SPRINGWATER INTERCHANGE MANAGEMENT AREA
APPENDIX A

MEMORANDUM

Natural Resources Program, Watershed Division
Gresham Department of Environmental Services

To: **Springwater US 26 IAMP Project Management Team**

From: **Kathy Majidi, City of Gresham**
John van Staveren and Craig Tumer, Pacific Habitat Services
Colin MacLaren, Parametrix

Date: **August 31, 2010**

Subject: **Technical Memorandum:**
Environmental Criteria Review of IAMP Scenarios

The Oregon Department of Transportation (ODOT), the City of Gresham, the City of Damascus, Multnomah County and Clackamas County are working in conjunction to develop plans for an interchange along Route 26 within the Springwater Community. The first step in designing this new interchange and improving the local street network is the Springwater Interchange Area Management Plan (IAMP). As part of the Springwater IAMP, the City of Gresham Department of Environmental Services Watershed Management Division has conducted an environmental review of the design alternatives. The results of this review are present in this memo.

Background

In 2002, Metro added the Springwater area to the region's Urban Growth Boundary (UGB). Approximately 1,100 acres of the Springwater area have been designated a Regionally Significant Industrial Area, which will allow growth to the local employment base by protecting the area from non-industrial development.[1] The planned development for the Springwater area will increase travel demand in the project area and will further compromise the already poor traffic conditions at the SE 267th Avenue and Stone Road at-grade intersections. The Springwater area requires improved access to US 26 and improvements to the surrounding transportation

[1] In Title 4 (Metro Code Sections 3.-07.410 - 3.07.440) of Metro's code, a Regionally Significant Industrial Area has the following restrictions on non-industrial uses: (1) Retail uses less than 20,000 square feet and amounting to only 5 percent of the contiguous Regionally Significant Industrial Area; (2) Commercial office uses that are not accessory to the industrial uses with the exception of large corporate headquarters, and; (3) Uses necessary to serve the needs of businesses and employees of the Regionally Significant Industrial Area.

network.

The proposed Springwater Interchange will be located in proximity to the SE 267th Avenue intersection. Its transportation function will be to provide statewide and regional access to new industrial land uses in Springwater. The Interchange will be a service interchange, providing connections from US 26 onto city arterials.

The objective for the Springwater Interchange Area Management Plan (IAMP) is to address existing and future safety needs, improve the access to the existing transportation system, and provide for a future transportation network that will efficiently accommodate the planned development in the Springwater area, while preserving the function of US 26. With respect to land use and development, the function of the Springwater IAMP will be to serve the existing and planned land uses in the interchange management area. It is not the function of the interchange to facilitate further urbanization of resource lands or land that is not otherwise identified for future development in existing comprehensive plans.

As part of the Springwater IAMP, ODOT has developed 3 main scenarios, and 3 derivatives of those scenarios for comparative evaluation. All of these alternatives, as well as the No-Build Alternative, are being evaluated to select a preferred alternative that meets the transportation objectives of the project while minimizing environmental impacts and construction costs. Criteria considered in the evaluation of the alternatives include those related to transportation design, consistency with goals of existing plans, safety, bicycle/pedestrian concerns, transportation and land use objectives, cost, and impacts to natural resources.

Criteria Selection

The City of Gresham Department of Environmental Services Watershed Division, in conjunction with environmental scientists from Pacific Habitat Services, Inc. (PHS) and Parametrix, evaluated the potential environmental impacts of each of the six alternatives for the proposed Springwater Interchange. The environmental review team developed two criteria in each of five natural resource categories, for a total of ten criteria, to use in the evaluation of potential environmental impacts. Criteria were chosen to reflect the spectrum of environmental resources likely to be affected by the project, and only criteria that could be quantified using available resources were chosen so that the evaluation would be transparent and understandable to all project stakeholders. Criteria were vetted by Gresham's water quality staff, the Johnson Creek Watershed Council, Portland Audubon, and Multnomah County's Water Quality Program, prior to evaluation of the alternatives.

The criteria used to evaluate the alternatives were:

1. Wetland Resources
    a. Wetland area impacted
    b. Wetland functions impacted

2. Stream Resources
    a. Number of new and extended crossings
    b. Length of new and extended crossings

3. Riparian Resources
    a. Riparian area impacted
    b. Riparian composition impacted

4. Water Quality Resources
    a. Temperature TMDL Buffer impacted
    b. New impervious surface

5. Fish and Wildlife Habitat Resources
    a. Federally designated “critical habitat” for salmonids impacted
    b. Comparative disruption of habitat connectivity

Evaluation Methodology and Results

Each of the criteria listed above were evaluated based on review of the City’s existing GIS resources. Each of the seven alternatives were digitized and compared to the City’s GIS data to determine the potential environmental impacts of each alternative. The potential impacts of each alternative were compared against each other and assigned an impact rank of 1, 2, or 3, with “3” assigned to the lowest level of impact and “1” assigned to the highest level of impact. Descriptions of each of the evaluated criteria are provided below, and Table 1 summarizes the results of the environmental evaluation.

The “No Build” alternative was given scores of 3 for the above criteria as it was recognized that existing conditions would not realize any additional degradation from highway impacts if a highway interchange wasn’t constructed. Simultaneously, it was recognized that this interchange project was the lynchpin project for the Springwater area, needed before the City could reasonably expect annexation and development to occur. With development, the City will collect stormwater System Development Charges that are partly slated for improvements to the stream, riparian, wetland, and floodplain resources in the area. In addition to that anticipated $23.5M investment, the annexation and development process would result in significantly more protective regulatory buffer protections for the area’s natural resources. Because of that trade off with the No Build scenario (no new impacts, but no anticipated large-scale restoration investment or more protective buffers), the team opted to score the No Build Scenario as equivalent to the least impactful build scenarios for each criteria. Then, the least impactful alternative would represent an equivalent trade off (no new negative impacts, but no catalyst for development and annexation that would bring large-scale restoration funds and buffer protections).

This trade-off was discussed among the Project Management Team after the ten (above-listed) environmental criteria were scored. To call out the trade-off between between no new impacts vs. no large-scale restoration funding for the area, an additional measure was added to the overall project evaluation matrix. That measure was worded, “Provide a mechanism for the City of Gresham to enhance the area’s natural environment,” and was scored with the No Build scenario receiving a 1, and the build scenarios scoring 2s. As none of the build scenario was better than the others in terms of jump starting the development needed to realize the funding, no 3s were given.

Scoring of the 10 environmental impact criteria was completed as follows:

Wetland Area

Using maps from a draft Springwater Local Wetland Inventory and City records of National Wetland Inventory resources in the area, total impacts to mapped wetlands were calculated for each scenario, by means of a GIS analysis. Impacts to mapped wetlands for the seven alternatives ranged from 0.84 acres for Alternative C2 and Alternative C2, Elevated Trail to 2.09 acres for Alternative A.

Wetland Function

Parametrix and PHS conducted a functional assessment of the mapped wetlands affected by the proposed build alternatives using the Oregon Rapid Wetland Assessment Protocol (ORWAP). For each wetland impacted, the group function scores were averaged, and the average of the functional scores was multiplied by the proportion of the existing wetland that would be impacted by the proposed alternative. The resulting scores for impacted wetlands under each scenario were totaled, resulting in a numeric value for total loss of wetland function under each scenario. Based on this analysis, impacts to wetland functions were determined to be lowest for

Alternative C2 and Alternative C2, Elevated Trail and highest for Alternative A, Elevated Trail, as shown in Table 1.

Number and Length of New and Extended Stream Crossings

The number and lengths of new and extended stream crossings resulting from each of the proposed alternatives were determined through GIS analysis, using the City's LiDAR-derived stream layer. The number of new and extended stream crossings for the proposed alternatives ranged from 6 for Alternative A to 10 for Alternative A, Elevated Trail. The total lengths of new impacts from new or extended crossings ranged from 2,472 feet for Alternative C2 to 3,659 feet for Alternative B, Modified Ramp.

Riparian Area

Riparian areas provide buffers that provide water quality enhancement, habitat for terrestrial and aquatic organisms, streambank stabilization, and healthy stream ecosystems. To quantify riparian impacts from the proposed build alternatives, the City evaluated impacts as total area of structures or fill that would be placed within City-mapped Habitat Conservation Area buffer areas. Based on this analysis, impacts to riparian areas were determined to be lowest for Alternative C2 and Alternative C2, Elevated Trail and highest for Alternative B, Modified Ramp, as shown in Table 1.

Riparian Composition

To further evaluate potential impacts to the existing ecosystem benefits provided by the current state of riparian resources within the project area, the City evaluated assessed the composition of riparian plant communities. Impacts to well-vegetated, mature forest riparian areas were assumed to be more significant than impacts to riparian areas that contain structures, development, active resource extraction uses, or otherwise lack a dense riparian forest community. To evaluate this criterion, the City compared impacts to existing forested areas, as assessed for the City's Natural Resources Master Plan via analysis of 2009 aerial photos. Based on this analysis, impacts to higher value riparian areas were determined to be lowest for Alternative B, Modified Ramp and highest for Alternative A, Elevated Trail, as shown in Table 1.

Temperature TMDL Buffer

As part of the City's response to Clean Water Act regulations, staff had previously mapped "Temperature TMDL buffers" along all streams within the City and the new community areas, demonstrating where the City is required to increase shade for protection of water quality and aquatic species. Within these "shade buffers," existing vegetation has been categorized as a 3 (areas where minimal restoration is needed to meet the shade target), 2 (moderate restoration is needed to meet the shade target), or 1(extensive restoration is needed to meet the shade target). As shown in Table 1, Alternative B results in the least impact to Category 3 Temperature TMDL Buffer, while the variations of Alternative A result in the greatest impact to this resource.

Impervious Surface

Because runoff from impervious surfaces is a major contributor of pollutants to surface waters, the amount of impervious surfaces associated with each of the alternatives were compared as a surrogate measure of potential impacts to water quality. Because the estimated area of impervious surfaces resulting from each of the alternatives are similar, all alternatives were determined to have the same general relative impact to water quality, as shown in Table 1.

Critical Habitat for salmonids

Johnson Creek's main stem is mapped as critical habitat for salmon and trout listed as "threatened" under the federal Endangered Species Act. Potential impacts to federally listed salmonid species were compared by looking at the total length and area of impacts to Johnson Creek as a result of each of the alternatives. Impacts

to Johnson Creek for the six alternatives ranged from 958 linear feet for Alternative C2 and Alternative C2 to 1,979 linear feet for Alternative B, Modified Ramp.

Habitat Connectivity

Impacts to habitat connectivity were not quantified as part of this analysis. Rather, impacts to habitat connectivity were determined based on qualitative assessment of how the proposed alternatives cross blocks of existing contiguous blocks of forested and riparian habitats through aerial photography review of existing conditions. Because all of the alternatives cross existing habitats in much the same manner, the relative impacts of all of the alternatives were determined to be similar.

Evaluation Summary

As discussed above, impacts in each of the criteria were assigned scores of 1, 2, or 3 based on the relative extent of the impact, with a score of “3” representing the least negative impact to natural resources and “1” the most negative impact to natural resources. The resulting scores for all of the criteria were summed for each of the alternatives to give a total environmental impact score so that each of the alternatives could be compared. Based on this analysis, it is the City’s opinion that Alternative A, Elevated Trail will likely result in the greatest overall environmental impact, while Alternative C2 will result in the lowest level of impact to natural resources.

Table 1. Summary of Potential Environmental Impacts for each of the Proposed Springwater Interchange Build Alternatives.

Criteria	Alternative A		Alternative A Elevated Trail		Alternative A New (C2) Arterial		Alternative B Modified Ramp		Alternative C2		Alternative C2 Elevated Trail	
	Impact	Score	Impact	Score	Impact	Score	Impact	Score	Impact	Score	Impact	Score
Wetland Area	2.09 ac.	1	1.27 ac.	2	2.07 ac.	1	1.98 ac.	1	0.84 ac.	3	0.84 ac.	3
Wetland Function*	6.24	1	7.39	1	6.24	1	3.25	2	2.09	3	2.09	3
Stream Crossings – Number	6	3	10	1	7	3	8	2	7	3	9	1
Stream Crossings – Length	3,008 ft.	2	3,322 ft.	2	2,729 ft.	3	3,659 ft.	1	2,472 ft.	3	2,598 ft.	3
Riparian Area	6.43 ac.	2	7.71 ac.	1	6.51 ac.	2	8.31 ac.	1	5.48 ac.	3	5.82 ac.	3
Riparian Composition	5.58 ac.	2	6.14 ac.	1	5.58 ac.	2	5.10 ac.	3	5.56 ac.	2	5.60 ac.	2
Temperature TMDL Buffer	2.44 ac.	1	2.90 ac.	1	2.53 ac.	1	1.61 ac.	3	2.18 ac.	2	2.15 ac.	2
Additional Impervious Surface	21.12 ac.	1	21.12 ac.	1	21.12 ac.	1	20.94 ac.	1	21.12 ac.	1	21.12 ac.	1
Critical Salmonid Habitat	1,536 ft.	2	1,568 ft.	2	1,536 ft.	2	1,979 ft.	1	958 ft.	3	1,058 ft.	3
Habitat Connectivity**	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1
Total Evaluation Score		**16**		**13**		**17**		**16**		**24**		**22**

Notes: * Wetland function impacts are represented as the average of the functional group assessment scores, as determined by ORWAP analysis multiplied by the percentage of the existing mapped wetland area affected by the proposed project.

** Impacts to habitat connectivity were not quantified as part of this analysis. Impacts to habitat connectivity were determined based on review of aerial photography, and the relative impacts of all of the alternatives were determined to be similar based on this review.

Recommended Design Alternatives

Given the "concept" level schematics that were available for this environmental impact review, a number of design factors were unknown at the time of this ranking. It is recognized by the environmental review team, the Project Management Team, and Johnson Creek stakeholders that final design criteria will be selected with a priority on minimizing the short-term and long-term impacts of this interchange project on the Johnson Creek watershed. The evaluation reviewed in this memo provides a ranking only of the relative environmental impact of the alternatives' alignments; as design work is conducted once a preferred alternative is identified, details were not available at the time of this review to address impacts from possible variations of the interchange design elements. As the design of the selected alternative is carried forward, it will be possible to refine this impact assessment based on field review of structure and fill placement, as well as proposed design elements.

To minimize the final design's impacts to natural resources, the City, with input from PHS, Parametrix, the Johnson Creek Watershed Council and the Audubon Society of Portland, makes the following recommendations for minimizing impacts to natural resources:

- Where possible, incorporate into the preferred alternative those elements in other scenarios that would further reduce environmental impacts. For instance, Alternative C2 had the least environmental impact; additional reduction of C2's impacts appears possible if the project design engineer could alter the west end of the arterial to be more similar in width and placement to the west end of Alternative A's final arterial alignment. This would eliminate a small portion of stream, riparian, and floodplain area impacts in favor of additional impacts to an adjacent, poorly functioning wetland to the east.
- Use retaining walls and/or steepened side slopes where their use can eliminate fill placed within resource areas or their associated buffers.
- Avoid the placement of fill within floodplains.
- Avoid impacts to stream confluences.
- Keep design consistent with the restoration goals set forth for the Springwater Community.
- Mitigation of impacts should occur, as opportunities exist, within the Springwater area to ensure there is no loss of function within the plan area.
- If mitigation of wetlands has to be done outside of Springwater plan area, then mitigation must stay within Johnson Creek Watershed (no use of Foster Creek mitigation bank).
- Mitigation of impacts should be consistent with City's Natural Resources Master Plan.
- Mitigation of impacts must consider Metro's on-going investment in land acquisition and restoration. In addition to compensating Metro for the lands they have worked to acquire, mitigation for this project should build upon the restoration work that Metro has initiated with regional funds. If mitigation for this project can be done contiguous to existing Metro restoration projects, that will increase the success and benefits of both the existing restoration projects as well as the mitigation project.
- Keep design and associated stormwater treatment elements consistent with the Low Impact Development goals of Springwater (e.g., use of pervious pavement, pervious concrete, vegetated water quality treatment, etc.).

Exhibit 5
Springwater IAMP Evaluation Matrix

GOALS	EVALUATION CRITERIA		MEASURE	NO BUILD	ALT A, NEW ARTERIAL & ELV. TR	ALT B	ALT C2, ELEVATED TRAIL
GOAL 1: Improve access and capacity for all modes of transportation in the Springwater area.	Improve connectivity to the existing and planned bicycle, pedestrian, trail, and street networks.	1	The local street system does or does not connect to the regional system, as shown in the Regional Transportation Plan.	1	3	3	3
		2	Meets the adopted bicycle, trail, and pedestrian plans.	1	3	3	3
	Improves transportation safety	3	The intersection of the arterial and Springwater Trail is or is not at grade.	1	3	3	3
		4	The alternative improves or minimizes vehicle conflict points.	1	2	3	2
		5	Sight distance is better or not as good as the average sight distance of all alternatives.	1	2	3	2
		6	Is there a comfortable and safe bike experience?	1	3	3	3
		7	Is there a comfortable and safe pedestrian experience?	1	3	3	3
	Crossroads meet state spacing standards.	8	Distance from the interchange ramp terminals to the nearest access on the arterial meet state spacing standards (1,320 feet).	N/A	2	3	2
	Provides adequate capacity.	9	Interchange meets or does not meet planning and design mobility standards (volume-to-capacity ratios), as defined in the Oregon Highway Plan and Oregon Highway Design Manual.	1	3	3	3
			Goal 1 Subtotal	8	24	27	24
			Goal 1 Average Score	1.000	2.667	3.000	2.667
GOAL 2: Maintain mobility for regional movements along US Highway 26.	Interchange meets state spacing standards.	10	Distance from the Springwater interchange to the first full movement interchange along US 26 meets state spacing standards: 2 miles (rural) to south and 1 mile (urban) to north.	2	2	2	2
	Provides adequate capacity.	11	US 26 through traffic meets or does not meet mobility standards (volume-to-capacity ratios) for 2035.	1	3	3	3
			Goal 2 Subtotal	3	5	5	5
			Goal 2 Average Score	1.500	2.500	2.500	2.500
GOAL 3: Minimize impacts to the natural environment and provide opportunities for enhancement.	Adhere to the restoration goals of the Springwater Plan, while avoiding or reducing impacts to wetlands, streams, and the natural environment.	12	Wetland Area	3	1	1	3
		13	Wetland Function	3	1	2	3
		14	Stream Crossings (number)	3	3	2	1
		15	Stream Crossings (length)	3	3	1	3
		16	Riparian Area	3	2	1	3
		17	Riparian Composition	3	2	3	2

Ranking Scale	1	2	3
Connections	Does not connect to regional system	Some connection to regional system	All connections to regional system
Plan consistency	Does not meet plan goals	Somewhat meets plan goals	Meets plan goals
Grade	At grade		Not at grade
Conflict points	Includes conflict points		Avoids conflict points
Sight distance	Lower sight distance	Average sight distance	Better sight distance
Bike experience	Least comfortable	Comfortable	Most Comfortable
Pedestrian experience	Least comfortable	Comfortable	Most Comfortable
Spacing requirements	Does not meet design standards	Design exception is likely	Meets design standards
Mobility standards	*Pass or Fail*		
Spacing requirements	Does not meet design standards	Design exception is likely	Meets design standards
Mobility standards	*Pass or Fail*		
Wetland Area - please see Appendix A			
Wetland Function - please see Appendix A			
Stream Crossings (number) - please see Appendix A			
Stream Crossings (length) - please see Appendix A			
Riparian Area - please see Appendix A			
Riparian Composition - please see Appendix A			

Exhibit 5
Springwater IAMP Evaluation Matrix

GOALS	EVALUATION CRITERIA		MEASURE	NO BUILD	ALT A, NEW ARTERIAL & ELV. TR	ALT B	ALT C2, ELEVATED TRAIL	Ranking Scale	1	2	3
		18	Temperature TMDL Buffer	3	1	3	2	**TMDL Buffer - please see Appendix A**			
		19	Additional Impervious Surface	3	1	1	1	**Impervious Surface - please see Appendix A**			
		20	Critical Salmonid Habitat	3	2	1	3	**Salmonid Habitat - please see Appendix A**			
		21	Habitat Connectivity	3	1	1	1	**Connectivity - please see Appendix A**			
		22	Provide a mechanism for the City of Gresham to enhance the natural environment.	1	2	2	2	**Mechanism to enhance environment - please see Appendix A**			
			Goal 3 Subtotal	31	19	18	24				
			Goal 3 Average Score	2.818	1.727	1.636	2.182				
GOAL 4: Increase the viability of development within the Springwater area while supporting community livability.	Support transportation and land use objectives articulated in adopted plans.	23	Meets or does not meet the transportation and land use objectives articulated in the Springwater Community Plan and City of Gresham Comprehensive Plan.	1	3	3	3	**Transportation and land use objectives**	*Pass or Fail*		
	Maintain developable parcels.	24	Maximize the number of acres available for development.	1	3	1	2	**Acquired acres**	High	Medium	Low
		26	Minimize impacts to existing neighborhoods. (total acquisitions)	3	3	1	2	**Number of total acquisitions**	High	Medium	Low
		27	Maximizes the number of large developable parcels for industrial uses.	1	2	2	2	**Large range of parcel sizes**	Does not maximize number large parcels	Somewhat maximizes number of large parcels	Maximizes number of large parcels
			Goal 4 Subtotal	6	11	7	9				
			Goal 4 Average Score	1.500	2.750	1.750	2.250				
GOAL 5: Ensure financial feasibility of the interchange and local circulation options.	Support lower cost projects while providing a safe and efficient facility.	28	Construction cost for the arterial, collector, and interchange is low or high in comparison to the average cost of all alternatives.	N/A	2	1	3	**Construction cost**	High cost in comparison	Average cost in comparison	Low cost in comparison
		29	Right of way acquisition cost is low or high in comparison to the average cost of all alternatives.	N/A	3	1	2	**ROW cost**	High	Medium	Low
		30	Does or does not allow for moderate cost phasing of the alternative (construction only).	N/A	2	1	3	**Phasing**	Larger cost compared to the average	Moderate cost compared to the average	Lower Cost compared to the average
		31	Phasing of the alternative minimizes rework/temporary construction.	N/A	3	1	3	**Phasing**	Does not minimize	Somewhat Minimizes	Minimizes
			Goal 5 Subtotal	0	10	4	11				
			Goal 5 Average Score	0.000	2.500	1.000	2.750				
			TOTAL SCORE	**48**	**69**	**61**	**73**				
			TOTAL AVERAGED SCORE	**7**	**12**	**10**	**12**				

Appendix C

Alternatives Analysis

SCREENING THE ALTERNATIVES

The PMT first met in 2007 to draft the project's purpose and need, and later, the project's goals, criteria, and measures. With the project's foundation established, the PMT held a design workshop to discuss several options for interchange locations and designs along US 26. This effort resulted in seven different alternatives.

Once the seven alternatives were developed, the PMT screened the alternatives to determine which options best satisfied the project's purpose and intent. Three alternatives then advanced to the evaluation phase: Alternative A, Alternative B, and Alternative C-2.[1]

ALTERNATIVES DESCRIPTION

Alternative A is a partial cloverleaf interchange with a loop ramp in the southeast quadrant. The Springwater Trail would be elevated above the proposed arterial once the arterial is constructed with five lanes (Appendix C-2). If funding were not available to build the complete interchange, Alternative A would be phased with an overcrossing over US 26 extending to Telford Road and new roads primarily utilizing the existing rights-of-way of SE 267th Avenue and SE Anderson Road.

Alternative B is a partial cloverleaf interchange with loop ramps in the northwest and southeast quadrants to provide access to US 26 eastbound. In this alternative, the arterial is grade-separated over both Telford Road and the Springwater Trail with a jughandle ramp providing access to/from Telford Road (Appendix C-3). If funding were not available to build the complete interchange, Alternative B would be phased with an overcrossing over US 26 and Telford Road, a new road to the northwest of 267th Avenue, and a new road utilizing a portion of existing right-of-way on Jeanette Street.

Alternative C-2, the preferred alternative, is an urban diamond configuration. As with Alternative A, the Springwater Trail would be elevated above the proposed arterial once the arterial is constructed with five lanes (Exhibit 3 in the main document). If funding is not available to build the complete interchange, Alternative C-2 would be phased with an overcrossing over US 26 extending to Telford Road, with connections between the overcrossing and US 26.

EVALUATING THE ALTERNATIVES

Once the top three alternatives were established, the PMT started to refine the interchange designs based on input from stakeholder meetings with residents, realtors, the East Metro

[1] Alternative C-2 is named so because it was the second version of Alternative C.

Economic Alliance, JCWC, Audubon Society of Portland, Portland Parks and Recreation, and Metro.

Based on input from Portland Parks and Recreation and Metro about conflicts between vehicles and bicyclists/pedestrians on the Springwater Trail, the PMT re-designed Alternatives A and C-2, elevating the Springwater Trail over the proposed arterial to avoid conflicts between trail users and vehicles.

Based on feedback from City of Gresham natural resource staff, the PMT shifted the alignment of the proposed arterial road further south for Alternatives A and C-2 to reduce impacts to the Sunshine Creek Riparian Area.

In addition to stakeholder meetings, the PMT also held two public open houses—one in February 2009 and one in July 2010. The key issue raised during the open houses was potential property acquisitions. In response to this, the PMT eliminated the ramp in the northeast quadrant of Alternative B to reduce the alternative's footprint and its associated acquisitions.

At one open house, it was suggested that the interchange alignment be shifted south near Stone Road. The PMT had previously considered this option but had dismissed it because it does not adequately serve future industrial development in the Springwater area. In addition, it is not feasible given Stone Road's proximity to the Metro-adopted Urban and Rural Reserves, which would require exceptions to the Statewide Planning Goals. It is unlikely that a goal exception would be granted due to the fact that there is available land within the UGB for the interchange. See Appendix B-4 for more information about an interchange near Stone Road.

Once the alternative refinements mentioned above were complete, the PMT met on August 25, 2010, to score Alternatives A, B, and C-2 against the updated criteria. The potential impacts of each alternative were compared against each other and assigned an impact rank of 1, 2, or 3, with "3" assigned to the lowest level of impact and "1" assigned to the highest level of impact. The scores for each individual goal were averaged, and the averages were summed for each alternative; this normalized the scores so that goals with more measures did not receive a better score simply because they had more measures. See Exhibit 5 for a matrix of scores for each alternative.

Below is a brief description of each alternative's key differentiating impacts:

<u>Alternative A</u>

- Fewest residential displacements
- Moderate construction cost
- Moderate impact to the natural environment

<u>Alternative B</u>

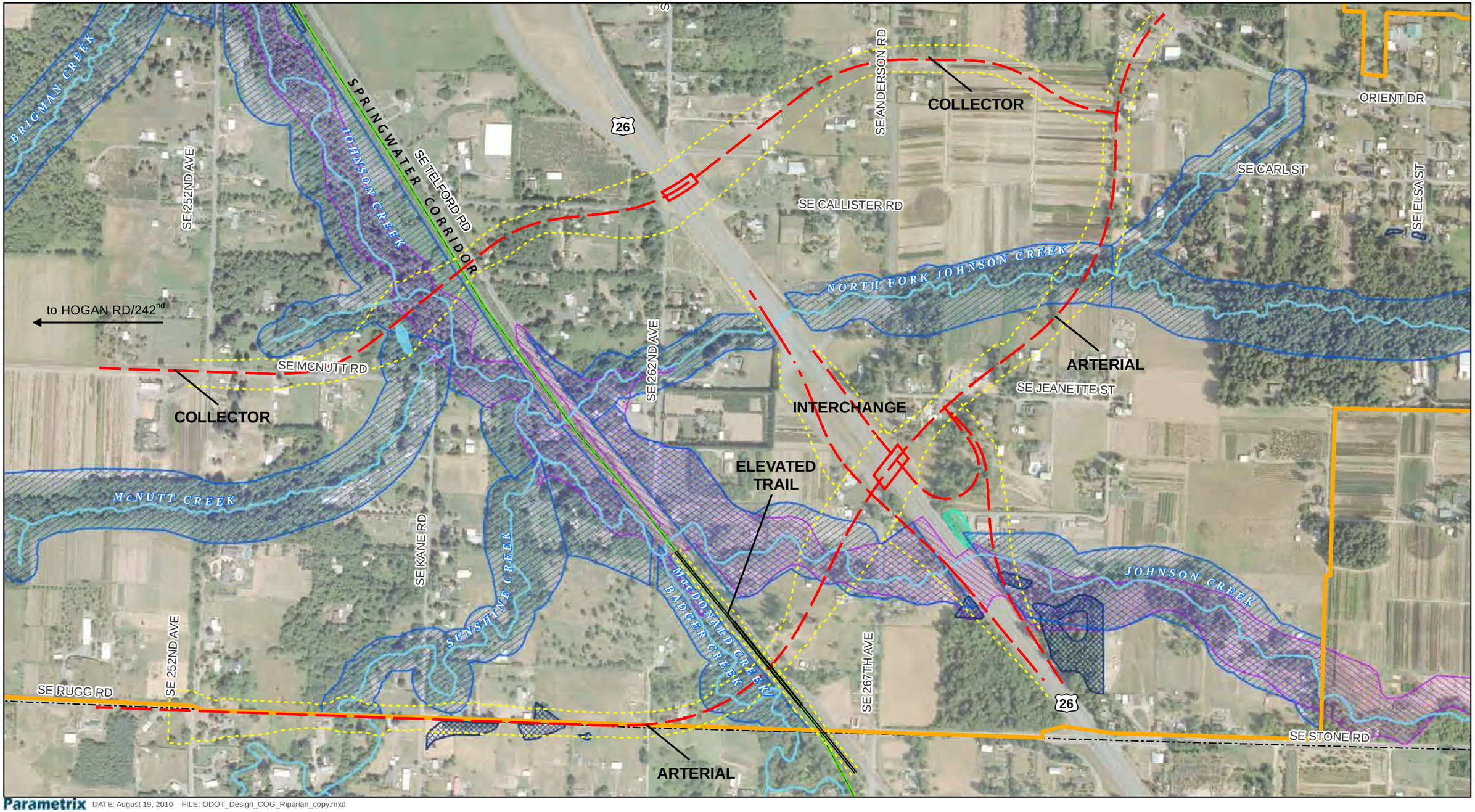
- High residential displacements
- High construction costs
- High impact to the natural environment

<u>Alternative C-2</u>

- Moderate residential displacements
- Lower construction cost
- Lowest impact to the natural environment

PMT RECOMMENDATION

Based on scoring the alternatives, and on public and stakeholder input, the PMT recommends Alternative C-2 due to its comparatively low impact on the natural environment, low cost, moderate residential displacements, and its ability to meet the transportation needs for the Springwater area. Of the 31 measures meant to identify the alternative that best addressed the goals of the *Springwater Community Plan*, Alternative C-2 earned the best score (73), compared to Alternative A (69) and Alternative B (61).



Parametrix DATE: August 19, 2010 FILE: ODOT_Design_COG_Riparian_copy.mxd

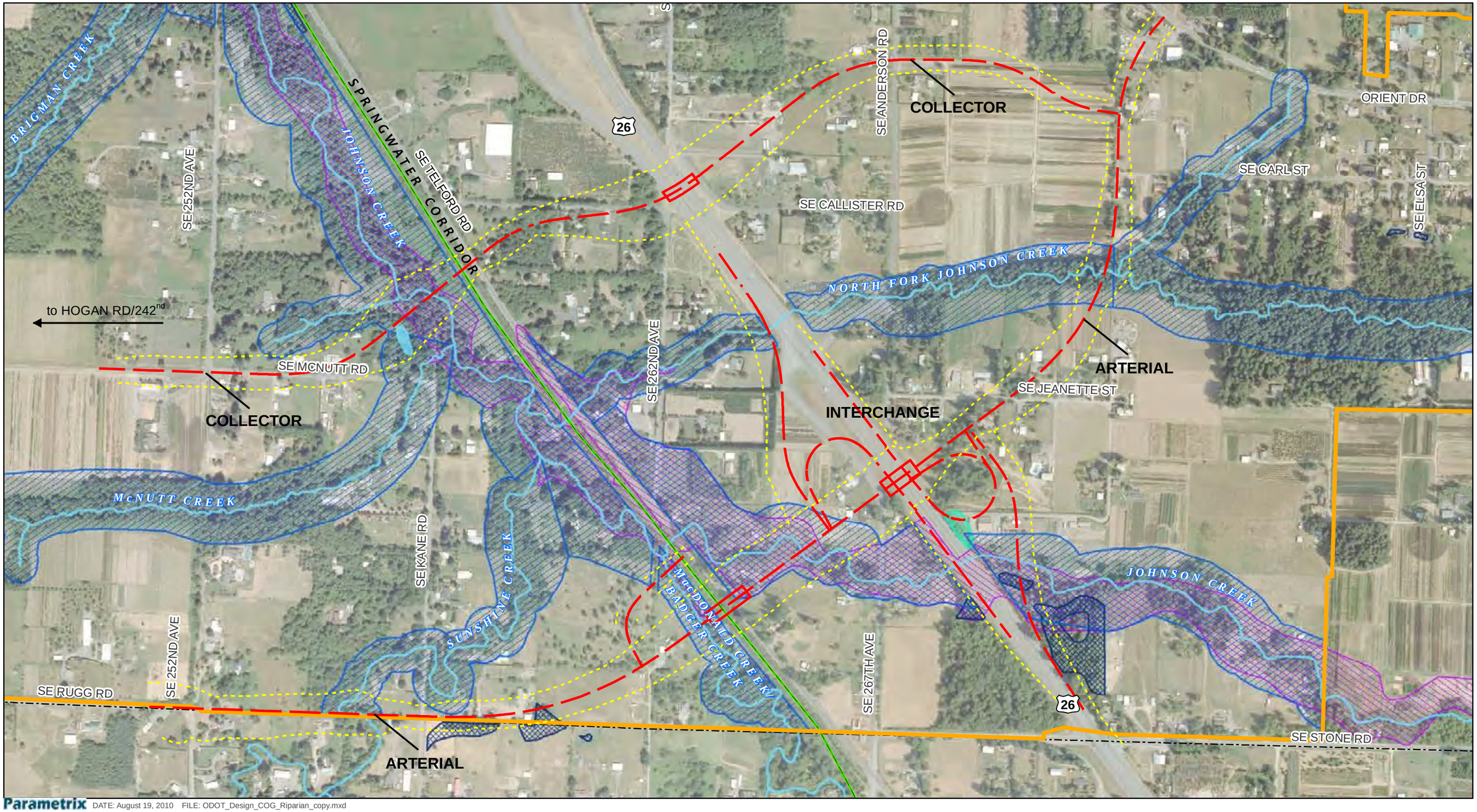
N

0 500 1,000
Scale in Feet

- Proposed Roadway Alignment
- Estimated Slope Lines
- Springwater Community Plan District
- Springwater Corridor Trail
- County Boundary
- Water Body
- Springwater Streams
- Springwater Riparian Areas
- Field Verified Wetlands
- NWI Areas
- FEMA Flood Areas

Appendix C-2
Springwater IAMP
Alternative A

Gresham,
Oregon



Parametrix DATE: August 19, 2010 FILE: ODOT_Design_COG_Riparian_copy.mxd

N

0 500 1,000
Scale in Feet

- Proposed Roadway Alignment
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- Springwater Corridor Trail
- County Boundary
- Water Body
- Springwater Streams
- Springwater Riparian Areas
- Field Verified Wetlands
- NWI Areas
- FEMA Flood Areas

Appendix C-3
Springwater IAMP
Alternative B

Gresham,
Oregon

Parametrix ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

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APPENDIX C-4

MEMORANDUM

Date:	August 23, 2010
To:	Springwater IAMP PMT
From:	Shelley Holly and Jason Franklin
Subject:	Implications of locating the Springwater Interchange at Stone Road
cc:	
Project Number:	277-2395-057
Project Name:	US 26: Access to Springwater Community IAMP

The purpose of this memo is to highlight issues associated with locating the Springwater Interchange near Stone Road, outside of or adjacent to the Urban Growth Boundary (UGB). An interchange located at Stone Road was considered early in the planning process but was dismissed because it didn't meet the project's purpose and need of serving industrial development. Traffic projections showed that an interchange located at Stone Road would not draw much traffic and would not likely aid in the development of the Springwater area.

At the July 27, 2010 public meeting the idea of a Stone Road interchange was promoted by some residents. This memo addresses the regulatory hurdles to overcome in order to locate an interchange at Stone Road. The memo reviews the existing and proposed regulatory environment related to transportation uses in Metro urban and rural reserves, and potential issues with locating the interchange in reserve areas outside the UGB.

Existing Regulatory Environment

Oregon Statewide Planning Goals and Guidelines adopted in the 1970's have been implemented through state administrative rules (OAR) and revised statutes (ORS). Several of these goals, rules and statutes are aimed at protecting agricultural and forest land from the encroachment of urban land uses through the establishment of UGBs.

Urban Growth Boundaries

Local governments (cities, counties and Metro) work together to determine the location of urban growth boundaries and adopt them into local comprehensive plans which are then acknowledged by the Land

Conservation and Development Commission (LCDC) to ensure implementation of the Statewide Planning Goals and ORS 197.298. Local governments seeking comprehensive plan amendments to change to UGBs must first consider urban reserve land as the first priority for conversion when evaluating alternative boundary locations. Additionally, they must consider the following factors in their evaluation:

1. *The efficient accommodation of identified land needs;*
2. *The orderly and economic provision of public facilities and services;*
3. *Comparative environmental, energy, economic and social consequences; and,*
4. *Compatibility of the proposed urban uses with nearby agricultural and forest activities occurring on farm and forest land outside the UGB.*[1]

Statewide Planning Goal Exceptions

A county or other local government may adopt an exception to the Statewide Planning Goals applicable to specific properties or situations as a comprehensive plan amendment. A goal exception is required if the proposed action does not comply with some or all goal requirements applicable to the subject properties. In the case of a transportation goal exception, the Transportation System Plan (TSP) would also be amended as part of the process.

There are several requirements that must be satisfied for goal exception approvals that either show that the land protected by the goal is physically developed and no longer available for uses allowed by the applicable goal; or the land is committed to uses not allowed by the applicable goal because adjacent uses and other factors and uses allowed by the applicable goal would be impracticable.

If the subject property is available for uses allowed by the applicable goal, a goal exception may only be taken if the applicant can provide adequate findings that:

1. *Reasons justify why the state policy embodied in the applicable goals should not apply;*
2. *Areas which do not require a new exception cannot reasonably accommodate the use;*
3. *The long-term environmental, economic, social and energy consequences resulting from the use of the proposed site, with measures designed to reduce adverse impacts, are not significantly more adverse than would typically result from the same proposal being located in other areas requiring a goal exception; and*
4. *The proposed uses are compatible with other adjacent uses or will be so rendered through measures designed to reduce adverse impacts.*[2]

Regulations Specific to the Metro-area

In 2007 the Oregon Legislature passed SB 1011 which authorized Metro, and Washington, Clackamas, and Multnomah Counties to designate Urban Reserve Areas (URA) and Rural Reserve Areas (RRA) in their jurisdictions through a different process than available to the rest of the state in OAR 660-021. SB 1011 is implemented by OAR 660-027-0070. The Urban and Rural Reserve rules under OAR 660-027-0070 initially prohibited future amendments to local plans and land use regulations in areas designated as urban or rural reserves.

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[1] Oregon Statewide Planning Goal 14: Urbanization, OAR 660-015-0000(14)

[2] Oregon Statewide Planning Goal 2: Land Use Planning, OAR 660-015-0000(2) Part II - Exceptions

Urban reserves refer to lands outside a UGB that will provide for: (a) future expansion over a long-term period; and (b) the cost-effective provision of public facilities and services within the area when the lands are included within the UGB.

Rural reserves refer to land reserved to provide long-term protection for agriculture, forestry or important natural landscape features that limit urban development or help define appropriate natural boundaries of urbanization, including plant, fish and wildlife habitat, steep slopes and floodplains.

Areas near the proposed Springwater Interchange designated as URA and RRA are shown on Figure 1. According to the Urban and Rural Reserve rules (OAR 660-027-0070) as currently adopted, once a county has designated an area as RRA, it cannot include this area within the UGB or redesignate the area as a URA for the 40 to 50 year time period allotted for the county's URA.

OAR 660-027-0070, as initially adopted, prohibited new land uses, including transportation facilities that were not specifically allowed at the time the reserves were designated. This is problematic because some uses are specifically allowed on farm and forest lands, while others have traditionally been granted through a plan amendment process. Urban and Rural Reserve rules do not provide for a plan amendment or goal exception process for those land uses not specifically identified as an allowed use on reserve land, including transportation facilities.

In April of 2010, LCDC adopted minor amendments to OAR 660-027-0070 that allow Metro counties to adopt amendments in local plans that would allow some transportation and other public facilities allowed in other rural areas of the State not designated as reserves, provided no Goal Exception is required. However, exceptions to Statewide Planning Goals for transportation facilities in urban and rural reserves are not currently allowed.

Anticipated Regulatory Changes

Additional amendments to the Urban and Rural Reserve rules are currently being discussed by the Metro Urban and Rural Reserves Rules Advisory Working Group and are being finalized for submittal to LCDC for consideration. The draft proposed amendments include several provisions that could be relevant to the Springwater Interchange. These include:

- Allowing transportation improvement exceptions, in rural or urban reserves, or both.
- Allowing amendments to the county plan to allow changes from one resource designation to another.
- Different standards for amendments to plans and ordinances in URAs versus RRAs.

LCDC is scheduled to review and rule on the proposed changes in September, 2010.

Implications for Locating the Springwater Interchange Adjacent to or Outside the UGB

There have been some suggestions about locating the proposed Springwater Interchange in a location near Stone Road. Stone Road is contiguous to the Multnomah and Clackamas County boundary in this area and an alignment in this location would likely require the interchange, as well as some of the local connections to the interchange to be located in both counties. Locating an interchange at this site would require agreement and coordination between both counties and amendments to each of their comprehensive plans, assuming the interchange design and local roads connecting to the interchange could be constructed within the existing UGB.

Under the April 2010 amendment to the Urban and Rural Reserve rules, there are provision for the counties to approve a comprehensive plan amendment to expand the UGB in this area for transportation

purposes, however, the county must first consider urban reserve land for an expansion area, which in this case, is readily available north of Stone Road and west of US 26. If the counties could find that the available land within the UGB is not suitable for the interchange, as noted above, expanding the UGB would still require an evaluation comparing environmental, energy, economic and social consequences, and, the compatibility of the interchange with nearby agricultural and forest activities occurring on farm and forest land outside the UGB.

There are areas south and west of Stone Road designated as URA and areas south and east of Stone Road designated as RRA. Depending on the interchange design, it is likely that part of the interchange would have to be located outside the existing UGB east of Stone Road on RRA land. Because the interchange would primarily serve transportation generated in an urban area, it would be considered an urban public facility. The guidelines for Statewide Planning Goal 11: Public Facilities and Services, indicate that "public facilities and services for rural areas should be provided at levels appropriate for rural use only and should not support urban uses."[3] In order to avoid this conflict, constructing an interchange on land south of Stone Road and east of US 26 location would either require a UGB expansion or a goal exception to Statewide Planning Goal 11. Under the existing Urban and Rural Reserve rules, there are two restrictions that prohibit either of these actions:

1) According to OAR 660-027-0070 as currently adopted, once a county has designated an area as RRA, it cannot include this area within the UGB or redesignate the area as a URA for the 40 to 50 year time period allotted for the county's URA.

2) Under the existing OAR 660-027-0070 language, there are no options for statewide goal exceptions on URA or RRA lands.

Therefore under current rules, the interchange would have to be constructed solely within the current UGB area; alternatively, it could be located in the URA area if the UGB were to be expanded in this area (see Figure 1).

If the soon to be proposed OAR 660-027-0070 language is adopted in its entirety, there may be two different strategies that could allow for locating the Springwater Interchange to the south, outside of the existing UGB. These include:

- A two-step process of 1) redesignate the RRA area south of Stone Road to URA, and then 2) proposing a UGB amendment for the URA areas contiguous to the existing UGB that would be used for transportation facilities. This would require a comprehensive plan amendment as noted above.
    - Specifically, the burden would be proving that an interchange within the UGB could not possibly handle the traffic generated from population growth and development over the next 20 or even 50 years.
    - This would be difficult to prove given much of the surrounding land to the south of the proposed interchange is designated as RRA. In order to reasonably make this argument, it is likely that an area larger than that required for a new interchange would need to be re-designated as URA to support growth and traffic projections at a level that would require an interchange in a southern location.

[3] Oregon Statewide Planning Goal 11: Public Facilities and Services, OAR 660-015-0000(11)

- Proposing goal exceptions to Statewide Planning Goals 3, 11, and 14 for areas south of Stone Road within the URA and RRA that would be required to locate a public urban transportation facility on rural land.
    - A goal exception would require the findings of fact and reasons to support exceptions to Statewide Planning Goals 3 (Agricultural Lands), 11 (Public Facilities and Services), and 14 (Urbanization) based on a forecasted increased demand for the facility. Findings would have to include a review of a range of transportation alternatives for addressing traffic congestion and the need for an interchange on rural land. These alternatives could include transportation system management (TSM), transportation demand management (TDM), other interchange alternatives within the UGB, and a no build alternative.

Summary

There are issues of concern and uncertainty with locating the Springwater Interchange at Stone Road which add much higher risks to the project schedule than the proposed interchange location within the UGB at location to the north. As of August 2010, the Urban and Rural Reserve rule (OAR 660-027-0070) has been amended to allow Metro counties to expand UGBs for certain transportation facilities through a comprehensive plan amendment. However, the processes for expanding a UGB through a plan amendment requires extensive analysis showing why there are no other alternatives within the existing UGB that can meet the needs of the proposed transportation facility. It remains to be seen if LCDC will adopt amendments to OAR 660-027-0070 that will allow a re-designation of RRA land.

The soon to be proposed changes to the Urban and Rural Reserve rule may be ruled on as early as September 2010. It is unknown which of these changes to OAR 660-027-0070 may be approved by LCDC, or if these changes will allow exceptions for the construction of transportation facilities in RRAs. If a goal exception is permitted for locating the interchange in an RRA, exceptions to Statewide Planning Goals 3, 11, and 14 would potentially be required, as would the burden of justification and an alternatives analysis as noted above.

APPENDIX D

SPRINGWATER MANAGEMENT AREA EXISTING AND PLANNED ZONING

Clackamas County (Unincorporated Areas Only)

- Timber District (TBR): Natural Resource Preservation
    - This conservation zone is designed to facilitate timber harvesting, agriculture and recreational uses while protecting natural resources such as watersheds, wetlands, and fisheries. Wildfire risks are also sought to be minimized in this zone.

- Exclusive Farm Use (EFU): Agricultural/Open Space Preservation
    - This zone is intended to preserve and expand agriculture uses and related industries by barring "conflicting uses, high taxation, and the cost of public facilities unnecessary for agriculture." This zone also calls for the protection of wildlife habitats and enhancement of air, water, and land resources.

Clackamas County (Unincorporated Areas and City of Damascus)

- Rural Residential Farm/Forest 5-Acre District (RRFF5):
    - Areas within the zone are designated as "Rural" in the county's Comprehensive Plan and consist of very low density development. New lots platted in this zone must encompass a minimum of five acres, with lots located inside the urban growth boundary being designed for future development at "urban densities".

Multnomah County

- Exclusive Farm Use (EFU): Agricultural/Open Space Preservation
    - This zone is geared towards preserving agriculture, open space, and forest lands and disallows non-agriculture or other incompatible uses. Air, land, and water quality is to be maintained and improved while resource and scenic areas are to be protected from new development.

