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TECHNICAL MEMORANDUM

December 12, 2024 Project# 27003.041

To: Teresa Penninger, Oregon Department of Transportation

From: Kristine Connolly, PE, Michael Ruiz-Leon, PE, Nick Foster, AICP, RSP1

Project: I-84 Exit 159 Tower Road IAMP

Subject: Technical Memorandum #1: IAMP Definition and Background

The purpose of this memorandum is to provide an overview of the Interchange Area Management Plan (IAMP) for the Interstate 84 (I-84) interchange with Tower Road at Exit 159. Specifically, this memorandum describes the project purpose and background. It also proposes goals, objectives, evaluation criteria, and the study area.

BACKGROUND

The following sections describe the purpose and intent of the IAMP, the IAMP's problem statement, the function of the interchange, and the proposed study area. Further information on previous studies and relevant policies and plans can be found in the Policy Review memorandum in Attachment "A" to this memorandum.

Purpose and Intent

The I-84 Exit 159 Tower Road IAMP is intended to be a strategic transportation plan to protect the long-term function of the interchange as the area around it develops. Potential development north and south of the interchange is the primary driving force behind the need for this study. The IAMP will identify land use management strategies, short- and long-term transportation improvements, access management goals, and strategies to fund identified improvements. The intent is a planning effort that results in policies, ordinances, and other provisions that will be adopted into the Morrow County Transportation System Plan (TSP). The IAMP will also be adopted by the Oregon Transportation Commission (OTC) as an amendment to the Oregon Highway Plan (OHP).

Problem Statement

There are over 21,000 acres of land zoned for industrial or commercial uses, most of which is undeveloped, that would likely use this interchange as their primary I-84 access, given that the nearest interchanges are approximately 7.5 miles to the west and 4.8 miles to the east. The areas north of the interchange include approximately 2,253 acres of land zoned General Industrial (M-G) and approximately 14 acres of land zoned Public (PUB), and to the south includes approximately 49 acres of land zoned Tourist Commercial (TC), approximately 13,428 acres of land zoned Space Age Industrial (SAI), approximately 2,316 acres of lane zoned Airport Light Industrial (ALI), approximately 870 acres of land zoned Air/Industrial Park (AI), and approximately 3,845 acres of M-G (Reference 1). Development of these properties would affect the operations of the interchange. There are additional access considerations for future development to the north of the interchange due to its proximity to both the interchange and the railroad line. Furthermore, within the study area there have been several data centers that have been recently approved but not yet constructed.

Interchange Function

The I-84 Exit 159 Tower Road interchange is located in Morrow County, west of the City of Boardman city limits and outside of the City of Boardman urban growth boundary. It provides access via Tower Road to industrial, agricultural, and highway-oriented uses (e.g., the Boardman Airport, Love's Truck Stop, Threemile Canyon Farms Dairy, PGE cogeneration plant, and the US Navy bombing range) on the south side of I-84. It also provides secondary access to Boardman via Kunze Lane. Additionally, to the north of the interchange is primarily undeveloped and includes the Union Pacific Railroad and Oregon Department of Fish and Wildlife's Columbia River Regulated Hunt Area. Tower Road is classified by Morrow County as a major collector (Reference 2).

Interchange Management Study Area (IMSA)

To provide a comprehensive study and to achieve effective results, the IMSA includes developable and re-developable properties and major roadways that could significantly affect the function of the interchange over the next 20 years. At a minimum, the IMSA includes properties, as well as all access points within ½-mile from the existing interchange as defined by the IAMP Guidelines. Figure 1 presents the draft IMSA map.

OPERATIONS AND ACCESS STUDY AREA

The Operations and Access Study Area encompasses those key intersections and accesses that have the potential to affect traffic operations in the interchange area over the 20-year planning period. These study boundaries identify the area for which operational analysis will be completed and the area that will be considered for the Access Management Plan (although access spacing requirements from the interchange are only ¼ mile).

