

Final Report

City of Salem

**Transportation
Systems Development Charge
Update**

June 2, 2008



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Transportation Services Division

Transportation System Development Charge Update Project

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This report contains selections from and includes the general methodology contained in the following:

Transportation Systems Development Charge: Methodology, by Kittelson & Associates, Inc., August 18, 1994.

Salem Transportation Systems Development Charge Update, Final Draft Report, The Transpo Group, Inc., October 2002.

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Summary

The City of Salem has undertaken a study to update its current Transportation System Development Charge (TSDC). Consistent with the Oregon Revised Statutes, Salem adopted its TSDC beginning in 1995. It has since updated or revised the TSDC methodology or its Eligible Project List in 2002, 2004, 2006, and 2007. The 2008 TSDC Update will fulfill the City's policy to periodically evaluate and update its TSDC on at least a five-year cycle. This update proposes to revise the TSDC Eligible Projects List, update its travel demand forecasting, and extend the TSDC planning period. It also proposes decision packages for Council consideration that would potentially raise the TSDC actual fee amount per different options, ratios, and sub-options. A number of relatively minor revisions to the methodology and implementation measures are also proposed. Unless specifically identified as a change, this document supplements the methodology originally adopted in 1995 and its subsequent revisions and modifications since then.

Updated Future Travel Demand Forecasts

The Mid-Willamette Valley Council of Governments has updated its Salem-Keizer Transportation Study (SKATS) travel demand model to provide the most recent traffic forecasts for the Salem Urban Area. The planning period has been extended to begin in 1995 (original adoption date of the TSDC) and end in 2031 (end of the planning horizon of the Salem and SKATS Regional Transportation System Plans). During the 36-year planning period, it is estimated that 357,400 new daily vehicle trips, will be created by growth in the Salem Urban Area. This represents a 69 percent growth in trips during the extent of the planning period. This TSDC Update uses the updated travel demand forecasts to identify those projects needed in the Salem Urban Area in response to growth.

Updated Project Costs

Upon adoption of the 2007 amendments to the Salem Transportation System Plan, the needs of the Salem Urban Area were evaluated to determine which projects, whole or in part, are eligible for TSDC funding. Approximately \$152,671,000 in total TSDC-eligible project costs were identified as needed between 1995 (yet to be built) and 2031 (needed to be built in the future). A revised TSDC Eligible Project List is contained in Appendix A of this report.

Implementation Measures

A number of small revisions are proposed to how the City implements the TSDC methodology. Some of these include revisions to how appeals for trip generation rates are evaluated and how statistical measures are applied to trip generation rates.

Decision Packages

Council considered three primary decision packages; one that kept all current TSDC project categories eligible, a second option that subtracted the Standard Street Upgrade projects from the total TSDC-eligible project costs, and a third option that removed only the Collector-level street projects from the TSDC-Eligible Project List. Council chose the third option that resulted in a total TSDC-eligible project cost of \$141,085,000, a new maximum-allowed cost-per-trip of \$394.75, and a raise in the actual fee charged to \$234.16 per trip – phased-in over three years. In addition, Council approved automatically adjusting the actual fee charged for inflation on an annual basis.

Introduction

Background and History

Since its adoption in 1995, the City of Salem's Transportation System Development Charge (TSDC) has helped pay for an estimated \$12,744,000 in completed capital transportation improvement projects, with another \$10,900,000 in projects currently in design and construction. It has allowed the City to build needed infrastructure in response to the demands of new development on the community's street system. In addition, it has been the only consistent source of revenue for capital street construction since completion of the projects attributed to the 1995 general obligation bond. Over the last eleven years the City has collected an annual average of \$1,876,000 in TSDC fees. Today, TSDC funds constitute fifty-two percent of the total annual capital transportation construction budget of the City.

The City of Salem adopted a Transportation System Development Charge in November 1995. This was the culmination of nearly two years work by a combined citizen/Council Transportation Impact Task Force and the efforts of Kittelson & Associates, Inc., consultants. The Task Force recommended a funding strategy for constructing transportation infrastructure to address existing needs and those related to new growth based on a "multi-legged stool" approach: one leg representing the continued use of voter-approved, general obligation bonds; the second leg would be improvements imposed, as allowed by law, as exactions on new development; the third leg would represent projects funded through Federal and State grants; and the fourth leg to be a systems development charge for transportation. This strategy still guides the City's funding efforts today.

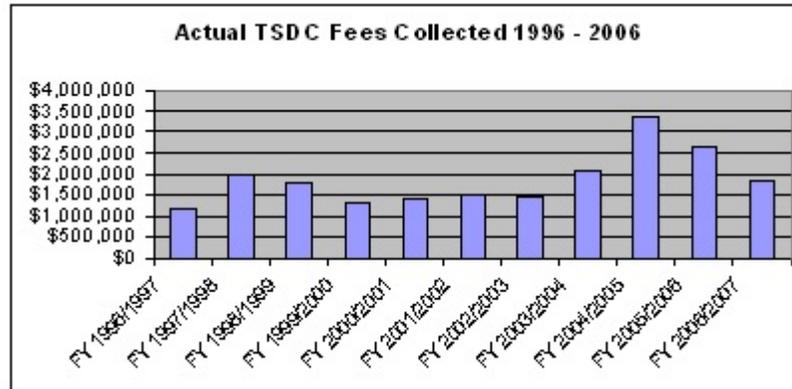
Salem's original TSDC was not intended to recover the full cost of new transportation system capacity improvements to serve growth. A full-growth recovery option was included among several decision packages for consideration. The City Council rejected that option. In 1995, the total cost of TSDC-eligible improvements was identified at slightly more than \$182 million. These projects included a range of capital improvements including new street widenings, traffic signals, and upgrades to the arterial and collector street system to meet City standards, based on the 1992 Salem Transportation Plan. However, there was concern in 1995 that the new TSDC would significantly increase the cost of development and steer new development away from Salem. After considering all of the different options, City Council adopted a TSDC based on a more modest project list totaling \$55 million. After a phase-in period, the first permanent TSDC fee was set in November 1996 at \$109.63 per Equivalent Length New Daily Trip (ELNDT).

In 2002 the City undertook a significant update to its TSDC, with an emphasis on the list of eligible projects. This update based its findings on the 2000 and 2001 Salem Transportation System Plan amendments and the Salem-Keizer Area Transportation Study (SKATS) EMME/2 regional travel demand model. A total of \$68.4 million in TSDC-eligible projects was identified to be divided by a forecasted increase of 309,600 new daily vehicle trips. The update was a joint effort between The Transpo Group Inc., consultants, and City staff that culminated in the adoption of a revised TSDC in December 2002 of \$159.63 per ELNDT.

The Council has subsequently amended the TSDC three times since 2002, raising the TSDC to \$189.63 per ELNDT in 2004, modifying the eligible projects list in 2004 and 2006, and creating a campus land use trip rate in 2007. In 2004, the Council also adopted a strategy to incrementally raise over time the TSDC fee to bring it closer to full recovery of total project

costs related to new growth. The current TSDC fee remains at \$189.63 per ELNDT and captures 58.5 percent of the transportation improvement costs related to new growth. See Appendix C for a complete summary of the legislative history of Salem's TSDC.

Figure 1



Purpose of the TSDC Update

One of the guiding policies that was established in the 1995 TSDC methodology was that the City would periodically review its methodology and make modifications as necessary to keep the project costs and travel demand forecasts current. The first comprehensive update to the TSDC occurred in 2002. In 2004, the Council adopted a policy that the TSDC Eligible Project List should be kept consistent with the projects identified in each new round of amendments to the Salem Transportation System Plan (Salem TSP). The Council amended the Salem TSP most recently in July 2007. The Salem TSP is the basis in this update for the projects contained in the TSDC eligible project list.

Specifically, the current update to the TSDC has the following purposes:

- Update the TSDC-eligible project list to remove completed projects;
- Add the projects identified in the July 2007 amendments to the Salem TSP to the Eligible Project List;
- Revise the base unit costs of each project to reflect project scopes, project cost estimates, and make inflationary adjustments to 2006 dollars;
- Adjust the time period for forecasting infrastructure needs and forecasting future travel demand; and
- Evaluate the policy ramifications of different approaches to cost recovery of growth and make revisions to how the TSDC fee is implemented.

This update does not assess elements of the adopted TSDC related to trip generation adjustments, credits, and Transportation Demand Management (TDM) credits. The proposed update to the TSDC reflects the efforts of a Technical Advisory Committee of sixteen staff members from the City of Salem, Marion County Public Works, and the Mid-Willamette Valley Council of Governments SKATS-Metropolitan Planning Organization.

Summary of Plans and Policies

Legal Framework

The ability for governments in Oregon to collect a systems development charge for transportation is found in ORS 223.297 - 223.314. The statutes establish a uniform framework for governments to impose systems development charges to pay for capital improvements, including facilities or assets used for transportation. Charges may be assessed or collected "at the time of increased usage of a capital improvement or issuance of a development permit, building permit or connection to the capital improvement." ORS 223.299(4)(a) The statute allows collection of systems development charges for the costs associated with capital improvements to be constructed ("improvement fees" or "TSDC-I fees") and capital improvements already constructed or under construction ("reimbursement fees" or "TSDC-R fees"). ORS 223.304 At this time, the City of Salem only collects improvement or TSDC-I fees.

The statute also provides for credits against the fees for the construction of qualified public improvements. ORS 223.304(4) A qualified public improvement means a capital improvement that is required as a condition of development approval, identified in a plan and list adopted pursuant to ORS 223.309 and either (a) not located on or contiguous to property that is subject of development approval; or (b) located in whole or in part on or contiguous to property that is the subject of development approval and required to be built larger or with greater capacity than is necessary for the particular development project to which the improvement fee is related.

In order for governments to spend TSDC improvement fees on construction of transportation projects, all of the following criteria must be met:

- Can only cover the costs of capacity increasing capital improvements to solve the demands placed on the system by future users. ORS 223.307(2), ORS 223.304(2)(a)(B)
- Such improvements must be identified in a capital improvement plan, public facilities plan, transportation master plan or similar plan, which lists the capital improvements that may be funded with improvement fee revenues, along with the costs and timing of each improvement. ORS 223.309(1)

Consistent with ORS 223.307(2), the projects contained in this update are limited to those that increase system capacity to solve future growth. Their inclusion in either the Salem Transportation System Plan or in the TSDC Eligible Project List (Appendix A of this document), meets the requirement that they be included in a plan under ORS 223.309(1). The projects contained in the Eligible Project List each have a project scope, estimated cost, and are shown as being anticipated to be constructed within the planning time period of this updated methodology. Projects that have committed TSDC funding assigned to them are contained in the City's five-year Capital Improvement Program (CIP).

Under ORS 223.304(2), improvement fees must be established by ordinance or resolution, setting forth a methodology that considers the costs of projected capital improvements needed to increase the capacity of the systems to which the fee is related. The statute does not specify a certain methodology. However, there must be a rational basis for the charge. In other words, the costs imposed on development must reasonably relate to the impacts created by development and the overall cost of the improvements. The City of Salem uses a methodology

based on the number of trips generated by a type of development and the average trip length for that development. This methodology reasonably provides for the fair and equitable distribution of costs and thereby satisfies the requirements of state law.

Salem Transportation System Plan

The City of Salem uses its transportation master plan as the general basis for identifying transportation system deficiencies as well as the projects needed to address those deficiencies. The original Salem TSDC, adopted in 1995, was based on the 1992 Salem Transportation Plan.

In 1991, the Oregon Land Conservation and Development Commission adopted Oregon Administrative Rule (OAR) Chapter 660, Division 12, otherwise known as the State Transportation Planning Rule. The Rule requires all local governments to develop a comprehensive, multi-modal transportation system plan that reflects the jurisdiction's adopted comprehensive land use plan. Those jurisdictions located within a metropolitan planning organization must also coordinate their local plans with other local jurisdictions to create a regional transportation system plan. The City of Salem adopted the Salem Transportation System Plan (Salem TSP) in August 1998. The Salem TSP bases its travel demand assumptions on the land use designations of the adopted Salem Area Comprehensive Plan. The Salem TSP has subsequently been updated and amended in February 2000, May 2001, January 2005, March 2005, and July 2007. The 2002 TSDC Update used the 2000 and 2001 amended Salem TSP. In 2004, City Council adopted a policy that the TSDC Eligible Project List should be kept consistent with the projects identified in each new round of amendments to the Salem TSP. This update uses the Salem TSP as amended in July 2007.

The Salem TSP contains a set of policies and technical criteria that establish level-of-service standards for the performance of the street system. These standards are used with the Salem TSP development and amendment process to measure street system performance and identify portions of the street system where improvements are needed to increase daily and peak hour system capacity. The Salem TSP includes individual project scopes and estimated costs in 2006 dollars. For many of the different modal elements, the improvements are categorized into committed (funding assigned within 5 years), high (within 10 years), medium (within 15 years), and low priority (within 25 years). In the Street System and Transportation System Management Elements, street improvement needs in Salem are identified as having one or more of the following characteristics:

- **Capacity:** Major or minor street widenings to add through travel lanes and turn lanes, as well as improvements that add new or upgrade existing traffic signals and coordinate them through interconnection and other communication systems;
- **New Streets:** Add street capacity by constructing new arterial and collector streets to serve existing or future travel demand; and
- **Standard Upgrades:** Improvements to existing arterial and collector streets to add extra pavement width and depth, and urban street components such as curb, gutter, storm drainage, sidewalks, street lights, and bicycle lanes (on specific streets as identified in the Salem TSP).

The Salem TSP includes a Transportation Finance Element that identifies the City's funding needs and anticipated funding sources over the next 25 years. TSDCs are identified in the Finance Element as one of the potential funding sources to address the needs listed in Table 1 of this report. Table 1 summarizes the Salem TSP capital transportation improvement needs for the next 25 years (2006 through 2031). Overall, the City of Salem and Marion County (for the County's portion outside the City limits but inside the Urban Growth Boundary) will need to invest \$931 million in multi-modal improvements for all streets. Of that amount, approximately \$668 million in improvement projects come under one or more of the capacity and upgrade categories for arterial and collector streets, as listed above.

Table 1

Salem TSP Capital Transportation Improvement Needs (Capacity & Upgrades) for Arterial and Collector Streets (in 2006 dollars)			
Project Priority or Type	City of Salem	Marion County (Inside UGB)	Total Cost Estimate
Committed Street Projects	\$57,492,000	\$2,854,000	\$60,346,000
High Priority Street Projects	\$140,687,000	\$5,850,000	\$146,537,000
Medium Priority Street Projects	\$183,602,000	\$27,148,000	\$210,750,000
Low Priority Street Projects	\$203,847,000	\$16,407,000	\$220,254,000
Transportation System Management	\$13,027,000	\$350,000	\$13,377,000
Bicycle & Pedestrian Facilities	\$17,068,000		\$17,068,000
Total	\$615,723,000	\$52,609,000	\$668,332,000

This above table does not include an additional \$188 million in State Highway improvement projects identified in the Salem TSP as needed within the Salem Urban Growth Boundary during the next 25 years.

Salem TSP Policies Relevant to TSDCs

Street System Element

GOAL: Provide a comprehensive system of streets and highways that serves the mobility and multi-modal needs of the Salem Urban Area.

