Policy 1F Proposed Revisions
August 2011
DRAFT

1999 OREGON HIGHWAY PLAN

HIGHWAY MOBILITY ~~STANDARDS~~POLICY

Background

Several policies in the Highway Plan establish general mobility objectives and approaches for maintaining mobility.

- Policy 1A (State Highway Classification System) describes in general the functions and objectives for several categories of state highways. Greater mobility is expected on Interstate and Statewide Highways than on Regional and District Highways.

- Policy 1B (Land Use and Transportation) has an objective of coordinating land use and transportation decisions to maintain the mobility of the highway system. The policy identifies several land use types and describes in general the levels of mobility objectives appropriate for each.

- Policy 1C (State Highway Freight System) has an objective of maintaining efficient through movement on major truck Freight Routes. The policy identifies the highways that are Freight Routes.

- Policy 1G (Major Improvements) has the purpose of maintaining highway performance and improving highway safety by improving system efficiency and management before adding capacity.

Although each of these policies addresses mobility, none ~~specifically identifies~~provide measures by which to ~~what levels of~~describe and understand levels of mobility ~~are acceptable~~ and evaluate what is acceptable for facilities that make up the state highway system.

The Highway Mobility ~~Standards~~ Policy ~~establishes standards for~~ identifies how the State measures mobility and establishes performance targets that are reasonable and consistent with the direction~~s~~ of the Oregon Transportation Plan (OTP) and other Highway Plan policies. This policy carries out ~~the directions of~~ Policies 1A and 1C by establishing performance targets ~~higher mobility standards~~ for Interstate Highways, Freight Routes and other Statewide Highways that reflect the expectation that these facilities- maintain a level of mobility to safely and efficiently support statewide economic growth while balancing available financial resources. ~~than for Regional or District Highways~~ It carries

out Policy 1B by ~~establishing~~ acknowledging that lower mobility ~~standards for~~in Special Transportation Areas (STAs) and ~~more~~ highly developed urban areas ~~than in less developed areas and rural areas~~ is the expectation and assigns a performance target that accepts a higher level of congestion in these situations. The targets set for~~The lowest standards for mobility are for~~ Regional and District Highways in STAs and highly urbanized areas~~,~~ allow for~~-~~ lower vehicular mobility to better balance other objectives, including a multimodal system. In these areas ~~Here~~ traffic congestion will ~~be allowed to~~regularly reach levels where peak hour traffic flow is highly unstable and ~~traffic queues will form~~ greater traffic congestion will occur. ~~on a regular basis. The levels of mobility established for Statewide Highways in STAs will avoid high levels of traffic instability (except where accidents or other incidents disrupt traffic). A larger cushion of reserve capacity is established for~~ In order to better support state and local economic activity, targets for Freight Routes are set to provide for less congestion than would be acceptable for other Statewide Highways~~ to provide steady flow conditions,~~. ~~although traffic will be slowed in STAs to accommodate pedestrians. (~~Interstate Highways and Expressways are incompatible with slower traffic and higher level of vehicular congestion and therefore, ~~will not be incorporated into an~~ STA designations will not be applied to these highway classifications.~~)~~ For these types of facilities it will be important to manage congestion to support regional and state economic activity.

The mobility ~~standards~~ performance targets are contained in Tables 6 and 7 and in Actions 1F.1~~ and 1F.5~~.
~~While state highways are often important routes for pedestrians and bicyclists,~~ Tables 6 and 7 refer only to vehicle mobility on the state highway system. At the same time, it is recognized that other transportation modes and regional and local planning objectives need to be considered and balanced when evaluating the performance, operation and improvements to the state highway system. Implementation of the Highway Mobility Policy will require state, regional and local agencies to assess performance targets and balance resulting actions within the context of multiple technical and policy objectives. While the mobility targets are important tools for assessing the transportation condition of the system, mobility is only one of a number of factors that will be considered when developing transportation solutions.

The ~~policy identifies three uses for the~~ highway mobility ~~standards~~performance targets are used in three distinct ways:

- Transportation System Planning: Mobility performance targets identify~~ing~~ state highway mobility performance expectations and provide the principal measure by which the existing and future performance of the (vehicular) transportation system can be evaluated. ~~for planning and p~~Plan development may necessitate adopting methodologies and targets that deviate from adopted state targets in order to reflect regional and local performance expectations.

