Oregon
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NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

Date: 08/18/2014

Jurisdiction: City of Hood River

Local file no.: 2011-08

DLCD file no.: 002-11

The Department of Land Conservation and Development (DLCD) received the attached notice of adopted amendment to a comprehensive plan or land use regulation on 08/15/2014. A copy of the adopted amendment is available for review at the DLCD office in Salem and the local government office.

Notice of the proposed amendment was submitted to DLCD 42 days prior to the first evidentiary hearing.

Appeal Procedures

Eligibility to appeal this amendment is governed by ORS 197.612, ORS 197.620, and ORS 197.830. Under ORS 197.830(9), a notice of intent to appeal a land use decision to LUBA must be filed no later than 21 days after the date the decision sought to be reviewed became final. If you have questions about the date the decision became final, please contact the jurisdiction that adopted the amendment.

A notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR chapter 661, division 10).

If the amendment is not appealed, it will be deemed acknowledged as set forth in ORS 197.625(1)(a). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

DLCD Contact

If you have questions about this notice, please contact DLCD's Plan Amendment Specialist at 503-934-0017 or plan.amendments@state.or.us

002-11 E18440

DLCD FORM 2

NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

FOR DLCD USE
File No.:
Received: AUG 15 2014 DEPT OF LAND CONSERVATION AND DEVELOPMENT

Local governments are required to send notice of an adopted change to a comprehensive plan or land use regulation **no more than 20 days after the adoption.** (*See* OAR 660-018-0040). The rules require that the notice include a completed copy of this form. **This notice form is not for submittal of a completed periodic review task or a plan amendment reviewed in the manner of periodic review.** Use Form 4 for an adopted urban growth boundary including over 50 acres by a city with a population greater than 2,500 within the UGB or an urban growth boundary amendment over 100 acres adopted by a metropolitan service district. Use Form 5 for an adopted urban reserve designation, or amendment to add over 50 acres, by a city with a population greater than 2,500 within the UGB. Use Form 6 with submittal of an adopted periodic review task.

Jurisdiction: City of Hood River

Local file no.: **2011-08**

Date of adoption: 10/11/11 Date sent: 8/14/2014

Was Notice of a Proposed Change (Form 1) submitted to DLCD?
Yes: Date (use the date of last revision if a revised Form 1was submitted): 4/21/11
No

Is the adopted change different from what was described in the Notice of Proposed Change? Yes No
If yes, describe how the adoption differs from the proposal:

Nonsubstantive changes

Local contact (name and title): Cindy Walbridge

Phone: 541-387-5217 E-mail: cindy@ci.hood-river.or.us

Street address: 211 2nd Street City: Hood River Zip: 97031-

PLEASE COMPLETE ALL OF THE FOLLOWING SECTIONS THAT APPLY

For a change to comprehensive plan text:
Identify the sections of the plan that were added or amended and which statewide planning goals those sections implement, if any:

Comprehensive Plan Goal 12- Transportation

For a change to a comprehensive plan map:
Identify the former and new map designations and the area affected:

Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.

Location of affected property (T, R, Sec., TL and address):

The subject property is entirely within an urban growth boundary

The subject property is partially within an urban growth boundary

If the comprehensive plan map change is a UGB amendment including less than 50 acres and/or by a city with a population less than 2,500 in the urban area, indicate the number of acres of the former rural plan designation, by type, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

If the comprehensive plan map change is an urban reserve amendment including less than 50 acres, or establishment or amendment of an urban reserve by a city with a population less than 2,500 in the urban area, indicate the number of acres, by plan designation, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

For a change to the text of an ordinance or code:
Identify the sections of the ordinance or code that were added or amended by title and number:

The Hood River Comprehensive Plan, Goal 12 (Transportation), and Hood River Municipal Code, Title 17 (Zoning), Chapter 03 (Land Use Zones) and Chapter 20 (Transportation Circulation and Access Management), by the adoption of the Interchange Area Management Plans (IAMP) for Interstate 84 Exits 62, 63 & 64.

For a change to a zoning map:
Identify the former and new base zone designations and the area affected:

Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:

Identify additions to or removal from an overlay zone designation and the area affected:

Overlay zone designation: IAMP Acres added: Acres removed:

Location of affected property (T, R, Sec., TL and address):

List affected state or federal agencies, local governments and special districts: ODOT

Identify supplemental information that is included because it may be useful to inform DLCD or members of the public of the effect of the actual change that has been submitted with this Notice of Adopted Change, if any. If the submittal, including supplementary materials, exceeds 100 pages, include a summary of the amendment briefly describing its purpose and requirements.

BEFORE THE CITY COUNCIL
FOR THE CITY OF HOOD RIVER, OREGON

ORDINANCE NO. 2001

An Ordinance Amending the Hood River Comprehensive Plan, Goal 12 (Transportation), and Hood River Municipal Code, Title 17 (Zoning), Chapter 03 (Land Use Zones) and Chapter 20 (Transportation Circulation and Access Management), by the adoption of Interchange Area Management Plans (IAMP) for Interstate 84 Exits 62, 63 and 64

The Hood River City Council finds as follows:

WHEREAS, the City of Hood River approved participation in the interchange area management planning process for Hood River Area Interstate 84 Interchanges 62, 63, and 64; and

WHEREAS, the county, city, Port of Hood River, Oregon Department of Transportation, and local property owners have participated in a collaborative planning process that addressed land use and transportation needs in the interchange areas; and

WHEREAS, a series of public meetings have been held to inform the public about the planning process, including a public meeting held on 7/10/07 and 12/17/09 public information mailings to all affected property owners, and written and oral testimony received from the public at public meetings and other venues; and

WHEREAS, the Hood River Planning Commission and City Council held a joint work session with other elected and advisory officials that were open to the public, on [dates]; and

WHEREAS, a Public Hearings were held on June 10, July 18, and August 1, 2011 before the Hood River Planning Commission to consider the draft Interchange Area Management Plan (IAMP) for Exit 62 and for Exits 63/64 and due notice was given of the hearing before the Planning Commission and written and oral testimony were accepted; and

WHEREAS, the Hood River County Planning Commission, after reviewing and considering oral testimony and staff reports, recommended that the Hood River City Council adopt the following set of Comprehensive Plan and Municipal Code amendments attached hereto as Exhibits A, B, C, D and E, incorporated herein by this reference:

1. Adopt the I-84 EXIT 62 IAMP and EXIT 63/64 IAMP as elements of the Hood River Urban Area Transportation System Plan (TSP) and amend the TSP Policy Document.

2. Adopt a common regulatory framework to apply to areas within the Urban Growth Boundary of the City of Hood River regarding transportation matters affecting

properties near interstate highway interchanges.

3. Amend sections of the Hood River Municipal Code to implement regulations consistent with those being adopted by Hood River County.

WHEREAS, the Hood River City Council held a duly notice public hearing on the Planning Commission's recommendation at the Council's regular meetings on August 8, August 22, and September 12, 2011 at which time the Council accepted written and oral testimony; and

WHEREAS, the Hood River City Council deliberated at its regular meeting on September 26, 2011, after which a majority voted in favor of adoption of amendments to the City's Comprehensive Plan and Municipal Code to implement the IAMP for Interstate 84 Exits 62, 63 and 64.

NOW, THEREFORE, based on the following findings, the Hood River City Council Ordains as follows:

Section 1 – Comprehensive Plan Amendment, IAMP Adoption: The Hood River Comprehensive Plan is hereby amended by the adoption and addition of the following:

a) I-84 EXIT 62 IAMP, attached hereto as Exhibit A and by this reference incorporated herein.

b) I-84 EXIT 63/64 IAMP, attached hereto as Exhibit B and by this reference incorporated herein.

c) A new Goal 12 (Transportation) and related policies to implement State-wide Planning Goal 12 (Transportation), attached hereto as Exhibit C and by this reference incorporated herein.

These amendments to the Hood River Comprehensive Plan shall become part of and incorporated into the Hood River Transportation System Plan (TSP) once the TSP is adopted by the City Council pursuant to Ordinance 2002

Section 2 - Municipal Code Amendment. The Hood River Municipal Code Title 17 (Zoning), Chapter 03 (Land Use Zones) is hereby amended by the addition of a new section - Section 17.02.120 Interchange Area Management Plan (IAMP) Overlay Zone – which is set forth in Exhibit D, attached hereto and by this reference incorporated herein.

Section 3 - Municipal Code Amendment. The Hood River Municipal Code Title 17 (Zoning), Chapter 20 (Transportation Circulation and Access Management) is hereby amended by a revision to Section 17.20.030 (Access Management Standards), Section

17.20.050 Standards for Transportation Improvements and the addition of a new section - Section 17.20.060 (Traffic Impact Analysis) – both of which are set forth in Exhibit E, attached hereto and by this reference incorporated herein.

Read for the First Time this 26th day of September 2011

Read for the Second Time and approved this 11 day of Oct. 2011. This Ordinance shall take effect on the 31st day following the second reading.

////

AYES: 4
NAYS: 0
ABSTAIN: 0
ABSENT: 2

Arthur Babitz, Mayor

ATTEST:

Jennifer Gray, City Recorder

Approved as to form:

Daniel Kearns, City Attorney

Interstate 84 Exit 62 Interchange Area Management Plan

Interstate 84/ Cascade Avenue (Historic Columbia River Highway)

Hood River, Oregon

Prepared for

City of Hood River
Hood River County
Oregon Department of Transportation

Prepared by

DKS Associates
Angelo Planning Group
Parametrix

October 2011

Acknowledgments

The completion of this plan has been the collective effort of the following people:

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Jennifer Kaden, Columbia River Gorge Commission
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Appendix B- City of Hood River Municipal Code Amendments – Exhibits D and E

Appendix C – Hood River County Goal 12 Amendments – Exhibit C

Appendix D- Hood River County Code Amendments – Exhibit D

Appendix E- Technical Memorandum #1: Plans and Policies Review and Findings of Compliance

Appendix F- Technical Memorandum #2: Study Area Boundaries and Preliminary Goals and Objectives

Appendix G- Technical Memoranda #3: Existing Conditions

Appendix H- Technical Memorandum #4: Future Needs Analysis

Appendix I- Technical Memorandum #5: Alternatives Analysis

Appendix J- Interchange Area Management Plan Overlay Zone Maps

Appendix K – Port of Hood River Waterfront Area Transportation Impact Analysis

** Appendices are provided as a separate document. See Appendices for Interstate 84 Exit 62 Interchange Area Management Plan and Interstate 84 Exit 63 & Exit 64 Interchange Area Management Plan, Hood River Oregon, October 2011.*

ACRONYMS

HCRH	Historic Columbia River Highway
HDM	Highway Design Manual
IAMP	Interchange Area Management Plan
LOS	Level of Service
OAR	Oregon Administrative Rule
ODOT	Oregon Department of Transportation
OHP	Oregon Highway Plan
TSP	Transportation System Plan
UGB	Urban Growth Boundary
V/C	Volume to Capacity

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CHAPTER 1: EXECUTIVE SUMMARY

This Interchange Area Management Plan (IAMP) for the I-84 Exit 62 interchange in Hood River, Oregon acts as refinement areas of the City of Hood River and Hood River County Transportation System Plans (TSPs) and as a facility plan for the Oregon Department of Transportation. It establishes the desired function of this interchange and provides a long-range plan for infrastructure improvements and operations to achieve agency and community goals as the City continues to grow.

The IAMP was developed as a cooperative effort between the Oregon Department of Transportation, the City of Hood River, Hood River County, and the Port of Hood River. Further input from the community and local stakeholder groups was obtained through meetings with a Stakeholder Working Group and through public open house meetings. The process followed in the development of this plan is illustrated in Figure 1.

This plan has been organized to facilitate implementation, including only content needed to understand the direction for managing the transportation system within the interchange area and to guide future decision-making in a manner consistent with that direction. Documents containing detailed background information developed through the planning process that created the basis for findings and recommendations are included in a separate appendix.[1] The plan elements in this report include:

Introduction

- This chapter discusses the purpose of the I-84 Exit 62 IAMP, the intended function of this interchange, identification of the study area, and the goals and objectives for this plan developed by participating agencies and local stakeholders.

Management Plan

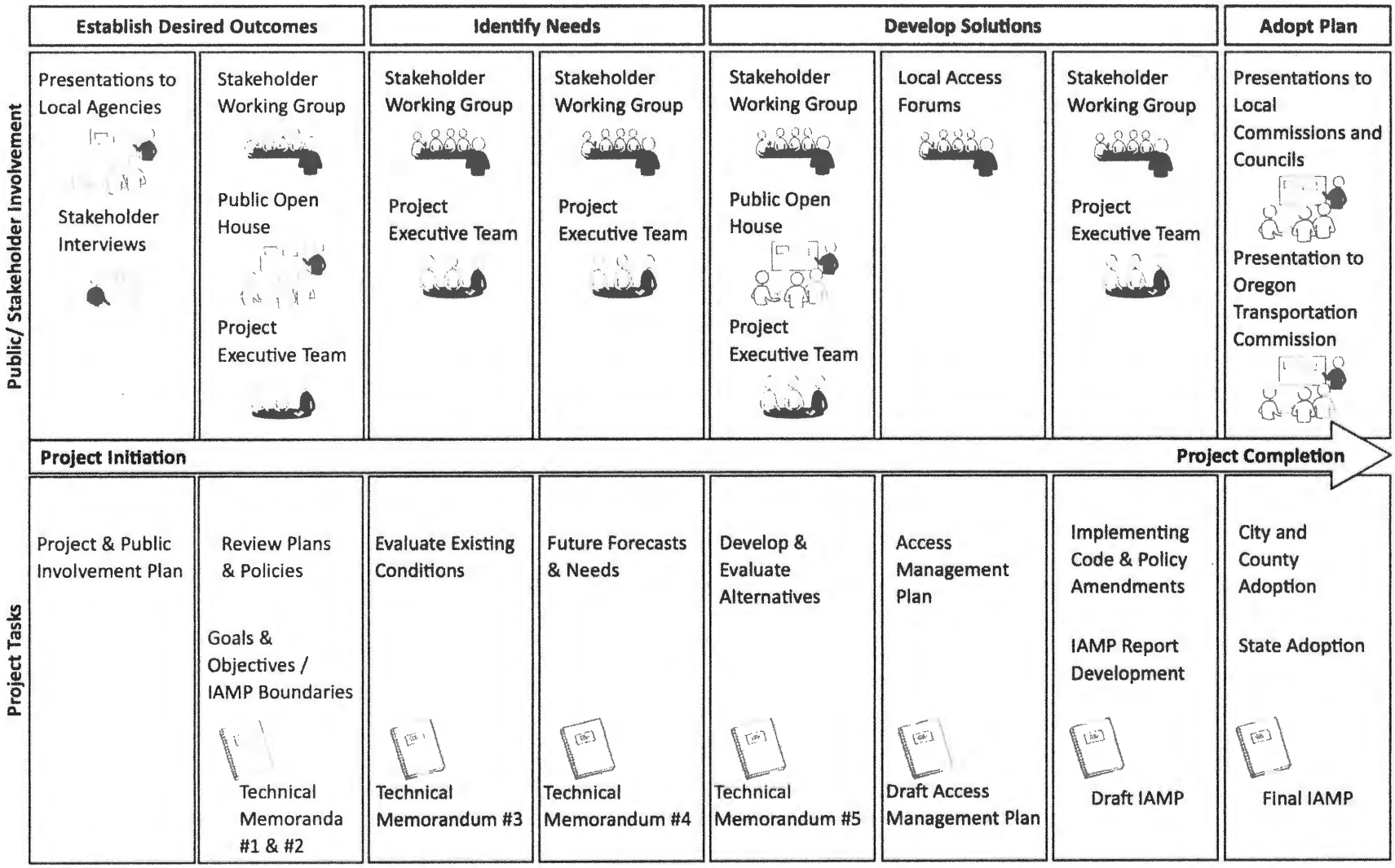
- A multimodal plan for transportation system improvements is provided for the I-84 Exit 62 interchange and surrounding area, including projects for pedestrian and bicycle travel, as well as for motor vehicle needs.
- An access management plan is included to facilitate the ongoing maintenance of the interchange crossroads in a manner that is consistent with their intended function.
- Roles and responsibilities related to the adoption and implementation of the IAMP are outlined for the Oregon Department of Transportation, the City of Hood River, and Hood River County. Recommended amendments to City and County plans and development codes necessary to successfully adopt and implement the IAMP are also included as appendices.
- Planning-level cost estimates for recommended improvement projects are included to guide future financing strategies.

Monitoring and Updates

- A process for tracking future traffic growth and impacts in the interchange area and comparison against forecasted conditions is provided.
- A list of potential actions or conditions that could result in a need to update the IAMP is provided and should be continuously reviewed as part of the ongoing monitoring process.

---

[1] *Appendices for Interstate 84 Exit 62 Interchange Area Management Plan and Interstate 84 Exit 63 & Exit 64 Interchange Area*



I-84 Exit 62
Interchange Area Management Plan

Figure 1 IAMP Development Process

DKS Associates
TRANSPORTATION SOLUTIONS

CHAPTER 2: INTRODUCTION

This chapter discusses the purpose of the Interchange Area Management Plan, introduces the management area, describes the function of the interchange, and outlines the goals and objectives.

IAMP Purpose and Intent

The I-84 Exit 62 interchange and surrounding transportation system has not been significantly improved since it was constructed to serve the underdeveloped west end of the City of Hood River. Today, much of this infrastructure is substandard and unable to adequately serve the growing demand from new development. In fact, development of surrounding properties has been difficult because of the inability of the transportation system to safely and efficiently accommodate added traffic.

While no improvements are currently planned for the I-84 Exit 62 interchange, a comprehensive plan is needed to guide future investments in transportation improvements that allow for safe and efficient travel through the interchange area as the City continues to grow. Therefore, the City of Hood River, Hood River County, and the Oregon Department of Transportation (ODOT) have worked together to develop this IAMP.

IAMPs are required by OAR 734-051-0155(7) for any new or significantly reconstructed interchange. The Oregon Highway Plan policies further direct ODOT to plan and manage interchange areas for safe and efficient operation. The purpose of an IAMP is to protect the function of the interchange and, consequently, the state's and local agency's investment in the facility. New interchanges and improvements to existing interchanges are very costly. State and local government and their citizens have an interest in ensuring that their interchanges function efficiently. The IAMP will define how the land use and transportation systems within the interchange study area will function over the planning horizon (year 2031).

Interchange Function

Generally, an interchange is defined as a system of interconnecting roadways in conjunction with one or more grade separations that provides for the movement of traffic between two or more roadways or highways on different levels.[2] The function of an interchange is established by the characteristics of the connecting highway. The I-84 Exit 62 interchange is a component of I-84, an Interstate Highway and Freight Route. The interchange's primary function is to serve the residential areas of the City of Hood River and Hood River County through key surface streets such as Cascade Avenue, Westcliff Drive, Country Club Road, and Rand Road. The interchange is also an important access point for freight movement from Hood River County to the interstate system and markets outside of the County. In addition, it provides access to the Heights residential area, as well as large undeveloped commercial, industrial, and future residential lands at the west end of the City of Hood River. As the west end of the City continues to develop, Exit 62 will become an important gateway into the urban area.

The Oregon Highway Plan (OHP)[3] classifies I-84 as an Interstate Highway. According to the OHP, the primary function of an Interstate Highway is to "provide connections to major cities, regions of the state,

[2] *A Policy on Geometric Design of Highways and Streets*, American Association of State Highway and Transportation Officials, Washington D.C., 5th Edition, 2004, p. 743.

[3] *1999 Oregon Highway Plan*, Oregon Department of Transportation, Amended July 2006.

and other states. A secondary function in urban areas is to provide connections for regional trips within the metropolitan area. Interstate Highways are major freight routes and their objective is to provide mobility."

Cascade Avenue (also known as US 30 or the Historic Columbia River Highway) is owned by ODOT and is the crossroad within the I-84 Exit 62 interchange. ODOT classifies Cascade Avenue as a District Highway, which are facilities of county-wide significance and function largely as county and city arterials or collectors. Cascade Avenue provides both a connection to the interstate freeway system and access to local businesses and residences in the City. The City has designated Cascade Avenue as a minor arterial in their Transportation System Plan.

Approximately 100 feet north of the I-84 Exit 62 interchange, Cascade Avenue ends at Westcliff Drive, which parallels I-84 and provides access to properties bordering the Columbia River. To the west of Cascade Avenue, Westcliff Drive is under Hood River County jurisdiction. However, the intersection with Cascade Avenue and the remaining segment of Westcliff Drive to the east are under ODOT jurisdiction. The City has designated Westcliff Drive as a local street.

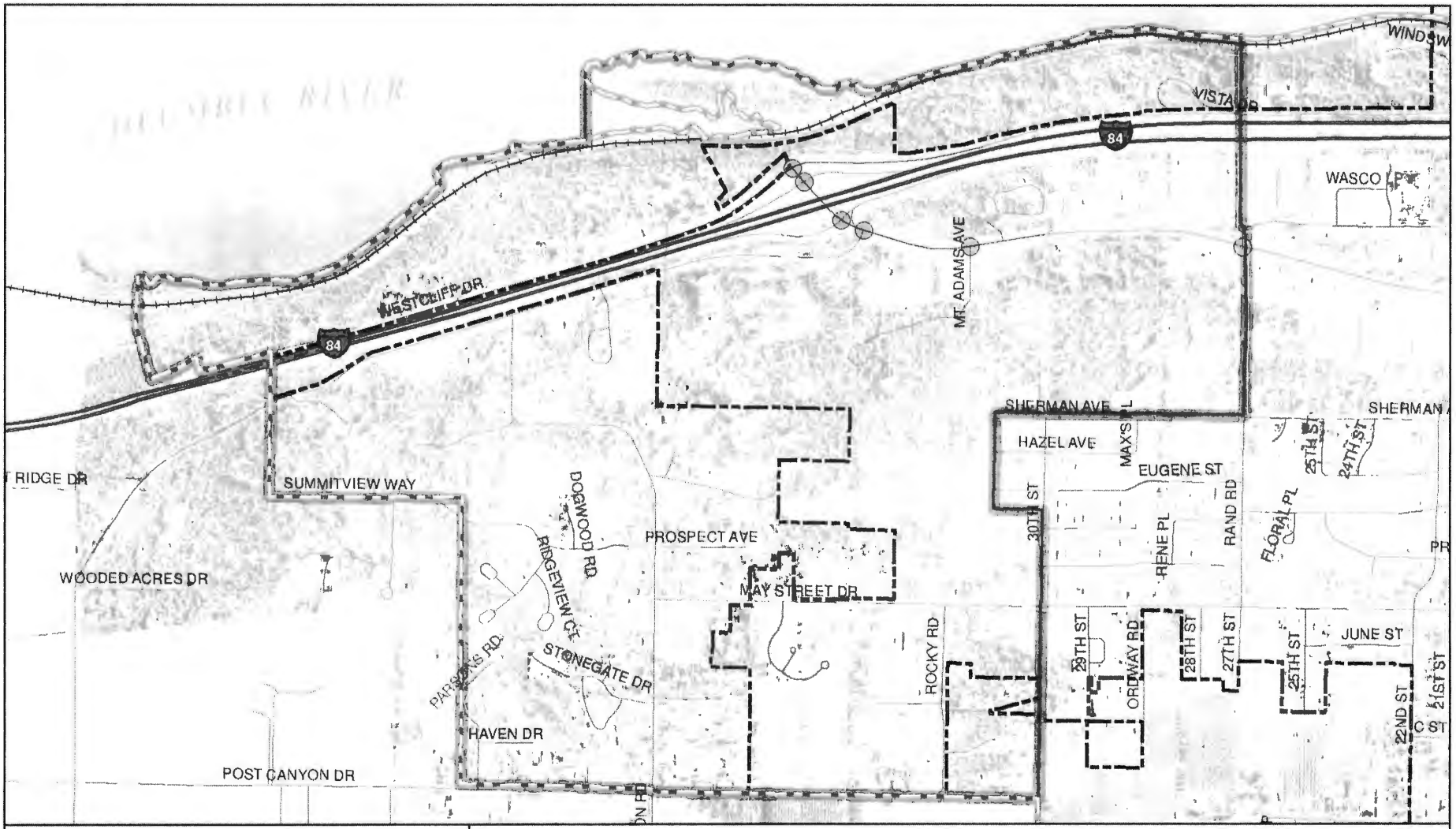
Study Area

Figure 2 illustrates the Study Area for the I-84 Exit 62 IAMP. The Exit 62 study area boundaries include a combination of the urban growth boundary (UGB) and Sherman Avenue to the south, 30th Street and Rand Road to the east, and the UGB to the north and west.

The IAMP study area was chosen to reflect the general area where the interchange would potentially influence land use and traffic patterns. As a general rule of thumb, lands located within approximately ½-mile from the interchange are considered. However, the boundary was further refined through consideration of existing and planned land uses in the vicinity that will impact the interchange, transportation facilities and traffic operations, and natural and cultural resources.

While Rand Road is slightly beyond the ½-mile radius from the interchange, it was included as a study boundary because it represents a significant link in the transportation system. In addition, the area between May Street, Frankton Road, 30th Street, and the UGB was included because of its high development potential over the next 20 years and its anticipated reliance on the I-84 Exit 62 interchange for access to areas beyond Hood River. It should also be noted that a small pocket of existing residential development in the southwest and southeast corners of the study area were excluded, as their potential for redevelopment within the planning horizon was considered to be negligible.

In addition to mapping study area boundaries, Figure 2 also identifies study intersections and access management areas. Study intersections are key locations where safe and efficient operation is essential for adequate operation of the interchange. These intersections were analyzed as part of the study to identify any safety or operational deficiencies through the planning horizon. Needed improvements to address deficiencies were developed and recommended for inclusion in State and local capital improvement plans. Within the Study Area, ODOT, Hood River County, and the City of Hood River all maintain jurisdiction over one or more key roadways, as shown in Table 1.



I-84 Exit 62
Interchange Area Management Plan

Figure 2 Study Area

- Study Area
- Study Intersection
- Access Management Area
- Interstate
- Roadway
- Railroad
- City Limit
- UGB
- Stream
- Parcel Boundary

0 400 800 1,200
Feet
1 inch = 1,000 feet

Parametrix

Table 1: Roadway Jurisdiction

Key Interchange Area Roadway	Agency of Jurisdiction
I-84	ODOT
Cascade Avenue	ODOT
Westcliff Drive	ODOT (Cascade Avenue to Jaymar Road)
	Hood River County (west of Cascade Avenue)
Country Club Road	City of Hood River (within City Limits)
	Hood River County (outside of City Limits)
Rand Road	City of Hood River

Access management areas are corridors along the interchange crossroad where turning movements related to driveways and public street intersections can influence interchange operations. As a general practice, this corridor includes the length of the interchange crossroad within ¼-mile of the interchange ramp terminals, which would be consistent with ODOT's access management spacing standards for interchange areas. As part of the IAMP, an access management plan was developed that provides short, medium, and long-range actions to modify access to the crossroad within the access management area to provide conformance with ODOT's access management spacing standards where feasible.

Goals and Objectives

The goals and objectives of this IAMP reflect the intentions and interests of ODOT, the City of Hood River, Hood River County, and other key stakeholders for the interchange and transportation operations in the area. The goals and objectives are guided by, but not re-statements of, Oregon Highway Plan policies and OAR language. The objectives relate what the plan is trying to accomplish and are intended to be achievable and measurable. The objectives served as the basis for data collection and research, as alternative evaluation criteria to guide alternatives analysis and selection of the preferred alternative, and to guide management decisions.

Goal 1: Protect the function and operation of the interchange and the state highways as follows:

- I-84 is classified as an Interstate Highway. It is part of the National Highway System and is a designated freight route between Portland and points east. The operational objective for Interstate Highways is to provide safe and efficient high-speed travel in urban and rural areas.
- The Historic Columbia River Highway (HCRH) is classified as a District Highway. The operational objective for District Highways is to allow safe and efficient moderate to low-speed travel in urban and urbanizing areas for traffic flow, as well as bicycle and pedestrian movements. In addition, the HCRH has design and operational requirements not applicable to other highways in the state.

  Objective 1a: The project alternatives meet the requirements of the Federal Interchange Policy and will accommodate design-year (2031) traffic demands as a threshold.

  Objective 1b: The project alternatives are consistent with the OHP requirement that the maximum volume to capacity ratio for the ramp terminals of interchange ramps be the smaller of the values of the volume to capacity ratio for the crossroad or 0.85.

Objective 1c: Meet or move in the direction of ODOT access management spacing standards for access along interchange crossroads.

Objective 1d: The project alternatives are consistent with the intent of the Programmatic Agreement for the HCRH.

Objective 1e: The project alternatives are consistent with the intent of the I-84 Corridor Strategy.

Goal 2: Provide for an adequate system of local roads and streets for access and circulation within the interchange area that minimizes local traffic through the interchange and on the interchange crossroad.

Objective 2a: Any necessary supporting improvements to the surface street system have been (or will be) identified in the local comprehensive plan and funding or a funding source for these improvements has been identified.

Objective 2b: While recognizing the urban fabric of Hood River, the project alternatives propose surface street improvements that either meet the ODOT established access management standards or improve on the current conditions.

Objective 2c: The project alternatives propose surface street improvements that will operate adequately over the 20-year planning horizon.

Goal 3: Provide safe and efficient multimodal travel between the connecting roadways.

Objective 3a: While recognizing existing capacity constraints and consistent with the Programmatic Agreement for the HCRH, the project alternatives will improve safety by adding capacity to reduce congestion and/or correcting geometric conditions that do not meet current standards.

Objective 3b: The project alternatives will improve bicycle and pedestrian safety by providing upgraded bikeways and walkways that meet current standards and include facility infill and extensions where needed to provide a continuous network while respecting the historic streetscape.

Goal 4: Ensure future changes to the planned land use system are consistent with protecting the long-term function of the interchange and the surface street system and the integration of future transportation projects and land use changes.

Objective 4a: The project alternatives were developed in partnership with affected property owners in the interchange area, the City of Hood River, Hood River County, the Oregon Department of Transportation, and other stakeholders, including interchange users.

Objective 4b: The City and County Comprehensive Plans and/or Transportation System Plans are consistent, or will be made consistent, with the project alternatives.

Objective 4c: The project alternatives are consistent with the County's Bike Plan.

Goal 5: Recognize the importance of the interchange function to support local and regional economic development goals and plans.

Objective 5a: The project alternatives are expected to reduce delay for vehicles, including commercial vehicles, accessing the freeway and increase safety.

Objective 5b: The project alternatives would facilitate access to, through, and from businesses in Hood River.

Objective 5c: The project alternatives recognize the importance of recreation and tourism to the regional economy.

Goal 6: Ensure that the needs of regional through trips and the timeliness of freight movements are considered when developing and implementing plans and projects on freight routes.

Objective 6a: The project alternatives would facilitate freight access to and from the many industrial, agricultural, and forest products freight destinations in the interchange area.

CHAPTER 3: MANAGEMENT PLAN

This chapter describes plan actions for improving and managing the transportation system in the interchange area through the year 2031 to maximize the operational life of the I-84 Exit 62 interchange, while ensuring that planned growth can be supported. It describes future operations within the Exit 62 interchange area, identifies transportation improvements for the interchange and surrounding street network, and includes an access management plan to guide the planning of approach locations along the interchange crossroad (Cascade Avenue). Guidance for agency implementation of the plan is also provided, including recommended amendments to City and County plans and development codes.

Transportation System Improvements

Transportation system improvements are categorized by mode of travel, including improvements for the pedestrian, bicycle, and motor vehicle networks.

Pedestrian Network Improvements

This category of improvement projects includes those exclusively targeted at improving connectivity for pedestrians within the interchange area. In addition to these, the motor vehicle improvement projects identified along Cascade Avenue, Mt. Adams Avenue, and Country Club Road (including the future realigned section) would include sidewalks as part of a complete street project. Exclusive pedestrian network projects are listed below and illustrated in Figure 3.

