

# **APPENDIX A**

## **Potential Future Management Measures**



## APPENDIX A

### Potential Future Management Measures Description, Existing or Potential Use and Local Plan Support

The following section contains a brief description of several potential future management measures, a summary of their existing or potential use to protect the new interchange and citations showing support from local plans. These measures could be applied within the entire region, a portion of the region, or just within the IAMP study area. They may also be considered in connection with individual transportation projects or future updates of the City TSP or the RTP.

#### *1.0 Transportation Demand Management (TDM) Strategies*

##### *1.1 Description*

TDM strategies are designed to reduce vehicle miles traveled, especially in the peak periods. These strategies focus on the provision of services or facilities intended to shift travelers to different travel modes, to travel at non-peak times, or to offer trip substitution choices such as telecommuting. The most common mode choice alternatives are transit and carpool/vanpool options. These are generally most attractive for daily commuters rather than for occasional trips. TDM strategies are also most effective where there are high concentrations of employment or at least one employer with a large number of employees. The presence of a Transportation Management Association (TMA) can also encourage the use of TDM strategies by pooling the efforts of multiple employers.

##### *1.2 Existing or Potential Use*

The SMI study area has characteristics that enable TDM strategies to be successful. This area is served by a TMA, which was established in 2002 to meet an OTC requirement prior to the approval of alternative mobility standards for the existing South Medford Interchange at Barnett Road. Employers were encouraged to participate in the TMA and were assisted in developing incentives for employees to reduce congestion by reducing reliance on single occupancy vehicles. As of September 2004, the TMA included both private sector employer members and public agencies, including Bear Creek Corporation, Asante Health System, Rogue Community College, the City of Medford, Jackson County, Rogue Valley Transportation District (RVTD), RVCOG and ODOT.

RVTD already provides transit service twice per hour from both downtown Medford and Ashland, to Southgate Center within the study area. Additional service could be provided if demand warrants it. RVTD also promotes other TDM strategies, such as education programs, trip reduction incentives, bikes on buses, carpools, vanpools, park-and-ride, and employer outreach.

Operation of the TMA to promote TDM strategies in the SMI study area would assist in the reduction of overall and peak hour traffic. In addition, policies in both the Medford TSP and the 2005-2030 RTP support the implementation of TDM strategies.

##### *1.3 Local Plan Support*

The **RTP** provides policy to support the implementation of regional TDM strategies:

- **Policy 6.A:** Foster increased transportation demand management (TDM) to reduce SOV (single-occupancy vehicles).
- **Policy 6.A-1:** The implementation of a regional TDM program shall be an important component of a comprehensive strategy to reduce demands placed on the transportation system.
- **Policy 6.A.2:** TDM measures should be considered before transportation capacity expansion is determined to be necessary.
- **Policy 6.A.3:** Local governments and ODOT shall support and encourage the growth of the Rogue Valley Transportation Management Association (TMA).
- **Policy 6.A.5:** Develop public-private partnerships with employers to adopt trip reduction goals, policies and programs to reduce trip generation, and offer incentives to foster TDM.

The **Medford TSP** also contains Goals and Policies to support TDM. TSP Chapter 8 includes the TDM plan and lists strategies that include an active participation in and support of the TMA.

**Goal 1:** To provide a multi-modal transportation system that supports the safe, efficient and accessible movement of all people and goods, and recognizes the area's role as the financial, medical, tourism and business hub of Southern Oregon and Northern California.

- **Policy 1-D:** The City of Medford's second priority for the use of transportation funds shall be to maximize efficient use of the existing transportation system through use of Transportation System Management (TSM) and Transportation Demand Management (TDM) measures prior to expending transportation funds on capacity improvements.

**Goal 2:** To provide a comprehensive street system that serves the mobility and multi-modal transportation needs of the Medford planning area.

- **Policy 2-G:** The City of Medford shall undertake efforts to reduce per capita vehicle miles traveled (VMT) and single-occupancy vehicle (SOV) demand through TDM strategies.

**Goal 3:** To facilitate the increased use of public transportation in the Medford area as the adequacy of transit service is a measure of the quality of life in a community.

- **Policy 3-A:** The City of Medford shall undertake efforts to increase the percentage of total daily trips taken in the Medford planning area by transit, consistent with the target benchmarks in the Alternative Measures of the RTP.
- **Policy 3-B:** The City of Medford shall support the provision of convenient and accessible transit service to, from and within the Medford planning area, especially to higher density residential areas, employment centers and major commercial areas.
- **Policy 3-C:** The City of Medford shall undertake efforts to increase the percentage of dwelling units in the Medford planning area located within ¼ mile

walking distance of transit routes, consistent with the target benchmarks in the Alternative Measures of the RTP.

## ***2.0 Transportation System Management (TSM) Strategies***

### ***2.1 Description***

TSM strategies are designed to make maximum use of existing transportation facilities and include traffic engineering measures such as signal timing changes, provision of turn lanes, turn restrictions, and restricting on-street parking to increase the number of travel lanes.

### ***2.2 Existing or Potential Use***

In the past, both the City of Medford and ODOT have used TSM strategies to maximize the function of the existing transportation system. The City currently operates a fully interconnected traffic signal system that could be used to implement timing plans via a centralized traffic control center. ODOT and Medford traffic engineers responsible for traffic operations in the interchange area already make decisions to balance traffic flow, minimize congestion, protect the safety of all system users and minimize negative impacts on adjacent neighborhoods. Traffic operations are regularly reviewed and will be fine-tuned after construction of the SPUI to assure that it operates at optimal efficiency and safety. If necessary in the future, operational protocols could be implemented to place the highest priority on traffic operations at the ramp terminals. Signals could be timed at intersections nearest the interchange to prevent long queues from developing on the approaches to the ramp terminals. Signal timing could also be adjusted to both limit traffic approaching the interchange and encourage the use of alternate routes.

### ***2.3 Local Plan Support***

Both the Medford TSP and the 2005-2030 RTP make specific reference to coordination of traffic signal systems and their use to optimize traffic flow.

The **RTP** provides policies that support Transportation System Management (TSM) strategies.

**Goal 5:** Maximize the efficient utilization of existing and future transportation infrastructure to facilitate smooth movement of people and motorized and non-motorized vehicles.

- **Policy 5-1:** Where appropriate and cost-effective, local governments and ODOT shall update existing signals and signal systems to improve mobility. This may include coordinating and linking signals to a master control system to optimize system efficiency.

**The Medford TSP** includes a TSM plan in Chapter 8 which includes traffic signal coordination and control, and a recommendation that the city should use signal timing plans that maximize operational efficiency during different time periods. The following Policy and Implementation measure provide further support for the use of TSM strategies and system coordination.

- **Policy 1-D:** The City of Medford's second priority for the use of transportation funds shall be to maximize efficient use of the existing transportation system

through use of Transportation System Management (TSM) and Transportation Demand Management (TDM) measures prior to expending transportation funds on capacity improvements.

- **Implementation 2-H(3):** Continue to modernize the traffic signal system and improve its efficiency by ultimately connecting all signals to the centralized traffic control center. Employ traffic signal timing plans that maximize efficiency during different time periods. Provide a program to identify locations for new/modified signals.

### ***3.0 Intelligent Transportation Systems (ITS) Management Strategies***

#### ***3.1 Description***

Another way of improving operations at or near the interchange is the use of Intelligent Transportation Systems (ITS) technology. When congested traffic conditions occur on one roadway, traffic on adjoining roadways or freeway interchanges in the corridor are also impacted. ITS can enable agencies to monitor traffic, respond to traffic accidents faster and communicate with the motoring public in real time. Real time traffic information can be shared with travelers by variable message signs, highway advisory radio, the 511 number, web sites, and specialized warning systems (such as fog warnings), to help them make travel decisions.

Other technologies that could be used to control traffic without adding traffic capacity in the vicinity of the interchange include transit signal priority, lane control signals and variable speed limit signs. All these technologies aim at smoothing the flow of traffic by improving travel time and thereby reducing congestion.

#### ***3.2 Existing or Potential Use***

The City of Medford's existing ITS system includes variable message signs, traffic monitoring cameras, call boxes for motorist assistance, photo violation detection and incident management. The City also has three permanent electronic traffic counters. In fiscal year 2004, the RVMPO began work on an ITS Architecture Plan for the Rogue Valley area. Oversight was provided by a TAC, with the City of Medford assuming a prominent role as the major city in the region. In subsequent years, the MPO with the guidance of the TAC, has continued to update and refine the plan. To enable this ITS Turbo Architecture, which is software that enables the electronic coordination of the ITS infrastructure, has been installed at the MPO for use in the Rogue Valley region.

#### ***3.3 Local Plan Support***

The **RTP** includes both policy and projects that will improve the capability of the City's incorporation of ITS.

- **Policy 9-1:** Implement a comprehensive Intelligent transportation System program.
- **Project #543:** Upgrade the fiber optic system on various arterial and collector locations.
- **Project #550:** Install ITS equipment to enhance traffic flow and system communication on arterial and collector streets as needed.

The **Medford TSP** contains policy and projects supporting ITS.

- **Policy 2-H(4):** Utilize Intelligent Transportation Systems (ITS) such as real-time traffic monitoring cameras and management projects, that provide motorist information and incident response/clearance programs to alleviate traffic congestion.
- **Project #532:** Fiber optic system upgrade at arterial or collector locations.
- **Project #538:** Install ITS equipment to facilitate traffic flow and enhance system communications.

#### ***4.0 Ramp Metering***

##### ***4.1 Description:***

Ramp meters are typically used on the on-ramps to freeways and other limited access highways, to meter the rate of traffic flow entering the highway. Ramp meters can use a fixed-time signal to set minimum intervals between vehicles entering the freeway from the ramp. They can also adjust the rate of entering vehicles in response to the actual, real-time flow on the freeway and the number of vehicles waiting to enter on the on-ramp. Ramp meters are successful when deployed throughout the corridor system and have a greater influence on the freeway mainline and downstream interchanges, than they have at the interchange at which they are installed. This means that to help alleviate congestion at the South Medford Interchange, ramp metering should be considered on all ramps entering I-5 over the entire MPO area.

##### ***4.2 Existing or Potential Use***

Ramp metering is a proven management tool on freeways and ODOT currently uses ramp meters on I-5, I-205, I-84 and US 26. Since ramp metering is specifically mentioned in the RTP policies, further policy actions are not likely to be required prior to implementation. Beginning in FY 2008, ODOT will be conducting a study of the I-5 corridor in the RVMPO area, to both monitor congestion and to determine the most effective locations to place ramp meters. Placement would be such that all potentially congested interchanges in the MPO area would be positively impacted.

##### ***4.3 Local Plan Support***

The **RTP** includes policy regarding the use of ramp meters.

- **Policy 5-7:** ODOT, in consultation with local governments, shall consider the installation of ramp signals at freeway on-ramps to meter the amount of traffic entering the freeway, thereby maintaining acceptable flow conditions on the freeway system.

## ***5.0 Adopt Revised Standards for Parking with Lower Minimums and Maximums***

### ***5.1 Description***

Free or low-cost parking makes it difficult to encourage the use of transportation modes other than vehicles. Reducing parking helps to discourage automobile use especially if combined with TDM measures that provide positive incentives for people to use transit or carpooling for their trips. Local zoning codes that specify a lower parking supply (low minimum required parking, low maximum parking ratios, and allowing shared parking) can also lessen automobile use.

### ***5.2 Existing or Potential Use***

Medford's TSP was given conditional acknowledgement by the DLCDC pending the development of a work program that will include the drafting of a parking plan. This plan is intended to result in the adoption of code amendments that will be consistent with the parking standards in the TRP (OAR 660-012-00455(5d)).

### ***5.3 Local Plan Support***

The **RTP** contains policies that enable a reduced supply of parking.

**Goal 6.B:** Manage parking supply in a manner that discourages SOV reliance.

- **Policy 6.B-1:** Local governments shall consider the adoption of maximum parking requirements in their zoning codes to reduce excessive off-street parking supply.
- **Policy 6.B-2:** Local governments should establish low minimum parking requirements in their zoning codes to encourage in-fill development.
- **Policy 6.B-4:** Local governments and ODOT where appropriate shall manage the roadway space so as to eliminate excess on-street parking in the region in favor of such projects as bike lanes, bus stops and narrower street widths that promote use of alternative modes.

The **Medford TSP** also contains policies supporting the reduction of available parking. In Chapter 12 - Parking Management, strategies are established to meet the parking standards of the TRP.

**Goal 2:** To provide a comprehensive street system that serves the mobility and multi-modal transportation needs of the Medford Planning area.

- **Policy – 2-L:** The City of Medford shall require an appropriate supply and design of off-street parking to promote economic vitality, neighborhood livability, efficient use of urban space, reduced reliance on single occupancy vehicles and to make TODs more pedestrian friendly.
  - **Implementation 2-L:** Require a minimum and maximum of off-street parking spaces based on the typical daily needs of the specific land use type.
- **Policy 2-M:** The City of Medford shall undertake efforts to contribute to a reduction in the regional per capita parking supply to promote the use of alternatives to the single occupancy motor vehicle.

- **Implementation 2-M(1):** Every five years, estimate the parking supply in areas designated for commercial, industrial and institutional uses by the Medford Comprehensive Plan in order to monitor progress toward meeting the goal of reducing parking supply per capita by ten percent over the 20-year planning period.

**Medford's Land Development Code** contains regulations to encourage the provision of a minimum of parking spaces.

- **Section 10.744 - Joint Use of Parking Facilities:** The off-street parking requirements of two or more uses may be satisfied by the same parking or loading space used jointly to the extent that it can be shown by the owners or operators of the uses that their operations and parking needs to not overlap in point of time.

## ***6.0 Limiting New Trips or Land Use Changes in a Specific Study Area***

### ***6.1 Description***

At other interchanges, trip caps or trip budgets have been considered to limit the amount of additional traffic generated by new development in a specified management area. Zoning and comprehensive plan designations may allow a variety of uses with widely varying traffic generation characteristics. To assure that traffic generated from a wide variety of uses does not exceed the amount anticipated, additional mechanisms can be incorporated to control trips generated by new development. Where such management measures have been implemented, the city or county adopted legislation that established a trip budget, trip cap ordinance, or other mechanism.

### ***6.2 Existing or Potential Use***

Traffic originating in or destined for businesses and residences in the immediate vicinity of an interchange can account for a significant portion of the traffic using that interchange. However, traffic analysis for the South Medford IAMP indicated that a large portion of the traffic affecting the new interchange was generated from beyond the interchange study area. This would make the use of a trip budget within the study area a less effective tool. Traffic analysis using assumptions from the regional model and also an Alternative Development Scenario, indicated that the SPUI is calculated to operate acceptably even accounting for substantial growth in the study area.

The TPR already requires that local agencies and developers assess the traffic generating implications of rezoning, and refer plan amendments and UGB expansions to ODOT for comment. Specific procedures are required and approval criteria are established (OAR 660-012-0060). The City of Medford complies with its obligations specified under state law, by using specific standards and procedures for traffic impact studies and requiring mitigation to meet the applicable mobility standards.

