

**West Linn,
Oregon**

Final Report

**WATER AND
TRANSPORTATION
SYSTEM DEVELOPMENT
CHARGE STUDY**

August 28, 2009

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August 28, 2009

Mr. Dennis Wright
Engineering Manager
City of West Linn
22500 S. Salamo Road
West Linn, OR 97068

Subject: Water and Transportation System Development Charge Study

Dear Mr. Wright:

FCS GROUP is pleased to submit this final report summarizing the results of our water and transportation system development charge (SDC) study for the City of West Linn. Our findings indicate that the City can increase its water SDC to \$6,747 per 5/8-inch by 3/4-inch water meter equivalent (ME) and its transportation SDC to \$6,354 per peak-hour trip (P-HT) plus \$1,466 per average daily bicycle/pedestrian trip.

It has been a pleasure working with the City on this important project. Please do not hesitate to contact us at (425) 867-1802 ext. 225 if you have any follow-up questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "John Ghilarducci". The signature is fluid and cursive, with a large initial "J" and "G".

John Ghilarducci
Principal

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I. INTRODUCTION

In January 2009, the City of West Linn contracted with Financial Consulting Solutions Group, Inc. (FCS GROUP), to perform a system development charge (SDC) study for its water and transportation services. West Linn is a growing city experiencing increasing demands on its water and transportation infrastructure. The City's latest water and transportation system plans identified a number of improvement projects that are needed to meet the needs of growth over the next twenty years. With this study, the City wished to implement equitable, adequate, and defensible SDCs that would generate funding to meet the needs of growth without unduly burdening existing residents and business owners.

Consistent with these objectives, the following general approach was used to calculate the water and transportation SDCs:

- ◆ **Conduct Technical Analysis.** In this step, we compiled the SDC project lists, identified applicable Metro recommendations, and worked with City staff and engineering consultants to allocate project costs to growth, and isolate the recoverable portion of existing and planned facility costs. The technical analysis is included as Appendix B.
- ◆ **Assemble Documentation and Presentation.** In this step, we wrote the report describing the resulting charges and participated in Council and public meetings. The SDC presentation packet is included as Appendix A.

II. SYSTEM DEVELOPMENT CHARGE METHODOLOGY

Legal Authority and Conceptual Basis

A system development charge is a one-time fee imposed on new development (and some types of re-development) at the time of development. The fee is intended to recover growth's fair share of the costs of existing and planned facilities that provide the necessary capacity to accommodate future development.

Oregon Revised Statute (ORS) 223.297 - 223.314 defines SDCs and specifies how they shall be calculated, applied, and accounted for. By statute, a SDC is the sum of two components:

- ◆ a **reimbursement fee**, designed to recover costs associated with capital improvements *already constructed or under construction*, and
- ◆ an **improvement fee**, designed to recover costs associated with capital improvements *to be constructed in the future*.

The reimbursement fee methodology must be based on "the value of unused capacity available to future system users or the cost of the existing facilities", and must further consider prior contributions by existing users and gifted and grant-funded facilities. The calculation must also "promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities." Reimbursement fee proceeds may be spent on any capital improvements related to the systems for which the SDC is applied – i.e., water SDCs must be spent on water improvements.

The improvement fee methodology must include only the cost of projected capital improvements or portions of improvements needed to increase system capacity for future users. In other words, the cost(s) of planned projects or portions of projects that correct existing deficiencies, or do not otherwise increase capacity for future users, may not be included in the improvement fee calculation. Improvement fee proceeds may be

spent only on capital improvements, or portions thereof, which increase the capacity of the systems for which they were applied.

CALCULATION SUMMARY

In general, a SDC is calculated by adding the applicable reimbursement fee component to the applicable improvement fee component. Each separate component is calculated by dividing the eligible cost by the appropriate measure of growth in capacity demand. The unit of capacity used becomes the basis of the charge. A sample calculation is shown below.

| Reimbursement Fee | | Improvement Fee | | SDC |
|--------------------------------------------------------|---|-------------------------------------------------------------------------|---|-----------------|
| Eligible cost of capacity in existing facilities | + | Eligible cost of planned capacity-increasing capital improvements | = | SDC (\$ / unit) |
| Growth in system capacity demand | | Growth in system capacity demand | | |

SDC (IMPROVEMENT FEE) CREDITS

The law requires that credits be provided against the improvement fee for the construction of qualified public improvements. Oregon Revised Statute 223.304 states that, at a minimum, credits be provided against the improvement fee for

“the construction of a qualified public improvement. A ‘qualified public improvement’ means a capital improvement that is required as a condition of development approval, identified in the plan and list adopted pursuant to ORS 223.309 and either:

- (a) Not located on or contiguous to property that is the 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.”

The law further states that credits

“may be granted only for the cost of that portion of such improvement that exceeds the local government’s minimum standard facility size or capacity needed to serve the particular development project or property.”

The City’s current SDC credit policy exceeds statutory requirements. City code allows SDC credits to be provided for improvements that are not on the SDC project list, and thereby fail to meet the definition of a “qualified public improvement.”

We recommend that the City revise its credit policy to be more consistent with minimum legal requirements. We believe it is important for the City to retain as much control as possible over the prioritization and implementation of its capital plan(s). These plans are created to address total system needs – not just the needs of growth. Without control over how and when those needs are addressed, the re-prioritization of projects over time can leave important capacity needs unmet. To avoid this outcome, credits should:

- ◆ be only for the portion of the agreed-upon or planned cost of capacity *in excess of that needed to serve the particular development*;
- ◆ be for planned projects only; and

- ◆ be provided only upon completion of a “qualified public improvement”.

Indexing Charge for Inflation

Oregon law (ORS 223.304) allows for the periodic indexing of system development charges for inflation, as long as the index used is

- “(A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three;
- (B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology; and
- (C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order.”

We recommend that the City index its SDCs to the Engineering News Record (ENR) 20-City Average Construction Cost Index (CCI), and adjust the charge annually as per that index. For reference, the June 2009 20-City CCI was 8,578.28.

III. WATER SDC CALCULATION

The City’s existing water SDCs are applied by meter size, as shown in the charge schedule below:

| Meter Size | SDC |
|-------------|------------|
| 5/8" x 3/4" | \$ 4,628 |
| 3/4" | \$ 6,942 |
| 1" | \$ 11,570 |
| 1 ½" | \$ 23,140 |
| 2" | \$ 37,024 |
| 3" | \$ 74,048 |
| 4" | \$ 115,700 |
| 6" | \$ 231,400 |
| 8" | \$ 370,240 |
| 10" | \$ 578,500 |

Both the existing and the proposed charges are based on meter flow capacity as expressed by the number of meter equivalents (MEs). Meter flow capacity is directly linked to each customer’s potential water demand – not just average use. As meter sizes increase, flow capacity increases exponentially. Therefore, associated charges increase significantly from meter size to meter size – with the exponential change in potential demand.

The calculation of the proposed water SDC is summarized below and provided in detail in Appendix B.

Capacity Basis

In order to estimate the number of meter equivalents to be generated by growth over the planning period (ending in 2030) – the denominator in both the reimbursement and improvement fee calculations – the following approach was taken.

- ◆ As of January 2009, customer account data showed that the water utility served 9,861 MEs.

- ◆ The City of West Linn Water System Master Plan, published in November 2008, reported 2008 average day demand of 3.5 MGD. Also reported was an average day demand forecast of 4.20 MGD for 2030, based on a constant level of per capita water demand for the period.
- ◆ To estimate average day demand (ADD) for 2009, the initial 2008 ADD total was escalated at the average annual ADD growth rate for the 2008-2030 period: 0.83%. The result was a 2009 water demand estimate of 3.53 MGD.
- ◆ Total meter equivalents for 2009 were then grown proportionately with the forecasted water demand increase from 3.53 MGD to 4.2 MGD, resulting in projected growth of 1,890 meter equivalents. It is important to note that forecasted growth in MEs may not occur proportionally with average day water demand. Absent specific projections, however, this is a necessary simplifying assumption.

Reimbursement Fee Calculation

In order to estimate the cost of unused capacity in the existing water system – the numerator in the reimbursement fee calculation – the following approach was taken.

- ◆ The FY 2008 Comprehensive Annual Financial Report noted that, net of depreciation, the water utility had \$9,118,800 of capital assets in service.
- ◆ Based on the performance evaluations reported in the 2008 Water System Master Plan, existing facilities had sufficient supply and system performance capacity to serve build-out development demand, in all circumstances except for some sections of the system during fire flow events that occurred simultaneously with maximum day demand. Accordingly, as existing facilities contained sufficient capacity to serve base water demand at build-out, 15.97% of all existing asset costs were allocated to growth – equivalent to growth's share of the forecasted meter equivalent total at build-out. This amounted to \$1,456,563.
- ◆ The existing unused capacity cost total of \$1,456,563 was then adjusted as follows:
 - A pro-rata share of contributed assets, totaling \$1,564,990, was deducted;
 - A pro-rata share of net utility debt principal outstanding, \$1,380,000 at the time of the study, was deducted.
- ◆ The sum of the costs of unused capacity, \$1,456,563, less a pro-rata share of contributed assets of \$249,979 and outstanding debt principal of \$220,430, resulted in net unused capacity of \$986,154. This became the reimbursement fee cost basis.

Based on forecasted growth of 1,890 meter equivalents, the resulting reimbursement fee was \$522 per ME.

Improvement Fee Calculation

The following approach was taken to determine the cost of capacity-increasing capital improvements for inclusion in the improvement fee cost basis.

- ◆ The 2008 Water System Master Plan provided the list of capital projects needed to meet build-out capacity demand. Based on ENR's 20-City Average Construction Cost Index of 8,578 for June 2009, the sum of this list of project costs in current dollars was \$34,116,949.
- ◆ Project cost allocations to growth, based on capacity-increasing percentages, were reported in the Master Plan for the majority of projects. With the input of Plan author Murray, Smith & Associates, remaining

project costs were allocated proportionately to growth based on its share of future systemwide average day demand in 2030, or 15.97%. The sum of this list of “SDC-eligible” project costs was \$12,500,996.

- ◆ Finally, the beginning FY 2009 Water SDC Fund Balance, \$1,049,317, was deducted from the total eligible cost to (1) recognize that the fund balance is available for spending on the project list and (2) prevent new customers from paying for those project costs twice. The resulting improvement fee cost basis was \$11,451,679.

Based on forecasted growth of 1,890 meter equivalents, the resulting improvement fee was \$6,059 per ME.

Recommended System Development Charge

The recommended water SDC is the sum of the reimbursement fee and the improvement fee, adjusted by an administrative cost recovery factor of 2.53%. The administrative cost recovery factor was derived by dividing annual SDC program accounting and administrative costs, including the amortized cost of this study, by forecasted annual SDC revenues. The resulting recommended SDC schedule is provided below.

| Meter Size | Reimbursement Fee | Improvement Fee | Administrative Fee | SDC | ME Factor |
|-------------|-------------------|-----------------|--------------------|-------------------|-----------|
| 5/8" x 3/4" | \$ 522 | \$ 6,059 | \$ 166 | \$ 6,747 | 1.0 |
| 3/4" | \$ 783 | \$ 9,088 | \$ 249 | \$ 10,120 | 1.5 |
| 1" | \$ 1,304 | \$ 15,147 | \$ 416 | \$ 16,867 | 2.5 |
| 1 1/2" | \$ 2,609 | \$ 30,293 | \$ 831 | \$ 33,733 | 5.0 |
| 2" | \$ 4,174 | \$ 48,469 | \$ 1,330 | \$ 53,973 | 8.0 |
| 3" | \$ 8,348 | \$ 96,938 | \$ 2,661 | \$ 107,947 | 16.0 |
| 4" | \$ 13,043 | \$ 151,466 | \$ 4,157 | \$ 168,667 | 25.0 |
| 6" | \$ 26,087 | \$ 302,932 | \$ 8,315 | \$ 337,333 | 50.0 |
| 8" | \$ 41,739 | \$ 484,691 | \$ 13,303 | \$ 539,733 | 80.0 |
| 10" | \$ 65,217 | \$ 757,330 | \$ 20,786 | \$ 843,333 | 125.0 |

IV. TRANSPORTATION SDC CALCULATION

The City’s existing transportation SDC is based on projected trip generation by land use. Specifically, new development is charged by added peak-hour trips (P-HTs). Existing residential transportation SDCs are provided below: [Commercial charges vary by land use type.]

| Development Type | Reimbursement Fee per Unit | Improvement Fee per Unit | Administrative Fee per Unit | SDC per Unit |
|-------------------------|----------------------------|--------------------------|-----------------------------|--------------------|
| Single-Family Residence | \$ 47.47 | \$ 5,198.47 | \$ 262.60 | \$ 5,508.54 |
| Apartments | \$ 29.14 | \$ 3,191.14 | \$ 161.20 | \$ 3,381.48 |

Both the existing and the proposed vehicle charges are based on peak-hour trip generation statistics provided in the Institute of Transportation Engineers (ITE) *Trip Generation* manual for each land use type and development size. Peak-hour trips are defined as the average trip rate during the peak hour of adjacent street traffic – which usually coincides with the traditional commuting peak periods of 7 am to 9 am or 4 pm to 6 pm. Transportation engineers commonly use peak-hour trip estimates to assess transportation performance and determine system needs. Average daily trips, as measures of total traffic volume, are not generally used to size a system – although they are typically used to estimate maintenance requirements.

Also, the proposed charge continues to adjust for linked, or pass-by, trips, as documented in *Trip Generation*, revealing that a significant percentage of trip ends associated with specific land uses are a result of linked, or pass-by, trips.

Finally, the proposed SDC includes an additional bike/ped component. The improvement fee for the bike/ped charge is based on assumed average daily bike/ped trip generation rates by land use type.

The calculation of the proposed transportation charge is summarized below and provided in detail in Appendix B.

Capacity Bases

In order to estimate the number of P.M. peak-hour trips to be generated by growth over the planning period (ending in 2030) – the denominator in the improvement fee calculation – the following approach was taken.

- ◆ DKS Associates consulted the 2005-2030 Metro Travel Demand Model to provide an estimate of current and future peak-hour trip generation within the City. This model reported an initial peak-hour trip end total of 10,240 for 2005 and forecasted a 2030 total of 15,105 trip ends.
- ◆ To account for growth that has occurred since the base year (2005), the average annual P-HT growth rate of 1.57% during the study period was applied to the initial trip total to estimate current (2009) trip generation. The result was a current peak-hour trip total of 10,897.
- ◆ Therefore, during the study period, new development was expected to generate 4,207 P.M. peak-hour trip ends.
- ◆ Additionally, growth in bicycle, pedestrian, and transit trip generation was estimated. First, as such trip generation is closely related to average daily trips, the forecast of peak-hour trip growth was converted to 42,071 ADTs based on the standard assumption of a 1:10 ratio between peak-hour trips and average daily trips (calculated by multiplying the 4,207.1 peak-hour trip ends by 10). Second, U.S. Census travel data for the Portland Metro area indicated that 12% of total average daily trip generation generally consists of bike/ped trips. Accordingly, based on the 12% share for bike/ped trips and the 42,071 ADT growth estimate in vehicle trips, total average daily trip growth – including bike/ped trips – during the period was estimated to total 47,808.
- ◆ Therefore, during the study period, new development was expected to generate 5,737 bike/ped trips per day.

Reimbursement Fee Calculation

In order to estimate the cost of unused capacity in the existing transportation system – the numerator in the reimbursement fee calculation for the vehicle charge – the following approach was taken.

- ◆ It is important to first recall that the City's transportation infrastructure has been largely contributed and/or funded by general tax sources, leaving only unused capacity in SDC-funded infrastructure eligible for reimbursement. However, since 1993 – the earliest that records are still available – transportation improvements have been completed not with the expenditure of improvement fee proceeds but instead by developers that received improvement fee credits. In this sense, improvement fee credits are functionally equivalent to improvement fee expenditures. Accordingly, City records showed that \$11,031,964 of historical transportation improvement fee credits had been redeemed from FY 1993 through FY 2008. Current unused capacity of the donated facilities was calculated by reducing the improvement fee credit total for each year proportionally by the estimated trip growth that has occurred since that year. The

resulting total of unused capacity in system assets funded by improvement fees was slightly above 75% of redeemed credits, or \$8,291,639.

Based on forecasted growth of 4,207 peak-hour vehicle trips, the resulting reimbursement fee was \$1,971 per peak-hour vehicle trip.

There was no eligible cost basis for a bike/ped reimbursement fee.

Improvement Fee Calculation

The following approach was taken to determine the cost of capacity-increasing capital improvements for inclusion in the improvement fee cost basis.

- ◆ The City of West Linn Transportation System Plan (TSP), published in December 2008, provided the list of capital projects needed to meet 2030 vehicle capacity needs. Based on ENR's 20-City Average Construction Cost Index of 8,578 for June 2009, the sum of this list of vehicle project costs in current dollars was \$61,431,385.
- ◆ Net of State funding, the City's cost share amounted to \$30,698,399. Note that the City expects that a 20% local match on Oregon Department of Transportation (ODOT) projects will be needed to ensure project completion.
- ◆ Project cost allocations to growth for the majority of vehicle projects contained in the Transportation System Plan's Master Plan and Action Plan project lists were based on current and future capacity deficiencies and from additional data provided by DKS Associates – the author of the Plan. Additionally, remaining vehicle projects that were expected to serve existing and future users equally were allocated proportionately to growth based on its share of systemwide peak-hour trips in 2030, or 27.9%. The sum of this list of "SDC-eligible" project costs was \$17,782,788.

Based on forecasted growth of 4,207 peak-hour vehicle trips, the resulting improvement fee was \$4,227 per peak-hour vehicle trip.

- ◆ Additionally, the TSP included a list of capital projects needed to increase bike/ped capacity within the City. The sum of this list of project costs in current dollars was \$32,038,854.
- ◆ To assign project costs to the bike/ped improvement fee cost basis, an allocation equal to growth's share of future vehicle trip generation – 27.9% – was applied. The sum of each project's growth allocation resulted in a total \$8,200,223 of improvement fee-eligible costs.

Based on forecasted growth of 5,737 bike/ped trips, the resulting improvement fee was \$1,429 per bike/ped trip.

Recommended System Development Charge

The recommended SDC of \$6,354 per peak-hour vehicle trip and \$1,466 per bike/ped trip is the sum of the relevant reimbursement fees and improvement fees, adjusted by an administrative cost recovery factor of 2.53%, or \$156.62 per vehicle trip and \$36.12 per bike/ped trip. The administrative cost recovery factor was derived by dividing projected annual SDC accounting and administrative costs, including the amortized cost of this study, by forecasted annual vehicle and bike/ped SDC revenues. The resulting recommended SDCs for a comprehensive list of land uses are provided immediately following this section.

Note that bike/ped trip estimates were obtained from multiple sources, including the "A Pedestrian Planning Procedures Manual" by the Federal Highway Administration and "Funding Mechanisms for Cycling

Infrastructure" by Queensland Transport. Overall, the amount of data on bicycle and pedestrian trip generation by land use is relatively small and therefore it is recommended that the following bike/ped trip groupings be utilized to assess the bike/ped SDC:

Daily Bike/Ped Trip Generation (Per Unit of Development)

| | | | |
|----------------|-----|----------------|-----|
| Group 1 | 0.1 | Group 4 | 0.6 |
| Group 2 | 0.2 | Group 5 | 1.0 |
| Group 3 | 0.4 | Group 6 | 2.0 |

SDC Application

In July 2007, the Portland Area Metropolitan Service District (Metro) published a report detailing the various approaches to crafting system development charges that meet regional objectives. While noting that the applicability of each approach varied by jurisdiction, the report provided a number of recommendations designed to achieve impact-based SDCs and full cost recovery within the framework of current Oregon legislation. In updating the water and transportation SDC methodologies for the City of West Linn, the project team considered the following five key SDC practices and policies – and their associated criteria – from the Metro report:

- ◆ full cost recovery,
 - capital improvements plan projecting needs for at least 10 years
 - a reimbursement fee component
 - inclusion of planning and financing costs, as well as the costs of calculating the SDC and accounting for their expenditures and revenues
 - an annual charge adjustment to account for changes in land and materials costs
- ◆ impact-based SDCs,
 - land use – vary fees by land use (homes, apartments, grocery stores, offices, etc.)
 - development size – vary residential charge by lot size (related to irrigation)
 - density – vary residential fee by units per lot (higher density results in lower charge)
- ◆ recognition of cost variations by location,
 - area-specific charges recommended where cost differences may be significant (particularly relevant for growth in currently unserved areas)
- ◆ green design,
 - reduced SDC for on-site facilities that reduce demand
- ◆ and technical vs. policy-based solutions
 - give preference to technically-based (cost-justified and quantifiable) considerations over policy-based approaches.

