Appendix 1
Detention Basin Design Criteria and Review Submittal Guidelines for Developers

General Guidelines

1. Designs should satisfy Oregon Drainage Law. ODOT will accept the runoff that drains naturally prior to development. ODOT generally will not accept runoff that does not naturally drain to the highway. Once runoff is collected in a system it is no longer considered natural drainage.
2. ODOT's Hydraulics Manual explains our hydraulic design criteria and procedures. The manual is available from the ODOT Hydraulics Unit. Contact the Hydraulics Managing Engineer at 986-3400.
3. Detention may be required when any of the following criterion are met:
   - History of drainage deficiencies in the area is known.
   - The total runoff from the site after the proposed development without flow control is 0.014 m3/s (0.5 ft3/s) or greater.
   - The total impervious surface after the proposed development is 1,000 m2 (0.25 acre) or greater.
4. Detention may not be required when:
   - The total runoff from the site after the proposed development without flow control is less than 0.014 m3/s (0.5 ft3/s).
   - The total contributing area after the proposed development is less than 1,000 m2 (0.25 acre).
   - It is demonstrated the downstream ODOT drainage facilities are sufficiently sized. The analysis must evaluate the entire contributing basin to the downstream ODOT facilities and assume full development runoff coefficients based on current zoning.
   - It is demonstrated the affects of the changed site conditions do not increase the peak runoff due to time lag and sub basin location. A complete hydrogragh analysis, using multiple sub basins, is required for this method.
   - When the ODOT drainage facility being impacted is a bridge, large box, or large pipe. A large facility must span 4 m or larger.
   - All regulatory agencies, watershed councils, and the ODOT Hydraulics Unit agree that detention is not in the best interest for the specific watershed at this location.
5. A site plan and construction drawings drawn to scale and drainage calculations must be submitted for ODOT's review and approval. Enough

information should be submitted so the design can be independently verified.

Drainage Calculations

1. The detention basin's outlet structure must limit the maximum outflow to the peak flow that drains to the highway prior to the proposed development. When calculating the maximum outflow, use the same recurrence interval as the design recurrence interval for the detention basin.
2. The design recurrence interval for detention basins shall be as follows:
   - For detention basins which serve 2 hectares (5 acres) or less and discharge directly to and are physically connected to storm sewers or which discharge to ditches which do not lead directly to cross culverts or inlets:

     ☐ 10-year.
   - For detention basins which serve 2 hectares (5 acres) or less and do not discharge directly to storm sewers (This includes systems that utilize ditches and lead directly to cross culverts or inlets.) use one of the following: (Note: DHV=0.15ADT)

     ☐ 25-year when the design hourly volume (DHV) of the highway is less than 100.

     ☐ 50-year when the design hourly volume (DHV) is 100 or greater.
   - For detention basins which serve an area of development of greater than 2 hectares (5 acres):

     ☐ 10-year, 25-year, and 50-year.

   A recurrence interval differing from described above is only allowed if required by a local or regional agency or the ODOT District Manager and approved by the ODOT Hydraulics Unit.
3. The drainage calculations should include the following information:
   - Provide a narrative describing the characteristics of the contributing drainage basin prior to proposed development including but not limited to slope, shape, soil type, vegetation, storage, and runoff coefficients. A description of the changes to this information due to proposed development should also be included.
   - Show drainage basin area(s) for contributing flows from on-site and off-site, if applicable.
   - Calculations for the time of concentration. Show flow paths, points of concentration and lengths for each flow component.

- Show all runoff coefficients and include the rainfall intensity-duration-frequency-curve used for the calculations.
- Peak runoff from the site prior to proposed development during the design storm.
- Peak runoff from the site after proposed development during the design storm.
- Calculations that show the outlet structure will limit the peak outflow to the allowable outflow. Note: Orifice calculations are based on the center of the orifice (not the invert).
- Storage and volume calculations for the detention system. Note: Water quality storage volumes should not be considered available for detention storage unless a thorough hydrogragh and stage-storage analysis is submitted which includes variable outflow rates.
- Calculations that show the required detention storage volume is available on the proposed project.
- Auxiliary outlet or overflow capacity must be provided to allow overflow during storm events that exceed the design storm or to allow overflow if the outlet structure is obstructed. The purpose of this overflow outlet is to provide protection to the embankments of the storage facility to avoid catastrophic failure. The overflow outlet cannot be connected directly to a storm drain system that may be at capacity during the 100-yr rainfall event. A typical auxiliary outlet may consist of a rip rapped lined weir and outlet channel.
- Units: Calculations should be prepared in the same units used for the plans.
- ODOT's procedure manual that is dated 1978 and entitled "Application of Detention Storage for Limiting Runoff" presents a procedure for designing detention systems. The procedure described is one of many currently being used. Methods utilizing hydrogragh analysis are described in the ODOT Hydraulics Manual. Any method that provides reasonable detention volumes is acceptable.

Site Plan / Construction Drawings

1. The site plan should include but not be limited to the following information:

   - Buildings, landscaped areas, and impervious areas such as parking lots and sidewalks.
   - Contours of site prior to proposed development
   - Contours of site after proposed development

- Details of proposed and existing drainage systems including the flow line elevations, size, material, length, and available headwater for all pipes and ditches. Also identify the location and rim elevation of all inlets and manholes.
- Details of the proposed detention system that includes the dimensions and bottom elevation of all detention ponds. Details of the outlet and overflow structure should also be shown. If an orifice is used, include the size, type and elevation of the orifice.
- Units: Plans should be prepared in either English or metric units as directed by the District Manager.

2. The need for screening or other debris control designs should be considered and may be required for outlet structures that have orifices smaller than 13 mm (6-inches) in diameter.

Detention Basin Review Submittal Checklist

- ❑ **DRAINAGE CALCULATIONS**
  - ❑ Narrative (Existing and Proposed)
    - ❑ Slope of drainage basin(s)
    - ❑ Shape of drainage basin(s)
    - ❑ Soil type(s)
    - ❑ Ground cover
    - ❑ Storage
    - ❑ Other
  - ❑ Drainage Basin Areas (Existing and Proposed)
  - ❑ Time of Concentration (Existing and Proposed)
    - ❑ Show Location of Flow Paths
    - ❑ Lengths of flow paths
    - ❑ Slopes of flow paths
    - ❑ Flow Regimes
    - ❑ Points of Concentration
  - ❑ Runoff Coefficients
  - ❑ Rainfall Data (I-D-F curves, isopluvial maps, etc)
  - ❑ Peak runoff (Before and After)
  - ❑ Outlet control structure release rates (orifices, weirs, etc)
  - ❑ Storage and volume for detention (required and available)
  - ❑ Auxiliary overflow capacity (100-yr)
  - ❑ Units: Prepare calculations in the same units that the construction drawings are prepared.

- ❑ **SITE PLAN / CONSTRUCTION DRAWINGS**
  - ❑ Buildings
  - ❑ Landscaped Area
  - ❑ Impervious Areas
  - ❑ Contours – Existing
  - ❑ Contours – After Development
  - ❑ Drainage Systems – Existing
  - ❑ Drainage Systems Plans and Details – After Development
  - ❑ Detention System Plans and Details
  - ❑ Auxiliary Outlet or Overflow
  - ❑ Screening provided to protect orifices

- ❑ Back-Check Calculations, Plans, and Details for Consistency

Water Quality Facility Design Criteria – Draft

Prepared by Paul R. Wirfs, PE, ODOT Urban Hydraulic Engineer, July 24, 2002

Water Quality

- The water quality volume calculation is applied to the net new impervious surface area. (New impervious surface area) – (Removed impervious surface area) = Net new impervious surface area.
- Design Storm
  - West of the Cascades = 1/3 of the 2-yr, 24-hr storm.
  - East of the Cascades = 2/3 of the 2-yr, 24-hr storm.
  - Apply multiplier (1/3 or 2/3) to rainfall value from NOAA isopluvial map. The resulting rainfall value shall not exceed 1" and not be less than 0.5".
  - The King County SBUH software may be used to determine the peak runoff flow rate and total effective volume of the design storm.
- POND: Use the Total Effective Runoff Volume of the design storm.
- SWALE: Use the Peak Runoff flow rate of the design storm.
- WATER QUALITY STRUCTURE: Use the Peak Runoff flow rate of the Design Storm.

Water Quality Facilities

- The facilities listed below are the most common types of facilities used on ODOT projects and are acceptable methods for treating stormwater prior to discharge to ODOT R/W. Additional stormwater treatment measures may also be required (i.e. oil/water separators, etc.) to pre-treat stormwater from sites with high pollutant loadings. Other methods of treating stormwater runoff may be proposed but must be evaluated on a project-by-project basis to determine if the proposed treatment methods are adequate.
- Provide maintenance access to all facilities.
- Facilities treating stormwater from outside ODOT R/W must be placed outside ODOT R/W.
- Facilities treating stormwater from ODOT R/W may be placed in ODOT R/W.
- Provide Operation and Maintenance Manual for all facilities to be maintained by ODOT.

Extended Dry Pond

- Design Outflow Rate = Necessary to release Design Volume in 48 hrs. Q = V/[(48)(60)(60)] = Maximum Allowable Water Quality Outflow Rate.
- Use the water surface elevation at the top of the storage volume to determine orifice sizing.
- Contact ODOT Hydraulics Unit for sample details for outlet control structure.
- Preferred Side Slope: 1V:4H or 1V:3H
- The water quality design volume is in addition to any detention storage volume required in combined use facilities. The water quality volume is in the lower portion of the pond and the detention volume is in the upper portion of the pond.
- If soil percolation rates are determined as part of the geotechnical investigation then the pond sizing can be reduced taking into account the residual affect of storm water percolating into the pond sides and bottom even though this would not be the primary outlet source for the storm water.
- Also refer to the GENERAL POND DESIGN CRITERIA.

Vegetated Swale

- Minimum Hydraulic Residence Time: 9 min
- Maximum Water Design Depth: 150 mm (0.5 ft)
- Minimum Freeboard: 150 mm (0.5 ft) (for facilities not protected from high flows)
- Manning “n” Value: 0.24
- Maximum Velocity: 0.61 m/s (2 ft/s) (or check shear stress on channel bottom) based on the 25-yr flow.
- Minimum Length: 30 m (100 ft)
- Minimum Slope: 0.5%
- Minimum Bottom Width: 1.2 m (4 ft)
- Maximum Side Slope: 1V:4H (within treatment depth)
- Include porous paving system on bottom of swale to provide stability for large mowing equipment.
- Include flow spreader where pipe enters swale.

- Include flow spreaders at 15 m (50 ft) intervals if porous paving system is not included.
- For swales that do not provide a split flow manhole upstream and must convey the water quality design storm in addition to the 25-yr conveyance storm, provide calculations to show adequate capacity and channel bottom stability for the 25-yr storm.

Water Quality Structure

A self-activating structure, with no moving mechanical parts or external power sources, which removes pollutants from stormwater flow and retains them in the structure. Pollutants to be removed and retained include, but are not limited to, sediments, floatables, and petroleum products and by-products. Supply water quality structures from a manufacturer who is regularly engaged in designing and building stormwater-treatment structures and appurtenances and who has provided similar structures for a minimum of five years of continuous, successful operation.

Water Quality Structures approved for use on ODOT projects are listed on the ODOT Qualified Products (Conditional Use) List.

General Pond Design Criteria

This criteria applies to all ponds.

- Provide maintenance access road and sediment de-watering area.
- Side slopes 1V:3H or flatter. Slopes of 1V:4: are preferred. The access point into the pond should be sloped 1:6 or flatter.
- Freeboard
    - Design Storm WS elevation to auxiliary outlet rim = 0.3 m to 0.6 m.
    - Check Storm WS elevation to top of embankment = 0.3 m
- Design water surface elevations should be below roadbed subgrade. If this is not possible then an impermeable liner should be used to protect roadbed material.
- Maximum design water surface elevation in the pond should be below the upstream invert of the pond inlet pipe (i.e. Backwater from pond should not adversely impact the operation of the upstream storm drain system). If this is not possible then a detailed backwater analysis of the storm drain system is required to assure the system E.G.L. is below all grate and rim elevations.
- Set Backs

  - Check flood high water elevation to Embankment slopes> 10% side slope = 60 m
  - Check flood high water elevation to Well = 30 m
  - Toe of Berm to Property Line = 1/2 berm height or 1.5 m min.
- Safety
  - Fences are not preferred but are sometimes necessary.
  - Limit pond depths to 1m or less. If this is not possible then a protective fence is required around the pond perimeter.
  - Maintain side slopes to 1:3 or flatter. If this is not possible then a protective fence may be required around the pond perimeter.
  - Ponds in clear zones may be hazard to vehicles. Placing ponds near roadways that are protected by curb, guardrail or concrete barrier is acceptable.

Appendix 2
TSP Status Worksheet

TSP STATUS (all Jurisdictions)

			Transportation System Plans								Transportation System Ordinances	
ODOT Region	Jurisdiction or MPO	Population (PSU 2001 est.) July 1, 2001	Exemption Eligible	Exemption Approval Date	TSP Under Development	TSP in Adoption Phase	Local Adoption	Acknowledgement Date (by DLCD)	PR PAPA File #	Considering Plan Amendment/ Update	Under Development PR or PAPA	COMMENTS
1	Banks	1,400	X		X					X		2003 TGM Grant to complete adoption
1	Barlow	140	X									
1	Beaverton	77,170					X	12/29/1999	PR Tasks 9 &10	X		2001 Update pushed planning horizon to 2020.
1	Canby	12,790					X	5/17/2000	002-99		Task 7	Locally adopted 4/19/00
1	Cascade Locks	1,130	X				X	Adopted 11/26/2001			001-01	City to hold adoption hearings by fall 2001
1	CLACKAMAS COUNTY	345,150					X	1/1/2001	006-96			Urban and rural portions adopted
1	Clatskanie	1,530	X				X					
1	Columbia City	1,620	X				X	12/5/1998	001-98			
1	COLUMBIA COUNTY	44,300					X	6/24/1998	002-98			
1	Cornelius	9,710	X				X		PR Task 1		Task 1	Planned adoption 7-2005
1	Durham	1,390	X									Within Metro's boundary
1	Estacada	2,460	X				X	1999				
1	Fairview	8,070	X				X	Adopted 2004				Within Metro's boundary.
1	Forest Grove	18,380					X	11/22/1999	003-99			
1	Gaston	640	X									Has amended the Transportation Element of their Comprehensive Plan, adopted 11/13/02.
1	Gladstone	11,450					X	8/12/1997	002-97			Within Metro's boundary
1	Gresham	91,420					X		PR Task 10			
1	Happy Valley	4,930	X				X	Local adpt. 12/7/98		Currently updating the TSP		Within Metro's boundary.
1	Hillsboro	73,200					X	Adopted 2004	Task 5 and 001-99			Ord. 5341/2-04
1	Hood River	6,020	X				X	7/20/2000	004-99			
1	HOOD RIVER COUNTY	20,600	X				X	9/24/2003			Task 5	Applied for 2001 TGM grant to update and adopt TSP.
1	Johnson City	630	X									Within Metro's boundary
1	King City	2,060	X									Within Metro's boundary
1	Lake Oswego	35,580					X	11/17/1998	013-97			
1	Maywood Park	780	X									Within Metro's boundary.
1	Metro						X	X				Local adoption 8/10/00
1	Milwaukie	20,550					X	7/15/1997	001-97	X		
1	Molalla	5,690	X				X	Adopted 6/27/2001	001-00		004-01	Rec'd TGM Code Assistance; hearing June 27, 2001
1	MULTNOMAH COUNTY	666,350				X		7/2/1998	004-98			For Multnomah County, one subarea is heading toward TSP adoption by Fall 2005, and one subarea (E of Sandy River) still needs a TSP.
1	North Plains	1,660	X				X	Adopted 11/5/2001	006-98 and 007-98			
1	Oregon City	26,680					2001	6/4/2001				
1	Portland	536,240					X	11/27/2002				
1	Prescott	70	X									
1	Rainier	1,690	X				X		001-99			
1	Rivergrove	320	X									
1	Sandy	5,380	X				1997					

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1	Scappoose	5,160	X				X		004-97			Adopted 12/6/99 - Appealed to LUBA - Remanded to city 8/11/98
1	Sherwood	12,840					3/15/2005	4/6/2005				Within Metro's boundary
1	St. Helens	10,380					X	8/6/1997	007-97			
1	Tigard	43,040					X	2/5/2002				
1	Troutdale	13,980					X	12/12/1995	006-95	Currently updating; to be finished in July 2005		Current TSP Update
1	Tualatin	23,270					X	Adopted 7/9/2001				
1	Vernonia	2,220	X				X	Adopted 1999	PR Task 4			
1	WASHINGTON COUNTY	455,800					X	11/20/2002				
1	West Linn	23,090					X	11/9/1998	003-99			Partial ack.
1	Wilsonville	14,170					X		PR Task 3		Task 3	
1	Wood Village	2,860	X				X	Adopted 9/5/2001	PR Task 1			Within Metro's boundary.
2	Adair Village	600	X		MPO RTP under development							
2	Albany	41,650					X	9/8/1997	009-99 and 014-97	Developing a refinement plan to consider development impacts near I-5		
2	Amity	1,480	X									
2	Astoria	9,790	X				X	1/15/2000	003-99			
2	Aumsville	3,000	X				X	5/14/2003	PR Task 2			Under review
2	Aurora	660	X			X						
2	Bay City	1,160	X									TGM app for downtown plan
2	BENTON COUNTY	79,000			MPO RTP under development		X	8/8/2001				
2	Brownsville	1,460	X									
2	Cannon Beach	1,600	X				X	5/31/2001	Task 8			TPR
2	Carlton	1,550	X				X		PR Task 3			
2	CLATSOP COUNTY	35,850					10/22/2003					TSP was prepared by CH2M Hill with 01-03 TGM funding.
2	Coburg	970	X				X	11/2/1999	001-99			TSP will be revised as an outcome of periodic review and further interchange refinement planning.
2	Corvallis	51,040			MPO RTP under development		X	7/27/2000	PR Task 6			Approved by LCDC 7/6/2000.
2	Cottage Grove	8,670	X				X	8/24/1998	002-98			
2	Creswell	3,580	X				X	8/10/1998	002-98			Creswell TSP may be impacted by OTIA 2 project.
2	Dallas	12,650					X		PR Task 5	X		Comp plan transportation element only. City has not adopted PPR-compliant TSP. Will be funded in 2003-05.

TSP STATUS (all Jurisdictions)

Transportation System Plans											Transportation System Ordinances	
ODOT Region	Jurisdiction or MPO	Population (PSU 2001 est.) July 1, 2001	Exemption Eligible	Exemption Approval Date	TSP Under Development	TSP in Adoption Phase	Local Adoption	Acknowledgement Date (by DLCD)	PR PAPA File #	Considering Plan Amendment/ Update	Under Development PR or PAPA	COMMENTS
2	Dayton	2,190	X			X					002-01	Held public hearing 6/4/01; adoption process anticipated to resume fall 2001.
2	Depoe Bay	1,190	X			X						Downtown Refinement Plan underway funded by TGM.
2	Detroit	260	X									
2	Donald	610	X									
2	Dundee	2,670	X		X						Task 6	TSP adopted by City Council 6/6/03
2	Dunes City	1,260	X									
2	Eugene -Springfield MPO RTP	189,435					X	X	001-99	T plan amendments that include full WEP appealed to LUBA. LUBA remand to Court of Appeals.	001-99	MPO transportation plan to be updated apart from local TSP. Impacts to Metro as yet unknown.
2	Falls City	980	X					8/20/2003				
2	Florence	7,460	X				X*	2/24/2003	PR Task 4			* Council lists effective date as one day following Oregon Supreme Court ruling that invalidates Measure 7.
2	Garibaldi	900	X								Task 4	Transportation Plan starting through TGM grant FY 01-03.
2	Gates	480	X	X								
2	Gearhart	1,010	X									
2	Gervais	2,080	X				X	10/8/1999	PR Task 3			
2	Halsey	730	X							X		A downtown plan effort is beginning, funded by TGM.
2	Harrisburg	2,850	X				X		PR Task 2			Under review.
2	Hubbard	2,510	X				X	6/13/2000	PR Task 2			
2	Idanha	230	X	X								
2	Independence	6,400	X				X	5/12/2003	PR Task 6		Task 6	
2	Jefferson	2,540	X				X	1/7/2002				DLCD appealed the TSP because the skinny street language was removed by CC decision. Since then a TSP amendment was adopted to include skinny street language. Paperwork is being filed with DLCD to dismiss LUBA appeal on initial TSP.
2	Junction City	4,730	X				X				001-00	OR Refinement Plan to reengage this biennium. Plan should be amended into TSP.
2	Keizer	32,950					X	11/27/2000			002-00	
2	Lafayette	2,600	X			X		10/8/2003	PR Task 6			Scheduled to go to Council for adoption Feb 02.

TSP STATUS (all Jurisdictions)

Transportation System Plans											Transportation System Ordinances	
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2	LANE COUNTY	325,900			X			6/1/2004	008-98		008-98	Project is moving again. Staff hopes to complete within one year.
2	Lebanon	13,190				X						
2	Lincoln City	7,420	X				X	8/2/1995	PR Task 6	TMP update underway, refinement plans in process		Approved 8/02/1995. Major update underway. Urban renewal redevelopment plans being developed and will be incorporated into master plan.
2	LINCOLN COUNTY	44,650			X							
2	LINN COUNTY	103,500					X	3/8/1997	008-96		Task 12	
2	Lowell	860	X									
2	Lyons	1,040	X									
2	Manzanitia	580	X					8/8/2003				TGM app forTSP
2	MARION COUNTY	288,450			X			12/30/1998	012-98			Rural part adopted/acknowledged. County has begun update. To be completed in Fall 03.
2	McMinnville	27,500			X				PR Task 2		Task 2	Region 2 funding TSP development for data collection/update. Work to begin Feb 03, completion Summer 03. Completion of TSP dependent on successful resolution of comp lplan/UGB expansion issues with DLCD.
2	Millersburg	680	X		X				PR Task 1e		Task 1e	
2	Mills City	1,550	X									
2	Monmouth	7,910	X				X		PR Task 6		Task 6	
2	Monroe	610	X									Refinement for downtown plan through OTIA project.
2	Mt. Angel	3,400	X				X	3/2/2004	PR Task 2			TGM app for TSP Refinement to be complete 6/30/03.
2	Nehalem	200	X		X			5/6/2004				Downtown transportation plan starting through TGM grant FY 01-03.
2	Newberg	18,280					X	8/1/1994	002-93			Update in process funded by TGM. Completion in Fall 03.
2	Newport	9,660	X				X	1/4/1999	011-97	Hwy 101 Corridor Refinement		
2	Oakridge	3,150	X				X	11/1/2000				City adopted TSP 10/5/00, implementing ords 12/7/00, Co. adopted TSP 1/7/01
2	Philomath	4,010	X		MPO RTP under development		X	7/30/2002	PR Task 4	Refinement plan through OTIA project		Submitted, under review.
2	POLK COUNTY	63,600					X	X				

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2	Rockaway Beach	1,290	X		X							TGM project for downtown plan FY 01-03 with six other cities.
2	Salem	139,320					X	3/6/1997	PR Task 2 and 3			Biennial update process started. TO be completed June 04.
2	Salem-Keizer MPO RTP	158,855					X		010-99, 013-99 and 016-97			Minor update adopted Summer 02. Major update, including VMT alternative measures in process. Completion Summer 04.
2	Scio	690	X									
2	Scotts Mills	310	X									
2	Seaside	5,950	X		X							
2	Sheridan	5,580	X				X	1/20/2000	002-99			TGM app for downtown refinement
2	Siletz	1,130	X									
2	Silverton	7,420	X				X		PR Task 3		Task 3	
2	Sodaville	290	X									
2	St. Paul	350	X						Task 2			Objections received
2	Stayton	6,960	X				X	10/14/2004		X	Task 5	TSP not acknowledgee; approved by resolution only. TGM grant for refinement & adoption of TSP FY01-03. Update and adoption in process; complete summer 03.
2	Sublimity	2,150	X				X		001-96			Under PR task 1
2	Sweet Home	8,160	X			X		10/17/2003			Task 4	
2	Tangent	940	X				X		PR Task 4	Refinement of downtown conceptual plan through OTIA project		Approved by CC and PC, to be voted on by community Spring 02. Adopted locally but not acknowledged by DLCD. Periodic review will require change in plan for Ag lands, but community vote required.
2	Tillamook City	4,340	X				X					TSp funded by TGM throught joint application with six Tillamook Co. cities FY 01-03
2	TILLAMOOK COUNTY	24,600			X							TGM funded draft TSP completed June 2003. County anticipates adoption in 2004 following additional public workshops.
2	Toledo	3,540	X		X							
2	Turner	1,340	X				X		PR Task 1e and 2e			Submitted, under review.
2	Veneta	2,840	X				X	11/9/1998	001-98		Task 10	Partial ack: TSP amendments go to PC/CC summer 01 to fine tune TSP in relationship to new plan designations.
2	Waldport	2,060	X				X		PR Task 4a	Downtown conceptual plan		Downtown plan completed.

