Report

System Development Charge Study

Prepared for

City of Lebanon

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Galardi Consulting, LLC

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Economic and Financial Analysis

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Citizens Advisory Committee

- Bob Armstrong, General Contractor
- Bob Elliott, City Councilor
- Jon Erwin, Consulting Engineer
- Todd Gestrin, Financial Representative
- Floyd Fisher, City Councilor
- Rich Branvold, General Contractor

SDC Technical Advisory Committee

- Jim Ruef, Public Works Director
- Dan Grassik, City Engineer
- Rob Emmons, Senior Engineer
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Executive Summary

Background

In March 2004, the City of Lebanon (the City) initiated a process to update system development charges (SDCs) for the water, sewer, storm water, transportation, and parks systems. In June 2005, revised SDCs were adopted for the water, sewer, storm water and parks systems. The transportation SDC update was deferred to allow for completion of the City's Transportation System Plan. Subsequent to the SDC update, the City completed master plans for the water and parks systems. This report describes the updated SDC methodologies and calculations for the City's transportation, water, and parks systems, reflecting the recently completed system plans.

The revised SDC methodologies and calculations are consistent with the framework set forth by Oregon SDC legislation (ORS 223.297-314), the City's system plans and Capital Improvement Program, and the recommendations set forth by the Citizen Advisory Committee (CAC).

Citizen Advisory Committee

As with previous updates, stakeholder involvement has been a critical component of this SDC update process. The main objectives of this involvement are to ensure that the resultant methodologies and fee levels are understandable and acceptable, reflect community values, and balance the interests of affected stakeholders. The CAC was established in March 2004 to serve as a formal mechanism for stakeholder input into the SDC review process. The group was re-engaged in November 2007 for the current update. The CAC has six (6) members, with membership and composition shown in the Acknowledgements section of this report.

City staff, with support from the Galardi Consulting team, worked with the CAC over an 8-month period reviewing the existing SDC methodologies and evaluating alternative approaches. The recommendations developed as part of this process reflect the objectives developed by the CAC and are summarized at the end of this section.

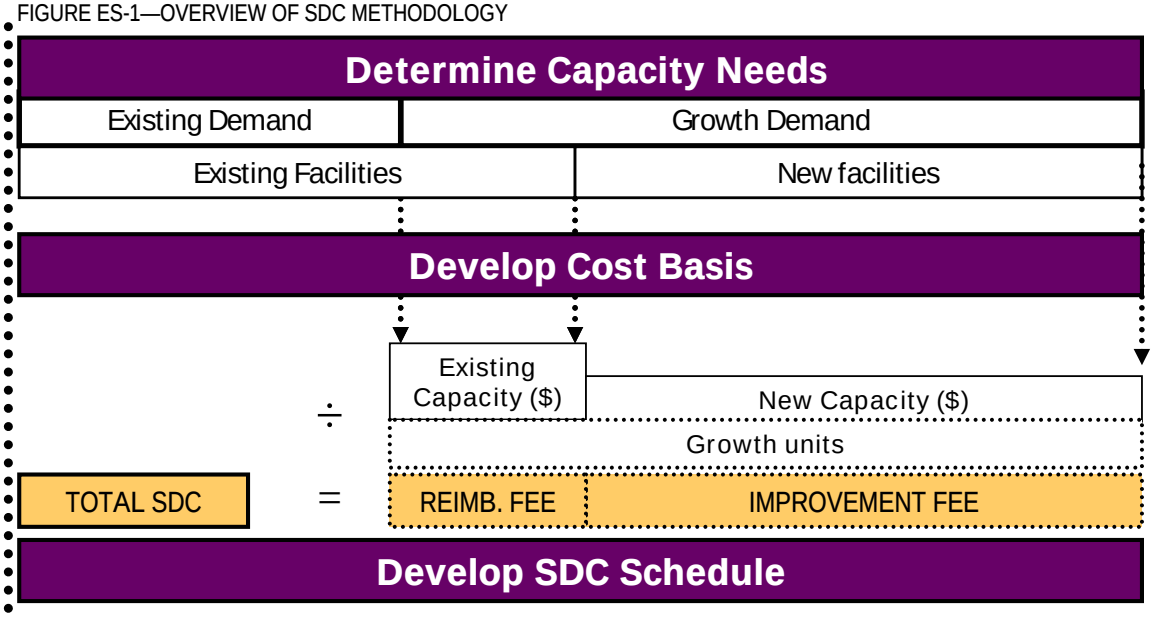
Overview of SDC Methodology

The provisions of Oregon SDC law, described in Section 2 of this report, provide the framework for determining SDCs for local governments in Oregon. Within that framework, the City has flexibility in selecting specific approaches that best meet its growth management and other objectives.

SDCs can be developed around two concepts: (1) a reimbursement fee, and (2) an improvement fee. The recommended SDC methodologies are based on a combined reimbursement and improvement structure (when a reimbursement fee is warranted). This structure, which is shown graphically in Figure ES-1, consists of the following elements:

- Determine capacity needs
- Develop cost basis
- Develop SDC schedule

FIGURE ES-1—OVERVIEW OF SDC METHODOLOGY



The reimbursement fee is based on the value of existing capacity in the system that will serve growth. The improvement fee is based on future capital costs associated with providing growth's additional capacity needs (above what is already available in the system). Together, the reimbursement and improvement fees recover costs equal to growth's capacity needs.

The value of existing system available capacity is added to the cost of future improvements needed for growth to determine the SDC cost basis. The cost basis is then divided by the forecast growth units to determine the system-wide unit cost of capacity. The growth units vary by system; for example, growth units for the water system are measured in gallons of water demand. For parks growth units are measured by population.

The system-wide unit costs are then reduced by any applicable credits for past and future capital payments, such as existing and future debt service. Finally, the SDCs for individual developments are determined by applying the unit costs to the individual development's estimated capacity requirements, for each infrastructure system.

SDC Calculations

The revised SDC calculations are summarized below for each system. In addition, the calculated fees are compared to the current fees (established in 1994 for transportation, and 2005 for water and parks).

Water System

Water System Capacity Needs

The City's most recently completed Water System Master Plan (2007, CH2M HILL) identifies the projected water system demands through 2027. Water systems are generally sized to meet customers' peak demands. Therefore, the relevant capacity measure for most water system facilities is maximum day demand.

Based on recent production records, current maximum day demand is 3.4 million gallons per day (mgd), and current storage requirements are 5.3 million gallons (mg). The existing system maximum day capacity is 4.0 mgd, with storage facilities having a total capacity of 4.0 mg. Compared to existing demands, the water system has an average available capacity of 15 percent (existing capacity less current demand divided by existing capacity). However, existing storage facilities are not sufficient to fully meet existing system demands under established criteria. Future water capacity requirements include additional demands associated with growth, along with existing storage deficiencies. System-wide future maximum day demand is projected to be 6.0 mgd in 2027 and 12.0 mgd at build-out; the total future storage need is 7.0 mg. The projected growth requirements through 2027 are 2.6 mgd system-wide (6.0 mgd future less 3.4 mgd current demand), and 1.7 mg for storage (7.0 mg future less 5.3 mg current requirement.)

Water System Cost Basis

The improvement fee cost basis reflects allocation of individual projects from the project list shown in Appendix A (Table A-1). These improvements are based on the 2007 Water System Master Plan[1]. The total improvement costs are estimated to be $44.4 million, of which almost $21.6 million (49 percent) is allocated to growth.

The reimbursement fee cost basis is limited to distribution system facilities, as growth's source, storage and treatment needs will be met through future improvements. The combined improvement and reimbursement cost basis is approximately $21.9 million, net of grants and contributions.

Water System SDC Schedule

The improvement and reimbursement costs are divided by the projected growth units these facilities will serve to determine the system-wide cost of capacity for growth. The cost per unit of growth capacity for facilities sized for maximum day demands (source, treatment and distribution) is $4.294 million per mgd ($4.294 per gallon per day), and the unit cost for storage is $0.743 million per mg ($0.743 per gallon).

The base service unit for the water system is a 5/8 X 3/4-inch meter, the standard size for a single-family dwelling. The estimated maximum day capacity requirement of 550 gallons per day (gpd) is multiplied by the maximum day unit cost ($4.294 per gpd) to arrive at the base cost of $2,362 per 5/8 X 3/4-inch meter. The estimated storage capacity requirement of 858 gallons is multiplied by the storage unit cost ($0.743 per gallon) to arrive at the base

[1] Table A-1 in Appendix A reflects the CAC recommendation that costs associated with the replacement of small diameter water lines are allocated 100 percent to existing development.

storage cost of $638 per 5/8 X 3/4-inch meter. The combined base fee for a 5/8X ¾-inch meter is $3,000.

A credit against the unit cost is provided to recognize future contributions by newly developed properties toward the retirement of existing and future debt principal used to pay for a portion of existing facilities and planned improvements. The existing debt service credit is $256 per meter equivalent. The future debt credit is $949 per meter equivalent.

The cost per 5/8X3/4-inch meter equivalent, net of credits is $1,795. The SDC for larger meter sizes is scaled up based on the hydraulic capacity ratio to that of a 5/8 X 3/4-inch meter, as shown in **Table ES-1**. The calculated maximum fees range from $1,795 to $89,770 for a 6-inch meter.

Table ES-1
Water System Calculated SDC Schedule

Meter Size	Meter Factor (1)	Calculated Max Fee	Current Fee Established 2005
5/8 x 3/4"	1.00	$1,795	$1,049
1"	2.50	$4,489	$2,623
1 1/2"	5.00	$8,977	$5,245
2"	8.00	$14,363	$8,392
3"	16.00	$28,727	$16,784
4"	25.00	$44,885	$26,225
6"	50.00	$89,770	$52,450

(1) American Water Works Association Capacity Ratios

Table ES-1 also provides the current SDC schedule for comparison. The current fee reflects the same structure as the calculated fee, but is based on a master plan that was completed in 1989. Under the current schedule established in 2005, the SDC for a 5/8 X 3/4-inch meter is $1,049.

Transportation System

Transportation System Capacity Requirements

Like most infrastructure systems, a transportation system is built to accommodate peak rates of use, which typically occur during the weekday afternoon period between the hours of 4 and 6 P.M (the "PM peak"). Therefore, system capacity is measured by trip generation during the PM peak. Trip generation data by land use is available from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. Trip generation rates are available per dwelling unit (by dwelling type) and per employee (for various nonresidential land uses), and are applied to the City's forecast growth in dwelling units and employment to estimate future trip generation. The number of future trip ends is projected to be 20,949, an increase of 7,073 over the existing 13,876 estimated trips.

Transportation System Cost Basis

The improvement fee cost basis reflects allocation of individual projects from the project lists shown in Appendix A (Tables A-2 to A-4). These improvements are based on the

recently completed Transportation System Plan (CH2M HILL, 2007). Major improvements are planned for: 1) roadways ($55.1 million), including the Lebanon Parkway ($22.1 million), signalization ($2.8 million), and various roadway improvements, 2) bikeways ($7.2 million) and 3) pedestrian facilities ($4.2 million).

The total improvement costs are estimated to be almost $66.6 million, of which $8.6 million (13 percent) is allocated to growth through the SDCs. A significant portion of the transportation system improvement costs are assumed to be funded through external funding sources, including state and federal agency contributions, and assessments. Growth's share of the City costs for each project was determined based on an analysis of trip generation data from the transportation system model. The model forecasts trip generation from existing and future development on each roadway segment; the ratio of growth trips to total future trips was used to allocate costs for each segment.

The reimbursement fee cost basis reflects the City's costs of recently completed roadway construction. The total cost for the reimbursement projects is $3.3 million, of which $1.2 million is allocated to growth based on forecast trip generation.

The combined improvement and reimbursement cost basis is almost $9.9 million net of grants and contributions.

Transportation System SDC Schedule

For the purposes of determining transportation system unit costs, the growth costs are divided by the projected growth in PM peak trip ends over the planning period. Dividing the capacity-related improvements by the associated capacity units, results in improvement costs of $1,223 per PM peak trip end. Reimbursement unit costs are $175 per PM peak trip end. Adding the reimbursement and improvement components, results in a total system unit cost of $1,398 per PM peak trip end.

The transportation SDC for an individual development is based on the total cost per trip end and the number of trips attributable to a particular development. The standard practice in the transportation industry is to use ITE published trip generation rates to determine the SDCs for individual developments. ITE trip rates by land use are based on studies from around the country, and in the absence of local data, represent the best available source of trip data for specific land uses.

Trip rates for some land uses are adjusted for "linked trips". Linked trips refer to trips that occur when a motorist is already on the roadway, as in the case of a traveler stopping by a fast-food restaurant on the way home from work. In this case, the motorist stopping at the restaurant en route home is counted as a trip generated by the restaurant, but it doesn't represent a new trip on the roadway. The City's existing transportation SDC methodology discounts all retail trips by 65 percent to account for linked trips. The updated methodology retains the linked trip adjustment, as shown in **Table ES-2 (next page)**.