### ***6.3 Local Plan Support***

The **Medford TSP** contains policies that have the effect of limiting new trips, influencing land use changes and requiring mitigation to assure mobility. Four Transit Oriented Development (TOD) areas have been identified appropriate locations for more intense development to occur. Three of the four are at the edges of the UGB, far from the South

Medford interchange area. They are the North, West (central), and Southeast Medford TODs. The Downtown Medford TOD is approximately three-quarters of a mile north of the interchange study area. Figure 1 shows the location of the Downtown Medford TOD relative to the South Medford Interchange. Locating future high traffic generating uses away from the interchange will help provide long-term protection for the facility's function.

**Goal 2:** To provide a comprehensive street system that serves the mobility and multi-modal transportation needs of the Medford planning area.

- **Policy 2-H:** The City of Medford shall manage and maintain the transportation system in an efficient, clean and safe manner.
  - **Implementation 2-H(1):** Require Traffic Impact Analysis (TIAs), as appropriate, in conjunction with development applications to assess impacts on the existing and planned transportation system, and require transportation system improvements that are identified through the TIA or by other Municipal Code requirements as a condition of approval of development permits and land use actions.

**Goal 8:** To maximize the efficiency of Medford's transportation system through effective land use planning.

- **Policy 8-B:** The City of Medford shall undertake efforts to increase the percentage of dwelling units and employment located in Medford's adopted TODs, consistent with the targeted benchmarks in the Alternative Measures of the RTP.

**Chapter 5 - Street Plan:** Establishes Level of Service (LOS) D as the threshold for determining when street improvements or development mitigation for traffic impacts will be required.

**Medford's Land Development Code** also contains ordinance language that protects the function of the interchange. These facility adequacy requirements assure the provision of a suitable local street network that will in turn benefit the new interchange.

- **Section 10.227 Zone Change Criteria:** Requires applicants to demonstrate that Category A urban services or facilities are available, or can and will be provided for the subject property. Streets and street capacity must be provided by either i) streets that presently exist and have adequate capacity, ii) existing streets that will either be improved or new streets constructed to provide adequate capacity, by the time of building permit issuance, iii) for streets that must be constructed or improved, the Planning Commission may find that the street to be adequate if improvements are fully funded, iv) for streets that need to be improved, specific improvements must be identified and demonstrated to result in street adequacy.

**Section 10.462 Maintenance of Level of Service D:** Whenever level of service is determined to be below level D for arterials or collectors, development is not permitted unless the developer makes the roadway or other improvements necessary to maintain level of service D respectively.

## ***7.0 Access Management***

### ***7.1 Description***

Access management is a set of techniques that state and local governments can use to control access to highways, major arterial streets, and other roadways. Access management involves a compromise between efficiency of movement on major roads and access to adjacent parcels. Its benefits include improved movement of traffic, reduced crashes, and fewer vehicle conflicts. Access management techniques that can be employed are:

***Access Spacing:*** The flow of traffic on major arterials can be improved by increasing the distance between traffic signals. This also reduces congestion and improves air quality for heavily traveled corridors.

***Driveway Spacing:*** Fewer driveways spaced further apart allows for a more orderly merging of traffic and presents fewer challenges to drivers.

***Turning Lanes:*** Dedicated left- and right-turn lanes, and indirect left-turns and U-turns are techniques that keep through-traffic flowing.

***Median Treatments:*** Non-traversable, raised medians are some of the most effective means to regulate access and reduce accidents.

### ***7.2 Existing or Potential Use***

The new design for the SMI analyzed in this IAMP is an example of the benefits of access management in connection with a design project. An Access Management Strategy, completed in August of 2003, included numerous access treatments to the new interchange and its vicinity. The components of the strategy, which are shown in Figure 7, are being constructed with the new interchange. Locations and access treatments that comprise the Access Management Strategy are shown in Figure 8 and Table 13 of the IAMP. Access changes also include the removal of the interchange ramps from Barnett Road and improving it as an east/west arterial.

The good performance predicted for the SPUI can be credited in part to the Access Management Strategy that is being implemented with the SMI construction project. The IAMP recommends it as one of the management tools to protect the function of the interchange.

### ***7.3 Local Plan Support***

The **RTP** includes policies that relate to access management.

- **Policy 5-5** directs local governments to manage access points (curb cuts) for their major street systems.

The **Medford TSP** also contains policies that relate to access management. The Access Management Strategy that is being implemented by the construction of the new interchange is consistent with the following policy and implementation measure.

**Goal 2:** To provide a comprehensive street system that serves the mobility and multi-modal transportation needs of the Medford Planning area.

- **Policy 2-H:** The City of Medford shall manage and maintain the transportation system in an efficient, clean and safe manner.
  - **Implementation 2-H(2):** Utilize access management, including access location and spacing, to increase the capacity and safety of the transportation system. Incorporate access management techniques, such as raised medians, access management plans, driveway consolidation, driveway relocation, and closure of driveway access, into Arterial and Collector street design and development applications.

# **APPENDIX B**

## **Future Traffic Volume Forecasting and Traffic Operations Analysis**



## **APPENDIX B**

# **FUTURE TRAFFIC VOLUME FORECASTING AND TRAFFIC OPERATIONS ANALYSIS**

### **Regional Traffic Forecasting Model**

In support of the IAMP effort, ODOT's Transportation Planning and Analysis Unit (TPAU) used the regional traffic forecasting model to forecast year 2002, 2010 and 2030 traffic volumes. The regional forecasting model uses a variety of data to generate trips, predict travel patterns and assign traffic to a network representing the major streets and highways in the region. Information from travel behavior surveys of Medford area residents was used as the basis for much of the regional model. The traffic assignment and traffic volume information uses the EMME/2 package to simulate traffic volumes on the regional street network.

One of the important steps in modeling is the calibration process in which traffic volumes predicted by the model are checked against recent traffic counts for the street network. In support of the modeling for the RVMPO's Regional Transportation Plan and for the IAMP, year 2002 was used as the base year for the calibration process. TPAU and local agencies, including the RVMPO, invested considerable effort to calibrate the model to enhance its ability to simulate the current conditions. Efforts expended in calibration translate into a better, more useful model for evaluation of future conditions.

One of the greatest values of a traffic forecasting model is the ability to use it to test changes in the street network. Planned changes for the South Medford area include the relocation and reconfiguration of the interchange that is the subject of this IAMP.

In TPAU's year 2002 simulation, the model simulates the existing street network and connections between I-5 and Barnett Road. The model shows the ramps exactly as they exist today. For the year 2010 simulation, the Barnett Road ramps were deleted and were replaced by new ramps connecting with the new Garfield-Highland connector. The Garfield-Highland connector is also a new facility running from Barnett Road to OR 99.

The differences between the 2002 simulation and the 2010 simulation result in significant alterations of the traffic patterns in the study area, including a diversion of traffic from Barnett to the Highland-Garfield connector. The street network used for the 2010 simulation was also used for the year 2030.

Because a traffic forecasting model does not fully replicate the existing traffic patterns, the usual approach is to perform "post processing" of the model results. The recommended practice is found in National Cooperative Highway Research Planning (NCHRP) Report 255. The basic approach of this methodology assumes that a discrepancy between a base year count and a base year assignment from the model is likely to be of the same magnitude in the future.

Post processing using the difference method uses the following equation:

$$F_c = V_c + (F_m - V_m), \text{ where}$$

$F_c$  = Future Traffic Volume  
 $F_m$  = Future Model Volume

$V_c$  = Current Traffic Volume  
 $V_m$  = Current Model Volume

This equation, which is based on the assumption that there is a uniform numerical difference between the model volumes and counts, is most appropriate for intersections already in existence. New facilities, such as the SMI SPUI, do not have actual base year count data or identifiable travel patterns making the  $V_c$  and  $V_m$  terms in the above equation zero.

Lacking any base year traffic volumes, we had to rely more heavily on the direct outputs from the regional forecasting model. Before accepting these for direct application, we analyzed traffic patterns predicted by the model for both year 2002 and year 2010. Among other things, we analyzed the patterns of the traffic from the ramps. For these analyzes, we evaluated the “select link” outputs provided by TPAU. A select link output shows the routes of all traffic using the selected link as it traverses the entire roadway network. It is a valuable tool to help show the destinations of traffic using a particular street segment. Evaluating the traffic patterns by examining select link runs gave us greater confidence in the model and led us to accept the future volumes directly from the model for our traffic analysis.

When analyzing the future volumes at the SPUI and comparing the volumes from 2010 with 2030, most traffic volumes were forecast to increase. In a couple specific locations, traffic volumes predicted by the model show decreases during this twenty-year period. This result appears counterintuitive. It is natural to assume that traffic will increase in the future, especially when significant growth is planned in the SMI area.

There are several possible explanations for the predicted decrease in traffic volumes on individual ramps. First, the model predicts trip interchanges between potential origins and destinations based on the availability of all potential destinations and intervening opportunities of similar destinations. A shopping trip originally intended for a distant destination may be made to a nearer store if new stores are constructed. All of the new development, including commercial centers, planned throughout the region may have caused the model to predict different travel patterns and explain some of the traffic decreases. Second, the model is sensitive to congestion. More congestion anywhere along a motorist’s route may cause a change in his/her travel pattern. A general increase in traffic in the south Medford area due to growth around the interchange might cause sufficient congestion to shift traffic patterns and cause a decrease in traffic on some facilities. Third, new facilities planned elsewhere may cause new travel patterns. Fourth, the planned increase in transit and other transportation demand management measures may reduce traffic in some areas. In consideration of these factors, modest decreases predicted by the model for particular movements at the SPUI are not considered significant and no actions were taken to override the volumes predicted by the application of the regional forecasting mode.

## Evolution of SPUI Modeling Techniques

The City of Medford provided Synchro files for 2003 and 2023 that were created by JRH Transportation Engineering for use in the City of Medford Transportation Plan. These Synchro files were a refinement of those originally developed by JRH Transportation Engineering for the Draft Environment Impact Statement.

The JRH model was originally developed using a version of Synchro that has been upgraded at least twice. Several improvements have been made and the newest version, Synchro 7.0, has greater capabilities than its predecessors.

The JRH model analyzed the SPUI as three separate intersections: a central signalized intersection flanked by two unsignalized intersections. The function of the flanking intersections is to account for right-turn maneuvers to/from the I-5 ramps to the Garfield/Highland connector. In the years since the JRH model was created there have been updates to the Synchro/SimTraffic software package. These updates enable SPUIs to be modeled/operate as they are designed: a single signalized intersection. Trafficware, the developers of the Synchro/SimTraffic software package, believe that there is an appropriate template for modeling SPUI operations that utilizes the software updates and improvements. This template was provided to DEA and used for the SMI IAMP analysis. Results for the SPUI, utilizing the Trafficware template, are shown in the IAMP report.

Prior to receiving the new SPUI template from Trafficware, a preliminary analysis was conducted using the JRH SPUI model with updated 2030 volumes. The results of the initial 2030 SPUI analysis calculated that central, signalized portion of the intersection would operate acceptably, meeting the applicable ODOT mobility standards. However, viewed as an isolated, unsignalized intersection, the calculated volume-capacity (v/c) ratio of the right turn from the northbound off-ramp onto the Garfield-Highland Connector exceeded ODOT's mobility standard.

The high v/c ratio calculated by Synchro initially led to some concern, but after additional analysis, we concluded the intersection would operate acceptably. Treating the SPUI as three intersections is only necessary because of the limitations of the early version of Synchro. SimTraffic, which is a traffic simulation tool that accounts for the interaction of traffic at closely-spaced intersections, was also used to assess traffic operations of the SPUI using the "three intersection" configuration. The results of the SimTraffic analysis indicated adequate operation and queue storage distance for all movements at each of the 3 intersections (main signalized intersection and two flanking unsignalized intersections). The delay for traffic on the ramps was shown to be much less using SimTraffic than calculated by Synchro. SimTraffic reports include delay, but not a v/c ratio, so it cannot be used to directly assess an intersection's ability to meet OHP mobility standards.

The problems of calculating the v/c ratio for the SPUI was solved by replacing the earlier "three intersection" approach to modeling the SPUI used in the earlier version of Synchro with the latest version of the Synchro analysis package and the new template provided by Trafficware staff. When evaluated as a single intersection, the SMI SPUI is shown to meet applicable OHP v/c standards through year 2030.

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# **APPENDIX C**

## **Traffic Operations Analysis Synchro and Simtraffic Files**

**2010 Base Year SPUI Operations and Queuing**

**2030 SPUI Operations and Queuing**

**2030 SPUI Operations and Queuing For  
Alternative Development Scenario**



HCM Signalized Intersection Capacity Analysis  
 114: SB I-5 Off-Ramp & Garfield Street

8/24/2006



Movement	EBL	EBR2	WBL	WBR2	NEL	NET	NER2	SWL	SWT	SWR2
Lane Configurations										
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	1.00	0.97	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1583	3433	1583	3433	3539	1560	3433	3539	1560
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1583	3433	1583	3433	3539	1560	3433	3539	1560
Volume (vph)	245	440	55	520	485	485	60	515	350	250
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	272	489	61	578	539	539	67	572	389	278
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	272	489	61	578	539	539	67	572	389	278
Confl. Peds. (#/hr)	10		10		10		10	10		10
Turn Type	Prot	Free	Prot	Free	Prot		Free	Prot		Free
Protected Phases	7		3		5	2		1	6	
Permitted Phases		Free		Free			Free			Free
Actuated Green, G (s)	9.7	60.0	9.7	60.0	15.0	22.8	60.0	15.5	23.3	60.0
Effective Green, g (s)	6.7	60.0	6.7	60.0	12.0	19.8	60.0	12.5	20.3	60.0
Actuated g/C Ratio	0.11	1.00	0.11	1.00	0.20	0.33	1.00	0.21	0.34	1.00
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)	383	1583	383	1583	687	1168	1560	715	1197	1560
v/s Ratio Prot	0.08		0.02		0.16	0.15		c0.17	0.11	
v/s Ratio Perm		0.31		c0.37			0.04			0.18
v/c Ratio	0.71	0.31	0.16	0.37	0.78	0.46	0.04	0.80	0.32	0.18
Uniform Delay, d1	25.7	0.0	24.1	0.0	22.8	15.9	0.0	22.6	14.8	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1	0.5	0.2	0.7	5.9	1.3	0.1	6.4	0.7	0.3
Delay (s)	31.8	0.5	24.3	0.7	28.6	17.2	0.1	29.0	15.5	0.3
Level of Service	C	A	C	A	C	B	A	C	B	A
Approach Delay (s)						21.6			18.3	
Approach LOS						C			B	

Intersection Summary

HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Queuing and Blocking Report  
 2010 Base-modernized model

8/29/2006

Intersection: 114: SB I-5 Off-Ramp & Garfield Street

Movement	EB	EB	EB	WB	WB	WB	NE	NE	NE	NE	NE	SW
Directions Served	L	L	>	L	L	>	L	L	T	T	>	L
Maximum Queue (ft)	114	107	86	58	29	150	207	221	167	201	45	174
Average Queue (ft)	64	53	11	26	10	63	87	101	77	85	2	90
95th Queue (ft)	102	93	55	51	29	125	155	168	139	156	33	155
Link Distance (ft)	1158	1158		1072	1072				757	757		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			200			200	300	300			200	300
Storage Blk Time (%)						0			0	0		
Queuing Penalty (veh)						0			0	0		