- Plan Amendments and Development Review: Mobility performance targets are used to ~~R~~review ~~of~~ amendments to comprehensive plans and land use regulations pursuant to the Transportation Planning Rule to assess if the

proposed changes are consistent ~~:maintaining consistency between~~ with the desired ~~highway~~ performance ~~and the type ofland use development; and~~of significantly affected state highway facilities.

- Operations: ~~-~~Mobility performance targets assist in ~~M~~making traffic operations decisions such as managing access and traffic control systems to maintain acceptable highway performance.

The Highway Mobility ~~Standards~~ Policy applies primarily to transportation and land use planning decisions. By defining acceptable levels of highway system mobility, the policy provides direction for identifying highway system deficiencies. The policy does not, however, determine what actions should be taken to address the deficiencies. Mobility ~~The highway mobility standards~~ in the policy is measured using a ~~(~~volume to capacity ratio or v/c.~~)~~ This policy also provides opportunities to seek OTC approval for alternative performance targets that are not v/c-~~-~~based.

It is also important to note that regardless of the performance measure, v/c or other, the Highway Mobility Policy recognizes the importance of considering the performance of other modes of travel. While the policy does not prescribe targets of performance for other modes of travel it does allow and encourage ODOT and local jurisdictions to consider mobility broadly – through multimodal measures or within the context of regional or local land use objectives. Providing for better multi-modal operations is a legitimate justification for developing alternatives to OHP mobility performance targets. ~~are neutral regarding whether solutions to mobility deficiencies should be addressed by actions that reduce highway volumes or increase highway capacities. The Major Improvements Policy establishes priorities for actions to address deficiencies.~~

The Highway Mobility ~~Standards~~ Policy will ~~primarily~~ affect land use decisions through the requirements of the ~~Transportation Planning Rule (~~TPR~~)~~. The TPR requires that regional and local transportation system plans be consistent with plans adopted by the OTC~~ransportation Commission~~. The TPR also requires that local governments ensure that comprehensive plan amendments~~, and zone changes~~zone changes and amendments to land use regulations ~~which~~ that significantly affect a transportation facility ~~be~~ are consistent with the ~~adopted~~ identified function, capacity and performance ~~measures~~ of ~~for~~ the affected state facility. The Highway Mobility ~~Standards~~ Policy establishes ODOT's mobility performance ~~measures~~ targets for state highways as the standards for determining compliance with the TPR (OAR 660-012-0060).

~~Policy 1F does not apply to highway design.~~ Separate design standards are contained in ODOT's Highway Design Manual (HDM). While HDM design standards and OHP mobility targets in Policy 1F are not the same, ODOT's intention is to continue to balance statewide mobility and economic objectives with community mobility, livability and economic development objectives through coordination between planning and design. Where the OTC adopts alternative mobility targets in accordance with this policy, they are establishing an agreement with the local jurisdiction to manage, maintain and develop the state system to the expected and planned levels of performance, consistent with the

jurisdiction's underlying planning objectives (as set out in local comprehensive plan policy and land use regulations). ~~Mobility performance standards for highway design are generally equal to or higher than the standards contained in this policy to provide an adequate operating life for highway improvements. In some circumstances, highway improvements may be designed to meet the highway mobility standards in this policy where necessary to avoid adverse environmental, land use or other effects.~~

ODOT's intention is that the highway mobility ~~standards~~ performance targets be used to identify system constraints ~~not be exceeded~~ over the course of a reasonable planning horizon. The planning horizon shall be:

- At least 20 years for the development of state, regional and local transportation plans, including ODOT's corridor plans; and

- The greater of 15 years or the planning horizon of the applicable local and regional transportation system plans for amendments to transportation plans, comprehensive plans or land use regulations.

~~In the 1991 Highway Plan, levels of service were defined by a letter grade from A-F, with each grade representing a range of volume to capacity ratios. A level of service of A represented virtually free-flow traffic with few or no interruptions while level of service F indicated bumper-to-bumper, stop-and-go traffic. However, each letter grade actually represented a range of traffic conditions, which made the policy difficult to implement. This Highway Plan maintains a similar concept for measuring highway performance, but represents levels of service by specific volume to capacity ratios to improve clarity and ease of implementation.~~

~~A volume to capacity ratio (v/c) is the peak hour traffic volume (vehicles/hour) on a highway section divided by the maximum volume that the highway section can handle. For example, when v/c equals 0.85, peak hour traffic uses 85 percent of a highway's capacity; 15 percent of the capacity is not used. If the traffic volume entering a highway section exceeds the section's capacity, traffic queues will form and lengthen for as long as there is excessive demand. When v/c is less than but close to 1.0 (e.g., 0.95), traffic flow becomes very unstable. Small disruptions can cause traffic flow to break down and long traffic queues to form. This is a particular concern for freeways because the capacity of a freeway under stop-and-go traffic conditions is lower than the capacity when traffic is flowing smoothly.~~

