



Final Report

Transportation Master Plan

- Street System
- Non-motorized System
- Transit System
- Funding the Plan
- Implementing the Plan

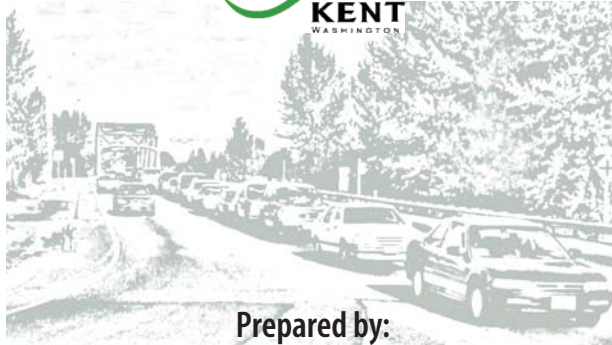


Transportation Master Plan

Final Report

Prepared for:

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Kent, Washington



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June 2008



Cover Photos

- Clockwise from left:
1. James Street
 2. Titus Street
 3. Kent City Hall
 4. Interurban Trail
 5. Kent Transit Center

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ORDINANCE NO. 3883

AN ORDINANCE of the City Council of the City of Kent, Washington adopting the Transportation Master Plan.

RECITALS

A. In the fall of 2005, the City began the process of developing a new Transportation Master Plan (TMP). When the TMP is integrated into the Transportation Element of the City's Comprehensive Plan, it serves as the City's blueprint for long-range transportation planning. The TMP includes, among other items, an inventory of the existing transportation system; level of service standards; transportation demand management strategies; future improvement needs; and a multi-year financing plan for improvements.

B. The TMP has undergone an extensive public process. The City worked at length with a citizen's task force to address development of the TMP, and engaged in a stakeholder involvement process to promote and provide a variety of meaningful forums for communication with the City. During the TMP development, two newsletters were mailed to every home and business within the City limits and the Potential Annexation Area. These newsletters provided information about the TMP project, directed people to future involvement opportunities, and encouraged comment. Two surveys were also conducted which allowed people to express their transportation

concerns and priorities. Additionally, the City held two open house events and a meeting with neighborhood councils in the fall of 2007.

C. Throughout this process, the City Council has held workshop and committee meetings to gather information and analyze the ongoing development of the TMP. Meetings were held on June 20, 2006; July 5 and 10, 2006; August 21, 2006; September 5, 2006; February 27, 2007; June 18, 2007; December 3, 2007; and January 7, 2008.

D. On February 28, 2008, the City provided the State of Washington with the required sixty (60) day notification under RCW 36.70A.106 of the City's proposed adoption of the TMP and corresponding amendment to the Transportation Element of the Comprehensive Plan. Comments were provided by the State of Washington Department of Community, Trade, and Economic Development and the State of Washington Department of Transportation. These comments have been taken into consideration by the City.

E. On May 5, 2008, the City's SEPA responsible official adopted existing environmental documents consisting of the City of Kent Comprehensive Plan Environmental Impact Statement (EIS) Draft and Final (ENV-93-51) and a SEPA Addendum, dated May 5, 2008 (ENV-2008-1). The SEPA Addendum explained that the proposed TMP would not create unavoidable impacts beyond those previously identified in the EIS.

F. The public involvement process continued with the Land Use and Planning Board holding workshops regarding the TMP as an amendment to the Comprehensive Plan on April 14 and 28, 2008, and a public hearing on May 12, 2008. Adoption of the TMP and the TMP as an amendment to the Transportation Element of the Comprehensive Plan were also considered by the City Council's Planning and Economic Development Committee on June 9, 2008. On June 17, 2008, the City Council adopted the TMP for the City of

Kent.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF KENT, WASHINGTON, DOES HEREBY ORDAIN AS FOLLOWS:

ORDINANCE

SECTION 1. - *Incorporation of Recitals.* The preceding recitals are incorporated herein.


SECTION 2. - *Amendment.* The Transportation Master Plan as attached and incorporated as Exhibit "A" is adopted by the City of Kent.

SECTION 3. - *Severability.* If any one or more sections, sub-sections, or sentences of this ordinance are held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portion of this ordinance and the same shall remain in full force and effect.

SECTION 4. - *Effective Date.* This ordinance shall take effect and be in force thirty (30) days from and after the date of passage as provided by law.


SUZETTE COOKE, MAYOR

ATTEST:


BRENDA JACOBER, CITY CLERK

APPROVED AS TO FORM:

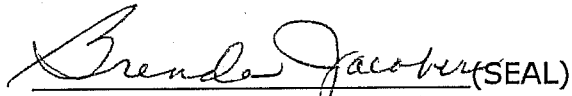

TOM BRUBAKER, CITY ATTORNEY

PASSED: 17 day of June, 2008.

APPROVED: 17 day of June, 2008.

PUBLISHED: _____ day of June, 2008.

I hereby certify that this is a true copy of Ordinance No. 3883,
passed by the City Council of the City of Kent, Washington, and approved by
the Mayor of the City of Kent as hereon indicated.


BRENDA JACOBES (SEAL)
BRENDA JACOBES, CITY CLERK

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Acknowledgements

The City would like to acknowledge and thank those who contributed to the development of the Transportation Master Plan. In addition to those listed below, numerous individuals provided insight, expertise, and other contributions that informed this plan.

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Community

Bob Shull/PTV, Kent Senior Center, Kent Chamber of Commerce, Kent Bicycle Advisory Board, Green River Community College, Kent Downtown Partnership, King County Metro, Sound Transit, Washington Trucking Association, The Kent Reporter

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Transit Lead: Nelson/Nygaard Associates; Tom Brennan, Scott Chapman

Finance Lead: Henderson, Young & Company; Randy Young

Non-Motorized Lead: The Transpo Group; Andy Mortensen

Public Involvement Lead: CH2M Hill; Jodi Ketelsen, Jeff Crisafulli



Thank You!



Chapter 1 | The Planning Process

In 2005, the City of Kent began an update of the Transportation Master Plan (TMP or Master Plan). In the 22 years since the TMP was last updated, the City of Kent’s population has nearly tripled, and the amount of non-resident traffic that passes through the City has increased tremendously, stretching the transportation system. Over the past two decades, development has intensified and some of the region’s largest employers have located in the City.

Transportation affects the quality of life and our economic vitality. The transportation system is the backbone of our economy and a key component to our economic competitiveness. Everyone who lives, works or commutes through Kent depends on the transportation network. Developing and maintaining a comprehensive transportation system that supports automobile, transit, bicycle, and pedestrian travel is the City’s responsibility. The City must ensure that the transportation network functions not only for personal mobility, but also for freight and delivery service circulation and access and for emergency vehicles.

Purpose of a Transportation Master Plan

The TMP as adopted into the City’s Comprehensive Plan is the City’s blueprint for long-range transportation planning in Kent. It functions as the overarching guide for developing the transportation system. The TMP provides a framework necessary to balance the existing and long-term transportation needs of people living or working

Chapter Contents

- ▶ The purpose of the TMP
- ▶ What does the GMA Require
- ▶ Key Steps in the Development of the TMP
- ▶ How will the City use the TMP?
- ▶ Coordinating with others in the Region
- ▶ How is the TMP Final Report organized?

In Kent's annual citizen opinion surveys, transportation has been the number one concern of Kent's citizens.

in Kent. The TMP is intended to benefit everyone – including children, senior citizens, all ethnic communities, business owners, commuters, people with disabilities, those with economic disadvantages, residents, employees and visitors.

The plan evaluates the existing system by identifying key assets and improvement needs. These findings are then incorporated into a needs assessment, which informs the direction the City will take in developing the future transportation system. The TMP is multi-modal, addressing all forms of transportation in Kent including the street network, non-motorized travel, and transit. Evaluating all modes uniformly enables the City to address the future network needs in a more comprehensive and balanced manner.

The TMP provides guidance on how the transportation system should develop and function in the long-term future in the context of other elements of the City's comprehensive plan, especially the land use plan. The Plan provides:

- A background and description of the existing system
- A vision for Kent's future transportation system
- Policies that include standards and criteria as guidelines to advise project and programmatic decision-making
- Maps that indicate the location and names of all current and proposed streets, bikeways and special walkways
- Descriptions of proposed new and /or upgraded facilities
- An implementation plan that prioritizes projects and identifies funding resources for projects

How Does the TMP affect You?

This plan affects your choices for getting around Kent - as you travel by car, bus, bicycle or on foot. The TMP reflects policy direction from the City Council, Land Use and Planning Board, you – our public, the technical analysis and state and federal mandates. The TMP describes a vision for Kent's transportation future, identifies priority projects to help achieve that vision and the funding program for implementation.

State, Regional and County Planning Requirements

GMA Requirements

Washington's 1990 Growth Management Act (GMA) requires rapidly growing communities to prepare a transportation plan directly tied to the City's land use decisions and financial planning. Kent will fulfill this mandate by adopting the Transportation Master Plan as the Transportation Element of the City's Comprehensive Plan.

The TMP addresses all of the following items that a Transportation Element must include in order to be GMA compliant.

- Use land use assumptions to estimate travel, including impacts to state-owned facilities;
- Inventory the existing transportation system in order to identify existing capital facilities and travel levels as a basis for future planning;

- Identify level of service (LOS) standards for all arterials, transit routes, and state-owned facilities as a gauge for evaluating system performance;
- Specify actions and requirements for bringing into compliance locally owned transportation facilities or services that are below an established level of service standard;
- Determine existing deficiencies of the system;
- Identify future improvement needs from at least ten years of traffic forecasts based on the adopted land use plan;
- Include a multi-year financing plan based on the identified needs;
- Address intergovernmental coordination; and
- Include transportation demand management strategies.

PSRC – Vision 2020 and Destination 2030

The City of Kent’s Transportation Plan must also be compliant with the regional plans. The Puget Sound Regional Council (PSRC) sets policy for King, Pierce, Kitsap, and Snohomish counties through its long-range planning documents, *Vision 2020*, and its regional transportation plan, *Destination 2030*. Both documents encourage future growth to be concentrated in urban centers. Both plans seek to provide a multi-modal transportation system that serves all travel modes, actively encouraging the use of alternatives to the automobile. Another important policy theme is a focus on maximizing the efficiency of the transportation system through transportation demand management (TDM) and transportation system management (TSM) strategies, as well as completing critical links in the network. Kent’s transportation plan must be consistent with and supportive of PSRC’s regional planning efforts.

Countywide Planning Policies

Under the GMA, counties must adopt Countywide Planning Policies to guide development in both incorporated and unincorporated areas of their jurisdictions. The policies support both county and regional goals to provide a variety of mobility options and establish level of service standards that emphasize the movement of people, and not just automobiles. King County’s Countywide Planning Policies are also important because they provide direction for planning and development of Kent’s potential annexation areas. In line with these policies, the City of Kent works closely with King County to ensure an adequate transportation infrastructure is provided in the annexation areas.

What is the Growth Management Act?

Eighteen years ago, the state Legislature passed the landmark **Growth Management Act** to coordinate and plan for growth. The GMA is all about planning and its goals are broad.

The law’s basic premise is that land use and growth must be planned. New growth was required to occur within a specified area, called the “urban growth boundary”. Denser neighborhoods and commercial districts with mixed residential and retail development were ways that cities found to accommodate the growth.

The GMA calls for cities and counties to prepare Comprehensive Plans that include plans for:

- Land Use
- Transportation
- Parks
- Capital Facility Plans

The essential elements of the TMP will be adopted into the City’s Comprehensive Plan. .



The City has a number of goals for the Transportation Master Plan, but one of the most important was to make the plan a “community plan.”
Larry Blanchard
Public Works Director

Master Plan Development Process

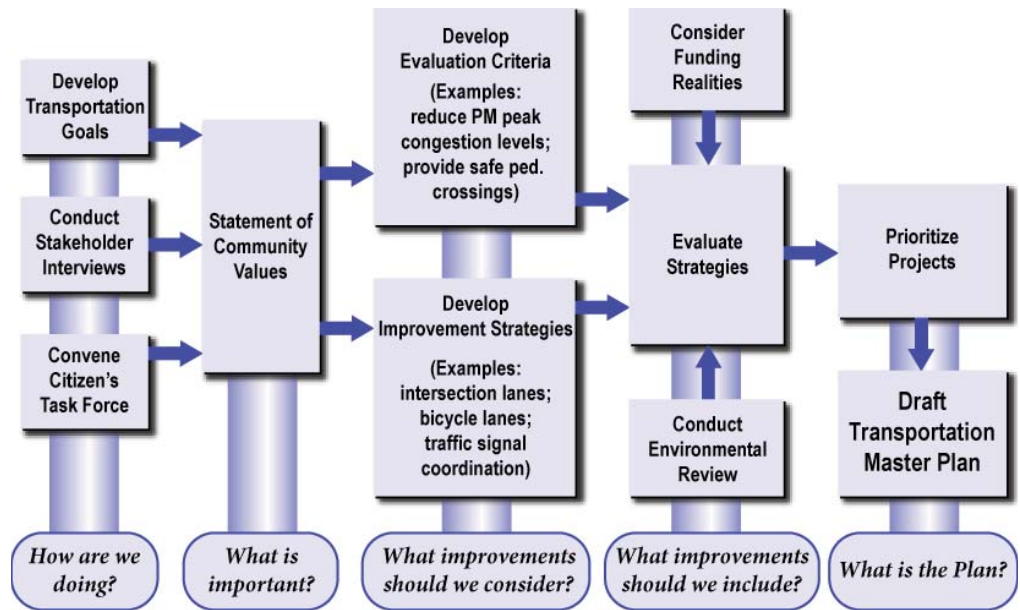
The Transportation Master Plan got underway with the City Council approval of a contract with Mirai Transportation Planning and Engineering¹, in the fall of 2005. The process was coordinated with and will be implemented through the City’s Capital Improvement Plan for transportation projects.

- Fall 2005/Winter 2006 – Education and Public Engagement (interviews with key stakeholders, focus groups, task force created, community telephone survey) and Alternative Development
- Spring/Summer 2006 – Testing of ideas and Alternatives
- Fall 2006/Winter 2007 – Draft Elements
- Spring/Summer 2007 – Council review of plan components
- Fall 2007 – Public review and Plan finalization
- Spring 2008 – Environmental Review and Public Hearing
- Summer 2008 – Adopted by the City Council

The TMP Plan was Developed in 5 Key Steps

The TMP was developed in five steps. **Figure 1** shows the key steps in the study and how the parts of each step of the TMP process flowed together, and the questions each step was designed to answer – all leading to projects that improve the way the transportation system works.

Figure 1-1. Transportation Master Plan Developed in Five Steps



Steps 1 and 2. How is the Transportation System Working? What is Important?

One of the first steps was to examine how well the existing transportation system was working. TMP staff conducted interviews with community stakeholders and business groups, mailed a newsletter to every household, established a citizen-based Transportation Task Force, and developed goals for the study. The Task Force and TMP staff identified a list of community values—that is, qualities that the community considers important. These values helped set the transportation policies

¹ Henderson Young & Company, Nelson Nygaard, CH2M Hill, and The Transpo Group also assisted with the TMP.

Community Stakeholders
 Stakeholders are those who have a significant stake in a particular decision; i.e., they stand to win a lot, lose a lot, or they are in a position to significantly help or hinder implementation of the plan.
 When stakeholders don't participate in the decision-making, there is a good chance they will work against decision implementing.

that will guide the way the City plans and implements transportation improvements. Community values also played a critical role in guiding the evaluation of the transportation system and the recommendations for improvements.

Step 3. What Improvements Should Be Considered?

During this step, the TMP staff collected information about Kent's transportation facilities, such as roads, signals, signs, transit stops and service, bike routes, and sidewalks. How well each mode works was also examined. For example, how congested are the streets at different times of the day, how many residents have access to frequent transit, where are there missing sidewalks? This information provided a snapshot of how well Kent's transportation system is working. Locations were examined to identify where improvements should be considered. Also, the TMP staff examined what conditions would be like in the future to accommodate the forecast growth in population and employment.

Step 4. What Improvements Should Be Included?

All of this information was used to come up with strategies to target each issue. Strategies were developed for each travel mode, for example adding turn lanes at intersections, repairing sidewalks, adding bicycle lanes, coordinating traffic signals, and widening roads. From these strategies, the TMP staff developed a list of projects to accommodate future land use.

Step 5. Finalizing the Plan!

The projects were prioritized using input from across the range of transportation users, and considering all the evaluation criteria and the funding and environmental limitations. Because the TMP will serve as a guide for transportation capital improvements for years to come, continued input from the stakeholders is important to help the plan become a reality over the next 20 years.

How will the City Use the TMP?

The TMP provides both policy and technical direction for the City's transportation system through the year 2030. Specifically, the City will use the TMP to:

- Understand Transportation System Needs
- Understand the Community's Preferences
- Establish Policies
- Guide GMA Requirements for LOS and Concurrency
- Identify Projects for the CIP and TIP

Understand Transportation System Needs

In developing the TMP, the City has completed a system-wide, multi-modal needs assessment that identifies which aspects of Kent's transportation system work well and which ones need improvement. As part of this process potential solutions and investment priorities were identified. The end result is that the City has a more thorough understanding of system deficiencies and a better grasp of the best way to address these deficiencies and grow the system in a sustainable manner.



The TMP will be adopted into the City's Comprehensive Plan providing guidance and a list of capital improvements for the transportation system within the City.



Key policy themes of the TMP

- ▶ Provides more mobility for everyone and every mode
- ▶ Creates and supports viable choices – for walking, taking transit or commuter rail, and bicycling
- ▶ Provides safe transportation facilities and environments
- ▶ Decreases congestion on roadways

Understand the Community’s Preferences

Several open houses and community and neighborhood meetings were held to solicit feedback from the public on transportation issues. Additionally, a citywide telephone survey was conducted in Spring 2006², which concluded that investment in City streets is the number one spending priority when surplus tax funds are available. An important component of the TMP was the public outreach.

The City formed a community task force to provide guidance in specialized areas of transportation. The task force members were tremendously valuable in shaping the plan and advising on behalf of their constituents. The task force was comprised of staff from the Kent School District, local businesses, and Kent residents with different areas of expertise, ranging from neighborhood needs to senior needs to non-motorized travel. The Kent Area Chamber of Commerce was represented, along with developers, and freight industry representatives.

Develop Policies

The City creates policies to preserve and enhance the existing system and develop the future transportation system. Policies can be qualitative in nature, but often they are quantitative and prescribe a specific standard.

The City often works in collaboration with other governmental or non-governmental organizations. Policies are also important for communicating the City’s values and needs to neighboring jurisdictions and regional and state agencies. The policies enable the City to more easily influence change that is in keeping with its needs and preferences.

Meet GMA Requirements for LOS and Concurrency

The 1990 Growth Management Act (GMA) has concurrency provisions. Concurrency requires that local governments permit development only if adequate public facilities are, or can be guaranteed to be, available within six years to support new development. The GMA requires local jurisdictions to set level of service (LOS) standards and identify facility and service needs based on them. This ensures that future development will not cause the transportation system’s performance to fall below the adopted LOS standard by taking one or a combination of the following actions: limiting development, requiring appropriate mitigation, or changing the adopted standard.

Capital Facilities Plan and Transportation Improvement Program

The TMP identifies both long-term and short-term improvement projects. The City uses the Transportation Improvement Program (TIP) and Capital Improvement Plan (CIP) to develop the financial plan for capital improvements in Kent that are consistent with the TMP as adopted into the Comprehensive Plan. These two documents enable the City to fulfill the GMA requirement of having a multi-year financing plan based on the identified transportation needs.

The TIP is a six-year transportation financing plan, adopted annually by the City Council. It is used to implement the list of transportation improvement projects identified in the TMP analysis of existing and future traffic conditions. It is reviewed annually by the City Council and modified as project priorities and funding circumstances change.

² Survey of Kent Residents, conducted by Nelson Nygaard, March 2006.

The Capital Improvement Plan is also a 6-year financing plan that is annually adopted in a separate process. It includes non-transportation projects in addition to the transportation related projects also found in the TIP.

Regional Coordination

The transportation master plan addresses transportation facilities and services that are within the City or otherwise within our control. But Kent is part of a larger transportation system – the regional system that connects the City to others in the area and beyond that to other states. Kent’s facilities are part of regional network of roads, streets, transit routes and other infrastructure and services.

Kent’s transportation system carries regional pass-through traffic in addition to local circulation and access to homes and businesses. The transportation system connects Kent to other destinations in the region. The City of Kent does have a voice in the decisions that affect this regional system and is involved in transportation policy-making through a variety of settings – standing committees, task forces and as representation on major regional bodies such as King County Metro, the PSRC, etc. City transportation policies establish preferences that the City advocates in these regional settings.

At the same time, Kent’s transportation system is influenced by what happens beyond its City limits. Growth in neighboring communities, infrastructure maintenance by regional agencies, the lack of funding for road maintenance as well as capacity expansion, and competing demands for transit services all affect mobility in Kent. The TMP calls for effective interjurisdictional actions to address cross-border issues and to mitigate the impact of new development.

Washington State Department of Transportation

The Washington State Department of Transportation (WSDOT) owns several major routes connecting Kent to the region: SR 167, SR 18, SR 99, SR 181, SR 515, SR 509 and SR 516. The City works with the state to study these corridors and implement roadway improvements. WSDOT also serves an important role as administrator of federal and state transportation funds. All in all, WSDOT is an important partner, helping Kent improve its transportation system.

King County

The City works with King County to coordinate roads within the City’s potential annexation areas. King County Parks also coordinates the regional trail system through Kent. KC Metro, a division of the King County Department of Transportation, provides local bus services for the Kent area. In addition, KC Metro operates Dial-A-Ride (DART 914/916 and 918) on a variable routing service. The 914/916 shopper shuttle is funded through an agreement with the City and is operated by the non-profit provider Hopelink. The Kent Transit Center serves as a hub and transfer station for local transit service provided by King County Metro (KC Metro) and Sound Transit regional express service. Planned transit service for the City of Kent is described in Chapter 7 - Transit system. The City has also developed an employee Commute Trip Reduction (CTR) program in cooperation with Metro. Details of the CTR program are summarized in Chapter 8 – Managing Demand.

Increasingly, other agencies, particularly transit agencies and WSDOT provide a significant share of the transportation service and facilities serving Kent.





Sound Transit

Sound Transit is a regional provider offering a variety of regional transit services for King, Snohomish, and Pierce counties. In Kent, Sound Transit provides commuter rail and express bus service. The transit chapter provides more detail on current Sound Transit services, remaining needs for regional transit service, and the role Kent plays in coordinating with the agency.

Adjacent Cities

The City recognizes the importance of coordinated and strong interjurisdictional action because transportation impacts do not stop at local boundaries. The City works closely with neighboring cities to address transportation issues. These neighbors adopt goals and policies that directly impact the Kent community. In developing this plan, analysis was undertaken to ensure that all transportation system improvements are compatible with neighboring jurisdictions.

City of Auburn

The City of Auburn shares Kent's southern border and several regional transportation corridors including S 277th Street, SR 167, and the West Valley Highway. A recent reconstruction project was finished improving a half-mile-long section of S 277th Street.

The City of Auburn was also a partner in the SR 167 corridor improvement study. A significant component of this study was to find ways to accommodate regional freight traffic, much of which is generated from the high concentration of warehouses in Auburn and Kent. WSDOT selected SR 167 as a test corridor for its first high occupancy toll (HOT) lanes project area. As such, Kent residents will have access to the high occupancy vehicle (HOV) lane by paying a toll if they have fewer than 2 people in the vehicle.

City of Renton

Kent and Renton are joining together in a Transit Now Service Partnership agreement with King County Metro Transit to provide new 30 minute mid-day transit service on the Route 153 which travels between the Kent Transit Center and the Renton Transit Center along East Valley Highway.

Cities of Tukwila, Federal Way, and Covington

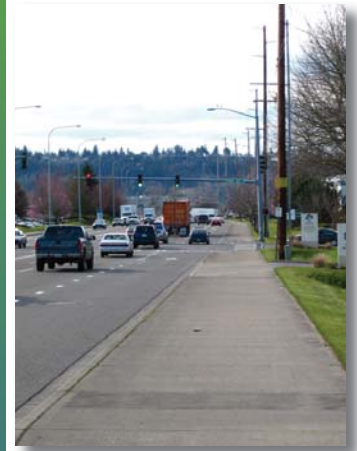
The City partners with its other neighbors in many respects, including street system planning, transit planning, and regional trail planning. The city worked closely with the cities of SeaTac, Tukwila, Renton, and King County on the Trans Valley Study, which looked at congestion relief and east/west mobility options in the area north of 212th Street. Kent is working with the cities of Federal Way, Des Moines, SeaTac and Tukwila; WSDOT; and KC Metro in the development of Pacific Highway South (SR 99) in several phases and the development of Bus Rapid Transit service. Strong partnerships with neighboring cities will continue to be an important factor in successful transportation planning in the valley.

Plan Organization

The TMP has three primary categories: Streets, Transit and Non-Motorized. The Non-motorized category is further divided into distinct bicycle and pedestrian modes of travel. Improvements to these modes are identified and prioritized. This report has several chapters as follows:

- Chapter 1. The Planning Process
- Chapter 2. Trends and Conditions
- Chapter 3. Public Outreach
- Chapter 4. Transportation Goals and Policies
- Chapter 5. Street Plan
- Chapter 6. Non-motorized Plan
- Chapter 7. Transit Plan
- Chapter 8. Managing Demand
- Chapter 9. Funding the Plan
- Chapter 10. Implementing the Plan

The TMP is not a short-range plan. The recommendations in the TMP will be implemented over the next 20 years. However, the City’s transportation needs change over time and this TMP will be updated periodically to accommodate the shifting needs, and some projects may be deferred until appropriate funding sources become available. For this reason, and many others, it is important for everyone to keep involved with transportation planning efforts in the City.



WHAT IS IN THE TEXT BOXES THROUGHOUT THIS REPORT?

Supplemental Information

These types of boxes provide additional information for the reader

PUBLIC COMMENT

Bringing the Community into the planning process was a high priority. When you see these boxes, you will find community issues, outreach activities and resident opinions about the plan.

Primary Source:

Identifies reports and studies that provide more detail on the travel mode or the topic







Chapter 2 | Trends and Conditions

As one of the established cities in the Puget Sound region, Kent has grown from an agricultural community into a major industrial center for warehouse, customer service and distribution companies. Located between Seattle and Tacoma along the Interstate 5 (I-5) corridor, Kent has the sixth largest concentration of jobs and residents in the region, according to the Puget Sound Regional Council (PSRC).

This chapter summarizes key demographics and identifies trends that impact the transportation system. Over the past three decades, both population and employment have grown at a rapid pace, providing more balance between residential living and commercial activity. This trend has also changed commuting patterns and increased the traffic loads on the local and arterial street network. The residential developments east of downtown Kent have put a substantial burden on the arterial roadway system as residents connect to regional highways (SR 167 and I-5). The Comprehensive Plan's Land Use policies encourage development patterns of mixed use activity centers and high residential densities downtown. This supports a shift in travel modes from single occupant vehicles to transit and non-motorized travel.

Kent's location in the middle of a large rapidly growing urbanized region results in two sources of growth: the increasing size and density of the City itself, and ongoing regional growth and development. The Transportation Master Plan (TMP) reflects an analysis of past and future travel growth trends related to autos, and non-motorized and transit modes, modes that support the residents and businesses that live and work in Kent.

Chapter Contents

- ▶ Geography
- ▶ Land Use
- ▶ Population Demographics
- ▶ Employment Characteristics
- ▶ Freight
- ▶ Trends for the Future

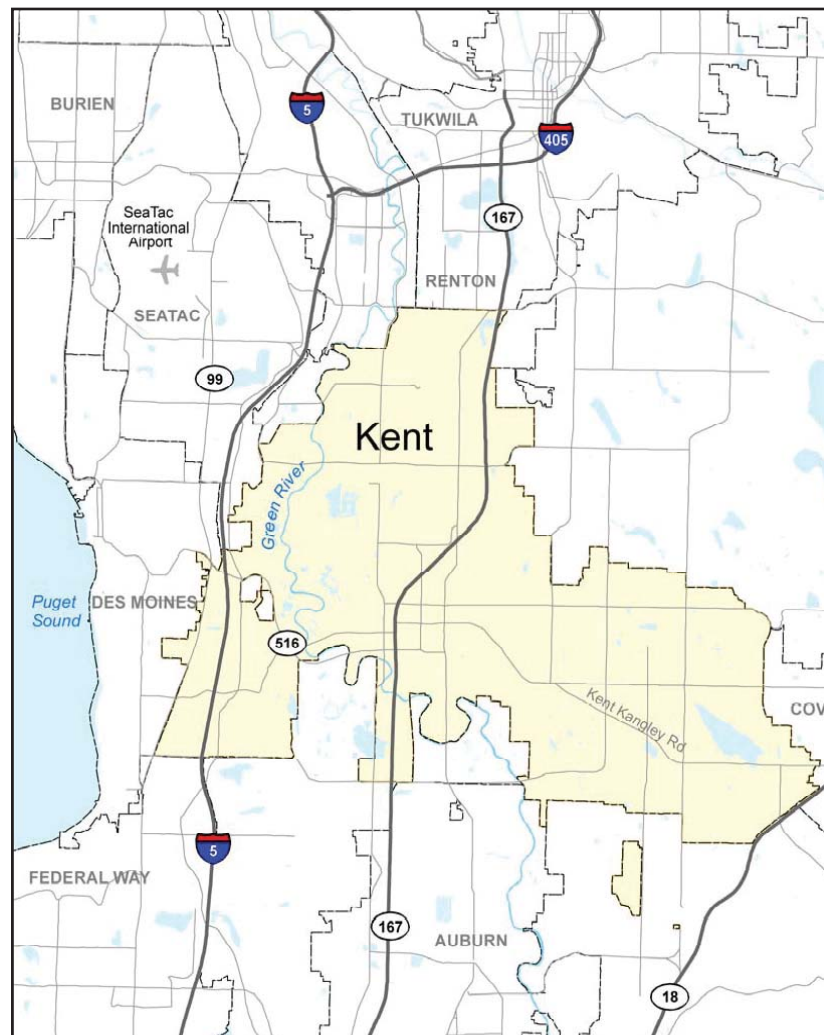
Kent has the sixth largest concentration of jobs and residents in the region.

Geography

Kent is centrally located between the metropolitan areas and ports of Seattle and Tacoma. The area's regional airport, Sea-Tac International, is less than 2 miles away from Kent's northwest city limits. Several communities surround Kent --- Des Moines and Federal Way to the west, Covington to the east, Auburn to the south and Renton to the north (**Figure 2-1**). Kent is characterized by a valley floor running north to south in the middle of the City, which rises steeply to hills both east and west of the valley floor ("East Hill" and "West Hill"). The Green River flows through the western and southern portions of Kent. The valley is characterized by flat terrain and includes some wetland areas near the Green River.

One of Kent's main assets is its access to a number of transportation systems. Three regional freeways run through Kent from north-to-south: Interstate 5 (I-5), State Route 167 (SR 167), SR 181 (W Valley Highway). Five State Routes (SR) are located in or on the borders of Kent: SR 99 runs north-to-south along the City's western border, just west of I-5; SR 516 runs east-to-west through the southern portion of Kent; SR 515 runs north-to-south through the middle of the City; and SR 18 passes just southeast of the City limits.

Figure 2-1. Kent and Surrounding Cities



Two rail lines run north-south through the heart of the downtown and industrial areas on the valley floor. The rail lines support both freight and Sound Transit (*Sounder*) commuter trains and Amtrak passenger rail service. Sound Transit and KC Metro provide bus service to the City and partner with Kent on a free community circulator shuttle which was pioneered by Kent in 1995. Many city streets have sidewalks and bicycle routes, but both bicycle routes and sidewalks have missing linkages in places. The regional Interurban Trail runs parallel to the railroad tracks and the popular Green River Trail follows the river through Kent.

Although access to regional transportation systems and other major destinations is good, the geography does affect the perception of accessibility within the City of Kent.

Land Uses

Kent covers approximately 29 square miles and is comprised of multiple land uses, as illustrated in **Figure 2-2**. The City has grown by a series of annexations, neighborhoods that were built under various King County standards of the 1960s, 1970s, and 1980s. These development patterns and Kent's suburban, industrial history present challenges as the City becomes more urbanized and the transportation system needs to be upgraded to meet standards required of new developments.

The majority of housing in Kent is single family (between four and eight units per acre).¹ Multifamily housing is primarily located in the southern, central and East Hill portions of the City, near James Street, along Canyon Drive, and along both sides of Kent Kangley Road. New residential developments are also being planned for the northwest quadrant of the City. Parks and open space are located throughout the City, including the Green River Trail.

Corridors of mixed-use land uses (commercial and residential) are located along 104th Avenue SE and W Meeker Street. Commercial land uses are primarily concentrated along major roadway corridors, including between SR 99 and I-5; along East Valley Highway, Kent-Kangley Road and SE 240th Street; and off SR 167. The bulk of the industrial and manufacturing uses are located in the northern valley areas of Kent, between West Valley and East Valley Highways.

Downtown Kent – a Regional Growth Center

Downtown Kent designated as an Urban Center, is located towards the south and center of the valley floor. The Kent Downtown Partnership has been active in attracting commercial redevelopment opportunities in this area. The downtown area has mixed-use development and high density housing around the downtown core, and surrounding areas. Downtown Kent has seen major investment in recent years, spurred in part by the introduction of Sounder Commuter Rail service at the Kent Transit Center. Downtown Kent is now one of the busiest stops on the Sounder line and extensive commercial development around the Kent Transit Center reflects the importance of transit in building a vital downtown. Kent residents interviewed during this plan have stressed repeatedly the desire for more frequent service on the Sounder commuter rail line to support their transportation needs and to achieve the vision for the downtown area.

Land Use Definitions

The kind of development and land use that occurs makes a difference in how easily people and goods can get to where they need to go. Common land uses are commercial, industrial, residential, office, public (library, City Hall, etc).

Mixed-use development is the practice of allowing more than one type of use in a building or set of buildings. A mixed use district will generally have greater density being a residential building with streetfront commercial space.

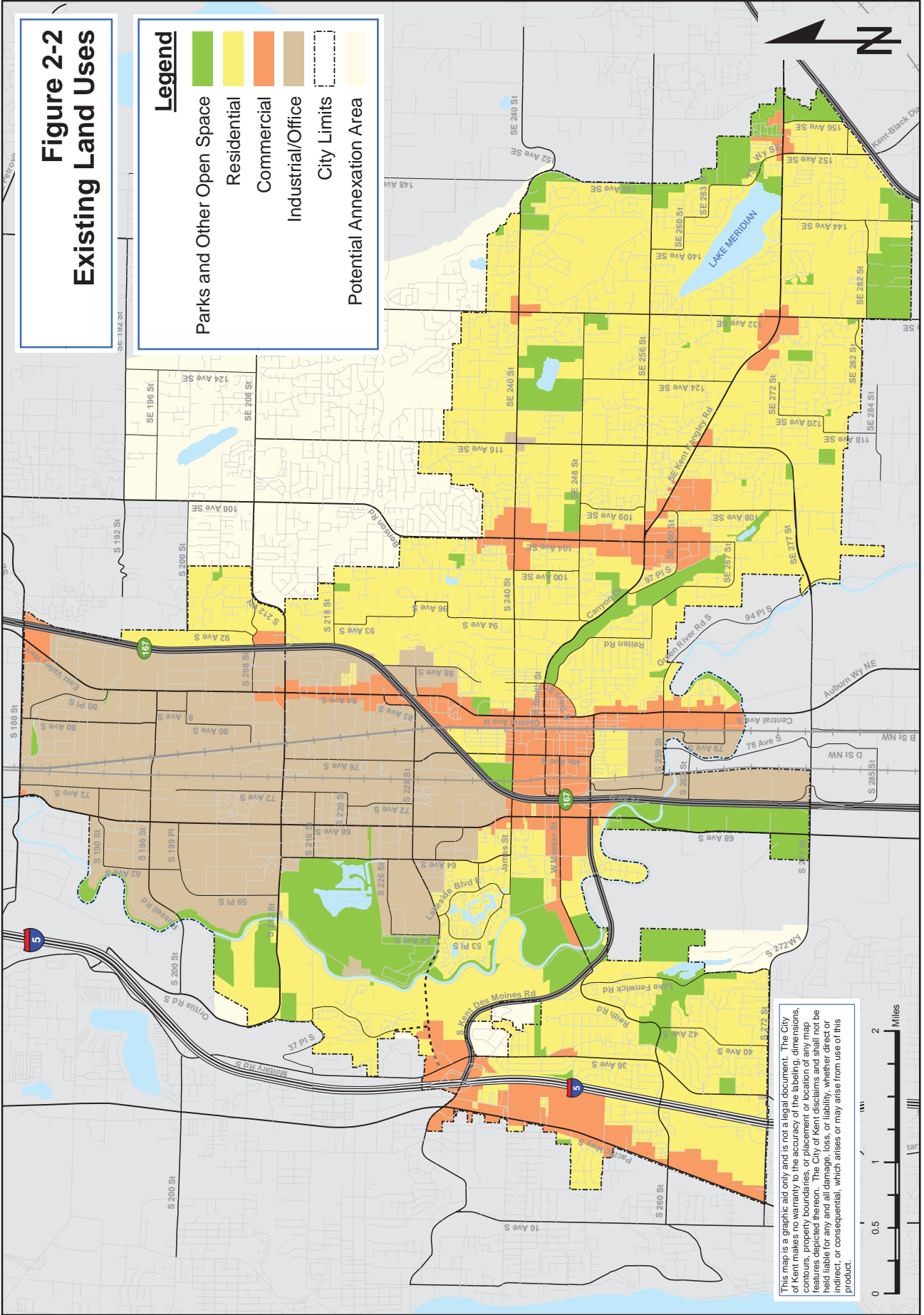
The City has grown by a series of annexations, neighborhoods that were built under various King County standards of the 1960s, 1970s, and 1980s.

¹ 2002 Regional Growth Centers Report, Kent Puget Sound Regional Council <http://www.psrc.org/projects/growth/toolkit/kent.htm>

**Figure 2-2
Existing Land Uses**

Legend

- Parks and Other Open Space
- Residential
- Commercial
- Industrial/Office
- City Limits
- Potential Annexation Area



This map is a graphic aid only and is not a legal document. The City of Kent makes no warranty to the accuracy of the labeling, dimensions, contours, property boundaries, or placement or location of any map features depicted thereon. The City of Kent disclaims and shall not be held liable for any and all damage, loss, or liability, whether direct or indirect, or consequential, which arises or may arise from use of this product.

Community Profile

Kent is diverse in many ways, including its geography, land uses, residents and business community. This diversity is Kent’s success and it represents challenges in creating a Transportation Plan that will serve the greatest number of people. **Table 2-1** provides a snapshot of Kent demographics in comparison to the overall State of Washington.

Population

Population density and its distribution are used to prioritize transportation services and projects. With a population of more than 85,000 in 2006, Kent is projected to grow to approximately 94,000 by 2030. Total 2030 population is expected to approach 126,000 when Kent’s surrounding annexation areas are included. Most of Kent’s residents are concentrated in the east and west portions of the City. The areas north of Meeker Street and along Kent-Kangley Road have the most dense populations. The potential Kent annexation area (to the northeast of Kent) is also notably dense, particularly near the city limits.