Intersection: 114: SB I-5 Off-Ramp & Garfield Street

Movement	SW	SW	SW	SW
Directions Served	L	T	T	>
Maximum Queue (ft)	206	131	131	87
Average Queue (ft)	108	63	58	3
95th Queue (ft)	177	115	106	37
Link Distance (ft)		484	484	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300			200
Storage Blk Time (%)				
Queuing Penalty (veh)				

HCM Signalized Intersection Capacity Analysis  
 114: SB I-5 Off-Ramp & Garfield Street

8/29/2006



Movement	EBL	EBR2	WBL	WBR2	NEL	NET	NER2	SWL	SWT	SWR2
Lane Configurations	↖↗	↖	↖↗	↖	↖↗	↖↗	↖	↖↗	↖↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lane Util. Factor	0.97	1.00	0.97	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frbp, ped/bikes	1.00	0.99	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	1560	3433	1560	3433	3539	1560	3433	3539	1560
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	1560	3433	1560	3433	3539	1560	3433	3539	1560
Volume (vph)	160	490	70	650	530	645	65	620	455	195
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	178	544	78	722	589	717	72	689	506	217
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	178	544	78	722	589	717	72	689	506	217
Confl. Peds. (#/hr)	10	10	10	10	10		10	10		10
Turn Type	Prot	Free	Prot	Free	Prot		Free	Prot		Free
Protected Phases	4		8		5	2		1	6	
Permitted Phases		Free		Free			Free			Free
Actuated Green, G (s)	8.5	65.0	8.5	65.0	16.9	25.2	65.0	19.3	27.6	65.0
Effective Green, g (s)	5.5	65.0	5.5	65.0	13.9	22.2	65.0	16.3	24.6	65.0
Actuated g/C Ratio	0.08	1.00	0.08	1.00	0.21	0.34	1.00	0.25	0.38	1.00
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)	290	1560	290	1560	734	1209	1560	861	1339	1560
v/s Ratio Prot	0.05		0.02		0.17	0.20		c0.20	0.14	
v/s Ratio Perm		0.35		c0.46			0.05			0.14
v/c Ratio	0.61	0.35	0.27	0.46	0.80	0.59	0.05	0.80	0.38	0.14
Uniform Delay, d1	28.7	0.0	27.9	0.0	24.2	17.7	0.0	22.8	14.7	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.8	0.6	0.5	1.0	6.3	2.1	0.1	5.4	0.8	0.2
Delay (s)	32.5	0.6	28.4	1.0	30.6	19.8	0.1	28.2	15.5	0.2
Level of Service	C	A	C	A	C	B	A	C	B	A
Approach Delay (s)						23.4			19.3	
Approach LOS						C			B	

Intersection Summary

HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queuing and Blocking Report  
 2030 Base-modernized model

8/29/2006

Intersection: 114: SB I-5 Off-Ramp & Garfield Street

Movement	EB	EB	EB	WB	WB	WB	NE	NE	NE	NE	NE	SW
Directions Served	L	L	>	L	L	>	L	L	T	T	>	L
Maximum Queue (ft)	97	95	92	74	169	229	231	243	225	246	177	227
Average Queue (ft)	47	41	5	34	29	118	108	123	106	115	6	131
95th Queue (ft)	82	76	48	62	143	225	184	199	184	208	67	206
Link Distance (ft)	1157	1157		1108	1108				764	764		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			200			200	300	300			200	300
Storage Blk Time (%)			0			2			1		0	
Queuing Penalty (veh)			0			1			1		0	

Intersection: 114: SB I-5 Off-Ramp & Garfield Street

Movement	SW	SW	SW
Directions Served	L	T	T
Maximum Queue (ft)	237	185	148
Average Queue (ft)	146	90	72
95th Queue (ft)	219	154	131
Link Distance (ft)		493	493
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	300		
Storage Blk Time (%)			
Queuing Penalty (veh)			

HCM Signalized Intersection Capacity Analysis  
 114: SB I-5 Off-Ramp & Garfield Street

2/19/2007



Movement	EBL	EBR2	WBL	WBR2	NEL	NET	NER2	SWL	SWT	SWR2	
Lane Configurations	↖↗	↖	↖↗	↖	↖↗	↖↗	↖	↖↗	↖↗	↖	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lane Util. Factor	0.97	1.00	0.97	1.00	0.97	0.95	1.00	0.97	0.95	1.00	
Frbp, ped/bikes	1.00	0.99	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	3433	1560	3433	1560	3433	3539	1560	3433	3539	1560	
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	3433	1560	3433	1560	3433	3539	1560	3433	3539	1560	
Volume (vph)	160	600	90	655	635	780	85	620	575	200	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	178	667	100	728	706	867	94	689	639	222	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	178	667	100	728	706	867	94	689	639	222	
Confl. Peds. (#/hr)	10	10	10	10	10		10	10		10	
Turn Type	Prot	Free	Prot	Free	Prot		Free	Prot		Free	
Protected Phases	4		8		5	2		1	6		
Permitted Phases		Free		Free			Free			Free	
Actuated Green, G (s)	7.0	60.0	7.0	60.0	20.7	19.9	60.0	21.1	20.3	60.0	
Effective Green, g (s)	4.0	60.0	4.0	60.0	17.7	16.9	60.0	18.1	17.3	60.0	
Actuated g/C Ratio	0.07	1.00	0.07	1.00	0.30	0.28	1.00	0.30	0.29	1.00	
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)	229	1560	229	1560	1013	997	1560	1036	1020	1560	
v/s Ratio Prot	0.05		0.03		c0.21	c0.24		0.20	0.18		
v/s Ratio Perm		0.43		c0.47			0.06			0.14	
v/c Ratio	0.78	0.43	0.44	0.47	0.70	0.87	0.06	0.67	0.63	0.14	
Uniform Delay, d1	27.6	0.0	26.9	0.0	18.8	20.5	0.0	18.3	18.5	0.0	
Progression Factor	1.00	1.00	1.00	1.00	0.83	1.43	1.00	0.89	1.41	1.00	
Incremental Delay, d2	15.2	0.9	1.3	1.0	1.7	8.5	0.1	0.1	0.3	0.0	
Delay (s)	42.8	0.9	28.3	1.0	17.3	37.9	0.1	16.4	26.4	0.0	
Level of Service	D	A	C	A	B	D	A	B	C	A	
Approach Delay (s)						27.0			18.2		
Approach LOS						C			B		
<b>Intersection Summary</b>											
HCM Average Control Delay			17.4							HCM Level of Service	B
HCM Volume to Capacity ratio			0.70								
Actuated Cycle Length (s)			60.0							Sum of lost time (s)	14.0
Intersection Capacity Utilization			61.3%							ICU Level of Service	B
Analysis Period (min)			15								

c Critical Lane Group

Queuing and Blocking Report  
 2030 Total Added Trips

2/19/2007

Intersection: 114: SB I-5 Off-Ramp & Garfield Street

Movement	EB	EB	EB	WB	WB	WB	NE	NE	NE	NE	NE	SW
Directions Served	L	L	>	L	L	>	L	L	T	T	>	L
Maximum Queue (ft)	90	91	216	247	462	233	196	220	247	276	89	212
Average Queue (ft)	47	37	23	48	77	130	89	106	136	155	3	126
95th Queue (ft)	78	70	121	169	360	234	159	174	206	232	47	198
Link Distance (ft)	1157	1157		1108	1108				764	764		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)			200			200	300	300			200	300
Storage Blk Time (%)			0.00			0.06			0.00	0.02	0.00	
Queuing Penalty (veh)			0			3			0	2	0	

Intersection: 114: SB I-5 Off-Ramp & Garfield Street

Movement	SW	SW	SW	SW
Directions Served	L	T	T	>
Maximum Queue (ft)	229	206	186	25
Average Queue (ft)	141	114	97	2
95th Queue (ft)	209	175	159	24
Link Distance (ft)		493	493	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	300			200
Storage Blk Time (%)			0.00	
Queuing Penalty (veh)			0	

# **APPENDIX D**

## **Trips and Traffic Volumes for the Alternative Development Scenario for the South Medford Interchange IAMP**



## Appendix D

### **Trips and Traffic Volumes for the Alternative Development Scenario for the South Medford Interchange IAMP**

This appendix describes the methodology used to develop year 2030 trip generation and traffic volumes associated with the Alternative Development Scenario.

The Alternative Development Scenario addresses the potential for additional traffic in the study area related to both employment growth and residential growth. The Alternative Development Scenario addresses the traffic impact resulting from employment with high traffic generation potential. In addition, it assesses the impact if there is more residential development in the study area than assumed in the regional traffic forecasting model.

It outlines our approach to the development of the trip generation rates and the calculation of the additional trips for Transportation Analysis Zones (TAZ) that would be significantly different than the regional model. It also discusses the assignment of the additional trips to the transportation network.

### **BACKGROUND**

For all of the analyses performed to date, the Rogue Valley regional traffic forecasting model has been used to project future traffic volumes in the area surrounding the South Medford Interchange (SMI). The regional model provides traffic volumes that are based on planned dwelling units and planned employment throughout the study area. According to the procedures and methodologies in the regional model, the number of residences governs the total number of trips generated in the region. Employment sites attract trips according to algorithms that consider, among other things, the type of employment, the number of intervening opportunities, the travel time to the location, and congestion. The regional model is based upon a series of travel diaries and data on trip-making characteristics specific to the Medford region and validated by comparison with similar surveys elsewhere.

The regional model is based on a specific land use pattern with dwelling unit and employment values for a base year (2002) and a single future year (2030). Interim years are the result of interpolating between these dates. The regional model does not account for the possibility that development will be rapid and concentrated in certain areas and delayed in others.

The regional model uses several employment categories, such as industrial, retail and service employment, each of which has different trip characteristics. By necessity, the regional model's retail and service employment categories contain businesses with widely divergent trip generation characteristics. The broad retail category, for example, includes shopping centers, specialty retail, and some very high traffic generators such as convenience stores. The service category includes low traffic subcategories such as insurance or real estate offices and high-traffic uses such as banks and fast food restaurants. The use of broad employment categories is entirely appropriate for the regional model because of the large geographic area and the total number of residents and employees in the region.

## **ALTERNATIVE DEVELOPMENT SCENARIO METHODOLOGY**

During the analysis of future traffic operations based on traffic volumes derived from the regional traffic forecasting model, there were discussions about the possibility of development in the area generating more traffic than forecast using the results from the regional model.

While the regional model is believed to produce valid results on a regional basis, there were concerns that future traffic in the study area might be underestimated because it is predominately a regional center with high growth predicted in the retail and service sectors. Stated another way, the issue became, “What if the development in the study area has a concentration of high-traffic generators, that are higher than the regional averages?”

To address this question, DEA staff created and evaluated an Alternative Development Scenario that was based on using trip generation rates derived from ITE’s *Trip Generation*. The Alternative Development Scenario uses the same number of employees used in the RTP, but a mix of employment that was selected to generate more traffic than the traffic volumes from the regional model.

Recent activity in the study area, including large residential developments, led some members of the Technical Advisory Committee to question whether the assumptions in the RTP reflect a reasonable amount of future residential growth. To address this potential, the Alternative Development Scenario assumed an additional 820 dwelling units beyond the growth assumptions made in the RTP.

The methodology described in this appendix more closely parallels that commonly used in traffic impact studies. Traffic impact studies evaluate the impacts of a specific development on the surrounding street network and can be used to determine the improvements needed to accommodate the new development. Traffic volumes generated by a development are most often developed using trip rates from ITE’s *Trip Generation* based on the specific attributes of the site, such as building size. Our approach was to apply this to the anticipated growth in most of the entire study area.

## **CALCULATION OF TRIPS ATTRIBUTABLE TO EMPLOYMENT GROWTH**

A five-step process was used to calculate the additional trips related to employment growth that would result from the application of trip generation rates derived from ITE’s *Trip Generation*. Developing additional trips in the SMI area followed five steps:

1. Determine average trip rates per employee for retail, service, industrial, and other land uses.
2. Adjust the average trip rates to account for pass-by trips.
3. Determine average trip rates by land use category.
4. Calculate the net change in employment between the year 2002 and 2030.
5. Calculate additional trips by TAZ based on the employment growth and the new rates.

Average values were calculated for a variety of retail, service, and industrial land uses in terms of PM peak hour trips per employee from ITE’s *Trip Generation 7<sup>th</sup> Edition*. Some of the average rates were taken directly from the per employee rate in *Trip Generation*, while others are

derived from the trip rate per thousand square feet of building and an employee density rate borrowed from Metro's 1999 *Employment Density Study*.

Trip generation rates are the total number of trips entering and exiting a driveway. The basic trip rate includes both the new traffic added to the street system and the pass-by trips drawn from traffic passing the site. Pass-by trips are trips already on the network that make an additional stop on their way from their origin to their destination without having to alter their route. While the driveway traffic volumes are critical to traffic operations analysis of individual sites, the use of the unadjusted rates would cause the impact on the major street network to be over-estimated. To limit our estimate to the amount of new traffic added to the network, a reduction in the average rate was made to account for pass-by trips. Once the average rates by land use type were reduced to account for pass-by trips, an average or composite rate was calculated for by employment category.

### ***Retail Employment***

For retail uses, we calculated a composite trip rate based on eight retail land uses. The Free-Standing Discount Store was the only land use containing a rate based on trips per employee. All other land uses were estimated based on employee density rates from Metro's study combined with trips per thousand square feet listed in *Trip Generation*. The pass-by percentages for retail uses are taken from the *Trip Generation Handbook*.

Table D-1 summarizes the individual rates and the weighted average based on an assumed proportion of the individual uses in the retail category.

**Table D-1 Calculation of Composite PM Peak Hour Rate for Retail Employment**

<b>ITE Land Use Code</b>	<b>Description</b>	<b>Proportion %</b>	<b>PM Peak Hour Trips/Employee</b>	<b>Weekday PM Peak Avg. Pass-by %</b>	<b>Weekday PM Peak Hr. New Trips</b>
813	Free-Standing Discount Superstore <sup>1</sup>	12.5	1.80	17%	1.49
815	Free-Standing Discount Store <sup>2</sup>	12.5	3.48	17%	2.89
820	Shopping Center <sup>3</sup>	12.5	1.75	34%	1.15
823	Factory Outlet Center <sup>4</sup>	12.5	1.07	34%	0.70
850	Supermarket <sup>5</sup>	12.5	6.55	36%	4.19
862	Home Improvement Superstore <sup>6</sup>	12.5	1.23	48%	0.64
863	Electronics Superstore <sup>7</sup>	12.5	2.25	33%	1.51
870	Apparel Store <sup>8</sup>	12.5	3.91	-	3.91
	<b>Weighted Average</b>	<b>100.00</b>	<b>2.8</b>		<b>2.1</b>

<sup>1</sup> Based on 3.87 trips per 1000 sq ft and 466 sq ft per employee. Pass-by percentage is from LU 815

<sup>2</sup> Uses per employee trip rate directly.

