110 N Court St. • P.O. Box 788
Heppner, OR 97836
541-676-5613
www.co.morrow.or.us

BOARD OF COMMISSIONERS

AGENDA

Board of Commissioners
Land Use Hearing
Wednesday, June 18, 2025, 1:30 PM
Morrow County Government Center, Irrigon, OR

Members of Staff
Tamra Mabbott, Planning Director
Dan Kearns, Land Use Counsel

1. Public Hearing to begin at 1:30 PM (COMMISSION ACTION REQUIRED):

ACM-155-25 Comprehensive Plan Amendment and AZM-156-25 Zoning Map Amendment. Threemile Canyon Farms, Applicant and Owner. The property is located approximately two miles west of the Boardman Airport, south of I-84 off Boardman Airport Lane. The application proposes to amend the Comprehensive Plan Map and Zoning Map to rezone approximately 1,298 acres from Space Age Industrial (SAI) and Exclusive Farm (EFU) to General Industrial with a Limited Use Overlay Zone to allow only exascale data centers. Applicable Criteria include Morrow County Zoning Ordinance (CZO) Article 8 Amendments and Oregon Administrative Rules (OAR) Chapter 660 Division 004.

ACM-157-25 Comprehensive Plan Amendment and AZM-158-25 Zoning Map Amendment. Threemile Canyon Farms, Applicant and Owner. The property is located approximately two southwest of the City of Boardman, east of Tower Road and abutting the west boundary of the Naval Bombing Range. The application proposes to rezone approximately 1,605 acres from Space Age Industrial to Exclusive Farm Use. Applicable Criteria include Morrow County Zoning Ordinance (MCZO) Article 8 Amendments and Oregon Administrative Rules (OAR) 660-004.

Zoom Meeting Information

https://zoom.us/j/5416762546 Password: 97836 Meeting ID: 541-676-2546

Zoom Call-In Numbers for Audio Only Using Meeting ID 541-676-2546#:

- 1-346-248-7799
- 1-312-626-6799
- 1-253-215-8782
- 1-669-900-6833
- 1-929-436-2866
- 1-301-715-8592

Zoom Specific Notes:

- If joining by a browser, use the raise hand icon to indicate you would like to provide public comment, if and when allowed. If using a phone, press *9 to indicate you would like to speak and *6 to unmute when you are called on.

- Morrow County provides the option for Zoom Translated Captions.
  - Instructions: https://support.zoom.us/hc/en-us/articles/6643133682957-Enabling-and-configuring-translated-captions
  - If you need further assistance, please contact Justin Nelson at jnelson@co.morrow.or.us

Board of Commissioners Hearing
Threemile Canyon Farms, LLC

Application: ACM-155-25, AZM-156-25, ACM-157-25 and AZM-158-25

June 18, 2025

Exhibit	Date/pg	Submitted by	Exhibit description
	June 10, 2025 Pg. 4-5	**Tamra Mabbott, Planning Director**	**Staff Memo**
1	**June 10, 2025 Pg. 6-9**	**Tamra Mabbott, Planning Director**	**Draft Ordinance No. ORD-2023-6**
2	**June 10, 2025 Pg. 10-65**	**Tamra Mabbott, Planning Director**	**Findings of Fact and Conclusions of Law**
3	**June 10, 2025 Pg. 66-124**	**Tamra Mabbott, Planning Director**	**Redline Findings of Fact and Conclusions of Law, reflecting changes after the Planning Commission Hearing**
4	**June 4, 2025 Pg. 125-127**	**Applicant**	**Applicant's Cover Letter to Morrow County Board of Commissioners**
5	**June 4, 2025 Pg. 128-180**	**Applicant**	**Applicant's Planning Commission Presentation revised**
6	**June 4, 2025**	**Applicant**	**Complete Copy of Application Materials, with Revised Exhibits to Reflect Planning Commission's Recommendation to Adjust Downzone Area**
6.1	**Pg. 181-278**		Application Narrative
6.2	**Pg. 279-281**		Land Use Application Form
6.3	**Pg. 282**		Vicinity Map (***revised 6/4/25***)
6.4	**Pg. 283-306**		Presentation Slides from January 9, 2025, Pre-Application Meeting
6.5	**Pg. 307**		Conceptual Exascale Data Center Site Plan
6.6	**Pg. 308**		Map of Proposed SAI to EFU Rezone (***revised 6/4/25***)
6.7	**Pg. 309-311**		Text of Proposed Limited Use Overlay
6.8	**Pg. 312-387**		Alternative Areas Analysis
6.9	**Pg. 388-405**		Economic Impact Analysis
6.10	**Pg. 406-489**		Transportation Planning Rule Analysis

6.11	**Pg. 490-564**		Supplemental Traffic Memo
6.12	**Pg. 565-581**		Soils Report for Upzone Area
6.13	**Pg. 582-600**		Soils Report for Downzone Area (***revised 6/4/25***)
6.14	**Pg. 601**		Morrow County Significant Resources Inventory Map (***revised 6/4/25***)
6.15	**Pg. 602-703**		Natural Resources Assessment
6.16	**Pg. 704-705**		Boardman Airport Horizontal and Conical Surfaces Map (***revised 6/4/25***)
6.17	**Pg. 706**		FEMA FIRM Panels Map (***revised 6/4/25***)
6.18	**Pg. 707-708**		DOGAMI SLIDO Maps (***revised 6/4/25***)
6.18	**Pg. 709-713**		Six-Mile Canyon Gravel Site Map (***revised 6/4/25***)
6.20	**Pg. 714**		Port of Morrow Water Service Provider Letter
6.21	**Pg. 715**		Pacific Power Service Provider Letter
6.22	**Pg. 716**		Port of Morrow Transportation Access Service Provider Letter
6.23	**Pg. 750-788**		Data Center Reference Literature
6.24	**Pg. 789**		Map of Proposed Zone Amendments (***revised 6/4/25***)
7	**April 29, 2025 Pg. 790-796**	**Planning Staff**	**April 29, 2025, Planning Commission approved minutes**
8	**April 29, 2025 Pg. 797**	**Planning Staff**	**4/29/25 Planning Commission Audio Files available here**
9	**April 29, 2025 Pg. 798**	**Planning Staff**	**Exhibit list of documents received after the Planning Commission packets were sent out**
9.1	April 29, 2025 **Pg. 799-800**	Jon Jinings, Community Services Specialist DLCD	Neutral comment letter
9.2	April 29, 2025 **Pg. 801-814**	Applicant	Power Point Presentation for Planning Commission Hearing
9.3	April 29, 2025 **Pg. 815**	Mary Killion	IAMP map of future development
9.4	April 29, 2025 **Pg. 816**	Planning Staff	Proposed map

10	**April 22, 2025**	**Planning Staff**	**04/29/2025 Planning Commission packet, which provides a link to the following supporting documents**
10.1			Applicant Cover Letter
10.2			Application Narrative
10.3			Land Use Application Form
10.4			Vicinity Map
10.5			Presentation Slides from January 9, 2025, Pre-Application Meeting
10.6			Conceptual Exascale Data Center Site Plan
10.7			Map of Proposed SAI to EFU Rezone
10.8			Text of Proposed Limited Use Overlay
10.9			Alternative Areas Analysis
10.10			Economic Impact Analysis
10.11			Transportation Planning Rule Analysis
10.12			Supplemental Traffic Memo
10.13			Soils Report for Upzone Area
10.14			Soils Report for Downzone Area
10.15			Morrow County Significant Resources Inventory Map
10.16			Natural Resources Assessment
10.17			Boardman Airport Horizontal and Conical Surfaces Map
10.18			FEMA FIRM Panels Map
10.19			DOGAMI SLIDO Maps
10.20			Six-Mile Canyon Gravel Site Map
10.21			Port of Morrow Water Service Provider Letter
10.22			Pacific Power Service Provider Letter
10.23			Port of Morrow Transportation Access Service Provider Letter
10.24			Data Center Reference Literature
10.25			Map of Proposed Zone Amendments
11	**April 21, 2025**	**Tamra Mabbott, Planning Director**	**Staff Memo**
12	**March 12, 2025**	**Applicant**	**Complete Application Materials, which were all provided in the Planning Commission packet**

PLANNING DEPARTMENT

PO Box 40 • Irrigon, Oregon 97844
(541) 922-4624

June 10, 2025

MEMO

TO:	Board of Commissioners
FROM:	Tamra Mabbott, Planning Director
CC:	Planning Commission
	Planning Department
RE:	Threemile Canyon Farms, LLC Plan and Zone Change
	ACM-155-25, AZM-156-25, ACM-157-25 and AZM-158-25

The above applications are legislative actions that require your action. At the Planning Commission's April 29, 2025, hearing, Planning Commission voted to recommend the Board of Commissioners approve all four applications. The vote was three to one, with one abstention and Chair Stacie Ekstrom did not vote.

Two Planning Commission hearings are typically held for large applications to allow time for follow-up and a continued hearing. However, the Planning Commission was able to take final action at their April meeting.

Findings for the above applications have been amended to reflect changes adopted by the Planning Commission. They are presented to you in both a final and a draft (redline) format to allow you to identify the changes made after the Planning Commission hearing.

To reduce the size of the electronic (and paper) file, staff posted the application and exhibits on the Planning Department web page. https://www.co.morrow.or.us/pc/page/04292025-planning-commission-meeting

If you would like a paper copy of the application or exhibits, please contact Michaela Ramirez. She can deliver a paper copy or have one available at the hearing.

APPLICATION SUMMARY

To amend the Comprehensive Plan designation from Agricultural (967 acres +/-) and Space Age Industrial (SAI, 331 acres +/-) to Industrial, and to amend the County Zoning Map designation from Exclusive Farm Use (EFU, 967 acres +/-) and Space Age Industrial (SAI, 331 acres +/-) to General Industrial (MG) for a contiguous 1,298-acre area located west of the Boardman Airport ("the Site"); to adopt a Limited Use Overlay (LU Overlay) Zone to restrict urban use of the Site to data centers and related ancillary improvements and associated infrastructure facilities, as well as farm uses allowed in the EFU zone; and to adopt exceptions to Statewide Planning Goals 3, 11 and 14 to allow data center use at the Site.

The proposal also includes a concurrent request to amend the Comprehensive Plan and Zoning Map to change the Plan and zoning designation of an approximately1,623-acre area located about 4 miles southwest of Boardman immediately west of the Naval Weapon Systems Training Facility Boardman ("the Downzone Area"), from Space Age Industrial (SAI) to Agricultural and from Space Age Industrial (SAI) to Exclusive Farm Use (EFU), respectively. The Downzone Area is currently improved with center-pivot irrigation and actively farmed (except for small patches of unfarmed land between pivot-irrigated fields). Although there is no criterion (MCZO, OAR, ORS) requiring a corresponding downzone to Exclusive Farm Use zoning as a condition of the proposed upzone approval, this concurrent request, to eliminate the potential for non-agricultural uses in the downzone area is sufficient to ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

DRAFT MOTIONS:

1. Approve the applications based on the Application, Findings, and Exhibits.
2. Approve the applications with modifications to the Findings and/or conditions of approval.
3. Reject or amend the Findings and deny the applications.

BEFORE THE BOARD OF COMMISSIONERS
FOR MORROW COUNTY, OREGON

AN ORDINANCE AMENDING THE MORROW COUNTY COMPREHENSIVE PLAN TO (1) CHANGE THE PLAN AND ZONE MAP DESIGNATIONS OF A 1298-ACRE PARCEL FROM AGRICULTURAL AND SPACE AGE INDUSTRIAL TO INDUSTRIAL AND FROM EXCLUSIVE FARM USE AND SPACE AGE INDUSTRIAL TO GENERAL INDUSTRIAL, RESPECTIVELY (2) ADOPT A LIMITED USE OVERLAY ZONE TO LIMIT USE TO A DATA CENTER AND FARM USES, (3) CHANGE THE COMPREHENSIVE PLAN AND ZONE DESIGNATION OF A 1,623 ACRE PARCEL FROM SPACE AGE INDUSTRIAL TO AGRICULTURE AND FROM SPACE AGE INDUSTRIAL TO EXCLUSIVE FARM USE RESPECTIVELY AND (4) ADOPT EXCEPTIONS TO STATEWIDE PLANNING GOALS 3, 11 & 14 TO ALLOW THE ESTABLISHMENT AND OPERATION OF A DATA CENTER USE - COUNTY FILE NUMBERS ACM-155-25, AZM-156-25, ACM-157-25 AND AZM-158-25	ORDINANCE NO. ORD-2023-6

WHEREAS, ORS 203.035 authorizes Morrow County's duly elected Board of Commissioners to exercise authority within the County over matters of County concern; and

WHEREAS, Morrow County exercises exclusive land use planning and permitting authority over all unincorporated areas within its boundaries pursuant to ORS Chapters 197 and 215 and the County's Comprehensive Land Use Plan and implementing regulations, as amended and acknowledged by the Land Conservation & Development Commission on January 30, 1986;

WHEREAS, Threemile Canyon Farms, LLC as applicant and the property owner submitted an application on January 28, 2025 to Morrow County seeking approval of a comprehensive plan amendment and zone change with corresponding exceptions to Statewide Planning Goals 3, 11 and 14 to construct and operate an exascale data center campus on ~1,298 acres currently zoned Exclusive Farm Use and Space Age Industrial (the "Application") and more particularly described as Parcel 2 of Partition Plat No. 2023-3, also described as TL 100, Twp 3 North, Range 24 East, Sections 28 & 29 (the "Property"). Said application also seeks approval for a concurrent comprehensive plan and zone map change from Space Age Industrial to Agricultural and Space Age Industrial to EFU, respectively, for a 1,623 acre parcel generally described as the southern half of Morrow County Tax Map 04N, 24 East, Section 36 and 03N, 24 East, Sections 01 and 02.

WHEREAS, Morrow County deemed the Application complete on or about February 26, 2025; and

WHEREAS a revised Application was submitted on March 12, 2025 following the initial completeness review and thereafter was deemed complete by the County Planning Department; and

WHEREAS, at the April 29, 2025 hearing, the Planning Commission accepted public testimony on the proposal, closed the record, deliberated and voted to recommend approval to the Board of Commissioners with specified conditions of approval; and

WHEREAS, based upon the entire record compiled through the Planning Commission proceeding, including the Planning Commission's favorable recommendation, the Morrow County Board of Commissioners convened a duly noticed public hearing on June 18, 2025, at which time it accepted all manner of public testimony on the proposal, closed public testimony and deliberated.

NOW THEREFORE, based on the foregoing recitals, which are incorporated herein by this reference, the Morrow County Board of Commissioners Ordains as follows:

Section 1. Decision and Conditions. The Application by Three Mile Canyon Farms is approved as proposed, subject to the satisfactory completion of the following conditions of approval. These conditions are binding upon the applicant:

1. Prior to any data center development, developer shall prepare and submit an application to Morrow County for Site Plan Review subject to the submittal requirements, standards, approval criteria and procedure set out in MCZO 5.020.A through H.

    a. As part of the Site Plan Review application, developer shall retain a Traffic Engineer to provide a project-specific Traffic Impact Analysis (TIA) consistent with the requirements of MCZO 4.035. That work shall include coordination with staff of Morrow County and the Oregon Department of Transportation (ODOT) on the necessary scope of the analysis; assessment of operational and safety impacts of the proposed development on affected intersections, including the Interstate 84-Tower Road interchange, other Tower Road intersections, and any secondary/emergency access routes and facilities; and providing recommendations for mitigation actions at locations where performance is projected to fall below established standards due to traffic generated by the proposed development.

2. Prior to construction, developer shall provide notice to Threemile Canyon Farms, the area farming operator, of its construction traffic schedule and coordinate with Threemile Canyon Farms to minimize any potential impacts to farm traffic during harvest.

3. Developer shall obtain all necessary local, state and federal permits and approvals for the data center campus construction and operation prior to commencement of the proposed use or certificate of occupancy being granted. If applicable, such permits shall include, but are not limited to: (A) review and approval of a Water Pollution Control Facilities (WPFC) permit issued by the Oregon Department of Environmental

Quality and (b) Pollutant Discharge Elimination System (NPDES) 1200-C Permit issued by the Oregon Department of Environmental Quality.

4. Delivery of adequate electricity and water from third-party providers shall be provided substantially as described in this record, prior to commencement of the proposed use or certificate of occupancy being granted.

Section 2. Incorporation of Findings. In support of the decision, the Board of Commissioners adopts as its own and incorporates herein by this reference the Findings of Fact and Conclusions of Law attached hereto as Exhibit A.

Section 3. Procedural Issue.

Section 4. The Record. The record in this matter consists of all of the application materials and supplemental exhibits provided by the applicant, all public and agency comments, the County's notices to the public, media outlets and DLCD related to the application, public hearings and decisions, staff reports and the applicant's revisions thereto. The record also includes audio recordings of all public hearings before the Planning Commission and the Board of Commissioners and other over-sized exhibits submitted into the record together with oral and written testimony submittal to the Planning Commission and Board of Commissioners during such public hearings.

Section 5. Effective Date. This Ordinance is a statutory land use decision and shall be effective upon expiration of the 21-day appeal period following the date on which the notice of the final decision sought to be reviewed is mailed or otherwise submitted to parties entitled to such notice.

ADOPTED and read for the first time by title only on ____ __, 2025. Read for the second time by title only and finally adopted on ____ __, 2025.

BOARD OF COMMISSIONERS FOR MORROW COUNTY, OREGON

_____
David Sykes, Chair

_____
Jeff Wenholz, Commissioner

_____
August (Gus) Peterson, Commissioner

Approved as to Form

_____

Justin Nelson
Morrow County Counsel

Morrow County Board of Commissioners

Findings of Fact and Conclusions of Law

Applicant: Threemile Canyon Farms, LLC

Application: ACM-155-25, AZM-156-25, ACM-157-25 and AZM-158-25

REQUEST: To amend the Comprehensive Plan designation from Agricultural (967 acres +/-) and Space Age Industrial (SAI, 331 acres +/-) to Industrial, and to amend the County Zoning Map designation from Exclusive Farm Use (EFU, 967 acres +/-) and Space Age Industrial (SAI, 331 acres +/-) to General Industrial (MG) for a contiguous 1,298-acre area located west of the Boardman Airport ("the Site"); to adopt a Limited Use Overlay (LU Overlay) Zone to restrict urban use of the Site to data centers and related ancillary improvements and associated infrastructure facilities, as well as farm uses allowed in the EFU zone; and to adopt exceptions to Statewide Planning Goals 3, 11 and 14 to allow data center use at the Site.

The proposal also includes a concurrent request to amend the Comprehensive Plan and Zoning Map to change the Plan and zoning designation of an approximately1,623-acre area located about 4 miles southwest of Boardman immediately west of the Naval Weapon Systems Training Facility Boardman ("the Downzone Area"), from Space Age Industrial (SAI) to Agricultural and from Space Age Industrial (SAI) to Exclusive Farm Use (EFU), respectively. The Downzone Area is currently improved with center-pivot irrigation and actively farmed (except for small patches of unfarmed land between pivot-irrigated fields). Although there is no criterion (MCZO, OAR, ORS) requiring a corresponding downzone to Exclusive Farm Use zoning as a condition of the proposed upzone approval, this concurrent request, to eliminate the potential for non-agricultural uses in the downzone area is sufficient to ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

APPLICANT/OWNER:	Threemile Canyon Farms 75906 Threemile Road Boardman, OR 97818
"SITE" PROPERTY:	Portion of Tax Lot 110 of Assessor's Map 4N 23E and Portion of Tax Lot 121 of Assessor's Map 4N 24E. 1,298 acres total
"SITE" LOCATION:	Property is located west of the Boardman Airport, bounded on the east by the east edge of the PGE Rail Spur easement that extends south to the Carty Generating Facility, on the north by Interstate 84, and on the west and southwest by the eastern top-of-bank of Sixmile Canyon.

"DOWNZONE" PROPERTY:	Generally corresponds to the southern half of Morrow County Tax Map 04N 24E Section 36, together with Tax Map 03N 24E Sections 01 and 02 to the south and southwest of it, respectively. Approximately 1,623 acres total
"DOWNZONE" LOCATION:	Polygon area east of Tower Road, about 3 miles southeast of Interstate 84 Exit 159, and 3-4 miles south of Boardman, abutting the west boundary of the Naval Weapons Systems Training Facility.

I. FINDINGS OF FACT AND CONCLUSIONS OF LAW FOR THE SITE:

A. Site Description and Surrounding Land Use:

As described in the application at pages 3-6 and Exhibits 2, 5, 6, the 1,298-acre Site is an irregular-shaped area of vacant, non-irrigated, undeveloped land located south of Interstate 84 and east of Sixmile Canyon. The Site is part of a large holding owned by Threemile and is undeveloped. Historically and currently, the Site does not support cultivated agricultural use but is used for grazing. As described in detail in the Upzone Soils Report at Exhibit 10A, the Site has shallow soil depth to bedrock, rock outcroppings, mounds, lack of irrigation, and other characteristics that make cultivated farming operations infeasible. It has also not been developed with any Space Age Industrial uses. However, the site is adjacent to the Boardman Airport and other industrial uses and is near existing utilities and transportation infrastructure.

A Portland General Electric rail spur that extends south to the PGE Carty Generating Facility runs in a 150-foot wide easement within the Site along its eastern boundary, and there is an existing electric transmission line that runs through the southern part of the Site on a northeast-southwesterly alignment.

To the east of the Site is land in the Airport Light Industrial (ALI) Zone, and land in the ALI zone surrounds the Boardman Airport. Within these areas, a motor speedway has previously been approved, and a photovoltaic solar energy generation project is currently under construction. In 2024, a data center was permitted in the far southwest corner of the ALI-zoned land (on the north side of Boardman Airport Lane and the east side of the Carty Generating Station rail spur).

Abutting the Site to the southeast, and south and west across Sixmile Creek Canyon, are additional EFU-zoned lands that are predominantly in irrigated farm use. Other surrounding land is in the Exclusive Farm Use (EFU) zone.

To the north of Interstate 84, which forms the Site's north boundary, the land area between I-84 and the south bank of the Columbia River is in the General Industrial (MG) zone. Those properties, most of which have riverbank frontage, are not currently developed for industrial use.

Applicant's Soils Report indicates the Site is underlain by shallow basalt flows and contains a complex of rock outcrops, subtle mounds, and concave intermound areas, which severely limit the Site's potential for crop production. The Soils Report concludes that the Site does not contain soils that are considered "high value farmland" and has little potential for crop production. The NRCS soil classification shows the predominate soil classifications is class IVe and Ve. The Site is within the Lower Umatilla Basin Groundwater Management Area (LUBGWMA), which was established by DEQ in 1990 because of high levels of nitrate in the groundwater. Future development of the Site will be required to comply with DEQ regulations, including treatment for on-site septic and industrial wastewater systems, to ensure the development does not impact drinking water safety.

B. Relevant Procedural History

On January 27, 2025, Threemile Canyon Farms submitted a Morrow County Land Use Application Form; application materials, including supporting reports; and a $7,500.00 application fee. The Morrow County Planning Department identified several outstanding items during its completeness review. In turn, the Applicant submitted revised and additional application materials on March 12, 2025 addressing items identified in the County's completeness determination, as well as issues raised in a Transportation Planning Rule Analysis memo prepared by Todd Mobley, PE on behalf of Morrow County. For record purposes, the March 12, 2025 submission was a complete application package for the upzone and downzone requests and served as a complete replacement for the initial submittal.

On April 9, 2025, the Morrow County Planning Department provided notice to adjoining landowners, public agencies, interested parties entitled to such notice that a public hearing for the application would be held on April 20, 2025 at 6:00PM at the Morrow County Government Center in Irrigon, Oregon. The staff report and preliminary findings of fact were made available on April 21, 2025.

At the Planning Commission hearing on April 29, 2025, Planning Staff described the Application and recommended Conditions of Approval and Applicant representatives and its consultants summarized the application. Following these presentations and two public comments, the Planning Commission requested a revision to expand and shift the boundaries of the Downzone Area (**ACM-157-25** and **AZM-158-25**), principally to exclude a 680-acre habitat conservation easement area that was part in the original downzone area. Threemile confirmed acceptance of this modification, and Planning Staff generated a map exhibit to illustrate the new Downzone Area boundary, which was added to the Planning Commission record. With this revision to the Downzone Area, the Planning Commission closed the record, deliberated, and voted to recommend approval of this application with conditions, and as modified to include the exhibit depicting the revised Downzone Area.

Applicant submitted revised and additional application materials to the Board of Commissioners on May 26, 2025 to reflect the revised Downzone Area boundaries. Applicant submitted revised and additional application materials to the Board of Commissioners on May 27, 2025, to reflect the revised Downzone Area boundaries. Per the request of Planning Staff on June 4, 2025, the applicant incorporated the revised exhibits into its previously submitted application to provide the Board with a complete revised application package that fully implements the Planning

Commission's recommendation. All other aspects of the application remain unaltered from the version reviewed by the Planning Commission. The Board of Commissioners held a public hearing on June 18, 2025 in Irrigon, Oregon. The Board of Commissioners held a public hearing on June 18, 2025 in Irrigon, Oregon.

C. Summary of Proposed Rezone for the Site

This application proposes to rezone SAI and EFU land to permit data centers supported by ancillary improvements and associated infrastructure facilities. The application addresses "Reasons" exceptions to Goal 3 (Agricultural Lands); Goal 11 for water (Public Facilities and Services); and Goal 14 (Urbanization) for the entire Site. In addition to state laws and regulations, the application also addresses applicable Morrow County Comprehensive Plan policies, implementing code criteria relating to Plan and Zone Map amendments, and the statutory and MCZO requirement to enact a Limited Use Overlay, which will limit future development of the Site to data center and farm uses consistent with the exceptions analysis. The Applicant has also provided technical reports and analyses to support the proposed amendments, including a Transportation Analysis, an Economic Impact Analysis, a Soils Report, a Natural Resources Assessment, and an Alternative Areas Analysis.

The Site proposal consists of the following specific amendment requests:

1. Amend the Zoning Map by redesignating the easterly 331 acres of the 1,298-acre Site from its current Space Age Industrial (SAI) zoning to General Industrial (MG), as depicted in Figure II-3.
2. Amend the Comprehensive Plan and Zoning Map by redesignating the remaining westerly 967 acres of the 1,298-acre Site from its current Exclusive Farm Use (EFU) zoning to MG and Comprehensive Plan designation from Agriculture to Industrial, as depicted in Figure II-3.
3. Adopt a Limited Use (LU) Overlay Zone applicable to the Site, with the following provisions:
    a. Allowed land uses are limited to: Data center, including related ancillary improvements and associated infrastructure facilities, and uses and activities allowed by the EFU zone regulations (i.e., Section 3.010 of the Morrow County Zoning Ordinance and its subsections).
    b. All development and use shall comply with standards of the Airport Safety and Compatibility (ASC) Overlay Zone (i.e., Section 3.092 of the Morrow County Zoning Ordinance and its subsections), and applicable standards of other aviation-related regulatory agencies including the Federal Aviation Administration.
4. Adopt findings of compliance with standards for "Reasons" exceptions to Goals 3, 11, and 14 as presented in this report, to support the above zoning actions.

Exascale Data Center Use. As described in the application materials at pages 8-16 and Exhibit 18, this proposal responds to a recent increase in demand for development of large campus sites for high-capacity data processing facilities, known as Exascale Data Center Campuses. EDCCs are large-scale facilities designed to handle extremely high computational workloads, often associated with advanced technologies such as generative artificial intelligence

(AI). The site characteristics necessary for an EDCC include contiguous developable land area of 1,000 acres, proximity to existing high-capacity electric power transmission lines, and access to essential utilities and transportation infrastructure. An EDCC offers significant efficiencies, as compared with siting smaller data center facilities on multiple dispersed sites—for example by isolating possible off-site impacts to just one area, minimizing the required extension of new power transmission lines across multiple locations, and decreasing traffic by enabling technical support staff to perform maintenance, repairs, upgrades and other services entirely within the site.

With respect to Morrow County and its neighboring counties, the economic analysis identified demand for 3,000 acres of land for EDCC use in the coming 10-year period. If approved, this proposal will partially meet this demand by allowing EDCC development on a uniquely situated site adjacent to similar industrial and other compatible uses (including another forthcoming data center). According to the application materials, the Site meets the unique siting needs for EDCC development due to its size, topography, and proximity to high-capacity electric power transmission lines, among other siting criteria. And because urban water and roads are either already available to the Boardman Airport or will be constructed to serve a forthcoming data center development to the east, only short extensions will be necessary to reach and serve the Site. Further, the Site is not located within a floodplain or other natural hazard area,[1] and its development and use will not cause adverse environmental impacts to water availability, wetlands, habitat areas, or sensitive species. While preparing the submittal, the Applicant indicated they prepared an initial cultural resources assessment, received feedback from the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and are working to update the assessment to identify and address potential cultural resource issues. CTUIR Cultural Resources Protection Program will be notified of this application and will have the opportunity to provide testimony regarding any issues of concern.

Power. The Applicant has provided a Service Provider Letter from Pacific Power. Applicant's Exhibit 17B. The letter states, "Pacific Power's plan is to serve the property from the south using transmission lines being permitted for a separate project and is not planning to add transmission lines in the vicinity of the Project at this time." The proposed transmission line was permitted in 2024 (see Application No. LUD-N-70-24).

Water. Future data center campus development at the Site will require potable water for employees and industrial water for processing and cooling, as well as emergency fire suppression capacity. The Applicant has provided a service provider letter from the Port of Morrow declaring that "the Port of Morrow will be able to timely and efficiently supply up to 1,300 gallons per minute to meet peak demand, not to exceed 35 million gallons of water annually, sufficient to support the potential development of data centers on the Property. Additionally, the Port of Morrow can and will supply approximately 3,000 gallons per minute of fire flow to sustain

[1] As to this particular Site, the Morrow County Comprehensive Plan does not require compliance with the Community Wildfire Protection Plan. However, prior to any development on the Site, MZCO 5.020 (site plan review) will apply, and this provision provides that "development in hazard areas identified in the Morrow County Comprehensive Plan, Natural Hazard Mitigation Plan, or Community Wildfire Protection Plan shall comply with all applicable requirements."

public health and safety requirements for data center campus development on the Property." Applicant's Exhibit 17A.

Wastewater. The large size of the Site provides sufficient area for a proposed data center campus to incorporate one or more septic drain field areas for sanitary waste, as well as one or more on-site evaporation ponds or similar facilities for the management of water used by cooling systems as well as surface drainage. Such on-site systems could operate permanently, but future extension of sewer to the Site is not precluded (subject to compliance with all applicable state and local regulations). As noted above, prior to any data center campus construction, proposed approval condition 3 will require the future developer(s) to provide a specific design and comply with Oregon DEQ water quality permitting requirements for septic and surface water management systems. See Application at page 27.

Transportation and Access. Applicant's Exhibits 9 and 9A provide a Transportation Planning Rule (TPR) analysis and supplemental technical analysis responding to additional issues raised by staff. Those analyses conclude that (a) the proposed land use designation and zone changes will produce lower "reasonable worst-case" vehicle trip generation than potential uses allowed by right under the current zoning; (b) the Port of Morrow has already constructed Boardman Airport Lane with a 32-foot paved width, shoulders and other characteristics consistent with the Morrow County Transportation System Plan (TSP) design section for a Rural Arterial II, west from Tower Road to the east property boundary of the Site, which provides sufficient capacity to accommodate future traffic from a potential data center development on the Site; and (c) the anticipated vehicle trips from the proposed land use designation changes and future data center campus development will not result in any impacts that "significantly affect a transportation facility" within the meaning of Oregon Administrative Rules (OAR) 660-012-0060(1), familiarly known as the "Transportation Planning Rule."

Existing improved transportation facilities – more particularly Boardman Airport Lane and Tower Road – will provide access to the Site. See Exhibit 17C. Regarding impacts of future development on roads and intersections, including emergency or secondary access, proposed Condition of Approval #1a will require future developer(s) to include as part of the Site Plan Review application a project-specific Traffic Impact Analysis, which ensures that Morrow County will have the opportunity to impose conditions of approval during Site Plan Review approval, prior to development, at which time mitigation measures can properly align with impacts from an actual development proposal. The TIA will be required to identify street network deficiencies that may arise and recommend mitigation actions where necessary to assure that the road network will provide acceptable operating capacities, safety characteristics, and emergency access to and from the Site. It is appropriate to perform that level of detailed traffic analysis as part of the Site Plan Review process because several aspects of the analysis will depend on specific characteristics of the proposed development and use, such as staffing levels, shift scheduling, hours of operation, site planning, access locations, and other factors.

Future Site Plan Review. Approval of this legislative application will not result in approval of a development plan; the request is limited to making a change in Morrow County's land use designations, including a change in its Comprehensive Plan Map and Zoning Map designations, including adding a Limited Use Overlay Zone on the Site. The request has been submitted by the property owner, not by a developer. The requested zoning changes are a first step prior to

submittal of plans by a future developer(s) for a data center campus proposal(s), which will be the subject of separate Site Plan Review application(s) that the future developer(s) will be required to submit for Morrow County review and approval of specific proposed development. For instance, the preliminary site plan provided by the Applicant at Exhibit 4 illustrates the general conceptual feasibility of one possible layout for exascale data center campus development, but future Site Plan Review application materials are expected to differ when an actual developer undertakes further design development at the detailed level. The Site Plan Review process will resolve the numerous detail issues that will arise in the specific site development process – such as specific locations for vehicular access, including any required alternate emergency access, routing of water service (service to buildings as well as landscape irrigation and fire suppression), septic or sanitary sewer systems and facilities, stormwater management facilities and discharge locations, the phasing and time frame for full development, and so forth.

D. Compliance with Criteria For Goal Exceptions

The Applicant proposes to develop an urban-scale industrial use on undeveloped rural agricultural land that may require public services for water supply. In such circumstances, when urban-scale development and public services or facilities are proposed to be located on rural agricultural land, an applicant must demonstrate compliance with the applicable standards for goal exceptions in both OAR 660-004 and OAR 660-014. In particular, the application addresses "Reasons" exceptions to Goal 3 (preserving agricultural land for farm use); Goal 11 (prohibiting extension of urban water to serve industrial uses on rural lands); and Goal 14 (directing urban uses to be located inside urban growth boundaries) for the entire Site.[2]

As explained below, OAR 660, Division 4 standards and criteria are met for the requested exceptions to Goal 3. With respect to Goals 11 and 14, OAR 660-014-0040(2) supplies the criteria for a reasons exception involving new urban development on undeveloped rural lands See *VinCEP v. Yamhill Cnty.*, 215 Or App 414, 422-23, 171 P3d 368, 372 (2007). Finally, the Applicant addresses compliance with OAR 550-012-0060 ("Transportation Planning Rule").

1. OAR 660, Division 4 (Reasons Exception for Goal 3)

660-004-0018 – Planning and Zoning for Exception Areas

(4) "Reasons" Exceptions:

(a) When a local government takes an exception under the "Reasons" section of ORS 197.732(1)(c) and OAR 660-004-0020 through 660-004-0022, plan and zone

[2] Although the SAI-zoned portion of the Site may not require new goal exceptions to accommodate new or additional allowed industrial uses on a qualifying site (see ORS 197.713), the lack of clear interpretative guidance or case law on the issue requires the Applicant to treat the entire Site as whole and seeks goal exceptions for both the EFU and SAI zoned portions.

designations must limit the uses, density, public facilities and services, and activities to only those that are justified in the exception.

Response: Morrow County's Limited Use Overlay Zone (LU) will be applied to the Site to limit the uses of the Site which require a Goal 11 or Goal 14 exception to only those that are justified in the exception (i.e., data centers and associated infrastructure) and farm uses (which do not require an exception), as set forth in MCZO 3.110. See also Application at pages 17-18. This criterion is met.

660-004-0020 – Goal 2, Part II(c), Exception Requirements

(1) If a jurisdiction determines there are reasons consistent with OAR 660-004-0022 to use resource lands for uses not allowed by the applicable Goal or to allow public facilities or services not allowed by the applicable Goal, the justification shall be set forth in the comprehensive plan as an exception.

Response: The application explains the reasons which justify the proposed goal exceptions in the following responses.[3] The text of the comprehensive plan will be amended to incorporate the justification for the proposed exceptions to Goals 3, 11, and 14. This criterion is met.

(2) The four standards in Goal 2 Part II(c) required to be addressed when taking an exception to a goal are described in subsections (a) through (d) of this section, including general requirements applicable to each of the factors:

(a) "Reasons justify why the state policy embodied in the applicable goals should not apply." The exception shall set forth the facts and assumptions used as the basis for determining that a state policy embodied in a goal should not apply to specific properties or situations, including the amount of land for the use being planned and why the use requires a location on resource land;

Response: OAR 660-004-0020(2)(a) provides the first of four standards applicable to the Applicant's Goal 3 exception request. With respect to "reasons" justifying why the applicable policies in Goal 3 should not apply to the Site, OAR 660-004-0022 does not provide an exclusive list of reasons.[4] Here, Applicant's materials establish that reasons justify the allowance of Exascale Data Center Campus development on this Site, which are based on a recent emergence of high demand for exascale data center development and unique siting characteristics for such

[3] Note that the criteria in OAR 660-004-0022(1) are not applicable to the establishment of new urban development on undeveloped rural lands and the application, instead, is subject to OAR 660-014-0040 for purposes of an exception to Goals 11 and 14. And OAR 660-004-0020 applies for purpose of an exception to Goal 3.

[4] *1000 Friends of Oregon v. Jackson County*, 292 Or App 173, 183-184 (2018) (citing *State v. Kurtz*, 350 Or 65, 75 (2011) to find that, within the context of OAR 660-004-0022, 660-011-0060, and 660-014-0040, "statutory terms such as 'including' and 'including but not limited to," when they precede a list of statutory examples, convey an intent that an accompanying list of examples be read in a nonexclusive sense").

EDCCs, as described in more detail at Application at pages 8-16 and Exhibit 8. According to the Economic Impacts Analysis, development of an Exascale Data Center Campus at the proposed exceptions Site would meet a recent increased demand for EDCC development in the region and benefit Morrow County's economy (including generating significant ongoing property tax revenue streams to the local school district and other agencies).

According to the Application and Exhibit 8, the Site also meets the essential siting characteristics for EDCC development, including:

1. Proximity to and ability to extend existing, high-capacity electrical transmission lines (Pacific Power).

2. Proximity to existing and/or forthcoming water infrastructure near Boardman Airport (Port of Morrow).

3. Proximity to existing and/or forthcoming long-haul fiber-optic routes (multiple major internet service providers).

4. Proximity to an interstate highway (I-84).

In addition to having access to all essential support facilities, Applicant notes that the Site is isolated by natural and physical barriers (Sixmile Canyon, BPA transmission lines, PGE rail spur extending south to the Carty Generating Station), reducing potential for external impacts on residences or other sensitive land uses.

The proposed use of the Site for EDCC development would cause minimal or no loss of cultivated farmland. As described in greater detail in the attached Soils Report, Exhibit 10, the Site is underlain by shallow basalt flows and contains a complex of rock outcrops, subtle mounds, and concave intermound areas, which severely limit the Site's potential for crop production. The Soils Report supports the conclusion that the Site does not contain soils that are considered "high value farmland" and has little potential for crop production. Based on these factors, the property owner has not and does not intend to use the Site for productive agricultural uses.

The amount of land proposed for the use is 1,298 acres, which represents only a small part (about 1.5%) of the Applicant's combined land holdings in Morrow County, over 40,000 acres of which are irrigated and under active farm use. Approximately 967 acres of the Site are zoned EFU; the remaining 331 acres are zoned SAI, and are therefore already available for some types of industrial development other than data centers. This criterion is met.

(b) "Areas that do not require a new exception cannot reasonably accommodate the use". The exception must meet the following requirements:

(A) The exception shall indicate on a map or otherwise describe the location of possible alternative areas considered for the use that do not require a new exception. The area for which the exception is taken shall be identified;

(B) To show why the particular site is justified, it is necessary to discuss why other areas that do not require a new exception cannot reasonably accommodate the proposed use. Economic factors may be considered along with other relevant factors in determining that the use cannot reasonably be accommodated in other areas. Under this test the following questions shall be addressed:

(i) Can the proposed use be reasonably accommodated on nonresource land that would not require an exception, including increasing the density of uses on nonresource land? If not, why not?

(ii) Can the proposed use be reasonably accommodated on resource land that is already irrevocably committed to nonresource uses not allowed by the applicable Goal, including resource land in existing unincorporated communities, or by increasing the density of uses on committed lands? If not, why not?

(iii) Can the proposed use be reasonably accommodated inside an urban growth boundary? If not, why not?

(iv) Can the proposed use be reasonably accommodated without the provision of a proposed public facility or service? If not, why not?

(C) The "alternative areas" standard in paragraph B may be met by a broad review of similar types of areas rather than a review of specific alternative sites. Initially, a local government adopting an exception need assess only whether those similar types of areas in the vicinity could not reasonably accommodate the proposed use. Site specific comparisons are not required of a local government taking an exception unless another party to the local proceeding describes specific sites that can more reasonably accommodate the proposed use. A detailed evaluation of specific alternative sites is thus not required unless such sites are specifically described, with facts to support the assertion that the sites are more reasonable, by another party during the local exceptions proceeding.

Response: Applicant's Exhibit 7 provides a detailed inventory, maps, and analysis of potential alternative sites within a study area containing the northern portions of Gilliam, Morrow and Umatilla County, located within approximately 10 miles of electric power transmission line corridors (an essential siting characteristic for exascale data center locations), including the cities located within that area (Arlington, Boardman, Ione, Irrigon, Umatilla, Hermiston, Stanfield and Echo). Summarizing the results of that analysis, the Applicant concludes that:

- Existing exception areas that would not require a new goal exception to reasonably accommodate exascale data center campus development are not found within the study

area.[5] Such essential site criteria include minimum developable land area of 1,000 acres, shape and horizontal dimensions suitable for siting clusters of rectangular data center buildings typical in this region, within 10 miles of existing high-capacity electric power transmission lines, and absence of regulatory hazard areas (e.g., floodplain or landslide areas).

Areas requiring a new exception were excluded. OAR 660-004-0018(4)(a) states that when an exception is taken to a statewide planning goal for a particular reason to meet a specific need, the uses allowed must be limited to uses that were justified in the exception. In other words, adding a new use to prior exception land that was not identified for the current proposed use requires a new goal exception. Because data centers are generally a newer type of development that began in the 2010s, many of the prior exception lands, which were adopted long before 2010, would not have contemplated "data centers" as a permitted use, nor would the reasons that supported those exceptions have covered such a use. Therefore, "data centers" would necessarily be considered a new permitted use and require a new goal exception.

This is the case for the SAI zone in Morrow County which was subject to a reasons exception specifically for aircraft or space vehicle testing and/or development at the request of Boeing in 1987. It is also the case for the block of 3,800 acres of MG land south of the Site which was subject to a reasons exception for "antennae test range uses."[6] Similarly, in unincorporated Gilliam County, there are no zones that currently permit data centers. Therefore, these areas were excluded because the process for establishing data centers as a permitted use is uncertain and would likely involve a new goal exception, significant delays, legal challenges, and increased costs, thereby undermining any argument that these sites could "reasonably accommodate" data center use.

Industrial portions of the Umatilla Army Chemical Depot were excluded because these lands are the subject of litigation in the Circuit Court of the County of Umatilla (Case No. 24CV31777), which introduces significant legal uncertainty, the outcome of which is uncertain in substance and timing. Thus, this Site cannot "reasonably accommodate" data center development, while it remains the subject of active litigation which seeks to prohibit sale of industrial property.

North of the Site, on the opposite (north) side of Interstate 84, there are multiple parcels of land in the Morrow County General Industrial (MG) zone. This area is referred to as Area MC-1 in Applicant's Alternative Areas Analysis. The ownership pattern consists

[5] An applicant may identify essential siting criteria to narrow the field of alternatives. *VinCEP v.Yamhill County*, 55 Or LUBA 433 (2007), *affirmed in part, reversed and remanded in part*, 215 Or App 414, 171 P3d 368 (2007). Alternative sites that do not meet the proposal's essential site criteria can be eliminated. *See*, *e.g.*, *Devin Oil Co. Inc. v. Morrow County*, 62 Or LUBA 247, *affirmed* 241 Or App 351, 250 P3d 38 (2010), *rev. den.*, 350 Or 408, 256 P3d 121 (2011). In addition, the rule specifies that "economic factors may be considered" in evaluating whether alternative sites are ones that could reasonably accommodate a particular use. OAR 660-004-0020(2)(b).

[6] Ordinance No. MC-C-4-86, https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page /16596/mc-c-4-86.pdf.

of several large parcels owned by the Port of Morrow, separated by intervening large parcels owned by the Applicant, Threemile Canyon Farms, LLC. Threemile Canyon Farms has provided a letter indicating that its properties within this sub-area are not available for purchase or lease, for any purpose. See Appendix C in the Alternatives Analysis (Exhibit 7). Because it is not possible to assemble a contiguous parcel with sufficient area for an exascale data center campus (1,000 acres or more) without including some of the Threemile Canyon Farms parcels, the MC-1 Area cannot reasonably accommodate exascale data center campus use.

- No resource land that is already irrevocably committed to nonresource uses was identified within the study area that was sufficiently proximate to existing power supply infrastructure, so the proposed use cannot be reasonably accommodated on such land. See Application at page 22 and related technical evidence in Exhibit 7.

- No reasonable alternative areas are available within UGB areas. The study area included eight UGB areas: City of Arlington, City of Boardman, City of Ione, City of Irrigon, City of Umatilla, City of Hermiston, City of Stanfield, and City of Echo. After identifying zones in these jurisdictions that allow for data center uses, land was then evaluated to identify sites that met all of the essential siting characteristics for EDCCs. The analysis concludes that no reasonable alternatives areas are available within UGBs because of constraints such as existing development, entitled development, insufficient contiguous development area, or distance from existing high-capacity transmission lines.

- The proposed use cannot reasonably be accommodated without the provision of the listed public facilities and services. Based on generally industry standards, EDCC's require proximity to existing high-capacity electrical transmission lines (<10 miles); water supply of approximately 1,000 gallons/day per developable acre of land to cool equipment; sewage disposal facilities for employee restrooms; industrial wastewater disposal facilities to discharge industrial wastewater generated from non-contact cooling processes; and proximity to interstate highways and public roads for employees and service providers.

  Regarding sewage disposal, it is anticipated that on-site septic facilities will be relied on. The septic system would be subject to review and approval of Water Pollution Control Facilities (WPCF) permits issued by the Oregon Department of Environmental Quality pursuant to ORS 468B.050. WPCF permits issued by ODEQ have limits and conditions that are intended to be protective of ground and surface waters, as well as the environment and public health including potential nitrate treatment requirements. The Site is within the Lower Umatilla Basin Groundwater Management Area, designated by DEQ in 1990 because of high levels of nitrate in the groundwater. Compliance with DEQ regulations, including treating wastewater for nitrate removal, ensures the proposal will not have negative impacts on groundwater quality.

  Regarding industrial wastewater disposal, it is estimated that approximately 15,000,000 gallons of industrial wastewater (IWW) will be generated from each data center's non-contact cooling process annually, which would be treated onsite via conveyance in

subsurface pipes to on-site-lined IWW evaporation ponds, sized and located to store and fully evaporate the non-contact cooling water, until such time infrastructure for treatment and disposal of IWW is extended to the Site by the Port of Morrow. The cooling process uses water that does not come into direct contact with electronic components to manage the heat generated by servers and other electronic equipment. There would be no anticipated discharges from the IWW ponds on the Site, and the ponds would be subject to a 2501 Water Pollution Control Facility General Permit issued by the Oregon Department of Environmental Quality.

- Areas within the study area that cannot satisfy essential siting characteristics for exascale data center campus cannot reasonably accommodate the proposed use. These include sites with excess slope; inadequate size and configuration; development constraints like floodways, landslide areas, wetlands, and protected habitat; lack of proximity to high-capacity electric distribution lines; insufficient water supply, sewage disposal, industrial wastewater disposal, and access to public roads and proximity to an interstate highway.

See also Application at pages 19-24, and related technical evidence in Applicant's Exhibit 7. These criteria are met.

> ***(c) "The long-term environmental, economic, social and energy consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site." The exception shall describe: the characteristics of each alternative area considered by the jurisdiction in which an exception might be taken, the typical advantages and disadvantages of using the area for a use not allowed by the Goal, and the typical positive and negative consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts. A detailed evaluation of specific alternative sites is not required unless such sites are specifically described with facts to support the assertion that the sites have significantly fewer adverse impacts during the local exceptions proceeding. The exception shall include the reasons why the consequences of the use at the chosen site are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site. Such reasons shall include but are not limited to a description of: the facts used to determine which resource land is least productive, the ability to sustain resource uses near the proposed use, and the long-term economic impact on the general area caused by irreversible removal of the land from the resource base. Other possible impacts to be addressed include the effects of the proposed use on the water table, on the costs of improving roads and on the costs to special service districts;***

Response: The "ESEE standard only require[s] the county to complete a detailed ESEE evaluation of specific alternative sites if the sites were 'described with facts to support the assertion that the sites have significantly fewer adverse impacts during the local exceptions

proceeding.'"[7] A local government may choose the preferred alternative as long as the environmental, social, economic and energy consequences are not "significantly more adverse" than would typically result from using other resource lands for the proposed use. A local government is not required to choose the alternative that is "least disruptive to resource land."[8]

Applicant's proposed goal exceptions Site is appropriate for Exascale Data Center Campus development and would result in significantly fewer adverse environmental, social, economic, and energy (ESEE) impacts compared with other areas requiring new exceptions.[9] A comparison of these impacts is described below. When comparing impacts to alternative areas, it is important to consider the ESEE benefits of placing data centers on a single large site as opposed to multiple dispersed sites, i.e., an Exascale Data Center Campus is a more efficient use of land, is more efficient to construct, provides opportunities for operational efficiencies due to the associated economies of scale, and isolates possible negative off-site impacts to just one area. The Site benefits from close proximity to existing high-capacity electrical transmission lines (e.g., there are existing transmission lines to the south of the property near the Carty Reservoir and planned lines to the Site's eastern boundary), as well as water supply and existing transportation facilities near the Boardman Airport and an approved data center development to the east, which means impacts associated with extending services to the Site would be minimal in comparison to other areas.

- Environmental impacts associated with the development of the Site for data center use are not significant because the Site contains no inventoried Goal 5 resources or natural resource protection overlay zones. Data center development may require wetland removal/fill permit and mitigation; however, the state policies and regulatory processes applicable to this development ensure that possible adverse impacts will be minimized. Similarly, state and/or federal permits will be required for air quality for diesel backup generators, and erosion and stormwater control associated with site preparation and construction.

- Economic impacts of the proposed amendments are positive in comparison to other potential locations because the Site has minimal potential for agricultural productivity. By contrast, other land in the vicinity is generally irrigated and actively in use for crop or dairy production.

- Social impacts associated with Exascale Data Center Campus development, such as visual impacts, noise, and traffic, are generally greater the closer an EDCC is to population centers and residential uses. Because the Site is situated more than five miles from population centers and isolated from any potentially incompatible uses (such as residences), no adverse social impacts area anticipated.

- Energy impacts associated with Exascale Data Center Campus development on the

[7] *1000 Friends v. Morrow County*, 81 Or LUBA 508 (quoting OAR 660-004-0020(2)(c)).
[8] *1000 Friends of Oregon v. Yamhill County*, 52 Or LUBA 418 (2006).
[9] Other areas within the bounds of the Alternative Areas Analysis requiring new exceptions generally fall into two categories: (1) Irrigated agricultural land; (2) Industrial land in zoning districts that do not allow data center uses.

Site are less significant than the impacts of the same development on other land requiring new exceptions. The amount of energy required is the same regardless of location; however, the proposed exceptions Site is proximate to existing transmission lines to the south, near the Carty reservoir, and adjoining planned lines immediately to the east. Close proximity to such lines is an essential siting requirement. Alternative areas that would require the development of new transmission lines would have significantly greater impacts. Additionally, as the Site is adjacent to Interstate 84 (I-84) and near the interchange at Tower Road, energy needs associated with transportation to and from the Site are lower than sites requiring greater travel distances from an I-84 interchange.

For the above reasons, the proposed goal exceptions Site is appropriate for Exascale Data Center Campus development and would result in significantly fewer adverse environmental, social, economic, and energy (ESEE) impacts compared with other areas requiring new exceptions.[10] See also Application at pages 25-27 with technical evidence in Applicant's Exhibits 7, 8, 10A and 10B, 11, 12, 14, 15 and 16. This criterion is met.

(d) "The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts." The exception shall describe how the proposed use will be rendered compatible with adjacent land uses. The exception shall demonstrate that the proposed use is situated in such a manner as to be compatible with surrounding natural resources and resource management or production practices. "Compatible" is not intended as an absolute term meaning no interference or adverse impacts of any type with adjacent uses.

Response: Data center use will be compatible with adjacent uses through compliance with applicable requirements governing airports, water, and air, as well as the natural and physical features bounding the Site. The Site is not proximate to many adjacent uses given natural buffers separating the Site via a canyon to the west and south, a rail spur to the east, and a highway to the north. The airport runway to the east of the rail spur is not within 5,000 feet of the Site. And the other abutting adjacent uses are a vineyard and another data center also to the east of the rail spur, agricultural fields to the west and south of the canyon, and vacant industrial lands to the north of I-84. None of these are particularly sensitive to any of the potential impacts generated by an EDCC, and any potential impacts associated with EDCC development will be addressed through compliance with applicable regulatory standards relating to air emissions, lighting and glare, water, and airport compatibility, as described more fully in the Application at pages 27-28, with technical evidence in Applicant's Exhibits 7, 11, 12, 13, 15 and 16. The farm operator adjacent to the Site is the Applicant for this proposal; the Applicant has identified the Site as a part of its large ownership that (a) is not suitable for commercial farming operations, which it conducts on most of its lands, and (b) can support data center operations without adversely

[10] Other areas within the bounds of the Alternative Areas Analysis requiring new exceptions generally fall into two categories: (1) Irrigated agricultural land; (2) Industrial land in zoning districts that do not allow data center uses.

affecting agricultural productivity or operations on surrounding properties, including its own holdings.

2. OAR 660-014-0040 (Reasons Exception for Goals 11 and 14)

Applicant seeks an exception to Goal 14 to allow for urban industrial development on the Site, and an exception to Goal 11 for extension of urban-levels of water to the Site. With respect to Goal 14, OAR 660-014-0040(2) supplies the criteria for a reasons exception, not OAR 660-004-0022. The Applicant cites to *VinCEP v. Yamhill Cnty.*, 215 Or App 414, 422-23, 171 P 3d 368, 372 (2007) for this interpretation. Although the analysis under Division 14 must be done separately, there is obvious overlap with criteria in Division 4, and it is understood that an applicant may rely on the same proof and findings to the extent they address criteria in both Divisions.

A Goal 11 exception to establish or extend public facilities to serve proposed development is evaluated under the criteria in Division 4, and in particular OAR 660-004-0020(2)(b)-(d), and, as appropriate, OAR 660-014-0040 for purposes of siting urban development on undeveloped rural lands. *See Friends of Marion County v. Marion County*, 59 Or LUBA 323 (2009) ("there is no need to articulate a different reason to justify the exception to Goal 11 that is used to justify the Goal 14 exception or, stated differently, the reasons sufficient to justify the Goal 14 exception are also sufficient to justify the Goal 11 exception for purposes of OAR 660-004-0022"); *Doherty v. Morrow County*, 44 Or LUBA 141 (2003) ("OAR 660-014-0040(2) and (3) effectively become the relevant criteria for a statewide planning goal exception to Goal 14, and to Goals 11 and 3 if such additional exceptions are necessary, to allow urban uses and urban public facilities on rural agricultural lands"); *DLCD v. Umatilla County*, 39 Or LUBA 715 (2001) (if "the proposed exception is intended to allow urban development, then OAR 660-004-0022(1) directs the county to OAR 660-014-0040"). "If reasons are identified under OAR 660-014-0040(2) that justify exceptions to Goal 14, and Goals 3 and 11 as well, then there is no need to provide additional reasons to justify reasons exceptions to Goals 3 and 11 under OAR 660-004-0022(1) or (2)." *Doherty*, 44 Or LUBA at 177. Here, the "proposed use" served by the facilities is data centers, which is an urban industrial use. Therefore, OAR 660-014-0040 provides the relevant criteria.

As explained below, the reasons that justify the requested exception to Goal 14 suffices to demonstrate a need for an exception to Goal 11 for extension of urban-scale water.

660-014-0040 – Establishment of New Urban Development on Undeveloped Rural Lands

(1) As used in this rule, "undeveloped rural land" includes all land outside of acknowledged urban growth boundaries except for rural areas committed to urban development. This definition includes all resource and nonresource lands outside of urban growth boundaries. It also includes those lands subject to built and committed exceptions to Goals 3 or 4 but not developed at urban density or committed to urban level development.

Response: The Site is split-zoned EFU and SAI, and it is located outside of any UGB. Therefore, the SAI-zoned area already allows urban uses, and only the EFU-zoned portion of the Site falls

within the definition of "undeveloped rural land." However, out of abundance of caution and pursuant to direction at the pre-application conference, the Applicant addresses Goal 14 criteria for the entire Site.

> ***(2) A county can justify an exception to Goal 14 to allow the establishment of new urban development on undeveloped rural land. Reasons that can justify why the policies in Goals 3, 4, 11 and 14 should not apply can include but are not limited to findings that an urban population and urban levels of facilities and services are necessary to support an economic activity that is dependent upon an adjacent or nearby natural resource.***

Response: OAR 660-014-0040(2) provides an example of a reason that is sufficient to justify urban development on rural land, but it does not limit the bases for a reasons exception to those listed in the statute. According to LUBA's ruling in *Schaefer v. Marion County*, LUBA No. 2020-108 (2022), "OAR 660-014-0040(2) expressly provides a non-exclusive basis for a reasons exception."

Reasons justifying exceptions from policies in Goal 3 are detailed in the response to OAR 660-004-0020(2)(a) and those reasons also support exceptions to Goals 11 and 14. The response identifies the essential siting criteria for developing an Exascale Data Center Campus, which include but are not limited to characteristics such as close proximity to existing high-capacity electrical transmission lines; access to adequate water supply, wastewater disposal capacity, telecommunications and fiber-optic routes; and adequate site size and configuration to accommodate multiple 200,000+ SF buildings and associated vehicle access, circulation, and parking. The applicant evaluated other possible alternative areas to determine whether it could reasonably accommodate these needs, identifying no reasonable alternative areas within a large study area surrounding the Site.

Further, a portion of the Site is already zoned for more dense industrial uses (i.e., space age-related research and development facilities). The Limited Use Overlay will restrict the potential uses of the Site to data centers and related infrastructure, which involve a relatively small number of employees, thus eliminating the potential that the proposal will increase density.

Finally, the Site is proximate to existing urban water systems serving the Boardman Airport and adjacent lands zoned ALI, which will minimize the need to extend significant water infrastructure to the Site. At the time of this application, a construction project is underway to install a water service line along the full length of Boardman Airport Lane west of Tower Road, which is intended to serve an adjacent approved data center facility to the east of the Site. The Site will rely on that water infrastructure and require only a short extension across the rail spur to connect. So Goal 11's intent to prevent the proliferation of urban uses in rural areas caused by the availability of urban-level services extended beyond UGBs is largely not implicated due to the fact that the Limited Use Overlay restricts industrial uses to data centers, and the Boardman Airport area (which will include the development for a recently approved data center campus) directly to the east already allows for extension of urban-scale services.

The application materials set forth multiple reasons why this Site is suitable for this scale of urban development and provide the County with substantial evidence to support the justifications necessary for the requested goal exceptions to Goals 11 and 14.

See also Application at pages 32 with technical evidence in Exhibits 7 and 8. This criterion is met.

(3) To approve an exception under section (2) of this rule, a county must also show:

(a) That Goal 2, Part II (c)(1) and (c)(2) are met by showing that the proposed urban development cannot be reasonably accommodated in or through expansion of existing urban growth boundaries or by intensification of development in existing rural communities;

Response: As discussed above, Applicant's Alternative Areas Analysis Exhibit 7 demonstrates that the proposed exascale data center campus development cannot be reasonably accommodated within an existing UGB.

Applicant also notes that an exascale data center cannot be reasonably accommodated through the expansion of an existing urban growth boundary due to several factors. First, the unique infrastructure requirements of an exascale data center, such as proximity to high-capacity electrical transmission lines, are not typically available within or near existing UGBs. These large-scale data center facilities require a substantial and uninterruptible power supply, which necessitates direct access to high-capacity transmission lines. Expanding a UGB to include areas with such infrastructure would be impractical and costly.

Second, the scale of land required for an exascale data center campus, generally requiring 1,000 acres or more, is not readily available within or adjacent to existing UGBs. Land areas closer to urban areas are generally characterized by higher land values and fragmented ownership, making it challenging and economically infeasible to assemble large, flat, vacant contiguous parcels of land for such development.

Third, the environmental and social impacts of situating an exascale data center near urban areas pose significant challenges. These facilities can generate noise and emissions from backup diesel generators which could adversely affect nearby residential communities. The facilities also often are sited with industrial wastewater cooling ponds, electrical substations and other energy facilities, security fencing and other infrastructure, which may generate impacts typically associated with uses outside of UGBs.

A related factor is that siting exascale data centers within or on the perimeter of existing urbanized areas poses a complicating challenge for planning future growth of efficient, compact communities. Exascale Data Center Campus development involves a very high amount of capital infrastructure investment, and so can be expected to persist for a long service life; for planning purposes, they should be considered irrevocably committed to such use. As cities plan to meet land needs associated with population growth and resulting needs for housing, employment, institutional and open space lands, the large size of EDC campus sites within or on the edges of existing urban areas would compel cities to "leapfrog" over them in order to accommodate growth. For example, each side of a square 1,000-acre area

would be 1.25 miles long, interrupting a contiguous expansion pattern for other urban uses in both dimensions. The resulting development pattern would accelerate sprawl by substantially increasing the distances between older parts of the community and newer development areas forced to locate on the opposite side of an intervening EDC campus. Such a development pattern would be very detrimental from the standpoint of trying to create compact and efficient urban communities, by increasing distances for commuting and other circulation, as well as for construction and maintenance of utility services.

By contrast, siting an exascale data center away from a UGB, and in particular at the Site, enables it to be proximate to necessary large-scale utility infrastructure, to minimize any potential impacts on urban communities, and generally to present a more viable and efficient location to meet a documented demand for this large-scale industrial use. The 1,298-acre Site located west of the Boardman Airport is adjacent to the east bank of Sixmile Creek, which is a logical boundary for the proposed Site. Service from existing high-capacity electric power transmission lines can be made available to the Site and, because urban-level water and transportation services are available to the Airport area, including an adjacent forthcoming data center campus at the western terminus of the improved Boardman Airport Lane, only short extensions are necessary to reach and serve the Site.

Significantly, in the context of meeting land needs that operate at a regional scale, for any of the cities in the area to justify expanding its UGB for exascale data center campus development, the Goal 9 process would require an Economic Opportunities Analysis (EOA) justifying a UGB expansion of 1,000+ acres for a single land use to meet that city's population growth forecast and associated land needs. Such a land area being brought into a UGB expressly for EDCC use would need to be made ineligible for other industrial uses. And a consolidated site of sufficient size, along with the other required site characteristics, would have to be identified contiguous to the existing UGB. Absent an identified user, such a large-acreage site could remain in the UGB indefinitely as surplus industrial land. For these reasons, the established UGB expansion process requires a level of certainty that makes it less supportable under these specific implementing regulations addressing UGB expansions as an alternative to reliance upon the Goal 2 exception process to accommodate compliance with all of the EDCC siting criteria required for exascale data center campus development.

So, particularly in the context of this proposal, the "reasons exception" process is preferable to the UGB expansion process for several reasons:

(1) The necessary designation change is a voluntary proposal submitted by the owner of the property as the applicant.

(2) The proposed designation change (MG with Limited Use Overlay) only allows for the specific urban use – data center – that is the basis for the "reasons" exception.

(3) The proposed designation change contributes significantly to the need to allocate land on a regional basis, responding to a documented recent dramatic increase in land demand for a novel industrial activity.

(4) The proposal will continue to allow EFU uses on the property unless and until data center development becomes economically feasible. Even if such use ultimately is not realized, the protections inherent in the land use approval process will require a new exception before any other urban use or development can occur.

See also Application at pages 32-34, with technical evidence in Exhibit 7, incorporated by reference herein. This criterion is met.

(b) That Goal 2, Part II (c)(3) is met by showing that the long-term environmental, economic, social and energy consequences resulting from urban development at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located on other undeveloped rural lands, considering:

(A) Whether the amount of land included within the boundaries of the proposed urban development is appropriate, and

(B) Whether urban development is limited by the air, water, energy and land resources at or available to the proposed site, and whether urban development at the proposed site will adversely affect the air, water, energy and land resources of the surrounding area.

Response: The proposed Site includes 1,298 acres, which is appropriate and necessary for the development of an exascale data center campus, based on the size of comparable examples cited in the Applicant's Economic Impact Analysis at Exhibit 8. The size of the Site is necessary to accommodate multiple large buildings, power substations, supporting infrastructure, and landscape features, ensuring construction and operational efficiency and minimizing off-site impacts. The Site is not limited by air, water, energy or land resources. The Applicant has obtained service provider letters indicating the availability of necessary power and water. The Site's proximity to existing high-capacity transmission lines and other infrastructure to the east near the Boardman Airport and an approved data center development minimizes the need for extensive new infrastructure, thereby reducing potential adverse effects on surrounding resources.

See also Application at page 34 with technical evidence in Exhibits 8 and 17A, B and C, incorporated by reference herein. This criterion is met.

(c) That Goal 2, Part II (c)(4) is met by showing that the proposed urban uses are compatible with adjacent uses or will be so rendered through measures designed to reduce adverse impacts considering:

(A) Whether urban development at the proposed site detracts from the ability of existing cities and service districts to provide services; and

(B) Whether the potential for continued resource management of land at present levels surrounding and nearby the site proposed for urban development is assured.

Response: The Applicant has obtained service provider letters for power and water. These letters indicate that the necessary services are available for an Exascale Data Center Campus. In addition, the data center development is anticipated to rely upon on-site services for sanitary sewer and industrial wastewater disposal. Further, the provision of services will be addressed in detail during the County's Site Plan Review approval, prior to any development of the Site.

Applicant has examined possible adverse impacts on surrounding resource lands under the response to OAR 660-004-0020(2)(d). The proposed exceptions Site is adjacent to a large-scale commercial agriculture operation to the west and south, but potential adverse impacts will be mitigated by the natural and physical features bounding the Site, and compliance with state regulations related to air quality and wastewater disposal. Notably, the operator of that farm is the Applicant for this proposal, which further indicates the farm operator is not concerned with its ability to manage and operate the farm.

See also Application at pages 34-35 with technical evidence in Exhibits 8 and 17A and B, incorporated by reference herein. This criterion is met.

(d) That an appropriate level of public facilities and services are likely to be provided in a timely and efficient manner; and

Response: The appropriate level of public facilities and services needed for an Exascale Data Center Campus is defined in the introductory sections of the Findings above, the applicant's narrative report and responses to OAR 660-004-0020. These include power and water supply, vehicular access, and telecommunication facilities including fiber-optic internet service. These services exist in the vicinity and Applicant has obtained service provider letters from the Port of Morrow and Pacific Power to demonstrate these providers are able to provide the required service levels, which ensures their provision in a timely and efficient manner.

In addition, any developer or end user will be required to demonstrate adequate provision of facilities as part of Site Plan Review. In particular, the Morrow County Zoning Ordinance will require the end user to demonstrate that "electrical services … are adequate for the proposed use" prior to receiving site plan approval under MCZO 5.020.E.4. Further, any end user will need to demonstrate that "*water is or will be available to the site at a quantity and quality adequate for the proposed use*" prior to receiving site plan approval under MCZO 5.020.E.2. Pursuant to robust site plan review criteria relating to water, "*[n]ew developments that rely on a non-exempt groundwater source must (1) provide an estimated annual water usage, and (2) identify the necessary OWRD authorizations required to serve the estimated water need. All other developments that do not rely on groundwater as a source of water may satisfy this review criteria by submitting a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site, which shall indicate the source of water (e.g., surface water, existing water right, etc.) and a targeted delivery for water to the site.*" MCZO 5.020.E.2.

Applicant anticipates that exascale data center campus development at the Site will rely upon on-site industrial septic and industrial wastewater evaporation ponds. Evaluation of the precise mechanism for disposal and treatment of wastewater will also be a requirement of Site Plan

Review, pursuant to MCZO 5.020.E.3, which requires that demonstration that "*[a]dequate sewage disposal and wastewater management can be provided for the proposed use as determined by the service provider or by demonstrating compliance with applicable review authority standards, as set forth below. For new developments that will rely on third-party service providers for sewer and/or wastewater disposal, the applicant may satisfy this criterion by submitting a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site. For new developments that will rely on on-site septic and/or industrial wastewater and/or non-contact cooling water disposal and/or treatment, the applicant may satisfy this criterion by identifying the necessary ODEQ permits, as required by the state regulations, to be obtained prior to commencement of the proposed use or certificate of occupancy being granted.*"

See also Application at pages 35-36, with technical evidence in Exhibits 17A, 17B, and 17C, incorporated by reference herein. This criterion is met.

(e) That establishment of an urban growth boundary for a newly incorporated city or establishment of new urban development on undeveloped rural land is coordinated with comprehensive plans of affected jurisdictions and consistent with plans that control the area proposed for new urban development.

Response: This proposal involves the establishment of new urban development on undeveloped rural land. The reasons that are used to justify the necessary goal exceptions will be adopted into the Morrow County Comprehensive Plan. Substantial evidence in the record supports findings of consistency with existing Comprehensive Plan and MCZO policies. No expansion of the nearby Boardman UGB is being proposed. This criterion is met.

(4) Counties are not required to justify an exception to Goal 14 in order to authorize industrial development, and accessory uses subordinate to the industrial development, in buildings of any size and type, in exception areas that were planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 (Industrial development on industrial lands outside urban growth boundaries) and 197.714 (Cooperation of county and city concerning industrial development).

Response: The Site includes 331 acres of land in the SAI zone, which was implemented prior to January 1, 2004 and allows for industrial use of that portion of the Site. Based upon a lack of clarity regarding whether ORS 197.713 allows for the subsequent addition of new industrial uses in such areas without a new exception, Applicant has requested new exceptions because the SAI zone is limited to uses addressed in the earlier exception, which do not include data center development. This criterion is met.

3. OAR 660-012-0060 (Transportation Planning Rule)

660-012-0060 – Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures

as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response: Applicant has provided a Transportation Planning Rule (TPR) analysis report at Exhibit 9 and a Supplemental Traffic Memo at Exhibit 9A by David Evans and Associates (DEA). The report and memo address Statewide Planning Goal 12 and compliance with the Transportation Planning Rule (TPR). Summarizing from those technical documents:

- The proposed zone change is projected to generate fewer trips than allowable under the existing zoning for the subject Site. As a result, the proposed zone change does not constitute a "significant effect" on the local transportation system.

- The proposal will not significantly affect any transportation facility by either: (1) changing any TSP roadway functional classification or roadway configuration; (2) changing the standards that implement the functional classification system; or (3) degrading the performance of an existing or planned facility beyond the projected performance of such facilities at the end of the planning period identified in the adopted TSP.

- Boardman Airport Lane is not identified in the County's currently adopted 2012 TSP and, thus, carries no classification, but the Port of Morrow has already constructed it consistent with the applicable design section in the TSP for a Rural Arterial II roadway.

With adoption of the proposed rezoning, projected vehicle trip volumes are consistent with the capacity of Boardman Airport Lane's existing built condition.

- Although the report indicates that one ramp terminal and two intersections are anticipated to fail in year 2044 under current EFU/SAI zoning. See Table 10 in Exhibit 9, the analysis also demonstrates that only two of those three projected failures will occur under the proposed rezoning, and that the two intersection failures will be less severe and will occur later in the planning period under the proposed zoning than under the current zoning. The report further observes that the projected intersection failures can be easily mitigated with traffic signalization when future traffic volumes reach a level that warrants it.

- Morrow County will have opportunities to impose conditions of approval in required Site Plan Review procedures prior to development occurring under the proposed zoning change, with mitigation measures correctly aligned with the impacts of the actual development proposal(s).

See also Applicant's Narrative Report at pages 29-30 with technical evidence in Applicant's Exhibits 9, 9A and 17C as incorporated herein. These criteria are met.

(5) The presence of a transportation facility or improvement shall not be a basis for an exception to allow residential, commercial, institutional or industrial development on rural lands under this division or OAR 660-004-0022 (Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)) and 660-004-0028 (Exception Requirements for Land Irrevocably Committed to Other Uses).

Response: This provision is not applicable because the Applicant has provided substantial evidence in the record of reasons to support the requested Goal exceptions, independent of the fact that the existing Boardman Airport Lane, located on exception land in the ALI Zone, has already been improved west from Tower Road to the east edge of the rail spur that extends south to the Carty Generating Station.

660-012-0065 – Transportation Improvements on Rural Lands

(1) This rule identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception.

Response: Existing improved transportation facilities – more particularly Boardman Airport Lane and Tower Road – will provide access to the Site. Both those facilities are within approved/acknowledged urban exception lands. Following approval of the proposed Comprehensive Plan Map/Zoning designation change, the short extension of Boardman Airport Lane to serve the Site (i.e., crossing the Carty Generating Station railroad spur) will also be within the Goal exception area and this will be urban land. Therefore, the proposal does not involve future transportation improvements on rural lands, and OAR 660-012-0065 is not applicable.

See also Applicant's Narrative Report at pages 30-31 with technical evidence in Exhibits 9, 9A and 17C, as referenced and incorporated herein.

660-012-0070 – Exceptions for Transportation Improvements on Rural Land

(1) Transportation facilities and improvements which do not meet the requirements of OAR 660-012-0065 (Transportation Improvements on Rural Lands) require an exception to be sited on rural lands.

(a) A local government approving a proposed exception shall adopt as part of its comprehensive plan findings of fact and a statement of reasons that demonstrate that the standards in this rule have been met. A local government denying a proposed exception shall adopt findings of fact and a statement of reasons explaining why the standards in this rule have not been met. However, findings and reasons denying a proposed exception need not be incorporated into the local comprehensive plan.

(b) The facts and reasons relied upon to approve or deny a proposed exception shall be supported by substantial evidence in the record of the local exceptions proceeding.

Response: As in the response to OAR 660-012-0065 above, existing improved transportation facilities in approved/acknowledged exception areas – more particularly Boardman Airport Lane and Tower Road – will provide access to the Site. Following approval of the proposed Comprehensive Plan Map/Zoning designation change, the short 50 foot extension of Boardman Airport Lane necessary to serve the Site i.e., crossing the Carty Generating Station railroad spur will also be within the Goal exception area and thus will be converted from rural to urban land upon approval. It is well established that OAR 660-012-0070 does not require an exception for future transportation improvements when, for example, the land is converted to urban land due to inclusion in an urban growth boundary, which also will be the case upon approval of exceptions to Goals 11 and 14 and the concurrent application of urban zoning in this instance. *Deumling, et al v. City of Salem*, 76 OR LUBA 99 (2017); *1000 Friends, et al. v. Curry County*, 301 Or 447, 498-501 (1986). Therefore, the proposal does not involve transportation improvements on rural lands, and OAR 660-012-0070 is not applicable.

See also Applicant's Narrative Report at page 31 with technical evidence in Applicant's Exhibits 9, 9A and 17C, as incorporated by reference herein.

E. Compliance with Statewide Planning Goals

Morrow County adopts these findings to show that the request complies with applicable Statewide Planning Goals. This application includes an exception to three Statewide Planning Goals: 3, 11 and 14.

1. Goal 1 (Citizen Involvement): To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

Response: Generally, Goal 1 is satisfied when a county complies with public notice and hearing requirements in the Oregon Statutes and in the local Comprehensive Plan and Land Use Code. The County's Zoning Ordinance is consistent with State law with regard to notification requirements. Pursuant to Section 9 of Morrow County Zoning Ordinance at least one public hearing before the Planning Commission and Board of Commissioners is required. Legal notice in a newspaper of general circulation is required. The County has met these requirements and notified DLCD 35 days prior to the first evidentiary hearing.

2. **Goal 2 (General Land Use): To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.**

Response: Findings provided to implementing regulations in OAR 660-004 and OAR 660-014-0040 demonstrate that the proposed zoning redesignation package complies with "reasons" exception criteria. In addition to demonstrating that the proposed Site to be rezoned to allow data center use is superior and preferable to alternative potential areas within a sizable vicinity, the request incorporates a request to downzone approximately 1,623 acres of SAI land to EFU, to ensure no net loss of productive agricultural land will occur. The proposal therefore maintains consistency with policies in the comprehensive plan.

3. **Goal 3 (Agricultural Land): To preserve and maintain agricultural lands.**

Response: Applicant requests a Goal 3 exception. Goal 3 requires Morrow County to protect agricultural lands for farm uses through appropriate zoning. With respect to the Site, Applicant's submittal materials include detailed responses to "reasons" exception standards in OAR 660-004 and supporting evidence, which demonstrate that the proposed zoning redesignation package complies with Goal 3.

The request proposes conversion of approximately 1,623 acres from SAI to EFU, ensuring that no net loss of productive agricultural land will occur. The Applicant has provided geotechnical/soils analysis documentation demonstrating that the Downzone Area contains superior soil conditions, and is actively farmed and irrigated. In particular, the Downzone Area contains Class IVe soils and is far more suitable for the proposed Agriculture/EFU designation than the EFU-zoned soils at the Site, because the Site has many agricultural limitations (e.g., shallow soils, mounds, lack of irrigation), would require substantial financial and time investment to achieve a cultivation condition, and even if such condition were achieved, would still be inferior to the agricultural condition of the downzone study area. As noted in the Downzone Area Soils Report at Applicant's Exhibit 10B, given these limitations the land proposed for upzoning (the Site) is not likely to become cultivation land, while the approximately 1,623 acres proposed for downzoning are likely to remain in high-value crop production due to favorable soil conditions and associated improvement (irrigation, land leveling, access, etc.).

Thus, although there is no applicable local or state criterion requiring a corresponding downzone to Exclusive Farm Use zoning as a condition of the proposed upzone approval. This concurrent

request to eliminate the potential for non-agricultural uses in the Downzone Area is sufficient to ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

See also Application at page 69 with technical evidence at Exhibits 2, 7, 10A and 10B, as referenced and incorporated herein.

4. **Goal 4 (Forest Lands): To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.**

Response: The proposal does not affect lands that are designated for forest uses. Goal 4 does not apply.

5. **Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources): To protect natural resources and conserve scenic and historic areas and open spaces.**

Response: The County Comprehensive Plan has not identified any significant natural, scenic, historic or open space areas within or near the Site, or within the proposed Downzone Area. Per the analysis in the Natural Resources Assessment at Applicant's Exhibit 12, there are no significant Goal 5 resources that would be affected by this proposal to amend land use designations. To protect confidential location information that may be critical to cultural resource conservation efforts, Applicant reports completing an Archaeological and Cultural Resources Assessment and sharing it with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) for review, comment, and coordination; CTUIR was provided notice of this application and can provide comments directly to the County during the public hearing process.

Within the Applicant's property but outside and west of the Site (the proposed exception area), on the east bank of Sixmile Creek, the Oregon Department of Geology and Mineral Industries (DOGAMI) issued permit #25-0006 to Three Mile Canyon Farms for the "Six-Mile Pit." See Exhibit 16; the permit location is labeled "25006" on the Significant Resource Overlay Map. The permit allows the extraction of screened sand and gravel from a 12-acre area that the County has not designated as "Goal 5 Significant." The Applicant intends to retain the facility's current EFU zoning, maintain its active status under the permit, and provide for vehicular access to it in any future development plans for the Site. All relevant areas are under common ownership (i.e., owned by Three Mile Canyon Farms, LLC). This proposed approach will allow extraction under the existing DOGAMI permit to continue until the permit is terminated.

The Significant Resource Overlay Map also includes a dot within the Site identified as "25008." DOGAMI permit #25-0008, issued to Portland General Electric Company, is listed by DOGAMI as a "Riprap Quarry" site for extraction of "rock." Its permit is listed as "Closed" in the DOGAMI Permit Data spreadsheet (updated January 6, 2021), and there is no corresponding line

item in the County's "Inventory of Natural Resources/Aggregate and Mineral Resources" table, included in Exhibit 16. As in the case of DOGAMI permit #25-0006, the facility is not identified as a significant Goal 5 resource, so this request will have no effect on significant Goal 5 resources. Moreover, because the permit's status is closed, no further extraction activity is expected at this permit location. Post-extraction reclamation for a different use will be consistent with the Goal 5 process as it applies to mineral/aggregate resource sites.

See also Application at pages 37-38 and 69, with technical evidence at Exhibits 11 and 12, as incorporated by reference herein.

6. **Goal 6 (Air, Water and Land Resources Quality): To maintain and improve the quality of the air, water and land resources of the state.**

Response: The State of Oregon has adopted statutes and administrative rules to protect air, water and land resources from environmental impacts of development and land use activities. In the site development and construction permitting processes that will follow this amendment proposal, pursuant to MCZO 5.020 and proposed Conditions of Approval (see page 3 above), all future development and use of the Site will be required to comply with permitting requirements for air quality management, stormwater management (i.e., the Oregon Department of Environmental Quality 1200-C process), wetland fill/removal (i.e., the Joint Removal/Fill Permit process administered by the US Army Corps of Engineers and Oregon Department of State Lands), wastewater discharge, and other such permitting. Since all proposed developments will be contingent on the receipt of any such required state and federal permits, compliance with Goal 6 is assured.

Regarding noise as an environmental impact issue, the Site is located west of the Boardman Airport and distant from any noise-sensitive receiver sites or uses, such as residential development. Based on the Site's large distance from noise-sensitive sites, and the occasional background noise levels associated with aircraft take-off and landing activities at the Airport, there is no reason to anticipate any exceedance of applicable noise control standards arising from future development under the proposed land designation/zoning amendment.

See also Application at pages 38 and 70, with technical evidence at Exhibits 11 and 12.

7. **Goal 7 (Areas Subject to Natural Disasters and Hazards). To protect people and property from natural hazards.**

Response: The subject Site does not contain mapped flood or geologic hazards. See FEMA FIRM Panels at Exhibit 14, and DOGAMI SLIDO Maps at Exhibit 15. The proposed amendment will have no effect on Morrow County's compliance with Goal 7.

Further, as to this particular Site, the Morrow County Comprehensive Plan does not require compliance with the Community Wildfire Protection Plan. However, prior to any development on the Site, MCZO 5.020 (site plan review) will apply, and this provision provides that "development in hazard areas identified in the Morrow County Comprehensive Plan, Natural

Hazard Mitigation Plan, or Community Wildfire Protection Plan shall comply with all applicable requirements.

8. **Goal 8 (Recreational Needs): To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.**

Response: The proposal does not affect recreational facilities or land needed to meet Morrow County's recreational needs. Goal 8 does not apply.

9. **Goal 9 (Economic Development): To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.**

Response. Applicant has provided an economic analysis at Applicant's Exhibit 8, which identifies demand for an estimated 3,000 acres (or more) of land in the vicinity in the next 10 years, to meet the rapidly growing demand for data center services. That report observes that the availability of sufficient, reliable electric power and other critical location factors make the Morrow County segment of the Columbia River corridor region attractive for such uses – including at the exascale-level – and the report also notes that the highly competitive, time-critical nature of that industry makes it imperative for jurisdictions to ensure that their regulatory environments and inventories of eligible and available land combine to offer feasible development opportunities that align with industry drivers. In addition to the direct economic benefits attributable to having Exascale Data Center Campuses located in Morrow County, their presence is expected to induce beneficial secondary economic effects on the local economy. Adopting the proposed land designation amendments is a fundamental first step in ensuring that Morrow County will enjoy the health, welfare and prosperity benefits of this emerging economic development trend.

See also Application at pages 39 and 70, with technical evidence at Exhibit 8.

10. **Goal 10 (Housing): To provide for the housing needs of citizens of the state.**

Response: The proposal does not affect the provision of housing. While development of the site will likely increase demand for housing, the proposed amendments have no direct effect on Morrow County's compliance with Goal 10.

11. **Goal 11 (Public Facilities and Services): To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.**

Response: The findings presented above in response to compliance with OAR 660-014-0040 support the County's decision to adopt an exception to Goal 11 in order to address the documented demand for land for exascale data center development. And Goal 11's intent to prevent the proliferation of urban uses in rural areas caused by the availability of urban-level services extended beyond UGBs is largely not implicated due to the fact that the Limited Use

Overlay restricts industrial uses to data centers, and the Boardman Airport area (which will include the development for a recently approved data center campus) directly to the east already allows for extension of urban-scale services.

12. Goal 12 (Transportation): To provide and encourage a safe, convenient and economic transportation system.

Response. Applicant has submitted a Transportation Planning Rule (TPR) analysis (per OAR 660-012), which demonstrates that a Goal 12 exception is not required because the land use activity to be allowed by the proposed zoning (data center) will not require extension of urban transportation improvements on rural lands, and the land use designation changes will have no significant effect on transportation facilities identified in the Transportation System Plan (TSP). Data center use of the Site is projected to produce fewer trips than other development that is allowed under the Site's current zoning designations (SAI and EFU). Additionally, the Port of Morrow has constructed Boardman Airport Lane between Tower Road and the Site with paved width and other features consistent with the Rural Arterial II standard in the TSP.

13. Goal 13 (Energy Conservation): To conserve energy.

Response. The Site's location – close to existing electric power transmission lines – makes it highly efficient and cost-effective to meet the power needs of Exascale Data Center Campus operations. Additionally, EDCCs yield operational efficiency benefits because the concentration of operations on a single campus facilitates consolidation of inventories and performance of maintenance/repair/upgrade activities with a minimum of off-site travel and associated effects such as fuel consumption, traffic, increased vehicle miles traveled (VMT), and operational delays. This proposal to redesignate the Site to allow Exascale Data Center Campus use responds to society's accelerating computing needs – and associated demand for large tracts of land – in a way that provides for efficient construction and operations of sufficient and suitably located facilities.

See also Application at page 41, with technical evidence at Exhibit 8.

14. Goal 14 (Urbanization): To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.

Response. To support the request for an exception to Goal 14 to allow large-scale data center campus development of the 1,298-acre Site, Applicant has provided evidence and findings that address the Goal 14 exception standards in OAR 660, Division 14.

Statewide Planning Goal 15 (Willamette River Greenway), Goal 16 (Estuarine Resources), Goal 17 (Coastal Shorelands), Goal 18 (Beaches and Dunes), and Goal 19 (Ocean Resources) are not applicable because the Site is not located near these resources/areas.

F. Compliance with Morrow County Comprehensive Plan and Land Use Regulations

1. MCZO 8.040 Criteria for Amendments

MCZO 8.040, CRITERIA. The proponent of the application or permit has the burden of proving justification for its approval. The more drastic the request or the greater the impact of the application or permit on the neighborhood, area, or county, the greater is the burden on the applicant. The following criteria shall be considered by the Planning Commission in preparing a recommendation and by the County Court in reaching their decision.

A. The local conditions have changed and would warrant a change in the zoning of the subject property(ies)

Response: Applicant's evidence includes a report from Johnson Economics at Exhibit 8 that documents a recent economic/land development trend: deployment of Artificial Intelligence (AI) services across a wide range of applications is spurring a rapid – and only recently emerging – expansion in computing demand. That growth is in turn spurring demand for land suitable for Exascale Data Center Campus siting. The Johnson Economics report projects that Morrow County can expect EDCC development to absorb an estimated 3,000 acres of land within the coming 10-year period.

Up to the present, comprehensive land use planning by Morrow County and other jurisdictions in the vicinity has relied on estimates of industrial/employment land needs that have been based on a familiar mix of historic demand drivers, supplemented by Economic Opportunities Analyses (EOAs) to identify strategic opportunities and make projections for associated land needs; however, the novel nature of the emerging trend includes the very recent advent of demand for AI services, which has recently dramatically accelerated demand for mass computation capabilities requiring multiple buildings on large campus sites served by direct connections to high-capacity power transmission lines and fiber optic communications/internet service. See also Application at pages 60-61, 89.

The Johnson Economics report identifies changes in the need and market demand for tracts of industrial land suitable for the specific needs of EDCCs. These changes in local conditions are sufficient to warrant the proposed change in the zoning of the Site. This criterion is met.

B. The public services and facilities are sufficient to support a change in designation including, but not limited to, water availability relevant to both quantity and quality, waste and storm water management, other public services, and streets and roads.

Response. As noted above, service provider letters for power (Pacific Power) and water (Port of Morrow) indicate that the necessary services are available, or will be available, for EDCC development on the Site. See Exhibits 17A and 17B. In addition, the data center development is anticipated to rely upon on-site services for sanitary sewer and industrial wastewater disposal. Such new infrastructure would be planned and sized to accommodate the proposed data center development(s) on this Site and, therefore, would not detract from the ability of Boardman to provide such services. Finally, as described more fully in the application materials, provision of

services will be addressed in detail during the County's Site Plan Review approval, prior to any development of the Site. See also Application at pages 61-64 and 89-90.

With respect to road access and traffic, existing improved transportation facilities – more particularly Boardman Airport Lane and Tower Road – will provide adequate access to the Site. See Exhibit 17C. Further, the Applicant has provided a Traffic Analysis at Exhibit 9 and Supplemental Traffic Memo at Exhibit 9A addressing Statewide Planning Goal 12 and compliance with the Transportation Planning Rule (TPR). To summarize, the proposal will not "significantly affect" any transportation facility because the proposed zone change is projected to generate fewer trips than allowable under the existing SAI/EFU zoning for the subject Site. Finally, Morrow County will have opportunities to impose conditions of approval during Site Plan Review approval, prior to development, at which time mitigation measures can properly align with impacts from an actual development proposal. See also Application at pages 28-31, 61, and pages 89-90.

With respect to other public services, data center developments to date have not been associated with unusual levels of police activity or need for community services, but data centers' payrolls as well as the employment and property tax revenues they provide to local jurisdictions contribute significantly to funding needed for police, emergency and other public services. The proposed redesignation will contribute positively to achieving these policies. See Application at pages 52-54, with technical supporting evidence at Exhibit 8. This criterion is met.

> ***1. Amendments to the zoning ordinance or zone changes which significantly affect a transportation facility shall assure that land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:***
>
> ***a. Limiting allowed land uses to be consistent with the planned function of the transportation facility or roadway;***
>
> ***b. Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,***
>
> ***c. Altering land use designations, densities, or design requirements to reduce demand for automobile travel to meet needs through other modes***.

Response. As discussed below, this amendment request does not significantly affect a transportation facility, therefore this Subpart and Subpart (2), discussed below, do not apply to this application.

> ***2. A plan or land use regulation amendment significantly affects a transportation facility if it:***
>
> ***a. Changes the functional classification of an existing or planned transportation facility;***
>
> ***b. Changes standards implementing a functional classification;***

c. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or

d. Would reduce the level of service of the facility below the minimal acceptable level identified in the Transportation System Plan.

Response. Applicant's submittal includes a Transportation Planning Rule (TPR) compliance report and a supplemental memo from David Evans and Associates at Exhibits 9 and 9A, which establish that the proposed change in zone designation and associated allowed development will not "significantly affect" any transportation facility because the proposed zone change is projected to generate fewer trips than allowable under the existing SAI/EFU zoning for the subject Site. That conclusion is reasonable due to the proposed LU Overlay designation restricting use to data center, which is consistent with the types of travel demand reducing strategies authorized in subparagraphs a and c of Subpart 1 quoted above, and the net reduction in vehicular trips to and from the Site as compared with reasonable worst-case trip generation under current zoning. See also Application at pages 61-62 and 89-90.

C. That the proposed amendment is consistent with unamended portions of the Comprehensive Plan and supports goals and policies of the Comprehensive Plan, that there is a public need for the proposal, and that the need will be best served by allowing the request. If other areas in the county are designated for a use as requested in the application, then a showing of the necessity for introducing that use into an area not now so zoned and why the owners there should bear the burden, if any, of introducing that zone into their area.

Response. Applicant's materials address the four discrete tests in this Subpart. First, the Applicant identified and responded to each of the Policies and Objectives of the Morrow County Comprehensive Plan that are relevant to, or could be affected by, the proposed amendment. See Application at pages 74-87. Second, Applicant's Exhibit 8 contains an economic report from Johnson Economics that documents recent accelerating growth in data processing as a service, largely associated with broad adoption of AI services, which is causing a recent, rapid increase in demand for, and construction of, Exascale Data Center Campuses. It estimates a demand for an additional 3,000 acres for data center development in the region over the next 10 years. Third, Applicant's Exhibit 7 contains an analysis of alternative areas within a large vicinity east and west of the Site pursuant to Oregon Administrative Rules (OAR) exceptions standards, which demonstrates that the Site is the best situated location with respect to multiple siting factors, whether examined individually or in combination. And fourth, regarding the question of placing a burden on the owners of property where the new zoning would be introduced, this application has been presented by Threemile, who owns the property as well as much of the surrounding area. Threemile has adequately considered how the proposed rezoning would affect its properties and operations, and is satisfied that rezoning as proposed is preferable to maintaining the existing zoning designations as they apply to this Site. See also Application at pages 44, 62 and 90-91. This criterion is met.

D. The request addresses issues concerned with public health and welfare, if any.

Response. Economic development is an important public health and welfare issue of concern to Morrow County, and the recent, rapid and broad-based popular adoption of AI technology services is spurring a rapid increase in demand within northern Morrow County and the surrounding vicinity for large tracts of land to support Exascale Data Center Campus development and use see Exhibit 8. Communities in the Columbia River corridor have already found themselves well positioned to compete to attract regional data center developments: the presence of sufficient electric power and transmission lines, Interstate 84, and high-capacity fiber optic facilities in the Columbia River corridor, together with available suitably-zoned land with sufficient buffering from other uses has already led to numerous data center development projects completed or now in process. But those projects have generally occupied about 150 acres or less, and have utilized land already zoned to allow data center development, reducing available inventories of industrially-zoned buildable land available to meet other economic development needs and objectives. For this reason, identifying particularly suitable locations and designating land for EDCC development and use contributes to public health and welfare, by meeting emerging needs while keeping adopted Economic Development planning on track.

Separately, regarding public health and welfare issues associated with impacts of industrial development and use activities, EDCCs are normally equipped with backup diesel generators to avoid, or at least mitigate, occasional disruptions in data processing due to instability or outages in the electric transmission system. In populated areas, such generator activations and operations can result in perceived impacts at sensitive receptor sites, such as residences, even though the actual noise levels, air emissions and other effects may in fact be in compliance with applicable federal, state and local standards. But the relative isolation of the Site for the proposed zone change – west of the Boardman Airport, on the south side of the I-84 corridor and on the east bank of Sixmile Creek – dramatically reduces potential for such perceived impacts. See also Application at pages 62-63 and 91-92. This criterion is met.

2. MCZO 3.110 Criteria for Limited Use Overlay Zone

1. No other zoning district currently provided in the zoning ordinance can be applied consistent with the requirements of the 'reasons' exception statement because the zoning would allow uses beyond those justified by the exception.

Response. There are Morrow County base zones in which data center is an allowed use, but they also include use lists that would allow activities other than data centers within the Site. Because such other uses would be inconsistent with the purpose of this application and the exceptions from Statewide Planning Goals requested by this application, the LU Overlay is necessary and appropriate in conjunction with the proposed base rezoning to General Industrial (MG). This criterion is met.

2. The proposed zone is the best suited to accommodate the desired uses(s); and

Response. Applying the MG zone to the Site, together with an LU Overlay restricting land use to data center, is the best way to provide land for large-campus Exascale Data Center Campus development and use because data centers are typically consistent with the form, appearance, and sometimes very large scale of industrial sites and buildings in the MG zone and the proposed LU Overlay will reserve the full area of the Site for data center use, ensuring that other forms of

employment development will not seek to locate within the Site instead of at currently planned locations for such other uses. This criterion is met.

3. It is required under the exception rule (OAR 660, Division 4) to limit the uses permitted in the proposed zone.

Response. This provision implements OAR 660-004-0018(4)(a), which states that "when a local government takes an exception under the 'reasons' section of ORS 197.732(1)(c) and OAR 660-004-0020 through 660-004-0022, plan and zone designations must limit the uses, density, public facilities and services, and activities to only those that are justified in the exception." Findings are provided above responding to the "reasons" exception rules in OAR 660-004 in Section I.D.1 above and implementation of this provision of MCZO 3.110 limits the uses permitted under the proposed zone to only those justified in the exception. Consequently, approval of the requested goal exceptions necessarily requires the adoption and implementation of the overlay zone designation for the Site as proposed, to ensure compliance with applicable law as required under this code criterion.

B. Official Plan/Zoning Map. The official plan/zoning map shall be amended to show an LU suffix on any parcel where the Limited Use Overlay Zone has been applied.

Response. Staff will amend the map to show the LU suffice over this Site.

C. Site Plan Requirement. In addition to limiting the uses in the zone it may be necessary to require County approval of the location of buildings, access and parking, screening and other site planning considerations in order to ensure the compatibility of the permitted uses with the area. This requirement may be added by specific reference in the adopting ordinance. The ordinance shall indicate any special concerns or locational requirements that must be addressed in the site plan and be approved by the Planning Commission.

Response. Any development of this Site will first require Site Plan Review and approval, pursuant to MCZO 5.020. Further, the surrounding area is not currently improved or designated for any types of future development, such as residential, that would be considered sensitive to impacts affecting compatibility of uses. See also Application at 64-65. This criterion is met.

3. MCZO 3.092 Airport Safety and Compatibility Overlay Zone

A map of the imaginary surfaces for the Boardman Airport, including the boundary of the Site, is included in Exhibit 13. As indicated in the exhibit, the Site is partially within the horizontal and conical surface areas surrounding the runway. However, it will be feasible for future data center development to comply with the requirements in this overlay zone, as demonstrated by the conceptual site plan provided as Exhibit 4. This is because the Site is more than 5,000 feet from the Boardman Airport runway and only a small portion of the Site overlaps with the imaginary surfaces--at the eastern edge of the Site, nearest to the airport, a structure would have to be over 100 feet in height to penetrate the conical surface. Across the rest of the Site, structures could be well over 100 feet without penetrating the surface. Final compliance will be confirmed through the County's Site Plan Review process. See also Application at pages 65-67, with technical

supporting evidence at Exhibit 6. There is no incompatibility with the Airport Safety and Compatibility Overlay Zone presented by this application.

4. Compliance with Morrow County Comprehensive Plan Goals and Policies

Not all Comprehensive Plan Goals and Policies provide review criteria for a quasi-judicial application—i.e., aspirational goals and policies do not constitute review criteria. The discussion below focuses primarily on Morrow County Comprehensive Plan goals and policies that provide relevant and applicable criteria for this application.

(i) Goal 1 (Citizen Involvement)

The Citizen Involvement Goal develops and implements a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process. Citizen Involvement Policy 3 encourages people to attend and participate in Morrow County Planning Commission and County Court meetings and hearings. Procedures include notice to the public, Oregon State Agencies including the Departments of Land Conservation and Development (DLCD) and Transportation (ODOT), Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and other interested parties, and public hearings. The goal and policy are satisfied through the opportunities afforded to the public to participate at public hearings before the Morrow County Planning Commission and Board of Commissioners on the proposed amendments, as provided for by state law and the county's Zoning Ordinance.

(ii) Goal 2 (General Land Use)

General Land Use Policy 9 requires that all plan and zone changes comply with all applicable statewide planning goals and County policies and procedures. This policy can be satisfied upon approval of the Findings and analysis of compliance with the statewide goals and applicable County zoning provisions that are contained in this application.

In preparing to submit this request, the Applicant's team coordinated with staff of affected local governments (cities and counties), CTUIR, and utility service providers to identify issues of concern and address them in the analysis and recommendations, and to obtain data and service provider letters to support the analysis and proposed amendments.

Applicant has presented factual evidence and analysis findings – in particular, the responses provided above to implementing regulations in OAR 660-004 and OAR 660-014-0040 – demonstrating that the proposed redesignation package complies with "reasons" exception criteria. In addition to demonstrating that the proposed Site to be rezoned to allow data center use is superior and preferable to alternative potential areas within a sizable vicinity, the proposal incorporates equivalent-area conversions of land between resource and industrial zones, such that no net loss of productive agricultural land will occur. The proposal therefore maintains consistency with policies in the comprehensive plan, satisfying Goal 2 requirements.

See also Application at pages 42-45, with technical supporting evidence at Exhibit 8.

(iii) Goal 3 (Agricultural Lands Element)

Applicant is seeking a Goal 3 exception. Applicant's evidence and recommended findings addressed the Agricultural Lands Exceptions Objectives of the Comprehensive Plan.

Agricultural Lands Exceptions Objective 1 seeks "To maintain a viable agricultural base, preserve agricultural lands for agriculture, and to protect agriculture as a commercial enterprise." The proposal includes redesignation of more productive farmland from its current SAI zoning to EFU, which will replace the Site area proposed for EFU/SAI to MG redesignation. This exchange will ultimately remove 967 acres of non-productive land from EFU and replace it with approximately 1,623 acres of EFU-zoned land, which is actively farmed. This action contributes positively to meeting this objective.

Agricultural Lands Exceptions Objective 2 seeks "To conserve natural resources constituting important physical, social, aesthetic and economic assets through the development and adoption of realistic land use and development policies intended to achieve an economic-environmental balance, minimize public costs, and maximize energy conservation." Applicant's submitted evidence and recommended findings demonstrate that the proposed redesignations are consistent with land use and development policies. The Site contains no significant natural resources, and its geology and soils characteristics will not support cultivated farming. See Exhibit 10A. The needs of Exascale Data Center Campus development and use make the Site particularly suitable for data center use, which will contribute to the County economy while preserving other industrial-zoned lands for employment uses as intended by previous economic development and planning efforts. Public costs, which may include capital expenditures as well as ongoing operations and maintenance expenditures, will be minimized by siting data center development where access to high-capacity electric transmission lines is feasible and proximate. The Port of Morrow has plans to extend water services to serve the Airport property, next-door to the east of the Site; this proposal will add another rate-paying user to absorb those costs and fund service operations. Those factors similarly contribute to maximizing energy conservation, along with enabling future data center operator(s) to realize operational economies of scale by consolidating facilities on a large campus rather than on distributed sites (which would necessitate multiple trips on public roads by data center staff vehicles, to perform operational, maintenance, repair and other tasks). For those reasons, the proposed designation amendments are consistent with this objective.

Agricultural Lands Exceptions Objective 3 seeks "To minimize and actually prevent conflict between farm and non-farm uses and resultant increased economical costs to the agricultural sector." Applicant's evidence indicates that data center operations at the Site will not constrain agricultural practices, including movements of agricultural vehicles/implements, in the surrounding area. Relative to the size of the campus area, human occupancy is low, and all operations are indoors. Transportation access requires only the extension of the existing paved segment of Boardman Airport Lane to the west, across the railroad spur that extends south to the Carty Generating Station, into the Site. The proposal includes converting a larger area (approximately 1,623 acres +/-) of SAI-zoned land, which is now in farm use, to EFU. And the Applicant – the primary farm user in the vicinity – has not identified a conflict between the proposed exascale data center use and its existing or planned farm uses. The proposal furthers the goal of preventing farm/non-farm conflicts, as intended by this objective.

Agricultural Lands Exceptions Objective 4 seeks "To provide maximum opportunity for optimum management and operational practices, and provide adequately efficient supportive resources and services." As discussed above for Objective 3, the proposed land designation changes will improve the overall quality and farm productivity of land in the County's EFU inventory by replacing the Site's non-farmable land with more than 1,600 acres of EFU land, which is irrigated, productive farmland. The resulting improved alignment between zoning designation and productive agricultural capacity contributes to this objective by preserving better-quality farmland in EFU for long-term use in accordance with optimum agricultural management and operational practices.

Agricultural Policy 1 states, "It shall be the policy of Morrow County, Oregon, to preserve agricultural lands, to protect agriculture as its main economic enterprise, to balance economic and environmental considerations, to limit non-compatible nonagricultural development, and to maintain a high level of livability in the County." Applicant noted that the Board of Commissioners included the following finding in its 2018 approval of the Goal 3 exception for OE Solar 1, LLC, familiarly known as the HARP Solar Generation Facility:

> Another interpretation of Economic Element Goal 4 would be that allowing this activity on land zoned for Exclusive Farm Use protects land zoned Port or General Industrial from uses that consume large amounts of acreage, but do not either create jobs or significant tax base. Placing the proposed solar photovoltaic energy generation facility on land zoned for Exclusive Farm Use preserved industrial land for higher density and impact uses.

The reasoning is similarly applicable in this case, where economic data indicates a novel, and very recent trend: growth in regional demand for 3,000 acres of land for development of Exascale Data Center Campuses in a 10-year period. Exascale Data Center Campuses are a new type of land use previously unanticipated by economic development planning and land use allocations to date. As a result, relying on existing inventories of industrially zoned exception lands to meet the novel demand would have the perverse effect of absorbing land (i.e., removing it from the available inventories to meet employment needs associated with growth planning in the first place). In that scenario, in the future it will become necessary to urbanize more land to satisfy growth needs, leapfrogging over and around the zoned industrial lands absorbed by data center development.

It follows that enabling the Site to accommodate an Exascale Data Center Campus on non-farmable land located west of the Boardman Airport will protect productive agricultural lands from expansion pressure. This occurs because allocating non-farmable land to meet the novel demand for exascale data center use preserves existing industrial land allocations to meet employment needs already associated with the population growth forecasting/planning process. For the above reasons, the proposed designation changes are consistent with this policy.

Agricultural Policy 17 states, "The County, Port, regional and state agencies should work with private citizens to secure utilization of the Navy's north Morrow tract, so that when market conditions permit, the land may be developed for more intensive agriculture, or other compatible and/or complementary uses including industrial and energy purposes." The Applicant understands the "Navy's north Morrow tract" to refer to the large, generally rectangular area

labeled "Naval Weapon Systems Training Facility Boardman" on the Morrow County Comprehensive Plan Map. The Site of the proposed redesignation/zone change is approximately four miles west-northwest of that tract.

This policy anticipates that the "north Morrow tract" will be converted to private sector tenancy and use, possibly to include private ownership, at a future time. Unless and until such time, the land in that tract is not available for data center development or other private use.

The proposed redesignation of the Site to allow exascale data center use will have no significant effect on the ability of the County to convene parties and engage with the federal government regarding redeployment of the "Navy's north Morrow tract" for locally preferred activities. Therefore, the proposal is consistent with this policy.

With respect to the proposed Downzone Area (discussed more fully below), the proposed conversion of approximately 1,623 acres from Industrial/SAI designation to Agriculture/EFU will contribute to ensuring that no net loss of productive agricultural land will occur. The Applicant has provided geotechnical/soils analysis documentation at Exhibit 10B demonstrating that the Downzone Area contains superior soil conditions and is actively farmed and improved with center-pivot irrigation. The Downzone Area contains Class IVe soils and is far more suitable for the proposed Agriculture/EFU designation than the EFU-zoned soils at the Site, which has many agricultural limitations, would require substantial financial and time investment to achieve a cultivation condition, and even if such condition were achieved, would still be inferior to the agricultural condition of the downzone study area. As noted in the Downzone Area Soils Report, given these limitations the land proposed for upzoning is not likely to become cultivation land, while the Downzone Area is likely to remain in high-value crop production due to favorable soil conditions and associated improvement (irrigation, land leveling, access, etc.). Although there is no criterion requiring a corresponding downzone as a condition of upzone approval, the greater acreage and productivity of the currently-farmed Downzone Area is sufficient to provide mitigation for the upzone.

See also Application at pages 45-48 and 69, with technical supporting evidence at Exhibits 9, 9A, 10A, 10B, 11, 12, 13, 15, and 17A, B and C.

(iv) Goals 5 and 6 (Natural & Cultural Resources Elements)

The Natural Resources Element of the plan provides a general overview of all natural resources common to the County. In general, natural resources are considered vital to the County's historical and future development and are recognized as a primary base for the County's economy.

As directed by Statewide Planning Goal 5 and its implementing statutes and administrative rules, Morrow County has inventoried resources; has analyzed Environmental, Social, Economic, and Energy (ESEE) consequences of conservation/protection versus allowing development impacts; and has adopted designations of significant Goal 5 resources. Such significant resource designations include land resources (soils, minerals, vegetation, and water resources); air resources; air, water, and land quality; fish and wildlife; fisheries; wildlife; scientific and cultural resources; and historical resources.

Neither the proposed redesignation Site (from the SAI/EFU zone to MG with Limited Use Overlay restricting use to data centers) nor the Downzone Area contain any significant Goal 5 resources; therefore, the proposed amendments will have no effect on Goal 5 compliance.

Natural Resource General Policy M states that the County should establish policies for the analysis of proposed zone changes' effects on air, water, and land quality.

Applicant's evidence demonstrates that the proposed Site for rezoning to permit exascale data center campus development does not contain soil conditions suitable for farm productivity, even if irrigation were available to it. The Port of Morrow has provided a service provider letter indicating its ability to provide industrial water service to the Site, so future development will not rely on groundwater wells for its water supply. Water quality and air quality will be assured through compliance with all applicable Oregon DEQ permitting requirements in the Site Plan Review process, which a future developer must complete prior to any non-farm construction and industrial use of the property.

Applicant has proposed rezoning the Downzone Area to ensure that the Site-related amendments will not reduce the amount of EFU-protected cropland in the County's inventory.

See also Application at pages 48 and 69-70, with technical supporting evidence at Exhibits 11 and 12.

(v) Goal 11 (Public Facilities and Services Element)

Applicant requests a Goal 11 exception, but Applicant's evidence has also addressed the application's consistency with the MCCP's Public Facilities and Services policies.

General Policies A and B require "planning and implementation of public facilities and service programs necessary for the public health, safety and welfare ... [which, for urban areas,] shall be provided at levels appropriate to support optimum development." Applicant has provided correspondence from service providers indicating that levels of power and water service appropriate to support EDCC development can feasibly be provided to the area in which Goals exceptions are proposed (i.e., the Site). Providing excess capacity to serve additional development is not warranted in this circumstance because the Site encompasses all of the potential industrial development area located between the ALI-zoned Airport area and the eastern top-of-bank of the Sixmile Canyon to the west, which forms a natural boundary constraining contiguous development west of the City of Boardman.

General Policy D requires that the provision of public facilities and services to rural areas being changed to urban use shall be based on (1) the least time required to provide the service, (2) the most reliable service, (3) lowest financial cost, and (4) adequate levels of service that satisfy long range needs. General Policy E calls for the coordinated development of all necessary urban facilities and services appropriate to an urban area.

Applicant's evidence demonstrates that the Port of Morrow has planned water service capacity to support development consistent with the proposed zoning changes for the Site, including both industrial use and fire-suppression flows. Applicant's evidence also indicates that on-site septic systems and open ponds for industrial water management can feasibly be provided within the

Site. In the Site Plan Review process, the developer will be required to provide designs for specific methods of handling public facility service requirements, demonstrate that service capacities are or will be made available timely to support operations, and obtain all necessary permits from regulatory agencies, such as Oregon DEQ with respect to air and water quality. Developer will also be required to propose emergency service access routing to the Site as part of Site Plan Review, for review by the County Sheriff's Office, County Emergency Manager and other emergency services providers.

General Policy F calls for the siting of utility lines and facilities on or adjacent to existing public or private ROW or through generally unproductive lands to avoid dividing existing farm units. General Policy G requires that public facilities and services not exceed the carrying capacity of the air, land, and water resources.

Applicant has provided correspondence from service providers indicating that levels of water and power service appropriate to support EDCC development can feasibly be provided. These policies provide guidance to service providers regarding how to plan and implement such service provision following adoption of the proposed Plan Map/Zoning amendments and exception findings. Consistent with these policies, the applicant/owner and/or any future prospective developer(s) will be required to coordinate with all needed service providers regarding specifics of design, construction, and operation of such utility services. Demonstration of sufficient service capacities and carrying capacities will be required from the developer in the Site Plan Review procedure prior to industrial construction and use of the property, supported by compliance with federal and state environmental permitting requirements in construction and operations.

General Policy K is an aspirational policy that establishes a goal of achieving a maximum balance of public costs versus benefits and revenues in the provision of public facilities and services. General Policy L states, "equitable approaches and methods of financing shall be a goal." As noted in the above statements for policies D through G, a future developer will be required to coordinate with the Port of Morrow and other service providers regarding specifics of design, construction and operation of needed utility services, as well as funding mechanisms and rate structures to be utilized within that process. This request does not require provision of additional utility services by the county. Additionally, the project will provide economic benefits such as new employment, payroll, spending with vendors on construction and operations, and new tax revenue.

General Policy M calls for Morrow County to "utilize development review processes to ascertain the impact of large projects on County and community services and should demand the sponsor to participate in meeting associated expenses." Similarly, Utilities Policy F calls for coordination of development with utilities providing electrical, natural gas, cable television, and telephone services. Conditions of Approval 1, 3 and 4 (listed above) require Site Plan Review prior to non-farm construction and industrial use of the Site, consistent with that policy.

Water and Sewer Policy is to "encourage intensive development to locate within existing cities whenever possible," but then it further provides that when development occurs in unincorporated areas, compliance with minimum state sanitation and health requirements is required. Applicant has provided an inventory and analysis of alternative potential areas for EDCC development and

operation within a large area surrounding the proposed Site. Exhibit 7 Its study area extends along the Columbia River corridor both west and east of the Site to include portions of Gilliam, Morrow and Umatilla Counties, respectively, and the UGBs of included cities, i.e., Arlington, Boardman, Ione, Irrigon, Umatilla, Hermiston, Stanfield, and Echo (from west to east). The analysis finds that appropriately zoned areas within those cities' UGBs are not available to meet the 3,000-acre projected need within a 10-year period see Exhibit 8, for reasons such as being already developed and irrevocably committed to other uses, or being insufficient in dimensions or total contiguous area.

Applicant's evidence demonstrates that the Site is suitable for EDCC use because urban water utility services already extend to the Boardman Airport area, adjacent to the east of the Site, and it is feasible to meet minimum State sanitation and health requirements through on-site industrial septic facilities until such time infrastructure for treatment and disposal may be extended to the Site by the Port of Morrow. Conditions of Approval 1, 3 and 4 (listed below) require the developer/applicant to demonstrate the sufficiency of such facilities and services in Site Plan Review prior to data center construction and industrial use of the Site.

Solid Waste Policies A and B can be met by a new industrial development using the same processes for which solid waste management occurs elsewhere in the county, typically a contract for solid waste services or direct hauling of waste to Finley Buttes Landfill.

Regarding the Downzone Area, its redesignation from Industrial/SAI to Agriculture/EFU is proposed to ensure that the proposed redesignation of the Site to allow data center use will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Continued crop production under EFU zoning will not require urban service extensions.

See also Application at pages 50-54 and 71, with technical supporting evidence at Exhibits 7, 8, 17A, 17B and 17C.

(vi) Goal 12 (Transportation Element)

While most of the County's Goal 12 objectives are general in nature and directed towards the County, four – Objectives 2, 5, 14, and 15 – apply more directly to this application. This application complies with the objectives for the following reasons:

- Applicant's Transportation Planning Rule (TPR) analysis at Applicant's Exhibits 9 and 9A shows that the proposed amendments will not cause a significant impact on existing or planned transportation facilities because reasonable worst-case trip generation under the proposed zoning – including LU Overlay limiting industrial use to data center – will be lower than that allowed under the Site's current zoning, which includes approximately 331 gross acres in the Space-Age Industrial (SAI) zone.

- Applicant's TPR analysis shows that the proposed land use amendment can be accommodated by the existing transportation infrastructure network, consisting of Boarman Airport Lane and Tower Road, which connect the Site to Interstate 84. Proposed Condition of Approval 1.a above (see page 3) will require the developer to

provide a traffic impact analysis as part of Site Plan Review procedure, so mitigation measures warranted by the proposed development can be included through conditions of Site Plan Review approval.

Applicable Transportation Policies 1, 2, 4, 5, 6, 7, 9, 10, and 11 are summarized below.

- The overall transportation network is capable of accommodating the overall transportation-related demands on the multi-modal network (Policy 1), but it is appropriate to consider specific conditions and impacts through Site Plan Review when development is proposed, and to require appropriate mitigation measures at that time. Proposed Condition of Approval 1.a will require that.

- No modifications or updates are needed to the Morrow County Transportation System Plan (Policy 2) because (1) Boardman Airport Lane does not have a specific functional designation in the TSP, and (2) the Port of Morrow has constructed Boardman Airport Lane between Tower Road and the Site with sufficient capacity to handle projected vehicle trip volumes under the proposed new zoning.

- No changes are required to the roadway functional classification system (Policy 4).

- No changes to the standards that implement the management and maintenance of the system (Policy 5).

- Conditions 1 and 1.a will require analysis of traffic impacts that may require ROW modification and/or roadway facility upgrades (Policy 6) during the Site Plan Review procedure prior to industrial development or use of the Site. To the extent warranted, the County may at that time require mitigation actions through conditions of Site Plan Review approval, which may include a Road Use Agreement specifying certain improvements or proportional funding contributions to planned public improvement projects.

- Traffic generation will be compatible with the function of the applicable roadway network (Policy 7).

- Traffic generation may not exceed carrying capacity of roadway (Policy11).

- Traffic impacts may impact roadway function or require modifications to roadway classifications (Policies 9 and 10). The classification of Tower Road is appropriate to accommodate anticipated traffic attributable to data center campus operations, which is generally limited to data center employees and personnel.

Regarding the Downzone Area, its redesignation from Industrial/SAI to Agriculture/EFU is proposed to ensure that the proposed redesignation of the Site to allow data center use will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Continued crop production in the Downzone Area under EFU zoning will not require any change in the existing road network.

See also Application at pages 54-56 and 71-73, with technical supporting evidence at Exhibits 9 and 9A.

(vii) Goal 13 (Energy Conservation Element)

As with many other MCCP policies identified, these policies are directory or aspirational in nature, rather than mandatory to an applicant. While they are not standards upon which approval or denial is based, they are nevertheless addressed herein.

Energy Conservation Policy 1 encourages the use of renewable and/or efficient energy systems, design, siting, and construction materials in all new development in the County. Energy Conservation Policy 14 encourages the County to combine increasing density gradients along high-capacity transportation corridors to achieve greater energy efficiency.

This request affects County land designation policy and does not include a proposal for actual development of the Site. That procedure will subsequently be required of a proposed developer(s) following approval of the requested land designation/zoning amendments, prior to industrial development and use within the Site. The developer's preparation of a Site Plan Review application package will necessarily involve coordination with one or more suppliers of energy to achieve consistent, reliable service to the Site. At this time, Applicant has contacted Pacific Power and anticipates that electric service will be provided by a future Pacific Power extension of transmission lines from the south, which is already permitted and will also serve other data centers in the vicinity and increase density on those lines.

Regarding the Downzone Area, its redesignation from Industrial/SAI to Agriculture/EFU is proposed to ensure that the proposed redesignation of the Site to allow data center use will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Continued crop production in the Downzone Area under EFU zoning will not cause any change in energy needs or consumption patterns.

See also Application at pages 56- 57 and 73, with technical supporting evidence at Exhibit 17B.

(viii) Goal 14 (Urbanization Element)

Applicant is seeking a Goal 14 exception to allow for urban-scale and type of development and for the provision of public utility services (water) to the Site.

Regarding the Downzone Area, its redesignation from Industrial/SAI to Agriculture/EFU is proposed to ensure that the proposed redesignation of the Site to allow data center use will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Continued crop production in the Downzone Area under EFU zoning will be protected from urbanization pressure.

See also Application at pages 57-58 and 73, with technical supporting evidence at Exhibit 10A and 10B.

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW FOR THE DOWNZONE AREA:

This application also proposes to amend the Comprehensive Plan/Zoning Map by redesignating approximately 1,623 acres on another site south of Boardman from its current Comprehensive Plan designation of Industrial to Agriculture and zoning from SAI to EFU.

A. Downzone Area Description and Surrounding Land Use:

The Downzone Area is an area southwest of the City of Boardman, abutting the western boundary of the Naval Weapons Systems Training Facility. It is approximately 1,623 acres. Zoning to the east is PUB; zoning to the north and west is SAI; and zoning to the south is MG. There is existing pivot-irrigated farm use to the west and portions of the north (as well as within the Downzone Area itself).[11]

Applicant's Exhibit 10B reports that the Downzone Area contain Class IVe soils, and that the area is likely to remain in high-value crop production due to favorable soil conditions and associated existing improvements (irrigation, land leveling, access, etc.).

The Downzone Area has vehicular access consistent with its current use for crop production. No change in its access and circulation is associated with the proposed downzoning. And there is no proposed change in provision of utilities or public services.

B. Summary of Proposal for the Downzone Area

Applicant proposes to amend the Comprehensive Plan to change the Plan and zoning designation of the Downzone Area from Industrial/Space Age Industrial (SAI) to Agriculture/Exclusive Farm Use (EFU). The purpose of that change is to maintain (or, effectively, increase) the County's inventory of productive farm land under EFU protection while allowing data center use at the Site. Although there is no criterion requiring a corresponding downzone to EFU as a condition of upzone approval, the downzone will eliminate the potential for non-agricultural uses over a greater acreage of more productive soils, and is sufficient to ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

C. Compliance with Statewide Planning Goals

County adopts these findings to show that the Downzone request complies with applicable Statewide Planning Goals. The goals are presented below in bold, underlined print with responses in regular print.

1. **Goal 1 (Citizen Involvement): To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.**

[11] Generally, the boundaries of the proposed 1,623-acre Downzone Area correspond to the southern half of Morrow County Tax Map 04N 24E Section 36, together with Tax Map 03N 24E Sections 01 and 02 to the south and southwest of it, respectively.

Response: Generally, Goal 1 is satisfied when a county complies with public notice and hearing requirements in the Oregon Statutes and in the local Comprehensive Plan and Land Use Code. The County's Zoning Ordinance is consistent with State law with regards to notification requirements. Pursuant to Section 9 of Morrow County Zoning Ordinance at least one public hearing before the Planning Commission and Board of Commissioners is required. Legal notice in a newspaper of general circulation is required. The County has met these requirements and notified DLCD 35 days prior to the first evidentiary hearing.

2. **Goal 2 (General Land Use): To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.**

Response: The downzone request will convert land currently in agricultural use from an Industrial/Space Ace Industrial (SAI) designation to Agriculture/EFU to ensure that no net loss of productive agricultural land will occur with the proposed redesignation of the Site, as discussed in detail above in this report. Based on the discussion below regarding compliance with applicable Comprehensive Plan policies, the proposal maintains consistency with policies in the Comprehensive Plan, and thus satisfies Goal 2 requirements.

3. **Goal 3 (Agricultural Land): To preserve and maintain agricultural lands.**

Response: With respect to the proposed Downzone Area, the proposed conversion of approximately 1,623 acres from Industrial/SAI designation to Agriculture/EFU will help ensure that no net loss of productive agricultural land will occur. The Applicant has provided geotechnical/soils analysis documentation in Exhibit 10B demonstrating that the Downzone Area contains superior soil conditions, and is actively farmed and improved with center-pivot irrigation. The Downzone Area contains Class IVe soils and is far more suitable for the proposed Agriculture/EFU designation than the EFU-zoned soils at the Site, which has many agricultural limitations, requires substantial financial and time investment to achieve a cultivation condition, and even if such condition were achieved, would still be inferior to the agricultural condition of the downzone study area. See Exhibit 10B. As noted in the Downzone Area Soils Report, given these limitations the land proposed for upzoning is not likely to become cultivation land, while the Downzone Area is likely to remain in high-value crop production due to favorable soil conditions and associated improvements (irrigation, land leveling, access, etc.) The Applicant has also provided aerial photographic evidence of center-pivot irrigation in use in the Downzone Area (see Exhibit 2).

Although there is no criterion requiring a corresponding downzone as a condition of upzone approval, the downzone will eliminate the potential for non-agricultural uses in the downzone area is sufficient to ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

4. **Goal 4 (Forest Lands): To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the**

continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.

Response: The proposal does not affect lands that are designated for forest uses. Goal 4 does not apply.

5. **Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources): To protect natural resources and conserve scenic and historic areas and open spaces.**

Response: The County Comprehensive Plan has not identified any inventoried significant natural, scenic, historic or open space areas within or near the proposed Downzone Area. See the attached Significant Resource Inventory Map, Exhibit 11**Error! Reference source not found.**, and also a map excerpt in Exhibit 16. Per the analysis in the Natural Resources Assessment, there are no significant Goal 5 resources that would be affected by this proposal to amend land use designations.

6. **Goal 6 (Air, Water and Land Resources Quality): To maintain and improve the quality of the air, water and land resources of the state.**

Response: The effect of the proposed redesignation of the Downzone Area will be to protect it from urban industrial development. Like other agricultural operations, activities within the Downzone Area will be required to comply with applicable local, state, and federal regulations regarding air, water and land resources quality as they apply in EFU-zoned areas.

7. **Goal 7 (Areas Subject to Natural Disasters and Hazards): To protect people and property from natural hazards.**

Response: The Downzone Area does not contain mapped flood or geologic hazards (see FEMA FIRM Panels, Exhibit 14, and DOGAMI SLIDO Maps, Exhibit 15). The amendment will have no effect on Morrow County's compliance with Goal 7.

8. **Goal 8 (Recreational Needs).:To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.**

Response: The proposal does not affect recreational facilities or land needed to meet Morrow County's recreational needs. Goal 8 does not apply.

9. **Goal 9 (Economic Development): To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.**

Response. Agriculture is a vital component of the Morrow County economy. The redesignation of the Downzone Area – from Industrial/SAI to Agriculture/EFU – will ensure that the proposed redesignation of the Site to allow data center use (the subject of the exceptions discussed in the above section of this report) will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Additionally, because soil conditions and irrigation capacity are superior for agriculture at the Downzone Area as compared to the Site, the net effect is to ensure the long-term productivity of a greater acreage of higher quality farmland in Morrow County. The net effect of the whole proposal will be a net increase in both the quantity and the quality of Morrow County's total agricultural resource area in the EFU zone. See Exhibits 10A and 10B.

In 1987, Morrow County, at the request of Boeing, completed the exceptions process in order to change its Comprehensive Plan and zoning designation for approximately 14,080 acres of EFU land to an Industrial Comp Plan designation and Space Age Industrial (SAI) zoning. In 1996, the County further amended the SAI zone to allow farm uses as a permitted use to respond to changes making it possible to irrigate portions of this area and to allow interim uses pending Boeing long-term efforts to develop portions of the area for industrial uses.

Since the time of the 1987 redesignation, no development consistent with the "Space-Age Industrial" uses the zoning was intended to generate or attract has occurred. While such development may occur in the future, there is scant evidence of economic demand within that economic sub-sector to date for the approximately 13,500 acres currently in the SAI zone. The proposed downzone will reduce the County's SAI-zoned land inventory by approximately 1,623 acres or 12.3%, from approximately 13,169 acres (after the proposed conversion of 331 acres of the Site to MG/LU Overlay) to a total of approximately 11,546 acres. Given the apparent lack of economic demand for SAI development to date, there is no evidence to suggest that an SAI inventory reduction of about 12.3% will in any way compromise the County's ability to attract economic user(s) of the remaining 11,546 acres of land in the SAI zone.

For these reasons, the Downzone will continue to further the goal of providing "adequate opportunities … for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens" and is consistent with Goal 9.

10. Goal 10 (Housing): To provide for the housing needs of citizens of the state.

Response: The proposal does not affect the provision of housing. The proposed amendments have no effect on Morrow County's compliance with Goal 10.

11. Goal 11 (Public Facilities and Services): To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Response: The proposed Downzone – from Industrial/SAI to Agriculture/EFU – will designate the area agricultural resource land, making it ineligible for extension of urban facilities. In this context, it is appropriate to consider whether such ineligibility could potentially compromise future utility extensions that would be necessary to serve other SAI-zoned areas that will require

public facilities. Significantly, the large SAI-zoned area is situated on both sides of Tower Road, which is likely to serve as the primary corridor for transportation access as well as public facilities infrastructure to serve the area. Because the Downzone Area is situated at the far eastern edge of the SAI zone, its redesignation to EFU will not impose a barrier to public facilities extension(s) to serve any other SAI-zoned property from the central Tower Road corridor. The proposed downzone maintains compliance with Goal 11 and prior actions of Morrow County that imply future extensions of public facilities to serve development in the remaining SAI-zoned areas.

12. Goal 12 (Transportation): To provide and encourage a safe, convenient and economic transportation system.

Response. The downzone will eliminate the current allowance of urban development based on existing SAI zoning within the Downzone Area (approximately 1,623 acres), and proposes redesignation of the entire Area as Exclusive Farm Use, allowing only rural farm and limited non-farm uses. Such change will not only reduce potential reasonable-worst-case trip generation from the Downzone Area itself (based on EFU- rather than SAI-zone land uses), it will also reduce the overall potential for vehicle trips from urban sources/destinations on County roads in the vicinity and at the Tower Road interchange.

In Exhibit 9, the Applicant has provided a report that addresses the requirements of the Transportation Planning Rule (OAR 660-012). In relevant part, the TPR Analysis concludes that vehicular traffic generated by uses allowed under EFU zoning will have a less significant impact compared with the potential vehicular traffic generated under the existing SAI zone designation. For these reasons, based on the TPR Analysis, the proposed downzoning does not "significantly affect" a transportation facility as defined in OAR 660-012-0060(1)(a) through (c).

13. Goal 13 (Energy Conservation): To conserve energy.

Response. The Downzone Area currently supports extensive agricultural activity with center-pivot irrigation and sufficient access to allow continued and enhanced farming. The proposed designation change will require no energy inputs or practice changes relative to existing conditions because the established farm use will continue under the new zoning, while eliminating the possibility of industrial development of the area (~1,623 acres).

14. Goal 14 (Urbanization): To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.

Response. The Downzone Area is not located adjacent to an Urban Growth Boundary (UGB), where the proposed Agriculture/EFU redesignation could foreseeably conflict with the purpose of Goal 14: notably, to foster and achieve efficient urban growth and development patterns in the future. Because the Downzone Area's location is suitable for continued farming use, its redesignation for Agriculture/EFU zoning will maintain consistency with Goal 14 by focusing urban growth and development pressures appropriately on other areas proximate to established UGBs.

Statewide Planning Goal 15 (Willamette River Greenway), Goal 16 (Estuarine Resources), Goal 17 (Coastal Shorelands), Goal 18 (Beaches and Dunes), and Goal 19 (Ocean Resources) are not applicable because the Site is not located near these resources/areas.

D. Compliance with Morrow County Comprehensive Plan and Land Use Regulations

1. MCZO 8.040 Criteria for Amendments

MCZO 8.040, CRITERIA. The proponent of the application or permit has the burden of proving justification for its approval. The more drastic the request or the greater the impact of the application or permit on the neighborhood, area, or county, the greater is the burden on the applicant. The following criteria shall be considered by the Planning Commission in preparing a recommendation and by the County Court in reaching their decision.

A. The local conditions have changed and would warrant a change in the zoning of the subject property(ies)

Response: The proposal to redesignate the approximately 1,623-acre Downzone Area, from the Industrial Comprehensive Plan designation and SAI zoning to the Agriculture designation and EFU zoning, is specifically designed to ensure that Morrow County's inventory of zoned and productive EFU land will not be diminished as the County moves to respond to a rapidly expanding regional demand for land suitable for EDCC siting and development. In fact, the County's overall EFU productivity will increase because the Downzone Area adds 1,623 acres to the County's EFU inventory, which is already improved with center-pivot irrigation and being actively farmed, while removing about 967 acres of land not suitable for commercial farming (see Soils Reports, Exhibits 10A and 10B). This criterion is met.

B. The public services and facilities are sufficient to support a change in designation including, but not limited to, water availability relevant to both quantity and quality, waste and storm water management, other public services, and streets and roads.

1. Amendments to the zoning ordinance or zone changes which significantly affect a transportation facility shall assure that land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:

a. Limiting allowed land uses to be consistent with the planned function of the transportation facility or roadway;

b. Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,

c. Altering land use designations, densities, or design requirements to reduce demand for automobile travel to meet needs through other modes.

2. A plan or land use regulation amendment significantly affects a transportation facility if it:

a. Changes the functional classification of an existing or planned transportation facility;

b. Changes standards implementing a functional classification;

c. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or

d. Would reduce the level of service of the facility below the minimal acceptable level identified in the Transportation System Plan.

Response. This proposal will convert the approximately 1,623-acre area to an agricultural resource designation and zoning that allows only farming and other EFU-allowed uses. The Downzone Area will then become ineligible for public services (unless and subject to a subsequent Goal exception adoption procedure). As noted above, potential trip generation from the Downzone Area will be significantly lower under the new zoning than the current SAI zoning, so the proposal will not significantly affect transportation facilities. The Downzone Area will require no stormwater or wastewater services and is already served with pivot irrigation water. These criteria are met.

C. That the proposed amendment is consistent with unamended portions of the Comprehensive Plan and supports goals and policies of the Comprehensive Plan, that there is a public need for the proposal, and that the need will be best served by allowing the request. If other areas in the county are designated for a use as requested in the application, then a showing of the necessity for introducing that use into an area not now so zoned and why the owners there should bear the burden, if any, of introducing that zone into their area.

Response. First, the the proposed amendment is consistent with relevant Comprehensive Plan Policies and Objectives. Second, the proposed designation/zone change in the Downzone Area will ensure that, as the County moves to address an emergent public need for EDCCs, doing so will not result in a net loss of productive farmland under the protection of Agriculture designation and EFU zoning. Third, with the proposed conversion of the Downzone Area's 1,623 acres from SAI to EFU, there will still be approximately 11,546 acres of land available in the SAI zone. And fourth, in the particular case of the Downzone Area, the question is not one of *introducing* farming as the preferred use zoning, but rather that of *protecting in place* the continuation of established productive farming practices that are already in use within the Downzone Area. Regarding the question of placing a burden on the owners of property where the EFU zoning is proposed, this application has been presented by Threemile, who owns the Downzone Area, as well as much of the surrounding area. Threemile has adequately considered how the proposed rezoning would affect its properties and operations, and is satisfied that rezoning as proposed is preferable to maintaining the existing zoning designations as they apply to this property. This criterion is met.

D. The request addresses issues concerned with public health and welfare, if any.

Response. The proposed Downzone Area amendment complements the Site designation changes to ensure that the County's inventory of productive cropland under EFU protection is not reduced by the zoning changes at the Site. The changes will enable the Downzone Area to continue contributing to the agricultural economy of the County. Such economic productivity contributes to the local economy and also provides local property tax revenues that support County efforts to meet public health and welfare goals. This criterion is met.

2. Compliance with Morrow County Comprehensive Plan Policies and Goals

Not all Comprehensive Plan Goals and Policies provide review criteria for a quasi-judicial application—i.e., aspirational goals and policies do not constitute review criteria. The discussion below focuses primarily on Morrow County Comprehensive Plan goals and policies that provide relevant and applicable criteria for this application.

Additional evidence demonstrating compliance with Morrow County Comprehensive Plan Policies and Objectives for the downzone can be found in Application at pages 74-89.

(i) Goal 1 (Citizen Involvement)

The Citizen Involvement Goal develops and implements a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process. Citizen Involvement Policy 3 encourages people to attend and participate in Morrow County Planning Commission and Board of Commissioners meetings and hearings. Procedures include notice to the public, Oregon State Agencies including the Departments of Land Conservation and Development (DLCD) and Transportation (ODOT), Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and other interested parties, and public hearings. The goal and policy are satisfied through the opportunities afforded to the public to participate at public hearings before the Morrow County Planning Commission and Board of Commissioners on the proposed amendments, as provided for by state law and the county's Zoning Ordinance.

(ii) Goal 2 (General Land Use)

The Downzone Area is already a productive farm site, not adjacent to any UGB, with center-pivot irrigation and sufficient access to allow farming. The established farm use will continue under the new zoning, while eliminating the possibility of industrial development of the developable portions of the Site. For those reasons, the proposal is consistent with the Farm element, which states "[i]n order to protect the agricultural element of the County's economic base, productive farm lands should be protected from encroachment by non-agricultural uses. Farm land in Morrow County is best managed in large units…"

The Space Age Industrial element states that uses inconsistent with the purpose of providing areas suitable for space age technology research and development will not be authorized. With the proposed redesignation of Downzone Area, the Morrow County inventory of SAI-zoned land will remain at approximately 11,546 acres, or approximately 18 square miles of land. The

relatively minor change will not compromise Morrow County's ability to realize the intended development potential of the SAI land use designation.

It is appropriate to use EFU zoning to protect this productive agricultural land, keep it in farm production, and restrict potential for it to be converted to industrial use.

(iii) Goal 3 (Agricultural Lands Element)

The proposed SAI-to-EFU conversion puts productive agricultural land now in use for farming under the protections of the Agriculture Comprehensive Plan designation and EFU zoning. The proposed approximately 1,623-acre Downzone Area contains productive irrigated agricultural soils but no other inventoried significant natural resources. Compared to the approximately 967-acre EFU-zoned portion of the Site (proposed for resignation from EFU to MG/LU Overlay), its geology and soils characteristics support commercial farming, which is not feasible within the Site, based on findings in the Soils Report (Exhibits 10A and 10B). Thus, the Downzone Area superior as compared to the Site for Agriculture/EFU designation and farm use. The resulting improved alignment between zoning designation and productive agricultural capacity contributes to this objective by preserving more and better-quality farmland in EFU for long-term use.

Threemile Canyon Farms LLC is the owner not only of the Downzone Area but also the adjacent lands in the SAI zone. As owner, Threemile has selected the area for EFU conversion because they have concluded that it will not create a conflict if and when development and use of the adjacent SAI-zoned property occurs. The proposal furthers the goal of preventing farm/non-farm conflicts.

(iv) Goal 11 (Public Facilities and Services Element)

No provision of public facilities and services is proposed to the Downzone Area. Continued crop production under EFU zoning will not require urban service extensions.

Because Tower Road is the logical, centrally-located corridor for provision of transportation access and public facilities and services to the SAI-zoned area generally, and because the proposed Downzone Area is at the eastern perimeter of the SAI-zoned area, its conversion to Agriculture/EFU designation will neither require further extension of planned future public facilities infrastructure, nor be in conflict with orderly service provision to the SAI-zoned area over time as its development may occur.

(v) Goal 12 (Transportation Element)

No new road extensions or other improvements are necessary for access to the Downzone Area to support commercial farming because access has already been successfully established.

In fact, the downzone will substantially reduce potential vehicle trip generation from the area because travel demand associated with EFU uses is lower than that of SAI-zone uses. Therefore, the proposed SAI-to-EFU change will cause no "significant effect" on existing or planned facilities identified in the Transportation System Plan (TSP).

III. MISCELLANEOUS CONCERNS RAISED BY OPPONENTS

Two public comments were submitted at the April 29, 2025 Planning Commission hearing. First Mary Killion raised several issues that are outside the scope of this proceeding and/or relate to issues that not applicable to approval criteria. By way of example but not limitation, Ms. Killion spoke about the general policy need for the County to maximize protection of farm land and the need to consider the potential for future increases in traffic or Tower Road. With regard to this testimony, the Board finds that these concerns and issues, while acknowledged by the Board, are not relevant to the Board's analysis of compliance with the applicable legal criteria. A local government is not required to address in its findings issues that are not substantively relevant to the applicable approval criteria. *See* ORS 215.416(8)(a) (approval or denial shall be based on standards and criteria).

DLCD sent an email stating that:

> "Although we are not fully convinced that the applicable criteria of OAR Chapter 660, Division 14 have been satisfied, we believe the county has sufficient information to make an informed decision. Should the county move to approve the applicant's proposal, downzoning the companion 1,605 acres needs to be part of the decision."

The Downzone Area has since been revised to include 1,623 acres, per the Planning Commission's recommendation. And the Planning Commission recommended concurrent approval of the upzone and downzone requests; thus, the substance of DLCD's comment has been addressed.

IV. AGENCIES NOTIFIED

Department of Land Conservation & Development, Oregon Department of Transportation, Oregon Department of Fish & Wildlife, Oregon Water Resources, Oregon Department of Environmental Quality, Morrow County Public Works, Morrow County Emergency Management, Morrow County Sheriff, Boardman Rural Fire District, City of Boardman, Port of Morrow, Federal Aviation Administration, Oregon Department of Aviation, NAS Whidbey Island Air Station

V. ATTACHMENTS

Applicant's Narrative/Findings Report, including Applicant's Exhibits:

1. Land Use Application Forms
2. Vicinity Map
3. Presentation Slides from 1-9-2025 Pre-Application Meeting
4. Conceptual EDCC Site Plan
5. Map of Proposed SAI to EFU Rezone
6. Text of Proposed Limited Use Overlay
7. Alternative Areas Analysis Report
8. Economic Impact Analysis
9. Transportation Rule Analysis (TPR)
   A. Supplemental Traffic Memo

10. Soils Reports
    A. Upzone Area
    B. Downzone Area
11. Morrow County Significant Resource Inventory Map
12. Natural Resources Assessment
13. Boardman Airport Horizontal and Conical Surfaces Map
14. FEMA FIRM Panels
15. DOGAMI SLIDO Maps
16. Six-Mile Canyon Sand and Gravel Site Information
17. Service Provider Letters
    A. Water – Port of Morrow
    B. Power – PacifiCorp
    C. Road Access – Port of Morrow
18. Data Center Reference Literature
    A. State of the Digital Infrastructure Industry 2024 Annual Report, iMasons
    B. AI Power: Expanding Data Center Capacity to Meet Growing Demand, McKinsey & Company
    C. Mega $14 billion data center project proposed in metro Phoenix, Phoenix Business Journal
    D. Data center boom transforms Culpepper, InsideNoVa
    E. Technical Memo: Siting Criteria for Hyperscale Data Centers, Mackenzie
    F. The Impacts of Data Processing in Oregon, Business Oregon
19. Proposed Morrow County Zoning Map Amendments

VI. HEARING DATES

Planning Commission
North Morrow Government Building
April 29, 2025
North Morrow Government Center
215 NE Main Street
Irrigon, OR 97844

Board of Commissioners
June 18, 2025
North Morrow Government Center
215 NE Main Street
Irrigon, OR 97844

VII. RECOMMENDATIONS OF THE BOARD OF COMMISSIONERS

Options for Board of Commissioner consideration.

1. Vote to approve based on the Application and Findings as presented.

2. Vote to approve with modified conditions of approval.

3. Reject these Findings and vote to deny.

Conditions of Approval

The following conditions of approval must be satisfied prior to non-farm development within the Site. These conditions are binding upon the Applicant and future owners of the property:

1. Prior to any data center development, developer shall prepare and submit an application to Morrow County for Site Plan Review subject to the submittal requirements, standards, approval criteria and procedure set out in MCZO 5.020.A through H.
    a. As part of the Site Plan Review application, developer shall retain a Traffic Engineer to provide a project-specific Traffic Impact Analysis (TIA) consistent with the requirements of MCZO 4.035. That work shall include coordination with staff of Morrow County and the Oregon Department of Transportation (ODOT) on the necessary scope of the analysis; assessment of operational and safety impacts of the proposed development on affected intersections, including the Interstate 84-Tower Road interchange, other Tower Road intersections, and any secondary/emergency access routes and facilities; and providing recommendations for mitigation actions at locations where performance is projected to fall below established standards due to traffic generated by the proposed development.

2. Prior to construction, developer shall provide notice to Threemile Canyon Farms, the area farming operator, of its construction traffic schedule and coordinate with Threemile Canyon Farms to minimize any potential impacts to farm traffic during harvest.

3. Developer shall obtain all necessary local, state and federal permits and approvals for the data center campus construction and operation prior to commencement of the proposed use or certificate of occupancy being granted. If applicable, such permits shall include, but are not limited to: (A) review and approval of a Water Pollution Control Facilities (WPFC) permit issued by the Oregon Department of Environmental Quality and (b) Pollutant Discharge Elimination System (NPDES) 1200-C Permit issued by the Oregon Department of Environmental Quality.

4. Delivery of adequate electricity and water from third-party providers shall be provided substantially as described in this record, prior to commencement of the proposed use or certificate of occupancy being granted.

Morrow County Board of Commissioners

~~Draft~~ Findings of Fact and Conclusions of Law

Applicant: Threemile Canyon Farms, LLC

Application: ACM-155-25, AZM-156-25, ACM-157-25 and AZM-158-25

REQUEST: To amend the Comprehensive Plan designation from Agricultural (967 acres +/-) and Space Age Industrial (SAI, 331 acres +/-) to Industrial, and to amend the County Zoning Map designation from Exclusive Farm Use (EFU, 967 acres +/-) and Space Age Industrial (SAI, 331 acres +/-) to General Industrial (MG) for a contiguous 1,298-acre area located west of the Boardman Airport ("the Site"); to adopt a Limited Use Overlay (LU Overlay) Zone to restrict urban use of the Site to data centers and related ancillary improvements and associated infrastructure facilities, as well as farm uses allowed in the EFU zone; and to adopt exceptions to Statewide Planning Goals 3, 11 and 14 to allow data center use at the Site.

The proposal also includes a concurrent request to amend the Comprehensive Plan and Zoning Map to change the Plan and zoning designation of ~~a rectangular 1,605~~an approximately1,623-acre area located about 4 miles southwest of Boardman immediately west of the Naval Weapon Systems Training Facility Boardman ("the Downzone Area"), from Space Age Industrial (SAI) to Agricultural and from Space Age Industrial (SAI) to Exclusive Farm Use (EFU)~~. Approximately 775 acres of the~~, respectively. The Downzone Area is currently ~~actively farmed. The northernmost 680 acres of the Downzone Area are subject to a conservation easement, which prohibits agriculture and other disturbance activities. The remaining 150 acres consist of areas between cultivated fields, along the east perimeter, and the access road. This area subject to the conservation easement is required by law to carry a zone designation, and the Applicant's request is to have this area be zoned exclusively for farm use in the event the easement is released or modified in the future.~~improved with center-pivot irrigation and actively farmed (except for small patches of unfarmed land between pivot-irrigated fields). Although ~~T~~there is no criterion (MCZO, OAR, ORS) requiring a corresponding downzone to Exclusive Farm Use zoning as a condition of the proposed upzone approval, this concurrent request, to eliminate the potential for non-agricultural uses in the downzone area is sufficient to ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

APPLICANT/OWNER:	Threemile Canyon Farms 75906 Threemile Road Boardman, OR 97818
"SITE" PROPERTY:	Portion of Tax Lot 110 of Assessor's Map 4N 23E and Portion of Tax Lot 121 of Assessor's Map 4N 24E. 1,298 acres total

"SITE" LOCATION:	Property is located west of the Boardman Airport, bounded on the east by the east edge of the PGE Rail Spur easement that extends south to the Carty Generating Facility, on the north by Interstate 84, and on the west and southwest by the eastern top-of-bank of Sixmile Canyon.
"DOWNZONE" PROPERTY:	~~Tax Lot 120 of Assessor's~~Generally corresponds to the southern half of Morrow County Tax Map 04N 24E ~~and~~ Section 36~~ of Assessor's Map 4N 24E and Section 1 of Assessor's Map 3N 24E~~, together with Tax Map 03N 24E Sections 01 and 02 to the south and southwest of it, respectively. Approximately 1,6~~05~~23 acres total
"DOWNZONE" LOCATION:	~~Rectangular area adjacent to the inside corner formed by the panhandle that extends west from the northwest corner~~Polygon area east of Tower Road, about 3 miles southeast of Interstate 84 Exit 159, and 3-4 miles south of Boardman, abutting the west boundary of the Naval Weapons Systems Training Facility.

I. FINDINGS OF FACT AND CONCLUSIONS OF LAW FOR THE SITE:

A. Site Description and Surrounding Land Use:

As described in the application ~~(~~at pages 3-6~~,~~ and Exhibits 2, 5, 6~~)~~, the 1,298-acre Site is an irregular-shaped area of vacant, non-irrigated, undeveloped land located south of Interstate 84 and east of Sixmile Canyon. The Site is part of a large holding owned by Threemile and is undeveloped. Historically and currently, the Site does not support cultivated agricultural use but is used for grazing. As described in detail in the Upzone Soils Report ~~(~~at Exhibit ~~**Error! Reference source not found.**A)~~10A, the Site has shallow soil depth to bedrock, rock outcroppings, mounds, lack of irrigation, and other characteristics that make cultivated farming operations infeasible. It has also not been developed with any Space Age Industrial uses. However, the site is adjacent to the Boardman Airport and other industrial uses and is near existing utilities and transportation infrastructure.

A Portland General Electric rail spur that extends south to the PGE Carty Generating Facility runs in a 150-foot wide easement within the Site along its eastern boundary, and there is an existing electric transmission line that runs through the southern part of the Site on a northeast-southwesterly alignment.

To the east of the Site is land in the Airport Light Industrial (ALI) Zone, and land in the ALI zone surrounds the Boardman Airport. Within these areas, a motor speedway has previously been approved, and a photovoltaic solar energy generation project is currently under

construction. In 2024, a data center was permitted in the far southwest corner of the ALI-zoned land (on the north side of Boardman Airport Lane and the east side of the Carty Generating Station rail spur).

Abutting the Site to the southeast, and south and west across Sixmile Creek Canyon, are additional EFU-zoned lands that are predominantly in irrigated farm use. Other surrounding land is in the Exclusive Farm Use (EFU) zone.

To the north of Interstate 84, which forms the Site's north boundary, the land area between I-84 and the south bank of the Columbia River is in the General Industrial (MG) zone. Those properties, most of which have riverbank frontage, are not currently developed for industrial use.

Applicant's Soils Report ~~(Exhibit 10A)~~ indicates the Site is underlain by shallow basalt flows and contains a complex of rock outcrops, subtle mounds, and concave intermound areas, which severely limit the Site's potential for crop production. The Soils Report concludes that the Site does not contain soils that are considered "high value farmland" and has little potential for crop production. The NRCS soil classification shows the predominate soil classifications is class IVe and Ve. ~~See attached soil map.~~ The Site is within the Lower Umatilla Basin Groundwater Management Area (LUBGWMA), which was established by DEQ in 1990 because of high levels of nitrate in the groundwater. Future development of the Site will be required to comply with DEQ regulations, including treatment for on-site septic and industrial wastewater systems, to ensure the development does not impact drinking water safety.

B. Relevant Procedural History

On January 27, 2025, Threemile Canyon Farms submitted a Morrow County Land Use Application Form; application materials, including supporting reports; and a $7,500.00 application fee. The Morrow County Planning Department identified several outstanding items during its completeness review. In turn, the Applicant submitted revised and additional application materials on March 12, 2025 addressing items identified in the County's completeness determination, as well as issues raised in a Transportation Planning Rule Analysis memo prepared by Todd Mobley, PE on behalf of Morrow County. For record purposes, the March 12, 2025 submission was a complete application package for the upzone and downzone requests and served as a complete replacement for the initial submittal.

On April 9, 2025, the Morrow County Planning Department provided notice to adjoining landowners, public agencies, interested parties entitled to such notice that a public hearing for the application would be held on April 20, 2025 at 6:00PM at the Morrow County Government Center in Irrigon, Oregon. The staff report and preliminary findings of fact were made available on April 21, 2025.

At the Planning Commission hearing on April 29, 2025, Planning Staff described the Application and recommended Conditions of Approval and Applicant representatives and its consultants summarized the application. Following these presentations and two public comments, the Planning Commission requested a revision to expand and shift the boundaries of the Downzone

Area (**ACM-157-25** and **AZM-158-25**), principally to exclude a 680-acre habitat conservation easement area that was part in the original downzone area. Threemile confirmed acceptance of this modification, and Planning Staff generated a map exhibit to illustrate the new Downzone Area boundary, which was added to the Planning Commission record. With this revision to the Downzone Area, the Planning Commission closed the record, deliberated, and voted to recommend approval of this application with conditions, and as modified to include the exhibit depicting the revised Downzone Area.

Applicant submitted revised and additional application materials to the Board of Commissioners on May 27, 2025 to reflect the revised Downzone Area boundaries. Per the request of Planning Staff on June 4, 2025, applicant incorporated the revised exhibits into its previously submitted application to provide the Board with a complete revised application package that fully implements the Planning Commission's recommendation. All other aspects of the application remain unaltered from the version reviewed by the Planning Commission. The Board of Commissioners held a public hearing on June 18, 2025 in Irrigon, Oregon.

C. ~~B.~~ Summary of Proposed Rezone for the Site

This application proposes to rezone SAI and EFU land to permit data centers supported by ancillary improvements and associated infrastructure facilities. The application addresses "Reasons" exceptions to Goal 3 (Agricultural Lands); Goal 11 for water (Public Facilities and Services); and Goal 14 (Urbanization) for the entire Site. In addition to state laws and regulations, the application also addresses applicable Morrow County Comprehensive Plan policies, implementing code criteria relating to Plan and Zone Map amendments, and the statutory and M~~Z~~CZO requirement to enact a Limited Use Overlay, which will limit future development of the Site to data center and farm uses consistent with the exceptions analysis. The Applicant has also provided technical reports and analyses to support the proposed amendments, including a Transportation Analysis, an Economic Impact Analysis, a Soils Report, a Natural Resources Assessment, and an Alternative Areas Analysis.

The Site proposal consists of the following specific amendment requests:

1. Amend the Zoning Map by redesignating the easterly 331 acres of the 1,298-acre Site from its current Space Age Industrial (SAI) zoning to General Industrial (MG), as depicted in Figure II-3.
2. Amend the Comprehensive Plan and Zoning Map by redesignating the remaining westerly 967 acres of the 1,298-acre Site from its current Exclusive Farm Use (EFU) zoning to MG and Comprehensive Plan designation from Agriculture to Industrial, as depicted in Figure II-3.
3. Adopt a Limited Use (LU) Overlay Zone applicable to the Site, with the following provisions:
    a. Allowed land uses are limited to: Data center, including related ancillary improvements and associated infrastructure facilities, and uses and activities allowed by the EFU zone regulations (i.e., Section 3.010 of the Morrow County Zoning Ordinance and its subsections).

b. All development and use shall comply with standards of the Airport Safety and Compatibility (ASC) Overlay Zone (i.e., Section 3.092 of the Morrow County Zoning Ordinance and its subsections), and applicable standards of other aviation-related regulatory agencies including the Federal Aviation Administration.

4. Adopt findings of compliance with standards for "Reasons" exceptions to Goals 3, 11, and 14 as presented in this report, to support the above zoning actions.

Exascale Data Center Use. As described in the application materials ~~(~~at pages 8-16~~,~~ and Exhibit 18~~)~~, this proposal responds to a recent increase in demand for development of large campus sites for high-capacity data processing facilities, known as Exascale Data Center Campuses. EDCCs are large-scale facilities designed to handle extremely high computational workloads, often associated with advanced technologies such as generative artificial intelligence (AI). The site characteristics necessary for an EDCC include contiguous developable land area of 1,000 acres, proximity to existing high-capacity electric power transmission lines, and access to essential utilities and transportation infrastructure. An EDCC offers significant efficiencies, as compared with siting smaller data center facilities on multiple dispersed sites—for example by isolating possible off-site impacts to just one area, minimizing the required extension of new power transmission lines across multiple locations, and decreasing traffic by enabling technical support staff to perform maintenance, repairs, upgrades and other services entirely within the site.

With respect to Morrow County and its neighboring counties, the economic analysis identified demand for 3,000 acres of land for EDCC use in the coming 10-year period ~~(see Exhibit Error! Reference source not found.)~~. If approved, this proposal will partially meet this demand by allowing EDCC development on a uniquely situated site adjacent to similar industrial and other compatible uses (including another forthcoming data center). According to the application materials, the Site meets the unique siting needs for EDCC development due to its size, topography, and proximity to high-capacity electric power transmission lines, among other siting criteria. And because urban water and roads are either already available to the Boardman Airport or will be constructed to serve a forthcoming data center development to the east, only short extensions will be necessary to reach and serve the Site. Further, the Site is not located within a floodplain or other natural hazard area,[1] and its development and use will not cause adverse environmental impacts to water availability, wetlands, habitat areas, or sensitive species. While preparing the submittal, the Applicant indicated they prepared an initial cultural resources assessment, received feedback from the ~~the~~ Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and are working to update the assessment to identify and address potential cultural resource issues. CTUIR Cultural Resources Protection Program will be notified of this application and will have the opportunity to provide testimony regarding any issues of concern.

Power. The Applicant has provided a Service Provider Letter from Pacific Power. Applicant's Exhibit 17B. The letter states, "Pacific Power's plan is to serve the property from the south using

[1] As to this particular Site, the Morrow County Comprehensive Plan does not require compliance with the Community Wildfire Protection Plan. However, prior to any development on the Site, MZCO 5.020 (site plan review) will apply, and this provision provides that "development in hazard areas identified in the Morrow County Comprehensive Plan, Natural Hazard Mitigation Plan, or Community Wildfire Protection Plan shall comply with all applicable requirements."

transmission lines being permitted for a separate project and is not planning to add transmission lines in the vicinity of the Project at this time." The proposed transmission line was permitted in 2024 (see Application No. LUD-N-70-24). ~~See attached map.~~

Water. Future data center campus development at the Site will require potable water for employees and industrial water for processing and cooling, as well as emergency fire suppression capacity. The Applicant has provided a service provider letter from the Port of Morrow declaring that "the Port of Morrow will be able to timely and efficiently supply up to 1,300 gallons per minute to meet peak demand, not to exceed 35 million gallons of water annually, sufficient to support the potential development of data centers on the Property. Additionally, the Port of Morrow can and will supply approximately 3,000 gallons per minute of fire flow to sustain public health and safety requirements for data center campus development on the Property." Applicant's Exhibit 17A.

Wastewater. The large size of the Site provides sufficient area for a proposed data center campus to incorporate one or more septic drain field areas for sanitary waste, as well as one or more on-site evaporation ponds or similar facilities for the management of water used by cooling systems as well as surface drainage. Such on-site systems could operate permanently, but future extension of sewer to the Site is not precluded (subject to compliance with all applicable state and local regulations). As noted above, prior to any data center campus construction, proposed approval condition 3 will require the future developer(s) to provide a specific design and comply with Oregon DEQ water quality permitting requirements for septic and surface water management systems. ~~More details, s~~See Application~~,~~ at page 27.

Transportation and Access. Applicant's Exhibits 9 and 9A provide a Transportation Planning Rule (TPR) analysis and supplemental technical analysis responding to additional issues raised by staff. Those analyses conclude that (a) the proposed land use designation and zone changes will produce lower "reasonable worst-case" vehicle trip generation than potential uses allowed by right under the current zoning; (b) the Port of Morrow has already constructed Boardman Airport Lane with a 32-foot paved width, shoulders and other characteristics consistent with the Morrow County Transportation System Plan (TSP) design section for a Rural Arterial II, west from Tower Road to the east property boundary of the Site, which provides sufficient capacity to accommodate future traffic from a potential data center development on the Site; and (c) the anticipated vehicle trips from the proposed land use designation changes and future data center campus development will not result in any impacts that "significantly affect a transportation facility" within the meaning of Oregon Administrative Rules (OAR) 660-012-0060(1), familiarly known as the "Transportation Planning Rule."

Existing improved transportation facilities – more particularly Boardman Airport Lane and Tower Road – will provide access to the Site. See Exhibit 17C. Regarding impacts of future development on roads and intersections, including emergency or secondary access, proposed Condition of Approval #1a will require future developer(s) to include as part of the Site Plan Review application a project-specific Traffic Impact Analysis, which ensures that Morrow County will have the opportunity to impose conditions of approval during Site Plan Review approval, prior to development, at which time mitigation measures can properly align with impacts from an actual development proposal. The TIA will be required to identify street

network deficiencies that may arise and recommend mitigation actions where necessary to assure that the road network will provide acceptable operating capacities, safety characteristics, and emergency access to and from the Site. It is appropriate to perform that level of detailed traffic analysis as part of the Site Plan Review process because several aspects of the analysis will depend on specific characteristics of the proposed development and use, such as staffing levels, shift scheduling, hours of operation, site planning, access locations, and other factors.

Future Site Plan Review. Approval of this legislative application will not result in approval of a development plan; the request is limited to making a change in Morrow County's land use designations, including a change in its Comprehensive Plan Map and Zoning Map designations, including adding a Limited Use Overlay Zone on the Site. The request has been submitted by the property owner, not by a developer. The requested zoning changes are a first step prior to submittal of plans by a future developer(s) for a data center campus proposal(s), which will be the subject of separate Site Plan Review application(s) that the future developer(s) will be required to submit for Morrow County review and approval of specific proposed development. For instance, the preliminary site plan provided by the Applicant ~~(Applicant's~~at Exhibit 4~~)~~ illustrates the general conceptual feasibility of one possible layout for exascale data center campus development, but future Site Plan Review application materials are expected to differ when an actual developer undertakes further design development at the detailed level. The Site Plan Review process will resolve the numerous detail issues that will arise in the specific site development process – such as specific locations for vehicular access, including any required alternate emergency access, routing of water service (service to buildings as well as landscape irrigation and fire suppression), septic or sanitary sewer systems and facilities, stormwater management facilities and discharge locations, the phasing and time frame for full development, and so forth.

D. ~~C.~~ Compliance with Criteria For Goal Exceptions

The Applicant proposes to develop an urban-scale industrial use on undeveloped rural agricultural land that may require public services for water supply. In such circumstances, when urban-scale development and public services or facilities are proposed to be located on rural agricultural land, an applicant must demonstrate compliance with the applicable standards for goal exceptions in both OAR 660-004 and OAR 660-014. In particular, the application addresses "Reasons" exceptions to Goal 3 (preserving agricultural land for farm use); Goal 11 (prohibiting extension of urban water to serve industrial uses on rural lands); and Goal 14 (directing urban uses to be located inside urban growth boundaries) for the entire Site.[2]

As explained below, OAR 660, Division 4 standards and criteria are met for the requested exceptions to Goal 3. With respect to Goals 11 and 14, OAR 660-014-0040(2) supplies the criteria for a reasons exception involving new urban development on undeveloped rural lands ~~(per~~ See *VinCEP v. Yamhill Cnty.*, 215 Or App 414, 422-23, 171 P3d 368, 372

[2] Although the SAI-zoned portion of the Site may not require new goal exceptions to accommodate new or additional allowed industrial uses on a qualifying site (see ORS 197.713), the lack of clear interpretative guidance or case law on the issue requires the Applicant to treat the entire Site as whole and seeks goal exceptions for both the EFU and SAI zoned portions.

(2007)~~)~~. Finally, the Applicant addresses compliance with OAR 550-012-0060 ("Transportation Planning Rule").

1. OAR 660, Division 4 (Reasons Exception for Goal 3)

660-004-0018 – Planning and Zoning for Exception Areas

(4) "Reasons" Exceptions:

(a) When a local government takes an exception under the "Reasons" section of ORS 197.732(1)(c) and OAR 660-004-0020 through 660-004-0022, plan and zone designations must limit the uses, density, public facilities and services, and activities to only those that are justified in the exception.

Response: Morrow County's Limited Use Overlay Zone (LU) will be applied to the Site to limit the uses of the Site which require a Goal 11 or Goal 14 exception to only those that are justified in the exception (i.e., data centers and associated infrastructure) and farm uses (which do not require an exception), as set forth in MCZO 3.110. See also Application at pages 17-18. This criterion is met.

660-004-0020 – Goal 2, Part II(c), Exception Requirements

(1) If a jurisdiction determines there are reasons consistent with OAR 660-004-0022 to use resource lands for uses not allowed by the applicable Goal or to allow public facilities or services not allowed by the applicable Goal, the justification shall be set forth in the comprehensive plan as an exception.

Response: The application explains the reasons which justify the proposed goal exceptions in the following responses.[3] The text of the comprehensive plan will be amended to incorporate the justification for the proposed exceptions to Goals 3, 11, and 14. This criterion is met.

(2) The four standards in Goal 2 Part II(c) required to be addressed when taking an exception to a goal are described in subsections (a) through (d) of this section, including general requirements applicable to each of the factors:

(a) "Reasons justify why the state policy embodied in the applicable goals should not apply." The exception shall set forth the facts and assumptions used as the basis for determining that a state policy embodied in a goal should not apply to specific properties or situations, including the amount of land for the use being planned and why the use requires a location on resource land;

Response: OAR 660-004-0020(2)(a) provides the first of four standards applicable to the Applicant's Goal 3 exception request. With respect to "reasons" justifying why the applicable

[3] Note that the criteria in OAR 660-004-0022(1) are not applicable to the establishment of new urban development on undeveloped rural lands and the application, instead, is subject to OAR 660-014-0040 for purposes of an exception to Goals 11 and 14. And OAR 660-004-0020 applies for purpose of an exception to Goal 3.

policies in Goal 3 should not apply to the Site, OAR 660-004-0022 does not provide an exclusive list of reasons.[4] Here, Applicant's materials establish that reasons justify the allowance of Exascale Data Center Campus development on this Site, which are based on a recent emergence of high demand for exascale data center development and unique siting characteristics for such EDCCs, as described in more detail at Application at pages 8-16 and Exhibit 8. According to the Economic Impacts Analysis, development of an Exascale Data Center Campus at the proposed exceptions Site would meet a recent increased demand for EDCC development in the region and benefit Morrow County's economy (including generating significant ongoing property tax revenue streams to the local school district and other agencies).

According to the Application and Exhibit 8, the Site also meets the essential siting characteristics for EDCC development, including:

1. Proximity to and ability to extend existing, high-capacity electrical transmission lines (Pacific Power).

2. Proximity to existing and/or forthcoming water infrastructure near Boardman Airport (Port of Morrow).

3. Proximity to existing and/or forthcoming long-haul fiber-optic routes (multiple major internet service providers).

4. Proximity to an interstate highway (I-84).

In addition to having access to all essential support facilities, Applicant notes that the Site is isolated by natural and physical barriers (Sixmile Canyon, BPA transmission lines, PGE rail spur extending south to the Carty Generating Station), reducing potential for external impacts on residences or other sensitive land uses.

The proposed use of the Site for EDCC development would cause minimal or no loss of cultivated farmland. As described in greater detail in the attached Soils Report, Exhibit 10, the Site is underlain by shallow basalt flows and contains a complex of rock outcrops, subtle mounds, and concave intermound areas, which severely limit the Site's potential for crop production. The Soils Report supports the conclusion that the Site does not contain soils that are considered "high value farmland" and has little potential for crop production. Based on these factors, the property owner has not and does not intend to use the Site for productive agricultural uses.

The amount of land proposed for the use is 1,298 acres, which represents only a small part (about 1.5%) of the Applicant's combined land holdings in Morrow County, over 40,000 acres of which

[4] *1000 Friends of Oregon v. Jackson County*, 292 Or App 173, 183-184 (2018) (citing *State v. Kurtz*, 350 Or 65, 75 (2011) to find that, within the context of OAR 660-004-0022, 660-011-0060, and 660-014-0040, "statutory terms such as 'including' and 'including but not limited to," when they precede a list of statutory examples, convey an intent that an accompanying list of examples be read in a nonexclusive sense").

are irrigated and under active farm use. Approximately 967 acres of the Site are zoned EFU; the remaining 331 acres are zoned SAI, and are therefore already available for some types of industrial development ~~(however, the SAI zone does not allow~~other than data centers~~)~~. This criterion is met.

(b) "Areas that do not require a new exception cannot reasonably accommodate the use". The exception must meet the following requirements:

(A) The exception shall indicate on a map or otherwise describe the location of possible alternative areas considered for the use that do not require a new exception. The area for which the exception is taken shall be identified;

(B) To show why the particular site is justified, it is necessary to discuss why other areas that do not require a new exception cannot reasonably accommodate the proposed use. Economic factors may be considered along with other relevant factors in determining that the use cannot reasonably be accommodated in other areas. Under this test the following questions shall be addressed:

(i) Can the proposed use be reasonably accommodated on nonresource land that would not require an exception, including increasing the density of uses on nonresource land? If not, why not?

(ii) Can the proposed use be reasonably accommodated on resource land that is already irrevocably committed to nonresource uses not allowed by the applicable Goal, including resource land in existing unincorporated communities, or by increasing the density of uses on committed lands? If not, why not?

(iii) Can the proposed use be reasonably accommodated inside an urban growth boundary? If not, why not?

(iv) Can the proposed use be reasonably accommodated without the provision of a proposed public facility or service? If not, why not?

(C) The "alternative areas" standard in paragraph B may be met by a broad review of similar types of areas rather than a review of specific alternative sites. Initially, a local government adopting an exception need assess only whether those similar types of areas in the vicinity could not reasonably accommodate the proposed use. Site specific comparisons are not required of a local government taking an exception unless another party to the local proceeding describes specific sites that can more reasonably accommodate the proposed use. A detailed evaluation of specific alternative sites is thus not required unless such sites are specifically described, with facts to support the assertion that the sites are more reasonable, by another party during the local exceptions proceeding.

Response: Applicant's Exhibit 7 provides a detailed inventory, maps, and analysis of potential alternative sites within a study area containing the northern portions of Gilliam, Morrow and Umatilla County, located within approximately 10 miles of electric power transmission line corridors (an essential siting characteristic for exascale data center locations), including the cities located within that area (Arlington, Boardman, Ione, Irrigon, Umatilla, Hermiston, Stanfield and Echo). Summarizing the results of that analysis, the Applicant concludes that:

- Existing exception areas that would not require a new goal exception to reasonably accommodate exascale data center campus development are not found within the study area.[5] Such essential site criteria include minimum developable land area of 1,000 acres, shape and horizontal dimensions suitable for siting clusters of rectangular data center buildings typical in this region, within 10 miles of existing high-capacity electric power transmission lines, and absence of regulatory hazard areas (e.g., floodplain or landslide areas).

  Areas requiring a new exception were excluded. OAR 660-004-0018(4)(a) states that when an exception is taken to a statewide planning goal for a particular reason to meet a specific need, the uses allowed must be limited to uses that were justified in the exception. In other words, adding a new use to prior exception land that was not identified for the current proposed use requires a new goal exception. Because data centers are generally a newer type of development that began in the 2010s, many of the prior exception lands, which were adopted long before 2010, would not have contemplated "data centers" as a permitted use, nor would the reasons that supported those exceptions have covered such a use. Therefore, "data centers" would necessarily be considered a new permitted use and require a new goal exception.

  This is the case for the SAI zone in Morrow County which was subject to a reasons exception specifically for aircraft or space vehicle testing and/or development at the request of Boeing in 1987. ~~It's~~It is also the case for the block of 3,800 acres of MG land south of the Site which was subject to a reasons exception for "antennae test range uses."[6] Similarly, in unincorporated Gilliam County, there are no zones that currently permit data centers. Therefore, these areas were excluded because the process for establishing data centers as a permitted use is uncertain and would likely involve a new goal exception, significant delays, legal challenges, and increased costs, thereby undermining any argument that these sites could "reasonably accommodate" data center use.

[5] An applicant may identify essential siting criteria to narrow the field of alternatives. *VinCEP v.Yamhill County*, 55 Or LUBA 433 (2007), *affirmed in part, reversed and remanded in part*, 215 Or App 414, 171 P3d 368 (2007). Alternative sites that do not meet the proposal's essential site criteria can be eliminated. *See*, *e.g.*, *Devin Oil Co. Inc. v. Morrow County*, 62 Or LUBA 247, *affirmed* 241 Or App 351, 250 P3d 38 (2010), *rev. den.*, 350 Or 408, 256 P3d 121 (2011). In addition, the rule specifies that "economic factors may be considered" in evaluating whether alternative sites are ones that could reasonably accommodate a particular use. OAR 660-004-0020(2)(b).

[6] Ordinance No. MC-C-4-86, https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page /16596/mc-c-4-86.pdf.

Industrial portions of the Umatilla Army Chemical Depot were excluded because these lands are the subject of litigation in the Circuit Court of the County of Umatilla (Case No. 24CV31777), which introduces significant legal uncertainty, the outcome of which is uncertain in substance and timing. Thus, this Site cannot "reasonably accommodate" data center development, while it remains the subject of active litigation which seeks to prohibit sale of industrial property.

North of the Site, on the opposite (north) side of Interstate 84, there are multiple parcels of land in the Morrow County General Industrial (MG) zone~~; this~~. This area is referred to as Area MC-1 in ~~the Exhibit Error! Reference source not found.,~~Applicant's Alternative Areas Analysis. The ownership pattern consists of several large parcels owned by the Port of Morrow, separated by intervening large parcels owned by the Applicant, Threemile Canyon Farms, LLC. Threemile Canyon Farms has provided a letter indicating that its properties within this sub-area are not available for purchase or lease, for any purpose~~(~~. ~~s~~See Appendix C in the Alternatives Analysis (Exhibit ~~Error! Reference source not found.~~7). Because it is not possible to assemble a contiguous parcel with sufficient area for an exascale data center campus (1,000 acres or more) without including some of the Threemile Canyon Farms parcels, the MC-1 Area cannot reasonably accommodate exascale data center campus use.

- No resource land that is already irrevocably committed to nonresource uses was identified within the study area that was sufficiently proximate to existing power supply infrastructure, so the proposed use cannot be reasonably accommodated on such land. See Application at page 22~~, with~~ and related technical evidence in Exhibit 7.

- No reasonable alternative areas are available within UGB areas. The study area included eight UGB areas: City of Arlington, City of Boardman, City of Ione, City of Irrigon, City of Umatilla, City of Hermiston, City of Stanfield, and City of Echo. After identifying zones in these jurisdictions that allow for data center uses, land was then evaluated to identify sites that met all of the essential siting characteristics for EDCCs. The analysis concludes that no reasonable alternatives areas are available within UGBs because of constraints such as existing development, entitled development, insufficient contiguous development area, or distance from existing high-capacity transmission lines.

- The proposed use cannot reasonably be accommodated without the provision of the listed public facilities and services. Based on generally industry standards, EDCC's require proximity to existing high-capacity electrical transmission lines (<10 miles); water supply of approximately 1,000 gallons/day per developable acre of land to cool equipment; sewage disposal facilities for employee restrooms; industrial wastewater disposal facilities to discharge industrial wastewater generated from non-contact cooling processes; and proximity to interstate highways and public roads for employees and service providers.

  Regarding sewage disposal, it is anticipated that on-site septic facilities will be relied on. The septic system would be subject to review and approval of Water Pollution Control Facilities (WPCF) permits issued by the Oregon Department of Environmental

Quality pursuant to ORS 468B.050. WPCF permits issued by ODEQ have limits and conditions that are intended to be protective of ground and surface waters, as well as the environment and public health including potential nitrate treatment requirements. The Site is within the Lower Umatilla Basin Groundwater Management Area, designated by DEQ in 1990 because of high levels of nitrate in the groundwater. Compliance with DEQ regulations, including treating wastewater for nitrate removal, ensures the proposal will not have negative impacts on groundwater quality.

Regarding industrial wastewater disposal, it is estimated that approximately 15,000,000 gallons of industrial wastewater (IWW) will be generated from each data center's non-contact cooling process annually, which would be treated onsite via conveyance in subsurface pipes to on-site-lined IWW evaporation ponds, sized and located to store and fully evaporate the non-contact cooling water, until such time infrastructure for treatment and disposal of IWW is extended to the Site by the Port of Morrow. The cooling process uses water that does not come into direct contact with electronic components to manage the heat generated by servers and other electronic equipment. There would be no anticipated discharges from the IWW ponds on the Site, and the ponds would be subject to a 2501 Water Pollution Control Facility General Permit issued by the Oregon Department of Environmental Quality.

- Areas within the study area that cannot satisfy essential siting characteristics for exascale data center campus cannot reasonably accommodate the proposed use. These include sites with excess slope; inadequate size and configuration; development constraints like floodways, landslide areas, wetlands, and protected habitat; lack of proximity to high-capacity electric distribution lines; insufficient water supply, sewage disposal, industrial wastewater disposal, and access to public roads and proximity to an interstate highway.

~~Applicant's additional findings are found in~~See also Application at pages 19-24, ~~with~~and related technical evidence in Applicant's Exhibit 7. These criteria are met.

(c) "The long-term environmental, economic, social and energy consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site." The exception shall describe: the characteristics of each alternative area considered by the jurisdiction in which an exception might be taken, the typical advantages and disadvantages of using the area for a use not allowed by the Goal, and the typical positive and negative consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts. A detailed evaluation of specific alternative sites is not required unless such sites are specifically described with facts to support the assertion that the sites have significantly fewer adverse impacts during the local exceptions proceeding. The exception shall include the reasons why the consequences of the use at the chosen site are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site. Such reasons shall include but are not limited to a description of: the facts

used to determine which resource land is least productive, the ability to sustain resource uses near the proposed use, and the long-term economic impact on the general area caused by irreversible removal of the land from the resource base. Other possible impacts to be addressed include the effects of the proposed use on the water table, on the costs of improving roads and on the costs to special service districts;

Response: The "ESEE standard only require[s] the county to complete a detailed ESEE evaluation of specific alternative sites if the sites were 'described with facts to support the assertion that the sites have significantly fewer adverse impacts during the local exceptions proceeding.'"[7] A local government may choose the preferred alternative as long as the environmental, social, economic and energy consequences are not "significantly more adverse" than would typically result from using other resource lands for the proposed use. A local government is not required to choose the alternative that is "least disruptive to resource land."[8]

Applicant's proposed goal exceptions Site is appropriate for Exascale Data Center Campus development and would result in significantly fewer adverse environmental, social, economic, and energy (ESEE) impacts compared with other areas requiring new exceptions.[9] A comparison of these impacts is described below. When comparing impacts to alternative areas, it is important to consider the ESEE benefits of placing data centers on a single large site as opposed to multiple dispersed sites, i.e., an Exascale Data Center Campus is a more efficient use of land, is more efficient to construct, provides opportunities for operational efficiencies due to the associated economies of scale, and isolates possible negative off-site impacts to just one area. The Site benefits from close proximity to existing high-capacity electrical transmission lines (e.g., there are existing transmission lines to the south of the property near the Carty Reservoir and planned lines to the Site's eastern boundary), as well as water supply and existing transportation facilities near the Boardman Airport and an approved data center development to the east, which means impacts associated with extending services to the Site would be minimal in comparison to other areas.

- Environmental impacts associated with the development of the Site for data center use are not significant because the Site contains no inventoried Goal 5 resources or natural resource protection overlay zones. Data center development may require wetland removal/fill permit and mitigation; however, the state policies and regulatory processes applicable to this development ensure that possible adverse impacts will be minimized. Similarly, state and/or federal permits will be required for air quality for diesel backup generators, and erosion and stormwater control associated with site preparation and construction.

- Economic impacts of the proposed amendments are positive in comparison to other potential locations because the Site has minimal potential for agricultural

[7] *1000 Friends v. Morrow County*, 81 Or LUBA 508 (quoting OAR 660-004-0020(2)(c)).
[8] *1000 Friends of Oregon v. Yamhill County*, 52 Or LUBA 418 (2006).
[9] Other areas within the bounds of the Alternative Areas Analysis requiring new exceptions generally fall into two categories: (1) Irrigated agricultural land; (2) Industrial land in zoning districts that do not allow data center uses.

productivity. By contrast, other land in the vicinity is generally irrigated and actively in use for crop or dairy production.

- Social impacts associated with Exascale Data Center Campus development, such as visual impacts, noise, and traffic, are generally greater the closer an EDCC is to population centers and residential uses. Because the Site is situated more than five miles from population centers and isolated from any potentially incompatible uses (such as residences), no adverse social impacts area anticipated.

- Energy impacts associated with Exascale Data Center Campus development on the Site are less significant than the impacts of the same development on other land requiring new exceptions. The amount of energy required is the same regardless of location; however, the proposed exceptions Site is proximate to existing transmission lines to the south, near the Carty reservoir, and adjoining planned lines immediately to the east. Close proximity to such lines is an essential siting requirement. Alternative areas that would require the development of new transmission lines would have significantly greater impacts. Additionally, as the Site is adjacent to Interstate 84 (I-84) and near the interchange at Tower Road, energy needs associated with transportation to and from the Site are lower than sites requiring greater travel distances from an I-84 interchange.

For the above reasons, the proposed goal exceptions Site is appropriate for Exascale Data Center Campus development and would result in significantly fewer adverse environmental, social, economic, and energy (ESEE) impacts compared with other areas requiring new exceptions.[10] ~~Applicant's additional findings are found in~~See also Application at pages 25-27 with technical evidence in Applicant's Exhibits 7, 8, 10A and 10B, 11, 12, 14, 15 and 16. This criterion is met.

(d) "The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts." The exception shall describe how the proposed use will be rendered compatible with adjacent land uses. The exception shall demonstrate that the proposed use is situated in such a manner as to be compatible with surrounding natural resources and resource management or production practices. "Compatible" is not intended as an absolute term meaning no interference or adverse impacts of any type with adjacent uses.

Response: Data center use will be compatible with adjacent uses through compliance with applicable requirements governing airports, water, and air, as well as the natural and physical features bounding the Site. The Site is not proximate to many adjacent uses given natural buffers separating the Site via a canyon to the west and south, a rail spur to the east, and a highway to the north. The airport runway to the east of the rail spur is not within 5,000 feet of the Site. And the other abutting adjacent uses are a vineyard and another data center also to the east of the rail spur, agricultural fields to the west and south of the canyon, and vacant industrial lands to the

[10] Other areas within the bounds of the Alternative Areas Analysis requiring new exceptions generally fall into two categories: (1) Irrigated agricultural land; (2) Industrial land in zoning districts that do not allow data center uses.

north of I-84. None of these are particularly sensitive to any of the potential impacts generated by an EDCC, and any potential impacts associated with EDCC development will be addressed through compliance with applicable regulatory standards relating to air emissions, lighting and glare, water, and airport compatibility, as described more fully in the Application at pages 27-28, with technical evidence in Applicant's Exhibits 7, 11, 12, 13, 15 and 16. The farm operator adjacent to the Site is the Applicant for this proposal; the Applicant has identified the Site as a part of its large ownership that (a) is not suitable for commercial farming operations, which it conducts on most of its lands, and (b) can support data center operations without adversely affecting agricultural productivity or operations on surrounding properties, including its own holdings.

2. OAR 660-014-0040 (Reasons Exception for Goals 11 and 14)

Applicant seeks an exception to Goal 14 to allow for urban industrial development on the Site, and an exception to Goal 11 for extension of urban-levels of water to the Site. With respect to Goal 14, OAR 660-014-0040(2) supplies the criteria for a reasons exception, not OAR 660-004-0022. The Applicant cites to *VinCEP v. Yamhill Cnty.*, 215 Or App 414, 422-23, 171 P 3d 368, 372 (2007) for this interpretation. Although the analysis under Division 14 must be done separately, there is obvious overlap with criteria in Division 4, and it is understood that an applicant may rely on the same proof and findings to the extent they address criteria in both Divisions.

A Goal 11 exception to establish or extend public facilities to serve proposed development is evaluated under the criteria in Division 4, and in particular OAR 660-004-0020(2)(b)-(d), and, as appropriate, OAR 660-014-0040 for purposes of siting urban development on undeveloped rural lands. *See Friends of Marion County v. Marion County*, 59 Or LUBA 323 (2009) ("there is no need to articulate a different reason to justify the exception to Goal 11 that is used to justify the Goal 14 exception or, stated differently, the reasons sufficient to justify the Goal 14 exception are also sufficient to justify the Goal 11 exception for purposes of OAR 660-004-0022"); *Doherty v. Morrow County*, 44 Or LUBA 141 (2003) ("OAR 660-014-0040(2) and (3) effectively become the relevant criteria for a statewide planning goal exception to Goal 14, and to Goals 11 and 3 if such additional exceptions are necessary, to allow urban uses and urban public facilities on rural agricultural lands"); *DLCD v. Umatilla County*, 39 Or LUBA 715 (2001) (if "the proposed exception is intended to allow urban development, then OAR 660-004-0022(1) directs the county to OAR 660-014-0040"). "If reasons are identified under OAR 660-014-0040(2) that justify exceptions to Goal 14, and Goals 3 and 11 as well, then there is no need to provide additional reasons to justify reasons exceptions to Goals 3 and 11 under OAR 660-004-0022(1) or (2)." *Doherty*, 44 Or LUBA at 177. Here, the "proposed use" served by the facilities is data centers, which is an urban industrial use. Therefore, OAR 660-014-0040 provides the relevant criteria.

As explained below, the reasons that justify the requested exception to Goal 14 suffices to demonstrate a need for an exception to Goal 11 for extension of urban-scale water.

660-014-0040 – Establishment of New Urban Development on Undeveloped Rural Lands

(1) As used in this rule, "undeveloped rural land" includes all land outside of acknowledged urban growth boundaries except for rural areas committed to urban development. This definition includes all resource and nonresource lands outside of urban growth boundaries. It also includes those lands subject to built and committed exceptions to Goals 3 or 4 but not developed at urban density or committed to urban level development.

Response: The Site is split-zoned EFU and SAI, and it is located outside of any UGB. Therefore, the SAI-zoned area already allows urban uses, and only the EFU-zoned portion of the Site falls within the definition of "undeveloped rural land." However, out of abundance of caution and pursuant to direction at the pre-application conference, the Applicant addresses Goal 14 criteria for the entire Site.

(2) A county can justify an exception to Goal 14 to allow the establishment of new urban development on undeveloped rural land. Reasons that can justify why the policies in Goals 3, 4, 11 and 14 should not apply can include but are not limited to findings that an urban population and urban levels of facilities and services are necessary to support an economic activity that is dependent upon an adjacent or nearby natural resource.

Response: OAR 660-014-0040(2) provides an example of a reason that is sufficient to justify urban development on rural land, but it does not limit the bases for a reasons exception to those listed in the statute. According to LUBA's ruling in *Schaefer v. Marion County*, LUBA No. 2020-108 (2022), "OAR 660-014-0040(2) expressly provides a non-exclusive basis for a reasons exception."

Reasons justifying exceptions from policies in Goal 3 are detailed in ~~Applicant's~~the response to OAR 660-004-0020(2)(a) and those reasons also support exceptions to Goals 11 and 14. The response identifies the essential siting criteria for developing an Exascale Data Center Campus, which include but are not limited to characteristics such as close proximity to existing high-capacity electrical transmission lines; access to adequate water supply, wastewater disposal capacity, telecommunications and fiber-optic routes; and adequate site size and configuration to accommodate multiple 200,000+ SF buildings and associated vehicle access, circulation, and parking. The applicant evaluated other possible alternative areas to determine whether it could reasonably accommodate these needs, identifying no reasonable alternative areas within a large study area surrounding the Site.

Further, a portion of the Site is already zoned for more dense industrial uses (i.e., space age-related research and development facilities). The Limited Use Overlay will restrict the potential uses of the Site to data centers and related infrastructure, which involve a relatively small number of employees, thus eliminating the potential that the proposal will increase density.

Finally, the Site is proximate to existing urban water systems serving the Boardman Airport and adjacent lands zoned ALI, which will minimize the need to extend significant water infrastructure to the Site. At the time of this application, a construction project is underway to install a water service line along the full length of Boardman Airport Lane west of Tower Road, which is intended to serve an adjacent approved data center facility to the east of the

Site. The Site will rely on that water infrastructure and require only a short extension across the rail spur to connect. So Goal 11's intent to prevent the proliferation of urban uses in rural areas caused by the availability of urban-level services extended beyond UGBs is largely not implicated due to the fact that the Limited Use Overlay restricts industrial uses to data centers, and the Boardman Airport area (which will include the development for a recently approved data center campus) directly to the east already allows for extension of urban-scale services.

The application materials set forth multiple reasons why this Site is suitable for this scale of urban development and provide the County with substantial evidence to support the justifications necessary for the requested goal exceptions to Goals 11 and 14.

~~Applicant's recommended findings are found in the~~See also Application at pages 32 with technical evidence in Exhibits 7 and 8. This criterion is met.

(3) To approve an exception under section (2) of this rule, a county must also show:

(a) That Goal 2, Part II (c)(1) and (c)(2) are met by showing that the proposed urban development cannot be reasonably accommodated in or through expansion of existing urban growth boundaries or by intensification of development in existing rural communities;

Response: As discussed above, Applicant's Alternative Areas Analysis ~~(~~Exhibit 7~~)~~ demonstrates that the proposed exascale data center campus development cannot be reasonably accommodated within an existing UGB.

Applicant also notes that an exascale data center cannot be reasonably accommodated through the expansion of an existing urban growth boundary due to several factors. First, the unique infrastructure requirements of an exascale data center, such as proximity to high-capacity electrical transmission lines, are not typically available within or near existing UGBs. These large-scale data center facilities require a substantial and uninterruptible power supply, which necessitates direct access to high-capacity transmission lines. Expanding a UGB to include areas with such infrastructure would be impractical and costly.

Second, the scale of land required for an exascale data center campus, generally requiring 1,000 acres or more, is not readily available within or adjacent to existing UGBs. Land areas closer to urban areas are generally characterized by higher land values and fragmented ownership, making it challenging and economically infeasible to assemble large, flat, vacant contiguous parcels of land for such development.

Third, the environmental and social impacts of situating an exascale data center near urban areas pose significant challenges. These facilities can generate noise and emissions from backup diesel generators which could adversely affect nearby residential communities. The facilities also often are sited with industrial wastewater cooling ponds, electrical substations and other energy facilities, security fencing and other infrastructure, which may generate impacts typically associated with uses outside of UGBs.

A related factor is that siting exascale data centers within or on the perimeter of existing urbanized areas poses a complicating challenge for planning future growth of efficient, compact communities. Exascale Data Center Campus development involves a very high amount of capital infrastructure investment, and so can be expected to persist for a long service life; for planning purposes, they should be considered irrevocably committed to such use. As cities plan to meet land needs associated with population growth and resulting needs for housing, employment, institutional and open space lands, the large size of EDC campus sites within or on the edges of existing urban areas would compel cities to "leapfrog" over them in order to accommodate growth. For example, each side of a square 1,000-acre area would be 1.25 miles long, interrupting a contiguous expansion pattern for other urban uses in both dimensions. The resulting development pattern would accelerate sprawl by substantially increasing the distances between older parts of the community and newer development areas forced to locate on the opposite side of an intervening EDC campus. Such a development pattern would be very detrimental from the standpoint of trying to create compact and efficient urban communities, by increasing distances for commuting and other circulation, as well as for construction and maintenance of utility services.

By contrast, siting an exascale data center away from a UGB, and in particular at the Site, enables it to be proximate to necessary large-scale utility infrastructure, to minimize any potential impacts on urban communities, and generally to present a more viable and efficient location to meet a documented demand for this large-scale industrial use. The 1,298-acre Site located west of the Boardman Airport is adjacent to the east bank of Sixmile Creek, which is a logical boundary for the proposed Site. Service from existing high-capacity electric power transmission lines can be made available to the Site and, because urban-level water and transportation services are available to the Airport area, including an adjacent forthcoming data center campus at the western terminus of the improved Boardman Airport Lane, only short extensions are necessary to reach and serve the Site.

Significantly, in the context of meeting land needs that operate at a regional scale, for any of the cities in the area to justify expanding its UGB for exascale data center campus development, the Goal 9 process would require an Economic Opportunities Analysis (EOA) justifying a UGB expansion of 1,000+ acres for a single land use to meet that city's population growth forecast and associated land needs. Such a land area being brought into a UGB expressly for EDCC use would need to be made ineligible for other industrial uses. And a consolidated site of sufficient size, along with the other required site characteristics, would have to be identified contiguous to the existing UGB. Absent an identified user, such a large-acreage site could remain in the UGB indefinitely as surplus industrial land. For these reasons, the established UGB expansion process requires a level of certainty that makes it less supportable under these specific implementing regulations addressing UGB expansions as an alternative to reliance upon the Goal 2 exception process to accommodate compliance with all of the EDCC siting criteria required for exascale data center campus development.

So, particularly in the context of this proposal, the "reasons exception" process is preferable to the UGB expansion process for several reasons:

(1) The necessary designation change is a voluntary proposal submitted by the owner of the property as the applicant.

(2) The proposed designation change (MG with Limited Use Overlay) only allows for the specific urban use – data center – that is the basis for the "reasons" exception.

(3) The proposed designation change contributes significantly to the need to allocate land on a regional basis, responding to a documented recent dramatic increase in land demand for a novel industrial activity.

(4) The proposal will continue to allow EFU uses on the property unless and until data center development becomes economically feasible. Even if such use ultimately is not realized, the protections inherent in the land use approval process will require a new exception before any other urban use or development can occur.

~~Applicant's recommended findings are found in~~See also Application at pages 32-34, with technical evidence in Exhibit 7, incorporated by reference herein. This criterion is met.

(b) That Goal 2, Part II (c)(3) is met by showing that the long-term environmental, economic, social and energy consequences resulting from urban development at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located on other undeveloped rural lands, considering:

(A) Whether the amount of land included within the boundaries of the proposed urban development is appropriate, and

(B) Whether urban development is limited by the air, water, energy and land resources at or available to the proposed site, and whether urban development at the proposed site will adversely affect the air, water, energy and land resources of the surrounding area.

Response: The proposed Site includes 1,298 acres, which is appropriate and necessary for the development of an exascale data center campus, based on the size of comparable examples cited in the Applicant's Economic Impact Analysis ~~(~~at Exhibit 8~~)~~. The size of the Site is necessary to accommodate multiple large buildings, power substations, supporting infrastructure, and landscape features, ensuring construction and operational efficiency and minimizing off-site impacts. The Site is not limited by air, water, energy or land resources. The Applicant has obtained service provider letters indicating the availability of necessary power and water. The Site's proximity to existing high-capacity transmission lines and other infrastructure to the east near the Boardman Airport and an approved data center development minimizes the need for extensive new infrastructure, thereby reducing potential adverse effects on surrounding resources.

~~Applicant's recommended findings are found in~~See also Application at page 34 with technical evidence in Exhibits 8 and 17A, B and C, incorporated by reference herein. This criterion is met.