- Multiple Use Agriculture, with 20-Acre Minimum Lot Size (MUA-20): Agricultural/Open Space Preservation
    - This zone is allotted for less intensive agricultural uses than the EFU designation with preference given to forestry, open space preservation, outdoor recreation, low-density residential and other uses that befit the rural character of this district on non-agriculture land.

- Orient Rural Center Residential (OR): Rural Residential, Min. 1 acre
    - *This zone will be subsumed by the IND-SW designation as mandated by the Springwater Community Plan.*

- Orient Commercial-Industrial District (OCI): Rural Commercial and Industrial, Min. 1 acre
    - *This zone will be subsumed by the IND-SW designation as mandated by the Springwater Community Plan.*

<u>City of Gresham</u>

- Industrial – Springwater (IND-SW)
    - This zone is intended to provide industrial land for the city of Gresham and the east metro area. It is intended to permit Advanced Materials, Medical Devices, Specialized Software Applications, Forestry & Agricultural Biotechnology, Nanotechnology, Recreational Equipment/Recreation Technology, Headquarters, Professional Services, Specialty Food Processing, Transportation Equipment/Technology, Logistics and other light to medium industries while utilizing sustainable design practices.

- Low Density Residential – Springwater (LDR-SW)
    - This zone consists of detached and attached dwellings, and at an average density of 5.8 to 7.3 dwelling units per net acre. It is intended to provide for standard lot (6,000-7,500 sq. ft.) housing developments.

- Low Density Residential-7 (LDR-7)
    - This zone is primarily intended for single-family detached dwellings and manufactured homes at a maximum density of 6.22 units per net acre. For all subdivisions, and for those partitions of parent parcels greater than 20,000 square feet, a minimum density of 4.35 units per net acre is required.

- Low Density Residential-5 (LDR-5)
    - This zone is primarily intended for single-family detached dwellings and manufactured homes at a maximum density of 8.71 units per net acre. For all subdivisions, and for those partitions of parent parcels greater than 20,000 square feet, a minimum density of 6.22 units per net acre is required.

- Transition Residential (TR)
    - This zone is intended for a mix of single-family detached, single-family attached and duplex housing. It is applied primarily to locations between more intense land use districts (such as those that allow multi-family residential and commercial uses) and less intense land use districts such as LDR-5 and LDR-7. The residential density is 6.2 to 18.2 units per acre.

- Moderate Density Residential-12 (MDR-12)
    - This zone is primarily intended for attached housing at a maximum net density of 12.1 units per acre and manufactured dwelling parks at a maximum net density of 8.71 units per acre.

- Moderate Density Residential-24 (MDR-24)
    - This zone is primarily intended for attached housing at a maximum net density of 24.2 units per acre and a minimum net density of 12.1 units per acre. Some non-residential uses may also be permitted within this district.

- General Commercial (GC)
    - This zone is intended to provide opportunities for retail, service and office development in commercial centers and existing commercial strips. Most business activities in this district are intended to be conducted within a completely enclosed building. A limited area may be used for outdoor business activities, product display or storage.

- Neighborhood Commercial (NC)
    - This zone is intended to provide for small to medium sized shopping and service facilities and limited office uses adjacent to residential neighborhoods and the industrial employment area. The sub-district is intended to meet the shopping and service needs of the immediate neighborhood and to have minimal negative impacts on surrounding residential uses.

<u>Springwater Plan District (Future)</u>

- Environmentally Sensitive/Restoration Areas – Springwater (ESRA-SW)
    - This zone protects as one connected system, the critical habitats and associated natural functions of the streams, riparian corridors, wetlands and the forested parts of buttes found in Springwater. It is intended to resolve conflicts between development and conservation of stream corridors, wetlands, floodplains, and forests identified in the Springwater Plan District. The ESRA-SW provisions do not affect existing uses and development, or the normal maintenance of existing structures, driveways/parking areas, public facilities, farmland and landscaped areas. New public facilities are allowed within the sub-district under prescribed conditions such as recreation trails, planned road and utility line crossings and stormwater facilities.

- Townhouse Residential – Springwater (THR-SW)]
    - This zone consists of detached and attached dwellings at an average density of 12.0 to 17.4 dwelling units per net acre, designed for separate units on separate lots. In addition to attached single family homes, it is intended to allow for detached single-family homes on small lots, also called patio, cottage or green court homes.

- Neighborhood Commercial – Springwater (NC-SW)
    - This zone is intended to provide for small to medium sized shopping and service facilities and limited office uses adjacent to residential neighborhoods and the industrial employment area. The sub-district is intended to meet the shopping and service needs of the immediate neighborhood and to have minimal negative impacts on surrounding residential uses.

- Research/Technology Industrial – Springwater (RTI-SW)
    - This zone is intended to provide space for industrial uses, related enterprises serving primarily industrial clients, and research and technology employment in office-type buildings. Primary uses shall include knowledge-based industries (graphic communications, creative services, and information technology), research and development facilities, limited professional service uses primarily serving industrial clients, and other industry focused uses. Emphasis is placed on businesses that are sustainable in nature and utilize green development practices.

APPENDIX E

US 26: Access to Springwater Community IAMP Existing Conditions Technical Report

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IAMP Existing Conditions Technical Report.
Prepared by Kittelson & Associates, Inc.,
Portland, Oregon.
August 3, 2007.

CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

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Prepared by Wade Scarbrough, P.E., Erin Ferguson, and Michael Houston

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Checked and approved by Marc A. Butorac, P.E., P.T.O.E

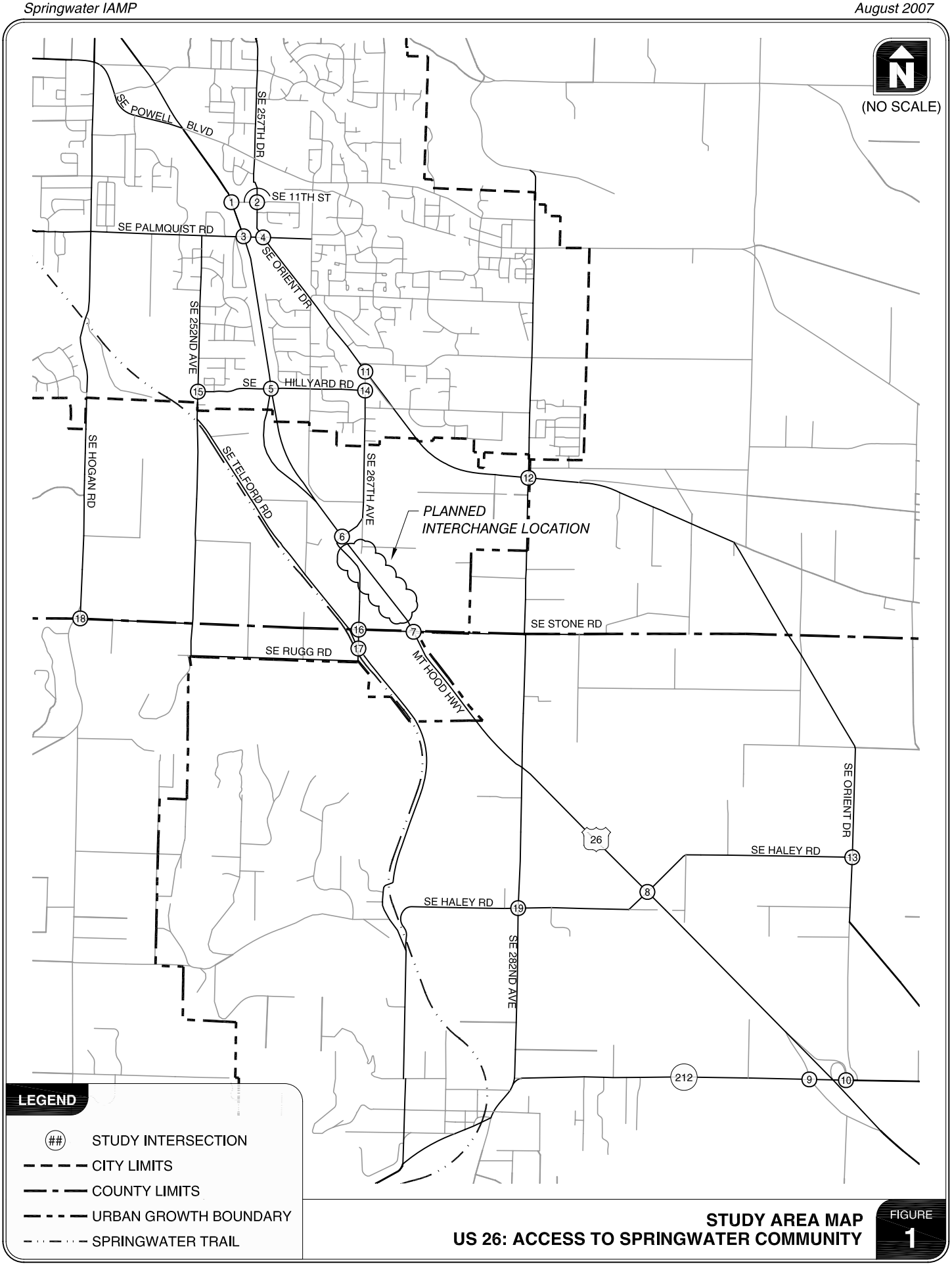
This technical report is one of a series of Access memorandums and reports being prepared to support the development of the US 26 Springwater Community Interchange Area Management Plan (IAMP) and the accompanying environmental analysis. This memorandum is an inventory (geometric and operational) of existing transportation conditions located within the vicinity of the proposed Springwater/US 26 interchange.

1. PROJECT STUDY AREA

The study area for the transportation analysis was selected based on a review of the surrounding roadway network, land use patterns, existing ODOT access spacing policies associated with a Statewide Expressway interchange, and input from ODOT and the City of Gresham. The study area includes roadways and intersections extending as far north as US 26/SE 11th Street, as far south as US 26/OR 212 interchange, as far east as SE Orient Drive/SE Haley Road and as far west as SE 242nd Avenue (SE Hogan Road)/SE Rugg Road. The intersections and roadways are located just within and extending beyond the eastern Metro urban growth boundary. The study area focuses on existing intersections along US 26 and surrounding roadways in the vicinity of the planned Springwater/US 26 interchange, as documented in the *Springwater US 26 Interchange Concept Design and Access Plan* (DKS & Associates, Inc., 2005). The planned location is south of the existing US 26/SE 267th Avenue intersection and north of the existing US 26/SE Stone Road intersection.

As part of the planned interchange, a new east-west arterial is also proposed for the Springwater area, connecting the areas on the east and west sides of US 26. To understand the effect of this new arterial and the proposed Springwater/US 26 interchange, the project team identified the existing study intersections that are likely to experience changes in travel patterns resulting from the proposed new roadways.

Figure 1 illustrates the existing conditions study area boundary and the proposed location for the Springwater interchange.



STUDY AREA MAP
US 26: ACCESS TO SPRINGWATER COMMUNITY

FIGURE 1

2. EXISTING TRANSPORTATION INVENTORY

The existing transportation inventory provides a detailed description of all transportation facilities and travel modes within the study area. In addition, the inventory identifies the current operational, traffic control, and geometric characteristics of roadways and other transportation facilities. A detailed description of these facilities is provided in the following sections.

2.1 ROADWAY FACILITIES

US Highway 26 (Mount Hood Highway) is a *Statewide Expressway* within the study area and serves as the primary connection between the Portland metro area and Mount Hood as well as beyond into Central Oregon. Within the urban areas of Portland and Gresham, the highway also serves an arterial function with numerous at-grade connections to city arterials and commercial developments. East of the urban area, there are several county roadways that intersect US 26 and provide access to rural residences and agricultural land uses. According to the Oregon Highway Plan, the primary function of a statewide expressway such as US 26 is to provide for inter urban travel and connections to ports and major recreation areas with minimal interruptions. A secondary function is to provide for long distance intra-urban travel in metropolitan areas.

Currently, access to US 26 is provided only at major intersecting public roadways such as regional arterials and collectors that support the suburban and rural communities in the area. Access is controlled by either interchanges (e.g. US 26 and OR 212), traffic signals, or by stop signs located on the minor street approaches. The arterials and collectors that intersect US 26 are supported by a network of secondary collectors and local streets whose functions are to balance the needs of regional and local mobility with access to adjoining properties. A more detailed description of these facilities is provided below.

2.1.1 US 26 (Mount Hood Highway)

The *1999 Oregon Highway Plan* (Reference 2) designates US 26 as a *Statewide Highway* and *Freight Route*, and the highway is considered a part of the National Highway System. The highway is also designated a *Statewide Expressway* from mile point (MP) 14.18 to MP 22.74 (East Powel Boulevard to Sandy City Limits). Throughout the project area, the highway consists of two travel lanes in each direction. The width and treatment of the median area varies throughout the study area. At the existing intersections along US 26, the median area consists of center left-turn turn lanes. Between intersections, the center treatment varies from a striped median (with no physical separator), to a wide a grass median, to a concrete barrier.

According to ODOT's *2005 Transportation Volumes Table* (Reference 3), the average annual daily traffic (AADT) along US 26 in this area ranges from approximately 26,000 AADT at the northern end of the study area to about 20,000 AADT at the southern end of the study area.

2.1.2 State Highways, Regional Arterials, and Secondary Roadways

Oregon Highway 212 (OR 212) is the only other statewide highway in the study area. It crosses and interchanges with US 26 at the southern end of the study area. Arterials within the study area are SE Orient Drive, SE 282nd Avenue, and SE 242nd Avenue. The study area collector facilities are SE Palmquist Road, SE 252nd Avenue, and SE Telford Road. The local and community streets selected for this study area SE 11th Street, SE Hillyard Road, SE Stone

Road, SE Haley Road, and SE Rugg Road. As mentioned above, these secondary facilities serve the access needs of area residents and business establishments.

Table 1 summarizes the major characteristics of US 26 and other study roadways. Figure 2 displays the existing lane configurations and traffic control devices at the study area intersections.

Table 1
Existing Transportation Facilities and Roadway Designations

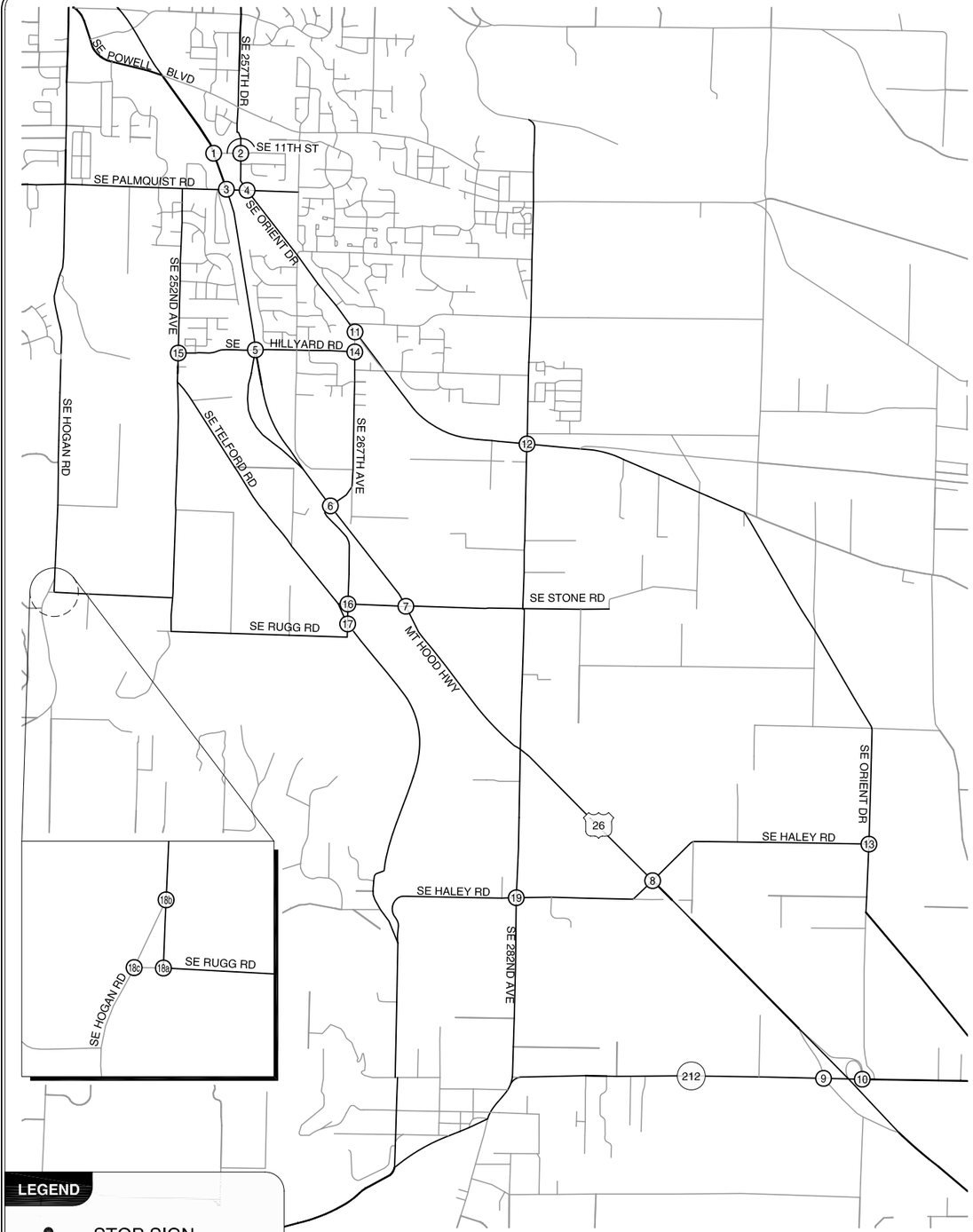
Roadway	Existing Roadway Functional Classification	Posted Speed (mph)	Side-walks	Bicycle Lanes?	On-Street Parking?
US 26 (Mt Hood Highway)	Statewide Highway, Expressway, and Freight Route	45/55	No	No	No
OR 212	Statewide Highway	NP[1]	No	No	No
SE Orient Drive	Major Arterial / Rural Arterial[2]	35/45	Partial[3]	Partial[3]	No
SE 11th Street	Community Street	25	Yes	Yes	No
SE Palmquist Road	Collector	35	Partial[3]	Yes	No
SE Hillyard Road	Community Street	25	Partial[3]	No	No
SE 267th Avenue	Rural Collector	25	Partial[3]	No	Partial[3]
SE Stone Road	Rural Local	NP[1]	No	No	No
SE Haley Road	Rural Local	35	No	No	No
SE 282nd Avenue	Rural Arterial	45	No	No	No
SE 252nd Avenue	Rural Collector	35	Partial[3]	No	No
SE 242nd Avenue (SE Hogan Road)	Rural Arterial	45	No	No	No
SE Rugg Road	Rural Local	NP[1]	No	No	No
SE Telford Road	Rural Collector	NP[1]	No	No	No

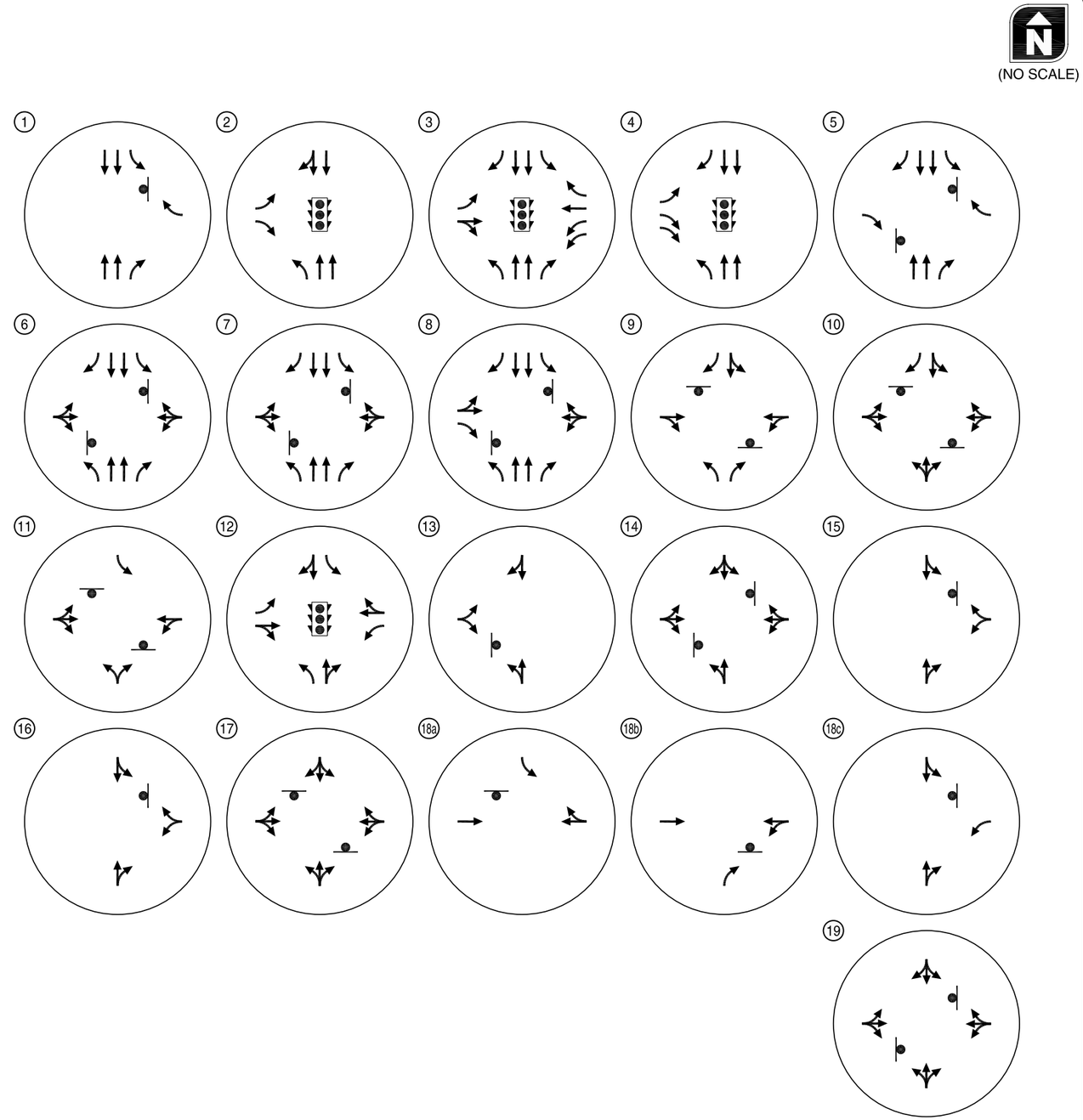
Notes:

[1] NP = The speed limit is not posted in the vicinity of the study intersection(s).

[2] South of 267th Avenue, Orient Drive becomes a Rural Arterial.

[3] Partial = These amenities are provided intermittently on the given facility throughout the study area.





EXISTING LANE CONFIGURATIONS & TRAFFIC CONTROL DEVICES
US 26: ACCESS TO SPRINGWATER COMMUNITY

FIGURE 2

2.2 PEDESTRIAN AND BICYCLE FACILITIES

There are currently no sidewalks along US 26 within the study area. Because this portion of highway is an expressway and located on the urban/rural fringe, providing sidewalks may not be appropriate. In addition, the Springwater Trail multi-use path passes through the study area and provides an alternative route for non-motorized users that is generally parallel to US 26 along the southwest side (immediately west of Telford Road). The paved trail begins near downtown Portland and currently extends as far east as the Rugg Road/Telford Road intersection. The trail continues east as a dirt path, although there are future plans to extend the paved trail as far east as Boring, Oregon.

In addition to the Springwater Trail, bicycle traffic is also accommodated directly on US 26 via paved shoulders (generally about ten feet wide) in both directions throughout the study area.

While the Springwater Trail and paved highway shoulders provide travel options along the US 26 corridor, there are limited opportunities for pedestrians and bicyclists to safely cross the highway. In the nearly 5-mile segment between SE Palmquist Road and OR 212, there are no east-west crossing opportunities (either signalized or grade-separated). Because the area is currently rural in nature, there is little need for pedestrian crossings. However, as the Springwater Industrial Area develops and the surrounding land on both sides of the highway urbanizes, new crossings for pedestrians and bicyclists should be provided.

Pedestrian and bicycle facilities are currently provided intermittently on the study streets within Gresham city limits (the northern portion of the study area). The study streets with existing pedestrian and bicycle facilities are SE 11th Street and portions of SE Palmquist Road, SE Orient Drive, SE Hillyard Road, SE 252nd Avenue, and SE 257th Drive. As these urban roadways are affected by future improvement projects, they should be upgraded to provide continuous sidewalks and bicycle lanes. The remainder of the study roadways are currently rural in character and generally do not have bicycle lanes and/or sidewalks. As the rural areas convert or transition to urbanized areas, the pedestrian and bicycle facilities should be upgraded on collector and arterial roadways.

2.3 PUBLIC TRANSPORTATION FACILITIES

TriMet Route 84 provides service within the study area. Route 84 travels on SE Powell Valley Boulevard, SE Orient Drive, and SE 282nd Avenue, providing a connection to Gresham Transit Center. It provides service Monday through Friday during the morning and evening peak hours with two buses in the morning peak (with about 1.5-hour headway) and two buses in the afternoon/evening separated by 3 hours.

The City of Sandy also provides bus service along US 26 through its Sandy Area Metro (SAM); it runs along US 26 and connects to the Gresham Transit Center. Service is provided on weekdays from approximately 5:30 a.m. to 8:00 p.m. The buses operate with 30-minute headways during the weekdays. Service is also provided on Saturdays from approximately 10:30 a.m. to 10:30 p.m. operating with 1-hour headways.

2.4 RAILROAD FACILITIES

There are no existing railroad facilities within the Springwater/US 26 IAMP study area.

2.5 AIRPORT FACILITIES

There are no existing airport facilities within the Springwater/US 26 IAMP study area.

3. EXISTING TRAFFIC VOLUMES AND PEAK HOUR OPERATIONS

Traffic data were collected during the month of May 2007 in the study area. The data included turning movement counts at the study intersections as well as a 7-day tube count on US 26. The collected traffic count data was then adjusted for seasonal variation to develop the design hour traffic volumes, and the study intersections were then analyzed to determine their existing operational performance. The remainder of this section summarizes the traffic data and operational analysis results. *Appendix "A" provides the turning movement data and 24-hour tube count collected for this study.*

3.1 SEASONAL ADJUSTMENT FACTOR

Highways serving tourist and recreational destinations are often prone to seasonal fluctuations in traffic volumes. In the case of US 26, the skiing and other recreational activities of the Mount Hood area create peaks in the traffic volumes during the summer and winter months. Using the methodology outlined by ODOT's Transportation Planning Analysis Unit, a seasonal adjustment factor of 1.05 was calculated for the mid-May traffic count data. The adjustment factor was applied to the collected tube count data and turning movement count data on US 26 to represent the 30th highest hour yearly volume, or the design hour volume.

3.2 US 26 TUBE COUNT VOLUMES

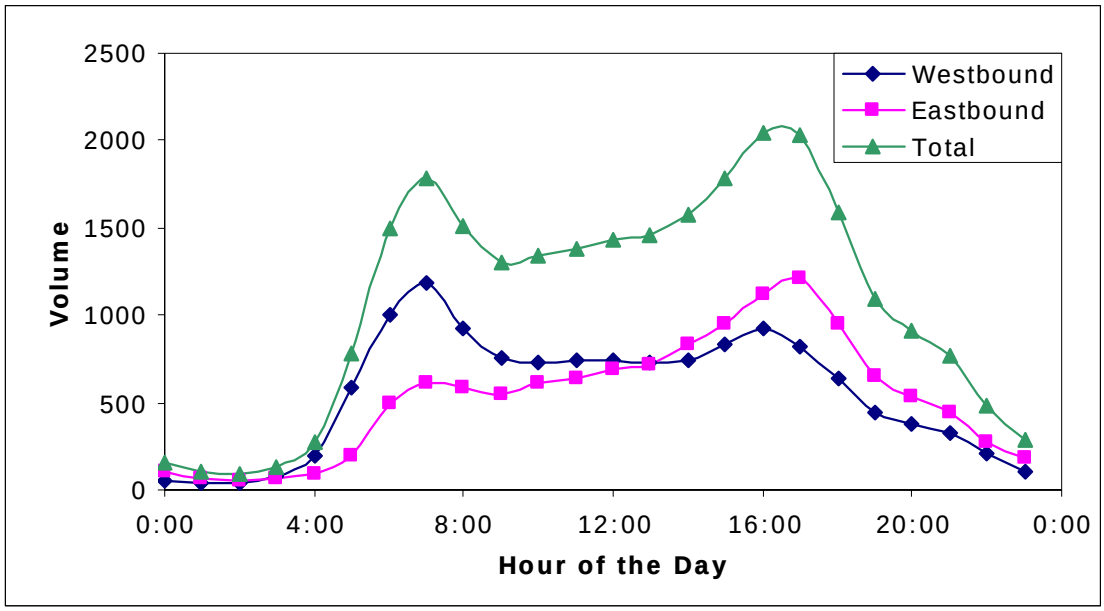
7-day tube count data were collected during the month of May 2007 on US 26, approximately 300 feet south of SE 267th Avenue. Table 2 summarizes the peak season weekday and weekend average daily traffic (ADT) volume on US 26, based on the May 2007 tube counts with the seasonal adjustment of 1.05 applied (as discussed above in Section 3.1).

Table 2
Measured Peak Season Average Daily Traffic

Roadway	Direction	Weekday ADT (veh/day)	Weekend ADT (veh/day)
US 26	Westbound (Northbound)	13,885	11,890
	Eastbound (Southbound)	13,245	10,815

Figure 3 shows the hourly weekday volume for each direction on US 26. As shown in the figure, the westbound traffic has a sharp peak in the morning between 7 and 8 a.m., while the eastbound direction peaks between 4 and 6 p.m. The heaviest total volume occurs during the evening peak hour. This weekday profile illustrates that the heaviest movement during the morning peak is traveling northwest toward Portland. During the evening peak, the trend reverses with the majority of traffic traveling out of Portland to the southeast suburbs.

Figure 3
Weekday Volume Profile on US 26



Figures 4 and 5 show a comparison of the typical volume profiles for each the day of the week in the westbound and eastbound directions, respectively.

Figure 4
Westbound Volume Profile for US 26

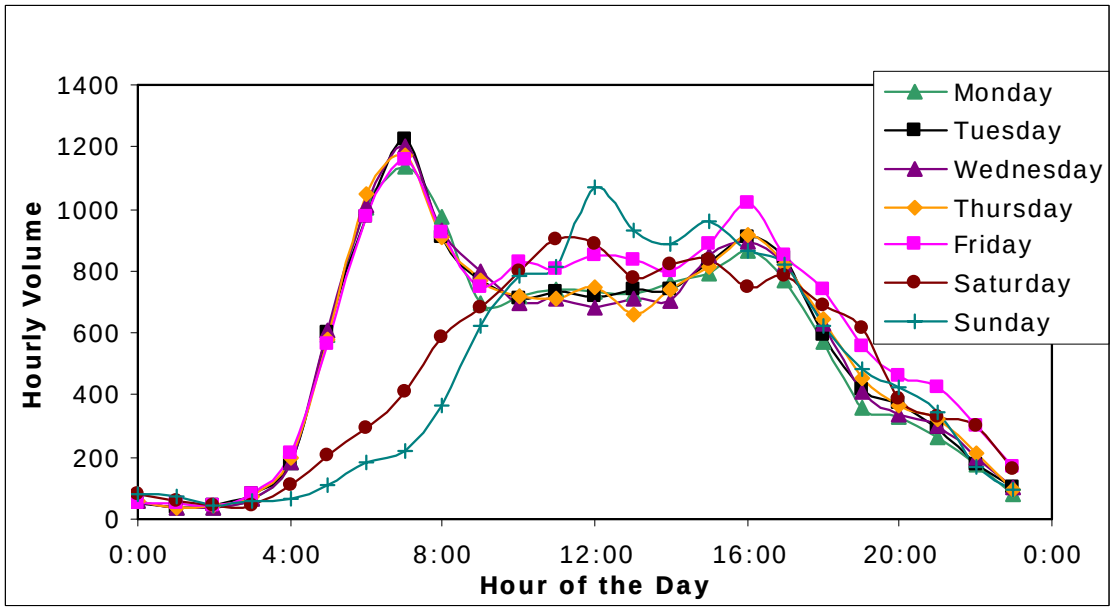
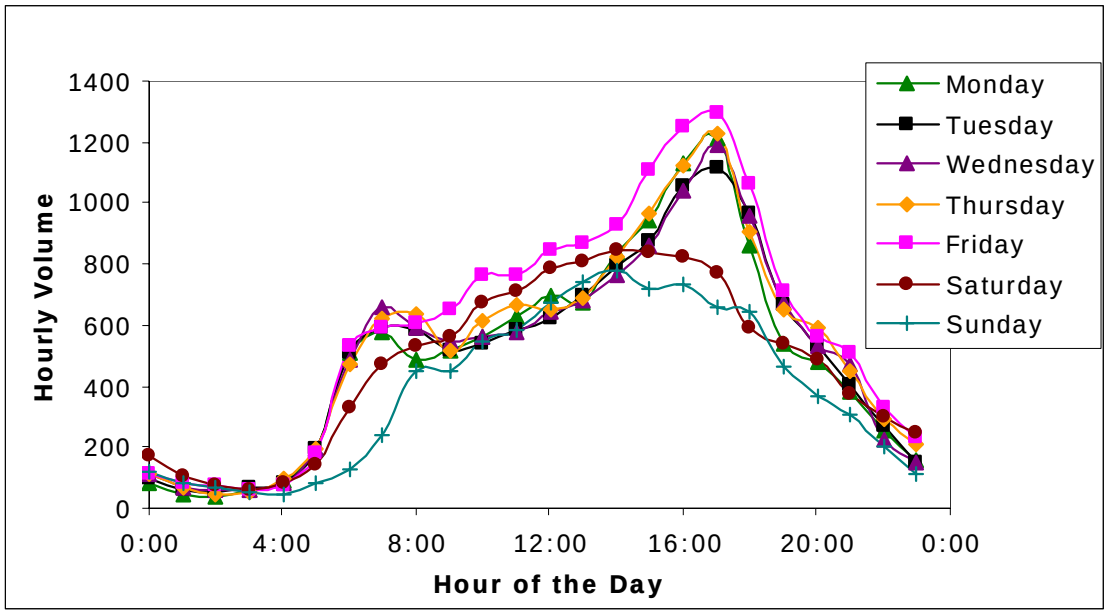


Figure 5
Eastbound Volume Profile for US 26

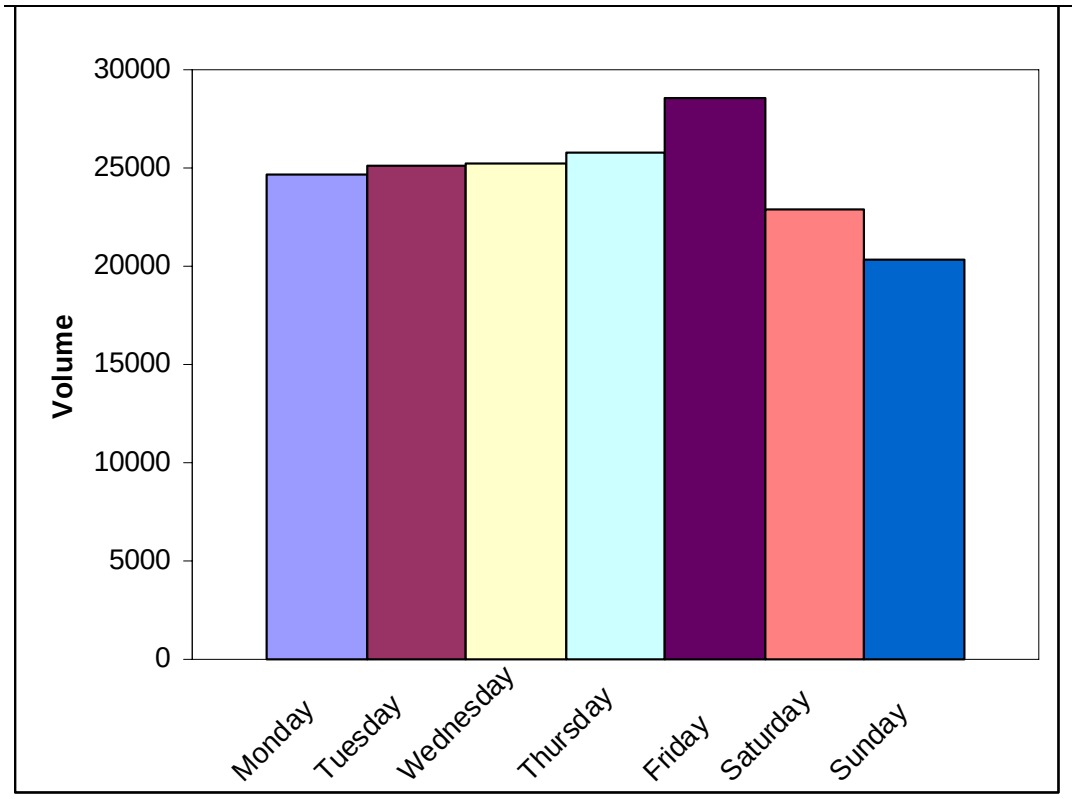


As shown in Figure 4, each weekday has a similar westbound weekday a.m. peak hour in both time and volume. The a.m. peak also occurs for a relatively short duration, spiking for one hour, and is considerably higher than the same weekend hours of the day. The weekday p.m. peak is spread out over a longer period of time and is less consistent between weekdays. The weekday p.m. peak is lower than the weekday a.m. peak and the weekends have similar volumes as during the week.

Figure 5 shows that the eastbound weekday a.m. peak is spread out and has a relatively low volume compared to the weekday p.m. peak hours. The weekday p.m. peak is the highest for the day and occurs between 5 and 6 p.m. The volumes are fairly consistent for the weekdays during the weekday p.m. peak, but rise as the week progresses and finally reach their highest volume on Friday. The higher volumes on Friday are likely due to the addition of recreational traffic headed east to the Mount Hood and Central Oregon area. Weekend volumes are not as high as the weekday volumes.

Figure 6 shows the daily volume in both directions on US 26 where the tube-count was taken. This bar graph shows the total traffic flows are relatively consistent Monday through Thursday. Friday has the highest total volume of cars on the highway, and Sunday has the lowest overall volume. It also shows that all the weekday volumes are larger than the weekend volumes.

Figure 6
Daily Volumes in Both Directions on US 26



3.3 HEAVY VEHICLES

Vehicle classification information was collected as part of the tube counts conducted on US 26. The vehicle classification information was used to calculate the average heavy vehicle volume and percentage of heavy vehicles on US 26 during an average weekday, weekend day, weekday a.m. peak hour, and weekday p.m. peak hour. Table 3 summarizes this heavy vehicle volumes and percentages on US 26 within the study area.

Table 3
Heavy Vehicle Traffic Volumes and Percentages

Time Period	Westbound (Northbound)		Eastbound (Southbound)	
	Heavy Vehicle Volume	Percentage of Total Traffic	Heavy Vehicle Volume	Percentage of Total Traffic
Weekday Average	2090	15.8%	1015	8.4%
Weekend Average	1470	13.0%	490	4.8%
A.M. Peak Hour	150	12.9%	60	9.5%
P.M. Peak Hour	110	12.0%	80	7.0%

3.4 SYSTEM PEAK HOUR INTERSECTION VOLUMES

From the manual intersection turning movement counts conducted in May 2007, weekday morning (7:00 – 9:00 a.m.) and evening (4:00 – 6:00 p.m.) peak hour traffic volumes were summarized for the purposes of evaluating the existing traffic operations at the key study intersections. Using the peak period count data, the system peak hour was determined across the study intersections located on US 26. The weekday morning system peak hour was found to occur from 7:00 to 8:00 a.m. and the weekday evening system peak hour was found to occur from 4:30 to 5:30 p.m.

The individual intersection peak hours were used for the study intersections not located on US 26 to provide the most conservative traffic operations results.

The seasonally adjusted turning movement volumes for the weekday a.m. and p.m. peak hours are shown in Figures 7 and 8. The weekday p.m. peak hour volumes shown in Figure 8 represent the 30th highest hour (design hour) volumes for the study intersections.

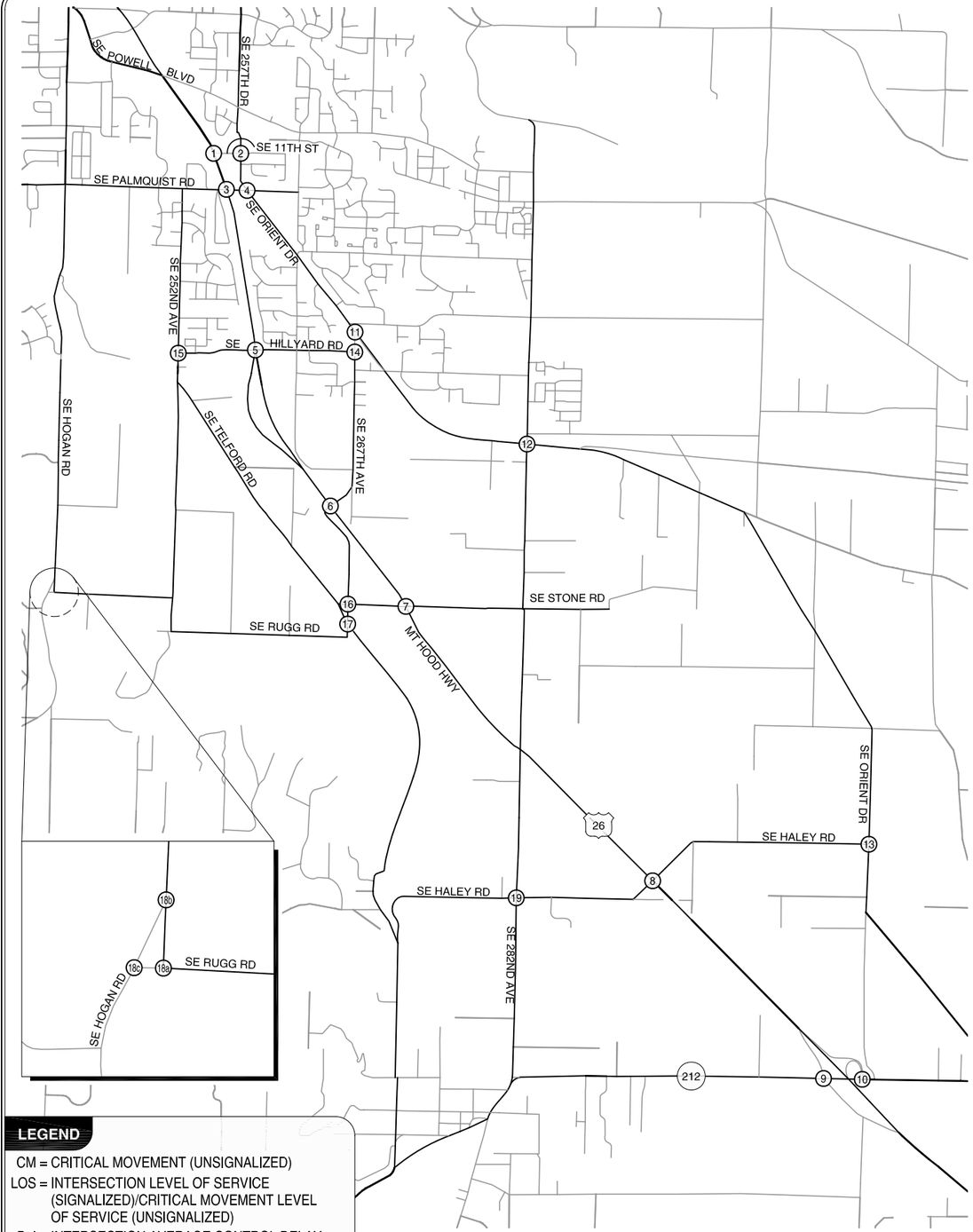
3.5 APPLICABLE MOBILITY STANDARDS

The applicable mobility standards for each of the study intersections varies according to the agency with governing jurisdiction over the roadways. For the intersections located on US 26, the operational standards are defined by the *1999 Oregon Highway Plan*. The remaining study intersections fall under the City of Gresham's and Clackamas County's mobility standards. Table 4 summarizes the applicable mobility standards for the study intersections. *Appendix "B" summarizes the Level-of-Service Methods and Criteria used in the 2000 Highway Capacity Manual*.

Table 4
Mobility Standards

	Urban Intersections	Rural Intersections
ODOT		
State Highway Approach	v/c = 0.90	v/c = 0.70
Side Street Approach	v/c = 0.95	v/c = 0.80
City of Gresham		
Signalized Intersection[1]	LOS D, v/c = 0.90	
Unsignalized Intersection	LOS E	
Clackamas County		LOS D

Notes:
[1] City of Gresham also specifies that each movement at a signalized intersection operate with LOS E or better and with a v/c ratio less than 1.0.