The study intersections include:

- I-84 WB Off-Ramp/Tower Road
- I-84 EB Off-Ramp/Tower Road
- Tower Road/Love's Northern Driveway
- Tower Road/Love's Southern Driveway
- Tower Road/Kunze Road (located south of Love's Travel Stop)
- Tower Road/Boardman Airport Lane

Within the Operations and Access Study Area there also exist some unofficial and unpaved accesses to Tower Road, the locations of which will be considered in developing access recommendations.

Interchange Management Study Area

Boardman Urban Growth Boundary

Minimum 1320' IAMP Limits

Operations/Access Study Area

Railroads

0 1 2 Miles

Figure 1

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Interchange Management Study Area
Morrow County, Oregon

LAND USE STUDY AREA

The Land Use Study Area includes all properties located roughly within the Operations and Access Study Area and beyond in order to incorporate developable and re-developable properties that have the potential to significantly affect the interchange functions. Properties identified with potential to affect the interchange include those that are expected to use the interchange as the primary connection to I-84. For the purposes of this study, the land use study area will include all parcels that are anticipated to be accessed using the Tower Road interchange that are bounded by the existing exclusive farm use zoning.

GOAL, OBJECTIVES, AND EVALUATION CRITERIA

The primary goal of the IAMP process is to protect the function of the interchange for the next 20 years while accounting for changes in land use and traffic patterns. As stated in Policy 3C of the 1999 Oregon Highway Plan, "it is the policy of the State of Oregon to plan for and manage grade-separated interchange areas to ensure safe and efficient operation between connecting roadways." To this end, the following draft objectives have been developed based on this goal and the scope of work for this project:

1. Consider the surrounding contextual land use and roadway network;
2. Consider pedestrian and bicycle connectivity in analysis area of the interchange;
3. Provide for efficient connectivity, right-of-way, and access control in the analysis area of the interchange;
4. Refine and prioritize improvements needed to maintain acceptable traffic operations at the interchange while providing safe access to adjacent land uses;
5. Provide plans for improved local street connectivity in the Project area while limiting cul-de-sacs or other non-connected roads;
6. Evaluate existing and potential land use designations, overlay zones, intensities, conditions, and actions that could have favorable effect on the facility or an adverse effect on the facility;
7. Include implementation policies to be adopted into the County comprehensive plans, transportation system plans, interchange access standards, and zoning ordinances, as appropriate; and
8. Develop alternatives that consider the surrounding topographical context, environmental impacts, construction cost, and potential phasing strategies.

These objectives will be reviewed with members of the study's Technical Advisory Committee (TAC) and Public Advisory Committee (PAC) before they are finalized.

Draft Evaluation Criteria

Based on the goal and objectives, the following draft evaluation criteria were assembled so that potential interchange improvement concepts would be evaluated for consistency with the overall intent of the project. The six evaluation criteria are outlined in Table 1.

Table 1. Draft Evaluation Criteria

Evaluation Criteria	Description	Relationship to Objectives
Transportation	– Safety – Mobility – Freight mobility	2, 3, 4, 5
Land Use/Economic Development	– Right-of-way impacts – Compatibility with land use – Growth accommodation	1, 3, 4, 5, 6
Environmental	– Environmental impacts	8
Accessibility	– Future access to undeveloped properties – Access spacing requirements – Social equity – Pedestrian and bicycle access to recreational opportunities along the river using the Heritage Trail	1, 2, 3, 4, 5
Cost	– Cost relative to other improvement concepts	8
Implementation	– Impacts to existing and proposed developments – Topographical challenges – Ability to construct in phases – Fundability	7, 8

NEXT STEPS

This memorandum will be reviewed with the project's TAC and PAC and revised based on their feedback.

REFERENCES

1. Morrow County. *Morrow County Interactive Land Use Map,* Accessed August 2024.
2. Morrow County. *Transportation System Plan,* 2022.