<sup>3</sup> Based on 3.75 trips per 1000 sq ft and 466 sq ft per employee.

<sup>4</sup> Based on 2.29 trips per 1000 sq ft and 466 sq ft per employee. Pass-by percentage is from LU 820

<sup>5</sup> Based on 10.45 trips per 1000 sq ft and 627 sq ft per employee.

<sup>6</sup> Based on 2.45 trips per 1000 sq ft and 500 sq ft per employee.

<sup>7</sup> Based 4.50 trips per 1000 sq ft and 500 sq ft per employee.

<sup>8</sup> Based on 4.20 trips per 1000 sq ft and 930 sq ft per employee.

After accounting for pass-by trips, the composite average for the retail employment sector was calculated to be 2.1 PM peak hour trips per employee.

***Service Employment***

For service related land uses, we calculated the composite average based on a combination of banks, restaurants, service station with convenience market and offices. Offices are an important component of the service industry and account for activities such as medical, dental services, finance, insurance and real estate.

**Table D-2 Calculation of Composite PM Peak Hour Rate for Service Employment**

<b>ITE Land Use Code</b>	<b>Description</b>	<b>Proportion %</b>	<b>PM Peak Hour Trips/Employee</b>	<b>Weekday PM Peak Avg. Pass-by %</b>	<b>Weekday PM Peak Hr. New Trips</b>
912	Drive-in Bank	7.50	8.65	47%	4.58
931	Quality Restaurant <sup>1</sup>	12.50	4.70	44%	2.63
932	High-Turnover (Sit Down) Restaurant <sup>2</sup>	12.50	6.85	43%	3.90
934	Fast-Food Restaurant with Drive-Through Window <sup>3</sup>	12.50	21.72	50%	10.86
945	Gasoline/Service Station with Convenience Market <sup>4</sup>	5.00	69.77	56%	30.70
710	General Office Building	12.50	0.46	-	0.46
720	Medical-Dental Office Building	12.50	1.06	-	1.06
750	Office Park	12.50	0.39	-	0.39
770	Business Park	12.50	0.39	-	0.39
<b><i>Weighted Average</i></b>		<b>100.00</b>	<b>8.1</b>		<b>4.1</b>

<sup>1</sup> Based on 7.49 trips per 1000 sq ft and 627 sq ft per employee  
<sup>2</sup> Based on 10.92 trips per 1000 sq ft and 627 sq ft per employee  
<sup>3</sup> Based on 34.64 trips per 1000 sq ft and 627 sq ft per employee  
<sup>4</sup> Based on 96.37 trips per 1000 sq ft and 724 sq ft per employee

After accounting for pass-by trips, the composite average for the service employment sector was calculated to be 4.1 PM peak hour trips per employee.

### ***Industrial Employment***

For industrial uses, we calculated a composite trip rate based on seven industrial land uses. There are no pass-by percentages for industrial uses in *Trip Generation*. All land uses had a rate based on trips per employee.

Table D-3 summarizes the individual rates and the weighted average based on an assumed proportion of the individual uses in the industrial category.

**Table D-3 Calculation of Composite PM Peak Hour Rate for Industrial Employment**

<b>ITE Land Use Code</b>	<b>Description</b>	<b>Proportion %</b>	<b>PM Peak Hour Trips/Employee</b>	<b>Weekday PM Peak Avg. Pass-by %</b>	<b>Weekday PM Peak Hr. New Trips</b>
110	General Light Industrial	14.29	0.42	-	0.42
120	General Heavy Industrial	14.29	0.88	-	0.88
130	Industrial Park	14.29	0.46	-	0.46
140	Manufacturing	14.29	0.36	-	0.36
150	Warehousing	14.29	0.47	-	0.47
152	High-Cube Warehouse	14.29	0.66	-	0.66
170	Utilities	14.29	0.76	-	0.76
<b><i>Weighted Average</i></b>		<b><i>100.00</i></b>	<b><i>0.57</i></b>		<b><i>0.57</i></b>

The composite average for the industrial employment sector was calculated to be 0.57 PM peak hour trips per employee.

### ***Other Employment***

Other employment was considered to be a mix of different land uses of offices and business land uses. All land uses had a rate based on trips per employee.

**Table D-4 Calculation of Composite PM Peak Hour Rate for Other Employment**

<b>ITE Land Use Code</b>	<b>Description</b>	<b>Proportion %</b>	<b>PM Peak Hour Trips/Employee</b>	<b>Weekday PM Peak Avg. Pass-by %</b>	<b>Weekday PM Peak Hr. New Trips</b>
710	General Office Building	25.0	0.46	-	0.46
720	Medical-Dental Office Building	25.0	1.06	-	1.06
750	Office Park	25.0	0.39	-	0.39
770	Business Park	25.0	0.39	-	0.39
<b><i>Weighted Average</i></b>		<b><i>100.00</i></b>	<b><i>0.58</i></b>		<b><i>0.58</i></b>

The composite average for the other employment sector was calculated to be 0.58 PM peak hour trips per employee.

### *Summary of Composite Rates*

Table D-5 summarizes the composite trip rate for all four employment categories after the adjustment to subtract pass-by trips.

**Table D-5: Composite PM Peak Hour Trip Rate by Employment Category after Pass-by Trip Adjustment**

Retail	Service	Industrial	Other
2.1	4.1	0.57	0.58

The values in Table D-5 were applied to the net change in employment to assess the change in trips generated by the Alternative Development Scenario.

### ***Calculation of the Net Change in Employment***

For the Alternative Development Scenario, we did not change any assumptions about the total amount of employment or the employment sectors from those used for the regional model. As part of the process for development of long-range regional planning, RVCOG, the cities and Jackson County made employment allocations for each TAZ in the region based on zoning or comprehensive plan land uses and the amount of vacant or underutilized land.

Table D-6 below summarizes the net change in employment, aggregated into four employment categories, between the years 2002 and 2030. The same employment assumptions were used for both the regional model and the Alternative Development Scenario.

**Table D-6: Net Change in Employment (2030-2002) by TAZ**

TAZ	Retail	Service	Industrial	Other	Total
351	0	+20	+5	-95	-70
352	+10	+53	+4	0	+67
353	+1	+5	0	0	+6
354	+18	+11	0	0	+29
355	0	+3	0	0	+3
357	+1	+66	0	0	+67
362	+8	+20	+7	+2	+37
369	+58	+79	+268	-17	+388
370	+186	+195	+2	0	+383
371	+8	+89	+3	0	+100
372	0	+4	0	+10	+14
373	+23	+48	0	0	+71
380	+28	+138	+21	0	+187
382	+26	+132	+48	+19	+225
Study Area	+367	+863	+358	-81	+1,507

As shown in Table D-6, only five TAZs are estimated to have an increase of 100 or more employees between 2002 and 2030. These zones (TAZ 369, 370, 371, 380 and 382) were identified as the zones with the greatest potential for inclusion in the Alternative Development Scenario.

Zones that fell below the threshold were examined individually. Because of its proximity to the interchange and because it is adjacent to the zones already identified for inclusion, one additional zone (TAZ 352) was also added to the five already included in the Alternative Development Scenario. TAZ 357 and TAZ 373 were not added because they are at the far eastern end of the study area and had relatively little employment growth.

### **Calculation of Additional Trips from New Employment**

Having identified the six zones for the Alternative Development Scenario, we performed calculations of trips resulting from anticipated growth and compared those with the trip calculations from the regional forecasting model.

The initial step in accounting for trips from new employment was evaluating the number of trips forecast for these six TAZs in the regional model for both year 2002 and year 2030 and calculating the difference. The first column in Table D-7 identifies the TAZ number. The second and third columns indicate the number of PM peak hour trips according to the regional model for years 2002 and 2030, respectively. The fourth column, labeled “Increase in Trips Due to Growth between 2002 and 2030,” shows the difference and represents the increase in trips attributable to growth according to the regional model.

The trips generated using the alternative methodology are also presented in Table D-7. The new trips using the trip rates derived from ITE’s *Trip Generation* were calculated separately for each TAZ. The average trip generation rates from Table D-5 were multiplied by the net change in employment by zone shown in Table D-6. The product of the trip rate and the employment is an estimate of the new trips resulting from employment growth between year 2002 and 2030 for each zone. This is presented in the fifth column in Table D-7.

The final column in Table D-7 summarizes the differences between the two methodologies. The difference between the two methodologies ranges from a decrease in PM peak hour trips in TAZ 369 to an increase of 828 PM peak hour trips in TAZ 370. Note the decrease in TAZ 369 is attributable to the lower rate for industrial employment. The total number of “extra” trips for these six TAZs is 2,053 PM peak hour trips. Excluding the possible decrease in TAZ 369, the net increase is 2111 PM peak trips for the Alternative Development Scenario.

**Table D-7: Comparison of PM Peak Hour Trips Attributed to New Employment by TAZ**

TAZ	Trips Calculated by TAZ in Regional Transportation Forecasting Model			Trips Forecast Using Trip Generation Rates Specified in Table D-5	Difference Due to Alternative Development Scenario Trip Rates
	Year 2002	Year 2030	Increase in Trips Due to Growth between 2002 and 2030		
352	448	571	123	240	117
369	2,189	2,832	643	585	-58
370	169	523	354	1,182	828
371	427	567	140	382	242
380	363	576	213	634	421
382	76	205	129	632	503
Total			1,602	3,655	2,053

Trip generation associated with high trip generation rates for the Alternative Development Scenario results in 2,111 additional PM peak hour trips above that predicted from the trip generation methodology of the regional model. This difference is accounted for by trip generation rates. The total trips calculated by this alternative methodology is similar to PM peak hour trips that would be calculated from a series of traffic impact studies for new developments representing full development of the SMI area under current zoning.

## **CALCULATION OF TRIPS ATTRIBUTABLE TO RESIDENTIAL GROWTH**

Recent development activity in the study area includes a proposal for a large residential project totaling more than 500 dwelling units in TAZ 382. This zone, according to the assumptions used in the RTP, was assumed to grow by only 64 dwelling units. To reflect this recent development pattern, the Alternative Development Scenario was adjusted to provide an additional 520 dwelling units by year 2030. TAZ 369 has also been suggested as a site that might have significant residential development. The RTP assumptions provided for residential growth of 63 dwelling units. The Alternative Development Scenario was adjusted to account for an additional 300 dwelling units by year 2030.

The PM peak hour trip generation for these potential residential developments was calculated using ITE’s *Trip Generation* land use code 220 – Apartments. The PM peak hour trip generation rate is 0.62 trips per dwelling unit with 65 percent entering and 35 percent exiting. These rates were applied to the dwelling assumptions (520 for TAZ 382 and 300 for TAZ 369). Table D-8 summarizes the trips attributable to additional residential development assumed for the Alternative Development Scenario.

**Table D-8: PM Peak Hour Trips Attributed to Additional Residential Development by TAZ**

<b>TAZ</b>	<b>Number of Additional Residential Units</b>	<b>Trip Rate</b>	<b>PM Peak Hour Exiting Trips</b>	<b>PM Peak Hour Entering Trips</b>
369	300	0.62	65	121
382	520	0.62	113	210

## **TRIP ASSIGNMENT**

Once the additional trips for each zone were calculated, they were assigned to the major street network of SMI study area. We used select zone runs provided by TPAU from the regional model to mimic the distribution pattern for these zones in the regional model. The increase in trips was assigned to the same routes as the original traffic distribution.

The proportion of new trips going through the SPUI and the turning movements at the SPUI were calculated for trips going to and coming from each of the six TAZs (352, 369, 370, 371, 380, and 382) that were part of the Alternative Development Scenario and where trip increases were calculated.

These additional trips were then added to the year 2030 volumes used in the original scenario. The new volumes accounted for the additional 2,619 PM peak hour trips resulting from the Alternative Development Scenario.

Figure 6 in the SMI IAMP shows PM peak hour traffic volumes at the SPUI developed by application of the methodology described in this appendix.

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# **APPENDIX E**

## **City of Medford Letter of Consistency and Support**





# Planning Department

*Continuous Improvement – Customer Service*

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City Hall – Lausmann Annex • Room 240 • 200 South Ivy Street • Medford, Oregon 97501

October 22, 2007

Shirley Roberts, Planner  
ODOT Region 3  
P.O. Box 3275  
Central Point, OR 97502

Dear Shirley,

City of Medford staff has completed a review of the South Medford Interchange Area Management Plan, draft of September 18, 2007. City staff members participated on the Technical Advisory Committee that guided the development of the Interchange Area Management Plan (IAMP). This draft IAMP appears to be consistent with the goals, policies, and implementation strategies of the *Medford Comprehensive Plan*, including the 2003 Transportation System Plan, and with ordinance language in the *Medford Land Development Code*.

We encourage the Oregon Transportation Commission to adopt the South Medford IAMP. Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "R. O. Scott".

Robert O. Scott, A.I.C.P.  
Planning Director



# ATTACHMENT A

## Staff Report

### **Public Involvement Process:**

The South Medford Interchange Area Management Plan (SMI IAMP) was prepared with participation from the City of Medford, Oregon Department of Transportation (ODOT), Jackson County, the Department of Land Conservation and Development (DLCD) and the Rogue Valley Metropolitan Planning Organization. Other stakeholders and the general public were also given the opportunity to provide input.

The IAMP Technical Advisory Committee was comprised of representatives from ODOT, the City of Medford, the Oregon Department of Land Conservation and Development (DLCD), the Rogue Valley Metropolitan Planning Organization, and Jackson County. This group met seven times and actively participated in the plan development process. Meeting dates and locations are listed below.

<b>Meeting Date</b>	<b>Location</b>
September 16, 2004	Medford Public Library
November 16, 2004	Medford City Hall
April 12, 1005	Medford City Hall
May 25, 2005	Medford City Hall
December 29, 2005	Telephone conference
April 6, 2006	Medford City Hall
February 26, 2007	Medford City Hall

A public meeting was held in the Medford City Hall on May 25, 2005 to introduce the concept of the IAMP and to enable public comment. Prior to the meeting, ODOT issued a news release announcing the public meeting which was published in the Medford Mail Tribune.

In addition, five informational presentations were made before City of Medford bodies in the Medford City Hall. Agendas for these meetings were placed on the City's website prior to the meeting date and these meetings were open for public attendance. Meeting dates and type are listed below.

<b>Presentation Date</b>	<b>Meeting Type</b>
November 11, 2004	City Council
January 25, 2006	Joint Transportation Subcommittee
February 26, 2007	Medford Planning Commission & Joint Transportation subcommittee

September 13, 2007	Medford City Council
September 24, 2007	Medford Planning Commission

**Local Government Responsibility**

The City of Medford issued a letter dated October 22, 2007 affirming that the SMI IAMP is consistent with the City of Medford Transportation System Plan and Land Development Code. The letter also states that the City supports the Oregon Transportation Commission’s (OTC) adoption of the SMI IAMP. The City of Medford will also continue to coordinate with ODOT in evaluating land use actions that could impact the interchange.