Transportation Finance Element

Policy 1.2 Transportation System Development Charges

As defined by Oregon Revised Statutes and City Ordinances, TSDCs may be collected by the City to mitigate impacts placed on areawide transportation facilities.

Street System Element**Policy 5.3 Transportation Improvements Funded Through System Development Charges**

The City may require new development to pay charges towards the mitigation of systemwide transportation impacts created by new growth in the community. These funds can be used toward improvements to the street and transit system. Improvements funded through these charges are growth-related and should be selected from the approved list and prioritized based upon the criteria in Policy 4.1 [Street System Element, Citizen Participation in Project Planning and Transportation Studies].

Street System Element**Policy 2.4 City of Salem Street Design Standards**

The City of Salem Street Design Standards shall be the basis for all street design within the Salem Urban Area. The Street Design Standards shall reflect the functional role of different street classifications and shall consider the impact on the character and livability of surrounding neighborhoods and businesses. Street design standards shall consider managing vehicle speeds as appropriate for the given functional classification, with particular attention given to this consideration in residential areas.

Street System Element**Policy 2.5 Capacity Efficient Design and Level of Service (LOS) Standards**

The City of Salem shall apply the street design standard that most safely and efficiently provides motor vehicle capacity respective to the functional classification of the street. The City shall design its streets and intersections to the following LOS criteria:

1. **Definition of Capacity Deficient.** A street or intersection shall be determined to be capacity deficient when traffic volumes exceed its peak hour design LOS. A street or intersection shall be determined to be over-capacity when traffic volumes exceed its effective peak hour capacity.
2. **Peak Travel Periods**
 - a. The City shall design its streets and intersections to function at the lower end of LOS D (where traffic volumes approach 90 percent of the street's effective capacity) during the peak hour.
 - b. When the peak hour LOS exceeds LOS D on existing streets and intersections, the City shall first employ transportation system management measures, where feasible, to alleviate congestion.
 - c. The City shall allow its existing streets and intersections to function at LOS E (where traffic volumes generally are approaching or at 100 percent of the street's effective capacity) during the morning and evening peak travel hours. However, traffic impacts created by new development, as identified in a traffic impact analysis, must be mitigated to maintain peak hour LOS D or better.

- d. When existing streets and intersections experience, or are expected to experience, extended periods of LOS E, or instances where the street is at LOS F (where traffic volumes exceed the effective capacity of the street) despite the aggressive use of transportation system management measures, the City shall consider designing and constructing additional physical capacity.
- e. Regardless of its peak hour operating LOS designation, both transportation system management measures and additional physical capacity shall be considered for the effective mitigation of violations of regional air quality standards.

The City of Salem applies its Street Design Standards per the functional classification of the street in scoping improvements to the street system to meet the Level of Service standards as defined in Street System Element Policy 2.5. This then forms the basis for prioritizing the need for these improvements. The TSDC methodology takes the capacity and upgrade improvement needs identified in the Salem TSP for arterial and collector streets and determines the amount of eligibility for each improvement per its relationship to new growth.

TSDC Planning Period

The traditional planning time horizon for transportation system plans has been twenty years. However, all levels of government have begun to extend their planning time horizons to twenty-five years and beyond in recognition of improvements in regional travel demand modeling capabilities and due to the longer amount of time it takes to complete a project from conception, planning, funding, design, and construction. The 2007 Salem TSP uses a planning time horizon of twenty-five years, from the period beginning in 2006 and ending in 2031.

The following planning periods have been used in Salem's TSDC methodologies:

- 1995 TSDC: 1995 to 2015 (twenty years)
- 2002 TSDC: 2001 to 2021 (twenty years) - Projects back to 1995 remained eligible
- 2008 TSDC: 1995 to 2031 (thirty-six years) - Proposed -

The proposed 36-year planning period is based on the 25-year planning period of the 2007 Salem TSP and the 11 years that have elapsed since 1995, which is the beginning of the Salem TSDC timeline. Maintaining the 36-year planning period will allow for projects dating back to 1995 that have not yet been constructed, but are eligible for TSDC funding, to remain on the Eligible Project List, plus the addition of the new projects needed for the planning time horizon of the 2007 Salem TSP. The Total Project Costs and Total Equivalent Length New Daily Trips will be adjusted to account for this extended timeframe. It is anticipated that in the future, when all of the 1995 eligible projects have been constructed, the "beginning point" of the planning time period will move forward.

The point in time or "beginning point" that Salem's street system performance is assessed for Level-of-Service deficiencies is the original travel demand and system performance modeling work completed for the 1995 TSDC. Specifically, Level-of-Service deficiencies on the street system identified as existing prior to 1995 are not eligible for TSDC funding. Those deficiencies

identified as occurring or forecasted to occur from 1995 on through the 2031 TSDC planning period are eligible for TSDC funding per the methodology.

TSDC-Related Policies

Transit Capital Improvements

It is recognized that TSDC charges can be applied to transit facilities to include the construction of capital projects and purchase of capital assets in support of providing increased capacity for transit service in support of new growth in the community. The Salem-Keizer Transit District has the ability to impose a TSDC on new development, but has not yet chosen to do so. The City of Salem has approached the issue of using TSDC funds for transit service improvements in a limited fashion. The current policy is that projects that improve transit facilities must also benefit general vehicular capacity and traffic flow on specific street corridors or specific intersections.

The following types of transit-supportive projects are eligible for TSDC funding:

- **Bus pull-outs** These are paved pockets or lanes where buses can pull out of traffic and load and unload passengers while allowing traffic in the adjacent travel lanes to continue flowing.
- **Queue Jump Lanes** These are dedicated travel lanes that allow the bus to bypass traffic that is queued, waiting at an intersection. In order for these projects to be eligible they must also function as a dedicated left or right turn lane for general vehicular traffic.
- **Transit Signal Priority** These systems give priority to buses that are traveling on an arterial transit corridor by extending the length of "green" time for an approaching bus. This also allows extended "green" time for general vehicular traffic to travel through the intersection.

Definition of Arterial Street

When referenced in relation to the TSDC methodology and Eligible Project List, the term "arterial" street includes those streets classified as Parkways, Major Arterial Streets, and Minor Arterial Streets in the Salem TSP.

General Project Component Eligibility

There are two levels of eligibility in relation to funding TSDC projects. The first level is related to the overall percentage of eligibility of TSDC funding for a project, based on the scope of the improvements contained in the project. The second level of eligibility is more specific to the types of construction activities and improvements that constitute and TSDC-funded project.

Generally, the improvements and construction activities that are required to build the capacity improvement are considered eligible for TSDC funding. For example: the design, right-of-way acquisition, construction, inspection, contract management, and replacement of existing pavement, curb, gutter, sidewalk, drainage, striping, signage, signals, and street lights damaged or removed to accommodate the new improvement are all considered fully TSDC eligible.

However, restoration of existing pavement or other maintenance activities not directly impacted by the improvement project are not eligible for TSDC funding.

Miscellaneous & Unspecified Projects

TSDCs do not have the flexibility of tax revenue. They are limited intentionally by statute to apply only to projects that meet the qualifying criteria for mitigating impacts of future growth by creating new capacity in the system. For that reason, only those projects that are specifically identified in the TSDC Eligible Project List (Appendix A) are eligible to receive TSDC funding. In addition, when authorized by law, TSDC revenues are used for:

- **Right-of-Way Purchases** The purchase of street right-of-way for projects that would add capacity to the system for purposes of responding to future growth is eligible. A specific right-of-way purchase that is in support of projects contained in the TSDC Eligible Project List or those street connections and extensions identified in the Street System Element of the Salem TSP, are eligible for TSDC funds.

- **Alignment Studies** Studies undertaken to determine and refine the alignments of future street connections and extensions as identified in the Salem TSP are considered part of the preliminary design of a project needed as a result of future growth, and are thereby eligible for TSDC funding.

The identification of "Unspecified" TSDC funds in the City's adopted budget is to be used to denote TSDC funds that have not been assigned to a specific project for that year and may be used as project contingencies to address cost overruns on TSDC-funded projects; may be used to fund mid-year projects (projects not identified during budget development process) contained on the TSDC Eligible Project List; or may be used to fund projects discussed above. All new TSDC-funded projects need to have City Council approval either through the review and adoption of the CIP, Budget, Mid-Year Project Approval, or TSDC Update processes. The TSDC Eligible Project List can be amended by Council with a public hearing and the appropriate statutory notice at any time.

Use of TSDC Revenues in Support of a Future New Willamette River Bridge

The Salem River Crossing Environmental Impact Statement (EIS) Study has identified two alternative alignments that would require construction of a new bridge and connecting ramps and surface streets. A third alternative involves modification and expansion of the existing Center Street and Marion Street bridges across the River. The costs of design, right-of-way acquisition, and construction of these alternatives range from \$400 million to \$770 million. Future growth in travel demand across the River may justify the eligibility of the use of TSDC revenues as a component part of a larger funding strategy that will likely include federal, state, and other local funding sources. Until a preferred alternative alignment has gained community consensus and received a Record-of-Decision from the Federal Highway Administration, thus providing a more detailed estimate of total project costs, the expenditure of TSDC funds on this project will be limited to funding preliminary design and alignment studies (including EIS studies), purchase of future street right-of-way, and pre-construction design. The amount of eligibility for these purposes is contained in Appendix A-1 of the TSDC Eligible Project List and is listed at \$5,000,000.

Updated Travel Demand Forecasts

The City of Salem uses the regional travel demand model, developed and maintained by the staff of the Mid-Willamette Valley Council of Governments SKATS-MPO. The regional travel demand model provides the data necessary to:

- Provide an estimation of current, or base year, travel demand and assignment of traffic flows on the regional arterial and collector street system;
- Provide long-range forecasts of travel demand and assignment of traffic flows on the regional arterial and collector street system based on future population, land use, and employment assumptions in support of the adopted Salem Area Comprehensive Plan;
- Provide the forecasts of the Equivalent Length New Daily Trips (vehicle) needed to calculate the TSDC Unit Cost; and
- Evaluate the base year and future year arterial and collector street system for Level-of-Service performance deficiencies and identification/testing of improvements necessary to mitigate those deficiencies.

The regional travel demand model is periodically updated and improved to reflect improvements in modeling technology and techniques, as well as updated land use, population, and employment data. The regional model uses U.S. Bureau of Census population and demographic data that is updated through the Portland State University Center for Population in Portland, Oregon. Employment data is obtained through the Oregon Bureau of Labor and Industries. Land utilization and land use designations are provided through the Salem Area Comprehensive Plan, vacant land studies, and current zoning maps. Trip generation and mode choice data is estimated through household activity surveys, census, and land use data. Street system characteristics reflect the location, alignment, classification, capacity, and traffic control associated with each highway, arterial, and collector street facility in the region.

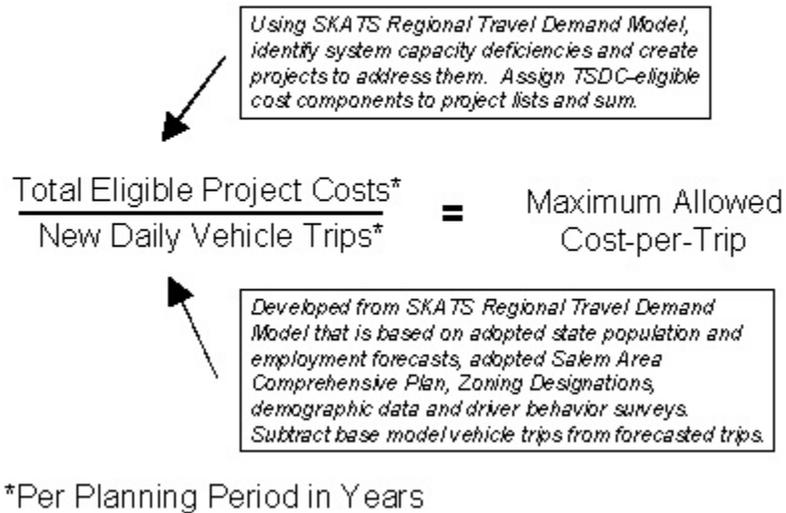
Unit Cost Methodology

As shown in Figure 2, the Salem TSDC is calculated by dividing the total cost of TSDC-eligible improvement projects needed within the TSDC planning period by the number of anticipated future, Salem Urban Area new daily vehicle trips within the same planning period. The result is a TSDC maximum-allowed cost-per-trip. The City Council can choose to charge the maximum-allowed cost-per-trip or a lesser cost-per-trip.

- The Salem Urban Area is defined as the area contained within the city limits of Salem and the Salem portion of the Salem-Keizer Urban Growth Boundary.
- Equivalent Length New Daily Trips (ELNDT) are defined as those new daily vehicle trips that originate and/or terminate with at least one trip end within the Salem Urban Area. Trips that both originate outside of the Salem Urban Area and terminate outside of the Salem Urban Area are not included in the ELNDT estimation. Because the regional travel demand model accounts for the estimated origin and destination of each travel trip by trip purpose and type, the trips generated through the model estimation are considered to be adjusted to be equivalent length trips.

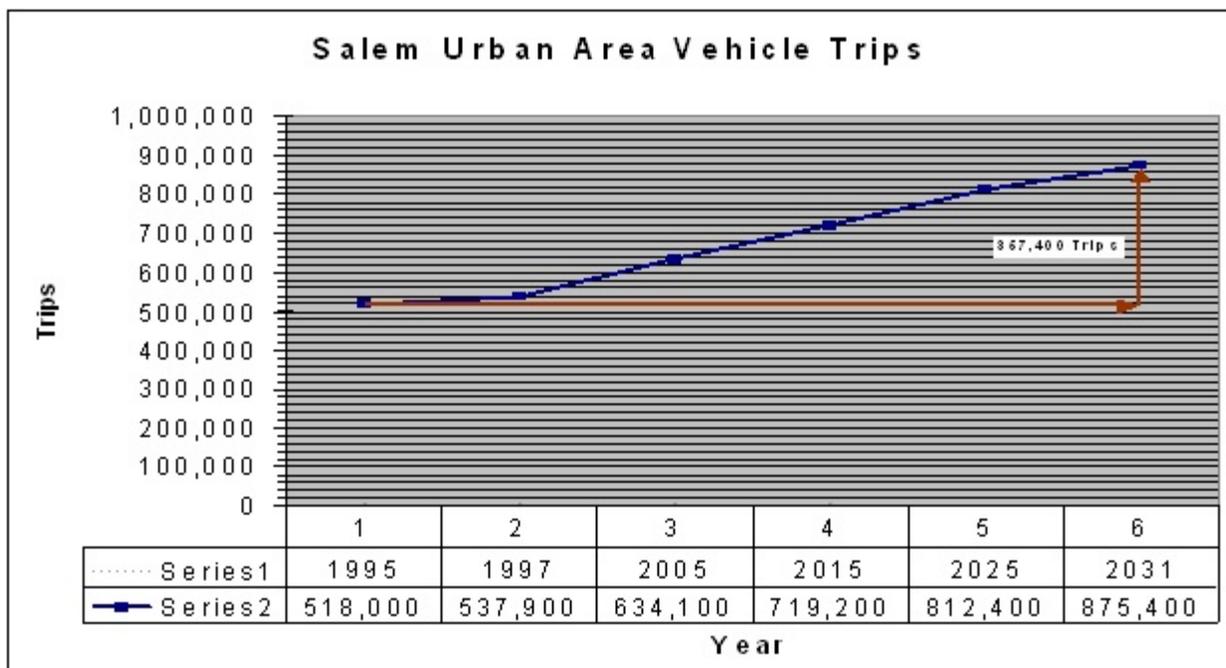
Figure 2

TSDC Fee Equation



The Salem TSDC methodology for this update uses the SKATS regional travel demand model base year of 1995 (extrapolated) and a ending forecast year of 2031, or a 36-year planning period. The model also uses a number of intermediate base and forecast years for incremental times within the total 36-year planning period. As illustrated in Figure 3, the SKATS estimate is approximately 518,000 daily trips in 1995 and 875,400 daily trips in 2031, with intermediate forecasts in 1997, 2005, 2015, and 2025. Subtracting the 1995 daily trips from the 2031 daily trips results in 357,400 net ELNDT.