TSP STATUS (all Jurisdictions)

			Transportation System Plans								Transportation System Ordinances	
ODOT Region	Jurisdiction or MPO	Population (PSU 2001 est.) July 1, 2001	Exemption Eligible	Exemption Approval Date	TSP Under Development	TSP in Adoption Phase	Local Adoption	Acknowledgement Date (by DLCD)	PR PAPA File #	Considering Plan Amendment/ Update	Under Development PR or PAPA	COMMENTS
2	Warrenton	4,230	X		X		X	2004	004-96		Task 2	2003. City still reviewing. Under
2	Waterloo	240	X									
2	Westfir	280	X									
2	Wheeler	400	X			X						TGM funded FY 99-01
2	Willamina	1,840	X				X		PR Task 6		Task 6	
2	Woodburn	20,410					X	3/5/1997	005-96		Task 3	TSP update in process - to be comleted Fall 03.
2	Yachats	630	X				X			Downtown conceptual plan		Downtown plan underway.
2	Yamhill	790	X				X		PR Task 3		Task 3	
2	YAMHILL COUNTY	86,400					X	3/27/1996	011-95			
3	Ashland	19,770					2/29/97	10/30/1999	PR Task 1			
3	Bandon	2,880	X				1/20/2000	2/16/2000	002-99			
3	Brookings	5,680	X			X	8/30/2002		PR Task 5			Partial approval - TSP update expected 12/05.
3	Butte Falls	440	X									R3 supports exemption
3	Canyonville	1,430	X									TSP not scheduled for the 03-05 biennium.
3	Cave Junction	1,380	X				7/23/2001	8/14/2001	PR Task 3,12		001-01	City wants to update local street network and add an Access Mgmt Plan.
3	Central Point	13,460			X		12/14/2000	1/23/2002	PR Task 4		Task 4	
3	Coos Bay	15,470			X		1/6/2004				Task 5	concurrently with North Bend TSP.
3	COOS COUNTY	62,950					8/25/1999	11/17/1999	PR Task 9			TSP amended 10/17/2001.
3	Coquille	4,190	X		X						Task 4	City has started twice, but did not complete TSP. There is no project scheduled this biennium.
3	CURRY COUNTY	21,550	X			X			PR Task 5 South		Task 5 South and Task 2.3	North/South portions in adoption phase. Expected adoption 12/05. Commissioners resist adoption.
3	DOUGLAS COUNTY	101,200					Aug-97	10/26/2001	011-99			Green UUA issues on remand from LUBA under development. Partial adoption and acknowledgement. County must work on sidewalks on local streets and skinny streets for the Green UUA.
3	Drain	1,030	X	X								Received letter granting exemption.
3	Eagle Point	5,410	X				9/25/2001	2/1/2005				Requested DLCD to research
3	Elkton	180	X	X								Received letter granting exemption.

TSP STATUS (all Jurisdictions)

					Transportation System Plans						Transportation System Ordinances	
ODOT Region	Jurisdiction or MPO	Population (PSU 2001 est.) July 1, 2001	Exemption Eligible	Exemption Approval Date	TSP Under Development	TSP in Adoption Phase	Local Adoption	Acknowledgement Date (by DLCD)	PR PAPA File #	Considering Plan Amendment/ Update	Under Development PR or PAPA	COMMENTS
3	Glendale	860	X									R3 supports exemption.
3	Gold Beach	1,920	X			X			PR Task 4		Task 4	Part of Curry Co. (North) TSP. Expected adoption 12/03.
3	Gold Hill	1,110	X								Task 6	R3 supports exemption as long as the city does not expand the UGN near the interchange.
3	Grants Pass	23,670					12/12/1997	5/8/2001	PR Task 7			TSP work task remanded as part of Periodic Review
3	County)	6,500	X				X	10/26/2001				acknowledgement. County must work
3	JACKSON COUNTY	184,700				X	3/15/2005	5/15/2005			PAPA	
3	Jacksonville	2,360	X				9/5/1995	7/23/2003	PR Task 2			Has a transportation element and not an adopted TSP. Sent 60-day review notice in 1995. Not acknowledged.
3	JOSEPHINE COUNTY	76,850			X		9/22/2004	8/30/2004				12/03.
3	Lakeside	1,370	X				8/1/1996	9/10/1996	Task 3			Region 3 supports exemption.
3	Medford	64,730			X		11/20/2003		PR Task 5		Task 4	TGM Project. Expected adoption 12/04.
3	Myrtle Creek	3,410	X		X							biennium.
3	Myrtle Point	2,460	X									biennium.
3	North Bend	9,370	X			X	2/24/2004	3/19/2004			PAPA	will be adopted to implement TSP.
3	Oakland	950	X									R3 supports exemption.
3	Phoenix	4,270	X				10/4/1999	12/2/2003	PR Task 9			Remanded by DLCD for inconsistency with Regional TSP.
3	Port Orford	1,180	X			X						Part of Curry Co. (North) TSP. Expected adoption 12/03.
3	Powers	730	X									R3 supports exemption.
3	Reedsport	4,370	X									TSP scheduled in 03-05 biennium.
3	Riddle	1,020	X									R3 supports exemption.
3	Rogue River	1,860	X			X	4/23/2005	10/8/2003				Requested DLCD to research.
3	Rogue Valley MPO						4/25/2002	X				
3	Roseburg	20,200			X							Expected adoption 12/03.
3	Shady Cove	2,400	X		X			2/10/2004				R3 supports exemption.
3	Sutherlin	6,990	X									Recommending TGM Grant. Scheduled in 03-05 biennium.
3	Talent	5,580	X				4/19/2000	5/12/2003				
3	Winston	4,790	X				7/3/2003		002-96			Requested DLCD to research.
3	Yoncalla	1,060	X									R3 supports exemption.
4	Antelope	60	X									
4	Arlington	520	X				X	5/1/2000				
4	Bend	55,080					X	Remanded				On Remand form LCDC
4	Bonanza	420	X									

TSP STATUS (all Jurisdictions)

					Transportation System Plans						Transportation System Ordinances	
ODOT Region	Jurisdiction or MPO	Population (PSU 2001 est.) July 1, 2001	Exemption Eligible	Exemption Approval Date	TSP Under Development	TSP in Adoption Phase	Local Adoption	Acknowledgement Date (by DLCD)	PR PAPA File #	Considering Plan Amendment/ Update	Under Development PR or PAPA	COMMENTS
4	Chiloquin	720	X									
4	Condon	760	X				X	7/27/2000	001-99			
4	CROOK COUNTY	19,850	X		X		X		003-97			Update in process.
4	Culver	800	X		X							
4	DESCHUTES COUNTY	122,050					X	8/26/1998	014-98			
4	Dufur	590	X									
4	Fossil	470	X				X					As part of the Wheeler County TSP
4	GILLIAM COUNTY	1,900	X				X	4/14/1999	001-99			
4	Grass Valley	170	X				X	7/10/2003				
4	JEFFERSON COUNTY	19,400	X									1996 draft never adopted and no work is being done.
4	KLAMATH COUNTY	64,200			X			5/3/2000	012-98		012-98	The Klamath County TSP is under development. The county property within the Kfalls UGB is covered in the Kfalls TSP.
4	Klamath Falls	19,540					X		PR Task 3		Task 3	Not all implementing ordinances adopted yet.
4	LAKE COUNTY	7,500	X				12/18/2002	2/13/2003				
4	Lakeview	2,480	X				7/24/2001	10/31/2001				Funded throught TGM FY 00-01.
4	Lonerock	20	X									As part ot the Gilliam County TSP
4	Madras	5,200	X				Oct. 2002	6/20/2003		scheduled to begin	Task 3	TGM grant FY 00-01.
4	Malin	640	X									
4	Maupin	420	X				X					Adopted Local Street Network Plan in lieu of TSP.
4	Merrill	900	X									
4	Metolius	660	X		X							Inc. in county TSP.
4	Mitchell	170	X									Inc.in county TSP.
4	Moro	340	X				X	7/10/2003				Inc.in county TSP.
4	Mosier	410	X				X					Adopted Local Street Network Plan in lieu of TSP.
4	Paisley	250	X									State and county transportation facilities only.
4	Prineville	7,750	X		X		1998				Task 4	An update is currently underway.
4	Redmond	14,960					X	1/26/1998	002-97			Partial ack.
4	Rufus	270	X				X	7/10/2003				Inc. in county TSP
4	Shaniko	30	X									
4	SHERMAN COUNTY	1,900	X				X	7/10/2003				
4	Sisters	960	X				6/28/2001	11/23/2001				
4	Spray	140	X									Through county TSP.
4	The Dalles	12,230			X							Underway with TGM grant.
4	Wasco	380	X				X	7/10/2003				Through county TSP.
4	WASCO COUNTY	24,150	X									
4	WHEELER COUNTY	1,550	X				X	12/12/2001				Funded through TGM FY 00-01.

TSP STATUS (all Jurisdictions)

Transportation System Plans											Transportation System Ordinances	
ODOT Region	Jurisdiction or MPO	Population (PSU 2001 est.) July 1, 2001	Exemption Eligible	Exemption Approval Date	TSP Under Development	TSP in Adoption Phase	Local Adoption	Acknowledgement Date (by DLCD)	PR PAPA File #	Considering Plan Amendment/ Update	Under Development PR or PAPA	COMMENTS
5	Adams	310	X				X	8/1/2003	001-01 (11411)			
5	Adrian	150	X				X					
5	Athena	1,270	X			X						
5	Baker City	9,840	X				X		001-01 (11411)		Task 4	
5	BAKER COUNTY	16,700	X			X			PR Task 4		Task 4	
5	Boardman	2,940	X				X	4/2/2003	PR Task 1		Task 1	Ordinances pending
5	Burns	3,060	X				X	4/2/2003			001-01	6/01 adopted
5	Canyon City	670	X				X	7/12/1999	001-99	Adopted 6/25/99		
5	Cove	590	X				X	9/1/1998	001-98			
5	Dayville	140	X				X	6/16/1999	006-99			
5	Echo	670	X				X	2/4/2003			001-01	5/01 adopted
5	Elgin	1,660	X				X	8/10/1999	001-99			
5	Enterprise	1,890	X				X	4/12/1999	PR Task 4			
5	Granite	20	X									
5	GRANT COUNTY	7,800	X				X	5/23/2000	Task 13			Transportation Element
5	Greenhorn	0	X									
5	Haines	430	X				X				001-01	
5	Halfway	340	X				X	3/31/2003			001-01	
5	HARNEY COUNTY	7,600	X				X	6/5/2001	PR Task 4			5/01 adopted
5	Helix	180	X				X	3/18/2003			001-01	6/01 adopted
5	Heppner	1,390	X				X	10/31/2003	(12871)			
5	Hermiston	13,560					X	12/13/1999	007-99			
5	Hines	1,680	X				X	6/1/2001				5/01 adopted
5	Huntington	520	X				X					
5	Imbler	280	X				X	8/2/1999	001-99			
5	Ione	320	X				X	7/15/2003				
5	Irrigon	1,750	X				3/22/2005	5/3/2005				
5	Island City	920	X				X	3/13/2001				LUBA appeal formally dismissed.
5	John Day	1,830	X				X	7/15/1999	001-99	6/22/1999		
5	Jordan Valley	240	X				X	4/3/2003	001-98			6/01 adopted - ordinances pending
5	Joseph	1,060	X				X	6/16/2005	(10933)			ordinances pending.
5	La Grande	12,420					X	4/05/2000 for both files.	005-99 and 007-96		Task 3	
5	Lexington	260	X				X	11/4/2003	(12433)			
5	Long Creek	230	X				X	6/24/1999	001-99			
5	Lostine	260	X			X						
5	MALHEUR COUNTY	32,000					X		002-98			

TSP STATUS (all Jurisdictions)

Transportation System Plans											Transportation System Ordinances	
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5	Milton-Freewater	6,560	X				X	7/10/2003	003-98 and 002-99			
5	Monument	150	X				X	6/29/1999	001-99			
5	MORROW COUNTY	11,150	X				X	10/7/1998	002-98			
5	Mt. Vernon	600	X				X	6/15/1999	001-99			
5	North Powder	490	X				X	8/4/1998	007-98			Adopted 8/4/98
5	Nyssa	3,170	X				X		001-99 (9969)			
5	Ontario	11,140					X		PR Task 4			Local implementing ordinances in adoption phase.
5	Pendleton	16,600					X	2/18/1997 (001-96)	001-96 and 002-99			Partial ack.- Ordinances pending
5	Pilot Rock	1,540	X				X	3/20/2002				
5	Prairie City	1,080	X				X	7/15/1999	001-99			
5	Richland	150	X				X	9/13/2003	002-01 (11501)			
5	Seneca	220	X				X	6/23/1999	001-99			
5	Stanfield	1,980	X				X	3/18/2003				6/01 adopted
5	Summerville	120	X									
5	Sumpter	170	X				X					10/01 adopted
5	Ukiah	260	X				X	3/31/2003				5/01 adopted
5	Umatilla	5,750	X				X	11/17/2000	PR Task 3			
5	UMATILLA COUNTY	70,900					X	4/3/2002				Ordinances pending
5	Union	1,960	X				X	8/10/1998	001-98			
5	UNION COUNTY	24,550	X				X	8/18/1999	001-98			
5	Unity	130	X				X	3/31/2003				
5	Vale	1,980	X				X	5/14/2002	001-98			6/01 adopted - ordinances pending
5	Wallowa	870	X				X	4/2/2003				6/01 adopted
5	WALLOWA COUNTY	7,100	X				X	8/23/2001	PR Task 1e			6/01 adopted
5	Weston	720	X				X	1/29/2002				6/01 adopted

* 1999 Estimates from Portland State University.

Appendix 3

Example Response Letters

Urban, Multiple Criteria

May 12, 2003 ***ODOT Case No: XXXX***

Timberland County
Department of Transportation & Development
517 SE Glenbrook Blvd.
Salmon, OR 97555

Attn: Rick O'Brien, Planning

Re: **Local Application Files No. Z0794-02-CP, Z-705-02-Z, Z-706: Welkommen Engineering; Highway 173/94 EcoDevo Center; Embert Development LLC, Applicant**

Dear Mr. O'Brien:

We have reviewed the applicant's proposal for a comprehensive plan map amendment and zone change from light industrial to general commercial to allow the development of a big box retail commercial center on 24.55 acres. The site is located on OR 94 and ODOT has serious concerns about this proposal from both regional transportation and land use perspectives.

At this time, ODOT is recommending denial of the application as submitted because it does not meet the burden of proof to demonstrate compliance with applicable criteria. Specific areas of concern are discussed below. We will be meeting with the applicant's representative on April 24th to discuss additional traffic analysis that must be provided before we can adequately assess the traffic impacts of the proposal. The applicant may wish to ask for a continuance of the local hearing until the requested supplemental Traffic Impact Analysis (TIS) can be produced and reviewed by ODOT and the County.

ODOT Facilities and Standards

The site is adjacent to OR 173. The *Oregon Highway Plan (1999)* classifies this highway as having Statewide Urban significance. It is a state Freight route on the National Highway System. The posted speed is 45 miles per hour, and has an access spacing standard of 990 feet. The ODOT mobility standard is .99 volume to capacity ration (v/c) in this Metro section.

The *Metro Functional Plan, Title 4* identifies the properties as Industrial. *Metro's 2000 Regional Transportation Plan* designates OR 173 as a Regional Street.

The *2000 Regional Transportation Plan* includes Project 6003: Moonglow Corridor on the Financially Constrained System. The project description states: Construct a new four-lane highway from I-555 to SchSchrock Creek/52nd Avenue. Project includes construction of

interchanges at 122nd Avenue, 35th Avenue, and the SchSchrock Creek Junction, and modification of I-605 interchange. The *Timberland County Transportation System Plan, Table V-1, 20-Year Capital Improvement Needs* lists both Phase 1 (as described above) as well as Phase 2 to US 46.

The October 1996 *Draft Environmental Impact Statement (DEIS), Moonglow Corridor, I-555-US 46* was published. To prepare the EIS, detailed analysis and consideration of transportation, land use, socioeconomic and environmental impacts were considered. There was an extensive public involvement process. The DEIS selected the proposed Central Alignment as the Preferred Alternative for Unit 1. In 1996, the Timberland County Board of Commissioners endorsed this alignment.

The Central Alignment of the Moonglow Corridor calls for a new expressway on a separate alignment to the north of existing OR 173-94.

Currently, the County is taking the lead in preparing a Supplemental EIS for the Moonglow Corridor that will "update the design and environmental information, consider whether alternatives to the Moonglow Corridor should be considered and determine the construction phasing of Unit 1." *(Timberland County Work Program, EXHIBIT B to Resolution No. 03-3306: Moonglow Corridor I-555 to 72nd EIS Project, Work Program.)*

The above process may result in modifications to the proposed Moonglow Corridor alignment. The possibility of expanding OR 173/OR 94 to serve the regional and statewide transportation needs in the corridor, rather than building a separate facility as proposed in the Central Alignment preferred alternative, will be a considered alternative.

The 2020 future year analysis contained in the *Welkommen Engineering (2/03) Highway 173/94 EcoDevo Center Traffic Impact Study* provided by the applicant assumes available roadway capacity based on construction of the Moonglow Corridor. While the road may be considered "planned" in concept, the ultimate capacity of the Moonglow Corridor is unknown until the SEIS and Final EIS have been completed. In addition, given the limited options for roadway alignment in this area, it is likely that at portion of the subject property will be needed for highway expansion.

The applicant has proposed an Alternative Alignment and Configuration for the Moonglow Expressway *(Exhibit H and H1-6)* for the Phase 1 (I-555 to Schrock Creek). Their narrative states that the new alignment would decrease the amount of right-of-way needed, save project costs as well as jobs. The applicant has also proposed that the County's approval of the comprehensive plan amendment and zone change include a condition that their proposed Moonglow Corridor alignment be adopted prior to the initiation of development on the site.

<u>ODOT does not support these proposals for several reasons:</u>

1) The proposal would allow a comprehensive plan map amendment and zone change from industrial to commercial designation. While a more extensive traffic analysis is needed to fully assess the impacts, we do know that impacts on area transportation facilities would be significantly higher with commercial development than with the industrial development allowed under the existing zoning.

2) It is premature to consider comprehensive plan map amendments and zone changes in this vicinity until the proposed alignment and function of the Moonglow Corridor project have been determined. The county's EIS process is the proper vehicle for making such decisions, not the development review process.

3) Amending the comprehensive plan and zoning maps from industrial to commercial zoning would increase the value of the subject properties. Even if the Moonglow Corridor were to be realigned as proposed by the applicant, a portion of the subject property may still be needed for the highway project. Upzoning the parcels now, even if development were conditioned to be delayed until the Final EIS, may raise the cost of the Moonglow Corridor project.

Transportation Analysis

ODOT has conducted a technical review of the *Highway 173/94 EcoDevo Center Traffic Impact Study* (Welkommen Engineering, February 2003). Please see the attached memorandum by Parker McLane, Traffic Analysis, ODOT Region 6.

ODOT and Timberland County engineering staff have discussed the report, and have requested supplemental traffic information from the applicant. Until additional information has been provided, ODOT cannot make findings whether state or county transportation mobility and safety criteria will be met.

Approval Criteria

ODOT findings on relevant County code criteria are noted below in *italics* following each referenced section.

ZDO 1202.01 C. 1.

The Moonglow Corridor Phase 1 and 2 are both listed in the *Timberland County Transportation System Plan (2001) and Capital Improvement Plan – 20 Year Project Needs* list. This criteria is not met, as the Moonglow Corridor would need to be redesigned to accommodate the traffic from this proposal. In addition to realigning the proposed corridor, plans for the Moonglow Corridor call for a grade separated partial interchange at SE 35th, and an overcrossing at SE 42nd. Access to the subject parcel would need to be relocated several blocks away from the highway (whether on separated or expanded OR 173 expressway alignment); this access scenario may not be acceptable to the applicant or future site tenants.

ZDO 1202.01.C.2.

ODOT is unable to make a determination on future transportation system adequacy until additional traffic analysis is provided by the applicant.

ZDO 1202.01.C.3

The County code requires that adequacy be demonstrated within a 5 year study horizon. The County has a LOS E for industrially zoned lands, but a higher LOS D for

commercially zoned lands (outside of the Timberland Regional Center.) TIS shows that County road-highway intersections will not operate adequately within the five year horizon required by the County.

ZDO 1202.01.D

The attached technical memorandum by Parker McLane, ODOT Region 6, indicates existing safety issues at several intersections on OR 173 within the site's traffic impact area. ODOT cannot make a finding regarding the safety of the future transportation system until supplemental analysis has been provided by the applicant and the feasibility of proposed mitigation is demonstrated.

ZDO.1202.01.C.4.

This section requires that state transportation facilities shall be evaluated pursuant to the Oregon Highway Plan (OHP) rather than the Comprehensive Plan. The Oregon Highway Plan (1999), Policy 1F: Mobility Standards includes these relevant criteria:

- Evaluate the impacts on state highway of amendments to transportation plans, acknowledged comprehensive plans and land use regulations pursuant to the *Transportation Planning Rule (OAR 660-12-060).*

OAR 660-12-060 Plan and Land Use Amendments is relevant to this proposal. ODOT believes that this proposal may "significantly affect" the transportation system because the subject parcel is in the Central Alignment of the planned Moonglow Corridor. As explained in the Moonglow Corridor section above, ODOT does not find it reasonable to assume adequate capacity with the future construction of the Moonglow Corridor when the development of this proposal as submitted limits the alternatives and increases the costs of that project, consequently increasing the uncertainty whether and when it will be built.

OAR 660-012-0060 (2) (c) – Even if the County were willing to accept the applicant's assumptions about the Moonglow Corridor, ODOT is unable to make a finding regarding transportation adequacy until the traffic study has been revised. From preliminary information, it appears that the proposal would result in "Allowing types or level of land uses which would result in level of travel or access that are inconsistent with the functional classification of the transportation facility," as prohibited by the rule.

ZDO 1202.01.E requires that development based on a zone change granted pursuant to the ZDO shall be subject to ZDO Section 1022. ODOT does not believe that the ZDO 1022 Concurrency ordinance can adequately protect the state transportation system because the code allows traffic impacts to be mitigated by an applicant's "substantial contribution" toward a transportation improvement project in the County's 5 Year CIP. If a "substantial contribution" is volunteered, then impacts to other affected facilities are no longer considered. For this reason, and also because the County's 5-Year CIP does not list state highway projects, ODOT has a concern that the traffic impacts of the proposal be addressed at the comprehensive plan amendment/zone change stage.

Timberland County Comprehensive Plan, Chapter 5 Transportation

We have particular concern about the impacts of this proposal on the following policies pertaining to transportation:

General Transportation Goals

ODOT has requested supplemental traffic analysis in order to more accurately determine the impacts of the proposal. Please see the enclosed Technical Memorandum by Parker McLane, ODOT Region 6.