With the goal of full cost recovery in mind, the recommended charges are based on comprehensive project lists that meet system needs for over twenty years and include planning costs, reimbursement fee components, and the costs of calculating the SDCs and accounting for their expenditure and receipt. Additionally, we have recommended that the charges be adjusted annually to account for changes in materials and labor costs.

Alternative charges were calculated and presented to staff that included the financing costs that were expected to be incurred as the water and transportation project lists were completed. However, due to uncertainty regarding the project funding approach and the associated risk of over-collecting future interest costs, we do not recommend including financing costs at this time.

To ensure that the recommended transportation SDC is impact-based, the charge does vary by land use. However, the water SDC does not include this consideration, as land use is not readily applicable to the water charge, especially given the significant complexity such a distinction would add to the water SDC calculation.

Also, a consideration for residential lot area was not included in the charge calculation as it was determined that the installed meter size would be an acceptable indicator for irrigation activity. Similarly, the recommended SDCs do not consider residential density in the charge calculation as this would make the charge significantly more complex.

We also reviewed the relevancy of area-specific charges for the City. However, as forecasted growth needs were fairly homogenous throughout the City, there was no basis for SDCs that varied by location.

Regarding discounted fees for on-site design features and facilities that reduce demand, this practice has already been adopted by the City in its assessment of transportation SDCs, where local traffic studies are allowed to supersede ITE trip estimates. Regarding the water SDC, we have recommended that the City adjust the charge only to the extent that on-site facilities reduce potential water demand as measured by the meter flow capacity.

Finally, to promote charges that recover the full cost of meeting the demand needs of new development, we also recommended that the City give preference to technically-based considerations over policy-based approaches. As a result, the proposed SDCs do not include policy-based discounts for any type of targeted development.

Vehicle SDC (1)

| ITE Code | Customer Type | Land Use Description | Peak-Hour Trips | Pass-By Trip Factor | Adjusted P-H Ts | Vehicle SDC | Units |
|----------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------------|-------------|---------|
| 110 | General Light Industrial | Typically less than 500 employees, free standing and single use. Examples: Printing plants, material testing laboratories, data processing equipment assembly, power stations. | 0.98 | 1 | 0.98 | \$ 6,227 | KSF |
| 130 | Industrial Park | Industrial Park areas that contain a number of industrial and/or related facilities (mix of manufacturing, service, and warehouse). | 0.86 | 1 | 0.86 | \$ 5,465 | KSF |
| 140 | Manufacturing | Facilities that convert raw materials into finished products. Typically have related office, warehouse, research, and associated functions. | 0.74 | 1 | 0.74 | \$ 4,702 | KSF |
| 151 | Mini-Warehouse | Storage Units or Vaults rented for storage of goods. Units are physically separate and access through an overhead door or other common access point. Example: U-Store-It. | 0.26 | 1 | 0.26 | \$ 1,652 | KSF |
| 210 | SF Detached | Single family detached housing. | 1.01 | 1 | 1.01 | \$ 6,418 | DU |
| 220 | Apartment | Rental Dwelling Units within the same building. At least 4 units in the same building. Examples: Quadplexes and all types of apartment buildings. | 0.62 | 1 | 0.62 | \$ 3,940 | DU |
| 230 | Condo/Townhouse | Residential Condominium/Townhouses under single-family ownership. Minimum of two single family units in the same building structure. | 0.52 | 1 | 0.52 | \$ 3,304 | DU |
| 240 | Mobile Home | Trailers or Manufactured homes that are sited on permanent foundations. Typically the parks have community facilities (laundry, recreation rooms, pools). | 0.59 | 1 | 0.59 | \$ 3,749 | DU |
| 253 | Elderly Housing | Restricted to senior citizens. Contains residential units similar to apartments or condos. Sometimes in self-contained villages. May also contain medical facilities, dining, and some limited, supporting retail. | 0.17 | 1 | 0.17 | \$ 1,080 | DU |
| 310 | Hotel | Lodging facility that may include restaurants, lounges, meeting rooms, and/or convention facilities. Can include a large motel with these facilities. | 0.59 | 1 | 0.59 | \$ 3,749 | Room |
| 320 | Motel | Sleeping accommodations and often a restaurant. Free on-site parking and little or no meeting space. | 0.47 | 1 | 0.47 | \$ 2,987 | Room |
| 411 * | Local Park | City-owned parks, varying widely as to location, type, and number of facilities, including boating / swimming facilities, ball fields, and picnic facilities. | 0.09 | 1 | 0.09 | \$ 572 | Acre |
| 430 | Golf Course | Includes 9, 18, 27, and 36 hole municipal and private country clubs. Some have driving ranges and clubhouses with pro shops, restaurants, lounges. Many of the muni courses do not include such facilities. | 2.74 | 1 | 2.74 | \$ 17,411 | Hole |
| 435 | Multipurpose Recreation Facility | Multi-purpose recreational facilities contain two or more of the following land uses at one site: mini-golf, batting cages, video arcade, bumper boats, go-carts, and driving ranges. | 5.77 | 1 | 5.77 | \$ 36,665 | Acre |
| 437 | Bowling Alley | Recreational facilities with bowling lanes which may include a small lounge, restaurant or snack bar. | 3.54 | 1 | 3.54 | \$ 22,495 | Lane |
| 493 | Athletic Club | Privately owned with weightlifting and other facilities often including swimming pools, hot tubs, saunas, racquet ball, squash, and handball courts. | 5.76 | 1 | 5.76 | \$ 36,601 | KSF |
| 495 | Recreational Community Center | Recreational community centers are facilities similar to and including YMCAs, often including classes, day care, meeting rooms, swimming pools, tennis racquetball, handball, weightlifting equipment, locker rooms, & food service. | 1.64 | 1 | 1.64 | \$ 10,421 | KSF |
| 520 * | Elementary School | Public. Typically serves K-6 grades. | 0.28 | 1 | 0.28 | \$ 1,779 | Student |
| 522 | Middle School | Public. Serves students that completed elementary and have not yet entered high school. | 0.15 | 1 | 0.15 | \$ 953 | Student |
| 530 | High School | Public. Serves students that completed middle or junior high school. | 0.14 | 1 | 0.14 | \$ 890 | Student |
| 540 | Junior/Community College | Two-year junior colleges or community colleges. | 0.12 | 1 | 0.12 | \$ 763 | Student |
| 560 | Church | Contains worship area and may include meeting rooms, classrooms, dining area and facilities. | 0.66 | 1 | 0.66 | \$ 4,194 | KSF |
| 565 * | Day Care | Facility for pre-school children care primarily during daytime hours. May include classrooms, offices, eating areas, and playgrounds. | 13.18 | 0.33 | 4.35 | \$ 27,642 | KSF |
| | | | 0.82 | 0.33 | 0.27 | \$ 1,716 | Student |
| 590 | Library | Public or Private. Contains shelved books, reading rooms or areas, sometimes meeting rooms. | 7.09 | 1 | 7.09 | \$ 45,053 | KSF |
| 591 | Lodge/Fraternal Organization | Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms. | 0.03 | 1 | 0.03 | \$ 191 | Member |
| 710 | General Office | Office building with multiple tenants. Mixture of tenants can include professional services, bank and Loan institutions, restaurants, snack bars, and service retail facilities. | 1.49 | 1 | 1.49 | \$ 9,468 | KSF |
| 715 | Single Tenant Office Building | Single tenant office building. Usually contains offices, meeting rooms, file storage areas, data processing, restaurant or cafeteria, and other service functions. | 1.73 | 1 | 1.73 | \$ 10,993 | KSF |
| 720 | Medical-Dental Office | Provides diagnosis and outpatient care on a routine basis. Typically operated by one or more private physicians or dentists. | 3.72 | 1 | 3.72 | \$ 23,638 | KSF |
| 750 | Office Park | Park or campus-like planned unit development that contains office buildings and support services such as banks & loan institutions, restaurants, service stations. | 1.5 | 1 | 1.5 | \$ 9,532 | KSF |
| 760 | Research & Development Center | Single building or complex of buildings devoted to research & development. May contain offices and light fabrication facilities. | 1.08 | 1 | 1.08 | \$ 6,863 | KSF |
| 770 | Business Park | Group of flex-type or incubator 1 - 2 story buildings served by a common roadway system. Tenant space is flexible to accommodate a variety of uses. Rear of building usually served by a garage door. Typically includes a mix of offices, retail & wholesale. | 1.29 | 1 | 1.29 | \$ 8,197 | KSF |

Vehicle SDC (2)

| ITE Code | Customer Type | Land Use Description | Peak-Hour Trips | Pass-By Trip Factor | Adjusted P-H Ts | Vehicle SDC | Units |
|----------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------------|-------------|------------------|
| 812 | Building Materials & Lumber | Small, free standing building that sells hardware, building materials, and lumber. May include yard storage and shed storage areas. The storage areas are not included in the GLA needed for trip generation estimates. | 4.49 | 1 | 4.49 | \$ 28,531 | KSF |
| 813 | Discount Super Store | A free-standing discount store that also contains a full service grocery dept. under one roof. | 3.87 | 0.718 | 2.78 | \$ 17,665 | KSF |
| 814 | Specialty Retail | Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants. | 2.71 | 1 | 2.71 | \$ 17,220 | KSF |
| 815 | Discount Store | A free-standing discount store that offers a variety of customer services, centralized cashiering, and a wide range of products under one roof. Does not include a full service grocery dept. like Land Use 813, Free-standing Discount Superstore. | 5.06 | 0.475 | 2.4 | \$ 15,251 | KSF |
| 816 | Hardware/Paint Store | Typically free-standing buildings with off-street parking that sell paints and hardware. | 4.84 | 0.450 | 2.18 | \$ 13,853 | KSF |
| 817 | Nursery/Garden Center | Free-standing building with yard containing planting or landscape stock. May have large green houses and offer landscape services. Typically have office, storage, and shipping facilities. GLA is Building GLA, not yard and storage GLA. | 3.8 | 1 | 3.8 | \$ 24,147 | KSF |
| 820 | Shopping Center | Integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Provides enough on-site parking to serve its own parking demand. May include non-merchandising facilities such as office buildings, movie theatres, restaurants, post offices, health clubs, and recreation like skating rinks and amusements. | 3.75 | 0.393 | 1.47 | \$ 9,341 | KSF Leasable |
| 841 | New Car Sales | New Car dealership with sales, service, parts, and used vehicles | 2.64 | 1 | 2.64 | \$ 16,776 | KSF |
| 848 | Tire Store | Primary business is tire sales and repair. Generally does not have a large storage or warehouse area. | 4.15 | 0.617 | 2.56 | \$ 16,267 | KSF |
| 850 | Supermarket | Free-standing grocery store. May also contain ATMs, photo centers, pharmacies, video rental areas. | 10.45 | 0.265 | 2.76 | \$ 17,538 | KSF |
| 851 | Convenience Market | Sells convenience foods, newspapers, magazines, and often Beer & Wine. Does not have gas pumps. | 52.41 | 0.282 | 14.8 | \$ 94,045 | KSF |
| 880 | Pharmacy w/o drive through | Facilities that fulfill medical Prescriptions | 8.42 | 0.327 | 2.75 | \$ 17,475 | KSF |
| 881 | Pharmacy w/ drive through | Facilities that fulfill medical Prescriptions | 8.62 | 0.383 | 3.3 | \$ 20,969 | KSF |
| 890 | Furniture Store | Sells furniture, accessories, and often carpet/floor coverings. | 0.46 | 0.157 | 0.07 | \$ 445 | KSF |
| 911 * | Walk-In Bank | Usually a Free-standing building with a parking lot. Does not have drive-up windows. May have ATMs. | 33.15 | 0.270 | 8.95 | \$ 56,872 | KSF |
| 912 | Drive-In Bank | Provides Drive-up and walk-in bank services. May have ATMs. | 45.74 | 0.270 | 12.35 | \$ 78,477 | KSF |
| 931 | Quality Restaurant | High quality eating establishment with slower turnover rates (more than one hour). | 7.49 | 0.288 | 2.15 | \$ 13,662 | KSF |
| 932 | High Turnover Sit-Down Rest. | Sit-Down eating establishment with turnover rates of less than one hour. | 10.92 | 0.315 | 3.44 | \$ 21,859 | KSF |
| 933 * | Fast Food w/o Drive-Thru | Fast Food but no drive-through window | 26.15 | 0.265 | 6.94 | \$ 44,099 | KSF |
| 934 | Fast Food With Drive-Thru | Fast Food with drive-through window | 34.64 | 0.265 | 9.2 | \$ 58,460 | KSF |
| 936 * | Drinking Place | Contains a bar where alcoholic beverages and snacks are serviced and possibly some type of entertainment such as music, games, or pool tables | 11.34 | 0.315 | 3.58 | \$ 22,749 | KSF |
| 944 | Gas Station | Sell gasoline and may also provide vehicle service and repair. Does not have Convenience Market and/or Car Wash. | 13.86 | 0.235 | 3.26 | \$ 20,715 | Fueling Position |
| 945 | Gas/Service Station with Convenience Market | Selling gas and Convenience Market are the primary business. May also contain facilities for service and repair. Does not include Car Wash. | 13.38 | 0.123 | 1.65 | \$ 10,485 | Fueling Position |
| 946 * | Gas/Service Station with Convenience Market, Car Wash | Selling gas, Convenience Market, and Car Wash are the primary business. May also contain facilities for service and repair. | 13.33 | 0.382 | 5.09 | \$ 32,344 | Fueling Position |
| 947 | Self-Service Car Wash | Allows manual cleaning of vehicles by providing stalls for the driver to park and wash. | 5.54 | 1 | 5.54 | \$ 35,203 | Wash Stall |

NOTES:

Source: Institute of Transportation Engineers, *Trip Generation*, Seventh Edition.
 Peak-Hour Trips: Weekday, peak-hour of adjacent street traffic. Most often, one hour between 4 and 6 p.m.
 Pass-By Trip Factor reflects diverted linked trips in addition to pass-by trips.
 ITE codes identified with asterisks (*) include information derived from the ITE manual (e.g., the pass-by factor is derived from pass-by counts for a similar land use or are as estimated by traffic engineers).

Land Use Units:

- KSF = 1,000 gross square feet building area
- DU = dwelling unit
- Room = number of rooms for rent
- Fueling Positions = maximum number of vehicles that can be served simultaneously
- Student = number of full-time equivalent students enrolled
- Hole = number of individual putting holes that are paired with driving tees
- Acre = 43,560 square feet of park space
- Lane = number of bowling lanes

Bike / Ped SDC (1)

| ITE Code | Customer Type | Land Use Description | Bike/Ped Group | Bike/Ped Trips | Bike/Ped SDC | Units |
|----------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|--------------|---------|
| 110 | General Light Industrial | Typically less than 500 employees, free standing and single use. Examples: Printing plants, material testing laboratories, data processing equipment assembly, power stations. | 1 | 0.1 | \$ 147 | KSF |
| 130 | Industrial Park | Industrial Park areas that contain a number of industrial and/or related facilities (mix of manufacturing, service, and warehouse). | 1 | 0.1 | \$ 147 | KSF |
| 140 | Manufacturing | Facilities that convert raw materials into finished products. Typically have related office, warehouse, research, and associated functions. | 2 | 0.2 | \$ 293 | KSF |
| 151 | Mini-Warehouse | Storage Units or Vaults rented for storage of goods. Units are physically separate and access through an overhead door or other common access point. Example: U-Store-It. | 1 | 0.1 | \$ 147 | KSF |
| 210 | SF Detached | Single family detached housing. | 5 | 1 | \$ 1,466 | DU |
| 220 | Apartment | Rental Dwelling Units within the same building. At least 4 units in the same building. Examples: Quadplexes and all types of apartment buildings. | 4 | 0.6 | \$ 879 | DU |
| 230 | Condo/Townhouse | Residential Condominium/Townhouses under single-family ownership. Minimum of two single family units in the same building structure. | 4 | 0.6 | \$ 879 | DU |
| 240 | Mobile Home | Trailers or Manufactured homes that are sited on permanent foundations. Typically the parks have community facilities (laundry, recreation rooms, pools). | 3 | 0.4 | \$ 586 | DU |
| 253 | Elderly Housing | Restricted to senior citizens. Contains residential units similar to apartments or condos. Sometimes in self-contained villages. May also contain medical facilities, dining, and some limited, supporting retail. | 3 | 0.4 | \$ 586 | DU |
| 310 | Hotel | Lodging facility that may include restaurants, lounges, meeting rooms, and/or convention facilities. Can include a large motel with these facilities. | 3 | 0.4 | \$ 586 | Room |
| 320 | Motel | Sleeping accommodations and often a restaurant. Free on-site parking and little or no meeting space. | 2 | 0.2 | \$ 293 | Room |
| 411 * | Local Park | City-owned parks, varying widely as to location, type, and number of facilities, including boating / swimming facilities, ball fields, and picnic facilities. | 6 | 2 | \$ 2,931 | Acre |
| 430 | Golf Course | Includes 9, 18, 27, and 36 hole municipal and private country clubs. Some have driving ranges and clubhouses with pro shops, restaurants, lounges. Many of the muni courses do not include such facilities. | 1 | 0.1 | \$ 147 | Hole |
| 435 | Multipurpose Recreation Facility | Multi-purpose recreational facilities contain two or more of the following land uses at one site: mini-golf, batting cages, video arcade, bumper boats, go-carts, and driving ranges. | 6 | 2 | \$ 2,931 | Acre |
| 437 | Bowling Alley | Recreational facilities with bowling lanes which may include a small lounge, restaurant or snack bar. | 3 | 0.4 | \$ 586 | Lane |
| 493 | Athletic Club | Privately owned with weightlifting and other facilities often including swimming pools, hot tubs, saunas, racquet ball, squash, and handball courts. | 5 | 1 | \$ 1,466 | KSF |
| 495 | Recreational Community Center | Recreational community centers are facilities similar to and including YMCAs, often including classes, day care, meeting rooms, swimming pools, tennis racquetball, handball, weightlifting equipment, locker rooms, & food service. | 6 | 2 | \$ 2,931 | KSF |
| 520 * | Elementary School | Public. Typically serves K-6 grades. | 3 | 0.4 | \$ 586 | Student |
| 522 | Middle School | Public. Serves students that completed elementary and have not yet entered high school. | 2 | 0.2 | \$ 293 | Student |
| 530 | High School | Public. Serves students that completed middle or junior high school. | 1 | 0.1 | \$ 147 | Student |
| 540 | Junior/Community College | Two-year junior colleges or community colleges. | 1 | 0.1 | \$ 147 | Student |
| 560 | Church | Contains worship area and may include meeting rooms, classrooms, dining area and facilities. | 3 | 0.4 | \$ 586 | KSF |
| 565 * | Day Care | Facility for pre-school children care primarily during daytime hours. May include classrooms, offices, eating areas, and playgrounds. | 1 | 0.1 | \$ 147 | KSF |
| | | | 1 | 0.1 | \$ 147 | Student |
| 590 | Library | Public or Private. Contains shelved books, reading rooms or areas, sometimes meeting rooms. | 6 | 2 | \$ 2,931 | KSF |
| 591 | Lodge/Fraternal Organization | Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms. | 4 | 0.6 | \$ 879 | Member |
| 710 | General Office | Office building with multiple tenants. Mixture of tenants can include professional services, bank and Loan institutions, restaurants, snack bars, and service retail facilities. | 6 | 2 | \$ 2,931 | KSF |
| 715 | Single Tenant Office Building | Single tenant office building. Usually contains offices, meeting rooms, file storage areas, data processing, restaurant or cafeteria, and other service functions. | 6 | 2 | \$ 2,931 | KSF |
| 720 | Medical-Dental Office | Provides diagnosis and outpatient care on a routine basis. Typically operated by one or more private physicians or dentists. | 1 | 0.1 | \$ 147 | KSF |
| 750 | Office Park | Park or campus-like planned unit development that contains office buildings and support services such as banks & loan institutions, restaurants, service stations. | 4 | 0.6 | \$ 879 | KSF |
| 760 | Research & Development Center | Single building or complex of buildings devoted to research & development. May contain offices and light fabrication facilities. | 2 | 0.2 | \$ 293 | KSF |
| 770 | Business Park | Group of flex-type or incubator 1 - 2 story buildings served by a common roadway system. Tenant space is flexible to accommodate a variety of uses. Rear of building usually served by a garage door. Typically includes a mix of offices, retail & wholesale. | 1 | 0.1 | \$ 147 | KSF |