ODOT measures highway mobility performance through volume to capacity (v/c) ratios. The v/c ratio was selected after an extensive analysis of highway performance measures prior to adoption of the 1999 Highway Plan. The review included the effectiveness of the measure to achieving other highway plan policies (particularly OHP Policy 1B, Land Use and Transportation), implications for growth patterns, how specifically should ODOT policy consider land use, flexibility for modifying standards, and the effects of Portland metro area standards on the major state highways in the region. V/C based standards were chosen for reasons of application consistency and flexibility, manageable data

requirements, forecasting accuracy, and the ability to aggregate into area-wide standards that are fairly easy to understand and specify. In addition, since the measure is responsive to changes in demand as well as in capacity, it reflects the results of demand management, land use, and multimodal policies. However, it is recognized that there are limitations in applying v/c, especially in highly congested conditions and in a multimodal environment. OHP policies will allow options for other measures to be considered.

~~The Department and Transportation Commission are concerned that m~~Mobility performance targets ~~standards~~ are the measure by which the state assesses the functionality of a facility and are used to plan for system improvements. These performance targets are shown in Table 6 and vary, depending on the category of highway, the location of the facility – within a STA, MPO, UGB, unincorporated community, or rural lands – and the posted speed of the facility. Table 6 also reflects Policy 1B (Land Use and Transportation) and the State's commitment to support increased density and commercial activities in urban areas. Through the adoption of higher v/c ratios the State acknowledges that it is appropriate and anticipated that certain areas will have more traffic congestion because of the land use pattern that a region or local jurisdiction has committed to through adopted local policy. ~~may have the unintended effect of discouraging development in downtowns and encouraging development in urban fringe areas. This may occur where highways in downtowns and central business districts are near capacity. Plan amendments to allow more development in such areas are generally discouraged because there is inadequate highway capacity to support more intense use. By contrast, highway facilities in urbanizable areas may have excess capacity that allow land use plan amendments that increase development. The plan attempts to offset this unintended effect by varying the mobility standards by type of area, as shown by Table 6.~~

~~Furthermore, the policy in Action 1F.3 allows alternate standards to be adopted in metropolitan areas, Special Transportation Areas (STAs) and constrained areas.~~

~~Alternate S~~Separate performance targets for the Portland metropolitan area have been included in the policy (Table 7). These targets ~~standards~~ have been adopted with an understanding of the unique context and policy choices that have been made by local governments in that area including:

- A legally enforceable regional plan prescribing minimum densities, mixed use development and multi-modal transportation options;

- Primary reliance on high capacity transit to provide additional capacity in the radial freeway corridors serving the central city;

- Implementation of an Advanced Traffic Management System including freeway ramp meters, real time traffic monitoring and incident response to maintain adequate traffic flow; and

- An air quality attainment/maintenance plan that relies heavily on reducing auto

trips through land use changes and increases in transit service.

~~alternative~~Portland Metro ~~standards~~ targets ~~are granted to~~have been adopted specifically for the Portland metropolitan area with a mutual understanding that ~~reduced~~ these mobility ~~standards~~ targets ~~will result in~~better reflect the congestion that already exists within the constraints of the metro area's transportation system and which will not be ~~reduced~~ alleviated by state highway improvements. The ~~standards~~ targets contained in Table 7 are meant ~~to be an~~for interim ~~standard~~ use only.~~;~~ ~~t~~The OTC expects the Portland Metro area to work with ODOT to develop ~~and propose an A~~alternative ~~standard~~ targets that best reflect the multiple transportation, land use and economic objectives of the region and seek OTC adoption within the next few years. ~~s may also be approved for other metropolitan areas or portions thereof to support integrated land use and transportation plans for promoting compact development.~~

The performance targets included in the Highway Mobility Policy must be used for the initial deficiency analysis of state highways. However, where it can be shown that it is infeasible to provide an adequate road network to serve planned development, local governments may work with ODOT to consider and evaluate alternatives to the performance targets in Tables 6 and 7. Any variance from the targets in Tables 6 and 7 will require OTC adoption. ~~the ts~~Increasingly, urban and urbanizing areas are facing traffic and land use pressures due to population growth, aging infrastructure, and reduced revenues for roadway and related infrastructure projects. With significant capacity investments becoming less frequent, system management solutions and enhancement of alternative modes of travel, rather than major improvements, will be relied upon to minimize congestion issues. Developing performance targets that are tailored to specific facility needs, consistent with local expectations, values and land use context will need to be part of the ~~"~~solution~~"~~ for some highway locations. Furthermore, certain urban areas may need area-specific targets to better balance local policies pertaining to land use and economic development. Examples where local conditions may not match state performance targets include metropolitan areas, Special Transportation Areas (STAs), areas with high seasonal traffic, and areas constrained by the existing built or natural environment. For these areas, a possible approach to measuring mobility is to consider an area-wide, or corridor standard.