Needed Roadway Improvements, Policies 7.0 and 7.1

The proposal does not appear to be "consistent with the Designation of the Moonglow Corridor along a new alignment of Highway 173" as stated in the application narrative. Specifically, if approved, the proposal may inhibit the County's policy to "Meet the future transportation demands of the County."

Functional Classifications and Roadway Standards, Policy 11

Until additional traffic analysis has been conducted, it is unknown whether the zone change would require "A roadway as planned in the Capitol Improvement Plan to be redesigned or increased to a higher functional classification in order to maintain the minimum acceptable performance evaluation."

Access Standards, Policy 14

The policy directs ??? to "Plan and control access onto roads within the County…for both new and existing uses, and coordinate with the ODOT for access control on state highways." The Moonglow Corridor is planned as a controlled access facility. Direct access to the site would be prohibited. ODOT would purchase access control on the connecting roadways to 1350 feet to address our interchange management spacing standard. This access scenario may be problematic for the proposed retail development. If development were to proceed prior to construction of the Moonglow Corridor, direct access to OR 173 may not be supported by ODOT, as the site's frontage does not allow for the required 990 foot minimum access spacing.

Improvements to Service Development, Policies 15 & 16 and Operating Standards, Policy 29

The applicant has not demonstrated that the transportation system will be adequate to support the zone change or that mitigation measures identified in their Traffic Impact Analysis are technically feasible and would be approved by ODOT. We anticipate that the supplemental TIS will identify additional impacted intersections. Compliance with these policies cannot be determined until the supplemental TIS is provided and the feasibility of proposed mitigation is demonstrated.

Industrial Lands Policies

The *Metro Urban Growth Report* which formed the basis for the December 2002 Urban Growth Boundary amendment decision showed a region-wide deficit of industrial lands and an excess of commercial lands. Specially, the industrial land deficit prior to the UGB amendment was 5,685 acres. There was a shortage of industrial lands of all parcel sizes. Commercial land, on the other hand, showed a surplus of 760 acres region-wide. In terms of parcel size, there is an oversupply of commercial lands of all but the smallest (<1 acre) lot sizes. After the UGB was amended in December 2002, there remained a need for 1968 net acres of industrial lands, and a commercial land surplus of 393 acres. In view of these numbers, this application has not adequately demonstrated compliance with *Statewide Planning Goal 9, the Economy*, the Metro *Urban Growth Management Functional Plan,* and the *Timberland County Comprehensive Plan* Industrial Lands policies.

Given the scarce resources available to build and maintain additional transportation infrastructure for the region, we must be prudent about how existing and proposed facilities should be used. As planned, the Moonglow Corridor will serve existing industrially-zoned lands that is much needed in Timberland County.

Recommendation

ODOT recommends that the application be denied at this time. If the hearing is continued and supplemental traffic analysis is provided, we respectfully request to be provided a minimum of 10 working days to review and comment prior to the final hearing.

Thank you for coordinating this review with the ODOT.

Sincerely,

Dusty Rhoades, Assoc. Planner

Encl. K. Freitag traffic memo to S. Kazen, 4/21/03

DATE: April 21, 2003

TO: Dusty Rhoades
Region 6 Planning

FROM: Parker McLane
Region 6 Traffic

SUBJECT: Highway 173/94 EcoDevo Center (Embert)
Z0794-02-CP, Z0795-02-Z, Z0796-02-CP

Upon reviewing the February 2003 Traffic Impact Study (TIS) prepared by Welkommen Engineering for the proposed zone change and comp plan amendment, I have the following comments.

The property in question is located on Highway 173/94 between SE 136th Avenue and SE 142nd Avenue. A zone change/comp plan amendment is proposed to change the zoning of the property from industrial (I-2) to commercial (C-2). The TIS proposes that with commercial development of the property, direct access will be requested to Highway 173/94 in addition to the full access points on SE 136th Avenue and SE 142nd Avenue.

Highway 173/94 is classified as a Statewide Urban highway in the vicinity of the site. The speed is posted at 45 mph. The mobility standard for Highway 173/94 in this vicinity is a volume-to-capacity ratio (v/c) of 0.99. Highway 173/94 has a five-lane cross-section through the majority of the study area, with two through lanes in both directions and a center two-way left-turn lane or dedicated left-turn lane.

The TIS analyzed a 290,000-ft² shopping center as the reasonable worst-case under the proposed zoning. The trip generation analysis in the TIS provided site-generated volumes of 1,468 trips in the PM peak hour and 13,518 trips on a weekday. Compared to the 468 PM peak hour trips and 1,616 weekday trips generated by the industrial park under the existing zoning, the amount of additional traffic that will be generated by the zone change is significant.

The TIS analyzed five intersections on Highway 173/94 (in addition to the proposed site access) that will be impacted by the proposed zone change. Those intersections are SE 130th Avenue, SE 135th Avenue, SE 136th Avenue, SE 142nd Avenue, and SE 152nd Avenue.

The Statewide Priority Index System (SPIS) is a method developed by ODOT for identifying hazardous locations on state highways based on accident data over a three-year period and is comprised of three components: accident frequency, accident rate and accident severity. The Highway 173/94 @ SE 130th Avenue intersection as well as the Highway 173/94 @ SE 135th Avenue intersection have both been identified in the

2001 listings as top 10% SPIS sites, which is the highest priority ranking. This indicates that there are existing operational and safety concerns. The proposed zone change will add a significant number of trips to both intersections. Review of the crash data for these intersections for a five-year period (1997-2001) indicated that the majority of the crashes were rear-end crashes, which is typical for signalized intersections. There was not a significant pattern of turning-movement crashes at either intersection.

The TIS analyzed conditions for existing traffic, 2004 (year of potential buildout), 2007 (County requirement for zone changes), and 2020 (ODOT requirement for zone changes). No short-term improvements were assumed in the analysis. For the 2020 analysis, it was assumed that the Moonglow Corridor was built.

Existing Conditions
All study intersections were found to be operating within ODOT and County standards (v/c of 0.99 or better and LOS D or better) in the PM peak hour under existing conditions.

2004 Background Conditions
All study intersections are expected to operate within ODOT and County standards in the PM peak hour under background conditions, with the exception of the intersection of Highway 173/94 and SE 135th. That intersection is expected to operate at a v/c of 1.0 under background conditions, which exceeds ODOT's mobility standard (v/c=0.99).

2004 Total Traffic Conditions (Background + Site Traffic)
With the addition of the site traffic generated by the 290,000-ft^2 shopping center is expected to degrade several of the study intersections below ODOT and County standards. The SE 135th Avenue intersection is expected to degrade to a v/c of 1.1 and LOS E. The SE 136th Avenue intersection is anticipated to operate at a LOS F with the addition of the site traffic. The SE 142nd Avenue intersection is expected to degrade to a v/c of 1.2 and LOS F.

Some potential improvements were proposed to mitigate the transportation facilities back to within ODOT and County standards. Dual southbound left-turn lanes and a 130-second signal cycle were proposed for the SE 135th intersection. Dual southbound and northbound left-turn lanes were proposed as mitigation for the SE 142nd intersection. No mitigation was proposed for the SE 136th intersection.

Dual turn lanes must meet approval from the State Traffic Engineer to be installed. At this time, ODOT has no indication of whether the proposed dual left-turn lanes at either intersection would be acceptable or approvable in these locations.

The traffic signals on Highway 173/94 are part of a coordinated signal system. This means that if the signal at SE 135th Avenue was retimed for a 130-second cycle, then every signal in the system would have to be retimed for that cycle length. No analysis

was provided that would show that the other intersections in the signal system would operate sufficiently under this modified cycle length of 130 seconds.

2007 Background Conditions

Conditions for 2007 were analyzed to meet Timberland County's Zone Change Criteria. It should be noted that both the 2007 and 2020 zone change analysis should be reviewed and all requirements for both analysis years should be applied. This is due to the fact that although the County Zone Change Criteria yields to the Oregon Highway Plan for ODOT facilities, the intersections being reviewed in the TIS are intersections of a state highway with County streets. The signalized intersections that were studied are part of a signal system; therefore the amount of green time that could be allowed to the side streets is limited. Adding site-generated traffic to the study intersections would have a significant effect on the County streets.

Under background conditions, the SE 135th Avenue intersection was analyzed to be operating at a v/c of 1.3 and LOS F. The SE 142nd Avenue intersection was analyzed to be operating at a v/c of 1.0. The SE 152nd Avenue intersection is expected to operate at a LOS E.

2007 Total Traffic Conditions

With the addition of the site-generated traffic, the transportation facilities are expected to degrade. The SE 130th Avenue intersection is anticipated to operate at a v/c of 1.0. The SE 135th Avenue intersection is expected to operate at a v/c of 1.5 and a LOS F. The SE 136th Avenue intersection is expected to degrade to LOS F. The SE 142nd Avenue intersection is expected to operate at a v/c of 1.2 and LOS F. The SE 152nd Avenue intersection is expected to operate at LOS F.

Potential mitigation measures were proposed for the intersections that were not meeting ODOT or County standards. The TIS proposed to change the signal cycle length at the SE 130th Avenue intersection to 140 seconds. Dual southbound left-turn lanes, a northbound right-turn lane, and a westbound right-turn lane are proposed to mitigate for failing conditions at the SE 135th Avenue intersection. No mitigation was proposed for the failing conditions at the SE 136th Avenue intersection. A northbound left-turn lane and dual southbound left-turn lanes were proposed as mitigation at the SE 142nd Avenue intersection in addition to increasing the signal cycle length to 130 seconds. Separate southbound left- and right-turn lanes are proposed at the SE 152nd Avenue intersection.

Any proposal for additional turn lanes at an intersection on Highway 173/94 would be subject to ODOT review and approval. Dual turn lanes must meet ODOT State Traffic Engineer approval.

The TIS proposes to modify the signal cycle lengths at two different intersections to two different cycle lengths. As these signals are part of a coordinated signal system, the cycle lengths for all signals within the system must be the same. This is required in

order to maintain traffic progression through the system. In addition, analysis must be provided to show that the other intersections in the signal system will continue to operate adequately with a modified cycle length.

A previous application for a conditional use daycare facility had looked into constructing separate left- and right-turn lanes on SE 152nd Avenue as mitigation for their impacts. The County informed the applicant (Love n' Learn Daycare) that there was not sufficient right-of-way to construct separate turn lanes at the intersection. As a result, the daycare application was denied on the grounds of inadequate facilities. Unless additional right-of-way has been obtained in order to construct separate turn lanes on SE 152nd Avenue at Highway 173/94, this is not feasible mitigation.

2020 Traffic Conditions

Analysis for the year 2020 was done for conditions both with and without the Moonglow Corridor. As the Moonglow Corridor is considered planned, it should be accounted for in the analysis. Therefore, all of the analysis results referenced below are for the scenarios that include Moonglow Corridor.

All of the intersections analyzed in the TIS are expected to operate within ODOT and County standards for background conditions in 2020. Under total traffic conditions, the SE 130th Avenue intersection is expected to degrade to a LOS E. All other intersections are anticipated to either operate within ODOT and County standards or be removed as a result of the construction of the Moonglow Corridor.

The TIS proposes that dual southbound left-turn lanes be constructed to mitigate for the traffic impacts at the SE 130th Avenue intersection. Such a proposal would have to meet ODOT standards and State Traffic Engineer approval.

General Comments

The SE 152nd Avenue intersection was incorrectly analyzed in the TIS. It was analyzed with a continuous two-way left-turn lane on the highway on both sides of the intersection. In reality, the two-way left-turn lane terminates on the west side of the intersection and does not continue on through the intersection. It is expected that if the intersection were re-analyzed using the correct median treatment, the intersection would be operating more poorly than was indicated in the TIS. This intersection should be re-analyzed.

The TIS only analyzed for the weekday PM peak hour. Highway 173/94 is a major commuting route with high AM and PM peak hour traffic volumes. While the proposed shopping center would add significantly less traffic in the AM peak hour, analysis should be included for the weekday AM peak hour. In addition, a shopping center would add a significant number of trips on the weekends. Therefore, analysis of the Saturday peak hour should be done.

Schrock Creek Junction (Timberland Highway @ Timberland-Boring Highway) should be analyzed. A significant amount of the site traffic will utilize this intersection.

The narrative for the proposed land use case states that a shopping center in this location would be beneficial to I-555. No traffic analysis was provided that would support this claim. If the applicant wishes to make this statement in support of the proposed zone change and comp plan amendment, they must provide sufficient evidence in the form of traffic analyses that this statement is factual.

The TIS identified a signal at Highway 173/94 and SE 152nd Avenue as a potential mitigation measure under future year (2020) conditions without the Moonglow Corridor. ODOT identifies the desirable spacing of signalized intersections as being 0.5 mile (2460 feet) apart. This intersection is located approximately 0.15 mile (792 feet) from Schrock Creek Junction. It is unlikely a signal would be approved for the Highway 173/94 @ SE 152nd Avenue intersection, due to the close intersection spacing and other potential operational concerns. A proposed signal would have to meet State Traffic Engineer approval.

The applicant is proposing direct access in some form to Highway 173/94. The TIS shows a single right-in, right-out access point. Other documentation provided in the application packet showed either one or two access points, neither of which seem to be restricted. Any proposal for access would be considered a deviation from ODOT's access spacing standards and would be subject to review by ODOT under OAR 731-051.

Any proposals to modify signal timing must meet ODOT approval. The applicant (or representative) should discuss these proposals with Nelson Chi, ODOT Signal Manager. In addition, all analysis must be done using ODOT's signal timing parameters for the signal system on Highway 173/94 to accurately analyze the study intersections. Again, Nelson Chi is the appropriate contact for this information. He can be reached at (503) 731-3014.

Please let me know if there are any questions regarding ODOT's review of the TIS. I can be reached at (503) 731-8220.

Sincerely,

Parker McLane

Review Will Require TIS

July 23, 2003 ***ODOT Case No: XXXX***

City of Salmon
Planning Department
PO Box 958
Salmon, OR 97555

Attn: Mike McGillicutty, Sr. Planner

Subject: **CPA/ZC2005-2: Four Eagles Annexation & CPA/ZC**
29736-30000 SE Eagle Creek Road at OR 94

Dear Mr. McMcGillicutty:

We have reviewed the applicant's proposal to annex 26 acres into the City of Salmon. A comprehensive plan and zoning map designation from light industrial to general commercial is also proposed. The property is adjacent to OR 94, and traffic generated by the proposal has the potential to impact the state highway.

ODOT Standards

According to the Oregon Highway Plan (1999), OR 94 is classified a District Rural highway. The posted speed in this section is 45 miles per hour. Based on speed and classification, the access spacing standard is 500 ft., however, the site's OR 94 frontage may be access controlled. The mobility standard is 0.8, volume to capacity ratio (v/c).

ODOT Review

The applicant did not provide a traffic impact analysis to support this proposal. For comprehensive plan and zoning map amendments, the state *Transportation Planning Rule, OAR 660-12-060*, as well as the *Oregon Highway Plan, Policy 1F,* place the burden of proof on the applicant to demonstrate that the planned transportation system is adequate to support the proposed land use designation. A detailed transportation impact analysis comparing typical trip generation for reasonable 'worst case' development under existing light industrial zoning compared to the proposed general commercial zoning projected to year 2020 (the City of Salmon's transportation system plan horizon) will be needed in order to make an assessment of the proposal's impacts.

The proposal also fails to address *Salmon Code 17.101.015.A*. that requires that it be demonstrated that transportation facilities are, or can be made, adequate to support the proposed zone change.

ODOT Recommendation

We recommend that the City deny the proposed annexation and comprehensive plan/zoning map amendment at this time. The applicant has failed to demonstrate that the planned transportation system can support the land uses that would be allowed under the proposed general commercial zoning.

Please contact me at 541.777.5353 if you have questions regarding this case. Please forward a copy of the decision and findings when they have been issued. Thank you.

Sincerely,

Dusty Rhoades, Assoc. Planner

Cc: Transportation Planner, DLCD

Response to Code Amendment

January 14, 2005 ***ODOT Case No: XXXX***

City of Salmon
Planning Department
PO Box 958
Salmon, OR 97555

Attn: Mike McGillicutty, Sr. Planner
City of Salmon Planning Commission

Re: **Local File No. CA 05-07: City of Salmon Zoning Districts**

Dear Mr. Lazenby,

We have reviewed the proposed changes to *City of Salmon Municipal Code*, *Title 19.* ODOT operates two state highways in the City, US 36 and OR 311, and has a concern about the impacts that the proposals may have on the state as well as the local transportation system.

ODOT Review of Proposed Code Language

Central Business District – Chapter 19.42
We are not opposed to the consolidation of listed allowed uses in the Central Business District. We support the prohibition of new auto-oriented and drive-through uses because these can be detrimental to a viable pedestrian-oriented downtown. However, it is recommended that a definition of "auto oriented" be added to *SDC Chapter 19.30* to ensure consistent implementation. The proposal to allow light industrial uses in the downtown core, however, may not be compatible with a pedestrian environment. Industrial uses generally generate high truck traffic, and truck access maneuvers from Pioneer and Proctor, the US 36 couplet, could conflict with pedestrian, transit and bicycle use and reduce visibility for parking in the downtown core. This provision may be acceptable if the type of use referred to is clearly distinguished from light industrial uses that typically require regular truck traffic, and is otherwise defined narrowly enough to ensure that traffic impacts are consistent with the commercial land uses that are also allowed.

General Commercial – Chapter 19.44
We are not opposed to the consolidation of the list of permitted land uses. The proposed increase from 60,000 to 80,0000 SF for gross floor area could have an impact; additional traffic analysis to support this change would be necessary if the zoning code in place at the time of the City's *Transportation System Plan* did not allow buildings up to 80,000 square feet.

The proposed addition of light industrial uses and residential planned unit developments warrants further discussion. While in theory this change could open up many acres to industrial and residential construction, experience has shown that parcels with commercial zoning will primarily continue to develop with commercial uses unless there are complementary regulations

that include requirements or incentives for residential or industrial development. To our knowledge, the City of Salmon zoning code does not include such provisions and none are proposed.

Neighborhood Commercial 19.46
We are not opposed to the consolidation of the list of permitted commercial land uses. The proposed limitations on office and retail building size, auto-oriented uses, drive-throughs and truck traffic within the designated "neighborhoods" is very supportive of neighborhood livability.

Single Family Residential 19.34-Intent and Low Density Residential 19.36.00 Intent
The proposed text would eliminate required minimum densities of 2 units and 5 units per gross acre respectively, and replace with a maximum limit of 6 units and 10 units per gross acre respectively. The proposed maximums appear to be typical for the referenced zone types. However, because minimum density requirements are an effective tool to reduce sprawl, we recommend that the minimum density requirement also be retained. The City could consider adopting language that allows cluster development and flexible design standards where slope maximums or riparian setbacks preclude development on portions of a site as a means to meet minimum densities and provide development opportunities.

Industrial Park 19.48, Light Industrial 19.50 and General Industrial 19.52
The proposed language changes for Uses Permitted Outright (1) would allow" Any commercial, institutional, civic or industrial uses that comply with the design standards for the district, unless specifically excluded." Auto-oriented or drive-through uses would also be allowed.

The *City of Salmon Transportation System Plan* was formulated on traffic analysis from 1994/1995 existing conditions projected to year 2015. The analysis was based on future build-out of lands according to the *Comprehensive Land Use Map,* and in tandem with the comprehensive plan and development code language developed through the *2040 Regional Coordination Study.* The TSP was adopted in 1996, and the complementary comprehensive plan and development code revisions were adopted in 1997. These planning efforts included extensive public involvement and participation by service providers, and resulted in consistency between the comprehensive plan policies and plan map and implementing land use ordinances. The current proposal does not appear to meet the growth concepts and goals developed in the *2040 Regional Coordination Study* or the *Town Center Plan.*

As the City is aware, the gap between transportation project needs and available state and local funding is wide. There are numerous projects discussed in the City's *Transportation System Plan* considered to be needed in the near or long term that are not programmed in the *State Transportation Improvement Program* or the City of Salmon's *Capitol Improvement Plan.* For example, traffic studies for recent development proposals showed that four intersections on US 36: Bufford, Industrial, 62nd and Robin that are expected to fail by 2006. While the need for signal upgrades for three of these highway intersections was identified in the TSP, these projects are not listed in the TSP's Implementation Plan and they are not programmed in either the STIP or the City's CIP. Uses already allowed under the City's existing zoning code will exacerbate the anticipated deficiencies and it is likely that the improvements needed at these intersections may be disproportionate to the mitigation that could reasonably be required to offset impacts of a specific development. Exacerbating this situation further with code changes

that permit more intensive traffic-generating land uses without concurrently providing mechanisms to mitigate their impacts is not recommended.

ODOT has a serious concern with this proposal, as the potential traffic generation from commercial as well as some institutional and civic uses is substantially higher than for industrial development. Under the proposed code, a major chain grocery store, a large church complex that includes weekday activities, schools and a sports arena would all be permitted as long as each building was kept to less than 80,000. The impacts of this change on the 30 acres of industrial zoning currently within the city limits, as well as lands within the City's urban growth boundary could be substantial. The text change could also result in dispersed auto-oriented strip development, especially along US 36, which might reduce the attractiveness of downtown or other neighborhoods for retail development. Dispersed commercial growth could also increase the number of locations where transportation improvements are needed that were not anticipated in the *City of Salmon Transportation System Plan.*

The attached chart, prepared by Parker McLane, Traffic Analyst, ODOT Region 6 presents a rough comparison of the typical trip generation from development allowed under the City's existing and proposed industrial zoning code. As you can see, the potential increase in trip generation is substantial. The Permitted Uses now allowed in the City's three industrial zoning districts are typical of those found in industrial zones around the state. The proposal to allow general commercial development in industrial zones is not a standard practice. It is highly probable that primarily commercial development would occur on industrially-zoned parcels if this zoning code text change were to be adopted. Cities that previously allowed commercial development on industrial lands, such as the City of Murrelet, saw their industrial land supply erode due to commercial development; Murrelet recently amended their development code to eliminate commercial uses in their industrial zones to address this issue.

In order to assess the adequacy of the state and local transportation system to accommodate the proposed code changes, the City should conduct a traffic impact analysis that compares reasonable worst case development as allowed under the current zoning codes to the development that would be allowed under the proposed code. The analysis will need to be based on the acreage that will be affected and be consistent with the study area of the *TSP*, and calculate site densities according to all provisions in the City's existing and proposed development code. Such a study is
needed to demonstrate the potential impacts of these text changes, and would identify necessary transportation system improvements. Based on the analysis, the City and service providers could ascertain the feasibility of providing necessary infrastructure, and/or propose alternate zoning code revisions that address concurrency of transportation infrastructure. Potential options could include moving commercial, institutional or civic uses into the "conditional use" category, adding requirements for traffic analysis and for demonstration of transportation adequacy as approval criteria.

ODOT has a strong interest in establishing a *Special Transportation Area (STA)* along the US 36 couplet in downtown. An expectation for STA designation, which would create the potential for more pedestrian-friendly highway design standards and allow lower speeds within the downtown core, is that mobility standards be maintained on highway segments outside of the STA. The proposed zoning code amendments may foster additional strip commercial

development along US 36 outside of downtown that in turn would diminish the mobility of through travel along US 36.

ODOT FINDINGS

The following state and local approval criteria pertain to this proposal:

http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_012.html

The Oregon Highway Plan (1999) Action 1F.2
…When evaluating highway mobility for amendments to transportation system plans, acknowledged comprehensive plans and land use regulations, use the planning horizon 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 an amendment to a 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 development according to the applicable acknowledged comprehensive plan over the planning period.

Oregon Highway Plan, Action 1F.6
For purposes of evaluating amendments to transportation system plans, acknowledged comprehensive plans and land use regulations subject to OAR 660-12-060, in situations where the volume to capacity ratio for a highway segment, intersection or interchange is above the standards in Table 6…, 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 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, it will significantly affect the facility.