Figure 3



Future Traffic Forecasts

The SKATS regional traffic model is used to determine the forecasted future street system capacity needs by comparing the forecast year traffic volumes to the base year estimated traffic volumes. The capacity deficiencies identified in the base year model would indicate existing deficiencies and the projects identified to mitigate those needs would not be considered TSDC-eligible. The projects that are considered "Committed" in the City's CIP or Oregon Statewide Transportation Improvement Plan (STIP) at the time of the base year model are also considered to be in response to serving the existing capacity deficiencies and not future growth. The new capacity deficiencies identified between the base model year and the forecast year are translated into improvement projects and are considered TSDC-eligible.

In the case of this 2007 TSDC Update, the base model year for the Salem TSP and Regional TSP is the year 2005 and the future forecast year is 2031. The previous model base years for the two previous TSDC Updates were 1995 and 2001. The projects identified as TSDC-eligible in the first two TSDC Updates will continue to be eligible by including the new net ELNDT from 1995 to 2005. Those projects identified as the result of growth between 2005 and 2031 will be added as new projects to be TSDC-eligible.

Region-wide volume-to-capacity ratios were calculated for the base and future year traffic forecasts for the PM Peak Hour of travel, based on Level-of-Service (LOS) thresholds. These thresholds were calculated consistent with the LOS standards contained in the Salem TSP Street System Element. Table 2 indicates what LOS thresholds are considered below capacity, nearing capacity and above capacity. Those streets with a LOS of D, E, or F ($V/C > .87$) are considered capacity deficient.

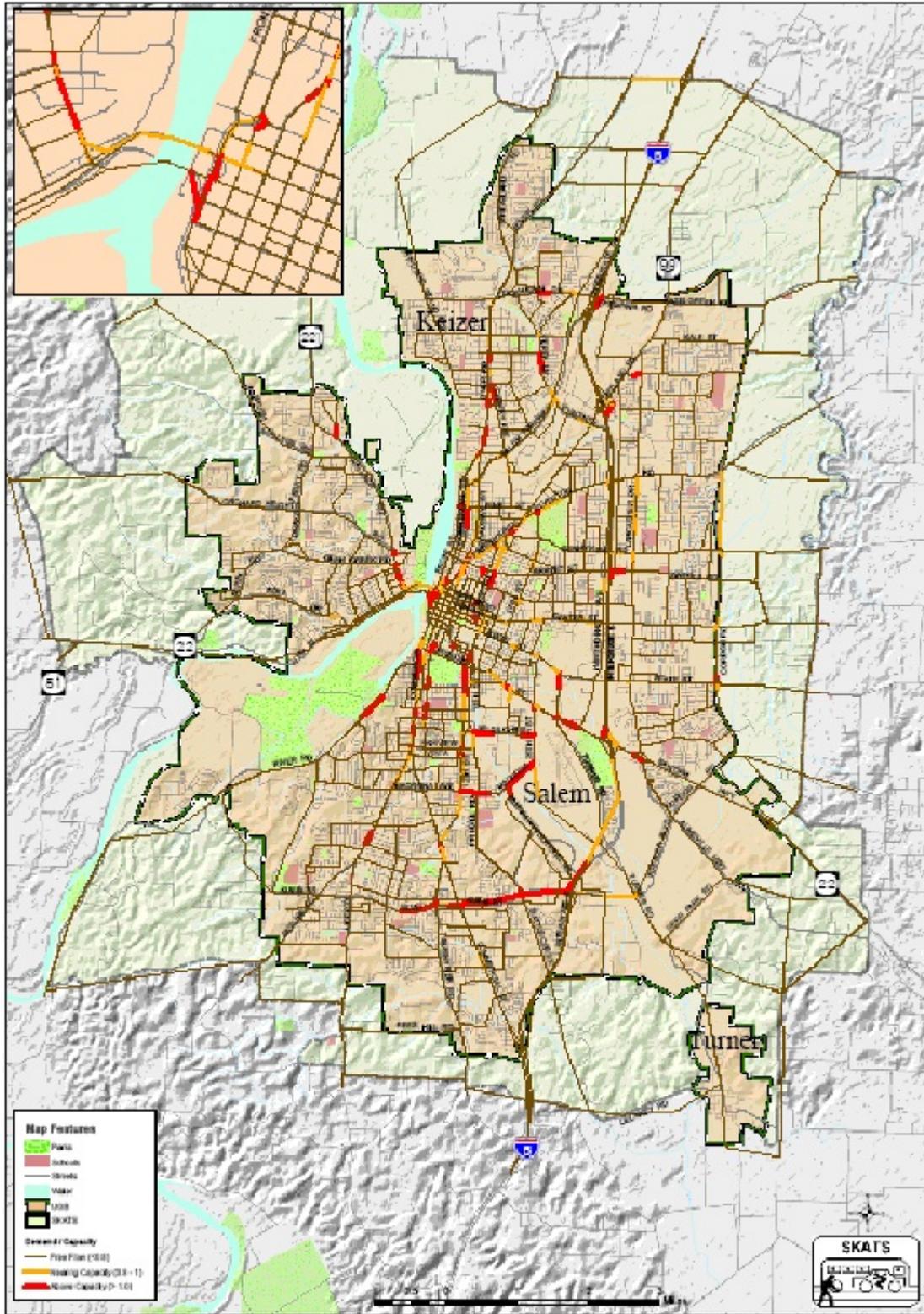
Table 2

Level-of-Service Thresholds		
	Level-of-Service	Volume/Capacity
Below Capacity	A, B, C	0.0 to 0.87
Approaching Capacity	D/E	0.88 to 0.99
Over Capacity	F	1.00+

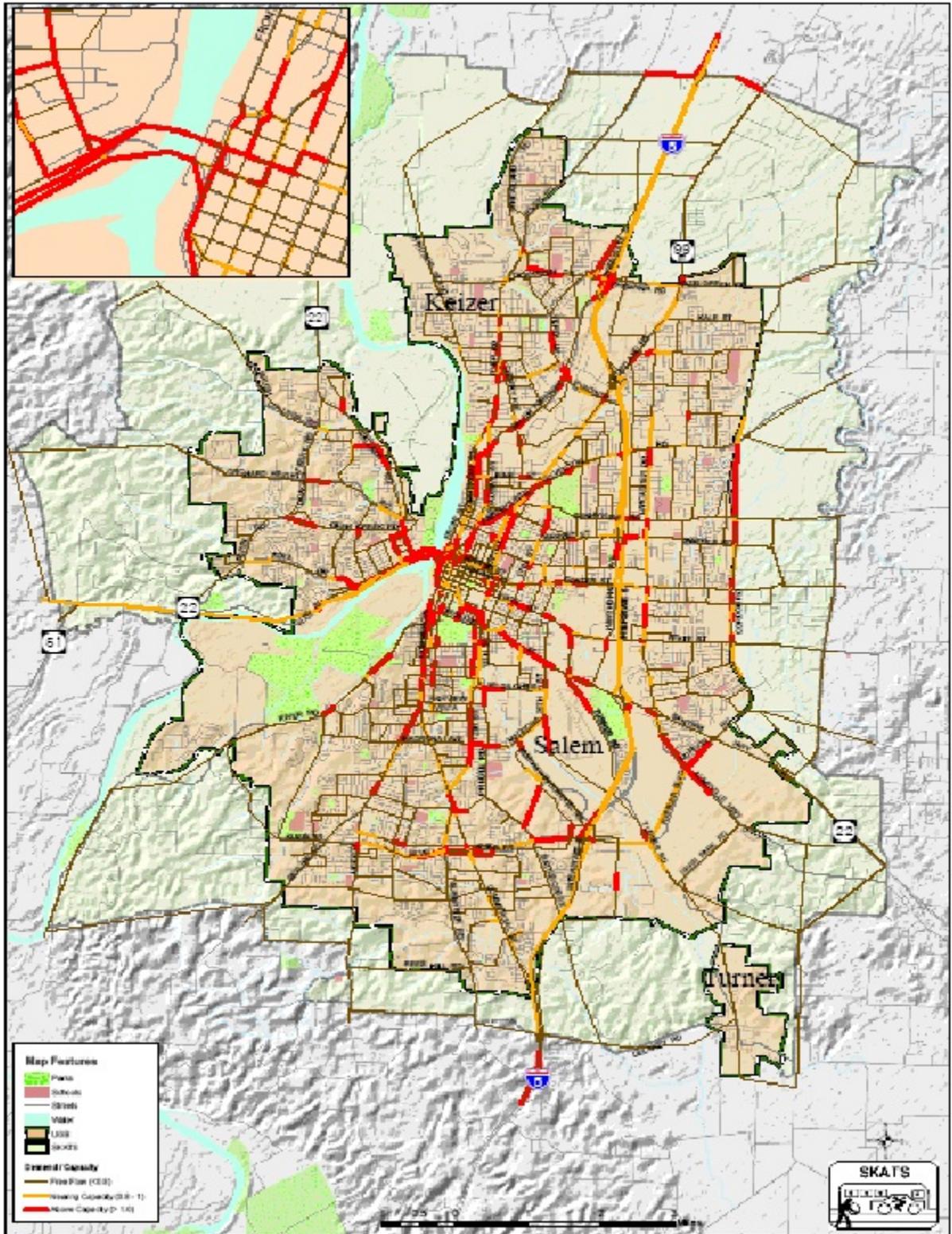
The maps on pages 13 and 14 show the 2005 system capacity deficiencies as compared to the new deficiencies shown in the 2031 map. The new deficiencies are reflected as the new projects found in the 2007 amendments to the Salem TSP. Those new projects are then added to the TSDC Eligible Project List as contained in Appendix A.

In general, the regional arterial and collector street systems will continue to become more congested over the twenty-five years of the Salem TSP. While the annual rate of growth may vary, the street system will require additional capacity on key corridors and intersections in order for the system to provide a level of mobility needed to keep the community economically vibrant, reduce fuel use, and maintain the livability of neighborhoods.

Map 3-2
2005 PM Demand / Capacity



Map 3-3
2031 PM Demand / Capacity



Updated Project Costs

Methodology for Determining Project Costs and TSDC Eligibility

Once the system capacity deficiencies have been identified and reflected as projects in the adopted Salem TSP, the projects are then evaluated to determine if they meet the growth and time-of-deficiency criteria needed to make them TSDC-eligible projects. The projects are then assigned to one of three categories:

- **Corridor Capacity Projects:** These projects add new through travel lane capacity on arterial and collector streets, including center turn lanes, and acceleration and deceleration lanes. They also include new arterial and collector streets that the City would anticipate building itself, independent of the development process. (See Appendix A, Table A-1)
- **Standard Street Upgrade Projects:** These are improvements to existing arterial and collector streets located outside the Urban Services Area (USA) that add urban street components such as proper pavement depth, lane width, curb, gutter, storm drainage, sidewalks, street lights, and bicycle lanes (on specific streets as identified in the Salem TSP). They also include new arterial and collector streets that the City would anticipate being constructed as part of the development process. Only the portion of the projects that add pavement right-of-way, depth and width are TSDC-eligible. (See Appendix A, Table A-2)
- **Traffic Signal System and Intersection Improvement Projects:** These projects add capacity to the system through the installation of new traffic signals, upgrading of existing traffic signals, installation and upgrade of traffic signal interconnection, coordination and communication systems, and the construction of dedicated left and right turn lanes, additional through travel lanes, and any other improvements to intersections that improve vehicular capacity. (See Appendix A, Table A-3)

The following methodologies are used to calculate the percentage of eligibility for each of the above project categories:

Corridor Capacity Projects

Appendix A, Table A-1 lists the identified Corridor Capacity Projects identified from 1995 through 2031 travel demand. This table provides project descriptions, including existing pavement width, and estimated TSDC and Non-TSDC costs for each project. The estimated total project

costs were derived by taking the planning level cost estimate for the project, adjusted to 2006 dollars, and multiplying it by the ratio of new additional pavement needed to mitigate the additional travel demand attributed to growth. Specifically, all additional right-of-way costs are TSDC eligible, as well as all additional pavement, bridge and culvert expansions, installation of needed storm drainage systems (curb, gutter, catch basin to pipe systems or open ditch/swale systems), required water quality systems, and the cost of replacing existing pavement, curb, gutter, drainage, sidewalk, bicycle lanes, landscaping and street lighting needed to be moved or reconstructed due to having to expand the roadway section, or it being damaged by constructing the improvement.

Example #1: Widen a Major Arterial street from an existing cross-section of two travel lanes and gravel shoulders with open drainage (existing pavement width 28 feet) to four travel lanes, plus add a continuous center turn lane, sidewalks, curb, gutter, drainage, landscaping, and street lights (new pavement width 68 feet), for a distance of 5,000 feet.

Total Planning Level Cost Estimate for Project: \$5,000,000

New Pavement Width - Existing Pavement Width = New Capacity Improvement
68 ft. - 28 ft. = 40 ft. therefore $40/68 = .588$

...or 58.8% of the Total Planning Level Cost Estimate is TSDC Eligible

$\$5,000,000 \times .588 = \$2,940,000$ TSDC-Eligible Project Costs

$\$2,060,000$ Non-TSDC Eligible Project Costs

Example #2: Widen a Major Arterial street, fully improved to urban standards, from an existing cross-section of two travel lanes, continuous center turn lane and bicycle lanes (existing pavement width 46 feet) to four travel lanes, plus a continuous center turn lane, and bicycle lanes and all other urban standard components. (new pavement width 68 feet) with a widened bridge 100 feet long, for a total corridor distance of 5,000 feet.

Total Planning Level Cost Estimate for Project: \$8,000,000

New Pavement Width - Existing Pavement Width = New Capacity Improvement
68 ft. - 46 ft. = 22 ft. therefore $22/68 = .324$

...or 32.4% of the Total Planning Level Cost Estimate is initially TSDC Eligible

$\$8,000,000 \times .324 = \$2,592,000$ initially TSDC-Eligible Project Cost

...plus cost of widening bridge to accommodate extra lanes: $\$2,500,000$

...plus cost of replacing existing urban standard components: $\$1,500,000$

$\$2,592,000 + \$2,500,000 + \$1,500,000 = \$6,592,000$ or 82.4% TSDC Eligibility

$\$1,408,000$ or 17.6% Non-TSDC Eligible

Example #3 City determines it needs to build a new Minor Arterial street connection (72 ft. ROW, pavement width 46 ft.) to full urban standards, independent of the private development process. This connection will alleviate congestion on nearby arterial streets that will reach capacity deficient levels within the TSDC planning period. Project includes purchase of right-of-way, street construction, and building a bridge over a creek 100 feet in length. Total length of project is 3,000 feet.