**Oregon Department of Transportation Responsibility**

The OTC will adopt the SMI IAMP as a facility plan element of the Oregon Highway Plan (OHP). ODOT Region 3 is implementing the Access Management Strategy (AMS) as the project is being constructed. ODOT will continue to coordinate with the City of Medford through the plan amendment and development review process, to keep existing land use protections in place.

**Other Amendments with This Action**

The South Medford IAMP includes a recommendation that the Highland-Garfield Connector, a new state facility created with the new interchange, shall be designated with an OHP Highway Classification of Local Interest Road. There are also two management measures identified in the SMI IAMP, to provide protection for the new interchange. These are to implement the Access Management Strategy which was prepared during project design, and to include in the IAMP goals and policies from the City of Medford Transportation System Plan and ordinance language from the Land Development Code.

**Summary of Draft Findings**

ODOT’s State Agency Coordination Agreement requires that the OTC adopt findings of fact when adopting facility plans (OAR 731-015-065). Pursuant to these requirements, ODOT provides the following findings to support the OTC adoption of the SMI IAMP. In Attachment B, findings of consistency are made for:

- Compatibility with Acknowledged City and County Comprehensive Plans (Medford and Jackson County)
- Compliance with Applicable Statewide Planning Goals (Goal 1: Citizen Involvement, Goal 2: Land Use Planning, Goal 11: Public Facilities, Goal 12: Transportation and Goal 14: Urbanization)
- Consistency with the Oregon Transportation Plan and other Modal Plans (Oregon Highway Plan, 1999)
- Compatibility with the Rogue Valley Metropolitan Planning Organization (2005-2030 Regional Transportation Plan)

The SMI IAMP has been found to be consistent with all applicable state and local goals, plans, and regulations.

**Requested Action**

ODOT Region 3 requests that the OTC adopt the SMI IAMP. As defined by Oregon Administrative Rule (OAR) 731-015-0015, the IAMP is a facility plan. Adoption of the SMI IAMP implements the OHP.

**Suggested Motion Language**

I move to adopt the Interstate 5 South Medford Interchange 27 Interchange Area Management Plan as an element of the Oregon Highway Plan and to adopt the findings in support of this action.

## ATTACHMENT B

### FINDINGS OF COMPLIANCE – OAR 731-015-0065

#### 1. Coordination Procedures for Adopting Final Facility Plans

The State Agency Coordination rule requires that the Oregon Transportation Commission (OTC) adopt findings of fact when adopting facility plans. (OAR 731-015-065). ODOT in coordination with the City of Medford and Jackson County, developed an IAMP for the new Interstate 5 Interchange 27. Staff is requesting that the OTC adopt the IAMP as a facility plan pursuant to OAR 731-015-0065.

Pursuant to these requirements, the Oregon Department of Transportation (ODOT or Department) provides the following findings to support the OTC adoption of the South Medford Interchange Area Management Plan (SMI IAMP).

(1) Except in the case of minor amendments, the Department shall involve DLCD and affected metropolitan planning organizations, cities, counties, state and federal agencies, special districts and other interested parties in the development or amendment of a facility plan. This involvement may take the form of mailings, meetings or other means that the Department determines are appropriate for the circumstances. The Department shall hold at least one public meeting on the plan prior to adoption.

**Finding:** The South Medford Interchange Area Management Plan (SMI IAMP) was prepared with participation from the City of Medford, Oregon Department of Transportation (ODOT), Jackson County, the Department of Land Conservation and Development (DLCD) and the Rogue Valley Metropolitan Planning Organization. Other stakeholders and the general public were also given numerous opportunities to provide input.

The IAMP Technical Advisory Committee was comprised of representatives from ODOT, the City of Medford, the Oregon Department of Land Conservation and Development (DLCD), the Rogue Valley Metropolitan Planning Organization, and Jackson County. This group met seven times and actively participated in the plan development process. Meeting dates and locations are listed as follows:

Meeting Date	Location
September 16, 2004	Medford Public Library
November 16, 2004	Medford City Hall
April 12, 1005	Medford City Hall
May 25, 2005	Medford City Hall
December 29, 2005	Telephone conference
April 6, 2006	Medford City Hall
February 26, 2007	Medford City Hall

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A public open house and meeting was held in the Medford City Hall on May 25, 2005, to introduce the concept of the IAMP and to enable public comment. Prior to the meeting, ODOT issued a news release which was published in the Medford Mail Tribune, announcing the public meeting.

In addition, five informational presentations were made before City of Medford bodies in the Medford City Hall. Agendas for these meetings were placed on the City's website prior to the meeting date and these meetings were open for public attendance. Meeting dates and type are listed below.

<b>Meeting Date</b>	<b>Location</b>
November 11, 2004	City Council
January 25, 2006	Joint Transportation Subcommittee
February 26, 2007	Medford Planning Commission & Joint Transportation Subcommittee
September 13, 2007	City Council
September 20, 2007	Planning Commission

(2) The Department shall provide a draft of the proposed facility plan to planning representatives of all affected cities, counties and metropolitan planning organization and shall request that they identify any specific plan requirements which apply, any general plan requirements which apply and whether the draft facility plan is compatible with the acknowledged comprehensive plan. If no reply is received from an affected city, county or metropolitan planning organization within 30 days of the Department's request for a compatibility determination, the Department shall deem that the draft plan is compatible with that jurisdiction's acknowledged comprehensive plan. The Department may extend the reply time if requested to do so by an affected city, county or metropolitan planning organization.

**Finding:** On September 21, 2007, letters requesting a compatibility determination were sent by US Mail to the affected jurisdictions of Medford and Jackson County, to the Rogue Valley Metropolitan Planning Organization (RVMPO) and to the Department of Land Conservation and Development (DLCD). Included in the package with the letter was a copy of the draft South Medford IAMP, dated September 18, 2007. Letters received from notified jurisdictions are summarized below and included as Attachments.

A letter dated October 22, 2007 was received from the City of Medford. This letter states that the IAMP "appears to be consistent with the goals, policies, and implementation strategies of the Medford Comprehensive Plan, including the 2003 Transportation System Plan and with ordinance language in the Medford Land Development Code." The letter further stated that "We encourage the

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Oregon Transportation Commission to adopt the South Medford IAMP.” This letter is included as Attachment D.

A letter dated October 19, 2007 was received from the Rogue Valley Metropolitan Planning Organization. This letter states that “Staff has reviewed the plan and finds that it is consistent with goals, policies and other provisions of the 2005-2030 Regional Transportation Plan.” This letter further states that “...travel-demand forecasts used in this IAMP were completed using assumptions obtained from the RVMPO regional travel demand model, consistent with the RVMPO 2005-2030 Regional Transportation Plan.” This letter is included in Attachment E.

No written comment was received from Jackson County in response to the letter sent to them on September 21, 2007. OAR 731-015-0065 provides that if no comment is received from a notified jurisdiction within 30 days of the Department’s request for a compatibility determination, the Department shall deem that the draft plan is compatible with that jurisdiction’s acknowledged comprehensive plan. Based upon this provision it may be determined that the South Medford IAMP is consistent with goals and policies of Jackson County’s Comprehensive Plan.

A letter dated October 19, 2007 was received from the DLCD. This letter requested that the IAMP be amended to include policy language that would tie approval of new land uses in the IAMP study area, to the land use assumptions used for the IAMP. Department response to this request is covered in the finding under (3) which follows. Both the letter and the Department response are included in Attachment E.

(3) If any statewide goal or comprehensive plan conflicts are identified, the Department shall meet with the local government planning representatives to discuss ways to resolve the conflicts.

**Finding:** The DLCD submitted a letter dated October 19, 2007, indicating that the IAMP should include policy language to connect the approval of new development with the land use assumptions in the IAMP. The letter stated that new development should not exceed land use assumptions in the IAMP unless the IAMP is amended to reflect the new assumptions. Department response clarified that the traffic analysis for the IAMP was based upon the regional traffic forecasting model that was used for both the Environmental Impact Statement (EIS) for the new interchange and for the 2005-2030 Regional Transportation Plan (RTP). Consistency between the IAMP, the EIS and the RTP is an important component of the planning process. Also, the traffic analysis for the SPUI conducted for both the traffic anticipated in the RTP and for an alternative scenario that added even more trips, indicated that OHP mobility standards would clearly be met in 2030. Even so, the IAMP still includes a management measure that recognizes the importance of continuing to implement the effective Access Management Strategy that is being built into the project. A second management measure recommends that the IAMP be adopted with City TSP policies and ordinance language that further serve to protect the facility. Any

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amendment to these local policies or code language would require that the OTC approve a corresponding amendment to the IAMP. It is ODOT's position that the SPUI has been designed to function consistent with OHP mobility standards and that the IAMP contains adequate additional protection for the SPUI's function.

(4) The Department shall evaluate and write draft findings of compatibility with acknowledged comprehensive plans of affected cities and counties, findings of compliance with any statewide planning goals which specifically apply as determined by Oregon Administration Rule (OAR) 660-030-0065(3)(d), and findings of compliance with all provisions of other statewide planning goals that can be clearly defined if the comprehensive plan of an affected city or county contains no conditions specifically applicable or any general provisions, purposes or objectives that would be substantially affected by the facility plan.

**Finding:** These findings are submitted for the Commission's consideration in the following sections.

- Section 2 – Compatibility with Acknowledged City and County Comprehensive Plans (Medford and Jackson County)
- Section 3 – Compliance with Applicable Statewide Planning Goals (Goal 1: Citizen Involvement, Goal 2: Land Use Planning, Goal 11: Public Facilities, Goal 12: Transportation and Goal 14: Urbanization)
- Section 4 - Consistency with the Oregon Transportation Plan (2006) and other Modal Plans (Oregon Highway Plan, 1999)
- Section 5 – Compatibility with the Rogue Valley Metropolitan Planning Organization (2005-2030 Regional Transportation Plan)

(5) The Department shall present to the Transportation Commission the draft plan, findings of compatibility with the acknowledged comprehensive plans of affecting cities and counties and findings of compliance with applicable statewide planning goals.

**Finding:** The Final Draft of the Facility Plan is attached as Attachment C for the Commission's consideration. The following findings address compliance with applicable statewide planning goals. Findings are also made for consistency with the acknowledged comprehensive plans of the affected city and county. The Department has received a letter affirming consistency with the Comprehensive Plan including the Transportation System Plan and the Land Development Code of the City of Medford. That letter is included as Attachment D.

(6) The Transportation Commission shall adopt findings of compatibility with the acknowledged comprehensive plans of affected cities and counties, and findings of compliance with applicable statewide planning goals when it adopts the final facility plan.

**Finding:** These findings are submitted for the Commission's consideration. These findings address compliance with applicable statewide planning goals and compatibility with the acknowledged comprehensive plans of the City and County.

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(7) The Department shall provide copies of the adopted final facility plan and findings to DLCDD, to affected metropolitan planning organizations, cities, counties, state and federal agencies, special districts and to others who request to receive a copy.

**Finding:** The Department will provide copies of the adopted IAMP, including all required findings, to the DLCDD, the affected metropolitan planning organization, the affected local jurisdictions and to others who request a copy.

## **2. Compatibility with Acknowledged City and County Comprehensive Plans**

Pursuant to OAR 731-015-0065(2), letters requesting a compatibility determination were sent by US Mail to the affected jurisdictions of Medford and Jackson County. A letter dated October 22, 2007 was received from the City of Medford, stating that the IAMP was consistent with the goals, policies, and implementation strategies of the Medford Comprehensive Plan, including the 2003 Transportation System Plan and with ordinance language in the Medford Land Development Code. This letter is included as Attachment D.

No written comment was received from Jackson County in response to the letter sent to them on September 21, 2007. OAR 731-015-0065 provides that if no comment is received from a notified jurisdiction within 30 days of the Department's request for a compatibility determination, the Department shall deem that the draft plan is compatible with that jurisdiction's acknowledged comprehensive plan. Based upon this provision and the following findings, it may be determined that the South Medford IAMP is consistent with goals and policies of Jackson County's Comprehensive Plan.

### **City of Medford**

The City of Medford Comprehensive Plan was adopted in 1975 and was last updated in 1997, with a planning period target date of 2010. Most of the land within the IAMP study area is within the jurisdiction of the City of Medford. There are transportation-related policies that refer to automobile, street hierarchy and development, public transportation, bicycle transportation, pedestrian access and coordination with the Medford Airport.

The Medford TSP establishes the City's short and long-term goals and objectives for meeting existing transportation needs and includes short, medium and long-range projects. The South Medford Interchange project is listed as an ODOT Tier 1 short-range (2004-2008) improvement (project number 3, TSP Table 13-2). The TSP also addresses planning for future growth and improvements necessary for providing an effective multimodal transportation system. One of the fundamental strategies of the TSP is to reduce reliance on the automobile by promoting changes in land use patterns and transportation systems that make it more convenient for people to walk, bicycle, use transit, and drive less to meet their daily needs.

The Medford TSP has eight goals with accompanying policies and implementation strategies. The IAMP includes the following goals and policies, which support protection of the interchange function:

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**Goal 2:** To provide a comprehensive street system that serves the mobility and multi-modal transportation needs of the Medford planning area.

**Policy 2-G:** The City of Medford shall undertake efforts to reduce per capita vehicle miles traveled (VMT) and single-occupancy vehicle (SOV) demand through TDM strategies.

**Policy 2-M:** The City of Medford shall undertake efforts to contribute to a reduction in the regional per capita parking supply to promote the use of alternatives to the single occupancy motor vehicle.

**Goal 8:** To maximize the efficiency of Medford's transportation system through effective land use planning.

**Policy 8-B:** The City of Medford shall undertake efforts to increase the percentage of dwelling units and employment located in Medford's adopted TODs, consistent with the targeted benchmarks in the Alternative Measures of the RTP.

**Findings:** The TSP identifies the South Medford interchange project as a short-term Tier One improvement (project number 3, Table 13-2). The TSP also states that a key element of the project is the development of an IAMP for the new interchange. The City of Medford provided input on the population and employment data used in the regional transportation forecasting model used for the IAMP traffic analysis. ODOT coordinated with the City of Medford throughout the IAMP planning process and representatives from the City of Medford served on the IAMP TAC. The IAMP preparation process, including the TAC meetings, provided a forum for discussing issues related to land use. Based on the traffic operations analysis, the IAMP concluded that only two management measures were recommended to protect the function of the interchange for the 20-year planning period.

Management Measure #1 of the IAMP requires that ODOT continue to implement the Access Management Strategy – South Medford Interchange Project, 2003, which was developed in the design phase of the project.

Management Measure #2 includes the goals and policies from the Medford TSP (listed above) and ordinance language from the Land Development Code that support the protection of the new interchange. The policies cited above, which are directed at reducing VMT and reliance upon SOVs, work to reduce traffic congestion both on local streets and on the new interchange. Encouraging more intense development in Transit Oriented Development areas, which contain mixed uses, bike and pedestrian facilities and transit service, will benefit both the interchange and the local street network, by reducing vehicle use and congestion. All of Medford's identified TODs are located outside the South Medford Interchange study area, which assures the City's intent to focus future development to areas outside the interchange area.