The City has not conducted a transportation impact analysis to assess the effects of the proposed zoning code amendments. Based on available information, there are existing and anticipated deficiencies in the transportation system that are not addressed in the adopted City of Salmon *Transportation System Plan*. The proposed zoning code amendments have the potential to exacerbate deficiencies, and could have a *significant impact* on the transportation system.

City of Salmon Municipal Code 19.24.70 REVIEW CRITERIA *Comprehensive Plan amendments shall be reviewed to assure consistency with the purposes of this chapter, policies of the Comprehensive Plan, and any other applicable policies and standards adopted by the City Council. Amendments shall be approved only when the following findings are made:*
A. *The change being proposed is the best means of meeting the identified public need; and*
B. *The change will result in a net benefit to the community.*

The City has not yet identified their objectives with this proposal and what public need is being addressed. Based on the information at hand, it appears that the code revisions could result in a negative impact on community livability.

RECOMMENDATION

ODOT does not support adoption of the zoning code revisions proposed at this time. The changes may result in conditions that are inconsistent with State Planning Goals and with the objectives of the City's adopted comprehensive plan. The changes to permitted uses in the Industrial and Commercial zones are likely to cause a *significant effect* on the transportation system (which triggers the requirements of the TPR, OAR 660-012), and are inconsistent with State Planning Goal 12 – Transportation.

We would welcome the opportunity to meet with City staff and board members along with representatives of other affected state agencies (DLCD, OECDD) to learn more about the City's objectives and to explore alternatives.

Please contact me at 533.732.5555 if you have questions regarding this letter. I would appreciate receiving a copy of the staff report and planning commission recommendation as soon as they are available prior to City Council hearing.

Sincerely,

Dusty Rhoades,
Assoc. Planner

Notice Required

ODOT NOTIFICATION PROCEDURES

The State Agency Coordination Program, ODOT (1990) and the Oregon Transportation Planning Rule (1991) identify local requirements for notification and coordination with ODOT concerning local land use and transportation planning activities. A Notice of Decision with Conditions of Approval must be sent for all cases for which ODOT provides comments.

House Bill 2219, effective date January 2004, requires notification to ODOT and the railroad for land use actions in which a railroad-highway crossing provides or will provide the only access to a property. Applicants are required to indicate that fact in the application submitted to the decision maker.

CRITERIA TRIGGERING NOTIFICATION

- Any development proposing access to a state highway facility (includes state highways and frontage roads) or across railroad right of way
- Modifications to existing developments that have access to a state highway or across railroad right of way
- All zone changes and comp plan amendments (legislative and quasi-judicial)
- Any development that generates 50 or more trips to a state highway (includes all state highways, interchanges, ramps and frontage roads) or a railroad crossing
- Any development proposed w/in 500 ft of ODOT right of way or railroad right of way
- Land divisions with property adjacent to ODOT right of way
- All proposed access or activities within the state highway right of way require ODOT permits, even if local land use review is not required. Please notify the district contact of all activities within state right of way.

Helpful Information to Send:

- Applicant's Name, Address, Phone #
- Project Name
- Local File Number (previous actions)
- Location & Legal Description of Property
- Description of Proposal
- Type of Land Use Review
- Current and Proposed Zoning
- Comment Deadline
- Assigned Planner and phone number

- Public hearing date and location
- Vicinity Map
- Traffic Impact Study, if available
- Site Plan (to scale, showing existing and proposed accesses and rail facilities)
- Landscape/grading and drainage plans when adjacent to highway

SEND NOTICES AND APPLICATION MATERIALS TO

ODOT Region 1 Planning Development Review Planning 123 NW Flanders Portland, OR 97209 503-731-8200	**ODOT District 2A** Sam Hunaidi, Assist. Manager 5440 SW Westgate Dr. #350 Portland, OR 97221 503-229-5002	**ODOT Rail Division** Dave Lanning, Sr. Crossing Safety Specialist 555 13th St NE Suite 3 Salem, OR 97301 503-986-4267

No Significant Effect

May 12, 2006 ***ODOT Case No: XXXX***

Timberland County
Department of Transportation & Development
517 SE Glenbrook Blvd.
Salmon, OR 97555

Attn: Rick O'Brien, Planning

Re: Local File No ZA-113-05: Burlwood Subdivision; Becker Lane and OR 94; Red Burl, Applicant

Dear Mr. O'Brien:

Thank you for providing ODOT the opportunity to review this proposed zone change to R-8 and R12 to allow development of a 27-lot subdivision plat.

Based on our review and analysis, we find that capacity and operations of the affected state highway, OR 94 and the interchange at Hwy 173 will not be significantly affected by the proposal in the near or long term. The planned interchange modernization project provides capacity to meet the transportation adequacy provisions of the Transportation Planning Rule, 660-12-060. The revised traffic analysis shows that the proposal meets the County's transportation concurrency Level of Service D standard.

The Hwy 173 / 94 interchange fails the state's volume-to-capacity mobility standard. However, ODOT does not believe that any mitigation by the applicant is warranted because background conditions are already anticipated to exceed our .99 v/c standard and the development's traffic will not cause a significant worsening of the situation. The proposal appears to meet the County's approval criteria.

Parker McLane, Traffic Analyst, ODOT Region 6 has provided the following technical review of the TIS:

> The proposed zone change is to facilitate the development of a 27-lot subdivision with access to Becker Lane, which accesses Hwy 94 at MP 9.70. This intersection and the intersection of Hwy 173 with Hwy 94 (Hwy 173 Interchange) are expected to be impacted by the development, and were analyzed in the Strata Engineering traffic impact study (TIS), dated April 2004. The TIS stated that emergency access to Hwy 94 will be available through 65th Avenue, but that intersection was not included in the analysis. This review considers possible mitigation measures dealing with traffic operations or safety of the state facilities.

According to the *1999 Oregon Highway Plan (OHP),* Hwy 173 is a District Urban facility. It is a two-lane highway with a posted speed of 45 mph. The *OHP* classifies OR 94 as a Statewide Urban highway in this vicinity. It has four lanes and a posted speed of 45 mph. The OHP mobility standard for both facilities is a volume to capacity (v/c) ratio of 0.99 for the peak two consecutive hours. Becker Lane is under the jurisdiction of Timberland County and is classified as a collector street. Additionally, Timberland County's Concurrency Ordinance requires a level of service of "D" or above for all facilities.

The TIS listed some recent improvements in the area, including a 150 ft southbound left-turn lane on Hwy 224 for access to Becker Lane, and widening of Becker Lane to 48', which affords room for separate left and right turn egress lanes. A new westbound through lane has recently been added to Hwy 94 at its intersection with Hwy 224. In-process development that was considered in the analysis include a total of 26 currently undeveloped single-family lots in the Hall Heights, Orchard Hill, and English Ivy subdivisions. The TIS does not consider the traffic generated by the recently approved Sunnyside Community Church, which will access Hwy 94 just east of the Hwy 173 Interchange. However, that development will have a negligible impact during the critical analysis period, as it is only expected to generate about six PM peak hour trips.

Trip generation for the Burlwood development was derived from ITE Trip Generation code 210 - Single Family. The development is expected to generate 153 daily trips, with 12 AM peak hour, and 16 PM peak hour trips. The TIS analyzed future year conditions for the subject intersections for the year 2007, which included trips from the in-process developments noted above, as well as a 3% per year growth factor applied to highway volumes.

The analysis showed the intersection of Hwy 224 and Becker Lane operating well below ODOT's mobility and Timberland County concurrency standards for all development scenarios. A revised analysis submitted by Strata Engineering in May 2005 showed the Hwy 173 Interchange exceeding ODOT's mobility standard for both background and build scenarios for 2007. The facility was shown to meet the County Concurrency standard of LOS "D." ODOT's preferred basis for analyzing zone changes is a 20 year future year analysis, which was not provided for this proposal. However, improvements to the Hwy 173 Interchange are identified in the County and Regional TSP. These improvements are expected to accommodate future traffic growth in the area.

It should be noted that the analysis method was not done according to Highway Capacity Manual (HCM) standards. The TIS analysis divided the peak two hours into two one-hour blocks, and these blocks were analyzed separately. ODOT expects intersection capacity analysis to reflect the peak 15-minute operating conditions, which are approximated by the use of peak hour factors. Further, it appears that the cycle length had been modified, which may have decreased theoretical delay (LOS), but lowered capacity (increased v/c). Nevertheless, other analyses have indicated that the intersection will approach capacity even under background conditions, and the subject development alone would not have a significant impact on operations.

Possible safety concerns include sight distance restrictions, documented crash history, and observed operational problems. The TIS indicates that sight distance was measured in

excess of 550 in both directions. However, it was not specified what method was used for measuring sight distance. Sight distance for state facilities should follow the methodology outlined in the 2001 AASHTO "Policy on Geometric Design of Highways and Streets." For a speed of 45 mph, the necessary distance is 500', indicating that existing sight distance is adequate. Visual inspection from the Video Log does appear to confirm this. The crash history revealed no documented safety problems at either of the subject intersections. Recent improvements, such as the installation of a southbound left-turn lane on Hwy 94 at Becker Rd may reduce the occurrence of the types of crashes typically associated with this type of intersection.

The TIS did not recommend any mitigation measures for the subject intersections. ODOT concurs with this assessment, as a signal at Hwy 94/Becker Lane is not warranted, and the existing southbound left-turn lane storage is adequate. There are no other safety or operational concerns with the intersection that warrant mitigation measures at this time.

Please forward a copy of the Decision for File No ZA-113-05 when it has been issued. Thank you.

Sincerely,

Dusty Rhoades, Assoc. Planner

Cc: Parker McLane, Traffic, ODOT Region 6

Form Letter Example: ODOT Response to Local Land Use Notification

Oregon

Theodore R. Kulongoski, Governor

Oregon Department of Transportation
ODOT Region 1
123 NW Flanders St
Portland, OR 97209
Telephone (503)731-8200
FAX (503)731-8259

ODOT Response to Local Land Use Notification

Jurisdiction:	**Case #:**	
Applicant:	**Project Name:**	
Address:		
Legal Description:	**Tax Lot(s)**	
State Highway: ***Highway Route Number***	**Mileposts: -**	
TRAFFIC CONTACT: **Traffic Analyst**		**Phone:**
PERMIT CONTACT: **Access Mgt & Engineering Coordinator**	**ODOT District:**	**Phone:**

***Please see reverse side for Recommended Local Conditions of Approval.**

The site is adjacent to the referenced state highway. ODOT has permitting authority for the state highway and an interest in ensuring that the proposed land use is compatible with its safe and efficient operation.

Please direct the applicant to the District Contact indicated above to determine permit requirements and obtain application information.

☐**ODOT has determined there will be no significant impacts to state highway facilities and no additional state review is required.**

☐**The applicant is advised that a residential development on the proposed site will likely be exposed to traffic noise levels that exceed federal noise guidelines. Builders should take appropriate measures to mitigate this impact. It is generally not the State's responsibility to provide mitigation for receptors that are built after the noise source is in place.**

☐**ODOT recommends that the applicant be required to submit a traffic impact analysis assessing the impacts of the proposed use on the State highway system. The analysis shall be conducted by a Professional Engineer registered in Oregon.** Contact the ODOT traffic representative identified above to scope the study.

PROPOSED ACCESS TO STATE HIGHWAY

☐**Site access to the state highway is regulated by OAR 734.51. Until the ODOT approach permit review has been completed, we cannot make a determination on the number, location or design of the proposed approach(es) to the highway.**

☐**ODOT is not obligated to provide additional approaches to the state highway for new parcels created through partition. If shared access is required by ODOT, the applicant would need to establish crossover easements or service roads between the new parcels to facilitate a shared approach.**

☐ **ODOT has conditionally approved the highway approach location(s) based on the specific site plan and uses identified in the applicant's approach road permit application. The locally approved site plan and uses must be consistent with the site plan and uses identified for the ODOT permit in order for the ODOT conditional permit approval to remain valid. If the site plan or proposed uses are modified, the conditional access approval may be invalidated and no permit issued by ODOT.**

RECOMMENDED LOCAL CONDITIONS OF APPROVAL

☐ **Curb, sidewalk and bikeways shall be constructed consistent with the local Transportation System Plan and Regional Transportation Plan (if applicable) to current local, ODOT/ADA standards to provide pedestrian and bicycle access to the site.**

☐ **Right of way dedication as necessary to accommodate the planned cross section identified in the Transportation System Plan shall be provided through deed to the Oregon Department of Transportation.**

☐ **Either an ODOT approach permit(s) for access to the state highway or a written determination (e-mail, fax or mail is acceptable) from ODOT that the existing approach(es) are legal for the proposed use is required.**

☐**An ODOT Miscellaneous Permit is required for all work in the highway right of way.**

☐An ODOT Drainage Permit is required for connection to state highway drainage facilities. Connection will only be considered if the site's drainage naturally enters ODOT right of way. The applicant must provide ODOT District with a preliminary drainage plan showing impacts to the highway right of way.

A drainage study prepared by an Oregon Registered Professional Engineer is usually required by ODOT if:

1. The total peak runoff entering the highway right of way is greater than 1.77 cubic feet per second; or
2. **The improvements create an increase of the impervious surface area greater than 10,758 square feet.**

ADDITIONAL COMMENTS:

Signed:	**Development Review Planner**
Phone:	**Date:**

Appendix 4
Findings Workshop (Liz Fancher)

Tips on Writing Land Use Decisions **April 19, 1999**
Presentation to APA Conference

<u>Legal Concepts to Analyze By</u>

Determine Relevant Approval Criteria First

- What do you do if criteria conflict?
  - Apply hierarchy of laws
    - State law, except Goals
    - Transportation Planning Rule
    - Comprehensive Plan
    - Zoning Regulations
  - As a general rule, you can be more restrictive than State regulations.
    - Exception: ORS 215.283 (1) Uses
      You must allow these uses as uses permitted outright unless a DLCD regulation allows you to impose additional restrictions. <u>Lane County v. LCDC</u> & <u>Brentmar v. Jackson County</u>.
  - Beware of the Bermuda Triangle see Friends of <u>Neabeack Hill v. City of Philomath</u>, 139 Or.App. 39, 911 P.2d 350 then call your lawyer!
    - Do you apply the OAR or do you enforce your acknowledged plan and zoning regulations?
      - Have you failed to adopt provisions required by state law?
      - Have you adopted local rules to implement state regulations/laws but your implementation is obviously inadequate to fulfill requirements of state law?
  - Remember that ORS 197.829 requires that local interpretations of local regulations must comply with state law and the comprehensive plan.

- Is Comprehensive Plan policy intended to serve as an approval criterion?
- Has a general Plan policy been implemented by zoning regulations?
  - Is it wise to create requirements not found in the zoning regulations based upon general Plan policies on an ad hoc basis in each land use application?

Common Errors

Inconsistent Findings

- Sources of Problems
  - Adopting Findings Written by Others to Support Decision
  - Tip: Be sure to read all adopted findings to identify conflicts with your findings. Specifically reject all findings you do not agree with and all that do not support your theory of the case or findings.
  - Writing Long Decisions and Losing Track of What You've Said
  - Trying Too Hard to Approve or Deny an Application
  - Tip: Try writing the decision without an outcome in mind - just try to answer the questions asked by each criterion. See where you end up. If you arrive at a denial and approval is in the public interest, review the findings to see if compliance with the application criteria can be met by imposing conditions of approval.

Improper Deferral of Decision Making

- Beware of Conditions of Approval
  - LUBA will reverse any decision that allows an applicant to delay demonstrating compliance with the approval criteria until after approval if the County does not determine that it is feasible for the applicant to obtain approval.
  - Any condition that requires the County to make a subsequent discretionary decision (land use decision) about some aspect of the application should also provide notice and hearing rights to opponents and the public.

Failing to Respond to Arguments and Conflicting Evidence

- It is especially important to respond to legal arguments raised by the party or parties who LOSE.
  - Review arguments and evidence presented by parties.
  - Be sure to address all arguments and evidence that relate to the approval criteria.
  - If there is a conflict in the evidence, say which evidence you accept and why. Remember that the applicant has the burden of proof.

Shifting the Burden of Proof

- Never say that the opponents have failed to prove a point. Opponents NEVER have the burden of proving anything, in the Oregon land use system, about the approval criteria. Instead, say that there is no evidence in the record (if this is the case) or explain why you did not find certain evidence presented by the opponents persuasive (perhaps because you were persuaded by the evidence presented by the applicant or others).

Failing to Address All Relevant Approval Criteria

Failing to Recognize Ambiguity in Approval Criteria and to Interpret Criteria

- See, ARLU DeCo v. Deschutes County, 149 Or App. 259, 942 P.2d 836 (1997) for help if you make this mistake.
- LUBA may refuse to interpret vague provisions of local ordinances and remand to the County to interpret the code in the first instance.
- If you fail to interpret vague provisions, LUBA may choose to do so and you may not like it.

Improper Reliance on Clark v. Jackson County

- Interpretations of local ordinances by a hearings officer or planning staff are not entitled to deference by LUBA.
- Interpretations of state law by a local government are not subject to deference.
- Look to ORS 197.829 for the Legislature's adoption of Clark
    - Does the Clark case have any continued vitality other than what is expressly stated in ORS 197.829? This question was raised by the Supreme Court at oral argument re the ARLU DeCo case. Issue not decided as Court dismissed case because review was improvidently granted.

Conclusory Findings

- Findings should discuss and determine facts, not simply state a legal conclusion.
- It is, however, a good idea to include findings that state that the approval criteria are satisfied, in the terms used by the approval criterion. Just be sure to ADD FACTS!
- If there are no facts in the record to support your conclusion, you must deny the application, unless the failure of evidence can be corrected with conditions of approval.
- Check case law for the required method of analysis of farm and forest issues that relate to compatibility, significant impacts, etc. As a general rule, you must identify the area impacted by the use being reviewed, determine what farm and forest activities are occurring (not just commercial operations), determine what the operating characteristics of the farm and forest uses are and determining whether the proposed use will impact those protected uses.

Failing to Make Findings that Respond to the Approval Criteria

- Just because it doesn't make sense to apply the criterion, that doesn't mean that the applicant has complied with the criterion.
    - If you think a criterion should not apply, SAY SO rather than saying that an application complies because it is not possible or logical to make the applicant comply. See, ODOT Weigh Station findings.
- Be sure to read the requirement and be sure to make findings that track the requirement.

- Answer the question posed by the criteria!

Make Findings Based Upon the Law in Effect at the Time of Application

- Apply this rule unless the application was not completed within 180 days of submittal (only if no refusal to submit additional information received during 180 day period) or if the case involves the amendment of a comprehensive plan. ORS 215.428
- Don't decide the case based upon newly adopted rules or plans that are under consideration but that have not been adopted.

Failing to Make Dolan Findings

- Establish essential connection between development and exaction
- Establish that exaction is roughly proportional to impact of development
- Must make an individualized factual review; make sure you get the facts you need.

Failing to Use Dolan to Help You Be Reasonable in the Light of Unreasonable Approval Criteria

- Tip: If an exaction is required by an applicable land use ordinance you should still make an individualized factual review. If the exaction is unconstitutional, it should be reduced to constitutional levels or not imposed. Per Gensman v. City of Tigard (LUBA), such requirements do not govern review of the application.

Remember the proper relationship and role of comprehensive plan.

- Not all provisions are approval criteria.
    - Some direct the County, not the applicant to act.
    - Some state general aspirations, not specific requirements for development.
- Your land use decision MAY NOT conflict with applicable provisions of the plan. Remember Angell Brothers. Tip: Seek to interpret the plan provisions to be consistent with approval. If you can't, tell the applicant to file for a plan text amendment.

Don't Make A Decision Based on Evidence Improperly Included in Final Argument

- Sort out and reject any new evidence included in final argument (if you are writing a decision for the Board of Commissioners on appeal and the applicant has failed to introduce the improperly submitted evidence at the de novo hearing).

Don't Rely on Prior County Decisions to Supply Evidence Unless They Are a Part of the Record.

An Uncommon But Interesting Error

Don't Rely on Conditions Present on Someone Else's Property

- If you do this, be sure to require the applicant to assure that those conditions will continue to exist.
- Typically, this occurs when you rely on adjoining property to provide a separation or buffer between uses.

Don't Rely on the Occurrence of Events that are not Certain to Occur

Food for Thought

1. When no one is opposing the application, pare down your findings. Just make sure the decision includes facts to support each required conclusion and make sure that the applicant knows what he needs to do to comply with conditions of approval.

2. Don't approve applications that require extensive revisions of development plans to meet code requirements.

3. Listing approval criteria in the report makes for a long report but makes a good record for code enforcement and for future applications (both for and against the applicant). It also helps you make all required findings.

4. Don't skimp on findings in contested cases. To save time, you usually can ignore the arguments advanced by the winning side on points that are not essential to your decision. Don't ignore arguments raised by the losing side.

Appendix 5
Reasonably Likely Letter

Transportation Planning Rule Guidelines
OAR 660-012-0060

DRAFT

DATE _____, 2005

Name
Community Development Director
City of Y, Oregon

RE: Plan Amendment from Residential to Commercial

The City of Y is considering proposed amendments that would redesignate and rezone 10 acres of land from residential to commercial. The proposed amendment is located at the intersection of Oak Street, a state highway, and Main Avenue, a local arterial. Pursuant to OAR 660-012-0060(4)(b), the City has written the Oregon Department of Transportation (ODOT) requesting a determination as to whether planned state highway improvements to Oak Street that are included in the City's TSP are:

- Funded for construction or implementation in the Statewide Transportation Improvement Program (STIP);
- Part of the region's federally approved, financially constrained regional transportation system plan *[if City Y is located within an MPO area];* or
- If neither of the above, the planned improvements are reasonably likely to be provided by the end of the TSP planning period.

ODOT offers the following comments in response:

1. Oak St. is a state highway facility and is classified as a Regional Highway and as a Freight Route.
2. The following improvements to Oak St. are included as planned improvements in the City of Y's TSP, which the City adopted using a 2018 planning period:
   - Widening Oak Street from 2 to 4 travel lanes.
   - Channelization improvements (turn lanes) at Oak Street and Main Avenue.
   - Provision of a traffic signal at the intersection of Oak St. and Main Ave.

3. The identified improvements to Oak St. are not included for construction funding in ODOT's Statewide Transportation Improvement Program (C-STIP).
4. The identified improvements to Oak St. are not included in the region's federally-approved, financially constrained regional transportation system plan *[identify the region].*
5. The identified improvements to Oak St. do not have a funding plan or mechanism in place or approved.

Because of this, ODOT offers the following written statement as to whether the identified Oak Street improvements are reasonably likely to be provided (i.e. in place and available) by the end of the planning period. Because the Oregon Highway Plan uses a minimum 15 year planning horizon for state transportation facilities and improvements, and the City's planning horizon local transportation improvements is less than 15 years, ODOT is using a 15-year(2020) planning period in making this determination.

The reasonably likely written statement is intended to be analogous to a service provider letter provided during the review of development actions in many local jurisdictions. That is, it is intended to answer the question: *"Is it reasonably likely to expect that the transportation capacity provided by the planned improvement will be in place and available by the end of the planning period and, therefore, can be relied upon when conducting the traffic analysis that accompanies a proposed amendment application?"*

Based on ODOT's review of the circumstances associated with future improvements to Oak St. it is our opinion that the necessary improvements (identified above) <u>are reasonably likely to occur by the end of the planning period</u> – in this case, by 2020. Region # has evaluated the circumstances and reached this conclusion based on the following factors:

1. *The planned improvements are located on a priority type of facility (in this case a key freight connection) that the Region believes would be reasonably likely to receive future funding because of the access it provides to existing and future employment.*
2. *The planned improvements are located in an area that anticipates high growth and, therefore, may be a high priority area for targeting future transportation revenues.*
3. *The City of Y has land use regulations that allow the City to impose conditions on future development if such conditions are needed to avoid or remedy a significant effect. ODOT will provide further comments should this amendment result in a specific development request.*
4. *[Other]*

Please note that under OAR 660-012-0060(4)(e), this reasonably likely determination is conclusive (e.g. not rebuttable). As such, the City may consider

the planned improvements to Oak St. in determining whether the amendment would significantly affect existing or planned transportation facilities.