(c) That Goal 2, Part II (c)(4) is met by showing that the proposed urban uses are compatible with adjacent uses or will be so rendered through measures designed to reduce adverse impacts considering:

(A) Whether urban development at the proposed site detracts from the ability of existing cities and service districts to provide services; and

(B) Whether the potential for continued resource management of land at present levels surrounding and nearby the site proposed for urban development is assured.

Response: The Applicant has obtained service provider letters for power and water. These letters indicate that the necessary services are available for an Exascale Data Center Campus. In addition, the data center development is anticipated to rely upon on-site services for sanitary sewer and industrial wastewater disposal. Further, the provision of services will be addressed in detail during the County's Site Plan Review approval, prior to any development of the Site.

Applicant has examined possible adverse impacts on surrounding resource lands under the response to OAR 660-004-0020(2)(d). The proposed exceptions Site is adjacent to a large-scale commercial agriculture operation to the west and south, but potential adverse impacts will be mitigated by the natural and physical features bounding the Site, and compliance with state regulations related to air quality and wastewater disposal. Notably, the operator of that farm is the Applicant for this proposal, which further indicates the farm operator is not concerned with its ability to manage and operate the farm.

~~Applicant's recommended findings are found in~~See also Application at pages 34-35 with technical evidence in Exhibits 8 and 17A and B, incorporated by reference herein. This criterion is met.

(d) That an appropriate level of public facilities and services are likely to be provided in a timely and efficient manner; and

Response: The appropriate level of public facilities and services needed for an Exascale Data Center Campus is defined in the introductory sections of the Findings above, the applicant's narrative report and responses to OAR 660-004-0020. These include power and water supply, vehicular access, and telecommunication facilities including fiber-optic internet service. These services exist in the vicinity and Applicant has obtained service provider letters from the Port of Morrow and Pacific Power to demonstrate these providers are able to provide the required service levels, which ensures their provision in a timely and efficient manner.

In addition, any developer or end user will be required to demonstrate adequate provision of facilities as part of Site Plan Review. In particular, the Morrow County Zoning Ordinance will require the end user to demonstrate that "electrical services … are adequate for the proposed use" prior to receiving site plan approval under MCZO 5.020.E.4. Further, any end user will need to demonstrate that "*water is or will be available to the site at a quantity and quality adequate for the proposed use*" prior to receiving site plan approval under MCZO 5.020.E.2. Pursuant to robust site plan review criteria relating to water, "*[n]ew developments that rely on a non-exempt*

groundwater source must (1) provide an estimated annual water usage, and (2) identify the necessary OWRD authorizations required to serve the estimated water need. All other developments that do not rely on groundwater as a source of water may satisfy this review criteria by submitting a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site, which shall indicate the source of water (e.g., surface water, existing water right, etc.) and a targeted delivery for water to the site." MCZO 5.020.E.2.

Applicant anticipates that exascale data center campus development at the Site will rely upon on-site industrial septic and industrial wastewater evaporation ponds. Evaluation of the precise mechanism for disposal and treatment of wastewater will also be a requirement of Site Plan Review, pursuant to M~~Z~~CZO 5.020.E.3, which requires that demonstration that "*[a]dequate sewage disposal and wastewater management can be provided for the proposed use as determined by the service provider or by demonstrating compliance with applicable review authority standards, as set forth below. For new developments that will rely on third-party service providers for sewer and/or wastewater disposal, the applicant may satisfy this criterion by submitting a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site. For new developments that will rely on on-site septic and/or industrial wastewater and/or non-contact cooling water disposal and/or treatment, the applicant may satisfy this criterion by identifying the necessary ODEQ permits, as required by the state regulations, to be obtained prior to commencement of the proposed use or certificate of occupancy being granted.*"

~~Applicant's recommended findings are found in~~See also Application at pages 35-36, with technical evidence in Exhibits 17A, 17B, and 17C, incorporated by reference herein. This criterion is met.

(e) That establishment of an urban growth boundary for a newly incorporated city or establishment of new urban development on undeveloped rural land is coordinated with comprehensive plans of affected jurisdictions and consistent with plans that control the area proposed for new urban development.

Response: This proposal involves the establishment of new urban development on undeveloped rural land. The reasons that are used to justify the necessary goal exceptions will be adopted into the Morrow County Comprehensive Plan. Substantial evidence in the record supports findings of consistency with existing Comprehensive Plan and MCZO policies. No expansion of the nearby Boardman UGB is being proposed. This criterion is met.

(4) Counties are not required to justify an exception to Goal 14 in order to authorize industrial development, and accessory uses subordinate to the industrial development, in buildings of any size and type, in exception areas that were planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 (Industrial development on industrial lands outside urban growth boundaries) and 197.714 (Cooperation of county and city concerning industrial development).

Response: The Site includes 331 acres of land in the SAI zone, which was implemented prior to January 1, 2004 and allows for industrial use of that portion of the Site. Based upon a lack of clarity regarding whether ORS 197.713 allows for the subsequent addition of new industrial uses in such areas without a new exception, Applicant has requested new exceptions because the SAI zone is limited to uses addressed in the earlier exception, which do not include data center development. This criterion is met.

3. OAR 660-012-0060 (Transportation Planning Rule)

660-012-0060 – Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response: Applicant has provided a Transportation Planning Rule (TPR) analysis report ~~(~~at Exhibit 9~~)~~ and a Supplemental Traffic Memo ~~(~~at Exhibit 9A~~)~~ by David Evans and Associates (DEA). The report and memo address Statewide Planning Goal 12 and compliance with the Transportation Planning Rule (TPR). Summarizing from those technical documents:

- The proposed zone change is projected to generate fewer trips than allowable under the existing zoning for the subject Site. As a result, the proposed zone change does not constitute a "significant effect" on the local transportation system.

- The proposal will not significantly affect any transportation facility by either: (1) changing any TSP roadway functional classification or roadway configuration; (2) changing the standards that implement the functional classification system; or (3) degrading the performance of an existing or planned facility beyond the projected performance of such facilities at the end of the planning period identified in the adopted TSP.

- Boardman Airport Lane is not identified in the County's currently adopted 2012 TSP and, thus, carries no classification, but the Port of Morrow has already constructed it consistent with the applicable design section in the TSP for a Rural Arterial II roadway. With adoption of the proposed rezoning, projected vehicle trip volumes are consistent with the capacity of Boardman Airport Lane's existing built condition.

- Although the report indicates that one ramp terminal and two intersections are anticipated to fail in year 2044 under current EFU/SAI zoning ~~(~~. sSee Table 10 in Exhibit 9~~)~~, the analysis also demonstrates that only two of those three projected failures will occur under the proposed rezoning, and that the two intersection failures will be less severe and will occur later in the planning period under the proposed zoning than under the current zoning. The report further observes that the projected intersection failures can be easily mitigated with traffic signalization when future traffic volumes reach a level that warrants it.

- Morrow County will have opportunities to impose conditions of approval in required Site Plan Review procedures prior to development occurring under the proposed zoning change, with mitigation measures correctly aligned with the impacts of the actual development proposal(s).

See also Applicant's ~~recommended findings are found in Applicant's~~ Narrative Report at pages 29-30 with technical evidence in Applicant's Exhibits 9, 9A and 17C as incorporated herein. ~~Further, this application and draft Findings have been shared with Oregon Department of Transportation and Morrow county Public Works who may provide additional input~~These criteria are met.

(5) The presence of a transportation facility or improvement shall not be a basis for an exception to allow residential, commercial, institutional or industrial development on rural lands under this division or OAR 660-004-0022 (Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)) and 660-004-0028 (Exception Requirements for Land Irrevocably Committed to Other Uses).

Response: This provision is not applicable because the Applicant has provided substantial evidence in the record of reasons to support the requested Goal exceptions, independent of the fact that the existing Boardman Airport Lane, located on exception land in the ALI Zone, has

already been improved west from Tower Road to the east edge of the rail spur that extends south to the Carty Generating Station.

660-012-0065 – Transportation Improvements on Rural Lands

(1) This rule identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception.

Response: Existing improved transportation facilities – more particularly Boardman Airport Lane and Tower Road – will provide access to the Site. Both those facilities are within approved/acknowledged urban exception lands. Following approval of the proposed Comprehensive Plan Map/Zoning designation change, the short extension of Boardman Airport Lane to serve the Site (i.e., crossing the Carty Generating Station railroad spur) will also be within the Goal exception area and this will be urban land. Therefore, the proposal does not involve future transportation improvements on rural lands, and OAR 660-012-0065 is not applicable.

~~Applicant's recommended findings are found in~~See also Applicant's Narrative Report at pages 30-31 with technical evidence in ~~Applicant's~~ Exhibits 9, 9A and 17C, as referenced and incorporated herein.

660-012-0070 – Exceptions for Transportation Improvements on Rural Land

(1) Transportation facilities and improvements which do not meet the requirements of OAR 660-012-0065 (Transportation Improvements on Rural Lands) require an exception to be sited on rural lands.

(a) A local government approving a proposed exception shall adopt as part of its comprehensive plan findings of fact and a statement of reasons that demonstrate that the standards in this rule have been met. A local government denying a proposed exception shall adopt findings of fact and a statement of reasons explaining why the standards in this rule have not been met. However, findings and reasons denying a proposed exception need not be incorporated into the local comprehensive plan.

(b) The facts and reasons relied upon to approve or deny a proposed exception shall be supported by substantial evidence in the record of the local exceptions proceeding.

Response: As in the response to OAR 660-012-0065 above, existing improved transportation facilities in approved/acknowledged exception areas – more particularly Boardman Airport Lane and Tower Road – will provide access to the Site. Following approval of the proposed Comprehensive Plan Map/Zoning designation change, the short 50 foot extension of Boardman Airport Lane necessary to serve the Site ~~(~~i.e., crossing the Carty Generating Station railroad spur~~)~~ will also be within the Goal exception area and thus will be converted from rural to urban land upon approval. It is well established that OAR 660-012-0070 does not require an exception for future transportation improvements when, ~~as in this instance~~for example, the land is ~~no longer rural~~converted to urban land due to ~~the prior~~inclusion in an urban growth boundary,

which also will be the case upon approval of exceptions to Goals 11 and 14 and the concurrent application of urban zoning in this instance. *Deumling, et al v. City of Salem*, 76 OR LUBA 99 (2017); *1000 Friends, et al. v. Curry County*, 301 Or 447, 498-501 (1986). Therefore, the proposal does not involve transportation improvements on rural lands, and OAR 660-012-0070 is not applicable.

See also Applicant's ~~recommended findings are found in Applicant's~~ Narrative Report at page 31 with technical evidence in Applicant's Exhibits 9, 9A and 17C, as incorporated by reference herein.

E. ~~D.~~ Compliance with Statewide Planning Goals

Morrow County ~~will be required to~~ adopts these findings to show that the request complies with applicable Statewide Planning Goals. This application includes an exception to three Statewide Planning Goals: 3, 11 and 14.

1. **Goal 1 (Citizen Involvement): To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.**

Response: Generally, Goal 1 is satisfied when a county complies with public notice and hearing requirements in the Oregon Statutes and in the local Comprehensive Plan and Land Use Code. The County's Zoning Ordinance is consistent with State law with regard to notification requirements. Pursuant to Section 9 of Morrow County Zoning Ordinance at least one public hearing before the Planning Commission and Board of Commissioners is required. Legal notice in a newspaper of general circulation is required. The County has met these requirements and notified DLCD 35 days prior to the first evidentiary hearing.

2. **Goal 2 (General Land Use): To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.**

Response: Findings provided to implementing regulations in OAR 660-004 and OAR 660-014-0040 demonstrate that the proposed zoning redesignation package complies with "reasons" exception criteria. In addition to demonstrating that the proposed Site to be rezoned to allow data center use is superior and preferable to alternative potential areas within a sizable vicinity, the request incorporates a request to downzone approximately 1,6~~05~~23 acres of SAI land to EFU, to ensure no net loss of productive agricultural land will occur. The proposal therefore maintains consistency with policies in the comprehensive plan.

3. **Goal 3 (Agricultural Land): To preserve and maintain agricultural lands.**

Response: Applicant requests a Goal 3 exception. Goal 3 requires Morrow County to protect agricultural lands for farm uses through appropriate zoning. With respect to the Site, Applicant's submittal materials include detailed responses to "reasons" exception standards in OAR 660-004

and supporting evidence, which demonstrate that the proposed zoning redesignation package complies with Goal 3.

The request proposes conversion of approximately 1,6~~05~~23 acres from SAI to EFU, ensuring that no net loss of productive agricultural land will occur. The Applicant has provided geotechnical/soils analysis documentation demonstrating that the Downzone Area contains superior soil conditions, and ~~that 775 acres are~~is actively farmed and irrigated. ~~This 775 acres in~~In particular ~~exhibits~~, the Downzone Area contains Class IVe soils and is far more suitable for the proposed Agriculture/EFU designation than the EFU-zoned soils at the Site, because the Site has many agricultural limitations (e.g., shallow soils, mounds, lack of irrigation), would require substantial financial and time investment to achieve a cultivation condition, and even if such condition were achieved, would still be inferior to the agricultural condition of the downzone study area. As noted in the Downzone Area Soils Report ~~(~~at Applicant's Exhibit 10B~~)~~, given these limitations the land proposed for upzoning (the Site) is not likely to become cultivation land, while ~~775 of~~ the approximately 1,6~~05~~23 acres proposed for downzoning are likely to remain in high-value crop production due to favorable soil conditions and associated improvement (irrigation, land leveling, access, etc.). ~~Applicant has also provided aerial photographic evidence of center-pivot irrigation in use in the southern portion of the Downzone Area, together with evidence of the potential for expanded irrigation within the remaining Downzone Area. The balance of the 1,605 Downzone Area is part of a permanent Conservation Easement set aside for preserving shrub steppe habitat and wildlife species.~~

~~It is important to note that all land within the County, including the portion of the Downzone Area subject to the conservation easement (~680 acres), is required by law to carry a zone designation. And the Applicant's request is to have this area be also zoned exclusively for farm use in the event the easement is released or modified in the future. Further, there is no criterion requiring a corresponding downzone as a condition of upzone approval, so the greater productivity of the currently-farmed portion of the Downzone Area (775 acres) is sufficient to provide mitigation for the upzone.~~

Thus, although there is no applicable local or state criterion requiring a corresponding downzone to Exclusive Farm Use zoning as a condition of the proposed upzone approval. This concurrent request to eliminate the potential for non-agricultural uses in the Downzone Area is sufficient to ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

See also Applicat~~ion~~n~~'s recommended findings are found in Applicant's Narrative Report~~ at page 69 with technical evidence ~~in Applicant's~~at Exhibits 2, 7, 10A and 10B, as referenced and incorporated herein.

4. **Goal 4 (Forest Lands): To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.**

Response: The proposal does not affect lands that are designated for forest uses. Goal 4 does not apply.

5. Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources): To protect natural resources and conserve scenic and historic areas and open spaces.

Response: The County Comprehensive Plan has not identified any significant natural, scenic, historic or open space areas within or near the Site, or within the proposed Downzone Area. Per the analysis in the Natural Resources Assessment ~~(~~at Applicant's Exhibit 12~~)~~, there are no significant Goal 5 resources that would be affected by this proposal to amend land use designations. To protect confidential location information that may be critical to cultural resource conservation efforts, Applicant reports completing an Archaeological and Cultural Resources Assessment and sharing it with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) for review, comment, and coordination; CTUIR was provided notice of this application and can provide comments directly to the County during the public hearing process.

Within the Applicant's property but outside and west of the Site (the proposed exception area), on the east bank of Sixmile Creek, the Oregon Department of Geology and Mineral Industries (DOGAMI) issued permit #25-0006 to Three Mile Canyon Farms for the "Six-Mile Pit." ~~(~~See Exhibit 16; the permit location is labeled "25006" on the Significant Resource Overlay Map.~~)~~ The permit allows the extraction of screened sand and gravel from a 12-acre area that the County has not designated as "Goal 5 Significant." The Applicant intends to retain the facility's current EFU zoning, maintain its active status under the permit, and provide for vehicular access to it in any future development plans for the Site. All relevant areas are under common ownership (i.e., owned by Three Mile Canyon Farms, LLC). This proposed approach will allow extraction under the existing DOGAMI permit to continue until the permit is terminated.

The Significant Resource Overlay Map also includes a dot within the Site identified as "25008." DOGAMI permit #25-0008, issued to Portland General Electric Company, is listed by DOGAMI as a "Riprap Quarry" site for extraction of "rock." Its permit is listed as "Closed" in the DOGAMI Permit Data spreadsheet (updated January 6, 2021), and there is no corresponding line item in the County's "Inventory of Natural Resources/Aggregate and Mineral Resources" table, included in Exhibit 16. As in the case of DOGAMI permit #25-0006, the facility is not identified as a significant Goal 5 resource, so this request will have no effect on significant Goal 5 resources. Moreover, because the permit's status is closed, no further extraction activity is expected at this permit location. Post-extraction reclamation for a different use will be consistent with the Goal 5 process as it applies to mineral/aggregate resource sites.

See also Applicationt's ~~recommended findings are found in Applicant's Narrative Report~~ at pages 37-38 and 69, with technical evidence ~~in Applicant's~~at Exhibits 11 and 12, as incorporated by reference herein.

6. Goal 6 (Air, Water and Land Resources Quality): To maintain and improve the quality of the air, water and land resources of the state.

Response: The State of Oregon has adopted statutes and administrative rules to protect air, water and land resources from environmental impacts of development and land use activities. In the site development and construction permitting processes that will follow this amendment proposal, pursuant to MZCZO 5.020 and proposed Conditions of Approval (see page 3 above), all future development and use of the Site will be required to comply with permitting requirements for air quality management, stormwater management (i.e., the Oregon Department of Environmental Quality 1200-C process), wetland fill/removal (i.e., the Joint Removal/Fill Permit process administered by the US Army Corps of Engineers and Oregon Department of State Lands), wastewater discharge, and other such permitting. Since all proposed developments will be contingent on the receipt of any such required state and federal permits, compliance with Goal 6 is assured.

Regarding noise as an environmental impact issue, the Site is located west of the Boardman Airport and distant from any noise-sensitive receiver sites or uses, such as residential development. Based on the Site's large distance from noise-sensitive sites, and the occasional background noise levels associated with aircraft take-off and landing activities at the Airport, there is no reason to anticipate any exceedance of applicable noise control standards arising from future development under the proposed land designation/zoning amendment.

See also Application's recommended findings are found in Applicant's Narrative Report at pages 38 and 70, with technical evidence in Applicant's at Exhibits 11 and 12.

7. **Goal 7 (Areas Subject to Natural Disasters and Hazards). To protect people and property from natural hazards.**

Response: The subject Site does not contain mapped flood or geologic hazards (. sSee FEMA FIRM Panels, at Exhibit 14, and DOGAMI SLIDO Maps, at Exhibit 15). The proposed amendment will have no effect on Morrow County's compliance with Goal 7.

Further, as to this particular Site, the Morrow County Comprehensive Plan does not require compliance with the Community Wildfire Protection Plan. However, prior to any development on the Site, MZCZO 5.020 (site plan review) will apply, and this provision provides that "development in hazard areas identified in the Morrow County Comprehensive Plan, Natural Hazard Mitigation Plan, or Community Wildfire Protection Plan shall comply with all applicable requirements.

8. **Goal 8 (Recreational Needs): To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.**

Response: The proposal does not affect recreational facilities or land needed to meet Morrow County's recreational needs. Goal 8 does not apply.

9. **Goal 9 (Economic Development): To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.**

Response. Applicant has provided an economic analysis ~~(~~at Applicant's Exhibit 8~~)~~, which identifies demand for an estimated 3,000 acres (or more) of land in the vicinity in the next 10 years, to meet the rapidly growing demand for data center services. That report observes that the availability of sufficient, reliable electric power and other critical location factors make the Morrow County segment of the Columbia River corridor region attractive for such uses – including at the exascale-level – and the report also notes that the highly competitive, time-critical nature of that industry makes it imperative for jurisdictions to ensure that their regulatory environments and inventories of eligible and available land combine to offer feasible development opportunities that align with industry drivers. In addition to the direct economic benefits attributable to having Exascale Data Center Campuses located in Morrow County, their presence is expected to induce beneficial secondary economic effects on the local economy. Adopting the proposed land designation amendments is a fundamental first step in ensuring that Morrow County will enjoy the health, welfare and prosperity benefits of this emerging economic development trend.

See also Applicationt's ~~recommended findings are found in Applicant's Narrative Report~~ at pages 39 and 70, with technical evidence ~~in Applicant's~~at Exhibit 8.

10. Goal 10 (Housing): To provide for the housing needs of citizens of the state.

Response: The proposal does not affect the provision of housing. While development of the site will likely increase demand for housing, the proposed amendments have no direct effect on Morrow County's compliance with Goal 10.

11. Goal 11 (Public Facilities and Services): To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Response: The findings presented above in response to compliance with OAR 660-014-0040 support the County's decision to adopt an exception to Goal 11 in order to address the documented demand for land for exascale data center development. And Goal 11's intent to prevent the proliferation of urban uses in rural areas caused by the availability of urban-level services extended beyond UGBs is largely not implicated due to the fact that the Limited Use Overlay restricts industrial uses to data centers, and the Boardman Airport area (which will include the development for a recently approved data center campus) directly to the east already allows for extension of urban-scale services.

12. Goal 12 (Transportation): To provide and encourage a safe, convenient and economic transportation system.

Response. Applicant has submitted a Transportation Planning Rule (TPR) analysis (per OAR 660-012), which demonstrates that a Goal 12 exception is not required because the land use activity to be allowed by the proposed zoning (data center) will not require extension of urban transportation improvements on rural lands, and the land use designation changes will have no significant effect on transportation facilities identified in the Transportation System Plan (TSP). Data center use of the Site is projected to produce fewer trips than other development that is

allowed under the Site's current zoning designations (SAI and EFU). Additionally, the Port of Morrow has constructed Boardman Airport Lane between Tower Road and the Site with paved width and other features consistent with the Rural Arterial II standard in the TSP.

13. Goal 13 (Energy Conservation): To conserve energy.

Response. The Site's location – close to existing electric power transmission lines – makes it highly efficient and cost-effective to meet the power needs of Exascale Data Center Campus operations. Additionally, EDCCs yield operational efficiency benefits because the concentration of operations on a single campus facilitates consolidation of inventories and performance of maintenance/repair/upgrade activities with a minimum of off-site travel and associated effects such as fuel consumption, traffic, increased vehicle miles traveled (VMT), and operational delays. This proposal to redesignate the Site to allow Exascale Data Center Campus use responds to society's accelerating computing needs – and associated demand for large tracts of land – in a way that provides for efficient construction and operations of sufficient and suitably located facilities.

See also Application~~'s recommended findings are found in Applicant's Narrative Report~~ at page 41, with technical evidence ~~in Applicant's~~at Exhibit 8.

14. Goal 14 (Urbanization): To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.

Response. To support the request for an exception to Goal 14 to allow large-scale data center campus development of the 1,298-acre Site, Applicant has provided evidence and findings that address the Goal 14 exception standards in OAR 660, Division 14.

Statewide Planning Goal 15 (Willamette River Greenway), Goal 16 (Estuarine Resources), Goal 17 (Coastal Shorelands), Goal 18 (Beaches and Dunes), and Goal 19 (Ocean Resources) are not applicable because the Site is not located near these resources/areas.

F. ~~E.~~ Compliance with Morrow County Comprehensive Plan and Land Use Regulations

1. M~~Z~~CZO 8.040 Criteria for Amendments

M~~Z~~CZO 8.040, CRITERIA. The proponent of the application or permit has the burden of proving justification for its approval. The more drastic the request or the greater the impact of the application or permit on the neighborhood, area, or county, the greater is the burden on the applicant. The following criteria shall be considered by the Planning Commission in preparing a recommendation and by the County Court in reaching their decision.

A. The local conditions have changed and would warrant a change in the zoning of the subject property(ies)

Response: Applicant's evidence includes a report from Johnson Economics ~~(~~at Exhibit 8~~)~~ that documents a recent economic/land development trend: deployment of Artificial Intelligence (AI) services across a wide range of applications is spurring a rapid – and only recently emerging – expansion in computing demand. That growth is in turn spurring demand for land suitable for Exascale Data Center Campus siting. The Johnson Economics report projects that Morrow County can expect EDCC development to absorb an estimated 3,000 acres of land within the coming 10-year period.

Up to the present, comprehensive land use planning by Morrow County and other jurisdictions in the vicinity has relied on estimates of industrial/employment land needs that have been based on a familiar mix of historic demand drivers, supplemented by Economic Opportunities Analyses (EOAs) to identify strategic opportunities and make projections for associated land needs; however, the novel nature of the emerging trend includes the very recent advent of demand for AI services, which has recently dramatically accelerated demand for mass computation capabilities requiring multiple buildings on large campus sites served by direct connections to high-capacity power transmission lines and fiber optic communications/internet service. See also Application at pages 60-61, 89.

The Johnson Economics report identifies changes in the need and market demand for tracts of industrial land suitable for the specific needs of EDCCs. These changes in local conditions are sufficient to warrant the proposed change in the zoning of the Site. This criterion is met.

B. The public services and facilities are sufficient to support a change in designation including, but not limited to, water availability relevant to both quantity and quality, waste and storm water management, other public services, and streets and roads.

Response. As noted above, service provider letters for power (Pacific Power) and water (Port of Morrow) indicate that the necessary services are available, or will be available, for EDCC development on the Site. See Exhibits ~~**Error! Reference source not found.A,**~~17A and 17B. In addition, the data center development is anticipated to rely upon on-site services for sanitary sewer and industrial wastewater disposal. Such new infrastructure would be planned and sized to accommodate the proposed data center development(s) on this Site and, therefore, would not detract from the ability of Boardman to provide such services. Finally, as described more fully in the application materials, provision of services will be addressed in detail during the County's Site Plan Review approval, prior to any development of the Site. See also Application at pages 61-64 and 89-90.

With respect to road access and traffic, existing improved transportation facilities – more particularly Boardman Airport Lane and Tower Road – will provide adequate access to the Site. See Exhibit 17C. Further, the Applicant has provided a Traffic Analysis ~~(~~at Exhibit 9~~)~~ and Supplemental Traffic Memo ~~(~~at Exhibit 9A~~)~~ addressing Statewide Planning Goal 12 and compliance with the Transportation Planning Rule (TPR). To summarize, the proposal will not "significantly affect" any transportation facility because the proposed zone change is projected to generate fewer trips than allowable under the existing SAI/EFU zoning for the subject Site. Finally, Morrow County will have opportunities to impose conditions of approval during Site Plan Review approval, prior to development, at which time mitigation measures can properly

align with impacts from an actual development proposal. See also Application at pages 28-31, 61, and pages 89-90.

With respect to other public services, ~~Applicant's materials state that~~ data center developments to date have not been associated with unusual levels of police activity or need for community services, but data centers' payrolls as well as the employment and property tax revenues they provide to local jurisdictions contribute significantly to funding needed for police, emergency and other public services. The proposed redesignation will contribute positively to achieving these policies. See Application at pages 52-54, with technical supporting evidence at Exhibit 8. This criterion is met.

> ***1. Amendments to the zoning ordinance or zone changes which significantly affect a transportation facility shall assure that land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:***
>
> ***a. Limiting allowed land uses to be consistent with the planned function of the transportation facility or roadway;***
>
> ***b. Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,***
>
> ***c. Altering land use designations, densities, or design requirements to reduce demand for automobile travel to meet needs through other modes***.

Response. As discussed ~~under Subpart (2)~~ below, this amendment request does not significantly affect a transportation facility, therefore this Subpart and Subpart (2), discussed below, do not apply to this application.

> ***2. A plan or land use regulation amendment significantly affects a transportation facility if it:***
>
> ***a. Changes the functional classification of an existing or planned transportation facility;***
>
> ***b. Changes standards implementing a functional classification;***
>
> ***c. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or***
>
> ***d. Would reduce the level of service of the facility below the minimal acceptable level identified in the Transportation System Plan***.

Response. Applicant's submittal includes a Transportation Planning Rule (TPR) compliance report and a supplemental memo from David Evans and Associates ~~(~~at Exhibits 9 and 9A~~)~~, which establish that the proposed change in zone designation and associated allowed development will

not "significantly affect" any transportation facility because the proposed zone change is projected to generate fewer trips than allowable under the existing SAI/EFU zoning for the subject Site. That conclusion is reasonable due to the proposed LU Overlay designation restricting use to data center, which is consistent with the types of travel demand reducing strategies authorized in subparagraphs a and c of Subpart 1 quoted above, and the net reduction in vehicular trips to and from the Site as compared with reasonable worst-case trip generation under current zoning. See also Application at pages 61-62 and 89-90.

C. That the proposed amendment is consistent with unamended portions of the Comprehensive Plan and supports goals and policies of the Comprehensive Plan, that there is a public need for the proposal, and that the need will be best served by allowing the request. If other areas in the county are designated for a use as requested in the application, then a showing of the necessity for introducing that use into an area not now so zoned and why the owners there should bear the burden, if any, of introducing that zone into their area.

Response. Applicant's materials address the four discrete tests in this Subpart. First, the Applicant identified and responded to each of the Policies and Objectives of the Morrow County Comprehensive Plan that are relevant to, or could be affected by, the proposed amendment. See Application at pages 74-87. Second, Applicant's Exhibit 8 contains an economic report from Johnson Economics that documents recent accelerating growth in data processing as a service, largely associated with broad adoption of AI services, which is causing a recent, rapid increase in demand for, and construction of, Exascale Data Center Campuses. It estimates a demand for an additional 3,000 acres for data center development in the region over the next 10 years. Third, Applicant's Exhibit ~~**Error! Reference source not found.**~~7 contains an analysis of alternative areas within a large vicinity east and west of the Site pursuant to Oregon Administrative Rules (OAR) exceptions standards, which demonstrates that the Site is the best situated location with respect to multiple siting factors, whether examined individually or in combination. And fourth, regarding the question of placing a burden on the owners of property where the new zoning would be introduced, this application has been presented by Threemile, who owns the property as well as much of the surrounding area. Threemile has adequately considered how the proposed rezoning would affect its properties and operations, and is satisfied that rezoning as proposed is preferable to maintaining the existing zoning designations as they apply to this Site. See also Application at pages 44, 62 and 90-91. This criterion is met.

D. The request addresses issues concerned with public health and welfare, if any.

Response. ~~Applicant's report states that e~~Economic development is an important public health and welfare issue of concern to Morrow County, ~~noting that~~and the recent, rapid and broad-based popular adoption of AI technology services is spurring a rapid increase in demand within northern Morrow County and the surrounding vicinity for large tracts of land to support Exascale Data Center Campus development and use ~~(~~see Exhibit 8~~)~~. Communities in the Columbia River corridor have already found themselves well positioned to compete to attract regional data center developments: the presence of sufficient electric power and transmission lines, Interstate 84, and high-capacity fiber optic facilities in the Columbia River corridor, together with available suitably-zoned land with sufficient buffering from other uses has already led to numerous data center development projects completed or now in process. But those projects have generally

occupied about 150 acres or less, and have utilized land already zoned to allow data center development, reducing available inventories of industrially-zoned buildable land available to meet other economic development needs and objectives. For this reason, identifying particularly suitable locations and designating land for EDCC development and use contributes to public health and welfare, by meeting emerging needs while keeping adopted Economic Development planning on track.

Separately, regarding public health and welfare issues associated with impacts of industrial development and use activities, ~~Applicant states that~~ EDCCs are normally equipped with backup diesel generators to avoid, or at least mitigate, occasional disruptions in data processing due to instability or outages in the electric transmission system. In populated areas, such generator activations and operations can result in perceived impacts at sensitive receptor sites, such as residences, even though the actual noise levels, air emissions and other effects may in fact be in compliance with applicable federal, state and local standards. But the relative isolation of the Site for the proposed zone change – west of the Boardman Airport, on the south side of the I-84 corridor and on the east bank of Sixmile Creek – dramatically reduces potential for such perceived impacts. See also Application at pages 62-63 and 91-92. This criterion is met.

2. M~~Z~~CZO 3.110 Criteria for Limited Use Overlay Zone

1. No other zoning district currently provided in the zoning ordinance can be applied consistent with the requirements of the 'reasons' exception statement because the zoning would allow uses beyond those justified by the exception.

Response. There are Morrow County base zones in which data center is an allowed use, but they also include use lists that would allow activities other than data centers within the Site. Because such other uses would be inconsistent with the purpose of this application and the exceptions from Statewide Planning Goals requested by this application, the LU Overlay is necessary and appropriate in conjunction with the proposed base rezoning to General Industrial (MG). This criterion is met.

2. The proposed zone is the best suited to accommodate the desired uses(s); and

Response. Applying the MG zone to the Site, together with an LU Overlay restricting land use to data center, is the best way to provide land for large-campus Exascale Data Center Campus development and use because data centers are typically consistent with the form, appearance, and sometimes very large scale of industrial sites and buildings in the MG zone and the proposed LU Overlay will reserve the full area of the Site for data center use, ensuring that other forms of employment development will not seek to locate within the Site instead of at currently planned locations for such other uses. This criterion is met.

3. It is required under the exception rule (OAR 660, Division 4) to limit the uses permitted in the proposed zone.

Response. This provision implements OAR 660-004-0018(4)(a), which states that "when a local government takes an exception under the 'reasons' section of ORS 197.732(1)(c) and OAR 660-004-0020 through 660-004-0022, plan and zone designations must limit the uses, density, public facilities and services, and activities to only those that are justified in the exception." Findings

are provided above responding to the "reasons" exception rules in OAR 660-004 in Section I.D.1 above and implementation of this provision of M~~Z~~CZO 3.110 limits the uses permitted under the proposed zone to only those justified in the exception. Consequently, approval of the requested goal exceptions necessarily requires the adoption and implementation of the overlay zone designation for the Site as proposed, to ensure compliance with applicable law as required under this code criterion.

B. Official Plan/Zoning Map. The official plan/zoning map shall be amended to show an LU suffix on any parcel where the Limited Use Overlay Zone has been applied.

Response. Staff will amend the map to show the LU suffice over this Site.

C. Site Plan Requirement. In addition to limiting the uses in the zone it may be necessary to require County approval of the location of buildings, access and parking, screening and other site planning considerations in order to ensure the compatibility of the permitted uses with the area. This requirement may be added by specific reference in the adopting ordinance. The ordinance shall indicate any special concerns or locational requirements that must be addressed in the site plan and be approved by the Planning Commission.

Response. Any development of this Site will first require Site Plan Review and approval, pursuant to M~~Z~~CZO 5.020. Further, the surrounding area is not currently improved or designated for any types of future development, such as residential, that would be considered sensitive to impacts affecting compatibility of uses. See also Application at 64-65. This criterion is met.

3. M~~Z~~CZO 3.092 Airport Safety and Compatibility Overlay Zone

A map of the imaginary surfaces for the Boardman Airport, including the boundary of the Site, is included in Exhibit 13. As indicated in the exhibit, the Site is partially within the horizontal and conical surface areas surrounding the runway. However, it will be feasible for future data center development to comply with the requirements in this overlay zone, as demonstrated by the conceptual site plan provided as Exhibit 4. This is because the Site is more than 5,000 feet from the Boardman Airport runway and only a small portion of the Site overlaps with the imaginary surfaces--at the eastern edge of the Site, nearest to the airport, a structure would have to be over 100 feet in height to penetrate the conical surface. Across the rest of the Site, structures could be well over 100 feet without penetrating the surface. Final compliance will be confirmed through the County's Site Plan Review process. See also Application at pages 65-67, with technical supporting evidence at Exhibit 6. There is no incompatibility with the Airport Safety and Compatibility Overlay Zone presented by this application.

4. Compliance with Morrow County Comprehensive Plan Goals and Policies

Not all Comprehensive Plan Goals and Policies provide review criteria for a quasi-judicial application—i.e., aspirational goals and policies do not constitute review criteria. The discussion below focuses primarily on Morrow County Comprehensive Plan goals and policies that provide relevant and applicable criteria for this application.

(i) Goal 1 (Citizen Involvement)

The Citizen Involvement Goal develops and implements a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process. Citizen Involvement Policy 3 encourages people to attend and participate in Morrow County Planning Commission and County Court meetings and hearings. Procedures include notice to the public, Oregon State Agencies including the Departments of Land Conservation and Development (DLCD) and Transportation (ODOT), Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and other interested parties, and public hearings. The goal and policy are satisfied through the opportunities afforded to the public to participate at public hearings before the Morrow County Planning Commission and Board of Commissioners on the proposed amendments, as provided for by state law and the county's Zoning Ordinance.

(ii) Goal 2 (General Land Use)

General Land Use Policy 9 requires that all plan and zone changes comply with all applicable statewide planning goals and County policies and procedures. This policy can be satisfied upon approval of the Findings and analysis of compliance with the statewide goals and applicable County zoning provisions that are contained in this application.

In preparing to submit this request, the Applicant's team coordinated with staff of affected local governments (cities and counties), CTUIR, and utility service providers to identify issues of concern and address them in the analysis and recommendations, and to obtain data and service provider letters to support the analysis and proposed amendments.

Applicant has presented factual evidence and analysis findings – in particular, the responses provided above to implementing regulations in OAR 660-004 and OAR 660-014-0040 – demonstrating that the proposed redesignation package complies with "reasons" exception criteria. In addition to demonstrating that the proposed Site to be rezoned to allow data center use is superior and preferable to alternative potential areas within a sizable vicinity, the proposal incorporates equivalent-area conversions of land between resource and industrial zones, such that no net loss of productive agricultural land will occur. The proposal therefore maintains consistency with policies in the comprehensive plan, satisfying Goal 2 requirements.

~~For more details s~~See also Application at pages 42-45, with technical supporting evidence at Exhibit 8.

(iii) Goal 3 (Agricultural Lands Element)

Applicant is seeking a Goal 3 exception. Applicant's evidence and recommended findings addressed the Agricultural Lands Exceptions Objectives of the Comprehensive Plan.

Agricultural Lands Exceptions Objective 1 seeks "To maintain a viable agricultural base, preserve agricultural lands for agriculture, and to protect agriculture as a commercial enterprise." The proposal includes redesignation of more productive farmland from its current SAI zoning to EFU, which will replace the Site area proposed for EFU/SAI to MG redesignation. This exchange will ultimately remove 967 acres of non-productive land from EFU and replace it with approximately 1,6~~05~~23 acres of EFU-zoned land~~: 775 acres of~~, which is ~~irrigated and~~ actively

farmed~~, 680 acres of which is subject to a conservation easement, and 150 acres of which consists of areas between cultivated fields~~. This action contributes positively to meeting this objective.

Agricultural Lands Exceptions Objective 2 seeks "To conserve natural resources constituting important physical, social, aesthetic and economic assets through the development and adoption of realistic land use and development policies intended to achieve an economic-environmental balance, minimize public costs, and maximize energy conservation." Applicant's submitted evidence and recommended findings demonstrate that the proposed redesignations are consistent with land use and development policies. The Site contains no significant natural resources, and its geology and soils characteristics will not support cultivated farming. See Exhibit 10A. The needs of Exascale Data Center Campus development and use make the Site particularly suitable for data center use, which will contribute to the County economy while preserving other industrial-zoned lands for employment uses as intended by previous economic development and planning efforts. Public costs, which may include capital expenditures as well as ongoing operations and maintenance expenditures, will be minimized by siting data center development where access to high-capacity electric transmission lines is feasible and proximate. The Port of Morrow has plans to extend water services to serve the Airport property, next-door to the east of the Site; this proposal will add another rate-paying user to absorb those costs and fund service operations. Those factors similarly contribute to maximizing energy conservation, along with enabling future data center operator(s) to realize operational economies of scale by consolidating facilities on a large campus rather than on distributed sites (which would necessitate multiple trips on public roads by data center staff vehicles, to perform operational, maintenance, repair and other tasks). For those reasons, the proposed designation amendments are consistent with this objective.

Agricultural Lands Exceptions Objective 3 seeks "To minimize and actually prevent conflict between farm and non-farm uses and resultant increased economical costs to the agricultural sector." Applicant's evidence indicates that data center operations at the Site will not constrain agricultural practices, including movements of agricultural vehicles/implements, in the surrounding area. Relative to the size of the campus area, human occupancy is low, and all operations are indoors. Transportation access requires only the extension of the existing paved segment of Boardman Airport Lane to the west, across the railroad spur that extends south to the Carty Generating Station, into the Site. The proposal includes converting a larger area (approximately 1,6~~05~~23 acres +/-) of SAI-zoned land, ~~775 acres of~~ which is now in farm use, to EFU. And the Applicant – the primary farm user in the vicinity – has not identified a conflict between the proposed exascale data center use and its existing or planned farm uses. The proposal furthers the goal of preventing farm/non-farm conflicts, as intended by this objective.

Agricultural Lands Exceptions Objective 4 seeks "To provide maximum opportunity for optimum management and operational practices, and provide adequately efficient supportive resources and services." As discussed above for Objective 3, the proposed land designation changes will improve the overall quality and farm productivity of land in the County's EFU inventory by replacing the Site's non-farmable land with more than 1,600 acres of EFU land, ~~775 acres of~~ which is irrigated, productive farmland. The resulting improved alignment between zoning designation and productive agricultural capacity contributes to this objective by

preserving better-quality farmland in EFU for long-term use in accordance with optimum agricultural management and operational practices.

Agricultural Policy 1 states, "It shall be the policy of Morrow County, Oregon, to preserve agricultural lands, to protect agriculture as its main economic enterprise, to balance economic and environmental considerations, to limit non-compatible nonagricultural development, and to maintain a high level of livability in the County." Applicant noted that the Board of Commissioners included the following finding in its 2018 approval of the Goal 3 exception for OE Solar 1, LLC, familiarly known as the HARP Solar Generation Facility:

> Another interpretation of Economic Element Goal 4 would be that allowing this activity on land zoned for Exclusive Farm Use protects land zoned Port or General Industrial from uses that consume large amounts of acreage, but do not either create jobs or significant tax base. Placing the proposed solar photovoltaic energy generation facility on land zoned for Exclusive Farm Use preserved industrial land for higher density and impact uses.

~~Applicant suggests the~~The reasoning is similarly applicable in this case, where economic data indicates a novel, and very recent trend: growth in regional demand for 3,000 acres of land for development of Exascale Data Center Campuses in a 10-year period. Exascale Data Center Campuses are a new type of land use previously unanticipated by economic development planning and land use allocations to date. As a result, relying on existing inventories of industrially zoned exception lands to meet the novel demand would have the perverse effect of absorbing land (i.e., removing it from the available inventories to meet employment needs associated with growth planning in the first place). In that scenario, in the future it will become necessary to urbanize more land to satisfy growth needs, leapfrogging over and around the zoned industrial lands absorbed by data center development.

It follows that enabling the Site to accommodate an Exascale Data Center Campus on non-farmable land located west of the Boardman Airport will protect productive agricultural lands from expansion pressure. This occurs because allocating non-farmable land to meet the novel demand for exascale data center use preserves existing industrial land allocations to meet employment needs already associated with the population growth forecasting/planning process. For the above reasons, the proposed designation changes are consistent with this policy.

Agricultural Policy 17 states, "The County, Port, regional and state agencies should work with private citizens to secure utilization of the Navy's north Morrow tract, so that when market conditions permit, the land may be developed for more intensive agriculture, or other compatible and/or complementary uses including industrial and energy purposes." The Applicant understands the "Navy's north Morrow tract" to refer to the large, generally rectangular area labeled "Naval Weapon Systems Training Facility Boardman" on the Morrow County Comprehensive Plan Map. The Site of the proposed redesignation/zone change is approximately four miles west-northwest of that tract.

This policy anticipates that the "north Morrow tract" will be converted to private sector tenancy and use, possibly to include private ownership, at a future time. Unless and until such time, the land in that tract is not available for data center development or other private use.

The proposed redesignation of the Site to allow exascale data center use will have no significant effect on the ability of the County to convene parties and engage with the federal government regarding redeployment of the "Navy's north Morrow tract" for locally preferred activities. Therefore, the proposal is consistent with this policy.

With respect to the proposed Downzone Area (discussed more fully below), the proposed conversion of approximately 1,6~~05~~23 acres from Industrial/SAI designation to Agriculture/EFU will contribute to ensuring that no net loss of productive agricultural land will occur. The Applicant has provided geotechnical/soils analysis documentation ~~(~~at Exhibit 10B~~)~~ demonstrating that the Downzone Area contains superior soil conditions~~, 775 acres of which~~ and is actively farmed and improved with center-pivot irrigat~~ed~~ion~~. This 775-acre~~. The Downzone ~~a~~Area ~~in particular exhibits~~contains Class IVe soils and is far more suitable for the proposed Agriculture/EFU designation than the EFU-zoned soils at the Site, which has many agricultural limitations, would require substantial financial and time investment to achieve a cultivation condition, and even if such condition were achieved, would still be inferior to the agricultural condition of the downzone study area. As noted in the Downzone Area Soils Report, given these limitations the land proposed for upzoning is not likely to become cultivation land, while ~~much of the land (775 acres) proposed for downzoning~~the Downzone Area is likely to remain in high-value crop production due to favorable soil conditions and associated improvement (irrigation, land leveling, access, etc.). ~~The Applicant has also provided aerial photographic evidence of center-pivot irrigation in use in the southern portion of the area, together with evidence of the potential for expanded irrigation within the remaining Downzone Area. Further, it is important to note that the portion of this area subject to a conservation easement (680 acres) is required by law to carry a zone designation, and the Applicant's request is to have this area be zoned exclusively for farm use in the event the easement is released or modified in the future. And~~ Although there is no criterion requiring a corresponding downzone as a condition of upzone approval, ~~so~~ the greater acreage and productivity of the currently-farmed ~~portion of the~~ Downzone Area ~~(775 acres)~~ is sufficient to provide mitigation for the upzone.

~~Applicant's additional findings are found at~~See also Application at pages 45-48 and 69, with technical supporting evidence at Exhibits 9, 9A, 10A, 10B, 11, 12, 13, 15, and 17A, B and C.

(iv) Goals 5 and 6 (Natural & Cultural Resources Elements)

The Natural Resources Element of the plan provides a general overview of all natural resources common to the County. In general, natural resources are considered vital to the County's historical and future development and are recognized as a primary base for the County's economy.

As directed by Statewide Planning Goal 5 and its implementing statutes and administrative rules, Morrow County has inventoried resources; has analyzed Environmental, Social, Economic, and Energy (ESEE) consequences of conservation/protection versus allowing development impacts; and has adopted designations of significant Goal 5 resources. Such significant resource designations include land resources (soils, minerals, vegetation, and water resources); air resources; air, water, and land quality; fish and wildlife; fisheries; wildlife; scientific and cultural resources; and historical resources.

Neither the proposed redesignation Site (from the SAI/EFU zone to MG with Limited Use Overlay restricting use to data centers) nor the Downzone Area contain any significant Goal 5 resources; therefore, the proposed amendments will have no effect on Goal 5 compliance.

Natural Resource General Policy M states that the County should establish policies for the analysis of proposed zone changes' effects on air, water, and land quality.

Applicant's evidence demonstrates that the proposed Site for rezoning to permit exascale data center campus development does not contain soil conditions suitable for farm productivity, even if irrigation were available to it. The Port of Morrow has provided a service provider letter indicating its ability to provide industrial water service to the Site, so future development will not rely on groundwater wells for its water supply. Water quality and air quality will be assured through compliance with all applicable Oregon DEQ permitting requirements in the Site Plan Review process, which a future developer must complete prior to any non-farm construction and industrial use of the property.

Applicant has proposed rezoning the Downzone Area to ensure that the Site-related amendments will not reduce the amount of EFU-protected cropland in the County's inventory.

~~Applicant's additional findings are at~~See also Application at pages 48 and 69-70, with technical supporting evidence at Exhibits 11 and 12.

(v) Goal 11 (Public Facilities and Services Element)

Applicant requests a Goal 11 exception, but Applicant's evidence has also addressed the application's consistency with the MCCP's Public Facilities and Services policies.

General Policies A and B require "planning and implementation of public facilities and service programs necessary for the public health, safety and welfare ... [which, for urban areas,] shall be provided at levels appropriate to support optimum development." Applicant has provided correspondence from service providers indicating that levels of power and water service appropriate to support EDCC development can feasibly be provided to the area in which Goals exceptions are proposed (i.e., the Site). Providing excess capacity to serve additional development is not warranted in this circumstance because the Site encompasses all of the potential industrial development area located between the ALI-zoned Airport area and the eastern top-of-bank of the Sixmile Canyon to the west, which forms a natural boundary constraining contiguous development west of the City of Boardman.

General Policy D requires that the provision of public facilities and services to rural areas being changed to urban use shall be based on (1) the least time required to provide the service, (2) the most reliable service, (3) lowest financial cost, and (4) adequate levels of service that satisfy long range needs. General Policy E calls for the coordinated development of all necessary urban facilities and services appropriate to an urban area.

Applicant's evidence demonstrates that the Port of Morrow has planned water service capacity to support development consistent with the proposed zoning changes for the Site, including both industrial use and fire-suppression flows. Applicant's evidence also indicates that on-site septic systems and open ponds for industrial water management can feasibly be provided within the

Site. In the Site Plan Review process, the developer will be required to provide designs for specific methods of handling public facility service requirements, demonstrate that service capacities are or will be made available timely to support operations, and obtain all necessary permits from regulatory agencies, such as Oregon DEQ with respect to air and water quality. Developer will also be required to propose emergency service access routing to the Site as part of Site Plan Review, for review by the County Sheriff's Office, County Emergency Manager and other emergency services providers.

General Policy F calls for the siting of utility lines and facilities on or adjacent to existing public or private ROW or through generally unproductive lands to avoid dividing existing farm units. General Policy G requires that public facilities and services not exceed the carrying capacity of the air, land, and water resources.

Applicant has provided correspondence from service providers indicating that levels of water and power service appropriate to support EDCC development can feasibly be provided. These policies provide guidance to service providers regarding how to plan and implement such service provision following adoption of the proposed Plan Map/Zoning amendments and exception findings. Consistent with these policies, the applicant/owner and/or any future prospective developer(s) will be required to coordinate with all needed service providers regarding specifics of design, construction, and operation of such utility services. Demonstration of sufficient service capacities and carrying capacities will be required from the developer in the Site Plan Review procedure prior to industrial construction and use of the property, supported by compliance with federal and state environmental permitting requirements in construction and operations.

General Policy K is an aspirational policy that establishes a goal of achieving a maximum balance of public costs versus benefits and revenues in the provision of public facilities and services. General Policy L states, "equitable approaches and methods of financing shall be a goal." As noted in the above statements for policies D through G, a future developer will be required to coordinate with the Port of Morrow and other service providers regarding specifics of design, construction and operation of needed utility services, as well as funding mechanisms and rate structures to be utilized within that process. This request does not require provision of additional utility services by the county. Additionally, the project will provide economic benefits such as new employment, payroll, spending with vendors on construction and operations, and new tax revenue.

General Policy M calls for Morrow County to "utilize development review processes to ascertain the impact of large projects on County and community services and should demand the sponsor to participate in meeting associated expenses." Similarly, Utilities Policy F calls for coordination of development with utilities providing electrical, natural gas, cable television, and telephone services. Conditions of Approval 1, 3 and 4 (listed above) require Site Plan Review prior to non-farm construction and industrial use of the Site, consistent with that policy.

Water and Sewer Policy is to "encourage intensive development to locate within existing cities whenever possible," but then it further provides that when development occurs in unincorporated areas, compliance with minimum state sanitation and health requirements is required. Applicant has provided an inventory and analysis of alternative potential areas for EDCC development and

operation within a large area surrounding the proposed Site. ~~(~~Exhibit 7~~)~~ Its study area extends along the Columbia River corridor both west and east of the Site to include portions of Gilliam, Morrow and Umatilla Counties, respectively, and the UGBs of included cities, i.e., Arlington, Boardman, Ione, Irrigon, Umatilla, Hermiston, Stanfield, and Echo (from west to east). The analysis finds that appropriately zoned areas within those cities' UGBs are not available to meet the 3,000-acre projected need within a 10-year period ~~(~~see Exhibit 8~~)~~, for reasons such as being already developed and irrevocably committed to other uses, or being insufficient in dimensions or total contiguous area.

Applicant's evidence demonstrates that the Site is suitable for EDCC use because urban water utility services already extend to the Boardman Airport area, adjacent to the east of the Site, and it is feasible to meet minimum State sanitation and health requirements through on-site industrial septic facilities until such time infrastructure for treatment and disposal may be extended to the Site by the Port of Morrow. Conditions of Approval 1, 3 and 4 (listed below) require the developer/applicant to demonstrate the sufficiency of such facilities and services in Site Plan Review prior to data center construction and industrial use of the Site.

Solid Waste Policies A and B can be met by a new industrial development using the same processes for which solid waste management occurs elsewhere in the county, typically a contract for solid waste services or direct hauling of waste to Finley Buttes Landfill.

Regarding the Downzone Area, its redesignation from Industrial/SAI to Agriculture/EFU is proposed to ensure that the proposed redesignation of the Site to allow data center use will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Continued crop production under EFU zoning will not require urban service extensions.

~~Applicant's additional findings are found in~~See also Application at pages 50-54 and 71, with technical supporting evidence at Exhibits 7, 8, 17A, 17B and 17C.

(vi) Goal 12 (Transportation Element)

While most of the County's Goal 12 objectives are general in nature and directed towards the County, four – Objectives 2, 5, 14, and 15 – apply more directly to this application. This application complies with the objectives for the following reasons:

- Applicant's Transportation Planning Rule (TPR) analysis ~~(~~at Applicant's Exhibits 9 and 9A~~)~~ shows that the proposed amendments will not cause a significant impact on existing or planned transportation facilities because reasonable worst-case trip generation under the proposed zoning – including LU Overlay limiting industrial use to data center – will be lower than that allowed under the Site's current zoning, which includes approximately 331 gross acres in the Space-Age Industrial (SAI) zone.

- Applicant's TPR analysis shows that the proposed land use amendment can be accommodated by the existing transportation infrastructure network, consisting of Boarman Airport Lane and Tower Road, which connect the Site to Interstate 84. Proposed Condition of Approval 1.a above (see page 3) will require the developer to

provide a traffic impact analysis as part of Site Plan Review procedure, so mitigation measures warranted by the proposed development can be included through conditions of Site Plan Review approval.

Applicable Transportation Policies 1, 2, 4, 5, 6, 7, 9, 10, and 11 are summarized below.

- The overall transportation network is capable of accommodating the overall transportation-related demands on the multi-modal network (Policy 1), but it is appropriate to consider specific conditions and impacts through Site Plan Review when development is proposed, and to require appropriate mitigation measures at that time. Proposed Condition of Approval 1.a will require that.

- No modifications or updates are needed to the Morrow County Transportation System Plan (Policy 2) because (1) Boardman Airport Lane does not have a specific functional designation in the TSP, and (2) the Port of Morrow has constructed Boardman Airport Lane between Tower Road and the Site with sufficient capacity to handle projected vehicle trip volumes under the proposed new zoning.

- No changes are required to the roadway functional classification system (Policy 4).

- No changes to the standards that implement the management and maintenance of the system (Policy 5).

- Conditions 1 and 1.a will require analysis of traffic impacts that may require ROW modification and/or roadway facility upgrades (Policy 6) during the Site Plan Review procedure prior to industrial development or use of the Site. To the extent warranted, the County may at that time require mitigation actions through conditions of Site Plan Review approval, which may include a Road Use Agreement specifying certain improvements or proportional funding contributions to planned public improvement projects.

- Traffic generation will be compatible with the function of the applicable roadway network (Policy 7).

- Traffic generation may not exceed carrying capacity of roadway (Policy11).

- Traffic impacts may impact roadway function or require modifications to roadway classifications (Policies 9 and 10). The classification of Tower Road is appropriate to accommodate anticipated traffic attributable to data center campus operations, which is generally limited to data center employees and personnel.

Regarding the Downzone Area, its redesignation from Industrial/SAI to Agriculture/EFU is proposed to ensure that the proposed redesignation of the Site to allow data center use will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Continued crop production in the Downzone Area under EFU zoning will not require any change in the existing road network.

~~Applicant's additional findings are found in~~See also Application at pages 54-56 and 71-73, with technical supporting evidence at Exhibits 9 and 9A.

(vii) Goal 13 (Energy Conservation Element)

As with many other MCCP policies identified, these policies are directory or aspirational in nature, rather than mandatory to an applicant. While they are not standards upon which approval or denial is based, they are nevertheless addressed herein.

Energy Conservation Policy 1 encourages the use of renewable and/or efficient energy systems, design, siting, and construction materials in all new development in the County. Energy Conservation Policy 14 encourages the County to combine increasing density gradients along high-capacity transportation corridors to achieve greater energy efficiency.

This request affects County land designation policy and does not include a proposal for actual development of the Site. That procedure will subsequently be required of a proposed developer(s) following approval of the requested land designation/zoning amendments, prior to industrial development and use within the Site. The developer's preparation of a Site Plan Review application package will necessarily involve coordination with one or more suppliers of energy to achieve consistent, reliable service to the Site. At this time, Applicant has contacted Pacific Power and anticipates that electric service will be provided by a future Pacific Power extension of transmission lines from the south, which is already permitted and will also serve other data centers in the vicinity and increase density on those lines.

Regarding the Downzone Area, its redesignation from Industrial/SAI to Agriculture/EFU is proposed to ensure that the proposed redesignation of the Site to allow data center use will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Continued crop production in the Downzone Area under EFU zoning will not cause any change in energy needs or consumption patterns.

~~Applicant's additional findings are found in~~See also Application at pages 56- 57 and 73, with technical supporting evidence at Exhibit 17B.

(viii) Goal 14 (Urbanization Element)

Applicant is seeking a Goal 14 exception to allow for urban-scale and type of development and for the provision of public utility services (water) to the Site.

Regarding the Downzone Area, its redesignation from Industrial/SAI to Agriculture/EFU is proposed to ensure that the proposed redesignation of the Site to allow data center use will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Continued crop production in the Downzone Area under EFU zoning will be protected from urbanization pressure.

~~Applicant's additional findings are found in~~See also Application at pages 57-58 and 73, with technical supporting evidence at Exhibit 10A and 10B.

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW FOR THE DOWNZONE

AREA:

This application also proposes to amend the Comprehensive Plan/Zoning Map by redesignating approximately 1,6~~05~~23 acres on another site south of Boardman from its current Comprehensive Plan designation of Industrial to Agriculture and zoning from SAI to EFU.

A. Downzone Area Description and Surrounding Land Use:

The Downzone Area is ~~a rectangular area adjacent to the inside corner formed by the panhandle that extends west from the northwest corner~~an area southwest of the City of Boardman, abutting the western boundary of the Naval Weapons Systems Training Facility. It is approximately 1,6~~05~~23 acres ~~and is bounded on the north and east by the NWSTF~~. Zoning to the east is PUB; zoning to the north and west is SAI; and zoning to the south is MG~~, with~~. There is existing pivot-irrigated farm use ~~on both those sides~~to the west and portions of the north (as well as within the ~~southern part of the~~ Downzone Area itself).[11]

Applicant's Exhibit 10B reports that the ~~southerly approximately 775 acres of the~~ Downzone Area contain Class IVe soils, and that the area is likely to remain in high-value crop production due to favorable soil conditions and associated existing improvements (irrigation, land leveling, access, etc.). ~~The northernmost 680 acres of the Downzone Area are subject to a conservation easement, which prohibits agriculture and other disturbance activities. And the remaining 150 acres consists of areas between cultivated fields, along the east perimeter and access road. However, it is important to note that the portion of this area subject to the conservation easement is required by law to carry a zone designation, and the Applicant's request is to have this area be zoned exclusively for farm use in the event easement is released or modified in the future. Further, there is no criterion a corresponding rezone to EFU as a condition of upzone approval, so the greater productivity of the remaining Downzone Area (775 acres) is sufficient to provide mitigation for the upzone.~~

The Downzone Area has vehicular access consistent with its current use for crop production. No change in its access and circulation is associated with the proposed downzoning. And there is no proposed change in provision of utilities or public services.

B. Summary of Proposal for the Downzone Area

Applicant proposes to amend the Comprehensive Plan to change the Plan and zoning designation of the Downzone Area from Industrial/Space Age Industrial (SAI) to Agriculture/Exclusive Farm Use (EFU). The purpose of that change is to maintain (or, effectively, increase) the County's inventory of productive farm land under EFU protection while allowing data center use at the Site. Although ~~680 acres of this land is already subject to a conservation easement, and therefore not developable, it is important to note that even this area is required to carry a zone designation, and the Applicant's request is to have this area be zoned exclusively for farm use in the event the easement is released or~~

[11] Generally, the boundaries of the proposed 1,6~~05~~23-acre Downzone Area correspond to the ~~rectangle formed by the~~ southern half of Morrow County Tax Map 04N 24E Section ~~25 (Tax Lot 120, 04N24E)~~36, together with ~~all of 04N 24E Section 36 and~~Tax Map 03N 24E Sections 01 and 02 to the south and southwest of it, respectively.

~~modified in the future. Further,~~ there is no criterion requiring a corresponding downzone to EFU as a condition of upzone approval, ~~so~~ the downzone will eliminate the potential for non-agricultural uses over a greater ~~productivity of the remaining Downzone Area (775 acres)~~acreage of more productive soils, and is sufficient to ~~provide mitigation for the~~ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

C. Compliance with Statewide Planning Goals

County ~~will be required to~~ adopts these findings to show that the Downzone request complies with applicable Statewide Planning Goals. The goals are presented below in bold, underlined print with responses in regular print.

1. **Goal 1 (Citizen Involvement): To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.**

Response: Generally, Goal 1 is satisfied when a county complies with public notice and hearing requirements in the Oregon Statutes and in the local Comprehensive Plan and Land Use Code. The County's Zoning Ordinance is consistent with State law with regards to notification requirements. Pursuant to Section 9 of Morrow County Zoning Ordinance at least one public hearing before the Planning Commission and Board of Commissioners is required. Legal notice in a newspaper of general circulation is required. The County has met these requirements and notified DLCD 35 days prior to the first evidentiary hearing.

2. **Goal 2 (General Land Use): To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.**

Response: The downzone request will convert land currently in agricultural use from an Industrial/Space Ace Industrial (SAI) designation to Agriculture/EFU to ensure that no net loss of productive agricultural land will occur with the proposed redesignation of the Site, as discussed in detail above in this report. Based on the discussion below regarding compliance with applicable Comprehensive Plan policies, the proposal maintains consistency with policies in the Comprehensive Plan, and thus satisfies Goal 2 requirements.

3. **Goal 3 (Agricultural Land): To preserve and maintain agricultural lands.**

Response: With respect to the proposed Downzone Area, the proposed conversion of approximately 1,6~~05~~23 acres from Industrial/SAI designation to Agriculture/EFU will help ensure that no net loss of productive agricultural land will occur. The Applicant has provided geotechnical/soils analysis documentation ~~(see~~in Exhibit ~~**Error! Reference source not found.)**~~10B demonstrating that the Downzone Area contains superior soil conditions, ~~775 acres of which~~and is actively farmed and improved with center-pivot irrigat~~ed~~ion~~. This 775 acres in particular exhibits~~. The Downzone Area contains Class IVe soils and is far more suitable for the proposed Agriculture/EFU designation than the EFU-zoned soils at the Site, which has many agricultural limitations, requires substantial financial and time investment to achieve a

cultivation condition, and even if such condition were achieved, would still be inferior to the agricultural condition of the downzone study area. See Exhibit 10B~~.B~~. As noted in the Downzone Area Soils Report, given these limitations the land proposed for upzoning is not likely to become cultivation land, while ~~much of the land (775 acres) proposed for downzoning~~the Downzone Area is likely to remain in high-value crop production due to favorable soil conditions and associated improvements (irrigation, land leveling, access, etc.) The Applicant has also provided aerial photographic evidence of center-pivot irrigation in use in the ~~southern portion of the area, together with evidence of the potential for expanded irrigation within the remaining~~ Downzone Area (see ~~Figure II-4~~Exhibit 2).

~~With respect to the 680 acres that are subject to a conservation easement, it is important to note that this area (like all County land) is required by law to carry a zone designation, and the Applicant's request is to have this area be zoned exclusively for farm use in the event the easement is released or modified in the future. Further, there is no criterion requiring a corresponding downzone as a condition of upzone approval, so the greater productivity of the currently-farmed portion of the Downzone Area (775 acres) is sufficient to provide mitigation for the upzone.~~

Although there is no criterion requiring a corresponding downzone as a condition of upzone approval, the downzone will eliminate the potential for non-agricultural uses in the downzone area is sufficient to ensure no net loss of agricultural productivity as a result of the proposed upzone approval.

4. **Goal 4 (Forest Lands): To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.**

Response: The proposal does not affect lands that are designated for forest uses. Goal 4 does not apply.

5. **Goal 5 (Open Spaces, Scenic and Historic Areas, and Natural Resources): To protect natural resources and conserve scenic and historic areas and open spaces.**

Response: The County Comprehensive Plan has not identified any inventoried significant natural, scenic, historic or open space areas within or near the proposed Downzone Area. See the attached Significant Resource Inventory Map, Exhibit ~~**Error! Reference source not found.**~~11**Error! Reference source not found.**, and also a map excerpt in Exhibit ~~**Error! Reference source not found.**~~16. Per the analysis in the Natural Resources Assessment, there are no significant Goal 5 resources that would be affected by this proposal to amend land use designations.

6. **Goal 6 (Air, Water and Land Resources Quality): To maintain and improve the quality of the air, water and land resources of the state.**

Response: The effect of the proposed redesignation of the Downzone Area will be to protect it from urban industrial development~~; for the area that is already subject to a conservation easement, the base zone designation still provides protections in the event the easement is released or modified~~. Like other agricultural operations, activities within the Downzone Area will be required to comply with applicable local, state, and federal regulations regarding air, water and land resources quality as they apply in EFU-zoned areas.

7. **Goal 7 (Areas Subject to Natural Disasters and Hazards): To protect people and property from natural hazards.**

Response: The Downzone Area does not contain mapped flood or geologic hazards (see FEMA FIRM Panels, Exhibit ~~**Error! Reference source not found.**~~14, and DOGAMI SLIDO Maps, Exhibit ~~**Error! Reference source not found.**~~15). The amendment will have no effect on Morrow County's compliance with Goal 7.

8. **Goal 8 (Recreational Needs).:To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.**

Response: The proposal does not affect recreational facilities or land needed to meet Morrow County's recreational needs. Goal 8 does not apply.

9. **Goal 9 (Economic Development): To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.**

Response. Agriculture is a vital component of the Morrow County economy. The redesignation of the Downzone Area – from Industrial/SAI to Agriculture/EFU – will ensure that the proposed redesignation of the Site to allow data center use (the subject of the exceptions discussed in the above section of this report) will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Additionally, because soil conditions and irrigation capacity are superior for agriculture at the Downzone Area as compared to the Site, the net effect is to ensure the long-term productivity of ~~an almost equal~~a greater acreage of higher quality farmland in Morrow County. The net effect of the whole proposal will be a net increase in both the quantity and the quality of Morrow County's total agricultural resource area in the EFU zone. See Exhibits 10A and 10B.

In 1987, Morrow County, at the request of Boeing, completed the exceptions process in order to change its Comprehensive Plan and zoning designation for approximately 14,080 acres of EFU land to an Industrial Comp Plan designation and Space Age Industrial (SAI) zoning. In 1996, the County further amended the SAI zone to allow farm uses as a permitted use to respond to changes making it possible to irrigate portions of this area and to allow interim uses pending Boeing long-term efforts to develop portions of the area for industrial uses.

Since the time of the 1987 redesignation, no development consistent with the "Space-Age Industrial" uses the zoning was intended to generate or attract has occurred. While such development may occur in the future, there is scant evidence of economic demand within that economic sub-sector to date for the approximately 13,500 acres currently in the SAI zone. The proposed downzone will reduce the County's SAI-zoned land inventory by approximately 1,60523 acres or 12.23%, from approximately 13,1569 acres (after the proposed conversion of 331 acres of the Site to MG/LU Overlay) to a total of approximately 11,5646 acres. Given the apparent lack of economic demand for SAI development to date, there is no evidence to suggest that an SAI inventory reduction of about 12.23% will in any way compromise the County's ability to attract economic user(s) of the remaining 11,5646 acres of land in the SAI zone.

For these reasons, the Downzone will continue to further the goal of providing "adequate opportunities … for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens" and is consistent with Goal 9.

10. Goal 10 (Housing): To provide for the housing needs of citizens of the state.

Response: The proposal does not affect the provision of housing. The proposed amendments have no effect on Morrow County's compliance with Goal 10.

11. Goal 11 (Public Facilities and Services): To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

Response: The proposed Downzone – from Industrial/SAI to Agriculture/EFU – will designate the area agricultural resource land, making it ineligible for extension of urban facilities. In this context, it is appropriate to consider whether such ineligibility could potentially compromise future utility extensions that would be necessary to serve other SAI-zoned areas that will require public facilities. Significantly, the large SAI-zoned area is situated on both sides of Tower Road, which is likely to serve as the primary corridor for transportation access as well as public facilities infrastructure to serve the area. Because the Downzone Area is situated at the far eastern edge of the SAI zone, its redesignation to EFU will not impose a barrier to public facilities extension(s) to serve any other SAI-zoned property from the central Tower Road corridor. The proposed downzone maintains compliance with Goal 11 and prior actions of Morrow County that imply future extensions of public facilities to serve development in the remaining SAI-zoned areas.

12. Goal 12 (Transportation): To provide and encourage a safe, convenient and economic transportation system.

Response. The downzone will eliminate the current allowance of urban development based on existing SAI zoning within the ~~developable areas of the~~ Downzone Area (approximately ~~775~~1,623 acres), and proposes redesignation of the entire Area as Exclusive Farm Use, allowing only rural farm and limited non-farm uses. Such change will not only reduce potential reasonable-worst-case trip generation from the Downzone Area itself (based on EFU- rather than

SAI-zone land uses), it will also reduce the overall potential for vehicle trips from urban sources/destinations on County roads in the vicinity and at the Tower Road interchange.

In Exhibit 9, the Applicant has provided a report that addresses the requirements of the Transportation Planning Rule (OAR 660-012). In relevant part, the TPR Analysis concludes that vehicular traffic generated by uses allowed under EFU zoning will have a less significant impact compared with the potential vehicular traffic generated under the existing SAI zone designation. For these reasons, based on the TPR Analysis, the proposed downzoning does not "significantly affect" a transportation facility as defined in OAR 660-012-0060(1)(a) through (c).

13. Goal 13 (Energy Conservation): To conserve energy.

Response. The Downzone Area currently supports extensive agricultural activity with center-pivot irrigation and sufficient access to allow continued and enhanced farming. The proposed designation change will require no energy inputs or practice changes relative to existing conditions because the established farm use will continue under the new zoning, while eliminating the possibility of industrial development of the ~~developable portion of the~~ area (~~775~~1,623 acres).

14. Goal 14 (Urbanization): To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.

Response. The Downzone Area is not located adjacent to an Urban Growth Boundary (UGB), where the proposed Agriculture/EFU redesignation could foreseeably conflict with the purpose of Goal 14: notably, to foster and achieve efficient urban growth and development patterns in the future. Because the Downzone Area's location is suitable for continued farming use, its redesignation for Agriculture/EFU zoning will maintain consistency with Goal 14 by focusing urban growth and development pressures appropriately on other areas proximate to established UGBs.

Statewide Planning Goal 15 (Willamette River Greenway), Goal 16 (Estuarine Resources), Goal 17 (Coastal Shorelands), Goal 18 (Beaches and Dunes), and Goal 19 (Ocean Resources) are not applicable because the Site is not located near these resources/areas.

D. Compliance with Morrow County Comprehensive Plan and Land Use Regulations

1. M~~Z~~CZO 8.040 Criteria for Amendments

M~~Z~~CZO 8.040, CRITERIA. The proponent of the application or permit has the burden of proving justification for its approval. The more drastic the request or the greater the impact of the application or permit on the neighborhood, area, or county, the greater is the burden on the applicant. The following criteria shall be considered by the Planning Commission in preparing a recommendation and by the County Court in reaching their decision.

A. The local conditions have changed and would warrant a change in the zoning of the subject property(ies)

Response: The proposal to redesignate the approximately 1,6~~05~~23-acre Downzone Area, from the Industrial Comprehensive Plan designation and SAI zoning to the Agriculture designation and EFU zoning, is specifically designed to ensure that Morrow County's inventory of zoned and productive EFU land will not be diminished as the County moves to respond to a rapidly expanding regional demand for land suitable for EDCC siting and development. In fact, the County's overall EFU productivity will increase because the Downzone Area adds 1,6~~05~~23 acres to the County's EFU inventory, ~~775 acres of~~ which is already ~~in~~improved with center-pivot irrigat~~ed~~ion and being actively farmed ~~production~~, while removing about 967 acres of land not suitable for commercial farming (see Soils Reports, Exhibits ~~**Error! Reference source not found.**~~A10A and 10B). This criterion is met.

B. The public services and facilities are sufficient to support a change in designation including, but not limited to, water availability relevant to both quantity and quality, waste and storm water management, other public services, and streets and roads.

1. Amendments to the zoning ordinance or zone changes which significantly affect a transportation facility shall assure that land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:

a. Limiting allowed land uses to be consistent with the planned function of the transportation facility or roadway;

b. Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,

c. Altering land use designations, densities, or design requirements to reduce demand for automobile travel to meet needs through other modes.

2. A plan or land use regulation amendment significantly affects a transportation facility if it:

a. Changes the functional classification of an existing or planned transportation facility;

b. Changes standards implementing a functional classification;

c. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or

d. Would reduce the level of service of the facility below the minimal acceptable level identified in the Transportation System Plan.

Response. This proposal will convert the approximately 1,60523-acre area to an agricultural resource designation and zoning that allows only farming and other EFU-allowed uses. The Downzone Area will then become ineligible for public services (unless and subject to a subsequent Goal exception adoption procedure). As noted above, potential trip generation from the Downzone Area will be significantly lower under the new zoning than the current SAI zoning, so the proposal will not significantly affect transportation facilities. The Downzone Area will require no stormwater or wastewater services and is already served with pivot irrigation water. These criteria are met.

C. That the proposed amendment is consistent with unamended portions of the Comprehensive Plan and supports goals and policies of the Comprehensive Plan, that there is a public need for the proposal, and that the need will be best served by allowing the request. If other areas in the county are designated for a use as requested in the application, then a showing of the necessity for introducing that use into an area not now so zoned and why the owners there should bear the burden, if any, of introducing that zone into their area.

Response. First, the Applicant has provided statements explaining why the proposed amendment is consistent with relevant Comprehensive Plan Policies and Objectives. Second, the proposed designation/zone change in the Downzone Area will ensure that, as the County moves to address an emergent public need for EDCCs, doing so will not result in a net loss of productive farmland under the protection of Agriculture designation and EFU zoning. Third, with the proposed conversion of the Downzone Area's 1,60523 acres from SAI to EFU, there will still be approximately 11,5646 acres of land available in the SAI zone. And fourth, in the particular case of the Downzone Area, the question is not one of *introducing* farming as the preferred use zoning, but rather that of *protecting in place* the continuation of established productive farming practices that are already in use within 775 acres of the Downzone Area. Regarding the question of placing a burden on the owners of property where the EFU zoning is proposed, this application has been presented toby Threemile, who owns the Downzone Area, as well as much of the surrounding area. Threemile has adequately considered how the proposed rezoning would affect its properties and operations, and is satisfied that rezoning as proposed is preferable to maintaining the existing zoning designations as they apply to this property. This criterion is met.

D. The request addresses issues concerned with public health and welfare, if any.

Response. The proposed Downzone Area amendment complements the Site designation changes to ensure that the County's inventory of productive cropland under EFU protection is not reduced by the zoning changes at the Site. The changes will enable the Downzone Area to continue contributing to the agricultural economy of the County. Such economic productivity contributes to the local economy and also provides local property tax revenues that support County efforts to meet public health and welfare goals. This criterion is met.

2. Compliance with Morrow County Comprehensive Plan Policies and Goals

Not all Comprehensive Plan Goals and Policies provide review criteria for a quasi-judicial application—i.e., aspirational goals and policies do not constitute review criteria. The discussion

below focuses primarily on Morrow County Comprehensive Plan goals and policies that provide relevant and applicable criteria for this application.

~~Applicant's a~~Additional ~~findings relating to~~evidence demonstrating compliance with Morrow County Comprehensive Plan Policies and Objectives for the downzone can be found in Application at pages 74-89.

(i) Goal 1 (Citizen Involvement)

The Citizen Involvement Goal develops and implements a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process. Citizen Involvement Policy 3 encourages people to attend and participate in Morrow County Planning Commission and ~~County Court~~ Board of Commissioners meetings and hearings. Procedures include notice to the public, Oregon State Agencies including the Departments of Land Conservation and Development (DLCD) and Transportation (ODOT), Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and other interested parties, and public hearings. The goal and policy are satisfied through the opportunities afforded to the public to participate at public hearings before the Morrow County Planning Commission and Board of Commissioners on the proposed amendments, as provided for by state law and the county's Zoning Ordinance.

(ii) Goal 2 (General Land Use)

The Downzone Area is already a productive farm site, not adjacent to any UGB, with center-pivot irrigation and sufficient access to allow farming ~~on the property over 775 acres of the Downzone Area~~. The established farm use will continue under the new zoning, while eliminating the possibility of industrial development of the developable portions of the Site. For those reasons, the proposal is consistent with the Farm element, which states "[i]n order to protect the agricultural element of the County's economic base, productive farm lands should be protected from encroachment by non-agricultural uses. Farm land in Morrow County is best managed in large units…"

The Space Age Industrial element states that uses inconsistent with the purpose of providing areas suitable for space age technology research and development will not be authorized. With the proposed redesignation of Downzone Area, the Morrow County inventory of SAI-zoned land will remain at approximately 11,5~~6~~46 acres, or approximately 18 square miles of land. The relatively minor change will not compromise Morrow County's ability to realize the intended development potential of the SAI land use designation.

~~The application explains that it~~It is appropriate to use EFU zoning to protect this productive agricultural land, keep it in farm production, and restrict potential for it to be converted to industrial use.

(iii) Goal 3 (Agricultural Lands Element)

The proposed SAI-to-EFU conversion puts productive agricultural land now in use for farming under the protections of the Agriculture Comprehensive Plan designation and EFU zoning. The proposed approximately 1,6~~05~~23-acre Downzone Area contains ~~approximately 775 acres of~~ productive irrigated agricultural soils but no other inventoried significant natural resources.

Compared to the approximately 967-acre EFU-zoned portion of the Site (proposed for resignation from EFU to MG/LU Overlay), its geology and soils characteristics support commercial farming, which is not feasible within the Site, based on findings in the Soils Report (Exhibits ~~**Error! Reference source not found.**~~10A and 10B~~.A~~). Thus, the Downzone Area superior as compared to the Site for Agriculture/EFU designation and farm use. The resulting improved alignment between zoning designation and productive agricultural capacity contributes to this objective by preserving more and better-quality farmland in EFU for long-term use.

Threemile Canyon Farms LLC is the owner not only of the Downzone Area but also the adjacent lands in the SAI zone. As owner, Threemile has selected the area for EFU conversion because they have concluded that it will not create a conflict if and when development and use of the adjacent SAI-zoned property occurs. The proposal furthers the goal of preventing farm/non-farm conflicts.

(iv) Goal 11 (Public Facilities and Services Element)

No provision of public facilities and services is proposed to the Downzone Area. Continued crop production under EFU zoning will not require urban service extensions.

Because Tower Road is the logical, centrally-located corridor for provision of transportation access and public facilities and services to the SAI-zoned area generally, and because the proposed Downzone Area is at the eastern perimeter of the SAI-zoned area, its conversion to Agriculture/EFU designation will neither require further extension of planned future public facilities infrastructure, nor be in conflict with orderly service provision to the SAI-zoned area over time as its development may occur.

(v) Goal 12 (Transportation Element)

No new road extensions or other improvements are necessary for access to the Downzone Area to support commercial farming because access has already been successfully established.

In fact, the downzone will substantially reduce potential vehicle trip generation from the area because travel demand associated with EFU uses is lower than that of SAI-zone uses. Therefore, the proposed SAI-to-EFU change will cause no "significant effect" on existing or planned facilities identified in the Transportation System Plan (TSP).

III. MISCELLANEOUS CONCERNS RAISED BY OPPONENTS

Two public comments were submitted at the April 29, 2025 Planning Commission hearing. First Mary Killion raised several issues that are outside the scope of this proceeding and/or relate to issues that not applicable to approval criteria. By way of example but not limitation, Ms. Killion spoke about the general policy need for the County to maximize protection of farm land and the need to consider the potential for future increases in traffic or Tower Road. With regard to this testimony, the Board finds that these concerns and issues, while acknowledged by the Board, are not relevant to the Board's analysis of compliance with the applicable legal criteria. A local government is not required to address in its findings issues that are not substantively relevant to the applicable approval criteria. *See* ORS 215.416(8)(a) (approval or denial shall be based on standards and criteria).

DLCD sent an email stating that:

> "Although we are not fully convinced that the applicable criteria of OAR Chapter 660, Division 14 have been satisfied, we believe the county has sufficient information to make an informed decision. Should the county move to approve the applicant's proposal, downzoning the companion 1,605 acres needs to be part of the decision."

The Downzone Area has since been revised to include 1,623 acres, per the Planning Commission's recommendation. And the Planning Commission recommended concurrent approval of the upzone and downzone requests; thus, the substance of DLCD's comment has been addressed.

IV. ~~III.~~ AGENCIES NOTIFIED

Department of Land Conservation & Development, Oregon Department of Transportation, Oregon Department of Fish & Wildlife, Oregon Water Resources, Oregon Department of Environmental Quality, Morrow County Public Works, Morrow County Emergency Management, Morrow County Sheriff, Boardman Rural Fire District, City of Boardman, Port of Morrow, Federal Aviation Administration, Oregon Department of Aviation, NAS Whidbey Island Air Station

V. ~~IV.~~ ATTACHMENTS

Applicant's Narrative/Findings Report, including Applicant's Exhibits:

1. Land Use Application Forms
2. Vicinity Map
3. Presentation Slides from 1-9-2025 Pre-Application Meeting
4. Conceptual EDCC Site Plan
5. Map of Proposed SAI to EFU Rezone
6. Text of Proposed Limited Use Overlay
7. Alternative Areas Analysis Report
8. Economic Impact Analysis
9. Transportation Rule Analysis (TPR)
   - A. ~~A.~~ Supplemental Traffic Memo
10. Soils Reports
    - A. Upzone Area
    - B. Downzone Area
11. Morrow County Significant Resource Inventory Map
12. Natural Resources Assessment
13. Boardman Airport Horizontal and Conical Surfaces Map
14. FEMA FIRM Panels
15. DOGAMI SLIDO Maps
16. Six-Mile Canyon Sand and Gravel Site Information
17. Service Provider Letters
    - A. Water – Port of Morrow
    - B. Power – PacifiCorp

C. Road Access – Port of Morrow

18. Data Center Reference Literature
    A. State of the Digital Infrastructure Industry 2024 Annual Report, iMasons
    B. AI Power: Expanding Data Center Capacity to Meet Growing Demand, McKinsey & Company
    C. Mega $14 billion data center project proposed in metro Phoenix, Phoenix Business Journal
    D. Data center boom transforms Culpepper, InsideNoVa
    E. Technical Memo: Siting Criteria for Hyperscale Data Centers, Mackenzie
    F. The Impacts of Data Processing in Oregon, Business Oregon
19. Proposed Morrow County Zoning Map Amendments

VI. ~~V.~~ HEARING DATES

Planning Commission
North Morrow Government Building
April 29, 2025
North Morrow Government Center
215 NE Main Street
Irrigon, OR 97844

Board of Commissioners
June 18, 2025
North Morrow Government Center
215 NE Main Street
Irrigon, OR 97844

VII. ~~VI.~~ RECOMMENDATIONS OF THE ~~MORROW COUNTY PLANNING~~BOARD OF COMMISSIONERS

Options for ~~Planning~~Board of Commissioner consideration.

~~1. Accept the Findings [as amended] and recommend Board of Commissioners approve the application.~~

1. ~~2.~~ Vote to ~~recommend Board of Commissioners not~~ approve based on the ~~a~~Application and Findings as presented.

2. Vote to approve with modified conditions of approval.

3. Reject these Findings and vote to deny.

Conditions of Approval

The following conditions of approval must be satisfied prior to non-farm development within

the Site. These conditions are binding upon the Applicant and future owners of the property:

1. Prior to any data center development, developer shall prepare and submit an application to Morrow County for Site Plan Review subject to the submittal requirements, standards, approval criteria and procedure set out in MCZO 5.020.A through H.
    a. As part of the Site Plan Review application, developer shall retain a Traffic Engineer to provide a project-specific Traffic Impact Analysis (TIA) consistent with the requirements of MCZO 4.035. That work shall include coordination with staff of Morrow County and the Oregon Department of Transportation (ODOT) on the necessary scope of the analysis; assessment of operational and safety impacts of the proposed development on affected intersections, including the Interstate 84-Tower Road interchange, other Tower Road intersections, and any secondary/emergency access routes and facilities; and providing recommendations for mitigation actions at locations where performance is projected to fall below established standards due to traffic generated by the proposed development.

2. Prior to construction, developer shall provide notice to Threemile Canyon Farms, the area farming operator, of its construction traffic schedule and coordinate with Threemile Canyon Farms to minimize any potential impacts to farm traffic during harvest.

3. Developer shall obtain all necessary local, state and federal permits and approvals for the data center campus construction and operation prior to commencement of the proposed use or certificate of occupancy being granted. If applicable, such permits shall include, but are not limited to: (A) review and approval of a Water Pollution Control Facilities (WPFC) permit issued by the Oregon Department of Environmental Quality and (b) Pollutant Discharge Elimination System (NPDES) 1200-C Permit issued by the Oregon Department of Environmental Quality.

4. Delivery of adequate electricity and water from third-party providers shall be provided substantially as described in this record, prior to commencement of the proposed use or certificate of occupancy being granted.

Summary report: **Litera Compare for Word 11.9.1.1 Document comparison done on 5/27/2025 3:09:21 PM**	
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Move To	2
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Embedded Excel	0
Format changes	0
Total Changes:	583

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June 4, 2025

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Morrow County Board of Commissioners
Morrow County Barthlomew Building, Rm 201
110 N. Court St.
Heppner, OR 97836

Re: Threemile Canyon Farm LLC – Revised Application Materials for Comprehensive Plan and Zoning Map Amendments

Dear Commissioners:

This office represents Threemile Canyon Farms, LLC ("Threemile") with respect to a consolidated request (the "Application") to:

(1) Amend the Morrow County Comprehensive Plan Map and Zone Map to rezone approximately 1,298 acres of Threemile property west of the Boardman Airport from Space Age Industrial and Exclusive Farm Use to General Industrial, with a Limited Use Overlay to allow only data center and farm use (**ACM-155-25** and **AZM-156-25**); and

(2) Amend the Morrow County Comprehensive Plan Map and Zone Map to downzone approximately 1,623 acres of Threemile property southwest of the City of Boardman abutting the west boundary of the Naval Bombing Range from Space Age Industrial to Exclusive Farm Use (**ACM-157-25** and **AZM-158-25**).

On January 27, 2025, Threemile submitted a Morrow County Land Use Application Form; Application materials, including supporting reports; and a $7,500.00 application fee. Following completeness review by County Planning, Threemile submitted a revised Application on March 12, 2025 which included, among other additional information, an enhanced Transportation Impact Analysis. For ease of review the March 12, 2025 submission was a complete Application package, which replaced the initial submittal.

On April 9, 2025, the Morrow County Planning Department provided mailed notice to adjoining landowners, public agencies, and parties entitled to such notice that a public hearing for the Application would be held on April 20, 2025 at 6:00PM at the Morrow County Government Center in Irrigon, Oregon. The staff report and preliminary findings of fact were made available on April 21, 2025.

At the Planning Commission hearing on April 29, 2025, Planning Staff described the proposed Application and recommended Conditions of Approval, and Threemile representatives and its consultants summarized the Application. Following these presentations and two public comments, the Planning Commission requested a revision to expand and shift the boundaries of

the downzone area (**ACM-157-25** and **AZM-158-25**), principally to exclude a 680-acre habitat conservation easement area that was part in the original downzone area. Threemile confirmed acceptance of this modification, and Planning Staff generated a map exhibit to illustrate the new downzone boundary, which was added to the Planning Commission record. With this revision to the proposed downzone area, the Planning Commission closed the record, deliberated, and voted to recommend approval of the Application with conditions and as modified.

On May 27, 2025, Threemile submitted certain revised exhibits to its March 12, 2025 application in order to document the revised downzone area recommended by the Planning Commission. These supplemental documents include:

(1) Revised Application Exhibits depicting the revised downzone area, including:

a. Exhibit 2 (Vicinity Map)

b. Exhibit 5 (Map of Existing Zoning)

c. Exhibit 11 (Morrow County Significant Resources Inventory Map)

d. Exhibit 13 (Boardman Airport Horizontal and Conical Surfaces Map)

e. Exhibit 14 (FEMA Firm Panels Map)

f. Exhibit 15 (DOGAMI SLIDO Map)

g. Exhibit 16 (Six-Mile Canyon Gravel Site Information)

h. Exhibit 19 (Map of Proposed Amended Zoning)

(2) Updated Soils Report for the revised downzone area.

(3) A copy of Applicant's PowerPoint Presentation before the Planning Commission, revised to depict the modified recommended downzone area.

Per the request of Planning Staff on June 4, 2025, Threemile incorporated the revised exhibits listed above into its previously-submitted Application to provide the Board of Commissioners with a complete revised Application package that fully implements the Planning Commission's recommendation. All other aspects of the Application remain unaltered from the version reviewed by the Planning Commission.

In addition, we have provided the Morrow County Planning Department with Word versions of a draft ordinance approving the Application, and draft Findings of Fact and Conclusions of Law for the Board's consideration.

We look forward to working with Morrow County toward approval of this Application. Thank you for your courtesies in this matter.

Sincerely,

Steven L. Pfeiffer

Threemile Canyon Farms

COMPREHENSIVE PLAN MAP AND TEXT AMENDMENTS, ZONING MAP AMENDMENTS, AND EXCEPTIONS TO GOALS 3, 11, AND 14

Planning Commission Hearing

Tuesday, April 29, 2025

Description of Request

The proposed land use action consists of the following:

1. Comprehensive Plan map amendment from Agricultural to Industrial (955 acres);

2. Zone change from EFU and SAI to General Industrial (MG) (1,298 acres);

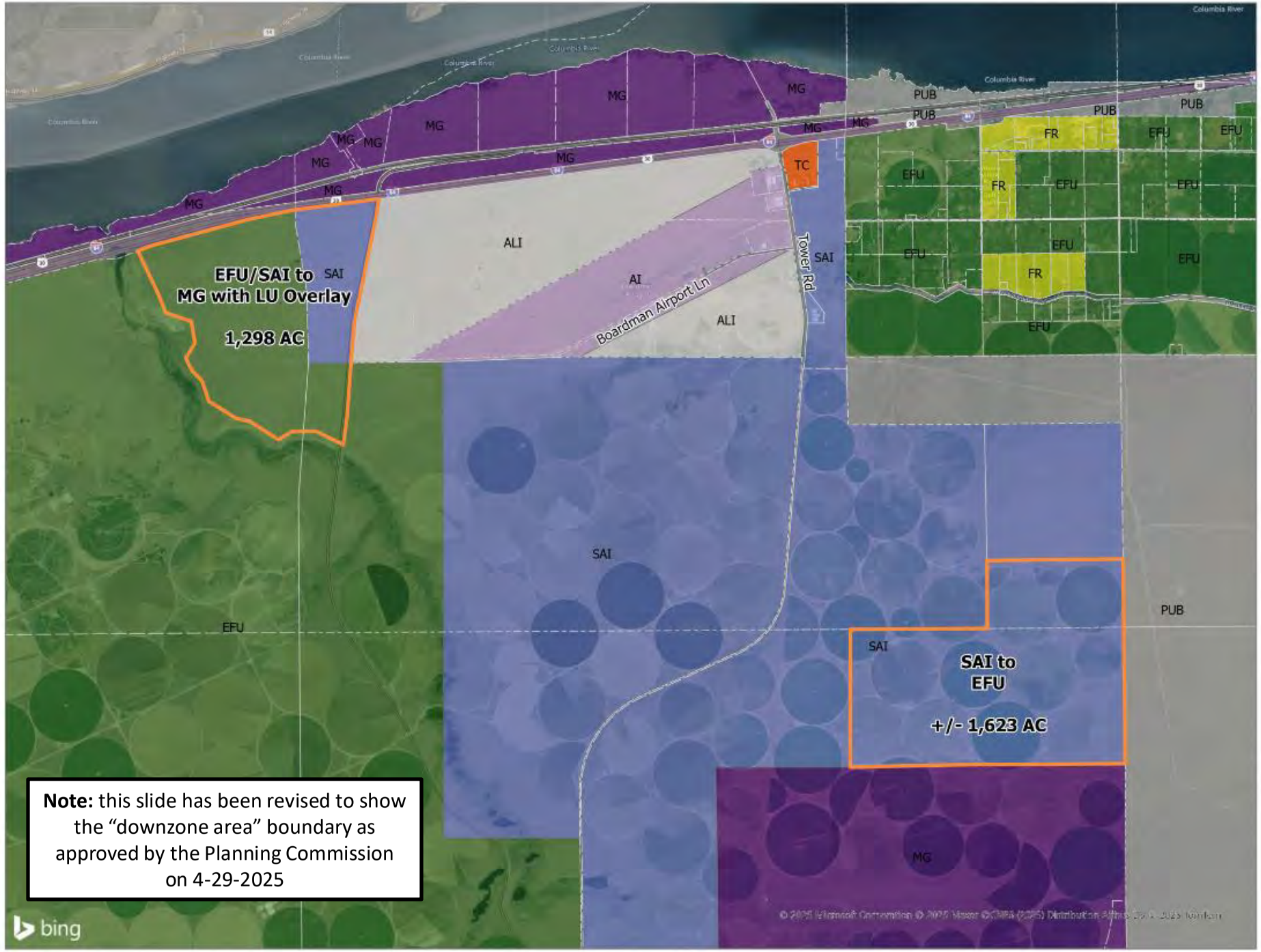
3. Limited Use Overlay (LU) to limit the permitted industrial use to data centers with ancillary improvements and associated infrastructure facilities (1,268 acres).

To facilitate the proposed amendments, the proposal will request "reasons" exceptions to Statewide Planning Goals 3, 11 and 14; and

4. Downzone 1,605 acres from SAI to EFU.

Project Team

Applicant Representatives:	Greg Harris and Scott Neal Threemile Canyon Farms, LLC
Soils Scientist:	Phil Scoles, Terra Science, Inc.
Land Use Planning:	Lee Leighton and Ian Sisson, Mackenzie
Economic Impacts Analysis:	Brendan Buckley, Johnson Economics
Transportation Planning:	Janet Jones, PE, David Evans and Associates



Note: this slide has been revised to show the "downzone area" boundary as approved by the Planning Commission on 4-29-2025

EXHIBIT 5
Zoning Map

LEGEND

- Proposed Map Amendments
- Tax Lots

Zoning

- Airport Industrial
- Airport Light Industrial
- Exclusive Farm Use
- Farm Residential
- General Industrial
- Public
- Space Age Industrial
- Tourist Commercial

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

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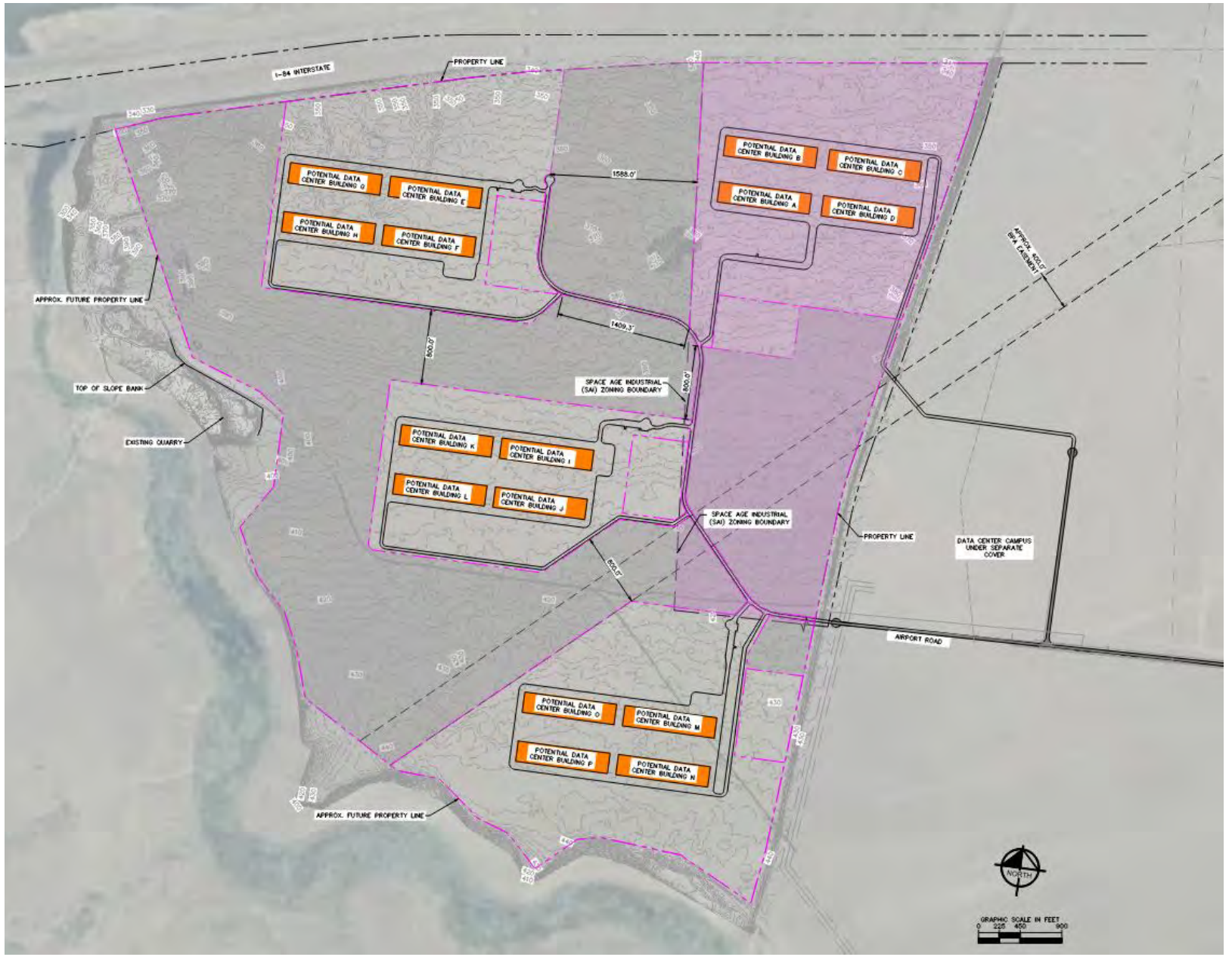
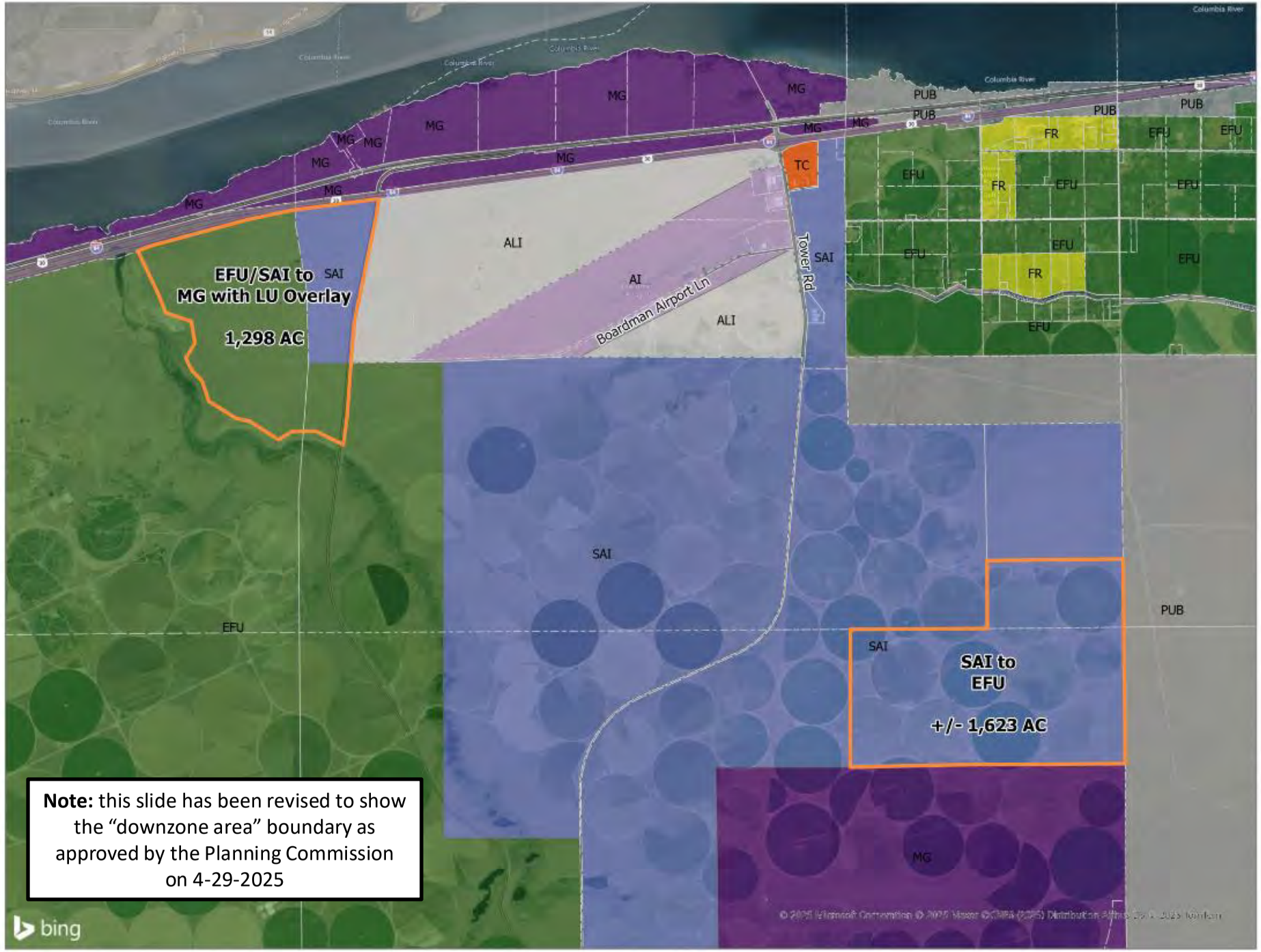
MACKENZIE.

Conceptual EDCC Site Plan





Note: this slide has been revised to show the "downzone area" boundary as approved by the Planning Commission on 4-29-2025

EXHIBIT 5
Zoning Map

LEGEND

- Proposed Map Amendments
- Tax Lots

Zoning

- Airport Industrial
- Airport Light Industrial
- Exclusive Farm Use
- Farm Residential
- General Industrial
- Public
- Space Age Industrial
- Tourist Commercial

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

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MACKENZIE.

Land Capability (Soils) Evaluation

Land capability is a rating system that identifies soils having no limitations (Class I and 2 prime soil) to having severe limitations (Class 6, 7 and 8).

- Terra Science examined 2 study areas to determine on-the-ground land capability.
- The field study involved representative soil sampling with a hand auger to determine soil depth, texture and other attributes.
- Evaluated in Oct. 2024 and Feb. 2025 by Phil Scoles (35+ yrs. soil scientist).
- Rating system evaluates “as is”, so lack of irrigation rates as a significant limitation for Class 6 and higher.

Upzone Soil Attributes

Mapped soils: >90% Prosser silt loam and Prosser-Rock outcrop complex. Moderately deep, well drained.

Actual soil conditions:

- Mostly sandy loam textures
- 10 to 15% gravels in upper part
- Hundreds of subtle mounds of moderately deep soil and well drained.
- These mounds are surrounded by shallow soils that is somewhat excessively drained.
- Rock outcrops throughout north part of upzone site; fewer in south part.

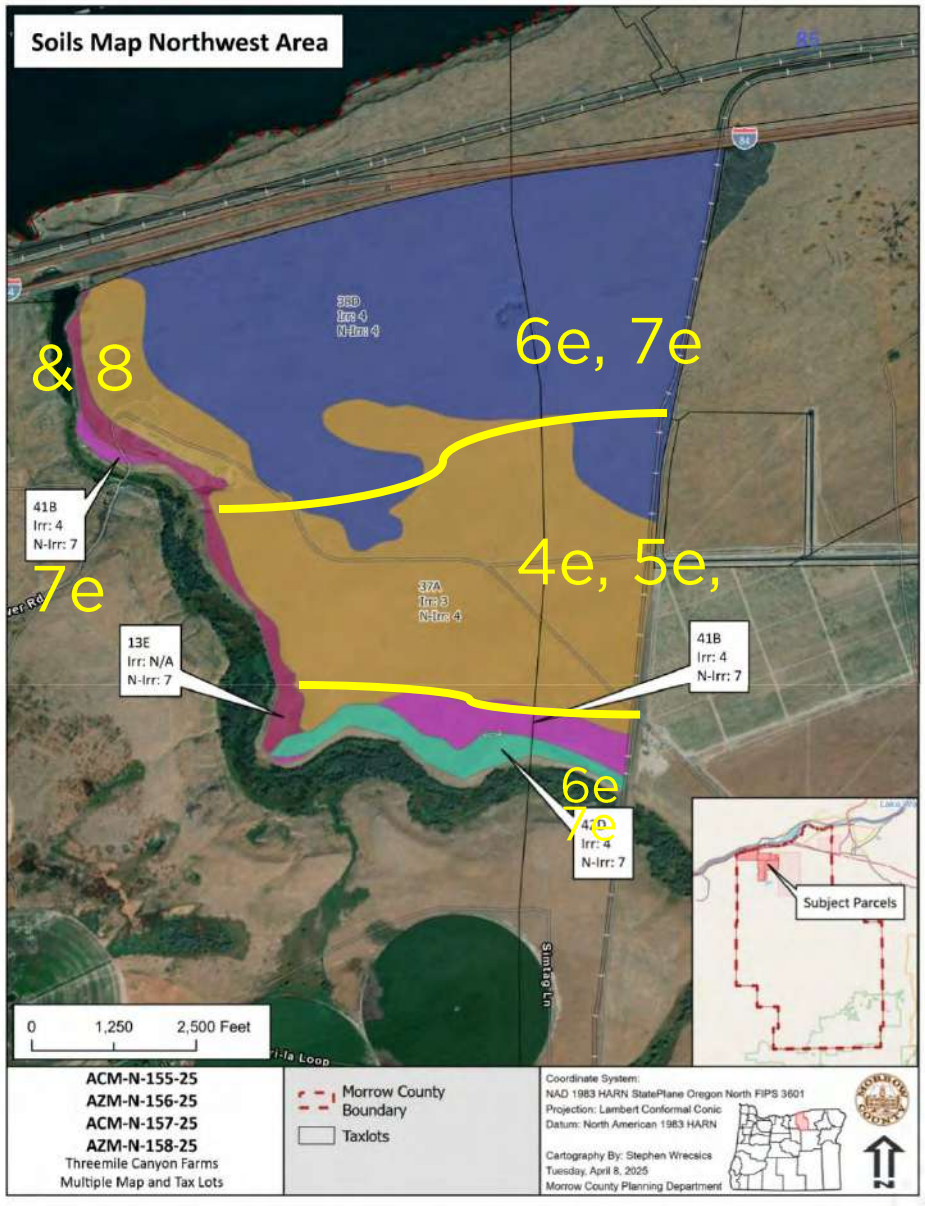
Downzone Soil Attributes

Mapped soils: 20% Hezel loamy fine sand, 15% Koehler loamy fine sand, and 65% Quincy loamy fine sand. Moderately to deep, somewhat excessively drained.

Actual soil conditions:

- Mostly loamy fine sand textures; Few gravels.
- Terraces and ancient, stabilized sand dunes.
- Predominantly deep, but smaller areas having calcium-indurated layers in Koehler soils.
- No rock outcrops.
- Native topography graded for cropping.
- Ongoing irrigation in center and south parts.

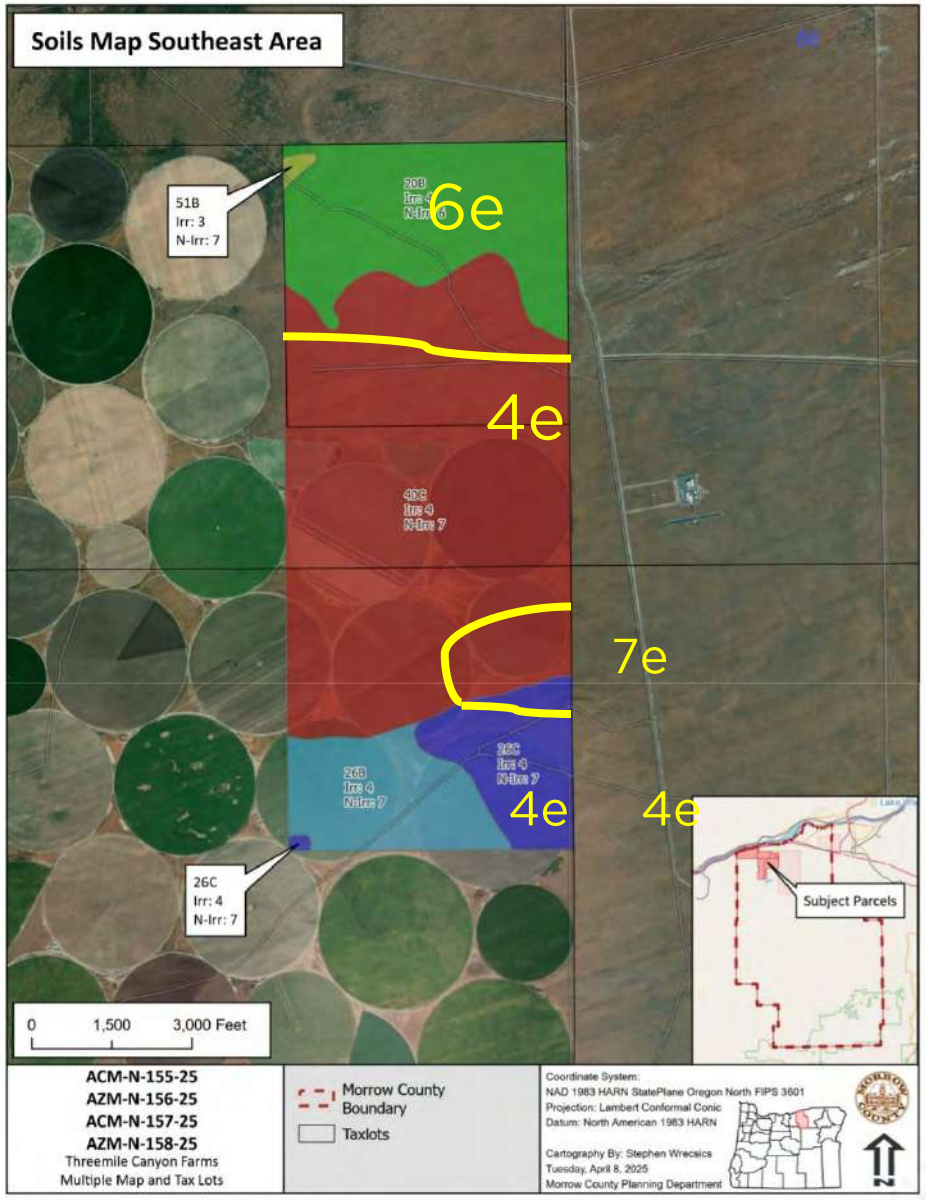
Upzone Soil Mapping and Land Capability Rating



- South part of parcel is mostly Class 4e and 5e ("e" for high erosion potential)
- Center of parcel is mostly Class 5e, with some Class 6e.

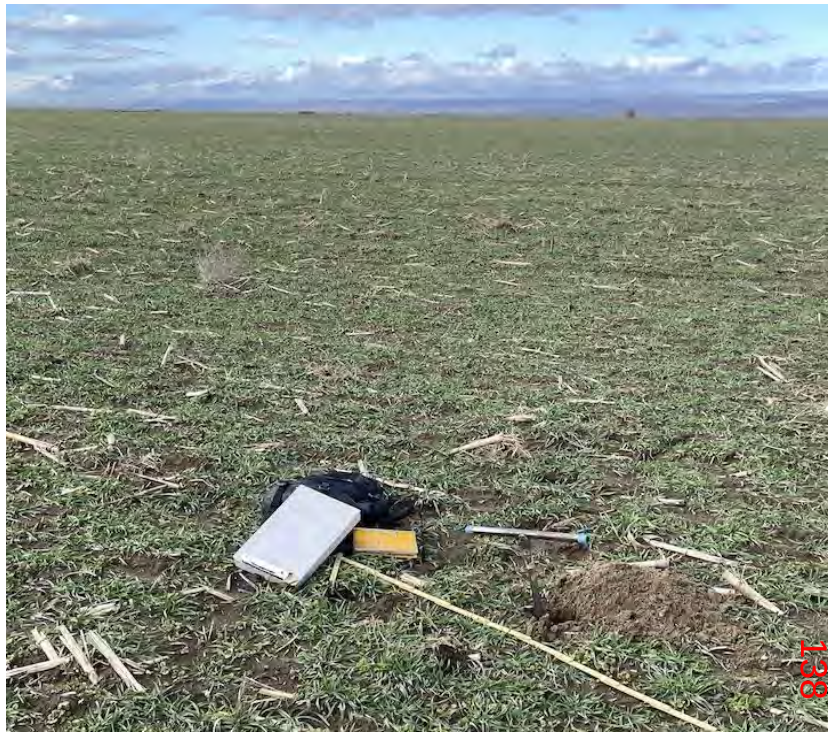
- North part of parcel is mostly Class 6e and Class 8e; large outcrops are Class 8.

Downzone Soil Mapping and Land Capability Rating



- Dry and windy climate prevent soil ratings of Class 1 and 2 (prime soil), as well as Class 3 (high value). Irrigation added 1997-2000.

- Class 4 is considered high value agricultural soil if utilized for perennial crops, nursery, berries, fruits as of Nov. 04, 1993.




Upzone Parcel


Downzone Parcel

Land Capability Conclusions

Both Upzone and Downzone parcels qualify as "agricultural land" per OAR 660-033-0020(1)(A). Neither parcel qualify as prime or high value farm land.

- For Upzone parcel, shallow soils/rockiness, dry and windy climate, plus lack of irrigation result in moderate to severe limitations for current uses. Upzoning to light industrial utilizes land with substantial limitations and not suitable for cropping.

- For Downzone parcel, deeper soils, low rock content and ongoing irrigation mitigate dry and windy climate, so soils have low to moderate limitations for crops. Downzoning to EFU assures land stays in production for crops like potatoes, onions, carrots and corn.

Data Centers – Rapid Growth

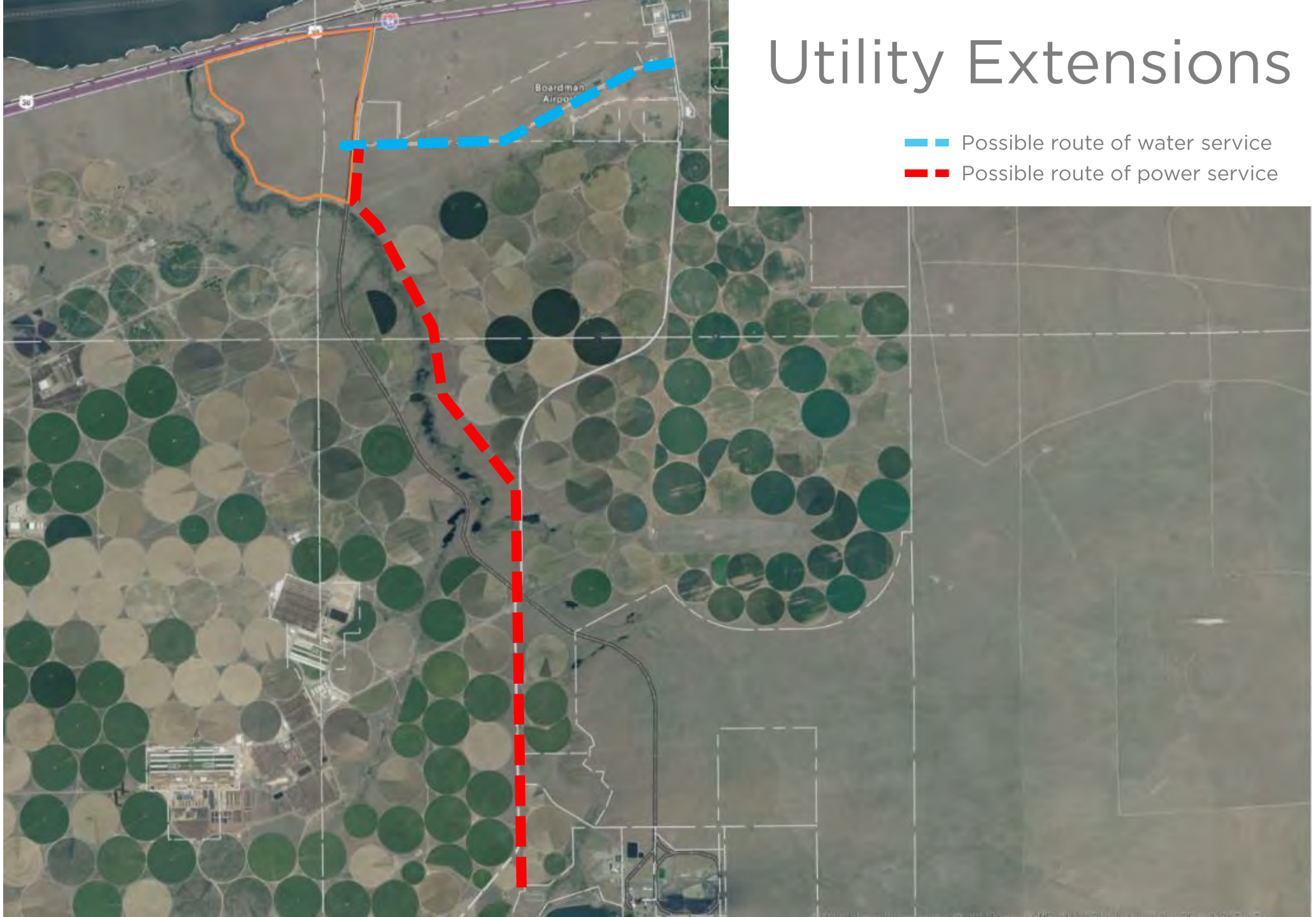
Mackenzie has specific data center land use planning experience:

- Business Oregon – Industrial Site Certification program modernization (2015)
  - Industry-preferred siting characteristics for data centers
- Hermiston Economic Opportunities Analysis (2024)
  - Sources: built examples, published information, Mackenzie design projects
  - Identified factors include site size/configuration, location, visibility, transportation, utilities including electric power and water supply

Road Access

- Existing paved road
- Proposed road extension

Utility Extensions



Alternative Areas Analysis

- "Reasons" for goal exceptions require evaluating possible alternative areas
- Mackenzie identified and evaluated possible alternative areas suitable for meeting projected Exascale Data Center Campus (EDCC) demand
- Understand economic/market factors driving land demand
  - Johnson Economics analysis
- Geographic Information System (GIS) screening method
  - Obtain GIS data from Gilliam, Morrow and Umatilla Counties and other sources
  - Identify potential areas based on zoning and industry siting criteria, e.g., power, water, land area, transportation, topography, hazards

Data Center Industry Trends

Continued growth in data center development, at an accelerating pace:

- Growth in Artificial Intelligence (AI)
- Cloud applications
- E-commerce
- Streaming (entertainment, communications)
- Phone service and data
- Data storage, backup, and recovery

Expansion is feasible: Largest, best-capitalized companies in the world

Columbia Basin Data Center Trends

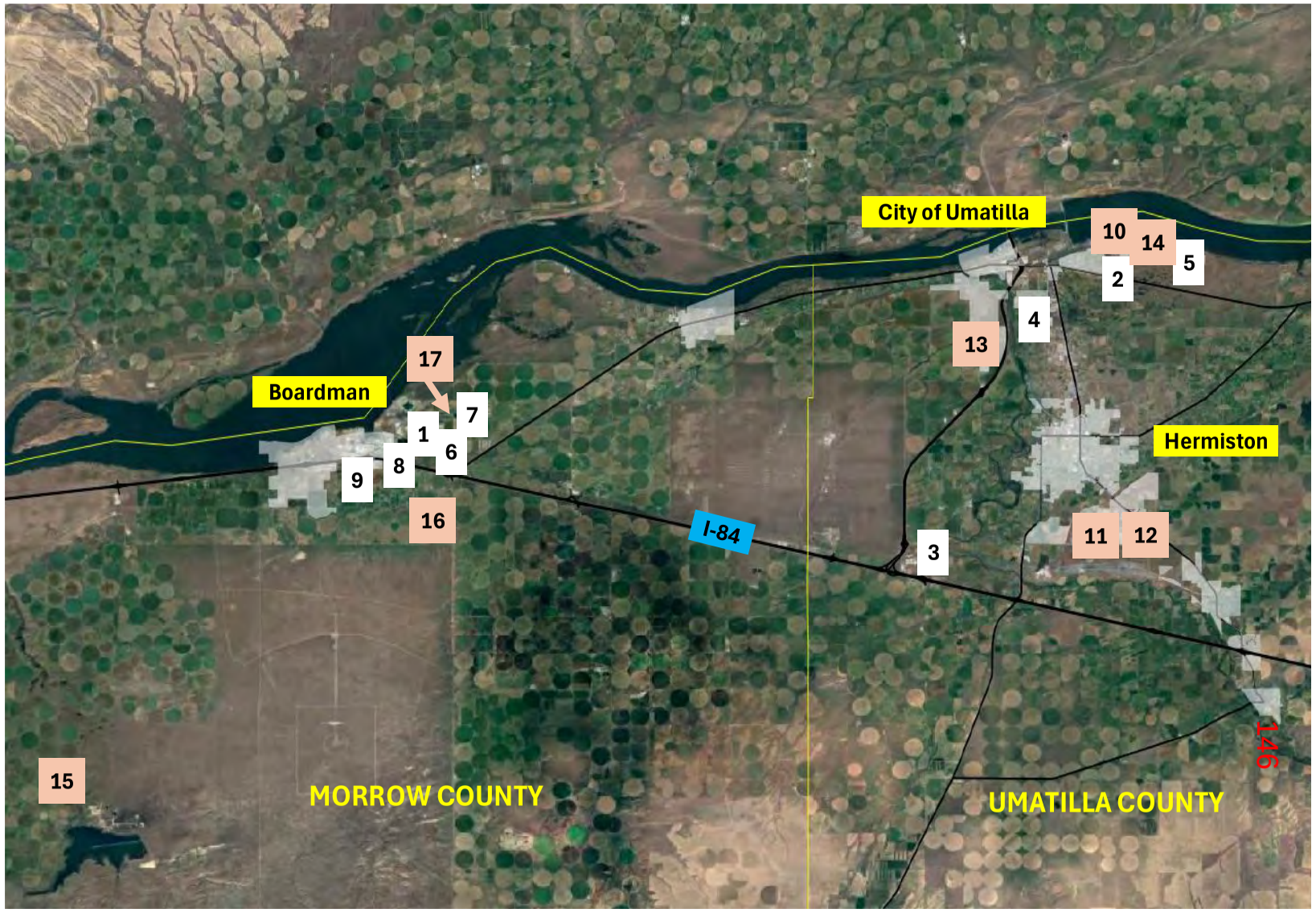
Oregon is a globally significant Data Center market

- Highly ranked for:
  - Total processing capacity
  - Cloud operators
  - Renewable power options
  - Tax structure
- Columbia Basin is a major hub with national reputation
  - Pace of growth: 200 to 300 acres per year
  - 3,000 acres over 10 years

Columbia Basin Data Center Trends

Since 2014

- 9 existing campuses
- 8 under way or planned
- 17 total over ~12 years
- Recent: >2 per year
- Sites are increasing in size



Exascale Data Centers

Trend toward larger Data Center campuses:

- 800 to 1,500 acres
- Economies of Scale in Consolidated Campuses:
  - Process, planning, and time costs
  - Construction co-location and phasing
  - Efficient operations: maintenance, security, grounds, custodial, admin, etc.
  - Efficient infrastructure and service: power, water, transportation
  - Reduced data latency
  - Limited external impacts
- Confidence that demand will be there

147

Exascale Data Centers: Siting Characteristics

- 1,000+ acres (land supply), more remote locations
- Flat, buildable, lack of environmental constraints or hazards
- High-capacity power, and means to serve
- Proximity to existing or planned transmission lines (<10 miles),
- Water capacity and means to serve
- Water cooling and sewer or septic capacity
- Fiber optic capacity
- Proximity to transportation corridor
- Cluster benefits: local labor shed, construction, and operations expertise
- Industry vendors and suppliers

Modeled Investment and Economic Impact

Hypothetical Exascale Data Center Campus:

- 16 data center buildings
- 250,000 square feet each, 4M square feet total
- Electrical substation, parking/circulation, mechanical, HVAC, water cooling, stormwater management, back-up power generation.
- Power capacity up to 1GW
- Timeline: 8 years total; 4 buildings every 2 years
- Estimated total investment: $8 Billion
- Potential range: $7B to $12B

149

Modeled Investment and Economic Impact

Jobs

- Construction: 800 jobs/year (>6,000 FTE jobs over 8 years)
- Operations: 560 on-site FTE jobs; average of 35 years per building
- Jobs in operations, maintenance, grounds, security, administration, etc.
- Average total wages and benefits: over $100,000 / FTE / year
- Nearly 500 additional community jobs

Economic Impact

- $490M in economic impact annually
- Power, water, maintenance, staffing, and indirect and induced
- Billions in indirect and induced economic activity

150

Modeled Fiscal Impact

- Assumed use of Strategic Investment Program (SIP)
- 15-year property tax exemption
- Significant revenue even in years 1 - 15
- Taxable value remains high in 16th year, even after depreciation
- By 20th year, total cumulative tax revenue is projected to total over $300M
- 32% to Morrow County, 32% to the school district

Alternative Areas Analysis

- Oregon Administrative Rules (OAR) 660-004-0020
  - *"Areas that do not require a new exception cannot reasonably accommodate the use"*
    - Identify possible alternative areas considered
    - Discuss why alternative areas cannot reasonably accommodate the use:
      - Alternative areas must be able to support the proposed use without requiring significant changes or additional discretionary approvals.
      - Factors may include economic considerations and essential siting characteristics.

152

Alternative Areas Analysis

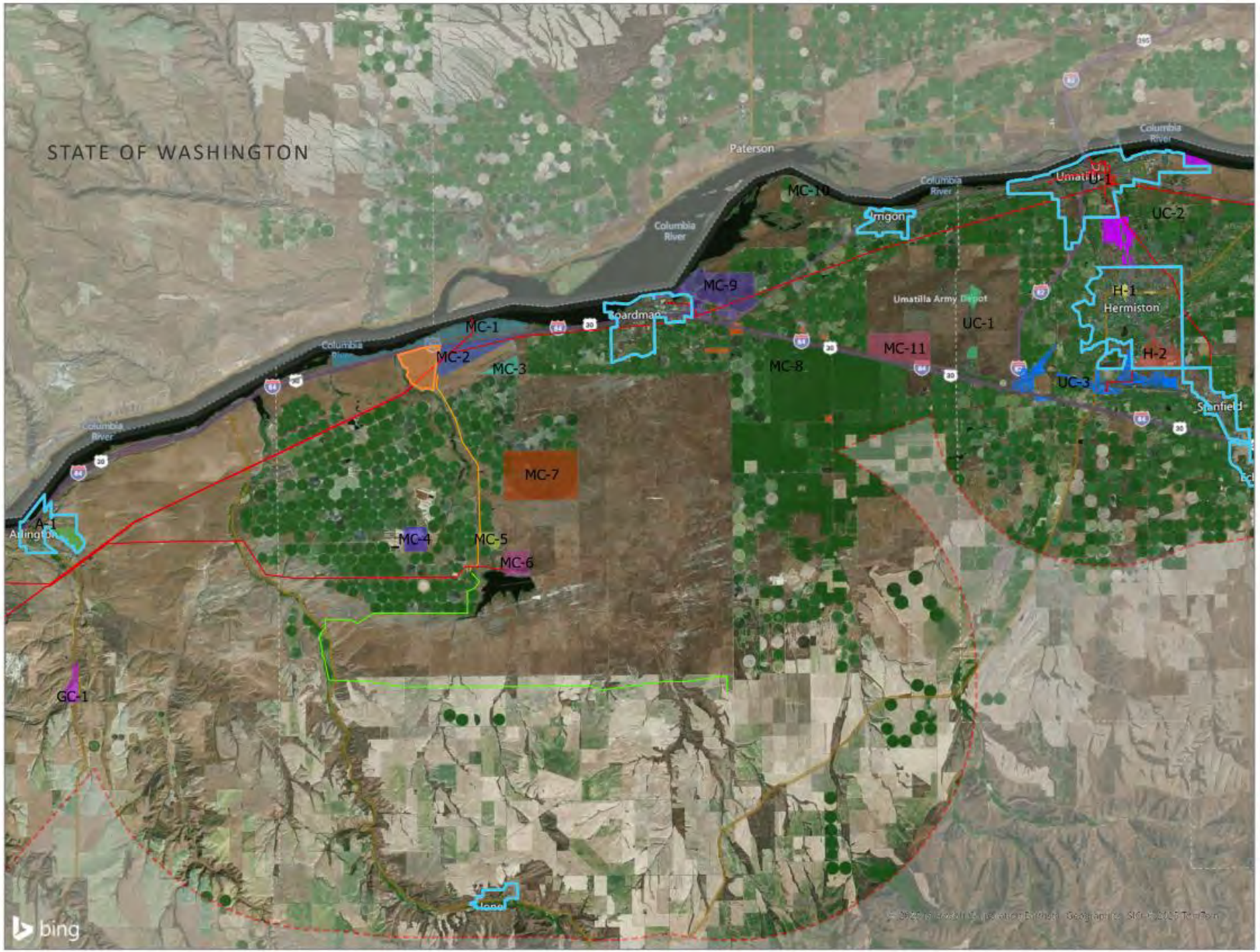
- Required analysis areas include:
  - Non-resource land that does not require a new goal exception
  - Resource land that is irrevocably committed to non-resource uses
  - Land within Urban Growth Boundaries (UGBs)
  - Land without the provision of public facility(ies) or service(s)
  - Possible UGB expansion areas (OAR 660-014)

- The analysis standard is met by providing a broad review of similar areas in the vicinity. Detailed site-specific analysis is not required.

153

Alternative Areas Analysis

- Study Area (+/- 1,300 square miles)
  - Gilliam, Morrow, and Umatilla County areas
    - Includes Cities of Arlington, Boardman, Ione, Irrigon, Umatilla, Hermiston, Stanfield, and Echo
  - Within 10 miles of existing high-capacity electric power transmission lines
- GIS data to identify and assess possible alternative areas
  - Tax lot boundaries and ownership
  - Zoning and comprehensive plan maps
  - Existing power transmission line routes and capacity
  - Floodplain and landslide hazard maps
- Evaluate suitability based on Essential Siting Characteristics for EDCCs
  - Site size and physical features
  - Power supply
  - Water and sewage disposal
  - Transportation access
  - Natural hazards
  - Existing development



MAP 1
Alternative Areas Overview

LEGEND

- Approx. Subject Site Boundary
- Urban Growth Boundary

Power Transmission Lines

- 345 Volts
- 500 Volts

Proposed Power Transmission Lines

- Apex Lightspeed 230kv
- Maverick-Apex-500kv
- Bridging Power
- 10 Mile Buffer - Transmission Lines

Alternative Areas

- City of Arlington Area #1 (A-1)
- City of Umatilla Area #1 (U-1)
- City of Hermiston Area #1 (H-1)
- City of Hermiston Area #2 (H-2)
- Gilliam County Area #1 (GC-1)
- Morrow County Area #1 (MC-1)
- Morrow County Area #2 (MC-2)
- Morrow County Area #3 (MC-3)
- Morrow County Area #4 (MC-4)
- Morrow County Area #5 (MC-5)
- Morrow County Area #6 (MC-6)
- Morrow County Area #7 (MC-7)
- Morrow County Area #8 (MC-8)
- Morrow County Area #9 (MC-9)
- Morrow County Area #10 (MC-10)
- Morrow County Area #11 (MC-11)
- Umatilla County Area #1 (UC-1)
- Umatilla County Area #2 (UC-2)
- Umatilla County Area #3 (UC-3)

0 2 4 Miles

1 inch = 4 mi

N

SOURCE DATA:
Gilliam County Data, 2024
Morrow County Data, 2024
Umatilla County Data, 2024
City of Arlington Data, 2024
City of Hermiston Data, 2024
City of Umatilla Data, 2024
DLCD GIS Data, 2022
Esri U.S. Federal Data, 2022

GEOGRAPHIC PROJECTION
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Date: 1/22/2025
File: MAP 1 SubAreas

Map Created By: CJS
Project No: 2242966.00

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Portland, Oregon • Vancouver, Washington • Seattle, Washington

Alternative Areas Analysis

- Morrow County
  - (11) areas in unincorporated industrial zones
    - (1) area is not available due to ongoing litigation (Depot Site)
    - (1) area is not available because existing goal exceptions limit use to antenna test range
    - (1) area is not available because of fragmented ownership; owner(s) not willing to sell
    - Other areas:
      - Largely committed to other development
        - » Existing and/or entitled through land use approvals
      - Inadequate acreage for EDCC
  - City UGBs of Boardman, Ione, and Irrigon
    - Zoning does not allow data centers

Alternative Areas Analysis

- Gilliam County
  - (1) area in an unincorporated industrial zone
    - Zoning does not allow data centers
    - Inadequate acreage for EDCC
  - (1) area in City of Arlington UGB
    - Committed to development by AWS
    - Inadequate acreage for EDCC

Alternative Areas Analysis

- Umatilla County
  - (3) areas in unincorporated industrial zones
    - (1) area is not available due to ongoing litigation (Depot Site)
    - Other areas:
      - Largely committed to other development
      - Inadequate acreage for EDCC
  - (1) area in City of Umatilla UGB
    - Largely committed to other development
    - Inadequate contiguous acreage remaining for EDCC
  - (2) areas in City of Hermiston UGB
    - Largely committed to other development
    - Inadequate contiguous acreage remaining for EDCC
  - City UGBs of Echo and Stanfield
    - Zoning does not allow data centers

Why this Site?

Threemile Canyon Farms, LLC is the Owner/Applicant

- Threemile acquired large tracts of land in a batch transaction
- Since that time, Threemile has installed pivot irrigation and grows crops in areas with productive soil conditions
- Threemile has been approached by data center site selectors
- The 1,298-acre Site is not suitable for commercial farming, but it is suitable for data center campus use:
  - Location west of Boardman Airport
  - Proximity to power transmission lines and I-84
  - Port of Morrow Water Project - Columbia River source

The Site is Suitably Located for an EDCC

Site (1,298 acres) Factors:

- West of Boardman Airport, bounded at west by Sixmile Canyon
  - Far from populated areas and residences
- Electric Power: Transmission Lines nearby
- Vehicular Access: Rural Arterial II equivalent Boardman Airport Lane
- Water: Port of Morrow project; Columbia River source
- Groundwater protection: compliance with Oregon DEQ permitting

- Rezoning requires exceptions to Statewide Planning Goals 3, 11 and 14

160

Downzone Area

Downzone Area (1,605 acres) Factors:

- Proposal causes No Net Loss of productive agricultural land
- Change from SAI to EFU zoning will protect productive farmland

Is This a Development Proposal?

No – this request is only to change zoning to MG with LU Overlay

- Applicant's proposal includes Limited Use (LU) Overlay restricting urban use to data center development

- A proposed Condition of Approval ensures that future development must go through Site Plan Review (public hearing procedure)
  - A project-specific Traffic Impact Analysis will be required
  - County can impose appropriate conditions of approval

Dynamic Markets vs. Planners

Market-based demand for land can surprise the planners …

- Land demand projections are based on past experience:
  - Coordinated state population growth projections for communities
  - Land Use and Economic Development Planning by cities and counties
  - Grounded in trend extrapolation from previous patterns, ratios and growth rates

- Disruptive innovation and market factors can present development conditions that diverge significantly from planning assumptions

Responding to Emergent Growth Needs

How do jurisdictions adapt to new information and circumstances?

- First, by responding to requests from constituents
  - Citizens/property owners identify emergent needs and propose solution ideas
  - Constituent proposals may represent full- or partial solutions to identified needs
  - This is often the mechanism by which a community first identifies new needs

- Second, through legislative planning and policymaking efforts
  - Planning studies
  - Legislative policy proposals, e.g., Comp Plan- and Zoning Map amendments
  - Efforts typically require a year or more before adoption of policy changes
  - Delayed response can hobble a community's ability to capture beneficial economic development in a competitive national and regional market environment

Why Not Expand City UGB's?

Oregon Statewide Planning Goals aspire to …

- Protect farm and forest lands
- Promote compact, efficient development within urban areas
  - Bring residential, commercial and employment uses close together to support multi-modal access and reduced travel distances

… but Exascale Data Center Campuses are REALLY BIG!

- A 1,000-acre square is 1-1/4 MILES long on each of its four sides
- Contiguous urban growth would be required to "leap-frog" over an EDCC – separating uses we would prefer to locate close together

165

Why Not Expand City UGB's? (cont'd)

- UGB expansions can be part of strategy to meet land demand needs but require diligent study to avoid bad consequences
- OAR's require each city to develop evidence of need
- Such efforts typically require a year or more
- Legislative imposition of LU zoning by a city, restricting economic use of a property to a single allowed urban use, would likely be subject to takings challenges
  - The LU overlay limitations of this request have been proposed by the Applicant

An Exception is the Right Action

In this circumstance, the "reasons exception" process is preferable and appropriate:

- Voluntary proposal submitted by the owner/applicant;
- Proposed MG/LUO zoning allows only the specific urban use that is the basis for the "reasons" exception (data center);
- Approval will contribute to *partially* meeting the project need for the coming 10 years, responding to a well-documented recent dramatic increase in a novel industrial activity; and
- Approval allows EFU uses of the Site unless and until data center development becomes economically feasible.
- Protections inherent in the land use approval process would require a new exception before any other urban use or development may occur.

The First Step, Not the Last

Johnson Economics' analysis indicates demand for 3,000 acres of Exascale Data Center Campus demand in the next 10 years

- The Site's 1,298 acres west of Boardman Airport represent only about 43% of a complete solution

Morrow County should:

- Adopt the applicant's proposed exception findings
- Approve the proposal to rezone the Site MG with LU Overlay limiting its urban use to data center development, and
- Approve the companion proposal to "downzone" 1,605 acres from SAI to EFU

168

Traffic Analysis: Background

- Transportation System Plan (TSP)
  - Identifies improvements reflecting Comprehensive Plan assumptions (i.e. zoning)
- Transportation Planning Rule (TPR) analysis
  - Statewide policy
  - Requires analysis of "reasonable worst-case" development.
- Determine if planned zone change will "significantly affect" transportation network.
  1. Does it require changing functional classification of roadway;
  2. Does it require changing standards that implement functional classification; or
  3. Does it degrade performance of existing or planned facility beyond projected performance by end of planning period?

169

Traffic Analysis: Zoning Comparison

- Existing Zoning
  - Exclusive Farm Use (EFU) and Space Age Industrial (SAI)
- Proposed Zoning
  - General Industrial (M-G) with Limited Use Overlay (LU)

Traffic Analysis: Development Potential

1,400,000 SF Research & Development

Existing Zoning

4,000,000 SF Data Center

Proposed Zoning

Traffic Analysis: Key Takeaways

1. Proposal results in fewer trips/less traffic impact than current zoning.
   - This results in better traffic conditions for TSP analysis planning year.
2. Proposal does not require changes to roadway standards per Morrow County TSP.
   - Boardman Airport Lane was recently improved by Port of Morrow.

Traffic Analysis: Trip Comparison

- Existing Zoning: EFU/SAI

Table 1 - Trip Generation Estimates for Existing Zone Designations

Zone Designation	ITE Land Use	LUC	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
SAI	Research and Development Center	760	1,400 KSF	13,828	1,042	229	1,271	192	1,009	1,201

LUC: Land Use Code

- Proposed Zoning: M-G with LU

Table 1 - Trip Generation Estimates for Proposed Zone Designation

Zone Designation	ITE Land Use	LUC	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
M-G	Data Center	160	4,000 KSF	3,960	242	198	440	130	304	434

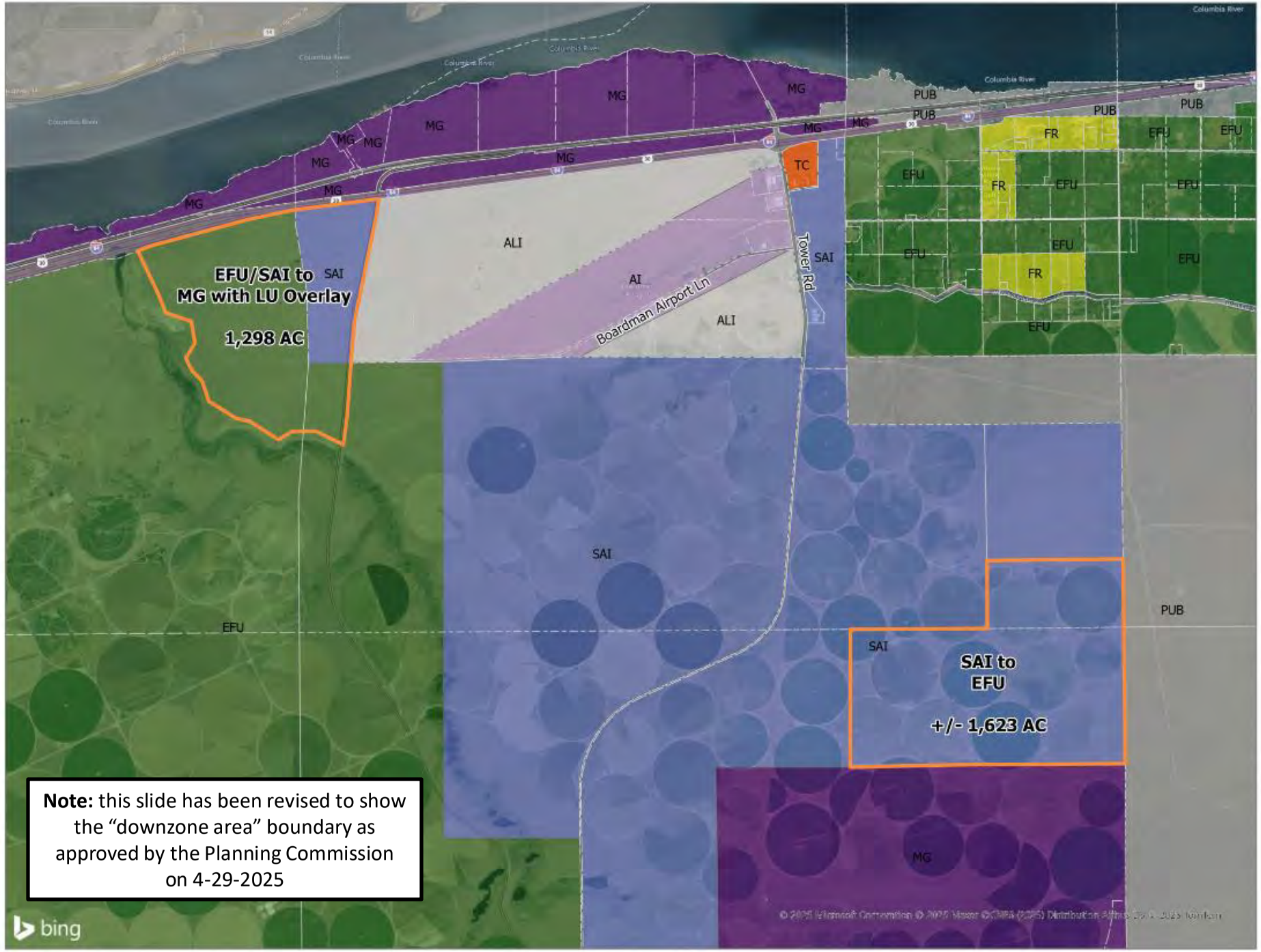
LUC: Land Use Code

Traffic Analysis: TPR Compliance

- Proposed zone change is not expected to “significantly affect” a transportation facility.
- Boardman Airport Lane (Port of Morrow facility)
  - Consistent with Rural Arterial II road standards.
  - Consistent with Rural Arterial II traffic volume thresholds.
  - Adequate capacity for existing and future traffic with proposed zone change.
- Tower Road, per 2012 Morrow County TSP
  - Consistent with Minor Collector road standards.
  - Consistent with Minor Collector traffic volume thresholds.
  - Adequate capacity for existing and future traffic with proposed zone change.
- Planned roadway network within Morrow County will not be significantly impacted by proposed zone change.

Traffic Analysis: Next Steps

- Prior to actual development, site is subject to additional traffic analysis.
  - Requirement via Condition of Approval (Agenda Packet pages 83-84; Staff Report pages 55-56)
  - Requires scoping with Morrow County and ODOT.
  - Requires assessment of emergency access.
  - Opportunity to require/provide off-site mitigation (signalization, roundabout, etc.)



Note: this slide has been revised to show the "downzone area" boundary as approved by the Planning Commission on 4-29-2025

EXHIBIT 5
Zoning Map

LEGEND

- Proposed Map Amendments
- Tax Lots

Zoning

- Airport Industrial
- Airport Light Industrial
- Exclusive Farm Use
- Farm Residential
- General Industrial
- Public
- Space Age Industrial
- Tourist Commercial

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

N

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Conditions of Approval

1. Prior to any data center development, developer shall prepare and submit an application to Morrow County for Site Plan Review subject to the submittal requirements, standards, approval criteria and procedure set out in MCZO 5.020.A through H.
    a. As part of the Site Plan Review application, developer shall retain a Traffic Engineer to provide a project-specific Traffic Impact Analysis (TIA) consistent with the requirements of MCZO 4.035. That work shall include coordination with staff of Morrow County and the Oregon Department of Transportation (ODOT) on the necessary scope of the analysis; assessment of operational and safety impacts of the proposed development on affected intersections, including the Interstate 84-Tower Road interchange, other Tower Road intersections, and any secondary/emergency access routes and facilities; and providing recommendations for mitigation actions at locations where performance is projected to fall below established standards due to traffic generated by the proposed development.

Conditions of Approval

2. Prior to construction, developer shall provide notice to Threemile Canyon Farms, the area farming operator, of its construction traffic schedule and coordinate with Threemile Canyon Farms to minimize any potential impacts to farm traffic during harvest.

3. Developer shall obtain all necessary local, state and federal permits and approvals for the data center campus construction and operation prior to commencement of the proposed use or certificate of occupancy being granted. If applicable, such permits shall include, but are not limited to: (A) review and approval of a Water Pollution Control Facilities (WPFC) permit issued by the Oregon Department of Environmental Quality and (b) Pollutant Discharge Elimination System (NPDES) 1200-C Permit issued by the Oregon Department of Environmental Quality.

4. Delivery of adequate electricity and water from third-party providers shall be provided substantially as described in this record, prior to commencement of the proposed use or certificate of occupancy being granted.

178

Questions?

Threemile Canyon Farms

COMPREHENSIVE PLAN MAP AND TEXT AMENDMENTS, ZONING MAP AMENDMENTS, AND EXCEPTIONS TO GOALS 3, 11, AND 14

Planning Commission Hearing

Tuesday, April 29, 2025

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Per the Planning Commission's recommendation on April 29, 2025, the proposed downzone area has been reconfigured, principally to avoid overlap with a conservation easement and to include alternate lands which are currently actively cultivated. The reconfigured downzone area has also increased in size from 1,605 acres to approximately 1,623 acres. The Applicant has updated exhibits referred to herein to reflect the Planning Commission's recommendation. It is important to note, however, that this Application Narrative has not been similarly revised to reflect the single modification recommended by the Planning Commission, and the updated exhibits control in the event of a conflict with this Application Narrative.

COMPREHENSIVE PLAN MAP AND TEXT AMENDMENTS, ZONING MAP AMENDMENTS, AND EXCEPTIONS TO GOALS 3, 11, AND 14

To
Morrow County

For
Threemile Canyon Farms, LLC

Dated
January 27, 2025
(Revised March 12, 2025)

Project Number
2240364.00

MACKENZIE
Since 1960

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PO Box 14310, Portland, OR 97293 | T 503.224.9560 | www.mackenzie.inc

TABLE OF CONTENTS

EXHIBITS

13. Boardman Airport Horizontal and Conical Surfaces Map
14. FEMA FIRM Panels
15. DOGAMI SLIDO Maps
16. Six-Mile Canyon Sand and Gravel Site Information
17. Service Provider Letters
    A. Water – Port of Morrow
    B. Power – PacifiCorp
    C. Road Access – Port of Morrow
18. Data Center Reference Literature
    A. *State of the Digital Infrastructure Industry 2024 Annual Report*, iMasons
    B. *AI Power: Expanding Data Center Capacity to Meet Growing Demand,* McKinsey & Company
    C. *Mega $14 billion data center project proposed in metro Phoenix,* Phoenix Business Journal
    D. *Data center boom transforms Culpepper,* InsideNoVa
    E. *Technical Memo: Siting Criteria for Hyperscale Data Centers,* Mackenzie
    F. *The Impacts of Data Processing in Oregon,* Business Oregon
19. Proposed Morrow County Zoning Map Amendments

I. PROJECT SUMMARY

Applicant:	Threemile Canyon Farms, LLC 75906 Threemile Road Boardman, OR 97818
Owner:	Threemile Canyon Farms, LLC
Site Address:	None
Tax Lots (portions of):	04N23E-00110 (9,017 acres) 04N24E-00121 (6,779 acres)
Site Acreage:	1,298 acres +/- [1]
Existing Zoning:	Exclusive Farm Use (EFU) – 967 acres +/- Space Age Industrial (SAI) – 331 acres +/-
Adjacent Zoning:	EFU – Exclusive Farm Use (to the east, west, and south) ALI – Airport Light Industrial (to the east) MG – General Industrial (to the north)
Overlay/Plan District:	None
Comprehensive Plan:	Agriculture (EFU area) Industrial (SAI area)
Existing Structures:	BPA transmission towers
Request:	Amend the Morrow County Comprehensive Plan and Zoning Map, and adopt reasons exceptions to Statewide Planning Goals 3, 11, and 14, to rezone 1,298 acres from EFU and SAI to General Industrial (MG); apply a Limited Use Overlay (LU) to limit the permitted industrial use to data centers with related ancillary improvements and associated infrastructure facilities.
Project Contact:	Mackenzie Att: Brian Varricchione, Land Use Planner bvarricchione@mcknze.com 1515 SE Water Avenue, Suite 100 Portland, OR 97214 503.224.9560

[1] Of the 1,298-acre total area, 34 acres along the eastern Site boundary are within a 150- wide railroad right-of-way easement, which is proposed to remain in place and available for rail service. The resulting net potential development area of 1,264 acres appears in technical reports provided by the applicant.

II. INTRODUCTION

Description of Request

Comprehensive Plan Map Amendment from Agricultural and Space Age Industrial to Industrial, and Zone Map Amendment from EFU and SAI to MG at the 1,298-acre Site, with companion CPMA/ZMA from Industrial/SAI to Agriculture/EFU at the 1,605-acre "downzone" area.

This request seeks to amend the Morrow County (County) Comprehensive Plan Map designation of Space Age Industrial (SAI) and Agriculture to Industrial, and the corresponding zone map designations of Space Age Industrial and Exclusive Farm Use to General Industrial (MG), for a contiguous area of 1,298 acres located west of the Boardman Airport (the "Site"). The proposal includes application of a Limited Use (LU) Overlay zone encompassing the Site, to limit permitted industrial uses to data centers with ancillary improvements and associated infrastructure facilities, while continuing to allow uses consistent with EFU zone regulations.

This request also includes a concurrent request to amend the County Comprehensive Plan Map designation of Industrial to Agriculture, and the corresponding map designation of Spage Age Industrial to Exclusive Farm Use, for a contiguous area comprising 1,605 acres. This concurrent rezoning will enhance Goal 3 protections to existing agricultural lands, much of which is irrigated and used for crop production, by prohibiting the development of a wide range of intensive industrial uses allowed under the current SAI zoning designation.

This amendment proposal responds to a recent dramatic increase in demand for development of large campus sites for high-capacity data processing facilities, known as Exascale Data Center Campuses (EDCC). With respect to Morrow and its neighboring Counties, economic analysis has identified demand for 3,000 acres of land for EDCC use in the coming 10-year period (see Exhibit 8). With adoption of the necessary Goal exceptions, this proposal will allow Exascale Data Center Campus siting on 1,298 acres located west of the Boardman Airport and east of Sixmile Creek, which forms a logical, natural-feature boundary for urban development. Service from high-capacity electric power transmission lines can be made available to the Site from the south and, because urban water and roads are either already available to the Boardman Airport or will be constructed to serve a forthcoming data center development to the east, only short extensions will be necessary to reach and serve the Site.

As cities plan to meet land needs associated with population growth and resulting needs for housing, employment, institutional, and open space lands, placement of EDCC sites within or on the edges of existing urban areas would compel cities to "leapfrog" over them to accommodate growth. The resulting development pattern would accelerate sprawl by substantially increasing the distances between older parts of the community and newer development areas forced to locate on the opposite side of an EDCC. Such a development pattern would be detrimental to creating compact and efficient urban communities, by increasing distances for commuting and other circulation and leading to increased costs for public infrastructure construction and maintenance.

The proposed amendment avoids the urban growth leapfrogging problem by putting an appropriate land allocation for EDCC use (responding to data on industry growth and projected demand for EDCC sites within the next 10 years) at a logical perimeter for urban area expansion, where the land allocation will not become interposed between current and potential future urban areas that will benefit from adjacency/proximity.

Materials submitted with this application demonstrate that the proposed MG/LU area is not suitable for farm use and Sixmile Creek forms a natural barrier to further western expansion. The Site's transportation needs can be met by extending the existing paved Boardman Airport Lane west from its current western terminus (the east edge of the rail spur to the Portland General Electric (PGE) Carty Generating Station site), and its utility service needs can be met by a feasible combination of on-site facilities and extension of services at the Boardman Airport and a recently approved data center campus to the southwest of the Airport. The evidence shows that the proposed change will not cause a significant encroachment on productive farmland in the vicinity.

Exceptions to Statewide Planning Goals

The application of the Limited Use Overlay to the Site will implement the County's adoption of "reasons" exceptions to Statewide Planning Goals ("Goals") 3, 11, and 14. Goal 3 addresses Agricultural Lands, Goal 11 addresses Public Facilities and Services, and Goal 14 addresses Urbanization.

This narrative and attached supporting technical reports demonstrate compliance with the applicable Oregon Revised Statutes (ORS) and Administrative Rules (OAR) that apply to goal exceptions, as well as compliance with the applicable Morrow County Zoning Ordinance (MZCO) and Comprehensive Plan policies.

Site Description and Surrounding Land Use

The Site is part of a large holding owned by Threemile Canyon Farms (applicant), but historically and currently, the Site does not support agricultural use other than limited and episodic grazing. As described in detail in the Soils Report (Exhibit 10), the Site has shallow soil depth to bedrock, rock outcroppings, and other characteristics that make commercial farming operations infeasible. The Site is within the Lower Umatilla Basin Groundwater Management Area (LUBGWMA), which was established by DEQ in 1990 because of high levels of nitrate in the groundwater. Future development of the site will be required to comply with DEQ regulations, including nitrate treatment for onsite septic and industrial wastewater systems, to ensure the development does not impact drinking water safety.

Figure II-1 Aerial Image – Project Site

As shown in Figure II-2, the Site's northeastern 331 acres +/- are currently in the Space Age Industrial (SAI) Zone, with the western/southwestern remainder (967 acres +/-) in Exclusive Farm Use (EFU).

Figure II-2 Existing Zoning – Project Site and Vicinity

The Site's eastern boundary is the east edge of the rail spur that extends south to the Carty Generating Station, which is situated within a 150' wide easement within the Site and occupies approximately 34 acres. Immediately east of the SAI-zoned portion of the Site, land in the Airport Light Industrial (ALI) and Airport Industrial (AI) zones surrounds the Boardman Airport. Within these areas, a motor speedway has previously been approved and a photovoltaic solar energy generation project is currently under construction. In 2024, a hyperscale data center was approved in the far southwest corner of the ALI-zoned land (on the north side of Boardman Airport Lane and the east side of the Carty Generating Station rail spur).

South and east of those airport zones, but not contiguous with the SAI-zoned portion of the Site, there is a large area designated SAI that is used for farm operations, including center-pivot irrigation and other associated supportive infrastructure. Multiple center-pivot systems can be seen in Figure II-2 above.

Abutting the Site to the southeast, and south and west across Sixmile Creek Canyon, are additional EFU-zoned lands that are predominantly in irrigated farm use, with multiple center-pivot systems visible in Figure II-2 above.

To the north of Interstate 84, which forms the Site's north boundary, the land area between I-84 and the south bank of the Columbia River is in the General Industrial (MG) zone. Those properties, most of which have riverbank frontage, are not currently developed for industrial use.

Proposed Amendments

The proposal consists of the following specific amendment requests:

1. Amend the Zoning Map by redesignating the easterly 331 acres of the 1,298-acre Site from its current Space Age Industrial (SAI) zoning to General Industrial (MG), as depicted in Figure II-3.
2. Amend the Comprehensive Plan and Zoning Map by redesignating the remaining westerly 967 acres of the 1,298-acre Site from its current Exclusive Farm Use (EFU) zoning to MG and Comprehensive Plan designation from Agriculture to Industrial, as depicted in Figure II-3.
3. Adopt a Limited Use (LU) Overlay Zone applicable to the Site, with the following provisions:
    A. Allowed land uses are limited to:
        I. Data center, including related ancillary improvements and associated infrastructure facilities.
        II. Uses and activities allowed by the EFU zone regulations (i.e., Section 3.010 of the Morrow County Zoning Ordinance and its subsections).
    B. All development and use shall comply with standards of the Airport Safety and Compatibility (ASC) Overlay Zone (i.e., Section 3.092 of the Morrow County Zoning Ordinance and its subsections), and applicable standards of other aviation-related regulatory agencies including the Federal Aviation Administration.
4. Amend the Comprehensive Plan/Zoning Map by redesignating approximately 1,605 acres on another site south of Boardman from its current Comprehensive Plan designation of Industrial to Agriculture and zoning from SAI to EFU, as depicted in Figure II-4 (and referred to throughout this report as the "downzone area").[2]
5. Adopt findings of compliance with standards for "Reasons" exceptions to Goals 3, 11, and 14 as presented in this report, to support the above zoning actions.

[2] Generally, the boundaries of the proposed 1,605-acre "downzone" area correspond to the rectangle formed by the south half of Morrow County Tax Map 04N 24E Section 25 (Tax Lot 120, 04N24E) together with all of 04N 24E Section 36 and 03N 24E Section 01 to the south of it.

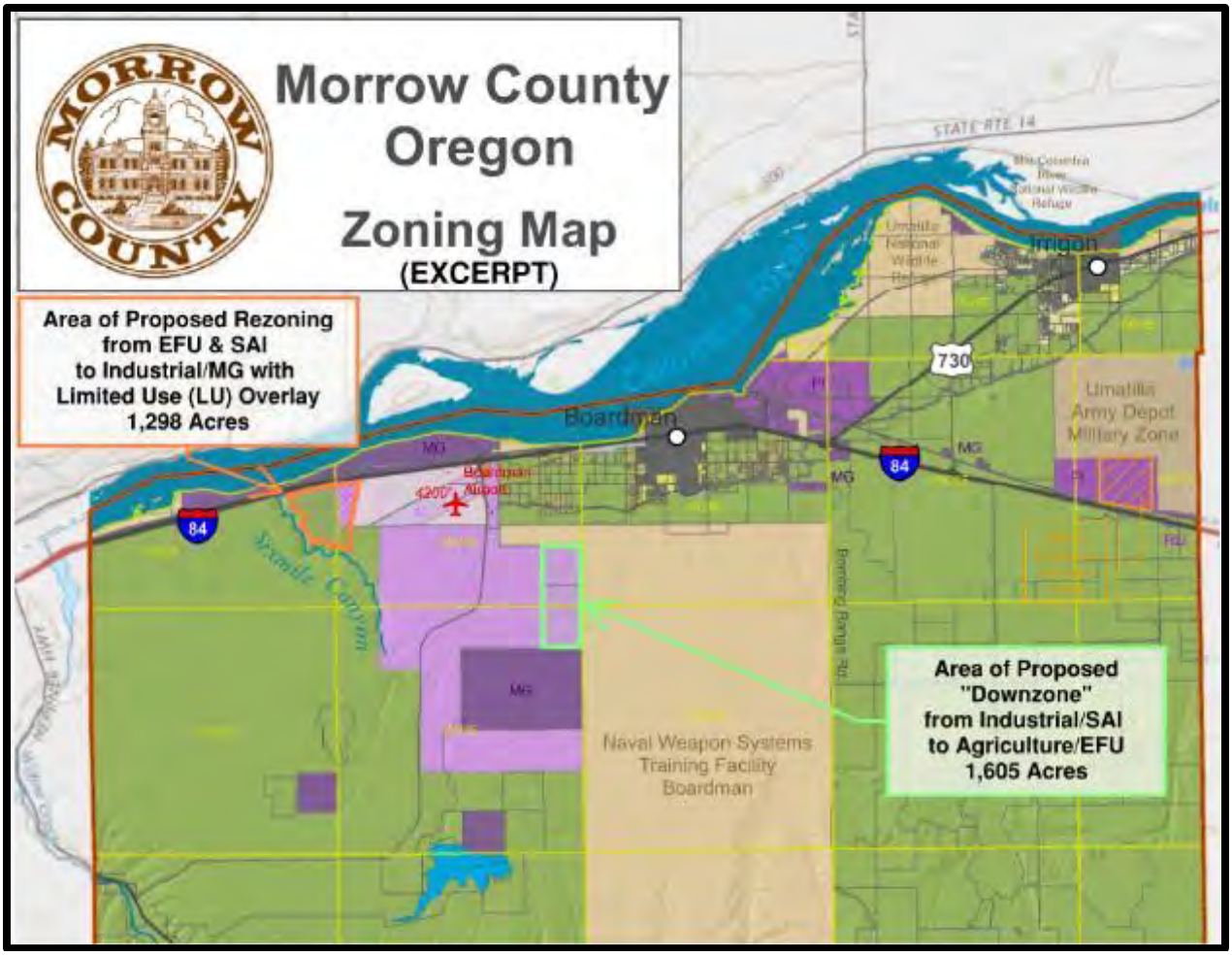


Figure II-3 Project Site and "Downzone" Area Existing and Proposed Zoning Designations on Zoning Map Base

Figure II-4 Locations of Site and Proposed SAI-to-EFU "Downzoning" Designation

Digital Industry Infrastructure Perspective

As our society's use of computerization and digital media communications has grown, it has created increasing demand not only for high-capacity connectivity (such as fiber optic and broadband internet connections to the end users), but increasingly for concentrated data center nodes capable of meeting real-time user needs associated with cloud-based computing, streaming services, and cell phone use. The Infrastructure Masons (iMasons) State of the Digital Infrastructure Industry 2024 Report (Exhibit 18.A) provides this brief historical overview:

> *Like other utilities such as running water and electricity, Digital Infrastructure was a curiosity long before it became a necessity. It grew organically, out of sight, out of mind and on the back of analog technology. Early websites were hosted on single servers in office closets and bedroom corners that were reached through dial-up modems. In the late 1990s and early 2000s, the dotcom bubble fueled construction of internet exchanges.*
>
> *In the 2010s, businesses, governments and institutions began to shift from on-premises server rooms to leasing space in colocation data centers, building enterprise data centers, and moving their workloads to public hyperscale cloud providers. Then, boom. COVID-19 hit. The pandemic-induced lockdowns forced a shift to remote work and online school, boosted content streaming and online gaming, and spurred e-commerce for everything from food to furniture, all of which accelerated growth of Digital Infrastructure. Then, just as the Digital Infrastructure industry started to catch its breath postpandemic, generative AI exited the research lab and turbocharged growth anew.*

Today, Digital Infrastructure is as important to any community as its airport, train station, waterworks, power generation, transmission lines and substations. It enables technologies that people use every day to connect, communicate, work and play. It's moved from a curiosity and nice-to-have to the enabler of the digital age. It's woven into the fabric of modern life, visible and essential. Humanity needs it and wants more. It will continue to grow. [iMasons 2024 Report, Pg. 8]

Generative Artificial Intelligence (AI) Drives Digital Infrastructure Needs

Beginning in the 2020s, Generative AI has emerged from the experimental/laboratory setting to become accessible and increasingly useful for a broad range of business, institutional, governmental, and personal applications. The emergent industry has triggered a corresponding surge in demand for large-scale computation, not only for data storage and retrieval, but perhaps more importantly, for real-time processing for Generative AI products and services in response to user requests. That exponentially increasing demand is reflected in a significant change in data center development trends that have become increasingly apparent since 2020, as noted in the iMasons 2024 Report:

In 2021, there were 7 million data center locations around the world, according to iMasons. Each of these data center locations has a unique street address and ranges in size from hyperscale data centers with more than 1 GW of power capacity to micro edge deployments on street corners that draw less than 10 kW of power. In total, they represented 105 GW of built power capacity in 2021 and an annual electricity consumption of 594 TWh. This electricity consumption represented 2.4% of global electricity draw that year, which was more than the electricity consumed in the entire United Kingdom. The Digital Infrastructure industry is forecast to double and possibly triple in size over the next 10 years with 38 GW of new capacity required for generative AI alone by 2028. Total power consumption by data centers could double by 2026 to more than 1,000 TWh, according to forecasts from the International Energy Agency.

Expansion of the data center sector in the US is expected to account for more than one third of additional demand through 2026….

Digital Infrastructure projects to meet the demand for electronic services represent major capital investments in local communities. For example, in 2022 $3.9 billion of the $4 billion in investment in the data center hub of Prince William County, Virginia was for data center projects, according to the Data Center Coalition (DCC), a voice for the data center industry in the United States.

Digital Infrastructure deployments also represent a meaningful increase in local jobs outside of data centers. For every direct job at a data center in the US, there are six more jobs created, according to the coalition. These jobs are in construction, electrical and mechanical engineering, security, catering, delivery and other fields. Unaccounted for are new jobs in digital services that Digital Infrastructure supports. This multiplier effect of data center jobs holds true around the world, from the established data center markets of North America and Europe to the emerging markets of Africa, Latin America and India. Data centers and the jobs they create are also a steady source of tax revenue. [iMasons 2024 Report, Pg. 9]

Prior to the emergence of AI, construction of data centers focused on available industrially zoned land with sufficient electric power service, fiber optic internet connectivity, and proximity to digital user demand (typically concentrated in urban centers) in order to reduce latency (slow response times due to longer transmission distances for two-way data communications). In the age of AI:

Recent investments, mergers and acquisitions announced by [Data Center] companies have exceeded $100 billion for infrastructure to keep up with demand for cloud services and to train and deploy next-generation AI technologies. Ironically, even with the significant growth of cloud usage

over the last decade, some estimates show that only 20% of enterprises and governments have fully integrated public cloud into their platforms. AI-fueled growth has eclipsed forecasts from the industry's biggest participants and industry analysts. Revised forecasts suggest capacity could double in just a few years, and triple in the next 10 years.

This AI-driven shift in the industry impacts data center design, location and use. Data center campuses dedicated to large language model training, for example, have less latency constraints than data centers dedicated to cloud computing and thus have greater flexibility to locate in regions that are prioritized for abundant clean power rather than access to population centers. [iMasons 2024 Report, Pg. 10]

Growth in Electric Power Demand – at Gigawatt Scale

At many suitable sites, data services capacity growth has been slowed by limited availability of electric power capacity as well as the time necessary to coordinate service providers, construct high-capacity service extensions to sites, and adapt transmission networks to accommodate the added loads. Quoting from the iMasons 2024 Report:

Without power, there is no digital economy. "We need to move the data center to the power instead of moving power to the data center." — iMasons member. [iMasons 2024 Report, Pg. 14]

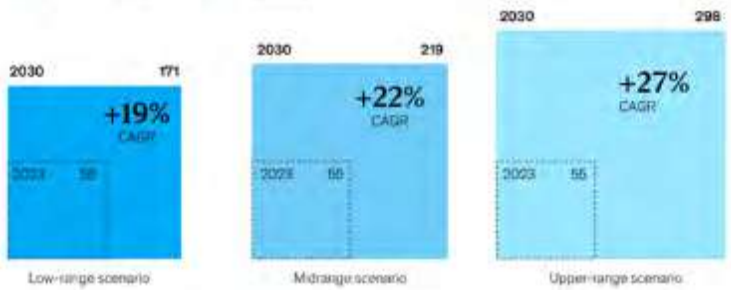
Similarly, the McKinsey & Company's Technology, Media & Telecommunications Practice group published AI power: Expanding data center capacity to meet growing demand in October 2024 (see Exhibit 18.B), making these observations:

Data center demand [measured by power consumption to reflect the number of servers a facility can house] has already soared in response to the role data plays in modern lives. But with the emergence of generative AI (gen AI), demand is set to rise even higher. And that is likely to presage a supply deficit…. Our analysis of current trends suggests that global demand for data center capacity could rise at an annual rate of between 19 and 22 percent from 2023 to 2030 to reach an annual demand of 171 to 219 gigawatts (GW). A less likely yet still possible scenario sees demand rising by 27 percent to reach 298 GW (Exhibit 1). [Estimates are based on an analysis of AI adoption trends; the likely mix of application-specific integrated circuits (ASICs), graphics processing units (GPUs), field-programmable gate arrays (FPGAs), and nonaccelerated central processing units (CPUs) used to run workloads; the mix between training and inference workloads; the emergence of inference optimized chips; efficiencies in model training; and the extent to which higher processing power requires higher power consumption.] This contrasts with the current demand of 60 GW, raising the potential for a significant supply deficit. To avoid a deficit, at least twice the data center capacity built since 2000 would have to be built in less than a quarter of the time.

Exhibit 1

Global demand for data center capacity could more than triple by 2030.

Demand for data center capacity,[1] gigawatts



McKinsey & Company

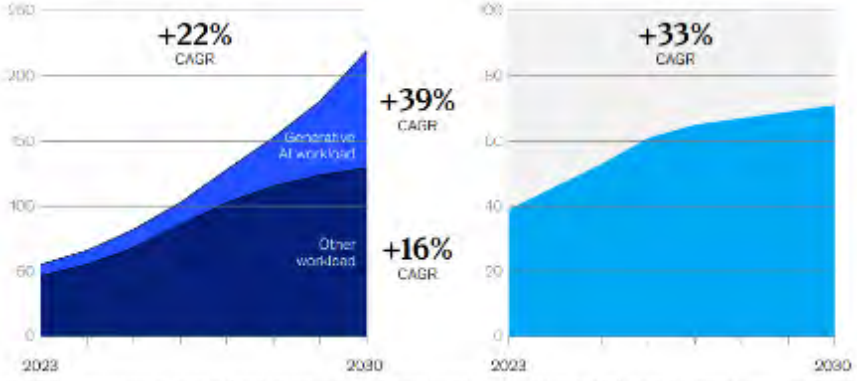
Demand for AI-ready capacity is the main driver of this potential deficit—as it must provide the high computational power and power density required by AI workloads. Our analysis suggests that demand for AI-ready data center capacity will rise at an average rate of 33 percent a year between 2023 and 2030 in a midrange scenario. This means that around 70 percent of total demand for data center capacity will be for data centers equipped to host advanced-AI workloads by 2030. Gen AI, currently the fastest-growing advanced-AI use case, will account for around 40 percent of the total (Exhibit 2).

Exhibit 2

AI is the key driver of growth in demand for data center capacity.

Estimated global data center capacity demand,[1] gigawatts

Demand for advanced-AI capacity, % of total data center capacity demand



McKinsey & Company

Examples of the emerging new class of gigawatt-capacity data center developments have been reported in recent industry publications. Mega $14 billion data center project proposed in metro Phoenix (Phoenix Business Journal; see Exhibit 18.C) reports:

PHOENIX — A Denver developer has plans to build a $14 billion master-planned data center complex across 1,000 acres in metro Phoenix. Between two campuses, the development will span across nearly 30 buildings totaling 5.6 million square feet, one of the largest data center projects

proposed in the Valley by acreage. The development is being spearheaded by Denver-based Tract, a new data center developer embarking on its first project in the Grand Canyon State.

The facility, called Project Range, will also be supported by three Arizona Public Service substations in the Buckeye planning area, according to recent project documents submitted to Maricopa County. The buildings will range from 149,000 square feet to 260,000 square feet each, and will be located north and south of Yuma Road between Jackrabbit Trail and Perryville Road on a county island."

As described below and in the attached Economic Impacts Analysis, (Exhibit 8), several national examples of this type of exascale data center are being planned or built out now.

In the state of Virginia, Data center boom transforms Culpeper (InsideNoVa; see Exhibit 18.D) reports on over 13 million square feet (SF) of built or approved data center buildings on nearly 1,000 acres within Culpeper County and the Town of Culpeper, Virginia, including six built or approved data center buildings within Culpeper County and two within the Town. (One, the Culpeper Technology Campus, is partially in both the county and town.)

For the reported projects, the article "Data center boom transforms Culpeper" provides data for the year approved or constructed, megawatt electrical load/capacity, and acreage. The reported data along with plotted data from examples compiled in the Economic Impact Analysis (Exhibit 8) indicate that the scale of proposed data center projects, in terms of both megawatt load and site acreage, have trended upward substantially since 2020, including a proposal pending approval for a 426-acre, 900 MW facility (represented in the two graphs below as an anticipated 2025 approval).

Figure II-5: Summary Charts from InsideNoVa Article (prepared by Mackenzie)

The Economic Impact Analysis prepared by Johnson Economics (see Exhibit 8, pages 9-10) also lists several examples of exascale data center projects under or nearing construction in the United States:

- The Cumulus Data Center, Berwick, PA: 1,200 acres; ultimate power capacity reaching 960 megawatts.
- The Crusoe Energy Systems project at the Lancium Clean Campus in Abilene, Texas: over 1,000 acres; ultimate power capacity 1.2 gigawatts (1,200 megawatts).
- The Surry Green Energy Center, Surry, Virginia: 641 acres.
- Project Range, Phoenix, Arizona metro area: proposed 1,000 total acres across two DC campuses, with 30 buildings and over 5 million SF; the master-planned project is expected to entail an estimated $14 billion investment.

- The Quantum Loophole project, Maryland: 2,100-acre campus, ultimate power capacity of nearly two gigawatts. The campus will be developed in phases representing up to $30 billion of investment, including environmental mitigation and hundreds of acres of greenspace.
- The Google data center campus in Council Bluffs, Iowa: roughly 1,000 acres with estimated $5.5 billion in investment so far, with another potential $1 billion investment announced.

Numerous published articles, as well as a growing national list of large-campus, high-megawatt electrical capacity Exascale Data Center Campus developments, provide compelling evidence of the recent emergence of a significant inflection point: as the industry evolves to address growing demand for Generative Artificial Intelligence and other computation-based services, a previously unprecedented number of EDCC's has moved through the development permitting process to construction and operational phases. (See Exhibit 18, Data Center Reference Literature.)

More particularly with respect to recent Oregon developments in the data center arena, see the January 31, 2025 Business Oregon article, "The Impacts of Data Processing in Oregon," Exhibit 18.18.F.

Hyperscale Data Center Location Factors

With respect to "hyperscale" data centers, Mackenzie produced a report dated July 9, 2024, to support the City of Hermiston Economic Opportunities Analysis (Technical Memo: Siting Criteria for Hyperscale Data Centers), see Exhibit 18.E). That report observes that "Hermiston's proximity to the Columbia River and major electrical transmission lines makes the area desirable for hyperscale data center campuses. The following sections of this report primarily focus on the siting criteria for the hyperscale category of data center facilities, based on information derived from trade organizations, literature, an end user, and Mackenzie engineering staff." The following list summarizes site criteria from that report:

- **Site and building characteristics:** 100 acres or larger with minimum dimensions to accommodate about 1,000-foot-long data center buildings, associated parking and circulation, utilities, supportive infrastructure, and buffers. Site topography of less than 5%.
- **Location**: Within 30 miles of interstate highway or freight route and reasonable distant from residential and other overnight accommodation facilities due to noises produced by cooling equipment and backup generators.
- **Utilities**:
  - Electricity – 60-240 megawatts (MW) capacity with close proximity to substation and redundancy including emergency backup system for uninterrupted operation.
  - Telecommunications – Fiber Optic "Major Communications" and "Route Diversity" connections.
  - Water Service – high pressure supply with flow capacity of at least 1,000 gallons per day per acre (GPD/Ac.).
  - Sanitary sewer (if used for wastewater or cooling water) – discharge flow capacity 500-1000 GPD/Ac, with the clarification that water and sewer requirements are highly variable based on cooling methods and water reclamation practices and should be reviewed on a case-by-case basis for specific development requirements.
- **Site Security**: Gated access, security lighting, and security systems to ensure data remains secure and systems stay online.
- **Natural Hazards**: Due to need to be in continuous operation, sites must have minimal seismic, flood, or other natural hazard risk exposure.

Similar site criteria have been acknowledged by LUBA in part. In 2019-2020, the Port of Morrow sought to rezone an 89.6-acre site in Morrow County from agricultural land to industrial in connection with a sale

of property for hyperscale data center use. Specifically, the Port of Morrow filed an application for a reasons exception to Goals 3, 11, and 14 to change the property's comprehensive plan/zoning designation from EFU to Port Industrial (PI) with an LU Overlay in order to develop an industrial use on the property. The Port later identified that the industrial use would be a data center. The Board of Commissioners approved the application, and 1000 Friends of Oregon appealed.

LUBA held that the locational advantage analysis for hyperscale data centers can consider criteria such as site size requirements, proximity to transmission lines, and ability to discharge water and that it was not necessary to analyze specific criteria in alternative areas, where alternative areas were not rejected based on those specific criteria.[3]

Exascale Data Center Campus (EDCC) Location Factors

Exascale Data Center Campuses, while similar to hyperscale data centers, have a distinct set of siting criteria. The advent of Generative AI forms a *strategic inflection point*[4] with significant ramifications for land use policy. In planning sites for facilities capable of providing the computational power to meet emerging AI industry needs, public planning considerations–such as provision of utility services and minimizing or mitigating off-site visual, acoustic, traffic and other impacts–necessarily intersect with critically important industry economic factors such as scale and ability to consistently achieve operating efficiencies.

Particularly for exascale facilities to support Generative AI applications and services, those planning factors combine to form a need (and opportunities) for substantially larger campus sites (i.e., Exascale Data Center Campuses) with a different set of fundamental characteristics than hyperscale data centers:

Emerging/Unique Exascale Data Center Campus Required Location Factors

- **Site Area:** Campus area exceeding 1,000 acres, to accommodate multiple buildings, power substations, and to concentrate various accessory/supporting facilities and functions for efficiency.
- **Electricity:** Proximity to and the ability to extend electric transmission lines with one Gigawatt (GW, equal to 1,000 MW) or greater service capacity at the site, with on-site substation(s) and redundancy including large-scale uninterruptible emergency backup systems for continuous operation. This is a roughly 4 times to 16 times the electric power requirements assumed in the Hermiston EOA Technical Memo for Hyperscale Data Centers on approximately 100+ acre sites.
- **Telecommunications:** Fiber Optic "Major Communications" and "Route Diversity" connections with higher capacities corresponding to the higher volume of data traffic.
- **Water Service:** High pressure supply with flow capacity of at least 50-200 Gallons per Megawatt Hour (MWh); while the ratio of water supply to MWh capacity is similar, the substantially larger scale of operations requires facilities capable of accommodating the correspondingly larger total service demand.

[3] *1000 Friends vs. Morrow County*, 81 Or LUBA 508 (2020)

[4] The term, popularized in the 1990s by former CEO of Intel Corporation Andy Grove, refers to a major change in the competitive environment that requires a fundamental change in business strategy. Response outcomes (success or failure) depend on strategic decisions made by executive teams.

- **Wastewater (equipment cooling):** Discharge flow capacity 500-1,000 GPD/Ac.; while the ratio of water discharge to MWh capacity is similar to hyperscale data centers, the substantially larger scale of operations requires facilities capable of handling a correspondingly larger total discharge.
- Note: Water supply and wastewater disposal system requirements are highly variable based on cooling methods and water reclamation practices and should be reviewed on a case-by-case basis for specific development requirements.

Similar Required Location Factors for Exascale Data Center Campus Sites

EDCCs have some similar required locational requirements as hyperscale data centers:

- **Environmental Quality:** Site not subject to surrounding area environmental quality issues (e.g., sources of vibration, air quality impacts, or other factors).
- **Site Security:** Gated access, security lighting, and security systems to ensure data remains secure and systems stay online.

Similar Competitive Location Factors for Exascale Data Center Campus Sites

EDCCs have some similar competitive location factors as hyperscale data centers:

- **Site Slope:** less than 5%.
- **Transportation:** within 30 miles of Interstate or Freight Route.
- **Natural Gas:** minimum 4" service line.
- **Natural Hazards:** Outside Environmental Hazard Areas (FEMA Floodplain, landslide/soil liquefaction, etc.).
- **Environmental/Resource Permitting:** Not subject to Environmental or Resource permitting (hazardous materials cleanup, wetlands/stream impacts, Endangered Species Act Threatened/Protected species, etc.).
- **Site Separation:** Isolation or buffering from sensitive land uses including but not limited to residential (e.g., to mitigate potential noise/air quality impacts of occasional diesel backup generator operation and other activities).

Planning Considerations for EDCCs

When these factors are considered together, not only the feasibility but also the preferability of planning one or more sites at suitable location(s) represent sound land use policy for Morrow County and is consistent with adopted County land use policies as reflected in Morrow County's Comprehensive Plan, Economic Element at pages 11-13:

- Locating an Exascale Data Center Campus (EDCC) containing 1,298 acres in proximity to high-capacity power transmission lines will significantly minimize the required extension of new power transmission lines. By contrast, achieving comparable computation capacity at multiple distributed smaller sites would require extending high-capacity power transmission lines in one or more new corridors to provide the necessary electric service. In addition to being costly to construct, multiple extensions are more complex to plan, permit, and integrate into the electric service delivery system, and would have a significantly more extensive visual impact on the surrounding community.
- Locating an EDCC far from residential areas and other sensitive receptor sites reduces potential for undesirable potential off-site impacts. Most such effects are sporadic and temporary, associated primarily with occasional operation of backup electric power generation systems that

produce equipment noise and exhaust, such as from diesel generators. By contrast, multiple distributed sites under similar conditions (i.e., switching to backup power during a regional power outage) would cause such impacts at multiple locations, over a more dispersed and generally larger area, and potentially affecting a larger number of residents. Importantly, in either scenario, air quality, noise and other impacts would be subject to all applicable state and local compliance regulations; the point is that while any such impacts would be relatively minor and legally permitted, they would be perceived differently by residents of the area due to relative proximity– and concentrating such impacts at a location distant from population concentrations is preferable.

- Water service for an EDCC can be achieved by the extension of existing urban services on ALI-zoned lands to the east of the Site, to provide a water system extension designed to handle flows to the fully-developed facility under full operation. Stormwater management can be handled by ponds. By contrast, serving multiple distributed sites would likely require extension and/or upgrading of existing public water and storm drain system infrastructure at multiple locations within the community, which would be more costly to construct, cause more construction impacts on the community, and would have higher associated ongoing operation and maintenance costs.
- Although the traffic associated with data center operations tends to be quite low, the concentration afforded by an EDCC enables technical support staff to perform maintenance, repairs, upgrades and other services entirely within the site. By contrast, distributed sites would require multiple trips on the public roads to accomplish the same tasks and functions, further impacting traffic operations at various locations. In addition to the added vehicular trips, the associated transit times for staff to access multiple sites would slow response times and produce comparative inefficiencies.

III. NARRATIVE AND COMPLIANCE

The following narrative describes compliance with the standards of the Oregon Revised Statutes (ORS), Oregon Administrate Rules (OAR), Morrow County Comprehensive Plan, and Morrow County Zoning Ordinance (MCZO) which apply to the proposed Comprehensive Plan and Zoning Map Amendments and application of the Limited Use Overlay to the Site. The subsequent Section provides findings of compliance for the proposed companion Plan Map Amendment/Zone Change of the 1,605-acre "downzoning" area from Industrial/Space Age Industrial (SAI) to Agriculture/Exclusive Farm Use (EFU).

Findings for Amendments Applicable to the Site

Compliance with Criteria for Goal Exceptions

Because the proposal involves rezoning rural resource lands for industrial use, exceptions from the applicable Statewide Planning Goals are required. There are three types of goal exceptions: (1) for land already physically developed; (2) for land irrevocably committed to uses not allowed by the applicable goal; and (3) when there are sufficient reasons to not apply the goal (ORS 197.732). This proposal requests the County to adopt findings under criterion (3), so-called "Reasons" exceptions for the Site.

ORS 197.732(2)(c) sets forth the requirements for a local government to adopt a reasons exception:

(A) Reasons justify why the state policy embodied in the applicable goals should not apply;

(B) Areas that do not require a new exception cannot reasonably accommodate the use;

(C) The long term environmental, economic, social and energy consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site; and

(D) The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts.

To rezone SAI and EFU land to permit data centers supported by ancillary improvements and associated infrastructure facilities, this narrative addresses "Reasons" exceptions to Goal 3 (preserving agricultural land for farm use); Goal 11 (prohibiting extension of urban sewer to serve industrial uses on rural lands); and Goal 14 (directing urban uses to be located inside urban growth boundaries) for the entire Site.[5] In addition to state laws and regulations, this narrative addresses applicable Morrow County Comprehensive Plan policies, implementing code criteria relating to planned zone map amendments, and the MZCO requirement to enact a Limited Use Overlay to implement the rules governing a "Reasons" exception to statewide planning goals.

OAR 660, Division 4 – Interpretation of Goal 2 Exception Process

660-004-0018 – Planning and Zoning for Exception Areas
(4) "Reasons" Exceptions:

[5] Although the SAI-zoned portion of the Site may not require new goal exceptions to accommodate new or additional allowed industrial uses on a qualifying site (see ORS 197.713), the lack of clear interpretative guidance or case law on the issue requires the applicant to treat the entire Site as whole and seeks goal exceptions for both the EFU and SAI zoned portions.

(a) When a local government takes an exception under the "Reasons" section of ORS 197.732(1)(c) and OAR 660-004-0020 through 660-004-0022, plan and zone designations must limit the uses, density, public facilities and services, and activities to only those that are justified in the exception.

Response: This application seeks "reasons" exceptions to Statewide Planning Goals 3, 11, and 14 to rezone the subject site from EFU and SAI to MG to accommodate data centers with ancillary improvements and associated infrastructure facilities. As explained below, OAR 660, Division 4 standards and criteria are met for the requested exceptions to Goal 3. With respect to Goals 11 and 14, OAR 660-014-0040(2) supplies the criteria for a reasons exception involving new urban development on undeveloped rural lands (per *VinCEP v. Yamhill Cnty.*, 215 Or. App. 414, 422-23, 171 P.3d 368, 372 (2007)). Morrow County's Limited Use Overlay Zone (LU) will be applied to the Site to limit the uses of the site which require a Goal 11 or Goal 14 exception to only those that are justified in the exception (i.e., data centers and associated infrastructure) and farm uses (which do not require an exception), as set forth in MCZO 3.110. This standard is met.

660-004-0020 – Goal 2, Part II(c), Exception Requirements

(1) If a jurisdiction determines there are reasons consistent with OAR 660-004-0022 to use resource lands for uses not allowed by the applicable Goal or to allow public facilities or services not allowed by the applicable Goal, the justification shall be set forth in the comprehensive plan as an exception.

Response: This narrative defines the reasons which justify the proposed goal exceptions in the following response.[6] The text of the comprehensive plan will be amended to incorporate the justification for the proposed exceptions to Goals 3, 11, and 14. This standard is met.

(2) The four standards in Goal 2 Part II(c) required to be addressed when taking an exception to a goal are described in subsections (a) through (d) of this section, including general requirements applicable to each of the factors:

(a) "Reasons justify why the state policy embodied in the applicable goals should not apply." The exception shall set forth the facts and assumptions used as the basis for determining that a state policy embodied in a goal should not apply to specific properties or situations, including the amount of land for the use being planned and why the use requires a location on resource land;

Response: The applicant is requesting goal exceptions to allow exascale data center development on lands currently zoned EFU and SAI. Data centers are considered an urban-scale industrial use and require the extension of public facilities and services (water) to the site, as well as transportation facilities. As such, the applicant seeks an exception to policies in Goal 3 (Agricultural Land) and Goal 11 (Public Facilities and Services).

As set forth below, these reasons justify the allowance of Exascale Data Center Campus development on this Site, which are based on the essential siting characteristics defined in the introductory sections of this report:

1. Proximity to and ability to extend existing, high-capacity electrical transmission lines.
2. Proximity to existing and/or forthcoming water infrastructure near Boardman Airport (Port of Morrow).

[6] Note that the criteria in OAR 660-004-0022(1) are not applicable to the establishment of new urban development on undeveloped rural lands; the application, instead, is subject to OAR 660-014-0040 for purposes of an exception to Goals 11 and 14. And OAR 660-004-0020 applies for purpose of an exception to Goal 3.

3. Proximity to existing and/or forthcoming long-haul fiber-optic routes (multiple major internet service providers).
4. Proximity to an interstate highway (I-84).

As described in the attached Economic Impact Analysis, Exhibit 8, development of an Exascale Data Center Campus at the proposed exceptions Site would benefit Morrow County's economy, including generating significant ongoing property tax revenue streams to the local school district and other agencies, and causing minimal or no loss of productive resource lands. The Site's 1,298 acres represent only a small part – about 1.5% – of the applicant's combined land holdings, which exceed 85,000 acres in Morrow County, over 40,000 of which are irrigated and under active farm use. Approximately 967 acres of the site are zoned EFU; the remaining 331 acres are zoned SAI, and are therefore already available for some types of industrial development (however, the SAI zone does not allow data centers).

The exceptions Site is isolated by natural and physical barriers (Sixmile Canyon, BPA transmission lines, PGE rail spur extending south to the Carty Generating Station). As described in greater detail in the attached Soils Report, Exhibit 10, the site is underlain by shallow basalt flows and contains a complex of rock outcrops, subtle mounds, and concave intermound areas, which severely limit the site's potential for crop production. The Soils Report supports the conclusion that the site does not contain soils that are considered "high value farmland" and has little potential for crop production. Based on these factors, the property owner has not and does not intend to use the site for productive agricultural uses. Furthermore, while this proposal involves rezoning 967 acres from EFU to MG, it also involves rezoning a greater area of land (1,605 acres) currently zoned SAI to EFU (see map, Exhibit 5). Approximately 775 acres of the downzone area is improved with center-pivot irrigation equipment and is actively used for crop production, approximately 680 acres has a third party stewardship agreement, and the remaining 150 acres consists of areas between cultivated fields, along the east perimeter and access road. Therefore, the proposed goal exceptions would not result in a loss of productive resource land.

(b) "Areas that do not require a new exception cannot reasonably accommodate the use". The exception must meet the following requirements:

(A) The exception shall indicate on a map or otherwise describe the location of possible alternative areas considered for the use that do not require a new exception. The area for which the exception is taken shall be identified;

Response: Exhibit 7 contains a series of maps and narrative which identify the Goal exceptions site and potential alternative areas which do not require a new goal exception. The map series illustrates and describes the process used to evaluate the feasibility of possible alternative areas based on essential siting criteria for Exascale Data Center Campuses. This standard is met.

(B) To show why the particular site is justified, it is necessary to discuss why other areas that do not require a new exception cannot reasonably accommodate the proposed use. Economic factors may be considered along with other relevant factors in determining that the use cannot reasonably be accommodated in other areas. Under this test the following questions shall be addressed:

Response: In determining whether alternative sites can "reasonably accommodate" the proposal under OAR 660, Division 4, the applicant must evaluate the alternative sites

within (i) existing exception areas, (ii) irrevocably committed resource lands, and (iii) urban growth boundaries.[7]

Thus, this standard is a holistic examination of whether, considering all essential site characteristics and economic factors, other sites could "reasonably accommodate" the proposed use. It considers all relevant circumstances and has been interpreted to mean that the alternative sites must be able to support the proposed use without requiring significant changes or additional discretionary approvals. For instance, in *Columbia Riverkeeper v. Columbia County*, 70 Or LUBA 171 (2014), the Oregon Land Use Board of Appeals (LUBA) emphasized that the alternatives analysis must consider whether the proposed use can be accommodated without requiring a new exception. Similarly, in *1000 Friends vs. Morrow County*, 81 Or LUBA 508 (2020), LUBA held that it was permissible to exclude sites that require an exception. Further, alternative sites that are already developed or committed to development may be excluded. When an applicant identifies significant cost or timing barriers to developing on sites that are otherwise under contract for purchase/sale, contain wetlands, or that require assemblages, those can constitute "economic factors" sufficient to eliminate alternative sites. See *1000 Friends vs. Morrow County*, 81 Or LUBA 508 (2020).