Total Planning Level Cost Estimate for Project: \$10,320,000

Total Right-of-Way Costs: 72 ft. width x 3,000 ft. length x $\$30$ sq.ft = $\$6,480,000$

TSDC Right-of-Way Costs: $\$6,480,000$ (100% eligible)

Total Street Costs: 2,900 ft. x \$820 = \$2,460,000

TSDC Street Costs: \$2,460,000 (100% eligible)

Total Bridge Costs: 100 ft. long x 46 ft. wide x \$300 sq. ft. = \$1,380,000

TSDC Bridge Costs: \$1,380,000 (100% eligible)

Total TSDC Eligible Costs: \$10,320,000 (100% eligible)

Standard Street Upgrade Projects (Outside the USA)

Appendix A, Table A-2 lists the identified projects needed to upgrade arterial and collector streets located outside the Urban Service Area (USA) to full urban standards. It is assumed that developers will be responsible for providing streets to serve the undeveloped areas, as they are developed. However, the developers will be required to provide only a "local" street's level of improvement, with any extra costs to upgrade to collector or arterial streets being eligible for TSDC funding. The projects in the list include: upgrading the street pavement to proper depth and lane width per the City's Street Design Standards and Salem TSP requirements; needed additional right-of-way, installing bicycle lanes where designated in the Salem TSP; and constructing curb, gutter, storm drainage, sidewalk, landscaping, and street lights. Basic unit costs for constructing the street per its functional classification are listed below.

The allocation of TSDC costs were made by applying the difference in unit costs between providing a local street and the unit cost for an arterial or collector street. These cost differences are for extra pavement width and pavement thickness to support more frequent and heavier loads. Thus, the increment in street costs for the TSDC share of street standard upgrades outside the USA are calculated on the following unit costs:

Table 3

Basic Unit Costs for Street Improvements by Functional Classification in 2006 dollars				
Functional Classification	Pavement Width	Cost/Lineal Foot	Difference to Local	Cost/Lin. Ft.
Parkway	80 feet	\$1,100	Parkway - Local	\$560
Major Arterial	68 feet	\$1,000	Major Arterial - Local	\$460
Minor Arterial	46 feet	\$820	Minor Arterial - Local	\$280
Collector A & C	34 feet	\$620	Collector A & C - Local	\$80
Collector B	40 feet	\$670	Collector B - Local	\$130
Local	30 feet	\$540	*Collector B has additional parking on one side, plus bicycle lanes on both sides.	

Eligible bridge costs are those costs estimated necessary to widen the structure to account for the upgrade in pavement width. The estimated cost in 2006 dollars for bridge construction is \$300 per square foot of bridge deck. Right-of-way costs eligible for TSDC funding are those costs of providing additional width over the local street standard width of 60 feet. In some cases outside the USA, developers will be required to provide the entire right-of-way (even in excess of 60 feet). However, in other cases, the City will be required to purchase the additional right-of-way. To

account for both cases, 50 percent of the cost of extra right-of-way has been included in the TSDC cost category. Right-of-way purchase costs (in 2006 dollars) are estimated at \$10 per square foot for undeveloped residential land and \$30 per square foot for commercial/industrial.

Example #1 Developer upgrades an existing local street, outside the USA, (pavement width 30 feet, no curb, gutter, sidewalk) to its new classification as a Minor Arterial street (pavement width 46 feet, with curb, gutter, sidewalk, storm drainage, landscaping, and street lights) for 1,000 feet, plus widening an existing bridge that is 50 feet long.

Total Street Cost:	1,000 ft. x \$820 = \$820,000
TSDC Street Cost:	1,000 ft. x \$280 = \$280,000
Non-TSDC Street Cost:	\$820,000 - \$280,000 = \$540,000
Right-of-Way Costs:	1,000 ft. x (72 ft. - 60 ft.) x \$10 sq. ft. = \$120,000
TSDC ROW Cost:	.50 x \$120,000 = \$60,000
Non-TSDC ROW Costs:	\$120,000 - \$60,000 = \$60,000
Total Bridge Costs:	46 ft. wide x 50 ft. long x \$300 sq. ft. = \$690,000
TSDC Bridge Cost:	(46 ft. - 34 ft.) x 50 ft. x \$300 = \$180,000
Non-TSDC Bridge Cost:	\$690,000 - \$180,000 = \$510,000
Total Project Cost:	\$820,000 + \$120,000 + \$690,000 = \$1,630,000
Total TSDC Cost:	\$280,000 + \$60,000 + \$180,000 = \$520,000
Total Non-TSDC Cost:	\$540,000 + \$60,000 + \$510,000 = \$1,110,000

Example #2 Developer extends a new collector street, outside the USA, (ROW 60 ft. wide, pavement width 34 ft.) per the requirements of the Salem TSP as part of a new subdivision in undeveloped land. Street is built to full urban standards. A bridge 75 ft. long is needed to cross a creek. Total project street length is 2,000 feet.

Total Street Cost:	2,000 ft. x \$620 = \$1,240,000
TSDC Street Cost:	2,000 ft. x \$80 = \$160,000
Non-TSDC Street Cost:	\$1,240,000 - \$160,000 = \$1,080,000
Right-of-Way Costs:	2,000 ft. x (60 ft. - 60 ft.) x \$10 sq. ft. = \$0
TSDC ROW Cost:	\$0
Non-TSDC ROW Costs:	\$0 (Dedicated to City as ROW)
Total Bridge Costs:	34 ft. wide x 75 ft. long x \$300 sq. ft. = \$765,000
TSDC Bridge Cost:	(34 ft. - 30 ft.) x 75 ft. x \$300 = \$90,000
Non-TSDC Bridge Cost:	\$765,000 - \$90,000 = \$675,000
Total Project Cost:	\$1,240,000 + \$0 + \$765,000 = \$2,005,000
Total TSDC Cost:	\$160,000 + \$0 + \$90,000 = \$250,000
Total Non-TSDC Cost:	\$1,080,000 + \$0 + \$675,000 = \$1,755,000

Traffic Signal System & Intersection Improvement Projects

Appendix A, Table A-3 lists the identified projects needed to add capacity at intersections, specifically through installation of new and the enhancement of existing traffic signals. It also includes projects necessary to interconnect and enhance coordination and communication. It is consistent with the policies and projects contained in the Salem TSP Transportation System Management Element. The list also contains intersection widening and improvement projects that increase turning movements and through traffic movements at intersections. The list contains project descriptions and percentages of TSDC and Non-TSDC Cost Eligibility.

Examples of TSDC-Eligibility: Installation of new traffic signal	100% Eligible
Upgrade signal phases & actuation	100% Eligible
Install new traffic signal interconnect	100% Eligible
Upgrade signal interconnect to fiber optic	100% Eligible
Install new turn lane at stop-controlled intersection	100% Eligible
Install new traffic signal with turn lanes	100% Eligible
Install new traffic signal with turn lanes plus add new curb, gutter, and sidewalk	Total Project Cost Eligible, minus cost to add new sidewalk

Inflation and Revised Unit Costs

The methodologies listed above are primarily for new projects to be added to the TSDC Eligible Project List (EPL). For those projects already contained on the list from the original 1995 and 2002, 2004, and 2006 project list updates, the project costs, scopes, and boundaries have been reviewed and adjusted to be made current. The majority of project costs have been updated through the 2007 amendments to the Salem TSP to 2006 dollars. The following process was used to update existing projects on the TSDC Eligible Project List:

- A. Salem TSP project descriptions that exactly matched a previous TSDC project:
 1. Match existing TSDC projects with Salem TSP projects
 2. Eliminate TSDC projects that have been completed or are not included in the Salem TSP.
 3. In the majority of cases, use the Salem TSP project cost as the updated TSDC total project cost. (In some cases, if Salem TSP project cost was deemed too low, use the linear unit costs as shown in Table 3)
 4. For existing TSDC projects, compute the TSDC-eligible cost by dividing the new total project cost by the old TSDC total project cost.
- B. For determining new TSDC-eligible projects, use the Salem TSP total project cost and apply the appropriate methodology to determine the TSDC-eligible cost. For Standard Street Upgrade Projects, apply a percentage of the project located outside of the USA as part of determining the amount of TSDC-eligibility.

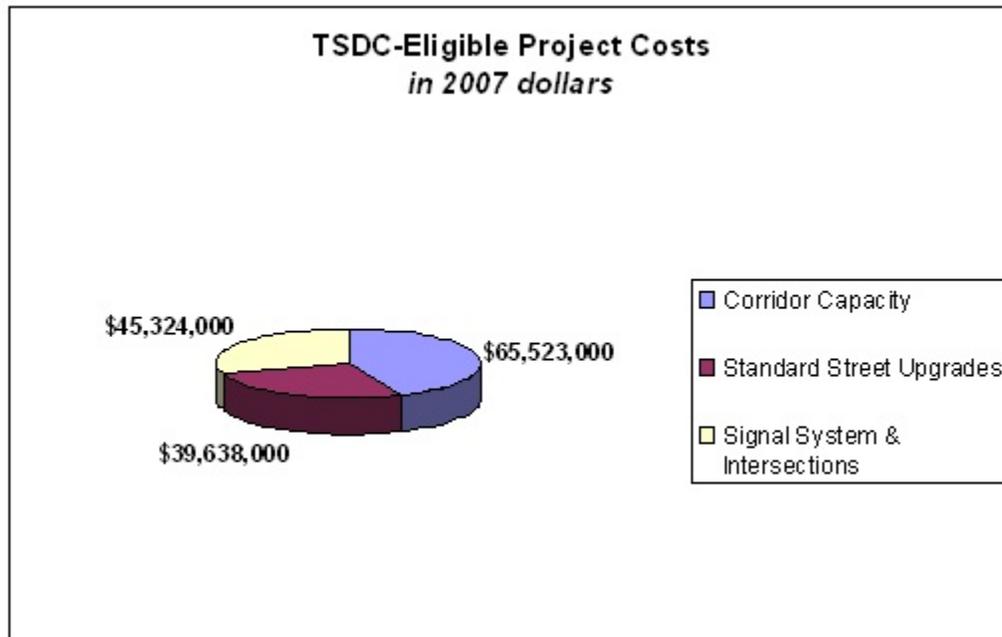
Update to Eligible Project List

Table 4 contains a summary of the TSDC-eligible project costs by project category and by whether it is a pre-existing project on the Eligible Project List or a new project.

Table 4

Summary of 2008 TSDC Eligible Project List Total Project Costs by Category in 2007 dollars			
Project Category	Existing Projects	New Projects	Total by Category
Corridor Capacity	\$37,103,000	\$28,420,000	\$65,523,000
Standard Street Upgrades (Outside the USA)	\$26,301,000	\$13,337,000	\$39,638,000
Traffic Signal System & Intersection Improvements	\$14,739,000	\$30,585,000	\$45,324,000
Total	\$78,143,000	\$72,342,000	\$150,485,000

Figure 4



Implementation Issues

Trip Generation Rate Study Update

The Institute of Transportation Engineers (ITE) publishes a trip generation manual that contains studies of different vehicular trip generation rates by different criteria and land use/development types. The Institute of Transportation Engineers, Trip Generation Manual, 7th Edition, 2003, is the version of the manual that is to be used with the adoption of the 2008 TSDC Update. This replaces the 6th edition of the same manual used previously.

Trip Generation Analysis

The 2008 TSDC Update will also incorporate an implementation practice that is different from previous practices. The ITE Trip Rates are based on the compilation of trip generation studies per different land use types (i.e. single family homes, multi-family units, commercial retail, etc.) and different trip generation factors (i.e. per housing unit, per 1,000 square feet, etc.) The practice will be to apply either the "fitted curve equation" or "average rate" based on which curve best applies to the individual situation. When in doubt, the default will be to apply the one that produces the lower trip generation rate.

Campus Trip Rate

In 2007, City Council adopted a change to the trip generation methodology by creating a "campus" trip generation rate factor and calculation methodology. This new methodology will remain in this update. (See Appendix B)

Trip Generation Rate Alternatives and Appeals

The current TSDC methodology allows for alternative methodologies to calculate the trip generation (ELNDT) for use in calculation of improvement fees. These provisions are needed in case standard trip generation rates, trip length factors, or linked trip factors included in the TSDC do not adequately reflect the true trip generation characteristics of a particular land use development. These provisions also provide an approach for project proponents that believe that their development does not generate trips in the same way as described in the TSDC methodology or the ITE Trip Generation Manual.

These provisions include:

1. Those uses, or combination of uses, that are not specifically identified in the ITE Trip Generation, 7th Edition, 2003, shall be categorized by the City of Salem as the use(s) identified in the manual that is (are) most similar in trip generation; or
2. In the event trip rates calculated by the Institute of Transportation Engineers are felt to inadequately reflect an individual development's trips, the Public Works Director will consider, at the applicant's expense, traffic generation studies performed by a transportation professional recognized by the Public Works Director, as being proficient in traffic generation analysis, to show traffic data in the calculation of transportation SDCs. The Public Works Director shall set standards for the traffic generation studies, and may accept, reject, or require

revisions to the proposed study methodology and/or the transportation planning professional conducting the study. Such standards may include:

- a. The trip generation survey shall include at least three sites that have development similar to the proposed development, of which at least one site must be within the Salem Urban Growth Boundary, unless otherwise specified by the Public Works Director. If there are no similar sites located within the Salem UGB, then the proponent needs to find three similar sites in metropolitan areas as similar as possible to that of Salem's UGB. A variance for this requirement needs to be approved by the Public Works Director. An average (mean) of the trip generation rates of the three studied sites shall be used for the proposed development.
- b. Any adjustments in the Trip Length Factor shall be based on surveys made within the Salem Urban Growth Boundary, unless approved in advance by the Public Works Director. If such surveys are made outside the Salem UGB, the survey must include the trip length for home-based trips as well as for the types of development proposed.
- c. Any adjustments to the Linked Trip Factor shall be based on surveys made within the Salem UGB, unless approved in advance by the Public Works Director. The survey questions used to determine pass-by trips shall be reviewed and approved by the Public Works Director prior to its use in the survey.

Where the ITE average daily trip rate is based on less than five studies or the fitted curve relationship based on the unit employed in ITE Trip Generation, 7th Edition, 2003, exhibits an R2 (correlation) less than 0.7., the applicant is strongly encouraged to submit, at the applicant's expense, the traffic generation studies noted above.

Credits

Credits against the calculated TSDC will be given for the cost of qualified public improvements, in whole or in part, identified on the TSDC Eligible Project List. The cost of right-of-way acquired by the applicant will be included in the costs of an improvement eligible for credit if the cost of the right-of-way is included in the project cost which is the part of the TSDC costs. Costs not eligible under the TSDC methodology shall not be eligible for TSDC credit.

Transportation Demand Management Credits

Credits may be given to developments that implement transportation demand management (TDM) plans designed to reduce generated trips. The proponent of the development must declare an intention to apply for the TDM trip reduction and TSDC credit as a part of the building permit application. The TDM plan must be prepared by a transportation planning or engineering professional recognized by the Public Works Director as being proficient in TDM programs.