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## **City of Medford Land Development Code (2001)**

Land Development Code Sections 10.146 (Referral Agencies, Distribution), 10.227 (Zone Change Criteria), Section 10.462 (Maintenance of level of Service D) and 10.744 (Joint Use of Parking Facilities) support management measures that will serve to protect the function of the new interchange. These sections are as follows:

**Section 10.146 Referral Agencies, Distribution:** Establishes the types of plan authorizations that the City notifies other agencies for review. This section requires the City Planning Department to notify ODOT regarding all major comprehensive plan amendments or amendments to the City's TSP. ODOT is also notified when other land use actions (including zone changes, Planned Unit Developments, land divisions and site plan reviews) occur in the proximity or adjacent to a state facility.

**Section 10.227 Zone Change Criteria:** Requires applicants to demonstrate that Category A urban services or facilities are available, or can and will be provided for the subject property. Streets and street capacity must be provided by either i) streets that presently exist and have adequate capacity, ii) existing streets that will either be improved or new streets constructed to provide adequate capacity, by the time of building permit issuance, iii) for streets that must be constructed or improved, the Planning Commission may find that the street to be adequate if improvements are fully funded, iv) for streets that need to be improved, specific improvements must be identified and demonstrated to result in street adequacy.

**Section 10.462 Maintenance of Level of Service D:** Whenever level of service is determined to be below level D for arterials or collectors, development is not permitted unless the developer makes the roadway or other improvements necessary to maintain level of service D respectively.

***Finding:*** The requirement for ODOT notification enables ODOT planners and engineers to review development proposals that could affect state facilities, to require the completion of traffic impact studies assessing the impact and to apply appropriate mitigation to manage the impact from development. The requirements for adequate facilities, particularly when these improvements occur in the interchange's management area, assure the provision of a suitable local street network that will effectively handle local traffic and protect the function of the interchange. The requirement for the maintenance of Level of Service D will also assure that the function of local streets is protected to enable them to serve as a viable alternative to state facilities. The City of Medford has issued a letter dated October 22, 2007, stating that the IAMP is consistent with the City's TSP and Land Development Code, and that the City supports the OTC adoption of the SMI IAMP.

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## **Jackson County**

The Jackson County Comprehensive Plan was originally adopted in 1972. The County Board of Commissioners approved amendments to the plan on January 12, 2004, which became effective March 12, 2004. The County's Comprehensive Plan is the official long-range land use policy document for Jackson County. The plan sets forth general land use planning policies and allocates land uses to resource, residential, commercial and industrial categories. The plan serves as the basis for the coordinated development of physical resources and the development or redevelopment of the county based on physical, social, economic and environmental factors.

The update of the Jackson County TSP was approved on March 15, 2005 and went into effect on May 15, 2005. The TSP has livability, modal components, and integration goals with associated policies and strategies to implement each goal. The livability goal is "to develop and maintain a safe and multi-modal transportation system capable of meeting the diverse transportation needs of Jackson County while minimizing adverse impacts to the environment and to the County's quality of life." There are no policies or strategies related to this goal specifically applicable to the interchange project. However, the TSP does include policies to support freight mobility and coordination between the County and ODOT. There are also bicycle and pedestrian-related policies applicable to the project area listed in TSP Section 4.2.4-A,d. The South Medford Interchange Reconstruction Project will address these TSP pedestrian and bicycle policies by including pedestrian and bicycle amenities on the Highland-Garfield connector which is the crossroad for the new interchange.

***Findings:*** A portion of the IAMP study area, which is outside of the Medford city limits, is in the UGB and under Jackson County jurisdiction. The majority of these parcels are located along the railroad tracks and south of Barnett Road. The majority of county land is designated for industrial and commercial uses.

ODOT coordinated with Jackson County throughout the IAMP planning process. Jackson County provided input on the population and employment data used in the regional transportation forecasting model used for the IAMP traffic analysis. A representative from the Jackson County Roads Department served on the IAMP TAC. The IAMP preparation process, including the TAC meetings, provided a forum for discussing issues related to land use. Based on the traffic operations analysis, the IAMP concluded that no land use actions were needed to protect the function of the interchange for the 20-year planning period.

### **3. Compliance with Applicable Statewide Planning Goals**

Relevant statewide planning goals adopted by the LCDC include: Goal 1 (Citizen Involvement); Goal 2 (Land Use Planning); Goal 11 (Public Facilities); Goal 12 (Transportation); and Goal 14 (Urbanization).

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## **Goal 1: Citizen Involvement**

Goal 1 requires that citizens have the opportunity to be involved in all phases of the planning process. For the IAMP's planning process, Goal 1 requires that ODOT enable public involvement in the plan development process.

***Finding:*** The South Medford Interchange Area Management Plan (SMI IAMP) was prepared with participation from the City of Medford, Oregon Department of Transportation (ODOT), Jackson County, the Department of Land Conservation and Development (DLCD) and the Rogue Valley Metropolitan Planning Organization. Other stakeholders and the general public were also given numerous opportunities to provide input. The IAMP Technical Advisory Committee was comprised of representatives from ODOT, the City of Medford, the Oregon Department of Land Conservation and Development (DLCD), the Rogue Valley Metropolitan Planning Organization, and Jackson County. This group met seven times and actively participated in the plan development process. Meetings dates and locations are listed in the findings of compliance with the Coordination Procedures, Section 1.

A public meeting was held in the Medford City Hall on May 25, 2005 to introduce the concept of the IAMP and to enable public comment. Prior to the meeting, ODOT issued a news release in the Medford Mail Tribune, announcing the public meeting. In addition, five informational presentations were made before City of Medford bodies in the Medford City Hall. Meeting dates and groups are also listed in the findings of compliance with the Coordination Procedures, Section 1. Agendas for these meetings were placed on the City's website prior to the meeting date and these meetings were open for public attendance. As both agency representatives and the general public were given a variety of opportunities for involvement in the IAMP development process, the process can be found to be consistent with Goal 1.

## **Goal 2: Land Use Planning**

Goal 2 requires planning coordination between those local governments and state agencies "which have programs, land ownerships, or responsibilities within the area included in the plan." In this case, Goal 2 requires that ODOT coordinate with the City of Medford, Jackson County, the RVMPO, and the DLCD. Goal 2 also 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.

***Finding:*** The majority of the study area is within the City of Medford UGB, which has planning authority over the area, although there are also some pockets of land within the study area that remain under Jackson County planning authority. The City of Medford recently annexed some of the county parcels within the study area. The entire Rogue Valley area is designated as a metropolitan area and is served by the RVMPO. ODOT coordinated with the Rogue Valley Metropolitan Planning Organization (RVMPO), Jackson County, and the City of Medford throughout the IAMP planning process. RVMPO, Jackson County, and the City of Medford provided input regarding population and employment data for the regional transportation forecasting model that was used for the IAMP traffic

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analysis. Representatives from RVMPO, Jackson County, the City of Medford and the DLCDC served on the IAMP TAC. The IAMP preparation process, which including the TAC meetings, a public meeting and presentations before Medford City bodies, provided a forum for discussing issues related to land use.

TAC jurisdictions and agencies were also given the opportunity to comment on the draft plan. These Coordination Procedures are discussed in Section 1. The IAMP can be found consistent with the plans and policies of the City of Medford, Jackson County, and the Rogue Valley Metropolitan Organization.

DLCDC comment requested the addition of policy language to the IAMP, stating that new development should not exceed land use assumptions in the IAMP unless the IAMP is amended to reflect the new assumptions. Department response clarified that the traffic analysis for the IAMP was based upon the regional traffic forecasting model that was used for both the Environmental Impact Statement (EIS) for the new interchange and for the 2005-2030 Regional Transportation Plan (RTP). Consistency between the IAMP, the EIS and the RTP is an important component of the planning process. Also, the traffic analysis that was conducted both for traffic anticipated in the RTP and for an alternative scenario that added even more trips, indicated that OHP mobility standards would clearly be met in 2030. Even so, the IAMP still includes a management measure that recognizes the importance of continuing to implement the effective Access Management Strategy that is being built into the project. A second management measure recommends that the IAMP be adopted with City TSP policies and ordinance language that further serve to protect the facility. Any amendment to these local policies or code language would require that the OTC approve a corresponding amendment to the IAMP. It is ODOT's position that the SPUI has been designed to function consistent with OHP mobility standards and that the IAMP contains adequate additional protection for the SPUI's function. The IAMP can be found to be consistent with Goal 2.

### **Goal 11: Public Facilities and Services**

Goal 11, Public Facilities and Services, requires 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."

***Finding:*** The purpose of the South Medford Interchange Reconstruction Project is to reduce congestion while improving both the function and safety of the interchange. The goals of the IAMP are to "maintain the function of the interchange over the 20-year planning period to preserve the investment in the facility" and to "minimize the need for future major improvements to the interchange." The IAMP traffic analysis is based on the population and employment data used in the 2005-2030 Regional Transportation Plan. The traffic analysis confirmed that the new Single Point Urban Interchange (SPUI) will

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meet ODOT mobility standards in 2030, using the RTP assumptions for population and employment growth. The IAMP is consistent with Goal 11.

### **Goal 12: Transportation**

Goal 12, Transportation, requires cities, counties, MPOs, and ODOT to provide and encourage a safe, convenient and economic transportation system. This is accomplished through development of TSPs based on inventories of local, regional and state transportation needs. Goal 12 is implemented through OAR 660, Division 12, the Transportation Planning Rule (TPR). 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 major purpose of the TPR is to promote more careful coordination of land use and transportation planning, to assure that planned land uses are supported by and consistent with planned transportation facilities and improvements.

OAR 660-012-0060, Plan and Land Use Regulation Amendments requires action by the local government when a plan amendment or land use regulation significantly affects a transportation facility. An amendment or regulation significantly affects if it “reduces the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan” (section (1)(c)(B)).

660-012-0060 (3) (d) does not allow a local government to approve an amendment for a property located in an interchange area that would significantly affect a facility without assuring that land uses are consistent with facility standards. Section (4)(d) (C)(ii) defines an interchange area as designated in an adopted IAMP.

***Finding:*** The TPR Plan and Land Use Regulation Amendments section (OAR 660-012-0060) provides protection for the function of the SMI. The OHP identifies the minimum acceptable performance standard for I-5 as 0.80 volume-to-capacity (v/c) ratio. Upon OTC adoption of the SMI IAMP, the City of Medford will be required to implement one or more measures listed in section 660-012-0060 (2) if it approves a plan amendment or land use regulation that would reduce the performance of I-5 below 0.80 or the SMI ramps below 0.85 v/c. The five allowable measures are to demonstrate that land uses would be consistent with the facility, amend the TSP to provide improvements, alter land use regulations to reduce demand, amend the TSP to modify the facility standards, or require TSM or TDM measures or improvements (including timing) as a condition of development. These measures reflect some of the potential management actions listed in Section 7 and Appendix A of the SMI IAMP. In addition, 660-012-0060 (4) requires local governments to coordinate with the affected transportation facility provider in making the determination of effect. Therefore, the City of Medford must coordinate with ODOT in determining whether a plan amendment or regulation would significantly affect I-5 or the SMI.

Using the forecast population and employment values from the RTP and the traffic volumes forecast using the regional traffic model, the operational analysis

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showed that the SPUI would meet ODOT mobility standards in year 2030 (20-year operational life). In addition, analysis also was conducted for an alternative development scenario that assumed more residential development and a higher trip generation from employment uses in the study area than contained in the regional transportation model. Both of these two analyses ensured that the planned land uses assumed in the RTP and City of Medford comprehensive plan would be supported by and are consistent with the capacity of the new SPUI.

However, to assure that the SPUI is protected through and beyond the planning period, the IAMP recommends the application of two management measures. Management Measure #1 of the IAMP requires that ODOT continue to implement the Access Management Strategy – South Medford Interchange Project, 2003, which was developed in the design phase of the project. IAMP Management Measure #2 requires that goals and policies from the Medford TSP and Land Development Code language be included in the adopted IAMP. The IAMP is consistent with Goal 12 and the TPR.

#### **Goal 14: Urbanization**

Goal 14, Urbanization, requires an orderly and efficient transition from rural to urban land use. This is accomplished through the establishment of urban growth boundaries (UGBs) and unincorporated communities. UGBs and unincorporated community boundaries separate urbanizable land from rural land. The compact development that Goal 14 fosters helps contain the costs of public facilities such as transportation by reducing the need for facilities further out and helping jurisdictions better anticipate where growth will occur.

***Finding:*** The IAMP study area is entirely within the UGB. The study area includes parcels under Jackson County jurisdiction, most of which are industrial and commercial. The City of Medford recently annexed some of the parcels within the UGB and designated them SFR-00 and C-R. The IAMP traffic analysis uses the same land use assumptions about the parcels as the RTP, which RVMPO developed in agreement with Jackson County, the City of Medford, and ODOT. The IAMP is consistent with Goal 14.

#### **4. Compatibility with Other Modal Plans and the OTP**

##### **Oregon Transportation Plan (2006)**

The Oregon Transportation Plan (OTP) is a policy document developed by ODOT in response to the federal and state mandates for systematic planning for the future of Oregon's transportation system. The OTP is intended to meet the statutory requirements of ORS 184.618(1), to develop a state transportation policy and comprehensive long-range plan for a multi-modal transportation system that addresses economic efficiency, orderly economic development, safety and environmental quality.

***Finding:*** The OTP does not specifically address improvements to the South Medford Interchange, but offers a broad policy framework and standards for

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improving state highway systems. The IAMP has been developed to be compatible with the OTP, specifically the Oregon Highway Plan which is an element of the OTP.

### **Oregon Highway Plan (1999)**

The Oregon Highway Plan (OHP), a modal element of the OTP, 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 roads, bicycle, pedestrian, transit, rail, and air systems. Findings for the applicable goals and policies are as follows;

#### **Goal 1 - System Definition**

##### **Policy 1A - State Highway Classification System**

This policy calls for ODOT to apply the state highway classification system to guide priorities for system investment and management.

**Finding:** The OHP classifies I-5 as an Interstate Highway. In 1995, the U.S. Congress established the National Highway System (NHS), which classifies the roadways in each state that are critical to the movement of interstate commerce. I-5 is part of the NHS system. The South Medford Interchange Reconstruction Project and the SMI IAMP support the interstate classification by demonstrating that mobility standards will be met for at least the 20-year planning period.

##### **Policy 1B - Land Use and Transportation**

This policy recognizes the role of both the State and local governments related to the state highway system and calls for a coordinated approach to land use and transportation planning.

**Finding:** Coordination with local jurisdictions occurred throughout the preparation of the IAMP. The IAMP Technical Advisory Committee was comprised of representatives from ODOT, the City of Medford, the Oregon Department of Land Conservation and Development (DLCD), the Rogue Valley Metropolitan Planning Organization, and Jackson County. This group met seven times and actively participated in the plan development process. Meetings dates and locations are listed in the findings of compliance with the Coordination Procedures, Section 1.