Table ES-2
Current (established in 1994) and Revised Transportation SDCs for Sample Developments

Development Type	Trip Ends/ Unit	Linked Trip Discount	Units	SDC Current	SDC Revised
Base Trip Rate				$401	$1,398
Residential					
Single Family	1.02		Dwelling	$409	$1,426
Apartment Bldg	0.67		Dwelling	$269	$937
Condominium/Townhouse	0.52		Dwelling	$209	$727
Mobile Home Park	0.60		Dwelling	$241	$839
Sr Adult Housing - Detached	0.35		Dwelling	$140	$489
Assisted Living	0.20		Beds	$80	$280
Medical/Office					
Hospital	1.61		TGSF	$646	$2,251
Clinic	4.43		TGSF	$1,776	$6,193
Medical/Dental Office	4.45		TGSF	$1,784	$6,221
General Office	1.49		TGSF	$597	$2,083
Retail					
Building Materials/Lumber	5.56	65%	TGSF	$780	$2,721
Hardware/Paint Store	4.74	65%	TGSF	$665	$2,319
Nursery (Garden Center)	4.97	65%	TGSF	$698	$2,432
Quality Restaurant	9.02	65%	TGSF	$1,266	$4,414
High Turnover/Sit Down Rest	18.80	65%	TGSF	$2,639	$9,199
Fast Food w/o Drive Thru	52.40	65%	TGSF	$7,354	$25,640
Fast Food with Drive Thru	46.80	65%	TGSF	$6,568	$22,899
Service Station	15.65	65%	Fuel. Pos.	$2,196	$7,658
Serv.Station w/ Conven.Mkt	13.57	65%	Fuel. Pos.	$1,905	$6,640
Tire Store	3.26	65%	Service Bay	$458	$1,595
Supermarket	12.02	65%	TGSF	$1,687	$5,881
Discount Club	4.76	65%	TGSF	$668	$2,329
Furniture Store	0.53	65%	TGSF	$74	$259
Walk-in Bank	42.02	65%	TGSF	$5,898	$20,561
Drive-in Bank	53.46	65%	Lanes	$7,503	$26,158
Institutional/Other					
Motel	0.56		Rooms	$225	$783
Health/Fitness Club	4.06		TGSF	$1,628	$5,676
Church	1.41		TGSF	$565	$1,971
Daycare Center	13.91		TGSF	$5,578	$19,446
Elementary School	3.13		TGSF	$1,255	$4,376
High School	2.12		TGSF	$850	$2,964
Industrial					
General Light Industrial	1.08		TGSF	$433	$1,510
Truck Terminal	7.24		Acres	$2,903	$10,122
Mini Warehouse	0.29		TGSF	$116	$405

TSF Gross = Gross Square Feet (in thousands)
Source: ITE Trip Generation Manual (7th Edition)

Park System

Park System Capacity Requirements

Park systems are typically planned and developed based on community-wide standards of acreage per 1,000 people. Park standards vary according to park types, which are classified according to their size and service area. The current system inventory includes 234 total acres (71 developed acres) of park land, or about 17 total acres and 5.2 developed acres per 1,000 people (based on a current estimated population of 13,787).

The City plans to make significant investments in park land based on the adopted Parks Master Plan (Community Planning Workshop, March 2006) and the Cheadle Lake Refinement Plan (CMcG&S, June 2007). The planned LOS (as measured in units per 1,000 people) is used to determine existing and future capacity needs and to determine allocation percentages for the improvement projects. The planned level of service (LOS) is almost 30 total acres per 1,000 people (almost 22 developed acres per 1,000). Based on the planned LOS, the total capacity need for the existing population is 409 total acres (301 developed acres), compared to the existing inventory of 234 total acres (71 developed acres). The existing population need for recreation trails is almost 33 miles. The total *additional* need for the existing population (i.e. current deficit) is 175.5 acres of total parkland (229.5 developed acres) and almost 31 miles of trails. This deficit, along with growth's capacity needs will be met through the planned investments. The total growth need, based on the planned LOS and a growth in population of 5,810, is 172.5 acres of total parkland (126.7 acres of developed park land) and almost 14 miles of trails.

Park System Cost Basis

The improvement cost basis reflects allocation of individual projects from the project list shown in Appendix A (Table A-5). The total improvement costs are estimated to be $35.1 million, including almost $26.3 million in parks (land acquisition and development costs), and $8.8 million in recreation trails. Growth is allocated almost $11.6 million (about 33 percent) of total improvement project costs. Growth needs will be met in part through the existing inventory of mini, community and special use parks. However, the reimbursement cost basis is $0, as existing park acreage was primarily donated to the City.

Parks System SDC Schedule

Prior to the calculation of park system-wide unit costs, the cost basis is separated between residential and nonresidential development. Nonresidential development creates a demand on parks through use of parks by employees and patrons. Data from the City's park reservation system indicates that approximately 15 percent of park reservations are for nonresidential functions. These functions tend to be in the larger parks, as opposed to neighborhood and community parks. Therefore, 15 percent of all growth-related costs for all park types, except neighborhood and community parks are allocated to nonresidential developments.

The growth capacity units for both residential and nonresidential developments are people; in the case of residential it is total population, and in the case of nonresidential the unit of measure is employment. The growth in population and employment during the planning

period is estimated to be 5,810 and 3,569, respectively. Dividing the residential cost by the total growth in population yields a gross cost per person of $1,724.25. Similarly, the unit cost for nonresidential is determined to be $431.45 per employee.

A credit against the gross unit cost is provided to recognize future contributions by newly developed properties toward the retirement of estimated future debt principal. This future credit is equal to $508.80 per person for residential, and $153.57 per employee for nonresidential. There is currently no outstanding debt associated with the park system, so no existing debt credit is warranted. The cost per person/employee, net of credits is $1,215.45 for residential, and $277.88 for nonresidential.

The calculated SDC schedule is presented in **Table ES-3**. The SDC for residential developments is based on the number of dwelling units and the type of dwelling. The SDC per unit is calculated by multiplying the net cost per person by the average number of occupants per dwelling: 2.61 for single-family and 2.13 for multifamily, yielding a single-family SDC per dwelling unit of $3,172 and a multifamily SDC of $2,589 per unit.

Table ES-3
Park System Calculated SDC Schedule

	Units	Unit Cost	Calculated SDC/Unit	Current SDC/Unit (Established 2005)
Residential	*person/DU(1)*			
Single-Family	2.61	$1,215.45	$3,172	$632.54
Multifamily	2.13	$1,215.45	$2,589	$516.21
	Emp./ 1,000 sq. ft	SDC/ 1,000 sq. ft.		
Commercial				
Retail	2.5	$277.88	$695	$140.50
Industrial	1.7	$277.88	$472	$95.54
Office	3.3	$277.88	$917	$185.46

For nonresidential development, the SDC is assessed based on estimated employment density and building size (as measured in square feet). Three categories of nonresidential are identified: retail, industrial and office. Estimated employment per 1,000 square feet is based on national data (information from the ITE *Trip Generation Manual*). The SDC per 1,000 square feet for each nonresidential type is computed by multiplying the cost per employee ($277.88) by the estimated employees per 1,000 square feet (ranges from 1.7 to 3.3). The SDC per 1,000 square feet of building ranges from $472 for industrial to $917 for office type developments.

Table ES-4 also shows the current SDC established in 2005. Based on the recommendation of the CAC in 2005, the current SDCs exclude the costs of natural open space. The current fee for a single-family dwelling unit is $632 and the fee for multifamily dwelling units. The current fees for nonresidential development range from $95 to 185 per 1,000 square feet. The CAC has again recommended that the SDC exclude natural open space. Assuming these costs are excluded, the SDCs are reduced to $2,678 and $2,186 for single family and multifamily dwelling units, respectively, and the cost per employee is $229.03.

Compliance Costs

In addition to recovering capacity costs for the individual infrastructure systems, Oregon law provides SDC revenue may be used for costs incurred by the local government in complying with the provisions of the statutes. The law also requires annual accounting of SDC expenditures, including revenue collected and attributed to the costs of compliance.

Compliance costs include auditing costs, SDC methodology development costs, and a portion of master planning costs. Annual compliance costs are estimated to be $40,000 (rounded to the nearest $10,000). The compliance charge is calculated as a percent of the projected SDC revenue. Future SDC revenue is projected based on the calculated maximum SDC charges -- assuming the CAC recommended exclusions of for small diameter water lines for the water system, and open space for parks -- and the estimated annual number of development units, based on a three-year historical average. Projected annual SDC revenue is $965,300 for all systems combined. In order to recover the estimated compliance costs, the City would need to charge an additional 4.1 percent of the assessed SDCs. The CAC has recommended a reduced compliance charge of 2.5 percent.

Summary of Recommendations

The methodologies presented in this report are consistent with Oregon SDC statutes and reflect recommendations by the CAC. These recommendations are summarized below.

1. **Transportation:** Retain the current methodology of basing the SDC on peak PM trips. Assign trip rates using the ITE Trip Generation Manual (Seventh Edition). Discount retail trips by 65 percent, reflecting linked trips (consistent with current methodology).

2. **Water:** Retain the current methodology of basing the SDC on equivalent ¾-inch water meter size (that of a typical single family dwelling unit). Base the SDC on the recently adopted Master Plan; excluding costs of small diameter pipe replacement costs (reduces the maximum allowable SDC per meter equivalent from $2,024 to $1,795.)

3. **Parks**: Retain the current methodology of assessing a park SDC on residential and nonresidential development; nonresidential SDCs reflect costs for all park types except neighborhood and community parks. Base the SDC on the recently adopted Master Plan; excluding natural open space costs (reduces the maximum allowable SDC per single-family dwelling unit from $3,172 to $2,678.)

4. **Compliance Costs:** Implement a compliance cost of 2.5 percent (lower than the 4.1 percent maximum allowable presented in this report).

5. **Inflationary Adjustments:** To help keep SDC fees current to the average change in materials and labor costs adjust the SDCs based on changes in the construction cost index (CCI) published by McGraw Hill, Inc in its ENR publication. The CAC recommends updating the SDCs every July 1st.

The CAC also offered recommendations to the City Council on phasing the fess for all developments, and scaling the fees for small single-family houses; these can be found in a separate CAC report.

SECTION 1

Introduction

Background

In March 2004, the City of Lebanon (the City) initiated a process to update system development charges (SDCs) for the water, sewer, storm water, transportation, and parks systems. In June 2005, revised SDCs were adopted for the water, sewer, storm water and parks systems. The transportation SDC update was deferred to allow for completion of the City's Transportation System Plan. Subsequent to the SDC update, the City completed master plans for the water and parks systems. This report describes the updated SDC methodologies and calculations for the City's transportation, water, and parks systems, reflecting the recently completed system plans.

The revised SDC methodologies and calculations are consistent with the framework set forth by Oregon SDC legislation (ORS 223.297-314), the City's master and facility plans and Capital Improvement Program, and the recommendations set forth by the Citizen Advisory Committee (CAC).

Oregon SDC Law

Oregon Revised Statutes 223.297-223.314 authorize local governments to assess SDCs for the following types of capital improvements:

- Drainage and flood control (i.e., storm water)
- Water supply, treatment, and distribution
- Wastewater collection, transmission, treatment, and disposal
- Transportation (i.e., streets)
- Parks and recreation

In addition to specifying the infrastructure systems for which SDCs may be assessed, the SDC legislation provides guidelines on the calculation and modification of SDCs, accounting requirements to track SDC revenues, and the adoption of administrative review procedures. A summary of key provisions is provided below.

SDC Structure

SDCs can be developed around two concepts: (1) a reimbursement fee and (2) an improvement fee. The **reimbursement fee** is based on the costs of capital improvements *already constructed or under construction*. The legislation requires the reimbursement fee to be established or modified by an ordinance or resolution setting forth the methodology used to calculate the charge. This methodology must consider the cost of existing facilities, prior contributions by existing users, gifts or grants from federal or state government or private persons, the value of unused capacity available for future system users, rate-making principles employed to finance the capital improvements, and other relevant factors. The objective of the methodology must be that future system users contribute no more than an

equitable share of the capital costs of *existing* facilities. Reimbursement fee revenues are restricted only to capital expenditures for the specific system which they are assessed, including debt service.

The methodology for establishing or modifying an **improvement fee** must be specified in an ordinance or resolution that demonstrate consideration of the *projected costs of capital improvements identified in an adopted plan and list*, that are needed to increase capacity in the system to meet the demands of new development. Revenues generated through improvement fees are dedicated to capacity-increasing capital improvements or the repayment of debt on such improvements. An increase in capacity is established if an improvement increases the level of service provided by existing facilities or provides new facilities.

In many systems, growth needs will be met through a combination of existing available capacity and future capacity enhancing improvements. Therefore, the SDC provides for a **combined fee** (reimbursement plus improvement component). However, when such a fee is developed, the methodology must demonstrate that the charge is not based on providing the same system capacity. This is generally accomplished by structuring the fee to reflect the weighted average cost of existing and new capacities.

Credits

The legislation requires that a credit be provided against the improvement fee for the construction of "qualified public improvements." Qualified public improvements are improvements that are required as a condition of development approval, identified in the system's capital improvement program, and either (1) not located on or contiguous to the property being developed, or (2) 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.

Update and Review

The methodology for establishing or modifying improvement or reimbursement fees shall be available for public inspection. The local government must maintain a list of persons who have made a written request for notification prior to the adoption or amendment of such fees. However, changes to the SDC rate resulting from:

1. changes to costs in materials, labor, or real property as applied to projects in the required project list, or
2. application of a cost index that considers average change in costs in materials, labor, or real property and is published for purposes other than SDC rate setting

are not considered "modifications" to the SDC. As such, the local government is not required to adhere to the notification provisions. The notification provisions for changes to the fees that do represent a modification to the methodology require 90-day written notice prior to first public hearing, with the SDC methodology available for review 60 days prior to public hearing.

Other Provisions

Other provisions of the legislation require:

- Preparation of a capital improvement program or comparable plan (prior to the establishment of a SDC), that "includes a list of the improvements that the governmental unit intends to fund, in whole or in part, with revenues from an improvement fee and the estimated cost, timing, and percentage of costs eligible to be funded with revenues from the improvement fee for each improvement."
- Deposit of SDC revenues into dedicated accounts and annual accounting of revenues and expenditures – including a list of the amount spent on each project funded, in whole or in part, by SDC revenues, and including costs attributed to complying with the SDC legislation.
- Creation of an administrative appeals procedure, in accordance with the legislation, whereby a citizen or other interested party may challenge an expenditure of SDC revenues.

The provisions of the legislation are invalidated if they are construed to impair the local government's bond obligations or the ability of the local government to issue new bonds or other financing. Furthermore, the establishment or modification of an SDC or a project list is not a land use decision.

Review Process and Citizen's Advisory Committee

As with previous updates, stakeholder involvement has been a critical component of this SDC update process. The main objectives of this involvement are to ensure that the resultant methodologies and fee levels are understandable and acceptable, reflect community values, and balance the interests of affected stakeholders. The CAC was established in March 2004 to serve as a formal mechanism for stakeholder input into the SDC review process. The group was re-engaged in November 2007 for the current update. The CAC has six (6) members, with membership and composition shown in the Acknowledgements section of this report.

City staff, with support from the Galardi Consulting team, worked with the CAC over an 8-month period reviewing the existing SDC methodologies and evaluating alternative approaches. Through these deliberations, the CAC arrived at a set of recommendations, which are reflected in the body of this report and summarized in the Executive Summary.

Report Organization

The following sections comprise the remainder of this report:

- Section 2, System Development Charge Methodology. The steps used in developing SDCs, including both the reimbursement and improvement fee components, are described in general terms and shown schematically.