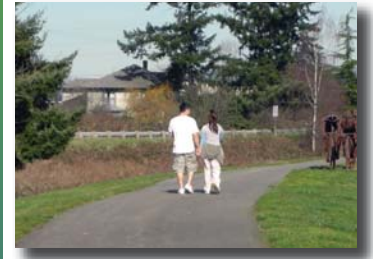
Residents

Kent is perhaps the most culturally diverse city within King County. Some of the largest cultural groups include Latino; Russian/Ukrainian/Slavic; Somali; Asian; and Indic communities. Nearly 17 percent of the residents were born outside of the United States, and English-language ability among individuals within cultural groups ranges from perfectly fluent to non-English- speaking. The language barrier can impede the ability to take full advantage of transit and other transportation way-finding signs.

Kent residents also reflect a range of educational and economic backgrounds. The 2000 Census shows that 87 percent of Kent residents over age 25 have high school degrees, and 24 percent have a bachelors degree or higher. The median age in Kent is 32 years old, 11 percent of residents are 65 years or older and 26 percent are under 18 years old.

Kent is home to a lower percentage of seniors than the rest of Washington, has roughly the same percentage of residents with a disability and a slightly higher percentage earning less than the poverty level.

Just over 17 percent of the City of Kent’s population is defined as disabled according to the 2000 US Census.² Almost 12 percent of the population live below the poverty level, making it difficult for them to afford to own and operate an automobile. While renting itself is not directly correlated to the use of transit, higher densities of affordable and multi-family housing generally increase the number of residents dependent on transit. The City of Kent is home to a high number of renters, with less than half of the households owning their own homes. Nearly 13 percent of these renter households do not have access to an automobile.



Accessibility is the extent to which facilities are barrier free and usable by persons with disabilities, including wheelchair users.

Accessibility is often an issue for those with disabilities. In Kent, 7.7 percent of the population 5 to 20 years old has a disability, 17.6 percent of the population 21 to 64 years old has a disability and for those 65 years or older 47.1 percent have a disability.

² The U.S. Census definition of a disability is: A long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business.

Table 2-1. Kent Demographic Profile

Profile Characteristic	City of Kent	State of Washington
Geography	29 square miles	66,544 square miles
Population (2000)	79,524	6,131,445
Average Age	31.8 years	35.3 years
Cultural Diversity*	White – 70.8% African American – 8.2% American Indian – 1.0% Asian – 9.4% Native Hawaiian/Pac Islander – 0.8% Hispanic/Latino – 8.1% Two or More Races – 5.4% Other – 4.4%	White – 81.8% African American – 3.2% American Indian – 1.6% Asian – 5.5% Native Hawaiian/Pac Islander – 0.4% Hispanic/Latino – 7.5% Two or More Races – 3.6% Other – 3.9%
Languages Spoken at Home*	English Only – 78.2% Language Other than English – 21.8% Spanish – 6.6% Other Indo-European – 7.4% Asian/Pacific Island – 6.5%	English Only – 86.0% Language Other than English – 14.0% Spanish – 5.8% Other Indo-European – 3.2% Asian/Pacific Island – 4.4%
Median Household Income (1999)	\$46,046	\$45,776
Commute Travel Modes	Drove Alone – 73.5% Carpooled – 14.8% Public Transportation – 5.7% Walked – 1.9% Worked at Home – 3.2% Other – 0.8%	Drove Alone – 73.3% Carpooled – 12.8% Public Transportation – 4.9% Walked – 3.2% Worked at Home – 4.3% Other – 1.4%
Mean Travel Time to Work (Population over 16 Years)	28.7 minutes	25.5 minutes
Persons Below Poverty Level	11.6%	10.6%

* - The total is greater than 100% because Census categories overlap one another.
Source: 2000 U.S. Census; Kent TMP Stakeholder Involvement Report, 2007

Employment/Business Community

Kent has a thriving business community, ranging from small businesses to large company headquarters, from tea shops to warehousing and freight operations. The downtown area is home to a variety of smaller and service businesses, such as restaurants, banks and retail shops. Many large distributors and manufacturing companies are located beyond the downtown core, primarily in the north valley area. In the area around I-5 and Military Road, West Hill businesses include light industry, freeway-oriented retail, and restaurants, among other categories.

Major Employers in Kent

Major employers in the City of Kent include the Boeing Company, Kent School District, the City of Kent, and REI, as shown in **Table 2-2**. Although the majority of the City of Kent’s current employment is in manufacturing, the highest levels of future growth are expected in the service and retail sectors according to the City land use and employment forecasts.

Employers with 100 or more full-time employees are required to participate in the Washington State Commute Trip Reduction (CTR) program. There are currently

35 employers or work sites in the City of Kent participating in the CTR program. Together, these entities employ over 15,000 people within the City. These employers are required to survey their employees every two years and provide annual reports on their progress towards meeting the CTR goals (see Chapter 8 – Managing Demand for more information).

Larger companies report that they located in Kent because of its central location relative to the regional transportation systems, such as the ports of Seattle and Tacoma, and major freeways, such as I-5 and I-405. This central location is one of the prime reasons that Kent has the largest concentration of distribution centers in the region, with more than 1,360 truck trips originating from Kent each day.³

Table 2-2. Top Employers in Kent

Company	Employees	Type of Business
The Boeing Company	4,342	Space research
Kent School District	3,165	School district
City Of Kent	780	City government
King County Regional Justice Center	701	Courthouse-detention facility
R.E.I.	689	Outdoor equipment
Sysco Food Services of Seattle Inc	596	Food service distributor
Mikron Industries	595	Manufactures vinyl extrusions
Oberto Sausage Company	553	Specific meat sales/manufacturer
Alaska Distributors	500	Beverage distribution
Patient Accounting Service Center	439	Process medical accounts

Source: City of Kent CTR Report, 2007

Commuters – the Journey to Work

The 2000 US Census reported the mean travel time to work for Kent resident workers was 29 minutes, slightly higher than the state average.

According to the 2000 Census, about 73 percent of those working in Kent drive alone, 15 percent carpool, and 12 percent carpool with more than two people. Kent’s commute trip mode split (percentage of residents who drive alone, take transit, bike, and walk) is comparable to the State of Washington and neighboring cities, like Auburn and Federal Way. The City of Kent had a slightly higher percentage of residents who carpool and take transit than the state average, but fewer people who walk to work. This may be due in part to disconnected pattern of sidewalks and bicycle facilities. A transit telephone survey conducted for the TMP provides a more detailed description of commute patterns for Kent residents. (See Chapter 7 – the Transit System). **Table 2-3** shows the comparison of mode split between Kent and neighboring cities as well as the state average.

The City of Kent has actively pursued policies that encourage mixed-use development, the integration of transit facilities in new development and lowered minimum parking requirements; all critical factors in reducing single occupancy vehicle (SOV) trips and encouraging transit use.

CTR Coordinator

³ The Washington Transportation Plan, Freight Systems presentation by Barbara Ivanov, 2005.

Table 2-3. Comparison of Mode Split

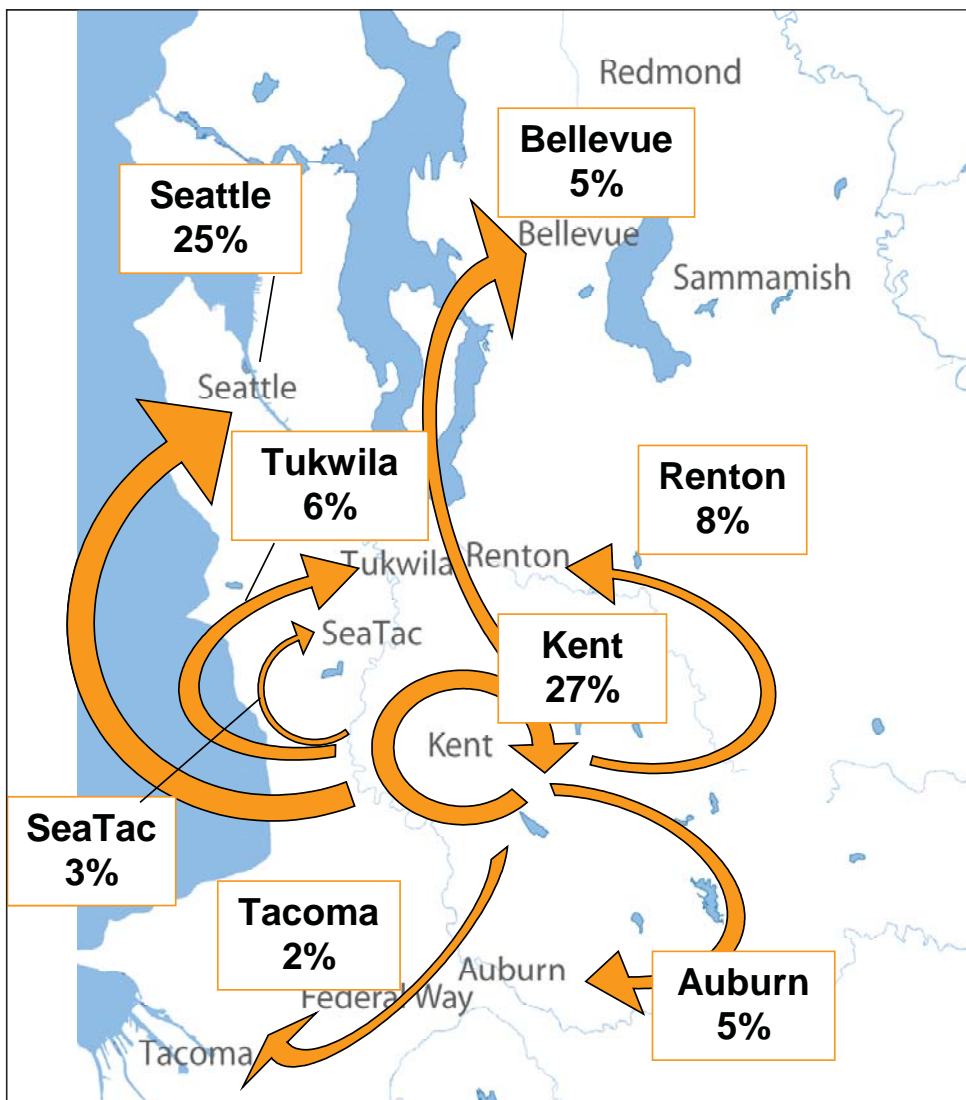
Mode used for Work	Washington State		Auburn		Federal Way		Kent	
		%		%		%		%
Drove alone	2,040,833	73%	13,800	73%	30,445	74%	29,113	73%
Carpooled	357,742	13%	2,873	15%	6,351	15%	5,883	15%
Public transportation	136,278	5%	938	5%	2,422	6%	2,251	6%
Bicycle	16,205	1%	95	1%	72	<1%	92	<1%
Walked	89,739	3%	566	3%	524	1%	763	2%
Other means	19,499	1%	101	1%	216	1%	200	1%
Worked at home	120,830	4%	543	3%	1,190	3%	1,286	3%
Total:	2,785,479	100%	18,922	100%	41,259	100%	39,629	100%

Source: 2000 US Census

Commuters can be characterized as follows:

- **Local commuters:** Commuters who live and work in Kent.
- **Regional Commuters:** Commuters who live in Kent but work in other cities or towns.
- **Through-trip Commuters:** Commuters who neither live nor work in Kent, but pass through on their way to work.

Figure 2- 3. Commute Trip Patterns for Kent Residents



As shown in **Figure 2-3**, over 70 percent of Kent commuters travel outside of Kent each day, challenging the road network and all transportation modes to meet the peak demand. About a fourth commute to Seattle with the rest dispersed throughout the south Sound and the Eastside. Most commuters use their own vehicles, but 34 percent used the bus and 9 percent used the Sounder commuter trains .

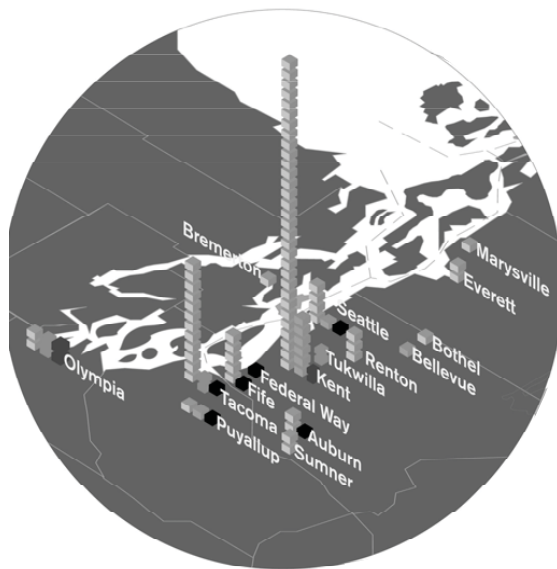
Freight Transportation

The Washington State Department of Transportation (the WSDOT) estimates that over \$160 million in goods are moved to and from the Ports of Seattle and Tacoma daily, making Washington the most trade-dependent state in the nation. Kent's location in the Green River Valley is midway between the Ports of Seattle and Tacoma. The City serves as a distribution point for both seaports as well as air cargo moving through Seattle-Tacoma International Airport. Kent's 40 million square feet of warehouse/industrial space makes it the second largest freight transportation center on the west coast, second only to the Los Angeles/Long Beach freight corridor.

Figure 2-4 compares the number of distribution centers in Kent to the rest of the Puget Sound. The City partners with regional agencies and the State to build and maintain freight routes through the Green River Valley and to the ports to promote international trade and maintain manufacturing and distribution jobs.

A telephone survey was conducted on March 2006 for the TMP. Specific commuter issues voiced were commonly focused on regional transportation systems.

- ▶ The congestion on SR 167, I-405 and I-5 greatly impacts commuters coming into and out of Kent.
- ▶ Transit was a frequent issue of concern for commuters.
- ▶ The inflexibility and limited connections between the Sounder train and buses is unsatisfactory for many.
- ▶ Larger businesses who would like to attract broad-base of workers to their location are concerned about the frequency and ease of transit use.



Freight is an important industry in the State and Kent

As reported for the year 2003, 3.6 million truck trips began and ended in Central Puget Sound. Another 1.0 million truckloads left Central Puget Sound bound for other regions. Every day, 17,000 truck moves originating in Central Puget Sound delivered goods to western Washington cities – primarily Tacoma (3,500 trucks/day), Seattle (2,000/day) and Kent (1,400/day).

Source: Washington State University, Strategic Freight Transportation Analyses, 2004

Figure 2- 4. Distribution Centers in Puget Sound Region

Another input for determining freight needs is identifying where future warehouses are located. In a 2006 study⁴, the WSDOT identified where future warehouse and industrial space would be built. The key finding from the data was that there is a significant shift towards the markets south of Seattle. More than 91 percent of all new warehouse space under construction is in the south Sound or Tacoma areas. The conclusions of the report emphasized that the infrastructure that feeds these southern regions needs to be a high priority.

The safe and efficient movement of freight is of premier importance to the City of Kent. The majority of jobs in the City are tied to the movement of freight in some manner, and this dependence on the smooth flow of goods is expected to increase in the future as Pacific Rim nations become more technologically developed and international trade booms. In addition, more than ever, firms rely on just-in-time inventories of parts and supplies, not to mention perishable goods. In this sector, time is money. If trucks cannot reach their delivery points or intermodal transfer points in the required time, the firm has no alternative but to divide the delivery stops between two or more trucks, thus exacerbating the congestion problems, increasing operating costs to firms, and ultimately raising consumption costs to everyone.

Truck and rail freight movement often come to conflict points within the City of Kent. Since both systems are of vital importance to international commerce, the City has identified railroad grade-separation projects as high priority to improve the safety for rail, truck, and vehicle traffic.

The FAST Partnership

The City of Kent is a member of the FAST partnership (local cities, ports, counties, the trucking industry, the BNSF and UP railroads, Economic Development organizations, business interests and WSDOT). The FAST Corridor Program is working to improve the movement of freight through the central Puget Sound region. FAST projects are designed to fix freight and general traffic bottlenecks, increase the competitiveness of Puget Sound ports, improve safety at rail/roadway crossings, and create jobs.

What Does the Future hold for Kent?

The future promises growth in population and employment for the City. A glimpse of the future follows, to set the context for the TMP.

2030 Population and Employment Growth

Kent has developed rapidly over the last 15 years. The population has more than doubled from around 40,000 in 1990 to over 85,000 in 2006 through both household growth and the expansion of the city limits. If the City's potential annexation areas are included, the population in 2006 was closer to 109,000. Employment has also grown to over 57,000 jobs⁵ in Kent in 2006. **Table 2-4** shows the forecast growth in households, population and employment between 2005 and 2030.

Population Growth

By 2030, the population within the City and surrounding annexation areas is expected to increase by another 16 percent, to about 126,000 residents. However, populations in communities surrounding Kent are expected to increase at higher rates as shown in

4 Wilbur Smith Associates, Heffron Transportation; NohBell Group; RNO Group; "Freight Efficiency & Competitiveness Phase I, Final Report"; WSDOT June 2006.

5 The employment forecasts were provided by the PSRC. The 57,000 jobs (City plus annexation area) is lower than recent City estimates of between 67,000 and 71,000 jobs.



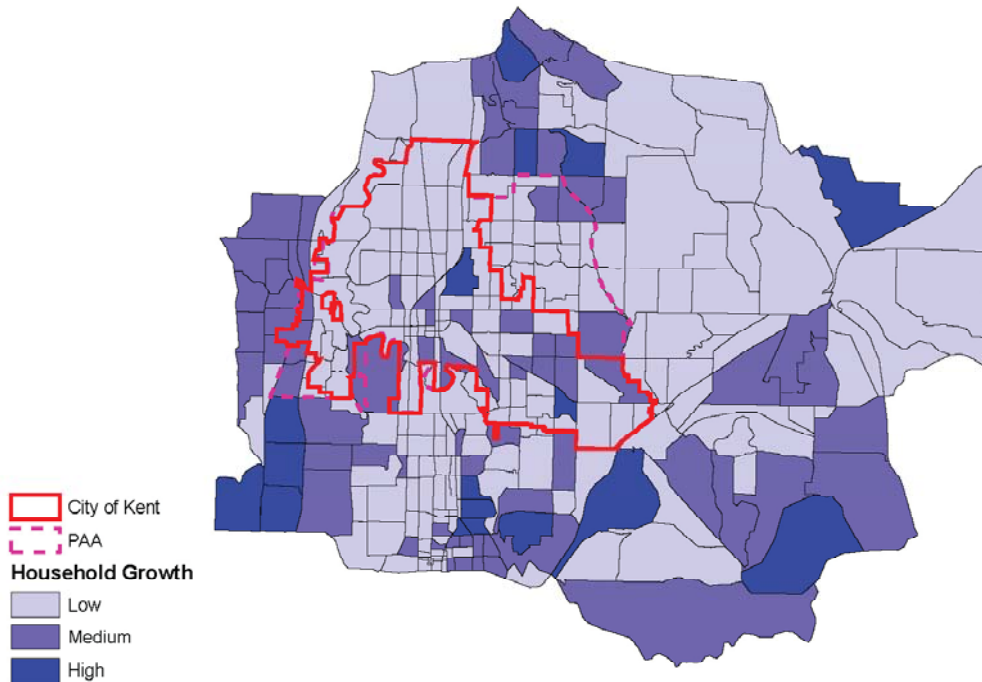
Figure 2-5.

Table 2- 4. Kent Travel Model Growth Forecast (2006-2030)

Location	2006	2030	Growth	
			2006 to 2030	
Kent and Annexation Area				
Households	43,100	49,900	6,800	16%
Population*	109,000	126,000	17,000	16%
Employment	57,300	82,300	24,100	44%

Source: City of Kent Travel Demand Model (2006); PSRC Data
 * Population assumes 2.53 persons per household (2000 US Census)

Figure 2- 5. Population Growth 2006 to 2030

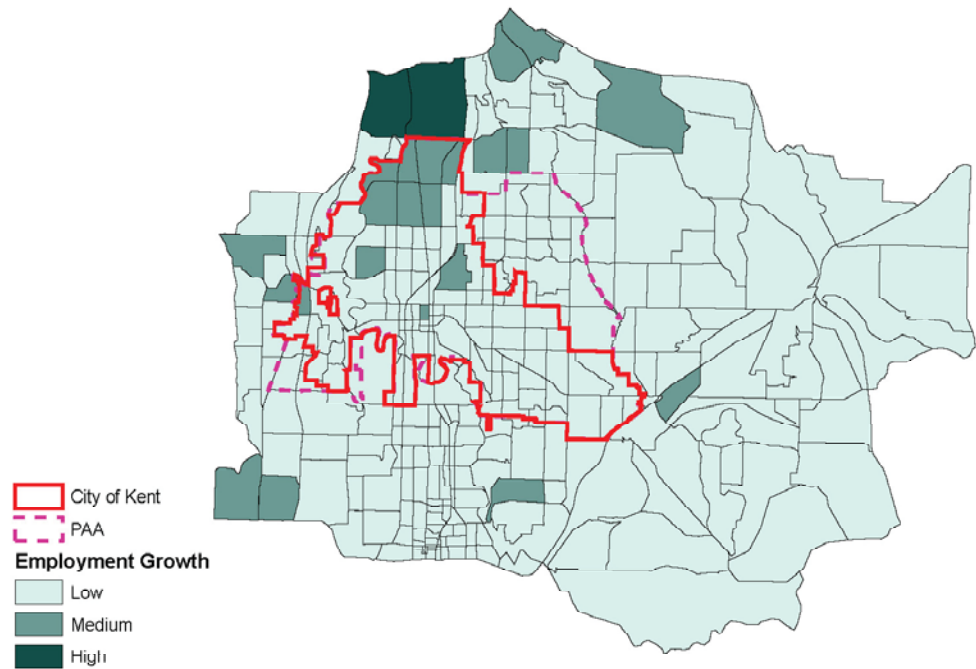


Employment Growth

Employment in Kent and the potential annexation area is forecast to increase by around 44 percent reaching over 82,000 jobs by 2030. As shown in **Figure 2-6**, about a quarter of the south end’s employment growth will occur within the Kent urban growth boundaries.

Impacts of Growth on Transportation Needs

Growth in population and employment within Kent will continue to create needs for travel by all modes. The diverse travel patterns of Kent residents and employees will tax both the local and regional transportation system. The growth in new residents and jobs outside of Kent is also likely to result in more traffic passing through the City’s roadway system.

Figure 2- 6. Employment Growth Areas 2006 to 2030

Summary

The City of Kent with the sixth largest concentration of jobs and residents in the region has grown over the past 20 years to nearly 109,000 residents (including the potential annexation area) and has become the home to some of the state's most well known businesses, including the Boeing Company, REI, Oberto Sausage Company, and the Starbucks Roasting Plant. The large warehouses are managed by companies not known by name, but well-known in the National Freight Industry. With 40 million square feet of space, Kent is second only to the Los Angeles/Long Beach freight corridor on the west coast. The cultural diversity of the residents, the old timers and the newest immigrants make Kent an interesting place to call home.

The Transportation Master Plan described in the following chapters will be a guide for the City leaders as Kent grows over the next 20 years.



Chapter 3 | Public Outreach

An important goal of the Kent City Council is to include all residents and businesses who are impacted by the City’s transportation system in the planning process. The City’s public outreach program for the Transportation Master Plan was designed to accomplish this goal.

Purpose and Objectives of the Public Outreach Program

The City designed the public outreach program to promote the Transportation Master Plan and provide meaningful forums for stakeholders to talk and work with the City and other stakeholders. The City developed the TMP Public Involvement Plan in partnership with the stakeholders – businesses, residents, seniors, and the schools – who depend on and make heavy use of the transportation system. To be successful, the public involvement program required not only that stakeholders understand the planning process and provide input on transportation priorities but also that they feel that their input was meaningful and included in developing the recommendations for the final plan. This ensures the stakeholders have a vested interest in the implementation of the TMP.

Chapter Contents

- ▶ Purpose and Objectives of the Public Outreach Program
- ▶ Outreach Activities
- ▶ Stakeholder Interviews
 - Citizen Task Force
 - Open Houses
 - Newsletters
 - Project Website
 - Transit Telephone Survey
 - City Council Meetings
 - Email Updates
 - Public Comments

Primary Source:

Stakeholder Involvement Report 2007 Update
CH2M Hill (December 2007).

Public involvement programs create a forum where stakeholders can understand the planning process, learn about the TMP and know that their comments will be used to develop the final plan.

The public involvement program included the following objectives:

- Inform stakeholders about the planning process and use their input to develop the TMP
- Discuss with stakeholders the transportation system in Kent, what needs to be improved, and what is required to make those improvements
- Gather community perspectives on transportation issues
- Understand community values
- Encourage two-way communication during the planning process
- Engage and be responsive to community groups that have not previously been involved in City government decision-making processes
- Provide a variety of ongoing opportunities for input

To achieve these objectives, a variety of outreach activities were implemented to build early awareness of the project while gathering and categorizing the public's values and interests. The City incorporated stakeholder issues and priorities into the planning process. By incorporating public input into the TMP, the plan has been developed with public endorsement. The remainder of this chapter describes these outreach activities and their results.

Overview of Outreach Activities

The City has made it a priority to understand the community's needs and issues, and to use these insights to guide future transportation decisions. The TMP outreach program was designed to reach out to as many people in the Kent community as possible. TMP staff, in consultation with City leaders, focused on the most effective public involvement tools – tools that would reach the most people and offer maximum opportunities for community input. Success of these tools was demonstrated by participation at public meetings, validation during interviews, responses to comment opportunities, and increase of visits to the TMP web site after other public involvement contacts.

The application of these tools and their results are described throughout the chapters in this report in green colored boxes. The key components of each outreach activity are summarized in the remainder of this chapter.

Stakeholder Interviews

City Council members helped identify key stakeholders—individuals and groups—that represented a diverse range of users of the transportation system in Kent. The City interviewed individuals and organized focus group sessions to talk with these stakeholders about their transportation issues and needs and to identify the types of solutions they would perceive as most effective.

Individual interviews were held with people recognized as leaders in the community --- church leaders, chairs of volunteer associations, and City Council members, as well as with people who could not easily convene in a group setting. Focus group meetings involved small groups of individuals with similar interests or situations, such as trucking associations, builders and developers, cultural/ethnic groups, and school district transportation staff. Meetings with both individuals and focus groups helped identify individuals for the Citizen Task Force. City staff participated in focus group sessions, responding directly to the concerns of the group.

Group Interviews

- Diversity Advisory Board
- Senior citizens/citizens with disabilities
- Small business owners
- Large business owners and operators
- Downtown business associations (Kent Downtown Partnership)
- Ethnic communities (Slavic/Ukrainian, Somali, Latino, Asian)
- Freight providers and truckers
- Industrial/manufacturing managers
- Developers and builders (Master Builders Association)

In all, interviews were conducted with nearly 40 individuals and focus groups in March and April 2006, and follow-up focus group interviews were held in September, October, and November 2007. The groups and individuals who were interviewed as a part of the public involvement process are shown on this page.

Stakeholder interviews consistently revealed that commuters want improved internal and regional connectivity; hours of congestion are expanding to all day, but north-south roadways are perceived as slightly less congested than east-west roads; the backups caused by trains are a major concern; better transit service is a key issue for everyone and there are language barriers regarding transit information; people are concerned about safe street crossings near transit and trail locations; better parking downtown is wanted; businesses use Kent's transportation system 24 hours a day; and businesses and shipping companies are concerned about the effect of traffic on transporting goods. Also, neighborhood groups are concerned about traffic in their communities, especially as it relates to safety. **Table 3-1** provides a summary of repeated themes brought up by stakeholders through these interviews, with the most frequently mentioned concerns denoted by a checkmark.

Individual Interviews

- Neighborhood representatives/ residential property owners
- Indic community representatives
- Asian community representatives
- Transit users; Transit providers
- Commute trip reduction staff
- Journalists
- Youth
- Business community and trucking industry
- Bicyclists
- School district transportation staff
- Economic development representatives
- Kent City Council
- Kent Land Use and Planning Board
- Parents
- Real estate professionals
- Event planners
- Other agencies



Extra lanes are needed on 132nd Avenue SE between the Kent-Kangley Road and SE 240th Street. . . . Resident

Table 3-1. Most Frequently Mentioned Issues from Community

Issue	Most Frequently Mentioned Issues	Issue	Most Frequently Mentioned Issues
Congestion		Transit	
East-West roadways	✓	Access	✓
North-South roadways	✓	Frequency (bus)	✓
104th Avenue	✓	Frequency (Sounder)	✓
116th Avenue		In-City Service	✓
124th Avenue		Lack of routes	✓
132nd Avenue		Language – translation	
SR 167	✓	Regional service	✓
208th Street		Safety/Security	✓
212th Street	✓	Stops (bus)	✓
238th Street		Pedestrian	
240th Street		Access	✓
256th Street		Safety	✓
277th Street		Crossings	✓
SR 516		Bicycle	
Benson Highway		Access	✓
Central Avenue/E. Valley Hwy	✓	Safety	
James Street	✓	Maintenance	
Kent-Kangley Road	✓	Cleaning/Mowing	✓
Meeker Street	✓	Lighting	
Military Road		Roadwork/Construction	
Orillia Road		Other Issues	
Smith Street	✓	Freight traffic – need to accommodate	✓
W. Valley Highway	✓	Parking	✓
Willis Street	✓	Safety/Security	✓
Railroad Tracks (backups)	✓	Signage	✓
Downtown Kent (general)	✓		

What Do Kent’s Residents and Community Value?

Base on community interviews and task force member comments, the following key values were identified.

- Traffic mobility
- Regional mobility
- Multimodal use
- Safety
- Neighborhood-oriented
- Efficient use of funding
- Attractiveness
- Freight mobility
- Pedestrian-friendly
- Preserve the environment
- Connectedness
- Business-friendly

Citizen Task Force

The City convened a Citizen’s Task Force to work with as the TMP was developed. Members provided input and feedback that helped the City prioritize projects that are recommended in the TMP. Task Force members also served as liaisons to the rest of the community. As the members gained more knowledge about how the City’s transportation system worked and better understood the community values –they also learned what it would take to accomplish these goals and became uniquely qualified to take this information back to their communities.

Task Force members were recommended by City Council members and the Mayor, based on comments received during community interviews. Members represented a very broad cross section of transportation system users in Kent, including neighborhood groups, parents, builders, freight interests, businesses, seniors, cultural community groups, transit users, and others.

The City set several goals for the Task Force:

- Identify transportation issues
- Build a collective vision
- Identify success goals and criteria
- Develop solutions that reflect community values
- Serve as liaisons to the community
- Understand funding opportunities and limits
- Prioritize community needs
- Endorse a plan that meets community needs

The Task Force met seven times over the course of a year. The topics and results of these seven meetings are summarized below.

Meeting #1 (April 11, 2006). The purpose of the first Task Force meeting was for members to understand the role of the Task Force and identify transportation issues facing the City. The Task Force began its work by exploring the values, goals, and policies to be used as guiding principles and markers of the success of the TMP. The Task Force confirmed the values identified during the community interviews.

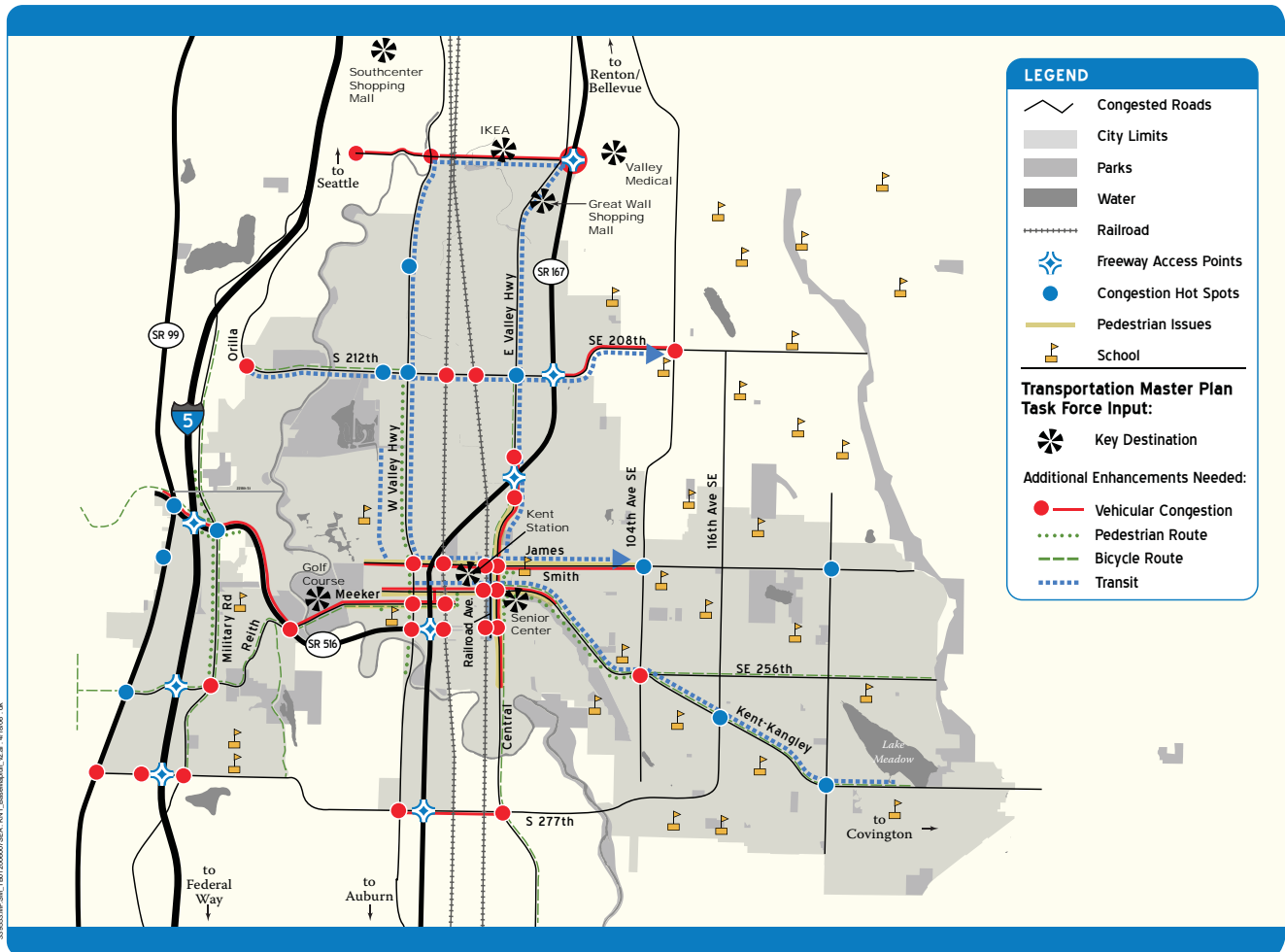
Breaking into small groups that mixed people with varying interests was a method used frequently to get task force members to think in different ways and look at things from other points of view. The groups clarified the transportation issues identified by the community, including vehicular congestion areas, key destinations, and areas needing transit, bike, and pedestrian improvements. The results of the issues exercise are shown on **Figure 3-1**.

The Citizen’s Task Force helped set the priorities for the road, transit, pedestrian, and bicycle portions of the Plan. This important role helped build community trust and endorsement.

TMP Task Force Members

Residents – families
 Residents – single adults
 Kent School District - Transportation Staff
 Kent School District - PTA
 Senior citizens/citizens with disabilities
 Kent Bicycle Advisory Board
 Small business owners
 Large business owners and operators
 Chamber of Commerce
 Ethnic communities (Slavic/ Ukrainian, Somali, Latino, Asian)
 Freight providers and truckers
 High school student
 Industrial/manufacturing manager
 Office Workers
 Transit/Train commuters
 Developers and builders

Figure 3-1. Issues Map Developed at Task Force Meeting 1



Meeting #2 (May 10, 2006). At the second meeting, the Task Force discussed and evaluated the existing transportation issues shown in Figure 3-1 and developed a vision of potential solutions. The Task Force looked at several critical pieces of the transportation system and identified factors that would indicate successful improvement of each of these elements. The list was used to select and weigh the criteria for prioritizing TMP projects.

Meeting #3 (June 14, 2006). At the third Task Force meeting, the group reviewed the existing transit and pedestrian elements of the City's transportation system. This information was used to develop priorities for use in the TMP. The Task Force selected the top five transit issues, which include more local service to residential neighborhoods, connections between industrial areas and Kent Transit Center, new midday and peak hour service on commuter rail, and pedestrian improvements to transit.

The Task Force also identified the types of destinations where it was most important for there to be safe and effective pedestrian access. The top 3 were, in order, schools, transit, and lower-income housing. These priorities were used by TMP staff to weight transit and pedestrian projects for the final Plan.

Meeting #4 (August 9, 2006). At the fourth meeting, task force members reviewed the findings from the existing conditions analysis for streets and bicycles. Members examined the trade-offs that need to be made between reducing congestion or maximizing non-motorized facilities.

Meeting #5 (September 13, 2006). At this meeting members discussed what they had learned about the transportation system in Kent and how to address priorities. Members met in small groups to clarify issues and

concerns for all modes. This allowed discussion about the issues to be best addressed by the setting of TMP project priorities.

Meeting #6 (October 25, 2006). At the sixth Task Force meeting, City staff presented an overview of the preliminary recommendations for all modes—streets, transit, and non-motorized (pedestrian and bicycle)—and took comments from Task Force members, either responding to them at the meeting or at a later date if the solution had not been considered.

Meeting #7 (May 2, 2007). At the last meeting, members received an overview of the final draft set of recommendations for all the modes. Different funding options were presented for discussion.

Open Houses

The City held two open houses and a neighborhood meeting in the fall of 2007 to explain the TMP plan and offer an opportunity for public feedback. Kent residents took advantage of these opportunities, and turnout was very good.

Members of the City’s Public Works Transportation Section staffed the open houses and the neighborhood councils meeting. At each event, stations were set up to present information on the existing and future conditions for each mode. The open houses explained the current conditions, showed the growth that is expected by 2030, and the impacts on the transportation system. For example, stations offered information about plans for new sidewalks; streets; transit; bicycle facilities; and level of service. During the development of the TMP, the City identified several projects that are needed to accommodate growth; these were included in the Open Houses as part of a station featuring the Transportation Improvement Program.

The September 26th neighborhood meeting began with a short presentation about the TMP planning process and had a question and answer session before the meeting moved to an open forum where people visited the display stations and asked individual questions of staff.

At the open houses residents had the chance not only to share their ideas and concerns but also to engage in discussion about those concerns with the staff directly involved in developing and implementing solutions to address those concerns. These concerns are noted on the web site and the comments have been used in the finalization of the TMP.

Open House Dates and Locations in 2007

- September 20, from 2 to 8 pm
Green River Community College
Kent Station Campus
- September 25, from 1 to 3:30 pm
Kent Senior Center
- The Neighborhood Councils meeting
- September 26, from 7 to 9 pm
City Council Chambers.

TMP staff and Kent residents talked about traffic signals, developer responsibilities, safer school bus routes, bicycle route connections, extended shopper shuttle hours, traffic calming measures, and issues associated with the Kent-Kangley “Y.”



Newsletters

The newsletters provided project updates to the broadest possible cross-section of Kent residents. The City mailed two newsletters to every household in the City.