TAC jurisdictions and agencies were also given the opportunity to comment on the draft plan. These Coordination Procedures are discussed in Section 1. The IAMP can be found consistent with the plans and policies of the City of Medford, Jackson County, and the Rogue Valley Metropolitan Organization. Comment from the DLCD state that new development should not exceed land use assumptions in the IAMP unless the IAMP is amended to reflect the new

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assumptions. Department response clarified that the traffic analysis for the IAMP was based upon the regional traffic forecasting model that was used for both the Environmental Impact Statement (EIS) for the new interchange and for the 2005-2030 Regional Transportation Plan (RTP). Consistency between the IAMP, the EIS and the RTP is an important component of the planning process. Also, the traffic analysis for the SPUI, conducted both for traffic levels anticipated in the RTP and for an alternative scenario that added even more trips, indicated that OHP mobility standards would clearly be met in 2030. Even so, the IAMP still includes a management measure that recognizes the importance of continuing to implement the effective Access Management Strategy that is being built into the project. A second management measure recommends that the IAMP be adopted with City TSP policies and ordinance language that further serve to protect the facility. Any amendment to these local policies or code language would require that the OTC approve a corresponding amendment to the IAMP. It is ODOT's position that the SPUI has been designed to function consistent with OHP mobility standards and that the IAMP contains adequate additional protection for the SPUI's function. The IAMP can be found to be consistent with Policy 1B.

### **Policy 1C - State Highway Freight System**

This policy recognizes the need for the efficient movement of freight through the state. I-5 is listed as a Designated Freight Route.

**Finding:** The South Medford Interchange is located on Interstate 5, which is listed in the OHP as a designated freight route. IAMP traffic operations analysis accounted for freight movement as well as passenger vehicle movement. The project to construct a new South Medford Interchange will greatly improve the movement of freight, in addition to providing needed capacity and improving both operation and safety.

### **Policy 1F - Highway Mobility Standards**

This policy addresses the state highway performance expectations, providing guidance for managing access and traffic control systems related to interchanges. This policy 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:** Using population and employment values from the RTP and the traffic volumes forecast by the regional traffic forecasting model, the IAMP traffic analysis showed that the new SPUI would meet ODOT mobility standards in year 2030 with an overall volume-to-capacity (v/c) ratio of 0.58. This clearly meets the OHP mobility standard for the SPUI of 0.85. A traffic analysis was also conducted for an alternative development scenario that added additional trips for employment and also assumed more dwelling units, for a total of 2,600 additional trips beyond the amount assumed in the RTP. The traffic analysis indicated that

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for this alternative development scenario, the v/c ratio for the interchange as a whole would be 0.70 in year 2030, also meeting the OHP standards.

The IAMP also recommends a Highway Classification and mobility standard for a new facility. The Highland-Garfield Connector will be the new crossroad for the SPUI. The IAMP establishes a classification of Local Interest Road for this facility, with a current OHP mobility standard of 0.90.

### **Policy 1G - Major Improvements**

This policy emphasizes the state's preference for improving system efficiency and management before adding capacity.

**Finding:** The new interchange replaces the existing interchange at Barnett Road. The existing on- and off-ramps at Barnett Road will be removed, leaving Barnett Road to serve as the main east-west arterial overpass in the study area. Completion of the new interchange will enable related improvements to the City's street system such as creating new limited-access local streets and improvements to Barnett Road. The construction of the new interchange will both add capacity, while operating more safely and efficiently than did the Barnett Road interchange. A new interchange crossroad, the Highland-Garfield Connector, will also be constructed.

### **Goal 2: System Management:**

#### **Policy 2B - Off-System Improvements**

This policy helps local jurisdictions adopt land use and access management policies;

**Finding:** The IAMP operational analysis evaluated whether the new SPUI would meet ODOT mobility standards in 2030, using forecast population and employment values from the RTP and the traffic volumes forecast using the regional traffic forecasting model. A second traffic analysis was also conducted using an alternative development scenario, which assumed that an additional 2,600 trips would be added in the study area. The analysis showed that the new SPUI would meet ODOT mobility standards in both cases. The IAMP relies upon the fact that the Access Management Strategy—South Medford Interchange (2003), is being implemented with the construction of the new interchange. This effective strategy includes numerous treatments to both state and local facilities. The IAMP concludes the implementation of the Access Management Strategy will provide sufficient access management for the SPUI and that the City of Medford and Jackson County do not need to amend existing land use and access management policies.

### **Policy 2D - Public Involvement**

This policy which ensures that citizens, local governments, state agencies, and organizations have input into decisions about the state highway system.

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**Finding:** The SMI IAMP was prepared with participation from the City of Medford, ODOT, Jackson County, the DLCD, the RVMPO and with input from a variety of stakeholders and the general public. The IAMP TAC, comprised of representatives from ODOT, DLCD, the City of Medford, RVCOG, and Jackson County, met seven times. A public meeting was held in the Medford City Hall on May 25, 2005 to introduce the concept of the IAMP and to enable comment. Five informational presentations were made before City of Medford bodies. On November 11, 2004 a presentation was made before the Medford City Council; on January 25, 2006 a presentation was made before the Joint Transportation Subcommittee; on the February 26, 2007 the presentation was to a joint meeting of the City of Medford Planning Commission and Joint Transportation Subcommittee. Study sessions were held with the City Council on September 13, 2007 and with the Planning Commission on September 24, 2007. The agendas for all public meetings were placed on the City's website prior to the meetings, and all meetings were open to the public.

### **Policy 2F - Traffic Safety**

This policy emphasizes the state's efforts to improve the safety of all uses of the highway system.

**Finding:** The Environmental Impact Statement (2001) prepared for the South Medford Interchange Reconstruction Project evaluated safety and crash data at the existing interchange. Safety was also a primary consideration in the design of the new SPUI.

### **Goal 3: Access Management**

#### **Policy 3A - Classification and Spacing Standards**

This policy addresses the location, spacing and type of road and street intersections and approach roads on state highways.

#### **Policy 3C - Interchange Access Management Areas**

This sets policy for managing interchange areas by developing an IAMP that identifies and addresses current interchange deficiencies and short, medium and long term solutions. OAR 734-051 governs the permitting, management, and standards of approaches to state highways to ensure safe and efficient operation of the state highways. Section 734-051-0125, Access Management Spacing Standards for Approaches in an Interchange Area establishes interchange management area access spacing standards.

**Finding:** ODOT developed the Access Management Strategy for the new South Medford Interchange, in accordance with OAR 734-051. The strategy includes an inventory of the existing public and private approaches and findings for compliance with Division 51 standards. The IAMP relies upon the fact that the Access Management Strategy—South Medford Interchange Project (2003), developed during the project design phase, will be implemented during the

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construction of the facility. This implementation constitutes Management Measure #1 of the IAMP. A Key feature of this strategy is full access control along the Highland-Garfield Connector, which is the SPUI's new crossroad. Another major access management component is the removal of the Barnett Road freeway ramps, which will occur when the new SPUI is operational. There will also be numerous other access treatments to both state facilities and the local street system, to enable the safe and efficient operation of the SPUI. Section 8 of the IAMP, which is in Attachment C, details the location and extent of these access treatments. With the implementation of this strategy, the IAMP is consistent with OAR 734-051.

#### **Goal 4: Travel alternatives**

##### **Policy 4A – Efficiency of Freight Movement**

This policy emphasizes the State's role in managing access to highway facilities in order to maintain functional use, safety and to preserve public investment.

**Finding:** The South Medford Interchange is located on Interstate 5, which is listed in the OHP as a designated freight route. IAMP traffic operations analysis accounted for freight movement as well as passenger vehicle movement. The project to construct a new South Medford Interchange will greatly improve the movement of freight, as in addition to providing needed capacity, operational features and safety will also be improved.

#### **5. Compatibility with the Rogue Valley Metropolitan Planning Organization 2005-2030 Regional Transportation Plan (Amended 2005)**

The RTP is a multi-modal transportation plan designed to meet the anticipated 25 year transportation needs within the MPO planning area boundary. The RTP serves as a guide for the management of existing transportation facilities and for the design and implementation of future transportation facilities through the year 2030. There are 12 RTP goals, each with several associated objectives. Those relevant to IAMP consistency are:

**Goal 1.** Plan for, develop, and maintain a balanced multi-modal transportation system that will address existing and future needs for transportation of people and goods in the region.

**Goal 2.** Optimize safety and security on the transportation system.

**Goal 3.** Use transportation investments to foster compact, livable communities. Develop a plan that builds on the character of the community, is sensitive to the environment, and enhances quality of life.

**Policy 3-2.** Local governments shall consider amending their Comprehensive Plans to promote mixed-use or higher density developments in urban areas that will lower the vehicular demand on the regional transportation system. These

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plans will facilitate transit-oriented development (TOD) in current and future RTP designated TOD areas.

**Policy 3-5.** Prioritize investments to ensure existing transportation system preservation.

**Goal 5.** Maximize the efficient utilization of existing and future transportation infrastructure to facilitate smooth movement of people and motorized and non-motorized vehicles.

**Goal 7.** Provide an open, balanced, and credible process for planning and developing a transportation system that complies with state and federal regulations.

**Policy 7-2.** Coordinate the planning for existing and future land use and development with the planning of the transportation system.

**Findings:** The IAMP goals parallel the RTP goals. The IAMP goals to “maintain the function of the interchange over the 20-year planning period to preserve the investment in the facility” and “minimize the need for future major improvements to the interchange” support RTP Goal 1 (to maintain the system for existing and future needs) and Goal 5 (to maximize existing and future infrastructure). The purpose of the IAMP to protect the function of the interchange over time is consistent with Policy 3-2, which seeks to lower vehicular demand on the regional transportation system by encouraging development in Transit Oriented Districts (TODs). All of the City’s designated TODs are outside the interchange management area. Policy 3-5 reflects the IAMP goal “to preserve the investment in the facility.” The South Medford Interchange Reconstruction Project was initiated and designed to reduce congestion while improving the safety and function of the interchange, which demonstrates consistency with RTP goals 2 and 5.

The IAMP traffic analysis used the population and employment values from the RTP and the traffic volumes forecast by the regional traffic model, to demonstrate that the new SPUI would meet ODOT mobility standards in year 2030. The RTP street system project list identifies construction of the new South Medford Interchange as a Short Range project (project number 900 in Figure 8-3) to be funded by ODOT and the City of Medford. Short-range projects are expected to be needed within five years of plan adoption. The IAMP can be found to be consistent with the RTP.

## **6. Assurance that the Department is not Exceeding its Authority**

The OTC will adopt the SMI IAMP as a facility plan element of the Oregon Highway Plan (OHP). ODOT Region 3 is implementing the Access Management Strategy (AMS) as the project is being constructed. A new interchange crossroad, the Highland-Garfield Connector, will also be constructed. ODOT will continue to coordinate with the City of Medford through the plan amendment and development review process, to keep existing land use protections in place.

## ATTACHMENT C

### Interstate 5 South Medford Interchange Area Management Plan (IAMP)

Copies of the Interstate 5 South Medford Interchange Area Management Plan can be obtained by downloading it at:

<ftp://ftp.odot.state.or.us/outgoing/OTC/>

Please click on the file named South Medford IAMP.

Shirley Roberts, Planner  
ODOT Region 3  
P. O. Box 3275  
Central Point, OR 97502

(541) 423-1362

[sroberts@rvcoq.org](mailto:sroberts@rvcoq.org)



# Planning Department

*Continuous Improvement – Customer Service*

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City Hall – Lausmann Annex • Room 240 • 200 South Ivy Street • Medford, Oregon 97501

October 22, 2007

Shirley Roberts, Planner  
ODOT Region 3  
P.O. Box 3275  
Central Point, OR 97502

Dear Shirley,

City of Medford staff has completed a review of the South Medford Interchange Area Management Plan, draft of September 18, 2007. City staff members participated on the Technical Advisory Committee that guided the development of the Interchange Area Management Plan (IAMP). This draft IAMP appears to be consistent with the goals, policies, and implementation strategies of the *Medford Comprehensive Plan*, including the 2003 Transportation System Plan, and with ordinance language in the *Medford Land Development Code*.

We encourage the Oregon Transportation Commission to adopt the South Medford IAMP. Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

Robert O. Scott, A.I.C.P.  
Planning Director

September 21, 2007

Rob Scott, Planning Director  
City of Medford, Lausmann Annex  
200 South Ivy Street  
Medford, OR 97501

Dear Rob:

Included here and in the cover e-mail is a link to the ftp site containing the final draft (9-18-07) of the Interchange Area Management Plan (IAMP) for the new South Medford Interchange:

<ftp://ftp.odot.state.or.us/Reg3Planning/>

The SMI IAMP file includes the plan, figures and appendices developed by the City and ODOT with oversight from Technical Advisory Committee, and it is too large to send electronically. IAMP's are intended to consider the traffic generation impact of land uses upon the interchange, with the intent of protecting the function of the interchange over at least the 20-year planning period. They are required for all new and substantially modified interchanges, as established by Oregon Administrative Rule section 734-051-0155.

The purpose of this letter is to ask that you please provide a letter indicating that the IAMP is consistent with City plans, policies and ordinances and encouraging OTC adoption. Please provide this comment letter within 30 Days (by October 20, 2007) in order to meet the agency coordination review deadline. A template letter has been attached for your use, if you wish.

I appreciate your review of and comment on the South Medford IAMP. Please send your letter to me at: P. O. Box 3275, Central Point, OR 97502. You may contact me at (541) 423-1362 if you have any questions regarding this matter.

Sincerely,



Shirley Roberts, Planner 3  
ODOT Region 3 Planning



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200 Antelope Road  
White City, OR 97503  
Phone (541) 774-6350  
Fax (541) 830-6408



# Planning Department

*Continuous Improvement – Customer Service*

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City Hall – Lausmann Annex • Room 240 • 200 South Ivy Street • Medford, Oregon 97501

October 22, 2007

Shirley Roberts, Planner  
ODOT Region 3  
P.O. Box 3275  
Central Point, OR 97502

Dear Shirley,

City of Medford staff has completed a review of the South Medford Interchange Area Management Plan, draft of September 18, 2007. City staff members participated on the Technical Advisory Committee that guided the development of the Interchange Area Management Plan (IAMP). This draft IAMP appears to be consistent with the goals, policies, and implementation strategies of the *Medford Comprehensive Plan*, including the 2003 Transportation System Plan, and with ordinance language in the *Medford Land Development Code*.

We encourage the Oregon Transportation Commission to adopt the South Medford IAMP. Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

A handwritten signature in cursive script that reads "Robert O. Scott".

Robert O. Scott, A.I.C.P.  
Planning Director

September 21, 2007

Vicki Guarino, Planning Program Manager  
Rogue Valley Metropolitan Planning Organization  
P. O. Box 3275  
Central Point, OR 97502

Dear Vicki:

Enclosed is a copy of the Interchange Area Management Plan (IAMP) for the new South Medford Interchange, currently being constructed approximately one-half mile south of the existing Interstate 5 Interchange at Barnett Road. IAMP's are intended to consider the traffic generation impact of land uses upon the interchange, with the intent of protecting the function of the interchange over at least the 20-year planning period. They are required for all new and substantially modified interchanges, as established by Oregon Administrative Rule section 734-051-0155.