Credits for TDM trip reductions will be limited to a maximum of 15 percent of the TSDC charge calculated without TDM credits. TDM plans must include an annual reporting plan that will document the amount of trip reduction that is actually achieved. The amount of maximum TDM improvement fee credit shall be placed in a separate account (TDM credit account), and shall be held there for two years until the actual amount of any TDM credits can be calculated, based on

the development proponent's annual reports. Following receipt of the second annual report on TDM trip reduction from the project proponent, the amount of the TDM credit shall be determined by the Public Works Director. Funds held in the special TDM credit account will either be reimbursed to the developer (in whole or in part) or transferred to the regular TSDC account, in the event of non-performance. No further action will be taken on TDM credits following this reimbursement and/or transfer of TDM credit. See the Transportation Systems Development Charge Methodology Summary Report, 1994, Kittelson and Associates, pp. 10-11, for an example of how the TDM Credit would be calculated.

Fee Collection

The TSDC will be collected from the applicant at the time the building permits are issued or the applicant may defer payment using the Bancroft, or other Council approved, approach. The City of Salem reserves the right to re-determine the TSDC at the time the development is approved for occupancy to assure that the appropriate land use designation was used as the basis for the TSDC.

Separation of Funds

The TSDC receipts shall be placed in the City's Extra Capacity Facilities Fund - Transportation Account and shall be segregated by accounting practices from all other SDC funds received by the City. Funds collected that may qualify for TDM credits also shall be segregated from all other SDC funds received by the City.

Use of TSDC Funds

Funds collected through the TSDC Program and any interest earned on these funds must be used only for projects specifically included in the currently adopted TSDC Eligible Project List, or as specified in this Update Report. TSDC funds can be used only for designated components of the project and only in the proportions shown in the currently adopted TSDC Eligible Project List, or as specified in this Update Report. TSDC funds are limited to the overall proportion shown in the TSDC Eligible Projects List for any particular project. However, they do not need to be spent in the same proportion over the length of the project schedule or geographically over the project.

Periodic Updates to the TSDC

The City of Salem will continue to complete periodic updates of the TSDC Methodology and particularly the TSDC Eligible Projects List. The TSDC Eligible Projects List shall be updated after any significant amendments to the Salem TSP Project Needs Lists are adopted by City Council. The List may also be amended at any time it is necessary to do so. City staff shall continue to make complete evaluations of the overall methodology and propose updates as necessary on a five-year cycle.

Decision Packages

Current TSDC Fee

Figure 5 shows the calculation of the current maximum-allowed cost-per-trip. The actual fee charged by City Council is currently \$189.63 per ELNDT. The actual fee charged represents 58.5 percent of what the maximum allowed fee could be.

Figure 5

$$\frac{\$100,457,000 \text{ in Total TSDC-Eligible Project Costs}}{309,600 \text{ New Trips (Total ELNDT)}} = \$324.47 \text{ Maximum Allowed Cost Per Trip}$$

The current fee represents a Council strategy, approved in 2004, that calls for the City to incrementally raise the TSDC actual cost-per-trip fee over time so that the percentage of actual cost-per-trip charged to maximum-allowed cost-per-trip continues to grow closer to, but not ultimately equal the maximum-allowed cost-per-trip.

Proposed Options

Staff proposes three options for Council to consider as part of adopting the 2008 TSDC Update. Table 5 shows the three options available for Council consideration:

Table 5

Comparison of Proposed TSDC Fee Options			
	Option 1: All Current TSDC Eligible Project Categories	Option 2: Corridor Capacity, Signal System, and only those Street Standard Upgrade Projects with Committed Development Activity	Option 3: Corridor Capacity, Signal System, and Arterial Street Standard Upgrade Projects including only those Collector Upgrade Projects with Committed Development Activity
Total Project Costs	\$315,970,000	\$213,670,000	\$268,034,000
Total TSDC Eligible Project Costs	\$150,485,000	\$126,913,000	\$141,085,000
Total New Daily Trips (Total ELNDT)	357,400	357,400	357,400
Maximum-Allowed Cost-Per-Trip	\$421.05	\$355.10	\$394.75
Current Actual Cost-Per-Trip Percentage to New Maximum-Allowed Cost-Per-Trip	\$189.63/\$421.05 = 45%	\$189.63/\$355.10 = 53.4%	\$189.63/\$394.75 = 48%

Increase in Actual Cost-Per-Trip Needed to Equal Current 58.5% of Maximum	\$421.05 x 58.5% = \$246.42 Increase of \$56.69	\$355.10 x 58.5% = \$207.73 Increase of \$18.10	\$394.75 x 58.5% = \$230.93 Increase of \$41.30
Adjusted by 1.4% for Inflation (ENR 2007) Effective July 1, 2008	\$249.77 Net Increase of \$60.14	\$210.64 Net Increase of \$21.01	\$234.16 Net Increase of \$44.53
Fee per Single-Family Home (Current \$1,815)	\$2,390 Increase of 32% or \$575	\$2,016 Increase of 11% or \$201	\$2,241 Increase of 23% or \$426

Table 5 includes a number of options that Council could consider in determining what the actual fee should be. Under Option 1, it would take an increase of \$60.14 per trip to equal the current percentage of 58.5% actual cost-per-trip to maximum-allowed cost-per-trip. If that percentage was increased to 67%, the increase in actual cost-per-trip would be \$92.47 more than the current amount. If the percentage were increased to 75%, the actual cost-per-trip would increase by \$126.16. Option 2 removes the Arterial and Collector Street Standard Upgrade Projects (outside the USA) from eligibility, except for those street projects that already have committed development activity adjacent to them. Committed development activity is defined as adjacent property having successfully received a Urban Growth Area Development Permit, subdivision approval, preliminary plat, building permit, or final plat approvals. Option 3 adds the Arterial Standard Street Upgrade project category back in and only keeps Collector Street Standard Upgrade projects eligible that have committed development activity.

Table 6 compares the fees that would be charged on a single-family home under the three different options and under four different percentages of actual cost-per-trip to maximum-allowed cost-per trip.

Table 6

Example TSDC Fees on Single Family Home (9.57 ELNDT)				
Percentage of Actual Cost-Per-Trip Fee to Maximum Allowed Cost-Per-Trip	Current TSDC	Option 1 All Current TSDC Project Categories Eligible	Option 2 Corridor Capacity, Signal Systems, and only Arterial & Collector Upgrades having Committed Development Activity	Option 3 Corridor Capacity, Signal Systems, Arterial Upgrades and only Collector Upgrades having Committed Development Activity
58.5%	\$189.63 per trip \$1,815 per home	\$249.77 per trip \$2,390 per home	\$210.64 per trip \$2,016 per home	\$234.16 per trip \$2,241 per home
60%		\$252.63 per trip \$2,418 per home	\$213.06 per trip \$2,039 per home	\$236.85 per trip \$2,267 per home
67%		\$282.10 per trip \$2,700 per home	\$237.92 per trip \$2,277 per home	\$264.48 per trip \$2,531 per home
75%		\$315.79 per trip \$3,022 per home	\$266.33 per trip \$2,549 per home	\$296.06 per trip \$2,833 per home
100%		\$421.05 per trip \$4,029 per home	\$355.10 per trip \$3,398 per home	\$394.75 per trip \$3,778 per home

Adjustments for Inflationary Cost Increases

Unlike the City’s Water and Sewer SDCs, which are adjusted annually for inflation, the Transportation SDC has been held at a constant amount until Council has considered periodic, specific fee increases at its discretion. Construction costs have increased dramatically in recent years, especially for steel, cement, fuel, asphalt, PVC pipe, and other materials. Staff believes that it is important that the City keep its TSDC revenues, at least, equal to the impacts of inflation in order to maintain its ability to build projects. The following are options for Council to consider:

- A. TSDC actual cost-per-trip fee be automatically adjusted annually using the Engineering News-Record (ENR) index, as used for the City’s Water and Sewer SDCs.
- B. Council continue its current practice of raising or lowering the TSDC actual cost-per-trip fee at its discretion, as projects are added or subtracted from the TSDC Eligible Project List.

Staff Recommendations

City staff recommended that Council adopt Option 3, as shown in Table 5, maintaining the existing 58.5 percentage of actual cost-per-trip fee to maximum-allowed cost-per-trip, with a 1.4 percent annual inflation adjustment for 2008. This would result in a maximum-allowed cost-per-trip of \$394.75 and an actual cost-per-trip fee of \$234.16. This would be a 23 percent increase over the existing actual cost-per-trip fee charged, or an additional \$44.53 per trip. The TSDC fee for a single-family home would be \$2,241, or an increase of \$426 per home.

Staff recommended that the actual cost-per-trip fee amount be automatically adjusted annually for inflation using the same ENR index as that used by the Water and Sewer SDCs.

Staff further recommended that the actual cost-per- trip fee increase of \$44.53 be phased in over a three-year period of time, plus the annual inflationary adjustment. The TSDC actual cost-per-trip fee charge would follow the schedule shown in Table 7, effective July 1, 2008.

Table 7

TSDC Actual Cost-Per-Trip Fee Phasing Schedule	
Year - Date	Fee Amount
Existing Fee	\$189.63 per trip
July 1, 2008	\$204.16 per trip (Additional \$14.53)
July 1, 2009	\$219.16 per trip + inflationary adjustment (Additional \$15 plus inflation)
July 1, 2010	\$234.16 per trip + inflationary adjustment (Additional \$15 plus 2 years’ inflation)
July 1, 2011	\$234.16 per trip + inflationary adjustment for 3 years’ inflation
July 1, 2012	Dependent upon results of next planned comprehensive methodology update

The fee schedule shown in Table 7 reflects the Eligible Project List as produced from this methodology update. Council has the right to raise and lower fees at its discretion. Likewise,

projects can be added to and subtracted from the Eligible Project List as deemed necessary by Council, with or without having to adjust the actual cost-per-trip fee charged.

Reasons for Staff Recommendations

Staff recommended that the Council adopt Option 3 because it retained the project categories that have the most capacity-enhancing benefit to the street system. The capacity-enhancing component of the Collector Street Standard Upgrade projects is relatively small – usually coming to just four feet of extra pavement width and some additional depth of pavement. The developer reimbursements are historically low dollar amounts. Many of the Collector-level improvements can be exacted as a condition of development. Eliminating the Collector Standard Street Upgrade project category (except those streets already having committed development activity) will reduce the total cost of eligible projects by \$9,400,000. Staff believes that many of the Arterial Street Standard Upgrade projects have more significant capacity-enhancements, larger developer reimbursements, and valuable economic development benefit.

Staff recommended keeping those projects in the Collector Street Standard Upgrade project category that have committed development activity eligible so that any financial assumptions made by developers in a committed process can be honored.

In addition, staff recommended a phased schedule of actual cost-per-trip fee increases over a three year period. This would be a reasonable approach to increasing the fee, while softening the impact on housing prices at a time when the industry is in downturn.

Adoption Process

The City Council will held a work session in January 2008 on the proposed revisions to the Salem TSDC methodology, Eligible Project List, and actual cost-per-trip. A public hearing was held on June 2, 2008, for the Council to take public testimony on the revisions. Council deliberated the evening of the public hearing and adopted the December 27, 2007 Draft Report with revisions to the document and TSDC-Eligible Project List as contained in the June 2, 2008, staff report.

Summary of Council Actions

Council approved the following at its June 2, 2008 public hearing and deliberations:

- Option #3 which includes Corridor Capacity, Signal System, Arterial Street Standard Upgrades, with Collector Upgrades that have committed development activity only.
- Total TSDC-Eligible Project List of \$141,085,000 in projects.
- Total New Daily Trips (ELNDT) of 357,400
- Total Maximum-Allowed Cost-per-Trip of \$394.75
- Kept the percentage of actual fee charged to Maximum-Allowed Cost-per-Trip at 58.5%
- Adjust the actual fee charged automatically for inflation per the ENR factor annually, beginning with a 1.4% increase for 2008.
- Raise the actual fee charged to \$234.16 per trip, phased-in over three years per Table 7.

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APPENDICES

Appendix A

2008 TSDC Eligible Project List

A-1 Corridor Capacity Projects

A-2 Standard Street Upgrade Projects Outside of the USA

A-3 Traffic Signal System & Intersection Improvement Projects

Appendix A-1
2008 TSDC-Eligible Corridor Capacity Projects
in 2007 dollars

ID No.	Year Added to List	District	Street	Location	Functional Classification	Total Project Cost	TSDC Eligible Cost	% TSDC Eligible	Non-Eligible Cost
1	1995	SE	Battle Creek Road SE	Widen from Kuebler Blvd. SE to Hillrose Street SE	Minor Arterial	\$6,439,000	\$2,125,000	33%	\$4,314,000
2	1995	SE	Kuebler Boulevard SE	Widen Bridge over Mill Creek	Parkway	\$2,238,000	\$1,119,000	50%	\$1,119,000
3	1995	SE	Kuebler Boulevard SE	Widen Bridge over UPRR Railroad	Parkway	\$1,279,000	\$575,000	45%	\$704,000
4	1995	SE	Kuebler Boulevard SE	Widen from I-5 Interchange to 36th Avenue SE	Parkway	\$2,510,000	\$1,054,000	42%	\$1,456,000
5	1995	SE	25th Street SE	Widen from Mission Street SE to McGilchrist Street SE	Major Arterial	\$3,206,000	\$1,886,000	59%	\$1,320,000
6	1995	SE	Commercial Street SE	Widen from Baxter Road SE to I-5 Interchange	Major Arterial	\$7,657,000	\$4,650,000	61%	\$3,007,000
7	1995	SE	Battle Creek Road SE	Widen from Kuebler Boulevard SE to Wiltsey Rd. SE	Minor Arterial	\$3,677,000	\$1,214,000	33%	\$2,463,000
8	2004	SE	Hilfiker Lane SE	Extend from Commercial St. SE to Pringle Rd. SE	Minor Arterial	\$4,039,000	\$4,039,000	100%	\$0
9	2006	SE	Kuebler Boulevard SE	Widen from I-5 Interchange to Commercial Street SE (Westbound)	Parkway	\$7,900,000	\$3,002,000	38%	\$4,898,000
10	2006	SE	Kuebler Boulevard SE	Widen from I-5 Interchange to Commercial Street SE (Eastbound)	Parkway	\$3,200,000	\$1,216,000	38%	\$1,984,000
11	2006	SE	Kuebler Boulevard SE	Widen from Commercial Street SE to Sunnyside Road SE (Both Directions)	Parkway	\$2,130,000	\$805,000	38%	\$1,325,000
12	2008	SE	Kuebler Boulevard SE	Widen from Sunnyside Road SE to Lone Oak Rd. SE	Parkway	\$5,400,000	\$2,052,000	38%	\$3,348,000
13	2008	SE	12th Street SE	Widen from McGilchrist Street SE to Fairview Ave. SE	Major Arterial	\$1,800,000	\$1,098,000	61%	\$702,000
14	2008	SE	Fabry Road SE	Extend from Reed Lane SE to Battle Creek Road SE	Minor Arterial	\$3,061,000	\$3,061,000	100%	\$0
15	2008	SE	Madrona Avenue SE	Widen from 25th Street SE to UPRR	Major Arterial	\$6,000,000	\$2,162,000	36%	\$3,838,000
16	2008	SE	12th Street SE	Widen from Fairview Avenue SE to Vista Avenue SE	Major Arterial	\$507,000	\$284,000	56%	\$223,000
17	2008	S	Croisan Scenic Way S	Extend from Joplin Street S to Croisan Creek Road S	Minor Arterial	\$6,066,000	\$6,066,000	100%	\$0
18	2008	S	Browning Avenue S	Extend from Cloudview Dr. S to Croisan Scenic Way S	Collector	\$500,000	\$500,000	100%	\$0
19	1995	NW	Eola Drive NW	Widen from Edgewater Street NW to Kingwood Dr. NW	Minor Arterial	\$2,234,000	\$550,000	25%	\$1,684,000
20	1995	NW	Glen Creek Road NW	Widen from Crescent Dr. NW to Westfarthing Way NW	Minor Arterial	\$2,734,000	\$2,439,000	89%	\$295,000
21	2002	NW	Marine Drive NW	Construct New Street from Moyer Lane NW to City Limits near Cameo Street NW	Collector	\$2,420,000	\$2,420,000	100%	\$0
22	2008	NW	Salem River Crossing	Design and Right-of-Way Acquisition for Approved Alignment East and West of the Willamette River	Parkway	\$5,000,000	\$5,000,000	100%	\$0
23	2008	NW	5th Avenue NW	Construct New Street from Cameo Street NW to Marine Drive NW	Collector	\$554,000	\$554,000	100%	\$0
24	1995	NE	Capitol Street NE	Restripe to Add Lane Northbound from Market Street NE to Fairgrounds Road NE	Major Arterial	\$42,000	\$42,000	100%	\$0
25	1995	NE	Hyacinth Road NE	Widen from Portland Road NE to Salem Parkway NE	Major Arterial	\$3,602,000	\$2,208,000	61%	\$1,394,000
26	1995	NE	Summer Street NE	Restripe to Add Lane Southbound from Fairgrounds Road NE to Marion Street NE	Major Arterial	\$59,000	\$59,000	100%	\$0
27	1995	NE	Salem Industrial Drive NE	Extend from Bill Frey Drive NE to Hyacinth Street NE	Collector	\$7,700,000	\$7,700,000	100%	\$0
28	2008	NE	Fisher Road NE	Extend from Terminus South of Sunnyview Road NE to Market Street NE	Collector	\$1,728,000	\$1,728,000	100%	\$0
29	2008	NE	Silverton Road NE	Realign from E. of UPRR to Pine St./Portland Rd. NE intersection.	Major Arterial	\$2,356,000	\$2,356,000	100%	\$0
30	2008	NE	Cherry Avenue NE	Widen from BNRR to Salem Parkway NE	Major Arterial	\$5,770,000	\$2,896,000	50%	\$2,874,000
31	2008	NE	Chemawa Road NE	Widen from I-5 Interchange to Portland Road NE	Parkway	\$2,623,000	\$663,000	25%	\$1,960,000
Total TSDC Corridor Capacity Projects						\$104,431,000	\$65,523,000		\$38,908,000