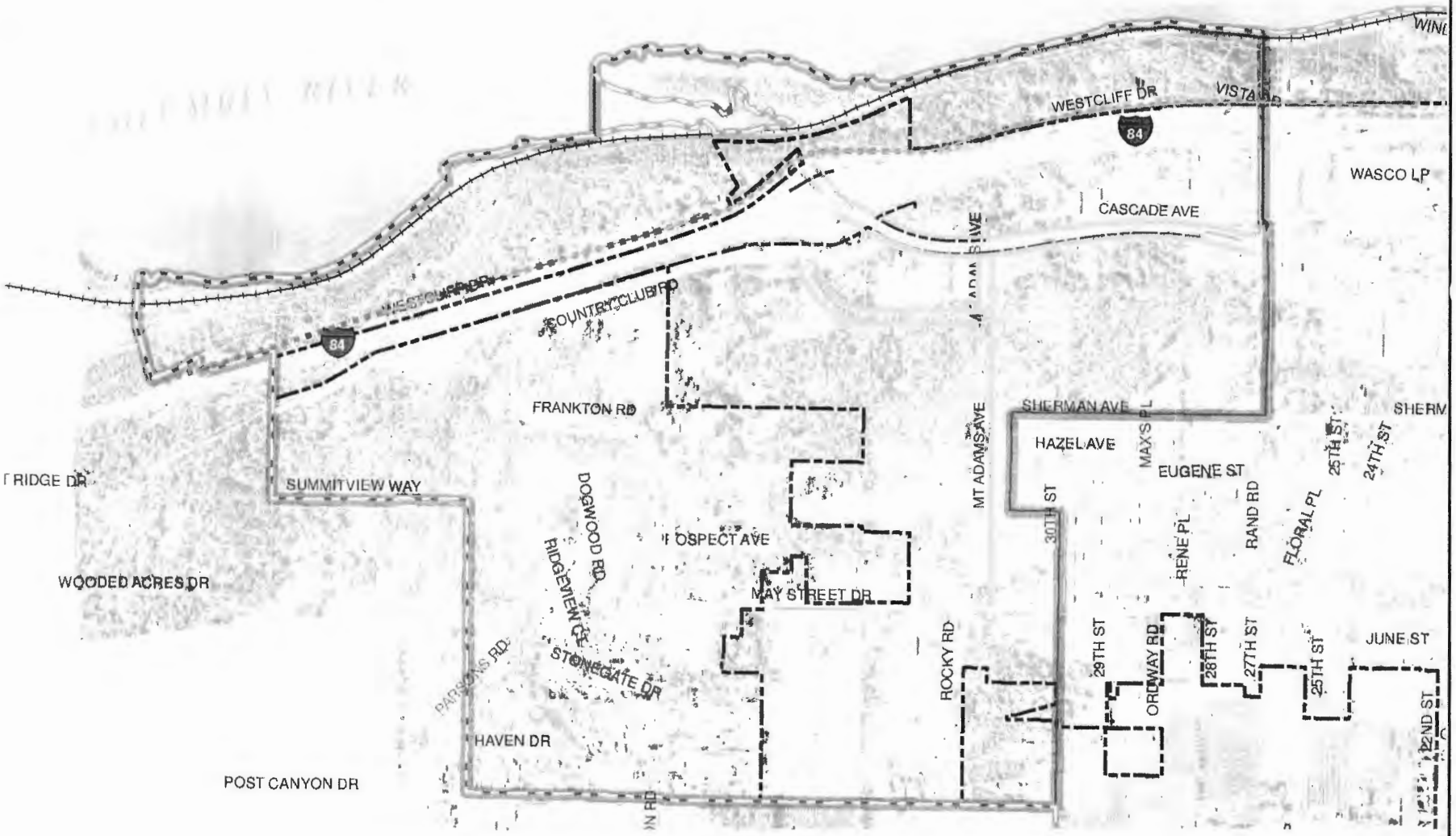
A. Construct sidewalk along the south side of Country Club Road between Cascade Avenue and the urban growth boundary to the west.

B. When Country Club Road is realigned and the intersection at Cascade Avenue is closed, construct a bicycle/pedestrian accessway between the new cul-de-sac and Cascade Avenue (also listed under Bicycle Network Improvements).

C. Construct sidewalk along Frankton Road between Country Club Road and May Street.

It is also recognized that an extension of the Historic Columbia River Highway State Trail is planned to occur along the north side of Westcliff Drive, approaching from the west and ending at Ruthton Park. The design and alignment of this trail have not yet been determined, but they may be planned to replace the need for standard pedestrian and bicycle amenities along the property frontages. Furthermore, an extension of the trail design beyond Ruthton Park has been considered, reaching to Cascade Avenue or even to the eastern terminus of Westcliff Drive at Jaymar Road.

The design and location of this trail extension will be a coordinated effort between ODOT, Hood River County, and the City of Hood River. This may effect pedestrian and bicycle facility design through much of the interchange area and along the I-84 Exit 62 interchange itself. As plans are refined, they must compliment adjacent facilities to provide a comprehensive network for walking and biking through the interchange area. Furthermore, it should be acknowledged that future improvements to Westcliff Drive that are outside of the Hood River urban area may require review for consistency with National Scenic Area provisions.



I-84 Exit 62
Interchange Area Management Plan

Figure 3 Pedestrian Network Improvements

LEGEND

- Study Area
- City Limit
- UGB
- Parcel Boundary
- Railroad
- Stream

Existing
- Sidewalk

Future
- Sidewalk Part of Road Project
- Infill/New Sidewalk
- Multi-Use Path
- Sidewalk or Multi-Use Path

0 400 800 1,200
1 inch equals 1,000 feet

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TRANSPORTATION SOLUTIONS

Bicycle Network Improvements

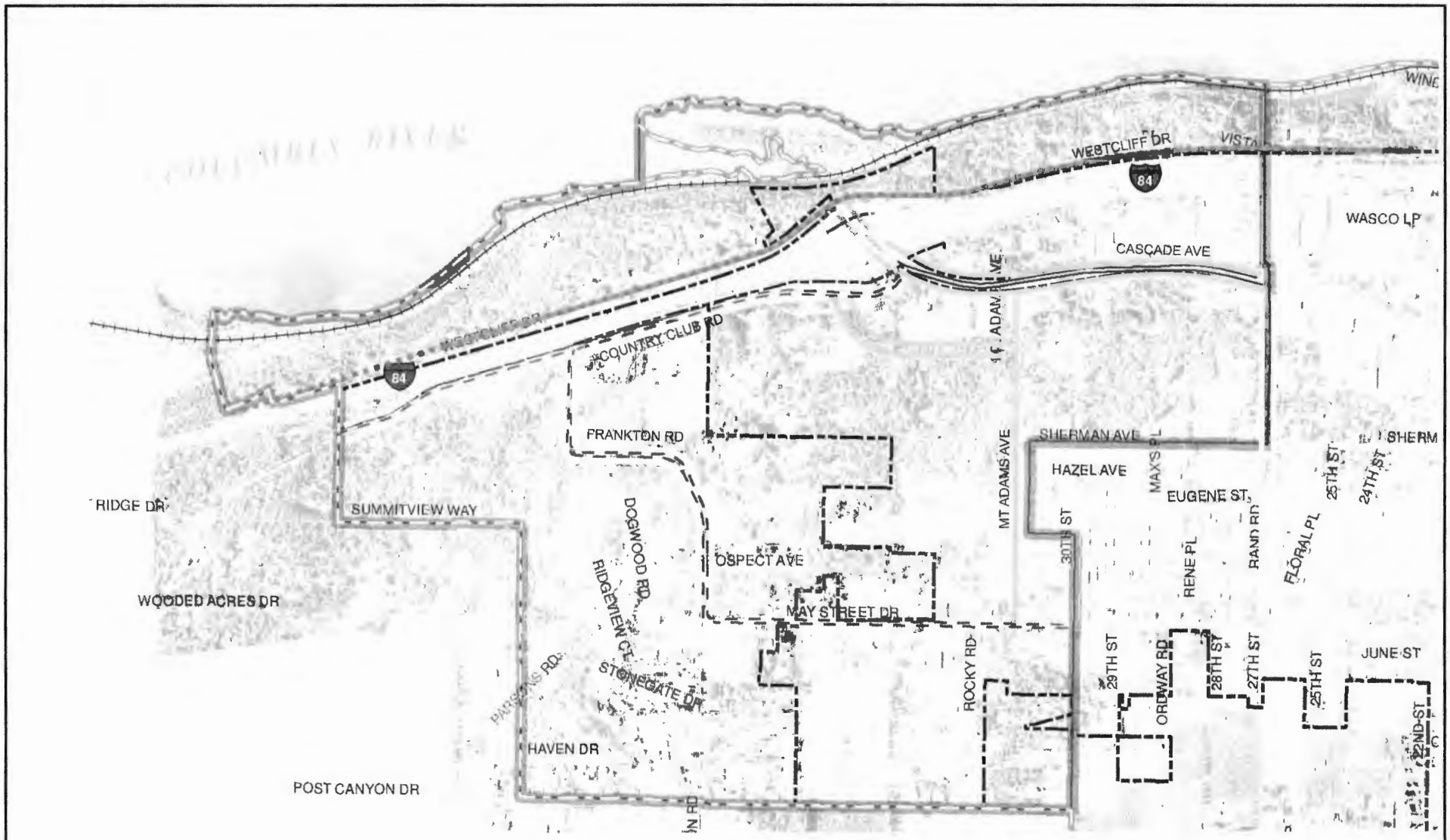
This category of improvement projects includes those exclusively targeted at improving connectivity for bicyclists within the interchange area. In addition to these, the motor vehicle improvement projects identified along Cascade Avenue, Mt. Adams Avenue, and Country Club Road (including the future realigned section) would include bike lanes as part of a complete street project. Exclusive bicycle network projects are listed below and illustrated in Figure 4.

A. Infill bicycle lanes along Frankton Road between Country Club Road and May Street.

B. Infill bicycle lanes along Rand Road between Cascade Avenue and May Street.

C. When Country Club Road is realigned and the intersection at Cascade Avenue is closed, construct a bicycle/pedestrian accessway between the new cul-de-sac and Cascade Avenue (also listed under Pedestrian Network Improvements).

D. Construct bicycle lanes along Country Club Road between the eastern terminus (Cascade Avenue under existing alignment or to the newly constructed segment connecting to Mt. Adams Avenue if realigned) and the urban growth boundary to the west. When Country Club Road is realigned to Mt. Adams Avenue, bicycle lane construction for that segment will occur as part of that project. If realignment of Country Club Road occurs before bicycle lanes are constructed along the section of Country Club Road to the west, construction of bicycle lanes on the segment between Cascade Avenue and the point of realignment will not be necessary.



I-84 Exit 62
Interchange Area Management Plan

Figure 4 Bicycle Network Improvements

LEGEND

- Study Area
- City Limit
- UGB
- Parcel Boundary
- Railroad
- Stream

Existing

- Partial Shoulder Bikeway
- Dedicated Bikelane

Future

- Bike Lane Part of Road Project
- Infill/New Bike Lane
- Multi-Use Path
- Multi-Use Path or Shared Roadway

0 400 800 1,200
1 inch equals 1,000 feet

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TRANSPORTATION SOLUTIONS

Motor Vehicle Network Improvements

Land Use Assumptions

Traffic volume forecasts for the year 2031 were developed through estimation of continued regional growth in through traffic and city-wide growth in housing and employment within the urban growth boundary in a manner that would be consistent with the City of Hood River Comprehensive Plan and Map as of July 2009. The growth in local development would be consistent with full buildout of lands within the Exit 62 interchange area. A detailed description of land use assumptions for the year 2031 is included in the appendix.

Future Traffic Volumes

Traffic volume forecasts were developed for two time periods of interest for the I-84 Exit 62 interchange area: the summer Sunday p.m. peak hour and the summer weekday p.m. peak hour. The summer Sunday p.m. peak hour represents the 30th highest annual hour of traffic for I-84, which is the time period used by ODOT for design purposes. The summer weekday p.m. peak hour represents the time period where local commuting traffic combines with recreational traffic and often reflects a more appropriate design hour for the local transportation system.

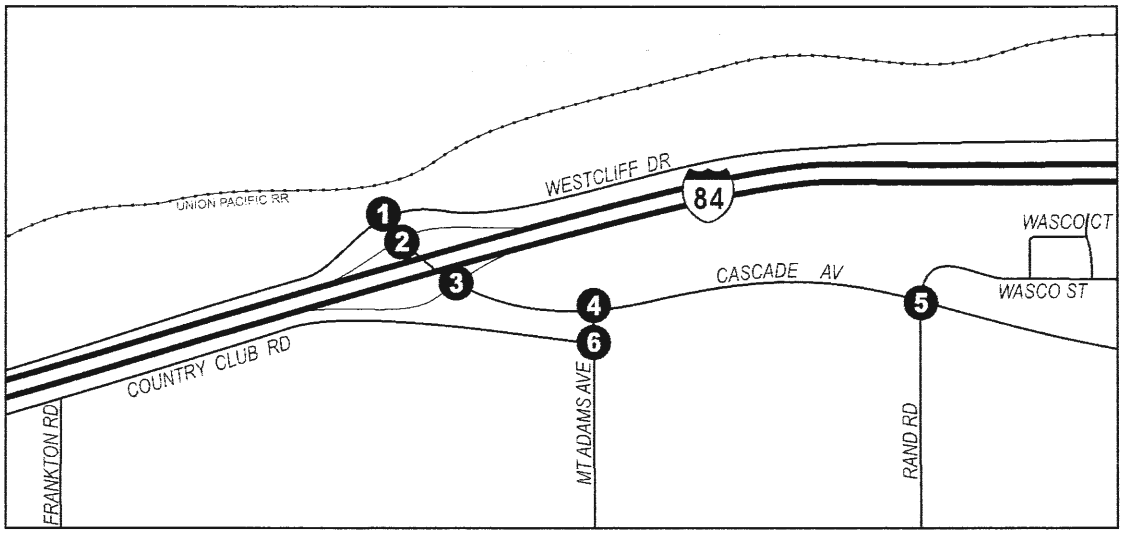
Figures 5 and 6 display the forecasted turning movement volumes at study intersections for the year 2031 during the weekday and Sunday p.m. peak hour scenarios, respectively. Much of the growth in traffic to 2031 in the Exit 62 interchange area is attributed to commercial growth surrounding the interchange and residential growth to the south. However, the Exit 62 interchange is also part of an important travel route for trucks traveling to and from the agricultural lands in the County south of Hood River and for many vehicles traveling to the south area of the city and to the Heights area along 13th Street.

Mobility Standards

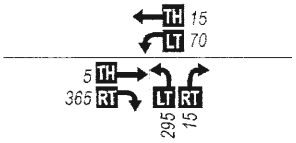
ODOT, the City of Hood River, and Hood River County have adopted mobility standards for transportation facilities under their jurisdiction that require a minimum level of acceptable performance. While ODOT maintains jurisdiction of all study intersections within the Exit 62 interchange area, the City of Hood River applies the most restrictive standard where a transportation facility within the City Limits is maintained by ODOT or the County. For non-ODOT facilities that are outside of the City Limits, the County mobility standards apply.

Through the recent 2011 update of the City of Hood River's Transportation System Plan, the City's mobility standard changed from requiring a level of service C to only requiring a level of service D on City roadways. This change was primarily in response to the increasing difficultly of funding transportation improvement projects in a timely manner to support new development. The City of Hood River's mobility standards are included in the 2011 City of Hood River Transportation System Plan. Under Goal 4, Policy 4 states, "A minimum level of service (LOS) D on transportation systems serving new developments is desired on streets and signalized and unsignalized intersections. Level of service shall be based on the most recent edition of the Highway Capacity Manual. Where a facility is maintained by the County or ODOT, the more restrictive of the standards should apply."[4]

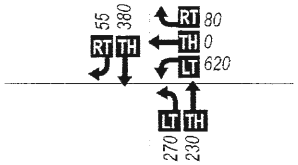
[4] *City of Hood River Transportation System Plan*, DKS Associates, June 2011.



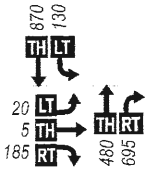
1 Westcliff Dr. @ Cascade Ave.



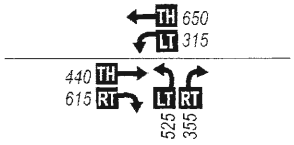
2 I-84 WB On/Off Ramps @ Cascade Ave.



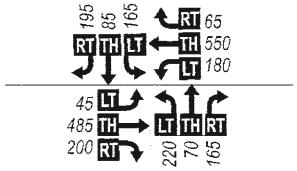
3 I-84 EB On/Off Ramps @ Cascade Ave.



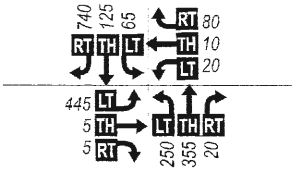
4 Mt. Adams Ave. @ Cascade Ave.



5 Cascade Ave. @ Rand Rd.



6 Mt. Adams Ave. @ Country Club Rd.



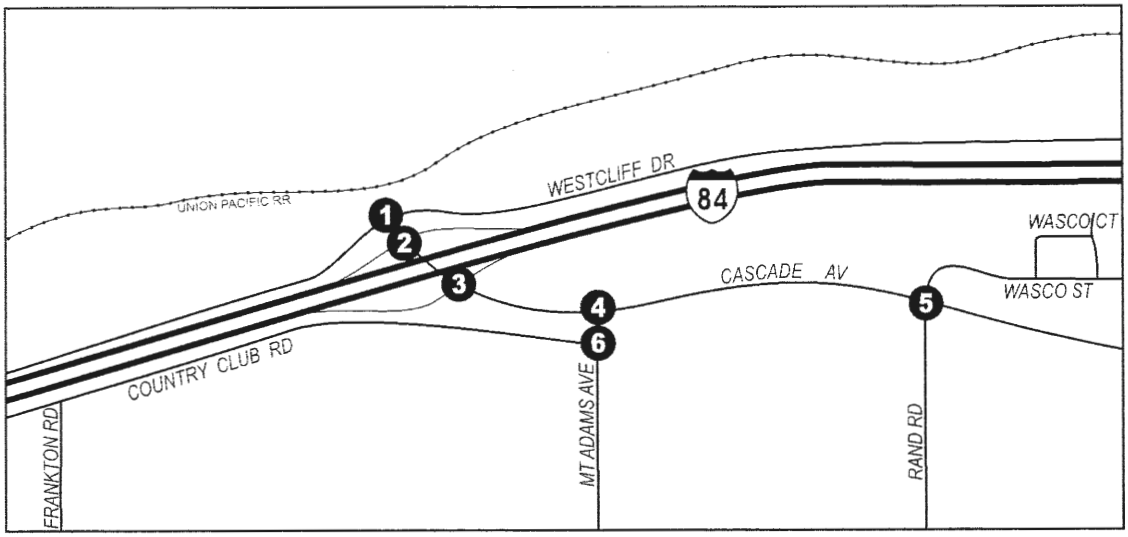
I-84 Exit 62
Interchange Area Management Plan

Figure 5 2031 Weekday PM Peak Hour Traffic Volumes

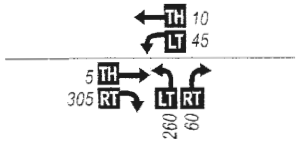
LEGEND

- 0 - Study Intersection & Number
- RT 00 - Right Turn Movement Traffic Volume
- TH 00 - Through Movement Traffic Volume
- LT 00 - Left Turn Movement Traffic Volume

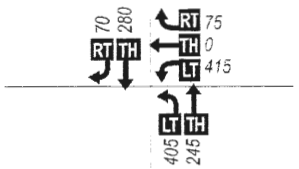
DKS Associates



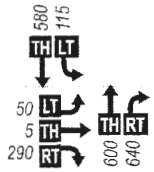
1 Westcliff Dr. @ Cascade Ave.



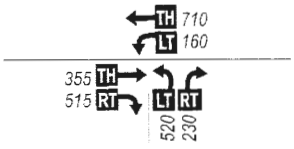
2 I-84 WB On/Off Ramps @ Cascade Ave.



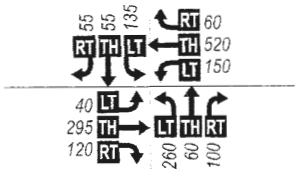
3 I-84 EB On/Off Ramps @ Cascade Ave.



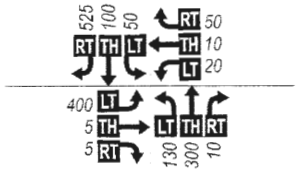
4 Mt. Adams Ave. @ Cascade Ave.



5 Cascade Ave. @ Rand Rd.



6 Mt. Adams Ave. @ Country Club Rd.



I-84 Exit 62
Interchange Area Management Plan

Figure 6 2031 Sunday PM Peak Hour Traffic Volumes

LEGEND

- (0) - Study Intersection & Number
- RT 00 - Right Turn Movement Traffic Volume
- TH 00 - Through Movement Traffic Volume
- LT 00 - Left Turn Movement Traffic Volume

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To maintain consistency with City mobility standards, it is recommended that Hood River County amend their mobility standards to allow LOS D operations (a LOS C is currently required) within the City of Hood River urban growth area.

ODOT mobility standards are given as volume to capacity (V/C) ratios and are based on roadway classification, designations, and posted speed limits. There are two types of mobility standards for state facilities that are used for different purposes. Those contained in ODOT's 1999 Oregon Highway Plan (OHP) are applied to the review of development proposals and for the determination of needed infrastructure improvements (i.e., No Build conditions). However, the mobility standards from ODOT's Highway Design Manual (HDM)[5] are to be applied to the evaluation of all alternatives considered for roadway improvements through public investments.

Table 2 lists the mobility standards from the OHP and HDM that are applicable to Exit 62 interchange area facilities (I-84 is classified as an Interstate Highway and Cascade Avenue is classified as a District Highway). While the recommended improvements included in this plan were designed to comply with the HDM standards, the mobility standards from the OHP will be used for all future interchange area operations monitoring, including the review of development proposals.

Table 2: Applicable ODOT Mobility Standards (V/C ratios)

Highway Category	Inside Urban Growth Boundary	
	Non-MPO outside of STA's where non-freeway speed ≤ 35 mph	Non-MPO where non-freeway speed limit ≥ 45mph
Oregon Highway Plan ▪ *Applied to the review of development proposals and for the determination of needed infrastructure improvements (i.e., No Build conditions)*		
Interstate Highways	-	0.70*
District Highways/ Local Interest Roads	0.90*	-
Highway Design Manual ▪ *Applied to the evaluation of all alternatives considered for roadway improvements through public investments*		
Interstate Highways	-	0.65
District Highways/ Local Interest Roads	0.80	-

* The maximum volume to capacity ratio for ramp terminals of interchange ramps shall be the smaller of the values of the volume to capacity ratio for the crossroad or 0.85.

[5] *Highway Design Manual*, Oregon Department of Transportation, 2003, p. 10-38.

In addition to the mobility standards shown in Table 2, special conditions apply at some locations. At unsignalized intersections and road approaches, the volume to capacity ratios shall not be exceeded for either of the state highway approaches that are not stopped. Approaches at which traffic must stop, or otherwise yield the right of way, shall be operated to maintain safe operation of the intersection and all of its approaches and shall not exceed the volume to capacity ratios for District/Local Interest Roads within the urban growth boundary.

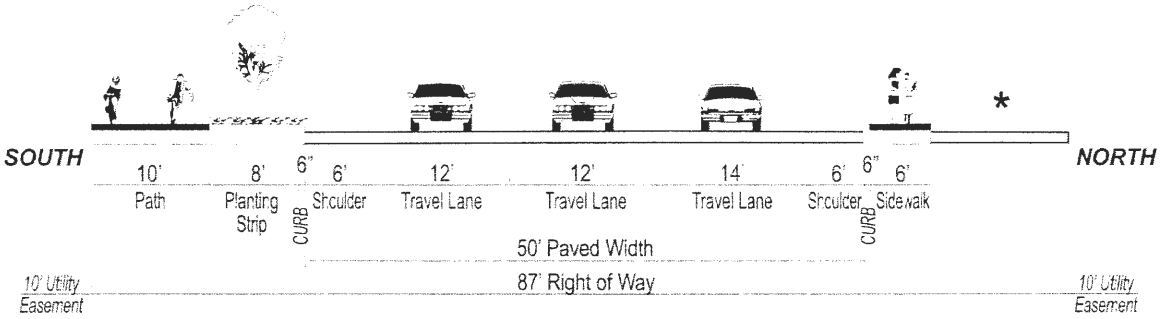
Roadway Improvements

All study intersections within the I-84 Exit 62 IAMP study area will fail to comply with mobility standards during the weekday p.m. peak hour with the exception of the intersection of Westcliff Drive at Cascade Avenue (see future intersection operations included on following pages). However, during the Sunday p.m. peak hour, only the I-84 ramp terminals with Cascade Avenue fail to comply with mobility standards. Critical improvements to maintain safe and efficient operation of the transportation system in the interchange area described below.

- The I-84 Exit 62 interchange will require significant modernization to provide needed turning lanes, bicycle and pedestrian accommodations, and traffic signals. While the design of this interchange may be explored further, a diamond configuration using the existing footprint as much as feasible was assumed for the purpose of this plan.
- The realignment of Country Club Road from Cascade Avenue to a future Mt. Adams Avenue extension is a critical improvement for the Exit 62 interchange area. This project significantly improves intersection spacing in the vicinity of the I-84 interchange ramp terminals, which allows all other elements of the transportation system to function adequately. While sidewalk should be provided on both sides of Country Club Road in the realigned section, topography may make this infeasible. At a minimum, sidewalk should be constructed along the north side of this section, which is adjacent to existing and future development.
- With Country Club Road realigned to intersect with Mt. Adams Avenue, there will be increased traffic demand on the segment of Cascade Avenue between I-84 and the intersection with Mt. Adams Avenue. To adequately accommodate this demand, Cascade Avenue will ultimately need to be widened to include two travel lanes in each direction within the segment. It is imperative that the intersections be designed to accommodate large trucks. Once east of Mt. Adams Avenue, the cross-section of Cascade Avenue can return to only one travel lane in each direction as planned in the City of Hood River TSP.

  On March 3, 2011, the Historic Columbia River Highway Advisory Committee passed a motion to support an amendment of the Programmatic Agreement #19942 to accommodate the wider cross-section on Cascade Avenue in this segment. The approved roadway design is shown in Figure 7.

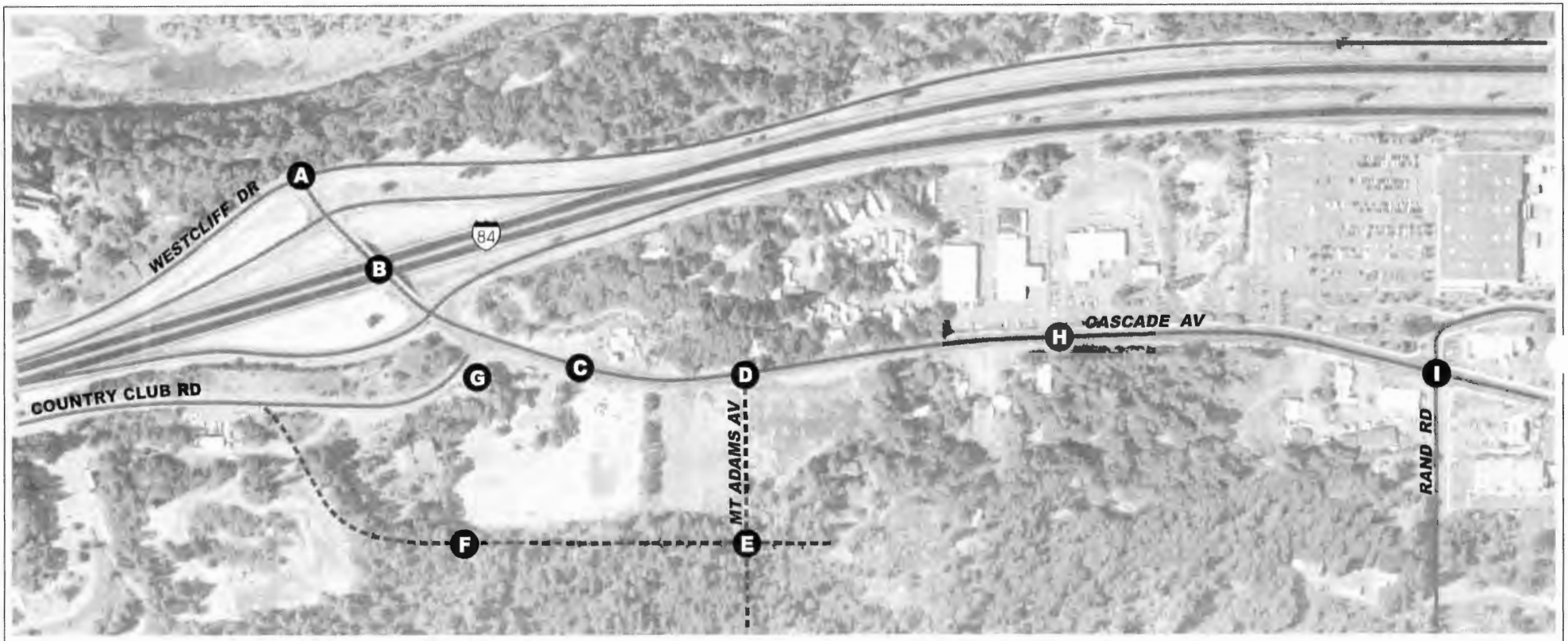
Figure 7: Cascade Avenue Design from I-84 Eastbound to Mt. Adams Avenue



* Prior to construction of the outer westbound travel lane, the City of Hood River and ODOT will demonstrate the need for the lane based on updated traffic projections and will present the findings to the Historic Columbia River Highway Advisory Committee.

- East of Mt. Adams Avenue, Cascade Avenue will be widened to 3 lanes (one travel lane in each direction plus a center turn lane). This design is consistent with that identified in the City of Hood River TSP and will match the existing roadway east of Rand Road.

A comprehensive map of Exit 62 interchange area motor vehicle network improvements is provided in Figure 8, with more detailed descriptions of these improvements as they relate to study intersections included in the following pages. All roadway improvement projects shown along Cascade Avenue, Mt. Adams Avenue, and Country Club Road are assumed to include bicycle lanes and sidewalks.



- **A** Improve intersection with traffic signal and turning lanes (see page 20).
- **B** Modernize interchange to accommodate turning lanes and traffic signals (see page 21).
- **C** Widen Cascade Ave. to an ultimate 4-lane roadway from I-84 eastbound ramps to Mt. Adams Ave. (see Figure 7).
- **D** Improve intersection with traffic signal and turning lanes (see page 22).
- **E** Improve intersection with traffic signal and turning lanes (see page 23).
- **F** Construct new alignment of Country Club Rd. as a 2-lane roadway.
- **G** Cul-de-sac Country Club Rd. and provide pedestrian/bicycle accessway.
- **H** Widen Cascade Ave. to a 3-lane roadway from Mt. Adams Ave. to Rand Rd.
- **I** Improve intersection with traffic signal and turning lanes (see page 24).