- Section 3, Water System Development Charge Calculations. The SDC calculation for the water system is documented, including the capacity needs of growth, the SDC cost basis, the SDC schedule, and revenue offsets and credits.
- Section 4, Transportation System Development Charge Calculations. The SDC calculation methodology for the transportation system is documented.
- Section 5, Park System Development Charge Calculations. The park SDC calculation is documented.
- Section 6, Compliance Costs. Costs of complying with the SDC legislation are summarized, and a compliance charge is calculated.
- Appendix A, Capital Project Lists. A detailed list planned capital projects is provided for each system, including the project cost, timing, and percentage of costs eligible to be funded through improvement fees.
- Appendix B, Trip Generation Rate Detail. Data from the Institute of Transportation Engineer's Trip Generation Manual is presented. The data were used to estimate trip generation for purposes of developing the transportation SDCs.

SECTION 2

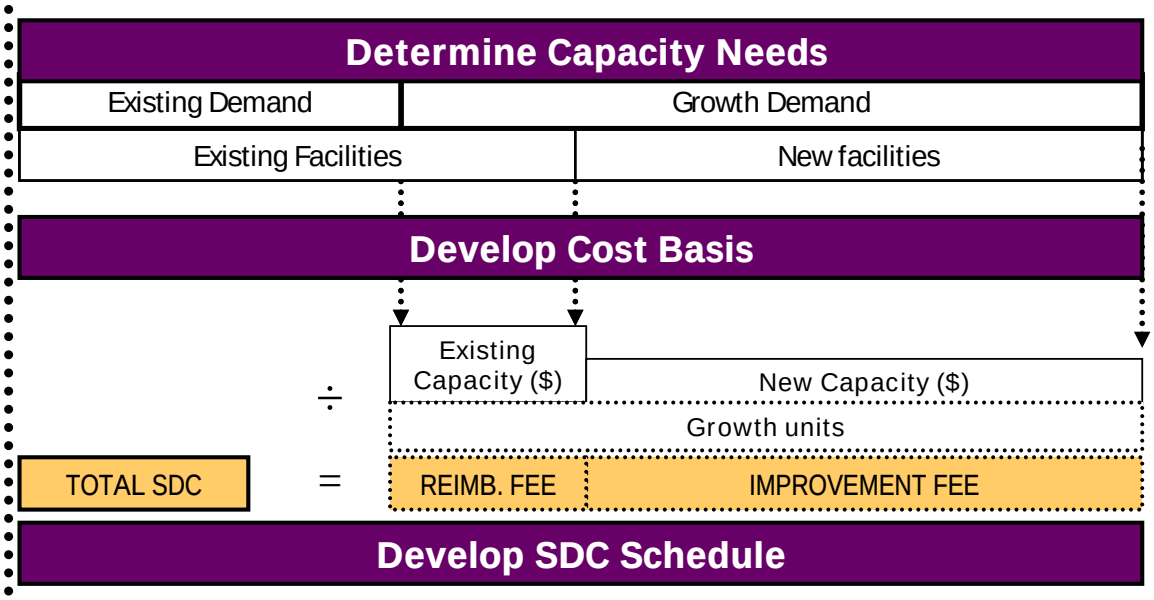
System Development Charge Methodology

Overview

As indicated in Section 1, SDCs can be developed around two concepts: (1) a reimbursement fee and (2) an improvement fee. The recommended SDC methodologies are based on a combined reimbursement and improvement structure. This structure, which is shown graphically in Figure 2-1, consists of the following three elements:

- Determine capacity needs
- Develop cost basis
- Develop SDC schedule

FIGURE 2-1—OVERVIEW OF RECOMMENDED SDC METHODOLOGY



The reimbursement fee is based on the value of available capacity in the system that will serve growth. The improvement fee is based on future capital costs associated with providing growth's additional capacity needs (above what is already available in the system). Together, the reimbursement and improvement fees recover costs equal to growth's capacity needs.

The value of existing system available capacity is added to the cost of future improvements needed for growth to determine the SDC cost basis. The cost basis is then divided by the forecast growth units to determine the system-wide unit cost of capacity. The system-wide unit costs are then reduced by any applicable credits for past and future capital payments, such as existing and future debt service. Finally, the SDCs for individual developments are

determined by applying the unit costs to the individual development's estimated capacity requirements, for each infrastructure system.

The methodology is discussed in more detail below.

Determine Growth Capacity Needs

Oregon SDC law requires explicit analysis of capacity required to serve growth, and demonstration of how those capacity needs will be met through existing and future facilities. Therefore, it is necessary to first determine the appropriate capacity measures and growth's capacity requirements.

Define Capacity Measure

Capacity measures vary by system and relate to infrastructure sizing criteria. Specific capacity measures included in the methodologies are:

- Water – maximum day demand (measured in millions of gallons per day)
- Transportation – PM peak trip generation
- Parks – population and employment

Estimate Growth Capacity Requirements

In developing SDCs, costs related to growth are spread over growth's total capacity requirements during the capital planning period to determine the overall cost per unit of growth by system. To determine the capacity required by growth, the capacity required by existing users is subtracted from the capacity projected in the system or master plan to be required at the end of the planning period.

Develop Cost Basis

The cost basis represents the total costs that the SDCs are intended to recover. The following four methodological issues were addressed in developing the reimbursement and improvement fee cost bases.

Existing System Valuation

Calculation of the reimbursement fee begins with a review of fixed asset records to determine the value of the existing system. The system may be valued based on original cost, book value (original cost less depreciation), replacement cost, or other approaches. Based on previous recommendations from the CAC, the City's methodology is based on book value. Under this approach, the original cost of existing system assets is reduced by the accumulated depreciation.

Existing System Allocation

The reimbursement fee cost basis is limited to system assets with available capacity to meet the needs of growth. For the water and transportation systems, the reimbursement fee includes a limited number of distribution and roadway facilities, respectively. There is no reimbursement fee for parks, as the limited available capacity was donated to the City.

Future System Project Cost Allocation

Calculation of the improvement fee begins with a review of the system capital project lists to determine which, or what portion of each planned improvement is needed to provide capacity for new development. System capacity may be expanded through the upgrade of existing facilities or the construction of new facilities.

Adjustments

The methodology includes adjustments to the reimbursement and improvement fee cost bases to recognize "gifts or grants from federal or state government or private persons", as required by SDC law. Existing (and if applicable in the future, planned) asset costs are reduced by the percent of the asset that is funded by grants or funding from other external sources (e.g., developer contributions or other agency participation).

Develop SDC Schedule

Unit costs for each fee component are determined by dividing the adjusted cost basis by the total projected growth capacity units. In some cases, a credit against the unit cost is developed to reflect future contributions by new development toward existing and future debt service used to fund capital improvements. The net unit costs are then multiplied by the estimated capacity requirements of different types of users to determine the SDCs.

The SDC schedules lay out the basis by which each development will be charged, including the particular "scaling measure" that will be used to determine individual capacity needs. The use of scaling measures in calculating SDCs is designed to ensure that customers who are larger, or use infrastructure systems more intensively, pay the associated costs of capacity required to serve them. It is important to note that all available scaling measures offer limited precision in capturing potential differences in system requirements across customers. For example, there is the potential for differences in demands of customers with the same meter size, as the intensity of use may vary among customers. Nevertheless, standard scaling criteria are required because of the inherent lack of information on customers' prospective use of system resources at the time of connection (unless they are existing developments connecting to the system). Since there is no viable mechanism by which individual capacity needs may be predicted in advance, standard scaling criteria are employed to achieve reasonable estimates of different users' requirements for growth-related capacity.

The following scaling measures are used in the SDC calculations:

- Water – water meter size
- Transportation – varies by land use type
- Parks – dwelling units for residential; square feet of building area for nonresidential

SECTION 3

Water SDC Calculations

Introduction

This section describes the SDC calculation for the water system. It includes a discussion of existing and future system demands, and existing and planned capital facilities required to meet those demands. Based on the system capacity needs and costs, a maximum allowable SDC schedule is presented.

Capacity Requirements

The City's most recently completed Water System Master Plan (2007, CH2M HILL) identifies the projected water system demands through 2027. Water systems are generally sized to meet customers' peak demands. Therefore, the relevant sizing criterion for most water system facilities is maximum day demand measured in millions of gallons per day (mgd). **Table 3-1** presents estimated current maximum day and storage requirements, and current and future capacities by component.

As shown in Table 3-1, the current maximum day demand is 3.4 mgd and the existing system capacity is 4.0 mgd. Existing storage facilities have total capacity of 4.0 million gallons (MG). Compared to existing demand, the water system has an average available capacity of 15 percent, with the exception of storage. Existing storage facilities are not sufficient to fully meet existing system design criteria, so there is a deficiency in storage capacity. Future capacity requirements include additional demands associated with growth, along with any existing deficiencies. System-wide future maximum day demand is projected to be 6.0 mgd in 2027 and 12.0 mgd at build-out. The total future storage need in 2027 is 7.0 MG.

Table 3-1
Water System Capacity Requirements

	Existing Capacity	Current Demand		Available Capacity		Future Capacity	Growth Requirements	
Measure	(mgd/MG)	(mgd/ MG)	%	(mgd/ mg)	%	(mgd/mg)	(mgd/ mg)	%
Maximum Day Demand	4.0	3.4	85%	0.6	15%			
Source/Treatment (1)						6.0	2.6	43%
Distribution (2)						12.0	8.6	72%
Storage (Total)	4.0	5.3	133%	(1.3)	0%	7.0	1.7	24%
New Reservoir						3.0	1.7	57%

(1) Sized for system needs through 2027
(2) Sized for system needs through build-out

The projected growth requirements through 2027 (used to size treatment facilities) are 2.6 mgd (6.0 mgd future less 3.4 current) and 8.6 mgd (12 mgd future less 3.4 mgd current) through build-out (used to size distribution improvements). Growth storage requirements are 1.7 mg (7.0 mg future less 5.3 mg current need) through 2027.

Cost Basis

Table 3-2 summarizes the improvement and reimbursement cost bases for the water system. The improvement fee cost basis reflects allocation of individual projects from the project list shown in the CIP in Appendix A (Table A-1). The reimbursement fee cost basis reflects system fixed assets that were built or acquired by the city prior to 2006 (when the Master Plan was developed). As for the improvement project list, individual asset records were reviewed and a determination of available capacity was made.

Table 3-2
Water System Cost Basis

Fee/System Component	Total Cost/Value	% Growth	Growth Allocation
Improvements			
Distribution (1)	$25,028,000	53%	$13,317,833
Storage	$3,055,200	41%	$1,263,667
Source/Treatment	$16,333,700	43%	$7,057,197
Subtotal Improvement	*$44,416,900*	*49%*	*$21,638,697*
Reimbursements			
Distribution (2)	$584,507	46%	$267,062
Storage (3)	$684,044	0%	$0
Source (4)	$193,533	0%	$0
Treatment (5)	$2,831,713	0%	$0
Subtotal Reimbursement	*$4,293,797*	6%	*$267,062*
Total System	**$48,710,697**	**45%**	**$21,905,759**

(1) First 8-inch allocated to existing customers
(2) Net of grant funds for Airport Area Infrastructure Improvement
(3) Existing system deficiency -- growth needs will be met through improvements
(4) Emergency back-up wells -- growth needs will be met through improvements
(5) Existing system facilities to be replaced; growth needs will be met through improvements

Improvement Fee

Distribution system improvement cost allocations assume that the cost of 8-inch diameter water mains are allocated to existing customers to reflect minimum sizing criteria, system-wide fire flow and other benefits. Storage costs include one additional reservoir ($2.2 million), needed in part to remedy the existing storage deficiency, and existing reservoir repainting and security improvements. The overall storage costs are allocated 41 percent to growth. Source and treatment costs include the construction of a new water treatment plant ($13.3 million) and design and construction of new wells, and are allocated proportionately to existing customers and growth based on each group's share of total future maximum day demand (as calculated in Table 3-1).

The total improvement costs are estimated to be $44.4 million of which, about $21.6 million (49 percent) is allocated to growth.

Reimbursement Fee

The existing water system facilities valued at book value total approximately $4.3 million. Distribution system costs include only a limited number of improvements constructed recently, as identified in the city's previous water system facilities plan. As was the case for planned future water mains, the equivalent 8-inch cost is allocated to existing customers, and grant-funded costs are excluded from the cost basis. Existing storage facilities are excluded from the SDC cost basis because of the existing system deficiency in storage capacity. Source and treatment costs are also excluded from the cost basis because the existing treatment facilities will be replaced, and the improvement cost allocations are based on growth's full capacity requirements being met by the new facilities. Overall, growth is allocated 6 percent of existing fixed asset value.

The combined improvement and reimbursement cost basis is about $21.9 million, net of grants and contributions.

SDC Schedule

Unit Costs

Table 3-3 shows the calculation of system-wide unit costs (in mgd and gpd) that are attributable to growth. The table includes a reimbursement fee portion, based on the value of available capacity in the existing system that will meet demands of growth, and an improvement fee portion, based on the value of planned capacity-related improvements.

Table 3-3
Water System Unit Costs

Component	Source & Treatment	Storage	Distribution	Total
Improvement Fee				
Improvement Costs (1)	$7,057,197	$1,263,667	$13,317,833	$21,638,697
Growth Units (mgd) (2)	2.60	1.70	8.60	
Cost per Unit ($/mgd)	$2,714,306	$743,333	$1,548,585	
Cost per Unit ($/gpd)	$2.71	$0.74	$1.55	
Reimbursement Fee				
Reimbursement Cost (1)	$0	$0	$267,062	
Growth Units (mgd) (2)			8.60	
Cost per Unit ($/mgd)	$0	$0	$31,054	
Cost per Unit ($/gpd)			$0.03	
Total Cost per Unit ($/mgd)	$2,714,306	$743,333	$1,579,639	
Total Cost per Unit ($/gpd)	$2.71	$0.74	$1.58	

(1) From Table 3-2
(2) From Table 3-1

The improvement unit cost is calculated by dividing the growth-related future improvement costs (from Table 3-2) by the projected growth units these facilities will serve (from Table 3-1). For example, dividing the almost $7.1 million capacity-related source and treatment improvements by the associated capacity units (2.60 mgd) results in an improvement unit cost of $2.71 million per mgd ($2.71 per gpd). The reimbursement unit cost is calculated in the same manner, the almost $0.27 million growth-related distribution

costs are divided by the 8.6 mgd growth capacity units, yielding a unit cost of $0.03 million per mgd ($0.03 per gpd). The combined costs per unit of growth capacity are: Source and Treatment - $2.71 million per mgd ($2.71 per gpd), Storage - $0.74 million per MG ($0.74 per gallon); Distribution - $1.58 million per mgd ($1.58 per gpd).