Bike / Ped SDC (2)

| ITE Code | Customer Type | Land Use Description | Bike/Ped Group | Bike/Ped Trips | Bike/Ped SDC | Units |
|----------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|--------------|------------------|
| 812 | Building Materials & Lumber | Small, free standing building that sells hardware, building materials, and lumber. May include yard storage and shed storage areas. The storage areas are not included in the GLA needed for trip generation estimates. | 1 | 0.1 | \$ 147 | KSF |
| 813 | Discount Super Store | A free-standing discount store that also contains a full service grocery dept. under one roof. | 1 | 0.1 | \$ 147 | KSF |
| 814 | Specialty Retail | Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants. | 6 | 2 | \$ 2,931 | KSF |
| 815 | Discount Store | A free-standing discount store that offers a variety of customer services, centralized cashiering, and a wide range of products under one roof. Does not include a full service grocery dept. like Land Use 813, Free-standing Discount Superstore. | 1 | 0.1 | \$ 147 | KSF |
| 816 | Hardware/Paint Store | Typically free-standing buildings with off-street parking that sell paints and hardware. | 1 | 0.1 | \$ 147 | KSF |
| 817 | Nursery/Garden Center | Free-standing building with yard containing planting or landscape stock. May have large green houses and offer landscape services. Typically have office, storage, and shipping facilities. GLA is Building GLA, not yard and storage GLA. | 1 | 0.1 | \$ 147 | KSF |
| 820 | Shopping Center | Integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Provides enough on-site parking to serve its own parking demand. May include non-merchandising facilities such as office buildings, movie theatres, restaurants, post offices, health clubs, and recreation like skating rinks and amusements. | 2 | 0.2 | \$ 293 | KSF Leasable |
| 841 | New Car Sales | New Car dealership with sales, service, parts, and used vehicles | 1 | 0.1 | \$ 147 | KSF |
| 848 | Tire Store | Primary business is tire sales and repair. Generally does not have a large storage or warehouse area. | 1 | 0.1 | \$ 147 | KSF |
| 850 | Supermarket | Free-standing grocery store. May also contain ATMs, photo centers, pharmacies, video rental areas. | 1 | 0.1 | \$ 147 | KSF |
| 851 | Convenience Market | Sells convenience foods, newspapers, magazines, and often Beer & Wine. Does not have gas pumps. | 6 | 2 | \$ 2,931 | KSF |
| 880 | Pharmacy w/o drive through | Facilities that fulfill medical Prescriptions | 3 | 0.4 | \$ 586 | KSF |
| 881 | Pharmacy w/ drive through | Facilities that fulfill medical Prescriptions | 3 | 0.4 | \$ 586 | KSF |
| 890 | Furniture Store | Sells furniture, accessories, and often carpet/floor coverings. | 1 | 0.1 | \$ 147 | KSF |
| 911 * | Walk-In Bank | Usually a Free-standing building with a parking lot. Does not have drive-up windows. May have ATMs. | 1 | 0.1 | \$ 147 | KSF |
| 912 | Drive-In Bank | Provides Drive-up and walk-in bank services. May have ATMs. | 1 | 0.1 | \$ 147 | KSF |
| 931 | Quality Restaurant | High quality eating establishment with slower turnover rates (more than one hour). | 1 | 0.1 | \$ 147 | KSF |
| 932 | High Turnover Sit-Down Rest. | Sit-Down eating establishment with turnover rates of less than one hour. | 3 | 0.4 | \$ 586 | KSF |
| 933 * | Fast Food w/o Drive-Thru | Fast Food but no drive-through window | 6 | 2 | \$ 2,931 | KSF |
| 934 | Fast Food With Drive-Thru | Fast Food with drive-through window | 6 | 2 | \$ 2,931 | KSF |
| 936 * | Drinking Place | Contains a bar where alcoholic beverages and snacks are serviced and possibly some type of entertainment such as music, games, or pool tables | 1 | 0.1 | \$ 147 | KSF |
| 944 | Gas Station | Sell gasoline and may also provide vehicle service and repair. Does not have Convenience Market and/or Car Wash. | 1 | 0.1 | \$ 147 | Fueling Position |
| 945 | Gas/Service Station with Convenience Market | Selling gas and Convenience Market are the primary business. May also contain facilities for service and repair. Does not include Car Wash. | 1 | 0.1 | \$ 147 | Fueling Position |
| 946 * | Gas/Service Station with Convenience Market, Car Wash | Selling gas, Convenience Market, and Car Wash are the primary business. May also contain facilities for service and repair. | 1 | 0.1 | \$ 147 | Fueling Position |
| 947 | Self-Service Car Wash | Allows manual cleaning of vehicles by providing stalls for the driver to park and wash. | 1 | 0.1 | \$ 147 | Wash Stall |

NOTES:

Land Use Units:

KSF = 1,000 gross square feet building area

DU = dwelling unit

Room = number of rooms for rent

Fueling Positions = maximum number of vehicles that can be served simultaneously

Student = number of full-time equivalent students enrolled

Hole = number of individual putting holes that are paired with driving tees

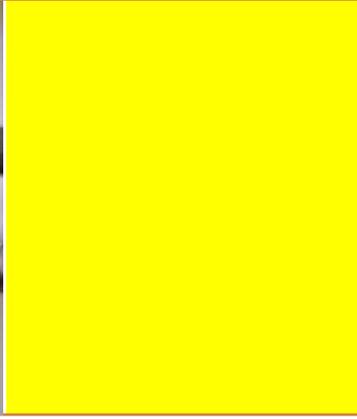
Acre = 43,560 square feet of park space

Lane = number of bowling lanes

Appendix A

SDC Presentation

**City of
West
Linn**

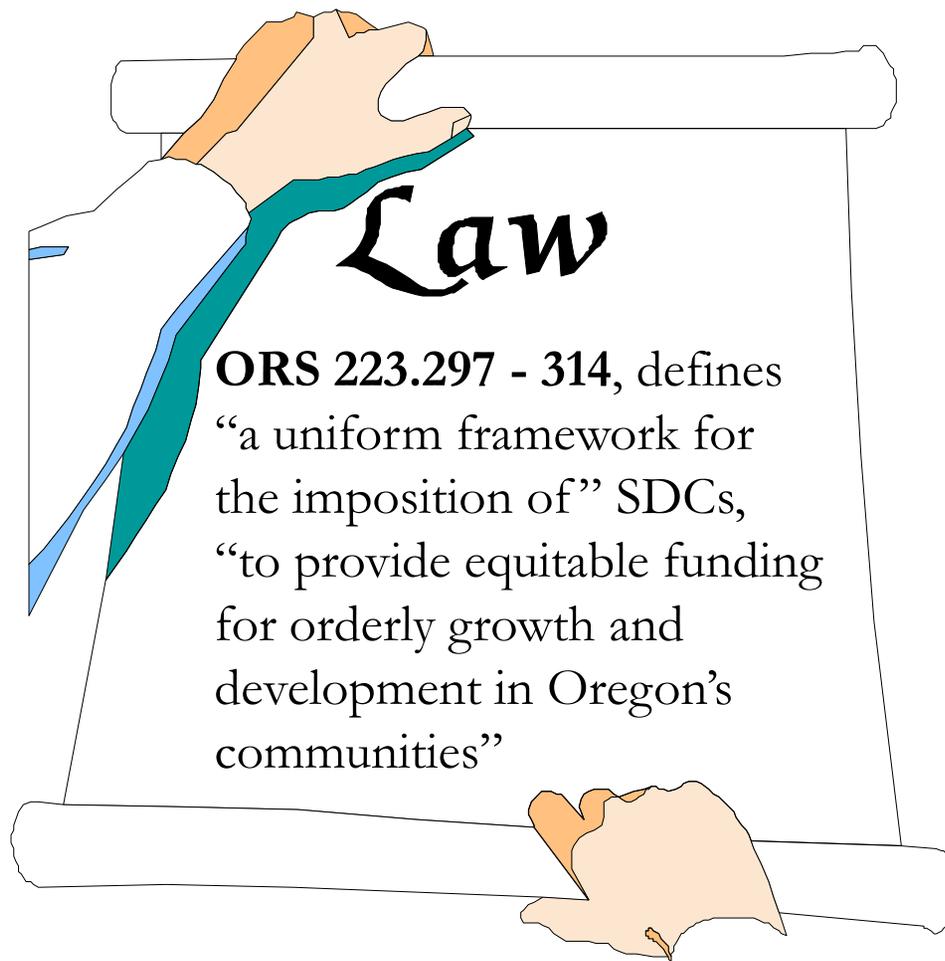


Water and Transportation System Development Charge (SDC) Update

Presented by

John Ghilarducci, FCS GROUP Principal

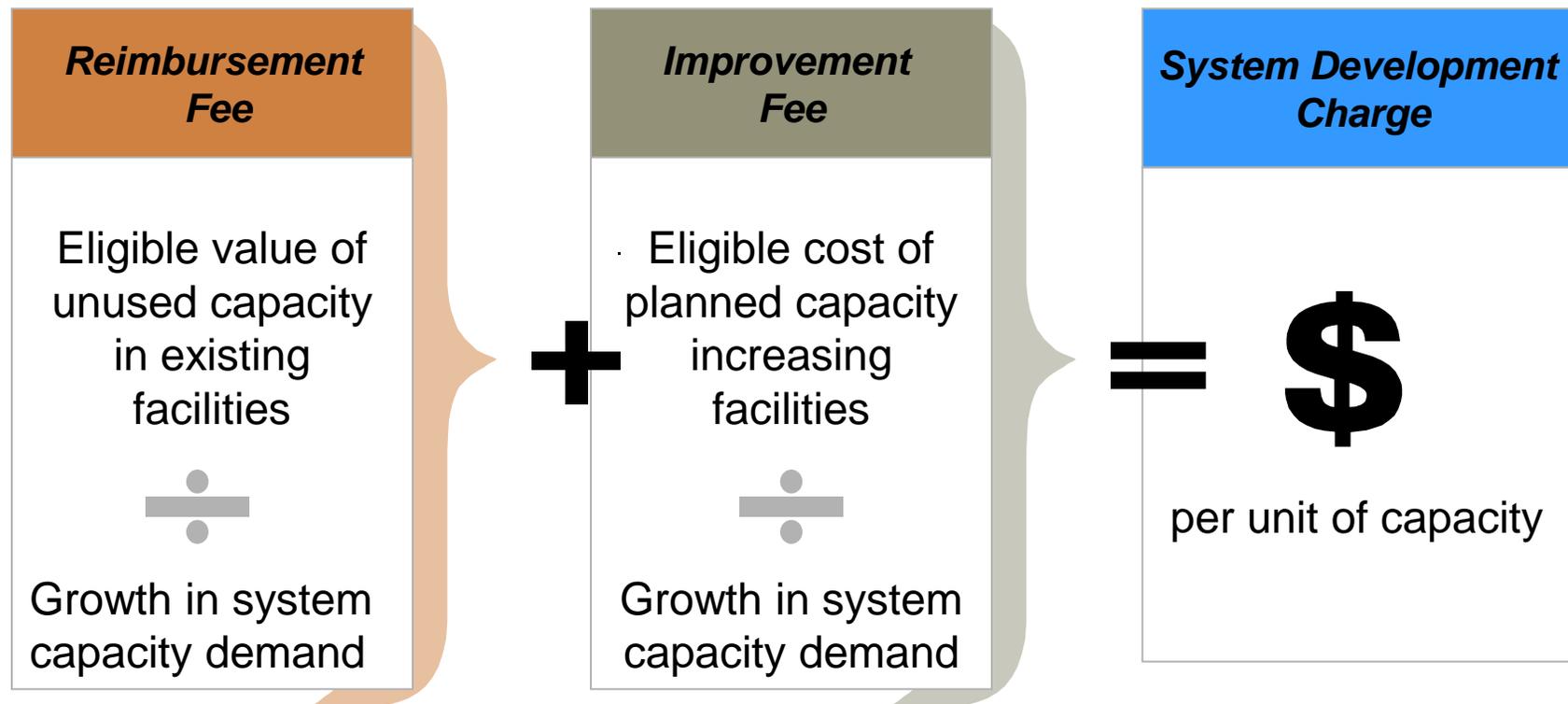
SDC Background



Key Characteristics

1. SDCs are one-time charges, not ongoing rates.
2. SDCs are for capital only, in both their calculation and in their use.
3. Properties which are already developed do not pay SDCs unless they “redevelop”.
4. SDCs include both future and existing cost components.
5. SDCs are for general facilities, not “local” facilities.

SDC Components and Calculation



Credits against the improvement fee must be provided for the construction of a capital improvement, which is:

- ✓ required as a condition of development,
- ✓ identified in an adopted capital facilities plan, and
- ✓ is either off-site or, if on-site, is required to provide more capacity than needed by the development in question.



Key Assumptions / Discussion Points

- **Proposed charges incorporate growth and cost assumptions of recently adopted plans:**
 - **Water System Master Plan:** Capital maintenance projects are assumed to benefit existing and future customers equally
 - **Transportation System Plan:** Planned facilities, including bike/ped/transit, are sized to serve local and regional (thru-) traffic; all costs recovered from in-City development
- **Proposed “base” scenarios do not include financing (interest) costs**
- **Transportation SDC base scenario includes separate bike/ped component, recovered by forecasted bike/ped trips**

Water SDC Calculation

Base Scenario: Without Interest Costs



Fee Calculations

Capacity Analysis

| | | |
|-------------------------------------|--------|-------------------|
| Existing Customer Base | 9,943 | Meter Equivalents |
| Projected Growth | 1,890 | Meter Equivalents |
| Customers At End of Planning Period | 11,833 | Meter Equivalents |

Reimbursement Fee Calculation

| | | |
|--------------------------------|------------|--------|
| Allocable Unused Capacity Cost | \$ 986,154 | |
| Reimbursement Fee | \$ 522 | per ME |

Improvement Fee Calculation

| | | |
|-----------------------------------|---------------|--------|
| Capacity Increasing Project Costs | \$ 11,451,679 | |
| Improvement Fee | \$ 6,059 | per ME |

SDC Calculation

System Development Charge

| | | | |
|------------------------------------|-------|----------|--------|
| Reimbursement Fee | | \$ 522 | per ME |
| Improvement Fee | | 6,059 | per ME |
| Subtotal | | \$ 6,580 | per ME |
| plus: Administrative Cost Recovery | 2.53% | \$ 166 | per ME |
| Total SDC | | \$ 6,747 | per ME |

Reimbursement Fee Cost Basis

| Component | Original Cost | Unused Capacity [4] | Allocable Cost |
|--------------------------------------------------|--------------------------|--------------------------------|---------------------------|
| Capital Assets, net of depreciation (1) | \$ 9,118,800 | 16% | \$ 1,456,563 |
| Subtotal | \$ 9,118,800 | 16% | \$ 1,456,563 |
| less: Net Utility Debt Principal Outstanding (2) | \$ 1,380,000 | 16% | \$ 220,430 |
| less: Contributions in aid of Construction (3) | 1,564,990 | 16% | 249,979 |
| Subtotal | \$ 2,944,990 | 16% | \$ 470,409 |
| Allocable Unused Capacity | | | \$ 986,154 |

NOTES:

(1) Source: FY 2008 Comprehensive Annual Financial Report.

(2) Source: NRMSIR Bond Disclosure filing. Projected water fund debt service requirements through FY 2021.

(3) FY 2006 through FY 2008. Source: NRMSIR Bond Disclosure filing (FY 2006 and FY 2007) and FY 2008 CAFR (FY 2008).

(4) Based on growth's share of the total customer base at end of period.

Improvement Fee Cost Basis

| Improvement Type | 2009 Project Cost Total [1] | Capacity Increasing [1] | Allocable Cost |
|-------------------------------------------|--------------------------------|----------------------------|-----------------------|
| Capital Maintenance Program | \$ 9,073,773 | 16.0% | \$ 1,449,370 |
| Storage and Pumping Facilities | 10,104,767 | 38.9% | 3,934,427 |
| Distribution System Piping | 12,527,628 | 53.7% | 6,732,121 |
| Supply | 2,256,902 | 16.0% | 360,499 |
| Other | 153,880 | 16.0% | 24,579 |
| Subtotal | \$ 34,116,949 | 36.6% | \$ 12,500,996 |
| less: Beginning FY2009 SDC Fund Balance | | | \$ 1,049,317 |
| Subtotal | | | \$ (1,049,317) |
| Allocable Capacity Increasing Cost | | | \$ 11,451,679 |

NOTES:

(1) Source: City of West Linn Water System Master Plan. November 2008. Murray, Smith & Associates, Inc. Reported capacity-increasing percentages were utilized for the majority of projects. Remaining project costs were allocated based on growth's share of future systemwide average day demand (2009-2030).

Summary of Alternative Scenarios

| Cost Scenario | Water SDC <i>(per ME)</i> |
|-------------------------|------------------------------|
| Without Financing Costs | \$ 6,747 |
| With Financing Costs | \$ 8,169 |

Residential Water SDC Comparison

| Jurisdiction | Water SDC | Jurisdiction | Water SDC |
|--------------------------------------------|-----------------|---------------|-----------|
| West Linn -- Proposed Base Scenario | \$ 6,747 | Beaverton [1] | 4,237 |
| Hillsboro | 5,586 | Gresham | 4,153 |
| Clackamas River Water | 5,219 | Forest Grove | 4,000 |
| Oak Lodge Water District | 4,965 | Gladstone | 3,311 |
| Tualatin Valley Water District | 4,755 | Tualatin | 3,143 |
| * Wilsonville | 4,736 | Lake Oswego | 2,485 * |
| West Linn -- Current | 4,628 | Rockwood PUD | 2,400 |
| Oregon City | 4,495 | Portland | 1,760 |

NOTES:

[1] Will be implemented September 2009.

* Currently being updated.