LEGEND

——— - Existing Roadway

- - - - - - - - Proposed Roadway

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NO SCALE

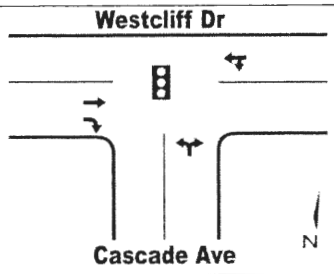
Figure 8

I-84 Exit 62
Interchange Area Management Plan
Motor Vehicle Network Improvements

Cascade Avenue/ Westcliff Drive Improvements

Improvements:

- Construct traffic signal
- Eastbound: construct right turn lane (175' storage)



Operations (Year 2031):

Scenario	Level of Service	Delay (sec)	V/C Ratio	ODOT Mobility Standards (V/C Ratio) OHP	ODOT Mobility Standards (V/C Ratio) HDM	City Mobility Standard (Level of Service)
No Build Sunday PM Peak Hour	B	14.5	0.15	0.90	0.80	D
No Build Weekday PM Peak Hour	C	18.2	0.27	0.90	0.80	D
With Improvements Sunday PM Peak Hour	C	23.6	0.36	0.90	0.80	D
With Improvements Weekday PM Peak Hour	C	29.9	0.36	0.90	0.80	D

Notes:

While the proposed improvements are shown to degrade intersection operations compared to the No Build condition, it should be recognized that the above improvements are intended to provide for compatibility with the nearby traffic signal at the I-84 westbound off-ramp. The priority at this intersection is to avoid queue spillback into the I-84 westbound ramp terminal. Prior to construction of a traffic signal, an engineering investigation must be completed showing that signal warrants will be met and ODOT Region and State Traffic Engineer approval must be obtained.

Cascade Avenue/ I-84 EB and WB Ramps Improvements

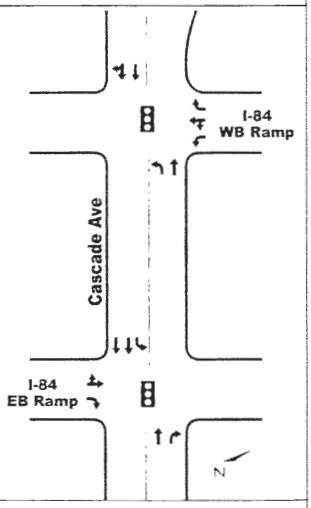
Improvements:

Cascade Avenue at I-84 WB Ramps

- Construct traffic signal
- Northbound: construct left turn lane (full length of bridge)
- Southbound: construct second southbound through lane
- Westbound: construct left turn lane (275' storage) shared through/left turn lane, right turn lane (150' storage)

Cascade Avenue at I-84 EB Ramps

- Construct traffic signal
- Northbound: construct right turn lane (drop lane from Cascade Ave.)
- Southbound: construct second southbound through lane, left turn lane (200' storage or full length of bridge)
- Eastbound: construct right turn lane (125' storage)



Operations (Year 2031):

Scenario	Level of Service	Delay (sec)	V/C Ratio	ODOT Mobility Standards (V/C Ratio) OHP	ODOT Mobility Standards (V/C Ratio) HDM	City Mobility Standard (Level of Service)
Westbound Ramp Terminal						
No Build Sunday PM Peak Hour	A/**F**	>60.0	**>1.00**	0.85	0.65	D
No Build Weekday PM Peak Hour	A/**F**	>60.0	**>1.00**	0.85	0.65	D
With Improvements Sunday PM Peak Hour	C	31.5	0.60	0.85	0.65	D
With Improvements Weekday PM Peak Hour	D	39.0	0.65	0.85	0.65	D
Eastbound Ramp Terminal						
No Build Sunday PM Peak Hour	A/**F**	>60.0	**>1.00**	0.85	0.65	D
No Build Weekday PM Peak Hour	A/**F**	>60.0	**>1.00**	0.85	0.65	D
With Improvements Sunday PM Peak Hour	B	18.8	0.55	0.85	0.65	D
With Improvements Weekday PM Peak Hour	B	14.9	0.50	0.85	0.65	D

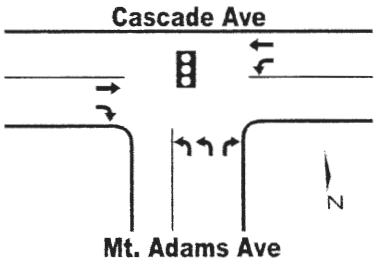
Notes: Bold Text indicates mobility standard is not met

While the design of this interchange may be explored further, a diamond configuration using the existing footprint as much as feasible was assumed for the purpose of this plan. The recommended improvements include signalization of both ramp terminals and widening and lengthening of the eastbound and westbound off-ramps. To accommodate the turn lane requirements at these intersections, the I-84 overcrossing structure would need to be replaced with a wider five-lane bridge, plus bike lanes and sidewalks.

Cascade Avenue/ Mt. Adams Avenue Improvements

Improvements:

- Construct traffic signal
- Northbound: construct two left turn lanes (200' storage on inside, full length to Country Club Rd. on outside), right turn lane (200' storage)
- Westbound: construct left turn lane (200' storage)
- Eastbound: construct channelized right turn lane under yield control (drop lane from Cascade Ave.)



Operations (Year 2031):

Scenario	Level of Service	Delay (sec)	V/C Ratio	ODOT Mobility Standards (V/C Ratio) OHP	ODOT Mobility Standards (V/C Ratio) HDM	City Mobility Standard (Level of Service)
No Build Sunday PM Peak Hour	C	25.6	0.90	0.90	0.80	D
No Build Weekday PM Peak Hour	C	35.0	**0.96**	0.90	0.80	D
With Improvements Sunday PM Peak Hour	C	33.9	0.64	0.90	0.80	D
With Improvements Weekday PM Peak Hour	B	18.1	0.62	0.90	0.80	D

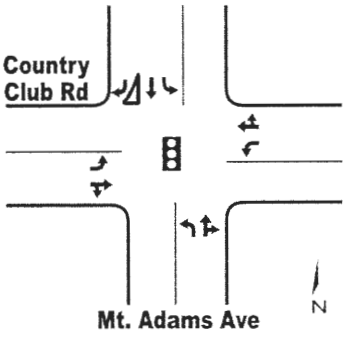
Notes: Bold Text indicates mobility standard is not met

A key element of the above improvements includes the construction of a separate eastbound right turn lane that is channelized and operates with yield control. Channelizing the separate eastbound right turn lane provides an opportunity to construct this lane with a larger radius, facilitating the movement of large trucks. The use of yield control maximizes the capacity of this movement, but as an alternative, it could also function adequately if signalized with right turn overlap phasing (i.e., eastbound right turn would have a green light at the same time as the northbound left turn). In addition, while only 200 feet of vehicle storage is required for the northbound right turn lane, it could be extended back to Country Club Road to provide additional width for large trucks turning from Country Club Road (eastbound to northbound onto Mt. Adams Avenue).

Country Club Road/ Mt. Adams Avenue Improvements

Improvements:

- Construct traffic signal
- Northbound: construct left turn lane (175' storage), shared through/right turn lane
- Southbound: construct left turn lane (100' storage), through lane, channelized right turn lane under yield control (drop lane from Mt. Adams Ave.)
- Westbound: construct left turn lane (50' storage), shared through/right turn lane
- Eastbound: construct left turn lane (275' storage), shared through/right turn lane



Operations (Year 2031):

Scenario	Level of Service	Delay (sec)	V/C Ratio	ODOT Mobility Standards (V/C Ratio) OHP	ODOT Mobility Standards (V/C Ratio) HDM	City Mobility Standard (Level of Service)
No Build Sunday PM Peak Hour	-	-	-	-	-	D
No Build Weekday PM Peak Hour	-	-	-	-	-	D
With Improvements Sunday PM Peak Hour	B	17.0	0.53	-	-	D
With Improvements Weekday PM Peak Hour	B	19.1	0.66	-	-	D

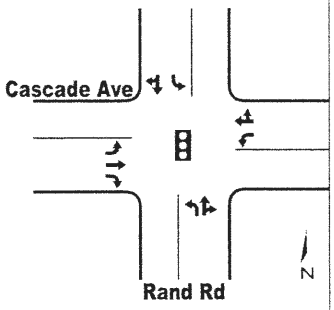
Notes:

The proposed realignment of Country Club Road will create a new intersection with the future Mt. Adams Avenue extension. A key element of this improvement is the channelized southbound right turn lane that operates under yield control. Channelizing the separate southbound right turn lane provides an opportunity to construct this lane with a larger radius, facilitating the movement of large trucks. The use of yield control was implemented to maximize capacity for the high demand movement and is critical for avoiding queue spillback into Cascade Avenue. Also, the second southbound lane extending from Cascade Avenue and dropping as a right turn lane at Country Club Road will provide additional maneuvering width for large trucks.

Cascade Avenue/ Rand Road Improvements

Improvements:

- Construct traffic signal
- Northbound: modify to include left turn lane (200' storage), shared through/right turn lane
- Westbound: none
- Southbound: modify to include left turn lane (175' storage), shared through/right turn lane
- Eastbound: construct right turn lane (150' storage)



Operations (Year 2031):

Scenario	Level of Service	Delay (sec)	V/C Ratio	ODOT Mobility Standards (V/C Ratio) OHP	ODOT Mobility Standards (V/C Ratio) HDM	City Mobility Standard (Level of Service)
No Build Sunday PM Peak Hour	B	20.9	0.78	0.90	0.80	D
No Build Weekday PM Peak Hour	D	37.5	**1.05**	0.90	0.80	D
With Improvements Sunday PM Peak Hour	B	17.3	0.70	0.90	0.80	D
With Improvements Weekday PM Peak Hour	C	22.6	0.79	0.90	0.80	D

Notes: Bold Text indicates mobility standard is not met

Key elements of the proposed improvements include the construction of a separate eastbound right turn lane to serve high volumes of traffic destined to the south and modification of the north and south approaches to include separate left turn lanes, which would allow for greater flexibility in signal phasing. However, the modifications to the north and south approaches will require some road realignment to ensure the opposing through lanes are appropriately aligned. Furthermore, prior to construction of the eastbound right turn lane, ODOT and the City will demonstrate the need for the lane based on updated traffic projections and will present the findings to the Historic Columbia River Highway Advisory Committee. This improvement is not only required meet mobility standards, but will help mitigate the potential for rear-end collisions associated with high volumes of eastbound through and right turn traffic using the same travel lane.

Access Management Plan

The purpose of the Access Management Plan is to provide a long-range, comprehensive and coordinated strategy for accommodating access as property develops or as public improvement projects are constructed. It is anticipated that most improvements will occur incrementally over time. The goal of the plan is to provide clear direction and ensure progress is made toward improving the management of access in the interchange area, while allowing sufficient flexibility to accommodate future development plans. Successful implementation will require continued collaboration between neighboring property owners, the City of Hood River, Hood River County, and ODOT staff.

Access Objectives

To provide a basis for decision-making during the development of the access management plan and to guide future policy decisions for the I-84 Exit 62 interchange area, a set of access management objectives was established. Given the constraints in the interchange area, the objectives were used as guidelines and may not be applicable in all instances.

These objectives were intended to reflect current practices, policies, and regulations pertaining to the management of access within the interchange area and include the following:

1. Create shared access points to reduce the overall number of accesses on the interchange crossroad.
2. Provide inter-parcel circulation through cross-over easements, shared parking lots, or connecting driveways where feasible.
3. Seek opportunities to avoid turning conflicts when positioning approaches on opposite sides of roadways.
4. Utilize easements, frontage/backage roads, and other City streets to allow for secondary access to facilitate large truck and emergency service vehicle circulation.
5. Prohibit or restrict movements to accesses adjacent to turning pockets at signalized intersections.
6. Ensure that all properties are provided reasonable access to the public street network.
7. Meet, or move in the direction of meeting, ODOT's adopted access management spacing standards for Interchange Areas, as documented in the *1999 Oregon Highway Plan* (as amended 2006). Applicable spacing standards for the I-84 Exit 62 interchange area are shown in Table 3.

Table 3: I-84 Exit 62 Interchange Area Access Spacing Standards

Type of Access Point	Minimum Spacing Dimension*
Distance between ramp terminal and first major intersection on Cascade Ave. / Westcliff Dr.	1,320 feet
Distance between ramp terminal and first directional median opening on Cascade Ave. / Westcliff Dr.	1,320 feet
Distance between ramp terminal and last right-in/right-out approach on the right side of Cascade Ave. / Westcliff Dr. (when moving toward I-84)	990 feet**
Distance between ramp terminal and first right-in/right-out approach on the right side of Cascade Ave. / Westcliff Dr. (when moving away from I-84)	750 feet

* Spacing standards for Freeway Interchanges with Multi-lane Crossroads

** 990-foot spacing applies to the future improved corridor. Until the corridor is widened, the 2-lane crossroad spacing of 750 feet will apply.

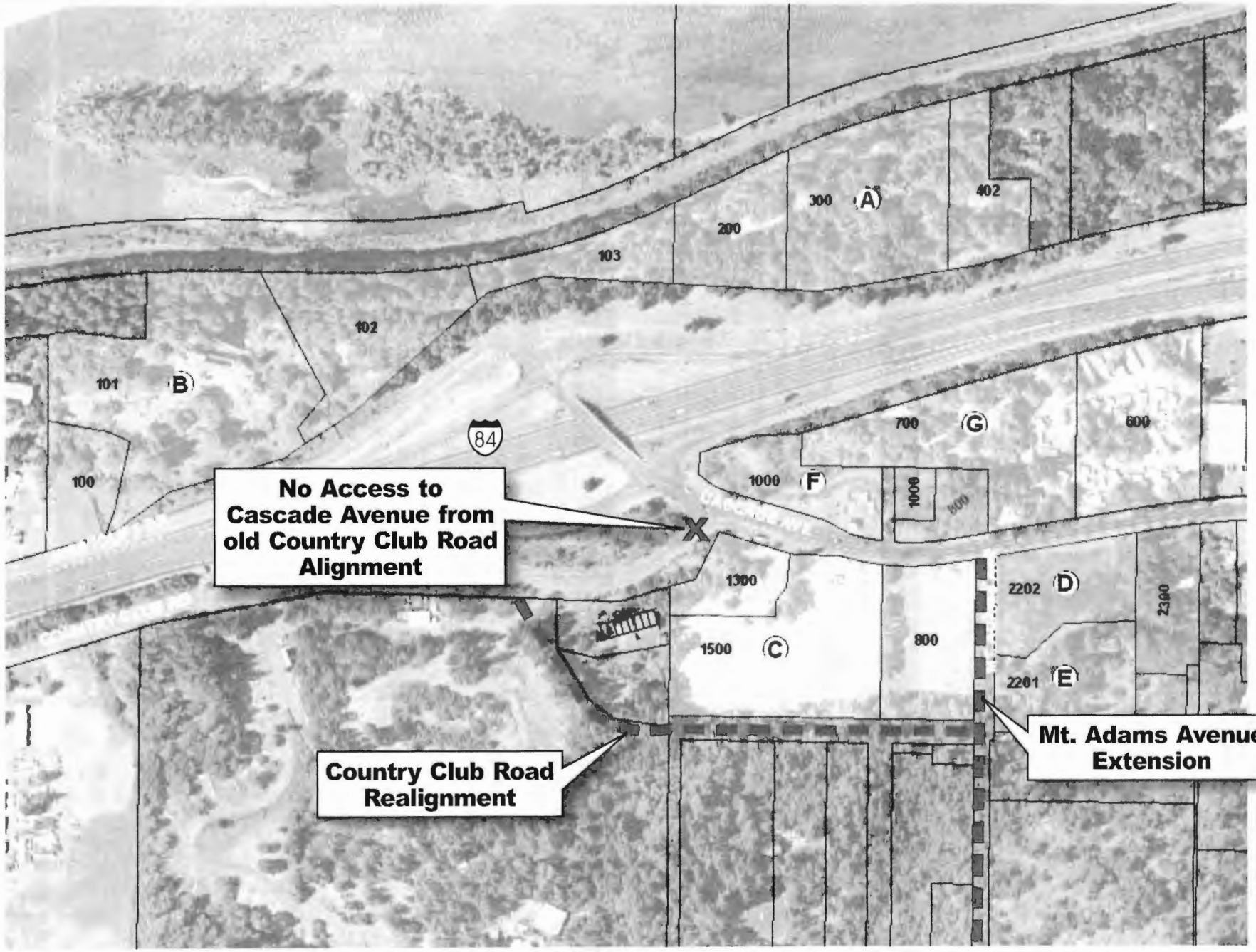
Access Recommendations

The implementation of the access management plan is anticipated to occur incrementally over a long period of time through property development/redevelopment or public construction projects. The framework for the plan provides a structure of existing and planned public streets to work within and guidance for improvements on area properties to work toward the ultimate goal.

A key outcome of this plan is a reduction in direct access to the interchange crossroad (i.e., Cascade Avenue), while maintaining the accessibility of abutting properties. Accomplishing this will require a combination of improvements to the public street infrastructure as well as cooperation among neighboring properties to establish effective accessways between businesses. This could include creating agreements to establish shared driveways or parking lots to establish inter-parcel circulation.

To help identify groups of properties where collaborative access planning and coordination are recommended, "Access Management Blocks" have been outlined in Figure 9. For each block shown, the recommended plan for establishing property access will be documented for future reference. In planning for future access, property owners may elect to work around existing development or assume the site would be redeveloped in the future. Cooperation between property owners within access management blocks, as well as between access management blocks, will be essential for maximizing business accessibility throughout the interchange area.

The access management block planning approach is intended to provide enough certainty and structure to guide future development and ensure progress is made toward the ultimate goal, but to also allow for enough flexibility to accommodate a variety of future development plans and site designs. However, the provision of this flexibility will require continued collaboration between property owners, City of Hood River, Hood River County, and ODOT staff as future developments are proposed or as public improvement projects are planned to ensure each action is consistent with the intent of the plan and is compatible with the access needs of other properties.



LEGEND

- Access Management Block
- Tax Lot
- Proposed Road

NO SCALE

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Figure 9

I-84 Exit 62 Interchange Area Access Management Blocks

The I-84 Exit 62 interchange area has been divided into seven access management blocks, with many consisting of several adjacent parcels that have similar access constraints. Access recommendations have been provided for each access management block below, corresponding with Figure 9. It is anticipated that the following recommendations will be modified following coordination with area property owners, the City of Hood River, Hood River County, and ODOT. However, site plan review will be required pursuant HRMC 17.20 Street and interchange improvements (defined as parking removal, access modifications, new lanes, new streets). The site plan review shall include findings and solutions addressing safety, mobility, and how the grid system, pedestrian system, bike system, parking and economic enterprise will be protected and/or enhanced by the proposed.

Block A	
Existing Constraints:	**Future Recommendations:**
Block A is constrained by topography and limited connectivity, with only Westcliff Drive available for access.	With no future plans for the construction of additional streets in the vicinity, access would continue to be taken from Westcliff Drive. However, to minimize congestion and potential conflicts within the Exit 62 interchange area, the number of access points within 1,320 feet of the I-84 westbound ramp terminal should be minimized. Any access points allowed to Westcliff Drive within 1,320 feet of the I-84 westbound ramp terminal should be located as far east as feasible.
Block B	
Existing Constraints:	**Future Recommendations:**
Block B is constrained by topography and limited connectivity, with only Westcliff Drive available for access.	With no future plans for the construction of additional streets in the vicinity, access would continue to be taken from Westcliff Drive. However, to minimize congestion and potential conflicts within the Exit 62 interchange area, the number of access points within 1,320 feet of the I-84 westbound ramp terminal should be minimized. Any access points allowed to Westcliff Drive within 1,320 feet of the I-84 westbound ramp terminal should be located as far west as feasible.

Block C	
Existing Constraints:	**Future Recommendations:**
Block C is currently only accessible from Cascade Avenue, with rocks and steep topography blocking access to Country Club Road. While future projects have been recommended to construct new roadways adjacent to this block (Mt. Adams Avenue and Country Club Road realignment), topography to the south and proximity to street intersections may limit accessibility.	Because Cascade Avenue is the crossroad through the I-84 interchange and Block C is within the interchange influence area (1,320 feet from the ramp terminals), direct access to Cascade Avenue should be minimized and turn restrictions on Cascade Avenue may be required. To help minimize direct access to Cascade Avenue, shared access points should be supported through cross-over easements and parking lot designs including inter-parcel roadways. In addition, access points should not create conflicts with the planned Cascade Avenue/Mt. Adams Avenue signalized intersection. Where access points to Cascade Avenue remain, turning conflicts with access points on the opposite side of Cascade Avenue should be avoided. Options to establish access to the future Mt. Adams Avenue and Country Club Road realignment should be explored to reduce the reliance on Cascade Avenue. Access points to Mt. Adams Avenue should be limited to avoid turning conflicts between the two intersections with Cascade Avenue and Country Club Road.
Block D	
Existing Constraints:	**Future Recommendations:**
Block D is currently only accessible from Cascade Avenue, but could also be accessible from the future Mt. Adams Avenue extension. No opportunities for access exist to the east or south and the construction of the future intersection on Cascade Avenue at Mt. Adams Avenue will create an additional constraint in that vicinity.	Access should be taken from Mt. Adams Avenue as much as feasible to reduce reliance on Cascade Avenue. However, options for access to Mt. Adams Avenue may be limited due to potential turning conflicts between the two intersections with Cascade Avenue and Country Club Road. Easements through Block E to the south should be considered to provide access to a potential Block E approach to Mt. Adams Avenue opposite the future Country Club Road extension. Because Cascade Avenue is the crossroad through the I-84 interchange and Block D is partially within the interchange influence area (1,320 feet from the ramp terminals), direct access to Cascade Avenue should be minimized and located as far east as feasible where allowed. Also, turning conflicts with access points on the opposite side of Cascade Avenue should be avoided and access points should be restricted as necessary to avoid conflicts in the vicinity of the planned Cascade Avenue/Mt. Adams Avenue signalized intersection.

Block E	
Existing Constraints: Topography and lack of access to public roadways limit access options to Block E.	**Future Recommendations:** The primary means of access to Block E should be through the east leg of the planned Country Club Road/Mt. Adams Avenue signalized intersection.
Block F	
Existing Constraints: Block F is currently only accessible from Cascade Avenue, with I-84 and steep topography limiting other opportunities. Block F is also bounded by the I-84 eastbound intersection to the west and the future Mt. Adams Avenue intersection to the east, which will create areas of potential conflicts that will further limit access options.	**Future Recommendations:** Because Cascade Avenue is the crossroad through the I-84 interchange and Block F is within the interchange influence area (1,320 feet from the ramp terminals), direct access to Cascade Avenue should be minimized and turn restrictions on Cascade Avenue may be required. However, site plan review will be required pursuant HRMC 17.20 Street and interchange improvements (defined as parking modifications, access removal, new lanes, new streets). The site plan review shall include findings and solutions addressing safety, mobility, and how the grid system, pedestrian system, bike system, parking and economic enterprise will be protected and/or enhanced by the proposed. Site plan review will consider requests to include a deviation to allow for continued left turn movements into the site.
Block G	
Existing Constraints: Access to Block G is currently only available from Cascade Avenue and is constrained by I-84 to the north and steep topography to the west.	**Future Recommendations:** Because Cascade Avenue is the crossroad through the I-84 interchange and Block G is partially within the interchange influence area (1,320 feet from the ramp terminals), direct access to Cascade Avenue should be minimized. To help minimize direct access to Cascade Avenue, shared access points should be supported through cross-over easements and parking lot designs including inter-parcel roadways. Where access points to Cascade Avenue remain, turning conflicts with access points on the opposite side of Cascade Avenue should be avoided. In addition, access points should be restricted to avoid conflicts with the planned Cascade Avenue/Mt. Adams Avenue signalized intersection.

Access Management Plan Phasing

Without a known source of funding or public improvement project planned to follow adoption of the access management plan, the timing of any actions will be uncertain. This section provides a general phasing structure for recommended access management plan actions, broken into short, medium, and long range time periods. This is provided to guide plan implementation and is not intended to be strictly adhered to (i.e., a long range action may precede a short range action if the opportunity arises).

Short Range Actions

- Adopt amendments to the City of Hood River Municipal Code and Hood River County Zoning Ordinance needed to implement the access management plan objectives and recommended actions.

Medium Range Actions

- Establish cross-over easements and inter-parcel roadways as part of property development to consolidate and create shared access points.

Long Range Actions

- Construct the Mt. Adams Avenue extension to the south of Cascade Avenue.
- Realign Country Club Road to connect with Mt. Adams Avenue approximately 450 feet to south of Cascade Avenue and remove the existing intersection of Country Club Road with Cascade Avenue (with continued accessibility for non-motorized travel).

Adoption and Implementation

As land continues to develop within the interchange area, compliance will be required with the access management and circulation plans developed through the IAMP process. As part of the adoption of the IAMP, a number of amendments will be made to state and local documents, plans, and regulations that will implement the IAMP. These include amendments to the City of Hood River and Hood River County Comprehensive Plan, Transportation System Plan, and development codes to reflect amendments contained in the appendix.

ODOT, the City of Hood River, and Hood River County, along with other stakeholders that include the Port of Hood River, have jointly prepared the I-84 Exit 62 IAMP in recognition of the importance of Interstate 84 and this interchange for the movement of people and goods to and from the Hood River region. It is anticipated that ODOT, the City, and the County will adopt the IAMP, thereby codifying a joint commitment to protect the function of the interchange for current and future users. The purpose of the IAMP and function of the interchange are defined in this document. Separate adoption processes for the plans and implementing measures are envisioned for each agency. This section summarizes the implementation roles and responsibilities for the respective jurisdictions.

ODOT/State of Oregon Implementing Actions

Project Construction

- Develop needed transportation system improvements. ODOT improvements, which are described in the plan, are proposed at the Exit 62 interchange and to Cascade Avenue (Historic Columbia River Highway) between Westcliff Drive and Rand Road.

Agency Coordination

- ODOT will continue to coordinate with the City of Hood River, Hood River County, the Port of Hood River, and with applicable state agencies through the development review process to keep interchange area protections in place. ODOT will also monitor and comment on any future actions that would alter land uses in the vicinity of the interchange to ensure the IAMP remains consistent with land use plans for the interchange area.
- In the future when circumstances in the IAMP study area result in the need for changes to the IAMP, the City of Hood River, Hood River County, and ODOT shall prepare amendments to the IAMP management actions and to accompanying funding plans to implement those actions.

Policy Actions

- The Oregon Transportation Commission will adopt the IAMP.

City of Hood River Implementing Actions

Project Construction, Land Use, and Access Management

- The City will modify regulations pertaining to access to local roads in the vicinity of the I-84 Exit 62 interchange, consistent with the Access Management Plan included in this IAMP.
- The City will modify regulations pertaining to Traffic Impact Analyses in the vicinity of the I-84 Exit 62 interchange to require these studies to consider development impacts on the interchange and on IAMP study area intersections.
- The City will amend their Transportation System Plan to incorporate local system improvements and will seek funding to facilitate implementation (primarily for the Country Club Road realignment and Mt. Adams Avenue extension).

Policy Actions

- The City will amend its zoning plan map to include an IAMP Overlay Zone (shown in Figure 10).
- The City will adopt Comprehensive Plan policies that are consistent with the stated function and planned design of the interchange facility and the surrounding transportation system, as identified in the IAMP.
- Requirements for regulating access management consistent with the IAMP will be codified in a new IAMP Overlay Zone (HRMC 17.03.120) and in the City's site development regulations (HRMC 17.20).

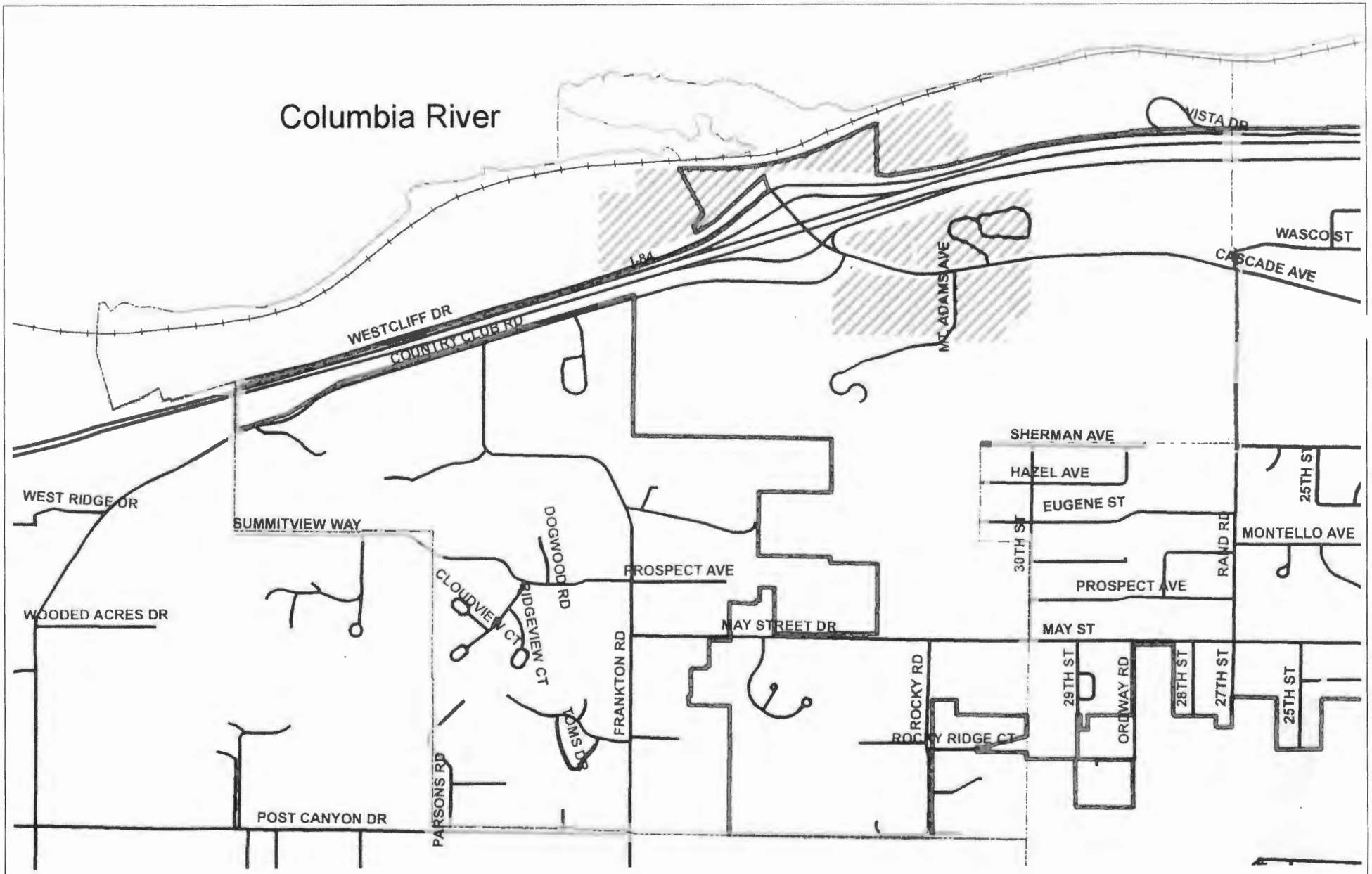

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Figure 10

I-84 Exit 62 Interchange Area Management Plan Overlay Zone

Hood River County Implementing Actions

Project Construction, Land Use, and Access Management

- The County will modify regulations pertaining to access to local roads in the vicinity of the I-84 Exit 62 interchange, consistent with the Access Management Plan included in this IAMP.
- The County will modify regulations pertaining to Traffic Impact Analyses in the vicinity of the I-84 Exit 62 interchange to require these studies to consider development impacts on the interchange and on IAMP study area intersections.
- The County will amend their Transportation System Plan to incorporate local system improvements.

Policy Actions

- The County will amend its zoning plan map to include an IAMP Overlay Zone (shown in Figure 10).
- The County will adopt Comprehensive Plan policies that are consistent with the stated function and planned design of the interchange facility and the surrounding transportation system, as identified in the IAMP.
- Requirements for regulating access management consistent with the IAMP will be codified in a new IAMP Overlay Zone (Chapter 17.03.090) and in the County's site development regulations for the Hood River Urban Growth Area, pursuant to Article 17 (Urban Growth Area Zoning Ordinance), Chapter 17.10 (Site Plan Review), Chapter 17.20 (Transportation Circulation and Access Management), and Chapter 16 (Land Division), Section 16.12.020 (General Design and Improvement Standards).