Cost per Service Unit

The water SDC schedule is based on the cost per unit of service attributable to the impact of new development and the service units required by individual developments. The base service unit for the water system is a 5/8 X 3/4-inch meter, the standard size for a single-family dwelling. The SDCs for larger meter sizes are scaled up based on the hydraulic capacity ratios to that of a 5/8 X 3/4-inch meter.

The current peak day water use of 3.4 mgd is divided by the average number of equivalent 5/8 X 3/4-inch meters to determine service units required per meter equivalent. As shown in **Table 3-4**, the city currently serves about 4,900 meters, ranging in size from 5/8 X 3/4-inch to 4 inch. By applying hydraulic equivalencies from the American Water Works Association the number of equivalent 5/8 X 3/4-inch meters is estimated to be 6,179. Therefore, the maximum day use per equivalent meter is 550 gpd (3,400,000 gpd/6,179 = 550 gpd per meter).

Table 3-4

Water System Equivalent Meters

Meter Size	Equivalent Meter Factor (1)	Average Number of Meters	Estimated Equivalent Meters
3/4"	1.0	4,585	4,585
1"	2.5	172	430
1 1/2"	5.0	78	390
2"	8.0	56	448
3"	16.0	11	176
4"	25.0	6	150
6"	50.0	0	0
Total		**4,908**	**6,179**

(1) American Water Works Association capacity ratios

Table 3-5 (next page) presents the calculation of the costs associated with the capacity requirement per meter equivalent. The estimated maximum day capacity requirement of 550 gpd per equivalent 5/8 X ¾-inch meter is multiplied by the unit costs from Table 3-3, to arrive at the costs per meter equivalent. As indicated in Table 3-5, the improvement cost per meter equivalent is $2,983 and the reimbursement cost per meter equivalent is $17, yielding a combined cost of $3,000.

Table 3-5
Water System Cost per Meter Equivalent

Component	Distribution, Source & Treatment	Storage	Total
Improvement Fee			
Cost per Unit ($/gpd)	$4.26	$0.74	
Requirements per meter equivalent (gpd)	550	858	
Cost per meter equivalent	*$2,346*	*$637*	*$2,983*
Reimbursement Fee			
Cost per Unit ($/gpd)	$0.03	$0.00	
Requirements per meter equivalent (gpd)	550	858	
Cost per meter equivalent	*$17*	*$0*	*$17*
Total Cost per Meter Equivalent	***$2,363***	***$637***	***$3,000***
Credits			
Existing Debt Service			($256)
Future Debt Service			($949)
Total Credit			($1,205)
Net Cost per Meter Equivalent			***$1,795***

A credit against the unit cost is provided to recognize future contributions by newly developed properties toward the retirement of existing debt principal. The value of debt-funded facilities is included in the reimbursement unit cost. However, as of June 30, 2006, almost $2.9 million of debt principal remained outstanding. In order to recognize the future contributions new users will make to the retirement of the outstanding principal through their water rates, a credit against the unit cost is provided. The debt service credit is based on the net present value of the future stream of annual debt principal, per meter equivalent. As Table 3-5 indicates, the existing debt service credit is $256 per meter equivalent. A similar credit is provided for future improvements providing service to existing customers. The future debt credit is $949 per meter equivalent.

The cost per meter equivalent, net of credits is $1,795.

Calculated Fee Schedule

As stated above, the base service unit for the water system is a 5/8 X 3/4-inch meter, the standard size for a single-family dwelling. The impact fee for larger meter sizes is adjusted based on the hydraulic capacity ratio to that of a 5/8 X 3/4-inch meter. **Table 3-6** (next page) shows the calculated maximum fees for each meter size.

Table 3-6
Water System Calculated SDC Schedule

Meter Size	Meter Factor (1)	Calculated Fee
5/8 x 3/4"	1.0	$1,795
1"	2.5	$4,489
1 1/2"	5.0	$8,977
2"	8.0	$14,363
3"	16.0	$28,727
4"	25.0	$44,885
6"	50.0	$89,770

(1) American Water Works Association Capacity Ratios

SECTION 4

Transportation SDC Calculations

Introduction

This section describes the SDC calculation for the transportation system. It includes a discussion of existing and future system demands, and existing and planned capital facilities required to meet those demands. Based on the system capacity needs and costs, a maximum allowable SDC schedule is presented.

Capacity Requirements

Like most infrastructure systems, a transportation system is built and sized to accommodate peak rates of use, which typically occur during the weekday afternoon period between the hours of 4 and 6 P.M. (the "PM peak"). Therefore, system capacity is measured by trip generation during the PM peak. Trip generation data by land use is available from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. ITE trip rates are based on studies from around the country, and in the absence of local data, represent the best available source of trip data for specific land uses.

Table 4-1 presents estimated trip generation by existing and future land uses, based on ITE trip generation rates per unit, and number of dwelling units and employees based on local data. The number of units – dwelling units for residential and employees for nonresidential – are multiplied by the trip ends[2] per unit to determine existing and future trip ends attributable to each land use.

Table 4-1
Existing and Future Trip Ends

	Units (1)		**Trip Ends**	**Trip Ends**	
Land Uses	Existing	Future	**per Unit (2)**	Existing	Future
	Dwelling Units				
Single Family	5,905	7,903	1.02	6,023	8,061
Multi-Family	1,192	2,100	0.67	799	1,407
			Subtotal =	6,822	9,468
	Employees				
Industrial	1,435	3,596	0.46	660	1,654
Commercial (3)	1,338	1,739	2.82	3,767	4,896
Office	1,537	2,495	0.72	1,107	1,796
Public	507	1,045	3.00	1,521	3,135
			Subtotal =	7,055	11,481
Totals =	4,817	8,875		13,876	20,949
			Growth Trip Ends		**7,073**

(1)Source: City of Lebanon
(2) ITE Trip Generation Manual, 7th Edition
(3) Commercial trip rate based on an average of typical land uses

[2] Each trip has 2 trip ends – an origin and a destination. ITE trip data counts each end separately.

As shown in Table 4-1, the estimated existing trips are 13,876. Based on projected growth in dwelling units and employment, the number of future trip ends is projected to be 20,949, an increase of 7,073.

Cost Basis

Table 4-2 summarizes the reimbursement and improvement cost bases for the transportation system. The improvement fee cost basis reflects allocation of individual projects from the project lists shown in Appendix A (Tables A-2 through A-4). These improvements are based on the recently adopted Transportation System Plan (CH2M HILL, January 2007). The reimbursement fee cost basis reflects recently constructed projects that will serve growth.

Table 4-2
Transportation SDC Cost Basis

		Growth (1)	
	Total	$	%
Improvement			
Roadways	$55,142,235	$4,702,562	8.5%
Bike Projects	$7,214,800	$3,944,886	54.7%
Pedestrian	$4,201,490	$0	0.0%
Subtotal	$66,558,525	$8,647,447	13.0%
Reimbursement			
Roadways	$3,315,505	$1,240,767	37.4%
Total	**$69,874,030**	**$9,888,214**	**14.2%**

(1) Growth percent is based on total project costs (before adjustments for grants and other funding)

Improvement Fee

As indicated previously, (Tables A-2 through A-4) in Appendix A presents detailed costs, funding, and growth allocation percentages for future improvements; this information is provided in summary form in Table 4-2. Major improvements are planned for: 1) roadways ($55.1 million), including the Lebanon Parkway ($22.1 million), signalization ($2.8 million), and various roadway improvements, 2) bikeways ($7.2 million) and 3) pedestrians ($4.2 million).

The total improvement costs are estimated to be $66.6 million, of which $8.6 million (13 percent) is allocated to growth through the SDCs. A significant portion of the transportation system improvement costs are assumed to be funded through external funding sources, including state and federal agency grants and contributions ($8.6 million) and assessments ($32.4 million). Growth's share of the City costs for each project was determined based on an analysis of trip generation data from the transportation system model. The model forecasts trip generation from existing and future development on each roadway segment; the ratio of growth trips to total future trips was used to allocate costs for each segment. Of total City-funded costs ($25.9 million), growth is allocated about 33 percent of costs ($8.6 million).

Reimbursement Fee

The reimbursement fee cost basis reflects the City's costs of recently completed roadway construction (specific projects are shown in Table A-2). The total cost for the reimbursement projects is $3.3 million, of which $1.2 million is allocated to growth based on share of forecast trip generation.

The combined improvement and reimbursement cost basis is almost $9.9 million net of grants and contributions.

SDC Schedule

Unit Costs

For the purposes of determining transportation system unit costs, the growth costs are divided by the projected growth in PM peak trip ends over the planning period. As shown in **Table 4-3**, dividing the capacity-related improvements by the associated capacity units, results in improvement costs of $1,223 per PM peak trip end. Reimbursement unit costs are $175 per PM peak trip end. Adding the reimbursement and improvement components, results in a total system unit cost of $1,398 per PM peak trip end.

Table 4-3
Transportation System Unit Costs

	Improvement	Reimbursement	Total
Cost Basis (1)	$8,647,447	$1,240,767	$9,888,214
Growth Trip Ends (2)	7,073	7,073	7,073
SDC per Trip End	**$1,223**	**$175**	**$1,398**

(1) From Table 4-2
(2) From Table 4-1

Calculated Fee Schedule

The transportation SDC for an individual development is based on the total cost per trip end and the number of trips attributable to a particular development. The standard practice in the transportation industry is to use ITE published trip generation rates to determine the SDCs for individual developments. Trip rates for some land uses are adjusted for "linked trips". Linked trips refer to trips that occur when a motorist is already on the roadway, as in the case of a traveler stopping by a fast-food restaurant on the way home from work. In this case, the motorist stopping at the restaurant en route home is counted as a trip generated by the restaurant, but it doesn't represent a new trip on the roadway. The City's existing transportation SDC methodology discounts all retail trips by 65 percent to account for linked trips. The updated methodology retains the linked trip adjustment, as shown in **Table 4-4** (next page).

Table 4-4
Current (established in 1994) and Revised Transportation SDCs for Sample Developments

Development Type	Trip Ends/ Unit	Linked Trip Discount	Units	SDC Current	SDC Revised
Base Trip Rate				$401	$1,398
Residential					
Single Family	1.02		Dwelling	$409	$1,426
Apartment Bldg	0.67		Dwelling	$269	$937
Condominium/Townhouse	0.52		Dwelling	$209	$727
Mobile Home Park	0.60		Dwelling	$241	$839
Sr Adult Housing - Detached	0.35		Dwelling	$140	$489
Assisted Living	0.20		Beds	$80	$280
Medical/Office					
Hospital	1.61		TGSF	$646	$2,251
Clinic	4.43		TGSF	$1,776	$6,193
Medical/Dental Office	4.45		TGSF	$1,784	$6,221
General Office	1.49		TGSF	$597	$2,083
Retail					
Building Materials/Lumber	5.56	65%	TGSF	$780	$2,721
Hardware/Paint Store	4.74	65%	TGSF	$665	$2,319
Nursery (Garden Center)	4.97	65%	TGSF	$698	$2,432
Quality Restaurant	9.02	65%	TGSF	$1,266	$4,414
High Turnover/Sit Down Rest	18.80	65%	TGSF	$2,639	$9,199
Fast Food w/o Drive Thru	52.40	65%	TGSF	$7,354	$25,640
Fast Food with Drive Thru	46.80	65%	TGSF	$6,568	$22,899
Service Station	15.65	65%	Fuel. Pos.	$2,196	$7,658
Serv.Station w/ Conven.Mkt	13.57	65%	Fuel. Pos.	$1,905	$6,640
Tire Store	3.26	65%	Service Bay	$458	$1,595
Supermarket	12.02	65%	TGSF	$1,687	$5,881
Discount Club	4.76	65%	TGSF	$668	$2,329
Furniture Store	0.53	65%	TGSF	$74	$259
Walk-in Bank	42.02	65%	TGSF	$5,898	$20,561
Drive-in Bank	53.46	65%	Lanes	$7,503	$26,158
Institutional/Other					
Motel	0.56		Rooms	$225	$783
Health/Fitness Club	4.06		TGSF	$1,628	$5,676
Church	1.41		TGSF	$565	$1,971
Daycare Center	13.91		TGSF	$5,578	$19,446
Elementary School	3.13		TGSF	$1,255	$4,376
High School	2.12		TGSF	$850	$2,964
Industrial					
General Light Industrial	1.08		TGSF	$433	$1,510
Truck Terminal	7.24		Acres	$2,903	$10,122
Mini Warehouse	0.29		TGSF	$116	$405

TSF Gross = Gross Square Feet (in thousands)
Source: ITE Trip Generation Manual (7th Edition)

SECTION 5

Park SDC Calculations

Introduction

This section describes the SDC calculation for the parks system. It includes a discussion of existing and future system demands, and existing and planned capital improvements to meet those demands. Based on the system capacity needs and costs, a maximum allowable SDC schedule is presented.

Capacity Requirements

Capacity requirements for existing and future park users (growth) are based on the planned Level of Service (LOS) for each type of park, as defined by the Master Plan (Community Planning Workshop, March 2006). The planned LOS for a particular park or facility is defined as the quantity of future City-owned park acreage per 1,000 population served.

The following equation shows the calculation of the planned LOS:

$$\frac{Existing Q + Planned Q}{Future Population Served} = Planned LOS$$

Where:

Q = quantity (acres of parks or miles of trails), and
Future Population Served = 19,597

Table 5-1 (next page) shows the existing and future LOS by park type and for trails. The Master Plan identifies the following park classifications:

- Neighborhood parks
- Community parks
- Regional parks
- Special use areas
- Natural open space

Table 5-1 shows this capacity analysis for total acreage and **Table 5-2** (next page) shows the analysis for developed acreage. The capacity requirements, or number of park acres or trail miles, needed for the existing population and for the growth population are estimated by multiplying the planned (future) LOS for each park type by the population of each group. The need for existing park users is equal to the planned LOS multiplied by the existing population. Existing users' needs are assumed to be met first by the existing inventory of parks; any shortfall is assumed to come from planned improvements. The total capacity need required by growth is equal to the product of the planned LOS and the projected increase in population over the planning period.