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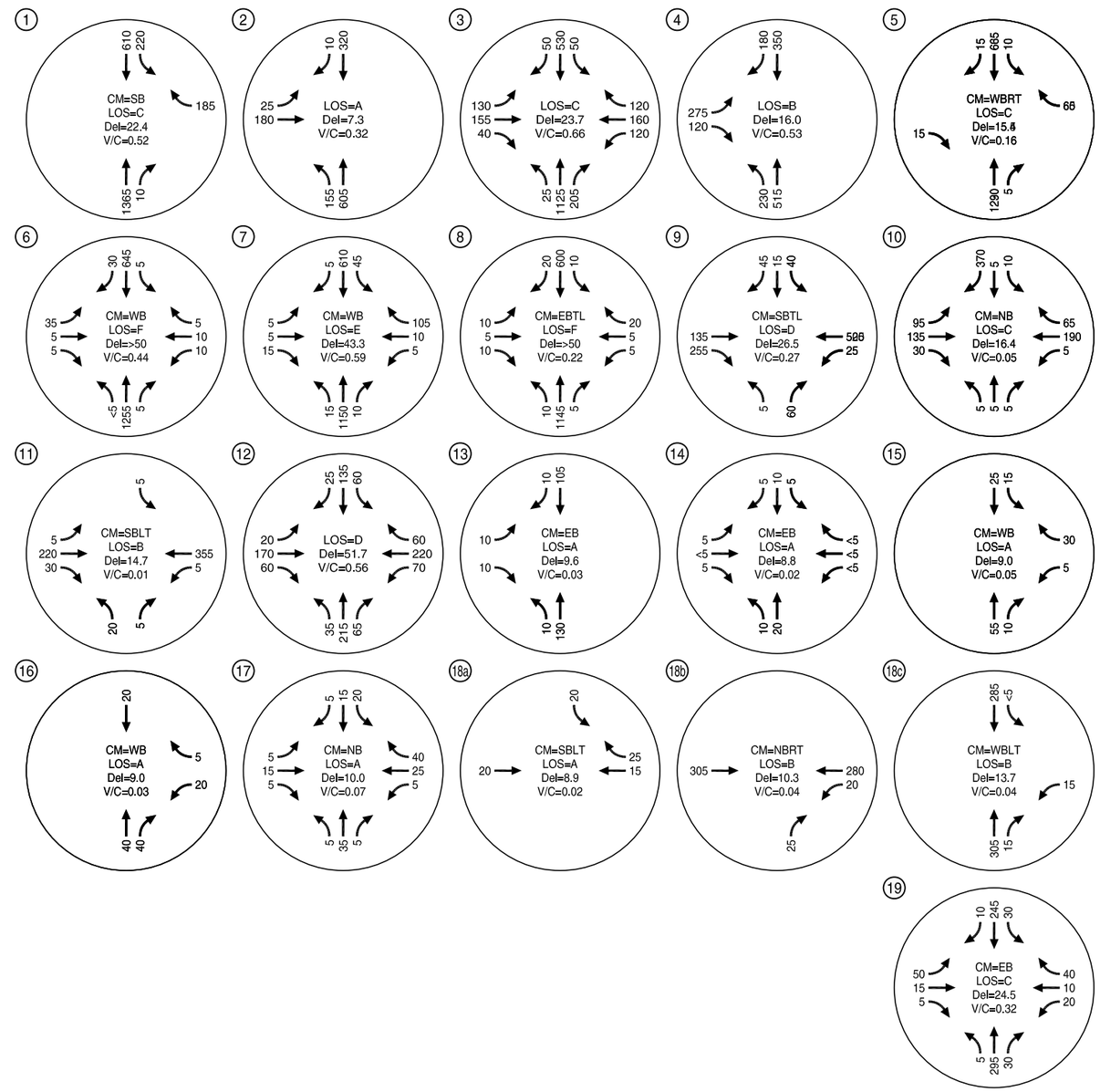

LEGEND

CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

EXISTING TRAFFIC CONDITIONS WEEKDAY AM PEAK HOUR
US 26: ACCESS TO SPRINGWATER COMMUNITY

FIGURE 7

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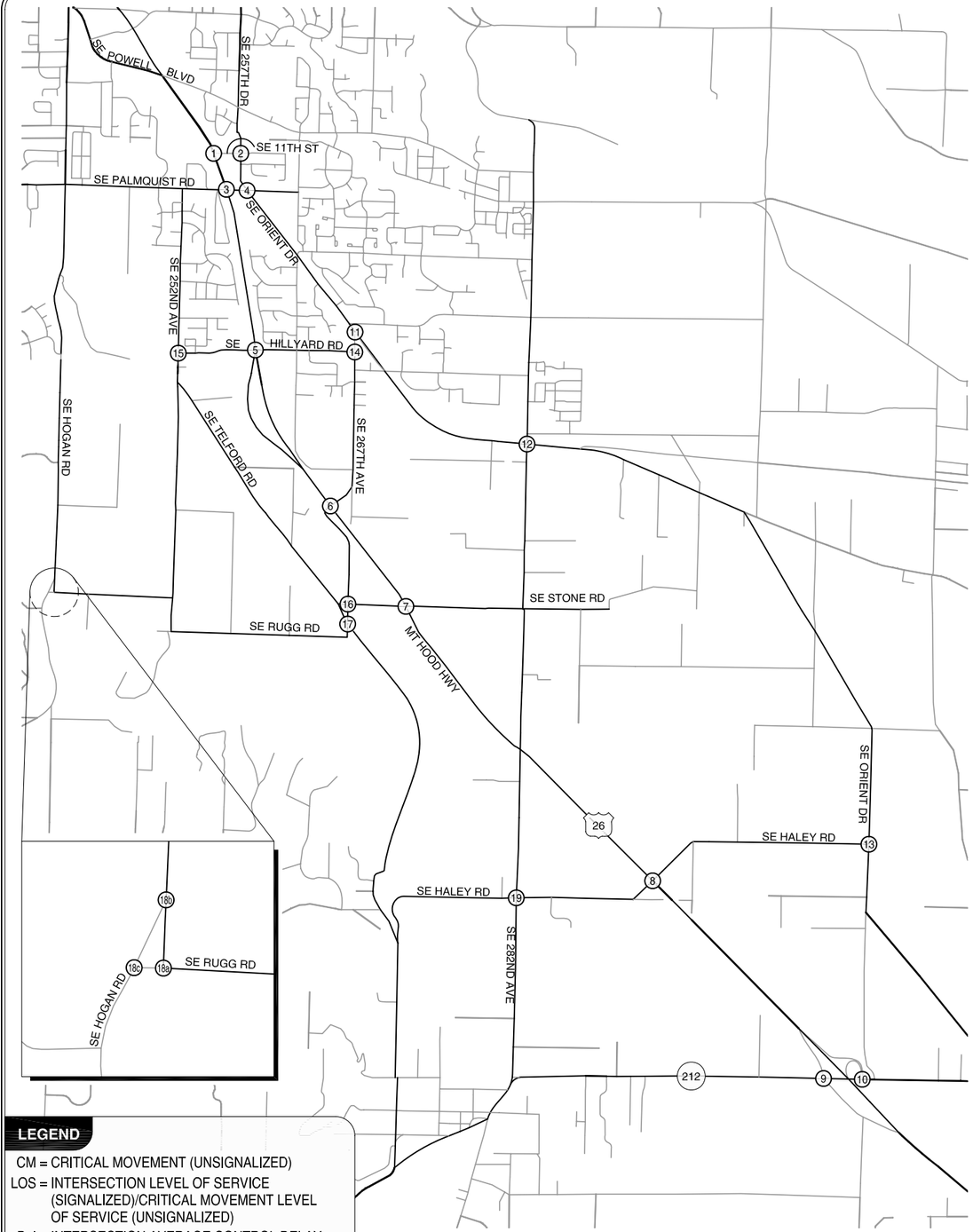

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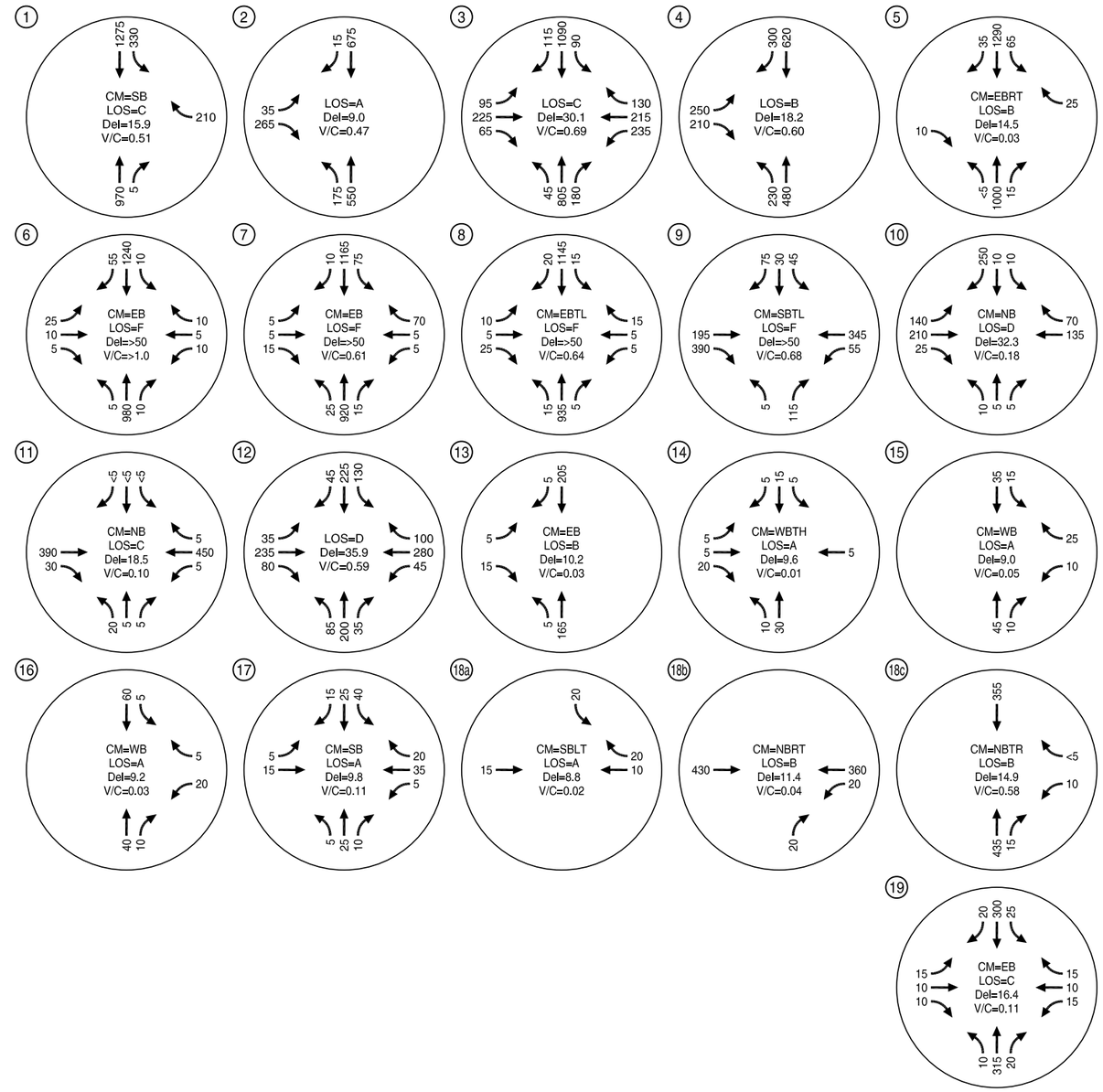

LEGEND

CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

EXISTING TRAFFIC CONDITIONS WEEKDAY PM PEAK HOUR
US 26: ACCESS TO SPRINGWATER COMMUNITY

FIGURE 8

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3.6 EXISTING INTERSECTION OPERATIONS

All operational analyses described in this report were performed in accordance with the procedures outlined in the *2000 Highway Capacity Manual* (Reference 4). The signalized intersections were analyzed using the *Synchro* traffic analysis software. The 11th Street/US 26 intersection was also analyzed using *Synchro* due to its proximity to the Palmquist/US 26 intersection. The remaining unsignalized intersections were analyzed using the *Traffix* analysis software.

Using the weekday a.m. and p.m. peak hour traffic volumes shown in Figures 7 and 8, the existing intersection operations at each of the study intersections were calculated and are also summarized in Figures 7 and 8. *Appendix "C" contains the existing intersection operations analysis worksheets.*

As shown in Figures 7 and 8, the US 26/SE 267th Avenue intersection is the only intersection that does meet the acceptable traffic operations standards; all other study intersections operate acceptably during the weekday a.m. and p.m. peak hours. The minor street approach of this unsignalized intersection has a volume-to-capacity ratio of 1.42 during the weekday p.m. peak period.

3.7 FREIGHT MOBILITY

The current roadway geometry at the accesses to US 26 within the study area are all adequate to accommodate heavy vehicles used to transport freight (e.g. trucks with a wheel-base of 67 feet). In addition, the existing conditions traffic operations analysis indicates that all movements on US 26 meet the mobility standards according to the 1999 Oregon Highway Plan. Therefore, the existing geometric characteristics and traffic operations on US 26 are adequate to facilitate and accommodate freight mobility under existing traffic conditions.

4. TRAFFIC SAFETY

The crash histories at the respective study intersections were reviewed in an effort to identify existing safety issues at the study area intersections and roadways. Crash records were obtained from ODOT for the five-year period from January 1, 2002 through December 31, 2006.

4.1 INTERSECTION CRASH DATA

A summary of the intersection crash data, including the type and severity of crashes, is provided in Table 5. *Appendix "D" contains the crash data obtained from ODOT.*

Table 5
Study Intersections—Crash Frequency (2002-2006)

Intersection	Total Number of Crashes	Collision Type				Severity		
		Turning	Rear-End	Angle	Other	PDO*	Injury	Fatality
US 26/ SE Palmquist Rd	22	5	9	7	1	8	14	0
US 26/ SE Hillyard Rd	2	1	1	0	0	1	1	0
US 26/ SE 267th Ave	1	0	0	1	0	0	0	1
US 26/ SE Stone Rd	3	1	1	1	0	0	3	0
US 26/ SE Haley Rd	5	4	0	1	0	3	2	0
US 26/OR 212	31	7	18	6	0	16	15	0
SE Orient Dr/ SE 11th St	5	1	2	1	1	2	3	0
SE Orient Dr/SE Palmquist Rd	0	0	0	0	0	0	0	0
SE Orient Dr/SE 267th Ave	0	0	0	0	0	0	0	0
SE Orient Dr/ SE 282nd Ave	6	2	2	2	0	3	3	0
SE Orient Dr/ SE Haley Rd	1	1	0	0	0	0	0	1
SE 252nd Ave/ SE Hillyard Rd	1	0	0	1	0	1	0	0
SE 282nd Ave/ SE Haley Rd	4	2	0	1	1	0	4	0
SE 267th Ave/SE Hillyard Rd	0	0	0	0	0	0	0	0
SE 267th Ave/SE Stone Rd	0	0	0	0	0	0	0	0
SE 267th Ave/SE Telford Rd	0	0	0	0	0	0	0	0
SE Hogan Rd/ SE Rugg Rd	2	0	1	0	1	0	2	0
SE 242nd Ave/ SE Rugg Rd	1	1	0	0	0	0	1	0
SE 242nd Ave/ SE Hogan Rd	1	1	0	0	0	0	1	0

Notes:
Crash data for US 26/SE 11th Street was not available.
*PDO = Property Damage Only

As shown in Table 5, there were two fatal collisions within the study area during the five-year analysis period: one at the US 26/SE 267th Avenue intersection and one at the SE Orient Drive/SE Haley Road intersection. According to the crash data, the fatal crash that occurred at the US 26/SE 267th Avenue intersection was caused by a southbound driver on SE 267th failing to yield the right-of-way to an eastbound motorist on US 26. At the SE Orient Drive/SE Haley Road intersection, ODOT's data indicates the cause was an eastbound left-turning motorist failing to obey the stop sign. Based on a review of the crash data and assessment of the existing physical condition of these two intersections, there does not appear to be a need for geometric and/or traffic control modifications.

To evaluate the frequency of crashes with respect to the traffic volume, crash rates for intersections are often expressed in crashes per million entering vehicles (MEV). The crash rates of the study intersections are summarized in Table 6.

Table 6
Study Intersections—Crash Rates (2002-2006)

Intersection	Number of Crashes	Crashes Per Year	Peak Hour TEV	MEV / Year	Crashes / MEV
US 26 / SE Palmquist Rd	22	4.4	3135	13.73	0.32
US 26 / SE Hillyard Rd	2	0.4	2335	10.23	0.04
US 26 / SE 267th Ave	1	0.2	2255	9.88	0.02
US 26 / SE Stone Rd	3	0.6	2205	9.66	0.06
US 26 / SE Haley Rd	5	1.0	2100	9.20	0.11
US 26 / OR 212	31	6.2	2035	8.91	0.70
SE Orient Dr / SE 11th St	5	1.0	1720	6.28	0.16
SE Orient Dr / SE 282nd Ave	6	1.2	1495	5.46	0.22
SE Orient Dr / SE Haley Rd	1	0.2	400	1.46	0.14
SE 252nd Ave / SE Hillyard Rd	1	0.2	140	0.51	0.39
SE 282nd Ave / SE Haley Rd	4	0.8	765	2.79	0.29
SE Hogan Rd / SE Rugg Rd	2	0.4	65	0.24	1.67
SE 242nd Ave / SE Rugg Rd	1	0.2	820	2.99	0.07
SE 242nd Ave / SE Hogan Rd	1	0.2	830	3.03	0.07

Notes:
Study intersections without any reported crashes are not listed in this table.
TEV = Total Entering Vehicles
MEV = Million Entering Vehicles

The intersection crash data were further evaluated to determine if any crash patterns or trends are present at the study intersections. With the exception of the US 26/Palmquist Road intersection and US 26/OR 212 intersections, the study intersections have had six or fewer crashes over the 5-year period, an average of one or fewer crashes per year.

At the US 26/OR 212 interchange, the data shows that eighteen rear-end collisions have occurred in the past five years, eleven of which occurred at the southbound off-ramp. One

potential contributing factor to the rear end crashes could be that drivers are occasionally unprepared to yield or stop at the as they exit via the loop ramp to OR 212.

The data for the US 26/SE Palmquist Road intersection show a range of crash types with no predominant trends or locations. No specific geometric or traffic control deficiencies are identified.

In addition to evaluating the intersection crash data, the project team reviewed ODOT's *2006 Five Percent Report*, which identifies the top five percent of highway locations exhibiting the most severe safety needs based on the Safety Priority Index System (SPIS). None of the intersections in the study area were identified in the ODOT report.

4.2 OVERALL ROADWAY CRASH DATA

Crash data for the segment of US 26 that extends from SE 11th Street to the ORE 212 interchange were also analyzed for potential safety issues. Table 7 summarizes the severity and type of crashes over the same five-year analysis period.

Table 7
US 26 Crash Frequency (2002-2006)

Segment	Number of Crashes	Collision Type				Severity		
		Turning	Rear-End	Angle	Other	PDO*	Injury	Fatality
US 26 from SE 11th St to OR 212	98	28	35	19	31	45	52	1

*PDO = Property Damage Only

Comparing the data in Table 7 to the intersection crash data reveals that thirty-four of the total crashes on the study segment of US 26 from 2002 to 2006 did not occur at the intersections. Approximately half of those crashes between intersections were with fixed objects. A more detailed review of the data found there were no predominant locations or causes of the crashes.

The crash rate for a segment is usually expressed by the number of crashes per million vehicle miles (MVM) on the segment. Using the milepost (MP) numbers provided by ODOT, the length of the segment was determined to be 5.51 miles. Table 8 shows the crash rate for the segment compared to the statewide average crash rate.

Table 8
US 26 Crash Rate (2002-2006)

Segment	Number of Crashes	Crashes Per Year	MVM/ Year	Crashes/ MVM	Statewide Average Crashes/MVM
US 26 from SE 11th Street to ORE 212	98	19.6	50.99	0.38	0.80

For comparison purposes, the statewide average in year 2005 for expressways in Urban areas and for Non-Interstate Freeways in rural areas was 0.80 crashes/MVM (information obtained from ODOT's Crash Table II and Table III, see *Appendix "D"*). As shown in Table 8, the

crash rate for US 26 segment within the study area is less than statewide average for similar facilities.

5. EXISTING ROADWAY ACCESS CONDITIONS

The spacing standards for all state facilities are located in the 1999 Oregon Highway Plan and Oregon Administrative Rules (OAR) 734-051 Division 51 rules. The standards as they pertain to US 26 in this study area are summarized below in Table 9.

Table 9
Spacing Standards

	Urban	Rural
Interchanges[1]	1.9 miles	3.0 miles
Intersection[2]	2,640 feet	5,280 feet
Interchange to Intersection[3]	1.0 mile	2.0 miles

Notes:
[1]Source: 1999 Oregon Highway Plan Table 12
[2]Source: OAR Division 51 Table 6
[3]Source: OAR Division 51 Table 1

A majority of the study intersections along US 26 fall within the urban growth boundary. Table 10 summarizes the applicable access standards and the current spacing of accesses along US 26 within the study area.

Table 10
Existing Access Spacing on US 26

Accesses to US 26	Current Spacing (feet)	Applicable Standard (feet)	Standard Met?
SE 11th Street to SE Palmquist Road	740	2,640	No
SE Palmquist Road to SE Hillyard Road	3,600	2,640	Yes
SE Hillyard Road to SE 267th Avenue	4,000	2,640	Yes
SE 267th Avenue to SE Stone Road	2,800	2,640	Yes
SE Stone Road to SE Haley Road	8,300	2,640	Yes
SE Haley Road to OR 212	4,900	10,560	No

With the exception of two locations, the current access spacing meets ODOT's standards. The distance between SE 11th Street and SE Palmquist Road, and the distance between SE Haley Road and the OR 212 interchange do not meet ODOT standards.

6. FINDINGS

This analysis of existing transportation conditions resulted in the following findings:

- Current pedestrian and bicycle facilities along US 26 are sufficient and consistent with the rural expressway character of the highway. Many of the study arterials and

collector roadways, particularly those outside the City of Gresham, do not currently have continuous pedestrian or bicycle facilities. As these existing rural areas transition to urbanized areas the pedestrian and bicycle facilities of the surrounding arterial and collector streets should be provided.

- All study intersections are currently operating acceptably during the weekday a.m. and p.m. peak periods, with the exception of the US 26/SE 267th Avenue intersection. The existing deficiency at this intersection occurs at the minor street approach, which has a volume-to-capacity ratio of 1.42 (exceeding ODOT's standard of 0.95).
- Based on a review of intersection geometry and operational performance, freight mobility on US 26 within the study area is sufficient.
- The traffic safety analysis indicates that there may be a trend or pattern of rear-end crashes at the US 26/OR 212 interchange while the remaining study intersections did not exhibit any apparent crash patterns. None of the intersections or highway segments in the study area was identified on ODOT's *Five Percent Report*, based on 2006 Safety Priority Index System (SPIS).
- There are two locations along US 26 that do not meet the access spacing standards according to the 1999 Oregon Highway Plan and the Oregon Administrative Rules (OAR) 734-051 Division 51 rules. These locations are: 1) US 26/ SE 11th Street intersection to US 26/SE Palmquist Road and 2) US 26/SE Haley Road to the US 26/OR 212 interchange. All other accesses to US 26 meet the applicable spacing standards.

7. REFERENCES

1. Oregon Department of Transportation. Division 51: Highway Approaches, Access Control, Spacing Standards and Medians. Oregon Administrative Rules 734-051. 2000.

2. Oregon Department of Transportation. 1999 Oregon Highway Plan. 1999.

3. Oregon Department of Transportation. 2005 Transportation Volume Tables. http://www.oregon.gov/ODOT/TD/TDATA/tsm/docs/2005_TVT.pdf

4. Transportation Research Board. 2000 Highway Capacity Manual - HCM 2000. 2000.

APPENDIX F

KITTELSON & ASSOCIATES, INC.
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MEMORANDUM

Date:	November 8, 2010	Project #: 8505
To:	Jason Franklin, Parametrix	
From:	Wade Scarbrough, P.E.	
Project:	U.S. 26: Access to Springwater Community	
Subject:	Traffic Analysis of Selected Alternative - Updated	

This memo summarizes the projected traffic analysis results for the selected alternative (Alternative "C-2") of the U.S. 26/Access to the Springwater Area Interchange.

Consistent with the preliminary analysis of alternatives, this analysis focuses on the forecast 2035 traffic conditions within the project study area. For more details related to the land use assumptions and basis of the future traffic projections, please see the *Updated Future Traffic Volumes and Preliminary Findings Memorandum* (Kittelson & Associates, Inc., October 20, 2008). The remainder of this memorandum summarizes results of the future year traffic analysis at the study intersections.

Future Transportation Network

The future transportation network assumed for the study area was based on the recommended network from the Springwater Master Urbanization Plan (which has also been adopted into the Gresham Transportation System Plan). Key transportation improvements within the Springwater Area are as follows:

- A new five-lane arterial would be constructed from the Hogan Road/Rugg Road intersection on the west to Orient Drive on the east.
- A new interchange on U.S. 26 would be provided at the new Arterial Road.
- A new three-lane collector road would extend from the Hogan Road/Butler Road intersection on the west to the new arterial on the east. The collector would cross U.S. 26 via a new overpass structure.
- Hogan Road would be improved to a five-lane arterial.
- Orient Drive would be improved to a five-lane arterial from Palmquist Road to 282nd Avenue.

Projected 2035 Traffic Volumes

The projected 2035 design hour traffic volumes at the study intersections are presented in Figures 1 and 2. As discussed in previous analyses, the design hour for this project corresponds to the weekday p.m. peak hour.

Recommended Lane Configurations and Traffic Control

KAI conducted operational analyses under the projected 2035 traffic volumes to identify recommended lane configurations and traffic control measures at the study intersections. Traffic signal warrant analyses were conducted at the key intersections to determine whether the intersections would meet signal warrants under the future traffic conditions. The signalized intersections were then analyzed using Synchro software, while the unsignalized intersections were analyzed using the *2000 Highway Capacity Manual* methodology.

Based on the analysis results, a number of additional capacity improvements are recommended at several study intersections. These network improvements, which would be beyond those included in the TSP, are as follows:

- On Orient Drive, the dominant travel pattern is for traffic to stay on Orient Drive, rather than turning onto the proposed arterial. Therefore, the existing alignment of Orient Drive should be preserved to maintain the continuity for through traffic. The proposed arterial street should connect to Orient Drive at a 90-degree "T" intersection. This intersection configuration would be a change from the adopted TSP.
- The projected travel demand volume on Hogan Road results in the need for three southbound through lanes within the study area. This demand is likely composed primarily of traffic from Gresham destined for Damascus and/or Boring. In actuality, capacity constraints north of the study area along 242nd Avenue would likely limit these traffic flows and may prevent the projected demand from being fully realized. Nevertheless, the need for a five-lane section on Hogan Road is apparent.
- Significant capacity improvements will be needed at the U.S. 26/Palmquist intersection to address the future traffic demand. Similar to Hogan Road, the actual traffic growth at this intersection will likely be limited by upstream capacity constraints. However, the City of Gresham and ODOT should anticipate the need for future improvements and consider further evaluation of this intersection area.

Figures 3 and 4 display the recommended lane configurations and resulting volume-to-capacity ratios at each study intersection under the projected 2035 traffic volumes.

Analysis Results

Table 1 summarizes the 2035 levels of service at each of the study intersections. The analysis worksheets are provided in Attachment "B."

Table 1 Intersection Analysis Results, Projected 2035 Design Hour Traffic Conditions

Intersection	Intersection Control	Volume-to-Capacity	Level of Service
US 26 / SE 11th St	Unsignalized	1.38	F
US 26 / SE Palmquist Rd	Signalized	0.88	D
US 26 / SE Hillyard Rd	Unsignalized	0.44	F
US 26 Westbound Ramps / *Proposed Arterial*	Signalized	0.76	D
US 26 Eastbound Ramps / *Proposed Arterial*	Signalized	0.79	D
SE 257th Dr / SE 11th St	Signalized	0.74	B
SE Orient Dr / SE Palmquist Rd	Signalized	0.85	C
SE Orient Dr / SE 267th Ave	Unsignalized	0.94	F
SE Orient Dr / *Proposed Arterial*	Signalized	0.74	B
SE Orient Dr / SE 282nd Ave	Signalized	0.82	C
SE 267th / SE Hillyard Rd	Unsignalized	0.04	A
SE 267th / *Proposed Collector*	Unsignalized	0.11	B
Proposed Collector / Proposed Arterial	Signalized	0.43	A
SE Telford Rd / *Proposed Collector*	Signalized	0.66	B
SE Telford Rd / *Proposed Arterial*	Signalized	0.79	C
SE 252nd Ave / SE Hillyard Rd	Unsignalized	0.13	C
SE 252nd Ave / *Proposed Collector*	Signalized	0.66	B
SE 252nd Ave / *Proposed Arterial*	Signalized	0.58	A
SE Hogan Rd / SE Butler Rd	Signalized	0.90	D
SE Hogan Rd / SE Rugg Rd	Signalized	0.81	B

As shown in Table 1, the study intersections will all operate acceptably under the recommended lane configurations, with the exception of three unsignalized intersection intersections. The US 26/SE 11th Street intersection, the US 26/SE Hillyard Road intersection, and the SE Orient Drive/SE 267th Avenue intersection are expected to operate at LOS "F" by 2035. Additional turn restrictions may be appropriate at these intersections to address delays at the minor street approaches. These intersections will not influence the design or performance of the proposed interchange alternative.

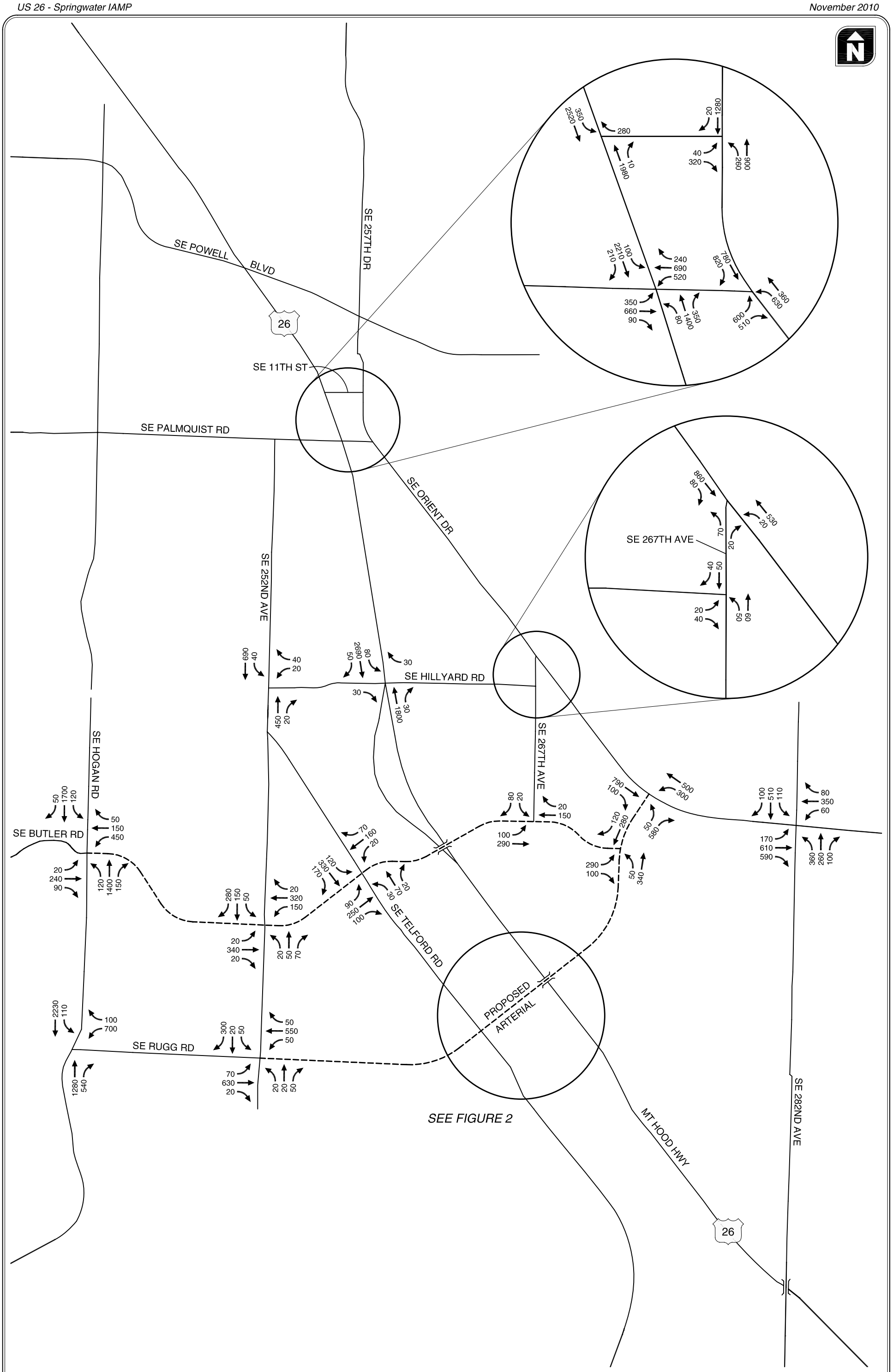
Findings

This analysis of future traffic conditions under the selected Alternative "C-2" interchange scenario resulted in the following key findings:

- The proposed arterial street, with a five-lane basic cross section, is expected to function acceptably through the 2035 design year, with additional capacity to last beyond 2035.
- The proposed collector should function acceptably with a three-lane basic cross section.
- The existing alignment of Orient Drive should be preserved to maintain the continuity for through traffic. The proposed arterial street should connect to Orient Drive at a 90-degree "T" intersection. This intersection configuration would be a change from the adopted TSP.
- The projected 2035 traffic volume on Hogan Road would result in the need for three southbound through lanes within the study area. Capacity constraints north of the study area along 242nd Avenue would likely limit these traffic flows and may prevent the projected demand from being fully realized. Nevertheless, the need for a five-lane section on Hogan Road is apparent.
- Significant capacity improvements will be needed at the U.S. 26/Palmquist intersection to address the future traffic demand. The City of Gresham and ODOT should anticipate the need for future improvements and consider further evaluation of this intersection area.

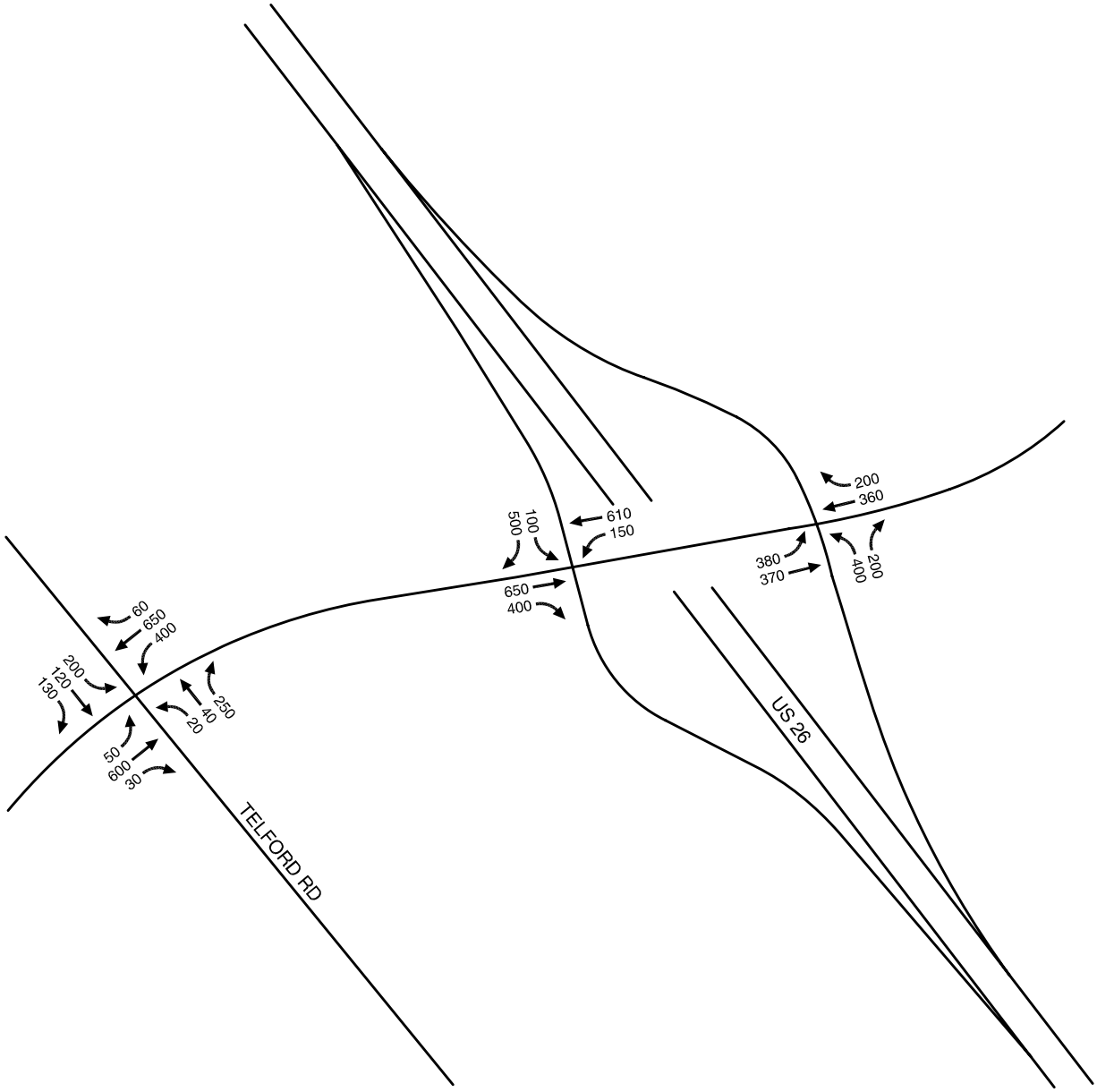
Attachment A

Figures



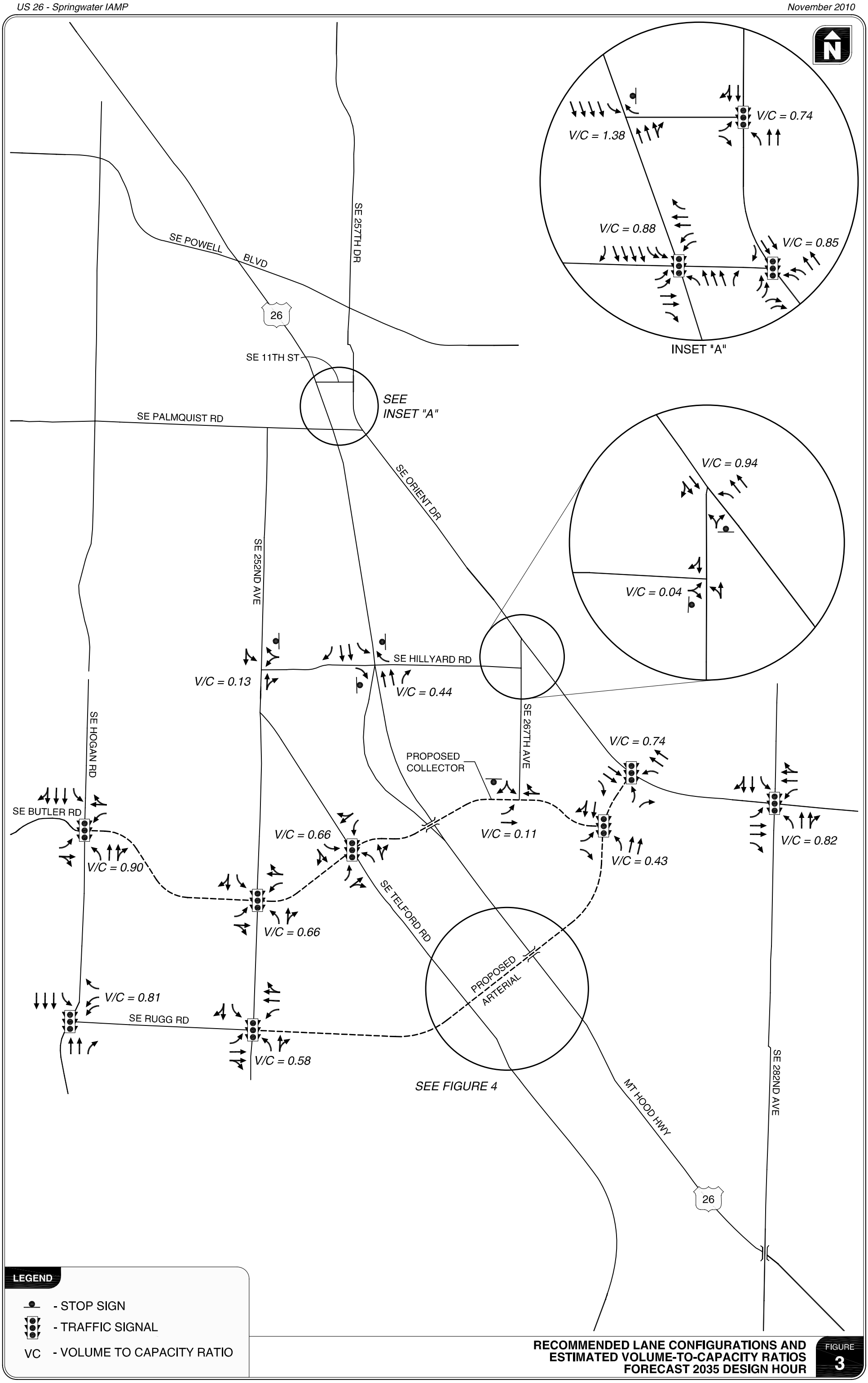
FUTURE TRAFFIC VOLUMES
2035 DESIGN HOUR

FIGURE 1



ALTERNATIVE C2
2035 DESIGN HOUR TRAFFIC VOLUMES

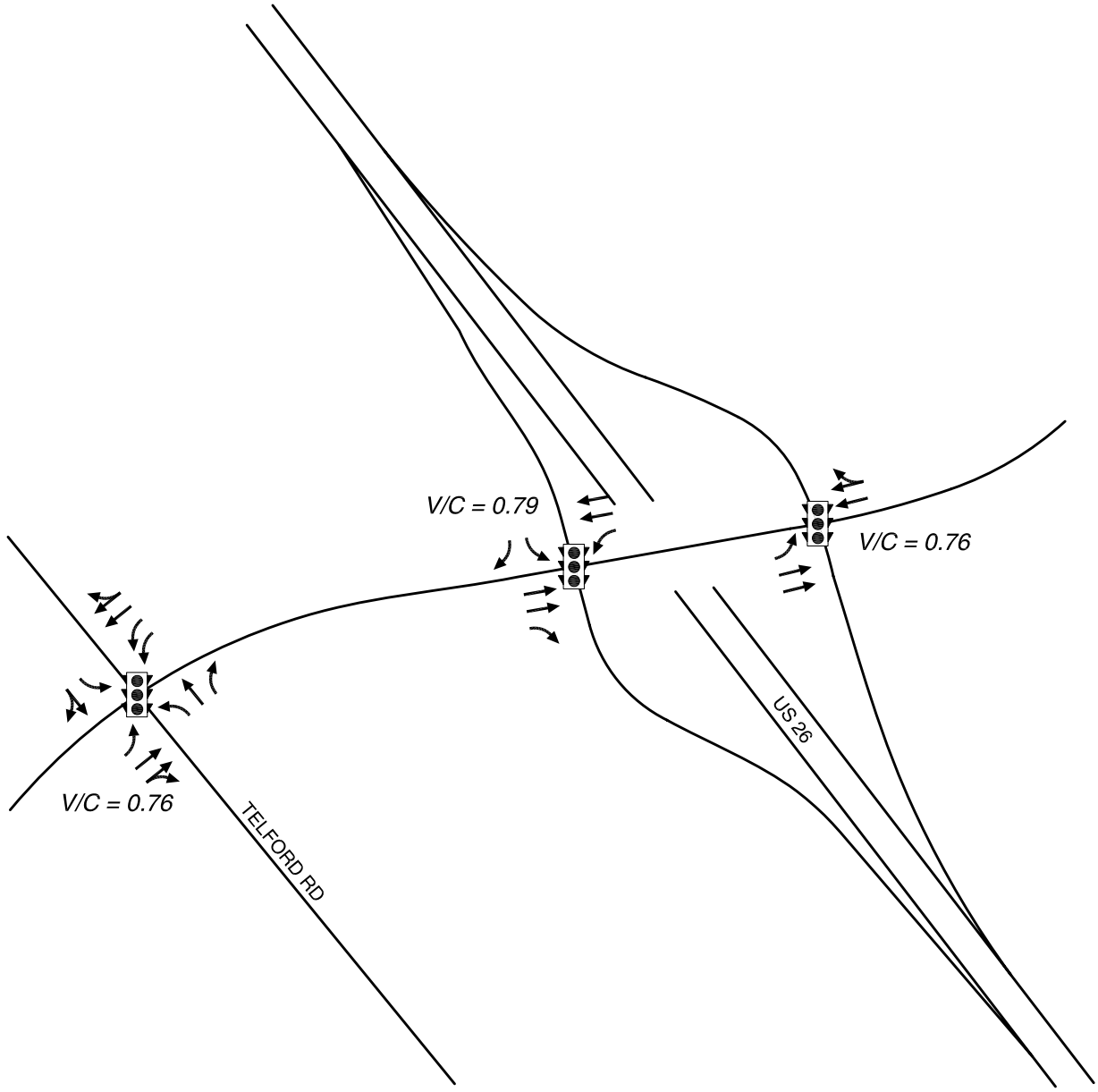
FIGURE
2



RECOMMENDED LANE CONFIGURATIONS AND ESTIMATED VOLUME-TO-CAPACITY RATIOS FORECAST 2035 DESIGN HOUR

FIGURE 3

H:\projfile\8505 - US 26 - Springwater IAMP\dwgs\Figs\8505Fig4.dwg Nov 08, 2010 - 4:59pm - nbadal Layout Tab: 03



LEGEND

- TRAFFIC SIGNAL

VC - VOLUME TO CAPACITY RATIO

ALTERNATIVE C2
RECOMMENDED LANE CONFIGURATIONS

FIGURE 4

H:\profile\8505 - US 26 - Springwater IAMP\dwgs\Figs\8505Fig4.dwg Nov 08, 2010 - 5:03pm - nbadal Layout Tab: 04

Attachment B

Traffic Analysis Worksheets

Kittelson & Associates, Inc. - Project #8505
US-26 Springwater IAMP - Springwater, Oregon
Year 2031 Background Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 SE 11th Street & US-26

Average Delay (sec/veh): 17.7 Worst Case Level Of Service: F[230.2]

Street Name:	US-26									SE 11th Street								
Approach:	North Bound					South Bound					East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	2	1	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	1
Volume Module:																				
Base Vol:	0	1980		10		350	2520			0	0		0		0	0		0		280
Growth Adj:	1.00	1.00		1.00		1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	1980		10		350	2520			0	0		0		0	0		0		280
User Adj:	1.00	1.00		1.00		1.00	1.00			1.00	1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.96	0.96		0.96		0.96	0.96			0.96	0.96		0.96		0.96	0.96		0.96		0.96
PHF Volume:	0	2063		10		365	2625			0	0		0		0	0		0		292
Reduct Vol:	0	0		0		0	0			0	0		0		0	0		0		0
FinalVolume:	0	2063		10		365	2625			0	0		0		0	0		0		292
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx			xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		6.9
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx			xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		2075	xxxx			xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		696
Potent Cap.:	xxxx	xxxx		xxxxx		264	xxxx			xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		389
Move Cap.:	xxxx	xxxx		xxxxx		264	xxxx			xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		388
Volume/Cap:	xxxx	xxxx		xxxx		1.38	xxxx			xxxx	xxxx		xxxx		xxxx	xxxx		xxxx		0.75
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		19.6	xxxx			xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		6.0
Control Del:	xxxxx	xxxx		xxxxx		230.2	xxxx			xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		37.6
LOS by Move:	*	*		*		F	*			*	*		*		*	*		*		E
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx			xxxxx	xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx		xxxxx	xxxx			xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx		xxxxx	xxxx			xxxxx	xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
Shared LOS:	*	*		*		*	*			*	*		*		*	*		*		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx							37.6		
ApproachLOS:	*					*					*							E		