Transportation SDC Calculation

Base Scenario: Without Interest Costs



Motor Vehicle Fee Calculations

Vehicle Capacity Analysis

| | | |
|-------------------------------------------|--------|-----------------|
| Existing Vehicle Trip Generation | 10,897 | Peak-Hour Trips |
| Vehicle Trips from Projected Growth | 4,207 | Peak-Hour Trips |
| Trip Generation at End of Planning Period | 15,105 | Peak-Hour Trips |

Reimbursement Fee Calculation

| | | |
|--------------------------------|--------------|----------|
| Allocable Unused Capacity Cost | \$ 8,291,639 | |
| Reimbursement Fee | \$ 1,971 | per P-HT |

Improvement Fee Calculation

| | | |
|-----------------------------------|---------------|----------|
| Capacity Increasing Project Costs | \$ 17,782,788 | |
| Improvement Fee | \$ 4,227 | per P-HT |

Motor Vehicle SDC Calculation

Motor Vehicle System Development Charge

| | | | |
|------------------------------------|-------|----------|----------|
| Reimbursement Fee | | \$ 1,971 | per P-HT |
| Improvement Fee | | 4,227 | per P-HT |
| <hr/> | | | |
| Subtotal | | \$ 6,198 | per P-HT |
| plus: Administrative Cost Recovery | 2.53% | \$ 157 | per P-HT |
| Total SDC | | \$ 6,354 | per P-HT |

Bike/Ped Fee Calculations

Bike/Ped Capacity Analysis

| | | |
|-------------------------------------------|--------|------------------|
| Existing Bike/Ped Trip Generation | 14,860 | Bike / Ped Trips |
| Bike/Ped Trips from Projected Growth | 5,737 | Bike / Ped Trips |
| Trip Generation at End of Planning Period | 20,597 | Bike / Ped Trips |

Improvement Fee Calculation

| | | |
|-----------------------------------|--------------|-------------------|
| Capacity Increasing Project Costs | \$ 8,200,223 | |
| Improvement Fee | \$ 1,429 | per Bike/Ped Trip |

Bike/Ped SDC Calculation

Bike/Ped System Development Charge

| | | | |
|------------------------------------|-------|----------|-------------------|
| Improvement Fee | | \$ 1,429 | per Bike/Ped Trip |
| plus: Administrative Cost Recovery | 2.53% | \$ 36 | per Bike/Ped Trip |
| Total SDC | | \$ 1,466 | per Bike/Ped Trip |

Reimbursement Fee Cost Basis

| Component | Original Cost | Unused Capacity [1] | Allocable Cost |
|--------------------------------------------|--------------------------|--------------------------------|---------------------------|
| Historical Transportation SDC Expenditures | \$ 11,031,964 | 75% | \$ 8,291,639 |
| Subtotal | \$ 11,031,964 | 75% | \$ 8,291,639 |
| Allocable Unused Capacity | | | \$ 8,291,639 |

NOTES:

(1) Unused capacity percentage determined by peak-hour trip growth since each year of SDC expenditure (FY1993 - FY2008).

Vehicle Improvement Fee Cost Basis

| Motor Vehicle Project List | 2009 Project Cost Total [1] | City Funding Share [1] | Capacity Increasing [2] | Allocable Cost |
|------------------------------------------------------------------|----------------------------------------|-----------------------------------|------------------------------------|---------------------------|
| Motor Vehicle Action Plan Projects -- City of West Linn | \$ 16,606,334 | 100.0% | 75.2% | \$ 12,485,713 |
| Motor Vehicle Master Plan Projects -- City of West Linn | 6,408,819 | 100.0% | 0.0% | - |
| Motor Vehicle Action Plan Projects -- ODOT | 272,493 | 20.0% | 27.9% | 15,180 |
| Motor Vehicle Master Plan Projects -- ODOT | 15,720,733 | 20.0% | 100.0% | 3,144,147 |
| Motor Vehicle Action Plan Projects -- ODOT (Hwy 43 Concept Plan) | 22,423,006 | 20.0% | 47.7% | 2,137,750 |
| Subtotal | \$ 61,431,385 | 50.0% | 63.4% | \$ 17,782,788 |
| Allocable Capacity Increasing Cost | | | | \$ 17,782,788 |

NOTES:

(1) City of West Linn Transportation System Plan. December 2008.

(2) Capacity increasing percentage for motor vehicle projects determined by the share of added capacity that will serve growth only. Growth allocation for City Vehicle Master Plan Projects reflects the correction of existing deficiencies to meet current City standards.

Bike/Ped Improvement Fee Cost Basis

| Non-Motor Vehicle Project List | 2009 Project Cost Total [1] | City Funding Share [1] | Capacity Increasing [2] | Allocable Cost |
|-----------------------------------------|----------------------------------------|-----------------------------------|------------------------------------|---------------------------|
| Pedestrian Master Plan | \$ 21,422,119 | 100.0% | 27.9% | \$ 5,966,720 |
| Bicycle Action Plan | 1,970,332 | 100.0% | 27.9% | 548,798 |
| Bicycle Master Plan | 7,304,901 | 100.0% | 27.9% | 2,034,640 |
| Transit Action Plan | 1,341,503 | 100.0% | 2.8% | 37,949 |
| Subtotal | \$ 32,038,854 | 100.0% | 26.8% | \$ 8,588,107 |
| less: Beginning FY2009 SDC Fund Balance | | | | \$ 387,884 |
| Subtotal | | | | \$ (387,884) |
| Allocable Capacity Increasing Cost | | | | \$ 8,200,223 |

NOTES:

(1) City of West Linn Transportation System Plan, December 2008.

(2) Non-motor vehicle improvements were assumed to provide capacity serving existing and future development proportionately. Transit allocation reflects 0% SDC allocation for annual cost of providing more local service.

Transportation SDC Comparison

| City | SFR Home | General Office Building (10,000 sq. ft.) | Specialty Retail (2,000 sq. ft.) | Shopping Center (100,000 sq. ft.) | Fast Food With Drive-Thru (1,000 sq. ft.) |
|-------------------------------------------|-----------------|------------------------------------------|----------------------------------|-----------------------------------|-------------------------------------------|
| West Linn - Proposed Base Scenario | \$ 7,884 | \$ 123,995 | \$ 40,303 | \$ 963,358 | \$ 61,389 |
| Happy Valley | 7,682 | 93,670 | 39,616 | 1,919,200 | 99,559 |
| West Linn - Current | 5,509 | 71,666 | 27,663 | 1,383,134 | 13,831 |
| Wilsonville | 4,834 | 82,813 | 21,274 | Traffic Study | 47,866 |
| Forest Grove [2] | 4,599 | 44,280 | 10,644 | 573,400 | 13,082 |
| Tualatin [2] | 4,599 | 44,280 | 10,644 | 573,400 | 13,082 |
| Hillsboro [2] | 4,599 | 44,280 | 10,644 | 573,400 | 13,082 |
| Beaverton [2] | 4,599 | 44,280 | 10,644 | 573,400 | 13,082 |
| Lake Oswego | 4,195 | 42,690 | 5,876 | 194,600 | 30,817 |
| Silverton | 3,908 | 57,653 | 20,972 | 568,788 | 35,598 |
| Clackamas County | 3,560 | 43,410 | 18,362 | 889,500 | 46,143 |
| Woodburn [3] | 3,532 | 68,615 | 24,959 | 676,935 | 42,366 |
| * Medford [4] | 3,167 | 67,824 | 34,558 | 834,418 | 17,455 |
| Phoenix | 3,114 | 45,945 | 16,713 | 453,282 | 28,369 |
| Gresham | 2,823 | 41,646 | 15,149 | 410,865 | 25,714 |
| Newberg | 2,655 | 44,249 | 8,310 | 722,000 | 80,324 |
| Canby | 2,440 | 28,076 | 22,603 | 429,930 | 33,586 |
| Springfield | 2,147 | 22,230 | 14,914 | 597,642 | 55,650 |
| Salem | 2,097 | 15,684 | 6,551 | 229,515 | 4,991 |
| Oregon City - Current | 1,885 | 22,539 | 10,627 | 646,257 | 42,159 |
| * Albany | 1,719 | 14,320 | 6,266 | 303,520 | 23,695 |
| McMinnville | 1,426 | 10,700 | 4,460 | 181,000 | 3,390 |

NOTES:

[1] PM peak-hour trip and average daily trip estimates are based on land use type and adjusted for pass-by trips, as reported in Trip Generation by Institute of Transportation Engineers, Seventh Edition.

PM Peak-Hour Trips

| SFR Home | General Office Building | Specialty Retail | Shopping Center | Fast Food With Drive-Thru |
|----------|-------------------------|------------------|-----------------|---------------------------|
| 1.01 | 1.49 | 2.71 | 1.47 | 9.20 |

[2] Transportation Impact Fee (TIF) assessed uniformly throughout Washington County, effective July 2009.

[3] Non-residential charges reflect Interchange Development Charge (IDC).

[4] Charged based on development within the South Interchange Development area.

* Currently being updated.

Sample Charge Applications

| | Vehicle P-HT Generation | Vehicle Component | Bike Trip Generation | Bike Component | Total SDC |
|----------------------------------|----------------------------|----------------------|-------------------------|-------------------|--------------|
| Single-Family Home | 1.01 | \$ 6,418 | 1.0 | \$ 1,466 | \$ 7,884 |
| Multi-Family Residence (4 units) | 2.48 | \$ 15,758 | 2.4 | \$ 3,518 | \$ 19,276 |
| Restaurant (3,000 S.F.) | 6.45 | \$ 40,983 | 0.3 | \$ 440 | \$ 41,423 |
| Specialty Retail (2,000 S.F.) | 5.42 | \$ 34,439 | 4.0 | \$ 5,864 | \$ 40,303 |
| Supermarket (20,000 S.F.) | 55.2 | \$ 350,741 | 2.0 | \$ 2,932 | \$ 353,673 |
| General Office (10,000 S.F.) | 14.9 | \$ 94,675 | 20.0 | \$ 29,320 | \$ 123,995 |

Summary of Alternative Scenarios

| | Separate Bike/Ped Charge | | Integrated Bike/Ped |
|--------------------------------|------------------------------|-------------------------------|------------------------------|
| Without Financing Costs | \$ 6,354 per vehicle trip | \$ 1,466 per bike/ped trip | \$ 6,509 per vehicle trip |
| With Financing Costs | \$ 8,819 per vehicle trip | \$ 1,458 per bike/ped trip | \$ 8,967 per vehicle trip |

Separating the vehicle and non-vehicle charges allows for recovery of a greater share of bike/ped improvement costs due to alternative capacity methodology

Metro SDC Recommendations

- **Full Cost Recovery**
 - ✓ ■ Capital improvements plan projecting needs for at least 10 years
 - ✓ ■ Reimbursement fee component
 - Planning and financing costs, as well as the costs of calculating the SDC and accounting for their expenditures and revenues
 - ✓ ■ Annual charge adjustment to account for changes in land/materials costs

- **Recognition of Cost Variations By Location**
 - Metro Recommendation – area-specific charges recommended where cost differences may be significant; particularly relevant for growth in currently unserved areas
 - *For the City of West Linn, no need for area-specific charges as forecasted growth needs are fairly homogenous throughout the City*

- ✓ ■ **Technical vs. Policy-Based Solutions**
 - Give preference to technically-based considerations over policy-based approaches

Metro SDC Recommendations

- **Impact-Based SDCs**
 - Land Use – vary fees by land use (homes, apartments, grocery stores, offices, etc.)
 - *Water SDC – not readily applicable*
 - ✓ ■ *Transportation SDC – charge varies by trips for each land use*
 - Development Size – vary residential charge by lot size (related to irrigation)
 - *Water SDC – not readily applicable except as meter size indicates*
 - *Transportation SDC – house size is a potential indicator of the number of occupants, which relates to trip generation – cost/benefit of administration is unclear*
 - Density – vary residential fee by units per lot (higher density, lower charge)
 - *Higher density development is less costly to serve per unit*
 - *However, charge application would be significantly more complex; resulting charges would be biased in favor of urban, dense development*
 - ✓ ■ Green Design – acknowledge design features that reduce demand
 - *Water SDC – not readily applicable except as potential demand is reflected in meter size*
 - *Transportation SDC – local traffic study can supersede ITE*

Proposed Code Changes

Credit Policy

- **Only grant credits for improvements on the SDC project list**
Credits for “off-list” improvements take money away from SDC project funding (the City is not made whole)
 - Implementation: strike parts (1)(c) and (2)(b) of section 4.455
 - Current Code:
 - (1)(c) When a permittee seeks a credit for a capital improvement that is not a qualified public improvement the following process and standards shall be applied: (i) Prior to beginning of construction on the capital improvement the permittee and the City shall meet and establish the maximum credit that will be allowed for the improvement...
 - (2)(b) For a request that is not related to a qualified public improvement the City Engineer shall review the documentation submitted to justify the request and determine the amount of credit due.

Indexing

- **Allow annual charge adjustment per ENR Construction Cost Index**
 - Implementation – incorporate the following into Code:

The SDC reflected in this methodology shall be adjusted each year on July 1 based on the change in the Engineering News Record (ENR) Construction Cost Index (CCI) for Seattle, Washington for the most recent twelve-month period.

Should the City Include SDC Project Financing Costs?

- **Rationale for Inclusion within SDC Cost Basis**
 - To the extent that debt financing is required to fund project costs, growth's share of the prospective repayment -- including principal, interest, and issuance cost -- is captured in the SDC
- **Pros:**
 - The SDC fully captures all costs necessary to provide system capacity for new development
 - Greater cost recovery through the SDC reduces the impact on rates/taxes if growth (and associated SDC revenue for debt service) is lower than expected
- **Cons:**
 - New development may again pay for financing costs when they pay debt service through ongoing utility rates or property taxes
 - Resulting SDC revenues should be committed to use for debt service
 - Could over-collect if cash or other funding is used in place of debt

Key Recommendations

- **Adopt \$6,747 per ME water SDC and transportation SDC of \$6,354 per P-HT and \$1,466 per bike/ped trip**
- **Create separate account for bike/ped SDC receipts & expenditures**
- **Incorporate Metro Considerations That Apply to West Linn**
 - **Water SDC**
 - Full Cost Recovery (except financing costs associated with future debt)
 - Technically-Based Approach
 - **Transportation SDC**
 - Full Cost Recovery (except financing costs associated with future debt)
 - Technically-Based Approach
 - Land Use Type
 - Green Design
- **Update Municipal Code**
 - Credit Policy
 - Annual Cost Adjustments

Appendix B

Technical Analysis

City of West Linn
 Water and Streets SDC Update Study -- Debt Out
 Water Fee Calculation

FINAL

Table 1

Reimbursement Fee

| | | |
|----------------------------------------|--------------------|-------------------|
| Cost of Net Unused Capacity | \$ 986,154 | |
| Growth to End of Planning Period | 1,890 | Meter Equivalents |
| Reimbursement Fee | \$ 521.74 | per ME |
| Improvement Fee | | |
| Capacity Expanding Projects | \$ 11,451,679 | |
| Growth to End of Planning Period | 1,890 | Meter Equivalents |
| Improvement Fee | \$ 6,058.64 | per ME |
| Total System Development Charge | | |
| Reimbursement Fee | \$ 521.74 | per ME |
| Improvement Fee | <u>6,058.64</u> | per ME |
| SDC Subtotal | \$ 6,580.38 | per ME |
| plus: Administrative Cost Recovery | <u>166.29</u> | per ME |
| | 2.53% | |
| Total Water SDC | \$ 6,746.67 | per ME |

Table 2

| Customer Class | Current Conditions: FY 2009 (1) | | | End of Period (2) | | | Net Growth | | |
|----------------|---------------------------------|-----------|------------------------|--------------------|-----------|---------------|--------------------|-----------|--------------|
| | # of Fixture Units | # of EDUs | # of Meter Equivalents | # of Fixture Units | # of EDUs | # of MEs | # of Fixture Units | # of EDUs | # of MEs |
| All Classes | 289,605 | - | 9,943 | 344,658 | - | 11,833 | 55,053 | - | 1,890 |
| Total | 289,605 | - | 9,943 | 344,658 | - | 11,833 | 55,053 | - | 1,890 |

NOTES:

(1) Source: Report of connections by meter size for January 2009.

| Current Customers by Meter Size | | | | Fixture Unit Calculation | |
|---------------------------------|--------------|-------------|--------------|--------------------------|----------------|
| Meter Size | Connections | Flow Factor | Total MEs | Fixture Units | Total |
| 5/8" x 3/4" | 7,610 | 1.00 | 7,610.00 | 30 | 228,300 |
| 3/4" | 390 | 1.50 | 585.00 | 30 | 11,700 |
| 1" | 158 | 2.50 | 395.00 | 39 | 6,162 |
| 1-1/2" | 63 | 5.00 | 315.00 | 151 | 9,513 |
| 2" | 42 | 8.00 | 336.00 | 370 | 15,540 |
| 3" | 20 | 16.00 | 320.00 | 500 | 10,000 |
| 4" | - | 25.00 | - | 750 | - |
| 6" | 6 | 50.00 | 300.00 | 1,000 | 6,000 |
| Totals | 8,289 | | 9,861 | | 287,215 |

(2) Future customer base is estimated based on proportional growth with average day water demand (mgd).

| | # | Year |
|---------------------------|---------|------|
| Average Day Demand (mgd) | 3.50 | 2008 |
| Average Day Demand (mgd) | 4.20 | 2030 |
| Annual Growth Estimate | 0.83% | |
| Current Water Demand | 3.53 | 2009 |
| Current Meter Equivalents | 9,943 | |
| Current Fixture Units | 289,605 | |

Note

Source: 2008 Water System Master Plan. Table 3-5.
 Source: 2008 Water System Master Plan. Table 3-5.

16.67% growth share (2008 to 2030)

15.97% growth share (2009 to 2030)

**City of West Linn
Water and Streets SDC Update Study -- Debt Out
Water Existing Assets**

FINAL

Table 3

| Utility Plant-in-Service | Original Cost | Non-Capacity Related | Capacity Related | Unused Capacity (5) | Used Capacity |
|----------------------------------------------------|----------------------|-----------------------------|-------------------------|----------------------------|----------------------|
| Capital Assets, net of depreciation (1) | \$ 9,118,800 | \$0 | \$9,118,800 | \$ 1,456,563 | \$7,662,237 |
| plus: Construction Work in Progress | - | - | - | - | - |
| plus: Credits Cash Reimbursed by SDCs (if any) (2) | - | - | - | - | - |
| less: Net Utility Debt Principal Outstanding (3) | 1,380,000 | - | 1,380,000 | 220,430 | 1,159,570 |
| less: Contributions in aid of Construction (4) | 1,564,990 | - | 1,564,990 | 249,979 | 1,315,011 |
| Allocable Plant-in-Service | \$6,173,810 | \$0 | \$6,173,810 | \$986,154 | \$5,187,656 |

NOTES:

- (1) Source: FY 2008 Comprehensive Annual Financial Report.
- (2) Unused Capacity of Assets Funded by Cash Credit Reimbursement.
- (3) Source: NRMSIR Bond Disclosure filing. Projected water fund debt service requirements through FY 2021.
- (4) FY 2006 through FY 2008. Source: NRMSIR Bond Disclosure filing (FY 2006 and FY 2007) and FY 2008 CAFR (FY 2008).
- (5) Based on growth's share of the total customer base at end of period.

Unused Capacity of Assets Funded by Cash Credit Reimbursement

| Construction Year | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 |
|---------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Credits Cash Reimbursed by SDCs (if any) [Note B] | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Beginning Average Day Demand [Note C] | 3.36 | 3.39 | 3.41 | 3.44 | 3.47 | 3.50 |
| Current Average Day Demand (FY 2009) [Note C] | 3.53 | 3.53 | 3.53 | 3.53 | 3.53 | 3.53 |
| Ending Average Day Demand for Study Period (FY 2030) [Note C] | 4.20 | 4.20 | 4.20 | 4.20 | 4.20 | 4.20 |
| % of Capacity Used by Growth to FY 2030 | 20.3% | 17.6% | 14.6% | 11.4% | 8.0% | 4.2% |
| Cost of Unused Capacity | \$ - |

Note [A]. Source: City staff. 10-Year Summary of Water Improvement Fee Expenditures.