Appendix A-2
2008 TSDC-Eligible Standard Street Upgrade Projects (Outside the Urban Services Area)
in 2007 dollars

Arterial Street Upgrade Projects

ID No.	Year Added to List	District	Street	Location	Functional Classification	Total Project Cost	TSDC Eligible Cost	% TSDC Eligible	Non-Eligible Cost	Committed Development Activity
32	1995	SE	Turner Road SE	Cascade Gateway Park south 2100 feet	Minor Arterial	\$1,550,000	\$1,000,000	65%	\$550,000	Yes
33	1995	SE	Reed Road SE	Battle Creek Road SE to Strong Road SE	Minor Arterial	\$1,858,000	\$329,000	18%	\$1,529,000	
34	1995	SE	32nd Av. SE & Trelstad Av.	I-5 to 36th Av. SE signal at Kuebler Blvd. SE	Minor Arterial	\$2,716,000	\$520,000	19%	\$2,196,000	
35	1995	SE	Mildred Lane S	Liberty Road S to Skyline Road S	Minor Arterial	\$6,838,000	\$1,186,000	17%	\$5,652,000	Yes
36	1995	SE	Turner Road SE	2100 ft S of Cascade Gateway Park to Airway Dr. SE	Minor Arterial	\$4,162,000	\$754,000	18%	\$3,408,000	
37	1995	SE	Airport Road SE	State Street to Mission Street SE	Minor Arterial	\$2,342,000	\$433,000	18%	\$1,909,000	
38	1995	SE	Mildred Lane SE	Lone Oak Road SE to Sunnyside Road SE	Minor Arterial	\$3,506,000	\$462,000	13%	\$3,044,000	Yes
39	1995	SE	Turner Road SE	Airway Drive SE to 500' North of Kuebler Blvd. SE	Minor Arterial	\$2,600,000	\$468,000	18%	\$2,132,000	Yes
40	1995	SE	Turner Road SE	Mill Creek Bridge to South City Limits	Minor Arterial	\$5,507,000	\$991,000	18%	\$4,516,000	
41	2008	SE	Gaffin Road SE	UGB east of Cordon Rd. SE to Deer Park Drive SE	Minor Arterial	\$2,160,000	\$1,003,000	46%	\$1,157,000	
42	2008	SE	Lancaster Drive SE	Cranston Street SE to Kuebler Boulevard SE	Minor Arterial	\$3,287,000	\$334,000	10%	\$2,953,000	
43	2008	SE	Sunnyside Road SE	Pawnee Circle SE to the City Limits	Minor Arterial	\$3,953,000	\$567,000	14%	\$3,386,000	
44	1995	S	Liberty Road S	Holder Lane to south City Limits	Major Arterial	\$1,903,000	\$1,058,000	56%	\$845,000	Yes
45	2002	S	Skyline Road S	Maplewood Drive S to Mildred Lane S	Minor Arterial	\$2,649,000	\$1,730,000	65%	\$919,000	Yes
46	2002	S	Byers St. S-Deer Run S	Viewcrest Road S to eastern terminus	Minor Arterial	\$2,065,000	\$441,000	21%	\$1,624,000	Yes
47	2002	S	Deer Run Avenue S	Heath Street S Extension to western terminus	Minor Arterial	\$460,000	\$98,000	21%	\$362,000	Yes
48	2008	S	River Road S	Croisan Creek Road S to south City Limits	Minor Arterial	\$10,238,000	\$3,426,000	33%	\$6,812,000	
49	2008	S	Kuebler Road S	Croisan Creek Road S to City Limits	Minor Arterial	\$4,137,000	\$1,577,000	38%	\$2,560,000	
50	2008	S	New Minor Arterial Street	Deer Run Avenue to River Road S	Minor Arterial	\$3,417,000	\$1,302,000	38%	\$2,115,000	
51	1995	NW	Eola Drive NW	Sunwood Drive NW to Gehlar Road NW	Minor Arterial	\$620,000	\$149,000	24%	\$471,000	
52	1995	NW	Orchard Heights Rd. NW	BPA ROW to Orchard Heights Place NW	Minor Arterial	\$3,677,000	\$674,000	18%	\$3,003,000	Yes
53	1995	NW	Orchard Heights Rd. NW	Titan Drive NW to BPA Power Line	Minor Arterial	\$610,000	\$112,000	18%	\$498,000	
54	1995	NW	Doaks Ferry Road NW	Orchard Heights Road to Brush College Road NW	Major Arterial	\$6,204,000	\$2,295,000	37%	\$3,909,000	Yes (USA)
55	2008	NW	Eola Drive NW	Woodlawn Street to Sunwood Drive NW	Minor Arterial	\$2,833,000	\$680,000	24%	\$2,153,000	
56	2008	NW	Brush College Road NW	Doaks Ferry Road NW to BPA Power Lines	Minor Arterial	\$3,924,000	\$1,059,000	27%	\$2,865,000	
57	2008	NW	Doaks Ferry Road NW	Eola Drive NW south to UGB	Minor Arterial	\$2,600,000	\$936,000	36%	\$1,664,000	
58	1995	NE	Kale Road NE	Portland Road NE to Cordon Road NE	Minor Arterial	\$4,068,000	\$720,000	18%	\$3,348,000	Yes
Total TSDC Arterial Street Standard Upgrade Projects						\$89,884,000	\$24,304,000		\$65,580,000	

Collector Street Upgrade Projects

ID No.	Year Added to List	District	Street	Location	Functional Classification	Total Project Cost	TSDC Eligible Cost	% TSDC Eligible	Non-Eligible Cost	Committed Development Activity
59	1995	SE	27th Avenue SE	Kuebler Boulevard SE to Marietta Street SE	Collector	\$992,000	\$219,000	22%	\$773,000	
60	1995	SE	Airway Drive SE	Ewald Avenue SE to Turner Road SE	Collector	\$2,315,000	\$485,000	21%	\$1,830,000	
61	1995	SE	Gath Road SE	Turner Road SE to City Limits	Collector	\$1,231,000	\$262,000	21%	\$969,000	
62	1995	SE	Marietta Street SE	27th Av. SE to Fairview Industrial Dr. SE	Collector	\$1,254,000	\$272,000	22%	\$982,000	Yes
63	1995	SE	New Collector Street	Lancaster Drive SE to Turner Road SE	Collector	\$7,024,000	\$1,462,000	21%	\$5,562,000	
64	1995	SE	Oxford Street SE	22nd Street SE to 14th Street SE	Collector	\$942,000	\$204,000	22%	\$738,000	Yes
65	1995	SE	Lone Oak Road SE	Holder Lane SE to Mildred Lane SE	Collector	\$5,210,000	\$1,102,000	21%	\$4,108,000	
66	1995	SE	Lone Oak Road SE	Jory Creek Crossing to Sahalee Drive SE	Collector	\$2,404,000	\$505,000	21%	\$1,899,000	Yes
67	1995	SE	14th Street SE	Oxford Street SE to Wilbur Street SE	Collector	\$550,000	\$120,000	22%	\$430,000	
68	1995	SE	22nd Street SE	McGilchrist Sreet SE to Hoyt Street SE	Collector	\$290,000	\$70,000	24%	\$220,000	
69	2008	SE	Strong Road SE	Fairview Industrial Drive SE to Reed Road SE	Collector	\$3,010,000	\$391,000	13%	\$2,619,000	
70	2008	SE	Deer Park Road SE	Turner Road SE to Aumsville Highway	Collector	\$3,824,000	\$493,000	13%	\$3,331,000	
71	2008	SE	Strong Road SE	Reed Road SE to Marietta Street SE	Collector	\$2,133,000	\$275,000	13%	\$1,858,000	
72	1995	S	Red Leaf Drive S	Davis Road S to Mildred Lane SE Extension	Collector	\$1,299,000	\$275,000	21%	\$1,024,000	Yes
73	1995	S	Croisan Ridge Way S	Inland Road S (west UGB) to Heath St. Extension	Collector	\$3,255,000	\$685,000	21%	\$2,570,000	
74	2002	S	Fern Drive S	Heath Street S to River Road S	Collector	\$1,831,000	\$314,000	17%	\$1,517,000	Yes
75	2002	S	Davis Road S	Skyline Road S to Liberty Road S	Collector	\$2,977,000	\$654,000	22%	\$2,323,000	Yes
76	2002	S	Croisan Creek Road S	Kuebler Boulevard S to Heath Street S	Collector	\$8,118,000	\$1,738,000	21%	\$6,380,000	Yes
77	2002	S	Heath Street S	Fern Drive S to Deer Run Avenue S Extension	Collector	\$3,038,000	\$648,000	21%	\$2,390,000	
78	1995	NW	Michigan City Lane NW	Wallace Road NW to end of roadway	Collector	\$2,385,000	\$490,000	21%	\$1,895,000	Yes
79	2002	NW	35th Avenue NW	Osage Drive NW to Orchard Heights Rd. NW	Collector	\$2,076,000	\$434,000	21%	\$1,642,000	Yes
80	2002	NW	Marine Drive NW	Cameo St. NW to River Bend Rd. NW	Collector	\$5,378,000	\$1,193,000	22%	\$4,185,000	
81	2002	NW	Christina Street NW	Elliot Street NW to Michigan City Lane NW	Collector	\$4,087,000	\$839,000	21%	\$3,248,000	Yes
82	2002	NW	New Collector Street	35th Av. NW extension to 37th Av. NW	Collector	\$1,022,000	\$209,000	20%	\$813,000	Yes
83	2008	NW	Islander Avenue NW	West Meadows Dr. NW to 35th Av. NW ext.	Collector	\$2,805,000	\$622,000	22%	\$2,183,000	
84	2008	NW	River Bend Road NW	Wallace Road NW to Marine Drive NW	Collector	\$449,000	\$58,000	13%	\$391,000	
85	2008	NW	Colorado Drive NW	S. end of Colorado Dr. NW to Orchard Heights Rd. NW	Collector	\$960,000	\$125,000	13%	\$835,000	
86	1995	NE	Hayesville Drive NE	Portland Road NE to Astoria Street NE	Collector	\$767,000	\$166,000	22%	\$601,000	
87	1995	NE	Indian School Road NE	Chemawa Road NE to Blossom Drive NE	Collector	\$2,499,000	\$535,000	21%	\$1,964,000	
88	2008	NE	49th Street Extension	Kale Street NE to Hazelgreen Road NE	Collector	\$2,206,000	\$489,000	22%	\$1,717,000	
Total TSDC Collector Street Standard Upgrade Projects						\$76,331,000	\$15,334,000		\$60,997,000	

Appendix A-3
2008 TSDC-Eligible Traffic Signal System & Intersection Improvement Projects
in 2007 dollars