The purpose of this letter is to ask that you please provide a letter indicating if this IAMP for the new interchange is compatible with any applicable plans, policies and regulations, from the perspective of the RVMPO. Please provide this comment letter within 30 Days (by October 21, 2007) in order to meet the agency coordination review deadline.

I appreciate your review of and comment on the South Medford IAMP. Please send your letter to me at: P. O. Box 3275, Central Point, OR 97502. You may contact me at (541) 423-1362 if you have any questions regarding this matter.

Sincerely,



Shirley Roberts, Planner 3  
ODOT Region 3 Planning





**Rogue Valley  
Metropolitan Planning Organization**

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**Regional Transportation Planning**

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Ashland • Central Point • Eagle Point • Jacksonville • Medford • Phoenix • Talent • White City  
Jackson County • Rogue Valley Transportation District • Oregon Department of Transportation

Oct. 19, 2007

Shirley Roberts, Planner 3  
ODOT Region 3  
P.O. Box 3275  
Central Point, OR 97502

Dear Ms. Roberts:

The Rogue Valley Metropolitan Planning Organization appreciates the opportunity to review and comment at the staff level on the South Medford Interchange Area Management Plan, Sept. 18, 2007. Staff has reviewed the plan and finds that it is consistent with goals, policies and other provisions of the 2005-2030 Regional Transportation Plan. In particular, the IAMP furthers the following goals:

- Goal 1: Plan for, develop and maintain a balanced multi-modal transportation system that will address existing and future needs for transportation of people and goods in the region.
- Goal 3: Use transportation investments to foster compact, livable communities.
- Goal 4: Develop a plan that can be funded and that reflects responsible stewardship of public funds.
- Goal 5: Maximize the efficient utilization of existing and future transportation infrastructure to facilitate smooth movement of people and motorized and non-motorized vehicles.
- Goal 6A: Foster increased transportation demand management to reduce reliance on single-occupancy vehicles.
- Goal 6B: Manage parking supply in a manner that discourages reliance on single-occupancy vehicles.
- Goal 9: Encourage use of cost-effective emerging technologies where appropriate to achieve regional transportation goals and policies.
- Goal 10: Use transportation investments to foster economic opportunities.

Additionally, as noted in our previous comment (April 9, 2007 letter), travel-demand forecasts used in this IAMP were completed using assumptions obtained from the RVCOG regional travel demand model, consistent with the RVMPO 2005-2030 Regional Transportation Plan.

I would be happy to provide additional information, if needed.

Sincerely,

Vicki Guarino  
RVMPO manager

September 21, 2007

Susan Lee, Planning Director  
Jackson County Planning Department  
10 S. Oakdale, Room 100  
Medford, OR 97501

Dear Susan:

Enclosed is a copy of the Interchange Area Management Plan (IAMP) for the new South Medford Interchange, currently being constructed approximately one-half mile south of the existing Interstate 5 Interchange at Barnett Road. IAMP's are intended to consider the traffic generation impact of land uses upon the interchange, with the intent of protecting the function of the interchange over at least the 20-year planning period. They are required for all new and substantially modified interchanges, as established by Oregon Administrative Rule section 734-051-0155.

The purpose of this letter is to ask that you please provide a letter indicating if this IAMP for the new interchange is consistent with any applicable plans, policies and regulations, from the perspective of Jackson County. Please provide this comment letter within 30 Days (by October 21, 2007) in order to meet the agency coordination review deadline.

I appreciate your review of and comment on the South Medford IAMP. Please send your letter to me at: P. O. Box 3275, Central Point, OR 97502. You may contact me at (541) 423-1362 or at [sroberts@rvcog.org](mailto:sroberts@rvcog.org) if you have any questions regarding this matter.

Sincerely,



Shirley Roberts, Planner 3  
ODOT Region 3 Planning



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200 Antelope Road  
White City, OR 97503  
Phone (541) 774-6350  
Fax (541) 830-6408

November 5, 2007

Terry Harbour, Planning Manager  
ODOT Region 3  
3500 NW Stewart Parkway  
Roseburg, OR 97470-1687

Dear Terry:

The South Medford Interchange Area Management Plan (IAMP) is scheduled to go before the Oregon Transportation Commission on Wednesday, December 12, 2007. The State Agency Coordination process requires that all affected Cities, Counties and MPO's receive copies of the IAMP and be given the opportunity to provide comment on plan requirements and consistency with the applicable comprehensive plan.

On September 21, 2007, a copy of the IAMP and a letter requesting review and comment were delivered to Susan Lee, Jackson County Planning Director. The letter requested that comment be provided indicating from the County's perspective, if the IAMP was consistent with any applicable plans, policies and regulations. It was stated in the letter that comment was needed before October 21, 2007, to meet the agency coordination review deadline. The deadline for this response passed two weeks ago.

Oregon Administrative Rule (OAR) 731-015-0065 provides that if no comment is received from a notified jurisdiction within 30 days of the Department's request for a compatibility determination, the Department shall deem that the draft IAMP is compatible with that jurisdiction's acknowledged comprehensive plan. Based upon this provision, it may be determined that the South Medford IAMP is consistent with the goals and policies of Jackson County's Comprehensive Plan. Findings of Compliance, which is Attachment B in the OTC's packet, will reference this OAR provision. Please let me know if you would like any further follow-up on this.

Sincerely,



Shirley Roberts, Planner 3  
ODOT Region 3



September 21, 2007

Bob Cortright, TGM Coordinator  
Department of Land Conservation & Development  
635 Capital Street NE, Suite 200  
Salem, OR 97301

Dear Bob:

Included here is the final draft (9-18-07) of the Interchange Area Management Plan (IAMP) for the new South Medford Interchange.

The purpose of this letter is to ask that you please provide comment indicating if this IAMP for the new interchange is compatible with any applicable plans, policies and regulations, from the perspective of the DLCD. Please provide this comment letter within 30 Days (by October 20, 2007) in order to meet the agency coordination review deadline.

I appreciate your review of and comment on the South Medford IAMP. Please send your letter to me at: P. O. Box 3275, Central Point, OR 97502. You may contact me at (541) 423-1362 or [sroberts@rvcoq.org](mailto:sroberts@rvcoq.org) if you have any questions regarding this matter.

Sincerely,



Shirley Roberts, Planner 3  
ODOT Region 3 Planning





# Oregon

Theodore R. Kulongoski, Governor

Department of Land Conservation and Development

635 Capitol Street, Suite 150

Salem, OR 97301-2540

(503) 373-0050

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October 19, 2007

Ms. Shirley Roberts  
Region Planner  
Oregon Department of Transportation  
PO Box 3275  
Central Point, OR 97502

**Regarding: Final Draft South Medford Interchange Area Management Plan (IAMP)**

Dear Shirley:

Thank you for the opportunity to comment on the proposed South Medford Interchange Area Management Plan (SMIAMP). Our department continues to recommend that the IAMP include a policy and implementing measures that tie approval of new land uses, including plan amendments and zone changes, to the land use assumptions in the interchange area management plan. Without such measures, we believe the IAMP will not be effective in protecting the function of this interchange or maximizing the operational life of this significant state investment.

In May of this year, we recommended that the IAMP include a policy to be adopted by ODOT and the city that would tie land use approvals to the development assumptions in the IAMP. The essence of such a policy is that new development approved within the interchange should not exceed the land use assumptions in the IAMP without an amendment to the IAMP. We made this recommendation because current zoning around the interchange allows more development than is estimated in the IAMP and, that without such a policy, the IAMP will be ineffective in assuring that future land uses do not exceed the capacity of the interchange. Since the "final draft" version of the plan is essentially unchanged as it relates to this issue we would reiterate our earlier comments and recommendations. A copy of our May 1, 2007 letter is attached.

The pending zone change for the proposed Stewart Meadows Village development illustrates our concerns with the proposed IAMP. At the same time that we received the final draft of the IAMP, we received notice from the City of Medford of a proposed zone change for Stewart Meadows Village - a 72 acre site in the southwest portion of the interchange area. The Stewart Meadows property is located in transportation analysis zone (TAZ) 369 and makes up about one fourth of the land included in that TAZ. A comparison of the land use assumptions in the IAMP and the traffic impact analysis (TIA) for the proposed zone change demonstrates that the IAMP significantly underestimates the amount of development allowed under existing zoning:

Regarding: South Medford Interchange Area Management Plan

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- In rough terms, Stewart Meadows Village would result in three times as much development as is assumed in the IAMP for all of TAZ 369. The IAMP estimates that between 2002 and 2030 that TAZ 369 will add 63 new households and 388 new employees. The Stewart Meadows Village plan proposes a total of 298 housing units and approximately 1200 new employees on just the Stewart Meadows Village site.
- It is not clear what assumptions the Stewart Meadows TIA makes for development of other properties within TAZ 369 and there appears to be significant development potential under existing zoning that is not accounted for. For example, the Stewart Meadows Golf Course - covering 50-60 acres - is zoned for residential development and could allow 300-500 new homes.

The Stewart Meadows Village TIA also reinforces the concerns we expressed about ODOT's decision to rely on the application of the TPR and OHP to manage plan amendments and zone changes to protect the function of the interchange. Our May 1 letter explains why the TPR and OHP are likely to have little effect: applicants and the city could use existing zoning and the extra capacity in planned interchange improvements to conclude that zone changes would not have a "significant effect" under the TPR. Both seem to be at work here:

- Despite the significant difference between assumptions in the IAMP and the Stewart Meadows plan, the applicant characterizes the zone change request as rearranging the allowed land uses rather than increasing the amount of development allowed:

*"The current zoning supports the proposed land uses in the PUD; a zone change will be required in order to align the proposed land uses with the appropriate tax lots." (Stewart Meadows TIA, August 13, page 1)*

In short, the applicant argues that the uses proposed are allowed by existing zoning. Accepted at face value, a finding to this effect would allow the city to conclude that the proposed zone change does not trigger a significant effect under the TPR - and the zone change could be approved.

- The TIA finds that there is enough available capacity in the planned South Medford interchange to accommodate the additional traffic from Stewart Meadows Village without exceeding ODOT performance standards. (Traffic mitigation measures are needed but are limited to adding either traffic signals or turn lanes to city street intersections to meet city requirements.) The availability of "extra" capacity in planned interchange improvements allows the applicant and the city to conclude that the proposed development does not have a significant effect -- even though it generates much more development than is assumed in the IAMP.

October 19, 2007

Regarding: South Medford Interchange Area Management Plan

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Conclusion

Our department supports and encourages the development of interchange area management plans. We also appreciate the extensive work that goes into them. At the same time, it is important that adopted IAMPs include measures that will effectively accomplish their primary objective of improved coordination of land use and transportation decisions in interchange areas. In this case, we think it is clear that more work is needed to create an effective tool to manage and coordinate land development to assure that it is consistent with the long term function and operation of the interchange. Our May 1 letter recommends specific policy language that could be included in the IAMP to address this issue. In addition, the Woodburn Interchange Area Management Plan provides a good model for such policies and measures. We would be pleased to work with Region 3 staff and the city to refine the proposed plan to include a trip allocation policy and implementing measures.

If you have questions about our comments or if I can provide further information, please contact me at 503.373.0050 x241, or via email at [bob.cortright@state.or.us](mailto:bob.cortright@state.or.us).

Sincerely,



Robert Cortright  
Transportation Planning Coordinator

Attachment: DLCD Letter of May 1, 2007

cc: John Renz, DLCD Regional Representative  
Terry Harbour, ODOT Region 3  
Alex Georgevitch, City of Medford



# Oregon

Theodore R. Kulongoski, Governor

Department of Land Conservation and Development

635 Capitol Street, Suite 150

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May 1, 2007



Ms. Shirley Roberts  
Region Planner  
Oregon Department of Transportation  
PO Box 3275  
Central Point, OR 97502

## Regarding: South Medford Interchange Area Management Plan (IAMP)

Dear Shirley:

Thank you for the opportunity to review and comment on the South Medford Interchange Area Management Plan (IAMP). We appreciate the extensive work that goes into such plans. While the plan is generally in very good shape, we do have one major comment and recommendation for your consideration. Specifically, we're concerned that the IAMP would allow future land uses, particularly plan and zone changes, that would result in trip generation that would exceed what the plan assumes and would, over time, exceed the planned capacity of the interchange.

The underlying problem, we think, is that the IAMP assumes that future development around the interchange will be somewhat less intense than what is legally allowed by current zoning. While this assumption may be reasonable, it has no legal effect because it is not adopted as a land use control. In short, in spite the assumptions in the IAMP, the City of Medford may approve land uses that generate more trips than are assumed in the plan. In addition, the city could, consistent with the TPR and the Oregon Highway Plan, approve plan and zone changes that would allow other more intense uses that would generate more traffic than the IAMP assumes. This can happen because plan amendments and zone changes would not allow more trips than allowed under existing planning or zoning do not trigger a "significant effect" under the TPR. Over time, these two factors are likely to result in much more traffic than the IAMP assumes and would likely exceed the planned capacity of the interchange.

We do understand that individual developments would be required to meet the city's concurrency requirement. However, we don't think this would be effective in resolving this problem because, as we understand it, the city's concurrency requirement is applied incrementally, as individual developments are approved. The planned South Medford interchange improvements will provide enough capacity so that city and state mobility standards will be met for a considerable period of time, perhaps 10 to 15 years or more. Until new developments begin to push up against capacity limits, the city's concurrency requirement would be satisfied. Initial developments could thus generate much more traffic than expected, leaving subsequent development "holding the bag" to deal with the concurrency requirements. We think it makes more sense to deal with the issue more comprehensively, whenever any one development

May 1, 2007

Regarding: South Medford Interchange Area Management Plan

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generates more traffic than the IAMP assumes, there ought to be coordination between ODOT and the city to assess how that additional traffic will be addressed.

To resolve this problem, we recommend that ODOT work with the city adopt a policy committing the city to seek an amendment to the IAMP for any plan or zone change that would result in an increase in peak hour trip generation over and above the trip generation assumptions in the IAMP. This would not prevent plan amendments or zone changes, but would allow ODOT and the city to evaluate the potential impacts of proposed plan and zone changes and consider whether other mitigating measures are needed to assure that planned development does not, over time, result in traffic that exceeds the capacity of the interchange.

Below are our suggestions for supporting findings and a policy:

Finding

The South Medford IAMP includes an estimate of expected trip generation associated with planned land uses within the interchange area based on the city's adopted plan and zoning within the interchange area. Planned facilities are expected to be adequate to meet city and state mobility standards through the planning period.

City Policy

It is the policy of the City of Medford to plan for land uses within the South Medford interchange area consistent with ODOT's adopted interchange area management plan.

The city shall review proposed plan and land use regulations amendments within the South Medford interchange area for consistency with ODOT's adopted interchange area management plan. Where a proposed plan or land use regulation amendment would result in a property generating more traffic than is estimated in the IAMP (reference the appropriate table or appendix) the city will coordinate with ODOT to amend the interchange area management plan as necessary to allow the proposed use prior to approval of the proposed amendment.

Sincerely,



Robert Cortright  
Transportation Planning Coordinator

cc: John Renz, DLCD Regional Representative