The analysis below demonstrates that this standard is met, considering economic factors and essential site characteristics for an EDCC. The Site is justified for this specific proposed use and there are no alternative sites in the vicinity that can "reasonably accommodate" the proposed use.

(i) Can the proposed use be reasonably accommodated on nonresource land that would not require an exception, including increasing the density of uses on nonresource land? If not, why not?

Response: Existing exception areas that would not require a new goal exception are very limited in the vicinity[8] of the Site. OAR 660-004-0018(4)(a) states that when an exception is taken to a statewide planning goal for a particular reason to meet a specific need, the uses allowed must be limited to uses that were justified in the exception. In other words, adding a new use to prior exception land that was not identified for the current proposed use requires a new goal exception.

[7] An applicant may identify essential siting criteria to narrow the field of alternatives. *VinCEP v.Yamhill County*, 55 Or LUBA 433 (2007), *affirmed in part, reversed and remanded in part*, 215 Or App 414, 171 P3d 368 (2007). Alternative sites that do not meet the proposal's essential site criteria can be eliminated. See, *e.g., Devin Oil Co. Inc. v. Morrow County,* 62 Or. LUBA 247, *affirmed* 241 Or App 351, 250 P3d 38 (2010), *rev. den.,* 350 Or 408, 256 P3d 121 (2011) (fact that two identified sites limited large truck access was alone sufficient to conclude that these alternative sites could not reasonably accommodate the proposed travel center); *see also Columbia Riverkeeper v. Columbia County*, 78 Or LUBA 547 (2018) ("*Riverkeeper II*"), *aff'd* 297 Or App 628, 443 P3d 1184, *rev den*, 365 Or 721 (2019) (in assessing whether there were other sites that did not require an exception that could reasonably accommodate the use, it was permissible to limit consideration to other deepwater port sites in Oregon). In addition, the rule specifies that "economic factors may be considered" in evaluating whether alternative sites are ones that could reasonably accommodate a particular use. OAR 660-004-0020(2)(b); *see also Columbia Riverkeeper v. Columbia Cnty.*, 297 Or. App. 628, 443 P.3d 1184 (2019) (because coastal ports were not "economically comparable" to Port Westward given their distance, "no need to conduct further analysis" on those sites).

[8] The Alternative Areas Analysis (Exhibit 7) study area encompasses northern Morrow, Gilliam, and Umatilla counties.

Initially, as described above, data centers are generally a newer type of development that began in the 2010s. Thus, many of the prior exception lands, which were adopted long before 2010, would not have contemplated "data centers" as a permitted use, nor would the reasons that supported those exceptions have covered such a use. Therefore, "data centers" would necessarily be considered a new permitted use and require a new goal exception.

Indeed, the Space Age Industrial zone near the Site does not permit data centers, and it is not possible to rely on the purpose or reasoning used to justify the previous goal exception for the Space Age Industrial zone. That purpose was to allow for antennae and space vehicle testing, including the development of transatmospheric planes and remote pilotless vehicles and electronics, laser and microwave research. As further background, in 1986, Morrow County, at the request of Boeing, rezoned EFU land to MG and simultaneously adopted a special Limited Use overlay zone applying to that land, limiting permitted uses to "antenna test range, or for electronics, aerospace, aircraft or space vehicle research and/or development." In 1987, Morrow County adopted the new SAI zone (including an associated goal exception) for approximately 14,000 acres of previously zoned EFU land—the basis for this exception was the same as the initial exception which led to the Limited Use overlay. Review of the specific justification offered by the County in support of the 1986 "Reasons" exception indicates that the need was limited to research and development efforts relating to space vehicles. This is consistent also with testimony from Boeing officials in the hearings in support of adopting the SAI zone. Thus, "data center" use would be a new use in the SAI zone and require a new goal exception.

General Industrial-zoned areas outside urban growth boundaries (UGBs) are likewise excluded if they do not permit data centers, because permitting data centers in such zones would necessarily require additional discretionary approvals (including a goal exception), making these sites categorically unavailable for immediate development. As noted above, courts and LUBA have held that sites requiring a goal exception may be excluded from consideration. There are several General Industrial blocks of land due south of the Site in Morrow County; however, it appears from the 1986 ordinance[9] establishing this exception area that data centers were not contemplated as permitted uses. The 1986 ordinance approved an upzone from EFU to MG to allow "antennae test range uses" for 3,800 acres. Similarly, in unincorporated Gilliam County, there are no zones that currently permit data centers. Therefore, these areas were excluded because the process for establishing data centers as a permitted use is uncertain and would likely involve a new goal exception, significant delays, legal challenges, and increased costs, thereby undermining any argument that these sites could "reasonably accommodate" data center use.

The Umatilla Army Depot site, which is partially in Morrow County and partially in Umatilla County, is also not a reasonably available alternative site because it is the subject of litigation, which seeks to prohibit the owner from selling the site.

[9] Ordinance No. MC-C-4-86, https://www.co.morrow.or.us/sites/default/files/fileattachments/planning/page/16596/mc-c-4-86.pdf

In particular, the Columbia Development Authority (CDA) voted on March 26, 2024 to approve the transfer of real property formerly the site of the Umatilla Army Chemical Depot to the Port of Morrow and the Port of Umatilla (collectively, the "Ports"). The CDA vote would transfer 1,900 acres of industrial property and 634 acres of exclusive farm use property to the Port of Morrow, 2,535 industrial acres to the Port of Umatilla, and 4,019 acres to Confederated Tribes of the Umatilla Indian Reservation (CTUIR) for wildlife habitat. Following that vote, Umatilla County filed an action in the Circuit Court of the County of Umatilla (Case No. 24CV31777), which includes a motion for preliminary injunction to enjoin the CDA (and Morrow County and the Ports) from taking any further action to convey any portion of the property to the Ports (i.e., the industrially-zoned portions). The motion was initially scheduled for hearing in October 2023, but the hearing has been rescheduled to January 2025. At the January hearing, however, the judge recused himself, the hearing was vacated, and the case has not yet been reassigned nor the hearing rescheduled. This litigation introduces significant legal uncertainty, the outcome of which is uncertain in substance and timing. Thus, the Site cannot "reasonably accommodate" data center development, while it remains the subject of active litigation which seeks to prohibit sale of industrial property.

North of the Site, on the opposite (north) side of Interstate 84, there are multiple parcels of land in the Morrow County General Industrial (MG) zone; this area is referred to as Area MC-1 in the Exhibit 7, Alternative Areas Analysis. A small amount of the MC-1 area is located in a strip between the Interstate and the railroad right-of-way, but most of it is situated north of the railroad corridor, having its north boundary formed by the Columbia River. The ownership pattern consists of several large parcels owned by the Port of Morrow, separated by intervening large parcels owned by the applicant, Threemile Canyon Farms, LLC. Threemile Canyon Farms has provided a letter indicating that its properties within this sub-area are not available for purchase or lease, for any purpose (see Appendix C in Exhibit 7). Because it is not possible to assemble a contiguous parcel with sufficient area for an exascale data center campus (1,000 acres or more) without including some of the Threemile Canyon Farms parcels, the MC-1 Area cannot reasonably accommodate exascale data center campus use.

(ii) Can the proposed use be reasonably accommodated on resource land that is already irrevocably committed to nonresource uses not allowed by the applicable Goal, including resource land in existing unincorporated communities, or by increasing the density of uses on committed lands? If not, why not?

Response: Resource land within 10 miles of existing high-capacity electrical transmission lines was investigated as part of the Alternative Areas Analysis (Exhibit 7). As established in the introduction to this report, proximity to existing power supply infrastructure is an essential siting requirement for Exascale Data Center Campuses, so areas that exceed this distance requirement were not considered as potential reasonable alternatives for such development. Within the areas that were investigated, no resource land that is already irrevocably committed to nonresource uses was identified; therefore, the proposed use cannot be reasonably accommodated on such land.

(iii) Can the proposed use be reasonably accommodated inside an urban growth boundary? If not, why not?

Response: Possible alternative areas for Exascale Data Center Campus development within UGBs are identified in the attached Alternative Areas Analysis (Exhibit 7). The study area for the analysis includes the following UGB areas:

1. City of Arlington
2. City of Boardman
3. City of Ione
4. City of Irrigon
5. City of Umatilla
6. City of Hermiston
7. City of Stanfield
8. City of Echo

The analysis identifies which zones allow data center uses and contains maps of all land in those zones. This land was then evaluated to determine whether there were sites that met the essential siting criteria for an Exascale Data Center Campus. The analysis concludes that no reasonable alternative areas are available because of constraints such as existing development, entitled development, insufficient contiguous development area, or distance from existing high-capacity transmission lines. Therefore, the proposed data centers use cannot be reasonably accommodated within an urban growth boundary.

(iv) Can the proposed use be reasonably accommodated without the provision of a proposed public facility or service? If not, why not?

Response: The essential siting characteristics for Exascale Data Center Campuses are described in the introductory sections to this narrative. Based on the essential siting characteristics, the provision of public facilities and services is necessary for the following reasons:

1. Proximity to existing high-capacity electrical transmission lines (<10 miles). This is required because the equipment used in an Exascale Data Center Campus generates demand for 250 megawatts to one gigawatt or more and requires one or more dedicated substations. Distribution lines would not provide adequate power supply. Possible alternative areas greater than 10 miles from existing high-capacity transmission line would not be reasonable based on the time, cost, and regulatory restrictions (such as Energy Facility Siting Council review) associated with extending new infrastructure to the site. The applicant has obtained a Service Provider Letter from the Pacific Power to provide the required electrical supply to the proposed exceptions site (Exhibit 17.B). Service provider letters stating that "they have the capacity to provide service to the property is substantial evidence upon which a reasonable person would rely to conclude that the property can be served." See *1000 Friends vs. Morrow County*, 81 Or LUBA 508 (2020).
2. Water supply of approximately 1,000 gallons/day per developed acre of land. This is required to cool the equipment used in an exascale data center campus. Groundwater resources within the study area of possible

alternative sites may be restricted and/or may not provide adequate water supply, so the proposal would very likely require public water infrastructure. The applicant will obtain a Service Provider Letter from the Port of Morrow to provide the required water supply to the proposed exceptions site (Exhibit 17.A). Service provider letters stating that "they have the capacity to provide service to the property is substantial evidence upon which a reasonable person would rely to conclude that the property can be served." See *1000 Friends vs. Morrow County*, 81 Or LUBA 508 (2020).

3. Sewage Disposal Facilities. This is required to provide for employee restroom facilities. Sewage disposal services will be provided by on-site septic disposal systems, which are subject to review and approval of Water Pollution Control Facilities (WPCF) permits issued by the Oregon Department of Environmental Quality pursuant to ORS 468B.050. WPCF permits issued by ODEQ have limits and conditions that are intended to be protective of ground and surface waters, as well as the environment and public health including potential nitrate treatment requirements. It is anticipated that such on-site facilities may be replaced via connection to sanitary sewer service if and when such off-site services are made available to the site. The Site is within the Lower Umatilla Basin Groundwater Management Area, designated by DEQ in 1990 because of high levels of nitrate in the groundwater. Compliance with DEQ regulations, including treating wastewater for nitrate removal, ensures the proposal will not have negative impacts on groundwater quality.
4. Industrial Wastewater Disposal. This is required to accommodate the discharge of cooling water. Approximately 15,000,000 gallons of industrial wastewater (IWW) will be generated from each data center's non-contact cooling process annually, which would be treated onsite via conveyance in subsurface pipes to onsite lined IWW evaporation ponds, sized and located to store and fully evaporate the non-contact cooling water, until such time infrastructure for treatment and disposal of IWW is extended to the Site by the Port of Morrow. There would be no anticipated discharges from the IWW ponds on the Site, and the ponds would be subject to a 2501 Water Pollution Control Facility General Permit issued by the Oregon Department of Environmental Quality.
5. Proximity to an interstate highway (<30 miles) and access to public roads. This is required to provide reasonable access for freight traffic, employees, and service providers. The subject site is isolated from any nearby population centers, so a reasonable travel distance to an interstate highway and access to public roads connecting to the site are required.

Based on the factors described above, the proposed use cannot be reasonably accommodated without the provision of the listed public facilities and services. This standard is met.

(C) The "alternative areas" standard in paragraph B may be met by a broad review of similar types of areas rather than a review of specific alternative sites. Initially, a local government adopting an exception need assess only whether those similar types of areas in the vicinity could not reasonably accommodate the proposed

use. Site specific comparisons are not required of a local government taking an exception unless another party to the local proceeding describes specific sites that can more reasonably accommodate the proposed use. A detailed evaluation of specific alternative sites is thus not required unless such sites are specifically described, with facts to support the assertion that the sites are more reasonable, by another party during the local exceptions proceeding.

Response: The attached Alternative Areas Analysis (Exhibit 7) evaluates possible alternative areas for Exascale Data Center Campus development within Morrow County, Gilliam County, and Umatilla County.[10] The first step of this analysis was to identify which nonresource zones in the study area allow data center uses.[11] Then, land in those zones was evaluated against the essential siting criteria for Exascale Data Center Campus development. Areas not within 10 miles of existing high-capacity electrical transmission lines were eliminated first, followed by areas without adequate developable land due to existing or entitled development, or lot size (including consideration of possible lot aggregations). Remaining areas were further investigated to determine the presence of flood and geologic hazards, slopes, sensitive natural resources, and lot shape and configuration, to evaluate the feasibility of developing an Exascale Data Center Campus with multiple 200,000-250,000 SF buildings.

This Alternative Areas Analysis offers a technical evaluation of the Alternative Areas evaluated in support of the proposed comprehensive plan map amendments, zoning map amendments and exceptions to Goals 3 and 14. This evaluation demonstrates that other sites that do not require a new exception cannot reasonably accommodate the proposed uses, as required by administrative rule. Therefore, none of the Alternative Areas would preclude the Site from its proposed Goal 3 and 14 Exceptions.

Based on the process outlined in this response, the Alternative Areas Analysis report and maps satisfy the applicant's requirements under the "alternative areas" standard in OAR 660-004-0020(2)(b)(B).

(c) *"The long-term environmental, economic, social and energy consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site." The exception shall describe: the characteristics of each alternative area considered by the jurisdiction in which an exception might be taken, the typical advantages and disadvantages of using the area for a use not allowed by the Goal, and the typical positive and negative consequences resulting from the use at the proposed site with measures designed to reduce adverse impacts. A detailed evaluation of specific alternative sites is not required unless such sites are specifically described with facts to support the assertion that the sites have significantly fewer adverse impacts during the local exceptions proceeding. The exception shall include the reasons why the consequences of the use at the chosen site are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed site. Such reasons*

[10] The geographic extents of the Alternative Areas Analysis are based on an interpretation made by the Oregon Court of Appeals: "The use of the word 'vicinity' suggests that a local government may, consistent with the rule, limit its consideration of alternative sites to those that are near the proposed exceptions area." Columbia Riverkeeper v. Columbia County, 297 Or. App. 628, 443 P.3d 1184 (2019).

[11] Other zones were not included because new goal exceptions would be required.

shall include but are not limited to a description of: the facts used to determine which resource land is least productive, the ability to sustain resource uses near the proposed use, and the long-term economic impact on the general area caused by irreversible removal of the land from the resource base. Other possible impacts to be addressed include the effects of the proposed use on the water table, on the costs of improving roads and on the costs to special service districts;

Response: The "ESEE standard only require[s] the county to complete a detailed ESEE evaluation of specific alternative sites if the sites were 'described with facts to support the assertion that the sites have significantly fewer adverse impacts during the local exceptions proceeding.'"[12] A local government may choose the preferred alternative as long as the environmental, social, economic and energy consequences are not "significantly more adverse" than would typically result from using other resource lands for the proposed use. A local government is not required to choose the alternative that is "least disruptive to resource land." [13]

The proposed goal exceptions Site is appropriate for Exascale Data Center Campus development and would result in significantly fewer adverse environmental, economic, social and energy (EESE) impacts compared with other areas requiring new exceptions.[14] A comparison of these impacts is described below. When comparing impacts to alternative areas, it is important to consider the EESE benefits of placing data centers on a single large site as opposed to multiple dispersed sites, i.e., an Exascale Data Center Campus is a more efficient use of land, is more efficient to construct, provides opportunities for operational efficiencies due to the associated economies of scale, and isolates possible negative off-site impacts to just one area. The Site benefits from close proximity to existing high-capacity electrical transmission lines (e.g., there are existing transmission lines to the south of the property near the Carty Reservoir and planned lines to the Site's eastern boundary), as well as water supply and existing transportation facilities near the Boardman Airport and an approved data center development to the east, which means impacts associated with extending services to the site would be minimal in comparison to other areas.

Environmental

Environmental impacts to the subject site are not significant because there are no inventoried Goal 5 resources or natural resource protection overlay zones. Data center development may require wetland removal/fill permit and mitigation; however, the state policies applicable to this process ensure that possible adverse impacts will be minimized. Similarly, state and/or federal permits will be required for air quality to accommodate diesel backup generators, and erosion and stormwater control associated with site preparation and construction.

Economic

Economic impacts are addressed in greater detail in the Economic Impacts Analysis (see Exhibit 8). Impacts associated with Exascale Data Center Campus development on the subject site are very positive compared with other areas that would require new exceptions. The subject site is predominantly zoned for farm use but is not irrigated and has minimal potential for crop production because of its soil type, topography, rock outcrops, and shallow bedrock (see Soils

[12] *1000 Friends vs. Morrow County*, 81 Or LUBA 508 (quoting OAR 660-004-0020(2)(c))
[13] *1000 Friends of Oregon v. Yamhill County*, 52 Or LUBA 418 (2006).
[14] Other areas within the bounds of the Alternative Areas Analysis requiring new exceptions generally fall into two categories: (1) Irrigated agricultural land; (2) Industrial land in zoning districts that do not allow data center uses.

Report, Exhibit 10). Other agricultural land in the vicinity is generally irrigated and actively used for crop production or is developed with large-scale dairy operations. This is also true of land in industrial zones that do not permit data center uses, such as the SAI zone. Therefore, development of an Exascale Data Center Campus in these other areas would have significant negative impacts on the agricultural economy of the region.

Social

Social impacts associated with Exascale Data Center Campus development are generally greater the closer a site is to population centers and residential uses. Examples include visual impacts, noise, and traffic. The subject site is isolated from any potentially incompatible uses (such as residential), situated more than five miles from population centers, so there are no adverse social impacts anticipated.

Energy

Energy impacts associated with Exascale Data Center Campus development on the Site are less significant than the impacts of the same development on other land requiring new exceptions. The amount of energy required is the same regardless of location; however, the proposed exceptions site is proximate to existing transmission lines to the south, near the Carty reservoir, and adjoining planned lines immediately to the east. Close proximity to such lines is an essential siting requirement. Alternative areas that would require the development of new transmission lines would have significantly greater impacts. Additionally, as the site is adjacent to Interstate 84 (I-84) and near the interchange at Tower Road, so energy needs associated with transportation to and from the site are lower than sites requiring greater travel distances from the I-84.

Based on these reasons, no resource land was identified that would be better suited for Exascale Data Center Campus development, and the EESE consequences of the use at the chosen Site are not significantly more adverse than would typically result from the same proposal being located in other areas requiring a goal exception.

(d) "The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts." The exception shall describe how the proposed use will be rendered compatible with adjacent land uses. The exception shall demonstrate that the proposed use is situated in such a manner as to be compatible with surrounding natural resources and resource management or production practices. "Compatible" is not intended as an absolute term meaning no interference or adverse impacts of any type with adjacent uses.

Response: The Site is not proximate to many adjacent uses given natural buffers separating the Site via a canyon to the west and south, a rail spur to the east, and a highway to the north. The airport runway to the east of the rail spur is not within 5,000 feet of the Site. And the other abutting adjacent uses are a vineyard and another data center also to east of the rail spur, agricultural fields to the west and south of the canyon, and vacant industrial lands to the north of I-84. As described below, none of these are particularly sensitive to any of the potential impacts generated by an EDCC, and any potential impacts associated with EDCC development will be addressed through compliance with applicable regulatory standards relating to air emissions, lighting and glare, water, and airport compatibility, as described more fully below.

Development associated with an EDCC may include generation of noise and exhaust from the occasional use of diesel backup generators during power outages, but the use of such generators

will typically be infrequent, temporary, and of limited duration (e.g., to maintain uninterrupted computation services until transmission-line power service is restored). Installation and operation of the diesel generating equipment will be subject to Oregon Department of Environmental Quality (DEQ) review, to ensure that its use will comply with DEQ air quality permitting regulations. Other adverse impacts could include glare from security lighting; however, this will be mitigated by providing fully shielded directional fixtures that comply with County performance standards. Onsite sewage disposal and industrial wastewater systems will not pose adverse impacts due to DEQ review and approval for compliance with DEQ wastewater regulations (including required treatment for nitrates)

Future development of the Site for data center use will result in a traffic increase over the existing (undeveloped) condition; however, as explained in the attached transportation analysis (Exhibit 9), trip generation by data center use of the whole Site is expected to be lower than that of other currently allowed industrial uses within the SAI-zoned subarea zoning. As a result, no greater adverse impacts to transportation facilities accessed from the Site are anticipated that would affect such facilities as I-84 or associated interchanges or Tower Road.

Adjacent land uses include the Boardman Airport to the east, but the Site is >8,500 feet from the end of the runway at all points and is outside of the runway protection zone and the approach surface. All future development of the Site will be required to comply with FAA and ODAV regulations. Another adjacent use to the east is an approximately 320-acre vineyard which is separated by this Site by the PGE rail spur. The vineyard is owned and operated by the applicant and is served by an independent irrigation system, which does not depend upon surface water flows. Consequently, the applicant does not anticipate any adverse impacts from the proposed EDCC development on water supply or delivery to the vineyard. Regarding potential air emission impacts on vineyard production, mitigation would be provided through compliance with DEQ permitting requirements. The applicant also owns irrigated agricultural fields to the south and west, but this land is separated from the Site by Sixmile Canyon which forms a natural buffer from any potential adverse impacts. Finally, to the north are vacant industrially zoned lands, but those are separated from the Site by I-84.

Therefore, data center use will be compatible with adjacent uses through compliance with applicable requirements governing airports, water, and air, as well as the natural and physical features bounding the site. It is also worth noting that in this area of the state, industrial uses have long coexisted with large-scale agricultural enterprises. Data center use is similar to other industrial development in the area to the extent it generates low volumes of vehicular traffic, and all activities are contained within buildings, causing minimal off-site impacts. Importantly, the farm operator adjacent to the Site is the applicant for this proposal; the applicant has identified the Site as a part of their large ownership that (a) is not suitable for commercial farming operations, which they conduct on most of their lands, and (b) can support data center operations without adversely affecting agricultural productivity or operations on surrounding properties, including their own holdings.

Based on the above facts and findings, the potential adverse impacts of the proposed data center use will not significantly affect surrounding land uses and is therefore “compatible,” as defined above. This standard is met.

OAR 660, Division 12 – Transportation Planning

660-012-0060 – Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response: The applicant has provided a report by David Evans and Associates (DEA) (Exhibit 9) and a Supplemental Traffic Memo (Exhibit 9.A) addressing Statewide Planning Goal 12 and compliance with the Transportation Planning Rule (TPR). Exhibits 9 and 9.A. provide detailed responses to subparagraphs (a), (b), and (c) of this Rule. To summarize, the proposal will not significantly affect any transportation facility by either: (1) changing any TSP roadway functional classification or roadway configuration; (2) changing the standards that implement the functional classification system; or (3) degrading the performance of an existing or planned facility beyond the projected performance of such facilities at the end of the planning period identified in the adopted TSP. Although the report does indicate that one ramp terminal and two intersections are anticipated to fail in year 2044 under current EFU/SAI zoning (see Table 10 in Exhibit 9), the analysis also demonstrates that only two of these failures will occur under the proposed rezoning and that these two intersection failures will be less severe and will occur later in the planning period under the proposed zoning than under the current zoning. Because the proposed zone change is projected to generate fewer trips than allowable under the existing zoning for the subject site, the proposed zone change does not constitute a "significant effect" on the local transportation system. The report further observes that the projected intersection failures can be easily mitigated with traffic signalization when future traffic volumes reach a level that warrants it. Morrow County will have opportunities to impose conditions of approval in required Site Development Review procedures prior to development occurring under the proposed zoning change, with mitigation measures correctly aligned with the impacts of the actual development proposal(s).

In response to a February 27, 2025 memo provided by Lancaster Mobley, the applicant's traffic engineer prepared a Supplemental Traffic Memo (Exhibit 9.A.) specifically addressing Boardman Airport Lane for purposes of addressing compliance with OAR 660-012-0060. The Lancaster Mobley memo concludes that there is a "significant affect" because Boardman Airport Lane is not currently identified in the County's

TSP and, therefore, an amendment to the TSP is required to formally designate a functional classification to Boardman Airport Lane to ensure that adequate infrastructure is planned and constructed; however, as explained in the Supplemental Traffic Memo (Exhibit 9.A), Boardman Airport Lane was constructed by the Port of Morrow in a manner that meets roadway design and traffic volume standards under the County's TSP for Arterial II's. The roadway is both operational today and expected to continue to operate adequately as constructed. Therefore, the Supplemental Traffic Memo concludes the proposal will have no significant effect on this road, as defined by OAR 660-012-0060, because:

> (1) it does not change a TSP roadway functional classification, because the subsequently constructed Boardman Airport Lane is not identified in the County's currently adopted 2012 TSP and, thus, carries no classification;
> (2) it does not change the standards that implement a functional classification system, because Boadman Airport Lane is consistent with roadway design requirements for the County's Rural Arterial II classification and no changes are required to that classification to provide adequate capacity for the proposed rezoning through the planning horizon;
> (3) it does not result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility, measured at the end of the planning period, because the projected traffic levels on Boardman Airport Lane are consistent with the functional classification for a Rural Arterial II, as presented in the TSP; and
> (4) it does not degrade the performance of an existing or planned facility beyond the projected performance of such facilities at the end of the planning period, because the trips associated with the rezone are within the capacity of the existing Boardman Airport Lane facility and will remain so throughout the planning period.

This rezone proposal also does not impact the Future Connectivity section of Morrow County's TSP (Page 4-7), nor will it exacerbate existing connectivity issues between north and south Morrow County, because the traffic generated by future data center development will not necessitate or result in north-south traffic movements beyond the Tower Road/Boardman Airport Lane travel route identified in the TPR Report. Specifically, the TPR Report confirms that the primary route to and from the site is via I-84 and Tower Road/Boardman Airport Lane, with minimal to no trips travelling south on Tower Road. Consequently, the proposed rezone will not increase or otherwise affect the identified pre-existing need for a second north-south connection, historically referred to as the Ione-Boardman Road.

Based on the evidence provided by the applicant, the proposed Comprehensive Plan Map/Zoning designation changes will not "significantly affect" an existing or future transportation facility.

(5) The presence of a transportation facility or improvement shall not be a basis for an exception to allow residential, commercial, institutional or industrial development on rural lands under this division or OAR 660-004-0022 (Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)) and 660-004-0028 (Exception Requirements for Land Irrevocably Committed to Other Uses).

Response: This provision is not applicable because the applicant has provided substantial evidence in the record of reasons to support the requested Goal exceptions, independent of the fact that the existing Boardman Airport Lane, located on exception land in the ALI Zone, has already been improved west from Tower Road to the east edge of the rail spur that extends south to the Carty Generating Station.

660-012-0065 – Transportation Improvements on Rural Lands

(1) This rule identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception.

Response: Existing improved transportation facilities – more particularly Boardman Airport Lane and Tower Road – will provide access to the Site. See Exhibit 17.C (Port of Morrow Road Access Letter). Both

those facilities are within approved/acknowledged urban exception lands. Following approval of the proposed Comprehensive Plan Map/Zoning designation change, the short extension of Boardman Airport Lane to serve the Site (i.e., crossing the Carty Generating Station railroad spur) will also be within the Goal exception area and this will be urban land. Therefore, the proposal does not involve future transportation improvements on rural lands, and OAR 660-012-0065 is not applicable.

660-012-0070 – Exceptions for Transportation Improvements on Rural Land

(1) Transportation facilities and improvements which do not meet the requirements of OAR 660-012-0065 (Transportation Improvements on Rural Lands) require an exception to be sited on rural lands.

(a) A local government approving a proposed exception shall adopt as part of its comprehensive plan findings of fact and a statement of reasons that demonstrate that the standards in this rule have been met. A local government denying a proposed exception shall adopt findings of fact and a statement of reasons explaining why the standards in this rule have not been met. However, findings and reasons denying a proposed exception need not be incorporated into the local comprehensive plan.

(b) The facts and reasons relied upon to approve or deny a proposed exception shall be supported by substantial evidence in the record of the local exceptions proceeding.

Response: As in the response to OAR 660-012-0065 above, existing improved transportation facilities in approved/acknowledged exception areas – more particularly Boardman Airport Lane and Tower Road – will provide access to the Site. See Exhibit 17.C (Port of Morrow Road Access Letter). Following approval of the proposed Comprehensive Plan Map/Zoning designation change, the short extension of Boardman Airport Lane necessary to serve the Site (i.e., crossing the Carty Generating Station railroad spur) will also be within the Goal exception area and thus will be converted from rural to urban land. It is well established that OAR 660-012-0070 does not require an exception for future transportation improvements when, as in this instance, the land is no longer rural land due to the prior approval of exceptions to Goals 11 and 14 and the concurrent application of urban zoning. *Deumling, et al v. City of Salem,* 76 OR LUBA 99 (2017); *1000 Friends, et al. v. Curry County*, 301 Or 447, 498-501 (1986). Therefore, the proposal does not involve transportation improvements on rural lands, and OAR 660-012-0070 is not applicable.

OAR 660, Division 14 – Application of the Statewide Planning Goals to Newly Incorporated Cities, Annexation, and Urban Development on Rural Lands[15]

660-014-0040 – Establishment of New Urban Development on Undeveloped Rural Lands

(1) As used in this rule, "undeveloped rural land" includes all land outside of acknowledged urban growth boundaries except for rural areas committed to urban development. This definition

[15] With respect to Goal 14, OAR 660-014-0040(2) supplies the criteria for a reasons exception, not OAR 660-004-0022. *VinCEP v. Yamhill Cnty.*, 215 Or. App. 414, 422-23, 171 P.3d 368, 372 (2007). As the Court of Appeals explained,

> "The plain reading of [OAR 660–004–0000(1)] is that OAR chapter 660, division 4, rules apply to an exception except to the extent that a more particular rule applies to that exception under OAR chapter 660, division 12 or division 14. OAR 660-014-0040(2) specifically sets out the criterion for the reasons justification standard for a Goal 14 exception to allow urban development on rural land. For that type of Goal 14 exception, OAR 660-004-0000(1) excuses the need to apply the more generic reasons justification standard that exists under OAR 660–004–0022(1)."

includes all resource and nonresource lands outside of urban growth boundaries. It also includes those lands subject to built and committed exceptions to Goals 3 or 4 but not developed at urban density or committed to urban level development.

Response: The proposed exceptions Site in unincorporated Morrow County is split-zoned EFU and SAI, and it is located outside of any UGB. Therefore, the SAI zoned area is urban rather than rural land, and only the EFU-zoned portion of the Site falls within the definition of "undeveloped rural land." And as noted above, out of abundance of caution and pursuant to direction at the pre-application conference, the applicant will address Goal 14 criteria for the entire site, even though it is split-zoned and the SAI portion already allows for urban uses.

(2) A county can justify an exception to Goal 14 to allow establishment of new urban development on undeveloped rural land. Reasons that can justify why the policies in Goals 3, 4, 11 and 14 should not apply can include but are not limited to findings that an urban population and urban levels of facilities and services are necessary to support an economic activity that is dependent upon an adjacent or nearby natural resource.

Response: OAR 660-014-0040(2) sets out a non-exclusive example of a reason that is sufficient to justify urban development on rural land (i.e., that "urban population and urban levels of facilities and services are necessary to support an economic activity that is dependent upon an adjacent or nearby natural resource"). *Joseph Schaefer v. Marion County*, 2022 WL 3567227, at *12–13 ("OAR 660-014-0040(2) does not limit the bases for a reasons exception to uses that are dependent on a natural resource. OAR 660-014-0040(2) expressly provides a non-exclusive basis for a reasons exception."); however, other reasons may also justify establishment of new urban development on undeveloped rural lands.

As discussed above, there are myriad reasons why this Site is suitable for this scale of urban development and why alternative sites are not suitable. Reasons justifying exceptions from policies in Goals 3, 11, and 14 are detailed in the response to OAR 660-004-0020(2)(a). The response identifies the essential siting criteria for developing an Exascale Data Center Campus, which includes but is not limited to characteristics such as close proximity to existing high-capacity electrical transmission lines; access to adequate water supply, wastewater disposal capacity, telecommunications and fiber-optic routes; and adequate site size and configuration to accommodate multiple 200,000+ SF buildings and associated vehicle access, circulation, and parking. Other possible alternative areas were evaluated to determine whether they could reasonably accommodate these needs. As demonstrated in the attached Alternative Areas Analysis (Exhibit 7), no reasonable alternative areas were identified. Therefore, this application provides the County with substantial evidence to support the justifications necessary for the requested goal exceptions. This standard is met.

(3) To approve an exception under section (2) of this rule, a county must also show:

(a) That Goal 2, Part II (c)(1) and (c)(2) are met by showing that the proposed urban development cannot be reasonably accommodated in or through expansion of existing urban growth boundaries or by intensification of development in existing rural communities;

Id. Thus, reasons exception under Goal 14 "must be analyzed under OAR 66-014-0040(2) and not under OAR 660-004-0022(1)." *Id*. "Similarly, OAR 660-014-0040(3) provides particular criteria for the lack of alternatives, consequences, and compatibility factors for an 'urban development' Goal 14 exception, excusing the need to apply OAR 660-004-0020 standards that apply to other types of exceptions." *Id*.

Although the analysis under Division 14 must be done separately, there is obvious overlap with criteria in Division 4, and the applicant may rely on the same proof and findings to the extent they speak to criteria in both Divisions.

Response: The attached Alternative Areas Analysis (Exhibit 7) demonstrates that the proposed exascale data center campus development cannot be reasonably accommodated within an existing UGB. In addition, an exascale data center cannot be reasonably accommodated through the expansion of an existing urban growth boundary due to several factors. First, the unique infrastructure requirements of an exascale data center, such as proximity to high-capacity electrical transmission lines, are not typically available within or near existing UGBs. These large-scale data center facilities require a substantial and uninterruptible power supply, which necessitates direct access to the high-capacity transmission lines. Expanding a UGB to include areas with such infrastructure would be impractical and costly.

Second, the scale of land required for an exascale data center campus, generally requiring 1,000 acres or more, is not readily available within or adjacent to existing UGBs. Land areas closer to urban areas are generally characterized by higher land values and fragmented ownership, making it challenging and economically infeasible to assemble large, flat, vacant contiguous parcels of land for such development.

Third, the environmental and social impacts of situating an exascale data center near urban areas pose significant challenges. These facilities can generate noise and emissions from backup diesel generators which could adversely affect nearby residential communities. The facilities also often are sited with industrial wastewater cooling ponds, electrical substations and other energy facilities (e.g., solar or wind facilities), security fencing and other infrastructure, which may generate impacts typically associated with uses outside of UGBs. A related factor is that siting exascale data centers within or on the perimeter of existing urbanized areas poses a complicating challenge for planning future growth of efficient, compact communities. Exascale Data Center Campus development involves a very high amount of capital infrastructure investment, and so can be expected to persist for a long service life; for planning purposes, they should be considered irrevocably committed to such use. As cities plan to meet land needs associated with population growth and resulting needs for housing, employment, institutional and open space lands, the large size of EDC campus sites within or on the edges of existing urban areas would compel cities to "leapfrog" over them in order to accommodate growth. For example, each side of a square 1,000-acre area would be 1.25 miles long, interrupting a contiguous expansion pattern for other urban uses in both dimensions. The resulting development pattern would accelerate sprawl by substantially increasing the distances between older parts of the community and newer development areas forced to locate on the opposite side of an intervening EDC campus. Such a development pattern would be very detrimental from the standpoint of trying to create compact and efficient urban communities, by increasing distances for commuting and other circulation, as well as for construction and maintenance of utility services.

By contrast, siting an exascale data center away from a UGB, and in particular at the Site, enables it to be proximate to necessary large-scale utility infrastructure, to minimize any potential impacts on urban communities, and generally to present a more viable and efficient location to meet a documented demand for this large-scale industrial use. This 1,298-acre area west of the Boardman Airport is adjacent to the east bank of Sixmile Creek, which forms a logical, natural-feature boundary for urban expansion west of the City of Boardman. Service from existing high-capacity electric power transmission lines can be made available to the site and, because urban-level water and transportation services are (or will be) available to the Airport area, including an adjacent forthcoming data center campus at the western terminus of the improved Boardman Airport Lane, only short extensions are necessary to reach and serve the Site.

Significantly in the context of meeting land needs that operate at a regional scale, for any of the cities in the area to justify expanding its UGB for exascale data center campus development, the Goal 9 process would require an Economic Opportunities Analysis (EOA) justifying a UGB expansion of 1,000+ acres for a single land use to meet that city's population growth forecast and associated land needs. Such a land area being brought into a UGB expressly for EDCC use would need to be made ineligible for other industrial uses. And a consolidated site of sufficient size, along with the other required site characteristics, would

have to be identified contiguous to the existing UGB. Absent an identified user, such a large-acreage site could remain in the UGB indefinitely as surplus industrial land. For these reasons, the established UGB expansion process requires a level of certainty that makes it less supportable under these specific implementing regulations addressing UGB expansions as an alternative to reliance upon the Goal 2 exception process to accommodate compliance with meeting all of the EDCC siting criteria required for exascale data center campus development.

Particularly in the context of this proposal, the "reasons exception" process is preferable for several reasons:

(1) The necessary designation change is a voluntary proposal submitted by the owner of the property as applicant.
(2) The proposed designation change (MG with Limited Use Overlay) only allows for the specific urban use – data center – that is the basis for the "reasons" exception.
(3) The proposed designation change contributes significantly to the need to allocate land on a regional basis, responding to a documented recent dramatic increase in land demand for a novel industrial activity.
(4) The proposal will continue to allow EFU uses on the property unless and until data center development becomes economically feasible. Even if such use ultimately is not realized, the protections inherent in the land use approval process will require a new exception before any other urban use or development can occur.

(b) That Goal 2, Part II (c)(3) is met by showing that the long-term environmental, economic, social and energy consequences resulting from urban development at the proposed site with measures designed to reduce adverse impacts are not significantly more adverse than would typically result from the same proposal being located on other undeveloped rural lands, considering:

(A) Whether the amount of land included within the boundaries of the proposed urban development is appropriate, and

Response: The proposed Site includes 1,298 acres, which is appropriate and necessary for the development of an exascale data center campus, based on the size of comparable examples cited in the Introduction section of this report and the accompanying Economic Impact Analysis (Exhibit 8). The size of the Site is necessary to accommodate multiple large buildings, power substations, supporting infrastructure, and landscape features, ensuring construction and operational efficiency and minimizing off-site impacts.

(B) Whether urban development is limited by the air, water, energy and land resources at or available to the proposed site, and whether urban development at the proposed site will adversely affect the air, water, energy and land resources of the surrounding area.

Response: The proposed Site is not limited by air, water, energy or land resources. The applicant has obtained service provider letters indicating the availability of necessary power and water. The Site's proximity to existing high-capacity transmission lines and other infrastructure to the east near the Boardman Airport and an approved data center development minimizes that the need for extensive new infrastructure, thereby reducing potential adverse effects on surrounding resources.

(c) That Goal 2, Part II (c)(4) is met by showing that the proposed urban uses are compatible with adjacent uses or will be so rendered through measures designed to reduce adverse impacts considering:

(A) Whether urban development at the proposed site detracts from the ability of existing cities and service districts to provide services; and

(B) Whether the potential for continued resource management of land at present levels surrounding and nearby the site proposed for urban development is assured.

Response: The applicant has obtained service provider letters for power and water. See Exhibit 17. These letters indicate that the necessary services are available for an Exascale Data Center Campus. In addition, the data center development is anticipated to rely upon on-site services for sanitary sewer and industrial wastewater disposal until such time sewer infrastructure (including a new treatment facility) can be designed and constructed by the Port of Morrow. Such new infrastructure would be planned and sized to accommodate the proposed data center development(s) on this Site and, therefore, would not detract from the ability of Boardman to provide such services (refer to SPL exhibits). Finally, as described more fully below, provision of services will be addressed in detail during the County's Site Plan Review approval, prior to any development of the Site.

Possible adverse impacts on surrounding resource lands are described under the response to OAR 660-004-0020(2)(d), above. The proposed exceptions site is adjacent to a large-scale commercial agriculture operation to the west and south, but potential adverse impacts will be mitigated by the natural and physical features bounding the site, and compliance with state regulations related to air quality and wastewater disposal. Notably, the operator of that farm is the applicant for this proposal, which further indicates the farm operator is not concerned with its ability to manage and operate the farm.

(d) That an appropriate level of public facilities and services are likely to be provided in a timely and efficient manner; and

Response: The appropriate level of public facilities and services needed for an Exascale Data Center Campus is defined in the introductory sections of this narrative and in responses to OAR 660-004-0020. These include power and water supply, vehicle access, and telecommunication facilities including fiber-optic internet service. These services exist in the vicinity and the applicant has obtained service provider letters from the Port of Morrow and Pacific Power to demonstrate these providers are able to provide the required service levels, which ensures their provision in a timely and efficient manner. See Exhibit 17.

In addition, any end user will be required to demonstrate adequate provision of facilities as part of Site Plan Review, which is the land use approval required prior to development. In particular, the Morrow County Zoning Ordinance will require the end user to demonstrate that "electrical services … are adequate for the proposed use" prior to receiving site plan approval under MCZO 5.020.E.4. Further, any end user will need to demonstrate that "water is or will be available to the site at a quantity and quality adequate for the proposed use" prior to receiving site plan approval under MCZO 5.020.E.2. Pursuant to robust site plan review criteria relating to water, "[n]ew developments that rely on a non-exempt groundwater source must (1) provide an estimated annual water usage, and (2) identify the necessary OWRD authorizations required to serve the estimated water need. All other developments that do not rely on groundwater as a source of water may satisfy this review criteria by submitting a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site, which shall indicate the source of water (e.g., surface water, existing water right, etc.) and a targeted delivery for water to the site." MCZO 5.020.E.2.

As noted above, data center development of this scale on the Site will initially rely on on-site industrial septic and industrial wastewater evaporation ponds until such time infrastructure and disposal is extended to the Site by the Port of Morrow. Evaluation of the precise mechanism for disposal and treatment of wastewater will also be a requirement of site plan review, pursuant to MZCO 5.020.E.3, which requires that demonstration that "[a]dequate sewage disposal and wastewater management can be provided for the proposed use as determined by the service provider or by demonstrating compliance with applicable review authority standards, as set forth below. For new developments that will rely on third-party service providers for sewer and/or wastewater disposal, the applicant may satisfy this criterion by submitting a letter, notice, or memorandum of understanding from the service provider evidencing a commitment to serve the site. For new developments that will rely on on-site septic and/or industrial wastewater and/or non-contact cooling water disposal and/or treatment, the applicant may satisfy this criterion by identifying the necessary ODEQ permits, as required by the state regulations, to be obtained prior to commencement of the proposed use or certificate of occupancy being granted."

(e) That establishment of an urban growth boundary for a newly incorporated city or establishment of new urban development on undeveloped rural land is coordinated with comprehensive plans of affected jurisdictions and consistent with plans that control the area proposed for new urban development.

Response: This proposal involves the establishment of new urban development on undeveloped rural land. The reasons that are used to justify the necessary goal exceptions will be adopted into the Morrow County Comprehensive Plan. Consistency with existing Comprehensive Plan and MCZO policies is demonstrated in the following sections of this narrative. No expansion of the nearby Boardman UGB is being proposed. This standard is met.

(4) Counties are not required to justify an exception to Goal 14 in order to authorize industrial development, and accessory uses subordinate to the industrial development, in buildings of any size and type, in exception areas that were planned and zoned for industrial use on January 1, 2004, subject to the territorial limits and other requirements of ORS 197.713 (Industrial development on industrial lands outside urban growth boundaries) and 197.714 (Cooperation of county and city concerning industrial development).

Response: The exceptions site includes 331 acres of land in the SAI zone, which allows for industrial use of the site and was implemented prior to January 1, 2004. Based upon the lack of clarity regarding whether ORS 197.713 allows for the subsequent addition of new industrial uses in such areas without a new exception, the applicant is seeking new exceptions because the SAI zone is limited to uses addressed in the earlier exception which do not include data center development.

Compliance with Statewide Planning Goals

Goal 1 (Citizen Involvement)

Goal: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

Response: Morrow County's acknowledged comprehensive plan and land use regulations specify public involvement procedures required for plan amendments. The procedures include notice to the public, Oregon State Agencies including the Departments of Land Conservation and Development (DLCD) and Transportation (ODOT), Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and other interested parties, and public hearings before the Morrow County Planning Commission and Morrow County Board of Commissioners. By following the County's established public involvement procedures, Goal 1 is met.

Goal 2 (Land Use Planning)

Goal: To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.
Response: The factual evidence and analysis findings presented in this application package – in particular, the responses provided above to implementing regulations in OAR 660-004 and OAR 660-014-0040 – demonstrate that the proposed zoning redesignation package complies with "reasons" exception criteria. In addition to demonstrating that the proposed Site to be rezoned to allow data center use is superior and preferable to alternative potential areas within a sizable vicinity, the request incorporates equivalent-area conversions of land between resource and industrial zones, such that no net loss of productive agricultural land will occur. The proposal therefore maintains consistency with policies in the comprehensive plan, satisfying Goal 2 requirements.

In preparing to submit this request, the applicant's team has coordinated with staff of affected local governments (cities and counties), CTUIR, and utility service providers to identify issues of concern and address them in the analysis and recommendations, and to obtain data to support the analysis.

Goal 3 (Agricultural Lands)

Goal: To preserve and maintain agricultural lands.
Response: Goal 3 requires Morrow County to protect agricultural lands for farm uses through appropriate zoning. To allow nonfarm uses on EFU-zoned land requires the County to go through the Exceptions process, including adoption of findings to demonstrate compliance with exceptions criteria.

As noted above for Goal 2, this application package includes evidence and detailed responses to "reasons" exception standards in OAR 660-004 to demonstrate that the proposed zoning redesignation package complies. Significantly, the request also proposes conversion of over 1,600 acres from SAI to EFU, ensuring that no net loss of productive agricultural land will occur. For these reasons, Goal 3 is satisfied.

Goal 4 (Forest Lands)

Goal: To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.
Response: The proposal does not affect lands that are designated for forest uses. Goal 4 does not apply.

Goal 5 (Open Spaces, Scenic and Historic Areas and Natural Resources)

Goal: To protect natural resources and conserve scenic and historic areas and open spaces.
Response: The County Comprehensive Plan has not identified any significant natural, scenic, historic or open space areas within or near the Site. See the attached Significant Resource Inventory Map (Exhibit 11, and Natural Resources Report by Parametrix, Exhibit 12. Per the analysis in the Natural Resources Assessment, there are no significant Goal 5 resources that would be affected by this proposal to amend land use designations. An Archaeological and Cultural Resources Assessment has also been completed by Parametrix and shared with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) for review, comment, and coordination. Following receipt of final comments from CTUIR, the applicant will supplement the record with the final Archaeological and Cultural Resources Assessment.

Within the applicant's property but outside and west of the Site (the proposed exception area), on the east bank of Sixmile Creek, the Oregon Department of Geology and Mineral Industries (DOGAMI) issued permit #25-0006 to Three Mile Canyon Farms for the "Six-Mile Pit." (See Exhibit 16; the permit location is labeled "25006" on the Significant Resource Overlay Map.) The permit allows extraction of screened sand and gravel from a 12-acre area that the County has not designated as "Goal 5 Significant." The applicant intends to retain the facility's current EFU zoning, maintain its active status under the permit, and provide for vehicular access to it in any future development plans for the Site. All relevant areas are under common ownership (i.e., owned by Three Mile Canyon Farms, LLC). This proposed approach will allow extraction under the existing DOGAMI permit to continue until the permit is terminated.

The Significant Resource Overlay Map also includes a dot within the Site identified as "25008." DOGAMI permit #25-0008, issued to Portland General Electric Company, is listed by DOGAMI as a "Riprap Quarry" site for extraction of "rock." Its permit is listed as "Closed" in the DOGAMI Permit Data spreadsheet[16] (updated January 6, 2021), and there is no corresponding line item in the County's "Inventory of Natural Resources/Aggregate and Mineral Resources" table, included in Exhibit 16. As in the case of DOGAMI permit #25-0006, the facility is not identified as a significant Goal 5 resource, so this request will have no effect on significant Goal 5 resources. Moreover, because the permit's status is closed, no further extraction activity is expected at this permit location. Post-extraction reclamation for a different use will be consistent with the Goal 5 process as it applies to mineral/aggregate resource sites.

Based on the facts and findings above, the proposal complies with Goal 5.

Goal 6 (Air, Water and Land Resources Quality)

Goal: To maintain and improve the quality of the air, water and land resources of the state.
Response: The State of Oregon has adopted statutes and administrative rules to protect air, water and land resources from environmental impacts of development and land use activities. In the site development and construction permitting processes that will follow this amendment proposal, all future development and use of the Site will be required to comply with permitting requirements for air quality management, stormwater management (i.e., the Oregon Department of Environmental Quality 1200-C process), wetland fill/removal (i.e., the Joint Removal/Fill Permit process administered by the US Army Corps of Engineers and Oregon Department of State Lands), wastewater discharge, and other such permitting. See also MZCO 5.020 (site plan review). Since all proposed development will be contingent on the receipt of any such required state and federal permits, compliance with Goal 6 is assured.

Regarding noise as an environmental impact issue, the Site is located west of the Boardman Airport and distant from any noise-sensitive receiver sites or uses, such as residential development. Based on the Site's large distance from noise-sensitive sites, and the occasional background noise levels associated with aircraft take-off and landing activities at the Airport, there is no reason to anticipate any exceedance of applicable noise control standards arising from future development under the proposed land designation/zoning amendment.

Goal 7 (Areas Subject to Natural Disasters and Hazards)

Goal: To protect people and property from natural hazards.
Response: The subject site does not contain mapped flood or geologic hazards (see FEMA FIRM Panels, Exhibit 14, and DOGAMI SLIDO Maps, Exhibit 15). The proposed amendment will have no effect on Morrow County's compliance with Goal 7.

[16] https://www.oregon.gov/dogami/mlrr/spreadsheets/Mining_db.xlsx

Goal 8 (Recreational Needs)

Goal: To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.
Response: The proposal does not affect recreational facilities or land needed to meet Morrow County's recreational needs. Goal 8 does not apply.

Goal 9 (Economic Development)

Goal: To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.
Response: The applicant has provided an economic analysis by Johnson Economics (Exhibit 8), which identifies demand for an estimated 3,000 acres (or more) of land in the vicinity in the next ten years, to meet the rapidly growing demand for data center services. Johnson Economics observes that the availability of sufficient, reliable electric power and other critical location factors make the Morrow County segment of the Columbia River corridor region attractive for such uses — including at the exascale-level – and the report also notes that the highly competitive, time-critical nature of that industry makes it imperative for jurisdictions to ensure that their regulatory environments and inventories of eligible and available land combine to offer feasible development opportunities that align with industry drivers. In addition to the direct economic benefits attributable to having Exascale Data Center Campuses locate in Morrow County, their presence is expected to induce beneficial secondary economic effects on the local economy. Adopting the proposed land designation amendments is a fundamental first step in ensuring that Morrow County will enjoy the health, welfare and prosperity benefits of this emerging economic development trend.

Goal 10 (Housing)

Goal: To provide for the housing needs of citizens of the state.
Response: The proposal does not affect the provision of housing. The proposed amendments have no effect on Morrow County's compliance with Goal 10.

Goal 11 (Public Facilities and Services)

Goal: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.
Response: A Goal 11 exception to establish or extend public facilities to serve proposed development is evaluated under the criteria in Division 4, and in particular OAR 660-004-0020(2)(b)-(d), and as appropriate OAR 660-014-0040 for purposes of siting urban development on undeveloped rural lands. See *Friends of Marion County, v. Marion County*, 59 Or LUBA 323 (2009) ("there is no need to articulate a different reason to justify the exception to Goal 11 than is used to justify the Goal 14 exception or, stated differently, the reasons sufficient to justify the Goal 14 exception are also sufficient to justify the Goal 11 exception for purposes of OAR 660-004-0022"); *Doherty, v. Morrow County*, 44 Or LUBA 141 (2003) ("OAR 660-014-0040(2) and (3) effectively become the relevant criteria for a statewide planning goal exception to Goal 14, and to Goals 11 and 3 if such additional exceptions are necessary, to allow urban uses and urban public facilities on rural agricultural lands"); and *DLCD v. Umatilla County*, 39 Or LUBA 715 (2001) (if "the proposed exception is intended to allow *urban* development, then OAR 660-004-0022(1) directs the county to OAR 660-014-0040"). "If reasons are identified under OAR 660-014-0040(2) that justify exceptions to Goal 14, and Goals 3 and 11 as well, then there is no need to provide additional reasons to justify reasons exceptions to Goals 3 and 11 under OAR 660-004-0022(1) or (2)." *Doherty*, 44 Or LUBA at 177.

Here, the "proposed use" is to be served by the facilities is data center, which is an urban industrial use. Therefore, OAR 660-014-0040 provides the relevant criteria. And as explained above, the reasons that justify the requested exception to Goal 14 suffice to demonstrate a need for an exception to Goal 11, and the responses to applicable criteria in Division 14 are incorporated by reference here. In particular, the exascale data center campus requires proximity to high-capacity electrical transmission lines and other infrastructure, which makes the Site unique due to its location near the Boardman Airport but on the opposite side of the airport from the urban area of the City of Boardman, thus minimizing potential for off-site impacts on residential communities and other populated areas. The large, contiguous area of 1,298 acres allows for efficient layout of multiple data center buildings, power substations, and supporting infrastructure to ensure operational efficiency and scalability. The Site's proximity to I-84 also facilitates convenient access for construction, maintenance, and operational personnel.

Therefore, the proposed use has special features and qualities that necessitate its location on the proposed Site as explained by the unique siting criteria for exascale data centers, and pursuant to the Division 4 and Division 14 alternatives analysis, which demonstrate that no reasonable alternatives that could reasonably accommodate the proposed use exist.

Further, a portion of the Site is already zoned for more dense industrial uses (i.e., space age-related research and development facilities). The Limited Use Overlay will restrict the potential uses of the Site to data centers and related infrastructure, which involve a relatively small number of employees, thus eliminating the potential that the proposal will increase density (and, in particular, residential density). Finally, the Site is proximate to existing urban water systems serving the Boardman Airport and adjacent lands zoned ALI, which will minimize the need to extend significant water infrastructure to the site. At the time of this application, a construction project is under way to install a water service line along the full length of Boardman Airport Lane west of Tower Road, which is intended to serve an adjacent approved data center facility to the east of the Site. The Site will rely on that water infrastructure and require only a short extension across the rail spur to connect.

Thus, the findings presented above support the County's decision to adopt an exception to Goal 11 in order to address the documented demand for land for exascale data center development. Goal 11's intent to prevent the proliferation of urban uses in rural areas caused by the availability of urban-level services extended beyond UGBs is largely not implicated due to the fact that the Limited Use Overlay restricts industrial uses to data centers, and the Boardman Airport area (which will include the development for a recently approved data center campus) directly to the east already allows for extension of urban-scale services.

Goal 12 (Transportation)

Goal: To provide and encourage a safe, convenient and economic transportation system.
Response: A Goal 12 exception is not required because the land use activity to be allowed by the proposed zoning (data center) will not require extension of transportation facilities on resource lands. Instead, there is an existing roadway, Boardman Airport Lane, that currently terminates on the eastern border of the proposed Site and will serve the Site. Additionally, an EDCC at the Site will not attract additional background vehicle trips on Boardman Airport Lane or other roads within the area, beyond such trips associated with worst-case development allowed under the current zoning designation, which ensures no significant effect on an existing or planned transportation facility serving the site pursuant to OAR 660-012-0060. In Exhibit 9, the applicant has provided a report that addresses the requirements of the Transportation Planning Rule (OAR 660-012) (TPR Analysis); its findings, conclusions and

recommendations have been incorporated into the recommended findings in this report. [17] The TPR Report concludes that an exception to Goal 12 is not required because no proposed urban transportation improvements will occur on rural lands. The analysis finds the vehicular traffic generated by data center operations at the Site will have a less significant impact compared with the vehicular traffic generated under the existing zone designation assuming a research and development use. For these reasons, based on the TPR Analysis, Goal 12 is met.

Goal 13 (Energy Conservation)

Goal: To conserve energy.
Response: The Site's location – close to existing electric power transmission lines – makes it highly efficient and cost-effective to meet the power needs of Exascale Data Center Campus operations. Additionally, EDCC's yield operational efficiency benefits because the concentration of operations on a single campus facilitates consolidation of inventories and performance of maintenance/repair/upgrade activities with a minimum of off-site travel and associated effects such as fuel consumption, traffic, increased vehicle miles traveled (VMT), and operational delays. This proposal to redesignate the Site to allow Exascale Data Center Campus use responds to society's accelerating computing needs – and associated demand for large tracts of land – in a way that provides for efficient construction and operations of sufficient and suitably located facilities. For those reasons, the proposal is consistent with Goal 13.

Goal 14 (Urbanization)

Goal: To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.
Response: Reasons for seeking an exception to Goal 14 are addressed above in response to OAR 660, Division 14 standards. This criterion is met.

Goal 15 (Willamette River Greenway)

Goal: To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.
Response: The subject site is not located near the Willamette River Greenway. Goal 15 does not apply.

Goal 16 (Estuarine Resources)

Goal: To recognize and protect the unique environmental, economic and social values of each estuary and associated wetlands; and

To protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon's estuaries.
Response: The subject site is not located near estuarine resources. Goal 16 does not apply.

[17] Of the 1,298-acre total area, 34 acres along the eastern Site boundary are within a 150- wide railroad right-of-way easement, which is proposed to remain in place and available for rail service. Within the SAI-zoned portion of the Site, 22 of the 331 acres of the Site are within the railroad easement. As a result, net potential development areas (total of 1,264 acres, of which 309 are in the SAI zone) acres appear in the TPR Analysis in Exhibit 9.

Goal 17 (Coastal Shorelands)

Goal: To conserve, protect, where appropriate, develop and where appropriate restore the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water dependent uses, economic resources and recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of the adjacent coastal waters; and

To reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat, resulting from the use and enjoyment of Oregon's coastal shorelands.
Response: The subject site is not located near coastal shoreland areas. Goal 17 does not apply.

Goal 18 (Beaches and Dunes)

Goal: To conserve, protect, where appropriate develop, and where appropriate restore the resources and benefits of coastal beach and dune areas; and

To reduce the hazard to human life and property from natural or man-induced actions associated with these areas.
Response: The subject site is not located near beach and dune areas. Goal 18 does not apply.

Goal 19 (Ocean Resources)

Goal: To conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social value and benefits to future generations.
Response: The subject site is not located near the ocean. Goal 19 does not apply.

Compliance with Morrow County Comprehensive Plan and Land Use Regulations

Morrow County Comprehensive Plan

In this section, the applicant has identified and excerpted Comprehensive Plan Goals and Policies that may be affected by the proposed change, followed by response statements.

Citizen Involvement [detailed provisions omitted for brevity]
Response: This proposal does not propose to amend any Citizen Involvement goals or policies. The County will comply with Citizen Involvement goals and policies in the acknowledged Comprehensive Plan by processing the application in accordance with the procedures in Article 8 of the Morrow County Zoning Ordinance.

General Land Use Element

General Land Use – Future

> *- Farm: In order to protect the agricultural element of the County's economic base, productive farm lands should be protected from encroachment by non-agricultural uses. Farm land in Morrow County is best managed in large units....*
> **Response:** The Soils Report provided by the applicant's soils consultant (Exhibit 10) demonstrates that the proposed 1,298-acre area for redesignation/rezoning to MG (from EFU and SAI) does not have soil characteristics suitable for farming. The proposal also includes removing more than 1,600 acres of land from the SAI designation and returning it to EFU resource zoning. Of those

1,605 acres, approximately 775 acres are irrigated, productive farmland with Class 4 soils. See Exhibit 10.b (Downzone Area Soils Report). Because the proposed MG area is not suitable for farming, its transportation needs can be met by extending Boardman Airport Lane west of the rail spur, and its utility service needs can be met by a feasible combination of on-site facilities and extension of services already at or near the Boardman Airport, the change will not cause a significant encroachment on productive farmland in the vicinity. Moreover, the SAI-to-EFU conversion will not only ensure that there is no reduction in EFU-zoned acreage in Morrow County; it will elevate the quality of the County's EFU-designated resource land because the farm productivity on 775 acres of the downzone site is superior and the total area (1,605 acres +/-) of the land to be converted to EFU is higher. As a final note, the proposed Limited Use Overlay zoning of the Site will continue to allow the land uses permitted in EFU, so the Site can still potentially be used for such activities in the event data center development does not occur promptly.

- Industrial: An objective of the Plan is to accommodate industry without encroaching on residential or agricultural development. Additionally, industry is to be protected from encroachment by noncompatible uses.

The industrial land designated in the Plan and on the land map reflects the needs of industry for (a) access to highway, rail, and water transportation; (b) access to electric power and natural gas; (c) extensive, level building sites; and (d) room for expansion.

The following general policies shall be followed in guiding future industrial development:

1. *Industrial uses should not encroach on residential or agricultural uses. For example, cattle feed lots, which are incompatible with most other uses, should be surrounded by sufficient open space to provide a protective buffer.*

Response: The Economic Analysis provided by the applicant's economics consultant (Exhibit 8) examines recent data center industry projects and development trends, and concludes that the region will experience a demand for approximately 3,000 acres of land for exascale data centers in the next ten years. To address this growing need for Exascale Data Center Campus development, it is appropriate to identify locations of suitable size that have access to sufficient electrical power and can be served by public utilities, but which will neither consume tracts of buildable land intended to meet other employment/economic development needs or impact existing or planned residential communities. The proposed area for MG designation does not contain suitable soil conditions to support commercial agriculture (see soils report in Exhibit 10), its western/southwestern boundary is along a natural feature the forms a buffer (the Sixmile Creek canyon), and it is more than a mile from an urban residential area. For these reasons, allowing data center use at the Site will have minimal impact on farming operations in the surrounding area and will not encroach on residential or agricultural uses. This policy is met.

2. *Interim uses in areas designated for industrial use should be limited to those that will not deter later industrial development.*

Response: This provision is not applicable because no interim use of the land is proposed prior to industrial development for data center use under MG with Limited Use Overlay zoning.

3. *When conflicts between different uses arise, consideration should be given to the general good of the economy and to the need for basic industry that will create new, continuing local employment.*

Response: The Economic Analysis provided by the applicant's economics consultant (Exhibit 8) provides details about direct, indirect and induced impacts of the proposed designation change.

The report concludes that project construction and operations will produce a nearly $10 billion regional impact after one year of operations, and the project will add over $14 billion to the local and regional economy after ten years of operation. This long-term, extended benefit makes exascale data centers a valuable addition to the local economy and employment opportunities. The proposed location for zoning changes to allow Exascale Data Center Campus use (i.e., west of the Boardman Airport), is specifically selected to avoid creating conflicts between uses. The proposal is consistent with this policy.

- Significant Resource Overlay Zone: The purpose of the Significant Resource Overlay Zone is to identify areas and sites in Morrow County identified as Significant Goal 5 Resources and designated: '3A' to preserve the site; and '3C' to limit conflicting uses. Such sites are subject to the applicable plan policies of the comprehensive plan and Section 3.200 'Significant Resource Overlay Zone' or Section 3.300 'Historic Building and Sites' of the Morrow County Zoning Ordinance.
Response: The proposed area for Industrial/MG zone designation contains no significant resources designated by Morrow County through the Goal 5 process. Goal 5 resources will not be affected by this proposal.

- Limited Use Overlay Zone: The purpose of the Limited Use Overlay Zone is to limit the list of permitted uses and activities allowed in the underlying zone to only those uses and activities which are justified in the Comprehensive plan 'reasons' exception statement under ORS 197.732(1)(c) and OAR 660-04-018(3). When the Limited Use Overlay is applied, the uses permitted in the underlying zone shall be limited to those and activities specifically referenced in the adopting ordinance applying the Limited Use Overlay Zone. Reasonable conditions may also be imposed by the Limited Use Overlay Zone when necessary to carry out the provisions of the plan and zoning ordinance.

- Space Age Industrial Zone: The proposed Space Age Industrial designation is intended to recognize those areas devoted to or most suitable for space age technology research and development. Uses of land inconsistent with those purposes with these purposes [SIC] *will not be authorized.*
Response: The eastern part of the Site – containing about 331 of the 1,298-acre area – is currently designated Space Age Industrial (SAI). Like the western EFU remainder, it is proposed for redesignation as General Industrial (MG) with the Limited Use Overlay discussed above. Also, a larger (approximately 1,605 acres) SAI-zoned area, much of which is currently in farm use, is proposed for redesignation as EFU, to ensure that no net loss of EFU-zoned land occurs. With these changes, the Morrow County inventory of SAI-zoned land will remain at approximately 11,564 acres.[18] The relatively minor change will not compromise Morrow County's ability to realize the intended development potential of the SAI land use designation.

Objectives and Policies

…

3. To continue efforts to identify lands suitable for development and areas where development should be restricted.

[18] Acreage figures are approximate, reported based on Geographic Information Systems (GIS) data provided by Morrow County. Total area in SAI zoning is 13,500 acres +/-, before proposed reductions of 331 and 1,605 acres by rezoning to MG/LU Overlay and EFU, respectively.

Response: The evidence provided by the applicant – in particular the Soils Report (Exhibit 10) – explains why the 1,298-acre Site is not suitable for farm use, and Morrow County has identified no significant natural, historic or cultural resources at the Site. The Site's location, west of the Boardman Airport, is removed from developed areas of the City of Boardman to the east, and the Site is already traversed by high-capacity power transmission lines and adjacent to another forthcoming data center campus. The applicant has also provided evidence of an economic need for 3,000 acres of land to support exascale data center development in the region in a ten-year period. Those combined factors support the conclusion that the proposed Site is suitable for development for data center use.

The Site to be redesignated General Industrial (MG) does not include the Sixmile Creek canyon or a small, DOGAMI-permitted gravel extraction site on the east bank of Sixmile Creek, which is not inventoried as a significant resource. The proposed redesignation will not conflict with County protections as they apply to lands where development should be restricted. For the above reasons, the proposal is consistent with this objective/policy.

4. *To continually monitor the land requirements and locations for projected economic development and population growth.*

Response: In Exhibit 8, the applicant has provided evidence of an economic need for 3,000 acres of land to support exascale data center development in the vicinity in a ten-year period. This data contributes to, and effectively improves the timeliness of, the County's ability to respond effectively to changing economic development conditions and opportunities as they arise. The proposal furthers this policy.

5. *To determine the public facilities and services required by the County to accommodate existing unmet public needs and expected needs resulting from population growth.*

Response: In preparing this request, the applicant has communicated with staff of Morrow County and the Port of Morrow regarding capacity requirements and timing of improvements capable of providing services to the Site. Needed transportation system improvement is limited to extending Boardman Airport Lane west from its existing terminus (on the east side of the rail spur to the Carty Generating Station site) into the Site. Water service can be provided by the Port of Morrow, based on the service provider letter in Exhibit 17.A. As described above, wastewater can be handled onsite by one or more treatment systems and septic discharge drain fields, or can be discharged to a public sanitary sewer system if and when it may be extended to serve the Site. Stormwater management can be achieved onsite by a collection system, one or more treatment facilities consistent with applicable Morrow County standards, and one or more ponds that can be designed to manage infiltration and/or release water to Sixmile Creek. All such facilities will be required to comply with applicable Morrow County development and permitting requirements through the development approval and permit issuance process.

9. *Plan/Zone Map Requirements:*
   a. *To insure consistency between the Comprehensive Plan Map and Zoning Map, a single plan/zone map shall be adopted with the zone designations and described in B, below. All plan and zone changes shall be in compliance with all applicable Statewide Planning Goals, County plan policies and procedures.*

   Response: This proposal is to amend the adopted Plan/Zone Map. This report and its supporting evidence demonstrate compliance of the proposed plan/zone change with the Statewide Goals and County plan policies and procedures. This requirement is satisfied.

Agricultural Lands Element

Introduction

"Agricultural Lands" as set forth within the context of Statewide Planning Goal No. 3 are defined as land of predominately Class I, II, III, IV, V, and VI soils as identified in the Soil Capability Classification System of the United States Soil Conservation Service, and other lands which are suitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land use patterns, technological and energy inputs required, or accepted farming practices. Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands, shall be included as agricultural land in any event.

Within the same context, "Farm Use" is defined in reference as set forth in ORS 215.203 and includes the non-farm uses authorized by ORS 215.283.

Morrow County agriculture contributes about $72 million in annual income to the County and supports local food processing, transportation, trade, and service employment and payrolls. The County's agricultural sector has consistently ranked among the top ten Oregon counties in total agricultural productivity. As agriculturalists enter new crop markets and as continued irrigation and technological advancements are developed, the sector's importance to the County and state will be ensured.

Problems facing County agriculture include formation of water allocation policies between local, state, and inter-state interests, shortages in affordable labor supplies, increased costs of supplies, electricity, equipment, and transportation, development of new markets for County products and in some areas, increased land use pressures among competing interests (i.e., industrial, commercial, recreational, and agricultural). Proper planning, policy formulation, education, and coordination efforts may alleviate some of these problems in the future.

Agricultural Lands Exceptions

Objectives

1. *To maintain a viable agricultural base, preserve agricultural lands for agriculture, and to protect agriculture as a commercial enterprise.*

Response: The proposal includes redesignation of more productive farmland from its current SAI zoning to EFU, which will replace the Site area proposed for EFU/SAI to MG redesignation. This exchange will ultimately remove 967 acres of non-productive, non-farmable land from EFU and replace it with 1,605 acres of EFU-zoned land, 775 acres of which is irrigated and actively farmed. This action contributes positively to meeting this objective.

2. *To conserve natural resources constituting important physical, social, aesthetic and economic assets through the development and adoption of realistic land use and development policies intended to achieve an economic-environmental balance, minimize public costs, and maximize energy conservation.*

Response: Evidence and recommended findings in this report demonstrate that the proposed redesignations are consistent with land use and development policies. The Site contains no significant natural resources, and its geology and soils characteristics will not support farming. The needs of Exascale Data Center Campus development and use make the Site particularly suitable for data center use, which will contribute to the County economy while preserving other industrial-zoned lands for employment uses as intended by previous economic development and planning efforts. Public costs, which may include capital expenditures as well as ongoing operations and maintenance expenditures, will be minimized by siting data center development where access to high-capacity electric transmission lines is feasible and proximate. The Port of Morrow has plans to extend utility services to serve the Airport property, next-door to the east of the Site; this proposal will add another rate-paying user to absorb those costs and fund

service operations. Those factors similarly contribute to maximizing energy conservation, along with enabling future data center operator(s) to realize operational economies of scale by consolidating facilities on a large campus rather than on distributed sites (which would necessitate multiple trips on public roads by data center staff vehicles, to perform operational, maintenance, repair and other tasks). The proposal is consistent with this objective.

3. To minimize and actually prevent conflict between farm and non-farm uses and resultant increased economical costs to the agricultural sector.

Response: Data center operations at the Site will not constrain agricultural practices, including movements of agricultural vehicles/implements, in the surrounding area. Relative to the size of the campus area, human occupancy is low, and all operations are indoors. Transportation access requires only the extension of the existing paved segment of Boardman Airport Lane to the west, across the railroad spur that extends south to the Carty Generating Station, into the Site. The proposal includes converting a larger area (1,605 acres +/-) of SAI-zoned land, much of which is now in farm use, to EFU. And the applicant — the primary farm user in the vicinity — has not identified a conflict between the proposed exascale data center use and its existing or planned farm uses. The proposal furthers the goal of preventing farm/non-farm conflicts, as intended by this objective.

4. To provide maximum opportunity for optimum management and operational practices, and provide adequately efficient supportive resources and services.

Response: As discussed above for Objective 3, the proposed land designation changes will improve the overall quality and farm productivity of land in the County's EFU inventory by replacing the Site's non-farmable land with more than 1,600 acres of mostly irrigated, productive farmland that is now designated SAI. The resulting improved alignment between zoning designation and productive agricultural capacity contributes to this objective by preserving better-quality farmland in EFU for long-term use in accordance with optimum agricultural management and operational practices.

Agricultural Policies

1. It shall be the policy of Morrow County, Oregon, to preserve agricultural lands, to protect agriculture as its main economic enterprise, to balance economic and environmental considerations, to limit non-compatible nonagricultural development, and to maintain a high level of livability in the County.

Response: The Board of Commissioners included the following finding it its 2018 approval of the Goal 3 exception for OE Solar 1, LLC, familiarly known as the HARP Solar Generation Facility:

> *Another interpretation of Economic Element Goal 4 would be that allowing this activity on land zoned for Exclusive Farm Use protects land zoned Port or General Industrial from uses that consume large amounts of acreage, but do not either create jobs or significant tax base. Placing the proposed solar photovoltaic energy generation facility on land zoned for Exclusive Farm Use preserved industrial land for higher density and impact uses.*

The reasoning is similarly applicable in this case where economic data indicates a novel, and very recent trend: growth in demand for 3,000 acres of land for development of Exascale Data Center Campuses in a ten-year period. Exascale Data Center Campuses are a new type of land use previously unanticipated by economic development planning and land use allocations to date. As a result, relying on existing inventories of industrially zoned exception lands to meet the novel demand would have the perverse effect of absorbing land (i.e., removing it from the available inventories to meet employment needs associated with growth planning in the first place). In that scenario, in the future it will become necessary

to urbanize more land to satisfy growth needs, leapfrogging over and around the zoned industrial lands absorbed by data center development.

In the present case, enabling the Site to accommodate an Exascale Data Center Campus on non-farmable land located west of the Boardman Airport will protect productive agricultural lands from expansion pressure. This occurs because allocating non-farmable land to meet the novel demand for exascale data center use preserves existing industrial land allocations to meet employment needs already associated with the population growth forecasting/planning process. For the above reasons, the proposed designation change is consistent with this policy.

17. *The County, Port, regional and state agencies should work with private citizens to secure utilization of the Navy's north Morrow tract, so that when market conditions permit, the land may be developed for more intensive agriculture, or other compatible and/or complementary uses including industrial and energy purposes.*

Response: The applicant understands the "Navy's north Morrow tract" to refer to the large, generally rectangular area labeled "Naval Weapon Systems Training Facility Boardman" on the Morrow County Comprehensive Plan Map. The Site of the proposed redesignation/zone change is approximately four miles west-northwest of that tract.

This policy anticipates that the "north Morrow tract" will be converted to private sector tenancy and use, possibly to include private ownership, at a future time. Unless and until such time, the land in that tract is not available for data center development or other private use.

The proposed redesignation of the Site to allow exascale data center use will have no significant effect on the ability of the County to convene parties and engage with the federal government regarding redeployment of the "Navy's north Morrow tract" for locally preferred activities. The proposal is consistent with this policy.

Forest Lands Element

Response: No Forest Lands are affected by this proposal. This Element is not applicable.

Natural & Cultural Resources Element

Response: As directed by Statewide Planning Goal 5 and its implementing statutes and administrative rules, Morrow County has inventoried resources; has analyzed Environmental, Social, Economic, and Energy (ESEE) consequences of conservation/protection versus allowing development impacts; and has adopted designations of significant Goal 5 resources. Such significant resource designations include land resources (soils, minerals, vegetation, and water resources); air resources; air, water, and land quality; fish and wildlife; fisheries; wildlife; scientific and cultural resources; and historical resources.

The proposed redesignation Site (from the SAI/EFU zone to MG with Limited Use Overlay restricting use to data centers) does not contain any significant Goal 5 resources; therefore, the proposed amendment will have no effect on Goal 5 compliance.

Natural Hazards Element

1. *Flood risk will be managed by limiting or regulating development in areas identified by the Federal Emergency Management Agency Flood Insurance Rate Maps or in areas identified by the County to be at risk to life or property due to flooding. County regulations will be compliant with National Flood Insurance Program requirements for development in flood prone areas*
2. *County land use regulations will assure proposed developments will receive a review of potential natural hazards and that sufficient authority exists to modify or deny applications where such*

hazards exist. Such provisions shall, at a minimum, require specific information clearly determining the degree of hazard present from applicants who seek approval to develop residential, commercial, or industrial uses within known areas of natural disasters and hazards.

Response: The Site does not contain areas within a Federal Emergency Management Agency (FEMA) flood hazard boundary, nor does it contain any of the other seven high-risk-factor natural hazard areas identified by this element of the Morrow County Comprehensive Plan (i.e., drought, earthquake, landslide, volcano, wildfire, windstorm, and winter storm). Morrow County has adopted land use and development permitting regulations that are sufficient to ensure the safety of future development within the Site, as required by Natural Hazard Policy #2, recited above. The proposal complies with the Natural Hazards Element.

Recreation Element

Response: The Site does not contain areas identified by Morrow County as necessary or particularly suitable for recreational use. The proposal will have no effect on recreational resources or implementation of the Morrow County Parks Master Plan.

Economic Element

Problems and Opportunities / Industrial Diversification: In the 1980 Comprehensive Plan concern was outlined that the opportunity for growth and development should become more diversified. While that has taken time diversification away from just an agricultural economic base has been happening. More energy generation projects have been sited in Morrow County and the use of personal computing and other devices has created the need for electronic data storage, or data centers. Two new developments at the Port of Morrow are driven from the need to create cleaner fuels and do less harm to the environment. While diversification has been taking place, it should continue as new opportunities emerge.

Problems and Opportunities / Industrial Sites and Port Planning: A concern raised in the 1980 Comprehensive Plan was about the need to assure adequate industrial land into the future and a request that the Port of Morrow complete a master plan. Over the intervening years the Port of Morrow has acquired additional land at the Tower Road interchange, both south and north of Interstate 84; acquired the Kinzua Mill Site just north of Heppner; and will soon have available to them 1,800 acres of industrially zoned land on the former Umatilla Army Depot. All of these locations, along with expansion of the East Beach Industrial Area, assures an adequate supply of industrial land for the current planning time frame. Planning and infrastructure work will need to continue to ensure that these industrial sites have adequate transportation, energy and utility investment. Floodplain concerns will also need to be addressed at the Kinzua Mill Site north of Heppner to facilitate development opportunities.

Goal 4: To encourage the development of compatible land uses throughout the County and to protect areas suitable for industrial development from encroachment of incompatible land uses.

Policy 4A: To limit uses on or near sites zoned for specific industrial and commercial uses to those which are compatible with industrial and commercial development.

Policy 4B: To utilize appropriate mechanisms in implementing regulations to ensure that any development adjacent to or in the vicinity of the Boardman Airport is a compatible use and will not impede future growth of the airport.

Response: With respect Morrow County's zoning for the Boardman Airport area, the code allows data centers in the Airport Light Industrial (ALI) zone; however, approved development projects within those land areas (i.e., solar power generation, hyperscale data center) make it infeasible to site an exascale data center within the remaining buildable area within those zones. The proposed Site for redesignation to

allow data center use is adjacent to and west of the Boardman Airport (i.e., the ALI-zoned land area), making it a logical and compatible location for additional data center activity. Data center use will be compatible with the Boardman Airport and industrial development in the vicinity because it typically does not require multi-story buildings, its vehicle trip generation is low, and the form of its site development is industrial in character; further, the eastern boundary of the Site is approximately 9,000 or more feet from the end of the runway, which provides for safe vertical clearances (addressed in greater detail under MCZO Section 3.092). The proposal is consistent with this Goal and those Policies.

Housing Element
Response: The proposed land use designation change has no effect on any land area designated for residential use. The Housing Element is not affected by it.

Public Facilities and Services Element

Findings

10. Utilities

C. Electrical power substations can create negative environmental impacts on nearby property. Careful site planning and physical design can minimize adverse environmental effects.

1. General Policies

A. Planning and implementation of public facilities and service programs necessary for the public health, safety and welfare shall guide and support development at levels of service appropriate for, but not limited to, the needs of the development to be served.

B. Public facilities and services for urban areas shall be provided at levels appropriate to support optimum development (maximum density).
Response: In Exhibit 17, the applicant has provided correspondence from service providers indicating that levels of power and water service appropriate to support EDCC development can feasibly be provided to the area in which Goals exceptions are proposed (i.e., the Site). Providing excess capacity to serve additional development is not warranted in this circumstance because the Site encompasses all of the potential industrial development area located between the ALI-zoned Airport area and the eastern top-of-bank of the Sixmile Creek canyon to the west, which forms a natural boundary constraining contiguous development west of the City of Boardman. Therefore, the proposal is consistent with these policies.

C. Public facilities and services for rural areas shall be provided at levels appropriate for rural use.
Response: This proposal includes service provision only to the area subject to the Goal exceptions requested by this application. No rural areas outside the Goal exceptions area will become eligible for public facilities and services as a result of approving this request. This policy is met.

D. Providing public facilities and services to rural areas being changed to urban use shall be based upon: 1) the least time required to provide the service; 2) most reliable service; 3) lowest financial cost;. and 4) adequate levels of service that satisfy long range needs.

E. A public facility or service shall not be provided in an urbanizable area unless there is provision for the coordinated development of all the other urban facilities and services appropriate to that area.

F. All utility lines and facilities shall be located on or adjacent to existing public or private right-of-way or through generally unproductive lands to avoid dividing existing farm units.

G. Public facilities and services shall not be allowed beyond a level that development supported by such services exceeds the carrying capacity of the air, land and water resources; therefore, public facilities and services shall be the principal framework for gaging density levels and types of urban and rural land developments.

Response: In Exhibit 17, the applicant has provided correspondence from service providers indicating that levels of water and power service appropriate to support EDCC development can feasibly be provided. These policies provide guidance to service providers regarding how to plan and implement such service provision following adoption of the proposed Plan Map/Zoning amendments and exception findings. Consistent with these policies, the applicant/owner and any future prospective developer(s) will be required to coordinate with all needed service providers regarding specifics of design, construction, and operation of such utility services. The proposal is consistent with these policies.

H. Public facilities and services shall be appropriate to support an adequate housing market in areas undergoing development or redevelopment.

Response: This proposal has no effect on this policy because it affects no land areas designated in the Comprehensive Plan for residential development.

I. All utility companies and irrigation companies affected by any and all land partitionings and subdivisions shall be notified and requested to make recommendations regarding compliance with long range development plans and specific utility easements.

Response: Notwithstanding that this policy refers specifically to "land partitionings and subdivisions," the applicant has coordinated with service providers in the preparation of this request. Correspondences indicating feasibility of service provision are attached in Exhibit 17. The proposal is consistent with the intent of this policy (albeit not in the context of a land partition or subdivision).

J. Methods for achieving desired types and levels of public facilities and services shall include without being limited to the following: 1) tax incentives and dis-incentives; 2) land use controls and ordinances; 3) multiple-use and joint development practices; 4) fee and less-than-fee acquisition techniques; 5) enforcement of local health and safety codes; and 6) a systems development charge as deemed appropriate and necessary.

K. The primary goal shall be to achieve a maximum balance of public costs vs. benefits/revenues in the provision of public facilities and services.

L. Equitable approaches and methods of financing shall be a basic goal.

Response: Refer to response above for policies D through G. Consistent with these policies, the applicant/owner and any future prospective developer(s) will be required to coordinate with all needed service providers regarding specifics of design, construction and operation of such utility services, as well as funding mechanisms and rate structures to be utilized within that process. The proposal is consistent with these policies.

M. Morrow County should utilize development review processes to ascertain the impact of large projects on County and community services and should demand the sponsor to participate in meeting associated expenses.

Response: This Plan Map Amendment/Zone Change request is submitted by the property owner, not by a developer with specific development plans for the Site. As a result, there is no development review application at this time. A future prospective developer will be required to submit proposed development plans for review and approval through the County's development review process. See MZCO 5.020 (setting forth criteria for site plan review and approval). Moreover, prior to commencing construction, the developer(s) will have to obtain land use approval(s), submit detailed construction plans for review, and demonstrate compliance with resulting conditions of the land use approval(s). That is, County review/approval procedures for development pursuant to this proposed Plan Map Amendment/Zone Change will ensure compliance with this policy.

N. The County recognizes the need to provide adequate community facilities to serve area residents and shall support city efforts to obtain funding for construction and improvement of necessary public facilities.

Response: Refer to responses above for policies D through G and J through L. Consistent with these policies, the applicant/owner and any future prospective developer(s) will be required to coordinate with all needed service providers regarding how services to development(s) within the Site will integrate with existing and planned service provision for the cities and exception areas in the area. The proposal is consistent with the intent of this policy.

2. Schools

A. Morrow County will work with the school district and sponsors of future large scale developments to ensure adequate school facilities for present and potential residents.

Response: Growth in residential development (i.e., increase in the number of households) in a community or region is a principal metric for projecting population growth and planning for school facilities. The proposed designation change will not affect the residential buildable land inventory in Morrow County or its cities. The proposed redesignation will have no effect on this policy.

3. Law Enforcement

A. Law enforcement, police protection and justice facilities should be provided in adequate proportion to the growth rate.

B. The County should evaluate alternatives for providing jail, or at a minimum, short term holding facilities and should investigate various methods of funding.

4. General Services

A. The County recognizes the importance of community services for attracting new businesses and residents.to the area and will encourage development of the service sector where it is feasible.

B. Morrow County should cooperate with Wheeler and Gilliam Counties to obtain adequate health care for the area.

Response: The proposed redesignation is a specific response to a recently emerging land development trend in the region, in particular, a sudden and dramatic increase in demand for large tracts of land (1,000 acres or more) for development and use as exascale data center campuses (EDCCs). Irrespective of scale, data center developments to date have not been associated with unusual levels of police activity or need for community services; however, the property tax revenues they provide to local jurisdictions contribute significantly to funding needed police, emergency and other public services. Payrolls for data center employees also fund local disposable income, supporting local private sector commerce and economic vitality; these effects are discussed in more detail in the Economic Impact Analysis (Exhibit 8). The proposed redesignation will contribute positively to achieving these policies.

5. Utilities

A. Programs should be continued to develop additional sources of electric and other power sources to assure adequate service to the County area and its projected growth.

B. Power substations should be centrally located to the service area as much as possible to assure economic service and facilitate energy conservation.

C. Power substations should be planned and designed in a manner which will minimize negative environmental impacts on nearby properties and the public as a whole.

D. Weatherization and other energy saving programs should be continued and supported by the power companies.

E. Underground utilities should be encouraged in all new developments where aesthetically and economically feasible.

F. Consideration of all new development shall be coordinated with. serving utilities relative to needed service locations and specifications, and easements and right-of-ways thereof. Included in such coordinated reviews shall be those utilities providing electrical, natural gas, cable television, and telephone services.

Response: Refer to responses above to 1. General Policies, in particular sub-paragraphs A, B, D through G, I, J through L, M, and N. The applicant has already engaged in communications with service providers to set the stage for such coordinated planning, as documented by correspondence in Exhibit 17. This proposal therefore contributes to utility service provision planning and implementation consistent with this policy. In addition, power substations serving the data center development will be centrally located. It is anticipated that the main substation will be located near the Carty Reservoir and that transmission lines will run north/south to connect to on-site substations that can serve multiple buildings.

6. Water & Sewer

A. The County's basic policy on water and sewerage shall be to encourage intensive development to locate within existing cities whenever possible. Cities are organized to provide water and sewerage service. When development does occur in unincorporated areas, such as recreation developments, minimum State sanitation and health requirements must be met by the private interests involved, including an individual lot-by-lot approval for subsurface sewage disposal or approved alternatives.

Response: The applicant has provided an inventory and analysis of alternative potential areas for EDCC development and operation within a large area surrounding the proposed Site. (See Exhibit 7) Its study area extends along the Columbia River corridor both west and east of the Site to include portions of Gilliam, Morrow and Umatilla Counties, respectively, and the UGBs of included cities, i.e., Arlington, Boardman, Ione, Irrigon, Umatilla, Hermiston, Stanfield, and Echo (from west to east). The analysis finds that appropriately zoned areas within those cities' UGBs are not available to meet the 3,000-acre projected need within a 10-year period (See Economic Impact Analysis, Exhibit 8), for reasons such as being already developed and irrevocably committed to other uses, or being insufficient in dimensions or total contiguous area. The Site is suitable for EDCC use because urban water utility services already extend to the Boardman Airport area, adjacent to the east of the Site, and it is feasible to meet minimum State sanitation and health requirements through onsite industrial septic facilities until such time infrastructure for treatment and disposal may be extended to the Site by the Port of Morrow. For these reasons, the proposal complies with this policy.

7. Solid Waste

A. Solid waste disposal shall be accomplished in conformance with City and County solid waste management plans and applicable regulations.

B. No solid wastes shall be disposed of in the County without prior approval by the County. No such approval shall be granted until all environmental and economical considerations

have been satisfied and the protection of the County, its residents and its economy assured.

C. Recycling shall be encouraged.

Response: Refer to responses above to *1. General Policies*, in particular sub-paragraphs A, B, D through G, I, J through L, M, and N, and the response to *5. Utilities*. The area of the Site makes it feasible to achieve solid waste disposal for the anticipated scale of EDCC development in conformance with County solid waste management regulations entirely within the Site, potentially on a permanent basis if necessary, or temporarily until a sanitary sewer service connection is extended to the Site. Before construction plans for any phase of development are issued, proposed plans will need to include details of the solid waste disposal system for review and approval by the County, pursuant to regulations implementing subparagraph B. Therefore, the proposed amendments are consistent with this policy.

8. Fire Protection

A. Fire protection shall be considered a common problem by the cities. County and fire protection districts.

B. All new subdivision design shall take into consideration the need for both an ingress and egress route for emergency vehicles and evacuation traffic.

C. All road and street names shall be clearly designated, as shall building addresses. Subdivisions shall be encouraged to install development layout signs at main entrances.

Response: Similar to the utility services coordination process discussed above, development project planning for the Site (following approval of this request) will necessarily include satisfying regulatory requirements of affected fire protection district(s) and other service provider(s). This policy will be satisfied through implementation of the County's development review and construction permitting regulations. The proposal is consistent with this policy.

Transportation Element

Water Transportation

The Port of Morrow, located in Boardman, operates an industrial park and power sources and three barge terminals for general, wood chip and grain shipments. Experience at the Port of Umatilla indicates that water transportation is a relatively inexpensive way of transporting certain bulk items, particularly with containerized cargo methods. Location of the Port of Morrow near the Hinkle railroad switchyard gives the Port the potential to become a center for an inexpensive way of shipping east coast or midwest goods to west coast centers.

The Columbia/Snake River system above Portland carries a significant amount of barge traffic (about 10 million tons per year). This relatively cheap form of transportation is an important part of the County's economy. Moving commodities by barge is a substantial component of the transportation network of the County. Deep-water barge docking facilities are an essential part of the system. There are three dock sites in Morrow County that are for the most part naturally occurring because the main channel of the Columbia River cuts close to the Oregon shoreline. These three sites are:

1. The Port of Morrow;

2. The Boeing Riverfront property (west two miles from the Tower Road Interchange); and

3. The Patterson Ferry Road site (one-quarter mile on each side of the road).

Extensive dredging is not required for the current use or future development of these sites; only occasional minor dredging is necessary to maintain specific facilities. Morrow County has placed these sites in a

special resource category and has adopted a plan policy to ensure their protection (Policy 27: Transportation Element).[19] *The uniqueness of the dock sites is supported by the U.S. Army Corps of Engineers' John Day Lock and Dam Master Plan (July 1970). The Master Plan notes that 99% of the riverfront along the John Day pool has been designated for recreation, fish and wildlife resource purposes.*

The Morrow County sites are the only barge dock sites in the upper end of the John Day pool. There are two other waterfront sites but both would require extensive dredging to develop as barge dock facilities (City of Umatilla, Port of Kennewick at Plymouth). In the lower half of the John Day pool, there are only three grain terminal barge dock facilities (Biggs, Arlington and Roosevelt WA). However, these sites are single purpose uses and are limited to current grain handling activities.

A recent study indicates that a potential for tripling the amount of cargo carried by barge exist [SIC] *in the river system. These sites are among those identified to handle this increase by continuing to provide the low-cost energy efficient transportation alternative that barges provide for agricultural producers, processors and manufacturers in the region (Source: Columbia/Snake River Port Study, 1980).*

Findings

4. *In addition to agriculturally-oriented firms already located at the Port of Morrow's industrial area, the Port has great potential for industrial and commercial development, and has identified an area with river frontage, as a future industrial park Site.*

5. *Barriers to the fullest development of this potential include inadequate access to the planned industrial zone, the constricted traffic pattern across the freeway in Boardman and into the Port property, the lack of dock facilities and of an airport, and the poor telephone service.*

Objectives

2. *To insure that all transportation systems within the County, to the fullest extent possible, be planned to utilize existing facilities and rights-of-ways provided that such is consistent with the environmental energy, land use, economic and social policies of the plan.*

5. *To classify streets and roads in accordance with function served or design function, and to insure compatible land uses adjacent thereto.*

9. *To include in all transportation plans considerations [SIC] of all appropriate transportation modes and to consider as a major determinant the carrying capacity of the air, land and water resources of the area, and more specifically, the affects [SIC] on agriculture and forestry base resources.*

28. *The County recognizes the importance of deep-water docking facilities to the economy and designates these sites as a deep-water transportation resource. The primary use of these sites will be for docking barges, cargo handling and support activities.*

Response: The applicant has provided a TPR Analysis (Exhibit 9) and a supplemental memorandum further discussing compliance with OAR 660012-0060 and consistency with Morrow County's TSP. Exhibit 9 notes that proposed uses of the Site will be limited to (1) data centers and associated support facilities, and (2) farm uses allowed in the EFU zone. The TPR Analysis concludes that vehicle trip generation by the proposed uses at the Site will result in fewer vehicle trips than are reasonably expected under the

[19] The referenced policy appears as number 28 at the time of this application submittal; it is quoted and a response is provided below.

currently allowed reasonable worst-case scenario for allowed development within the 331 acres of the Site that is currently in the Space Age Industrial (SAI) zone. As a result, there is no significant effect on existing or planned facilities, as defined under OAR 660-012-0060.

Specifically with respect to the Water Transportation element and Objective 28, the Site is not located along the Columbia River and therefore cannot be used for river-oriented or river-dependent use. For that reason, with respect to Objective 28, the Site is preferred for data center use over properties with Columbia River frontage in the MG Zone (identified in Exhibit 8 as Analysis Area MC-1) because only those riverfront sites are potentially capable of uses consistent with the Water Transportation element of the Comprehensive Plan and Objective 28.

Energy Conservation Element

Policies

1. *To encourage renewable and/or efficient energy systems, design, siting and construction materials in all new development and improvements in the County.*

2. *To conserve energy and develop and use renewable energy resources.*

3. *Encourage development of solar and wind resources.*

4. *To revise development regulations to encourage that the orientation of streets and buildings allow for utilization of solar energy and require landscaping to reduce summer cooling needs.*

5. *To regulate any object from casting a shadow on an existing solar collecting unit.*

6. *To encourage high density residential development in close and/or convenient proximity to high employment areas and commercial areas.*

7. *To encourage all systems and efforts for the collection, reuse and recycling of metallic and non-metallic wastes.*

8. *The County will work closely with individuals and appropriate government officials at all levels to ensure that the County continues to receive its share of the Columbia River power pool.*

9. *The County will encourage the development of alternative energy sources in County industries and businesses.*

10. *The County should encourage firms and agencies seeking to study these potential power sources to locate trial projects here, through a publicity campaign directed at interested institutions, business concerns and public agencies.*

11. *Priority consideration in overall planning should be given to implementation measures that will encourage achievement of maximum efficiency in energy utilization.*

12. *The allocation of land and uses permitted on the land should seek to minimize the depletion of non-renewable sources of energy.*

13. *Land use actions should, to the maximum extent possible, seek to recycle and re-use vacant land and those uses which are not energy efficient.*

14. *Land use development in the County should, to the maximum extent possible, combine increasing density gradients along high capacity transportation corridors to achieve greater energy efficiency.*

15. *All plans should be directed toward energy conservation and should consider as a major determinant the existing and potential capacity of the renewable energy sources to yield useful energy output. Renewable energy sources include water, sunshine, wind, geothermal heat and municipal, forest and farm waste.*

16. *Land use development shall be based on utilization of the following techniques and implementation devices which can have a material impact on energy efficiency:*
    - *a. Lot size, dimension, and siting controls;*
    - *b. Building height, bulk and surface area;*
    - *c. Density of uses, particularly those which relate to housing densities;*
    - *d. Availability of light, wind, and air;*
    - *e. Compatibility of and competition between competing land use activities; and*
    - *f. Systems and incentives for the collection, reuse and recycling of metallic and nonmetallic waste.*

Response: Refer to responses above to *Public Facilities and Services 1. General Policies*, in particular sub-paragraphs A, B, D through G, I, J through L, M and N, and the response to *5. Utilities*. Site development planning and development review/construction permitting following approval of this proposed Comprehensive Plan Map Amendment/Zone Change will necessarily involve coordination with one or more suppliers of energy to achieve consistent, reliable service to the Site. At this time the applicant anticipates service will be provided by Pacific Power via transmission lines from the south, which may also serve other data centers in the vicinity and increase density on those lines. Within that process, the parties are directed by these policies to pursue efficient solutions and incorporate renewable resource technologies wherever it is feasible to do so. Therefore, the proposed amendments are consistent with this policy.

Urbanization Element

Port of Morrow (Industrial Lands Outside an Urban Growth Boundary)

Recognized previously throughout the Plan for its economic importance to the County, necessitates special consideration in this element to those lands under jurisdiction of the Port of Morrow which are located outside the urban growth boundary of the City of Boardman and, are intended and vital for industrial development. Said properties (i.e. owned, controlled and managed by the Port of Morrow) involve a total of approximately 4,000 acres located east and southeast of the City of Boardman and bordered on the northwest by the Columbia River for a distance of about 3,600 feet (2/3 mile). Of this 4,000 acres, approximately 1,980 acres are available for future industrial development.

Major industrial development currently exists on Port property of which 350 acres is already identified as a Food Processing Industrial Park.

The major portion of the property under Port jurisdiction is located in Sections 1,2, 3, 4, 9, 10, 11,12 and 24 (Section 24 designated for effluent disposal) of Township 4 North, Range 25 East, and Sections 6 and 18 of Township 4 North, Range 26 East.

Existing ownerships and development patterns, coupled with the economic factors vital to the County, necessitates the designation of the Port of Morrow and properties controlled thereby as industrial. Such

designation and appropriate implementing zoning does not, however, preclude the continuance of some agricultural use of said properties as an interim beneficial use until needed for industrial development.
Response: The applicant notes that the Comprehensive Plan's Port of Morrow statement refers to land in Port jurisdiction within Section 24 as "designated for effluent disposal" without mentioning that the whole of the Boardman Airport facility, including all lands zoned ALI, is located within that Section. The Port of Morrow is also the record owner of four parcels of land in Section 24, north of Interstate 84 (tax lot 130, 04N24E) and three parcels with Columbia River frontage (tax lots 123, 126 and 128, 04N24E). As noted in the response above for *Transportation Element/Water Transportation*, the Port's properties with Columbia River frontage are uniquely capable of supporting Columbia River freight transportation, as compared to sites without such River frontage. Enabling EDCC use of the Site will, at least in part, satisfy market demand for EDCC development, and reduce the likelihood that river-frontage properties will be absorbed for EDCC use in the future. The proposal is therefore consistent with this policy.

Review and Revision Processes
Response: This Section of the Comprehensive Plan allows the County Board of Commissioners, Planning Commission, or a private property owner or authorized representative to initiate Comprehensive Plan amendments. The Section also provides direction for the review process, including public notices and hearings, and approval criteria; the latter refer specifically to (1) criteria in Morrow County Zoning Ordinance Article 8 Amendments, and (2) evidence of compliance with Statewide Planning Goals, including coordination and compliance with State agencies. The applicant's submittal includes evidence specifically addressed to those approval requirements, as detailed above in this report. Morrow County staff will process the request pursuant to procedural direction in the Morrow County Zoning Ordinance, consistent with the procedural direction of this Section. The proposal and the review procedure will thus comply with this Section.

Morrow County Transportation System Plan (TSP) Policies

The Transportation Element of the Comprehensive Plan contains a total of 28 policies. Below, the applicant has excerpted and responded to the policies identified as relevant and applicable to the proposed amendment.

4. *Streets and roads shall be classified in accordance with the function served or designated; such classifications shall have improvement standards established therefore, and planning decisions associated therewith shall take into account the interrelationships of such functions and adjoining land uses.*

Response: Exhibit 9 contains a Transportation Analysis that includes Transportation Planning Rule compliance findings. That analysis finds that trip generation by the future use of the entire Site with the proposed zoning designation change will be lower than that of allowed development of the SAI-zoned portion of the Site under its current SAI zoning. As a result, the proposed amendment will not significantly affect the functioning or TSP designation of any of the roads serving the Site. The amendment is consistent with this policy.

5. *The County shall both establish and operate within effective and efficient street and road maintenance and acceptance management systems.*

Response: Vehicular access to the Site will be provided by extending Boardman Airport Lane across the north-south rail spur to the Carty Generating Station to serve the Site. See Exhibit 17.C (Port of Morrow Road Access Letter). Boardman Airport Lane is located within the Goal exception area of the Airport Light Industrial (ALI) zone. As more fully described in Exhibit 9.A (Supplemental Traffic Memo), the Port of Morrow has already constructed Boardman Airport Lane to meet and/or exceed design and traffic volumes associated with Arterials under the County's TSP and the roadway is expected to operate

adequately as constructed. The road ends at the east edge of the rail spur corridor, which is labeled as 150-feet-wide at this position on Morrow County Tax Map 04N24E. Only a crossing of that rail corridor is necessary to reach the Site on the west side of the railroad right-of-way. With approval of the proposed Goal exceptions, none of the required road extension will be within a resource (non-exception) zone. This access route takes advantage of the existing road network, adding no new roadways, intersections, or other roadway extensions to the street network. For these reasons, the proposal is consistent with this policy.

6. *Transportation systems, to the fullest extent possible, shall be planned to utilize existing facilities and rights-of-ways, and shall avoid dividing existing economic farm units and urban social units unless no feasible alternative exists.*

Response: As noted in the response to policy #5 above, Boardman Airport Lane is an existing improved road that can provide access to the Site with only a limited (150 feet) western extension to cross a railroad spur. Doing so will not divide any existing farm units or urban social units. The proposal is consistent with this policy.

9. *The County shall recognize the relationship between land use and street function. Transportation shall be considered according to street classification policies in extension of existing development or approval of new development.*

Response: The Transportation Analysis and Supplemental Traffic Memo (Exhibits 9 and 9.A) demonstrate that land use activities allowed under the proposed Comprehensive Plan Map/Zoning change will maintain consistency with existing street classifications and classification policies. With respect to Boardman Airport Lane, the Supplemental Traffic Memo explains that the roadway was constructed to County Arterial II standards and has the capacity to support future projected traffic volumes consistent with the proposed zone change.

10. *The County shall require that road improvements necessitated by development shall be constructed in accord with street classification policies, and financed by the developer. (Such road improvements include roads affected by the impact of the development).*

Response: Based on the Transportation Analysis and Supplemental Traffic Memo (Exhibits 9 and 9.A), reasonable worst case trip generation under the proposed Comprehensive Plan Map/Zoning change will be lower than potential trip generation from the SAI-zoned portion of the Site under its current zoning. Because the improved Boardman Airport Lane and Tower Road have capacity to accommodate projected traffic, the proposal will not produce traffic impacts that will necessitate road improvements.

The Transportation Analysis assumes a 2% annual increase in background traffic under both current and proposed zoning. Under that assumption, growth in background traffic volumes together with Site-generated trips will produce a failing condition under current SAI zoning at the westbound I-84 ramp and at the Tower Road-Boardman Airport Lane and Tower Road-Kunze Lane intersections during the 20-year analysis period. Under the proposed zoning, the westbound ramp failure is avoided, and the failure at the remaining two facilities is less severe and thus delayed. Further, Site Plan Review and approval by the County will be required at the time of development, and the need for mitigation improvements will be addressed under implementing code criteria and standards during Site Plan Review.

11. *The County shall limit further development which prevents streets from serving their function (including causing streets to have lower speed limits than the function necessitates).*

Response: As noted in the above statements, projected trip generation by the Site is lower under the proposed Comprehensive Plan Map/Zoning amendment, maintaining consistency with the TSP designations and capacities of streets serving the Site. The proposal is consistent with this policy.

19. The County should work with the Port, private concerns, federal and state agencies to evaluate and develop those Port facilities that are most economically desirable for full utilization of the Port's geographic advantages.

Response: Boardman Airport Lane is part of the street network designed and constructed by the Port of Morrow to serve the Boardman Airport and surrounding properties, consisting of land areas in the Airport Industrial (AI), Airport Light Industrial (ALI), Space Age Industrial (SAI), and EFU zones, including the Site. The applicant has communicated with staff of the Port regarding Site access by way of Boardman Airport Lane, and the Traffic Engineer has coordinated with staff of ODOT and Morrow County regarding the scope and approach used in the Transportation Analysis. These consultations assure that the proposal is compatible with full utilization of Port facilities, consistent with this policy. See Exhibit 17.C (Port of Morrow Road Access Letter).

27. It shall be the policy of Morrow County to protect the Morrow County Airport at Lexington, Army Depot Airport and the Boardman airport from incompatible uses through the application of the criteria established by State Aeronautics publication "Airport Compatibility Guidelines, 1981."

Response: In addition to the steps reported in the response to policy #19 above, this narrative/findings report addresses the requirements of the Airport Overlay Zone and related regulatory requirements to ensure compliance with FAA requirements. The proposed Limited Use Overlay Zone provisions incorporate specific provisions to assure compatibility with Airport operational and safety requirements. This policy is met.

28. The County recognizes the importance of deep-water docking facilities to the economy and designates these sites as a deep-water transportation resource. The primary use of these sites will be for docking barges, cargo handling and support activities.

Response: The Site has no shoreline frontage on the Columbia River or a tributary, so the proposed Comprehensive Plan Map/Zoning amendment does not diminish opportunities for river-oriented and river-dependent uses on other lands within the County's inventory of available zoned land. Adoption of the proposed amendment will enable the County to respond to the growing regional demand for data center development, in effect relieving some market pressure that could otherwise lead to development of River-adjacent properties for data center use (which is neither river-oriented nor river-dependent).

Morrow County Zoning Ordinance (MCZO)

Article 8. Amendments

Section 8.040. Criteria

The proponent of the application or permit has the burden of proving justification for its approval. The more drastic the request or the greater the impact of the application or permit on the neighborhood, area, or county, the greater is the burden on the applicant. The following criteria shall be considered by the Planning Commission in preparing a recommendation and by the County Court in reaching their decision.

A. The local conditions have changed and would warrant a change in the zoning of the subject property(ies).

Response: The applicant's evidence includes a report from Johnson Economics (Exhibit 8) that documents a recent economic/land development trend: deployment of Artificial Intelligence (AI) services across a wide range of applications is spurring a rapid – and only recently emerging – expansion in computing demand. That growth is in turn spurring demand for land suitable for Exascale Data Center Campus siting, to meet the rapidly expanding market demand. The Johnson Economics report projects that Morrow

County can expect EDCC development to absorb an estimated 3,000 acres of land within the coming ten-year period.

Up to the present, comprehensive land use planning by jurisdictions in the vicinity (i.e., Morrow, Gilliam and Umatilla Counties, and their cities located close to the I-84/Columbia River corridor) has relied on estimates of industrial/employment land needs that have been based on a familiar mix of historic demand drivers, supplemented by Economic Opportunities Analyses (EOAs) to identify strategic opportunities and make projections for associated land needs; however, the novel nature of the emerging trend includes the very recent advent of demand for AI services, which has recently dramatically accelerated demand for mass computation capabilities requiring multiple buildings on large campus sites served by direct connections to high-capacity power transmission lines and fiber optic communications/internet service.

The Johnson Economics report identifies changes in the need and market demand for tracts of industrial land suitable for the specific needs of EDCCs. These changes in local conditions are sufficient to warrant the proposed change in the zoning of the Site. This criterion is met.

B. The public services and facilities are sufficient to support a change in designation including, but not limited to, water availability relevant to both quantity and quality, waste and storm water management, other public services, and streets and roads.

1. Amendments to the zoning ordinance or zone changes which significantly affect a transportation facility shall assure that land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:

a. Limiting allowed land uses to be consistent with the planned function of the transportation facility or roadway;

b. Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,

c. Altering land use designations, densities, or design requirements to reduce demand for automobile travel to meet needs through other modes.

2. A plan or land use regulation amendment significantly affects a transportation facility if it:

a. Changes the functional classification of an existing or planned transportation facility;

b. Changes standards implementing a functional classification;

c. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or

d. Would reduce the level of service of the facility below the minimal acceptable level identified in the Transportation System Plan. (MC-C-8-98)

Response: The applicant's submittal includes correspondence from utility service providers indicating their capacity and willingness to provide water and power services to the Site consistent with anticipated data center use (see Exhibit 17). And it is feasible to rely on on-site services for industrial wastewater and sanitary sewer, as described above, until such time infrastructure for treatment and disposal of wastewater is extended to the Site by the Port of Morrow. Regarding transportation, the applicant has provided a Transportation Planning Rule (TPR) compliance report which addresses the "significantly affect" standards set forth in this section; this analysis establishes that the proposed change in zone designation and associated allowed development results in no roadway or intersection that would be significantly affected by approval of the proposed zone change. That conclusion is reasonable due to the proposed Limited Use (LU) Overlay designation restricting use to data center, which is consistent with the types of travel demand reducing strategies authorized in subparagraphs a and c, and the net reduction in

vehicular trips to and from the Site as compared with reasonable worst-case trip generation under current zoning. Please also refer to the narrative describing compliance with OAR 660-012-0060 above. This criterion is met.

C. That the proposed amendment is consistent with unamended portions of the Comprehensive Plan and supports goals and policies of the Comprehensive Plan, that there is a public need for the proposal, and that the need will be best served by allowing the request. If other areas in the county are designated for a use as requested in the application, then a showing of the necessity for introducing that use into an area not now so zoned and why the owners there should bear the burden, if any, of introducing that zone into their area.

Response: This Section contains four discrete tests, all of which are met by this proposal as follows:

- *the proposed amendment is consistent with unamended portions of the Comprehensive Plan and supports goals and policies of the Comprehensive Plan:* Above, under the "Morrow County Comprehensive Plan" heading, the applicant has identified Policies and Objectives of the Morrow County Comprehensive Plan that are relevant to, or could be affected by, the proposed amendment. The applicant has provided statements responding to each, explaining why the proposed amendment is consistent with those Policies and Objectives.
- *there is a public need for the proposal:* As noted in the economic report from Johnson Economics (Exhibit 8), recent accelerating growth in data processing as a service, largely associated with broad adoption of AI services, is causing a rapid increase in demand for, and construction of, Exascale Data Center Campuses. EDCCs involve multiple buildings and ancillary facilities, such as dedicated power stations connected to high-capacity power lines, and leading firms in the nascent industry seek to build them and bring them into online service as quickly as possible.
- *the need will be best served by allowing the request:* Exhibit 7 contains an analysis of alternative potential rezoning areas within a large vicinity east and west of the Site pursuant to Oregon Administrative Rules (OAR) exceptions standards. That analysis examines both the eligibility of alternative areas in light of their exemptions status and case precedents, as well as the suitability of eligible alternative areas with respect to multiple location factors for EDCCs. Exhibit 8 contains an economic analysis that estimates demand for an additional 3,000 acres devoted to data center development in the area within a ten-year period. Taken together, the two analyses demonstrate that (1) there is an urgent need to allocate and zone land to meet the rising demand for growth in the regional EDCC market, and (2) the Site is the best situated location with respect to multiple factors, whether examined individually or in combination. (The latter is preferable, from the standpoint of arriving at a contextual understanding of the optimal combination of factors.) For these reasons, the Site is the preferred location for rezoning to meet the identified need.
- *If other areas in the county are designated for a use as requested in the application, then a showing of the necessity for introducing that use into an area not now so zoned and why the owners there should bear the burden, if any, of introducing that zone into their area:* The analysis in Exhibit 7 demonstrates why the Site is the preferred location for redesignation to allow data center development (and *only* data center development) to address the specific need identified in the economic analysis (Exhibit 8). Regarding the question of placing a burden on the owners of property where the new zoning would be introduced, this application has been presented by the current owner of the property to be rezoned, as well as much of the surrounding area. The applicant/owner has adequately considered how the proposed rezoning would affect its properties and operations, and is satisfied that rezoning as proposed is preferable to maintaining the existing zoning designations as they apply to their property. This criterion is satisfied.

D. The request addresses issues concerned with public health and welfare, if any.

Response: Economic development is an important public health and welfare issue of concern to Morrow County. Of particular interest in this case is evidence indicating that the recent, rapid and broad-based popular adoption of AI technology services is spurring a strategic inflection point (i.e., a rapid increase in demand for large tracts of land to support Exascale Data Center Campus development and use).

In the past few years, communities in the Columbia River corridor have already found themselves well positioned to compete to attract regional data center developments: the presence of sufficient electric power and transmission lines, Interstate 84, and high-capacity fiber optic facilities in the Columbia River corridor, together with available suitably-zoned land with sufficient buffering from other uses has already led to numerous data center development projects completed or now in process. Those projects, however, have generally occupied about 150 acres or less, and have utilized land already zoned to allow data center development, reducing available inventories of industrially-zone buildable land available to meet other economic development needs and objectives.

The recent emergence of Exascale Data Center Campuses – large, multi-building data center campuses with power consumption of one megawatt (MW) or more and on-site power stations connected directly to high-capacity electric transmission lines – forms a new class of large-scale industrial development. Demand for EDCC development has potential to undermine previous economic development planning by rapidly consuming a significant share of lands previously designated for industrial/employment use, reducing local buildable land inventories available to meet communities' growth needs. For this reason, identifying particularly suitable locations and designating land for EDCC development and use contributes to public health and welfare, by meeting emerging needs while keeping adopted Economic Development planning on track.

Separately, regarding public health and welfare issues associated with impacts of industrial development and use activities, EDCCs are normally equipped with backup diesel generators to avoid, or at least mitigate, occasional disruptions in data processing due to instability or outages in the electric transmission system. A data center activates its backup generators if and when a problem occurs in the electric transmission system serving the facility, to test that equipment is operational, and to maintain critically-needed stable power and avoid interruption of computing processes or disruptions in service to customers. When activated, diesel backup generators do produce some noise and diesel exhaust that would typically be detectable outside the data center property itself. In populated areas, such generator activations and operations can result in perceived impacts at sensitive receptor sites, such as residences, even though the actual noise levels, air emissions and other effects may in fact be in compliance with applicable federal, state and local standards. By contrast, the relative isolation of the Site for the proposed zone change – west of the Boardman Airport, on the south side of the I-84 corridor and on the east bank of Sixmile Creek – dramatically reduces potential for such perceived impacts.

Finally, as addressed more fully in Exhibit 9.A (Supplemental Traffic Memo), any required emergency access to the site will be identified and provided prior to any development of the site for data center use and be subject to County review and approval via required Site Plan Review. See MZCO 5.020.E.9; see also MZCO 4.010(C) ("it is the responsibility of the landowner to provide appropriate access for emergency vehicles at the time of development"). This ensures that safety/access issues are thoroughly evaluated, and that effective life/safety access will be made available at the stage of development when more information is known about actual site design and site access/circulation requirements.

For the above reasons, the proposal contributes to public health and safety. This criterion is met.

Article 3. Use Zones

Section 3.110. Limited Use Overlay Zone, LU

The purpose of the Limited Use Overlay Zone is to limit the list of permitted uses and activities allowed in the zone to only those uses and activities which are justified in the comprehensive plan 'reasons' exception statement under ORS 197.732(1)(c). The Limited Use Overlay Zone is intended to carry out the administrative rule requirement for 'reasons' exceptions pursuant to OAR 660-14-018(3).
Response: The proposed zone change includes adopting an LU Overlay on the whole Site, limiting its potential use to Data centers and existing uses allowed in the EFU district. Findings of compliance with applicable standards are provided below.

A. Overlay Zone Requirements. When the Limited Use Overlay Zone is applied, the uses permitted in the underlying zone shall be limited to those uses and activities specifically referenced in the ordinance adopting the Limited Use Overlay Zone. The Limited Use Overlay Zone cannot be used to authorize uses other than those expressly provided in the underlying zone. Reasonable conditions may also be imposed by the Limited Use Overlay Zone when necessary to carry out the provisions of the comprehensive plan and this ordinance. Until the overlay zone has been removed or amended through the plan amendment process the only permitted uses and activities in the zone shall be those specifically referenced in the adopting ordinance.

The Limited Use Overlay Zone is to be applied through the plan amendment and rezoning process at the time the primary plan and zone designation is being changed. The ordinance adopting the overlay zone shall include findings showing that

1. No other zoning district currently provided in the zoning ordinance can be applied consistent with the requirements of the 'reasons' exception statement because the zoning would allow uses beyond those justified by the exception;

Response: There are Morrow County base zones in which data center is an allowed use, but they also include use lists that would allow activities other than data centers within the Site. Because such other uses would be inconsistent with purpose of this application and the exceptions from Statewide Planning Goals requested by this application, the LU Overlay is necessary and appropriate in conjunction with the proposed base rezoning to General Industrial (MG). This criterion is met.

2. The proposed zone is the best suited to accommodate the desired uses(s); and

Response: Applying the MG zone to the Site, together with an LU Overlay restricting land use to data center, is the best way to provide land for large-campus Exascale Data Center Campus development and use because:

- General Industrial (MG) is an industrial zone in which data center is an outright permitted land use.
- Data centers are typically consistent with the form, appearance, and sometimes very large scale of industrial sites and buildings in the MG zone.
- The Site is particularly well suited for data center use because it is proximate to critically needed facilities and services, such as electrical transmission lines and fiber-optic data/communications lines, but also distant from sensitive land uses, such as residences.
- The proposed LU Overlay will reserve the full area of the Site for data center use, ensuring that other forms of employment development will not seek to locate within the Site instead of at currently planned locations for such uses, consistent with previous Economic Opportunities Analysis (EOA) work and Comprehensive Plan efforts to date.

Based on the above facts and findings, this criterion is met.

3. It is required under the exception rule (OAR 660, Division 4) to limit the uses permitted in the proposed zone.

Response: Findings are provided above responding to the "reasons" exception rules in OAR 660-004. It is necessary to limit the allowed land uses at the Site to Data Center because allowing a wider range of uses would potentially engender a variety of deleterious effects on adopted plans. For example, allowing other industrial or commercial activities within the Site would compromise planning efforts to achieve a compact urban form, to limit commuting distances and Vehicle Miles Traveled (VMT) in urban areas, and to minimize construction- and maintenance costs associated with providing public utility services in urban areas. This criterion is met.

B. Official Plan/Zoning Map. The official plan/zoning map shall be amended to show an LU suffix on any parcel where the Limited Use Overlay Zone has been applied.

Response: This Section provides direction to staff for implementation of approved LU Overlay designations and requires no factual evidence from the applicant. The applicant proposes that the LU Overlay designation limiting allowed land use to data centers be applied to the entirety of the 1,298-acre site.

C. Site Plan Requirement. In addition to limiting the uses in the zone it may be necessary to require County approval of the location of buildings, access and parking, screening and other site planning considerations in order to ensure the compatibility of the permitted uses with the area. This requirement may be added by specific reference in the adopting ordinance. The ordinance shall indicate any special concerns or locational requirements that must be addressed in the site plan and be approved by the Planning Commission.

Response: The 1,298-acre Site for proposed MG/LU Overlay rezoning to allow data center use is located in an isolated and agriculturally non-productive area west of the Boardman Airport. The Site abuts the south boundary of the Interstate 84 corridor, and its western boundary is formed by the east bank of Sixmile Creek, a natural drainageway whose confluence with the Columbia River is a short distance north of the Site. The surrounding area is not designated for any types of future development, such as residential, that would be considered sensitive to impacts affecting compatibility of uses. In this context, it is not necessary or warranted to require preliminary site development plans at this stage because no sensitive uses that could be affected are located proximate to the proposed area for redesignation. Additionally, the applicant notes that proposed development(s) within the Site will be subject to Morrow County's land use review and site plan approval procedures on a project-by-project basis; impacts on other uses in the vicinity can be considered at that time, and Morrow County has authority to impose reasonable conditions of approval to ensure compliance with applicable Site Plan Review standards.

Section 3.092. Airport Safety and Compatibility Overlay Zone, ASC

A. Purpose. The purpose of this overlay zone is to protect and support the continued operation of the Boardman public use airport by establishing compatibility and safety standards and to reduce potential safety hazards for persons living, working or recreating near that airport.

Response: The subject site is located to the west of the Boardman Airport and is partially within the imaginary horizontal and conical surface areas surrounding the runway. This section applies to development of the site.

B. Definitions. Definitions in this section apply specifically to this overlay zone and are intended to supplement the definitions in Article 1.
[list of definitions omitted for brevity]

Response: The definitions in this subsection were referenced to evaluate compliance with the standards of the ASC.

C. Imaginary Surface Delineation. The airport elevation and the location and dimensions of the runway, primary surface, runway protection zone, approach surface, horizontal surface, conical surface and transitional surface shall be delineated for each airport subject to this overlay zone and shall be made part of the Official Zoning Map. All lands, waters, and airspace or portions thereof, that are located within these surfaces shall be subject to the requirements of this overlay zone.

Response: A map of the imaginary surfaces for the Boardman Airport, including the boundary of the subject site, is included in Exhibit 13. As indicated in the exhibit, the subject site is partially within the horizontal and conical surface areas.

D. Notice of Land Use and Permit Applications within Overlay Zone Area. Except as otherwise provided, written notice of applications for land use or limited land use decisions in the area within this overlay zone, including comprehensive plan or zoning amendments, shall be provided to the airport sponsor and the Department of Aviation in the same manner as notice is provided to property owners entitled by law to written notice of land use or limited land use applications.

1. Notice shall be provided to the airport sponsor and the Department of Aviation when the property or a portion thereof that is subject to the land use or limited land use application is within 5,000 feet of the sides or ends of the runway.

2. Notices required by this section need not be provided to the airport sponsor or the Department of Aviation where the land use or limited land use application:

a. would only allow structures less than 35 feet in height, measured from grade;

b. involves property located entirely outside the approach surface;

c. does not involve uses that emit smoke dust, or steam; sanitary landfills or water impoundments; or radiotelephone, television or similar transmission facilities or electrical transmission lines; and

d. does not involve wetland mitigation, creation, enhancement or restoration.

Response: This subsection provides notice requirements for the County to follow when it processes land use and permit applications within the ASC. Under MZCO 5.020, data center development on this Site will be subject to Site Plan Review and this notification will occur as part of that land use permitting process.

E. Height Limitations on Allowed Used in Underlying Zone. All uses permitted by the underlying zone shall comply with the height limitations in the Section unless standards of the underlying zone are more restrictive.

1. Except as provided in paragraph 2, no structure or tree or other object of natural growth shall be allowed to penetrate an airport imaginary surface.

2. For areas within airport imaginary surfaces but outside of the approach and transition surfaces, where terrain is at higher elevations than the airport runway surfaces where existing structures and permitted development penetrate the airport imaginary surfaces, a local government may authorize structures up to 35 feet in height.

Response: Following approval of the requested amendments, the site will be zoned MG, which does not include height limitations. A Limited Use Overlay will restrict permitted uses to data centers with related ancillary improvements and associated infrastructure facilities, and the uses allowed in the EFU district. As shown in Exhibit 13, the grade of the site varies from approximately 440 feet at the south end to approximately 340 feet at the north end. The ASC horizontal surfaces intersect the eastern edge of the site at an elevation of 542 feet. The conical surface ascends westward across the site to an elevation of 742 feet at the outermost perimeter of the conical surface area. At the eastern edge of the Site, nearest to the airport, a structure would have to be over 100 feet in height to penetrate the conical surface. Across

the rest of the Site, structures could be well over 100 feet without penetrating the surface. Therefore, it will be feasible for future development to comply with the ASC, which can be confirmed through the County's development review process at such time new structures are proposed.

F. Procedures. An application for a land use or limited land use approval on property within this overlay zone shall provide the following information in addition to any other required information:

1. A map or drawing showing the location of the property in relation to the airport imaginary surfaces.

2. Elevation profiles and a site plan, drawn to scale, including the location and height of all existing and proposed structures, measured from existing grade.

Response: A map of the site in relation to the Boardman Airport imaginary surfaces is included in Exhibit 13. A conceptual site plan for a future EDCC, which includes elevation contours, is included in Exhibit 4; however, as this is a conceptual plan for prospective future development, building height is unknown. As described in the response to subsection (E), above, it will be feasible for future development to comply with the standards of the ASC. Final compliance will be demonstrated when development is proposed through site plan review.

G. Land Use Compatibility Requirements. Any land use allowed in the underlying zone may be permitted in the overlay zone, subject to the following standards:

1. The user shall comply with the height standards in Section (E) of this Chapter.

2. The use shall not include a place of public assembly.

3. The uses shall not create a bird attractant. If the airport sponsor determines that there is a potential for attracting birds, the application shall include a study demonstrating that any hazard to use of the airport is mitigated.

4. The use shall not cause light or glare that projects lighting directly onto a runway or taxiway, or imitates airport lighting

Response: These standards will be applied through the County's site plan review process when there is a specific development proposal.

H. Prohibited Uses. Notwithstanding the underlying zoning, the following uses are prohibited in the Airport Safety and Compatibility Overlay Zone:

1. New residential Development.

2. New Public Assembly Facilities.

Response: The proposed Limited Use Overlay does not include residential development or public assembly facilities. This standard is met.

I. Nonconforming Uses.

[remainder of this subsection omitted for brevity]

Response: The site does not contain any nonconforming uses. This section does not apply.

Findings for Amendments Applicable to the Proposed Downzone Area

Compliance with Criteria for Goal Exceptions and Comp Plan Amendments

As explained above in the Introduction section, an integral component of this application is the request to amend the County Comprehensive Plan Map designation of Industrial to Agriculture, and the corresponding map designation of Spage Age Industrial to Exclusive Farm Use, for a single contiguous rectangular area containing approximately 1,605 acres. This concurrent rezoning will enhance Goal 3 protections to an existing agricultural land area, much of which is irrigated and used for crop production,

by prohibiting the development of a wide range of intensive industrial uses allowed under the current SAI zoning designation. The evidence and findings presented below demonstrate that the EFU designation is appropriate for the proposed 1,605-acre "downzone" area.

Because this component of the proposal does not involve allowing urban or non-resource uses or related urban infrastructure, no exceptions from the applicable Statewide Planning Goals are required. The following statements explain why the proposed change complies with applicable Statewide Planning Goals, as well as Morrow County's standards identified in the Comprehensive Plan and Zoning Ordinance.

OAR 660, Division 4 – Interpretation of Goal 2 Exception Process

Response: OAR 660-004 is not applicable because the proposed redesignation/zone change, from Industrial/SAI to Agriculture/EFU, does not require a Goal exception.

OAR 660, Division 12 – Transportation Planning

Response: OAR 660-012 is applicable. Please see findings below in the response to Statewide Planning Goal 12 (Transportation).

OAR 660, Division 14 – Application of the Statewide Planning Goals to Newly Incorporated Cities, Annexation, and Urban Development on Rural Lands

Response: OAR 660-014 is not applicable because the proposed redesignation/zone change from Industrial/SAI to Agriculture/EFU effectively removes the proposed 1,605-acre downzone area from the current allowance of urban industrial use under the SAI zone designation.

Compliance with Statewide Planning Goals

Goal 1 (Citizen Involvement)

Goal: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.
Response: Morrow County's acknowledged comprehensive plan and land use regulations specify public involvement procedures required for plan amendments. The procedures include notice to the public, as well as State of Oregon agencies including the Departments of Land Conservation and Development (DLCD) and Transportation (ODOT), the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), and other interested parties. Public hearings before the Morrow County Planning Commission and Morrow County Board of Commissioners provide for public involvement in the planning process as required under Goal 1. By following the County's established public involvement procedures, Goal 1 is met.

Goal 2 (Land Use Planning)

Goal: To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.
Response: The factual evidence and analysis findings presented in this application package demonstrate that the proposed zoning redesignation package complies with Statewide Planning Goals as well as Morrow County implementing regulations in the Comprehensive Plan and Zoning Ordinance. The downzone request will convert land currently in agricultural use from an Industrial/Space Ace Industrial (SAI) designation to Agriculture/EFU to ensure that no net loss of productive agricultural land will occur with the proposed redesignation of the Site, as discussed in detail above in this report. Based on the

discussion below regarding compliance with applicable Comprehensive Plan policies, the proposal maintains consistency with policies in the Comprehensive Plan, and thus satisfies Goal 2 requirements.

In preparing to submit this request, the applicant's team has coordinated with staff of affected local governments (cities and counties), CTUIR, and utility service providers to identify issues of concern and address them in the analysis and recommendations, and to obtain data to support the analysis.

Goal 3 (Agricultural Lands)

Goal: To preserve and maintain agricultural lands.
Response: Goal 3 requires Morrow County to protect agricultural lands for farm uses through appropriate zoning. With respect to the Site, discussed in detail above, this application package includes detailed responses to "reasons" exception standards in OAR 660-004 and supporting evidence, which demonstrate that the proposed zoning redesignation package complies with Goal 3. With respect to the proposed "downzone" area, the proposed conversion of approximately 1,605 acres from Industrial/SAI designation to Agriculture/EFU will ensure that no net loss of productive agricultural land will occur. The applicant has provided geotechnical/soils analysis documentation (see Exhibit 10.B) demonstrating that the "downzone" area contains superior soil conditions, 775-acres of which is actively farmed and irrigated. This 775 acres in particular exhibits Class IVe soils and is far more suitable for the proposed Agriculture/EFU designation than the EFU-zoned soils at the Site, which has many agricultural limitations, would require substantial financial and time investment to achieve a cultivation condition, and even if such condition were achieved, would still be inferior to the agricultural condition of the downzone study area. See Exhibit 10.B. As noted in the Downzone Area Soils Report, given these limitations the land proposed for upzoning is not likely to become cultivation land, while much of the land (775 acres) proposed for downzoning is likely to remain in high-value crop production due to favorable soil conditions and associated improvement (irrigation, land leveling, access, etc.). The applicant has also provided aerial photographic evidence of center-pivot irrigation in use in the southern portion of the area, together with evidence of the potential for expanded irrigation within the remaining downzone area (See Figure II-4). For these reasons, Goal 3 is satisfied.

Goal 4 (Forest Lands)

Goal: To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.
Response: The proposal does not propose to designate or affect lands designated for forest uses. Goal 4 does not apply.

Goal 5 (Open Spaces, Scenic and Historic Areas and Natural Resources)

Goal: To protect natural resources and conserve scenic and historic areas and open spaces.
Response: The County Comprehensive Plan has not identified any inventoried significant natural, scenic, historic or open space areas within or near the proposed "downzone" area. See the attached Significant Resource Inventory Map, Exhibit 11., and also a map excerpt in Exhibit 16. Per the analysis in the Natural Resources Assessment, there are no significant Goal 5 resources that would be affected by this proposal to amend land use designations.

Based on the facts and findings above, the proposal complies with Goal 5.

Goal 6 (Air, Water and Land Resources Quality)

Goal: To maintain and improve the quality of the air, water and land resources of the state.
Response: The State of Oregon has adopted statutes and administrative rules to protect air, water and land resources from environmental impacts of development and land use activities. The effect of the proposed redesignation of the "downzone" area will be to protect it from urban industrial development within its approximately 1,605 acres. Like other agricultural operations, activities within the "downzone" area will be required to comply with applicable local, state, and federal regulations regarding air, water and land resources quality as they apply in EFU-zoned areas. The proposed downzone is therefore consistent with Goal 6.

Goal 7 (Areas Subject to Natural Disasters and Hazards)

Goal: To protect people and property from natural hazards.
Response: The proposed "downzone" area does not contain mapped flood or geologic hazards (see FEMA FIRM Panels, Exhibit 14, and DOGAMI SLIDO Maps, Exhibit 15). The proposed amendment will have no effect on Morrow County's compliance with Goal 7.

Goal 8 (Recreational Needs)

Goal: To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.
Response: The proposal does not affect recreational facilities or land needed to meet Morrow County's recreational needs. Goal 8 does not apply.

Goal 9 (Economic Development)

Goal: To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.
Response: Agriculture is a vital component of the Morrow County economy. The redesignation of the "downzone" area – from Industrial/SAI to Agriculture/EFU – is proposed to ensure that the proposed redesignation of the Site to allow data center use (the subject of the exceptions discussed in the above section of this report) will not cause a net decrease in the total amount of Goal 3 resource land in Morrow County protected for agricultural use. Additionally, because soil conditions and irrigation capacity are superior for agriculture at the "downzone" area as compared to the Site, the net effect is to ensure the long-term productivity of an almost equal acreage of higher quality farmland in Morrow County. See Exhibits 10 and 10B.

In 1987, Morrow County, at the request of Boeing, completed the exceptions process in order to change its Comprehensive Plan and zoning designation for approximately 14,080 acres of EFU land to an Industrial Comp Plan designation and Space Age Industrial (SAI) zoning.[20] In 1996, the County further amended the SAI zone to allow farm uses as a permitted use to respond to changes making it possible to irrigate portions of this area and to allow interim uses pending Boeing long-term efforts to develop portions of the area for industrial uses.[21]

[20]See Morrow County Ordinance 001-87b (Rezone of 14,080 acres of lands zoned for Exclusive Farm Use to Space Age Industrial).
[21] See Morrow County Ordinance MC-C-6-96 (An Ordinance amending the Morrow County Comprehensive Plan and Zoning Ordinance allowing Farm Use as an outright use in the Space Age Industrial and General Industrial-Limited Use Overlay Zone).

Since the time of the 1987 redesignation, no development consistent with the "Space-Age Industrial" uses the zoning was intended to generate or attract has occurred. While such development may occur in the future, there is scant evidence of economic demand within that economic sub-sector to date for the approximately 13,500 acres currently in the SAI zone.[22] The proposed downzone will reduce the County's SAI-zoned land inventory by approximately 1,605 acres or 12.2%, from approximately 13,159 acres (after the proposed conversion of 331 acres of the Site to MG/LU Overlay) to a total of approximately 11,564 acres. Given the apparent lack of economic demand for SAI development to date, there is no evidence to suggest that an SAI inventory reduction of about 12.2% will in any way compromise the County's ability to attract economic user(s) of the remaining 11,564 acres of land in the SAI zone.

For these reasons, the proposal, including in particular the "downzone" component, will continue to further the goal of providing "*adequate opportunities … for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens*" and is consistent with Goal 9.

Goal 10 (Housing)

Goal: To provide for the housing needs of citizens of the state.
Response: The proposal does not affect the provision of housing. The proposed amendments have no effect on Morrow County's compliance with Goal 10.

Goal 11 (Public Facilities and Services)

Goal: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.
Response: The proposed amendments in the "downzone" area – from Industrial/SAI to Agriculture/EFU – will designate the area agricultural resource land, making it ineligible for extension of such facilities. In this context, it is appropriate to consider whether such ineligibility could potentially compromise future utility extensions that would be necessary to serve other SAI-zoned areas that will require public facilities. Significantly, the large SAI-zoned area is situated on both sides of Tower Road, which is likely to serve as the primary corridor for transportation access as well as public facilities infrastructure to serve the area. Because the proposed "downzone" area is situated at the far eastern edge of the SAI zone, its redesignation to EFU will not impose a barrier to public facilities extension(s) to serve any other SAI-zoned property from the central Tower Road corridor. The proposed downzone maintains compliance with Goal 11 and prior actions of Morrow County that imply future extensions of public facilities to serve development in the remaining SAI-zoned areas.

Goal 12 (Transportation)

Goal: To provide and encourage a safe, convenient and economic transportation system.
Response: The proposed downzoning will eliminate the current allowance of urban development based on existing SAI zoning within the approximately 1,605-acre "downzone" area, and proposes redesignation as Exclusive Farm Use, allowing only rural farm and limited non-farm uses. Such change will not only reduce potential reasonable-worst-case trip generation from the "downzone" area itself (based on EFU- rather than SAI-zone land uses), it will also reduce the overall potential for vehicle trips from urban sources/destinations on County roads in the vicinity and at the Tower Road interchange.

[22] Current SAE acreage figures are approximately, reported based on Geographic Information Systems (GIS) data obtained from Morrow County.

OAR 660, Division 12 – Transportation Planning

660-012-0060 – Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

(b) Change standards implementing a functional classification system; or

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response: In Exhibit 9, the applicant has provided a report that addresses the requirements of the Transportation Planning Rule (OAR 660-012) (TPR Analysis); its findings, conclusions and recommendations have been incorporated into the recommended findings in this report. In relevant part, the TPR Analysis concludes that vehicular traffic generated by uses allowed under EFU zoning will have a less significant impact compared with the potential vehicular traffic generated under the existing SAI zone designation. For these reasons, based on the TPR Analysis, the proposed downzoning does not "significantly affect" a transportation facility as defined in OAR 660-012-0060(1)(a) through (c). Goal 12 is met, and further analysis of potential impacts under OAR 660-012-0060 is not required.

(5) The presence of a transportation facility or improvement shall not be a basis for an exception to allow residential, commercial, institutional or industrial development on rural lands under this division or OAR 660-004-0022 (Reasons Necessary to Justify an Exception Under Goal 2, Part II(c)) and 660-004-0028 (Exception Requirements for Land Irrevocably Committed to Other Uses).

Response: This provision is not applicable because the proposed "downzone" does not seek to allow residential, commercial, institutional or industrial development on rural lands.

660-012-0065 – Transportation Improvements on Rural Lands

(1) This rule identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception.

660-012-0070 – Exceptions for Transportation Improvements on Rural Land

(1) Transportation facilities and improvements which do not meet the requirements of OAR 660-012-0065 (Transportation Improvements on Rural Lands) require an exception to be sited on rural lands.

(a) A local government approving a proposed exception shall adopt as part of its comprehensive plan findings of fact and a statement of reasons that demonstrate that the standards in this rule have been met. A local government denying a proposed exception shall adopt findings of fact and a statement of reasons explaining why the standards in this rule have not been met. However, findings and reasons denying a proposed exception need not be incorporated into the local comprehensive plan.

(b) The facts and reasons relied upon to approve or deny a proposed exception shall be supported by substantial evidence in the record of the local exceptions proceeding.

Response: The "downzoning" component of this application does not involve transportation improvements on rural lands; OAR 660-012-0065 and -0070 are not applicable.

Goal 13 (Energy Conservation)

Goal: To conserve energy.

Response: The proposed "downzone" area currently supports extensive agricultural activity with center-pivot irrigation and sufficient access to allow continued and enhanced farming. The proposed designation change will require no energy inputs or practice changes relative to existing conditions because the established farm use will continue under the new zoning, while eliminating the possibility of industrial development of the 1,605-acre area in the future. For those reasons, the proposal is consistent with Goal 13.

Goal 14 (Urbanization)

Goal: To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land, and to provide for livable communities.

Response: The proposed "downzone" area is not located adjacent to an Urban Growth Boundary (UGB), where the proposed Agriculture/EFU redesignation could foreseeably conflict with the purpose of Goal 14: notably, to foster and achieve efficient urban growth and development patterns in the future. Because the "downzone" area's location is suitable for continued farming use, its redesignation for Agriculture/EFU zoning will maintain consistency with Goal 14 by focusing urban growth and development pressures appropriately on other areas proximate to established UGBs.

Goal 15 (Willamette River Greenway)

Goal: To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.

Response: The proposed "downzone" area is not located near the Willamette River Greenway. Goal 15 does not apply.

Goal 16 (Estuarine Resources)

Goal: To recognize and protect the unique environmental, economic and social values of each estuary and associated wetlands; and

To protect, maintain, where appropriate develop, and where appropriate restore the long-term

environmental, economic, and social values, diversity and benefits of Oregon's estuaries.
Response: The proposed "downzone" area is not located near estuarine resources. Goal 16 does not apply.

Goal 17 (Coastal Shorelands)

Goal: To conserve, protect, where appropriate, develop and where appropriate restore the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water dependent uses, economic resources and recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of the adjacent coastal waters; and

To reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat, resulting from the use and enjoyment of Oregon's coastal shorelands.
Response: The proposed "downzone" area is not located near coastal shoreland areas. Goal 17 does not apply.

Goal 18 (Beaches and Dunes)

Goal: To conserve, protect, where appropriate develop, and where appropriate restore the resources and benefits of coastal beach and dune areas; and

To reduce the hazard to human life and property from natural or man-induced actions associated with these areas.
Response: The proposed "downzone" area is not located near beach and dune areas. Goal 18 does not apply.

Goal 19 (Ocean Resources)

Goal: To conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social value and benefits to future generations.
Response: The proposed "downzone" area is not located near the ocean. Goal 19 does not apply.

Compliance with Morrow County Comprehensive Plan and Land Use Regulations

Morrow County Comprehensive Plan

In this section, the applicant has identified and excerpted Comprehensive Plan Goals and Policies that may be affected by the proposed change, followed by response statements.

Citizen Involvement [detailed provisions omitted for brevity]
Response: This proposal does not propose to amend any Citizen Involvement goals or policies. The County will comply with Citizen Involvement goals and policies in the acknowledged Comprehensive Plan by processing the application in accordance with the procedures in Article 8 of the Morrow County Zoning Ordinance.

General Land Use Element

General Land Use – Future

- Farm: In order to protect the agricultural element of the County's economic base, productive farm lands should be protected from encroachment by non-agricultural uses. Farm land in Morrow County is best managed in large units....

Response: The proposed "downzone" area is already a productive farm site, not adjacent to any UGB, with center-pivot irrigation and sufficient access to allow farming on the property. The established farm use will continue under the new zoning, while eliminating the possibility of industrial development of the 1,605-acre area in the future. For those reasons, the proposal is consistent with the Farm General Land Use Element.

- Industrial: An objective of the Plan is to accommodate industry without encroaching on residential or agricultural development. Additionally, industry is to be protected from encroachment by noncompatible uses.

The industrial land designated in the Plan and on the land map reflects the needs of industry for (a) access to highway, rail, and water transportation; (b) access to electric power and natural gas; (c) extensive, level building sites; and (d) room for expansion.

The following general policies shall be followed in guiding future industrial development:

1. *Industrial uses should not encroach on residential or agricultural uses. For example, cattle feed lots, which are incompatible with most other uses, should be surrounded by sufficient open space to provide a protective buffer.*

Response: As explained above in the response to Statewide Goal 9 (Economic Development), the proposed 1,605-acre downzone from SAI to EFU represents an approximately 12.2% reduction of available SAI-zoned land, leaving Morrow County with approximately 11,562 acres – or 18 square miles of SAI-zoned land – remaining in inventory for future development as planned under the SAI zoning designation. The "downzone" area's location at the edge of the SAI-zoned area, as well as its significant size (1,605 acres represents and area of 2.5 square miles), will allow future SAI development on the remaining SAI-zoned land without introducing an industrial-agricultural compatibility problem. This policy is met.

2. *Interim uses in areas designated for industrial use should be limited to those that will not deter later industrial development.*

Response: This provision is not applicable because the change to the Agriculture designation and EFU zoning will make agriculture a permanent rather than an interim use of the "downzone" area.

3. *When conflicts between different uses arise, consideration should be given to the general good of the economy and to the need for basic industry that will create new, continuing local employment.*

Response: The applicant, Threemile Canyon Farms LLC, is the owner not only of the proposed "downzone" area but also the adjacent lands in the SAI zone. As owner, Threemile has selected the area for EFU conversion because they have concluded that it will not create a conflict if and when development and use of the adjacent SAI-zoned property occurs. This policy is met.

- Significant Resource Overlay Zone: The purpose of the Significant Resource Overlay Zone is to identify areas and sites in Morrow County identified as Significant Goal 5 Resources and designated: '3A' to preserve the site; and '3C' to limit conflicting uses. Such sites are subject to the applicable plan policies of the comprehensive plan and Section 3.200 'Significant Resource Overlay Zone' or Section 3.300 'Historic Building and Sites' of the Morrow County Zoning Ordinance.

Response: The proposed "downzone" area contains no significant resources designated by Morrow County through the Goal 5 process. Goal 5 resources will not be affected by this proposal.

- Limited Use Overlay Zone: The purpose of the Limited Use Overlay Zone is to limit the list of permitted uses and activities allowed in the underlying zone to only those uses and activities which are justified in the Comprehensive plan 'reasons' exception statement under ORS 197.732(1)(c) and OAR 660-04-018(3). When the Limited Use Overlay is applied, the uses permitted in the underlying zone shall be limited to those and activities specifically referenced in the adopting ordinance applying the Limited Use Overlay Zone. Reasonable conditions may also be imposed by the Limited Use Overlay Zone when necessary to carry out the provisions of the plan and zoning ordinance.

Response: These provisions are not applicable because the "downzone" request does not require a reasons exception; therefore, no Limited Use Overlay is proposed or required for the "downzone" area.

- Space Age Industrial Zone: The proposed Space Age Industrial designation is intended to recognize those areas devoted to or most suitable for space age technology research and development. Uses of land inconsistent with those purposes with these purposes [SIC] *will not be authorized.*

Response: With the proposed redesignation of "downzone" area, the Morrow County inventory of SAI-zoned land will remain at approximately 11,564 acres, or approximately 18 square miles of land.[23] The relatively minor change will not compromise Morrow County's ability to realize the intended development potential of the SAI land use designation.

Objectives and Policies

…

3. To continue efforts to identify lands suitable for development and areas where development should be restricted.

Response: As explained above in findings for this policy as it applies to the proposed data center Site, the "downzone" area is proposed for conversion from SAI to EFU because its soil characteristics are in fact superior to those of the Site for purposes of commercial farming – which is already in practice within the "downzone" area, supported by center-pivot irrigation. Per this policy, it is appropriate to use EFU zoning to protect this productive agricultural land, keep it in farm production, and restrict potential for it to be converted to industrial use. The proposed Industrial/SAI-to-Agriculture/EFU change is therefore consistent with this objective/policy.

4. To continually monitor the land requirements and locations for projected economic development and population growth.

Response: As noted above, the proposed amendments, including conversion of the "downzone" area from SAI to EFU, will reduce the Morrow County inventory of SAI-zoned land from 13,500 to 11,564 acres, approximately. That land inventory figure – representing about 18 square miles of land eligible for Space-Age Industrial development – maintains Morrow County's ability to attract and support one or more users within that industrial category.

[23] Acreage figures are approximate, reported based on Geographic Information Systems (GIS) data obtained from Morrow County. Total area in SAI zoning is 13,500 acres +/-, before proposed reductions of 331 and 1,605 acres by rezoning to MG/LU Overlay and EFU, respectively.

5. *To determine the public facilities and services required by the County to accommodate existing unmet public needs and expected needs resulting from population growth.*

Response: The proposed SAI-to-EFU change relieves the need for the County to plan public facilities and services to the 1,605-acre "downzone" area, because it will be redesignated as Agriculture resource land and zoned for Exclusive Farm Use.

9. *Plan/Zone Map Requirements:*
   a. *To insure consistency between the Comprehensive Plan Map and Zoning Map, a single plan/zone map shall be adopted with the zone designations and described in B, below. All plan and zone changes shall be in compliance with all applicable Statewide Planning Goals, County plan policies and procedures.*

   Response: This proposal is to amend the adopted Plan/Zone Map. This report and its supporting evidence demonstrate compliance of the proposed plan/zone change with the Statewide Planning Goals and County plan policies and procedures. This requirement is satisfied.

Agricultural Lands Element

Introduction

"Agricultural Lands" as set forth within the context of Statewide Planning Goal No. 3 are defined as land of predominately Class I, II, III, IV, V, and VI soils as identified in the Soil Capability Classification System of the United States Soil Conservation Service, and other lands which are suitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land use patterns, technological and energy inputs required, or accepted farming practices. Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands, shall be included as agricultural land in any event.

Within the same context, "Farm Use" is defined in reference as set forth in ORS 215.203 and includes the non-farm uses authorized by ORS 215.283.

Morrow County agriculture contributes about $72 million in annual income to the County and supports local food processing, transportation, trade, and service employment and payrolls. The County's agricultural sector has consistently ranked among the top ten Oregon counties in total agricultural productivity. As agriculturalists enter new crop markets and as continued irrigation and technological advancements are developed, the sector's importance to the County and state will be ensured.

Problems facing County agriculture include formation of water allocation policies between local, state, and inter-state interests, shortages in affordable labor supplies, increased costs of supplies, electricity, equipment, and transportation, development of new markets for County products and in some areas, increased land use pressures among competing interests (i.e., industrial, commercial, recreational, and agricultural). Proper planning, policy formulation, education, and coordination efforts may alleviate some of these problems in the future.

Agricultural Lands Exceptions

Objectives

1. *To maintain a viable agricultural base, preserve agricultural lands for agriculture, and to protect agriculture as a commercial enterprise.*

Response: The proposed SAI-to-EFU conversion puts productive agricultural land now in use for farming under the protections of the Agriculture Comprehensive Plan designation and EFU zoning. The proposed action contributes directly to this three-part objective.

2. *To conserve natural resources constituting important physical, social, aesthetic and economic assets through the development and adoption of realistic land use and development policies intended to achieve an economic-environmental balance, minimize public costs, and maximize energy conservation.*

Response: The proposed approximately 1,605-acre "downzone" area contains approximately 775 acres of productive irrigated agricultural soils but no other inventoried significant natural resources. Compared to the approximately 967-acre EFU-zoned portion of the Site (proposed for resignation from EFU to MG/LU Overlay), its geology and soils characteristics support commercial farming, which is not feasible within the Site, based on findings in the Soils Report (Exhibits 10 and 10.A). Thus, the "downzone" area superior as compared to the Site for Agriculture/EFU designation and farm use. On balance, the overall effect of the proposed package of Comprehensive Plan Map/Zoning designation changes is preferable to the current land use designations with respect to conserving productive agricultural land for farming. The proposal is therefore consistent with this objective.

3. *To minimize and actually prevent conflict between farm and non-farm uses and resultant increased economical costs to the agricultural sector.*

Response: The applicant, Threemile Canyon Farms LLC, is the owner not only of the proposed "downzone" area but also the adjacent lands in the SAI zone. As owner, Threemile has selected the area for EFU conversion because they have concluded that it will not create a conflict if and when development and use of the adjacent SAI-zoned property occurs. The proposal furthers the goal of preventing farm/non-farm conflicts, as intended by this objective.

4. *To provide maximum opportunity for optimum management and operational practices, and provide adequately efficient supportive resources and services.*

Response: As discussed above for Objective 3, the proposed land designation changes will improve the overall quality and farm productivity of land in the County's EFU inventory by replacing the Site's approximately 967 acres of non-farmable land with the "downzone" area's approximately 1,605 acres of land that is currently zoned SAI, 775 acres of which is irrigated, productive farmland. The resulting improved alignment between zoning designation and productive agricultural capacity contributes to this objective by preserving better-quality farmland in EFU for long-term use in accordance with optimum agricultural management and operational practices.

Agricultural Policies

1. *It shall be the policy of Morrow County, Oregon, to preserve agricultural lands, to protect agriculture as its main economic enterprise, to balance economic and environmental considerations, to limit non-compatible nonagricultural development, and to maintain a high level of livability in the County.*

Response: The proposed land designation changes will improve the overall quality and farm productivity of land in the County's EFU inventory by replacing the Site's approximately 967 acres of non-farmable land with the "downzone" area's approximately 1,605 acres of SAI-zoned land, 775 acres of which is irrigated, productive farmland. The proposal is consistent with this policy.

17. *The County, Port, regional and state agencies should work with private citizens to secure utilization of the Navy's north Morrow tract, so that when market conditions permit, the land may be*

developed for more intensive agriculture, or other compatible and/or complementary uses including industrial and energy purposes.

Response: The proposed "downzone" area is not within or near the Navy's north Morrow tract. The proposed Agriculture/EFU redesignation has no effect on this policy.

Forest Lands Element

Response: No designated Forest Lands are affected by this proposal. This Element is not applicable.

Natural & Cultural Resources Element

Response: As directed by Statewide Planning Goal 5 and its implementing statutes and administrative rules, Morrow County has inventoried resources; has analyzed Environmental, Social, Economic, and Energy (ESEE) consequences of conservation/protection versus allowing development impacts; and has adopted designations of significant Goal 5 resources. Such significant resource designations include land resources (soils, minerals, vegetation, and water resources); air resources; air, water, and land quality; fish and wildlife; fisheries; wildlife; scientific and cultural resources; and historical resources.

The proposed "downzone" area for redesignation from Industrial/SAI to Agriculture/EFU does not contain any designated significant Goal 5 resources; therefore, the proposed amendment will have no effect on Goal 5 compliance.

Natural Hazards Element

1. *Flood risk will be managed by limiting or regulating development in areas identified by the Federal Emergency Management Agency Flood Insurance Rate Maps or in areas identified by the County to be at risk to life or property due to flooding. County regulations will be compliant with National Flood Insurance Program requirements for development in flood prone areas*
2. *County land use regulations will assure proposed developments will receive a review of potential natural hazards and that sufficient authority exists to modify or deny applications where such hazards exist. Such provisions shall, at a minimum, require specific information clearly determining the degree of hazard present from applicants who seek approval to develop residential, commercial, or industrial uses within known areas of natural disasters and hazards.*

Response: The proposed "downzone" area does not contain areas within a Federal Emergency Management Agency (FEMA) flood hazard boundary, nor does it contain any of the other seven high-risk-factor natural hazard areas identified by this element of the Morrow County Comprehensive Plan (i.e., drought, earthquake, landslide, volcano, wildfire, windstorm, and winter storm). See Exhibits 14 and 15. Morrow County has adopted land use and development permitting regulations that are sufficient to ensure the safety of future permitted uses and associated development, if any, within the "downzone" area, as required by Natural Hazard Policy #2, recited above. The proposal complies with the Natural Hazards Element.

Recreation Element

Response: The proposed "downzone" area does not contain areas identified by Morrow County as necessary or particularly suitable for recreational use. The proposal will have no effect on recreational resources or implementation of the Morrow County Parks Master Plan.

Economic Element

Problems and Opportunities / Industrial Diversification: In the 1980 Comprehensive Plan concern was outlined that the opportunity for growth and development should become more diversified. While that has taken time diversification away from just an agricultural economic base has been happening. More energy generation projects have been sited in Morrow County and the use of personal computing and other

devices has created the need for electronic data storage, or data centers. Two new developments at the Port of Morrow are driven from the need to create cleaner fuels and do less harm to the environment. While diversification has been taking place, it should continue as new opportunities emerge.

Problems and Opportunities / Industrial Sites and Port Planning: A concern raised in the 1980 Comprehensive Plan was about the need to assure adequate industrial land into the future and a request that the Port of Morrow complete a master plan. Over the intervening years the Port of Morrow has acquired additional land at the Tower Road interchange, both south and north of Interstate 84; acquired the Kinzua Mill Site just north of Heppner; and will soon have available to them 1,800 acres of industrially zoned land on the former Umatilla Army Depot. All of these locations, along with expansion of the East Beach Industrial Area, assures an adequate supply of industrial land for the current planning time frame. Planning and infrastructure work will need to continue to ensure that these industrial sites have adequate transportation, energy and utility investment. Floodplain concerns will also need to be addressed at the Kinzua Mill Site north of Heppner to facilitate development opportunities.

Goal 4: To encourage the development of compatible land uses throughout the County and to protect areas suitable for industrial development from encroachment of incompatible land uses.

> *Policy 4A: To limit uses on or near sites zoned for specific industrial and commercial uses to those which are compatible with industrial and commercial development.*
>
> *Policy 4B: To utilize appropriate mechanisms in implementing regulations to ensure that any development adjacent to or in the vicinity of the Boardman Airport is a compatible use and will not impede future growth of the airport.*

Response: The proposed "downzone" area is adjacent to land zoned PUB[24] (to the north and east), MG (to the south), and SAI (to the west). Redesignating this area from Industrial/SAI to Agriculture/EFU will increase the amount of Morrow County's Industrial land that is adjacent to Agricultural land. However, under existing conditions, these industrial zoned areas have substantial shared boundaries with EFU zoning on multiple sides. This indicates that Morrow County does not consider the uses allowed in the EFU district to be incompatible with adjacent industrial uses. Therefore, the proposed Agriculture/EFU designation of the 1,605-acre "downzone" area does not conflict with this Goal.

Housing Element
Response: The proposed land use designation change has no effect on any land area designated for residential use. The Housing Element is not affected by it.

Public Facilities and Services Element

Findings

10. Utilities

[24] The Morrow County Parcel Explorer online GIS (Interactive Maps and Dashboards|Morrow County Oregon / https://www.co.morrow.or.us/planning/page/interactive-maps-and-dashboards) displays the Naval Weapons Systems Training Facility property (five tax lots comprising approximately 47,326 acres) as being in the "Public (PUB)" zone; however, that Zone Designation is not found in the current version of the table in Morrow County Zoning Ordinance Section 2.010, Identified Zone Designations. See Figures II-3 and II-4 above in the Introduction section of this report.

C. *Electrical power substations can create negative environmental impacts on nearby property. Careful site planning and physical design can minimize adverse environmental effects.*

1. *General Policies*

A. *Planning and implementation of public facilities and service programs necessary for the public health, safety and welfare shall guide and support development at levels of service appropriate for, but not limited to, the needs of the development to be served.*

B. *Public facilities and services for urban areas shall be provided at levels appropriate to support optimum development (maximum density).*

Response: Because Tower Road is the logical, centrally-located corridor for provision of transportation access and public facilities and services to the SAI-zoned area generally, and because the proposed "downzone" area is at the eastern perimeter of the SAI-zoned area, its conversion to Agriculture/EFU designation will neither require further extension of planned future public facilities infrastructure, nor be in conflict with orderly service provision to the SAI-zoned area over time as its development may occur. Therefore, the proposal is consistent with these policies.

C. *Public facilities and services for rural areas shall be provided at levels appropriate for rural use.*

Response: No rural areas outside the Site (the Goal exceptions area) will become eligible for public facilities and services as a result of approving this request. The proposed amendments will designate the 1,605-acre "downzone" area as Agriculture resource land in the EFU zone, in which provision of public facilities and services would require a new exception(s) procedure. This policy is met.

D. *Providing public facilities and services to rural areas being changed to urban use shall be based upon: 1) the least time required to provide the service; 2) most reliable service; 3) lowest financial cost;. and 4) adequate levels of service that satisfy long range needs.*

E. *A public facility or service shall not be provided in an urbanizable area unless there is provision for the coordinated development of all the other urban facilities and services appropriate to that area.*

F. *All utility lines and facilities shall be located on or adjacent to existing public or private right-of-way or through generally unproductive lands to avoid dividing existing farm units.*

G. *Public facilities and services shall not be allowed beyond a level that development supported by such services exceeds the carrying capacity of the air, land and water resources; therefore, public facilities and services shall be the principal framework for gaging density levels and types of urban and rural land developments.*

Response: No provision of public facilities and services is proposed to the "downzone" area. The proposal is consistent with these policies.

H. *Public facilities and services shall be appropriate to support an adequate housing market in areas undergoing development or redevelopment.*

Response: This proposal has no effect on this policy because it affects no land areas designated in the Comprehensive Plan for residential development.

I. *All utility companies and irrigation companies affected by any and all land partitionings and subdivisions shall be notified and requested to make recommendations regarding compliance with long range development plans and specific utility easements.*

Response: Notwithstanding that this policy refers specifically to "land partitionings and subdivisions," the applicant has coordinated with service providers in the preparation of this request. Correspondences indicating feasibility of service provision to the Site are attached in Exhibit 17. No provision of public services is proposed to the 1,605-acre "downzone" area. The proposal is consistent with the intent of this policy (albeit not in the context of a land partition or subdivision).

J. *Methods for achieving desired types and levels of public facilities and services shall include without being limited to the following: 1) tax incentives and dis-incentives; 2) land use controls and ordinances; 3) multiple-use and joint development practices; 4) fee and less-than-fee acquisition techniques; 5) enforcement of local health and safety codes; and 6) a systems development charge as deemed appropriate and necessary.*

K. *The primary goal shall be to achieve a maximum balance of public costs vs. benefits/revenues in the provision of public facilities and services.*

L. *Equitable approaches and methods of financing shall be a basic goal.*

M. *Morrow County should utilize development review processes to ascertain the impact of large projects on County and community services and should demand the sponsor to participate in meeting associated expenses.*

N. *The County recognizes the need to provide adequate community facilities to serve area residents and shall support city efforts to obtain funding for construction and improvement of necessary public facilities.*

Response: No provision of public facilities and services is proposed to the "downzone" area, which will become ineligible for extension of public services as an Agriculture resource/EFU-zoned area. The proposal does not affect compliance with these policies.

2. Schools

A. *Morrow County will work with the school district and sponsors of future large scale developments to ensure adequate school facilities for present and potential residents.*

Response: Growth in residential development (i.e., increase in the number of households) in a community or region is a principal metric for projecting population growth and planning for school facilities. The proposed designation change will not affect the residential buildable land inventory in Morrow County or its cities. The proposed redesignation will have no effect on this policy.

3. Law Enforcement

A. *Law enforcement, police protection and justice facilities should be provided in adequate proportion to the growth rate.*

B. *The County should evaluate alternatives for providing jail, or at a minimum, short term holding facilities and should investigate various methods of funding.*

4. General Services

A. *The County recognizes the importance of community services for attracting new businesses and residents.to the area and will encourage development of the service sector where it is feasible.*

B. *Morrow County should cooperate with Wheeler and Gilliam Counties to obtain adequate health care for the area.*

Response: Agriculture/EFU-zoned areas in agricultural production are not associated with high or growing demand for law enforcement or other community- or health care services provided by the County or other service providers. The proposed SAI-to-EFU conversion will not significantly affect planning or delivery of such services in the region.

5. Utilities

A. *Programs should be continued to develop additional sources of electric and other power sources to assure adequate service to the County area and its projected growth.*

B. *Power substations should be centrally located to the service area as much as possible to assure economic service and facilitate energy conservation.*

C. *Power substations should be planned and designed in a manner which will minimize negative environmental impacts on nearby properties and the public as a whole.*

D. *Weatherization and other energy saving programs should be continued and supported by the power companies.*

E. *Underground utilities should be encouraged in all new developments where aesthetically and economically feasible.*

F. *Consideration of all new development shall be coordinated with. serving utilities relative to needed service locations and specifications, and easements and right-of-ways thereof. Included in such coordinated reviews shall be those utilities providing electrical, natural gas, cable television, and telephone services.*

Response: No provision of public utilities is proposed to the "downzone" area, which will become ineligible for extension of public utilities as an Agriculture resource/EFU-zoned area. The proposal does not affect compliance with these policies.

6. Water & Sewer

A. *The County's basic policy on water and sewerage shall be to encourage intensive development to locate within existing cities whenever possible. Cities are organized to provide water and sewerage service. When development does occur in unincorporated areas, such as recreation developments, minimum State sanitation and health requirements must be met by the private interests involved, including an individual lot-by-lot approval for subsurface sewage disposal or approved alternatives.*

Response: No provision of public utilities is proposed to the "downzone" area, which will become ineligible for extension of public utilities as an Agriculture resource/EFU-zoned area. The proposal does not affect compliance with this policy.

7. Solid Waste

A. *Solid waste disposal shall be accomplished in conformance with City and County solid waste management plans and applicable regulations.*

B. *No solid wastes shall be disposed of in the County without prior approval by the County. No such approval shall be granted until all environmental and economical considerations have been satisfied and the protection of the County, its residents and its economy assured.*

C. *Recycling shall be encouraged.*

Response: No solid waste disposal services to the "downzone" area are proposed because it will become an Agriculture resource/EFU-zoned area. The proposal does not affect compliance with this policy.

8. Fire Protection

A. *Fire protection shall be considered a common problem by the cities. County and fire protection districts.*
B. *All new subdivision design shall take into consideration the need for both an ingress and egress route for emergency vehicles and evacuation traffic.*
C. *All road and street names shall be clearly designated, as shall building addresses. Subdivisions shall be encouraged to install development layout signs at main entrances.*

Response: Fire protection needs of the proposed "downzone" area will be limited, consistent with allowed uses in Agriculture resource/EFU-zoned areas. The proposal does not affect compliance with this policy.

Transportation Element

Water Transportation

The Port of Morrow, located in Boardman, operates an industrial park and power sources and three barge terminals for general, wood chip and grain shipments. Experience at the Port of Umatilla indicates that water transportation is a relatively inexpensive way of transporting certain bulk items, particularly with containerized cargo methods. Location of the Port of Morrow near the Hinkle railroad switchyard gives the Port the potential to become a center for an inexpensive way of shipping east coast or midwest goods to west coast centers.

The Columbia/Snake River system above Portland carries a significant amount of barge traffic (about 10 million tons per year). This relatively cheap form of transportation is an important part of the County's economy. Moving commodities by barge is a substantial component of the transportation network of the County. Deep-water barge docking facilities are an essential part of the system. There are three dock sites in Morrow County that are for the most part naturally occurring because the main channel of the Columbia River cuts close to the Oregon shoreline. These three sites are:

1. The Port of Morrow;

2. The Boeing Riverfront property (west two miles from the Tower Road Interchange); and

3. The Patterson Ferry Road site (one-quarter mile on each side of the road).

Extensive dredging is not required for the current use or future development of these sites; only occasional minor dredging is necessary to maintain specific facilities. Morrow County has placed these sites in a special resource category and has adopted a plan policy to ensure their protection (Policy 27: Transportation Element).[25] *The uniqueness of the dock sites is supported by the U.S. Army Corps of Engineers' John Day Lock and Dam Master Plan (July 1970). The Master Plan notes that 99% of the riverfront along the John Day pool has been designated for recreation, fish and wildlife resource purposes.*

The Morrow County sites are the only barge dock sites in the upper end of the John Day pool. There are two other waterfront sites but both would require extensive dredging to develop as barge dock facilities (City of Umatilla, Port of Kennewick at Plymouth). In the lower half of the John Day pool, there are only three grain terminal barge dock facilities (Biggs, Arlington and Roosevelt WA). However, these sites are single purpose uses and are limited to current grain handling activities.

[25] The referenced policy appears as number 28 at the time of this application submittal; it is quoted and a response is provided below.

A recent study indicates that a potential for tripling the amount of cargo carried by barge exist [SIC] *in the river system. These sites are among those identified to handle this increase by continuing to provide the low-cost energy efficient transportation alternative that barges provide for agricultural producers, processors and manufacturers in the region (Source: Columbia/Snake River Port Study, 1980).*

Findings

4. *In addition to agriculturally-oriented firms already located at the Port of Morrow's industrial area, the Port has great potential for industrial and commercial development, and has identified an area with river frontage, as a future industrial park Site.*

5. *Barriers to the fullest development of this potential include inadequate access to the planned industrial zone, the constricted traffic pattern across the freeway in Boardman and into the Port property, the lack of dock facilities and of an airport, and the poor telephone service.*

Objectives

2. *To insure that all transportation systems within the County, to the fullest extent possible, be planned to utilize existing facilities and rights-of-ways provided that such is consistent with the environmental energy, land use, economic and social policies of the plan.*

5. *To classify streets and roads in accordance with function served or design function, and to insure compatible land uses adjacent thereto.*

9. *To include in all transportation plans considerations [SIC] of all appropriate transportation modes and to consider as a major determinant the carrying capacity of the air, land and water resources of the area, and more specifically, the affects [SIC] on agriculture and forestry base resources.*

28. *The County recognizes the importance of deep-water docking facilities to the economy and designates these sites as a deep-water transportation resource. The primary use of these sites will be for docking barges, cargo handling and support activities.*

Response: The changes in the proposed "downzone" area will substantially reduce potential vehicle trip generation from the area because travel demand associated with EFU uses is lower than that of SAI-zone uses. Therefore, the proposed SAI-to-EFU change will cause no significant impact on existing or planned facilities identified in the Transportation System Plan (TSP).

Specifically with respect to the Water Transportation element and Objective 28, the proposed "downzone" area is not located along the Columbia River and therefore cannot be used for river-oriented or river-dependent use. Its redesignation as Agriculture/EFU has no effect on compliance with the Water Transportation element and Objective 28.

Energy Conservation Element

Policies

1. *To encourage renewable and/or efficient energy systems, design, siting and construction materials in all new development and improvements in the County.*

2. *To conserve energy and develop and use renewable energy resources.*

3. *Encourage development of solar and wind resources.*

4. *To revise development regulations to encourage that the orientation of streets and buildings allow for utilization of solar energy and require landscaping to reduce summer cooling needs.*

5. *To regulate any object from casting a shadow on an existing solar collecting unit.*

6. *To encourage high density residential development in close and/or convenient proximity to high employment areas and commercial areas.*

7. *To encourage all systems and efforts for the collection, reuse and recycling of metallic and non-metallic wastes.*

8. *The County will work closely with individuals and appropriate government officials at all levels to ensure that the County continues to receive its share of the Columbia River power pool.*

9. *The County will encourage the development of alternative energy sources in County industries and businesses.*

10. *The County should encourage firms and agencies seeking to study these potential power sources to locate trial projects here, through a publicity campaign directed at interested institutions, business concerns and public agencies.*

11. *Priority consideration in overall planning should be given to implementation measures that will encourage achievement of maximum efficiency in energy utilization.*

12. *The allocation of land and uses permitted on the land should seek to minimize the depletion of non-renewable sources of energy.*

13. *Land use actions should, to the maximum extent possible, seek to recycle and re-use vacant land and those uses which are not energy efficient.*

14. *Land use development in the County should, to the maximum extent possible, combine increasing density gradients along high capacity transportation corridors to achieve greater energy efficiency.*

15. *All plans should be directed toward energy conservation and should consider as a major determinant the existing and potential capacity of the renewable energy sources to yield useful energy output. Renewable energy sources include water, sunshine, wind, geothermal heat and municipal, forest and farm waste.*

16. *Land use development shall be based on utilization of the following techniques and implementation devices which can have a material impact on energy efficiency:*
    a. *Lot size, dimension, and siting controls;*
    b. *Building height, bulk and surface area;*
    c. *Density of uses, particularly those which relate to housing densities;*
    d. *Availability of light, wind, and air;*
    e. *Compatibility of and competition between competing land use activities; and*
    f. *Systems and incentives for the collection, reuse and recycling of metallic and nonmetallic waste.*

Response: Refer to the "downzone" area-specific responses above to *Public Facilities and Services 1. General Policies* and the response to *5. Utilities*. Following the proposed "downzone" area designation amendment, the applicant intends to continue the existing farming use within the portion of the

downzone area (about 775 acres) that is currently improved with center pivot irrigation. No expenditure of energy will be necessary because the "downzone" area is already in use for farming, including a center-pivot irrigation installation. The "downzone" proposal is consistent with this policy.

Urbanization Element

Port of Morrow (Industrial Lands Outside an Urban Growth Boundary)

Recognized previously throughout the Plan for its economic importance to the County, necessitates special consideration in this element to those lands under jurisdiction of the Port of Morrow which are located outside the urban growth boundary of the City of Boardman and, are intended and vital for industrial development. Said properties (i.e. owned, controlled and managed by the Port of Morrow) involve a total of approximately 4,000 acres located east and southeast of the City of Boardman and bordered on the northwest by the Columbia River for a distance of about 3,600 feet (2/3 mile). Of this 4,000 acres, approximately 1,980 acres are available for future industrial development.

Major industrial development currently exists on Port property of which 350 acres is already identified as a Food Processing Industrial Park.

The major portion of the property under Port jurisdiction is located in Sections 1,2, 3, 4, 9, 10, 11,12 and 24 (Section 24 designated for effluent disposal) of Township 4 North, Range 25 East, and Sections 6 and 18 of Township 4 North, Range 26 East.

Existing ownerships and development patterns, coupled with the economic factors vital to the County, necessitates the designation of the Port of Morrow and properties controlled thereby as industrial. Such designation and appropriate implementing zoning does not, however, preclude the continuance of some agricultural use of said properties as an interim beneficial use until needed for industrial development.
Response: The proposed "downzone" area is not part of the Port of Morrow's land holdings. The proposed downzone will not affect compliance with the Port of Morrow component of the Urbanization Element.

Review and Revision Processes
Response: This Section of the Comprehensive Plan allows the County Board of Commissioners, Planning Commission, or a private property owner or authorized representative to initiate Comprehensive Plan amendments. The Section also provides direction for the review process, including public notices and hearings, and approval criteria; the latter refer specifically to (1) criteria in Morrow County Zoning Ordinance Article 8 Amendments, and (2) evidence of compliance with Statewide Planning Goals, including coordination and compliance with State agencies. The applicant's submittal includes evidence specifically addressed to those approval requirements, as detailed above in this report. Morrow County staff will process the request pursuant to procedural direction in the Morrow County Zoning Ordinance, consistent with the procedural direction of this Section. The proposal and the review procedure will thus comply with this Section.

Morrow County Transportation System Plan (TSP) Policies

The Transportation Element of the Comprehensive Plan contains a total of 28 policies. Below, the applicant has excerpted and responded to the policies identified as relevant and applicable to the proposed amendment.

4. Streets and roads shall be classified in accordance with the function served or designated; such classifications shall have improvement standards established therefore, and planning decisions

associated therewith shall take into account the interrelationships of such functions and adjoining land uses.

Response: Exhibit 9 contains a Transportation Analysis that includes Transportation Planning Rule (TPR) compliance findings. The proposed changes in the "downzone" area – redesignating approximately 1,605 acres from Industrial/SAI to Agriculture/EFU – will reduce potential vehicle trip generation within the "downzone" area. As a result, the proposed amendment will not significantly affect the functioning or TSP designation of any of the roads serving the "downzone" area. The amendment is consistent with this policy.

5. The County shall both establish and operate within effective and efficient street and road maintenance and acceptance management systems.

6. Transportation systems, to the fullest extent possible, shall be planned to utilize existing facilities and rights-of-ways, and shall avoid dividing existing economic farm units and urban social units unless no feasible alternative exists.

Response: No new road extensions or other improvements are necessary for access to the "downzone" area to support commercial farming because it is has already been successfully established in the 1,605-acre area. Access will continue to be by way of the existing road network, adding no new roadways, intersections, or other roadway extensions to the street network. For these reasons, the proposal is consistent with these policies.

9. The County shall recognize the relationship between land use and street function. Transportation shall be considered according to street classification policies in extension of existing development or approval of new development.

Response: The Transportation Analysis (Exhibit 9) demonstrates that land use activities allowed under the proposed Comprehensive Plan Map/Zoning change will maintain consistency with existing street classifications and classification policies.

10. The County shall require that road improvements necessitated by development shall be constructed in accord with street classification policies, and financed by the developer. (Such road improvements include roads affected by the impact of the development).

Response: Reasonable worst case trip generation by the "downzone" area under the proposed change from Industrial/SAI to Agriculture/EFU will be lower than potential trip generation from the area's current SAI zoning. The "downzone" area is already developed and in use for farm production. As a result, the proposal will not produce traffic impacts that will necessitate road improvements.

11. The County shall limit further development which prevents streets from serving their function (including causing streets to have lower speed limits than the function necessitates).

Response: As noted in the above statements, projected trip generation by the "downzone" area following the SAI-to-EFU change will be lower, maintaining consistency with the TSP designations and capacities of existing roads serving the area. The proposal is consistent with this policy.

19. The County should work with the Port, private concerns, federal and state agencies to evaluate and develop those Port facilities that are most economically desirable for full utilization of the Port's geographic advantages.

Response: The "downzone" area is not within or proximate to Port facilities. The proposed downzoning will have no effect on compliance with this policy.

27. It shall be the policy of Morrow County to protect the Morrow County Airport at Lexington, Army Depot Airport and the Boardman airport from incompatible uses through the application of the criteria established by State Aeronautics publication "Airport Compatibility Guidelines, 1981."

Response: As noted above, commercial farming of the "downzone" area will continue under the proposed SAI-to-EFU change. If future structures are proposed within the "downzone" area, they will be required to comply with applicable FAA requirements and the specific structure location(s). This policy is met.

28. The County recognizes the importance of deep-water docking facilities to the economy and designates these sites as a deep-water transportation resource. The primary use of these sites will be for docking barges, cargo handling and support activities.

Response: As noted above, the "downzone" area is not adjacent to the Columbia River and is not suitable for use as a docking facility. The proposed "downzone" area change has no effect on compliance with this policy.

Morrow County Zoning Ordinance (MCZO)

Article 8. Amendments

Section 8.040. Criteria

The proponent of the application or permit has the burden of proving justification for its approval. The more drastic the request or the greater the impact of the application or permit on the neighborhood, area, or county, the greater is the burden on the applicant. The following criteria shall be considered by the Planning Commission in preparing a recommendation and by the County Court in reaching their decision.

A. The local conditions have changed and would warrant a change in the zoning of the subject property(ies).

Response: With respect to the proposed data center Site, the applicant's evidence includes a report from Johnson Economics (Exhibit 8) that documents a recent economic/land development trend: deployment of Artificial Intelligence (AI) services across a wide range of applications is spurring a rapid – and only recently emerging – expansion in computing demand. That growth is, in turn, spurring demand for land suitable for Exascale Data Center Campus siting, to meet the rapidly expanding market demand. The Johnson Economics report projects that Morrow County can expect EDCC development to absorb an estimated 3,000 acres of land within the coming ten-year period. The Johnson Economics report identifies changes in the need and market demand for tracts of industrial land suitable for the specific needs of EDCCs. These changes in local conditions are sufficient to warrant the proposed change in the zoning of the Site.

The proposal to redesignate the approximately 1,605-acre "downzone" area, from the Industrial Comprehensive Plan designation and SAI zoning to the Agriculture designation and EFU zoning, is specifically designed to ensure that Morrow County's inventory of zoned and productive EFU land will not be diminished as the County moves to respond to this significant change in economic conditions. In fact, the County's overall EFU productivity will increase because the "downzone" area adds 1,605 acres to the County's EFU inventory, 775 acres of which is already in irrigated farm production, while removing about 967 acres of land not suitable for commercial farming (See Soils Reports, Exhibits 10 and 10b). This criterion is met.

B. The public services and facilities are sufficient to support a change in designation including, but not limited to, water availability relevant to both quantity and quality, waste and storm water management, other public services, and streets and roads.

1. *Amendments to the zoning ordinance or zone changes which significantly affect a transportation facility shall assure that land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:*
   a. *Limiting allowed land uses to be consistent with the planned function of the transportation facility or roadway;*
   b. *Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,*
   c. *Altering land use designations, densities, or design requirements to reduce demand for automobile travel to meet needs through other modes.*
2. *A plan or land use regulation amendment significantly affects a transportation facility if it:*
   a. *Changes the functional classification of an existing or planned transportation facility;*
   b. *Changes standards implementing a functional classification;*
   c. *Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or*
   d. *Would reduce the level of service of the facility below the minimal acceptable level identified in the Transportation System Plan. (MC-C-8-98)*

Response: The proposed changes for the "downzone" area – from Industrial/SAI to Agriculture/EFU designation/zoning – will convert the approximately 1,605-acre area to an agricultural resource designation and zoning that allow only farming and other EFU allowed uses. The "downzone" area will then become ineligible for public services (unless and subject to a subsequent Goal exception adoption procedure). As noted above, potential trip generation from the "downzone" area will be significantly lower under the new zoning than the current SAI zoning, so the proposal will not significantly affect transportation facilities. For these reasons, the proposed "downzone" area amendment meets these approval criteria.

C. That the proposed amendment is consistent with unamended portions of the Comprehensive Plan and supports goals and policies of the Comprehensive Plan, that there is a public need for the proposal, and that the need will be best served by allowing the request. If other areas in the county are designated for a use as requested in the application, then a showing of the necessity for introducing that use into an area not now so zoned and why the owners there should bear the burden, if any, of introducing that zone into their area.

Response: This Section contains four discrete tests, all of which are met by this proposal as follows:

- *the proposed amendment is consistent with unamended portions of the Comprehensive Plan and supports goals and policies of the Comprehensive Plan:* Above, under the "Morrow County Comprehensive Plan" heading, the applicant has identified Policies and Objectives of the Morrow County Comprehensive Plan that are relevant to, or could be affected by, the proposed amendment. The applicant has provided statements responding to each, explaining why the proposed amendment is consistent with those Policies and Objectives.
- *there is a public need for the proposal:* As noted in the economic report from Johnson Economics (Exhibit 8), recent accelerating growth in data processing as a service, largely associated with broad adoption of AI services, is causing a rapid increase in demand for, and construction of, Exascale Data Center Campuses requiring large campus sites. The proposed designation/zone change in the "downzone" area will ensure that, as the County moves to address that emergent public need, doing so will not result in a net loss of productive farmland under the protection of

Agriculture designation and EFU zoning. In fact, as noted above, the larger size and higher-productivity soil characteristics of the "downzone" area, as compared to the EFU-zoned portion of the proposed data center Site, will produce a net increase in Morrow County's inventory of productive EFU-zoned land. That change furthers the public need to maintain farming as a key economic activity in Morrow County.

- *the need will be best served by allowing the request:* Exhibit 7 contains an analysis of alternative potential rezoning areas within a large vicinity east and west of the Site pursuant to Oregon Administrative Rules (OAR) exceptions standards. To summarize, that analysis identifies the Site as the preferred location for rezoning to meet the identified data center development need. To complement the proposed zoning changes to allow that use (i.e., redesignating the 1,298-acre Site[26] as Industrial with MG zoning and a Limited Use Overlay restricting use to data centers and associated facilities), the applicant proposes to redesignate the 1,605-acre "downzone" area from its current Industrial/SAI to Agriculture/EFU zoning. The complementary "downzone" request actually increases the County's inventory of EFU-zoned land, and includes approximately 775 acres of irrigated, productive land. For these reasons, adopting the requested package of Comprehensive Plan designation and zoning changes is the preferred method of meeting the identified need.

- *If other areas in the county are designated for a use as requested in the application, then a showing of the necessity for introducing that use into an area not now so zoned and why the owners there should bear the burden, if any, of introducing that zone into their area:* As noted above, the analysis in Exhibit 7 demonstrates why the Site is the preferred location for redesignation to allow data center development (and *only* data center development) to address the specific need identified in the economic analysis (Exhibit 8). By contrast, the "downzone" area will be added to the inventory of large tracts of land under EFU zoning in Morrow County; however, agriculture, and more particularly farming where soil characteristics and irrigation capacity support it, is the predominant land use throughout the County. The County's Agriculture goals and policies are designed broadly to promote and support agricultural productivity wherever it is feasible throughout the County. So, in the particular case of the "downzone" area, the question is not one of *introducing* farming as the preferred use zoning, but rather that of *protecting in place* the continuation of established productive farming practices that are already in use within its 1,605 acres. Regarding the question of placing a burden on the owners of property where the EFU zoning is proposed, this application has been presented by the current owner of the property to be rezoned, as well as much of the surrounding area. The applicant/owner has adequately considered how the proposed rezoning would affect its properties and operations, and is satisfied that rezoning as proposed is preferable to maintaining the existing zoning designations as they apply to their property. This criterion is satisfied.

D. The request addresses issues concerned with public health and welfare, if any.

Response: Economic development is an important public health and welfare issue of concern to Morrow County. The changes proposed for the "downzone" area – from Industrial/SAI to Agriculture/EFU designation/zoning – are designed to protect the approximately 1,605-acre area from industrial development pressures and enable it to continue contributing to the agricultural economy of the County. Such economic productivity contributes to the local economy and also provides local property tax revenues that support County efforts to meet public health and welfare goals.

[26] Of the Site's 1,264 acres, 331 acres are designated Industrial and zoned SAI, and the remaining 967 acres are designated Agriculture and zoned EFU. (Figures are approximate.)

For the above reasons, the proposal contributes to public health and safety. This criterion is met.

Article 3. Use Zones

Section 3.110. Limited Use Overlay Zone, LU

The purpose of the Limited Use Overlay Zone is to limit the list of permitted uses and activities allowed in the zone to only those uses and activities which are justified in the comprehensive plan 'reasons' exception statement under ORS 197.732(1)(c). The Limited Use Overlay Zone is intended to carry out the administrative rule requirement for 'reasons' exceptions pursuant to OAR 660-14-018(3). [detailed provisions omitted for brevity.]

Response: Regarding the proposed "downzone" area, Limited Use (LU) Overlay zone provisions do not apply because there are no goal exceptions required for the proposed downzone; therefore,no LU Overlay is required or proposed with respect to the area.

Section 3.092. Airport Safety and Compatibility Overlay Zone, ASC

A. Purpose. The purpose of this overlay zone is to protect and support the continued operation of the Boardman public use airport by establishing compatibility and safety standards and to reduce potential safety hazards for persons living, working or recreating near that airport.

Response: The "downzone" area is located to the southeast of the Boardman Airport and is partially within the imaginary conical surface area surrounding the runway. See Exhibit 13. This section applies to development of the site.

B. Definitions. Definitions in this section apply specifically to this overlay zone and are intended to supplement the definitions in Article 1.
[list of definitions omitted for brevity]

Response: The definitions in this subsection were referenced to evaluate compliance with the standards of the ASC.

C. Imaginary Surface Delineation. The airport elevation and the location and dimensions of the runway, primary surface, runway protection zone, approach surface, horizontal surface, conical surface and transitional surface shall be delineated for each airport subject to this overlay zone and shall be made part of the Official Zoning Map. All lands, waters, and airspace or portions thereof, that are located within these surfaces shall be subject to the requirements of this overlay zone.

Response: A map of the imaginary surfaces for the Boardman Airport, including the boundaries of the Site and the "downzone" area, is included in Exhibit 13. As indicated in the exhibit, only the northwestern corner of the "downzone" area is located within the outermost band of the conical surface area, which transitions from Elevation 692' at the northwest (nearer the runway) to Elevation 742' at the southeast, at the outer edge of the regulatory conical surface. The land grade surface at that location corresponds approximately to Elevation 430',[27] which indicates that compliance with this Section will limit structures within the northwest corner of the "downzone" area to a height limit of approximately 360'. The remainder of the "downzone" area lies outside the "Elev. 742'" outer boundary of the conical surface.

[27] Source: Google Earth Pro. Its elevation data at both ends of the Boardman Airport runway closely match the runway elevation callouts on the FAA map (Elev. 363' at east and 392' at west), so relative precision/correlation with the vertical data of the FAA map appears to be high.

Compliance with this Section is feasible and is subject to the Morrow County permitting process for proposed structures.

D. Notice of Land Use and Permit Applications within Overlay Zone Area. Except as otherwise provided, written notice of applications for land use or limited land use decisions in the area within this overlay zone, including comprehensive plan or zoning amendments, shall be provided to the airport sponsor and the Department of Aviation in the same manner as notice is provided to property owners entitled by law to written notice of land use or limited land use applications.

1. Notice shall be provided to the airport sponsor and the Department of Aviation when the property or a portion thereof that is subject to the land use or limited land use application is within 5,000 feet of the sides or ends of the runway.

2. Notices required by this section need not be provided to the airport sponsor or the Department of Aviation where the land use or limited land use application:

a. would only allow structures less than 35 feet in height, measured from grade;

b. involves property located entirely outside the approach surface;

c. does not involve uses that emit smoke dust, or steam; sanitary landfills or water impoundments; or radiotelephone, television or similar transmission facilities or electrical transmission lines; and

d. does not involve wetland mitigation, creation, enhancement or restoration.

Response: This subsection provides notice requirements for the County to follow when it processes land use and permit applications within the ASC. Development within the "downzone" area will be subject to structure permitting (and possibly Site Plan Review, depending on the nature of the proposal) and this notification will occur as part of that permitting process.

E. Height Limitations on Allowed Used in Underlying Zone. All uses permitted by the underlying zone shall comply with the height limitations in the Section unless standards of the underlying zone are more restrictive.

1. Except as provided in paragraph 2, no structure or tree or other object of natural growth shall be allowed to penetrate an airport imaginary surface.

2. For areas within airport imaginary surfaces but outside of the approach and transition surfaces, where terrain is at higher elevations than the airport runway surfaces where existing structures and permitted development penetrate the airport imaginary surfaces, a local government may authorize structures up to 35 feet in height.

Response: A map of the imaginary surfaces for the Boardman Airport, including the boundaries of the Site and the "downzone" area, is included in Exhibit 13. As indicated in the exhibit, only the northwestern corner of the "downzone" area is located within the outermost band of the conical surface area, which transitions from Elevation 692' at the northwest (nearer the runway) to Elevation 742' at the southeast. The land grade surface at that location corresponds approximately to Elevation 430', which indicates that compliance with this Section will limit structures within the northwest corner of the "downzone" area to a height limit of approximately 360'. The remainder of the "downzone" area lies outside the "Elev. 742'" outer boundary of the conical surface. Compliance with this Section is feasible, without additional conditions of approval, and is subject to the Morrow County permitting process for proposed structures.

F. Procedures. An application for a land use or limited land use approval on property within this overlay zone shall provide the following information in addition to any other required information:

1. A map or drawing showing the location of the property in relation to the airport imaginary surfaces.

2. Elevation profiles and a site plan, drawn to scale, including the location and height of all existing and proposed structures, measured from existing grade.

Response: A map showing the boundary of the proposed "downzone" area in relation to the Boardman Airport imaginary surfaces is included in Exhibit 13. As described in the response to subsection (E), above, it will be feasible for future development to comply with the standards of the ASC because surface grade within the conical surface area is approximately 360' lower. Morrow County can therefore rely on its building construction permitting process to ensure that no buildings will penetrate the imaginary surfaces. Compliance will be demonstrated when any development is proposed through site plan review and/or permitting.

G. Land Use Compatibility Requirements. Any land use allowed in the underlying zone may be permitted in the overlay zone, subject to the following standards:

1. The user shall comply with the height standards in Section (E) of this Chapter.

2. The use shall not include a place of public assembly.

3. The uses shall not create a bird attractant. If the airport sponsor determines that there is a potential for attracting birds, the application shall include a study demonstrating that any hazard to use of the airport is mitigated.

4. The use shall not cause light or glare that projects lighting directly onto a runway or taxiway, or imitates airport lighting

Response: These standards will be applied through the County's site plan and permit review processes if and when there is a specific development proposal within the "downzone" area.

H. Prohibited Uses. Notwithstanding the underlying zoning, the following uses are prohibited in the Airport Safety and Compatibility Overlay Zone:

1. New residential Development.

2. New Public Assembly Facilities.

Response: The "downzone" area will remain subject to this Section. No such uses are proposed. This standard is met.

I. Nonconforming Uses.

[remainder of this subsection omitted for brevity]

Response: The "downzone" area does not contain any nonconforming uses. This section does not apply.

IV. CONCLUSION

This report and accompanying evidence materials submitted by the applicant satisfy the burden of proof for the requested map and text amendments to the Morrow County Comprehensive Plan and Zoning Ordinance, which would rezone the 1,298-acre Site from Exclusive Farm Use (EFU) and Space Age Industrial (SAI) to General Industrial (MG) with Limited Use (LU) Overlay limiting the permitted land uses to data centers with related ancillary improvements and associated infrastructure facilities, as well as farm uses allowed in the EFU district.

To ensure conservation of productive high-value farmland, the proposal includes a reciprocal/complementary rezoning of an approximately 1,605-acre area that is currently in the Space Age Industrial (SAI) zone, much of which is irrigated and in active use for agricultural production, to return it from SAI (exception) to EFU (agricultural resource) zoning.

The applicant respectfully requests Morrow County to adopt the proposed amendments.

LAND USE APPLICATION

Fee_____

FILE NUMBER _____ Date Received _____

Date Deemed Complete _____

Type of Application (check one):

☐Non-Farm Use ☐Temporary Use ☐Dwelling Authorization

☐Agri-tourism ☐Event(s) ☒Other Post-Acknowledgment Plan Map Amendment & Zone Change including Limited Use Overlay

Applicant:

Name(s) Threemile Canyon Farms, LLC (F. Scott Neal, President - Real Estate)

Address 75906 Threemile Road
Boardman, OR 97818

Phone 701-306-0393 E-mail address sneal@rdoffutt.com

Legal Owner (if different from the applicant):

Name(s) _____

Address _____

Legal and Physical Description:

Township_____ Range_____ Section_____ Tax Lot(s) 1,298 acres in portions of: 04N 23E Tax Lot 00110 04N 24E Tax Lot 00121

Physical Address n/a

General Location NE corner of 04N 23E Tax Lot 110 and NW corner of 04N 23E Tax Lot 121; bounded by I-84 at north, Sixmile Creek at west/southwest, and PGE railroad spur at east.

PROPOSAL (Identify what you are proposing): Zone change from EFU and SAI to MG with a Limited Use overlay allowing only data centers and ancillary improvements and associated infrastructure facilities. Exceptions to Goals 3, 11, and 14 are also proposed to facilitate the zone change. A downzone of 1,605 acres from SAI to EFU is also proposed.

APPROVAL CRITERIA:

Zoning Designation SAI / EFU Acreage 1,298 acres (331 in SAI, 967 in EFU)

List the applicable Article, Section(s), and Subsection(s): _____

See attached narrative for applicable approval criteria and applicant's responses.

A Planner can assist you in identifying the review criteria that apply to your request. The review criteria are used to determine whether your application will be approved or denied. It is your responsibility to provide adequate written justification and any other evidence you feel is relevant to explain how your request complies with the review criteria. Failure to provide adequate justification may result in your application being denied, or deemed incomplete until additional information is provided. For additional space on any questions, please attach a separate sheet of paper.