IAMP Adoption

It is anticipated that the adoption sequence will be as follows:

1. 45-day notice of adoption intent sent to state agencies by City and County
2. City planning commission advisory hearing to hear public testimony; deliberative hearings may be conducted at the discretion of the planning commission
3. City council legislative adoption hearings with coordinated staff report, public testimony, and deliberation
4. County planning commission advisory hearing to hear public testimony; deliberative hearings may be conducted at the discretion of the planning commission
5. County commission legislative adoption hearing with coordinated staff report, public testimony, and deliberation
6. Oregon Transportation Commission adoption hearing would take place at the first available meeting date after local adoption to consider amending the Oregon Highway Plan to include the I-84 Exit 62 IAMP

Improvement Costs

Advanced planning for project funding will help implement needed improvements in a timely manner that supports development opportunities. Understanding the magnitude of costs associated with future projects can guide updates to System Development Charge rates, underscore the need for supplemental financing programs such as urban renewal districts or local improvement districts, and provides a basis for grant applications and potential public and/or private partnerships.

Planning-level cost estimates are provided in Table 4 to guide project budgeting. These estimates are intended to support long-range project programming and are based on available data sets and field observations, without the benefit of detailed surveys to accurately define potential environmental impacts, geological constraints, drainage needs, right of way impacts, and other factors that could affect construction costs. Therefore, as projects are developed in more detail in the future, the estimated costs should be updated.

Table 4: I-84 Exit 62 Area Planning-Level Project Cost Estimates (2009 Dollars)

Improvement Project		Estimated Cost
Pedestrian Projects		
Construct sidewalk along the south side of Country Club Rd.		$700,000
Construct sidewalk along Frankton Rd.		$1,240,000
	TOTAL	**$1,940,000**
Bicycle Projects		
Construct bicycle lanes along Country Club Rd.		$365,000
Construct bicycle lanes along Frankton Rd.		$235,000
Construct bicycle lanes along Rand Rd.		$210,000
	TOTAL	**$810,000**
Motor Vehicle Projects		
Cascade Avenue / Westcliff Drive Improvements		$950,000
I-84 Exit 62 Interchange Improvements		$20,900,000
Widen Cascade Avenue between I-84 and Rand Road		$2,700,000
Country Club Road Realignment (includes Mt. Adams Avenue connection to Cascade Avenue and two traffic signals)		$4,900,000
Cascade Avenue / Rand Road Improvements		$1,000,000
	TOTAL	**$30,450,000**

Potential New Funding Sources

While some funds have been dedicated towards improvement projects in this plan, none of these projects are completely funded at this time. The City of Hood River, Hood River County, and ODOT will need to cooperatively explore funding opportunities if improvements are to be made in a timely manner for supporting future growth. It is recommended that a wide variety of potential funding sources be considered, which may include strategies that have not been previously applied in Hood River.

This section describes several potential transportation funding sources, including State and County contributions, City sources (i.e., residents, businesses, and/or developers), grants, and debt financing. Many of these sources have been used in the past by other agencies in Oregon, and in most cases, when used collectively, are sufficient to fund transportation improvements for a local community.

State and County Contributions

Within the Exit 62 IAMP area, most of the key roadways are not under City jurisdiction but instead are the responsibility of either ODOT (I-84, Cascade Avenue, Westcliff Drive) or Hood River County (Westcliff Drive, part of Country Club Road). The City should seek contributions (i.e., funding partnerships) from ODOT and Hood River County for projects located on their respective roadways.

ODOT Contributions

ODOT funds projects on state highways under three primary programs: modernization, preservation and maintenance, and grants (see Grant Programs below). Programmed projects are included in the four-year Statewide Transportation Improvement Program (STIP), which is updated every two years. ODOT maintenance districts (District 2C for Hood River) also have available funds that may be used for small-scale projects such as infill of sidewalks on a state highway.

ODOT has already conditionally contributed STIP funds for the immediate relocation of Country Club Road as recommended in this plan. While significant, the funds contributed are insufficient to complete the project on their own. Therefore, securing the remainder of the needed funds while the STIP funds are available should be a priority for the City.

Direct Appropriations

The City can also seek direct appropriations from the State Legislature and/or the United States Congress for transportation capital improvements. There may be projects identified in the plan for which the City may want to pursue these special, one-time appropriations. In particular, projects that support economic development, such as the I-84 Exit 62 interchange reconstruction or the Country Club Road realignment, may gain support for direct appropriations.

Developer Exactions

Exactions are roadway and/or intersection improvements that are partially or fully funded by developers as conditions of development approval. Typically, all developers are required to improve the roadways along their frontage upon site redevelopment. This may be an important funding source for the construction of sidewalk and bicycle lane projects along Country Club Road, Cascade Avenue, Frankton Road, and Rand Road.

In addition, when a site develops or redevelops, the developer may be required to provide off-site improvements depending upon the expected level of traffic generation and the resulting impacts on the transportation system. While such improvements could be applied to most projects within the IAMP area, they may be most applicable to the widening of Cascade Avenue, portions of the Country Club Road realignment, and intersection improvements on Cascade Avenue at Westcliff Drive and Rand Road.

Urban Renewal District (URD)

A URD is a tax-funded district within the City. The URD is funded with the incremental increases in property taxes that result from the construction of applicable improvements. As desired, the funds raised by a URD can be used for, but are not limited to, transportation projects located within the URD boundaries.

While the Exit 62 IAMP area has a significant amount of redevelopment potential, the City has already established URDs for the Waterfront and downtown core and has proposed a new URD for the Heights area. Therefore, the City may desire to pay off the debt on these URDs before creating an additional one.

Transportation System Development Charges (SDCs)

SDCs are a funding source collected from new development that can be used to fund projects that increase the transportation system's capacity, but not for projects that target maintenance or operations. While the methodologies for determining the SDC rate may vary, a commonly used method is to base the rate on the estimated p.m. peak hour vehicle trips generated by a proposed development. Because a single-family home generates approximately 1.0 p.m. peak hour vehicle trip, it is often considered the base unit.

The City of Hood River has a current SDC rate of approximately $666 per single-family residence and $69.60 per daily trip for all other uses. To help fund transportation improvements to support future growth, the City could consider increasing the SDC rate. For every increase in SDC rates of $100 for single-family households and $10 per daily trip for all other trip types, there would be an additional $514,000 available for transportation improvements over a 21-year period.

Any of the motor vehicle projects in the IAMP area would be eligible for SDC funding through the City. The pedestrian and bicycle projects would not be eligible for City SDC funds under the current ordinance, however, the City is considering an amendment to their SDC ordinance that would allow for such use. The City's SDCs are a critical source of transportation funding and are likely to be spent on projects that directly support new growth. Therefore, it is uncertain how much could be dedicated to projects in the IAMP area. However, increasing the SDC rate would make more funds available citywide.

Hood River County has a current transportation SDC rate of approximately $1,311 per single-family residence and $137 per daily trip for other uses. The County's transportation SDC is a "reimbursement fee" for excess capacity in the existing county road system that is available to accommodate growth. New developments outside of incorporated areas are charged the County's transportation SDC, which may be used for any capital improvement project identified in the County's Transportation System Plan (including pedestrian and bicycle projects).

Local Improvement District (LID)

The City may set up Local Improvement Districts (LIDs) to fund specific capital improvement projects within defined geographic areas, or districts. LIDs impose assessments on properties within its boundaries and may only be spent on capital projects within the district. Because citizens representing 33 percent of the assessment can terminate a LID and overturn the planned projects, LID projects and costs must obtain broad approval of those within the LID boundaries.

Proportionate Share Cost Allocations

Proportionate Share Cost Allocations distribute the cost of improvement projects over new developments by charging a fee per trip added to the location in need of improvement. The rate charged is commonly the total cost of the improvement divided by the anticipated growth in trips at that location over a specified period of time. The City has already established a proportionate share rate for the projects to improve the intersections on Cascade Avenue at Mt. Adams Avenue and Rand Road.

Street Utility Fee

A number of Oregon cities supplement their street funds with street utility fees. Establishing user fees to fund designated transportation activities, maintenance, operations, and/or capital construction ensures that those who create the demand for service pay for it proportionate to their use. The street utility fees are recurring monthly or bi-monthly charges that are paid by all residential, commercial, industrial, and institutional users. The fees are charged proportionate with the amount of traffic generated, so a retail

commercial user pays a higher rate than a residential user. Typically, there are provisions for reduced fees for those that can demonstrate they use less than the average rate implies, for example, a resident that does not own an automobile or truck.

From a system health perspective, forming a utility fee also helps to support the ongoing viability of the program by establishing a source of reliable, dedicated funding for that specific function. Fee revenues can be used to secure revenue bond debt for financing capital construction. A transportation utility fee can be formed by Council action.

The General Fund Revenues

At the discretion of the City Council, the City can allocate General Fund revenues to pay for its transportation program. General Fund revenues primarily include property taxes, use taxes, and any other miscellaneous taxes and fees imposed by the City. This allocation is completed as a part of the City's annual budget process, but the funding potential of this approach is constrained by competing community priorities set by the City Council.

Special Assessments

A variety of special assessments are available in Oregon to defray costs of sidewalks, curbs, gutters, street lighting, parking, and central business district (CBD) or commercial zone transportation improvements. These assessments would likely fall within the Measure 50 limitations. One example is the 50/50 program. This is a match program for sidewalk infill projects where property owners pay half the cost of a sidewalk improvement and the City matches the investment to complete the project.

Grants

The City of Hood River should actively pursue State and Federal grants, in particular to complete the identified pedestrian and bicycle projects. Current grant programs include:

Federal Funding Sources

- Highway Safety Improvement Program
- Transportation Enhancements
- Recreational Trails Program
- Safe Routes to School (SRTS)
- New Freedom Initiative
- Community Development Block Grants
- Land and Water Conservation Fund
- Transportation, Community and System Preservation Program

State Funding Sources

- Oregon Immediate Opportunity Fund
- Oregon Transportation Infrastructure Bank
- Oregon Special Transportation Fund
- Oregon Bicycle and Pedestrian Program Grants

- Oregon Pedestrian Safety Mini-Grant Program
- Oregon Business Energy Tax Credits (BETC)
- Oregon Safe Routes to School (OSRTS)

Other Funding Sources

- American Greenways Program
- Bikes Belong Grant Program

Debt Financing

While not a direct funding source, debt financing is another funding method. Through debt financing, available funds can be leveraged and project costs can be spread over the projects' useful lives. Though interest costs are incurred, the use of debt financing can serve not only as a practical means of funding major improvements, but it is also viewed as an equitable funding source for larger projects because it spreads the burden of repayment over existing and future customers who will benefit from the projects. One caution in relying on debt service is that a funding source must still be identified to fulfill annual repayment obligations. Two methods of debt financing are voter-approved general obligation bonds and revenue bonds.

Voter-Approved General Obligation Bonds

Subject to voter approval, the City can issue General Obligation (GO) bonds to debt finance capital improvement projects. GO bonds are backed by the increased taxing authority of the City, and the annual principal and interest repayment is funded through a new, voter-approved assessment on property throughout the City (i.e., a property tax increase). Depending on the critical nature of projects and the willingness of the electorate to accept increased taxation for transportation improvements, voter-approved GO bonds may be a feasible funding option for specific projects. Proceeds may not be used for ongoing maintenance.

Revenue Bonds

Revenue bonds are debt instruments secured by rate revenue. For the City to issue revenue bonds for transportation projects, it would need to identify a stable source of ongoing rate funding. Interest costs for revenue bonds are slightly higher than for general obligation bonds due to the perceived stability offered by the "full faith and credit" of a jurisdiction.

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CHAPTER 4: MONITORING AND UPDATES

Following adoption of the IAMP, regular maintenance is recommended to ensure it continues to meet the needs of area stakeholders.

Interchange Performance Monitoring

This plan identifies improvements to the transportation system surrounding the I-84 Exit 62 interchange that will provide for safe and efficient travel through the year 2031. However, it will be most effective if a proactive approach is taken. When needs are anticipated in advance, there is more time to develop funding and implementation strategies, which could include public and/or private partnerships, so incremental improvements are made in a timely manner and continue to support growth opportunities.

Recommended Process and Responsibilities

As the owner of most transportation facilities in the area, the primary responsibility for interchange area performance monitoring will be assigned to the Oregon Department of Transportation. However, the City of Hood River is encouraged to take an active role in this effort as well.

Performance monitoring will be carried out through regular tracking of traffic volumes through key intersections and roadways, as well as through findings included in Traffic Impact Analyses completed as part of proposed development applications.

Traffic Impact Analyses will be required by ODOT as part of approach applications pursuant to OAR 734-051, and will be required as part of land use applications filed with the City of Hood River pursuant to Hood River Municipal Code 17.20.060 and by Hood River County pursuant to Article 17, Chapter 17.20 (Transportation Circulation and Access Management). Any Traffic Impact Analysis being conducted relative to development partially or entirely within the IAMP overlay zone for the Exit 62 interchange (Figure 10) must include an account of weekday p.m. peak hour site generated trips through IAMP study intersections. Intersections impacted by 25 or more weekday p.m. peak hour site generated trips shall be analyzed for level of service and volume to capacity ratio during day of opening conditions. This requirement will not preclude Oregon Department of Transportation, City of Hood River, or Hood River County from requiring analysis of IAMP study intersections under other conditions.

The Oregon Department of Transportation shall obtain traffic volume counts at IAMP study intersections. Traffic volume counts shall minimally include two-hour weekday p.m. peak hour turn movement counts. New count data for each intersection should be obtained at least every two years. However, count data should be obtained more frequently where significant land development has occurred. ODOT should leverage the use of embedded traffic monitoring technologies to monitor traffic in the interchange areas (i.e., cameras, inductive loops).

Table 5 is provided to help forecast approaching needs for transportation improvements in the interchange area. Within this table, an approximated phasing plan for transportation improvements identified for this area has been laid out assuming growth will occur on an even and linear basis over the next 20 years. Because land development is generally not that regular or predictable, the estimated year of need should be used with caution. Rather, the weekday p.m. peak hour volume targets for critical movements at key intersections should be reviewed as part of the regular monitoring process. Traffic volume data obtained from Traffic Impact Analyses and other sources should be regularly reviewed with consideration to the phasing guide in Table 5 to identify intersection and roadway improvements that will be needed soon.

Table 5: I-84 Exit 62 Interchange Area Transportation Improvement Project Phasing Guide

Estimated Year of Need	Location	Project Needed	Critical Movement	Weekday PM Peak Hour Volume	OHP Mobility Standard
Near-Term	I-84 WB Ramps/ Cascade Ave	Signalize intersection. No additional turn lanes required at this time.	Westbound Left	225	0.85
	Country Club Rd/ Cascade Ave	Close intersection and realign Country Club Rd to connect to new Mt. Adams Ave (also to be constructed as part of this project if not in place). Retain old Country Club Rd section to use for access to adjacent properties and construct a non-motorized access way in the cul-de-sac to allow bicycle and pedestrian passage between Cascade Ave and Country Club Rd. The section of Mt. Adams Ave from Country Club Rd to Cascade Ave can be constructed with only one lane northbound and one lane southbound, with additional lanes constructed at a later time. Signalize intersection of Mt. Adams Ave at Cascade Ave and construct separate northbound left and right turn lanes on the Mt. Adams Ave approach.	Northbound Left	150	0.90
2020	I-84 WB Ramps/ Cascade Ave	Construct separate right and left turn lanes on the westbound I-84 approach. Only single westbound left needed at this time. Improvements to the ramp should be compatible with the future interchange design.	Westbound Left/ Right	425	0.85
		Construct separate northbound left turn lane. Will require bridge widening and should be designed as part of the ultimate interchange reconstruction.	Northbound Left	225	
	Mt Adams Ave/ Cascade Ave	Construct separate eastbound right turn lane that is channelized into an added southbound lane on Mt. Adams Ave, ending as a right turn lane at Country Club Rd. If Mt. Adams Ave has not yet been extended to the south, merge the added southbound lane into the existing southbound lane prior to reaching Country Club Rd.	Eastbound Through/ Right	600	0.90
		Construct separate westbound left turn lane.	Westbound Through/ Left	600	
2025	I-84 EB Ramps/ Cascade Ave	Signalize intersection and construct separate eastbound right and left turn lanes and southbound left turn lane. Improvements should be compatible with the future interchange design.	Southbound Through/Left	750	0.85
	I-84 WB Ramps/ Cascade Ave	Construct separate southbound right turn lane. May construct westbound right turn lane on Westcliff Dr to better manage queuing if needed.	Southbound Through/Right	300	
		Construct second westbound left turn lane. Construct second southbound lane on Cascade Ave from I-84 westbound ramp terminal to Mt. Adams Ave, ending in a right turn lane.	Westbound Left Turn	550	
2030	Cascade Ave	Construct second westbound through lane beginning immediately west of Mt. Adams Ave and dropping as a right turn lane at the I-84 Eastbound Ramps.	Westbound Through	425	0.90
	Mt Adams Ave/ Cascade Ave	Construct second northbound left turn lane.	Northbound Left	700	
	Rand Rd/ Cascade Ave	Construct separate eastbound right turn lane.	Eastbound Through	400	

Improvements to the intersection on Cascade Avenue at Westcliff Drive are not shown in Table 5. Because these improvements are recommended to mitigate potential conflicts with the future signal at the nearby I-84 westbound ramp terminal rather than mitigating failing operations at the intersection itself, the timing of need is uncertain. Therefore, the need for improvements at this intersection should be assessed by monitoring queuing conflicts with the I-84 westbound ramp terminal and overall safety in addition to compliance with mobility standards.

IAMP Updates

As area conditions change, the I-84 Exit 62 IAMP should be reviewed to ensure it continues to address needs through the planning horizon and should be updated accordingly. Actions that should trigger an IAMP review include:

- A change to the City of Hood River or Hood River County Comprehensive Plan, Plan Map, or implementing zoning ordinances that will have a "significant effect" on the transportation system within the IAMP overlay zone. The determination of a "significant effect" shall be pursuant to OAR 660-012-0060.
- The construction of transportation improvement projects within the IAMP overlay zone that are inconsistent with planned and assumed projects in the City of Hood River or Hood River County Transportation System Plans or the I-84 Exit 62 IAMP.
- An amendment or update to the City of Hood River or Hood River County Transportation System Plans.
- Significant modifications to the I-84 Exit 63 interchange that are inconsistent with the I-84 Exit 63/64 IAMP.
- Approval of a development of substantial size within the IAMP overlay zone that is consistent with the underlying zoning, but represents a worst-case trip generation scenario when considering the range of uses allowed in that zoning district. As a general guide, a development of substantial size from a trip generation perspective would generate 500 or more peak hour trips.

In addition to the above actions, consideration should be given to reviewing the IAMP for needed updates every five years. This could be done as part of the monitoring process and could be as simple as reviewing the above list for any actions that may have occurred since the last review.

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Interstate 84 Exit 63 & 64 Interchange Area Management Plan

Interstate 84/ 2nd Street & Interstate 84/ Button Bridge Road

Hood River, Oregon

Prepared for

City of Hood River
Hood River County
Oregon Department of Transportation

Prepared by

DKS Associates
Angelo Planning Group
Parametrix

October 2011

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Appendix E- Technical Memorandum #1: Plans and Policies Review and Findings of Compliance

Appendix F- Technical Memorandum #2: Study Area Boundaries and Preliminary Goals and Objectives

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Appendix H- Technical Memorandum #4: Future Needs Analysis

Appendix I- Technical Memorandum #5: Alternatives Analysis

Appendix J- Interchange Area Management Plan Overlay Zone Maps

Appendix K – Port of Hood River Waterfront Area Transportation Impact Analysis

** Appendices are provided as a separate document. See Appendices for Interstate 84 Exit 62 Interchange Area Management Plan and Interstate 84 Exit 63 & Exit 64 Interchange Area Management Plan, Hood River Oregon, October 2011.*

ACRONYMS

HCRH	Historic Columbia River Highway
HDM	Highway Design Manual
IAMP	Interchange Area Management Plan
LOS	Level of Service
OAR	Oregon Administrative Rule
ODOT	Oregon Department of Transportation
OHP	Oregon Highway Plan
STIP	Statewide Transportation Improvement Program
TSP	Transportation System Plan
UGB	Urban Growth Boundary
V/C	Volume to Capacity

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CHAPTER 1: EXECUTIVE SUMMARY

This Interchange Area Management Plan (IAMP) for the I-84 Exit 63 & Exit 64 interchanges in Hood River, Oregon acts as refinement areas of the City of Hood River and Hood River County Transportation System Plans (TSPs) and as a facility plan for the Oregon Department of Transportation. It establishes the desired function of these interchanges and provides a long-range plan for infrastructure improvements and operations to achieve agency and community goals as the City continues to grow.

The IAMP was developed as a cooperative effort between the Oregon Department of Transportation, the City of Hood River, Hood River County, and the Port of Hood River. Further input from the community and local stakeholder groups was obtained through meetings with a Stakeholder Working Group and through public open house meetings. The process followed in the development of this plan is illustrated in Figure 1.

This plan has been organized to facilitate implementation, including only content needed to understand the direction for managing the transportation system within the area surrounding these interchanges and to guide future decision-making in a manner consistent with that direction. Documents containing detailed background information developed through the planning process that created the basis for findings and recommendations are included in a separate appendix.[1] Elements in this report include:

Introduction

- This chapter discusses the purpose of the I-84 Exit 63 & Exit 64 IAMP, the intended function of these interchanges, identification of the study area, and the goals and objectives for this plan developed by participating agencies and local stakeholders.

Management Plan

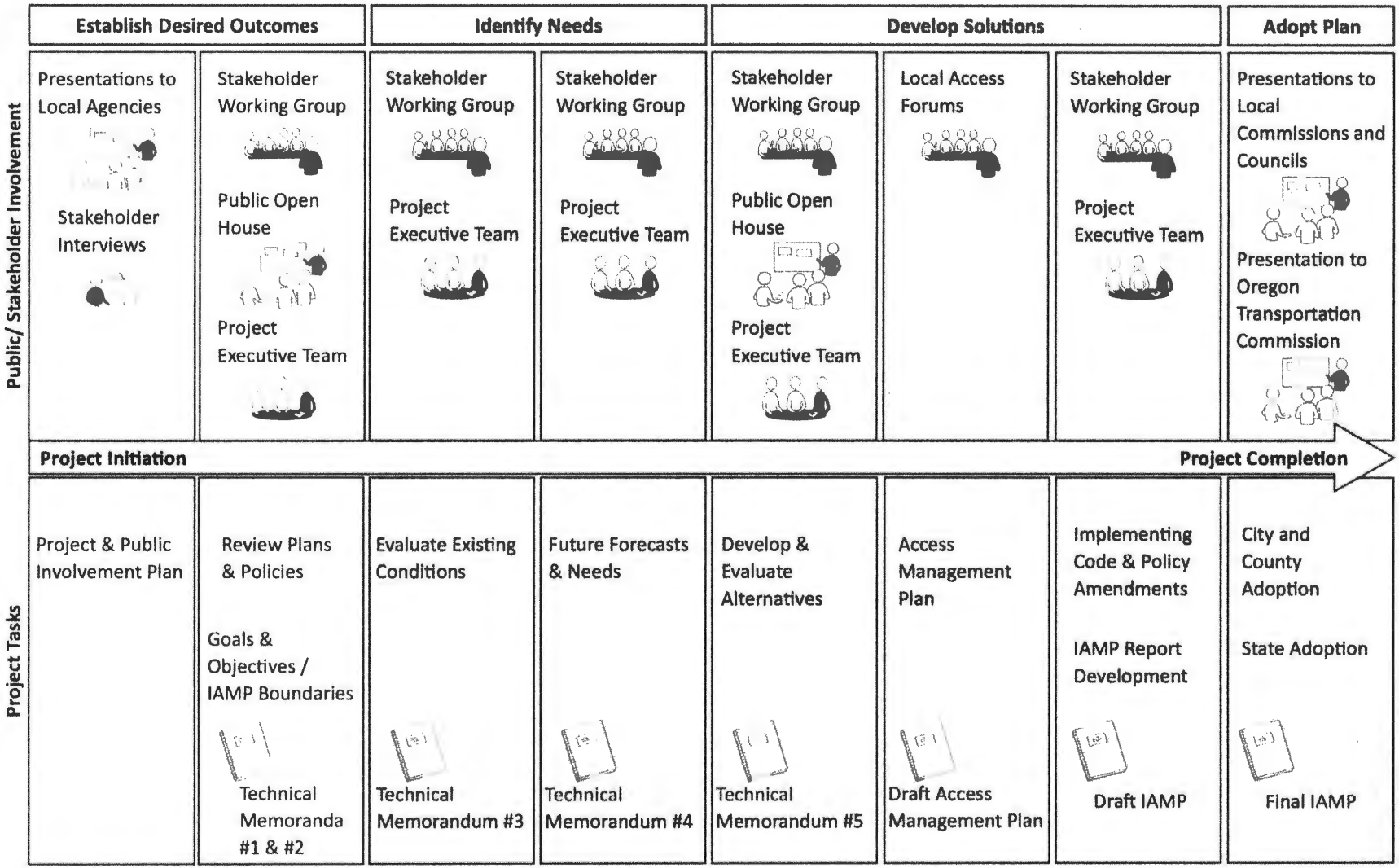
- A multimodal plan for transportation system improvements is provided for the I-84 Exit 63 and Exit 64 interchanges and surrounding areas, including projects for pedestrian and bicycle travel, as well as for motor vehicle needs.
- A supplementary planning study to evaluate changes in transportation system needs required to support a higher level of development intensity in the Hood River Waterfront is acknowledged. The findings from this study must be updated at the time the land use action is submitted.
- Access management plans are included to facilitate the ongoing maintenance of the interchange crossroads in a manner that is consistent with their intended function.
- Roles and responsibilities related to the adoption and implementation of the IAMP are outlined for the Oregon Department of Transportation, the City of Hood River, and Hood River County. Recommended amendments to City and County plans and development codes necessary to successfully adopt and implement the IAMP are also included as appendices.
- Planning-level cost estimates for recommended improvement projects are included to guide future financing strategies.

---

[1] *Appendices for Interstate 84 Exit 62 Interchange Area Management Plan and Interstate 84 Exit 63 & Exit 64 Interchange Area Management Plan*, Hood River Oregon, May 2011.

Monitoring and Updates

- A process for tracking future traffic growth and impacts in the interchange areas and comparison against forecasted conditions is provided.
- A list of potential actions or conditions that could result in a need to update the IAMP is provided and should be continuously reviewed as part of the ongoing monitoring process.



I-84 Exit 63 & Exit 64
Interchange Area Management Plan

Figure 1 IAMP Development Process

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TRANSPORTATION SOLUTIONS

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CHAPTER 2: INTRODUCTION

This chapter discusses the purpose of the Interchange Area Management Plan, introduces the management areas, describes the function of the interchanges, and outlines the goals and objectives.

IAMP Purpose and Intent

The I-84 Exit 64 - East Hood River Interchange project was identified as a high priority construction project by Hood River County, the City of Hood River, and the Port of Hood River. It is listed in the Approved 2008-2011 Statewide Transportation Improvement Program (STIP) and is being funded through OTIA III, with construction anticipated to be completed in 2011.

In accordance with Agency policies and State Administrative Rules, the reconstruction of the Exit 64 interchange requires that the Oregon Department of Transportation (ODOT) prepare an IAMP for the proposed Exit 64 - East Hood River Interchange project. Because of the proximity and nature of use of the Exit 63 interchange immediately to the west, both the Exit 63 and Exit 64 interchange areas are being included in the same IAMP.

IAMPs are required by OAR 734-051-0155(7) for any new or significantly reconstructed interchange. The Oregon Highway Plan policies further direct ODOT to plan and manage interchange areas for safe and efficient operation. The purpose of an IAMP is to protect the function of the interchange and, consequently, the state's and local agency's investment in the facility. New interchanges and improvements to existing interchanges are very costly. State and local government and their citizens have an interest in ensuring that their interchanges function efficiently. The IAMP will define how the land use and transportation systems within the interchange study area will function over the planning horizon (year 2031).

Interchange Function

Generally, an interchange is defined as a system of interconnecting roadways in conjunction with one or more grade separations that provides for the movement of traffic between two or more roadways or highways on different levels.[2] The function of an interchange is established by the characteristics of the connecting highway.

The I-84 Exit 63 and Exit 64 interchanges are components of I-84, an Interstate Highway and Freight Route. The Exit 63 interchange serves as the primary entrance into the commercial heart of the City of Hood River. It also serves as the primary entrance into the Port of Hood River property north of the interstate, which is currently underdeveloped, but is planned to support light industrial, recreational, and commercial uses in the future. Furthermore, the Exit 63 interchange serves as a link between downtown and the Hood River-White Salmon Bridge across the Columbia River and is the primary pedestrian connection between downtown and the Hood River Waterfront (Waterfront).

The Exit 64 interchange serves as a vital connection between the states of Washington and Oregon, connecting the central Gorge area and facilitating the local and interstate movement of freight. The

[2] *A Policy on Geometric Design of Highways and Streets*, American Association of State Highway and Transportation Officials, Washington D.C., 5th Edition, 2004, p. 743.

interchange also serves to facilitate the movement of recreational traffic from the interstate system to the numerous recreational areas in both Oregon and Washington states. A third function of the interchange is to facilitate the movement of commuters/ local residents and consumers between Washington and Oregon. Highway commercial development at the interchange provides interstate travelers with convenient gas, food, and lodging.

The Oregon Highway Plan (OHP)[3] classifies I-84 as an Interstate Highway. According to the OHP, the primary function of an Interstate Highway is to "provide connections to major cities, regions of the state, and other states. A secondary function in urban areas is to provide connections for regional trips within the metropolitan area. Interstate Highways are major freight routes and their objective is to provide mobility."

2nd Street (Exit 63) is owned by the City of Hood River south of I-84, by the Port of Hood River north of Riverside Drive, and by ODOT between these points. It is classified as a collector street for its entire length between Portway Avenue and State Street.

Button Bridge Road (Exit 64) is owned by ODOT through the interchange area. It leads to the Hood River-White Salmon Bridge across the Columbia River to the north, which is owned by the Port of Hood River, and to OR 35 to the south, which is classified as a Statewide Highway and is owned by ODOT.

Study Area

Figure 2 illustrates the Study Area for the I-84 Exit 63 & Exit 64 IAMP. The study area boundaries are State Street and the urban growth boundary (UGB) to the south, the UGB to the east and north, and 13th Street to the west.

The IAMP study area was chosen to reflect the general area where the interchanges would potentially influence land use and traffic patterns. As a general rule of thumb, lands located within approximately ½-mile from the interchanges are considered. However, the boundary was further refined through consideration of existing and planned land uses in the vicinity that will impact the interchanges, transportation facilities and traffic operations, and natural and cultural resources.

While the southern boundary at State Street is significantly closer to the interchanges than ½-mile, this limit was deemed appropriate for this area given the changes in topography and existing residential neighborhoods to the south that are unlikely to be redeveloped within the planning horizon.

In addition to mapping study area boundaries, Figure 2 also identifies study intersections and access management areas. Study intersections are key locations where safe and efficient operation is essential for adequate operation of the interchanges. These intersections were analyzed as part of the study to identify any safety or operational deficiencies through the planning horizon. Needed improvements to address deficiencies were developed and recommended for inclusion in State and local capital improvement plans. Within the Study Area, ODOT, the City of Hood River, and the Port of Hood River all maintain jurisdiction over one or more key roadways, as shown in Table 1.