Note: Queue reported is the number of cars per lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	1.00	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1641	1518	1752	3406	3392	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1641	1518	1752	3406	3392	
Volume (vph)	40	320	260	900	1280	20
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	356	289	1000	1422	22
Lane Group Flow (vph)	44	356	289	1000	1444	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	10%	6%	3%	6%	6%	18%
Turn Type		pm+ov	Prot			
Protected Phases	2	3	3	8	4	
Permitted Phases		2				
Actuated Green, G (s)	5.0	22.5	17.5	59.0	38.5	
Effective Green, g (s)	6.0	22.5	16.5	60.0	39.5	
Actuated g/C Ratio	0.08	0.30	0.22	0.81	0.53	
Clearance Time (s)	5.0	3.0	3.0	5.0	5.0	
Vehicle Extension (s)	4.0	1.0	1.0	6.0	6.0	
Lane Grp Cap (vph)	133	544	391	2762	1811	
v/s Ratio Prot	0.03	c0.15	0.16	0.29	c0.43	
v/s Ratio Perm		0.09				
v/c Ratio	0.33	0.65	0.74	0.36	0.80	
Uniform Delay, d1	32.1	22.4	26.7	1.9	14.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.0	2.2	6.2	0.2	3.1	
Delay (s)	34.1	24.5	32.9	2.1	17.1	
Level of Service	C	C	C	A	B	
Approach Delay (s)	25.6			9.0	17.1	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	74.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	0.97	0.86	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	3273	3539	1524	1770	4940	1553	3367	5836	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	3273	3539	1524	1770	4940	1553	3367	5836	1583
Volume (vph)	350	660	90	520	690	240	80	1400	350	100	2210	210
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	695	95	547	726	253	84	1474	368	105	2326	221
Lane Group Flow (vph)	368	695	95	547	726	253	84	1474	368	105	2326	221
Heavy Vehicles (%)	2%	2%	2%	7%	2%	6%	2%	5%	4%	4%	12%	2%
Turn Type	Prot		Perm	Prot		custom	Prot		Perm	Prot		Perm
Protected Phases	7	4!		7!	8		1	6		5	2	
Permitted Phases			4			4			6			2
Actuated Green, G (s)	29.4	69.5	69.5	29.4	36.6	69.5	8.0	67.4	67.4	8.3	67.7	67.7
Effective Green, g (s)	29.4	70.0	70.0	29.4	36.6	70.0	8.0	68.9	68.9	8.3	69.2	69.2
Actuated g/C Ratio	0.18	0.44	0.44	0.18	0.23	0.44	0.05	0.43	0.43	0.05	0.43	0.43
Clearance Time (s)	4.0	4.5	4.5	4.0	4.0	4.5	4.0	5.5	5.5	4.0	5.5	5.5
Vehicle Extension (s)	2.3	2.3	2.3	2.3	3.0	2.3	3.0	5.5	5.5	2.3	5.5	5.5
Lane Grp Cap (vph)	634	1556	696	604	814	670	89	2138	672	176	2537	688
v/s Ratio Prot	0.11	0.20		c0.17	c0.21		c0.05	0.30		0.03	c0.40	
v/s Ratio Perm			0.06			0.17			0.24			0.14
v/c Ratio	0.58	0.45	0.14	0.91	0.89	0.38	0.94	0.69	0.55	0.60	0.92	0.32
Uniform Delay, d1	59.3	31.1	26.6	63.5	59.4	30.0	75.4	36.5	33.6	73.8	42.3	29.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.1	0.1	17.0	12.0	0.2	76.4	1.3	1.8	4.1	6.2	0.7
Delay (s)	60.3	31.2	26.6	80.5	71.4	30.2	151.8	37.8	35.4	77.9	48.5	30.2
Level of Service	E	C	C	F	E	C	F	D	D	E	D	C
Approach Delay (s)		40.1			67.9			42.3			48.2	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	49.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	159.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.5%	ICU Level of Service	D

! Phase conflict between lane groups.
c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.88	0.97	0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3303	2356	3213	3471	3406	1514
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3303	2356	3213	3471	3406	1514
Volume (vph)	600	510	630	560	780	820
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	632	537	663	589	821	863
Lane Group Flow (vph)	632	537	663	589	821	863
Confl. Peds. (#/hr)	1	1				1
Heavy Vehicles (%)	6%	18%	9%	4%	6%	6%
Turn Type		Perm	Prot			pm+ov
Protected Phases	2		3	8	4	2
Permitted Phases		2				4
Actuated Green, G (s)	31.4	31.4	21.0	55.5	29.5	60.9
Effective Green, g (s)	32.4	32.4	22.0	56.5	30.5	62.9
Actuated g/C Ratio	0.33	0.33	0.23	0.58	0.31	0.65
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	6.0	6.0	1.0	6.0	6.0	6.0
Lane Grp Cap (vph)	1104	788	729	2024	1072	1045
v/s Ratio Prot	0.19		c0.21	0.17	0.24	c0.28
v/s Ratio Perm		0.23				0.29
v/c Ratio	0.57	0.68	0.91	0.29	0.77	0.83
Uniform Delay, d1	26.5	27.8	36.5	10.1	30.0	12.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	3.7	14.9	0.2	4.3	6.4
Delay (s)	28.0	31.5	51.4	10.4	34.3	19.2
Level of Service	C	C	D	B	C	B
Approach Delay (s)	29.6			32.1	26.6	
Approach LOS	C			C	C	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	96.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	C
c Critical Lane Group			

Kittelson & Associates, Inc. - Project #8505
US-26 Springwater IAMP - Springwater, Oregon
Year 2031 Background Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #6 SE 267th Ave & Orient Drive

Average Delay (sec/veh): 9.0 Worst Case Level Of Service: F[155.0]

Street Name:	SE 267th Ave						Orient Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	70	0	20	0	0	0	0	860	80	20	530	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	0	20	0	0	0	0	860	80	20	530	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
PHF Volume:	91	0	26	0	0	0	0	1117	104	26	688	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	91	0	26	0	0	0	0	1117	104	26	688	0
Critical Gap Module:												
Critical Gp:	6.9	6.6	7.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.2	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1566	1909	612	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1221	xxxx	xxxxx
Potent Cap.:	100	66	431	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	561	xxxx	xxxxx
Move Cap.:	96	63	430	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	561	xxxx	xxxxx
Volume/Cap:	0.94	0.00	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.7	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	116	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	6.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	155	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	F	*	*	*	*	*	*	*	*	*	*
ApproachDel:	155.0			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	F			*			*			*		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project #8505
US-26 Springwater IAMP - Springwater, Oregon
Year 2031 Background Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #7 SE 252nd Ave & Hillyard Rd

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: C[19.2]

Street Name:	SE 252nd Ave									Hillyard Rd								
Approach:	North Bound					South Bound					East Bound					West Bound		
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	450		20		40	690		0		0		0		0	20		0		40
Growth Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
Initial Bse:	0	450		20		40	690		0		0		0		0	20		0		40
User Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00		1.00		1.00	1.00		1.00		1.00
PHF Adj:	0.94	0.94		0.94		0.94	0.94		0.94		0.94		0.94		0.94	0.94		0.94		0.94
PHF Volume:	0	479		21		43	734		0		0		0		0	21		0		43
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	0	479		21		43	734		0		0		0		0	21		0		43
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx		xxxxx		xxxx		xxxxx	6.4		6.5		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx		xxxxx		xxxx		xxxxx	3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		503	xxxx		xxxxx		xxxx		xxxx		xxxxx	1314		1312		492
Potent Cap.:	xxxx	xxxx		xxxxx		1072	xxxx		xxxxx		xxxx		xxxx		xxxxx	174		158		574
Move Cap.:	xxxx	xxxx		xxxxx		1069	xxxx		xxxxx		xxxx		xxxx		xxxxx	168		151		573
Volume/Cap:	xxxx	xxxx		xxxx		0.04	xxxx		xxxx		xxxx		xxxx		xxxx	0.13		0.00		0.07
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		0.1	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx	xxxx		xxxxx		8.5	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		xxxx		xxxxx
LOS by Move:	*	*		*		A	*		*		*		*		*	*		*		*
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		317		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx		0.1	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		0.7		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx		8.5	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		19.2		xxxxx
Shared LOS:	*	*		*		A	*		*		*		*		*	*		C		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx							19.2		
ApproachLOS:	*					*					*							C		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project #8505
US-26 Springwater IAMP - Springwater, Oregon
Year 2031 Background Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #8 US-26 & SE Hillyard Rd

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: F[77.4]

Street Name:	US-26								SE Hillyard Rd							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L -	T -	R		L -	T -	R		L -	T -	R		L -	T -	R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0 0 2	0	1		1 0 2	0	1		0 0 0	0	1		0 0 0	0	1	
Volume Module:																
Base Vol:	0	1800	30		80	2690	50		0	0	30		0	0	30	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	1800	30		80	2690	50		0	0	30		0	0	30	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.81	0.81	0.81		0.81	0.81	0.81		0.81	0.81	0.81		0.81	0.81	0.81	
PHF Volume:	0	2222	37		99	3321	62		0	0	37		0	0	37	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	0	2222	37		99	3321	62		0	0	37		0	0	37	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	7.0	xxxxx	xxxx	6.9				
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	2259	xxxx	xxxxx	xxxx	xxxx	1660	xxxx	xxxx	1113				
Potent Cap.:	xxxx	xxxx	xxxxx	230	xxxx	xxxxx	xxxx	xxxx	84	xxxx	xxxx	206				
Move Cap.:	xxxx	xxxx	xxxxx	230	xxxx	xxxxx	xxxx	xxxx	84	xxxx	xxxx	206				
Volume/Cap:	xxxx	xxxx	xxxx	0.43	xxxx	xxxx	xxxx	xxxx	0.44	xxxx	xxxx	0.18				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	2.0	xxxx	xxxxx	xxxx	xxxx	1.8	xxxx	xxxx	0.6				
Control Del:	xxxxx	xxxx	xxxxx	31.9	xxxx	xxxxx	xxxxx	xxxx	77.4	xxxxx	xxxx	26.3				
LOS by Move:	*	*	*	D	*	*	*	*	F	*	*	D				
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	xxxxxx				xxxxxx				77.4				26.3			
ApproachLOS:	*				*				F				D			

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project #8505
US-26 Springwater IAMP - Springwater, Oregon
Year 2031 Background Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #9 SE 267th Ave & SE Hillyard Rd

Average Delay (sec/veh): 3.6 Worst Case Level Of Service: A[9.3]

Street Name:	SE 267th Ave																							
Street Name:	SE 267th Ave												SE Hillyard Rd											
Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	1	0	0	0		0	0	0	1	0		0	0	1!	0	0		0	0	0	0	0	
Volume Module:																								
Base Vol:	50	60	0	0	50	40	20	0	40	0	0	0												
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Initial Bse:	50	60	0	0	50	40	20	0	40	0	0	0												
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Volume:	50	60	0	0	50	40	20	0	40	0	0	0												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
FinalVolume:	50	60	0	0	50	40	20	0	40	0	0	0												
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx												
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx												
Capacity Module:																								
Cnflict Vol:	90	xxxx	xxxxx	xxxx	xxxx	xxxxx	230	230	70	xxxx	xxxx	xxxxx												
Potent Cap.:	1518	xxxx	xxxxx	xxxx	xxxx	xxxxx	763	673	998	xxxx	xxxx	xxxxx												
Move Cap.:	1518	xxxx	xxxxx	xxxx	xxxx	xxxxx	743	650	998	xxxx	xxxx	xxxxx												
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.04	xxxx	xxxx	xxxx												
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*												
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	896	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*												
ApproachDel:	xxxxxx			xxxxxx				9.3			xxxxxx													
ApproachLOS:	*			*				A			*													

Note: Queue reported is the number of cars per lane.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.97	1.00		1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1787		3433	1793		1770	5011		1770	5063	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1787		3433	1793		1770	5011		1770	5063	
Volume (vph)	20	240	90	450	150	50	120	1400	150	120	1700	50
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	267	100	500	167	56	133	1556	167	133	1889	56
Lane Group Flow (vph)	22	367	0	500	223	0	133	1723	0	133	1945	0
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	2.0	26.8		18.0	42.8		10.0	45.6		11.4	47.0	
Effective Green, g (s)	2.0	26.8		18.0	42.8		10.0	45.6		11.4	47.0	
Actuated g/C Ratio	0.02	0.23		0.15	0.36		0.08	0.39		0.10	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	30	407		525	651		150	1940		171	2020	
v/s Ratio Prot	0.01	c0.21		c0.15	0.12		c0.08	0.34		0.08	c0.38	
v/s Ratio Perm												
v/c Ratio	0.73	0.90		0.95	0.34		0.89	0.89		0.78	0.96	
Uniform Delay, d1	57.6	44.2		49.5	27.3		53.3	33.7		52.0	34.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	63.0	22.6		27.6	0.3		41.7	5.4		19.6	12.4	
Delay (s)	120.6	66.8		77.1	27.6		95.1	39.1		71.6	47.0	
Level of Service	F	E		E	C		F	D		E	D	
Approach Delay (s)		69.8			61.8			43.1			48.5	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM Average Control Delay	50.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	117.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	E
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1847		1770	1846		1770	1700		1770	1681	
Flt Permitted	0.42	1.00		0.39	1.00		0.40	1.00		0.67	1.00	
Satd. Flow (perm)	777	1847		720	1846		745	1700		1250	1681	
Volume (vph)	20	340	20	150	320	20	20	50	70	50	150	280
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	378	22	167	356	22	22	56	78	56	167	311
Lane Group Flow (vph)	22	400	0	167	378	0	22	134	0	56	478	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	11.6	11.6		11.6	11.6		16.8	16.8		16.8	16.8	
Effective Green, g (s)	11.6	11.6		11.6	11.6		16.8	16.8		16.8	16.8	
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	248	589		229	588		344	785		577	776	
v/s Ratio Prot		0.22			0.20			0.08			c0.28	
v/s Ratio Perm	0.03			c0.23			0.03			0.04		
v/c Ratio	0.09	0.68		0.73	0.64		0.06	0.17		0.10	0.62	
Uniform Delay, d1	8.7	10.8		11.0	10.6		5.4	5.7		5.5	7.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	3.1		11.0	2.4		0.1	0.1		0.1	1.5	
Delay (s)	8.8	13.9		22.0	13.0		5.5	5.8		5.6	8.8	
Level of Service	A	B		C	B		A	A		A	A	
Approach Delay (s)		13.6			15.8			5.8			8.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	36.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	B
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		0.95	0.95		1.00	1.00	
Frt	1.00	0.96		1.00	0.95		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1783		1770	1778		1681	1711		1770	1768	
Flt Permitted	0.58	1.00		0.40	1.00		0.31	1.00		0.69	1.00	
Satd. Flow (perm)	1081	1783		752	1778		553	1711		1283	1768	
Volume (vph)	90	250	100	20	160	70	30	70	20	120	330	170
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	278	111	22	178	78	33	78	22	133	367	189
Lane Group Flow (vph)	100	389	0	22	256	0	33	100	0	133	556	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	14.4	14.4		14.4	14.4		19.1	19.1		19.1	19.1	
Effective Green, g (s)	14.4	14.4		14.4	14.4		19.1	19.1		19.1	19.1	
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	375	619		261	617		255	787		590	814	
v/s Ratio Prot		c0.22			0.14			0.06			c0.31	
v/s Ratio Perm	0.09			0.03			0.06			0.10		
v/c Ratio	0.27	0.63		0.08	0.41		0.13	0.13		0.23	0.68	
Uniform Delay, d1	9.8	11.3		9.1	10.3		6.4	6.4		6.7	8.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	2.0		0.1	0.5		0.2	0.1		0.2	2.4	
Delay (s)	10.1	13.3		9.3	10.8		6.7	6.5		6.9	11.2	
Level of Service	B	B		A	B		A	A		A	B	
Approach Delay (s)		12.7			10.7			6.5			10.4	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	41.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	B
c Critical Lane Group			

Kittelson & Associates, Inc. - Project #8505
US-26 Springwater IAMP - Springwater, Oregon
Year 2031 Background Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #13 SE 267th Ave & New Collector

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: B[11.6]

Street Name:	SE 267th Ave								New Collector							
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	0	0	1!	0 0	0	1	0	0 0	0	0	0	1 0
Volume Module:																
Base Vol:	0	0	0	20	0	80			100	290	0		0	150	20	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	0	0	20	0	80			100	290	0		0	150	20	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87			0.87	0.87	0.87		0.87	0.87	0.87	
PHF Volume:	0	0	0	23	0	92			115	333	0		0	172	23	
Reduct Vol:	0	0	0	0	0	0			0	0	0		0	0	0	
FinalVolume:	0	0	0	23	0	92			115	333	0		0	172	23	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2			4.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3			2.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	747	747	184			195	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	xxxxx	378	339	853			1348	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	xxxxx	351	308	853			1348	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	xxxx	0.07	0.00	0.11			0.09	xxxx	xxxx	xxxx	xxxx	xxxx		
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	*	*	*	*			A	*	*	*	*	*		
Movement:	LT	- LTR	- RT	LT	- LTR	- RT			LT	- LTR	- RT	LT	- LTR	- RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	664	xxxxx			xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx			0.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	11.6	xxxxx			7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	*	B	*			A	*	*	*	*	*		
ApproachDel:	xxxxxx				11.6				xxxxxx			xxxxxx				
ApproachLOS:	*				B				*			*				

Note: Queue reported is the number of cars per lane.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	3539	3380	
Flt Permitted	0.95	1.00	0.49	1.00	1.00	
Satd. Flow (perm)	1770	1583	922	3539	3380	
Volume (vph)	290	100	50	340	280	120
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	322	111	56	378	311	133
Lane Group Flow (vph)	322	111	56	378	444	0
Turn Type		Perm	Perm			
Protected Phases	4			2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	9.0	9.0	12.3	12.3	12.3	
Effective Green, g (s)	9.0	9.0	12.3	12.3	12.3	
Actuated g/C Ratio	0.31	0.31	0.42	0.42	0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	544	486	387	1486	1419	
v/s Ratio Prot	c0.18			0.11	c0.13	
v/s Ratio Perm		0.07	0.06			
v/c Ratio	0.59	0.23	0.14	0.25	0.31	
Uniform Delay, d1	8.6	7.6	5.3	5.5	5.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.7	0.2	0.2	0.1	0.1	
Delay (s)	10.3	7.8	5.4	5.6	5.8	
Level of Service	B	A	A	A	A	
Approach Delay (s)	9.7			5.6	5.8	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	7.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	29.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	1770	3539	1770	1583
Volume (vph)	790	100	300	500	50	580
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	878	111	333	556	56	644
Lane Group Flow (vph)	878	111	333	556	56	644
Turn Type		Perm	Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4				2
Actuated Green, G (s)	23.7	23.7	23.4	51.1	8.4	31.8
Effective Green, g (s)	23.7	23.7	23.4	51.1	8.4	31.8
Actuated g/C Ratio	0.35	0.35	0.35	0.76	0.12	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1243	556	614	2679	220	840
v/s Ratio Prot	c0.25		0.19	0.16	0.03	c0.27
v/s Ratio Perm		0.07				0.14
v/c Ratio	0.71	0.20	0.54	0.21	0.25	0.77
Uniform Delay, d1	18.9	15.3	17.7	2.4	26.7	14.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.2	1.0	0.0	0.6	4.2
Delay (s)	20.8	15.5	18.7	2.4	27.3	19.0
Level of Service	C	B	B	A	C	B
Approach Delay (s)	20.2			8.5	19.7	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	3539	1583	1770	5085
Flt Permitted	0.95	1.00	1.00	1.00	0.13	1.00
Satd. Flow (perm)	3433	1583	3539	1583	239	5085
Volume (vph)	700	100	1280	540	110	2230
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	778	111	1422	600	122	2478
Lane Group Flow (vph)	778	111	1422	600	122	2478
Turn Type		Perm		Perm	Perm	
Protected Phases	8		2			6
Permitted Phases		8		2	6	
Actuated Green, G (s)	23.0	23.0	56.9	56.9	56.9	56.9
Effective Green, g (s)	23.0	23.0	56.9	56.9	56.9	56.9
Actuated g/C Ratio	0.26	0.26	0.65	0.65	0.65	0.65
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	898	414	2291	1025	155	3292
v/s Ratio Prot	c0.23		0.40			0.49
v/s Ratio Perm		0.07		0.38	c0.51	
v/c Ratio	0.87	0.27	0.62	0.59	0.79	0.75
Uniform Delay, d1	31.0	25.8	9.1	8.8	11.1	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.8	0.4	0.5	0.9	22.6	1.0
Delay (s)	39.8	26.1	9.7	9.7	33.8	11.7
Level of Service	D	C	A	A	C	B
Approach Delay (s)	38.1		9.7			12.7
Approach LOS	D		A			B

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	87.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	C
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3523		1770	3495		1770	1662		1770	1601	
Flt Permitted	0.39	1.00		0.36	1.00		0.49	1.00		0.71	1.00	
Satd. Flow (perm)	726	3523		664	3495		904	1662		1316	1601	
Volume (vph)	70	630	20	50	550	50	20	20	50	50	20	300
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	700	22	56	611	56	22	22	56	56	22	333
Lane Group Flow (vph)	78	722	0	56	667	0	22	78	0	56	355	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	12.8	12.8		12.8	12.8		9.6	9.6		9.6	9.6	
Effective Green, g (s)	12.8	12.8		12.8	12.8		9.6	9.6		9.6	9.6	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.32	0.32		0.32	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	306	1483		280	1472		285	525		416	506	
v/s Ratio Prot		c0.20			0.19			0.05			c0.22	
v/s Ratio Perm	0.11			0.08			0.02			0.04		
v/c Ratio	0.25	0.49		0.20	0.45		0.08	0.15		0.13	0.70	
Uniform Delay, d1	5.7	6.4		5.6	6.3		7.3	7.5		7.4	9.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.3		0.4	0.2		0.1	0.1		0.1	4.4	
Delay (s)	6.1	6.7		5.9	6.5		7.4	7.6		7.6	13.5	
Level of Service	A	A		A	A		A	A		A	B	
Approach Delay (s)		6.6			6.5			7.6			12.7	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	30.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	A
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3514		1770	3494		1770	1863	1583	1770	1717	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3514		1770	3494		1770	1863	1583	1770	1717	
Volume (vph)	50	600	30	400	650	60	20	40	250	200	120	130
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	667	33	444	722	67	22	44	278	222	133	144
Lane Group Flow (vph)	56	700	0	444	789	0	22	44	278	222	277	0
Turn Type	Prot			Prot			Prot		pm+ov	Prot		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases									2			
Actuated Green, G (s)	3.9	20.1		22.8	39.0		1.8	11.5	34.3	12.4	22.1	
Effective Green, g (s)	3.9	20.1		22.8	39.0		1.8	11.5	34.3	12.4	22.1	
Actuated g/C Ratio	0.05	0.24		0.28	0.47		0.02	0.14	0.41	0.15	0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	83	853		487	1646		38	259	732	265	458	
v/s Ratio Prot	0.03	c0.20		c0.25	0.23		0.01	0.02	0.10	c0.13	c0.16	
v/s Ratio Perm									0.07			
v/c Ratio	0.67	0.82		0.91	0.48		0.58	0.17	0.38	0.84	0.60	
Uniform Delay, d1	38.8	29.6		29.0	15.0		40.1	31.4	16.9	34.2	26.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	19.5	6.4		21.3	0.2		19.6	0.3	0.3	20.0	2.3	
Delay (s)	58.4	36.0		50.3	15.2		59.7	31.8	17.2	54.3	28.8	
Level of Service	E	D		D	B		E	C	B	D	C	
Approach Delay (s)		37.7			27.8			21.8			40.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	C
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3539	1583	1770	3539						1770	1583
Flt Permitted		1.00	1.00	0.15	1.00						0.95	1.00
Satd. Flow (perm)		3539	1583	276	3539						1770	1583
Volume (vph)	0	650	400	150	610	0	0	0	0	100	0	500
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	707	435	163	663	0	0	0	0	109	0	543
Lane Group Flow (vph)	0	707	435	163	663	0	0	0	0	0	109	543
Turn Type			Perm	pm+pt						Perm		Perm
Protected Phases		4		3	8						6	
Permitted Phases			4	8						6		6
Actuated Green, G (s)		23.0	23.0	37.7	37.7						44.3	44.3
Effective Green, g (s)		23.0	23.0	37.7	37.7						44.3	44.3
Actuated g/C Ratio		0.26	0.26	0.42	0.42						0.49	0.49
Clearance Time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		904	405	293	1482						871	779
v/s Ratio Prot		0.20		c0.07	0.19							
v/s Ratio Perm			c0.27	0.17							0.06	c0.34
v/c Ratio		0.78	1.07	0.56	0.45						0.13	0.70
Uniform Delay, d1		31.2	33.5	18.9	18.7						12.4	17.7
Progression Factor		1.00	1.00	1.79	1.47						1.00	1.00
Incremental Delay, d2		4.5	65.9	1.6	0.2						0.3	5.1
Delay (s)		35.6	99.4	35.5	27.7						12.7	22.8
Level of Service		D	F	D	C						B	C
Approach Delay (s)		59.9			29.2			0.0			21.1	
Approach LOS		E			C			A			C	

Intersection Summary			
HCM Average Control Delay	40.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	A
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00			
Frt	1.00	1.00			0.95			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (prot)	1770	3539			3350			1770	1583			
Flt Permitted	0.95	1.00			1.00			0.95	1.00			
Satd. Flow (perm)	1770	3539			3350			1770	1583			
Volume (vph)	380	370	0	0	360	200	400	0	200	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	413	402	0	0	391	217	435	0	217	0	0	0
Lane Group Flow (vph)	413	402	0	0	608	0	0	435	217	0	0	0
Turn Type	Prot						Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases							2		2			
Actuated Green, G (s)	24.9	46.3			17.4			35.7	35.7			
Effective Green, g (s)	24.9	46.3			17.4			35.7	35.7			
Actuated g/C Ratio	0.28	0.51			0.19			0.40	0.40			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	490	1821			648			702	628			
v/s Ratio Prot	c0.23	0.11			c0.18							
v/s Ratio Perm								c0.25	0.14			
v/c Ratio	0.84	0.22			0.94			0.62	0.35			
Uniform Delay, d1	30.7	12.0			35.8			21.7	19.0			
Progression Factor	1.67	1.61			1.00			1.00	1.00			
Incremental Delay, d2	9.5	0.0			21.2			4.1	1.5			
Delay (s)	60.9	19.3			57.0			25.8	20.5			
Level of Service	E	B			E			C	C			
Approach Delay (s)		40.4			57.0			24.0			0.0	
Approach LOS		D			E			C			A	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	C
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1626	3223	1568	1641	3203		1626	3140		1719	3240	
Flt Permitted	0.34	1.00	1.00	0.23	1.00		0.20	1.00		0.52	1.00	
Satd. Flow (perm)	588	3223	1568	401	3203		335	3140		934	3240	
Volume (vph)	170	610	590	60	350	80	360	260	100	110	510	100
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	189	678	656	67	389	89	400	289	111	122	567	111
Lane Group Flow (vph)	189	678	656	67	478	0	400	400	0	122	678	0
Heavy Vehicles (%)	11%	12%	3%	10%	9%	12%	11%	11%	8%	5%	10%	2%
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt			pm+pt		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	29.2	25.1	42.9	27.0	24.0		46.2	37.7		29.9	25.4	
Effective Green, g (s)	30.2	26.1	42.9	28.0	25.0		47.2	38.7		30.9	26.4	
Actuated g/C Ratio	0.34	0.30	0.49	0.32	0.28		0.53	0.44		0.35	0.30	
Clearance Time (s)	4.0	5.0	3.0	4.0	5.0		3.0	5.0		4.0	5.0	
Vehicle Extension (s)	3.0	6.0	1.0	3.0	6.0		1.0	6.0		3.0	6.0	
Lane Grp Cap (vph)	249	953	833	169	907		425	1376		367	969	
v/s Ratio Prot	c0.04	0.21	c0.15	0.01	0.15		c0.18	0.13		0.02	0.21	
v/s Ratio Perm	0.22		0.27	0.11			c0.32			0.10		
v/c Ratio	0.76	0.71	0.79	0.40	0.53		0.94	0.29		0.33	0.70	
Uniform Delay, d1	25.6	27.7	18.9	22.1	26.7		18.9	16.0		20.1	27.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.5	3.6	4.6	1.5	1.4		28.9	0.3		0.5	3.3	
Delay (s)	38.1	31.4	23.5	23.7	28.1		47.7	16.3		20.6	30.8	
Level of Service	D	C	C	C	C		D	B		C	C	
Approach Delay (s)		28.8			27.5			32.0			29.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	88.3	Sum of lost time (s)	4.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	C

c Critical Lane Group

Appendix G

Review of Plans and Policies

This appendix outlines the policy framework for the Springwater Interchange Area Management Plan (IAMP) using the identified state and local policies, plans, and regulations. The framework was used throughout the IAMP development process as a decision-making tool and assisted in making findings of compliance with adopted plans and regulations.

Summary

The Project Management Team (PMT) conducted a comprehensive review of plans and standards that are applicable to Springwater IAMP. The primary transportation standards that were applied in developing and evaluating strategies for the interchange area were drawn from the Oregon Highway Plan standards related to mobility and the Oregon Administrative Rules related to Access Management.

State Plans & Regulations

1999 Oregon Highway Plan

The 1999 Oregon Highway Plan (OHP) defines policies and investment strategies for Oregon's state highway system for the next 20 years by further refining the goals and policies of the Oregon Transportation Plan. One of the key goals of the OHP is to maintain and improve safe and efficient movement of people and goods, while supporting statewide, regional, and local economic growth and community livability.

Access Management Spacing Standards

Policies 3A and 3C of theOHP establish access management objectives for state highways and interchange areas based on facility type and set standards for spacing of approaches. These standards have also been adopted as part of OAR 734-051, which provides the regulatory basis for implementation.

Oregon Transportation Plan (Adopted September 20, 2006)

The goal of the Oregon Transportation Plan (OTP) is to provide a safe, efficient and sustainable transportation system that enhances Oregon's quality of life and economic vitality. The OTP is a 25-year transportation plan that comprehensively assesses state, regional and local, as well as both public and private transportation facilities and services.

Access Management Rules (OAR 734-051)

ODOT has adopted the identified administrative rules to establish procedures and criteria used to govern highway approaches, access control, spacing standards, medians and restriction of turning movements in compliance with statewide planning goals and in a manner compatible with acknowledged comprehensive plans and consistent with Oregon Revised Statutes, Oregon Administrative Rules, and the OHP.Any new street or driveway connections, as well as any changes to existing street or driveway connections to U.S. 26 or roads within the IAMP study boundary must be found to be in compliance with these rules by ODOT.

1995 Oregon Bicycle and Pedestrian Plan

The goal of the Oregon Bicycle and Pedestrian Plan is to provide safe and accessible bicycling and walking facilities in an effort to encourage increased levels of bicycling and walking. . The Plan provides actions that will assist local jurisdictions in understanding the principles and policies that ODOT follows in providing bike and walkways along state highways.

Statewide Transportation Improvement Program (ODOT)

The Statewide Transportation Improvement Program (STIP) is Oregon's four-year transportation capital improvement program. It is the document that identifies the funding for, and scheduling of, transportation projects and programs.

Department of Transportation Coordination Rules (OAR 731-015)

The IAMP will be carried out in compliance with the statewide planning goals and in a manner compatible with the City of Gresham Comprehensive Plan as well as the West of Sandy River Rural Area Transportation and Land Use Plan, as required by ORS 197.180 and OAR 660, Divisions 30 and 31.

Transportation Planning Rule (OAR 660-12-060)

The purpose of OAR 660-12 is to implement Statewide Planning Goal 12 (Transportation) and promote the development of safe, convenient, and economic transportation systems that are designed to reduce reliance on the automobile. Key elements include direction for preparing, coordinating, and implementing Transportation System Plans.

Oregon Statewide Planning Goals (OAR 660-015)

The Oregon Statewide Planning Goals provide a foundation for implementing state policy on land use planning. The 19 goals for land use planning in the state are to be achieved through local comprehensive planning. Local comprehensive plans must be consistent with the Statewide Planning Goals. Some of the goals relevant to the Springwater IAMP are the following:

The Citizen Involvement goal (Goal 1) develops a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process.

The Land Use Planning goal (Goal 2) establishes a land use planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

The Public Facilities and Services goal (Goal 11) directs the planning and development of timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.

The Transportation goal (Goal 12) directs planning for a safe, convenient, multimodal and economic transportation system. Consideration of local and regional economies, social consequences, environmental impacts, energy, the needs of transportation disadvantaged, and over reliance on a single mode should be included in local plans. Guidelines for planning and implementation are included to support the Statewide Planning Goals.

The intent of these statewide goals will be considered and incorporated into the Springwater IAMP.

State Performance & Design Standards

Highway Classifications

U.S. 26 is both owned and operated by ODOT, which has established management objectives and operational standards for this facility based on the assigned classifications and segment designations. Within the study area, U.S. 26 is classified as an expressway and is a designated freight route.

Oregon Highway Design Manual (2003)

This manual contains standards for the design of state highways and various highway elements. While detailed design drawings were not created as part of this study, elements such as the general alignments, roadway widths, and criteria for installation of turn lanes were considered for evaluating the feasibility of construction and determination of right of way needs for the alternatives developed.

Mobility Standards

ODOT has adopted standards for mobility for state facilities through the OHP and the *Highway Design Manual*[1]. The OHP mobility standards are to be used for identifying needs, while the *Highway Design Manual* standards represent the level of operation for which state facilities are to be designed. For this study, the OHP standards will be applied to existing and future no-build analysis, while the future build alternatives will be compared to the standards in the *Highway Design Manual*.

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

City of Gresham Plans & Regulations

Springwater Community Plan

The City of Gresham prepared the Springwater Community Plan in 2005 to address development and transportation needs in the Springwater area. The Community Plan was later adopted into the City of Gresham Comprehensive Plan. The focus of the plan is to develop industrial/high-tech campuses and to attract businesses that will bring an infusion of new jobs to the Springwater area. To augment the mixed-use theme of the area, a village center with mixed retail and housing, and quality, low-density residential development are also planned for areas too steep for industrial use.

Springwater Transportation System Plan

The Springwater Transportation System Plan (TSP) is a component of the Springwater Community Plan and was adopted into the Gresham Comprehensive Plan in 2005. In the Springwater TSP, the City of Gresham recommended a new interchange with US 26 and proposed enhancements to the local street network to provide safe and efficient access to the planned Springwater area while preserving the expressway function of US 26.

Multnomah County Plans & Regulations

West of Sandy River Rural Area Transportation and Land Use Plan

Currently, unincorporated areas within the Springwater management area are subject to land use and transportation policies in Multnomah County's West of Sandy River Rural Area Transportation and Land Use Plan. The plan is intended to guide development in the area over the next 20 years. In 1993, The Multnomah County Board of Commissioners initiated a Rural Area Planning Program for five areas of rural Multnomah County in order to recognize community needs and values as they relate to land use issues. This plan represents the fourth rural area plan, and contains policy direction intended to support realization of the community vision.

Multnomah County Zoning Ordinances

Land use and development in the Springwater management area is regulated by the Multnomah County Zoning Code. The code implements Multnomah County's comprehensive plan. The code, along with the zoning maps, governs what kind of development is appropriate in the Springwater area.

SPRINGWATER INTERCHANGE MANAGEMENT AREA

Appendix H – Findings

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Findings

Statewide Planning Goals

Oregon law created a hierarchy of consistency between local, regional and state plans. The foundation of Oregon's land use planning program is a set of 19 Statewide Planning Goals (http://www.lcd.state.or.us/LCD/goals.shtml#Statewide_Planning_Goals) OAR 660-15-0000 (1-15). The goals express the state's policies on land use and related topics, such as citizen involvement, housing, and natural resources.

Oregon's statewide goals are achieved through local comprehensive plans. State law requires each city and county to adopt a comprehensive plan and the zoning and land-division ordinances needed to put the plan into effect. The local comprehensive plans must be consistent with the Statewide Planning Goals. Plans are reviewed for such consistency by the state's Land Conservation and Development Commission (LCDC). When LCDC officially approves a local government's plan, the plan is said to be "acknowledged". It then becomes the controlling document for land use in the area covered by that plan.

The City of Gresham's and the Multnomah County's Comprehensive Plans have been acknowledged; therefore compliance with the policies and implementation measures of the Comprehensive Plan is considered compliance with the statewide goals. When a local jurisdiction's Comprehensive Plan is revised, each application for change is reviewed against the requirements of the goals.

This appendix will list and describe the statewide goals to insure that the facility plan maintains its consistency with state planning goals. These goals include: Goal 1 (Citizen Involvement), Goal 2 (Land Use Planning), Goal 9 (Economic Development), Goal 10 (Housing), Goal 11 (Public Facilities and Service), Goal 12 (Transportation), and Goal 14 (Urbanization).

Goal 1 (Citizen Involvement)

Goal 1, Citizen Involvement, requires development of a citizen involvement program that is widespread, understandable, responsive, funded, and that allows for two-way communications throughout all planning phases.

> ***Finding:*** *Appendix I of the Springwater Interchange Area Management Plan (IAMP) contains a summary of the public involvement efforts that were undertaken as part of the IAMP project. These efforts included the following:*

- *A meeting of interested parties was held on February 12, 2009*
- *A public open house held on July 27, 2010, to discuss the new Springwater interchange and the IAMP;*
- *Small group (property owners) meetings were held on November 2 and November 9, 2010, to answer project-specific questions from business owners and residents directly affected by the project;*

- *Five (5) stakeholder meetings were held between March and July, 2010, with identified stakeholders including:*
    - *Developers*
    - *Johnson Creek Watershed Council*
    - *East Metro Economic Alliance*
    - *Mt. Hood Neighborhood Association, Gresham Fire Department*
    - *Real Estate interests*
    - *Metro staff from land use planning, open spaces and transportation*
    - *Audubon Society*
    - *Portland Parks and Recreation*
- *A newsletter sent out to individuals near the proposed project to provide information and notification of the public involvement events; and*
- *A postcard announcing the small group meetings sent to business and property owners adjacent to the project.*

The draft IAMP was made available for public review and comment for a 45-day period beginning March 4, 2011. Notice of the public review draft was sent via postcard to individuals near the proposed project and those who had expressed interest at previous public events. Public comment was accepted via email, mail and telephone.

Public hearings on the proposed changes to the Gresham Comprehensive Plan and implementing ordinances were held by the Gresham Planning Commission and City Council during the winter 2010-11. The Board of Commissioners of Multnomah County, took no action as the IAMP is considered compliant with the Springwater Community Plan, which has been acknowledged by the County as the planning document for the Springwater area. These hearings provided opportunities for public comment on the proposed changes.

This information demonstrates consistency with Goal 1.

Goal 2 (Land Use Planning)

Goal 2, Land Use Planning, requires that a land use planning process and policy framework be established as a basis for all decisions and actions relating to the use of land. Goal 2 includes several requirements:

It requires planning coordination between those local governments and state agencies, "which have programs, land ownerships, or responsibilities within the area included in the plan." With regard to the Springwater IAMP, Goal 2 requires that ODOT coordinate with Gresham and Multnomah County, each of which has planning authority over some of the area impacted by the proposed interchange improvements. Coordination is particularly important because development within the county or the city will impact

use of the interchange, and land use decisions could affect future use and operation of the interchange.

Finding: *Preliminary tasks for the Springwater IAMP included a thorough review and analysis of all relevant state, regional and local planning documents in order to establish a planning process and policy framework. The following documents were reviewed:*

- *Applicable Oregon Statewide Planning Goals;*
- *Oregon Administrative Rule 731, Division 15, Department of Transportation Coordination Rules;*
- *Oregon Transportation Plan (2006);*
- *Oregon Highway Plan (1999);*
- *Oregon Administrative Rule 734-051, Highway Approaches, Access Control, Spacing Standards and Medians;*
- *Metro Regional Framework Plan (1997);*
- *Metro Urban Growth Management Functional Plan*
- *Metro Regional Transportation Plan (2007);*
- *Gresham Comprehensive Plan (2008);*
- *Gresham Zoning Ordinance;*
- *Gresham Transportation System Plan (2000);*
- *Springwater Community Plan (2005)*
- *Multnomah County Comprehensive Plan*
- *Multnomah County West of Sandy River Transportation and Land Use Plan (2002).*

This review identified how the documents influence planning for the proposed Springwater interchange project.

The Oregon Department of Transportation and the city of Gresham with participation by the city of Damascus, and Multnomah and Clackamas Counties jointly prepared the Springwater IAMP. Coordination between these agencies took place routinely throughout the process. ODOT staff facilitated and supported the adoption of the IAMP by Gresham, Multnomah County, and by the Oregon Transportation Commission (OTC). ODOT, Gresham and Multnomah County will continue to coordinate on development activity and land use actions within the interchange area.

Goal 2 has a provision that land use decisions and actions be supported by an "adequate factual base." This requirement applies to both legislative and quasi-judicial land use actions and requires that such actions be supported by "substantial evidence." In essence, it requires that there be evidence that a reasonable person would find to be adequate to support findings of fact that a land use action complies with the applicable review standards.

Finding: *This requirement is met through the technical analysis associated with the IAMP. Appendices C, D and E of the IAMP contain an analysis of the existing*

conditions within the IAMP study area. Appendix D describes the land use and zoning conditions and historic growth patterns in the vicinity of the proposed interchange, with Appendix E providing an inventory of existing transportation facilities and their relative functionality. A summary of deficiencies and issues is also provided based on analysis of current conditions.

Appendix D also describes expected future (2030) land use conditions within the IAMP study area and Appendices C and F provide future traffic analysis for current and 2030 no-build conditions.

Section 2 provides a description of the land use scenario used, with Appendix D providing the detail; including future household and employment growth and development patterns. The scenario was used for modeling the transportation network and determining where deficiencies may occur over time.

The analysis from Appendix D determined that improvements to the Springwater interchange area were necessary in order to accommodate future traffic. Appendix C summarizes the alternatives considered for the interchange and Appendix B describes the evaluation criteria used to select the preferred alternative.

Appendices A through I offer a factual base to support the Springwater interchange project and provide evidence to demonstrate compliance with the applicable Gresham and Multnomah County review standards.

Goal 2 also requires that city, county, state and federal agencies, and special district plans and actions related to land use are "consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS Chapter 268." This provision is important because elements of the IAMP developed for the Springwater interchange will need to be adopted by Gresham and incorporated into its Transportation System Plan (TSP).

Finding: *Appendix G of the IAMP contains detailed review of plans and policies pertinent to the IAMP. Properties that are within the City of Gresham are currently governed by the Gresham comprehensive plan and zoning designations. Properties that are within Multnomah County are currently governed by the Multnomah County comprehensive plan and zoning designations. These findings show that the Springwater IAMP is consistent with the County and City plans, adopted pursuant to the provisions of ORS 197 and ORS 215.*

OAR 660, Division 4, outlines the Goal 2 exception process. This rule is not expected to be pertinent to the Springwater IAMP because it is entirely contained within the urban growth boundary and is not expected to require the taking of an exception to any of the other state goals under the previsions of this rule.

Goal 5: (Natural Resources, Scenic and Historic Areas, and Open Spaces)

This goal requires that natural resources, scenic and historic areas and open spaces be protected. The goal goes on to state that these elements be inventoried and planned for.

Finding: *The Project Management Team worked closely with resource agencies such as Metro, the Johnson Creek Watershed Council and the City of Gresham's environmental staff and the City of Portland Parks Bureau to develop an interchange plan that to the greatest extent possible protects the Johnson Creek watershed and the watersheds of its tributary streams. The project management team also reviewed whether any historic and natural resources were within the management area. No known historic resources exist in the management area other than the Springwater Trail, which is a historic rail route, and no natural resources exist. The preferred interchange design avoids, to the greatest extent possible Johnson Creek and its tributaries. Where avoidance is not possible, the IAMP recommends that mitigation occur within the Springwater community.*

The project management team also consulted with the City of Portland Parks Bureau and based on their input developed an interchange plan that will grade separate the Springwater Trail at its intersection with the arterial serving the interchange.

Goal 7: (Areas Subject to Natural Hazards)

The purpose of this goal is to protect people and property from natural hazards.

Finding: *While the areas are subject to certain natural hazards, such as landslides and earthquakes, design of the facilities will minimize structural damage from earth movements.*

The interchange itself is not in a designated 100-year floodplain, but the road network serving the interchange cross the floodplains of Johnson Creek and its tributaries. The road network will be designed to minimize floodplain impacts by spanning them on elevated structures. The design of these structures are part of the design and engineering of the interchange facilities and not applicable to this IAMP.

Goal 8 (Recreational Needs)

The purpose of this goal is to satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

Finding*: In order to satisfy this goal, the project management team worked closely with the City of Portland Parks Bureau to address the Springwater Trail, which runs through the management area. In response to the Bureau's input, the design of the arterial serving the interchange is grade-seperated from the Springwater Trail.*

The second half of this goal is not applicable as there are no plans to site a destination resort within the Springwater community.

Goal 9: (Economic Development)

This goal requires that local comprehensive plans and policies contribute to a stable and healthy economy in all regions of the state.

Finding: *The Springwater Interchange provides a vital function in supporting local and regional economic development goals and plans. Local traffic, including*

commercial vehicles, must have safe and efficient access to US 26. The intent of the IAMP is to protect the function of the interchange; proposed IAMP policy language illustrates the County's and the City's role in preserving capacity and improving operations at the interchange. Adopting the IAMP will ensure that transportation improvements will be available to support the planned employment uses in Gresham and Multnomah County, consistent with this economic development goal.

Goal 10: Housing

This goal requires the County's and the City's plans provide for housing needs at price ranges and rent levels which are commensurate with the financial capabilities of citizens and allow for flexibility of housing location, type and density.

Finding: *While land in the immediate vicinity of the Springwater Interchange is currently zoned for Mixed Use Agricultural per Multnomah County Land Use, the entire area is slated for urban development and a Springwater Community Plan was developed that identifies predominantly industrial uses and other urban land uses such as Office, Commercial, and Residential when the Springwater Area is annexed into the city of Gresham. Appendix D delineates the future urban land uses. The proposed interchange is in an area that is planned for industrial use. It will not directly affect the supply of housing in the region.*

Goal 11: (Public Facilities Planning) and OAR 660, Division 11

Goal 11, Public Facilities Planning and OAR 660, Division 11, require cities and counties to plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. The goal requires that urban and rural development be "guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable and rural areas to be served."

Findings: *Transportation facilities are considered a primary type of public facility. The Springwater IAMP documents the current and future transportation needs of the urban, urbanizable, and rural areas in the vicinity of Springwater. The analysis of possible alternatives concluded that the grade-separated interchange is the appropriate facility to serve future transportation demand.*

The IAMP contains policies that will guide growth within the vicinity of the interchange to ensure that development takes place at a rate and density that is compatible with the capacity of the interchange.

In terms of other, non-transportation public facilities, the IAMP does not result in any land use changes. No impact on public facilities is expected, because no intensification of land use is created as a result of improvements recommended in the IAMP.

The city of Gresham is developing public facilities plans for the non-transportation related facilities that will be required as the Springwater area urbanizes. The Springwater IAMP does not preclude these other public facilities planning processes.

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Goal 12: (Transportation) and OAR 660, Division 12

Goal 12, Transportation, requires cities, counties, metropolitan planning organizations, and ODOT to provide and encourage a "safe, convenient and economic transportation system." Goal 12 is implemented through OAR 660, Division 12 (2007), also known as the Transportation Planning Rule (TPR) (http://www.oregon.gov/ODOT/TD/TP/TPR.shtml)

Finding: *The purpose of the Springwater interchange is to improve the safety and efficiency of traffic flow through the area and to accommodate efficient freight movements onto and off of US 26. The objective of the Springwater IAMP is to protect the functionality of the interchange and its ability to serve future transportation demands.*

Section 2 of the IAMP contains a discussion of the transportation analysis conducted in order to determine future demand, available capacity, deficiencies and necessary improvements for this interchange area. The analysis demonstrates that the planned transportation facility will adequately serve projected trips generated by future land uses, safely and efficiently for at least 20 years.

The Transportation System Plans of Gresham and Multnomah County have adopted relevant language of the IAMP by either ordinance or resolution. Policy and zoning ordinance language, and resolution language, as provided in IAMP, Appendix J, is added to the Comprehensive Plans and Zoning Ordinances of Gresham, in order to maintain interchange function and ensure that development inconsistent with the objectives of the IAMP does not cause unexpected traffic volumes or create non-conforming access points. The standards reserve capacity at the interchange so it is not consumed prematurely. IAMP policies provide for coordination between Gresham, Multnomah County and ODOT for any land use actions proposed within the IAMP study are. Local plans must be consistent with state plans. The Oregon Transportation Commission, first must approve proposed plan amendments involving land use actions that would exceed standards set forth in the IAMP.

ODOT, Gresham and Multnomah County jointly developed the Springwater IAMP. Policy language contained in the IAMP mandates continued coordination between these agencies for management of the interchange area. Current and future planned land uses were considered in the design of the interchange in order to ensure its ability to support future traffic demands. Policies within the IAMP are intended to manage land uses around the interchange to avoid unplanned growth and development that may impact the function of the facility. The policies also require that plan amendments and zone changes within the IAMP study area must not result in a significant impact on the interchange facility. If a significant impact is expected, then the IAMP must be amended and mitigation strategies, including a funding plan, must be adopted.