PHYSICAL FEATURES (Describe the site):
Vegetation on the property: Grasses and brush
Topography of the property (i.e. rocky, hilly, forested): 2-7% slopes w/ subtle mounds and rock outcrops
Any significant features of the property (i.e. steep slopes, water bodies, etc.): _____

Soil type(s): 37A - Prosser Silt Loam; 38D - Prosser-Rock Outcrop Complex
Is the land or any portion of it subject to flooding? No mapped flood hazards
Most current use of the property: Access roads; power lines
Has the location been utilized as an integral part of the farming operation on the property? No
Does the location have water rights for irrigation? No
What are the predominant farming types in the area? Livestock grazing and irrigated crop fields
Is the property currently under special assessment by the County Assessor's Office? Yes

EXISTING IMPROVEMENTS:
What structures or development does the property contain? Will any structure be removed or demolished? BPA transmission lines cross through the property. The property contains access roads. This application does not propose removal or demolition of structures.

DESCRIBE THE ACCESS TO THE PROPERTY (check one):
☐State Highway ☒County Road ☐Public Road ☐USFS ☐Private Easement
Road Name: Tower Road, Boardman Airport Lane
Improvement type and condition of road: Paved two-lane collector
Will any new access be required? Yes

EXISTING SERVICES:
Fire protection district or method: Boardman
Solid waste disposal method: None existing. On-site septic system proposed.
Utilities and other public services provided: Extension of Port of Boardman Airport facilities/services

Please include a map or plot plan with the following information: See attached
Existing and proposed water supply;
Existing and proposed sewage disposal method;
Location of existing and proposed structures; and
Existing and proposed roads and accesses.

With the map please provide a description of:
How the proposal will be compatible with surrounding land uses: See attached narrative
How the proposal will protect and preserve existing natural resources such as trees, vegetation, water resources and wildlife habitat: See attached narrative
Whether you believe diking, screening or other landscaping will be required to protect nearby properties and habitats: See attached narrative

The applicant is responsible for providing all of the information to show compliance with the standards for approval. If you are unsure of the standards required by the code, the Planning Department will work with you to identify them. It is the applicant's duty to prove the proposal meets all of the given code requirements. Your plot plan and narrative should show or answer the above questions as well as address specific issues about your particular application.

Through applying for this application I authorize the Morrow County Planning Director or designee to enter upon the property subject of the application to conduct a site visit necessary for processing the requested application. Morrow County shall contact the Land Owner prior to the site visit to arrange an appropriate time for the site visit.

Signatures:

I(we), the undersigned, acknowledge that I am familiar with the standards and limitations set forth by the Morrow County Zoning Ordinance and that additional information and materials may be required, as provided by the Zoning Ordinance and Comprehensive Plan. I propose to meet all standards set forth by the County's Zoning Ordinance and any applicable State and Federal regulations. I(we) certify that the statements and information provided with this application are true and correct to the best of my(our) knowledge.

Signed: _____ _____

(Applicant) (Applicant)

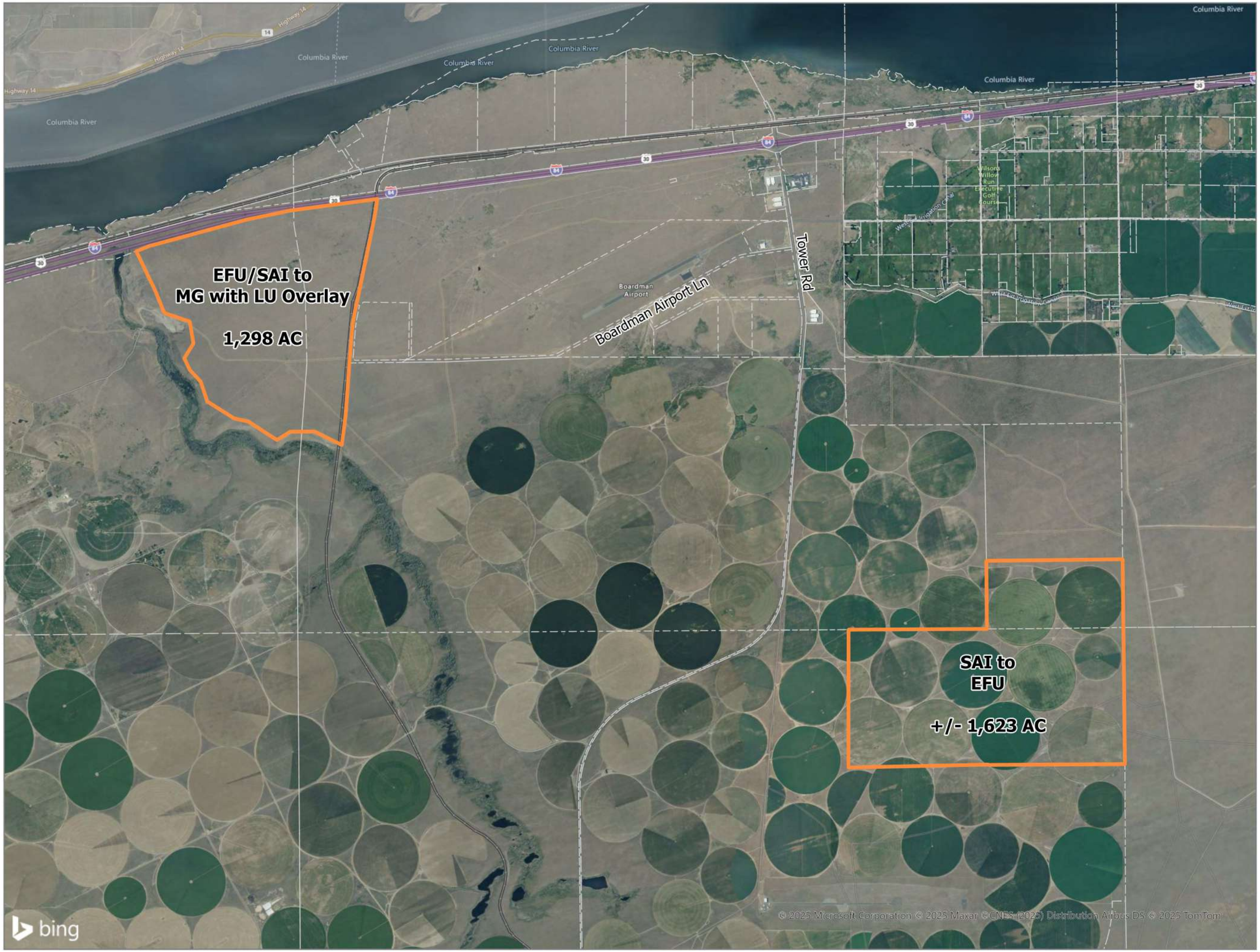
President Real Estate _____

(Legal Owner) (Legal Owner)

If this application is not signed by the property owner a letter authorizing signature by the applicant must be attached.

Morrow County Planning Department
P.O. Box 40, Irrigon Oregon 97844
(541) 922-4624 FAX: (541) 922-3472

EXHIBIT 2
Vicinity Map



LEGEND

- Proposed Map Amendments
- Tax Lots

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

N

SOURCE DATA: Morrow County Data, 2024

GEOGRAPHIC PROJECTION: NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 5/14/2025 File: GAF-1_Base Map

Map Created By: IAS Project No: 2240364.00

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Threemile Canyon Farms

COMPREHENSIVE PLAN MAP AND TEXT AMENDMENTS, ZONING MAP AMENDMENTS, AND EXCEPTIONS TO GOALS 3, 11, AND 14

Pre-Application Meeting Presentation

Thursday, January 9, 2025

Project Team

Legal:	Perkins Coie
Land Use Planning:	Mackenzie
Transportation Planning:	Janet Jones, PE, David Evans and Associates
Economic Impacts Analysis:	Brendan Buckley, Johnson Economics
Soils Analysis:	Phil Scoles, Terra Science, Inc.
Archaeology & Cultural Heritage:	Parametrix
Natural Resources Report:	Parametrix

Subject Site Aerial Map

LEGEND

- Approx. Subject Site Boundary
- Morrow County Taxlots

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

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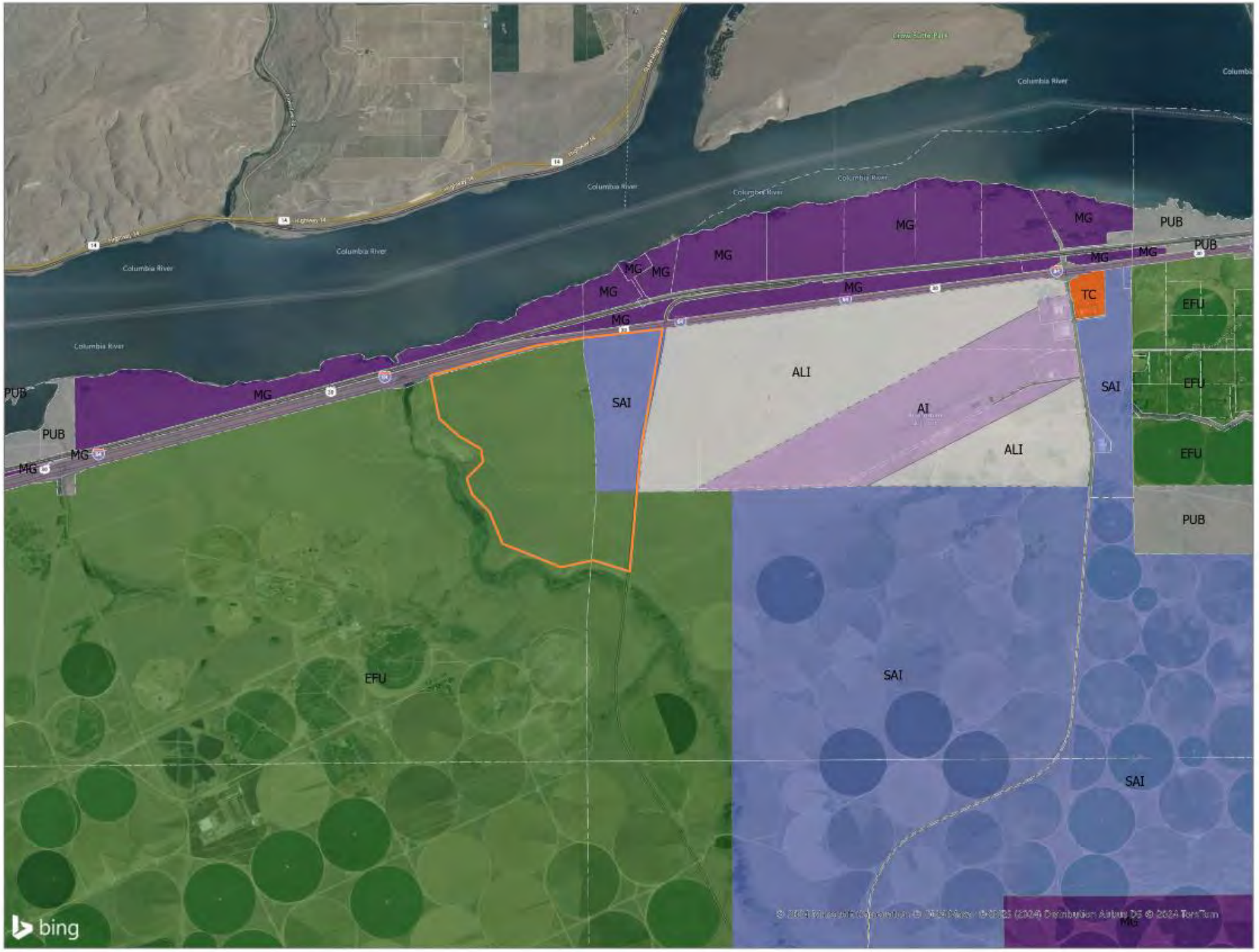
Site Information

Owner:	Threemile Canyon Farms, LLC
Tax Lots:	04N23E-00110 (9,017 acres)
	04N24E-00121 (6,779 acres)
Site Acreage:	1,264 acres
Existing Zoning:	Exclusive Farm Use (EFU) - 955 acres
	Space Age Industrial (SAI) - 309 acres
Adjacent Zoning:	EFU – Exclusive Farm Use (to the west and south)
	ALI – Airport Light Industrial (to the east)
	MG – General Industrial (to the north)
Overlay/Plan District:	None identified
Comprehensive Plan:	Agriculture (EFU area)
	Industrial (SAI area)
Existing Structures:	BPA transmission towers



Morrow County Zoning

LEGEND

- Approx. Subject Site Boundary
- Morrow County Taxlots

Zoning

- Airport Industrial
- Airport Light Industrial
- Exclusive Farm Use
- General Industrial
- Public
- Space Age Industrial
- Tourist Commercial

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

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Description of Request

The proposed land use action consists of the following:

1. Comprehensive Plan map amendment from Agricultural to Industrial (955 acres);

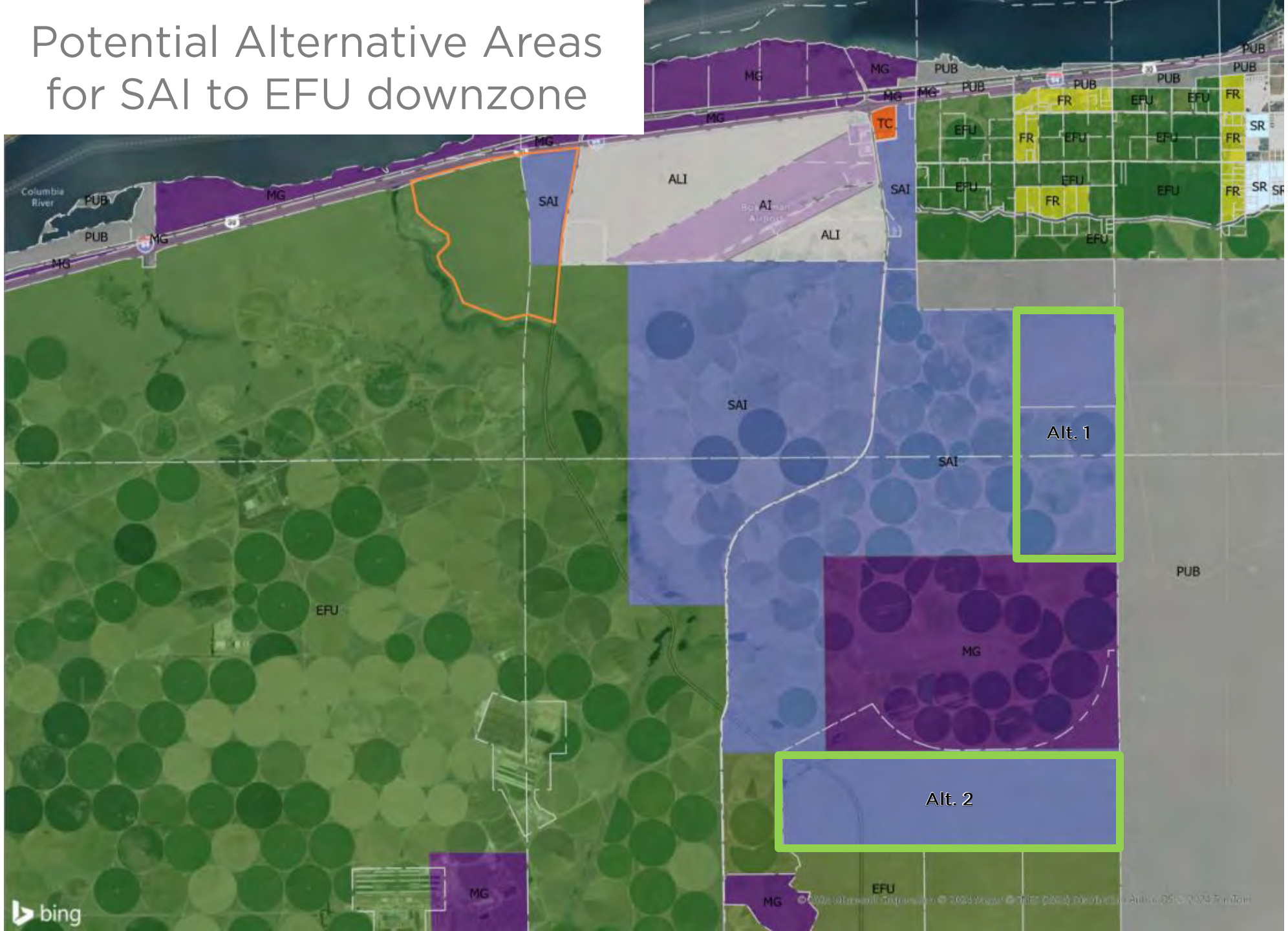
2. Zone change from EFU and SAI to General Industrial (MG) (1,264 acres);

3. Limited Use Overlay (LU) to limit the permitted industrial use to data centers with ancillary improvements and associated infrastructure facilities (1,264 acres).

To facilitate the proposed amendments, the proposal will request “reasons” exceptions to Statewide Planning Goals 3, 11 and 14; and

To further demonstrate minimal loss of productive resource lands, the proposal will also include a request to downzone an equal amount of acreage from SAI to EFU.

Potential Alternative Areas for SAI to EFU downzone



Exascale Data Center Campuses (EDCC)

- Also referred to as “gigawatt-scale” and “mega-scale” data center campuses. Nationally, several examples of exascale data center campuses are being planned or built out now, including:
  - Cumulus Data Center | Berwick, PA
    - 1,200 acres, co-located with an existing nuclear power plant (est. 960 MW capacity)
  - Lancium Clean Campus | Abilene, TX
    - 1,000+ acre campus including data centers to power AI (est. 1.2 GW capacity)
  - Project Range | Phoenix, AZ
    - 1,000 acres across two campuses w/ approx. 5 million SF of building area (unknown power capacity)
  - Quantum Loophole | Frederick County, MD
    - 2,100-acre campus (est. 2 GW capacity)
  - Google Data Center Campus | Council Bluffs, IA
    - 1,000-acre campus w/ approx. 3 million SF of building area (unknown power capacity)

Factors driving demand for EDCCs

- Growth in demand and development of data center capacity is currently rapid and likely to accelerate for the foreseeable future, driven in large part by the increasing capacity needed for AI and cloud computing.

- Continuous growth over the last five years in the Columbia Basin indicates that large technology companies have the will and resources to develop large data center campuses at a rate of one to two per year, consuming somewhere between 200 to 300 acres per year, for the foreseeable future.

- This historical pace of growth projected forward indicates a demand for at least 3,000 acres of appropriate industrial land to site large-format data center campuses over 10 years. Given the acceleration of data center demand, development, and capacity nationwide, there is likely to be demand even in excess of 3,000 acres if appropriate sites are available.

Factors driving demand for EDCCs

- Specifically, there is a trend towards building larger data center campuses, to leverage economics of scale and meet the demand for growing need for capacity.

- Whereas the trend over the past decade has been 100-acre campuses (“hyperscale” data centers), there are increasing examples of 800-, 1,000-, or 1,500-acre sites. These very large campuses are coming to be called “exascale” or “gigawatt” data centers.

Economies of Scale for EDCCs

- Process, planning, and time costs:
  - The process of finding and securing sites from multiple owners, obtaining entitlements and permits, and planning the site and facilities is costly and time-consuming. Securing a single large site consolidates this process and reduces costs to the developer.

- Construction:
  - Co-locating a large number of data center buildings at one location rather than across two or more smaller locations allows staging of substantial construction infrastructure on one site while all phases of the campus are built out.

- Operations:
  - Centralized facilities create operational efficiencies by allowing staff to work more efficiently across multiple data center buildings, allowing centralization of other operations such as security, grounds, janitorial, administration, maintenance, repairs etc. at one location thereby decreasing vehicle miles travelled and traffic, and avoiding redundant systems at multiple sites.

- Limited externalities:
  - A single location, particularly in a more remote location, reduces the potential for external impacts of a facility on other surrounding land uses and the community at large, particularly residential uses. By consolidating in a single larger site, as opposed to dispersed sites, an EDCC is a more efficient use of land that can also maximize use of infrastructure needed to provide power and water.

Economic Analysis for EDCCs

- The development of an EDCC at the site is projected to bring a range of economic and fiscal benefits to the state, Morrow County, and the community.

- Positive impacts include new employment, payroll, spending with vendors on construction and operations, new tax revenue, and indirect and induced economic activity from suppliers, vendors, and households.

  - **Construction Phase:** The high level of capital investment in the facility would translate into an estimated 6,400 direct full-time equivalent (FTE) jobs over the construction period, assumed to be eight years.

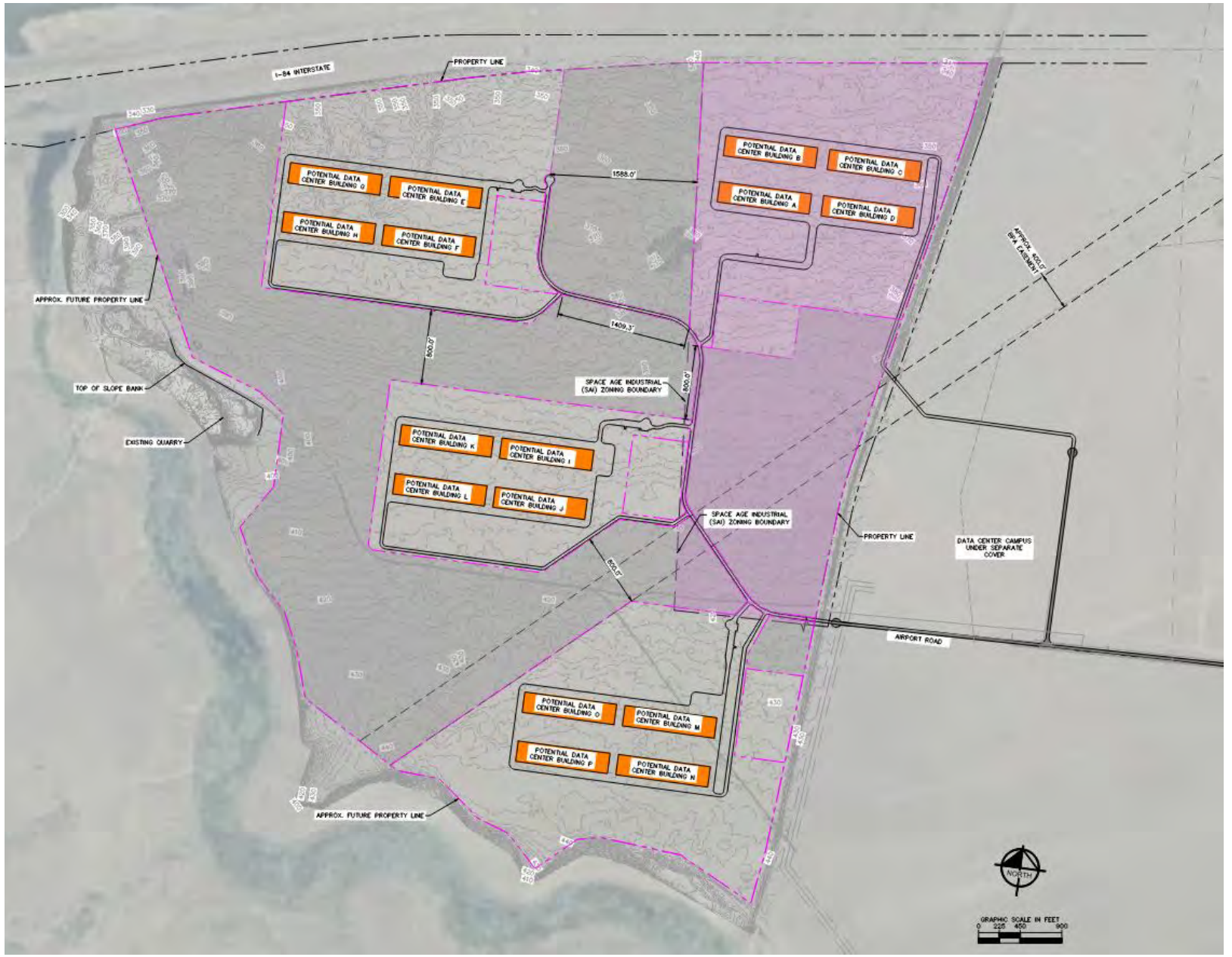
  - **Operations Phase:** Upon completion, the facility is projected to support approximately 560 FTE employees. Employment at the site would include employees of the data center's operations, maintenance, security, and other property management functions. Indirect and induced employment supported by ongoing operations would support an additional 490 employees in Morrow County, including vendors, commercial services, and beneficiaries of spending in the community from operations and employees at the site.

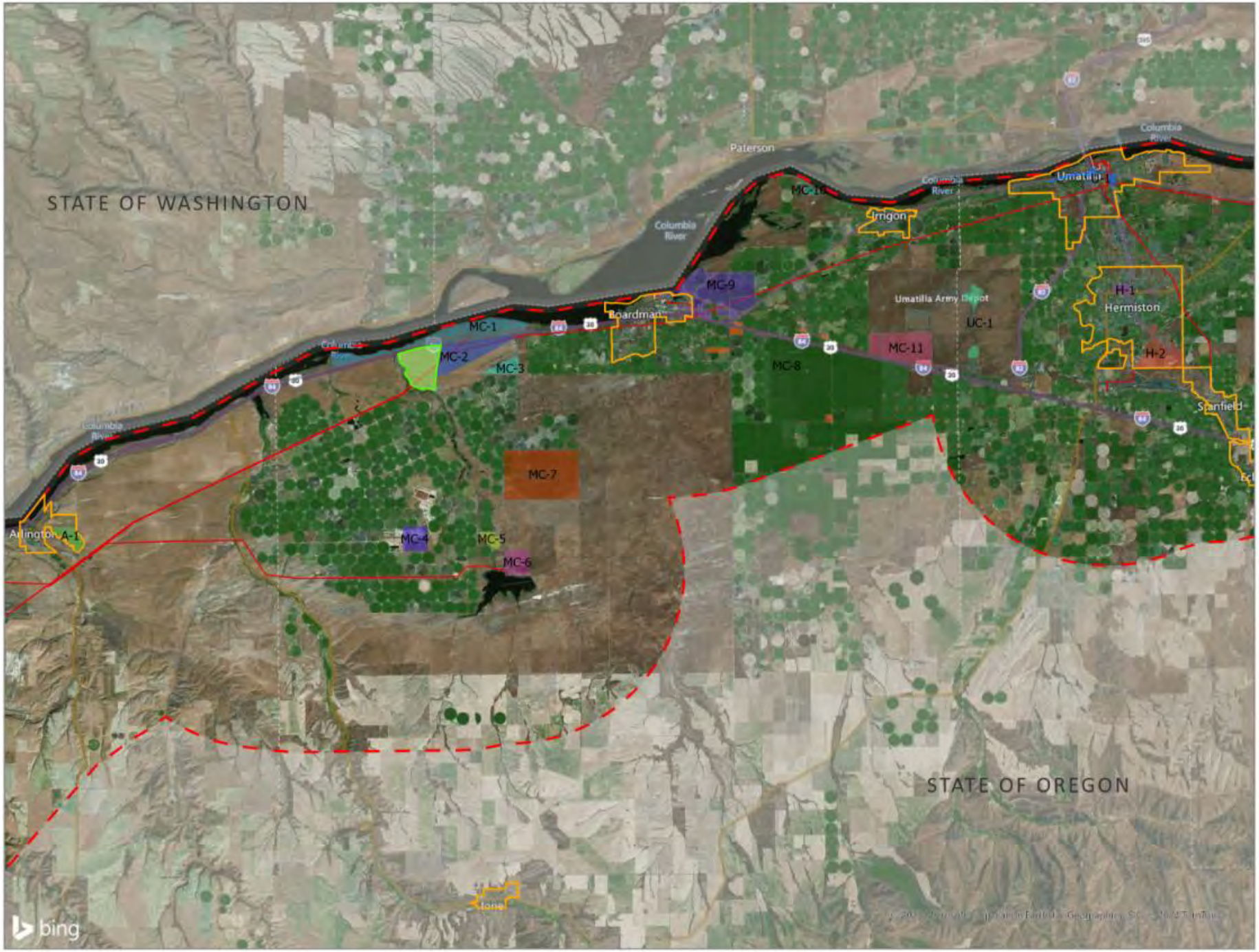
- Even with possible tax incentive programs, the long-term tax generation potential for the facility is high, generating significant revenues.

Essential Site Characteristics for EDCCs

- Adequate developable land area (1,000+ acres) w/ slopes less than 5%
- Proximity (<10 miles) to existing high-capacity electrical transmission lines
- Proximity to adequate water supply and pressure
- Feasibility for required industrial wastewater disposal (onsite system and/or sewer)
- Proximity to fiber optic routes
- Proximity (<30 miles) to an interstate highway or freight route and access roads
- Other significant siting considerations:
  - Separation from residential uses
  - Avoidance of high value resource land

Conceptual EDCC Site Plan





Alternative Areas Overview

LEGEND

- Approx. Subject Site Boundary
- Urban Growth Boundary

Power Transmission Lines

- 500 Volts
- 345 Volts
- 10 Mile Buffer - Power Transmission Lines

Alternative Analysis Areas

- Arlington Area #1 (A-1)
- Morrow County Area #1 (MC-1)
- Morrow County Area #2 (MC-2)
- Morrow County Area #3 (MC-3)
- Morrow County Area #4 (MC-4)
- Morrow County Area #5 (MC-5)
- Morrow County Area #6 (MC-6)
- Morrow County Area #7 (MC-7)
- Morrow County Area #8 (MC-8)
- Morrow County Area #9 (MC-9)
- Morrow County Area #10 (MC-10)
- Morrow County Area #11 (MC-11)
- Umatilla County Area #1 (UC-1)
- City of Umatilla Area #1 (U-1)
- City of Hermiston Area #1 (H-1)
- City of Hermiston Area #2 (H-2)

0 2 4 Miles

1 inch = 4 mi

N

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Alternative Areas Analysis

- Possible Alternative Areas include:
  - "Areas that do not require a new exception" described under OAR 660-004-0020(2)(b)
    - Includes incorporated and unincorporated areas
  - UGB areas outside city limits
  - Possible UGB expansion areas and irrevocably committed resource lands
  - Areas identified by DLCD in response to the Rowan Digital Infrastructure PAPA application for the Percheron Data Center campus in Morrow County

Alternative Areas Analysis

- Possible alternative areas are evaluated for whether they can "reasonably accommodate" an EDCC based on essential site characteristics, including but not limited to:
  - Adequate developable land area (1,000+ acres) with slopes <5%
  - Proximity to existing high-capacity transmission lines (<10 miles)
  - Proximity to adequate water supply and pressure
  - Proximity to fiber optic routes
  - Feasibility for required industrial wastewater disposal (onsite system and/or sewer)
  - Proximity to interstate highway (<30 miles) and access roads

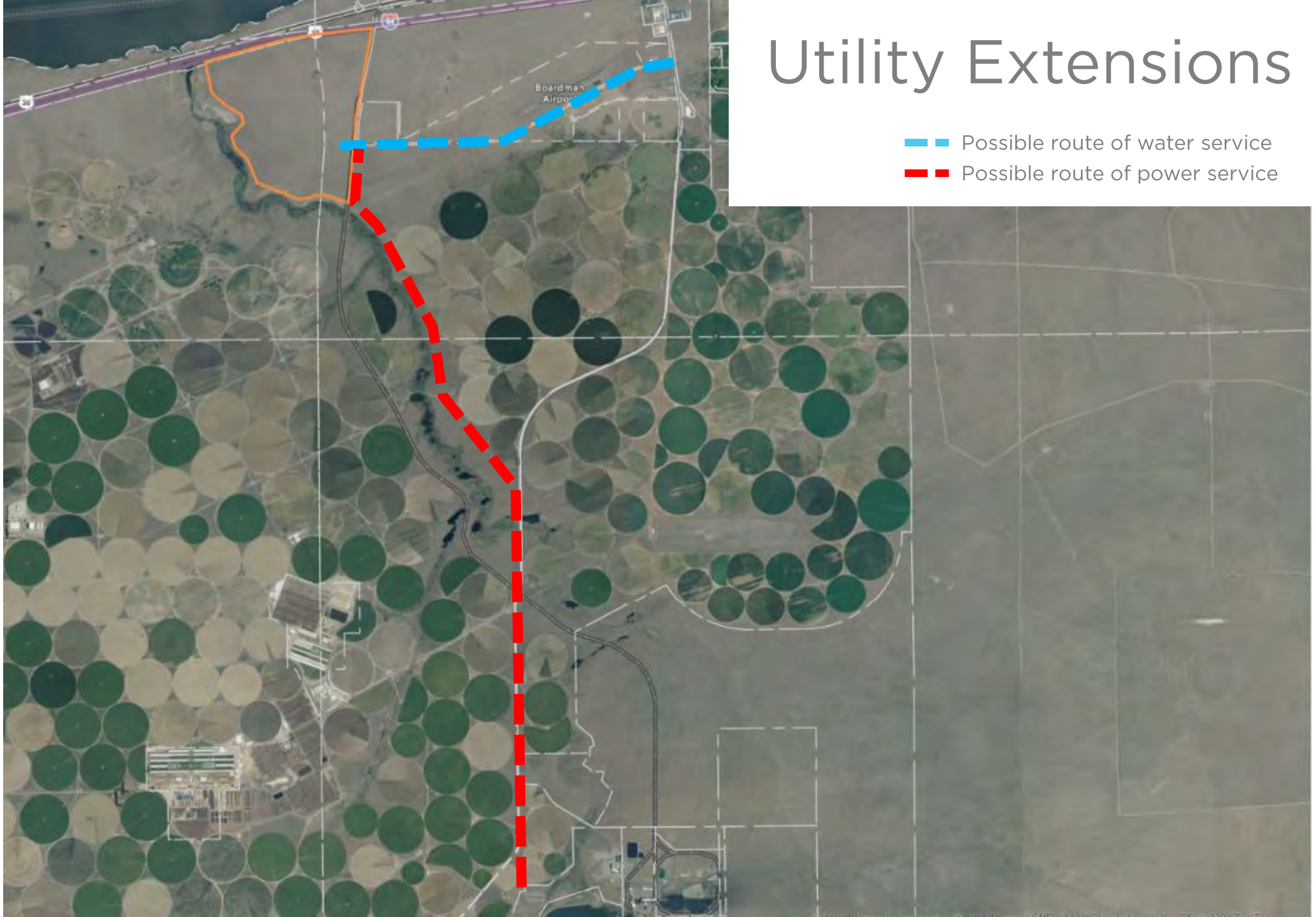
Soils Analysis

- Generally Class IVe - Ve
  - 38D – Prosser rock outcrop complex, 1-20% slopes (48% of site)
  - 37A – Prosser silt loam, 0-2% slopes (38% of site)
- Per analysis by soil scientist, the site is not suitable for cultivation due to irregular topography (mounds), shallow depth to bedrock, low available capacity to store rainfall, and rock outcrops.

Road Access

- Existing paved road
- Proposed road extension

Utility Extensions



Application Materials

- Application form
- Application narrative
- Alternative Areas Analysis, including report and maps
- Map of SAI to EFU downzone area
- Transportation Planning Rule and Transportation Impact Analyses
- Natural Resources Assessment
- Soils Assessment
- Archeological and Cultural Heritage assessment
- Economic Impact Analysis/Report
- Service provider letters from the Port of Morrow (water) and Pacific Power (electricity). The applicant anticipates that water will come from the east and power will come from the south.

303

Criteria for Approval

- OAR 660, Division 4 (OAR 660-004-0018, -0020, -0022)
- OAR 660, Division 12 (OAR 660-012-0060, -0070)
- OAR 660, Division 14 (OAR 660-014-0040)
- Statewide Planning Goals (Exceptions for Goals 3, 11 and 14)
- Morrow County Comprehensive Plan
- Morrow County Transportation System Plan
- Morrow County Zoning Ordinance (MCZO 8.010 Amendments and MZCO 3.110 Limited Use Overlay)

Questions

1. What are the application submittal requirements? Email transmittal with download link for narrative and supporting documents acceptable?

2. What are the applicable review criteria?

3. What are the applicable review processes? Timeline?

4. What is the required application fee?

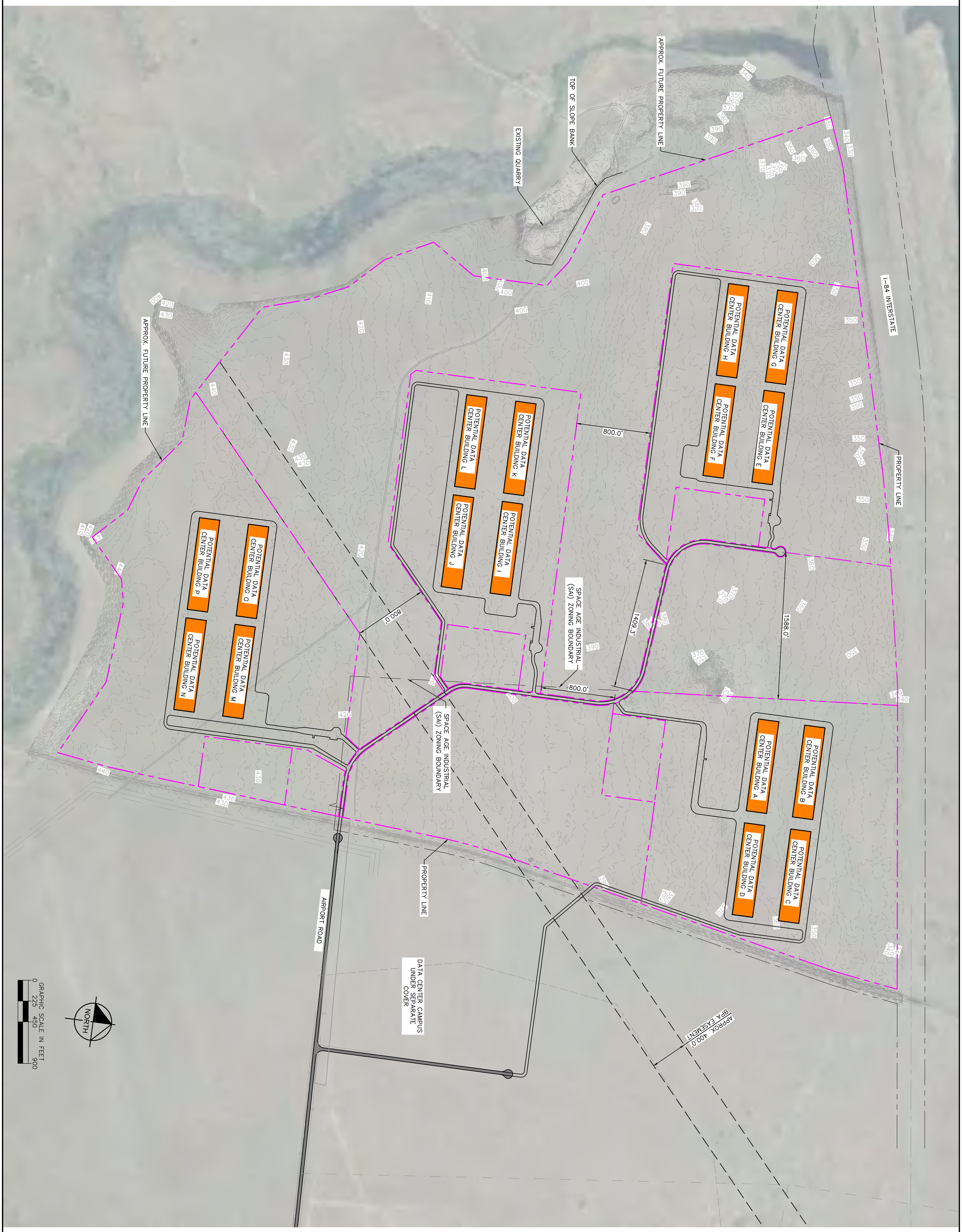
5. Does County staff have any preliminary concerns regarding compliance with applicable criteria?

Questions

6. Can County staff identify any potential obstacles to obtaining approval of these applications?

7. Do County staff have any suggestions or recommendations regarding specific evidentiary support or analysis?

8. Are there any other land use approvals required for the proposal?



THREEMILE OVERALL CAMPUS

CAMPUS PLAN

SHEET NUMBER EX-1

KHA PROJECT	
DATE	01/08/2025
SCALE	AS SHOWN
DESIGNED BY	LVA
DRAWN BY	CMT
CHECKED BY	LVA

Kimley»Horn

1 SW COLUMBIA STREET, SUITE 650, PORTLAND, OR 97204
PHONE: 503-404-3910
WWW.KIMLEY-HORN.COM

No.	REVISIONS	DATE	BY

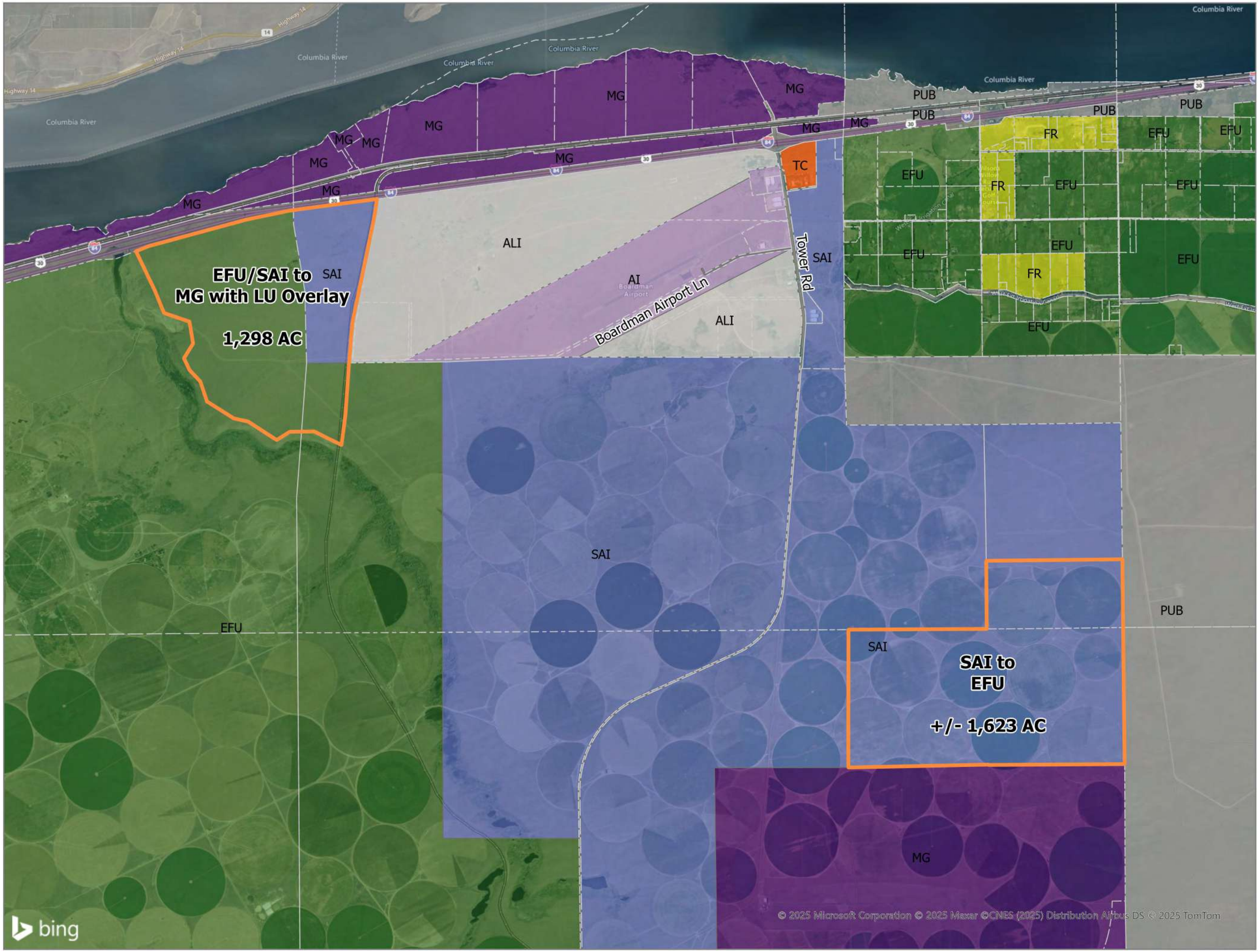


EXHIBIT 5
Zoning Map

LEGEND

- Proposed Map Amendments
- Tax Lots

Zoning

- Airport Industrial
- Airport Light Industrial
- Exclusive Farm Use
- Farm Residential
- General Industrial
- Public
- Space Age Industrial
- Tourist Commercial

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

N

SOURCE DATA: Morrow County Data, 2024

GEOGRAPHIC PROJECTION: NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 5/14/2025 File: GAF-1_Base Map

Map Created By: IAS Project No: 2240364.00

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Section 3.110 Limited Use Overlay Zone, LU

Section 3.111. West of Boardman Airport Limited Use (WBA LU) Overlay.

The purpose of the WBA LU Overlay zone is to limit industrial use within the boundary of the WBA LU Overlay zone consistent with the adopted Goal exceptions for that area.[1]

A. Area of Applicability. The WBA LU Overlay zone area, containing approximately 1,264 acres, is bounded at the north by Interstate 84, at the east by a rail spur that extends south to the Carty Generating Station, and at the west and south by the easterly top-of-bank of Sixmile Creek Canyon and an existing mineral/aggregate extraction site[2] located within the Sixmile Creek Canyon. The WBA LU Overlay zone boundary is depicted in Figure 3.111-1.

B. Uses Permitted Outright. The following uses are permitted outright:

   1. Data centers, including related ancillary improvements and associated infrastructure facilities, subject to Site Plan Review under Section 4.165.

   2. Farm use as defined in Section 1.030 Definitions.

C. Conditional Uses. The following uses and their accessory uses are permitted when authorized in accordance with the provisions of this section and Article 6 of this ordinance:

   1. Commercial utility facilities for the purpose of generating power for public use by sale, not including wind power generation facilities.

D. Development Standards.

   1. All development and use shall comply with standards of Section 3.092 Airport Safety and Compatibility (ASC) Overlay Zone.

   2. Development is subject to surface water management facilities permitting requirements designed to protect groundwater and surface waters from potential contamination by nitrates and other compounds, as may be required under Water Pollution Control Facilities (WPCF) permits issued by the Oregon Department of Environmental Quality pursuant to ORS 468B.050.

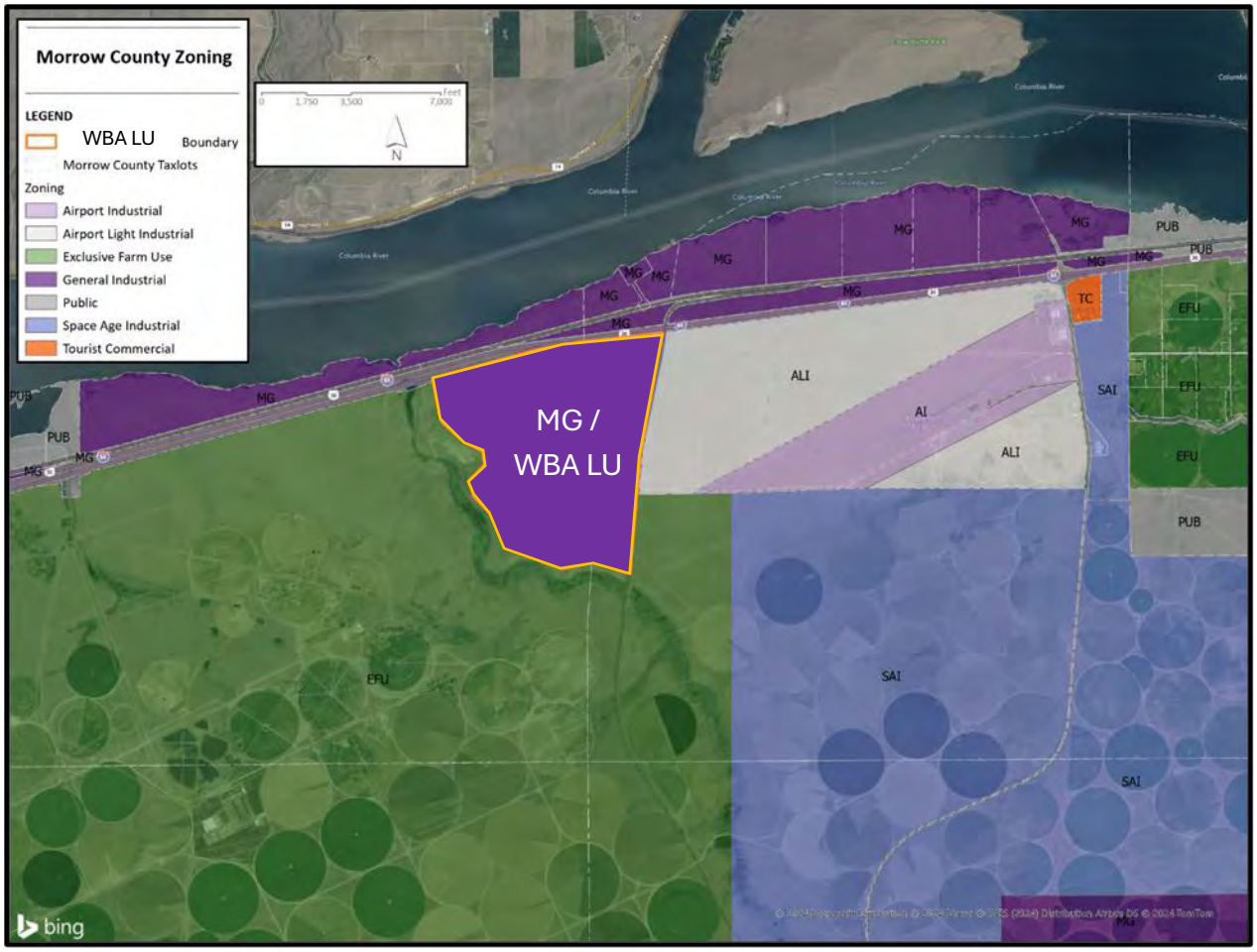
---

[1] Ordinance XX-XX

[2] Operating Permit 25-0006, Oregon Department of Geology and Mineral Industries (DOGAMI)

3. Data center development shall use drought tolerant landscaping and to the extent practicable, native plants to meet any landscape requirements; no long-term irrigation shall be allowed.
4. Data center development does not require screening.

Figure 3.111-1 West of Boardman Airport (WBA) LU Overlay Area Boundary



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ALTERNATIVES AREAS ANALYSIS FOR COMPREHENSIVE PLAN MAP AND TEXT AMENDMENTS, ZONING MAP AMENDMENTS, AND EXCEPTIONS TO GOALS 3, 11, AND 14

To
Morrow County

For
Threemile Canyon Farms, LLC

Dated
January 23, 2025

Project Number
2240364.00

MACKENZIE
Since 1960

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PO Box 14310, Portland, OR 97293 | T 503.224.9560 | www.mackenzie.inc

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

A. Alternative Area Analysis Maps
B. Deed from City of Arlington to Amazon Data Services, Inc. for portion of Alternative Area A-1
C. Letter from Threemile Canyon Farms, LLC regarding property within Alternative Area MC-1
D. Deed from Port of Morrow to Amazon Data Services, Inc. for portion of Alternative Area MC-3

I. INTRODUCTION AND PURPOSE

Threemile Canyon Farms, LLC is submitting an application to Morrow County seeking to amend the Comprehensive Plan Map and Zoning designation of approximately 1,264 acres (the Site) from a combination of Exclusive Farm Use (EFU) and Space Age Industrial (SAI) to General Industrial (MG) with a Limited Use Overlay (LU) restricting urban use to data centers and their associated site improvements, infrastructure, and utilities. The LU Overlay will also retain farm uses allowed under Morrow County Zoning Ordinance (MZCO) 3.010. The subject area is west of the Boardman Airport, east of Sixmile Creek, and south of Interstate 84 (I-84). In conjunction with this action, the applicant is also filing a concurrent application requesting amendment of the Comprehensive Plan map and zoning designation for approximately 1,619 acres south of Boardman from SAI to EFU.

The proposed Comprehensive Plan Map/Zoning amendment to MG requires exceptions to Statewide Planning Goals 3 (Agricultural Lands), 11 (Public Facilities and Services), and 14 (Urbanization).[1]

Mackenzie was retained to perform a site alternatives assessment in support of the application for Goal 3 and 14 exceptions, Comprehensive Plan Map Amendment and Zone Change to allow future development of the Site as an Exascale Data Center Campus (EDCC).

The report is structured as follows:

- Section II describes the Site, i.e., the area proposed for Comprehensive Plan Map/Zoning amendment to MG and the nearby land uses.
- Section III details the essential siting characteristics required for an EDCC and presents a comparative analysis of potential alternative areas.
- Section IV summarizes results and provides a conclusion.

[1] No exception is required to Statewide Goal 12 Transportation because access can be achieved by way of the existing paved segment of Airport Lane, which is located entirely within an acknowledged industrial exception zone and terminates adjacent to the east boundary of the Site.

II. SUBJECT SITE

This section describes the area proposed for the plan amendment/zone change to General Industrial, referred to as the "Site" in this report.

Existing Conditions

The Site is located west of the Boardman Airport, east of Sixmile Creek and south of I-84, on portions of parcels identified as Morrow County Tax Lots 04N23E-00110 and 04N24E-00121. The Site area is approximately 1,264 acres, with the northeastern approximately 309 acres zoned SAI and the balance zoned EFU. Figure 1 is an aerial photo of the Site, and Figure 2 is a map of the area's existing zoning designations.

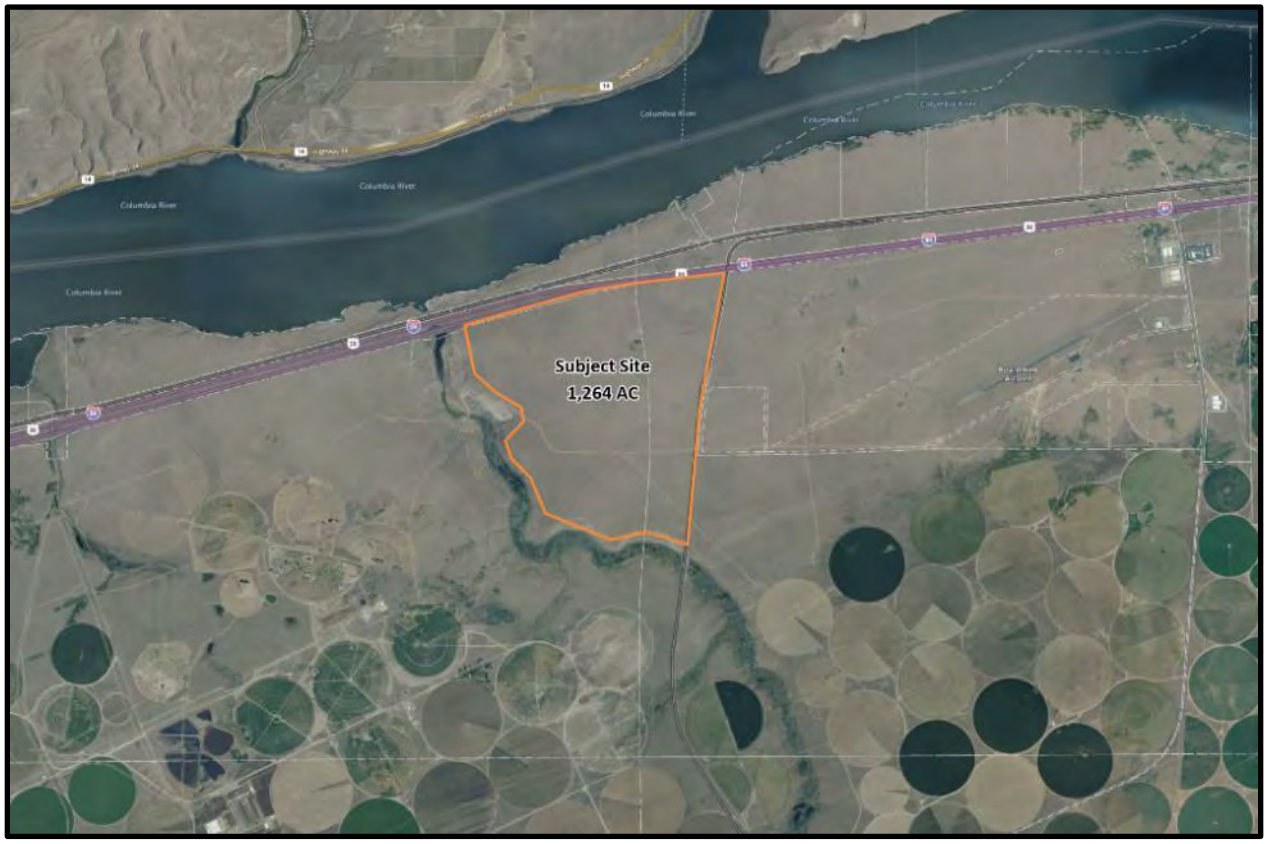


Figure 1: Aerial Image -- Project Site

The eastern boundary of the Site is a rail spur extending south to the Carty Generating Station. The site currently gains vehicle access from rail crossings at the west end of Boardman Airport Lane, which has been paved all the way to that western terminus. From this point, the roadway distance is approximately 4.25 miles to the I-84/Tower Road interchange.

The site is separated from the Columbia River by I-84 and generally defined at the west and south by the eastern top-of-bank of Sixmile Creek Canyon. As a result, according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps 41049C0100D and 41049C0125D, both dated December 18, 2007, the Site is located outside the Special Flood Hazard Area (the "100-year floodplain").

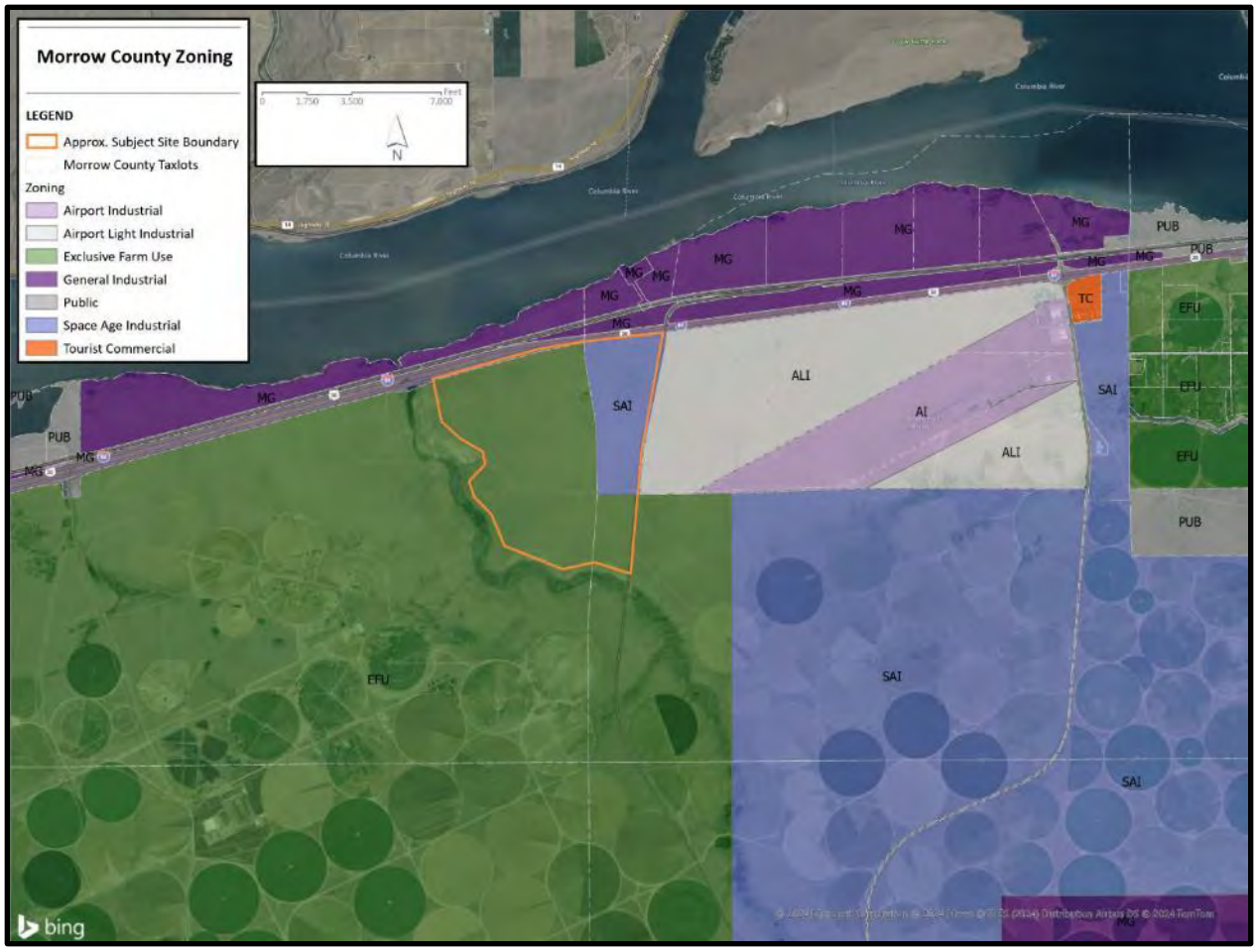


Figure 2: Existing Zoning -- Project Site and Vicinity

The Oregon Statewide Wetlands Inventory[2] depicts some wetlands along Sixmile Creek, which are located below the top-of-bank and outside the Site, and an isolated, intermittent pond/wetland in the northeastern portion of the Site that was created as a result of prior gravel mining under a permit issued by the Oregon Department of Geologic and Mineral Industries (DOGAMI). That DOGAMI permit is now closed.

The southern part of the property is traversed by Bonneville Power Administration (BPA) transmission lines, which run generally from northeast to southwest. The lines are supported by multiple towers.

The Site is not developed, and due to soil conditions, the Site has not proved suitable for farming, as there are shallow bedrock conditions and rock outcroppings that prevent planting and harvesting at commercial scale. Vegetation on Site is currently grasses, with some shrubs and some trees near the pond/wetland.

Site topography is highest near the south and east boundaries, sloping downward toward the north. The total elevation drop is approximately 100 feet. Due to the scale of the property (over 8,500' from north to south), this equates to an average slope of approximately 1%.

[2] https://maps.dsl.state.or.us/swi/

The site is traversed by Bonneville Power Administration (BPA) electrical transmission lines supported on multiple towers, running generally from northeast to southwest. The Site is also near approved electrical transmission lines that will run along the eastern boundary.

Adjacent Land Uses

Immediately east of the SAI-zoned portion of the Site (across the rail spur that extends south to the Carty Generating Station), land in the Airport Light Industrial (ALI) and Airport Industrial (AI) zones surrounds the Boardman Airport. Within these areas, a motor speedway has previously been approved and a photovoltaic solar energy generation project is currently under construction. In 2024, a hyperscale data center was approved in the far southwest corner of the ALI-zoned land (on the north side of Boardman Airport Lane and the east side of the Carty Generating Station rail spur).

South and east of those airport zones, but not contiguous with the SAI-zoned portion of the Site, there is a large area designated SAI that is used for farm operations, including center-pivot irrigation and other associated supportive infrastructure. Multiple center-pivot systems can be seen in Figure 1 and Figure 2 above.

Abutting the Site to the southeast, and south and west across Sixmile Creek Canyon, are additional EFU-zoned lands that are predominantly in irrigated farm use, with multiple center-pivot systems visible in aerial photographs (see Figure 1 and Figure 2 above). An approximately 320-acre vineyard is located south of Airport Lane.

To the north of Interstate 84, which forms the Site's north boundary, the land area between I-84 and the south bank of the Columbia River is in the General Industrial (MG) zone. Those properties, most of which have riverbank frontage, are not currently developed for industrial use.

III. ALTERNATIVE AREAS ANALYSIS

This section presents an alternative areas analysis to demonstrate (1) the appropriateness of the requested Plan Map Amendment/Zone Change for the site, and (2) why other sites in the study area are not viable for the proposed data center use. The analysis method implements direction in applicable statutes (Oregon Revised Statutes or ORS), the Oregon Administrative Rules (OAR) that implement them, and applicable case precedents regarding their application and interpretation.

Analysis Method – Goal Exceptions

To support a "Reasons" exception to Statewide Land Use Goals, ORS 197.732(2)(c)(B) requires a jurisdiction to adopt findings that "[A]reas that do not require a new exception cannot reasonably accommodate the use." The corresponding OAR [660-004-0020] specifies that new exception areas are allowed with adequate justification, including demonstration that "areas that do not require a new exception cannot reasonably accommodate the use." The specific OAR "reasonable accommodation" standard is quoted in full below:

OAR 660-004-0020(2)

(b) "Areas that do not require a new exception cannot reasonably accommodate the use". The exception must meet the following requirements:

(A) The exception shall indicate on a map or otherwise describe the location of possible alternative areas considered for the use that do not require a new exception. The area for which the exception is taken shall be identified;

(B) To show why the particular site is justified, it is necessary to discuss why other areas that do not require a new exception cannot reasonably accommodate the proposed use. Economic factors may be considered along with other relevant factors in determining that the use cannot reasonably be accommodated in other areas. Under this test the following questions shall be addressed:

(i) Can the proposed use be reasonably accommodated on nonresource land that would not require an exception, including increasing the density of uses on nonresource land? If not, why not?

(ii) Can the proposed use be reasonably accommodated on resource land that is already irrevocably committed to nonresource uses not allowed by the applicable Goal, including resource land in existing unincorporated communities, or by increasing the density of uses on committed lands? If not, why not?

(iii) Can the proposed use be reasonably accommodated inside an urban growth boundary? If not, why not?

(iv) Can the proposed use be reasonably accommodated without the provision of a proposed public facility or service? If not, why not?

(C) The "alternative areas" standard in paragraph B may be met by a broad review of similar types of areas rather than a review of specific alternative sites. Initially, a local government adopting an exception need assess only whether those similar types of areas in the vicinity could not reasonably accommodate the proposed use. Site specific comparisons are not required of a local government taking an exception unless another party to the local proceeding describes specific sites that can more reasonably accommodate the proposed use. A detailed evaluation of specific alternative sites is thus not required unless such sites are specifically described, with facts to support the assertion

that the sites are more reasonable, by another party during the local exceptions proceeding.

This analysis implements this direction through the following series of inventory and analysis steps:

1. Define location factors based on essential characteristics or requirements of the intended land use activity.

   For EDCC siting and operations, the following are essential location factors:

   - Minimum contiguous developable land area of 1,000 acres;
   - Shape and horizontal dimensions (length, width) suitable for siting of clusters of large rectangular data center industrial buildings typical in this region;
   - Adjacent to (ideally) or within 10 miles of existing high-capacity electric power transmission lines.
   - Not within a regulatory environmental hazard area (such as a "100-Year" floodplain or a landslide hazard area).

2. Define study area and prepare an inventory of potential alternative areas, as defined by standards in OAR 660-004-0020(2)(b)(B)(i) through (iii), in the vicinity of the proposed Site.

   - The Study Area was defined broadly, including lands within 10 miles of existing high-capacity electric power transmission lines within a three-county area extending east and west of the proposed Site, incorporating portions of Gilliam, Morrow, and Umatilla Counties, including within the Urban Growth Boundaries (UGBs) of the Cities of Arlington (Gilliam County), Boardman, Ione, and Irrigon (Morrow County), and Echo, Hermiston, Stanfield, and Umatilla (Umatilla County). The study area is depicted in Map 1 in Appendix A.
   - Mackenzie obtained Geographic Information System (GIS) parcel base and zoning data from those jurisdictions, analyzed jurisdictional zoning regulations, identified land where "data center" is an allowed use under current zoning and areas within UGBs that have comprehensive plan designations that would support annexation and application of city zones in which data center is an allowed use, and assigned a unique reference label to each identified land area. The result of this analysis step, depicted in the maps in Appendix A, includes industrially zoned areas which include data centers as an allowed use within UGBs and "exception" lands in County industrial zones. Each Alternative Area was assigned a unique identifier.
   - Several Alternative Areas were included based on Oregon Department of Land Conservation and Development (DLCD) staff's suggestion during the Rowan Percheron, LLC goal exception process (Morrow County Docket AC-145-23; ACM-146-23; AZM-147-23). These areas were analyzed even in cases where their zoning does not permit data centers.

3. Assess characteristics of the identified potentially suitable Alternative Areas.

   - Evaluate each of the Alternative Areas identified in Step 2 against the Essential Location Factors listed in Step 1, to determine whether they could satisfy those requirements.
   - Review recent aerial photography available from online sources, including Bing and Google, and available jurisdictional land use and permit information, to identify evidence of development that would indicate whether land had become "irrevocably committed" to other uses for purposes of this analysis, as defined in Oregon state regulations.

- Aerial photo analysis was also used to identify *"resource land that is already irrevocably committed to nonresource uses not allowed by the applicable Goal"* as directed by OAR 660-004-0020(2)(b)(B)(ii). This visual analysis yielded no tax lots in resource zoning for which aerial photographic evidence indicated the property was irrevocably committed to a non-resource use.
- Identify zones which permit data centers outright:
  - City of Arlington Industrial (M-1) and Land Intensive Industrial (M-2)
  - City of Umatilla General Commercial (GC), Downtown Commercial (DC), Downtown Transitional (DT), and Highway Commercial (HC)
  - City of Hermiston Light Industrial (M-1) and Heavy Industrial (M-2)
  - Morrow County General Industrial (MG), Airport Light Industrial (ALI), and Port Industrial (PI)
  - Umatilla County Depot Industrial (DI)
- For lands subject to an exception allowing industrial zoning and use, determine whether the existing exception/zoning status allows data center use, or would instead require a new Goal 3, 11, or 14 exception procedure. This analysis requires reviewing the findings adopted through the prior exception process to identify use limitations incorporated in the adopted exception(s) specific to the property.

4. Assemble and report data and conclusions.

   - Provide maps, findings, and conclusions for each of the Alternative Areas.

Goal 3 Exception Analysis

The following discussion evaluates the Alternative Areas within Gilliam, Morrow, and Umatilla Counties which were evaluated as part of the Goal 3 (Agricultural Lands) alternatives analysis.

Gilliam County

Unincorporated Gilliam County

Alternative Area GC-1

Alternative Area GC-1 consists of approximately 315 acres in Gilliam County Intermodal Industrial (II) zoning, under three separate ownerships. It is located south of the City of Arlington near Highway 19. See Map 2 in Appendix A. This area was included in the analysis because DLCD staff suggested it as an alternative area in the Rowan Percheron, LLC goal exception process. However, data center is not a permitted use under II zoning. Furthermore, this Alternative Area cannot reasonably accommodate an EDCC due to inadequate contiguous acreage.

City of Arlington

Alternative Area A-1

Within Arlington city limits, Alternative Area A-1 consists of approximately 504 acres in nine tax lots, in a combination of M-1 (Industrial) and M-2 (Land Intensive Industrial) zoning. The Arlington comprehensive plan has no industrially-designated land outside city limits. See Map 3 in Appendix A. Alternative Area A-1 cannot reasonably accommodate EDCC development for the following reasons:

- Amazon Data Centers, Inc. now owns the two largest parcels totaling over 375 acres (see Appendix B). The applicant understands that the property Owner intends to proceed to permitting and construction and is not willing to sell the property. Thus, it is committed to other development.
- The remaining parcels are all under 25 acres each, which is too small for an EDCC.
- The total land area of Alternative Area A-1 is approximately half the 1,000-acre essential location factor threshold for EDCC development.

Morrow County

Unincorporated Morrow County

Alternative Area MC-1

Alternative Area MC-1 consists of approximately 2,119 acres in Morrow County General Industrial (MG) zoning, in which data center is an allowed use. It is located generally west of the Tower Road I-84 interchange area, extending north of I-84 to the south bank of the Columbia River. See Map 4 in Appendix A. Ownership is divided primarily between the Port of Morrow (somewhat less than half the area, in four tax lots) and Threemile Canyon Farms, LLC (somewhat more than half the area in six tax lots), with additional small holdings by the US Army Corps of Engineers (approximately 20.5 acres) and a private individual (about 10.7 acres).[3] Notably, the ownership pattern is such that the river frontage is divided into three discrete segments belonging to the Port of Morrow, four belonging to Threemile Canyon Farms, LLC, and one short segment owned by the US Army Corps of Engineers. See Figure 3 depicting ownership patterns.

[3] Acreages listed on tax maps and in County Assessor records, presumably based on historic deed records, appear to include substantial areas beneath the Ordinary High Water surface of the Columbia River. Ownership share estimates are based on rough area assessment using GIS polygon data.

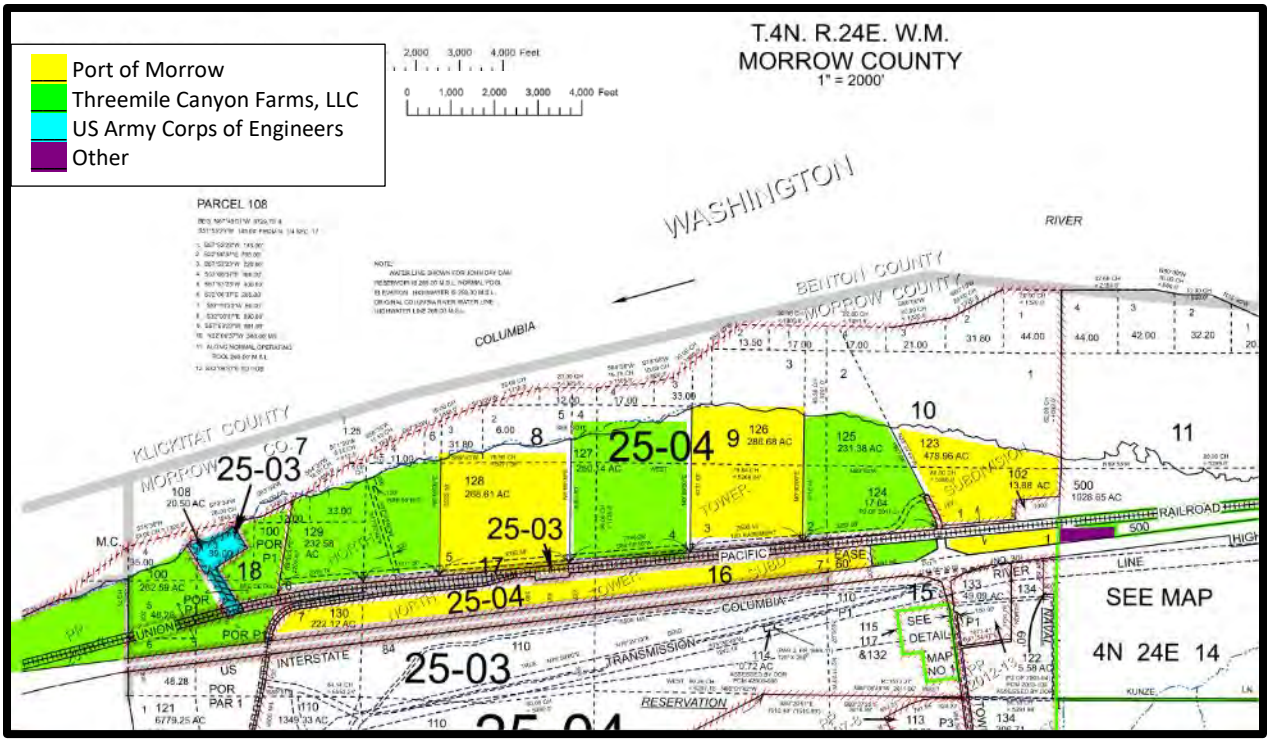


Figure 3: Land Ownerships in the Eastern Portion of Alternative Area MC-1

Vehicular access is extremely limited because the access-restricted Interstate 84 corridor forms the southern boundary of the MG-zoned area; access is available only from the north leg of the Tower Road interchange, near the east end of the Alternative Area. Vehicular access is further constrained by the Union Pacific Railroad tracks a short distance to the north of I-84.

The defining characteristic of Alternative Area MC-1 is its northerly shore frontage on the south bank of the Columbia River. In findings to support prior exception actions, Morrow County has noted that this segment of the Columbia River shore is characterized by shallow subsurface basalt formations, such that creating deepwater port facilities would be very costly, and that federal Public Law 86-645, 74 Stat 486 (33 USC #578) requires that the 1,700 acre "Riverfront Boeing Industrial Tract" "shall be used only for port or industrial purposes."[4] Portions of the shore frontage may nevertheless be suitable for barge-based shipping (requiring shallower draft depths than deepwater port facilities) or other river-dependent or river-oriented development and uses. In any case, the property Owner, Threemile Canyon Farms, LLC, is not willing to sell or lease its property within Alternative Area MC-1 for any use (see Appendix C).

Absent consolidation with at least some of the predominant Threemile Canyon Farms, LLC property holdings, none of the other property Owners' holdings can be assembled to form a contiguous campus area of 1,000 acres or more, and therefore fail to meet the 1,000-acre essential location factor threshold for EDCC development.

[4] See the *Goal Exceptions Statement for Rural Residential, Rural Service Centers and Industrial Lands* section of the Comprehensive Plan at p. 268 and p. 280.

Alternative Area MC-2

Alternative Area MC-2 consists of approximately 1,416 acres in Morrow County Airport Light Industrial (ALI) zoning, in which data center is an allowed use. It is located west of the Tower Road I-84 interchange area, extending south of I-84 to the northern edge of the Airport Industrial zone (which does not allow data centers). See Map 4 in Appendix A. Ownership is divided between the Port of Morrow (approximately 1,293 acres in a single tax lot) and Amazon Data Services, Inc. (approximately 107 acres in a single tax lot), with another 16 acres in public right-of-way.

The Port of Morrow property has been approved by Morrow County for a 1,200-acre solar power generation facility for which construction has commenced, while the Amazon Data Services property has been approved for a data center (Morrow County file number LUD-N-68-24). Accordingly, this Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other approved development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the entitled development.

Alternative Area MC-3

Alternative Area MC-3 consists of approximately 427 acres in Morrow County Airport Light Industrial (ALI) zoning, in which data center is an allowed use. It is located west of Tower Road and south of Boardman Airport Lane, extending south to the northern edge of the SAI zone. See Map 4 in Appendix A. Ownership is divided between the Port of Morrow (approximately 217 acres in a single tax lot in three noncontiguous areas) and Amazon Data Services, Inc. (approximately 196 acres in two tax lots; see Appendix D), with another 14 acres in public right-of-way.

The applicant understands that Amazon Data Centers, Inc. intends to proceed to permitting and construction and is not willing to sell its property. Thus, it is committed to other development.

This Alternative Area cannot reasonably accommodate an EDCC because approximately half is committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the in-process development.

Alternative Area MC-4

Alternative Area MC-4 consists of approximately 642 acres in Morrow County General Industrial (MG) zoning, in which data center is an allowed use. It is located on Taggares Lane west of Tower Road. See Map 5 in Appendix A. The property is owned by Threemile Canyon Farms, LLC and is developed with a commercial dairy operation located on portions of two tax lots (the balance of the dairy operation is on property zoned EFU).

This Alternative Area cannot reasonably accommodate an EDCC because it is committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

Alternative Area MC-5

Alternative Area MC-5 consists of approximately 274 acres in Morrow County General Industrial (MG) zoning, in which data center is an allowed use. It is located east of Tower Road. See Map 5 in Appendix A. The property is owned by Rowan Percheron, LLC and consists of a single tax lot which has been approved for a data center development.

This Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other approved development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the entitled development.

Alternative Area MC-6

Alternative Area MC-6 consists of approximately 641 acres in Morrow County General Industrial (MG) zoning, in which data center is an allowed use. It is located generally east of Tower Road. See Map 5 in Appendix A. The property is owned by Portland General Electric (PGE) and was previously used as the now-decommissioned Boardman Coal Plant. The site consists of three tax lots which have been approved for PGE's Carty Generating Station natural gas/solar development. The property also contains cooling ponds associated with PGE facilities.

This Alternative Area cannot reasonably accommodate an EDCC because it is committed to other approved development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the entitled development.

Alternative Area MC-7

Alternative Area MC-7 consists of approximately 3,870 acres in Morrow County General Industrial (MG) zoning, in which data center is an allowed use. It is located generally east of Tower Road. See Map 5 in Appendix A. The property is owned by Threemile Canyon Farms, LLC and consists of portions of two tax lots which are currently in irrigated agricultural production. The Area also contains facilities associated with Boeing's Radar Cross Section (RCS) test range, for which the site has been granted previous goal exceptions.

This Alternative Area cannot reasonably accommodate an EDCC since the existing goal exceptions are limited to allowing the antenna test range and do not authorize data centers.

Alternative Area MC-8

Alternative Area MC-8 consists of several scattered subareas zoned Morrow County General Industrial (MG), in which data center is an allowed use. The subareas are under six different ownerships and are located generally southeast of the City of Boardman UGB, with one subarea located northeast of the UGB. See Map 6 in Appendix A. Combined, the total area is approximately 359 acres in seven distinct subareas, with three subareas south of I-84 and four subareas north of I-84. One of the subareas is currently under construction with a data center.

This Alternative Area cannot reasonably accommodate an EDCC because the scattered subareas do not provide adequate contiguous acreage for EDCC development.

Alternative Area MC-9

Alternative Area MC-9 consists of upwards of fifty tax lots with a variety of owners, located generally east of the City of Boardman UGB, with three smaller subareas within the eastern portion of the UGB. See Map 6 in Appendix A. The property is zoned Morrow County General Industrial (MG) and Morrow County Port Industrial (PI), which both permit data center as an allowed use. The Alternative Area contains a variety of existing uses, including multiple data centers, irrigated agricultural fields, and scattered industrial developments including Calbee North America, Tredit Tire & Wheel, Oregon Hay, Port of Morrow warehousing, Cal Farms, Columbia River Processing, Dahlgren Industrial, and Windwave Communications.

This Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other existing and approved development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing and in-process development.

Alternative Area MC-10

Alternative Area MC-10 consists of approximately 108 acres in Morrow County General Industrial (MG) zoning, in which data center is an allowed use. It is located northwest of Irrigon, close to the Columbia River (but with no river frontage). See Map 7 in Appendix A. The property is owned by Morrow County Grain Growers and Tidewater Terminal Co. and consists of four tax lots which are in agricultural use and contain grain elevators.

This Alternative Area cannot reasonably accommodate an EDCC because of the portions committed to other development and because the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

Alternative Area MC-11

Alternative Area MC-11 consists of approximately 1,849 acres in Morrow County Port Industrial (PI) zoning, in which data center is an allowed use. It is located north of I-84, south of Irrigon and west of Hermiston. See Map 8 in Appendix A. The property is owned by the Columbia Development Authority in two separate tax lots that are part of the former Umatilla Army Depot, which previously stored munitions in bunkers spread throughout the area.

This Alternative Area cannot reasonably accommodate an EDCC due to ongoing litigation (Umatilla County v. Columbia Development Authority, et al., Umatilla County Circuit Court Case No. 24CV31777). That litigation introduces significant legal uncertainty, the outcome of which is unclear in substance and timing. Thus, the Site cannot "reasonably accommodate" data center development, while it remains the subject of active litigation which seeks to prohibit sale of industrial property.

Cities of Boardman, Ione, and Irrigon

The Cities of Boardman, Ione, and Irrigon contain no land on which data center is a permitted use under current zoning. Similarly, no areas within these UGBs would accommodate data centers, as upon annexation the land would receive city zoning which does not permit data centers.

Umatilla County

Unincorporated Umatilla County

Alternative Area UC-1

Alternative Area UC-1 consists of approximately 389 acres in Umatilla County Depot Industrial (DI) zoning, in which data center is an allowed use in Depot Industrial Subareas 2 and 3 (Depot Industrial Subarea 1 does not permit data centers and is therefore not part of this Alternative Area). It is located north of I-84, west of I-82, south of Irrigon, and west of Hermiston. See Map 8 in Appendix A. The property is owned by the Columbia Development Authority in one tax lot that is part of the former Umatilla Army Depot, which previously stored munitions in bunkers spread throughout the area. The northern portion (Subarea 3) contains facilities associated with disposal of the on-site chemical storage.

This Alternative Area cannot reasonably accommodate an EDCC due to ongoing litigation (Umatilla County v. Columbia Development Authority, et al., Umatilla County Circuit Court Case No. 24CV31777). That litigation introduces significant legal uncertainty, the outcome of which is unclear in substance and timing. Thus, the Site cannot "reasonably accommodate" data center development, while it remains the subject of active litigation which seeks to prohibit sale of industrial property.

Furthermore, according to Umatilla County zoning maps, 81 acres of Subarea 3 are a restricted area, further reducing suitable contiguous acreage.[5]

Alternative Area UC-2

Alternative Area UC-2 consists of approximately 930 acres in over 200 separate tax lots with multiple owners in Umatilla County Light Industrial (LI) and Heavy Industrial (HI) zoning. It is located south and east of the Umatilla UGB. See Map 9 in Appendix A. The area south of the UGB consists primarily of small, developed parcels, while the area east of the UGB contains a vacant 200-acre HI site. This area was included in the analysis because DLCD staff suggested it as an alternative area in the Rowan Percheron, LLC goal exception process. However, data center is not a permitted use under LI or HI zoning. Furthermore, this Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

Alternative Area UC-3

Alternative Area UC-3 consists of approximately 1,650 acres in over 100 separate tax lots with multiple owners in Umatilla County Light Industrial (LI) and Heavy Industrial (HI) zoning. It is located north of I-84, east of I-82, and generally southwest and south of Hermiston. See Map 10 in Appendix A. The area contains existing industrial sites and some vacant parcels. This area was included in the analysis because DLCD staff suggested it as an alternative area in the Rowan Percheron, LLC goal exception process. However, data center is not a permitted use under LI or HI zoning. Furthermore, this Alternative Area cannot reasonably accommodate an EDCC because portions are committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

Cities of Echo and Stanfield

The Cities of Echo and Stanfield contain no land on which data center is a permitted use under current zoning. Similarly, no areas within these UGBs would accommodate data centers, as upon annexation the land would receive city zoning which does not permit data centers.

City of Umatilla

Alternative Area U-1

Within Umatilla city limits, Alternative Area U-1 consists of approximately 184 acres in multiple tax lots with a variety of owners, located generally downtown, near Interstate 82 (I-82), and near Highways US 395 and US 730. See Map 9 in Appendix A. Property within this Alternative Area is variously zoned General Commercial (GC), Downtown Commercial (DC), Downtown Transitional (DT), and Highway Commercial

[5] https://umatillacounty.net/fileadmin/user_upload/Planning/DepotZoning_Umatilla_Only.pdf

(HC) by the City of Umatilla. Each of these zones permits data center as an allowed use. Alternative Area U-1 also includes approximately 116 acres outside city limits but within the UGB; these parcels are designated Commercial in the Umatilla Comprehensive Plan and could therefore accommodate data centers if they were annexed and zoned GC, DC, DT, or HC. The Alternative Area contains a variety of uses in existing development, particularly along US 730, and some undeveloped sites in the eastern portion of the area, with a contiguous area of less than 100 acres.

This Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

City of Hermiston

Alternative Area H-1

Within Hermiston city limits, Alternative Area H-1 consists of approximately 211 acres in multiple tax lots with a variety of owners, located in the northern portion of the City. See Map 10 in Appendix A. Property within this Alternative Area is zoned Light Industrial (M-1) by the City of Hermiston; this zone permits data center as an allowed use. Alternative Area H-1 also includes an additional 44 acres outside city limits but within the UGB; these parcels are designated Industrial in the Hermiston Comprehensive Plan and could therefore accommodate data centers if they were annexed and zoned M-1 or Heavy Industrial (M-2).

This Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

Alternative Area H-2

Within Hermiston city limits, Alternative Area H-2 consists of approximately 1,082 acres in over 40 tax lots with a variety of owners, located in the southeastern portion of the City, and is largely built out with the Walmart distribution center, existing Amazon data center, and other businesses. See Map 10 in Appendix A. Property within this Alternative Area is zoned either Light Industrial (M-1) or Heavy Industrial (M-2) by the City of Hermiston. Each of these zones permits data center as an allowed use. Alternative Area H-2 also includes an additional 117 acres outside city limits but within the UGB; these parcels are designated Industrial or Future Industrial in the Hermiston Comprehensive Plan and could therefore accommodate data centers if they were annexed and zoned M-1 or M-2.

This Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

Goal 14 Exception Analysis

The standards for a reasons exception to Goal 14 (Urbanization) are related, but not identical to those for a Goal 3 Agriculture exception. Per OAR 660-014-0040(3)(a), for a county to grant a Goal 14 exception allowing urban development on rural land, the county must show "…that the proposed urban development cannot be reasonably accommodated in or through expansion of existing urban growth boundaries or by intensification of development in existing rural communities…"

As described above under the "Analysis Method" heading, Mackenzie analyzed urban growth boundaries by (a) identifying those zones within city limits which allow "data center" as an allowed use and (b) for areas within UGBs but outside city limits, identifying those comprehensive plan designations that would support annexation and application of city zones where data center is an allowed use.

Gilliam County

City of Arlington

Alternative Area A-1

Within Arlington city limits, Alternative Area A-1 consists of approximately 504 acres in nine tax lots, in a combination of M-1 (Industrial) and M-2 (Land Intensive Industrial) zoning. The Arlington comprehensive plan has no industrially-designated land outside city limits. See Map 3 in Appendix A. Alternative Area A-1 cannot reasonably accommodate EDCC development for the following reasons:

- Amazon Data Centers, Inc. now owns the two largest parcels totaling over 375 acres (see Appendix B). The applicant understands that the property owner intends to proceed to permitting and construction and is not willing to sell the property. Thus, it is committed to other development.
- The remaining parcels are all under 25 acres each, which is too small for an EDCC.
- The total land area of Alternative Area A-1 is approximately half the 1,000-acre essential location factor threshold for EDCC development.

Morrow County

Cities of Boardman, Ione, and Irrigon

The Cities of Boardman, Ione, and Irrigon contain no land on which data center is a permitted use under current zoning. Similarly, no areas within these UGBs would accommodate data centers, as upon annexation the land would receive city zoning which does not permit data centers.

Umatilla County

Cities of Echo and Stanfield

The Cities of Echo and Stanfield contain no land on which data center is a permitted use under current zoning. Similarly, no areas within these UGBs would accommodate data centers, as upon annexation the land would receive city zoning which does not permit data centers.

City of Umatilla

Alternative Area U-1

Within Umatilla city limits, Alternative Area U-1 consists of approximately 184 acres in multiple tax lots with a variety of owners, located generally downtown, near Interstate 82 (I-82), and near Highways US 395 and US 730. See Map 9 in Appendix A. Property within this Alternative Area is variously zoned General Commercial (GC), Downtown Commercial (DC), Downtown Transitional (DT), and Highway Commercial (HC) by the City of Umatilla. Each of these zones permits data center as an allowed use. Alternative Area U-1 also includes approximately 116 acres outside city limits but within the UGB; these parcels are designated Commercial in the Umatilla Comprehensive Plan and could therefore accommodate data

centers if they were annexed and zoned GC, DC, DT, or HC. The Alternative Area contains a variety of uses in existing development, particularly along US 730, and some undeveloped sites in the eastern portion of the area, with a contiguous area of less than 100 acres.

This Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

City of Hermiston

Alternative Area H-1

Within Hermiston city limits, Alternative Area H-1 consists of approximately 211 acres in multiple tax lots with a variety of owners, located in the northern portion of the City. See Map 10 in Appendix A. Property within this Alternative Area is zoned Light Industrial (M-1) by the City of Hermiston; this zone permits data center as an allowed use. Alternative Area H-1 also includes an additional 44 acres outside city limits but within the UGB; these parcels are designated Industrial in the Hermiston Comprehensive Plan and could therefore accommodate data centers if they were annexed and zoned M-1 or Heavy Industrial (M-2).

This Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

Alternative Area H-2

Within Hermiston city limits, Alternative Area H-2 consists of approximately 1,082 acres in over 40 tax lots with a variety of owners, located in the southeastern portion of the City, and is largely built out with the Walmart distribution center, existing Amazon data center, and other businesses. See Map 10 in Appendix A. Property within this Alternative Area is zoned either Light Industrial (M-1) or Heavy Industrial (M-2) by the City of Hermiston. Each of these zones permits data center as an allowed use. Alternative Area H-2 also includes an additional 117 acres outside city limits but within the UGB; these parcels are designated Industrial or Future Industrial in the Hermiston Comprehensive Plan and could therefore accommodate data centers if they were annexed and zoned M-1 or M-2.

This Alternative Area cannot reasonably accommodate an EDCC because it is largely committed to other development and the remaining vacant land does not provide adequate contiguous acreage for EDCC development after accounting for the existing development.

Consideration for Expansion of Existing UGBs

As Goal 14 also requires demonstration "…that the proposed urban development cannot be reasonably accommodated in or through expansion of existing urban growth boundaries or by intensification of development in existing rural communities…," the concept of expanding UGBs within the study area is discussed here.

Siting an Exascale Data Center Campus within an expanded UGB would consume contiguous developable land area of 1,000 acres or more for a single use, precluding use of that land for other urban uses.

By contrast, siting an Exascale Data Center Campus away from a UGB, and in particular at the Site, enables it to be proximate to necessary large-scale utility infrastructure, to minimize any potential impacts on

urban communities, and generally to present a more viable and efficient location to meet a documented demand for this large-scale industrial use. This 1,264-acre area west of the Boardman Airport is adjacent to the east bank of Sixmile Creek, which forms a logical, natural-feature boundary for urban expansion west of the City of Boardman. Service from existing high-capacity electric power transmission lines can be made available to the site. As urban-level water and transportation services are (or will be) already available to the Airport area, including an adjacent forthcoming data center campus at the western terminus of the improved Boardman Airport Lane, only short extensions are necessary to reach and serve the Site.

Significantly in the context of meeting land needs that operate at a regional scale, for any of the cities in the area to justify expanding its UGB for Exascale Data Center Campus development, the Goal 9 process would require an Economic Opportunities Analysis (EOA) justifying a UGB expansion of 1,000+ acres for a single land use to meet that city's population growth forecast and associated land needs. Such a land area being brought into a UGB expressly for EDCC use would need to be made ineligible for other industrial uses, and a consolidated site of sufficient size, along with the other required site characteristics, would have to be identified contiguous to the existing UGB. Absent an identified user, such a large-acreage site could remain in the UGB indefinitely as surplus industrial land. For these reasons, the established UGB expansion process requires a level of certainty that make it less supportable under these implementing regulations as a method for making an alternative site available for Exascale Data Center Campus development at this time.

By contrast, and particularly in the context of this proposal, the "reasons exception" process is preferable for several reasons:

(1) The necessary designation change is a voluntary proposal submitted by the owner of the property as applicant;
(2) The proposed zone designation (MG with Limited Use Overlay) only allows for the specific urban use–data center–that is the basis for the "reasons" exception;
(3) The proposed designation change contributes significantly to the need to allocate land on a regional basis, responding to a documented recent dramatic increase in land demand for a novel industrial activity; and
(4) The proposal will continue to allow EFU uses on the property unless and until data center development becomes economically feasible. Even if such use ultimately is not realized, the protections inherent in the land use approval process will require a new exception before any other urban use or development can occur.

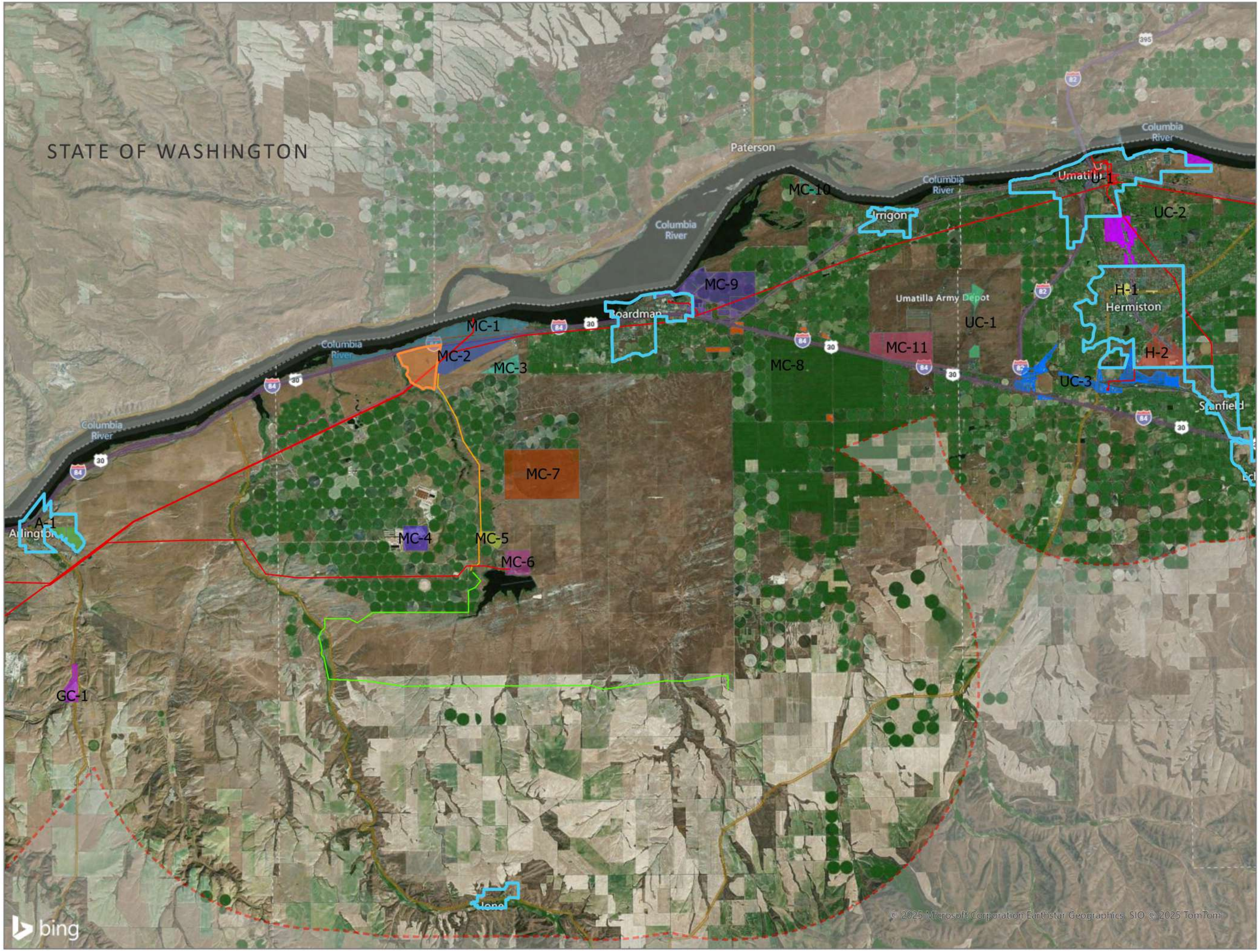
IV. CONCLUSION

This report offers a technical evaluation of the Alternative Areas evaluated in support of the proposed comprehensive plan map amendments, zoning map amendments and exceptions to Goals 3 and 14. This evaluation demonstrates that other sites that do not require a new exception cannot reasonably accommodate the proposed uses, as required by administrative rule. Therefore, none of the Alternative Areas would preclude the Site from its proposed Goal 3 and 14 Exceptions.

APPENDIX A

ALTERNATIVE AREA ANALYSIS MAPS

APPENDIX A MAPS



MAP 1
Alternative Areas Overview

LEGEND

- Approx. Subject Site Boundary
- Urban Growth Boundary

Power Transmission Lines

- 345 Volts
- 500 Volts

Proposed Power Transmission Lines

- Apex-Lightspeed-230kv
- Maverick-Apex-500kv
- Bridging Power
- 10 Mile Buffer - Transmission Lines

Alternative Areas

- City of Arlington Area #1 (A-1)
- City of Umatilla Area #1 (U-1)
- City of Hermiston Area #1 (H-1)
- City of Hermiston Area #2 (H-2)
- Gilliam County Area #1 (GC-1)
- Morrow County Area #1 (MC-1)
- Morrow County Area #2 (MC-2)
- Morrow County Area #3 (MC-3)
- Morrow County Area #4 (MC-4)
- Morrow County Area #5 (MC-5)
- Morrow County Area #6 (MC-6)
- Morrow County Area #7 (MC-7)
- Morrow County Area #8 (MC-8)
- Morrow County Area #9 (MC-9)
- Morrow County Area #10 (MC-10)
- Morrow County Area #11 (MC-11)
- Umatilla County Area #1 (UC-1)
- Umatilla County Area #2 (UC-2)
- Umatilla County Area #3 (UC-3)

0 2 4 Miles

1 inch = 4 mi

N

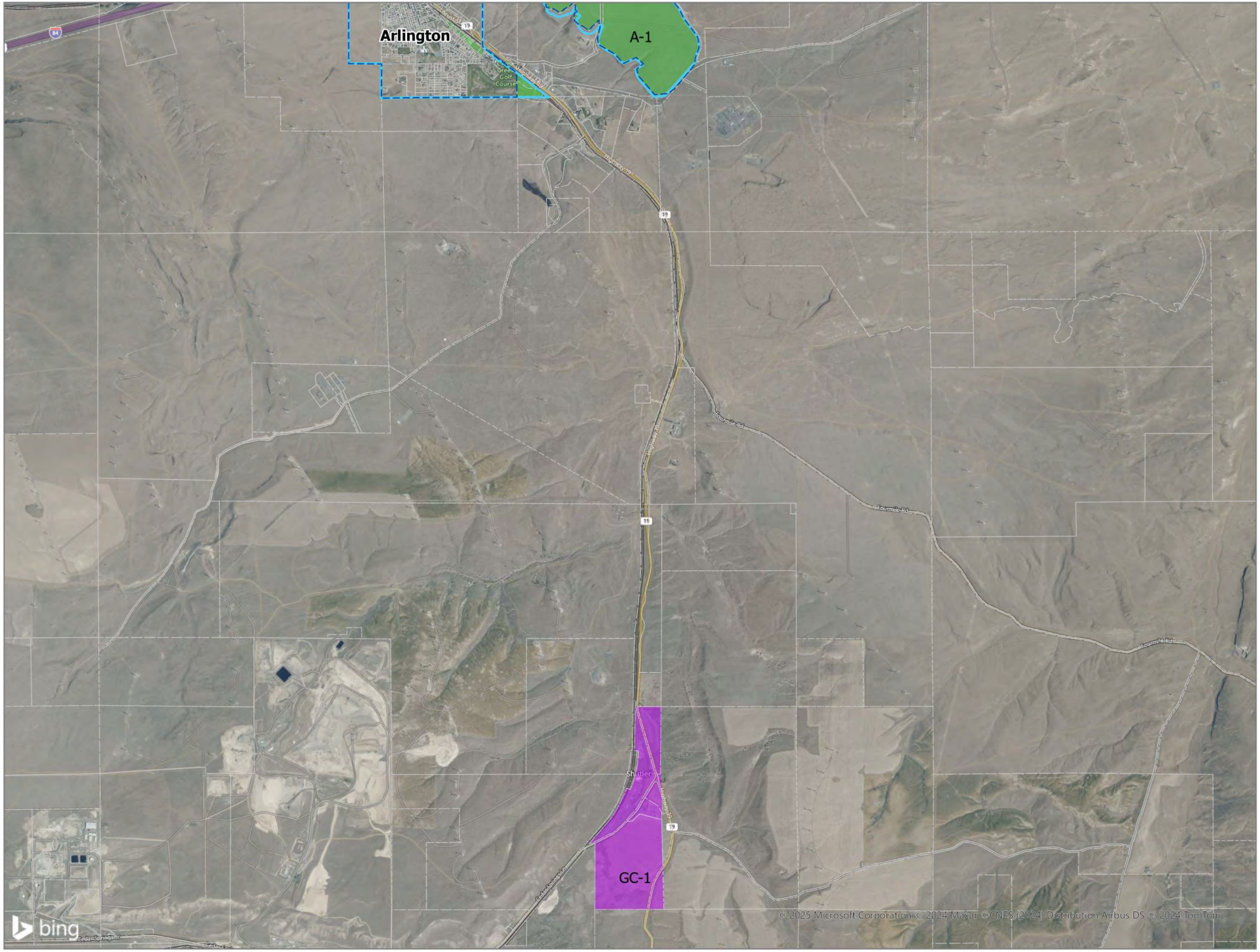
SOURCE DATA:
Gilliam County Data, 2024
Morrow County Data, 2024
Umatilla County Data, 2024
City of Arlington Data, 2024
City of Hermiston Data, 2024
City of Umatilla Data, 2024
DLCD UGB Data, 2022
Esri U.S. Federal Data, 2022

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 1/22/2025
File: GAF-2_SubAreas

Map Created By: CLR
Project No: 2240364.00

MACKENZIE.
P 503.224.9560 • F 503.228.1285 • W MCKNZE.COM
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington



MAP 2
Alternative Area: Gilliam County #1

LEGEND

- City Limits 2022
- Urban Growth Boundary
- Tax Lots

Alternative Areas

- City of Arlington Area #1 (A-1)
- Gilliam County Area #1 (GC-1)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

SOURCE DATA:
Gilliam County Data, 2024
DLCD UGB Data, 2022

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Date: 1/13/2025
File: GAF-2_SubAreas

Map Created By: CLR
Project No: 2240364.00

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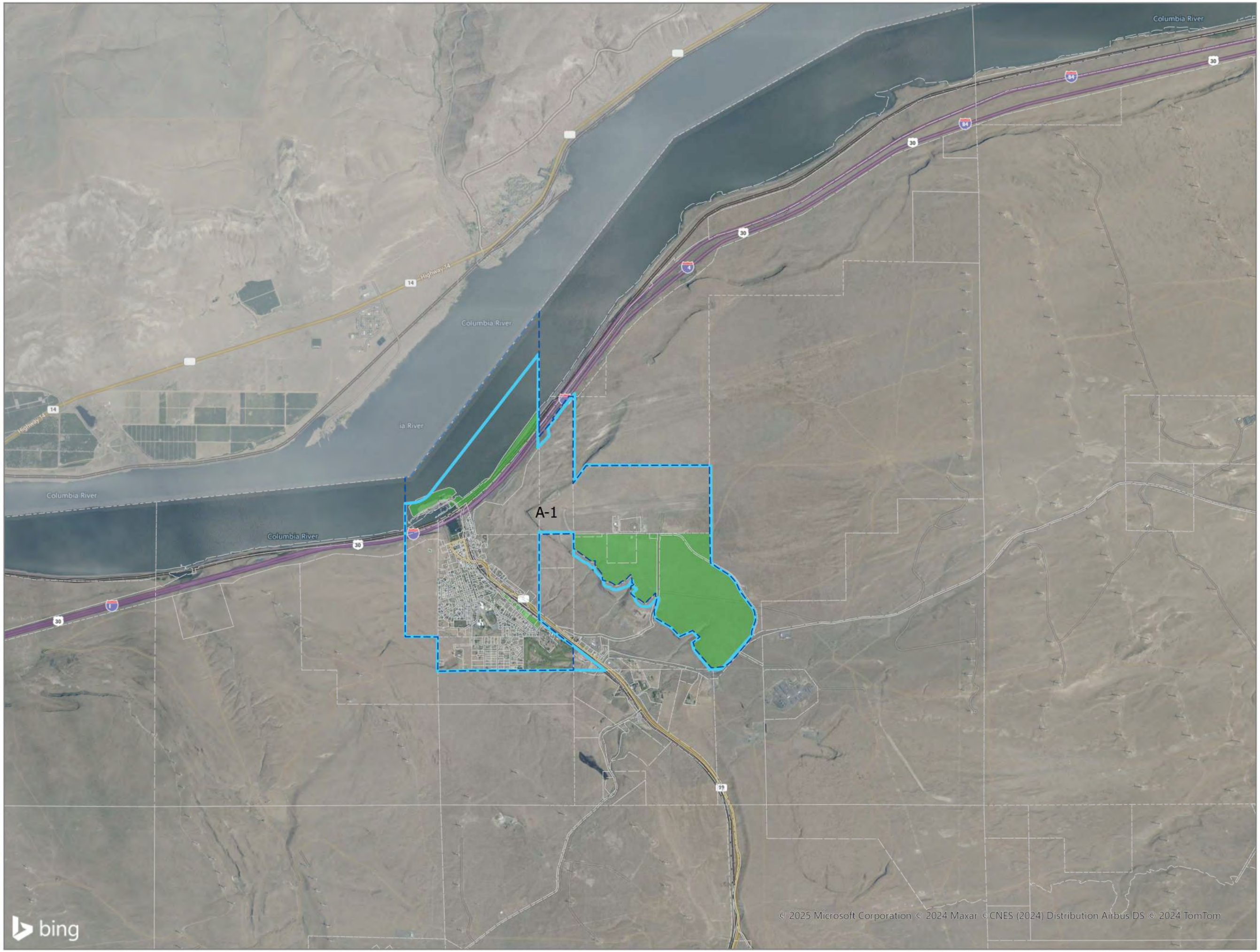


MAP 3
Alternative Area: Arlington #1

LEGEND

- Washington State Boundary
- City Limits 2022
- Urban Growth Boundary
- Tax Lots

Alternative Areas

- City of Arlington Area #1 (A-1)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

SOURCE DATA:
Gilliam County Data, 2024
DLCD UGB Data, 2022

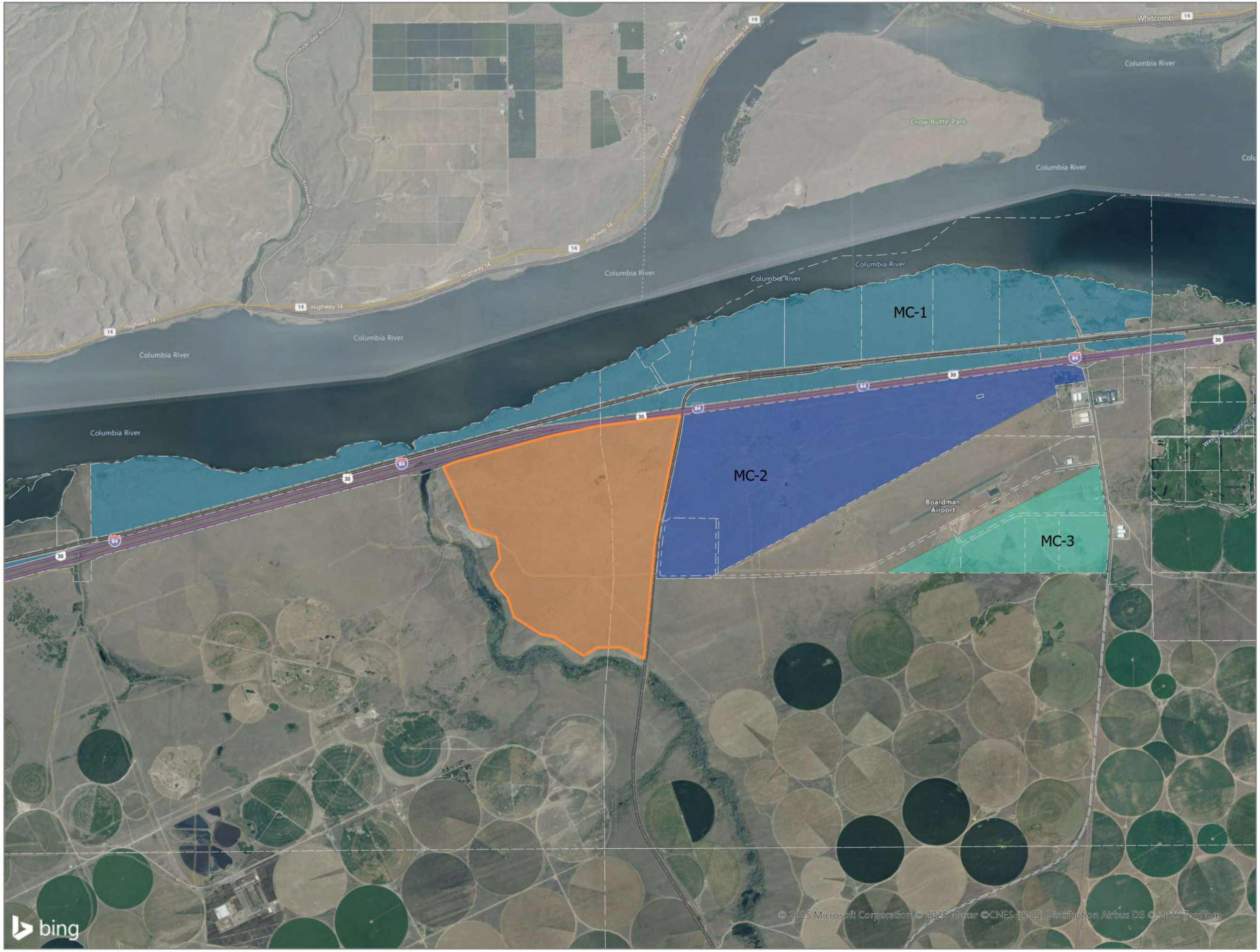
GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Date: 1/16/2025
File: GAF-2_SubAreas

Map Created By: CLR
Project No: 2240364.00

MACKENZIE.

P 503.224.9560 • F 503.228.1285 • W MCKNZE.COM
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington



MAP 4
Alternative Area: Morrow County #1, 2, & 3

LEGEND

- Washington State Boundary
- Approx. Subject Site Boundary
- Tax Lots

Alternative Areas

- Morrow County Area #1 (MC-1)
- Morrow County Area #2 (MC-2)
- Morrow County Area #3 (MC-3)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

SOURCE DATA:
Morrow County Data, 2024

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 1/22/2025
File: GAF-2_SubAreas

Map Created By: CLR
Project No: 2240364.00

MACKENZIE.

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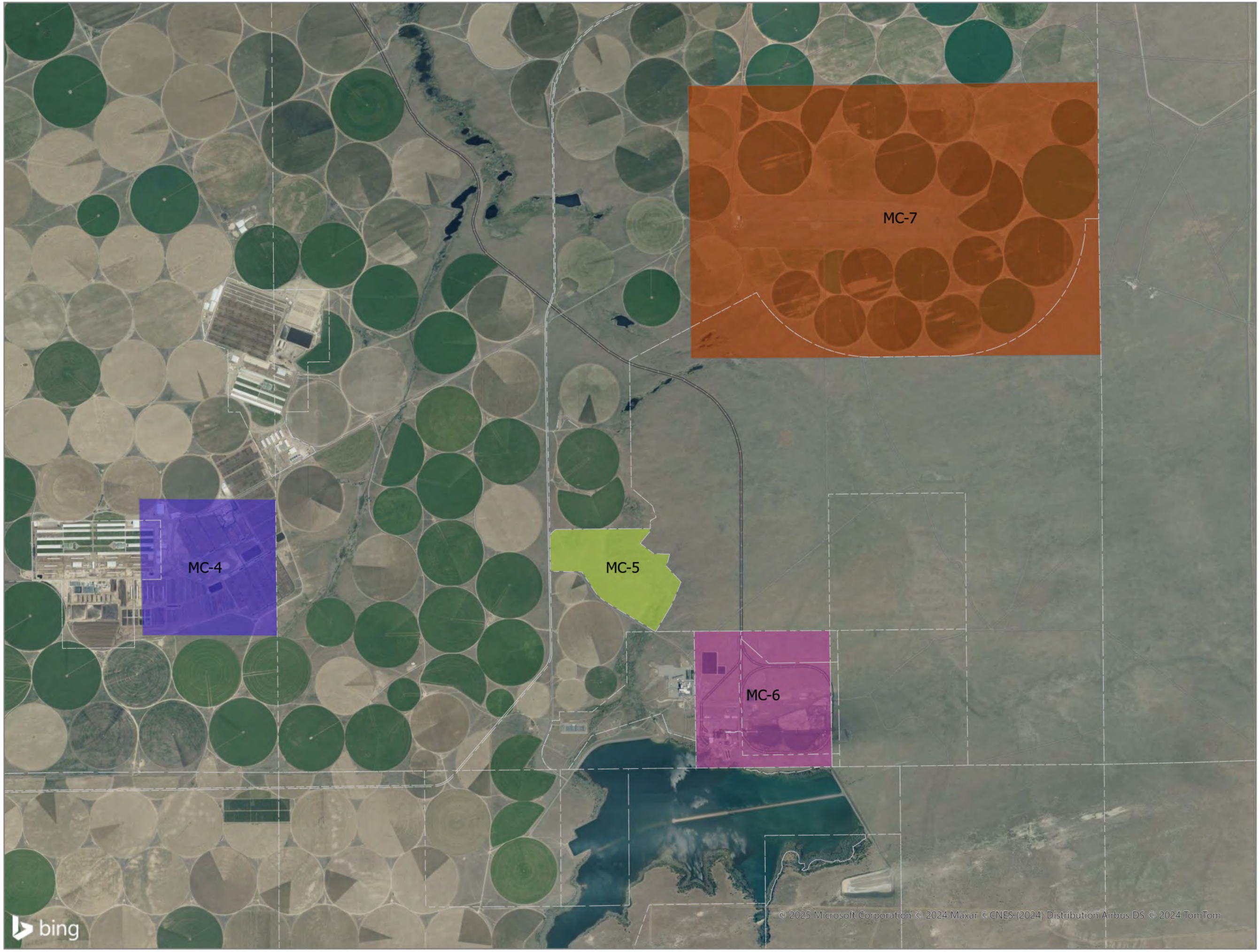
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214

Portland, Oregon • Vancouver, Washington • Seattle, Washington



MAP 5
Alternative Area: Morrow County #4-7

LEGEND

Tax Lots

Alternative Areas

- Morrow County Area #4 (MC-4)
- Morrow County Area #5 (MC-5)
- Morrow County Area #6 (MC-6)
- Morrow County Area #7 (MC-7)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

SOURCE DATA:
Morrow County Data, 2024

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 1/14/2025
File: GAF-2_SubAreas

Map Created By: CLR
Project No: 2240364.00

MACKENZIE.
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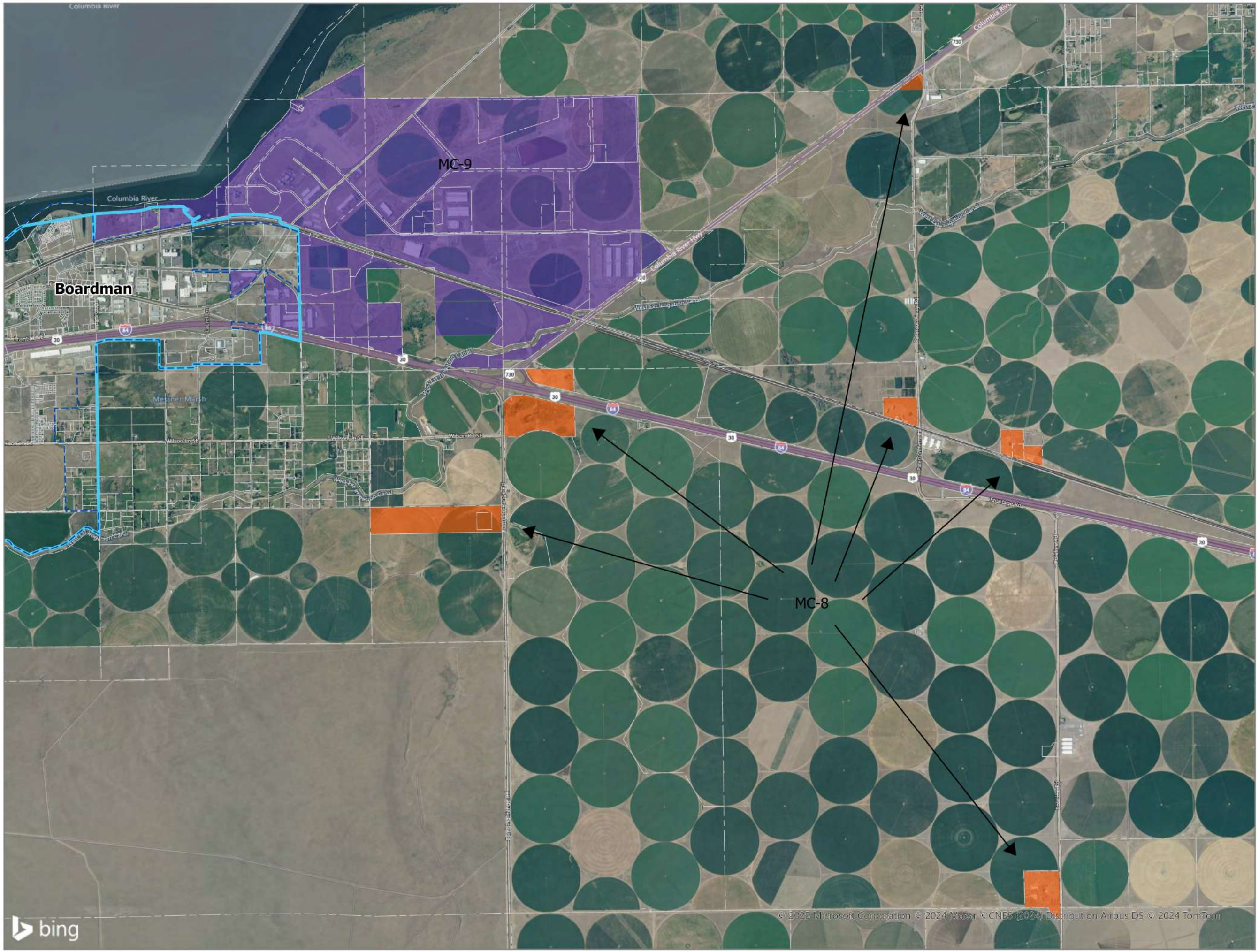
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington



MAP 6
Alternative Area: Morrow County #8 & 9

LEGEND

- Washington State Boundary
- City Limits 2022
- Urban Growth Boundary
- Tax Lots

Alternative Areas

- Morrow County Area #8 (MC-8)
- Morrow County Area #9 (MC-9)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

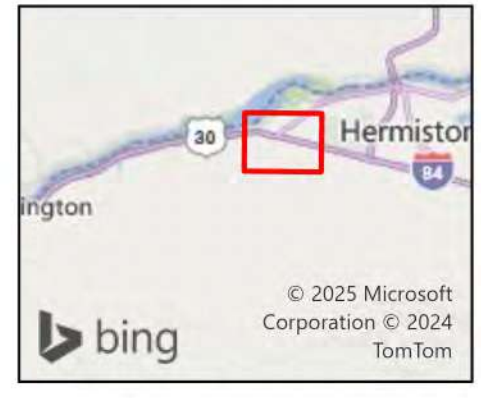
N

SOURCE DATA:
Morrow County Data, 2024

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 1/14/2025
File: GAF-2_SubAreas

Map Created By: CLR
Project No: 2240364.00



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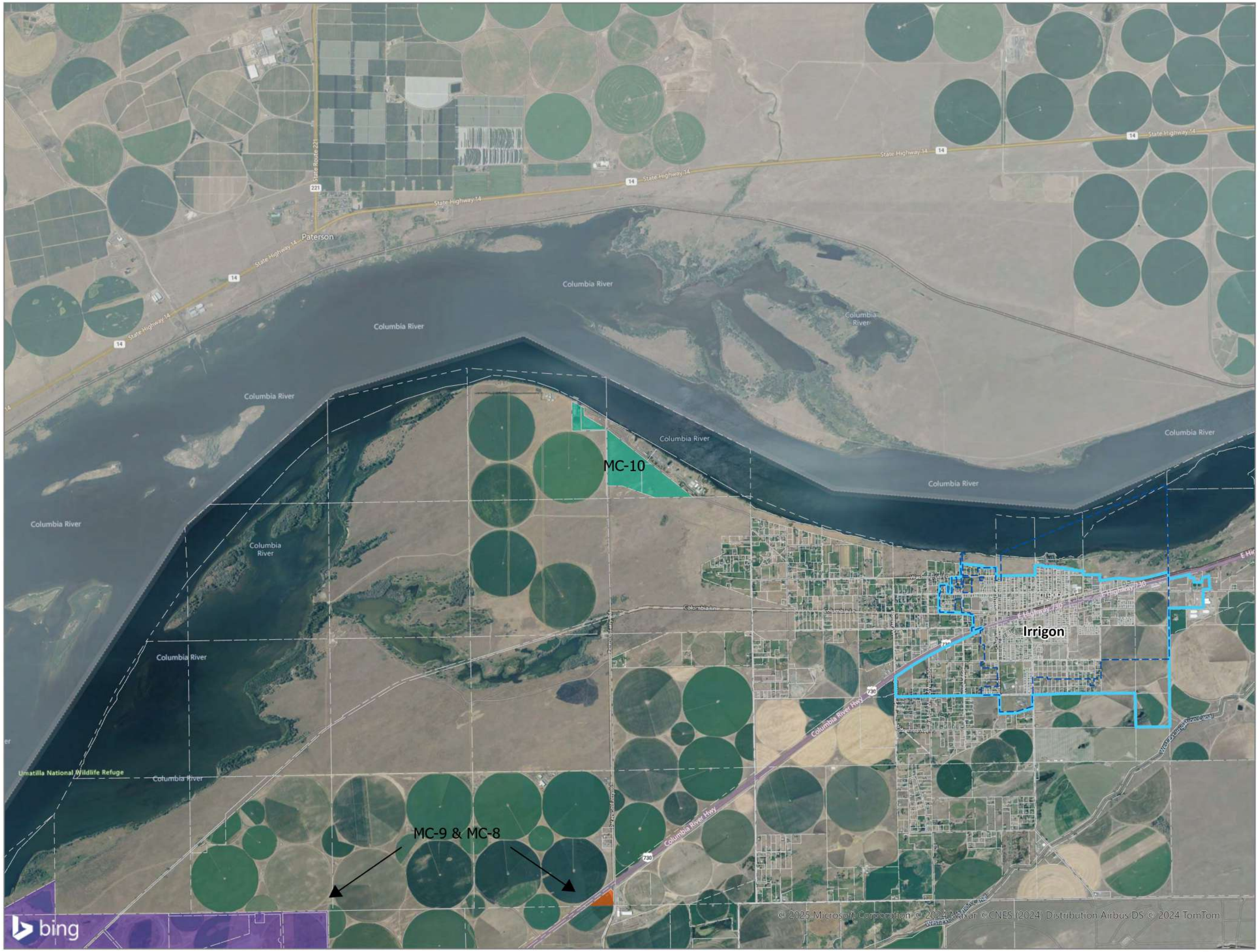
Portland, Oregon • Vancouver, Washington • Seattle, Washington



MAP 7
Alternative Area: Morrow County #10

LEGEND

- Washington State Boundary
- City Limits 2022
- Urban Growth Boundary
- Tax Lots

Alternative Areas

- Morrow County Area #8 (MC-8)
- Morrow County Area #9 (MC-9)
- Morrow County Area #10 (MC-10)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

SOURCE DATA:
Morrow County Data, 2024
DLCD UGB Data, 2022

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Date: 1/14/2025
File: GAF-2_SubAreas

Map Created By: CLR
Project No: 2240364.00

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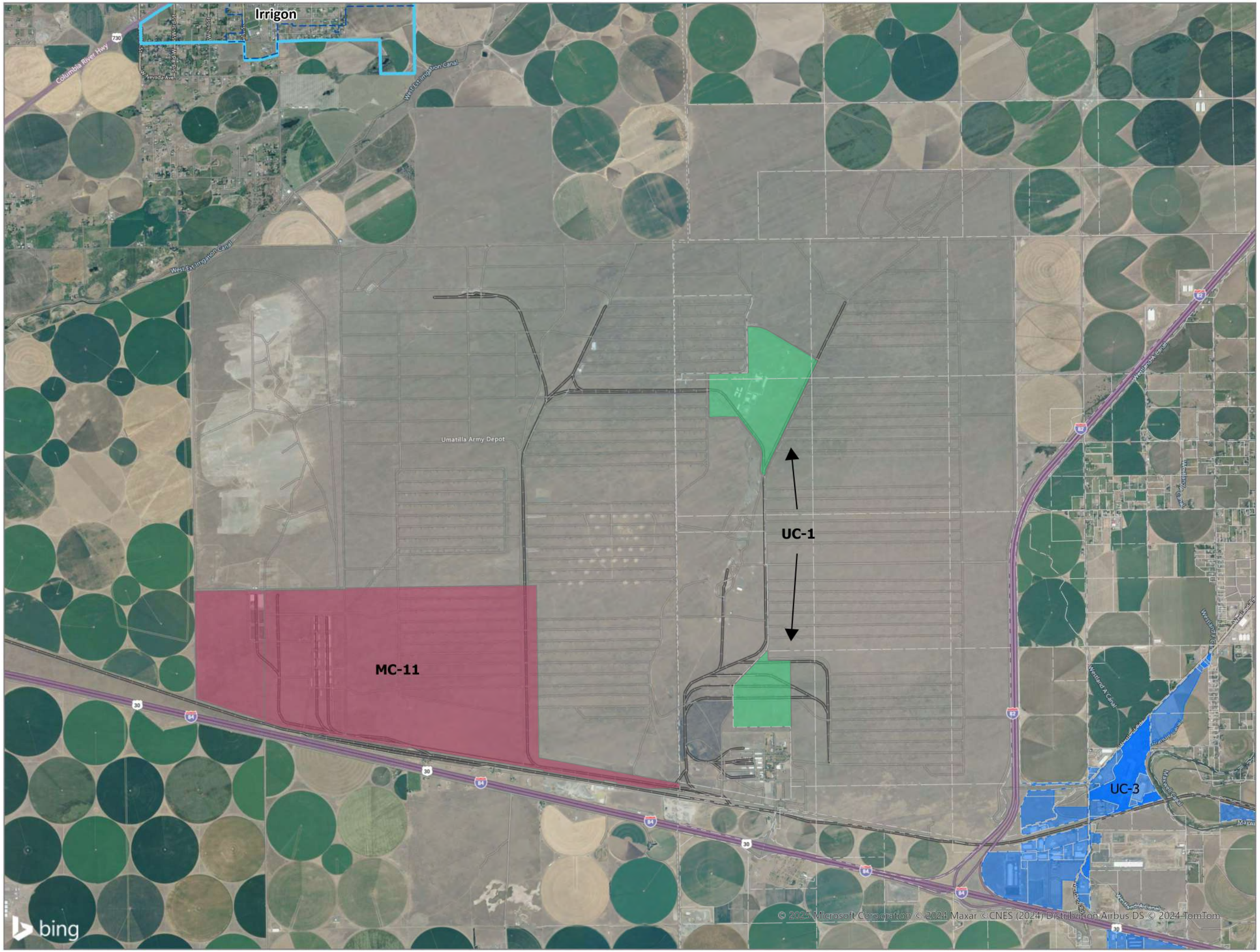
Portland, Oregon • Vancouver, Washington • Seattle, Washington



MAP 8
Alternative Area:
Morrow County #11
Umatilla County #1

LEGEND

- City Limits 2022
- Urban Growth Boundary

Alternative Areas

- Morrow County Area #11 (MC-11)
- Umatilla County Area #1 (UC-1)
- Umatilla County Area #3 (UC-3)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

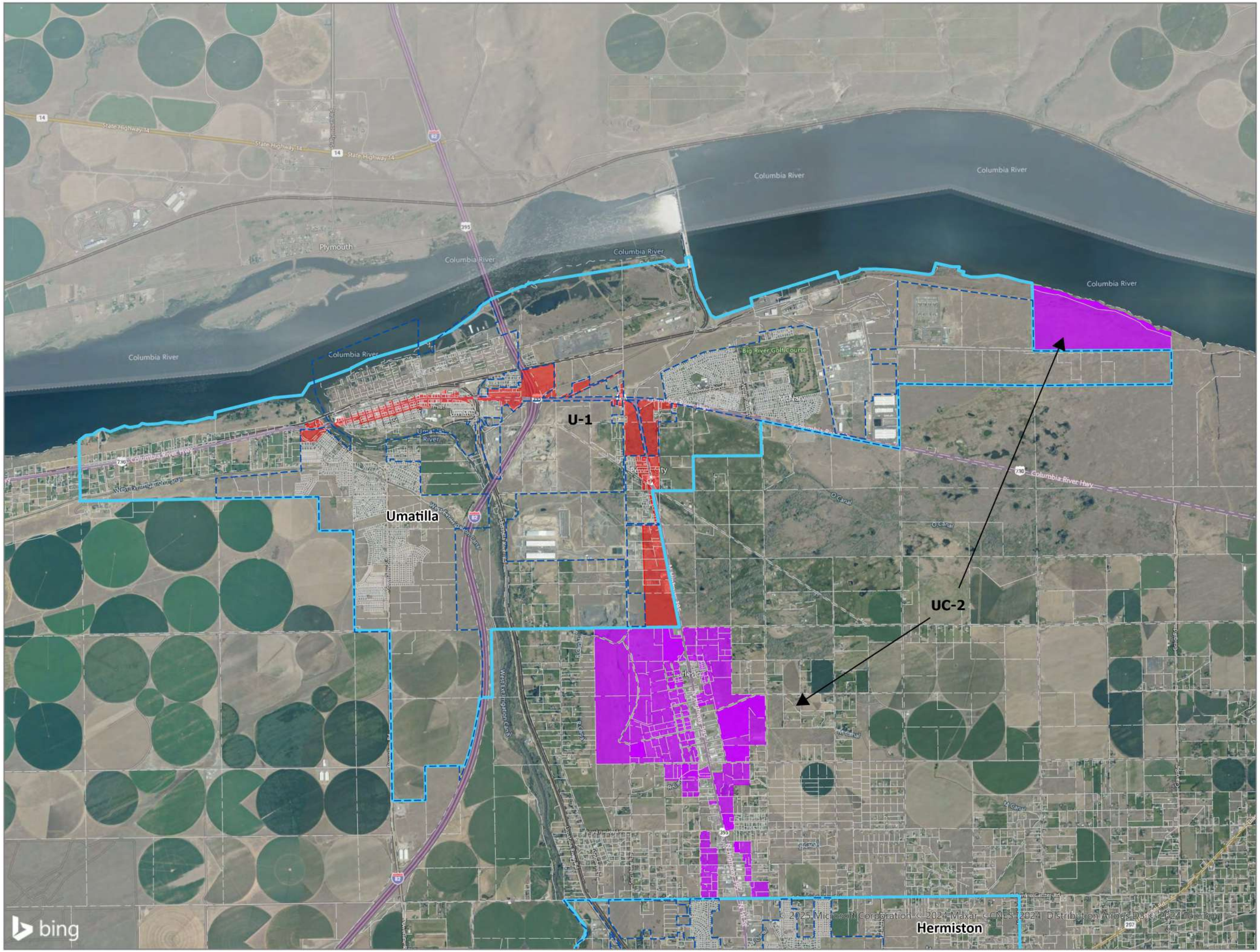
SOURCE DATA:
Morrow County Data, 2024
Umatilla County Data, 2024

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 1/14/2025
File: GAF-2_SubAreas_part_2

Map Created By: CLR
Project No: 2240364.00

MACKENZIE.
P 503.224.9560 • F 503.228.1285 • W MCKNZE.COM
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington



MAP 9
Alternative Area:
City of Umatilla #1
Umatilla County #2

LEGEND

- Washington State Boundary
- City Limits 2022
- Urban Growth Boundary
- Tax Lots

Alternative Areas

- City of Umatilla Area #1 (U-1)
- Umatilla County Area #2 (UC-2)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

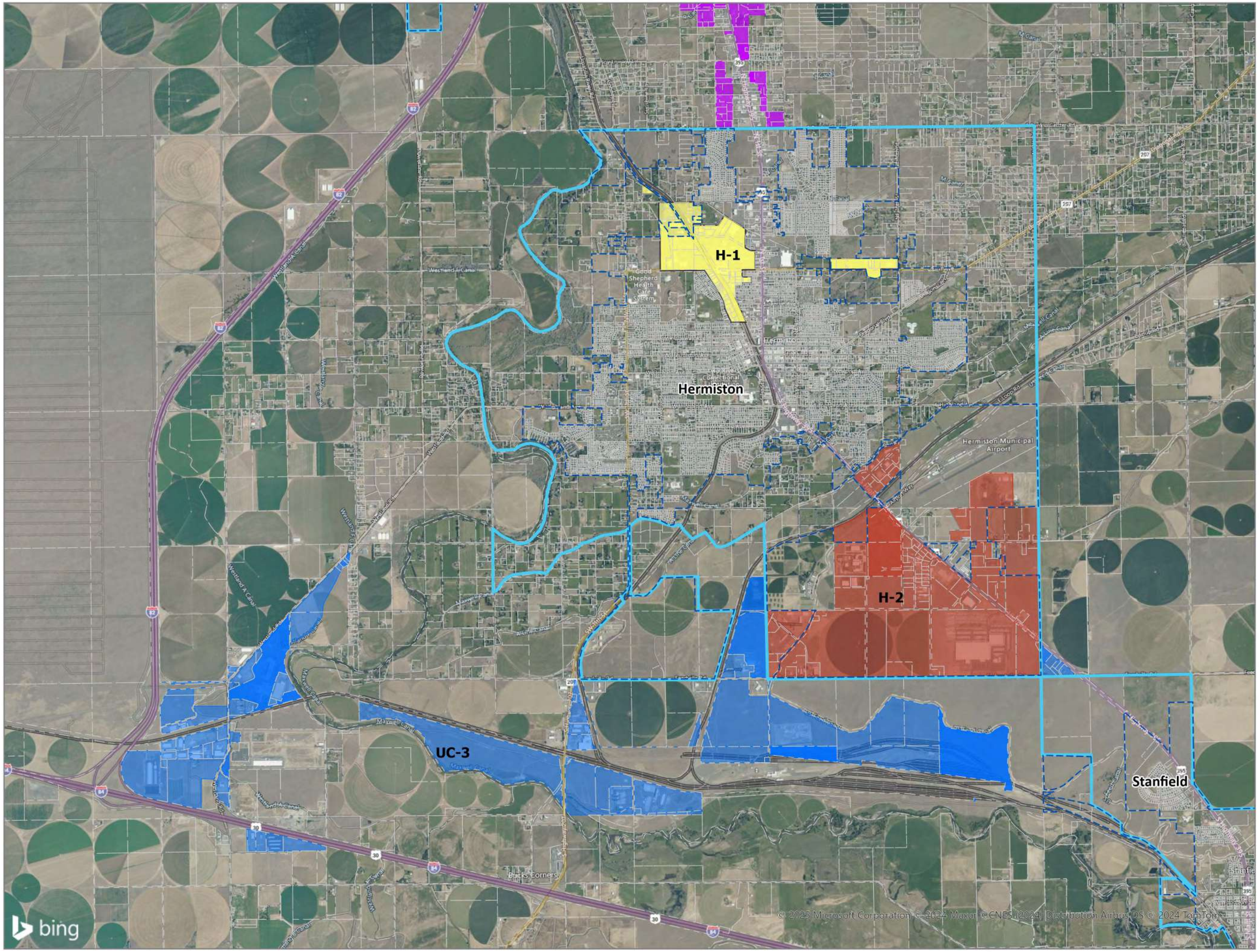
SOURCE DATA:
Umatilla County Data, 2024
City of Umatilla Data, 2024

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Date: 1/14/2025
File: GAF-2_SubAreas_part_2

Map Created By: CLR
Project No: 2240364.00

MACKENZIE.
P 503.224.9560 • F 503.228.1285 • W MCKNZE.COM
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington



MAP 10
Alternative Area:
City of Hermiston #1 & 2
Umatilla County #3

LEGEND

- City Limits 2022
- Urban Growth Boundary
- Tax Lots

Alternative Areas

- City of Hermiston Area #1 (H-1)
- City of Hermiston Area #2 (UC-2)
- Umatilla County Area #2 (UC-2)
- Umatilla County Area #3 (UC-3)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 feet

N

SOURCE DATA:
Umatilla County Data, 2024
City of Hermiston Data, 2024

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Date: 1/15/2025
File: GAF-2_SubAreas_part_2

Map Created By: CLR
Project No: 2240364.00

MACKENZIE.
P 503.224.9560 • F 503.228.1285 • W MCKNZE.COM
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington

APPENDIX B

DEED FROM CITY OF ARLINGTON TO AMAZON DATA SERVICES, INC. FOR PORTION OF ALTERNATIVE AREA A-1

AFTER RECORDING RETURN TO:
PO Box 80416
Seattle, WA 98108-0416
Attention: General Counsel (real estate) [PDX401]

UNTIL A CHANGE IS REQUESTED, ALL TAX STATEMENTS SHALL BE SENT TO THE FOLLOWING ADDRESS:
PO Box 80416
Seattle, WA 98108-0416
Attention: Real Estate Manager [PDX401]

GILLIAM COUNTY, OREGON **2024-000316**
D-D
Cnt=1 Pgs=4 KIMOC **12/23/2024 08:54:41 AM**
$20.00 $11.00 $10.00 $60.00 $101.00
I, Ellen Wagenaar, County Clerk for Gilliam County, Oregon, certify that the instrument identified herein was recorded in the Clerk records.
Ellen Wagenaar - County Clerk

STATUTORY SPECIAL WARRANTY DEED

CITY OF ARLINGTON, A MUNICIPAL CORPORATION OF THE STATE OF OREGON, Grantor, conveys and specially warrants to AMAZON DATA SERVICES, INC., a Delaware corporation, Grantee, the real property described on the attached Exhibit A, free of encumbrances created or suffered by the Grantor except as disclosed on the attached Exhibit B.

The true and actual consideration for this conveyance consists of or includes other property or value given or promised which is a part of the consideration.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

DATED effective this 13 day of December, 2024.

ATTN: 632828AM

CITY OF ARLINGTON,
a municipal corporation of the State of Oregon

By: _____
Jeffery C. Bufton, Mayor

STATE OF OREGON)
) ss
COUNTY OF GILLIAM)

This instrument was acknowledged before me on this 13 day of December, 2024, by Jeffery C. Bufton as Mayor of the CITY OF ARLINGTON, a municipal corporation of the State of Oregon, on behalf of said municipal corporation.

_____
Notary Public for Oregon
My Commission Expires: March 18, 2028

OFFICIAL STAMP
LAUREL ANNE WILLIAMS
NOTARY PUBLIC - OREGON
COMMISSION NO. 1045785
MY COMMISSION EXPIRES MARCH 18, 2028

EXHIBIT A

LEGAL DESCRIPTION

Lots 1 and 2 of MESA INDUSTRIAL PARK SUBDIVISION, recorded August 21, 2024, under Microfilm Number 2024-000195, County of Gilliam and State of Oregon

EXHIBIT B

DEED EXCEPTIONS

All covenants, restrictions, conditions, easements, reservations, rights-of-way, and other matters of record, to the extent valid, subsisting and enforceable.

APPENDIX C

LETTER FROM THREEMILE CANYON FARMS REGARDING PROPERTY WITHIN ALTERNATIVE AREA MC-1

THREEMILE CANYON FARMS

Ian Sisson
Mackenzie, Inc.
RiverEast Center, 1515 SE Water Ave, Suite 100
Portland, OR 97214
ISisson@mcknze.com

Dear Mr. Sisson,

As you know, Threemile Canyon Farms, LLC ("Threemile") owns real property located north of the Boardman Airport along the Columbia River, which is also identified as Tax Lot Nos 04N23E – 100; 04N24E – 100; 04N24E – 129; 04N24E – 127; 04N24E – 125; 04N24E – 124 ("Property"). You have asked whether this Property is or has been available for acquisition or lease by a third party for any purpose. In my capacity as President – Real Estate for Threemile Canyon Farms, LLC, I can confirm that the Property is deemed essential to Threemile's real property holdings and is not and has not been made available for acquisition or lease, regardless of the proposed purchaser/lessee or the proposed use.

Sincerely,

F. Scott Neal
President – Real Estate

APPENDIX D

DEED FROM PORT OF MORROW TO AMAZON DATA SERVICES, INC. FOR PORTION OF ALTERNATIVE AREA MC-3

RECORDING COVER SHEET ***(Please Print or Type)***
This cover sheet was prepared by the person presenting the instrument for recording. The information on this sheet is a reflection of the attached instrument and was added for the purpose of meeting first page recording requirements in the State of Oregon, ORS 205.234, and does NOT affect the instrument.

MORROW COUNTY, OREGON **2023-52454**
D-WD
Cnt=1 Stn=23 TC **01/05/2023 10:29:01 AM**
$175.00 $11.00 $10.00 $60.00 **$256.00**

I, Bobbi Childers, County Clerk for Morrow County, Oregon, certify that the instrument identified herein was recorded in the Clerk records.
Bobbi Childers - County Clerk

AFTER RECORDING RETURN TO:
Seyfarth Shaw LLP
Attention: Michael J. Merar
233 South Wacker Drive, Suite 8000
Chicago, Illinois 60606

1) TITLE(S) OF THE TRANSACTION(S) ORS 205.234(a)
Special Warranty Deed

2) DIRECT PARTY / GRANTOR(S) ORS 205.125(1)(b) and 205.160
Port of Morrow, an Oregon corporation

3) INDIRECT PARTY / GRANTEE(S) ORS 205.125(1)(a) and 205.160
Amazon Data Services, Inc., a Delaware corporation

4) TRUE AND ACTUAL CONSIDERATION
ORS 93.030(5) – Amount in dollars or other
$_____ ☐ Other

5) SEND TAX STATEMENTS TO:
Amazon Data Services, Inc.
Attn: Property Tax (AWS) PDX154-162
PO Box 80416, Seattle, WA 98108-0416

6) SATISFACTION of ORDER or WARRANT
ORS 205.125(1)(e)
CHECK ONE: (If applicable) ☐ FULL ☐ PARTIAL

7) The amount of the monetary obligation imposed by the order or warrant. ORS 205.125(1)(c)
$_____

8) If this instrument is being Re-Recorded, complete the following statement, in accordance with ORS 205.244: "RERECORDED AT THE REQUEST OF AmeriTitle TO CORRECT Add missing Exhibit "B" PREVIOUSLY RECORDED IN BOOK _____ AND PAGE _____, OR AS FEE NUMBER 2022-52441."

AmeriTitle 50529 AM

AFTER RECORDING RETURN TO:
Seyfarth Shaw LLP
Attention: Michael J. Merar
233 South Wacker Drive, Suite 8000
Chicago, Illinois 60606

UNTIL A CHANGE IS REQUESTED, ALL TAX STATEMENTS SHALL BE SENT TO:
Amazon Data Services, Inc.
Attention: Property Tax (AWS) PDX154/162
P.O. Box 80416
Seattle, WA 98108-0416

MORROW COUNTY, OREGON **2022-52441**
D-WD
Cnt=1 Stn=23 TC **12/30/2022 02:14:01 PM**
$165.00 $11.00 $10.00 $60.00 **$246.00**

I, Bobbi Childers, County Clerk for Morrow County, Oregon, certify that the instrument identified herein was recorded in the Clerk records.
Bobbi Childers - County Clerk

AmeriTitle 50563AM

SPECIAL WARRANTY DEED

The true consideration for this conveyance $3,724,380.00.

PORT OF MORROW, an Oregon municipal corporation ("**Grantor**"), conveys and specially warrants to **AMAZON DATA SERVICES, INC.**, a Delaware corporation ("**Grantee**"), the following described real property situated in Morrow County, Oregon, free of encumbrances except as specifically set forth herein:

The real property described in **Exhibit "A"** attached hereto (the "**Property**") and by this reference incorporated herein. Said Property is SUBJECT TO those exceptions described on **Exhibit "B"** attached hereto and by this reference incorporated herein.

EXCEPTING AND RESERVING UNTO GRANTOR all right, title and interest in and to all water rights appurtenant to the Property, as evidenced by State of Oregon Certificate of Water Right No. **68545, 94437,** Transfer **T-13107,** Permit **G-18505, G-17515, G-17516, S-55338.** The reserved water rights are further described as follows:

Certificate:	**That portion of Certificate 68545 appurtenant to and lying within the Property**
Type of Use:	Industrial Use
Source:	A well in the Columbia River Basin, as described in Certificate 68545
Priority Dates:	February 4, 1977
Place of use:	as described in Certificate 68545

Certificate:	**That portion of Certificate 94437 appurtenant to and lying within the Property**
Type of Use:	Industrial Use
Source:	Port Well #4 in the Columbia River Basin, as described in Certificate 94437
Priority Dates:	December 4, 1989
Place of use:	as described in Certificate 94437

Transfer:	**That portion of the Final Order Approving Transfer Application T-13107 appurtenant to and lying within the Property**
Type of Use:	Municipal Use
Source:	Columbia River, a tributary of the Pacific Ocean
Priority Dates:	November 5, 1971
Place of use:	within the Port of Morrow Service Area Boundaries, as described in the Final Order Approving Transfer Application T-13107

Permit:	**That portion of Permit G-18505 appurtenant to and lying within the Property**
Type of Use:	Municipal Use and Irrigation use
Source:	Various Port Water Production Wells in Columbia River Basin
Priority Dates:	October 23, 1996
Place of use:	as described in Permit G-18505

Permit:	**That portion of Permit G-17515 appurtenant to and lying within the Property**
Type of Use:	Municipal Use
Source:	Various Port Water Production Wells in Columbia River Basin
Priority Dates:	May 28, 2013
Place of use:	within service area boundaries of Port of Morrow, as described in Permit G-17515

Permit:	**That portion of Permit G-17516 appurtenant to and lying within the Property**
Type of Use:	Industrial Use, Irrigation, and Supplemental Irrigation
Source:	Various Port Water Production Wells within the Umatilla Basin
Priority Dates:	January 22, 1993
Place of use:	as described in Permit G-17516

Permit:	**That portion of Permit S-55338 appurtenant to and lying within the Property**
Type of Use:	Municipal Use
Source:	Various Port Diversions on the Columbia River, a tributary to the Pacific Ocean
Priority Dates:	January 29, 2018
Place of use:	within the boundaries of Port of Morrow Service Area, as described in Permit S-55338

True and correct copies of the State of Oregon Certificates of Water Right Nos. **68545**, and **94437**, Transfer **T-13107**, and Permits **G-18505, G-17515, G-17516,** and **S-55338,** are attached hereto in **Exhibit "A-1"**.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010.

MADE, GRANTED AND DATED ON December 30, 2022.

[Signature and acknowledgement appear on following page]

GRANTOR:

PORT OF MORROW,
an Oregon municipal corporation

By: Lisa Mittelsdorf
Name: Lisa Mittelsdorf
Title: Executive Director
Date Signed: 12/27/22

STATE OF Oregon)
) SS.
COUNTY OF Morrow)

On this 27th day of December, 2022 before me, a Notary Public of the State of Oregon, personally appeared Lisa Mittelsdorf, the Executive Director of Port of Morrow, an Oregon municipal corporation, a party to the foregoing instrument, and acknowledged that, being authorized to do so, he/she executed the foregoing instrument for the purposes therein contained by signing his/her name as such officer on behalf of such municipal corporation.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

OFFICIAL STAMP
BRANDY J WARBURTON
NOTARY PUBLIC - OREGON
COMMISSION NO. 1029608
MY COMMISSION EXPIRES OCTOBER 06, 2026

Brandy Warburton
Notary Public

My commission expires: October 06, 2026

Exhibit A

Legal Description

Tract 1: PDX 162 (P.P. 2022-15):
Parcel 2 of Partition Plat No. 2022-15, recorded August 23, 2022, as Document No. 2022-51830, Official Records of Morrow County, Oregon, located in the Southeast quarter of the Section 21 and the Southwest quarter of Section 22, Township 4 North, Range 24, East of the Willamette Meridian, Morrow County, Oregon.

Tract 2: PDX 154 (P.P. 2022-15):
Parcel 3 of Partition Plat No. 2022-15, recorded August 23, 2022, as Document No. 2022-51830, Official Records of Morrow County, Oregon, located in the Southwest quarter and the Southeast quarter of Section 22, Township 4 North, Range 24, East of the Willamette Meridian, Morrow County, Oregon.

Exhibit A-1

Water Rights Documents

State of Oregon Certificate of Water Right No. 68545, and 94437, Transfer T-13107, Permit G-18505, G-17515, G-17516, S-55338

(attached)

STATE OF OREGON

COUNTY OF MORROW

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

PORT OF MORROW
1 MARINE DRIVE
P.O. BOX 200
BOARDMAN, OREGON 97818

confirms the right to use the waters of A WELL in the COLUMBIA RIVER BASIN for INDUSTRIAL USE.

This right was perfected under Permit G-7158. The date of priority is FEBRUARY 4, 1977. This right is limited to 3.0 CUBIC FEET PER SECOND or its equivalent in case of rotation, measured at the well.

The well is located as follows:

SW 1/4 NE 1/4, SECTION 10, T 4 N, R 25 E, W.M. 130 FEET NORTH AND 2650 FEET EAST, FROM THE WEST 1/4 CORNER OF SECTION 10.

The use shall conform to such reasonable rotation system as may be ordered by the proper state officer.

A description of the place of use to which this right is appurtenant is as follows:

NE 1/4 SW 1/4
NW 1/4 SW 1/4
SW 1/4 SW 1/4
SE 1/4 SW 1/4
SECTION 2

NE 1/4 SW 1/4
SW 1/4 SW 1/4
SE 1/4 SW 1/4
NE 1/4 SE 1/4
NW 1/4 SE 1/4
SW 1/4 SE 1/4
SE 1/4 SE 1/4
SECTION 3

SE 1/4 SW 1/4
SW 1/4 SE 1/4
SE 1/4 SE 1/4
SECTION 4

NE 1/4 NE 1/4
NW 1/4 NE 1/4
NE 1/4 NW 1/4
SECTION 9

NE 1/4 NE 1/4
NW 1/4 NE 1/4
SW 1/4 NE 1/4
SE 1/4 NE 1/4
SECTION 10
TOWNSHIP 4 NORTH, RANGE 25 EAST, W.M.

SEE NEXT PAGE

NE 1/4 NW 1/4
NW 1/4 NW 1/4
SW 1/4 NW 1/4
SE 1/4 NW 1/4
NE 1/4 SW 1/4
NW 1/4 SW 1/4
NE 1/4 SE 1/4
NW 1/4 SE 1/4
SECTION 10

NE 1/4 NW 1/4
NW 1/4 NW 1/4
SW 1/4 NW 1/4
SE 1/4 NW 1/4
SECTION 11
TOWNSHIP 4 NORTH, RANGE 25 EAST, W.M.

The water user shall maintain a weir, meter or other suitable measuring device and shall keep a complete record of the amount of ground water withdrawn.

The right to use water for the above purpose is restricted to beneficial use on the lands or place of use described.

WITNESS the signature of the Water Resources Director, affixed AUGUST 14, 1995.

Martha O. Pagel

Recorded in State Record of Water Right Certificates numbered 68545.

STATE OF OREGON

COUNTY OF MORROW

CERTIFICATE OF WATER RIGHT

THIS CERTIFICATE ISSUED TO

PORT OF MORROW
PO BOX 200
BOARDMAN OR 97818

confirms the right to the use of water perfected under the terms of Permit G-10975. The amount of water used to which this right is entitled is limited to the amount used beneficially, and shall not exceed the amount specified, or its equivalent in the case of rotation, measured at the point of diversion from the source. The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: G-11992

SOURCE OF WATER: PORT WELL #4 IN THE COLUMBIA RIVER BASIN

PURPOSE or USE: INDUSTRIAL USES

MAXIMUM RATE: 4.46 CUBIC FEET PER SECOND

DATE OF PRIORITY: DECEMBER 4, 1989

The well is located as follows:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
4 N	25 E	WM	10	NE NE	PORT WELL #4 - 1211 FEET SOUTH AND 1257 FEET WEST FROM NE CORNER, SECTION 10

A description of the place of use is as follows:

Twp	Rng	Mer	Sec	Q-Q
4 N	25 E	WM	2	NW SW
4 N	25 E	WM	2	S 1/2 SW 1/4
4 N	25 E	WM	3	S 1/2 SW 1/4
4 N	25 E	WM	3	S 1/2 SE 1/4
4 N	25 E	WM	4	S 1/2 SE 1/4
4 N	25 E	WM	9	N 1/2 NE 1/4
4 N	25 E	WM	10	NE 1/4
4 N	25 E	WM	10	NW 1/4
4 N	25 E	WM	10	N 1/2 SW 1/4
4 N	25 E	WM	10	NW SE
4 N	25 E	WM	11	NW 1/4

NOTICE OF RIGHT TO PETITION FOR RECONSIDERATION OR JUDICIAL REVIEW

This is an order in other than a contested case. This order is subject to judicial review under ORS 183.484 and ORS 536.075. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.484(2). Pursuant to ORS 183.484, ORS 536.075 and OAR 137-004-0080, you may petition for judicial review and petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied. In addition, under ORS 537.260 any person with an application, permit or water right certificate subsequent in priority may jointly or severally contest the issuance of the certificate within three months after issuance of the certificate.

The appropriation shall be regulated if the well displays a static water level of 200 feet below land surface at time of permit issuance. Such regulation may include shutting down the use.

The water user shall maintain a record of levels of the water in the well and record water level measurements whenever well use ceases for more than two days. One measurement shall be made immediately before the resumption of pumping in order to reflect maximum water level recovery. The water user shall notify the Ground Water Section after each measurement period, reporting water level measurements stating the time of measurement and time of pumping cessation.

The wells shall be maintained in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge adequate to determine water level elevation in the well at all times.

When required by the Department, the water user shall install and maintain a weir, meter, or other suitable measuring device, and shall keep a complete record of the amount of groundwater withdrawn.

The Director may require water level or pump test results every ten years.

Failure to comply with any of the provisions of this right may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the right.

This right is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

The right to the use of the water for the above purpose is restricted to beneficial use on the place of use described.

Issued JUL 12 2019

Dwight French
Water Right Services Division Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

BEFORE THE WATER RESOURCES DEPARTMENT
OF THE
STATE OF OREGON

In the Matter of Transfer Application T-13107, Morrow County	)))	FINAL ORDER APPROVING ADDITIONAL POINTS OF DIVERSION AND CHANGES IN PLACE OF USE AND CHARACTER OF USE

Authority

Oregon Revised Statutes (ORS) 540.505 to 540.580 establish the process in which a water right holder may submit a request to transfer the point of diversion, place of use, or character of use authorized under an existing water right. Oregon Administrative Rules (OAR) Chapter 690, Division 380 implement the statutes and provides the Department's procedures and criteria for evaluating transfer applications.

Applicant

PORT OF MORROW
PO BOX 200 / NO. 2 MARINE DRIVE
BOARDMAN, OR 97818

Agent

BRUCE BRODY-HEINE
GSI WATER SOLUTIONS, INC.
147 SW SHEVLIN HIXON DR, SUITE 201
BEND, OR 97702

Findings of Fact

1. On January 15, 2019, the PORT OF MORROW filed an application to change the place of use, character of use and add additional points of diversion under Certificate 91597. The Department assigned the application number T-13107.

2. Notice of the application for transfer was published on January 29, 2019, pursuant to OAR 690-380-4000. No comments were filed in response to the notice.

This final order is subject to judicial review by the Court of Appeals under ORS 183.482. Any petition for judicial review must be filed within the 60-day time period specified by ORS 183.482(1). Pursuant to ORS 536.075 and OAR 137-003-0675, you may petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the Director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.

3. On March 13, 2020, the agent for the applicant submitted a revised application to clarify the points of diversion. The revision also requested the proposed WEID point of diversion be removed from the application.

4. On March 18, 2020, the Department sent a draft Preliminary Determination and cover letter to the applicant. The draft Preliminary Determination gave a deadline of April 17, 2020 in which to respond.

5. On April 15, 2020, the Department determined the draft Preliminary Determination did not contain concurrent changes to a layered supplemental right for both the place of use and character of use changes.

6. On May 14, 2020, the agent for the applicant submitted a revised application to include the layered supplemental water right Permit G-17516. The agent for the applicant also requested that the proposed date for complete application of water be extended to allow additional time to guarantee adequate time to complete the project. The Department shall include the layered supplemental water right approve and extend the date by which the applicant must make full beneficial use of water under the terms and conditions of this transfer to October 1, 2036. This REVISED draft of the preliminary determination, therefore, is issued to document the 766.9 acres place of use layered with primary water right Certificate 91597, and correctly reflects the changes proposed in Transfer Application T-13107, now described in Finding #5 below.

7. On July 15, 2020, the Department contacted the applicant by written correspondence to notify the applicant and the applicant's agent of a deficiency in the application. The date for complete application of water to the use, being October 1, 2018, has expired for Permit G-17516. The Department cannot complete the application without an active completion date. The Department requested that the deficiency be resolved by September 2, 2020.

8. On July 20, 2020, the Department received an Application for Extension of Time from the Port of Morrow, resolving the deficiency.

9. On September 29, 2020, the Department issued a Proposed Final Order, proposing to grant an extension of time to complete construction and application of water to full beneficial use to October 1, 2025.

10. On November 13, 2020, the Department received a protest and request for contested case hearing, in regard to the extension of time for Permit G-17516.

11. On November 5, 2021, the Department received a request to withdraw Permit G-17516 from transfer application T-13107.

12. On February 14, 2022, the Department issued a Preliminary Determination proposing to approve Transfer T-13107 and mailed a copy to the applicant. Additionally, notice of the Preliminary Determination for the transfer application was published on the Department's weekly notice on February 15, 2022, and in the Heppner Gazette newspaper on March 30 and April 6, 2022, pursuant to ORS 540.520 and OAR 690-380-4020. No protests were filed in response to the notices.

13. The portion of the right to be transferred is as follows:

Certificate: 91597 in the name of PORT OF MORROW, WESTLAND ENTERPRISES, LLC, C/O ROBERT LEVY (perfected under Permit S-35694)
Use: IRRIGATION of 1147.5 ACRES FROM COLUMBIA RIVER
Priority Date: NOVEMBER 5, 1971
Rate: 22.16 CUBIC FEET PER SECOND (cfs), BEING 22.16 CFS FOR IRRIGATION OF 1147.5 ACRES
Limit/Duty: The amount of water used for irrigation, together with the amount secured under any other right existing for the same lands, is limited to a diversion of ONE-FORTIETH of one cubic foot per second, or its equivalent for each acre irrigated and shall be further limited to a diversion of not to exceed 4.5 acre-feet per acre for each acre irrigated during the irrigation season of each year.
Period of Use: MARCH 1 THROUGH OCTOBER 31
Source: COLUMBIA RIVER, a tributary of the PACIFIC OCEAN

Authorized Point of Diversion:

Twp	Rng	Mer	Sec	Q - Q	GLot	Measured Distances
5 N	25 E	WM	35	SW SE	3	COLUMBIA RIVER DIVERSION *(ORIGINAL DIVERSION)* - 80 FEET NORTH AND 2480 FEET WEST FROM THE SE CORNER OF SECTION 35

Authorized Place of Use:

IRRIGATION						
Twp	Rng	Mer	Sec	Q - Q	GLot	Acres
4 N	25 E	WM	1	NE NE	1	30.3
4 N	25 E	WM	1	NW NE	2	33.8
4 N	25 E	WM	1	SW NE		34.3
4 N	25 E	WM	1	SE NE		20.0
4 N	25 E	WM	1	NE NW	3	0.8
4 N	25 E	WM	1	NW NW	4	5.9
4 N	25 E	WM	1	SW NW		25.1
4 N	25 E	WM	1	SE NW		37.3
4 N	25 E	WM	1	NE SW		35.8
4 N	25 E	WM	1	NW SW		18.3
4 N	25 E	WM	1	NE SE		35.4
4 N	25 E	WM	1	NW SE		34.7
4 N	25 E	WM	1	SW SE		11.7
4 N	25 E	WM	1	SE SE		33.8

IRRIGATION						
Twp	Rng	Mer	Sec	Q - Q	GLot	Acres
4 N	25 E	WM	2	NE NE	1	35.5
4 N	25 E	WM	2	NW NE	5	3.3
4 N	25 E	WM	2	SE NE		29.3
4 N	25 E	WM	12	NE NE		38.1
4 N	25 E	WM	12	NW NE		17.5
4 N	25 E	WM	12	SW NE		9.2
4 N	25 E	WM	12	SE NE		15.2
4 N	25 E	WM	12	SE NW		0.1
4 N	26 E	WM	6	SW NE		0.5
4 N	26 E	WM	6	SE NE		6.6
4 N	26 E	WM	6	NE NW	3	31.1
4 N	26 E	WM	6	NW NW	4	34.5
4 N	26 E	WM	6	SW NW	5	12.0
4 N	26 E	WM	6	SE NW		8.5
4 N	26 E	WM	6	NE SW		32.4
4 N	26 E	WM	6	NW SW	6	30.9
4 N	26 E	WM	6	SW SW	7	39.7
4 N	26 E	WM	6	SE SW		40.1
4 N	26 E	WM	6	NE SE		34.3
4 N	26 E	WM	6	NW SE		31.0
4 N	26 E	WM	6	SW SE		33.7
4 N	26 E	WM	6	SE SE		18.0
4 N	26 E	WM	7	NE NE		36.3
4 N	26 E	WM	7	NW NE		32.9
4 N	26 E	WM	7	SW NE		29.6
4 N	26 E	WM	7	SE NE		24.6
4 N	26 E	WM	7	NE NW		30.6
4 N	26 E	WM	7	NW NW	1	29.3
4 N	26 E	WM	7	SW NW	2	30.5
4 N	26 E	WM	7	SE NW		40.9
4 N	26 E	WM	7	NE SW		11.2
4 N	26 E	WM	7	NW SW	3	0.4
4 N	26 E	WM	7	NW SE		0.9
4 N	26 E	WM	8	NW NW		19.9
4 N	26 E	WM	8	SW NW		1.7
					Total	1147.5

14. Transfer Application T-13107 proposes additional points of diversion for the above described right Certificate 91597 located:

Twp	Rng	Mer	Sec	Q - Q	GLot	Dist. from Columbia Riv. POD	Measured Distances
4 N	25 E	WM	2	NE NW	7	Downstream 480 feet	CID POD - 150 FEET SOUTH AND 2990 FEET WEST FROM THE NE CORNER OF SECTION 2

Twp	Rng	Mer	Sec	Q - Q	GLot	Dist. from Columbia Riv. POD	Measured Distances
4 N	25 E	WM	2	SE NW	7	Downstream 5500 feet	TERMINAL 5 POD #2 - 1442 FEET SOUTH AND 3923 FEET WEST FROM THE NE CORNER OF SECTION 2
4 N	25 E	WM	3	SW SE	2	Downstream 5500 feet	TERMINAL 3 POD #3 - 1002 FEET NORTH AND 2168 FEET WEST FROM THE SE CORNER OF SECTION 3
4 N	25 E	WM	4	SE SE	2	Downstream 2.0 miles	TERMINAL 1 POD #4 - 410 FEET NORTH AND 435 FEET WEST FROM THE SE CORNER OF SECTION 4

15. Transfer Application T-13107 proposes to change the places of use of Certificate 91597 to:

MUNICIPAL USE
WITHIN THE PORT OF MORROW SERVICE AREA BOUNDARIES

16. Transfer Application T-13107 also proposes to change the character of use of the above described rights to municipal purposes.

17. The Oregon Department of Fish and Wildlife (ODFW) has determined that a fish screen is necessary at the new point of diversion to prevent fish from entering the diversion and that the diversion is not currently equipped with an appropriate fish screen. This diversion may be eligible for screening cost-share funds.

18. The total volume of water that may be diverted under Certificate 91597 for Municipal uses, as conditioned, is 5,163.75 Acre-Feet (AF) March 1 through October 31. (1147.5 x 4.5 = 5,163.75 AF).

Transfer Review Criteria (OAR 690-380-4010)

19. Water has been used within the last five years prior to the submittal of Transfer Application T-13107 according to the terms and conditions of Certificate 91597. There is no information in the record that would demonstrate that the right is subject to forfeiture under ORS 540.610.

20. Pump stations, pipeline, delivery system and sprinkler systems for irrigation and delivery system associated with municipal uses sufficient to use the full amount of water allowed under the existing rights were present within the five-year period prior to submittal of Transfer Application T-13107.

21. The proposed changes, as conditioned, would not result in enlargement of the right.

22. The proposed changes, as conditioned, would not result in injury to other water rights.

23. All other application requirements are met.

Conclusions of Law

The changes in place of use and character of use, and additional points of diversion proposed in Transfer Application T-13107 are consistent with the requirements of ORS 537.705 and 540.505 to 540.580 and OAR 690-380-5000.

Now, therefore, it is ORDERED:

1. The changes in place of use and character of use, and additional points of diversion proposed in Transfer Application T-13107 are approved.

2. The right to the use of the water is restricted to beneficial use at the place of use described, and is subject to all other conditions and limitations contained in Certificate 91597, and any related decree.

3. Water right Certificate 91597 is cancelled. A new certificate will be issued describing that portion of the right not affected by this transfer.

4. The use of water for the proposed municipal use under the right described by Certificate 91597 shall be limited to a rate of diversion of 22.16 cfs and further limited to a total volume diverted of 5,163.75 acre feet during the season of use being March 1 through October 31 of each year.

5. The quantity of water, authorized under water right Certificate 91597, diverted at the new additional points of diversion (CID POD, Terminal 5 POD #2, Terminal 3 POD #3, and Terminal 1 POD #4), together with that diverted at the original points of diversion (Columbia River Diversion (Original Diversion)), shall not exceed the quantity of water lawfully available at the original points of diversion (Columbia River Diversion (Original Diversion)).

6. Water use measurement conditions:

   a. **Before water use may begin** under this order, the water user shall install a totalizing flow meter, or, with prior approval of the Director, another suitable measuring device at each point of diversion (new and existing).

   b. The water user shall maintain the meters or measuring devices in good working order.

   c. The water user shall allow the Watermaster access to the meters or measuring devices; provided however, where the meters or measuring devices are located within a private structure, the Watermaster shall request access upon reasonable notice.

7. Prior to diverting water, the water user shall install an approved fish screen at the new point of diversion and shall provide to the OWRD a written statement from Oregon Department of Fish and Wildlife (ODFW) that the installed screen meets the state's criteria, or that ODFW has determined a screen is not necessary.

The water user shall operate and maintain the fish screen at the new point of diversion consistent with ODFW's operational and maintenance standards. If ODFW determines the screen is not functioning properly, and is unsuccessful in working with the water user to meet ODFW standards, ODFW may request that OWRD regulate the use of water until OWRD receives notification from ODFW that the fish screen is functioning properly.

8. Full beneficial use of the water shall be made, consistent with the terms of this order, on or before **October 1, 2036**. A Claim of Beneficial Use prepared by a Certified Water Right Examiner shall be submitted by the applicant to the Department within one year after the deadline for completion of the changes and full beneficial use of the water.

9. After satisfactory proof of beneficial use is received, new certificates confirming the rights transferred will be issued.

Dated at Salem, Oregon this JUN 0 1 2022.

Lisa J. Jaramillo, Transfers & Conservation Services Manager, for
Thomas M. Byler, Director
Oregon Water Resources Department

Mailing date: JUN 0 2 2022

STATE OF OREGON

COUNTY OF MORROW

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

PORT OF MORROW
PO BOX 200, ONE MARINE DRIVE
BOARDMAN, OR 97818

This superseding permit is issued to describe an amendment for additional points of appropriation proposed under Permit Amendment Application T-13504 and approved by Special Order Vol. 118, Page 542, entered February 10, 2021, and to describe an extension of time for complete application of water approved December 20, 2007, and November 4, 2016, and a Water Management and Conservation Plan approved November 5, 2018. This permit supersedes Permit G-13765.

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: G-14397

SOURCE OF WATER: FOUR WELLS IN COLUMBIA RIVER BASIN

PURPOSE OR USE: MUNICIPAL USE AND IRRIGATION OF 301.0 ACRES

MAXIMUM RATE: NOT TO EXCEED A MAXIMUM CUMULATIVE TOTAL OF 4.96 CUBIC FEET PER SECOND (CFS). BEING 4.96 CFS FOR MUNICIPAL USE AND 3.76 CFS FOR IRRIGATION

PERIOD OF USE: YEAR ROUND FOR MUNICIPAL USE, AND MARCH 1 THROUGH OCTOBER 31 FOR IRRIGATION

DATE OF PRIORITY: OCTOBER 23, 1996

POINT OF DIVERSION LOCATIONS:

Twp	Rng	Mer	Sec	Q-Q	Measured Distances
4 N	24 E	WM	21	SE NE	WELL 3 – 3200 FEET NORTH AND 110 FEET WEST FROM THE SE CORNER OF SECTION 21
4 N	24 E	WM	21	NE SW	WELL 2 – 2085 FEET NORTH AND 2650 FEET WEST FROM THE SE CORNER OF SECTION 21
4 N	24 E	WM	22	NW SW	WELL 1 - 2580 FEET NORTH AND 60 FEET EAST FROM THE SW CORNER OF SECTION 22
4 N	25 E	WM	10	SW NE	WELL 5A - 1650 FEET SOUTH AND 1330 FEET WEST FROM THE NE CORNER OF SECTION 10

The amount of water used for nursery use under this right, together with the amount secured under any other right existing for the same lands, is limited to a diversion of ONE-EIGHTIETH of one cubic foot per second (or its equivalent) and 3.0 acre feet for each acre irrigated during the irrigation season of each year.

THE PLACE OF USE IS LOCATED AS FOLLOWS:

MUNICIPAL USE
WITHIN THE SERVICE BOUNDARIES

IRRIGATION					
Twp	Rng	Mer	Sec	Q-Q	Acres
4 N	24 E	WM	21	NE SW	8.0
4 N	24 E	WM	21	SE SW	19.0
4 N	24 E	WM	21	NE SE	37.0
4 N	24 E	WM	21	NW SE	25.0
4 N	24 E	WM	21	SW SE	35.0
4 N	24 E	WM	21	SE SE	37.0
4 N	24 E	WM	22	NE SW	37.5
4 N	24 E	WM	22	NW SW	24.0
4 N	24 E	WM	22	SW SW	24.0
4 N	24 E	WM	22	SE SW	37.5
4 N	24 E	WM	22	NW SE	8.5
4 N	24 E	WM	22	SW SE	8.5
				Total	301.0

Permit Amendment T-13504 Conditions:

The combined quantity of water diverted at the new additional points of appropriation (Well 3 and Well 5A), together with that diverted at the old points of appropriation (Wells 1 and 2), shall not exceed the quantity of water lawfully available at the original point of appropriation (Wells 1 and 2).

Water shall be acquired from the same aquifer as the original points of appropriation.

Extension of Time Conditions:

Well Condition

The use of any water under Permit G-13765 is subject to this Groundwater Condition.

The permit holder shall provide written documentation that Airport Well #1 (MORR 50471/MORR 50531/ MORR 51712) is not producing water from the basalt source which is common to the Port of Morrow Wells #1 and 2 on or before October 1, 2021. If the Department does not receive written documentation on or before October 1, 2021, the Airport Well #1 (MORR 50471/MORR 50531/ MORR 51712) will be excluded on the final certificate.

Development Limitations

Appropriation of any water beyond 0.46 cfs up to 4.96 cfs under Permit G-13765 for municipal use shall only be authorized upon issuance of a final order approving a Water Management and Conservation Plan (WMCP) under OAR Chapter 690, Division 86 that authorizes access to a greater rate of appropriation of water under the permit consistent with OAR 690-086-0130(7). The required WMCP shall be submitted to the Department within 3 years of this Final Order. The amount of water used under Permit G-13765 must be consistent with this and subsequent WMCP's approved under OAR Chapter 690, Division 86 on file with the Department.

The Development Limitation established in the above paragraph supersedes any prior limitation of the appropriation of water under Permit G-13765 that has been established under a prior WMCP or Extension final order issued by the Department.

The deadline established in the Extension Final Order for submittal of a WMCP shall not relieve a permit holder of any existing or future requirement for submittal of a WMCP at an earlier date as established through other orders of the Department. A WMCP submitted to meet the requirements of the final order may also meet the WMCP submittal requirements of other Department orders.

Water Management and Conservation Plan Conditions:

The Port of Morrow's Water Management and Conservation Plan is approved and shall remain in effect until April 3, 2028, unless this approval is rescinded pursuant to OAR 690-086-0920.

The limitation of the diversion of water under Permit G-13765 established in the Final Order approving an Extension of Time for Permit G-13765 (issued on November 4, 2016) remains unchanged. Subject to other limitations or conditions of the permit, therefore, the Port of Morrow remains authorized to divert up to 0.46 cfs (out of the total permitted 4.96 cfs) of water under Permit G-13765.

The Port of Morrow shall submit an updated plan meeting the requirements of OAR Chapter 690, Division 086 within 10 years and no later than October 3, 2027.

The Port of Morrow shall submit a progress report containing the information required under OAR 690-086-0120(4) by April 3, 2023. The deadline established herein for the submittal of an updated Water Management and Conservation Plan (consistent with OAR Chapter 690, Division 086) shall not relieve the Port of Morrow from any existing or future requirement(s) for submittal of a Water Management and Conservation Plan at an earlier date as established through other final orders of the Department.

Existing Permit Conditions:

Measurement. recording and reporting conditions:

A. Before water use may begin under this permit, the permittee shall install a meter or other

suitable measuring device as approved by the Director. The permittee shall maintain the meter or measuring device in good working order, shall keep a complete record of the amount of water used each month and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the water user to report general water use information, including the place and nature of use of water under the permit.

B. The permittee shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

The water user shall develop a plan to monitor and report the impact of water use under this permit on water levels within the aquifer that provides water to the permitted well(s). The plan shall be submitted to the Department within one year of the date the permit is issued and shall be subject to the approval of the Department. At a minimum, the plan shall include a program to periodically measure static water levels within the permitted well(s) or an adequate substitution such as water levels in nearby wells. The plan shall also stipulate a reference water level against which any water-level declines will be compared. If a well listed on this permit (or replacement well) displays a total static water-level decline of 25 or more feet over any period of years, as compared to the reference level, then the water user shall discontinue use of, or reduce the rate or volume of withdrawal from, the well(s). Such action shall be taken until the water level recovers to above the 25-foot decline level or until the Department determines, based on the water user's and/or the Department's data and analysis, that no action is necessary because the aquifer in question can sustain the observed declines without adversely impacting the resource or senior water rights. The water user shall in no instance allow excessive decline, as defined in Commission rules, to occur within the aquifer as a result of use under this permit.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this permit, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interferences.

Within one year of permit issuance, the appropriator shall prepare a plan for the Water Resources Commission which shall indicate the steps for obtaining an alternate long term water supply.

Within one year of permit issuance, the permittee shall submit a water management and conservation plan consistent with OAR Chapter 690, Division 86.

Under this permit, groundwater shall not be produced from the basalt source developed by Port of Morrow wells #1 and #4, identifies in Department records as MORR 752 and MORR 1526.

STANDARD CONDITIONS

The wells shall be constructed in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge adequate to determine water level elevation in the well at all times.
The use shall conform to such reasonable rotation system as may be ordered by the proper state officer.

Prior to receiving a certificate of water right, the permit holder shall submit the results of a pump test meeting the Department's standards, to the Water Resources Department. The Director may require water level or pump test results every ten years thereafter.

Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

The Director finds that the proposed use(s) of water described by this permit, as conditioned, will not impair or be detrimental to the public interest.

Complete application of the water to the use was to be made on or before October 1, 2002. By Extension of Time Final Order dated November 4, 2016, complete application of the water to the use is to be made on or before October 1, 2040.

Signed FEB 10 2021:

Lisa J. Jaramillo, Transfer and Conservation Section Manager, for
THOMAS M. BYLER, DIRECTOR
Oregon Water Resources Department

STATE OF OREGON

COUNTY OF MORROW

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

PORT OF MORROW
PO BOX 200
BOARDMAN, OR 97818

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: G-17678

SOURCE OF WATER: PORT WELL 5A AND PORT WELL 5B IN COLUMBIA RIVER BASIN

PURPOSE OR USE: MUNICIPAL USE

MAXIMUM RATE: 4.95 CUBIC FEET PER SECOND

PERIOD OF USE: YEAR-ROUND

DATE OF PRIORITY: MAY 28, 2013

WELL LOCATIONS:

PORT WELL 5A: NE ¼ NE ¼, SECTION 10, T4N, R25E, W.M.; 1570 FEET NORTH AND 910 FEET WEST FROM E¼ CORNER, SECTION 10

PORT WELL 5B: SW ¼ NW ¼, SECTION 11, T4N, R25E, W.M.; 475 FEET NORTH AND 620 FEET EAST FROM W¼ CORNER, SECTION 11

THE PLACE OF USE IS LOCATED AS FOLLOWS:

WITHIN SERVICE AREA BOUNDARIES OF PORT OF MORROW

Measurement devices, and recording/reporting of annual water use conditions:

A. Before water use may begin under this permit, the permittee shall install a totalizing flow meter at each point of appropriation. The permittee shall maintain the device in good working order.

B. The permittee shall allow the watermaster access to the device; provided however, where any device is located within a private structure, the watermaster shall request access upon reasonable notice.

C. The permittee shall keep a complete record of the volume of water diverted each month, and shall submit a report which includes water-use measurements to the Department annually, or more frequently as may be required by the Director. Further, the Director may require the permittee to report general water-use information, including the place and nature of use of water under the permit.

D. The Director may provide an opportunity for the permittee to submit alternative measuring and reporting procedures for review and approval.

Static Water Level Conditions

The Department requires the water user to obtain, from a qualified individual (see below), and report annual static water levels for each well on the permit. The static water level shall be measured in the month of March. Reports shall be submitted to the Department within 30 days of measurement.

The permittee shall report an initial March static water-level measurement once well construction is complete and annual measurements thereafter. Annual measurements are required whether or not the well is used. The first annual measurement will establish a reference level against which future measurements will be compared. However, the Director may establish the reference level based on an analysis of other water-level data. The Director may require the user to obtain and report additional water levels each year if more data are needed to evaluate the aquifer system.

All measurements shall be made by a certified water rights examiner, registered professional geologist, registered professional engineer, licensed well constructor or pump installer licensed by the Construction Contractors Board. Measurements shall be submitted on forms provided by, or specified by, the Department. Measurements shall be made with equipment that is accurate to at least the standards specified in OAR 690-217-0045. The Department requires the individual performing the measurement to:

A. Associate each measurement with an owner's well name or number and a Department well log ID; and
B. Report water levels to at least the nearest tenth of a foot as depth-to-water below ground surface; and
C. Specify the method of measurement; and
D. Certify the accuracy of all measurements and calculations reported to the Department.

The Department may require the discontinuance of groundwater use, or reduce the rate or volume of withdrawal, from the well(s) if any of the following events occur:

A. Annual water-level measurements reveal an average water-level decline of three or more feet per year for five consecutive years; or
B. Annual water-level measurements reveal a water-level decline of 15 or more feet in fewer than five consecutive years; or
C. Annual water-level measurements reveal a water-level decline of 25 or more feet; or
D. Hydraulic interference leads to a decline of 25 or more feet in any neighboring well with senior priority.

The period of restricted use shall continue until the water level rises above the decline level which triggered the action or the Department determines, based on the permittee's and/or the Department's data and analysis, that no action is necessary because the aquifer in question can sustain the observed declines without adversely impacting the resource or causing substantial interference with senior water rights. The water user shall not allow excessive decline, as defined in Commission rules, to occur within the aquifer as a result of use under this permit. If more than one well is involved, the water user may submit an alternative measurement and reporting plan for review and approval by the Department.

Dedicated Measuring Tube: Wells with pumps shall be equipped with a minimum 3/4-inch diameter, unobstructed, dedicated measuring tube pursuant to figure 200-5 in OAR 690-200. If a pump has been installed prior to the issuance of this permit, and if static water levels and pumping levels can be measured using an electrical tape, then the installation of the measuring tube can be delayed until such time that water levels cannot be measured or the pump is repaired or replaced.

Any well drilled under this permit shall be continuously cased and continuously sealed from land surface to approximately 900 feet below land surface to isolate the well(s) from the Basalt of Sentinel Gap (Frenchman Springs Member, Wanapum Basalt) water-bearing zones that are open within Port of Morrow Well #4 (MORR 1526).

During the construction of any well under this permit, drill cuttings shall be collected at 10-foot intervals and at changes in lithology. A reference set of cleaned drill cuttings, labeled in plastic sample trays, shall be submitted to the Department for each well. The applicant shall have select drill cuttings analyzed for a comprehensive suite of major, minor, and trace elements that are appropriate for characterizing Columbia River Basalt Group stratigraphy. Available data for each well location shall be compiled, and the basalt stratigraphy interpreted by an Oregon Registered Geologist, whose written report shall be provided to the Department.

A copy of all hydrogeologic, geochemical, downhole video logs, and aquifer testing data collected from any well drilled under this permit will be provided in both hard copy and electronic format to the Department.

Prior to using water from any well listed on this permit, the permittee shall ensure that the well has been assigned an OWRD Well Identification Number (Well ID tag), which shall be permanently attached to the well. The Well ID shall be used as a reference in any correspondence regarding the well, including any reports of water use, water level, or pump test data.

STANDARD CONDITIONS

Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

If the number, location, source, or construction of any well deviates from that proposed in the permit application or required by permit conditions, this permit may be subject to cancellation, unless the Department authorizes the change in writing.

If substantial interference with surface water or a senior water right occurs due to withdrawal of water from any well listed on this permit, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interferences.

The well(s) shall be constructed and maintained in accordance with the General Standards for the Construction and Maintenance of Water Supply Wells in Oregon. The works shall be equipped with a usable access port adequate to determine water-level elevation in the well at all times.

If the riparian area is disturbed in the process of developing a point of appropriation, the permittee shall be responsible for restoration and enhancement of such riparian area in accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy OAR 635-415. For purposes of mitigation, the ODFW Fish and Wildlife Habitat Mitigation Goals and Standards, OAR 635-415, shall be followed.

The use may be restricted if the quality of downstream waters decreases to the point that those waters no longer meet state or federal water quality standards due to reduced flows.

Where two or more water users agree among themselves as to the manner of rotation in the use of water and such agreement is placed in writing and

filed by such water users with the watermaster, and such rotation system does not infringe upon such prior rights of any water user not a party to such rotation plan, the watermaster shall distribute the water according to such agreement.

Prior to receiving a certificate of water right, the permit holder shall submit to the Water Resources Department the results of a pump test meeting the Department's standards for each point of appropriation (well), unless an exemption has been obtained in writing under OAR 690-217. The Director may require water-level or pump-test data every ten years thereafter.

This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

Completion of construction and application of the water shall be made within twenty years of the date of permit issuance. If beneficial use of permitted water has not been made before this date, the permittee may submit an application for extension of time, which may be approved based upon the merit of the application.

Within one year after making beneficial use of water, the permittee shall submit a claim of beneficial use, which includes a map and report, prepared by a Certified Water Rights Examiner.

Issued DECEMBER 23 2015

E. Timothy Wallin

E. Timothy Wallin, Water Rights Program Manager
for Thomas M. Byler, Director

STATE OF OREGON

COUNTY OF MORROW

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

PORT OF MORROW
PO BOX 200
#2 MARINE DRIVE
BOARDMAN, OREGON 97818

(541) 481-7678

This superseding permit is issued to describe changes in place of use and additional points of appropriation approved under T-11992, Special Order Vol. 98, Page 373, entered February 8, 2016, and to describe an extension of time for complete application of water approved by an order dated June 19, 2015. This permit supersedes Permit G-16935.

The specific limits for the use are listed below along with conditions of use.

APPLICATION FILE NUMBER: G-13264

SOURCE OF WATER: WELL 4A, WELL 5A, PORT WELL #6, PORT WELL #7, EB WELL #1, EB WELL #2, EB WELL #3, FARM WELL #2, AND FARM WELL #3, WITHIN THE UMATILLA BASIN

PURPOSE OR USE: IRRIGATION OF 118.8 ACRES, SUPPLEMENTAL IRRIGATION OF 851.0 ACRES AND INDUSTRIAL USE

AMOUNT ALLOWED: 15.34 CUBIC FEET PER SECOND (CFS), BEING 9.77 CFS FOR IRRIGATION AND 5.57 CFS FOR INDUSTRIAL USE

PERIOD OF ALLOWED USE: MARCH 1 THROUGH APRIL 15 AND OCTOBER 1 THROUGH OCTOBER 31 FOR IRRIGATION AND OCTOBER 1 THROUGH APRIL 15 FOR INDUSTRIAL USE

DATE OF PRIORITY: JANUARY 22, 1993

POINTS OF DIVERSION LOCATIONS:

Twp	Rng	Mer	Sec	Q-Q	Measured Distance
4 N	25 E	WM	1	NE NW	WELL 4A—150 FEET SOUTH AND 2550 FEET EAST FROM THE NW CORNER OF SECTION 1
4 N	25 E	WM	1	NE NW	WELL 5A—60 FEET SOUTH AND 1380 FEET EAST FROM THE NW CORNER OF SECTION 1
4 N	25 E	WM	10	SW NE	PORT WELL #6—120 FEET NORTH AND 2400 FEET WEST FROM THE E1/4 CORNER OF SECTION 10
4 N	25 E	WM	10	SE NW	PORT WELL #7—1108 FEET NORTH AND 1417 FEET EAST FROM THE W1/4 CORNER OF SECTION 11
4 N	25 E	WM	2	SE NW	EB WELL #1-1372 FEET SOUTH AND 3646 FEET WEST FROM THE NE CORNER OF SECTION 2
4 N	25 E	WM	2	SE NW	EB WELL #2- 1444 FEET SOUTH AND 3710 FEET WEST FROM THE NE CORNER OF SECTION 2
4 N	25 E	WM	2	SE NW	EB WELL #3- 1595 FEET SOUTH AND 3850 FEET WEST FROM THE NE CORNER OF SECTION 2
4 N	25 E	WM	12	NW NW	FARM WELL #2-338 FEET SOUTH AND 691 FEET EAST FROM THE NW CORNER OF SECTION 12
4 N	25 E	WM	12	NW NW	FARM WELL #3- 1030 FEET SOUTH AND 120 FEET EAST FROM THE NW CORNER OF SECTION 12

The amount of water used for irrigation under this right, together with the amount secured under any other right existing for the same lands, is limited to a diversion of ONE-EIGHTIETH of one cubic foot per second (or its equivalent) and 3.0 acre-feet for each acre irrigated during the irrigation season of each year.

THE PLACE OF USE IS LOCATED AS FOLLOWS:

INDUSTRIAL/MANUFACTURING USES
WITHIN THE SERVICE BOUNDRY

IRRIGATION					
Twp	**Rng**	**Mer**	**Sec**	**Q-Q**	**Acres**
4 N	25 E	WM	11	NE NE	0.3
4 N	25 E	WM	11	SW NE	6.5
4 N	25 E	WM	11	SE NE	11.1
4 N	25 E	WM	11	NE SE	12.5
4 N	25 E	WM	11	NW SE	31.5
4 N	25 E	WM	12	NW NW	3.7
4 N	25 E	WM	12	SW NW	26.8
4 N	25 E	WM	12	NW SW	25.8
4 N	25 E	WM	12	SW SW	0.6
				TOTAL	118.8

SUPPLEMENTAL IRRIGATION					
Twp	**Rng**	**Mer**	**Sec**	**Q-Q**	**Acres**
4 N	25 E	WM	1	NE NE	30.3
4 N	25 E	WM	1	NW NE	33.8
4 N	25 E	WM	1	SW NE	34.3
4 N	25 E	WM	1	SE NE	20.0
4 N	25 E	WM	1	NE NW	0.8
4 N	25 E	WM	1	SW NW	20.3
4 N	25 E	WM	1	SE NW	37.3
4 N	25 E	WM	1	NE SW	35.8
4 N	25 E	WM	1	NW SW	18.3
4 N	25 E	WM	1	NE SE	35.4
4 N	25 E	WM	1	NW SE	34.7
4 N	25 E	WM	1	SW SE	11.7
4 N	25 E	WM	1	SE SE	33.8
4 N	25 E	WM	12	NE NE	38.1
4 N	25 E	WM	12	NW NE	0.7
4 N	25 E	WM	12	SW NE	9.2
4 N	25 E	WM	12	SE NE	1.6
4 N	25 E	WM	12	SE NW	0.1
4 N	25 E	WM	12	NE SE	30.8
4 N	25 E	WM	12	NW SE	36.8
4 N	25 E	WM	12	SW SE	9.2
4 N	25 E	WM	12	SE SE	7.3
4 N	26 E	WM	6	SW NE	0.5
4 N	26 E	WM	6	SE NE	6.6

SUPPLEMENTAL IRRIGATION					
Twp	Rng	Mer	Sec	Q-Q	Acres
4 N	26 E	WM	6	NE NW	31.1
4 N	26 E	WM	6	NW NW	34.5
4 N	26 E	WM	6	SW NW	12.0
4 N	26 E	WM	6	SE NW	8.5
4 N	26 E	WM	6	NE SW	32.4
4 N	26 E	WM	6	NW SW	30.9
4 N	26 E	WM	6	SW SW	39.7
4 N	26 E	WM	6	SE SW	38.0
4 N	26 E	WM	6	NE SE	34.3
4 N	26 E	WM	6	NW SE	31.0
4 N	26 E	WM	6	SW SE	20.2
4 N	26 E	WM	6	SE SE	18.0
4 N	26 E	WM	7	NE NW	12.0
4 N	26 E	WM	7	NW NW	21.0
				TOTAL	851.0

Permit Amendment T-11992 Conditions:

The combined quantity of water diverted at the new points of appropriation, together with that diverted at the old points of appropriation, shall not exceed the quantity of water lawfully available at the original points of appropriation.

Water shall be acquired from the same aquifer as the original points of appropriation.

Measurement, recording and reporting conditions:

A. Before water use may begin under this permit, the permittee shall install a meter or other suitable measuring device as approved by the Director. The permittee shall maintain the meter or measuring device in good working order, shall keep a complete record of the amount of water used each month and shall submit a report which includes the recorded water use measurements to the Department annually or more frequently as may be required by the Director. Further, the Director may require the permittee to report general water use information, including the place and nature of use of water under the permit.

B. The permittee shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

If substantial interference with a senior water right occurs due to withdrawal of water from any well listed on this permit, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal shall be regulated until or unless the Department approves or implements an alternative administrative action to mitigate the interference. The Department encourages junior and senior appropriators to jointly develop plans to mitigate interferences.