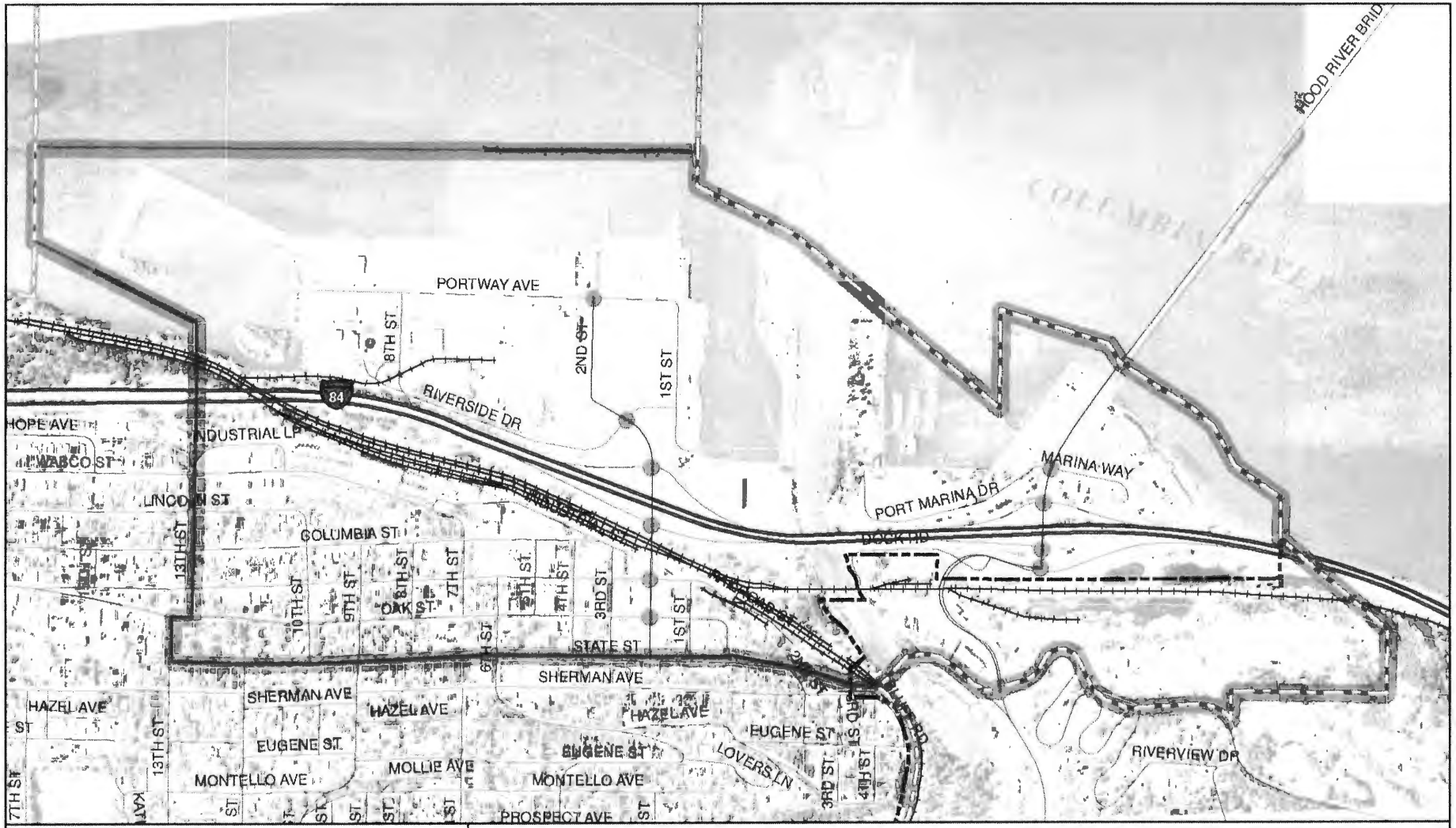
[3] *1999 Oregon Highway Plan*, Oregon Department of Transportation, Amended July 2006.

Table 1: Roadway Jurisdiction

Key Interchange Area Roadway	Agency of Jurisdiction
I-84	ODOT
2nd Street	City of Hood River
	ODOT (Riverside Drive to north of Cascade Avenue)
Riverside Drive	ODOT (in 2nd Street intersection area) City of Hood River (outside of 2nd Street intersection area)
Cascade Avenue (from Oak Street to 1st Street)	City of Hood River
Oak Street	ODOT
State Street	City of Hood River (West of Front Street)
	ODOT (East of Front Street)
Historic Columbia River Highway*	ODOT
Button Bridge Road	ODOT
OR 35	ODOT

* The Historic Columbia River Highway (US 30) runs over Oak Street, Front Street, and State Street (from Front Street to OR 35) and continues east of OR 35.

Access management areas are corridors along the interchange crossroads where turning movements related to driveways and public street intersections can influence interchange operations. As a general practice, these corridors include the length of the interchange crossroads within ¼-mile of the interchange ramp terminals, which would be consistent with ODOT's access management spacing standards for interchange areas. As part of the IAMP, access management plans were developed that provide short, medium, and long-range actions to modify access to the crossroads within the access management areas to provide conformance with ODOT's access management spacing standards where feasible.



I-84 Exit 63 & Exit 64
Interchange Area Management Plan

Figure 2 Study Area

- Study Area
- Study Intersection
- Access Management Area
- Interstate
- Roadway
- Railroad
- City Limit
- UGB
- Stream
- Parcel Boundary

0 400 800 1,200
Feet
1 inch = 1,000 feet

Parametrix

Goals and Objectives

The goals and objectives of this IAMP reflect the intentions and interests of ODOT, the City of Hood River, Hood River County, and other key stakeholders for the interchanges and transportation operations in the area. The goals and objectives are guided by, but not re-statements of, Oregon Highway Plan policies and OAR language. The objectives relate what the plan is trying to accomplish and are intended to be achievable and measurable. The objectives served as the basis for data collection and research, as alternative evaluation criteria to guide alternatives analysis and selection of the preferred alternative, and to guide management decisions.

Goal 1: Protect the function and operation of the interchanges and the state highways as follows:

- I-84 is classified as an Interstate Highway. It is part of the National Highway System and is a designated freight route between Portland and points east. The operational objective for Interstate Highways is to provide safe and efficient high-speed travel in urban and rural areas.
- Oregon 35 is classified as a Statewide Highway, which provides inter-urban and inter-regional mobility and provides connections to larger urban areas, ports, and major recreational areas not directly served by Interstate Highways.
- The Historic Columbia River Highway (HCRH) is classified as a District Highway. The operational objective for District Highways is to allow safe and efficient moderate to low-speed travel in urban and urbanizing areas for traffic flow, as well as bicycle and pedestrian movements. In addition, the HCRH has design and operational requirements not applicable to other highways in the state.
- The Hood River-White Salmon Bridge over the Columbia River is a privately owned facility, but is part of the National Highway System and provides an important link between Oregon and Washington. The area around the Exit 64 interchange should be managed to facilitate safe and efficient travel through the interchange and Hood River-White Salmon Bridge.

  Objective 1a: The project alternatives meet the requirements of the Federal Interchange Policy and will accommodate design-year (2031) traffic demands as a threshold.

  Objective 1b: The project alternatives are consistent with the OHP requirement that the maximum volume to capacity ratio for the ramp terminals of interchange ramps be the smaller of the values of the volume to capacity ratio for the crossroad or 0.85.

  Objective 1c: Meet or move in the direction of ODOT access management spacing standards for access along interchange crossroads.

  Objective 1d: The project alternatives are consistent with the intent of the Programmatic Agreement for the HCRH.

  Objective 1e: The project alternatives are consistent with the intent of the I-84 Corridor Strategy.

Goal 2: Provide for an adequate system of local roads and streets for access and circulation within the interchange areas that reduces the reliance on the interchanges and on the interchange ramps.

Objective 2a: Any necessary supporting improvements to the surface street system have been (or will be) identified in the local comprehensive plan and funding or a funding source for these improvements has been identified.

Objective 2b: While recognizing the urban fabric of Hood River, the project alternatives propose surface street improvements that either meet the ODOT established access management standards or improve on the current conditions.

Objective 2c: The project alternatives propose surface street improvements that will operate adequately over the 20-year planning horizon.

Goal 3: Provide safe and efficient multi-modal travel between the connecting roadways.

Objective 3a: While recognizing existing capacity constraints and consistent with the Programmatic Agreement for the HCRH, the project alternatives will improve safety by adding capacity to reduce congestion and/or correcting geometric conditions that do not meet current standards.

Objective 3b: The project alternatives will improve bicycle and pedestrian safety by providing upgraded bikeways and walkways that meet current standards and include facility infill and extensions where needed to provide a continuous network while respecting the historic streetscape.

Goal 4: Ensure future changes to the planned land use system are consistent with protecting the long-term function of the interchange and the surface street system and the integration of future transportation projects and land use changes.

Objective 4a: The project alternatives were developed in partnership with affected property owners in the interchange area, the City of Hood River, Hood River County, the Oregon Department of Transportation, and other stakeholders, including interchange users.

Objective 4b: The City and County Comprehensive Plans and/or Transportation System Plans are consistent, or will be made consistent, with the project alternatives.

Objective 4c: The project alternatives are consistent with the County's Bike Plan.

Goal 5: Recognize the importance of the interchange function to support local and regional economic development goals and plans.

Objective 5a: The project alternatives are expected to reduce delay for vehicles, including commercial vehicles, accessing the freeway and increase safety.

Objective 5b: The project alternatives would facilitate access to, through, and from businesses in Hood River, while protecting the function and livability of downtown Hood River.

Objective 5c: The project alternatives recognize the importance of recreation and tourism to the regional economy.

Objective 5d: The project alternatives will recognize the local interest in supporting employment growth on the Port Waterfront property north of the Exit 63 interchange.

Goal 6: Ensure that the needs of regional through trips and the timeliness of freight movements are considered when developing and implementing plans and projects on freight routes.

Objective 6a: The project alternatives would facilitate freight access to and from the many industrial, agricultural, and forest products freight destinations in the interchange areas.

Objective 6b: The project alternatives recognize the importance of interstate travel and freight mobility within the corridor by improving mobility and access to the Hood River-White Salmon Bridge.

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CHAPTER 3: MANAGEMENT PLAN

This chapter describes plan actions for improving and managing the transportation system in the interchange areas through the year 2031 to maximize the operational life of the I-84 Exit 63 and Exit 64 interchanges, while ensuring that planned growth can be supported. It describes future operations within the interchange areas, identifies transportation improvements for the interchanges and surrounding street network, and includes access management plans to guide the planning of approach locations along the interchange crossroads (2nd Street and Button Bridge Road). Guidance for agency implementation of the IAMP is also provided, including recommended amendments to City and County plans and development codes.

Transportation System Improvements

Transportation system improvements are categorized by mode of travel, including improvements for the pedestrian, bicycle, and motor vehicle networks.

Pedestrian Network Improvements

This category of improvement projects includes those exclusively targeted at improving connectivity for pedestrians within the interchange areas. In addition to these, the Exit 64 Interchange reconstruction project will include sidewalk along the east side of Button Bridge Road from Marina Way through the interchange ramps to the south. Exclusive pedestrian network projects are listed below and illustrated in Figure 3.

A. Construct sidewalk along both sides of OR 35/Button Bridge Road between State Street (Historic Columbia River Highway) and Button Bridge, as well as on the south side of OR 35/Button Bridge Road between Button Bridge and the Exit 64 interchange. The construction of sidewalk between State Street and Button Bridge could be included as part of the proposed OR 35/ State Street intersection improvement project.

B. Explore the feasibility of constructing a multi-use trail under the I-84/Hood River Bridge and along the east side of the Hood River to connect Port Marina Park with State Street (Historic Columbia River Highway) without requiring travel through the Exit 64 interchange. At the north end, this trail would connect to a planned multi-use path that will connect to the Exit 64 interchange area, cross over the Hood River, pass around the shoreline of the Waterfront, and eventually connect to Jaymar Road. There are two separate segments of the trail proposed in this plan:

    Segment 1: Connection between the existing bicycle/pedestrian bridge over the Hood River and the public frontage road (Dock Road) along the south side of I-84 that connects to OR 35 near the north end of Button Bridge. This trail would pass under the I-84/Hood River Bridge. All land required to accommodate this corridor is under public ownership. To complete this route, additional sidewalk should be constructed along at least one side of Dock Road. Bicycles could share the low-volume, low-speed travel lanes with motor vehicles on Dock Road.

Segment 2: Provide a connection between Dock Road and State Street following the existing informal dirt walking path along the eastern bank of the Hood River. This trail would pass under the Union Pacific Railroad Bridge and connect to Dock Road using publicly owned land between tax lots 300 and 400.

For both trail segments, key design issues such as vertical clearance (10-foot minimum) under the bridges and location of the flood plain must be addressed.

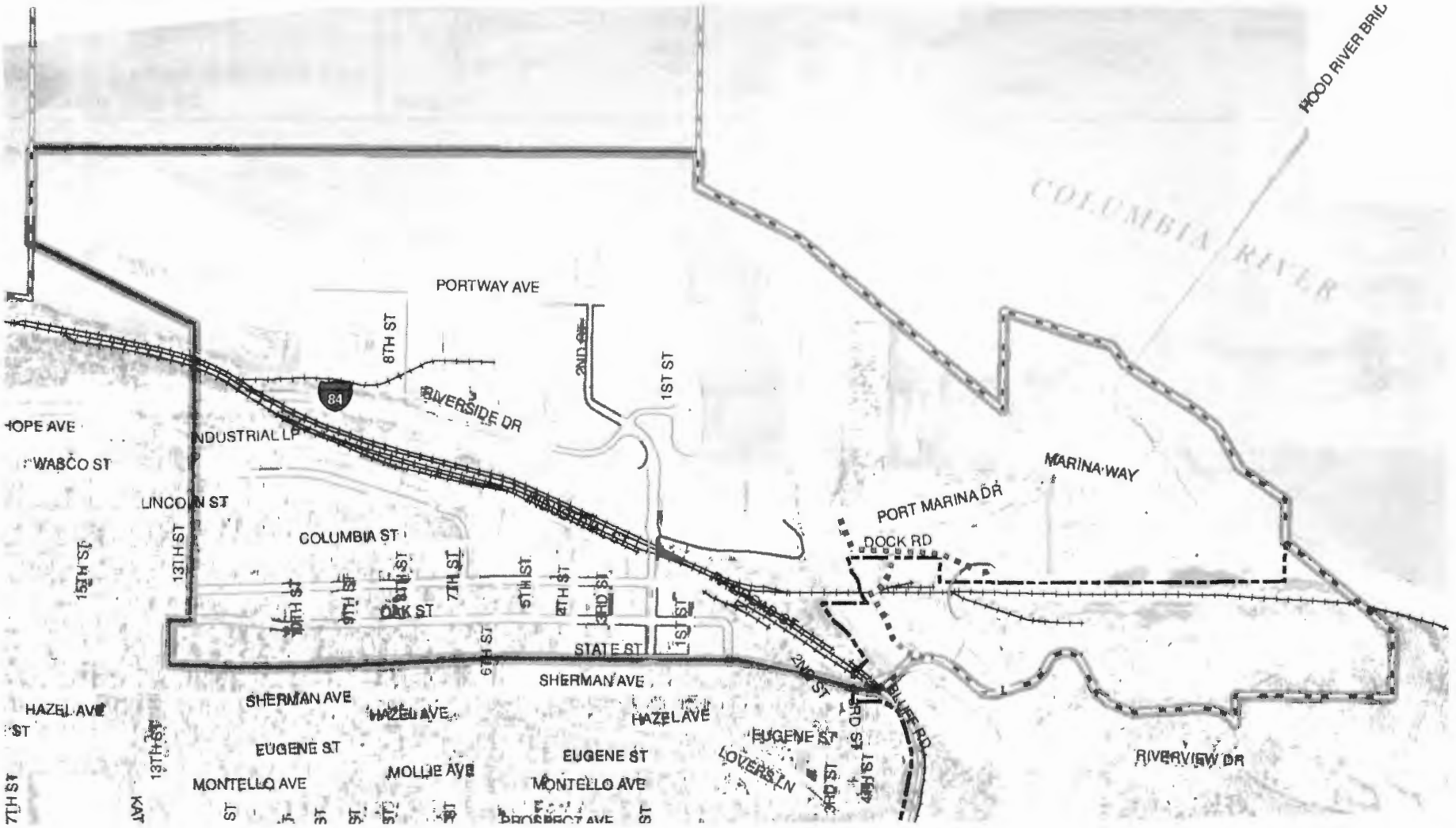
Bicycle Network Improvements

This category of improvement projects includes those exclusively targeted at improving connectivity for bicyclists within the interchange areas. In addition to these, the Exit 64 Interchange reconstruction project will include bike lanes along both sides of Button Bridge Road from Marina Way through the interchange ramps to the south. Exclusive bicycle network projects are listed below and illustrated in Figure 4.

A. Provisions for safe bicycle travel are needed through the downtown. Shared lane markings on Cascade Avenue, Oak Street, and State Street have been proposed as part of an update to the City of Hood River Transportation System Plan.

B. Bicycle travel would also benefit from the proposed multi-use trail recommended for pedestrians between Port Marina Park and State Street along the eastern bank of the Hood River.

C. At the time improvements are being developed for the intersection of OR 35 with State Street, bicycle safety and accessibility of the Historic Columbia River Highway shall be addressed, with opportunities for public input provided.



I-84 Exit 63 & Exit 64
Interchange Area Management Plan

Figure 3 Pedestrian Network Improvements

LEGEND

- Study Area
- City Limit
- UGB
- Parcel Boundary
- Railroad

Existing

- Sidewalk
- Multi-Use Path
- Pedestrian Bridge

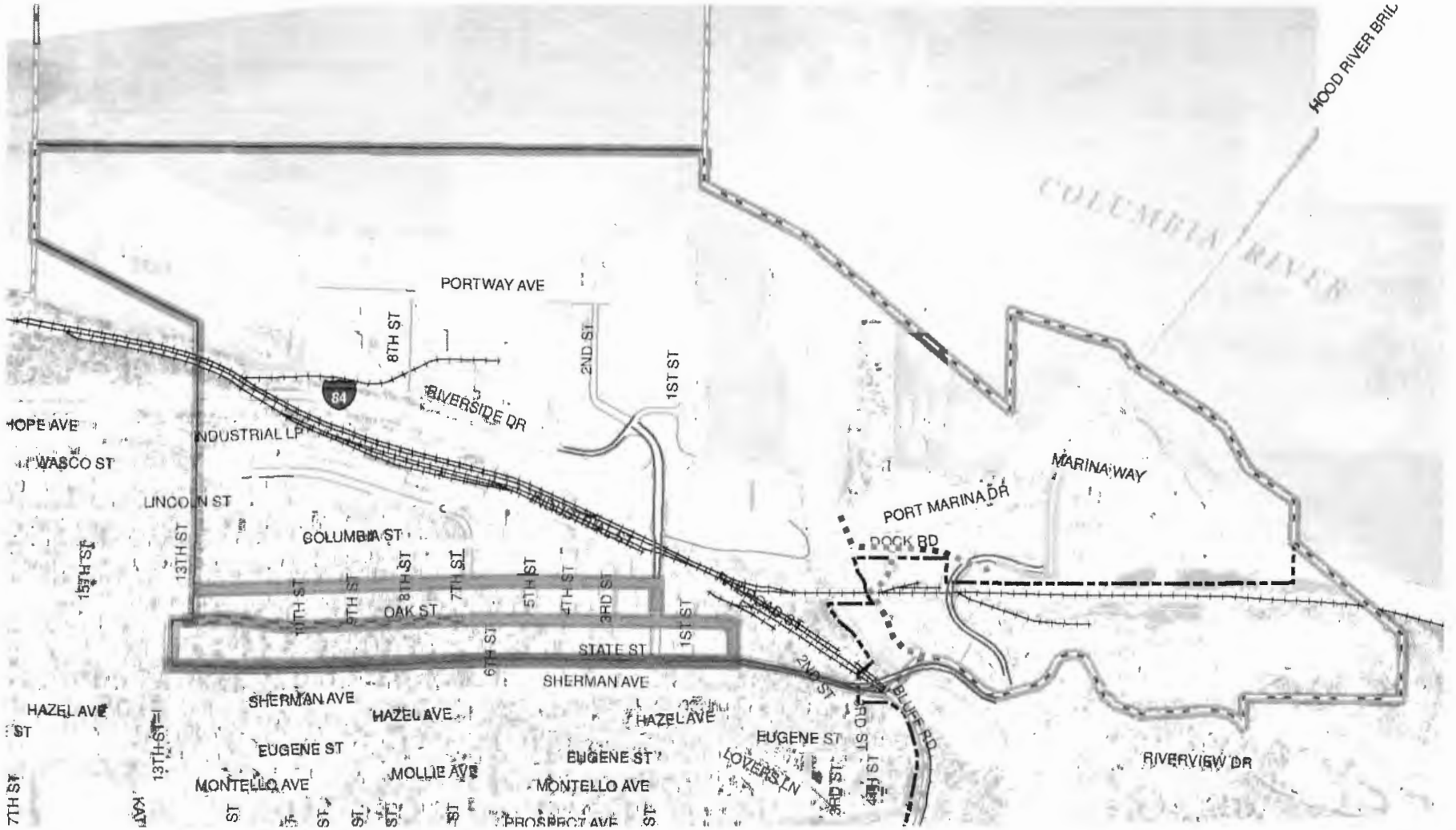
Future

- Sidewalk Part of Road Project
- Infill/New Sidewalk
- Potential Trail Alignment

0 400 800 1,200

1 inch equals 1,000 feet

DKS Associates
TRANSPORTATION SOLUTIONS



I-84 Exit 63 & Exit 64
Interchange Area Management Plan

Figure 4 Bicycle Network Improvements

LEGEND

- Study Area
- City Limit
- UGB
- Parcel Boundary
- Railroad

Existing

- Shoulder Bikeway
- Partial Shoulder Bikeway
- Sidewalk
- Multi-Use Path
- Pedestrian Bridge

Future

- Bike Lane Part of Road Project
- Shared Lane Markings
- Potential Trail Alignment

0 400 800 1,200

1 inch equals 1,000 feet

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Motor Vehicle Network Improvements

Land Use Assumptions

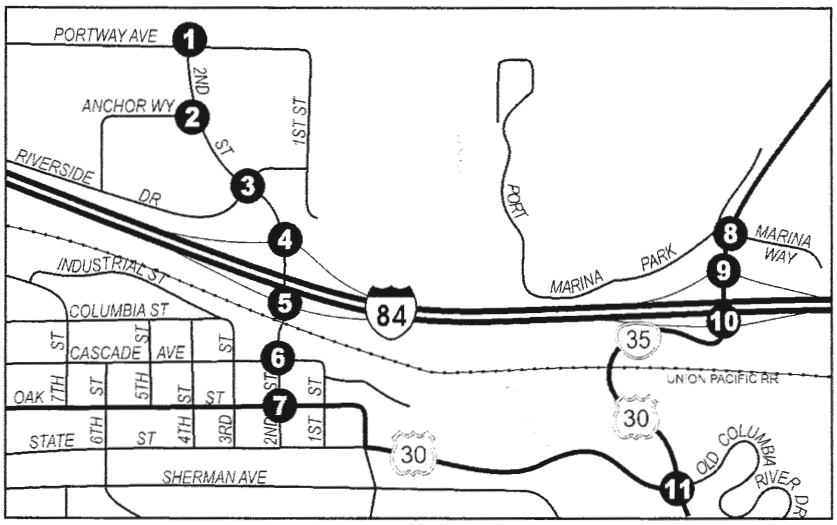
Traffic volume forecasts for the year 2031 were developed through estimation of continued regional growth in through traffic and city-wide growth in housing and employment within the urban growth boundary in a manner that would be consistent with the City of Hood River Comprehensive Plan and Map as of July 2009. The growth in local development would be consistent with full buildout of lands within the Exit 63 and Exit 64 interchange areas, including the Waterfront north of Exit 63. When forecasting future growth within the Waterfront area, land use assumptions were refined by modeling growth according to master planning completed by the Port of Hood River for the area bounded by Portway Avenue, 8th Street, Riverside Drive, and 2nd Street.[4] A detailed description of land use assumptions for the year 2031 is included in the appendix.

Future Traffic Volumes

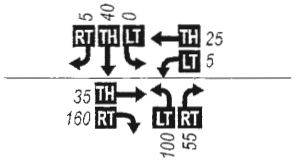
Traffic volume forecasts were developed for two time periods of interest for the I-84 Exit 63 and Exit 64 interchange areas: the summer Sunday p.m. peak hour and the summer weekday p.m. peak hour. The summer Sunday p.m. peak hour represents the 30th highest annual hour of traffic for I-84, which is the time period used by ODOT for design purposes. The summer weekday p.m. peak hour represents the time period where local commuting traffic combines with recreational traffic and often reflects a more appropriate design hour for the local transportation system.

Figures 5 and 6 display the forecasted turning movement volumes at study intersections for the year 2031 during the weekday and Sunday p.m. peak hour scenarios, respectively. Much of the growth in traffic to 2031 in the Exit 63 and Exit 64 interchange areas is attributed to growth at the Waterfront north of the Exit 63 interchange, employment growth in downtown Hood River, and continued growth in traffic across the Hood River-White Salmon Bridge. However, Exit 63 is also an important travel route for vehicles traveling to the south area of the city and to the Heights area along 13th Street.

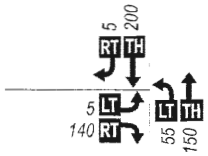
[4] *Port of Hood River Central Area Build-Out Scenario*, Group Mackenzie, May 19, 2008.



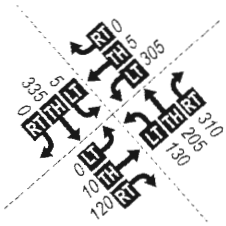
1 Portway Ave. @ 2nd St.



2 Anchor Wy. @ 2nd St.

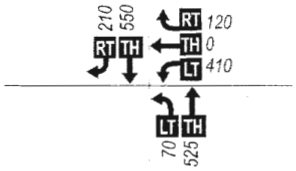


3 Riverside Dr. @ 2nd St.

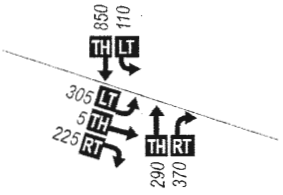


Traffic volumes shown at 2nd St./Riverside Dr. illustrate the demand for each movement with no turning restrictions in place and no alternative route provided for drivers entering or leaving the east approach. Volumes at intersections 1, 2, and 3 may vary with the type of mitigation implemented at the 2nd St./Riverside Dr. intersection.

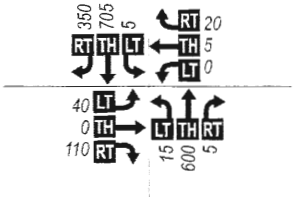
4 I-84 WB On/Off Ramps @ 2nd St.



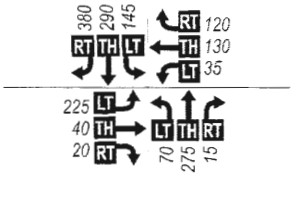
5 I-84 EB On/Off Ramps @ 2nd St.



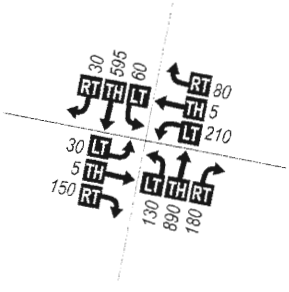
6 Cascade Ave. @ 2nd St.



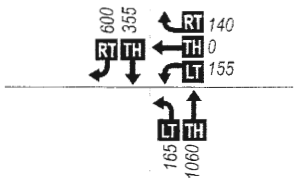
7 Oak St. @ 2nd St.



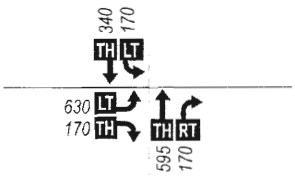
8 Marina Wy. @ Button Bridge Rd.



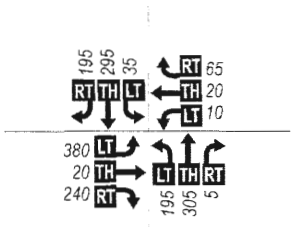
9 I-84 WB On/Off Ramps @ Button Bridge Rd.



10 I-84 EB On/Off Ramps @ Button Bridge Rd.



11 State St. @ OR 35



I-84 Exit 63 & Exit 64
Interchange Area Management Plan

Figure 5 2031 Weekday PM Peak Hour Traffic Volumes

LEGEND

- **0** - Study Intersection & Number
- RT 00 - Right Turn Movement Traffic Volume
- TH 00 - Through Movement Traffic Volume
- LT 00 - Left Turn Movement Traffic Volume

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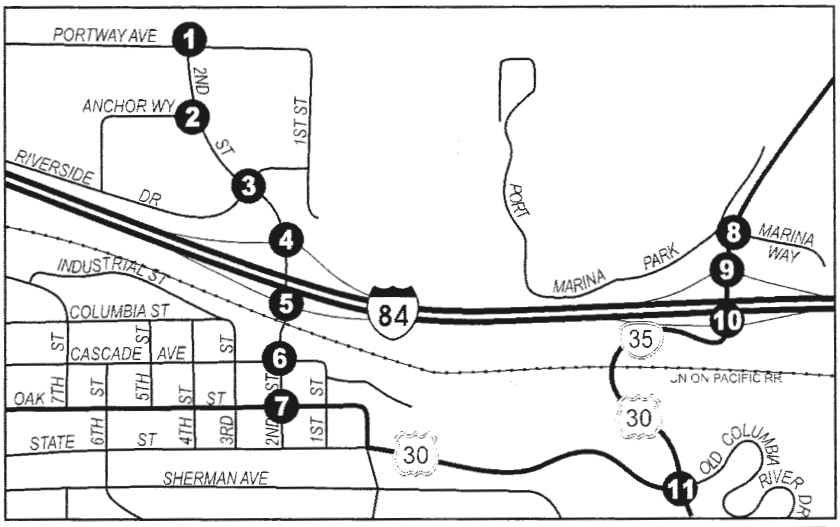
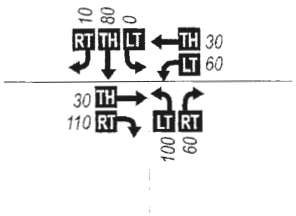
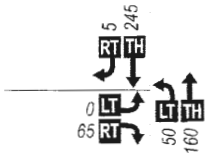


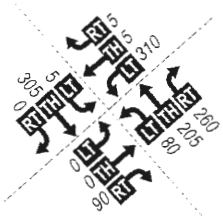
1 Portway Ave. @ 2nd St.



2 Anchor Wy. @ 2nd St.



3 Riverside Dr. @ 2nd St.



Traffic volumes shown at 2nd St./Riverside Dr. illustrate the demand for each movement with no turning restrictions in place and no alternative route provided for drivers entering or leaving the east approach. Volumes at intersections 1, 2, and 3 may vary with the type of mitigation implemented at the 2nd St./Riverside Dr. intersection.