This reasonably likely determination does not constitute a commitment on the part of ODOT to fund the planned improvements on Oak St. Further, this written statement applies only to the subject property and only to this specific proposed amendment. It does not apply to any future amendments that may rely upon the same project to avoid a significant effect. Instead, future proposed amendments will require a new written statement from ODOT. This is necessary because circumstances may have shifted from the factors that ODOT considered for this application in making this reasonably likely determination for the planned improvements to Oak Street.

ODOT appreciates the opportunity to provide you with this written statement. ODOT also looks forward to an opportunity to review and comment on the significant effect determination that the City will be making and on the applicant's final traffic impact report once it is prepared and submitted to the City. Please keep us informed on these matters and provide us with the traffic report and staff report when they become available.

Sincerely,

Region X Manager

Cc: ODOT Director, ODOT TDD Manager, District X Manager

Appendix 6
Sullivan Takings Paper

A BRIEF HISTORY OF THE TAKINGS CLAUSE

By Edward J. Sullivan
Preston Gates & Ellis LLP

The "Takings Clause" of the U.S. Constitution fairly simply provides "nor shall private property be taken for public use." However, in the last quarter century, that clause has taken on a prominent role in constitutional jurisprudence, particularly with respect to the limits of state and local regulatory power. Any discussion of the Takings Clause should begin with the history that led to its enactment and the way the law has developed in the courts.

The Takings Clause found its genesis in Section 38 of the Magna Charta, which declared that land would not be taken without some form of due process. King John I, who signed that document, almost immediately denounced this undertaking to his barons. However, that promise eventually made its way into the coronation oaths taken by kings and, in England at least, became a protection against confiscation of lands without some form of a hearing.

That was not to say there were not battles between the kings and queens on the one hand and, on the other hand, the barons and Church and, after the Renaissance, a rising middle class. Those who opposed the powers of the monarchy to seize land found three formidable legal, and political, writers who provided theories based on common or natural law to support their position.

Each of those writers was influential in the development of American law in general, and constitutional law in particular.

Sir Edward Coke (1552-1634), Lord Chief Justice of England, wrote decisions in cases coming before him and treatises on the development of the common law. Coke also published works opposing the powers of the King. Although his work was not historically accurate, it was put forth with passion and rhetorical brilliance. The common strand of his work was that the common law was a long-recognized tradition of rights against which even the powers of the King must bow. He authored the "Petition of Right," which set up specific rights, of alleged ancient provenance, against the powers of the King. He compiled the law in the form of reports on cases that he had heard and those he read and prepared a full volume series called the "Institutes of the Laws of England," which set out his views on the role of the common law as protecting ancient rights against royal power.

Sir William Blackstone (1723-1780) wrote a four-volume series entitled the "Commentaries on the Laws of England," which was used as a foundation for legal education in England and the American colonies. The Commentaries sought to provide an introduction to English law in an easily understandable way. Like Coke, Blackstone stressed the continuity of the common law, as well as its position as a bulwark against royal powers.

The third writer of this trio is John Locke (1632-1704), who was a philosopher and political thinker. He is famous for the Two Treatises on Government, which were written, in part, to justify the "Glorious Revolution" of

1688, in which a Catholic king was overthrown and the Protestant ascendancy returned to England with the support of the middle class. His view was that sovereignty did not reside in the state, but rather in the people, who had the right to overthrow government. Locke's view of natural law provided for natural rights, including property rights, which did not depend on royal authority.

The writings of Coke, Blackstone, and Locke were, in addition to the Bible, a standard reference for enlightened English colonialists, and these English authors influenced the Declaration of Independence, which asserted a natural right against royal absolutism. The Declaration of Independence, in particular, reflected Locke's view that the monarchy could be limited or overthrown if it violated ancient or natural rights.

After the American Constitution was adopted, there was fear, particularly by the anti-Federalists led by Jefferson, that the federal government would be too powerful. Jefferson agitated for the adoption of the Bill of Rights, the first ten amendments to the federal Constitution. One of these Amendments, the Fifth, provided that no person shall "be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation." Jefferson's views probably came from his reading of Coke, Blackstone, Locke, and enlightenment philosophers, and reflected similar provisions in certain earlier post-Revolutionary War state constitutions.

The Fifth Amendment, as originally written, was only a restriction against the federal government. As was held in the opinion of Chief Justice Marshall in Barron v. Mayor and City Council of Baltimore, 32 U.S. 243 (1833), the

prohibitions of the Bill of Rights did not apply to the States. While there were some limits on the powers of the States before 1865, it was not until the Civil War that the federal Constitution limited the powers of the state (and thus local) governments against their own citizens through the passage of the Thirteenth, Fourteenth, and Fifteenth Amendments.

The Fourteenth Amendment imposed restrictions on States through the broadly worded Equal Protection, Due Process, and Privileges and Immunities Clauses. The Privileges and Immunities Clause was quickly eviscerated in the Slaughterhouse Cases, 83 U.S. 36 (1873). The Equal Protection Clause developed its own jurisprudence as to similar treatment of similar situations and was especially useful in ending state-sponsored racial segregation in Brown v. Board of Education, 394 U.S. 294 (1955). The Due Process Clause, however, developed along at least three lines.

One of those lines was procedural and was developed to assure that hearings and other governmental decision-making processes were conducted fairly. This review of the processes of government is known as “procedural due process.” A second line of cases extended the limits on the federal government in the Bill of Rights to state and local government action using the Due Process Clause. For approximately 100 years after the passage of the post-Civil War amendments, Due Process Clause litigation resulted in "incorporation" of some of the limitations on the federal government in the Bill of Rights to state and local actions as well. The Supreme Court applied the Takings Clause of the Fifth Amendment to the States through the Fourteenth Amendment Due Process

Clause in Chicago Burlington and Quincy R.R. v. City of Chicago, 166 U.S. 226 (1897).

A third line of cases, commencing with Mugler v. Kansas, 123 U.S. 623 (1887), in which the U.S. Supreme Court, through Justice John Marshall Harlan, indicated that that Court could review, through the Due Process Clause, the substance of legislation. The ability to review both the substance, as well as the procedure, involving legislation, came to be known as "substantive due process." This third strand of the Due Process Clause allowed judges to "second-guess" state and local legislative decisions and reigned supreme for the period 1887 through approximately 1940. Under substantive due process, a court could determine whether the ends and means of legislation were appropriate and whether or not the legislation were “unduly oppressive” to regulated parties. To many critics, substantive due process allowed judges to substitute their own views on political and social matters in the guise of constitutional interpretation. Substantive due process generally became unimportant after the clash between the U.S. Supreme Court and the Franklin Delano Roosevelt administration when various New Deal measures were declared unconstitutional and the President threatened to "pack" the Supreme Court. The packing effort was unsuccessful; however, President Roosevelt was able to appoint seven justices to the Supreme Court in approximately two years. With some notable exceptions, particularly in the privacy and abortion areas, substantive due process is not a major factor in constitutional adjudication today, but some critics assert that the ability to

second-guess legislatures has shifted from this third strand of substantive due process to the Takings Clause.

It was to be a quarter century after incorporation of the Takings Clause of the Fifth Amendment that the U.S. Supreme Court began working out its application to state and local government actions. In 1922, the U.S. Supreme Court decided Pennsylvania Coal v. Mahon, 260 U.S. 393 (1922). This case involved a regulation enacted by the Pennsylvania legislature to prohibit mining of coal under streets, houses, and places of public assembly. The coal company held mineral rights to many properties in northeast Pennsylvania and had sold the surface rights to others. The coal company argued that a taking had occurred under these regulations because it was unable to mine the coal. The U.S. Supreme Court agreed and said that, while property may be regulated, if the regulation goes "too far," it constitutes a taking. No compensation was ordered in that case, and the law was deemed invalid. The analysis of the court in Pennsylvania Coal was along the lines of substantive due process. No later cases discussed this case, or its reasoning, for many years after the decision.

At about the same time as the Pennsylvania Coal case, the U.S. Supreme Court took four cases involving the new land use regulatory technique called "zoning." Two of these cases were important. In Village of Euclid v. Ambler Realty Co., 272 U.S. 365 (1926), the Court upheld a general zoning ordinance against various substantive due process challenges. However, the Court found a zoning ordinance invalid as applied in a particular situation in Nectow v. City of Cambridge, 277 U.S. 183 (1928). Both of these cases were substantive due

process cases and used a substantive due process analysis. For almost 50 years, the U.S. Supreme Court did not take a land use regulatory case, but, in the meantime, abandoned its substantive due process analysis. The irony was that all four land use cases that were decided between 1926 and 1928 undertook a substantive due process, rather than a takings clause, analysis.

In 1978, in Penn Central Transportation Co. v. New York City, 438 U.S. 104 (1978), the U.S. Supreme Court applied the Pennsylvania Coal takings analysis to determine whether a local government had gone "too far" and announced a three-factor rule to determine whether a taking had occurred. The Court said it would look at the "economic impact" of the regulation, how the regulation would affect "investment-backed expectations," and the "character of the governmental action." Three years later in Agins v. City of Tiburon, 447 U.S. 255 (1980), the Court established a two-part alternative test to determine whether a regulation amounted to a taking. The first part was whether or not the regulation "substantially advanced a legitimate state interest," and the second was whether the regulation "denied an owner economically viable use of land." Both the three-factor Penn Central test and the two-prong alternative test of Agins are part of current U.S. Supreme Court jurisprudence.

With regard to conditions involving dedication or transfer of property interests, the U.S. Supreme Court used the "substantially advanced a legitimate state interest" prong of Agins in Nollan v. California Coastal Commission, 43 U.S. 825 (1987), and Dolan v. City of Tigard, 512 U.S. 374 (1994), to require that there be a "nexus" between the anticipated effects of a land use and the real

property exaction. The Court required that there be an individualized determination, with the burden being on the government, to show that there was a "rough proportionality" between the impacts of the land use proposal and the real property exaction.

The Court has also distinguished “facial” takings claims, which are rarely found, and involve the invalidity of a general ordinance or regulation in which its every application would be invalid, from “as applied” takings claims in which a taking may be found in the application of an ordinance or regulation to a single property. However, in an “as applied” situation, the property owner must demonstrate a final decision showing that level of use to which a parcel of land may be put. That may mean that property owners must seek zoning variances or other forms of relief before the court will find that property has been “taken” by regulation. Williamson County Regional Planning Commission v. Hamilton Bank, 473, U.S. 172 (1985).

Further, the U.S. Supreme Court has determined that either a physical occupation of land either by government itself or by a private person authorized by government, as in Loretto v. Telepromptor Manhattan CATV Corp., 458 U.S. 419 (1982), or the deprivation by regulation of all viable economic use, as in Lucas v. South Carolina Coastal Commission, 505 U.S. 1003 (1992), would constitute a "per se" taking (i.e., a taking by itself).

Aside from these “categorical” takings cases, the Court has yet to settle on an analysis for the application of the Takings Clause between the “three-factor” analysis of Penn Central and the alternative tests of Agins.

Takings law is confusing and perhaps has developed in a sporadic and contradictory way. Historically, politically, and socially, the arbitrary deprivation of title to property has always touched a raw nerve. However, the reduction of property value by regulation through general government action has not been as much a subject of concern, except in the “per se” situations described above. Law, particularly constitutional law, develops incrementally. Interpretation of the Takings Clause, as it applies to regulation of the use of land, is slow to develop and sometimes changes course. The twists and turns of its development over the next quarter century of the Takings Clause can be expected to replicate the erratic course of the last 25 years.

Appendix 7
Traffic Impact Analysis: TIS – Scope R2

Oregon
Theodore R. Kulongoski, Governor

Department of Transportation

Region 2 Tech Center
455 Airport Road SE Building A
Salem, Oregon 97301-5397
Telephone (503) 986-2990
Fax (503) 986-2839

Date: **May 8, 2006** **File:**

Subject: **Traffic Impact Analysis Scope of Work**
Project Name
Adjacent Highway Name – Route Number (Highway Number)
Milepost/Milepost Range
City Name
County Name

Attn:

The purpose of this letter is to define the scope of work for a Traffic Impact Analysis (TIA), which evaluates the impact for the proposed .

The Oregon Department of Transportation (ODOT) and _____, along with the Developer previously met and discussed the need and general scope of a traffic impact analysis for this project. The affected jurisdictions agreed that ODOT would be the lead agency regarding the traffic study coordination. Therefore, any questions or comments will be coordinated through this office.

Scope of Work:

I. General:

Executive Summary:
Provide a description of the development, site location and study area (including a site map). Briefly describe the purpose of the analysis, principal findings, recommendations and conclusions.

Analysis Study Area:
Provide a text description (including tax-lot descriptions) of the proposed development; and a graphic showing the intersections and accesses, identified by highway milepost, to be evaluated as part of this analysis.

II. Traffic Data:

Traffic Counts
Full federal manual classification counts shall be made at all study area intersections. For all major intersections, the count must be at least 14-hours long, with 15-minute breakdowns during the A.M. and P.M. peak hours. For all minor intersections and approaches, the count must be at least 3-hours long, made during the afternoon peak, with 15-minute breakdowns.

Raw traffic volumes will not be accepted for use in traffic analysis. All traffic volumes shall be seasonally adjusted to represent 30th Highest Hour Volumes (30HV) for Current Year, Year of Opening, and Future Year "*background traffic*" conditions. For guidance, please refer to the *Developing Design Hour Volumes* document.
http://www.oregon.gov/ODOT/TD/TP/Analysis.shtml

Site Trip Generation, Distribution and Assignment:
Site trip generation shall utilize the most current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual to estimate daily and peak hour trip volumes originating from and destined to the proposed development.

This analysis should use available transportation models in conjunction with the City of *"Name"*, as well as current Transportation System and Comprehensive Plans to estimate traffic distribution patterns. Approved computer models, such as Traffix, or manual calculations may also be used for determining trip assignments for site-generated traffic volumes on roadways within the study area.

All assumptions, adjustments and variables shall be approved by Region Traffic in advance. Trip distribution and assignment will be shown on a vicinity map, as percentages and trips at significant intersections within the vicinity of the development. This information shall be documented and discussed in the TIA, or in the appendix.

Analysis Procedures:

Capacity Analysis:

Capacity analysis of signalized intersections, unsignalized intersections, and roadway segments shall follow the established methodologies of the current Highway Capacity Manual (HCM2000). For signalized intersections, the overall intersection V/C shall be reported. For unsignalized intersections, the highest approach V/C shall be reported, along with an indication of its corresponding movement.

Refer to **Table 3.3.7** in the Development Review Guidelines; it lists ODOT's default parameters for use in signalized intersection analysis. If the parameters used in the analysis are outside those listed in **Table 3.3.7**, documentation shall be supplied as justification. If multiple intersections are analyzed, the traffic volumes shall be balanced between intersection nodes. All intersection capacity analyses shall include heavy vehicles percentages by approach, as determined from manual counts.
http://www.oregon.gov/ODOT/TD/TP/DRG.shtml

Project level mobility results (V/C) from the TIA will be compared against the Highway Design Manual mobility requirements (Table 10-1, 20 Year Design Mobility Standards). Planning level mobility results (V/C) from the TIA will be compared against Highway Mobility Standards (Policy 1F) and the Maximum V/C Ratios provided in Table 6 of the 1999 Oregon Highway Plan (OHP), August 2005 Amendments.
http://www.oregon.gov/ODOT/TD/TP/orhwyplan.shtml#1999_Oregon_Highway_Plan

Application of Computer software shall closely follow ODOT-approved analysis methodologies. HCS2000 and Synchro/SimTraffic are examples of accepted analysis software. For further guidance, contact TPAU. All electronic files used in this analysis shall be provided via CD-ROM or ODOT's FTP site. For details, contact the Region Traffic office.
ftp://ftp.odot.state.or.us/

Queue Length Analysis:

Intersection operation analysis shall include the effects of queuing and blocking. Average queue lengths and 95th Percentile queue lengths shall be reported for all study area intersections. The 95th Percentile queuing shall be used for design purposes, and will be reported to the next nearest 25 foot increment. Any methodology used to determine queue length shall be approved in advance by either TPAU or the Region, and documented in the TIA or appendix.

III. Analysis Requirements:

Intersection Sight Distance:

Adequate intersection sight distance shall be verified for all proposed intersections and highway approaches as required in ODOT's 2005 Highway Design Manual. For guidance, please contact the Region Access Management Engineer.
http://egov.oregon.gov/ODOT/HWY/ENGSERVICES/hwy_manuals.shtml

Right & Left Turn Lane Criteria:

Proposed right or left turn lanes at unsignalized intersections and private approach roads shall meet installation criteria contained in the current Highway Design Manual (HDM). For turn lane evaluation procedures, refer to:
http://www.oregon.gov/ODOT/TD/TP/Analysis.shtml

Traffic Signal Installations & Modifications:

Analysis and recommendations related to new and/or modified traffic signals shall follow ODOT's Traffic Signal Policy and Guidelines, and all subsequent revisions. These documents can found on the web at:
http://www.oregon.gov/ODOT/HWY/TRAFFIC/publications.shtml

New signal proposals for Day of Opening shall show, but are not limited to, the following:

- A clear indication of need for a traffic signal; only after other enhancements to nearby signals are shown to be insufficient to mitigate the new highway related impacts resulting from the proposed development.
- An assessment of the ability of existing, planned, and proposed public roads to accommodated development traffic at another location.
- A detailed description how the proposed development will affect existing and proposed study area intersections.
- Documentation of traffic volumes and signal warrant satisfaction; if a new signal is determined to be the correct solution.

Clearly show how one or more of the eight warrants identified in the Millennium Edition of the Manual on Uniform Traffic Control Devices (MUTCD), Chapter 4C, Sections 1 through 9 are met, consistent with the requirements of OAR 734-020-0490. Traffic signal spacing requirements shall conform to the 1999 Oregon Highway Plan. Progression analysis shall meet the requirements of OAR 743-020-480.

If applicable; complete time-space diagrams for each of the analysis scenarios, including the existing coordinated system shall be provided. They will demonstrate the proposed signal system is capable of maintaining adequate progression band widths for through traffic on the State Highway on the most critical roadway segments within the study area.

Any recommendations for traffic signals to be installed as part of future mitigation should meet preliminary signal warrants (MUTCD Warrant #1, Case A & B). All future proposed signals shall still need to meet the need and warrants as described. For guidance, please contact TPAU or the Region, or refer to the Preliminary Signal Warrant Guidelines.
http://www.oregon.gov/ODOT/TD/TP/Analysis.shtml

NOTE: It is ultimately up to State Traffic Engineer to approve all signal installations, modifications and deviations. Just because an intersection may meet the MUTCD Warrants does not insure it will be approved by the State Traffic Engineer.

Access Management:
Demonstrate how the proposed access, or accesses meet the minimum spacing criteria of OAR 734-051; or how it coincides with the current access management plan/strategy.

IV. Analysis Output:

Existing Conditions:

Identify current year site conditions at the proposed development location. This includes, but is not limited to the following:

- A description of the site location, zoning, existing use(s), and proposed use(s) of subject property.
- A description of surrounding land uses.
- A graphic identifying existing lane configurations and traffic control devices at the study area intersections.
- A graphic showing existing 30HV traffic; reported as AM (7-9 a.m.) and PM (4-6 p.m.) Peak Hour Volumes (PHV), and also as average daily traffic (ADT). Also include in this graphic a list of heavy vehicle percentages by approach.
- An analysis of existing intersection operations, reported in terms of both Volume to Capacity (V/C) and Level of Service (LOS).
- An analysis of at least 3-years worth of crash data; including information on all SPIS sites within or adjacent to the study area.

Traffic Volumes & Operations – Year of Opening; with & without Proposed Development:

An analysis shall be made of all study area intersections in the Year of Opening, for both "*background traffic*" and "*total traffic*" conditions. "*Total traffic*" conditions are considered "*background traffic*" volumes plus site generated trips. This analysis should provide the following:

- A graphic showing Year of Opening "*background traffic*" and "*total traffic*" volumes.
- A graphic or table showing V/C and LOS analysis results for both "*background traffic*" and "*total traffic*" volumes.
- A graphic or table itemizing storage length requirements for all approaches, rounded to the next nearest 25 foot increment.
- If applicable, a discussion of progression performance along the analysis corridor.

Traffic Volumes & Operations – Future Year; with & without Proposed Development:

An analysis shall be made of all study area intersections for a XX-year horizon, for both "*background traffic*" and "*total traffic*" conditions. This analysis should provide the following:

- A graphic showing Year of Opening "*background traffic*" and "*total traffic*" volumes.
- A graphic or table showing V/C and LOS analysis results for both "*background traffic*" and "*total traffic*" volumes.
- A graphic or table itemizing storage length requirements for all approaches, rounded to the next nearest 25 foot increment.
- If applicable, a discussion of progression performance along the analysis corridor.

Planned transportation system improvements anticipated within the XX-year horizon shall be incorporated into the Future Year analysis. Do not incorporate improvements that are proposed as mitigation for the development. For guidance, please refer to the Transportation Planning Rule (TPR): OAR 660-012-0060.
http://egov.oregon.gov/ODOT/TD/TP/TPR.shtml

Analysis Variable Inputs:

A summary of traffic analysis variable inputs shall be provided in an appendix. In Synchro, the ***Int: Lanes, Volumes, Timings*** report is the output source for this information. TIA's submitted without an input summary will not be accepted by the Department.

Conclusions and Recommendations:

Summarize existing and future conditions and discuss the proposed development's impacts. Identify any operational or safety deficiencies and recommend mitigation along with the effectiveness of the mitigation. Summarize how the proposed development complies with all operational and safety standards in the applicable approval criteria.

Note: Signal timing adjustments will not be considered as mitigation.

Sincerely,

Name
Title

cc:

Traffic Impact Analysis: TIS-TIA Guidance R1

ODOT Guidelines for Requiring and Requesting Traffic Impact Studies for Development Review

OAR 734 Division 51 Access Management Rule

Oregon Administrative Rule Chapter 734, Division 51, Access Management Rule gives ODOT the authority to regulate access to State highway facilities. OAR 734-051-070 establishes when ODOT may require a TIS and when ODOT shall require a TIS for applicants proposing access to a State highway.

- ODOT **may require** a TIS for proposed developments generating vehicle trips that equal or exceed 600 daily trips or 100 hourly trips; and
- **Shall require** a TIS for proposed developments or land use actions where the on-site review indicates that operational or safety problems exist or are anticipated.

OAR 660-012-0060 Transportation Planning Rule

For comprehensive plan and zone change amendments local governments must make findings that a proposed amendment complies with the Transportation Planning Rule OAR 660-012-0060. There must be substantial evidence in the record to either make the finding of "no significant effect" on the transportation system, or if there is significant effect "assurance that allowed land uses are consistent with the identified function, capacity, and level of service of the transportation facility". In order to determine whether or not there will be a significant impact on the State transportation system, **ODOT may request** a TIS. The **local jurisdiction may require** the applicant to prepare a TIS to produce substantial evidence in the record.

TPR 660-012-0060 Plan and Land Use Regulation Amendments

(1) Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity and performance standards (v/c ratio) of the facility. This shall be accomplished by either:

a. **Limiting allowed land uses to be consistent with the planned function, capacity, and performance standards of the transportation facility;**
b. Amending the TSP to provide transportation facilities adequate to support the proposed land uses consistent with the requirements of this division;
c. Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes, or
d. Amending the TSP to modify the planned function, capacity and performance standards, as needed, to accept greater motor vehicle congestion to promote mixed use, pedestrian friendly development where multimodal travel choices are provided.

(2) A plan or land use regulation amendment significantly affects a transportation facility if it:

a. Changes the function classification of an existing or planned transportation facility;
b. Changes standards implementing a functional classification system;
c. Allows types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of a transportation facility;
d. Would reduce the performance standards of the facility below the minimum acceptable level identified in the TSP.

Interchange Management Areas
According to the Oregon Highway Plan 1999, freeways and interchanges are the highest classification of State highway facilities. When a proposed development is within a quarter mile of the terminal of an interchange ramp, ODOT **may request** the local jurisdiction require a TIS.