ID No.	Year Added to List	District	Street	Location	TSDC Project Type	Total Project Cost	TSDC Eligible Cost	% TSDC Eligible
89	1995	SE	Owens Street SE	at Liberty Street SE and at Commercial Street SE	Expand Intersections	\$4,499,000	\$4,499,000	100%
90	1995	SE	Battle Creek Road SE	at Reed Road SE	New Signal	\$400,000	\$400,000	100%
91	1995	SE	Fairview Av. SE	at Pringle Road SE	New Signal	\$400,000	\$400,000	100%
92	1995	SE	McGilchrist Street SE	at 22nd Av. SE	New Signal	\$400,000	\$400,000	100%
93	1995	SE	Sunnyside Road SE	at Mildred Lane SE	New Signal & Turn Lanes	\$510,000	\$510,000	100%
94	1995	SE	Turner Road SE	at Airway Drive SE	New Signal	\$400,000	\$400,000	100%
95	2002	SE	Cordon Road SE	Macley Road SE and Gaffin Road SE	New Signal & Turn Lanes	\$992,000	\$992,000	100%
96	2002	SE	Lancaster Drive SE	Hagers Grove Road SE to Cordon Road SE	Interconnect	\$200,000	\$200,000	100%
97	2002	SE	Madrona Avenue SE	Pringle Road SE to 25th Street SE	Interconnect	\$165,000	\$165,000	100%
98	2002	SE	25th Street SE	Mission Street SE to Madrona Avenue SE	Interconnect	\$150,000	\$150,000	100%
99	2002	SE	Commercial Street SE	Mission Street SE to Robins Lane/Fairway Avenue SE	Interconnect	\$600,000	\$600,000	100%
100	2002	SE	Kuebler Blvd. SE	at Lancaster Drive SE	Add P/P Phasing	\$18,000	\$18,000	100%
101	2002	SE	Kuebler Blvd. SE	I-5 to Skyline	Interconnect	\$600,000	\$600,000	100%
102	2008	SE	Commercial Street SE	at Kuebler Boulevard SE	Additional Turn Lanes	\$4,440,000	\$4,440,000	100%
103	2008	SE	Kuebler Boulevard SE	at Lone Oak Road	Additional Turn Lanes	\$800,000	\$800,000	100%
104	2008	SE	Baxter Road SE	at Commercial Street SE	Add P/P Phasing	\$15,000	\$15,000	100%
105	2008	SE	12th Street SE	at Fairview Av. SE	Add P/P Phasing	\$15,000	\$15,000	100%
106	2008	SE	Commercial Street SE	at Hilfiker Lane SE	New Signal	\$400,000	\$400,000	100%
107	2008	SE	12th Street SE	at Hines Av. SE	Upgrade Signal	\$200,000	\$200,000	100%
108	2008	SE	12th Street SE	at Hoyt Av. SE	Upgrade Signal	\$200,000	\$200,000	100%
109	2008	SE	12th/13th Street SE	Mission to Commercial	Interconnect	\$300,000	\$300,000	100%
110	2008	SE	13th Street SE	at Hines Av. SE	Upgrade Signal	\$200,000	\$200,000	100%
111	2008	SE	13th Street SE	at Hoyt Av. SE	Upgrade Signal	\$200,000	\$200,000	100%
112	2008	SE	Battle Creek Road SE	at Fabry Rd. SE	New Signal	\$400,000	\$400,000	100%
113	2008	SE	Battle Creek Road SE	at Hilfiker Lane SE	New Signal	\$400,000	\$400,000	100%
114	2008	SE	Commercial Street SE	at 12th Street SE	Upgrade Signal	\$450,000	\$450,000	100%
115	2008	SE	Commercial Street SE	at Lansford Drive SE	Upgrade Signal	\$450,000	\$450,000	100%
116	2008	SE	Commercial Street SE	at Ratcliff Dr. SE	New Signal	\$400,000	\$400,000	100%
117	2008	SE	Fabry Road SE	at Reed Lane SE	New Signal	\$400,000	\$400,000	100%
118	2008	SE	Madrona Av SE	at 12th Street SE	Add P/P Phasing	\$20,000	\$20,000	100%
119	2008	SE	Madrona Av SE	at Liberty Road S	Add P/P Phasing	\$20,000	\$20,000	100%
120	2008	SE	Madrona Av. SE	at Fairview Ind. Drive SE	Add P/P Phasing	\$15,000	\$15,000	100%
121	2008	SE	McGilchrist Street SE	at 12th Street SE	New Signal	\$400,000	\$400,000	100%
122	2008	SE	McGilchrist Street SE	at 25th Street SE	Upgrade Signal	\$400,000	\$400,000	100%
123	2008	SE	McGilchrist Street SE	at Pringle Rd. SE	Upgrade Signal	\$400,000	\$400,000	100%
124	2008	SE	Mildred Lane SE	at Liberty Road S	New Signal	\$400,000	\$400,000	100%
125	2008	SE	Mildred Lane SE	at Lone Oak Road SE	New Signal	\$400,000	\$400,000	100%
126	2008	SE	Reed Road SE	at Fairview Industrial Drive SE	New Signal	\$400,000	\$400,000	100%
127	2008	SE	Rickey Street SE	at Connecticut Avenue SE	Add P/P Phasing	\$20,000	\$20,000	100%
128	1995	S	River Road S	Acacia Drive S to Croisan Creek Road S	Additional Turn Lanes	\$836,000	\$836,000	100%
129	2008	S	Davis Road S	at Liberty Road S	New Signal	\$400,000	\$400,000	100%
130	2008	S	Liberty Road S	at Madrona Avenue S	Additional Turn Lanes	\$2,850,000	\$2,850,000	100%

ID No.	Year Added to List	District	Street	Location	TSDC Project Type	Total Project Cost	TSDC Eligible Cost	% TSDC Eligible
131	2008	S	Kuebler Blvd. S	at Skyline Road. S	Add P/P Phasing	\$15,000	\$15,000	100%
132	2008	S	Liberty Road S	at Boone Road S	Add P/P Phasing	\$20,000	\$20,000	100%
133	2008	S	Madrona Av. S	at Croisan Creek Rd. S	New Signal	\$400,000	\$400,000	100%
134	1995	NW	Doaks Ferry Rd. NW	at Brush College Road NW	New Signal	\$400,000	\$400,000	100%
135	1995	NW	Eola Drive NW	at Kingwood Drive NW	New Signal & Turn Lanes	\$540,000	\$540,000	100%
136	2002	NW	Doaks Ferry Road NW	at Eola Drive NW	New Signal	\$400,000	\$400,000	100%
137	2008	NW	Edgewater/ Wallace Rd. NW	Edgewater Street NW and Wallace Road NW	Interconnect	\$400,000	\$400,000	100%
138	2008	NW	Marion Street Bridge	Wallace Road NW to Front Street NE	Interconnect	\$100,000	\$100,000	100%
139	2008	NW	Doaks Ferry Rd. NW	at Glen Creek Road NW (west intersection)	New Signal	\$400,000	\$400,000	100%
140	2008	NW	Glen Creek Rd. NW	at Cascade Drive/Parkway Avenue NW	New Signal	\$400,000	\$400,000	100%
141	2008	NW	Wallace Road NW	at Brush College Rd.	New Signal	\$400,000	\$400,000	100%
142	2008	NW	Marine Drive NW	at Glen Creek Road NW	New Signal	\$400,000	\$400,000	100%
143	1995	NE	Center Street NE	at Park Avenue NE	New Signal	\$400,000	\$400,000	100%
144	1995	NE	Park Avenue NE	at D Street NE	New Signal	\$400,000	\$400,000	100%
145	1995	NE	Union Street NE	at Liberty Street NE	New Signal	\$400,000	\$400,000	100%
146	2002	NE	17th St. NE & Center St. NE	State St. to Market St. & 17th St. to 24th St. NE	Interconnect	\$329,000	\$329,000	100%
147	2002	NE	Lancaster Drive NE/SE	Hayesville to Kuebler	Interconnect	\$1,000,000	\$1,000,000	100%
148	2002	NE	Center Street NE	12th to Hawthorne	Interconnect	\$300,000	\$300,000	100%
149	2002	NE	Hayesville Drive NE	at 49th Avenue NE	New Signal	\$400,000	\$400,000	100%
150	2008	NE	Broadway Street NE	at Stark Street N	Queue Jump/Right Turn Lane	\$1,300,000	\$1,300,000	100%
151	2008	NE	Brown Road NE	at Sunnyview Road NE	Additional Turn Lanes	\$209,000	\$209,000	100%
152	2008	NE	Market Street NE	at Broadway Street NE	New Signal & Turn Lanes	\$653,000	\$653,000	100%
153	2008	NE	Portland Road NE	Lana Avenue NE to Hyacinth Street NE	Interconnect	\$392,000	\$392,000	100%
154	2008	NE	Sunnyview Road NE	Lancaster Drive NE to 45th Av NE	Interconnect	\$290,000	\$290,000	100%
155	2008	NE	Center Street NE	at 17th Street NE	New Signal & Turn Lanes	\$2,854,000	\$2,854,000	100%
156	2008	NE	Ward Drive NE	at Lancaster Drive NE	Upgrade Signal	\$600,000	\$600,000	100%
157	2008	NE	Broadway Street NE	at Salem Parkway NE	Queue Jump/Right Turn Lane	\$522,000	\$522,000	100%
158	2008	NE	Broadway Street NE	at Salem Parkway NE	Additional Turn Lanes	\$627,000	\$627,000	100%
159	2008	NE	Evergreen Avenue NE	at Market Street NE	Additional Turn Lanes	\$121,000	\$121,000	100%
160	2008	NE	Hawthorne Avenue NE	Midway Street NE to Center Street NE	Additional Turn Lanes	\$742,000	\$742,000	100%
161	2008	NE	Hood Street NE	at Broadway Street NE	Intersection	\$830,000	\$830,000	100%
162	2008	NE	17th Street NE	at Center Street NE	Upgrade Signal	\$400,000	\$400,000	100%
163	2008	NE	17th Street NE	at D Street NE	Upgrade Signal	\$560,000	\$560,000	100%
164	2008	NE	Hyacinth Avenue NE	at 25th Av NE	Add P/P Phasing	\$15,000	\$15,000	100%
165	2008	NE	Liberty Street	at Broadway Street NE	Upgrade Signal	\$360,000	\$360,000	100%
166	2008	NE	Fisher Road NE	at Devonshire Av. NE	New Signal	\$400,000	\$400,000	100%
167	2008	NE	Portland Road NE	at Lana Av. NE	Intersection	\$1,200,000	\$1,200,000	100%
168	2008	NE	Sunnyview Road NE	at Lansing Av. NE	New Signal	\$400,000	\$400,000	100%
169	2008	NE	Park Avenue NE	at Market Street NE	Additional Turn Lanes	\$300,000	\$300,000	100%
170	2008	N	Center Street Bridge Ramp	at Front Street Bypass	New Signal	\$280,000	\$280,000	100%
Total Traffic Signal System and Intersection Improvement Projects						\$45,324,000	\$45,324,000	

Appendix B

Trip Generation/Trip Length/Linked Trip Values

ELNDT Adjustment Factors

Source: All Trip Rates from Trip Generation, 7th Edition, Institute of Transportation Engineers (ITE), 2003, except for Campus Trip Rate, which was developed by City of Salem staff

ITE Land Use Code	Land Use	Trip Rate		Rate Unit	Trip Length Factor	Linked Trip Factor
010	Waterport/Marine Terminal	171.52		Berths	1.00	1.00
021	Commercial Airport	104.73		Average Flts/Day	1.00	1.00
021		122.21		Commercial Flts/Day	1.00	1.00
022	General Aviation Airport	1.97		Average Flts/Day	1.00	1.00
022		5.00		Based Aircraft	1.00	1.00
030	Truck Terminal	81.90		Acres	1.00	1.00
090	Park&Ride Lot w/Bus Service	372.32		Acres	1.00	1.00
093	Light Rail Transit Station w/Parking	2.51		Parking Spaces	1.00	1.00
110	General Light Industrial	6.97		1000 sqft GFA	1.00	1.00
110		51.80		Acres	1.00	1.00
120	General Heavy Industrial	1.50		1000 sqft GFA	1.00	1.00
120		6.41		Acres	1.00	1.00
130	Industrial Park	6.96		1000 sqft GFA	1.00	1.00
130		63.11		Acres	1.00	1.00
140	Manufacturing	3.82		1000 sqft GFA	1.00	1.00
140		38.88		Acres	1.00	1.00
150	Warehousing	4.96		1000 sqft GFA	1.00	1.00
150		57.23		Acres	1.00	1.00
151	Mini-Warehouse	2.60		1000 sqft GFA	0.47	1.00
151		0.28		Storage Units	0.47	1.00
151		38.87		Acres	0.47	1.00
152	High-Cube Warehouse	1.09	P	1000 sqft GFA	1.00	1.00
170	Utilities	4.45	P	1000 sqft GFA	1.00	1.00
170		22.64	P	Acres	1.00	1.00
210	Single-Family Detached Housing	9.57		Dwelling Units	1.00	1.00
220	Apartment	6.72		Dwelling Units	0.97	1.00
221	Low-Rise Apartment	6.59		Occupied Units	0.97	1.00
222	High-Rise Apartment	4.20		Dwelling Units	0.97	1.00
224	Rental Townhouse	6.65	P	Dwelling Units	0.97	1.00
230	Residential Condo/Townhouse	5.86		Dwelling Units	0.97	1.00
231	Low-Rise Res. Condo/Townhouse	4.91	P	Dwelling Units	0.97	1.00
232	High-Rise Res. Condo/Townhouse	4.18		Dwelling Units	0.97	1.00
240	Mobile Home Park	4.81		Occupied Units .	0.97	1.00
255	Retirement Community (CCRC)	2.81	P	Occupied Units	0.95	1.00
251	Senior Adult Housing- Detached	3.71	P	Dwelling Units	0.95	1.00
253	Congregate Care Facility	2.02		Occupied Units	0.95	1.00
252	Senior Adult Housing- Attached	3.48	P	Occupied Units .	0.95	1.00
260	Recreational Homes	3.16		Dwelling Units	1.00	1.00
270	Residential Planned Unit Dev. (PUD)	7.50		Dwelling Units	0.97	1.00
310	Hotel	7.14		Rooms	0.69	0.75
311	All Suites Hotel	4.62		Rooms	0.69	0.75
312	Business Hotel	5.38	P	Rooms	0.69	0.75
320	Motel	7.10		Rooms	0.69	0.75
330	Resort Hotel	5.36	P	Rooms	0.69	0.76
411	City Park	1.59		Acres	0.90	1.00
412	County Park	2.28		Acres	0.90	1.00

ITE Land Use Code	Land Use	Trip Rate		Rate Unit	Trip Length Factor	Linked Trip Factor
413	State Park	0.65		Acres	0.90	1.00
417	Regional Park	4.57		Acres	0.90	1.00
418	National Monument	5.37		Acres	0.90	1.00
420	Marina	2.96		Berths	0.91	1.00
420		20.93		Acres	0.91	1.00
430	Golf Course	5.04		Acres	0.91	1.00
430		35.74		Holes	0.91	1.00
432	Golf Driving Range	11.36	P	Tees	0.91	1.00
435	Multipurpose Rec. Facility	90.38		Acres	0.91	1.00
443	Movie Theater w/o Matinee	78.06		1000 sqft GFA	0.46	1.00
452	Horse Racetrack	43.00		Acres	0.91	1.00
454	Dog Racetrack	1.36	P	Attendees	0.91	1.00
460	Arena	33.33		Acres	1.00	1.00
465	Ice Rink	2.36		1000 sqft GFA	0.91	1.00
473	Casino/Video Lottery	122.09	P	1000 sqft GFA	1.00	1.00
480	Amusement Park	180.20		Acres	0.90	1.00
481	Zoo	114.88		Acres	0.90	1.00
488	Soccer Complex	71.33		Field	0.51	1.00
490	Tennis Courts	31.04		Courts	0.51	1.00
491	Racquet Club	38.70		Courts	0.51	1.00
492		14.03		1000 sqft GFA	0.51	1.00
493	Athletic Club	43.00	P	1000 sqft GFA	0.51	1.00
437	Bowling Alley	33.33		1000 sqft GFA	0.51	1.00
495	Recreational Community Center	22.88	P	1000 sqft GFA	0.91	1.00
501	Military Base	1.78		Employees .	1.00	1.00
501		0.86		Vehicles	1.00	1.00
520	Elementary School	14.49		1000 sqft GFAJ	1.00	1.00
536	Private School (K-12)	2.48	P	student	1.00	1.00
522	Middle/Jr. High School	13.78		1000 sqft GFA	1.00	1.00
530	High School	12.89		1000 Sqft GFA	1.00	1.00
540	Junior/Community College	27.49		1000 sqft GFA	1.00	1.00
550	University/College	2.38		Students	1.00	1.00
560	Church	9.11		1000 sqft GFA	1.00	1.00
561	Synagogue	10.64		1000-sqft GFA	1.00	1.00
565	Day Care Center	79.26		1000 sqft GFA	0.23	1.00
566	Cemetery	4.73		Acres	1.00	1.00
590	Library	54.00		1000 sqft GFA	0.49	1.00
591	Lodge/Fraternal Organization	0.29		Members	0.95	1.00
610	Hospital	17.57		1000 sqft GFA	0.95	1.00
620	Nursing Home	6.10	P	1000 sqft GFA	0.95	1.00
630	Clinic -	31.45		1000 sqft GFA	0.53	1.00
710	General Office Building	11.01		1000 sqft GFA	0.65	1.00
714	Corporate Headquarters Building	7.98		1000 sqft GFA	0.65	1.00
715	Single Tenant Office Building	11.57		1000 sqft GFA	0.65	1.00
720	Medical-Dental Office Building	36.13		1000 sqft GFA	0.53	1.00
730	Government Office Building	68.93		1000 sqft GFA	0.96	1.00
731	State Motor Vehicles Department	166.02		1000 sqft GFA	0.96	1.00
732	United States Post Office	108.19		1000 sqft GFA	0.96	1.00
733	Government Office Complex	27.92		1000 sqft GFA .	0.96	1.00
750	Office Park	11.42		1000 sft GFA .	0.67	1.00
750		195.11		Acres	0.67	1.00
760	Research & Development Center.	8.11		1000 sqft-GFA	0.67	1.00
760		79.61			0.67	1.00