Table 5-1
Parks System Capacity Analysis (Total Acreage)

Park Type	Unit Measure	Existing Conditions Inventory (Units)	Existing Conditions Level of Service (Units/ /1,000)	Planned (1) Level of Service (Units/ /1,000)	Existing Population (2) Total Needed (Units)	Existing Population (2) Additional Need (Units)	Total Planned (Units)	Growth Total Need (Units)	*Additional Planned* Total (Units)	*Additional Planned* Growth (Units)	*Additional Planned* Growth (%)	Existing Inventory for Growth (Units)
Mini-Parks	Acres	1.6	0.12	**0.08**	1.13	-0.48	1.61	0.48	0.00	0.00	NA	0.48
Neighborhood	Acres	12.41	0.90	**1.40**	19.28	6.87	27.41	8.13	15.00	8.13	54.2%	0.00
Community	Acres	13.95	1.01	**0.71**	9.81	-4.14	13.95	4.14	0.00	0.00	NA	4.14
Regional	Acres	24.87	1.80	**6.15**	84.74	59.87	120.45	35.71	95.58	35.71	37.4%	0.00
Special Use	Acres	21.63	1.57	**1.48**	20.42	-1.21	29.03	8.61	7.40	7.40	100%	1.21
Natural Open Space	Acres	159.27	11.55	**19.86**	273.86	114.59	389.27	115.41	230.00	115.41	50.2%	0.00
Trails	Miles	1.8	0.13	**2.37**	32.62	30.85	46.37	13.75	44.60	13.75	30.8%	0.00
Total Acres		**233.74**	**16.95**	**29.68**	**409.25**	**175.51**	**581.72**	**172.47**	**347.98**	**166.65**		

Table 5-2
Parks System Capacity Analysis (Developed Acreage)

Park Type	Unit Measure	Existing Conditions Inventory (Units)	Existing Conditions Level of Service (Units/ /1,000)	Planned (1) Level of Service (Units/ /1,000)	Existing Population (2) Total Needed (Units)	Existing Population (2) Additional Need (Units)	Total Planned (Units)	Growth Total Need (Units)	*Additional Planned* Total (Units)	*Additional Planned* Growth (Units)	*Additional Planned* Growth (%)	Existing Inventory for Growth (Units)
Mini-Parks	Acres	1.2	0.09	**0.06**	0.85	-0.36	1.21	0.36	0.00	0.00	NA	0.36
Neighborhood	Acres	10.99	0.80	**1.40**	19.28	8.29	27.41	8.13	16.42	8.13	49.5%	0.00
Community	Acres	13.95	1.01	**0.71**	9.81	-4.14	13.95	4.14	0.00	0.00	29.6%	4.14
Regional	Acres	24.87	1.80	**6.15**	84.74	59.87	120.45	35.71	95.58	35.71	37.4%	0.00
Special Use	Acres	20.25	1.47	**1.48**	20.42	0.17	29.03	8.61	8.78	8.61	98%	0.00
Natural Open Space	Acres	0.00	0.00	**12.01**	165.62	165.62	235.42	69.80	235.42	69.80	29.6%	0.00
Trails	Miles	1.8	0.13	**2.37**	32.62	30.85	46.37	13.75	44.60	13.75	30.8%	0.00
Total Acres		**71.27**	**5.17**	**21.81**	**300.73**	**229.46**	**427.47**	**126.74**	**356.20**	**122.24**	**34%**	

(1) Source: City of Lebanon Parks Master Plan
(2) Existing 2005 population of city 13,787
(3) Assumed 2025 population of urban growth boundary: 19,597

The City plans to make significant investments in parkland based on the adopted master plan. As Table 5-1 indicates, the planned LOS is almost 30 acres per 1,000 people, including almost 20 acres per 1,000 people of natural open space acreage. The planned LOS for neighborhood and regional parks also increases; the neighborhood park LOS increases from 0.9 to 1.40 acres per 1,000, and the regional park LOS increases from 1.8 to 6.15 acres per 1,000. As indicated in Table 5-1 (fourth column from the right), no additional investment in acreage is planned for mini parks or community parks.

As indicated in Table 5-1 and 5-2, total capacity needs for the existing population are 409 total acres (301 developed acres), compared to the existing inventory of about 234 total acres (71 developed acres). The existing population need for recreation trails is almost 33 miles (determined by multiplying the planned LOS of 2.37 miles per 1,000 by the current population in thousands). The additional need for parks and trails by the existing population is equal to the total inventory needed less the existing inventory. As indicated previously, existing park users' needs are assumed to be met first by existing parks and trails. The total additional need (i.e. current deficit) is 175.5 acres of total parkland (229.5 developed acres) and almost 31 miles of trails. These deficits, along with growth's capacity needs will be met through the planned investments.

For growth, the allocated additional planned acreage (third column from the right in Tables 5-1 and 5-2) is assumed to equal the total growth need or the total additional planned units, whichever is less. In cases where the additional planned units are less than the total need, growth will require a portion of the existing inventory to be fully served. This is true for mini and community park acreage and development, and special use park acreage. The total growth need, based on the planned LOS is 172.5 acres of total parkland (126.7 acres of developed park land) and almost 14 miles of trails.

As indicated in Tables 5-1 and 5-2 (fourth column from right), the planned parks improvements will add an additional 348 total acres (356 developed acres) of parkland and almost 45 miles of trails. The portion of the improvements attributable to growth is also shown in Tables 5-1 and 5-2 (second column from the right). The growth percentages are equal to growth's additional planned units (third column from right) divided by total additional planned units (fourth column from right). Existing park users are allocated a portion of costs associated with the planned improvements for all but special use parks. This is true because the planned LOS is greater than the existing LOS for all but special use parks, so a portion of costs are related to an existing deficiency. For special use parks, the LOS decreases so there is no existing deficiency and all future improvements are assumed to be needed for growth. In the case of mini and community parks, there is also a decrease in the LOS. However, future community park improvement costs relate to development of existing land only (i.e., there is no additional land acquisition). In this case, development costs are assumed to be shared by existing users and growth in proportion to LOS needs.

Cost Basis

Table 5-3 (next page) summarizes the improvement cost basis for the parks system. The improvement cost basis reflects allocation of individual projects from the project list shown in Appendix A (Table A-5). Growth allocations for projects within each park type reflect growth's share as presented in Tables 5-1 and 5-2.

Table 5-3
Park System Cost Basis

Project Name	Total	Growth
Improvement Costs		
Mini Parks	$109,394	$32,433
Neighborhood Parks	$3,145,563	$1,213,310
Community Parks	$266,289	$78,949
Regional Parks	$14,564,268	$5,137,178
Special Use Parks	$1,266,294	$317,389
Natural Open Space	$6,928,897	$2,054,261
Total Parks	$26,280,705	$8,833,520
Recreation Trails	$8,838,325	$2,724,351
Total Improvements	**$35,119,030**	**$11,557,871**
Total Reimbursement	**$0**	**$0**
System Total	**$35,119,030**	**$11,557,871**

As indicated in Table 5-3, the reimbursement fee cost basis for the parks system is $0. While growth will rely on a portion of existing facilities to meet its capacity needs (as demonstrated in Tables 5-1 and 5-2 in the far right hand column), the existing park acreage was not funded by the City, so there is no cost to reimburse. Existing community and mini park land was donated to the City by other agencies or individuals. Therefore, the parks SDC is limited to an improvement fee only.

Improvement Fee

The total improvement costs are estimated to be $35.1 million, including almost $26.3 million in parks (land acquisition and development costs), and $8.8 million in recreation trails. Growth is allocated almost $11.6 million (about 33 percent) of total improvement project costs. As shown in Table A-4 (Appendix A), development costs for most existing parks are not allocated to growth, with the following exceptions:

1. Community and mini parks where no additional acreage is planned, so growth will rely on existing facilities entirely to meet projected service needs
2. Porter Street Park and Had Irvine Park, where currently undeveloped acreage is planned to be developed and is part of meeting the future service requirements of growth.

New park acreage and development costs are allocated to growth based on the capacity analysis shown in Tables 5-1 and 5-2. For example, all planned costs associated with additional neighborhood park acquisition are allocated 54.2 percent to growth and costs for neighborhood park development are allocated 49.5 (equal to growth percentages shown in Tables 5-1 and 5-2, second column from the right).

SDC Schedule

Unit Costs

Table 5-4 (next page) shows the calculation of system-wide unit costs that are attributable to growth. At this point, the cost basis is separated between residential and nonresidential

development. Nonresidential development creates a demand on parks through use of parks by employees and patrons. Data from the City's park reservation system indicates that approximately 15 percent of park reservations are for nonresidential functions. These functions tend to be in the larger parks, as opposed to neighborhood and community parks. Therefore, 15 percent of all growth-related costs for all park types, except neighborhood and community are allocated to nonresidential developments.

Table 5-4
Park System Unit Costs

Park Type	Total	Residential	Nonresidential
Growth Costs			
Mini-Parks	$32,433	$27,568	$4,865
Neighborhood	$1,213,310	$1,213,310	$0
Community	$78,949	$78,949	$0
Regional	$5,137,178	$4,366,601	$770,577
Special Use	$317,389	$269,781	$47,608
Natural Open Space	$2,054,261	$1,746,122	$308,139
Recreation Trails	$2,724,351	$2,315,698	$408,653
Total	**$11,557,871**	**$10,018,029**	**$1,539,842**

Unit Costs	**Population**	**Employment**
Growth Units	5,810	3,569
Gross Cost/Unit	$1,724.25	$431.45
Credit	$508.80	$153.57
Net Cost/Unit	**$1,215.45**	**$277.88**

The growth capacity units for both residential and nonresidential developments are people; in the case of residential it is total population, and in the case of nonresidential the unit of measure is employment. The growth in population and employment during the parks master planning period is estimated to be 5,810 and 3,569, respectively[3]. Dividing the residential cost by the total growth in population yields a gross cost per person of $1,724.25. Similarly, the unit cost for nonresidential is determined to be $431.45 per employee.

A credit against the gross unit cost is provided to recognize future contributions by newly developed properties toward the retirement of estimated future debt principal. As growth-related debt service may be repaid with SDC revenue, the future debt service credit is limited to the estimated annual principal payments related to existing customer's costs. As growth will be paying for its share of these same improvements up-front through the SDCs, a credit for future tax-supported debt service is provided. This future credit is equal to $508.80 per person for residential, and $153.57 per employee for nonresidential. There is currently no outstanding debt associated with the park system, so no existing debt credit is warranted.

The cost per person/employee, net of credits is $1,215.45 for residential, and $277.88 for nonresidential.

[3] Population forecasts provided by the City; employment forecast from Lebanon Urbanization Study (June 2004, ECO Northwest).

Calculated Fee Schedule

The calculated SDC schedule is presented in **Table 5-5**. The SDC for residential developments is based on the number of dwelling units and the type of dwelling. The SDC per unit is calculated by multiplying the net cost per person by the average number of occupants per dwelling: 2.61 for single-family and 2.13 for multifamily, yielding a single-family SDC per dwelling unit of $3,172 and a multifamily fee of $2,589 per unit.

Table 5-5
Park System Calculated SDC Schedule

	Units	Unit Cost	SDC/Unit
Residential	*person/DU(1)*		
Single-Family/ Manufactured Homes	2.61	$1,215.45	$3,172
Multifamily	2.13	$1,215.45	$2,589
Commercial	*Emp./1,000 sq. ft(2)*		SDC/1,000 sq. ft.
Retail	2.5	$277.88	$695
Industrial	1.7	$277.88	$472
Office	3.3	$277.88	$917

(1) City of Lebanon Urbanization Study (June 2004, ECO Northwest)
(2) Based on information from Institute of Transportation Engineers Manual

For nonresidential development, the SDC is assessed based on estimated employment density and building size (as measured in square feet). Three categories of nonresidential are identified: retail, industrial and office. Estimated employment per 1,000 square feet is based on national data (information from the Institute of Transportation Engineers *Trip Generation Manual*). The SDC per 1,000 square feet for each nonresidential type is computed by multiplying the cost per employee ($277.88) by the estimated employees per 1,000 square feet (ranges from 1.7 to 3.3). The SDC per 1,000 square fee of building are ranges from $472 for industrial to $917 for office type developments.

SECTION 6

Compliance Costs

Introduction

Oregon law provides that system development charge (SDC) revenue may be used for costs incurred by the local government in complying with the provisions of the law, including the costs of developing SDC methodologies and annual accounting expenses. Recent amendments to the law require annual accounting of SDC expenditures, including revenue collected and attributed to the costs of compliance.

Compliance Costs

Table 6-1 summarizes estimated compliance costs for all systems, including storm water and wastewater. Compliance costs include auditing costs, SDC methodology development costs, and a portion of master planning costs. Auditing costs are incurred on an annual basis; the SDC portion of auditing costs is estimated based on a pro-rata share of the cost per fund and the number of SDC funds. Cost of the SDC methodology development reflect estimated total consulting fees for a comprehensive update for all systems, prepared once a decade. This is likely conservative, as more frequent updates generally occur, and if systems are updated individually, the unit cost would likely increase, as there are certain economies of scale realized in conducting a combined system evaluation. Similarly, master planning costs are also conservative due to assumed frequency of comprehensive updates and the need for more frequent updates to the project lists.

Table 6-1
Projected SDC Compliance Costs and Charge

		Growth Portion (1)	Frequency (Years)	Annual Requirement
Auditing	$1,000	100%	1	$1,000
SDC Methodology Development	$85,000	100%	10	$8,500
Master Planning/Capital Project List Development				
Water	$205,000	39%	10	$8,073
Sewer	$170,000	39%	10	$6,695
Parks	$100,000	39%	10	$3,938
Transportation	$190,000	39%	10	$7,482
Storm water	$150,000	39%	10	$5,907
Subtotal				$32,095
Total (Rounded)				$40,000
Estimated Annual SDC Revenue (2)				$965,300
Admin Charge %				**4.1%**

(1) Master planning costs allocated in proportion to future 2025 population
(2) Based on calculated maximum charges

Annual compliance costs are estimated to be $40,000 (rounded to the nearest $10,000).

Compliance Charge

The compliance charge is calculated as a percent of the projected SDC revenue. Future SDC revenue is projected based on the CAC-recommended maximum SDC charges, and the estimated annual number of equivalent development units (EDUs), based on a three-year historical average. As shown in **Table 6-2**, the projected annual SDC revenue is $965,300 for all systems combined. In order to recover the estimated compliance costs, the City would need to charge an additional 4.1 percent of the assessed SDCs.