"Conditional Use" Land Use Applications
Typically, the local zoning code requires that applicant's demonstrate adequacy of public facilities at year of buildout for "conditional use" approval. A TIS may be necessary for the local government to make findings that there are adequate transportation facilities based on substantial evidence. Local governments typically defer to ODOT for determining whether or not State transportation facilities are adequate to serve the "conditional use". Therefore, ODOT **may request** the local government require a TIS so that the impacts on State highway facilities can be evaluated.

Operational or Safety Problems
ODOT **may request** the local government require a TIS when our preliminary review indicates that traffic generation from the proposed development may be impacting a State highway intersection where operational or safety problems exist or are anticipated.

State highway is the proposed development's primary access to the roadway network
ODOT **may request** the local government require a TIS when large amounts of the site generated traffic must use an intersection with the State highway to access the roadway network even when direct access to the highway is not proposed.

ODOT Region 1 TIS Requirements

1. When an applicant has been required to prepare a Transportation Impact Study (TIS) and a State highway facility may be impacted, the applicant is advised to contact the ODOT Transportation Analyst as early in the process as possible to scope the TIS.

2. Unlike most local jurisdictions that use the Level of Service (LOS) letter grades to measure highway performance, the Oregon Highway Plan (OHP) 1999 adopted the volume–to-capacity ratio (v/c) as the mobility standard for State highways. The v/c ratio is defined as the peak hour traffic volume (vehicles/hour) on a highway section divided by the maximum capacity of the highway section. An intersection with a v/c of 1.0 is operating at capacity. A v/c of less than 1.0 indicates that there is additional capacity at the intersection and a v/c exceeding 1.0 indicates that the intersection is operating over capacity. Mobility standards for State highways can be found in Tables 6 and 7 (as amended) of the OHP.

3. If the analysis area includes a signalized State highway intersection, the applicant must use ODOT's existing or planned signal timing for the intersection. For this information, applicants are advised to contact the ODOT Signal Manager.

4. Transportation Planning Rule OAR 660-012-0060 Compliance Analysis for Zone Changes or Comprehensive Plan Amendments must address the following:

   a. A TIS (prepared by a transportation engineer registered in Oregon) shall compare the land use with the highest trip generation rate allowed outright under the proposed zoning with the land use with the highest trip generation rate allowed outright under the existing zoning (this is commonly referred to as a "worst case" traffic analysis)*. The analysis should utilize the current edition of Institute of Transportation Engineers (ITE) *Trip Generation* manual, unless otherwise directed. If the applicant chooses to perform the analysis using a trip generation rate determined by any means other than from ITE *Trip Generation*, the proposed trip generation rate must meet ODOT concurrence.

   b. The analysis should apply the highway mobility standard (volume-to-capacity ratio) identified in the OHP over a planning horizon of the adopted local transportation system plan or 15 years from the proposed date of amendment adoption, whichever is greater (OHP Action 1F2).

   c. In situations where the highway facility is operating above the OHP mobility standard and transportation improvements are not planned within the planning horizon to bring performance to standard, the performance standard is to avoid further degradation. If the proposed zone change or comprehensive plan amendment increases the volume-to-capacity ratio further, it will significantly affect the facility (OHP Action 1F6).

   *It is particularly important that the applicant's transportation engineer provide ODOT the opportunity to review and concur with the mix of land uses and square footage they propose to use for the "reasonable worst case" traffic analysis for both existing and proposed zoning prior to commencing the traffic analysis.

Appendix 8
Mobility Standards: Mobility White Paper 04

Application of Oregon Highway Plan Mobility Standards

Introduction

Purpose

The purpose of this white paper is to clarify application of the 1999 Oregon Highway Plan (OHP) highway mobility standards for both ODOT staff and consultants.

Caution

This paper is a clarification of current practice, in order to give further guidance to those involved in the preparation of Traffic Impact Study (TIS) reports and to ODOT staff who are responsible for reviewing them. The following discussions provide general information to be applied to typical TIS reports, but is not intended to be exhaustive. Because every development proposal presents a unique set of problems to address, professional judgement must be used along with the information in this paper. Agreement with ODOT should be obtained during the scoping process, prior to proceeding with any analysis that deviates from these parameters.

ODOT Development Review Guidelines

All TIS's need to follow the ODOT Development Review Guidelines, which address the use of a PHF and other analysis parameters (such as from Table 3.3.7 of the Guidelines that lists peak hour factors, minimum lost time per phase, and ideal saturation flow rates). Many of the defaults and suggestions in the Guidelines also can be applied to planning products and project development work.[1] Changes will be made to the Development Review Guidelines to reflect clarifications made in this paper.

Background

Concern was expressed by both ODOT staff and consultants about the lack of clarity on the proper application of the Oregon Highway Plan (OHP) mobility standards (OHP Policy 1F). In response to this concern, the issues raised were discussed within the ODOT Planning and Traffic Management Sections, and this paper was developed. Region input was provided by the Region Access Management Engineers.

[1] The ODOT Development Review Guidelines are available in hardcopy from the ODOT Planning Section or on the Internet at the following link: http://www.oregon.gov/ODOT/TD/TP/DRG.shtml

Introduction, Continued

Contents

This paper covers the following topics:

Topic	See Page
OHP Table 7	3
Peak Hour Factors	4
Signalized Intersections	7
Mobility Standards for No Build and Build Alternatives	12
Proposed Revision To Development Review Guidelines Table 3.3.7	13

OHP Table 7

Amendment to OHP Table 7

Table 7 in the OHP was revised by OHP Amendment 00-04 on December 13, 2000. The revised Table 7 is found in the document "Amendment to 1999 Oregon Highway Plan Alternate Highway Mobility Standards Metro Area"[2].

First and Second Hour Standards

The December 2000 OHP amendment eliminated the two-hour volume to capacity (v/c) ratios. Separate v/c ratio standards are specified for each of the one-hour periods. The existing first bullet under OHP Table 7 was a leftover from the original Table 7 and is proposed to be stricken from the OHP with the next revision. Each of the hours needs to be analyzed separately, using an appropriate PHF, with the results compared to the respective v/c ratios provided in Table 7.

[2] Alternate Mobility Standards for RVMPO & Metro, and other Oregon Highway Plan amendments, can be found on the Internet at the following link:
http://www.oregon.gov/ODOT/TD/TP/orhwyplan.shtml#Registry_of_Highway_Plan_Amendments

Peak Hour Factors (PHF)

Congestion

- The transportation system must be designed to accommodate the 15-minute peaking in the peak hour. In areas near capacity, the 15-minute flow can cause up to several hours of congested flow. The congestion that results from the 15-minute flow must be accounted for in the analysis of the transportation system.
- Peak 15 minute deficiencies do not necessarily result in additional lanes and significant cost and right of way impacts. Minor mitigation resulting in lesser impacts may be sufficient, such as transportation demand management (TDM) strategies and acceptable operational improvements. If TDM strategies are contained in an adopted plan, a different PHF (to reflect spreading of the demand) may be used for future analysis if agreed to by ODOT during the scoping process.
- Guidance on the application of PHF's is contained in the ODOT Development Review Guidelines.

Development of OHP Tables 6 and 7

The 1999 OHP v/c ratio Tables 6 and 7 originally intended peak hour factors to be used. The analysis that determined the v/c ratio standards used PHF's as an input. To remain consistent with the OHP, any analysis that uses the OHP v/c ratios need to use a PHF.

OHP Tables 6 and 7 Clarification Language

The second bullet under OHP Table 6 (also for a new first bullet for the revised Table 7) needs to have clarification language added. The clarification should read as follows:

Current Language

- *"For the purposes of this policy, the peak hour shall be the 30th highest annual hour. This approximates weekday peak hour traffic in larger urban areas."*

Proposed Language

- ***"For the purpose of this policy, the maximum volume-to-capacity ratio for peak operating conditions shall be evaluated using the highest 15-minute period of the 30th highest annual hour. Weekday peak hour traffic can be used to approximate the 30th highest hour in larger urban areas."***

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Peak Hour Factors (PHF), Continued

Existing PHF's

- Existing year analyses need to use PHF's derived from the count information
- For areas with pronounced peaking characteristics such as industrial sites and schools, other peak 15 minute periods may need examination as well.

Existing PHF - Method 1

The preferred analysis method uses PHF's to estimate peak 15 minute period equivalent hourly flow rates from the peak 60-minute period volumes. The peak 15 minute period with the highest intersection total entering volume (TEV) should be used to determine the PHF's. PHF's are calculated for each approach as follows.

Step	Action
1.	Determine the peak 15 minute period that has the highest intersection total entering volume (TEV).
2.	Calculate the PHF for each approach based on the time period determined in Step 1, by dividing the approach peak 60 minute volume by four times the approach peak 15 minute volume.
3.	In the analysis, apply the approach PHFs from Step 2 to the approach peak 60 minute volumes (usually calculated by the analysis software).

Existing PHF - Method 2

As an option, the traffic count volumes for all movements that occur during the single peak 15 minute period can be used directly in software that multiplies the peak 15 minute period volumes by a factor of four. If this method is used, both the actual 60-minute period hourly volumes and the equivalent peak 15 minute hourly flow rates should be shown on the Existing Traffic flow diagrams, and clearly labeled to avoid confusion.

Step	Action
1.	Determine the peak 15 minute period that has the highest intersection total entering volume (TEV).
2.	For the time period determined in Step 1, enter the peak 15 minute volumes directly in the software

Continued on next page

Peak Hour Factors (PHF), Continued

Existing PHF - Method 2 (continued)

3.	Select software analysis procedure based on the peak 15 minute period
4.	On the flow diagrams show and clearly label both the actual 60-minute period hourly volumes and the equivalent peak 15 minute hourly flow rates, to avoid confusion.

Future PHFs

The future year analyses use the PHF defaults in Table 3.3.7 (see below) of the ODOT Development Review Guidelines unless better information is available. For areas with aggressive TDM strategies contained in an adopted plan, a different PHF (to reflect spreading of the demand) may be used for future analysis if agreed to by ODOT during the scoping process. For areas with pronounced peaking characteristics such as industrial sites and schools, PHF's lower than those shown in Table 3.3.7 should be used.

Signalized Intersections

Intersection V/C Ratio

For signalized intersections, the OHP v/c ratio is based on the overall intersection v/c ratio, not the movement v/c ratio as explained in Action 1F of the OHP. The intersection v/c ratio is also known as the critical v/c ratio, or X_c in the Highway Capacity Manual (HCM). The intersection v/c ratio is not generally affected by the approach green times (except in cases with shared left turns). See HCM equation 16-8 below.

$$Xc = \sum \left(\frac{v}{s}\right)_{ci} \left(\frac{C}{C-L}\right) \qquad (16\text{-}8)$$

where

Xc = critical v/c ratio for intersection;

$\Sigma\left(\frac{v}{s}\right)_{ci}$ = summation of flow ratios for all critical lane groups i;

C = cycle length(s); and

L = total lost time per cycle, computed as lost time, tL, for critical path of movement(s).

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Signalized Intersections, Continued

Analysis Procedures Regarding Signal Timing

Capacity analysis of signalized intersections should be performed in accordance with the methods and default parameters listed in chapter three of ODOT's Development Review Guidelines, Traffic Impact Studies. ODOT has established the following criteria for traffic impact studies in regards to the timing chosen for the capacity analysis of signalized intersections. ODOT reserves the right to reject any operational improvements that in its judgment would compromise the safety and efficiency of the facility.

Phase splits

A maximum split of at least 13 seconds should be used. Clear documentation of the selected maximum splits for each phase must be provided in the traffic impact study. The total side street splits should not be greater than the highway splits. Except in cases where the analyst is directed otherwise by ODOT staff, the splits should be optimized so as to yield the lowest overall intersection v/c ratio. This optimization should be done for each capacity analysis.

Non-Coordinated Signals

Cycle lengths and phase splits should be optimized to meet an ideal level of service, queuing, and/or volume to capacity ratio for a non-coordinated traffic signal intersection. Unless directed to do so by ODOT staff, the use of the existing timing is not required. The cycle length for the analysis should not exceed 60 seconds for a two-staged traffic signal, 90 seconds for a three-staged traffic signal (e.g. protected highway left turns and permissive side streets left turns), or 120 seconds for a four- or more staged traffic signal. The signal cycle length should cover the pedestrian clearance time for all crosswalks. For information on pedestrian crossings, see *ODOT Traffic Signal Policy and Guidelines.*[3]

[3] ODOT Traffic Signal Policy and Guidelines are available at: http://www.odot.state.or.us/traffic/publicat.htm

Signalized Intersections, Continued

Analysis Procedures Regarding Signal Timing (continued)

Signals in Coordinated Signal System

At the initial scoping meeting for the traffic impact study, ODOT staff will determine whether the analysts should use the existing signal timings for all analysis scenarios or develop optimized timings for the coordinated system. If the existing timings are to be used in the analysis, Region traffic shall provide timing files, timing sheets, or Synchro files of the existing settings. If optimized timings are to be developed, those settings are subject to approval by ODOT; and those conditions become the baseline for all comparisons. The following settings should be optimized for each analysis scenario when the analyst is asked to use optimum coordination settings.

- Cycle length
- Phase length,
- Phase sequence (lead/lag left turns)
- Intersection offsets

The optimum settings must meet the criteria established in OAR 734-020-0480 as it relates to progression analysis while also attempting to find the lowest v/c ratio for each intersection. This OAR only applies when modifications are proposed to a signal which would affect the settings of the coordination plans. Examples of these modifications are changes in cycle length, decreased green time for mainline, additional phases, longer crosswalks, and intersection relocation.

Saturation Flow Rates[4]

The passenger cars per hour of green per lane specified in the ODOT Development Review Guidelines is the ideal (unadjusted) saturation flow for a through travel lane. This value is adjusted downward by many factors (lane width, parking, bus blockage, area type, etc.) to arrive at the adjusted saturation flow.

Continued on next page

[4] Saturation flow rate data are collected on an ongoing basis. See TPAU website for latest information on saturation flow rates (http://www.odot.state.or.us/tddtpau/SysAnalysis.html).

Signalized Intersections, Continued

Field Measurements of Saturation Flow Rates

- Saturation flow rates for signalized intersections should be based on field measurements in accordance with Appendix H in Chapter 16 of the Highway Capacity Manual.
- The adjusted saturation flow is equivalent to a saturation flow field study calculated volume. In other words, if a field study is performed at the critical intersection(s) the resulting saturation flow volume is not adjusted by any of the factors above. All factors should be set to 1.00. Alternatively, the ideal saturation flow could be back-calculated from the field saturation flow and other known saturation flow factors.

Where Field Measurements are not Conducted

Where field measurements are not conducted,

- Outside of Metropolitan Planning Organization (MPO) urban areas, 1800 passenger cars per hour of green per lane (pcphgl) shall be used
- Inside MPO urban growth boundaries, 1900 pcphgl may be used, unless one or more of the following conditions are present, in which case 1800 pcphgl shall be used
    - On-street Parking
    - Greater than 5% trucks
    - Roadways intersect at severe skew angle (i.e. greater than 20 degrees off perpendicular.
    - Accesses are present upstream or downstream (within the functional area of the intersection??)
    - Poor signal spacing or observed queue spillbacks between signals during the peak hour, or
    - Less than 12 foot travel lanes

Software

Any methodology or software that is applied in accordance with the operational method of the most recent edition of the Highway Capacity Manual will be accepted for signalized intersection v/c ratios. SIGCAP 2 is used in planning for relative comparisons between alternatives, not for evaluating the critical v/c ratio to compare to the OHP mobility standard, because it does not utilize a peak hour factor.

Continued on next page

Signalized Intersections, Continued

Future Signals

For future signals, left turns should be assumed to be protected if the criteria for protected left turn phasing contained in the current ODOT Traffic Signal Policy and Guidelines[5] will be met.

Scoping a TIS

It is important to work closely with the Region Traffic Engineer or a designee to scope a TIS involving signalized intersections, to ensure the correct parameters are used and to avoid unnecessary revisions. Any variance from parameters found in this document or the Development Review Guidelines must be agreed to in writing prior to completion of analysis.

[5]Can be found on the Internet at the following link: http://www.odot.state.or.us/traffic/publicat.htm

Mobility Standards for No Build and Build Alternatives

TIS

Traffic Impact Studies (TIS) use the v/c ratios in the OHP as the mobility standard for existing and future no-build and build conditions. In situations where an interchange and interstate freeway needs to be modified, it is necessary to coordinate with FHWA and the developer to work out any issues relative to OHP versus HDM standards.

Project Development & Refinement Studies

No Build Conditions

All no-build alternative work for existing and future conditions will use the OHP v/c ratio as shown in Tables 6 and 7 in the OHP. Both Tables 6 and 7 in the OHP have been amended. The revisions are found in the "Amendment to 1999 Oregon Highway Plan Alternate Highway Mobility Standards South Medford Interchange And Metro Area"[6]. This applies to project development, corridor/refinement studies and Transportation System Plans.

Build Conditions

Since the ODOT Highway Design Manual (HDM) has been published, all future build alternative work needs to follow the HDM v/c ratios (HDM Table 10-1). The HDM v/c ratio will apply to project development work and refinement studies. The clarifications in this white paper also apply to the HDM v/c ratios.

[6] Alternate Mobility Standards for RVMPO & Metro, and other Oregon Highway Plan amendments, can be found on the Internet at the following link:
http://www.odot.state.or.us/tdb/planning/highway/amendments.htm

Revised Development Review Guidelines Table 3.3.7

Default Signal Parameters

Table 3.3.7: ODOT Default Parameters for Use With Signalized Intersection Analysis Methodologies	
Total Lost Time	4 seconds per phase minimum for typical intersections, more for large or complex intersections.
Peak Hour Factor	For future year analysis: • 0.85 for local and collector street approaches • 0.90 for minor arterial approaches, • 0.95 for major arterial approaches, unless better information is available, such as for a school or industrial use.

Ideal Saturation Flow Rate	Field measurement should be consistent with methodology laid out in the HCM.
	Saturation flow rate worksheets must be included in the documentation.
	Where field measurements are not done,
	• Outside of MPO urban areas, 1800 passenger cars per hour of green per lane (pcphgl) shall be used
	• Inside MPO urban growth boundaries, 1900 passenger cars per hour of green per lane (pcphgl) may be used, unless one or more of the following conditions are present, in which case 1800 pcphgl shall be used
	  • Parking
	  • Greater than 5% trucks
	  • Other than ninety degree intersection skew angle
	  • Accesses are present upstream or downstream
	  • Poor signal spacing or observed queue spillbacks between signals during the peak hour, or
	  • Less than 12 foot travel lanes

Mobility Standards: Mobility Paper 99

HIGHWAY PERFORMANCE AND THE 1999 MOBILITY STANDARDS

APPLYING THE MOBILITY STANDARDS TO MINIMIZE CONGESTION

1. Introduction. The 1999 Oregon Highway Plan changed the performance standards for mobility on state highways. The highway mobility standards are applicable to all highway decisions made after adoption of the 1999 Oregon Highway Plan. The subsequent adoption of Oregon Administrative Rules (OAR) Chapter 734, Division 51 on highway approaches, access control, spacing standards and medians (access management rules) incorporated the new mobility standards as one of the criteria in managing access to State highways.

Adoption of the highway mobility standards resolved questions about how to assess the performance of intersections and driveways. This was accomplished by using an objective standard of the volume to capacity of an intersection, rather than delay to drivers. However, questions have emerged about how to apply the new standards.[1] The purpose of this paper is to:

- Discuss how the revised mobility standards impact ODOT's review of local land use and development applications and permitting approaches to the state system;
- Address questions of how to apply the highway mobility standards and the access management rules when affected intersections are already exceeding the V/C ratios or are projected to do so within the horizon study year; and
- Discuss the policy and access management rule provisions for avoiding further degradation of performance where the mobility standards are exceeded and improvements are not possible.

The conclusions of the paper are two-fold:

- **"Don't make it worse."** In reviewing local government development review applications, where the affected intersections are already exceeding the V/C ratios or are projected to do so within the horizon study year, ODOT should request the local jurisdiction to require developers to mitigate their impacts so the intersection does not become worse than it would be without the development. This should be viewed as a general guideline since there will likely be situations where it will not be practical to require mitigation and there will also be situations where a 'don't make it worse' approach is not appropriate due to existing safety problems or other issues. If no mitigation is possible to even meet this "don't make is worse" standard, then ODOT should recommend that the local jurisdiction deny the application.

[1] This paper is not an attempt to answer all questions arising from adoption of the Highway Mobility Standards and the Access Management Rules. For example, the relationship between mobility standards and the Transportation Planning Rules, OAR Chapter 660, Division 12, will be discussed in a separate paper. Other questions will be addressed in the future as the agency develops further clarity on implementation of the policies and rules in the Highway Plan and the administrative rules.

- ***Approval, denial, mitigation under the access management rules.*** *When an approach permit is requested under OAR 734, Division 51, subject to the limitations listed in Section 3.A below, the mobility standards can be used to approve or deny an application or to require mitigation.*

2. Revised Mobility Standards in the 1999 Oregon Highway Plan - Change in Performance Standards from Level of Service to Volume-to-Capacity.

The 1999 Highway Plan mobility standards identify the performance standards for State highways.[2] The 1999 Highway Plan highway mobility policy adopted volume-to-capacity ratios (V/C) rather than Level of Service (LOS) letter grades to measure highway performance. Volume to capacity (V/C) is a more precise and consistent measure and avoids the interpretation and consistency problems experienced with the 1991 Highway Plan policy. The highway mobility standards are expressed in V/C ratios, which are defined as "the peak hour traffic volume (vehicles/hour) on a highway section divided by the maximum volume that the highway section can handle." The closer the V/C ratio is to 1.0, the more congested traffic is. In *ODOT v. City of Warrenton*, LUBA No. 99-153, the Land Use Board of Appeals upheld the V/C ratios as the relevant performance standard for state highways.

3. Use of mobility standards in development review. Development review applications are the land use connection between local governments and ODOT. The applications are notices to ODOT of development proposals that are generally, although not always, accompanied by a land use change (comprehensive plan amendment, zone change or a conditional use permit or variance.) Often there is no approach permit associated with the development proposal.

Where there is a land use change or change of regulation, the Transportation Planning Rule, OAR 660-012-0060, can be used to allege that there is a significant affect on the transportation facility. Where there is not a land use change then ODOT has no direct permit authority to deny or require mitigation but must instead rely on the local government to deny the application or require appropriate mitigation if the state highway is negatively affected. There are generally five types of actions available to ODOT:

- *Respond to the local jurisdiction that the agency has no adverse comments since the land use would not cause the mobility standards to be exceeded and no mitigation is needed;*
- Recommend that the local jurisdiction require mitigation to ensure the highway mobility standards will be met for the affected facility;
- Recommend that the local jurisdiction require mitigation that will keep the intersection at a condition no worse than it would be without the added traffic from the proposed development;

[2] Tables 6 and 7 of the 1999 Oregon Highway Plan, pages 80 and 81.

- *Recommend that the local jurisdiction deny the application due to inadequate public facilities as based on the adopted transportation system plan or local approval criteria;*
- In limited situations, the local government may propose to the Oregon Transportation Commission that it adopt alternate mobility standards that reduce mobility standards and support integrated land use and transportation plans for promoting compact development. Adoption of alternate mobility standards is an option only available in a few narrowly prescribed situations that require major alternative planning efforts.[3]

There are situations where each of these actions may be appropriate. However, if the agency is to be successful in its efforts to influence the effects of growth and development along the state highways, then the actions must be judicious and supportable. For example, recommendations to a local government to deny an application must make a strong showing of negative impacts to the highway and must be tied to a local jurisdiction's ordinances.