Figure 3-2. TMP Newsletter

A Plan in the Making: The Five Steps to Prioritizing Our Transportation Improvements

Continued from previous page

We wrote the TMP using five steps. The diagram below shows how the parts of each step of the TMP process flow together, and the questions each step is designed to answer—all leading to projects that improve the way our transportation system works.

Steps 1 and 2. How Are We Doing and What is Important?

The first step of the TMP process was to learn how effective the City has been at providing a usable transportation system. TMP staff conducted interviews with community and business groups, mailed a newsletter to every household, established a citizen-based Transportation Task Force, and developed goals for the study. The Task Force and TMP staff prepared a list of community values—that is, qualities that the community considers important. These values played a critical role in guiding the evaluation of the transportation system and the recommendations for improvements. These values also helped us set the transportation policies that guide the way the City plans and implements improvements.

Step 3. What Improvements Should We Consider?

The TMP staff collected information about Kent's transportation facilities, such as roads, signals, signs, transit stops and service, bike routes, and sidewalks. This information provided a snapshot of how well Kent's transportation system works. We then started to examine locations where improvements should be considered.

Step 4. What Improvements Should We Include?

All of this information was used to come up with strategies to target each issue. We developed strategies for each travel mode, including adding turn lanes at intersections, repaving sidewalks, adding bicycle lanes, coordinating traffic signals, and widening roads. These strategies were used to develop a list of projects to accommodate future land use.


Step 5. Finalize the Plan!

Finally, we prioritized the projects, using input from across the range of transportation users, and considering all the evaluation criteria and funding and environmental limitations. Because the TMP will serve as a road-map for transportation capital improvements for years to come, your continued feedback is important on the draft priorities and list of projects.

Next Steps

Now, you have the opportunity again to participate as we hold open houses to show all of the project priorities. Your comments will help as the plan becomes a reality over the next 25 years.

The Pieces of the Puzzle



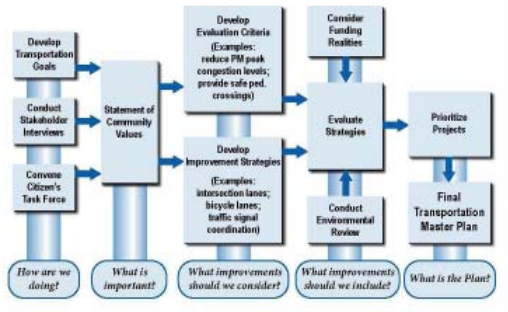
The three primary categories of the TMP are Streets, Transit, and Non-motorized, and the Non-motorized category is further divided into distinct bicycle and pedestrian modes of travel. We developed recommendations for these pieces of the transportation puzzle.

The maps on the following pages show many of our draft recommendations for all modes. While there is not space in this newsletter to describe all of the proposed projects in the TMP, the following three pages describe several representative projects.

For example, the Streets priorities show various roadway widening and intersection improvements, along with railroad grade separations. The Non-motorized page shows locations for high-priority sidewalk improvements and describes the three types of bike facilities that are recommended.

For the Transit priorities, several of the plans for regional and local bus routes are featured.

The maps have been scaled down and simplified to fit within this limited space, but visit the TMP web pages for more on each piece of our transportation puzzle.



Page 2 More information at www.ci.kent.wa.us/transportation/TMP/

The first, mailed at the beginning of the planning process, in spring 2006, provided information about the project, such as reasons for the TMP and information about the issues that had been gathered through traffic surveys, group and individual interviews, and the transit survey (Figure 3-2). It also directed residents to future involvement opportunities and encouraged feedback. The mailing of the first newsletter coincided with an increase in web traffic, e-mail feedback, and telephone feedback. To reach a larger portion of Kent's minority communities, the newsletter was translated into Spanish and Russian. Both translated versions were made available on the TMP web site.

The second newsletter, mailed in the summer of 2007, described the recommendations developed for the draft TMP in all modes and encouraged the Kent community to attend the open houses and provide comments. Because it was timed to coincide with the two open houses, attendance at both events was very good. In addition, a postage-paid comment card was inserted into the newsletter, and the information sent back was used to help

make final project prioritization decisions. As of October 2007, nearly 400 comment cards were returned.

The Project Website

The website was structured to match the organization of the TMP. It includes pages for streets, transit/pedestrian/bicycle, funding resources, and community involvement.

The purpose of the TMP web site was not to serve as an independent, primary source of information. Instead, the fact that it had no space limitation and that it could be updated regularly made it an ideal support tool for all the other outreach activities. For example, when a statistical phone survey of Kent residents was conducted to gather transit use information, the web site offered a follow-up survey that provided valuable information supporting transit priorities, despite the fact that the web survey was not statistically significant. When newsletters were mailed to residents, the web site provided verbatim copies of newsletter text and provided additional information that was referenced in the newsletter. For example, all street project recommendations could be shown on the web site, and visual representations of all three types of the City's bicycle facilities could be presented, whereas the newsletter provided information only about selected projects and brief descriptions of bike facilities.

3 - 8

The screenshot shows the City of Kent website's 'TRANSPORTATION MASTER PLAN' section. It features a navigation menu with categories like Living, Working, Visiting, Business, Government, and Emergency. The main heading is 'TRANSPORTATION MASTER PLAN'. Below this, there are links for 'Transportation Master Plan comments' and a 'Provide your comment' section. The feedback form includes instructions on how to rate the importance of different transportation modes: Streets, Non-Motorized (Pedestrian and Cycling), and Transit. A table is provided for users to list their top three projects for each mode.

	Streets	Non-Motorized	Transit
1			
2			
3			



The web site also supported Open House events, not only by providing information about upcoming events, but also by being used to post responses to frequently asked questions, providing a degree of connection to and interactivity with residents not otherwise easily available. The web site also served as a funnel to bring feedback to TMP staff. It provided relevant phone numbers, click-access to e-mail addresses, and online feedback opportunities.

Upon completion of the TMP, the web site will provide permanent and open access to an online version of the TMP, similar to the access provided for the City's 6-Year Transportation Improvement Program document.

Transit Telephone Survey

In March 2006 a telephone survey of Kent residents was conducted to gather information regarding use of and opinions about transit service. The survey provided a statistically valid sampling, meaning that enough people were surveyed to provide a reasonable approximation of the sentiments of the entire Kent community. The survey included several questions regarding usage, routes, frequency, location of bus stops, length of trips, and safety.

A research firm conducted the surveys over the phone with 401 randomly selected Kent households. The data were used to identify transit issues and determine effective improvements in transit service. Chapter 7 reports on these findings in detail.

Transit Survey Results

- 65 percent of Kent residents commute outside Kent (34 percent to Seattle; 14 percent to Bellevue)
- 34 percent of Kent residents had used a bus in the past year
- 9 percent of residents had used the Sounder commuter train in the past year
- 12 percent of Kent residents would like to use the bus, but there are no bus stops near their homes or desired destinations
- 57 percent of Kent residents would be more likely to ride the bus or train if service was offered every 15 minutes

Reports to the Public Works Committee and City Council Meetings

The TMP was a standing agenda item for the second Public Works Committee meeting every other month. Each update included the TMP progress since the previous meeting and an overview of upcoming tasks. These updates kept the Council informed, maintained their engagement, and made sure that the City’s elected leaders knew the TMP was on track. In turn, at the City Council meetings, the Public Works Committee delivered a committee report to the full council, including noteworthy developments in the TMP.

TMP team members appeared on several occasions before the City Council to directly present TMP updates and respond to questions from the council members. These Council meetings provided an opportunity for the TMP team to explain the planning process and keep City leaders up to date about development of the recommendations that would appear in the final plan. They also provided an avenue to incorporate feedback from Council members and their constituents into the Plan as it was being developed.

TMP staff also met with the Mayor to discuss the Plan.

Table 3-2 provides a summary of these meetings with the City Council, Public Works Committee, and Mayor and their topics.

Table 3-2. Presentations to City Council, Public Works Committee, and Mayor

Date	Format	Subject
June 20, 2006	Council Workshop	Concurrency and Performance Standards
July 5, 2006	Council Workshop	Transit and Non-Motorized
July 10, 2006	Public Works Committee	Public Involvement Report
August 21, 2006	Public Works Committee	Streets Analysis and LOS Standards
September 5, 2006	Council Workshop	Transportation Funding Options
February 9, 2007	Mayor's Office	Brief Mayor and Executive Staff on TMP Funding Options
February 27, 2007	Council Workshop	TMP Funding Options, Streets
April 19, 2007	Mayor's Office	Brief Mayor and Executive Staff on TMP Project Priorities and Funding Options
June 18, 2007	Public Works Committee	CTR Plan / Demand Management
December 3, 2007	Public Works Committee	Transportation Impact Fees
January 7, 2008	Public Works Committee	Draft TMP



E-mail Updates/Information Distributions

The City used email to quickly disseminate information to a group of people that had indicated specific interests in the transportation system. A special e-mail address (tmp@ci.kent.wa.us) was set up and everyone who used it was added to the distribution list. The distribution list also included members of the Citizen’s Task Force, people who gave their e-mail address at public meetings, and anyone who left their e-mail address on the traffic hotline. As more people expressed an interest in

Kent's transportation system their names were added to the list, expanding the reach of City public outreach.

E-mail updates were also used to notify recipients of new information available on the web site, public meeting opportunities, new information about TMP development, and any other opportunities to participate in the public process. E-mail distribution was a key tool used to generate interest in the second TMP open house, which was not advertised in the newsletter.

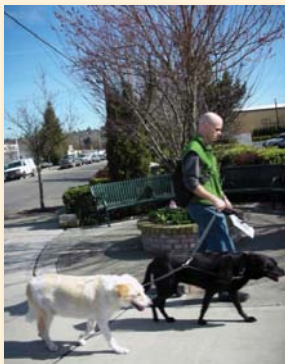
Issues Identified through the Public Outreach Program

The public involvement program offered several avenues for public input, including direct discussion at the project task force and community meetings, open house comment cards, reader-reply cards in the second newsletter, web site comment opportunities, a transportation hotline, and a TMP e-mail address. As a result of these opportunities, the TMP planners received additional evidence to support the recommendations of the plan. In some cases, issues that might otherwise have remained hidden were identified as a result of these opportunities.

The community comments received and how they were used to change the final TMP are detailed in the implementation chapter (Chapter 10).

Stay Involved - Future Public Involvement

While the public involvement program has lasted well over a year, the TMP is a long-range plan. Now that effective communication has been established, the City and the Transportation Section should build on the existing momentum. By maintaining proactive, open channels of two-way communication and remaining responsive to stakeholders, the trust that has been built with residents will lead to lasting public endorsement of the TMP as it is implemented over the next 25 years.







Chapter 4 | Goals and Policies

The TMP will guide the development and funding of a transportation network that will provide mobility for residents and employees within the City of Kent in a way that preserves the quality of life. The TMP establishes policies on how to prioritize the City's transportation improvements and how to identify the City's strategic interests in regional investments, adjacent transportation facilities and funding alternatives.

The residents of Kent value specific attributes of our community, whether it is the economic vitality of the downtown area, the ease of mobility and safe streets, the quality of the schools, or the system of parks. These values are important; as they help the City Council and staff make decisions and manage the City. These values are integrated into the policies that guide the City and the evaluation criteria that are used to prioritize transportation improvement projects.

The City's review of goals and policies began with the TMP Task Force. The group developed statements that best described the future transportation system they envisioned for Kent. Community members also confirmed the core values identified by the community interviews. These core values became the foundation for evaluating the proposed multi-modal transportation improvements.

Transportation related principles, goals and policies were reviewed and revised using input from the community and stakeholder interviews, the task force, and City Council members.

Chapter Contents

- ▶ Community Values
- ▶ Transportation Policies

Our citizens deserve a transportation system that emphasizes safety, mobility and access, while minimizing the impacts on the environment. Kent remains committed to providing a more balanced transportation system, providing citizens with transportation choices to maintain our high quality of life.

... Mayor Suzette Cooke

The City of Kent's Overall Transportation Goal is to provide for a balanced multimodal transportation system which will support current and projected land use patterns and provide an adequate level of transportation service.



Transportation Community Values

- Traffic Mobility** - Reduce congestion and facilitate economic growth
- Regional Mobility**- Coordinate with others to address regional congestion and multi-modal corridors (serve all residents: walkers; bicyclists; commuters; freight; business; schools; transit); integrate with regional transportation systems
- Multi-modal/Mobility** - Recognize transportation needs of different users. Make sure that transit is accessible to all residents, provide more frequent bus and Sounder train service; maintain a balance among modes
- Safety** - Provide a safe place to drive/walk/bike/take the bus, increase police enforcement; Emergency Medical Services quick response
- Pedestrian Friendly** – Facilitate pedestrians crossing streets; walking to bus stops; for all ages; Limit the Roadway footprint – to keep small town friendliness
- Environmental Preservation** - Develop Kent transportation systems with sensitivity to maintaining and enhancing natural resources
- Attractiveness** - Make the City more attractive - street trees; medians/ code enforcement; improve downtown appearance and infrastructure
- Connectedness/Accessibility** – Connect residents and businesses internally within the City; Provide connections to surrounding communities
- Business Friendly** - Transportation should support needs of retail, industrial, commercial businesses
- Neighborhood Oriented**- Focus traffic on arterial routes
- Efficient Use of Funding** – Obtain and spend funds for transportation in an efficient manner.
- Provide freight mobility** for businesses and warehouses; provide load/unload zones near businesses; design for needed deliveries and trash pick up by trucks

Values, Goals, and Policies

An early priority for the Task Force was to identify values, goals, and policies that guided development of the TMP. The Task Force defined these terms as follows:

Value: A principle, standard, or quality that is worth upholding and that may determine behavior or actions.

Goal: The purpose toward which an endeavor is directed and that guides the actions of the Task Force.

Policy: A course of action, guiding principle, or procedure considered expedient, prudent, or advantageous, and which helps to fulfill the goal of the TMP.



The policies were revised to align with community values and maintain consistency with the other elements of the Comprehensive Plan. Then the goals and policies were carefully reviewed by City internal staff and the City Council.

Using the City's overall transportation goal as a base, several specific transportation system goals and policies were established. These goals and policies, described in the remainder of this chapter, provide guidance to implementing the Transportation Master Plan.

Transportation and Land Use

GOAL TR-1. Coordinate land use and transportation planning to meet the needs of the City consistent with the Growth Management Act.

Policy TR-1.1: Work actively and cooperatively with state, regional and other South County jurisdictions to plan, design, fund and construct regional transportation projects that further the City's transportation and land use goals.

Policy TR-1.2: Ensure consistency between land use and transportation plans so that transportation facilities are compatible with the type and intensity of land uses.

Policy TR-1.3: Prohibit development approval if the proposed development would cause the level of service to fall below the City's adopted level of service standards, unless improvements or strategies to accommodate the impacts of development are made concurrent with the development.

Policy TR-1.4: Phase implementation of transportation plans with growth to allow adequate transportation facilities and services to be in place concurrent with development. Approval of new development will be dependent on the active participation of development property owners in the funding of the transportation improvements needed to maintain the City's level of service standards.

Policy TR-1.5: Use a "Plan-Based" approach as the basis for a multimodal transportation concurrency management system. A plan-based approach means that the funding of programs, construction of facilities, and provision of services occur as envisioned in the Comprehensive Plan and are proportionate with the pace of growth.

Policy TR-1.6: Coordinate new commercial and residential development in Kent with transportation projects to assure that transportation facility and service capacity is sufficient to accommodate the new development.

Policy TR-1.7: Prioritize those projects that improve transportation facilities and services within designated centers and along identified corridors connecting Centers; those that support the existing economic base and those that will aid the City attracting new investments to those centers.

Policy TR-1.8: Ensure the transportation system is developed consistent with the anticipated development of the land uses and acknowledge the influence of providing transportation facilities to accelerate or delay the development of land uses, either by type or by area.



Policy TR-1.9: Promote multimodal facilities and services, street design, and development that includes residential, commercial and employment opportunities within walking/bicycling distance so that distances traveled are shorter and there is less need for people to travel by automobile.

Policy TR-1.10: Incorporate pedestrian and transit friendly design features into new development. Examples include:

- Orient entries of major buildings to the street and closer to transit stops rather than to parking lots.
- Avoid constructing large surface parking areas between the building frontage and the street.
- Provide pedestrian pathways that provide convenient walking distances to activities and to transit stops.
- Cluster major buildings within developments to improve pedestrian and transit access.
- Provide weather protection such as covered walkways connecting buildings, and covered waiting areas for transit and ridesharing.
- Design for pedestrian safety, providing adequate lighting and barrier free pedestrian linkages.
- Provide bicycle connections and secure bicycle storage lockers convenient to major transit facilities.
- Use design features to create an attractive, interesting and safe pedestrian environment that will encourage pedestrian use.
- Design transit access to large developments, considering bus stops and shelters as part of the project design.
- Encourage developers of larger commercial and public projects to provide restrooms for public use.

Policy TR-1.11: Manage access to all residential, recreational, commercial, and industrial properties along principal, minor and collector arterials. Consider consolidating access points whenever feasible during development review or design of road improvement projects.



Street System

GOAL TR-2: Identify a hierarchal street classification that is designed to balance street capacity needs, compatibility and context of adjacent land uses, emergency response efforts, non-motorized travel, and multimodal user safety.

Policy TR-2.1: Assign a functional classification to each street in the City based on factors including travel demand of motorized and non-motorized traffic, access to adjacent land use and connectivity of the transportation network.

Policy TR-2.2: Preserve needed traffic capacity when planning street improvements by consistent application of functional classification standards.

Policy TR-2.3: Establish procedures to implement the authority granted to the City by RCW 35.79 to inventory, evaluate, and preserve right-of-way needs for future transportation purposes, and wherever possible, make advance acquisition in order to minimize inconvenience to affected property owners and to safeguard the general public interest.

Policy TR-2.4: Consider the context of adjacent land uses, the benefits and desirability of non-motorized travel, and the competition for street space when reconstructing or adding streets.

Traffic Flow Goals & Policies

GOAL TR-3: Preserve and expand capacity, mobility and access management for all transportation modes on the arterial network to reduce congestion.

Policy TR-3.1: Maintain level of service (LOS) standards that promote growth where appropriate while preserving and maintaining the existing transportation system. Set LOS E as the standard for City Street Corridors. Set LOS F as the standard for the Pacific Highway (SR 99) Corridor and for downtown Kent while recognizing WSDOT’s LOS D for SR 99.

Policy TR-3-2: Evaluate the City’s transportation facilities annually to determine compliance with the adopted level of service standards and, as necessary, amend the Six-Year Transportation Improvement Program (TIP) and Capital Improvement Plan (CIP)

Policy TR-3-3: Maintain the flow of traffic on the road system and provide adequate access to adjacent land uses by using adopted Access Management strategies. These include: limiting the number of driveways (usually one per parcel); locating driveways away from intersections; connecting parking lots and consolidating driveways to create more pedestrian-friendly streets.

Policy TR-3.4: Use Transportation System Management (TSM) strategies to maximize the efficiency of the existing street network; include techniques such as intelligent transportation systems (ITS) and synchronizing traffic signals to facilitate safe and efficient traffic flow on the arterial street system.

Neighborhood Traffic

GOAL TR-4: Balance the dual goals of providing accessibility within the local street system and ensuring neighborhood street safety.

Policy TR-4.1: Ensure reliable traffic flow and mobility on arterial roads, especially on regional through routes, while protecting local neighborhood roads from increased traffic volumes.

Policy TR-4.2: Minimize through traffic on residential streets by emphasizing through traffic opportunities on collector and arterial streets.

Policy TR-4.3: Protect residential areas that are impacted by overflow traffic from the regional system.

Policy TR-4.4: Enhance the Neighborhood Traffic Control Program (NTCP) to help residents identify and resolve neighborhood traffic concerns.

Policy TR-4.5: Maintain a connected street network to give people more options and to spread out the traffic over more streets.



Transportation Facility Design



GOAL TR-5: Design transportation facilities to preserve and to be consistent with the natural and built environments.

Policy TR-5.1: Encourage landscapes at transportation facilities that complement neighborhood character and amenities, incorporate street trees in planting strips to improve air quality and visual aesthetics, and implement traffic calming strategies.

Policy TR-5.2: Separate pedestrians from traffic lanes on all arterials, wherever possible, by the use of street trees and landscaped strips, and avoid the construction of sidewalks next to street curbs.

Policy TR-5.3: Maintain and incorporate prominent features of the natural environment when landscaping transportation facilities.

Policy TR-5.4: Encourage pedestrian and bicycle connections between residential developments, neighborhood commercial centers, and recreation areas.

Policy TR-5.5: Arrange streets and pedestrian paths in residential neighborhoods to form a grid network, providing multiple choices as to path and mode.

Policy TR-5.6: Avoid the creation of excessively large blocks and long local access residential streets.

Freight Movement

GOAL TR-6: Maintain Kent's Manufacturing and Industrial Center as a primary hub for regional goods movement and as a gateway for international goods distribution to the national marketplace.

Policy TR-6.1: Support investments in trucking and rail facilities to enhance the freight transportation system and strengthen the City's economic base.

Policy TR-6.2: Establish a network of freight routes to improve freight reliability and mobility incorporating sensitivity to land use context into roadway design.

Policy TR-6.3: Coordinate with BNSF Railroad, UP Railroad, Washington Utilities and Trade Commission (WUTC), and Sound Transit to ensure maximum transportation efficiency on both roads and rails.

Policy TR-6.4: Locate new spur tracks to provide a minimum number of street crossings and to serve a maximum number of sites.

Policy TR-6.5: Provide, when feasible, grade-separated railroad crossings on arterial corridors to eliminate conflict between rail and road traffic and to enhance the safety and efficiency of both transportation systems.

Policy TR-6.6: Provide protective devices, such as barriers and warning signals, on at-grade crossings. Develop traffic signal preemption that is activated by crossing signals in order to maintain non-conflicting auto/truck traffic flow and to facilitate clearing of the grade crossings prior to when crossings are occupied by trains.



Non-Motorized Transportation

GOAL TR-7: Improve the Non-Motorized transportation system to provide a comprehensive system of connecting sidewalks, walkways, on-street bicycle facilities and shared-use paths that will encourage increased usage and safe travel.

Policy TR-7.1: Implement the Non-Motorized system in a way that reflects the priorities identified by the public process. Emphasize completion of sidewalks identified as the highest-high priority (shown in Figure 6-6) and bicycle facilities identified on the Bicycle System Map (shown in figure 6-11).

Policy TR-7.2: Provide non-motorized facilities within all areas of the City to connect land use types, facilitate trips made by walking or bicycling, and reduce the need for automobile trips.

Policy TR-7.3: Create a comprehensive system of pedestrian facilities using incentives and regulations. All future development should include pedestrian and bicycle connections to schools, parks, community centers, public transit services and other services. Provide special attention to the requirements set forth in the Americans with Disabilities Act (ADA) regarding the location and design of sidewalks and crosswalks.

Policy TR-7.4: Encourage schools, safety organizations, and law enforcement agencies to provide information and instruction on pedestrian safety issues that focus on prevention of the most important accident problems. The programs will educate all roadway users of their privileges and responsibilities when driving, bicycling, and walking.

Policy TR-7.5: Encourage an increase in the percent of modal share of commuter trips made by cyclists by the year 2030 by fostering an environment that eliminates deterrents to bicycling and encourages bicycle use city-wide for all types of trips.

Policy TR-7.6: Consider needs of bicyclists when developing design plans for City street construction projects consistent with the City's bicycle system plan and Construction Standards.

Policy TR-7.7: Encourage the installation of bicycle parking facilities at park and ride facilities, train/transit stations, shopping malls, office buildings, and all land use types that attract the general public.

Policy TR-7.8: Work with the Kent, the Federal Way, the Highline school districts and neighborhood associations to support programs that encourage walking and bicycling to local schools.

Policy TR-7.9: Encourage efforts that inform the public about the health effects of cycling and walking. Encourage walking and cycling for travel and recreation to achieve personal health and well-being and to support a more healthful environment for the community by reducing noise and pollution.

Policy TR-7.10: Encourage schools, safety organizations, and law enforcement agencies to provide information and instruction on bicycle safety issues that focus on prevention of the most important accident problems. .



Transit and High Occupancy Vehicles (HOV)



GOAL TR-8: Encourage the development and use of alternatives to single-occupancy vehicles.

Policy TR-8.1: Work with regional transit providers to resolve the transit needs identified in the TMP and provide high quality travel options for local residents, employees, students, visitors, business, and other users of local and regional facilities.

Policy TR-8.2: Work with regional transit providers to establish a hierarchy of transit services focused on three major elements:

- Kent-Kent Connections
- Kent-South County Connections
- Kent-Regional Connections

Policy TR-8.3: Emphasize transit service and capital investments that provide mobility and access within the City of Kent and make it possible for residents to access local services and support local businesses while reducing their travel by auto.

Policy TR-8.4: Work with transit providers to maintain and expand direct and frequent regional bus routes.

Policy TR-8.5: Develop a network of park and ride facilities in cooperation with regional transit providers and the Washington State Department of Transportation. Work to ensure that the regional transit system includes park and ride lots in outlying areas, which could:

- Intercept trips by SOVs closer to the trip origins;
- Reduce traffic congestion; and
- Reduce total vehicle miles traveled

Policy TR-8.6: Secure a share of regional transit system facilities and service priorities for Kent residents proportional to the City of Kent's contributed share of regional transit revenues.

Policy TR-8.7: Coordinate with transit providers to enhance transit service information and provide incentives to encourage and facilitate transit use.

Policy TR-8.8: Develop the Kent Transit Center with complete set of transit center amenities, including timed transfers between most routes, passenger waiting areas, Intelligent Transportation System (ITS) bus arrival notification, on-site route information, and other amenities.

Policy TR-8.9: Coordinate with transit providers and other transportation agencies in the design and placement of bus shelters and transit supportive facilities that are needed at both ends of the transit trip when the transit rider becomes a pedestrian or a bike rider. These include but are not limited to transit shelters, bike racks or lockers, good (illuminated) pedestrian paths to and from transit stops and covered walkways wherever possible. Work with transit agencies and developers to design transit facilities that are compatible with neighborhood character.

Policy TR-8.10: Work with employers to provide Transportation Demand Management (TDM) measures in the workplace that promote alternatives to single occupant vehicles (SOV). The City will lead by example by implementing a successful Commute Trip Reduction (CTR) program for City employees.

Policy TR-8.11: Develop Transportation Demand Management (TDM) strategies in support of mode-split goals. These include, but are not limited to, parking management, individualized marketing, ridesharing and support of non-motorized travel.

Policy TR-8.12: Work with private developers and transit providers to integrate transit facilities into residential, retail, manufacturing, commercial, office and other types of development using the following actions:

- Support transit by including land uses with mixed-use and night-time activities;
- Support transit-oriented development opportunities with the private and public sectors;
- Integrate multiple access modes, including buses, carpools, vanpools, bicycles and pedestrians;
- support and facilitate transit use by choice of urban design and community character.

Funding Goals & Policies

GOAL TR-9: Pursue funding for transportation improvements from all potential sources in an efficient and equitable manner.

Policy TR-9.1: Consider the full range of public and private funding sources available for all modes of transportation.

Policy TR-9.2: Allow for funding of growth-related traffic improvements by impact fees or other mechanisms that apportion costs in relation to the impact of new development.

Policy TR-9.3: Identify and evaluate alternative land use and transportation scenarios, including assumptions about levels and distribution of population and employment densities, types and mixes of land use, and transportation facilities and services, and assess their effects on transportation funding needs.

Policy TR-9.4: Support regional, state and federal initiatives to increase transportation funding.

Policy TR-9.5: Coordinate equitable public/private partnerships, such as Local Improvement Districts (LID), Transportation Benefit Districts (TBD), Transportation Benefit Zones (TBZ), and Transportation Management Associations (TMA) to help pay for transportation improvements.

Policy TR-9.6: Establish a mechanism to provide a multi-jurisdictional cooperation to fund transportation improvements, participate in joint ventures and promote them to improve inter-jurisdictional transportation systems.

Policy TR-9.7: Create a funding mechanism that can be applied across boundaries to address the impact on the City’s transportation system of growth outside the City’s boundaries.

Policy TR-9.8: Emphasize investments for the preservation and enhancement of the existing transportation facilities. Seek funding from a variety of sources and consider pursuing new revenue opportunities for roadway maintenance and improvements to encourage non-SOV modes of travel.



Intergovernmental Coordination

GOAL TR-10: Coordinate transportation operations, planning, and improvements with the State, the County, neighboring jurisdictions, and all transportation planning agencies to ensure the City's interests are well represented in regional planning strategies, policies and projects.

Policy TR-10.1: Emphasize City representation on planning boards that have authority over or can affect the City's transportation system.

Policy TR-10.2: Identify opportunities to partner with neighboring jurisdictions, regional transit agencies, or other agencies in order to improve funding opportunities from state, federal or other grant providers.

Policy TR-10.3: Coordinate planning for developments that impact transportation level-of-service across jurisdictional boundaries.

Policy TR-10.4: Support intergovernmental programs that emphasize regional mobility for people and goods, promote the urban center approach to growth management, and seek to reduce greenhouse gas emissions.

Policy TR-10.5: Coordinate with state, regional and neighboring agencies to encourage pass-through traffic to by-pass downtown Kent, thus reducing unnecessary air pollution and congestion.

Policy TR-10.6: Support innovative transportation system management strategies such as High Occupancy Toll (HOT) lanes that help keep the regional traffic on the freeways rather than spilling over onto the City arterials.

Environmental Preservation

Goal TR-11. Ensure that transportation facilities are developed and maintained in a manner that is sensitive to the natural environment and support a transportation system that minimizes its impact on the environment.

Policy TR-11-1: Minimize levels of harmful pollutants generated by transportation-related construction, operations, and maintenance activities from entering surface and groundwater resources.

Policy TR-11.2: Improve management strategies to reduce contamination from street runoff and stormwater. Coordinate these efforts with other jurisdictions, as well as regional and state agencies.

Policy TR-11.3: Ensure that transportation-related improvement projects comply with state and federal guidelines for air and water quality.

Policy TR-11.4: Promote energy conservation and greenhouse gas reductions by implementing TDM goals and policies.





Chapter 5 | Street System

The street system provides the primary means for all modes of transportation throughout the Kent area. The City is served by an extensive street network that includes freeways, arterials, residential, and local streets. This chapter describes that network and how well it serves the City today and in the future.

Residents and businesses have identified traffic congestion as the # 1 issue for each of the past five annual surveys. This chapter examines the underlying reasons for this congestion and offers some recommendations to improve these conditions.

The analysis considers the different types of users of streets – commuters, freight and delivery trucks, public and school buses, seniors, students, children, moms and dads. Streets play different roles within the network. Some are used to access freeways for regional connections such as SR 167 or SR 18, while others provide access to neighborhoods.

This chapter describes the street system plan and the analysis, as follows:

- Examines the infrastructure of the street network, the role of each street in that network and the inter-relationship with adjacent State highways and regional arterials.
- Evaluates how well the existing street network operates and the traffic conditions forecast for the future street network.
- Identifies the preferred street network and the improvement projects for that network.

Chapter Contents

- ▶ Street System Infrastructure
 - Functional Classification
 - Freight
 - Safety
- ▶ How well does the Street Network Operate?
 - Traffic Volumes
 - Level of Service
- ▶ Future Traffic Conditions
 - Travel Forecasts
 - Street Network
 - Level of Service
 - Truck Routes
- ▶ Prioritization of Projects

We need to improve transportation choices for our residents. The streets of our City ought to be for everyone, whether young or old, motorist or bicyclist, walker or wheelchair user, bus rider or shopkeeper. Our streets need to be safe for everyone.

Task Force Member

Kent's Street System Includes

- ▶ Principal Arterials
- ▶ Minor Arterials
- ▶ Collector Arterials
- ▶ Local Access Streets

Street System Infrastructure

Streets represent the most visible and influential infrastructure in the City – their size, appearance and operational characteristics shape everything around them.

The street system in Kent is a network of roads that carry both regional and local traffic. Each street plays a role in that network, providing access to individual properties or supporting mobility for vehicles. But Kent's streets serve more than automobiles and trucks. The City's street network represents the principal infrastructure for all modes of travel---vehicle, public transit, walking or biking.

Good street networks are not developed solely in response to traffic demand. The street plan reflects careful consideration of the users and Kent's community character, urban design and quality of life. Kent's community vision calls for improving transportation (mode) choices and personal mobility. This will require that the streets function as well for public transit, pedestrians and bicycles as they do for personal motor vehicles and commercial trucks.

Existing Street System

The City's street network is the backbone of the transportation system. Street types range from local streets, which are designed to provide access to neighborhoods, to freeways that primarily serve through traffic. The street system is described in the following section, starting with the State highways, followed by City streets.

State Highways

State highways are those roads owned by the state and managed by the WSDOT. These highways include the regional freeway system together with major roads that connect communities. To serve through traffic at higher speeds and meet mobility and safety goals, access to these roadways is often restricted. The freeways are designed to accommodate high volumes of traffic moving at high speeds under free-flowing conditions. More than 12 miles of freeways within Kent, such as I- 5 and SR 167, connect Kent to the region and serve longer-distance travel from areas outside the City.

The State highways that are within or adjacent to Kent fall under two categories, depending on their role in the regional network: highways of statewide significance (HSS) or highways of regional significance (Non-HSS).

Highways of Statewide Significance (HSS)

The following HSS roads are located within or adjacent to the City of Kent:

- **Interstate 5:** As the principal north-south freeway in the region, I-5 contains eight general purpose lanes and two high occupant vehicle (HOV) lanes in the Kent area. The City of Kent is directly served by four interchanges, which are located at S 272nd Street, the Kent-Des Moines Road (SR 516), S 200th Street, and S 188th Street/Orillia Road.
- **State Route 167:** SR 167 contains four general purpose travel lanes and two HOV lanes in Kent. Interchanges are located at S 277th Street, Willis Street (SR-516), 84th Avenue S, S 212th Street, and S 180th Street.
- **State Route 18:** SR 18 is not inside the city limits, but is immediately adjacent to the eastern border of the City. SR 18 is a major freight corridor between I-5 and I-90 and serves as another gateway into the City.

Interchanges with the greatest impact to Kent are located at the Kent-Kangley Road/SE 256th Street and SE 232nd Street.

- **State Route 99:** SR 99 (aka Pacific Highway) runs north-south from S 272nd Street north to the Kent-Des Moines Road.

Highways of Regional Significance (Non-HSS)

The following Non-HSS are located within or adjacent to the City of Kent:

- **State Route 181:** SR 181 (aka Washington Avenue N, 68th Avenue S, and W Valley Highway) runs north-south along the valley floor from SR-516 to S 180th Street/SW 43rd Street;
- **State Route 516:** SR 516 (aka Kent-Des Moines Road, Willis Street, Central Avenue, Canyon Drive, SE 256th Street, and Kent-Kangley Road) runs east from Pacific Highway S east to the city limits, near 156th Avenue SE; and,
- **State Route 515:** SR 515 (aka Benson Highway, 104th Avenue SE, and 108th Avenue SE) runs north-south from SE 256th Street to the north city limits, near SE 226th Street.

City Streets

Each street in Kent is but one element in the street network. The network operates as a system, handling a wide variety of modal users. Thus, it is important to define the role that any particular road or street should play in serving the flow of traffic through the skeletal street network, and making sure that there are enough of the right kinds of streets in the right places.

The City considers each street and intersection in terms of its role in the overall street network. Streets serve many functions, as follows:

- Connect Kent to other parts of the Puget Sound Region;
- Connect local districts and neighborhoods within Kent; or
- Provide internal circulation within local districts and neighborhoods.

Each street type reflects the function of the street relative to the rest of the network. Street Functional Classifications are established to balance and recognize differing needs of vehicles and non-motorized travelers

Arterials generally support higher traffic volumes, much of which is generated outside of the immediate area – or what is termed ‘through traffic’. Arterials support the travel of cars and trucks and other modes, including public transit, cycling and walking. Conversely, local and collector streets carry substantially lower volumes of traffic and support more localized forms of transportation, including walking, cycling and neighborhood transit services. Local streets are the most abundant streets by mileage, but carry the least amount of traffic over the smallest trip distances. Local streets also serve as the way for pedestrians and cyclists to move around Kent’s neighborhood.

The functional classification of each roadway determines its roadway design and ultimate cross section. Classification is important to the City because it helps ensure that the needed capacity will be available and that street improvements will be consistent with the assigned function. In addition, from a planning perspective, acknowledgment and proper designation of functional classifications preserves the right of way for future transportation corridors, whether for cars, transit users, cyclists or pedestrians.

Functional classification also defines the character of service that a road is intended to provide. Specific standards for streets and roadways are shown in **Table 5-1** and are detailed in *City of Kent's Construction Standards -Section 6. Standards for Streets and Roadways*. The current street classification assigned to City streets is shown in **Figure 5-1**.

Table 5-1. Street Design Criteria

	Design Capacity (vehicles/day)	Design Speed (mph)	Typical Curb-to-Curb Width (ft)*	Typical Number of Lanes
Principal Arterial	50,000	50	80	6 lanes /1 turn lane
Minor Arterial	30,000	45	58	4 lanes/1 turn lane
Collector Arterials				
Industrial	15,000	35	44	2 lanes/1 turn lane
Residential	5,000	35	36	2 lanes/1 turn lane or 2-way left turn lane
Residential Collectors	3,500	30	36	2 lanes/2 parking lanes

* All classified streets in the City also provide for sidewalks. Bicycle facilities are designated according to the Bicycle System Plan.
Source: City of Kent

Table 5-2 stratifies the City's street mileage by classification. There are more miles of local streets than any other category, as local streets are present in all neighborhoods and represent two-thirds of the street mileage. Principal arterials represent only 7 percent of the roadway miles, but carry most of the daily traffic volumes. The current street classification ratios fall close to Federal Highway Administration (FHWA) guidelines.