Alternatives to~~Although non-metropolitan areas do not face the same magnitude of traffic and land use pressures as do metropolitan areas, they may include Special Transportation Areas or may face environmental or land use constraints that make it infeasible to provide an adequate road network to serve planned development. For example, in a number of coastal cities, highway and other road improvements are severely limited by the presence of unstable terrain and the coast, sensitive wetlands and endangered plants and animals. In these places it may not be feasible to improve the transportation system to the degree necessary to accommodate the reasonable use of properties in accordance with acknowledged comprehensive plans. In such circumstances, the standards in Table 6 might also preclude comprehensive plan changes that carry out the Land Use and Transportation Policy (1B) such as compact development in a Special Transportation Area. Therefore, t~~ the performance targets and methodologies in the tables, must be adopted through an amendment to the OHP. The Oregon Transportation Commission

(OTC) must ~~may~~ adopt ~~alternate~~ the new ~~standards~~targets supported by findings that explain and justify the supporting methodology. ~~, to accommodate development where practical difficulties make conformance with the highway mobility standards infeasible~~.

~~Local governments may adopt higher operating standards if desired, but the standards in Tables 6 and 7 must be used for deficiency analyses of state highways.~~

~~The~~ This ~~policy also anticipates that there will be instances where the standards are exceeded and the deficiencies~~ by the mobility targets are ~~correctable but the necessary transportation improvements are not planned. This~~ will increasingly ~~may be due to environmental or land use constraints or to a lack of adequate funding, but may also be the result of environmental or land use constraints. In these circumstances, the Department of Transportation's~~ (ODOT's) ~~objective is to improve highway performance as much as possible and to avoid further degradation of performance where improvements are not possible. Action 1F.5 gives examples of actions that may be undertaken to improve performance.~~

Policy 1F is not the only transportation policy that influences how the state assesses the adequacy of a highway facility and vehicle mobility is not the only objective. Facilitating economic development, enhancing livability for Oregon's communities, and encouraging other modes are also important policy areas that guide state transportation investment and planning. Policy 1B recognizes that the state will coordinate land use and transportation decisions to efficiently use public infrastructure investments to enhance economic competitiveness. Policies for lifeline routes (Policy 1E) are intended to speed economic recovery in the event of disasters. Economic viability considerations help define when to make major transportation investments (Policy 1G). Goal 4, Travel Alternatives, articulates the state's goal to maintain a well-coordinated and integrated multimodal system that accommodates efficient inter-modal connections for people and promotes appropriate multi-modal choices. Making decisions about the appropriate level of mobility for any given part of the statewide highway system must be balanced by these, and all other relevant OTP and OHP policies.

Policy 1F: Highway Mobility ~~Standards~~Policy

It is the policy of the State of Oregon ~~to use highway mobility standards~~ to maintain acceptable and reliable levels of mobility on the state highway system, consistent with the expectations for each facility type, location and functional objectives. Highway mobility performance targets will be the initial tool to identify deficiencies and consider solutions for vehicular mobility on the state system. Specifically, ~~These standards~~ performance targets shall be used for:

- *Identifying state highway mobility performance expectations for planning and plan implementation;*

- *Evaluating the impacts on state highways of amendments to transportation plans, acknowledged comprehensive plans and land*

use regulations pursuant to the Transportation Planning Rule (OAR 660-12-0060); and

- *Guiding operations~~s~~al decisions such as managing access and traffic control systems to maintain acceptable highway performance.*

Where it is not feasible to meet the performance targets, "acceptable and reliable" levels of mobility for a specific facility, corridor or area will be determined through a collaborative process between the ODOT and the local jurisdiction(s) with land use authority.. The resulting targets will reflect the balance between relevant objectives related to land use, economic development, social equity, and mobility and safety for all modes of transportation. Alternative mobility targets for the specific facility shall be adopted by the OTC as part of the OHP.