Requesting that the local government require mitigation is, in many cases, the most reasonable course of action to pursue. Mitigation to ensure the Highway Plan's mobility standards are met and/or maintained is consistent with the department's policies on access management and system operations. In situations where mobility standards are exceeded and the deficiencies are correctable, but the necessary improvements are not planned, mitigation is also consistent with the Highway Plan. In these latter circumstances, ODOT's objective is to improve highway performance as much as possible and avoid further degradation of performance where improvements are not possible.[4]

3.A Mobility standards and local approval criteria. The highway mobility standards give a clear and objective standard of review that can be used to form the basis of recommendations to local governments. In the development review process, ODOT can request local governments to require mitigation based on the highway mobility standards. In many cases ODOT can also use the approval criteria of local governments as a vehicle for referencing the mobility standards. The salient point is that the mobility standards provide ODOT the ability to buttress its position that local governments should require mitigation.

Local governments vary in the precise wording of their zoning ordinances, but in general have some language about the need for adequate public infrastructure to support development. For example, Deschutes County has the following in Section 19.76.070 of their Site Plan Approval Criteria in their development code: 19.76.070(D) "…location and number of access points to the site…shall be designed to promote safety and avoid congestion on adjacent streets" and 19.76.070(G) "[T]he

[3] OHP Action 1F.3, p 77.
[4] OHP, p. 74.

proposed use shall not be an undue burden on public facilities, such as the street, sewer, or water system." The City of Bend in their General Conditional User Permit Criteria in 10.10.29(3)(a) requires consideration of "…alteration of traffic patterns and the capacity of surrounding streets…" and Site Plan Criteria 10.10.23(8)(g) states the intended use "shall not be an undue burden on public facilities, such as the street, sewer, or water system." A determination or finding about the sufficiency of infrastructure must be done as part of the local government's staff report on the land use application. In these situations ODOT can reference the language from the local ordinance to incorporate the mobility standards (volume-to-capacity ratio) during development review.

3.B Don't make it worse - Recommended actions where V/C ratios are already exceeded. There are two important situations where the mobility standards can be used to ensure the safety and convenience of the traveling public through the development review process. These situations arise when:

- V/C ratios are already exceeded and a land use allowed under existing zoning would ***contribute additional traffic*** to a failing intersection, and when
- A land use application would route its traffic to an ***already failing intersection*** or one that will fail within the designated horizon year even without the proposed development.

These situations often arise where the comprehensive plan allowed for commercial zoning along the highway and development has occurred consistent with those designations. Typically, this is more of a problem in urban areas, particularly where the state highway doubles as a major city arterial.

In instances where the affected intersections are already exceeding the V/C ratios or are projected to do so within the horizon study year, ODOT should request that the local jurisdiction require developers to mitigate their impacts so the intersection does not become worse than it would be without the development. Thus if the OHP V/C standard for an intersection is 0.70 and it's already functioning at 0.85 before the development, it should be at 0.85 after the development. However, this should be viewed as a general guideline since there will likely be situations where it will not be practical to require mitigation and there will also be situations where a 'don't make it worse' approach is not appropriate due to existing safety problems or other issues. If no mitigation is possible to even meet this "don't make is worse" standard, then ODOT should recommend that the local jurisdiction deny the application.[5]

[5] The "don't make it worse" strategy was endorsed by the Planning Business Line Team at their May 2000 meeting.

4. Oregon Administrative Rules Chapter 734, Division 51, Highway Approaches, Access Control, Spacing Standards and Medians (access management rules). The mobility standards from the 1999 Oregon Highway Plan were adopted in OAR Chapter 734, Division 51. The access management rules list the 1999 OHP mobility standards as approval criteria for both private and public approaches. Approval of an application for an approach and a subsequent construction permit are required to construct an approach to the state highway for either new connections or a change in use of an existing connection. This means that when an approach permit is requested, subject to the limitations listed below, the mobility standards can be used to approve or deny an application or to require mitigation.

4.A The authority to implement the mobility standards for approach permits is tempered in two situations:

4.A.1. **Future year analysis.** The highway mobility standards from the future year analysis ***cannot be used as the basis for denial*** of the requested approach(es). Only when the mobility standards are exceeded at the time of the development can the permit be denied. Where the mobility standards will be exceeded at some point in the future, the permit cannot be denied, although mitigation can be required.[6] In other words, an application for an approach permit to the highway near a failing intersection could be the grounds for either denial or mitigation requirements. An application for an approach permit to the highway near an intersection that will fail up to 15 years in the future cannot form the ground for denying an application, but could form the basis for requiring mitigation. Mitigation measures, including access management plans, are discussed in OAR 734-051-0210.

4.A.2. Reasonable Access. Under what circumstances an application for an approach permit can be approved, denied, or mitigated varies depending upon a number of factors, including whether the applicant has a reasonable access to the subject property.

4.A.2.a Where the applicant ***does not have reasonable access*** to its property, considerations in granting a permit are limited to considerations of safety of the traveling public and consistency with the highway classification and highway segment designations of the facility.[7] In these situations, the mobility standards are not a factor in granting the permit. While mitigation can be required, the permit cannot be denied outright without constituting a taking. Where mitigation cannot make the approach safe enough, the permit may be denied but ODOT would then be in the position of having to compensate the owner on the basis of a "taking" of the property.

[6] OAR 734-051-0080 (1)(b)(E) and 734-051-0080 (2)(F).
[7] OAR 734-051-0080 (4)(b)(C) and 734-051-0080(4)(C).

4.A.2.b Where the applicant ***does have reasonable access*** to its property, the applicant has to meet the highway mobility standards, as well as other requirements, to obtain an approach permit.[8] Where mitigation requirements, that may include an access management plan, can be met, the permit can be allowed. However, where the mobility standards or other requirements cannot be met, the permit can be denied.

4.B. Avoiding further degradation of performance under the Access Management Rules. Both the Highway Plan and Division 51 contain objectives for avoiding further degradation of the highway where mobility standards are exceeded. The methodology for achieving the objectives is different between the policy and the rules. The "don't make it worse" strategy discussed above is the recommended approach for development review functions. For approach permits, Division 51 has similar goals where the goal is to not worsen current approach spacing. The provisions for approach permits are governed by specific language in the rules. For example, OAR 734-051-0190(2)(c) defines in-fill development situations where it may not be possible to meet the appropriate access management spacing standards, and states that:

"When in-fill development occurs, the goal is to meet the appropriate access management spacing standards. This may not be possible and at the very least the goal is to improve the current conditions by moving in the direction of the access management spacing standards. Thus, in-fill development should not worsen current approach spacing. This may involve appropriate mitigation, such as joint access…"

In another provision of the rules discussing the future year analysis for zone changes and plan amendments for Traffic Impact Studies, "…the highway mobility standard for the highway segment for future year analysis shall be used to evaluate performance, to improve performance as much as feasible and to avoid further degradation of performance where no performance improvements are feasible."[9] The language of Division 51 will determine under what circumstances the goal will be to not worsen current spacing standards rather than meet the spacing standards requirement.

5. Conclusion. As the State highway system becomes more congested, the mobility standards in the Highway Plan and the access management rules will be useful tools to maintain acceptable highway performance. These tools also recognize that there will be instances where the mobility standards are or will be exceeded and there are no planned transportation improvements. In these instances, both policy and rules establish the objective of improving highway performance as much as possible and avoiding further degradation of highways.

[8] OAR 734-051-0080 (1)(a)(A), (B).
[9] OAR 734-051-0080 (1)(b)(A)-(I) and 734-051-0080(2).

Questions and input from agency personnel involved in implementing Division 51 and the Highway Plan are vital for the successful implementation of these policies and rules. If you have further questions, suggestions or comments, please direct them to Craig Greenleaf, Transportation Development Deputy Director, or to a Region Access Management Engineer or Region Planning Manager.

Appendix 9
Case Law

Selected Oregon LUBA and Court of Appeals Cases - Land Use and Transportation

Jaqua and 1000 Friends of Oregon, and Lane County v. City of Springfield and Peacehealth, LUBA 2003-072, 2003-073, 2003-077, 2003-078; (January5, 2004) Affirmed by the Court of Appeals, A 123624, June 9, 2004

- OAR 660-012-0060 must be read to prohibit a plan amendment or zone change that would allow even a temporary failure of a facility, within the planning period. The local government has other tools to mitigate a failure, if the transportation facility will not be provided by the time the facility is failing.

- LUBA noted the ambiguity in the TPR, subsection -060 (p. 45). LUBA's interpretation of the intent of the rule, at p. 46, is that the purpose is to correct the pattern of decision making by the local government. LUBA concludes that city must make findings that there will be no failure of the facility during the planning period. Ruling upheld by the Court of Appeals.

Ramsey et al v. City of Philomath and ODOT, 46 Or. LUBA 241 (2004)

- In a legislative hearing, city can use quasi-judicial procedures. However doing so does not turn the decision into a quasi-judicial decision. City can vary its procedures from the quasi-judicial form, even if it begins by using quasi-judicial procedures.

- The city's TSP contained several alternatives for a couplet route through the city. Even though city's decision about which alternative to use may ultimately be driven in part by timing or financing questions, when it decides that the preferred alternative chosen is consistent with the alternative in the TSP, it is interpreting its TSP, and that is a land use decision.

- The city can construct the preferred alternative, which is a phase, or part, of the option that the TSP recommended. Even though the preferred alternative is only a portion of the larger improvement that the TSP envisions, it is located within the alignment. By constructing this portion, the city has not precluded the possibility of constructing the rest of the alignment at a later date.

- If the city ultimately decides to abandon the remaining portion of the couplet as described in its TSP, it would have to amend the TSP at that time.

Friends of Eugene et al v. City of Eugene, Lane County, City of Springfield and Lane Transit District, (WEP) 44 Or LUBA 239, (2003)

- This is the West Eugene Parkway case, defended on appeal by ODOT and a coalition of city and county. LUBA remanded on four counts, generally requesting further examination of the findings in the record, and more clearly explaining the evidence that supported the findings.

- The WEP involved a modification of a portion of the proposed highway corridor that had previously been adopted into the comprehensive plans of Eugene, Lane County, Springfield, and Lane County Transit District. ODOT argued that LUBA need only look at the modified portion of the project, and whether it had been properly adopted, and not re-look at the justification for the entire corridor that had already been adopted. LUBA agreed.

- In another interpretation of 660-012-0060(2), ("significant affect"), petitioners said that the proposed modification of the WEP would cause a particular intersection in the city to fall below acceptable standards. Under the previous WEP version, that intersection would have been improved before the end of the planning period. Under the new WEP version, that improvement had to be postponed, because the money to build it would be paying for other intersection improvements involved with the new WEP project. Petitioners said that caused a "significant affect" to that particular intersection. However, even though that intersection was negatively affected by the new highway, several other intersections would be improved. ODOT argued, and LUBA agreed, that a plan amendment that *improves* the performance of 13 intersections over the performance that is expected under the un-amended plan does not "significantly affect a transportation facility". "Amendments to the TSP itself are not necessarily amendments that significantly affect transportation facilities". p. 50-51.

Citizens for Protection of Neighborhoods, LLC vs. City of Salem and Sustainable Fairview Associates, LLC, LUBA No. 2003-201, 2004.

- City of Salem adopted a plan amendment allowing a mixed use comprehensive plan designation, and a second ordinance that applied the mixed use designation to the former Fairview property, a multi-acre development. Developer planned to develop only 20

acres originally, and the rest at a later date. The traffic information applied only to the currently planned 20 acres. The ordinance required that any further development was subject to additional review to ensure that traffic impacts would be consistent with the function, capacity and performance standards of affected transportation facilities. A portion of the new zoning ordinance required the further review, and was substantially identical to the requirements of the TPR.

- LUBA said that it is permissible to find that a proposed amendment complies with 660-012-0060 based on conditions or restrictions to development that limit allowed uses on the subject property to levels consistent with the function, capacity and performance standards of affected transportation facilities. No further development would be allowed until a master plan was approved, and the necessary transportation standards applied.

- Although the master plan process did not involve a plan or zone amendment to which OAR 660-012-0060 is directly applicable, LUBA found no reason why the standards of the similar city ordinance would not be sufficient to ensure compliance with the performance standards of affected facilities.

Church v. Grant County, 187 Or App 518, 2003. Appeal of *Church v. Grant County* 37 Or LUBA 646 (2000).

- Further interpretation of ORS 197.829(1), regarding LUBA's deference to the local government's interpretation of its ordinances. Review court is not required to defer to local interpretation if it is inconsistent with the terms, context, purpose or policy behind the local provision. This is a less strict standard than the former "clearly wrong" standard. Instead, look at the text and context of the local ordinance, much like interpreting statutes under *PGE v. Bureau of Labor and Industries, 317 Or 606, 859 P. 2d 1143(1993)*.

Friends of Marion County v. City of Keizer, Confederated Tribes of the Grand Ronde Community of Oregon etc. LUBA No. 2003-036.

- The City of Keizer is reviewing plans for development around the Chemawa interchange with I-5. Keizer approved an amendment to a previously adopted master plan for the area. The amendment changed the zoning designation, and rearranged the commercial/industrial/office/sports portions of the whole area. The traffic study that the city relied upon indicated that the new zoning designations would not produce anymore traffic than the previous

plan, and therefore there was no "significant effect" under TPR. Petitioner's said the city did not consider the most intensive uses that would be allowed with the new zoning. LUBA said the city did not consider the most intensive uses allowed under the old zoning, either, so the two traffic studies were consistent. As long as the two studies used the same assumptions, they made a valid comparison. LUBA did not comment one way or the other about whether the traffic studies SHOULD have compared most intensive uses allowed.

No Tram to OHSU, Inc. v. City of Portland and Oregon Health & Science University, 44 Or. LUBA 647, 2003.

- City approved an overhead tram to carry traffic up the hill to OHSU. Petitioners argued that the Tram would have a "significant affect" on the street below the tram, and on the character of the neighborhood in the district. LUBA said no. To the extent the tram may permit an additional transportation option from the Marquam Hill Plan District to the South Waterfront, the standard is not the number of persons that will be transported during any given time period. Rather, the standards are based on the number of vehicles that will use the transportation facilities. LUBA said that use of the Tram will not affect existing land based transportation facilities negatively.

- In addition, LUBA said that OAR 660-012-0060(2) is concerned with amendments that will result in land uses that are inconsistent with transportation systems, not at transportation systems that are alleged to be inconsistent with nearby land uses. The decision does not change the functional classification of any transportation facility.

Excelsior Investment Co. v. City of Medford and Jackson County Airport Authority, 44 Or. LUBA 553, (2003)

- City of Medford switched the zoning on two parcels, at the request of a developer who wanted to build a hotel. The city found that there was no affect on the local traffic facilities caused by the switch. Petitioners said that the switch would encourage a hotel to be built, because the newly up-zoned property had better frontage, and was better located for a hotel. Therefore, it was more likely to be built upon than if the zone change were not made. LUBA said that fact is not sufficient to undermine the city's conclusion that exchanging zoning designations between the two parcels would have no net increase in traffic impacts.

ODOT v. City of Klamath Falls, 177 Or App 1,(2001).

- Affirms the LUBA decision that an amendment significantly affects a transportation facility if it will cause the facility to fail sooner than it would without the amendment. This is based on v/c ratios rather than the LOS standard used in Coos County where the court reached a different result.

- Denying a permit for an amendment after finding the amendment would cause the transportation facility to fail sooner rather than later does not create a moratorium because the effect can be mitigated under OAR 660-012-0060(1)(a) through (d) and because this situation is excluded from the definition of moratorium.

ODOT v. City of Klamath Falls, 39 Or LUBA 641 (2001).

- For an amendment to significantly affect a transportation facility under OAR 660-012-0060, the amendment must play a causative role in reducing the applicable performance standards below the minimum acceptable level. The focus of the inquiry is on the transportation impacts allowed by the amendment, not on impacts from uses already allowed by the existing plan or zoning.

- Although a local government may rely on improvements identified in its transportation system plan to mitigate the significant affects of a development, a local government may not avoid the requirements of OAR 660-012-0060(1) by assuming the existence of unplanned future transportation improvements.

- Even if a transportation facility would fall below the applicable performance standard without the proposed amendment, a proposed plan amendment significantly affects the transportation facility if it would reduce the performance standard below the applicable performance standard sooner than would otherwise occur.

- A local government may proceed under an assumption that a plan amendment significantly affects a transportation facility without making a specific determination under OAR 660-012-0060(2)(c) that the amendment is inconsistent with the functional classification of the facility. Although such a course creates difficulty in determining what level of mitigation is necessary under OAR 660-012-0060(1)(a) through (d), a condition that prevents the amendment from affecting the facility at all until necessary improvements are made overcomes that difficulty and complies with OAR 660-012-0060(1)(a).

Citizens Against Irresponsible Growth v. Metro, 39 Or LUBA 539 (2001).

- The transportation planning rule does not apply to the amendment of the Metro UGB where the amendment only converts rural land to urbanizable land, and does not alter the types or intensity of allowed land uses, reduce the performance standards of transportation facilities, or otherwise "significantly affect" a transportation facility within the meaning of OAR 660-012-0060.

Friends of Yamhill County v. Yamhill County, 39 Or LUBA 478 (2001).

- The requirement under OAR 660-012-0065(3)(o) that the travel capacity and level of service of transportation facilities sited on rural EFU-zoned land must "be limited to that necessary to support rural land uses identified in the acknowledged comprehensive plan" is satisfied where the proposed facility would serve seven lot of record dwellings, the comprehensive plan authorizes rural dwellings and the EFU zoning statutes specifically authorize lot of record dwellings in EFU zones.

- An existing road cannot be rejected as an alternative under OAR 660-012-0065(5)(a) because it is (1) unsafe, (2) does not meet "applicable standards," or (3) has not previously been "approved by a registered professional engineer." Under the rule, the county must also establish that the existing road cannot be improved to be "safe," meet "applicable standards," and be "approved by a registered professional engineer" "at a reasonable cost, not considering raw land costs, with available technology.

- A decision that an existing road need not be considered as an alternative under OAR 660-012-0065(5)(a) is not supported by substantial evidence where there is no attempt to identify how costly it would be to address safety problems and bring the road up to applicable standards so that it could be approved by a registered engineer.

- OAR 660-012-0065(5)(a) prohibits consideration of "land costs," in determining whether the cost of an alternative is reasonable. "Land costs" are not limited to purchase of the fee title and include purchase of an easement.

Adams v. City of Medford, 39 Or LUBA 464 (2001).

- Where a zoning map is part of the city's zoning ordinance, an amendment of the zoning map constitutes a land use regulation amendment, within the meaning of OAR 660-012-0060, and must meet the requirements of OAR 660-012-0060(1) if the zoning map amendment will significantly affect a transportation facility.

- Where a city's finding that a zoning map amendment will not significantly affect transportation facilities is based on a lengthy transportation impact study, and petitioner attacks that finding based on other evidence of questionable relevance without developing any arguments challenging the transportation impact study, petitioner provides no basis for reversal or remand.

Craig Realty Group v. City of Woodburn, 39 Or LUBA 384 (2001).

- A local government may rely on existing or planned facilities to determine whether its transportation facilities are adequate to handle additional traffic that will be generated by a proposed amendment.

- If a local government relies on planned-for facilities to accommodate additional vehicle trips that will be generated by a proposed plan amendment, then the local government must find that those planned-for facilities will be built or improved on a schedule that will accommodate those additional trips.

- If a proposed amendment will generate additional trips that cannot be absorbed by existing or planned-for facilities, then a local government must adopt one or more of the strategies set out in OAR 660-012-0060(1) to make the proposal consistent with "the identified function, capacity and level of service of the [affected] facility," as is required by OAR 660-012-0060(1).

- A determination by a local government that a proposed amendment will not currently significantly affect a transportation facility is insufficient to satisfy OAR 660-012-0060(1), because the rule requires a demonstration of no significant effect over the entire relevant planning period.

- A local government may rely on a transportation facility improvement that is not fully set out in the local transportation systems plan, where that improvement has been identified and deferred to a future refinement plan pursuant to OAR 660-012-0025.

Mekkers v. Yamhill County, 39 Or LUBA 367 (2001).

- OAR 660-012-0060 has no applicability to a decision vacating a county road, where the decision does not amend a functional plan, comprehensive plan or land use regulation.

DLCD v. Klamath County, 38 Or LUBA 769 (2000).

- A local government may not explicitly rely on a traffic study to demonstrate compliance with Goal 12 and then ignore a portion of the traffic study that describes anticipated deterioration in level of service.

- Where development will result in a change in the level of service and reduce performance standards of the facility below the minimum acceptable level of service over the relevant planning horizon, the proposed amendment "significantly affects" a transportation facility.

Lentz v. Lane County, 38 Or LUBA 669 (2000).

- The establishment of a new public use airport runway, along with associated road realignment and expansion of the airport boundary, is considered to be part of the "expansion of a public use airport," pursuant to OAR 660-012-0065(3)(n).

- As long as the expansion of the public use airport continues to serve the same class of airplanes pursuant to OAR 660-012-0065, the expansion is considered to be consistent with Goals 3, 4, 11, and 14, and an exception to those goals is not required.

Northwest Aggregates Co. v. City of Scappoose, 38 Or LUBA 291 (2000).

- The "air, rail, water and pipeline transportation plan" required by OAR 660-012-0020(2)(e) to be included in a local government's Transportation System Plan need not include any information other than that specified in the rule; *i.e.*, the location and extent of existing or planned facilities.

- The coordination requirement at OAR 660-012-0015(5) provides that the adopting local government must provide notice and an opportunity to comment to affected local governments. However, the rule does not require that the adopting local government provide additional notice and opportunity to comment each time the proposal is modified.

DLCD v. City of Warrenton, 37 Or LUBA 933 (2000)

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- OAR 660-012-0060(1) and (2) contemplate that any mitigation measures that may be necessary to ensure that land uses allowed by amendments remain consistent with a facility's function, capacity and performance standards are considered after the local

government has determined whether the proposed plan amendment significantly affects a transportation facility within the meaning of OAR 660-012-0060(2). It is inconsistent with that scheme to consider such mitigation measures as a means of avoiding the conclusion that an amendment significantly affects a transportation facility.

- Where an applicable transportation system plan adopts particular performance standards, a local government errs by not using those standards to analyze whether a proposed amendment significantly affects a transportation facility, as defined by OAR 660-012-0060(2).

Douglas v. City of Lake Oswego, 37 Or LUBA 826 (2000).

- OAR 660-012-0045(5)(c) requires local governments to adopt legislation to comply with the rule's parking reduction requirements; it is not an independent decisional criterion applicable to every quasi-judicial application involving parking.

Marine Street LLC v. City of Astoria, 37 Or LUBA 587 (2000).

- A zoning ordinance text amendment that, as conditioned, would not permit development that would add more traffic to the transportation system than could be added under the zoning ordinance before the text amendment does not "significantly affect a transportation system," within the meaning of OAR 660-012-0060(2) (1998).

- OAR 660-012-0060(2) (1998) does not require that a local government consider whether a proposed zoning text amendment to raise the permissible building height on one property will in some general way encourage development in the future on nearby properties that may, in turn, "significantly affect a transportation facility.

Volny v. City of Bend, 37 Or LUBA 493 (2000).

- A local government's failure to adopt a transportation system plan (TSP) by the date required by OAR 660-012-0055 does not preclude the local government from amending the transportation element of its comprehensive plan until it adopts a TSP, where it is clear under the comprehensive plan that the transportation element is a separate policy document than the TSP, and the amendments to the transportation element are not intended to and do not have the effect of adopting a TSP.

- A comprehensive plan amendment that changes a minor arterial to a major arterial changes the functional classification of a transportation facility and thus requires findings of compliance with OAR 660-012-0060.

- The focus of OAR 660-012-0060 is on protecting transportation facilities from impacts inconsistent with their identified function, capacity and level of service, not on protecting adjacent residential land uses from the adverse impacts of transportation facilities.

Mulford v. Town of Lakeview, 36 Or LUBA 715 (1999).

- A local government's decision to rezone land to allow an industrial use generating up to 120 truck trips per day through local streets and a state highway must demonstrate compliance with Goal 12. LUBA will not exercise its authority under ORS 197.835(11)(b) to affirm the decision notwithstanding inadequate findings of compliance with Goal 12, where the parties cannot identify traffic studies or other evidence in the record sufficient to make it "obvious" or "inevitable" that the decision complies with Goal 12's requirement for a safe, convenient and economic transportation system.