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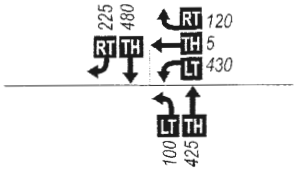
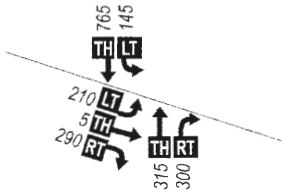


5 I-84 EB On/Off Ramps @ 2nd St.



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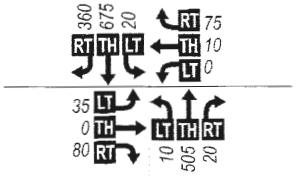

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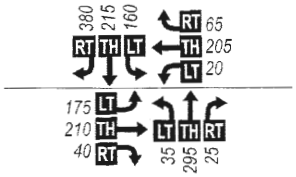
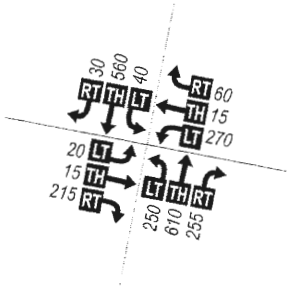
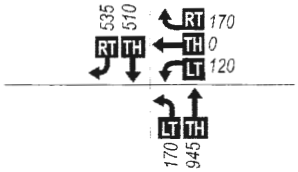


8 Marina Wy. @ Button Bridge Rd.



9 I-84 WB On/Off Ramps @ Button Bridge Rd.



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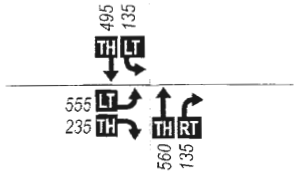
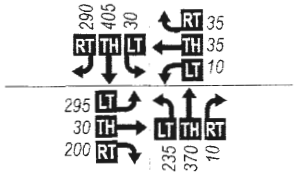


11 State St. @ OR 35



I-84 Exit 63 & Exit 64
Interchange Area Management Plan

Figure 6 2031 Sunday PM Peak Hour Traffic Volumes

LEGEND

- **0** - Study Intersection & Number
- RT 00 - Right Turn Movement Traffic Volume
- TH 00 - Through Movement Traffic Volume
- LT 00 - Left Turn Movement Traffic Volume

DKS Associates

Mobility Standards

ODOT, the City of Hood River, and Hood River County have adopted mobility standards for transportation facilities under their jurisdiction that require a minimum level of acceptable performance. While ODOT maintains jurisdiction of most study intersections within the Exit 63 and Exit 64 interchange areas, the City of Hood River applies the most restrictive standard where a transportation facility within the City Limits is maintained by ODOT or the County. For non-ODOT facilities that are outside of the City Limits, the County mobility standards apply.

Through the recent 2011 update of the City of Hood River's Transportation System Plan, the City's mobility standard changed from requiring a level of service C to only requiring a level of service D on City roadways. This change was primarily in response to the increasing difficultly of funding transportation improvement projects in a timely manner to support new development. The City of Hood River's mobility standards are included in the 2011 City of Hood River Transportation System Plan. Under Goal 4, Policy 4 states, "A minimum level of service (LOS) D on transportation systems serving new developments is desired on streets and signalized and unsignalized intersections. Level of service shall be based on the most recent edition of the Highway Capacity Manual. Where a facility is maintained by the County or ODOT, the more restrictive of the standards should apply."[5]

To maintain consistency with City mobility standards, it is recommended that Hood River County amend their mobility standards to allow LOS D operations (a LOS C is currently required) within the City of Hood River urban growth area.

ODOT mobility standards are given as volume to capacity (V/C) ratios and are based on roadway classification, designations, and posted speed limits. There are two types of mobility standards for state facilities that are used for different purposes. Those contained in ODOT's 1999 Oregon Highway Plan (OHP) are applied to the review of development proposals and for the determination of needed infrastructure improvements (i.e., No Build conditions). However, the mobility standards from ODOT's Highway Design Manual (HDM)[6] are to be applied to the evaluation of all alternatives considered for roadway improvements through public investments.

Table 2 lists the mobility standards from the OHP and HDM that are applicable to Exit 63 and Exit 64 interchange area facilities (I-84 is classified as an Interstate Highway, 2nd Street and Button Bridge Road are classified as Local Interest Roads, Oak Street and the Historic Columbia River Highway are classified as District Highways, and OR 35 is classified as a Statewide Highway and Freight Route). While the recommended improvements included in this plan were designed to comply with the HDM standards, the mobility standards from the OHP will be used for all future interchange area operations monitoring, including the review of development proposals.

In addition to the mobility standards shown in Table 2, special conditions apply at some locations. At unsignalized intersections and road approaches, the volume to capacity ratios shall not be exceeded for either of the state highway approaches that are not stopped. Approaches at which traffic must stop, or otherwise yield the right of way, shall be operated to maintain safe operation of the intersection and all of its approaches and shall not exceed the volume to capacity ratios for District/Local Interest Roads within the urban growth boundary.

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[5] *City of Hood River Transportation System Plan*, DKS Associates, June 2011.

[6] *Highway Design Manual*, Oregon Department of Transportation, 2003, p. 10-38.

Table 2: Applicable ODOT Mobility Standards (V/C ratios)

Highway Category	Inside Urban Growth Boundary	
	Non-MPO outside of STA's where non-freeway speed ≤ 35 mph	Non-MPO where non-freeway speed limit ≥ 45mph
Oregon Highway Plan ▪ *Applied to the review of development proposals and for the determination of needed infrastructure improvements (i.e., No Build conditions)*		
Interstate Highways	-	0.70*
Statewide (NHS) Freight Routes	0.80*	-
District Highways/ Local Interest Roads	0.90*	-
Highway Design Manual ▪ *Applied to the evaluation of all alternatives considered for roadway improvements through public investments*		
Interstate Highways	-	0.65
Statewide (NHS) Freight Routes	0.70	-
District Highways/ Local Interest Roads	0.80	-

* The maximum volume to capacity ratio for ramp terminals of interchange ramps shall be the smaller of the values of the volume to capacity ratio for the crossroad or 0.85.

Roadway Improvements

Roadway improvements will require site plan review pursuant HRMC 17.20 Street and interchange improvements (defined as parking modifications, access removal, new lanes, new streets). The site plan review shall include findings and solutions addressing safety, mobility, and how the grid system, pedestrian system, bike system, parking and economic enterprise will be protected and/or enhanced by the proposed improvements.

Under No Build conditions in the year 2031, the intersections of 2nd Street at Cascade Avenue and OR 35 at State Street were found failing to comply with mobility standards during both the weekday and Sunday peak hours. In addition, the intersection of 2nd Street at Riverside Drive fails during the weekday peak hour. It should be noted that the construction of a traffic signal at the intersection of 2nd Street at Oak Street was assumed to have been completed under the No Build condition since this improvement has already been made a condition of approval on a past land use action.

While the intersection of 2nd Street at Oak Street complies with mobility standards, the queues extending to the north from the future traffic signal interfere with upstream intersections during both the weekday and Sunday peak hours. This queue spillback is significant enough to cause long queues on the I-84 Exit 63 interchange ramps that extend back into or beyond the section of the ramp used for deceleration from freeway travel speeds. This creates a similar situation to what has been a common problem at the I-84 Exit 64 eastbound off-ramp (to be mitigated by the interchange reconstruction project), where ramp queues extend to the freeway and create safety and operational problems.

Improvements needed to maintain safe and efficient operations at the study intersections and I-84 Exit 63 freeway off-ramps are described below.

I-84 Exit 63 interchange area motor vehicle improvement projects:

Improvements proposed for the I-84 Exit 63 interchange area are primarily focused on vehicle queue management, especially where those queues could encroach on the freeway mainline. These improvements are illustrated in Figure 7 and described below, including operations at each study intersection in Table 3.

- 2nd Street/ Riverside Drive intersection: Several alternatives were considered for mitigating operations at this intersection in the future when it can no longer comply with mobility standards. These included conversion to two-way stop control, restriction of turning movements, installation of a traffic signal, and construction of a roundabout. Most alternatives could either not provide sufficient capacity to comply with mobility standards, experienced queuing conflicts with the nearby I-84 westbound traffic signal, or required significant right of way acquisition. Only the alternative involving the removal of stop signs on 2nd Street approaches and restriction of turning movements to allow only right-in and right-out turn movements on the Riverside Drive approaches, in addition to allowing southbound lefts from 2nd Street to Riverside Drive was found to provide acceptable operations.

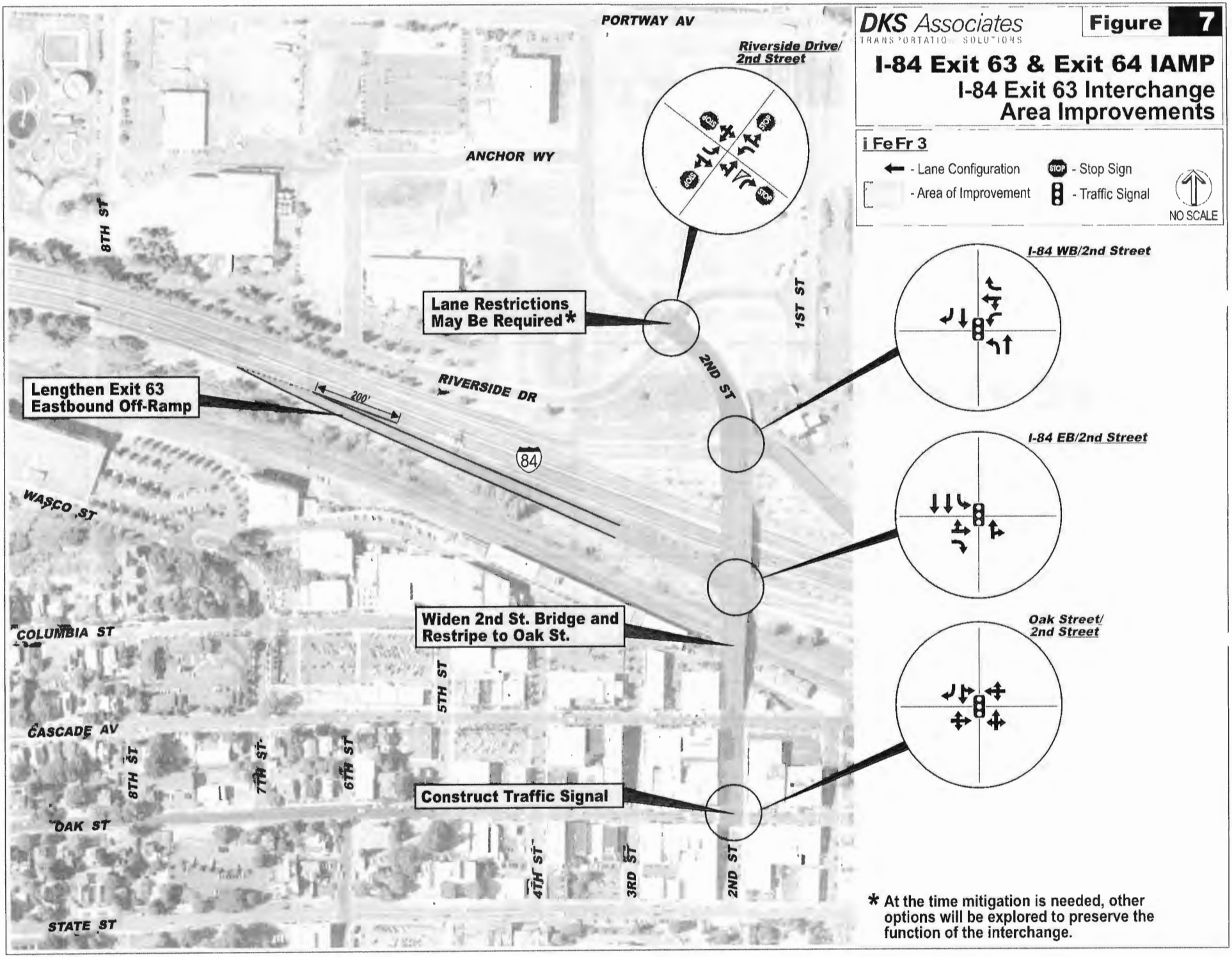
  In response to these findings, the following improvements are recommended in this IAMP as one option for mitigating the 2nd Street/ Riverside Drive intersection in the future:

  Remove stop signs on 2nd Street approaches and restrict turning movements to allow only right-in and right-out turn movements on the Riverside Drive approaches, in addition to allowing southbound lefts from 2nd Street to Riverside Drive. Lane configurations include (see Figure 7):

  - Northbound: shared through/right turn lane
  - Southbound: left turn lane (50' storage), shared through/right turn lane
  - Westbound: right turn lane
  - Eastbound: right turn lane

  In the future, the 2nd Street/ Riverside Drive intersection may no longer comply with mobility standards and restrictions on turning movements may be required. One identified solution involves the removal of stop signs on 2nd Street approaches and restriction of turning movements to allow only right-in and right-out turn movements. While this solution was found to provide acceptable operations, it could significantly reduce the accessibility of some properties and result in undesirable diversion of traffic through other areas of the Waterfront.

  Changes to the 2nd/Riverside intersection should be expected in the future. However, such changes shall occur only when necessary and left turn movement restrictions shall occur only if no other solution is found to be acceptable. Any solution to mitigating the 2nd Street/ Riverside Drive intersection must be compatible with the long-term ability to safely and efficiently accommodate traffic movements through the I-84 Exit 63 interchange. All property owners in the Waterfront area shall be noticed at the time improvements at the 2nd Street/ Riverside Drive intersection are being considered and shall be allowed the opportunity to participate in the process of developing and selecting appropriate improvements.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TRANSPORTATION SOLUTIONS
Figure 7
I-84 Exit 63 & Exit 64 IAMP
I-84 Exit 63 Interchange Area Improvements
- Lane Configuration
- Area of Improvement
- Stop Sign
- Traffic Signal
NO SCALE
PORTWAY AV
Riverside Drive/ 2nd Street
ANCHOR WY
8TH ST
1ST ST
2ND ST
RIVERSIDE DR
200'
84
WASCO ST
COLUMBIA ST
5TH ST
CASCADE AV
8TH ST
7TH ST
6TH ST
OAK ST
4TH ST
3RD ST
2ND ST
STATE ST
Lane Restrictions May Be Required*
Lengthen Exit 63 Eastbound Off-Ramp
Widen 2nd St. Bridge and Restripe to Oak St.
Construct Traffic Signal
I-84 WB/2nd Street
I-84 EB/2nd Street
Oak Street/ 2nd Street
* At the time mitigation is needed, other options will be explored to preserve the function of the interchange.

Table 3: I-84 Exit 63 Interchange Area Intersection Operations (2031)

Intersection	City Mobility Standard (LOS)	ODOT Mobility Standard (V/C ratio) OHP / HDM	Weekday PM Peak Hour						Sunday PM Peak Hour					
			No Build			With Improvements			No Build			With Improvements		
			LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
2nd St/ Portway Ave	D	-	B	10.9	0.22	B	14.0	0.59	B	12.7	0.28	C	15.5	0.69
2nd St/ Anchor Wy	D	-	B	10.5	0.19	B	14.7	0.29	B	10.4	0.10	B	13.8	0.15
2nd St/ Riverside Dr	D	0.90 / 0.80	**E**	**40.6**	**0.94**	C	15.7	0.26	D	29.0	0.84	B	14.4	0.19
2nd St/ I-84 WB	D	0.85 / 0.65	C	20.2	0.74	B	15.1	0.60	C	20.0	0.71	B	12.6	0.50
2nd St/ I-84 EB	D	0.85 / 0.65	B	18.9	0.81	**B**	**16.7**	**0.74**	B	14.8	0.68	B	13.6	0.57
2nd St/ Cascade Ave	D	-				**E**	**42.4**	**0.64**	**F**	**81.0**	**0.78**	**E**	**49.4**	**0.62**
2nd St/ Oak St	D	0.90 / 0.80	B	14.1	0.78	B	18.1	0.77	B	16.5	0.80	C	20.1	0.80

Notes: Shaded cells indicate mobility standard is not met.
ODOT OHP mobility standards apply to the evaluation of No Build conditions and development proposals.
ODOT HDM mobility standards apply to the evaluation of improvements through public investments.

Should turning movements be restricted as recommended, the elimination of left turns out of Riverside Drive to return to I-84 and the downtown will reduce the accessibility of some properties and may result in undesirable diversion of traffic through the industrial areas. Alternatives for addressing Waterfront area local circulation are discussed in the Access Management section of this plan. Depending on which alternative for enhancing local circulation is selected, an additional improvement to install all-way stop control at the intersection of 2nd Street at Portway Avenue may be needed.

- 2nd Street/ I-84 Exit 63 westbound intersection: Add a second westbound left turn lane on the off-ramp. The reconfigured westbound approach on the off-ramp would include:
  - Right turn lane (125' storage)
  - Shared through/left lane
  - Left turn lane (200' storage)

  These improvements are primarily focused on keeping vehicle queues away from the freeway mainline and out of the portion of the off-ramp needed for deceleration from freeway speeds. If recurring congestion and unsafe ramp queues become a problem before these improvements can be funded and constructed, an interim solution includes:
  - Install queue detection devices on the I-84 Exit 63 westbound off-ramp, communications with ODOT's Traffic Management Operations Center, and surveillance cameras for viewing the off-ramp. This will allow for operators to post warning messages on the variable message sign on I-84 westbound entering Hood River when deemed warranted by conditions on the Exit 63 westbound off-ramp. These cameras and queue detection shall be made available to 911 dispatch which will help provide an acceptable solution to seasonal traffic congestion at critical interchanges.

- 2nd Street/ I-84 Exit 63 eastbound off-ramp: Lengthen the I-84 Exit 63 eastbound off-ramp by 200 feet to provide additional queue storage as follows:
  - Shared through/left lane
  - Right turn lane (250' storage)

  This intersection is shown in Table 3 as failing to meet mobility standards with these improvements in place during the weekday p.m. peak hour in 2031. While the City's mobility standards will be met, as well as ODOT's mobility standards from the OHP, ODOT's mobility standards from the HDM will not be. However, a design exception from ODOT will be sought based on the following:
  a. While the weekday p.m. peak hour is a time period of interest for facility design, it is the Sunday p.m. peak hour that represents the 30th highest annual hour of traffic in this area. Because the HDM mobility standards are to be applied to the 30th highest annual hour of traffic, they may not be directly applicable during the weekday.
  b. Operations at this intersection are improved compared to the No Build condition and continue to meet OHP mobility standards, providing more capacity for future growth.
  c. This intersection meets OHP mobility standards under No Build conditions and was not in need of improvement to comply with mobility standards. Rather, improvements were made to address safety needs related to interchange area queue management.

d. The I-84 Exit 63 interchange improvements recommended in this plan are focused on system management rather than modernization. The interchange ramp terminals will have adequate capacity to serve future demand. However, improvements are needed to address vehicle queuing through the interchange, which is a result of the capacity-constrained downtown area immediately adjacent to the interchange.

- 2nd Street Improvements: Changes to 2nd Street from I-84 to Oak Street should be expected in the future, however such changes should occur only when necessary. Alternatives to parking removal and alternate lane configurations shall be considered only if no other solution is found to be acceptable. Any solution must be compatible with a long-term ability to safely and efficiently accommodate traffic movements through the I-84 interchange. All property owners in the downtown will be noticed at the time improvements are considered and shall be allowed to participate.

- 2nd Street/ Cascade Avenue intersection: Traditionally, interchange crossroads are designed as arterial or collector streets that are able to gradually distribute large volumes of traffic away from the freeway system to many destinations on the surface streets. To do this effectively generally requires that the crossroad be managed such that direct access is limited within several hundred feet of the interchange.

  While 2nd Street is designated as a collector street, the close proximity of Hood River's downtown limits the ability of 2nd Street to safely and efficiently move traffic away from the interchange as desired. To facilitate this, the City of Hood River had previously placed a condition of approval on a land use action requiring that the intersection on 2nd Street at Cascade Avenue be restricted such that only right-in and right-out turning movements could be made to and from the Cascade Avenue approaches. However, given the potential impacts to traffic circulation in the surrounding area within the downtown that could create other safety and operational problems, this action is no longer desired.

  Through discussions with ODOT regarding the management of the 2nd Street corridor south of I-84, the City of Hood River has determined that the best approach is to leave the 2nd Street at Cascade Avenue intersection in its current condition with no mitigation. As opposed to the previous plan to restrict turning movements, leaving the intersection as-is provides a better balance between facilitating interchange operations and preserving the function of the downtown. Within the downtown, there are a number of important issues that must be considered, such as the preservation of parking, provision of a safe and convenient walking environment, truck access to the industrial area north of Columbia Street, and reasonable motor vehicle circulation and access to businesses.

  In leaving 2nd Street at Cascade Avenue intersection in its current configuration, it is acknowledged that it will be unable to comply with the City's mobility standard, which requires operation at a level of service D or better. Therefore, as part of an overall interchange and downtown management strategy, the City will allow for an exception from the mobility standard at this intersection.

  2nd Street is a critical pedestrian corridor between downtown and the waterfront. Pedestrian movements must be safe and carefully guarded at this intersection.

- 2nd Street/ Oak Street intersection: Construct traffic signal (already planned as a condition of approval on a past land use action). The built environment in the downtown limits the ability to implement further capacity improvements, such as separate turning lanes, without the elimination of on-street parking. Therefore, no new turning lanes are recommended at this time. The primary operational concerns for this intersection should be focused on managing queues so they don't compromise interchange safety and on pedestrian crossing safety.

I-84 Exit 64 interchange area motor vehicle improvement projects:

The current project to reconstruct the I-84 Exit 64 interchange will address a majority of the motor vehicle needs in this area through the year 2031. However, the intersection of OR 35 at State Street will require improvements as described below. Forecasted intersection operations for key intersections within the Exit 64 interchange area are shown in Table 4.

- OR 35/ State Street intersection: Construct traffic signal and modify lane configurations on intersection approaches to include:
  - Northbound: left turn lane (250' storage), shared through/right turn lane
  - Southbound: left turn lane (125' storage), through lane, right turn lane
  - Westbound: left turn lane (75' storage), shared through/right turn lane
  - Eastbound: left turn lane, through lane (150' storage), right turn lane separated from intersection (as existing)

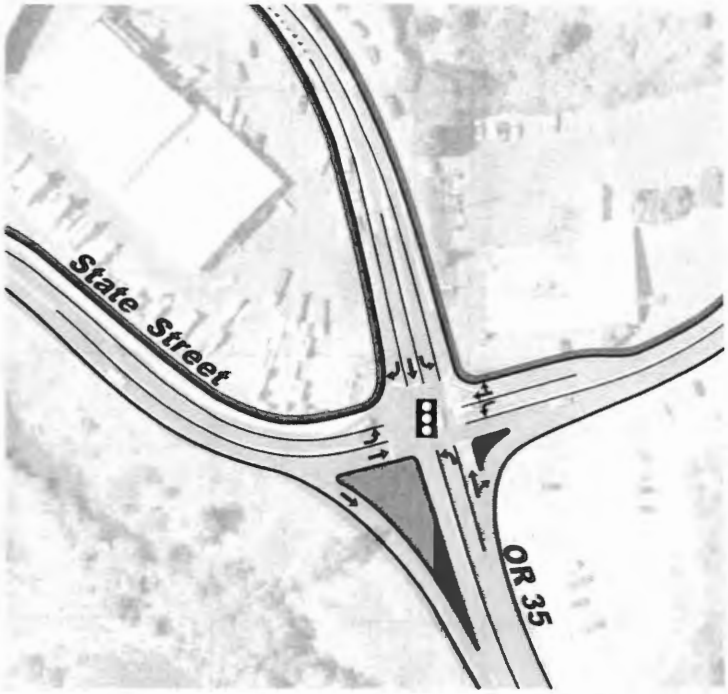


Figure 8: Recommended Improvements at OR 35 / State St.

The construction of a traffic signal and associated turning lanes as recommended would have right of way impacts, which may require National Scenic Area review for improvements outside of the urban growth area (south of State Street/ Historic Columbia River Highway). However, a traffic signal will allow different timing plans to be implemented in response to changing demands during seasonal and event peak traffic times. The type of traffic control used for the eastbound right turn from State Street to OR 35 (e.g., signalized, yield, free movement) was assumed to be a free right turn movement into the existing second southbound lane on OR 35. However, should motor vehicle conflicts with bicycles and pedestrians become a concern, this movement could be signalized as well. Bicycle safety was raised as a specific concern at this intersection and must be carefully addressed during design because of the unusually high bicycle traffic accessing the Historic Columbia River Highway State Trail.

Table 4: I-84 Exit 64 Interchange Area Intersection Operations (2031)

Intersection	City Mobility Standard (LOS)	ODOT Mobility Standard (V/C ratio) OHP / HDM	Weekday PM Peak Hour						Sunday PM Peak Hour					
			No Build			With Improvements			No Build			With Improvements		
			LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C	LOS	Delay (sec)	V/C
Button Bridge Rd/ Marina Wy	D	0.90 / 0.80	B	11.6	0.58	B	12.7	0.58	B	16.8	0.67	B	17.7	0.67
Button Bridge Rd/ I-84 WB	D	0.85 / 0.65	A	8.4	0.49	A	7.9	0.49	A	6.6	0.43	A	7.1	0.43
Button Bridge Rd/ I-84 EB	D	0.85 / 0.65	B	17.0	0.59	B	16.9	0.59	B	14.2	0.57	B	14.4	0.57
OR 35/ State St	D	0.80 / 0.70	**F**	**>60.0**	**>1.00**	C	20.8	0.64	**F**	**>60.0**	**>1.00**	C	22.5	0.59

Notes: Shaded cells indicate mobility standard is not met.
No Build condition includes reconstruction of the Exit 64 interchange - to be completed in 2011.
ODOT OHP mobility standards apply to the evaluation of No Build conditions and development proposals.
ODOT HDM mobility standards apply to the evaluation of improvements through public investments.

Access Management Plan

The purpose of the Access Management Plan is to provide a long-range, comprehensive and coordinated strategy for accommodating access as property develops or as public improvement projects are constructed. It is anticipated that most improvements will occur incrementally over time. The goal of the plan is to provide clear direction and ensure progress is made toward improving the management of access in the interchange areas, while allowing sufficient flexibility to accommodate future development plans. Successful implementation will require continued collaboration between neighboring property owners, the City of Hood River, Hood River County, and ODOT staff.

Access Objectives

To provide a basis for decision-making during the development of the access management plan and to guide future policy decisions for the I-84 Exit 63 and Exit 64 interchange areas, a set of access management objectives was established. Given the constraints in the interchange areas, the objectives were used as guidelines and may not be applicable in all instances.

These objectives were intended to reflect current practices, policies, and regulations pertaining to the management of access within the interchange areas and include the following:

1. Create shared access points to reduce the overall number of accesses on the interchange area crossroads.
2. Provide inter-parcel circulation through cross-over easements, shared parking lots, or connecting driveways where feasible.
3. Seek opportunities to avoid turning conflicts when positioning approaches on opposite sides of roadways.
4. Utilize easements, frontage/backage roads, and other City streets to allow for secondary access to facilitate large truck and emergency service vehicle circulation.
5. Prohibit or restrict movements to accesses adjacent to turning pockets at signalized intersections.
6. Ensure that all properties are provided reasonable access to the public street network.
7. Meet, or move in the direction of meeting, ODOT's adopted access management spacing standards for Interchange Areas, as documented in the *1999 Oregon Highway Plan* (as amended 2006). Applicable spacing standards for the I-84 Exit 63 and Exit 64 interchange areas are shown in Table 5 and Table 6, respectively.

Table 5: I-84 Exit 63 Interchange Area Access Spacing Standards

Type of Access Point	Minimum Spacing Dimension*
Distance between ramp terminal and first major intersection on 2nd St.	1,320 feet
Distance between ramp terminal and first directional median opening on 2nd St.	1,320 feet
Distance between ramp terminal and last right-in/right-out approach on the right side of 2nd St. (when moving toward I-84)	750 feet
Distance between ramp terminal and first right-in/right-out approach on the right side of 2nd St. (when moving away from I-84)	750 feet

* Spacing standards for Freeway Interchanges with Two-lane Crossroads

Table 6: I-84 Exit 64 Interchange Area Access Spacing Standards

Type of Access Point	Minimum Spacing Dimension*
Distance between ramp terminal and first major intersection on Button Bridge Rd.	1,320 feet
Distance between ramp terminal and first directional median opening on Button Bridge Rd.	1,320 feet
Distance between ramp terminal and last right-in/right-out approach on the right side of Button Bridge Rd. (when moving toward I-84)	990 feet
Distance between ramp terminal and first right-in/right-out approach on the right side of Button Bridge Rd. (when moving away from I-84)	750 feet

* Spacing standards for Freeway Interchanges with Multi-lane Crossroads

Access Recommendations

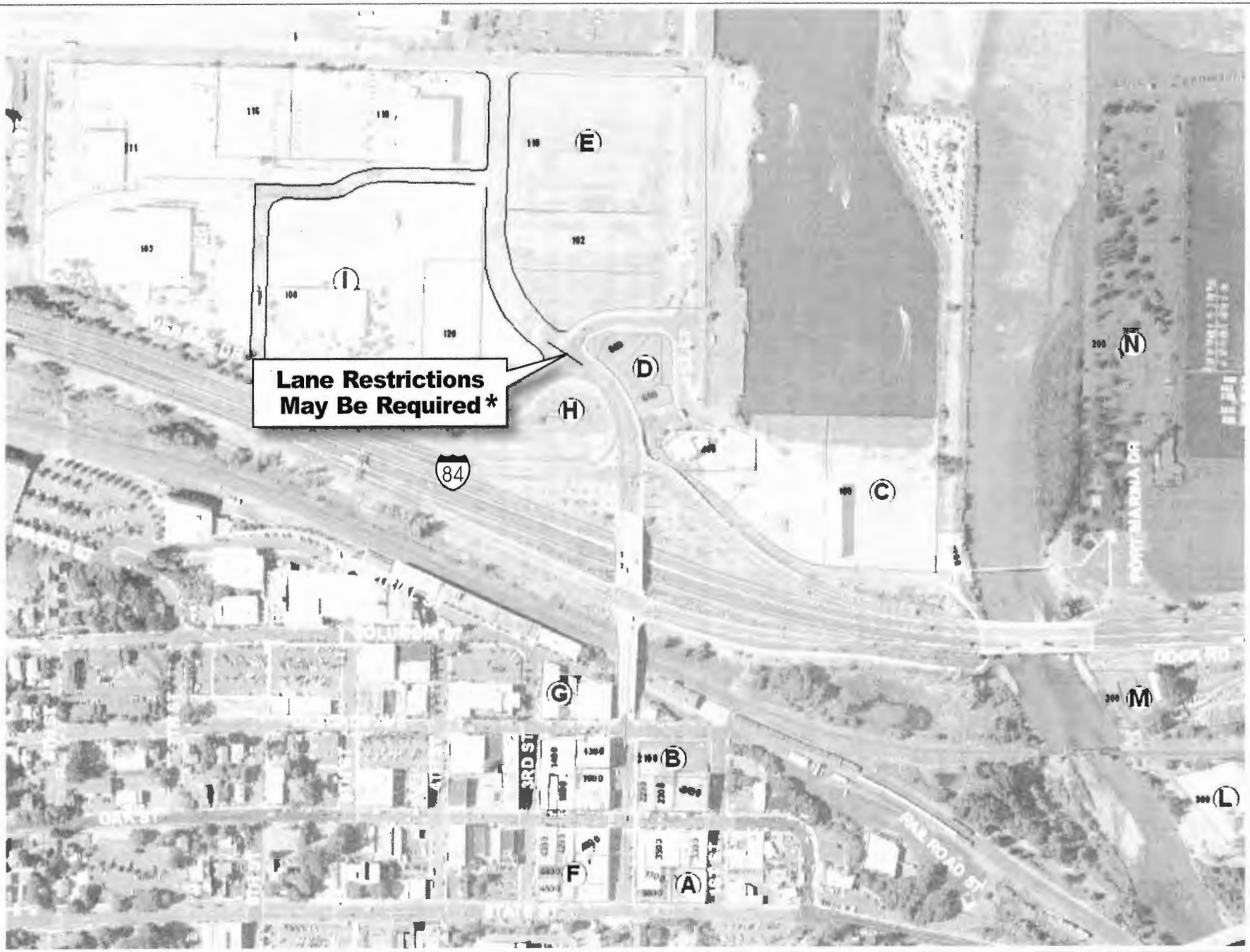
The implementation of the access management plan is anticipated to occur incrementally over a long period of time through property development/redevelopment or public construction projects. The framework for the plan provides a structure of existing and planned public streets to work within and guidance for improvements on area properties to work toward the ultimate goal.

A key outcome of this plan is a reduction in direct access to interchange area crossroads, while maintaining the accessibility of abutting properties. Accomplishing this will require a combination of improvements to the public street infrastructure as well as cooperation among neighboring properties to establish effective access ways between businesses. This could include creating agreements to establish shared driveways or parking lots to establish inter-parcel circulation.