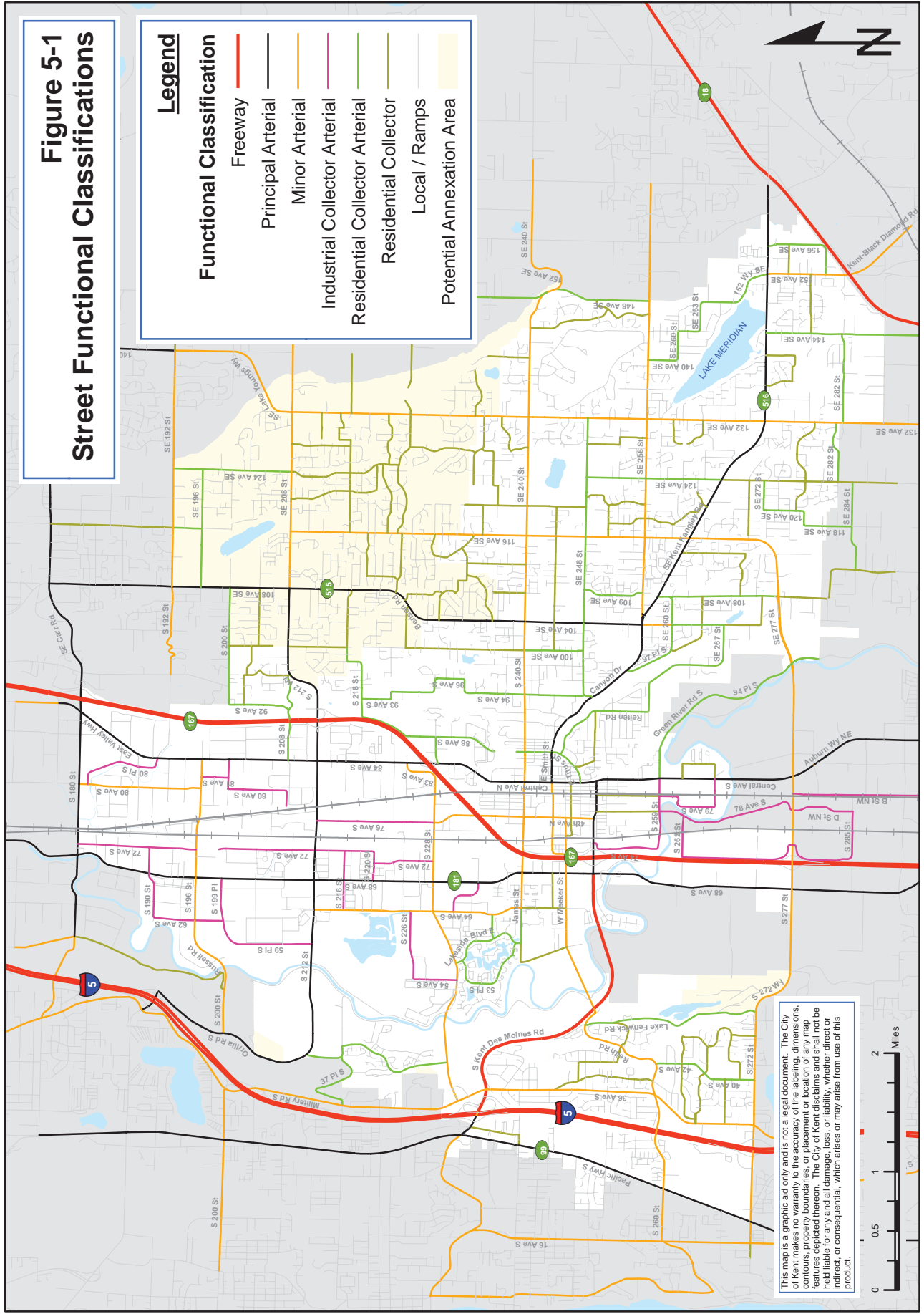
Table 5-2. Existing Street Functional Classification Breakdown

	City of Kent		Potential Annexation Area		FHWA Recommendation
	Centerline Miles of Roadway	Percentage of Road Network	Centerline Miles of Roadway	Percentage of Road Network	Mileage Percentage of Total
Principal Arterial	26	7%	4	5%	5%-10%
Minor Arterial	33	9%	6	8%	10%-15%
Collector Arterial					5%-10%
Industrial	13	4%	0	0%	
Residential	28	7%	3	4%	
Residential Collectors	28	7%	13	15%	
Local Access Streets/ Unclassified	246	66%	57	68%	65%-80%
Total (excludes freeways)	374	100%	83	100%	

Note: Approximately 12 centerline miles of freeways are also located within the City limits of Kent.
Source: City of Kent

Figure 5-1 Street Functional Classifications

- Legend**
- Functional Classification**
- Freeway
 - Principal Arterial
 - Minor Arterial
 - Industrial Collector Arterial
 - Residential Collector Arterial
 - Residential Collector
 - Local / Ramps
 - Potential Annexation Area



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Principal Arterial

Principal Arterial

Principal arterials are designed to provide relatively unimpeded traffic flow between major activity centers within the City, and provide access to the State highway system. Generally they are four travel lanes, some with a center turn lane. Access from adjacent private property to the arterials is limited or controlled. Turn restrictions, median channelization, elimination of on-street parking, or prohibition of direct driveway access are used to control access. Sidewalks are provided to allow safe pedestrian movements.

Intersections generally cross at minor arterial streets, or with grade separated interchanges to State/Interstate highways. Principal arterials in the City include: *Orillia Road S, W Valley Highway (68th Avenue S), E Valley Highway (Central Avenue N, Central Avenue S, 84th Avenue S), S 212th Way, SR 515 (Benson Road), S 180th Street, SE 256th Street, SE Kent-Kangley Road (E Willis Street, W Willis Street, E Canyon Drive, Canyon Drive).*



Minor Arterial

Minor Arterial

Minor arterials provide connections to and from principal arterials and State highways, and access to major land-use activity centers. The traffic-carrying capacity of these streets is accomplished by means of the same types of access restrictions and design criteria as the principal arterial roadways; but balance increased levels of direct property access, with lower geometric design and capacity requirements. Sidewalks and bicycle facilities are common features. Access to the minor arterial system will generally be from collector arterial roadways at signalized at-grade intersections. Minor arterials include: *Military Road S, Reith Road, 4th Avenue N, 83rd Avenue S, SE 192nd Street, E James Street (SE 240th Street), S 259th Place, S 277th Street (SE 274th Way).*

Collector Arterial

Collector arterials connect to and from higher classified streets in an orderly and well planned manner, and as a secondary function, provide access to land use activity centers. These streets provide high levels of traffic carrying capacity; but serve as the “bridge” from high capacity roadways to local access roadways and abutting land uses. Sidewalks and bicycle facilities are common features.

There are three sub-categories of the collector arterial classification – based upon the type of the adjacent land use. These sub-categories and their functions are:

Industrial Collector Arterial: These streets provide traffic distribution and collection from abutting industrial and commercial land uses to higher classified roadways. Access to Industrial collector arterials is typically not restricted, although access and on-street parking may be limited for safety reasons and/or proximity to a major signalized intersection. These roadways include specifications that allow truck traffic to safely traverse these roads.

Industrial collector arterials include: *72nd Avenue S, 74th Avenue S, 76th Avenue S, 79th Avenue S, 80th Place S, 81st Avenue S, S 199th Place, S 207th Court.*

Residential Collector Arterial: These streets provide traffic distribution and collection from the local street system to higher classified arterials. Driveway access and on-street parking will typically be prohibited. Residential collector arterials include: *Riverview Boulevard S, Cambridge Drive, Lake Fenwick Road, Lakeside Boulevard W, Lakeside Boulevard E, Jason Avenue N, Green River Road, Reiten Road, 152nd Way SE, 156th Avenue SE, SE 196th Street, SE 248th Street, S 267th Street, SE 282nd Street.*



Residential Collector Arterial

Residential Collector: These streets provide traffic distribution and collection at a neighborhood level – from the local street system to the arterial classified roadways. The design of these roadways balances the traffic carrying capacity with property access and discourages the utilization of these roadways by non-locally generated (“cut-through”) traffic. Driveway access and on-street parking typically is prohibited. The design of collectors emphasizes accommodating pedestrian and non-motorized traffic in the design of these roadways. Residential collectors include: *96th Way S, Maple Lane S, Carnaby Street (Carnaby Way, Carnaby Way S), Downing Avenue S, S 203rd Street, SE 214th Way, SE 221st Street, SE 223rd Drive, SE 223rd Street, W Goww Street, S Alder Lane, S 264th Street, S 268th Street, SE 276th Way.*

Local Access Streets (unclassified)

Other roadways in the City provide direct access to abutting land uses (businesses, parks et al) from residential collector streets, safely and efficiently. The design parameters of these roadways minimize vehicle operating speeds and non-locally generated (cut-through) traffic. Typically, on-street parking is allowed except at those locations necessary for public safety, a high emphasis is placed on safely accommodating pedestrian and non-motorized traffic in the design of these roadways. Unclassified/ local access streets include: *1st Avenue N, E McMillan S, E Novak Lane, S Hampton Court, S Stratford Court.*

Traffic Signals and Signs

Another critical piece of the street infrastructure is the traffic signals and signs that control traffic, including railroad crossings. Traffic signals, signs, and pavement markings are used to direct drivers, pedestrians, and bicyclists, thereby increasing the effective use of the roadway by moving traffic more efficiently and safely. The City uses the Manual of Uniform Traffic Control Devices (MUTCD) except as modified by the guidance and practices of WSDOT, or by City standards as guidance for design, construction, and placement of signs in the right of way.

Freight – Truck and Rail

The confluence of important geographical elements makes Kent an important freight distribution center in the Puget Sound area. As was noted in Chapter 2 (Trends and Conditions), the efficient movement of freight, through and within the City is critical to Kent’s economic health. Both rail and truck freight, originating largely in the Ports of Tacoma and Seattle, pass through Kent regularly. Trucking is a frequently used, versatile, and often the most efficient means of movement. Whether as a beginning or interim step in distribution, or as a final delivery to a retail outlet or end user, trucks will continue to be the way most goods and products are moved in Kent and the region.

Trucks are subject to most of the same traffic constraints as other vehicles. With vehicle miles of travel increasing and congestion worsening during the peak travel hours, travel times have increased encouraging truckers to look for alternate routes to their destinations.

The City tries to balance the needs of trucks to travel to and from intermodal facilities, industrial parks and other destinations with the needs of residents for quiet livable streets. Truck routes, weight load limits, better access to the regional network and improving general congestion are all ways to improve travel times for freight vehicles.



Railroad Crossings

When roads and rails intersect, trains have the priority. Kent is severely impacted by at-grade railroad crossings on many east-west arterials. In the downtown center, James Street, Smith Street, Meeker Street, Gowe Street, Titus Street, and SR-516 (Willis Street) cross the tracks at-grade and create significant conflicts between the railroad and the movement of people, either in vehicles or on foot, as well as the movement of freight via trucks. These conflicts are anticipated to increase in the future as both systems forecast significant growth.



The Burlington Northern Santa Fe Railway (BNSF) and the Union Pacific Railroad (UPRR) run parallel rail lines in the north-south direction through Kent. The City has nine streets that cross railroads at-grade with approximately 65 trains passing through the City each day. These junctions cause delay and create potentially hazardous situations for motorists and non-motorized travelers. The City regularly works with the railroads to take appropriate measures of safety, such as installing signal interties and constructing grade separations. The 2007-2012 Transportation Improvement Plan (TIP) includes constructing grade separations at both BNSF and UPRR railroad crossing at S 212th Street, S 228th Street and Willis Street (SR 516).

Safety

The City places a high priority on providing a safe transportation system for travelers of all modes and promotes road safety for the ongoing management of the street network and emergency services. Continual efforts are made to construct and retrofit streets in a manner that improves safety and decreases the likelihood of collisions and makes the street safer for pedestrians, transit, and bicyclists. Constructing streets for ease of use by pedestrians can increase overall safety by altering the behavior of drivers who anticipate pedestrian activity. Pedestrian crossings and other non-motorized safety issues are discussed in another chapter. Safety issues related to emergency response, collisions and railroad crossings follow.



Emergency Response (EMS)

Providing residents with quick responses in emergency situations is a high priority for the City. An adequate street network helps to ensure that multiple alternate routes are available for emergency vehicles. Fire response vehicles are equipped with devices that control traffic signals enabling emergency vehicles to secure safe and rapid passage through signalized corridors. In addition, the City has mutual-aid agreements with nearby emergency response operators to ensure adequate coverage in case of road closures or other obstacles that would otherwise prevent timely emergency response.

Collisions

The City collects and monitors collision data to identify roadway hazards, and seeks to correct hazardous locations by implementing appropriate safety measures. Many of these collisions occur at or near intersections. **Figure 5-2** shows the intersections where the highest number of collisions occurred (9 or more) between January 1, 2002 and December 31, 2004. Collision rates weight the number of collisions by the number of vehicles that enter the intersection in units of collisions per million entering vehicles. The intersection with highest number of collisions was 104th Avenue SE (SR 515) at SE 256th Street (SR 516). During the given time period, there were 71 collisions with a collision rate of 1.29. The majority of the collisions were rear ends, common under congested conditions. Other intersections with a large number of collisions are located in the downtown area and along State highways.

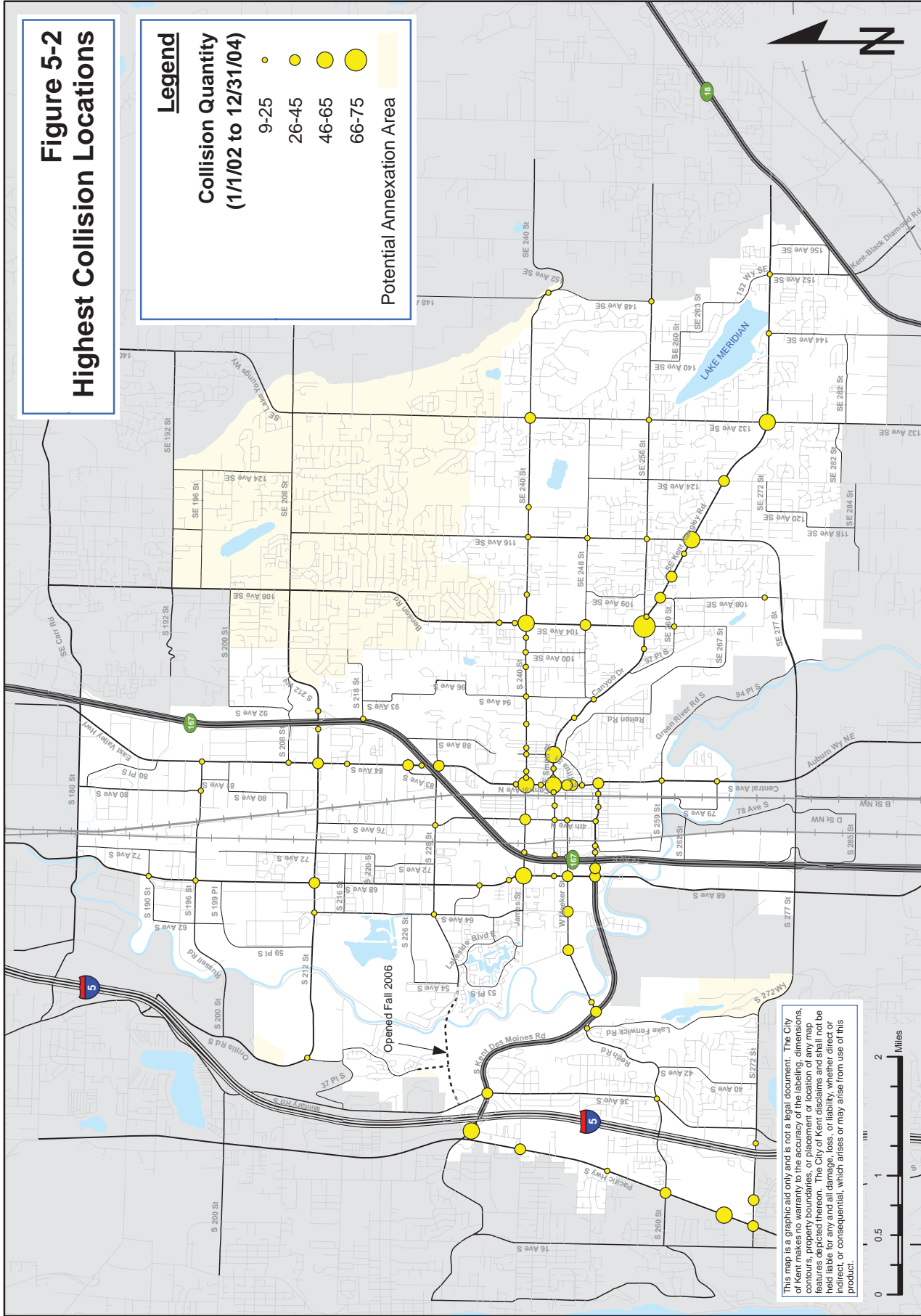
**Figure 5-2
Highest Collision Locations**

Legend

**Collision Quantity
(11/1/02 to 12/31/04)**

- 9-25
- 26-45
- 46-65
- 66-75

Potential Annexation Area



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How well Does the Street Network Operate?

During the development of this plan, the TMP Citizens Task Force, the public, various stakeholders, and the City of Kent staff identified several transportation issues in the City of Kent. Congestion was the number one issue identified by the community.

Both residents and businesses use the road network every day to go to work or school and carry on with their lives. The City must balance the needs of vehicles with the needs of pedestrians and cyclists. When traffic flows smoothly, trips can be predictable and efficient. However, when the roads are congested traveling becomes more difficult, delays increase, and frustration rises. Congestion is the term generally used to describe the traffic conditions in a corridor. An uncongested corridor would have high speeds and short delays at intersections, while a congested corridor would have low speeds and long delays.

There are three key questions to consider when evaluating the street system:

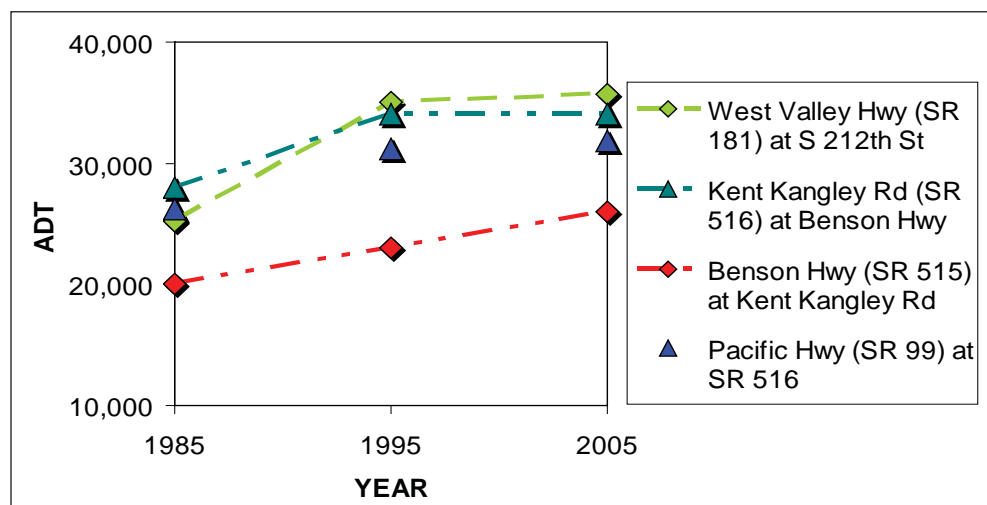
- How well does the existing street system work?
- How well will it work in 2030, when population and employment have both increased?
- What improvements can we make that will help the network operate better in 2030?

To answer these questions, the performance of the street network was evaluated for two situations: the existing system in 2006 and the future system in 2030. To measure the performance of the existing street system, the City reviewed existing traffic volumes and the amount of resulting congestion. To assess how the street network will work in the future, the City developed a model for the street system in 2030. Models are a tool used to forecast travel demand for local, regional and countywide trips. The regional planning organization, the PSRC, has developed a regional model for the Puget Sound Region. How that model was customized for the City of Kent, is explained in the Future Traffic Conditions section later in this chapter.

Existing Traffic Conditions

Traffic conditions are measured by reviewing the traffic volumes and the congestion, measured as the delay (the waiting time) at intersections. Measuring changes in traffic volumes helps identify capacity needs. Two measurements are needed for the analysis: average daily traffic totals (ADT) and the PM peak hour traffic volumes.

Figure 5-3. Traffic Growth on Key Arterials



Traffic volume counts were obtained from the City of Kent and WSDOT. The counts provided intersection turning volumes for the PM peak period and hourly traffic flows along major routes throughout the day.

Traffic Volumes

Growth both within the City and the region have caused traffic volumes on city streets to increase during the past 20 years. **Figure 5-3** shows the historical growth of traffic on several key streets. The average daily traffic grew steadily in the 1980s and 1990s, but leveled off during the 2000s. However, peak hour volumes have continued to grow. A major contributor to the high traffic volumes on the arterials is traffic passing through Kent. This pass-through traffic originating in surrounding jurisdictions uses the City's arterial streets to access the regional highways, such as I-5, SR 18 and SR 167. The City continues to work with WSDOT to improve the State highway system, in order to shift traffic away from the City street network.

Average Weekday Volumes

Figure 5-4 shows the average weekday traffic volumes for 2006. The heaviest volumes are on the principal arterials and State highways. The volumes on principal arterials ranged from 17,000 to 39,000 vehicles a day. The highest average daily traffic (ADT) volumes were found on the following principal arterials:

- S 180th Street (19,900 - 38,600 ADT)
- S 208th Street (34,500 ADT)
- S 212th Street (34,500 ADT)
- Canyon Drive (32,200 ADT)

Minor arterials showed daily volumes ranging from 6,800 to 32,700 ADT. The minor arterials with the highest average daily traffic were:

- SE 256th Street (32,700 ADT)
- E Smith Street (32,200 ADT)
- S 240th Street (James Street) (28,700 ADT)

The industrial collectors typically have daily volumes in the 4,900 to 13,400 to ADT range.

PM Peak Hour Volumes

The City uses traffic volumes during the PM peak hour (typically 4:30 to 5:30 pm) to determine how well the street network works, at those times when it serves the greatest number of vehicles. The PM peak hour represents the highest volume that typically occurs on a city street during the week. The peak hour can vary from location-to-location, with peaks occurring earlier around school zones, and later along commuter routes. Traffic volumes were analyzed at 71 intersections around the city. The PM peak hour volumes range from approximately 8 to 10 percent of the daily volumes shown in Figure 5-4.



**Figure 5-4
Existing Daily Traffic Volumes**

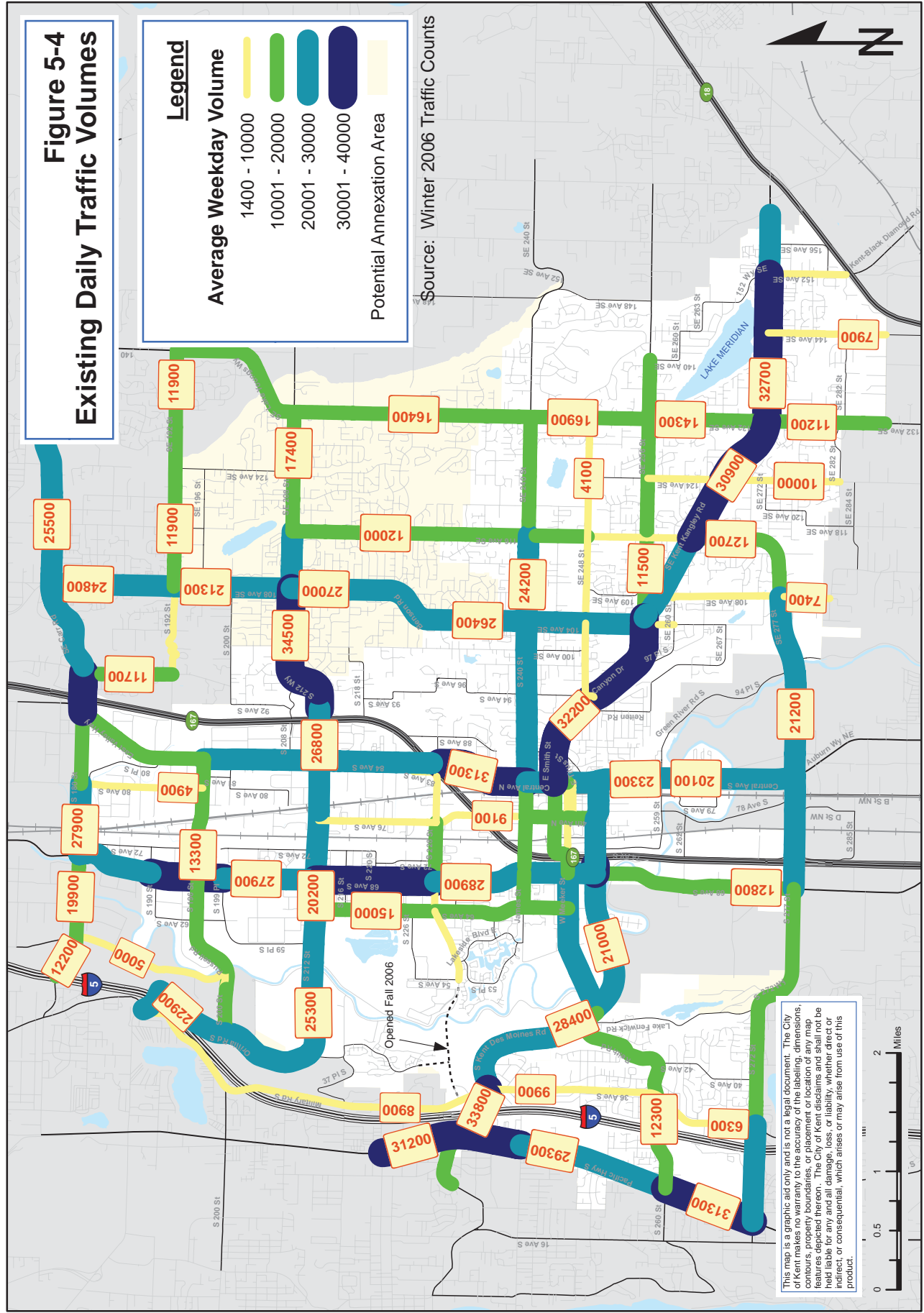
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Average Weekday Volume

- 1400 - 10000
- 10001 - 20000
- 20001 - 30000
- 30001 - 40000

Potential Annexation Area

Source: Winter 2006 Traffic Counts



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Level of Service – A Measure of Performance

Transportation planners and engineers use the term “level of service” (LOS) to measure the operational performance of a transportation facility (also known as a street or intersection). This measure considers the perception by motorists and passengers in terms of speed, travel time, freedom to maneuver, traffic interruptions and delays, comfort and convenience. Levels of service are given letter designations, from A to F, with LOS A representing the best operating conditions (free flow, little delay) and LOS F the worst (congestion, long delays). Generally, LOS A and B are good, LOS C and D are moderate, and LOS E and F represent congested conditions.

The City of Kent used roadway corridors to evaluate the level of service. The methodology calculates the LOS operation for key corridor intersections (in seconds of delay) and then develops a corridor-wide average based upon a weighting of the corridor intersection volumes. This method provides a “corridor-wide” result, allowing some intersections to operate at a congested LOS as long as the overall corridor operation is maintained.

For intersections with a signal, the LOS is calculated as the average delay of all the approaches to the intersection and is weighted by the total PM peak hour volume entering the intersection. For unsignalized intersections, the worst individual movement or approach determines the delay for the intersection and is weighted by the volume of the same movement or approach. **Table 5-3** defines the LOS operation based on the seconds of delay for signalized and unsignalized intersections.

Table 5-3. Level of Service Definitions

LOS	Signalized Delay per Vehicle (sec/veh)	Unsignalized Delay per Vehicle (sec/veh)
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Source: Highway Capacity Manual (HCM 2000, Transportation Research Board)



Level of Service Corridors

For the LOS analysis, the City chose 16 corridors including the downtown street system, which was represented as a zone. The corridors represent the primary north-south and east-west travel routes within the City. Non-Kent corridors, such as I-5 and SR167 were not included in the evaluation. Downtown Kent is treated as a zone rather than a corridor, since traffic flows along multiple streets within the downtown grid. The corridors and their limits are listed in **Table 5-4** and illustrated in **Figure 5-5**.

Table 5-4. Corridors for LOS Analysis

ID	Corridor/Area	From	To
1	S 196th St/SE 192nd St Corridor	W Valley Highway	SR 515 (Benson)
2	S 212th St/S 208th St	42nd Ave S	132nd Ave SE
3	S 224th St/S 228th St	SR 516/Military Road	S 228th St/ 84th Ave S
4	James St/SE 240th St	64th Ave S	132nd Ave SE
5	S 260th St/ Reith Road/ W Meeker St	SR 99	Washington Ave
6	Smith St/ Canyon Drive/ 256th St / Kent-Kangley Road	Jason Ave	152nd Way SE
7	S 256th St	SR 515	132nd Ave SE
8	S 272nd St	SR 99	Military Road
9	Pacific Highway S	S 240th St	S 272nd St
10	Military Road	231st St	S 272nd St
11	64th Ave S	S 212th St	Meeker St
12	Washington Ave/ 68th Ave S/ W Valley Hwy	S 196th St	Meeker St
13	Central Ave/ 84th Ave S	S 196th St	James St
14	SR 515/Benson Ave	SE 192nd St	SE 256th St
15	116th Ave SE	SE 208th St	Kent-Kangley Road
16	132nd Ave SE	SE 208th St	Kent-Kangley Road
17	Downtown Area	4th Ave N to E Titus St	James St to W Willis St

Level of Service Standard

The City has set the level of service (LOS) standard to require that most corridors operate at LOS E or better during the PM peak hour.¹ Corridors that operate below this adopted standard are considered deficient.

Two locations are allowed to operate at LOS F: Pacific Highway south (SR 99) and downtown Kent. Pacific Highway has an LOS F standard since it is largely outside of the City's control and is designated as a Highway of Statewide Significance (HSS). The City recently improved SR 99 and any further widening is unlikely. The operation of SR 99 is highly dependent upon travel conditions along I-5 and the effects of the SR 509 project under design by the WSDOT. Note that WSDOT has set an LOS D standard for SR 99. The City will work with WSDOT to determine whether this is a realistic standard for the SR 99 corridor.

Downtown Kent is also designated with an LOS F standard. The City considers the downtown street system to be largely complete and few street capacity increases are available. The City also recognizes that traffic conditions in downtown Kent are heavily influenced by conditions on the State highways, SR 167 and SR 18. City policies encourage non-auto modes such as transit, pedestrian, and bicycle for travel within downtown Kent.

The GMA, Land Use and LOS

The GMA requires the City to adopt LOS standards to determine when growth has consumed the available capacity in the transportation system. The GMA requires that land use and transportation planning be coordinated so that transportation capacity is evaluated concurrent with development.

¹ The City's PM peak hour typically occurs between 4:30 and 5:30 pm.

Figure 5-5 Corridors for LOS Analysis

Legend

Study Intersections



Downtown



Study Corridors

1 2 3 4 5 6 7 8

9 10 11 12 13 14 15 16

Potential Annexation Area

Refer to Table 5-4
for corridor descriptions

0 0.5 1 2 Miles

SE 192 St

SE 196 St

SE 200 St

SE 204 St

SE 208 St

SE 212 St

SE 216 St

SE 220 St

SE 224 St

SE 228 St

SE 232 St

SE 236 St

SE 240 St

SE 244 St

SE 248 St

SE 252 St

SE 256 St

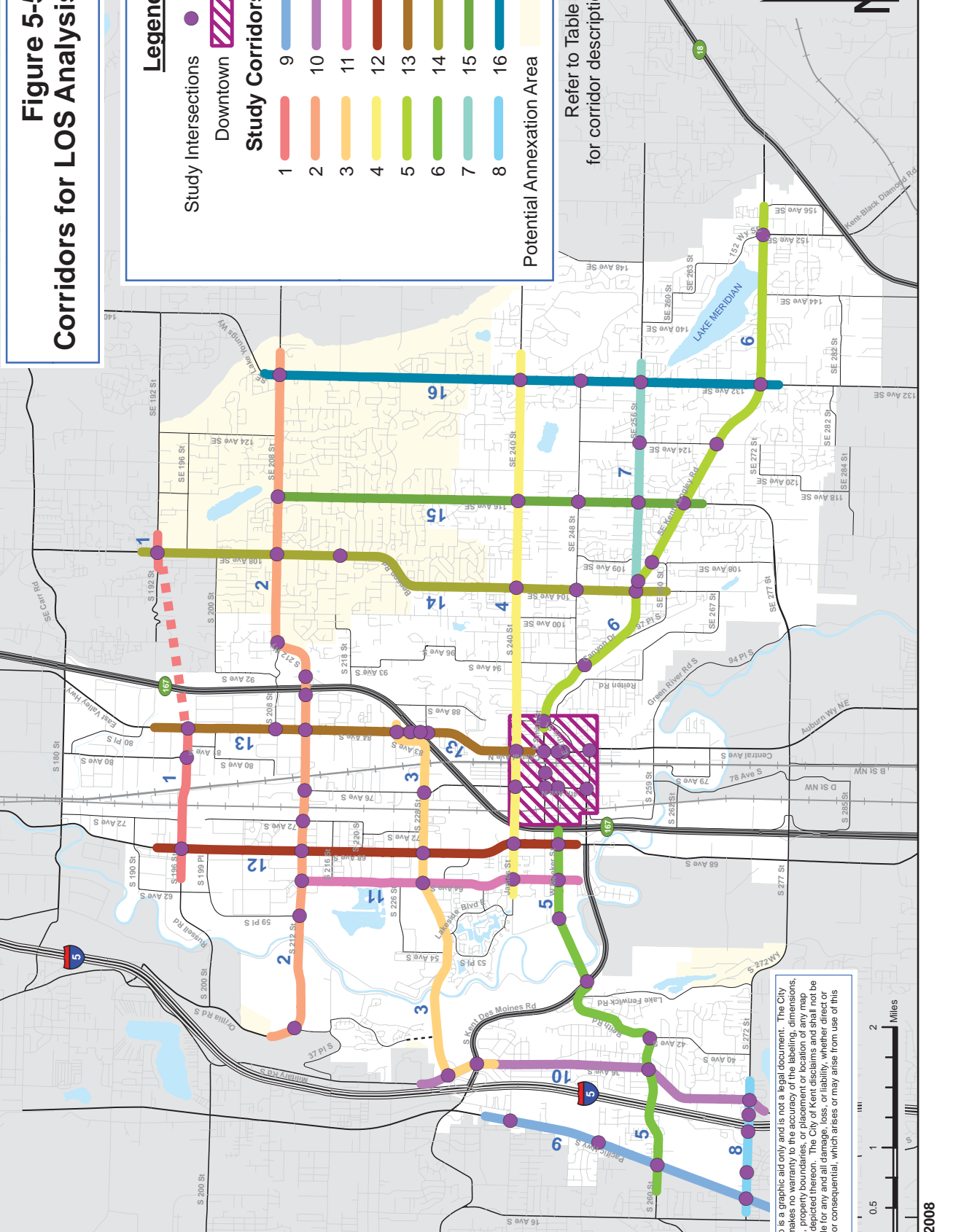
SE 260 St

SE 264 St

SE 268 St

SE 272 St

SE 276 St



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LOS for Existing Conditions

For the analysis of the City's roadway system during the PM peak hour Synchro 6.14 software was used to calculate the intersection level of service. This software considers the traffic volumes, signal timing and phasing, presence of pedestrians and transit and topographic features to estimate the LOS operation of the intersections. The evening commute traffic conditions were analyzed at each corridor intersection to calculate the existing PM peak hour LOS conditions. The weighted average LOS for each corridor in the analysis was calculated using the LOS results of each intersection.

Figure 5-6 shows the 2006 LOS in Kent. Table 5-5 identifies Kent's LOS standards, as well as the 2006 corridor LOS. Within the City, corridor signals generally operate between LOS C and LOS E, with most corridors impacted by at least one LOS E or LOS F signal. One corridor, S 272nd Street, currently operates at LOS F during the PM peak hour. Pacific Highway S, Military Road, the Benson Highway, SE 256th Street, Kent-Kangley Road and the roads in the Downtown Zone all operate at LOS E for the PM peak hour existing conditions.

Table 5-5. Existing Corridor LOS

ID	Corridor/Area	From	To	LOS Standard	LOS 2006
1	S 196th St/SE 192nd St Corridor	W Valley Highway	SR 515 (Benson)	E	D
2	S 212th St/S 208th St	42nd Ave S	132nd Ave SE	E	C
3	S 224th St/S 228th St	SR 516/Military Road	S 228th St/ 84th Ave S	E	D
4	James St/SE 240th St	64th Ave S	132nd Ave SE	E	D
5	S 260th St/ Reith Road/ W Meeker St	SR 99	Washington Ave	E	D
6	Smith St/ Canyon Drive/ 256th St / Kent-Kangley Road	Jason Ave	152nd Way SE	E	E
7	S 256th St	SR 515	132nd Ave SE	E	E
8	S 272nd St	SR 99	Military Road	E	F
9	Pacific Highway S	S 240th St	S 272nd St	F*	E
10	Military Road	231st St	S 272nd St	E	E
11	64th Ave S	S 212th St	Meeker St	E	C
12	Washington Ave/ 68th Ave S/ W Valley Hwy	S 196th St	Meeker St	E	D
13	Central Ave/ 84th Ave S	S 196th St	James St	E	D
14	SR 515/Benson Ave	SE 192nd St	SE 256th St	E	E
15	116th Ave SE	SE 208th St	Kent-Kangley Road	E	D
16	132nd Ave SE	SE 208th St	Kent-Kangley Road	E	D
17	Downtown Area	4th Ave N to E Titus St	James St to W Willis St	F	E

* The WSDOT LOS Standard = LOS D

State and Regional Facility Level of Service

The GMA also requires that cities take a look at the performance of the State-owned highways near them. The City of Kent is surrounded by state highways and freeways that are used by residents to get from here to there in the region. Both the State and the regional planning organization, the PSRC, have set LOS standards for the roadways they manage.

Figure 5-6 Existing Corridor LOS

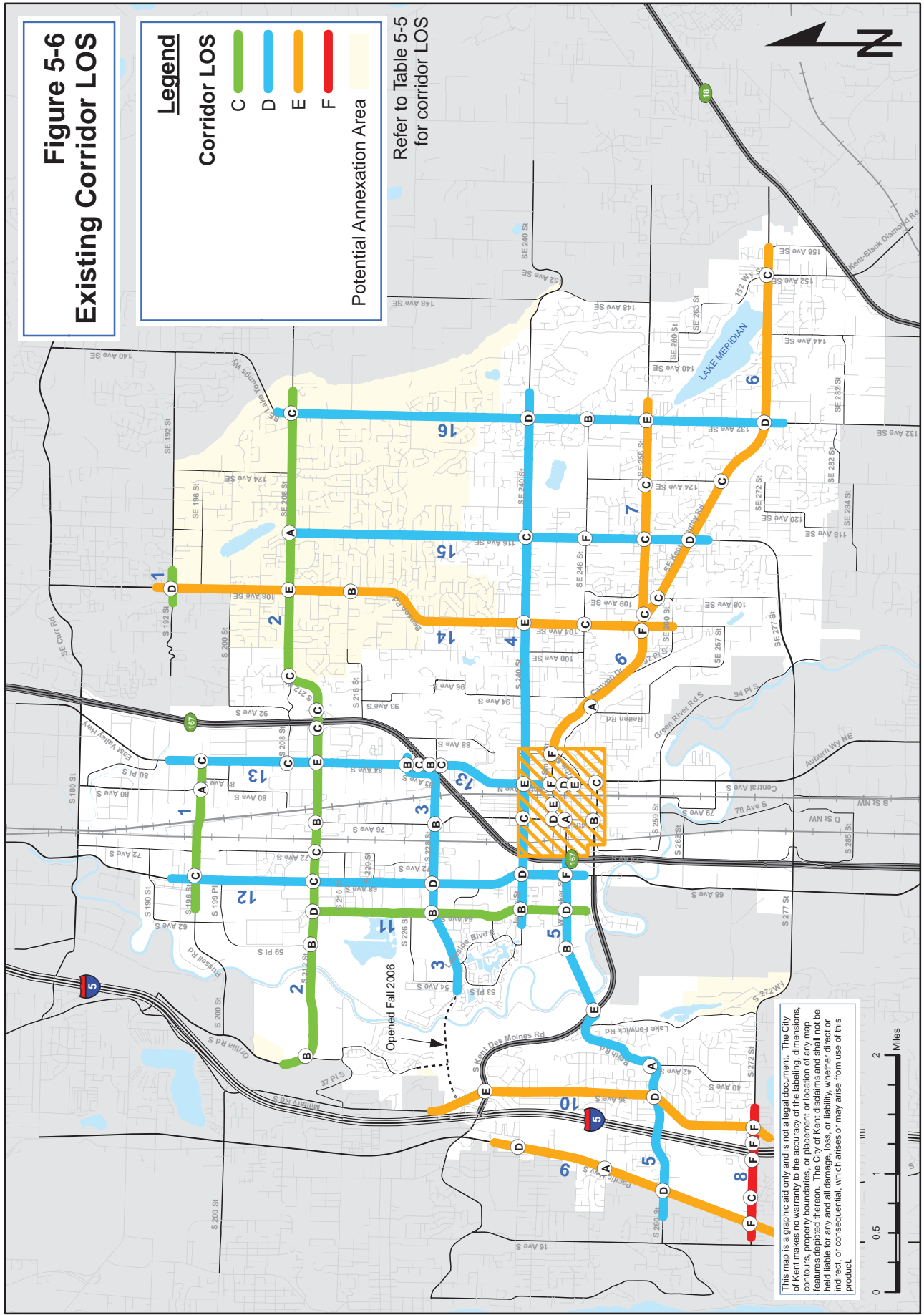
Legend

Corridor LOS

- C █
- D █
- E █
- F █

Potential Annexation Area

Refer to Table 5-5
for corridor LOS



Washington State Department of Transportation Standards for HSS

WSDOT sets the LOS standards for facilities listed as Highways of Statewide Significance (HSS). WSDOT has used a congestion index to report the severity of traffic congestion over a 24-hour period. Index values range from 1 (little to no congestion) to 24 (theoretically congestion over the entire 24 hours in a day). The methodology computes the congestion index by dividing average annual daily traffic (AADT) by the roadway's two-way, hourly capacity (C). This AADT/C ratio has been organized into a number of thresholds that relate to conventional LOS measurements for peak hour traffic periods. WSDOT has set LOS D (an index = 10) as the standard for urban areas and LOS C (index = 6) for rural areas.