Dept. of Transportation v. Douglas County, 36 Or LUBA 686 (1999).

- A local provision that merely recites language from the Transportation Planning Rule, OAR 660-012-0045(2)(g), is not adequate to implement that rule, where the local code does not contain any operative terms actually implementing the rule, and does not ensure that all amendments to land use designations, densities and design standards are consistent with the function, capacity and level of service of transportation facilities, as the rule requires.

Dept. of Transportation v. Douglas County, 36 Or LUBA 131 (1999).

- A county's transportation plan is inconsistent with the Transportation Planning Rule where it fails to inventory existing and committed bicycle and pedestrian facilities in the county, assess the capability and condition of those facilities, develop a system of planned improvements to those facilities, and depict planned improvements on a map, as required by OAR 660-012-0020.

- A letter from an ODOT employee regarding negotiations between ODOT and the county does not constitute an affirmative waiver of

issues related to minimum street width standards under OAR 660-012-0045(7), where it is unclear what was resolved between the parties and whether the county implemented the parties' resolution. Even if petitioner ODOT had waived that issue, such waiver would not apply to petitioner DLCD.

- The requirement at OAR 660-012-0045(7) that the county evaluate whether its street width standards are the minimum consistent with operational needs is not satisfied by a county procedure to consider, on a case-by-case basis, whether certain street widths should be reduced.

Terra v. City of Newport, 36 Or LUBA 582 (1999).

- Findings and conditions that require only external pedestrian improvements, and that require pedestrians in one part of the development to leave the subject property in order to go to another part of the development, are inadequate to demonstrate compliance with the Transportation Planning Rule's requirement for internal pedestrian facilities and clustering of buildings.

Baughman v. City of Portland, 36 Or LUBA 353 (1999).

- Where a plan policy, implementing the Transportation Planning Rule, requires that the parking spaces per capita ratio must be reduced by 10 percent but does not specify how the starting point for computing the reduction must be computed, a city council interpretation that the starting point computation may include approved but not yet constructed parking spaces is within the city's interpretive discretion under ORS 197.829.

Brome v. City of Corvallis, 36 Or LUBA 225 (1999).

- Where a city approves a development plan for a university district as part of a quasi-judicial proceeding, but does not incorporate it into the city's comprehensive plan or land use regulations, the development plan is not a comprehensive plan or land use regulation, and thus amendments to that plan are not subject to review for compliance with statewide planning goals or the Transportation Planning Rule.

Hunt v. City of Ashland, 35 Or LUBA 467 (1999).

- A city does not err by failing to require that a subdivision access road be improved to particular city standards, where the applicable

city criterion merely requires that the subdivision provide "paved" access.

Dept. of Transportation v. Coos County, 35 Or LUBA 285 (1998).

- OAR 660-012-0060 does not require that a local government impose exactions to ensure that impacts from a plan amendment do not violate Transportation Planning Rule Level of Service requirements.

- Compliance with OAR 660-012-0060 does not deprive a property of all beneficial use, where the current comprehensive plan and zoning designations allow a range of uses that may generate any amount of traffic and are not subject to the rule.

Citizens for Florence v. City of Florence, 35 Or LUBA 255 (1998).

- The Transportation Planning Rule, OAR 660-012-0060, requires that when a plan amendment "significantly affects" a transportation facility the local government must either ensure that the amendment is consistent with its transportation plan or amend its plan.

- When a land use allowed by a comprehensive plan amendment would "significantly affect" a transportation facility, a local government may not avoid the requirements of the Transportation Planning Rule, OAR 660-012-0060, by conditioning the amendment on improvements that maintain the facility above the thresholds provided in OAR 660-012-0060(2).

- A local government's reliance on a traffic study using a method not currently preferred but nonetheless required by the state Department of Transportation (ODOT) does not provide a basis for reversal or remand, where traffic analysis under either of two methods recognized by ODOT supports the conclusion reached by the local government.

- A local government fails to satisfy the requirement of the Transportation Planning Rule, OAR 660-012-0060, to coordinate with affected jurisdictions, where it amends its comprehensive plan to allow a shopping mall designed to be a regional destination point, but limits its coordination efforts to ODOT and the surrounding county.

- When a local government has not adopted requirements in the Transportation Planning Rule at OAR 660-012-0045 regarding

pedestrian and bicycle facilities, those requirements apply directly to local government land use decisions.

Northwest Aggregates Co. v. City of Scappoose, 35 Or LUBA 30 (1998).

- Although Oregon Laws 1997, chapter 859 (HB 2605) repeals two sections of the legislation that directed DLCD to adopt the Airport Planning Rule (APR), the 1997 legislation does not completely supersede the APR or DLCD's authority to adopt rules regarding airport planning.

- Where the TPR and Airport Planning Rule specifically require that a jurisdiction include areas of its airport that extend beyond its corporate limits, a city action doing so does not violate the ORS 221.720 limitation of a city's municipal power to its city limits.

Hannah v. City of Eugene, 35 Or LUBA 1 (1998) (1998).

- Where petitioner adequately raised the issue of whether a street would continue to function as a local street, failure to specify the TPR or comprehensive plan provision that required that the street continue to function as a local street does not result in waiver of the issue.

- Requiring that a street be connected to allow through traffic does not inevitably mean the street will cease to function as a local street, where there are identified measures that can be used to discourage non-local traffic.

- A city's findings are adequate to demonstrate compliance with a criterion requiring that development approval not result in "unreasonable congestion," where the findings acknowledge that the required street connectivity will change the nature of the traffic on the street but also discuss "traffic calming measures" that are incorporated into the design.

Lee v. City of Oregon City, 34 Or LUBA 691 (1998).

- An applicant does not carry his burden to demonstrate compliance with transportation-related criteria, where the findings supporting denial identify a flaw in the applicant's evidence resulting from conducting a traffic study in the summer when school trips would not be reflected in the study.

Barnard Perkins Corp. v. City of Rivergrove, 34 Or LUBA 660 (1998).

- Petitioner's allegations that decreases in potential housing density could affect transportation facilities are insufficient to show the challenged decision will "significantly affect a transportation facility," within the meaning of OAR 660-012-0060(1), where petitioner fails to identify any allegedly affected transportation facilities.

Dept. of Transportation v. Douglas County, 34 Or LUBA 608 (1998).

- The Transportation Planning Rule requirements set forth at OAR 660-012-0045(2) by their terms apply directly to local codes, not local comprehensive plans. Under OAR 660-012-0045(2) local codes must require compliance with ODOT access standards or require that an applicant obtain an access permit from ODOT as a condition of approval. The OAR 660-012-0045(2)(g) requirement that local governments adopt "regulations assuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities and levels of service of facilities identified in the TSP" is not satisfied by a plan provision that fails to refer to the Transportation Planning Rule by name or number and that imposes a different threshold for application of the rule standard than is required by the rule.

- The requirement of OAR 660-012-0015(2)(a) that regional TSPs be consistent with the state TSP is violated by a comprehensive plan amendment that purports to require that ODOT provide access under circumstances that are not consistent with ODOT policies.

- The term "rural community" as used in OAR 660-012-0045(3) of the Transportation Planning Rule is broader than the term "rural community" as defined in OAR 660-022-0010(7) of the Unincorporated Communities rules.

Fogarty v. City of Gresham, 34 Or LUBA 309 (1998).

- An amendment to a future streets plan does not significantly affect a transportation facility, and the TPR does not apply, where the record demonstrates that the decision does not change a functional classification or any standards relating to functional classifications and traffic levels would not be increased.

Sanders v. Yamhill County, 34 Or LUBA 69 (1998).

- Plan map and zoning amendments that significantly affect a transportation facility must be consistent with the Transportation Planning Rule (TPR). Therefore findings must address Goal 12 and the TPR as they apply to all access to the subject property

unless the local government restricts access by imposing conditions of approval.

Melton v. City of Cottage Grove, 30 Or LUBA 331 (1996).

- When a city finds a proposed development will not result in levels of travel or access inconsistent with the existing functional classification, the development does not "significantly affect a transportation facility" under OAR 660-12-060(2)(c), and OAR 660-12-060(1) does not apply.

- When, prior to an appeal to LUBA, a city satisfies the coordination requirement of OAR 660-12-060(3) by consulting with the county, and the development proposal does not change between LUBA's remand order and a second appeal, the city is not required to consult with the county again during the proceedings on remand. *Melton v. City of Cottage Grove*, 30 Or LUBA 331 (1996).

Marcott Holdings, Inc. v. City of Tigard, 30 Or LUBA 101 (1995).

- Where evidence identified in the city's brief clearly supports a finding that a proposed development will not significantly affect a transportation facility, LUBA will affirm that part of the city's decision under ORS 197.835(9), notwithstanding the city's failure to make the required finding.

Leathers v. Washington County, 29 Or LUBA 343 (1995).

- Where petitioners claim a local government decision authorizing improvements to a public right-of-way violates the Transportation Planning Rule (TPR), but fail to establish how the TPR applies to the challenged decision or how the proposed road improvements will frustrate compliance with the TPR, LUBA will deny petitioners' assignment of error.

Common Ground v. City of Gresham, 29 Or LUBA 164 (1995).

- OAR 660-12-045(4)(b) establishes minimum standards for preferential access to transit that local government regulations must meet, not maximum limitations beyond which local government regulation is prohibited.

- The requirements of OAR 660-12-045(4)(b)(B) and (C), for "clustering" buildings around transit stops and locating buildings "as close as possible" to transit stops, are not satisfied by requiring that

buildings on designated transit streets abut sidewalks and that no more than 50 percent of the frontage on transit streets be occupied by auto parking and maneuvering areas. Local government prohibitions against auto parking and maneuvering areas between a building and a transit street, and limitation of such areas to no more than 50 percent of the frontage along a transit street, are not inconsistent with or prohibited by OAR 660-12-045(4)(b).

- The requirements of OAR 660-12-045(3)(b) for facilities providing safe and convenient pedestrian and bicycle access are *minimum* requirements. Nothing in OAR 660-12-045(3)(b) or any other provision of the TPR prohibits local government adoption of architectural standards "to provide street safety and a comfortable pedestrian environment," even if they are not required by the TPR.

ONRC v. City of Seaside, 29 Or LUBA 39 (1995).

- In adopting a quasi-judicial comprehensive plan and land use regulation amendment, a local government is obligated either to demonstrate compliance with the Transportation Planning Rule (TPR) or, alternatively, establish that the TPR does not apply.

Opus Development Corp. v. City of Eugene, 28 Or LUBA 670 (1995).

- Where a comprehensive plan amendment adopts a map indicating a street may be considered to receive a "Green Street" classification in the future, and future application of the "Green Street" classification will itself require a plan amendment, petitioners' challenge to the plan amendment based on Goal 12 and the Transportation Planning Rule is premature.

Salem Golf Club v. City of Salem, 28 Or LUBA 561 (1995).

- Where a comprehensive plan map amendment to allow a proposed concrete batch plant will result in all aggregate and concrete trucks entering the subject property via a road that provides the sole access to certain existing dwellings, Goal 12 requires the local government to demonstrate the amendment will result in use of the road being safe and adequate.

Friends of Cedar Mill v. Washington County, 28 Or LUBA 477 (1995).

- Where a local government finds that a proposed road alignment is consistent with plan policies calling for a balanced transportation system designed to minimize energy impacts because it will shorten travel distance to a light rail station, that the facility will also

shorten travel distance to a major arterial does not, of itself, mean the plan policies are violated.

- Realigning a proposed minor arterial to run along an adjoining right of way does not "significantly affect a transportation facility" by changing "the functional classification of an existing or planned transportation facility," as those concepts are used in OAR 660-12-060(2).

- Where petitioner alleges a realigned minor arterial will in fact operate as a major arterial, but fails to challenge the local government's findings explaining why it believes the realigned roadway is properly classified as a minor arterial, petitioner provides no basis for reversal or remand.

Sensible Transportation v. Washington County, 28 Or LUBA 375 (1994).

- Nothing in the Transportation Planning Rule authorizes local governments to exempt any type of retail, office or institutional buildings from the building orientation and location requirements of OAR 660-12-045(4)(b).

- The building orientation and location requirements of OAR 660-12-045(4)(b) apply to new buildings located near transit stops, regardless of whether such buildings are located on a transit street.

- The OAR 660-12-045(4)(b)(C) requirement that certain new buildings be located "as close as possible" to transit stops is not satisfied by code setback limitations that (1) allow a new building on a small lot fronting on a transit street to be situated 100 feet away from the transit street, or (2) require only that half of a new building on a large lot fronting on a transit street be located on the front half of such lot.

Melton v. City of Cottage Grove, 28 Or LUBA 1 (1994).

- Where the deadlines established by OAR 660-12-055(1) and (2) for adoption of regional and local transportation system plans (TSPs) have not yet passed, and the local government has not yet adopted a TSP, the requirements of OAR 660-12-045(2) and (3) for regulations implementing TSPs are inapplicable to a decision amending the local code.

- That an amendment to an acknowledged local code may result in decreasing the level of service at an interchange does not, of itself, mean the amendment "significantly affects a transportation facility" under OAR 660-12-060(2).

- That the record shows a code amendment will affect a site that has direct access onto a particular road is a sufficient basis for requiring the local government's determination under OAR 660-12-060(2)(c), that the amendment does not allow land uses resulting in "levels of travel or access * * * inconsistent with the functional classification of a transportation facility," to include consideration of impacts on that road.

- The coordination requirement of OAR 660-12-060(3) should be interpreted the same as the coordination provision in Goal 2, which requires the jurisdiction developing plan or land use regulation provisions (1) to exchange information with other affected governmental units; and (2) to consider and accommodate the needs of such governmental units as much as possible in formulating or revising the plan or regulations.

1000 Friends of Oregon v. City of North Plains, 27 Or LUBA 372 (1994).

- OAR 660-12-060(1) is applicable to comprehensive plan amendments which significantly affect a transportation facility. Compliance with this rule provision must be addressed when a UGB amendment is adopted; it cannot be deferred to future annexation decisions within the UGB expansion area.

- OAR 660-12-060(4) prohibits using the existence of transportation facilities as a basis for approving (1) exceptions to the requirements of OAR 660-12-065, adopted under OAR 660-12-070; or (2) exceptions to statewide planning goals, adopted under OAR 660-04-022 (reasons exceptions) or OAR 660-04-028 (committed exceptions). OAR 660-12-060(4) does not apply to an exception for a change to an established UGB, adopted under OAR 660-04-010(1)(c)(B).

ODOT v. Clackamas County, 27 Or LUBA 141 (1994).

- A local government can show an amendment to its acknowledged comprehensive plan and zoning maps complies with Goal 12 (Transportation) by establishing either (1) there is a safe and adequate transportation system to serve development under the proposed map designations, or (2) development of the property under the proposed designations will not create greater or different transportation demands and impacts than development under the existing, acknowledged designations.

Federal and Oregon "Takings" Cases

Palazzolo v. Rhode Island, 121 S.Ct. 2448 (2001).

- Court applied the Penn Central test for regulatory takings which looks at 3 factors to determine if there is a regulatory taking.
- The first factor is the economic effect of the regulation on the landowner.
- The second factor is the extent to which the regulation interferes with reasonable expectation back expectations.
- The third factor is the character of the governmental act.
- The majority of the court stated that justice and fairness are the purposes of the takings clause.
- Questions remain as to whether when looking at a taking claims the court will look at the parcel as a whole to determine loss and use or whether it will look at the section of the property specifically at issue.

McClure v. City of Springfield, 175 Or App 425 (2001).

- Affirms LUBA's decision that certain exactions imposed by the city did not meet the Dolan test.
- Found that for some exactions there was an absence of findings explaining how the proposed exactions furthered the governmental interest and were proportional to the effects of the proposes partitioning.
- Found that for one exaction the city properly addressed the essential nexus test of Dolan through a conflict point study provided by the city's traffic engineer. This study was a "quantified description" of the safety effects of the proposed project.
- Denied the McClures challenge that a highly detailed and precise explanation of each effect and an equally highly detailed and precise correlation between the effects and the exactions was required. The Court reminded the McClures that Dolan specifically stated that no precise mathematical calculation is required.

Clark v. City of Albany, 138 Or App 293 (1995).

- Extends the *Dolan* rough proportionality test so that it may apply where developers retain title to the land they are required to improve and make available to the public

- Traffic regulations are not exactions and therefore exempt from *Dolan* analysis.

Dolan v. City of Tigard, 512 US 374 (1994).

- Expands the test developed in *Nollan v. California Coastal Commission* 483 US 825 (1987) to a two part test.

- Court's first task is to determine if there is some nexus between the development and the exaction.

- The second task is to determine whether there are the required degrees of connection between the two.

- The degree of connection is "rough proportionality."

- The court required that there be individualized findings as to the degree of connection. Although there does not need to be "precise mathematical calculation," the fact finder "must make some effort to quantify its findings."
- *Dolan* added the second step of the analysis because it was not needed in *Nollan*. In *Nollan*, the court found there was no nexus between the development and the exaction so it did not proceed to the second step.

- For application at the state level see, *McClure v. City of Springfield*, *Clark v. City of Alba*ny. For application and changes to this analysis at the federal level see *Palazzolo v. Rhode Island*.

Appendix 10
Resource Links

Internet Links – available to all users.

- Access Management Manual: http://www.oregon.gov/ODOT/HWY/ACCESSMGT/accessmanagementmanual.shtml#Volume_1#Volume_1
- Analysis Procedures Manual: http://www.oregon.gov/ODOT/TD/TPAU/A_APM.shtml
- Department of Land Conservation and Development (DLCD): http://egov.oregon.gov/LCD/
- Developing Design Hour Volumes: http://www.oregon.gov/ODOT/TD/TP/docs/TAPM/apm/ch4.pdf
- Development Review Guidelines: http://www.oregon.gov/ODOT/TD/TP/DRG.shtml
- Land Use Board of Appeals (LUBA): http://www.oregon.gov/LUBA/index.shtml
- LUBA FAQs: http://www.oregon.gov/LUBA/FAQ.shtml
- OAR 660-012-0000 – Transportation Planning Rule: http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_012.html
- OAR 731-015-0005 – ODOT Coordination Rules: http://arcweb.sos.state.or.us/rules/OARS_700/OAR_731/731_015.html
- OAR 734-020 – Traffic Control: http://arcweb.sos.state.or.us/rules/OARS_700/OAR_734/734_020.html
- OAR 734-051 – Highway Approaches, Access Control, Spacing Standards and Medians: http://arcweb.sos.state.or.us/rules/OARS_700/OAR_734/734_051.html
- ODOT Geo-Environmental Section: http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/index.shtml
- ODOT Highway Design Manual: http://www.oregon.gov/ODOT/HWY/ENGSERVICES/hwy_manuals.shtml
- ODOT Rail Section: http://www.oregon.gov/ODOT/RAIL/about_us.shtml
- ODOT Traffic Engineering Operations Section (TEOS): http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/traffic_engineering.shtml
- ODOT Traffic-Roadway Publications: http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/publications.shtml

- ODOT Travel Demand Models and Application Guidelines: http://www.oregon.gov/ODOT/TD/TPAU/M_TravelDemand.shtml
- Oregon Aviation Plan: http://www.oregon.gov/Aviation/docs/resources/OregonAviationPlan.pdf
    - Aviation System Plan Update: http://www.oregon.gov/Aviation/docs/statesystem05.pdf
- Oregon Bicycle/Pedestrian Plan: http://www.oregon.gov/ODOT/HWY/BIKEPED/planproc.shtml
- Oregon Blue Book: http://www.sos.state.or.us/bbook/
- Oregon Highway Plan (OHP): http://www.oregon.gov/ODOT/TD/TP/orhwyplan.shtml
- Oregon Public Transportation Plan (OPTP): http://www.oregon.gov/ODOT/TD/TP/OPTP.shtml
- Oregon Rail Plan: http://www.oregon.gov/ODOT/RAIL/docs/railplan01.pdf
- Oregon Revised Statutes (ORS) – Index: http://www.leg.state.or.us/ors/home.htm
- Oregon Transportation Plan (OTP): http://www.oregon.gov/ODOT/TD/TP/ortransplanupdate.shtml
- Oregon's Statewide Planning Goals: http://egov.oregon.gov/LCD/goals.shtml
- Oregon's Statewide Planning Goals & Guidelines – Goal 12-Transportation: http://egov.oregon.gov/LCD/docs/goals/goal12.pdf
- Preliminary Signal Warrants (*See also* Analysis Procedures Manual): http://www.oregon.gov/ODOT/TD/TP/docs/TAPM/apm/pswForm.pdf
- Statewide Transportation Improvement Program (STIP): http://www.oregon.gov/ODOT/HWY/STIP/index.shtml
- Traffic Signal Information: http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/signals.shtml
- Transportation Planning Analysis Unit (TPAU): http://www.oregon.gov/ODOT/TD/TPAU/
- Transportation System Planning Guidelines: http://www.oregon.gov/ODOT/TD/TP/TSP.shtml
- Transportation Safety Action Plan: http://www.oregon.gov/ODOT/TS/docs/Transportation_Safety_Action_Plan.pdf
- ODOT GIS Unit: http://www.oregon.gov/ODOT/TD/TDATA/gis/odotgis.shtml
- STIP Users Guide: http://www.oregon.gov/ODOT/TD/TP/stipGuide.shtml
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Intranet Links – available to users on ODOT servers

- Development Review Committee:
  http://intranet.odot.state.or.us/tp/pblt_drs.htm

Development Review Guidelines
Appendix 11

Summary of ODOT's Process for Managing Negotiated Agreement Funds[1]

Purpose of this paper: ODOT Region and District staff work with local governments and developers to ensure that new or expanding development mitigates their impacts to the State transportation system. This mitigation may take the form of a payment of funds which is roughly proportional to the development's transportation impact (i.e., an 'exaction'). These funds may be held by ODOT for a number of years until the needed improvement can be constructed. Consequently, there is a need to accurately track and report on these funds. The following process is recommended to accomplish this.

1. If these monies are to be received by an outside party, the region will initiate a miscellaneous contract and agreement (intergovernmental agreement). The region Local Agency Liaison or Agreement Specialist can provide direction on initiating an intergovernmental agreement. Note that a maximum of ten years is recommended to utilize the funds. If the funds are not used within ten years, the agreement should include a clause that requires refunding the money to the developer.
2. If monies are received by the region, they shall be forwarded promptly (ASAP!!) to:

   Cash Receipts Technician
   Financial Services Section
   434 Transportation Building
   Salem OR 97310

   The check shall be accompanied with a copy of the miscellaneous contract and agreement. If the miscellaneous contract and agreement in not available, a cover letter with the following information should accompany the monies:

   a) Miscellaneous contract and agreement number (if available)
   b) County, highway, and milepost
   c) Local jurisdiction involved in the planning project
   d) File number for the land use decision and relevant condition of approval
   e) Description of future project
   f) Name and phone number of region contact

   Delay in acquiring a miscellaneous contract and agreement number should not delay forwarding the check to Financial Services Section.
3. Cash Receipts Technician deposits money as deferred revenue.
4. Revenue Accountant codes check for entry and sets up revenue account to track money.

[1] Paper was developed in collaboration between Region 4 and the ODOT Finance Office, and reviewed and updated in February 2008.

5. Region Financial Coordinator shall run monthly report of exaction monies and provide to Region.
6. Region shall monitor report so that monies are optimally utilized.
7. If future project is in the STIP, Region shall alert Agreements of the key number so they may enter it into their database. Region shall also contact Program and Funding Services so they are aware of the funds to be used for said STIP project. Any subsequent agreements should reference these funds.
8. If future project is planned as a general service contract, region shall contact Financial Services Section, Accounting Operations, Revenue unit, billings desk for outside billing expenditure account.
9. If project is planned as a maintenance project, region shall contact Maintenance Management Services. Maintenance Management Services shall request an agreement table from Revenue unit, Billings desk.
10. If monies are not used within the required time, region shall send written request to Program and Funding Services for refund, identifying the revenue account in question.