Action 1F.1

Mobility performance targets are the measure by which the state assesses the existing or forecasted functionality of a facility and, as such, are a key component ODOT uses to plan for system improvements. These performance targets are shown in Table 6 and Table 7. For purposes of assessing state highway performance:

- ~~Apply~~ Use the highway mobility ~~standards~~ targets below and in Table 6 ~~to~~ when initially assessing the functionality of all state highway sections located outside of the Portland metropolitan area urban growth boundary. ~~and~~

- Use the ~~standards~~ mobility targets below and in Table 7 to when initially assessing the conditions of all state highway sections located within the Portland metropolitan area urban growth boundary.

- ~~On~~ For ~~portions of~~ highways segments where there are no intersections, achieving the volume to capacity ratios in Tables 6 and 7 ~~shall not be exceeded~~ for either direction of travel on the highway demonstrates that state mobility objectives are being met.

- ~~At~~ For unsignalized intersections and road approaches, achieving the volume to capacity ratios in Tables 6 and 7 ~~shall not be exceeded~~ for either of the state highway approaches that are not stopped indicates that state mobility expectations are being met. In order to maintain safe operation of the intersection and all of its approaches, ~~A~~approaches at which traffic must stop~~,~~ or otherwise yield the right of way, ~~shall be operated~~ are expected to meet or not to exceed ~~to maintain safe operation of the intersection and all of its approaches and shall not exceed~~ the volume to capacity ratios for District/Local Interest Roads in Table 6 and Table 7 within urban growth boundaries or a v/c of 0.80 outside of urban growth boundaries.

At signalized intersections other than crossroads of freeway ramps (see below), ~~the total volume to capacity ratio for the intersection considering all critical movements~~ the overall intersection v/c ratio shall not exceed the volume to capacity ratios in Tables 6 and 7. Where two state highways of different classifications intersect, the ~~lower~~ more restrictive of the volume to capacity ratios in the tables shall apply. Where a state highway intersects with a local road or street, the volume to capacity ratio for the state highway shall apply.

- Although a freeway interchange serves both the freeway and the crossroad to which it connects, it is important that the interchange be managed to maintain safe and efficient operation of the freeway through the interchange area. The main ~~problem~~ objective is to avoid ~~is~~ the formation of traffic queues on freeway off-ramps which back up into the portions of the ramps needed for safe deceleration from freeway speeds or onto the freeway itself. This is a significant traffic safety concern. The primary cause of traffic queuing at freeway off-ramps is inadequate capacity at the intersections of the freeway ramps with the crossroad. These intersections are referred to as ramp terminals. In many instances where ramp terminals connect with another state highway, the volume to capacity ~~standard~~ performance target for the connecting highway will generally ~~be adequate~~signify that ~~to avoid~~ traffic backups onto the freeway can be avoided. However, in some instances where the crossroad is another state highway or a local road, the ~~standards~~ performance target will not be ~~sufficient to avoid this~~ a good indicator of possible future queuing problems. Therefore, the better indication is a maximum volume to capacity ratio for the ramp terminals of interchange ramps ~~shall be~~that is the ~~smaller of the values of the~~more restrictive volume to capacity ratio for the crossroad, or 0.85.

  At an interchange within a metropolitan area ~~where a majority of the interchange access management area (Policy 3C) of the interchange is developed,~~ the performance indicator used ~~maximum volume to capacity ratio~~ may be increased to as much as 0.90 v/c, but no higher than the standard for the crossroad, if:

  1. It can be determined, with a probability equal to or greater than 95 percent, that vehicle queues would not extend onto the freeway or into the portion of the ramp needed to accommodate deceleration from freeway speed; and

  2. The interchange access management area is retrofitted to comply, as much as possible, with the standards contained in Policy 3C of this plan.

For the purposes of this policy, the portion of the freeway ramp needed to accommodate deceleration shall be the distance, along the centerline of the ramp, needed to bring a vehicle to a full stop from the posted freeway speed at a deceleration rate of 6.5 feet/second^2 (two meters/second^2).

- Because the freeway ramps serve as an area where vehicles accelerate or decelerate to or from freeway speeds, the ~~maximum volume to capacity ratio~~performance target for the interchange ramps exclusive of the crossroad terminals ~~shall be the standard~~is the same as that for the freeway. ~~with the following exception. For~~ Metered freeway on-ramps, where entering traffic is ~~metered~~ managed to maintain efficient operation of the freeway through the interchange area, may allow for greater~~the maximum~~ volume to capacity ratios ~~maybe higher~~.