The IAMP calls for construction of an interchange. The IAMP documents the various design alternatives considered, the criteria used to evaluate the alternatives, and the rationale for selecting the preferred alternative.

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The TPR requires local governments to adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors and sites for their identified functions" (OAR 660-012-0045(2)). A variety of measures help to achieve this policy, including:

- *Access control measures which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;*
- *Standards to protect future operations of roads;*
- *A process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites;*
- *A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites;*
- *Regulations to provide notice to ODOT of land use applications that require public hearings, involve land divisions, or affect private access to roads; and*
- *Regulations assuring that amendments to land use designations, densities and design standards are consistent with the functions, capacities and performance standards of facilities identified in the TSP. See also OAR 660-012-0060.*

Goal 14: (Urbanization) and OAR 660, Divisions 14 and 22

Goal 14, Urbanization, requires an "orderly and efficient transition from rural to urban use" and the establishment of urban growth boundaries (UGBs) to provide land for urban development and identify and separate urban and urbanizable land from rural land.

Finding: *The Springwater interchange planning area is located entirely within the Metro urban growth boundary. Land in the vicinity of the interchange is currently zoned multi-use agriculture per Multnomah County, but with annexation into the city of Gresham will change to urban/suburban-level residential and employment uses. The IAMP contains policies that will guide growth within the vicinity of the interchange to ensure that development takes place at a rate and density that is compatible with the capacity of the interchange that are adopted to protect the function of the interchange from any unplanned future development.*

Generally, compliance with the goals is achieved by demonstrating compliance with an acknowledged comprehensive plan. Since the Gresham Comprehensive Plan and the County's TSP have been acknowledged as complying with the Statewide Planning Goals and related rules, compliance with the County Comprehensive Plan is considered to equate to compliance with the Statewide Planning Goals. The Springwater interchange area, for which this IAMP is being completed, is contained in these plans and is therefore presumed to comply with the related goal requirements.

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Goal 3 Agricultural Lands
Goal 4 Forest Lands
Goal 6 Air, Water and Land Resources Quality
Goal 13 Energy Conservation
Goal 15 Willamette River Greenway
Goal 16 Estuarine Resources
Goal 17 Coastal Shorelands
Goal 18 Beaches and Dunes
Goal 19 Ocean Resources

These goals were determined not to be applicable to the development of the IAMP. Goals 3 and 4are not applicable because the area within the IAMP is within the Metro urban growth boundary. Goal 6 is not applicable because no changes to waste and discharge will occur from this plan, and environmental quality will not fall below accepted state or federal standards as a result of the plan. Goal 13 is not applicable as no changes will occur to density of land use nor will it encumber energy conservation efforts in the area of the plan. Goal 15 is not applicable because the Willamette River Greenway is not in or near the interchange area. Goals 16, 17, 18, 19 are not applicable because no estuarine resources, coastal shorelands, beaches or dunes or ocean resources exist in or near the interchange area.

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Oregon Transportation Plan (2006)

The Oregon Transportation Plan (OTP) is the state's long-range multimodal transportation plan. The OTP is the overarching policy document among a series of plans that together form the state transportation system plan (TSP). An IAMP must be consistent with applicable OTP goals and policies. Findings of compatibility will be part of the basis for IAMP approval. The most pertinent OTP goals and policies for interchange planning are as follows:

POLICY 1.1 – of an Integrated Multimodal System

It is the policy of the State of Oregon to plan and develop a balanced, integrated transportation system with modal choices for the movement of people and goods.

> ***Finding:*** *The Springwater Community Plan calls for an integrated Multi-modal system including sidewalks and bike lanes on roads classified as collectors and above. The IAMP for Springwater reinforces the Community Plan and builds from it by recommending that the Springwater Trail be grade-separated from the arterial street that serves the interchange.*
>
> *The Springwater IAMP was developed to facilitate improved movement of good (freight) from the Springwater Community, which is a planned arae for industrial expansion. The interchange will provide for a safe and integrated roadway network in the area with improved access to and from US 26.*

POLICY 1.2 – Equity, Efficiency and Travel Choices

It is the policy of the State of Oregon to promote a transportation system with multiple travel choices that are easy to use, reliable, cost-effective and accessible to all potential users, including the transportation disadvantaged.

> ***Finding:*** *Improved bicycle and pedestrian facilities are incorporated into the design for the interchange reconstruction. Any new roadway projects (including local streets) will meet current applicable standards. Pursuant to existing local requirements, 5-foot wide sidewalks will be constructed as part of all collector or local streets planned within the interchange area (see Proposed Local Circulation Plan, Exhibit 14), with separate bike lanes required for roadways classified as collectors or above. The Local Street Connectivity Plan includes connections for bicycles and pedestrians where street connections are not possible or practical.*
>
> *Th Springwater Community currently has one transit route serving the area along SE Orient Drive. The Springwater Community Plan identifies three new transit routes. One Primary Transit Route along SE Hogan Road, west of the management area; one Secondary Transit Route along the arterial serving the Springwater interchange; and ond one Neighborhood Circulation Route along the proposed collector crossing US 26 to the north of the interchange.*
>
> *The Springwater IAMP builds off of the Springwater Community Plan and does not prohibit or otherwise limit more transit routes in the future.*

POLICY 1.3 – Relationship of Interurban and Urban Mobility

It is the policy of the State of Oregon to provide intercity mobility through and near urban areas in a manner which minimizes adverse effects on urban land use and travel patterns and provides for efficient long distance travel.

> ***Finding:*** *The Springwater IAMP provides for improved safety and intercity mobility along the US 26 corridor. The IAMP regulates access and land uses in the vicinity of the interchange to ensure the facility will operate at levels consistent with established state/regional mobility standards for the 20-year planning horizon and beyond.*
>
> *The IAMP process has coordinated with local partners in vicinity of the Springwater Interchange, through their TSPS, to develop/enhance the local street network, to accommodate local access and connectivity. A proposed new local arterial will provide connectivity between SE Hogan Road and SE Orient Drive in Multnomah County (future City of Gresham), as will a new collector crossing between SE 252nd Avenue and the proposed arterial provide greater connectivity between neighborhoods, and improve access across US 26.*

POLICY 2.1 - Capacity and Operational Efficiency

It is the policy of the State of Oregon to manage the transportation system to improve its capacity and operational efficiency for the long term benefit of people and goods movement.

> ***Finding:*** *The Springwater interchange was developed in response to safety, capacity and operational efficiency issues affecting the US 26 corridor. Short term actions in the IAMP accomplish these management objectives by minimizing access locations through this section of US 26. The medium-term and long-term actions in the IAMP protect long-term system capacity by ensuring that the interchange continues to function at a level that meets the mobility expectations of the state. The IAMP contains policies that regulate land use in the vicinity of the interchange by requiring that proposed land use actions must include a review of potential impacts to interchange operations.*

POLICY 2.2 – Management of Assets

It is the policy of the State of Oregon to manage transportation assets to extend their life and reduce maintenance costs.

> ***Finding:*** *The stated purpose of the IAMP is to maximize the operational life of the Springwater Interchange, and consequently, protect the State's investment in the facility. Specifically, the goal of the IAMP is to protect the function and operation of the interchange and the local street network within the IAMP area. This includes providing safe and efficient connections between local streets and state highways and minimizing local traffic traveling through the interchange. The IAMP requires proposed changes to the planned land use system to demonstrate consistency with IAMP policies protecting the long-term function of the interchange facility.*

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The US 26 corridor includes bus service on the facility between Gresham and the neighboring city of Sandy.

TriMet's Metropolitan Area Express lightrail service is within 2-miles of the Springwater area.

POLICY 3.1 – An Integrated and Efficient Freight System

It is the policy of the State of Oregon to promote an integrated, efficient and reliable freight system involving air, barges, pipelines, rail, ships and trucks to provide Oregon a competitive advantage by moving goods faster and more reliably to regional, national and international markets.

Finding: *The US 26 corridor serves as a primary connection between the Portland metro region and central and eastern Oregon. The highway is a designated Statewide Freight Route in the Oregon Highway Plan. It serves the planned development of the Springwater Community and the cities of Portland, Gresham, Damascus, Troutdale, Fairview and Wood Village to the west, with the area around Mt. Hood and Central and Eastern Oregon to the east.*

The US 26 corridor is a principal facility for freight traffic and regional through-trips. The Springwater interchange will alleviate congestion and conflicts of combined local trips and through-trips currently experienced in the Springwater Community. The Springwater IAMP provides management tools to ensure the continued safety and efficiency of travel along the US 26 Corridor, particularly in the vicinity of the new interchange.

POLICY 3.2 – Moving People to Support Economic Vitality

It is the policy of the State of Oregon to develop an integrated system of transportation facilities, services and information so that intrastate, interstate and international travelers can travel easily for business and recreation.

Finding**:** *The Springwater interchange will facilitate improved connections to and from the Springwater community and US 26, providing for an efficient and safe transportation network for travelers on business and persueing recreational pursuits.*

POLICY 4.1 - Environmentally Responsible Transportation System

It is the policy of the State of Oregon to provide a transportation system that is environmentally responsible and encourages conservation and protection of natural resources.

Finding: *IAMP policy language protects resource land within the IAMP study area by restricting the location and operation of approach roads in the vicinity of the interchange consistent with the existing designations in the comprehensive plan. The Springwater Interchange will span the adjacent Johnson Creek and its tributaries, home to threatened and endangered salmonid species. Actions necessary to protect and enhance the natural resources within the management area were taken in the refinement of the preferred alternative. The IAMP has goals and policies to address the protection of the natural environment.*

POLICY 5.1 – Safety

It is the policy of the State of Oregon to continually improve the safety and security of all modes and transportation facilities for system users including operators, passengers, pedestrians, recipients of goods and services, and property owners.

> ***Finding:*** *The Springwater IAMP addresses crash rates along this section of US 26. The highway improvements minimize access to the highway and the grade-separated interchange limits conflicts between local and regional trips - a contributing cause for vehicle crashes in the area. The interchange design, and the specified location and authorized use of approach roads provide for long-term highway safety.*

POLICY 7.1 – A Coordinated Transportation System

It is the policy of the State of Oregon to work collaboratively with other jurisdictions and agencies with the objective of removing barriers so the transportation system can function as one system.

> ***Finding:*** *ODOT worked in collaboration with Gresham and Multnomah County to develop and adopt the IAMP. Improvements to local street connectivity and access to state facilities within the IAMP area were further coordinated in the development and updating of local jurisdiction TSPs. The IAMP policy language adopted by these local jurisdictions requires continued coordination between themselves and ODOT to protect the long-term function of the interchange.*

POLICY 7.3 – Public Involvement and Consultation

It is the policy of the State of Oregon to involve Oregonians to the fullest practical extent in transportation planning and implementation in order to deliver a transportation system that meets the diverse needs of the state.

> ***Finding:*** *Appendix I of the Springwater Interchange Area Management Plan (IAMP) contains a summary of the public involvement efforts that were undertaken as part of the IAMP project. These efforts included the following:*

- *A meeting of interested parties was held on February 12, 2009*
- *A public open house held on July 27, 2010, to discuss the new Springwater interchange and the IAMP;*
- *Small group (property owners) meetings were held on November 2 and November 9, 2010, to answer project-specific questions from business owners and residents directly affected by the project;*
- *Five (5) stakeholder meetings were held between March and July, 2010, with identified stakeholders including:*
    - *Developers*
    - *Johnson Creek Watershed Council*

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- *East Metro Economic Alliance*
- *Mt. Hood Neighborhood Association, Gresham Fire Department*
- *Real Estate interests*
- *Metro staff from land use planning, open spaces and transportation*
- *Audubon Society*
- *Portland Parks and Recreation*

- *A newsletter sent out to individuals near the proposed project to provide information and notification of the public involvement events; and*
- *A postcard announcing the small group meetings sent to business and property owners adjacent to the project.*

The draft IAMP was made available for public review and comment for a 45-day period beginning March 4, 2011. Notice of the public review draft was sent via postcard to individuals near the proposed project and those who had expressed interest at previous public events. Public comment was accepted via email, mail and telephone.

Public hearings on the proposed changes to the Gresham Comprehensive Plan and implementing ordinances were held by the Gresham Planning Commission and City Council during the winter 2010-11. The Board of Commissioners of Multnomah County, took no action as the IAMP is considered compliant with the Springwater Community Plan, which has been acknowledged by the County as the planning document for the Springwater area. These hearings provided opportunities for public comment on the proposed changes.

POLICY 7.4 - Environmental Justice

It is the policy of the State of Oregon to provide all Oregonians, regardless of race, culture or income, equal access to transportation decision-making so all Oregonians may fairly share in benefits and burdens and enjoy the same degree of protection from disproportionate adverse impacts.

Findings: *Appendix I provides a summary of the public involvement efforts that took place during development of the IAMP. Various methods were used to gather public input about the interchange project and the management plan, including two open houses, a series of small group meetings, and a public review and comment period for the draft IAMP. Press releases to announce the open houses and small group meetings were sent to all local newspapers, as well as local radio and television stations. Input from citizens was used to evaluate alternatives. These opportunities were provided equally to all, regardless of race, culture or income.*

Oregon Highway Plan

The 1999 Oregon Highway Plan (OHP) establishes policies and investment strategies for Oregon's state highway system over a 20-year period and refines the goals and policies

found in the OTP. Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity. These policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail and air systems.

The OHP identifies gaps to the region's throughway system that are needed to improve access from the Portland metropolitan region to the rest of the state, and destinations beyond. Among these is a connection from I-84 to the Mt. Hood Hwy (US 26). The OHP policies applicable to planning for this connection are described below.

Under Goal 1: System Definition, the following policies are applicable:

Policy 1A (Highway Classification) defines the function of state highways to serve different types of traffic that should be incorporated into and specified through IAMPs.

> ***Finding:*** *Section 2 of the Springwater IAMP summarizes the functional classification of roadways within the IAMP study area. US 26 is classified as a Statewide Freight Route and an Expressway. Construction of an interchange to replace an at-grade intersection at Springwater (US 26 and SE 267th Avenue), and limiting approach roads are consistent with the highway's classification.*

Policy 1B (Land Use and Transportation) recognizes the need for coordination between state and local jurisdictions.

> ***Finding:*** *Coordination between state and local jurisdictions occurred throughout the preparation of the IAMP, and in the preparation/updating of local jurisdiction TSPs. A Project Management Team (PMT) subgroup was formed to inform the IAMP process and included members representing Gresham, ODOT, Multnomah and Clackamas Counties, and Damascus. The PMT subgroup met numerous times and reviewed draft documents in order to provide input and revisions.*

Policy 1C (State Highway Freight System) states the need to balance the movement of goods and services with other uses.

> ***Finding****: The project improves freight mobility through the area by addressing safety and efficiency issues that have been identified throughout the corridor due to the conflict of combined regional freight movements and local trips. Existing freight distribution centers to the north (Columbia Corridor), and lands to be zoned as future Industrial Areas in the Springwater Community, will benefit from the construction of a new, interchange along US 26.*

Policy 1D (Scenic Byways) It is the policy of the State of Oregon to preserve and enhance designated Scenic Byways, and to consider aesthetic and design elements along with safety and performance considerations on designated Byways.

> ***Finding:*** *Policy 1D is not applicable as this section of US 26 is not a Scenic Byway SE Orient Drive, which is the east boundary of the Springwater IAMP, is part of the Mt.*

Hood Scenic Byway. There are no policies or actions within the IAMP that would prohibit US 26 from being designated as a Scenic Byway in the future.

Policy 1E (Lifeline Routes) It is the policy of the State of Oregon to provide a secure lifeline network of streets, highways, and bridges to facilitate emergency services response and to support rapid economic recovery after a disaster.

Finding: *There is nothing in the Springwater IAMP that prohibits or otherwise limits the establishment of US 26 as a Lifeline Route.*

Policy 1F (Highway Mobility Standards) sets mobility standards for ensuring a reliable and acceptable level of mobility on the highway system by identifying necessary improvements that would allow the interchange to function in a manner consistent with OHP mobility standards.

Finding: *The analysis of existing and future traffic conditions in the vicinity of the Springwater Interchange shows that the existing highway cannot perform at the level expected in the OHP without modernization. Since the Springwater Interchange Project entails construction of a new grade-separated crossing of US 26, the Highway Design Manual (HDM) standards were used as a criterion for selecting a preferred design for the new interchange, instead of the OHP/Metro mobility standards. The HDM standards adopted as part of the plan will result in acceptable interchange and highway operations throughout the 20-year planning horizon.*

Policy 1G (Major Improvements) requires maintaining performance and improving safety by improving efficiency and management before adding capacity. ODOT works with regional and local governments to address highway performance and safety.

Finding: *Appendix C summarizes the alternatives that were evaluated for their potential to accommodate existing and future traffic demand at the Springwater interchange. Those alternatives included an evaluation of a 2030 No-Build scenario with retention of at-grade intersection at SE 267th Avenue and US 26, as well as different Build Alternative roadway alignments and interchange designs. The 2030 No-Build alternative, that did not include a grade-separated interchange, does not provide a solution to the highway capacity and highway safety needs. Therefore, adding capacity is the necessary means for improving safety and efficiency in this highway section.*

Policy 1H (Bypasses) Bypasses are highways designed to maintain or increase statewide or regional mobility. Generally they relocate a highway alignment around a downtown, an urban or metropolitan area or an existing highway. The goal of bypass facilities is to effectively serve state and regional traffic trips. It is the policy of the State of Oregon to build bypasses to provide safe, effi cient passage for through travelers and commerce.

Finding: *Policy 1H is not applicable as US 26 is designated a limited access Expressway through the Springwater IAMP area. The development of the IAMP helps to ensure the future operations of US 26 so that construction of a bypass is never necessary.*

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Under Goal 2: System Management, the following policies are applicable:

Policy 2A (Partnerships) It is the policy of the State of Oregon to establish cooperative partnerships to make more effi cient and effective use of limited resources to develop, operate, and maintain the highway and road system. These partnerships are relationships among ODOT and state and federal agencies, regional governments, cities, counties, tribal governments, and the private sector.

> ***Finding:*** *The development of the Springwater IAMP was a partnership between ODOT and the Cities of Gresham and Damascus and the Counties of Multnomah and Clackamas. Private organizations such as the Johnson Creek Watershed Council and the East Multnomah Economic Alliance also participated in the development of the IAMP as did the citizens of the Springwater community.*

Policy 2B (Off-System Improvements) helps local jurisdictions adopt land use and access management policies.

> ***Finding:*** *Adoption of the land use and access management policies and actions in the IAMP protect the function of the interchange and other related improvements. The IAMP actions minimize the use of US 26 and the new arterial for property access. For most properties, local roads are used to provide access. Off-system improvements within the Springwater IAMP area were identified in the IAMP process, as well as in the local jurisdiction TSP process, to ensure coordination among these efforts.*

Policy 2C (Interjurisdictional Transfers) It is the policy of the State of Oregon to consider, in cooperation with local jurisdictions, interjurisdictional transfers that:

- Rationalize and simplify the management responsibilities along a particular roadway segment or corridor;
- Reflect the appropriate functional classification of a particular roadway segment or corridor; and/or
- Lead to increased efficiencies in the operation and maintenance of a particular roadway segment or corridor.

> ***Finding:*** *Policy 2C is not applicable to the Springwater IAMP as there will be no jurisdictional transfer of state facilities, nor will there be a transfer of local facilities to the state.*

Policy 2D (Public Involvement) *It is the policy of the State of Oregon to ensure that citizens, businesses, regional and local governments, state agencies, and tribal governments have opportunities to have input into decisions regarding proposed policies, plans, programs, and improvement projects that affect the state highway system.*

> ***Finding:*** *Refer to Goal 1 Finding above.*

Policy 2E (Intelligent Transportation Systems) It is the policy of the State of Oregon to consider a broad range of Intelligent Transportation Systems services to improve system efficiency and safety in a cost-effective manner. Deployment of ITS shall reflect the user

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service priorities established in the Oregon Intelligent Transportation Systems Strategic Plan. Specifically:

- Incident Management
- En-route Driver Information
- Traffic Control (Arterials and Freeways)
- Route Guidance
- Commercial Vehicle Electronic Clearance
- Pre-trip Travel Information
- Public Transportation Management
- Emergency Notification and Personal Security
- Emergency Vehicle Management
- Commercial Fleet Management

Finding: *Policy 2E is not directly applicable to the Springwater IAMP. However elements of Policy 2E can be implemented for the Springwater interchange and US 26, in the Springwater community without affecting the Springwater IAMP.*

Policy 2F (Traffic Safety) improves the safety of the highway system.

Finding: *An important reason for construction of the interchange project is to address safety issues in this section of the highway. The IAMP protects the safe and efficient operation of the interchange by regulating access and land use in the vicinity, and through separation of local, regional, and freight movements.*

Policy 2G (Rail and Highway Compatibility) It is the policy of the State of Oregon to increase safety and transportation efficiency through the reduction and prevention of conflicts between railroad and highway users.

Finding: *Policy 2G is not applicable to the Springwater IAMP as there are no active rail lines in the vicinity of the management area*

Under Goal 3: Access Management, the following policies are applicable:

Policy 3A: (Classification and Spacing Standards) sets access spacing standards for driveways and approaches to the state highway system.

Finding: *The IAMP largely adheres to the approach road spacing standards established by OAR 734-051. Only two locations within the Springwater interchange influence area do not meet interchange spacing standards (the intersection of SE Teleford Road and the new arterial and EB ramp terminals; and the new intersection of SE Jeanette Street and the new arterial and the WB ramp terminals). The reasons for deviating from this standard are provided in detail in the Access Management Plan component of the IAMP. Generally, these deviations are sought to provide access for an existing intersection (SE Teleford Road) and to protect the riparian area of the North Fork Johnson Creek (new intersection of SE Jeanette Street).*

The IAMP contains short and long-term access strategies that will be applied within the IAMP planning area in order to regulate existing and future driveway and other approaches in the vicinity of the interchange.

Policy 3B (Medians) It is the policy of the State of Oregon to plan for and manage the placement of medians and the location of median openings on state highways to enhance the efficiency and safety of the highways, and influence and support land use development.

> ***Finding:*** *US 26 is currently a divided highway through the Springwater community. The location of the Springwater interchange will close an exsisting median opening, thereby improving safety along the highway.*

Policy 3C (Interchange Access Management Areas) sets policy for managing interchange areas by developing an IAMP that identifies and addresses current interchange deficiencies and establishes short, and long term solutions.

> ***Finding:*** *The purpose of the Springwater IAMP is to effectively manage the US 26 at Springwater interchange area. The IAMP provides recommendations for short and long term implementation and access management actions, as well as land use policies that are intended to protect the interchange into the 20-year planning horizon and beyond.*

Policy 3D (Deviations) establishes general policies and procedures for deviations from adopted access management standards and policies.

> ***Finding*****:** *The Access Management Plan component of the IAMP identifies access points that will require an access spacing deviation request, and the rationale for the request. Deviations will be requested in accordance with the applicable state procedure.*

Policy 3E (Appeals) It is the policy of the State of Oregon to manage appeals of both denied requests for approach roads and denied requests for deviations from adopted access management standards and policies through an appeals process to ensure statewide consistency.

> ***Finding*****:** *The Springwater IAMP does not prohibit the uniform application of Policy 3E.*

Policy 4A (Efficiency of Freight Movement) It is the policy of the State of Oregon to maintain and improve the efficiency of freight movement on the state highway system and access to intermodal connections. The State shall seek to balance the needs of long distance and through freight movements with local transportation needs on highway facilities in both urban areas and rural communities.

> ***Finding:*** *The Springwater IAMP seeks to improve the efficiency of freight movement by constructing a grade-separated interchange to US 26 in an area planned for future development of industrial uses.*

Policy 4B: (Alternative Passenger Modes) It is the policy of the State of Oregon to advance and support alternative passenger transportation systems where travel demand, land use, and other factors indicate the potential for successful and effective development of alternative passenger modes.

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Finding: *Policy 4B is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit or otherwise constrain the development of alternative passenger modes of transportation.*

Policy 4C (High-Occupancy Vehicle (HOV) Facilities) It is the policy of the State of Oregon to utilize HOV facilities to improve the efficiency of the highway system in locations where travel demand, land use, transit, and other factors are favorable to their effectiveness. A systems planning approach shall be taken in which individual HOV facilities complement one another and the other elements of the multimodal transportation system.

Finding: *Policy 4C is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit or otherwise constrain the development of alternative passenger modes of transportation.*

Policy 4D: (Transportation Demand Management) It is the policy of the State of Oregon to support the efficient use of the state transportation system through investment in transportation demand management strategies.

Finding: *Policy 4D is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit or otherwise constrain the development of transportation demand management strategies.*

Policy 4E (Park-and-Ride Facilities) *It is the policy of the State of Oregon to encourage the efficient use of the existing transportation system and to seek cost-effective expansion of the highway system's passenger capacity through development and use of park-and-ride facilities.*

Finding: *Policy 4E is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit or otherwise constrain the development of park-and-ride facilities.*

Policy 5A (Environmental Resources) It is the policy of the State of Oregon that the design, construction, operation, and maintenance of the state highway system should maintain or improve the natural and built environment including air quality, fish passage and habitat, wildlife habitat and migration routes, sensitive habitats (i.e. wetlands, designated critical habitat, etc.), vegetation, and water resources where affected by ODOT facilities.

Finding: *Development of the Springwater IAMP took into consideration avoidance and enhancement of the natural environment. The Project Management Team work closely with the Johnson Creek Watershed Council, Metro, City of Portland Parks Bureau and the City of Gresham's environmental staff to develop an interchange plan that avoids to the extent possible natural features. The IAMP specifically calls for enhancement to the natural environment when feasible during the design and construction of the interchange and its supporting road network.*

Policy 5B (Scenic Resources) *It is the policy of the State of Oregon that scenic resources management is an integral part of the process of creating and maintaining the state*

highway system. The State of Oregon will use best management practices to protect and enhance scenic resources in all phases of highway project planning, development, construction, and maintenance.

Finding: *The finding of Policy 5A are also applicable to Policy 5B.*

OAR 731-015-0065 Coordination Procedures for Adopting Final Facility Plans

OAR 731-015-0065 regulates the ODOT procedure for adopting facility plans. An IAMP is a facility plan. The procedure outlined in OAR 731-015-0065 requires that ODOT coordinate with local government agencies during development of the plan and provide a draft of the facility plan to affected cities, counties, and other agencies for comment. The facility plan must be consistent with statewide planning goals and local comprehensive plan policies, and findings of compatibility must be presented to the Oregon Transportation Commission for facility plan adoption.

Finding: *The Springwater IAMP was developed jointly by ODOT, Gresham, and Multnomah County. A final draft of the IAMP will be provided to all affected government and other agencies, and any potential conflicts with state or local plans will be jointly resolved. These findings were developed with statewide planning goals and local comprehensive plans in mind for presentation to the Oregon Transportation Commission. Adoption of the IAMP will take place in conformance with this provision.*

OAR 734, Division 51: Highway Approaches, Access Control, Spacing Standards and Medians

ODOT adopted OAR 734, Division 51 to address access management and it is expected that as part of this project, ODOT will engage in access management consistent with its Access Management Rule and Highway Plan policies. This could involve the purchase of access rights within at least one-quarter mile of the interchange ramps, as well as the development of local roadways to provide access to parcels whose access may be affected by right-of-way acquisitions.

OAR 734-051 governs the permitting, management, and standards of approaches to state highways to ensure safe and efficient operation of the state highways. OAR 734-051 policies address the following:

- How to bring existing and future approaches into compliance with access spacing standards, and ensure the safe and efficient operation of the highway;
- The purpose and components of an access management plan; and
- Requirements regarding mitigation, modification and closure of existing approaches as part of project development.

Section 734-051-0125, Access Management Spacing Standards for Approaches in an Interchange Area, establishes interchange management area access spacing standards.

Section 734-051-0155 specifies elements that are to be included in an IAMP, such as short-, medium-, and long-range actions to improve and maintain safe and efficient

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roadway operations within the interchange area.

ODOT adopted OAR 734, Division 51 to address access management and it is expected that as part of this project. ODOT will engage in access management consistent with its Access Management Rule and Highway Plan policies. This could involve the purchase of access rights within at least one-quarter mile of the interchange ramps, as well as the development of local roadways to provide access to parcels whose access may be affected by right-of-way acquisitions.

The Access Management Plan component of this project will compare access spacing with adopted access standards. If future proposed interchange improvements would not meet access spacing standards outlined in OAR 734-051-0125, the project will require deviations to interchange and roadway approach (public and private streets and driveways) access management spacing standards to be approved by ODOT regional access manager, as per OAR 734-051-0135.

> ***Finding:*** *The Springwater IAMP identifies where approach roads along the proposed arterial serving the new interchange will not meet the standards after interchange construction. Short-term and long-term access strategies are provided to close approach roads to be consistent with spacing standards. In some cases, new road alignments will provide alternative access. The IAMP also identifies access spacing deviations that will be needed and provides rationale for each.*
>
> *The IAMP contains approach road spacing standards for new development near the interchange. These standards, shown in Table 2 of OAR 734, are the spacing standards in OAR 734-051, Table 8 for Non-freeway Interchanges with Multi-lane Crossroads.*

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Regional Regulations

Metro is the regional government for the Oregon portion of the Portland Metropolitan area. Metro's jurisdictional boundary encompasses the urban portions of Multnomah, Washington and Clackamas counties.

Metro's Role in Land Use Planning

Metro is responsible for regional land use and transportation planning functions, including all adjustments to the UGB and related activities.

Metro's Role in Transportation Planning

Metro is the regional government responsible for regional transportation planning under state law and is the federally-designated metropolitan planning organization (MPO) for the Portland metropolitan area. As the federally designated MPO, Metro guides regional transportation system planning and development in the Portland metropolitan area. Metro is also responsible for developing a regional transportation system plan (TSP), consistent with Oregon Transportation Planning Rule (TPR) requirements and Federal planning rules.

Metro's Regional Framework Plan

The Regional Framework Plan unites all of Metro's adopted land use planning policies and requirements. The Metro Charter directs the agency to address the following subjects in the Plan:

- Management and amendment of the Urban Growth Boundary
- Protection of lands outside the Urban Growth Boundary for natural resource use and conservation, future urban expansion or other uses
- Urban design and settlement patterns
- Housing densities
- Transportation and mass transit systems
- Parks, open spaces and recreational facilities
- Water sources and storage
- Coordination with Clark County, Washington
- Planning responsibilities mandated by state law
- Other issues of metropolitan concern

Metro's Regional Framework Plan can be accessed in its entirety through this link:

(http://www.oregonmetro.gov/index.cfm/go/by.web/id=432).

Regional Framework Plan Structure

Each chapter of this Plan contains an introduction followed by a list of relevant Fundamentals. Fundamentals are eight value statements adopted by the Metro Council that synthesize the 2040 Growth Concept and regional policies and are listed below:

Fundamental 1: Encourage a strong local economy by providing an orderly and efficient use of land, balancing economic growth around the region and supporting high quality education.

Fundamental 2: Encourage the efficient use of land within the UGB including buildable industrial and commercial land and focus development in 2040 mixed use centers and corridors.

Fundamental 3: Protect and restore the natural environment including fish and wildlife habitat, streams and wetlands, surface and ground water quality and quantity, and air quality.

Fundamental 4: Provide a balanced transportation system including safe, attractive facilities for bicycling, walking and transit as well as for motor vehicles and freight.

Fundamental 5: Maintain separation between the Metro UGB and neighboring cities by working actively with these cities and their respective counties.

Fundamental 6: Enable communities inside the Metro UGB to enhance their physical sense of place by using among other tools, greenways, natural areas, and built environment elements.

Fundamental 7: Enable communities to provide diverse housing options for all residents by providing a mix of housing types as well as affordable homes in every jurisdiction.

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Fundamental 8: Create a vibrant place to live and work by providing sufficient and accessible parks and natural areas, improving access to community resources such as schools, community centers and libraries as well as by balancing the distribution of high quality jobs throughout the region, and providing attractive facilities for cultural and artistic performances and supporting arts and cultural organizations.

These Fundamentals are followed by policies of the Metro Council. Chapters 1 through 6 address substantive planning policies. Chapter 7 addresses how Metro will manage the plan and amendments to the plan. Chapter 8 addresses how the plan policies are to be implemented. Related documents and background information are contained in Appendices.

Policies – Chapter 1, Land Use

1.1 Urban Form
1.2 Built Environment
1.3 Housing Choice
1.4 Economic Opportunity
1.5 Economic Vitality
1.6 Growth Management
1.7 Urban/Rural Transition
1.8 Developed Urban Land
1.9 Urban Growth Boundary
1.10 Urban Design
1.11 Neighbor Cities
1.12 Protection of Agriculture and Forest Resource Lands
1.13 Participation of Citizens
1.14 School and Local Government Plan and Policy Coordination
1.15 Centers
1.16 Residential Neighborhoods

Finding: *The Springwater IAMP contains no policies or actions that would limit Metro from carrying out policies identified in Chapter 1 of the Regional Framework Plan. In fact, the IAMP contributes positively to many of the land use policies identified in the Regional Framework Plan.*

Policies – Chapter 2, Transportation

2.1 Public Involvement
2.2 Intergovernmental Coordination
2.3 Urban Form
2.4 Consistency Between Land Use and Transportation Planning
2.5 Barrier-Free Transportation
2.6 Interim Job Access and Reverse Commute Policy
2.7 Transportation Safety and Education

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2.8 The Natural Environment
2.9 Water Quality
2.10 Clean Air
2.11 Energy Efficiency
2.12 Regional Street Design
2.13 Local Street Design
2.14 Regional Motor Vehicle System
2.15 Regional Public Transportation System
2.16 Public Transportation Awareness and Education
2.17 Public Transportation Safety and Environmental Impacts
2.18 Regional Public Transportation Performance
2.19 Special Needs Public Transportation
2.20 Regional Freight System
2.21 Regional Freight System Investments
2.22 Regional Bicycle System Connectivity
2.23 Regional Bicycle System Mode Share and Accessibility
2.24 Regional Pedestrian System
2.25 Regional Pedestrian Mode Share
2.26 Regional Pedestrian Access and Connectivity
2.27 Transportation System Management
2.28 Regional Transportation Demand Management
2.29 Regional Parking Management
2.30 Peak Period Pricing
2.31 Transportation Funding
2.32 2040 Growth Concept Implementation
2.33 Transportation System Maintenance and Preservation
2.34 Transportation Safety

Finding: *The Springwater IAMP contains no policies or actions that would limit Metro from carrying out policies identified in Chapter 2 of the Regional Framework Plan. In fact, the IAMP contribute positively to many of the transportation policies identified in the Regional Framework Plan.*

Policies – Chapter 3, Nature in Neighborhoods

3.1 Inventory of Park Facilities and Identification and Inventory of Regionally Significant Parks, Natural Areas, Open Spaces, Fish and Wildlife Habitat,Trails and Greenways
3.2 Protection of Regionally Significant Parks, Natural Areas, Open Spaces, Fish and Wildlife Habitat, Trails and Greenways
3.3 Management of the Publicly-Owned Portion of the Regional System of Parks, Natural Areas, Open Spaces, Fish and Wildlife Habitat, Trails and Greenways
3.4 Protection, Establishment and Management of a Regional Trails System
3.5 Provision of Community and Neighborhood Parks, Open Spaces, Fish and Wildlife Habitat, Natural Areas, Trails and Recreation Programs
3.6 Participation of Citizens in Environmental Education, Planning, Stewardship

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Activities, and Recreational Services

Finding: *The project management team worked closely with Metro and the Johnson Creek Watershed Council to ensure the Springwater interchange avoided to the greatest extent possible natural areas and where avoidance is not possible ensure that mitigation is located within the Springwater area. The PMT also worked with the City of Portland to ensure that the regionally significant Springwater Trail is grade separated from the arterial. The IAMPs contain no policies that would preclude Metro from carrying out policies in this chapter for the acquisition of parks and open spaces.*

Policies – Chapter 4, Watershed Health and Water Quality

4.1 Water Supply
4.2 Overall Watershed Management
4.3 Water Quality
4.4 Stormwater Management
4.5 Urban Planning and Natural Systems

Finding: *Chapter 4 of the Regional Framework Plan is not directly applicable to the Springwater IAMP because the chapter addresses how Metro is to plan for watershed health and water quality. The Springwater interchange will need to address water quality and stormwater runoff during the design of the interchanges, but the Springwater IAMP will not itself prohibit Metro from implementing Policies in Chapter 4 of the Regional Framework Plan.*

Policies – Chapter 5, Regional Natural Hazards

5.1 Earthquake Hazard Mitigation Measures
5.2 Flood Hazard Mitigation Measures
5.3 Landslide Hazard Mitigation Measures
5.4 Volcanic Hazard Mitigation Measures
5.5 Wildland-Urban Interface Fire Mitigation Measures
5.6 Severe Weather Hazard Mitigation Measures
5.7 Biological Hazard Mitigation Measures
5.8 Other Hazard Mitigation Measures
5.9 Natural Disaster Response Coordination

Finding: *Chapter 5 of the Regional Framework Plan is not directly applicable to the Springwater IAMP because the chapter addresses how Metro is to plan for the future with consideration given to natural hazards. Chapter 5 is applicable in that the design of the Springwater interchange will need to address natural hazards and that ODOT will need to work with Metro to ensure the design of the interchange do not contribute to a natural disaster.*

Policies – Chapter 6, Clark County

6.1 Coordination with Clark County

Finding: *Chapter 6 of the Regional Framework Plan is not applicable to the*

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Springwater interchange as it is far removed from Clark County, Washington.

Policies – Chapter 7, Management

7.1 Citizen Participation
7.2 Metro Policy Advisory Committee and Joint Policy Advisory Committee on Transportation
7.3 Applicability of Regional Framework Plan Policies
7.4 Urban Growth Boundary Management Plan
7.5 Functional Plans
7.6 Periodic Review of Comprehensive Land Use Plans
7.7 Implementation Roles
7.8 Performance Measures
7.9 Monitoring and Updating
7.10 Environmental Education

Finding: *Policies contained in Chapter 7 of the Regional Framework Plan are not applicable to the Springwater IAMP as the chapter addresses how the Regional Framework Plan is updated and how conflicts between policies are resolved.*

Policies – Chapter 8, Implementation

8.1 Implementation
8.2 Regional Funding and Fiscal Policy
8.3 Schools
8.4 Administration
8.5 Enforcement

Finding: *Policies contained in Chapter 8 of the Regional Framework Plan are not applicable to the Springwater IAMP as the chapter addresses how the Regional Framework Plan is implemented. There are no policies in the IAMP that contradict policies in Chapter 8 of the Regional Framework Plan.*

Regional Transportation Plan (2007)

According to state law, the Regional Transportation Plan (RTP) serves as the region's TSP. The RTP is the 20-year blueprint that guides investment in the region's transportation system. It must meet federal requirements specific to the metropolitan transportation planning process and also be consistent with state plans and the statewide planning goals. For transportation projects and programs to receive federal – and some state – funding, they must be in the RTP, and local plans must be consistent with the RTP. Gresham coordinates with Metro's sixteen cities and transit providers in regional transportation planning related to the RTP.

The RTP establishes policies and strategies for all modes of travel – motor vehicles, transit, walking and bicycling – as well as the movement of freight and goods. The RTP also addresses street design and the efficient management of the transportation system.

Elements of the RTP: Regional Transportation System

Regional multi-modal transportation facilities and services include eight components: Regional Street and Throughway System; Regional Transit System; Regional Bicycle System; Regional Pedestrian System; Regional Freight System; Regional Design System; System Management Strategies and Demand Management Strategies.

Elements of the RTP: Regional Street and Throughway System

The **Regional Street and Throughway System** seeks to apply a regularly spaced street network design to accommodate travel demands of the region. **Throughways** connect major activity centers within the region, including the central city, regional centers, industrial areas and intermodal facilities. They generally span several jurisdictions and often are of statewide importance linking the Metro area with neighboring cities, other parts of the state, and beyond. Throughway interchanges are spaced no less than two miles apart.

> ***Findings:*** *US 26 is identified in the RTP as Principal arterial and Regional Throughway. SE Orient Drive is identified as a Rural arterial as is SE 242nd Avenue.*
>
> *The intersection at SE Hilyard Road and US 26 is an existing at-grade intersection with turning movements currently restricted to right-in, right-out, and left-in movements. Disconnecting SE Hillyard Road from US 26 would cause significant added travel distance for drivers accessing this neighborhood. It would also result in 50-100 additional turn movements at the SE Palmquist Road/US 26 intersection, which is projected to operate well over capacity in the future. The safety analysis found there have only been two crashes at the SE Hillyard Road/US 26 intersection over the five-year period between 2002 and 2006. With construction of the new interchange, the safety at the SE Hillyard Road/US 26 intersection is not expected to be compromised. Therefore, preserving the existing SE Hillyard Road/US 26 intersection is expected to provide aq higher level of safety and efficiency for the overall transportation system.*
>
> *To the south of the proposed interchange, SE Stone Road and SE Haley Road intersections with US 26 will be closed. The next interchange with US 26 is the existing OR 212/US 26 interchange, which meets the throughway spacing standard of two-miles.*

Elements of the RTP: Regional Mobility Corridors

The regional mobility corridor concept is a sub-section of the regional street and throughway network concept that integrates arterial streets and throughways, as well as transit and other modes, into corridors that work together to provide for cross-regional, statewide and interstate travel. This corridor approach considers multiple facilities, modes, jurisdictions, and land uses.

The northern half of the Springwater Management Area is identified in the RTP, and illustrated as a regional corridor on the Regional Mobility Corridors map (Corridor 15).

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Finding: *The northern half of the Springwater Management Area is identified in the RTP, and designated as a Regional Mobility Corridor.*

Elements of the RTP: Local Streets Network Concept

Collector and local streets are general access facilities that provide for community and neighborhood circulation. Although they are not part of the regional transportation system, they play an important supporting role to the design and optimization of the regional transportation system.

Local jurisdictions are responsible for defining the network of local streets within a mile-spacing grid of arterial streets. Since the late 1990s, the region has required a maximum spacing of 1/10 mile for local streets, with the goal of encouraging local traffic to use local streets to minimize local traffic on regional arterial streets. Local street connectivity also benefits emergency response.

The local street network concept provides for bicycle and pedestrian travel and provides for direct access from local street systems to community destinations and transit on regional arterial streets. More frequent bike and pedestrian connections are recommended where collector and local streets cannot be constructed due to existing development or topographic or environmental constraints.

The local street network was analyzed as part of the IAMP, and modifications to the system were proposed.

Finding: *The Springwater IAMP examines how best to integrate the interchange with adjacent local streets, to enhance local access and connectivity in the study area. IAMP work is coordinated with on-going TSP work in both the City of Gresham and Multnomah County, to ensure safe and convenient traffic operations in the interchange study area.*

Elements of the RTP: Regional Freight System

The Regional Freight System identifies the transportation networks and facilities that serve our region and state's freight mobility needs, based on the regional freight concept.

Since US 26 connects the eastern Columbia Corridor to Central and Eastern Oregon and points farther east, the Regional Freight System standards must be addressed in the IAMP.

Finding: US 26 *is identified in the RTP, and designated as a Main Roadway Route on the Regional Freight System.*

Elements of the RTP: 2035 RTP Investment Pool

The 2035 RTP Investment Pool describes the projects and programs identified by local agencies, ODOT, TriMet and Metro to address the impacts of future growth on our regional transportation system.

State and Regional Mobility Corridor Investment Strategy focuses on regional mobility corridor investments that leverage the 2040 Growth Concept and improve interstate, intrastate and

cross-regional people and goods movement. These corridors are the backbone of the regional transportation system because of their statewide significance and the magnitude of costs associated with providing for people and goods movement in these corridors.

Examples of the types of projects include:

- *Freight access and connections*. Rail and street expansions to maintain access and connections for national and international rail, air and marine freight to reach its destination with limited delay.
- *Throughway expansion.* Major throughway expansions to maintain regional mobility and enhance access to intermodal industrial areas and facilities where goods move from one transportation mode to another.

Finding: *The Springwater interchange is identified in the near-term (1-4 years) of RTP analysis for construction.*

Elements of the RTP: Financially Constrained RTP Project List

The **financially constrained system** is the system of investments that responds to federal planning requirements, and is based on the financial forecast. The following is a list of the projects in the vicinity of the Springwater IAMP Management Area that are on the Financially Constrained RTP Project List.

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Metro Project ID	Nominating Agengy	Facility Owner/Operator	Project/Program Name	Project Start Location (Identify starting point of project)	Project End Location (Identify terminus of project)	Local Functional Classification	Project Purpose	Description
10474	Gresham	N/A	Rugg Rd. Ext.	Orient Dr.	US 26	Local	Provide congestion relief and facilitate Springwater Industrial economic development.	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.
10475	Gresham	N/A	Rugg Rd. Ext.	US 26	252nd Ave.	Local	Provide congestion relief and facilitate Springwater Industrial economic development.	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.
10476	Gresham	N/A	Rugg Rd.	252nd Ave.	242nd. Ave.	Local	Provide congestion relief and facilitate Springwater Industrial economic development.	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.
10477	Gresham	Gresham	Springwater Road Section 4	242nd Ave.	252nd Ave.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.
10478	Gresham	Gresham	252nd Ave.	Palmquist Rd.	10	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.
10479	Gresham	Gresham	252nd Ave.	10	Rugg Rd.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.

10481	Gresham	Gresham	Springwater Road Section 8	242nd Ave.	9	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.	
10482	Gresham	Gresham	Springwater Road Section 9	7	252nd Ave.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.	
10483	Gresham	Gresham	Springwater Road Section 10	252nd Ave.	Telford Rd.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.	
10484	Gresham	Gresham	Springwater Road Section 11	Telford Rd.	Orient Dr.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.	
10485	Gresham	Gresham	Hogan	Palmquist Rd.	Rugg Rd.	Minor Arterial	Economic development and implementation of Springwater Plan.	Improvement of existing roadway to arterial 4 lane standards.	
10486	Gresham	Gresham	Telford Rd.	Springwater Boundary	252nd Ave.	Local	Economic development and implementation of Springwater Plan.	Improvement of existing roadway to collector standards, add bike and ped facilities, intersection improvements.	
10488	Gresham	Gresham	282nd Ave.	Springwater Boundary	20	Local	Economic development and implementation of Springwater Plan.	Improvement of existing roadway to collector standards, add bike and ped facilities, intersection improvements.	

Finding: *Components of the Springwater interchange including the US 26 expressway mainline, the arterial and interchange, the collector, and associated local street improvements designed to complement the network and enhance local access and connectivity, have been identified in the RTP financially-constrained project list.*

Gresham Comprehensive Plan

Gresham's Comprehensive Plan was originally adopted in 1969, with major updates in 1980 and 1992. In addition, revisions to the plan text and maps have been made periodically in response to an opportunity, or a state, federal or regional requirement. The Comprehensive Plan is available on the county's website:

(http://greshamoregon.gov/city/city-departments/planning-services/resources-and-links/default.aspx?id=3598)

Gresham's Comprehensive Plan has five volumes. Volume 4: Transportation System Plan, includes policy language that must be addressed by the Springwater IAMP

Volume 4 of the Comprehensive Plan: Transportation System Plan (TSP)

The Gresham Transportation System Plan (TSP) background documents provide the framework for the transportation system and policies codified in Volume 4 of the City's Comprehensive Plan, which is the official TSP. They summarize the review, analysis and strategies behind the adopted maps and policies and include the original source of the list of capital transportation projects that needed over a twenty-year period. The "Capital Improvement Plan (CIP)," described below, implements these adopted transportation goals and policies.