There are three HSS facilities that travel through the Kent's city limits: SR 99, I-5 and SR167. All of these facilities are defined as being within an urban area. The existing 2005 congestion index was calculated using 2005 traffic volumes from WSDOT *Annual Traffic Report* and the estimated capacity of the traffic lanes based on the *Highway Capacity Manual*. **Table 5-6** shows the LOS operation following WSDOT's congestion index methodology based on the 2005 traffic data. For 2005, two of the three corridors exceed the congestion index/LOS D standard.

Table 5-6. Existing LOS for Kent Area Highways of Statewide Significance

Facility Name	Average Annual Daily Traffic	Lanes	Assumed Capacity pc/h/ln	Hourly Capacity	Congestion Index	Meets Standard
SR 99 south of SR 516	29,000	4	1,400	5,600	5.2	Yes
I-5 north of SR 516	204,000	8	2,250	18,000	11.3	No
SR 167 at SR 515	119,000	4+ HOV	2,250	11,250	10.6	No

Source: 2005 Traffic Data (WSDOT)

Puget Sound Regional Council Standards for Non-HSS

The Puget Sound Regional Council (PSRC) in its long range planning document, *Destination 2030*, adopted LOS standards for Highways of Regional Significance (non-HSS) facilities. A three tier system defines the LOS standards, which varies depending on the location of the facility. All standards are based on the PM peak hour.

Tier 1 facilities are located in highly developed urban areas and have a "LOS E/mitigated" standard. The E/mitigated standard allows Tier 1 projects to operate at below LOS E, but they must provide mitigation that may address congestion such as transit facilities, HOV lanes, pedestrian and bicycle facilities and other travel options. Tier 2 facilities are those in "outer urban areas". Tier 3 facilities are considered rural. Within Kent, SR 516, the W Valley Highway (SR 181) and Benson Road (SR 515) are classified as Tier 1 non-HSS facilities by PSRC and have a LOS E/mitigated standard. There are no facilities within Kent classified as Tier 2 or Tier 3.



Future Traffic Conditions

Since the Transportation Master Plan will be used by the City for transportation planning for the next 20 years, the City needs to assess the traffic conditions the City will have in 2030 and identify projects that will improve these conditions. Over the next two decades, population and employment are expected to continue to grow, not only in Kent, but in adjacent cities and throughout the Puget Sound region (For more details see Chapter 3).

The population and employment growth forecasts are used to estimate future traffic levels expected on City streets. In turn, future traffic levels are used to calculate future traffic operations. A description of the traffic forecast methodology used to develop Kent's travel model follows.

Travel Forecast Methodology

The model includes a Baseline 2030 street network and its traffic operations (the conditions expected if no additional improvements are made) and a 2030 Preferred street network and its traffic conditions that include street improvements.

The travel model uses geographic areas for the estimates and analysis. For Kent, the travel forecasting model study area consists of 310 transportation analysis zones (TAZs) as the basic geographic unit for estimating travel demand. The TAZs were laid out using digital information, including 2000 Census TIGER files and aerial photos. Approximately one-third of the TAZs are located within the City of Kent, with the remaining TAZs representing potential annexation areas and surrounding jurisdictions. The model includes travel data for the entire Puget Sound Region in order to accurately analyze the impact of regional traffic on the City.

For the model, the City also updated roadway and intersection characteristics. Initially, the model's trip purposes, trip generation rates and trip distribution parameters were based on those of the Puget Sound Regional Council (PSRC) surveys and parameters used in other travel models in the region. These were adjusted as part of the validation process. The final model validation procedure calibrated the 2006 base year model to the PM peak hour traffic counts, which had been collected as part of the transportation planning effort.

The 2030 transportation network assumed two alternative levels of development, a baseline and a preferred network, to allow a comparison of future transportation system performance. To predict the future traffic conditions the existing land uses were replaced with the proposed future land uses and the resulting traffic levels were analyzed on the assumed future street network. The City supplied the 2030 land use estimates and identified the expected growth in households and the employment for each TAZ. To capture the impacts of traffic growth from areas outside the Kent Urban Growth Area (UGA), the model used the PSRC household and employment forecasts.

The Kent travel model was run with these land use and transportation inputs to generate estimates of 2030 travel demand on the future transportation network.

Population and Employment Growth

During the last 15 years, Kent's population has more than doubled from both household growth and the expansion of the City limits. Over the next 20 years, the model forecasts that population within the City and surrounding Urban Growth Area (UGA) is expected to increase by another 16 percent, to more than 141,000 residents. Employment is forecast to increase by around 42 percent between 2006 and 2030.

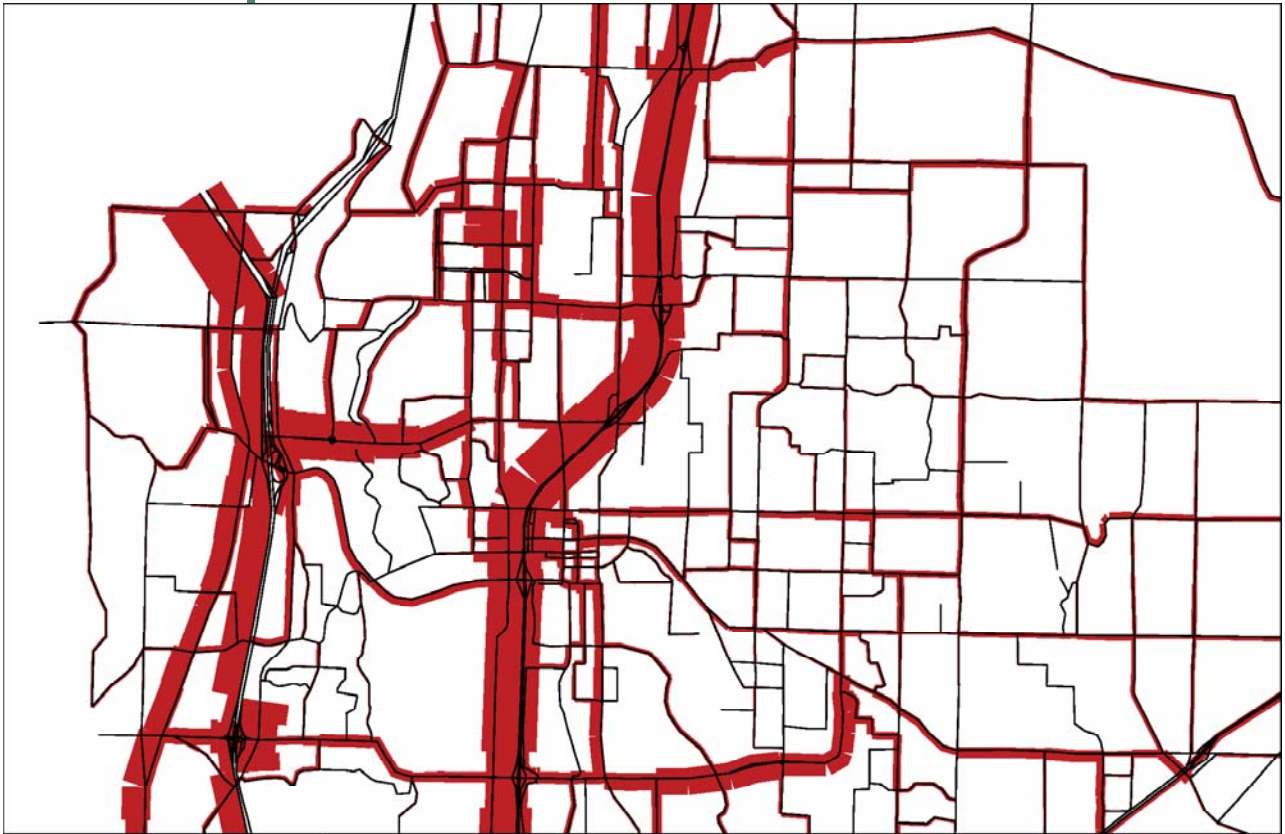
To predict future traffic conditions, two alternative levels of development were assumed in 2030 - a Baseline and a Preferred.



Traffic Volume Growth

Kent's location in the middle of a large and rapidly growing urbanized region creates two sources of growth: increasing size and density of the City itself, and ongoing regional growth and development. The travel demand model uses future land use forecasts within the study area combined with regional travel along State highways to estimate future traffic growth. The existing 2006 and 2030 traffic models were compared. **Figure 5-7** depicts the relative magnitude of growth for traffic throughout the Kent study area. Much of this growth is expected to occur on State and regional highways and the major arterial routes within the City. The widening of SR 167 will expand capacity and travel. Other major facilities will have more modest growth due to constrained conditions, as shown in **Table 5-7**.

Figure 5-7. Future Traffic Growth in Kent



Source: Mirai City of Kent Model.
Note: Width of line indicates greater volumes.

Table 5-7. Traffic Growth Expected on State and Local Facilities by 2030

Location	Growth Percent 2006 to 2030	Annual Growth Rate 2006 to 2030	Comments
State Roads			
I-5	36%	1.3%	Assumes I-5 widening
SR 99	105%	3.0%	Assumes completion of HOV lanes
SR 167	84%	2.6%	Assumes additional GP lane and completion of HOV system
SR 516 (West of Downtown)	23%	.9%	No widening assumed
SR 516 (Kent-Kangley Road)	9%	0.4%	No widening assumed
SR 181 (West Valley Highway)	39%	1.4%	No widening assumed
SR 515 (Benson Highway)	7%	0.3%	No widening assumed
Arterials			
S 212th St	88%	2.7%	No widening assumed
E Valley Highway (Central Ave)	36%	1.3%	No widening assumed
SE 256th St	22%	0.8%	No widening assumed
Military Road S	181%	4.4%	No widening assumed
E James Street (SE 240th St)	24%	0.9%	No widening assumed
132 Avenue SE	20%	0.8%	No widening assumed

Future Kent Street Network

In order to address the growing traffic volumes and congestion levels on City streets, two future roadway improvement scenarios were examined: the Baseline and the Preferred street network. While the Baseline represents a minimum level of roadway improvements, the Preferred scenario represents a level of roadway improvements necessary to bring the street system into compliance with the City’s level of service standards.

Baseline Network

The 2030 Baseline scenario represents the conditions in the street network with the projects committed to date. The Baseline network consists primarily of the existing city street system, funded projects programmed in the City’s Transportation Improvement Program (TIP) and the State’s Highway Program. The projects in **Table 5-8** are assumed to be in place by 2030 as part of the City’s baseline traffic model and street system. Most of these projects are at least partially funded and have a reasonable likelihood of being implemented during the next 20 years. This set of projects provides a frame of reference for examining the performance of the City street system in 2030.

Table 5-8. Future Baseline Projects

TIP#	Project	Description
Regional Projects		
	SR 167 – I-405 to SR 18	Add one travel lane in each direction
	I-5 – SR 509 Extension to S 277th Street	Add travel lanes for merging traffic to/from SR 509 Extension
	SR 509 Extension – SR 518 to I-5	Construct new freeway extension from SeaTac Airport to I-5
	I-405 – I-5 to Bellevue	Add travel lanes (funded by WSDOT gas tax projects)
City of Kent Projects		
7*	S 228th Street Corridor-Phase I – Military Road S to 64th Avenue S	This new 5-lane minor arterial is included in the future baseline, because the existing traffic volumes were collected prior to its 2007 completion.
2	S 277th Street Corridor Extension – Widen 116th Ave SE from Kent-Kangley Road (SR 516) to SE 256th Street	Widen 116th Ave SE to provide a 5-lane roadway between Kent-Kangley Road and SE 256th Street.
8	72nd Ave S Extension – S 200th St to S 196th Street	Extend 72nd Ave S to provide a parallel corridor to the West Valley Highway
27	SR 181/West Valley Highway/ Washington Avenue Widening – Meeker St north to approximately the 218th block.	The widening project would expand the existing five lane roadway to seven lanes.

* This project was under construction during the collection of existing data and is not in the current TIP.

Preferred Network

The Preferred network consists of the projects in the Baseline scenario and additional projects targeted to improve traffic operations. Several of these projects have already been identified in the Kent's Transportation Improvement Program (TIP).

The Preferred network includes intersection improvements, new streets, street widening and railroad grade separation projects. Intersection improvements vary from simple changes such as changing the lane assignment at Smith Street/Central Avenue, to more complex projects such as revising the I-5/S 272nd Street freeway ramp interchange. Street widening projects would improve the amount of capacity on the arterial system and allow development of bicycle lanes and sidewalks. Railroad grade separation would alleviate the delays caused by railroad crossings on the street network.

The Preferred street network calls for a total of \$599 million (2007 dollars) of transportation improvements. Of this total approximately, \$97 million is for street projects located within the City's potential annexation area, and is not the City's current responsibility. Therefore, the current City share of the street projects equals \$502 million. The City's share is inclusive of all local revenue sources (e.g. local taxes, special assessments, developer payments, et al). The City's share of project cost (by project type) is depicted in **Figure 5-8**. The Preferred network includes \$235 million (City's share) in widened and improved streets. Intersection improvements, such as adding turn lanes or modifying a signal, comprise \$62 million (City's share). New streets, such as connecting S 224th Street from 84th Avenue to Benson Road, would

improve east-west links within the City. Approximately \$43 million (City's share) in new streets is included in the preferred network. Approximately \$162 million of railroad grade separation projects are also included in the Preferred network plan.

The Preferred network improvements are displayed in **Table 5-9** and depicted in **Figure 5-9**.

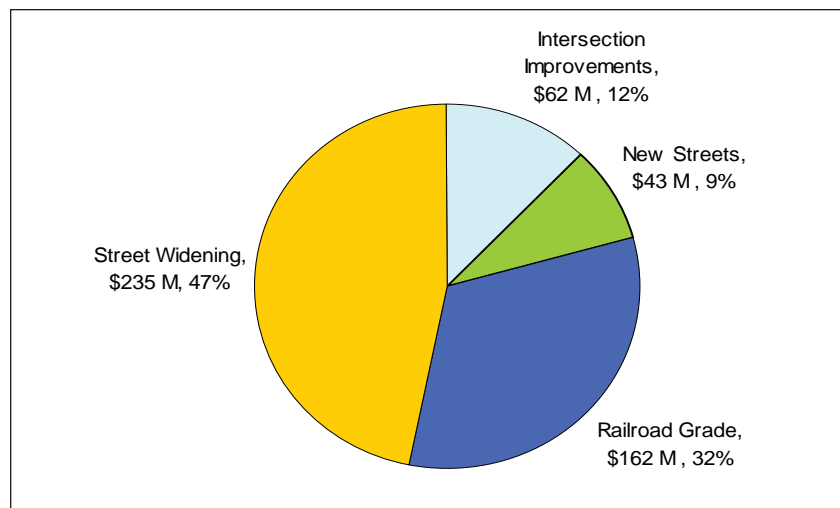
The travel demand model was also used to help identify locations that require modification in the future. For example, comparing the 2030 traffic conditions with the Baseline network, it became clear that there needs to be more capacity for vehicles traveling east-west between the Kent Valley and East Hill.

In response, the Preferred street network includes these projects to improve east-west mobility:

- Widening S 212th Street (SE 208th Street)
- Constructing a new road between 84th Avenue S and 104th Avenue SE along S 224th Street/S 218th Street
- Constructing a new road between 84th Avenue SE to 108th Ave SE along the SE 192nd Street Corridor.

These improvements will spread traffic over the City more evenly by allowing more route options, which in turn, will ease some of the traffic in the downtown area. These new routes will also be designed to accommodate growing pedestrian and bicycle demand for east-west travel (see Chapter 6). They can also handle existing and future transit services as they become available (see Chapter 7).

Figure 5-8. Preferred Network Costs



(Note: City of Kent Share Only)

Table 5-9. Preferred Network Projects

	TMP Project #	Capital Project (location and description)	Cost (\$) (City Share)
Intersection Improvements	I-1	SE 192nd St/SR515-Benson - Add southbound right turn pocket.	540,000 (0)
	I-2	S 196th St/80th Ave S - Change intersection phasing and lane approaches.	250,000
	I-3	S 196th St/84th Ave S - Add eastbound right turn pocket and southbound dual left turn lanes.	1,190,000
	I-4	SE 208th St/SR 515-Benson - Add dual southbound left storage lane and modify signal phasing.	690,000 (0)
	I-5	S 212th St/72nd Ave S - Add southbound dual left turn lanes.	330,000
	I-6	S 212th St/84th Ave S - Extend eastbound left turn lane and add northbound and southbound dual left turn lanes.	1,710,000
	I-7	S 212th St/SR 167 Southbound Ramp - Add southbound left turn lane.	400,000
	I-8	S 212th St/SR 167 Northbound Ramp - Modify signal timing by making northbound right turn free.	220,000
	I-9	S 240th St/SR 99 - Change signal phasing.	420,000
	I-10	4th Ave N/Cloudy St - Provide northbound and southbound exclusive left turn lanes. Install traffic signal.	2,160,000
	I-11	SE 240th St/SR 515 - Add dual northbound and southbound left turn lanes. Add northbound and southbound right turn pockets.	1,650,000
	I-12	Smith St/Lincoln Ave (Smart Growth Initiative) - Add eastbound left turn pocket.	1,990,500
	I-13	W Meeker St and W Smith St - Interconnect Interurban Trail crossing signals.	342,000
	I-14	Smith St/Central Ave - Revise southbound and northbound turn lane assignment.	20,000
	I-15	Meeker St/Washington Ave - Modify signal phasing. Add eastbound and westbound right turn pockets.	780,000
	I-16	S 260th St/SR 99 - Add westbound dual left turn lane. Add eastbound and westbound right turn pockets.	1,180,000
	I-17	Military Rd S/Reith Rd - Widen intersection to provide turn lanes on all approaches.	1,945,000
	I-18	SE 256th St/SR515-Benson - Add northbound right turn lane and change signal phasing.	550,000
	I-19	Kent-Kangley Rd/108th Ave SE - Add eastbound and westbound dual left turn lanes. Add eastbound right turn pocket. Change northbound right turn phasing.	1,410,000
	I-20	SE 256th Street and 132nd Ave SE - Extend northbound left, southbound left, and westbound left turn pockets. Construct new eastbound and southbound right turn lanes.	302,000
	I-21	I-5/S 272nd St Interchange Reconstruction-Phase I - Provide transit and HOV Direct Access between S 272nd St and I-5.	42,330,000
	I-22	S 272nd St/Military Rd - Add a southbound through lane at intersection. Add northbound dual left turn lanes.	1,540,000
	I-23	Kent-Kangley Rd/132nd Ave SE - Add northbound and southbound dual left turn lanes.	1,360,000
Total Cost (City Share of Cost)			\$ 63,309,500 \$ (62,079,500)
New Streets	N-1	SE 192nd St (84th Ave SE to 108th Ave SE) - Create new roadway connection with 4-5 lanes and bicycle lanes.	45,200,000 (14,329,000)
	N-2	72nd Ave S (S 200th St to S 196th St) - Extend roadway to connect to S 196th St.	1,015,000
	N-3	S 224th St (84th Ave S to 104th Ave SE (Benson Rd-SR 515)) - Extend roadway to connect to E Valley Hwy and widen existing road to 3-5 lanes.	36,000,000 (24,983,000)
	N-4	S 228th St Corridor-Phase I (Military Rd S to 64th Ave S) - Construct new roadway with 5 lanes.	Completed
	N-5	108th Ave SE (SE Kent-Kangley Rd (SR 516) to SE 256th St) - Extend roadway connection to SE 256th St.	2,500,000
Total Cost (City Share of Cost)			\$ 84,715,000 \$ (42,827,000)

Table 5-9. Preferred Network Projects (cont'd)

	TMP Project #	Capital Project (location and description)	Cost (\$) (City Share)
Street Widening	W-1	80th Ave S Widening (S 196th St to S 188th St) - Widen to 5 lanes.	1,323,000
	W-2	S 212th St (SR 167 to 108th Ave SE) - Widen to 5-6 lanes.	10,100,000 (6,046,000)
	W-3	SR 181/West Valley Hwy/Washington Ave Widening (Meeker St north to 218th block) - Widen to 7 lanes.	16,150,000
	W-4	84th Ave S (SR 167 to S 212th St) - Widen to 7 lanes.	5,106,000
	W-5	116th Ave SE (SE 208th St to SE 256th St) - Widen to 5 lanes with bike lanes.	46,430,000 (17,730,000)
	W-6	132nd Ave SE (SE 200th St to SE 236th St) - Widen to 5 lanes with bike lanes.	20,990,000 (0)
	W-7	S 228th St Corridor-Phase I (Military Rd S from SR 516 to Bolger Road) - Widen to 5 lanes.	Completed
	W-8	James St (Union Pacific Railroad to 4th Ave N) - Provide eastbound and westbound exclusive left turn lanes.	1,800,000
	W-9	132nd Ave SE-Phase III (SE 248th St to SE 236th St) - Widen to 5 lanes with bike lanes.	11,950,000
	W-10	Military Rd S (S 272nd St to S 240th St) - Widen to provide a center turn lane, bike lanes and sidewalks.	13,630,000
	W-11	W Meeker St-Phase II (Lake Fenwick Road to east side of the Green River) - Widen to 5 lanes including a new bridge.	70,000,000
	W-12	W Meeker St Phase I (64th Ave S to Green River Bridge) - Widen to 5 lanes.	5,960,000
	W-13	SE 248th St (116th Ave SE to 132nd Ave SE) - Construct a 3 lane roadway.	5,640,000
	W-14	SE 256th St-Phase II (SR 516 (Kent-Kangley Rd) to 116th Ave SE) - Construct a 5 lane roadway with bike lanes.	5,100,000
	W-15	SE 256th St-Phase III (132nd Ave SE to 148th Ave SE) - Widen to 5 lanes with bike lanes.	16,980,000
	W-16	S 277th St Corridor (116th Ave SE from Kent-Kangley Rd (SR 516) to SE 256th St) - Widen to 5 lanes with bike lanes.	7,500,000
	W-17	132nd Ave SE-Phase II (Kent-Kangley Rd (SR 516) to SE 248th St) - Widen to 5 lanes with bike lanes.	23,200,000
	W-18	S 272nd St-Phase II (Pacific Hwy S to Military Rd S) - Add 2 HOV lanes and a center left-turn lane.	13,916,000
	W-19	132nd Ave SE-Phase I (SE 288th St to Kent-Kangley Rd (SR 516)) - Widen to 5 lanes with bike lanes.	13,120,000
Total Cost (City Share of Cost)			\$ 288,895,000 \$ (235,151,000)
Railroad Grade	R-1	S 212th St/Union Pacific Railroad - Grade Separation.	33,000,000
	R-2	S 212th St/Burlington Northern Santa Fe Railroad - Grade Separation.	33,000,000
	R-3	S 228th St / Union Pacific Railroad - Grade Separation.	24,200,000
	R-4	S 228th St / Burlington Northern Santa Fe Railroad - Grade separation.	23,000,000
	R-5	Willis St (SR 516)/Union Pacific Railroad - Grade Separation.	26,500,000
	R-6	Willis St (SR 516)/Burlington Northern Santa Fe Railroad - Grade Separation.	22,600,000
Total Cost			\$ 162,300,000
Grand Total Cost (City Share of Cost)			\$ 599,219,500 \$ (502,357,500)

Future Level of Service

The future PM peak hour levels of service for the 2030 Baseline and 2030 Preferred network are displayed in **Table 5-10**. **Figure 5-10** displays the results for the 2030 baseline and **Figure 5-11** shows the LOS for the 2030 preferred network.

Under the baseline scenarios traffic operations are expected to degrade throughout the City. About half of the corridors will operate at LOS F with the remainder operating at LOS E. The City defines satisfactory LOS as maintaining an LOS E or better along designated corridors. The SR 99 Corridor and downtown Kent are allowed to operate at LOS F.

Corridors that operate at LOS F typically have heavy congestion and are impacted by poorly operating intersections. The following section describes the corridors that would operate at LOS F under the Baseline conditions along with the improvements needed to meet the acceptable LOS operations.

Corridor 5 (Smith Street/ Canyon Drive/ 256th Street/Kent-Kangley Road) This heavily congested corridor is forecast to operate worse in 2030 with four of the nine intersections operating at LOS F. The intersections within the corridor that operate at LOS F during the PM peak hour are: SE 256th Street/Jason Avenue, SE 256th Street/SR 515 (Benson), Kent-Kangley Road/116th Avenue SE and Kent-Kangley Road/132nd Avenue SE. The preferred network's intersection improvements at 108th Avenue SE and 132nd Avenue SE will allow the corridor to meet the LOS E threshold. The corridor will also serve transit and will also have bike lanes.

Corridor 6 (S 260th Street/ Reith Road/W Meeker Street) – By 2030, four of the seven intersections along this corridor are likely to operate at LOS F. Heavy congestion along Meeker Street between Washington Avenue S and 64th Avenue S contribute to the poor performance of this corridor. The preferred network would widen Meeker Street to five lanes between Lake Fenwick Road and 64th Avenue S and add turn pockets and signal phasing changes at the Washington Avenue S intersection, resulting in a corridor improvement to LOS D. The corridor will also serve transit and will have bike lanes.

Corridor 8 (S 272nd Street) – S 272nd Street currently operates at LOS F. The City and State have planned improvements that would widen the roadway and modify the freeway access ramps. The proposed improvements would allow S 272nd Street to meet the LOS E threshold. The corridor will have bike lanes when completed.





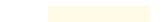
Corridor 9 (Pacific Highway S) This corridor is classified by the State as a Highway of Statewide Significance, and the traffic impacts are primarily related to traffic traveling through the City of Kent. This corridor is forecast to operate at LOS F under future conditions. The City has assumed that this corridor is built-out to its maximum configuration and has set a LOS F threshold. While general traffic conditions will worsen, this corridor has existing HOV lanes that can serve a future bus rapid transit (BRT) system. Therefore, the LOS will be substantially better for transit and carpool users. The corridor also accommodates bicycles.

Corridor 10 (Military Road) - Between 231st Street and S 272nd Street, Military Road is a two-lane road, lacking turn lanes at intersections and driveways. The lack of adequate capacity at the intersections of Military Road/S 272nd Street and Military Road/SR-516 results in corridor congestion during peak commuter periods. The preferred alternative would widen the roadway to three lanes. New turn lanes at Military Road/Reith Road and an additional southbound lane at Military Road/S 272nd Street would bring the corridor up to LOS D. This corridor serves transit and will have bike lanes.

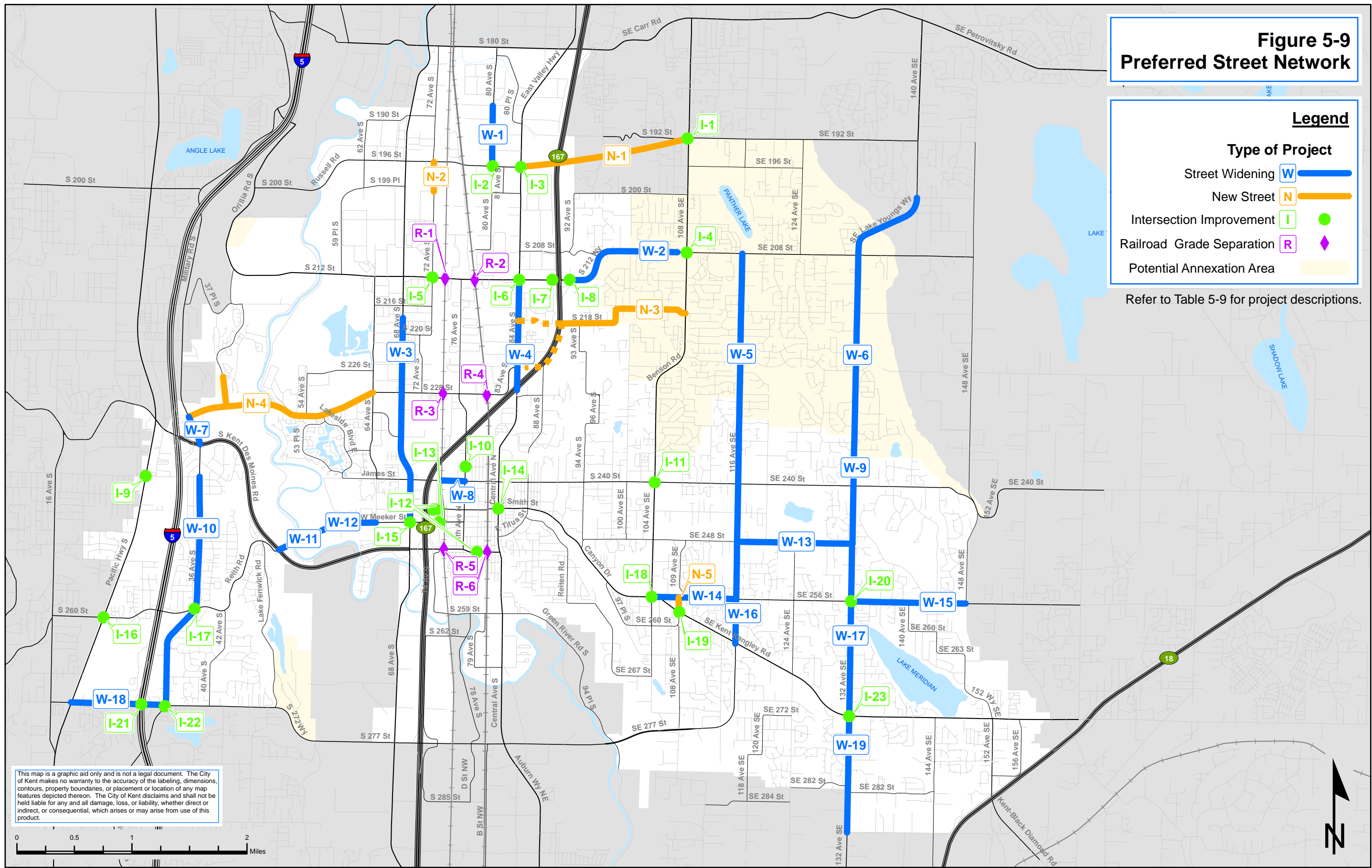
**Figure 5-9
Preferred Street Network**

Legend

Type of Project

- Street Widening **W** 
- New Street **N** 
- Intersection Improvement **I** 
- Railroad Grade Separation **R** 
- Potential Annexation Area 

Refer to Table 5-9 for project descriptions.



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Table 5-10. Future Corridor LOS

ID	Corridor/Area	From	To	LOS Baseline	LOS Preferred Network
1	S 196th St/SE 192nd St Corridor	W Valley Highway	SR 515 (Benson)	E	D
2	S 212th St/S 208th St	42nd Ave S	132nd Ave SE	E	D
3	S 224th St/S 228th St	SR 516/Military Road	S 228th St/ 84th Ave S	E	E
4	James St/SE 240th St	64th Ave S	132nd Ave SE	E	E
5	S 260th St/ Reith Road/ W Meeker St	SR 99	Washington Ave	F	D
6	Smith St/ Canyon Drive/ 256th St / Kent-Kangley Road	Jason Ave	152nd Way SE	F	E
7	S 256th St	SR 515	132nd Ave SE	E	D
8	S 272nd St	SR 99	Military Road	F	E
9	Pacific Highway S	S 240th St	S 272nd St	F	F
10	Military Road	231st St	S 272nd St	F	D
11	64th Ave S	S 212th St	Meeker St	E	D
12	Washington Ave/ 68th Ave S/ W Valley Hwy	S 196th St	Meeker St	F	E
13	Central Ave/ 84th Ave S	S 196th St	James St	D	D
14	SR 515/Benson Ave	SE 192nd St	SE 256th St	F	E
15	116th Ave SE	SE 208th St	Kent-Kangley Road	E	D
16	132nd Ave SE	SE 208th St	Kent-Kangley Road	E	D
17	Downtown Area	4th Ave N to E Titus St	James St to W Willis St	F	F

Corridor 12 (Washington Ave/ 68th Ave S/ W Valley Hwy) – This stretch of West Valley Highway is a primary north-south route through Kent and an important truck route. The corridor also serves high transit volumes. The section between James Street and the Meeker Street intersection is forecast to have high delays during the 2030 PM peak hour. The preferred network would widen Washington Avenue to seven lanes from Meeker Street to approximately the 218th Street block to provide additional vehicle capacity along this corridor. With the preferred network improvements, the corridor would operate at LOS E during the 2030 PM peak hour.

Corridor 14 (SR 515/Benson Ave) – This is the primary north-south route to Kent’s East Hill and serves as a major transit corridor. With four to five lanes in its current configuration, this roadway has been widened to its practical limits. Improvements at major intersections (S 192nd Street, S 208th Street, S 256th Street) along the corridor and widening of parallel routes on 116th Avenue SE and 132nd Avenue SE would bring this corridor to the City’s LOS E threshold.

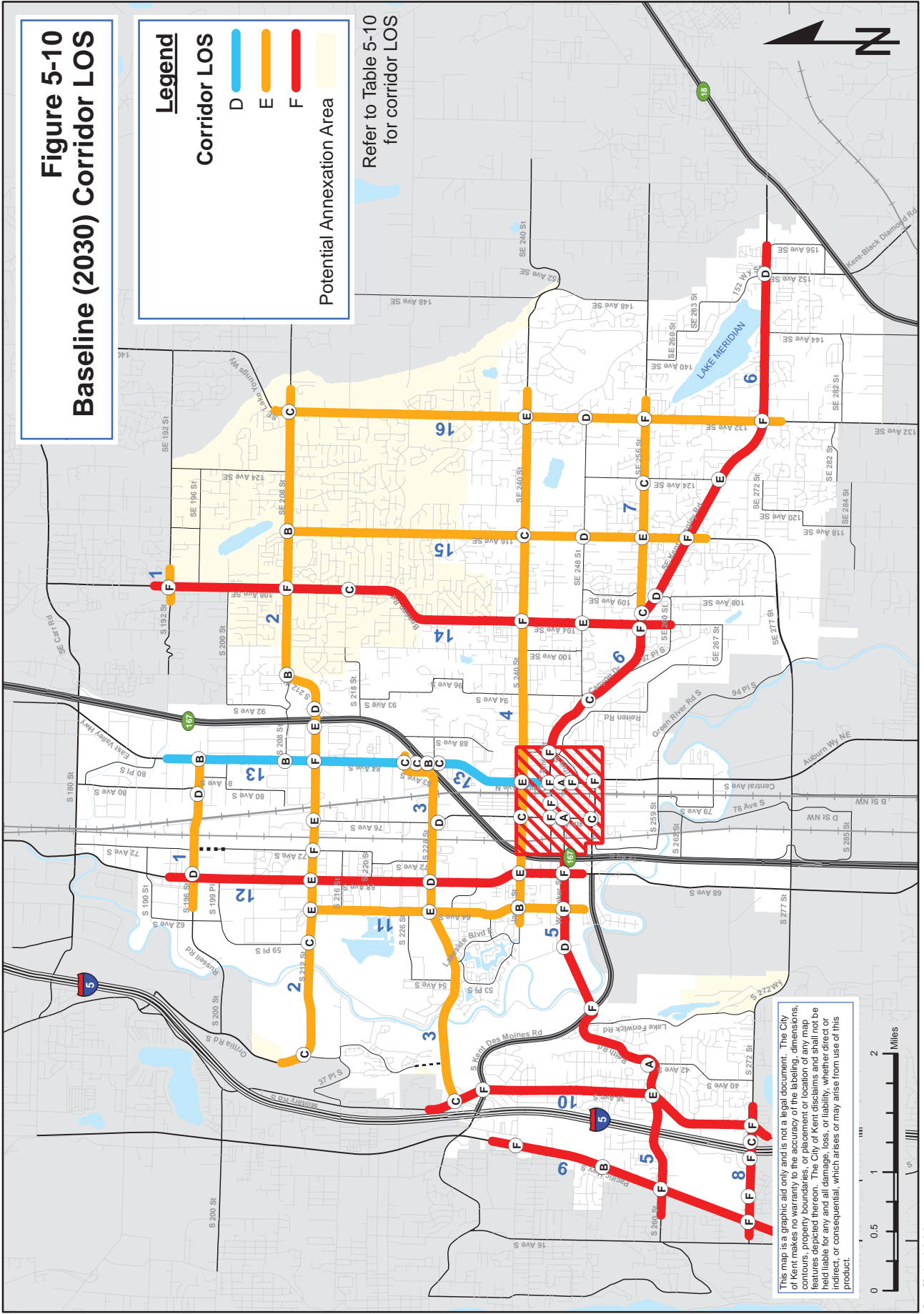
Corridor 17 (Downtown Kent) - Downtown Kent is treated as a zone that extends from 4th Ave N to E Titus Street (east-west) and from James Street to W Willis Street (north-south). The downtown area accommodates all modes – cars, bus transit, commuter trains, pedestrians and bicyclist. Downtown operates as a hub of the transportation system with major roadways radiating out from its core, resulting in congested conditions. The preferred network includes a few targeted intersection modifications downtown, but no major street widening. This approach matches the City’s desire not to impact business or degrade pedestrian mobility. The City will allow LOS F operation within the Downtown zone and encourage public transportation to provide growth in person-carrying capacity.