- ~~The Director of the Department of Transportation or his/her delegate shall have the authority to adopt methods for calculating and applying the volume to capacity ratio standards in this policy or any alternative standards adopted pursuant to this policy.~~

Action 1F.2

- Apply the highway mobility ~~standards~~ performance targets over ~~a~~ at least a 20-year planning horizon when developing state, regional or local transportation system plans, including ODOT's corridor plans.

- When evaluating highway mobility for amendments to transportation system plans, acknowledged comprehensive plans and land use regulations, use the planning horizons in adopted local and regional transportation system plans or a planning horizon of 15 years from the proposed date of amendment adoption, whichever is greater. To determine the effect that an amendment to an ~~transportation system plan,~~ acknowledged comprehensive plan or land use regulation has on a state facility, the capacity analysis shall include the forecasted growth of traffic on the state highway due to regional and intercity travel and to ~~full~~ planned development[11] ~~a~~according to the applicable acknowledged comprehensive plan over the planning period. Planned development, for the purposes of this policy, means the amount of population and employment growth and associated travel anticipated by the community's acknowledged comprehensive plan over the planning period. The OTC encourages communities to consider and adopt land use plan amendments that would reallocate expected population and employment growth to designated community centers to reduce reliance on state highways.

~~[11] Full development, for the purposes of this policy, means the amount of population and employment growth and associated travel anticipated by the community's acknowledged comprehensive plan over the planning period. The Transportation Commission encourages communities to consider and adopt land use plan amendments that would reallocate expected population and employment growth to designated community centers to reduce reliance on state highways.~~

Action 1F.3

Where it is infeasible to meet the existing performance targets through the development of transportation system plans or ODOT facility plans, ~~it would be infeasible to meet the standards in this policy~~, ODOT and local jurisdictions may explore different target levels, methodologies and measures for assessing mobility and consider adopting alternate highway mobility ~~standards~~ targets for the facility. While v/c remains the preferred methodology to measure system performance, measures other than those based on v/c may ~~only~~ be developed through a multi-modal transportation system planning process that seeks to optimize the overall transportation system efficiency and balance multiple objectives within the area being addressed.

Examples of where state performance targets may not match local expectations for a specific facility or may not reflect the surrounding land use, environmental or financial conditions include:

- Metropolitan areas or portions[12] thereof where mobility expectations cannot be achieved and where they are in conflict with ~~to support~~ an adopted integrated land use and transportation plan for promoting compact development, reducing the use of automobiles and increasing the use of other modes of transportation, promoting efficient use of transportation infrastructure, and improving air quality;

- When financial considerations or limitations preclude the opportunity to provide a planned improvement within the planning horizon;

- When other locally adopted policies must be balanced with vehicular mobility and it can be shown that these policies are consistent with the goals and objectives of the OTP Plan and OHP policy.

~~[12] This policy does not prescribe minimum or maximum sizes for portions of metropolitan areas that would qualify for alternative standards. Nevertheless, the area must be of the size necessary to support compact development, reduce the use of automobiles and increase the use of other modes of transportation, promote effi cient use of transportation infrastructure, and improve air quality.~~

- Special Transportation Areas (STAs); and

- Areas where severe environmental or land use constraints[13] make infeasible the transportation improvements necessary to accommodate planned land uses ~~(reasonable use of properties in accordance with acknowledged comprehensive plans)~~ or to accommodate comprehensive plan changes that carry out the Land Use and Transportation Policy (1B).

- ~~The alternative~~ Any proposed ~~standards~~ standard that deviates from the mobility performance targets shall be clear and objective and shall provide clear standardized procedures to ensure consistent application of the selected measure. ~~be related to v/c (e.g., corridor-average v/c, network-average v/c, and the ratio of average daily traffic and hourly capacity (adt/c)).~~ The ~~standards~~ alternative performance target(s) shall be adopted by the OTC as an amendment to the OHP. It is also expected that the participating local jurisdiction will acknowledge the target for the State highway facility as part of a regional and/or local transportation system plan. ~~.~~ Findings shall demonstrate why the particular target is necessary, including the finding that it is infeasible to meet the highway mobility performance targets in this policy. If alternative targets cannot be established through the system planning process prior to adoption, they should be identified as necessary and committed to as a future work item with an associated timeframe for adoption. ~~The plan shall demonstrate that it would be infeasible to meet the highway mobility standards in this policy. In addition~~

[13] Examples of severe environmental and land use constraints include endangered species, sensitive wetlands, areas with severe or unstable slopes, river or bay crossings, and historic districts. See Chapter 3 of the 2007 *Oregon Highway Plan Mobility Standards Guidelines* for more examples.