To help identify groups of properties where collaborate access planning and coordination are recommended, "Access Management Blocks" have been outlined in Figure 9 and Figure 10. For each block shown, the recommended plan for establishing property access will be documented for future reference. In planning for future access, property owners may elect to work around existing development or assume the site would be redeveloped in the future. Cooperation between property owners within access management blocks, as well as between access management blocks, will be essential for maximizing business accessibility throughout the interchange areas.

The access management block planning approach is intended to provide enough certainty and structure to guide future development and ensure progress is made toward the ultimate goal, but to also allow for enough flexibility to accommodate a variety of future development plans and site designs. However, the provision of this flexibility will require continued collaboration between property owners, City of Hood River, Hood River County, and ODOT staff as future development is proposed or as public improvement projects are planned to ensure each action is consistent with the intent of the plan and is compatible with the access needs of other properties.

The I-84 Exit 63 and Exit 64 interchange areas have been divided into 14 access management blocks, with many consisting of several adjacent parcels that have similar access constraints. Access recommendations have been provided for each access management block below, corresponding with Figures 9 and 10. It is anticipated that the following recommendations will be modified following coordination with area property owners, the City of Hood River, Hood River County, and ODOT. However, site plan review will be required pursuant HRMC 17.20 Street and interchange improvements (defined as parking removal, access modifications in IAMP blocks, new lanes, new streets, signalization modifications). The site plan review shall include findings and solutions addressing safety, mobility, and the effect of traffic beyond the immediate vicinity, pedestrian system, bike system, parking and economic enterprise will be protected and/or enhanced by the proposed.



LEGEND

- Access Management Block
- Tax Lot

* At the time mitigation is needed, other options will be explored to preserve the function of the interchange.

NO SCALE

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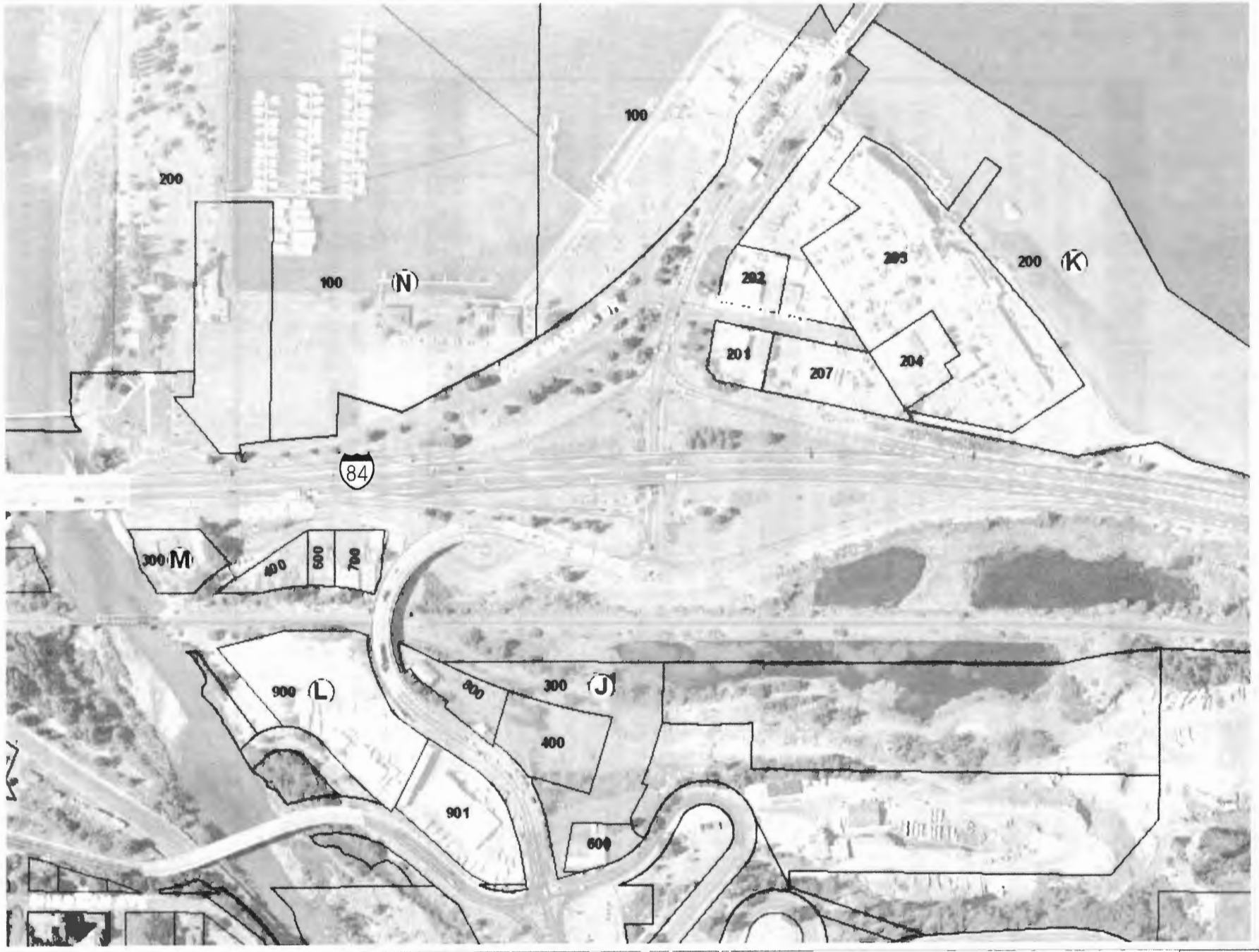
Figure 9

I-84 Exit 63 Interchange Area
Access Management Blocks



LEGEND

- Access Management Block
- Tax Lot

NO SCALE

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Figure 10

I-84 Exit 64 Interchange Area
Access Management Blocks

Block A	
Existing Constraints:	**Future Recommendations:**
Block A includes one city block within Hood River's downtown. Access needs and opportunities are limited by the character of development in the downtown where properties are largely covered by buildings and on-street parking replaces the need for on-site parking.	Minimizing access points within the downtown allows for more on-street parking and reduces conflicts between pedestrians and motor vehicles where drivers would cross the sidewalk. There is currently one private access point directly to 2nd Street serving the City Hall and Police. As future site redevelopment occurs (including a new use replacing the City Hall and Police functions), the number of access points to Block A should be minimized with a priority placed on the elimination of access directly to 2nd Street (the primary route for traveling to and from the I-84 interchange).
Block B	
Existing Constraints:	**Future Recommendations:**
Block B includes one city block within Hood River's downtown and a small parcel adjacent to the east side of the 2nd Street bridge over the railroad tracks. Access needs and opportunities are limited by the character of development in the downtown where properties are largely covered by buildings and on-street parking replaces the need for on-site parking.	Minimizing access points within the downtown allows for more on-street parking and reduces conflicts between pedestrians and motor vehicles where drivers would cross the sidewalk. There are currently no private access points directly to 2nd Street from Block B. As future site redevelopment occurs, the number of access points to Block B should be minimized with a priority placed on avoiding access directly to 2nd Street (the primary route for traveling to and from the I-84 interchange).
Block C	
Existing Constraints:	**Future Recommendations:**
Access to Block C is constrained by the Columbia River to the north, the Hood River to the east, and I-84 to the south. Currently, a frontage road leading to Riverside Drive is the only means of access for this block.	With no future plans to construct new roadways in this area, the frontage road leading to Riverside Drive should continue to be used as the primary means of access to Block C.

Block D	
Existing Constraints:	**Future Recommendations:**
Access to Block D is constrained by the proximity to the westbound I-84 ramp terminals on 2nd Street to the west.	The primary means of access to Block D should be through Riverside Drive and a future Street. The number of direct access points to Block D should be minimized to avoid additional conflicts in the vicinity of the street intersections surrounding the property. Access points shall not be established directly to 2nd Street to avoid introducing turning conflicts within the interchange influence area.
Block E	
Existing Constraints:	**Future Recommendations:**
Block E is bound by roadways on all sides, including a private roadway (1st Street) that is part of the east end of the block. All of these roadways are physically accessible, but various street intersections create locations where turning conflicts could occur.	Because 2nd Street is the crossroad of the I-84 interchange, direct access should be minimized and located no further south than Anchor Way. Access points to Riverside Drive and Portway Avenue should be located far enough from nearby intersections to avoid turning conflicts.
Block F	
Existing Constraints:	**Future Recommendations:**
Block F includes one city block within Hood River's downtown. Access needs and opportunities are limited by the character of development in the downtown where properties are largely covered by buildings and on-street parking replaces the need for on-site parking.	Minimizing access points within the downtown allows for more on-street parking and reduces conflicts between pedestrians and motor vehicles where drivers would cross the sidewalk. There are currently no private access points directly to 2nd Street from Block F. As future site redevelopment occurs, the number of access points to Block F should be minimized with a priority placed on avoiding access directly to 2nd Street (the primary route for traveling to and from the I-84 interchange).
Block G	
Existing Constraints:	**Future Recommendations:**
Block G includes two city blocks within Hood River's downtown. Access needs and opportunities are limited by the character of development in the downtown where properties are largely covered by buildings and on-street parking replaces the need for on-site parking.	Minimizing access points within the downtown allows for more on-street parking and reduces conflicts between pedestrians and motor vehicles where drivers would cross the sidewalk. There are currently no private access points directly to 2nd Street from Block G. As future site redevelopment occurs, the number of access points to Block G should be minimized with a priority placed on avoiding access directly to 2nd Street (the primary route for traveling to and from the I-84 interchange).

Block H	
Existing Constraints: Access to Block H is constrained by the presence of I-84 to the south and a combination of the topography and the proximity of the I-84 westbound ramp terminal to the east.	**Future Recommendations:** Access to Block H shall be established from Riverside Drive. The location of access to Riverside Drive should provide adequate separation from the intersection with 2nd Street to avoid potential conflicts.
Block I	
Existing Constraints: Block I is bound by roadways on all sides and has the newly constructed Anchor Way running through it connecting Riverside Drive on the south to 2nd Street on the east. All of these roadways are physically accessible, but various street intersections create locations where turning conflicts could occur.	**Future Recommendations:** Because 2nd Street is the crossroad of the I-84 interchange, any direct access to 2nd Street north of Anchor Way should be consolidated through the existing Anchor Way intersection. Access points to Riverside Drive, Portway Avenue, and 8th Street should be located far enough from nearby intersections to avoid turning conflicts.
Block J	
Existing Constraints: Access to Block J is constrained by the railroad tracks and topography to the north and east, while the proximity to the OR 35/ State Street/ Historic Columbia River Highway intersection and Button Bridge limit access opportunities to the west and south.	**Future Recommendations:** Given the limited amount of property frontage on OR 35 and the Historic Columbia River Highway, access points should be minimized through the establishment of shared accesses between properties/businesses where feasible. Shared access points should be supported by the provision of cross-over easements between properties and internal connecting roadways or parking lots allowing for inter-parcel circulation. When establishing future access points, the distance from the OR 35/ State Street/ Historic Columbia River Highway intersection should be maximized to avoid conflicts within the intersection influence area. However, careful consideration must also be given to ensure adequate sight distance will remain to the north (curve and Button Bridge railing) and east (horizontal curve in highway).

Block K	
Existing Constraints: Access to Block K is constrained by the proximity to the I-84 westbound ramp terminals, the Hood River-White Salmon Bridge tollbooth, and the Columbia River.	**Future Recommendations:** Given the constraints noted above, access opportunities are limited. The number of access points to Button Bridge Road should be minimized and located to avoid conflicts with the closely spaced intersections and tollbooth operations. The access through the signalized intersection of Marina Way should be maintained as the primary access point to all properties within Block K.
Block L	
Existing Constraints: Opportunities for access are limited by the railroad tracks, the Hood River, steep topography, and the proximity to the OR 35/ State Street/ Historic Columbia River Highway intersection.	**Future Recommendations:** Given the steep slopes and proximity to the intersection with OR 35, establishment of direct access to State Street may be difficult. The number of access points to OR 35 should be minimized through the establishment of shared accesses between properties/businesses where feasible. Shared access points should be supported by the provision of cross-over easements between properties and internal connecting roadways or parking lots allowing for inter-parcel circulation. Where existing buildings/infrastructure and site circulation limit the ability to establish shared access points, prior site redevelopment may be required. When establishing future access points to OR 35, the distance from the OR 35/ State Street/ Historic Columbia River Highway intersection should be maximized to avoid conflicts within the intersection influence area. However, careful consideration must also be given to ensure adequate sight distance will remain to the north (curve and Button Bridge railing).
Block M	
Existing Constraints: Access to Block M is constrained by I-84, the Hood River, and the railroad tracks, leaving Dock Road as the only feasible means of access.	**Future Recommendations:** Dock Road should continue to be used for access to Block M.

Block N	
Existing Constraints:	**Future Recommendations:**
Access to Block N is constrained by the Hood River to the west, the Columbia River to the north, I-84 to the south, and the proximity to the I-84 westbound ramp terminals and the Hood River-White Salmon Bridge tollbooth to the east.	Given the constraints noted above, access opportunities are limited. The number of access points to Button Bridge Road should be minimized and located to avoid conflicts with the closely spaced intersections and tollbooth operations. The access through the signalized intersection of Port Marina Drive should be maintained as the primary access point to all properties within Block N.

Waterfront Area Local Circulation

In the future, the 2nd Street/ Riverside Drive intersection may no longer comply with mobility standards and restrictions on turning movements may be required. One identified solution involves the removal of stop signs on 2nd Street approaches and restriction of turning movements to allow only right-in and right-out turn movements. While this solution was found to provide acceptable operations, it could significantly reduce the accessibility of some properties and result in undesirable diversion of traffic through other areas of the Waterfront.

Changes to the 2nd/Riverside intersection should be expected in the future. However, such changes shall occur only when necessary and left turn movement restrictions shall occur only if no other solution is found to be acceptable. Any solution to mitigating the 2nd Street/ Riverside Drive intersection must be compatible with the long-term ability to safely and efficiently accommodate traffic movements through the I-84 Exit 63 interchange. All property owners in the Waterfront area shall be noticed at the time improvements at the 2nd Street/ Riverside Drive intersection are being considered and shall be allowed the opportunity to participate in the process of developing and selecting appropriate improvements.

Access Management Plan Phasing

Without a known source of funding or public improvement project planned to follow adoption of the access management plan (beyond the I-84 Exit 64 interchange reconstruction), the timing of any actions will be uncertain. This section provides a general phasing structure for recommended access management plan actions, broken into short, medium, and long range time periods. This is provided to guide plan implementation and is not intended to be strictly adhered to (i.e., a long range action may precede a short range action if the opportunity arises).

Short Range Actions

- Adopt amendments to the City of Hood River Municipal Code needed to implement the access management plan objectives and recommended actions.

Medium Range Actions

- Establish cross-over easements and inter-parcel roadways as part of property development to consolidate and create shared access points.

Long Range Actions

- In the future, the 2nd Street/ Riverside Drive intersection may no longer comply with mobility standards and restrictions on turning movements may be required. One identified solution involves the removal of stop signs on 2nd Street approaches and restriction of turning movements to allow only right-in and right-out turn movements. While this solution was found to provide acceptable operations, it could significantly reduce the accessibility of some properties and result in undesirable diversion of traffic through other areas of the Waterfront.
- Changes to the 2nd/Riverside intersection should be expected in the future. However, such changes shall occur only when necessary and left turn movement restrictions shall occur only if no other solution is found to be acceptable. Any solution to mitigating the 2nd Street/ Riverside Drive intersection must be compatible with the long-term ability to safely and efficiently accommodate traffic movements through the I-84 Exit 63 interchange. All property owners in the Waterfront area shall be noticed at the time improvements at the 2nd Street/ Riverside Drive intersection are being considered and shall be allowed the opportunity to participate in the process of developing and selecting appropriate improvements.

Accommodating Increased Development Intensity on the Waterfront

The Hood River Waterfront (Waterfront) is a key area for local job creation and economic development and the City of Hood River, Port of Hood River, and ODOT recognize that higher density development may be desirable. In April 2011, in a collaborative effort between several IAMP stakeholders, a Transportation Impact Analysis (TIA) was prepared for the Port by Group Mackenzie[7] that evaluated transportation impacts likely to result from a magnitude of development that is not presently reflected in State plans. According to the TIA, the existing zoning (Light Industrial and Commercial) could accommodate this potential level of Waterfront Development and the transportation impacts could be mitigated to accommodate adequate operations through the year 2031.

These findings and mitigation steps would need to be verified with an updated TIA at the time a future land use action is submitted. If the trip generation assumptions in the updated TIA exceed the IAMP assumptions, ODOT, the City of Hood River, Hood River County, and the Port of Hood River will work together to identify appropriate measures to accommodate increased densities in the Waterfront area and update the IAMP if necessary.

Adoption and Implementation

As land continues to develop within the interchange areas, compliance will be required with the access management and circulation plans developed through the IAMP process. As part of the adoption of the IAMP, a number of amendments will be made to state and local documents, plans, and regulations that will implement the IAMP. These include amendments to the City of Hood River and Hood River County Comprehensive Plan, Transportation System Plan, and development codes to reflect amendments contained in the appendix.

ODOT, the City of Hood River, and Hood River County, along with other stakeholders that include the Port of Hood River, have jointly prepared the I-84 Exit 63 & Exit 64 IAMP in recognition of the importance of Interstate 84 and these interchanges for the movement of people and goods to and from the Hood River region. It is anticipated that ODOT, the City, and the County will adopt the IAMP, thereby codifying a joint commitment to protect the function of the interchanges for current and future users, while protecting the function of the surface streets at the same time. The purpose of the IAMP and function of the interchanges are defined in this document. Separate adoption processes for the plans and implementing measures are envisioned for each agency. This section summarizes the implementation roles and responsibilities for the respective jurisdictions.

ODOT/State of Oregon Implementing Actions

Project Construction

- Develop needed transportation system improvements. Some of this work is underway as part of the I-84 Exit 64 interchange reconstruction project, with completion expected in 2011. Additional ODOT improvements, which are described in the plan, are proposed at the Exit 63 interchange and to the OR 35 at State Street intersection. Additional improvements to install queue detection devices on

[7] *Port of Hood River Waterfront Area Transportation Impact Analysis*, Group Mackenzie, April 2011 (included in Appendix K for reference).

off-ramps and surveillance cameras within the Exit 63 and Exit 64 interchange areas should be advanced as a near-term project.

Agency Coordination

- ODOT will continue to coordinate with the City of Hood River, Hood River County, the Port of Hood River, and with applicable state agencies through the development review process to keep interchange area protections in place. ODOT will also monitor and comment on any future actions that would alter land uses in the vicinity of the interchanges to ensure the IAMP remains consistent with land use plans for the interchange areas.
- In the future when circumstances in the IAMP study area result in the need for changes to the IAMP, the City of Hood River, Hood River County, and ODOT shall prepare amendments to the IAMP management actions and to accompanying funding plans to implement those actions.

Policy Actions

- The Oregon Transportation Commission will adopt the IAMP.

City of Hood River Implementing Actions

Project Construction, Land Use, and Access Management

- The City of Hood River will participate in the design and construction of the I-84 Exit 64 interchange reconstruction that is currently underway.
- The City will modify regulations pertaining to access to local roads in the vicinity of the I-84 Exit 63 and Exit 64 interchanges, consistent with the Access Management Plan included in this IAMP.
- The City will modify regulations pertaining to Traffic Impact Analyses in the vicinity of the I-84 Exit 63 and Exit 64 interchanges to require these studies to consider development impacts on the interchanges and on IAMP study area intersections.
- The City will amend their Transportation System Plan to incorporate local system improvements and will seek funding to facilitate implementation.

Policy Actions

- The City will amend its zoning plan map to include an IAMP Overlay Zone (shown in Figure 11).
- The City will adopt Comprehensive Plan policies that are consistent with the stated function and planned design of the interchange facility and the surrounding transportation system, as identified in the IAMP.
- Requirements for regulating access management consistent with the IAMP will be codified in a new IAMP Overlay Zone (HRMC 17.03.120) and in the City's site development regulations (HRMC 17.20).

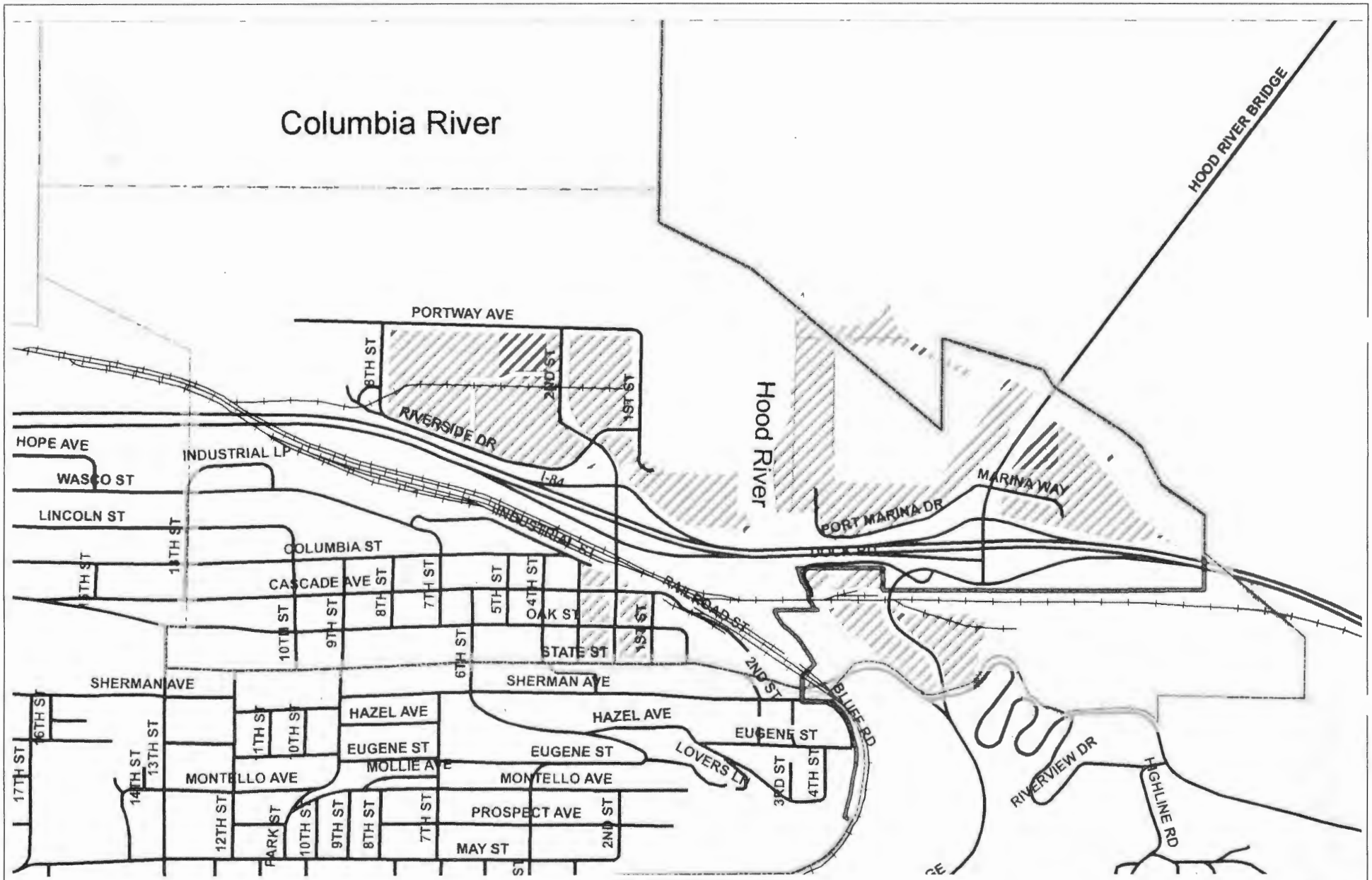

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Figure 11

I-84 Exit 63 & Exit 64 Interchange Area Management Plan Overlay Zone

Hood River County Implementing Actions

Project Construction, Land Use, and Access Management

- The County will participate in the design and construction of the I-84 Exit 64 interchange reconstruction that is currently underway.
- The County will modify regulations pertaining to access to local roads in the vicinity of the I-84 Exit 63 and Exit 64 interchanges, consistent with the Access Management Plan included in this IAMP.
- The County will modify regulations pertaining to Traffic Impact Analyses in the vicinity of the I-84 Exit 63 and Exit 64 interchanges to require these studies to consider development impacts on the interchanges and on IAMP study area intersections.
- The County will amend their Transportation System Plan to incorporate local system improvements.

Policy Actions

- The County will amend its zoning plan map to include an IAMP Overlay Zone (shown in Figure 11).
- The County will adopt Comprehensive Plan policies that are consistent with the stated function and planned design of the interchange facilities and the surrounding transportation system, as identified in the IAMP.
- Requirements for regulating access management consistent with the IAMP will be codified in a new IAMP Overlay Zone (Chapter 17.03.090) and in the County's site development regulations for the Hood River Urban Growth Area, pursuant to Article 17 (Urban Growth Area Zoning Ordinance), Chapter 17.10 (Site Plan Review), Chapter 17.20 (Transportation Circulation and Access Management), and Chapter 16 (Land Division), Section 16.12.020 (General Design and Improvement Standards).

IAMP Adoption

It is anticipated that the adoption sequence will be as follows:

1. 45-day notice of adoption intent sent to state agencies by City and County
2. City planning commission advisory hearing to hear public testimony; deliberative hearings may be conducted at the discretion of the planning commission
3. City council legislative adoption hearings with coordinated staff report, public testimony, and deliberation
4. County planning commission advisory hearing to hear public testimony; deliberative hearings may be conducted at the discretion of the planning commission
5. County commission legislative adoption hearing with coordinated staff report, public testimony, and deliberation
6. Oregon Transportation Commission adoption hearing would take place at the first available meeting date after local adoption to consider amending the Oregon Highway Plan to include the I-84 Exit 63 & Exit 64 IAMP

Improvement Costs

Advanced planning for project funding will help implement needed improvements in a timely manner that supports development opportunities. Understanding the magnitude of costs associated with future projects can guide updates to System Development Charge rates, underscore the need for supplemental financing programs such as urban renewal districts or local improvement districts, and provides a basis for grant applications and potential public and/or private partnerships.

Planning-level cost estimates are provided in Table 7 to guide project budgeting. These estimates are intended to support long-range project programming and are based on available data sets and field observations, without the benefit of detailed surveys to accurately define potential environmental impacts, geological constraints, drainage needs, right of way impacts, and other factors that could affect construction costs. Therefore, as projects are developed in more detail in the future, the estimated costs should be updated.

Table 7: I-84 Exit 63 and Exit 64 Area Planning-Level Project Cost Estimates (2009 Dollars)

Improvement Project	Estimated Cost
Pedestrian Projects	
Construct sidewalk on both sides of OR 35/ Button Bridge Rd. between State St. (HCRH) and Button Bridge	*Cost included in OR 35/ State Street Traffic Signal motor vehicle project*
Construct sidewalk on south side of OR 35 from Button Bridge to Exit 64	$60,000
Construct multi-use trail from State St. to Port Marina Dr. (includes sidewalk to OR 35 on Dock Rd.)	$500,000
TOTAL	**$560,000**
Bicycle Projects	
Implement shared roadway treatments on State St., Oak St., Front St., and Cascade Ave. through the downtown	$60,000
TOTAL	**$60,000**
Motor Vehicle Projects	
Mitigation for 2nd St./Riverside Dr.*	$310,000
Extended I-84 EB off-ramp and widened I-84 WB off-ramp with added 2nd St. SB lane from I-84 WB to Oak St.	$8,600,000
Construct traffic signal at 2nd St./ Oak St. intersection	$350,000
I-84 Exit 63/64 ramp queue detection and surveillance	$230,000
OR 35/ State St. traffic signal and geometric improvements	$1,100,000
TOTAL	**$10,590,000**

* While appropriate mitigation is to be determined later, for budgeting purposes, a project including turning restrictions through construction of concrete islands was assumed.

Potential New Funding Sources

The projects listed in this plan are currently unfunded. The City of Hood River, Hood River County, Port of Hood River, and ODOT will need to cooperatively explore funding opportunities if improvements are to be made in a timely manner for supporting future growth. It is recommended that a wide variety of potential funding sources be considered, which may include strategies that have not been previously applied in Hood River.

This section describes several potential transportation funding sources, including State and County contributions, City sources (i.e., residents, businesses, and/or developers), grants, and debt financing. Many of these sources have been used in the past by other agencies in Oregon, and in most cases, when used collectively, are sufficient to fund transportation improvements for a local community.

State Contributions

Within the Exit 63 and Exit 64 IAMP area, many of the key roadways are not under City jurisdiction but instead are the responsibility of ODOT. The City should seek contributions (i.e., funding partnerships) from ODOT for projects located on state highways.

ODOT Contributions

ODOT funds projects on state highways under three primary programs: modernization, preservation and maintenance, and grants (see Grant Programs below). Programmed projects are included in the four-year Statewide Transportation Improvement Program (STIP), which is updated every two years. ODOT maintenance districts (District 2C for Hood River) also have available funds that may be used for small-scale projects such as infill of sidewalks on a state highway.

There are no STIP funds dedicated towards projects in the Exit 63 and Exit 64 IAMP area at this time. The City should work with ODOT to prioritize key projects for inclusion on the STIP that benefit both the City and State. Key projects could include the improvements to the Exit 63 interchange ramps, widening of the 2nd Street overcrossing bridges, Exit 63 and Exit 64 queue detection and surveillance, and improvements to the OR 35/ State Street intersection.

Direct Appropriations

The City can also seek direct appropriations from the State Legislature and/or the United States Congress for transportation capital improvements. There may be projects identified in the plan for which the City may want to pursue these special, one-time appropriations. In particular, projects that support economic development, such as the I-84 Exit 63 interchange improvements, may gain support for direct appropriations.

Developer Exactions

Exactions are roadway and/or intersection improvements that are partially or fully funded by developers as conditions of development approval. Typically, all developers are required to improve the roadways along their frontage upon site redevelopment. In addition, when a site develops or redevelops, the developer may be required to provide off-site improvements depending upon the expected level of traffic generation and the resulting impacts on the transportation system. While such improvements could be applied to many projects within the IAMP area, they may be most applicable to the intersection improvements on 2nd Street at Riverside Drive and Oak Street.

Urban Renewal District (URD)

A URD is a tax-funded district within the City. The URD is funded with the incremental increases in property taxes that result from the construction of applicable improvements. As desired, the funds raised by a URD can be used for, but are not limited to, transportation projects located within the URD boundaries. The City has already established URDs for the Waterfront and downtown core. Improvements within these districts could be considered for URD funding.

Transportation System Development Charges (SDCs)

SDCs are a funding source collected from new development that can be used to fund projects that increase the transportation system's capacity, but not for projects that target maintenance or operations. While the methodologies for determining the SDC rate may vary, a commonly used method is to base the rate on the estimated p.m. peak hour vehicle trips generated by a proposed development. Because a single-family home generates approximately 1.0 p.m. peak hour vehicle trip, it is often considered the base unit.

The City of Hood River has a current transportation SDC rate of approximately $666 per single-family residence and $69.60 per daily trip for all other uses. To help fund transportation improvements to support future growth, the City could consider increasing the SDC rate. For every increase in SDC rates of $100 for single-family households and $10 per daily trip for all other trip types, there would be an additional $514,000 available for transportation improvements over a 21-year period.

Any of the motor vehicle projects in the IAMP area would be eligible for SDC funding through the City. The pedestrian and bicycle projects would not be eligible for City SDC funds under the current ordinance, however, the City is considering an amendment to their SDC ordinance that would allow for such use. The City's SDCs are a critical source of transportation funding and are likely to be spent on projects that directly support new growth. Therefore, it is uncertain how much could be dedicated to projects in the IAMP area. However, increasing the SDC rate would make more funds available citywide.