Note [B]. Source: n/a.

Note [C]. Source: 2008 Water System Master Plan. Table 3-5.

City of West Linn
Water and Streets SDC Update Study -- Debt Out
Water SDC Project List

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Table 4

| # | Project Source (1) | Project Title (1) | Eligible Capacity Increasing % (1) | Serving Existing Deficiency | 2008 Project Cost | Current Project Cost (2) | SDC Eligible Cost |
|------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------|-----------------------------|-------------------|--------------------------|-------------------|
| Capital Maintenance Program | | | | | | | |
| 1 | 2008 WMP | Distribution System -- AC Pipe Replacement | 16.0% | 84.0% | \$ 6,900,000 | \$ 7,078,466 | \$ 1,130,656 |
| 2 | 2008 WMP | Distribution System -- Galvanized Pipe Replacement | 16.0% | 84.0% | 750,000 | 769,398 | 122,897 |
| 3 | 2008 WMP | Distribution System -- Pressure Reducing Valve Vault Improvements | 16.0% | 84.0% | 100,000 | 102,586 | 16,386 |
| 4 | 2008 WMP | Reservoir Improvements -- Reservoir Seismic Assessment and Improvements | 16.0% | 84.0% | 390,000 | 400,087 | 63,907 |
| 5 | 2008 WMP | Reservoir Improvements -- Reservoir Coating Maintenance and Replacement | 16.0% | 84.0% | 360,000 | 369,311 | 58,991 |
| 6 | 2008 WMP | General System Improvements -- Willamette Pump Station Motor Control Center Assessment and Upgrades | 16.0% | 84.0% | 120,000 | 123,104 | 19,664 |
| 7 | 2008 WMP | General System Improvements -- Demolish Abandoned View Drive Site Facilities | 16.0% | 84.0% | 75,000 | 76,940 | 12,290 |
| 8 | 2008 WMP | General System Improvements -- SCADA System Upgrades | 16.0% | 84.0% | 150,000 | 153,880 | 24,579 |
| 9 | Storage and Pumping Facilities | | | | | - | - |
| 10 | 2008 WMP | Bolton Pressure Zone -- Bolton Reservoir Replacement – 4.0 MG | 30.0% | 70.0% | 8,000,000 | 8,206,917 | 2,462,075 |
| 11 | 2008 WMP | Bland Pressure Zone -- Bland Reservoir No. 2 – 0.3 MG | 33.0% | 67.0% | 525,000 | 538,579 | 177,731 |
| 12 | 2008 WMP | Emergency Intertie Pump Station Expansion | 16.0% | 84.0% | 75,000 | 76,940 | 12,290 |
| 13 | 2008 WMP | 3rd Rosemont Pressure Zone Supply PS – Bland Reservoir Site (Intertie Supply to Rosemont) | 100.0% | 0.0% | 1,250,000 | 1,282,331 | 1,282,331 |
| Distribution System Piping | | | | | | | |
| 1 | 2008 WMP | Willamette -- Willamette Falls Dr. from PRV to Pump Station | 75.0% | 25.0% | 1,187,200 | 1,217,906 | 913,430 |
| 2 | 2008 WMP | Willamette -- Willamette Falls Dr. from Britton to Ostman | 56.0% | 44.0% | 311,910 | 319,977 | 179,187 |
| 3 | 2008 WMP | Willamette -- Dollar St. from 16th to Fields Dr. | 56.0% | 44.0% | 505,605 | 518,682 | 290,462 |
| 4 | 2008 WMP | Willamette -- 16th St & 8th Ave. to 10th St. | 100.0% | 0.0% | 351,125 | 360,207 | 360,207 |
| 5 | 2008 WMP | Willamette -- 12th St. from Tualatin Ave. to Volpp St. on to 9th St. up to 5th Ave. | 0.0% | 100.0% | 355,625 | 364,823 | - |
| 6 | 2008 WMP | Willamette -- 10th St. from 5th Ave. to Leslie Way | 0.0% | 100.0% | 84,750 | 86,942 | - |
| 7 | 2008 WMP | Willamette -- 19th St. from Dollar St. to Blankenship Rd. | 100.0% | 0.0% | 244,750 | 251,080 | 251,080 |
| 8 | 2008 WMP | Willamette -- Ostman Rd. from Dollar St. to Blankenship Rd. | 100.0% | 0.0% | 170,625 | 175,038 | 175,038 |
| 9 | 2008 WMP | Willamette -- Michael Dr. | 0.0% | 100.0% | 92,875 | 95,277 | - |
| 10 | 2008 WMP | Willamette -- Blankenship Rd. from Ostman Rd. to 19th | 100.0% | 0.0% | 122,500 | 125,668 | 125,668 |
| 11 | 2008 WMP | Willamette -- 19th St. from Blankenship Rd. to Johnson Rd | 100.0% | 0.0% | 176,500 | 181,065 | 181,065 |
| 12 | 2008 WMP | Willamette -- Blankenship Rd. from 19th to Willamette Terrace Apartments | 100.0% | 0.0% | 47,250 | 48,472 | 48,472 |
| 12 | 2008 WMP | Willamette -- Blankenship Rd. from 19th to Willamette Terrace Apartments | 100.0% | 0.0% | 99,665 | 102,243 | 102,243 |
| 13 | 2008 WMP | Willamette -- Johnson Rd. from Blankenship Rd. to Willamette River | 100.0% | 0.0% | 518,375 | 531,783 | 531,783 |
| 14 | 2008 WMP | Willamette -- Ostman Rd.& Dollar St. to Rancho Lobo Ln & Swiftshore Dr | 100.0% | 0.0% | 320,625 | 328,918 | 328,918 |
| 15 | 2008 WMP | Willamette -- South of Willamette Falls Dr. & 19th to Swiftshore Dr. | 0.0% | 100.0% | 90,000 | 92,328 | - |
| 16 | 2008 WMP | Willamette -- Swiftshore Dr. | 0.0% | 100.0% | 109,250 | 112,076 | - |
| 16 | 2008 WMP | Willamette -- Swiftshore Dr. | 0.0% | 100.0% | 62,900 | 64,527 | - |
| 17 | 2008 WMP | Willamette -- Evah Ln | 0.0% | 100.0% | 63,375 | 65,014 | - |
| 18 | 2008 WMP | Willamette -- From Willamette Falls Dr. to Dollar St. | 100.0% | 0.0% | 224,750 | 230,563 | 230,563 |
| 20 | 2008 WMP | Willamette -- Debok Rd. from Blankenship Rd. to Margery St | 36.0% | 64.0% | 196,540 | 201,623 | 72,584 |

| # | Project Source (1) | Project Title (1) | Eligible Capacity Increasing % (1) | Serving Existing Deficiency | 2008 Project Cost | Current Project Cost (2) | SDC Eligible Cost |
|----|--------------------|----------------------------------------------------------------------------------|------------------------------------|-----------------------------|-------------------|--------------------------|-------------------|
| 21 | 2008 WMP | Willamette -- Village Park Pl. | 0.0% | 100.0% | 66,500 | 68,220 | - |
| 23 | 2008 WMP | Willamette -- Debok Rd. from Village Park Pl. to Tamarisk Dr | 36.0% | 64.0% | 250,170 | 256,641 | 92,391 |
| 24 | 2008 WMP | Willamette -- Farrvista Dr. & Debok Rd. to Farrvista Ct. | 0.0% | 100.0% | 74,625 | 76,555 | - |
| 24 | 2008 WMP | Willamette -- Farrvista Dr. & Debok Rd. to Farrvista Ct. | 0.0% | 100.0% | 63,705 | 65,353 | - |
| 25 | 2008 WMP | Willamette -- Tamarisk Dr. | 100.0% | 0.0% | 89,500 | 91,815 | 91,815 |
| 26 | 2008 WMP | Willamette -- Troy Ct. | 0.0% | 100.0% | 68,875 | 70,656 | - |
| 27 | 2008 WMP | Willamette -- Wisteria Ct. | 0.0% | 100.0% | 40,000 | 41,035 | - |
| 34 | 2008 WMP | Willamette -- I-205 crossing west of Tamarisk Dr. | 100.0% | 0.0% | 151,000 | 154,906 | 154,906 |
| 19 | 2008 WMP | Bland PZ -- Barnes Circle from Greene St. to Lois Ln. | 0.0% | 100.0% | 68,250 | 70,015 | - |
| 22 | 2008 WMP | Bland PZ -- Riverknoll Ct | 0.0% | 100.0% | 68,375 | 70,143 | - |
| 28 | 2008 WMP | Bland PZ -- Killarney Dr. from Debok Rd. to PRV | 44.0% | 56.0% | 150,000 | 153,880 | 67,707 |
| 28 | 2008 WMP | Bland PZ -- Killarney Dr. from PRV to Tipperary Ct. | 44.0% | 56.0% | 44,250 | 45,395 | 19,974 |
| 29 | 2008 WMP | Horton PZ -- Weatherhill Rd. from S. Salamo Rd to S. Bland Circle and then south | 100.0% | 0.0% | 289,000 | 296,475 | 296,475 |
| 31 | 2008 WMP | Horton PZ -- Sussex St. south of Sunset Ave. | 0.0% | 100.0% | 31,000 | 31,802 | - |
| 32 | 2008 WMP | Horton PZ -- From River View Ave. to Falls View Dr. | 0.0% | 100.0% | 26,625 | 27,314 | - |
| 39 | 2008 WMP | Horton PZ -- Clark St. south of Skyline | 0.0% | 100.0% | 53,125 | 54,499 | - |
| 42 | 2008 WMP | Horton PZ -- North of Linn Ln. | 0.0% | 100.0% | 46,125 | 47,318 | - |
| 43 | 2008 WMP | Horton PZ -- Parkview Terrace and Rosepark Dr. | 0.0% | 100.0% | 95,625 | 98,098 | - |
| 47 | 2008 WMP | Horton PZ -- Apollo Rd. west of Athena Rd. | 0.0% | 100.0% | 48,125 | 49,370 | - |
| 48 | 2008 WMP | Horton PZ -- Palomino Way from Saddle Ct. to Palomino Circle | 100.0% | 0.0% | 30,750 | 31,545 | 31,545 |
| 36 | 2008 WMP | Bolton PZ -- River St. from Burns St. to Holly St. | 0.0% | 100.0% | 263,375 | 270,187 | - |
| 36 | 2008 WMP | Bolton PZ -- River St. from Burns St. to Holly St. | 0.0% | 100.0% | 31,375 | 32,187 | - |
| 38 | 2008 WMP | Bolton PZ -- Burns St. from Hood St. to River St. | 0.0% | 100.0% | 153,500 | 157,470 | - |
| 40 | 2008 WMP | Bolton PZ -- Caufield St. | 0.0% | 100.0% | 88,875 | 91,174 | - |
| 49 | 2008 WMP | Bolton PZ -- Mark Ln. from Willamette Dr. to Lowell Ave | 100.0% | 0.0% | 94,875 | 97,329 | 97,329 |
| 50 | 2008 WMP | Bolton PZ -- Magone Ln. west of Tulane St. | 0.0% | 100.0% | 36,625 | 37,572 | - |
| 51 | 2008 WMP | Horton PZ -- Dillow Dr. and Larson Ave. area | 0.0% | 100.0% | 166,750 | 171,063 | - |
| 51 | 2008 WMP | Horton PZ -- Dillow Dr. and Larson Ave. area | 36.0% | 64.0% | 139,655 | 143,267 | 51,576 |
| 52 | 2008 WMP | Horton PZ -- Hidden Springs Rd. southwest of Willamette Dr. | 100.0% | 0.0% | 39,875 | 40,906 | 40,906 |
| 30 | 2008 WMP | Rosemont PZ -- Weatherhill Rd. | 100.0% | 0.0% | 107,625 | 110,409 | 110,409 |
| 37 | 2008 WMP | Rosemont PZ -- Suncrest Ave. from Carriage Way to Valley View Dr. | 56.0% | 44.0% | 306,360 | 314,284 | 175,999 |
| 41 | 2008 WMP | Rosemont PZ -- Ridge Ln. area | 100.0% | 0.0% | 162,500 | 166,703 | 166,703 |
| 44 | 2008 WMP | Rosemont PZ -- S. Shannon Ln. north of Rosepark Dr. | 0.0% | 100.0% | 75,250 | 77,196 | - |
| 46 | 2008 WMP | Rosemont PZ -- Parker Rd. to Horton Reservoir | 56.0% | 44.0% | 939,600 | 963,902 | 539,785 |
| 45 | 2008 WMP | Rosemont PZ -- Rosemont Rd. from Salamo Rd to Wild Rose Dr | 56.0% | 44.0% | 340,955 | 349,774 | 195,873 |
| 61 | 2008 WMP | Rosemont PZ -- Upper Midhill Circle from Robinwood Way to Marylhurst Dr | 100.0% | 0.0% | 99,375 | 101,945 | 101,945 |
| 62 | 2008 WMP | Rosemont PZ -- View Drive Pump Station to Marylhurst Drive | 36.0% | 64.0% | 26,350 | 27,032 | 9,731 |
| 63 | 2008 WMP | Rosemont PZ -- Arbor Dr. from Upper Midhill Dr. to Lower Midhill Dr | 100.0% | 0.0% | 50,750 | 52,063 | 52,063 |
| 64 | 2008 WMP | Rosemont PZ -- Scenic Drive and Hillside Dr. area | 100.0% | 0.0% | 85,000 | 87,198 | 87,198 |
| 35 | 2008 WMP | Robinwood PZ -- Transmission to View Dr. Reservoir | 31.0% | 69.0% | 779,035 | 799,184 | 247,747 |
| 53 | 2008 WMP | Robinwood PZ -- Elmran Dr. from Cedaroak Dr. to Nixon Ave. | 100.0% | 0.0% | 123,500 | 126,694 | 126,694 |
| 54 | 2008 WMP | Robinwood PZ -- Nixon Ave. | 0.0% | 100.0% | 317,000 | 325,199 | - |
| 54 | 2008 WMP | Robinwood PZ -- Nixon Ave. | 0.0% | 100.0% | 61,500 | 63,091 | - |
| 55 | 2008 WMP | Robinwood PZ -- Elmran Dr. from Trillium Dr. to Calaroga Dr | 100.0% | 0.0% | 107,500 | 110,280 | 110,280 |

| # | Project Source (1) | Project Title (1) | Eligible Capacity Increasing % (1) | Serving Existing Deficiency | 2008 Project Cost | Current Project Cost (2) | SDC Eligible Cost |
|---------------|--------------------|---------------------------------------------------------------------|------------------------------------|-----------------------------|----------------------|--------------------------|----------------------|
| 56 | 2008 WMP | Robinwood PZ -- Parkwood Way west of Calaroga Dr. | 0.0% | 100.0% | 28,125 | 28,852 | - |
| 57 | 2008 WMP | Robinwood PZ -- River Rd south of Riverwood Pl. | 100.0% | 0.0% | 51,375 | 52,704 | 52,704 |
| 59 | 2008 WMP | Robinwood PZ -- Vista Ct. | 0.0% | 100.0% | 73,000 | 74,888 | - |
| 60 | 2008 WMP | Robinwood PZ -- Shady Hollow Way and Willamette Dr. to Fairview Way | 0.0% | 100.0% | 250,250 | 256,723 | - |
| 61 | 2008 WMP | Pressure Reducing Facilities -- Scenic Drive PRV Station | 16.0% | 84.0% | 120,000 | 123,104 | 19,664 |
| Supply | | | | | - | - | - |
| 1 | 2008 WMP | Emergency Supply -- Tigard/Lake Oswego Intertie | 16.0% | 84.0% | 2,200,000 | 2,256,902 | 360,499 |
| Other | | | | | | - | - |
| 1 | 2008 WMP | Water System Master Plan Update | 16.0% | 84.0% | 150,000 | 153,880 | 24,579 |
| Total | | | 36.6% | 63.4% | \$ 33,256,775 | \$ 34,116,949 | \$ 12,500,996 |

plus: SDC Credits Outstanding (3) \$ -
less: Beginning FY2009 Water SDC Fund Balance (4) (1,049,317)
Total Future Capital Projects for SDC Calculation \$ 11,451,679

NOTES:

- (1) Source: City of West Linn Water System Master Plan. November 2008. Murray, Smith & Associates, Inc. Reported capacity-increasing percentages were utilized for the majority of projects. Remaining project costs were allocated based on growth's share of future systemwide average day demand (2009-2030).
The eight projects listed under the "Capital Maintenance Program" were allocated to growth proportionately with their share of future water needs after consulting with the project engineer and concluding that both existing and future development would be jointly served by the improved and/or replaced system assets.
Distribution System -- AC Pipe Replacement. Will be replaced due to higher failure rate. Some pipes will be upsized, but not all.
Distribution System -- Galvanized Pipe Replacement. Typically 3-inch diameter or less, will be replaced with 4-inch piping. Allocation based on 3" and 4" meter flow capacity.
Distribution System -- Pressure Reducing Valve Vault Improvements. Proportional allocation due to improved ability of the stations to serve current and future development.
Reservoir Improvements -- Reservoir Seismic Assessment and Improvements. These assessments will allow reservoirs to continue to serve current and future customer needs.
Reservoir Improvements -- Reservoir Coating Maintenance and Replacement. Interior and exterior coating will allow reservoirs to continue to serve current and future customer needs.
General System Improvements -- Willamette Pump Station Motor Control Center Assessment / Upgrades. Proportionally allocated as the station is sized to meet the needs of growth.
General System Improvements -- Demolish Abandoned View Drive Site Facilities. Retiring abandoned facilities to reduce the risk associated with the failure of aging structures.
Emergency Intertie Pump Station Expansion. Will improve the capacity of the City's emergency supply system, providing equal benefit to all existing and future customers (pg 8-7).
Emergency Supply -- Tigard/Lake Oswego Intertie. Will improve the capacity of the City's emergency supply system, providing equal benefit to all existing and future customers (pg 8-7).
- (2) Source: Engineering News Review, April 20, 2009 issue. 2008 project cost estimates were based on the 20-City August 2008 ENR CCI of 8,362.
- | | | |
|--------------------------------------|-------------|-----------|
| Year | August 2008 | June 2009 |
| 20-City Avg. Construction Cost Index | 8,362 | 8,578 |
- (3) Credits based on eligible SDC costs. Few if any outstanding water SDC credits as of May 2009.
(4) Source: Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2008.