Figure 5-10 Baseline (2030) Corridor LOS

- Legend**
- Corridor LOS**
- D
 - E
 - F

Potential Annexation Area

Refer to Table 5-10
for corridor LOS



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Figure 5-11 Preferred Network (2030) Corridor LOS

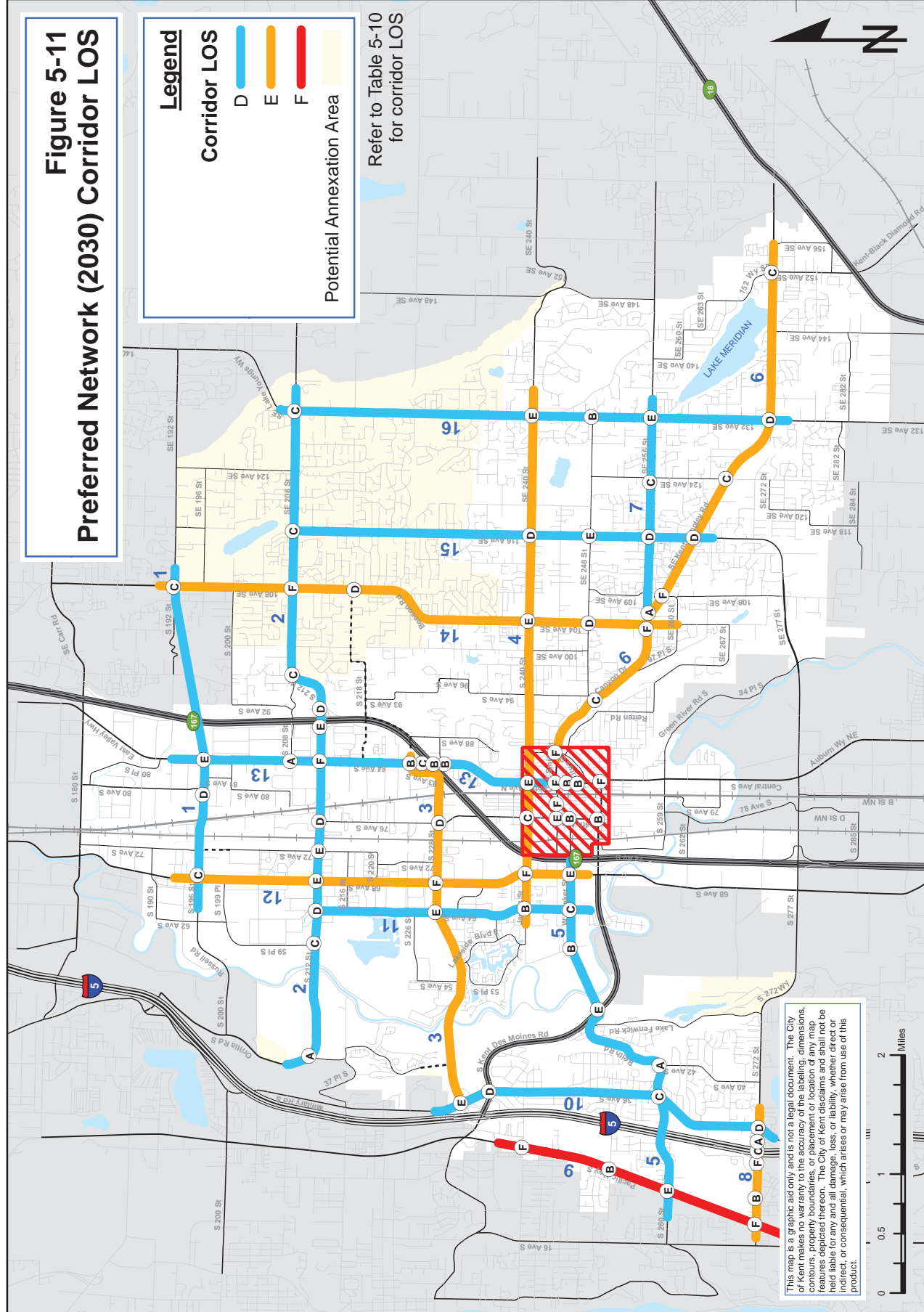
Legend

Corridor LOS

- D
- E
- F

Potential Annexation Area

Refer to Table 5-10
for corridor LOS



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April 1, 2008

The City defines truck freight movement as the movement of heavy and medium trucks.

- ▶ Medium trucks include trucks with two to four axles and two-axle trucks with six tires.
- ▶ Heavy trucks include all articulated trucks, trucks with one, two, or three trailers, and/or with three to nine axles.

Truck Routes

Kent has substantial industrial and commercial development throughout the City. The City is committed to supporting local industry, business, and residential needs and recognizes that the ability to ship and receive freight is essential to the success of many businesses. The City will continue to collaborate with local businesses to improve freight access, while maintaining the roadway infrastructure, whenever possible.

As noted earlier in Chapter 2, Kent is one of the region and west coast's largest distribution centers. More than 1,400 trucks enter or leave Kent each day. The forecasts by the state show that Kent will continue as a center for warehousing and distribution within the region. The City will accommodate trucks by providing truck routes that encourage distribution businesses to locate in Kent.

The City expects that the majority of regional truck trips would take place on the State highways. However, recognizing that trucks need to travel on city streets to access the State highways and also need to travel into and within the City, Kent has designated a network of north-south and east-west corridors as truck routes. **Figure 5- 12** shows the designated truck routes. These truck routes will incorporate special design considerations such as wider turning radii and stronger pavements.

The City has also designated a set of industrial truck routes for several north-south roads parallel to and adjacent to SR 167. These routes are located within the areas zoned as manufacturing and industrial sites and provide local truck travel options.



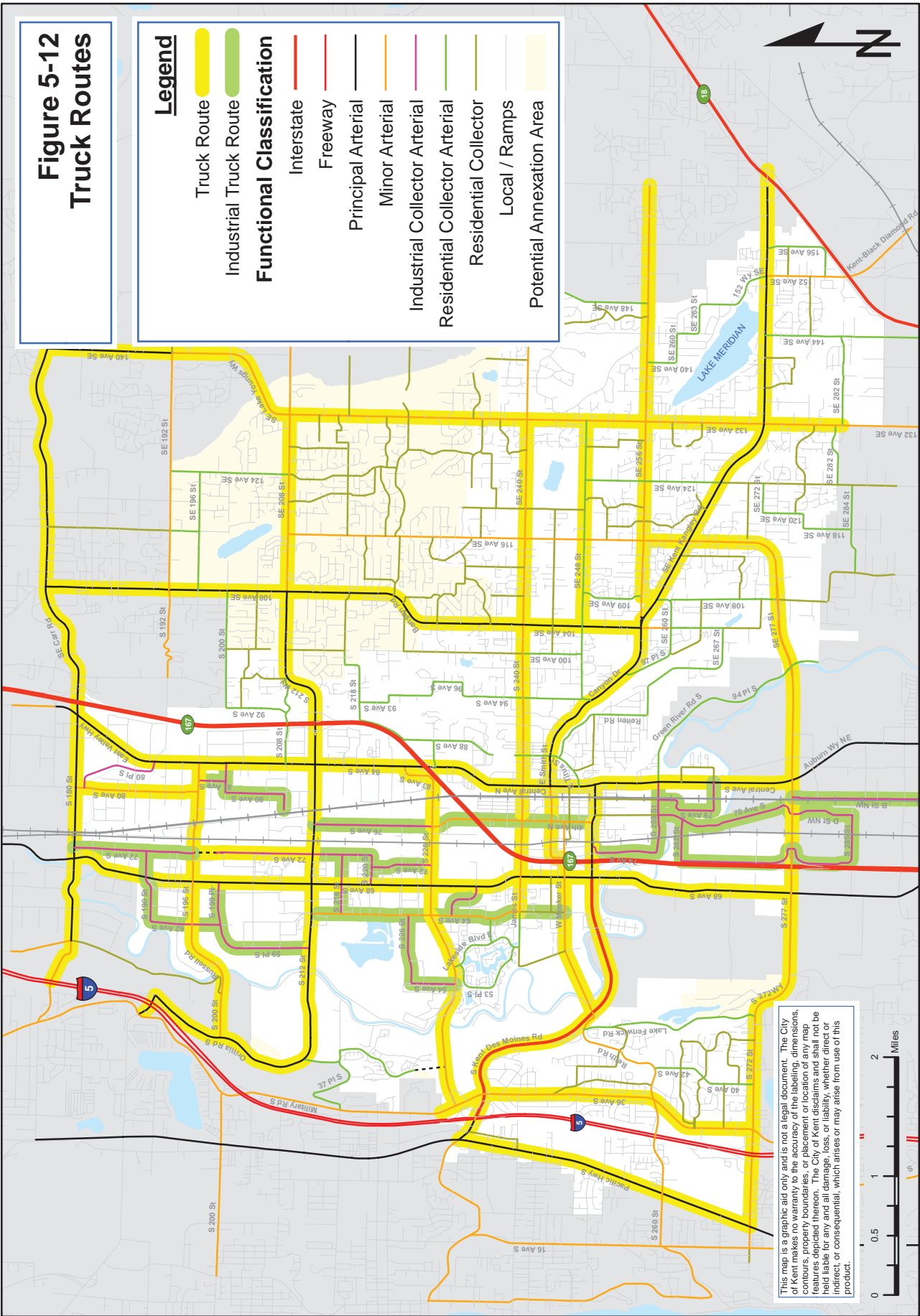
Figure 5-12 Truck Routes

Legend

- Truck Route
- Industrial Truck Route

Functional Classification

- Interstate
- Freeway
- Principal Arterial
- Minor Arterial
- Industrial Collector Arterial
- Residential Collector Arterial
- Residential Collector
- Local / Ramps
- Potential Annexation Area



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PRIORITIZATION OF STREET PROJECTS

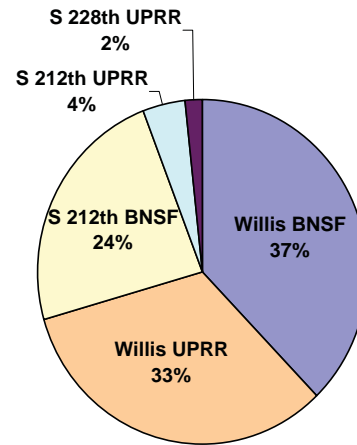
What the Community said about... Street improvements

The community voiced their ideas about the most important street projects after attending one of the City's TMP open houses, reading the TMP newsletter, or reviewing the TMP website. While not a scientific polling, the following projects were often cited in the responses the City received from the public:

- Railroad grade separations (see below)
- Kent-Kangley/SR 516/SE 256th Street "Y" improvement
- James Street Improvements
- SR 181 (West Valley Highway) improvements
- 277th Street Corridor Extension
- SE 256th Street Improvements
- 132nd Avenue Improvements

Railroad grade separation projects (taken together) were the most often listed high-priority street project needs. The diagram shows the percentage of community interest for specific railroad grade separation projects.

Community Interest for Railroad Grade Separation Projects



The street projects contained in the 2030 Preferred Network vary in size, scope, and benefits. Since all of these projects cannot be built immediately, the City must identify a way to select which projects to do first, and which can be done at a later date. This is accomplished by prioritizing the projects.

Prioritization Criteria

The TMP Task Force was asked to develop a set of criteria to help the City prioritize the projects. The criteria were based on the community values identified at a workshop that updated the City's transportation policies.

Several criteria were selected to rank the street projects. These criteria, covering the important issues of project cost, performance, values, as well as tangential benefits to the transportation system and community, are as follows:

- **Mobility:** The ease with which one can move about the city and the region, including traffic mobility, regional mobility, freight movements, and preservation (improvements) of the roads
- **Safety:** Traffic safety improvements at high accident locations (HAL); improvements that reduce travel times for EMS vehicles
- **Multimodal:** Street improvements that support other modes including, transit mobility, pedestrian mobility, bicycle mobility and connectedness/ accessibility (completing missing links)
- **Environment:** Environmental preservation (protecting open spaces) and neighborhood street protection
- **Implementation:** Cost effectiveness (per \$1000 investment); funding commitment; project readiness (is it ready to go forward)

These criteria and how they were measured are shown in **Table 5-11**. Measurements include improvements in LOS; the degree to which the project supports transit operation on primary transit corridors; improvements that benefit pedestrians based on composite accessibility index; improvements provided for bicycle facilities; and the degree to which the project completes missing links or improves access.

Table 5-11. Prioritization Criteria for Street Projects

Criteria	Measurement	Very Positive ++	Slightly Positive +	Neutral 0	Negative -
Mobility	Traffic Mobility	Improves LOS at location of existing deficiency	Improves LOS of forecasted deficiency	Not a Deficiency/No change	Reduces LOS
	Regional Mobility	New through capacity on regional route	Some through capacity added on parallel route	No benefit to regional routes	Reduces capacity of through routes
	System Preservation	Improves existing or substandard roadways	Rebuilds or improves existing roadway with widening	New roadway	Improvement does not address substandard conditions
	Freight Movement	Improves freight truck movement	Improves traffic operations on existing truck route	Not a truck route	Worsens truck capacity
Safety	Traffic Safety	Safety improvement at HAL location	Other Improvement at HAL location	Not a HAL location	May degrade safety at HAL
	Emergency Response	Reduces travel time to fire demand zones based on percent response in <= 7 minutes	Improves access to Fire Demand Zones with low response times (0-49%)	No change in response times	Worsens response times
Environment	Environmental Preservation	Protects open spaces and minimizes increases to paved areas	No addition ROW and no increase in paved area	Increased ROW in non-sensitive areas	Impact to Sensitive Area
	Neighborhood Protection	Supports protection of residential areas and neighborhood streets	Reduces traffic flow on residential streets	Improves traffic flow on arterial streets in residential areas	Increases traffic on local residential streets

Table 5-11. Prioritization Criteria for Street Projects (cont'd)

	Criteria	Measurement	Very Positive ++	Slightly Positive +	Neutral 0	Negative -
Multimodal	Transit Mobility	Supports transit operation on primary transit corridors	Adds transit enhancement (TSP/HOV) on transit corridor	Capacity improvement on transit corridor	Not a Transit Corridor	Negatively affects transit corridor
	Pedestrian Mobility	Improvements that benefit pedestrians based on Composite Accessibility Index	Adds facility within highest demand areas (Index >30)	Adds facilities in moderate demand areas (Index >20)	Pedestrian Facilities Exist	Widens intersection / Decreases pedestrian mobility
	Bicycle Mobility	Improvements that provide bicycle facilities	Adds new bicycle facility	Improves existing facility	Not a designated bicycle corridor /Retains existing facilities	Decreases bicycle mobility
	Connectedness-Accessibility	Completes missing links to improve access	New connecting roadway serving multiple modes	New connecting roadway for single mode	Improves an existing facility	No change
Implementation	Cost Effectiveness	Maximizes PM peak usage per 1000 dollar of investment	Top 10% of projects	Top 25% of projects	Middle 50% of projects	Bottom 25% of projects
	Funding	Level of funding commitment for project	85% funding committed	50% or more funding committed	Limited or no funding committed	High cost, difficult to fund
	Project Readiness	Degree the project is ready to be implemented	Environmental complete	Right-of-way available	Identified in TIP	Long-range project

The measurement system presented is broad enough in selected criteria to provide a good overview of the relative strengths and weaknesses of the proposed projects, and one must realize the scores produced are simply one more tool to use in producing a list of recommended projects. Each criterion was assigned a weighting as shown in Table 5-12.

Table 5-12. Criterion Weighting Matrix

Criteria (maximum points)	Percent of Total Category
Mobility (total maximum points = 85)	34%
<ul style="list-style-type: none"> • Traffic Mobility (30) • Regional Mobility (25) • System Preservation (10) • Freight Movement (20) 	
Safety (total maximum points = 30)	12 %
<ul style="list-style-type: none"> • Traffic Safety (15) • Emergency Response (15) 	
Multimodal (total maximum points = 50)	20 %
<ul style="list-style-type: none"> • Transit Mobility (15) • Pedestrian Mobility (15) • Bicycle Mobility (10) • Connectedness – Accessibility (10) 	
Environment (total maximum points = 35)	14%
<ul style="list-style-type: none"> • Environmental Preservation (15) • Neighborhood Protection (20) 	
Implementation (total maximum points = 50)	20%
<ul style="list-style-type: none"> • Cost Effectiveness (15) • Funding (15) • Project Readiness (20) 	
Total	100%

The results of the streets rating process are summarized in **Table 5-13** and depicted in **Figure 5-13**. The projects are grouped into quartiles based upon the overall project ratings. Table 5-13 shows that each project has different rankings by criteria. Few projects rank the same across all criteria. The highest rated projects contain the highest number of good criteria rankings. The rating for each criterion was multiplied by the criterion weight to produce a project “score”. For example, a project that achieved a (++) rating for a criterion with a weight of 30 would create a score of 2 x 30 = 60 points.

Criterion Ratings		
Symbol	=	Value
++	=	2
+	=	1
0	=	0
-	=	-1

Table 5-13. Street Project Evaluation Results

	Rating	TMP Project #	08-13 TIP Reference	Capital Project	City's share of Project Cost	PRIORITY RANKINGS				
						Mobility	Safety	Multimodal	Environment	Implementation
1ST QUARTILE	245	W-3	28	SR 181/West Valley Hwy/Washington Ave - Widening (Meeker St north to 218th block) - Widen to 7 lanes.	16,150,000	High	High	High	High	High
	230	W-16	1	S 277th St Corridor (116th Ave SE from Kent-Kangley Rd (SR 516) to SE 256th St) - Widen to 5 lanes with bike lanes.	7,500,000	High	High	High	High	High
	230	W-4	6	84th Ave S (SR 167 to S 212th St) - Widen to 7 lanes.	5,106,000	High	High	High	High	High
	230	R-4	7	S 228th Street / Burlington Northern Santa Fe Railroad - Grade separation.	23,000,000	High	High	High	High	High
	220	I-21	17	I-5 / S 272nd Street Interchange Reconstruction - Phase I - Provide transit and HOV Direct Access between S 272nd Street and I-5.	42,330,000	High	High	High	High	High
	220	I-9	116	S 240th Street/SR99 - Change signal phasing	420,000	High	High	High	High	High
	220	I-8	111	S 212th Street/SR 167 Northbound Ramp -Modify signal timing by making northbound right turn free.	220,000	High	High	High	High	High
	220	I-14	104	Smith Street/Central Avenue - Revise southbound and northbound turn lane assignment.	20,000	High	High	High	High	High
	215	I-18	106	SE 256th St/SR515-Benson - Add northbound right turn lane and change signal phasing.	550,000	High	High	High	High	High
	205	W-8	4	James St (Union Pacific Railroad to 4th Ave N) - Provide eastbound and westbound exclusive left turn lanes.	1,800,000	High	High	High	High	High
	205	I-5	108	S 212th Street/72nd Avenue S -Add southbound dual left turn lanes	330,000	High	High	High	High	High
	205	I-10	5	4th Avenue N/Cloudy St - Provide northbound and southbound exclusive left turn lanes. Install traffic signal.	2,160,000	High	High	High	High	High



Table 5-13. Street Project Evaluation Results (cont'd)

Rating	TMP Project #	08-13 TIP Reference	Capital Project	City's share of Project Cost	PRIORITY RANKINGS					
					Mobility	Safety	Multimodal	Environment	Implementation	
2ND QUARTILE	200	I-23	112	Kent-Kangley Rd/132nd Ave SE -Add northbound and southbound dual left turn lanes.	1,360,000					
	200	W-18	27	S 272nd St-Phase II (Pacific Hwy S to Military Rd S) - Add 2 HOV lanes and a center left-turn lane.	13,916,000					
	200	N-5	29	108th Ave SE (SE Kent-Kangley Rd (SR 516) to SE 256th St) - Extend roadway connection to SE 256th St.	2,500,000					
	195	W-19	32	132nd Ave SE - Phase I (SE 288th St to Kent-Kangley Rd (SR 516)) - Widen to 5 lanes with bike lanes.	13,120,000					
	195	I-20	10	SE 256th Street and 132nd Ave SE - Extend northbound left, southbound left, and westbound left turn pockets. Construct new eastbound and southbound right turn lanes.	302,000					
	185	I-11	107	SE 240th Street & SR 515 -Add dual northbound and southbound left turn lanes. Add northbound and southbound right turn pockets.	1,650,000					
	180	W-9	34	132nd Ave SE-Phase III (SE 248th St to SE 236th St) - Widen to 5 lanes with bike lanes.	11,950,000					
	180	N-2	13	72nd Ave S (S 200th St to S 196th St) - Extend roadway to connect to S 196th St.	1,015,000					
	180	N-3	16	S 224th St (84th Ave S to 104th Ave SE (Benson Rd-SR515) - Extend roadway to connect to E Valley Hwy and widen existing road to 3-5 lanes	24,983,000					
	165	R-6	22	Willis Street (SR 516)/Burlington Northern Santa Fe Railroad - Grade Separation.	22,600,000					
	165	R-5	21	Willis St (SR 516)/Union Pacific Railroad - Grade Separation.	26,500,000					
	165	R-2	24	S 212th St/Burlington Northern Santa Fe Railroad - Grade Separation.	33,000,000					
	165	R-1	23	S 212th St/Union Pacific Railroad - Grade Separation.	33,000,000					



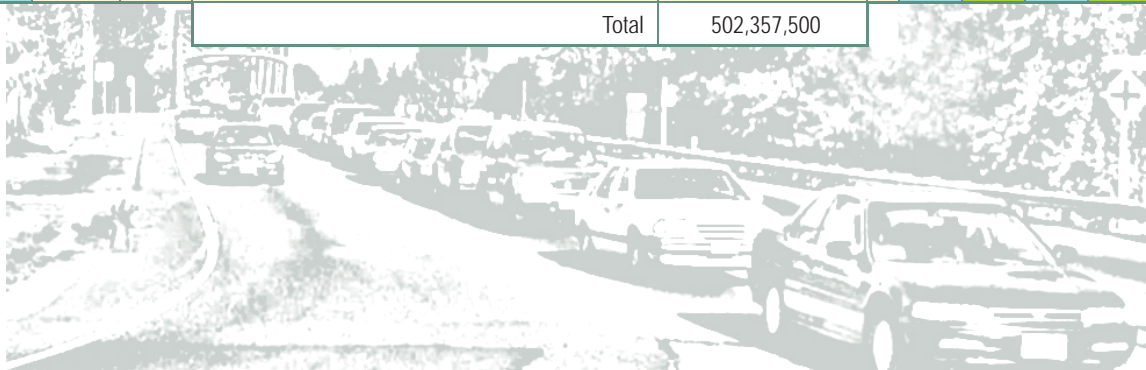
Table 5-13. Street Project Evaluation Results (cont'd)

						PRIORITY RANKINGS				
3RD QUARTILE	Rating	TMP Project #	08-13 TIP Reference	Capital Project	City's share of Project Cost	Mobility	Safety	Multimodal	Environment	Implementation
		160	W-13	12	SE 248th St (116th Ave SE to 132nd Ave SE) - Construct a 3 lane roadway.	5,640,000	Light Blue	Light Green	Light Green	Light Purple
	160	I-12	11	Smith St/Lincoln Ave (Smart Growth Initiative) - Add eastbound left turn pocket.	1,990,500	Light Blue	Light Purple	Light Green	Light Green	Yellow
	160	W-14	15	SE 256th St-Phase II (SR 516 (Kent-Kangley Rd) to 116th Ave SE) - Construct a 5 lane roadway with bike lanes.	5,100,000	Yellow	Light Green	Light Purple	Light Green	Light Green
	150	I-16	117	S 260th St/SR 99 - Add westbound dual left turn lane. Add eastbound and westbound right turn pockets.	1,180,000	Light Purple	Yellow	Light Green	Light Green	Light Blue
	150	W-17	33	132nd Ave SE-Phase II (Kent-Kangley Rd (SR 516) to SE 248th St) - Widen to 5 lanes with bike lanes.	23,200,000	Light Green	Yellow	Light Purple	Light Purple	Light Blue
	145	W-10	26	Military Rd S (S 272nd St to S 240th St) - Widen to provide a center turn lane, bike lanes and sidewalks.	13,630,000	Yellow	Light Green	Light Green	Light Purple	Light Blue
	140	W-2	102	S 212th Street (SR 167 to 108th Avenue SE) -Widen to 5-6 lanes	6,046,000	Light Purple	Yellow	Light Blue	Light Green	Light Blue
	140	W-15	35	SE 256th St-Phase III (132nd Ave SE to 148th Ave SE) - Widen to 5 lanes with bike lanes.	16,980,000	Light Green	Light Green	Light Purple	Light Purple	Light Blue
	140	R-3	25	S 228th St / Union Pacific Railroad - Grade Separation.	24,200,000	Light Purple	Light Purple	Light Blue	Light Green	Light Blue
	135	I-15	103	Meeker St/Washington Ave - Modify signal phasing. Add eastbound and westbound right turn pockets.	780,000	Yellow	Yellow	Light Green	Light Green	Light Blue
	120	I-7	110	S 212th Street & SR167 Southbound Ramp - Add southbound left turn lane	400,000	Light Purple	Light Green	Light Blue	Light Green	Light Blue



Table 5-13. Street Project Evaluation Results (cont'd)

Rating	TMP Project #	08-13 TIP Reference	Capital Project	City's share of Project Cost	PRIORITY RANKINGS					
					Mobility	Safety	Multimodal	Environment	Implementation	
4TH QUARTILE	115	I-17	18	Military Rd S/Reith Rd - Widen intersection to provide turn lanes on all approaches.	1,945,000					
	110	I-6	105	S 212th Street/84th Avenue S - extend eastbound left turn lane and northbound and southbound dual left turn lanes.	1,710,000					
	100	W-5	100	116th Ave SE (SE 208th St to SE 256th St) - Widen to 5 lanes with bike lanes.	17,730,000					
	100	N-1	37	SE 192nd Street (84th Avenue SE to 108th Avenue SE) -Create new roadway connection with 4-5 lanes and bicycle lanes	14,329,000					
	95	I-22	115	S 272nd St/Military Rd -Add a southbound through lane at intersection. Add northbound dual left turn lanes.	1,540,000					
	95	I-2	113	S 196th Street/80th Avenue S - Change intersection phasing and lane approaches.	250,000					
	95	I-19	109	Kent-Kangley Rd/108th Avenue SE -Add eastbound and westbound dual left turn lanes. Add eastbound right turn pocket. Change northbound right turn phasing.	1,410,000					
	95	I-13	8	W Meeker St and W Smith St - Interconnect Interurban Trail crossing signals.	342,000					
	90	W-12	30	W Meeker St Phase I (64th Ave S to Green River Bridge) - Widen to 5 lanes.	5,960,000					
	50	I-3	114	S 196th Street/84th Avenue S -Add eastbound right turn pocket and southbound dual left turn lanes	1,190,000					
	45	W-11	31	W Meeker St-Phase II (Lake Ferwick Road to east side of the Green River) - Widen to 5 lanes including a new bridge.	70,000,000					
	25	W-1	19	80th Ave S Widening (S 196th St to S 188th St) - Widen to 5 lanes.	1,323,000					
					Total	502,357,500				



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**Figure 5-13
Prioritized Street Projects**

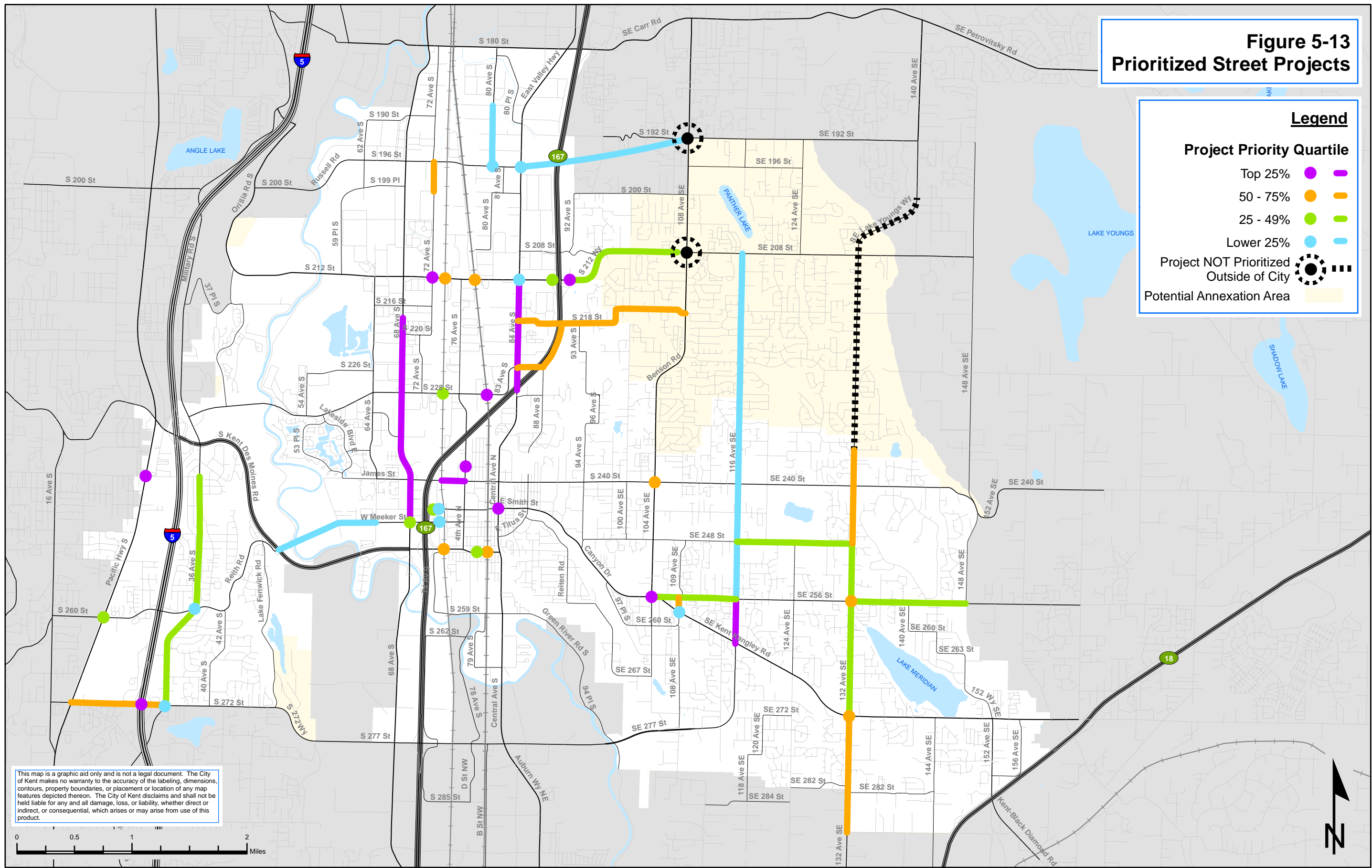
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Project Priority Quartile

- Top 25% ● —
- 50 - 75% ● —
- 25 - 49% ● —
- Lower 25% ● —

Project NOT Prioritized

Potential Annexation Area



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Chapter 6 | Non-Motorized System

Walking and cycling are integral components of the City’s multimodal transportation system. Walking is considered the preferred mode for short trips. Walking is the most affordable and accessible of all transportation modes. It is also clean, easy on the City’s infrastructure, healthy for the individual, and integral to community livability. In the last several decades, Kent has annexed many neighborhoods where streets were not built with sidewalks or the sidewalks are in need of repair. In addition, bicycles, scooters and inline skating provide both teenagers, adults and even older residents a choice of movement.

The City is committed to providing the benefits of walking and cycling to all residents by supporting pedestrian and bicycle travel as a safe, efficient, desirable, and accessible mode throughout the City’s neighborhoods. A key part of the Transportation Master Plan is an interconnected system for those who walk or use a bicycle. The City carried- out a Non-Motorized Study to identify critical gaps in the City’s pedestrian and bicycle transportation systems. This chapter evaluates the existing pedestrian and bicycle facilities and provides comprehensive recommendations for future facilities. This chapter :

- Evaluates how well the existing pedestrian and bicycle systems operate.
- Identifies a future pedestrian and bicycle network and a prioritized list of pedestrian and bicycle projects for those networks.

Chapter Contents

- ▶ ADA requirements
- ▶ Pedestrian System
 - Existing Inventory
 - Needs Analysis
 - Recommendations
 - Costs
- ▶ Bicycle System
 - Existing Inventory
 - Needs Analysis
 - Recommendations
 - Costs

Primary Source:

Kent Non-Motorized
Transportation Study prepared
by The Transpo Group (2007)

Spatial Analysis

GIS technology provides a powerful way to see things in context. Spatially explicit models study relationships between population, land use, and the environment. Mapping can also be very useful in assessing the validity of survey data.

The ADA, enacted by Congress on July 26, 1990, provides comprehensive civil rights protections to persons with disabilities in the areas of employment, state and local government services, access to public accommodations, transportation, and telecommunications.

The inventory of the existing pedestrian and bicycle system was integrated into the Kent Geographic Information System (GIS). The GIS data were used to conduct spatial analyses to identify priority pedestrian and bicycle improvements, while considering accessibility to public transit, schools, parks, civic centers and other critical factors. The Non-motorized Transportation Study was coordinated with the other modal elements and financial planning efforts in the larger Transportation Master Plan effort.

Americans with Disabilities Act (ADA)

The Kent Non-motorized Study addressed the guidelines and regulatory requirements of the Federal Americans with Disabilities Act (ADA). Of the five titles or parts to the ADA, Title II is of most concern to the City of Kent. Title II requires a public entity to evaluate its services, programs, policies, and practices to determine whether they are in compliance with the nondiscrimination requirements of the ADA. The ADA requires that a Transition Plan be prepared, to describe any structural or physical changes required to make programs accessible to all and to outline how they will be made. This chapter will serve as the Transition Plan to meet ADA Title II requirements.

The Pedestrian Plan

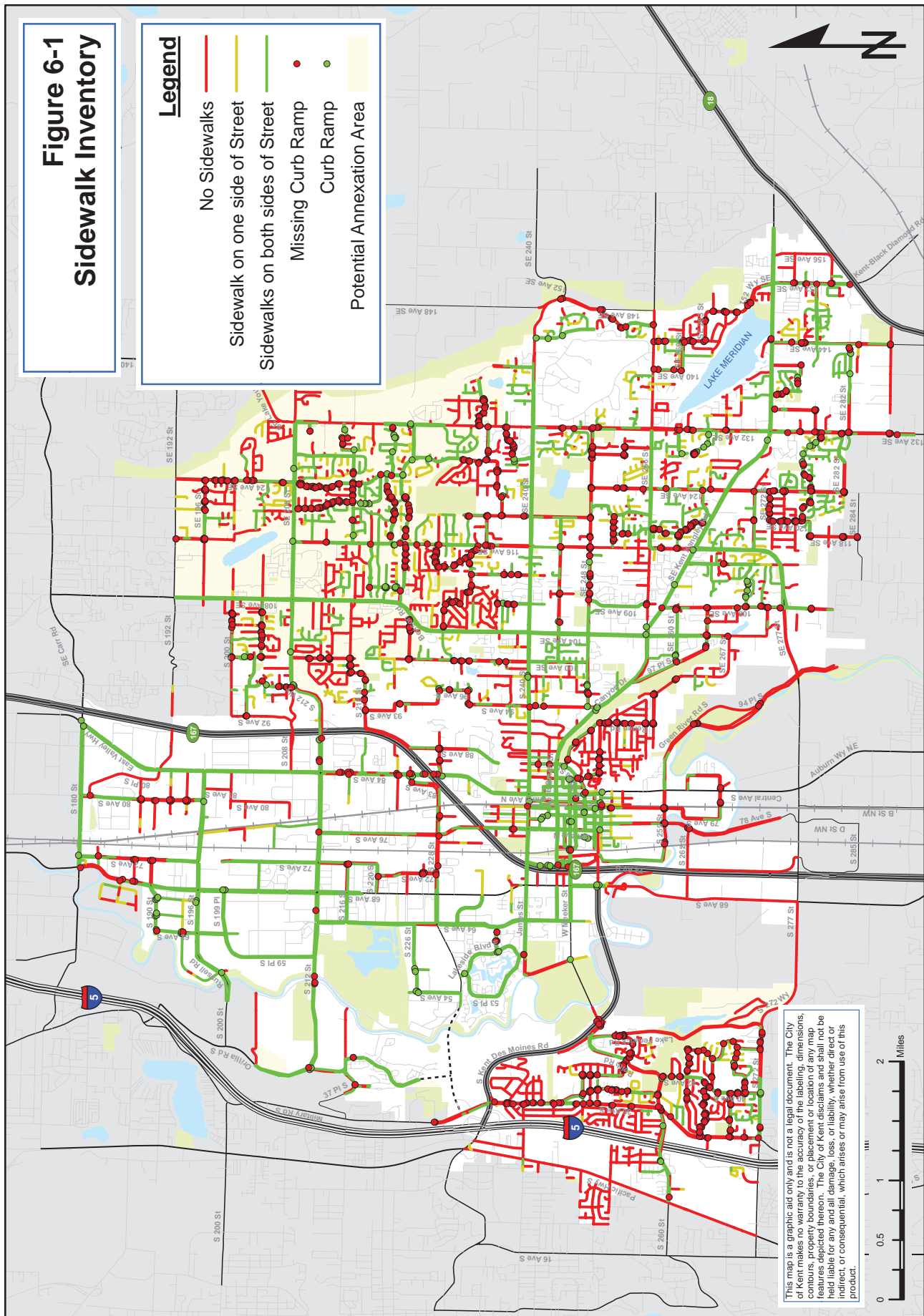
Commensurate with the ADA requirements for inventory and self-evaluation, the City targeted a significant portion of the overall Non-motorized Transportation Study to complete a walking inventory of the major street-side pedestrian system within the Kent urban area. The pedestrian plan was developed to address the needs identified during the assessment of the existing system; community priorities helped the City sort short term and long term projects.

Existing Inventory

In early 2005, the City inventoried the pedestrian facilities along Kent's major streets. The GPS data collection was focused on arterial and collector streets, while local (residential) streets were inventoried using the most current aerial photograph and the City's GIS database. The resulting inventory, shown in **Figure 6-1**, is a map and database of existing and missing sidewalks and curb ramps. The inventory database, formatted specifically for GIS analysis, was added to the City's other GIS-based mapping themes for analysis and evaluation. More than 450 miles of existing and missing sidewalks and 1,950 street corners (curb ramps) were inventoried and assessed as part of Kent's required self-evaluation.

Figure 6-1 Sidewalk Inventory

- Legend**
- No Sidewalks
 - Sidewalk on one side of Street
 - Sidewalks on both sides of Street
 - Missing Curb Ramp
 - Curb Ramp
 - Potential Annexation Area



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Sidewalks

The sidewalk analysis collected information on several characteristics, including the surface conditions, the width, heaving and cracking issues, obstacles blocking portion of the sidewalks, driveway crossings, and missing sidewalks.