The essential elements of the TSP, i.e., the project lists and transportation goals and policies, are adopted into Volume 4 of the City's Comprehensive Plan. Therefore, the authors of the Springwater IAMP will not need to look separately at the city TSP to determine if its requirements are met, except to the extent that the IAMP authors will need to understand how the policies and lists were derived.

The Gresham Transportation System Plan was adopted by the City Council in December 1999. Chapter 4 of the TSP contains the transportation policies and strategies, which need to be consistent with the IAMP.

Volume 4 of Gresham's Comprehensive Plan addresses the following specific modes of transportation: Roadways; Transit; Pedestrian and Bicycle Facilities; and Freight, Rail, Air, Pipelines and Water Transportation. Volume 4 lays out the planning framework, discusses assumptions and forecasts, provides an inventory and assessment of existing conditions and need, contains the transportation policies and strategies, analyzes three system alternatives, describes the System Plan and presents measures necessary to implement the System Plan.

Policies relevant to the Springwater IAMP are addressed below.

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Transportation System

Policy 1: Develop and promote a balanced transportation system that provides a variety of travel choices and reduces reliance on automobiles.

Finding: *While the Springwater IAMP primarily focuses on facilitating the safe and efficient movement of motorized vehicles on to and off of US 26, accommodations for all modes are made. Collector level and above streets that serve the interchange will have sidewalks and bicycle lanes, and the Springwater Trail will be elevated as it crosses the arterial road that serves the Springwater interchange.*

Policy 2: Plan, implement, and maintain an efficient transportation system.

Finding: *The development of the Springwater IAMP was a coordinated effort between the City of Gresham and ODOT. Other agencies that were directly involved included the City of Damascus and Multnomah and Clackamas Counties. The IAMP speaks to ongoing coordination between ODOT and the City of Gresham as the Plan is implemented.*

Policy 3: Provide a transportation system that maximizes accessibility to and within regional centers, town centers, transit corridors, station areas, and employment centers.

Finding: *The Springwater IAMP identifies a future street system and contains design standards based on street classification. The arterial that directly serves the interchange has an Access Management Plan based on state access management standards. The street network is based on the adopted Springwater Community land use designations.*

Policy 4: Provide a safe transportation system.

Finding: *The Springwater IAMP greatly improves safety over the existing intersection of US 26 and SE 267th Avenue by providing grade separation.*

The proposed interchange will close two existing at-grade intersection to the south (SE Stone Road and SE Haley Road), as well as provide for improved bicycle and pedestrian crossings across US 26.

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Street System

Policy 1: Provide a street system that accommodates a variety of travel options.

Finding: *While the Springwater IAMP primarily focuses on facilitating the safe and efficient movement of motorized vehicles on to and off of US 26, accommodations for all modes are made. Collector level and above streets that serve the interchange will have sidewalks and bicycle lanes, and the Springwater Trail will be elevated as it crosses the arterial road that serves the Springwater interchange.*

Policy 2: Develop a street system that meets current needs and anticipates future population growth and development.

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Finding: *The Springwater IAMP further implements the street system already adopted in the Springwater Community Plan.*

Policy 3: Provide a street system that maximizes accessibility within the community.

Finding: *The Springwater IAMP further implements the street system already adopted in the Springwater Community Plan.*

Policy 4: Ensure a safe street system.

Finding: *Implementation of the Springwater IAMP will facilitate a more safe street network in the plan area by grade-separating US 26 and the main arterial street serving Springwater.*

Transit System

Policy 1: Advocate convenient, expanded transit service within Gresham and the east Multnomah area.

Finding: *While the Springwater IAMP is not directly responsible for implementing transit policy, there is nothing in the IAMP that would prohibit the expansion of transit service into the area.*

Policy 2: Encourage efficient transit services to meet the current and projected transportation needs of the citizens of Gresham.

Finding: *This policy is not directly applicable to the IAMP. However, the Springwater IAMP does not conflict with the implementation of this policy.*

Policy 3: Promote the development of a transit system that maximizes accessibility.

Finding: *This policy is not directly applicable to the IAMP. However, the Springwater IAMP does not conflict with the implementation of this policy.*

Policy 4: Assist in the development of a safe transit system.

Finding: *This policy is not directly applicable to the IAMP. However, the Springwater IAMP does not conflict with the implementation of this policy.*

Bicycle System

Policy 1: Develop a continuous and convenient bicycle network.

Finding: *Collector level and above streets that serve the interchange will have sidewalks and bicycle lanes, and the Springwater Trail will be elevated as it crosses the arterial road that serves the Springwater interchange.*

Policy 2: Support programs and projects to improve bicycle safety and reduce the rate of bicycle-related accidents.

Finding: *This policy is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit the implementation of this policy.*

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Pedestrian System

Policy 1: Provide pedestrian facilities that are continuous, accessible, and adaptable to all users.

Finding: *The street network in the Springwater Community will include pedestrian facilities which connect to existing pedestrian facilities in the city of Gresham. As part of the implementation of the IAMP, the arterial serving the interchange will be grade separated from the Springwater Trail.*

Policy 2: Improve pedestrian access to transit.

Finding: *This policy is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit the implementation of this policy.*

Policy 3: Develop safe pedestrian environments.

Finding: *During development of the alternatives, consideration was given to providing for a safe pedestrian environment. One criterion for evaluating the alternatives included: Improve connectivity to the existing and planned bicycle, pedestrian, trail, and street networks.*

Transportation Demand Management

Policy: Implement transportation demand management programs and strategies that reduce the need to travel, reduce single occupant vehicle (SOV) travel, and make the use of alternative modes more convenient for all trips throughout Gresham.

Finding: *This policy is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit the implementation of this policy.*

Parking Management

Policy: Manage the on- and off-street parking supply to ensure there is an adequate but not excessive amount of parking available for all land uses.

Finding: *This policy is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit the implementation of this policy.*

Truck and Rail Freight System

Policy: Provide for the safe and efficient movement of truck and rail freight through and within Gresham.

Finding: *One of the key reasons for development of the Springwater IAMP was to provide for safe and efficient movement of truck traffic on to and off of US 26 and serve the industrial development of the Springwater community. Ther is no rail freight services in the Springwater community, although the Springwater Trail is a Rails-to-Trails corridor and could, one day, accommodate new freight rail service.*

Passenger Rail

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Policy: Support federal, state, regional and private investments in passenger rail service to the metropolitan area.

Finding: *This policy is not applicable to the Springwater IAMP.*

Air Transportation System

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Policy: Ensure that land uses in Gresham are compatible with aircraft noise exposure and aircraft safety.

Finding: *This policy is not applicable to the Springwater IAMP.*

Pipeline System

Policy: Ensure that land uses in Gresham are compatible with established and planned pipeline corridors.

Finding: *This policy is not applicable to the Springwater IAMP.*

Springwater Transportation System Plan

The purpose of the Springwater Transportation System Plan (TSP) is to address the transportation needs for new urban community development within the Springwater Plan District. This TSP will be amended to Volume 4 – Transportation System Plan in the Gresham Community Development Plan.

Policies

1. Identify improvements to Highway 26 that enhance access and mobility to and through the Springwater Community plan area to support industrial and employment development. Design elements are to be compatible and supportive of the Springwater Community Plan.

   Finding: *The Springwater IAMP provides enhanced access and mobility to and through the Springwater Community plan area. It was specifically developed to support industrial and employment development.*

2. Incorporate the North/South Transportation Study recommendations to identify better connections between Springwater and I-84 and I-205.

   Finding: *While the Springwater IAMP does not directly apply to this policy, as the North/South Transportation Study is outside of the Interchange Management Area, the North/South Transportation Study was a consideration in the development of the traffic analysis because the North/South Transportation Study will look at a connection of US 26 to Interstate 84 .*

3. Incorporate Green Street designs as described in Metro's handbook entitled *Green Streets: Innovative Solutions for Stormwater and Stream Crossings* and as designed in the Pleasant Valley Plan District area.

   Finding: *Street design is typically not part of IAMP development, beyond designating the functional classification of a street. However, there is no part of the Springwater IAMP that would hinder the development of Green Street concepts.*

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4. Develop transportation corridors and associated right-of-way widths for Green Street swales.

   Finding: *Street design is typically not part of IAMP development, beyond designating the functional classification of a street. However, there is no part of the Springwater IAMP that would hinder the development of Green Street concepts.*

5. Create streets for people as well as cars.

   Finding: *The Springwater IAMP incorporates facilities designated for people such as sidewalks, bike lanes and trails.*

6. Encourage alternative modes of transportation within the Springwater community.

   Finding: *The Springwater IAMP incorporates facilities designated for people such as sidewalks, bike lanes and trails.*

7. Provide good connectivity and access to practical destinations.

   Finding: *The Springwater IAMP built upon and refined the street connectivity plan identified in the Springwater Community Plan TSP.*

8. Provide safe and convenient access to and from employment areas, including freight access.

   Finding: *The primary purpose of developing the Springwater IAMP was to provide safe and convenient access to and from employment areas, including freight access.*

9. Incorporate adequate public safety access.

   Finding: *The Springwater IAMP specifically calls for the grade separation of the Springwater Trail as it crosses the main arterial serving the interchange. As the plan is implemented, City of Gresham standards for public safety will be implemented.*

10. Provide public transit options, such as bus, van, streetcar and/or light rail within the Springwater community and for east/west and north/south connections to the greater region.

    Finding: *While the Springwater IAMP does not directly incorporate transit options, there is nothing in the IAMP that would prohibit the implementation of transit option.*

11. Consider traffic impacts on surrounding rural areas and existing City of Gresham neighborhoods.

    Finding: *The location of the preferred alternative in the Springwater IAMP considered traffic impacts on adjoining rural areas. Appendix C-4 specifically addresses why locating the interchange at SE Stone Road was not preferred.*

12. Provide pedestrian and bicycle connections within the Springwater community and to the greater region.

    Finding: *Bicycle and pedestrian facilities are integrated into the street design standards adopted by the City of Gresham.*

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13. Plan roads to accommodate the movement of goods and services (truck traffic).

    Finding: *The primary function of the interchange is to address existing and future safety needs, improve access to the existing transportation system, and provide for a future transportation network that efficiently accommodates the planned development in the Springwater area, while preserving the function of US 26.*

14. Consider environmental barriers and constraints.

    Finding: *Consideration of the natural environment was critical in refining the arterial and interchange for Springwater. Goal 3 of the Evaluation Criteria specifically address minimizing impacts to the natural environments and provide opportunities for environmental enhancement.*

15. Address existing transportation safety issues.

    Finding: *The primary purpose of developing the Springwater IAMP was to provide safe and convenient access to and from employment areas, including freight access.*

16. Identify and promote the quality and level of telecommunication services needed to serve the industrial and other uses in the Springwater Community.

    Finding: *This policy is not applicable to the Springwater IAMP. However, there is nothing in the IAMP that would restrict implementation of this policy.*

Multnomah County

Currently, unincorporated areas within the Springwater management area are subject to land use and transportation policies in Multnomah County's *West of Sandy River Transportation and Land Use Plan*. The Multnomah County Zoning Code regulates land use and development in the unincorporated area.

Multnomah County Board of Commissioners accepted, by resolution, the *Springwater Community Plan* as the concept plan for urbanizing the Springwater area, required by Metro. Urbanization, including the transportation facilities identified in the *Springwater TSP*, will only occur in areas that are incorporated into the City of Gresham. Multnomah County does not have land use or transportation jurisdiction within the City of Gresham; therefore, no County actions are required for the IAMP. Multnomah County continues to support Gresham's implementation of the *Springwater Community Plan*.

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Appendix I
Public and Stakeholder Involvement

Throughout the course of developing the Springwater IAMP, the Project Management Team (PMT) conducted extensive public and stakeholder involvement to gain a better perspective of their opinions about the project. Comments gathered during public and stakeholder involvement events helped refine the alternatives. For example, concerns about the number of acquisitions associated with Alternative B led to the elimination of one interchange ramp, thereby preserving several homes. Comments from PortlandParks and Recreation led to a decision to elevate the Springwater Trail over the proposed arterial to avoid potential conflicts between vehicles and non-motorized trail users.

Below is a list of each public and stakeholder involvement event followed by summaries of comments collected during the events.

The PMT conducted the following public involvement:

- Interested Parties Meeting
- Stakeholder Meetings (5 meetings)
- Public Open House
- Property Owner Meetings (2 meetings)
- City of Gresham Planning Commission Meetings (2 meetings)
- City of Gresham City Council Meetings (2 meetings)
- Oregon Transportation Commission Hearing

Interested Parties Meeting

Thursday, February 12, 2009; 7:00 – 8:45 PM
Hogan Cedars Middle School Media Room, 1700 Fleming Ave., Gresham,OR97080
Approximately 35 attendees

Summary of questions and comments:

- Concern about safety at the intersection of SE 267th Avenueand U.S. 26.
- Why doesn't ODOT install a traffic light at the intersection of SE 267th Avenue and U.S. 26?
- How will water well rights be affected if annexation occurs?
- When will ODOT begin purchasing right-of-way for the project?
- What does ODOT expect property owners to do with their properties until ODOT is ready to purchase property?
- Will Gresham's industrial zoning make Springwater area properties more valuable than MultnomahCounty's current zoning?
- How much funding is available for the interchange?
- When is annexation into the City of Gresham expected?
- How will the PMT manage environmental impacts to Johnson Creek and its tributaries?
- Is there a possibility that Gresham will rezone the Springwater area?
- The City should focus on freight routes from U.S. 26 to I-84.

- The alternative maps should have a legend explaining the difference between the full build alignment and the interim alignment.
- Why were SE Stone Road and SE Callister Road not chosen as possible alternatives considered for the IAMP?

Stakeholder Meetings

Stakeholder meeting #1 with interested parties

Thursday, March 25, 2010; 10:00 – 11:30 AM
Gresham Public Library, 385 NW Miller Avenue, Gresham, OR97030
Attendees represented Persimmon Development Group, Johnson Creek Watershed Council, East Metro Economic Alliance, City of Gresham, ODOT, and Parametrix

Summary of questions and comments:

- Is a roundabout instead of an interchange an option?
- Has there been much interest from developers to invest here? Is there any guarantee that if the interchange is built, developers will want to invest here?
- Could the project include a low impact design so that impacts to aquatic resources are minimized?
- The nearest wetland bank is outside of the Johnson Creek Watershed. It is important to mitigate for impacts within the Johnson Creek Watershed.
- Johnson Creek Watershed Council is spending hundreds of thousands of dollars to plant trees along tributaries in the area.
- The Johnson Creek Watershed Council would like to see opportunities for floodplain mitigation and tree plantings as a part of this project.
- Investing in industrial areas is important to our regional economy to bring jobs to the area.
- Offering more green space within industrial areas might be a good incentive to bring developers into the area, while also providing some environmental benefits.
- Did the PMT analyze the traffic impacts of 15,000 new jobs on SE Orient Drive and SE Hogan Road?

Stakeholder meeting #2 with interested parties

Wednesday, May 5, 2010; 2:00 - 3:30 PM
Gresham Public Library, 385 NW Miller Avenue, Gresham, OR97030
Attendees represented the Mt. Hood Neighborhood Association, Johnson Creek Watershed Council, Gresham Fire Department, Butler Realty, ODOT, City of Gresham, and Parametrix

Summary of questions and comments:

- The riparian areas on the alternative maps don't represent the City's most recent GIS updates.
- The PMT needs to conduct further research to understand better the impacts to Johnson Creek and its tributaries.
- Crossing U.S. 26 at SE 267th Avenue is dangerous and needs to be addressed as soon as possible.

- Is it possible to install a traffic light at the U.S. 26/SE 267th Avenue intersection?
- Who will maintain the interchange?
- When will the interchange be constructed?
- When is development in the area expected to occur?

Stakeholder meeting #3 with Metro Regional Government

Thursday, June 17, 2010; 1:00 - 2:30 PM
Metro offices, 600 NE Grand Avenue, Portland, OR97232
Attendees included Metro staff representing land use planning, open spaces and transportation, ODOT, City of Gresham, and Parametrix.

Summary of questions and comments:

- The PMT needs to ensure that the IAMP does not preclude goals outlined in the East Metro Refinement Plan.
- It is important to avoid conflicts between vehicles and bikes/pedestrians as much as possible at the crossing of the proposed arterial with the Springwater Trail.
- From a freight perspective, an at-grade crossing of the arterial and the Springwater Trail is not ideal.
- The City of Portland owns the Springwater Trail from Portland to Boring. PortlandParks and Recreation manages the trail.
- Metro owns and is restoring 29 acres of land in the project area.
- The PMT needs to coordinate with Metro about the properties it owns before ODOT begins the acquisition process.
- Would it be possible to create an evaluation criterion to represent impacts to publicly owned land?
- Will the collector be a green street?
- Metro would like to see as many large lots preserved as possible.

Stakeholder meeting #4 with Johnson Creek Watershed Council

Tuesday, July 20, 2010;10:00 AM - 12:00 PM
1900 SE Milport Road; Suite B; Milwaukie, OR97222
Attendees represented Johnson Creek Watershed Council, Audubon Society, City of Gresham, ODOT, MultnomahCounty, Parametrix, and Pacific Habitat Services

Summary of questions and comments:

- Any span of Johnson Creek will meet ODOT width standards for crossing a creek.
- The PMT should view this project as an opportunity for restoration and enhancement of Johnson Creek.
- Alternative C-2 was revised in order to avoid impacts to the Sunshine Creek Riparian Area.

- How do the economics of development in the Springwater area play into the phasing of the interchange?
- Near the North Fork of Johnson Creek would probably be the first location of construction.
- There is a water body near the confluence of Johnson Creek and McNutt Creek; it may be a cattle pond or a wetland.
- The PMT attempted to create evaluation criteria that could be quantified.
- The PMT will prepare a technical memo outlining the environmental impacts.
- East County Soil and Water will let the PMT know if they find significant shade cover in the area.
- 100% of new impervious surface runoff will be treated.
- It might be good to add an evaluation criterion to represent impacts to mature trees.
- Johnson Creek Watershed Council would prefer a structure that spans the floodplain rather than a culvert.
- Is there any possibility of leveraging money for restoration through this project? Perhaps the IAMP could be a catalyst for restoration funding.

Stakeholder meeting #5 withPortlandParks and Recreation

Wednesday, July 21, 20102:00 PM - 3:00 PM
1120 SW 5th Avenue, #1302, Portland, OR97204
Three representatives from PortlandParks and Recreation attended, along with Parametrix

Summary of questions and comments:

- The Springwater Corridor Master Plan was written in 1992.
- A non-park use permit would be required to build the arterial within the footprint of the Springwater Trail.
- There may be potential 4(f) issues if the Springwater Trail is impacted.
- The City of Portland owns the Springwater Trail in the project area. The City also owns a few trailheads in the area.
- The City's trail right-of-way is 100' wide.
- PortlandParks and Recreation does not support an at-grade crossing of the arterial and the Springwater Trail.

Public Open House

Tuesday, July 27, 2010; 7:00 – 9:00 PM
Grace Community Church, Rooms 111 A & B, 800 SE Hogan Rd., Gresham, OR,97080
Approximately 55 attendees

Summary of questions and comments received:

- When will ODOT begin purchasing right-of-way for the project?
- What does ODOT expect property owners to do with their properties until ODOT is ready to purchase the property?
- Why was SE Stone Road not chosen as a possible alternativeanalyzed in the IAMP?
- The project's goals, evaluation criteria and measures seem reasonable.

- Land in the Springwater area isn't suitable for industrial land due to its hilly topography.
- Is the City of Gresham attempting to attract businesses to the numerous existing buildings that are sitting vacant?
- Why does the interchange connect to a two lane road (SE Orient Drive)?
- A decision about when this interchange will be built needs to be made so that impacted property owners can make decisions about their real estate and futures.
- Why didn't the PMT select an interchange location closer to I-84?
- Why doesn't ODOT install a traffic light at the intersection of SE 267th Avenue and U.S. 26?
- Concern about safety at the intersection of SE 267th Avenue and U.S. 26.

Property Owner Meetings

Tuesday, November 2 and 9, 2010; 6:00-8:00 PM
Grace Community Church, Rooms 111 A & B, 800 SE Hogan Rd., Gresham, OR,97080
16 attendees

Summary of questions and comments received:

- When will ODOT begin purchasing right-of-way for the project?
- What does ODOT expect property owners to do with their properties until ODOT is ready to purchase the property?
- Why was SE Stone Road not chosen as possible alternatives considered for the IAMP?
- Land in the Springwater area isn't suitable for industrial land due to its hilly topography.
- Gresham needs more jobs so locals do not have to drive to Portland, Beaverton, or Hillsboro to earn a living.
- A decision about when this interchange will be built needs to be made so that impacted property owners can make decisions about their real estate and futures.
- Why doesn't ODOT install a traffic light at the intersection of SE 267th Avenue and U.S. 26?
- Concern about safety at the intersection of SE 267th Avenue and U.S. 26.
- Do property owners need to disclose the planned interchange to potential buyers?
- The PMT should have paid more attention to the impacts on the people living in the area than impacts on Johnson Creek.
- Will Gresham's industrial zoning make Springwater area properties more valuable than Multnomah County's current zoning?
- How much funding is available for the interchange?
  When is annexation into the City of Gresham expected?

City of Gresham Meetings

Planning Commission Meeting #1

Monday, October 25, 2010 6:30 PM - 9:00 PM

1333 NW Eastman Parkway
Gresham, OR 97030

Representatives from ODOT and Parametrix attended this meeting along with Gresham City staff.

Summary of questions from the Gresham Planning Commission:

- When will construction for the project begin?
- How many homes will be acquired for the project?
- How will the PMT conduct outreach to affected property owners?
- What is the public's attitude toward this project?
- How will the PMT limit temporary construction impacts to the Springwater Trail?

Planning Commission Meeting #2

Monday, December 13, 2010 6:30 PM - 9:00 PM
1333 NW Eastman Parkway
Gresham, OR 97030

Representatives from ODOT and Parametrix attended this meeting along with Gresham City staff.

Summary of questions from the Gresham Planning Commission:

City Council Meeting #1

Tuesday, January 18, 2011,3:00 PM - 6:00 PM
1333 NW Eastman Parkway
Gresham, OR 97030

Representatives from ODOT and Parametrix attended this meeting along with Gresham City staff.

Summary of questions from the Gresham City Council:

City Council Meeting #2

Tuesday, February 15, 2011, 3:00 PM - 6:00 PM
1333 NW Eastman Parkway
Gresham, OR 97030

Representatives from ODOT and Parametrix attended this meeting along with Gresham City staff.

Summary of questions from the Gresham City Council:

Oregon Transportation Commission Meeting

March, 2011

TBD

Appendix J
Local Ordinance

BEFORE THE CITY COUNCIL OF THE

CITY OF GRESHAM

IN THE MATTER OF AMENDMENTS TO CHAPTER 9 OF VOLUME 4 OF THE GRESHAM COMMUNITY DEVELOPMENT PLAN AS IT RELATES TO THE TRANSPORTATION SYSTEM PLAN FOR THE SPRINGWATER COMMUNITY PLAN	)))))	Order No. 629 CPA 10-267

On January 18, 2011, the City Council held a public hearing to take testimony on amendments to Volume 4 of the Gresham Community Development Plan to as it relates to the transportation system plan for the Springwater Community Plan.

The hearing was conducted under Type IV procedures. Council President David Widmark presided at the hearing.

The Council closed the public hearing at the January 18, 2011 meeting, and a final decision was made at the February 15, 2011 meeting.

A permanent record of this proceeding is to be kept on file in the Gresham City Hall, along with the original of the Order.

The Council orders that these amendments are approved, adopts the standards, findings and conclusions as stated in the attached Planning Commission Recommendation Order and staff reports.

Dated: February 15, 2011

City Manager

Mayor

BEFORE THE PLANNING COMMISSION OF THE

CITY OF GRESHAM

TYPE IV RECOMMENDATION ORDER **CPA 10-267**

A public hearing was held on December 13, 2010, upon an application to consider proposed amendments to Volume 4, Transportation System Plan, of the Gresham Community Development Plan related to the **Springwater Interchange Area Management Plan**

The Commission closed the public hearing at the December 13, 2010 meeting, and a final recommendation to Council was made at the December 13, 2010 meeting.

William Bailey, Chairperson, presided at the hearing.

A permanent record of this proceeding is to be kept on file in the Gresham City Hall, along with the original of this Type IV Recommendation Order.

The Planning Commission recommends **APPROVAL** of the proposed Community Development Plan amendments to the City Council, and adopts the findings, conclusions and recommendations contained in the attached staff report with the following exceptions, additions and/or changes:

No Changes

Chairperson

12/13/10
Date

MEMORANDUM

URBAN DESIGN & PLANNING

STAFF REPORT

TYPE IV HEARING—COMPREHENSIVE PLAN AMENDMENT

SPRINGWATER TRANSPORTATION SYSTEM PLAN AMENDMENTS

To:	Gresham Planning Commission
From:	John Dorst, Deputy Director, Environmental Services Katherine Kelly, Transportation Planning Manager
Hearing Date:	December 13, 2010
Report Date:	December 3, 2010
File:	CPA 10-267
Proposal:	To adopt comprehensive plan amendments to Volume 4 (Springwater Transportation System Plan or "TSP") of the Gresham Community Development Plan. The purpose of these amendments to adopt refinements to the TSP that incorporate a Springwater Interchange Area Management Plan (IAMP).
Exhibits:	'A' – Draft amendments to Volume 4 of the Community Development Plan, the *Springwater Transportation System Plan*.
Recommendation:	Staff recommends adoption of the proposed Comprehensive Plan amendments to the City Council.

Staff Report Organization and Contents

- Section I is an Executive Summary of the project that provides an overview of proposed amendments to Volume 4 of the Community Development Plan.
- Section II identifies the current Goals and Policies identified in Volume 2 of Community Development Plan Goals and Policies that apply to the proposal.
- Section III identifies applicable Development Code procedures that apply to the proposal.
- Section IV identifies the applicable Statewide Planning Goals that apply to the proposal.
- Section V contains findings of fact that indicate how the proposal is consistent with Sections II, III, and IV:
    - Subsection A is findings of fact for the Community Development Plan Goals and Policies.
    - Subsection B identifies applicable Development Code procedures that apply to the proposal
    - Subsection C is findings of fact for the Statewide Planning goals.
- Sections VI and VII summarize staff conclusions and recommendations.
- Exhibit 'A' includes proposed amendments to Volume 4 of the Community Development Plan.

SECTION I
EXECUTIVE SUMMARY

Background

The project is part of the 2010 Council Work Plan and supports an update to the City of Gresham's Transportation System Plan (TSP). In 2006 an amendment to the City of Gresham TSP was adopted and consisted of an addendum titled '*Springwater Transportation System Plan*'. This project proposes amendments to the Springwater TSP.

The proposed amendments to the Springwater TSP consist of refinements in the transportation network that will enhance safety and access to the Springwater Plan Area, and which will support the Springwater Comprehensive Plan's development of industrial land uses. More specifically, the amendments: 1) define a preferred alternative for a new interchange on US 26 near 267th Avenue, 2) reconfirm the Springwater Comprehensive Plan's location for a collector road to connect SE 252nd Avenue and Orient Drive and a new arterial road to connect SE Rugg Road in the vicinity of SE 252nd Avenue and over US 26 via an interchange to SE Orient Drive.

The amendments consist of proposed text changes in the TSP and the addition of a new attachment to the TSP, titled the *Springwater Interchange Area Management Plan* (hereafter referred to as the "IAMP"). Oregon Administrative Rule (OAR) 734-051-0155 requires that an IAMP be prepared for any new interchange and recommends an IAMP for significant modifications to existing interchanges.

A benefit to adopting the IAMP, which includes the preferred alternative for a new interchange at US 26 and 267th (hereafter referred to as the "Springwater interchange"), is that it allows the City of Gresham and the Oregon Department of Transportation to collectively begin the process to apply for federal funds to design and construct the interchange when they are available. At this time there are no federal funds allocated for this project. Cost estimates to acquire rights-of-way, design, engineer, and construct the interchange are estimated at $24.5 million

Proposed Comprehensive Plan Amendments Overview

Text changes to Community Development Plan, Volume 4 are proposed. The format of the attached Exhibit 'A' is a ~~strikeout~~/underline version with those revisions shown in red font. The overview provided below summarizes the changes:

The following amendments are proposed to support adoption of the IAMP and to comply with applicable State of Oregon Administrative Rules for Transportation (OAR 660-012-0600):

- Adding language in the "US26 Improvements" section to an update on the process identify a preferred alternative for access from US 26 to Springwater.

- Deleting text in the "Potential US 26 Corridor Construction Phasing" section to eliminate previously identified alternatives to review as part of an IAMP. This text is deleted because the IAMP process has been completed.
- Revising text in the "Outstanding Issues" section to reflect a new study that is currently underway: the Metro-led corridor refinement plan, the *East Metro Connections Plan*. That Plan will review and identify north-south connections between I-84 and US 26. These changes are included in this update of the Springwater TSP because improvements to access Springwater from US 26, as identified in the IAMP, will inform this new study.
- Incorporating the IAMP report, prepared by the Oregon Department of Transportation and Parametrix, as Attachment A to the Springwater TSP.
- Additional minor formatting changes are proposed throughout the TSP.

SECTION II
APPLICABLE COMMUNITY DEVELOPMENT PLAN GOALS & POLICIES

Section 10.014:	Land Use Planning, Land Use Policies and Regulations and Community Design
Section 10.100:	Citizen Involvement
Section 10.320:	Transportation System
Section 10.800:	Springwater Plan District

SECTION III
APPLICABLE COMMUNITY DEVELOPMENT CODE PROCEDURES

Section 11.0200:	Classification of Applications
Section 11.0600:	Type IV Procedure – Legislative
Section 11.1100:	Public Hearings

SECTION IV
STATEWIDE PLANNING GOALS

Goal 12:	Transportation

SECTION V
FINDINGS OF FACT

The proposed Community Development Plan amendments attached as Exhibit "A" (Springwater TSP and Attachment A to that document, *US 26: Access to the Springwater Community Interchange Area Management Plan*) are consistent with all applicable Procedures, Goals and Policies of the Community Development Plan, Community Development Code Procedures, and Statewide Planning Goals as indicated in the following findings.

A. COMMUNITY DEVELOPMENT PLAN GOALS AND POLICIES (VOLUME II)

This section identifies the applicable Community Development Plan Goals and Policies. The text (*italicized*) of the Policy is followed by corresponding findings and conclusions. The applicable Policies are grouped by general categories.

1. General Goals & Policies

Section 10.014 Land Use Policies and Regulations
Goal: Maintain an up-to-date Comprehensive Plan and implementing regulations as the legislative foundation of Gresham's land use program.

Policy 6: The City shall, consistent with applicable laws, ensure that all required public facilities and services are available or committed prior to development approval and are constructed or provided concurrently with development or prior to development occupancy.

Policy 14: The City's public facility plan and its other facility master plans shall be coordinated with the requirements of projected growth within its urban services boundary and those Urban Growth Boundary Areas that may be added to the City at a future date.

Policy 21: Council may, upon finding it is in the overall public interest, initiate legislative processes to change the Comprehensive Plan text and Community Development Plan Map(s) and Development Code.

Policy 23: Gresham shall coordinate the development, adoption and amendment of its land use related goals, policies and implementing measures with other affected jurisdictions, agencies and special districts.

Findings
These general Goal and Policies establish the City's intent to use its Comprehensive Plan (Gresham Community Development Plan [GCDP]) as the basis for appropriate planning processes and resulting land use plans. The above goal and applicable policies are met as follows:

Policy 6: The proposed amendments provide a preferred alternative for public facilities that will allow adequate transportation capacity and safety concurrent or prior to development in Springwater.

Policy 14: The proposed amendments for new public facilities were developed using regionally forecasted travel demand volumes. The new facilities are within the Urban Growth Boundary in an area proposed for annexation into the City of Gresham.

Policy 21: The proposed amendments were requested by the Gresham City Council to help determine the location of new transportation facilities as adopted in the Springwater Transportation System Plan. The City Council initiated the project on Dec. 15, 2009, by adopting it in its 2010 Work Plan.

Policy 23: These proposed amendments were developed in coordination with the State of Oregon Department of Transportation, Multnomah County, City of Damascus, and the residents of the Springwater Plan Area. Their recommendations have been incorporated as noted in the *Springwater Interchange Area Management Plan*, which is an attachment to the Springwater TSP.

Conclusion
The proposed amendments are part of the Transportation System Plan project, which was initiated by Council as part of its 2010 Work Plan. They conform to State and regional law and Gresham's Community Development Plan, as described in Sections II, III, IV and V of this staff report.

The proposal is consistent with the applicable general goals and policies listed in this section.

2. *Citizen Involvement Goals & Policies*

Section 10.100 Citizen Involvement
Goal: The City shall provide opportunities for citizens to participate in all phases of the planning process by coordinating citizen involvement functions; effectively communicating information; and facilitating opportunities for input.

Goal: The City shall provide opportunities for citizens to participate in all phases of the planning process by coordinating citizen involvement functions; effectively communicating information; and facilitating opportunities for input.

Policy 1: The City shall ensure the opportunity for citizen participation and input when preparing and revising policies, plans and implementing regulations.

Policy 2: The City shall consider the interests of the entire community and the goals and policies of the Comprehensive Plan when making decisions.

Policy 10: The City shall ensure the opportunity for the public to be involved in all phases of planning projects and issues.

Policy 11: The City shall ensure that the public has complete and timely access to all public information concerning land use projects and issues. This includes private development proposals once they are in the formal application process.

Findings
The public involvement goals and policies establish the City's intent that its citizens have opportunities throughout a planning project to be informed and to affect proposals.

The key stakeholders who have been involved in the development of a preferred alternative for the IAMP include the Springwater community, the Transportation Subcommittee, and the Johnson Creek Watershed Council. All three primary groups in addition to a Project Management Team consisting of staff from the Oregon Department of Transportation, Multnomah County, and the City of Damascus have been involved in the project. Their involvement has included development of criteria to select a preferred alternative as well as final selection of a preferred alternative. Their suggestions have been incorporated as described in the Attachment A of the Springwater TSP, the *US 26: Access to the Springwater Community Interchange Area Management Plan,* or IAMP.

The following measures were taken to inform citizens and involve them in this project:

- 2/12/2009: Interested Parties Meeting to receive input on initial concept alternatives for the IAMP.
- 3/25, 5/5, and 7/20/2010: Three Stakeholder Focus Group Meetings (Attendees included Springwater residents, development groups, Mt. Hood Neighborhood Association, East Metro Economic Alliance, and Johnson Creek Watershed Council members, among others).
- 6/8/2010: City Council Work Session to discuss three final alternatives plus draft evaluation criteria to select a preferred alternative
- 7/27/2010: Public Open House to receive input on three final alternatives plus draft evaluation criteria to select a preferred alternative
- 10/25/2010: Planning Commission Work Session to review preferred alternative
- 11/2/2010 and 11/9/;2010: Focus Group meetings with property owners who may be directly impacted by preferred alternative.
- 2009-2010: Project updates provided at the regularly-scheduled Transportation Subcommittee meetings.

A project website has been publicly accessible since 2008. The website is accessed via the City of Gresham's website, at: *http://greshamoregon.gov/city/city-departments/environmental-*

services/transportation-streets/template.aspx?id=22554 and via the Oregon Department of Transportation website, at: *http://www.oregon.gov/ODOT/HWY/REGION1/Springwater/.*

Conclusion
The Citizen Involvement Goal and its policies are met by the combination of Project Management Team meetings, Transportation Subcommittee meetings, public workshops, individual and small group meetings with Springwater residents, a presentation to City Council and the Planning Commission, and providing information on the proposal on the Oregon Department of Transportation and City of Gresham web sites.

The proposal is consistent with the applicable citizen involvement goals and policies listed in this section.

3. Transportation System Plan Goals and Policies

Section 10.320 – Transportation System Plan

Goal: Plan, implement, and maintain an efficient transportation system.

Policy 1: The City shall coordinate transportation projects, programs, and investment strategies with land use planning, economic development, noise reduction, air quality, water quality, land resource quality and wetlands and stream corridor preservation to implement other Comprehensive Plan goals and policies.

Findings
Goal: The preferred alternative for three major transportation facilities as identified in the IAMP will allow the City to apply for funds to implement a new facility that supports a more efficient and safe transportation system.

Policy 1: Several proposed alternatives for the preferred alternative and the IAMP were considered. The criteria to select a preferred alternative and IAMP included land use, economic development, noise reduction, air quality, water quality, land resource quality, and wetlands and stream corridor preservation factors and weighted them against each other. The criteria are described in further detail in Attachment A of the Springwater TSP, the *US 26: Access to the Springwater Community Interchange Area Management Plan,* or IAMP.

Conclusion
The Transportation System Plan Goal is supported by the proposed amendments because they will enable the City to attain funds to implement a preferred alternative. Policy 1 is met because the preferred alternative was developed with these factors considered.

4. Springwater Plan District

Section 10.805 – Transportation

Goal: The Springwater Community will encompass a well-planned transportation system that supports the Springwater Community Plan, while promoting transit, walking, and bicycling. The road and trail network will provide good connectivity within Springwater, with existing neighborhoods, and with the regional trail network.

Policy 19: Identify improvements to Highway 26 that enhance access and mobility to and through the Springwater Community Plan are to support industrial and employment development. Design elements are to be supportive of the Springwater Community Plan.

Findings
Goal: The proposed amendments support a well-planned transportation network that provides enhanced access for vehicles as well as pedestrians and bicyclists. The preferred alternative includes an overpass of US 26 to enhance safe crossing of freight, pedestrians, and bicyclists that will connect existing and planned communities on the east and west sides of the Springwater Plan Area.

Policy 19: The preferred alternative and IMP enhance access and mobility by eliminating an at-grade crossing of US 26 and a new arterial and new collector road to link to the existing and planned street and trail networks as well as the Springwater Corridor Trail. The improvements as proposed will support future Springwater Industrial and employment development.

Conclusion
The Transportation Goal of the Springwater Plan District is supported by the proposed amendments because the proposed amendments connect employment areas, support industrial and employment development, and eliminate an unsafe at-grade crossing of US 26. The preferred alternative concept design has been developed to accommodate multi-modal traffic.

B. COMMUNITY DEVELOPMENT CODE PROCEDURES

1. ***Section 11.0200 – Initiation and Classification of Applications.*** This section requires that an amendment to the Community Development Code and the Community Development Plan be a legislative action under the Type IV Procedure pursuant to this section. This section applies to this proposal, as it is an amendment to the Community Development Code and the Community Development Plan.

2. ***Section 11.0600 - Type IV Legislative Procedures.*** This section requires the Planning Commission to hold a public hearing and make a recommendation to the Council. The Council holds another public hearing and makes a final decision. Interested persons may present evidence and testimony relevant to the proposal. The Planning Commission and Council make findings for each of the applicable criteria. The section also provides for a hearing process consistent with Section 11.0300. Both the Planning Commission and the City Council, at public hearings in conformance with provisions of this section, will consider this proposal. Findings are made for the applicable criteria in this report or as revised in the record.

3. ***Section 11.1000 – Public Hearings.*** For a Type IV Comprehensive Plan Amendment this section requires that hearings be scheduled, a notice published in a newspaper of general circulation in the City and a copy of the decision be mailed to those required to receive such notice. Required notice of public hearing for these proposed text amendments were published in the Gresham Outlook on December 1, 2010, as required by this section. The Planning Commission will make a recommendation and the Council will make a decision that will be based on findings of fact contained in this report and in the hearings record and a decision will be sent to those who participated in the hearings. A decision shall be made accompanied by findings and an order.

C. STATEWIDE PLANNING GOALS

This section identifies applicable Statewide Planning goals for this Comprehensive Plan Amendment.

Statewide Planning Goal 12: Transportation Planning

Findings
Statewide Planning Goal 12 requires local governments to plan and develop transportation facilities and services in close coordination with urban and rural development.

Oregon Administrative Rules (OARs) interpret and implement State laws and policies such as the Statewide Planning Goals. OAR 660-012-0000 is that part of the Goal 12 OARs which apply to preparation and coordination of Transportation System Plans. It has requirements that must be addressed in the City's Community Development Plan Volume IV, Transportation System Plan. The following lists the applicable requirement and describes how it is addressed by the proposed amendments:

1. *Cities and counties shall prepare, adopt, and amend local TSPs for lands within their planning jurisdiction in compliance with this division.*

Gresham's Transportation System Plan for Springwater identifies the general location of a new interchange along US 26 in the vicinity of 287th Avenue as well as a new arterial road and a new collector road. The proposed amendments to the TSP address the need to amend the TSP to identify the preferred alternative for these facilities and to incorporate the IAMP report as an attachment to the TSP.

Proposed Amendment. Revisions to the TSP text include new language that describes the process that was completed to adopt a preferred alternative for the Springwater IAMP. The revisions also include text regarding phasing of the construction of this project, deletion of previously considered alternatives, and incorporates the *US 26: Access to the Springwater Community Interchange Area Management Plan*, or IAMP as an attachment to the TSP.

Conclusion
The proposed amendments will make the TSP comply with Statewide Planning Goal 12.

SECTION VI
CONCLUSION

The proposed Comprehensive Plan amendments attached as Exhibit 'A' are consistent with applicable Goals and Policies of the Community Development Plan, the applicable Development Code procedures of the Community Development Plan and the Statewide Planning Goals as indicated by findings contained or referenced in Section V of this report.

SECTION VII
RECOMMENDATION

Staff recommends adoption of the proposed Comprehensive Plan Code amendments as contained in the attached Exhibit 'A'.

End of Staff Report

Proposed new language is double-underlined;
proposed language to be deleted is stricken.

CB 04-11

ORDINANCE NO. 1703

AN AMENDMENT TO CHAPTER 9 OF VOLUME 4, TRANSPORTATION SYSTEM PLAN, OF THE GRESHAM COMMUNITY DEVELOPMENT PLAN RELATING TO SPRINGWATER TRANSPORTATION SYSTEM PLAN

THE CITY OF GRESHAM DOES ORDAIN AS FOLLOWS:

Section 1. Chapter 9 of Volume 4, Transportation System Plan, of the Gresham Community Development Plan is amended as shown in Exhibit A attached hereto.

Section 2. Chapter 9 of Volume 4, Transportation System Plan, of the Gresham Community Development Plan is amended to adopt "Attachment A: Access to the Springwater Community Interchange Area Management Plan" attached hereto as Exhibit B.

First reading: January 18, 2011

Second reading and passed: February 15, 2011

Yes: Bemis, Fehrer, Echols, Stegmann, Barr-King, Kilian

No: None

Absent: Widmark

Abstain: None

City Manager

Mayor

Approved as to Form:

Senior Assistant City Attorney

Proposed new language is double-underlined;
proposed language to be deleted is stricken.

CB 04-11

ORDINANCE NO. 1703

AN AMENDMENT TO CHAPTER 9 OF VOLUME 4, TRANSPORTATION SYSTEM PLAN, OF THE GRESHAM COMMUNITY DEVELOPMENT PLAN RELATING TO SPRINGWATER TRANSPORTATION SYSTEM PLAN

THE CITY OF GRESHAM DOES ORDAIN AS FOLLOWS:

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Section 2. Chapter 9 of Volume 4, Transportation System Plan, of the Gresham Community Development Plan is amended to adopt "Attachment A: Access to the Springwater Community Interchange Area Management Plan" attached hereto as Exhibit B.

First reading: January 18, 2011

Second reading and passed: February 15, 2011

Yes: Bemis, Fehrer, Echols, Stegmann, Barr-King, Kilian

No: None

Absent: Widmark

Abstain: None

City Manager

Mayor

Approved as to Form:

Senior Assistant City Attorney

Council Bill 04-11 Exhibit A – Amendment to Chapter 9 of Volume 4, Transportation System Plan, of the Gresham Community Development Plan

TRANSPORTATION SYSTEM ALTERNATIVES ANALYSIS

Transportation networks were developed for the three land use alternatives developed during the concept planning process[1]. At that time, The peak hour trips generated with full development of the Springwater area were estimated to range from 9,200 for Alternative A up to 10,800 vehicle trips for Alternative C. These estimates assumed nominal transit services for this area, and could be further reduced with improved transit services or travel demand management programs.

The general features of the initial circulation networks for the three scenarios included:

- Alternative A: A central grade-separated interchange on US 26, with two parallel highway overcrossings roughly collinear with Orient Drive-Butler Road and Rugg Road-Stone Road. The local street patterns maintained the north-south grid layout commonly observed in built neighborhoods to the north.
- Alternative B: Two at-grade connections on US 26, with one grade-separated overcrossing near Stone Road. The local street grid rotated 45 degrees to mirror the orientation of US 26.
- Alternative C: A northern grade-separated interchange on US 26, roughly collinear with Orient Drive, with a new connection along Telford Road to Hogan Drive. Two parallel highway overcrossings to US 26 were located further southeast.

These networks formed the basis for the model networks with the year 2025 travel forecasts. The nature of traffic controls for the at-grade intersection and ramp terminals was not specifically evaluated for each of the scenarios.

Future Traffic Forecasts

Metro's regional 2025 travel demand forecast model (~~recently used for the RTP update~~)was determined to be the most appropriate model for this ~~project~~ at the time the alternatives were developed. The Financially Constrained model scenario was adjusted to reflect the mid-level land use alternative for Springwater (Alternative B), and then Metro modeling staff re-ran the trip distribution model to update new travel patterns in the Springwater area. In addition, the model was refined to provide a greater level of street network detail in the Springwater area for a future base condition as well as the three conceptual street networks (with their associated land use patterns). The land use assumptions applied in the travel demand forecasts for Springwater are summarized for households (HH), retail employment (RET) and other employment (OTH), as shown in Table 5.

[1] *The Concept Planning process and the three Concept Plan scenarios are described in more detail in the Springwater Community Plan Report Summary (Springwater Community Plan Volume I)*

functionality of the on-site circulation system. Therefore, it was recommended that a hybrid circulation system be developed to support the preferred land use plan that incorporates the best parts of the circulation alternatives. Some general observations that were considered in formulating the preferred alternative circulation system include:

- Alternative A provides only one east-west arterial, while Alternatives B and C each provide two. Typically arterials are spaced at approximately one-mile intervals. The core portion of the Springwater study area is about one-mile in the north-south direction and about 2 ½ miles in the east-west direction. Either one or two east-west arterials could function adequately, given the density and location of development within Springwater.
- Alternative C locates the interchange with US 26 toward to the north end of Springwater, providing highway access closer to the urban area where demand is anticipated. Alternative A provides US 26 interchange access centrally located to Springwater, but does not functionally serve urban development further north.
- Alternative B does not include interchange access with US 26, thereby slowing traffic (e.g., roundabouts) or stopping traffic (e.g., traffic signals) on US 26 as it heads south out of the study area.
- Regardless of the alternative, additional capacity is needed for north-south travel through Gresham and East County, either in the form of widening existing facilities (i.e., US 26) or by providing additional capacity through access control and/or new routes.
- Since so much traffic is traveling to and from the south, additional inter-regional capacity is needed between Springwater and areas south (i.e. Damascus-Boring).

RECOMMENDED TRANSPORTATION SYSTEM PLAN

Motor Vehicle Plan

The motor vehicle plan for Springwater connects employment and residential neighborhoods to the regional arterial and highway facilities to provide safe and convenient access for future residents and workers. The existing arterial facilities such as Palmquist Road, Orient Drive, and 242nd Avenue form the framework for travel around and through this area. A new arterial is recommended to provide east-west circulation within the community, and to provide access to US 26.