Modifications to the performance targets could include changing the hour measured from the 30th highest hour, using multiple hour measures, or considering weekday or seasonal adjustments. ODOT's policy is to utilize a v/c based standard and methodology as the initial option, as this will simplify implementation issues throughout the state. Development of corridor or area mobility standards is also allowed. Where v/c based approaches may not meet all needs and objectives, alternative targets may also be pursued.

In support of the alternate target, the plan shall include ~~all~~ feasible actions for:

- Providing a network of local streets, collectors and arterials to relieve traffic demand on state highways and to provide convenient pedestrian and bicycle ways;

- Managing access and traffic operations to minimize traffic accidents, avoid traffic backups on freeway ramps, accommodate freight vehicles and make the most efficient use of existing and planned highway capacity;

- Managing traffic demand and incorporating transportation system management tools and information, where feasible, to manage peak hour traffic loads on state highways;

- Providing and enhancing multiple ~~alternative~~ modes of transportation; and

- Managing land use to limit vehicular demand on state highways consistent with the Land Use and Transportation Policy (1B).

The plan shall include a financially feasible implementation program and shall demonstrate that the proposed target(s) are consistent with and support locally adopted land use, economic development, and multimodal transportation policy and objectives. In addition, the plan shall demonstrate strong public and private commitment to carry out the identified improvements and other actions.

Outside of metropolitan areas, proposed highway mobility targets require adoption by the OTC before they are effective. In metropolitan areas, ~~the alternate~~proposed highway mobility ~~standards~~ targets need concurrence by the MPO and adoption by the OTC. ~~approval and adoption will become effective only after the standards have been approved by both the metropolitan planning organization and adopted by the Transportation Commission~~OTC~~.~~

~~Outside of metropolitan areas, the alternate highway mobility will become effective only after the Transportation Commission has adopted them in a corridor plan or in a portion of a corridor plan.~~

ODOT understands that in certain areas of the State, achieving OHP targets will be difficult and that regional and local policies may take precedence over transportation system performance. ODOT is committed to work with MPOs and local jurisdictions on system-level analysis of alternate mobility targets and to participate in public policy-level discussions where balancing mobility and other community objectives must be adequately addressed.

In developing and applying alternate mobility methodology for facilities throughout the state, ODOT will consider tools and methods that have been successfully used previously for a particular facility and/or within a specific metropolitan area or region. It is State policy to move towards consistency in the selection and application of methodologies over time, as they are applied to a specific facility, or to facilities within a region.

~~***Action 1F.4***~~

~~Develop corridor plans for Interstate Highways, other freeways and designated highway Freight Routes in the Portland metropolitan area that are important for through travel. Develop standards for those routes to provide adequate levels of highway mobility~~.

~~***Action 1F.5***~~

~~For purposes of preparing planning documents such as corridor plans and transportation system plans, in situations where the volume to capacity ratio for a highway segment is above the standards in Table 6 or Table 7, or those otherwise approved by the Commission, and transportation improvements are not planned within the planning horizon to bring performance to standard because of severe environmental, land use or financial constraints, the performance standard for the highway segment shall be to improve performance as much as feasible and to avoid further degradation of performance where no performance improvements are feasible. Examples of actions that might improve performance include the following:~~

- ~~Reconfigure highway and side-street accesses to minimize traffic conflicts at intersections;~~
- ~~Limit parking near signalized intersections to increase intersection capacity;~~
- ~~Coordinate and operate traffic signals to improve traffic progression;~~
- ~~Relocate driveways and improve local road connections to direct traffic away from overburdened intersections and intersections where side-street capacity is limited in order to optimize traffic progression on the state highway;~~
- ~~Improve turning radii at intersections that are heavily used by trucks to avoid lane blockages;~~
- ~~Install raised medians to reduce traffic conflicts;~~

~~• Improve accesses so that traffic can enter or exit the highway with minimal disruptions of flow; and~~

~~• Manage land uses to favor types of uses that generate less traffic or traffic peaks which do not coincide with traffic peaks on the highway. This could be done by making appropriate plan amendments or changes to zoning ordinances.~~

~~Local governments may also request that the Transportation Commission adopt alternate standards in accordance with Action 1F.3.~~