Hood River County has a current transportation SDC rate of approximately $1,311 per single-family residence and $137 per daily trip for other uses. The County's transportation SDC is a "reimbursement fee" for excess capacity in the existing county road system that is available to accommodate growth. New developments outside of incorporated areas are charged the County's transportation SDC, which may be used for any capital improvement project identified in the County's Transportation System Plan (including pedestrian and bicycle projects).

Local Improvement District (LID)

The City may set up Local Improvement Districts (LIDs) to fund specific capital improvement projects within defined geographic areas, or districts. LIDs impose assessments on properties within its boundaries and may only be spent on capital projects within the district. Because citizens representing 33 percent of the assessment can terminate a LID and overturn the planned projects, LID projects and costs must obtain broad approval of those within the LID boundaries.

Proportionate Share Cost Allocations

Proportionate Share Cost Allocations distribute the cost of improvement projects over new developments by charging a fee per trip added to the location in need of improvement. The rate charged is commonly the total cost of the improvement divided by the anticipated growth in trips at that location over a specified period of time. The City is currently exploring opportunities to establish a proportionate share rate for the improvements to the intersection on 2nd Street at Oak Street.

Street Utility Fee

A number of Oregon cities supplement their street funds with street utility fees. Establishing user fees to fund designated transportation activities, maintenance, operations, and/or capital construction ensures that those who create the demand for service pay for it proportionate to their use. The street utility fees are recurring monthly or bi-monthly charges that are paid by all residential, commercial, industrial, and institutional users. The fees are charged proportionate with the amount of traffic generated, so a retail commercial user pays a higher rate than a residential user. Typically, there are provisions for reduced fees for those that can demonstrate they use less than the average rate implies, for example, a resident that does not own an automobile or truck.

From a system health perspective, forming a utility fee also helps to support the ongoing viability of the program by establishing a source of reliable, dedicated funding for that specific function. Fee revenues can be used to secure revenue bond debt for financing capital construction. A transportation utility fee can be formed by Council action.

The General Fund Revenues

At the discretion of the City Council, the City can allocate General Fund revenues to pay for its transportation program. General Fund revenues primarily include property taxes, use taxes, and any other miscellaneous taxes and fees imposed by the City. This allocation is completed as a part of the City's annual budget process, but the funding potential of this approach is constrained by competing community priorities set by the City Council.

Special Assessments

A variety of special assessments are available in Oregon to defray costs of sidewalks, curbs, gutters, street lighting, parking, and central business district (CBD) or commercial zone transportation improvements. These assessments would likely fall within the Measure 50 limitations. One example is the 50/50 program. This is a match program for sidewalk infill projects where property owners pay half the cost of a sidewalk improvement and the City matches the investment to complete the project.

Grants

The City of Hood River should actively pursue State and Federal grants, in particular to complete the identified pedestrian and bicycle projects. Current grant programs include:

Federal Funding Sources

- Highway Safety Improvement Program
- Transportation Enhancements
- Recreational Trails Program
- Safe Routes to School (SRTS)
- New Freedom Initiative
- Community Development Block Grants
- Land and Water Conservation Fund
- Transportation, Community and System Preservation Program

State Funding Sources

- Oregon Immediate Opportunity Fund
- Oregon Transportation Infrastructure Bank
- Oregon Special Transportation Fund
- Oregon Bicycle and Pedestrian Program Grants
- Oregon Pedestrian Safety Mini-Grant Program
- Oregon Business Energy Tax Credits (BETC)
- Oregon Safe Routes to School (OSRTS)

Other Funding Sources

- American Greenways Program
- Bikes Belong Grant Program

Debt Financing

While not a direct funding source, debt financing is another funding method. Through debt financing, available funds can be leveraged and project costs can be spread over the projects' useful lives. Though interest costs are incurred, the use of debt financing can serve not only as a practical means of funding major improvements, but it is also viewed as an equitable funding source for larger projects because it spreads the burden of repayment over existing and future customers who will benefit from the projects. One caution in relying on debt service is that a funding source must still be identified to fulfill annual repayment obligations. Two methods of debt financing are voter-approved general obligation bonds and revenue bonds.

Voter-Approved General Obligation Bonds

Subject to voter approval, the City can issue General Obligation (GO) bonds to debt finance capital improvement projects. GO bonds are backed by the increased taxing authority of the City, and the annual principal and interest repayment is funded through a new, voter-approved assessment on property throughout the City (i.e., a property tax increase). Depending on the critical nature of projects and the willingness of the electorate to accept increased taxation for transportation improvements, voter-approved GO bonds may be a feasible funding option for specific projects. Proceeds may not be used for ongoing maintenance.

Revenue Bonds

Revenue bonds are municipal bonds that are secured by the revenue received by financing income-producing projects. In contrast to GO bonds, revenue bonds fund projects that generally only serve those in the community who pay for their services. Given the nature of revenue bonds, they may not be as applicable to transportation projects as are GO bonds and are most commonly used for other municipal projects such as sewer and water system upgrades where users pay a monthly fee for service. Interest costs for revenue bonds are slightly higher than for GO bonds due to the perceived stability offered by the "full faith and credit" of a jurisdiction.

CHAPTER 4: MONITORING AND UPDATES

Following adoption of the IAMP, regular maintenance is recommended to ensure it continues to meet the needs of area stakeholders.

Interchange Performance Monitoring

This plan identifies improvements to the transportation system surrounding the I-84 Exit 63 and Exit 64 interchanges that will provide for safe and efficient travel through the year 2031. However, it will be most effective if a proactive approach is taken. When needs are anticipated in advance, there is more time to develop funding and implementation strategies, which could include public and/or private partnerships, so incremental improvements are made in a timely manner and continue to support growth opportunities.

Recommended Process and Responsibilities

As the owner of most transportation facilities in the area, the primary responsibility for interchange area performance monitoring will be assigned to the Oregon Department of Transportation. However, the City of Hood River is encouraged to take an active role in this effort as well.

Performance monitoring will be carried out through regular tracking of traffic volumes through key intersections and roadways, as well as through findings included in Traffic Impact Analyses completed as part of proposed development applications.

Traffic Impact Analyses will be required by ODOT as part of approach applications pursuant to OAR 734-051, and will be required as part of land use applications filed with the City of Hood River pursuant to Hood River Municipal Code 17.20.060 and by Hood River County pursuant to Article 17, Chapter 17.20 (Transportation Circulation and Access Management). Any Traffic Impact Analysis being conducted relative to development partially or entirely within the IAMP overlay zone for the Exit 63 and Exit 64 interchanges (Figure 11) must include an account of weekday p.m. peak hour site generated trips through IAMP study intersections. Intersections impacted by 25 or more weekday p.m. peak hour site generated trips shall be analyzed for level of service and volume to capacity ratio during day of opening conditions. This requirement will not preclude Oregon Department of Transportation, City of Hood River, or Hood River County from requiring analysis of IAMP study intersections under other conditions.

The Oregon Department of Transportation shall obtain traffic volume counts at IAMP study intersections. Traffic volume counts shall minimally include two-hour weekday p.m. peak hour turn movement counts. New count data for each intersection should be obtained at least every two years. However, count data should be obtained more frequently where significant land development has occurred. ODOT should leverage the use of embedded traffic monitoring technologies to monitor traffic in the interchange areas (i.e., cameras, inductive loops).

Table 8 is provided to help forecast approaching needs for transportation improvements in the interchange areas. Within this table, an approximated phasing plan for transportation improvements identified for this area has been laid out assuming growth will occur on an even and linear basis over the next 20 years. Because land development is generally not that regular or predictable, the estimated year of need should be used with caution. Rather, the weekday p.m. peak hour volume targets for critical

Table 8: I-84 Exit 63 and Exit 64 Interchange Area Transportation Improvement Project Phasing Guide

Estimated Year of Need	Location	Project Needed	Critical Movement	Weekday PM Peak Hour Volume	OHP Mobility Standard
Near-Term	2nd Street/ Oak Street	Signalize intersection with no geometric improvements.	Southbound Approach	600	0.90
2020	2nd Street/ I-84 WB Ramps*	Construct second westbound left turn lane (200' storage) and extend right turn storage lane down ramp (125' storage). This will include bridge widening that will add an additional southbound through lane from this intersection to the 2nd Street/ Oak Street intersection where the additional southbound lane will drop as southbound right turn lane.	Westbound Left Turn	400	0.85
	2nd Street/ I-84 EB Ramps	Extend off-ramp a minimum of 200 feet and extend right turn lane further down ramp (250' storage).	Eastbound Right Turn	125	0.85
2025	OR 35/ State Street	Signalize intersection and reconfigure geometry to include a through/right shared lane with a separate left turn lane for the northbound and westbound approaches (250' storage for northbound left, 75' storage for westbound left). For the southbound and eastbound approaches, the lane configuration should include a left turn lane, through lane, and a separate right turn lane (125' storage for southbound left, 150' storage for eastbound through). The eastbound right turn lane may continue to be a channelized right that flows into an add lane that merges further south of the intersection.	Northbound Through/Left	400	0.80
2030	2nd Street/ Riverside Drive	Mitigate failing operations in a manner that supports safe and efficient operation of the I-84 Exit 63 interchange through a project to be approved by ODOT and the City of Hood River. This assumes 1st Street is still in place between Portway Avenue and Riverside Drive. If 1st Street is removed, this project will be needed sooner.	Northbound Through/Right	500	0.90

* Recommended interim improvement including queue detection on the I-84 Exit 63 westbound off-ramp and surveillance cameras may be implemented prior to the 2nd Street/ I-84 westbound ramp improvements if needed.

movements at key intersections should be reviewed as part of the regular monitoring process. Traffic volume data obtained from Traffic Impact Analyses and other sources should be regularly reviewed with consideration to the phasing guide in Table 8 to identify intersection and roadway improvements that will be needed soon.

IAMP Updates

As area conditions change, the I-84 Exit 63 & Exit 64 IAMP should be reviewed to ensure it continues to address needs through the planning horizon and should be updated accordingly. Actions that should trigger an IAMP review include:

- A change to the City of Hood River or Hood River County Comprehensive Plan, Plan Map, or implementing zoning ordinances that will have a "significant effect" on the transportation system within the IAMP overlay zone. The determination of a "significant effect" shall be pursuant to OAR 660-012-0060.
- The construction of transportation improvement projects within the IAMP overlay zone that are inconsistent with planned and assumed projects in the City of Hood River or Hood River County Transportation System Plans or the I-84 Exit 63 & Exit 64 IAMP.
- An amendment or update to the City of Hood River or Hood River County Transportation System Plans.
- Significant modifications to the I-84 Exit 62 interchange that are inconsistent with the I-84 Exit 62 IAMP.
- Approval of a development of substantial size partially or entirely within the IAMP overlay zone that is consistent with the underlying zoning, but represents a worst-case trip generation scenario when considering the range of uses allowed in that zoning district. As a general guide, a development of substantial size from a trip generation perspective would generate 500 or more peak hour trips.

In addition to the above actions, consideration should be given to reviewing the IAMP for needed updates every five years. This could be done as part of the monitoring process and could be as simple as reviewing the above list for any actions that may have occurred since the last review.

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EXHIBIT C

(To be inserted in **Goal 12 – Transportation** section of the Hood River Comprehensive Plan after Goal 7.)

INTERCHANGE AREA MANAGEMENT

GOAL 8: Protect the function and operation of the interstate highway interchanges consistent with the planned land uses in the vicinity of the interchanges.

POLICIES:

1. Provide for an adequate system of local roads and streets for access and circulation within the interchange areas that minimizes local traffic through the interchanges and on the interchange cross roads.

Action: *As part of the land division and development permit approval process the City will require future development to plan for and develop local roadway connections that are consistent with adopted IAMPs.*

2. Provide safe and efficient operations between the connecting roadways (and the local street network, if applicable) within adopted IAMP management areas in the City and the UGA.

Action: *Within the IAMP overlay, the City and County will approve development proposals only after it is demonstrated that proposed access and local circulation are consistent with the Access Management Plan in the applicable IAMP.*

Action: *Bicycle and pedestrian connections within the IAMP management areas will be required for new development consistent with adopted IAMPs and the City's Transportation System Plan. Connections for non-motorized transportation may be required of development even where street connections are not possible or required.*

3. Ensure that changes to the planned land use system are consistent with the preservation of the long-term transportation function of the interchange and the associated local street system.

Action: *Adopt regulations that require any proposed change to the Comprehensive Plan Map, Zoning Map, or the Development Code that would result in additional trips from what is allowed by the existing comprehensive plan to include a review of transportation impacts consistent with OAR 660-12-0060.*

Action: *Notify affected governmental units, including Hood River County and ODOT, of proposed changes to the adopted land use plan within the IAMP management areas to ensure local, regional and state coordination in planning for adequate transportation facilities.*

4. Recognize the importance of the interchange function to support the City's economic development goals and plans, including providing access to family wage jobs in the downtown, at the waterfront, and in west Hood River.

Action: *Support planned improvements to the interchanges that improve efficient and safe truck circulation and that facilitate the movement of goods to and from the City and within the County by managing access on local roads and monitoring trips generated by new development in the vicinity of interchanges.*

5. Partner with ODOT to ensure that system capacity for regional through trips and the timeliness of freight movements are considered when developing and implementing transportation plans and projects on Hood River area freight routes.

6. Support the design of the Historic Highway that provides a distinctive roadway character that is consistent with the City's vision to preserve the identity of that transportation corridor.

7. Working in conjunction with ODOT, help ensure that the functional capacity and safety of I-84 interchanges in Hood River are preserved and that sufficient revenue is generated to finance necessary improvements.

Action: *The City, in coordination with ODOT and Hood River County, shall participate in monitoring the cumulative peak hour trip generation impact from new development by enacting rules that require traffic studies for development near interchanges to assess the impact on interchange facilities.*

Action: *The City and Hood River County will review development regulations and funding resources, including system development charges, to ensure that new development is providing its fair share of revenue to finance needed local transportation improvements in interchange areas.*

In addition to the above general IAMP policies, which are applicable to all Hood River interchanges, **the following policies are applicable to the Exit 62 interchange**:

8. Support the design of the Historic Highway in the vicinity of Exit 62 as a gateway into the City.

9. Partner with ODOT to ensure that planned improvements to the local roadway system are consistent with the proposed improvements to Exit 62, and also that those local

system improvements enhance safety and reduce turning conflicts in the vicinity of the interchange.

Action: *Determine and implement appropriate funding measures to ensure the construction of the realignment of Country Club Road.*

10. Support safe bicycle and pedestrian facilities in the vicinity of Exit 62 that provide connectivity throughout the area and to destinations along the proposed Historic Columbia River Highway State Trail and the Hood River Valley.

In addition to the IAMP policies that are generally applicable to all of the interchanges within the City of Hood River, **the following policies are applicable to the Exit 63/64 interchange area**:

11. Recognize the strategic importance of Exit 63 as an essential transportation facility that provides access to the City's two major employment districts, the Downtown and the Waterfront, and plays a critical role in the vitality of these two regional employment areas.

12. Support construction of safe and efficient bicycle and pedestrian facilities in the vicinity of Exit 63 that encourage employees to travel to work via alternative modes of transportation and to provide opportunities for residents and visitors alike to access recreational opportunities along the Columbia River.

13. Recognize the vital role Exit 64 has in providing regional connectivity between destinations in Hood River County and the rest of the state, via I-84, and in Washington State via OR 35.

14. Support safe bicycle and pedestrian facilities in the vicinity of Exit 64 that provide recreational access to the Columbia River and to the Historic Columbia River Highway State Trail.

(To be inserted in **Hood River Municipal Code** Title 17.03.)

Section 17.03.120. Interchange Area Management Plan (IAMP) Overlay Zone

The purpose of the IAMP Overlay Zone is the long-range preservation of operational efficiency and safety of the highway interchanges within the City of Hood River, which provides access from and to Interstate 84 for residents and businesses throughout the city. The interchanges are a vital transportation link for regional travel and freight movement and provide connectivity between the east and west side of the community and to employment and recreational opportunities at the waterfront. Preserving capacity and ensuring the safety of these interchanges and the local transportation systems in their vicinity is essential to visitors, residences, and existing businesses as well as to the continued economic vitality along the Columbia River and to community growth and development in the vicinity of the interchanges.

A. Boundary

The boundary of the IAMP Overlay Zone is shown on the City of Hood River Zoning Map and also is depicted in the respective IAMP documents. The zone's boundary generally corresponds with a 1/2 –mile buffer area around the interstate highway interchanges. The Overlay Zone is applied to two boundary areas - one centered at Exit 62 and the other encompassing both Exit 63 and Exit 64.

B. Applicability

The provisions of this section shall apply to any Administrative, Quasi-judicial, or Legislative land use application pursuant to Section 17.09 that is for a parcel wholly or partially within the IAMP Overlay Zone, as defined by Section 17.03.120.A. Any conflict between the standards of the IAMP Overlay Zone and those contained within other chapters of the Zoning Ordinance shall be resolved in favor of this chapter and the applicable requirements in Chapter 17.20, Transportation Circulation and Access Management.

C. Permitted Land Uses

Uses allowed in the underlying zoning district are allowed subject to other applicable provisions in the Zoning Ordinance and in Title 16, Subdivision Ordinance.

D. Comprehensive Plan and Zoning Map and Text Amendments

This Section applies to all Comprehensive Plan Map and Zoning Map amendments to parcels wholly or partially within the IAMP Overlay Zone and code amendments that affect development within the IAMP Overlay Zone.

In addition to meeting the requirements of Section 17.08.020, applications for Comprehensive Plan amendments, Zoning Map amendments, or development regulation amendments shall meet the requirements of the Transportation Planning Rule, Oregon Administrative Rule (OAR) 660-012-0060, including

making a determination whether or not the proposed change will significantly affect an existing or planned transportation facility.

E. IAMP Review and Update

The IAMP document must be reviewed and possibly updated in association with a proposed change to the Hood River Comprehensive Plan, Plan Map, or implementing zoning ordinances that will have a "significant affect" on one or more I-84 Interchanges pursuant to OAR 660-12-0060.

a. An IAMP update is required when the findings and conclusions from an IAMP review demonstrate the need for an update to the plan in order to mitigate identified impacts to interchange facilities. The agency or person(s) proposing the change shall be responsible for reviewing and initiating an update to the applicable IAMP(s), consistent with the procedures outlined in the IAMP.

b. An updated IAMP that results from a City-initiated review process pursuant to Section 17.03.120.E, shall be legislatively adopted, requiring a City Council public hearing, as an amendment to the City of Hood River Transportation System Plan and also will be adopted by the Oregon Transportation Commission as an update to the Oregon Highway Plan.

CHAPTER 17.20 TRANSPORTATION CIRCULATION AND ACCESS MANAGEMENT

SECTIONS:
17.20.010 Applicability
17.20.020 Definitions
17.20.030 Access Management Standards
17.20.040 Bicycle Parking
17.20.050 Standards for Transportation Improvements
17.20.060 Traffic Impact Analysis

...

17.20.030 Access Management Standards. This section shall apply to all development on arterials and collectors within the City and UGA and to all properties that abut these roadways as part of site plan review process (Chapter 17.16). Within the Interchange Area Management Plan Overlay Zone's "Access Management Blocks," this section also applies to local streets and roads and abutting properties.

...

D. Access within Interchange Area Management Plan (IAMP) Overlay Zone.

In addition to the standards and requirements of the Transportation Circulation and Access Management section of this ordinance (Section 16.12 and Section 17.20), parcels wholly or partially within an adopted IAMP Overlay Zone are subject to the Access Management Plan in the applicable IAMP (Exit 62 or Exit 63/64). The following applies to land use and development applications for parcels within an adopted IAMP Overlay Zone that are subject to Chapter 17.16 Site Plan Review or Title 16 Subdivisions and, that are shown as part of an "Access Management Block" subject to the recommendations of the Access Management Plan (see Figure 9, Access Management Blocks, in the Exit 62 IAMP and Figures 10 and 11, Access Management Blocks, in the Exit 63 and 64 IAMP).

1. Access Approval.

a. Access to streets and roads within the IAMP Overlay Zone shall be subject to joint review by the City and the Oregon Department of Transportation (ODOT) and, where applicable, by Hood River County. Coordination of this review will occur pursuant to Section 17.03.120.D. and consistent with requirements of Title 16.12, when applicable.

b. Approval of an access permit is an Administrative Action and is based on the standards contained in this Section, the provisions of Sections 17.20.030. B. and C., and the Access Management Plan in the applicable IAMP. Where the recommendations of the Access Management Plan conflict with other access management and spacing requirements in Section 17.20.030 of the Zoning Ordinance, the applicable IAMP Access Management Plan shall govern.

2. Cross Access Agreement.

a. Prior to approving access for tax lots that are identified in the Access Management Plan of the applicable IAMP, the City shall require that:

i. The applicant demonstrate how cross access can be accomplished for sites contiguous to the subject property or properties, consistent with the circulation and planned local street network shown in the IAMP;

ii. If access across an adjacent parcel or parcels is necessary for the development of the subject site, a signed cross access agreement is submitted with the application; and,

iii. For applications reviewed as part of a subdivision approval process, necessary cross access easements are shown and recorded on the final plat. Access widths shall be consistent with City Public Works standards unless based on a Transportation Impact Study, developed pursuant to Section 17.20.060.C.2 and approved by the City Engineer or his/her designee.

3. Frontage Improvements to Public Streets. Development application approval will require public street frontage improvements pursuant to the Access Management Plan in the applicable IAMP and City requirements for constructing public improvements, including those in Subdivision Ordinance Section 16.12.060, Public Facilities Standards.

17.20.050 Standards for Transportation Improvements

A. **Permitted Uses.** Except where otherwise specifically regulated by this ordinance, the following improvements are permitted outright:

1. Normal operation, maintenance, repair, and preservation activities of existing transportation facilities.
2. Installation of culverts, pathways, medians, fencing, guardrails, lighting, and similar types of improvements within the existing right-of-way.
3. Projects specifically identified in the Transportation System Plan as not requiring further land use regulation.
4. Landscaping as part of a transportation facility.
5. Emergency measures necessary for the safety and protection of property
6. Acquisition of right-of-way for public roads, highways, and other transportation improvements designated in the Transportation System Plan except for those that are located in exclusive farm use or forest zones.
7. Construction of a street or road as part of an approved subdivision or land partition approved consistent with the applicable land division ordinance.

B. **Uses Subject to Site Plan Review.**

1. Construction, reconstruction, or widening of highways, roads, bridges or other transportation projects that are
   a. Not improvements designated in the Transportation System Plan; or
   b. Not designed and constructed as part of a subdivision or planned development subject to site plan and/or conditional use review.

2. An application for site plan review is subject to review under *Site Plan Review* (Chapter 17.16); however, the decision criteria do not apply. In order to be approved, the site plan permit shall comply with the Transportation System Plan and applicable standards of this title, and shall address the criteria below. For State projects that require an Environmental Impact Statement (EIS) or EA (Environmental Assessment), the draft EIS or EA shall be reviewed and used as the basis for findings to comply with the following criteria:

a. The project is designed to be compatible with existing land use and social patterns, including noise generation, safety, and zoning.

b. The project is designed to minimize avoidable environmental impacts to identified wetlands, wildlife habitat, air and water quality, cultural resources, and scenic qualities.

c. The project preserves or improves the safety and function of the facility through access management, traffic calming, or other design features.

d. Project includes provision for bicycle and pedestrian circulation as consistent with the Comprehensive Plan and other requirements of this ordinance.

3. **Street and interchange improvements (defined as parking removal, access modifications in IAMP blocks, new lanes, new streets, signalization modifications). The site plan review shall include findings and solutions addressing safety, mobility, and the effect of traffic beyond the immediate vicinity, pedestrian system, bike system, parking and economic enterprise will be protected and/or enhanced by the proposed. "The following facility(ies) shall be considered in the study area for all traffic analysis unless modified by the City Engineer: All access points and intersections signalized and un-signalized adjacent to the proposed site, if the proposed site fronts an arterial collector street the analysis shall address all intersection and driveways along the site frontage and within the access facing distances extending out from the boundary from the site frontage roads through and adjacent to the site. All intersections that receive site generated trips that comprise at least 10% or more of the total intersection volume. All intersections needed for signal progression analysis. In addition to these requirements the City Engineer may determine any additional intersections or roadway links that may be adversely affected as the result of the proposed development."**

17.20.060 Traffic Impact Analysis

A. Purpose. The purpose of this section of the code is to implement Section 660-012-0045(2)(e) of the State Transportation Planning Rule that requires the city to adopt a process to apply conditions to development proposals in order to protect and minimize adverse impacts to transportation facilities. This section establishes the standards for when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Analysis (TIA) must be submitted with an application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a TIA; and who is qualified to prepare the analysis.

B. Typical Average Daily Trips and Peak Hour Trips. The latest edition of the *Trip Generation* manual, published by the Institute of Transportation Engineers (ITE) shall be used as standards

by which to gauge average daily and peak hour (weekday and/or weekend) vehicle trips, unless a specific trip generation study that is approved by the City Engineer indicates an alternative trip generation rate is appropriate. A trip generation study may be used to determine trip generation for a specific land use which is not well represented in the ITE Trip Generation Manual and for which a similar facility is available to count.

C. Applicability and Consultation. A Traffic Impact Analysis shall be required to be submitted to the city with a land use application when (1) a change in zoning or plan amendment is proposed or (2) a proposed development shall cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis, field measurements, crash history, Institute of Transportation Engineers *Trip Generation*; and information and studies provided by the local reviewing jurisdiction and/or ODOT:

a. The proposed action is estimated to generate 250 Average Daily Trips (ADT) or more, or 25 or more weekday AM or PM peak hour trips (or as required by the City Engineer);

b. An increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day

c. The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles queue or hesitate, creating a safety hazard; or

d. The location of the access driveway does not meet the access spacing standard of the roadway on which the driveway is located; or

e. A change in internal traffic patterns that may cause safety problems, such as back up onto public streets or traffic crashes in the approach area.

The applicant shall consult with the City Engineer or his/her designee at the time of a pre-application conference (see Section 17.09.120 Pre-Application Conferences) about whether a TIA is required and, if required, the details of what must be included in the TIA.

D. Traffic Assessment Letter. If a TIA is not required as determined by Section 17.20.060.C, the applicant shall submit a Transportation Assessment Letter (TAL) to the City indicating that TIA requirements do not apply to the proposed action. This letter shall present the trip generation estimates and distribution assumptions for the proposed action and verify that driveways and roadways accessing the site meet the sight distance, spacing, and roadway design standards of the agency with jurisdiction of those roadways. Other information or analysis may be required as determined by the City Engineer. The TAL shall be prepared by an Oregon Registered Professional Engineer who is qualified to perform traffic engineering analysis.

The requirement for a TAL may be waived if the City Engineer determines that the proposed action will not have a significant impact on existing traffic conditions.

E. Traffic Impact Analysis Requirements.

1. Preparation. A Traffic Impact Analysis shall be prepared by an Oregon Registered Professional Engineer who is qualified to perform traffic engineering analysis and will be paid for by the applicant.

2. Transportation Planning Rule Compliance. See Chapter 17.08.050 Transportation Planning Rule Compliance.

3. Pre-application Conference. The applicant will meet with the City Engineer prior to submitting an application that requires a Traffic Impact Analysis. The City has the discretion to determine the required elements of the TIA and the level of analysis expected.

F. Study Area. The following facilities shall be included in the study area for all Traffic Impact Analyses (unless modified by the City Engineer):

1. All site-access points and intersections (signalized and unsignalized) adjacent to the proposed site. If the proposed site fronts an arterial or collector street, the analysis shall address all intersections and driveways along the site frontage and within the access spacing distances extending out from the boundary of the site frontage.

2. Roads through and adjacent to the site.

3. All intersections that receive site-generated trips that comprise at least 10% or more of the total intersection volume.

4. All intersections needed for signal progression analysis.

5. In addition to these requirements, the City Engineer may determine any additional intersections or roadway links that may be adversely affected as a result of the proposed development.

6. Those identified in the IAMP Overlay Zone (see Subsection I).

G. When a Traffic Impact Analysis (TIA) is required, the TIA shall address the following minimum requirements:

1. The TIA was prepared by an Oregon Registered Professional Engineer; and

2. If the proposed development shall cause one or more of the effects in Section 17.20.060(C), above, or other traffic hazard or negative impact to a transportation facility, the TIA shall include mitigation measures that are attributable and are proportional to those impacts, meet the City's adopted Level-of-Service standards, and are satisfactory to the City Engineer and ODOT, when applicable; and

3. The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:

a. Minimize the negative impacts on all applicable transportation facilities; and

b. Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable; and

c. Make the most efficient use of land and public facilities as practicable; and

d. Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and

e. Otherwise comply with applicable requirements of the Hood River Municipal Code.

4. If the proposed development will increase through traffic volumes on a residential local street by 20 or more vehicles during the weekday p.m. peak hour or 200 or more vehicles per day, the impacts on neighborhood livability shall be assessed and mitigation for negative impacts shall be identified. A negative impact to neighborhood livability will occur where:

a. residential local street volumes increase above 1,200 average daily trips; or

b. the existing 85th percentile speed on residential local streets exceed 28 miles per hour.

H. Conditions of Approval. The city may deny, approve, or approve a development proposal with appropriate conditions needed to meet transportation operations and safety standards and provide the necessary right-of-way and improvements to develop the future planned transportation system. Factors that should be evaluated as part of land division and site development reviews, and which may result in conditions of approval, include:

1. Crossover or reciprocal easement agreements for all adjoining parcels to facilitate future access between parcels.

2. Access for new developments that have proposed access points that do not meet the designated access spacing policy and/or have the ability to align with opposing access driveways.

3. Right-of-way dedications for planned roadway improvements.

4.Street improvements along site frontages that do not have improvements to current standards in place at the time of development.

5. Construction or proportionate contribution toward roadway improvements necessary to address site generated traffic impacts, i.e. construction or modification of turns lanes or traffic signals.

I. Traffic analysis within an IAMP Overlay Zone. All development applications located within an IAMP Overlay Zone that are subject to the provisions of Chapter 17.16 (Site Plan Review) or Chapter 16.08 (Land Divisions) may be required to prepare a Traffic Impact Analysis. City of Hood River Transportation System Plan policies call for the City, in coordination with Hood River County and ODOT, to monitor and evaluate vehicle trip generation impacts at Hood River interchanges and on street systems in interchange areas from development. This requirement will not preclude Oregon Department of Transportation, City of Hood River, or Hood River County from requiring analysis of IAMP study intersections under other conditions. Development approved under this article shall be subject to the following additional requirements.

1. The Traffic Impact Analysis must include an account of weekday p.m. peak hour site generated trips through IAMP study intersections. Intersections impacted by 25 or more weekday p.m. peak hour site generated trips, or weekend peak hour site generated trips, shall be analyzed for level of service and volume to capacity ratio during day of opening conditions.

2. The City shall provide written notification to ODOT and Hood River County when an application concerning property in the IAMP Overlay Zone and subject to Site Plan Review or Title 16 is received. This notice shall include an invitation to ODOT and the County to participate in the City's pre-application conference with the applicant, pursuant to Section 17.09.120.

3. The City shall not deem the land use application complete unless it includes a Traffic Impact Analysis prepared in accordance with the applicable requirements of Section 17.20.060.

4. Pursuant to Section 17.09.030.F, ODOT shall have 14 calendar days from the date a completion notice is mailed to provide written comments to the City. If ODOT does not provide written comments during this 14-day period, the City staff report may be issued without consideration of ODOT comments.

5. Monitoring Responsibilities. The details of monitoring responsibilities will be outlined in the adopted IAMP.

EXHIBIT E

DEPT OF
AUG 15 2014
LAND CONSERVATION
AND DEVELOPMENT

Attn: Plan Amendment Specialist
Dept of Land Conv & Development
635 Capitol Street NE, Suite 150
Salem OR 97301-2540