The new arterial route begins along existing Orient Drive, then bends south to form a new four-way intersection within Springwater. This functional change will help to reduce travel speeds on Orient Drive to be more compatible with existing residential uses. A new arterial would continue south then southwesterly across US 26 to connect to Rugg Road and 242nd Avenue. This new arterial route is expected to be the primary link for employment circulation within Springwater, and it is also expected to serve regional traffic for connections to and from US 26. The other A new ~~arterial~~collector crosses US 26 to the north, and connects to Telford and McNutt Roads and the middle of the Village Center area west of 252nd Avenue.

The new residential neighborhoods east of 242nd Avenue include the Village Center area opposite to Butler Road. This area will be served by a series of collector streets and one neighborhood connector, as shown in Figure 1. The looping neighborhood connector alignment reduces the number of stream crossings, and still provides convenient connections from the residential neighborhoods to 242nd Avenue and the Village Center. The proposed functional classifications are consistent with the adopted Gresham

Transportation System Plan. The exception is the designated Neighborhood Connector route, which has the same design profile as a Community Street, but allows for future traffic calming measures to be deployed, as the need arises.

Proposed new language is double-underlined;
proposed language to be deleted is stricken.

CB 04-11

ORDINANCE NO. 1703

AN AMENDMENT TO CHAPTER 9 OF VOLUME 4, TRANSPORTATION SYSTEM PLAN, OF THE GRESHAM COMMUNITY DEVELOPMENT PLAN RELATING TO SPRINGWATER TRANSPORTATION SYSTEM PLAN

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First reading: January 18, 2011

Second reading and passed: February 15, 2011

Yes: Bemis, Fehrer, Echols, Stegmann, Barr-King, Kilian

No: None

Absent: Widmark

Abstain: None

City Manager

Mayor

Approved as to Form:

Senior Assistant City Attorney

Council Bill 04-11 Exhibit A – Amendment to Chapter 9 of Volume 4, Transportation System Plan, of the Gresham Community Development Plan

TRANSPORTATION SYSTEM ALTERNATIVES ANALYSIS

Transportation networks were developed for the three land use alternatives developed during the concept planning process[1]. At that time, The peak hour trips generated with full development of the Springwater area were estimated to range from 9,200 for Alternative A up to 10,800 vehicle trips for Alternative C. These estimates assumed nominal transit services for this area, and could be further reduced with improved transit services or travel demand management programs.

The general features of the initial circulation networks for the three scenarios included:

- Alternative A: A central grade-separated interchange on US 26, with two parallel highway overcrossings roughly collinear with Orient Drive-Butler Road and Rugg Road-Stone Road. The local street patterns maintained the north-south grid layout commonly observed in built neighborhoods to the north.
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These networks formed the basis for the model networks with the year 2025 travel forecasts. The nature of traffic controls for the at-grade intersection and ramp terminals was not specifically evaluated for each of the scenarios.

Future Traffic Forecasts

Metro's regional 2025 travel demand forecast model (~~recently used for the RTP update~~)was determined to be the most appropriate model for this ~~project~~ at the time the alternatives were developed. The Financially Constrained model scenario was adjusted to reflect the mid-level land use alternative for Springwater (Alternative B), and then Metro modeling staff re-ran the trip distribution model to update new travel patterns in the Springwater area. In addition, the model was refined to provide a greater level of street network detail in the Springwater area for a future base condition as well as the three conceptual street networks (with their associated land use patterns). The land use assumptions applied in the travel demand forecasts for Springwater are summarized for households (HH), retail employment (RET) and other employment (OTH), as shown in Table 5.

[1] *The Concept Planning process and the three Concept Plan scenarios are described in more detail in the Springwater Community Plan Report Summary (Springwater Community Plan Volume I)*

functionality of the on-site circulation system. Therefore, it was recommended that a hybrid circulation system be developed to support the preferred land use plan that incorporates the best parts of the circulation alternatives. Some general observations that were considered in formulating the preferred alternative circulation system include:

- Alternative A provides only one east-west arterial, while Alternatives B and C each provide two. Typically arterials are spaced at approximately one-mile intervals. The core portion of the Springwater study area is about one-mile in the north-south direction and about 2 ½ miles in the east-west direction. Either one or two east-west arterials could function adequately, given the density and location of development within Springwater.
- Alternative C locates the interchange with US 26 toward to the north end of Springwater, providing highway access closer to the urban area where demand is anticipated. Alternative A provides US 26 interchange access centrally located to Springwater, but does not functionally serve urban development further north.
- Alternative B does not include interchange access with US 26, thereby slowing traffic (e.g., roundabouts) or stopping traffic (e.g., traffic signals) on US 26 as it heads south out of the study area.
- Regardless of the alternative, additional capacity is needed for north-south travel through Gresham and East County, either in the form of widening existing facilities (i.e., US 26) or by providing additional capacity through access control and/or new routes.
- Since so much traffic is traveling to and from the south, additional inter-regional capacity is needed between Springwater and areas south (i.e. Damascus-Boring).

RECOMMENDED TRANSPORTATION SYSTEM PLAN

Motor Vehicle Plan

The motor vehicle plan for Springwater connects employment and residential neighborhoods to the regional arterial and highway facilities to provide safe and convenient access for future residents and workers. The existing arterial facilities such as Palmquist Road, Orient Drive, and 242nd Avenue form the framework for travel around and through this area. A new arterial is recommended to provide east-west circulation within the community, and to provide access to US 26.

The new arterial route begins along existing Orient Drive, then bends south to form a new four-way intersection within Springwater. This functional change will help to reduce travel speeds on Orient Drive to be more compatible with existing residential uses. A new arterial would continue south then southwesterly across US 26 to connect to Rugg Road and 242nd Avenue. This new arterial route is expected to be the primary link for employment circulation within Springwater, and it is also expected to serve regional traffic for connections to and from US 26. The other A new ~~arterial~~collector crosses US 26 to the north, and connects to Telford and McNutt Roads and the middle of the Village Center area west of 252nd Avenue.

The new residential neighborhoods east of 242nd Avenue include the Village Center area opposite to Butler Road. This area will be served by a series of collector streets and one neighborhood connector, as shown in Figure 1. The looping neighborhood connector alignment reduces the number of stream crossings, and still provides convenient connections from the residential neighborhoods to 242nd Avenue and the Village Center. The proposed functional classifications are consistent with the adopted Gresham

Transportation System Plan. The exception is the designated Neighborhood Connector route, which has the same design profile as a Community Street, but allows for future traffic calming measures to be deployed, as the need arises.

- Funding program needs for the City of Gresham and the addition of transportation improvements to the project list.

These elements are described in more detail later in this TSP.

New or modified street connections to County facilities (e.g., 242nd Avenue, 282nd Avenue) will require compliance with appropriate spacing and design standards. One specific consideration for streets on the Urban Growth Boundary edge, especially 282nd Avenue, is that urban improvements will be built on the Springwater site only. The rural edge of these street facilities will be left intact on the side fronting the rural protect lands.

US26 Improvements

~~This section summarizes findings from the~~ A *Springwater US 26 Concept Design and Access Study (CDAS)* was prepared completed in 2005 ~~under a separate planning document (included in the Reference Documents)~~. The study focused on alternative access concepts to US 26 to support Springwater as it develops over the next twenty years. The development assumptions and travel forecasting ~~process was~~ were coordinated with the Springwater Master Plan development process so that the same assumptions and methods were applied for both studies. The 2025 travel forecasts were made using the same Metro model that was applied for Springwater. ~~More detail was provided to describe the various network alternatives~~ used in this study, but, overall, the same base model was applied. A wide range of alternative highway connections were investigated for Springwater, including at-grade intersections controlled by traffic signals, and several variations of grade separated interchanges. The alternatives were developed with consideration of applicable mobility, safety and design standards that are adopted by ODOT and the City of Gresham. One of the critical elements of this concept design process considered the minimum spacing between adjacent traffic signals or interchanges and the proximity to major environmental constraints, so that the proposed alternatives were consistent with standards and generally considered feasible to construct. ~~The concept design alternatives were evaluated using 2025 traffic conditions to assess how successful they performed relative to the applicable automobile and freight mobility standards. A comparative matrix evaluation showed the relative merits and impacts for each alternative, in terms of compliance with standards, performance and potential impacts to the environment.~~

Based on the CDAS, ~~the~~ recommended plan alternative for Springwater was a new US 26 interchange at the southern arterial, which connects to Rugg Road on the west and Orient Drive on the east. Prior to the construction of the ~~a~~ major interchange such as the one recommended via the CDAS, an *Interchange Area Management Plan (IAMP)*, is required. That process includes coordination between the Oregon Department of Transportation (ODOT) and local agencies to address transportation and land use needs within the interchange area. It evaluates multiple interchange design concepts and recommends one interchange design concept for further engineering design. In 2007 a US26 Springwater IAMP team was formed. The team included stakeholders from ODOT, the Cities of Gresham and Damascus, as well as Clackamas and Multnomah counties. Following an inventory of existing conditions, the project purpose and need plus goals and objectives were developed. Additionally, interchange alignments were conceptualized and screened against selection criteria that had been developed. Public outreach was conducted throughout this process. In September 2010 the Project Management Team selected a preferred alternative. Attachment A, the IAMP, provides detailed information about the process and preferred alternative for access from US 26 to Springwater. ~~, the necessary environmental reviews, facilities design and approval and project funding need to be completed.~~

~~The initial concept design will be further refined to address any identified impacts or issues identified through more further studies. Interim steps for access and circulation to and from US 26 in the~~

~~Springwater area were identified in the following phases. Where appropriate, potential thresholds for development triggers in Springwater have been identified, however, a specific evaluation will be required at the time of development application to confirm the need and timing of interim improvements.~~

POTENTIAL US 26 CORRIDOR CONSTRUCTION PHASING

The potential construction phasing of improvements to the US 26 corridor and Springwater roadway network must support the transportation demand as the Springwater community develops. In general the US 26 corridor will be developed from north to south, as shown in Figure 5-6and will tentatively utilize Proposed Collector A and a temporary connection to US 26 until the transportation demand supports building the Proposed Arterial B interchange as the permanent connection to US 26. However, development of the Proposed Arterials A and B plus the Overcrossing and Interchange may happen before development of the local road system due to federal and state funding opportunities. Figure 5-6 illustrates the following potential construction phasing for the recommended US 26 corridor concept that is described in more detail in this section:

- ~~Phase 1A: Stop Control at Proposed Collector A~~
- ~~Phase 1B: Traffic Signal at Proposed Collector A~~
- ~~Phase 2A: Build Proposed Arterial B Interchange~~
- ~~Phase 2B: Build Proposed Collector A Overcrossing~~

The phasing of access improvements to US 26 will need to be addressed at a higher level of detail in the NEPA process and preliminary engineering. This additional analysis may lead to changes in the phasing shown in this report. ~~Phase 1A: Stop Control at Proposed Collector A~~
~~Phase 1A~~ includes the following potential construction elements:

- ~~Construct Proposed Collector A, including a bridge over~~ Johnson Creek, as an ~~at-grade intersection with~~ US 26 just south of the wide median on US 26. This also includes an ~~at-grade intersection with~~ Telford Road ~~and the Springwater Trail.~~
- Install stop signs on the Proposed ~~Collector A approaches~~ to the US 26/Proposed ~~Collector A intersection.~~ Use the lane configuration ~~illustrated in Figure 5-6,~~ which includes one ~~dedicated left and right turn lane and one through lane on both US 26~~ approaches as well as one ~~dedicated left turn lane and an shared through/right lane on both Proposed Collector A approaches.~~ An additional ~~dedicated left turn lane and through lane should be added to both Proposed~~ Collector A approaches ~~for the installation of a~~ traffic signal ~~(see Phase 1B)~~ as this geometry will maximize the ~~life span of the intersection.~~
- Install underground ~~electrical conduit to accommodate~~ the installation ~~of a traffic signal at the US~~ 26/Proposed ~~Collector A intersection (see Phase 1B).~~
- Close the US 26/267th Avenue ~~intersection upon the completion of the US 26/Proposed Collector A~~ intersection.
- ~~Keep the US 26/Hillyard Road and US 26/Stone Road intersections open.~~

~~Phase 1B: Traffic Signal at Proposed Collector A~~
~~Phase 1B~~ includes the following potential ~~construction elements:~~

- ~~Construct a traffic signal~~ at the US 26/~~Proposed Collector A intersection. Maintain the lane geometry~~ constructed during Phase 1A and ~~upon the additional dedicated~~ left turn lane and ~~through lane on both~~ Proposed ~~Collector A approaches.~~
- ~~Construct visual indicators on US 26 to one motorists of the presence of a traffic signal. Specific design elements will be determined by ODOT during the design of the traffic signal and may include vertical elements such as raised curbs and roadway illumination that provide a more urban feel.~~
- Keep the ~~US 26/Hillyard Road and US 26/Stone~~ Road intersections ~~open.~~

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Phase 2A: Build ~~Proposed Arterial B Interchange~~
~~Phase 2A includes the following potential construction elements:~~

~~• Construct~~ Proposed Arterial B ~~and the interchange at US 26.~~ This also includes grade ~~separation at Telford~~ Road and the Springwater ~~Trail and a bridge at~~ Johnson Creek. Install traffic signals ~~at the ramp terminals if they are warranted within three years~~ of the interchange ~~completion. Install stop signs at the ramp terminals if traffic signals~~ are not warranted.
~~• Keep the US 26/Stone Road intersection open during construction of the~~ interchange for as long as ~~feasible.~~
~~• Keep the US 26/Hillyard~~ Road intersection ~~open during this phase.~~
~~• Maintain the traffic signal at the US 26/~~Proposed Collector A intersection.

~~Phase 2B: Build Proposed Collector A Overpass~~
Phase 2B includes ~~the following potential construction~~ elements:
~~• Close the US 26/~~Proposed Collector A, ~~US 26/Hillyard Road, and US 26/Stone Road intersections at the~~ completion of Phase 2A. ~~These intersections will no longer meet access spacing standards once the interchange is operational.~~
~~• Remove the traffic signal at US 26/~~Proposed Collector A.
~~• Realign~~ southbound US 26 at the north ~~end of Springwater to reduce~~ the median separation ~~between~~ southbound and northbound ~~US 26 to 16 feet, which is the~~ current ODOT standard ~~for US 26. By saving this~~ realignment ~~until the last phase it provides~~ more flexibility for detours, lane closures, or construction staging ~~during the earlier phases.~~
• Construct ~~the Proposed Collector A~~ overcrossing at US 26.

~~It will be important for development to recognize the shift~~ in access over time ~~within Springwater. During the early years, primary access will be~~ to and from the north ~~on Collector. However, eventually,~~ this ~~connection to US 26 will be~~ close (Phase 3), and ~~these circulation replaced by the new~~ interchange located ~~at the southern~~ Arterial.

Amendment to Street Functional Class Map and Plan Designations

The city street designations in the Gresham Transportation System Plan were applied to the Springwater Master Plan area. The street design type designations and cross-section elements were taken from the Pleasant Valley Plan area, since it is the most recent new development that incorporates Green Street components into new street designs. The proposed Street Functional Class Plan for the Springwater Master Plan area was illustrated in Figure 1.

The key arterial connections for Springwater include US 26, 242nd Avenue, Orient Drive, Kane Road and Rugg Road. The existing alignment of Orient Drive changes to create a new four-way intersection just east of 267th Avenue. This change is intended to separate urban travel to and from

For all phases, estimated construction cost for the ultimate US 26 connection improvements totals~~ed~~ $24.5 million. Cost estimates will be re-evaluated as part of the City of Gresham's TSP Update between 2010 and 2012. Once the preferred US 26 improvement project has been adopted, the specific nature and expected construction costs ~~should~~will be incorporated into ~~the Gresham TSP,~~ the updated TSP and the Metro RTP as appropriate.

Several existing streets bordering Springwater require improvements in the long-term to support planned growth. These include the projects numbered 27 through 30 shown in Table 8 Of these, Telford Road is the only street that traverses the planning area; the other streets border the site. The total estimated cost for improvements on these facilities is $38 million. Most of these projects will be constructed in a 6-20 year timeframe; however some would be required to support likely initial development in the northern part of the study area adjacent to US 26 and Telford Road. These are shown as occurring in a 1-5 year timeframe. All of the recommended improvements for Springwater are eligible for funding using system development charges (SDCs), however the City should investigate opportunities to obtain federal, state, or private funding to augment local funding of transportation improvements.

Outstanding Issues

~~The improvements identified above do not address the off-site system improvements required to service long-term travel demands, particularly in the north-south arterial corridors. The North/South Transportation Study (also known as the East Metro Area Telecommunications and Transportation Assessment) is evaluating the need for enhanced services or new facilities.~~ A Metro region corridor refinement plan, the *East Metro Connections Plan (EMCP)*, is scheduled to be complete by the end of 2013. That plan subsequent ~~original studies are to~~ will address recommended capacity, mobility, and access improvements through and within the jurisdictions of ~~Gresham~~ East Multnomah County (including additional needs associated with Springwater and Damascus development). ~~Preliminary findings from the study show the need for substantially more north-south carrying capacity, which could include upgrading existing arterials to higher quality of service, and implementing a high capacity transit solution between Damascus and Troutdale/I-84. The implications for Springwater potentially include a much higher level of traffic for the connector between 242nd Avenue and US 26 (Projects 2 and 3), and potentially a wider right-of-way requirement on 242nd Avenue (or other parallel north-south route) for a high capacity transit service.~~ Based on ~~this study~~ the outcomes of the EMCP, the City's Transportation System Plan update ~~and Metro's~~ Regional Transportation Plan update provide a forums to continue to address off-site improvements beyond the Springwater Plan. TSP will be updated to reflect necessary improvements, including any necessary improvements in the Springwater area.

Local Street Connectivity Map

Overall, local street planning for Springwater incorporates the on-site circulation requirements to support the intended land use development schemes, and is designed to provide key connections for low volume circulation between neighborhoods for automobiles, bicycles and pedestrians alike. A better connected street and trail system helps to reduce out-of-direction travel for all modes of transportation, and it also complies with requirements as described in Title 6 of the Regional Transportation Plan.

The local street network in Gresham bordering the Springwater area is developed along the northern face, on either side of US 26, and portions of the western face along 242nd Avenue, north of Butler Road. The southern and eastern faces of the Springwater planning area border the Urban Growth Boundary and local street extensions are not expected with the current designations. Development of local streets within Springwater will be consistent with standards adopted by the City of Gresham for spacing, sight distance

Table 9 (Continued): Springwater TSP Projects

Project	Street	Cost	Timing (Years)	Responsible Jurisdiction	Funding Source
		Additional Projects			
32	Refine Green Street Design Standards	$50,000	1-5	Gresham	Local
33	TIF Update Study	$100,000	1-5	Gresham	SDC
34	282nd Access Study	$100,000	1-5	Gresham/Multnomah County	SDC/Local
Subtotal		$250,000			
Total Transportation Projects		$190,303,000			

Grant Funding

Grant funding could be used to offset the cost of transportation improvements. Over ~~the past 10~~ years, the ~~City of Gresham has averaged approximately $1 million per year in transportation capital grants from various sources.~~ A specific estimate has not been made as to how much grant funding will be available to offset the cost of transportation improvements.

Developer Exactions

Developer exactions are applied to transportation improvements (usually frontage improvements) that developers are required to construct in order to develop their land. These most often apply to internal local streets.

TSP IMPLEMENTATION ACTIONS

The following actions are required to implement the Springwater TSP:

1. Continue to participate with other regional service providers to advance concepts from the ~~North/South Transportation~~ Plan regional and local plans to fully develop alternatives, develop a recommended plan, and identify and execute implementation measures to improve access between Springwater and major transportation routes such as I-205 and I-84.
2. Refine the Green Street concepts from this TSP and the Stormwater Master Plan as required to fully implement Green Street development in Springwater.
3. Implement a Transportation Impact Fee to adequately fund growth-related improvements in Springwater.
4. Continue to work with the Oregon Department of Transportation to develop plans for improved access to US 26 through Springwater.
5. Consider including conduit with future roadway improvements in Springwater to serve telecommunication needs in the area.

Exhibit B
Findings

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SPRINGWATER INTERCHANGE MANAGEMENT AREA

Appendix H – Findings

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Findings

Statewide Planning Goals

Oregon law created a hierarchy of consistency between local, regional and state plans. The foundation of Oregon's land use planning program is a set of 19 Statewide Planning Goals (http://www.lcd.state.or.us/LCD/goals.shtml#Statewide_Planning_Goals) OAR 660-15-0000 (1-15). The goals express the state's policies on land use and related topics, such as citizen involvement, housing, and natural resources.

Oregon's statewide goals are achieved through local comprehensive plans. State law requires each city and county to adopt a comprehensive plan and the zoning and land-division ordinances needed to put the plan into effect. The local comprehensive plans must be consistent with the Statewide Planning Goals. Plans are reviewed for such consistency by the state's Land Conservation and Development Commission (LCDC). When LCDC officially approves a local government's plan, the plan is said to be "acknowledged". It then becomes the controlling document for land use in the area covered by that plan.

The City of Gresham's and the Multnomah County's Comprehensive Plans have been acknowledged; therefore compliance with the policies and implementation measures of the Comprehensive Plan is considered compliance with the statewide goals. When a local jurisdiction's Comprehensive Plan is revised, each application for change is reviewed against the requirements of the goals.

This appendix will list and describe the statewide goals to insure that the facility plan maintains its consistency with state planning goals. These goals include: Goal 1 (Citizen Involvement), Goal 2 (Land Use Planning), Goal 9 (Economic Development), Goal 10 (Housing), Goal 11 (Public Facilities and Service), Goal 12 (Transportation), and Goal 14 (Urbanization).

Goal 1 (Citizen Involvement)

Goal 1, Citizen Involvement, requires development of a citizen involvement program that is widespread, understandable, responsive, funded, and that allows for two-way communications throughout all planning phases.

> ***Finding:*** *Appendix I of the Springwater Interchange Area Management Plan (IAMP) contains a summary of the public involvement efforts that were undertaken as part of the IAMP project. These efforts included the following:*
>
> - *A meeting of interested parties was held on February 12, 2009*
> - *A public open house held on July 27, 2010, to discuss the new Springwater interchange and the IAMP;*
> - *Small group (property owners) meetings were held on November 2 and November 9, 2010, to answer project-specific questions from business owners and residents directly affected by the project;*
> - *Five (5) stakeholder meetings were held between March and July, 2010, with identified stakeholders including:*

- *Developers*
- *Johnson Creek Watershed Council*
- *East Metro Economic Alliance*
- *Mt. Hood Neighborhood Association, Gresham Fire Department*
- *Real Estate interests*
- *Metro staff from land use planning, open spaces and transportation*
- *Audubon Society*
- *Portland Parks and Recreation*

- *A newsletter sent out to individuals near the proposed project to provide information and notification of the public involvement events; and*
- *A postcard announcing the small group meetings sent to business and property owners adjacent to the project.*

The draft IAMP was made available for public review and comment for a 45-day period beginning March 4, 2011. Notice of the public review draft was sent via postcard to individuals near the proposed project and those who had expressed interest at previous public events. Public comment was accepted via email, mail and telephone.

Public hearings on the proposed changes to the Gresham Comprehensive Plan and implementing ordinances were held by the Gresham Planning Commission and City Council during the winter 2010-11. The Board of Commissioners of Multnomah County, took no action as the IAMP is considered compliant with the Springwater Community Plan, which has been acknowledged by the County as the planning document for the Springwater area. These hearings provided opportunities for public comment on the proposed changes.

This information demonstrates consistency with Goal 1.

Goal 2 (Land Use Planning)

Goal 2, Land Use Planning, requires that a land use planning process and policy framework be established as a basis for all decisions and actions relating to the use of land. Goal 2 includes several requirements:

It requires planning coordination between those local governments and state agencies, "which have programs, land ownerships, or responsibilities within the area included in the plan." With regard to the Springwater IAMP, Goal 2 requires that ODOT coordinate with Gresham and Multnomah County, each of which has planning authority over some of the area impacted by the proposed interchange improvements. Coordination is particularly important because development within the county or the city will impact use of the interchange, and land use decisions could affect future use and operation of the interchange.

Finding: *Preliminary tasks for the Springwater IAMP included a thorough review and analysis of all relevant state, regional and local planning documents in order to*

establish a planning process and policy framework. The following documents were reviewed:

- *Applicable Oregon Statewide Planning Goals;*
- *Oregon Administrative Rule 731, Division 15, Department of Transportation Coordination Rules;*
- *Oregon Transportation Plan (2006);*
- *Oregon Highway Plan (1999);*
- *Oregon Administrative Rule 734-051, Highway Approaches, Access Control, Spacing Standards and Medians;*
- *Metro Regional Framework Plan (1997);*
- *Metro Urban Growth Management Functional Plan*
- *Metro Regional Transportation Plan (2007);*
- *Gresham Comprehensive Plan (2008);*
- *Gresham Zoning Ordinance;*
- *Gresham Transportation System Plan (2000);*
- *Springwater Community Plan (2005)*
- *Multnomah County Comprehensive Plan*
- *Multnomah County West of Sandy River Transportation and Land Use Plan (2002).*

This review identified how the documents influence planning for the proposed Springwater interchange project.

The Oregon Department of Transportation and the city of Gresham with participation by the city of Damascus, and Multnomah and Clackamas Counties jointly prepared the Springwater IAMP. Coordination between these agencies took place routinely throughout the process. ODOT staff facilitated and supported the adoption of the IAMP by Gresham, Multnomah County, and by the Oregon Transportation Commission (OTC). ODOT, Gresham and Multnomah County will continue to coordinate on development activity and land use actions within the interchange area.

Goal 2 has a provision that land use decisions and actions be supported by an "adequate factual base." This requirement applies to both legislative and quasi-judicial land use actions and requires that such actions be supported by "substantial evidence." In essence, it requires that there be evidence that a reasonable person would find to be adequate to support findings of fact that a land use action complies with the applicable review standards.

Finding: *This requirement is met through the technical analysis associated with the IAMP. Appendices C, D and E of the IAMP contain an analysis of the existing conditions within the IAMP study area. Appendix D describes the land use and zoning conditions and historic growth patterns in the vicinity of the proposed interchange,*

with Appendix E providing an inventory of existing transportation facilities and their relative functionality. A summary of deficiencies and issues is also provided based on analysis of current conditions.

Appendix D also describes expected future (2030) land use conditions within the IAMP study area and Appendices C and F provide future traffic analysis for current and 2030 no-build conditions.

Section 2 provides a description of the land use scenario used, with Appendix D providing the detail; including future household and employment growth and development patterns. The scenario was used for modeling the transportation network and determining where deficiencies may occur over time.

The analysis from Appendix D determined that improvements to the Springwater interchange area were necessary in order to accommodate future traffic. Appendix C summarizes the alternatives considered for the interchange and Appendix B describes the evaluation criteria used to select the preferred alternative.

Appendices A through I offer a factual base to support the Springwater interchange project and provide evidence to demonstrate compliance with the applicable Gresham and Multnomah County review standards.

Goal 2 also requires that city, county, state and federal agencies, and special district plans and actions related to land use are "consistent with the comprehensive plans of cities and counties and regional plans adopted under ORS Chapter 268." This provision is important because elements of the IAMP developed for the Springwater interchange will need to be adopted by Gresham and incorporated into its Transportation System Plan (TSP).

Finding: *Appendix G of the IAMP contains detailed review of plans and policies pertinent to the IAMP. Properties that are within the City of Gresham are currently governed by the Gresham comprehensive plan and zoning designations. Properties that are within Multnomah County are currently governed by the Multnomah County comprehensive plan and zoning designations. These findings show that the Springwater IAMP is consistent with the County and City plans, adopted pursuant to the provisions of ORS 197 and ORS 215.*

OAR 660, Division 4, outlines the Goal 2 exception process. This rule is not expected to be pertinent to the Springwater IAMP because it is entirely contained within the urban growth boundary and is not expected to require the taking of an exception to any of the other state goals under the previsions of this rule.

Goal 5: (Natural Resources, Scenic and Historic Areas, and Open Spaces)

This goal requires that natural resources, scenic and historic areas and open spaces be protected. The goal goes on to state that these elements be inventoried and planned for.

Finding: *The Project Management Team worked closely with resource agencies such as Metro, the Johnson Creek Watershed Council and the City of Gresham's environmental staff and the City of Portland Parks Bureau to develop an interchange plan that to the greatest extent possible protects the Johnson Creek watershed and the watersheds of its tributary streams. The project management team also reviewed whether any historic and natural resources were within the management area. No*

known historic resources exist in the management area other than the Springwater Trail, which is a historic rail route, and no natural resources exist. The preferred interchange design avoids, to the greatest extent possible Johnson Creek and its tributaries. Where avoidance is not possible, the IAMP recommends that mitigation occur within the Springwater community.

The project management team also consulted with the City of Portland Parks Bureau and based on their input developed an interchange plan that will grade separate the Springwater Trail at its intersection with the arterial serving the interchange.

Goal 7: (Areas Subject to Natural Hazards)

The purpose of this goal is to protect people and property from natural hazards.

Finding: *While the areas are subject to certain natural hazards, such as landslides and earthquakes, design of the facilities will minimize structural damage from earth movements.*

The interchange itself is not in a designated 100-year floodplain, but the road network serving the interchange cross the floodplains of Johnson Creek and its tributaries. The road network will be designed to minimize floodplain impacts by spanning them on elevated structures. The design of these structures are part of the design and engineering of the interchange facilities and not applicable to this IAMP.

Goal 8 (Recreational Needs)

The purpose of this goal is to satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

Finding*: In order to satisfy this goal, the project management team worked closely with the City of Portland Parks Bureau to address the Springwater Trail, which runs through the management area. In response to the Bureau's input, the design of the arterial serving the interchange is grade-seperated from the Springwater Trail.*

The second half of this goal is not applicable as there are no plans to site a destination resort within the Springwater community.

Goal 9: (Economic Development)

This goal requires that local comprehensive plans and policies contribute to a stable and healthy economy in all regions of the state.

Finding: *The Springwater Interchange provides a vital function in supporting local and regional economic development goals and plans. Local traffic, including commercial vehicles, must have safe and efficient access to US 26. The intent of the IAMP is to protect the function of the interchange; proposed IAMP policy language illustrates the County's and the City's role in preserving capacity and improving operations at the interchange. Adopting the IAMP will ensure that transportation improvements will be available to support the planned employment uses in Gresham and Multnomah County, consistent with this economic development goal.*

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Goal 10: Housing

This goal requires the County's and the City's plans provide for housing needs at price ranges and rent levels which are commensurate with the financial capabilities of citizens and allow for flexibility of housing location, type and density.

Finding: *While land in the immediate vicinity of the Springwater Interchange*

is currently zoned for Mixed Use Agricultural per Multnomah County Land Use, the entire area is slated for urban development and a Springwater Community Plan was developed that identifies predominantly industrial uses and other urban land uses such as Office, Commercial, and Residential when the Springwater Area is annexed into the city of Gresham. Appendix D delineates the future urban land uses. The proposed interchange is in an area that is planned for industrial use. It will not directly affect the supply of housing in the region.

Goal 11: (Public Facilities Planning) and OAR 660, Division 11

Goal 11, Public Facilities Planning and OAR 660, Division 11, require cities and counties to plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. The goal requires that urban and rural development be "guided and supported by types and levels of urban and rural public facilities and services appropriate for, but limited to, the needs and requirements of the urban, urbanizable and rural areas to be served."

Findings: *Transportation facilities are considered a primary type of public facility. The Springwater IAMP documents the current and future transportation needs of the urban, urbanizable, and rural areas in the vicinity of Springwater. The analysis of possible alternatives concluded that the grade-separated interchange is the appropriate facility to serve future transportation demand.*

The IAMP contains policies that will guide growth within the vicinity of the interchange to ensure that development takes place at a rate and density that is compatible with the capacity of the interchange.

In terms of other, non-transportation public facilities, the IAMP does not result in any land use changes. No impact on public facilities is expected, because no intensification of land use is created as a result of improvements recommended in the IAMP.

The city of Gresham is developing public facilities plans for the non-transportation related facilities that will be required as the Springwater area urbanizes. The Springwater IAMP does not preclude these other public facilities planning processes.

Goal 12: (Transportation) and OAR 660, Division 12

Goal 12, Transportation, requires cities, counties, metropolitan planning organizations, and ODOT to provide and encourage a "safe, convenient and economic transportation system." Goal 12 is implemented through OAR 660, Division 12 (2007), also known as the Transportation Planning Rule (TPR) (http://www.oregon.gov/ODOT/TD/TP/TPR.shtml)

Finding: *The purpose of the Springwater interchange is to improve the safety and efficiency of traffic flow through the area and to accommodate efficient freight*

movements onto and off of US 26. The objective of the Springwater IAMP is to protect the functionality of the interchange and its ability to serve future transportation demands.

Section 2 of the IAMP contains a discussion of the transportation analysis conducted in order to determine future demand, available capacity, deficiencies and necessary improvements for this interchange area. The analysis demonstrates that the planned transportation facility will adequately serve projected trips generated by future land uses, safely and efficiently for at least 20 years.

The Transportation System Plans of Gresham and Multnomah County have adopted relevant language of the IAMP by either ordinance or resolution. Policy and zoning ordinance language, and resolution language, as provided in IAMP, Appendix J, is added to the Comprehensive Plans and Zoning Ordinances of Gresham, in order to maintain interchange function and ensure that development inconsistent with the objectives of the IAMP does not cause unexpected traffic volumes or create non-conforming access points. The standards reserve capacity at the interchange so it is not consumed prematurely. IAMP policies provide for coordination between Gresham, Multnomah County and ODOT for any land use actions proposed within the IAMP study are. Local plans must be consistent with state plans. The Oregon Transportation Commission, first must approve proposed plan amendments involving land use actions that would exceed standards set forth in the IAMP.

ODOT, Gresham and Multnomah County jointly developed the Springwater IAMP. Policy language contained in the IAMP mandates continued coordination between these agencies for management of the interchange area. Current and future planned land uses were considered in the design of the interchange in order to ensure its ability to support future traffic demands. Policies within the IAMP are intended to manage land uses around the interchange to avoid unplanned growth and development that may impact the function of the facility. The policies also require that plan amendments and zone changes within the IAMP study area must not result in a significant impact on the interchange facility. If a significant impact is expected, then the IAMP must be amended and mitigation strategies, including a funding plan, must be adopted.

The IAMP calls for construction of an interchange. The IAMP documents the various design alternatives considered, the criteria used to evaluate the alternatives, and the rationale for selecting the preferred alternative.

The TPR requires local governments to adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors and sites for their identified functions" (OAR 660-012-0045(2)). A variety of measures help to achieve this policy, including:

- *Access control measures which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;*
- *Standards to protect future operations of roads;*
- *A process for coordinated review of future land use decisions affecting*

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transportation facilities, corridors or sites;

- *A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites;*
- *Regulations to provide notice to ODOT of land use applications that require public hearings, involve land divisions, or affect private access to roads; and*
- *Regulations assuring that amendments to land use designations, densities and design standards are consistent with the functions, capacities and performance standards of facilities identified in the TSP. See also OAR 660-012-0060.*

Goal 14: (Urbanization) and OAR 660, Divisions 14 and 22

Goal 14, Urbanization, requires an "orderly and efficient transition from rural to urban use" and the establishment of urban growth boundaries (UGBs) to provide land for urban development and identify and separate urban and urbanizable land from rural land.

Finding: *The Springwater interchange planning area is located entirely within the Metro urban growth boundary. Land in the vicinity of the interchange is currently zoned multi-use agriculture per Multnomah County, but with annexation into the city of Gresham will change to urban/suburban-level residential and employment uses. The IAMP contains policies that will guide growth within the vicinity of the interchange to ensure that development takes place at a rate and density that is compatible with the capacity of the interchange that are adopted to protect the function of the interchange from any unplanned future development.*

Generally, compliance with the goals is achieved by demonstrating compliance with an acknowledged comprehensive plan. Since the Gresham Comprehensive Plan and the County's TSP have been acknowledged as complying with the Statewide Planning Goals and related rules, compliance with the County Comprehensive Plan is considered to equate to compliance with the Statewide Planning Goals. The Springwater interchange area, for which this IAMP is being completed, is contained in these plans and is therefore presumed to comply with the related goal requirements.

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Goal 3 Agricultural Lands

Goal 4 Forest Lands

Goal 6 Air, Water and Land Resources Quality

Goal 13 Energy Conservation

Goal 15 Willamette River Greenway

Goal 16 Estuarine Resources

Goal 17 Coastal Shorelands

Goal 18 Beaches and Dunes

Goal 19 Ocean Resources

These goals were determined not to be applicable to the development of the IAMP. Goals 3 and 4are not applicable because the area within the IAMP is within the Metro urban growth boundary. Goal 6 is not applicable because no changes to waste and discharge will occur from this plan, and environmental quality will not fall below accepted state or federal standards as a result of the plan. Goal 13 is not applicable as no changes will occur to density of land use nor will it encumber energy conservation efforts in the area of the plan. Goal 15 is not applicable because the Willamette River Greenway is not in or near the interchange area. Goals 16, 17, 18, 19 are not applicable because no estuarine resources, coastal shorelands, beaches or dunes or ocean resources exist in or near the interchange area.

Oregon Transportation Plan (2006)

The Oregon Transportation Plan (OTP) is the state's long-range multimodal transportation plan. The OTP is the overarching policy document among a series of plans that together form the state transportation system plan (TSP). An IAMP must be consistent with applicable OTP goals and policies. Findings of compatibility will be part of the basis for IAMP approval. The most pertinent OTP goals and policies for interchange planning are as follows:

POLICY 1.1 – of an Integrated Multimodal System

It is the policy of the State of Oregon to plan and develop a balanced, integrated transportation system with modal choices for the movement of people and goods.

> ***Finding:*** *The Springwater Community Plan calls for an integrated Multi-modal system including sidewalks and bike lanes on roads classified as collectors and above. The IAMP for Springwater reinforces the Community Plan and builds from it by recommending that the Springwater Trail be grade-separated from the arterial street that serves the interchange.*
>
> *The Springwater IAMP was developed to facilitate improved movement of good (freight) from the Springwater Community, which is a planned arae for industrial expansion. The interchange will provide for a safe and integrated roadway network in the area with improved access to and from US 26.*

POLICY 1.2 – Equity, Efficiency and Travel Choices

It is the policy of the State of Oregon to promote a transportation system with multiple travel choices that are easy to use, reliable, cost-effective and accessible to all potential users, including the transportation disadvantaged.

Finding: *Improved bicycle and pedestrian facilities are incorporated into the design for the interchange reconstruction. Any new roadway projects (including local streets) will meet current applicable standards. Pursuant to existing local requirements, 5-foot wide sidewalks will be constructed as part of all collector or local streets planned within the interchange area (see Proposed Local Circulation Plan, Exhibit 14), with separate bike lanes required for roadways classified as collectors or above. The Local Street Connectivity Plan includes connections for bicycles and pedestrians where street connections are not possible or practical.*

The Springwater Community currently has one transit route serving the area along SE Orient Drive. The Springwater Community Plan identifies three new transit routes. One Primary Transit Route along SE Hogan Road, west of the management area; one Secondary Transit Route along the arterial serving the Springwater interchange; and ond one Neighborhood Circulation Route along the proposed collector crossing US 26 to the north of the interchange.

The Springwater IAMP builds off of the Springwater Community Plan and does not prohibit or otherwise limit more transit routes in the future.

POLICY 1.3 – Relationship of Interurban and Urban Mobility

It is the policy of the State of Oregon to provide intercity mobility through and near urban areas in a manner which minimizes adverse effects on urban land use and travel patterns and provides for efficient long distance travel.

Finding: *The Springwater IAMP provides for improved safety and intercity mobility along the US 26 corridor. The IAMP regulates access and land uses in the vicinity of the interchange to ensure the facility will operate at levels consistent with established state/regional mobility standards for the 20-year planning horizon and beyond.*

The IAMP process has coordinated with local partners in vicinity of the Springwater Interchange, through their TSPS, to develop/enhance the local street network, to accommodate local access and connectivity. A proposed new local arterial will provide connectivity between SE Hogan Road and SE Orient Drive in Multnomah County (future City of Gresham), as will a new collector crossing between SE 252nd Avenue and the proposed arterial provide greater connectivity between neighborhoods, and improve access across US 26.

POLICY 2.1 - Capacity and Operational Efficiency

It is the policy of the State of Oregon to manage the transportation system to improve its capacity and operational efficiency for the long term benefit of people and goods movement.

Finding: *The Springwater interchange was developed in response to safety, capacity and operational efficiency issues affecting the US 26 corridor. Short term actions in the IAMP accomplish these management objectives by minimizing access locations*

through this section of US 26. The medium-term and long-term actions in the IAMP protect long-term system capacity by ensuring that the interchange continues to function at a level that meets the mobility expectations of the state. The IAMP contains policies that regulate land use in the vicinity of the interchange by requiring that proposed land use actions must include a review of potential impacts to interchange operations.

POLICY 2.2 – Management of Assets

It is the policy of the State of Oregon to manage transportation assets to extend their life and reduce maintenance costs.

Finding: *The stated purpose of the IAMP is to maximize the operational life of the Springwater Interchange, and consequently, protect the State's investment in the facility. Specifically, the goal of the IAMP is to protect the function and operation of the interchange and the local street network within the IAMP area. This includes providing safe and efficient connections between local streets and state highways and minimizing local traffic traveling through the interchange. The IAMP requires proposed changes to the planned land use system to demonstrate consistency with IAMP policies protecting the long-term function of the interchange facility.*

The US 26 corridor includes bus service on the facility between Gresham and the neighboring city of Sandy.

TriMet's Metropolitan Area Express lightrail service is within 2-miles of the Springwater area.

POLICY 3.1 – An Integrated and Efficient Freight System

It is the policy of the State of Oregon to promote an integrated, efficient and reliable freight system involving air, barges, pipelines, rail, ships and trucks to provide Oregon a competitive advantage by moving goods faster and more reliably to regional, national and international markets.

Finding: *The US 26 corridor serves as a primary connection between the Portland metro region and central and eastern Oregon. The highway is a designated Statewide Freight Route in the Oregon Highway Plan. It serves the planned development of the Springwater Community and the cities of Portland, Gresham, Damascus, Troutdale, Fairview and Wood Village to the west, with the area around Mt. Hood and Central and Eastern Oregon to the east.*

The US 26 corridor is a principal facility for freight traffic and regional through-trips. The Springwater interchange will alleviate congestion and conflicts of combined local trips and through-trips currently experienced in the Springwater Community. The Springwater IAMP provides management tools to ensure the continued safety and efficiency of travel along the US 26 Corridor, particularly in the vicinity of the new interchange.

POLICY 3.2 – Moving People to Support Economic Vitality

It is the policy of the State of Oregon to develop an integrated system of transportation facilities, services and information so that intrastate, interstate and international travelers can travel easily for business and recreation.

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***Finding*:** *The Springwater interchange will facilitate improved connections to and from the Springwater community and US 26, providing for an efficient and safe transportation network for travelers on business and persueing recreational pursuits.*

POLICY 4.1 - Environmentally Responsible Transportation System

It is the policy of the State of Oregon to provide a transportation system that is environmentally responsible and encourages conservation and protection of natural resources.

Finding: *IAMP policy language protects resource land within the IAMP study area by restricting the location and operation of approach roads in the vicinity of the interchange consistent with the existing designations in the comprehensive plan. The Springwater Interchange will span the adjacent Johnson Creek and its tributaries, home to threatened and endangered salmonid species. Actions necessary to protect and enhance the natural resources within the management area were taken in the refinement of the preferred alternative. The IAMP has goals and policies to address the protection of the natural environment.*

POLICY 5.1 – Safety

It is the policy of the State of Oregon to continually improve the safety and security of all modes and transportation facilities for system users including operators, passengers, pedestrians, recipients of goods and services, and property owners.

Finding: *The Springwater IAMP addresses crash rates along this section of US 26. The highway improvements minimize access to the highway and the grade-separated interchange limits conflicts between local and regional trips - a contributing cause for vehicle crashes in the area. The interchange design, and the specified location and authorized use of approach roads provide for long-term highway safety.*

POLICY 7.1 – A Coordinated Transportation System

It is the policy of the State of Oregon to work collaboratively with other jurisdictions and agencies with the objective of removing barriers so the transportation system can function as one system.

Finding: *ODOT worked in collaboration with Gresham and Multnomah County to develop and adopt the IAMP. Improvements to local street connectivity and access to state facilities within the IAMP area were further coordinated in the development and updating of local jurisdiction TSPs. The IAMP policy language adopted by these local jurisdictions requires continued coordination between themselves and ODOT to protect the long-term function of the interchange.*

POLICY 7.3 – Public Involvement and Consultation

It is the policy of the State of Oregon to involve Oregonians to the fullest practical extent in transportation planning and implementation in order to deliver a transportation system that meets the diverse needs of the state.

Finding: *Appendix I of the Springwater Interchange Area Management Plan (IAMP) contains a summary of the public involvement efforts that were undertaken as part of the IAMP project. These efforts included the following:*

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- *A meeting of interested parties was held on February 12, 2009*
- *A public open house held on July 27, 2010, to discuss the new Springwater interchange and the IAMP;*
- *Small group (property owners) meetings were held on November 2 and November 9, 2010, to answer project-specific questions from business owners and residents directly affected by the project;*
- *Five (5) stakeholder meetings were held between March and July, 2010, with identified stakeholders including:*
    - *Developers*
    - *Johnson Creek Watershed Council*
    - *East Metro Economic Alliance*
    - *Mt. Hood Neighborhood Association, Gresham Fire Department*
    - *Real Estate interests*
    - *Metro staff from land use planning, open spaces and transportation*
    - *Audubon Society*
    - *Portland Parks and Recreation*
- *A newsletter sent out to individuals near the proposed project to provide information and notification of the public involvement events; and*
- *A postcard announcing the small group meetings sent to business and property owners adjacent to the project.*

The draft IAMP was made available for public review and comment for a 45-day period beginning March 4, 2011. Notice of the public review draft was sent via postcard to individuals near the proposed project and those who had expressed interest at previous public events. Public comment was accepted via email, mail and telephone.

Public hearings on the proposed changes to the Gresham Comprehensive Plan and implementing ordinances were held by the Gresham Planning Commission and City Council during the winter 2010-11. The Board of Commissioners of Multnomah County, took no action as the IAMP is considered compliant with the Springwater Community Plan, which has been acknowledged by the County as the planning document for the Springwater area. These hearings provided opportunities for public comment on the proposed changes.

POLICY 7.4 - Environmental Justice

It is the policy of the State of Oregon to provide all Oregonians, regardless of race, culture or income, equal access to transportation decision-making so all Oregonians may fairly share in benefits and burdens and enjoy the same degree of protection from disproportionate adverse impacts.

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Findings: *Appendix I provides a summary of the public involvement efforts that took place during development of the IAMP. Various methods were used to gather public input about the interchange project and the management plan, including two open houses, a series of small group meetings, and a public review and comment period for the draft IAMP. Press releases to announce the open houses and small group meetings were sent to all local newspapers, as well as local radio and television stations. Input from citizens was used to evaluate alternatives. These opportunities were provided equally to all, regardless of race, culture or income.*

Oregon Highway Plan

The 1999 Oregon Highway Plan (OHP) establishes policies and investment strategies for Oregon's state highway system over a 20-year period and refines the goals and policies found in the OTP. Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity. These policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail and air systems.

The OHP identifies gaps to the region's throughway system that are needed to improve access from the Portland metropolitan region to the rest of the state, and destinations beyond. Among these is a connection from I-84 to the Mt. Hood Hwy (US 26). The OHP policies applicable to planning for this connection are described below.

Under Goal 1: System Definition, the following policies are applicable:

Policy 1A (Highway Classification) defines the function of state highways to serve different types of traffic that should be incorporated into and specified through IAMPs.