Table 6-2
Projected Annual SDC Revenue

System	Rec. Max Fee/EDU	Estimated EDUs (1)	Estimated Revenue
Water	$1,795	69.47	$124,706
Sewer	$2,725	99.72	$271,732
Storm	$134	197.03	$26,471
Parks (2)	$2,678	77.64	$244,617
Transportation	$1,426	208.80	$297,755
Total	$8,758		$965,281
Total (Rounded)			**$965,300**

(1) Based on 2002-2004 average
(2) Excludes SDC costs related to Open Space

Appendix A

Table A-1
CITY OF LEBANON
WATER SYSTEM PROJECTS

No.	Project Title	Total Capital Cost	Estimate Project Phasing	Growth %	Growth $
1	Purchase spare parts for WTP	$73,200	Phase 1	15%	$10,980
2	River bank test well No. 1	$194,500	Phase 1	43%	$84,283
3	River bank well and river intake siting study	$36,000	Phase 1	43%	$15,600
4	South 5th Street Reservoir repainting	$354,200	Phase 1	0%	$0
5	South 5th Street Reservoir security improvements	$41,000	Phase 1	0%	$0
6	Existing system pipe replacement in Central Area	$5,000	Phase 1	30%	$1,500
7	Existing system pipe replacement in Central Area	$199,000	Phase 1	30%	$59,700
8	Existing system pipe replacement in Central Area	$131,000	Phase 1	30%	$39,300
9	Existing system pipe replacement in Central Area	$323,000	Phase 1	30%	$96,900
10	Small diameter pipeline replacement program	$4,910,000	Phase 1	0%	$0
11	New distribution reservoir tank	$2,230,000	Phase 1	57%	$1,263,667
12	River bank production wells No. 1 and No. 2	$610,000	Phase 1	43%	$264,333
13	Central distribution improvements	$154,000	Phase 1	30%	$46,200
14	Central distribution improvements	$138,000	Phase 1	30%	$41,400
15	Grant Street Reservoir repainting	$389,000	Phase 1	0%	$0
16	Grant Street Reservoir security improvements	$41,000	Phase 1	0%	$0
17	River Bank test wells No. 2 and No. 3	$260,000	Phase 1	43%	$112,667
18	River bank wells No. 3, 4, 5, and 6	$1,860,000	Phase 2	43%	$806,000
19	Water treatment plant to treat river bank well water	$13,300,000	Phase 3	43%	$5,763,333
20	Central-eastern distribution improvements	$66,000	Phase 3	66%	$43,560
21	Central-eastern distribution improvements	$262,000	Phase 3	66%	$172,920
22	Central-eastern distribution improvements	$246,000	Phase 3	66%	$162,360
23	Central-eastern distribution improvements	$379,000	Phase 3	84%	$318,360
24	Central-eastern distribution improvements	$480,000	Phase 3	84%	$403,200
25	Central-eastern distribution improvements	$569,000	Phase 3	84%	$477,960
26	Central-eastern distribution improvements	$154,000	Phase 3	84%	$129,360
27	East to new area	$215,000	Phase 3	66%	$141,900
28	Eastern distribution improvements	$124,000	Phase 3	66%	$81,840
29	Eastern distribution improvements	$721,000	Phase 3	66%	$475,860
30	Eastern distribution improvements	$16,000	Phase 3	66%	$10,560
31	Eastern distribution improvements	$16,000	Phase 3	66%	$10,560
32	Eastern distribution improvements	$30,000	Phase 3	66%	$19,800
33	Northeastern distribution improvements	$370,000	Phase 3	30%	$111,000
34	Northeastern distribution improvements	$154,000	Phase 3	30%	$46,200
35	Northeastern distribution improvements	$138,000	Phase 3	30%	$41,400
36	Northeastern distribution improvements	$73,000	Phase 3	30%	$21,900
37	Northeastern distribution improvements	$124,000	Phase 3	30%	$37,200
38	Northeastern distribution improvements	$89,000	Phase 3	30%	$26,700
39	Northeastern distribution improvements	$138,000	Phase 3	30%	$41,400
40	Northeastern distribution improvements	$246,000	Phase 3	30%	$73,800
41	Northeastern distribution improvements	$120,000	Phase 3	84%	$100,800
42	Northern distribution improvements	$154,000	Phase 3	66%	$101,640
43	Northern distribution improvements	$276,000	Phase 3	66%	$182,160
44	Northern distribution improvements	$307,000	Phase 3	84%	$257,880
45	Northern distribution improvements	$169,000	Phase 3	84%	$141,960

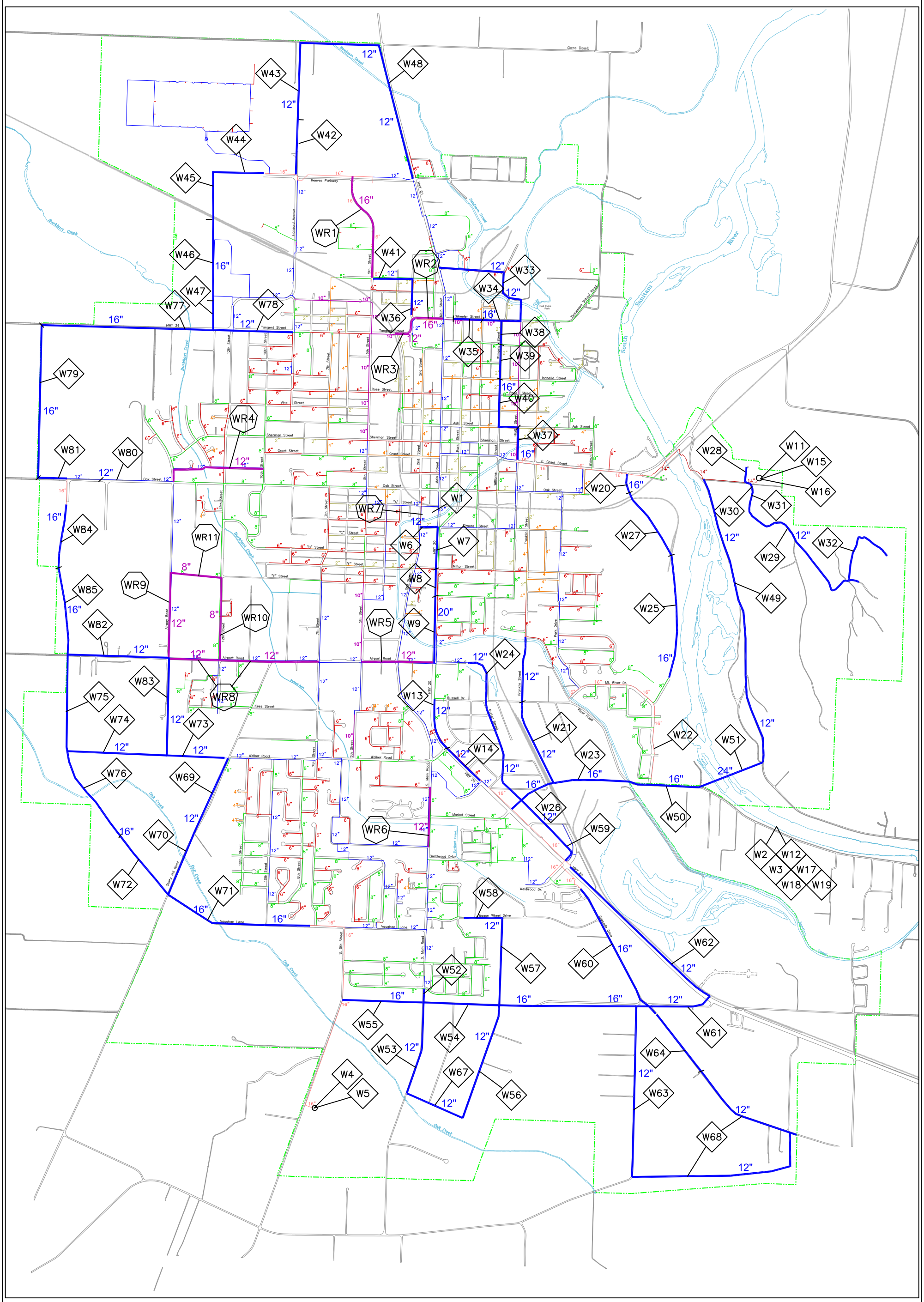
No.	Project Title	Total Capital Cost	Estimate Project Phasing	Growth %	Growth $
46	Northern distribution improvements	$307,000	Phase 3	84%	$257,880
47	Northern distribution improvements	$126,000	Phase 3	84%	$105,840
48	Northern distribution improvements	$599,000	Phase 3	66%	$395,340
49	Southeastern distribution improvements	$845,000	Phase 3	66%	$557,700
50	Southeastern distribution improvements	$112,000	Phase 3	84%	$94,080
51	Southeastern distribution improvements	$922,000	Phase 3	43%	$399,533
52	Southeastern distribution improvements	$47,000	Phase 3	66%	$31,020
53	Southeastern distribution improvements	$262,000	Phase 3	66%	$172,920
54	Southeastern distribution improvements	$292,000	Phase 3	84%	$245,280
55	Southeastern distribution improvements	$301,000	Phase 3	66%	$198,660
56	Southeastern distribution improvements	$323,000	Phase 3	66%	$213,180
57	Southeastern distribution improvements	$246,000	Phase 3	66%	$162,360
58	Southeastern distribution improvements	$108,000	Phase 3	66%	$71,280
59	Southeastern distribution improvements	$276,000	Phase 3	84%	$231,840
60	Southeastern distribution improvements	$552,000	Phase 3	66%	$364,320
61	Southeastern distribution improvements	$229,000	Phase 3	66%	$151,140
62	Southeastern distribution improvements	$552,000	Phase 3	66%	$364,320
63	Southeastern distribution improvements	$445,000	Phase 3	66%	$293,700
64	Southeastern distribution improvements	$414,000	Phase 3	66%	$273,240
65	Southeastern distribution improvements	$185,000	Phase 3	84%	$155,400
66	Southeastern distribution improvements	$522,000	Phase 3	66%	$344,520
67	Southeastern distribution improvements	$169,000	Phase 3	66%	$111,540
68	Southeastern distribution improvements	$400,000	Phase 3	66%	$264,000
69	Southwestern distribution improvements	$229,000	Phase 3	66%	$151,140
70	Southwestern distribution improvements	$185,000	Phase 3	66%	$122,100
71	Southwestern distribution improvements	$276,000	Phase 3	84%	$231,840
72	Southwestern distribution improvements	$276,000	Phase 3	84%	$231,840
73	Southwestern distribution improvements	$169,000	Phase 3	66%	$111,540
74	Southwestern distribution improvements	$229,000	Phase 3	66%	$151,140
75	Southwestern distribution improvements	$341,000	Phase 3	84%	$286,440
76	Southwestern distribution improvements	$629,000	Phase 3	84%	$528,360
77	Western distribution improvements	$646,000	Phase 3	84%	$542,640
78	Western distribution improvements	$215,000	Phase 3	66%	$141,900
79	Western distribution improvements	$583,000	Phase 3	84%	$489,720
80	Western distribution improvements	$199,000	Phase 3	66%	$131,340
81	Western distribution improvements	$154,000	Phase 3	66%	$101,640
82	Western distribution improvements	$215,000	Phase 3	66%	$141,900
83	Western distribution improvements	$262,000	Phase 3	66%	$172,920
84	Western distribution improvements	$337,000	Phase 3	84%	$283,080
85	Western distribution improvements	$353,000	Phase 3	84%	$296,520
	Total =	$44,416,900			$21,813,297

Project Phasing:
Phase 1: 1 - 5 years
Phase 2: 6 - 10 years
Phase 3: 11- 20 years

Table A-1
CITY OF LEBANON
WATER SYSTEM REIMBURSEMENT

No.	Project Title	From	To	Zoning	Existing Size	Constructed Size	Length (LF)	Book Value	
WR1	5th Street	Mary St.	Reeves Prkwy	SPD	NA	16"	2163	$151,502	
WR2	Morton Street	Hwy 20 (N)	2nd Street	Com/Res/School	10"	16"	625	$37,434	
WR3	2nd Street	Morton St.	Tangent St.	Residential	10"	12"	400	$15,494	
WR4	Green Acres	10th St.	Oak St.	Residential	NA	12"	2136	$97,308	
WR5	Airport Road	Hwy 20	5th St.	Comm./Res.	NA	12"	1781	$114,932	
WR6	South Main	Cedar	Vaughn	Mixed/Res/Com	NA	12"			
	Vaughn Lane	South Main	Quail Place	Residential	NA	12"	1445	$60,645	
WR7	Water Treatment Plant	2nd & "A"	Clearwell Baffles	Commercial	NA	NA	NA	$52,999	
WR8	Airport Area Infrastructure	Airway Road	7th Street	Residential	NA	12"	2990	$40,596	(1)
WR9	Airport Area Infrastructure	Airport Road	1362' N on Airway	Res/Spd	NA	12"	1262	$17,134	(1)
WR10	Airport Area Infrastructure	Airport Road	2643' N on 12th	Res/Spd	NA	8"	2643	$35,885	(1)
WR11	Airport Area Infrastructure	12th Street	Airway Road	Dev. District	NA	8"	1000	$13,577	(1)
							Water Reimbursement Total:	$637,506	

(1) City's cost after grant contribution



City of Lebanon

System Development Charge

Infrastructure Projects - WATER

CITY OF LEBANON
It's easier from here.