STANDARD CONDITIONS

The wells shall be constructed in accordance with the General Standards for the Construction and Maintenance of Water Wells in Oregon. The works shall be equipped with a usable access port, and may also include an air line and pressure gauge adequate to determine water level elevation in the well at all times.

The use shall conform to such reasonable rotation system as may be ordered by the proper state officer.

Prior to receiving a certificate of water right, the permit holder shall submit the results of a pump test meeting the department's standards, to the Water Resources Department. The Director may require water level or pump test results every ten years thereafter.

Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

The use of water shall be limited when it interferes with any prior surface or ground water rights.

The Director finds that the proposed use(s) of water described by this permit, as conditioned, will not impair or be detrimental to the public interest.

Construction shall be completed on or before October 1, 2018. Complete application of the water to the use shall be made on or before October 1, 2018.

Dated at Salem, Oregon this 8 day of February, 2016.

Dwight French, Water Right Services Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

STATE OF OREGON

COUNTIES OF UMATILLA AND MORROW

PERMIT TO APPROPRIATE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO:

PORT OF MORROW
2 MARINE DR
BOARDMAN OR 97818

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: S-88507

SOURCE OF WATER: COLUMBIA RIVER, TRIBUTARY TO PACIFIC OCEAN

PURPOSE OR USE: MUNICIPAL USE

MAXIMUM RATE: 29.9 CUBIC FEET PER SECOND

PERIOD OF USE: OCTOBER 1 THROUGH APRIL 14

DATE OF PRIORITY: JANUARY 29, 2018

AUTHORIZED POINTS OF DIVERSION:

POD Name	Twp	Rng	Mer	Sec	Q-Q	Measured Distances
POD 1	5 N	25 E	WM	35	SW SE	80 FEET NORTH AND 2480 FEET WEST FROM SE CORNER, SECTION 35
CID POD 2	4 N	25 E	WM	2	NE NW	SOUTH 86 DEGREES 22 MINUTES 46 SECONDS WEST, 2829 FEET FROM NE CORNER, SECTION 2
POM RIVER STATION POD 3	4 N	25 E	WM	2	SE NW	1438 FEET SOUTH AND 3903 FEET WEST FROM SE CORNER, SECTION 35, TOWNSHIP 5 NORTH, RANGE 25 EAST. W.M.

AUTHORIZED PLACE OF USE: WITHIN THE BOUNDARIES OF PORT OF MORROW SERVICE AREA

PERMIT SPECIFIC CONDITIONS

1. Failure to comply with any of the provisions of this permit may result in action including, but not limited to, restrictions on the use, civil penalties, or cancellation of the permit.

2. **Water Use Measurement, Recording, and Reporting:**

   A. Before water use may begin under this permit, the permittee shall install a totalizing flow meter at each point of diversion. The permittee shall maintain the device in good working order.

   B. The permittee shall allow the watermaster access to the device; provided however, where

any device is located within a private structure, the watermaster shall request access upon reasonable notice.

C. The permittee shall keep a complete record of the volume of water diverted each month, and shall submit a report which includes water-use measurements to the Department annually, or more frequently as may be required by the Director. Further, the Director may require the permittee to report general water-use information, including the place and nature of use of water under the permit.

D. The Director may provide an opportunity for the permittee to submit alternative measuring and reporting procedures for review and approval.

3. **Fish Screen/Bypass:**

The permittee shall install, maintain, and operate fish screening and by-pass devices consistent with current Oregon Department of Fish and Wildlife (ODFW) standards. Fish screening is to prevent fish from entering the proposed diversion while by-pass devices provide adequate upstream and downstream passage for fish. The required screen and by-pass devices are to be in place and functional prior to diversion of any water. Permittee shall obtain written approval from ODFW that the installation of the required screen and by-pass devices meets the state's criteria or the permittee shall submit documentation that ODFW has determined screens and/or by-pass devices are not necessary.

4. **Water Use During October and November:**

The permittee shall cease pumping for any days during October and November when the U.S. Army Corps of Engineers is managing the Columbia River to meet chum targets **AND** the 7-day rolling average of the mean daily gage height below Bonneville Dam (USGS gage station #14128870) is less than the stage target set that year by the Technical Management Team for protection of chum salmon. The permittee shall discontinue pumping for the duration of time the 7-day rolling average remains below the stage target. The permittee may re-commence pumping when the 7-day rolling average is at or above the target set for that year.

The permittee may pump water during times when the stage target is not met during October and November each year, provided that real-time mitigation that meets the goals and standards of OAR 635-415-0025 (ODFW Habitat Mitigation Recommendations) has been secured during the pumping period, and proof of mitigation has been provided to the Water Resources Department. The permittee is not required to track the 7-day rolling average or cease pumping during periods when mitigation has been secured.

Any mitigation provided for the period October 1 - November 30 shall be protected instream at a point or reach above Bonneville Dam located at approximately River Mile 146.

STANDARD CONDITIONS

1. Where two or more water users agree among themselves as to the manner of rotation in the use of water and such agreement is placed in writing and filed by such water users with the watermaster, and such rotation system does not infringe upon such prior rights of any water user not a party to such rotation plan, the watermaster shall distribute the water according to such agreement.

2. This permit is for the beneficial use of water without waste. The water user is advised that new regulations may require the use of best practical technologies or conservation practices to achieve this end.

3. By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan.

4. The use of water allowed herein may be made only at times when sufficient water is available to satisfy all prior rights, including prior rights for maintaining instream flows.

DEVELOPMENT AND COMPLETION TIMELINE REQUIREMENTS

1. Construction of the water system shall begin within twenty years of the date of permit issuance. The deadline to begin construction may not be extended. This permit is subject to cancellation proceedings if the begin construction deadline is missed.

2. Complete application of the water shall be made within twenty years of the date of permit issuance. If beneficial use of permitted water has not been made before this date, the permittee may submit an application for extension of time, which may be approved based upon the merit of the application.

3. Within one year after complete application of water to the proposed use, the permittee shall submit a claim of beneficial use, which includes a map and report, prepared by a Certified Water Rights Examiner.

Issued DEC 10 2021

Dwight French
Water Right Services Division Administrator, for
Thomas M. Byler, Director
Oregon Water Resources Department

Exhibit B

Permitted Exceptions

1. Taxes assessed under Code No. 2504 Account No. 10704 Map No. 4N24 131, including the current fiscal year. Taxes for 2022 and subsequent years, none now due or payable.

2. An easement including the terms and provisions thereof, affecting the portion of said premises and for the purposes stated therein as set forth in an instrument granted to Umatilla Electric Cooperative Association, recorded on September 8, 1994, as Instrument No. 43540, in the Morrow County Records, in the State of Oregon.

3. An easement including the terms and provisions thereof, affecting the portion of said premises and for the purposes stated therein as set forth in an instrument granted to Umatilla Electric Cooperative Association, recorded on July 25, 1995, as Instrument No. 45669, in the Morrow County Records, in the State of Oregon.

[end of Exhibit B]

ECONOMIC IMPACT ANALYSIS OF PROSPECTIVE EXASCALE DATA CENTER DEVELOPMENT IN MORROW COUNTY, OREGON

JANUARY 2025

JOHNSON ECONOMICS

TABLE OF CONTENTS

JOHNSON ECONOMICS

I. INTRODUCTION

JOHNSON ECONOMICS was hired to prepare a third-party analysis of the economic impacts of a potential exascale data center campus in Morrow County, Oregon. The assumptions used in this analysis were built through research of third-party sources on data center development costs, employment, and direct and indirect impacts.

The impacts discussed here are for a hypothetical data center campus development of 1,264 acres, based upon a known study site in the County. The exact details of any prospective data center development at the site are unknown, so this analysis relies on industry standards, third-party information, and consultant experience.

The analysis is intended to provide rough-order-of-magnitude estimates of the likely economic impacts of a data center in this location, based on the best and most reasonable assumptions available at the time this analysis was completed.

This analysis discusses data center industry trends nationally and regionally, and considers the following categories of economic impact from the proposed development:

A. Economic Need: Trends in the data center industry nationally and regionally, that indicate the ongoing and growing need for additional data center development, and aggregation of data centers into increasingly larger campuses.

B. Economic Impacts: Impacts on employment, payroll, and capital investment from the construction of the facility, and on-going operations. Direct, indirect, and induced impacts are considered.

C. Fiscal Impacts: Projected impacts to local, state, and federal revenues from property and income taxes, fees, and system development charges.

This report focuses on the expected economic benefits of a hypothetical large data center campus for Morrow County.

II. EXECUTIVE SUMMARY

This report presents analysis of a hypothetical 1,264-acre, 1-gigawatt "exascale" data center campus located in Morrow County. Data center industry trends and projected impacts are summarized below:

- Independent estimates of the coming growth in demand and development of data center capacity agree that growth will be very rapid and likely to accelerate year-to-year for the foreseeable future. The United States remains the leading market in the world for data center development, capacity, and usage.
- The trend toward aggregation of data center facilities into larger and larger campuses is the underlying impetus and support for the expected development of one or more very large (exascale) data center campus developments in the Columbia Basin in the foreseeable future.

- Continuous growth over the last five years in the Columbia Basin indicates that large technology companies have the will and resources to develop large data center campuses at a rate of one to two per year, consuming somewhere between 200 to 300 acres per year, for the foreseeable future.
- This historical pace of growth projected forward indicates a demand for at least 3,000 acres of appropriate industrial land to site large-format data center campuses over 10 years. Given the acceleration of data center demand, development and capacity nationwide, there is likely to be demand even in excess of 3,000 acres if appropriate sites are available.
- Given these growth trends, the trend towards building ever larger data center campuses has become more prevalent across the United States. Operating companies and investors are looking to lock in the efficiencies of scale from constructing and operating very large facilities in a single location and are confident that there will be ample demand for a huge amount of new capacity in coming decades.
- The rapidly emerging next step is to scale up data center campuses from one- to two-hundred-acre facilities (hyperscale facilities), to much larger campuses of 800, 1,000, or 1,500 acres. These very large campuses are coming to be called "exascale" or "gigawatt" data centers.
- The build-out of a 1,264-acre exascale data center campus as modeled in this analysis would entail a high level of investment in real property and equipment over the coming years. Data centers are a very high-investment category of development due to the amount of infrastructure and equipment needed to run these specialized facilities, in addition to the high density of information technology that users install within them. On average, the investment in development and equipment for data centers exceeds the cost for traditional industrial uses and even most high-tech manufacturing uses.
- As outlined in this report, the hypothetical development is projected to bring a range of economic and fiscal benefits to the state, Morrow County, and the community. The positive impacts include new employment, payroll, spending with vendors on construction and operations, new tax revenue, and indirect and induced economic activity from suppliers, vendors, and households.
- The project is not anticipated to have any net *negative* economic impacts on the County as the development would pay for its own development and infrastructure. State and local revenues are not reduced because of the data center economic development programs, because absent these programs the region may not attract investments of this scale at all. Instead, the County and region would derive many benefits from this investment and ongoing economic activity long after incentives expire.
- For this analysis, we have modeled a hypothetical exascale data center campus of 16 buildings of 250k square feet each, or 4M total square feet of space for main data center operations. The modeled exascale campus would have a total power capacity of up to 1GW.
- **Total Capital Investments:** The modeled exascale data center campus is assumed to support a load of 1,000 total utility megawatts (MW). The **total estimated investment in this facility would be roughly $8 billion**, including land, infrastructure and facilities improvements.
    - Due to the variation in costs for data centers, and unforeseen market factors over coming years, we estimate a potential range of $7B to $12B in total investment at this location. An assumption on the more conservative end of this range was selected for this analysis.
- **Construction Phase:** The high level of capital investment in the facility would translate into an estimated 6,400 direct full-time equivalent (FTE) jobs over the construction period, assumed to be eight years. Because the development period is estimated to extend over many years, the total estimated construction jobs likely

represent many of the same employees, employed over the project lifecycle.

  - Direct jobs during this phase would pay an estimated average annual wage of over $78,000 per full time employee (FTE). Benefits average 30% in the construction industry (via BLS), indicating average total wages and benefits of over $100,000 per FTE annually.
  - The direct economic impact ($8 billion development cost) is joined by nearly $1.5 billion in indirect and induced impact, for an estimated total impact of nearly $9.5 billion in total economic impacts over the eight-year construction phase.

- **Operations Phase:** Upon completion, the facility is projected to support approximately 560 FTE employees. Employment at the site would include employees of the data center's operations, maintenance, security, and other property management functions. Indirect and induced employment supported by ongoing operations would support an additional 490 employees in Morrow County, including vendors, commercial services, and beneficiaries of spending in the community from operations and employees at the site.
  - Direct employment at the data center is expected to pay high employee compensation of approximately $110,000 per FTE, well above the median annual earnings of Morrow County residents with full employment.
  - Annual economic output from operations is projected to be $430 million, with a large share being the cost of power, maintenance, and staffing. Total economic impact in the County, including indirect and induced impacts, is projected to be $490 million annually.
- For this analysis, tax projections were generated assuming a 15-year tax exemption on improvements via the Oregon Strategic Investment Program (SIP), with a return of the remaining value (after depreciation) beginning in the 16th year. Even given this assumption, the long-term tax generation potential from these large projects is high.
  - By the 20th year, total cumulative tax revenue to local jurisdictions is projected to total over $300 million dollars, including 32% to Morrow County, and 32% to the school district.
  - Given the high projected level of investment, a rural location like Morrow County is allowed to tax the first $150M of investment under the state SIP rules, and also to collect an annual community service fee of $3M, even while the tax exemption is in effect.
  - When the 15-year SIP tax abatement expires, annual taxes to the jurisdictions could approach $70 million annually. Even allowing for annual depreciation, this high tax level would significantly boost the tax base for decades beyond.

III. DATA CENTER INDUSTRY TRENDS

Data center development has been booming worldwide over the past decade, with the U.S. leading the way and a prominent submarket established in Oregon, including the Columbia Basin (Morrow County and adjacent Umatilla County). These facilities have been attracted to the area, as well as Central Oregon, due to the availability of ample affordable power and water resources that meet the criteria for data center campuses, as well as large, flat development sites to house these substantial facilities. Local and state financial incentives have also helped attract this development.

Data centers accommodate the physical equipment necessary to store, manage, process, and transmit digital information over the internet. Demand for data centers has increased rapidly and continues to do so, especially as cloud computing, cell phone and streaming services, remote meetings and events, e-commerce, and artificial intelligence (AI) become more prevalent. Data centers are the physical manifestation of the constantly accelerating growth of online activity of the past and future decades.

> "The importance of data centers in today's digital economy cannot be overstated—they are the lifeblood of everything from:
>
> - Hosting private cloud applications for businesses (e.g., CRM, ERP systems[1])
> - Processing big data and powering machine learning and AI
> - Supporting high-volume eCommerce platforms
> - Powering online gaming communities
> - Managing data storage, backups, and recovery
> - Powering stock trading systems
> - Real time medical imaging, diagnosis, and research
> - Enabling autonomous vehicles and real-time maps
>
> These are just a few examples of how data centers are integrated into every corner of modern life. As digital needs continue to grow, the complexities of building and managing these facilities also expand."[2]

While data centers come in a wide variety of sizes and capacities, development in the Columbia Basin has consisted almost exclusively of large data center campuses, which serve the needs of the largest internet and cloud computing companies including Amazon, Google, Meta (Facebook), Apple, and Microsoft. These companies are among the largest and best capitalized in the world with the resources to make these massive investments.

National Growth

Estimates of the coming growth in demand and development of data center capacity differ in this quickly evolving sector, but all market analysts seem to agree that growth will be very rapid and likely to accelerate year-to-year for the foreseeable future. The United States has pioneered this industry and remains the number one global market for data center development and operations.

[1] CRP = Customer Relationship Management; ERP = Enterprise Resource Management (i.e. business administration software)
[2] "The Billion-Dollar AI Gamble: Data Centers As The New High-Stakes Game." Forbes, 2024

A 2024 report[3] by Cushman and Wakefield on the data center (DC) market finds that new development of these facilities is still accelerating globally, with the amount of new development known to be in the current pipeline (excluding those in land planning stage) expected to increase DC capacity by 2.5 times in the Americas market alone. (The data center industry measures capacity in megawatts of power to run equipment.) The report forecasts that DC revenues from cloud storage and AI customers is expected to grow by nearly 900% within the next 5 years.

A market report by Infrastructure Masons projects that computing capacity in the data center industry will double between 2021 and 2026, while the industry will grow by three times over the next 10 years.[4]

Meanwhile, a recent analysis by McKinsey & Company projects that global demand for data center capacity might grow by 3.5 times over current levels by 2030, just six years from now. The analysis estimates that global demand for data center capacity could rise at an annual rate of between 19% and 22% per year, or as much as 27% per year at the upper end of the possible range.[5] (The forecasted growth of 3.5 times by 2030 was already revised upwards from McKinsey's 2023 estimate of 2.5 times growth.)

The large "hyperscale" DC category has been the fastest growing type in terms of capacity. As of 2010, hyperscale campuses represented an estimated 13% of total capacity among data centers. As of 2022, they represented an estimated 77% of total capacity.[6] With the largest technology companies needing their own dedicated data centers to accommodate their own storage and AI needs or run cloud operations, the growth of very large data center campuses (hyperscale and exascale) is expected to continue to outpace other categories. Recent years have seen the introduction of exascale data centers, which are discussed more below.

Meanwhile, smaller categories of data centers are expected to diminish as a share of total capacity. Co-location centers, owned by third-party operators with capacity that is leased to multiple other businesses, are expected to continue to grow, but less quickly than large centers. Growth in small "enterprise centers", run by smaller individual businesses for their own needs, has stagnated as they increasingly rely on outsourcing to the other two categories for their data storage and processing needs. Enterprise centers now make up 10% of data center capacity and this share is falling year by year.

Physical capacity in land, facilities, power and water will be needed globally, nationally, and regionally to meet this accelerating strong demand. The United States remains the leading market in the world for DC development, capacity, and usage. The trend toward aggregation of data center facilities into larger and larger campuses is the underlying impetus and support for the expected development of one or more very large (exascale) data center campuses in the Columbia Basin in the foreseeable future.

Regional Growth (Oregon)

Oregon is now an established major market for data center development with the largest data center clusters focused on the eastern Columbia Basin (Morrow and Umatilla), Portland metro area, and Prineville. Currently, the Portland metro area has the greatest number of data centers, with most in the Hillsboro area. However, these tend to be smaller data centers in the co-location category. Land constraints and shortage of available industrial sites in the Metro area restrict the size and expansion of DC campuses. The Prineville area is home to a small number of large campuses, specifically Apple and Meta (Facebook) campuses of roughly 150 and 360 acres, respectively.

[3] "Global Data Center Market Comparison." Cushman and Wakefield, 2024.
[4] "State of the Digital Infrastructure Industry." Infrastructure Masons, Annual Report 2024.
[5] "AI power: Expanding data center capacity to meet growing demand." McKinsey & Company, 2024.
[6] "*What do you Need to Know About Designing Data Centers?",* Consulting Specifying Engineer, May/June 2023

The Columbia Basin is home to the greatest concentration of hyperscale data centers in the state, with a much larger number of large campuses averaging over 100 acres (see more below). Development activity has also been the most robust in the Columbia Basin as the need for large sites, land prices, water, and power resources make it a very competitive candidate for location.

Oregon is a globally significant data center market. The Cushman and Wakefield report assesses Oregon to be the #8 DC market in the world, and #4 in the United States. Oregon is now home to very large data center campuses and clusters for many of the largest tech companies in the world. Established markets have advantages for DC operators including vendors, construction expertise, and state and local governments and utilities that are familiar with the industry and its needs. Oregon ranks even better in some categories, including being:

- #3 globally in IT load (computation capacity), #2 nationally
- #6 globally in presence of cloud operators, #4 nationally
- #5 globally in renewable power options, #1 nationally
- #1 in tax structure nationally

Regional Growth (Umatilla and Morrow Counties)

Over the prior decade, investment and jobs growth in this sector has been extremely robust and outstripped growth in any other sector in the region. Prior to 2024, nine large data center campuses had been developed in Morrow and Umatilla Counties with multiple additional facilities now approaching completion. The nine completed campuses are spread in dispersed locations across the two counties and include 34 total individual data center buildings of roughly 200k-225k square feet each and accompanying substations for each campus.

There are currently eight additional campuses planned or under development, for a total of 17 hyperscale data center campuses expected to be completed over a period of roughly 12 years.

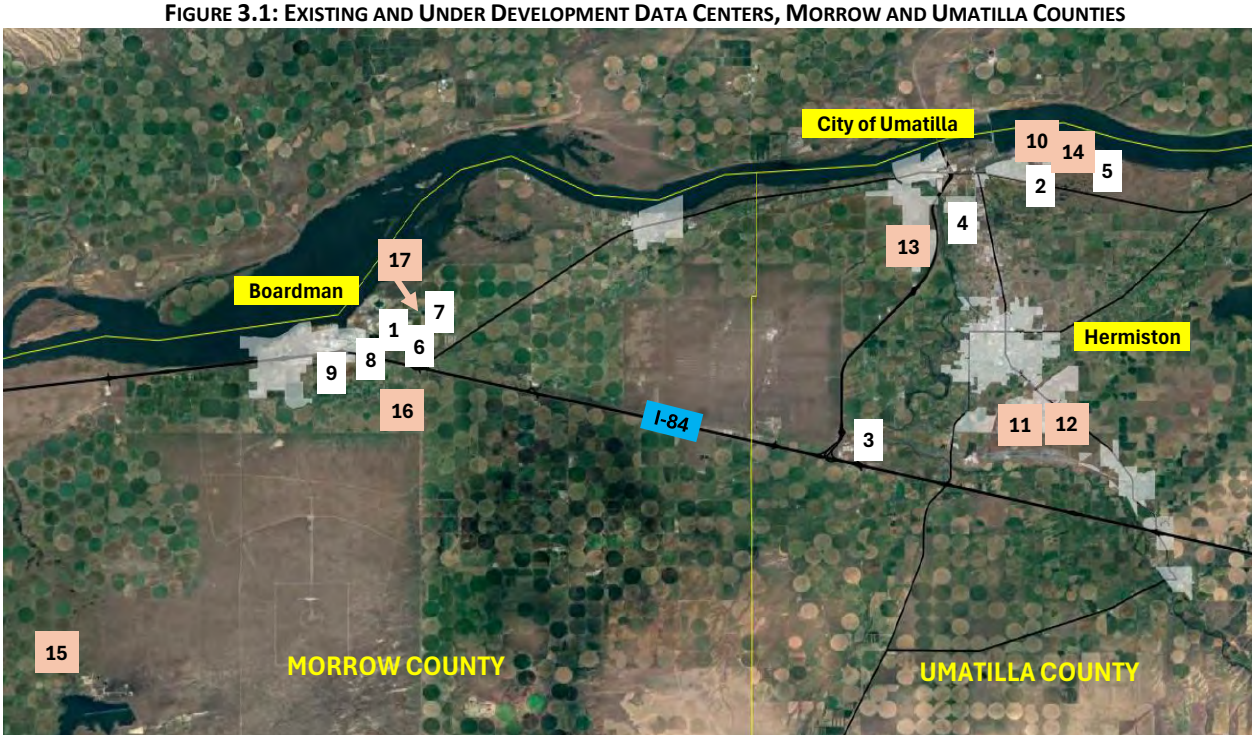
Only two of the completed developments began operation prior to 2021. The remainder (15 of 17 campuses, with 60 buildings) were either completed in the last five years or will be delivered in the next two years. Between 2021 and roughly 2026, an average of 2.5 data center campuses will be completed each year across the two counties. At an average of 120 acres per campus, this is average land development of roughly 300 acres per year for large data centers.

The following map and table (Figure 3.1) summarize the existing and planned data center developments in the region. Of the 17 total data center projects identified, eight are in Morrow County and nine are in Umatilla County.

Continuous growth over the last five years indicates that large technology companies have the will and resources to develop hyperscale data center campuses at a rate of one to two per year, consuming somewhere between 200 to 300 acres per year, for the foreseeable future.

This historical pace of growth projected forward indicates a demand for at least 3,000 acres of appropriate industrial land to site large-format data center campuses over 10 years. Given the acceleration of data center demand, development and capacity nationwide, there is likely to be demand even in excess of 3,000 acres if appropriate sites are available.

FIGURE 3.1: EXISTING AND UNDER DEVELOPMENT DATA CENTERS, MORROW AND UMATILLA COUNTIES



Site #	Years Built (Est.)	Total Acres	DC Buildings
Completed			
1	2014-2017	60	3
2	2014-2022	35	3
3	2022-2023	126	4
4	2023	187	4
5	2023-2024	83	4
6	2021-2022	108	4
7	2023	100	4
8	2019-2023	68	4
9	2021-2023	82	4
Under Development/Planned			
10	2024	131	4
11	2024-2025	100	4
12	2024-2025	114	4
13	2024-2025	194	4
14	2025-2026	133	4
15	2024-2025	100	4
16	2024-2025	125	4
17	2024-2025	130	4
TOTALS:	17	1,876	66
Since 2019:	15	1,781	60
Avg. Annual (Since 2019):	2.5	297	10

SOURCE: Baxtel, Data Centers.com, Umatilla and Morrow County assessors and GIS, Google Earth, Johnson Economics

Growth in AI

One of, if not the primary, driving factors of recent and future growth in data center development is the growth in artificial intelligence (AI), and especially generative AI, which require a vast amount of processing and storage capacity. AI demands DC capacity in two primary ways: one for training AI models such as large language models (LLMs) on the enormous reams of data required, and then for operating the AI models for the end users.

The use of artificial intelligence, especially generative AI, has accelerated greatly over just the last few years, and demand for AI is only forecasted to increase. Generative AI refers to a subset of artificial intelligence that learns the underlying patterns in training data to produce new content or data based on the prompts of users. Examples include chatbots that provide textual responses to prompts, as well as image and video programs which produce novel visual results from descriptive text prompts. McKinsey & Company estimates that by 2030, 70% of global demand for data center capacity will be for or related to advanced AI workloads, and that generative AI will account for about 40% of this demand.[7] This AI-related demand is growing from very low levels as recently as 2022, as Bloomberg reports:

> "With the influx of consumer generative AI programs like Google's Bard and OpenAI's ChatGPT, the generative AI market is poised to explode, growing to $1.3 trillion over the next 10 years from a market size of just $40 billion in 2022, according to a new report by Bloomberg Intelligence (BI). Growth could expand at a [compound annual growth rate] of 42% [per year] …."[8]

With this rise in demand for AI use comes a rise in demand for processing power capacity, especially given that AI models are continuing to evolve and become more complex. Goldman Sachs Research forecasts growth of 160% in AI-driven data center power demand by 2030.[9] This is despite recent improvements in efficiency; for example, from 2015 to 2018, data center workloads almost tripled, but power demand remained mostly constant. These efficiency gains have been outpaced over the last few years by the magnitude of power needed for AI workloads.

The world's largest technology companies and governments are investing heavily in AI infrastructure as the size and implications of this wave have become apparent. Data center development will necessarily have to continue to accelerate to keep pace with this explosive growth and will benefit those regions ready to capitalize with available land, power, and water resources.

Exascale Data Centers

Given the trends discussed above, it is not surprising that over the past few years, the trend towards building ever larger data center campuses has become more prevalent across the United States. Companies and investors are looking to lock in the efficiencies of scale from constructing and operating very large facilities in a single location, while anticipating that there will be ample demand for a huge amount of new capacity in coming decades.

The rapidly emerging next step is to scale up data center campuses from one- to two-hundred-acre facilities (hyperscale facilities), to much larger campuses of 800, 1,000, or 1,500 acres. These very large campuses are coming to be called "exascale" or "gigawatt" data centers. Exascale data centers can have power capacities of one to two gigawatts; in comparison, hyperscale DCs typically range from 20-50 megawatts.

Nationally, several examples of this type of exascale data center are being planned or built out now, including:

[7] "AI power: Expanding data center capacity to meet growing demand." McKinsey & Company, 2024.
[8] "Generative AI to become $1.3 trillion market by 2032, research finds." Bloomberg, 2023.
[9] "AI is poised to drive 160% increase in data center power demand." Goldman Sachs Research, 2024.

- The Cumulus Data Center in Berwick, Pennsylvania, was sold to Amazon Web Services in 2023.[10] The campus is 1,200 acres, co-located with an existing nuclear power plant that will power the data center directly. Over several years, the data center capacity is expected to reach 960 megawatts, with one 300,000 square foot building completed so far.
- Crusoe Energy Systems recently announced the first phase of a large AI data center at the 1,000+ acre Lancium Clean Campus in Abilene, Texas.[11] The data center portion will begin with a 200-megawatt data center, and once fully completed, will offer 1.2 gigawatts of power capacity, drawn primarily from local renewable energy.
- In Virginia, the Surry Green Energy Center has 30 data center buildings planned on 641 acres.[12] This project is also collocated with an existing nuclear power plant and plans to add additional small modular reactors to the site in the future. While the power capacity has not yet been specified, this project will have a similar scale to the Cumulus Data Center and the Lancium Clean Campus data center.
- Project Range located in metro Phoenix consists of a proposed 1,000 total acres across two DC campuses, 30 buildings and over 5 million square feet. The master-planned project is expected to entail an estimated $14 billion investment.[13]
- The Quantum Loophole project in Maryland is a 2,100-acre campus that claims it will be the largest data center campus in the world upon completion. The campus will include an estimated investment of up to $30 billion and utilize almost two gigawatts of power. The campus will be built in phased development with environmental mitigation and hundreds of acres of greenspace included.[14]
- The Google Council Bluffs data center campus in Iowa contains roughly 1,000 acres and has seen an estimated $5.5 billion in investment so far, with another potential $1 billion investment announced.[15]

Locating these large facilities depends on several factors, including availability of large tracts of suitable land, proximity to a dependable high-capacity power source, and often availability of water capacity for cooling. Many of these exascale facilities will be located in more remote locations to meet these requirements.

Exascale data centers are unlikely to locate in urban areas due to many considerations, including the significant acreage requirement, potential construction and operational incompatibilities with other urban uses, and extensive infrastructure requirements. As with other specialized uses such as solar farms, wind farms, or marine terminals, the need for exascale data center campuses of the future may be thought of as comparable in importance to essential utility or public-service uses, providing the data backbone on which the entire internet, cell and streaming services rely.

Economies of Scale

There are major perceived benefits to development at this scale, over accommodating the same DC capacity over some number of smaller sites. These include:

[10] " The Growth of Gigawatt-Scale Data Centers for Powering AI and Renewable Energy Innovation." Vertical Data, 2024.

[11] "Crusoe to Build Initial 200MW AI Data Center With Plans to Expand at 1.2 GW Lancium Clean Campus." Lancium, LLC, 2024.

[12] "Surry planners endorse data center that projects up to 3,000 jobs." Faleski, 2024.

[13] "Mega $14 billion data center project proposed in metro Phoenix", Phoenix Business Journal, March 2024.

[14] Quantumloophole.com

[15] "Google Continues to Invest in Iowa Data Centers." Data Center Frontier, July 2024.

- **Process, planning, and time costs:** The process of finding and securing sites from multiple owners, obtaining entitlements and permits, and planning the site and facilities is costly and time-consuming. Securing a single large site consolidates this process and reduces costs to the developer. The savings in time from reducing multiple transactions to one development process is particularly important in the current data center development environment when competing companies and regions are racing to meet exploding demand.

- **Economies of scale in construction:** Co-locating a large number of data center buildings at one location rather than across two or more smaller locations creates efficiencies in all phases. During construction, a single large site will allow for the substantial construction infrastructure required to be staged on one site while all phases of the campus are built out. Building materials, equipment, and labor can be staged and utilized at one consolidated location. Off-site improvements such as roads and utilities serving the site must be constructed for one site rather than multiple locations, and transportation congestion impacts associated with intensive construction activity will be focused on the immediate vicinity of a single site rather than across multiple locations.

- **Economies of scale in operations:** Centralized facilities will create similar efficiencies in operations by allowing staff to work more efficiently across multiple data center buildings, allowing centralization of other operations such as security, grounds, janitorial, administration, etc. at one location rather than managing and funding redundant systems at multiple sites. More buildings will be able to share mechanical, electrical, water and other systems at the site, and the impacts and cost of constructing and maintaining key off-site electrical, water, and other required services will be reduced to a single location. In the case of data centers, co-location of more facilities on one campus also reduces the data latency, or time to send and process data, by reducing distance of communication. All such efficiencies reduce the cost-per-unit of the data center services being produced, with benefits that accrue in favor of larger campuses.

- **Limited externalities:** A single location, particularly in a more remote location, reduces the potential for external impacts of a facility on other surrounding land uses and the community at large, particularly residential uses. For example, the power requirements of hyperscale and larger facilities require direct service by high-capacity electric power *transmission* lines, which generally involve much larger and taller towers and require wider corridors than typical local *distribution* lines, which can be extended on typical power poles and/or underground. Compared to a single exascale facility, meeting the need for hyperscale data centers on distributed sites could necessitate extending new overhead electric transmission lines in multiple corridors to reach them all.

  Similarly, a single large exascale campus can be served by consolidated water, sewer, telecom and other utilities that would otherwise require disruptive construction in multiple locations. The traffic generated by these large operations will also be focused on one location served by adequate roadways rather than dispersed locations.

IV. PROJECT DESCRIPTION

This analysis evaluates the fiscal and economic impact profile of a prospective exascale data center located in Morrow County on a site of roughly 1,264 acres. The specifications of any eventual data center campus built at the site are unknown, so this analysis relies on assumptions drawn from industry standards, third-party information, and consultant experience.

The analysis is intended to provide rough-order-of-magnitude estimates of the likely economic impacts of a data center in this location, based on the best and most reasonable assumptions available at the time this analysis was completed.

Note: *the scale of development and estimated investment in a campus of this size are extremely large, putting them among the very largest projects by property value in the state of Oregon. As explained below, the level of investment in the type of exascale data center modeled here runs to the many billions of dollars, with commensurate economic and fiscal impacts.*

Hypothetical Site Plan: An exascale data center campus of 1,264 acres could be expected to accommodate an estimated 16 to 20 individual data center buildings of an average of 250,000 square feet (sqft). Data center developments typically include space for electrical substations, parking/circulation, mechanical, HVAC, water treatment, landscaping and stormwater management, and back-up power generation. Some buffer space may be required between collections of data center buildings, and between buildings and off-campus land uses.

For this analysis, we have modeled a hypothetical exascale data center campus of 16 buildings of 250k sqft each, or 4M total sqft of space for main data center operations. The modeled exascale campus would have a total power capacity of up to 1GW.

Development Timeline: This analysis assumes that the hypothetical exascale campus would be built out continuously at a pace of four buildings every two years. The first four buildings are assumed to be completed in 2027, with four more every two years, until completion of the campus in 2033. This would be roughly eight years from the time of this report.

ANTICIPATED CAPITAL INVESTMENT

Data centers are a very high-investment category of development due to the amount of infrastructure and equipment needed to run these specialized facilities, in addition to the high density of information technology that users install within them. On average, the cost of development and equipment for data centers exceeds the cost for traditional industrial uses and even most high-tech manufacturing uses.

Investment per MW: This analysis applied a cost-per-cMW (Critical MW) approach to estimate capital investments in the property for this data center development.[16] The cost-per-cMW approach is favored by the industry. The cost of building a data center development can vary widely depending on size, location, and specifications of the facility.

[16] The power capacity of a data center is discussed in terms of total "utility MW" or the total available power to run all aspects of the property (1GW in this case), and the "critical MW" (cMW) which is the power load required to maintain the critical IT functions of the data center business (828 cMW in this case.)

Industry sources have cited costs of anywhere from $7M to $12M per cMW. However, in recent years, development costs have escalated due to inflation in the costs of energy, materials and labor, supply chain disruptions, and other factors.

This analysis finds a conservative cost estimate of $10M per cMW. For comparison, the most recent global survey of data center cost trends by Turner and Townsend[17] estimated an average cost in the Portland market of $10.5M per MW as of 2024. Data centers in the Morrow County area were not included in this survey but are likely to face comparable costs, balancing cheaper land with greater labor and material constraints.

Total Capital Investments: The modeled exascale data center campus is assumed to support a load of 1,000 total utility MW, or 828 critical MW (see footnote).

- At a cost of $10M per cMW, the **total estimated investment in this facility would be roughly $8 billion**, including land, infrastructure and facilities improvements.
- Due to the variation in costs for data centers, and unforeseen market factors over coming years, we estimate a potential range of $7B to $12B in total investment. An assumption on the more conservative end of this range was selected for this analysis.

V. Economic Impacts – Morrow County

The construction and ongoing business operations of the data center will have significant economic benefits to the local and regional economy. To model the economic impacts of various activities, Johnson Economics utilized the IMPLAN (IMPact for PLANning)[18] economic multiplier model. IMPLAN is an economic impact model designed for analyzing the effects of industry activity (employment, income, or business revenues) upon all other industries in an economic area.

A. IMPLAN Modeling Methodology

IMPLAN models the magnitude and distribution of economic impacts, and measures three types of effects. These are the direct, indirect, and induced changes within the economy. The following is a brief definition of the three impact types:

Direct Impacts: The actual change in activity affecting a local economy. For example, if a new industrial building is constructed, direct economic impacts represent the value-added output for that firm/user, as well as the jobs required for development and the labor income paid.

Indirect Impacts: Indirect impacts reflect the response of all other local businesses within the geographic area to the direct impact. Continuing the previous example, indirect impacts of a new institutional user would comprise revenues for related venders (e.g., real estate services, suppliers, etc.), and the jobs and labor income thereby generated.

Induced Impacts: These reflect the response of households within the geographic area affected by direct and indirect impacts. In the given example, induced impacts would be the increase in all categories of spending by

[17] Data Center Cost Index 2024, www.turnerandtownsend.com/insights/data-centre-cost-index-2024/

[18] Minnesota IMPLAN Group (MIG), Stillwater, Minnesota

households in the geography directly or indirectly employed by the businesses' activities.

Our analysis evaluated the Jobs, Labor Income, and Value-Added Output of our estimated direct industry change and commodity change activities. (Value Added Output is the difference between an industry's or an establishment's total economic output and the cost of its intermediate inputs.)

Geographic Level

Impact analysis has varying degrees of geographic coverage. Specifically, vendors who provide goods and services in response to modeled impacts are in a range of locales. For this analysis, we focused on impacts retained in Morrow County. That is, indirect and induced impacts which leak outside of the county are not included. The degree to which indirect and induced impacts are captured within Morrow County and the surrounding region will be a function of how well local businesses capitalize on the opportunities associated with the facilities.

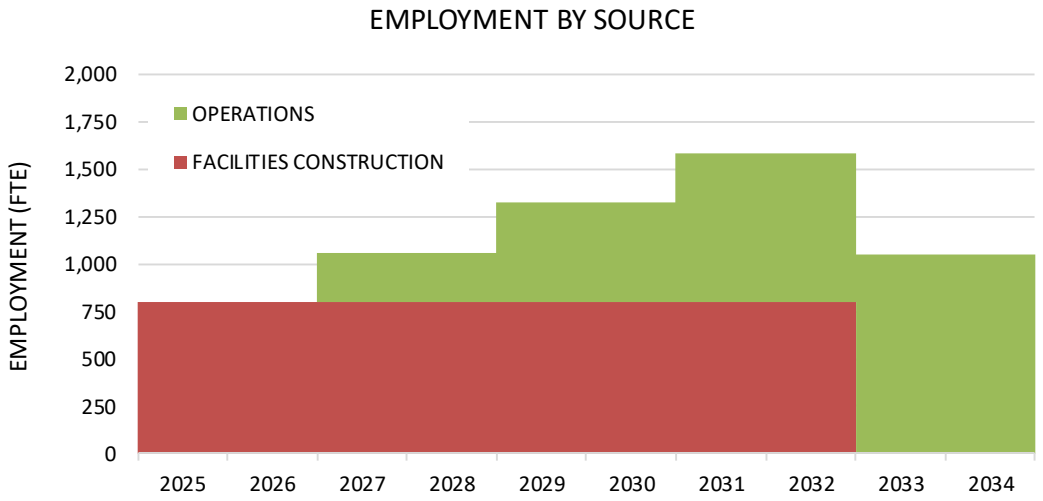
B. Economic Impacts of Construction Activity & Operations

Figure 5.1 presents an estimate of the economic impacts from the eight-year construction period of the proposed development, as well as on-going operations of the facility. Given the size of the project, the total number of jobs is expected to be higher during the construction period; however, the project's operations phase will provide roughly 560 on-going high-wage jobs upon completion.

- **Construction Phase:** The high capital investment in the facility would translate into an estimated 6,400 direct full-time equivalent (FTE) jobs over the entire construction period, or 800 FTE per year over eight years. Because the development period is estimated to extend over many years, the total estimated construction jobs likely represent many of the same employees, employed over the project lifecycle.
- Direct jobs during this phase would pay an estimated average annual wage of over $78,000 per FTE. Benefits average 30% in the construction industry (via BLS), indicating average total wages and benefits of over $100,000 per FTE annually. The average wage of $78,000 would be 60% higher than the median earnings of a Morrow County resident who is employed year-round and full-time: $47,500 (Census).
- The direct economic impact ($8 billion development cost) is joined by nearly $1.5 billion in indirect and induced impact, for an estimated total impact of nearly $9.5 billion in total economic impacts over the eight year construction phase.
- **Operations Phase:** Upon completion, the facility is projected to support approximately 560 FTE employees. Employment at the site would include employees of the data center's operations, maintenance, security, and other property management functions. Indirect and induced employment supported by ongoing operations would support an additional 490 employees in Morrow County, including vendors, commercial services, and beneficiaries of spending in the community from operations and employees at the site.
- Direct employment at the data center is expected to pay high employee compensation of approximately $110,000 per FTE, well above the median annual earnings of Morrow County residents with full employment.
- Annual economic output from operations is projected to be $430 million, with a large share being the cost of power, maintenance, and staffing. Total economic impact in the County, including indirect and induced impacts is projected to be $490 million annually.

FIGURE 5.1: SUMMARY OF TOTAL ECONOMIC IMPACTS (CONSTRUCTION AND OPERATIONS)

	PROJECTED IMPACTS, MORROW COUNTY (2024 $s)			
	Employment	Labor Income	Value Added	Output
FACILITIES CONSTRUCTION				
Direct Effect	6,370	$502,100,000	$4,120,400,000	$8,000,000,000
Indirect Effect	370	$28,100,000	$389,300,000	$750,100,000
Induced Effect	480	$21,300,000	$439,600,000	$737,000,000
Total Effect	7,220	$551,500,000	$4,949,300,000	$9,487,100,000
OPERATIONS				
Direct Effect	560	$82,300,000	$194,800,000	$429,700,000
Indirect Effect	420	$27,870,000	$18,600,000	$55,300,000
Induced Effect	70	$2,920,000	$1,100,000	$4,900,000
Total Effect	1,050	$113,090,000	$214,500,000	$489,900,000



SOURCE: Johnson Economics and Minnesota IMPLAN Group, Inc.

After completion of the development and one year of operations, the total impact of the development (direct, indirect, and induced) is estimated to be nearly $10 billion to the local and regional economy. After ten years of operation, it is estimated to be over $14 billion to the local and regional economy.

VI. FISCAL IMPACT

In addition to economic impacts, the data center development will have potential fiscal implications for the County, Port of Morrow, other local service providers and the State of Oregon. These impacts include property taxes, income and business taxes, and development charges and fees.

Given the very high level of anticipated investment, the likely Real Market Value (RMV) of the property after completion will be commensurately high ($8 billion in investment over eight years, depreciated over 31 years).

A. Impact Before Tax Incentives

Data center developments in Morrow County and nearby counties typically apply for a package of tax incentives that may defer taxes of the property for five to as many as fifteen years. Given this likelihood, a firm estimate of Taxable Assessed Value (TAV) from the property, and the resulting tax revenue, is difficult to generate.

The figures presented in Figure 6.1 projected tax revenues without tax incentives applied, reflecting the full value of the data center campus investments modeled.

- Based on these assumptions, the taxable value of the facility is expected to remain very high despite some depreciation of the real property. At its peak, the annual property tax revenue (to all taxing jurisdictions) could exceed $93 million annually.
- By the 20th year, total cumulative tax revenue is projected to total over $1.2 billion dollars.
- Figure 6.1 shows this projected revenue by local taxing jurisdiction over ten and 20-year periods. Benefits to the County, school district, and other districts are projected to be in the tens of millions of dollars over these periods.

Figure 6.1: Projected Tax Revenue by District (2024/25 Rates)

Tax Code 2511	Tax Rate (per $1,000 of TAV)				10-Year	20-Year
Taxing District	Education	Government	Bond	Total	(2025 - 2034)	(2025 - 2044)
Morrow County		4.1347		4.1347	$155,660,000	$400,870,000
UMA-Morrow Radio District		0.1700		0.1700	$6,400,000	$16,480,000
Health District		0.6050	0.3900	0.9950	$37,460,000	$96,470,000
Port of Morrow		0.0841		0.0841	$3,170,000	$8,150,000
Boardman RFD		0.7464	0.2325	0.9789	$36,850,000	$94,910,000
Unified Recreation District		0.4560		0.4560	$17,170,000	$44,210,000
Morrow School District	4.0342			4.0342	$151,880,000	$391,130,000
Intermountain ESD	0.6156			0.6156	$23,180,000	$59,680,000
BMCC	0.6611		0.1797	0.8408	$31,650,000	$81,520,000
Vector Control		0.2899		0.2899	$10,910,000	$28,110,000
Oregon Trail Library		0.2536		0.2536	$9,550,000	$24,590,000
Total Tax Rate	**5.3109**	**6.7397**	**0.8022**	**12.8528**	**$483,880,000**	**$1,246,120,000**

Source: Morrow County, Johnson Economics

- Of the total millage rate, Morrow County receives over 32% of revenue, and the Morrow School District receives just under 32%. The health district and the fire district each receive nearly 8% of revenue.
- Total projected tax revenue to the County could be over $150 million over 10 years, and over $400 million over 20 years. Total projected tax revenue to the school district would be similar (Figure 6.1).

B. Impact with Tax Incentives

As noted, the ultimate tax benefits to local jurisdictions will be highly dependent on any tax incentives applied to this project. The most commonly used tax incentives for large industrial projects are Enterprise Zone incentives and

the Oregon Strategic Investment Program (SIP). In this case, the modeled data center project is not anticipated to take place within a designated Enterprise Zone.

The more likely program to be used by a data center campus developer in the county would be the SIP program, which offers a 15-year tax abatement incentive to large developments that meet requirements for high level of investment and high-paying employment.

For this analysis, tax projections were generated assuming a 15-year tax exemption on improvements, with a return of the remaining value (after depreciation) beginning in the 16th year. Even given this assumption, the long-term tax generation potential from these large projects is high.

- By the 20th year, total cumulative tax revenue is projected to total over $300 million dollars.
- Figure 6.2 shows this projected revenue by local taxing jurisdiction over ten and 20-year periods. Benefits to the County, school district, and some other districts are projected to be in the tens of millions of dollars over these periods.
- When the SIP tax abatement expires, annual taxes to the jurisdictions could approach $70 million annually. Even allowing for annual depreciation, this high tax level would then continue beyond the 20-year horizon presented in Figure 6.2, significantly boosting the tax base for decades beyond.

FIGURE 6.2: PROJECTED TAX REVENUE BY DISTRICT (2024/25 RATES)
ASSUMING STRATEGIC INVESTMENT PROGRAM INCENTIVE

Tax Code 2511	Tax Rate (per $1,000 of TAV)				10-Year	20-Year
Taxing District	Education	Government	Bond	Total	(2025 - 2034)	(2025 - 2044)
Morrow County		4.1347		4.1347	$17,834,184	$97,962,291
UMA-Morrow Radio District		0.1700		0.1700	$733,260	$4,027,762
Health District		0.6050	0.3900	0.9950	$4,291,729	$23,574,257
Port of Morrow		0.0841		0.0841	$362,748	$1,992,558
Boardman RFD		0.7464	0.2325	0.9789	$4,222,285	$23,192,804
Unified Recreation District		0.4560		0.4560	$1,966,863	$10,803,880
Morrow School District	4.0342			4.0342	$17,400,698	$95,581,172
Intermountain ESD	0.6156			0.6156	$2,655,265	$14,585,239
BMCC	0.6611		0.1797	0.8408	$3,626,619	$19,920,839
Vector Control		0.2899		0.2899	$1,250,424	$6,868,520
Oregon Trail Library		0.2536		0.2536	$1,093,852	$6,008,474
Total Tax Rate	**5.3109**	**6.7397**	**0.8022**	**12.8528**	**$55,437,927**	**$304,517,796**

- Total projected tax revenue to the County could approach nearly $18 million over 10 years, and nearly $100 million over 20 years. Total projected tax revenue to the school district would be similar (Figure 6.2).

SMART MOBILITY
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DEA PROJECT NO.: PERK0000-0012

TRANSPORTATION PLANNING RULE (TPR) ANALYSIS

Morrow County

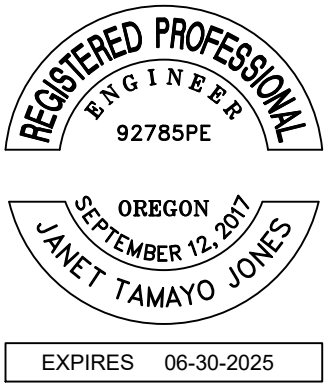
JANUARY 21, 2025 **(REVISED MARCH 12, 2025)**

PREPARED FOR THREEMILE CANYON FARMS, LLC

ATTN: TAMRA MABBOTT, MORROW COUNTY

PREPARED BY DAVID EVANS AND ASSOCIATES, INC.

FROM: JANET JONES, PE, TRAFFIC ENGINEER



DAVID EVANS AND ASSOCIATES INC.

CONTENTS

TABLES

FIGURES

1 INTRODUCTION

This Transportation Impact Analysis (TIA) has been prepared in support of the proposed zone change from Exclusive Farm Use (EFU) and Space Age Industrial (SAI) to General Industrial (M-G) for an approximately 1,264-acre site just west of the Boardman Airport in Morrow County, Oregon. This TIA was prepared to comply with Oregon's Transportation Planning Rule (TPR) and to make a determination whether an exception to Statewide Planning Goal 12 addressing transportation is necessary.

1.1 PROJECT DESCRIPTION

The subject site is located west of the Boardman Airport in Morrow County, Oregon, approximately six miles outside of the City of Boardman Urban growth Boundary (UGB). The site contains approximately 1,264 acres and is generally bounded by I-84 to the north, Tower Road to the south, Sixmile Creek to the west, and an existing rail spur to the east.

Figure 1. Subject Site and Study Area

The existing zone designation for the site is a combination of Space Age Industrial (SAI) (approximately 309 acres) and Exclusive Farm Use (EFU) (approximately 955 acres). The proposed zoning designation for the site is General Industrial (M-G) with a Limited Use Overlay (LU) to allow a future data center. Farm use and solar facilities may be added in the future. However, these uses are low trip generators and will be considered to generate a negligible number of trips.

1.2 SCOPE OF ANALYSIS

This TIA has been prepared to address the transportation impacts of the proposed zone change and future site plan review. The I-84 interchange at Tower Road is maintained by the Oregon Department of Transportation (OODT). Therefore, this analysis follows ODOT's *Analysis and Procedures Manual*, Version 2 (APM) and is also compliant with the County's Traffic Impact Analysis Guidelines as presented in Appendix D of the County's 2022 Transportation System Plan (TSP). Boardman Airport Lane is a Port of Morrow County facility that must conform to County standards. This analysis follows Morrow County's Zoning Ordinance Section 3.072.G.1., 3.070.E.1., and 3.010.N.1 to address TPR compliance.

1.2.1 Study Area

The County's Zoning Ordinance requires analysis of public street intersections that will be impacted by 30 or more site generated peak hour vehicle trips. The primary route to the subject site is via I-84 and Tower Road, with little to no trips traveling to and from the south on Tower Road due to lack of cross-connectivity to the remainder of Morrow County. Based on this criterion and travel assumption, the following intersections were analyzed in this study:

1. I-84 WB Ramps/Tower Road
2. I-84 EB Ramps/Tower Road
3. Tower Road/Kunze Lane
4. Tower Road/Boardman Airport Lane (Site Access)

All study area intersections are located within Morrow County. Tower Road and Kunze Lane are owned and maintained by Morrow County. Boardman Airport Lane is owned and maintained by the Port of Morrow County. The ramp terminals at I-84 are maintained by ODOT.

1.2.2 Methodology

Analysis is provided for all study area intersections during the AM and PM peak hours. Per ODOT's APM guidelines, existing conditions were analyzed after applying a seasonal adjustment and assuming a system peak hour. Analysis was completed using HCM7 methodology and Synchro 12 software. Mobility Targets used for comparison are shown in Table 1.

Table 1. Mobility Targets for Study Area Intersections.

Intersection	Standard	Source
1. I-84 WB Ramps & Tower Rd	Exit Ramp: V/C ≤ 0.85; Road: LOS ≤ D	Oregon Highway Plan [1]/ Morrow County TSP
2. I-84 EB Ramps & Tower Rd	Exit Ramp: V/C ≤ 0.85; Road: LOS ≤ D	Oregon Highway Plan [1]/ Morrow County TSP
3. Kunze Ln & Tower Rd	LOS ≤ D	Morrow County TSP
4. Boardman Airport Ln & Tower Rd	LOS ≤ D	Morrow County TSP

1. The Oregon Highway Plan (OHP) sets specific mobility targets for ramp terminals as described in Action 1F.1.

The Mobility Targets for the ramp terminals are not the v/c ratios listed in Table 6 of the Oregon Highway Plan (OHP) as that table is only applicable to the mainline of the freeway, not the ramp terminals. The v/c target for ramp terminals is discussed in OHP Action 1F.1, in the excerpt: "*… the better indication is a maximum volume to capacity ratio for the ramp terminals of interchange ramps that is the more restrictive volume to capacity ratio for the crossroad, or 0.85.*" As the crossroad does not have a v/c mobility target, the 0.85 v/c target is used. The Morrow County TSP gives a mobility target of Level of Service D or better for their facilities as presented in Chapter 3.

1.2.3 Analysis Scenarios

The following scenarios were evaluated in the TIA:

- 2024 Seasonally Adjusted Existing Conditions (representative of the 30th highest hour)
- 2044 with Existing EFU and SAI Zone Designations (for TPR)
- 2044 with Proposed M-G and LU Overlay Zone Designation (for TPR)

2 EXISTING CONDITIONS

The existing conditions analysis is based on a current year 2024 inventory of transportation facilities and traffic data from October 2022 and December 2024.

2.1 SITE CONDITIONS

The proposed zone change is for a site located in Morrow County, outside the Boardman UGB. The site is approximately 1,264 acres and is currently zoned both EFU and SAI. The site consists of a northeast corner portion of 04N23E Tax Lot 110 and a northwest corner portion of 04N24E Tax Lot 121.

2.2 TRANSPORTATION FACILTIES

2.2.1 Vehicular Transportation Facilities

All Roadways and intersections included in this TIA are either under ODOT, Morrow County, or Port of Morrow jurisdiction. Boardman Airport Lane is a Port of Morrow facility with a public access easement. Table 2 summarizes the characteristics of existing study area roadways.

Table 2. Existing Vehicular Transportation Facilities

ROADWAY	JURISDICTIONAL AUTHORITY	FUNCTIONAL CLASSIFICATION	NUMBER OF AUTO LANES	POSTED SPEED (MPH)	SIDEWALKS PRESENT?	BIKE LANES PRESENT?	ON-STREET PARKING ALLOWED?
ODOT Jurisdiction							
I-84 Westbound	ODOT	Interstate [1]	2	70 [3]	No	No	No
I-84 Eastbound	ODOT	Interstate [1]	2	70 [3]	No	No	No
Morrow County Jurisdiction							
Tower Road	Morrow County	Minor Collector [2]	2	45/55 [4]	No	No	No
Kunze Lane	Morrow County	Major Collector [2]	2	45	No	No	No
Boardman Airport Lane	Port of Morrow	Unidentified [2]	2	35	No	No	No

[1] Source: Oregon Highway Plan (1999-2023)
[2] Source: Morrow County Transportation Plan (April 20, 2022)
[3] Posted speed is 65 mph for trucks
[4] Posted speed is 45 mph north of Kunze Lane and 55 mph south of Kunze Lane.

2.2.2 Pedestrian and Bicycle Facilities

There are no bike lanes or sidewalks on any of the study area roadways.

2.2.3 Transit Facilities

The study area is not served by transit.

2.3 EXISTING TRAFFIC COUNTS

2.3.1 2024 Turning Movement Counts

Turning movement counts were collected on Thursday, December 5, 2024, at the three (3) northern study area intersections along Tower Road. Per ODOT's APM guidance, a system peak hour was selected for both the morning and afternoon peak periods. The AM system peak hour was determined to occur between 7:40 AM and 8:40 AM and the PM system peak hour occurred between 4:00 PM and 5:00 PM. The raw turning movement counts are provided in the appendix.

The 2024 traffic counts are seasonally adjusted using ODOT's 2023 Seasonal Trend Table, as presented in Table 3. This methodology is consistent with a recent traffic study (May 8, 2023) prepared by Kittelson & Associates for the same study area intersections. The volume development spreadsheet can be found in the Appendix and the turning movement volumes used to model traffic operations are shown below in Figure 2.

Table 3. Seasonal Adjustment Factor Calculation

TREND	DECEMBER COUNT MONTH	SEASONAL TREND PEAK PERIOD FACTOR	SEASONAL ADJUSTMENT FACTOR	AVERAGE
COMMUTER	1.0452	0.9376	1.11	**1.22**
SUMMER	1.1223	0.8449	1.33	

2.3.2 2022 Turning Movement Count

A turning movement count was collected in October 2022 at the Tower Road at Boardman Airport Lane intersection for a recently approved data center adjacent to the subject site. The seasonal adjustment factor for these counts was calculated by PBS Engineering and approved by ODOT and Morrow County using the on-site ATR method. Table 4 shows this seasonal adjustment factor and its calculations. The ATR used was ATR #11-009, 0.43 miles east of Heppner Highway (OR74) on I-84, at milepost 147.78.

Table 4. Seasonal Adjustment Factor for October 2022 Traffic Count.

MONTHYEAR	2017	2018	2019	2021	2022	AVERAGE
Peak Month (July)	123[2]	132	132	129	136[2]	131
Count Month (October 25[1])	100	101	96[2]	99	103[2]	100
Seasonal Adjustment Factor (Peak Month Average / Count Month Average)						**1.31**

[1] Count Month ADT percentage is a weighted average of the October and November percentages

[2] High and low percentages removed from average calculation

Figure 2. Existing Conditions Traffic Volumes

2.4 TRAFFIC OPERATIONS

Table 5. Existing Traffic Operations Summary

INTERSECTION	CRITICAL APPROACH/ LANE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		v/c	Approach Delay (seconds)	Approach LOS	v/c	Approach Delay (seconds)	Approach LOS
I-84 WB Ramp Terminal and Tower Rd	Westbound	0.17	10.6	B	0.23	12.00	B
I-84 EB Ramp Terminal and Tower Rd	Eastbound	0.05	9.8	A	0.13	10.0	A
Tower Rd and Kunze Ln	Westbound	0.02	9.55	A	0.05	11.00	B
Tower Rd and Boardman Airport Ln	Eastbound	0.01	9.44	A	0.001	10.55	B

As presented in Table 5, all study area intersections currently operate well below capacity and meet both ODOT and County mobility standards during both the AM and PM peak hours.

2.5 CRASH ANALYSIS

2.5.1 Crash Data Summary

Crash Data from between January 1, 2018, and December 31, 2022, was reviewed at all four (4) study area intersections. These data were obtained from the *Oregon Transportation Safety Data Explorer*. Table 6 below summarizes the crash data at the study area intersections during the five-year period.

Table 6. Five-Year Crash Evaluation (2018-2022)

Int #	Intersection (Control)	Year					Total CRASHES	ADT	Crash Rate	ODOT's 90th Percentile Crash Rate
		2018	2019	2020	2021	2022				
1	I-84 Westbound Ramp Terminal and Tower Road (3ST [1])	0	0	1	0	0	1	2,000	0.27	0.475
2	I-84 Eastbound Ramp Terminal and Tower Road (3ST [1])	0	1	0	0	2	3	5,200	0.32	0.475
3	Tower Road And Kunze Lane (4ST [2])	0	0	0	0	0	0	2,900	0.00	1.080
4	Tower Road And Boardman Airport Lane (3ST [1])	0	0	0	0	0	0	2,500	0.00	0.475

[1] 3ST indicates three-leg minor stop-control traffic control type, per ODOT APM ,Version 2.

[2] 4ST indicates four-leg minor stop-control traffic control type, per ODOT APM ,Version 2.

During the five-year period between January 1, 2018, and December 31, 2022, four (4) crashes were reported at the four (4) study area intersections. One (1) crash was reported at the I-84 Westbound ramp intersection with Tower Road and three (3) crashes were reported at the I-84 Eastbound ramp intersection with Tower Road. Three

(3) of the four (4) collisions were reported to have resulted in no injury and one (1) collision was reported to have resulted in a minor injury. Two (2) of the collisions were reported in 2022, one (1) in 2020, and one (1) in 2019.

ODOT's Safety Priority Index System (SPIS) was reviewed to see if any of the study area intersections are in the top 15% of crash hotspots. None of the studied intersections are included in the top 15% of 2022 SPIS groups.

2.5.2 Intersection Crash Rates

The Intersection Crash Rate is calculated by taking the average annual number of crashes and dividing it by the million entering vehicles (MEV) for a given intersection. By dividing the PM peak hour volume by the peak-to-daily factor (k-factor), one can estimate the daily traffic volume for an intersection. The k-factor assumed to estimate the daily traffic volume was 0.10.

Intersections that have a crash rate above 1.0 crashes/MEV should be reviewed to see where safety improvements can be made. Each of the intersections within the study area have a crash rate lower than 1.0 crashes/MEV. In addition, all crash rates are lower than the 90th percentile crash rates shown on page 4-3 of ODOT's APM v2.

3 ZONE CHANGE ANALYSIS

3.1 2044 BACKGROUND CONDITIONS

3.1.1 Planned Transportation Improvements

The Tower Road at I-84 interchange will be undergoing construction with a new bridge structure. However, this improvement is not anticipated to impact capacity at the interchange. There are no other planned transportation improvements that are currently funded within the study area that will impact capacity. Therefore, no transportation improvements were assumed in the forecast year analysis scenarios.

3.1.2 Background Traffic Growth

A linear, annual growth rate of 2.0% per year (total of 40% growth) was applied to existing, seasonally adjusted traffic volumes to forecast from year 2024 to year 2044. This growth rate is consistent with the long-range planning growth rate reported in the Morrow County Transportation System Plan for mid-county (Page 4-3).

3.1.3 In-Process Traffic

In-process traffic volumes are traffic volumes that are generated by developments that are currently under construction or have been recently approved for construction. Trips for the recently approved data center on Boardman Airport Lane just east of the proposed site were included in this analysis as an in-process development.

3.2 PLANNING GOAL 12 CONFORMANCE

To show conformance with Statewide Planning Goal 12, the TIA must show that the proposed change in use does not adversely impact the existing and planned transportation infrastructure. This burden of proof is demonstrated by showing the trip potential to be generated by the proposed zoning designation does not cause additional impact to the roadway network beyond the projected impact associated with the existing zoning designation, as forecasted in the planning horizon year.

The subject site is currently zoned both Space Age Industrial (SAI) and Exclusive Farm Use (EFU), as shown in Figure 3. Approximately 309 acres are currently designated SAI and approximately 955 acres are currently designated EFU. The proposal is to change the zoning designation for the entire site from SAI and EFU to General Industrial (M-G) with a Limited Use Overlay limiting industrial use to data centers with related ancillary improvements and associated infrastructure facilities. The reasonable worst-case trip generation potential for both the existing and proposed zoning designations is described below.

Figure 3. Existing Morrow County Zoning for Subject Site

3.3 EXISTING ZONING DESIGNATION

Based on the Morrow County Zoning Code Section 3.010, limited large parcel single family residential and winery uses are allowed outright within the EFU zone, in addition to farm uses. We note within the EFU zone the minimum parcel size is 160 acres for a single-family dwelling. While higher trip generating uses potentially are allowed in the EFU zone including commercial activities in conjunction with farm use, it was conservatively assumed the currently zoned EFU portion of the site, which is vacant and not in agricultural use, will generate trips at a rate consistent with farm use for purposes of this analysis. This is consistent with the May 8, 2023 traffic study by Kittelson & Associates for a similar zone change analysis.

Based on the Morrow County Zoning Code Section 3.072, the following uses are allowed outright within the SAI zone and can generate a substantial number of trips:

- Buildings and structures (above and below ground) used for space age technology research and development.
- Aerospace Aircraft and space vehicle testing and related research products.

Based on the allowable uses in the SAI and EFU zones, the reasonable worst-case trip generator on the subject site would be a research and development center within the SAI-zoned property and assumed farm use on the EFU-zoned property.

3.3.1 Trip Generation

Assuming trip generation estimates for one of the largest surveyed sites published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual,* 11th Edition for a "Research and Development Center" (LUC 760) use, the reasonable worst-case scenario for the existing 309 acres zoned SAI is approximately 1,400,000 square feet of research and development. A facility of this size assumes a floor area ratio of approximately 0.10, which is comparable to a large-scale, research and development center campus. 1,400,000 SF can be disbursed in multiple buildings across a campus or in a single building. Trips for the existing farm use(s) are already reflected in the existing year traffic counts collected during the AM and PM peak hours.

Table 7 - Trip Generation Estimates for Existing Zone Designations

Zone Designation	ITE Land Use	LUC	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
SAI	Research and Development Center	760	1,400 KSF	13,828	1,042	229	1,271	192	1,009	1,201

LUC: Land Use Code

3.4 PROPOSED ZONING DESIGNATION

Based on the Morrow County Zoning Code Section 3.070, several uses are allowed outright within the M-G zone that can generate a substantial number of trips. However, a Limited Use Overlay will be sought to limit the permitted uses to data centers with related ancillary improvements and associated infrastructure facilities. Therefore, the assumed data center development for which this zone change is being pursued presents a reasonable worst-case development scenario. Figure 4 shows the proposed rezoning of the proposed site.

Figure 4. Proposed Morrow County Zoning for Proposed Site

3.4.1 Trip Generation

Table 8 presents trip generation estimates for the proposed zone designation a Limited Use Overlay using ITE trip estimates for the "Data Center" (LUC 160) use. These estimates assume a total building area dispersed among multiple buildings, not necessarily a single building.

Table 8 - Trip Generation Estimates for Proposed Zone Designation

Zone Designation	ITE Land Use	LUC	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
M-G	Data Center	160	4,000 KSF	3,960	242	198	440	130	304	434

LUC: Land Use Code

As summarized in Table 8, the proposed zone designation with a Limited Use Overlay is projected to generate fewer trips than the existing zone designations for the subject site. For comparison, an approximately 490,000 SF Research and Development center would generate about the same number of trips (461 AM and 437 PM peak hour trips and 5,001 daily trips) as a 4,000,000 SF data center. A 490,000 SF research and development center would be about the size of two buildings shown on the conceptual site plan attached to this study.

3.5 TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution for both the existing and proposed zone designations is as follows:

- 70% to/from the east on I-84
- 5% to/from the west on I-84
- 25% to/from the east on Kunze Lane

Figure 5 and Figure 6 present the trip assignment for the exiting SAI/EFU and proposed M-G zone designations, respectively.

Figure 5. Trip Assignment for Existing EFU and SAI Zone Designation

Figure 6. Trip Assignment for Proposed M-G Zone Designation

3.6 FUTURE YEAR 2044 CONDITIONS WITH EXISTING EFU/SAI ZONING

3.6.1 Volume Development

The trip assignment generated from the existing EFU/SAI scenario was added to the 2044 background traffic volumes and the resulting traffic volumes were analyzed. The turning movement volumes used are shown below in Figure 7.

3.6.2 Roadway Impacts

The future, bidirectional volume projections for Tower Road assuming the worst-case development scenario for the existing EFU and SAI zoning are approximately 1,700 and 1,800 during the AM and PM peak hours, respectively, as presented in Figure 7. The future, bidirectional volume projections for Boardman Airport Lane assuming the existing EFU and SAI zoning are approximately 1,400 and 1,300 during the AM and PM peak hours, respectively. A two-lane roadway generally has a capacity of approximately 1,000 vehicles per hour in one direction, with a bidirectional capacity of approximately 2,000 vehicles per hour. Therefore, both Tower Road and Boardman Airport Lane are projected to adequately serve the peak hour traffic volumes associated with the reasonable worst-case scenario development of the existing EFU and SAI zoned subject property.

3.6.3 Traffic Operations

Table 9. Year 2044 Traffic Operations Summary with Existing EFU/SAI Zoning

INTERSECTION	CRITICAL APPROACH/ LANE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		v/c	Approach Delay (seconds)	Approach LOS	v/c	Approach Delay (seconds)	Approach LOS
I-84 WB Ramp Terminal and Tower Rd	Westbound	**1.83**	**> 300**	**F**	**1.04**	**85.6**	**F**
I-84 EB Ramp Terminal and Tower Rd	Eastbound	0.56	**42.3**	**E**	0.29	13.6	B
Tower Road and Kunze Ln	Westbound	**> 2**	**> 300**	**F**	**>2**	**> 300**	**F**
Tower Rd and Boardman Airport Ln	Eastbound	**1.57**	**>300**	**F**	**> 2**	**> 300**	**F**

Bold text indicates failure to meet applicable operational standards.

All study area intersections are projected to fail to meet the applicable mobility standards assuming a reasonable worst-case development scenario with the existing EFU/SAI zone designations in year 2044. The I-84 Westbound ramp terminal is projected to fail to meet the ODOT standard during the AM and PM peak hours with a v/c of 1.83 and 1.04, respectively, both well over the 0.85 threshold[1]. Both the Tower Road and Kunze Lane intersection and

[1] Mobility Target from Table 6 of the Oregon Highway Plan, Interstate Highway x Rural Lands Standard.

the Tower Road and Boardman Airport Lane intersection are projected to fail to meet the county standard during both the AM and PM peak hours with LOS F operations during both peak hours.

Figure 7. Future Year 2044 Traffic Volumes with Existing EFU/SAI Zone Designation

3.7 FUTURE YEAR 2044 TRAFFIC CONDITIONS WITH PROPOSED M-G ZONING

3.7.1 Volume Development

The trip assignment generated from the proposed M-G/LU Overlay zoning scenario was added to the 2044 background traffic volumes and the resulting traffic volumes were analyzed. The turning movement volumes used are shown below in Figure 8.

3.7.2 Roadway Impacts

The future, bidirectional volume projections for Tower Road assuming the worst-case development scenario for the proposed M-G zoning (with Limited Use Overlay) are approximately 600 and 700 during the AM and PM peak hours, respectively, as presented in Figure 8. The future, bidirectional volume projections for Boardman Airport Lane assuming the proposed M-G zoning are approximately 600 and 500 during the AM and PM peak hours, respectively. A two-lane roadway generally has a capacity of approximately 1,000 vehicles per hour in one direction, with a bidirectional capacity of approximately 2,000 vehicles per hour. Therefore, both Tower Road and Boardman Airport Lane are projected to adequately serve the peak hour traffic volumes associated with the reasonable worst-case scenario development of the proposed M-G zoned subject property.

3.7.3 Traffic Operations

Table 10. Year 2044 Traffic Operations Summary with Proposed M-G Zoning

INTERSECTION	CRITICAL APPROACH/ LANE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
		v/c	Approach Delay (seconds)	Approach LOS	v/c	Approach Delay (seconds)	Approach LOS
I-84 WB Ramp Terminal and Tower Rd	Westbound	0.78	27.0	D	0.79	33.2	D
I-84 EB Ramp Terminal and Tower Rd	Eastbound	0.14	13.6	B	0.27	12.8	B
Tower Road and Kunze Ln	Westbound	0.74	**57.4**	**F**	0.64	**53.2**	**F**
Tower Road and Boardman Airport Lane	Eastbound	0.70	28.7	D	1.33	**194.2**	**F**

Bold text indicates failure to meet applicable operational standards.

With the proposed zone change designation, traffic operations are projected to stay within the mobility targets set by ODOT and Morrow County except for PM peak hour operations at the Boardman Airport Lane intersection with Tower Road during the PM peak hour and the Kunze Lane intersection with Tower Road during both the AM and PM peak hours.

Figure 8. Future Year 2044 Traffic Volumes with Proposed M-G Zone Designation

3.7.4 Project Impacts

The impacts for the zone change proposal from EFU and SAI to M-G with a Limited Use Overlay are discussed below.

3.7.4.1 Proposed Zone Change Impacts

The proposed zone change from EFU and SAI to M-G with a Limited Use Overlay to support a future data center is not expected to significantly affect the existing transportation network as compared with a reasonable worst-case development scenario on the existing EFU and SAI zoned property. Under the existing zoning designation, a 1,400,000 SF research and development center could be developed generating over 1,200 trips during the peak hours and causing operational failures at most of the study area intersections reviewed along Tower Road, in both the AM and PM peak hours.

By contrast, a 4,000,000 SF data center could be constructed under the proposed M-G zoning designation with a Limited Use Overlay and generate just over 400 peak hour trips, approximately a third of the potential trip generation associated with the existing zoning designation. With the proposed zoning designation, only two (2) study area intersections are projected to fail mobility standards in the future, and only in the PM peak hour.

Overall, the traffic generated by the proposed data center would cause an increase of 38% to morning traffic levels and 25% to afternoon traffic levels within the study area. In comparison, traffic generated by a research and development center would cause an increase of 110% to morning traffic levels and 69% to afternoon traffic levels within the study area. The comparison shows that the zone change would have no significant effect on the planned future transportation network.

3.7.4.2 Proposed Development Impacts

A future large-scale data center campus, consistent with the proposed zoning, is projected to generate a high volume of eastbound left turns exiting the site at Tower Road. This high-volume movement is projected to cause a failure at the Boardman Airport Lane intersection with Tower Road during the PM peak hour in the future. The two-way stop-controlled intersection of Tower Road and Boardman Airport Lane is projected to operate at a v/c of 1.33 and an LOS of F for the eastbound left-turn movement in the PM peak period in 2044, failing the County's mobility target of LOS D or better. This is in comparison to the same movement in the Research and Development center scenario where the v/c is projected to be over 2.0 and the delay is projected to be over 300 seconds for the eastbound left-turn movement during the PM peak period, as presented in Table 9. A comparison is shown in Table 11 of the traffic volume increases expected for a Research and Development Center versus a Data Center for this intersection is presented in Table 11.

Table 11. Boardman Airport Ln at Tower Rd Total Entering Vehicles Comparison.

PEAK HOUR	BACKGROUND VOLUMES	R&D BUILD VOLUMES	DATA CENTER BUILD VOLUMES	PERCENT R&D CENTER TRAFFIC	PERCENT DATA CENTER TRAFFIC
AM	435	1706	875	74.5%	50.3%
PM	590	1791	1024	67.1%	42.4%

The westbound approach at Kunze Lane is also projected to fail the county's mobility target of LOS D or better with a projected LOS of F during both peak periods. This is not just due to high volumes approaching on Kunze

Lane but rather from high volumes southbound during the AM peak hour and northbound during the PM peak hour on Tower Road, resulting in fewer gaps for stop-controlled traffic from Kunze Lane to turn left onto Tower Road. For comparison, the same movement under the existing zoning scenario is projected to fail with LOS F, v/c over 2.0, and delay over 300 seconds during both the AM and PM peak periods. The proposed zoning scenario is projected to operate at a v/c less than 0.75 and delay of around 55 seconds. A comparison is shown in Table 12 of the traffic volume increases expected for a Research and Development Center (Existing Zoning) versus a Data Center (Proposed Zoning) for this intersection are presented in Table 12..

Table 12. Kunze Ln at Tower Rd Total Entering Vehicles Comparison.

PEAK HOUR	BACKGROUND VOLUMES	R&D BUILD VOLUMES	DATA CENTER BUILD VOLUMES	PERCENT R&D CENTER TRAFFIC	PERCENT DATA CENTER TRAFFIC
AM	467	1737	908	73.1%	48.6%
PM	657	1857	1092	64.6%	39.8%

3.7.5 Mitigation

Overall, more extensive mitigation would be needed at more intersections assuming a reasonable worst-case buildout under the existing zoning as compared with the proposed zoning. Therefore, the proposed zoning designation is projected to result in fewer and smaller impacts than the existing zoning designation and should thereby not require mitigation for approval. Since the proposed rezoning has no significant effect on the planned future traffic network, any necessary analysis for the potential need for mitigation of possible future failures will be evaluated as part of a site plan review application, and not in this TPR report.

3.8 TRANSPORTATION PLANNING RULE COMPLIANCE

A change in zoning must meet the criteria laid out in Oregon Administrative Rule 660-012-0060, part of the Transportation Planning Rule (TPR). The relevant portion of this section is laid out below in italic text with the response for this project in bold text.

660-012-0060 Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

The proposed General Industrial zone with Limited Use Overlay will not require or result in any changes to the functional classification of any transportation facility in the vicinity of the site, as presented in this study. Tower Road, Kunze Lane, and Boardman Airport Lane are expected to adequately serve the demand of future trips associated with the proposed zoning designation in their current, two-lane configurations.

(b) Change standards implementing a functional classification system; or

The proposed General Industrial/Limited Use Overlay zoning will not require changes to the standards that implement the functional classification system. The existing roadway configurations are expected to adequately serve future trips associated with the proposed zone designation.

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection. If a local government is evaluating a performance standard based on projected levels of motor vehicle traffic, then the results must be based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

The proposed General Industrial/Limited Use Overlay zoning would result in future traffic patterns that remain consistent with the functional classifications of the roadways in the study area, as documented in this study.

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan.

The existing SAI zoning would be expected to experience performance standard failure at all four study area intersections: Tower Road at I-84 WB and EB ramp terminals, Tower Road at Kunze Lane, and

Tower Road at Boardman Airport Lane. However the proposed General Industrial/Limited Use Overlay zoning is expected to result in a less severe failure due to fewer generated trips at Kunze Lane and at Boardman Airport Lane along Tower Road and is also not expected to fail at the I-84 ramp terminals. Therefore, the proposed zone designation of M-G should not require mitigation for approval.

660-012-0065 Transportation Improvements on Rural Lands

(1) This rule identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception.

See responses below.

(3) The following transportation improvements are consistent with Goals 3, 4, 11, and 14 subject to the requirements of this rule:

(a) Accessory transportation improvements for a use that is allowed or conditionally allowed by ORS 215.213, 215.283 or OAR chapter 660, division 6 (Forest Lands);

N/A

(b) Transportation improvements that are allowed or conditionally allowed by ORS 215.213, 215.283 or OAR chapter 660, division 6 (Forest Lands);

N/A

(c) Channelization not otherwise allowed under subsections (a) or (b) of this section;

N/A

(d) Realignment of roads not otherwise allowed under subsection (a) or (b) of this section;

N/A

(e) Replacement of an intersection with an interchange;

N/A

(f) Continuous median turn lane;

N/A

(g) New access roads and collectors within a built or committed exception area, or in other areas where the function of the road is to reduce local access to or local traffic on a state highway. These roads shall be limited to two travel lanes. Private access and intersections shall be limited to rural needs or to provide adequate emergency access.

N/A

(h) Bikeways, footpaths and recreation trails not otherwise allowed as a modification or part of an existing road;

N/A

(i) Park and ride lots;

N/A

(j) Railroad mainlines and branchlines;

N/A

(k) Pipelines;

N/A

(l) Navigation channels;

N/A

(m) Replacement of docks and other facilities without significantly increasing the capacity of those facilities;

N/A

(n) Expansions or alterations of public use airports that do not permit service to a larger class of airplanes; and

N/A

(o) Transportation facilities, services and improvements other than those listed in this rule that serve local travel needs. The travel capacity and performance standards of facilities and improvements serving local travel needs shall be limited to that necessary to support rural land uses identified in the acknowledged comprehensive plan or to provide adequate emergency access.

Future improvements may be necessary under the existing zoning designation. However, the proposed zoning designation is expected to result in fewer impacts. Any improvements that would be required with development review associated with the proposed zoning designation are expected to be contextually consistent with the local background traffic projected in the area and would not be anticipated to attract additional traffic (i.e. cut-through or rerouted traffic from I-84 via Kunze Lane).

(4) Accessory transportation improvements required as a condition of development listed in subsection (3)(a) of this rule shall be subject to the same procedures, standards and requirements applicable to the use to which they are accessory.

N/A

(5) For transportation uses or improvements listed in subsections (3)(d) to (g) and (o) of this rule within an exclusive farm use (EFU) or forest zone, a jurisdiction shall, in addition to demonstrating compliance with the requirements of ORS 215.296:

(a) Identify reasonable build design alternatives, such as alternative alignments, that are safe and can be constructed at a reasonable cost, not considering raw land costs, with available technology. The jurisdiction need not consider alternatives that are inconsistent with applicable standards or not approved by a registered professional engineer;

No alternative alignments need to be considered as the proposed zone change is projected to result in minimal impacts to the transportation network. Additionally, this criterion may not apply as the proposed zone change will not include any EFU land.

(b) Assess the effects of the identified alternatives on farm and forest practices, considering impacts to farm and forest lands, structures and facilities, considering the effects of traffic on the movement of farm and forest vehicles and equipment and considering the effects of access to parcels created on farm and forest lands; and

To support the future development for which the proposed zone change is sought, access will be taken from the existing Boardman Airport Lane. Farm uses currently have access to Boardman Airport Lane, as needed, and access to surrounding uses is not proposed to change.

(c) Select from the identified alternatives, the one, or combination of identified alternatives that has the least impact on lands in the immediate vicinity devoted to farm or forest use.

The proposed access plan currently presents the least impact to the transportation network and surrounding farm uses because it relies on existing paved roads that already extend to the site.

660-012-0070 Exceptions for Transportation Improvements on Rural Land

A. *Transportation facilities and improvements which do not meet the requirements of OAR 660-012-0065 require an exception to be sited on rural lands.*

This traffic analysis concludes that no transportation improvements on rural lands will be needed to support the proposed zone change as the impacts associated with the reasonable worst-case for the proposed zone designation are less significant than the reasonable worst-case impacts associated with the existing zone designations. As such, the criteria of OAR 660-012-0065 identifies a goal exception is not required. Therefore, the criteria listed below do not apply to the proposed zone change.

(a) A local government approving a proposed exception shall adopt as part of its comprehensive plan findings of fact and a statement of reasons that demonstrate that the standards in this rule have been met. A local government denying a proposed exception shall adopt findings of fact and a statement of reasons explaining why the standards in this rule have not been met. However, findings and reasons denying a proposed exception need not be incorporated into the local comprehensive plan.

(b) The facts and reasons relied upon to approve or deny a proposed exception shall be supported by substantial evidence in the record of the local exceptions proceeding.

(2) When an exception to Goals 3, 4, 11, or 14 is required to locate a transportation improvement on rural lands, the exception shall be taken pursuant to ORS 197.732(1)(c), Goal 2, and this division. The exceptions standards in OAR chapter 660, division 4 and OAR chapter 660, division 14 shall not apply. Exceptions adopted pursuant to this division shall be deemed to fulfill the requirements for goal exceptions required under ORS 197.732(1)(c) and Goal 2.

(3) An exception shall, at a minimum, decide need, mode, function and general location for the proposed facility or improvement:

(a) The general location shall be specified as a corridor within which the proposed facility or improvement is to be located, including the outer limits of the proposed location. Specific sites or areas within the corridor may be excluded from the exception to avoid or lessen likely adverse impacts. Where detailed design level information is available, the exception may be specified as a specific alignment;

(b) The size, design and capacity of the proposed facility or improvement shall be described generally, but in sufficient detail to allow a general understanding of the likely impacts of the proposed facility or improvement and to justify the amount of land for the proposed transportation facility. Measures limiting the size, design or capacity may be specified in the description of the proposed use in order to simplify the analysis of the effects of the proposed use;

(c) The adopted exception shall include a process and standards to guide selection of the precise design and location within the corridor and consistent with the general description of the proposed facility or improvement. For example, where a general location or corridor crosses a river, the exception would specify that a bridge crossing would be built but would defer to project development decisions about precise location and design of the bridge within the selected corridor subject to requirements to minimize impacts on riparian vegetation, habitat values, etc.;

(d) Land use regulations implementing the exception may include standards for specific mitigation measures to offset unavoidable environmental, economic, social or energy impacts of the proposed facility or improvement or to assure compatibility with adjacent uses.

(4) To address Goal 2, Part II(c)(1) the exception shall provide reasons justifying why the state policy in the applicable goals should not apply. Further, the exception shall demonstrate that there is a transportation need identified consistent with the requirements of OAR 660-012-0030 which cannot reasonably be accommodated through one or a combination of the following measures not requiring an exception:

(a) Alternative modes of transportation;

(b) Traffic management measures; and

(c) Improvements to existing transportation facilities.

(5) To address Goal 2, Part II(c)(2) the exception shall demonstrate that non-exception locations cannot reasonably accommodate the proposed transportation improvement or facility. The exception shall set forth the facts and assumptions used as the basis for determining why the use requires a location on resource land subject to Goals 3 or 4.

(6) To determine the reasonableness of alternatives to an exception under sections (4) and (5) of this rule, cost, operational feasibility, economic dislocation and other relevant factors shall be addressed. The thresholds chosen to judge whether an alternative method or location cannot reasonably accommodate the proposed transportation need or facility must be justified in the exception.

(a) In addressing sections (4) and (5) of this rule, the exception shall identify and address alternative methods and locations that are potentially reasonable to accommodate the identified transportation need.

(b) Detailed evaluation of such alternatives is not required when an alternative does not meet an identified threshold.

(c) Detailed evaluation of specific alternative methods or locations identified by parties during the local exceptions proceedings is not required unless the parties can specifically describe with supporting facts why such methods or locations can more reasonably accommodate the identified transportation need, taking into consideration the identified thresholds.

(7) To address Goal 2, Part II(c)(3), the exception shall:

(a) Compare the long-term economic, social, environmental and energy consequences of the proposed location and other alternative locations requiring exceptions. The exception shall describe the characteristics of each alternative location considered by the jurisdiction for which an exception might be taken, the typical advantages and disadvantages of using the location for the proposed transportation facility or improvement, and the typical positive and negative consequences resulting from the transportation facility or improvement at the proposed location with measures designed to reduce adverse impacts;

(b) Determine whether the net adverse impacts associated with the proposed exception site, with mitigation measures designed to reduce adverse impacts, are significantly more adverse than the net impacts from other locations which would also require an exception. A proposed exception location would fail to meet this requirement only if the affected local government concludes that the impacts associated with it are significantly more adverse than the other identified exception sites. The exception shall include the reasons why the consequences of the needed transportation facility or improvement at the proposed exception location are not significantly more adverse than would typically result from the same proposal being located in areas requiring a goal exception other than the proposed location. Where the proposed goal exception location is on resource lands subject to Goals 3 or 4, the exception shall include the facts used to determine which resource land is least productive; the ability to sustain resource uses near the proposed use; and the long-term economic impact on the general area caused by irreversible removal of the land from the resource base; and

(c) The evaluation of the consequences of general locations or corridors need not be site-specific, but may be generalized consistent with the requirements of section (3) of this rule. Detailed evaluation of specific alternative locations identified by parties during the local exceptions proceeding is not required unless such locations are specifically described with facts to support the assertion that the locations have significantly fewer net adverse economic, social, environmental and energy impacts than the proposed exception location.

(8) To address Goal 2, Part II(c)(4), the exception shall:

(a) Describe the adverse effects that the proposed transportation improvement is likely to have on the surrounding rural lands and land uses, including increased traffic and pressure for nonfarm or highway oriented development on areas made more accessible by the transportation improvement;

(b) Demonstrate how the proposed transportation improvement is compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts. Compatible is not intended as an absolute term meaning no interference or adverse impacts of any type with adjacent uses; and

(c) Adopt as part of the exception, facility design and land use measures which minimize accessibility of rural lands from the proposed transportation facility or improvement and support continued rural use of surrounding lands.

(9)

(a) Exceptions taken pursuant to this rule shall indicate on a map or otherwise the locations of the proposed transportation facility or improvement and of alternatives identified under subsection (4)(c), sections (5) and (7) of this rule.

(b) Each notice of a public hearing on a proposed exception shall specifically note that a goal exception is proposed and shall summarize the issues in an understandable manner.

(10) An exception taken pursuant to this rule does not authorize uses other than the transportation facilities or improvements justified in the exception.

(a) Modifications to unconstructed transportation facilities or improvements authorized in an exception shall not require a new exception if the modification is located entirely within the corridor approved in the exception.

(b) Modifications to constructed transportation facilities authorized in an exception shall require a new exception, unless the modification is permitted without an exception under OAR 660-012-0065(3)(b)–(f). For purposes of this rule, minor transportation improvements made to a transportation facility or improvement authorized in an exception shall not be considered a modification to a transportation facility or improvement and shall not require a new exception.

(c) Notwithstanding subsections (a) and (b) of this section, the following modifications to transportation facilities or improvements authorized in an exception shall require new goal exceptions:

(A) New intersections or new interchanges on limited access highways or expressways, excluding replacement of an existing intersection with an interchange.

(B) New approach roads located within the influence area of an interchange.

(C) Modifications that change the functional classification of the transportation facility.

(D) Modifications that materially reduce the effectiveness of facility design measures or land use measures adopted pursuant to subsection (8)(c) of this rule to minimize accessibility to rural lands or support continued rural use of surrounding rural lands, unless the area subject to the modification has subsequently been relocated inside an urban growth boundary.

3.9 MORROW COUNTY ZONING ORDINANCE COMPLIANCE

A change in zoning must also meet the criteria laid out in Section 8.040 of the Morrow County Zoning Ordinance (MCZO). The relevant portion of this section is laid out below in italic text with the response for this project in bold text.

B. The public services and facilities are sufficient to support a change in designation including, but not limited to, water availability relevant to both quantity and quality, waste and storm water management, other public services, and streets and roads.

1. *Amendments to the zoning ordinance or zone changes which significantly affect a transportation facility shall assure that land uses are consistent with the function, capacity, and level of service of the facility identified in the Transportation System Plan. This shall be accomplished be one of the following:*

   a. *Limiting allowed land uses to be consistent with the planned function of the transportation facility or roadway;*

      This criterion is met as the proposed M-G zone change could generate more trips in comparison with the existing EFU and SAI zoning if the proposed zoning did not include a Limited Use overlay. The Limited Use Overlay, as proposed, will ensure consistency with the planned function of the transportation network.

   b. *Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or*

      No amendment to the County's current TSP is needed as both Boardman Airport Lane and Tower Road are expected to adequately serve future traffic volumes with the proposed zone designation as identified in this analysis. Furthermore, the proposed zone designation is projected to generate fewer trips as compared with the existing zone designation, showing the proposed zone designation is consistent with the land use assumptions made in the County's current TSP, or otherwise stated, the existing transportation facilities were planned and designed to serve the level of traffic that is expected with the proposed zone designation.

   c. *Altering land use designations, densities, or design requirements to reduce the demand for automobile travel to meet needs through other modes.*

      This criterion does not apply to the proposed zone change as the surrounding transportation network does not serve other modes of transportation such as walking or biking due to lack of sidewalk and bicycle infrastructure.

2. A plan or land use regulation amendment significantly affects a transportation facility if it:

   a. *Changes the functional classification of an existing or planned transportation facility;*

      This criterion does not apply because Boardman Airport Lane is not identified in the County's TSP.

Boardman Airport Lane is not identified nor addressed in the County's currently adopted 2012 Transportation System Plan. The County's TSP lists Collectors and Arterials Figure 3-1 of the TSP and Boardman Airport Lane is not on the list. Boardman Airport Lane is owned and maintained by the Port of Morrow, as identified in a February 20, 2025 letter prepared by the Port of Morrow for the subject zone change application. Therefore, it is not a Morrow County facility bound by the roadway standards set forth by Morrow County.

b. *Changes standards implementing a functional classification;*

This criterion does not apply because Boardman Airport Lane is not identified in the County's TSP. While Boardman Airport Lane is not identified in the Morrow County TSP, the physical geometry is consistent with the roadway design requirements for the County's Rural Arterial II roadway classification. Therefore, if the facility was expressly owned and maintained by Morrow County, no changes would be required to the standards for a Rural Arterial II classification regarding its application to Boardman Airport Lane. Assuming the Morrow County roadway standards apply to Port of Morrow facilities by extension, no changes are required to the standards for a Rural Arterial II classification regarding its application to Boardman Airport Lane.

c. *Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or*

The projected traffic levels on Boardman Airport Lane are consistent with the functional classification for a Rural Arterial II, as presented in the currently adopted 2012 Morrow County TSP.

While Boardman Airport Lane is not identified as a Collector or Arterial on the Morrow County TSP (and is not owned and maintained by Morrow County), it was recently constructed to standards that most closely align with the County's Rural Arterial II classification, per Table 6-1 of the currently adopted TSP. The County's Rural Arterial II functional classification requires a 60-foot right of way (ROW) width, 32-40 feet of paved width, and two (2) 12-foot travel lanes. Boardman Airport Lane exceeds these design requirements with a 100-foot ROW and a 32-foot paved width.

d. *Would reduce the level of service of the facility below the minimal acceptable level identified in the Transportation System Plan (MC-C-8-98).*

Boardman Airport Lane also appears to fall within the range of traffic volume thresholds identified for Arterial II roadways. It should be noted the "Average Daily Traffic (ADT)" column in Table 6-1 of the TSP appears to be incorrectly labeled, as the volume thresholds identified in this column more appropriately reflect peak hour traffic volumes. This is confirmed by comparing the traffic volume thresholds in Table 6-1 with the traffic volume thresholds in Table 3-10, which shows both average daily traffic (ADT) and peak

hour traffic volumes, identified as “30th DHV”, or 30th Design Hourly Volumes. The maximum ADT value in Table 3-10 is approximately 14,000, whereas the maximum peak hour volume, or 30th DHV is approximately 2,200.

Additionally, study area intersections analyzed in this study show the proposed zone change is projected to result in less significant degradation of levels of service in comparison with the existing EFU and SAI zone designations.

APPENDIX

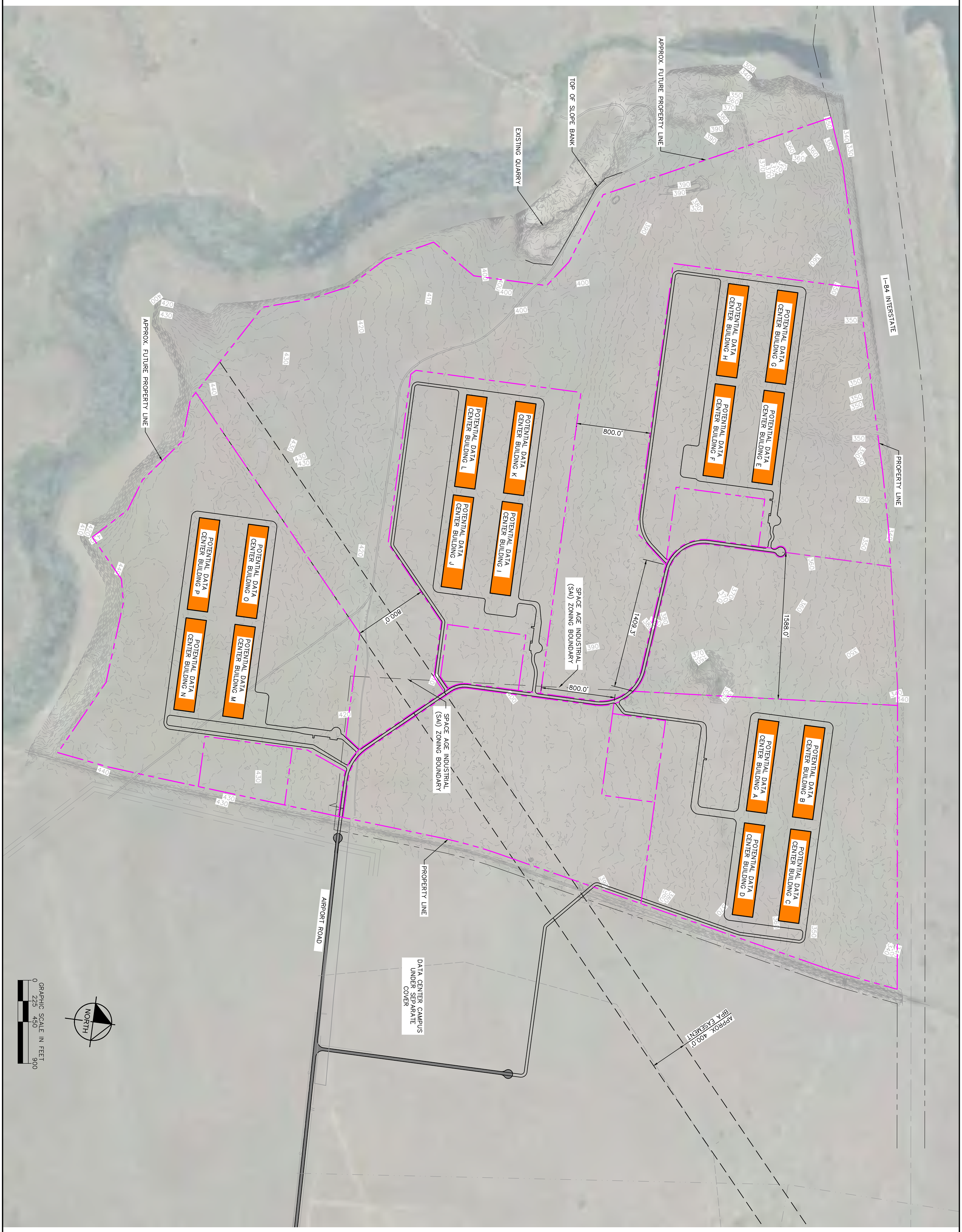
Appendix A: Conceptual Site Plan

Appendix B: Turning Movement Counts

Appendix C: Volume Development Summary

Appendix D: HCM7 Synchro Reports

APPENDIX A:
SITE PLAN



THREEMILE OVERALL CAMPUS

CAMPUS PLAN

SHEET NUMBER EX-1

KHA PROJECT	
DATE	01/08/2025
SCALE	AS SHOWN
DESIGNED BY	LVA
DRAWN BY	CMT
CHECKED BY	LVA

Kimley»Horn
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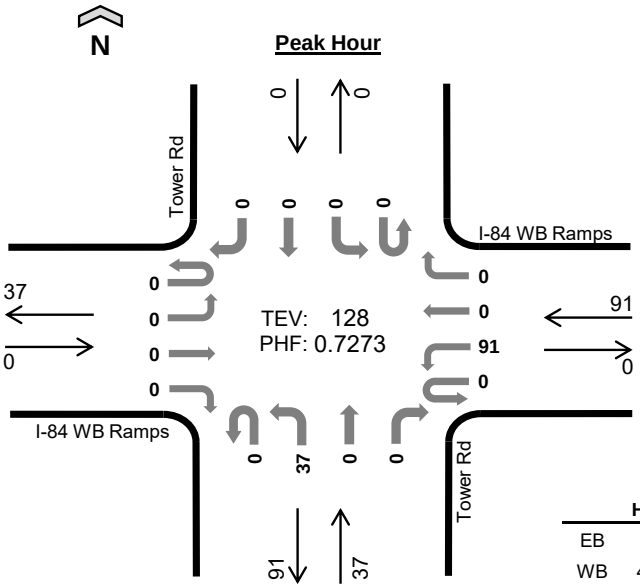
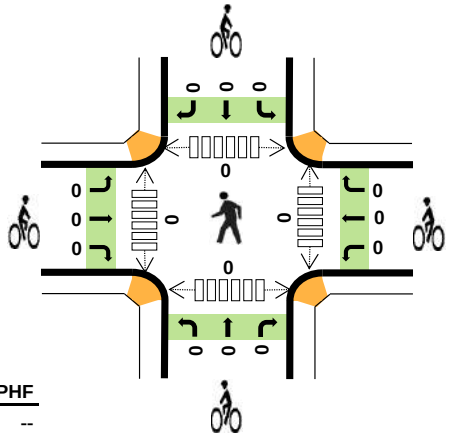
No.	REVISIONS	DATE	BY

APPENDIX B:
TURNING MOVEMENT COUNTS

Tower Rd
I-84 WB Ramps

Date: 12/5/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:05 AM to 8:05 AM





	HV%	PHF
EB	--	--
WB	48%	0.71
NB	70%	0.71
SB	--	--
TOTAL	55%	0.73

Peak Hour Count Summaries

Peak Hour Interval Start	I-84 WB Ramps Eastbound				I-84 WB Ramps Westbound				Tower Rd Northbound				Tower Rd Southbound				5-min Total	Rolling Hour Total
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:05 AM	0	0	0	0	0	4	0	0	0	5	0	0	0	0	0	0	9	0
7:10 AM	0	0	0	0	0	9	0	0	0	3	0	0	0	0	0	0	12	0
7:15 AM	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	4	0
7:20 AM	0	0	0	0	0	6	0	0	0	3	0	0	0	0	0	0	9	0
7:25 AM	0	0	0	0	0	6	0	0	0	2	0	0	0	0	0	0	8	0
7:30 AM	0	0	0	0	0	8	0	0	0	1	0	0	0	0	0	0	9	0
7:35 AM	0	0	0	0	0	6	0	0	0	3	0	0	0	0	0	0	9	0
7:40 AM	0	0	0	0	0	7	0	0	0	3	0	0	0	0	0	0	10	0
7:45 AM	0	0	0	0	0	14	0	0	0	3	0	0	0	0	0	0	17	0
7:50 AM	0	0	0	0	0	7	0	0	0	4	0	0	0	0	0	0	11	0
7:55 AM	0	0	0	0	0	11	0	0	0	5	0	0	0	0	0	0	16	0
8:00 AM	0	0	0	0	0	10	0	0	0	4	0	0	0	0	0	0	14	128
Pk Hr All	0	0	0	0	0	91	0	0	0	37	0	0	0	0	0	0	128	
Pk Hr HV	0	0	0	0	0	44	0	0	0	26	0	0	0	0	0	0	70	
Pk Hr HV%	-	-	-	-	-	48%	-	-	-	70%	-	-	-	-	-	-	55%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) E	W	N	S	Total
7:05 AM	0	0	4	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
7:10 AM	0	4	1	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	2	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
7:20 AM	0	4	2	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
7:25 AM	0	2	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	5	1	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
7:35 AM	0	2	2	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
7:40 AM	0	5	2	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	0	9	2	0	*11*	0	0	0	0	*0*	0	0	0	0	*0*
7:50 AM	0	2	3	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
7:55 AM	0	6	4	0	*10*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	0	3	3	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	0	44	26	0	*70*	0	0	0	0	*0*	0	0	0	0	*0*

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Count Summaries - All Vehicles

Interval Start	I-84 WB Ramps				I-84 WB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	7	0
7:05 AM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**
7:10 AM	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**
7:15 AM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**
7:20 AM	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**
7:25 AM	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**
7:30 AM	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**
7:35 AM	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**
7:40 AM	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**
7:45 AM	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**17**	**0**
7:50 AM	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**
7:55 AM	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**121**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**128**
8:05 AM	0	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0	5	124
8:10 AM	0	0	0	0	0	10	0	1	0	3	0	0	0	0	0	0	14	126
8:15 AM	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	0	5	127
8:20 AM	0	0	0	0	0	2	0	0	0	3	0	0	0	0	1	0	6	124
8:25 AM	0	0	0	0	0	8	0	0	0	2	0	0	0	0	0	0	10	126
8:30 AM	0	0	0	0	0	4	1	0	0	2	0	0	0	0	0	0	7	124
8:35 AM	0	0	0	0	0	7	0	0	0	2	0	0	0	0	0	0	9	124
8:40 AM	0	0	0	0	0	6	0	0	0	1	0	0	0	0	0	0	7	121
8:45 AM	0	0	0	0	0	12	0	0	0	3	0	0	0	0	0	0	15	119
8:50 AM	0	0	0	0	0	6	0	1	0	2	0	0	0	0	0	0	9	117
8:55 AM	0	0	0	0	0	6	0	0	0	7	0	0	0	0	0	0	13	114
Count Total	0	0	0	0	0	161	2	2	0	69	0	0	0	0	1	0	235	
Pk Hr All	**0**	**0**	**0**	**0**	**0**	**91**	**0**	**0**	**0**	**37**	**0**	**0**	**0**	**0**	**0**	**0**	**128**	
Pk Hr HV	**0**	**0**	**0**	**0**	**0**	**44**	**0**	**0**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**70**	
Pk Hr HV%	-	-	-	-	-	**48%**	-	-	-	**70%**	-	-	-	-	-	-	**55%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	4	3	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:05 AM	**0**	**0**	**4**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:10 AM	**0**	**4**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:15 AM	**0**	**2**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:20 AM	**0**	**4**	**2**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:25 AM	**0**	**2**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:30 AM	**0**	**5**	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:35 AM	**0**	**2**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:40 AM	**0**	**5**	**2**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:45 AM	**0**	**9**	**2**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:50 AM	**0**	**2**	**3**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:55 AM	**0**	**6**	**4**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**0**	**3**	**3**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:05 AM	0	1	1	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
8:10 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
8:20 AM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
8:25 AM	0	3	1	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	0	2	2	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:35 AM	0	2	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
8:40 AM	0	3	1	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	0	2	2	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:50 AM	0	3	2	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
8:55 AM	0	2	2	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	66	46	0	*112*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**0**	**44**	**26**	**0**	***70***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**

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Count Summaries - Heavy Vehicles

Interval Start	I-84 WB Ramps				I-84 WB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	7	0
7:05 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**
7:10 AM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
7:15 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**
7:20 AM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**
7:25 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**
7:30 AM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**
7:35 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**
7:40 AM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**
7:45 AM	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**
7:50 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
7:55 AM	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**71**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**70**
8:05 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	68
8:10 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	64
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	63
8:20 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	59
8:25 AM	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	4	60
8:30 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4	58
8:35 AM	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	3	57
8:40 AM	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	4	54
8:45 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4	47
8:50 AM	0	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	5	47
8:55 AM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4	41
Count Total	0	0	0	0	0	66	0	0	0	46	0	0	0	0	0	0	112	
Pk Hr Heavy	**0**	**0**	**0**	**0**	**0**	**44**	**0**	**0**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**70**	

Count Summaries - Bikes

Interval Start	I-84 WB Ramps				I-84 WB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:10 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:20 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:25 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:35 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:40 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:50 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:55 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

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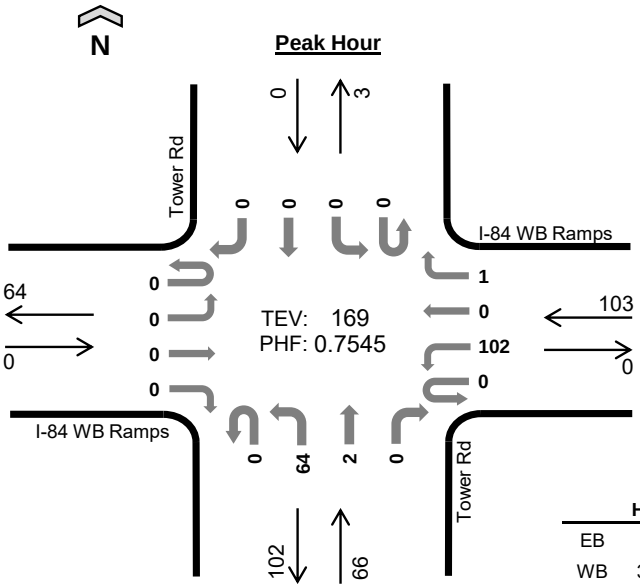
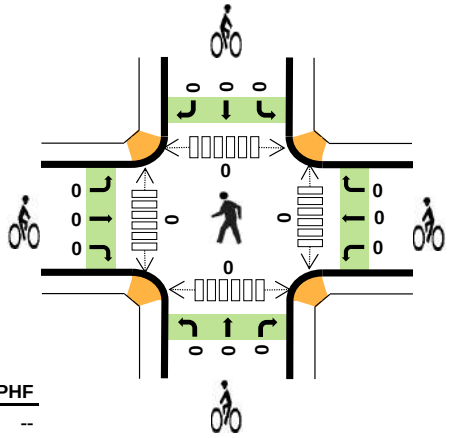
Tower Rd
I-84 WB Ramps

Date: 12/5/2024
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV%	PHF
EB	--	--
WB	35%	0.56
NB	36%	0.75
SB	--	--
TOTAL	36%	0.75

Peak Hour Count Summaries

Peak Hour Interval Start	I-84 WB Ramps Eastbound				I-84 WB Ramps Westbound				Tower Rd Northbound				Tower Rd Southbound				5-min Total	Rolling Hour Total
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	8	0	0	0	6	0	0	0	0	0	0	14	0
4:05 PM	0	0	0	0	0	5	0	0	0	9	0	0	0	0	0	0	14	0
4:10 PM	0	0	0	0	0	5	0	0	0	7	0	0	0	0	0	0	12	0
4:15 PM	0	0	0	0	0	6	0	0	0	4	0	0	0	0	0	0	10	0
4:20 PM	0	0	0	0	0	17	0	0	0	2	0	0	0	0	0	0	19	0
4:25 PM	0	0	0	0	0	19	0	0	0	5	0	0	0	0	0	0	24	0
4:30 PM	0	0	0	0	0	10	0	0	0	3	0	0	0	0	0	0	13	0
4:35 PM	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	10	0
4:40 PM	0	0	0	0	0	5	0	0	0	7	0	0	0	0	0	0	12	0
4:45 PM	0	0	0	0	0	5	0	0	0	5	1	0	0	0	0	0	11	0
4:50 PM	0	0	0	0	0	11	0	0	0	4	0	0	0	0	0	0	15	0
4:55 PM	0	0	0	0	0	6	0	1	0	7	1	0	0	0	0	0	15	169
Pk Hr All	0	0	0	0	0	102	0	1	0	64	2	0	0	0	0	0	169	
Pk Hr HV	0	0	0	0	0	36	0	0	0	24	0	0	0	0	0	0	60	
Pk Hr HV%	-	-	-	-	-	35%	-	0%	-	38%	0%	-	-	-	-	-	36%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) E	W	N	S	Total
4:00 PM	0	2	2	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
4:05 PM	0	1	5	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
4:10 PM	0	1	4	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:20 PM	0	9	2	0	*11*	0	0	0	0	*0*	0	0	0	0	*0*
4:25 PM	0	6	2	0	*8*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	2	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:35 PM	0	3	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
4:40 PM	0	2	2	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	0	2	3	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
4:50 PM	0	4	3	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
4:55 PM	0	2	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	0	36	24	0	*60*	0	0	0	0	*0*	0	0	0	0	*0*

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Count Summaries - All Vehicles

Interval Start	I-84 WB Ramps				I-84 WB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	0
4:05 PM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**
4:10 PM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**
4:15 PM	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**
4:20 PM	**0**	**0**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**0**
4:25 PM	**0**	**0**	**0**	**0**	**0**	**19**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**
4:30 PM	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**
4:35 PM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**
4:40 PM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**0**	**0**	**11**	**0**
4:50 PM	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**0**
4:55 PM	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**1**	**0**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	**15**	**169**
5:00 PM	0	0	0	0	0	7	0	0	0	2	0	0	0	0	0	0	9	164
5:05 PM	0	0	0	0	0	8	0	0	0	4	0	0	0	0	0	0	12	162
5:10 PM	0	0	0	0	0	3	0	0	0	4	0	0	0	0	0	0	7	157
5:15 PM	0	0	0	0	0	2	0	0	0	4	0	0	0	0	0	0	6	153
5:20 PM	0	0	0	0	0	3	0	1	0	5	1	0	0	0	0	0	10	144
5:25 PM	0	0	0	0	0	5	0	0	0	3	0	0	0	0	0	0	8	128
5:30 PM	0	0	0	0	0	8	0	0	0	2	0	0	0	0	0	0	10	125
5:35 PM	0	0	0	0	0	7	0	0	0	1	0	0	0	0	0	0	8	123
5:40 PM	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	6	117
5:45 PM	0	0	0	0	0	9	0	0	0	2	0	0	0	0	0	0	11	117
5:50 PM	0	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	7	109
5:55 PM	0	0	0	0	0	2	0	0	0	6	0	0	0	0	0	0	8	102
Count Total	0	0	0	0	0	163	0	2	0	103	3	0	0	0	0	0	271	
Pk Hr All	**0**	**0**	**0**	**0**	**0**	**102**	**0**	**1**	**0**	**64**	**2**	**0**	**0**	**0**	**0**	**0**	**169**	
Pk Hr HV	**0**	**0**	**0**	**0**	**0**	**36**	**0**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**60**	
Pk Hr HV%	-	-	-	-	-	**35%**	-	**0%**	-	**38%**	**0%**	-	-	-	-	-	**36%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	**0**	**2**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:05 PM	**0**	**1**	**5**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:10 PM	**0**	**1**	**4**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:15 PM	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:20 PM	**0**	**9**	**2**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:25 PM	**0**	**6**	**2**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:35 PM	**0**	**3**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:40 PM	**0**	**2**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:45 PM	**0**	**2**	**3**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:50 PM	**0**	**4**	**3**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:55 PM	**0**	**2**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	3	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:05 PM	0	3	1	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:10 PM	0	2	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	0	2	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:20 PM	0	1	4	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
5:25 PM	0	1	2	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	4	1	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
5:35 PM	0	4	0	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:40 PM	0	2	1	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	3	0	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:50 PM	0	2	2	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:55 PM	0	0	3	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	63	40	0	*103*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**0**	**36**	**24**	**0**	***60***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**

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Count Summaries - Heavy Vehicles

Interval Start	I-84 WB Ramps				I-84 WB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	0
4:05 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**
4:10 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
4:15 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
4:20 PM	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**0**
4:25 PM	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**
4:30 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
4:35 PM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**
4:40 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**
4:50 PM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**
4:55 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**60**
5:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	59
5:05 PM	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	4	57
5:10 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	3	55
5:15 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	3	56
5:20 PM	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	5	50
5:25 PM	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	3	45
5:30 PM	0	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0	5	48
5:35 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	49
5:40 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	3	48
5:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	46
5:50 PM	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	4	43
5:55 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	43
Count Total	0	0	0	0	0	63	0	0	0	40	0	0	0	0	0	0	103	
Pk Hr Heavy	**0**	**0**	**0**	**0**	**0**	**36**	**0**	**0**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**60**	

Count Summaries - Bikes

Interval Start	I-84 WB Ramps				I-84 WB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:05 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:10 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:20 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:25 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:35 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:40 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:50 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:55 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

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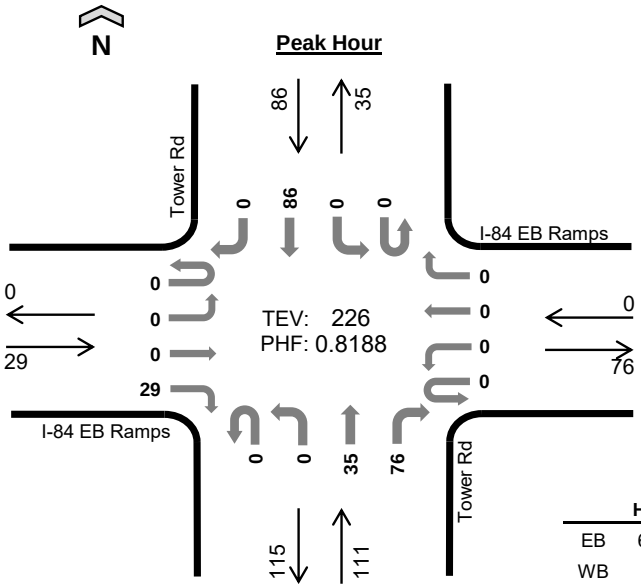
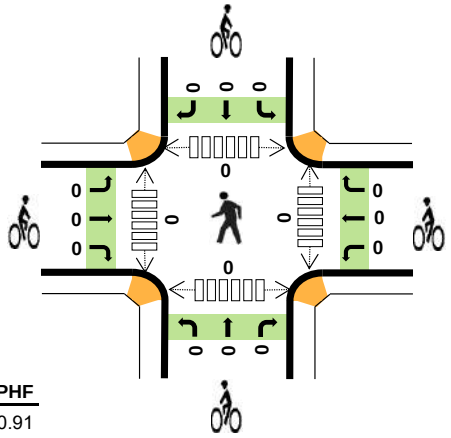
Tower Rd
I-84 EB Ramps

Date: 12/5/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:40 AM to 8:40 AM





	HV%	PHF
EB	69%	0.91
WB	--	--
NB	66%	0.87
SB	37%	0.67
TOTAL	55%	0.82

Peak Hour Count Summaries

Peak Hour Interval Start		I-84 EB Ramps				I-84 EB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:40 AM		0	0	0	4	0	0	0	0	0	0	3	4	0	0	4	0	15	0
7:45 AM		0	0	0	0	0	0	0	0	0	0	3	8	0	0	16	0	27	0
7:50 AM		0	0	0	3	0	0	0	0	0	0	4	4	0	0	8	0	19	0
7:55 AM		0	0	0	3	0	0	0	0	0	0	6	6	0	0	8	0	23	0
8:00 AM		0	0	0	2	0	0	0	0	0	0	4	4	0	0	13	0	23	0
8:05 AM		0	0	0	3	0	0	0	0	0	0	1	5	0	0	4	0	13	0
8:10 AM		0	0	0	1	0	0	0	0	0	0	3	6	0	0	8	0	18	0
8:15 AM		0	0	0	3	0	0	0	0	0	0	3	6	0	0	3	0	15	0
8:20 AM		0	0	0	3	0	0	0	0	0	0	3	6	0	0	2	0	14	0
8:25 AM		0	0	0	1	0	0	0	0	0	0	2	10	0	0	7	0	20	0
8:30 AM		0	0	0	3	0	0	0	0	0	0	2	6	0	0	6	0	17	0
8:35 AM		0	0	0	3	0	0	0	0	0	0	1	11	0	0	7	0	22	226
Pk Hr	All	0	0	0	29	0	0	0	0	0	0	35	76	0	0	86	0	226	
	HV	0	0	0	20	0	0	0	0	0	0	23	50	0	0	32	0	125	
	HV%	-	-	-	69%	-	-	-	-	-	-	66%	66%	-	-	37%	-	55%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:40 AM	4	0	5	2	*11*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	0	0	7	10	*17*	0	0	0	0	*0*	0	0	0	0	*0*
7:50 AM	1	0	5	3	*9*	0	0	0	0	*0*	0	0	0	0	*0*
7:55 AM	1	0	9	5	*15*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	1	0	6	5	*12*	0	0	0	0	*0*	0	0	0	0	*0*
8:05 AM	2	0	4	1	*7*	0	0	0	0	*0*	0	0	0	0	*0*
8:10 AM	1	0	3	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	2	0	7	0	*9*	0	0	0	0	*0*	0	0	0	0	*0*
8:20 AM	2	0	6	0	*8*	0	0	0	0	*0*	0	0	0	0	*0*
8:25 AM	1	0	9	2	*12*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	2	0	5	2	*9*	0	0	0	0	*0*	0	0	0	0	*0*
8:35 AM	3	0	7	2	*12*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	20	0	73	32	*125*	0	0	0	0	*0*	0	0	0	0	*0*

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Count Summaries - All Vehicles

Interval Start	I-84 EB Ramps				I-84 EB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	5	0	0	0	0	0	0	3	4	0	0	6	0	18	0
7:05 AM	0	0	0	2	0	0	0	0	0	0	5	6	0	0	4	0	17	0
7:10 AM	0	0	0	5	0	0	0	0	0	0	3	6	0	0	8	0	22	0
7:15 AM	0	0	0	2	0	0	0	0	0	0	1	9	0	0	3	0	15	0
7:20 AM	0	0	0	2	0	0	0	0	0	0	3	4	0	0	6	0	15	0
7:25 AM	0	0	0	4	0	0	0	0	0	0	2	3	0	2	5	0	16	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	3	0	0	6	0	10	0
7:35 AM	0	0	0	3	0	0	0	0	0	0	3	0	0	0	8	0	14	0
7:40 AM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**4**	**0**	**0**	**4**	**0**	**15**	**0**
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**0**	**0**	**16**	**0**	**27**	**0**
7:50 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**4**	**0**	**0**	**8**	**0**	**19**	**0**
7:55 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**6**	**0**	**0**	**8**	**0**	**23**	**211**
8:00 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**4**	**0**	**0**	**13**	**0**	**23**	**216**
8:05 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	**0**	**0**	**4**	**0**	**13**	**212**
8:10 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**6**	**0**	**0**	**8**	**0**	**18**	**208**
8:15 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**6**	**0**	**0**	**3**	**0**	**15**	**208**
8:20 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**6**	**0**	**0**	**2**	**0**	**14**	**207**
8:25 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**10**	**0**	**0**	**7**	**0**	**20**	**211**
8:30 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**6**	**0**	**0**	**6**	**0**	**17**	**218**
8:35 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**11**	**0**	**0**	**7**	**0**	**22**	**226**
8:40 AM	0	0	0	3	0	0	0	0	0	0	2	4	0	0	6	0	15	226
8:45 AM	0	0	0	2	0	0	0	0	0	0	3	4	0	0	9	0	18	217
8:50 AM	0	0	0	1	0	0	0	0	0	0	1	10	0	0	5	0	17	215
8:55 AM	0	0	0	3	0	0	0	0	0	0	6	9	0	0	10	0	28	220
Count Total	0	0	0	61	0	0	0	0	0	0	68	138	0	2	162	0	431	
Pk Hr All	**0**	**0**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**35**	**76**	**0**	**0**	**86**	**0**	**226**	
Pk Hr HV	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**50**	**0**	**0**	**32**	**0**	**125**	
Pk Hr HV%	-	-	-	**69%**	-	-	-	-	-	-	**66%**	**66%**	-	-	**37%**	-	**55%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	3	0	4	4	*11*	0	0	0	0	*0*	0	0	0	0	*0*
7:05 AM	1	0	10	0	*11*	0	0	0	0	*0*	0	0	0	0	*0*
7:10 AM	2	0	2	3	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	1	0	7	3	*11*	0	0	0	0	*0*	0	0	0	0	*0*
7:20 AM	2	0	4	4	*10*	0	0	0	0	*0*	0	0	0	0	*0*
7:25 AM	2	0	3	2	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	0	2	3	*5*	0	0	0	0	*0*	0	0	0	0	*0*
7:35 AM	2	0	2	4	*8*	0	0	0	0	*0*	0	0	0	0	*0*
7:40 AM	**4**	**0**	**5**	**2**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:45 AM	**0**	**0**	**7**	**10**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:50 AM	**1**	**0**	**5**	**3**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:55 AM	**1**	**0**	**9**	**5**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**1**	**0**	**6**	**5**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:05 AM	**2**	**0**	**4**	**1**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:10 AM	**1**	**0**	**3**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	**2**	**0**	**7**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:20 AM	**2**	**0**	**6**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:25 AM	**1**	**0**	**9**	**2**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	**2**	**0**	**5**	**2**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:35 AM	**3**	**0**	**7**	**2**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:40 AM	2	0	4	3	*9*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	1	0	4	2	*7*	0	0	0	0	*0*	0	0	0	0	*0*
8:50 AM	1	0	6	2	*9*	0	0	0	0	*0*	0	0	0	0	*0*
8:55 AM	2	0	8	4	*14*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	39	0	129	66	*234*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**20**	**0**	**73**	**32**	***125***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**

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Count Summaries - Heavy Vehicles

Interval Start	I-84 EB Ramps				I-84 EB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	3	0	0	0	0	0	0	3	1	0	0	4	0	11	0
7:05 AM	0	0	0	1	0	0	0	0	0	0	4	6	0	0	0	0	11	0
7:10 AM	0	0	0	2	0	0	0	0	0	0	1	1	0	0	3	0	7	0
7:15 AM	0	0	0	1	0	0	0	0	0	0	1	6	0	0	3	0	11	0
7:20 AM	0	0	0	2	0	0	0	0	0	0	2	2	0	0	4	0	10	0
7:25 AM	0	0	0	2	0	0	0	0	0	0	1	2	0	1	1	0	7	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	0	5	0
7:35 AM	0	0	0	2	0	0	0	0	0	0	2	0	0	0	4	0	8	0
7:40 AM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**2**	**0**	**11**	**0**
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**0**	**0**	**10**	**0**	**17**	**0**
7:50 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**0**	**3**	**0**	**9**	**0**
7:55 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**5**	**0**	**0**	**5**	**0**	**15**	**122**
8:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	**0**	**0**	**5**	**0**	**12**	**123**
8:05 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**1**	**0**	**7**	**119**
8:10 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**4**	**116**
8:15 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**0**	**0**	**0**	**0**	**9**	**114**
8:20 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**0**	**8**	**112**
8:25 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**0**	**0**	**2**	**0**	**12**	**117**
8:30 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**2**	**0**	**9**	**121**
8:35 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**2**	**0**	**12**	**125**
8:40 AM	0	0	0	2	0	0	0	0	0	0	2	2	0	0	3	0	9	123
8:45 AM	0	0	0	1	0	0	0	0	0	0	2	2	0	0	2	0	7	113
8:50 AM	0	0	0	1	0	0	0	0	0	0	1	5	0	0	2	0	9	113
8:55 AM	0	0	0	2	0	0	0	0	0	0	3	5	0	0	4	0	14	112
Count Total	0	0	0	39	0	0	0	0	0	0	46	83	0	1	65	0	234	
Pk Hr Heavy	**0**	**0**	**0**	**20**	**0**	**0**	**0**	**0**	**0**	**0**	**23**	**50**	**0**	**0**	**32**	**0**	**125**	

Count Summaries - Bikes

Interval Start	I-84 EB Ramps				I-84 EB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:50 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:55 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:05 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:10 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:20 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:25 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:35 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

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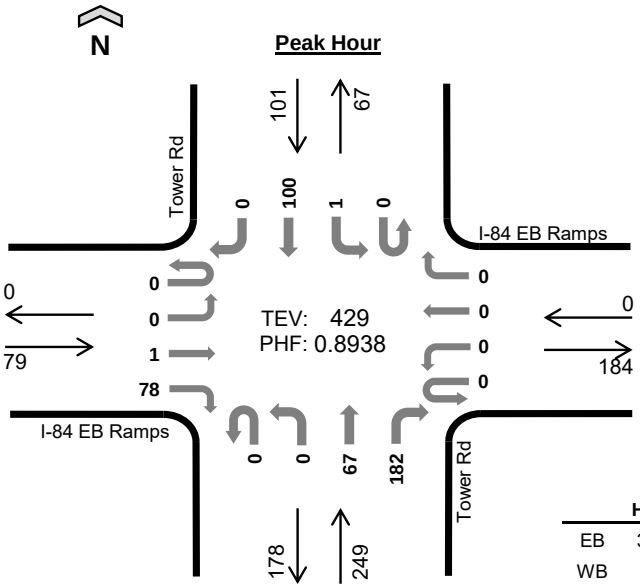
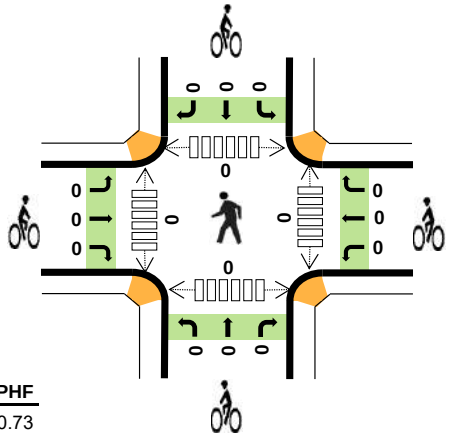
Tower Rd
I-84 EB Ramps

Date: 12/5/2024
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV%	PHF
EB	38%	0.73
WB	--	--
NB	21%	0.80
SB	35%	0.57
TOTAL	28%	0.89

Peak Hour Count Summaries

Peak Hour Interval Start		I-84 EB Ramps Eastbound				I-84 EB Ramps Westbound				Tower Rd Northbound				Tower Rd Southbound				5-min Total	Rolling Hour Total
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	1	7	0	0	0	0	0	0	6	10	0	0	8	0	32	0
4:05 PM		0	0	0	2	0	0	0	0	0	0	9	24	0	0	4	0	39	0
4:10 PM		0	0	0	6	0	0	0	0	0	0	7	15	0	0	6	0	34	0
4:15 PM		0	0	0	6	0	0	0	0	0	0	4	19	0	0	5	0	34	0
4:20 PM		0	0	0	6	0	0	0	0	0	0	2	17	0	0	13	0	38	0
4:25 PM		0	0	0	7	0	0	0	0	0	0	5	10	0	1	21	0	44	0
4:30 PM		0	0	0	4	0	0	0	0	0	0	4	21	0	0	9	0	38	0
4:35 PM		0	0	0	7	0	0	0	0	0	0	5	14	0	0	7	0	33	0
4:40 PM		0	0	0	13	0	0	0	0	0	0	8	16	0	0	5	0	42	0
4:45 PM		0	0	0	7	0	0	0	0	0	0	7	12	0	0	5	0	31	0
4:50 PM		0	0	0	6	0	0	0	0	0	0	4	15	0	0	9	0	34	0
4:55 PM		0	0	0	7	0	0	0	0	0	0	6	9	0	0	8	0	30	429
Pk Hr	All	0	0	1	78	0	0	0	0	0	0	67	182	0	1	100	0	429	
	HV	0	0	1	29	0	0	0	0	0	0	25	28	0	0	35	0	118	
	HV%	-	-	100%	37%	-	-	-	-	-	-	37%	15%	-	0%	35%	-	28%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) E	W	N	S	Total
4:00 PM	5	0	3	2	*10*	0	0	0	0	*0*	0	0	0	0	*0*
4:05 PM	1	0	12	0	*13*	0	0	0	0	*0*	0	0	0	0	*0*
4:10 PM	3	0	5	2	*10*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	3	0	2	2	*7*	0	0	0	0	*0*	0	0	0	0	*0*
4:20 PM	4	0	5	6	*15*	0	0	0	0	*0*	0	0	0	0	*0*
4:25 PM	2	0	6	9	*17*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	1	0	3	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
4:35 PM	3	0	1	5	*9*	0	0	0	0	*0*	0	0	0	0	*0*
4:40 PM	4	0	6	2	*12*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	1	0	4	2	*7*	0	0	0	0	*0*	0	0	0	0	*0*
4:50 PM	2	0	1	2	*5*	0	0	0	0	*0*	0	0	0	0	*0*
4:55 PM	1	0	5	3	*9*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	30	0	53	35	*118*	0	0	0	0	*0*	0	0	0	0	*0*

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Count Summaries - All Vehicles

Interval Start	I-84 EB Ramps				I-84 EB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**1**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**10**	**0**	**0**	**8**	**0**	**32**	0
4:05 PM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**24**	**0**	**0**	**4**	**0**	**39**	**0**
4:10 PM	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**15**	**0**	**0**	**6**	**0**	**34**	**0**
4:15 PM	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**19**	**0**	**0**	**5**	**0**	**34**	**0**
4:20 PM	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**17**	**0**	**0**	**13**	**0**	**38**	**0**
4:25 PM	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**10**	**0**	**1**	**21**	**0**	**44**	**0**
4:30 PM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**21**	**0**	**0**	**9**	**0**	**38**	**0**
4:35 PM	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**14**	**0**	**0**	**7**	**0**	**33**	**0**
4:40 PM	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**16**	**0**	**0**	**5**	**0**	**42**	**0**
4:45 PM	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**12**	**0**	**0**	**5**	**0**	**31**	**0**
4:50 PM	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**15**	**0**	**0**	**9**	**0**	**34**	**0**
4:55 PM	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**9**	**0**	**0**	**8**	**0**	**30**	**429**
5:00 PM	0	0	0	4	0	0	0	0	0	0	2	12	0	1	4	0	23	420
5:05 PM	0	0	0	5	0	0	0	0	0	0	3	20	0	1	10	0	39	420
5:10 PM	0	0	0	7	0	0	0	0	0	0	4	17	0	0	3	0	31	417
5:15 PM	0	0	0	11	0	0	0	0	0	0	4	17	0	0	1	0	33	416
5:20 PM	0	0	0	3	0	0	0	0	0	0	5	10	0	0	4	0	22	400
5:25 PM	0	0	0	2	0	0	0	0	0	0	3	10	0	0	2	0	17	373
5:30 PM	0	0	0	6	0	0	0	0	0	0	2	14	0	0	8	0	30	365
5:35 PM	0	0	0	6	0	0	0	0	0	0	1	6	0	0	9	0	22	354
5:40 PM	0	0	0	5	0	0	0	0	0	0	3	10	0	0	3	0	21	333
5:45 PM	0	0	0	1	0	0	0	0	0	0	2	8	0	0	9	0	20	322
5:50 PM	0	0	0	5	0	0	0	0	0	0	3	4	0	0	3	0	15	303
5:55 PM	0	0	0	4	0	0	0	0	0	0	7	5	0	0	3	0	19	292
Count Total	0	0	1	137	0	0	0	0	0	0	106	315	0	3	159	0	721	
Pk Hr All	**0**	**0**	**1**	**78**	**0**	**0**	**0**	**0**	**0**	**0**	**67**	**182**	**0**	**1**	**100**	**0**	**429**	
Pk Hr HV	**0**	**0**	**1**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**28**	**0**	**0**	**35**	**0**	**118**	
Pk Hr HV%	-	-	**100%**	**37%**	-	-	-	-	-	-	**37%**	**15%**	-	**0%**	**35%**	-	**28%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	**5**	**0**	**3**	**2**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:05 PM	**1**	**0**	**12**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:10 PM	**3**	**0**	**5**	**2**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:15 PM	**3**	**0**	**2**	**2**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:20 PM	**4**	**0**	**5**	**6**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:25 PM	**2**	**0**	**6**	**9**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**1**	**0**	**3**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:35 PM	**3**	**0**	**1**	**5**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:40 PM	**4**	**0**	**6**	**2**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:45 PM	**1**	**0**	**4**	**2**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:50 PM	**2**	**0**	**1**	**2**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:55 PM	**1**	**0**	**5**	**3**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	2	2	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:05 PM	1	0	5	5	*11*	0	0	0	0	*0*	0	0	0	0	*0*
5:10 PM	2	0	2	2	*6*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	6	0	3	1	*10*	0	0	0	0	*0*	0	0	0	0	*0*
5:20 PM	0	0	3	2	*5*	0	0	0	0	*0*	0	0	0	0	*0*
5:25 PM	1	0	2	1	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	2	0	5	3	*10*	0	0	0	0	*0*	0	0	0	0	*0*
5:35 PM	3	0	1	5	*9*	0	0	0	0	*0*	0	0	0	0	*0*
5:40 PM	0	0	5	2	*7*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	1	3	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:50 PM	2	0	1	1	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:55 PM	1	0	5	1	*7*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	48	0	88	63	*199*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**30**	**0**	**53**	**35**	***118***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**

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Count Summaries - Heavy Vehicles

Interval Start	I-84 EB Ramps				I-84 EB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**10**	0
4:05 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**6**	**0**	**0**	**0**	**0**	**13**	**0**
4:10 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**2**	**0**	**10**	**0**
4:15 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**0**	**7**	**0**
4:20 PM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**6**	**0**	**15**	**0**
4:25 PM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**0**	**0**	**9**	**0**	**17**	**0**
4:30 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**4**	**0**
4:35 PM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**9**	**0**
4:40 PM	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**0**	**0**	**2**	**0**	**12**	**0**
4:45 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**2**	**0**	**7**	**0**
4:50 PM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**5**	**0**
4:55 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**3**	**0**	**9**	**118**
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	4	112
5:05 PM	0	0	0	1	0	0	0	0	0	0	1	4	0	0	5	0	11	110
5:10 PM	0	0	0	2	0	0	0	0	0	0	0	2	0	0	2	0	6	106
5:15 PM	0	0	0	6	0	0	0	0	0	0	1	2	0	0	1	0	10	109
5:20 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	99
5:25 PM	0	0	0	1	0	0	0	0	0	0	2	0	0	0	1	0	4	86
5:30 PM	0	0	0	2	0	0	0	0	0	0	1	4	0	0	3	0	10	92
5:35 PM	0	0	0	3	0	0	0	0	0	0	0	1	0	0	5	0	9	92
5:40 PM	0	0	0	0	0	0	0	0	0	0	1	4	0	0	2	0	7	87
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	4	84
5:50 PM	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	4	83
5:55 PM	0	0	0	1	0	0	0	0	0	0	3	2	0	0	1	0	7	81
Count Total	0	0	1	47	0	0	0	0	0	0	39	49	0	0	63	0	199	
Pk Hr Heavy	**0**	**0**	**1**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**28**	**0**	**0**	**35**	**0**	**118**	

Count Summaries - Bikes

Interval Start	I-84 EB Ramps				I-84 EB Ramps				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:05 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:10 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:20 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:25 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:35 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:40 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:50 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:55 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

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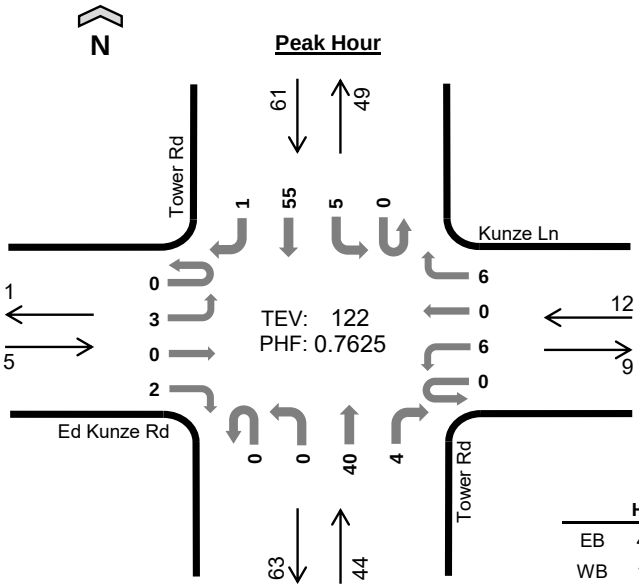
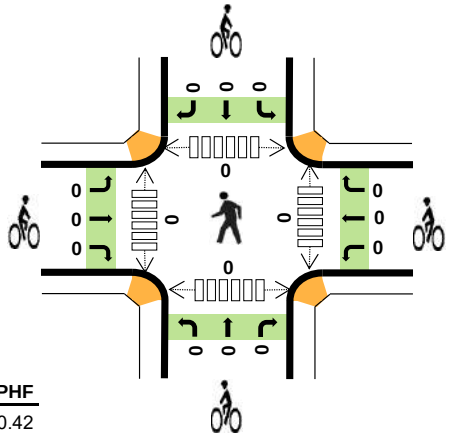
Tower Rd
Ed Kunze Rd

Date: 12/5/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV%	PHF
EB	40%	0.42
WB	17%	0.50
NB	68%	0.61
SB	33%	0.61
TOTAL	44%	0.76

Peak Hour Count Summaries

Peak Hour Interval Start		Ed Kunze Rd				Kunze Ln				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:45 AM		0	0	0	0	0	0	0	0	0	0	4	0	0	0	7	0	11	0
7:50 AM		0	0	0	0	0	0	0	1	0	0	0	1	0	0	9	0	11	0
7:55 AM		0	0	0	1	0	0	0	0	0	0	5	0	0	1	6	0	13	0
8:00 AM		0	0	0	0	0	1	0	1	0	0	2	2	0	0	9	0	15	0
8:05 AM		0	0	0	1	0	1	0	0	0	0	4	0	0	0	4	0	10	0
8:10 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0	5	0
8:15 AM		0	0	0	0	0	0	0	0	0	0	2	0	0	1	2	0	5	0
8:20 AM		0	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	4	0
8:25 AM		0	1	0	0	0	2	0	3	0	0	5	0	0	0	5	0	16	0
8:30 AM		0	1	0	0	0	0	0	0	0	0	6	0	0	1	5	0	13	0
8:35 AM		0	0	0	0	0	0	0	1	0	0	7	0	0	1	2	0	11	0
8:40 AM		0	0	0	0	0	2	0	0	0	0	3	0	0	0	2	1	8	122
Pk Hr	All	0	3	0	2	0	6	0	6	0	0	40	4	0	5	55	1	122	
	HV	0	0	0	2	0	1	0	1	0	0	26	4	0	2	18	0	54	
	HV%	-	0%	-	100%	-	17%	-	17%	-	-	65%	100%	-	40%	33%	0%	44%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:45 AM	0	0	3	4	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:50 AM	0	0	1	4	*5*	0	0	0	0	*0*	0	0	0	0	*0*
7:55 AM	1	0	3	3	*7*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	0	0	4	4	*8*	0	0	0	0	*0*	0	0	0	0	*0*
8:05 AM	1	1	1	1	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:10 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
8:20 AM	0	0	2	0	*2*	0	0	1	0	*1*	0	0	0	0	*0*
8:25 AM	0	1	4	0	*5*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	0	0	4	3	*7*	0	0	0	0	*0*	0	0	0	0	*0*
8:35 AM	0	0	4	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:40 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	2	2	30	20	*54*	0	0	1	0	*1*	0	0	0	0	*0*

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Count Summaries - All Vehicles

Interval Start	Ed Kunze Rd (Eastbound)				Kunze Ln (Westbound)				Tower Rd (Northbound)				Tower Rd (Southbound)				5-min Total	Rolling Hour Total
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	1	0	1	0	0	2	0	0	0	7	0	11	0
7:05 AM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	3	0	5	0
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	4	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	1	3	1	8	0
7:20 AM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	5	0	9	0
7:25 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	4	0	6	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	0	5	0
7:35 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	6	0	10	0
7:40 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	1	6	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**7**	**0**	**11**	**0**
7:50 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**9**	**0**	**11**	**0**
7:55 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**1**	**6**	**0**	**13**	**99**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**2**	**2**	**0**	**0**	**9**	**0**	**15**	**103**
8:05 AM	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**0**	**10**	**108**
8:10 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**3**	**0**	**5**	**109**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**2**	**0**	**5**	**106**
8:20 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**4**	**101**
8:25 AM	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**0**	**16**	**111**
8:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**5**	**0**	**13**	**119**
8:35 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**7**	**0**	**0**	**1**	**2**	**0**	**11**	**120**
8:40 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**1**	**8**	**122**
8:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	1	6	0	9	120
8:50 AM	0	0	0	0	0	0	0	1	0	0	6	0	0	0	3	0	10	119
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	111
Count Total	0	4	0	2	0	13	0	13	0	0	55	5	0	8	107	3	210	
Pk Hr All	**0**	**3**	**0**	**2**	**0**	**6**	**0**	**6**	**0**	**0**	**40**	**4**	**0**	**5**	**55**	**1**	**122**	
Pk Hr HV	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**26**	**4**	**0**	**2**	**18**	**0**	**54**	
Pk Hr HV%	**-**	**0%**	**-**	**100%**	**-**	**17%**	**-**	**17%**	**-**	**-**	**65%**	**100%**	**-**	**40%**	**33%**	**0%**	**44%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
7:00 AM	0	0	1	6	*7*	0	0	0	0	*0*	0	0	0	0	*0*
7:05 AM	0	1	1	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
7:10 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	2	4	*6*	0	0	0	0	*0*	0	0	0	0	*0*
7:20 AM	0	0	1	3	*4*	0	0	0	0	*0*	0	0	0	0	*0*
7:25 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
7:35 AM	0	1	0	3	*4*	0	0	0	0	*0*	0	0	0	0	*0*
7:40 AM	0	0	0	2	*2*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	**0**	**0**	**3**	**4**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:50 AM	**0**	**0**	**1**	**4**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:55 AM	**1**	**0**	**3**	**3**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**0**	**0**	**4**	**4**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:05 AM	**1**	**1**	**1**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:10 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:20 AM	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**
8:25 AM	**0**	**1**	**4**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	**0**	**0**	**4**	**3**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:35 AM	**0**	**0**	**4**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:40 AM	**0**	**0**	**3**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	1	3	*4*	0	0	0	0	*0*	0	0	0	0	*0*
8:50 AM	0	1	2	0	*3*	0	0	0	0	*0*	0	0	0	0	*0*
8:55 AM	0	0	0	2	*2*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	2	5	38	46	*91*	0	0	1	0	*1*	0	0	0	0	*0*
Peak Hour	**2**	**2**	**30**	**20**	***54***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	**0**

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Count Summaries - Heavy Vehicles

Interval Start	Ed Kunze Rd				Kunze Ln				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	6	0	7	0
7:05 AM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	3	0
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	3	0	6	0
7:20 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	0
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:35 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	4	0
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**4**	**0**	**7**	**0**
7:50 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**5**	**0**
7:55 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**2**	**0**	**7**	**47**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**4**	**0**	**8**	**48**
8:05 AM	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**4**	**49**
8:10 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**48**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**43**
8:20 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**2**	**41**
8:25 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**5**	**46**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**1**	**2**	**0**	**7**	**52**
8:35 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**4**	**52**
8:40 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**4**	**54**
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	4	51
8:50 AM	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	3	49
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	44
Count Total	0	0	0	2	0	3	0	2	0	0	34	4	0	4	42	0	91	
Pk Hr Heavy	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**26**	**4**	**0**	**2**	**18**	**0**	**54**	

Count Summaries - Bikes

Interval Start	Ed Kunze Rd				Kunze Ln				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:50 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
7:55 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:05 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:10 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:20 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
8:25 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:35 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:40 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	

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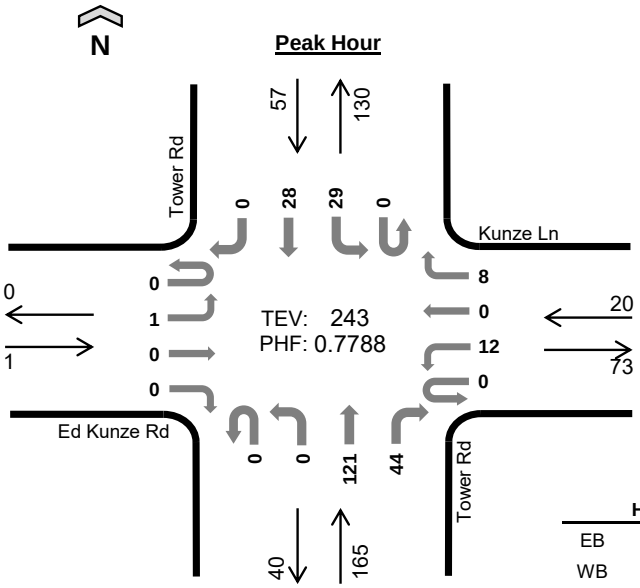
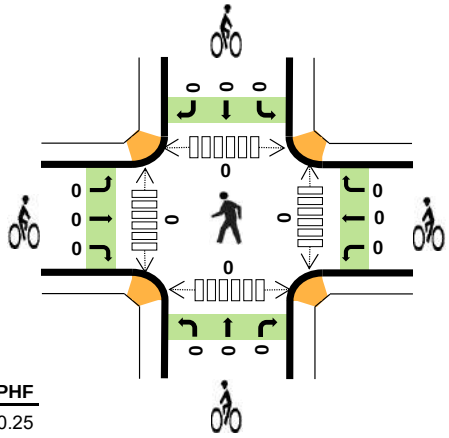
Tower Rd
Ed Kunze Rd

Date: 12/5/2024
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM





	HV%	PHF
EB	0%	0.25
WB	5%	0.56
NB	5%	0.86
SB	16%	0.59
TOTAL	7%	0.78

Peak Hour Count Summaries

Peak Hour Interval Start		Ed Kunze Rd				Kunze Ln				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:15 PM		0	0	0	0	0	1	0	0	0	0	15	1	0	1	3	0	21	0
4:20 PM		0	0	0	0	0	2	0	1	0	0	12	1	0	1	3	0	20	0
4:25 PM		0	0	0	0	0	4	0	1	0	0	9	5	0	1	9	0	29	0
4:30 PM		0	0	0	0	0	1	0	0	0	0	13	5	0	4	6	0	29	0
4:35 PM		0	1	0	0	0	2	0	0	0	0	5	4	0	3	1	0	16	0
4:40 PM		0	0	0	0	0	1	0	2	0	0	11	3	0	5	0	0	22	0
4:45 PM		0	0	0	0	0	1	0	1	0	0	9	3	0	3	2	0	19	0
4:50 PM		0	0	0	0	0	0	0	1	0	0	10	3	0	4	1	0	19	0
4:55 PM		0	0	0	0	0	0	0	1	0	0	3	5	0	3	2	0	14	0
5:00 PM		0	0	0	0	0	0	0	1	0	0	9	4	0	2	1	0	17	0
5:05 PM		0	0	0	0	0	0	0	0	0	0	11	3	0	0	0	0	14	0
5:10 PM		0	0	0	0	0	0	0	0	0	0	14	7	0	2	0	0	23	243
Pk Hr	All	0	1	0	0	0	12	0	8	0	0	121	44	0	29	28	0	243	
	HV	0	0	0	0	0	0	0	1	0	0	8	0	0	3	6	0	18	
	HV%	-	0%	-	-	-	0%	-	13%	-	-	7%	0%	-	10%	21%	-	7%	

Note: For complete count summary (all intervals), see following pages.
*** Heavy Vehicle Classifications include FHWA Classes 4-13.*
*** Count Summaries include heavy vehicles, but exclude bicycles in overall count.*

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:15 PM	0	0	0	2	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:20 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:25 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:35 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
4:40 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	0	1	1	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
4:50 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
4:55 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:05 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:10 PM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	0	1	8	9	*18*	0	0	0	0	*0*	0	0	0	0	*0*

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Count Summaries - All Vehicles

Interval Start	Ed Kunze Rd				Kunze Ln				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	1	0	0	13	0	0	1	0	0	16	0
4:05 PM	0	0	0	0	0	1	0	1	0	0	17	1	0	0	0	0	20	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	10	1	0	3	1	0	15	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**15**	**1**	**0**	**1**	**3**	**0**	**21**	**0**
4:20 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**12**	**1**	**0**	**1**	**3**	**0**	**20**	**0**
4:25 PM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**1**	**0**	**0**	**9**	**5**	**0**	**1**	**9**	**0**	**29**	**0**
4:30 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**13**	**5**	**0**	**4**	**6**	**0**	**29**	**0**
4:35 PM	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	**4**	**0**	**3**	**1**	**0**	**16**	**0**
4:40 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**11**	**3**	**0**	**5**	**0**	**0**	**22**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**9**	**3**	**0**	**3**	**2**	**0**	**19**	**0**
4:50 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**10**	**3**	**0**	**4**	**1**	**0**	**19**	**0**
4:55 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**5**	**0**	**3**	**2**	**0**	**14**	**240**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**9**	**4**	**0**	**2**	**1**	**0**	**17**	**241**
5:05 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**3**	**0**	**0**	**0**	**0**	**14**	**235**
5:10 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**7**	**0**	**2**	**0**	**0**	**23**	**243**
5:15 PM	0	0	0	0	0	0	0	2	0	0	7	7	0	2	1	0	19	241
5:20 PM	0	0	0	0	0	0	0	0	0	0	5	1	0	2	2	0	10	231
5:25 PM	0	0	0	0	0	0	0	0	0	0	6	5	0	2	1	0	14	216
5:30 PM	0	0	0	0	0	0	0	1	0	0	10	0	0	0	2	0	13	200
5:35 PM	0	0	0	0	0	0	0	0	0	0	1	7	0	1	1	0	10	194
5:40 PM	0	0	0	0	0	0	0	1	0	0	3	0	0	0	1	0	5	177
5:45 PM	0	0	0	0	0	0	0	2	0	0	4	1	0	1	3	0	11	169
5:50 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	4	154
5:55 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	3	143
Count Total	0	1	0	0	0	15	0	16	0	0	198	69	0	43	41	0	383	
Pk Hr All	**0**	**1**	**0**	**0**	**0**	**12**	**0**	**8**	**0**	**0**	**121**	**44**	**0**	**29**	**28**	**0**	**243**	
Pk Hr HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**8**	**0**	**0**	**3**	**6**	**0**	**18**	
Pk Hr HV%	**-**	**0%**	**-**	**-**	**-**	**0%**	**-**	**13%**	**-**	**-**	**7%**	**0%**	**-**	**10%**	**21%**	**-**	**7%**	

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	E	W	N	S	Total
4:00 PM	0	0	2	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
4:05 PM	0	1	3	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
4:10 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:20 PM	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:25 PM	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:35 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:40 PM	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:45 PM	**0**	**1**	**1**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:50 PM	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:55 PM	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:05 PM	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:10 PM	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:15 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
5:20 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:25 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	1	2	*3*	0	0	0	0	*0*	0	0	0	0	*0*
5:35 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:40 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:50 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:55 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	3	17	17	*37*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**0**	**1**	**8**	**9**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	**0**

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Count Summaries - Heavy Vehicles

Interval Start	Ed Kunze Rd				Kunze Ln				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	3	0
4:05 PM	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	4	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**2**	**0**
4:20 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**
4:25 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**0**
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**
4:35 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:40 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**2**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**3**	**0**
4:50 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**
4:55 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**23**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**21**
5:05 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**18**
5:10 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**18**
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	18
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	18
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	18
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	19
5:40 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	18
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	16
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	16
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
Count Total	0	0	0	0	0	0	0	3	0	0	17	0	0	4	13	0	37	
Pk Hr Heavy	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**8**	**0**	**0**	**3**	**6**	**0**	**18**	

Count Summaries - Bikes

Interval Start	Ed Kunze Rd				Kunze Ln				Tower Rd				Tower Rd				5-min Total	Rolling Hour Total
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:20 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:25 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:35 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:40 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:50 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:55 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:05 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:10 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pk Hr Bike	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

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APPENDIX C:
VOLUME DEVELOPMENT

Project: Morrow County Zone Change TPR
Job #: PERK00000012
Subject: AM Turning Movement Volumes

		Trips	% increase	% of traffic	Trips	% increase	% of traffic
Total	108	Total	1271	141.1%	58.5%	440	48.8%	32.8%
In	59	In	1042	237.4%	70.4%	242	55.1%	35.5%
Out	49	Out	229	49.6%	33.1%	198	42.9%	30.0%

Tax Lot 110

N-S ID	Synchro ID	Intersection		Movement	Collected Counts	Existing Count Data				Existing Conditions	Future Year Base Background				Pipeline Project			Future Year Total Background	Existing Zone	Future Year Total Build Existing Zone	% of Total Trips Existing Zone	Proposed Zone	Future Year Total Build Proposed Zone	% of Total Trips Proposed Zone
					2024 1-Hr Volume AM Peak	Heavy Vehicle Count	Heavy Vehicle Percentage	2024 Seasonally Adjusted 1-Hr Volume AM Peak	Volume Balancing Adjustments	2024 Balanced Volumes AM Peak	Annual Growth Rate	Seasonal Adjustment Factor	2044 Rounded 1-Hr Volume AM Peak	2044 Data Center adjecent to site and airport	2044 1-Hr Volume AM Peak	Volume Balancing Adjustment	2044 Balanced Volumes AM Peak	2044 Project Trip Generation	2044 Existing Zone 1-Hr Volume AM Peak	2044 Existing Zone % Trips Generated of Total Build Vol	2044 Project Trip Generation	2044 Proposed Zone 1-Hr Volume AM Peak	2044 Proposed Zone % Trips Generated of Total Build Vol
1	100	I-84 WB Ramps/Tower Road	10	EBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100		10	EBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100	Count Date: 6/15/2022	10	EBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100	2022	10	WBL	85	33	39%	104		104	2.0%	1.220	155	41	195		195	729	924	78.9%	169	364	46.4%
	100		10	WBT	2	0	0%	2		2	2.0%	1.220	3	0	5		5	0	5	0.0%	0	5	0.0%
	100		10	WBR	1	0	0%	1		1	2.0%	1.220	2	0	2		2	0	2	0.0%	0	2	0.0%
	100	Intersection Peak Hour: 7:05 AM-8:05 AM	10	NBL	35	24	69%	43		43	2.0%	1.220	65	2	65		65	11	76	14.5%	10	75	13.3%
	100	AM Peak Hour Used: 7:40 AM-8:40 AM	10	NBT	0	0	0%	0	1	1	2.0%	1.220	2	0	2		2	0	2	0.0%	0	2	0.0%
	100	Volume Difference: 4	10	NBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100		10	SBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100	PHF:	10	SBT	1	0	0%	1		1	2.0%	1.220	2	0	2		2	0	2	0.0%	0	2	0.0%
	100	0.82	10	SBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100		10	**TEV**	**124**	**57**		**151**	**1**	**152**			**228**	**43**	**271**	**0**	**271**	**740**	**1011**	**73.2%**	**179**	**450**	**39.8%**
2	200	I-84 EB Ramps/Tower Road	20	EBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200	16 hr Turning Movement Count	20	EBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200	Count Date: 6/15/2022	20	EBR	29	20	69%	35		35	2.0%	1.220	50	3	55		55	52	107	48.6%	12	67	17.9%
	200	2022	20	WBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200		20	WBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200		20	WBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200	Intersection Peak Hour: 4:20 PM-5:20 PM	20	NBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200	AM Peak Hour Used: 7:40 AM-8:40 AM	20	NBT	35	23	66%	43	1	44	2.0%	1.220	65	2	65	2	67	11	78	14.1%	10	77	13.0%
	200	Volume Difference: 0	20	NBR	76	50	66%	93		93	2.0%	1.220	140	34	175		175	160	335	47.8%	139	314	44.3%
	200		20	SBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200	PHF:	20	SBT	86	32	37%	105		105	2.0%	1.220	155	41	195	2	197	729	926	78.7%	169	366	46.2%
	200	0.93	20	SBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200		20	**TEV**	**226**	**125**		**276**	**1**	**277**			**410**	**80**	**490**	**4**	**494**	**952**	**1446**	**65.8%**	**330**	**824**	**40.0%**
3	300	Tower Road/Kunze Lane	30	EBL	3	0	0%	4		4	2.0%	1.220	5	0	5		5	0	5	0.0%	0	5	0.0%
	300	16 hr Turning Movement Count	30	EBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	300	Count Date: 6/15/2022	30	EBR	2	2	100%	2		2	2.0%	1.220	3	0	5		5	0	5	0.0%	0	5	0.0%
	300	2022	30	WBL	5	1	20%	6	4	10	2.0%	1.220	15	15	30		30	261	291	89.7%	61	91	67.0%
	300		30	WBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	300		30	WBR	7	1	14%	9		9	2.0%	1.220	15	0	15		15	0	15	0.0%	0	15	0.0%
	300	Intersection Peak Hour: 7:45 AM-8:45 AM	30	NBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	300	AM Peak Hour Used: 7:40 AM-8:40 AM	30	NBT	37	23	62%	45		45	2.0%	1.220	65	36	100	4	104	171	275	62.2%	149	253	58.9%
	300	Volume Difference: 2	30	NBR	4	4	100%	5		5	2.0%	1.220	5	12	15	1	16	57	73	78.1%	50	66	75.8%
	300		30	SBL	5	2	40%	6		6	2.0%	1.220	10	0	10		10	0	10	0.0%	0	10	0.0%
	300	PHF:	30	SBT	56	19	34%	68	5	73	2.0%	1.220	110	44	155		155	781	936	83.4%	181	336	53.9%
	300	0.75	30	SBR	1	0	0%	1		1	2.0%	1.220	2	0	2		2	0	2	0.0%	0	2	0.0%
	300		30	**TEV**	**120**	**52**		**146**	**9**	**155**			**230**	**107**	**337**	**5**	**342**	**1270**	**1612**	**78.8%**	**441**	**783**	**56.3%**
4	400	Tower Road / Boardman Airport Lane	40	EBL	3	0	0%	4		4	2.0%	1.310	5	49	55		55	229	284	80.6%	198	253	78.3%
	400	16 hr Turning Movement Count	40	EBT	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400	Count Date: 6/15/2022	40	EBR	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400	2022	40	WBL	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	WBT	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	WBR	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	NBL	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	NBT	35	23	65%	46		46	2.0%	1.310	70	0	70		70	0	70	0.0%	0	70	0.0%
	400		40	NBR	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	SBL	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400	PHF:	40	SBT	64	19	29%	84		84	2.0%	1.310	125	0	125		125	0	125	0.0%	0	125	0.0%
	400	0.78	40	SBR	1	0	0%	1		1	2.0%	1.310	2	59	60		60	1042	1102	94.6%	242	302	80.1%
	400		40	**TEV**	**103**	**42**		**135**	**0**	**135**			**202**	**108**	**310**	**0**	**310**	**1271**	**1581**	**80.4%**	**440**	**750**	**58.7%**

Project: Morrow County Zone Change TPR
Job #: PERK00000012
Subject: PM Turning Movement Volumes

	Trips	% increase	% of traffic	Trips	% increase	% of traffic
Total	90	Total	1201	78.0%	43.8%	434	28.2%	22.0%
In	27	In	192	25.0%	20.0%	130	16.9%	14.5%
Out	63	Out	1009	130.9%	56.7%	304	39.4%	28.3%

Tax Lot 110

N-S ID	Synchro ID	Intersection		Movement	Collected Counts 2024 1-Hr Volume AM Peak	Existing Count Data: Heavy Vehicle Count	Heavy Vehicle Percentage	2024 Seasonally Adjusted 1-Hr Volume AM Peak	Volume Balancing Adjustments	Existing Conditions 2024 Balanced Volumes AM Peak	Future Year Base Background: Annual Growth Rate	Seasonal Adjustment Factor	2044 Rounded 1-Hr Volume AM Peak	Pipeline Project 2044 Data Center adjecent to site and airport	2044 1-Hr Volume AM Peak	Volume Balancing Adjustment	Future Year Total Background 2044 Balanced Volumes AM Peak	Existing Zone 2044 Project Trip Generation	Future Year Total Build Existing Zone 2044 Existing Zone 1-Hr Volume AM Peak	% of Total Trips Existing Zone 2044 Existing Zone % Trips Generated of Total Build Vol	Proposed Zone 2044 Project Trip Generation	Future Year Total Build Proposed Zone 2044 Proposed Zone 1-Hr Volume AM Peak	% of Total Trips Proposed Zone 2044 Proposed Zone % Trips Generated of Total Build Vol
1	100	I-84 WB Ramps/Tower Road	10	EBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100	16 hr Turning Movement Count	10	EBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100	Count Date: 6/15/2022	10	EBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100	2022	10	WBL	102	36	35%	124		124	2.0%	1.220	185	19	205	2	207	134	341	39.3%	91	298	30.5%
	100		10	WBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100		10	WBR	1	0	0%	1		1	2.0%	1.220	2	0	2		2	0	2	0.0%	0	2	0.0%
	100	Intersection Peak Hour: 4:00 PM-5:00 PM	10	NBL	64	24	38%	78	2	80	2.0%	1.220	120	3	125		125	50	175	28.6%	15	140	10.7%
	100	PM Peak Hour Used: 4:00 PM-5:00 PM	10	NBT	2	0	0%	2		2	2.0%	1.220	3	0	5		5	0	5	0.0%	0	5	0.0%
	100	Volume Difference: 52	10	NBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100		10	SBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100	PHF:	10	SBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100	0.80	10	SBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	100		10	**TEV**	**169**	**60**		**205**	**2**	**207**			**310**	**22**	**337**	**2**	**339**	**184**	**523**	**35.2%**	**106**	**445**	**23.8%**
2	200	I-84 EB Ramps/Tower Road	20	EBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200	16 hr Turning Movement Count	20	EBT	1	1	100%	1		1	2.0%	1.220	2	0	2		2	0	2	0.0%	0	2	0.0%
	200	Count Date: 6/15/2022	20	EBR	78	29	37%	95		95	2.0%	1.220	140	1	140		140	10	150	6.7%	7	147	4.8%
	200	2022	20	WBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200		20	WBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200		20	WBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200	Intersection Peak Hour: 4:00 PM-5:00 PM	20	NBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200	PM Peak Hour Used: 4:00 PM-5:00 PM	20	NBT	67	25	37%	82		82	2.0%	1.220	120	3	125	5	130	50	180	27.8%	15	145	10.3%
	200	Volume Difference: 107	20	NBR	182	28	15%	222		222	2.0%	1.220	330	44	375		375	706	1081	65.3%	213	588	36.2%
	200		20	SBL	1	1	100%	1		1	2.0%	1.220	2	0	2		2	0	2	0.0%	0	2	0.0%
	200	PHF:	20	SBT	100	35	35%	122	1	123	2.0%	1.220	185	19	205		205	134	339	39.5%	91	296	30.7%
	200	0.92	20	SBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	200		20	**TEV**	**429**	**119**		**523**	**1**	**524**			**778**	**67**	**849**	**5**	**854**	**900**	**1754**	**51.3%**	**326**	**1180**	**27.6%**
3	300	Tower Road/Kunze Lane	30	EBL	1	0	0%	1		1	2.0%	1.220	2	0	2		2	0	2	0.0%	0	2	0.0%
	300	16 hr Turning Movement Count	30	EBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	300	Count Date: 6/15/2022	30	EBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	300	2022	30	WBL	14	0	0%	17	9	26	2.0%	1.220	40	7	45		45	48	93	51.6%	33	78	42.3%
	300		30	WBT	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	300		30	WBR	9	2	22%	11		11	2.0%	1.220	15	0	15		15	0	15	0.0%	0	15	0.0%
	300	Intersection Peak Hour: 4:15 PM-5:15 PM	30	NBL	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	300	PM Peak Hour Used: 4:00 PM-5:00 PM	30	NBT	127	11	9%	155		155	2.0%	1.220	230	47	275		275	756	1031	73.3%	228	503	45.3%
	300	Volume Difference: 74	30	NBR	32	0	0%	39		39	2.0%	1.220	60	16	75		75	252	327	77.1%	76	151	50.3%
	300		30	SBL	29	4	14%	35		35	2.0%	1.220	50	0	50		50	0	50	0.0%	0	50	0.0%
	300	PHF:	30	SBT	28	6	21%	34	10	44	2.0%	1.220	65	20	85		85	144	229	62.9%	98	183	53.6%
	300	0.86	30	SBR	0	0	0%	0		0	2.0%	1.220	0	0	0		0	0	0		0	0	
	300		30	**TEV**	**240**	**23**		**292**	**19**	**311**			**462**	**90**	**547**	**0**	**547**	**1200**	**1747**	**68.7%**	**435**	**982**	**44.3%**
4	400	Tower Road / Boardman Airport Lane	40	EBL	2	0	0%	3		3	2.0%	1.310	5	63	70		70	1009	1079	93.5%	304	374	81.3%
	400	16 hr Turning Movement Count	40	EBT	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400	Count Date: 6/15/2022	40	EBR	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400	2022	40	WBL	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	WBT	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	WBR	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	NBL	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	NBT	144	32	22%	188	3	191	2.0%	1.310	285	0	285		285	0	285	0.0%	0	285	0.0%
	400		40	NBR	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400		40	SBL	0	0	0%	0		0	2.0%	1.310	0	0	0		0	0	0		0	0	
	400	PHF:	40	SBT	53	21	39%	70		70	2.0%	1.310	105	0	105	4	109	0	109	0.0%	0	109	0.0%
	400	0.75	40	SBR	0	0	0%	0		0	2.0%	1.310	0	27	25	1	26	192	218	88.1%	130	156	83.3%
	400		40	**TEV**	**199**	**53**		**261**	**3**	**264**			**395**	**90**	**485**	**5**	**490**	**1201**	**1691**	**71.0%**	**434**	**924**	**47.0%**

APPENDIX D:
HCM 7 SYNCHRO REPORTS

Intersection	
Int Delay, s/veh	9.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	104	2	1	43	1	0	0	1	0
Future Vol, veh/h	0	0	0	104	2	1	43	1	0	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	39	0	0	69	0	0	0	0	0
Mvmt Flow	0	0	0	127	2	1	52	1	0	0	1	0

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	107	107	1	1	0	-	-	-	0	
Stage 1	106	106	-	-	-	-	-	-	-	
Stage 2	1	1	-	-	-	-	-	-	-	
Critical Hdwy	6.79	6.5	6.2	4.79	-	-	-	-	-	
Critical Hdwy Stg 1	5.79	5.5	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	5.79	5.5	-	-	-	-	-	-	-	
Follow-up Hdwy	3.851	4	3.3	2.821	-	-	-	-	-	
Pot Cap-1 Maneuver	808	787	1089	1275	-	0	0	-	-	
Stage 1	834	811	-	-	-	0	0	-	-	
Stage 2	934	899	-	-	-	0	0	-	-	
Platoon blocked, %					-			-	-	
Mov Cap-1 Maneuver	775	0	1089	1275	-	-	-	-	-	
Mov Cap-2 Maneuver	775	0	-	-	-	-	-	-	-	
Stage 1	799	0	-	-	-	-	-	-	-	
Stage 2	934	0	-	-	-	-	-	-	-	

Approach	WB	NB	SB
HCM Control Delay, s/v	10.57	7.76	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	1274	-	777	-	-
HCM Lane V/C Ratio	0.041	-	0.168	-	-
HCM Control Delay (s/veh)	7.9	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	35	0	0	0	0	44	93	0	105	0
Future Vol, veh/h	0	0	35	0	0	0	0	44	93	0	105	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	69	0	0	0	0	66	66	0	37	0
Mvmt Flow	0	0	38	0	0	0	0	47	100	0	113	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	160	260	113	-	0	0	147	0	0
Stage 1	113	113	-	-	-	-	-	-	-
Stage 2	47	147	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.89	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.921	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	835	648	786	0	-	-	1447	-	0
Stage 1	917	806	-	0	-	-	-	-	0
Stage 2	980	779	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	835	0	786	-	-	-	1447	-	-
Mov Cap-2 Maneuver	810	0	-	-	-	-	-	-	-
Stage 1	917	0	-	-	-	-	-	-	-
Stage 2	980	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.81	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	786	1447	-
HCM Lane V/C Ratio	-	-	0.048	-	-
HCM Control Delay (s/veh)	-	-	9.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	2	10	0	9	0	45	5	6	73	1
Future Vol, veh/h	4	0	2	10	0	9	0	45	5	6	73	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	0	100	20	0	14	0	62	100	40	34	0
Mvmt Flow	5	0	3	13	0	12	0	60	7	8	97	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	174	181	98	177	178	63	99	0	0	67	0	0
Stage 1	114	114	-	63	63	-	-	-	-	-	-	-
Stage 2	60	67	-	113	115	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	7.2	7.3	6.5	6.34	4.1	-	-	4.5	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.3	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	4.2	3.68	4	3.426	2.2	-	-	2.56	-	-
Pot Cap-1 Maneuver	793	717	746	747	719	968	1507	-	-	1325	-	-
Stage 1	896	805	-	904	846	-	-	-	-	-	-	-
Stage 2	957	843	-	850	805	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	778	712	746	740	715	968	1507	-	-	1325	-	-
Mov Cap-2 Maneuver	778	712	-	740	715	-	-	-	-	-	-	-
Stage 1	890	800	-	904	846	-	-	-	-	-	-	-
Stage 2	945	843	-	841	799	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.74	9.46	0	0.58
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1507	-	-	767	833	135	-	-
HCM Lane V/C Ratio	-	-	-	0.01	0.03	0.006	-	-
HCM Control Delay (s/veh)	0	-	-	9.7	9.5	7.7	0	-
HCM Lane LOS	A	-	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	0	0	46	84	1
Future Vol, veh/h	4	0	0	46	84	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	65	29	0
Mvmt Flow	5	0	0	59	108	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	167	108	109	0	-	0
Stage 1	108	-	-	-	-	-
Stage 2	59	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	828	951	1494	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	828	951	1494	-	-	-
Mov Cap-2 Maneuver	828	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	969	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.38	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1494	-	828	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s/veh)	0	-	9.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	10.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	124	0	1	80	2	0	0	0	0
Future Vol, veh/h	0	0	0	124	0	1	80	2	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	35	0	0	38	0	0	0	0	0
Mvmt Flow	0	0	0	155	0	1	100	3	0	0	0	0

Major/Minor	Minor1			Major1					Major2		
Conflicting Flow All	204	204	3	1	0	-	-	-	0		
Stage 1	203	203	-	-	-	-	-	-	-		
Stage 2	1	1	-	-	-	-	-	-	-		
Critical Hdwy	6.75	6.5	6.2	4.48	-	-	-	-	-		
Critical Hdwy Stg 1	5.75	5.5	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.75	5.5	-	-	-	-	-	-	-		
Follow-up Hdwy	3.815	4	3.3	2.542	-	-	-	-	-		
Pot Cap-1 Maneuver	716	696	1087	1415	-	0	0	-	-		
Stage 1	759	738	-	-	-	0	0	-	-		
Stage 2	942	899	-	-	-	0	0	-	-		
Platoon blocked, %					-			-	-		
Mov Cap-1 Maneuver	665	0	1087	1415	-	-	-	-	-		
Mov Cap-2 Maneuver	665	0	-	-	-	-	-	-	-		
Stage 1	705	0	-	-	-	-	-	-	-		
Stage 2	942	0	-	-	-	-	-	-	-		

Approach	WB	NB	SB
HCM Control Delay, s/v	12.03	7.55	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	1413	-	667	-	-
HCM Lane V/C Ratio	0.071	-	0.234	-	-
HCM Control Delay (s/veh)	7.7	0	12	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.9	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1	95	0	0	0	0	82	222	1	123	0
Future Vol, veh/h	0	1	95	0	0	0	0	82	222	1	123	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	100	37	0	0	0	0	37	15	100	35	0
Mvmt Flow	0	1	103	0	0	0	0	89	241	1	134	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	225	466	134	-	0	0	330	0	0
Stage 1	136	136	-	-	-	-	-	-	-
Stage 2	89	330	-	-	-	-	-	-	-
Critical Hdwy	6.4	7.5	6.57	-	-	-	5.1	-	-
Critical Hdwy Stg 1	5.4	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.633	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	768	376	830	0	-	-	836	-	0
Stage 1	896	630	-	0	-	-	-	-	0
Stage 2	939	502	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	767	0	830	-	-	-	836	-	-
Mov Cap-2 Maneuver	767	0	-	-	-	-	-	-	-
Stage 1	896	0	-	-	-	-	-	-	-
Stage 2	938	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.96	0	0.08
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	830	15	-
HCM Lane V/C Ratio	-	-	0.126	0.001	-
HCM Control Delay (s/veh)	-	-	10	9.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	26	0	11	0	155	39	35	44	0
Future Vol, veh/h	1	0	0	26	0	11	0	155	39	35	44	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	22	0	9	0	14	21	0
Mvmt Flow	1	0	0	30	0	13	0	180	45	41	51	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	313	358	51	335	335	203	51	0	0	226	0	0
Stage 1	133	133	-	203	203	-	-	-	-	-	-	-
Stage 2	180	226	-	133	133	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.42	4.1	-	-	4.24	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.498	2.2	-	-	2.326	-	-
Pot Cap-1 Maneuver	644	571	1023	622	588	790	1568	-	-	1275	-	-
Stage 1	876	790	-	804	737	-	-	-	-	-	-	-
Stage 2	826	721	-	876	790	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	612	553	1023	602	569	790	1568	-	-	1275	-	-
Mov Cap-2 Maneuver	612	553	-	602	569	-	-	-	-	-	-	-
Stage 1	847	764	-	804	737	-	-	-	-	-	-	-
Stage 2	813	721	-	847	764	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.89	10.96	0	3.51
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1568	-	-	612	647	797	-	-
HCM Lane V/C Ratio	-	-	-	0.002	0.066	0.032	-	-
HCM Control Delay (s/veh)	0	-	-	10.9	11	7.9	0	-
HCM Lane LOS	A	-	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	0	191	70	0
Future Vol, veh/h	3	0	0	191	70	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	22	39	0
Mvmt Flow	4	0	0	255	93	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	348	93	93	0	-	0
Stage 1	93	-	-	-	-	-
Stage 2	255	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	653	969	1514	-	-	-
Stage 1	935	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	653	969	1514	-	-	-
Mov Cap-2 Maneuver	653	-	-	-	-	-
Stage 1	935	-	-	-	-	-
Stage 2	792	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.55	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1514	-	653	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s/veh)	0	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	363.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	974	5	2	81	2	0	0	2	0
Future Vol, veh/h	0	0	0	974	5	2	81	2	0	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	39	0	0	69	0	0	0	0	0
Mvmt Flow	0	0	0	1188	6	2	99	2	0	0	2	0

Major/Minor	Minor1			Major1					Major2		
Conflicting Flow All	202	202	2	2	0	-	-	-	0		
Stage 1	200	200	-	-	-	-	-	-	-		
Stage 2	2	2	-	-	-	-	-	-	-		
Critical Hdwy	6.79	6.5	6.2	4.79	-	-	-	-	-		
Critical Hdwy Stg 1	5.79	5.5	-	-	-	-	-	-	-		
Critical Hdwy Stg 2	5.79	5.5	-	-	-	-	-	-	-		
Follow-up Hdwy	3.851	4	3.3	2.821	-	-	-	-	-		
Pot Cap-1 Maneuver	~ 710	697	1088	1273	-	0	0	-	-		
Stage 1	~ 753	739	-	-	-	0	0	-	-		
Stage 2	~ 932	898	-	-	-	0	0	-	-		
Platoon blocked, %					-			-	-		
Mov Cap-1 Maneuver	~ 655	0	1088	1273	-	-	-	-	-		
Mov Cap-2 Maneuver	~ 655	0	-	-	-	-	-	-	-		
Stage 1	~ 694	0	-	-	-	-	-	-	-		
Stage 2	~ 932	0	-	-	-	-	-	-	-		

Approach	WB	NB	SB
HCM Control Delay, s/v	$ 394.05	7.87	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	1271	-	655	-	-
HCM Lane V/C Ratio	0.078	-	1.826	-	-
HCM Control Delay (s/veh)	8.1	0	$ 394	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.3	-	73.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	107	0	0	0	0	83	375	0	976	0
Future Vol, veh/h	0	0	107	0	0	0	0	83	375	0	976	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	69	0	0	0	0	66	66	0	37	0
Mvmt Flow	0	0	115	0	0	0	0	89	403	0	1049	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1139	1542	1049	-	0	0	492	0	0
Stage 1	1049	1049	-	-	-	-	-	-	-
Stage 2	89	492	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.89	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.921	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	225	116	207	0	-	-	1081	-	0
Stage 1	340	307	-	0	-	-	-	-	0
Stage 2	939	551	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	225	0	207	-	-	-	1081	-	-
Mov Cap-2 Maneuver	296	0	-	-	-	-	-	-	-
Stage 1	340	0	-	-	-	-	-	-	-
Stage 2	939	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	42.29	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	207	1081	-
HCM Lane V/C Ratio	-	-	0.557	-	-
HCM Control Delay (s/veh)	-	-	42.3	0	-
HCM Lane LOS	-	-	E	A	-
HCM 95th %tile Q(veh)	-	-	3	0	-

Intersection	
Int Delay, s/veh	666

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	5	306	0	15	0	320	88	10	986	2
Future Vol, veh/h	5	0	5	306	0	15	0	320	88	10	986	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	0	100	20	0	14	0	62	100	40	34	0
Mvmt Flow	7	0	7	408	0	20	0	427	117	13	1315	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1769	1887	1316	1827	1829	485	1317	0	0	544	0	0
Stage 1	1343	1343	-	485	485	-	-	-	-	-	-	-
Stage 2	427	544	-	1341	1344	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	7.2	7.3	6.5	6.34	4.1	-	-	4.5	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.3	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	4.2	3.68	4	3.426	2.2	-	-	2.56	-	-
Pot Cap-1 Maneuver	66	71	121	~ 53	77	558	531	-	-	859	-	-
Stage 1	189	223	-	531	555	-	-	-	-	-	-	-
Stage 2	610	522	-	~ 172	222	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	60	67	121	~ 47	73	558	531	-	-	859	-	-
Mov Cap-2 Maneuver	60	67	-	~ 47	73	-	-	-	-	-	-	-
Stage 1	178	210	-	531	555	-	-	-	-	-	-	-
Stage 2	588	522	-	~ 153	210	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	58.87	$ 3601.99	0	0.09
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	531	-	-	80	49	18	-	-
HCM Lane V/C Ratio	-	-	-	0.167	8.653	0.016	-	-
HCM Control Delay (s/veh)	0	-	-	58.9	$ 3602	9.3	0	-
HCM Lane LOS	A	-	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	50.5	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	52.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	284	0	0	125	195	1102
Future Vol, veh/h	284	0	0	125	195	1102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	65	29	0
Mvmt Flow	364	0	0	160	250	1413

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1117	956	1663	0	-	0
Stage 1	956	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 232	315	392	-	-	-
Stage 1	376	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 232	315	392	-	-	-
Mov Cap-2 Maneuver	~ 232	-	-	-	-	-
Stage 1	376	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, $/3	315.36	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	392	-	232	-	-
HCM Lane V/C Ratio	-	-	1.572	-	-
HCM Control Delay (s/veh)	0	-	$ 315.4	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	22.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	59.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	361	0	2	175	5	0	0	0	0
Future Vol, veh/h	0	0	0	361	0	2	175	5	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	35	0	0	38	0	0	0	0	0
Mvmt Flow	0	0	0	451	0	3	219	6	0	0	0	0

Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	445	445	6	1	0	-	-	-	0
Stage 1	444	444	-	-	-	-	-	-	-
Stage 2	1	1	-	-	-	-	-	-	-
Critical Hdwy	6.75	6.5	6.2	4.48	-	-	-	-	-
Critical Hdwy Stg 1	5.75	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.75	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.815	4	3.3	2.542	-	-	-	-	-
Pot Cap-1 Maneuver	514	511	1082	1415	-	0	0	-	-
Stage 1	582	579	-	-	-	0	0	-	-
Stage 2	942	899	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	~ 434	0	1082	1415	-	-	-	-	-
Mov Cap-2 Maneuver	~ 434	0	-	-	-	-	-	-	-
Stage 1	492	0	-	-	-	-	-	-	-
Stage 2	942	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	85.63	7.79	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	1410	-	436	-	-
HCM Lane V/C Ratio	0.155	-	1.042	-	-
HCM Control Delay (s/veh)	8	0	85.6	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.5	-	14.2	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	155	0	0	0	0	180	1131	2	359	0
Future Vol, veh/h	0	2	155	0	0	0	0	180	1131	2	359	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	100	37	0	0	0	0	37	15	100	35	0
Mvmt Flow	0	2	168	0	0	0	0	196	1229	2	390	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	590	1820	390	-	0	0	1425	0	0
Stage 1	395	395	-	-	-	-	-	-	-
Stage 2	196	1425	-	-	-	-	-	-	-
Critical Hdwy	6.4	7.5	6.57	-	-	-	5.1	-	-
Critical Hdwy Stg 1	5.4	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.633	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	473	45	588	0	-	-	268	-	0
Stage 1	685	466	-	0	-	-	-	-	0
Stage 2	842	127	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	468	0	588	-	-	-	268	-	-
Mov Cap-2 Maneuver	551	0	-	-	-	-	-	-	-
Stage 1	685	0	-	-	-	-	-	-	-
Stage 2	833	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	13.6	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	588	10	-
HCM Lane V/C Ratio	-	-	0.29	0.008	-
HCM Control Delay (s/veh)	-	-	13.6	18.6	0
HCM Lane LOS	-	-	B	C	A
HCM 95th %tile Q(veh)	-	-	1.2	0	-

Intersection	
Int Delay, s/veh	64

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	103	0	15	0	1086	347	50	254	0
Future Vol, veh/h	2	0	0	103	0	15	0	1086	347	50	254	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	22	0	9	0	14	21	0
Mvmt Flow	2	0	0	120	0	17	0	1263	403	58	295	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1674	2078	295	1876	1876	1465	295	0	0	1666	0	0
Stage 1	412	412	-	1465	1465	-	-	-	-	-	-	-
Stage 2	1263	1666	-	412	412	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.42	4.1	-	-	4.24	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.498	2.2	-	-	2.326	-	-
Pot Cap-1 Maneuver	77	54	749	~ 55	72	142	1278	-	-	355	-	-
Stage 1	621	598	-	161	195	-	-	-	-	-	-	-
Stage 2	210	155	-	621	598	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	54	44	749	~ 44	58	142	1278	-	-	355	-	-
Mov Cap-2 Maneuver	54	44	-	~ 44	58	-	-	-	-	-	-	-
Stage 1	500	481	-	161	195	-	-	-	-	-	-	-
Stage 2	184	155	-	500	481	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	74.57	$ 998.16	0	2.81
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1278	-	-	54	49	296	-	-
HCM Lane V/C Ratio	-	-	-	0.043	2.816	0.164	-	-
HCM Control Delay (s/veh)	0	-	-	74.6	$ 998.2	17.1	0	-
HCM Lane LOS	A	-	-	F	F	C	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	14.6	0.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	844.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1079	0	0	355	139	218
Future Vol, veh/h	1079	0	0	355	139	218
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	22	39	0
Mvmt Flow	1439	0	0	473	185	291

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	804	331	476	0	-	0
Stage 1	331	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 355	716	1097	-	-	-
Stage 1	~ 732	-	-	-	-	-
Stage 2	~ 631	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 355	716	1097	-	-	-
Mov Cap-2 Maneuver	~ 355	-	-	-	-	-
Stage 1	~ 732	-	-	-	-	-
Stage 2	~ 631	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	$ 1402.18	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1097	-	355	-	-
HCM Lane V/C Ratio	-	-	4.053	-	-
HCM Control Delay (s/veh)	0	-	$ 1402.2	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	139.3	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	23.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	414	5	2	80	2	0	0	2	0
Future Vol, veh/h	0	0	0	414	5	2	80	2	0	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	39	0	0	69	0	0	0	0	0
Mvmt Flow	0	0	0	505	6	2	98	2	0	0	2	0

Major/Minor	Minor1			Major1				Major2		
Conflicting Flow All	200	200	2	2	0	-	-	-	0	
Stage 1	198	198	-	-	-	-	-	-	-	
Stage 2	2	2	-	-	-	-	-	-	-	
Critical Hdwy	6.79	6.5	6.2	4.79	-	-	-	-	-	
Critical Hdwy Stg 1	5.79	5.5	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	5.79	5.5	-	-	-	-	-	-	-	
Follow-up Hdwy	3.851	4	3.3	2.821	-	-	-	-	-	
Pot Cap-1 Maneuver	712	699	1088	1273	-	0	0	-	-	
Stage 1	755	741	-	-	-	0	0	-	-	
Stage 2	932	898	-	-	-	0	0	-	-	
Platoon blocked, %					-			-	-	
Mov Cap-1 Maneuver	657	0	1088	1273	-	-	-	-	-	
Mov Cap-2 Maneuver	657	0	-	-	-	-	-	-	-	
Stage 1	697	0	-	-	-	-	-	-	-	
Stage 2	932	0	-	-	-	-	-	-	-	

Approach	WB	NB	SB
HCM Control Delay, s/v	27.02	7.87	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	1271	-	659	-	-
HCM Lane V/C Ratio	0.077	-	0.779	-	-
HCM Control Delay (s/veh)	8.1	0	27	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.2	-	7.5	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	67	0	0	0	0	82	354	0	416	0
Future Vol, veh/h	0	0	67	0	0	0	0	82	354	0	416	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	69	0	0	0	0	66	66	0	37	0
Mvmt Flow	0	0	72	0	0	0	0	88	381	0	447	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	535	916	447	-	0	0	469	0	0
Stage 1	447	447	-	-	-	-	-	-	-
Stage 2	88	469	-	-	-	-	-	-	-
Critical Hdwy	6.4	6.5	6.89	-	-	-	4.1	-	-
Critical Hdwy Stg 1	5.4	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.921	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	509	274	493	0	-	-	1103	-	0
Stage 1	648	577	-	0	-	-	-	-	0
Stage 2	940	564	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	509	0	493	-	-	-	1103	-	-
Mov Cap-2 Maneuver	561	0	-	-	-	-	-	-	-
Stage 1	648	0	-	-	-	-	-	-	-
Stage 2	940	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	13.55	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	493	1103	-
HCM Lane V/C Ratio	-	-	0.146	-	-
HCM Control Delay (s/veh)	-	-	13.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	5	106	0	15	0	298	81	10	386	2
Future Vol, veh/h	5	0	5	106	0	15	0	298	81	10	386	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	0	100	20	0	14	0	62	100	40	34	0
Mvmt Flow	7	0	7	141	0	20	0	397	108	13	515	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	940	1048	516	993	995	451	517	0	0	505	0	0
Stage 1	543	543	-	451	451	-	-	-	-	-	-	-
Stage 2	397	505	-	541	544	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	7.2	7.3	6.5	6.34	4.1	-	-	4.5	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.3	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.3	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	4.2	3.68	4	3.426	2.2	-	-	2.56	-	-
Pot Cap-1 Maneuver	246	230	406	208	247	584	1059	-	-	890	-	-
Stage 1	528	523	-	554	574	-	-	-	-	-	-	-
Stage 2	632	543	-	494	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	232	225	406	200	241	584	1059	-	-	890	-	-
Mov Cap-2 Maneuver	232	225	-	200	241	-	-	-	-	-	-	-
Stage 1	517	512	-	554	574	-	-	-	-	-	-	-
Stage 2	611	543	-	476	511	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	17.75	57.43	0	0.23
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1059	-	-	296	218	45	-	-
HCM Lane V/C Ratio	-	-	-	0.045	0.74	0.015	-	-
HCM Control Delay (s/veh)	0	-	-	17.7	57.4	9.1	0	-
HCM Lane LOS	A	-	-	C	F	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	5	0	-	-

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	253	0	0	125	195	302
Future Vol, veh/h	253	0	0	125	195	302
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	65	29	0
Mvmt Flow	324	0	0	160	250	387

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	604	444	637	0	-	0
Stage 1	444	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	465	618	956	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	465	618	956	-	-	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	28.75	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	956	-	465	-	-
HCM Lane V/C Ratio	-	-	0.698	-	-
HCM Control Delay (s/veh)	0	-	28.7	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0	-	5.3	-	-

Intersection	
Int Delay, s/veh	25.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	318	0	2	140	5	0	0	0	0
Future Vol, veh/h	0	0	0	318	0	2	140	5	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	35	0	0	38	0	0	0	0	0
Mvmt Flow	0	0	0	398	0	3	175	6	0	0	0	0

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	358	358	6	1	0	-	-	-	0
Stage 1	356	356	-	-	-	-	-	-	-
Stage 2	1	1	-	-	-	-	-	-	-
Critical Hdwy	6.75	6.5	6.2	4.48	-	-	-	-	-
Critical Hdwy Stg 1	5.75	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.75	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.815	4	3.3	2.542	-	-	-	-	-
Pot Cap-1 Maneuver	580	572	1082	1415	-	0	0	-	-
Stage 1	641	632	-	-	-	0	0	-	-
Stage 2	942	899	-	-	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	508	0	1082	1415	-	-	-	-	-
Mov Cap-2 Maneuver	508	0	-	-	-	-	-	-	-
Stage 1	562	0	-	-	-	-	-	-	-
Stage 2	942	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	33.22	7.63	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	SBT	SBR
Capacity (veh/h)	1410	-	510	-	-
HCM Lane V/C Ratio	0.124	-	0.785	-	-
HCM Control Delay (s/veh)	7.9	0	33.2	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.4	-	7.2	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	152	0	0	0	0	145	638	2	316	0
Future Vol, veh/h	0	2	152	0	0	0	0	145	638	2	316	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	100	37	0	0	0	0	37	15	100	35	0
Mvmt Flow	0	2	165	0	0	0	0	158	693	2	343	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	505	1199	343	-	0	0	851	0	0
Stage 1	348	348	-	-	-	-	-	-	-
Stage 2	158	851	-	-	-	-	-	-	-
Critical Hdwy	6.4	7.5	6.57	-	-	-	5.1	-	-
Critical Hdwy Stg 1	5.4	6.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.4	6.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.9	3.633	-	-	-	3.1	-	-
Pot Cap-1 Maneuver	530	123	626	0	-	-	491	-	0
Stage 1	719	492	-	0	-	-	-	-	0
Stage 2	876	267	-	0	-	-	-	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	527	0	626	-	-	-	491	-	-
Mov Cap-2 Maneuver	594	0	-	-	-	-	-	-	-
Stage 1	719	0	-	-	-	-	-	-	-
Stage 2	871	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.83	0	0.08
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	626	11	-
HCM Lane V/C Ratio	-	-	0.267	0.004	-
HCM Control Delay (s/veh)	-	-	12.8	12.4	0
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	0	88	0	15	0	558	171	50	208	0
Future Vol, veh/h	2	0	0	88	0	15	0	558	171	50	208	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	22	0	9	0	14	21	0
Mvmt Flow	2	0	0	102	0	17	0	649	199	58	242	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1007	1206	242	1106	1106	748	242	0	0	848	0	0
Stage 1	358	358	-	748	748	-	-	-	-	-	-	-
Stage 2	649	848	-	358	358	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.42	4.1	-	-	4.24	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.498	2.2	-	-	2.326	-	-
Pot Cap-1 Maneuver	221	185	802	189	212	381	1336	-	-	741	-	-
Stage 1	664	631	-	407	423	-	-	-	-	-	-	-
Stage 2	462	381	-	664	631	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	192	168	802	172	193	381	1336	-	-	741	-	-
Mov Cap-2 Maneuver	192	168	-	172	193	-	-	-	-	-	-	-
Stage 1	604	574	-	407	423	-	-	-	-	-	-	-
Stage 2	441	381	-	604	574	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	23.97	53.21	0	1.99
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	192	187	349	-	-
HCM Lane V/C Ratio	-	-	-	0.012	0.64	0.078	-	-
HCM Control Delay (s/veh)	0	-	-	24	53.2	10.3	0	-
HCM Lane LOS	A	-	-	C	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	3.7	0.3	-	-

Intersection	
Int Delay, s/veh	70.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	374	0	0	355	139	156
Future Vol, veh/h	374	0	0	355	139	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	22	39	0
Mvmt Flow	499	0	0	473	185	208

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	763	289	393	0	-	0
Stage 1	289	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	~ 375	755	1176	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 375	755	1176	-	-	-
Mov Cap-2 Maneuver	~ 375	-	-	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	631	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/veh	194.25	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1176	-	375	-	-
HCM Lane V/C Ratio	-	-	1.328	-	-
HCM Control Delay (s/veh)	0	-	194.2	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	23.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

DATE:	March 12, 2025	FROM:	Janet Jones
TO:	Tamra Mabbott	SUBJECT:	Zone Change – Completeness Review Response

DATE: March 12, 2025

TO: Tamra Mabbott
Morrow County
215 NE Main Avenue
Irrigon, OR 97844

FROM: Janet Jones, PE

SUBJECT: Zone Change – Completeness Review Response

PROJECT: Morrow County Zone Change
EFU/SAI to M-G with Limited Use Overlay

CC: Megan Lin, Steve Pfeiffer – Perkins Coie
Lee Leighton, Ian Sisson, Brian Varricchione – Mackenzie

This memorandum was prepared to supplement the Transportation Planning Rule Analysis prepared for Threemile Canyon Farms, LLC by David Evans and Associates, Inc., dated March 12, 2025 ("TPR study") to respond to completeness review items raised by Morrow County in a letter dated February 26, 2025 and review items raised by Lancaster Mobley in a memorandum dated February 27, 2025.