City of West Linn
 Water and Streets SDC Update Study -- Debt Out
 Transportation Fee Calculation

FINAL

Table 1

| Reimbursement Fee | Alt 1. Vehicle Portion | Alt 1. Bike/Ped/Transit Portion |
|------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------|
| Cost of Net Unused Capacity | \$ 8,291,639 | \$ - |
| Citywide Growth to End of Planning Period | 4,207 Peak-Hour Trips | 5,737 Bike / Ped Trips |
| Reimbursement Fee | \$ 1,970.88 per P-HT | \$ - per Bike/Ped Trip |
| Improvement Fee | | |
| Capacity Expanding Projects | \$ 17,782,788 | \$ 8,200,223 |
| Citywide Growth to End of Planning Period | 4,207 Peak-Hour Trips | 5,737 Bike / Ped Trips |
| Improvement Fee | \$ 4,226.88 per P-HT | \$ 1,429.38 per Bike/Ped Trip |
| Total System Development Charge | | |
| Reimbursement Fee | \$ 1,970.88 per P-HT | \$ - per Bike/Ped Trip |
| Improvement Fee | <u>4,226.88</u> per P-HT | <u>1,429.38</u> per Bike/Ped Trip |
| SDC Subtotal | \$ 6,197.76 per P-HT | \$ 1,429.38 per Bike/Ped Trip |
| plus: Administrative Cost Recovery 2.53% | <u>156.62</u> per P-HT | <u>36.12</u> per Bike/Ped Trip |
| Total Transportation SDC | \$ 6,354.39 per P-HT | \$ 1,465.50 per Bike/Ped Trip |

Table 2

Vehicle Trip Data

| | # | Year | Note |
|----------------------------------------|--------------|------|------|
| Initial Peak-Hour Trips | 10,240 | 2005 | (1) |
| Average Annual Peak-Hour Trip Growth | 1.57% | | |
| Future Peak-Hour Trips | 15,105 | 2030 | (1) |
| Current Peak-Hour Trips | 10,897 | 2009 | (2) |
| P-HT Growth During Study Period | 4,207 | | |
| Growth Share of Future Trip Total | 27.85% | | |

Bike/Ped Trip Data

| | | Note |
|----------------------------------------------|--------------|------|
| Peak-Hour Trip Growth | 4,207 | |
| Average Daily Trip Growth (estimate) | 42,071 | (3) |
| Bike/Ped % of Total Trips | 12.0% | (4) |
| Total Daily Trip Growth (Vehicle & Bike/Ped) | 47,808 | |
| Bike/Ped Daily Trip Growth | 5,737 | |

NOTES:

- (1) Source: 2005 - 2030 Residential Trip Growth Estimation within West Linn City Limits. April 2009. DKS Associates. Based on the land use assumptions of Clackamas County and Metro for 2030 and the Average Residential 2-hour Model Trip Rate, and forecasted household growth of less than 1% annually (page 10-3 of TSP).
- (2) Interpolated from the average annual growth rate for peak-hour trips from 2005 to 2030.
- (3) Estimate based on standard ratio of 10 average daily trips per 1 peak-hour trip.
- (4) Census travel data in the Portland Metro area demonstrates that walking, bike, and transit trips generally account for 12% of all trips.

**City of West Linn
Water and Streets SDC Update Study -- Debt Out
Transportation Existing Assets**

FINAL

Table 3

| Description | Capacity Related | Unused Capacity | Used Capacity |
|------------------------------------------------|-----------------------------|----------------------------|--------------------------|
| Historical Transportation SDC Expenditures (1) | \$ 11,031,964 | \$ 8,291,639 | \$ 2,740,325 |

NOTES:

(1) Unused Capacity of Assets Funded by Transportation SDC Expenditures (FY1993 - FY2008).

| Construction Year | FY 1993 | FY 1994 | FY 1995 | FY 1996 | FY 1997 | FY 1998 | FY 1999 | FY 2000 | FY 2001 |
|-------------------------------------------------------|------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|---------------------|---------------------|
| Improvement Fee Credits [Note A] | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Percentage For Capacity Increasing Projects | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Credits Cash Reimbursed by SDCs (if any) [Note B] | \$ 58,119 | \$ 438,752 | \$ 890,931 | \$ 50,093 | \$ 1,264,236 | \$ 813,431 | \$ 1,121,601 | \$ 1,415,100 | \$ 2,770,885 |
| Applicable Transportation SDC Expenditures | \$ 58,119 | \$ 438,752 | \$ 890,931 | \$ 50,093 | \$ 1,264,236 | \$ 813,431 | \$ 1,121,601 | \$ 1,415,100 | \$ 2,770,885 |
| Beginning Trip Total [Note C] | 8,498 | 8,631 | 8,766 | 8,903 | 9,043 | 9,185 | 9,328 | 9,475 | 9,623 |
| Current Trip Total (FY 2009) [Note C] | 10,897 | 10,897 | 10,897 | 10,897 | 10,897 | 10,897 | 10,897 | 10,897 | 10,897 |
| Ending Trip Total for Study Period (FY 2030) [Note C] | 15,105 | 15,105 | 15,105 | 15,105 | 15,105 | 15,105 | 15,105 | 15,105 | 15,105 |
| % of Capacity Used by Growth to FY 2009 | 36.3% | 35.0% | 33.6% | 32.2% | 30.6% | 28.9% | 27.2% | 25.3% | 23.2% |
| Cost of Unused Capacity | \$ 37,009 | \$ 285,132 | \$ 591,342 | \$ 33,985 | \$ 877,440 | \$ 578,071 | \$ 816,932 | \$ 1,057,463 | \$ 2,126,675 |

Note [A]. Source: City staff. 10-Year Summary of Street SDC Expenditures.

Note [B]. Source: n/a.

Note [C]. Source: Historical peak-hour trips derived from rate of growth implied in 2005-2030 trip forecast.

City of West Linn
 Water and Streets SDC Update Study -- Debt Out
 Transportation SDC Project List

FINAL

Table 4

| Project # | Source (1) | Project Location -- Description (1) | Existing Delay or V/C Ratio | Existing Meets Standard? | Future Delay or V/C Ratio | Future Delay or V/C w/ Project | Project Capacity Increasing % (1) | Systemwide Capacity Increasing % (2) | Methodology of Capacity Calculation (3) | Serving Existing Deficiency | City Funding Responsibility | Debt-Funded? | 2008 Project Cost (4) | Current Project Cost | SDC Eligible Cost | |
|-----------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|---------------------------|--------------------------------|-----------------------------------|--------------------------------------|-----------------------------------------|-----------------------------|-----------------------------|--------------|-----------------------|----------------------|-------------------|--|
| | 2008 TSP | Motor Vehicle Action Plan Projects -- City of West Linn Facility Projects | | | | | | | | | | | | | | |
| 1 | 2008 TSP | Salamo Road / Rosemont Road -- Add a traffic signal when warranted and pave adjacent intersection legs | 38.30 | No | > 224.3 | 28.60 | 95.0% | | B -- % Share | 5.0% | 100.0% | Yes | \$ 520,000 | \$ 544,985 | \$ 517,973 | |
| 2 | 2008 TSP | Willamette Falls Drive / Sunset Avenue -- Add a traffic signal when warranted | 0.31 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 260,000 | 272,493 | 272,493 | |
| 3 | 2008 TSP | Rosemont Road / Carriage Way -- Add a center median on Rosemont Road to allow two-stage left turn from Carriage Way | 0.21 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 1,475,000 | 1,545,872 | 1,545,872 | |
| 4 | 2008 TSP | Rosemont Way / Hidden Springs Road -- Add a traffic signal when warranted and northbound/southbound left turn lanes on Rosemont Road | 0.14 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 780,000 | 817,478 | 817,478 | |
| 5 | 2008 TSP | Willamette Falls Drive / Ostman Road -- Widen Willamette Falls Drive with center median 500' on each side of intersection to allow for two-stage left turn from Ostman Rd | 0.06 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 1,335,000 | 1,399,145 | 1,399,145 | |
| 6 | 2008 TSP | Willamette Falls Drive / Dollar Street (east) -- Widen Willamette Falls Drive with center median 500' on each side of intersection for two-stage left turn from Dollar St | 0.07 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 1,475,000 | 1,545,872 | 1,545,872 | |
| 7 | 2008 TSP | 10th Street (I-205 SB Ramps to 8th Court) -- Widen to 5-lane section with center turn lane and 2 travel lanes each direction | 0.61 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 1,685,000 | 1,765,962 | 1,765,962 | |
| 8 | 2008 TSP | 10th Street (8th Ave to Willamette Falls Drive) -- Add through lanes on 10th Street for a total of 2 lanes in each direction. Prohibit northbound left turn movement and replace left turn lane with ped island. | 0.73 | No | 1.00 | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | Yes | 500,000 | 524,024 | 145,957 | |
| 9 | 2008 TSP | Blankenship Road / 10th Street -- Add 2nd eastbound right turn lane and restripe westbound approach to have exclusive left turn and shared left-thru lane | 0.63 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 520,000 | 544,985 | 544,985 | |
| 10 | 2008 TSP | 10th Street / Willamette Falls Drive -- Change/upgrade traffic control to either signal or roundabout | 0.87 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 830,000 | 869,881 | 869,881 | |
| 11 | 2008 TSP | 10th Street / 8th Avenue -- Add right-in right-out access at the time of 8th Court extension. | 0.73 | No | 1.00 | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | No | 20,000 | 20,961 | 5,838 | |
| 12 | 2008 TSP | 10th Street / I-205 NB Ramps -- Add turn lanes (northbound right turn lane, stripe southbound approach to have dual left turn lanes and one thru lane, add exclusive NB Off-ramp left turn lane, and widen NB On-ramp to have two receiving lanes to support dual SB left turn movement) | 0.65 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 1,035,000 | 1,084,731 | 1,084,731 | |
| 13 | 2008 TSP | 8th Court -- Extend 8th Ct to Willamette Falls Dr. to provide additional access to 8th Court retail. (Concurrently make 10th Street / 8th Avenue right-in right-out access.) | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | Yes | 2,075,000 | 2,174,701 | 605,721 | |
| 14 | 2008 TSP | Willamette Falls Drive / 12th Street -- All way stop control/ traffic signal when warrants are met | 0.23 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 260,000 | 272,493 | 272,493 | |
| 15 | 2008 TSP | Willamette Falls Drive / 14th Street -- All way stop control when warrants are met | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | No | 10,000 | 10,480 | 2,919 | |
| 16 | 2008 TSP | Willamette Falls Drive / 19th Street -- All way stop control when warrants are met | 0.04 | Yes | Standard Met | 0.06 | 0.0% | | D -- 0% | 100.0% | 100.0% | No | 10,000 | 10,480 | - | |
| 17 | 2008 TSP | 8th Avenue -- Modify Dollar St connection to reconnect to 8th Avenue, and provide alternative route for local trips | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | Yes | 1,035,000 | 1,084,731 | 302,131 | |
| 19 | 2008 TSP | 8th Avenue -- Upgrade from 10th Street to Dollar Street | 0.73 | No | 1.00 | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | Yes | 1,760,000 | 1,844,566 | 513,768 | |
| 20 | 2008 TSP | Salamo Road / Parker Road -- Add a traffic signal when warranted | 0.13 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 100.0% | Yes | 260,000 | 272,493 | 272,493 | |
| | 2008 TSP | Motor Vehicle Master Plan Projects -- City of West Linn Facility Projects | | | | | | | | | | | | | | |
| 18M | 2008 TSP | 19th Street / Blankenship Road -- Upgrade to current City standards from Blankenship Rd/Debok Road to Willamette Falls Drive | | | | | 0.0% | | D -- 0% | 100.0% | 100.0% | Yes | 6,115,000 | 6,408,819 | - | |

| Project # | Source (1) | Project Location -- Description (1) | Existing Delay or V/C Ratio | Existing Meets Standard? | Future Delay or V/C Ratio | Future Delay or V/C w/ Project | Project Capacity Increasing % (1) | Systemwide Capacity Increasing % (2) | Methodology of Capacity Calculation (3) | Serving Existing Deficiency | City Funding Responsibility | Debt-Funded? | 2008 Project Cost (4) | Current Project Cost | SDC Eligible Cost |
|-----------|------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|--------------------------------|--------------------------------|-----------------------------------|--------------------------------------|-----------------------------------------|-----------------------------|-----------------------------|--------------|-----------------------|----------------------|-------------------|
| | | Motor Vehicle Action Plan Projects -- ODOT Facility Projects | | | | | | | | | | | | - | - |
| 21 | 2008 List | Highway 43 / Willamette Falls Drive -- Add a traffic signal that is coordinated with adjacent signal at I-205 NB Off Ramps | 0.21 | No | 0.77 | | | 27.9% | C -- 2030 share | 72.1% | 20.0% | Yes | 260,000 | 272,493 | 15,180 |
| | 2008 TSP | Motor Vehicle Master Plan Projects -- ODOT Facility Projects | | | | | | | | | | | | - | - |
| 22M | 2008 TSP | I-205/10th St. Interchange -- Construct long-term interchange improvement (SPUI \$15m or Split Diamond \$30m). | | | Average of Project #s 7 and 12 | | 100.0% | | Average: #7, #12 | 0.0% | 20.0% | Yes | 15,000,000 | 15,720,733 | 3,144,147 |
| | | Motor Vehicle Action Plan Projects -- ODOT Facility Projects (Hwy 43 Concept Plan) | | | | | | 27.9% | C -- 2030 share | 72.1% | 20.0% | | | - | - |
| 23 | 2008 TSP | Highway 43 / Arbor Drive -- Add left turn lanes on Highway 43 (cost included in Highway 43 segment cost, listed below) | 0.37 | No | > 1.0 | | 0.0% | | D -- 0% | 100.0% | 20.0% | No | - | - | - |
| 24 | 2008 TSP | Highway 43 / Cedar Oak Drive -- Realign shopping center driveway located to the southeast with intersection | 0.65 | Yes | Standard Met | 0.82 | 0.0% | | D -- 0% | 100.0% | 20.0% | Yes | 520,000 | 544,985 | - |
| 25 | 2008 TSP | Highway 43 / Holmes Street -- Modify circulation to allow exit only traffic from Holmes Street | 0.65 | No | > 1.0 | | | 27.9% | C -- 2030 share | 72.1% | 20.0% | No | 10,000 | 10,480 | 584 |
| 26 | 2008 TSP | Highway 43 / Lewis Street -- Modify circulation to prohibit left turns out from Lewis Street | 0.65 | Yes | Standard Met | 0.82 | 0.0% | | D -- 0% | 100.0% | 20.0% | No | 10,000 | 10,480 | - |
| 27 | 2008 TSP | Highway 43 / Pimlico Drive -- Add a traffic signal when warranted | 0.16 | No | > 1.0 | | 95.0% | | Estimated (near 100%) | 5.0% | 20.0% | Yes | 260,000 | 272,493 | 51,774 |
| 28 | 2008 TSP | Highway 43 / Hood Street / McKillican Street -- Modify traffic signal timing to have protected/permitted phasing on Hood and McKillican | 0.76 | Yes | Standard Met | 1.07 | | 27.9% | C -- 2030 share | 72.1% | 20.0% | No | 50,000 | 52,402 | 2,919 |
| 29 | 2008 TSP | North City Limit to Maryhurst -- Highway 43 Improvements | 0.80 | Yes | Standard Met | 0.94 | 0.0% | | D -- 0% | 100.0% | 20.0% | Yes | 3,030,000 | 3,175,588 | - |
| 30 | 2008 TSP | Maryhurst to Hidden Springs -- Highway 43 Improvements | 0.83 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 20.0% | Yes | 4,350,000 | 4,559,013 | 911,803 |
| 31 | 2008 TSP | Hidden Springs to Pimlico -- Highway 43 Improvements | 0.83 | Yes | Failing | Meets Standard | 100.0% | | A -- 100% | 0.0% | 20.0% | Yes | 5,585,000 | 5,853,353 | 1,170,671 |
| 32 | 2008 TSP | Pimlico to Buck Highway 43 Improvements | | | | | 0.0% | | D -- 0% | 100.0% | 20.0% | Yes | 3,460,000 | 3,626,249 | - |
| 33 | 2008 TSP | West A Street to Webb -- Highway 43 Improvements | 0.74 | Yes | Standard Met | 0.97 | 0.0% | | D -- 0% | 100.0% | 20.0% | Yes | 2,140,000 | 2,242,825 | - |
| 34 | 2008 TSP | Webb to Hood- McKillican -- Highway 43 Improvements | 0.76 | Yes | Standard Met | 1.07 | 0.0% | | D -- 0% | 100.0% | 20.0% | Yes | 1,980,000 | 2,075,137 | - |
| | 2008 TSP | Pedestrian Master Plan | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | | | - | - |
| 15 | 2008 TSP | 10th Street One side of street. I-205 8th Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 65,000 | 68,123 | 1,897 |
| 16 | 2008 TSP | 10th Street* One side of street. Blankenship Road I-205 | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 55,000 | 57,643 | 1,606 |
| 17 | 2008 TSP | CedarOak Drive* Both sides of street. Old River Road Elmran Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 585,000 | 613,109 | 17,077 |
| 18 | 2008 TSP | Dillow Drive Both sides of street. Willamette Drive Larson Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 305,000 | 319,655 | 8,903 |
| 19 | 2008 TSP | Dillow Drive* Both sides of street. Larson Avenue Failing Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 220,000 | 230,571 | 6,422 |
| 20 | 2008 TSP | Elmran Avenue* Both sides of street. Nixon Avenue Old River Road | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 415,000 | 434,940 | 12,114 |
| 21 | 2008 TSP | Failing Street* Both sides of street. Willamette Drive Dillow Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 395,000 | 413,979 | 11,531 |
| 22 | 2008 TSP | Hillcrest Drive* Both sides of street. Maryhurst Drive (North) Maryhurst Drive (South) | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 655,000 | 686,472 | 19,120 |
| 23 | 2008 TSP | Jolie Pointe Drive* Both sides of street. Larson Avenue Rainier Place | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 230,000 | 241,051 | 6,714 |
| 25 | 2008 TSP | Larson Avenue* Both sides of street. Dillow Drive Jolie Pointe Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 205,000 | 214,850 | 5,984 |
| 26 | 2008 TSP | Mapleton Drive* Both sides of street. Willamette Drive Nixon Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 645,000 | 675,992 | 18,828 |
| 27 | 2008 TSP | Maryhurst Drive* Both sides of street. Willamette Drive Hillcrest Court | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 950,000 | 995,646 | 27,732 |
| 28 | 2008 TSP | McKillican* One side of street. West A Street Willamette Falls Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 105,000 | 110,045 | 3,065 |
| 29 | 2008 TSP | Nixon Avenue* Both sides of street. Mapleton Drive Elmran Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 540,000 | 565,946 | 15,763 |
| 30 | 2008 TSP | Old River Road* Both sides of street. Willamette Drive Cherokee Court | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 870,000 | 911,803 | 25,397 |
| 31 | 2008 TSP | Ostman Road* Both sides of street. Blankenship Road Willamette Falls Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 560,000 | 586,907 | 16,347 |
| 32 | 2008 TSP | Parker Road* One side of street. 200' east of Wild Rose Drive Sunset Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 245,000 | 256,772 | 7,152 |