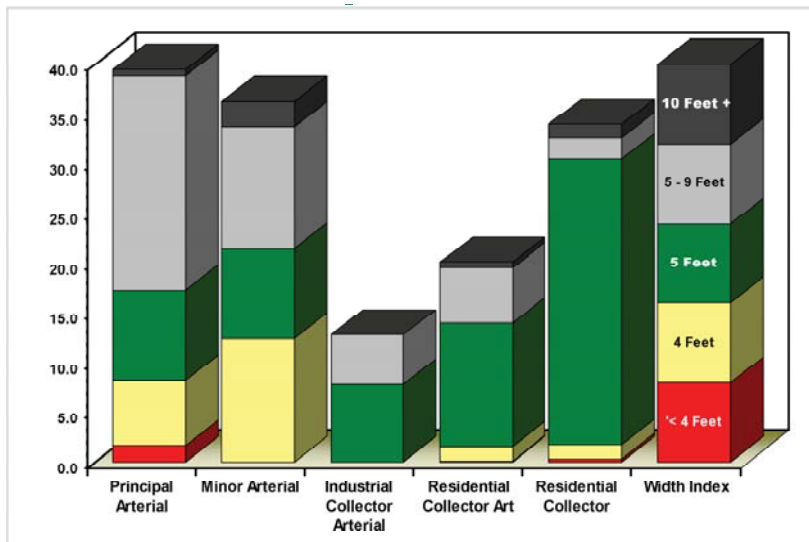
Sidewalk Surface Conditions.

The older developed areas of the City have a larger portion of older sidewalks needing repair and needs for new sidewalks where they are currently missing. In some cases these areas were developed prior to the current sidewalk design standards and/or site development standards that required sidewalks to be built on both sides of the street. Older Kent neighborhoods have a greater number of missing sidewalks and sidewalks in poor condition.

Sidewalk Widths

In the study area, most existing sidewalks are at least four feet wide and most are wider than five feet, as shown in **Figure 6-2**. Only a small percentage of existing sidewalks are less than four feet wide, mostly along some Principal Arterials. Not all of the existing sidewalks are free of obstacles that reduce the effective clear width (minimum of four feet), but the fact that the majority of existing sidewalks are at least four feet or wider is an excellent starting point.

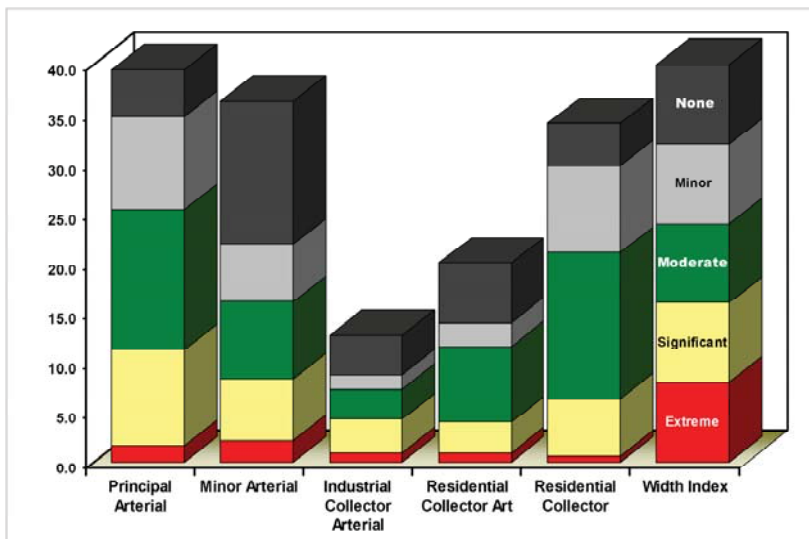
Figure 6-2. Width of Existing Sidewalks



Sidewalks with Heaving and Cracking

Sidewalks with heaving and cracking can be problematic for pedestrians with limited mobility. Only a small portion of the study area sidewalks have significant or extreme heaving and cracking conditions, as shown in **Figure 6-3**. Many of these sidewalks are located along principal and minor arterials next to buffer strips where older trees are causing heaving.

Figure 6-3. Sidewalks with Heaving and Cracking



Sidewalks with Obstacles

The inventory program was developed specifically to identify the location, type and density of fixed and removable obstacles found along existing sidewalks. Fixed obstacles are considered those that reduce the pedestrian clear width to less than four feet. A high percentage, 97 percent of existing sidewalks are free from fixed obstacles. Review of the data indicates that mailboxes are the predominant type of fixed obstacles. Street trees are also a common occurrence. While utility pole obstacles are less frequent,

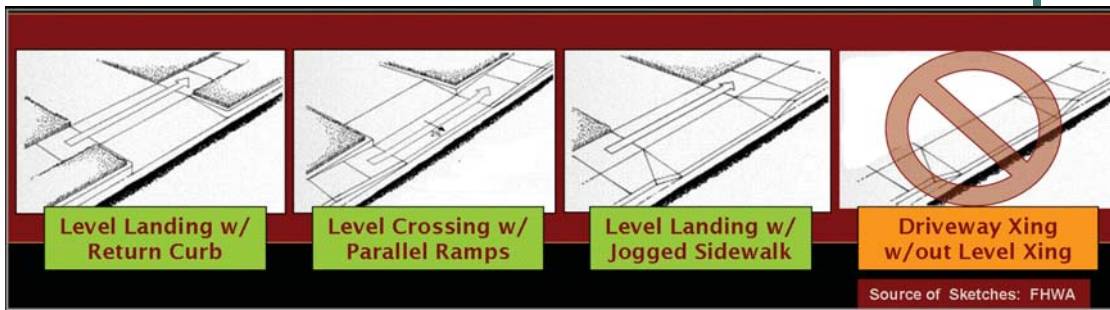
they are likely the most difficult and expensive fixed obstacle to remove from the sidewalk area.

A variety of moveable obstacles were noted in the inventory, including advertising message boards, sometimes referred to as “sandwich” boards. Along residential collector streets, in particular, the presence of parked cars was noted as a significant movable obstacle that hinders pedestrian travel. Along residential streets a variety of movable obstacles were identified in the inventory. Over 4 miles of existing sidewalks were noted as having some type of movable obstacles that hindered pedestrian mobility. Removal of these kinds of obstacles is often corrected by enforcement.

Driveway Crossings on Sidewalks

Figure 6-4 illustrates a number of different driveway crossing examples. The type of driveway crossing design can also be a factor in pedestrian mobility. A large number of older sidewalks were constructed without level landings, especially along principal and minor arterials. The City has revised its sidewalk standards to require level sidewalks as they cross driveway access points.

Figure 6-4. Examples of Driveway Crossing Treatments



Missing Sidewalks

In general, and over the past 10 to 20 years, the City has been ensuring that sidewalks are constructed on both sides of new streets. As a result, newer subdivisions have few missing sidewalks. A greater number of streets with missing sidewalks are located within older neighborhoods.

Figure 6-1 illustrates the location of existing and missing sidewalks throughout the City. Approximately 53 percent of Kent’s streets have sidewalks on at least one side. Local street sidewalks constitute about 40 percent of the total sidewalk mileage within the Kent urban area. For non-local street sidewalks, most of the existing sidewalks are located along principal arterials, minor arterials and residential collector streets. Only about 18 percent of the sidewalks have some form of a buffer that separates sidewalks from the street and curb section.

Curb Ramps

Of the more than 1,950 street corners inventoried along existing sidewalk corridors, only about 8 percent are missing curb ramps. All other corners have some type of curb ramp to assist the mobility-impaired pedestrian when crossing the street. Characteristics of the existing curb ramps collected include the ramp type, width and top landing.

Keep sidewalks passable. Kent-Kangley from 132nd to Lake Meridian is overgrown with weeds to point of safety concern. Tough for 2 people to walk side by side. Please clean these!

Website Commentor

There needs to be a crossing light at SE 256th and 140th Ave SE (Meridian Elementary). ... I walk and bike less than I used to because of heavy traffic on SE 256th Street. I'm afraid to cross SE 256th Street. People don't stop for me when I wait at the crosswalk at 140th Street.

Website Commentor

A number of the existing curb ramps are essentially ADA non-compliant. ADA non-compliance can generally mean that: (a) the ramp width is too narrow; (b) the top landing is either missing or too narrow; or, (c) the ramp slope is too steep. Many of the non-compliant ramps were built before the ADA was passed.

Needs Assessment

As there are many more pedestrian needs than dollars available, the City has to prioritize pedestrian improvements. The prioritization method must consider the relative cost of a needed improvement. The City seeks to select projects within areas of Kent that require higher levels of pedestrian accessibility. A pedestrian priority index (PPI) was developed based on separate index measures for physical characteristics, called “attributes”, and for destinations and activities accessed by walking, called “accessibility” characteristics.

Attribute Index

A higher attribute index value reflects a poorer condition of the existing sidewalk or curb ramp. For example, a curb ramp that scores 35 points (out of a possible 35 points maximum for prioritized need) would reflect the following conditions:

- Top Landing: Missing
- Ramp Width: Less than 3 Feet
- Ramp Slope: Exceeds 8.3 %
- Surface Condition: Very Poor
- Alignment: At Angle with Curb Line
- Cross-Slope: Exceeds 2 %
- Gutter Slope: Exceeds 2 %

Attribute Index

The City prioritized the pedestrian improvements by assigning each sidewalk segment and curb ramp in the GIS database an attribute index value. Sidewalks were scored in seven categories with a maximum possible score of 35, as seen in the box to the left.

The attribute index enables the City to consistently measure and quantify problematic sidewalks and curb ramps that may pose as obstacles to the mobility-impaired. The Attribute Index scoring values for sidewalks, missing sidewalks, curb ramps and missing curb ramps were a maximum of 5 points each.

Each existing sidewalk and curb ramp identified for each pedestrian attribute was given a condition rating, ranging from very poor to good or excellent. The current pedestrian system attributes in the poorest condition (or missing) were scored highest in the Attribute Index as the segments in greatest need for improvement.

Accessibility Index

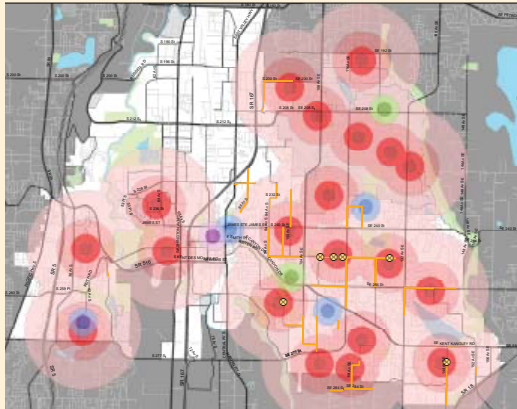
The accessibility index identified the proximity of pedestrian facilities to various important trip generators and other transportation facilities noted below. Accessibility indices were established by measuring and scoring the proximity of existing and missing sidewalk segments. Sidewalks were scored in 11 categories from 1 to 5, with a maximum score of 55.

- Schools (by school type, crossings and walk-to-school routes)
- Civic /commercial centers
- Parks
- Transit (routes and bus stops)
- Traffic signals (street crossing access)
- Street functional classification (type and level of auto/truck traffic conflict)
- Lower income residence
- Mobility-impaired residence
- Population/employment density
- Senior/adult housing
- Walk-to-work (US Census of areas with high walk-to-work mode split)

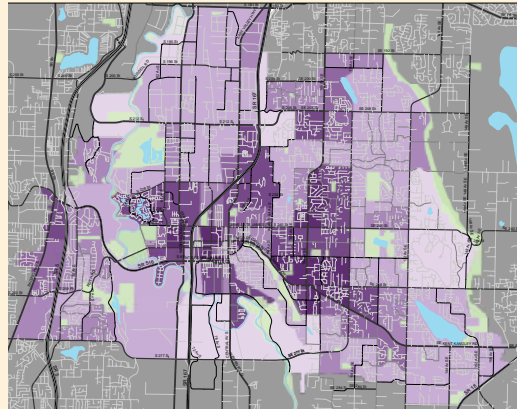
The accessibility measures were coordinated and ranked by the Kent TMP Task Force. To reflect the community’s priority, a slightly higher emphasis was placed on accessibility improvements near schools or along walk-to-school routes, and those near transit facilities.

Accessibility Index Categories

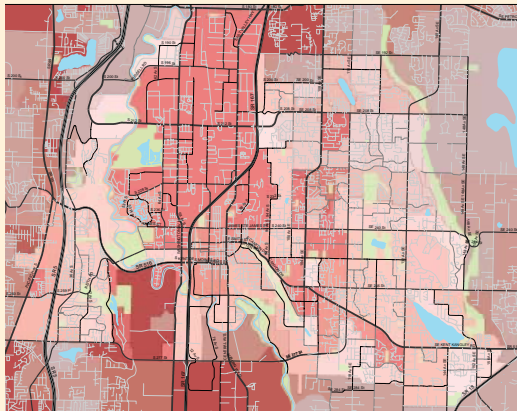
Walk to School Routes



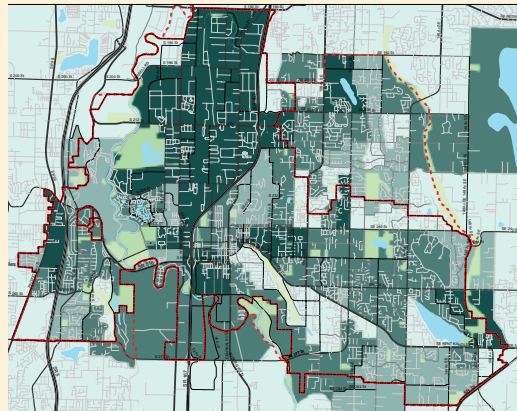
Population & Employment Density



Population Below Poverty Level



Population with Disabilities



These charts represent four of the categories used to measure accessibility to important trip generators. The darker the color the greater the need.

Pedestrian Priority Index (PPI) Composite Score

A composite pedestrian priority index (PPI) was developed using the attribute and accessibility indices. The map in **Figure 6-5** shows that areas in darker shading reflect higher pedestrian accessibility index values. The map also shows streets with missing sidewalks (automatically mapped and graded as “very poor”) or existing sidewalks in poor condition. Those poor or missing sidewalks within the darkest shaded areas are ranked the highest in priority for future improvements. The City used these values and scoring system as the basic input when prioritizing the pedestrian system improvements. Potential sidewalk or curb ramp improvements with the highest composite PPI score have the highest priority for future project completion.

*The community believes that the quality of the pedestrian and bicycle systems have a strong relationship to the quality of life in Kent
The TMP Task Force*

Figure 6-5 Pedestrian Priority Index

Legend

Attribute Index

Sidewalk Value

- 1 - 10 Very Good
- 11 - 15 Good
- 16 - 30 Poor
- 31 - 35 Very Poor

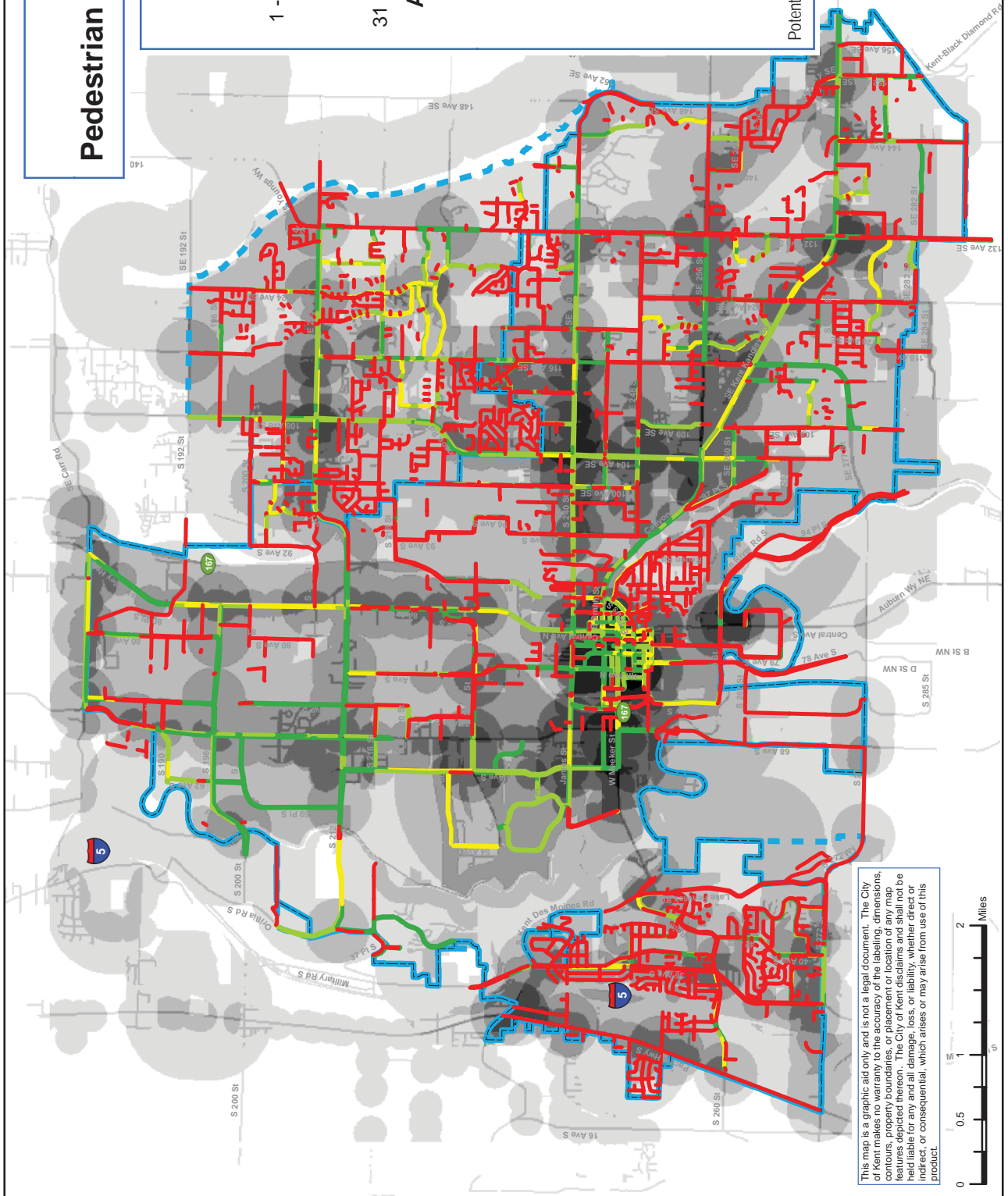
Accessibility Index

Background Value

- 0 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 - 59

City Limits

Potential Annexation Area



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Pedestrian Facility Recommendations

The Composite PPI was applied to all sidewalk segments and curb ramp locations, including missing sidewalk segments and missing curb ramps. Four priority levels were assigned to all possible pedestrian improvements: highest, high, medium, and low.

Funding for pedestrian improvements is scarce and the number of projects greatly exceeds the resources. Therefore, only the projects scoring in the top three categories are potentially fundable within the next 20 year planning period. More details about these projects - new sidewalks, sidewalk repairs and new curb ramps and repairs - are provided in the Non-motorized Transportation Study and summarized below.

The pedestrian plan identifies sidewalk and curb ramp improvements and their costs. For the TMP, projects are categorized in two major priority groups:

Highest / High - projects that can likely be funded within the next 20 years (generally based on traditional funding sources and levels), and

Medium - projects that are constructed as additional funding becomes available, likely beyond the 20-year planning period.

Pedestrian Improvements include three types of projects .

- New Sidewalks
- Sidewalk Repairs
- New Curbs and Ramps

New Sidewalks

Installing new sidewalks along critical street corridors helps remove significant obstacles to pedestrians of all types. Those streets that currently do not have sidewalks on one or both sides of the street are identified in this chapter for the installation of new sidewalks. These projects, totaling more than 100 miles in new sidewalk construction, provide important system connections to major pedestrian trip generators and safety enhancements for pedestrians traveling along busy city arterial streets. Medium priority projects are located more on the periphery within the urban area.

Figure 6-6 and **Figure 6-7** map and illustrate the high/highest and medium priorities. These figures also illustrate a sizeable increase in new sidewalks that will be constructed as part of the street plan development (see Street Chapter 5), which are not itemized in terms of stand-alone pedestrian system needs. Major street projects that add critical sidewalk connections and help complete the pedestrian system include: *Military Road; W Meeker Street; SE 256th Street; 116th Avenue SE; 132nd Avenue SE.*

Other new sidewalks would be built in areas around schools and parks, and near civic and commercial centers. Many of the new sidewalk needs are found along Local streets within neighborhoods, as is the case for the Highest and High priority projects. The Highest/High priority pedestrian system improvements include the completion of sidewalks along Principal and Minor Arterial streets, including portions of: *Military Road; Reith Road; Kent-Des Moines Road; E Smith Road; SE 248th Street; Canyon Drive.*

The TMP Task Force was essential in helping to establish pedestrian priorities and in the review and general consensus of draft pedestrian plan recommendations—mainly the pedestrian system plan maps.

What the Community said about Pedestrian Improvements

The community voiced their ideas about the most important transit needs after attending one of the City's TMP open houses, reading the TMP newsletter, or reviewing the TMP website. Many people identified the need for installation of more sidewalks throughout the city and overall safety improvements (such as overhead lighting). Some specific projects identified were sidewalk improvements on Military Road, Reith Road (particularly around 260th Avenue), 132nd Avenue, 116th Avenue, and 248th Avenue.

Sidewalk Repairs

Reconstructing existing sidewalks with significant structural problems can greatly improve pedestrian safety and access, particularly for the young, elderly and mobility-impaired pedestrians. Existing sidewalks were identified for reconstruction if they are currently rated with either (a) significant-extreme heaving and cracking, (b) substandard width (less than four feet in width), or (c) below average or very poor surface condition. Slightly more than 25 miles of existing sidewalks are in need of repair within the Kent urban area. **Figure 6-8** maps those existing sidewalks that should be reconstructed due to poor conditions. Many of the sidewalks on streets in the downtown area are in need of repair. Other critical corridors in need of sidewalk repairs include portions of *Reiten Road*, *Kent Kangley Road*, *104th Avenue SE*, *84th Avenue S* and *SE 208th Street*.



New Curb Ramps and Repairs

Installing new curb ramps in critical locations will significantly remove obstacles for the mobility-impaired pedestrian. Those street corners that currently do not have curb ramps were identified in the Plan for the installation of new curb ramps. Some of Kent's older curb ramps are in such poor condition that they are more a hindrance and barrier to pedestrians than they are helpful. Through reconstruction these curb ramps can provide the needed safety and access improvements for the mobility-impaired and others. Existing curb ramps were identified for reconstruction if they are currently rated with either (a) very poor surface condition, (b) non-compliant ramp width (less than 3 feet wide), (c) non-compliant top landing (missing or less than 3 feet wide), or (d) non-compliant ramp slope (8.4% or greater).



Individual curb ramp projects are not mapped in this chapter but are included within the City GIS database for reference in project planning. However, the cost for new curb ramps and curb ramp replacements are included in the following section.

Figure 6-6
Pedestrian System-Highest and High Priorities

Legend

New Sidewalk Priorities


Highest

All Classifications 


High

Principal Arterial 


Minor Arterial 


Residential Collector Arterial 

Industrial Collector Arterial 

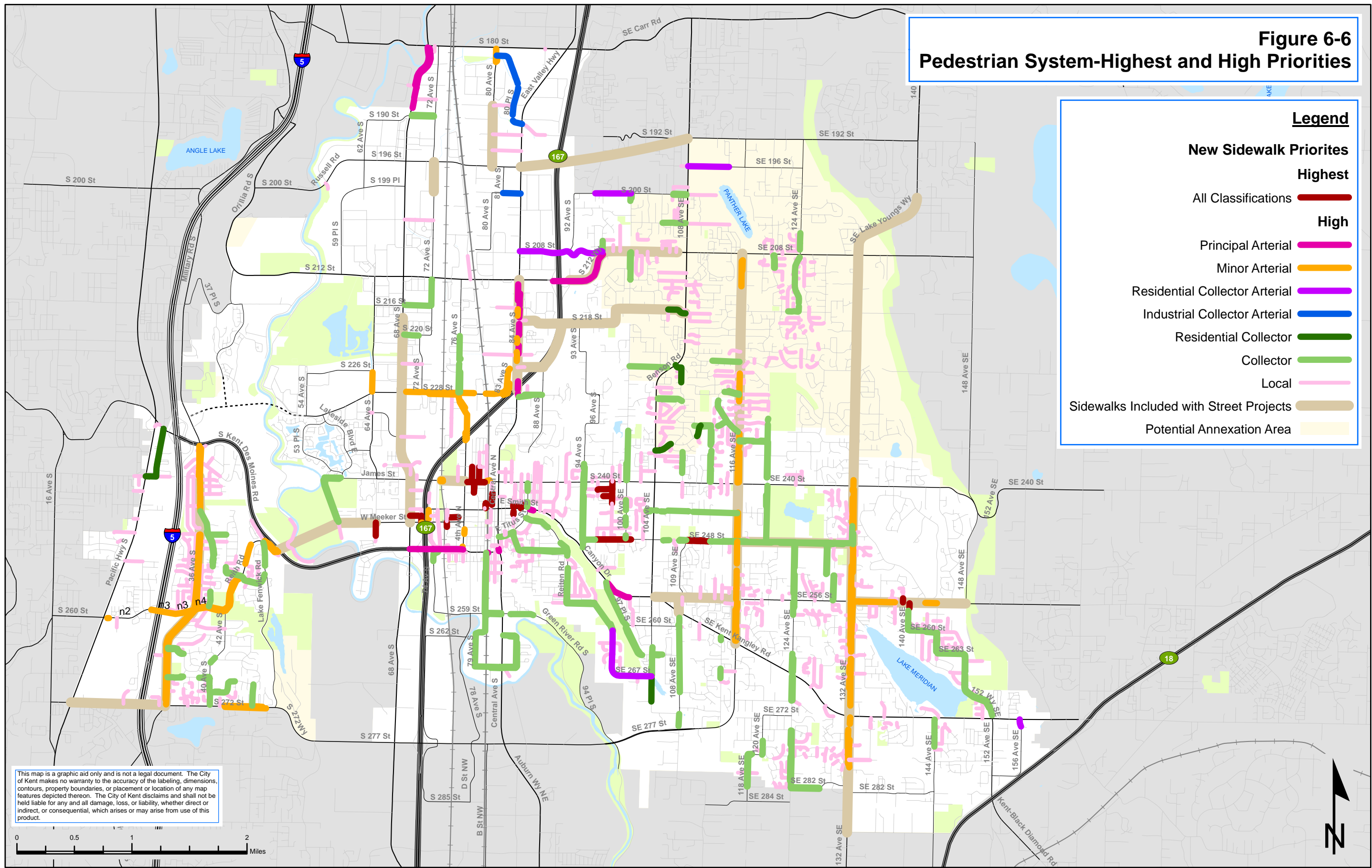
Residential Collector 

Collector 

Local 

Sidewalks Included with Street Projects 

Potential Annexation Area 



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**Figure 6-7
Pedestrian System-Medium Priorities**

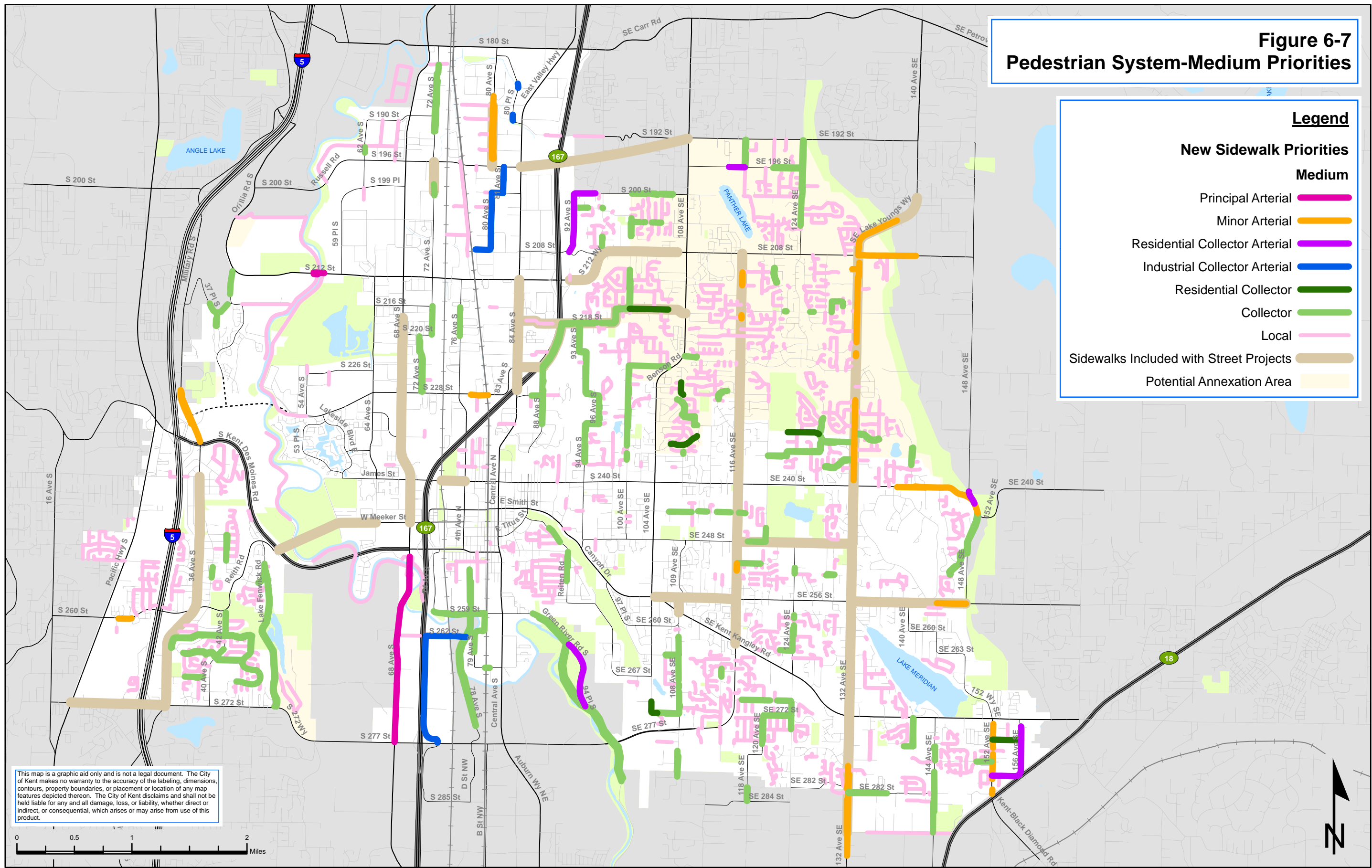
Legend

New Sidewalk Priorities

- Principal Arterial █
- Minor Arterial █
- Residential Collector Arterial █
- Industrial Collector Arterial █
- Residential Collector █
- Collector █
- Local █

Sidewalks Included with Street Projects █

Potential Annexation Area █



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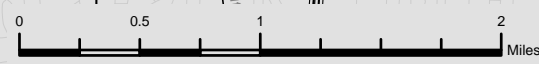


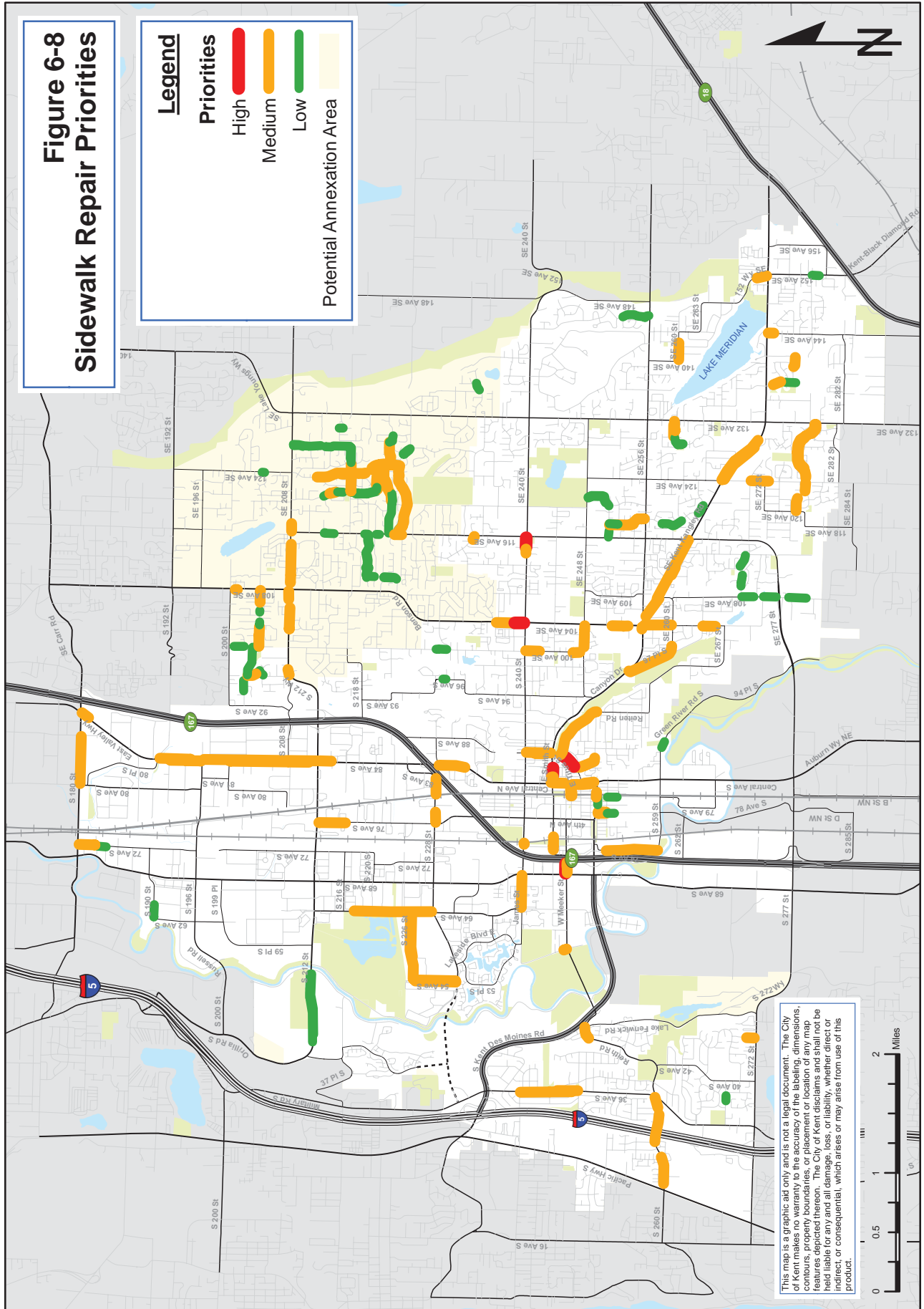
Figure 6-8 Sidewalk Repair Priorities

Legend

Priorities

- High █
- Medium █
- Low █

Potential Annexation Area



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Pedestrian Facility Cost Estimates

Planning-level Costs

The City prepared a set of planning-level unit cost measures to estimate the cost of the future pedestrian improvements. These costs were not necessarily reflective of actual costs, but provided a comparative basis for establishing priorities and evaluating future programs. All pedestrian system improvements were assigned a planning-level cost estimate.

The cost to build new and improved sidewalks and curb ramps fully compliant with the ADA is estimated at about \$174 million. **Table 6-1** summarizes these pedestrian improvement cost estimates by priority and improvement type. Not all pedestrian improvements are essential for system pedestrian mobility and access.

The cost of constructing new sidewalks is the largest of all improvement costs, and the greatest portion of these costs is amongst the “medium” and “low” priorities. Low priority, new sidewalk improvement needs are essentially in areas outside many or all of the accessibility measures calculated as part of the study. The “highest” (\$2.0 million) and “high” (\$ 33.4 million) priority pedestrian improvements are the focus of the recommended projects. These improvements are located in areas where pedestrian activity is highest (near schools and transit stops, or near dense population and employment centers) and needed accessibility improvements are greatest (along or across busy arterials or near civic buildings).

Table 6-1. Pedestrian Plan Improvement Costs

Pedestrian Improvements	Priority				
	Highest	High	Medium	Low	TOTAL
New Sidewalk	\$1.3	\$32.1	\$67.9	\$62.7	\$164.0
Sidewalk Repairs		\$0.2	\$3.2	\$0.9	\$4.3
New Curb Ramps	\$0.2	\$0.4	\$2.2		\$2.8
Curb Ramp Repairs	\$0.5	\$0.7	\$0.5	\$1.2	\$2.9
Total	\$2.0	\$33.4	\$73.8	\$64.8	\$174.0

(2006 dollars, in millions)

The costs of the combined “Highest/High priorities, when averaged over 20 years, results in an annual cost of about \$1.7 million to add or repair over 100 miles of sidewalks and curb ramps in Kent’s critical corridors.

The Bicycle Plan

Bicycling has become more common over the past decade. There are a variety of bicyclists traveling within Kent; depending on their skills, confidence and preferences, they use the facilities differently.

Existing System

The City of Kent urban area spans both the west and east plateaus on either side of the valley floor, home of the city center. Overcoming the steep terrain has been a major engineering and design issue, for both streets and bicycle system features. Other transportation constraints that have limited bicycle system connectivity in the Kent urban area include SR-167 and the two major railroads. Green River is both a barrier to east-west bicycle travel and also a partial asset with the development of the Green River Trail facilities. As a result of the terrain and barriers, Kent’s bicycle system has



many excellent features but is lacking a cohesive and connected system.

The City inventoried the bicycle system including bicycle lanes, shared-use paths and shared travel lane facilities. The inventory expanded the City’s bicycle planning database to allow assessment and identification of bicycle corridor enhancements that would fill in gaps in the bicycle system. **Figure 6-9** illustrates the existing bicycle system in Kent.

Bicycle Needs Assessment

Two fundamental building blocks are needed in understanding the study of Kent’s bicycle system: (1) a baseline definition of the various terms and language used in describing bicycle facilities, and (2) acknowledging the physical constraints which have limited Kent’s bicycle system development.

Past City plans include a “Bikeway” or “Bikeway Route” network, some of which may be implied to mean on-street bicycle lanes. **Figure 6-10** illustrates the basic forms of bikeway facilities similar to those that the City of Kent has historically used and will be embodied in future bicycle system improvements shown in Figure 6-11.

Defining Bicycle Users

There are a variety of bicyclists traveling within the study area, depending on their skills, confidence and preferences. The bicyclists fall into the following categories of users. Each category based on the skills and goals of riders, favors a different bicycle facility type.

Advanced or experienced riders are generally using their bicycles as they would a motor vehicle. They are riding for convenience and speed and want direct access to destinations with a minimum of detour or delay. They are typically comfortable riding with motor vehicle traffic; however, they need sufficient operating space on the traveled way or shoulder to eliminate the need for either themselves or a passing motor vehicle to shift position.