Consistent with state and local requirements, the TPR Report analyzes the projected transportation impacts of Threemile Canyon Farm's proposed comprehensive plan and land use regulation amendment with the intent of identifying and addressing any inconsistencies with Morrow County's adopted 2012 Transportation System Plan (TSP). Among other things, a TSP determines the functional classification of identified transportation facilities, adopts standards for implementing that functional classification system, and adopts performance standards for transportation facilities.

Per ODOT's TPR Section 0060 FAQs document, local governments determine whether a plan amendment or zone results in a "significant effect" if: 1) it generates more traffic than allowed under an existing plan and zoning; AND 2) planned transportation improvements do not provide adequate capacity to support allowed land uses. Because the proposed zone change is projected to generate fewer trips than allowable under the existing zoning for the subject site, the proposed zone change does not constitute a "significant effect" on the local transportation system.

The functional classification and performance standards in the TSP establish the baseline against which subsequent plan and land use regulation amendments must be measured to determine if they "significantly effect" a transportation facility within the meaning of OAR 660-012-0060(1). Specifically, per Oregon Administrative Rule (OAR) 660-012-0060(1), the following criteria are identified in considering when a proposed zone change has a "significant effect" on the transportation system:

(1) A plan or land use regulation amendment significantly affects a transportation facility if it:
  (a) Changes the functional classification of an existing or planned transportation facility.
  (b) Changes standards implementing a functional classification.
  (c) Results in any of the effects listed in paragraphs (A) through (C) of this subsection.

DATE: March 12, 2025 FROM: Janet Jones

TO: Tamra Mabbott SUBJECT: Zone Change – Completeness Review Response

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility.

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan.

(C) Degrade the performance of an existing or planned transportation facility this is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Based on the criteria listed above, the proposed zone change does not have a significant effect on Morrow County's TSP as described below. Specifically, the proposed zone change does not "significantly affect" Boardman Airport Lane within the meaning of this rule.

(a) Changes the functional classification of an existing or planned transportation facility.

This criterion does not apply because Boardman Airport Lane is not identified in the County's TSP.

Boardman Airport Lane is not identified nor addressed in the County's currently adopted 2012 Transportation System Plan. The County's TSP lists Collectors and Arterials Figure 3-1 of the TSP and Boardman Airport Lane is not on the list. Boardman Airport Lane is owned and maintained by the Port of Morrow County, as identified in a February 20, 2025 letter prepared by the Port of Morrow for the subject zone change application. Therefore, it is not a Morrow County facility bound by the roadway standards set for by Morrow County.

(b) Changes standards implementing a functional classification.

This criterion does not apply because Boardman Airport Lane is not identified in the County's TSP. While Boardman Airport Lane is not identified in the Morrow County TSP, the physical geometry is consistent with the roadway design requirements for the County's Rural Arterial II roadway classification. Therefore, if the facility was expressly owned and maintained by Morrow County, no changes would be required to the standards for a Rural Arterial II classification in regard to its application to Boardman Airport Lane. Assuming the Morrow County roadway standards apply to Port of Morrow facilities by extension, no changes are required to the standards for a Rural Arterial II classification in regard to its application to Boardman Airport Lane.

(c)(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility.

The projected traffic levels on Boardman Airport Lane are consistent with the functional classification for a Rural Arterial II, as presented in the currently adopted 2012 Morrow County TSP.

While Boardman Airport Lane is not identified as a Collector or Arterial on the Morrow County TSP (and is not owned and maintained by Morrow County), it was recently constructed to standards that most closely align with the County's Rural Arterial II classification, per Table 6-1 of the currently adopted TSP. The County's Rural Arterial II[1] functional classification requires a 60-foot right of way (ROW) width, 32-40 feet of paved width, and two (2) 12-foot travel lanes, as presented in Figure 1 below. Boardman Airport Lane exceeds these design requirements with a 100-foot ROW and a 32-foot paved width, as presented in Figure 2 and Figure 3 below.

[1] All of the County's roadway classifications are labeled "Rural" and County's TSP does not have a separate "Urban" Arterial designation.

DATE: March 12, 2025
FROM: Janet Jones
TO: Tamra Mabbott
SUBJECT: Zone Change – Completeness Review Response

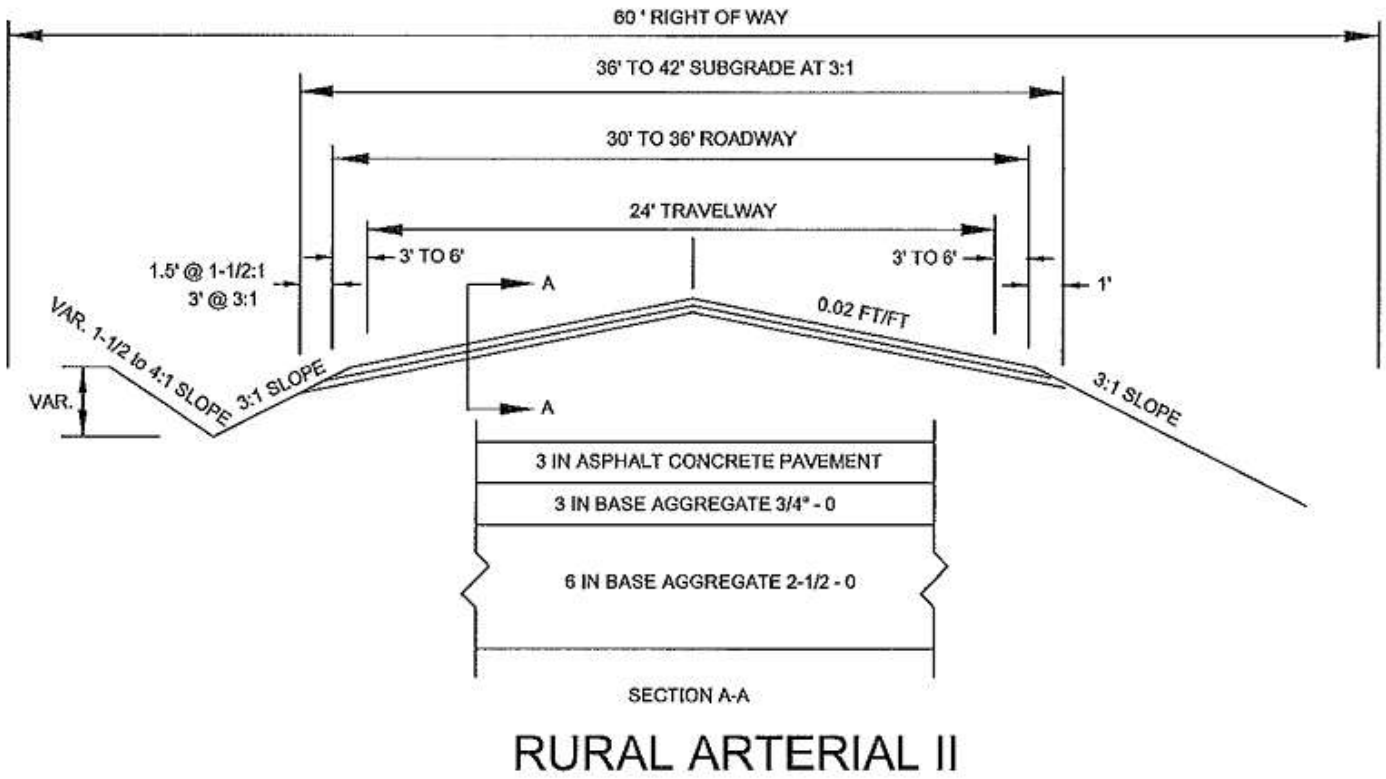

Figure 1 - Morrow County Rural Arterial II Standard Cross Section; Source: Morrow County 2012 TSP

DATE: March 12, 2025 FROM: Janet Jones

TO: Tamra Mabbott SUBJECT: Zone Change – Completeness Review Response

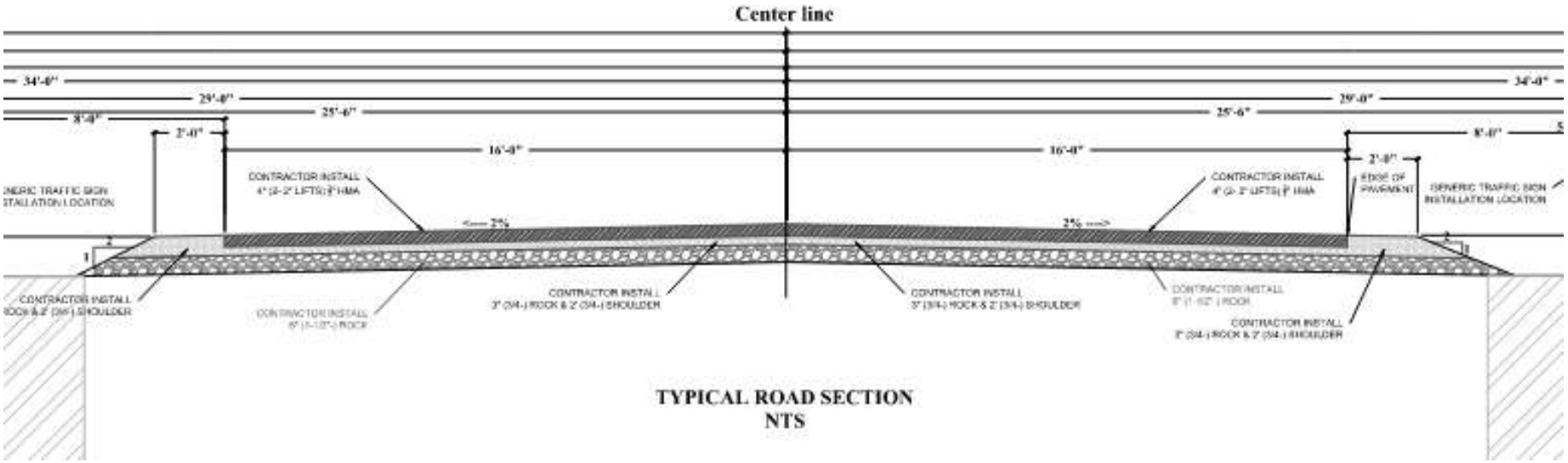

Figure 2 - Typical Road Section for Boardman Airport Lane (Paved Width); Source: Port of Morrow Airport Road Infrastructure Plans

DATE: March 12, 2025 FROM: Janet Jones

TO: Tamra Mabbott SUBJECT: Zone Change – Completeness Review Response

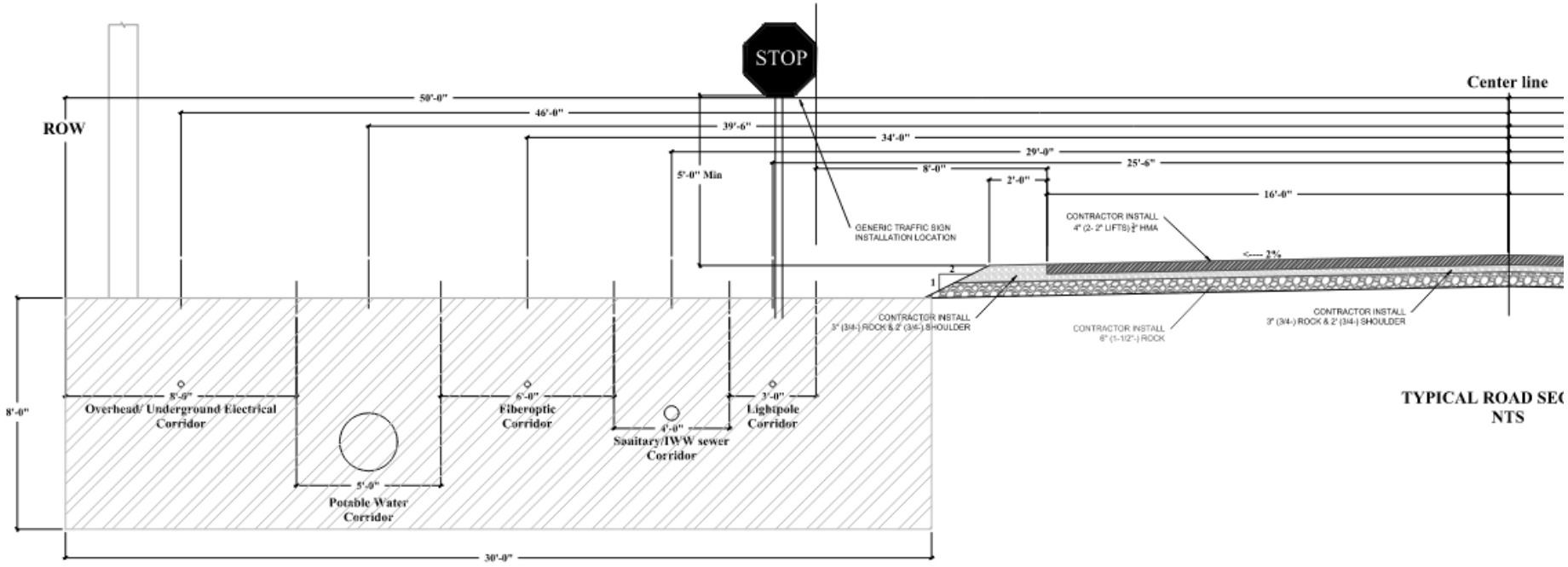

Figure 3 - Typical Road Section for Boardman Airport Lane (Half Street ROW); Source: Port of Morrow Airport Road Infrastructure Plans

DATE: March 12, 2025 FROM: Janet Jones

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(c)(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan.

While Boardman Airport Lane is not identified in the County's TSP, the roadway is designed to the standards most closely matching that of the County's Rural Arterial II designation. The projected traffic volumes associated with the proposed rezoning on Boardman Airport Lane are consistent with the traffic volume thresholds identified in the County's TSP for a Rural Arterial II.

Boardman Airport Lane also appears to fall within the range of traffic volume thresholds identified for Arterial II roadways. It should be noted the "Average Daily Traffic (ADT)" column in Table 6-1 of the TSP appear to be incorrectly labeled, as the volume thresholds identified in this column ranges more appropriately reflect peak hour traffic volumes. This is confirmed by comparing the traffic volume thresholds in Table 6-1 with the traffic volume thresholds in Table 3-10, which shows both average daily traffic (ADT) and peak hour traffic volumes, identified as "30th DHV", or 30th Design Hourly Volumes. The maximum ADT value in Table 3-10 is approximately 14,000, whereas the maximum peak hour volume, or 30th DHV is approximately 2,200.

Based on this analysis, while Boardman Airport Lane is not identified as a transportation facility in the County's adopted TSP, both the physical design of and the projected traffic volumes on Boardman Airport Lane associated with the proposed rezoning are consistent with Morrow County's Rural Arterial II functional classification. The existing paved width of Boardman Airport Lane is approximately 32 feet, with two (2) 12-foot travel lanes and a 4-foot paved shoulder within a 100-foot right-of-way, as presented in Figure 2 below. The future ADT with the proposed zone change is projected to be 600 and 700 vehicles during the AM and PM peak hours, respectively. Therefore, the proposed zone change does not cause an inconsistency with the adopted TSP (which does not address Boardman Airport Lane) and, in fact, is consistent with the actual design of Boardman Airport Lane, and related performance standards, which meet roadway standards and projected traffic volumes for Arterial II roads under the County's TSP.

(c)(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

This criterion does not apply as Boardman Airport Lane is not identified in the County's TSP as not meeting performance standards. As explained in the March 12, 2025 TPR study, the proposed zoning designation is projected to result in fewer potential trips generated compared to potential development under the existing Space Age Industrial and Exclusive Farm Use zones on the site. The study notes that under the existing zoning designation, three intersections fail to meet performance standards during the planning period (Tower Road/I-84 WB Ramp; Tower Road/Kunze Lane; and Tower Road/Boardman Airport Lane). By comparison, under the proposed rezone, only two intersections fail to meet performance standards during the planning period (Tower Road/Kunze Lane and Tower Road/Boardman Airport Lane). Because the analysis found a net decrease in trip generation potential associated with the proposed rezoning and reduced impacts when compared with the existing zoning designation, there is no "significant effect" within the meaning of OAR 660-012-0060. Enclosed with this response are two supporting documents with respect to OAR 660-012-0060: 1) "Frequently Asked Questions about Section 0060 of the Transportation Planning Rule", and 2) "Development Review Guidelines, Chapter 3 Section 3.2 – Transportation Planning Rule (TPR) Reviews".

DATE: March 12, 2025 FROM: Janet Jones

TO: Tamra Mabbott SUBJECT: Zone Change – Completeness Review Response

Secondary Access

Regarding emergency or secondary access, the County's TSP states that streets need to be required under certain conditions, such as where physical conditions make streets impractical, or "where conditions of development approval require off-site improvements." TSP at 4-6, 4-7. As noted in the TPR Report, because the proposed rezoning is projected to result in fewer impacts than the existing zoning designation, no mitigation is required for approval of the rezoning. And instead, any need for potential future off-site improvements required to mitigate traffic impacts from data center development will be evaluated as part of development approval—in particular, Morrow County's Site Plan Review process. Likewise, any required improvements for emergency access to the site will be identified and provided prior to any development of the site for data center use and be subject to County review and approval via required Site Plan Review. *See* MZCO 5.020.E.9. This ensures that safety/access issues are thoroughly evaluated, and effective life/safety access will be made available at the stage of development when more information is known about actual site design and site access/circulation requirements.

This rezone proposal does not impact the Future Connectivity section of Morrow County's TSP (Page 4-7), nor will it exacerbate existing connectivity issues between north and south Morrow County, because the traffic generated by future data center development will not necessitate or result in north-south traffic movements beyond the Tower Road/Airport Lane travel route identified in the TPR Report. Specifically, the TPR Report confirms that the primary route to and from the site is via I-84 and Tower Road/Airport Lane, with minimal to no trips travelling south on Tower Road. Consequently, the proposed rezone will not increase or otherwise affect the identified pre-existing need for a second north-south connection, historically referred to as the Ione-Boardman Road.

Per MZCO 4.010(C), "It is the responsibility of the landowner to provide appropriate access for emergency vehicles at the time of development." As this application is for a zone change and not for land development, identification of emergency access is not required at this time.

Conclusion

In summary, the proposed zone change for the subject property west of the Boardman Airport is not expected to significantly affect a transportation facility based on the following:

- The geometric design of Boardman Airport Lane is consistent with a Rural Arterial II as presented in the currently adopted 2012 Morrow County TSP, and actually exceeds the paved width requirements for such roadway.
- The projected traffic volumes on Boardman Airport Lane are consistent with a Rural Arterial II as presented in the currently adopted 2012 Morrow County TSP. Therefore, no change to the design of Boardman Airport Lane is needed.
- The planned roadway network within Morrow County will not be impacted by the proposed zone change. Secondary/emergency access to and from the site will be identified as a requirement of site plan review.

The TPR analysis completeness review prepared by Lancaster Mobley and dated February 27, 2025 notes that "with the zone change in place, an amendment to the TSP would be necessary in order to establish an

DATE: March 12, 2025 FROM: Janet Jones

TO: Tamra Mabbott SUBJECT: Zone Change – Completeness Review Response

appropriate functional classification to ensure that adequate infrastructure is planned and constructed." While an amendment to the County's TSP could be prepared to formally designate Boardman Airport Lane as a "Rural Arterial", the intent of the roadway classification remains the same: the roadway is expected to operate adequately as constructed. The roadway is constructed to County arterial standards and has the capacity to support the future projected traffic volumes consistent with the proposed zone change.

In short, the proposed zone change is expected to be adequately served by existing roadway improvements, namely improvements recently made to Boardman Airport Lane, making the proposed zone change compliant with the state's Transportation Planning Rule.

Please contact me at 503.499.0276 or janet.jones@deainc.com if you have any questions or need additional information.

DATE:	March 12, 2025	FROM:	Janet Jones
TO:	Tamra Mabbott	SUBJECT:	Zone Change – Completeness Review Response

Sincerely,

DAVID EVANS AND ASSOCIATES, INC.

Janet Jones, PE
Senior Transportation Engineer | Associate

Attachments/Enclosures: Frequently Asked Questions about Section 0060 of the Transportation Planning Rule; Development Review Guidelines, Chapter 3 Section 3.2 – Transportation Planning Rule (TPR) Reviews

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FREQUENTLY ASKED QUESTIONS ABOUT SECTION 0060 OF THE TRANSPORTATION PLANNING RULE

What is Section 0060 of the Transportation Planning Rule?

Section 0060 of the Transportation Planning Rule (TPR) is a statewide planning requirement that directs cities and counties to assess whether proposed plan amendments and zone changes will have a significant effect on the transportation system. In essence, this means that before approving plan or zone changes, cities and counties must determine whether existing transportation facilities and planned improvements will provide adequate capacity to support the new development that would be allowed by the proposed land use changes.

If there is not adequate planned capacity, a "significant effect" occurs. When a city or county finds there is a significant effect, it must take steps to put land use and transportation in balance. Ways to do this include: adding planned transportation facilities or improvements, limiting land use or modifying performance standards to tolerate additional congestion. Section 0060 outlines the process and standards for deciding whether a plan amendment or zone change has a significant effect, and appropriate remedies.

What is the purpose of Section 0060?

Section 0060 is intended to assure that when new land uses are allowed by plan or zone changes that there is adequate planned transportation capacity, usually roadway capacity, to serve the planned land uses. The potential for traffic and congestion from new development is a major concern in communities around the state. Section 0060 is a tool to help communities understand the traffic impacts of plan and zone changes and assure that growth is adequately planned for and does not result in excessive traffic congestion. Amendments to Section 0060 adopted in 2005 also help communities address whether funding plans and strategies for needed improvements are in place before plans or zoning are changed to allow more development.

What is the legal basis for Section 0060?

State law (ORS 197.646) requires that local governments comply with statewide planning goals and rules adopted to implement them when they consider plan amendments. The TPR implements Statewide Planning Goal 12 (Transportation) which requires local governments to plan for a safe, convenient, and adequate transportation system.

What decisions does TPR Section 0060 apply to?

This portion of the TPR applies to local plan and land use regulation amendments. These include plan and zoning map changes as well as changes to the list of allowed land uses in a zone or other provisions of a zoning district.

Does Section 0060 apply to building permits, subdivisions or conditional use permits or similar authorizations?

No. As described above, Section 0060 only applies where a plan amendment or zone change of some sort is involved. Approvals that are made under the terms of existing city and county plans and zoning ordinances are not subject to Section 0060. However, in some situations local governments may have adopted local standards that are equivalent to the TPR Section 0060 that do apply during site plan review.

Does Section 0060 affect <u>all</u> plan amendments and zone changes?

In practice, the TPR affects relatively few plan amendments and zone changes. Most plan amendments don't affect expected traffic one way or another; and those that do are often adequately served by existing or planned roadway improvements.

Do changes to land use regulation amendments other than zone changes need to be reviewed for compliance with Section 0060?

Yes. While most changes to zoning or development codes do not affect the transportation system, some relatively minor changes may allow new or expanded uses that would have a significant effect. For example, adding "sales of building materials" as an allowed use in an industrial zoning district could have the effect of allowing a large format retail use into an industrial zoning district that would generate much more traffic than allowed industrial development. Local governments need to evaluate each land use regulation amendment and assess whether or not it would allow uses that would generate more traffic than that generated by uses currently allowed in the zone.

Section 0060 is *part* of the Transportation Planning Rule. What are the other parts of the TPR?

The Transportation Planning Rule or TPR is an administrative rule adopted by the Land Conservation and Development Commission. The rule implements Statewide Planning Goal 12 (Transportation) and other statewide planning goals that provide guidance to local governments about how they conduct transportation planning. The major requirement in the TPR is that cities and counties adopt transportation system plans (TSPs) that include plan for future streets and roadway improvements and other transportation facilities and services needed to support future land use plans. The TPR was adopted in 1991. Since that time most of the cities and counties in the state have adopted TSPs to carry out the rule. Further information about the TPR including the full text of the rule is available on the DLCD website. Information about TSPs is available from the respective city and county planning departments.

My city and county have adopted transportation plans (TSPs). Is additional review of plan amendments and zone changes for compliance with 0060 still required?

Yes. Generally, TSPs include planned facilities that are adequate to serve uses anticipated based on existing planning and zoning. Changes to comprehensive plans and zoning can create the need for additional street or roadway improvements. Section 0060 requires cities and counties to assess whether a plan amendment or zone change would create more traffic than the plan anticipates or that facilities called for in the plan are designed to handle. In many cases, local governments find that improvements called for in TSPs will be

adequate to support the planned land use change. Where this is the case, the requirements of 0060 are met. However, where expected new traffic would exceed the capacity of planned facilities, additional planning must be done to figure out how the traffic will be handled, usually by amending the TSP to account for the additional traffic.

How is Section 0060 applied?

Local governments considering plan or land use regulation amendments evaluate whether the proposed plan amendment or zoning change would "significantly effect" the planned transportation system. Most local governments ask applicants to address this in their application. The evaluation involves reviewing applicable city, county or state transportation plans and assessing whether the proposed plan or zone change will have a significant effect on the transportation system.

What is the standard for deciding whether a plan amendment or zone change has a "significant effect"?

The standards for determining whether or not a plan or land use regulation amendment has a significant effect are set out in OAR 660-012-0060(1). [1] In most situations, an 0060 "significant effect" occurs because the plan amendment or zone change would allow uses that would result in a level traffic that exceeds the adopted performance standards for a local street or state highway. (This is the standard in 0060(1) (B): where a plan amendment or zone change reduces "….the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan.")

Local governments determine whether there is a significant effect by:

- Assessing how much new traffic would be generated by the proposed plan or zone change
- Adding the potential new traffic to traffic that is otherwise expected to occur
- Assessing whether this additional traffic will cause roadways in the vicinity of the plan amendment to exceed adopted performance standards

How do local governments determine whether or not a plan amendment or zone results in a "significant effect"?

Typically some sort of traffic analysis or traffic impact study is prepared. In either case, the analysis compares traffic allowed under the existing and proposed plan or zoning designations. A proposed plan amendment or zone change has a "significant effect" if:
(1) it generates more traffic than allowed by existing plan and zoning AND

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[1] There are three other circumstances where a plan amendment could trigger a "significant effect":
- Changes to the functional classification of an existing or planned transportation facility – an example would be where a local plan designation for a planned street is changed from a "minor arterial" to a "major collector".

- Changes to standards implementing a functional classification system. Examples of this type of change would include amendments to driveway or street spacing requirements.

- Allowing types or levels of uses which would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or

(2) planned transportation improvements do not provide adequate capacity to support the allowed land uses.

Are there some simple guidelines for assessing whether a plan amendment is likely to trigger a significant effect?

Yes. In most cases the key question is whether the proposed plan designation or zoning will result in more traffic than is allowed by current zoning.

If the proposed plan amendment or zone change would generate the same or less traffic than is allowed by the current plan and zone designations, it generally is considered *not* to have a "significant effect" on the transportation system. In essence, the rule requires further review of transportation impacts only where a plan amendment or zone change would yield more traffic than is allowed by current zoning.

If a plan amendment would result in more traffic being allowed is it automatically considered to have a "significant effect" under the TPR?

No. The local government would first need to evaluate whether planned transportation facilities will be adequate to handle the additional traffic. If they are adequate, then there would not be a significant effect.

Is the evaluation of significant effect based on the applicants proposed use or other uses allowed by the proposed plan or zone change?

Generally speaking the evaluation of whether there is a significant effect must consider the range of uses allowed by the proposed plan and zoning changes, not just the particular use proposed by the applicant. This is because the resulting plan amendment or zone change, once approved, would allow any of the uses listed in the zoning district without further review for compliance with the TPR. Typically, plan amendments and zone changes do not prevent an applicant (or subsequent property owners) from pursuing more intense development than is contemplated in the original application.

As explained below, an applicant or local government can modify or limit the proposed plan or zone change to reduce its traffic generating impacts and possibly avoid triggering a significant effect. Where the application or approval is limited to specific uses or a particular level of traffic generation, it is possible to limit the scope of the analysis. In many situations this is adequate to avoid triggering a significant effect.

What happens when a local government concludes there is a "significant effect"? Can the plan amendment or zone change still be approved?

A finding of "significant effect" does not prevent approval of a plan amendment or zone change. It does trigger the requirement for local governments to take steps to put land use and transportation "in balance"; by assuring that planned land uses are consistent with the planned transportation system. Local governments have four options for putting land use and transportation “in balance” including one or a combination of the following:

- Adding planned transportation facilities or improvements
- Limiting allowed land uses to fit available facilities

- Changing the transportation performance standards to accept lower performance
- Adopting measures that reduce auto travel

Can local governments avoid triggering a significant effect by limiting the uses allowed by a proposed plan amendment or zone change?

Yes. In practice, applicants or local governments have done this by calculating either the capacity of the planned transportation system or the intensity of use allowed by existing plans and zoning, and then including zoning restrictions that cap allowed development to avoid a "significant effect". This can be done by adopting trip caps or limits on the allowed uses. Currently, thoughtful applicants, with assistance from their traffic consultants, will carefully calculate the capacity of the planned transportation system and adjust their plan amendment proposal to fit within the available the capacity. This may include proposing roadway improvements or other measures to make the proposal fit the available capacity.

How do local governments assess whether there is adequate planned transportation capacity to support proposed uses?

Evaluation is based on applicable adopted transportation plans. These include adopted city and county transportation system plans (TSPs), and the 1999 Oregon Highway Plan adopted by the Oregon Department of Transportation (ODOT).[2] Basically, local governments compare expected traffic under existing plans with additional traffic that would be allowed under the proposed plan amendment. They then assess whether improvements included in adopted plans will adequately serve the additional traffic. If the increased volume of traffic would cause a performance standard not to be bet, there is a significant effect on the transportation system. This assessment is usually based on a traffic impact analysis prepared by a traffic engineer for the applicant.

Does the TPR require traffic impact studies?

While the TPR does not specifically require a traffic impact study, one may be needed to determine whether or not a plan amendment or zone change results in a significant effect. The need for a traffic impact study is usually decided by local government as it reviews a proposed plan amendment. Where a proposed amendment affects a state highway, the local government needs to consult with ODOT to determine whether a traffic impact study or some other analysis is needed.

Does the TPR require a "worst case" analysis - for example, where someone is proposing a zone change to allow a specific use, such as an auto dealership, but the proposed zoning allows other more intense uses, such as fast food restaurants?

No. However, the analysis must be based on the uses that would be allowed by the proposed zoning. An applicant or local government can limit the scope of analysis by limiting the request or approval to specific uses or to a particular level of traffic generation. One approach that is often used is to calculate the amount of traffic expected to be generated by the proposed use and to adopt land use regulations that limit uses in the zone to not exceed this amount.

[2] The Oregon Highway Plan also includes any specific implementing plans adopted by the Oregon Transportation Commission, such as Highway Corridor Plans or Interchange Area Management Plans. These specific “facility plans” often set different or additional standards for highway performance than are in the OHP document.

Is it possible to defer compliance with the TPR to a subsequent approval, such as a site plan or conditional use approval?

Technically no. However, local governments can achieve this result by limiting development and adopting a local ordinance that essentially mirrors the requirements of Section 0060. Several LUBA rulings[3] have upheld local government decisions that, in effect, defer application of the TPR where the following conditions are met:

(1) The plan amendment and zone change themselves do not allow additional development
(2) the plan or zoning amendment include the substance of 0060 as a standard for approving any development - typically through a site plan approval process; and
(3) the local implementation process provides for public review and a hearing including notice to ODOT and other affected transportation providers.

In addition, the Department of Justice has provided ODOT with informal guidance about requirements for local governments to accomplish deferral.

Does DLCD recommend "deferring" transportation analysis required by the TPR?

No. The department recommends against using this approach for several reasons:

- **It undermines the predictability that zoning is intended to provide.** Zoning or rezoning land is implies that the land is suitable and appropriate for uses allowed in the zone. If lands are zoned "commercial", for example, property owners rightfully assume that the public has determined that the land is suitable for many commercial uses and can be developed for commercial uses without difficult or complicated reviews. Deferring evaluation of transportation impacts and mitigation to site review works against this objective, especially where expensive improvements are needed to mitigate traffic impacts.

- **It undermines public participation in zoning decisions.** Rezoning is a key opportunity for the public, including neighboring property owners, citizens and agencies, to comment on a proposed zone change. Traffic impacts are often a major concern which the public should understand *before* a zone change is approved. Deferring transportation analysis reduces the opportunity for meaningful public participation.

- **It creates tracking and enforcement problems for local governments**. Where transportation analysis is deferred, future land use decisions and approvals have to be adjusted to include the required transportation analysis. It several years pass between the time the original zone change is approved there is likely to be uncertainty or confusion about what is required – especially if local staff turnover or if property is sold.

[3] The LUBA decisions on this issue are:
- Citizens for the Protection of Neighborhoods, LLC v. City of Salem and Sustainable Fairview Associates LLC, 47 OrLUBA 111 (2004): http://www.oregon.gov/LUBA/docs/Opinions/2004/06-04/03201.pdf
- *Concerned citizens of Malheur County v. Malheur County and Treasure Valley Renewable Resources, LLP, 47 OrLUBA 208 (2004)*.... http://www.oregon.gov/LUBA/docs/Orders/2004/04-04/04008.pdf

Overall, local governments, property owners and the public are better served by conducting the traffic analysis as the zone change is considered and making a clear decision about whether the planned transportation system is adequate to serve the allowed uses as part of approving the zone change.

What qualifies as a "planned transportation facility" that local governments may rely upon in determining whether there are adequate facilities to support the planned land use?

Section 0060(4) lists the types of facilities, improvements and services that can be counted as "planned" for purposes of 0060 compliance. Typically, a facility or improvement must be included in the relevant TSP and have some level of funding commitment in place to be considered to be "planned" under section 0060. The rule also allows transportation providers to issue letters to confirm that certain improvements are "reasonably likely" to be provided by the end of the planning period. Where such letters are issued, the improvements may be considered as planned. The rule also allows for improvements that are provided by the applicant, typically as a condition of approval, to be counted as planned improvements.

A detailed list of list of facilities, improvements and services that are considered planned is outlined in Section 0060(4) and includes:

- Transportation facilities, improvements or services that are funded for construction or implementation in:
  - the Statewide Transportation Improvement Program
  - a locally or regionally adopted transportation improvement program or capital improvement plan, or,
  - program of a transportation service provider.

  (See OAR 660-012-0060(4)(b)(A).)

- Transportation facilities, improvements or services that are authorized in a local transportation system plan and for which a funding plan or mechanism is in place or approved. These include, but are not limited to, transportation facilities, improvements or services for which:
  - transportation systems development charge revenues are being collected;
  - a local improvement district or reimbursement district has been established or will be established prior to development;
  - a development agreement has been adopted; or
  - conditions of approval to fund the improvement have been adopted. (See OAR 660-012-0060(4)(b)(B)).

- Transportation facilities, improvements or services in a metropolitan planning organization (MPO) area that are part of the area's federally-approved, financially constrained regional transportation system plan. OAR 660-012-0060(4)(b)(C).

Who decides whether a planned facility or improvement is "reasonably likely" to be provided by the end of the planning period?

The decision is made by the relevant transportation facility provider. For example, for state highways, the decision about whether an improvement is reasonably likely is made by

ODOT. For county roads, the decision is made by the county. For city streets, the determination is made by the city. In each case, the entity making the determination may establish its own procedures to determine who is authorized to make reasonably likely determinations and how such determinations will be issued. ODOTs guidelines address this issue for state highways.

Are "reasonably likely" determinations "land use decisions"?

The Commission's intent is that reasonably likely determinations not be land use decisions. The determination is essentially evidence or a finding submitted by a third-party. The rule does not ask or direct that local governments decide as part of the land use proceeding whether an improvement is "reasonably likely" to be funded; that determination is made separately and only the result, not the substance of determination, is at issue in the land use proceeding.

Why does the rule require "reasonably likely" determinations for projects that are included in TSPs? Why aren't all of the projects included in TSPs considered "planned projects" for purposes of 0060?

The amendments to Section 0060 were adopted following a broad evaluation of the TPR and of transportation planning done by Oregon communities over the last 10-15 years conducted jointly by the Oregon Transportation Commission and LCDC. A major finding of the evaluation was that there is a substantial gap between likely funding and the improvements that are called for in TSPs. In short, the transportation improvements included in plans greatly exceeds revenue likely to be generated over the next 20 years, even if there are new or expanded sources of revenue.

The consequence of this funding gap is that many of the projects that TSPs call for in the next 20 years will not be built, and for many communities traffic congestion will worsen. To a large extent, this is a result of past land use decisions – that put in place development patterns that create a need for additional roadway improvements. While LCDC recognizes that more needs to be done to address this gap, the conclusion was that it was not prudent to ignore or worsen the imbalance between land use and transportation by allowing additional land use changes that depend upon improvements that are not likely to be built in the next 20 years.

The TPR says that transportation performance is measured at the "end of the planning period". How is the applicable "planning period" determined?

The TPR defines planning period as "… the 20-year period beginning with the date of adoption of a TSP to meet the requirements … of the rule." (OAR 660-012-0005(18). This date based on the date of adoption of the applicable city or county TSP. For state highways, the Oregon Highway Plan indicates that the planning period is the one specified in the relevant local TSP applies but not less than 15 years from the date of application.

Are there additional requirements for review of plan and zone changes around freeway interchanges?

Yes. Section 0060 includes additional requirements for review of plan amendments within ½ mile of interchanges on interstate freeways. This includes interchanges on I-5 and I-84, as well as interchanges on I-205, I-405 (in the Portland Metropolitan area) and I-105 in the

Eugene-Springfield area. Additional review was required because of the special significance of the interstate system to the state transportation system.

Within freeway interchange areas the list of "planned improvements" is limited to improvements that have some form of funding commitment and does not include projects that are "reasonably likely" to be funded. However, other improvements can be counted as planned if ODOT agrees that the proposed plan amendment will not adversely affect the interstate highway system. (This part of the rule and ODOTs process for assessing whether amendments will affect the interstate system are outlined in ODOTs Guidelines for implementing Section 0060. See below.)

Who sets the performance standards for deciding whether there is "adequate" transportation capacity and what are they?

Standards for capacity and transportation system performance are set by local governments and ODOT through their adopted transportation system plans (TSPs). For state highways, mobility standards are expressed as acceptable "volume-to-capacity" ratios for traffic. Most local governments use a comparable system that uses letter grades to define acceptable "level of service" or LOS. The system rates service from "A", light traffic and free flow conditions to "F" heavily congested, with significant delays at traffic lights or to make turn movements. Most set "D" or "E" as the acceptable performance standard.

Does 0060 effectively set a "concurrency requirement", i.e. that adequate facilities have to be built or funded before development can be allowed?

No. The rule does not create the kind of "concurrency" requirement that has been adopted in other states, where transportation facilities must be built before new development is approved. . The TPR requires local governments to assess whether planned facilities – that are expected to be constructed over the planning period – will – at the end of the planning period – be adequate to meet needs. This allows for development to occur in advance of needed transportation improvements being constructed.

Will Section 0060 delay the development of "shovel-ready" industrial sites?

No. Industrial sites are not certified as "shovel-ready" until and unless they have the necessary plan and zoning designations for the appropriate industrial uses and are served by adequate public facilities, including transportation facilities. Section 0060 does not apply to sites already designated as "shovel-ready" and, therefore, will not cause a delay in their development.

Can local governments adopt concurrency requirements or other standards that are stricter than those in 0060 standards?

Yes. The TPR is basically a minimum state standard for review of plan amendments and zone changes. Individual cities can adopt ordinances regulating new development to meet particular local needs or circumstances that are stricter than the TPR. Several local governments have adopted concurrency type standards, requiring that needed improvements be constructed or funded or in place at the same time new development occurs.

Can a local government change performance standards to accept greater levels of congestion?

Yes. Where a planned development will result in an exceedance of the applicable performance standard, the TPR authorizes local governments to amend their TSPs to modify the performance standards to accept greater motor vehicle congestion OAR 660-012-0060(2)(d). Where state highways are affected, local governments need to get ODOT to agree to change its performance standards as well. Metro in the Portland metropolitan area, in coordination with the Oregon Transportation Commission and ODOT, has adopted performance standards that accomplish this objective and support the implementation of the region's Metro 2040 plan.

Where can I get more information about Section 0060?

The full text of the Transportation Planning Rule, including Section 0060, is available on DLCD's website at www.lcd.state.or.us

ODOT has produced guidelines for use by its staff in applying Section 0060. The guidelines are available on the ODOT website at:
http://www.oregon.gov/ODOT/TD/TP/docs/TPR/tprGuidelines.pdf
While the guidelines are intended principally for use by ODOT staff, they can also provide useful guidance to help local governments and applicants understand and apply Section 0060. Key to the amended rule are decisions by ODOT (and local governments) about whether or not needed improvements are funded or "reasonably likely" to be funded during the planning period. The ODOT guidance provides direction about how ODOT staff are to make reasonably likely determinations.

Numerous LUBA decisions provide useful guidance in understanding details of applying the Section 0060. The text of LUBA opinions and headnotes summarizing LUBA decisions related to Goal 12 and the Transportation Planning Rule are available on LUBA's website at www.orluba.state.or.us

DEVELOPMENT REVIEW GUIDELINES AND APPENDICES

3.2 Transportation Planning Rule (TPR) Reviews

3.2.1 Introduction

The Oregon Transportation Planning Rule, OAR 660-012 (TPR) implements Statewide Planning Goal 12, Transportation, and provides the framework for coordination among state and local land use and transportation plans and regulations. The content of this chapter discusses implementation of TPR Section -0060 which is concerned with transportation issues to be addressed in review of proposed amendments to comprehensive plans and zoning maps and TPR Section -0325 which is concerned with transportation issues to be addressed in review of proposed amendments to comprehensive plans and zoning maps in climate friendly areas (CFA) or Metro Region 2040 centers. The Oregon Highway Plan (OHP) Access Management and Highway Mobility Policies, et. al., are also applicable to comprehensive plan amendments subject to the TPR and so are also discussed herein.

This Chapter of the Development Review Guidelines has been updated to reflect the most current implementation steps associated with the TPR based on the 2022 amendments and related amendments to the OHP.

These guidelines are intended to provide direction to ODOT development review staff on how to apply the provisions of Section -0060 and -0325 of the TPR to applications under review by a local government that will amend a comprehensive plan or land use regulation (e.g., zoning ordinance).

While these guidelines are written specifically for ODOT development review staff, local government planners, consultants and others involved in local plan and code amendments may find them instructive, particularly as they relate to state highway facilities. Other TPR summary information is available from the Department of Land Conservation and Development's (DLCD) TPR website .

3.2.2 Determine If and How TPR Section -0060 Applies to an Application

1. TPR section -0060 applies to applications that include a comprehensive plan map or text amendment, a functional plan, a zoning map or zoning code text amendment and are not located in a defined CFA or Metro Region 2040 center. If the application is located within a defined CFA or Metro Region 2040 center, see Section 3.2.11.
   a. Information needed to proceed with the review includes the current and proposed map designations and/or text, affected parcel size or number of acres, location and the state highways that may be affected. For the purposes of this chapter “plan amendment” comprises all of the types of amendments to which the TPR applies.
   b. Note that there is a distinction in several areas of the rule based upon whether the subject property is inside or outside of an interchange area. “Interchange area” is defined in subsection (4)(d)(C) as:
      i. Property within one-quarter mile of the ramp terminal intersection of an existing or planned interchange on an Interstate Highway; or
      ii. The interchange area as defined in the Interchange Area Management Plan adopted by the Oregon Transportation Commission.
2. The functional classification of the roadway indicates the performance expectations for the facility. State facility functional classifications are set out in OHP Policy 1A and can be looked up in OHP Appendix D as a quick reference. A plan, map, or land use regulation amendment that changes the functional classification, changes standards implementing the functional classification system or generates levels of travel or access that are inconsistent with the functional class, of either an existing or planned transportation facility, creates a “significant effect” on the facility that has to be addressed consistent with Section -0060.
3. The rule has limited applicability if the subject property of the plan amendment is located within a designated Multi-Modal Mixed Use Area (MMA). If the subject property is not within an established MMA, go to step 4. If it is, review the proposed plan amendment against ODOT standards and MMA objectives other than mobility standards such as safety, complete local street networks and alternative travel modes. If an agreement exists per -0060 (10) (c) (B), review proposals in the terms of that agreement.
4. If the proposal is a zoning map amendment that is consistent with the acknowledged Comprehensive Plan map (TPR -0060(9)), then:

a. Determine a) whether the proposed zoning is consistent with the local Transportation System Plan (TSP) or the land use model used in the development of the local TSP, and b) that the area subject to the zone change was not exempted from TPR review at the time of an urban growth boundary or other previous plan amendment. If the previous decision was made under an exemption from TPR Section -0060 and the rule has not been addressed in a subsequent decision, the rule must be addressed as part of the current decision process.
b. If yes to a), make finding of no significant effect.

5. If the proposal is a zone change that is not consistent with the Comprehensive Plan, determine whether the amendment intensifies trips:
   a. Identify before and after reasonable worst case land use assumptions.
   b. Compare trip generation numbers for before and after reasonable worst case land uses.
   c. Reduce number of trips based on enforceable ongoing TDM requirements that demonstrably limit traffic generation per TPR -0060(1) (c).
   d. If the amendment does not increase the number of trips, make a finding of no significant effect.
6. If the proposal affects a facility that does not meet mobility targets or one that is projected to fail to meet mobility targets within the plan period, it is subject to the “No Further Degradation” standard and the following considerations apply:
   a. If the increase in trips constitutes a “small increase” as defined in OHP Action 1F5, and the project is outside an interchange area, make a finding of no significant effect.
   b. If the amendment does increase the number of trips above the 1F.5 threshold, make Significant Effect Determination.
   c. If the facility will not meet standards at the end of the plan period and there is no improvement planned that will bring it up to standards, OHP 1F.5 applies and the performance standard for the application impacts is “no further degradation”.
7. When it has been determined that there is a significant effect on a state highway facility, consider:
   a. Whether the “no further degradation” standard will apply:
      i. If the subject property is within an “interchange area” as defined in (4)(d)(C), the “no further degradation” provision does not apply.
      ii. Will the ODOT facility meet the OHP mobility standards within the planning period, and
      iii. Are there planned improvements to the subject facility that would bring the performance of the facility up to the standards?
   b. If the facility will meet the OHP standards at the end of the plan period or there is a planned improvement that will bring it up to standards:

i. The “no further degradation” standard does not apply, so the proposal must reviewed for a significant affect related to the OHP mobility standards.
ii. Planned improvements that may be considered are different within or outside of an interchange area as defined in subsection (4)(d)(C).

c. If the proposed changes without mitigation will cause a significant effect, consider local government options to remedy the significant effect. The local jurisdiction has the option to apply remedies enabled in section 0060(2) or to balance economic and job creation benefits with partial mitigation pursuant to 0060 (11).

Section 0060 (2) requires the local government to *“ensure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility measured at the end of the planning period“* and lists four acceptable approaches to do so, by legislating consistency, mitigating problems directly or improving alternate modes or facility sites per subsection (e):

(e) Providing improvements that would benefit modes other than the significantly affected mode, improvements to facilities other than the significantly affected facility, or improvements at other locations, if the provider of the significantly affected facility provides a written statement that the system-wide benefits are sufficient to balance the significant effect, even though the improvements would not result in consistency for all performance standards.

i. Section 0060 (11) allows “partial mitigation” when the economic benefits, coupled with partial mitigation of the traffic impacts, outweigh the negative transportation impacts.
    1. Partial mitigation is acceptable only when the benefits outweigh the negative effects on transportation facilities and providers of any transportation facility that would be significantly affected give written concurrence that benefits outweigh negative effects on their facilities.

ii. The types of mitigation available under Section (2) of the rule include:
    1. Adopting the subject amendment including measures that "demonstrate" that development under the amendment will be consistent with the performance standards for affected facilities.
    2. Local legislative approaches that modify local intentions for system performance such as amending the TSP to commit to planned facilities to remedy the development impacts or reclassifying or changing the intended characteristics of the roadway to be consistent with expected conditions of the development
    3. Conditions of approval or applicant initiated measures that mitigate the impacts directly of improve other modes in a way that facility and service providers can agree that the impacts are balanced on a system-wide basis.

d. Coordination with ODOT is required at several steps in the process laid out herein. However, if ODOT participates fully in the review process set up in the rule there still may be circumstances where the agency may be in a position to recommend denial and potentially appeal a plan amendment that does not resolve ODOT issues if, for instance:
    i. Local findings neglect to account information ODOT submitted that could reasonably have led to different findings;
    ii. Safety and operations problems are expected to occur that have not been addressed in the applicant proposal or conditions of approval;
    iii. Findings related to a traffic impact analysis are incomplete or are arguably prejudicial to the interests of the agency;
e. Remedies that may be available when ODOT still has outstanding concerns about impacts on state facilities after the local decision is final could include:
    i. Subsequent Site Plan Review provides an opportunity to recommend conditions of approval for specific development projects.
    ii. Where direct access to state facilities is proposed, the State Highway Approach Permitting process allows for mitigation of impacts related to the specific land use proposed.
    iii. A negotiated mitigation agreement may be developed with the local government and/or the applicant to address concerns in addition to those addressed in TPR 0060.

3.2.3 TPR Section 0060 Relationship to Transportation System Planning

The TPR requires local governments and the state to prepare Transportation System Plans based on their existing comprehensive plans & zoning designations. Transportation system needs are projected based upon allowed uses under existing plans and population and job growth projections. All cities and counties have TSPs, but many have not been updated for years and do not address current conditions. Every comp plan / zone change adopted after TSP adoption will change the basis for the assumptions used in the analysis and the rationale for proposed system improvements listed in the TSP.

Transportation planning as set up in the TPR requires local governments and the state to plan for future transportation demand. Traffic demand on any particular facility will tend to grow at different rates than population and employment. Some communities' daytime population is much higher than the resident population, increasing traffic demand on the transportation system to, from and within, job-dense areas. Local population & employment forecasts may anticipate 1.5% growth per year, while a developing commercial or industrial district can increase traffic demand in its vicinity at a much higher rate.

Section -0060 of the TPR sets out the processes and alternate approaches that local jurisdictions can use to ensure that, if changes are made to the local comprehensive plan, including amending zoning maps, that the TSP is still adequate to serve existing and planned land uses, or to identify what modifications to the TSP may be needed. So comprehensive plan and zone changes are reviewed for consistency with the TSP, and steps must be taken to remedy significant inconsistencies. This is directed at maintaining balance between planned land uses and the transportation system that supports those land uses.

As an overall principle, the rule provides that where a proposed comprehensive plan or land use regulation amendment would "significantly affect" an existing or planned transportation facility, then the local government must put measures in place to ensure that the land uses allowed by the amendment are consistent with the identified function, capacity and performance standards of the affected facility.

As summarized in the introductory section of this chapter, TPR amendments allow that:

- Under certain circumstances a significant effect determination is not required and
- Where an amendment would significantly affect a transportation facility, there are certain conditions under which the impact does not have to be fully addressed or mitigated.

The desired outcome of these changes is that future growth and development-related decisions will achieve a better balance of economic development, transportation and

land use objectives. For practitioners – those who will need to apply or comply with the TPR – there are methods described on how to meet the state's mobility targets, as well as new ways to show that a proposal is consistent with adopted land use and transportation plans.

The rule clearly states that an amendment significantly affects a transportation facility if its traffic impacts are found to:

- Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);
- Change standards implementing a functional classification system; or
- Result in any of the following, as measured at the end of the planning period identified in the adopted TSP:
    - Generate types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;
    - Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or
    - Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

The burden of determining whether an amendment would "significantly affect" a transportation facility lies with local governments, not with ODOT.

So, if a significant effect finding is required, the next step for a local government is to determine whether or not the traffic impacts of the amendment would "significantly affect" one or more transportation facilities "as measured at the end of the planning period." This requires the local government to:

- Determine what existing and planned state and local transportation facilities it can count on as being available by the end of the planning period and
- Determine what the impact of the amendment would be on those facilities.

The TPR also allows, as part of the evaluation of projected conditions associated with a proposed amendment, that the amount of traffic projected to be generated may be reduced if the amendment includes an *"enforceable, ongoing requirement that would demonstrably limit traffic generation."* Requirements that might qualify as "enforceable" and "ongoing" are discussed in Section 3.2.5.

ODOT is notified of local land use activities as an affected agency and that notice triggers the first level of development review. In addition to notice of the pending land use action, the local government should also notify ODOT of a determination that an amendment could impact a state highway facility and request that ODOT identify what state transportation facilities and improvements the local government can rely on to be

available for use by the end of the planning period to help determine whether there is a significant effect.

As described in this document, the planned state facilities and improvements local governments can rely on include:

- Existing state facilities,
- Transportation facilities, improvements or services that are "funded for construction or implementation" in the Statewide Transportation Improvement Program (STIP),
- Projects in a financially constrained Regional Transportation Plan (RTP) adopted by a Metropolitan Planning Organization (MPO), and
- Improvements to state highways that are "included as planned improvements in a regional or local TSP or comprehensive plan" when ODOT provides a "written statement" that the improvements are "reasonably likely" to be provided by the end of the planning period. (See Reasonably Likely Determination guidelines in Section 3.2.2)

The rule contains provisions that distinguish proposed amendments located inside "interstate interchange areas" from those located outside such areas. Being within the interchange area means the application applies to properties located either within one-quarter mile of a ramp terminal of an existing or planned interchange along Interstates 5, 82, 84, 105, 205 or 405 or within an interchange area as defined in an adopted Interchange Area Management Plan (IAMP. This is described in further detail later in this chapter.

3.2.4 When Significant Effect Analysis is NOT Required

All zone changes need to be reviewed for compliance with Section 0060. However, the rules provide for two circumstances under which a finding of no significant effect can be made without traffic impact analysis. Under Section (9) a zone change that is found to be consistent with the comprehensive plan designation and consistent with the acknowledged local TSP does not require further analysis to make a finding of no significant effect. And a plan amendment or regulatory amendment inside an established Multimodal Mixed-Use Area is not subject to analysis regarding transportation facility capacity (congestion, delay, travel time).

Zone Changes Consistent with - 0060(9)

Pursuant to Section 0060 (9), a finding of no significant effect can be made if it is determined that the proposed zoning is consistent with the existing comprehensive plan map designation and the acknowledged local TSP.

For areas that were added to an urban growth boundary (UGB) after the "significant effect" threshold was added (effective April 11, 2005), determining that Section 0060 (9) is applicable will require finding that TPR 0060 was applied at the time that the area was

added to the UGB or that the local government has a subsequently acknowledged TSP update or amendment that accounted for urbanization of the subject area.

Determining Consistency with the Existing Comprehensive Plan Map Designation

Many local governments have a two-map land use system and use both an adopted comprehensive plan map with general land use designations and a corresponding zoning map that implements the comprehensive plan map with more specific designations. Other jurisdictions may have a single map showing both the underlying comp plan designations and the subsections that identify more specific regulatory characteristics. In either of these cases, Section 0060 (9) can be readily applied.

However, if the comprehensive plan map and zoning map are identical then it is more difficult to justify the application of Section (9). Local planners should consult with their DLCD Regional Representative for clarification if they want to try to apply Section 0060 for an amendment of the zoning designation where a “single map” land use regime is in place.

In most cases, determining whether the proposed zone change is consistent with the existing comprehensive plan map should be fairly straight forward. As an example, a commercial comprehensive plan land use designation may be implemented by a variety of commercial zones, such as office commercial, general commercial, mixed-use commercial, neighborhood commercial, etc. If an applicant wanted to change zoning from office commercial to general commercial, and both zones implement the commercial land use designation on the comprehensive plan, then the consistency requirement of TPR subsection 0060 (9)(a) could be met for the comprehensive plan.

Determining Consistency with the Acknowledged Transportation System Plan

In addition to establishing that a proposed zone change is consistent with the comprehensive plan land use designation, the applicant must provide adequate information so the local government can determine whether the proposed zoning is consistent with the locally adopted and state acknowledged TSPs. While detailed information is preferred, it may not be easy to meet this test, so several approaches to meeting subsection -0060(9)(b) are suggested below.

Subsection -0060(9)(b) is clearly met when it can be shown that the transportation modeling for the TSP accounted for the type and intensity of development that is allowed by the proposed zoning. How easily this determination can be made will depend in part on whether the assumptions and analysis used in the TSP are readily available, accessible and discernable. Ideally, an applicant will be able to review (or the local government will be able to document) the traffic-related assumptions specific to the area that is the subject of the zone change. If this review determines that the TSP assumed the type of development, or levels of trip generation comparable to the levels that would be generated by the proposed zoning, a finding can be made that the zone change is consistent with the acknowledged TSP and Section -0060(9) can be met. If there is

insufficient documentation of plan assumptions or modeling data, other factors in the adopted TSP, such as trip distribution, trip assignment, and background traffic, may be reviewed and considered for their adequacy in forecasting the comparable impacts to the proposed rezoning.

Complicating factors include TSP modeling that based future trip generation on population growth projections, making it impossible to make a trip generation finding specific to the subject parcel. However, the applicant or local government may be able to demonstrate that the trip generation resulting from the zone change is substantially similar to that assumed in the TSP and, therefore, the action can be found to be consistent with the acknowledged TSP.

In cases where the TSP was not based on a travel demand model (which is typical in smaller cities) or it is not clear what was assumed in the TSP, it may be possible for the applicant or local government to show that the proposed rezoning is “not inconsistent” with the acknowledged TSP.

Where modeling data is not available or where the traffic assumptions for the subject area are not documented, more emphasis will need to be placed on consistency of the proposed action with adopted land use policy, CFEC rules in 660-012, the TSP goals and objectives as they relate to the particular area and growth, economic development policies, or planned transportation improvements. Whether or not one can make a credible argument that a proposed zone is “not inconsistent” with the TSP will depend on local circumstances and available information.

> **Example 1.a:** A zone change is proposed to reduce the maximum permitted residential density in an area from R-20, an existing 20 units per acre residential zone, to R-12, 12 units per acre. Both zones (R-20 and R-12) implement a Medium Density Residential comprehensive plan designation (MDR). In this case, the local government could find that the zone change reduced trip generation and thus would not significantly affect transportation facilities. No further “significant effect” analysis would be required.
>
> **Example 1.b:** A proposed zone change would increase the maximum permitted residential density from an existing R-12 units/acre to R-20 units/acre. While the proposed zone is consistent with the comprehensive plan designation, more information is needed to determine whether the amendment is consistent with TSP.
>
> If it can be demonstrated that the TSP:
>
> > (1) Assumed that the property could be rezoned to any of the zoning districts implementing the medium density residential plan designation, and

(2) Was developed to accommodate the most intensive level of development permitted under any of the zoning districts implementing that plan designation (including the 20 unit/acre zoning district), then:

The local government can find that the zone change would not affect the assumptions that underlie the TSP and thus the application is not subject to "significant effect" review.

Example 1.c: A proposed zone change would increase the maximum permitted residential density from an existing R-12 units/acre to R-20 units/acre. The proposed zone is consistent with the comprehensive plan designation, but traffic assumptions for the subject area are not available due to lack of clear modeling data. However, the proposal is supported by findings that show that the proposed density is consistent with locally adopted policy statements regarding future development in the subject area and an associated trip generation analysis shows that the proposed zoning will not exceed the locally adopted mobility standard on affected transportation facilities. In this case it is reasonable to conclude that the zone change is not inconsistent with the TSP and that the application does not require "significant effect" review.

Example 1.d: A zone change is proposed to increase the maximum permitted residential density in an area from an existing R-12 units/acre to R-25 units/acre. The R-12 zone implements the Medium Density Residential comprehensive plan designation (MDR). The R-25 implements the High Density Residential comprehensive plan designation (HDR). In this case, the proposed zone change is not consistent with the comprehensive plan, so the application is subject to "significant effect" analysis.

ODOT's Role in Determining Consistency with Plans

ODOT's participation in a zone change decision reviewed under Section -0060(9) will typically occur in response to the original notification of a proposed zone change for a property in the proximity of, or having potential impacts to a state facility. In straightforward cases, where there is little ambiguity about the applicability of section 0060 (9), ODOT's role in the local zone change process will be minimal. However, in cases where it is difficult to support findings concluding that the requirements of section 0060 (9) have been met, the Agency has a role in reviewing the proposed changes in more detail.

ODOT may make the case that Section -0060(9) does not apply where the Agency does not agree that the proposed action is consistent with the local comprehensive plan or transportation system plan and the action is anticipated to have a significant effect on a state transportation facility. In any case, note that ODOT must participate in the local proceedings prior to the local decision to ensure standing to appeal a potentially adverse decision.

Multimodal Mixed-use Areas - 0060 (8) & (10)

Multimodal Mixed-use Areas, or MMAs can be adopted, and subsequent amendments within their boundaries adopted, without consideration of local or state mobility performance measures (roadway capacity, congestion, delay, travel time, etc.) The act of designating an MMA is not subject to the significant effect evaluation requirements or remedies and no significant effect determination is required. For proposed MMA designations near state highway interchanges, ODOT may need to provide written concurrence, as further discussed under *Planning for MMAs near Interchanges* later in this section.

Any local government can take the land use planning and implementation steps in 0060 (10) necessary to establish an MMA. Because MMAs must include relatively high residential densities, and must limit or exclude low-intensity and auto-dependent land uses, MMAs are most likely to be designated in larger metropolitan areas and within or near existing central business districts, downtowns, and transit lines. There are similarities between the requirements of an MMA designation and the mixed-use Metro 2040 Growth Concept design types, which may make the Metro-area local governments among those likely to consider MMAs. There are also similarities to the ODOT designated Special Transportation Areas (STA); existing STAs may be candidates for MMA adoption.

Jurisdictions must adopt boundaries and make findings of consistency with TPR Section 0060 (10) to adopt an MMA designation. Because this action is a legislative plan amendment, the MMA designation must be acknowledged by the Land Conservation and Development Commission (or not appealed) in order to go into effect.

Establishing a Multimodal Mixed-Use Area

The steps to legislatively adopt an MMA include:

- Amend the adopted comprehensive plan to define the MMA boundary;
- Adopt implementation measures through ordinance amendments (e.g., development code, land use regulations, transportation standards);
- Follow the land use notice and inter-agency coordination requirements for legislative amendments; and
- Support the MMA-related amendments with findings of consistency with the Statewide Planning Goals, particularly for Goal 12 – Transportation, and compliance with TPR Sections 0060(8) and (10) specifically.
- A local government's findings supporting the MMA designation should specifically reference provisions in the locally adopted TSP and development code that satisfy the requirements of TPR Section 0060(8)(b), such as street connectivity and pedestrian-friendly street design, and/or the amendment creating the MMA must include revisions to policy and regulatory documents that require the Section 0060 (8) characteristics of an MMA to be design

standards and/or conditions of approval as redevelopment and new development occur.

- While capacity or mobility issues will not be the basis for decision making on MMA designations, an assessment of the operational and safety impacts of the MMA on the state system is needed and this may require a TIA or study. It is the local government's responsibility to provide findings and information in order to support the local action. A TIA is not explicitly required through the TPR; however, one is strongly recommended for potential MMAs near interchange facilities. An assessment of the impacts of the MMA on the state system will be particularly important to provide to ODOT for MMAs proposed within ¼ mile of an interchange, where written concurrence from the Agency is required. See *Planning for MMAs near Interchanges* later in this section and TPR Section 0060(10).

ODOT's Role in MMA Designations

The act of adopting an MMA designation is exempt from meeting mobility performance targets in OHP Tables 6 and 7. Regardless of the location of a proposed MMA, when state highways are affected ODOT has an advisory role in the local decision related to technical modeling and analysis and should review and comment on recommended (and/or previously adopted) standards that support the proposed designation.

While not explicit in the TPR, where an MMA designation includes a state facility the expectation is that ODOT will participate early in the local planning process, well before public legislative hearings and adoption. A way ODOT staff can assist the local government is with scoping for any necessary analysis to ensure that resulting information is sufficient to identify operational impacts on the state facility. ODOT has a responsibility to ensure that other transportation performance requirements are met. The TPR provides that MMA designation is *" not exempt… from other transportation performance standards or policies that may apply including, but not limited to, safety for all modes, network connectivity for all modes (e.g., sidewalks, bicycle lanes) and accessibility for freight vehicles of a size and frequency required by the development."*

Through the local planning process (as an early participant and/or as part of the local adoption process), ODOT will have an opportunity to verify whether an MMA requires ODOT written concurrence. ODOT concurrence is required if the boundaries of the MMA are within one-quarter mile of any ramp terminal intersection of an existing or planned interchange.

Planning for MMAs Near Interchanges

The TPR specifies that ODOT has a responsibility to assess the operational and safety performance of interchanges and mainline facilities when MMAs are proposed within one-quarter mile of an interchange's ramp terminal intersection. In these cases, ODOT

written concurrence with the MMA designation is required as a part of MMA adoption.[10] ODOT must consider safety, including crash rates and top 10 percent Safety Priority Index System (SPIS) locations, and the potential for exit ramp backups onto the mainline prior to issuing written concurrence. These circumstances don't necessarily stop ODOT from "concurring" with the MMA designation; rather they become considerations in the designation process to help to ensure the system is managed as effectively as possible.

If ODOT finds that there are interchange-related operational or safety issues resulting from the designation of an MMA, these conditions may need to be addressed in a traffic management agreement between ODOT and the local government. The TPR does not require that the impacts to the interchange or mainline facility be fully mitigated at the time of MMA designation. However, in order for ODOT to concur with the MMA decision, the local government and ODOT will need to consider how potential impacts can be avoided or mitigated. This may occur through developing agreements or management plans that address identified interchange-related operational and safety issues and/or include measures to move traffic away from the interchange. The agreement may also address issues that are forecast to occur or may arise unexpectedly in future years.

ODOT also has a role in reviewing proposed MMA designations within the management area of an adopted IAMP. The TPR does not specifically require that a local government obtain a written concurrence statement from ODOT when the proposed MMA is within an adopted IAMP management area. However, the TPR requires that, if the proposal is within an IAMP area, the MMA must be consistent with the provisions of the IAMP. The local government can address this requirement through findings of fact supporting MMA adoption. Where there is an adopted IAMP, ODOT will review how the proposed MMA boundaries relate to the management area and how well any amendments to proposed land uses and development requirements match the land use and transportation assumptions and recommendations in the IAMP. If the MMA is found to be consistent with the adopted IAMP, ODOT can concur with the designation. If there are inconsistencies with the IAMP, ODOT and the local government will need to take steps to either address inconsistencies through mitigation or suggest changes to the MMA and/or amendments to the IAMP to achieve consistency. ODOT may appeal local adoption of the MMA if concerns are not adequately addressed.

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[10] Note that designation of an MMA within the area of an adopted Interchange Area Management Plan (IAMP), where the MMA designation is consistent with the IAMP, is considered an action where performance standards related to mobility do not apply (Section (10)(b)(E)(ii)). ODOT's role in MMA designations within IAMP boundaries is explored later in this section.

To minimize delays and misunderstandings, ODOT recommends that the local government or applicant provide ODOT with a TIA that provides sufficient information to determine whether there are current or projected future traffic queues on an interchange exit ramp. TIAs used for this purpose need to include analysis of existing and potential safety and operational issues for modes at and near the interchange and any proposed traffic management measures to mitigate potential safety concerns for ODOT's consideration in review of the proposed MMA designation.

The TIA may identify needed capacity improvements, in addition to operational and safety issues. Volume-to-capacity ratio analysis may be used to determine the extent of congestion using the adopted OHP v/c targets (or adopted alternatives). An operational analysis should also be part of the assessment to determine the presence and extent of any traffic operational and safety impacts. A specific TIA may inform the agreement with local governments described in the TPR for potential MMA areas near interchanges. What is beneficial for a specific traffic impact analysis may differ based on the location and other characteristics of the proposed MMA.

If sufficient transportation analysis is not provided by the local government to support ODOT written concurrence, the Agency may conduct the analysis on its own to make the determination and identify potential mitigation measures to include in agreements with local governments as described in the TPR. Agency staff should communicate with the local government that this may complicate and/or lengthen the time necessary to make a determination on a proposed MMA designation within interchange areas as required in the TPR.

Outside of designated IAMP areas, and where an MMA designation is proposed beyond one-quarter of a mile from an interchange, ODOT concurrence is not required under the TPR. The Agency will still review these plan amendments as a party to the local government's legislative amendment process and, where necessary, will have an opportunity to comment and potentially appeal a local MMA adoption based on factors other than mobility targets for the affected facility(ies). For example, ODOT may consider and comment on safety, adequacy of multimodal facilities, transit capabilities and other characteristics.

Reviewing Plan Amendments and/or Zone Changes within a Designated MMA

When reviewing a Plan Amendment or Zone Change within an MMA for compliance with TPR 0060, do not use the mobility standards in the OHP. You can use safety or other measures to determine significant effect. If the MMA is within an interchange area there must be an ODOT letter of concurrence which should guide how you review the amendment for TPR 0060 compliance.

3.2.5 Determining Significant Effect

As noted in the introduction to these guidelines, after it is determined how Section 0060 applies, "step 2" for the local government addressing a proposed comprehensive plan or land use regulation amendment under OAR 660-012-0060 is to determine whether or not the amendment would **"significantly affect"** an existing or planned transportation facility. A significant effect will result when an amendment:

- Results in "*types or levels of travel or access"* that are inconsistent with the functional classification of an existing or planned transportation facility. The terms in quotes are not defined, but presumably:
  - "Types of travel" can include local versus through trips, proportions of vehicle types, such as a notable increase in large truck or transit vehicle trips, shifting focus from vehicle to transit trips, etc.
  - "Levels of travel" could relate to facility capacity, critical turn movements, travel speeds, etc.
  - "Types and levels of access" relates to the need for direct access to a facility, an increased density / reduced minimum lot size that will increase access demands, design standards reducing the allowable number of approaches where there is demand for increased numbers of approaches, etc.
- Degrades the performance of a transportation facility such that it would not meet the performance standards identified in a TSP or comprehensive plan; or
- Further degrades the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in a TSP or comprehensive plan.

Determining consistency with undefined standards is tricky. Access consistency might be interpreted to mean existing and allowed approaches under the amendments will meet spacing and other approach permitting standards. Types of travel are presumed consistent if they are consistent with the expectations for the roadway based on functional classification; for example, a statewide highway carries a high proportion of through traffic rather than local. Or a land use that will generate a high level of trips in and out of the local area would be changing the type of travel in a way that is inconsistent with the functional classification of an affected District Highway.

For state highway facilities, a significant effect most often occurs when a proposed use will create conditions that do not meet objectives for maintaining roadway function as established in the OHP (primarily highway classification definitions in OHP Policy 1A and highway mobility targets in OHP Policy 1F). Note that, when developing system and

facility plans (where the state and local governments jointly take a broad look at what is viable for an identified impact area around a particular facility), the State's mobility objectives are considered "target" levels. However, for purposes of local plan amendment review, the targets are treated as standards in order to ensure compliance with applicable administrative rules, including determining compliance with the TPR.

A proposed comprehensive plan or land use regulation amendment that does not result in a defined impact on the transportation system (i.e. does not exceed performance standards or allow more trips than do the current plan and zoning designations for a facility that is already projected to exceed standards) would not trigger a significant effect and, therefore, the provisions of Section -0060 would not apply to the amendment.

To identify impacts "at the end of the planning period identified in the adopted TSP" (see OAR 660-012-0060(1)(c)),[11] the local government first must determine which of any planned transportation improvements identified in its TSP or comprehensive plan will be provided (i.e., in place and available) at the end of the planning period. These are considered in addition to existing transportation facilities and services.[12]

Section -0060(4) of the TPR specifies which planned facilities, improvements and services a local government can rely on to determine whether a proposed amendment would significantly affect an existing or planned transportation facility. These improvements may include both state and local transportation facilities.

Planned Improvements Local Decision Makers Can Rely on for Significant Effect Analysis

OAR 660-012-0060(4) establishes various levels of planned, non-state transportation facilities, improvements and services a local government may rely on when conducting a "significant effect" analysis. The first thing to consider is planned transportation facilities, improvements and services that can be assumed as being "in-place" or committed and available to provide transportation capacity. Subsection –0060(4)(b) details the list of planned project types, all of which have some level of funding commitment associated with them, that can be considered as "in-place and available" by the end of the applicable planning period. In other words, the transportation capacity

[11] Section 0060 also regulates amendments that change the functional classification of an existing or planned transportation facility (e.g., amend the classification from a collector to an arterial) or change the standards implementing a functional classification system (e.g., change the lane width standards or the right-of-way requirements applied to a functional classification). When either circumstance occurs, the amendment is deemed to "significantly affect" a transportation system and the local government must apply one or a combination of the remedies in OAR 660-012-0060(2). These guidelines do not address this situation.

[12] Services includes transit services and measures such as transportation demand management.

provided by these projects may be considered as available to accommodate traffic increases associated with a proposed amendment.

Under this provision, local governments may rely upon the project lists that they used to establish a systems development charge (SDC) rate, even if it is likely that the SDC will not fully fund all improvements on the list.[13] However, state facilities that fall into this category still require a reasonably likely determination to be relied upon.

When responding to local government requests for review and comment on proposed plan amendments, ODOT will need to identify which state transportation facilities, improvements or services identified in the local TSP or comprehensive plan are "funded for construction or implementation." For ODOT projects, the following guidelines should be used:

C-STIP Projects - ODOT's Construction STIP; identifies project scheduling and funding for the state's transportation preservation and capital improvement program for a four-year construction period.

The C-STIP projects that a local government may rely on in making a significant effect determination will be those that are "funded for construction or implementation". This includes projects for which the construction costs are fully funded. It also includes projects that may be under-funded because the construction funding stream represents a commitment to build the project. However, it would not include projects where the funding is committed for something other than construction, e.g. planning, right of way purchase or environmental work.[14] The broader term "implementation" was included in the rule to cover transportation services and other measures, such as transportation demand management programs, that are provided in a manner that does not involve physical construction.

> *Example 2: A state highway project is proposed to be built in three phases. Phase 1 is fully funded for construction, but phases 2 and 3 have had funding approved only for right of way purchase. Under this scenario, only phase 1 may be considered "funded for construction or implementation." Note that this would be true even if phase 1 was funded for construction at a level somewhat below its full anticipated cost. Because phases 2 and 3 have been funded only for right of*

[13] Note that the rule distinguishes funding in the STIP from funding through local plans or mechanisms; Inclusion of a state facility in a local funding plan or program does not eliminate the need for a "reasonably likely" determination by ODOT for state facilities. The focus of OAR 660-004-0060(4)(b)(B) is regional and local transportation improvements, not state transportation improvements.
[14] While funding for environmental work might later lead to funding for construction that is not always a certainty. Until there is funding for construction, sole reliance on the C-STIP project is not permitted.

way purchase, ODOT would need to determine whether construction of either or both phases is reasonably likely within the planning period.

D-STIP Projects - Development STIP; includes projects that require more than 4 years to develop or for which construction funding needs to be obtained. Projects in the D-STIP are not yet "funded for construction or implementation" so will require a "reasonably likely" determination before they can be "relied upon."

MPO Financially Constrained Regional Transportation Plan (RTP) – Transportation facilities, improvements or services in a metropolitan planning organization (MPO) area that are part of the area's federally-approved, financially constrained RTP are considered to be funded.

Amendments Outside an Interstate Interchange Area

When the location where the proposed amendment will be applied is outside of an interstate interchange area, as defined in OAR 660-012-0060(4)(d)(B) and (C),[15] then, in addition to the transportation facilities and improvements identified above, a local government also may rely upon:

- Improvements to state highways that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when ODOT provides a written statement that the improvements are "reasonably likely" to be provided by the end of the planning period. OAR 660-012-0060(4)(b)(D).
- Improvements to regional and local roads, streets or other transportation facilities or services that are included as planned improvements in a regional or local transportation system plan or comprehensive plan when the local government(s) or transportation service provider(s) responsible for the facility, improvement or service provides a written statement that the facility, improvement or service is "reasonably likely" to be provided by the end of the planning period. OAR 660-012-0060(4)(b)(E).

Amendments Inside an Interstate Interchange Area

Interstate highways and associated interchanges play a major role in moving people and goods between regions of the state and between Oregon and other states. These facilities represent a tremendous public investment in highway infrastructure that the state wishes to protect. Consequently, the standards applicable to proposed

[15] Beyond one-quarter mile from the ramp terminal intersection of an existing or planned interchange along Interstates 5, 82, 84, 105, 205 or 405 or outside an interchange management area as defined in an adopted Interchange Area Management Plan on any of these facilities

amendments are more stringent for land areas located inside interstate interchange areas.[16] If the proposed amendment applies to land located inside of an interstate interchange area, the local government may consider only the planned facilities, improvements and services identified in Section -0060(4)(c) in determining whether the amendment would have a significant effect on an existing or planned transportation facility.

Section -0060(4)(c) sets out slightly different parameters for reliance on planned improvements. Generally, the improvements described in subsection 4(b)(A)-(C) can be relied upon; subsections 4(b)(D) and (E) can only be relied upon where ODOT provides a written statement that the proposed funding and timing of mitigation measures are sufficient to avoid a significant adverse impact on the Interstate Highway system caused by the proposed amendment.

This standard is somewhat broader than and different from existing ODOT standards because it involves an assessment of adverse impact to the "interstate highway system." This incorporation of a broader reference to the "system" was intentional to allow ODOT to consider the location of the proposed use and its impact on the interstate "system" in a broader fashion.

Examples of Improvements that can be Relied Upon to Meet Future Needs within an Interchange Management Area

> **Example 3.a:** An applicant is proposing plan and zoning amendments from low density residential to commercial for a 10-acre parcel located within one-quarter mile of an interchange along I-5. The Oregon Transportation Commission has adopted an Interchange Area Management Plan and all local governments with jurisdiction within the interstate interchange management area have adopted necessary amendments and/or resolutions to bring their codes into compliance with the IAMP. Improvements to state highways or regional or local roads and streets that are not identified in the STIP are included as planned improvements in the local government's TSP or comprehensive plan.
>
> In this situation, if the proposed amendment is consistent with the IAMP, then the local government reviewing the application may be able to consider the additional planned state and local transportation improvements to determine whether the amendment would significantly affect a transportation facility. Specifically, the

[16] "Interstate interchange area" means (1) property within one-quarter mile of a ramp terminal intersection of an existing or planned interchange on an Interstate Highway (i.e., Interstates 5, 82, 84. 105, 205 and 405), or (2) the interchange area as it is defined in an Interchange Area Management Plan adopted as an amendment to the Oregon Highway Plan.

local government reviewing the amendments may also consider the planned state and local improvements identified in OAR 660-012-0060(4)(b)(D) and (E), but only if ODOT or the local government or transportation service provider, as applicable, provides a written statement that the state improvement or the regional/local improvement or service is reasonably likely to be provided by the end of the planning period.

Example 3.b: In this second example, the same facts are present except there is no adopted IAMP. In this case, the local government may consider the planned improvements identified in OAR 660-012-0060(4)(b)(D) and (E) as part of its significant effect determination only where (1) the applicant proposes mitigation measures to avoid a significant adverse impact on the Interstate Highway system; (2) ODOT provides the local government with a written statement that the proposed measures are sufficient to achieve that result;[17] and (3) ODOT (for improvements to state highways) and the relevant local government or transportation service provider (for improvements to regional and local roads, streets and other transportation facilities or services) also indicate in writing that the planned improvements are reasonably likely by the end of the planning period.

In this second example, steps will need to be taken to ensure that the proposed improvements will be made by the time of development. For instance, the local government could adopt an additional plan policy when approving the plan amendment requiring that these measures be completed by the time of development, or ODOT and the parties may enter into a binding agreement that ensures that these measures will be implemented by the time of development. These measures would then be included as conditions of approval of the development at the time of development review.

Identify Traffic Generation Assumptions for Significant Effect Analysis

For traffic analysis, ODOT should be a party to the development of the assumptions that will be used to project traffic generation related to a land use amendment proposal. However, the local government is the lead agency in this process unless ODOT initiates the analysis independently.

Typically, the evaluation of traffic impacts is based on a “reasonable worst case” scenario for potential land use and traffic assumptions, rather than the particular land use and effects of what is proposed. The TPR does not specify the use of a reasonable

[17] To determine this, the applicant may need to submit a traffic impact statement or traffic impact analysis to ODOT. See Section 3.2.13.

worst case analysis, but DLCD suggests that this approach will get the most reliable results, and that opinion is supported by related case law. This is actually a two-step process that first assesses the reasonable worst case assumptions for land uses that may be developed within the plan period and subsequently assesses the reasonable worst case of the traffic characteristics of those land uses.

It is also important to take into account what is "reasonable" for the particular location that is being assessed. The concept of "worst case" is premised on an assumption that whatever else can be developed on a site will be developed so the transportation system needs to be sufficient to serve that set of possible uses. The "reasonable" part is about the market forces and local objectives that will affect what will actually be built. What is reasonable in Hillsboro will no doubt be entirely different from what is reasonable in Hines.

Oregon case law provides some insight into assumptions about defining a locally based "reasonable worst case" scenario for land uses when projected traffic effects are needed. The Land Use Board of Appeals provided some clarification in Rickreall Community Water Association v. Polk County, 53 Or LUBA 76 (2006). This decision says that the highest potential allowed use of the property must be considered for the purposes of projecting future trips, but that this approach does not require an estimation of the absolute maximum traffic that a use category might generate.

> *"A common approach in estimating traffic generated by a particular use is to rely on published data, such as the Institute of Transportation Engineers Trip Generation Handbook. Such data are usually based on average or typical intensities for particular categories of uses. Another common approach is to examine similar developed uses in the vicinity, and to base trip generation estimates on the traffic levels generated by such similar uses. We have never held that either approach requires an estimation of the highest theoretical intensity of a particular use category, and it is difficult to see how the theoretical intensity could be calculated with any accuracy."*

In estimating traffic generated for plan and zoning amendments, ODOT will generally rely on the judgment of local decision makers, provided there is some documentation of the methodology used, the assumptions made and the basis for those assumptions. Some types of information that would support land use assumptions include:

- Historic growth trends; population as well as industry-specific growth trends and projections. In many areas, particularly smaller markets' and rural communities' assessment of what is reasonable, may be based on local knowledge of economic conditions, population projections and past trends.

- As used in "available lands" assessments, only properties below a certain improvement to land value ratio may be assumed to be likely to redevelop.
- Likely infill of vacant properties in otherwise developed areas and/or added development "pads" on developed large lots may be assumed, where the reasoning behind the assumption can be documented.
- In zones allowing a broad range of uses, the basis for assumptions regarding what is "reasonable" should be documented where it is not simply the "worst case" for traffic related to allowed land uses.
- Site constraints in the area, either man-made, such as lot or street configurations, or natural such as floodplains or steep slopes, etc.
- An economist's report might be the basis for an assumption that the area will not fully build out to allowed densities within the planning horizon due to a location-specific market factor.

The methodology and assumptions used to evaluate legislative plan amendments, such as TSP updates and amendments to comprehensive plans, may be different from assumptions used to evaluate quasi-judicial plan amendments, where the subject property has to be shown to comply with specific standards and be consistent with existing plans. Similarly, assumptions for a single parcel or small area may be different than for an entire city or large sub-area. In all instances, communication and coordination between local and ODOT staff about methodology and assumptions is crucial early in the traffic analysis process.

OHP Policy 1F supports this approach. Consistent with Policy 1F (Action 1F.2), when evaluating how amendments to transportation system plans impact highway mobility, *"planned development" assumptions must be considered that are consistent with the community's comprehensive plan:*

> *Planned development means the amount of population or employment growth and associated travel anticipated by the community's acknowledged comprehensive plan over the planning period."*

So, growth "anticipated" in local plans (but not full build-out of allowable land uses, which would amount to using the worst case without tempering that by what is reasonable), plus the "forecasted growth of traffic on the state highway due to regional and intercity travel" are the basis for projections of travel demand on the state facility at the end of the planning period.

Identify the Applicable Planning Period

The TPR establishes "the end of the planning period in the adopted transportation system plan" as the period for the transportation analysis to determine whether a

proposed amendment would significantly affect an existing or proposed transportation facility. The planning period will vary with the age of the plan; TSPs typically are based on a 20 year planning horizon.

When considering impacts to regional and local (non-state) roadways, the time period to be used to determine significant effects is the time period identified in the local TSP. However, when considering impacts to state highways, this is not necessarily so. The Oregon Highway Plan (The highway modal plan of the Oregon Transportation Plan which is ODOT's adopted TSP) Action 1F.2 provides:

> *"…When evaluating highway mobility for amendments to transportation system plans, acknowledged comprehensive plans and land use regulations, use the planning horizons in adopted local and regional transportation system plans or a planning horizon of 15 years from the proposed date of amendment adoption, whichever is greater".*

So, if a local TSP has a planning horizon that is 18 years out, ODOT would use that 18-year planning horizon as the timeframe for determining whether a planned state highway improvement is reasonably likely to be provided. However, if the local TSP has a planning horizon that is just 8 years out, the state would use a 15 year planning horizon for state facilities as the timeframe for its "reasonably likely" and "significant effect" determinations, while local transportation service providers would use an 8 year planning horizon for the facilities they provide. The relevant TSP for non-state facilities is the local TSP, not the Oregon Transportation Plan.

The determination of the applicable planning period for local facilities and services is made by the local government in its review of the proposed plan amendment. If there is uncertainty about what the applicable planning period of the local TSP is (i.e. if it is not clear from the text of the adopted plan) local governments are generally given discretion to interpret how to apply the plan.

Reasonably Likely Determination

The TPR section that calls for an assessment of whether planned improvements are "reasonably likely" to be provided by the end of the planning period is an important element of TPR Section 0060. This provision recognizes that adopted transportation system plans often include more transportation projects and improvements than will be funded or constructed over the original 20-year planning period. Where funding is uncertain or unlikely, a project or improvement that is included in the TSP may not be counted as a "planned improvement" for purposes of Section 0060 to decide whether or not planned transportation facilities and improvements are adequate to support planned land uses.

ODOT may be asked to provide a written statement whether improvements to state highways that are included as planned improvements in a regional or local TSP or comprehensive plan are "reasonably likely to be provided by the end of the planning period." OAR 660-012-0060(4)(b)(D).[18]

To make a "reasonably likely" determination, ODOT must determine the following:

- A state highway improvement is included as a planned improvement in a regional or local transportation system plan or comprehensive plan;
- The improvement is not a transportation facility, improvement or service that is "funded for construction or implementation" in the Statewide Transportation Improvement Program (STIP) (which is already accounted for); and
- In ODOT's opinion, it is reasonably likely that the state highway improvement will be provided "by the end of the planning period"

OAR 660-012-0060(4)(b)(D) requires that ODOT provide its "reasonably likely" determination in the form of a **written statement**. When ODOT provides a written statement indicating that a planned state improvement is reasonably likely to be provided by the end of the planning period, that written statement is deemed conclusive (i.e., cannot be rebutted) for the purposes of the subject amendment. Upon receiving such a written statement from ODOT, a local government then may consider the additional transportation capacity provided by the reasonably likely improvement, as measured by the applicable performance standard, to determine whether a proposed amendment will significantly affect existing or planned transportation facilities.

If ODOT does not provide a written statement stating that a state highway improvement is reasonably likely to be provided by the end of the planning period, or if ODOT submits a written statement that such improvement is not reasonably likely, then the local government may not rely on that improvement when determining if the proposed amendment will have a significant effect.[19]

ODOT Considerations for Reasonably Likely Determinations

The reasonably likely written statement is intended to answer the question: "Is it reasonably likely to expect that the transportation capacity provided by the planned improvement will be in place and available by the end of the planning period and, therefore, can it be relied upon when conducting the traffic analysis that accompanies

[18]OAR 660-012-0060(4)(b)(E) also directs local governments or transportation service providers to make "reasonably likely" determinations for planned improvements to regional and local roads.
[19] For a summary of ODOT participation roles see TPR Subsection (4)(e)(A) and Guidelines under 3.2.6, ODOT Participation in -0060 Reviews.

the proposed amendment?" ODOT considerations for determining whether a future facility improvement is "reasonably likely" include but are not limited to:

- The cost of the planned improvement and its relative priority for ODOT funding, considering other needs in the region and expected funding levels;
- Whether there has been recent history of securing construction funding for the type of planned improvement;
- Location of the planned improvement in an area that anticipates high growth that may be a high priority area for targeting future transportation revenues;
- Location of the planned improvement in an area targeted for special land use consideration, such as a town center, a main street or an industrial area that benefits economic development in the region and/or the state and is therefore likely to receive a higher priority for future transportation funding;
- Demonstrated community and/or political support for the planned improvement or similar improvements that would likely result in securing funding by the end of the planning period;
- Location of the planned improvement on an arterial or statewide highway, or a designated freight route, that would be reasonably likely to receive future funding ahead of a lower classified facility;
- Whether the planned improvement would provide a critical transportation connection or complete a key transportation link that would have system-wide benefits;
- Potential availability of unique funding sources for the planned improvement, such as tax increment financing, special assessments, private contributions or other local initiatives; and
- Whether the proposed improvements reflect ODOT's Practical Design initiative or agreements associated with adopted alternative mobility targets.

For state highway improvements ODOT may find that reasonably likely determinations are more problematic for large-scale projects (e.g., projects that have multimillion-dollar price tags). While many of the above factors could go into the determination for these types of projects, other important factors will relate to the level of community/political support for a project of this type. In this circumstance ODOT may choose to consider these additional factors:

- Broad, multi-jurisdictional support (community, business, and political) for the planned improvement;
- Whether any project development steps have been completed towards providing the planned improvement (e.g. inclusion in the Developmental or D-STIP, preliminary design work or purchase of right-of-way);

- Any apparent “fatal flaws” that could obstruct moving the planned improvement forward; and
- The cost of the planned improvement and how important it is in relation to other planned projects within the Region.

Important Notes on Reasonably Likely Determinations

1. For state highways, the determination of whether improvements are reasonably likely to be provided by the end of the planning period is ODOT’s decision. This is true even where a local government has authorized local funds or has a revenue stream in place to fund the project. ODOT will consider any local commitment to contribute to project costs when determining whether an improvement is reasonably likely to be provided during the planning period.
2. An ODOT statement that a facility is reasonably likely to be available within the planning period applies only the proposed plan amendment for which it is written. If a subsequent plan amendment is proposed that affects the same facility, the process has to be repeated and there may be changes of circumstance that would result in the second instance being denied reasonably likely findings.
3. Where a state facility is affected so that an ODOT reasonably likely letter is needed, the local jurisdiction cannot proceed to rely on the subject facility if no such ODOT letter is received.

3.2.6 Significant Effect Remedies – Mitigation

Pursuant to Section -0060(2), if a local government determines that a proposed amendment will have a significant effect, approval of the proposal requires measures that will ensure that the allowed land uses are consistent with “the identified function, capacity, and performance standards of the facility,” as measured at the end of the planning period in the adopted TSP. The local government must:

- Adopt measures that ensure that the allowed land uses are consistent with the planned function, capacity, and performance standards of the affected facility;
- Amend the TSP or comprehensive plan to provide transportation system improvements sufficient to support the proposed land uses; and/or
- Amend the TSP to modify the planned function, capacity or performance standards of the affected facility (Section -0060(2)(a) through (c)). The local government can accomplish this in a number of ways, including:

- Amend the TSP to include facilities, improvements or services adequate to support the proposal and include a funding plan and/or mechanism as required by section 0060 (4).
- Amend the TSP to modify the function, capacity, or performance standards of a non-state facility. An example would be changing the functional classification of a roadway and/or its level of service standard.
- Require transportation system management measures or transportation improvements, including a timeframe for implementation, as a condition of development approval. This can be a problematic approach since the applicant for the plan amendment may be different from the future developer. Some jurisdictions resist putting development related conditions on plan amendments based on the logic that development creates the actual impacts on transportation. However, some jurisdictions will condition plan amendment approval, providing an opportunity to let applicants know what will be expected of them when development occurs. One approach to accomplish this would be to apply an overlay zone or area plan that creates special conditions for subject development area, a distinct planning process enabled in some development codes that would typically run concurrent with the plan amendment.

The local government is required to remedy a significant effect through one or a combination of the approaches listed above unless:

- The amendment is supported by a commitment to improvements that will benefit modes other than the significantly affected mode and that are sufficient to balance out the identified significant effect of the proposed amendment per Section -0060(1)(c);
- The local government approves the amendment inside an adopted MMA; or
- The local government approves partial mitigation, pursuant to Section -0060(11).

3.2.7 Remedies – Reduce or Avoid the Significant Effect

Measures that Reduce Traffic Generation

Revised language in Section -0060(1)(c) clarifies that when evaluating projected traffic conditions, any such requirement(s) proposed as part of the amendment may be considered and the assumed trip generation numbers may be reduced accordingly when determining significant effect.

> *"As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment."*

Examples of enforceable requirements include but are not limited to trip caps and transportation demand management actions, such as parking maximums, hours of operation or staggered shifts for labor intensive uses. Trip caps, or trip budgets, are adopted locally by ordinance as part of a comprehensive plan or zone amendment, or as a condition of approval of a development proposal. Transportation demand management requirements can be incorporated into a local development code or zoning ordinance through a legislative amendment, or can be more narrowly applied to a specific geographic or project area, as part of an amendment proposal and pursuant to conditions of approval adopted through the development approval process.

Local governments can also alter land use designations, densities, or design requirements through a legislative amendment to the local development code or zoning ordinance to reduce demand for automobile travel. Local plans may also address future travel needs through the development of other modes.

System-wide Balancing Test

Section 0060 (2) includes a list of acceptable remedies to mitigate a demonstrated significant effect on a transportation facility. New to this list is a "balancing test" that allows system-wide improvements to be part of a local government's determination of whether or not the proposed land uses and the planned transportation system are consistent. Improvements that can be considered when determining transportation/land use consistency include those that benefit other modes, improvements to the affected facility at other locations, or providing improvements to facilities other than the one significantly affected.

For state facilities, ODOT must agree and provide a written statement that the system-wide benefits are sufficient to balance the significant effect to a state facility. Under this TPR provision, it is not necessary to demonstrate that the proposed improvements will bring the affected facility up to all applicable performance standards in order to make a determination of no significant effect.

Local Actions to Implement System Balancing Approach

Where a proposed amendment is expected to significantly affect a transportation facility, a local government may propose a remedy that consists of improvements to state,

regional or local transportation facilities or services on the affected facility or at other locations or improvements that benefit other modes of transportation, rather than improvements only to the affected facility.

When a state highway is affected and addressed under this option, the local government will need to request a written statement from ODOT agreeing with the assessment that the system-wide benefits are sufficient to balance the significant effect, even though the improvements may not result in fully meeting the mobility targets or other applicable performance measures.

Traffic impact analysis will be needed to establish baselines of facility performance. against which a determination can be made of whether the system level mitigation proposed is sufficient to balance against the significant effect. For an affected state facility, the traffic impact analysis should identify recommended capacity improvements, as well as operational and safety measures. Typically, a volume-to-capacity (v/c) ratio analysis will be needed to determine the extent of congestion on the state facility and the adopted OHP v/c targets will be the baseline against which the extent of these impacts is evaluated. The prior adoption of alternative mobility targets and/or methods may change the requirements/thresholds for this initial analysis, but the approach is still the same. Specific requirements of analysis of the system benefits will vary, depending on the location of the proposed amendment area and the type(s) and location(s) of mitigating improvements being proposed.

ODOT's Role and Considerations: System-wide Balancing Test

The TPR requires a written statement from ODOT regarding the sufficiency of the proposal to meet the balancing test, so the Agency will have to ascertain the extent to which proposed system improvements will improve the whole transportation system and how the subject state and local facilities are expected to perform as part of that system. Proportionality of the mitigation to the scale of the proposed plan amendment and consistency with applicable plans will be important elements for performing this "balancing test."

This is a new regulatory concept, so there are no examples of implementing it at this writing. Consequently, there are no formal guidelines on how to determine if proposed mitigation provides sufficient net benefits to the system as a whole to balance an identified significant effect. Each situation will be unique. ODOT reviewers will need to rely on the local findings that support the proposed amendment and use their best professional judgment to make a determination that the system-wide benefits are sufficient to balance the significant effect. Quantitative "proof" of the equivalence of the benefits may be lacking. The local government will need to provide sufficient transportation analysis to support findings that the proposed mitigation sufficiently

addresses and balances the significant effect. Case study examples of early determinations will be helpful for providing additional guidance and best practices in the future.

Example: Assessing System Level Balance

> **Example 4:** A proposed amendment will allow development that will cause an intersection on a state highway to exceed the OHP mobility target for the facility (i.e. create a significant effect). The affected facility is located in a developed, urban area and has been recently re-constructed to improve mobility, a project that widened the roadway and included enhanced traffic signal timing. Capacity improvements to accommodate the additional traffic demand from the proposed amendment, such as additional lanes, would be counter to the local government's alternate mode transportation goals and could not be accommodated without acquiring right-of-way and costly impacts to existing development.
>
> Given the limitations related to increasing capacity on the significantly affected intersection, the proposal instead requires improvements to a parallel local collector that would improve vehicular circulation in the vicinity of the subject site and affected intersection. Improvements on the collector include left turn pockets, right turn lanes, and pedestrian improvements, all of which are designed to enhance the collector as a viable alternate route to the state highway. The traffic analysis shows that these local improvements will improve the mobility through the state intersection, but will not entirely mitigate the traffic impacts on the facility resulting from the proposed amendment. In this circumstance, where the state facility is severely constrained from additional capacity improvements and the local street system is enhanced to measurably offset the impacts on the significantly affected intersection, the Agency could provide the local government with a written statement agreeing with the assessment that the system-wide benefits are sufficient to balance the significant effect on the state facility.

3.2.8 Facilities Operating Below Performance Standards

Section 660-012-0060(3) is intended to provide a workable approach for plan amendments and zone changes planned transportation facilities, improvements and services in the adopted TSP are already expected to be insufficient to meet minimum acceptable performance standards by the end of the plan period. The proposed amendment must require mitigating measures that can be shown to prevent things from getting worse (e.g. no further degradation) than would occur under anticipated conditions without the plan amendment.

There are several qualifications to consider in applying Section 0060 (3):

- First, the provisions of Section -0060(3) are discretionary, not mandatory. Section -0060(3) indicates "Notwithstanding section (1) and (2) of this rule, a local government may approve an amendment…" (underline added). This means the application of this section is the option of the local government.
- Second, as in Section 0060 (4) (reasonably likely), Section 0060 (3) includes a provision authorizing ODOT to submit a written statement concurring with the adequacy of any needed mitigation measures. However, unlike Section (4), should ODOT fail to provide a written statement, the local government may make their own determination about the adequacy of the proposed mitigation. Consequently, ODOT should pay close attention to procedures for applying this section of the rule described below in *Approving an Amendment on a Failing Facility.*
- Section 0060 (3) focuses on whether proposed funding and timing for identified mitigation measures "are, at a minimum, sufficient to avoid further degradation to the performance of the affected state highway."

Approving an Amendment on a Failing Facility

Pursuant to section 0060 (3), a local government may be able to approve an amendment that would significantly affect an existing transportation facility without ensuring that the allowed land uses are consistent with the function, capacity and performance standards of the facility if it determines the following:

- In the absence of the amendment (i.e. under existing plan and zoning designations), planned transportation facilities, improvements and services would not be adequate to achieve consistency with the identified function, capacity or performance standard for that facility by the end of the planning period identified in the adopted TSP.

If this is the situation, then the local government may approve the amendment when the following conditions are met:

- At a minimum the development resulting from the amendment will mitigate the impacts of the change to avoid further degradation of the performance of an affected facility by the time of the development through one or a combination of transportation improvements or measures;
- The amendment does not involve property located in an interchange area as defined in OAR 660-012-0060 (4)(d)(C); and
- For affected state highways, ODOT provides a written statement that the proposed funding and timing for the identified mitigation improvements or

measures are, at a minimum, sufficient to avoid further degradation to the performance of an affected state highway.

Applicability of OHP Policy 1F: Highway Mobility Standards

Action 1F.5 addresses how ODOT evaluates proposed amendments to transportation system plans, acknowledged comprehensive plans and land use regulations that are subject to OAR 660-12-0060, where the proposal impacts a failing state transportation facility or one that is predicted to fail.

Action 1F.5 clarifies that where the volume to capacity ratio or alternative mobility target for a highway segment, an intersection or interchange is currently above the mobility targets in OHP Table 6 or Table 7 or those otherwise approved by the Oregon Transportation Commission, or is projected to be above the mobility targets at the planning horizon, and transportation improvements are not planned within the planning horizon to bring performance to the established mobility target, the mobility target to apply is "no further degradation." So, as in TPR section 0060 (3), the goal of avoiding further degradation is only applicable when there are no planned transportation improvements to bring performance up to the established mobility target.

Action 1F.5 further establishes that, where the facility is already operating above capacity, or is projected to be operating under failing conditions at the planning horizon, a small increase in traffic does not cause "further degradation" of the facility. Policy 1F defines a "small increase in traffic" in terms of certain thresholds that are based on average daily trips. If an amendment subject to TPR Section 0060 increases the volume to capacity ratio further, or degrades the performance of a facility so that it does not meet an adopted mobility target at the planning horizon, it will significantly affect the facility unless the change in trips falls below the thresholds listed:

"The threshold for a small increase in traffic between the existing plan and the proposed amendment is defined in terms of the increase in total average daily trip volumes as follows:

- *Any proposed amendment that does not increase the average daily trips by more than 400.*
- *Any proposed amendment that increases the average daily trips by more than 400 but less than 1001 for state facilities where:*
  - *The annual average daily traffic is less than 5,000 for a two-lane highway*
  - *The annual average daily traffic is less than 15,000 for a three-lane highway*

- *The annual average daily traffic is less than 10,000 for a four-lane highway*
- *The annual average daily traffic is less than 25,000 for a five-lane highway*

- *If the increase in traffic between the existing plan and the proposed amendment is more than 1000 average daily trips, then it is not considered a small increase in traffic and the amendment causes further degradation of the facility and would be subject to existing processes for resolution."*

The measured increase in average daily traffic is **total site trips** and is not broken down into trips that impact the state highway only or have any other specific traffic characteristics. The OHP Action 1F.5 threshold text regarding "state facilities" is in reference to the traffic and roadway characteristics of the affected state facility, not the additional trips from the site.

> **Example 5:** A state highway is currently performing at a v/c ratio of 0.95. The minimum acceptable performance target for this facility is v/c 0.90. By the end of the planning period, assuming all of the planned improvements identified in the adopted TSP, the highway will perform at a v/c of 1.0. That is, the TSP does not identify projects that will enable the facility to meet the minimum acceptable performance target at the end of the planning period.
>
> The traffic study for the proposed amendment indicates that the amendment will cause the facility to perform at a v/c of 1.05. In this circumstance, because the TSP has not identified improvements needed to meet the v/c 0.90 target for the facility at the end of TSP planning period Section 660-012-0060(3) may be applied to this circumstance. Application of 0060(3) would result in the requirement that the proposed amendment not result in further degradation to the facility from the future year v/c in the TSP. That is, the amendment will need to identify an improvement or action that will return the projected v/c of 1.05 to a v/c of 1.0 (the v/c projected for the facility without the amendment).

OHP Action 1F.5 Flexibility for Mitigation

In addition to setting thresholds for determining what is a small increase in traffic, 2011 revisions in OHP Action 1F.5 provide some flexibility for determining mitigation for an affected state facility. Action 1F.5 states:

> *"In applying OHP mobility targets to analyze mitigation, ODOT recognizes that there are many variables and levels of uncertainty in calculating volume-to-capacity ratios, particularly over a specified planning horizon.* ***After negotiating*** *reasonable levels of mitigation for actions required under OAR 660-012-0060,*

ODOT considers calculated values for v/c ratios that are within 0.03 of the adopted target in the OHP to be considered in compliance with the target. The adopted mobility target still applies for determining significant effect under OAR 660-012-0060."

This policy language applies after a significant effect has been determined through TPR Section 0060 processes and a reasonable level of mitigation has been negotiated with the applicant and/or local government. The intent of this language is to address situations where reasonable and proportional mitigation for the proposal will get close to the adopted target (within 0.03 v/c), but mitigation to fully meet the target is a significant investment that is unreasonable and not proportional to the likely development impact on state facilities.

OHP Action 1F.5 also encourages mitigation measures other than increasing capacity that include but are not limited to:

- System connectivity improvements for vehicles, bicycles and pedestrians.
- TDM methods to reduce the need for additional capacity.
- Multimodal (bicycle, pedestrian, transit) opportunities to reduce vehicle demand.
- Operational improvements to maximize use of the existing system.
- Land use techniques such as trip caps or trip budgets to manage trip generation.

These actions may not be applicable in many situations. However, the actions correspond well with many of the 2011 amendments to the TPR, particularly subsection 0060 2(e) that enables implementation of system level mitigation measures to balance potential impacts.

3.2.9 Economic Development Balancing Test

Section 0060 (11) is a new element of the TPR that allows for transportation impacts generated by a proposed amendment to be weighed against the proposed land uses' potential to create industrial or traded-sector jobs.

"Industrial" means employment activities generating income from the production, handling or distribution of goods including, but not limited to, manufacturing, assembly, fabrication, processing, storage, logistics, warehousing, importation, distribution and transshipment and research and development.

"Traded-sector" means industries in which member firms sell their goods or services into markets for which national or international competition exists.

Where a proposed amendment creates the type of jobs that meet the definitions above, a local government may accept partial mitigation where it can be shown that the economic benefits outweigh the negative effects on transportation facilities. ODOT has an opportunity to provide written concurrence that the benefits outweigh the negative effects on state facilities

Where a proposed amendment significantly affects a state transportation facility, the local government must obtain “concurrence” from ODOT that the economic benefits of the proposal outweigh the negative impacts to the state transportation system. The same is true for other transportation facility providers (e.g. city or county systems). The TPR requires that ODOT coordinate with the Oregon Business Development Department (Business Oregon) when determining the job-creation benefits of a proposed amendment.

Application of this section is more flexible in terms of the types of jobs considered eligible for communities with fewer than 10,000 in population and located outside of Metropolitan Planning Organization (MPO) areas as well as outside of the Willamette Valley.

Local Actions to Implement Economic Development Balancing Approach

Local governments may approve an amendment with partial mitigation if the amendment will create or retain industrial or traded-sector jobs, as defined in the TPR. For jurisdictions with populations of 10,000 or more, in an MPO, or in the Willamette Valley, such actions also must restrict retail uses to those considered incidental to the primary employment use and limit such uses to five percent or less of the net developable area.

Where a proposed amendment is expected to significantly affect a state facility and the local government proposes to approve it with partial mitigation of the impacts on the state system, the local government will need to provide notice requesting a written statement from ODOT agreeing with the assessment that the employment benefits outweigh the “negative effects” on the affected facility. However, as in the process for allowing “no further degradation,” above, if ODOT does not respond in writing in a timely manner, the local government can proceed to a decision based on their own findings supporting partial mitigation. A city proposal impacting a county facility would trigger a similar agreement process and vice versa.

The local government must coordinate with Business Oregon, DLCD, and where applicable, the local area commission on transportation (ACT), the MPO, and other transportation providers and local governments directly affected by the proposal to in the process of determining whether or not the proposal meets the definition of economic

development,[20] how it would impact the transportation system, and the adequacy of the proposed mitigation. The local government must also provide notice of any determination related to these factors at least 45 days before the first evidentiary hearing. (Note that this time period is different from the recent amendments to Oregon Administrative Rule 660, Division 18, where the notification period regarding notice of local government changes to comprehensive plans and land use regulations has been changed to 35 days in advance of the first evidentiary hearing.)

ODOT's Role and Considerations: Economic Balancing Test and Partial Mitigation

When a proposed amendment qualifies as economic development pursuant to the TPR, then it may be approved without mitigating the full effect of the amendment on traffic mobility. A local government determines whether economic benefits outweigh the negative effects on the local transportation system; ODOT makes the determination for the state transportation system. ODOT staff must evaluate the adequacy of the proposed mitigation, which may or may not include improvements to the significantly affected facility. The proportionality of proposed mitigation to the likely traffic impacts may be one consideration of partial mitigation. The proposed mitigation should be considered as a way to balance local economic development policy and objectives with any proposed improvement, especially where a significant facility improvement is needed to fully reach mobility target performance levels.

The TPR requires that ODOT coordinate with Business Oregon when determining the job-creation benefits of a proposed amendment. It may also be helpful for Business Oregon to assist in any determination of other economic impacts (positive or negative) from the proposal on existing or potential businesses in the area. This coordination allows ODOT staff to focus on transportation impacts rather than have the role of assessing job creation eligibility and potential as well as determining the economic benefits of the proposal.

It is still ODOT's decision whether or not the transportation impacts are acceptable after weighing the economic benefits against any proposed mitigation, but only if ODOT's position is submitted in writing in a timely manner. In the past, significant effect determinations have been focused on mobility considerations. TPR 0060(11) allows ODOT to consider trade-offs between mobility performance and employment benefits. Proposals for partial mitigation may offset capacity problems but still have a negative impact on the safety of the facility. Cases that raise safety concerns will require a higher level of review and coordination with the local government. Partial mitigation is not as

[20] The TPR does not define "economic development" per se, but the types of uses that comprise economic development are "industrial" and "traded sector" as defined at the beginning of this section.

likely to be found sufficient to mitigate a safety problem that exists or is created by the proposed development.

Assessing Whether Partial Mitigation is Acceptable

ODOT will compare the economic benefits and transportation impacts from a state perspective, and evaluate whether the economic benefits of the proposal outweigh the negative impacts, on a case by case basis and with input from Business Oregon. As with any proposed amendment that potentially impacts a state facility, ODOT will review the projected transportation impacts, including those on mobility and safety. When a local government is proposing to accept partial mitigation for a proposal that accommodates eligible development, and the level or type of mitigation does not remedy the impacts to a state facility, ODOT may work with Business Oregon to formulate a recommendation for a proper balance of job creation in consideration of the transportation impacts.

Because the economic development “balancing test” will be unique in each circumstance where it is applied, it is not possible to provide specific guidance to determine whether the proposed “partial mitigation” adequately addresses impacts to the state transportation system. There are no benchmarks or thresholds available at this time; ODOT reviewers, in coordination with Business Oregon, will need to weigh what is gained by the proposal (jobs) versus what is being given up (highway mobility). It may also be beneficial to coordinate with DLCD and local governments to consider the potential impacts on nearby or future businesses in the area.

Unresolved safety issues will be a key consideration for what may be considered acceptable as partial mitigation. Consistent with both the TPR and OHP Policy 1F changes, issues related to mobility can now be counterbalanced with effecting economic development policy objectives, particularly where Business Oregon staff has verified that the job creation benefits of the proposed change are significant. In these cases, partial mitigation may be one method to balance local economic development policy and objectives, especially where a significant facility improvement is needed to fully reach mobility target performance levels. As referenced here, a “significant” improvement could be one that is prohibitively expensive, or one where the necessary improvement is disproportionately expensive related to the impacts of the proposal. Safety considerations may need to be considered at a higher level than mobility considerations. Future actions related to partial mitigation will provide case studies on which to base subsequent decisions.

Note that, where section 0060 (11) is applied, neither the local government nor ODOT is required to provide the improvement(s) needed to fully mitigate the significant effect. In other words, acceptance of partial mitigation, consistent with the conditions of section

0060 (11), does not obligate either the local government or ODOT to provide the necessary funding to fully address the impacts expected from the proposed amendment.

Options for Using OAR 731-017

In 2010 the OTC adopted OAR 731-017 that provides relief for amendments that create economic development opportunities through an application process that local governments may use if they are not able to meet the funding or timing requirements of the TPR related to state highways. Refer to Oregon Administrative Rule 731-017 Guidelines for detailed information how a local government may work with the OTC and ODOT to apply for time extensions and to adjust existing traffic performance measures or allow the use of alternative performance measures, as allowed by the OAR.

3.2.10 Development Review Participation in 0060 Reviews

As discussed throughout this chapter, the TPR either requires or prompts ODOT's participation in local plan amendment actions in a variety of circumstances and through a variety of ways – some of which are prescribed by the Rule and some of which are not. This section is a summary of the ways ODOT participates in local actions related to 660-012-0060 and the associated timeframes for ODOT response.

An important thing to keep in mind is that, regardless of regulatory requirements and prescribed timelines, development review staff always have a role as an advisor to local governments when a state facility is affected by a land use proposal. Local governments throughout the state have codified procedures for noticing ODOT of actions that are located near state transportation facilities and many more notify ODOT as a matter of course so that the Agency can participate in the local development approval process as needed.

It is not uncommon for local governments to include ODOT at the pre-application phase of the process prior to the formal submittal of a development proposal, particularly when a proposed amendment or development proposal will result in a need for direct access to the state highway or is otherwise likely to impact state transportation facilities. Where invited to participate at the pre-application stage, development review staff should consider the proposal carefully, and involve others in the Agency with relevant expertise.
Participation in person, followed up with a written summary of pertinent issues that have bearing on the subject proposal or on subsequent decisions related to the proposal, are recommended. Through these communications, it should always be clear that development review staff is available as a technical advisor on issues concerning the state transportation system, with the objective of supporting informed decision making.

The TPR timelines related to coordination among jurisdictions are sometimes in addition to the basic land use decision notice and comment periods discussed in Chapter 3.1. For example, at the time of an initial notice of a land use review, the local notice document may refer to the whole TPR rule as applicable criteria without identifying the need to consider a partial mitigation scenario, or it may include enough specificity to trigger ODOT review at that level. Partial mitigation, economic development and system balancing procedures may come up in the course of local review, for example as accommodation for a problem with approval based on the application as originally submitted. The local government has a responsibility to be sure ODOT is aware that one of these types of reviews is necessary and identifying the deadline for a response. Extensions of time between the local government and the applicant may be necessary when this type of situation arises.

The following matrix lists actions inferred or required by the TPR and timing consideration. ODOT should always review land use notices with an eye to recognizing the need for additional review on the new TPR provisions, and strive to be responsive, aiming for quick turnaround times when commenting.

Table 3.1: ODOT Input into TPR 0060 Decision Making

Action and TPR Subsection	**Type of Communication**	**Do the Rules Set a Timeline?**
Determine "System-wide balancing test:" whether improvements not on affected facility are sufficient to balance a significant effect. Section (2)(e)	Written Concurrence Local govts. cannot approve an amendment based upon the system-wide balancing test without written agreement from the facility or service provider.	No: The rule includes no set deadline for providing this statement, but the local govt. may. The statement should be timely w/in the context of the local decision process.
Determine whether a proposal includes sufficient actions to "avoid further degradation" Section (3)(d)	Written Statement that "*that the proposed funding and timing for the identified mitigation improvements or measures are, at a minimum, sufficient to avoid further degradation*. . ." The local govt. may proceed with adoption, applying (3)(a)-(c) if ODOT gets notice and does not provide the written statement	No: The rule includes no set deadline for providing this statement, but the local govt. may. The response should be timely w/in the context of the local staff report / hearings process.
Provide a Reasonably Likely Determination Section (4)(b)(D)	Written Statement whether a facility that will mitigate impacts is reasonably likely to be delivered within the plan period. The local govt. cannot rely on state	No - There is no deadline for providing this letter. A reasonably likely finding for a needed facility, or a finding that an improvement

Action and TPR Subsection	Type of Communication	Do the Rules Set a Timeline?
	facilities to mitigate significant effect without the reasonably likely letter.	is not reasonably likely will focus the local review; this information is needed as early in the process as possible.
Mixed-Use Multimodal Area (MMA) designation w/in ¼ mile of interchange, not consistent with adopted IAMP Section (10)(b)	Written Concurrence – if there are no operations or safety effects (660-012-060 (10)(c)(A)); and/or Written Agreement – between local govt. and Agency regarding traffic management plans to move traffic away from interchange (if applicable) (660-012-060 (10)(c)(B))	No - There is no deadline for providing this letter or for developing a traffic management plan. Responses should be timely w/in local legislative processes.
Mixed-Use Multimodal Area (MMA) designation w/in an Interchange Area Management Plan (IAMP) area Section (10)(b)	ODOT will need to review the MMA for consistency with the IAMP. Written testimony should be submitted for the public adoption record where ODOT has concerns based on this review and/or other factors. Note that mobility targets for affected state facilities may be considered, but meeting these targets is not required for MMA designation.	During the public notice period, as part of the local govt.'s legislative amendment process.
Mixed-Use Multimodal Area (MMA) designation outside Interchange Area Management Plan (IAMP) area and ¼ from interchange ramp terminal Section (10)(b)	ODOT may have an advisory role in the local decision related to technical modeling and analysis and communication could be oral or written. Written testimony should be submitted for the public adoption record where ODOT has concerns based on operations and safety factors. Note that mobility targets for affected state facilities may be considered, but meeting these targets is not required for MMA designation.	During the public notice period, as part of the local govt.'s legislative amendment process.
Plan Amendment within an Existing MMA	ODOT may have an advisory role in the local decision related to issues other than mobility/congestion	During the public notice period, as part of the local govt.'s legislative amendment process.
Determine whether a proposal includes appropriate actions to support Partial Mitigation steps Section (11)(b)	Written Concurrence The local govt. can assume that they have obtained concurrence if ODOT does not respond in writing w/in 45 days. Section (11)(c)	Forty-five (45) days from receiving notice of the proposed local action.

ODOT Written Statements

This section highlights some additional details to be considered when drafting a formal written statement from ODOT as required in the various configurations of TPR Section 0060 reviews. ODOT Region Managers will be ultimately responsible for such written statements under the TPR.

A local pre-application process, including review of preliminary concept or development plans that show site configuration and access ideas that the property owner or develop intends to propose, presents the best opportunity to identify the types of written responses, including concurrence statements, that are likely to be needed to complete the review process.

ODOT's written statement addressing TPR 0060 issues made in response to private applicant requests should be developed only after conferring with the local government and sent to both the applicant and the local government. If the request comes from the local government, the response should be sent to the local government.

Reasonably Likely Written Statement

A request that ODOT make findings that a facility is "reasonably likely" to be in place at the end of the plan period should arise early in the application process, preferably in a pre-application process in which ODOT is included. By identifying the need before a formal application is submitted, all parties may be able to save time and resources by narrowing the review based on whether or not new state facilities may be relied upon. However, it the need for reasonably likely findings is not anticipated at that early stage, once it arises the local government should make a specific request of ODOT for the findings.

ODOT should respond to a request for a reasonably likely determination only after receiving a written request from an applicant or local government. If the request comes from the applicant, it may be a simple matter to confirm that planned improvements are already included in the STIP. But for projects that do not yet have identified funding, a request from an applicant should be followed up with the local government to determine whether the proposal has traction. ODOT's role here is to participate in the local land use decision process; resources should be focused on queries that are already going into or through that process.

If no one contacts ODOT on the matter, ODOT should take no action. Note that while there is no notice requirement under OAR 660-012-0060 (4)(b)(D) and (4)(c)(A), failure to provide notice to ODOT could work against the applicant's best interests. ODOT does not need to respond to an amendment or zone change proposal without first receiving

notice, but should monitor the application to make sure that no action is taken contrary to the requirements of the rule.

There is no potential harm to ODOT from not responding to a request for a reasonably likely determination. The local government cannot rely upon a future state facility without the reasonably likely letter. However, if a response is provided, ODOT is advised to respond as early as possible and within the locally noticed response period

Final responsibility for a reasonably likely determination is delegated to the Region Manager. ODOT Planning staff will advise the Region Manager of the need for the determination and written statement and brief the Region Manager on what is known about the proposal. The Region Manager may further consult with staff to understand the facts of the situation, apply the criteria in TPR 0060 and provide a written statement to the affected local government. It is understood that making a reasonably likely determination will require the Region Manager to exercise professional judgment.

While a region planner may do the background research and provide input as to whether a planned state highway improvement is “reasonably likely to be provided by the end of the planning period,” the Region Manager may not delegate signing an ODOT reasonably likely determination to an ODOT region planner or other ODOT employee. Having the Region Manager sign each reasonably likely letter will provide a level of continuity and consistency for how reasonably likely determinations are made and what factors are considered in making a determination, and will assure greater accountability in the process.

For all practical purposes, a planned transportation improvement project for a state facility is not reasonably likely to be provided within the plan period unless the improvement project is:

- Identified in a constrained (MPO) plan;
- Already funded through the construction section of the adopted STIP (and MTIP, if applicable);
- Identified in an adopted TSP through which we have worked with the local jurisdiction to make specific project likelihood determinations (clearly calling out what is not likely during the planning horizon or what is feasible to assume will be constructed within the planning horizon using some combination of federal, state, local, and private funds); or
- Required to be provided as mitigation by a local jurisdiction through a formal condition approval of a land use action.

The written statement to the local government shall consist at a minimum, of the following:

- Noting that the state highway improvement is included as a planned improvement in a regional or local transportation system plan or comprehensive plan;
- In the opinion of the ODOT Region Manager, it is reasonably likely that the state highway improvement will be provided by the end of the planning period.
- The caveat that finding that a project is reasonably likely to be provided within the plan period does not mean that ODOT will necessarily be the source of funds to ensure completion of the project.
- The caveat that, if circumstances change, ODOT reserves the right to withdraw its reasonably likely determination.
- Other documentation as needed of the information and criteria upon which the determination was made.

Copies of the written statement shall be sent to ODOT's Director and its Transportation Development Division Administrator, and to the Director of DLCD.

Reasonably Likely Determination has Limited Applicability: A reasonably likely written statement provided by ODOT applies only to the specific proposed amendment for which the written statement is requested and submitted. That written statement is not applicable to any future amendment that might rely on the same planned state highway improvement for purposes of determining significant effect. ODOT must issue a new reasonably likely determination for each proposed plan amendment where an applicant or local government intends to rely upon an improvement to the state highway as "reasonably likely."

The reason for this is that ODOT may need to reassess whether the circumstances that led to a reasonably likely determination have changed since the earlier statement was issued. For example, a reasonably likely determination may be issued for a proposed plan amendment where the applicant or local government commits to support funding of needed improvements. If the planned development or supporting funding does not occur as expected, then it may change ODOT's assessment of whether the project continues to be reasonably likely in the future.

The reasonably likely determination enables the local government to determine whether the proposed amendment will significantly affect transportation facilities. It does not represent a commitment by the Agency to provide the improvement.

Reasonably Likely Determination May Be Withdrawn: While highly improbable, it is possible that circumstances change between the time a reasonably likely determination letter is issued and the time that an application is before a local government for adoption. For instance, conditions may occur such that needed federal funding that

seemed probable when the letter was written is no longer probable a month later. If the assumptions upon which the reasonably likely determination was made are no longer valid, the Agency may wish to rescind the determination. To ensure that there is no question that ODOT has this option, every letter submitted to local governments should include language stating that if circumstances change, ODOT reserves the right to withdraw its reasonably likely determination.

The timing of ODOT's decision to rescind is important. ODOT's reasonably likely letter would typically be part of the written record before the local government as it considers a plan or land use regulation amendment. Once the record is closed, the local decision can proceed based upon the information in that record.

Avoid Further Degradation Written Statement

TPR Section 0060(1)(c) and (d) define "significant effects" where an amendment will further degrade conditions on a facility that is currently not meeting mobility standards or is projected not to meet mobility standards within the plan period, respectively. There is no need to address a significant effect on a particular facility if the facility provider submits a written statement that the proposed amendment includes a commitment to sufficient funding and timing to implement the needed improvements or measures to, at a minimum, avoid further degradation to the performance of the affected state facility.

Note that, if the local government provides the appropriate ODOT regional office with written notice of a proposed amendment in a manner that provides ODOT reasonable opportunity to submit a written statement into the record of the local government proceeding, and ODOT does not provide a written statement, then the local government may proceed with applying subsections (a) through (c) of this section as if ODOT had submitted a statement of "no further degradation."

Written Concurrence – System-wide Improvements

Where a plan amendment will create a significant effect on a transportation facility, mitigation may be done on a system level in lieu of mitigation of the specific affected facility. Subsection 0060 (2)(e) of the TPR 0060 allows a commitment to funding or construction of improvements to other facilities or services, including other transportation modes, to be considered as mitigation on a system wide level.

For system-wide improvements to be approved in lieu of facility improvements, the facility or service provider must submit a written statement of concurrence with the proposed approach. For state facilities, ODOT must agree in a written statement that the system-wide benefits are sufficient to balance the significant effect to the state facility. The rule does not include a formal timeline for providing this statement, but this approach cannot be relied upon as a basis for amendment approval without it. . The

statement should, if requested in a timely manner, be submitted before the first public hearing on the amendment, and must be submitted before the record is closed for the local decision process.

Written Concurrence – Mixed-Use Multimodal Areas

If a Mixed-use Multimodal Area is proposed for a land area all or part of which is inside a quarter mile of a state interchange ramp terminal intersection and the MMA designation is not otherwise found to be consistent with an adopted IAMP, a written statement of ODOT concurrence with the MMA designation is required. ODOT concurrence may be contingent upon development of a traffic management plan and/or other agreements. Pursuant to TPR 0060 (10)(c), before concurring, ODOT *"must"* consider:

- *The potential for operational or safety effects to the interchange area and the mainline highway, specifically considering:*
  - *Whether the interchange area has a crash rate that is higher than the statewide crash rate for similar facilities;*
  - *Whether the interchange area is in the top ten percent of locations identified by the safety priority index system (SPIS) developed by ODOT; and*
  - *Whether existing or potential future traffic queues on the interchange exit ramps extend onto the mainline highway or the portion of the ramp needed to safely accommodate deceleration.*

Where ODOT cannot concur with the MMA designation as submitted, negotiating remedies may include a Written Agreement between the local government and the agency regarding traffic management plans to move traffic away from the subject interchange, if applicable (660-012-060 (10)(c)(B)).

Written Concurrence - Economic Development Balancing Test

The economic development balancing test is the process that determines whether partial mitigation of an impact on a facility will be acceptable because of a countervailing gain in economic opportunities related to the amendment.

ODOT has 45-days from the time the local government provides notice that indicates that an application is being reviewed pursuant to TPR 0060 (11) (45 days before the first evidentiary hearing) in which to provide a concurring or non-concurring statement in writing under section 0060 (11). ODOT staff must work efficiently and, to the extent possible, coordinate with the local government and other affected state agencies (DLCD, OBDD) well in advance of the first public hearing. The requirement to obtain

written concurrence is satisfied without ODOT's input if the appropriate notice is provided and ODOT does not provide a written response within the 45-day period.

It is possible that the local plan amendment initial notification, as required by the TPR, will not explicitly state that a local government is proposing to approve partial mitigation, as allowed by section 0060 (11). However, DLCD "Notice of Proposed Amendment" form (the "green form") requires that local governments indicate the applicable Statewide Planning Goals and affected state agencies and provide a general description of the proposed action, including the proposed land use designation/zone.[21] There may be situations when ODOT staff will have one or more other indicators that the proposal entails employment uses and may include proposed partial mitigation on a state facility. If this occurs, initiating contact with the local government to determine whether section (11) will be applied is recommended to maintain ODOT's interests in the decision process.

When Local Documentation is Insufficient for an ODOT Determination

If the information provided in the amendment application is insufficient to allow ODOT to make a reasonably likely determination or to make a decision regarding concurrence, the Agency can request additional information. ODOT cannot require a traffic study in most cases, except under certain circumstances related to approach permitting, but it can ask for one and tailor Agency response to the sufficiency of the information included in the application and study. If no or inadequate information is provided, ODOT should submit a written statement stating that the application does not contain sufficient information to allow ODOT to make a determination.

Because the preparation of traffic studies takes time, ODOT should request additional time, as needed, to allow for full review and comment of a study.

3.2.11 Determine If and How TPR Section -0325 Applies to an Application

OAR 660-012-0325 outlines the specific actions local governments must take when considering the adoption of a new Climate Friendly Area (CFA) or Metro Region 2040 center or when reviewing comprehensive plan or land use regulation amendments within existing CFA/Metro Region 2040 centers. Depending upon what is being considered, the review process will necessitate the preparation of a multimodal transportation gap summary and/or a highway impacts summary as outlined in Table 3.2.

Table 3.2: TPR -0325 Decision Making

Adoption/Amendment Scenario	Analysis Requirements Multimodal Transportation Gap Summary	Analysis Requirements Highway Impacts Summary
Adoption of a New CFA or Metro Region 2040 Center	Required	Potentially Required[1]
Expansion of an Existing CFA/Metro Region 2040 Center Boundary	Required	Potentially Required[1]
Amendment to Comprehensive Plan or Land Use Regulations Within an Existing CFA or Metro Region 2040 Center	Not Required	Potentially Required[2]

[1]If the area being considered for adoption contains a ramp terminal intersection, state highway, interstate highway, or adopted ODOT facility plan.

[2]If the comprehensive plan/land use amendment study site/area is within a quarter- mile of a ramp terminal intersection, adopted Interchange Area Management Plan area, or adopted ODOT Facility Plan area…Or…If the comprehensive plan/land use amendment study site/area is expected to be reasonably likely to result in increasing traffic on the state facility that exceeds the small increase in traffic defined in the Oregon Highway Plan.

Additional details and guidance under these two scenarios are provided in the following sections.

3.2.12 When a New CFA/Metro Region 2040 Center is Being Considered for Adoption or An Existing CFA/Metro Region 2040 Center is Being Expanded

While the CFA/Metro Region 2040 center adoption decision is made at the city or county level, ODOT has a vested interest to ensure the decision process considers the Transportation Review provisions outlined in OAR 660-012-0325, particularly when state highways and state interests are located within or near the proposed boundary area. When ODOT is notified about a potential adoption of a new CFA/Metro Region 2040 center, ODOT review staff must ensure that a multimodal gap summary has been prepared and will prepare a highway impacts summary, if applicable. The multimodal gap summary definition outlined in OAR 660-012-0325 is intended to produce an initial high-level summary which identifies areas for further analysis in a TSP. The multimodal gap summary does not need to comply with multimodal inventory requirements outlined in OAR 660-012-0505, 660-012-0605, and 660-012-0705; however, this data may be used if available and needed to illustrate a particular issue. During a CFA/Metro Region 2040 Center designation process, Region staff should anticipate a multimodal gap summary that is prepared at a high level and uses available information from existing data sources/plans to help establish a baseline.

The following guidance outlines ODOT's general expectations when reviewing multimodal gap summary submittal information.

Multimodal Gap Summary

Requirement – A summary of the existing multimodal transportation network within the study area or CFA.

What is Expected?

- Vehicular (local street connectivity), pedestrian (sidewalks and multiuse pathways), bicycle (lanes, routes, multiuse pathways), freight (designated route, type) and public transit (routes, stations, transit stops, supporting infrastructure facilities) inventory information on all classified (local street and higher) facilities. This data may be extracted/derived from existing planning documents such as TSPs, facility plans, sub-area plans, and transit plans, with field verification as needed.
- For state highways, multimodal inventory could be derived/extracted from ODOT's TransGIS web tool.
- A list of references used to complete the summary.

What is Not Needed?

- Multimodal performance summary such as a Level of Traffic Stress (LTS) or Multimodal Level of Service (MMLOS) assessment, as the requirement is for an inventory summary.

Upon review of the multimodal transportation network summary, what questions should ODOT region staff be asking/considering?

- Does the summary cover all applicable travel modes, including freight?
- Are the modes summarized according to jurisdictional responsibility including ODOT?
- Is the summary sufficient enough to provide an understanding of the study area's basic multimodal transportation network and how that network supports the desired characteristics of a CFA/Metro 2040 Center?

Requirement – A summary of the gaps in the pedestrian and bicycle network, including gaps that need to be filled for people with disabilities.

What is Expected?

- Summary of gaps in the pedestrian network on all classified (local and higher) facilities and state highways, as applicable.
- Summary of gaps in the bicycle network on all collector and higher roadways and state highways, as applicable.
- Summary of the general condition of sidewalks, major impediments on the sidewalk network that limit the mobility for people with disabilities (e.g., utility pinch points, sidewalks without curb ramps at major intersections, accessible pedestrian push buttons etc.).

What is Not Needed?

- Inventory summary that identifies pedestrian segments that do not meet current local or state standards for sidewalk width on all classified (local and higher) streets. This detail should be provided in subsequent TSP updates.
- Detailed Americans with Disabilities Act (ADA) curb ramp, transit stop or sidewalk assessments.

Upon review of the pedestrian/bicycle gap summary, what questions should ODOT region staff be asking/considering?

- Is the gap summary consistent with the multimodal transportation network summary?
- At the planning level, what are the major challenges to address the identified pedestrian and ADA gaps?
- At the planning level, what are the major challenges to address the identified bicycle gaps?

Requirement – A list of planned projects to fill multimodal network gaps identified above.

What is Expected?

- A pedestrian and bicycle project list extracted/derived from existing planning documents such as TSPs, facility plans, sub-area plans, or transit plans.
- In the absence (or in addition to) of planned project lists, a preliminary list of pedestrian and bicycle projects to fill identified gaps on the infrastructure network.

What is Not Needed?

- Details about specific planned or potential projects. This detail should be provided in subsequent TSP updates.

Upon review of the planned project list, what questions should ODOT region staff be asking/considering?

- Is the list of projects coordinated across jurisdictions and agencies?
- At the planning level, what is needed to develop the CFA to build a well-connected and ADA-compliant pedestrian network?
- At the planning level, what is needed to develop the CFA to build a low-stress bicycle network throughout the CFA?
- Has sufficient planning taken already place such that projects have been identified to address key multimodal gaps and deficiencies?

Highway Impacts Summary

A highway impacts summary is only required at this level if the proposed CFA/Metro Regional 2040 center boundary contains an interchange ramp terminal intersection, state highway, interstate highway, or adopted ODOT facility plan.

Requirement – A summary of the existing and proposed development capacity of the CFA/Metro Region 2040 center based on the proposed changes to the Comprehensive Plan and land use regulations

What is Expected?

- A comparative assessment of the study area's existing and potential future development characteristics under the proposed plan designation/development code change.

Requirement – A summary of the additional motor vehicle traffic generation that may be expected within the planning period.

What is Expected?

- A quantification of the study site/area's existing and potential motor vehicle trip profile (daily, and AM/PM peak hours as applicable) on relevant state highway segments. The summary should be based on available tools such as the ITE Trip Generation Manual or local/regional travel demand model output.

- The trip generation estimates should account for internalization between complementary mixed-use development, reductions for multimodal (e.g., walking, bicycling, transit, travel demand management, telework) opportunities, and other study area specific land characteristics that would minimize motor vehicle trip making.
- The quantification of trip making does not require a review of the highway segment/intersection operations with the additional trips.

Upon review of the motor vehicle trip making assessment, what questions should ODOT region staff be asking/considering?

- Do the trip generation estimates take into consideration the urban context and properly account for multimodal opportunities?
- Is there a finding that identifies if the changes will generate additional motor vehicle traffic that will substantially impact interstate or state highway facilities or their ramp terminals?
- Do the impacts (if any), disproportionally impact the state highway system?

Requirement – A summary of traffic-related deaths and serious injuries within the climate friendly study area in the most recent past five years that data is available.

What is Expected?

- A narrative map that describes the location of all intersection/roadway segment fatalities and serious (Injury A) crashes within the proposed CFA/Metro Region 2040 center.
- For those fatality and serious (Injury A) crashes, a tabular summary of the crash types (e.g., left-turning, pedestrian) and other relevant conditions, such as whether alcohol or drugs were involved, lighting conditions, and roadway surface conditions.

Upon review of the safety assessment, what questions should ODOT staff be asking/considering?

- Are there existing intersections or segments within the study area with existing or known safety deficiencies and what would be the impact of future trips generated by the CFA/Metro 2040 Center on those intersections/segments?

3.2.13 When a Comprehensive Plan or Land Use Regulation Amendment is Being Considered within an Adopted CFA/Metro Region 2040 Center

After the adoption of a CFA/Metro Region 2040 center, local jurisdictions may sponsor or be presented with third-party requests for amendments to Comprehensive Plans or land use regulations. OAR 660-012-0325 outlines specific requirements and analyses that are needed to support a land use amendment within an existing adopted CFA/Metro Region 2040 center.

When ODOT is notified about a proposed land use amendment, Region staff should first review the application to determine if the following questions have been answered as part of the application narrative:

1. Is the comprehensive plan/land use amendment study site/area within a quarter-mile of a ramp terminal intersection, adopted Interchange Area Management Plan area, or adopted ODOT Facility Plan area? or

2. Is the comprehensive plan/land use amendment study site/area expected to be reasonably likely to result in increasing traffic on a classified state highway that exceeds the small increase in traffic defined in the Oregon Highway Plan[1] and adopted by the Oregon Transportation Commission?

If the above questions have been addressed and the answer to either is ”yes,” then ODOT must ensure the application includes a highway impact summary that is prepared according to the following expectations.

While OAR 660-012-0325 does not specifically outline how to perform a highway impact summary when reviewing an application for a land use amendment within an adopted CFA, the following guidance outlines ODOT’s general expectations.

Highway Impact Summary

Requirement – A summary of the existing and potential amended development capacity of the CFA/Metro Region 2040 center based on the proposed changes to the Comprehensive Plan and land use regulations.

[1] Per Action 1F.5 in the Oregon Highway Plan:
The threshold for a small increase in traffic between the existing plan and the proposed amendment is defined in terms of the increase in total average daily trip volumes as follows:

- Any proposed amendment that does not increase the average daily trips by more than 400.
- Any proposed amendment that increases the average daily trips by more than 400 but less than 1001 for state facilities where:
  - The annual average daily traffic is less than 5,000 for a two-lane highway
  - The annual average daily traffic is less than 15,000 for a three-lane highway
  - The annual average daily traffic is less than 10,000 for a four-lane highway
  - The annual average daily traffic is less than 25,000 for a five-lane highway
  - If the increase in traffic between the existing plan and the proposed amendment is more than 1000 average daily trips, then it is not considered a small increase in traffic and the amendment causes further degradation of the facility and would be subject to existing processes for resolution.

What is Expected?

- When involving a small study area or individual parcel, the application must include a summary of the existing site/study area's development potential and how that could change under a reasonable maximum development potential of the amended land use. If the study area in question is undeveloped or underdeveloped, the comparison should be based on each scenario's reasonable maximum development potential.
- When involving a larger study area or the entire CFA/Metro Region 2040 center, a comparative assessment of the study area's existing and potential future development potential under the proposed plan designation/development code change.

Requirement – A summary of the additional motor vehicle traffic generation that may be expected within the planning period on the applicable state highway.

What is Expected?

- A quantification of the study site/area's existing and potential amended motor vehicle trip profile (daily and AM/PM peak hours as applicable) on relevant state highway segments. The summary should be based on available tools such as the ITE Trip Generation Manual or local/regional travel demand model output.
- The trip generation estimates should account for internalization between complimentary mixed-use development, reductions for multimodal opportunities, and other study area specific land characteristics that would minimize motor vehicle trip making.
- The quantification of trip making does not require a review of the highway segment/intersection operations with the additional trips.

Upon review of the motor vehicle trip making assessment, what questions should ODOT region staff be asking/considering?

- Do the trip generation estimates take into consideration the urban context and properly account for multimodal opportunities?
- Is there a finding that identifies if the changes will generate additional motor vehicle traffic that will substantially impact interstate or state highway facilities or their ramp terminals.
- Do the impacts (if any), disproportionally impact the state highway system?

Requirement – A summary of traffic-related deaths and serious injuries within the climate friendly study area in the past five years.

What is Expected?

- A narrative map that describes the location of all intersection/roadway segment fatalities and serious (Injury A) crashes within the proposed CFA/Metro Region 2040 center.
- For those fatality and serious (Injury A) crashes, a tabular summary of the crash types (e.g., left-turning, pedestrian) and other relevant conditions such as whether alcohol or drugs were involved, lighting conditions, and roadway surface conditions.

Upon review of the safety assessment, what questions should ODOT staff be asking/considering?

- Are there existing intersections or segments on the applicable state highway network with existing or known safety deficiencies and will the trips generated by a proposed land use amendment impact those intersections/segments?

TERRA SCIENCE, INC.
Soil, Water & Wetland Consultants

MEMORANDUM

Date: **January 20, 2025** **Pages: 15**

From: **Phil Scoles, Soil & Wetland Scientist 503-274-2100 / pscoles@terrascience.com**

Regarding: **Soil suitability for Morrow County Data Center Rezone Project, West of Boardman, Oregon**

To: **Steve Pfeiffer and Megan Lin, Perkins Coie LLP, 1120 N.W. Couch Street, 10th Floor, Portland, OR. 97209-4128**

Cc: **File.**

This memorandum summarizes Terra Science, Inc. field observations of land capability limitations for potential parcel rezoning west of Boardman, Morrow County, Oregon. More specifically, the study area is situated between Interstate-84 and Six Mile canyon, which forms the west and south boundaries. A railroad spur forms the east edge of the study area, and a BPA powerline somewhat bisects the southwest portion (see attached aerial imagery). The lands beyond the study area compose a broad plain dipping to the north by northwest that is used for livestock grazing (where rocky) and pivot-irrigation farming (mostly to south for grains, vegetables).

Overview. The entire study area is underlain by ancient basalt flows, often between 15 and 40 inches below ground surface. Such basalt is visible as rock outcrops, particularly in the north and northwest part of the study area. The majority of the study is a complex of rock outcrops, subtle mounds and slightly concave intermound areas (see attached Google Earth photographs). The outcrops amount to 2 percent or less of the landscape in the south half of the study area, but 5 to 8 percent in the north half. The subtle mounds comprise about 35 to 45 percent of the land area (south to north), while the intermound areas account for 45 to 55 percent of the land area (south to north). The mounds vary from 15 inches to approximately 28 inches high, while the intermound areas are slightly depressional 3 to 6 inches. For most of the intermound areas, soil depth is 10 to 15 inches; however, bedrock within a few inches is apparent by mostly mosses and lichens growing atop 2 to 5 inches of soil. The study area has several disturbances, namely gravel and paved roads, a sand/gravel mining area along the west edge, several fill piles, and a large scraped area north of a deep depression (northeast part of site). This depression is relatively small, but recessed about 30 feet lower than surrounding land. The west and north parts of the depression exhibit wetland characteristics, such as hydrophytic vegetation and wetland hydrology indicators. The area immediately north of the depression was previously scraped, possibly for cattle watering.

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Field Evaluation. Soil scientist Phil Scoles of Terra Science evaluated the study area on October 25 and 26, 2024. The evaluation involved pedestrian trek across most of the study area to understand range of characteristics and types of limitation for agriculture use. For a 1.5-day field evaluation (not soil survey intensity), observed characteristics include texture, color, organic matter (via matrix color), gravel content, root penetration, and slope. Observed limitations include available water capacity, rock outcrops, shallow depth to bedrock, and irregular microtopography. All of the soils are non-irrigated, so such limitation is factored into the land capability determination.

Thirteen sample holes were hand-augered across the property. In situations where rock was encountered between 10 to 20 inches, additional attempts 3 to 5 feet apart were made to determine if such refusal was bedrock or just an unattached rock above the bedrock. Multiple rock refusals at approximately same depth likely indicate bedrock. The deepest soil observations were 34 and 37 inches (3 locations), while the shallowest observations were 10, 17 and 18 inches (5 locations). These shallow soils are the product of ancient floods (Missoula or Bretz floods) that occurred 12,000 to 15,000 years ago and washed away all of the soil atop the basalt bedrock. New soil material was laid atop the bedrock post-floods by alluvial and eolian processes (as apparent by fine sandy textures throughout). As relatively young soils (under 10,000 years), they lack distinctive horizons having iron and clay enrichment. That is, these soils have A horizons atop C horizons, then underlying bedrock (R horizons). Older soils (not present) form a B horizon with more clay and/or iron. Another aspect of the observed soils are the mounds and intermound areas. This microtopography, often called patterned ground or pimple prairies, occurs across more than 70 percent of the study area. These mini-high and low features are likely the result of wind transport and localized stabilization by grasses and low shrubs; however, other factors may be some influence (particularly a buried, wavy top of bedrock). The mounds have deeper soils (due to fine sand deposition by wind), while the intermound areas have shallow soils. The intermound areas are not vernal pools due to underlying bedrock that is fractured (hence does not perch infiltrated rainfall). Seven of the sample holes occurred on mounds/plains, four in intermound areas, 1 in a depression, and 1 on the shoulder of Six Mile canyon.

Soil Characteristics. The field evaluation characterized each of the 13 auger hole location for the following attributes:

> *Soil texture* – The majority surface and subsurface textures observed are fine sandy loam (FSL) and very fine sandy loam (VFSL). Several locations have silt loam (SiL) texture and one location, adjacent to Six Mile canyon, has fine sand (FS). These sandy to loamy soil textures are considered favorable for agricultural use, because these texture have moderate available water capacity. These textures are also susceptible to wind erosion when significantly disturbed for cultivation (slow revegetation in droughty sandy soils).
>
> *Soil color and organic matter* – Dark grayish brown (10YR 3/2) is a common topsoil color throughout the study area. This matrix color is typical of topsoil, which may have 4 to 6% organic matter from decayed vegetation. The subsoil color ranges from dark brown (10YR 3/3) to dark olive brown (2.5Y 3/3). Only one hole (Plot 13) exhibited grayish olive brown (2.5Y 4/2) subsoil color, presumably due to a depression landscape setting. None of the soils examined contained redoximorphic concentrations or depletions (hence, no hydric soils). The matrix colors often infer soil drainage,

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which are somewhat excessively drained due to shallow depth to bedrock. NOTE: Soils in the deep depression were not sampled, but such location has evidence of seasonally ponded conditions (shallow soil cracking, water marks, aquatic invertebrates, and algal matting).

Gravel content – Gravel volume was visually evaluated and found to be 1 to 10% for the surface layer at all plot locations. The gravel content typically increased to 5 to 15% for subsurface layers. Gravel size varied from pea-size to 1.5 inch diameter, often rounded (less angular). It is presumed that such gravels were deposited by receding Missoula flood waters. The volume of gravel in the soil profiles is relatively low; thus, only reducing the available water capacity by 10 to 15 percent.

Root penetration – The majority of roots from grasses, forbs and low shrubs occur in the upper 7 to 10 inches of the soil. Fine roots were observed to the bottom depth of each hand-auger hole, which ranged from 10 to 37 inches below the surface. The FSL and VFSL textures are favorable for root exploration from the surface to the underlying bedrock.

Slope – The study area has an overall slope range of 2 to 7 percent. In places, the microtopography has short slope reaches of 4 to 10 percent on mounds and 0 to 3 percent on intermound areas. These slopes are favorable to agricultural use; however, undulating microtopography can be inconvenient for mechanized harvesting.

Soil Limitations. The field evaluation identified the following limitations, via the 13 hand-auger holes and field observations during the pedestrian trek across the subject land :

Available water capacity – The ability of soil to store rainfall is closely related to the soil texture and depth, with loams and silt loams having desirable available water capacity, but sandy soils have somewhat less available water capacity. The observed soils are mostly FSL and VFSL textures, but somewhat shallow depths to bedrock limit the water storage in 10 to 37 inches of soil fines. Given most agricultural soils are 40 to 60 inches deep, the observed soils have 25 to 60 percent less available water capacity. This is a significant limitation for a non-irrigated soil. The potential to add irrigation was beyond the work scope; however, such opportunity is anticipated to be costly to extend into the study area (piping and trenching) and involve administrative procedures (water rights).

Rock outcrops – As mentioned, the south part of the study area has 2 percent or less of rock outcrops, while the north part has 5 to 8 percent rock outcrops. Rock outcrops are impediments for cultivation – they must be avoided, which creates irregular cropping and harvesting patterns. Rock outcrops typically have shallow depth to bedrock immediately adjacent, so such avoidance includes 10 to 20 feet of land around each outcrop. This skirt of shallow depth to bedrock increases the avoided land to 10 to 15 percent of the land in the north part of the study area. This is a severe limitation for any crop cultivation.

Shallow depth to bedrock – Areas of rock outcrops, as well as intermound area, often have adjacent areas with bedrock on a few inches below the surface. Such areas are readily noticed by the increased coverage of mosses and lichens, plus decreased amount of

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grass and forb vegetative growth. It is estimated that roughly 15 to 20 percent of the north portion of the study area has bedrock sufficiently close to the surface to interfere with typical farming practices. That is, tillage equipment gets damaged by scraping across bedrock and soil depth is sufficient to sustain planted seed material. The shallow depth to bedrock is also a severe impediment for subsurface irrigation pipes (if installed). The shallow depth to bedrock is a severe limitation for active cropping.

Irregular microtopography – The subtle mound and intermound microtopography has 1 to 2 foot elevation change between high and low spots. The mounds contain deeper soils, while the intermound areas are typically 10 to 20 inches of soil material. The irregular, somewhat wavy surface is impractical for cultivation, where some areas have sufficient soil depths, and others lack enough soil. Cultivation of land having variable yields across short distances is economically risky and potentially results in inferior crop quality where the soil is shallow. This is another severe limitation. To mitigate such limitation requires large-scale land leveling (this is not factored into the land capability rating). Additional analysis is needed to determine if land leveling is practical for the north part of the study – it is realistic that the north part simply lacks sufficient topsoil volume to make land leveling successful for cultivation.

Land Capability Rating. The process of determining land capability involves evaluation of onsite soil attributes, physical limitations and application of rating system. The Storie Index was formulated in the 1930s and it is a common rating system, where Class I soils have no limitations and Class VIII soils have severe limitations. Class I and II are considered prime soils, while Class III and IV are commonly cultivated with specific improvements, such as irrigation, crop selection, compaction management and/or tiling. Class V to VII are typically utilized for livestock range, and Class VIII soils are often too steep, too rocky or too limited for grazing. Soil depth, permeability, chemical attributes, soil drainage/erosion potential, and climate influences are the evaluation factors, then scores combined to determine a rating. It is an imperfect rating system, but it is utilized in Oregon for deciding if a soil is high value or non-high value. The attached "Guide for Placing Soils In Capability Classes In Oregon" was prepared by Natural Resources Conservation Service (NRCS) to assist in determining such rating.

Overall, soils within the study area consist mostly of Class IVe to Class Ve. The "e" suffix infers increased potential for erosion due to fine sand to sandy loam soil texture and windy conditions near Columbia River. The Class IVe soils include the mounds and slightly undulating plains (about 35 percent of the study area), while the intermound area (about 50 percent of study area) rate as Class Ve or VIe due to low available water capacity and bedrock at 10 to 20 inches. The remaining 15 percent of onsite soils have very shallow depth to bedrock (Class VIIe) or consist of rock outcrops (Class VIII). As can be imagined, the utility of Class IVe mounds is diminished by the surrounding Class Ve and VIe intermound areas. There is no practical means of cultivating the Class IVe mounds, when the Class Ve and VIe intermound areas are not suitable for cultivation. Under these circumstances, the shallow depth to bedrock, low available water capacity, and rock outcrops determine the utility of the study area as predominately Class Ve and VIe.

To overcome the limitations of Class Ve and VIe at this location, it would be necessary to remove rock outcrops, then regrade the mounds to add soil atop the intermound areas. Such approach may be successful in the center and south parts of the study area, but increased

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rockiness in the north part casts doubt if such approach is practical (due to insufficient topsoil volume). The current land use as livestock range is consistent with the soil characteristics and limitations observed during the field investigation and desktop analysis. Detailed mapping of soil conditions, such as a high-intensity soil survey, is beyond the work scope of this evaluation, but such survey may be useful if crop cultivation is considered for all or portions of the study area.

In accordance with OAR 660-033-0020(1)(A) and (B), (relating to Statewide Planning Goal no. 3), the majority of the study area qualifies as "agricultural land" because it suitable for grazing and potential farm use. That is, areas having grass ground cover and few patches of outcrops or shallow soils can be seasonally grazed, but the lack of irrigation results in a short-term grazing season, then it must be fallow for most of the year. Such grazing is sufficient to meet the "agricultural land" definition. The northwest portion of the study area has sufficiently higher amount of very shallow soil and rock outcrops that it is not agricultural land. OAR 660-033-0020(8)(a) specifies definitions for High-Value Farmland. No portion of the study qualifies as "prime, unique, Class I or II", nor "not irrigated and classified prime, unique, Class I or II". Such designations infer that prime, unique farm land has no or very few limitations. The study area has many significant limitations, such as shallow and droughty soils. OAR 660-033-0020(8)(b) specifies high-value outside of Willamette Valley as supporting perennial crops, nursery stock, berries, fruits, etc. as of November 04, 1993. The study area has only been utilized for short-term livestock grazing, so it does not qualify as high-value.

The evaluation also included an interview with Greg Harris, Director of Farming and Agronomy at Threemile Canyon Farms (property owner). Mr. Harris indicated the land in the study area was utilized for livestock range, but not suitable for cultivation due rock outcrops and shallow depth to bedrock, as well as no current water availability. He said a significant financial investment is necessary is bring water service to the property and there would be many challenges installing subsurface water delivery due to shallow depth to bedrock. There are also logistical challenges, since the study area is somewhat isolated, with Six Mile Canyon forming the west and south sides, Interstate-84 to the north, and a railroad spur to the east. Access is limited to the southeast edge of the study area (via two, unsignaled railroad crossings) and northwest edge (via sand and gravel mining operation). Construction costs would be above-average to bring infrastructure to the interior of the study area and very expensive to bring to the north part due to shallow depth to bedrock. Ultimately, insufficient soil resource and excessive rockiness limit land productivity and livestock grazing is the only viable agricultural use of this non-irrigated land. Furthermore, grazing is only seasonal, due to limited plant growth on shallow soil and dry climatic conditions east of the Columbia River Gorge.

Downzone Proposal. The land evaluated for this technical memorandum is currently zoned Exclusive Farm Use (EFU) and a light industrial use is proposed that requires a zone change. Oregon land use goals promote conservation of agricultural lands to sustain a diverse and stable economy, as well as consolidate resources and services in a pragmatic manner. The proposed zoning action would "upzone" a predominant portion of the study area from the current EFU zone designation, and the application includes a concurrent request to "downzone" a substantially larger , nearby area from Space Age Industrial to EFU, which effectively conserves these lands for farm uses and related non-farm uses. The downzone area is located southeast of the Boardman airport and east of Tower Road. This area is currently farmed in the center and south part, and fallow in the north part.

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The predominant soil mapped for this land is Quincy loamy fine sand, 2 to 12% slopes (Class 4e if irrigated, Class 7e if non-irrigated). The southernmost part is mapped as Koehler loamy fine sand, 5 to 12% slopes (also Class 4e if irrigated, Class 7e if non-irrigated). And a narrow portion of the north part is mapped as Hezel loamy fine sand, 2 to 5% slopes (Class 4e if irrigated, Class 6e if non-irrigated). From the NRCS soil mapping, these soils lack some of the limitations of the study area, namely shallow soils, rockiness, and patterned ground microtopography (subtle mounds and depressions). The primary farming limitation for these soils is low available water capacity, due to fine sand texture in the upper part of the profile (and sometimes extending to 60 inches). A secondary limitation is accumulation calcium carbonates in the lower part of the profile. Such accumulation can affect root penetration into the lower part of the soil profile. With irrigation added, as currently demonstrated by ongoing pivot cultivation, the land is suitable for high value crops. Said differently, the necessary investment to change from Class 6e or 7e to Class 4e is the extension of water and electrical service from existing irrigation systems. From Google Earth historical imagery, the northern part may be some irregular topography that would necessitate minor land grading for similar pivot cultivation.

The proposed downzoning would assure no net loss of EFU zoned land in the immediate vicinity, resulting from the proposed rezone to General Industrial . Furthermore, the resultant EFU land has greater potential for actual cultivation, while the study/upzone area requires substantially greater financial and time investment to achieve a similar cultivation condition. And the northern part of the study area is unlikely to be cultivated due to rock outcrops and shallow soils that cannot be improved by addition of irrigation and land grading. Ingress and egress into the study area is also limited by the railroad spur and Sixmile Canyon on the south and west sides, plus no access along Interstate-84. The proposed downzoning represents a favorable move to conserve agricultural land that is contiguous to ongoing farming operations, is more suitable for enhanced cultivation and currently is predominantly farmed with current pivot cultivation in the center and south parts of the proposed area.

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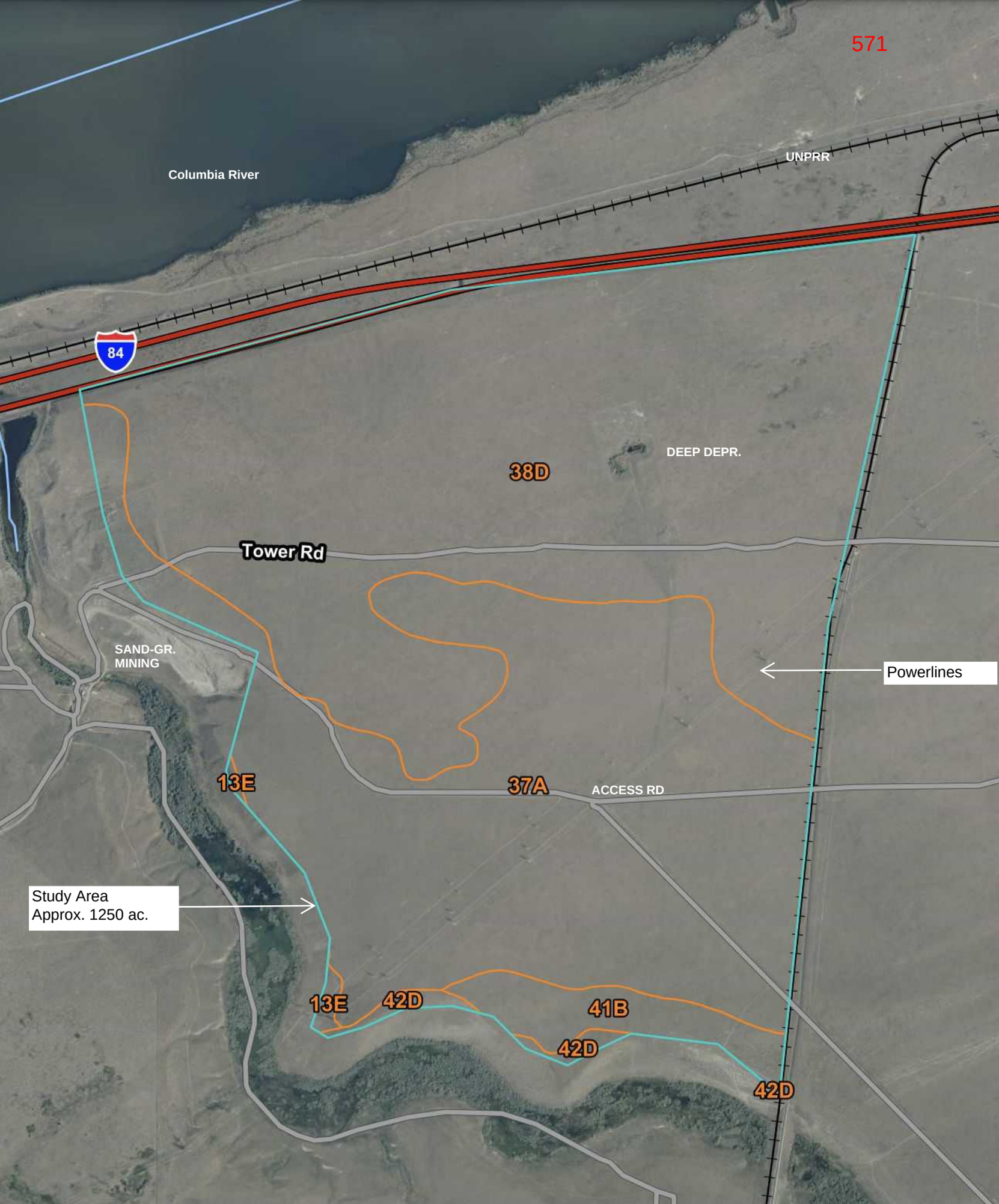


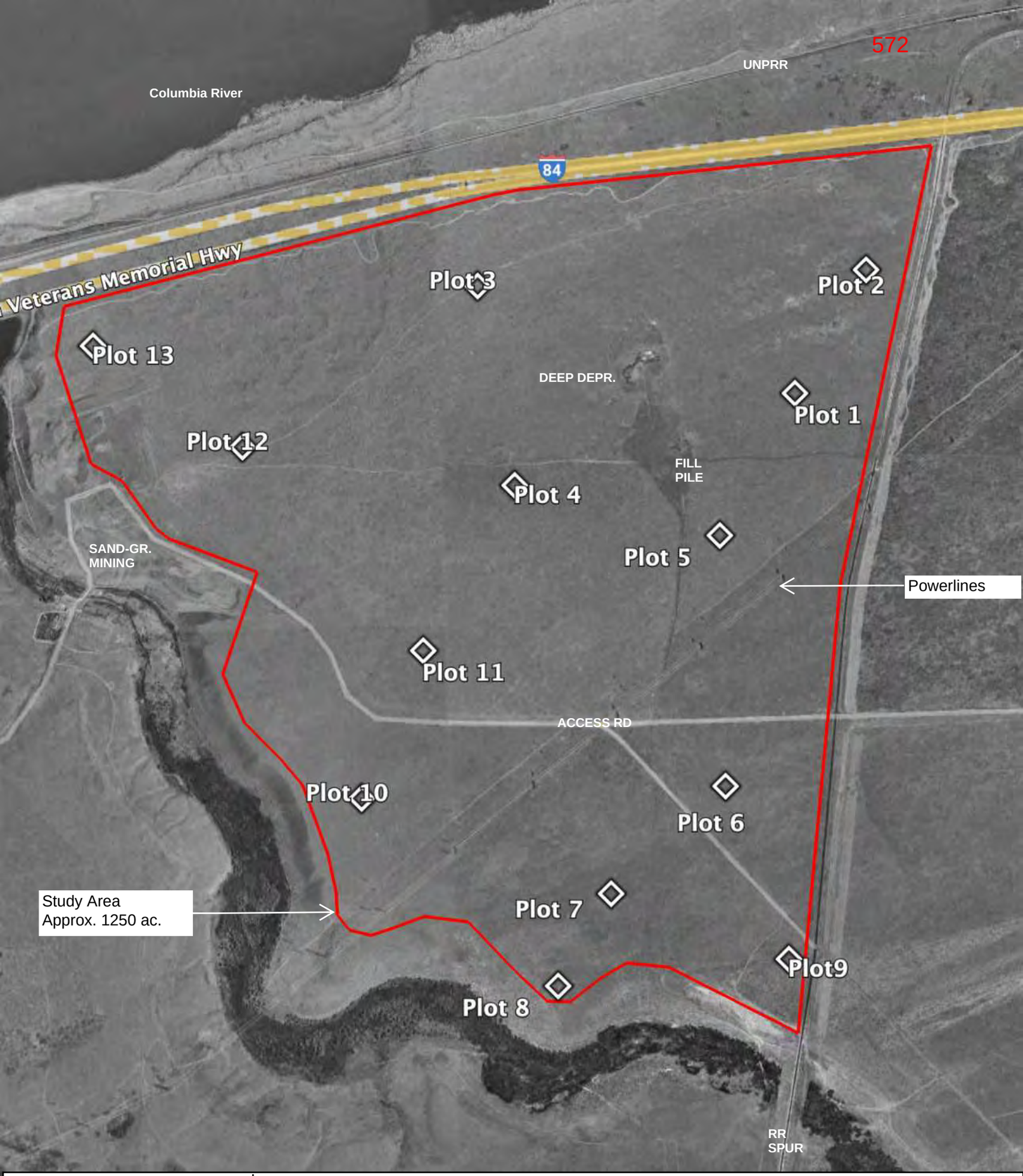
Terra Science, Inc.
Soil, Water & Wetland Consultants

LAND CAPABILITY (SOIL) EVALUATION
FOR PROPOSED DATA CENTER REZONE
Morrow County, Oregon

January 2025

NRCS SOIL MAPPING UNITS

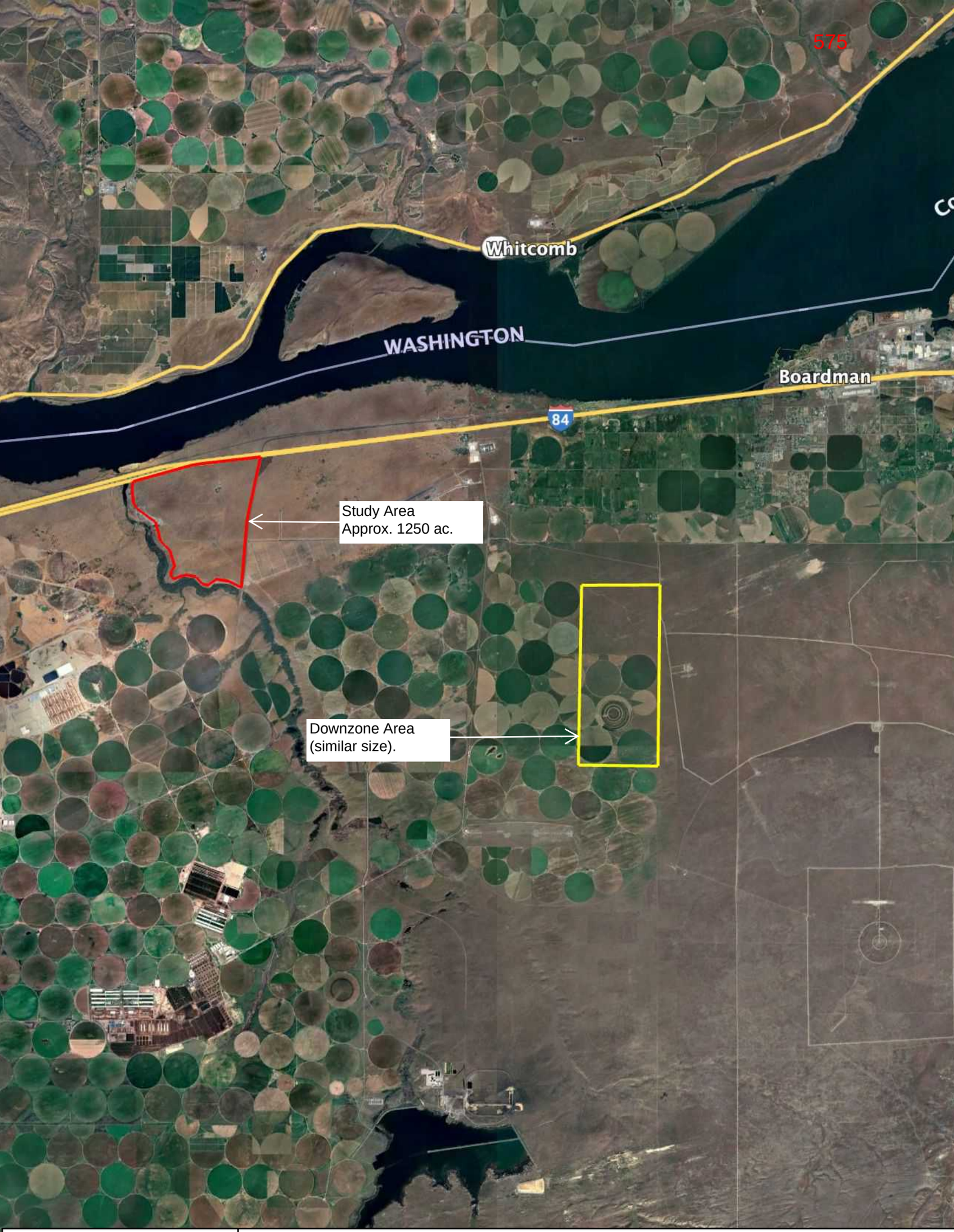
13E -- Gravden very gr. loam, 20-40% slopes
37A -- Prosser silt loam, 0-2% slopes
38D-- Prosser-Rock outcrop complex, 1-20% slopes
41B-- Quinton loamy fine sand, 2-5% slopes
42D-- Quinton-Rock outcrop complex, 2-20% slopes



Terra Science, Inc. Soil, Water & Wetland Consultants	LAND CAPABILITY (SOIL) EVALUATION FOR PROPOSED DATA CENTER REZONE Morrow County, Oregon January 2025	GOOGLE EARTH 2001 HISTORICAL IMAGERY

Terra Science, Inc. Soil, Water & Wetland Consultants	LAND CAPABILITY (SOIL) EVALUATION FOR PROPOSED DATA CENTER REZONE Morrow County, Oregon January 2025	GOOGLE EARTH 2021 HISTORICAL IMAGERY

Terra Science, Inc. Soil, Water & Wetland Consultants	LAND CAPABILITY (SOIL) EVALUATION FOR PROPOSED DATA CENTER REZONE Morrow County, Oregon January 2025	GOOGLE EARTH 2024 HISTORICAL IMAGERY



Terra Science, Inc. Soil, Water & Wetland Consultants	LAND CAPABILITY (SOIL) EVALUATION FOR PROPOSED DATA CENTER REZONE Morrow County, Oregon January 2025	VICINITY MAP FOR STUDY (UPZONE) AREA AND PROPOSED DOWNZONE AREA

Terra Science, Inc.
Soil, Water & Wetland Consultants

LAND CAPABILITY (SOIL) EVALUATION
FOR PROPOSED DATA CENTER REZONE
Morrow County, Oregon

January 2025

NRCS SOIL MAPPING UNITS

20B -- Hezel loamy fine sand, 2-5% slopes
26B -- Koehler loamy fine sand, 2-5% slopes
26C-- Koehler loamy fine sand, 5-12% slopes
40C-- Quincy loamy fine sand, 2-12% slopes
51B-- Royal loamy fine sand, 2-5% slopes

GUIDE FOR PLACING SOILS IN CAPABILITY CLASSES IN OREGON

Capability Class	Depth Inches		Surface Soil Texture		Permeability Within Effective Depth	Max. 2/ Slope %		Erosion Hazard	Available Water Capacity (In.) 3/ to 60"	Drainage Class	Overflow	Alkali & Salinity 4/	Frost Free Days 32 F 5/	ETp Irr. 5/	ETa Dry 5/ 6/
	Irr.	Dry	Irr	Dry	in/hr 1/	Irr.	Dry								
I	40 or more	40 or more	Sandy loam to silty clay loam	Very fine sandy loam to silty clay loam	0.2 - 6.0	3 or less	3 or less	None or slight	7.5 or more 1.5 per foot or more	Well & mod. well drained	none to rare	Free 0 - 4	140 or more	ETp 32 20	ETa 32 20
II	40 or more	40 7/ or more	Sandy loam to silty clay loam Gravelly	Sandy loam to silty clay loam Gravelly	0.06 - 20.0	5 or less	12 or less	Moderate	5.0 or more 1.0 per foot or more	Somewhat 8/ excessive to somewhat poorly drained	Occasional (1 in 10 yrs.)	Slight 4 - 8	100 or more	ETp 32 14	ETa 32 14
III	20 or more	40 9/ or more	Loamy sand to clay & organic Cobbly or gravelly	Sandy loam to clay & organic Cobbly or gravelly	<0.06 - 20.0	8 or less	20 or less	High	3.75 or more, 0.75 per ft. or more	Excessive 10/ to poorly drained	Frequent (1 in 5 years)	Moderate 8 - 15	70 or more	ETp 10	ETa 10
IV	10 or more	20 or more	Sand to clay Stony or very gravelly	Sand to clay Very gravelly, very cobbly, stony	<0.06 - >20	12 or less	35 or less	Any	2.5 or more 0.5 per foot or more	Excessive to poorly drained	Frequent (1 in 5 years)	Strong >15	50 or more	ETp 6	ETa 6
V	20 or more	20 or more	Any - Very gravelly, very cobbly, very stony	Any - Very gravelly, very cobbly, very stony	<0.06 - >20	3 or less	3 or less	None or slight	3 or more	Somewhat Excessive to poorly drained	Very frequent (each year)	Slight <8	Any	ETp 4	ETa 10
VI	10 or more	10 or more	Any - Very gravelly, very cobbly, very stony	Any - Very gravelly, very cobbly, very stony	Any	- -	60 or less	Any	2 or more	Any	Any	Any	Any	ETp 4	ETa 8
VII	Any	Any	Any- Extremely cobbly, extremely stony	Any- Extremely stony	Any	- -	90 or less	Any	Any	Any	Any	Any	Any 11/	- -	ETa 2
VIII	Any	Any	- -	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	- -	- -

1/ Permeability of the least permeable subsurface horizon. 2/The irrigated column refers to surface irrigation systems. The dryland column includes non-irrigated and sprinkler systems. 3/Available water between field capacity and wilting point. 4/Alkali soils have exchangeable sodium in excess of 15%. Figures shown in this column indicate salinity classes by conductivity of the extract in millimhos per centimeter. 5/Temperature and Water Balance for Oregon Weather Stations. Special Report 150, May 1963. Oregon Agr. Exp. Sta. Column figures are minimums. 6/Udic soils with excessive cloud cover (precipitation in excess of 60 or 70 inches) excluding coastal terraces and coastal bottom lands are Class VI up to 60 % slopes and Class VII above 60 % slopes. 7/Depth to fragipan may be 30 or more. 8/Poorly drained when protected by dikes and pumped. 9/Depth to fragipan may be 20 or more. 10/ Very poorly drained when protected by dikes and pumped. 11/All Cryorthods regardless of slope.

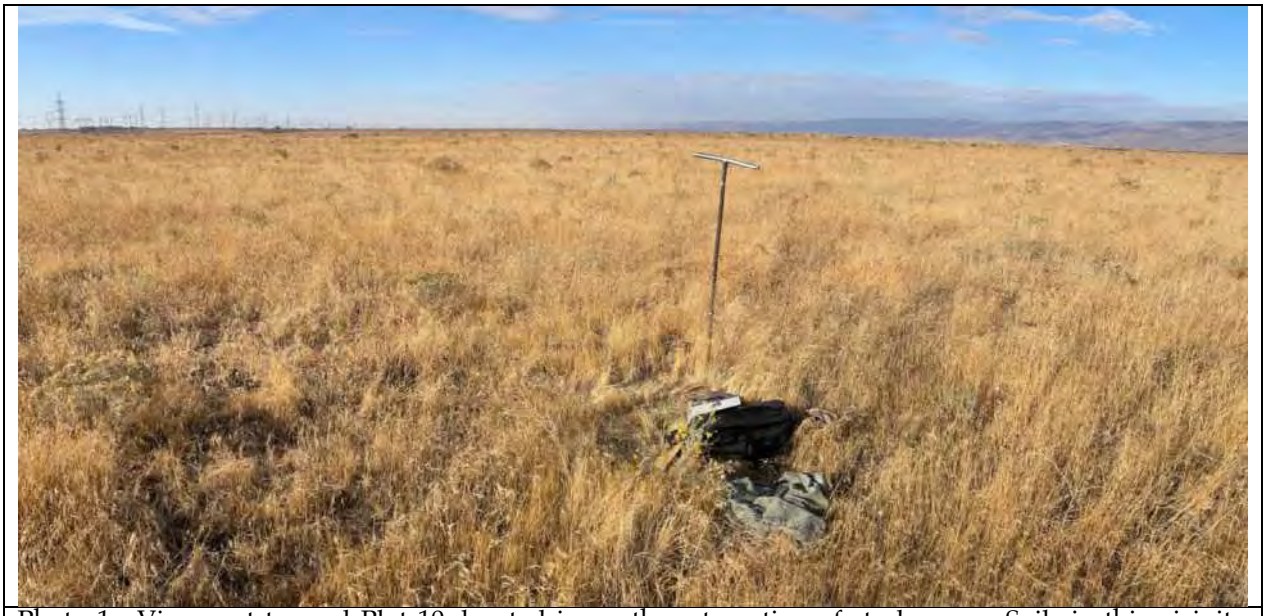


Photo 1. View east toward Plot 10, located in southwest portion of study area. Soils in this vicinity generally rate as Class IVe (non-irrigated), due to soil depth and available water capacity. While seasonally grazed, the underlying basalt bedrock (at 25 to 35 inches below surface) does not sustain year-round grazing.

Photo 2. View east toward railroad spur that forms east boundary of study area. The north part of study has more-defined mounds and intermound areas. Less dense plant growth in intermound areas reflects shallower soils (near-surface basalt bedrock), hence rated as Class Ve.

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Photo 3. View northwest toward vicinity of Plot 3, located in north-center of study area. While the north portion of site has an overall 5 to 8 percent cover of rock outcrops, this vicinity has 20 to 25 percent cover, with adjacent vegetated land having near-surface bedrock. Class VIIe.

Photo 4. Panoramic view east toward deep depression located in northeast portion of study area. This feature appears naturally created, as apparent by the smooth topography and suitable soil conditions on the interior slopes. The lowest areas in the depression exhibit wetland hydrology and vegetation indicators. Adjacent land, particularly to the north, has been scraped and exposed bedrock, possibly to provide additional cattle watering.

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Photo 5. View south toward Plot 5, located in west-center of study area. This vicinity is representative of south portion of study area that has 2 percent or less rock outcrops, and less-defined mounds. This vicinity rates as Class IVe. The "e" modifier indicates moderate to high potential for erosion when significantly disturbed (strong wind action).

Photo 6. View northwest toward Plot 12, located in northwest portion of study area. Plot situated on a mound (right), while adjacent intermound area (left) is less-vegetated due to near-surface bedrock. Land to north and east of this plot have higher than average amount of near-surface bedrock and rock outcrops. The intermound area rates as Class Ve.

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Photo 7. Panoramic view northeast toward Plot 8, located in south-center of study area, and near the north rim (shoulder) of Six Mile Canyon. The soils are more sandy in this location (more wind associated with canyon).

Photo 8. Panoramic view west toward small depression between Plots 1 and 2. While dominated by a different suite of plants, this depression lacks hydrophytic vegetation and wetland hydrology indicators. Several similar depressions occur nearby and evident on historical aerials.

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TERRA SCIENCE, INC.
Soil, Water & Wetland Consultants

MEMORANDUM

Date: **May 23, 2025** **Pages: 19**

From: **Phil Scoles, Soil & Wetland Scientist 503-274-2100 / pscoles@terrascience.com**

Regarding: **Updated Land Capability Evaluation for Threemile Canyon Farm Downzone Area; South of Boardman, Oregon**

To: **Megan Lin and Steve Pfeiffer, Perkins Coie LLP, 1120 N.W. Couch Street, 10th Floor, Portland, OR. 97209-4128**

Cc: **File.**

This memorandum updates the Terra Science, Inc. March 06, 2025 land capability evaluation memorandum for a rezoning proposal situated south of Boardman, Morrow County, Oregon. The applicant recently reconfigured the evaluation area to an east-west polygon (previously a north-south rectangle). The revised rezoning area is situated 1.3 miles east of Tower Road, about 3 miles southeast of Interstate 84 Exit 159, and 4 miles southwest of Boardman. It is also immediately west of Naval Weapons Systems Training Facility Boardman. Generally, the study area consists of the southern half of Morrow County Tax Map 04N 24E Section 36, together with Tax Map 03N 24E Sections 01 and 02 to the south and southwest of it, respectively. The lands west and south of the study area consist of pivot irrigation fields owned and operated by Threemile Canyon Farms. To the north, the land is not farmed and currently managed for conservation. The bombing practice range is located due east, which is largely vacant land, too. The study area lacks any residences, as well as lacks paved roads; however, it has several small structures for irrigation equipment and storage.

Overview. The 1,623-acre study area is underlain by ancient Columbia River basalts, typically deeper than 40 inches below ground surface, likely deeper than 60 inches in many areas. While this basalt geologic formation is visible as rock outcrops near Interstate 84/Boardman Airport, it is not exposed in or adjacent to the study area. Instead, the land surface consists of sandy Missoula flood deposits and eolian (windblown) sand. These sandy materials were historically part of a broad plain of stabilized sand dunes (ridges), swales, deflation plains, and depressions. Farming activity for a couple decades has graded smooth the natural ridges and swales, so the overall landscape has somewhat rolling hills and sloping plains (see attached Google Earth aerials). The land does not have the mound and depression microtopography that is sometimes associated with near-surface basalt. The study area is farmed, except for small patches of unfarmed land between pivot-irrigated fields. Such vacant land is used for pumping equipment, fertilizer storage, access roads and hay storage. In places, there are small piles of glacial erratic rocks removed from the fields. These hockey puck- to basketball-sized rocks were transported by the Missoula Floods (12,000 to 15,000 years ago) and they have varied mineralogy. The cultivated land

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ranges from recently planted to maturing crops (wheat, onions, potatoes and alfalfa. Less than 2 percent of the study area exhibits wetness characteristics of farmed wetland, such as sparce or stressed vegetation in low topographic setting, stunted crops, and/or presence of wet-adapted weeds. As a land capability evaluation, wetlands were not formally delineated and ongoing farming of wetlands often does not change the overall land capability classification (due to small percent of land).

Existing Soil Mapping. The Soil Survey of Morrow County Area, Oregon (NRCS, 1983) identifies three soil series within the revised study area. Such mapping utilizes detailed soil descriptions and county-wide field analysis to predict soil conditions. The predictions are analytical and field verified, but such mapping does not involve soil sampling in every polygon shown on the survey maps. The predominant soil mapped is Quincy loamy fine sand, 2 to 12% slopes (Class 4e if irrigated, Class 7e if non-irrigated). The southern part is mapped as Koehler loamy fine sand, 2 to 5% and 5 to 12% slopes (both Class 4e if irrigated). The southwest corner of the study area is mapped having a small pocket of Hezel loamy fine sand, 2 to 5% slopes (Class 4e if irrigated, Class 6e if non-irrigated). From Google Earth historical imagery (particularly 1996), the soil mapping conducted by Natural Resources Conservation Service (NRCS) generally correlates to changes in topography, landform and surface condition (ground cover and type of vegetation).

Field Evaluation. Soil scientist Phil Scoles of Terra Science evaluated the revised study area on February 25 and May 14 2025. The evaluation involved 4WD vehicle along existing farm roads and pedestrian access into cultivated fields or vacant areas to describe soil characteristics (attributes) and potential limitation for agriculture use. For the field evaluation (not soil survey intensity), the soil scientist described texture, color, gravel content, root penetration, drainage class, and slope. Limitations considerations included available water capacity, rock outcrops, soil depth to bedrock, and potential topography constraints. The cultivated fields and adjacent unfarmed lands have irrigation available, so the land capability rating reflects a soil having fewer limitations; while non-irrigated lands have significant limitations, particular dry climate with warm temperatures during the growing season.

Eleven sample plots were hand-augered across the study area. During sampling, if rock or hardpan were encountered, additional attempts 2 to 4 feet apart were made to determine if such refusal was consistent or random (like a buried glacial erratic rock). The deepest soil observations were 49 and 60 inches (8 locations), while the shallowest observations were 33, 40, and 43 inches (rock refusal at 3 locations). That is, the hand augering was stopped by cobbles and boulders dropped by ancient floods (Missoula floods) that occurred 12,000 to 15,000 years ago, then later buried those in sandy flood deposits. Additionally, some of the shallower soils could be remnants of an older soil (with cemented hardpan) that was truncated by those cataclysmic floods. Given the proximity to the Columbia River Gorge (wind funnel effect), it is speculated that sandy flood deposits were reworked by prevailing winds into dune landforms. Thus, these sandy materials are relatively young soils (under 10,000 years) and they lack distinctive horizons having iron and clay enrichment. That is, these soils have A horizons atop C horizons, while older soils (not present) form a B horizon with more clay and/or iron beneath the A horizon.

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Soil Characteristics. The field evaluation characterized each of the 11 auger hole locations for the following attributes:

Soil texture – The majority surface and subsurface textures observed are loamy fine sand (LFS). Several locations have fine sand (FS) and loamy very fine sand (LVFS) texture in the subsoil. If irrigated, these sand to loamy fine sand textures are considered adequate for shallow-rooted crops, and favorable for subsurface crops like potatoes, carrots and onions. That is, sandy soils when irrigated allow for rapid and clean extraction for tubers, bulbs and root vegetables. These sandy textures have moderate to low available water capacity. These textures are also susceptible to wind erosion when significantly disturbed, particularly on dune ridges.

Soil color, organic matter and drainage class – Dark grayish brown (10YR 3/2) is a common topsoil color throughout the study area. This matrix color is typical of topsoil, which may have 3 to 5% organic matter from decayed vegetation and roots. The subsoil color was most commonly very dark grayish brown (2.5Y 3/2) to dark olive brown (2.5Y 3/3). Sample Plot 2B contained redoximorphic concentrations; however, such features amounted to only 1 percent and occurred greater than 26 inches below the surface (hence, non-hydric). Another sample plot (Plot 3A) had redoximorphic concentrations starting at 46 inches below the surface (also non-hydric). The matrix colors can infer soil drainage; however, the fine sandy textures have a greater influence making the soils somewhat excessively drained (hence moderate to low available water capacity). The soils in the farmed wetlands were not specifically examined due to their low percent of land distribution (hence not significantly influencing the land capability classification).

Gravel content – Gravel volume was visually evaluated and found mostly <1 to 2% for the surface layer at most plot locations (some had no gravels). The gravel content typically remained the same or decreased for subsurface layers. Gravel size varied from small pea-size to 1.5 inch diameter, often rounded (less angular). Based on the occasional rock piles in vacant areas, the rocks plucked from the tillage surfaces, they appear deposited by Missoula flood waters. The gravel volume in the soil profiles is very low, so the available water capacity was not affected by rock presence.

Root penetration – The thickness of the A horizon generally reflects the major portion of the rooting zone, which was observed 9 to 17 inches thick. In the cultivated fields, fine and medium roots generally extended 15 to 20 inches. For unfarmed areas (where perennial grasses, annual forbs, and small shrubs grow), fine and medium roots extend 25 to 35 inches below the surface. The loamy fine sand and loamy very fine sand textures are favorable for root exploration from the surface to an unrestricted depth.

Slope – The study area has an overall slope range of 1 to 5 percent. In places, the microtopography has short slope reaches of 5 to 15 percent on escarpments between deflation plains and swales/terraces. The steeper slopes are not suitable for pivot irrigation but alternate types of irrigation could utilize such slopes for perennial crops (albeit only 1 or 2 percent of study area).

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Soil Limitations. The field evaluation identified the following limitations, via the 11 hand-auger holes and field observations during the pedestrian trek across the subject land :

Available water capacity – The ability of soil to store rainfall is closely related to the soil texture and depth, with loams and silt loams having desirable available water capacity, but sandy soils having lower available water capacity. The observed soils are mostly loamy fine sand textures, while the profile depths of depths of 30 to more than 60 inches of soil fines. This combination yields moderate to low available water capacity, which is adequate for irrigated agricultural production. Soils with moderately high and high available water capacity have greater volume of silt and clay, which provide more surfaces for water to adhere. The moderate to low available water capacity is not a significant limitation for irrigated land (installed for entire study area). In contrast, non-irrigated lands (situated north or east of the study area), are limited more by dry climate, than available water capacity. That is, sandy soils and climatic conditions (warm, dry spring and summer months). do not provide sufficient rain/snow for cultivated crops.

Rock outcrops – No outcrops were observed within the study area, so this is not a limitation for crop cultivation or range utilization.

Shallow depth to bedrock – Only one plot location encountered a calcium-cemented duripan, at a depth of 33 inches. For crop production with irrigation, such limitation is low. The duripan is likely encountered during installation of pivot irrigation system that places underground pipes 36 to 48 inches below the surface. Consequently, it may be necessary on a one-time basis to utilize an excavator with rock hammer tooth to break apart the duripan between the pump and center pivot. This is not a significant limitation for cropping.

Irregular microtopography – It is speculated that the original topography of the farmed portion of the study area was similar to the nearby Tax Lot 120, located immediately to the north. Tax Lot 120 is vacant land is managed for conservation of soil, wildlife and grassland habitat. It has steeper ridges, broad swales and isolated, linear and/or oblong depressions. Since the vast majority of the study area is farmed, cultivation practices have made the topography smooth, but not necessary level (flat). Given the sandy nature of the soil parent material, the minor degree of land alteration has not resulted in exposed subsoils that lack organic matter or nutrients. That is, the surface conditions and cropping patterns infer no limitations related to past microtopography.

[continued on following page]

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Land Capability Rating. The process of determining land capability involves evaluation of onsite soil attributes, physical limitations and application of rating system. The U.S. Dept. of Agriculture (USDA) land classification is a common rating system, where Class 1 soils have no limitations and Class 8 soils have severe limitations. Soil depth, permeability, chemical attributes, soil drainage/erosion potential, and climate influences are the evaluation factors, then scores combined to determine a rating. While it is an imperfect rating system, it is utilized in Oregon for deciding if a soil is high value or non-high value. Class 1 and 2 are considered prime soils, while Class 3and 4 are commonly cultivated with specific improvements, such as irrigation, crop selection, compaction management and/or tiling. Class 5 to 7 are typically utilized for livestock range, and Class 8 soils are often too steep, too rocky or too limited for grazing. The attached "Guide for Placing Soils In Capability Classes In Oregon" was prepared by NRCS to assist in determining such rating.

Overall, the irrigated soils throughout the study area rate as Class 4e. The "e" suffix infers increased potential for erosion due to fine sand to loamy fine sand soil texture and windy conditions near Columbia River. Without irrigation, such soils are Class 6e. The small patches of unfarmed land between pivots is also considered Class 4e, since irrigation is available. There are small, farmed depressions in the south portion of the study area which have land capability rating of Class 5, due to sandy textures and seasonally wet conditions (high water table). Such depressions are too small and infrequent occurrence for mapping in this evaluation.

In accordance with OAR 660-033-0020(1)(A) and (B), (relating to Statewide Planning Goal no. 3), the entire study area qualifies as "agricultural land" because it suitable for grazing and potential farm use. This definition is inclusive of both cultivated, grazed and fallow lands that have potential farm use. OAR 660-033-0020(8)(a) specifies definitions for High-Value Farmland. No portion of the study area qualifies as "prime, unique, Class I or II", nor "not irrigated and classified prime, unique, Class I or II". Such designations infer that prime, unique farm land has no or very few limitations. The irrigated portion of the study area has few limitations, such as sandy soils that have moderate to low available water capacity. OAR 660-033-0020(8)(b) specifies "high-value" outside of Willamette Valley as supporting perennial crops, nursery stock, berries, fruits, etc. as of November 04, 1993. No portion of the study area meets high-value farmland definition since farming was initiated with irrigation in 2000. Aside from the baseline date of November 04, 1993, the soils within the study area have similar rating as high-value farmland.

Downzone Proposal. The land evaluated for this technical memorandum is currently zoned Space Age Industrial (SAI). In exchange for rezoning Exclusive Farm Use (EFU) west of the Boardman Airport for general industrial use, the study area would be downzoned to EFU. The result of this downzoning will be that various industrial uses allowed under the current SAI zone designation will become prohibited and only farm uses and limited non-farm uses permitted under the County EFU designation will be allowed. Oregon land use goals promote conservation of agricultural lands to sustain a diverse and stable economy, as well as consolidate resources and services in a pragmatic manner. The proposed zoning action would "downzone" land that already demonstrates excellent productivity for wheat, corn, potatoes, onions, cattle and horse feed, and similar row crops. Additionally, the study area has extensive infrastructure of water lines, irrigation pumps, articulated sprinkler systems, and related structures for ongoing fertilization, weed control, and maintenance. The proposed downzoning conserves high yield agricultural land that is contiguous to ongoing farming

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operations, and such land is compatible with adjacent land uses. The downzoning also assures slight gain of EFU zoned land.

The study area for this evaluation is owned by Threemile Canyon Farms (TCF) and it is significantly more suitable for agriculture than the upzone area described in the January 20, 2025 Terra Science, Inc. technical memorandum. In particular, the upzone parcel (also owned by TCF) has many agricultural limitations that require substantial financial and time investment to achieve a cultivation condition. Such condition, if achieved, would still be significantly inferior to the agricultural condition of downzone study area. In particular, the upzone area center and northern part that cannot be practically cultivated due to numerous rock outcrops and adjacent shallow soils. The southern part of the upzone area also has shallow soils and microtopography that can only be slightly improved by land grading, due to underlying rocky subsoil. Installation of irrigation systems would be exceedingly difficult, requiring trenching in bedrock and soil sieving to remove cobbles and stones that interfere with tillage equipment. Ingress and egress into the upzone area lacks access along Interstate-84, plus lacks access along the elevated railroad spur and Sixmile Canyon on the south and west sides. Given these soil and access limitations, the land proposed for upzoning action is unlikely to become cultivated land, while the land proposed for downzoning is likely to remain in crop production due to favorable soil conditions, available irrigation, and associated improvements (irrigation, land leveling, access, etc.).