Finding: *Section 2 of the Springwater IAMP summarizes the functional classification of roadways within the IAMP study area. US 26 is classified as a Statewide Freight Route and an Expressway. Construction of an interchange to replace an at-grade intersection at Springwater (US 26 and SE 267th Avenue), and limiting approach roads are consistent with the highway's classification.*

Policy 1B (Land Use and Transportation) recognizes the need for coordination between state and local jurisdictions.

Finding: *Coordination between state and local jurisdictions occurred throughout the preparation of the IAMP, and in the preparation/updating of local jurisdiction TSPs. A Project Management Team (PMT) subgroup was formed to inform the IAMP process and included members representing Gresham, ODOT, Multnomah and Clackamas Counties, and Damascus. The PMT subgroup met numerous times and reviewed draft documents in order to provide input and revisions.*

Policy 1C (State Highway Freight System) states the need to balance the movement of goods and services with other uses.

Finding*: The project improves freight mobility through the area by addressing safety and efficiency issues that have been identified throughout the corridor due to the conflict of combined regional freight movements and local trips. Existing freight*

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distribution centers to the north (Columbia Corridor), and lands to be zoned as future Industrial Areas in the Springwater Community, will benefit from the construction of a new, interchange along US 26.

Policy 1D (Scenic Byways) It is the policy of the State of Oregon to preserve and enhance designated Scenic Byways, and to consider aesthetic and design elements along with safety and performance considerations on designated Byways.

Finding: *Policy 1D is not applicable as this section of US 26 is not a Scenic Byway SE Orient Drive, which is the east boundary of the Springwater IAMP, is part of the Mt. Hood Scenic Byway. There are no policies or actions within the IAMP that would prohibit US 26 from being designated as a Scenic Byway in the future.*

Policy 1E (Lifeline Routes) It is the policy of the State of Oregon to provide a secure lifeline network of streets, highways, and bridges to facilitate emergency services response and to support rapid economic recovery after a disaster.

Finding: *There is nothing in the Springwater IAMP that prohibits or otherwise limits the establishment of US 26 as a Lifeline Route.*

Policy 1F (Highway Mobility Standards) sets mobility standards for ensuring a reliable and acceptable level of mobility on the highway system by identifying necessary improvements that would allow the interchange to function in a manner consistent with OHP mobility standards.

Finding: *The analysis of existing and future traffic conditions in the vicinity of the Springwater Interchange shows that the existing highway cannot perform at the level expected in the OHP without modernization. Since the Springwater Interchange Project entails construction of a new grade-separated crossing of US 26, the Highway Design Manual (HDM) standards were used as a criterion for selecting a preferred design for the new interchange, instead of the OHP/Metro mobility standards. The HDM standards adopted as part of the plan will result in acceptable interchange and highway operations throughout the 20-year planning horizon.*

Policy 1G (Major Improvements) requires maintaining performance and improving safety by improving efficiency and management before adding capacity. ODOT works with regional and local governments to address highway performance and safety.

Finding: *Appendix C summarizes the alternatives that were evaluated for their potential to accommodate existing and future traffic demand at the Springwater interchange. Those alternatives included an evaluation of a 2030 No-Build scenario with retention of at-grade intersection at SE 267th Avenue and US 26, as well as different Build Alternative roadway alignments and interchange designs. The 2030 No-Build alternative, that did not include a grade-separated interchange, does not provide a solution to the highway capacity and highway safety needs. Therefore, adding capacity is the necessary means for improving safety and efficiency in this highway section.*

Policy 1H (Bypasses) Bypasses are highways designed to maintain or increase statewide or regional mobility. Generally they relocate a highway alignment around a downtown, an urban or metropolitan area or an existing highway. The goal of bypass facilities is to

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effectively serve state and regional traffic trips. It is the policy of the State of Oregon to build bypasses to provide safe, effi cient passage for through travelers and commerce.

> ***Finding:*** *Policy 1H is not applicable as US 26 is designated a limited access Expressway through the Springwater IAMP area. The development of the IAMP helps to ensure the future operations of US 26 so that construction of a bypass is never necessary.*

Under Goal 2: System Management, the following policies are applicable:

Policy 2A (Partnerships) It is the policy of the State of Oregon to establish cooperative partnerships to make more effi cient and effective use of limited resources to develop,

operate, and maintain the highway and road system. These partnerships are relationships among ODOT and state and federal agencies, regional governments, cities, counties, tribal governments, and the private sector.

> ***Finding:*** *The development of the Springwater IAMP was a partnership between ODOT and the Cities of Gresham and Damascus and the Counties of Multnomah and Clackamas. Private organizations such as the Johnson Creek Watershed Council and the East Multnomah Economic Alliance also participated in the development of the IAMP as did the citizens of the Springwater community.*

Policy 2B (Off-System Improvements) helps local jurisdictions adopt land use and access management policies.

> ***Finding:*** *Adoption of the land use and access management policies and actions in the IAMP protect the function of the interchange and other related improvements. The IAMP actions minimize the use of US 26 and the new arterial for property access. For most properties, local roads are used to provide access. Off-system improvements within the Springwater IAMP area were identified in the IAMP process, as well as in the local jurisdiction TSP process, to ensure coordination among these efforts.*

Policy 2C (Interjurisdictional Transfers) It is the policy of the State of Oregon to consider, in cooperation with local jurisdictions, interjurisdictional transfers that:

- Rationalize and simplify the management responsibilities along a particular roadway segment or corridor;
- Reflect the appropriate functional classification of a particular roadway segment or corridor; and/or
- Lead to increased efficiencies in the operation and maintenance of a particular roadway segment or corridor.

> ***Finding:*** *Policy 2C is not applicable to the Springwater IAMP as there will be no jurisdictional transfer of state facilities, nor will there be a transfer of local facilities to the state.*

Policy 2D (Public Involvement) *It is the policy of the State of Oregon to ensure that citizens, businesses, regional and local governments, state agencies, and tribal*

governments have opportunities to have input into decisions regarding proposed policies, plans, programs, and improvement projects that affect the state highway system.

Finding: *Refer to Goal 1 Finding above.*

Policy 2E (Intelligent Transportation Systems) It is the policy of the State of Oregon to consider a broad range of Intelligent Transportation Systems services to improve system efficiency and safety in a cost-effective manner. Deployment of ITS shall reflect the user service priorities established in the Oregon Intelligent Transportation Systems Strategic Plan. Specifically:

- Incident Management
- En-route Driver Information
- Traffic Control (Arterials and Freeways)
- Route Guidance
- Commercial Vehicle Electronic Clearance
- Pre-trip Travel Information
- Public Transportation Management
- Emergency Notification and Personal Security
- Emergency Vehicle Management
- Commercial Fleet Management

Finding: *Policy 2E is not directly applicable to the Springwater IAMP. However elements of Policy 2E can be implemented for the Springwater interchange and US 26, in the Springwater community without affecting the Springwater IAMP.*

Policy 2F (Traffic Safety) improves the safety of the highway system.

Finding: *An important reason for construction of the interchange project is to address safety issues in this section of the highway. The IAMP protects the safe and efficient operation of the interchange by regulating access and land use in the vicinity, and through separation of local, regional, and freight movements.*

Policy 2G (Rail and Highway Compatibility) It is the policy of the State of Oregon to increase safety and transportation efficiency through the reduction and prevention of conflicts between railroad and highway users.

Finding: *Policy 2G is not applicable to the Springwater IAMP as there are no active rail lines in the vicinity of the management area*

Under Goal 3: Access Management, the following policies are applicable:

Policy 3A: (Classification and Spacing Standards) sets access spacing standards for driveways and approaches to the state highway system.

Finding: *The IAMP largely adheres to the approach road spacing standards established by OAR 734-051. Only two locations within the Springwater interchange influence area do not meet interchange spacing standards (the intersection of SE Teleford Road and the new arterial and EB ramp terminals; and the new intersection*

of SE Jeanette Street and the new arterial and the WB ramp terminals). The reasons for deviating from this standard are provided in detail in the Access Management Plan component of the IAMP. Generally, these deviations are sought to provide access for an existing intersection (SE Teleford Road) and to protect the riparian area of the North Fork Johnson Creek (new intersection of SE Jeanette Street).

The IAMP contains short and long-term access strategies that will be applied within the IAMP planning area in order to regulate existing and future driveway and other approaches in the vicinity of the interchange.

Policy 3B (Medians) It is the policy of the State of Oregon to plan for and manage the placement of medians and the location of median openings on state highways to enhance the efficiency and safety of the highways, and influence and support land use development.

Finding: *US 26 is currently a divided highway through the Springwater community. The location of the Springwater interchange will close an exsisting median opening, thereby improving safety along the highway.*

Policy 3C (Interchange Access Management Areas) sets policy for managing interchange areas by developing an IAMP that identifies and addresses current interchange deficiencies and establishes short, and long term solutions.

Finding: *The purpose of the Springwater IAMP is to effectively manage the US 26 at Springwater interchange area. The IAMP provides recommendations for short and long term implementation and access management actions, as well as land use policies that are intended to protect the interchange into the 20-year planning horizon and beyond.*

Policy 3D (Deviations) establishes general policies and procedures for deviations from adopted access management standards and policies.

Finding**:** *The Access Management Plan component of the IAMP identifies access points that will require an access spacing deviation request, and the rationale for the request. Deviations will be requested in accordance with the applicable state procedure.*

Policy 3E (Appeals) It is the policy of the State of Oregon to manage appeals of both denied requests for approach roads and denied requests for deviations from adopted access management standards and policies through an appeals process to ensure statewide consistency.

Finding**:** *The Springwater IAMP does not prohibit the uniform application of Policy 3E.*

Policy 4A (Efficiency of Freight Movement) It is the policy of the State of Oregon to maintain and improve the efficiency of freight movement on the state highway system and access to intermodal connections. The State shall seek to balance the needs of long

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distance and through freight movements with local transportation needs on highway facilities in both urban areas and rural communities.

> ***Finding:*** *The Springwater IAMP seeks to improve the efficiency of freight movement by constructing a grade-separated interchange to US 26 in an area planned for future development of industrial uses.*

Policy 4B: (Alternative Passenger Modes) It is the policy of the State of Oregon to advance and support alternative passenger transportation systems where travel demand, land use, and other factors indicate the potential for successful and effective

development of alternative passenger modes.

> ***Finding:*** *Policy 4B is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit or otherwise constrain the development of alternative passenger modes of transportation.*

Policy 4C (High-Occupancy Vehicle (HOV) Facilities) It is the policy of the State of Oregon to utilize HOV facilities to improve the efficiency of the highway system in locations where travel demand, land use, transit, and other factors are favorable to their effectiveness. A systems planning approach shall be taken in which individual HOV facilities complement one another and the other elements of the multimodal transportation system.

> ***Finding:*** *Policy 4C is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit or otherwise constrain the development of alternative passenger modes of transportation.*

Policy 4D: (Transportation Demand Management) It is the policy of the State of Oregon to support the efficient use of the state transportation system through investment in transportation demand management strategies.

> ***Finding:*** *Policy 4D is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit or otherwise constrain the development of transportation demand management strategies.*

Policy 4E (Park-and-Ride Facilities) *It is the policy of the State of Oregon to encourage the efficient use of the existing transportation system and to seek cost-effective expansion of the highway system's passenger capacity through development and use of park-and-ride facilities.*

> ***Finding:*** *Policy 4E is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit or otherwise constrain the development of park-and-ride facilities.*

Policy 5A (Environmental Resources) It is the policy of the State of Oregon that the design, construction, operation, and maintenance of the state highway system should maintain or improve the natural and built environment including air quality, fish passage and habitat, wildlife habitat and migration routes, sensitive habitats (i.e. wetlands, designated critical habitat, etc.), vegetation, and water resources where affected by ODOT facilities.

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Finding: *Development of the Springwater IAMP took into consideration avoidance and enhancement of the natural environment. The Project Management Team work closely with the Johnson Creek Watershed Council, Metro, City of Portland Parks Bureau and the City of Gresham's environmental staff to develop an interchange plan that avoids to the extent possible natural features. The IAMP specifically calls for enhancement to the natural environment when feasible during the design and construction of the interchange and its supporting road network.*

Policy 5B (Scenic Resources) *It is the policy of the State of Oregon that scenic resources management is an integral part of the process of creating and maintaining the state highway system. The State of Oregon will use best management practices to protect and enhance scenic resources in all phases of highway project planning, development, construction, and maintenance.*

Finding: *The finding of Policy 5A are also applicable to Policy 5B.*

OAR 731-015-0065 Coordination Procedures for Adopting Final Facility Plans

OAR 731-015-0065 regulates the ODOT procedure for adopting facility plans. An IAMP is a facility plan. The procedure outlined in OAR 731-015-0065 requires that ODOT coordinate with local government agencies during development of the plan and provide a draft of the facility plan to affected cities, counties, and other agencies for comment. The facility plan must be consistent with statewide planning goals and local comprehensive plan policies, and findings of compatibility must be presented to the Oregon Transportation Commission for facility plan adoption.

Finding: *The Springwater IAMP was developed jointly by ODOT, Gresham, and Multnomah County. A final draft of the IAMP will be provided to all affected government and other agencies, and any potential conflicts with state or local plans will be jointly resolved. These findings were developed with statewide planning goals and local comprehensive plans in mind for presentation to the Oregon Transportation Commission. Adoption of the IAMP will take place in conformance with this provision.*

OAR 734, Division 51: Highway Approaches, Access Control, Spacing Standards and Medians

ODOT adopted OAR 734, Division 51 to address access management and it is expected that as part of this project, ODOT will engage in access management consistent with its Access Management Rule and Highway Plan policies. This could involve the purchase of access rights within at least one-quarter mile of the interchange ramps, as well as the development of local roadways to provide access to parcels whose access may be affected by right-of-way acquisitions.

OAR 734-051 governs the permitting, management, and standards of approaches to state highways to ensure safe and efficient operation of the state highways. OAR 734-051 policies address the following:

- How to bring existing and future approaches into compliance with access spacing standards, and ensure the safe and efficient operation of the highway;
- The purpose and components of an access management plan; and

- Requirements regarding mitigation, modification and closure of existing approaches as part of project development.

Section 734-051-0125, Access Management Spacing Standards for Approaches in an Interchange Area, establishes interchange management area access spacing standards.

Section 734-051-0155 specifies elements that are to be included in an IAMP, such as short-, medium-, and long-range actions to improve and maintain safe and efficient roadway operations within the interchange area.

ODOT adopted OAR 734, Division 51 to address access management and it is expected that as part of this project. ODOT will engage in access management consistent with its Access Management Rule and Highway Plan policies. This could involve the purchase of access rights within at least one-quarter mile of the interchange ramps, as well as the development of local roadways to provide access to parcels whose access may be affected by right-of-way acquisitions.

The Access Management Plan component of this project will compare access spacing with adopted access standards. If future proposed interchange improvements would not meet access spacing standards outlined in OAR 734-051-0125, the project will require deviations to interchange and roadway approach (public and private streets and driveways) access management spacing standards to be approved by ODOT regional access manager, as per OAR 734-051-0135.

> ***Finding:*** *The Springwater IAMP identifies where approach roads along the proposed arterial serving the new interchange will not meet the standards after interchange construction. Short-term and long-term access strategies are provided to close approach roads to be consistent with spacing standards. In some cases, new road alignments will provide alternative access. The IAMP also identifies access spacing deviations that will be needed and provides rationale for each.*
>
> *The IAMP contains approach road spacing standards for new development near the interchange. These standards, shown in Table 2 of OAR 734, are the spacing standards in OAR 734-051, Table 8 for Non-freeway Interchanges with Multi-lane Crossroads.*

Regional Regulations

Metro is the regional government for the Oregon portion of the Portland Metropolitan area. Metro's jurisdictional boundary encompasses the urban portions of Multnomah, Washington and Clackamas counties.

Metro's Role in Land Use Planning

Metro is responsible for regional land use and transportation planning functions, including all adjustments to the UGB and related activities.

Metro's Role in Transportation Planning

Metro is the regional government responsible for regional transportation planning under state law and is the federally-designated metropolitan planning organization (MPO) for the Portland metropolitan area. As the federally designated MPO, Metro guides regional

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transportation system planning and development in the Portland metropolitan area. Metro is also responsible for developing a regional transportation system plan (TSP), consistent with Oregon Transportation Planning Rule (TPR) requirements and Federal planning rules.

Metro's Regional Framework Plan

The Regional Framework Plan unites all of Metro's adopted land use planning policies and requirements. The Metro Charter directs the agency to address the following subjects in the Plan:

- Management and amendment of the Urban Growth Boundary
- Protection of lands outside the Urban Growth Boundary for natural resource use and conservation, future urban expansion or other uses
- Urban design and settlement patterns
- Housing densities
- Transportation and mass transit systems
- Parks, open spaces and recreational facilities
- Water sources and storage
- Coordination with Clark County, Washington
- Planning responsibilities mandated by state law
- Other issues of metropolitan concern

Metro's Regional Framework Plan can be accessed in its entirety through this link:

(http://www.oregonmetro.gov/index.cfm/go/by.web/id=432).

Regional Framework Plan Structure

Each chapter of this Plan contains an introduction followed by a list of relevant Fundamentals. Fundamentals are eight value statements adopted by the Metro Council that synthesize the 2040 Growth Concept and regional policies and are listed below:

Fundamental 1: Encourage a strong local economy by providing an orderly and efficient use of land, balancing economic growth around the region and supporting high quality education.

Fundamental 2: Encourage the efficient use of land within the UGB including buildable industrial and commercial land and focus development in 2040 mixed use centers and corridors.

Fundamental 3: Protect and restore the natural environment including fish and wildlife habitat, streams and wetlands, surface and ground water quality and quantity, and air quality.

Fundamental 4: Provide a balanced transportation system including safe, attractive facilities for bicycling, walking and transit as well as for motor vehicles and freight.

Fundamental 5: Maintain separation between the Metro UGB and neighboring cities by working actively with these cities and their respective counties.

Fundamental 6: Enable communities inside the Metro UGB to enhance their physical sense of place by using among other tools, greenways, natural areas, and built environment elements.

Fundamental 7: Enable communities to provide diverse housing options for all residents by providing a mix of housing types as well as affordable homes in every jurisdiction.

Fundamental 8: Create a vibrant place to live and work by providing sufficient and accessible parks and natural areas, improving access to community resources such as schools, community centers and libraries as well as by balancing the distribution of high quality jobs throughout the region, and providing attractive facilities for cultural and artistic performances and supporting arts and cultural organizations.

These Fundamentals are followed by policies of the Metro Council. Chapters 1 through 6 address substantive planning policies. Chapter 7 addresses how Metro will manage the plan and amendments to the plan. Chapter 8 addresses how the plan policies are to be implemented. Related documents and background information are contained in Appendices.

Policies – Chapter 1, Land Use

1.1 Urban Form

1.2 Built Environment

1.3 Housing Choice

1.4 Economic Opportunity

1.5 Economic Vitality

1.6 Growth Management

1.7 Urban/Rural Transition

1.8 Developed Urban Land

1.9 Urban Growth Boundary

1.10 Urban Design

1.11 Neighbor Cities

1.12 Protection of Agriculture and Forest Resource Lands

1.13 Participation of Citizens

1.14 School and Local Government Plan and Policy Coordination

1.15 Centers

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1.16 Residential Neighborhoods

Finding: *The Springwater IAMP contains no policies or actions that would limit Metro from carrying out policies identified in Chapter 1 of the Regional Framework Plan. In fact, the IAMP contributes positively to many of the land use policies identified in the Regional Framework Plan.*

Policies – Chapter 2, Transportation

2.1 Public Involvement

2.2 Intergovernmental Coordination

2.3 Urban Form

2.4 Consistency Between Land Use and Transportation Planning

2.5 Barrier-Free Transportation

2.6 Interim Job Access and Reverse Commute Policy

2.7 Transportation Safety and Education

2.8 The Natural Environment

2.9 Water Quality

2.10 Clean Air

2.11 Energy Efficiency

2.12 Regional Street Design

2.13 Local Street Design

2.14 Regional Motor Vehicle System

2.15 Regional Public Transportation System

2.16 Public Transportation Awareness and Education

2.17 Public Transportation Safety and Environmental Impacts

2.18 Regional Public Transportation Performance

2.19 Special Needs Public Transportation

2.20 Regional Freight System

2.21 Regional Freight System Investments

2.22 Regional Bicycle System Connectivity

2.23 Regional Bicycle System Mode Share and Accessibility

2.24 Regional Pedestrian System

2.25 Regional Pedestrian Mode Share

2.26 Regional Pedestrian Access and Connectivity

2.27 Transportation System Management

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2.28 Regional Transportation Demand Management

2.29 Regional Parking Management

2.30 Peak Period Pricing

2.31 Transportation Funding

2.32 2040 Growth Concept Implementation

2.33 Transportation System Maintenance and Preservation

2.34 Transportation Safety

Finding: *The Springwater IAMP contains no policies or actions that would limit Metro from carrying out policies identified in Chapter 2 of the Regional Framework Plan. In fact, the IAMP contribute positively to many of the transportation policies identified in the Regional Framework Plan.*

Policies – Chapter 3, Nature in Neighborhoods

3.1 Inventory of Park Facilities and Identification and Inventory of Regionally Significant Parks, Natural Areas, Open Spaces, Fish and Wildlife Habitat,Trails and Greenways

3.2 Protection of Regionally Significant Parks, Natural Areas, Open Spaces, Fish and Wildlife Habitat, Trails and Greenways

3.3 Management of the Publicly-Owned Portion of the Regional System of Parks, Natural Areas, Open Spaces, Fish and Wildlife Habitat, Trails and Greenways

3.4 Protection, Establishment and Management of a Regional Trails System

3.5 Provision of Community and Neighborhood Parks, Open Spaces, Fish and Wildlife Habitat, Natural Areas, Trails and Recreation Programs

3.6 Participation of Citizens in Environmental Education, Planning, Stewardship Activities, and Recreational Services

Finding: *The project management team worked closely with Metro and the Johnson Creek Watershed Council to ensure the Springwater interchange avoided to the greatest extent possible natural areas and where avoidance is not possible ensure that mitigation is located within the Springwater area. The PMT also worked with the City of Portland to ensure that the regionally significant Springwater Trail is grade separated from the arterial. The IAMPs contain no policies that would preclude Metro from carrying out policies in this chapter for the acquisition of parks and open spaces.*

Policies – Chapter 4, Watershed Health and Water Quality

4.1 Water Supply

4.2 Overall Watershed Management

4.3 Water Quality

4.4 Stormwater Management

4.5 Urban Planning and Natural Systems

Finding: *Chapter 4 of the Regional Framework Plan is not directly applicable to the Springwater IAMP because the chapter addresses how Metro is to plan for watershed health and water quality. The Springwater interchange will need to address water quality and stormwater runoff during the design of the interchanges, but the Springwater IAMP will not itself prohibit Metro from implementing Policies in Chapter 4 of the Regional Framework Plan.*

Policies – Chapter 5, Regional Natural Hazards

5.1 Earthquake Hazard Mitigation Measures

5.2 Flood Hazard Mitigation Measures

5.3 Landslide Hazard Mitigation Measures

5.4 Volcanic Hazard Mitigation Measures

5.5 Wildland-Urban Interface Fire Mitigation Measures

5.6 Severe Weather Hazard Mitigation Measures

5.7 Biological Hazard Mitigation Measures

5.8 Other Hazard Mitigation Measures

5.9 Natural Disaster Response Coordination

Finding: *Chapter 5 of the Regional Framework Plan is not directly applicable to the Springwater IAMP because the chapter addresses how Metro is to plan for the future with consideration given to natural hazards. Chapter 5 is applicable in that the design of the Springwater interchange will need to address natural hazards and that ODOT will need to work with Metro to ensure the design of the interchange do not contribute to a natural disaster.*

Policies – Chapter 6, Clark County

6.1 Coordination with Clark County

Finding: *Chapter 6 of the Regional Framework Plan is not applicable to the Springwater interchange as it is far removed from Clark County, Washington.*

Policies – Chapter 7, Management

7.1 Citizen Participation

7.2 Metro Policy Advisory Committee and Joint Policy Advisory Committee on Transportation

7.3 Applicability of Regional Framework Plan Policies

7.4 Urban Growth Boundary Management Plan

7.5 Functional Plans

7.6 Periodic Review of Comprehensive Land Use Plans

7.7 Implementation Roles

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7.8 Performance Measures

7.9 Monitoring and Updating

7.10 Environmental Education

> ***Finding:*** *Policies contained in Chapter 7 of the Regional Framework Plan are not applicable to the Springwater IAMP as the chapter addresses how the Regional Framework Plan is updated and how conflicts between policies are resolved.*

Policies – Chapter 8, Implementation

8.1 Implementation

8.2 Regional Funding and Fiscal Policy

8.3 Schools

8.4 Administration

8.5 Enforcement

> ***Finding:*** *Policies contained in Chapter 8 of the Regional Framework Plan are not applicable to the Springwater IAMP as the chapter addresses how the Regional Framework Plan is implemented. There are no policies in the IAMP that contradict policies in Chapter 8 of the Regional Framework Plan.*

Regional Transportation Plan (2007)

According to state law, the Regional Transportation Plan (RTP) serves as the region's TSP. The RTP is the 20-year blueprint that guides investment in the region's transportation system. It must meet federal requirements specific to the metropolitan transportation planning process and also be consistent with state plans and the statewide planning goals. For transportation projects and programs to receive federal – and some state – funding, they must be in the RTP, and local plans must be consistent with the RTP. Gresham coordinates with Metro's sixteen cities and transit providers in regional transportation planning related to the RTP.

The RTP establishes policies and strategies for all modes of travel – motor vehicles, transit, walking and bicycling – as well as the movement of freight and goods. The RTP also addresses street design and the efficient management of the transportation system.

Elements of the RTP: Regional Transportation System

Regional multi-modal transportation facilities and services include eight components: Regional Street and Throughway System; Regional Transit System; Regional Bicycle System; Regional Pedestrian System; Regional Freight System; Regional Design System; System Management Strategies and Demand Management Strategies.

Elements of the RTP: Regional Street and Throughway System

The **Regional Street and Throughway System** seeks to apply a regularly spaced street network design to accommodate travel demands of the region. **Throughways** connect major activity centers within the region, including the central city, regional centers, industrial areas and intermodal facilities. They generally span several jurisdictions and often are of statewide importance linking the Metro area with neighboring cities, other

parts of the state, and beyond. Throughway interchanges are spaced no less than two miles apart.

> ***Findings:*** *US 26 is identified in the RTP as Principal arterial and Regional Throughway. SE Orient Drive is identified as a Rural arterial as is SE 242nd Avenue.*
>
> *The intersection at SE Hilyard Road and US 26 is an existing at-grade intersection with turning movements currently restricted to right-in, right-out, and left-in movements. Disconnecting SE Hillyard Road from US 26 would cause significant added travel distance for drivers accessing this neighborhood. It would also result in 50-100 additional turn movements at the SE Palmquist Road/US 26 intersection, which is projected to operate well over capacity in the future. The safety analysis found there have only been two crashes at the SE Hillyard Road/US 26 intersection over the five-year period between 2002 and 2006. With construction of the new interchange, the safety at the SE Hillyard Road/US 26 intersection is not expected to be compromised. Therefore, preserving the existing SE Hillyard Road/US 26 intersection is expected to provide aq higher level of safety and efficiency for the overall transportation system.*
>
> *To the south of the proposed interchange, SE Stone Road and SE Haley Road intersections with US 26 will be closed. The next interchange with US 26 is the existing OR 212/US 26 interchange, which meets the throughway spacing standard of two-miles.*

Elements of the RTP: Regional Mobility Corridors

The regional mobility corridor concept is a sub-section of the regional street and throughway network concept that integrates arterial streets and throughways, as well as transit and other modes, into corridors that work together to provide for cross-regional, statewide and interstate travel. This corridor approach considers multiple facilities, modes, jurisdictions, and land uses.

The northern half of the Springwater Management Area is identified in the RTP, and illustrated as a regional corridor on the Regional Mobility Corridors map (Corridor 15).

> ***Finding:*** *The northern half of the Springwater Management Area is identified in the RTP, and designated as a Regional Mobility Corridor.*

Elements of the RTP: Local Streets Network Concept

Collector and local streets are general access facilities that provide for community and neighborhood circulation. Although they are not part of the regional transportation system, they play an important supporting role to the design and optimization of the regional transportation system.

Local jurisdictions are responsible for defining the network of local streets within a mile-spacing grid of arterial streets. Since the late 1990s, the region has required a maximum spacing of 1/10 mile for local streets, with the goal of encouraging local traffic to use local streets to minimize local traffic on regional arterial streets. Local street connectivity also benefits emergency response.

The local street network concept provides for bicycle and pedestrian travel and provides for direct access from local street systems to community destinations and transit on

regional arterial streets. More frequent bike and pedestrian connections are recommended where collector and local streets cannot be constructed due to existing development or topographic or environmental constraints.

The local street network was analyzed as part of the IAMP, and modifications to the system were proposed.

> ***Finding:*** *The Springwater IAMP examines how best to integrate the interchange with adjacent local streets, to enhance local access and connectivity in the study area. IAMP work is coordinated with on-going TSP work in both the City of Gresham and Multnomah County, to ensure safe and convenient traffic operations in the interchange study area.*

Elements of the RTP: Regional Freight System

The Regional Freight System identifies the transportation networks and facilities that serve our region and state's freight mobility needs, based on the regional freight concept.

Since US 26 connects the eastern Columbia Corridor to Central and Eastern Oregon and points farther east, the Regional Freight System standards must be addressed in the IAMP.

> ***Finding: US 26*** *is identified in the RTP, and designated as a Main Roadway Route on the Regional Freight System.*

Elements of the RTP: 2035 RTP Investment Pool

The 2035 RTP Investment Pool describes the projects and programs identified by local agencies, ODOT, TriMet and Metro to address the impacts of future growth on our regional transportation system.

State and Regional Mobility Corridor Investment Strategy focuses on regional mobility corridor investments that leverage the 2040 Growth Concept and improve interstate, intrastate and cross-regional people and goods movement. These corridors are the backbone of the regional transportation system because of their statewide significance and the magnitude of costs associated with providing for people and goods movement in these corridors.

Examples of the types of projects include:

- *Freight access and connections*. Rail and street expansions to maintain access and connections for national and international rail, air and marine freight to reach its destination with limited delay.
- *Throughway expansion.* Major throughway expansions to maintain regional mobility and enhance access to intermodal industrial areas and facilities where goods move from one transportation mode to another.

> ***Finding:*** *The Springwater interchange is identified in the near-term (1-4 years) of RTP analysis for construction.*

Elements of the RTP: Financially Constrained RTP Project List

The **financially constrained system** is the system of investments that responds to federal planning requirements, and is based on the financial forecast. The following is a list of

the projects in the vicinity of the Springwater IAMP Management Area that are on the Financially Constrained RTP Project List.

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Metro Project ID	Nominating Agengy	Facility Owner/Operator	Project/Program Name	Project Start Location (Identify starting point of project)	Project End Location (Identify terminus of project)	Local Functional Classification	Project Purpose	Description
10474	Gresham	N/A	Rugg Rd. Ext.	Orient Dr.	US 26	Local	Provide congestion relief and facilitate Springwater Industrial economic development.	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.
10475	Gresham	N/A	Rugg Rd. Ext.	US 26	252nd Ave.	Local	Provide congestion relief and facilitate Springwater Industrial economic development.	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.
10476	Gresham	N/A	Rugg Rd.	252nd Ave.	242nd. Ave.	Local	Provide congestion relief and facilitate Springwater Industrial economic development.	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.
10477	Gresham	Gresham	Springwater Road Section 4	242nd Ave.	252nd Ave.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.
10478	Gresham	Gresham	252nd Ave.	Palmquist Rd.	10	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.
10479	Gresham	Gresham	252nd Ave.	10	Rugg Rd.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.
10480	Gresham	Gresham	Springwater Road Section 7	242nd Ave.	9	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.

10481	Gresham	Gresham	Springwater Road Section 8	242nd Ave.	9	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.	
10482	Gresham	Gresham	Springwater Road Section 9	7	252nd Ave.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.	
10483	Gresham	Gresham	Springwater Road Section 10	252nd Ave.	Telford Rd.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.	
10484	Gresham	Gresham	Springwater Road Section 11	Telford Rd.	Orient Dr.	Local	Economic development and implementation of Springwater Plan.	Construction of new street for implementation of Springwater Plan.	
10485	Gresham	Gresham	Hogan	Palmquist Rd.	Rugg Rd.	Minor Arterial	Economic development and implementation of Springwater Plan.	Improvement of existing roadway to arterial 4 lane standards.	
10486	Gresham	Gresham	Telford Rd.	Springwater Boundary	252nd Ave.	Local	Economic development and implementation of Springwater Plan.	Improvement of existing roadway to collector standards, add bike and ped facilities, intersection improvements.	
10488	Gresham	Gresham	282nd Ave.	Springwater Boundary	20	Local	Economic development and implementation of Springwater Plan.	Improvement of existing roadway to collector standards, add bike and ped facilities, intersection improvements.	

Finding: *Components of the Springwater interchange including the US 26 expressway mainline, the arterial and interchange, the collector, and associated local street improvements designed to complement the network and enhance local access and connectivity, have been identified in the RTP financially-constrained project list.*

Gresham Comprehensive Plan

Gresham's Comprehensive Plan was originally adopted in 1969, with major updates in 1980 and 1992. In addition, revisions to the plan text and maps have been made periodically in response to an opportunity, or a state, federal or regional requirement. The Comprehensive Plan is available on the county's website:

(http://greshamoregon.gov/city/city-departments/planning-services/resources-and-links/default.aspx?id=3598)

Gresham's Comprehensive Plan has five volumes. Volume 4: Transportation System Plan, includes policy language that must be addressed by the Springwater IAMP

Volume 4 of the Comprehensive Plan: Transportation System Plan (TSP)

The Gresham Transportation System Plan (TSP) background documents provide the framework for the transportation system and policies codified in Volume 4 of the City's Comprehensive Plan, which is the official TSP. They summarize the review, analysis and strategies behind the adopted maps and policies and include the original source of the list of capital transportation projects that needed over a twenty-year period. The "Capital Improvement Plan (CIP)," described below, implements these adopted transportation goals and policies.

The essential elements of the TSP, i.e., the project lists and transportation goals and policies, are adopted into Volume 4 of the City's Comprehensive Plan. Therefore, the authors of the Springwater IAMP will not need to look separately at the city TSP to determine if its requirements are met, except to the extent that the IAMP authors will need to understand how the policies and lists were derived.

The Gresham Transportation System Plan was adopted by the City Council in December 1999. Chapter 4 of the TSP contains the transportation policies and strategies, which need to be consistent with the IAMP.

Volume 4 of Gresham's Comprehensive Plan addresses the following specific modes of transportation: Roadways; Transit; Pedestrian and Bicycle Facilities; and Freight, Rail, Air, Pipelines and Water Transportation. Volume 4 lays out the planning framework, discusses assumptions and forecasts, provides an inventory and assessment of existing conditions and need, contains the transportation policies and strategies, analyzes three system alternatives, describes the System Plan and presents measures necessary to implement the System Plan.

Policies relevant to the Springwater IAMP are addressed below.

Transportation System

Policy 1: Develop and promote a balanced transportation system that provides a variety of travel choices and reduces reliance on automobiles.

Finding: *While the Springwater IAMP primarily focuses on facilitating the safe and efficient movement of motorized vehicles on to and off of US 26, accommodations for all modes are made. Collector level and above streets that serve the interchange will have sidewalks and*

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bicycle lanes, and the Springwater Trail will be elevated as it crosses the arterial road that serves the Springwater interchange.

Policy 2: Plan, implement, and maintain an efficient transportation system.

Finding: *The development of the Springwater IAMP was a coordinated effort between the City of Gresham and ODOT. Other agencies that were directly involved included the City of Damascus and Multnomah and Clackamas Counties. The IAMP speaks to ongoing coordination between ODOT and the City of Gresham as the Plan is implemented.*

Policy 3: Provide a transportation system that maximizes accessibility to and within regional centers, town centers, transit corridors, station areas, and employment centers.

Finding: *The Springwater IAMP identifies a future street system and contains design standards based on street classification. The arterial that directly serves the interchange has an Access Management Plan based on state access management standards. The street network is based on the adopted Springwater Community land use designations.*

Policy 4: Provide a safe transportation system.

Finding: *The Springwater IAMP greatly improves safety over the existing intersection of US 26 and SE 267th Avenue by providing grade separation.*

The proposed interchange will close two existing at-grade intersection to the south (SE Stone Road and SE Haley Road), as well as provide for improved bicycle and pedestrian crossings across US 26.

Street System

Policy 1: Provide a street system that accommodates a variety of travel options.

Finding: *While the Springwater IAMP primarily focuses on facilitating the safe and efficient movement of motorized vehicles on to and off of US 26, accommodations for all modes are made. Collector level and above streets that serve the interchange will have sidewalks and bicycle lanes, and the Springwater Trail will be elevated as it crosses the arterial road that serves the Springwater interchange.*

Policy 2: Develop a street system that meets current needs and anticipates future population growth and development.

Finding: *The Springwater IAMP further implements the street system already adopted in the Springwater Community Plan.*

Policy 3: Provide a street system that maximizes accessibility within the community.

Finding: *The Springwater IAMP further implements the street system already adopted in the Springwater Community Plan.*

Policy 4: Ensure a safe street system.

Finding: *Implementation of the Springwater IAMP will facilitate a more safe street network in the plan area by grade-separating US 26 and the main arterial street serving Springwater.*

Transit System

Policy 1: Advocate convenient, expanded transit service within Gresham and the east

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Multnomah area.

Finding: *While the Springwater IAMP is not directly responsible for implementing transit policy, there is nothing in the IAMP that would prohibit the expansion of transit service into the area.*

Policy 2: Encourage efficient transit services to meet the current and projected transportation needs of the citizens of Gresham.

Finding: *This policy is not directly applicable to the IAMP. However, the Springwater IAMP does not conflict with the implementation of this policy.*

Policy 3: Promote the development of a transit system that maximizes accessibility.

Finding: *This policy is not directly applicable to the IAMP. However, the Springwater IAMP does not conflict with the implementation of this policy.*

Policy 4: Assist in the development of a safe transit system.

Finding: *This policy is not directly applicable to the IAMP. However, the Springwater IAMP does not conflict with the implementation of this policy.*

Bicycle System

Policy 1: Develop a continuous and convenient bicycle network.

Finding: *Collector level and above streets that serve the interchange will have sidewalks and bicycle lanes, and the Springwater Trail will be elevated as it crosses the arterial road that serves the Springwater interchange.*

Policy 2: Support programs and projects to improve bicycle safety and reduce the rate of bicycle-related accidents.

Finding: *This policy is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit the implementation of this policy.*

Pedestrian System

Policy 1: Provide pedestrian facilities that are continuous, accessible, and adaptable to all users.

Finding: *The street network in the Springwater Community will include pedestrian facilities which connect to existing pedestrian facilities in the city of Gresham. As part of the implementation of the IAMP, the arterial serving the interchange will be grade separated from the Springwater Trail.*

Policy 2: Improve pedestrian access to transit.

Finding: *This policy is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit the implementation of this policy.*

Policy 3: Develop safe pedestrian environments.

Finding: *During development of the alternatives, consideration was given to providing for a safe pedestrian environment. One criterion for evaluating the alternatives included: Improve connectivity to the existing and planned bicycle, pedestrian, trail, and street networks.*

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Transportation Demand Management

Policy: Implement transportation demand management programs and strategies that reduce the need to travel, reduce single occupant vehicle (SOV) travel, and make the use of alternative modes more convenient for all trips throughout Gresham.

Finding: *This policy is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit the implementation of this policy.*

Parking Management

Policy: Manage the on- and off-street parking supply to ensure there is an adequate but not excessive amount of parking available for all land uses.

Finding: *This policy is not directly applicable to the Springwater IAMP. However, there is nothing in the IAMP that would prohibit the implementation of this policy.*

Truck and Rail Freight System

Policy: Provide for the safe and efficient movement of truck and rail freight through and within Gresham.

Finding: *One of the key reasons for development of the Springwater IAMP was to provide for safe and efficient movement of truck traffic on to and off of US 26 and serve the industrial development of the Springwater community. Ther is no rail freight services in the Springwater community, although the Springwater Trail is a Rails-to-Trails corridor and could, one day, accommodate new freight rail service.*

Passenger Rail

Policy: Support federal, state, regional and private investments in passenger rail service to the metropolitan area.

Finding: *This policy is not applicable to the Springwater IAMP.*

Air Transportation System

Policy: Ensure that land uses in Gresham are compatible with aircraft noise exposure and aircraft safety.

Finding: *This policy is not applicable to the Springwater IAMP.*

Pipeline System

Policy: Ensure that land uses in Gresham are compatible with established and planned pipeline corridors.

Finding: *This policy is not applicable to the Springwater IAMP.*

Springwater Transportation System Plan

The purpose of the Springwater Transportation System Plan (TSP) is to address the transportation needs for new urban community development within the Springwater Plan District. This TSP will be amended to Volume 4 – Transportation System Plan in the Gresham Community Development Plan.

Policies

1. Identify improvements to Highway 26 that enhance access and mobility to and through the

Springwater Community plan area to support industrial and employment development. Design elements are to be compatible and supportive of the Springwater Community Plan.

Finding: *The Springwater IAMP provides enhanced access and mobility to and through the Springwater Community plan area. It was specifically developed to support industrial and employment development.*

2. Incorporate the North/South Transportation Study recommendations to identify better connections between Springwater and I-84 and I-205.

   Finding: *While the Springwater IAMP does not directly apply to this policy, as the North/South Transportation Study is outside of the Interchange Management Area, the North/South Transportation Study was a consideration in the development of the traffic analysis because the North/South Transportation Study will look at a connection of US 26 to Interstate 84 .*

3. Incorporate Green Street designs as described in Metro's handbook entitled *Green Streets: Innovative Solutions for Stormwater and Stream Crossings* and as designed in the Pleasant Valley Plan District area.

   Finding: *Street design is typically not part of IAMP development, beyond designating the functional classification of a street. However, there is no part of the Springwater IAMP that would hinder the development of Green Street concepts.*

4. Develop transportation corridors and associated right-of-way widths for Green Street swales.

   Finding: *Street design is typically not part of IAMP development, beyond designating the functional classification of a street. However, there is no part of the Springwater IAMP that would hinder the development of Green Street concepts.*

5. Create streets for people as well as cars.

   Finding: *The Springwater IAMP incorporates facilities designated for people such as sidewalks, bike lanes and trails.*

6. Encourage alternative modes of transportation within the Springwater community.

   Finding: *The Springwater IAMP incorporates facilities designated for people such as sidewalks, bike lanes and trails.*

7. Provide good connectivity and access to practical destinations.

   Finding: *The Springwater IAMP built upon and refined the street connectivity plan identified in the Springwater Community Plan TSP.*

8. Provide safe and convenient access to and from employment areas, including freight access.

   Finding: *The primary purpose of developing the Springwater IAMP was to provide safe and convenient access to and from employment areas, including freight access.*

9. Incorporate adequate public safety access.

   Finding: *The Springwater IAMP specifically calls for the grade separation of the Springwater Trail as it crosses the main arterial serving the interchange. As the plan is implemented, City of Gresham standards for public safety will be implemented.*

10. Provide public transit options, such as bus, van, streetcar and/or light rail within the

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Springwater community and for east/west and north/south connections to the greater region.

Finding: *While the Springwater IAMP does not directly incorporate transit options, there is nothing in the IAMP that would prohibit the implementation of transit option.*

11. Consider traffic impacts on surrounding rural areas and existing City of Gresham neighborhoods.

    Finding: *The location of the preferred alternative in the Springwater IAMP considered traffic impacts on adjoining rural areas. Appendix C-4 specifically addresses why locating the interchange at SE Stone Road was not preferred.*

12. Provide pedestrian and bicycle connections within the Springwater community and to the greater region.

    Finding: *Bicycle and pedestrian facilities are integrated into the street design standards adopted by the City of Gresham.*

13. Plan roads to accommodate the movement of goods and services (truck traffic).

    Finding: *The primary function of the interchange is to address existing and future safety needs, improve access to the existing transportation system, and provide for a future transportation network that efficiently accommodates the planned development in the Springwater area, while preserving the function of US 26.*

14. Consider environmental barriers and constraints.

    Finding: *Consideration of the natural environment was critical in refining the arterial and interchange for Springwater. Goal 3 of the Evaluation Criteria specifically address minimizing impacts to the natural environments and provide opportunities for environmental enhancement.*

15. Address existing transportation safety issues.

    Finding: *The primary purpose of developing the Springwater IAMP was to provide safe and convenient access to and from employment areas, including freight access.*

16. Identify and promote the quality and level of telecommunication services needed to serve the industrial and other uses in the Springwater Community.

    Finding: *This policy is not applicable to the Springwater IAMP. However, there is nothing in the IAMP that would restrict implementation of this policy.*

Multnomah County

Currently, unincorporated areas within the Springwater management area are subject to land use and transportation policies in Multnomah County's *West of Sandy River Transportation and Land Use Plan*. The Multnomah County Zoning Code regulates land use and development in the unincorporated area.

Multnomah County Board of Commissioners accepted, by resolution, the *Springwater Community Plan* as the concept plan for urbanizing the Springwater area, required by Metro. Urbanization, including the transportation facilities identified in the *Springwater TSP*, will only occur in areas that are incorporated into the City of Gresham. Multnomah County does not have land use or transportation jurisdiction within the City of Gresham; therefore, no County actions are required for the IAMP. Multnomah County continues to support Gresham's implementation

DRAFT

of the *Springwater Community Plan*.

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Exhibit D

US 26: Access to Springwater Interchange Area Management Plan

Copies of the US 26: Access to Springwater Interchange Area Management Plan can be obtained by downloading it at:

http://www.oregon.gov/ODOT/HWY/REGION1/Springwater/

or contacting:

Michael Ray, Senior Planner
ODOT Region 1
123 NW Flanders Street
Portland, OR 97209
(503) 731-8435
michael.j.ray@odot.state.or.us

Exhibit E
Concurrence Letter to ODOT from City of Gresham

CITY OF GRESHAM

Department of Environmental Services
1333 N.W. Eastman Parkway
Gresham, OR 97030-3813
(503) 618-2626
FAX (503) 669-0997
www.GreshamOregon.gov

Steve Fancher
Director

Transportation & Development Services
John Dorst
Deputy Director

Wastewater Division
Kelly Agee, Acting

Water Services Division
Paul Kelley
Manager

Water Quality
Brian Sale
Manager

Recycling & Solid Waste Program
Don Rice
Manager

March 15, 2011

Michael Ray, Senior Planner
Oregon Department of Transportation
Region 1
123 NW Flanders
Portland, OR 97209

Re: Springwater Interchange with US Highway 26: Interchange Area Management Plan, Gresham, Oregon

Dear Michael:

Per our conversation, it is my understanding that the Oregon Department of Transportation intends to adopt the Springwater Interchange Area Management Plan (IAMP) at the Oregon Transportation Commission's regular meeting scheduled for April 28, 2011.

On January 18, 2011 the Gresham City Council held a public hearing regarding the IAMP amendments to Volume IV of the City's Community Development Plan, more specifically, to the Transportation System Plan for the Springwater Plan Area. City Council voted unanimously to approve the amendments as proposed. City Council also voted in unanimous approval of the IAMP amendment at its February 15, 2011 public hearing.

The City of Gresham mailed ODOT the Notice of Adoption, January 23, 2011.

Please accept the appreciation of the Gresham City Council and Staff for ODOT's assistance, yours in particular, in working through the many issues and concerns related to the successful completion of the IAMP.

Sincerely,

Katherine Kelly

Katherine Kelly, AICP
Transportation Planning Manager

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