Action 1F.~~6~~4

For purposes of evaluating amendments to transportation system plans, acknowledged comprehensive plans and land use regulations subject to OAR 660- 12-0060, in situations where the volume to capacity ratio or alternate target for a highway segment, intersection or interchange is above the targets ~~standards~~ in Table 6 or Table 7, or those otherwise approved by the Commission, and transportation improvements are not planned within the planning horizon to bring performance to standard, the performance ~~standard~~ target is to avoid further degradation. If an amendment to a transportation system plan, acknowledged comprehensive plan or land use regulation increases the volume to capacity ratio further, or degrades and adopted target, it will significantly affect the facility. In addition to the capacity increasing improvements that may be required as a condition of approval, other performance improving actions include, but are not limited to:

- Reconfigure highway and side-street accesses to minimize traffic conflicts at intersections;

- Limit parking near signalized intersections to increase intersection capacity;

- Coordinate and operate traffic signals to improve traffic progression;

- Relocate driveways and improve local road connections to direct traffic away from overburdened intersections and intersections where side-street capacity is limited in order to optimize traffic progression on the state highway;

- Improve turning-radii at intersections that are heavily used by trucks to avoid lane blockages;

- Improve accesses so that traffic can enter or exit the highway with minimal disruptions of flow; and

- Manage land uses to favor types of uses that generate less traffic or traffic peaks which do not coincide with traffic peaks on the highway. This could be done by making appropriate plan amendments or changes to zoning ordinances.

In applying "Avoid Further Degradation" established in this Action for state highway facilities already operating above the existing standard when evaluating amendments to transportation system plans, acknowledged comprehensive plans, and land use regulations subject to OAR 660-12-0060, a small increase in traffic does not cause "further degradation" of the facility.

The threshold for a small increase in traffic between the existing plan and the proposed amendment is defined in terms of the increase in average daily trip volumes as follows:

- Any proposed amendment that does not increase the average daily trips by more than 400.

- Any proposed amendment that increases the average daily trips by more than 400 but less than 1001 for state facilities where:
  - The annual average daily traffic is less than 5,000 for a two-lane highway
  - The annual average daily traffic is less than 15,000 for a three-lane highway
  - The annual average daily traffic is less than 10,000 for a four-lane highway
  - The annual average daily traffic is less than 25,000 for a five-lane highway

- If the increase in traffic between the existing plan and the proposed amendment is more than 1000 average daily trips, then it is not considered a small increase in traffic and the amendment causes further degradation of the facility and would follow existing processes for resolution.

Amendments to local comprehensive plans and land use regulations (including zone changes) necessary to accommodate an economic development project that will significantly affect the state highway system can be made pursuant to OAR 731-107-0010.

Action 1F.5

Consider OHP mobility targets when evaluating proposed development applications that do not trigger Section 0060 of the Transportation Planning Rule. When making recommendations to local governments on approval of development permits and potential actions for mitigation related to local development proposals, consider and balance the following:

- OHP mobility targets;

- Community livability objectives;

- State and local economic development objectives;

- Safety for all modes of travel;

- Mitigation actions that consider system level enhancements for all modes of travel equally with highway infrastructure; and

- Local approval criteria.

Action 1F.6

Consider OHP mobility targets as guidance to ODOT's highway access management program when balancing economic development objectives of properties abutting state highways with transportation safety and access management objectives of state highways in a manner consistent with local transportation system plans and the land uses permitted in acknowledged local comprehensive plans.

When evaluating OHP mobility targets in access management decisions consider the following:

- The highest priority for OHP mobility targets in guiding access management practices is for addressing traffic movements on and from state highway facilities themselves.

- When evaluating traffic movements from an approach onto a state highway, the priority is to consider safety of the movements. While a v/c ratio for a specific movement greater than 1.0 is an indication of a capacity problem, it does not necessarily mean the traffic movement is unsafe. Apply engineering practices and disciplines in the design of highway approaches to ensure traffic movements meet safety objectives for the program.

Action 1F.7

Consider OHP mobility targets for implementing operational improvements to the state highway system. The OHP mobility targets are meant to be used as a guide and to compare the relative benefits of potential operational solutions rather than as a firm standard to be met. The main goal of operational projects is to improve system performance from current or projected conditions.

Action 1F.8

Enhance coordination and consistency between planning and project design decisions whenever possible. Ensure that future planned system levels of performance are a key factor in modernization project designs. Ensure that project development processes and

design decisions take into account statewide mobility and economic objectives, including design targets, while balancing community mobility, livability and economic development objectives and expectations. Ensure practical design principles that take a systematic approach to transportation solutions are considered in planning and project development processes. Practical design principles strive to deliver the broadest benefits to the transportation system possible within existing resources.