Table A-2
City of Lebanon
Transportation SDC Project List

STREET IMPROVEMENT

Street Improvement Projects				Existing Street Conditions		Street Improvements Recommended in the TSP & CIP						Assessments Minimum Street Requirements						Funding						Growth - Allocation			
Proj. #	Street Name	Length	Adjacent Zoning	Street Width (ft)	ROW (ft)	Classification	Street Width (ft)	Needed ROW (ft)	ROW **Cost ($)	Roadway Cost/ft	Estimated SDC Project Cost	Classification	Street Width (ft)	Needed ROW (ft)	ROW **Cost ($)	Cost/ft	Estimated Assessments	Other Agency	Grant	Assessments	City	% other Funding	Thru Trips	Street Allocation Growth %	Street Allocation Growth $	Signal Allocation Growth %	Signal Allocation Growth $
T1	12th Street	900	Residential	NA	NA	Collector (2 lanes)	34	60	$62,100	$416	$436,500	Residential	34	60	$62,100	$285	$318,600			$318,600	$117,900	73%		36%	$42,444	36%	$42,444
T2	Walker Road	175	Residential	NA	NA	Minor Arterial	50	75	$15,094	$609	$121,669	Residential	34	75	$15,094	$285	$64,969			$64,969	$56,700	53%		37%	$20,711	37%	$20,711
T3	12th Street	2,745	Residential/MU	32'	60	Collector (2 lanes)	34	0	$0	$416	$1,141,920	Residential	34	0	$0	$285	$782,325		$228,000	$782,325	$131,595	88%		52%	$68,851	52%	$68,851
T4	12th Street	1,500	Residential	20'	50	Collector (2 lanes)	34	10	$17,250	$416	$641,250	Residential	34	10	$17,250	$285	$444,750		$128,000	$444,750	$68,500	89%		49%	$33,737	49%	$33,737
T5	Russell Drive Area	14,025	Residential	20'	50	Local/Arterial*	*26' to 38'	0		$253/$479*	$4,576,050	Residential	26	0	$0	$285	$3,997,125			$3,997,125	$578,925	87%		43%	$251,100	43%	$251,100
T6	Williams Street	1,000	Industrial/Res.	22'	60	Collector (3 lanes)	48	15	$17,250	$591	$608,250	Collector (3 lanes)	48	15	$17,250	$591	$608,250			$608,250	$0	100%		41%	$0	41%	$0
T7	Airway Road	1,155	Industrial	22'	60	Collector (3 lanes)	48	15	$19,924	$591	$702,529	Collector (3 lanes)	48	15	$19,924	$591	$702,529		$232,000	$702,529	$0	100%		44%	$0	44%	$0
T8	Walker Road	2,540	Residential/Ind.	NA	NA	Major Arterial	78	105	$306,705	$950	$2,719,705	Residential	34	60	$175,260	$285	$899,160			$899,160	$1,820,545	33%		41%	$751,872	41%	$751,872
T9	Airway Road	1,920	Industrial	NA	NA	Collector (3 lanes)	48	75	$165,600	$591	$1,300,320	Collector (3 lanes)	48	75	$165,600	$591	$1,300,320			$1,300,320	$0	100%		41%	$0	41%	$0
T10	Williams & Wheeler Streets	5,800	Residential	28'-38'	60	Collector (2 lanes)	34	0	$0	$416	$2,412,800	Residential	34	0	$0	$285	$1,653,000			$1,653,000	$759,800	69%		0%	$0	0%	$0
T11	Milton Street	1,140	Commercial/Res.	30'	40	Collector (2 lanes)	34	20	$26,220	$416	$500,460	Residential	34	20	$26,220	$285	$351,120			$351,120	$149,340	70%		0%	$0	0%	$0
T12	Airport Road	1,680	Mixed Use	NA	NA	Minor Arterial	50	75	$144,900	$609	$1,168,020	Collector (3 lanes)	48	75	$144,900	$591	$1,137,780			$1,137,780	$30,240	97%		8%	$2,520	8%	$2,520
T13	Franklin Street	1,760	Residential	NA	NA	Collector (3 lanes)	48	60	$121,440	$591	$1,161,600	Residential	34	60	$121,440	$285	$623,040		$581,000	$623,040	$0	100%		15%	$0	15%	$0
T14	Market Street	2,600	Industrial	NA	NA	Collector (3 lanes)	48	75	$224,250	$591	$1,760,850	Collector (3 lanes)	48	75	$224,250	$591	$1,760,850			$1,760,850	$0	100%		27%	$0	27%	$0
T15	Lebanon Parkway	23,600	Residential/Ind.	NA	NA	Parkway Arterial	80	130/80	$3,137,200	$709	$22,079,600	Collector/Residential	48/ROW	130/80	$703,800	$628	$8,302,600		$3,070,000	$8,302,600	$10,707,000	52%	6%	21%	$2,102,942	21%	$2,102,942
T16	Signalized Intersection	NA	Special Dev. Dist.	NA	NA	NA	NA	NA			$400,000							$400,000		$0	$0	100%		100%	$0	83%	$0
T17	Reconfigure Intersection	NA	Residential	NA	NA	NA	NA	NA			$400,000							$200,000		$0	$200,000	50%		100%	$200,000	7%	$13,889
T18	Stoltz Hill Road	2,800	Residential	22'	60	Collector (2 lanes)	34	0	$0	$416	$1,164,800	Residential	34	0	$0	$285	$798,000			$798,000	$366,800	69%		44%	$160,120	44%	$160,120
T19	Signalized Intersection	NA	Industrial/Res.	NA	NA	NA	NA	NA			$750,000							$375,000		$0	$375,000	50%		100%	$375,000	40%	$149,042
T20	Eastside Connector	5,150	Industrial/Res.	NA	NA	Collector (3 lanes)	48	75	$444,188	$591	$3,487,838	Collector (3 lanes)	48	75	$444,188	$591	$3,487,838			$3,487,838	$0	100%		35%	$0	35%	$0
T21	Weldwood Drive	2,100	Residential/MU	NA	NA	Collector (3 lanes)	48	75	$181,125	$591	$1,422,225	Residential	34	60	$144,900	$285	$743,400			$743,400	$678,825	52%		41%	$280,350	41%	$280,350
T22	Signalized Intersection	NA	Residential	NA	NA	Major Arterial	NA	NA			$250,000							$250,000		$0	$0	100%		0%	$0	0%	$0
T23	Intersection Improvements	NA	Residential	NA	NA	Major Arterial	NA	NA			$500,000							$250,000		$0	$250,000	50%		100%	$250,000	81%	$202,270
T24	Signalized Intersection	NA	Residential	NA	NA	Arterial	NA	NA			$250,000									$0	$250,000	0%		100%	$250,000	42%	$105,660
T25	Signalized Intersection	NA	Residential	NA	NA	Parkway Arterial	NA	NA			$250,000									$0	$250,000	0%		50%	$125,503	50%	$125,503
T26	Berlin Road	7,400	Residential	22'	60	Minor Arterial	50	15	$127,650	$609	$4,634,250	Residential	34	0	$0	$313	$2,316,200			$2,316,200	$2,318,050	50%		17%	$386,342	17%	$386,342
T27	Seventh Street	725	Residential	22	60	Collector (2 lanes)	34	0	$0	$416	$301,600	Residential	34	0	$0	$313	$226,925			$226,925	$74,675	75%		7%	$5,210	7%	$5,210
						Street Improvements Subtotal:					**$55,142,235**						**$30,518,780**	**$1,475,000**	**$4,239,000**	**$30,518,780**	**$19,183,895**						**$4,702,562**

STREET REIMBURSEMENT PROJECTS

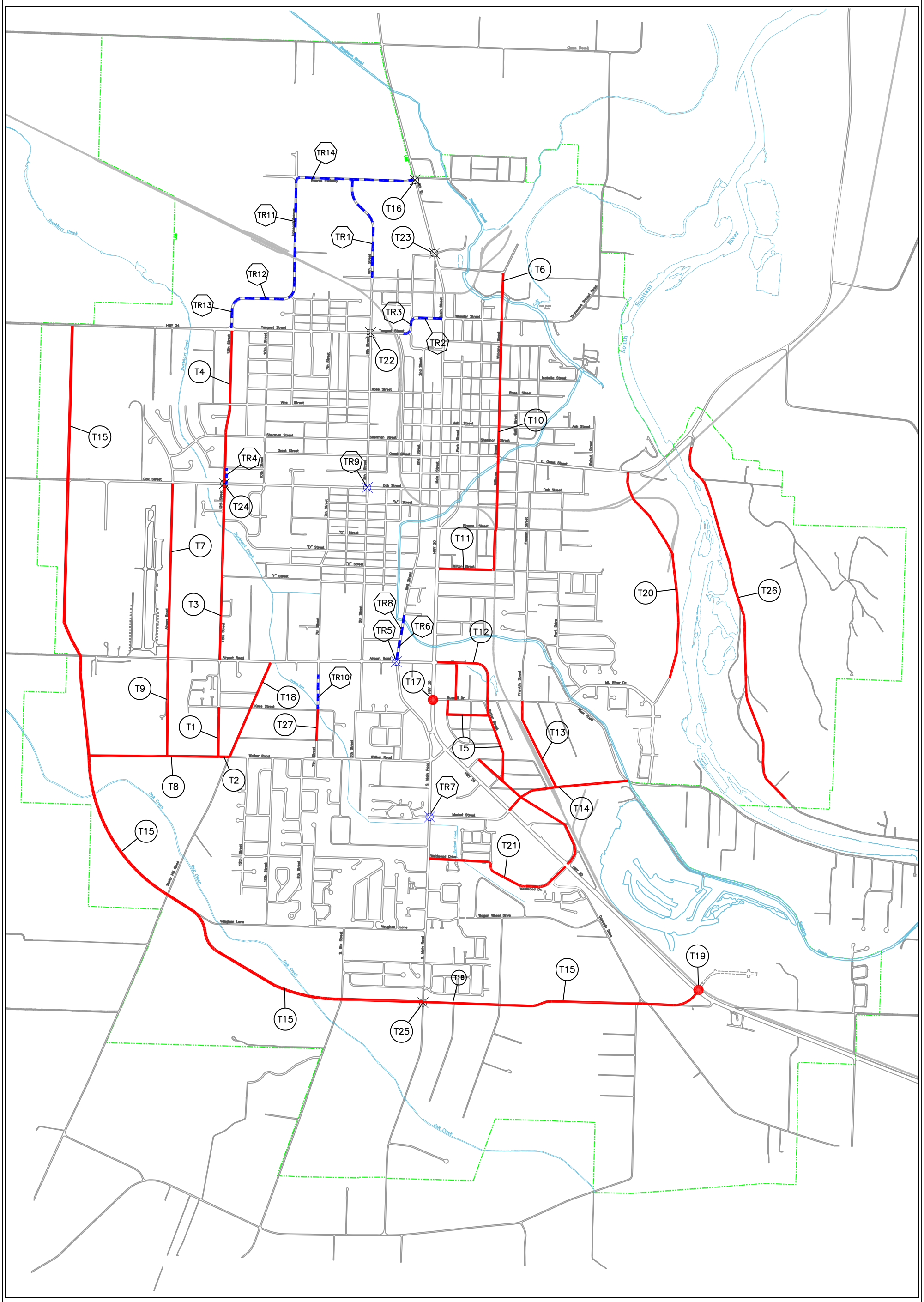
Proj. #	Street Name	Length	Adjacent Zoning	Existing Street Width	Street Type	Project Cost	Street Allocation Growth %	Street Allocation Growth $
TR1	5th Street	178'	Residential	46	Collector	$61,975	100%	$61,975
TR2	Morton & Tangent Streets	1000'	Residential	38	Major Arterial	$278,688	13%	$36,282
TR3	2nd Street	575	Residential	44	Arterial	$100,299	27%	$26,887
TR4	12th Street	578'	Residential	40	Collector	$128,177	55%	$69,914
TR5	Airport Road & Signal @ 2nd	2091'	Residential/Comm	48	Arterial	$519,920	20%	$106,428
TR6	2nd Street	463	Residential	44	Arterial	$110,772	8%	$9,193
TR7	S. Main Rd & Signal @ Market	1733'	Residential	46	Arterial	$322,400	49%	$157,883
TR8	2nd Street Incl. Bridge Widen.	390'	Residential	44	Arterial	$308,074	5%	$16,286
TR9	Signal @ 5th & Oak St.	NA	Residential	NA	Arterial	$257,641	21%	$54,736
TR10	7th Street	700'	Residential	39	Collector	$189,382	6%	$11,836
TR11	Hansard Ave	2450'	Industrial	43'	Collector	$434,632	78%	$338,047
TR12	Harrison Street	1220'	Industrial	43'	Collector	$247,266	48%	$118,044
TR13	12th Street	600'	Industrial	43'	Collector	$193,281	48%	$92,272
TR14	Reeve's Parkway	2275'	Mixed Use	42'	Collector	$163,000	86%	$140,984
					Street Reimbursement Total:	**$3,315,505**		**$1,240,767**

NOTES:

* Street sections defined in the Russell Drive Area Mixed Use Neighborhood Center Final Implementation Plan

** ROW Costs are estimated to be $50,000 per acre ($1.15/sf)

Zoning Adjacent to Project	Assessment Requirement
Residential	34 foot wide Residential Street
Commercial	48 foot wide Collector (3 lanes)
Industrial	48 foot wide Collector (3 lanes)
Mixed Use	48 foot wide Collector (3 lanes)