ITE Land Use Code	Land Use	Trip Rate		Rate Unit	Trip Length Factor	Linked Trip Factor
770	Business Park	12.76		1000 sqft GFA	0.67	1.00
770		149.79		Acres	0.67	1.00
812	Bldg Materials & Lumber Store	45.16		1000 sqft GFA	0.49	0.75
813	Free-Standing Discount Superstore	49.21		1000 sqft GFA	0.49	0.75
814	Specialty Retail Center	44.32		1000 sqft GLA	0.49	0.75
815	Free-Standing Discount Store	56.02		1000 sqft GFA	0.49	0.75
816	Hardware/Paint Store	51.29		1000 sqft GFA	0.49	0.75
816		545.77		Acres	0.49	0.75
817	Nursery (Garden Center)	36.08		1000 sqft GFA	0.49	0.75
817		96.21		Acres	0.49	0.75
818	Nursery (Wholesale)	39.00	P	1000 sqft GFA	0.65	0.75
820	Shopping Center	42.94		1000 sqft GLA	Based On Size	
823	Factory Outlet Center	26.59		1000 sqft GFA	0.49	0.75
841	New Car Sales	33.34		1000 sqft GFA	0.60	0.75
848	Tire Store	24.87		1000 sqft GFA	0.60	0.75
849	Tire Superstore	20.36		1000. sqft GFA	0.60	0.75
850	Supermarket	102.24		1000 sqft GFA	0.14.	0.46
851	Convenience Market (24 hour)	737.99		1000 sqft GFA	0.08	0.35
852	Convenience Market (15-16 hour)	329.27	P	1000 sqft GFA	0.08	0.35
853	Convenience Market w/Gas Pumps	542.60		Fueling Positions	0.32	0.22
853		845.60		1000 sqft GFA	0.32	0.22
854	Discount Supermarket	96.82	P.	1000 sqft GFA	0.14	0.46
860	Wholesale Market	6.73		1000 sqft GFA	1.00	1.00
860		128.25		Acres	1.00	1.00
861	Discount Club	41.80		1000 sqft GFA	0.60	0.75
862	Home Improvement Superstore	29.80		1000 sqft GFA	0.49	0.75
863	Electronics Superstore	45.04		1000 sqft GFA	0.49	0.75
864	Toy/Children's Superstore	50.27	P	1000 sqft GFA	0.49	0.75
870	Apparel Store	66.40	P.	1000 sqft GFA	0.49	0.75
880	Pharmacy/Drug Store w/o Drive-Thru	90.06		1000 sqft GFA	0.49	0.75
881	Pharmacy/Drug Store w/Drive-Thru	88.16		1000 sqft GFA	0.49	0.75
890	Furniture Store	5.06		1000 sqft GFA	0.49	0.75
896	Video Rental Store	123.64	P	1000 sqft GFA	0.49	0.75
911	Walk-In Bank	156.48	P	1000 sqft GFA	0.17	0.75
912	Drive-in Bank	246.49		1000 sqft GFA	0.17	0.55
912		411.17		Drive-In Windows	0.17	0.55
931	Quality Restaurant	89.95		1000 sqft GFA	0.65	0.75
932	High-Turnover (Sit-Down) Restauran	127.15		1000 sqft GFA	0.19	0.75
934	Fast-Food Restaurant w/ Drive Thru	496.12		1000 sqft GFA	0.09	0.51
935	Fast-Food w/Drive Thru w/o Indoor	1400.00	P	1000 sqft GFA	0.09	0.51
936	Drinking Place	140.82	P	1000 sqft GFA	0.65	1.00
941	Quick Lubrication Vehicle Shop	41.82	P	Service Positions	0.65	0.75
942	Automobile Care Center	30.73	P	1000 sqft Occ. GLA	0.60	0.75
943	Automobile Parts/Sales	61.91		1000 sqft GFA	0.60	0.75
944	Gasoline/Service Station	168.56		Fueling Positions	0.07	0.77
945	Gas/Service w/Convenience Mart	162.78		Fueling Positions	0.07	0.77
945		883.09	P	1000 sqft GFA	0.07.	0.77
946	Gas/Service/Conv. Mart w/Carwash	152.84		Fueling Positions	0.07	0.77
947	Self-Service Car Wash	108.00	P	Wash Stalls	0.60	0.75
	Campus	Calculated per equations found in attached methodology				

Notes:

Land Use Codes followed with a "P" denote that there are less than 5 studies completed for this specific use. Applicants may wish to conduct their own trip generation studies if desired
Campus Trip Rate is calculated on a site specific basis using equations in attached methodology memo.

City of Salem
Transportation System Development Charge Methodology Amendment
for the creation of a

Campus Trip Rate

Definitions

1. Campus. An existing multi-building facility within a defined boundary. The facility will typically be in single ownership and will house a variety of buildings for various purposes, for an overall singular purpose. For example, a college campus will have a wide variety of buildings within a campus all for the overall singular purpose of teaching. A Campus does not include a shopping center, office or business park.
2. Equivalent Length New Daily Trip (ELNDT). The trip generation for a given land use type as determined from using *Trip Generation* and modified by the adopted Trip Length and Linked Trip factors. The ELNDT is used to calculate the TSDC.
3. Trip Generation. The City's adopted database for trip generation information. Trip Generation is a document published by the Institute of Transportation, and periodically updated. The current Council-adopted version is the 6th edition.

Background

The City of Salem's TSDC methodology, adopted in 1995 and updated in 2002, uses the Institute of Transportation Engineer's *Trip Generation* for determining the base trips for proposed development. These trips are then adjusted with factors for Trip Length and Linked Trips, resulting in an Equivalent Length New Daily Trip (ELNDT), and the ELNDT is what is used to calculate the TSDC.

Trip Generation is the professionally-accepted source for estimating the trip generation characteristics of land uses. It provides a variety of independent variables (employees, students, beds, acres square feet, dwelling units, etc.) upon which to estimate the trip generation of the proposed development. The City prefers using independent variables that can be easily verified at the time of building permit issuance—such as square feet or dwelling unit—so that no further verification is needed.

Trip Generation has its limitations, however. One such limitation is its use when a proposed expansion of a campus is proposed. Often, entities propose expansion of a campus' physical plant with no attendant increase in the service population of the campus (hospital beds, students, etc.). In other words, as in the case of a college campus, additional square footage is proposed but no additional students are planned. In these cases it is understood that some additional trips will be generated by the new building, but not as many as if it were being developed as a free-standing facility. The purpose of the proposed new methodology is to allow campuses to determine an average overall trip rate for their facility and then apply it to proposed new buildings.

Methodology

The methodology for calculating the TSDC for a campus shall be based upon the following. All data collection and analysis must be completed by a professional engineer registered in the State of Oregon. Acceptance of the data, analysis and proposed Campus Trip Rate will at the sole discretion of the Public Works Director.

Campus Boundary

The TSDC methodology will only be applicable within the defined boundary of the campus.

Trip Length Factor

A single composite trip length factor (TLF) and a single composite average daily trip rate (ADTR) shall be used to determine the equivalent length net daily trips (ELNDT) for any change in the amount of available floor space. A single composite trip length factor for the Campus is calculated according to the following equation:

$$TLF = \frac{\sum_{LU=1}^n ITE_{LU} GSF_{LU} TLF_{LU}}{\sum_{LU=1}^n ITE_{LU} GSF_{LU}} \quad (1)$$

WHERE,

ITE_{LU} = the average daily trip rate for ITE Land Use Code “LU”, as defined in the latest edition of *Trip Generation*, and where Land Use Code “LU” identifies a specific land use type existent on the hospital campus (for example, Hospital, Medical Office Building, and General Office). This variable is expressed in terms of average daily trip ends generated per thousand gross square feet of floor area.

GSF_{LU} = the gross square feet of floor area, expressed in thousands, that is available on Campus and associated with ITE Land Use Code “LU”.

TLF_{LU} = The trip length factor associated with Land Use Code “LU”, as defined in City’s TSDC methodology as it was specified in March 2007.

Average Daily Trip Rate

A single average daily trip rate for the Campus is calculated according to the following equation:

$$ADTR = \frac{V_{obs}}{\sum_{LU=1}^n GSF_{LU}} \quad (2)$$

WHERE,

V_{obs} = The average daily total number of vehicle trip ends observed to enter and exit the Campus. V_{obs} is the result of actual field observation, and ideally represents the average of 24-hour observations on at least three mid-week days. However, it can also be estimated from mid-week day p.m. peak hour observations if 24-hour mid-week day observations are not available.

GSF_{LU} = the gross square feet of floor area, expressed in thousands, that is available on Campus and associated with ITE Land Use Code “LU”.

Transportation System Development Charge

The single composite trip length factor and the single composite average daily trip rate that result from these calculations are used, together with the dollar charge per trip as established in the most current edition of City’s TSDC methodology, to determine the appropriate charge or credit associated with construction or demolition of any building floor space located inside the Campus boundaries. This calculation is performed according to the following equation:

$$TSDC = (CPT)(TLF)(ADTR)(GSF_{Add}) \quad (3)$$

WHERE,

TSDC = Transportation System Development Charge (dollars)

CPT = Transportation system development charge per trip (dollars), as defined in the most current edition of City’s TSDC methodology.

TLF = Composite trip length factor, calculated according to Equation (1).

ADTR = Composite average daily trip rate, calculated according to Equation (2) and expressed in terms of average daily trips per thousand gross square feet of floor area.

GSF_{Add} = The total gross square feet of floor space, expressed in thousands, that is being either added or demolished inside the hospital campus boundaries. This variable is a positive number if floor space is being added, and it is a negative number if floor space is being demolished.

Implementation

Upon acceptance of the Campus Trip Rate, the City will enter into an agreement with the entity for using the Campus Trip Rate for all new development within the campus.

Duration

The Campus Trip Rate will be effective on the date it is adopted and be effective for a minimum of five years. The property owner will be solely responsible for updating the Campus Rate after five years. If the Campus Trip Rate is not updated, it will automatically expire on December 31st of the seventh year of its adoption.

Updates

The property owner will be responsible for providing the City with updated information required to create the Campus Trip Rate, specifically the average daily vehicle trip ends (V_{obs}) and the gross square feet of campus floor area (GSF_{LU}). The updates shall be prepared in a form acceptable to City's Public Works Director by a professional traffic engineer registered in the State of Oregon.

Notice

The City will publish the Campus Trip Rate in its TSDC methodology with its expiration date.

Appendix C:

Legislative History of Salem's Transportation System Development Charge (TSDC)

- Transportation Systems Development Charge: Methodology, by Kittleson & Associates, Inc., August 18, 1994, revised September 11, 1995. (Eligible Project List based on the 1992 Salem Transportation System Plan) Methodology to refer to trip generation rates as contained in the Institute of Transportation Engineers (ITE) manual "Trip Generation" Fifth Edition.
- City Council voted to approve charging a Transportation Systems Development Charge on October 23, 1995
- Council adopted Resolution 95-131, implementing a TSDC, on November 27, 1995. This resolution set the charge at \$109.63 per ELNDT, with an initial phase-in of 58% percent of the fee for residential beginning February 27, 1996, other land uses effective May 27, 1996, and full fee charges effective November 27, 1996.
- Council adopted Resolution 98-108 on May 4, 1998, to revise the TSDC methodology to refer to the Institute of Transportation Engineers manual "Trip Generation" Sixth Edition instead of the previous Fifth Edition. There was no change in the fee amount.
- Salem Transportation Systems Development Charge Update, dated October 2002, by the Transpo Group, Inc. This report updated the Eligible Project List and methodology. (Eligible Project List based on the 2000 and 2001 Salem Transportation System Plan).
- Council adopted Resolution 2002-197 on December 16, 2002, updating the TSDC methodology, with a new Eligible Project List, and increased the fee from \$109.63 to \$159.63, effective January 1, 2003.
- Council adopted Resolution 2004-141 on November 22, 2004, to modify the Eligible Project List, lowering the maximum allowed cost-per-trip, incrementally increasing the TSDC charge over time, and adopting a policy for updates consistent with amendments to the Salem Transportation System Plan. The fee was raised from \$159.63 to \$189.63 per ELNDT, with the new fee effective January 1, 2005.
- Council adopted Resolution 2006-195 on November 13, 2006, adding Kuebler Boulevard SE to the Eligible Project List and increasing the Total Maximum Allowed Cost-Per-Trip from \$309.87 to \$324.45. There was no change in the actual cost-per-trip charged.
- Council adopted Resolution 2007-86 on September 4, 2007, modifying the trip generation rates and calculation methodology to add a new category of "campus." land use to the trip rates. No changes were made to the Maximum Allowed Cost-per-Trip or the actual fee charged. The actual fee charge remained \$189.63 per trip.

Appendix D
Comparison of Salem's TSDCs to other Oregon Cities

Residential Single Family Home (at 9.57 trips per day)

Oregon Cities to Compare to in 2007	TSDC in 2007
Ashland	\$2,044
Beaverton	\$3,020
Bend	\$3,196
Corvallis	\$1,835
Eugene	\$1,113
Gresham	\$2,748
Hillsboro	\$3,062
Lake Oswego	\$4,420
Madras	\$2,303
Newburg	\$2,388
Pendleton	\$1,050
Philomath	\$2,330
Portland	\$1,883 LOC Report (\$2,000 Internet)
Prineville	\$2,801
Redmond	\$2,877
Salem	\$1,815 (Current)
Sandy	\$1,943
Silverton	\$3,245
Springfield	\$1,058
Stayton	\$2,512
Tigard	\$3,020
West Linn	\$4,674
Wilsonville	\$3,082
Woodburn	\$3,286
Average of Sample	\$2,576 (24 cities)

Sources: *System Development Charges: A Survey Conducted by the League of Oregon Cities*, League of Oregon Cities, May 2007, pp. 24-25, and individual internet web page searches.