| Project # | Project Source (1) | Project Location -- Description (1) | Existing Delay or V/C Ratio | Existing Meets Standard? | Future Delay or V/C Ratio | Future Delay or V/C w/ Project | Project Capacity Increasing % (1) | Systemwide Capacity Increasing % (2) | Methodology of Capacity Calculation (3) | Serving Existing Deficiency | City Funding Responsibility | Debt-Funded? | 2008 Project Cost (4) | Current Project Cost | SDC Eligible Cost |
|-----------|--------------------|--------------------------------------------------------------------------------------------|-----------------------------|--------------------------|---------------------------|--------------------------------|-----------------------------------|--------------------------------------|-----------------------------------------|-----------------------------|-----------------------------|--------------|-----------------------|----------------------|-------------------|
| 33 | 2008 TSP | Pimlico Drive* Both sides of street. Willamette Drive Palamino Way (East) | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 330,000 | 345,856 | 9,633 |
| 34 | 2008 TSP | Rosemont Road* Both sides of street. Summit Street Ridge Lane | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 290,000 | 303,934 | 8,466 |
| 35 | 2008 TSP | Rosemont Road* One side of street. Ridge Lane Carriage Way | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 880,000 | 922,283 | 25,688 |
| 38 | 2008 TSP | Salamo Drive* Both sides of street. 10th Street 300' south of Bland Circle | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 1,090,000 | 1,142,373 | 31,819 |
| 39 | 2008 TSP | Skyline Drive* Both sides of street. Summit Drive West A Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 915,000 | 958,965 | 26,710 |
| 40 | 2008 TSP | Sunset Avenue* Both sides of street. Parker Road Spring Rock Circle | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 535,000 | 560,706 | 15,617 |
| 41 | 2008 TSP | Tannler Drive* Both sides of street. Blankenship Road Greene Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 275,000 | 288,213 | 8,028 |
| 42 | 2008 TSP | Tualatin Avenue* Both sides of street. Volpp Street 12th Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 170,000 | 178,168 | 4,963 |
| 43 | 2008 TSP | Willamette Falls Drive* Both sides of street. 6th Street 10th Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 435,000 | 455,901 | 12,698 |
| 44 | 2008 TSP | Willamette Falls Drive* Both sides of street. 19th Street 16th Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 220,000 | 230,571 | 6,422 |
| 46 | 2008 TSP | 19th Street* Both sides of street. Blankenship Road Dollar Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 420,000 | 440,181 | 12,260 |
| 47 | 2008 TSP | Bland Circle Both sides of street. North Limits Salamo Road | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 720,000 | 754,595 | 21,018 |
| 50 | 2008 TSP | Blankenship Road One side of street. 100' east of Virginia Lane 13th Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 40,000 | 41,922 | 1,168 |
| 51 | 2008 TSP | Blankenship Road* One side of street. Ostman Road 19th Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 105,000 | 110,045 | 3,065 |
| 52 | 2008 TSP | Blankenship Road* One side of street. Under I-205 | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 60,000 | 62,883 | 1,751 |
| 53 | 2008 TSP | Carriage Way* Both sides of street. Rosemont Road 700' north of Rosemont Road | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 150,000 | 157,207 | 4,379 |
| 54 | 2008 TSP | Chestnut Street Both sides of street. Sunset Avenue Willamette Falls Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 140,000 | 146,727 | 4,087 |
| 55 | 2008 TSP | Cornwall Street* Both sides of street. Sunset Avenue Oxford Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 280,000 | 293,454 | 8,174 |
| 56 | 2008 TSP | Debok Road* Both sides of street. 100' north of Summerlin Drive Farvista Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 135,000 | 141,487 | 3,941 |
| 57 | 2008 TSP | Dollar Street* One side of street. Ostman Road Willamette Falls Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 585,000 | 613,109 | 17,077 |
| 59 | 2008 TSP | Exeter Street* Both sides of street. Oxford Street Long Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 140,000 | 146,727 | 4,087 |
| 60 | 2008 TSP | Hidden Springs Road One side of street. Carriage Drive Wildwood Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 145,000 | 151,967 | 4,233 |
| 61 | 2008 TSP | Hidden Springs Road One side of street. Santa Anita Drive 300' east of Suncrest Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 135,000 | 141,487 | 3,941 |
| 62 | 2008 TSP | Hidden Springs Road* One side of street. Wildwood Drive 400' south of Autumn View | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 65,000 | 68,123 | 1,897 |
| 63 | 2008 TSP | Johnson Road Both sides of street. Woodbine Road Blankenship Road | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 870,000 | 911,803 | 25,397 |
| 69 | 2008 TSP | Oxford Street* Both sides of street. Cornwall Street Exeter Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 130,000 | 136,246 | 3,795 |
| 70 | 2008 TSP | Pimlico Drive One side of street. Santa Anita Drive Palamino Way (West) | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 120,000 | 125,766 | 3,503 |
| 71 | 2008 TSP | Riverview Avenue Both sides of street. Turnwater Street Sunset Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 80,000 | 83,844 | 2,335 |
| 72 | 2008 TSP | Salamo Drive One side of street. Bland Circle Weathermill Road | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 140,000 | 146,727 | 4,087 |
| 73 | 2008 TSP | Salamo Drive One side of street. S. Day Road Parker Road | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 100,000 | 104,805 | 2,919 |
| 74 | 2008 TSP | Santa Anita Drive* One side of street. Pimlico Drive Clubhouse Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 50,000 | 52,402 | 1,460 |
| 75 | 2008 TSP | Santa Anita Drive* One side of street. Clubhouse Circle Hidden Springs Road | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 85,000 | 89,084 | 2,481 |
| 76 | 2008 TSP | Simpson Street Both sides of street. Long Street Turnwater Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 105,000 | 110,045 | 3,065 |
| 77 | 2008 TSP | Summit Drive* One side of street. Skyline Drive Oxford Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 245,000 | 256,772 | 7,152 |
| 78 | 2008 TSP | Suncrest Drive* One side of street. Hillcrest Drive Carriage Way | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 205,000 | 214,850 | 5,984 |
| 79 | 2008 TSP | Turnwater Street Both sides of street. Simpson Street Riverview Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 105,000 | 110,045 | 3,065 |
| 80 | 2008 TSP | Willamette Falls Drive One side of street. 16th Street Dollar Street (East) | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 45,000 | 47,162 | 1,314 |
| 81 | 2008 TSP | Willamette Falls Drive Both sides of street. 200' west of Ostman Road Dollar Street (West) | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 655,000 | 686,472 | 19,120 |

| Project # | Source (1) | Project Location -- Description (1) | Existing Delay or V/C Ratio | Existing Meets Standard? | Future Delay or V/C Ratio | Future Delay or V/C w/ Project | Project Capacity Increasing % (1) | Systemwide Capacity Increasing % (2) | Methodology of Capacity Calculation (3) | Serving Existing Deficiency | City Funding Responsibility | Debt-Funded? | 2008 Project Cost (4) | Current Project Cost | SDC Eligible Cost |
|-----------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|---------------------------|--------------------------------|-----------------------------------|--------------------------------------|-----------------------------------------|-----------------------------|-----------------------------|--------------|-----------------------|----------------------|-------------------|
| 82 | 2008 TSP | Willamette Falls Drive* Both sides of street. West A Street 6th Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 2,200,000 | 2,305,708 | 64,221 |
| | 2008 TSP | Bicycle Action Plan | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | | | - | - |
| 1 | 2008 TSP | Rosemont Road -- On-street Bike Lanes, from Carriage Way to Summit Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 1,475,000 | 1,545,872 | 43,057 |
| 2 | 2008 TSP | Salamo Road -- On-street Bike Lanes, from 10th Street to Barrington Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 405,000 | 424,460 | 11,823 |
| | 2008 TSP | Bicycle Master Plan | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | | | - | - |
| 3 | 2008 TSP | Clark Street / Long Street / Simpson Street / Kelly Street Bicycle Boulevard Treatment Skyline Drive Sunset Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 105,000 | 110,045 | 3,065 |
| 4 | 2008 TSP | Old River Road Bicycle Boulevard Treatment Willamette Drive North City Limits | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 105,000 | 110,045 | 3,065 |
| 5 | 2008 TSP | Pimlico Drive Bike Lane/ Shoulder Bikeway Santa Anita Drive Willamette Drive (Hwy 43) \$ | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 100,000 | 104,805 | 2,919 |
| 6 | 2008 TSP | Blankenship Road On-street Bike Lanes Ostman Road Debok Road | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | - | - | - |
| 7 | 2008 TSP | Hidden Springs Road* On-street Bike Lanes Rosemont Road Willamette Drive \$ | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 345,000 | 361,577 | 10,071 |
| 8 | 2008 TSP | Santa Anita Drive* On-street Bike Lanes Rosemont Road Hidden Springs Road \$ | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 545,000 | 571,187 | 15,909 |
| 9 | 2008 TSP | Skyline Drive* On-street Bike Lanes Summit Street West A Street \$ | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 655,000 | 686,472 | 19,120 |
| 10 | 2008 TSP | Summit Street* On-street Bike Lanes Skyline Drive Cornwall Street | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 375,000 | 393,018 | 10,947 |
| 11 | 2008 TSP | Sunset Avenue On-street Bike Lanes Parker Road Willamette Falls Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 945,000 | 990,406 | 27,586 |
| 24 | 2008 TSP | Willamette Drive On-street Bike Lanes - North City Limits McKillican Stree | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | - | - | - |
| 12 | 2008 TSP | Willamette Falls Drive* On-street Bike Lanes Egperly Street West City Limits | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 390,000 | 408,739 | 11,385 |
| 13 | 2008 TSP | Willamette Falls Drive* On-street Bike Lanes Willamette Drive Ostman Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | Yes | 2,520,000 | 2,641,083 | 73,562 |
| 14 | 2008 TSP | Johnson Road Shoulder Bike Lane Blankenship Road City Limits | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 25,000 | 26,201 | 730 |
| 15 | 2008 TSP | New Off-Street Accessway* Construct new bicycle and pedestrian connection. Wisteria Road Bland Circle | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 120,000 | 125,766 | 3,503 |
| 16 | 2008 TSP | New Off-Street Accessway* Construct new bicycle and pedestrian connection. Sinclair Street Holly Stree | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 40,000 | 41,922 | 1,168 |
| 17 | 2008 TSP | New Off-Street Accessway* Construct new bicycle and pedestrian connection. Rosepark Drive Rosemont Roa | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 40,000 | 41,922 | 1,168 |
| 18 | 2008 TSP | New Off-Street Accessway* Construct new bicycle and pedestrian connection. Hillcrest Court Marylhurst Driv | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 40,000 | 41,922 | 1,168 |
| 19 | 2008 TSP | 10th Street* On-street Bike Lanes Salamo Road Willamette Falls Drive | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 200,000 | 209,610 | 5,838 |
| 20 | 2008 TSP | 12th Street On-street Bike Lanes Willamette Falls Drive Tualatin Avenue | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 150,000 | 157,207 | 4,379 |
| 22 | 2008 TSP | Parker Road* On-street Bike Lanes Sunset Avenue 500' east of Coho Lane | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 135,000 | 141,487 | 3,941 |
| 23 | 2008 TSP | Tualatin Avenue On-street Bike Lanes 12th Street Tualatin River | | | | | 2.8% | | E -- bike/ped | 97.2% | 100.0% | No | 135,000 | 141,487 | 3,941 |
| | 2008 TSP | Transit Action Plan | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | | | - | - |
| 1 | 2008 TSP | Improve Service Coordination for Route 154 -- West Linn/TriMet -- Coordinate with TriMet to modify the schedule, stop locations, or add a layover to improve connections and service for Route 154 | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | No | - | - | - |
| 2 | 2008 TSP | Transit Expansion Study and Survey -- West Linn - Explore the feasibility of local fixed-route transit (e.g. jitney) service including surveys of residents and potential users. | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | No | 80,000 | 83,844 | 23,353 |
| 3 | 2008 TSP | Provide Transit Amenities at Major Transit Stops - West Linn/TriMet -- Provide shelters, information kiosks, etc along key transit routes in West Linn with land use development. Specific locations (5) to be determined through transit study and survey. | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | No | 50,000 | 52,402 | 14,596 |

| Project # | Project Source (1) | Project Location -- Description (1) | Existing Delay or V/C Ratio | Existing Meets Standard? | Future Delay or V/C Ratio | Future Delay or V/C w/ Project | Project Capacity Increasing % (1) | Systemwide Capacity Increasing % (2) | Methodology of Capacity Calculation (3) | Serving Existing Deficiency | City Funding Responsibility | Debt-Funded? | 2008 Project Cost (4) | Current Project Cost | SDC Eligible Cost |
|--------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|---------------------------|--------------------------------|-----------------------------------|--------------------------------------|-----------------------------------------|-----------------------------|-----------------------------|---------------------|-----------------------|----------------------|----------------------|
| 4 | 2008 TSP | Improve Pedestrian Connections to Transit Facilities -- West Linn/TriMet -- Construct sidewalks, crosswalks, etc. adjacent to transit routes and facilities. | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | No | - | - | - |
| 5 | 2008 TSP | Decrease Headways -- TriMet -- Provide more frequent transit service during peak commute periods. | | | | | | 27.9% | C -- 2030 share | 72.1% | 100.0% | No | - | - | - |
| 6 | 2008 TSP | Provide More Local Service -- West Linn/TriMet -- Expand coverage by providing local (e.g. jitney) service to connect to existing transit lines. Enhance/expand local pick up services. Specific locations/actions to be determined through transit study and survey. This project is a placeholder for funds pending the outcome of the study. \$50,000 annually. | | | | | | 0.0% | Not Applicable | 100.0% | 100.0% | Yes | 1,150,000 | 1,205,256 | - |
| Total | | | | | | | 40.8% | 1.8% | | 57.4% | 67.1% | \$88,245,715 | \$ 89,185,000 | \$ 93,470,238 | \$ 18,675,753 |

plus: SDC Credits Outstanding (5) \$ 62,737,253

less: Beginning FY2009 Transportation SDC Fund Balance (6) \$ -

Total Future Capital Projects for SDC Calculation \$ (387,884)

Total Future Capital Projects for SDC Calculation \$ 18,287,869

NOTES:

- City of West Linn Transportation System Plan. December 2008. DKS Associates. Motor Vehicle Action Plan is a subset of Motor Vehicle Master Plan which meets all system needs. For those projects where the improved level of service exceeded the existing level of service (1, 8, 11, 19), growth's share of the improved capacity was limited to the capacity needed to meet the existing (failing) level of service. Allocations for the following projects were based on additional performance or allocation information provided by DKS Associates: #1, 8, 11, 13, 15, 17, 19, 21, 23, 24, 25, 26, 27, and 32. Funding responsibility reflects updated City assumption of higher match requirements.
- Where site-specific capacity data was not available, project costs were allocated to future development based on growth's share of total peak-hour trips at the end of the study period (2030).
- For each project, one of the three following approaches was utilized to determine the capacity-increasing share that served the needs of growth:
 - A = 100% to growth -- existing state meets standard, future state without improvement does not meet standard, future state with improvement meets standard.
 - B = % of capacity added to serve growth -- based on the following equation [(future state without improvement MINUS existing state) / (future state without improvement - future state with improvement)].
 - C = % of systemwide trips -- growth's share of future trip total, based on the following equation [(2030 peak-hour trip total MINUS 2009 peak-hour trip total) / (2030 peak-hour trip total)].
 - D = 0% to growth -- existing state meets standard, future state without improvement also meets standard.
 - E = Bike/Ped = 10% of systemwide trip share -- 10% of bike/ped project costs were assumed to increase capacity, which were allocated to growth proportionately with its share of the future vehicle trip total.
- Source: Engineering News Review, April 20, 2009 issue.

| | | |
|--------------------------------------|-----------|-----------|
| Year | June 2008 | June 2009 |
| 20-City Avg. Construction Cost Index | 8,185 | 8,576 |
- Credits based on eligible SDC costs. Few if any outstanding transportation SDC credits as of May 2009.
- Source: Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2008.

**City of West Linn
Water and Streets SDC Update Study -- Debt Out
Administrative Cost Recovery Calculation**

FINAL

Table 5

| | |
|-------------------------------------------------------------------------------|------------------|
| Net Annual Administrative Cost related to Water & Streets SDCs (1) | \$ 50,000 |
| Amortization of SDC Study Cost over 5 years (2): | <u>6,212</u> |

Net Annual SDC Administrative Cost: **\$ 56,212**

Estimated Annual Proposed SDC Revenues before Admin. Cost

| | |
|----------------------------|---------------------|
| Revenues from Water SDC: | \$ 592,278 |
| Revenues from Streets SDC: | <u>1,632,126</u> |
| | \$ 2,224,404 |

Admin. Cost / Total Annual SDC Revenues: **2.53%** on all SDCs

NOTES:

(1) Source: 2009 estimate of the water and street share of annual SDC administrative and accounting costs.

(2) Cost of: **\$ 28,450**
 at: **3.0%**
 over: **5** years

Table 6

Vehicle SDC \$ 6,354.39 per P-HT

| ITE Code | Customer Type | Land Use Description | Peak-Hour Trips | Pass-By Trip Factor | Adjusted P-H Ts | Vehicle SDC | Units |
|----------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------------|-----------------------|----------------|
| 110 | General Light Industrial | Typically less than 500 employees, free standing and single use. Examples: Printing plants, material testing laboratories, data processing equipment assembly, power stations. | 0.98 | 1 | 0.98 | \$ 6,227 | KSF |
| 130 | Industrial Park | Industrial Park areas that contain a number of industrial and/or related facilities (mix of manufacturing, service, and warehouse). | 0.86 | 1 | 0.86 | \$ 5,465 | KSF |
| 140 | Manufacturing | Facilities that convert raw materials into finished products. Typically have related office, warehouse, research, and associated functions. | 0.74 | 1 | 0.74 | \$ 4,702 | KSF |
| 151 | Mini-Warehouse | Storage Units or Vaults rented for storage of goods. Units are physically separate and access through an overhead door or other common access point. Example: U-Store-It. | 0.26 | 1 | 0.26 | \$ 1,652 | KSF |
| 210 | SF Detached | Single family detached housing. | 1.01 | 1 | 1.01 | \$ 6,418 | DU |
| 220 | Apartment | Rental Dwelling Units within the same building. At least 4 units in the same building. Examples: Quadplexes and all types of apartment buildings. | 0.62 | 1 | 0.62 | \$ 3,940 | DU |
| 230 | Condo/Townhouse | Residential Condominium/Townhouses under single-family ownership. Minimum of two single family units in the same building structure. | 0.52 | 1 | 0.52 | \$ 3,304 | DU |
| 240 | Mobile Home | Trailers or Manufactured homes that are sited on permanent foundations. Typically the parks have community facilities (laundry, recreation rooms, pools). | 0.59 | 1 | 0.59 | \$ 3,749 | DU |
| 253 | Elderly Housing | Restricted to senior citizens. Contains residential units similar to apartments or condos. Sometimes in self-contained villages. May also contain medical facilities, dining, and some limited, supporting retail. | 0.17 | 1 | 0.17 | \$ 1,080 | DU |
| 310 | Hotel | Lodging facility that may include restaurants, lounges, meeting rooms, and/or convention facilities. Can include a large motel with these facilities. | 0.59 | 1 | 0.59 | \$ 3,749 | Room |
| 320 | Motel | Sleeping accommodations and often a restaurant. Free on-site parking and little or no meeting space. | 0.47 | 1 | 0.47 | \$ 2,987 | Room |
| 411 * | Local Park | City-owned parks, varying widely as to location, type, and number of facilities, including boating / swimming facilities, ball fields, and picnic facilities. | 0.09 | 1 | 0.09 | \$ 572 | Acre |
| 430 | Golf Course | Includes 9, 18, 27, and 36 hole municipal and private country clubs. Some have driving ranges and clubhouses with pro shops, restaurants, lounges. Many of the muni courses do not include such facilities. | 2.74 | 1 | 2.74 | \$ 17,411 | Hole |
| 435 | Multipurpose Recreation Facility | Multi-purpose recreational facilities contain two or more of the following land uses at one site: mini-golf, batting cages, video arcade, bumper boats, go-carts, and driving ranges. | 5.77 | 1 | 5.77 | \$ 36,665 | Acre |
| 437 | Bowling Alley | Recreational facilities with bowling lanes which may include a small lounge, restaurant or snack bar. | 3.54 | 1 | 3.54 | \$ 22,495 | Lane |
| 493 | Athletic Club | Privately owned with weightlifting and other facilities often including swimming pools, hot tubs, saunas, racquet ball, squash, and handball courts. | 5.76 | 1 | 5.76 | \$ 36,601 | KSF |
| 495 | Recreational Community Center | Recreational community centers are facilities similar to and including YMCAs, often including classes, day care, meeting rooms, swimming pools, tennis racquetball, handball, weightlifting equipment, locker rooms, & food service. | 1.64 | 1 | 1.64 | \$ 10,421 | KSF |
| 520 * | Elementary School | Public. Typically serves K-6 grades. | 0.28 | 1 | 0.28 | \$ 1,779 | Student |
| 522 | Middle School | Public. Serves students that completed elementary and have not yet entered high school. | 0.15 | 1 | 0.15 | \$ 953 | Student |
| 530 | High School | Public. Serves students that completed middle or junior high school. | 0.14 | 1 | 0.14 | \$ 890 | Student |
| 540 | Junior/Community College | Two-year junior colleges or community colleges. | 0.12 | 1 | 0.12 | \$ 763 | Student |
| 560 | Church | Contains worship area and may include meeting rooms, classrooms, dining area and facilities. | 0.66 | 1 | 0.66 | \$ 4,194 | KSF |
| 565 * | Day Care | Facility for pre-school children care primarily during daytime hours. May include classrooms, offices, eating areas, and playgrounds. | 13.18 0.82 | 0.33 0.33 | 4.35 0.27 | \$ 27,642 \$ 1,716 | KSF Student |
| 590 | Library | Public or Private. Contains shelved books, reading rooms or areas, sometimes meeting rooms. | 7.09 | 1 | 7.09 | \$ 45,053 | KSF |
| 591 | Lodge/Fraternal Organization | Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms. | 0.03 | 1 | 0.03 | \$ 191 | Member |
| 710 | General Office | Office building with multiple tenants. Mixture of tenants can include professional services, bank and Loan institutions, restaurants, snack bars, and service retail facilities. | 1.49 | 1 | 1.49 | \$ 9,468 | KSF |
| 715 | Single Tenant Office Building | Single tenant office building. Usually contains offices, meeting rooms, file storage areas, data processing, restaurant or cafeteria, and other service functions. | 1.73 | 1 | 1.73 | \$ 10,993 | KSF |
| 720 | Medical-Dental Office | Provides diagnosis and outpatient care on a routine basis. Typically operated by one or more private physicians or dentists. | 3.72 | 1 | 3.72 | \$ 23,638 | KSF |
| 750 | Office Park | Park or campus-like planned unit development that contains office buildings and support services such as banks & loan institutions, restaurants, service stations. | 1.5 | 1 | 1.5 | \$ 9,532 | KSF |
| 760 | Research & Development Center | Single building or complex of buildings devoted to research & development. May contain offices and light fabrication facilities. | 1.08 | 1 | 1.08 | \$ 6,863 | KSF |