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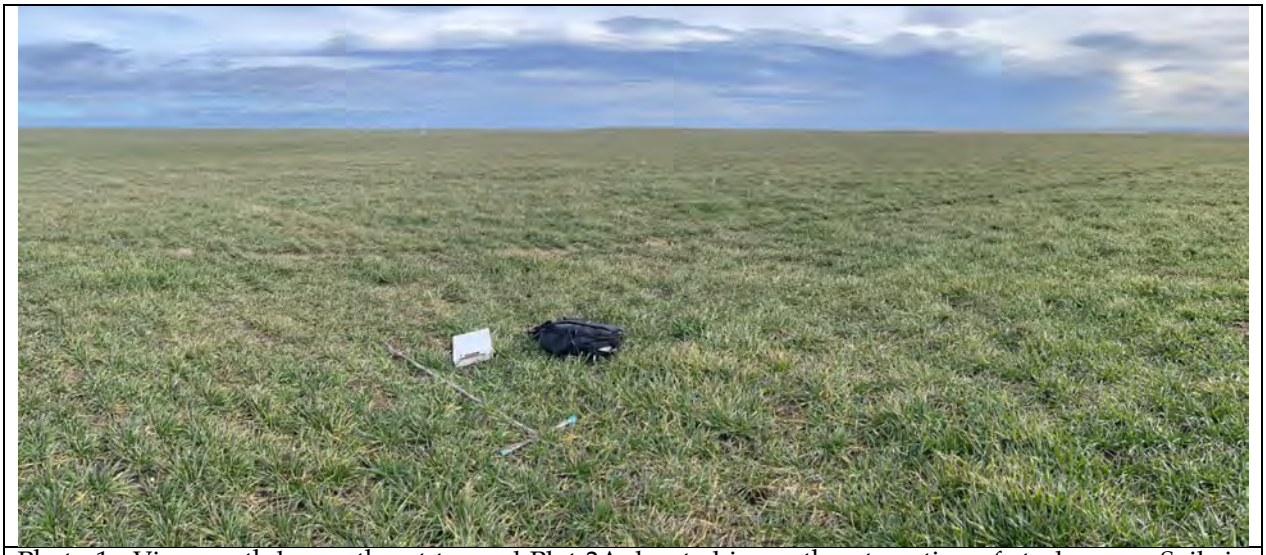

Photo 1. View north by northeast toward Plot 2A, located in southeast portion of study area. Soils in this vicinity generally rate as Class 4e, since they are nearly flat, have moderate to low available water capacity and irrigated. Rocks were encountered at 40-inch depth. Such rocks are likely stones and boulders deposited during ancient floods and do not have significant effect on land capability (too few, too deep in soil).

Photo 2. View north by northeast toward Plot 2B in the southwest portion of study area. The vicinity of this plot is a broad swale between terraces or dune deflation plains (slope inflection apparent in background). This was the only plot that encountered a calcium-cemented duripan at 33 inches – likely a remnant feature of the landscape prior to the Missoula floods 12,000 to 15,000 years ago.

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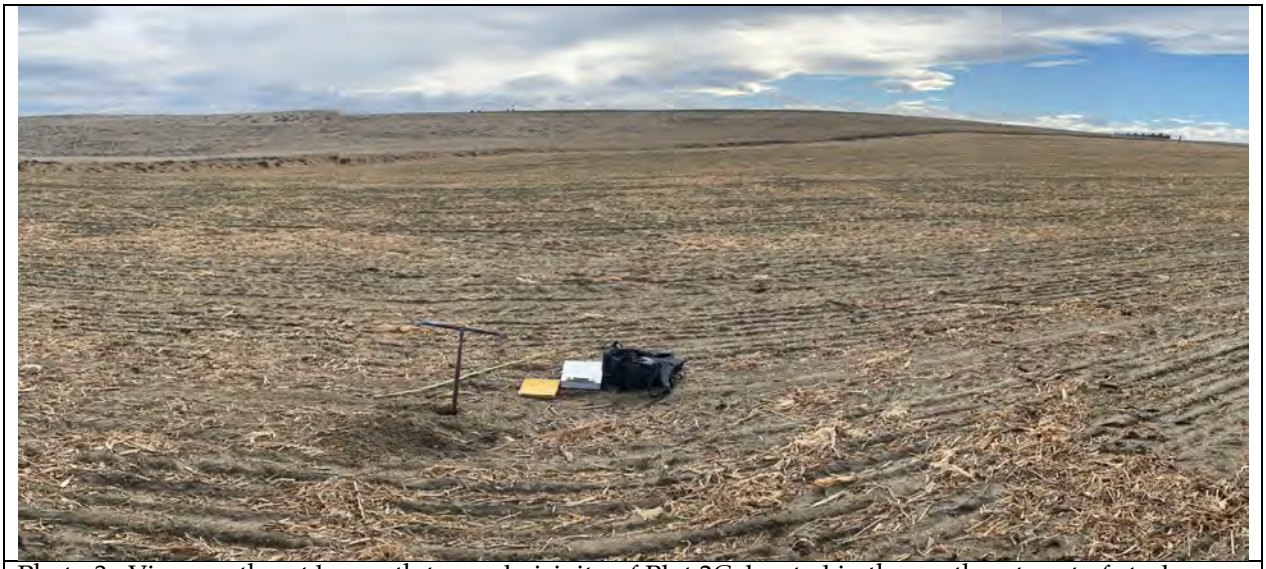

Photo 3. View southeast by south toward vicinity of Plot 2C, located in the southeast part of study area. The landform is a sand dune deflation plain, that is similar to an alluvial terrace. The steeper slope in the background is a stabilized sand dune, partially altered by past farmed but now vacant. While the original parent material was Missoula flood deposits, it was subsequently re-worked by winds to form scattered dunes with swales, depression and deflation plain between the dunes.

Photo 4. View north by northeast toward Plot 2D, situated in the east-center of study area. While the overall landscape slopes north to northwest (toward Columbia River), the soils are sufficiently sandy that rainfall and snowmelt typically infiltration, except where surrounding slopes create a localized catchment area. The majority of auger holes did not encounter rocks larger than 2 inches and often hand augering extended down to 49 or more inches.

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Photo 5. View east by southeast near eastern boundary of study area (also east of Plot 2D). The farming in this vicinity utilizes pivot irrigation systems, so there are unfarmed areas between the round fields and linear boundaries. Dominant plants in vacant areas include cheatgrass, prickly Russian thistle (aka tumbleweed), wild mustard, fiddleneck and prickly lettuce.

Photo 6. View south toward Plot 2E (foreground), located along northeast edge of study area. Plot situated north of active cultivation field (pivot irrigation line at upper right of photo). Soil at this location is deep, fine loamy sand textures, moderate to low available water capacity, no shallow bedrock or outcrops. Vegetation is similar to other unfarmed land, and supports rubber rabbitbrush, bluebunch wheatgrass, and common yarrow. This location and land further south rates as Class 4e.

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Photo 7. View northwest to north toward Plot 2F, located in west-center of study area. Similar to other locations, soils are deep; have loamy fine sand textures; have minimal gravels/cobbles; lack bedrock or outcrops; and flat to gently sloping topography. As irrigated, such lands rate as Class 4e.

Photo 8. View north to northeast toward Plot 3A near the south-center edge of the study area. Soil was hand-augered to almost 60 inches. The soils are composed of loamy fine sand with very few gravels. With irrigation, these sandy soils rate as Class 4e. The low area at far left edge of photo is an isolated farmed wetland (difficult to discern from distance). Recently cut alfalfa shown in photo.

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Photo 9. View southeast to south from Plot 3B, located near center of study area. Wheat crop planted and maturing to seed in this vicinity. Similar to other locations, soils are deep; have loamy fine sand textures; have minimal gravels/cobbles; lack bedrock or outcrops; and flat to gently sloping topography. As irrigated, such lands rates as Class 4e.

Photo 10. View south to southwest toward Plot 3C in northwest part of the study area. Soil was hand-augered to 49 inches (blocked by cobble-sized rock at this depth). The soils consist of loamy fine sand with less than 1 percent gravels. Plot location situated between pivot-irrigated fields, so it is not cultivated. It is rated as Class 4e since it is part of a larger irrigated complex. Non-farmed vegetation includes big sagebrush (*Artemisia tridentata*), rubber rabbitbrush (*Ericameria nauseosa*), green rabbitbrush (*Chrysothamnus viscidiflorus*), Menzies fiddleneck (Amsinckia menziesii), and cheatgrass (*Bromus tectorum*).

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Photo 11. View north to northeast toward Plot 3D, located in the northwest part of study area (hills adjacent to Columbia River in background). Plot is representative of broad terrace or deflation plain that dips to the north. This plot is similar loamy fine sand textures that extend greater than 60 inches below the surface. Row crop of potatoes shown in photo.

Photo 12. View of ice-rafted, glacial erratics (stones) deposited by ancient Missoula floods. Such rocks occur randomly in soil profile and get hand-piled in unfarmed areas if tillage equipment exposes or encounters the rocks.

Photo 13. View east at center of study area. Cultivation occurs at multiple times in spring and fall due to sandy soils that do not get compacted by farming equipment.

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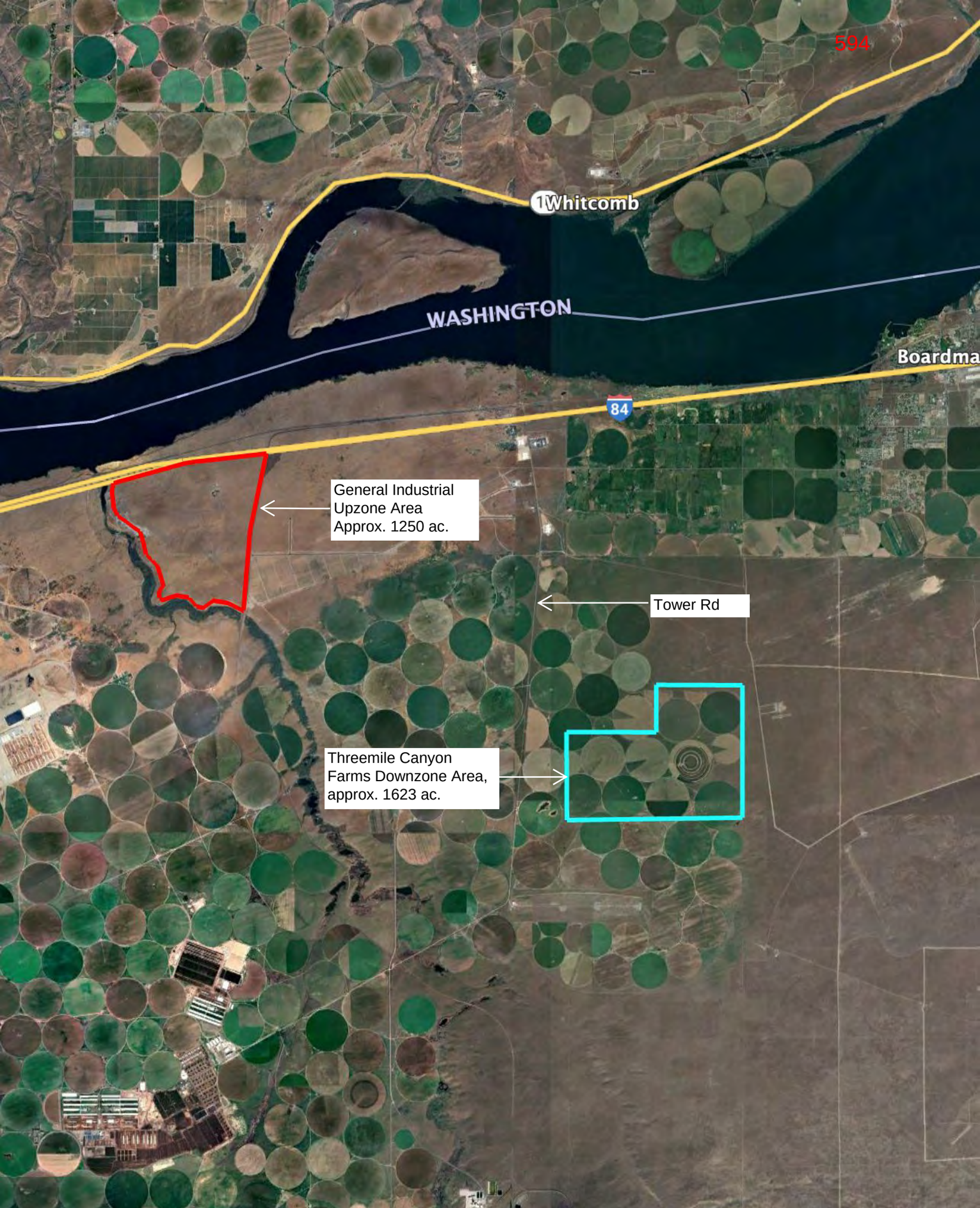
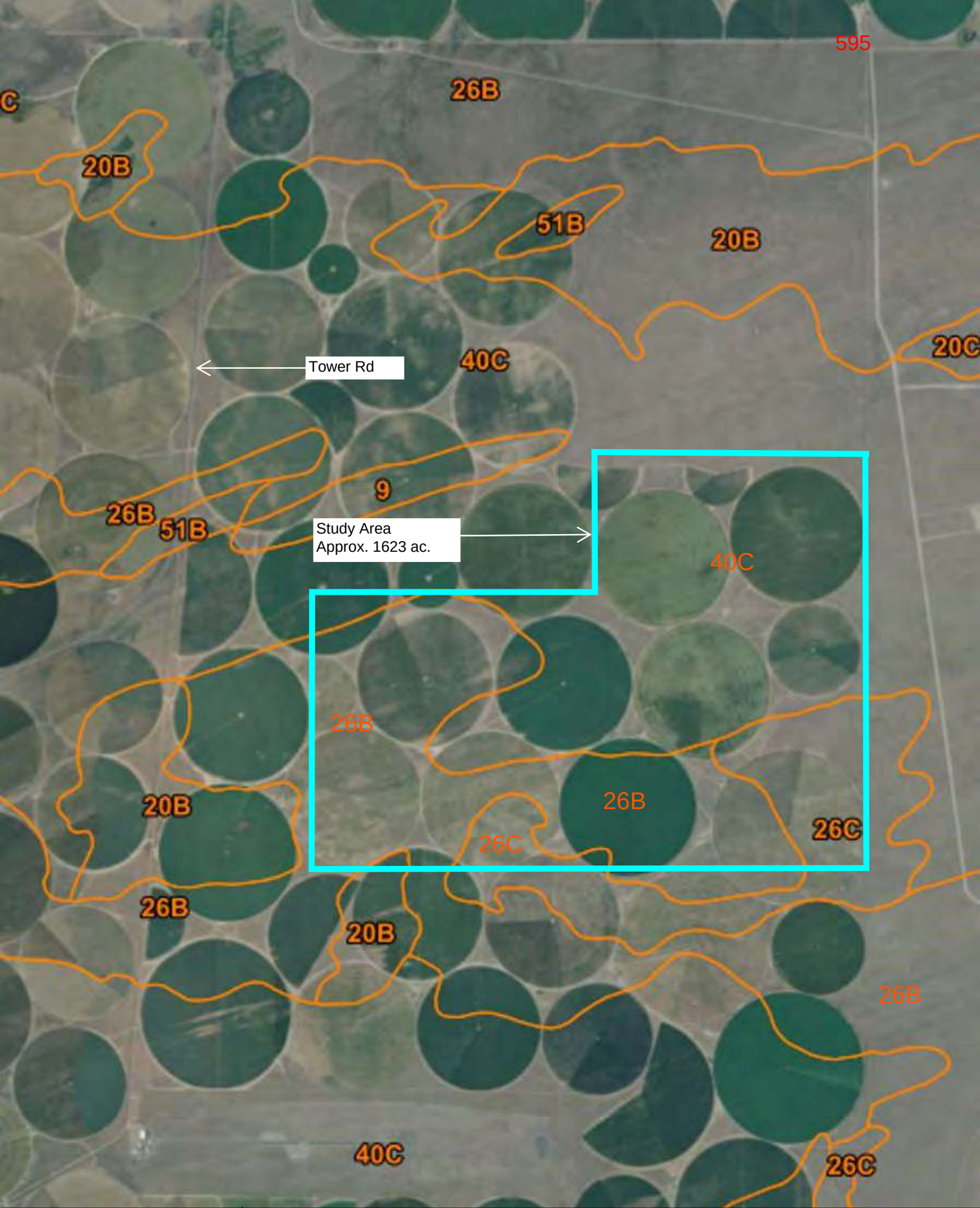


Terra Science, Inc.
Soil, Water & Wetland Consultants

LAND CAPABILITY (SOIL) EVALUATION
FOR PROPOSED THREEMILE CANYON
FARMS DOWNZONE AREA
Morrow County, Oregon

May 2025 (Updated)

VICINITY MAP FOR PROPOSED GENERAL
INDUSTRIAL (UPZONE) AREA
AND PROPOSED DOWNZONE AREA



Terra Science, Inc. Soil, Water & Wetland Consultants	LAND CAPABILITY (SOIL) EVALUATION FOR PROPOSED THREEMILE CANYON FARMS DOWNZONE AREA Morrow County, Oregon May 2025 (Updated)	NRCS SOIL MAPPING UNITS 20B-- Hezel loamy fine sand, 2-5% slopes 26B-- Koehler loamy fine sand, 2-5% slopes 26C-- Koehler loamy fine sand, 5-12% slopes 40C-- Quincy loamy fine sand, 2-12% slopes 51B-- Royal loamy fine sand, 2-5% slopes

Terra Science, Inc.
Soil, Water & Wetland Consultants

LAND CAPABILITY (SOIL) EVALUATION
FOR PROPOSED THREEMILE CANYON
FARMS DOWNZONE AREA
Morrow County, Oregon

May 2025 (Updated)

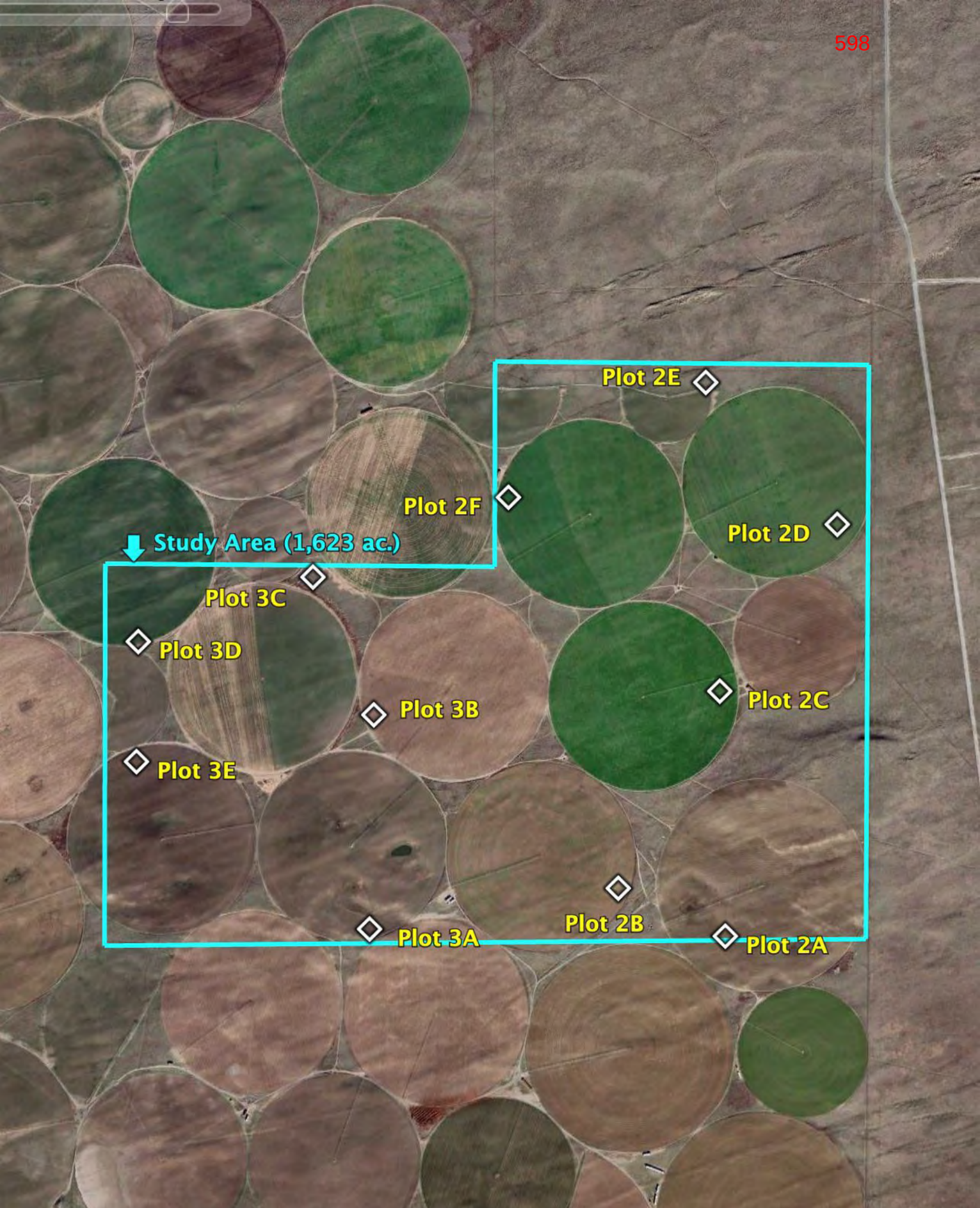
GOOGLE EARTH 2001
HISTORICAL IMAGERY

Terra Science, Inc.
Soil, Water & Wetland Consultants

LAND CAPABILITY (SOIL) EVALUATION
FOR PROPOSED THREEMILE CANYON
FARMS DOWNZONE AREA
Morrow County, Oregon

March 2025 (Updated)

GOOGLE EARTH 2013
HISTORICAL IMAGERY



Terra Science, Inc.
Soil, Water & Wetland Consultants

LAND CAPABILITY (SOIL) EVALUATION
FOR PROPOSED THREEMILE CANYON
FARMS DOWNZONE AREA
Morrow County, Oregon

March 2025 (Updated)

GOOGLE EARTH 2021
HISTORICAL IMAGERY

Terra Science, Inc.
Soil, Water & Wetland Consultants

LAND CAPABILITY (SOIL) EVALUATION
FOR PROPOSED THREEMILE CANYON
FARMS DOWNZONE AREA
Morrow County, Oregon

March 2025 (Updated)

GOOGLE EARTH 2023
HISTORICAL IMAGERY

GUIDE FOR PLACING SOILS IN CAPABILITY CLASSES IN OREGON

Capability Class	Depth Inches		Surface Soil Texture		Permeability Within Effective Depth	Max. 2/ Slope %		Erosion Hazard	Available Water Capacity (In.) 3/ to 60"	Drainage Class	Overflow	Alkali & Salinity 4/	Frost Free Days 32 F 5/	ETp Irr. 5/	ETa Dry 5/ 6/
	Irr.	Dry	Irr	Dry	in/hr 1/	Irr.	Dry								
I	40 or more	40 or more	Sandy loam to silty clay loam	Very fine sandy loam to silty clay loam	0.2 - 6.0	3 or less	3 or less	None or slight	7.5 or more 1.5 per foot or more	Well & mod. well drained	none to rare	Free 0 - 4	140 or more	ETp 32 20	ETa 32 20
II	40 or more	40 7/ or more	Sandy loam to silty clay loam Gravelly	Sandy loam to silty clay loam Gravelly	0.06 - 20.0	5 or less	12 or less	Moderate	5.0 or more 1.0 per foot or more	Somewhat 8/ excessive to somewhat poorly drained	Occasional (1 in 10 yrs.)	Slight 4 - 8	100 or more	ETp 32 14	ETa 32 14
III	20 or more	40 9/ or more	Loamy sand to clay & organic Cobbly or gravelly	Sandy loam to clay & organic Cobbly or gravelly	<0.06 - 20.0	8 or less	20 or less	High	3.75 or more, 0.75 per ft. or more	Excessive 10/ to poorly drained	Frequent (1 in 5 years)	Moderate 8 - 15	70 or more	ETp 10	ETa 10
IV	10 or more	20 or more	Sand to clay Stony or very gravelly	Sand to clay Very gravelly, very cobbly, stony	<0.06 - >20	12 or less	35 or less	Any	2.5 or more 0.5 per foot or more	Excessive to poorly drained	Frequent (1 in 5 years)	Strong >15	50 or more	ETp 6	ETa 6
V	20 or more	20 or more	Any - Very gravelly, very cobbly, very stony	Any - Very gravelly, very cobbly, very stony	<0.06 - >20	3 or less	3 or less	None or slight	3 or more	Somewhat Excessive to poorly drained	Very frequent (each year)	Slight <8	Any	ETp 4	ETa 10
VI	10 or more	10 or more	Any - Very gravelly, very cobbly, very stony	Any - Very gravelly, very cobbly, very stony	Any	- -	60 or less	Any	2 or more	Any	Any	Any	Any	ETp 4	ETa 8
VII	Any	Any	Any- Extremely cobbly, extremely stony	Any- Extremely stony	Any	- -	90 or less	Any	Any	Any	Any	Any	Any 11/	- -	ETa 2
VIII	Any	Any	- -	Any	Any	Any	Any	Any	Any	Any	Any	Any	Any	- -	- -

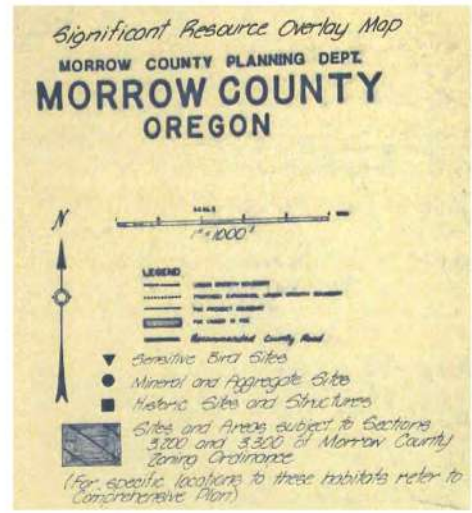
1/ Permeability of the least permeable subsurface horizon. 2/The irrigated column refers to surface irrigation systems. The dryland column includes non-irrigated and sprinkler systems. 3/Available water between field capacity and wilting point. 4/Alkali soils have exchangeable sodium in excess of 15%. Figures shown in this column indicate salinity classes by conductivity of the extract in millimhos per centimeter. 5/Temperature and Water Balance for Oregon Weather Stations. Special Report 150, May 1963. Oregon Agr. Exp. Sta. Column figures are minimums. 6/Udic soils with excessive cloud cover (precipitation in excess of 60 or 70 inches) excluding coastal terraces and coastal bottom lands are Class VI up to 60 % slopes and Class VII above 60 % slopes. 7/Depth to fragipan may be 30 or more. 8/Poorly drained when protected by dikes and pumped. 9/Depth to fragipan may be 20 or more. 10/ Very poorly drained when protected by dikes and pumped. 11/All Cryorthods regardless of slope.

EXHIBIT 11
Overlay of SRO Map (Approximate)

LEGEND

Proposed Map Amendments

1986 SRO Map Legend



0 1 2 4 Miles

1 inch = 2 Miles

N

SOURCE DATA:
Morrow County Data, 2024

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 5/6/2025
File: GAF-1_Base Map

Map Created By: IAS
Project No: 2240364.00

MACKENZIE.
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Portland, Oregon • Vancouver, Washington • Seattle, Washington

Natural Resources Site Technical Due Diligence

Prepared for
Property of Threemile Canyon Farms

January 2025

Parametrix

Natural Resources Site Technical Due Diligence

Prepared for

Property of Threemile Canyon Farms

Prepared by

Parametrix
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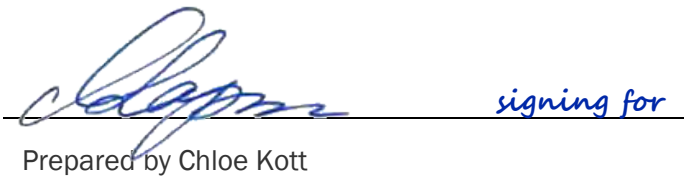
January 2025 | 553-4805-014

Citation

Parametrix. 2025. Natural Resources Site Technical Due Diligence. Prepared for Property of Threemile Canyon Farms by Parametrix, Portland, Oregon. January 2025.

Certification

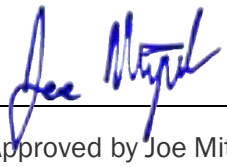
The technical material and data contained in this document were prepared under the supervision and direction of the undersigned.



signing for

Prepared by Chloe Kott

Checked by Colton Kyro



Approved by Joe Mitzel, PE

Contents

FIGURES

TABLES

Contents (Continued)

APPENDICES

Acronyms and Abbreviations

ACIS	Applied Climate Information System
DSL	Oregon Department of State Lands
EFU	Exclusive Farm Use
FEMA	Federal Emergency Management Agency
HUC	Hydrologic Unit Code
IPaC	Information for Planning and Consultation
LWI	Local Wetland Inventory
NOAA	National Oceanic Atmospheric Administration
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
ODA	Oregon Department of Agriculture
ODFW	Oregon Department of Fish and Wildlife
ORBIC	Oregon Biodiversity Information Center
PP	photo point
SAI	Space Age Industrial
SP	sample plot
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

1. Introduction

The purpose of this Natural Resources Due Diligence report is to describe the general natural resources characteristics of the Site (see map in Figure 1) owned by Threemile Canyon Farms. The Site is located in the Morrow County, Oregon (Township 4N, Range 23E, Sections 23, 24, and 25, portion of tax lot 110; Township 4N, Range 24E, Section 19, tax lot 121, and portion of tax lot 110). A portion of the Site is located within the Exclusive Farm Use (EFU), while another portion falls under the Space Age Industrial (SAI) county zoning designation (Morrow County 2023).

Parametrix evaluated the Site using readily available data, including aerial photographs, topographic maps, public GIS datasets, and information from agency websites. Parametrix also reviewed the rare species location records requested from the Oregon Biodiversity Information Center (ORBIC). In addition, a 1-day site visit was conducted on December 18, 2023, to inspect the Site for natural resources of special concern. Background data are presented in Appendix B. All ORBIC resource records obtained for the project are confidential and are not included as an appendix to this report but are on file with Parametrix . Representative site photographs are included in Appendix C.

2. Methods

2.1 Review of Existing Information

The following available environmental data, maps, and materials related to the site were reviewed:

- Aerial imagery of the Site from 1952 to 2023 (EDR 2023; Google Earth 2023; Nationwide Environmental Title Research, LLC 2023).
- Federal Emergency Management Agency (FEMA) flood insurance rate map (FEMA 2023).
- Natural Resources Conservation Service (NRCS) Web Soil Survey in the Site. (USDA NRCS 2023).
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) in the Site (USFWS 2023a).
- USFWS Critical Habitat for Threatened and Endangered Species maps (USFWS 2023b).
- USFWS Information for Planning and Consultation (IPaC) resource list (USFWS 2023c).
- Oregon Department of Agriculture (ODA) WeedMapper (ODA 2023a).
- ODA Oregon Listed Plants by County (ODA 2023b).
- ODA Noxious Weed Policy and Classification System (ODA 2023c).
- ORBIC Rare, Threatened, and Endangered Species Records (within a 2-mile radius of the project; generated March 24, 2023) (ORBIC 2023).
- Oregon Department of Fish and Wildlife (ODFW) Threatened and Endangered Species List (ODFW 2023).

There is no Local Wetland Inventory (LWI) at the Site and its vicinity.

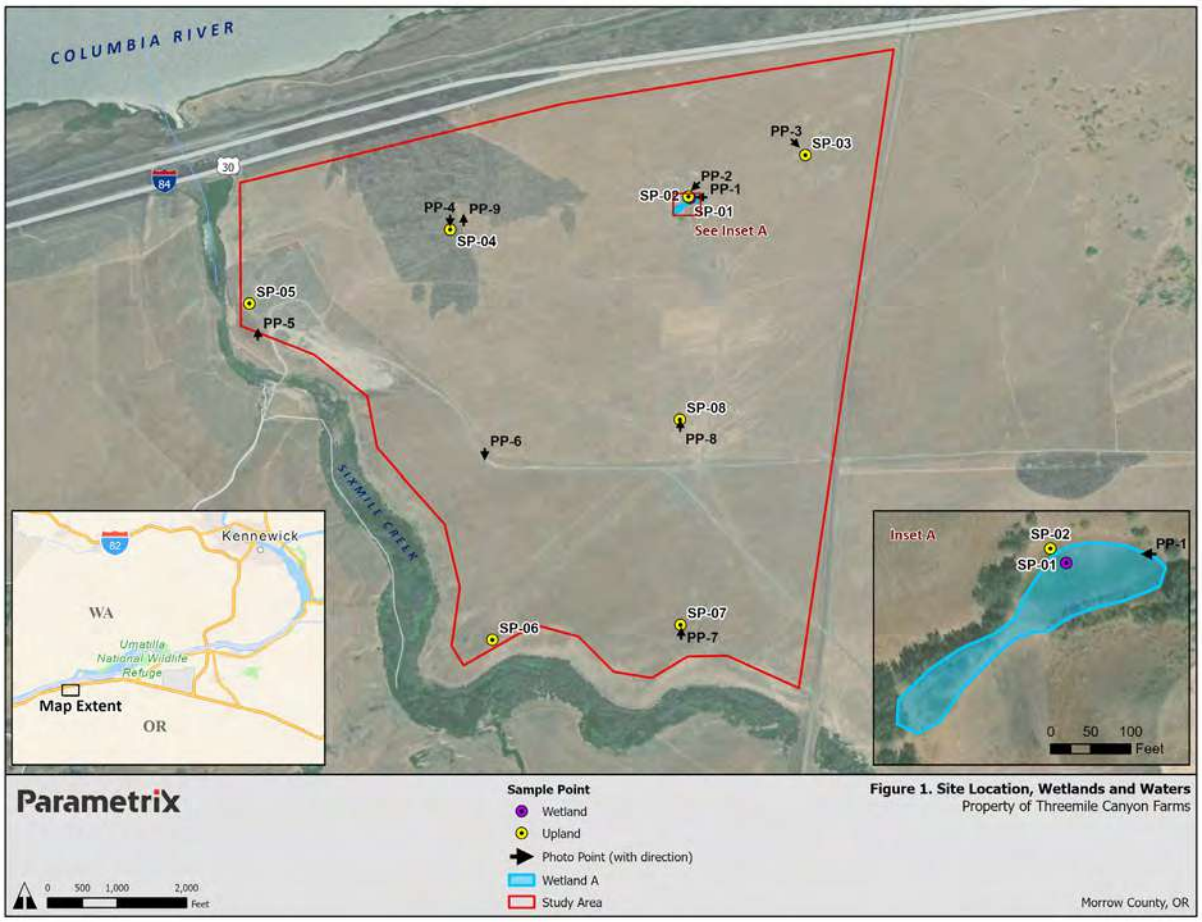


Figure 1. Site Map

2.2 Site Visit

Parametrix scientists Colton Kyro and Chloe Kott conducted a site visit on December 18, 2023, to identify whether waters of the United States and/or waters of the state occur within the Site and to assess vegetation, wildlife habitat characteristics, and other natural resources of special concern.

Weather during the site visit was cloudy with a high of 39°F. There was no precipitation during the site visit.

The presence of wetlands and waters was determined using methods specified in the U.S. Army Corps of Engineers (USACE) *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008). Vegetation, soil, and hydrology conditions were documented at eight sample plot (SP) locations. At each SP, Parametrix collected vegetation, soils, and hydrology data on standardized wetland determination data forms and documented field conditions with photographs. Additionally, Parametrix documented site conditions at 20 photo point (PP) locations. Sample plot and photo point locations were recorded using a handheld GPS. The locations of the SPs and the PPs are shown on Figure 1. Representative photographs are included in Appendix C. Wetland determination data forms are included in Appendix D.

General observations regarding wildlife habitats, vegetation communities, and signs of avian and wildlife site use were documented in field notes.

3. General Characteristics and Existing Conditions

3.1 Landscape Setting and Site Use

The Site is located within the Crow Butte-Lake Umatilla watershed (Hydrologic Unit Code [HUC] 170701010905) and the Poverty Ridge-Sixmile Canyon (HUC 170701010804) (USGS 2023). The topography of the Site is a mostly uniform flat plains with occasional bedrock outcroppings; hillsides and cliffs are present along the south and west site border above the Sixmile Canyon. The Site has an elevation range of approximately 340 to 440 feet above sea level.

The Site consists of pastureland currently used for cattle grazing operations, a gravel mine, and undeveloped land. The Site is bordered by Highway 84/Vietnam Veterans Memorial Highway and the Columbia River to the north, a Union Pacific railway and undeveloped grasslands to the east, and Sixmile Canyon to the south and west. The Columbia River is located approximately 0.31 miles to the north of the Site. Six Mile Creek runs approximately 0.09 miles to the west of the Site. Willow Creek Wildlife Area is located approximately 5.53 miles west of the Site.

3.2 Hydrology and Precipitation

Parametrix reviewed historical and current precipitation data from the weather station in Boardman, Oregon, available on the National Oceanic Atmospheric Administration (NOAA) Regional Climate Center website powered by the Applied Climate Information System (ACIS) (ACIS 2023). The normal range of annual precipitation in the area is between 6.72 and 8.57 inches. Most of the annual precipitation falls as rain or snow between October and May. The average growing season lasts 210 days, from the beginning of April to the end of October; however, there is a dry season that extends from June to October, with normal monthly precipitation ranging from 0.11 to 0.86 inches. Average temperatures range from 41.2°F to 65.8°F, with the highest monthly average temperature in July at 91.8°F and the lowest monthly average temperature in January at 27.9°F. The site visit was conducted in mid-December outside of the growing season, during the wet season.

Parametrix conducted precipitation analysis to determine whether monthly precipitation in the 3-month period prior to the site visit was normal. According to the WETS table for the period 1991 to 2020 and recorded precipitation for September, October, and November 2023, the hydrologic condition on the Site was normal for this time of the year.

3.3 Soils

According to NRCS soil mapping, several soil map units are mapped within the Site (USDA NRCS 2023 (see Table 1). All soils within the Site are nonhydric, well-drained, or excessively drained soils. Appendix B includes descriptions of the listed soil map units.

Table 1. Summary of Soils Mapped Within the Study Area

Map Unit Symbol	Map Unit Name	Hydric Soil	Drainage Class
13E	Gravden very gravelly loam, 20 to 40 percent slopes	No	Well-drained
37A	Prosser silt loam, 0 to 2 percent slopes	No	Well-drained
38D	Prosser-Rock outcrop complex, 1 to 20 percent slopes	No	Well-drained
41B	Quinton loamy fine sand, 2 to 5 percent slopes	No	Excessively drained
42D	Quinton-Rock outcrop complex, 2 to 20 percent slopes	No	Excessively drained

3.4 Upland Habitat

The vegetation within the Site is dominated by herbaceous bulbous blue grass (*Poa bulbosa*), long-beak stork's-bill (*Erodium botrys*), downy cheatgrass (*Bromus tectorum*), and bluebunch fescue (*Festuca idahoensis*). Occasionally, stands of shrubs were present, including rubber rabbitbrush (*Ericameria nauseosa*), broom snakeweed (*Gutierrezia sarothrae*), big sagebrush (*Artemisia tridentata*), and bitter-brush (*Purshia tridentata*). Trees of Russian-olive (*Elaeagnus angustifolia*) were present in upland around wetland boundary.

Vegetation communities formed by these plants are non-hydrophytic because they are dominated either by upland species or by species that are not listed in the National Wetland Plant List (Lichvar et al. 2016).

3.5 Wetlands and Waters

NWI indicates that a 1.31-acre freshwater palustrine unconsolidated bottom persistent emergent semipermanently flooded excavated (PUB/EM1Fx) feature is located in the northeastern portion of the Site (USFWS 2023a) (Appendix B). Historical aerial photographs from 1952 to 2020 indicate that this excavation occurred sometime between 1970 and 1977, likely due to earth material excavation (EDR 2023). Gravel mining operations are visible starting in 1977. Saturation signatures of the wetland are persistent through time. There are no LWIs for Morrow County.

3.5.1 Wetland A

Presence of wetland was confirmed in the location where the NWI feature was mapped. Wetland A was classified as a freshwater palustrine emergent persistent feature in the depressional hydrogeomorphic class. No open water was observed. Wetland vegetation was formed by common reed (*Phragmites australis*), fowl blue grass (*Poa palustris*), and rough cockleburr (*Xanthium strumarium*). Hydrology is supplied by water table exposed by excavation. Soils were found to be hydric. Wetland A lacks a hydrologic surface connection to any other wetlands or waters.

3.6 Floodplains

The FEMA floodplain maps show a 100-year floodplain in the narrow valley of the Sixmile Canyon, and also along the Columbia River (Maps 40149C0100D and 41049C0125D, effective December 18, 2007) (FEMA 2023).

The Site is located above the 100-year floodplain elevations.

3.7 Listed, Candidate, or Species of Concern

Available environmental data indicated that there are several special status species records within the vicinity, including a 2-mile radius buffer (ORBIC 2023; USFWS 2023c; NOAA 2023). Table 2 presents a summary of sensitive species that are known to occur in the vicinity and their occurrence potential within the Site; Appendix E includes descriptions of listed species habitats.

Bull trout (*Salvelinus confluentus*), Pacific lamprey (*Entosphenus tridentatus*), and steelhead (*Oncorhynchus mykiss*) occur in the Umatilla River and Columbia River (USFWS 2023c; ORBIC 2023). An additional protected aquatic species, Northwestern pond turtle (*Actinemys marmorata*), is known to occur in the vicinity (ORBIC 2023; Oregon Conservation Strategy 2023). However, suitable habitats (perennial waterbodies) are not present at the Site. The only wetland location at the Site is isolated from and located upslope from any suitable aquatic habitat where turtles can possibly occur. Therefore, these species were determined to be absent from the Site.

Monarch butterfly (*Danaus plexippus*), a federally listed candidate species, occurs in the vicinity (USFWS 2023c; USFWS 2023d). A small population of narrowleaf milkweed was found on the Site. Nectar of this flowering plant is essential food for this butterfly. However, due to the size of milkweed population, the forage supply is very limited at the site. Therefore, it was determined that this species is not likely to occur at the Site.

Table 2. Summary of Federal and State Statuses for Species Mapped in the Study Area and Vicinity

Description	Common Name (Scientific Name)	Federal Status [a]	State Status [a]	Occurrence Potential [b]
Mammals	Washington ground squirrel (*Urocitellus washingtoni*)	–	E	Present
Birds	Bald eagle (*Haliaeetus leucocephalus)*	D; Bald and Golden Eagle Protection Act	–	Absent
	Golden eagle (*Aquila chrysaetos)*	D; Bald and Golden Eagle Protection Act	–	Absent
Reptiles	Northwestern pond turtle (*Actinemys marmorata*)	PT	–	Not Likely to Occur
Fish	Bull trout (*Salvelinus confluentus*)	T	SC (Umatilla SMU [c] [BM, CP]; John Day SMU [BM, CP])	Absent
	Pacific lamprey (*Entosphenus tridentatus*)	SOC	S	Absent
	Steelhead (*Oncorhynchus mykiss*) (population 28; Middle Columbia River evolutionary significant units, summer run)	T	SC (Middle Columbia SMU [c]/ESU [BM, CP, EC])	Absent
Invertebrate Animals	Monarch butterfly (*Danaus plexippus*)	C	–	Not Likely to Occur
Plants	Lawrence's milkvetch (*Astragalus collinus var. laurentii)*	–	T	Absent

a D = delisted; E = endangered; SOC = species of concern; SC = sensitive-critical; S = sensitive; T = threatened; PT = proposed threatened; C = candidate for listing.

b May Occur = species is expected to occur and habitat meets special requirements; Not Likely to Occur = habitat is only marginally suitable or is suitable but not within species geographic range; Absent = habitat does not meet species requirements as currently understood in the scientific community.

c SMU = Species Management Units; ESU = Evolutionary Significant Unity; BM = Blue Mountains; CP = Columbia Plateau; EC = East Cascades.

Various migratory birds that are protected under the Migratory Bird Treaty Act of 1918 may forage on or nest on the Site. The bald eagle (*Haliaeetus leucocephalus)* is also protected under the Bald and Golden Eagle Protection Act of 1940 and is known to occur in the vicinity (USFWS 2023c). Bald eagles prefer large trees for perching and nesting, typically near rivers, large lakes, and other open water. Such habitats are not present at the Site, and this species was determined to be absent from the Site. The golden eagle (*Aquila chrysaetos*) is also protected under the Bald and Golden Eagle Protection Act of 1940 and is known to occur in the vicinity (USFWS 2023c). Golden eagles prefer cliffs and steep escarpments in grassland, chapparal, shrubland, and forest for nesting, typically near canyonlands, rimrock terrain, and riverside cliffs and bluffs (Cornell Lab of Ornithology 2023). Such habitats are not present at the Site, and this species was determined to be absent from the Site. Other protected bird species identified by IPaC include the following:

- American white pelican (*Pelecanus erythrorhynchos*).
- California gull (*Larus californicus*).
- Evening grosbeak (*Coccothraustes vespertinus*).
- Lewis's woodpecker (*Melanerpes lewis*).
- Rufous hummingbird (*Selasphorus rufus*).

American white pelican and California gull do not occur on the Site due to a lack of large open water bodies. Evening grosbeak does not occur on the Site due to a lack of deciduous woodlands at elevations between 5,000 and 10,000 feet. Lewis's woodpecker does not occur on the Site due to a lack of pine forest and open riparian woodland dominated by cottonwood. Rufous hummingbird does not occur on the Site due to a lack of forest and coniferous or deciduous trees (USFWS 2023d).

There are no designated critical habitats for federally listed or candidate animal or plant species protected under the Endangered Species Act on the Site (USFWS 2023b).

The Washington ground squirrel (*Urocitellus washingtoni*) is listed as a state endangered species in Oregon. The Washington ground squirrel survey was conducted in separate study. Survey methods, results, and recommendations were included in the *Washington Ground Squirrel Survey* technical memorandum (Parametrix 2023), which was provided to the property owner.

3.8 Noxious Weeds

Plant species listed as noxious by the Oregon Department of Agriculture (ODA 2023a) and/or as designated weeds by the Oregon Department of State Lands (DSL) are present on the Site. (See Table 3 below.)

Table 3. Noxious Weeds That Are Present or Have Potential to Be Present on the Site

Scientific Name	Common Name	ODA List/DSL Designation [a]
Centaurea solstitialis L.	Yellow star thistle	List B
Centaurea diffusa	Tumble knapweed	List B
Cynoglossum officinale	Houndstongue	List B
Phragmites australis	Common reed	List B
Onopordum acanthium	Scotch thistle	List B

Note: DSL-designated weed = known problem species.

a List B =a weed of economic importance that is regionally abundant but may have limited distribution in some counties (ODA 2023c).

4. Regulatory Requirements

4.1 Federal

Wetland and water resources found on the Site were evaluated using requirements established in the Final Rule: Revised Definition of "Waters of the United States"; Conforming Guidance (Federal Register Vol. 88, No. 173; 33 Code of Federal Regulations (CFR) Part 328; and 40 CFR Part 120. September 8, 2023).

Wetland A is likely not jurisdictional to the USACE, as it does not meet the definition of any jurisdictional waters defined in paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of the Final Rule. Also, due to Wetland A's lack of continuous surface connection to or significant effect on larger downstream waters, the wetland does not meet the relatively permanent or significant nexus standards defined in paragraph (a)(5). Site development would not require permitting under Section 404 of the Clean Water Act.

Federally listed threatened and endangered species or designated critical habitat are not present within the Site; therefore, site development would not require permitting under Section 10 or Section 7 of the Endangered Species Act.

The Migratory Bird Treaty Act makes it illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale any migratory bird or the parts, nests, or eggs of such bird except under the terms of a valid federal permit from the USFWS. To avoid and minimize effects to migratory birds, initial site development (vegetation clearing and grubbing) should be conducted during the nonnesting season. The nonnesting season generally extends from August 1 to January 31 and splits into two major timeframes:

- Early Nesting Season: February 1 to April 15. Raptors (owls, eagles, falcons, and hawks), herons, geese, and hummingbirds are early nesters.
- Primary Nesting Season: April 15 to July 31. Songbirds and most other avian species are late nesters.

Initial vegetation disturbance (clearing and grubbing) should be conducted during the nonnesting season. If vegetation disturbance occurs during the nesting season, the Site should be surveyed for nesting birds by a qualified biologist. If an active nest is found, an exclusion buffer around the nest should be established at an appropriate distance assigned by the biologist. Temporary protection fencing should be installed and maintained around the buffer area until young chicks have fledged to avoid impacts to migratory birds. Once young have fledged, construction may commence in the protected area.

4.2 State of Oregon

Wetland A is likely exempt from DSL jurisdiction per Oregon Administrative Rule 141-085-0515(7) Exempt Artificially Created Wetlands and Ponds.

"Artificially created wetlands and ponds created entirely from upland, regardless of size, are not waters of this state, if they are constructed for the purpose of: (g) surface mining."

As described in Section 3.5, Wetland A is a result of gravel mining, which was active starting in 1977; therefore, OAR 141-085-0515(7)(g) applies. Impact to Wetland A is not subject to the Oregon Removal/Fill Law requirements.

Washington ground squirrel protection was addressed in the *Washington Ground Squirrel Survey* technical memorandum (Parametrix 2023). There is no permitting nexus to the state agency's review of the development; therefore, coordination with ODFW would not be required for the site development. However, ODFW provides recommendations for minimizing impacts to this protected species and its habitat.

Plant species listed noxious by the ODA (ODA 2023c) or designated as weeds by DSL are present on the Site. Site development has the potential to spread the noxious/invasive weed species. To avoid the spread of the noxious weeds, best management practices shall be established at the Site for control, containment, or eradication of listed noxious weeds.

4.3 Local

The Morrow County Comprehensive Plan calls for protection of riparian vegetation, wetlands, bald and golden eagle nest sites, and land areas incorporated in wildlife preserves, refuges, or private or governmental game management areas (Morrow County Ordinance OR-1-2013) (Morrow County 2013a).

Based on the site's location and natural resources characteristics, this Site contains no resources on the adopted Statewide Planning Goal 5 inventories for significant natural resources, and associated local natural resource-specific permits from the County would not be needed for the Site development (Morrow County 2013b, 2013c).

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Appendix A

Curriculum Vitae

Chloe Kott

SCIENTIST II

Chloe Kott is a multi-faceted Environmental Professional with a demonstrated history of delivering customer satisfaction and project management expertise. Her background includes environmental risk, due diligence, wildlife ecology, and regulatory research. Her expertise includes preparing Phase I ESAs, Records Search with Risk Assessments, and 24 CFR Part 50 and Part 58 Environmental Reviews for clientele throughout the country. Her experience further includes preparing technical documentation in support of National Environmental Policy Act (NEPA) and the US Department of Housing and Urban Development. She is currently working on wetlands and waters delineations and permitting, ESA permitting, and assists with a variety of natural resource projects with Parametrix.

EXPERIENCE

Years of Experience: 6 years
Time with Parametrix: 3 months

EDUCATION

BS, Fish, Wildlife, & Conservation Biology, 2017

Selected Project Experience

Three Mile Canyon Washington Ground Squirrel Survey

Confidential Client | Arlington, OR

Chloe assisted with fieldwork and drafted report for Washington ground squirrel presence on the Site.

Raptor and Sensitive Bird Species Surveys

Oregon Parks and Recreation Department | Terrebonne, OR

Chloe prepared report describing methods, findings, and recommendations on raptor and sensitive bird species observed at a newly acquired parcel.

Haul Road Emergency Repair

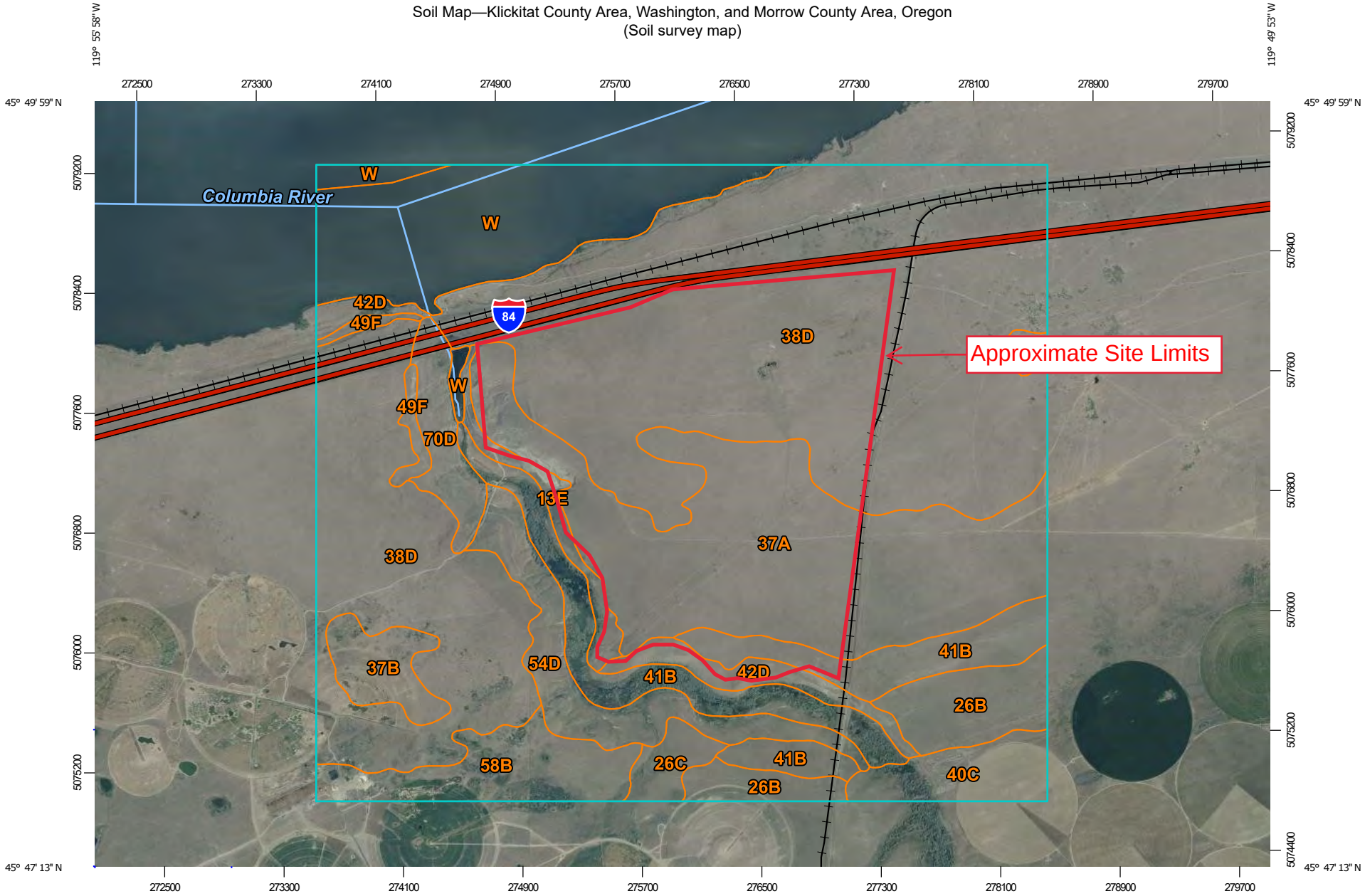
Port of Grays Harbor | Grays Harbor, WA

Chloe conducted fieldwork and prepared a report on sensitive bird species for the Haul Road emergency bank stabilization project. The Haul Road located along the bank of the Chehalis River where bank erosion continues to threaten critical infrastructure. Haul Road.

Appendix B

Background

Soil Map—Klickitat County Area, Washington, and Morrow County Area, Oregon
(Soil survey map)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Klickitat County Area, Washington
Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon
Survey Area Data: Version 11, Sep 8, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 3, 2020—Jun 26, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
W	Water	24.0	0.5%
Subtotals for Soil Survey Area		**24.0**	**0.5%**
Totals for Area of Interest		**5,161.2**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
13E	Gravden very gravelly loam, 20 to 40 percent slopes	61.2	1.2%
26B	Koehler loamy fine sand, 2 to 5 percent slopes	181.5	3.5%
26C	Koehler loamy fine sand, 5 to 12 percent slopes	50.2	1.0%
37A	Prosser silt loam, 0 to 2 percent slopes	838.8	16.3%
37B	Prosser silt loam, 2 to 7 percent slopes	108.0	2.1%
38D	Prosser-Rock outcrop complex, 1 to 20 percent slopes	2,358.5	45.7%
40C	Quincy loamy fine sand, 2 to 12 percent slopes	112.7	2.2%
41B	Quinton loamy fine sand, 2 to 5 percent slopes	376.7	7.3%
42D	Quinton-Rock outcrop complex, 2 to 20 percent slopes	97.8	1.9%
49F	Rock outcrop-Rubble land complex, very steep	30.3	0.6%
54D	Sagehill fine sandy loam, 12 to 20 percent slopes	199.5	3.9%
58B	Taunton fine sandy loam, 2 to 5 percent slopes	183.3	3.6%
70D	Warden very fine sandy loam, 12 to 20 percent slopes	91.7	1.8%
W	Water	446.7	8.7%
Subtotals for Soil Survey Area		**5,136.8**	**99.5%**
Totals for Area of Interest		**5,161.2**	**100.0%**

Morrow County Area, Oregon

13E—Gravden very gravelly loam, 20 to 40 percent slopes

Map Unit Setting

National map unit symbol: 21rx
Elevation: 500 to 1,700 feet
Mean annual precipitation: 9 to 12 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 150 to 190 days
Farmland classification: Not prime farmland

Map Unit Composition

Gravden and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gravden

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Gravelly alluvium and colluvium

Typical profile

H1 - 0 to 3 inches: very gravelly loam
H2 - 3 to 7 inches: very gravelly loam
H3 - 7 to 14 inches: extremely gravelly loam
H4 - 14 to 20 inches: cemented material
H5 - 20 to 60 inches: cemented material

Properties and qualities

Slope: 20 to 40 percent
Depth to restrictive feature: 10 to 20 inches to duripan; 20 to 60 inches to duripan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: D
Ecological site: R007XY020OR - South 8-10 PZ
Hydric soil rating: No

Data Source Information

Soil Survey Area: Benton County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington
Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon
Survey Area Data: Version 11, Sep 8, 2023

Morrow County Area, Oregon

37A—Prosser silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 21t3
Elevation: 300 to 600 feet
Mean annual precipitation: 7 to 9 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 160 to 200 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Prosser and similar soils: 65 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Prosser

Setting

Landform: Strath terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 29 inches: silt loam
H3 - 29 to 39 inches: unweathered bedrock

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R007XY014OR - Loamy 8-10 PZ

Hydric soil rating: No

Data Source Information

Soil Survey Area: Benton County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington
Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon
Survey Area Data: Version 11, Sep 8, 2023

Morrow County Area, Oregon

38D—Prosser-Rock outcrop complex, 1 to 20 percent slopes

Map Unit Setting

National map unit symbol: 21t5
Elevation: 300 to 600 feet
Mean annual precipitation: 7 to 9 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 160 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Prosser and similar soils: 60 percent
Rock outcrop: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Prosser

Setting

Landform: Strath terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loess

Typical profile

H1 - 0 to 4 inches: silt loam
H2 - 4 to 29 inches: silt loam
H3 - 29 to 39 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 20 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R007XY014OR - Loamy 8-10 PZ
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Strath terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear

Typical profile

R - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 1 to 20 percent
Depth to restrictive feature: 0 inches to lithic bedrock

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Data Source Information

Soil Survey Area: Benton County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington
Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon
Survey Area Data: Version 11, Sep 8, 2023

Morrow County Area, Oregon

41B—Quinton loamy fine sand, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 21t9
Elevation: 250 to 700 feet
Mean annual precipitation: 7 to 8 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Quinton and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quinton

Setting

Landform: Strath terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian sands over basalt

Typical profile

H1 - 0 to 30 inches: loamy fine sand
H2 - 30 to 37 inches: gravelly loamy fine sand
H3 - 37 to 47 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R007XY011OR - Sands 8-10 PZ

Hydric soil rating: No

Data Source Information

Soil Survey Area: Benton County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington
Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon
Survey Area Data: Version 11, Sep 8, 2023

Morrow County Area, Oregon

42D—Quinton-Rock outcrop complex, 2 to 20 percent slopes

Map Unit Setting

National map unit symbol: 21tb
Elevation: 250 to 700 feet
Mean annual precipitation: 7 to 8 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Quinton and similar soils: 60 percent
Rock outcrop: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quinton

Setting

Landform: Strath terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian sands over basalt

Typical profile

H1 - 0 to 30 inches: loamy fine sand
H2 - 30 to 37 inches: gravelly loamy fine sand
H3 - 37 to 47 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 20 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: R007XY011OR - Sands 8-10 PZ
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Strath terraces
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear

Typical profile

R - 0 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 20 percent
Depth to restrictive feature: 0 inches to lithic bedrock

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Data Source Information

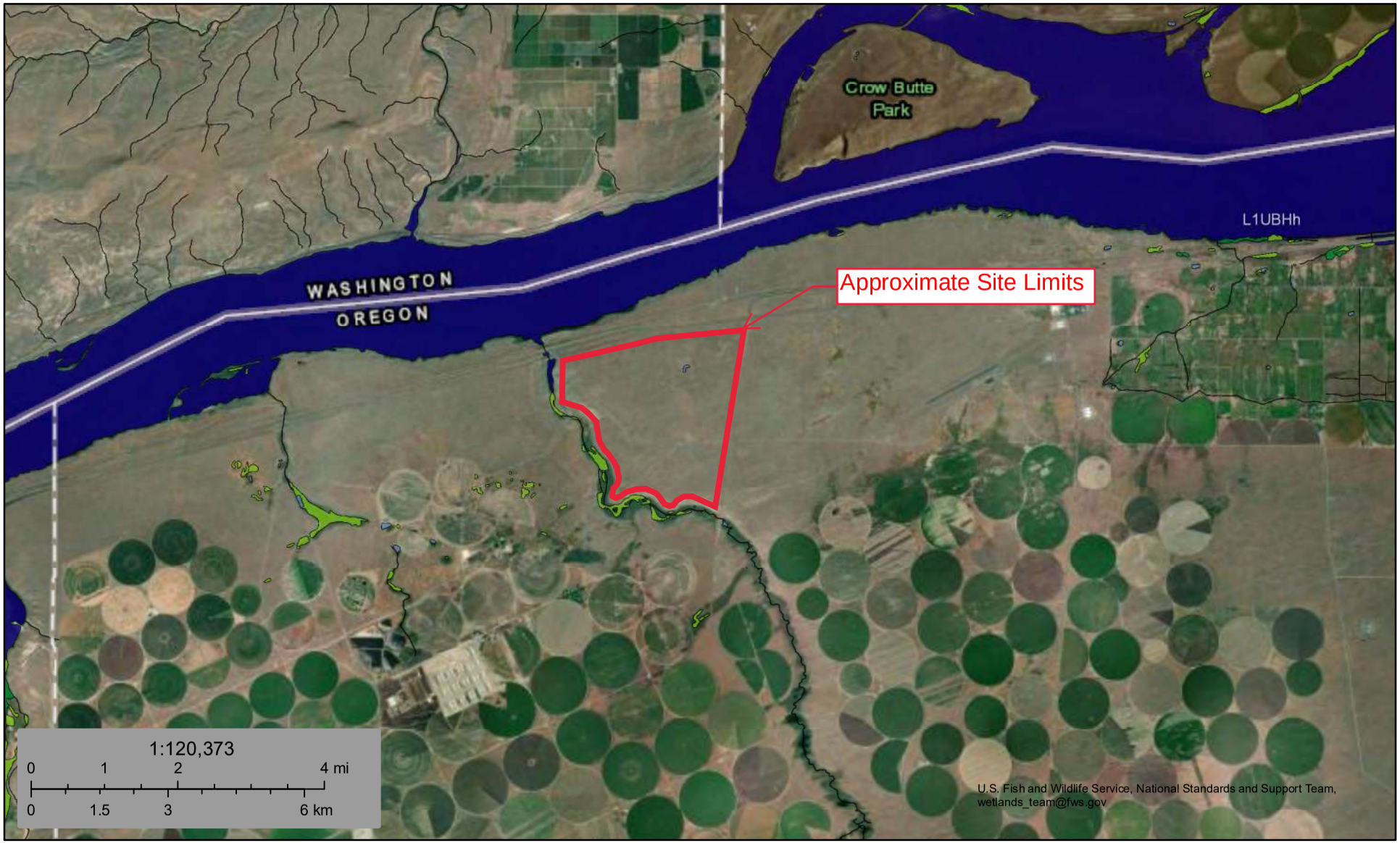
Soil Survey Area: Benton County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

Soil Survey Area: Klickitat County Area, Washington
Survey Area Data: Version 18, Aug 29, 2023

Soil Survey Area: Morrow County Area, Oregon
Survey Area Data: Version 11, Sep 8, 2023

U.S. Fish and Wildlife Service
National Wetlands Inventory

National Wetlands Inventory



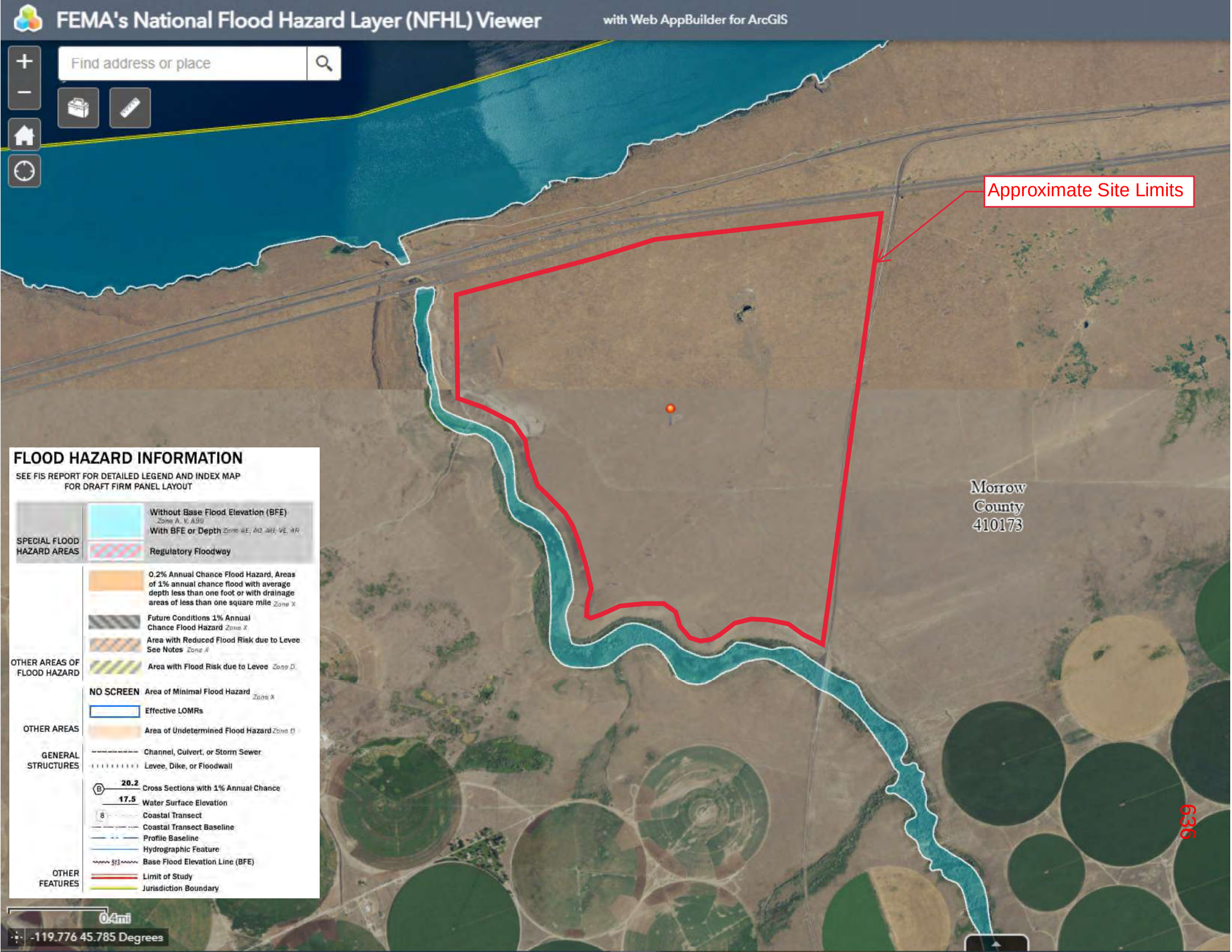
December 4, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper


FEMA's National Flood Hazard Layer (NFHL) Viewer
with Web AppBuilder for ArcGIS
Find address or place
Approximate Site Limits
Morrow
County
410173
635
FLOOD HAZARD INFORMATION
SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP
FOR DRAFT FIRM PANEL LAYOUT
SPECIAL FLOOD HAZARD AREAS
Without Base Flood Elevation (BFE)
Zone A, V, A99
With BFE or Depth Zone AE, AO, AH, VE, AR
Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD
0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
Future Conditions 1% Annual Chance Flood Hazard Zone X
Area with Reduced Flood Risk due to Levee See Notes Zone X
Area with Flood Risk due to Levee Zone D
OTHER AREAS
NO SCREEN Area of Minimal Flood Hazard Zone X
Effective LOMRs
Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES
Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall
OTHER FEATURES
20.2
Cross Sections with 1% Annual Chance
17.5
Water Surface Elevation
Coastal Transect
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature
Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
0.4mi
-119.776 45.785 Degrees

Site

Morrow County

Boardman, OR 97818

Inquiry Number:

December 07, 2023

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

638 12/07/23

Site Name:

Site
Morrow County
Boardman, OR 97818
EDR Inquiry # 7514816.5

Client Name:

Parametrix, Inc.
700 NE Multnomah
Portland, OR 97232
Contact: Adam Romey

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2020	1"=875'	Flight Year: 2020	USDA/NAIP
2016	1"=875'	Flight Year: 2016	USDA/NAIP
2012	1"=875'	Flight Year: 2012	USDA/NAIP
2009	1"=875'	Flight Year: 2009	USDA/NAIP
2005	1"=875'	Flight Year: 2005	USDA/NAIP
2001	1"=875'	Acquisition Date: January 01, 2001	USGS/DOQQ
1996	1"=875'	Acquisition Date: July 12, 1996	USGS/DOQQ
1981	1"=875'	Flight Date: June 26, 1981	USGS
1977	1"=875'	Flight Date: July 01, 1977	USGS
1970	1"=875'	Flight Date: July 06, 1970	USGS
1952	1"=875'	Flight Date: September 14, 1952	USGS

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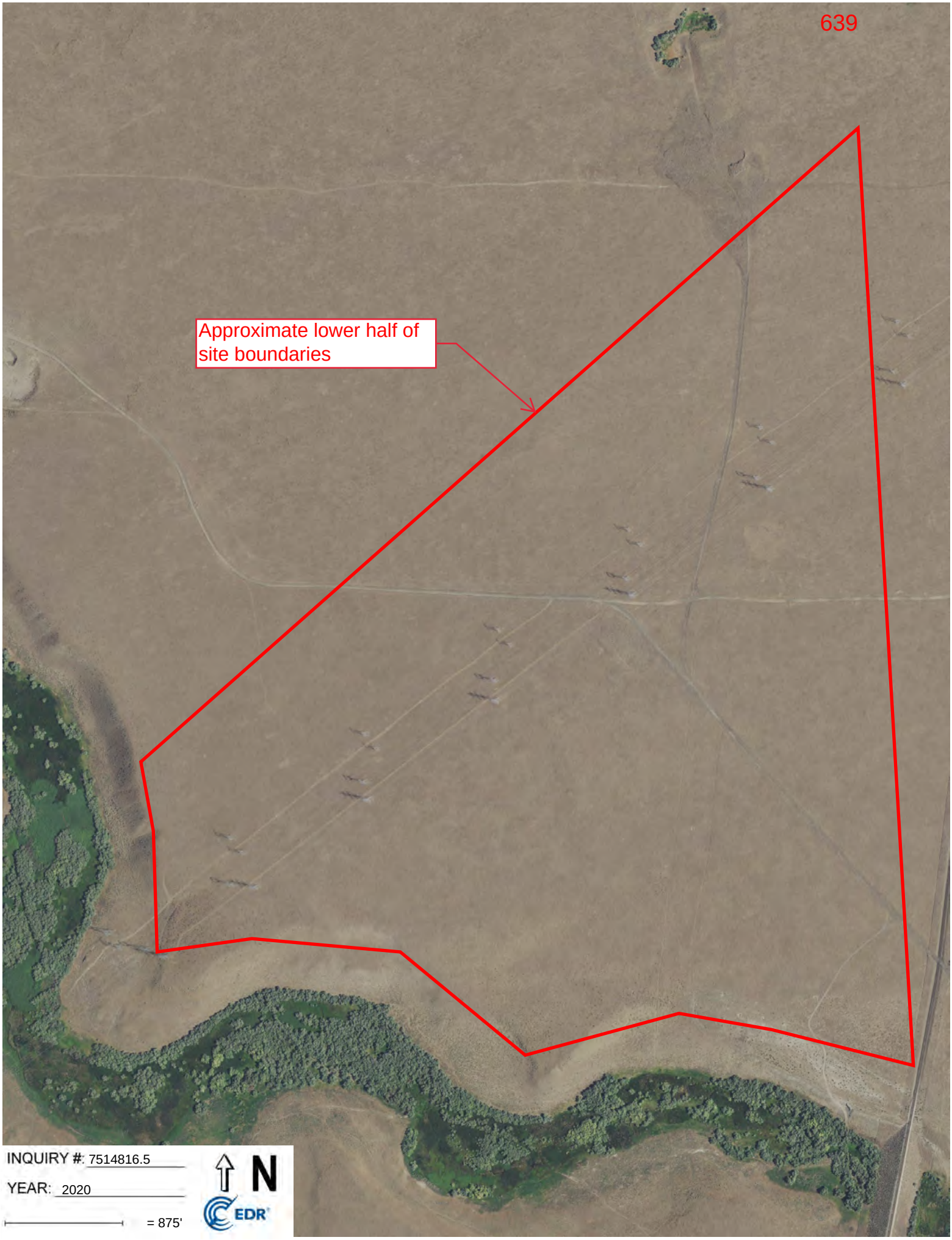
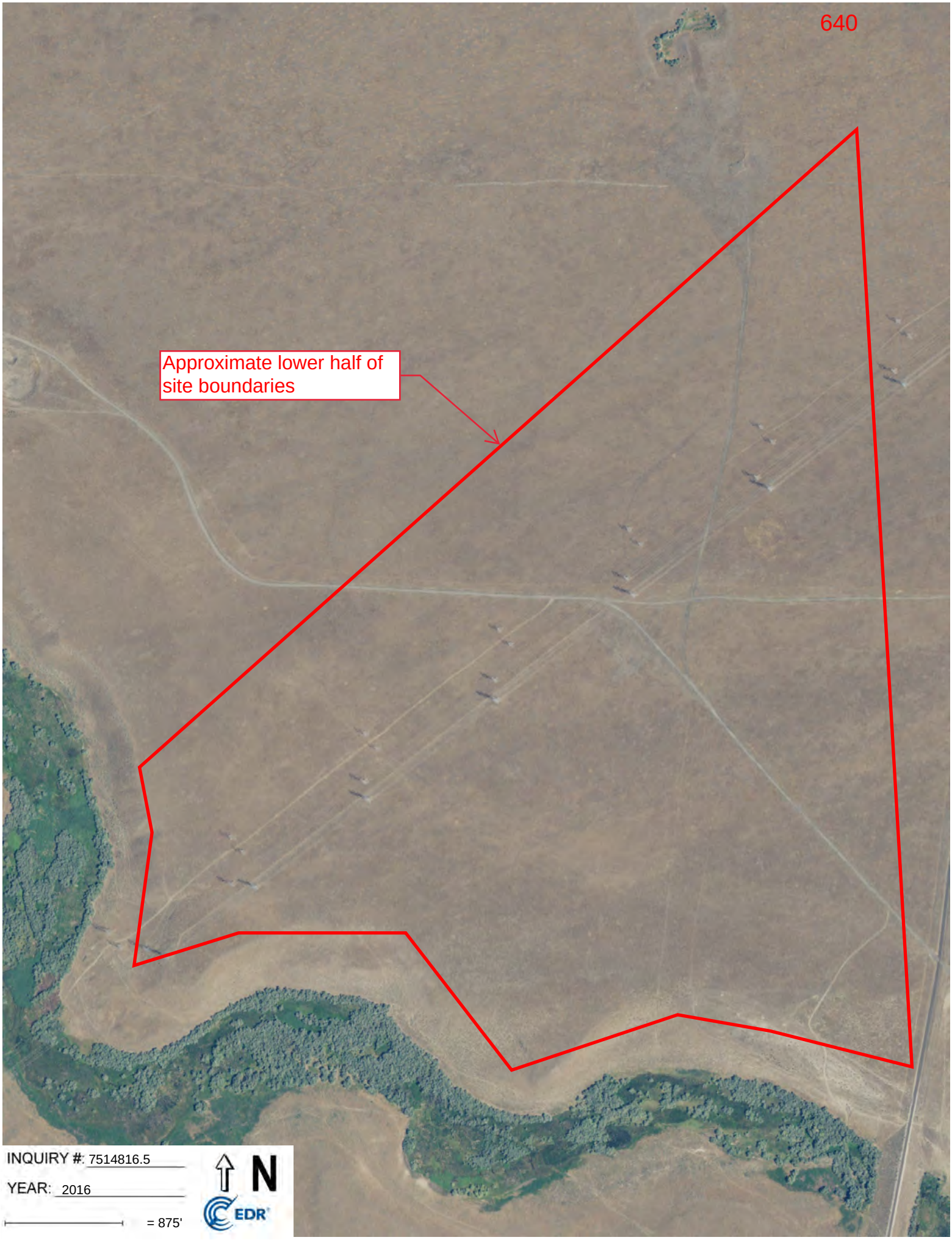

639
Approximate lower half of site boundaries
INQUIRY #: 7514816.5
YEAR: 2020
= 875'
N
EDR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YEAR: 2016
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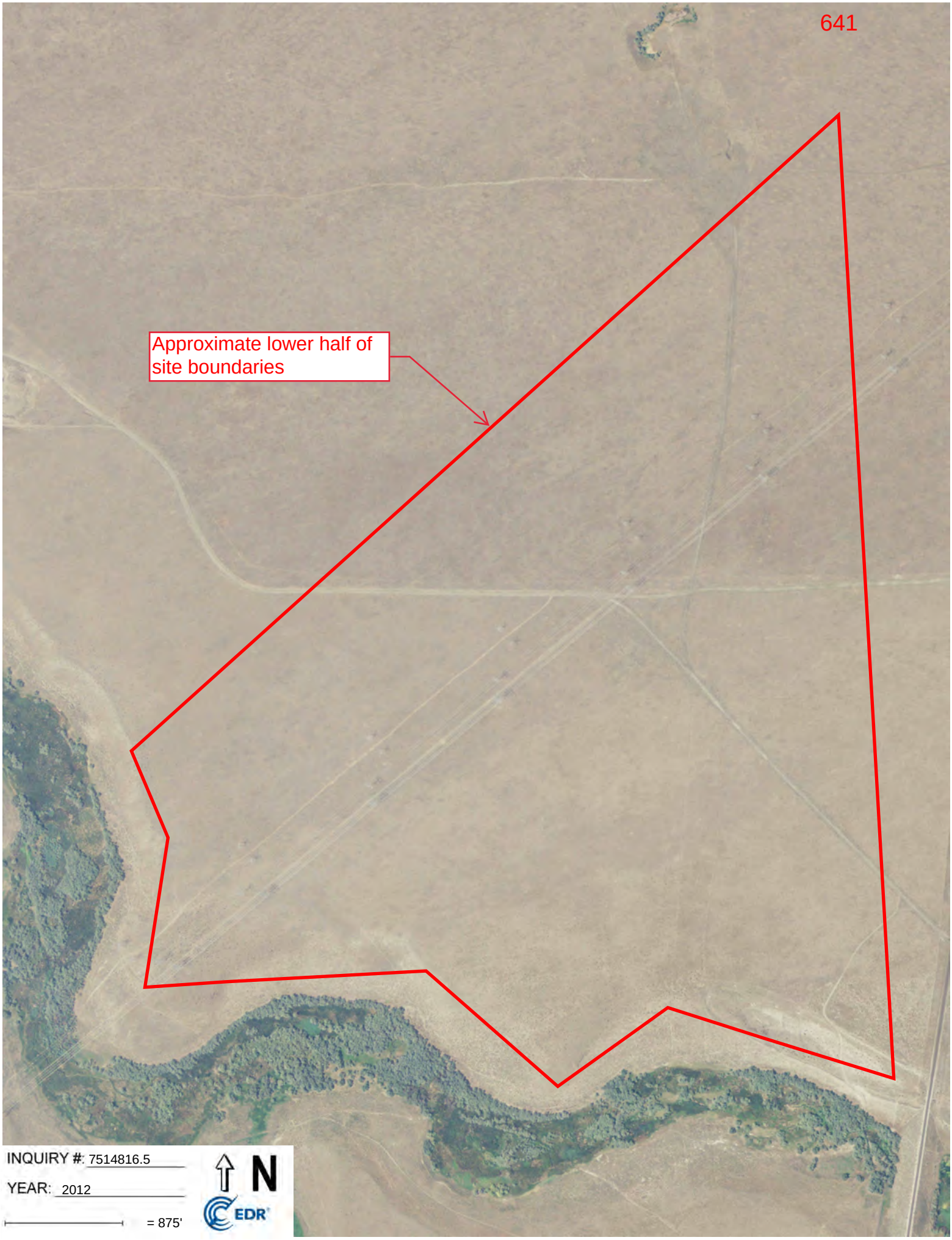
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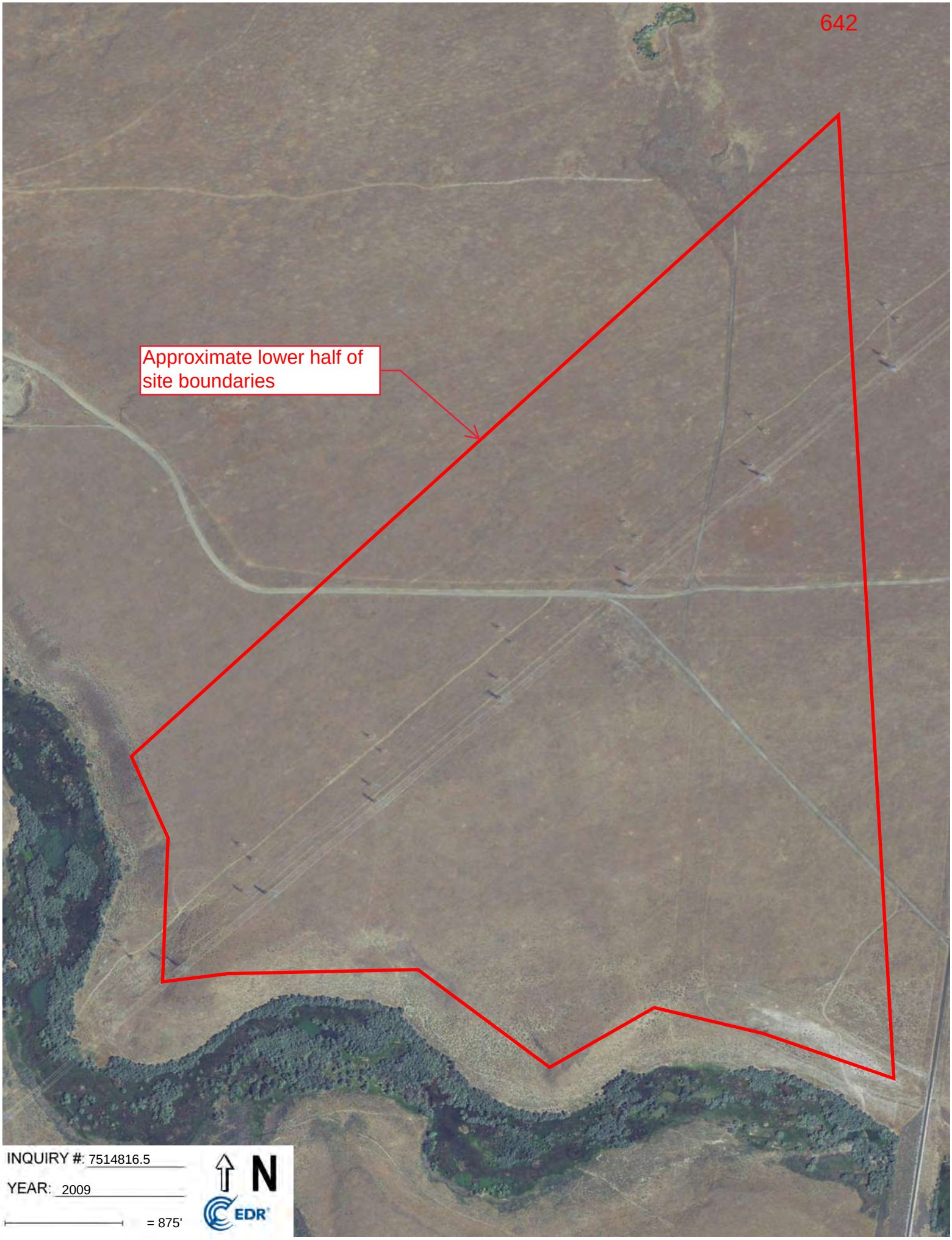
642
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YEAR: 2009
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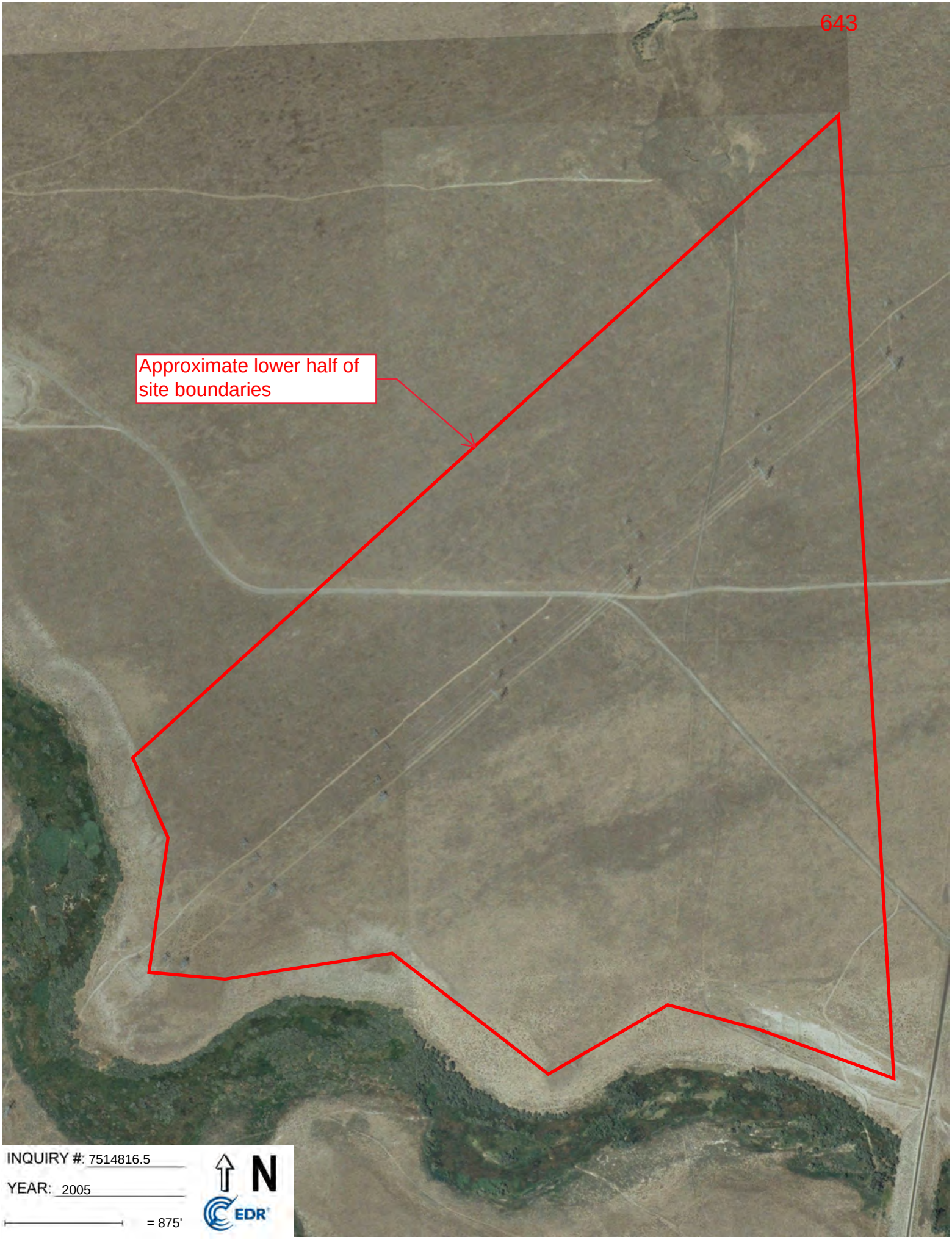
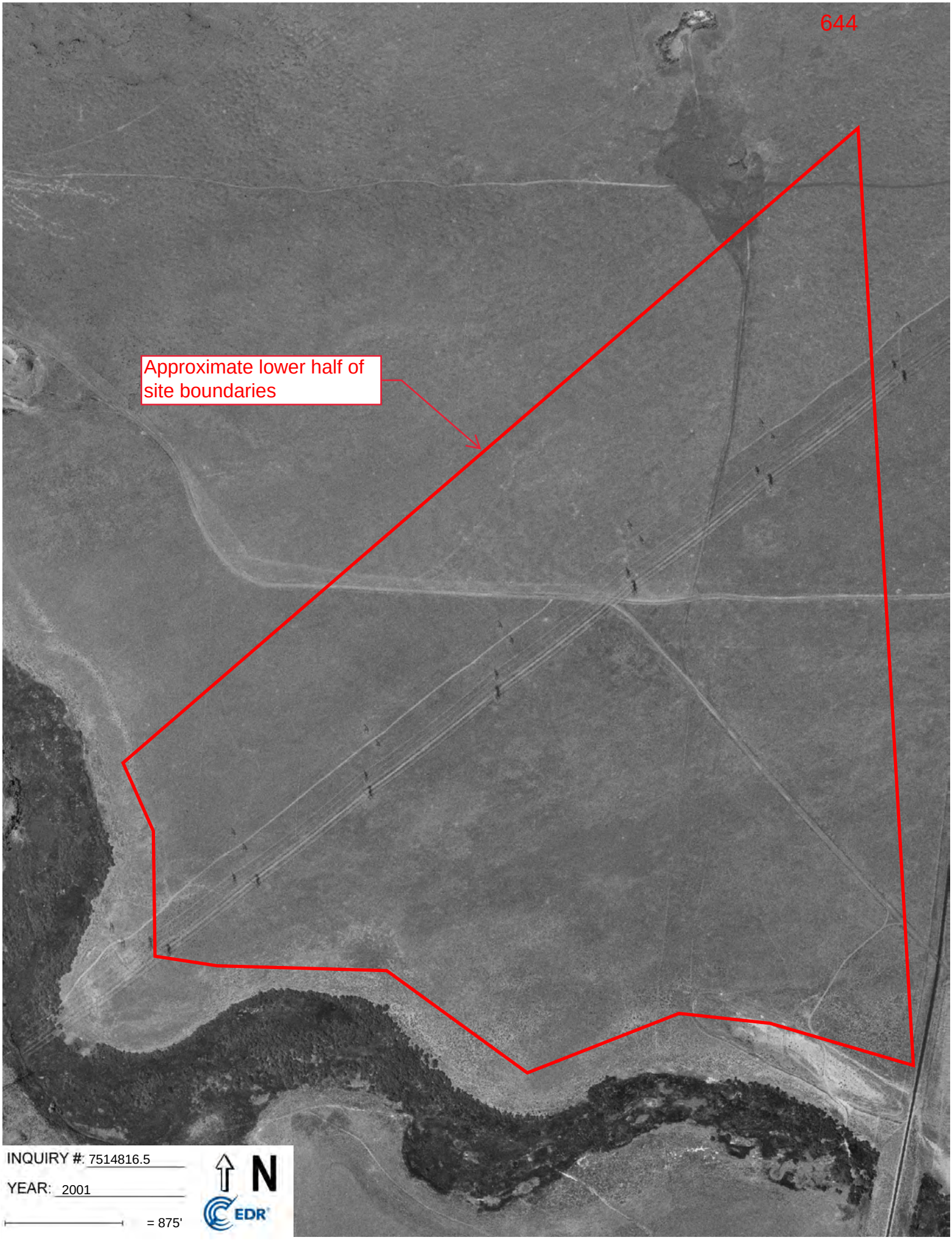
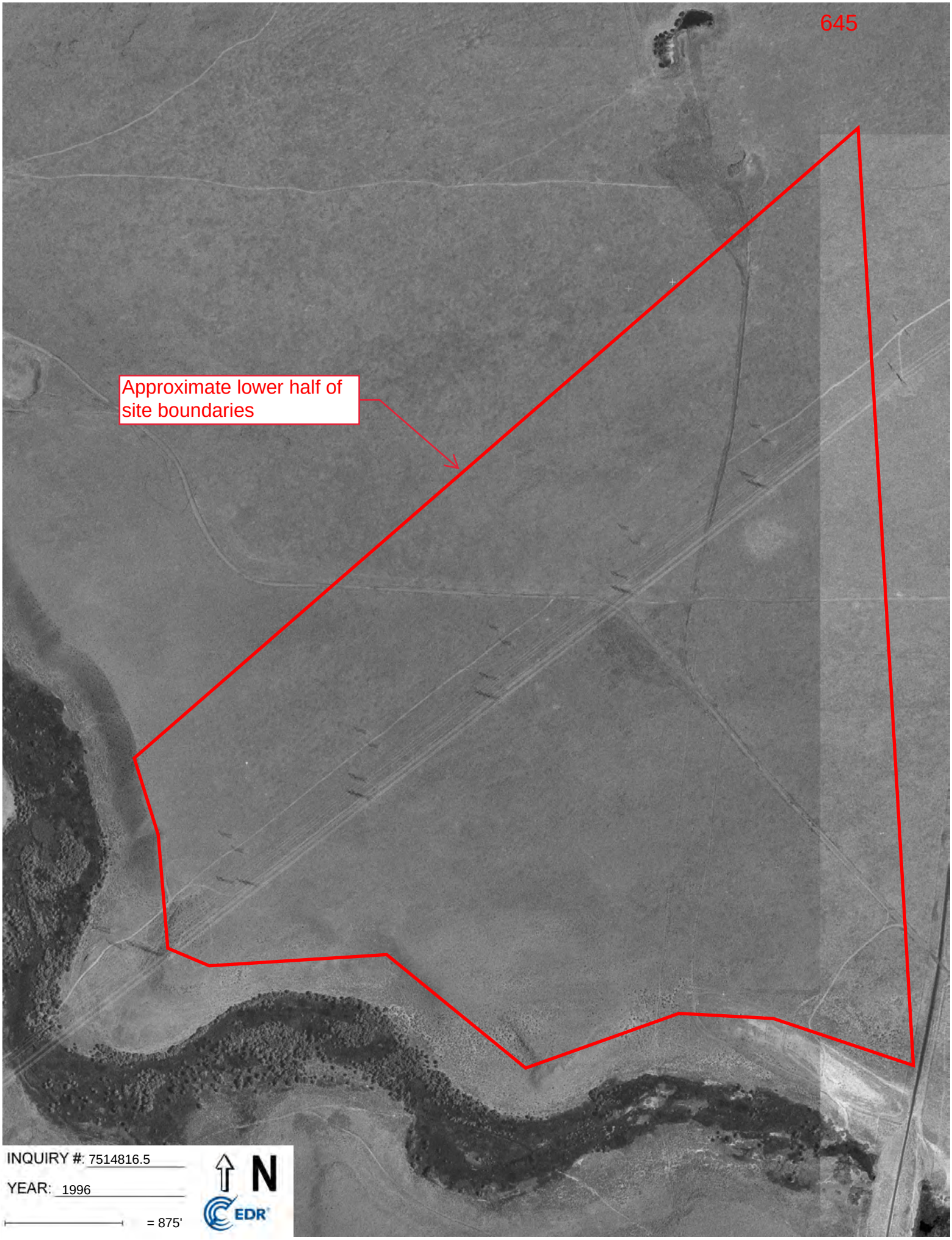

643
Approximate lower half of site boundaries
INQUIRY #: 7514816.5
YEAR: 2005
= 875'
N
EDR


644
Approximate lower half of site boundaries
INQUIRY #: 7514816.5
YEAR: 2001
= 875'
N
EDR


645
Approximate lower half of site boundaries
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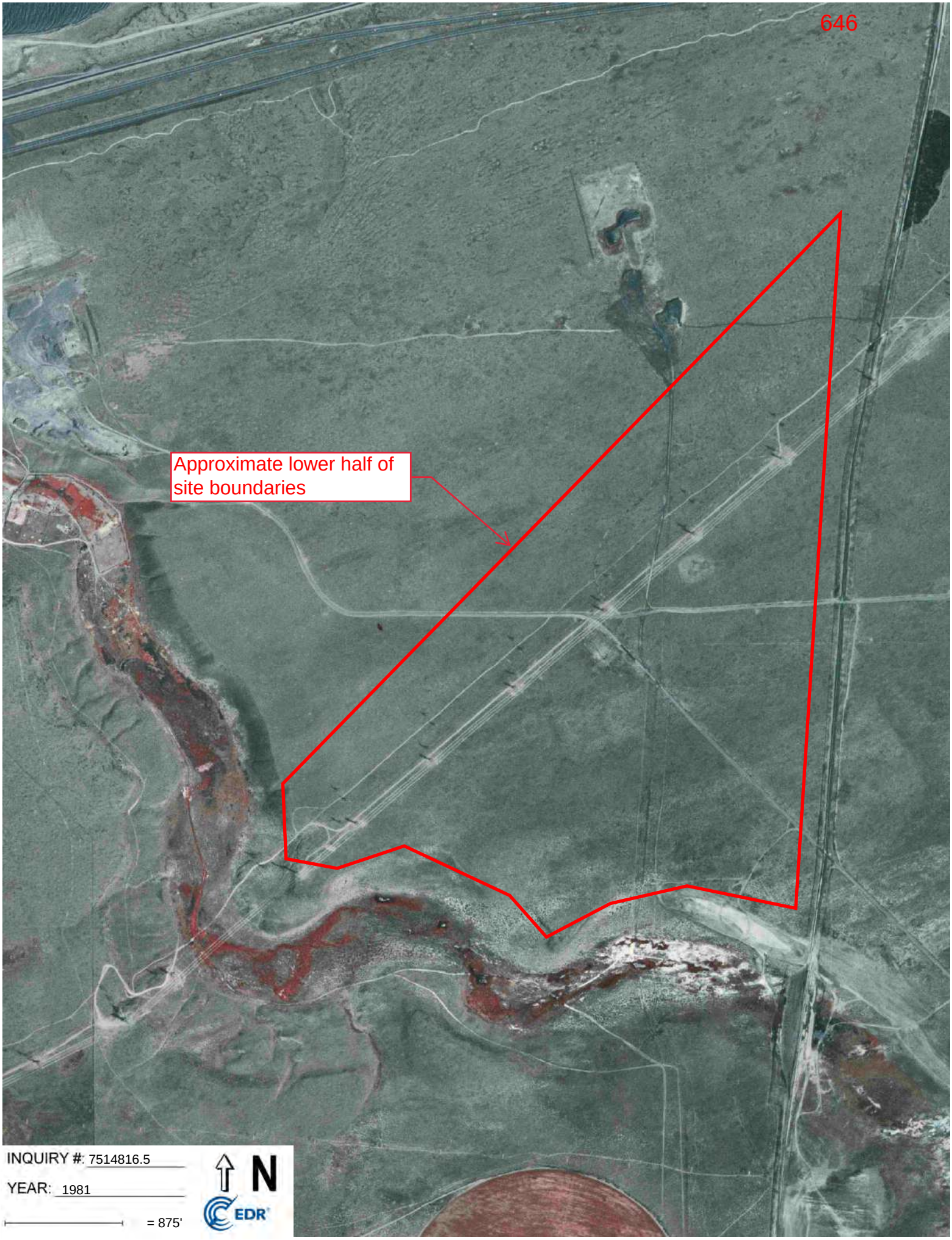
YEAR: 1996
= 875'
N
EDR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Approximate lower half of site boundaries
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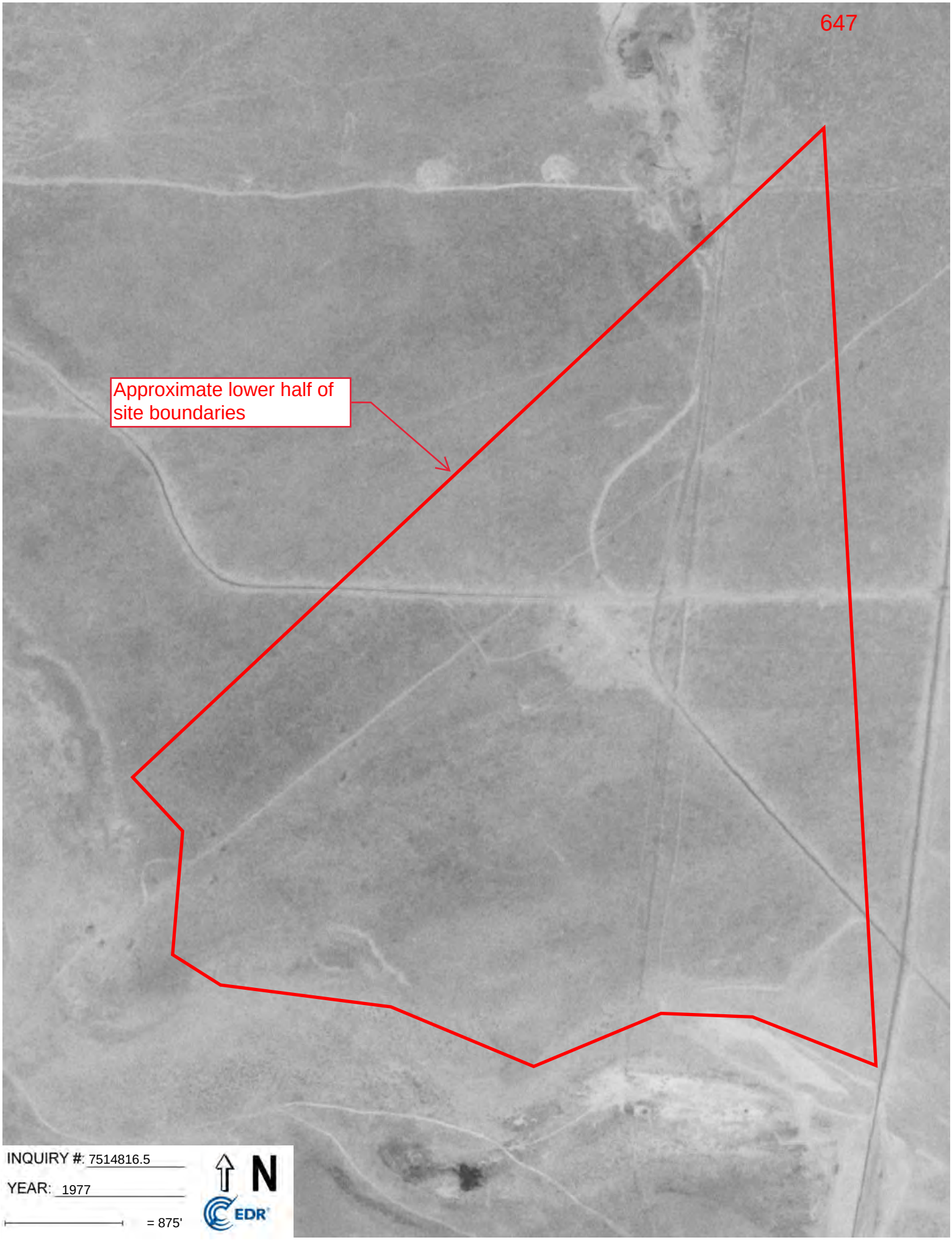
EDR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YEAR: 1977
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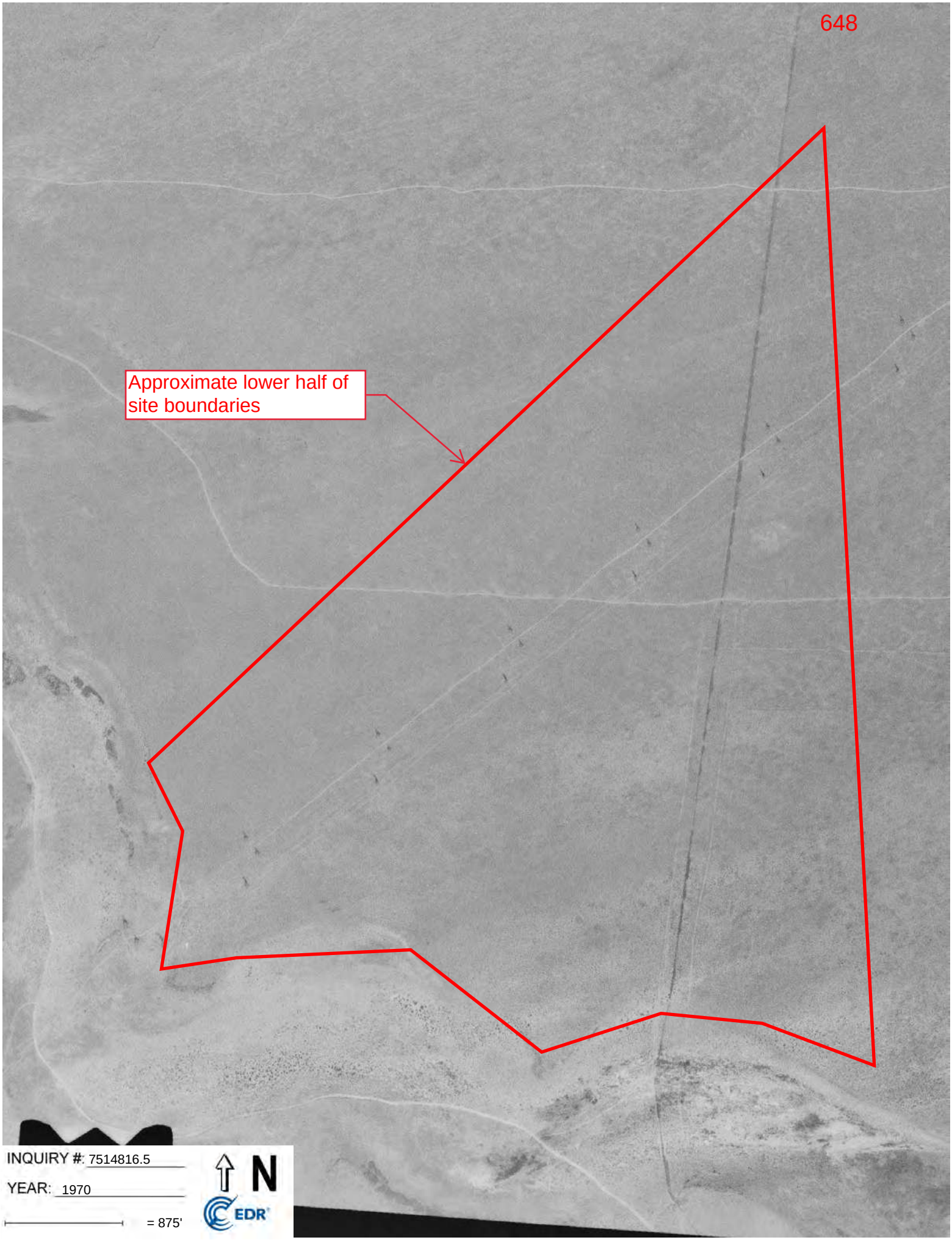
N
EDR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YEAR: 1970
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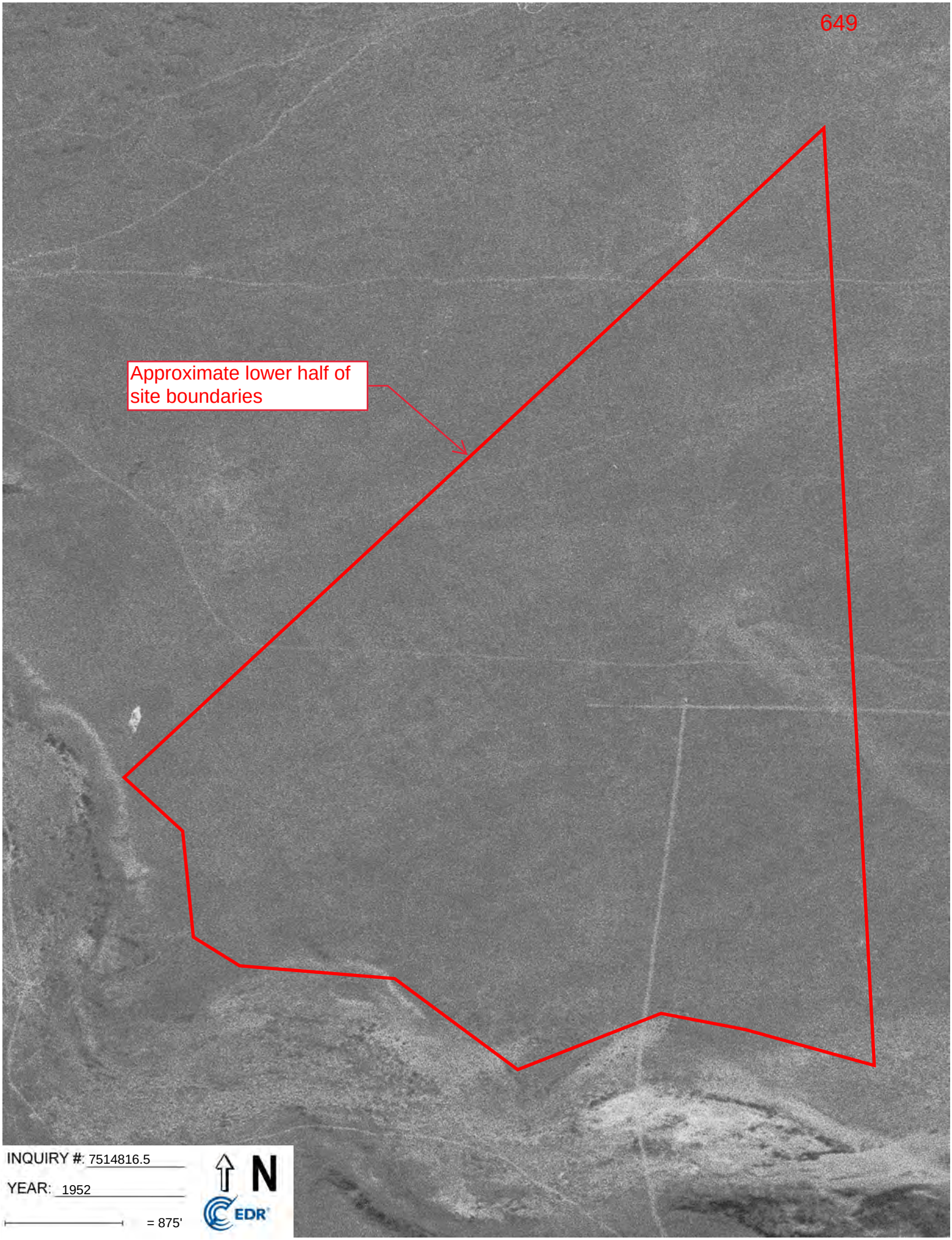
N
EDR


649
Approximate lower half of site boundaries
INQUIRY #: 7514816.5
YEAR: 1952
= 875'
N
EDR

7514815.5

December 07, 2023

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

651 12/07/23

Client Name:

Parametrix, Inc.
700 NE Multnomah
Portland, OR 97232

7514815.5

Contact: Adam Romey

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2020	1"=1250'	Flight Year: 2020	USDA/NAIP
2016	1"=1250'	Flight Year: 2016	USDA/NAIP
2014	1"=1250'	Flight Year: 2014	USDA/NAIP
2011	1"=1250'	Flight Year: 2011	USDA/NAIP
2005	1"=1250'	Flight Year: 2005	USDA/NAIP
2001	1"=1250'	Acquisition Date: January 01, 2001	USGS/DOQQ
1996	1"=1250'	Acquisition Date: July 12, 1996	USGS/DOQQ
1981	1"=1250'	Flight Date: June 26, 1981	USGS
1977	1"=1250'	Flight Date: July 01, 1977	USGS
1970	1"=1250'	Flight Date: July 06, 1970	USGS
1952	1"=1250'	Flight Date: September 14, 1952	USGS

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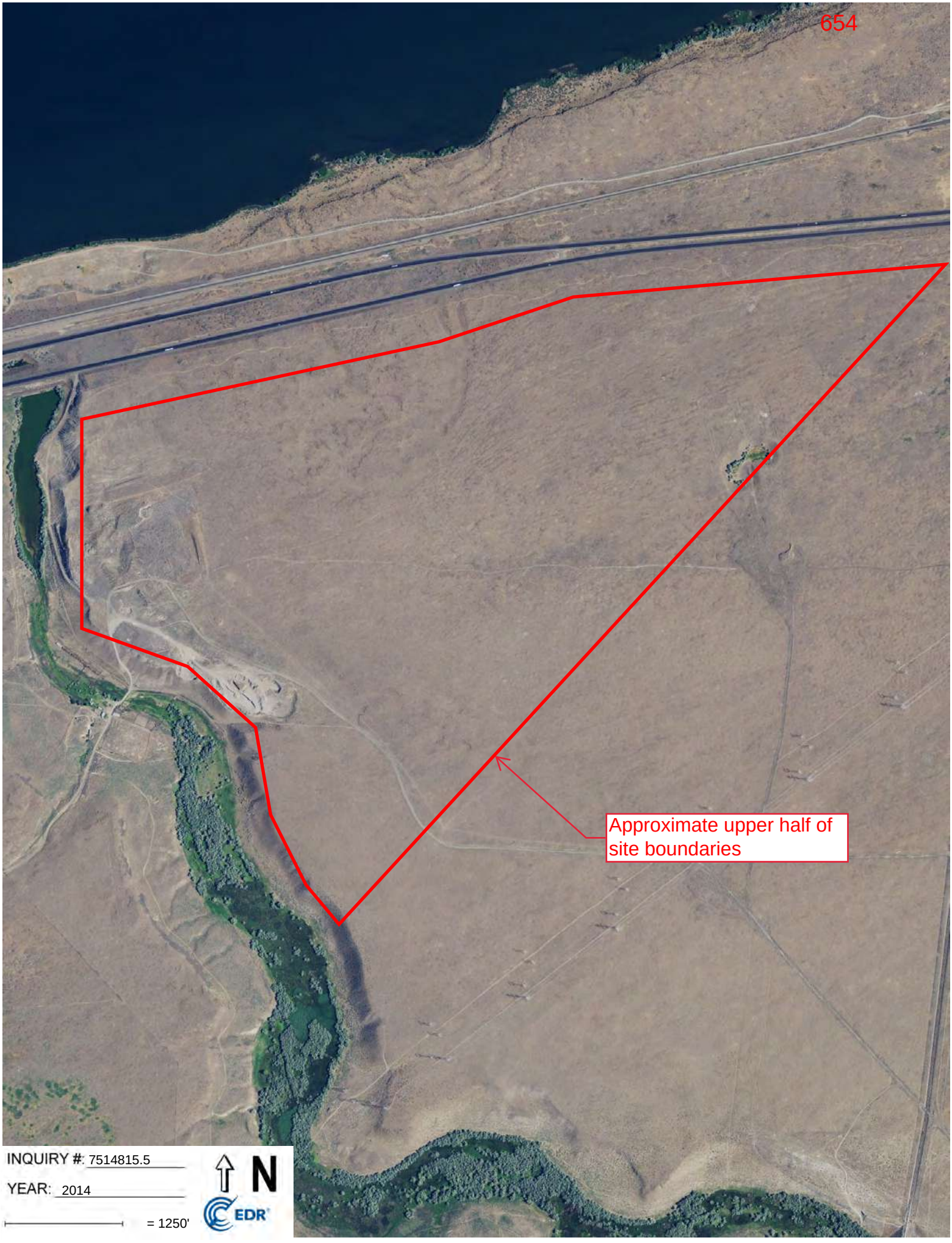
652
Approximate upper half of site boundaries
INQUIRY #: 7514815.5
YEAR: 2020
= 1250'
N
EDR


653
Approximate upper half of site boundaries
INQUIRY #: 7514815.5
YEAR: 2016
= 1250'
N
EDR


654
Approximate upper half of site boundaries
INQUIRY #: 7514815.5
YEAR: 2014
= 1250'
N
EDR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Approximate upper half of site boundaries
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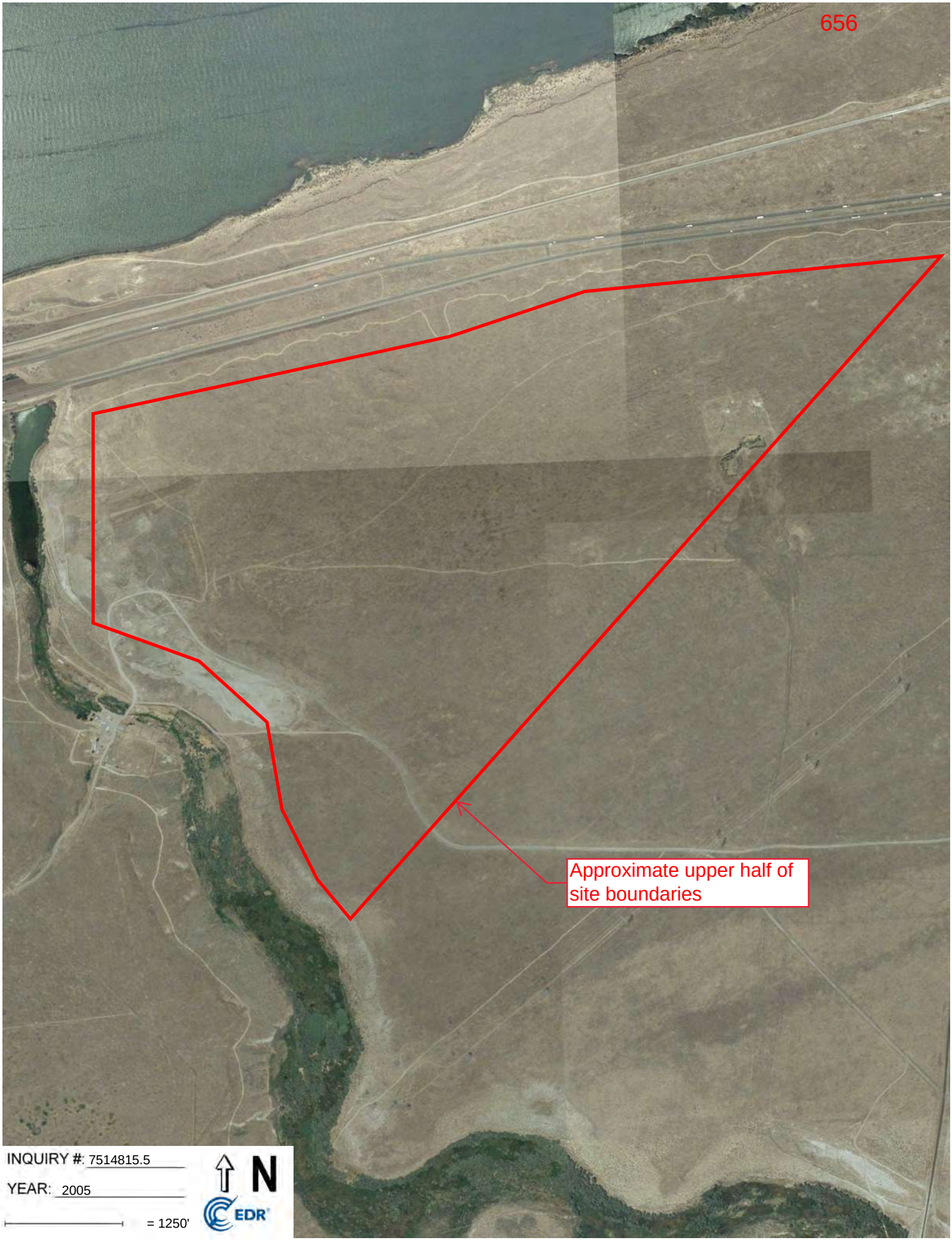
YEAR: 2011
= 1250'
N
EDR


656
Approximate upper half of site boundaries
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YEAR: 2005
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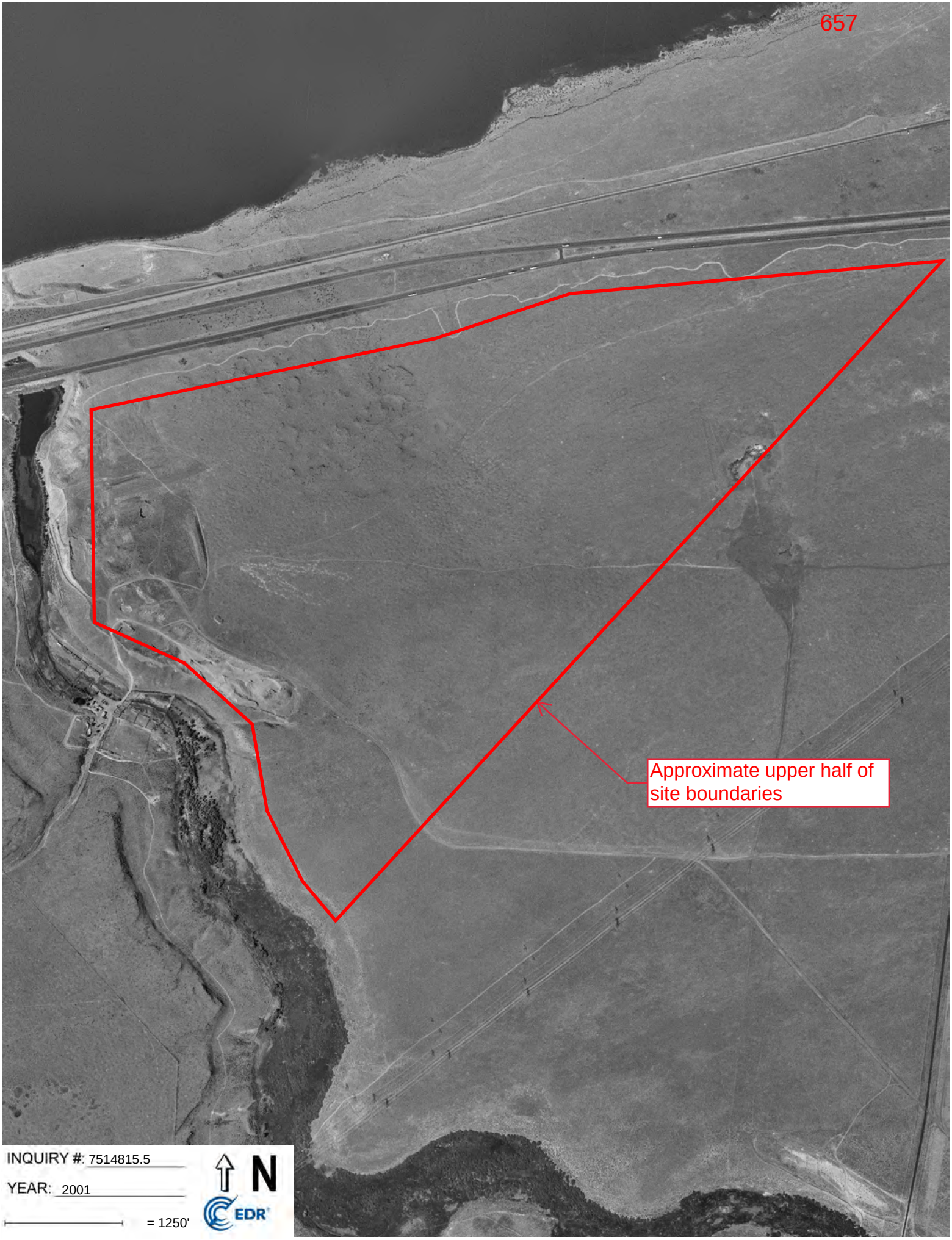
EDR


657
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YEAR: 2001
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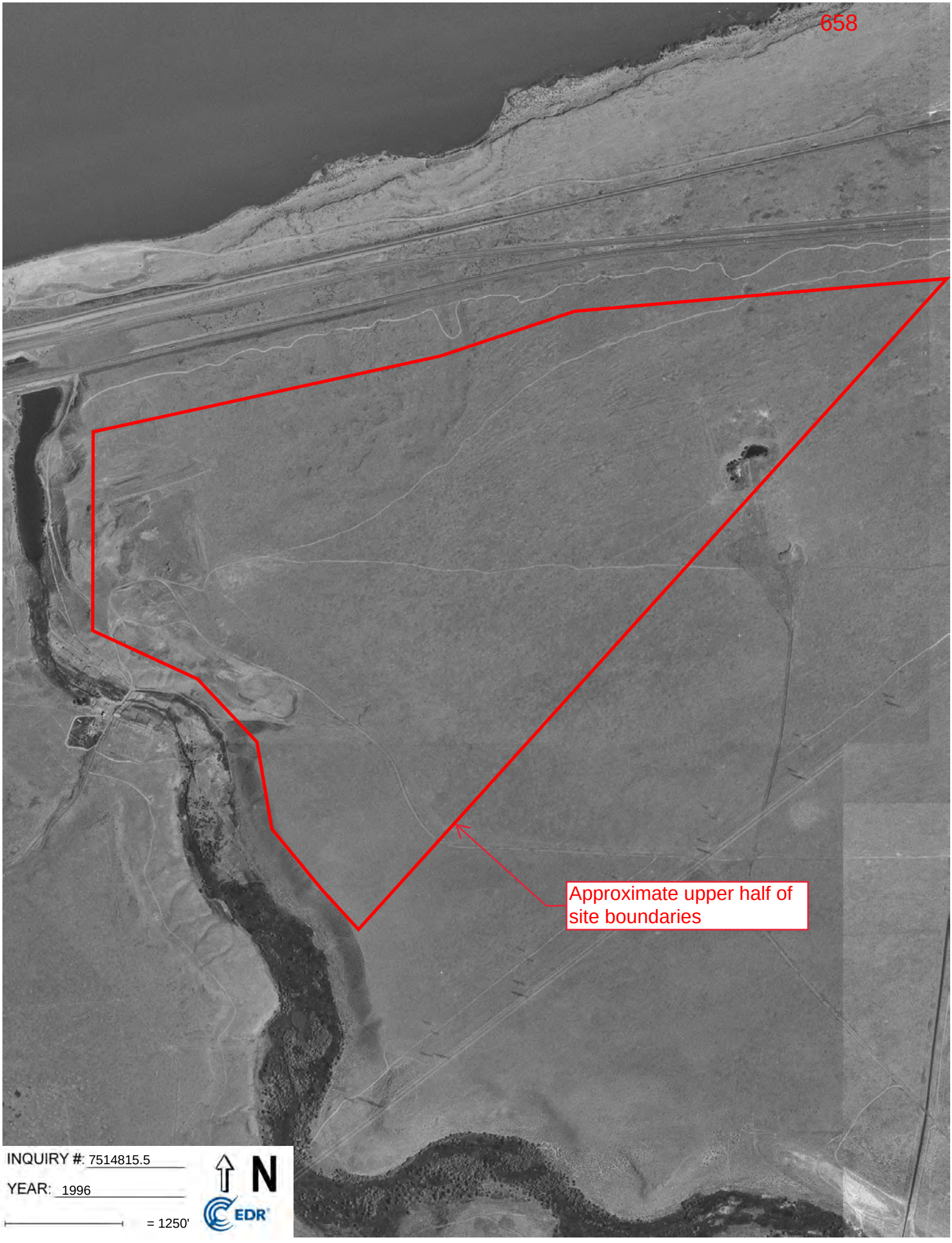
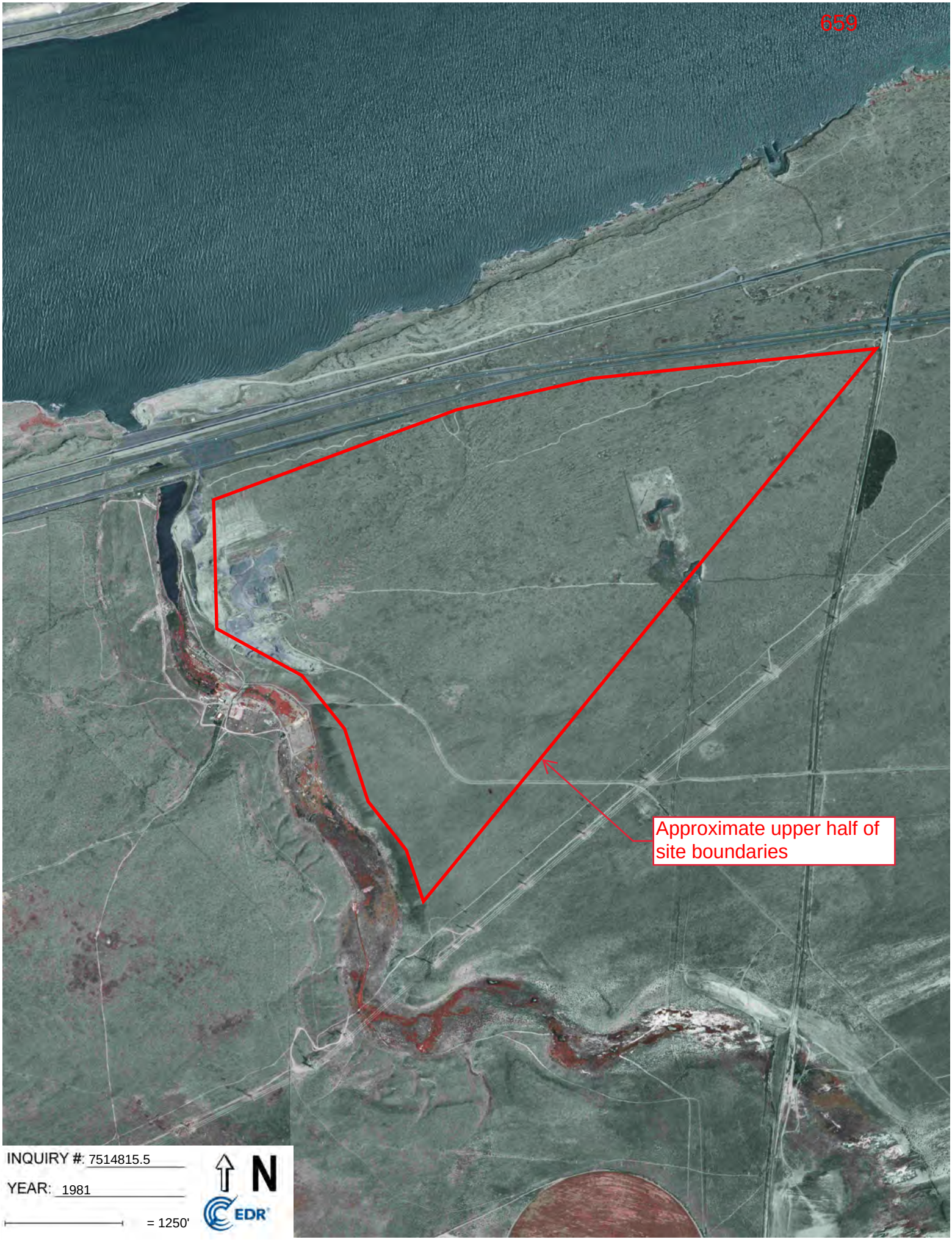
EDR


658
Approximate upper half of site boundaries
INQUIRY #: 7514815.5
YEAR: 1996
= 1250'
N
EDR


659
Approximate upper half of site boundaries
INQUIRY #: 7514815.5
YEAR: 1981
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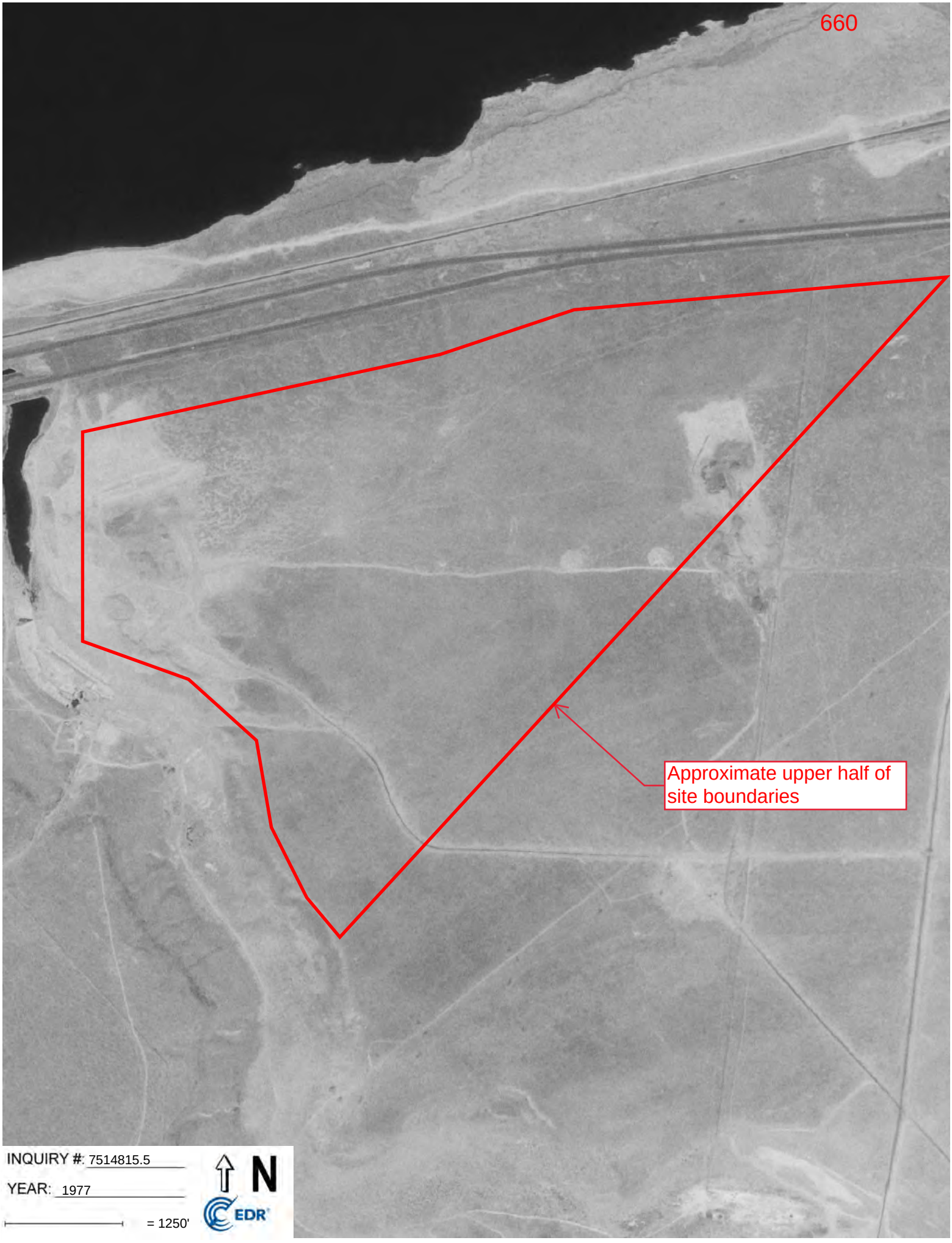
EDR


660
Approximate upper half of site boundaries
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YEAR: 1977
= 1250'
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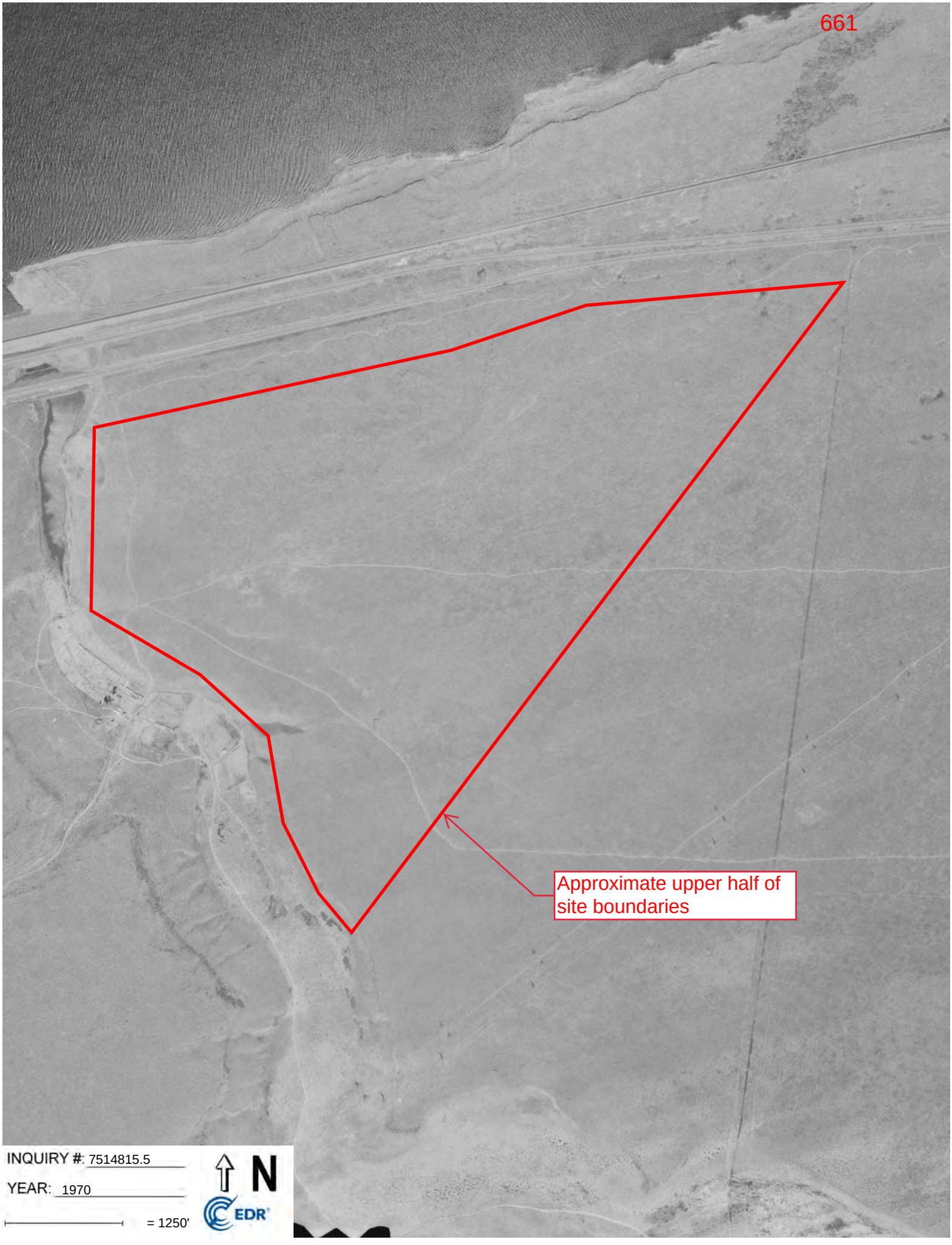
EDR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Approximate upper half of site boundaries
INQUIRY #: 7514815.5
YEAR: 1970
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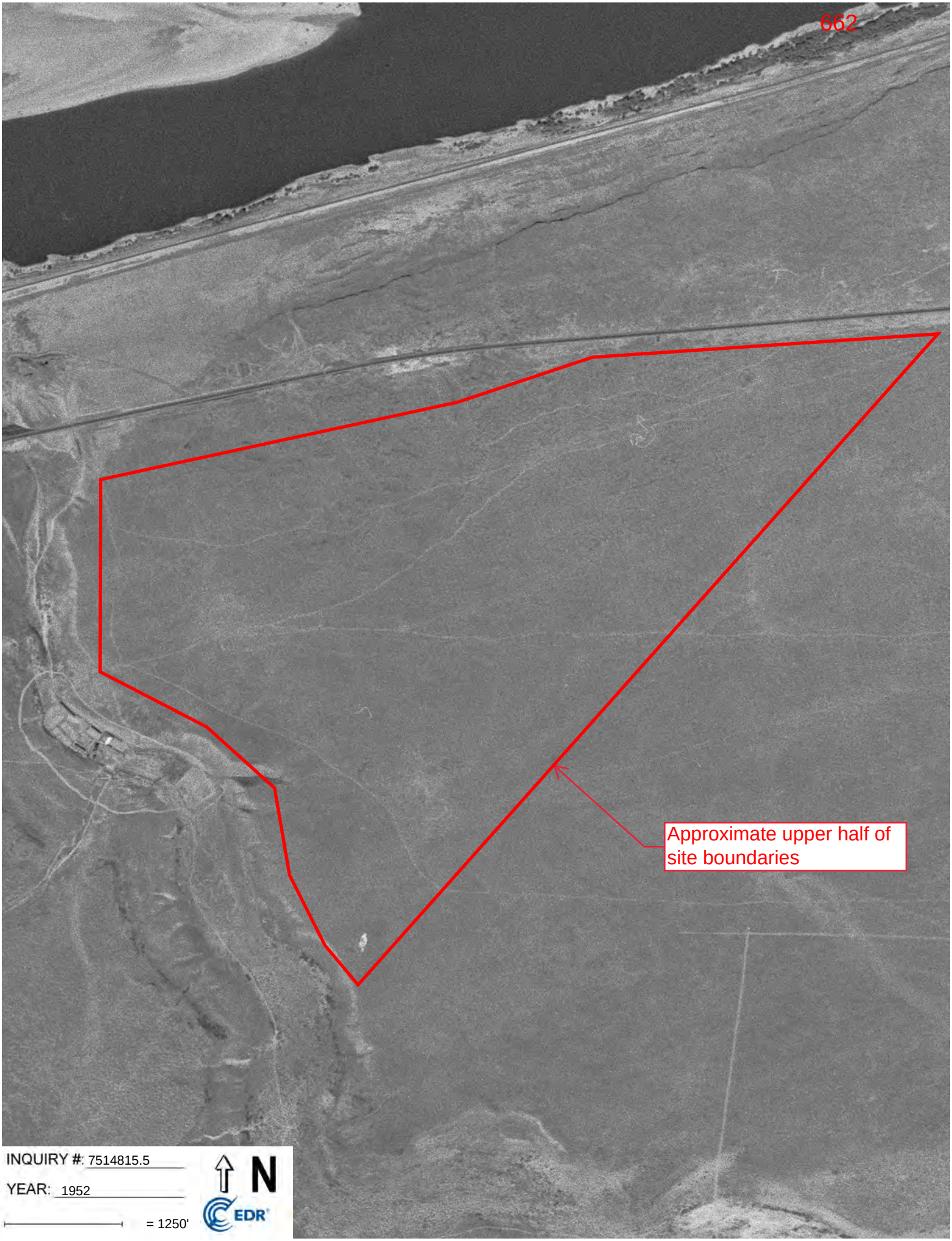

662
Approximate upper half of site boundaries
INQUIRY #: 7514815.5
YEAR: 1952
= 1250'
N
EDR

663

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Morrow County, Oregon

Local office

Oregon Fish And Wildlife Office

(503) 231-6179
(503) 231-6195

664

2600 Southeast 98th Avenue, Suite 100
Portland, OR 97266-1398

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Fishes

NAME	STATUS
Bull Trout Salvelinus confluentus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8212	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

667

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

668

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

669

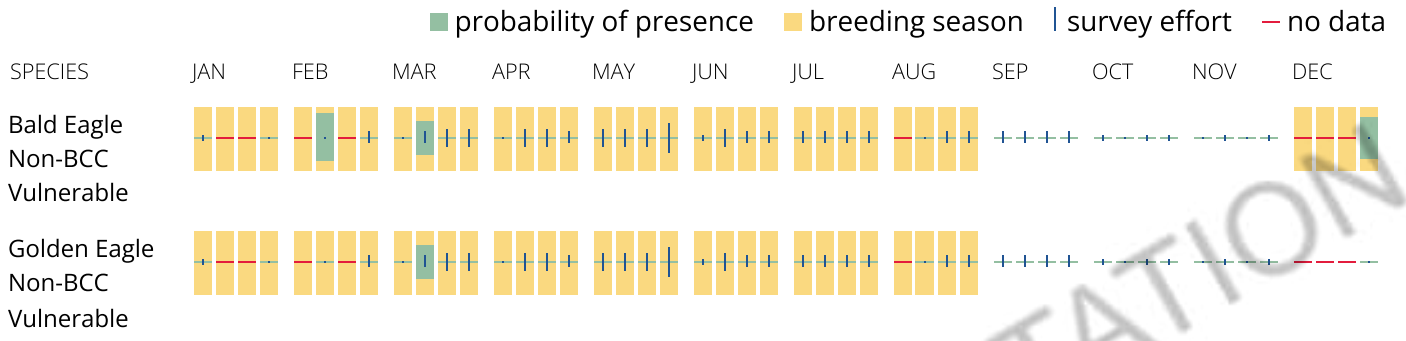
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

670

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American White Pelican pelecanus erythrorhynchos This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6886	Breeds Apr 1 to Aug 31
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
California Gull Larus californicus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Evening Grosbeak Coccothraustes vespertinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lewis's Woodpecker Melanerpes lewis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Rufous Hummingbird selasphorus rufus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15

672

Western Grebe aechmophorus occidentalis Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

673

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

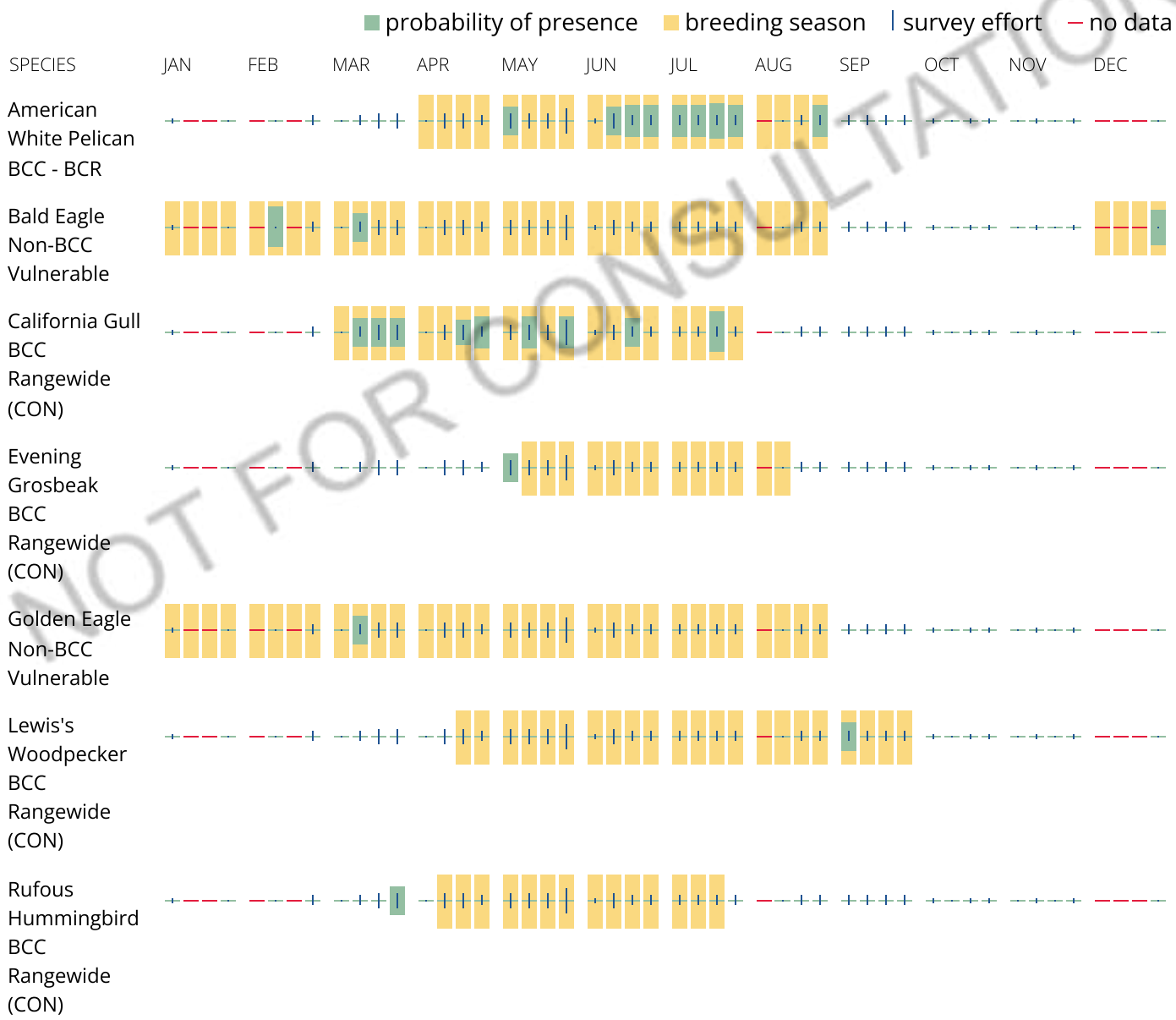
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

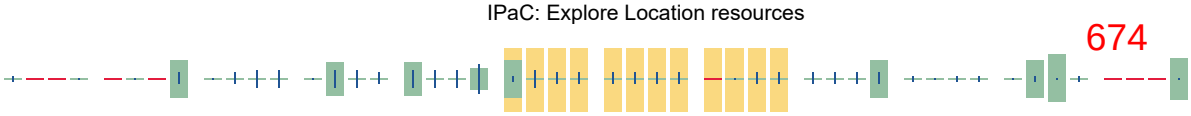
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Western Grebe
BCC
Rangewide
(CON)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is

the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

677

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1C

FRESHWATER POND

PUB/EM1Fx

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or

products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Critical Habitat for Threatened & Endangered Species [USFWS]

Final Polygon Features

Final Linear Features

Proposed Polygon Features

Proposed Linear Features

A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Earthstar Geographics | Oregon State Parks, State of Oregon GEO, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

679

Appendix C

Photos

Site Photographs

Job Name: Due Diligence

Job Number/Phase (Task) Mo/Yr: 553-4805-014 / February 2024

Photo No. 1. Wetland A, SP-01.

Photo No. 2. Wetland A at the bottom of depression, upland slopes of depression.

Photo No. 3. General view of the site, upland shrub. Location of SP-3.

Photo No. 4. Upland grassland. Location of SP-04.

Photo No. 5. Southern border of the site. The slope to Six Mile Creek is located outside of the study area.

Photo No. 6. General view of the site.

Photo No. 7. General view of the site. Location of SP-07.

Photo No. 8. General view of the site. Location of SP-08.

Photo No. 9. Rock outcrops.

Appendix D

Determination Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Site | City/County: Unincorporated Morrow County | Sampling Date: December 18, 2023
Applicant/Owner: Confidential Client | State: Oregon | Sampling Point: **SP-01**
Investigator(s): Colton Kyro, Chloe Kott | Section, Township, Range: 4N23E24SENE
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): None
Subregion (LRR): (B) Columbia/Snake River Plateau | Lat: 45.817335 | Long: -119.874741 | Datum: NAD 83
Soil Unit (Name-ID-Hydric Rating): Prosser-Rock outcrop complex, 1-20% slopes - 38D - No | NWI classification: PUB/EM1Fx
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Precipitation prior to fieldwork:
Precipitation was within the normal range for the three months prior to the site visit.

Remarks:
SP-01 was collected in an abandoned gravel mine.

VEGETATION

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: r =15')			
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r =10')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r = 5')			
1. *Phragmites australis*	80%	Yes	FACW
2. *Poa palustris*	30%	Yes	FAC
3. *Xanthium strumarium*	15%	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	125% = Total Cover		
Woody Vine Stratum (Plot size: r = 5')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:
Coastal salt grass (*Distichlis spicata*) was also observed in the wetland.

SOIL **Sampling Point:** **SP-01**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	[3]Texture	Remarks
0 - 1	2.5Y 2/2	100					SL	
1 - 5	2.5Y 2/2	95	7.5YR 4/6	5	C	M, PL	SL	
5+								Bedrock

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

[3]Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Bedrock

Depth (inches): 5

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	___	No	X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Site | City/County: Unincorporated Morrow County | Sampling Date: December 18, 2023
Applicant/Owner: Confidential Client | State: Oregon | Sampling Point: **SP-02**
Investigator(s): Colton Kyro, Chloe Kott | Section, Township, Range: 4N23E24SENE
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): convex | Slope (%): 3-5%
Subregion (LRR): (B) Columbia/Snake River Plateau | Lat: 45.817384 | Long: -119.874818 | Datum: NAD 83
Soil Unit (Name-ID-Hydric Rating): Prosser-Rock outcrop complex, 1-20% slopes - 38D - No | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Precipitation prior to fieldwork:
Precipitation was within the normal range for the three months prior to the site visit.

Remarks:

VEGETATION

Tree Stratum (Plot size: r = 15')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r = 10')			
1.			
2.			
3.			
4.			
5.			
	0% = Total Cover		
Herb Stratum (Plot size: r = 5')			
1. *Poa bulbosa*	70%	Yes	FACU
2. *Aristida longiseta*	15%	No	NOL
3. *Lactuca serriola*	10%	No	FACU
4. *Xanthium strumarium*	10%	No	FAC
5. *Centaurea diffusa*	5%	No	NOL
6.			
7.			
8.			
9.			
10.			
11.			
	110% = Total Cover		
Woody Vine Stratum (Plot size: r = 5')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% | % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 = ____	
FACW species ____	x 2 = ____	
FAC species ____	x 3 = ____	
FACU species ____	x 4 = ____	
UPL species ____	x 5 = ____	
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Russian olive (*Elaeagnus angustifolia*) also in this upland outside of the plot. Russian olive borders wetland around.

SOIL

Sampling Point: SP-02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	[3]Texture	Remarks
0 - 1	10YR 3/3	99	2.5Y 5/6	1	C	M	LS	Gravel inclusions
1+								Bedrock

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

[3]Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Bedrock

Depth (inches): 1

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches):	
Water Table Present?	Yes ___	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches):	

Wetland Hydrology Present? Yes ___ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Site | City/County: Unincorporated Morrow County | Sampling Date: December 18, 2023
Applicant/Owner: Confidential Client | State: Oregon | Sampling Point: **SP-03**
Investigator(s): Colton Kyro, Chloe Kott | Section, Township, Range: 4N24E19NENW
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): <3%
Subregion (LRR): (B) Columbia/Snake River Plateau | Lat: 45.818991 | Long: -119.868211 | Datum: NAD 83
Soil Unit (Name-ID-Hydric Rating): Prosser-Rock outcrop complex, 1-20% slopes - 38D - No | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? Yes ____ No X

Precipitation prior to fieldwork:
Precipitation was within the normal range for the three months prior to the site visit.

Remarks:

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum (Plot size: r = 15')		% Cover	Species?	Status
1.				
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum (Plot size: r = 10')				
1.	*Gutierrezia sarothrae*	15%	Yes	NOL
2.	*Ericameria nauseosa*	5%	Yes	NOL
3.				
4.				
5.				
		20%	= Total Cover	
Herb Stratum (Plot size: r = 5')				
1.	*Poa bulbosa*	70%	Yes	FACU
2.	*Bassia scoparia*	20%	No	FAC
3.	*Lactuca serriola*	5%	No	FACU
4.	*Salsola kali*	5%	No	NOL
5.	*Asclepias fascicularis*	1%	No	FAC
6.				
7.				
8.				
9.				
10.				
11.				
		101%	= Total Cover	
Woody Vine Stratum (Plot size: r = 5')				
1.				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species ____	x 3 =	____
FACU species ____	x 4 =	____
UPL species ____	x 5 =	____
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL **Sampling Point:** **SP-03**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	[3]Texture	Remarks
0 - 12	12.5Y 5/3	100					LS	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

[3]Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	___	No	X	Depth (inches): ___
Water Table Present?	Yes	___	No	X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Site | City/County: Unincorporated Morrow County | Sampling Date: December 18, 2023
Applicant/Owner: Confidential Client | State: Oregon | Sampling Point: **SP-04**
Investigator(s): Colton Kyro, Chloe Kott | Section, Township, Range: 4N23E24SENW
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): None
Subregion (LRR): (B) Columbia/Snake River Plateau | Lat: 45.816166 | Long: -119.888287 | Datum: NAD 83
Soil Unit (Name-ID-Hydric Rating): Prosser-Rock outcrop complex, 1-20% slopes - 38D - No | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? Yes ____ No X

Precipitation prior to fieldwork:
Precipitation was within the normal range for the three months prior to the site visit.

Remarks:
SP-04 was collected in a localized depression.

VEGETATION

		Absolute	Dominant	Indicator
Tree Stratum	(Plot size: r = 15')	% Cover	Species?	Status
1.				
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r = 10')			
1.				
2.				
3.				
4.				
5.				
		0%	= Total Cover	
Herb Stratum	(Plot size: r = 5')			
1.	*Erodium botrys*	60%	Yes	FACU
2.	*Poa bulbosa*	15%	Yes	FACU
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		75%	= Total Cover	
Woody Vine Stratum	(Plot size: r = 5')			
1.				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 25% % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:
Area was recently burned in Summer 2023. Dead rubber rabbitbrush (*Ericameria nauseosa*) and burn marks were observed.

SOIL **Sampling Point:** **SP-04**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	[3]Texture	Remarks
0 - 16	10YR 3/3	100					LS	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

[3]Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

_____ 1 cm Muck (A9) (**LRR C**)
_____ 2 cm Muck (A10) (**LRR B**)
_____ Reduced Vertic (F18)
_____ Red Parent Material (TF2)
_____ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

_____ Water Marks (B1) (**Riverine**)
_____ Sediment Deposits (B2) (**Riverine**)
_____ Drift Deposits (B3) (**Riverine**)
_____ Drainage Patterns (B10)
_____ Dry-Season Water Table (C2)
_____ Crayfish Burrows (C8)
_____ Saturation Visible on Aerial Imagery (C9)
_____ Shallow Aquitard (D3)
_____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	_____
Water Table Present?	Yes _____	No X	Depth (inches):	_____
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):	_____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Site | City/County: Unincorporated Morrow County | Sampling Date: December 18, 2023
Applicant/Owner: Confidential Client | State: Oregon | Sampling Point: **SP-05**
Investigator(s): Colton Kyro, Chloe Kott | Section, Township, Range: 4N23E23NESE
Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): convex | Slope (%): <3%
Subregion (LRR): (B) Columbia/Snake River Plateau | Lat: 45.813304 | Long: -119.899658 | Datum: NAD 83
Soil Unit (Name-ID-Hydric Rating): Gravden very gravelly loam, 20-40 % slopes - 13E - No | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Precipitation prior to fieldwork:
Precipitation was within the normal range for the three months prior to the site visit.

Remarks:

VEGETATION

		Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum	(Plot size: r = 15')			
1.				
2.				
3.				
4.				
		0%	= Total Cover	
Sapling/Shrub Stratum	(Plot size: r = 10')			
1.	*Artemisia tridentata*	30%	Yes	NOL
2.	*Purshia tridentata*	10%	Yes	NOL
3.				
4.				
5.				
		40%	= Total Cover	
Herb Stratum	(Plot size: r = 5')			
1.	*Bromus tectorum*	20%	Yes	NOL
2.	*Holcus lanatus*	15%	Yes	FAC
3.	*Erodium botrys*	5%	No	FACU
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
		40%	= Total Cover	
Woody Vine Stratum	(Plot size: r = 5')			
1.				
2.				
		0%	= Total Cover	

% Bare Ground in Herb Stratum 60% % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species ____	x 3 =	____
FACU species ____	x 4 =	____
UPL species ____	x 5 =	____
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL

Sampling Point: SP-05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	[3]Texture	Remarks
0 - 12	10YR 3/3	100					coGS	Small gravel inclusions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

[3]Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	
Water Table Present?	Yes ___	No X	Depth (inches): ___	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___	**Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Site | City/County: Unincorporated Morrow County | Sampling Date: December 18, 2023
Applicant/Owner: Confidential Client | State: Oregon | Sampling Point: **SP-06**
Investigator(s): Colton Kyro, Chloe Kott | Section, Township, Range: 4N23E25SENW
Landform (hillslope, terrace, etc.): Terrace | Local relief (concave, convex, none): convex | Slope (%): <3%
Subregion (LRR): (B) Columbia/Snake River Plateau | Lat: 45.800002 | Long: -119.886077 | Datum: NAD 83
Soil Unit (Name-ID-Hydric Rating): Quinton-Rock outcrop complex, 2-20 % slopes - 42D - No | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Precipitation prior to fieldwork:
Precipitation was within the normal range for the three months prior to the site visit.

Remarks:

VEGETATION

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: r = 15')			
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r = 10')			
1. *Ericameria nauseosa*	10%	Yes	NOL
2. *Purshia tridentata*	5%	Yes	NOL
3.			
4.			
5.			
	15% = Total Cover		
Herb Stratum (Plot size: r = 5')			
1. *Bromus tectorum*	60%	Yes	NOL
2. *Erodium botrys*	50%	Yes	FACU
3. *Poa bulbosa*	50%	Yes	FACU
4. *Holcus lanatus*	10%	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	170% = Total Cover		
Woody Vine Stratum (Plot size: r = 5')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% | % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species ____	x 1 =	____
FACW species ____	x 2 =	____
FAC species ____	x 3 =	____
FACU species ____	x 4 =	____
UPL species ____	x 5 =	____
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL **Sampling Point:** **SP-06**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	[3]Texture	Remarks
0 - 16	10YR 3/3	100					fS	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

[3]Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	
Water Table Present?	Yes ___	No X	Depth (inches): ___	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___	**Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Site | City/County: Unincorporated Morrow County | Sampling Date: December 18, 2023
Applicant/Owner: Confidential Client | State: Oregon | Sampling Point: **SP-07**
Investigator(s): Colton Kyro, Chloe Kott | Section, Township, Range: 4N23E25SENE
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): None
Subregion (LRR): (B) Columbia/Snake River Plateau | Lat: 45.800539 | Long: -119.875455 | Datum: NAD 83
Soil Unit (Name-ID-Hydric Rating): Quinton loamy fine sand, 2-5 % slopes - 41B - No | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? Yes ____ No X

Precipitation prior to fieldwork:
Precipitation was within the normal range for the three months prior to the site visit.

Remarks:

VEGETATION

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: r = 15')			
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r = 10')			
1. *Ericameria nauseosa*	5%	Yes	NOL
2.			
3.			
4.			
5.			
	5% = Total Cover		
Herb Stratum (Plot size: r = 5')			
1. *Bromus tectorum*	70%	Yes	NOL
2. *Festuca idahoensis*	60%	Yes	FACU
3. *Draba verna*	30%	No	NOL
4. *Holcus lanatus*	10%	No	FAC
5. *Erodium botrys*	10%	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	180% = Total Cover		
Woody Vine Stratum (Plot size: r = 5')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL **Sampling Point:** **SP-07**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	[3]Texture	Remarks
0 - 16	10YR 3/4	100					fS	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

[3]Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	
Water Table Present?	Yes ___	No X	Depth (inches): ___	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___	**Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Site | City/County: Unincorporated Morrow County | Sampling Date: December 18, 2023
Applicant/Owner: Confidential Client | State: Oregon | Sampling Point: **SP-08**
Investigator(s): Colton Kyro, Chloe Kott | Section, Township, Range: 4N23E24SESE
Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): concave | Slope (%): <3%
Subregion (LRR): (B) Columbia/Snake River Plateau | Lat: 45.808601 | Long: -119.875409 | Datum: NAD 83
Soil Unit (Name-ID-Hydric Rating): Prosser silt loam, 0-2 % slopes - 37A - No | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Precipitation prior to fieldwork:
Precipitation was within the normal range for the three months prior to the site visit.

Remarks:

VEGETATION

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: r = 15')			
1.			
2.			
3.			
4.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: r = 10')			
1. *Ericameria nauseosa*	3%	Yes	NOL
2. *Gutierrezia sarothrae*	2%	Yes	NOL
3.			
4.			
5.			
	5% = Total Cover		
Herb Stratum (Plot size: r = 5')			
1. *Poa bulbosa*	70%	Yes	FACU
2. *Erodium botrys*	60%	Yes	FACU
3. *Bromus tectorum*	60%	Yes	NOL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	190% = Total Cover		
Woody Vine Stratum (Plot size: r = 5')			
1.			
2.			
	0% = Total Cover		

% Bare Ground in Herb Stratum 0% | % Cover of Biotic Crust ____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: 0 (A)		0 (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ____ No X

Remarks:

SOIL **Sampling Point: SP-08**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	[3]Texture	Remarks
0 - 16	10YR 3/3	100					LS	Small gravel inclusions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

[3]Texture: S = sand; Si = silt; C = clay; L = loam or loamy. Texture Modifier: co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___	
Water Table Present?	Yes ___	No X	Depth (inches): ___	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___	**Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix E

Special Status Species

Federally and State Listed Species Occurrence Potential

Common Name (Scientific Name)	Federal Status	State Status	Habitat Characteristics	Occurrence Potential
Mammals				
Washington ground squirrel (*Urocitellus washingtoni*)	Not Listed	Endangered	Washington ground squirrels inhabit sites with sandy-loam texture soils that are deep to accommodate its burrow structures. Habitat also requires sufficient forage. Shrubsteppe and native grassland habitats are preferred. Silt loam soils, especially those classified as Warden soils, may be the most important habitat feature (WDFW 2023). There are ORBIC records of occurence of the species on and near the site.	**Present.** Site survey confirmed presence in one location. Suitable soil type (Prosser silt loam)/habitat present.
Birds				
Bald eagle (*Haliaeetus leucocephalus*)	Delisted. Bald and Golden Eagle Protection Act	Not Listed	Seacoasts, rivers, large lakes or marshes or other large bodies of open water with an abundance of fish. Typically requires old-growth and mature stands of coniferous or hardwood trees for perching, roosting, and nesting (National Wildlife Federation 2023).	**Absent.** Suitable habitat not present.
Golden eagle (*Aquila chrysaetos)*	Delisted. Bald and Golden Eagle Protection Act	Not Listed	Cliffs and steep escarpments in grassland, chapparal, shrubland, and forest for nesting, typically near canyonlands, rimrock terrain, and riverside cliffs and bluffs at elevations up to 12,000 feet (Cornell Lab of Ornithology 2023).	**Absent.** Suitable escarpments and elevation not present.
Fish				
Bull trout (*Salvelinus confluentus*)	Threatened	Sensitive-Critical	Bottom of deep pools in cold rivers and large tributary streams, often in moderate to fast currents with temperatures 45°–50° F. Now confined mostly to headwater streams (FWS 2023).	**Absent.** Suitable aquatic habitat not present.
Pacific lamprey (*Entosphenus tridentatus*)	Species of Concern	Sensitive	Riffle and side channel habitat; juveniles emigrate to ocean where they mature into adults (USFWS 2023).	**Absent.** Suitable aquatic habitat not present.
Steelhead (*Oncorhynchus mykiss* pop. 28) (Middle Columbia River ESU, summer run)	Threatened	Sensitive-Critical	All salmonids require sufficient invertebrate organisms for food; cool, flowing waters free of pollutants; high dissolved oxygen concentrations in rearing and incubation habitats; water of low sediment content during the growing season (for visual feeding); clean gravel substrate for reproduction; and unimpeded migratory access to and from spawning and rearing areas (USWFS 2023). Documented in Columbia River and tributaries (ORBIC 2023).	**Absent.** Suitable aquatic habitat not present.
Reptiles				
Northwestern Pond Turtle (*Actinemys marmorata*)	Proposed Threatened	Not Listed	Can be found in marshes, streams, rivers, ponds, and lakes. They use sparsely-vegetated ground nearby for digging nests and moist, shrubby or forested areas for aestivation and over-wintering. They require sunny logs/vegetation for basking and safe movement corridors between aquatic and terrestrial habitat (Oregon Conservation Strategy 2023).	**Absent.** Suitable aquatic habitat not present.

Federally and State Listed Species Occurrence Potential

Common Name (Scientific Name)	Federal Status	State Status	Habitat Characteristics	Occurrence Potential
Invertebrate Animals				
Monarch butterfly (*Danaus plexippus*)	Candidate	Not Listed	Associated with healthy and abundant milkweed which is needed for larval consumption. Sufficient quality and quantity of nectar from flower is needed for adult feeding through the breeding and migration seasons (USFWS 2023). Small population of milkweed was found on site.	**Not Likely to Occur.** May forage on-site, however, supply of forage material is very limited.
Plants				
Lawrence's milkvetch (*Astragalus collinus var. laurentii)*	Not Listed	Threatened	This species is endemic to the Columbia Plateau of northern Oregon, within the Columbia Basin ecoregion. The majority of known occurrences are small and fragmented, with poor estimated viability. The species is listed to occur in Morrow County. It occupies sandy or rocky soils overlaying basalt on dry slopes mostly at elevations ranging from 2000 to 3400 ft.	**Absent.** Suitable aquatic habitat not present.

NOTES

Occurrence Potential

Present = Known recent records. Species observed during recent survey.
May occur = Species is expected to occur and habitat meets special requirements.
Not likely to occur = Habitat is only marginally suitable or is suitable but not within species geographic range.
Absent = Habitat does not meet species requirements as currently understood in the scientific community. Project site is outside species geographic range. Surveys conducted to verify absence.

Federal Categories (USFWS and NMFS)

LE = Listed as endangered by the federal government
LT = Listed as threatened by the federal government
PE/PT = Proposed for listing as endangered or threatened
C = Candidate for federal listing
SOC = Species of concern

State Categories (ODFW for fish/wildlife, ODA for plants)

LE = Listed as endangered by state
LT = Listed as threatened by state
PE/PT = Proposed for listing as endangered or threatened
C = Candidate for state listing
S = Sensitive
C = Sensitive critical

References

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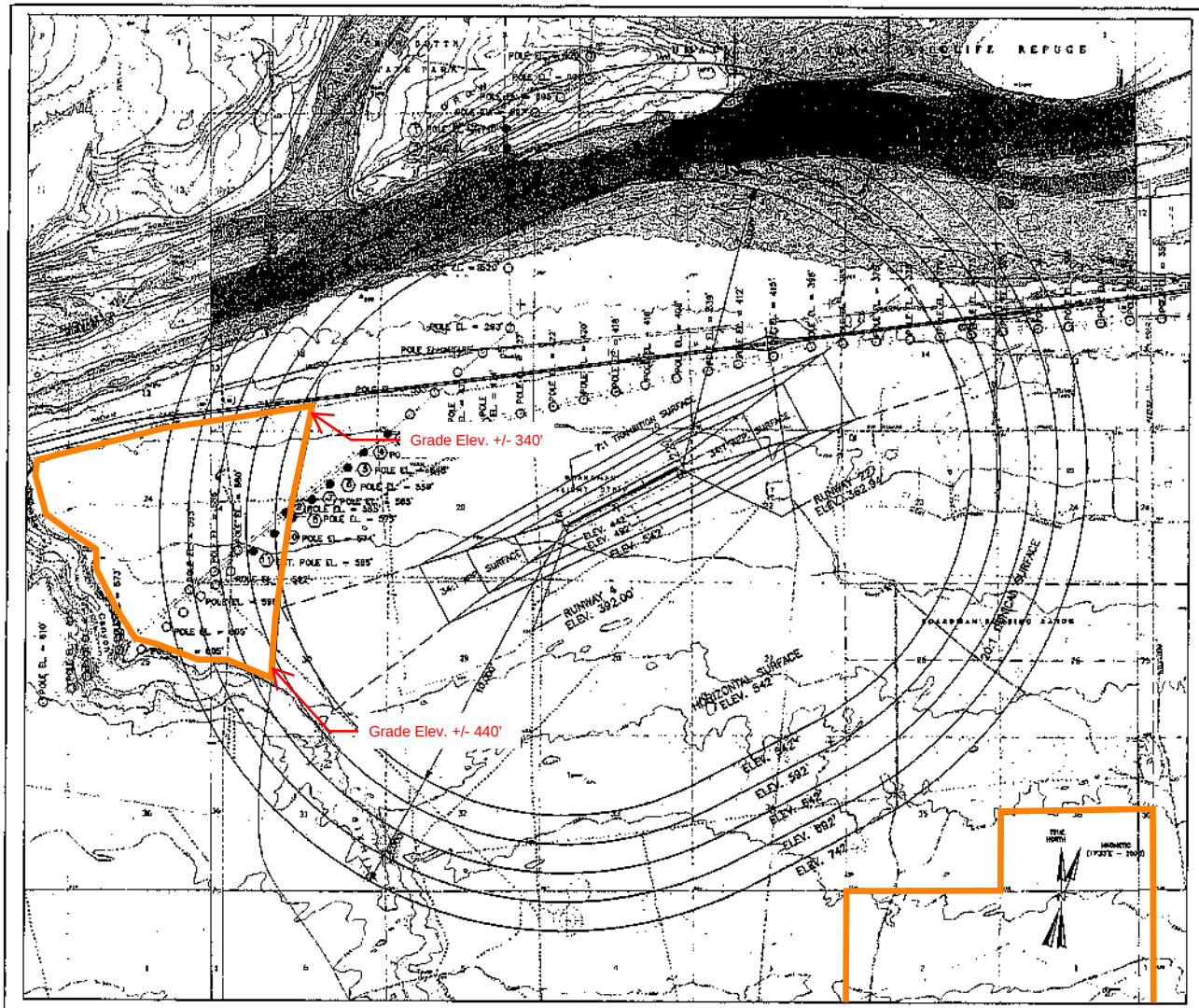


OBSTRUCTION TABLE DETAILS

RUNWAY	OBSTRUCT. NUMBER	DESCRIPTION / DIST FR RW END	SURFACE PENETRATION TYPE / DIST	OBSTRUCTION ELEVATION	DIST. FROM RUNWAY	PROPOSED DISPOSITION
25 (LOST 400' LENGTH)	(1)	POLE @ -200'	C/E EST.	710' EST	13,400' RIGHT	ADD OBSTR LIGHT
	(2)	POLE @ 150'	E/25 EST.	705' EST	12,700' RIGHT	ADD OBSTR LIGHT
	(3)	POLE @ 8,350'	E/16 EST.	600' EST	10,150' RT./FWD	ADD OBSTR LIGHT
	(4)	POLE @ 11,300'	E/45 EST.	597' EST	11,600' RT./FWD	ADD OBSTR LIGHT
	(5)	POLE @ 13,100'	E/25 EST.	540' EST	11,100' RT./FWD	ADD OBSTR LIGHT
	(6)	POLE @ 11,600'	E/16 EST.	558' EST	12,650' RT./FWD	ADD OBSTR LIGHT
	(7)	POLE @ 11,300'	E/20 EST.	565' EST	12,310' RT./FWD	ADD OBSTR LIGHT
	(8)	POLE @ 12,600'	E/20 EST.	535' EST	13,550' RT./FWD	ADD OBSTR LIGHT
	(9)	POLE @ 12,700'	E/20 EST.	565' EST	13,850' RT./FWD	ADD OBSTR LIGHT
	(10)	POLE @ 13,400'	E/20 EST.	674' EST	14,150' RT./FWD	ADD OBSTR LIGHT
	(11)	POLE @ 14,350'	E/5 EST.	565' EST	14,850' RT./FWD	ADD OBSTR LIGHT

NOTES:

1. GROUND PROFILE IS A COMPOSITE OF THE HIGHEST ELEVATIONS ACROSS THE WIDTH OF THE APPROACH.
2. TR = TRANSITIONAL
   AP = APPROACH
   C = CONICAL
   H = HORIZONTAL
   DIST = DISTANCE FROM RUNWAY END
3. UPON ALP APPROVAL IT IS THE PORT'S RESPONSIBILITY TO ACCOMPLISH THE OBSTRUCTION DISPOSITION.
4. ELEVATIONS OF OBSTRUCTIONS (POWER POLES) OBTAINED FROM BOARDMAN ALP (3/89) PREPARED BY DEVCO AVIATION CONSULTANTS

LEGEND:

"THE PREPARATION OF THIS DOCUMENT MAY HAVE BEEN SUPPORTED, IN PART THROUGH THE AIRPORT IMPROVEMENT PROGRAM ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION AS PROVIDED UNDER TITLE 49, UNITED STATES CODE, SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THESE DOCUMENTS BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS."

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

FEDERAL AVIATION ADMINISTRATION APPROVAL
APPROVAL DATE: _____
SIGNATURE

OREGON DEPT. OF AVIATION APPROVAL
APPROVAL DATE: _____
SIGNATURE

CENTURY WEST ENGINEERING CORPORATION
6650 S.W. Redwood Lane, Suite 300
Portland, Oregon 97224
503-419-2750 ph./503-639-2710 fax
www.centurywest.com

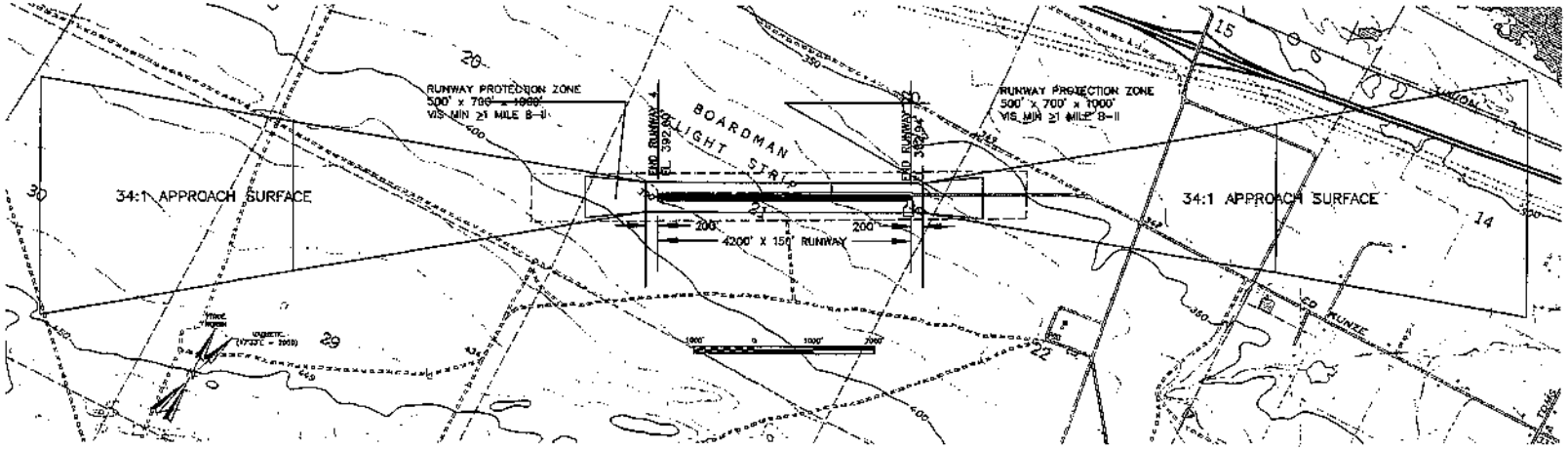
IN ASSOCIATION WITH:
ARON FAEGRE and ASSOCIATES
Portland, Oregon

DESIGNED BY: AF	DRAWN BY: MB	CHECKED BY: DM	SCALE: 1" = 2000'
DATE: (R) JUNE 24, 2002		PROJECT: BOARD-2a-final	

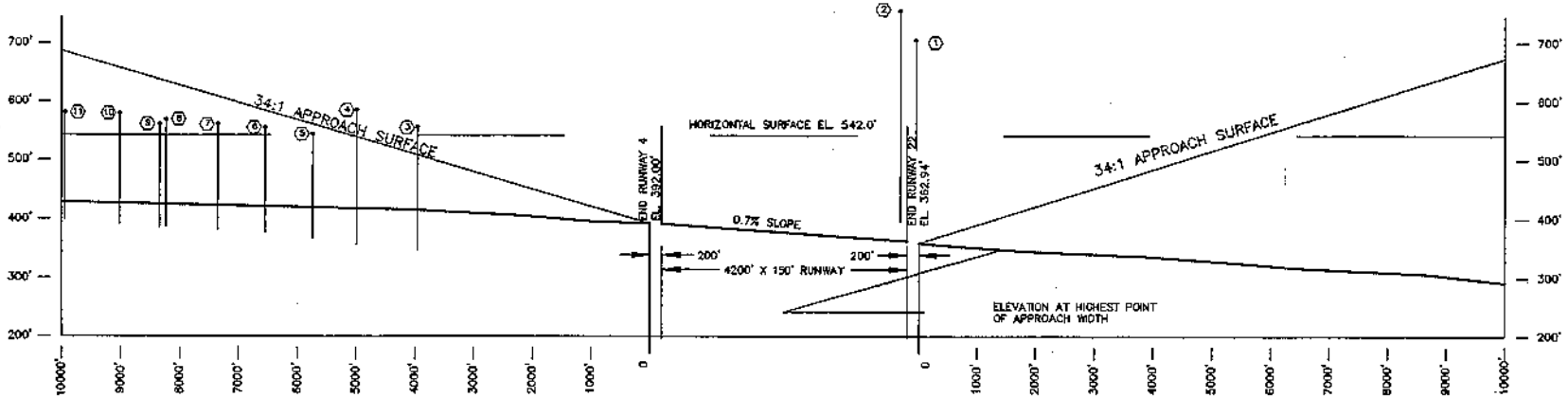
BOARDMAN AIRPORT
AIRPORT LAYOUT PLAN UPDATE

FAR PART 77 AIRSPACE PLAN

DRAWING NO. 2a
SHEET NO. 3 OF 5



PLAN VIEW



PROFILE VIEW

SCALE OF FEET
HORIZONTAL SCALE: 1" = 1000'

SCALE OF FEET
VERTICAL SCALE: 1" = 100'

LEGEND:

POLE IS AN OBSTRUCTION (PENETRATES HORIZONTAL OR CONICAL SURFACE BUT DOES NOT PENETRATE APPROACH SURFACE)

NOTES:

1. ELEVATIONS OF OBSTRUCTIONS (POWER POLES) OBTAINED FROM BOARDMAN ALP (3/86) PREPARED BY DEVCO AVIATION CONSULTANTS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING.
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

FEDERAL AVIATION ADMINISTRATION APPROVAL
APPROVAL DATE: _____
SIGNATURE

OREGON DEPT. OF AVIATION APPROVAL
APPROVAL DATE: _____
SIGNATURE

CENTURY WEST ENGINEERING CORPORATION
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503-419-2130 ph. 503-639-2710 fax
www.centurywest.com

IN ASSOCIATION WITH:
ARGH FABGRE and ASSOCIATES
Portland, Oregon

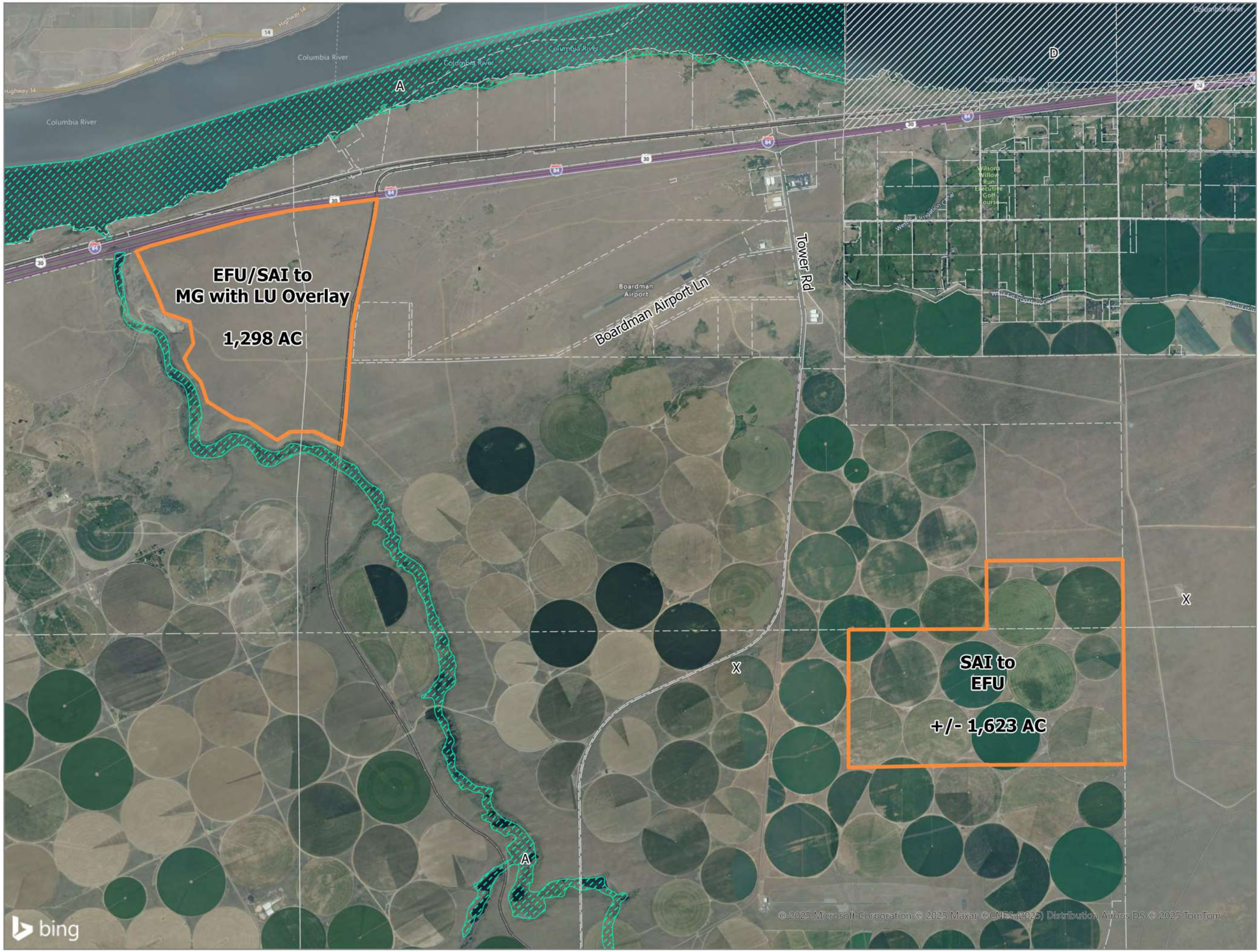
DESIGNED BY: AF	DRAWN BY: MB	CHECKED BY: DM	SCALE: 1" = 1000'
DATE: JUNE 24, 2002	PROJECT: BOARD-2b-final		

BOARDMAN AIRPORT
AIRPORT LAYOUT PLAN UPDATE

RUNWAY SURFACE APPROACH PLAN & PROFILE

DRAWING NO. 2b
SHEET NO. 4 OF 5

EXHIBIT 14
FEMA Map



LEGEND

- Proposed Map Amendments
- Tax Lots

Flood Zone

- A (1% annual chance of flood)
- D (Area of undetermined flood hazard)

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

N

SOURCE DATA: Morrow County Data, 2024

GEOGRAPHIC PROJECTION: NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 5/14/2025 File: GAF-1_Base Map

Map Created By: IAS Project No: 2240364.00

MACKENZIE.
P 503.224.9560 • F 503.228.1285 • W MCKNZE.COM
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington

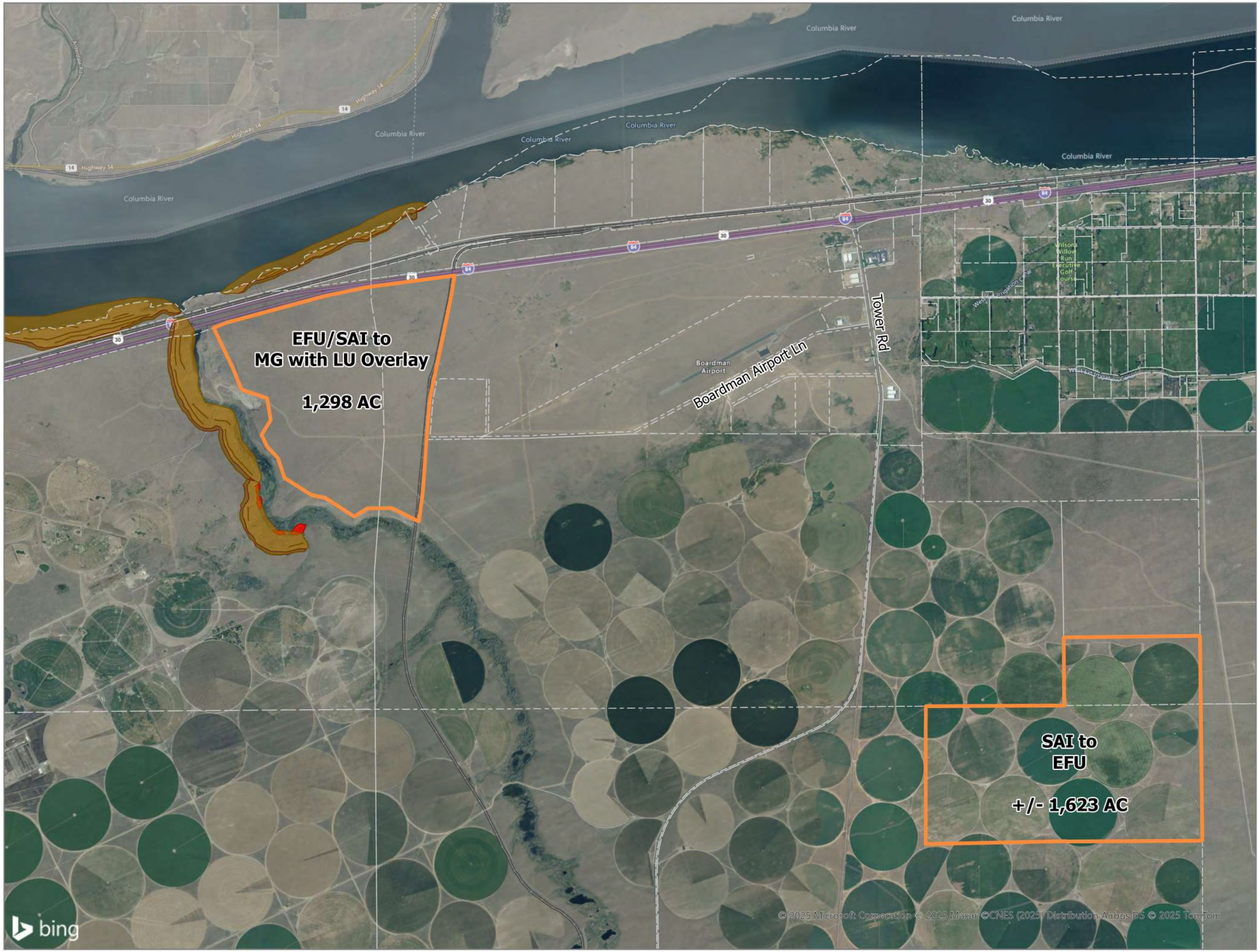


EXHIBIT 15
DOGAMI Map: Landslide Inventory

LEGEND

- Proposed Map Amendments
- Tax Lots
- Scarps
- Scarp Flanks

Deposits

- Fan
- Landslide
- Talus-Colluvium

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

N

SOURCE DATA:
Morrow County Data, 2024
DOGAMI Data, 2025

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Date: 5/14/2025
File: GAF-1_Base Map

Map Created By: IAS
Project No: 2240364.00

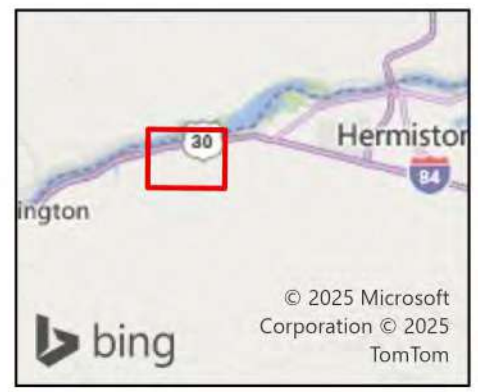


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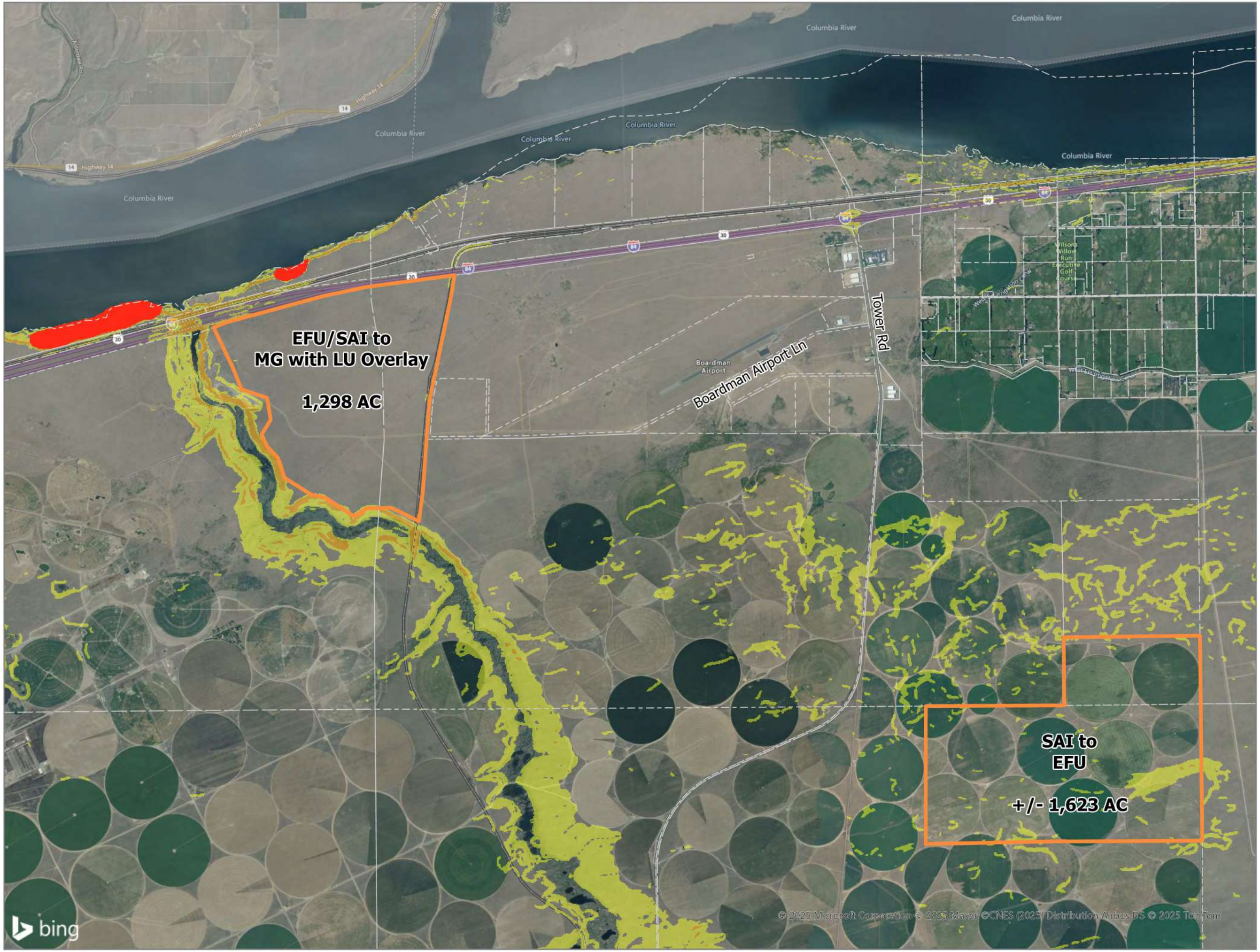
EXHIBIT 15
DOGAMI Map: Landslide Susceptibility



LEGEND

- Proposed Map Amendments
- Tax Lots

Landslide Susceptibility

- Moderate
- High
- Very High

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

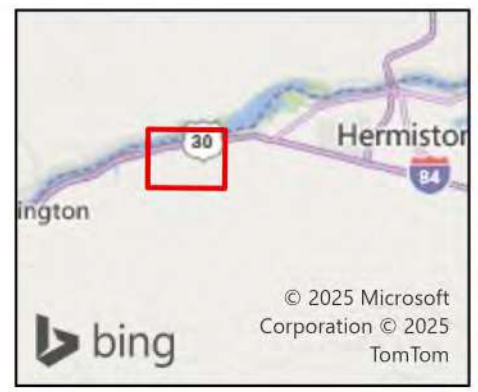
N

SOURCE DATA:
Morrow County Data, 2024
DOGAMI Data, 2025

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North
Lambert Conformal Conic

Date: 5/14/2025
File: GAF-1_Base Map

Map Created By: IAS
Project No: 2240364.00



MACKENZIE.
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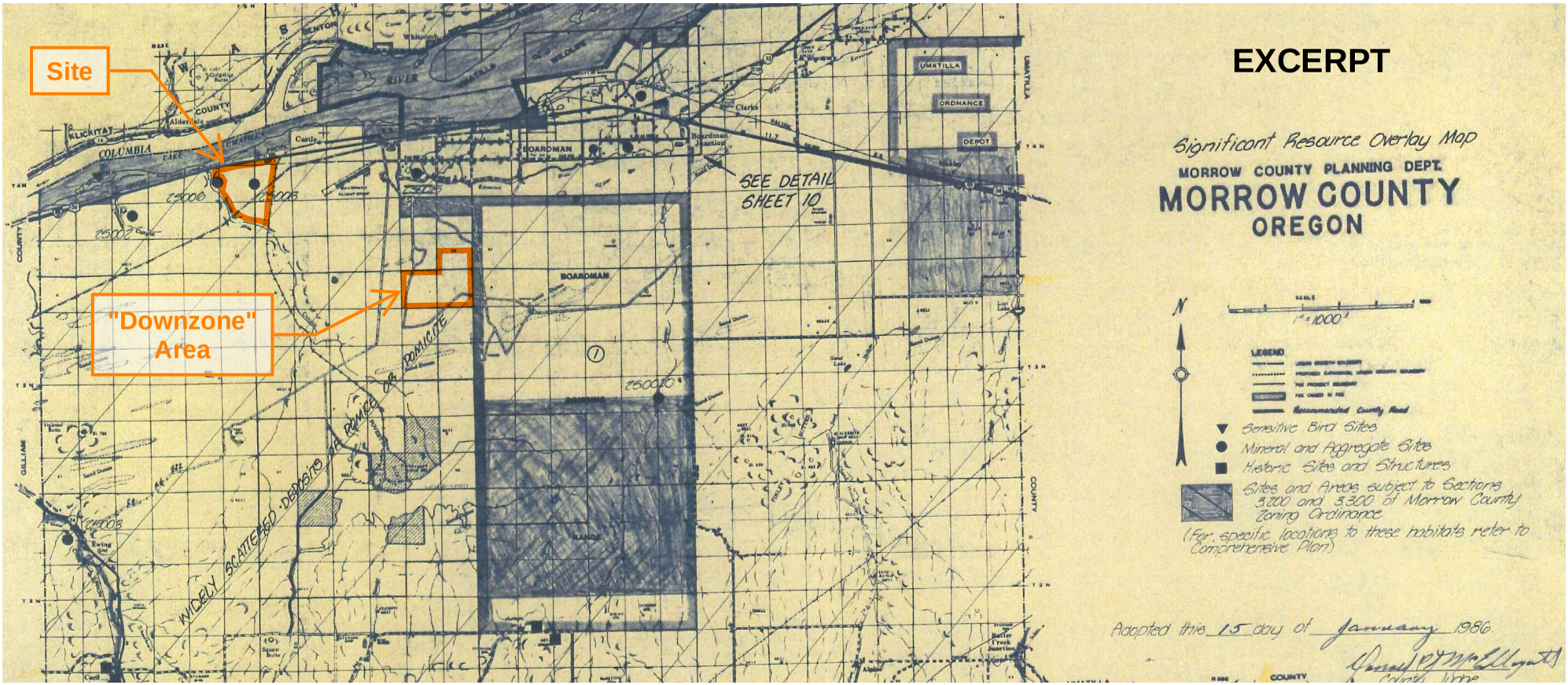
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington


Site
"Downzone" Area
EXCERPT
Significant Resource Overlay Map
MORROW COUNTY PLANNING DEPT.
MORROW COUNTY
OREGON
SEE DETAIL SHEET 10
BOARDMAN
UMATILLA
ORDNANCE
DEPOT
COLUMBIA
RIVER
LEGEND
Sensitive Bird Sites
Mineral and Aggregate Sites
Historic Sites and Structures
Sites and Areas subject to Sections 3.200 and 3.300 of Morrow County Zoning Ordinance
(For specific locations to these habitats refer to Comprehensive Plan)
Adopted this 15 day of January 1986.