City of Lebanon

System Development Charge

Infrastructure Projects - STREETS

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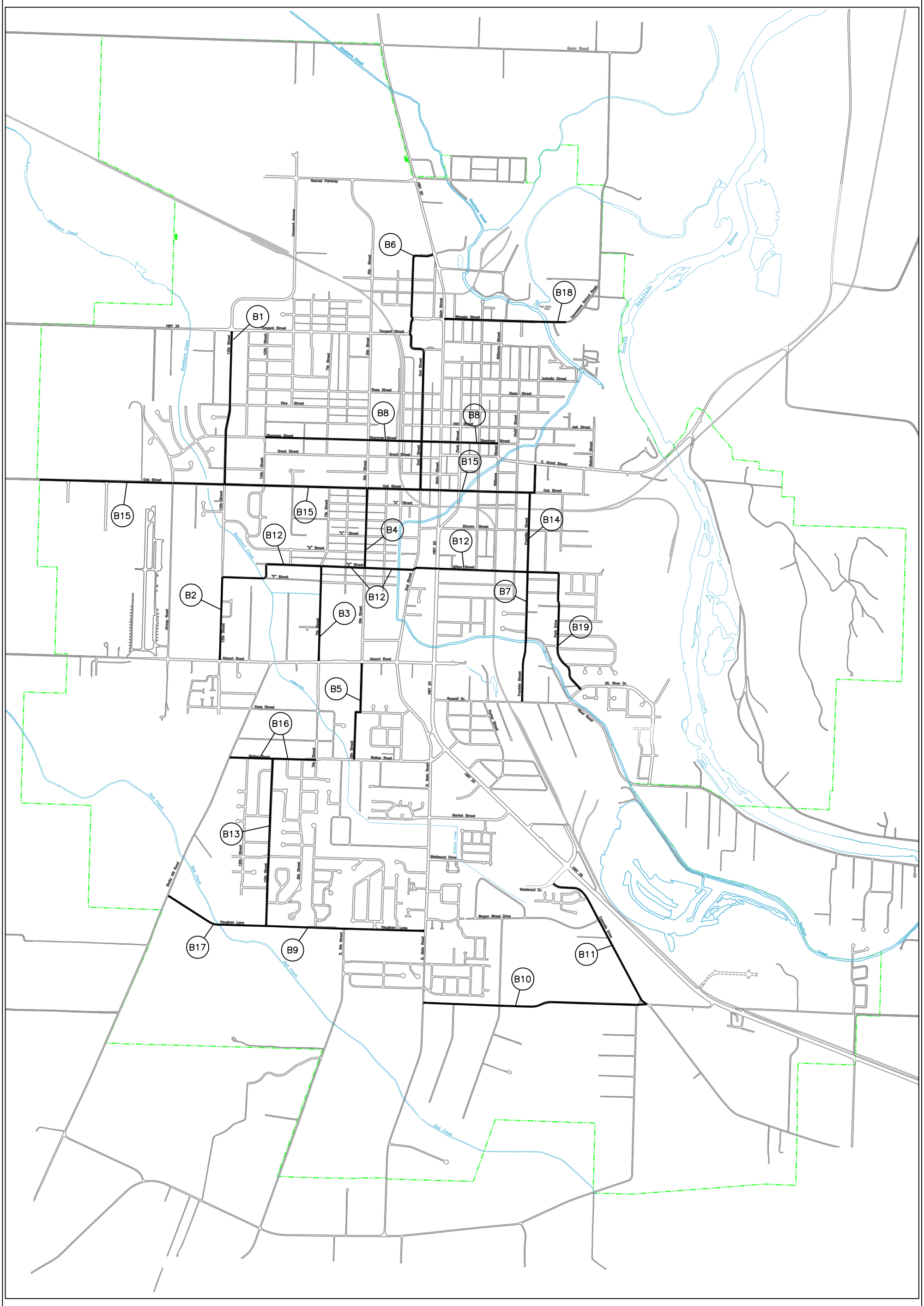
Table A-3
City of Lebanon
Transportation SDC Project List

Bike Improvements

Proj. #	Project Location	From	To	Existing Street Classification	Approximate Length (ft)	Master Plan Project Cost	Funding: Other Agency	Funding: Grant	Funding: City	Growth %	Growth $
1	12th Street	Tangent Street	Oak Street	Collector	3115	Included w/Road Projects 3&4					
2	12th Street	F Street	Airport Road	Collector	1695	Included w/Road Project 3					
3	7th Street	E Street	Oak Street	Collector	1590	$323,900		$15,250	$308,650	58.89%	$181,756
4	5th Street	Oak Street	E Street	Collector	1300	$113,200			$113,200	58.89%	$66,661
5	5th Street	Oak Street	Walker Road	Collector	2020	$58,300		$20,790	$37,510	58.89%	$22,089
6	2nd Street	US 20/Twin Oaks	Oak Street	Arterial/Residential	5365	$2,010,100		$39,100	$1,971,000	58.89%	$1,160,673
7	Franklin Street	Milton Street	Russell Drive	Collector	2630	$311,300			$311,300	58.89%	$183,317
8	Sherman Street	10th Street	Williams Street	Collector	4685	$312,100		$28,220	$283,880	58.89%	$167,170
9	Vaughn Lane	10th Street	South Main Road	Collector	3495	$207,100			$207,100	58.89%	$121,956
10	Crowfoot	South Main Road	Cascade Drive	Collector	5410	Included w/Road Project 15				58.89%	$0
11	Cascade Drive	Hwy 20	Crowfoot Road	Collector	4600	$294,000			$294,000	58.89%	$173,129
12	Milton Street	12th Street	Park Drive	Collector	7135	$664,800		$66,910	$597,890	58.89%	$352,082
13	10th Street	Walker Road	Vaughn Lane	Collector	3350	$36,100		$13,410	$22,690	58.89%	$13,362
14	Franklin Street	Grant Street	Milton Street	Collector	2250	$148,900		$14,190	$134,710	58.89%	$79,327
15	Oak Street	City Limits - West	Franklin Street	Arterial/Collector	10000	$2,776,300		$112,410	$2,663,890	58.89%	$1,568,698
16	Walker Road	Stoltz Hill	7th Street	Collector	1760	$47,200			$47,200	58.89%	$27,795
17	Vaughn Lane	Stoltz Hill	10th Street	Collector	3215	$205,500	$205,500		$0	58.89%	$0
18	Wheeler Street	Hwy 20	Tennessee Rd.	Collector	2530	Included w/Raod Project 10					
19	Park Drive	Milton Street	Mt. River Drive	Local	2500	No Improvements for Local Street			$0	58.89%	$0
					Total =	**$7,214,800**	**$205,500**	**$310,280**	**$6,699,020**		**$3,944,886**



City of Lebanon

System Development Charge

Infrastructure Projects - BICYCLE

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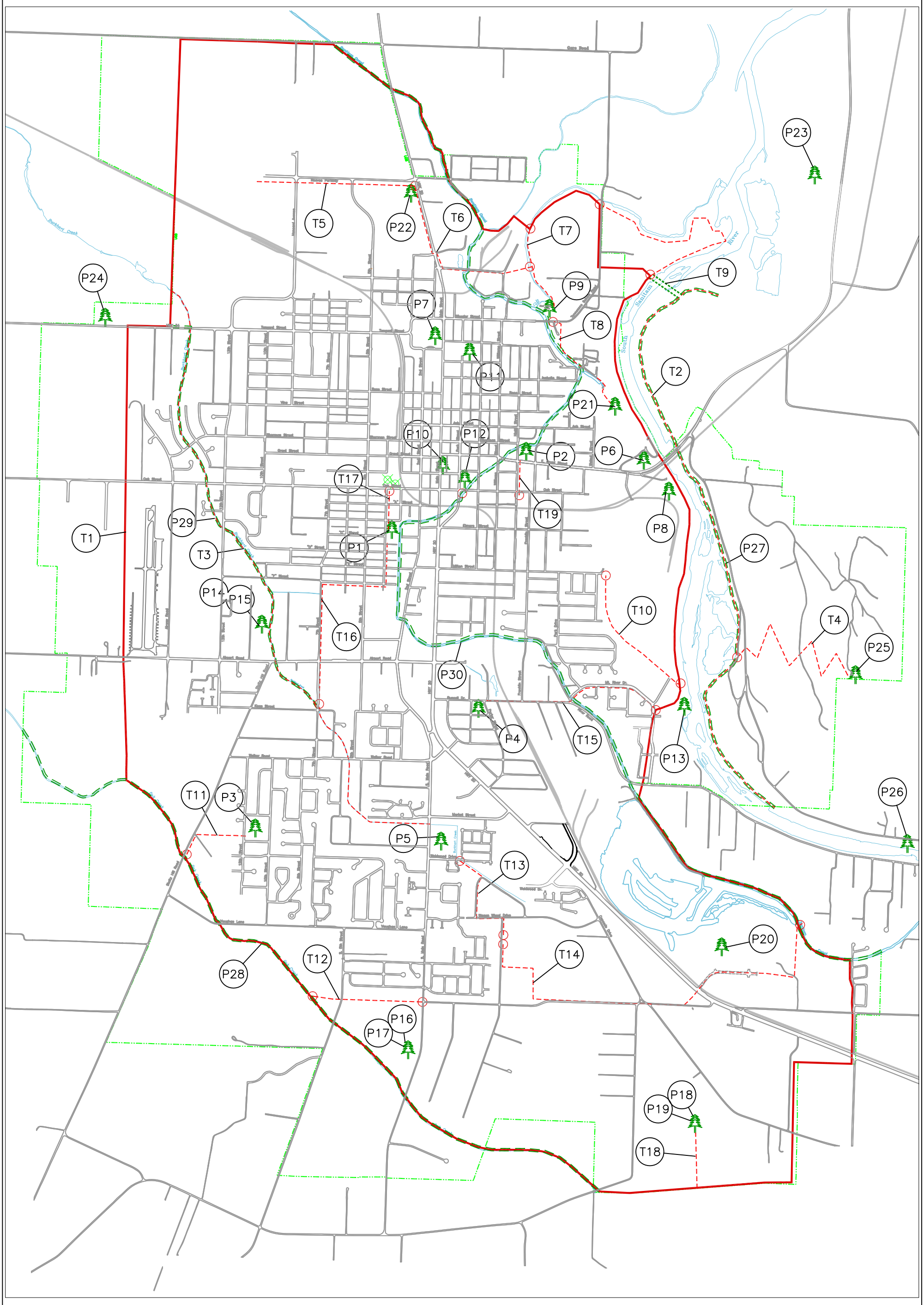
Table A-4
City of Lebanon
Parks SDC Analysis
Parks Master Plan Recommended Improvements

#	Project	Existing	Proposed	Total Cost	Growth Allocation %	Growth Allocation $
	Existing Park Improvements					
	Mini Park					
P1	Jaycee Park	0.69	0.00	$109,394	29.6%	$32,433
	Mini Park Subtotal			$109,394		$32,433
	Neighborhood Park					
P2	Booth Park	2.36	0.00	$282,747	0.0%	$0
P3	Christopher Columbus Park	3.26	0.00	$475,146	0.0%	$0
P4	Porter Street Park	0.00	1.42	$212,671	49.5%	$105,253
	Neighborhood Park Subtotal	5.62	1.42	$970,563		$105,253
	Community Park					
P5	Bob Smith Memorial Park	7.70	0.00	$266,289	29.6%	$78,949
	Community Park Subtotal			$266,289		$78,949
	Regional Park					
P6	River Park	24.87	0.00	$814,568	0.0%	$0
	Regional Park Subtotal			$814,568		$0
	Special Use Areas					
P7	Academy Square Park	7.48	0.00	$411,976	0.0%	$0
P8	Gill's Landing	6.23	0.00	$94,388	0.0%	$0
P9	Had Irvine Park	0.00	0.00	$82,679	98.0%	$81,047
P10	Mural Park	0.08	0.00	$12,449	0.0%	$0
P11	Pioneer Cemetery Park	2.60	0.00	$43,340	0.0%	$0
P12	Ralston Square Park	2.49	0.00	$185,363	0.0%	$0
	Special Use Areas Subtotal			$830,194		$81,047
	Natural Open Space					
P13	Santiam Riverfront Subtotal	0.00	5.42	$28,897	29.6%	$8,567
	Natural Open Space Subtotal			$28,897		$8,567
	Total Cost: Existing Parks			$3,019,905	10.1%	$306,249
	New Trails		**Miles**			
T1-T19	Trail System Total Cost		44.60	$8,838,325	30.8%	$2,724,351
	New Parks		**Acres**			
	Neighborhood Parks*					
P14	Airport Road Park Land Acquisition	0.00	5.00	$225,000	54.2%	$121,897
P15	Airport Road Park Development	0.00	5.00	$500,000	49.5%	$247,456
P16	Oak Creek Park Land Acquisition	0.00	5.00	$225,000	54.2%	$121,897
P17	Oak Creek Park Development	0.00	5.00	$500,000	49.5%	$247,456
P18	Cascade Drive Park Land Acquisition	0.00	5.00	$225,000	54.2%	$121,897
P19	Cascade Drive Park Development	0.00	5.00	$500,000	49.5%	$247,456
				$2,175,000	50.9%	$1,108,057
	Regional Parks					
P20	Proposed Cheadle Lake Regional Park	0.00	93.00	$13,633,600	37.4%	$5,093,800
P21	River park addition	24.87	2.58	$116,100	37.4%	$43,377
				$13,749,700		$5,137,178
	Special Use Areas					
P22	Proposed North Entrance Gateway	0.00	0.20	$19,000	98.0%	$18,625
P23	Proposed North Santiam Day-use Area	0.00	5.00	$105,600	98.0%	$103,516
P24	Proposed West Entrance Gateway	0.00	0.20	$19,000	98.0%	$18,625
P25	Proposed Ridgeway Butte Viewpoint	0.00	2.00	$97,500	98.0%	$95,576
P26	Proposed South Santiam Day-use Area	0.00	2.00	$195,000	0.0%	$0
				$436,100		$236,342
	Natural Open Space					
P27	Proposed Santiam River Corridor	0.00	150.00	$4,500,000	29.6%	$1,334,148
P28	Proposed Oak Creek Corridor	0.00	40.00	$1,200,000	29.6%	$355,773
P29	Proposed Burkhart Creek Corridor	0.00	40.00	$1,200,000	29.6%	$355,773
P30	Proposed Albany-Santiam Canal Corridor	0.00	0.00	$0	0.0%	$0
				$6,900,000		$2,045,694
	Total New Parks			$23,260,800	36.7%	$8,527,271
	Total All Projects			**$35,119,030**	**32.9%**	**$11,557,871**
	Without Natural Open Space			$28,190,133		$9,503,610

*Parks Plan assumptions for new neighborhood parks

$45,000 $/acre land (average high and low estimates)

$100,000 $/acre development



City of Lebanon

System Development Charge

Infrastructure Projects - PARKS

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Appendix B

Commercial

ITE Code	ITE Land Use	PM Peak Trips/ Employee
	Supermarket	3.51
814	Specialty Retail Center	22.36
815	Free-Standing Discount Store	3.52
841	New Car Sales	0.96
848	Tire Store	6.86
912	Drive-in Bank	11.77
934	Fast food Restaurant with Drive-Through Window	13.93
942	Automobile Care Center	1.43
945	Gasoline Service Station w/Convenience Market	NA
	Average	**8.0**

Public

ITE Code	ITE Land Use	PM Peak Trips/ Employee
730	Government Office Building	1.91
732	US Post Office	3.32
520	Elementry School	3.45
530	High School	3.21
	Average	**3.0**

Office

ITE Code	ITE Land Use	PM Peak Trips/ Employee
710	General Office Building	0.46
720	Medical-Dental Office Building	0.97
	Average	**0.72**

Mult Family

ITE Code	ITE Land Use	PM Peak Trips/ Dwelling Unit
220	Apartment	0.67
221	Low-Rise Apartment	0.62
224	Rental Town House	0.73
	Average =	**0.67**

Industrial

ITE Code	ITE Land Use	PM Peak Trips/ Employee
110	General Light Industrial	**0.51**
120	General Heavy Industrial	**0.4**
	Average =	**0.46**