| ITE Code | Customer Type | Land Use Description | Peak-Hour Trips | Pass-By Trip Factor | Adjusted P-H Ts | Vehicle SDC | Units |
|----------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|-----------------|-------------|------------------|
| 770 | Business Park | Group of flex-type or incubator 1 - 2 story buildings served by a common roadway system. Tenant space is flexible to accommodate a variety of uses. Rear of building usually served by a garage door. Typically includes a mix of offices, retail & wholesale. | 1.29 | 1 | 1.29 | \$ 8,197 | KSF |
| 812 | Building Materials & Lumber | Small, free standing building that sells hardware, building materials, and lumber. May include yard storage and shed storage areas. The storage areas are not included in the GLA needed for trip generation estimates. | 4.49 | 1 | 4.49 | \$ 28,531 | KSF |
| 813 | Discount Super Store | A free-standing discount store that also contains a full service grocery dept. under one roof. | 3.87 | 0.718 | 2.78 | \$ 17,665 | KSF |
| 814 | Specialty Retail | Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants. | 2.71 | 1 | 2.71 | \$ 17,220 | KSF |
| 815 | Discount Store | A free-standing discount store that offers a variety of customer services, centralized cashiering, and a wide range of products under one roof. Does not include a full service grocery dept. like Land Use 813, Free-standing Discount Superstore. | 5.06 | 0.475 | 2.4 | \$ 15,251 | KSF |
| 816 | Hardware/Paint Store | Typically free-standing buildings with off-street parking that sell paints and hardware. | 4.84 | 0.450 | 2.18 | \$ 13,853 | KSF |
| 817 | Nursery/Garden Center | Free-standing building with yard containing planting or landscape stock. May have large green houses and offer landscape services. Typically have office, storage, and shipping facilities. GLA is Building GLA, not yard and storage GLA. | 3.8 | 1 | 3.8 | \$ 24,147 | KSF |
| 820 | Shopping Center | Integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Provides enough on-site parking to serve its own parking demand. May include non-merchandising facilities such as office buildings, movie theatres, restaurants, post offices, health clubs, and recreation like skating rinks and amusements. | 3.75 | 0.393 | 1.47 | \$ 9,341 | KSF Leasable |
| 841 | New Car Sales | New Car dealership with sales, service, parts, and used vehicles | 2.64 | 1 | 2.64 | \$ 16,776 | KSF |
| 848 | Tire Store | Primary business is tire sales and repair. Generally does not have a large storage or warehouse area. | 4.15 | 0.617 | 2.56 | \$ 16,267 | KSF |
| 850 | Supermarket | Free-standing grocery store. May also contain ATMs, photo centers, pharmacies, video rental areas. | 10.45 | 0.265 | 2.76 | \$ 17,538 | KSF |
| 851 | Convenience Market | Sells convenience foods, newspapers, magazines, and often Beer & Wine. Does not have gas pumps. | 52.41 | 0.282 | 14.8 | \$ 94,045 | KSF |
| 880 | Pharmacy w/o drive through | Facilities that fulfill medical Prescriptions | 8.42 | 0.327 | 2.75 | \$ 17,475 | KSF |
| 881 | Pharmacy w/ drive through | Facilities that fulfill medical Prescriptions | 8.62 | 0.383 | 3.3 | \$ 20,969 | KSF |
| 890 | Furniture Store | Sells furniture, accessories, and often carpet/floor coverings. | 0.46 | 0.157 | 0.07 | \$ 445 | KSF |
| 911 * | Walk-In Bank | Usually a Free-standing building with a parking lot. Does not have drive-up windows. May have ATMs. | 33.15 | 0.270 | 8.95 | \$ 56,872 | KSF |
| 912 | Drive-In Bank | Provides Drive-up and walk-in bank services. May have ATMs. | 45.74 | 0.270 | 12.35 | \$ 78,477 | KSF |
| 931 | Quality Restaurant | High quality eating establishment with slower turnover rates (more than one hour). | 7.49 | 0.288 | 2.15 | \$ 13,662 | KSF |
| 932 | High Turnover Sit-Down Rest. | Sit-Down eating establishment with turnover rates of less than one hour. | 10.92 | 0.315 | 3.44 | \$ 21,859 | KSF |
| 933 * | Fast Food w/o Drive-Thru | Fast Food but no drive-through window | 26.15 | 0.265 | 6.94 | \$ 44,099 | KSF |
| 934 | Fast Food with Drive-Thru | Fast Food with drive-through window | 34.64 | 0.265 | 9.2 | \$ 58,460 | KSF |
| 936 * | Drinking Place | Contains a bar where alcoholic beverages and snacks are serviced and possibly some type of entertainment such as music, games, or pool tables | 11.34 | 0.315 | 3.58 | \$ 22,749 | KSF |
| 944 | Gas Station | Sell gasoline and may also provide vehicle service and repair. Does not have Convenience Market and/or Car Wash. | 13.86 | 0.235 | 3.26 | \$ 20,715 | Fueling Position |
| 945 | Gas/Service Station with Convenience Market | Selling gas and Convenience Market are the primary business. May also contain facilities for service and repair. Does not include Car Wash. | 13.38 | 0.123 | 1.65 | \$ 10,485 | Fueling Position |
| 946 * | Gas/Service Station with Convenience Market, Car Wash | Selling gas, Convenience Market, and Car Wash are the primary business. May also contain facilities for service and repair. | 13.33 | 0.382 | 5.09 | \$ 32,344 | Fueling Position |
| 947 | Self-Service Car Wash | Allows manual cleaning of vehicles by providing stalls for the driver to park and wash. | 5.54 | 1 | 5.54 | \$ 35,203 | Wash Stall |

NOTES:

Source: Institute of Transportation Engineers, *Trip Generation*, Seventh Edition.

Peak-Hour Trips: Weekday, peak-hour of adjacent street traffic. Most often, one hour between 4 and 6 p.m.

Pass-By Trip Factor reflects diverted linked trips in addition to pass-by trips.

ITE codes identified with asterisks (*) include information derived from the ITE manual (e.g., the pass-by factor is derived from pass-by counts for a similar land use or are as estimated by traffic engineers).

Land Use Units:

KSF = 1,000 gross square feet building area

DU = dwelling unit

Room = number of rooms for rent

Fueling Positions = maximum number of vehicles that can be served simultaneously

Student = number of full-time equivalent students enrolled

Hole = number of individual putting holes that are paired with driving tees

Acre = 43,560 square feet of park space

Lane = number of bowling lanes

Table 7

Bike/Ped SDC \$ 1,465.50 per bike/ped trip

| | | | |
|---------|-----|---------|-----|
| Group 1 | 0.1 | Group 4 | 0.6 |
| Group 2 | 0.2 | Group 5 | 1.0 |
| Group 3 | 0.4 | Group 6 | 2.0 |

| ITE Code | Customer Type | Land Use Description | Bike/Ped Group | Bike/Ped SDC | Units | Vehicle ADT |
|----------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|---------|-------------|
| 110 | General Light Industrial | Typically less than 500 employees, free standing and single use. Examples: Printing plants, material testing laboratories, data processing equipment assembly, power stations. | 1 | \$ 146.55 | KSF | 7.0 |
| 130 | Industrial Park | Industrial Park areas that contain a number of industrial and/or related facilities (mix of manufacturing, service, and warehouse). | 1 | \$ 146.55 | KSF | 7.0 |
| 140 | Manufacturing | Facilities that convert raw materials into finished products. Typically have related office, warehouse, research, and associated functions. | 2 | \$ 293.10 | KSF | 3.8 |
| 151 | Mini-Warehouse | Storage Units or Vaults rented for storage of goods. Units are physically separate and access through an overhead door or other common access point. Example: U-Store-It. | 1 | \$ 146.55 | KSF | 2.5 |
| 210 | SF Detached | Single family detached housing. | 5 | \$ 1,465.50 | DU | 9.6 |
| 220 | Apartment | Rental Dwelling Units within the same building. At least 4 units in the same building. Examples: Quadplexes and all types of apartment buildings. | 4 | \$ 879.30 | DU | 6.7 |
| 230 | Condo/Townhouse | Residential Condominium/Townhouses under single-family ownership. Minimum of two single family units in the same building structure. | 4 | \$ 879.30 | DU | 5.9 |
| 240 | Mobile Home | Trailers or Manufactured homes that are sited on permanent foundations. Typically the parks have community facilities (laundry, recreation rooms, pools). | 3 | \$ 586.20 | DU | 5.0 |
| 253 | Elderly Housing | Restricted to senior citizens. Contains residential units similar to apartments or condos. Sometimes in self-contained villages. May also contain medical facilities, dining, and some limited, supporting retail. | 3 | \$ 586.20 | DU | 2.2 |
| 310 | Hotel | Lodging facility that may include restaurants, lounges, meeting rooms, and/or convention facilities. Can include a large motel with these facilities. | 3 | \$ 586.20 | Room | 8.2 |
| 320 | Motel | Sleeping accommodations and often a restaurant. Free on-site parking and little or no meeting space. | 2 | \$ 293.10 | Room | 5.6 |
| 411 | Local Park | City-owned parks, varying widely as to location, type, and number of facilities, including boating / swimming facilities, ball fields, and picnic facilities. | 6 | \$ 2,931.00 | Acre | 0.9 |
| 430 | Golf Course | Includes 9, 18, 27, and 36 hole municipal and private country clubs. Some have driving ranges and clubhouses with pro shops, restaurants, lounges. Many of the muni courses do not include such facilities. | 1 | \$ 146.55 | Hole | 35.7 |
| 435 | Multipurpose Recreation Facility | Multi-purpose recreational facilities contain two or more of the following land uses at one site: mini-golf, batting cages, video arcade, bumper boats, go-carts, and driving ranges. | 6 | \$ 2,931.00 | Acre | 90.4 |
| 437 | Bowling Alley | Recreational facilities with bowling lanes which may include a small lounge, restaurant or snack bar. | 3 | \$ 586.20 | Lane | 33.3 |
| 493 | Athletic Club | Privately owned with weightlifting and other facilities often including swimming pools, hot tubs, saunas, racquet ball, squash, and handball courts. | 5 | \$ 1,465.50 | KSF | 43.0 |
| 495 | Recreational Community Center | Recreational community centers are facilities similar to and including YMCAs, often including classes, day care, meeting rooms, swimming pools, tennis racquetball, handball, weightlifting equipment, locker rooms, & food service. | 6 | \$ 2,931.00 | KSF | 22.9 |
| 520 | Elementary School | Public. Typically serves K-6 grades. | 3 | \$ 586.20 | Student | 1.3 |
| 522 | Middle School | Public. Serves students that completed elementary and have not yet entered high school. | 2 | \$ 293.10 | Student | 1.6 |
| 530 | High School | Public. Serves students that completed middle or junior high school. | 1 | \$ 146.55 | Student | 1.7 |
| 540 | Junior/Community College | Two-year junior colleges or community colleges. | 1 | \$ 146.55 | Student | 1.2 |
| 560 | Church | Contains worship area and may include meeting rooms, classrooms, dining area and facilities. | 3 | \$ 586.20 | KSF | 9.1 |
| 565 | Day Care | Facility for pre-school children care primarily during daytime hours. May include classrooms, offices, eating areas, and playgrounds. | 1 | \$ 146.55 | KSF | 26.2 |
| 590 | Library | Public or Private. Contains shelved books, reading rooms or areas, sometimes meeting rooms. | 1 | \$ 146.55 | Student | 1.5 |
| 591 | Lodge/Fraternal Organization | Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms. | 6 | \$ 2,931.00 | KSF | 54.0 |
| 591 | Lodge/Fraternal Organization | Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms. | 4 | \$ 879.30 | Member | 0.3 |
| 710 | General Office | Office building with multiple tenants. Mixture of tenants can include professional services, bank and Loan institutions, restaurants, snack bars, and service retail facilities. | 6 | \$ 2,931.00 | KSF | 11.0 |
| 715 | Single Tenant Office Building | Single tenant office building. Usually contains offices, meeting rooms, file storage areas, data processing, restaurant or cafeteria, and other service functions. | 6 | \$ 2,931.00 | KSF | 11.6 |
| 720 | Medical-Dental Office | Provides diagnosis and outpatient care on a routine basis. Typically operated by one or more private physicians or dentists. | 1 | \$ 146.55 | KSF | 36.1 |

| ITE Code | Customer Type | Land Use Description | Bike/Ped Group | Bike/Ped SDC | Units | Vehicle ADT |
|----------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|------------------|-------------|
| 750 | Office Park | Park or campus-like planned unit development that contains office buildings and support services such as banks & loan institutions, restaurants, service stations. | 4 | \$ 879.30 | KSF | 11.4 |
| 760 | Research & Development Center | Single building or complex of buildings devoted to research & development. May contain offices and light fabrication facilities. | 2 | \$ 293.10 | KSF | 8.1 |
| 770 | Business Park | Group of flex-type or incubator 1 - 2 story buildings served by a common roadway system. Tenant space is flexible to accommodate a variety of uses. Rear of building usually served by a garage door. Typically includes a mix of offices, retail & wholesale. | 1 | \$ 146.55 | KSF | 12.8 |
| 812 | Building Materials & Lumber | Small, free standing building that sells hardware, building materials, and lumber. May include yard storage and shed storage areas. The storage areas are not included in the GLA needed for trip generation estimates. | 1 | \$ 146.55 | KSF | 45.2 |
| 813 | Discount Super Store | A free-standing discount store that also contains a full service grocery dept. under one roof. | 1 | \$ 146.55 | KSF | 35.3 |
| 814 | Specialty Retail | Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants. | 6 | \$ 2,931.00 | KSF | 44.3 |
| 815 | Discount Store | A free-standing discount store that offers a variety of customer services, centralized cashiering, and a wide range of products under one roof. Does not include a full service grocery dept. like Land Use 813, Free-standing Discount Superstore. | 1 | \$ 146.55 | KSF | 26.6 |
| 816 | Hardware/Paint Store | Typically free-standing buildings with off-street parking that sell paints and hardware. | 1 | \$ 146.55 | KSF | 23.1 |
| 817 | Nursery/Garden Center | Free-standing building with yard containing planting or landscape stock. May have large green houses and offer landscape services. Typically have office, storage, and shipping facilities. GLA is Building GLA, not yard and storage GLA. | 1 | \$ 146.55 | KSF | 36.1 |
| 820 | Shopping Center | Integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Provides enough on-site parking to serve its own parking demand. May include non-merchandising facilities such as office buildings, movie theatres, restaurants, post offices, health clubs, and recreation like skating rinks and amusements. | 2 | \$ 293.10 | KSF Leasable | 16.9 |
| 841 | New Car Sales | New Car dealership with sales, service, parts, and used vehicles | 1 | \$ 146.55 | KSF | 33.3 |
| 848 | Tire Store | Primary business is tire sales and repair. Generally does not have a large storage or warehouse area. | 1 | \$ 146.55 | KSF | 15.3 |
| 850 | Supermarket | Free-standing grocery store. May also contain ATMs, photo centers, pharmacies, video rental areas. | 1 | \$ 146.55 | KSF | 27.1 |
| 851 | Convenience Market | Sells convenience foods, newspapers, magazines, and often Beer & Wine. Does not have gas pumps. | 6 | \$ 2,931.00 | KSF | 208.4 |
| 880 | Pharmacy w/o drive through | Facilities that fulfill medical Prescriptions | 3 | \$ 586.20 | KSF | 29.4 |
| 881 | Pharmacy w/ drive through | Facilities that fulfill medical Prescriptions | 3 | \$ 586.20 | KSF | 33.8 |
| 890 | Furniture Store | Sells furniture, accessories, and often carpet/floor coverings. | 1 | \$ 146.55 | KSF | 0.8 |
| 911 | Walk-In Bank | Usually a Free-standing building with a parking lot. Does not have drive-up windows. May have ATMs. | 1 | \$ 146.55 | KSF | 42.3 |
| 912 | Drive-In Bank | Provides Drive-up and walk-in bank services. May have ATMs. | 1 | \$ 146.55 | KSF | 66.6 |
| 931 | Quality Restaurant | High quality eating establishment with slower turnover rates (more than one hour). | 1 | \$ 146.55 | KSF | 25.9 |
| 932 | High Turnover Sit-Down Rest. | Sit-Down eating establishment with turnover rates of less than one hour. | 3 | \$ 586.20 | KSF | 40.1 |
| 933 | Fast Food w/o Drive-Thru | Fast Food but no drive-through window | 6 | \$ 2,931.00 | KSF | 190.1 |
| 934 | Fast Food with Drive-Thru | Fast Food with drive-through window | 6 | \$ 2,931.00 | KSF | 131.7 |
| 936 | Drinking Place | Contains a bar where alcoholic beverages and snacks are serviced and possibly some type of entertainment such as music, games, or pool tables | 1 | \$ 146.55 | KSF | 35.8 |
| 944 | Gas Station | Sell gasoline and may also provide vehicle service and repair. Does not have Convenience Market and/or Car Wash. | 1 | \$ 146.55 | Fueling Position | 39.6 |
| 945 | Gas/Service Station with Convenience Market | Selling gas and Convenience Market are the primary business. May also contain facilities for service and repair. Does not include Car Wash. | 1 | \$ 146.55 | Fueling Position | 20.1 |
| 946 | Gas/Service Station with Convenience Market, Car Wash | Selling gas, Convenience Market, and Car Wash are the primary business. May also contain facilities for service and repair. | 1 | \$ 146.55 | Fueling Position | 58.3 |
| 947 | Self-Service Car Wash | Allows manual cleaning of vehicles by providing stalls for the driver to park and wash. | 1 | \$ 146.55 | Wash Stall | 108.0 |

NOTES:

Data obtained from multiple sources, including the following:

"A Pedestrian Planning Procedures Manual" by the Federal Highway Administration

"Funding Mechanisms for Cycling Infrastructure" by Queensland Transport.

Land Use Units:

KSF = 1,000 gross square feet building area

DU = dwelling unit

Room = number of rooms for rent

Fueling Positions = maximum number of vehicles that can be served simultaneously

Student = number of full-time equivalent students enrolled