EXCERPT from DOGAMI Permit Data Spreadsheet (https://www.oregon.gov/dogami/mlrr/spreadsheets/Mining_db.xlsx)

PermitID	Permit Type	Status	Site Name	Permittee	Address1	Address2	City	State	Zip	Commodity	County	TRS TL	Latitude	Longitude	GoogleMapsLink
25-0006	Operating Permit (OP)	Active	Six-Mile Canyon	Threemile Canyon Farms LLC		75906 Three Mile Road	Boardman	OR	97818	sand and gravel	Morrow	4N23E23 110, 4N23E24 110	45.81196	-119.8964	https://www.google.com/maps/@?api=1&map_action=map&center=45.811962,-119.8964&zoom=16&basemap=satellite
25-0008	Operating Permit (OP)	Closed	Riprap Quarry	Portland General Electric Company - Lindsay Smith	3WTC0403	121 SW Salmon Street	Portland	OR	97204	rock	Morrow	4N23E 24E19 24	45.81629	-119.87456	

Inventory of Natural Resources

Aggregate and Mineral Resources

Goal 5 Significant	Farmland Significant	Site Name	Owner	Map and Tax Lot	DOGAMI #	Other Number	Primary Commodity	Zone	Permitted Boundary (acres)
Yes		Cecil Quarry, Cecil Rock Production	ODOT	2N 23 6, 7 TL 1100	25-0003	ODOT #25-007	Rock 49F	EFU	4.72
Yes		Lexington Quarry MP 39 Heppner	ODOT	1S 25 35 TL 600	25-0017	ODOT #25-009	Basalt 28E	EFU	14.94
Yes		Walpole Gravel Pit	MC/ODOT	5N 27 20 TL 1504,2200	25-0018	ODOT #25-005	Sand & gravel 8B	RR	5
Yes		Britt Quarry	Marty Britt/Sid and Randy Britt	1N 27 TL 1400	25-0069		Basalt	EFU	40
Yes		Willow Creek Ranch	Willow Farms, LLC/Mark Zoller	2N 23 17 TL 1401	25-0071		Rock	EFU	30
Yes		Hellberg Goal 5	Max Hellberg	5N 26 26 TL 203		DLCD# 001-04	Sand & gravel	EFU	52
Yes		Hellberg (ODOT)	ODOT	5N 26 26 TL 205, 207	25-0048	ODOT#25-032-5	Sand & gravel	EFU	11.98
Yes		Morgan Creek	ODOT	1N 23 22 TL 100		ODOT#25-031		EFU	7.89
Yes		Barratt Quarry	ODOT	2S 26 25 TL 3800		ODOT#25-011		EFU	4
Yes		Donaldson Canyon Quarry	ODOT	3S 26 TL 1502		ODOT#25-020-5		EFU	3.67
Yes		Threemile Canyon Quarry	ODOT	In ODOT ROW surrounded by 4N 23 TL 110		ODOT#25-027-5		EFU	10.3
	Yes	Six-Mile Pit	Three Mile Canyon Farms	4N 23 23, 24 TL102	25-0006		Screened S & G	EFU	12
	Yes	Kinzua Resources	Port of Morrow	2S 26 21 TL 2701	25-0004		Sand & gravel	EFU	>1
	Yes	Boardman	Eucon Corporation	4N 24 23 TL 402	25-0015		Rock	SF-40	<10
	Yes	So Bombing Range Pit	MC/ Irvan Rauch	1N 26 18 TL 3200	25-0020	PW #210	Sand & gravel	EFU	>1
	Yes	J. J. Aylett	Aylett, Jeddie & Juanita	4N 27 28 TL 300, 1101	25-0023		Sand & gravel	EFU	20
	Yes	East Fork Dry Ck Quarry MP 59.6 Wasco-Heppner Hwy	ODOT	3S 23 27 TL 3001	25-0024	ODOT #25-056	Borrow/Fill/Topsoil 32E	EFU	3.81
	Yes	Cutsforth Quarry	Cutsforth	1S 25 20 TL 2000	25-0027	CUP-N-5(1983)	Basalt	EFU	1
	Yes	Rhea Creek Quarry	MC/Melvin Harnett	3S 26 32 TL 3200	25-0029	PW #247/220	Basalt	EFU	1.5
	Yes	Zinter Quarry	MC/Zinter Dev.	3S 23 27 TL 3400	25-0030	ODOT #30-018, PW #221, Check against 25-0043!!	Sand & gravel	EFU	7.11
	Yes	Clark Canyon Quarry	MC	2S 25 15 TL 1702	25-0031	PW #201	Basalt	EFU	3
	Yes	Skinners Fork Quarry	MC	3S 27 12 TL 400	25-0032	PW #228	Basalt	EFU	1.5
	Yes	Butter Creek Quarry/Currin Pit	MC/Currin Ranch	1N 28 25 TL 700	25-0033	PW #239/224	Basalt	EFU	5
	Yes	Dougherty Pit/Sandhollow	MC/Jerry Dougherty	1S 27 7 TL 505	25-0034	PW# 226	Basalt	EFU	
	Yes	Chick Quarry/Reitmann Pit North	MC/Bridston	1N 23 12 TL 3600, 2200	25-0035	PW #227	Basalt	EFU	4
	Yes	Rugg Quarry/Road Canyon Pit	MC/James Martin	4S 26 22 TL 1502	25-0038	PW #230	Basalt	EFU	4
	Yes	2011 Ruhl Quarry	Rich Ruhl	2S 24 10 TL 600	25-0039	PW #229	Basalt	EFU	1.5
	Yes		Finley Buttes Landfill Company	2N, 3N 26 5, 32 TL 301	25-0040			EFU	>1
	Yes		Easy Way Contracting, Inc.	2N 26 7 TL 501	25-0041	CUP-N-34	Sand & gravel	EFU	1+
	Yes	Hellberg Pit	MC	5N 26 26 TL 206	25-0042	PW #231/241	Rock	EFU	5
	Yes	Zinter Quarry MP 60.45 Wasco-Hep Hwy	ODOT	3S 23 26 TL 3400	25-0043	ODOT #25-018	Basalt 43D	EFU	7.11
	Yes	Halverson Site	MC/Halverson	1S 23 27 TL 2300	25-0044	PW #217	Basalt	EFU	
	Yes	Rivercrest	Rivercrest Farms/Baker Produce South	2N 26 7 TL 500 or 501?	25-0046	Check against 25-0041!!!	Bar Run or Agate	EFU	>1
	Yes	Albert Wright Pit	MC/Wright Century Farm	4S 25 28, 33 TL 3800	25-0050	PW #236	Rock	EFU	4

Inventory of Natural Resources

Aggregate and Mineral Resources

Goal 5 Significant	Farmland Significant	Site Name	Owner	Map and Tax Lot	DOGAMI #	Other Number	Primary Commodity	Zone	Permitted Boundary (acres)
	Yes	Carlson	MCPW/4C Ranches	3S 24 7 TL 1401	25-0051	PW #237	Rock	EFU	5.5
	Yes	Little Butter Creek	MCPW/Currin Ranches	1S 28 TL 1600	25-0052	PW #209	Basalt	EFU	6
	Yes	Hellberg-Wise Pit	Wesley Wise/Max Hellberg	5N 26 26 TL 203	25-0053		Sand & gravel	EFU	5
	Yes	Turner	MCPW/Turner Ranch	2S 27 17 TL 1300	25-0054	PW #219	Basalt	EFU	7.34
	Yes	Madison Section 16	Madison, Kent	3N 27 16 TL 1100	25-0056		Sand & gravel	EFU	2.5
	Yes	Sand Lake	Boardman Tree Farm	3N 26 26 TL 1401	25-0059		Sand & gravel	EFU	1
	Yes	Doherty-Juniper Pit	MCPW/Doherty	1N 25 3 TL 700	25-0061	PW #238	Rock	EFU	10
	Yes	L & M Pit	Miller & Sons/L&M Ranch	2S 26 23, 26, TL 3402, 3301	25-0062		Sand & gravel	EFU	13
	Yes	Padberg Pit	Miller & Sons/Padberg	1S 24 27 TL 3501	25-0067		Basalt	EFU	
	Yes	Heideman Quarry	Heideman/4DG Land Co.	1N 23 19 TL 3102	25-0068		Basalt	EFU	10
	Yes	Ely Canyon Quarry, Heideman II	WI Construction /Heideman	1N 23 28 TL 6001	25-0070		Basalt	EFU	25
	Yes		Wade Aylett	4N 27 28 TL 800	30-0129		Sand & gravel	EFU	
	Yes	Thompson Pit	MC/Brian Thompson	4S 27 TL 900		PW #240, CUP-S-105, MC-C-5-97		EFU	20
	Yes		Kevin Haguewood	1N 23 28 TL 5900		CUP-N-284 AC-040-10 AC(M)-041-10		EFU	
	Yes		John Kilkenny	2S 28 28 TL 1300		CUP-S-297 AC-057-12 AC(M)-058-12		EFU	
	Yes		Madison Farms	3N 27 30 TL 1700		CUP-N 271 AC-018-09 AC(M)-017-09	Basalt	EFU	40
	Yes	Heideman Quarry III	Aaron Heideman	1N 26 (Sections 20 and 21) TL 2801 and 2807	TBD	CUP-N-329 AC-117-18	Predominately Basalt	EFU	20
	Yes	Haguewood Miller	Keven Haguewood/Mark and Shannon Miller	1S 26 (3) TL 300 and 500	TBD	CUP-S-335-19 AC-129-19	Predominately Basalt	EFU	20

Significant Resource Overlay Map

MORROW COUNTY PLANNING DEPT.

MORROW COUNTY
OREGON

SEE DETAIL SHEET 10

WIDELY SCATTERED - DESIRE AS REMOTE AS POSSIBLE

N

1" = 1000'

LEGEND

- Sensitive Bird Sites
- Mineral and Aggregate Site
- Historic Sites and Structures
- Sites and Areas subject to Sections 3.200 and 3.300 of Morrow County Zoning Ordinance

(For specific locations to these habitats refer to Comprehensive Plan)

Adopted this 15 day of January 1986

County Judge

Commissioner

Commissioner

1. Boardman Bombing Range
2. LeFoure Prairie
3. Eight Mile Grassland
4. Sand Hollow
5. Service Canyon Grassland
6. Rhea Creek
7. Housetog Creek
8. Gene Wood Creek

- Clay deposit tested
- Semiprecious gems
- Fossil plant Sites
- 00000 Denotes gravel permit number
- Denotes private parcels

OSC-18

PORT OF MORROW

February 20, 2025

Re: Provision of industrial water to a contiguous area of approximately 1,262 acres located west of the Boardman Airport (the "Property")

To Whom This May Concern,

This letter confirms that the Port of Morrow will be able to timely and efficiently supply up to 1,300 gallons per minute to meet peak demand, not to exceed 35 million gallons of water annually, sufficient to support the potential development of data centers on the Property. Additionally, the Port of Morrow can and will supply approximately 3,000 gallons per minute of fire flow to sustain public health and safety requirements for data center campus development on the Property.

Water will be used for drinking, cleaning, flushing, cooling, potable drinking and any other purpose required to operate the data center facilities. Water will be available on a year-round basis for a length of time to be determined by future data center developers/operators and Port of Morrow.

The Port of Morrow intends to work with any future data center developer/operator of the Property to allocate the costs for infrastructure improvements required to provide such industrial water to the Property, including but not limited to installation of pipe, pump stations, and potentially additional storage. The water service will rely primarily on infrastructure that is currently being installed within or adjacent to Boardman Airport Lane.

Sincerely,

Lisa Mittelsdorf

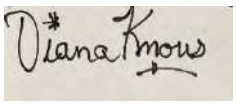
Executive Director

PACIFIC POWER
A DIVISION OF PACIFICORP

DATE January 23, 2025

To Whom It May Concern:

The address, located at or near GPS ***45°48'29.05"N 119°52'40.87"W*** , West of Boardman, Oregon, is located within Pacific Power's Oregon service territory. A system Impact study has been completed for the customer's requested electric load, to determine the estimated timelines and cost to establish service for a 16-building data center development. According to that study, it is anticipated that service can be provided upon completion of necessary contracts, capacity availability, line extension work, and network upgrades, as applicable, and subject to Pacific Power's electric service tariffs on file with the Oregon Public Utility Commission. Pacific Power's plan is to serve the property from the south using transmission lines being permitted for a separate project and is not planning to add transmission lines in the vicinity of the Project at this time.



Diana Knous
Principal Account Manager
Pacific Power

PORT OF MORROW

February 20, 2025

To Whom This May Concern:

The Port of Morrow understands that Threemile Canyon Farms, LLC has submitted an application to rezone approximately 1,262 acres west of the Boardman Airport in Morrow County (the "Property") to allow for potential data center development. The proposed road access to the Property will rely on Boardman Airport Lane, which is part of a street network constructed, owned, and maintained by the Port of Morrow. The Port of Morrow does not object to use of Boardman Airport Lane for ingress/egress to a potential data center development on the Property.

Sincerely,

Lisa Mittelsdorf
Executive Director

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State of the Digital Infrastructure Industry

ANNUAL REPORT 2024

Insights and Predictions
from 500+ Industry Leaders

For The Digital Future

TABLE OF CONTENTS

718

Dean Nelson

Chairman and Founder
Infrastructure Masons

Dear Reader,

Digital Infrastructure is the new utility, a necessity to participate in the modern world just like running water and electricity. I started Infrastructure Masons (iMasons) in 2016 to unite the people who design, construct, operate and maintain the networks, equipment and facilities of this new utility. Our community represents the builders of the digital age. This Digital Infrastructure is the great equalizer that enables anyone, anywhere to participate in the digital economy.

Demand for digital services is forecasted to double and potentially triple the size of Digital Infrastructure capacity over the next decade. Our goal as iMasons is to build Digital Infrastructure that integrates with every community in an economically, socially and ecologically responsible and sustainable way.

To achieve this goal, we must collaborate with local government and civic leaders, businesses and investors, and utility and service providers to ensure that our presence in every community creates jobs, improves neighborhoods, promotes equality and helps restore ecosystem balance. This is true for communities that are established data center hubs and communities poised to gain their first Digital Infrastructure development.

Today, iMasons has over 6,000 members who collectively represent more than $200 billion in infrastructure projects across 130 countries. We have a responsibility to think holistically about how we approach the growth of Digital Infrastructure to enable everyone to participate in the digital age.

This report unpacks that thinking and outlines the challenges we must overcome to achieve this growth responsibly and sustainably. Today, those global challenges center on access to power capacity, attracting and retaining people, addressing industry perception to ensure we are a good neighbor where we operate, and maintaining our commitments to protect the planet. Navigating these challenges will enable a balanced and responsible deployment of Digital Infrastructure in established and emerging markets around the world.

The iMasons board and I are responsible for the contents of this report. We invite you to reach out with questions and welcome your support in our mission of a greater digital future.

Sincerely,

Dean Nelson

719

About the Report

This is Infrastructure Masons' (iMasons') inaugural State of the Digital Industry Annual Report. It is intended to provide a holistic picture of the importance of Digital Infrastructure and to guide strategic decisions about where, when and how Digital Infrastructure is built, operated and maintained. The report is available to the public and was prepared for an audience of policy makers, economic development officers, investors, civic leaders and neighbors in the local communities where Digital Infrastructure is deployed.

The report aggregates and synthesizes information shared by iMasons' global members who represent some of the largest Digital Infrastructure portfolios in the world. In accordance with iMasons' values, all content is anonymous except where noted. This approach provides a unique perspective about the Digital Infrastructure industry that's difficult to achieve in any other forum. It surfaces the industry's biggest challenges to responsible and sustainable growth and provides insights into trends and conditions in established and emerging markets around the world.

The Digital Infrastructure industry will continue to grow at an accelerated pace to meet increased global demand for digital services that are as essential to human prosperity. iMasons prepared this report to help ensure this growth occurs in a manner that is economically, socially and ecologically responsible and sustainable.

Special acknowledgement to technology journalist John Roach for his assistance in creating this report.

Executive Summary

Digital Infrastructure is a collection of data center locations that delivers electronic services to people and machines. Today, it's as important to any community as its airport, train station, waterworks, power generation, transmission lines and substations. It enables technologies that people use every day to connect, communicate, work and play. It's the utility of the digital age and woven into the fabric of modern life.

In 2021, iMasons reported that the Digital Infrastructure industry includes 7 million data center locations around the world with a combined capacity of 105 GW and an annual electricity consumption of 594 TWh representing 2.4% of the global electricity draw. Demand for electronic services will double and could triple the size of the industry over the next decade. Global member discussions identified four critical challenges to fulfill this unprecedented demand.

Access to concentrated sources of clean power, the ability to find, train, hire and retain people to build, operate and maintain Digital Infrastructure, a willingness to earn a positive perception by being a good neighbor in the communities we build and a steadfast focus on decarbonization of Digital Infrastructure to do our part to protect the planet.

Exploding Digital Infrastructure Demand

3x industry growth over the next 10 years

2024 Critical Challenges

Power | People | Perception | Planet

Clean energy zones

are master-planned towns or city-size areas developed around concentrated sources of clean energy to serve multiple industries, including multi-tenant data center complexes.

Deeper conversations among iMasons spawned a potential solution to simultaneously address the challenges around power, people, perception and the planet: clean energy zones. Clean energy zones are master-planned towns or city-size areas developed around concentrated sources of clean energy to serve multiple industries, including multi-tenant data center complexes. Complementary power-intensive industries could co-locate in these zones and seed communities filled with skilled people resources.

The zones could also help scale next generation materials such as green concrete and clean energy technologies including sustainable storage, renewable fuels, small modular reactors, hydrogen fuel cells, enhanced geothermal and fusion.

The challenges and opportunities for the Digital Infrastructure industry are universal, though differ in the details between established markets and emerging markets.

In established markets, a combination of power generation, power transmission and supply chain constraints are driving new data center development to locations outside of the industry's central hubs that have available power capacity; skilled people are required to support new growth as well as replace industry veterans near retirement; and the industry must engage with communities where it builds to change the perception of the industry by effectively integrating into the local ecosystem. In emerging markets, access to reliable clean power is a challenge in some regions and an opportunity in others; an oversupply of people must be trained to account for workers lured abroad; and there's potential to earn a positive perception in communities from day one. Everywhere, the protection of the planet must remain a top priority.

Africa, Latin America and India stand out for their growth potential and opportunity to leapfrog the industry's past challenges. The regions are home to 3.5 billion people, or 44% of the world's population, reflecting a median age of 28.2. Today, they account for just 5% of the global live data center capacity, but they represent the largest future consumption and market growth. Projects under construction, committed to be built or in the early stages of development, are on pace to quintuple capacity over the next five to ten years.

Fulfilling the demand for Digital Infrastructure is not optional. The world needs it to advance and thrive. iMasons believes our industry's approach to addressing these expansion challenges must be deliberate.

Responsible and sustainable growth that's economically, socially and ecologically in balance with communities requires collaboration with governments, utilities, development agencies, investors and civic leaders. Together we can solve our biggest challenges and ensure a greater digital future for all.

01 Introduction

What is Digital Infrastructure?

Digital Infrastructure is a collection of data center locations that delivers electronic services to people and machines.

Digital Infrastructure is a collection of data center locations that delivers electronic services to people and machines. It's what passes messages between devices and allows a smartphone to open the door of a smart home. It enables voice and video calls, internet searches and chatbot queries, online gaming and social media, credit card transactions and online shopping and much, much more. Data centers are real estate locations that house information technology equipment to process, store and transmit data.

They are where generative artificial intelligence (AI) is trained and deployed; what facilitates ATM withdrawals, contactless payments, online brokerages and cryptocurrency exchanges; what enables music and video streaming; and what makes possible everything from remote work and online school to telehealth, digital twins and self-driving cars. Digital Infrastructure provides access to the sum of human knowledge and is the equalizer that allows anyone, anywhere to participate in the digital economy.

The digital economy made up more than 15% of the global GDP and was valued at $14.5 trillion in 2021, according to a report from the World Economic Forum. Data centers enable all this economic activity. There are three categories for data center deployments: providers, networks and blockchain.

Providers include cloud, hyperscale, colocation, enterprise, government and edge data centers that host websites and enable electronic services ranging from AI applications and data analytics to data backup and online gaming.

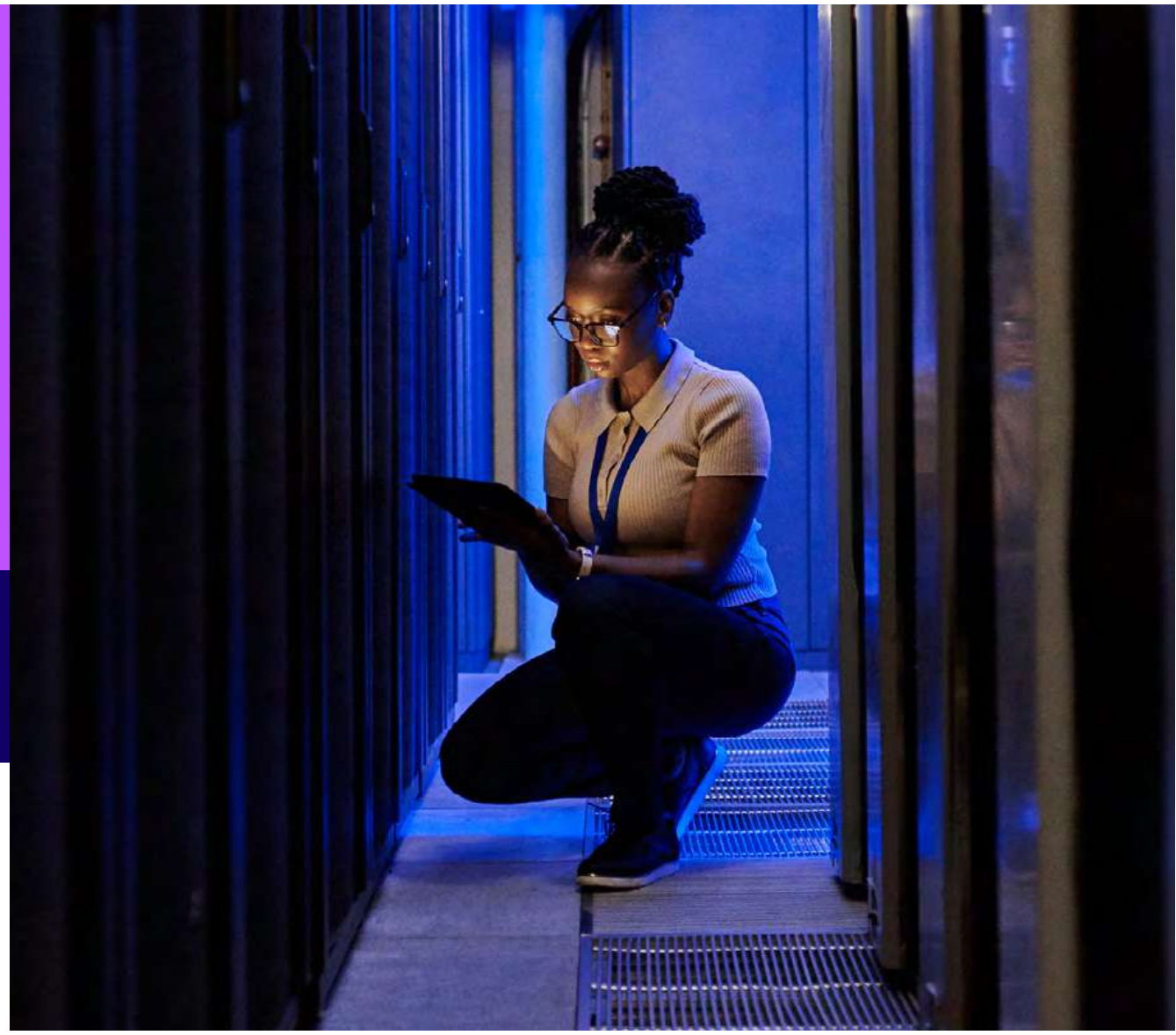
Network data centers include a range of types including internet exchanges where internet service providers and content delivery networks exchange internet traffic as well as cell towers and base stations that transmit data between people, homes, offices and other data centers.

Blockchain data centers include cryptocurrency mining and other peer-to-peer networks exchanging records of transactions.

Like other utilities such as running water and electricity, Digital Infrastructure was a curiosity long before it became a necessity. It grew organically, out of sight, out of mind and on the back of analog technology. Early websites were hosted on single servers in office closets and bedroom corners that were reached through dial-up modems. In the late 1990s and early 2000s, the dotcom bubble fueled construction of internet exchanges.

In the 2010s, businesses, governments and institutions began to shift from on-premises server rooms to leasing space in colocation data centers, building enterprise data centers, and moving their workloads to public hyperscale cloud providers. Then, boom. COVID-19 hit. The pandemic-induced lockdowns forced a shift to remote work and online school, boosted content streaming and online gaming, and spurred e-commerce for everything from food to furniture, all of which accelerated growth of Digital Infrastructure. Then, just as the Digital Infrastructure industry started to catch its breath post-pandemic, generative AI exited the research lab and turbocharged growth anew.

Today, Digital Infrastructure is as important to any community as its airport, train station, waterworks, power generation, transmission lines and substations. It enables technologies that people use every day to connect, communicate, work and play. It's moved from a curiosity and nice-to-have to the enabler of the digital age. It's woven into the fabric of modern life, visible and essential. Humanity needs it and wants more. It will continue to grow. This report is intended to help ensure that this growth is responsible, sustainable and in balance economically, socially and ecologically with the communities it serves.



Industry size and growth trends

In 2021, there were 7 million data center locations around the world, according to iMasons. Each of these data center locations has a unique street address and ranges in size from hyperscale data centers with more than 1 GW of power capacity to micro edge deployments on street corners that draw less than 10 kW of power. In total, they represented 105 GW of built power capacity in 2021 and an annual electricity consumption of 594 TWh. This electricity consumption represented 2.4% of global electricity draw that year, which was more than the electricity consumed in the entire United Kingdom. The Digital Infrastructure industry is forecast to double and possibly triple in size over the next 10 years with 38 GW of new capacity required for generative AI alone by 2028. Total power consumption by data centers could double by 2026 to more than 1,000 TWh, according to forecasts from the International Energy Agency.

Expansion of the data center sector in the US is expected to account for more than one third of additional demand through 2026 and together with heat pumps and electric vehicles account for half the expected gains in total demand in Europe.

Meanwhile, Africa, Latin America and India are home to 44% of the world's population yet account for just 5% of the global live data center capacity, according to DC Byte, a market research firm. Projects under construction, committed to be built or in the early stages of development, are on pace to quintuple capacity in those markets over the next five to ten years.

Digital Infrastructure projects to meet the demand for electronic services represent major capital investments in local communities. For example, in 2022 $3.9 billion of the $4 billion in investment in the data center hub of Prince William County, Virginia was for data center projects, according to the Data Center Coalition (DCC), a voice for the data center industry in the United States.

Digital Infrastructure deployments also represent a meaningful increase in local jobs outside of data centers. For every direct job at a data center in the US, there are six more jobs created, according to the coalition. These jobs are in construction, electrical and mechanical engineering, security, catering, delivery and other fields. Unaccounted for are new jobs in digital services that Digital Infrastructure supports. This multiplier effect of data center jobs holds true around the world, from the established data center markets of North America and Europe to the emerging markets of Africa, Latin America and India. Data centers and the jobs they create are also a steady source of tax revenue.

38 GW

of new capacity will be required for generative AI alone by 2028.

For every dollar that data centers use in local government services, they put back **between $8 and $17 in local tax revenue to that community, according to DCC.**

> "Generative AI and large language model training is the most fundamental shift seen in the data center industry for a very, very long period of time."
>
> **— iMasons member**

Most data center owners and operators in the US pay sales, use and property taxes. For every dollar that data centers use in local government services, they put back between $8 and $17 in local tax revenue to that community, according to DCC.

In 2010, data centers emerged as a new asset class for institutional investors due to their durable nature and consistent long-term returns. Today, firms that help build and finance data centers expect that demand for digital services will fuel continued growth in the industry for decades. Private equity and global real estate services companies fund, build and operate data centers around the world.

Recent investments, mergers and acquisitions announced by these companies have exceeded $100 billion for infrastructure to keep up with demand for cloud services and to train and deploy next-generation AI technologies. Ironically, even with the significant growth of cloud usage over the last decade, some estimates show that only 20% of enterprises and governments have fully integrated public cloud into their platforms. AI-fueled growth has eclipsed forecasts from the industry's biggest participants and industry analysts. Revised forecasts suggest capacity could double in just a few years, and triple in the next 10 years.

This AI-driven shift in the industry impacts data center design, location and use. Data center campuses dedicated to large language model training, for example, have less latency constraints than data centers dedicated to cloud computing and thus have greater flexibility to locate in regions that are prioritized for abundant clean power rather than access to population centers.

On the other hand, most AI-inferencing applications are latency sensitive and may require a proliferation of edge data centers deployed throughout cities and towns to enable services such as intelligent, personalized chatbots and self-driving cars along with the growing demand for content distribution and immersive experiences such as augmented reality and gaming in and out of the metaverse.

Uncertainty about the impact of AI on the industry is also prompting developers to future-proof data center designs and site selection for multiple outcomes and multiple uses rather than race to meet the perceived needs of AI today. In addition, today's centers of gravity – Northern Virginia and Silicon Valley in the US, and Frankfurt, London, Amsterdam, Paris and Dublin in Europe – will be replicated around the world. The need for land with power along with data privacy concerns and country-led data sovereignty requirements will drive this localized growth on every continent.

Many of these new data center builds will dwarf earlier generations. A decade ago, 10 MW was a big deal for any data center development. Today, hyperscale dedicated campuses are more than 200 MW and some are pushing into the multi-gigawatt scale. Core data center campuses delivered by most colocation providers start at 100 MW. Near edge deals range from 10 MW to 50 MW and far edge is now up to 5 MW.

> "We're getting into the yottabyte era,"
>
> **an iMasons member said about the amount of data generated by people and machines.**

A yottabyte is equivalent to 1 trillion terabytes. A single terabyte can hold up to 250 movies. People and machines will be generating data equivalent to 250 trillion movies every year. People need to understand and appreciate the critical role that data center infrastructure is going to play in connecting the data with the people and the vehicles and the enterprises around the world.

1 terabyte = 250 movies

02 Community Insights

Conversations among iMasons around the world revealed four universal challenges to the continued growth of the Digital Infrastructure industry:

POWER

The projected global growth of Digital Infrastructure to meet accelerating demand for electronic services will require access to additional electric power, which is a challenge in almost every market in the world and why power is the top-of-mind challenge to growth across the industry.

PEOPLE

Sustaining industry growth requires people to build, maintain and operate Digital Infrastructure, yet the industry currently faces an estimated shortfall of 300,000 people by 2025. Attracting, training and retaining people is the second biggest challenge for the industry.

PERCEPTION

The public is gaining a negative perception of the Digital Infrastructure industry in some areas as its physical footprint grows. The need to earn a positive public perception in the communities in which we build is the industry's third biggest challenge.

PLANET

As iMasons members discussed the challenges of power, people and perception driven by the unprecedented demand for Digital Infrastructure, another key issue continued to loom: the planet. The industry will grow to meet demand. Without a deliberate focus on decarbonization in growth decisions the industry's carbon footprint will significantly increase, making net-zero commitments unachievable. iMasons view growth-at-all-costs as unacceptable and made protecting the planet a top priority.

Clean Energy Zones

Clean energy zones are master-planned towns or city-size areas developed around concentrated sources of clean energy to serve multiple industries, including multi-tenant data center complexes.

Conversations about the challenges around power, people, perception and the planet surfaced a new vision for the digital infrastructure industry: clean energy zones. These are master-planned towns or city-size areas developed around concentrated sources of clean energy to serve multiple industries, including multi-tenant data center complexes. The size of these zones and corresponding energy generation will vary by each market's current capacity and growth trends.

In some markets, such as Africa and Latin America, these zones could be less than 100 MW while others, such as the US, could exceed 10 GW. Complementary power-intensive industries such as battery and green hydrogen production could co-locate in these zones. Housing, schools, restaurants and retail in these zones would attract people with an opportunity to gain the skills necessary to work in and support the Digital Infrastructure and adjacent industries.

The zones could also support next generation building materials such as carbon storing concrete that need funding and local, concentrated demand to economically scale. Similar scaling would be possible for next generation clean energy technologies including sustainable storage, renewable fuels such as hydrotreated vegetable oil (HVO) to replace diesel, small modular reactors, hydrogen fuel cells, enhanced geothermal and fusion.

Clean energy zones could enable accelerated growth of Digital Infrastructure across the established markets of North America and Europe and allow the emerging markets of Africa, Latin America and India to scale faster as they leapfrog many of the challenges the industry faced in the last two decades. Successful development of these zones will require coordination between the Digital Infrastructure industry and governments, power and water utilities, community leaders, adjacent industries and anyone else who wants to see the digital economy grow in the digital age.

The following pages unpack these challenges and offer support for the vision of clean energy zones.

POWER

Without power, there is no digital economy.

Each data center location requires land, network connections and power to function. Without power, there is no digital economy. Data center performance is measured in uptime, or the percentage of time it is available to provide electronic services. The industry standard is five nines, or 99.999%, of availability. Uptime requires redundancy of power, which is why most data center locations contain backup power solutions such as uninterruptible power supply systems and on-site generators. Power is so central to data centers that they are measured in units of power capacity in megawatts (MW) and gigawatts (GW). This power capacity metric is also used to describe the size of data centers and the overall industry.

Today, access to power is constrained and threatens to stunt the advances of civil society that Digital Infrastructure enables. The industry's push for increased power capacity is global. Some markets lack power generation capacity; others lack power transmission and distribution capacity. Other complications include interconnection study delays, supply chain bottlenecks for transformers and generators, and substation construction slippage. These constraints are forcing a rethink of where to locate data centers.

> "We need to move the data center to the power instead of moving power to the data center."
>
> **— iMasons member**

The Digital Infrastructure industry prioritizes access to clean power sources. For the past decade, some of the world's most valuable companies were the world's largest buyers of clean power. For example, four of the world's leading technology companies accounted for 54.6 GW of cumulative purchases through February 15, 2023, according to Bloomberg New Energy Finance. Today, clean power options are scarce in the reliable, always-on capacities required to meet demand.

730

> "We need to recognize that there's a physical constraint on the rate of expansion for data centers that's tied to the rate of decarbonization of our energy system."
>
> **— iMasons member**

This constraint has spurred activity within the Digital Infrastructure industry to seed development of new clean power sources. On the table is everything from fusion and green hydrogen to enhanced geothermal and small modular reactors. These options will take years to decades to scale. A potential bridge between now and then is a greater reliance on traditional nuclear power plants, though challenges remain around siting and permitting, waste disposal and public acceptance.

Another near-term bridge is on-site generation with fuel cells using natural gas, which is already in use at data center locations around the world to augment grid power or gain independence from it. While natural gas emits less carbon than coal and can bridge the transition to clean baseload energy sources in the short to mid-term, the Digital Infrastructure industry must deliver additive carbon offset, capture and sequestration projects in parallel to pay down the carbon debt from its use.

To address the power challenge today, some Digital Infrastructure developers are scoping project sites with access to reliable power capacity that are adjacent to established data center hubs where access to fiber is also available.

Four of the world's leading technology companies account for **54.6 GW of renewable energy purchases.**

Other developers are moving to second and third tier market cities that have available power capacity and local demand for low-latency digital services. Regions further afield with abundant and established sources of clean power such as hydroelectric and geothermal are also getting a second look for development of data center campuses. Mid to long-term solutions may rest in master-planned clean energy zones.

PEOPLE

There will be an estimated 300,000 unfilled jobs throughout the Digital Infrastructure industry in 2025.

There will be an estimated 300,000 unfilled jobs throughout the Digital Infrastructure industry in 2025. Attracting, training and retaining people to work in the industry is a struggle around the world. People are needed to build data centers and rack servers, design and configure networks, install backup power supplies and cooling systems, connect electric power systems, maintain and operate equipment, secure facilities and troubleshoot technical issues.

The industry needs general contractors and construction workers. It needs architects, mechanical engineers, electrical engineers and network engineers. It needs facilities technicians, HVAC technicians and electricians. It also needs people experienced in finance, sales, marketing and communications as well as people to manage supply chain logistics, sustainability programs and human resources. The Digital Infrastructure needs people as much as people need Digital Infrastructure.

Jobs in the Digital Infrastructure industry are plentiful, fun and well compensated ... and the best kept secret in the world. The industry's secrecy is part of the problem. While people with the skills or potential to work in Digital Infrastructure are out there, their knowledge of the industry is lacking. As a result, today Digital Infrastructure companies poach talent from each other, with bigger and more resourced firms luring away talented workers from smaller companies within the industry.

One solution is to find, hire and train people from outside of the industry. Indeed, many leaders in the Digital Infrastructure industry today built and operated other types of major infrastructure earlier in their careers, from airports and hospitals to hotels and stadiums. Some Digital Infrastructure companies have found success hiring mechanical and electrical engineers from oil refineries and the shipping industry.

Others champion military veterans and transitioning armed forces personnel as an underutilized talent resource. Many veterans bring leadership skills along with expertise in mechanical and electrical engineering. They have experience operating and maintaining complex machinery and systems from aircraft carriers and nuclear submarines to mobile operations command centers. To bring them on, the industry needs to make them aware of the opportunities and invest in their training.

70% of people in the industry are 45 years old or older

40% of the current workforce is expected to retire within the next 15 years

Another concern is that the current workforce is graying out. Surveys indicate that 70% of people employed in the industry are 45 years old or older. Estimates from Uptime Institute show 40% of the current workforce is expected to retire within the next 15 years. We need solutions to fill the pipeline now to address the current and future gaps in people resources. One method is to turn an industry challenge into a solution. Women represent half of the world's population. Today, the Digital Infrastructure industry employs less than 10% females. We could fulfill the industry people resource shortfall by tapping into this talent pool. The IM Women member resource group, made up by many of the most senior female leaders in the Digital Infrastructure industry, is tackling this directly by providing methods to attract, retain and grow female talent.

Other surveys show that 45% of people in the industry have more than 20 years of experience in the industry.

> "When they age out, we're going to lose their knowledge. We need to capture it and retain it."
>
> **— iMasons member**

That's a problem that coalitions of industry partners and iMasons are attempting to crack. For example, programs such as the iMasons Capstone Project pairs senior year students at select colleges and universities to work on a Digital Infrastructure project with industry mentors. Other initiatives throughout the industry are focused on curriculums that teach school-age children about the connection between digital services and Digital Infrastructure as a first step to preparing them for careers in the industry. "The biggest thing we're doing is going out to schools and talking to kids. That's the magic," an iMasons member said.

Some of these students will graduate straight into Digital Infrastructure industry jobs, others will pursue advanced degrees in mechanical, electrical or computer engineering with an eye toward the Digital Infrastructure industry.

Careers in Digital Infrastructure are also seen as a viable path for people interested in technology but who lack the skills or desire to program computers. In fact, while AI may pose a threat to many careers, the skilled trades needed to power AI are safe for years to come.

PERCEPTION

It is critical that we as an industry continue to focus on creating awareness of the good things that are happening, but also acknowledge the need to get better at sustainable deployments that help the local community.

When people stream a movie, do they know it came from a data center? When people send a group text, do they know the message was received by a cell tower, routed along a network of fiber optic cables through data centers, and then to other cell towers near their family and friends? When a storm knocks out the power grid, do people know backup generators at data centers maintain critical digital services that first responders rely on to keep communities safe and secure?

Many builders of the digital age say that people outside the Digital Infrastructure industry lack an understanding of Digital Infrastructure. This lack of understanding, industry insiders believe, causes pushback as its physical footprint expands in the communities it serves, challenging growth. While this may be true, it's also true that Digital Infrastructure developers are often aloof from the communities where they build. To overcome this challenge, the insiders and outsiders must work together to ensure that each data center is a welcome member of the community.

> "If the digital infrastructure industry wants to be perceived as a good neighbor, it must be a good neighbor."
>
> **— iMasons member**

Today, the words quiet, secretive and opaque describe the Digital Infrastructure industry. These traits allow the industry to acquire land, power and other resources needed to build and operate data centers without driving up costs and community resistance. Once the infrastructure is live, the industry prefers to remain out of the public eye. This is rooted in a desire to protect the privacy and security of the data contained inside data centers and routed along fiber optic cables. Yet this lack of transparency deepens mistrust. What's more, seeking privacy through secrecy is an illusion: online maps reveal the location of nearly every data center, fiber optic cable and other piece of Digital Infrastructure around the world.

Meanwhile, the industry's clandestine nature precludes the authentic community engagement required to hear and address concerns that it employs few people, raises prices for land, consumes an unfair share of power and water, disturbs the peace, disrupts the view and pollutes the air. The industry must demonstrate it hears these concerns with steps to address them. It must show up at community meetings, listen to civic, business and government leaders and work with them to find solutions to points of contention. It must do this wherever it establishes a presence, from Chicago to Cape Town and Mumbai to Montevideo. The industry must demonstrate its ability to engage, compromise and adapt to the unique communities it joins.

Education programs for school age children are emerging around the world that connect the dots between Digital Infrastructure and digital services. Other efforts shine a light on the benefits that Digital Infrastructure brings to communities. This includes tax revenue and a boost to direct and indirect employment without industrial wear and tear on roads or large consumption of local community services such as hospitals and schools. In addition, organizations are beginning to rethink data center design and construction to integrate buildings into the local ecosystem and help restore the landscape to its original biome. Still missing is a repeatable strategy to seamlessly integrate with every community the industry enters, from data center hubs with several gigawatts of power capacity to communities receiving their first 100-kW edge deployment. Every community will have data centers of various sizes and will be able to participate in and benefit from the digital economy The Digital Infrastructure industry must work with each community to determine how many data centers should be built and where and how they integrate with the community and landscape.

> "It is critical that we as an industry continue to focus on creating awareness of the good things that are happening but also acknowledge the need to get better at sustainable deployments that help the local community."
>
> **— iMasons member**

The Digital Infrastructure industry must work with each community to determine how many data centers should be built and where and how they integrate with the community and landscape.

PLANET

In today's world, rapid industrial growth and decarbonization are diametrically opposed. The planet cannot lose out to the demand for digital services and shareholder value.

The timeframe of Digital Infrastructure's growth coincides with commitments from the world's biggest companies to achieve net-zero carbon emissions. In today's world, rapid industrial growth and decarbonization are diametrically opposed. While companies remain committed to decarbonization, carbon reduction requirements are scarce in request for proposals sent to suppliers. The planet cannot lose out to the demand for digital services and shareholder value.

The purchasing decisions of the Digital Infrastructure industry shape decarbonization markets, policy and behaviors. The industry must stay focused on decarbonization as it races to meet demand. It must incentivize carbon avoidance projects, double down on cost efficient carbon sequestration and use holistic carbon accounting. This starts with budget tracking for carbon: Companies need to know their carbon debt, what increases are planned in that carbon debt and the actions to reduce that debt to zero as quickly as possible.

Reality drives the need for holistic carbon accounting. Clean power capacity is constrained by location and lacks cost-effective long duration storage to replace baseload. Production of carbon negative materials and equipment is immature and not funded to scale.
The pace of clean tech lags the demand for Digital Infrastructure.
As a result, carbon debt will increase at least in the short term.
The industry must track this accumulating debt and accelerate the decarbonization technologies that pay it down. This consistent carbon debt measurement will allow key decision makers to see the impact of their investments and justify solutions that simultaneously achieve economic, social and ecological goals.

Over the long term, the industry's focus on decarbonization could usher in an era of abundant clean power and carbon negative materials and equipment. Advances in digital services such as AI may lead to discoveries and innovations that open the door to this future. For example, AI was used to advance battery storage technology to address global power constraints helping solve base load challenges. In addition, rack densities needed to support generative AI workloads are driving a shift to rack level liquid cooling technologies, which are more energy efficient than operating current cooling systems.

Government regulations such as the European Green Deal are poised to shape the sustainable development and operation of Digital Infrastructure in Europe by requiring companies to report on metrics including carbon emissions, energy usage and waste heat utilization. These regulations could serve as a model for the industry to shape and follow in other regions around the world.

The current mix of regulations, and lack of them in markets such as the US, is a challenge for uniform sustainable development. Without rules, there's a risk companies will defer carbon reduction commitments if capacity constraints and/or voluntary compliance dents profits.

On the other hand, the industry can build on its track record of establishing sustainable frameworks and metrics, such as power usage effectiveness, or PUE, and technology advancements to increase work done per watt in data centers without a concurrent increase in power consumption to operate it.

In the absence of regulation, progress toward decarbonization requires the Digital Infrastructure industry to coalesce as a community and collaborate on solutions.

The iMasons Sustainability Committee, for example, leads workshops to address the decarbonization challenge, share best practices and spur innovation through publications, and engage industry experts in finding solutions for real-world impacts. Of particular interest for the Sustainability Committee are Scope 3 emissions, which are those that an organization indirectly causes through its value chain and can account for more than 80% of its carbon footprint. Currently, less than one quarter of Digital Infrastructure industry companies report Scope 3 emissions.

The iMasons Climate Accord, which launched in April of 2022, unites the Digital Infrastructure industry on decarbonization through measurement and reduction of carbon in materials, equipment and power. As the industry makes progress on this initiative, it can compound the impact of adjacent industry efforts such as construction. For example, several members of the accord released an open letter in 2023 calling for the use of less concrete where possible and to specify and deploy the lowest carbon concrete available while meeting structural, performance and cost criteria.

Concrete, steel and aluminum are responsible for 23% of global carbon emissions, while concrete alone makes up 11% of total global emissions.

A tripling of the Digital Infrastructure industry could mean a tripling of data centers that use these materials. The industry must implement low-carbon solutions or it will triple its carbon debt as it triples in size to meet capacity demand.

The iMasons Climate Accord has united over 250 companies, representing $6T dollars in market cap, on decarbonization of digital infrastructure through materials, equipment and power. 2024 is a critical moment to ensure we double down on the efforts to drive investment into solutions to track and reduce emissions. If we continue to lead with our wallets, we can achieve our net-zero carbon goals while our industry delivers on the unprecedented demand and growth.

Currently, less than 1/4 of Digital Infrastructure industry companies report Scope 3 emissions.

Concrete, steel and aluminum **are responsible for 23% of global carbon emissions, while concrete alone makes up 11% of total global emissions.**

03 Market Insights

iMasons represents the builders of the digital age and intentionally takes a wide aperture approach to its definition of Digital Infrastructure. The definition encompasses all elements that make up the infrastructure landscape of data centers including the information technology equipment that processes and stores data, the facilities that house that equipment and the networks that connect them all. Businesses that provide market research and intelligence on the Digital Infrastructure industry may take a narrower view to provide insights relevant to their clients' interests and needs.

DC Byte is a data center market intelligence firm that covers 1,546 companies responsible for nearly 7,000 data center campuses around the world. The firm shared data with iMasons to help prepare this report. DC Byte's coverage includes companies that build and operate hyperscale, colocation, enterprise and edge data centers. Each data center campus may include multiple, independent data centers. DC Byte does not track fixed and mobile network data centers, government data centers or blockchain data centers that are included in iMasons definition of Digital Infrastructure.

Additional insights and information gathered from iMasons members during meetings, interviews and informal conversations were synthesized and anonymized, except where noted, to complement DC Byte's data to create a snapshot on the state of the Digital Infrastructure industry at global and regional scales and across established and emerging markets.

GLOBAL

There were 34,223 MW of live data center capacity around the world at the end of the third quarter in 2023, according to DC Byte. An additional 10,082 MW were under construction, 25,500 MW committed for development and 25,775 MW in the early stages of development. Between 2020 and 2023, the average annual industry growth rate was 3,542 MW.

34,223 MW
LIVE CAPACITY

10,082 MW
UNDER CONSTRUCTION

25,500 MW
COMMITTED TO DEVELOPMENT

25,775 MW
EARLY STAGE DEVELOPMENT

If this pace continues, there will be 51,933 MW of live capacity in 2030 with an additional 74,184 MW in the pipeline. Based on recent market activity, including mega-scale campus deals, the firm suspects this forecast is conservative. Other industry observers forecast growth of three to five times current capacity over the next five to ten years.

The growth is fueled by the dominant hyperscale providers who continue to expand their footprint and scale in markets around the world. Many are making $10-billion-plus infrastructure investments to fuel their platform growth and in the promise of future revenue from generative AI. This trend started in the US, spread to Europe and is coming to the rest of the world. Data sovereignty requirements are also increasing around the world, prompting the industry to establish a presence in more countries to serve local governments as well as data-sensitive sectors such as financial services and healthcare.

> "I expect global growth to continue. The throttle, if you will, on that growth is going to be available utility capacity. That is causing many of our clients to look at alternative markets or regions."
>
> **— iMasons member**

AMERICAS

In the Americas, there are 16,635 MW of live capacity, 5,380 MW under construction, 9,194 MW committed for development and 10,072 MW in the early stages of development, according to DC Byte. Vacancy rates are at decade lows – 6% across the Americas, and 3% in the US.

16,635 MW
LIVE CAPACITY

5,380 MW
UNDER CONSTRUCTION

9,194 MW
COMMITTED TO DEVELOPMENT

10,072 MW
EARLY STAGE DEVELOPMENT

6%
VACANCY RATE

Northern Virginia is the largest market in North America, with 2.1 GW of supply, an increase of nearly 20% between 2022 and 2023, according to market data. Other fast-growing North American markets are Silicon Valley, Dallas/Fort Worth and Chicago. AI as well as strong interest from technology, finance and healthcare industries are driving the demand.

Hyperscalers have recently announced mega-campuses in the South and Midwest to support AI model training as well as continued cloud growth.

Power availability constraints in markets such as Northern Virginia and Silicon Valley are pushing some developers to look to neighboring regions, though the major hubs remain sticky due to the availability of fiber and a “mature market of people that understand the industry,” an iMasons member noted.

> Major hubs remain sticky due to the availability of fiber and a “mature market of people that understand the industry.”
>
> **— iMasons member**

In Latin America, live data center capacity is 799 MW. The biggest markets are in Brazil and Mexico, with Chile and Colombia also attracting an increasing share of development.

Across Latin America, an additional 445 MW are under construction, 297 MW committed for development and 798 MW in the early stages of development.

Please see the Latin America Market Spotlight for more information.

ASIA PACIFIC

Asia Pacific has 8,946 MW of live capacity, 2,578 MW under construction, 9,114 MW committed for development and 9,644 MW in the early stages of development, according to DC Byte. Vacancy is 10%.

8,946 MW
LIVE CAPACITY

2,578 MW
UNDER CONSTRUCTION

9,114 MW
COMMITTED TO DEVELOPMENT

9,644 MW
EARLY STAGE DEVELOPMENT

10%
VACANCY RATE

Inventory is growing rapidly across the region, with Tokyo, Sydney and Singapore each with more than 500 MW of live capacity, according to market data. Demand is across verticals as businesses and governments continue to undergo digital transformation.

Singapore has less than 2% vacancy, as the region has a limited power supply and high sustainability requirements.

This has pushed the industry to neighboring markets, including Johor in Malaysia and Batam Island in Indonesia.

Robust demand is expected across the region for the foreseeable future, which will spur continued development among colocation providers for cloud service providers and enterprises.

In China, there are 448 data centers across the country, according to Statista, a data and market research firm. Beijing is the second biggest market in the world with 1,799 MW of capacity. Shanghai is the seventh largest market with 725 MW.

The data center market in China wobbled during COVID-19 but it is growing again.

> "The fundamentals of the market that are common to the rest of the world are exactly the same in China. China is very, very good at adapting quickly and then accelerating fast."
>
> **— iMasons member**

Live capacity in India is 687 MW. The real story is in the pipeline. There are 555 MW under construction, 1,603 MW committed for development and 3,177 MW in the early stages of development. Please see the India Market Spotlight for more information.

EUROPE, MIDDLE EAST AND AFRICA

Europe, the Middle East and Africa have 8,641 MW of live capacity, 2,124 MW under construction, 7,193 MW committed for development and 6,059 MW in the early stages of development, according to DC Byte. Vacancy is 6%.

8,641 MW
LIVE CAPACITY

2,124MW
UNDER CONSTRUCTION

7,193 MW
COMMITTED TO DEVELOPMENT

6,059 MW
EARLY STAGE DEVELOPMENT

6%
VACANCY RATE

In Europe, growth is spreading from the established markets of Frankfurt, London, Amsterdam and Paris to tier two and three cities. Data sovereignty requirements along with land and power constraints in the established markets are driving the trend.

The search for clean power is driving development in the Nordic countries, though the industry must compete for powered land with other power-intensive industries such as green hydrogen and battery production.

In the Middle East, government tenders and incentives to enable digital transformation and the shift to cloud services are driving robust growth. Several hyperscalers are deploying in the region, which benefits from subsea cable connectivity to Europe, Asia and Africa. The Middle East market is concentrated in United Arab Emirates, Saudi Arabia and Israel, with 1,467 MW of capacity compared to 228 MW in the rest of the region.

Africa has 254 MW of live data center capacity across the continent, concentrated in South Africa, Nigeria and Kenya. An additional 186 MW are under construction, 296 MW committed for development and 240 MW in the early stages of development. Please see the Africa Market Spotlight for more information.

> “Africa has 1.4 billion people with a median age of 18.8. The young will drive rapid growth.”
>
> **— iMasons member**

04 Market Spotlights

LATIN AMERICA

AFRICA

INDIA

Africa, Latin America and India are home to 3.5 billion people, or 44% of the world's population. The median age is 28.2. Today, these regions account for just 5% of the global live data center capacity, according to DC Byte, but they represent the largest need.

The youth in these markets are the future consumers of digital services yet these markets have the smallest data center capacity in the world.

To address this disparity, projects under construction, committed to be built or in the early stages of development, are on pace to quintuple capacity over the next five to ten years.

Digital Infrastructure growth in Africa, Latin America and India is fueled by demand to participate in the digital economy. Research shows that 10% of broadband penetration adds about 2% to the GDP. Greater broadband penetration in turn drives demand for data centers. Every $10 million invested in new data center builds generates $100 million to $200 million in economic activity. Growth in Digital Infrastructure and the digital economy in Africa, Latin America and India requires the coordination of governments and utilities with project developers. The following pages provide a zoomed in view on each of these three key growth markets.

AFRICA

1.4 BILLION
POPULATION

18.8
MEDIAN AGE

254 MW
LIVE CAPACITY

Africa is home to 1.4 billion people, 54 countries and at least 75 languages with more than 1 million active speakers. The continent is culturally and geographically diverse, rapidly urbanizing and bursting with a young population eager to participate in the digital economy. To begin to meet this demand, there are 254 MW of live data center capacity across the continent, concentrated in South Africa, Nigeria and Kenya, according to DC Byte. An additional 186 MW are under construction, 296 MW committed for development and 240 MW in the early stages of development. This picture may prove conservative. Hyperscaler and investor interest in Africa is growing. New subsea cables are nearing completion that will provide increased connectivity between the east and west coasts of Africa, and to Europe, the Middle East and Asia. Terrestrial fiber networks are minimal but beginning to penetrate the inland countries of Africa from the north to south and east to west.

The Digital Infrastructure industry's ability to accelerate growth of the digital economy in Africa hinges on government support to attract hyperscale investment. This includes tax incentives, policies that spur enterprises to move data to the cloud and commitments from governments to serve as anchor clients. Hyperscale developers prefer a single government point of contact to guide the development process including acquisition of land, building permits and access to power, as well as to ensure compliance with anti-bribery, security and sustainability requirements. Markets that provide this type of government support along with political and economic stability will attract investment in Digital Infrastructure and a piece of the digital economy. Today, the primary markets for Digital Infrastructure development in Africa are in South Africa, which first attracted hyperscale investment in 2019 and saw its capacity outlook shoot up from 30 MW to more than 250 MW.

Today, a half dozen hyperscale providers are in South Africa, primarily through lease agreements with colocation providers. A similar narrative is beginning to play out in Nigeria, which is within reach of more than 500 million people in West Africa, and in Kenya, which offers the political, currency and power stability needed for a data center hub in East Africa.

The main challenge and opportunity for Digital Infrastructure development in Africa revolves around access to power, though the specifics are different in each market. In South Africa, the power grid is robust but a shortage of power generation capacity leads to regular load shedding that requires data centers to run on backup generators for several hours each day. In Nigeria, power generation is robust but the grid is weak, leading to frequent outages. As a workaround, data center operators rely on backup generators, produce power on site with natural gas and establish direct connections to high voltage transmission lines.

In Kenya, a stable power grid supplied by more than 90% clean energy sources is a key attraction for digital infrastructure investment.

Development of Kenya's geothermal resources could serve the power-dense infrastructure needed to train next-generation AI systems.

The global skills shortage throughout the global Digital Infrastructure industry is acute in Africa. People trained in Africa often depart for industry jobs in the US, Europe and Asia or get scooped up by international companies when they enter an African market. To counter these trends, industry participants must collaborate to support programs that educate today's youth about Digital Infrastructure and prepare them for jobs in the industry. The talent pipeline must produce an oversupply, knowing many people will go abroad to gain additional experience. Indeed, several of the industry's leaders in Africa today have recently returned from careers abroad to grow the Digital Infrastructure industry in their native countries and enable access to the digital economy for all.

In Kenya, a stable power grid supplied by **more than 90% clean energy sources** is a key attraction for Digital Infrastructure investment.

LATIN AMERICA

665 MILLION
POPULATION

31
MEDIAN AGE

798 MW
LIVE CAPACITY

Latin America, which includes South America, Central America, Mexico and the Caribbean, is home to 665 million people with a median age of 31 spread across 33 countries. The Digital Infrastructure industry gained a foothold in the region nearly two decades ago and today there are 799 MW of live data center capacity, according to DC Byte. The biggest markets are in Brazil and Mexico, with Chile and Colombia are also attracting an increasing share of development.

Across Latin America, an additional 445 MW are under construction, 297 MW committed for development and 798 MW in the early stages of development. Long-term forecasts for continued and accelerated growth are optimistic based on rising GDP in several countries, a young population and growing demand for digital services from the industrial and financial sectors. Political and economic instability in some countries cloud this optimism and today limit hyperscale activity.

São Paulo, Brazil, has the highest concentration of data center capacity in Latin America. Several colocation data centers serve enterprise customers, including multinational companies with regional offices in the city and the financial sector, which includes the Brazilian stock exchange, B3. Existing and planned wholesale colocation facilities on the outskirts of São Paulo are intended to attract hyperscale clients. More than 80% of Brazil's grid power is from clean energy sources, including hydro, wind and solar.

A similar pattern is found in Mexico, with colocation facilities first serving enterprise customers in Mexico City from nearby Querétaro, which is the country's data center hub. Today, hyperscale activity, primarily large cloud providers, is increasing in Querétaro, though access to power is a challenge and competitive. Recently completed facilities face a one to three year wait for grid connections. To work around the power challenge, developers are looking elsewhere for land within latency constraints of Mexico City and with available power capacity.

Abundant wind, solar and hydroelectric power sources have put Chile on a path to achieve a 70% clean energy grid by 2030, which could attract interest from hyperscale developers in search of clean power for AI workloads. Wholesale colocation providers are preparing for this possibility with future-proof data center designs to support the high rack densities and cooling requirements of AI. Any location with available clean power in Latin America could capitalize on the trend toward clean energy zones.

Today, the availability of power, fiber and land within latency constraints of population centers dictates Digital Infrastructure development in Latin America. Santiago, Chile, is a growing data center hub with access to subsea cables that connect the region to North America and will offer connectivity to Asia-Pacific. Similarly, Bogotá, Columbia's tax favorable free trade zones are beginning to attract more Digital Infrastructure development with connectivity to other markets in Latin America and North America.

Attracting and training people to work in the Digital Infrastructure industry is a challenge in Latin America as it is around the world. As a short-term solution, developers look to hire talent from adjacent industries such as telecommunications and put them through intensive training programs.

Longer term, data center providers are establishing partnerships with technical schools and universities to train the next generation of electrical and mechanical engineers. Governments and developers prefer local talent to work in the industry, rather than talent from abroad.

Optimism for the Digital Infrastructure industry's continued growth in Latin America has prompted developers to stockpile components currently caught in supply chain bottlenecks including generators and chillers. They note that the Digital Infrastructure industry is on a non-stop train in Latin America, where it goes will depend on the availability of resources.

More than 80%
of Brazil's grid power is from clean energy sources, including hydro, wind and solar.

INDIA

1.4 BILLION
POPULATION

28.2
MEDIAN AGE

687 MW
LIVE CAPACITY

India is home to 1.4 billion people with a median age of 28.2 and considered the next big market for the Digital Infrastructure industry. Live capacity is 687 MW, according to DC Byte. The real story is in the pipeline. There are 555 MW under construction, 1,603 MW committed for development and 3,177 MW in the early stages of development.

An active dialogue among market observers is whether total live capacity in 2030 will be 3 GW or 10 GW. Power availability and reliability along with perceived versus real market demand will drive the trajectory. Either way, government support, a revving economy and digitally savvy youth are expected to fuel digital infrastructure industry growth for years to come.

Access to subsea cables, land and government support made Mumbai, on the west coast, India's earliest data center market. Development started in the city center to serve the financial sector then moved east across the bay to serve Navi Mumbai, an industrial hub. Chennai, with subsea cable access on the east coast, and centrally located Hyderabad are the second and third biggest markets in India. Hyperscale interest in Hyderabad could make it the largest submarket in India.

Future growth may also occur in new clean energy zones near these hubs and other locations that could support data center campuses with 10 GW or more of available capacity. These zones could support cloud workloads as well as next-generation AI model training. Hyperscalers champion the approach to overcome challenges around power stability, water availability and network connectivity. Realization of the clean energy zone concept in India requires government support as well as close partnerships between industrial developers and utilities.

Today's power grid in India is unstable. Government and business support to improve grid reliability varies across states. Some data center operators run generators around the clock. Others accept frequent outages. Nationally, India is on track to at least quadruple power capacity in the next 10 years.

The power will serve multiple uses including the country's aggressive investment in electric cars. Data center developers recognize the need to collaborate with energy sector developers to ensure access to this new power capacity. This has led to joint ventures between data center developers and firms with energy infrastructure expertise. These ventures are focused on hyperscale clients, who must meet service level agreements of 99.999% uptime and net-zero carbon goals.

The pipeline of projects in various stages of development across India indicate optimism in the demand for digital services. Whether the demand will materialize remains an open question among hyperscalers. Domestic internet access is predominantly mobile, rather than broadband.

Is that a concern? Less than 3% of people pay taxes in India. Is that the actual user base? Small businesses remain frugal with their digital spend. A handful of enterprise companies represent more than 90% of market capitalization. If they commit to the cloud, the opportunity is huge. Sites with abundant renewable energy are also seen as potential AI centers. With government support for their development, capacity could reach the high end of the 2030 forecast range.

Today, India has 17% of the world population and 1.5% of global data center capacity. To have a fair share of the digital economy, data center capacity needs to grow by 10 to 15 times. Grow it will. If it can grow in lockstep with local communities and use low-carbon power, equipment and materials, it can leapfrog many of the challenges the Digital Infrastructure industry faces in established markets around the world.

Nationally, India is on track to at least quadruple power capacity in the next 10 years.

05 Conclusion

This is the first iMasons State of the Industry Report. Going forward, the association intends to release a report annually to provide insight into trends and challenges across the Digital Infrastructure industry. Collectively, these reports will document how these trends and challenges change over time and iMasons' progress in addressing them through the four strategic pillars of education, inclusion, innovation and sustainability.

Today, these challenges center on power, people, perception and the planet as the industry races to meet accelerating demand for digital services around the world. Digital Infrastructure is the equalizer that allows anyone, anywhere to participate in the digital economy. Every person in the world deserves access to the internet. Growth in Digital Infrastructure is inevitable. To address today's challenges and achieve the forecast doubling and potentially tripling in growth over the next decade will require educating the public about the Digital Infrastructure industry, engagement and collaboration with local communities where capacity is being built; recruiting an inclusive workforce of people to participate in the industry; innovating solutions that improve access to clean power; and championing sustainability throughout the industry to protect the planet.

As the Digital Infrastructure industry continues to grow, data centers will become a fixture in communities around the world to enhance communications and deliver low latency electronic services to people and machines. The expansion of this data center footprint requires the industry to be a good neighbor in every community it serves. It must engage with local government and civic industry groups, listen to their concerns, and learn to compromise, adapt and change. "If the digital infrastructure industry wants to be perceived as a good neighbor, it must be a good neighbor," an iMasons member said.

In addition, the Digital Infrastructure industry must take a new approach to the development of data center campuses. One potential approach that emerged through conversations with iMasons members around the world is for clean energy zones: master-planned towns or city-size areas developed around concentrated sources of clean energy to serve multiple industries, including multi-tenant data center complexes. These zones can leverage economies of scale to advance decarbonization across materials, equipment and power. Execution of this concept requires partnerships between the Digital Infrastructure industry's biggest companies, governments, power and water utilities, private equity, adjacent industries and communities that form and grow there. This is a vision that emerged from collaboration among Digital Infrastructure industry professionals and one that continued collaboration can achieve.

> To be perceived as a good neighbor, the Digital Infrastructure industry must be a good neighbor.

747

Contributors

The challenges and solutions to sustainable growth of the Digital Infrastructure industry outlined in this report were identified through formal and informal conversations with iMasons members around the world. A warm, heartfelt thanks to all of the contributors to the 2024 report. You represent the best of our community, and we sincerely appreciate you and all that you do.

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We would also like to thank our strategic alliance partners and SOI Report contribution partners for their collaboration and support in progressing our common goals in education, inclusion, innovation and sustainability.

About Infrastructure Masons

Infrastructure Masons (iMasons) is a global, nonprofit, professional association of individuals connected and empowered to build a greater digital future for all.

Since its launch in 2016, the organization has brought together 6,000 individuals across 130 countries, a community representing USD 150+ billion in infrastructure projects. iMasons provides an agnostic platform for members to connect, grow, and give back across four strategic pillars: Education, Inclusion, Innovation, and Sustainability.

United for a Greater Digital Future

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McKinsey & Company

Technology, Media & Telecommunications Practice

AI power: Expanding data center capacity to meet growing demand

Soaring demand for AI-ready data centers offers many opportunities for companies and investors across the value chain. How quickly they grasp them could determine the pace at which AI is deployed.

This article is a collaborative effort by Bhargs Srivathsan, Marc Sorel, and Pankaj Sachdeva, with Arjita Bhan, Haripreet Batra, Raman Sharma, Rishi Gupta, and Surbhi Choudhary, representing views from McKinsey's Technology, Media & Telecommunications Practice.

October 2024

The race is on to build sufficient data center capacity to support a massive acceleration in the use of AI. Data center demand[1] has already soared in response to the role data plays in modern lives. But with the emergence of generative AI (gen AI), demand is set to rise even higher. And that is likely to presage a supply deficit.

As challenging as this could be, companies and investors along the entire data center value chain have an opportunity to help address the looming capacity crunch—if they understand the requirements of data centers designed for the AI age. A big chunk of growing demand—about 70 percent at the midpoint of McKinsey's range of possible scenarios—is for data centers equipped to host advanced-AI workloads. And the nature of those workloads is rapidly transforming where and how data centers are being designed and operated.

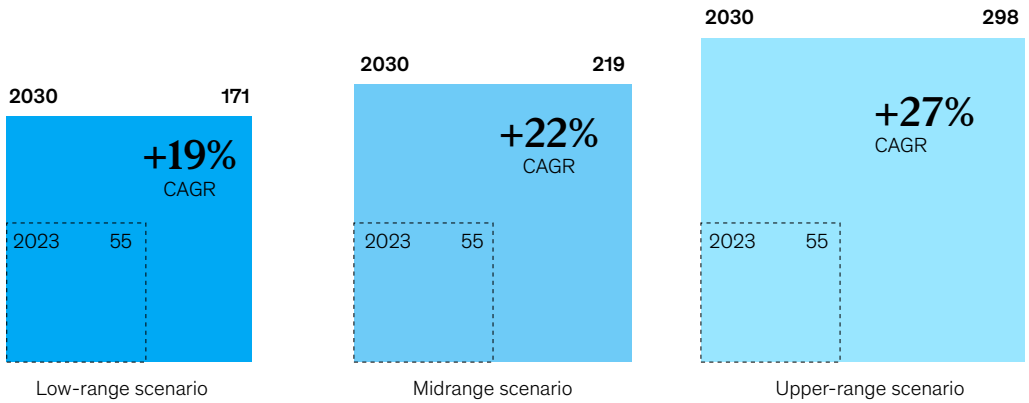
Exploding demand and lagging supply

Future demand for data center capacity will depend on factors that are still hard to accurately determine. The pace of adoption of advanced-AI use cases will certainly count, but so too will the mix of different types of chips deployed and their associated power consumption, as well as the balance between cloud and edge computing for AI workloads and the typical compute, storage, and network needs of AI workloads. This explains McKinsey's range of estimates. Our analysis of current trends suggests that global demand for data center capacity could rise at an annual rate of between 19 and 22 percent from 2023 to 2030 to reach an annual demand of 171 to 219 gigawatts (GW). A less likely yet still possible scenario sees demand rising by 27 percent to reach 298 GW (Exhibit 1).[2] This contrasts with the current demand

Exhibit 1

Global demand for data center capacity could more than triple by 2030.

Demand for data center capacity,[1] gigawatts



[1]Three scenarios showing the upper-, low-, and midrange estimates of demand, based on analysis of AI adoption trends; growth in shipments of different types of chips (application-specific integrated circuits, graphics processing units, etc) and associated power consumption; and the typical compute, storage, and network needs of AI workloads. Demand is measured by power consumption to reflect the number of servers a facility can house.
Source: McKinsey Data Center Demand model

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[1] Demand is measured by power consumption to reflect the number of servers a facility can house.
[2] Estimates are based on an analysis of AI adoption trends; the likely mix of application-specific integrated circuits (ASICs), graphics processing units (GPUs), field-programmable gate arrays (FPGAs), and nonaccelerated central processing units (CPUs) used to run workloads; the mix between training and inference workloads; the emergence of inference optimized chips; efficiencies in model training; and the extent to which higher processing power requires higher power consumption.

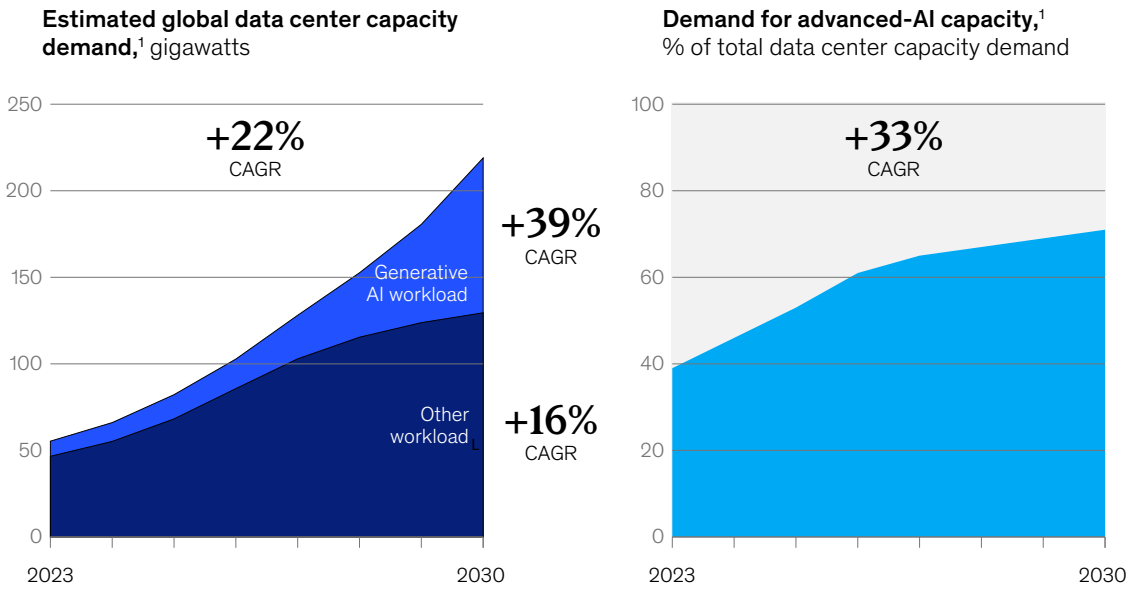
of 60 GW, raising the potential for a significant supply deficit. To avoid a deficit, at least twice the data center capacity built since 2000 would have to be built in less than a quarter of the time.

However, estimating the precise size of that deficit is hard because of uncertainties surrounding the pace of rising demand, the extent to which innovations might improve power efficiency, and limited knowledge concerning the longer-term expansion plans of data center owners and operators. But even if all currently known plans are delivered on time, there could still be a data center supply deficit of more than 15 GW in the United States alone by 2030.

Demand for AI-ready capacity is the main driver of this potential deficit—as it must provide the high computational power and power density required by AI workloads. Our analysis suggests that demand for AI-ready data center capacity will rise at an average rate of 33 percent a year between 2023 and 2030 in a midrange scenario. This means that around 70 percent of total demand for data center capacity will be for data centers equipped to host advanced-AI workloads by 2030. Gen AI, currently the fastest-growing advanced-AI use case, will account for around 40 percent of the total (Exhibit 2).

Exhibit 2

AI is the key driver of growth in demand for data center capacity.



[1]Midrange scenario is based on analysis of AI adoption trends; growth in shipments of different types of chips (application-specific integrated circuits, graphics processing units, etc) and associated power consumption; and the typical compute, storage, and network needs of AI workloads. Demand is measured by power consumption to reflect the number of servers a facility can house.
Source: McKinsey Data Center Demand model

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Hyperscalers dominate capacity demand and supply

Cloud service providers (CSPs) such as Amazon Web Services, Google Cloud, Microsoft Azure, and Baidu are the companies fueling most of today's incremental demand for AI-ready data centers. That's because of the capacity these hyperscalers require to run large foundational models developed in-house, such as Google's Gemini, or to host models developed by AI companies, such as OpenAI's ChatGPT.

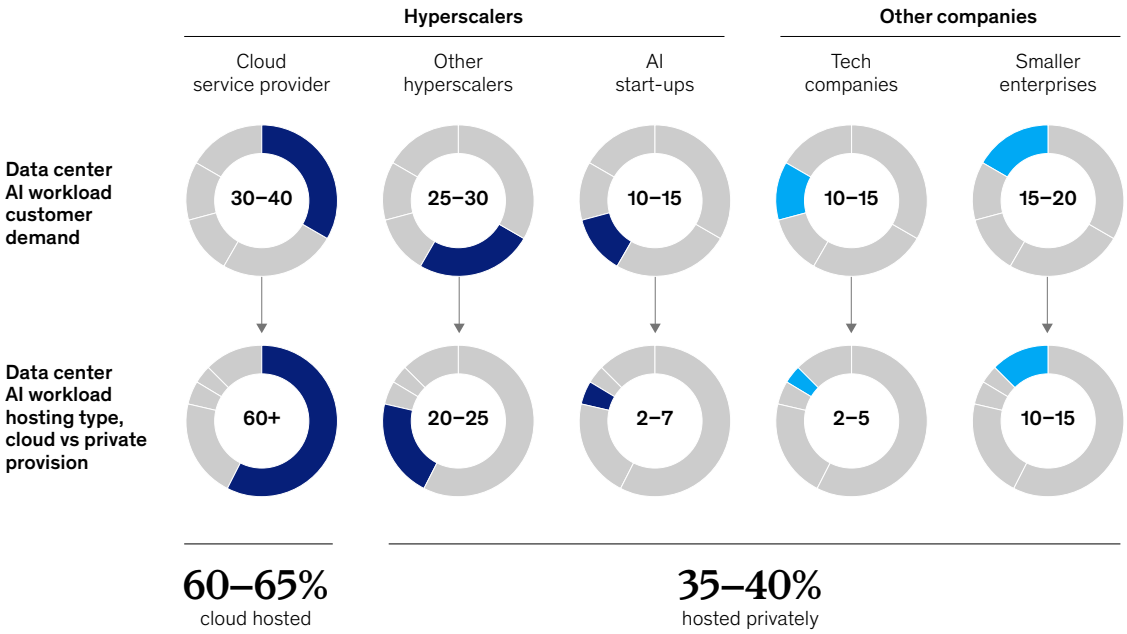
Most other companies are using (and sometimes refining) off-the-shelf models that are largely hosted on a public cloud. As the technology matures, more enterprises are likely to build and train their own models on their internal data, which could lead to demand for private hosting. Our estimate, however, is that by 2030, some 60 to 65 percent of AI workloads in Europe and the United States will be hosted on CSP infrastructures and other hyperscaler infrastructures (Exhibit 3).

To address the increasing demand, CSPs, which currently own more than half of the world's AI-ready data center capacity, according to McKinsey estimates, are rapidly constructing state-of-the-art facilities. However, because of impending supply constraints, they are also partnering with colocation providers (known as "colos") that are similarly expanding their infrastructures.

Exhibit 3

By the end of the decade, hyperscalers will host the lion's share of data center AI workloads.

Data center AI workload customer demand and hosting type in 2030 in Europe and the US, %



Source: McKinsey Data Center Demand model

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A small group of graphics processing unit (GPU) cloud providers is also emerging to meet the demand for AI-ready data center capacity. As the name suggests, these providers offer high-performance GPUs as a service to train AI models, then often work with colocation providers to build and operate the data center facility. GPU cloud provider CoreWeave, for example, had a fleet of approximately 45,000 GPUs by July 2024 and aims to operate in 28 locations globally by the end of the year.[3]

This new capacity is not likely to keep pace with demand, however. Tight supply is already apparent in the market. Prices charged by colocation providers for available data center capacity in the United States fell steadily from 2014 to 2020 in most primary markets but then rose by an average of 35 percent between 2020 and 2023. Additionally, new capacity due to come online in the next two to three years has already been leased out.[4] In Northern Virginia, dubbed the data capital of the world because of the high number of data centers concentrated there, the vacancy rate was less than 1 percent in 2024.[5] Making matters worse is the high demand for new data centers, which is causing supply constraints for power, key pieces of electrical infrastructure, and labor, thereby delaying completion of new facilities.

New location, design, and operational requirements

Data centers have seen steady changes and improvements over the past decade, gradually getting bigger, housing more power-hungry, high-density servers, and operating more efficiently and sustainably.

AI has forced the pace of progress, however. Most notably, data centers have exploded in size in terms of power consumption. Ten years ago, a 30-megawatt (MW) center was considered large. Today, a 200-MW facility is considered normal. The driving force for this is the computing power required for AI workloads, which, in turn, bumps up energy consumption.

All data centers consume significant amounts of energy, but AI-ready ones are especially demanding because of their high average power densities—the energy consumption of servers in the racks. Average power densities have more than doubled in just two years, to 17 kilowatts (kW) per rack, from eight kW, and are expected to rise to as high as 30 kW by 2027 as AI workloads increase. Training models like ChatGPT can consume more than 80 kW per rack, while Nvidia's latest chip, the GB200, combined with its servers, may require rack densities of up to 120 kW.

Such high energy demand and power density, along with the complexity of different AI workloads, are bringing about rapid change in three main areas in the construction of data centers: their location and the accompanying power infrastructure, the design of mechanical systems, and the design of electrical systems.

Data center location and power infrastructure

As more data centers are built and the amount of power they require grows, power supply is becoming an issue in markets that have traditionally attracted clusters of data centers, such as Northern Virginia and Santa Clara in the United States. Many utilities find they haven't been able to build out transmission infrastructure quickly enough, and there is concern that at some stage they may be unable to generate sufficient power.

This can slow data center expansion. For example, some utilities initially offer only relatively small chunks of power to data centers, which they then increase as they build out the power infrastructure—perhaps in 15- to 25-MW tranches for a 100-MW new data center campus. Additionally,

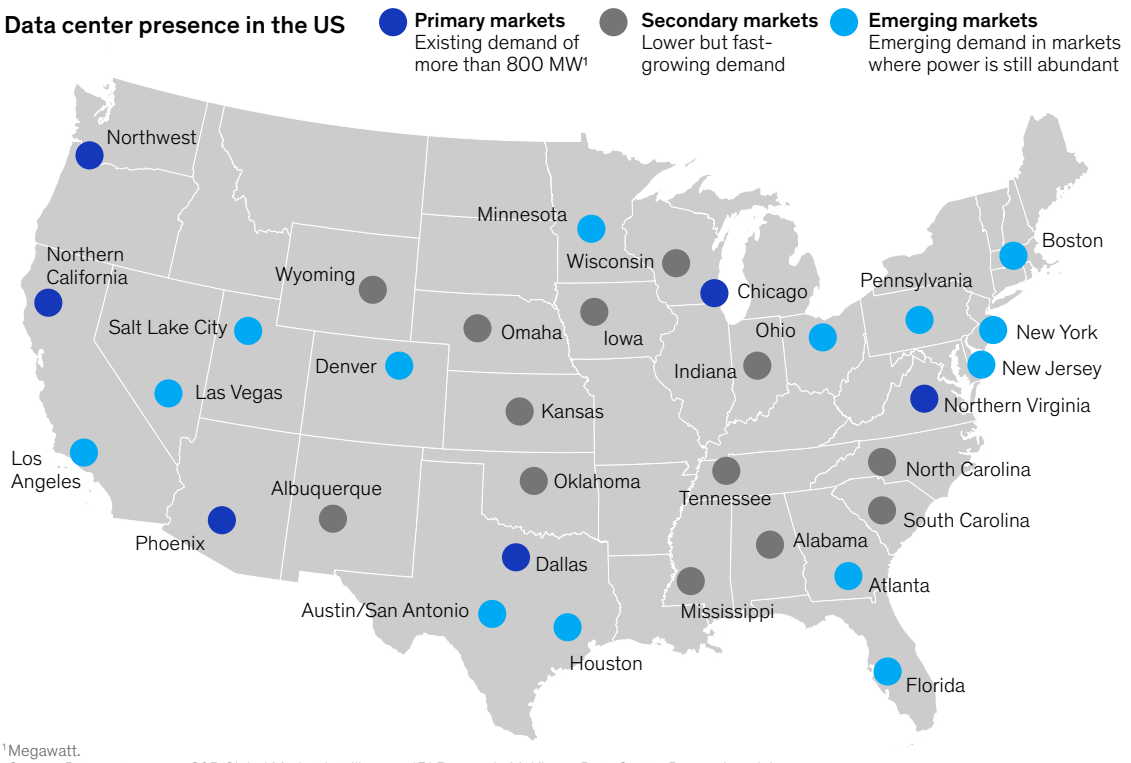
[3] Rod Walton and Matt Vincent, "CoreWeave, Chirisa tap Bloom Energy for Illinois AI data center project, lean into microgrids," Data Center Frontier, July 22, 2024.
[4] "North America data center trends H2 2023," CBRE, March 6, 2024; "Data centers 2024 global outlook," Jones Lang LaSalle, January 31, 2024.
[5] "Global data center trends 2024: Limited power availability drives rental rate growth worldwide," CBRE, June 24, 2024.

in some countries, concern about the pressure data centers exert on electricity grids as well as the impact on national climate targets have brought a complete halt to the building of new ones. Ireland, for instance, has stopped issuing new grid connections to data centers in the Dublin area until 2028. Ireland's transmission system operator estimates that data centers will account for 28 percent of the country's power use by 2031.[6]

The fact that not all AI workloads are equal has partly alleviated the power problem. Historically low latency has been one of several critical factors in determining data center location, often leading colocation providers to establish facilities near population centers. When AI models are being trained, typical performance factors such as low latency and network redundancy are less important. It is only when the model is put into operation—during the inferencing workload—that these factors become crucial for optimal performance. Hence, data centers dedicated to training AI models are being built in more remote locations in the United States, such as Indiana, Iowa, and Wyoming, where power is still abundant and grids are less strained (Exhibit 4). But given the lack of adequate power transmission infrastructure in these locations, power supply may still become an issue as demand grows.

Exhibit 4

Data centers are emerging in more remote locations, where power is still abundant and grids less strained.



[1] Megawatt.
Source: Datacenters.com; S&P Global Market Intelligence 451 Research; McKinsey Data Center Demand model

McKinsey & Company

[6] *Ireland capacity outlook 2022–2031*, EirGrid and SONI, October 2022.

Against this backdrop, some data center operators are acquiring facilities built close to power plants to help overcome transmission issues (for example, the Talen Energy data center powered by a nuclear power plant).[7] And some have started generating their own off-grid power using behind-the-meter solutions, such as fuel cells, batteries, or renewables. In the longer term, small modular reactors (SMRs) might be an option.

Mechanical system design

AI servers consume so much energy that they get hot—so much so that air-based cooling systems, which circulate cold air around them, often can't keep up. The upper limit to their effectiveness is generally considered to be power densities of up to 50 kW per rack—a level that might be adequate for AI inferencing workloads that have lower power densities, but not for training workloads.

This has prompted a shift to an approach that removes heat directly from racks by using liquid, which is significantly more effective in absorbing and transferring heat than air. There are three such rack-based technologies that differ both in their application and in the extent to which they depart from conventional data center cooling systems:

— *Rear-door heat exchangers* (RDHX), which are the closest to conventional cooling technology, combine cold air that is forced to the racks with liquid-cooled heat exchangers installed at the back of the rack. They tend to be used in data centers, where space is constrained and rack density is in the range of 40 to 60 kW.

— *Direct-to-chip* (DTC) technology uses a liquid (generally antifreeze coolant or a mix of water and glycol) that circulates through a cold plate in direct contact with the most power-dense electronic components, such as GPUs and certain central processing units. Of the three technologies, DTC is the one most commonly deployed to date, as it can handle power densities of 60 to 120 kW and can be integrated relatively easily within the existing infrastructure of a data center.

— *Liquid immersion cooling* entails placing the servers in a tank filled with dielectric fluid. There are two variations of this cooling method: single-phase immersion and dual-phase immersion. Both can cool racks with a power density of 100 kW, though dual-phase immersion has been used for racks with power densities upward of 150 kW per rack. The pace of adoption of liquid cooling in data centers has been slow, however, limited largely to crypto-mining applications that tend to be more open to experimentation. Additionally, there is concern about the health and environmental impact of the per- and polyfluoroalkyl substances (PFAS) chemicals used in dual-phase cooling.[8]

Another important benefit of liquid cooling systems is that they can keep electronics at a more consistent temperature by targeting the hottest spots. This can increase the life of the hardware and allow it to operate at higher speeds than those originally intended by manufacturers. Also, because the liquid extracts heat directly from the electronic components, capital and operational costs and power usage effectiveness (PuE)—a measure of how efficiently a data center uses energy—are improved.[9] Some data centers have seen a 10 percent reduction in PuE using liquid cooling systems rather than air cooling ones.

Electrical system design

AI workloads call for larger power distribution units to cope with higher power densities, leading many data center operators to install larger switchgear and floor-mounted power distribution units. This reduces the complexity as well as the capital and operational costs of installing and maintaining multiple smaller units.

[7] "Amazon buys nuclear-powered data center from Talen," Nuclear Newswire, March 7, 2024.
[8] "Will PFAS be the death of two-phase cooling?," *Electronics Cooling*, June 11, 2024.
[9] Higher circulation temperature reduces the size of the cooling system required and therefore the energy required and PuE.

Operators are also rethinking the power architecture at rack level. Because of the increasing power of AI chips, some hyperscalers and OEMs are considering installing servers with a 48-volt power supply unit rather than the traditional 12-volt unit, thereby reducing energy loss and improving system efficiency. In tests, these units have been shown to reduce energy loss by at least 25 percent.[10] Power-hungry AI workloads also require bigger, higher-capacity centralized uninterruptible power supply systems, leading to more complex designs.

Backup systems are also changing, as some AI-focused data centers reassess the amount of backup power capacity required. Traditional data centers that run mission-critical business applications for clients have backup generators to guard against any interruption due to a power outage. However, since training workloads are less critical to business operations, they can operate with lower power redundancies.

Opportunities abound

Understanding the requirements of AI-ready data centers makes clear the wide range of opportunities that exist for companies and investors in such a high-growth market. A number of them follow:

— *Owners and operators of data centers.* Colocation providers can retrofit existing data centers and build more new ones, particularly to lease capacity to hyperscalers that might struggle to keep pace with demand despite their current investments. Colocation providers that are able to offer build-to-suit development services—that is, those able to build and operate data centers customized to the specific needs and designs of each hyperscaler—might prove to be particularly attractive partners. There are also opportunities for GPU cloud providers, whose business model is gaining traction with investors, as Nvidia, which previously sold its GPUs mainly to hyperscalers, broadens its customer base.

— *Data center construction companies and equipment suppliers.* The supply crunch raises demand for modularized construction, which not only speeds up the build-out of data centers but also promotes sustainable construction practices. And there is high demand for all types of mechanical and electrical equipment within data centers. Capital spending on procurement and installation of mechanical and electrical systems for data centers is likely to exceed $250 billion by 2030, according to McKinsey estimates.

— *Across the energy and power supply value chain.* A variety of players in this space can take advantage of the AI data center building boom. These players include businesses generating and distributing more energy, particularly green energy; developing on-site, sustainable power solutions such as fuel cells, solar power, and small modular reactors; or promoting ways to reuse the heat generated at data centers in residential or other commercial buildings.

Companies and investors keen to pursue such opportunities may have to consider modifying their usual approach, however, if they are to win in an AI era. Here are some alternative approaches:

— *They may have to move more quickly than they have in the past, given the pace of change in the sector.* The race is on, for example, for data center owners and operators to seek and secure new sites with access to reliable power, for cooling-system manufacturers to innovate and offer solutions that tackle rapidly increasing power densities, and for other equipment providers such as transformer manufacturers to scale up capacity.

— *They may have to collaborate more, as constant innovation is a defining feature of today's data center value chain.* Collaboration between companies in the value chain or with those in other sectors can speed up the pace of innovation and help scale it. Collaboration can

[10] Paul O'Shea, "48V: The new standard for high-density, power efficient data centers," *Power Electronics News*, August 7, 2016.

also help tackle the capacity constraints the sector faces, whether it's between utilities and hyperscalers or large colocation providers to help coordinate plans for grid investments and data center capacity expansion, or between chip and server manufacturers and liquid cooling providers to design and scale efficient, easily operable cooling solutions.

— *They will certainly have to invest more too.* Scaling data center infrastructure at an unprecedented pace is capital intensive and will, we estimate, require more than a trillion dollars in investment across the ecosystem. Although investment funds globally are already backing growth in the sector, significantly more growth opportunities exist.

Many companies are already making moves. To name but a few: Blackstone and Digital Realty entered into a $7 billion deal in 2023 to build new AI-ready data centers in Frankfurt, Paris, and Northern Virginia.[11] Super Micro Computer, a US manufacturer of servers, is investing in additional sites in its home market as well as in Asia,[12] while tech company HCL Technologies is collaborating with Schneider Electric to develop solutions for managing energy consumption in data centers in the Asia–Pacific region.[13]

Still, the range of opportunities is not limited to large, established players. Some large companies already have considerable order backlogs. There are OEMs with one- to two-year backlogs for customized electrical switchgear and power distribution equipment, for example. As a result, smaller or newer manufacturers have a real chance to bridge the gap, particularly when investors are willing to help scale their production.

Demand for AI-ready data centers is surging, and with it the potential for a serious supply deficit. The extent to which companies and investors in the value chain are able to speed the build-out of those centers could determine their fortunes. And ultimately, it could determine the pace at which AI is deployed in all our lives.

[11] "Digital Realty and Blackstone announce $7 billion hyperscale data center development joint venture," Blackstone press release, December 7, 2023.
[12] "Supermicro announces expansion of Silicon Valley corporate headquarters and groundbreaking for new 800,000-square foot building in Taiwan," Super Micro Computer press release, April 29, 2019.
[13] "HCLTech and Schneider Electric collaborate to develop sustainability solutions for data centers in APAC," HCLTech press release, July 19, 2023.

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Mega $14 billion data center project proposed in metro Phoenix

The buildings would be built along Yuma Road in the West Valley

Watch the latest ABC15 Arizona in Phoenix headlines any time.

By: Audrey Jensen, Phoenix Business Journal

Posted 9:10 AM, Mar 20, 2024

PHOENIX — A Denver developer has plans to build a $14 billion master-planned data center complex across 1,000 acres in metro Phoenix.

Between two campuses, the development will span across nearly 30 buildings totaling 5.6 million square feet, one of the largest data center projects proposed in the Valley by acreage. The development is being spearheaded by Denver-based Tract, a new data center developer embarking on its first project in the Grand Canyon State.

The facility, called Project Range, will also be supported by three Arizona Public Service substations in the Buckeye planning area, according to recent project documents submitted to Maricopa County.

The buildings will range from 149,000 square feet to 260,000 square feet each, and will be located north and south of Yuma Road between Jackrabbit Trail and Perryville Road on a county island.

Read more of this story from the Business Journal.

https://www.insidenova.com/culpeper/data-center-boom-transforms-culpeper/article_751ced36-5b17-11ef-a52c-cf43381926b5.html

Data center boom transforms Culpeper

Maria Basileo
Aug 15, 2024

Equinix, which spans over 60 acres in Culpeper County, boasts 370,000-square-feet across four structures. It has an unknown megawatt load.

Hugh Kenny/PEC

A wave of development in recent years has been reshaping the landscape of Culpeper as data centers rapidly rise in and around the town and county.

The county, which has traditionally been known for its rural charm and historical significance, is now emerging as a significant hub in the data storage and processing industry.

In total, there are over 13 million-square-feet of built or approved data center buildings on nearly 1,000 acres within Culpeper County and the Town of Culpeper.

There are six built or approved data center buildings within Culpeper County and two within the Town. One project - Culpeper Technology Campus - is in the county and town.

Constructed data centers

Over the past few years, Culpeper has witnessed the completion of two data centers - Equinix and Swift.

Equinix, which spans over 60 acres in Culpeper County, boasts 370,000-square-feet across four structures. It has an unknown megawatt load.

For Equinix, it is a location for federal IT initiatives and the federal cloud market. It claims its buildings are among the most secure and technologically sophisticated data center facilities in the eastern U.S.

In addition to Equinix, Swift has completed a facility in the Town of Culpeper, attracted by the region's strategic location and availability of land.

Swift spans 30 acres with a 90,000-square-feet across four structures. It has an unknown megawatt load.

These centers are part of the broader Northern Virginia data center market, which is among the largest in the world.

Pending data centers

The construction boom is far from over. Several new projects are approved and pending construction. They include: CloudHQ, Databank (Red Ace), Culpeper Technology Campus, Copper Ridge, EdgeCore and Red Ace XI. Marvell has been approved and construction has begun. XX Tech Park is pending.

Found on McDevitt Drive, CloudHQ, which spans nearly 100 acres in the county, will have over 2 million-square-feet in structures. It will have a 275 megawatt load. It's application was approved in 2018.

Within the intersection of Germanna Highway and James Madison Highway, Databank (Red Ace), which spans 85 acres in the county, will have nearly 1.3 million-square-feet in structures. It will have a 192 megawatt load. It's application was approved in 2019.

Between Germanna Highway and McDevitt Drive, Culpeper Technology Campus, which spans 155 acres in the town and county, will have over 2-million-square-feet in structures. It will have a 600 megawatt load. Its application was approved in 2023.

Adjacent to the Culpeper Technology Campus, Copper Ridge, which spans over 115 acres in the town, will have over 2-million-square-feet in structures. It will have a 600 megawatt load. Its application was approved in 2023.

EdgeCore (formerly Cielo) on James Madison Highway, which spans over 120 acres in the town, will have almost 2.5-million-square-feet in structures. It will have a 300 megawatt load. Its application was approved in 2023.

Found on Germanna Highway, Red Ace XI (Keyser Farm), which spans nearly 70 acres in the town, will have almost 2.5-million-square-feet in structures. It will have a 300 megawatt load. Its application was approved in 2024.

In Stevensburg, on Germanna Highway, Marvell is under construction. It will span nearly 230 acres in the town, will have almost 450,000-square-feet in structures. It will have a 135 megawatt load. Its application was approved in 2021.

XX Tech Park's application is still pending. It proposes a 426-acre operation with over 4.5 million-square-feet in structures. It's proposing to have a 900 megawatt load.

Transmission lines

In a recently published liability report from regional transmission organization PJM, it shows that the two main transmission lines going through Culpeper are going to be overloaded, possibly to the point of grid collapse.

This could possibly lead either new lines or expanded lines through not just farmland but also communities.

PJM is the buying group that Dominion Energy works with.

Community impact

Data centers within the county and the town have notoriously been hot topics for the public as they weigh the importance of rural landscapes and viewscapes with anticipated high tax revenue totals to be accrued over years.

“We do not anticipate construction beginning for a few years as we await necessary power upgrades to power these facilities,” said Culpeper County Economic Development Coordinator Bryan Rothamel.

Tax revenue collected from these sites will be dependent on how much equipment is purchased, he continued. His office is currently working on its best estimates for the Board of Supervisors including an anticipated revenue collection schedule, but it is not yet finalized.

“I can say, these buildings will be the most expensive buildings in the county when built,” Rothamel said. “They will have the most expensive equipment in the county when occupied. These two factors alone will lead to significant increased local revenue.”

“I know there is a lot of conversation regarding data centers right because of the rezonings but we are still very early in the process. Development will occur over many years.”

“Data centers are still allowed by-right use in both light and heavy industrial zoning categories, meaning that an existing industrial property could be redeveloped as a data center without the approval of the Board of Supervisors or public input,” said The Piedmont Environmental Council Culpeper Land Use Representative Sarah Parmelee. “If the Board of Supervisors does not want additional data center growth outside the Technology Zone, they need to change this ASAP.”

“Design standards and best practices for data center operation exist, and these are the standards PEC believes local leaders should adopt to ensure Culpeper’s data centers are high quality and do not compromise the quality of life for those living nearby,” she continued. “We’re already facing years of construction noise, dust, and traffic from this industry, we need to do what we can to protect Culpeper residents and businesses from whatever impacts can be avoided.”

Looking ahead

The decisions made today will shape the future of the community, balancing economic opportunities with the preservation of the area’s unique character. With more projects on the horizon, Culpeper is poised to become an even more integral part of the digital infrastructure that underpins the global economy.

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TECHNICAL MEMO: SITING CRITERIA FOR HYPERSCALE DATA CENTERS

To
Johnson Economics

For
City of Hermiston Economic Opportunities Analysis (EOA)

Dated
July 9, 2024

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ATTACHMENT

I. INTRODUCTION

Hermiston Economic Opportunities Analysis

This technical memo describes Mackenzie's findings related to siting criteria for one of the City of Hermiston's target industrial uses identified in the Economic Opportunity Analysis (EOA) currently under development by Johnson Economics. Information from this document will be used in conjunction with the Employment Lands – Buildable Lands Inventory (BLI) component of the EOA to identify land and infrastructure needed to attract hyperscale data center operators.

Industrial Development Competitiveness Matrix

In 2015, in partnership with Business Oregon, Mackenzie developed a matrix outlining criteria that make a site competitive for development with a range of industrial uses (see Attachment 1). The criteria include physical site characteristics, transportation needs, utility needs, and other considerations used to assist in the selection of appropriate sites for industrial development. Data Center is one of the use categories identified in the matrix; however, for the reasons explained below, the 2015 matrix does not account for the more recent trend of hyperscale data centers.

Data Centers

Data centers accommodate the physical equipment necessary to store, manage, process, and transmit digital information over the internet. The data center industry has changed quickly as data processing needs have grown exponentially in response to the general growth of the internet (e.g., e-commerce) and development of new industries including widespread adoption of decentralized cloud services, video and game streaming, mass data farming and processing, and artificial intelligence (AI).

In the data center industry, rather than measure facilities in square feet, they are often measured in terms of bulk energy such as megawatts (MW), which provides a more useful representation of their processing capacity. To put the growth of this market into perspective, a report by McKinsey & Company estimates the data center industry is expected to grow from 17 gigawatts (GW, i.e., 1,000 MW) in 2022 to about 35 GW by 2030.[1] According to Cushman & Wakefield, Oregon ranks #8 in the global established data center market and #5 in the established Americas market.[2]

Types of Data Centers

Data centers can be developed at different scales, depending on the location and need they are intended to serve. Table 1 below lists categories identified by NAIOP, the Commercial Real Estate Development Association.

[1] *Investing in the Rising Data Center Economy*, McKinsey & Company, 2023.
[2] Global Data Center Market Comparison, Cushman & Wakefield, 2024.

TABLE 1: FIVE TYPES OF DATA CENTERS[3]
There is no one-size-fits-all when it comes to data centers, and depending on who is counting, five popular types of data centers are operating today.
Enterprise data centers: The enterprise data center supports a single organization. It is typically built, maintained, operated and managed by companies, such as banks, brokerage firms and insurance companies, for their own use.
Multitenant or co-location data centers: The co-location data center is one where a company will rent space within that data center, which is owned by others and located off premises from the company.
Hyperscale data centers: Hyperscale data centers are those of Amazon Web Services, Microsoft and IBM, and support their large-scale IT infrastructure.
Edge data centers: Edge data centers are owned by third parties in a specific metro area to bring IT infrastructure closer to users. They handle real-time data processing. These centers reduce communication delays.
Container data centers: Container data centers come in shipping containers or modules. These are ready-made data centers. They are plug-and-play, with all the components ready to go.

As the data needs of society have grown, the proliferation and scale of data centers has accelerated with it, including in Umatilla County. The development characteristics and site needs of data centers as described in the 2015 matrix (Attachment 1) do not accurately represent very large data centers and the examples that have been developed in Eastern Oregon over the last decade.

Hyperscale Data Centers

Based on the EOA's identified need for hyperscale data centers, the remainder of this report discusses the characteristics and site needs of these modern very-large data centers. This analysis is intended to augment the prior siting criteria work noted above, to address the evolution of the data center industry over the past decade. By way of context, in 2010, the ratio of energy consumption for hyperscale and cloud data centers was 13% of the total and 87% for other types. As of 2022, hyperscale demand increased to 77%.[4]

Hermiston's proximity to the Columbia River and major electrical transmission lines makes the area desirable for hyperscale data center campuses, as evidenced by several recent developments by Amazon Web Services (AWS) in Morrow and Umatilla Counties. The following sections of this report primarily focus on the siting criteria for the **hyperscale category** of data center facilities, based on information derived from trade organizations, literature, an end user, and Mackenzie engineering staff.

[3] *Data Center Real Estate: Challenges and Opportunities*, Development, Winter 2023/2024
[4] *What do you Need to Know About Designing Data Centers?,* Consulting Specifying Engineer, May/June 2023

II. SITING CRITERIA FOR HYPERSCALE DATA CENTERS

Due to changes in data center development patterns, the Data Centers category outlined in the 2015 Industrial Development Competitiveness Matrix (Attachment 1) is not directly germane to current hyperscale data center development trends in Eastern Oregon. The purpose of this section is to revisit and update the siting criteria to be applicable to the types of hyperscale data centers identified in the City of Hermiston's EOA.

Hyperscale Data Center Site Criteria

The availability of sufficient, affordable, and dependable electricity and water supply are critical factors driving site selection for data center development. Due to the need for data centers to stay in continuous operation, low natural hazard and security risks are also critical. There is also preference for milder climates, which reduces cooling demand and in turn, electricity, and water consumption.

Site and Building Characteristics

The typical site size for a hyperscale data center campus is 100 acres or more, including four or more buildings at 200,000 square feet (SF) to 250,000 SF each, with 5-10 acres for dedicated electrical substations. For hyperscale data centers, the minimum site size per building is approximately 25 acres; however, recent trends in Eastern and Central Oregon show that the development generally consists of four or more buildings on 100+ acres. For new hyperscale data center development, 100 acres is the minimum site size, with recent examples in Eastern Oregon averaging roughly 110 acres, and scaling to more than 150 acres in some cases.

While sites can have a variety of shapes, the minimum dimension is determined by the length of the data center buildings. Recent examples of hyperscale buildings range from 1,000 feet to 1,150 feet in length. Sites need to be large enough to contain these large buildings plus associated parking and circulation, utilities, supportive infrastructure, and buffers.

Site topography should be relatively flat, with a maximum grade of 5%, and site shape should accommodate large rectangular building(s). Building facilities, accompanying substations, and access roads should be located outside of areas of special flood hazard (i.e., 1% annual chance or "100-year" floodplain on Flood Insurance Rate Maps issued by the Federal Emergency Management Agency).

Location

Sites should be within 30 miles of an interstate highway or freight route. Frontage on major streets is not necessary as data centers do not rely on or benefit from high daily vehicle or pedestrian traffic, so facilities can be removed from major arterials. Proximity to marine ports and airports is generally not necessary. Proximity to rail lines is also not necessary.

Due to the noise produced by cooling equipment and backup generators, proximity to residential zones or other sensitive uses may be undesirable. While it is typically possible to mitigate those effects through building and landscape design, providing separation between hyperscale data centers and residential uses is typically desired to avoid these conflicts and to minimize exposure to potential emissions from back-up generators.

Utilities

Water

Data centers utilize large amounts of water for cooling equipment. In some cases, the water demand for data centers is estimated based on their energy use, which is measured in megawatt-hours (MWh). The estimated water demand is 1,000 gallons per day per acre, which requires a minimum 12" high-pressure supply line per Mackenzie engineering staff.

Sanitary Sewer

According to Mackenzie civil engineers, a minimum 8" service line is required if the site is reliant on sanitary sewer. Some hyperscale data center projects have developed alternative methods of disposing or reusing wastewater that does not require disposal of cooling water via sanitary sewer. Individual projects will therefore differ in their sanitary sewer requirements based on the proposed approach.

Natural Gas

Natural gas supply is not required; however, a minimum 4" service line where available increases the marketability of sites and is highly recommended.

Electricity

Data centers have a very high demand for electricity to power and cool equipment. Cooling the equipment accounts for approximately 40% of total energy consumption. The minimum power requirement per building is 60 megawatts (MW), so a prototypical four-building campus would require a minimum supply of 240 MW. This level of demand requires a dedicated substation, typically 5-10 acres in size. Redundancy is required to ensure data centers can operate without interruption. According to the U.S. Department of Energy (DOE), data centers collectively account for about 2% of total U.S. electricity use.[5] Backup generators, typically diesel-powered, are also required.

Telecommunications

Data center facilities require major telecommunications infrastructure including fiber optic service and route diversity.

Transportation

Sites require adequate access and circulation for truck traffic and fire apparatus. Proximity to public transit, airports, marine ports, or railroads is not required. Data centers generate minimal traffic, so frontage on high-capacity road classifications is not critical to site selection. The Industrial Development Competitiveness Matrix specifies trip generation capacity in terms of average daily trips per acre (ADT/ac), but this metric does not account for floor area ratio (FAR), which can vary significantly between single- and multi-story developments. Therefore, it may be more appropriate to based trip generation on floor area. According to the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, the average daily trip (ADT) generation rate for Land Use Code 160 (Data Center) is 0.99 trips per 1,000 SF (KSF) of gross floor area (GFA), though ITE notes this rate is based on a limited data set.

[5] www.energy.gov/eere/buildings/data-centers-and-servers

Security

Sites require gated access, security lighting, and enhanced security systems to ensure data remains secure and systems stay online. Proximity to buildings or infrastructure which may be vulnerable to attack is a factor in evaluating site suitability.

Natural Hazards

Due to the need for the facility to be in continuous operation, sites must have minimal seismic, flood, or other natural hazard risk exposure.

Examples of Eastern and Central Oregon Hyperscale Data Center Campuses

The following examples describe hyperscale data center facilities from Umatilla, Morrow, and Crook Counties. Each facility is 100 acres or larger.

Amazon Web Services (AWS) | Umatilla County, Oregon

Figure 1: AWS Data Center, Umatilla County, Oregon
Image Source: Umatilla County Interactive Map

- Site Address: 77954 Cottonwood Bend Road, Hermiston, OR 97838
- Year Developed: 2022 - 2023
- Site Size: 126 acres (including 9-acre dedicated substation)
- Buildings: Four single-story buildings – one at 217,900 SF and three at 250,000 SF each
- Estimated Floor Area Ratio (FAR)[6]: 0.18

[6] "Floor Area Ratio" is defined as the ratio of the total amount of enclosed gross floor area of buildings to the total size of the site.

Figure 2: AWS Data Center, City of Umatilla, Oregon
Image Source: Umatilla County Interactive Map

- Site Address: 81708 Lind Road, Hermiston, OR 97838
- Year Developed: 2023
- Site Size: 187 acres (including 9.1-acre dedicated substation)
- Buildings: Four single-story buildings – two at 218,000 SF, one at 220,000 SF, and one at 230,000 SF
- Estimated Floor Area Ratio (FAR): 0.11

Apple, Inc. | City of Prineville, Oregon

Figure 3: Apple Data Center, Prineville, Oregon
Image Source: Crook County Interactive Map

- Site Address: 1600 SW Baldwin Road, Prineville, OR 97754
- Year Developed: 2012 - 2023
- Site Size: 154 acres (including ±2-acre dedicated substation)
- Buildings: Three single-story buildings – one at ±270,000 SF and two at ±338,000 SF each
- Estimated Floor Area Ratio (FAR): 0.14

Facebook | City of Prineville, Oregon

Figure 4: Facebook Data Center, Prineville, Oregon
Image Source: Crook County Interactive Map

- Site Address: 735 SW Connect Way, Prineville, OR 97754
- Year Developed: 2011 - 2023
- Site Size: ±363 acres (including three dedicated substations totaling ±12.8 acres)
- Buildings: Eleven buildings totaling ±4.6 million SF
- Estimated Floor Area Ratio (FAR): 0.29

Amazon Web Services (AWS) | Morrow County, Oregon

Figure 5: AWS Data Center, Morrow County, Oregon
Image Source: Morrow County Interactive Map

- Site Address: 75300 Lewis and Clark Drive, Boardman, OR 97818
- Year Developed: 2021 – 2022
- Site Size: 108 acres (including 10-acre dedicated substation)
- Buildings: Four single-story buildings – one at 208,000 SF, one at 209,000 SF, one at 212,000 SF, and one at 213,000 SF
- Estimated Floor Area Ratio (FAR): 0.18

Amazon Web Services (AWS) | Morrow County, Oregon

Figure 6: AWS Data Center, Morrow County, Oregon
Image Source: Morrow County Interactive Map

- Site Address: 75246 Gar Swanson Drive, Boardman, OR 97818
- Year Developed: 2023
- Site Size: 100 acres (including 7.8-acre dedicated substation)
- Buildings: Four single-story buildings – one at 208,000 SF and three at 216,000 SF
- Estimated Floor Area Ratio (FAR): 0.20

III. RECOMMENDATIONS

Based on information from the Industrial Development Competitiveness Matrix and the findings in this technical memo, Mackenzie recommends the following siting criteria for the hyperscale data centers discussed in the City of Hermiston's EOA.

TABLE 2: SITING CRITERIA FOR HYPERSCALE DATA CENTERS		
Criteria		***Hyperscale Data Center***
Physical Site		
Total Site Size*	Competitive Acreage**	100+
Competitive Slope	Maximum Slope	0 - 5%
Transportation		
Trip Generation	Average Daily Trips Per Acre	15 - 45
Miles to Interstate or Freight Route	Miles	within 30
Railroad Access	Dependency	Not Required
Proximity to Marine Port	Dependency	Not Required
Proximity to International / Regional Airport	Dependency	Not Required
Utilities		
Water	Minimum Line Size (inches diameter)	12" – 16"
	Minimum Fire Line Size (inches diameter)	10" - 12"
	High Pressure Water Dependency	Required
	Flow (gallons per day per acre)	1,000†
Sanitary Sewer (if used for wastewater or cooling water disposal)	Minimum Service Line (inches diameter)	8" - 10"
	Flow (gallons per day per acre)	500 - 1,000‡
Natural Gas	Minimum Service Line	4"

	(inches diameter)	
	On Site	Competitive
Electricity	Min. Service Demand	60 - 240 MW
	Close proximity to substation	Required on-site
	Redundancy Dependency	Required
Telecommunications	Major Communications Dependency	Required
	Route Diversity Dependency	Required
	Fiber Optic Dependency	Required
Special Considerations		▪ Power delivery, water supply, and security are critical. ▪ May require high volume/supply of water and sanitary sewer treatment. ▪ Sites should be located outside areas of special flood hazard. ▪ Site designs typically provide a buffer between cooling equipment/backup generators and any nearby residential uses.

Terms: "Required" factors are seen as mandatory in a vast majority of cases and have become industry standards.
"Competitive" significantly increases marketability and is highly recommended. May be linked to financing in order to enhance the potential reuse of the asset in case of default.
"Not required" does not apply for the industry and/or criteria.

* Total Site: Building footprint, including buffers, setbacks, parking, mitigation, and expansion space.

** Competitive Acreage: Acreage that would meet the site selection requirements of the majority of industries in this sector.

† Water Requirements: While the Business Oregon Industrial Development Competitiveness Matrix identifies water requirements in gallons per MWh for data centers, this table uses gallons per acre.

‡ Sanitary Sewer Requirements: Water and sewer requirements are highly variable based on cooling methods and water reclamation practices and should be reviewed on a case-by-case basis for specific development requirements. Alternative approaches to wastewater management may drastically reduce the need for sanitary sewer capacity.

ATTACHMENT 1

BUSINESS OREGON INDUSTRIAL DEVELOPMENT COMPETITIVENESS MATRIX

Source: Mackenzie, Business Oregon

STATE OF OREGON - Infrastructure Finance Authority
Industrial Development Competitiveness Matrix

			Production Manufacturing		Value-Added Manufacturing and Assembly		Light / Flex Industrial			Warehousing & Distribuiton		Specialized		
	PROFILE		A	B	C	D	E	F	G	I	H	J	K	L
	CRITERIA		Heavy Industrial / Manufacturing	High-Tech / Clean-Tech Manufacturing	Food Processing	Advanced Manufacturing & Assembly	General Manufacturing	Industrial Business Park and R&D Campus	Business / Admin Services	Regional Warehouse / Distribution	Local Warehouse / Distribution	UVA Manufacturing / Research	Data Center	Rural Industrial
1	**GENERAL REQUIREMENTS**		Use is permitted outright, located in UGB or equivalent and outside flood plain; and site (NCDA) does not contain contaminants, wetlands, protected species, or cultural resources or has mitigation plan(s) that can be implemented in 180 days or less.											
	PHYSICAL SITE													
2	TOTAL SITE SIZE**	Competitive Acreage*	10 - 100+	5 - 100+	5 - 25+	5 - 25+	5 - 15+	20 - 100+	5 - 15+	20 - 100+	10 - 25+	10 - 25+	10 - 25+	5 - 25+
3	COMPETITIVE SLOPE:	Maximum Slope	0 to 5%	0 to 5%	0 to 5%	0 to 7%	0 to 5%	0 to 7%	0 to 12%	0 to 5%	0 to 5%	0 to 7%	0 to 7%	0 to 5%
	TRANSPORTATION													
5	TRIP GENERATION:	Average Daily Trips per Acre	40 to 60 (ADT / acre)	40 to 60 (ADT / acre)	50 to 60 (ADT / acre)	40 to 60 (ADT / acre)	40 to 50 (ADT / acre)	60 to 150 (ADT / acre)	170 to 180 (ADT / acre)	40 to 80 (ADT / acre)	40 to 80 (ADT / acre)	40 to 80 (ADT / acre)	20 to 30 (ADT / acre)	40 to 50 (ADT / acre)
6	MILES TO INTERSTATE OR OTHER PRINCIPAL ARTERIAL:	Miles	w/ in 10	w/ in 10	w/ in 30	w/ in 15	w/ in 20	N/A	N/A	w/ in 5 (only interstate or equivalent)	w/ in 5 (only interstate or equivalent)	N/A	w/ in 30	N/A
7	RAILROAD ACCESS:	Dependency	Preferred	Preferred	Preferred	Not Required	Preferred	Preferred	Not Required	Preferred	Preferred	Not Required	Avoid	N/A
8	PROXIMITY TO MARINE PORT:	Dependency	Preferred	Preferred	Preferred	Not Required	Preferred	Preferred	Not Required	Preferred	Preferred	Not Required	Not Required	N/A
9	PROXIMITY TO REGIONAL COMMERCIAL AIRPORT:	Dependency	Preferred	Competitive	Preferred	Competitive	Preferred	Required	Preferred	Preferred	Preferred	Preferred	Competitive	N/A
		Distance (Miles)	w/ in 60	w/ in 60	w/ in 60	w/ in 30	w/ in 60	w/ in 30	w/ in 60	w/ in 60	w/ in 60	w/ in 30	w/ in 60	N/A
10	PROXIMITY TO INTERNATIONAL AIRPORT:	Dependency	Preferred	Competitive	Preferred	Competitive	Preferred	Competitive	Preferred	Preferred	Preferred	Competitive	Preferred	N/A
		Distance (Miles)	w/ in 300	w/ in 300	w/ in 300	w/ in 100	w/ in 300	w/ in 100	w/ in 300	w/ in 300	w/ in 300	w/ in 100	w/ in 300	N/A
	UTILITIES													
11	WATER:	Min. Line Size (Inches/Dmtr)	8" - 12"	12" - 16"	12" - 16"	8" - 12"	6" - 10"	8" - 12"	4" - 6"	4" - 8"	4" - 6"	4" - 8"	16"	4" - 8"
		Min. Fire Line Size (Inches/Dmtr)	10" - 12"	12" - 18"	10" - 12"	10" - 12"	8" - 10"	8" - 12"	6" - 10"	10" - 12"	6" - 8"	6" - 10"	10"-12"	6" (or alternate source)
		High Pressure Water Dependency	Preferred	Required	Required	Preferred	Not Required	Preferred	Not Required	Not Required	Not Required	Not Required	Required	Not Required
		Flow Gallons per Day per Acre)	1600 (GPD / Acre)	5200 (GPD / Acre)	3150 (GPD / Acre)	2700 (GPD / Acre)	1850 (GPD / Acre)	2450 (GPD / Acre)	1600 (GPD / Acre)	500 (GPD / Acre)	500 (GPD / Acre)	1600 (GPD / Acre)	50-200 (Gallons per MWh) †	1200 (GPD / Acre)
12	SEWER:	Min. Service Line Size (Inches/Dmtr)	6" - 8"	12" - 18"	10" - 12"	10" - 12"	6" - 8"	10" - 12"	6" - 8"	4"	4"	6"	8"-10"	4" - 6" (or on-site source)
		Flow (Gallons per Day per Acre)	1500 (GPD / Acre)	4700 (GPD / Acre)	2600 (GPD / Acre)	2500 (GPD / Acre)	1700 (GPD / Acre)	2000 (GPD / Acre)	1600 (GPD / Acre)	500 (GPD / Acre)	500 (GPD / Acre)	1300 (GPD / Acre)	1000 (GPD / Acre) ‡	1000 (GPD / Acre)
13	NATURAL GAS:	Preferred Min. Service Line Size (Inches/Dmtr)	4" - 6"	6"	4"	6"	4"	6"	2"	2"	2"	2"	4"	N/A
		On Site	Competitive	Competitive	Preferred	Competitive	Competitive	Competitive	Preferred	Preferred	Preferred	Preferred	Preferred	Preferred
14	ELECTRICITY:	Minimum Service Demand	2 MW	4-6 MW	2-6 MW	1 MW	0.5 MW	0.5 MW	0.5 MW	1 MW	1 MW	0.5 MW	5-25 MW	1 MW
		Close Proximity to Substation	Competitive	Competitive	Not Required	Competitive	Preferred	Competitive	Preferred	Not Required	Not Required	Not Required	Required, could be on site	Not Required
		Redundancy Dependency	Required	Preferred	Not Required	Required	Not Required	Competitive	Required	Not Required	Not Required	Not Required	Required	Not Required
15	TELECOMMUNICATIONS:	Major Communications Dependency	Preferred	Required	Preferred	Required	Required	Required	Required	Preferred	Preferred	Required	Required	Preferred
		Route Diversity Dependency	Not Required	Required	Not Required	Required	Not Required	Preferred	Required	Not Required	Not Required	Not Required	Required	Not Required
		Fiber Optic Dependency	Preferred	Required	Preferred	Required	Preferred	Required	Required	Preferred	Preferred	Required	Required	Not Required
16	**SPECIAL CONSIDERATIONS:**		Adequate distance from sensitive land uses (residential, parks, large retail centers) necessary. High throughput of materials. Large yard spaces and/or buffering required. Often transportation related requiring marine/rail links.	Acreage allotment includes expansion space (often an exercisable option). Very high utility demands in one or more areas common. Sensitive to vibration from nearby uses.	May require high volume/supply of water and sanitary sewer treatment. Often needs substantial storage/yard space for input storage. Onsite water pre-treatment needed in many instances.	Surrounding environment of great concern (vibration, noise, air quality, etc.). Increased setbacks may be required. Onsite utility service areas. Avoid sites close to wastewater treatment plants, landfills, sewage lagoons, and similar land uses. Lower demands for water and sewer treatment than Production High-Tech Manufacturing.	Adequate distance from sensitive land uses (residential, parks) necessary. Moderate demand for water and sewer. Higher demand for electricity, gas, and telecom.	High diversity of facilities within business parks. R&D facilities benefit from close proximity to higher education facilities. Moderate demand on all infrastructure systems.	Relatively higher parking ratios may be necessary. Will be very sensitive to labor force and the location of other similar centers in the region. High reliance on telecom infrastructure.	Transportation routing and proximity to/from major highways is crucial. Expansion options required. Truck staging requirements mandatory. Minimal route obstructions between the site and interstate highway such as rail crossings, drawbridges, school zones, or similar obstacles.	Transportation infrastructure such as roads and bridges to/from major highways is most competitive factor.	Must be located withn or near FAA-regulated UAV testing sites. Moderate utility demands. Low reliance on transportation infrastructure.	Larger sites may be needed. The 25 acre site requirement represents the more typical site. Power delivery, water supply, and security are critical. Surrounding environment (vibration, air quality, etc.) is crucial. May require high volume/supply of water and sanitary sewer treatment.	Located in more remote locations in the state. Usually without direct access (within 50 miles) of Interstate or City of more than 50,000 people.

Mackenzie; Business Oregon

Terms:

More Critical ↑ Less Critical	**'Required'** factors are seen as mandatory in a vast majority of cases and have become industry standards
	'Competitive' significantly increases marketability and is *highly recommended by Business Oregon* . May also be linked to financing in order to enhance the potential reuse of the asset in case of default.
	'Preferred' increases the feasibility of the subject property and its future reuse. Other factors may, however, prove more critical.

* Competitive Acreage: Acreage that would meet the site selection requirements of the majority of industries in this sector.

**Total Site: Building footprint, including buffers, setbacks, parking, mitigation, and expansion space

† Data Center Water Requirements: Water requirement is reported as gallons per MWh to more closely align with the Data Center industry standard reporting of Water Usage Effectiveness (WUE).

‡ Data Center Sewer Requirements: Sewer requirement is reported as 200% of the domestic usage at the Data Center facility. Water and sewer requirements for Data Centers are highly variable based on new technologies and should be reviewed on a case-by-case basis for specific development requirements.

The industries, people, and trends driving Oregon's economy

The Impacts of Data Processing in Oregon

January 31, 2025

by Damon Runberg, Business Oregon Economist

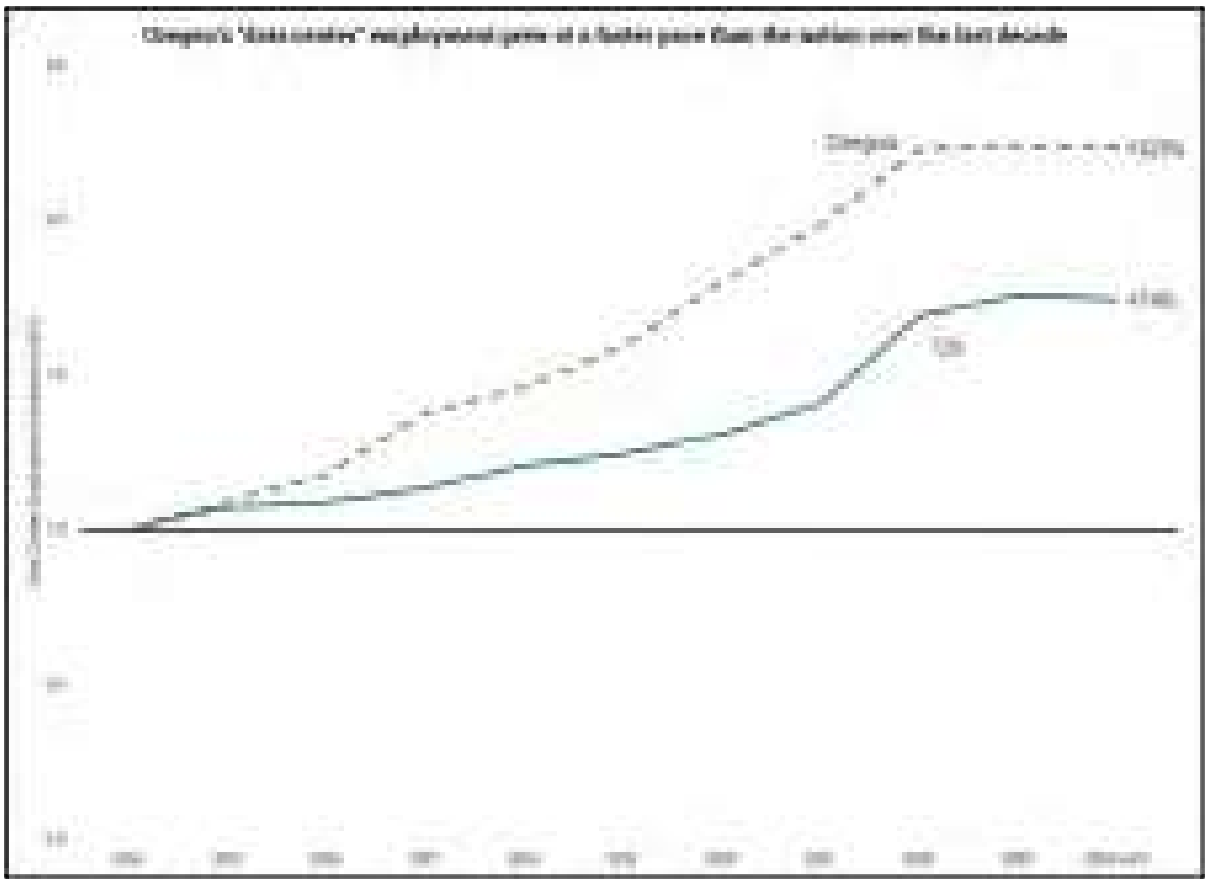
Our work and personal lives are increasingly moving to online cloud-based platforms. Fewer documents are stored on our personal hard drives and instead are being stored in the cloud for quick and convenient access. Even software is less available in a hard copy and encouraged to be purchased as a cloud-based product downloaded onto your computer. We also now have access to personal AI tools, like ChatGPT, where computation and processing happen online.

These technological transitions of how data is stored and processed has led to an increased demand for data centers. Moving documents, pictures, or other content into the cloud doesn't mean they no longer take up space. Instead of taking up space on your personal hard drive or a thumb drive, these digital materials now live in data centers.

Oregon has been a beneficiary of this transition with rapid growth in these data processing and computing infrastructure providers, most often referred to as data centers. Why Oregon? Data centers use an incredible amount of electricity to operate, and Oregon has relatively inexpensive electricity rates, making it a competitive location for these data centers. Additionally, much of the power generated in the state is carbon neutral as it comes from hydroelectric dams. This type of power is attractive to the many companies that are trying to lower their carbon footprint. The climate of the region also plays an important role in Oregon's selection as a data center location. Many of these data centers are being placed in Oregon's high desert or along the eastern portion of the Columbia River Gorge. The cool and dry temperate climate helps to save money on climate control for these facilities.

These data centers often have a reputation as being small employers. But that is not true here in Oregon. The combined average employment of data centers in Oregon through the first half of 2024 was around 7,800 employees. Just ten years ago, employment levels were only around 3,500—less than half of today's levels. Some of this "growth" came from non-economic code changes as firms were moved into this sector from other industries (~1,000 jobs). However, there was real economic growth with the industry adding around 3,300 jobs above these gains from the industry code changes since 2014 (+95%).

This is a growing industry sector across the nation with significant growth over the last decade. However, Oregon's growth far outpaced this national growth. This has resulted in Oregon gaining notable market share in data centers, computing infrastructure, and other data processing sectors. It is important to note that the industry growth has been flat since 2022 at both the national and state levels, likely reflecting softening in the tech sector during the same period.



Not only has the industry seen significant growth over the past decade, but the jobs that were added are high-paying. The average annual wage for data center jobs in Oregon was over $172,000 in 2023. This average wage is more than 2.5 times higher than the statewide average wage for all industries ($68,280). And it is important to note that these jobs are disproportionally represented in Oregon's rural communities east of the Cascade mountains. These data centers are a critical source of high-paying jobs in communities, such as Crook, Wasco, Morrow, and Umatilla counties. These workers then spend their income throughout the community on things like housing, groceries, and entertainment, distributing these earnings across other parts of the local economy.

The economic impact of these data centers doesn't end with direct spending and jobs. Broader economic impacts of these data processing facilities were calculated using the software application IMPLAN, which estimates multiplier effects of economic activities. Multipliers estimate the impact that a change in economic activity—like business or employee spending—will have on total economic output. Let's call this the ripple effect of an industry.

In addition to the direct employment of around 7,800 jobs these data centers also contribute roughly $2.8 billion to the state's gross output (GDP). That equates to nearly 1% of Oregon's total GDP. Finally, these direct workers contribute nearly $89 million in state income taxes.

Economic Impacts of Oregon's Data Centers

	Jobs	Valued Added (GDP)	State Income Taxes
Direct	7,786	$2,823,607,483	$88,814,902
Businss Spending	8,140	$918,158,317	$44,929,665
Employee Spending	7,959	$928,834,862	$48,329,872
Total Impact	23,886	$4,670,600,662	$182,074,440

However, the impact of these data centers goes beyond direct employment. The data centers themselves are significant purchasers of both goods and services. This business spending supports around 8,100 jobs and $918 million in gross output. While not all of this business spending directly supports Oregonians (some suppliers are businesses based outside Oregon), many local businesses still benefit from this spending. These indirect jobs include security services, facility/ building maintenance, and other suppliers for these technical facilities.

Finally, these data center employees spend their hard-earned wages across the economy. Most of that spending happens locally, including groceries, medical care, housing, restaurants, recreation, etc. This employee spending supports around 7,900 jobs and $928 million in gross output.

The combined annual economic impact of data centers in Oregon through direct employment, business spending, and employee spending is over 23,000 jobs, $4.6 billion in economic output, and around $182 million in state income taxes.

Data Centers are a big deal in Oregon, particularly for these rural communities who host one of the large data centers, as they support high-wage jobs, support other businesses in the community through both business and employee spending, and have proven to be good neighbors.

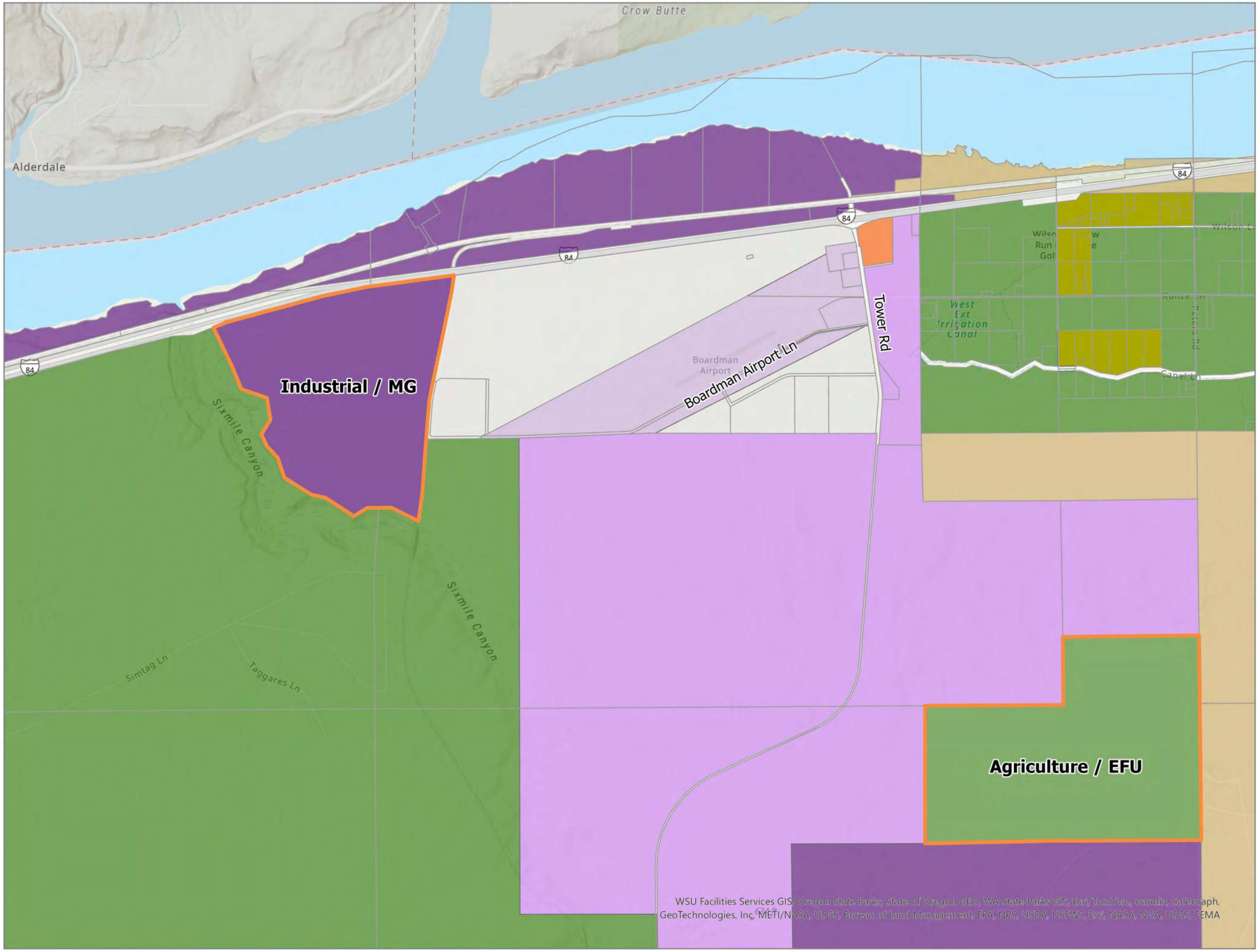


EXHIBIT 19
Proposed Zone Amendments

LEGEND

- Proposed Map Amendments
- Tax Lots

Zoning

- Airport Industrial
- Airport Light Industrial
- Exclusive Farm Use
- Farm Residential
- General Industrial
- Public
- Space Age Industrial
- Tourist Commercial

0 1,750 3,500 7,000 Feet

1 inch = 3,500 Feet

N

SOURCE DATA:
Morrow County Data, 2024
FEMA Data, 2025

GEOGRAPHIC PROJECTION:
NAD 83 HARN, Oregon North Lambert Conformal Conic

Date: 2/27/2025
File: Zoning Map

Map Created By: IAS
Project No: 2240364.00

MACKENZIE.
P 503.224.9560 • F 503.228.1285 • W MCKNZE.COM
RiverEast Center, 1515 SE Water Avenue, #100, Portland, OR 97214
Portland, Oregon • Vancouver, Washington • Seattle, Washington

Draft Minutes of the Public Meeting of the Morrow County Planning Commission Tuesday, April 29, 2025, 6:00 pm Morrow County Government Center 215 NE Main Ave Irrigon, OR

COMMISSIONERS PRESENT:
Stacie Ekstrom, Chair
Karl Smith
Stephen Henthorn
Charlene Cooley
John Kilkenny

COMMISSIONERS ABSENT:
Brian Thompson
Liz Peterson

ATTENDANCE via ZOOM:
Andy Cemore
Trip Finch

STAFF PRESENT:
Tamra Mabbott, Planning Director
Kaitlin Kennedy, Code Compliance Planner
Michaela Ramirez, Administrative Assistant
Jim Bagley, Principal Planner
Staff Zoom:
Stephen Wrecsics, GIS Analyst
Clint Shoemake, Planning Technician

1. **CALL TO ORDER**
   Chair Ekstrom called the meeting to order at 6:00 PM

2. **ROLL CALL**

3. **PLEDGE**

4. **APPROVAL OF FEBRUARY 25th, 2025 DRAFT MINUTES**
   Recommended Action: Approve
   Action: Unanimously Approved
   Director Mabbott shared that she consulted with legal counsel about previous minutes and suggested that the minutes could use more detail.

I. **Conditional Use permit CUP-N-386-25: Jose A. Arredondo Campos, Applicant, and Owner.**
Chair Ekstrom opened the hearing and read the Opening Statement, and called for conflicts of interest.
Conflicts of interest: None
Application presented by: Code Compliance Planner, Kaitlin Kennedy

Request: Conditional Use Permit to allow the storage and operation of a commercial trucking business on a residential property. The property is described as Tax Lot 1600 of Assessor's Map 5N26E24CA. The subject parcel is zoned Suburban Residential (SR) and is located outside of the City of Irrigon's Urban Growth Boundary (UGB). Criteria for approval include Morrow County Zoning Ordinance (MCZO) Article 3 Section 3.050, Suburban Residential, and Article 6 Section 6.050.G, Standards Governing Conditional Uses, Home Occupations.

Chair Ekstrom called for applicant or persons in favor or opposed.

Testifying Parties:
Jose Arredondo, 230 NW Oregon Ave, Irrigon, OR
Nancy Cano, 220 NW Oregon Ave, Irrigon, OR
Aaron Palmquist, Irrigon City Manager, 500 NE Main Ave, Irrigon
Rhonda Riley, 255 NW Oregon Ave, Irrigon, OR
Mary Killion, 78852 Toms Rd, Boardman, OR 97818

Applicant Arredondo: He would be happy to get his permit accepted and be given time to move the trucks off the property. He made sure to keep things in order with the rules after he was made aware of them.
Staff: Kaitlin Kennedy: If your permit was denied, what would be a reasonable time to move your trucks?
Applicant Arredondo: He would need at least until next year.
Chair Ekstrom: Do the hours of operation work for you?
Applicant Arredondo: Yes
Chair Ekstrom: Are mechanics done on the property?
Applicant Arredondo: Only simple mechanics. He was not aware of the city rules; other wise he wouldn't have purchased the property.
Commissioner Henthorn: Pointed out that the property is surrounded by city lots.
Opponent Nancy Cano: The area is zoned Suburban Residential and not commercial. She said there is damage to the roadways, potential contamination to the water, noise from trucks running all day, and the only time trucks were not running was when they were in Mexico. She expressed her concern about safety through a personal experience. She was also concerned about their property value.
Commissioner Kilkenny: Why were trucks running all the time?
Opponent Nancy Cano: She didn't know.
Opponent Aaron Palmquist: Spoke on Ordinance 222-14, city code for a truck route. He said the property is in the county, but road access was a city street, not a truck route. Trucks using the street were in violation. He claimed the applicant had been given warnings and would be subject to penalties if the county granted the permit. He also said the county was setting the applicant up for failure if the permit was granted. He proposed that the county should work out a workable means of property for these particular CUPs. He stated that he had authority to cite violators of City Code.
Commissioner Henthorn: Aaron, how could you cite someone who was not in city limits?
Opponent Aaron Palmquist: If they drove on his city roads, he had the right to cite them.
Staff Kaitlin Kennedy: Had the city planned on including the said property in the UGB?
Opponent Aaron Palmquist: Not at this time.
Chair Ekstrom: Are there any properties in Irrigon that are available?
Opponent Aaron Palmquist: No, not currently. The only current commercial property available is on Highway 730.
Commissioner Kilkenny: said it seemed that there wasn't an available solution.
Opponent Aaron Palmquist: responded the solution isn't available but if particular parties chaired together, but that hadn't happened in the years he has been Manager.
Commissioner Henthorn: asked if enough parties came together would he approve it.
Opponent Aaron Palmquist: No, but he believed that there were properties that would affect or benefit the problem, but no one had come forward.
Opponent Rhonda Riley: Claimed the trucks were loud, smelly, destroying the road, and ran all night. She mentioned the roads were narrow.
Proponent Mary Killion: Expressed that she was sympathetic to Mr. Arredondo because he had a right to make a living. Finding property is expensive and hard to find.

Neutral: None
Applicant Arredondo rebuttal: Stated that the trucks had not been moved in the last 6 months, and the person living in the RV moved out 2 months ago.
Commissioner Cooley: Asked if he had refrigerated units?
Applicant Jose: No, two trucks, one flatbed and an agriculture trailer, and two ten-wheelers.
Commissioner Kilkenny: Did the application indicate how many months of the year the trucks were being used?
Applicant Arredondo: Yes, he said he indicated in the permit that the trucks ran three months out of the year, but they only run one month. He went on to explain the situation with the flatbed.
Director Mabbott: Asked if he was aware of the city regulations?
Applicant Arredondo: He said he didn't know before, but he does now.

Public Hearing is closed by Chair Ekstrom.

Commissioner Cooley: asked about the dollar amount of the citation Mr. Arredondo would receive.
Opponent Aaron Palmquist: responded $260 a day. He also stated that he had been notified last fall and that there were other issues that aren't substance to the criteria, such as an RV.
Staff Kaitlin Kennedy: said she had already resolved that issue with the RV.
Commissioner Finch: Asked if the applicant received a citation, is it adjudicated before the Justice of the Peace in the county or the city? If he were granted the permit, would the citations be argued in court?
Chair Ekstrom: No, the Justice of the Peace is in the County.
Opponent Aaron Palmquist: said the city also has a Justice Court and the judge has been dealing with the trucks.
Commissioner Finch: He also asked if the property could be annexed into the city.
Director Mabbott: Responded and said it would be quite the process to annex the property.
Commissioner Kilkenny: asked if there were other lots like this with similar circumstances.
Opponent Aaron Palmquist: Yes, he is looking at them and trying to figure out a time frame to look at all of them, amongst other hot issues, then you have to go through the process.
Legal Counsel Kearns: Responded that it was hard for him to interpret because he didn't know the designation of the streets. He asked how many citations had been issued since 2015 and prosecuted under the said ordinance.
Commissioner Henthorn: asked if the permit could be granted as a non-renewable Conditional Use Permit.
Director Mabbott: This permit is about the 13th one. Each permit has been approved for a year with a maximum renewal. The other option is that the permit be denied and the applicant would then work with code enforcement, which would be much cleaner. She went on to explain that in their attempt to clean up particular neighborhoods, they had granted temporary permits so that they wouldn't be put out of business. She mentioned that the department had made efforts to zone enough land for commercial and industrial use, and we need more of that. Most of the property owners have purchased their properties to make it their home and business, not knowing the rules.
Chair Ekstrom: asked for a time frame comparing a denial to an approval.
Director Mabbott: said that if they were denied, they would be on a Correction Plan.
Staff Kaitlin Kennedy: said the Correction Plans had been very successful.
Recommended Action: Approve **Conditional Use permit CUP-N-386-25 for one year without an annual renewal opportunity.**
Motion: Approve **Conditional Use permit CUP-N-386-25 for a one-year non-renewable**
Motion by: Commissioner Kilkenny
Seconded by: Commissioner Finch
Vote: All voted (except chair Ekstrom) passed unanimously

Action: Approved

Presented by: Planning Director Tamra Mabbott

II. ACM-155-25 Comprehensive Plan Amendment and AZM-156-25 Zoning Map Amendment, Threemile Canyon Farms, Applicant and Owner.

Conflicts of interest: Commissioner Henthorn declared a conflict and left the table and sat in the audience.

Request: The property is located approximately two miles west of the Boardman Airport, south of I-84 off Boardman Airport Lane. The application proposes to amend the Comprehensive Plan Map and Zoning Map to rezone approximately 1,298 acres from Space Age Industrial (SAI) and Exclusive Farm (EFU) to General Industrial with a Limited Use Overlay Zone to allow only exascale data centers. Applicable Criteria include Morrow County Zoning Ordinance (CZO) Article 8 Amendments and Oregon Administrative Rules (OAR) Chapter 660 Division 004.

Director Mabbott read a letter from Jon Jinings, Department of Land Conservation.
Motion: To add the letter from Jon Jinings to the record, Commissioner Cooley
Seconded by: Commissioner Kilkenny
Approved unanimously.

Chair Ekstrom opened the testimony part of the Public Hearing

Testifying Parties:
Megan Lin, Attorney Perkins Coie, 10885 NE Fourth St, Ste. 700 Bellevue, WA 98004
Greg Harris, General Manager of Farm Operations, Threemile Canyon Farms, LLC, 75906 Threemile Rd, Boardman, OR 97818
Scott Neal, President of Real Estate, 3243 June Lane, Naples, Florida,
Phil Scoles, Soils Scientist, Terra Science, Inc, 4710 SW Kelly Ave, Portland, OR,
Lee Leighton, Mackenzie, Portland
Ian Sisson, Mackenzie, Portland
Brendon Buckley, Johnson Economics, Portland, OR
Janet Jones, Traffic Engineer, PE, David Evans and Associates
Jacob Cain, Director of Engineering, Port of Morrow, Boardman, OR
Miff Devin, Construction/Hydrant Water, Port of Morrow, Boardman, OR
Mary Killion, 78552 Camps road, Boardman, OR,

Megan Lin, Attorney: Gave a description of the application submitted and why the property was the best fit.
Scott Neal, RD Offutt Company: Presented information as to why the land was currently appropriate for data centers and mentioned the accessibility to utilities and roadways.
Greg Harris, Manager, Threemile Canyon Farms: Addressed how much of the acreage at the farm is irrigated, (41 thousand acres). The land that was signed over for the conservation easement, zoned SAI, was done in the early 2000s. The proposed rezone land is cost prohibited for irrigation and used for grazing. He stated that he is protecting land zoned for farm use. The Conservation land is not a perpetual Conservation easement; it does have a time frame and expires in a few years.
Phil Scoles, soil scientist: Explained the different types of soils. He said the government had predicted what type of soil would be at this particular site. He classified the soil at this particular site. He used a hand auger to check the soil (see slides 7-12)
Director Mabbott: Asked if the area considered upzone was irrigated.
Greg Harris: Responded no.

Director Mabbott: Asked why the parcel where they placed the vineyard was suitable for farming and compared to the subject rezone area that had the same soil.
Phil Scoles: Responded that some of the areas had the right amount of depth of soil.
Greg Harris: Responded that they had regret placing the vineyard where they did because of the rocks.
Lee Leighton, Mackenzie Group: Read through slides 13-17 that pertained to rapid growth and trends.
Brendan Buckley, Johnson Economics: Read through, slides 18-25. He presented an overview of the growth in our county, how many campuses are currently in the county, and how many were going to be built. He also gave details on what it took for a campus to run and the economic impact.
Ian Sisson, Mackenzie Group: Read through slides 26-32. He spoke on alternative areas of analysis. The reason they chose this was based on the size of the parcel, accessibility to power, and water.
Director Mabbott: What linear order are the campuses developed?
Brendon Buckley: Responded that the construction was phased because it would be difficult to build a campus all at once, because of the size, and referred to slide 23. It takes 2-3 years for the development of a campus. He went on to read through slides 37-42.
Janet Jones, traffic engineer: Read through slides 43-50, which were on the topic of the traffic analysis for the site.
Megan Lin: Closed the presentation with slides 51-52.
Commissioner Finch: Stated there was concern within the community about water and asked if there was an analysis done on the impact.
Megan Lin: Referred to the Water Service Provider letter submitted into the record, Exhibit 17b, she also suggested that Miff from the Port of Morrow could answer any water questions.
Commissioner Kilkenny: Asked if it was Columbia River water and not well water.
Miff Devin, Construction/Hydrant Water : Responded that it would be Columber River water and not well water. He said that the well on sight would provide water by the 1st of July. He also said the treatment plant would provide water next year, and water rights had already been accepted.
Megan Lin: Explained that the industrial wastewater, which is non-contact cooling water, does not touch any of the electronics as it passes through the facility to cool down the equipment. The water would then be conveyed via subsurface pipes into open open-lined pond that stores and evaporate the non-contact cooling water.
Director Mabbott: Said she would add the details of the wastewater to the site plan review.
Commissioner Finch: Asked if electricity will come from Pacific Power.
Megan Lin: It would come from the south, where the source is Pacific Power.
Commissioner Finch: Expressed that there was a concern about the usage of power, making rates go up. He then asked if the power was coming from Pacific Power and not the local utilities.
Megan Lin: Responded, correct.
Director Mabbott: Pointed out that Pacific Power would provide the site with power regardless if they had the capacity or not. She also said that would be a question the department would ask during the Site Plan Review.
Megan Lin: Stated that one of the conditions read: there would be no development without a site plan review.
Scott Neal: Said that 2/3 of the property is irrigated, and they used the Conservation Land to square the parcel off.
Commissioner Kilkenny: Commented that he didn't consider the conservation easement as land use because it is not used for agriculture. He also mentioned he couldn't believe the Fish and Wildlife was releasing the land. He asked why they chose that land for a swap.

Megan Lin: Explained that they were trying to square off the land and not interrupt Threemile land holding. She went on to say there was no specific reason.
Scott Neil: Confirmed what Megan said about squaring off the piece, and the land will always be in conservation, never to be farmed.
Proponents: None
Opponent: Mary Killion: Pointed out how many acres Oregon loses per year, it is ground right next to the Columbia River, very good cattle ground, she will be impacted as a Morrow County citizen with the data center development. She brought in a map of the proposed data centers.
Motion by: Commissioner Cooley motioned to enter the PowerPoint and IAMP map into record.
Seconded by: Commissioner Kilkenny
Neutral: None
The applicant requested a small minute break. Five minute recess.
Megan Lin: They decided they had no rebuttal for the opponent.
Commissioner Finch: Asked if the swap (downzone) piece of land could be changed. He suggested to move the land piece to the west so that farmland could stay farmland and stay out of the Conservation area.
Megan Lin: Suggested making the part smaller.
Commissioner Finch: Responded that it wouldn't work, the acreage would have to stay the same.
Megan Lin: Pointed out that currently there was a 100-acre differential, and the swap wasn't meant to meet a specific legal criterion, and this was Threemile's request.
Commissioner Finch: Said the land swap was necessary to preserve state goal 3.
There was discussion about the downzone area and GIS Analyst Stephen Wrecsics shared a map with modified boundaries.
The map with the modified acreage swap was accepted into the record as Exhibit 4. The map showed the downzone acreage changed to 1,623 from 1,605 acres.
Motion by: Commissioner Cooley
Seconded by: Commissioner Smith

Public Hearing is closed by Chair Ekstrom.

Director Mabbott: Commented that she and Megan Lin would review the conditions and the agreed changes to the downzone area and update the Findings.

Motion: Approve **ACM-155-25 Comprehensive Plan Amendment and AZM-156-25 Zoning Map Amendment, and, approve ACM-157-25 Comprehensive Plan Amendment and AZM-158-25 Zoning Map Amendment, with modification to the area, Threemile Canyon Farms, Applicant and Owner.**

Motion by: Commissioner Finch
Seconded by: Commissioner Kilkenny
Vote: Kilkenny, Finch, and Cooley voted in favor. Commissioner Smith voted in opposition. Chair Ekstrom did not vote.
Action: Approved

Other Business: April Planning Update in packet.
Correspondence: None
Public Comment: None
Adjourned: Meeting adjourned at 9:13 PM

Next Meeting: Tuesday, May 27, 2025, at 6:00 p.m. The next meeting will be held in Heppner, OR, in the Bartholomew Building.

Respectfully submitted,
Michaela Ramirez

4/29/25 Planning Commission Audio Files can be found on the Morrow County website.

April 29, 2025 Planning Commission Meeting

Exhibits submitted for AZM-155-, ACM-156, AZM-157, AZM-158

Exhibit #	Submitted by	Exhibit description	
1	Jon Jinings, DLCD	Letter	
2	Megan Lin, Perkins Coie	Powerpoint	
3	Mary Killion,	IAMP map	
4	Planning Staff	Proposed map	

Outlook

Threemile Canyon Farms, LLC Plan and Zone Change

From JININGS Jon * DLCD <Jon.JININGS@dlcd.oregon.gov>
Date Tue 4/29/2025 4:28 PM
To Tamra Mabbott <tmabbott@morrowcountyor.gov>
Cc HERT Dawn * DLCD <Dawn.Hert@dlcd.oregon.gov>; FOOTE Hilary * DLCD <Hilary.FOOTE@dlcd.oregon.gov>; MCILVAINE Leigh * DLCD <Leigh.MCILVAINE@dlcd.oregon.gov>

Local File: ACM-155-25, AZM-156-25, ACM-157-25 and AZM-158-25

Ms. Mabbott,

Thank you for providing the department notice of the proposals referenced above and allowing us an opportunity to comment.

It is our understanding that the applicant is proposing to exceptions to statewide planning goals 3, 11, and 14 in order to justify amending the county comprehensive plan and zoning map. If successful, about 1,298 acres would be converted from Space Age Industrial and Exclusive Farm Use to General Industrial with a Limited Use Overlay Zone to allow for an exascale data center. The proposal would also concurrently amend the county program to downzone 1,605 acres from Space Age Industrial to Exclusive Farm Use.

Although we are not fully convinced that the applicable criteria of OAR Chapter 660, Division 14 have been satisfied, we believe the county has sufficient information to make an informed decision.

Should the county move to approve the applicant's proposal, downzoning the companion 1,605 acres needs to be part of the decision.

Please include this message in the record of these proceedings and provide us with a copy of the county decision.

Respectfully,

Jon Jinings

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Jon Jinings

Community Services Specialist | Community Services Division

Pronouns: He/His

Oregon Department of Land Conservation and Development

635 Capitol Street NE, Suite 150 | Salem, OR 97301-2540

Cell: 541-325-6928 | Main: 503-373-0050

jon.jinings@dlcd.oregon.gov | www.oregon.gov/LCD

Threemile Canyon Farms

COMPREHENSIVE PLAN MAP AND TEXT AMENDMENTS, ZONING MAP AMENDMENTS, AND EXCEPTIONS TO GOALS 3, 11, AND 14

Planning Commission Hearing
Tuesday, April 29, 2025

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Description of Request

The proposed land use action consists of the following:

1. Comprehensive Plan map amendment from Agricultural to Industrial (955 acres);
2. Zone change from EFU and SAI to General Industrial (MG) (1,298 acres);
3. Limited Use Overlay (LU) to limit the permitted industrial use to data centers with ancillary improvements and associated infrastructure facilities (1,268 acres).

To facilitate the proposed amendments, the proposal will request "reasons" exceptions to Statewide Planning Goals 3, 11 and 14; and

4. Downzone 1,605 acres from SAI to EFU.

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Project Team

Applicant Representatives:	Greg Harris and Scott Neal Threemile Canyon Farms, LLC
Soils Scientist:	Phil Scoles, Terra Science, Inc.
Land Use Planning:	Lee Leighton and Ian Sisson, Mackenzie
Economic Impacts Analysis:	Brendan Buckley, Johnson Economics
Transportation Planning:	Janet Jones, PE, David Evans and Associates

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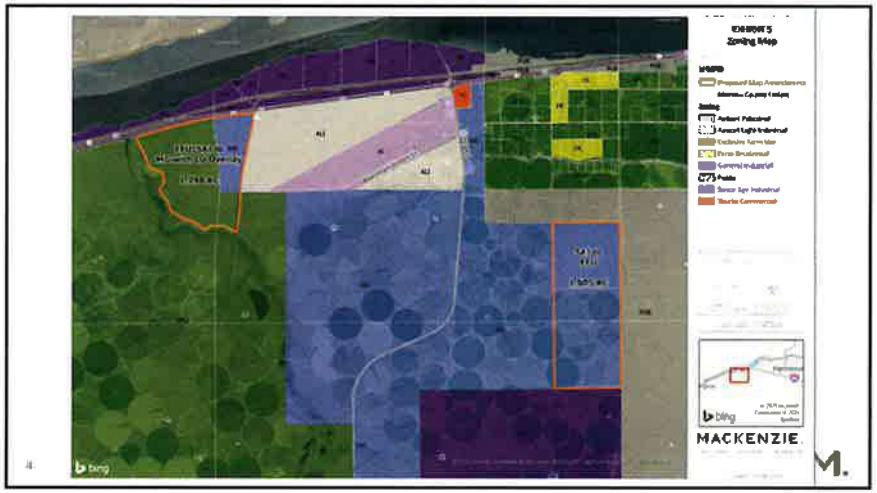

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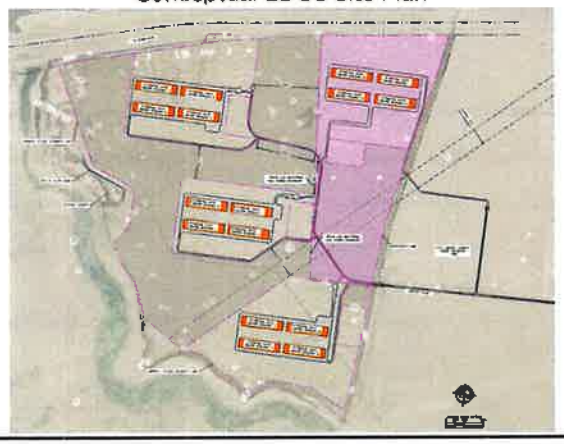
Conceptual EDCC Site Plan



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Land Capability (Soils) Evaluation

Land capability is a rating system that identifies soils having no limitations (Class 1 and 2 prime soil) to having severe limitations (Class 6, 7 and 8).

- Terra Science examined 2 study areas to determine on-the-ground land capability.
- The field study involved representative soil sampling with a hand auger to determine soil depth, texture and other attributes.
- Evaluated in Oct. 2024 and Feb. 2025 by Phil Scoles (35+ yrs. soil scientist).
- Rating system evaluates "as is", so lack of irrigation rates as a significant limitation for Class 6 and higher.

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Upzone Soil Attributes

Mapped soils: >90% Prosser si
Prosser-Rock outcrop comple
deep, well drained.

Actual soil conditions:

- Mostly sandy loam texture
- 10 to 15% gravels in upper p
- Hundreds of subtle mounds
deep soil and well drained
- These mounds are surround
soils that is somewhat exces
- Rock outcrops throughou
upzone site, fewer in south p

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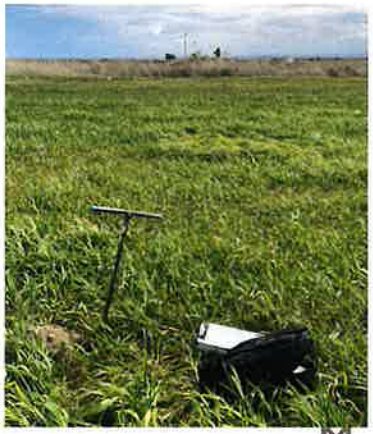
Downzone Soil Attributes

Mapped soils: 20% Hezel loamy fine sand, 15% Koehler loamy fine sand, and 65% Quincy loamy fine sand. Moderately to deep, somewhat excessively drained.

Actual soil conditions:

- Mostly loamy fine sand textures; Few gravels.
- Terraces and ancient, stabilized sand dunes.
- Predominantly deep, but smaller areas having calcium-indurated layers in Koehler soils.
- No rock outcrops.
- Native topography graded for cropping.
- Ongoing irrigation in center and south parts.



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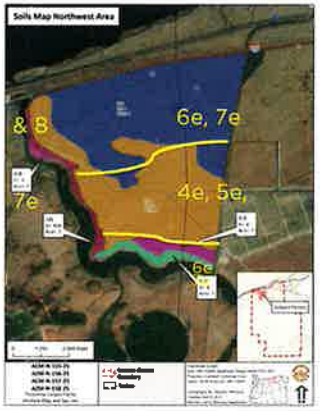
Upzone Soil Mapping and Land Capability Rating



- South part of parcel is mostly Class IVe and Ve ("e" for high erosion potential)
- Center of parcel is mostly Class Ve, with some Class VIe.
- North part parcel is mostly Class VIe and Class VIIe; large outcrops are Class VIII.

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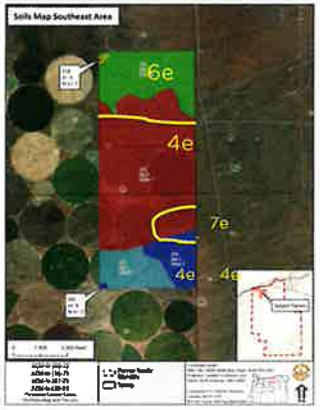
Downzone Soil Mapping and Land Capability Rating



- Dry and windy climate prevent soil ratings of Class I and II (prime soil), as well as Class III (high value). Irrigation added 1997-2000.
- Class IV is considered high value agricultural soil if utilized for perennial crops, nursery, berries, fruits as of Nov. 04, 1993.

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Land Capability Conclusions

Both Upzone and Downzone parcels qualify as "agricultural land" per OAR 660-033-0020(1)(A). Neither parcel qualify as prime or high value farm land.

- For Upzone parcel, shallow soils/rockiness, dry and windy climate, plus lack of irrigation result in moderate to severe limitations for current uses. Upzoning to light industrial utilizes land with substantial limitations and not suitable for cropping.
- For Downzone parcel, deeper soils, low rock content and ongoing irrigation mitigate dry and windy climate, so soils have low to moderate limitations for crops. Downzoning to EFU assures land stays in production for crops like potatoes, onions, carrots and corn.

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Data Centers – Rapid Growth

Mackenzie has specific data center land use planning experience:

- Business Oregon – Industrial Site Certification program modernization (2015)
  - Industry-preferred siting characteristics for data centers
- Hermiston Economic Opportunities Analysis (2024)
  - Sources: built examples, published information, Mackenzie design projects
  - Identified factors include site size/configuration, location, visibility, transportation, utilities including electric power and water supply

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Conceptual EDCC Site Plan

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Road Access

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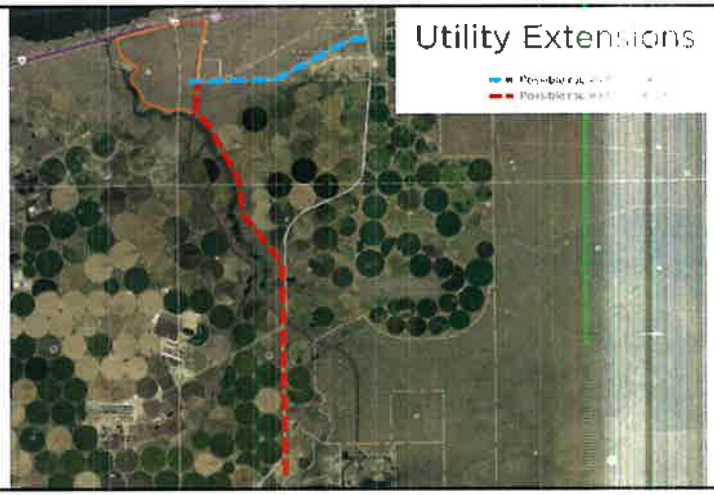
Utility Extensions



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Alternative Areas Analysis

- "Reasons" for goal exceptions require evaluating possible alternative areas
- Mackenzie identified and evaluated possible alternative areas suitable for meeting projected Exascale Data Center Campus (EDCC) demand
- Understand economic/market factors driving land demand
  - Johnson Economics analysis
- Geographic Information System (GIS) screening method
  - Obtain GIS data from Gilliam, Morrow and Umatilla Counties and other sources
  - Identify potential areas based on zoning and industry siting criteria, e.g., power, water, land area, transportation, topography, hazards

17

17

Data Center Industry Trends

Continued growth in data center development, at an accelerating pace:

- Growth in Artificial Intelligence (AI)
- Cloud applications
- E-commerce
- Streaming (entertainment, communications)
- Phone service and data
- Data storage, backup, and recovery

Expansion is feasible: Largest, best-capitalized companies in the world

18

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Columbia Basin Data Center Trends

Oregon is a globally significant Data Center market

- Highly ranked for:
  - Total processing capacity
  - Cloud operators
  - Renewable power options
  - Tax structure
- Columbia Basin is a major hub with national reputation
  - Pace of growth: 200 to 300 acres per year
  - 3,000 acres over 10 years

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Columbia Basin Data Center Trends

Since 2014

- 9 existing campuses
- 8 under way or planned
- 17 total over ~12 years
- Recent: >2 per year
- Sites are increasing in size

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Exascale Data Centers

Trend toward larger Data Center campuses:

- 800 to 1,500 acres
- Economies of Scale in Consolidated Campuses:
  - Process, planning, and time costs
  - Construction co-location and phasing
  - Efficient operations: maintenance, security, grounds, custodial, admin, etc
  - Efficient infrastructure and service: power, water, transportation
  - Reduced data latency
  - Limited external impacts
- Confidence that demand will be there

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Exascale Data Centers: Siting Characteristics

- 1,000+ acres (land supply), more remote locations
- Flat, buildable, lack of environmental constraints or hazards
- High-capacity power, and means to serve
- Proximity to existing or planned transmission lines (<10 miles)
- Water capacity and means to serve
- Water cooling and sewer or septic capacity
- Fiber optic capacity
- Proximity to transportation corridor
- Cluster benefits: local labor shed, construction, and operations expertise
- Industry vendors and suppliers

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Modeled Investment and Economic Impact

Hypothetical Exascale Data Center Campus:

- 16 data center buildings
- 250,000 square feet each, 4M square feet total
- Electrical substation, parking/circulation, mechanical, HVAC, water cooling, stormwater management, back-up power generation
- Power capacity up to 1GW
- Timeline: 8 years total; 4 buildings every 2 years
- Estimated total investment: $8 Billion
- Potential range: $7B to $12B

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Modeled Investment and Economic Impact

Jobs

- Construction: 800 jobs/year (>6,000 FTE jobs over 8 years)
- Operations: 560 on-site FTE jobs; average of 35 years per bu
- Jobs in operations, maintenance, grounds, security, administ
- Average total wages and benefits: over $100,000 / FTE / yea
- Nearly 500 additional community jobs

Economic Impact

- $490M in economic impact annually
- Power, water, maintenance, staffing, and indirect and induced
- Billions in indirect and induced economic activity

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Modeled Fiscal Impact

- Assumed use of Strategic Investment Program (SIP)
- 15-year property tax exemption
- Significant revenue even in years 1 - 15
- Taxable value remains high in 16th year, even after depreciation
- By 20th year, total cumulative tax revenue is projected to total over $300M
- 32% to Morrow County, 32% to the school district

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Alternative Areas Analysis

- Oregon Administrative Rules (OAR) 660-004-0020
  - *"Areas that do not require a new exception cannot reasonably accommodate the use"*
    - Identify possible alternative areas considered
    - Discuss why alternative areas cannot reasonably accommodate the use:
      - Alternative areas must be able to support the proposed use without requiring significant changes or additional discretionary approvals
      - Factors may include economic considerations and essential siting characteristics

26

26

Alternative Areas Analysis

- Required analysis areas include:
  - Non-resource land that does not require a new goal exception
  - Resource land that is irrevocably committed to non-resource uses
  - Land within Urban Growth Boundaries (UGBs)
  - Land without the provision of public facility(ies) or service(s)
  - Possible UGB expansion areas (OAR 660-014)
- The analysis standard is met by providing a broad review of similar areas in the vicinity. Detailed site-specific analysis is not required.

27

27

Alternative Areas Analysis

- Study Area (+/- 1,300 square miles)
  - Gilliam, Morrow, and Umatilla County areas
    - Include Cities of Arlington, Boardman, Ione, Irrigon, Lexington, Hermiston, Stanfield, and Echo
  - Within 10 miles of existing high-capacity electric power transmission lines
- GIS data to identify and assess possible alternative areas
  - Tax lot boundaries and ownership
  - Zoning and comprehensive plan maps
  - Existing power transmission line routes and capacity
  - Floodplain and landslide hazard maps
- Evaluate suitability based on Essential Siting Characteristics for EDCCs
  - Site size and physical features
  - Power supply
  - Water and sewage disposal
  - Transportation access
  - Natural hazards
  - Existing development

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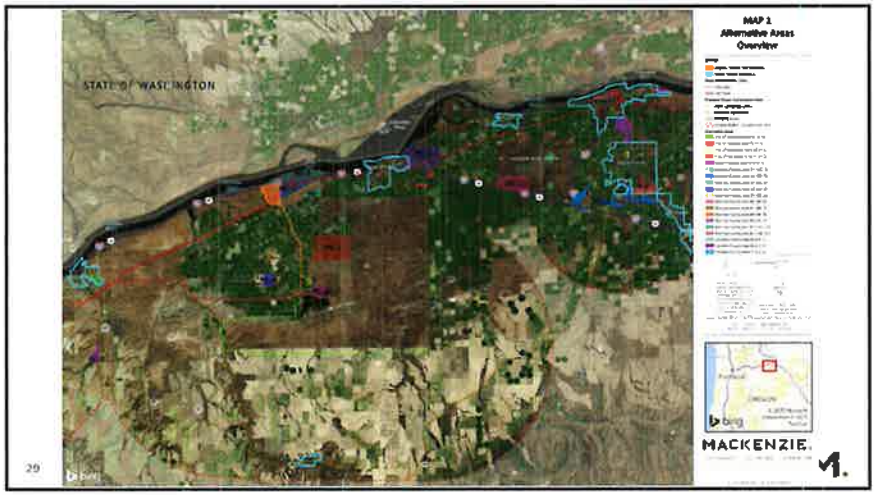

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Alternative Areas Analysis

- **Morrow County**
  - (11) areas in unincorporated industrial zones
    - (1) area is not available due to ongoing litigation (Depot Site)
    - (1) area is not available because existing goal exceptions limit use to antenna test range
    - (1) area is not available because of fragmented ownership; owner(s) not willing to sell
    - Other areas
      - Largely committed to other development
        - e.g., sited and/or entitled through land use approvals
      - Inadequate acreage for EDCC
  - City UGBs of Boardman, Ione, and Irrigon
    - Zoning does not allow data centers

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Alternative Areas Analysis

- **Gilliam County**
  - (1) area in an unincorporated industrial zone
    - Zoning does not allow data centers
    - Inadequate acreage for EDCC
  - (1) area in City of Arlington UGB
    - Committed to development by AWS
    - Inadequate acreage for EDCC

31

31

Alternative Areas Analysis

- **Umatilla County**
  - (3) areas in unincorporated industrial zones
    - (1) area is not available due to ongoing litigation (Depot Site)
    - Other areas
      - Largely committed to other development
      - Inadequate acreage for EDCC
  - (1) area in City of Umatilla UGB
    - Largely committed to other development
    - Inadequate contiguous acreage remaining for EDCC
  - (2) areas in City of Hermiston UGB
    - Largely committed to other development
    - Inadequate contiguous acreage remaining for EDCC
  - City UGBs of Echo and Stanfield
    - Zoning does not allow data centers

32

32

Why this Site?

Threemile Canyon Farms, LLC is the Owner/Applicant

- Threemile acquired large tracts of land in a batch transaction
- Since that time, Threemile has installed pivot irrigation and grows crops in areas with productive soil conditions
- Threemile has been approached by data center site selectors
- The 1,298-acre Site is not suitable for commercial farming, but it is suitable for data center campus use:
  - Location west of Boardman Airport
  - Proximity to power transmission lines and I-84
  - Port of Morrow Water Project - Columbia River source

33

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The Site is Suitably Located for an EDCC

Site (1,298 acres) Factors:

- West of Boardman Airport, bounded at west by Sixmile Canyon
  - Far from populated areas and residences
- Electric Power: Transmission Lines nearby
- Vehicular Access: Rural Arterial II equivalent Boardman Airport Lane
- Water: Port of Morrow project; Columbia River source
- Groundwater protection: compliance with Oregon DEQ permitting
- Rezoning requires exceptions to Statewide Planning Goals 3, 11 and 14

34

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Downzone Area

Downzone Area (1,605 acres) Factors:

- Proposal causes No Net Loss of productive agricultural land
- Change from SAI to EFU zoning will protect productive farmland

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Is This a Development Proposal?

No – this request is only to change zoning to MG with LU Overlay

- Applicant's proposal includes Limited Use (LU) Overlay restricting urban use to data center development
- A proposed Condition of Approval ensures that future development must go through Site Plan Review (public hearing procedure)
  - A project-specific Traffic Impact Analysis will be required
  - County can impose appropriate conditions of approval

36

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Dynamic Markets vs. Planners

Market-based demand for land can surprise the planners ...

- Land demand projections are based on past experience:
  - Coordinated state population growth projections for communities
  - Land Use and Economic Development Planning by cities and counties
  - Grounded in trend extrapolation from previous patterns, ratios and growth rates
- Disruptive innovat on and market factors can present development conditions that diverge significantly from planning assumptions

37

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Responding to Emergent Growth Needs

How do jurisdictions adapt to new information and circu m

- First, by responding to requests from constituents
  - Citizens/property owners identify emergent needs and propose solutio
  - Constituent proposals may represent full- or partial solutions to identifi
  - This is often the mechanism by which a community first identifies new
- Second, through legislative planning and policymaking e
  - Planning studies
  - Legislative policy proposals, e.g., Comp Plan and Zoning Map amend m
  - Efforts typically require a year or more before adoption of policy chang
  - Delayed response can hobble a community's ability to capture benef development in a competitive national and regional market environmen

38

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Why Not Expand City UGB's?

Oregon Statewide Planning Goals aspire to ...

- Protect farm and forest lands
- Promote compact, efficient development within urban areas
  - Bring residential, commercial and employment uses close together to support multi modal access and reduced travel distances

... but Exascale Data Center Campuses are REALLY BIG!

- A 1,000-acre square is 1-1/4 MILES long on each of its four sides
- Contiguous urban growth would be required to "leap-frog" over an EDCC – separating uses we would prefer to locate close together

39

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Why Not Expand City UGB's? (cont'd)

- UGB expansions can be part of strategy to meet land de but require diligent study to avoid bad consequences
- OAR's require each city to develop evidence of need
- Such efforts typically require a year or more
- Legislative imposition of LU zoning by a city, restricting use of a property to a single allowed urban use, would lik subject to takings challenges
  - The LU overlay limitations of this request have been proposed by the A

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An Exception is the Right Action

In this circumstance, the "reasons exception" process is preferable and appropriate:

- Voluntary proposal submitted by the owner/applicant;
- Proposed MG/LUO zoning allows only the specific urban use that is the basis for the "reasons" exception (data center);
- Approval will contribute to *partially* meeting the project need for the coming 10 years, responding to a well-documented recent dramatic increase in a novel industrial activity; and
- Approval allows EFU uses of the Site unless and until data center development becomes economically feasible.
- Protections inherent in the land use approval process would require a new exception before any other urban use or development may occur.

41

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The First Step, Not the Last

Johnson Economics' analysis indicates demand for 3,000 acres of Exascale Data Center Campus demand in the next 10 years

- The Site's 1,298 acres west of Boardman Airport represent only about 43% of a complete solution

Morrow County should:

- Adopt the applicant's proposed exception findings
- Approve the proposal to rezone the Site MG with LU Overlay limiting its urban use to data center development, and
- Approve the companion proposal to "downzone" 1,605 acres from SAI to EFU

42

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Traffic Analysis: Background

- Transportation System Plan (TSP)
  - Identifies improvements reflecting Comprehensive Plan assumptions (i.e. zoning)
- Transportation Planning Rule (TPR) analysis
  - Statewide **policy**
  - Requires analysis of "reasonable worst-case" development
- Determine if planned zone change will "significantly affect" transportation network.
  1. Does it require changing functional classification of roadway;
  2. Does it require changing standards that implement functional classification; or
  3. Does it degrade performance of existing or planned facility beyond projected performance by end of planning period?

43

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Traffic Analysis: Zoning Comparison

- **Existing Zoning**
  - Exclusive Farm Use (EFU) and Space Age Industrial (SAI)
- **Proposed Zoning**
  - General Industrial (M-G) with Limited Use Overlay (LU)

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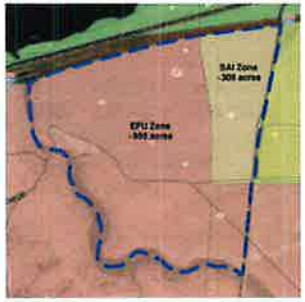
Traffic Analysis: Development Potential

1,400,000 SF Research & Development



Existing Zoning

4,000,000 SF Data Center

Proposed Zoning

45

Traffic Analysis: Key Takeaways

1. Proposal results in fewer trips/less traffic impact than current zoning.
   - This results in better traffic conditions for TSP analysis planning year.
2. Proposal does not require changes to roadway standards in Morrow County TSP.
   - Boardman Airport Lane was recently improved by Port of Morrow.

46

Traffic Analysis: Trip Comparison

- Existing Zoning: EFU/SAI

Table 1 - Trip Generation Estimates for Existing Zone Designations

Zone Designation	ITE Land Use	LUC	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
SAI	Research and Development Center	760	1,400 KSF	13,828	1,042	229	1,271	192	1,009	1,201

LUC: Land Use Code

- Proposed Zoning: M-G with LU

Table 1 - Trip Generation Estimates for Proposed Zone Designation

Zone Designation	ITE Land Use	LUC	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
M-G	Data Center	160	4,000 KSF	3,960	242	198	440	130	304	434

LUC: Land Use Code

47

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Traffic Analysis: TPR Compliance

- Proposed zone change is not expected to "significantly affect" a transportation facility.
- Boardman Airport Lane (Port of Morrow facility)
  - Consistent with Rural Arterial II road standards.
  - Consistent with Rural Arterial II traffic volume thresholds.
  - Adequate capacity for existing and future traffic with proposed zone change.
- Tower Road, per 2012 Morrow County TSP
  - Consistent with Minor Collector road standards.
  - Consistent with Minor Collector traffic volume thresholds.
  - Adequate capacity for existing and future traffic with proposed zone change.
- Planned roadway network within Morrow County will not be significantly impacted by proposed zone change.

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Traffic Analysis: Next Steps

- **Prior to actual development, site is subject to additional traffic analysis.**
  - Requirement via Condition of Approval (Agenda Packet pages 83-84; Staff Report pages 55-56)
  - Requires scoping with Morrow County and ODOT.
  - Requires assessment of emergency access.
  - Opportunity to require/provide off-site mitigation (signalization, roundabout, etc.)

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Conditions of Approval

1. Prior to any data center development, developer shall prepare and submit an application to Morrow County for Site Plan Review subject to the submittal requirements, standards, approval criteria and procedure set out in MCZO 5.020.A through H.
   a. As part of the Site Plan Review application, developer shall retain a Traffic Engineer to provide a project-specific Traffic Impact Analysis (TIA) consistent with the requirements of MCZO 4.035. That work shall include coordination with staff of Morrow County and the Oregon Department of Transportation (ODOT) on the necessary scope of the analysis; assessment of operational and safety impacts of the proposed development on affected intersections, including the Interstate 84-Tower Road interchange, other Tower Road intersections, and any secondary/emergency access routes and facilities; and providing recommendations for mitigation actions at locations where performance is projected to fall below established standards due to traffic generated by the proposed development.

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51

Conditions of Approval

2. Prior to construction, developer shall provide notice to Threemile Canyon Farms, the area farming operator, of its construction traffic schedule and coordinate with Threemile Canyon Farms to minimize any potential impacts to farm traffic during harvest.
3. Developer shall obtain all necessary local, state and federal permits and approvals for the data center campus construction and operation prior to commencement of the proposed use or certificate of occupancy being granted. If applicable, such permits shall include, but are not limited to: (A) review and approval of a Water Pollution Control Facilities (WPFC) permit issued by the Oregon Department of Environmental Quality and (b) Pollutant Discharge Elimination System (NPDES) 1200-C Permit issued by the Oregon Department of Environmental Quality.
4. Delivery of adequate electricity and water from third-party providers shall be provided substantially as described in this record, prior to commencement of the proposed use or certificate of occupancy being granted.

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Questions?

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Threemile Canyon Farms

COMPREHENSIVE PLAN MAP AND TEXT AMENDMENTS, ZONING MAP AMENDMENTS, AND EXCEPTIONS TO GOALS 3, 11, AND 14

Planning Commission Hearing
Tuesday, April 29, 2025

54

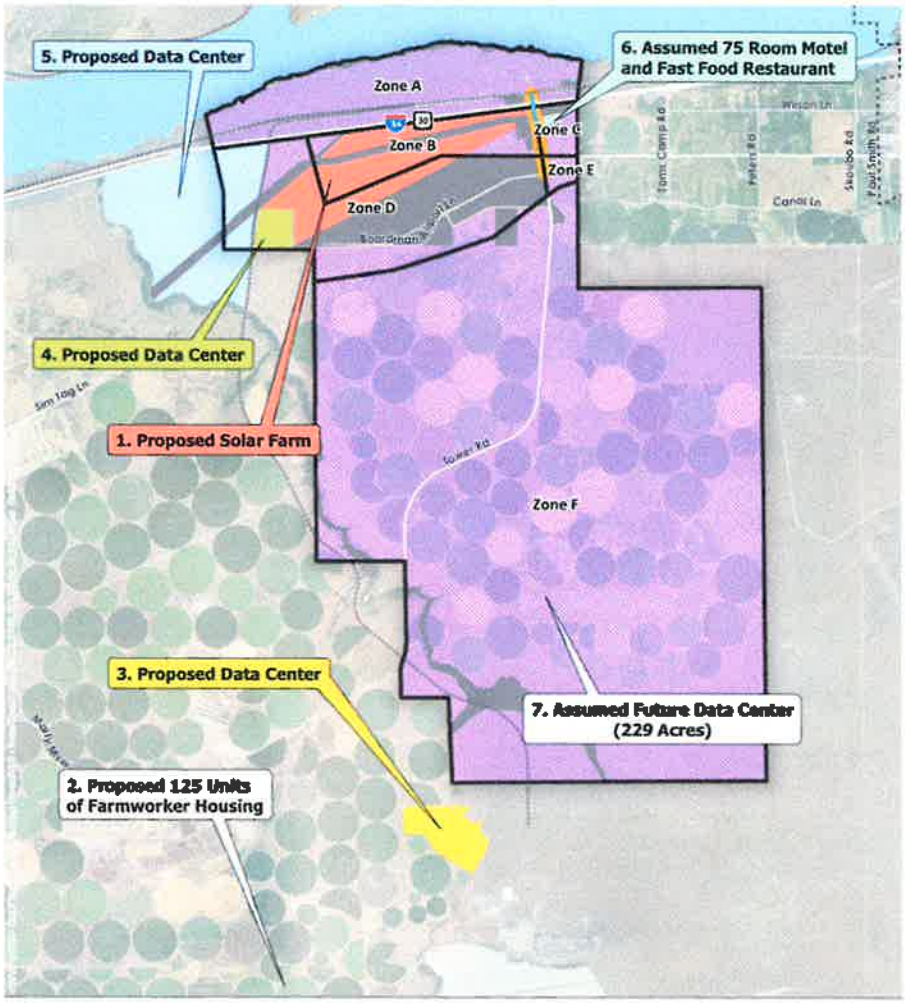
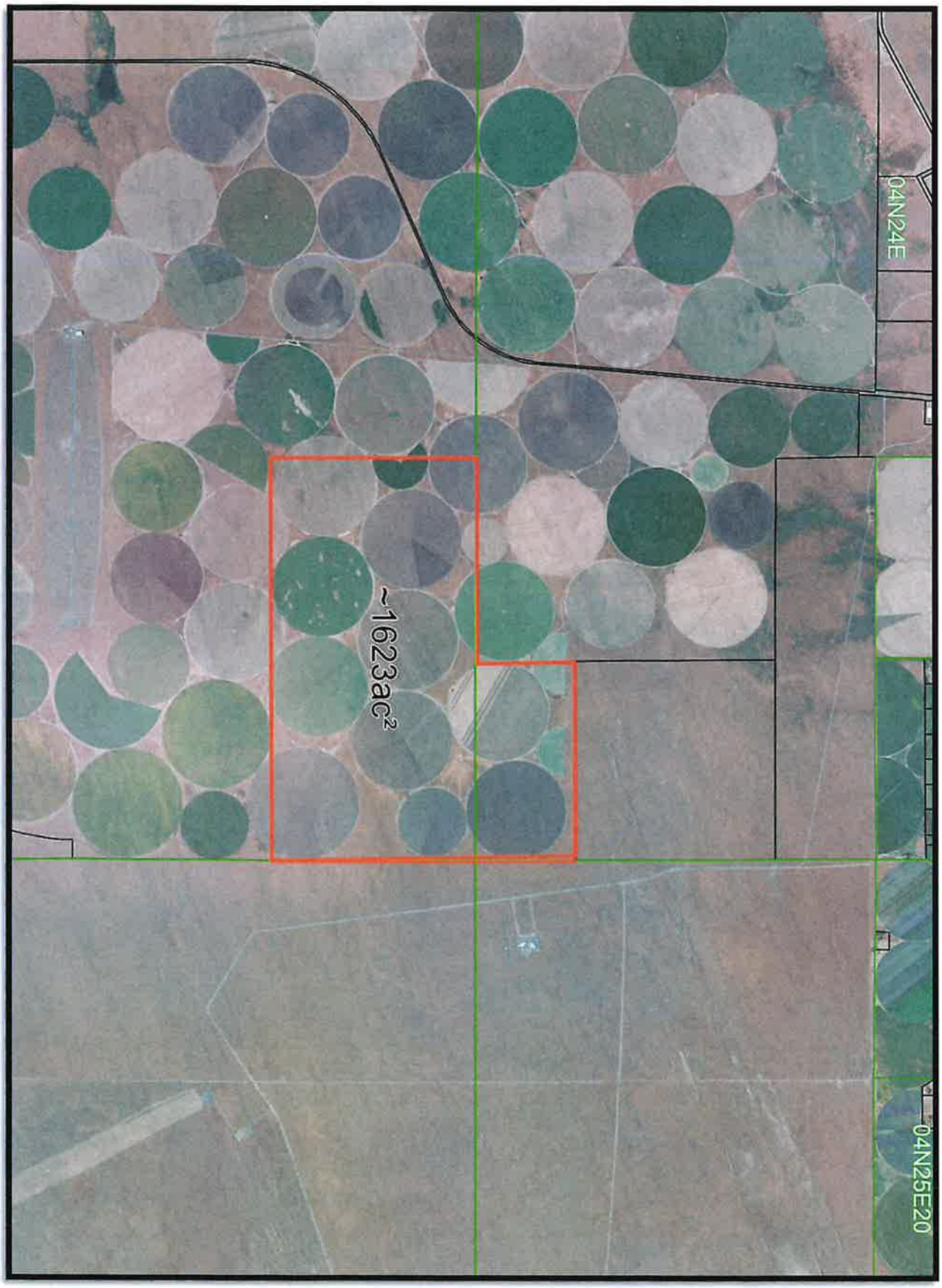


Figure 1

KITTELSON & ASSOCIATES

Proposed and Assumed Future Developments
Morrow County, Oregon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The 04292025 Planning Commission packet can be found on the Morrow County Website.