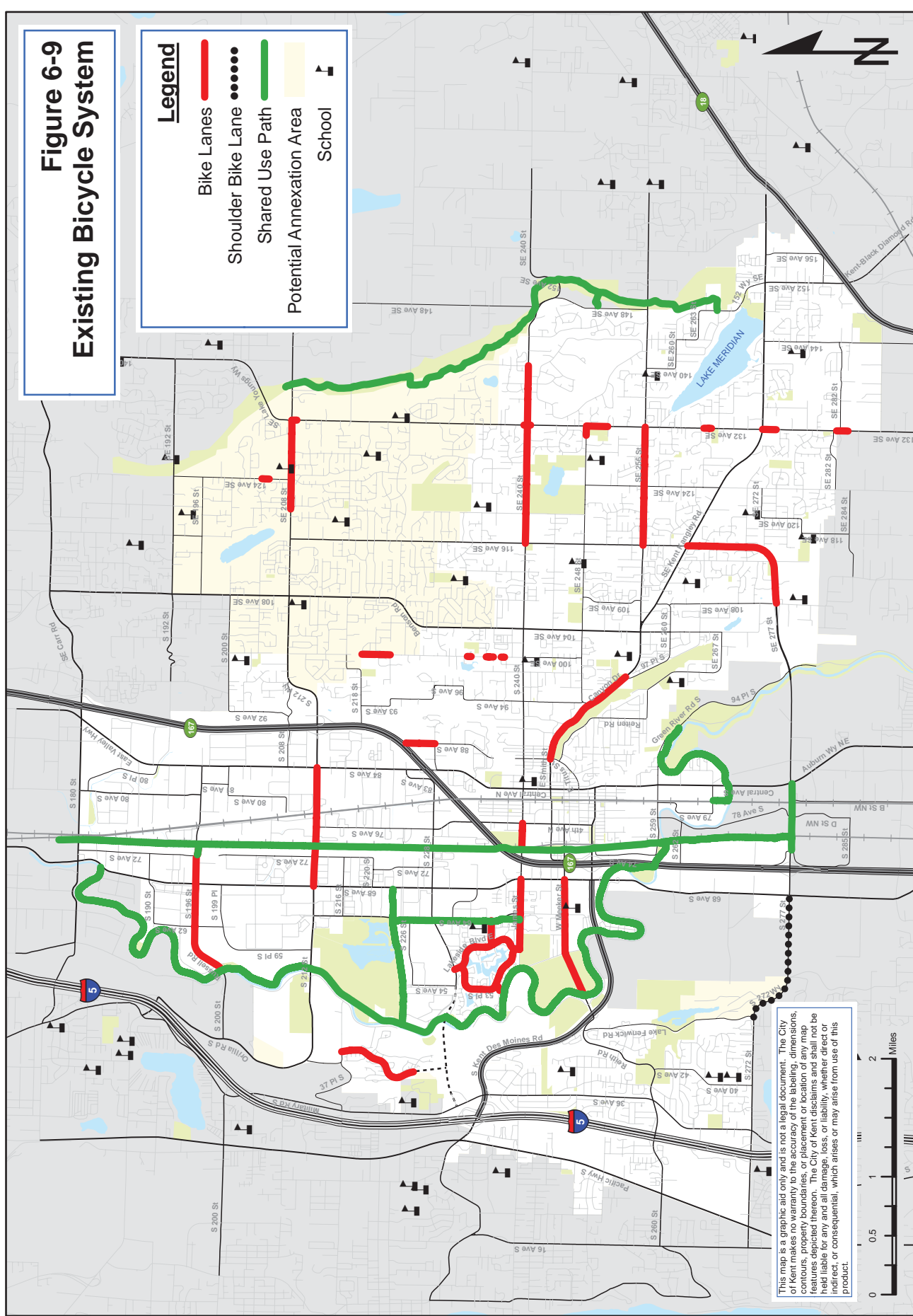
Basic or less confident adult riders may also be using their bicycles for transportation purposes, e.g., to get to the store or to visit friends, but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by faster motor vehicles. Thus, basic riders are comfortable riding on neighborhood streets and shared use paths and prefer designated facilities such as bike lanes or wide shoulder lanes on busier streets.

Children, riding on their own or with their parents, may not travel as fast as their adult counterparts but still require access to key destinations in their community, such as schools, convenience stores and recreational facilities. Residential streets with low motor vehicle speeds, linked with shared use paths and busier streets with well-defined pavement markings between bicycles and motor vehicles can accommodate children without encouraging them to ride in the travel lane of major arterials.



Figure 6-9 Existing Bicycle System

- Legend**
- Bike Lanes
 - Shoulder Bike Lane
 - Shared Use Path
 - Potential Annexation Area
 - School



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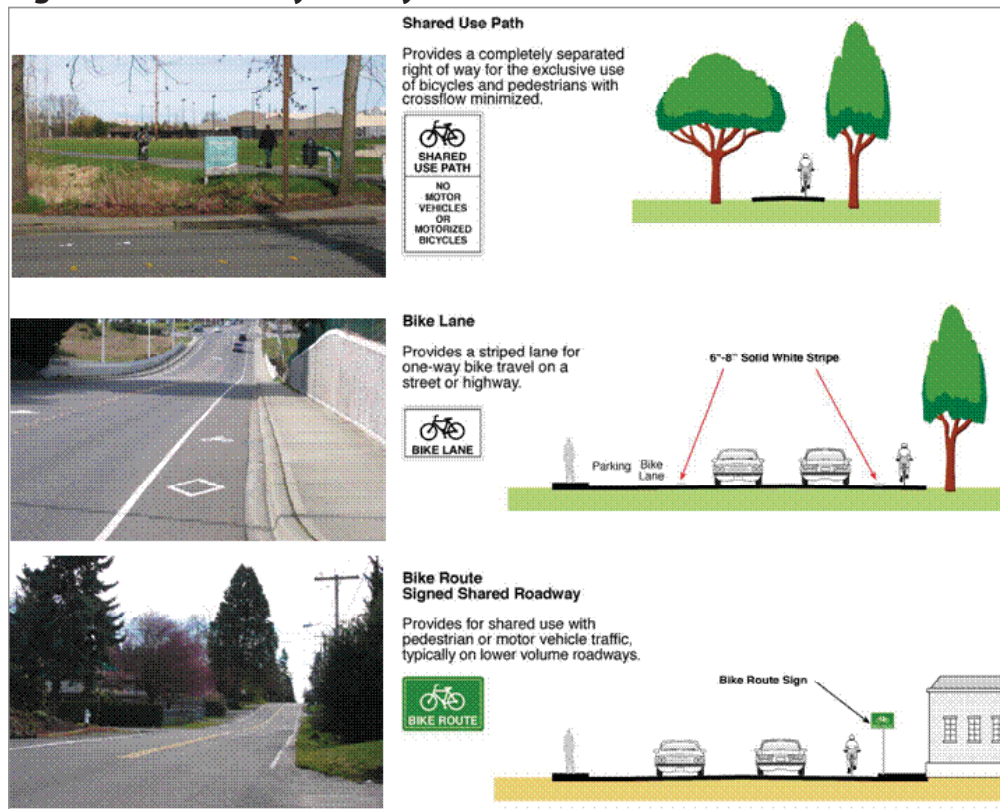
Evaluating the Needs

The City worked with the TMP Task Force and the City’s Bicycle Advisory Board to identify candidate corridors for bicycle lane and route enhancements. The recommended bicycle system will expand along corridors to provide better links with major areas of the City, especially between downtown and the east and west Kent neighborhoods.

The TMP Task Force was essential in helping to establish bicycle plan recommendations. The map indicates the priority bicycle projects identified to be constructed over the next 20 years in Kent. In addition, the Kent Bicycle Advisory Board provided review and comment on the draft bicycle system map. Their initial comments were considered by the Task Force and reflected in the final map.

Kent will continue to work with its neighboring cities and King County to expand and enhance the regional pedestrian and bicycle networks.

Figure 6-10. Bikeway Facility Definitions



Bicycle System Plan

Priority was placed in the process to identify opportunities to build new (as part of street projects identified in the Transportation Master Plan) or re-stripe existing arterial streets with bicycle lanes to close critical gaps in the existing system. The City is tasked with trying to effectively connect its east and west neighborhoods to downtown and industrial employment centers by means of overcoming extremely steep terrain and crossing the Green River, two sets of railroad tracks and SR 167. There are limited corridors making these connections, and in each corridor the public rights-of-way are constrained or already filled with needed sidewalk and travel lane capacity. The study examined a number of options to help connect the bicycle system within and through the urban area.

For example, along existing streets where space is limited (existing travel lanes and curb/sidewalks) or there are underlying design constraints (such as steep terrain

bicycle lane re-striping was found to be impractical. As an alternative to bike lanes, striping and posting many of these routes as shared lanes are recommended.

Many cyclists in Kent enjoy the existing shared-use path (trail) system, particularly for recreation, but for some commuter traffic as well. The Interurban Trail is heavily utilized as a commuter route to downtown Kent and through the City north and south. A series of new shared-use path connections are identified along Green River and Soos Creek.

Figure 6 - 11 maps the existing and planned bicycle system for the Kent urban area. The next page shows more detail for downtown streets. The bicycle system plan includes re-striping about 27 miles of bicycle lanes, 19 miles of shared-use lane routes, and over 9 miles of new shared-use paths to fill critical gaps in Kent’s bicycle system.

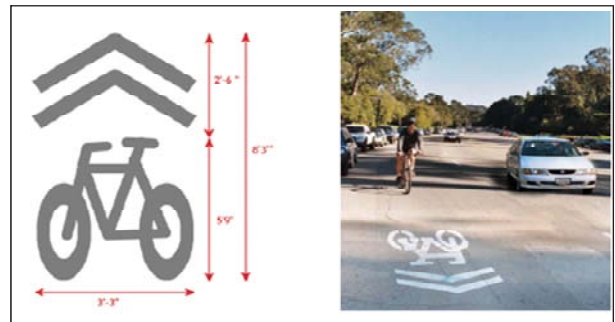
New Bike Lanes

As seen in Figure 6 -11, the arterial street improvements identified in the Transportation Master Plan will add significant mileage to the bike lane network, including major sections of:

- Military Road
- SE 248th Street
- SE 256th Street
- 116th Avenue SE
- 132nd Avenue SE

Several arterial streets have sufficient paved width for the possibility of re-striping travel lanes to accommodate on-street bike lanes (see the Non-motorized Transportation Study for design guidance on marking and posting bike lanes). These routes provide critical linkages to major cycling activity centers, particularly in downtown, and connections to the shared-use path system. These streets include:

- S 260th Street/S 259th Place/Reith Road
- 76th Avenue S/4th Avenue N
- Meeker Street
- 92nd Avenue S/SE
- 200th Street
- 132nd Avenue SE
- S 212th Street



Shared-Lane Routes

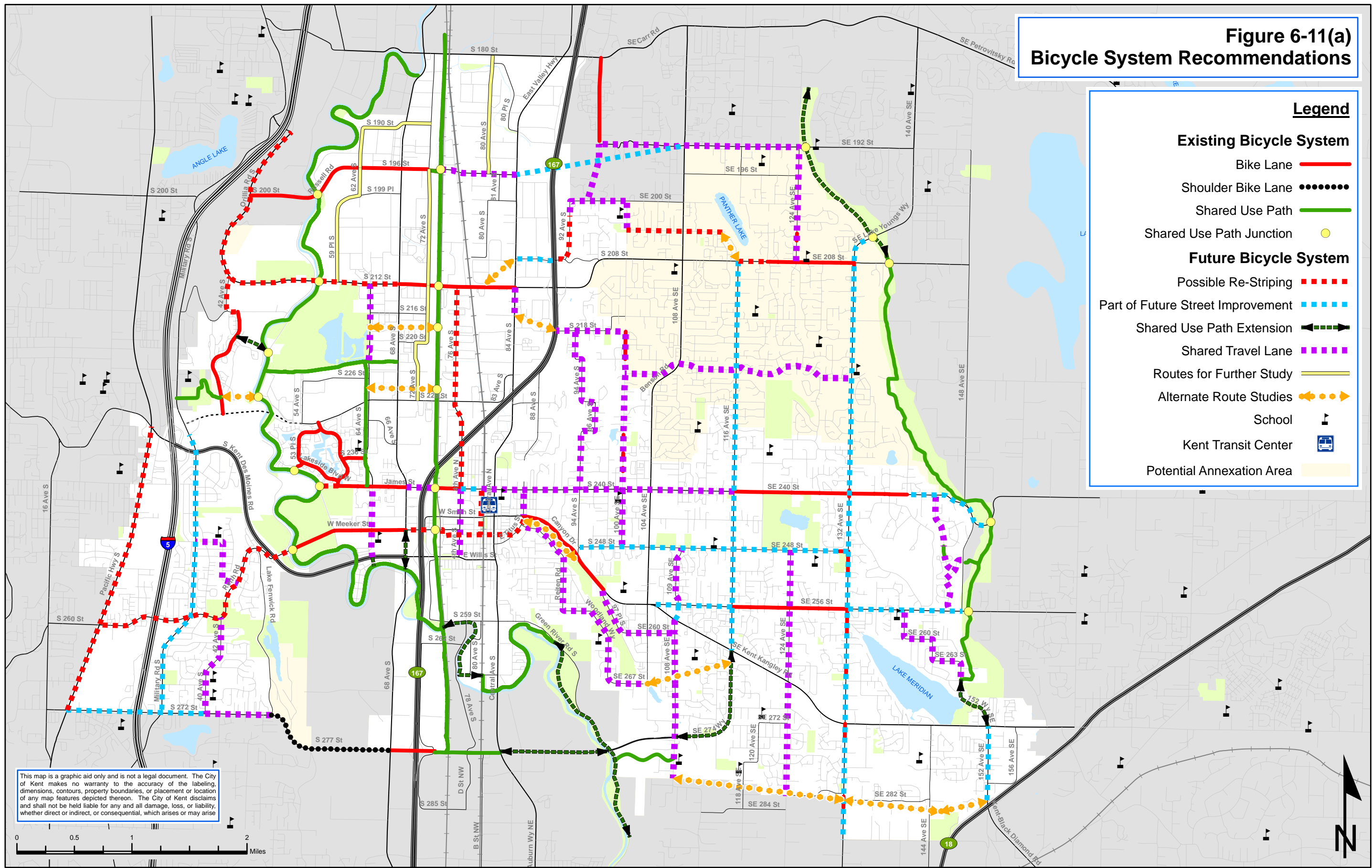
For the several major corridors that are severely constrained in width, it is difficult to re-stripe the existing streets without removing important travel lane vehicular capacity or incurring significant costs to purchase new right-of-way to widen existing streets. The use of “sharrow” symbols, and sign-posting shared-use routes can help inform motorists and cyclists of those critical corridors intended for significant bike use. See the non-motorized study for additional information on marking and posting shared-lane routes.

As illustrated in Figure 6 -11, the proposed shared-lane routes provide critical linkages for cyclists in a number of corridors, including: *Cambridge Street, South 72nd Street, 64th Avenue S, 94th Avenue S, 96th Avenue and Talbot Road, 100th Avenue SE, 108th Avenue SE, 124th Avenue SE, Reiten Road, James Street, SE 224th Street, and SE 192nd Street.*

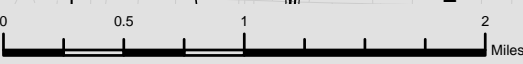


New Bike Lanes on SE 256th Street

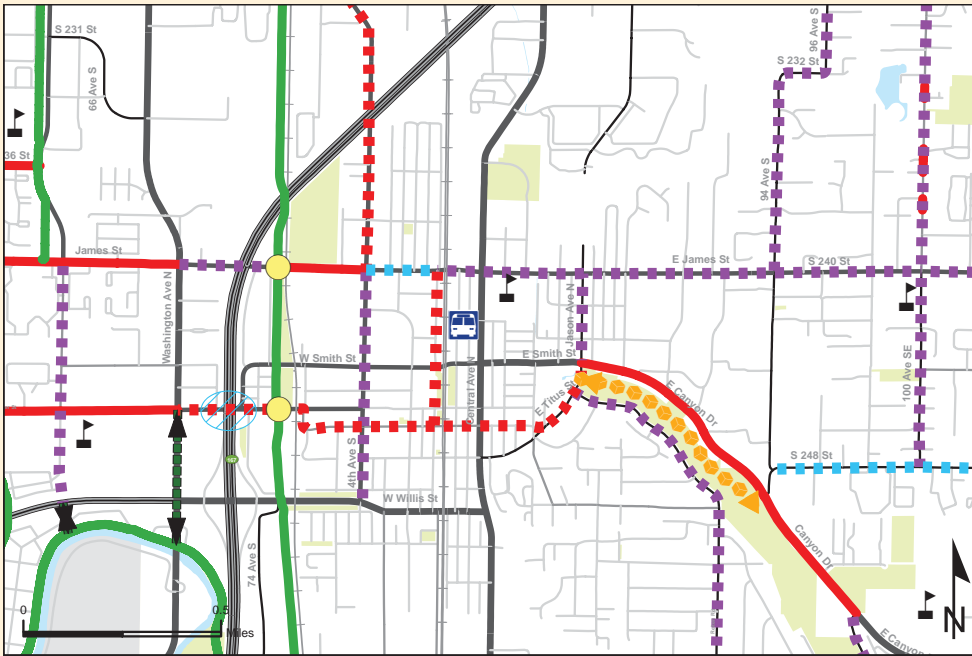
Figure 6-11(a)
Bicycle System Recommendations



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Downtown Bicycle Facilities



The downtown area is shown in greater detail to provide more information about the types of cycling facilities available.

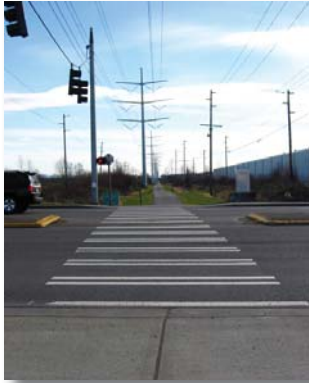
Shared-Use Path Extensions and Connections

The extension of the Green River and Soos Creek trails to the perimeter of the urban area will provide important linkages for future trail users, and provide greater regional access, especially for commuter and recreational cyclists and pedestrians. There are also a number of locations where greater access to the Green River Trail can help develop important east-west bike routes, particularly near Grandview Park and the extension of the Uplands Greenbelt to the Interurban Trail. These projects will require significant design efforts, considering the level of topographic and environmental constraints.

Shared-use paths usually intersect major city arterials at critical junctions. The city has already programmed in the current TIP, intersection traffic control enhancements at some of the Interurban Trail junctions. Similar design treatments may be warranted at other junctions in the future.

Routes for Future Study

The Non-motorized Transportation Study includes various new bike lane, shared-lane and shared-use path connections within a fairly comprehensive system spanning the Kent urban area. However, due to topographical and geographical constraints and obstacles, not all corridors are optimally connected and require further study to identify the appropriate, long-range plan solutions. Routes with severe limitations, primarily overcoming steep grades, include the SE 192nd Street, SE 208th /212th Street, Canyon Drive, and South 272nd Street corridors. A number of critical connections that will require further analysis are identified in the non-motorized



Interurban Trail Crossing
of 212th Street

study, including:

- SE 282nd Street Corridor – 108th Avenue SE to 152nd Avenue SE
- SE 267th Street Extension – 104th Avenue SE to 116th Avenue SE
- Mill Creek Canyon – possible trail connection from Titus Street to Canyon Drive at 94th Avenue S (requires significant structural access overcoming grade and creek crossing)
- SE 218th Street Extension – grade separation of SR 167 to 84th Avenue S
- S 208th Street Extension – Extension across 84th Avenue S to connect to S 212th Street
- 64th Avenue S to Interurban Trail – two possible connecting routes in the section between S 216th Street and S 228th Street
- Riverview Boulevard to Green River Trail – north of new 228th Street connection

Furthermore, analysis of future traffic conditions within the Kent industrial area may yield findings that suggest the possibility of re-striping some arterial streets either with on-street bike lanes or as shared-lane facilities. In these corridors the original street design characteristics were established to facilitate truck mobility serving the industrial lands. Balancing the needs for trucking and cycling access and mobility will be important in future re-assessments of the non-motorized plan.

Bicycles in Downtown Kent

There are limited streets in the downtown area where bicycle facility enhancements can be made without removing on-street parking (undesirable to local merchants) or travel lanes (undesirable to commuters). Yet downtown Kent is an important non-motorized destination and inter-modal hub. Key corridors in which bicycle lanes can be added by changing current traffic control measures have been identified in the downtown area.

Meeker Street is the best-suited corridor that links the Meeker Bridge crossing of the Green River through downtown with connections across the railroad and Central Avenue S to Canyon Road. Today, Meeker Street, east of SR 167, has two travel lanes in each direction but no bicycle lanes. Examination of current and future vehicle traffic volumes indicates that a 3-lane configuration (one lane in each direction and a left-turn lane) should suffice for vehicular operations. By re-striping Meeker Street to 3 lanes instead of 4, there is sufficient space to add on-street bicycle lanes in each direction. There may also be the need for minor intersection traffic control revisions.

Within the downtown area, 1st Avenue provides a direct, north-south connection linking Meeker Street and James Street with an important connection to the Kent Transit Center. Today, 1st Avenue has two travel lanes and on-street parking, but sufficient space that a combination of reduced travel lane widths and possible parking space reduction can accommodate the addition of striped bicycle lanes. This reconfiguration is often referred to as a road diet. In addition, 1st Avenue is currently disconnected at Smith Street. Bike-only access and street crossing traffic control devices will be required for a continuous bike route along 1st Street.

Currently 4th Avenue holds four travel lanes in the downtown area (between Willis and Smith Street), transitioning to five lanes north of Smith Street to James Street. Due to limited space, it is likely untenable to reduce the number of travel lanes or remove on-street parking to accommodate new bike lanes. This section of 4th Avenue



Meeker Street Today –
4 Travel Lanes

can be posted and marked with “sharrow” symbols as a shared-lane facility.

Meeker Street Bridge

The Meeker Street Bridge over the Green River is subject to long-range plans for replacement as the structure is antiquated and eventually reaching the end of its design lifetime. The bridge is located at a major junction for Kent area cyclists, linking Reith Road (planned on-street bike lanes) to downtown via Meeker Street bike lanes; and north-south via the Green River Trail shared-use path. Westbound cyclists can leave the Meeker Street bike lanes and join the shared-use path system bridging the Green River. Eastbound cyclists from west of the SR 516/Meeker Street intersection cannot access the eastbound bike lanes on Meeker Street. Long-range plans for the Meeker Street Bridge should include continuous, on-street bike lanes on Meeker Street and the bridge, with fully-accessible connections to the Green River Trail in each direction.

WSDOT Coordination

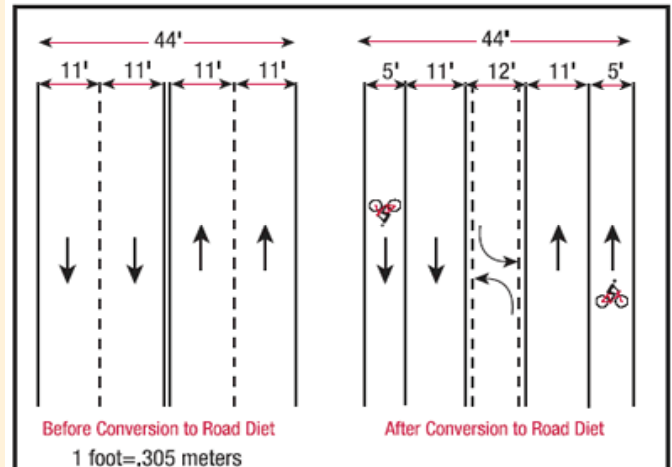
There are a number of corridors that require coordination of the NMTP findings with WSDOT as the state proceeds on short- and long-term highway improvements. The City recently completed the streetscape, travel lane and high occupancy vehicle (HOV) lane improvements to Pacific Highway South, SR 99, along its western city limits. Cyclists in the community have offered suggestions that the HOV lane be resigned and designated to allow for bicycle use. WSDOT does not currently support policy and design criteria for bicycle use of HOV lanes. The City will continue to coordinate with WSDOT for possible future policy revisions or clarification of bicycle access and use of HOV lanes along Pacific Highway 99.

As depicted in Figure 6 -11, within the downtown Kent area, Meeker Street provides one of the most important east-west corridor connections. Meeker Street is proposed to be re-striped with two travel lanes, a center left-turn lane and bicycle lanes on each side, east of SR 167. The SR 167 under-crossing is a significant barrier to both bicycle and pedestrian travel. As WSDOT continues its upgrading projects along SR 167, the under-crossing improvements should include enhancements to non-motorized access, circulation and safety by the following:

- Add pedestrian-scale lighting for improved safety (it’s dark, even during daylight hours)
- Add bicycle lanes
- Relocate sidewalks, behind support columns if necessary, to accommodate added bike lanes

Similar non-motorized design and safety issues should be addressed as part of other SR 167 interchange and under-crossing improvements.

Example of Road Diet



Green River Bridge Connection



Meeker Street Undercrossing of SR 167

What the Community said about Bicycle Improvements

Among bicycle enthusiasts, there was strong support for more shared-use paths, bike lanes, and shared lanes for bicycles. Several people cited the need for bicycle facilities on 116th Avenue SE and SE 248th Street, better connections to the Green River and Interurban trails, and improved connections among the various bike routes in the City.

Bicycle System Plan Costs

Planning-level costs were estimated for stand-alone bike lane and shared lane re-striping, and the extension of the shared-use path network. The total cost of the bicycle system improvements is estimated at \$2.2 million over the next 20 years. As summarized in **Table 6-2**, the total costs of bicycle system priorities results in an annualized cost of slightly more than \$111,000. Note that the street projects also include 16 miles of new bicycle routes representing approximately \$36 million of additional bicycle investment. The street projects also include 15 miles of new sidewalks.

Table 6-2. Priority Bicycle Improvement Costs

	Miles	Cost	Annual Cost
Bike Lane Signing and Marking	16	\$405,000	\$20,300
Shared-Lane Signing and Marking	27	\$903,750	\$45,200
New Shared-Use Path Construction	6	\$924,000	\$46,200
Total	49	\$2,232,750	\$111,700

Note: Does not include 16 miles of bicycle lanes provided on proposed street projects, valued at \$36 Million.



Chapter 7 | Transit System

Introduction

Transit solutions are an increasingly important element of the Kent local transportation system and the regional system. Improved transit services and new capital investments are integral in meeting the City’s land use goals and reducing the magnitude of capital investment needed to maintain roadway level-of-service.

Recent surges in growth have led to increased congestion on Kent roadways and have increased maintenance and capital budget requirements. Attempting to meet travel demand growth through roadway development and traffic management alone is not economically viable and could affect the city’s livability.

This chapter describes the existing transit service and facilities, identifies community needs and observed gaps in service, and recommends service improvements that provide local circulation in the City of Kent and that connect Kent residents to other regional communities. The recommendations are based on an extensive needs assessment. Capital improvements and pedestrian projects that support transit service goals are also detailed, as are transit-supportive land use policies.

Chapter Contents

- ▶ Existing Transit Services
- ▶ Transit Infrastructure
- ▶ Transit Policies, Plans and Programs
- ▶ Kent’s Transit Needs
 - Community Needs
 - Technical Analysis
 - Prioritized Needs
- ▶ KC Metro and Sound Transit Short-term Changes
- ▶ Transit Recommendations

Primary Source:

The Kent Transit Master Study, prepared by Nelson\Nygaard Consulting Associates (April 2007)

Existing Transit Services

King County Metro Transit (KC Metro) and Sound Transit serve the City with fixed route transit and commuter rail service. In addition to regional bus service, KC Metro operates Dial-A-Ride (DART 914/916 and 918) variable routing service. The 914/916 shopper shuttle is funded through an agreement with the City and is operated by the non-profit provider Hopelink. Sound Transit operates both regional bus service and Sounder commuter rail to the Kent Transit Center. KC Metro’s Access Transportation Services program offers demand responsive service to those residents that are eligible under the Americans with Disabilities Act (ADA). The following section describes Kent’s existing transit service and facilities.

Fixed-Route Service

Existing fixed-route services operating in or through the City of Kent fall into three primary categories:

- Regional Routes – These services cross Metro subarea (Seattle or East County) and/or King County lines - connecting Kent with other regional destinations within King, Snohomish, and Pierce Counties (routes to Seattle are considered regional routes).
- South County Routes – These services provide connectivity between Kent and other South King County communities, such as Renton, Auburn, Tukwila, Des Moines, Covington, and Federal Way.
- Local Routes – These routes exclusively serve the City of Kent - connecting Kent neighborhoods to each other, with downtown Kent, and with major employment sites.

Table 7-1 lists the KC Metro and Sound Transit routes that operate in these three service categories (as of September 2006). **Figure 7-1** graphically displays the KC Metro bus routes serving the City of Kent overlaid onto the current distribution of population and employment for Kent. Here and throughout this chapter, density information is presented with the use of a bi-chromatic density map that illustrates combined employment and population density by planning zone (K-Zone) to illustrate the relationship between land use and transit demand. Population (or household) densities are displayed using four gradations of blue. Similarly, employment densities are shown via shades of yellow.

Table 7-1. Transit Service in the City of Kent

Regional Services	South County Routes	Local Routes
KC Metro Bus Routes: 150, 154, 158, 159, 161, 162, 173, 174, 175, 190, 191, 192, 194, 197, 941, 952 (Boeing Shuttle- Everett) Sound Transit Express: 564, 565, 574 Sound Transit: Sounder Commuter Rail	KC Metro Bus Routes: 153, 164, 166, 168, 169, 180, 183, 247,	Kent DART Shuttles 914, 916, 918

Table 7-2 shows the routes by the frequency of service during peak, midday, evening, night, Saturday, and Sunday periods. Service frequency greatly affects the viability of transit service. Low frequency of service often leads to long wait times for bus riders and becomes a deterrent to the use of public transportation, especially for those passengers with other travel options. This is the case east of 108th Avenue where there is no midday service more frequently than 30 minutes.

Table 7-2. Transit Service Levels (frequency by minutes)

Route	Destination	Weekday				Saturday				Sunday			
		Peak	Mid	Eve	Night	Day	Day	Eve	Night	Day	Day	Eve	Night
150	Kent-Seattle	15	15	30	30/60	15	15	30	30/60	30	30	30	30/60
153	Kent-Renton	30											
154	Auburn-Kent- Kent Boeing	2 am/pm runs											
158	Kent-East Hill- Seattle	30											
159	Kent-Timberlane-Seattle	30											
161	Kent-East Hill- Seattle	30											
162	Kent- Seattle (PM Peak)	30											
164	Kent Transit Center-Green River CC	60	60	60	60								
166	Kent-Des-Moines	30	30	60		30	60	60		60	60	60	
168	Kent-Timberlane	60	60	60	60	60	60	60	60	60	60	60	60
169	Kent-Renton	30	30	30/60	60	30	60	30/60	60	30	30/60	60	60
173*	Federal Way-Boeing- Kent Des Moines P&R	2 am/pm runs											
174*	Federal Way- Kent Des-Moines P&R-Sea-Tac	20	30	30	30	30	30	30	30	30	30	30	30
175*	Kent Des-Moines P&R-Downtown Seattle	30											
180	Auburn-Kent-SeaTac	30	30 Auburn-Kent	30 Auburn-Kent	30/60 Auburn-Kent	30 Auburn-Kent	30 Auburn-Kent	30 Auburn-Kent	30/60 Auburn-Kent	30 Auburn-Kent	30 Auburn-Kent	30/60 Auburn-Kent	60 Auburn-Kent
183	Kent-Federal Way	30	60			60							
190*	Star Lake-Kent Des-Moines P&R-Seattle	20/30											

Table 7-2. Transit Service Levels (cont'd)

Route	Destination	Weekday			Saturday			Sunday				
		Peak	Mid	Eve	Night	Day	Eve	Night	Day	Eve	Night	
191*	Redondo Heights P&R-Kent Des-Moines P&R-Seattle	30										
192*	Kent Des-Moines P&R-Seattle	30										
194*	Federal Way-Kent Des Moines P&R-Seattle	15/30	30	30		30	30		30			
197*	Twin Lakes P&R-Kent Des Moines P&R-University District	30										
247	Overlake-Kent	3 am/ pm runs										
564/565ST	Auburn-Kent-Bellevue	15/30	30	30/60								
564/565ST	Federal Way/South Hill -Overlake	30/60	60	30/60								
574*ST	Lakewood-Kent Des-Moines P&R-Sea-Tac Airport	30	30/60	60		30	60		30	60		
914	Kent Shopper Shuttle		60			60						
916	Kent Shopper Shuttle		60			60						
918	Kent Commuter Shuttle	30										
941*	First Hill-Kent Des Moines P&R	30										
952	Meiro Boeing Custom Bus (Auburn-Kent-Everett Boeing)	4 am/ pm runs										

* = These routes only serve the Kent Des Moines Park and Ride Headway – time interval between buses moving in the same direction on a particular route.

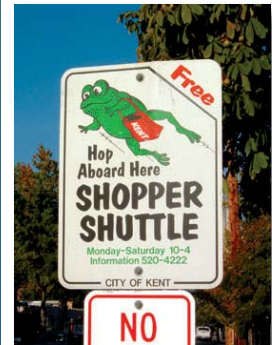
Transit Ridership Levels

Figure 7-2 shows bus stop boarding levels on the KC Metro routes (the downtown and commuter shuttle ridership by stop is not available). The greatest numbers of boardings occur where a high level of service is provided and moderate to high population and/or employment densities exist. High levels of boarding activity also occur at locations where convenient transfers are possible between routes and where automobile drivers can access the transit system via park and ride facilities. The highest boarding activity is at the Kent Transit Center. *Other high boarding areas include James Street, 104th/Benson Road (SR 515), 132nd Avenue SE / Kent-Kangley Road and the Kent-Des Moines Park and Ride. Routes 150, 166, 168 and 169 have the highest ridership.*

Kent Shopper Shuttles (DART 914 and 916)

The Kent Shopper Shuttles, (DART 914/916) are a free shuttle service funded jointly by KC Metro and the City of Kent, and operated by the non-profit Hopelink. The DART 914/916 offer two transportation services to Kent riders: fixed and (limited) variable routing outside of downtown. All of the scheduled DART 914/916 routes pass through the Kent Transit Center, City Hall, the Senior Center and the Regional Justice Center. These routes operate from 9:00 am until 5:00 pm on weekdays and Saturdays.

Hopelink estimates that 60 percent of the DART 914/916 rides start and end within the downtown. Hopelink also estimates that about 80 percent of the current Shopper Shuttle (914/916) ridership is comprised of seniors and people with disabilities. Despite being eligible for ACCESS, some passengers prefer the 914/916 dial-a-ride service as they do not need a reservation, and there is more flexibility in using the shuttle.



Hopelink

Since 1971, Hopelink has served homeless and low income families, children, seniors and people with disabilities. Hopelink is funded by diverse sources including public and private foundations, United Way, City support and by donations from individuals, organizations and corporations in the community. Hopelink operates Dial-a-Ride Transit (DART) under a contract with King County Metro. Although DART is available to the general public, many riders are from low income families that are highly dependent on public transportation for commuting to work or accessing basic services such as shopping and health care. Hopelink also uses public transit passes, gas cards, mileage reimbursement, volunteers, and contracted taxi and wheelchair van providers to coordinate service to the clients of a wide range of agencies, at no cost to the rider.

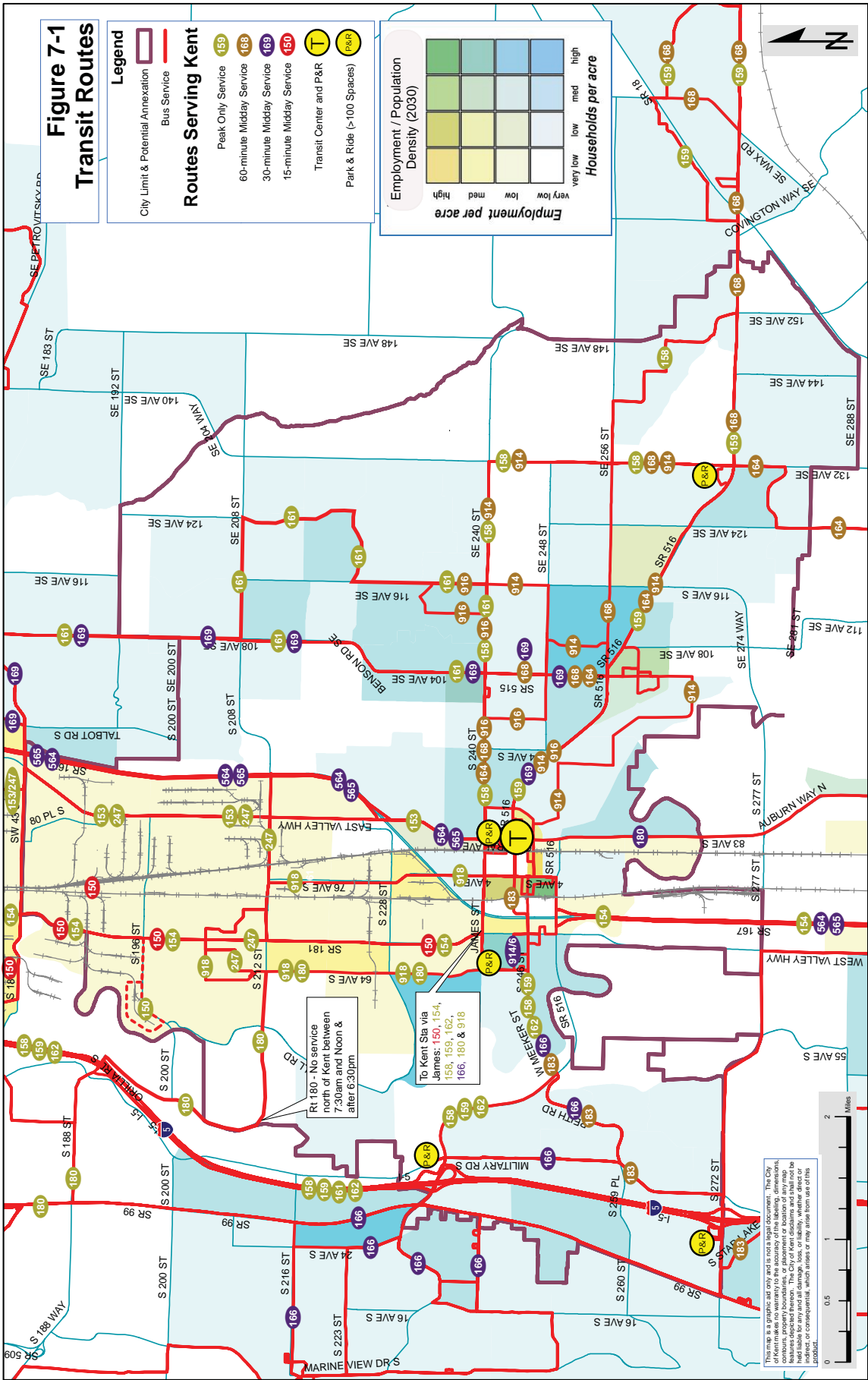
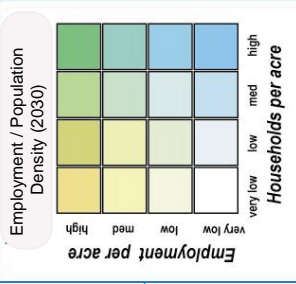
**Figure 7-1
Transit Routes**

Legend

- City Limit & Potential Annexation
- Bus Service

Routes Serving Kent

- Peak Only Service 159
- 60-minute Midday Service 168
- 30-minute Midday Service 169
- 15-minute Midday Service 150
- Transit Center and P&R
- Park & Ride (>100 Spaces)



Rt 180 - No service north of Kent between 7:30am and Noon & after 6:30pm

To Kent Via James: 150, 154, 158, 159, 162, 166, 180 & 918

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Figure 7-2
Transit Boardings by Stop

Legend

- City Limit & Potential Annexation
- Major Roads
- All Bus Service

Bus Stop Boardings

- 0 - 10
- 11 - 33
- 34 - 56
- 57 - 475

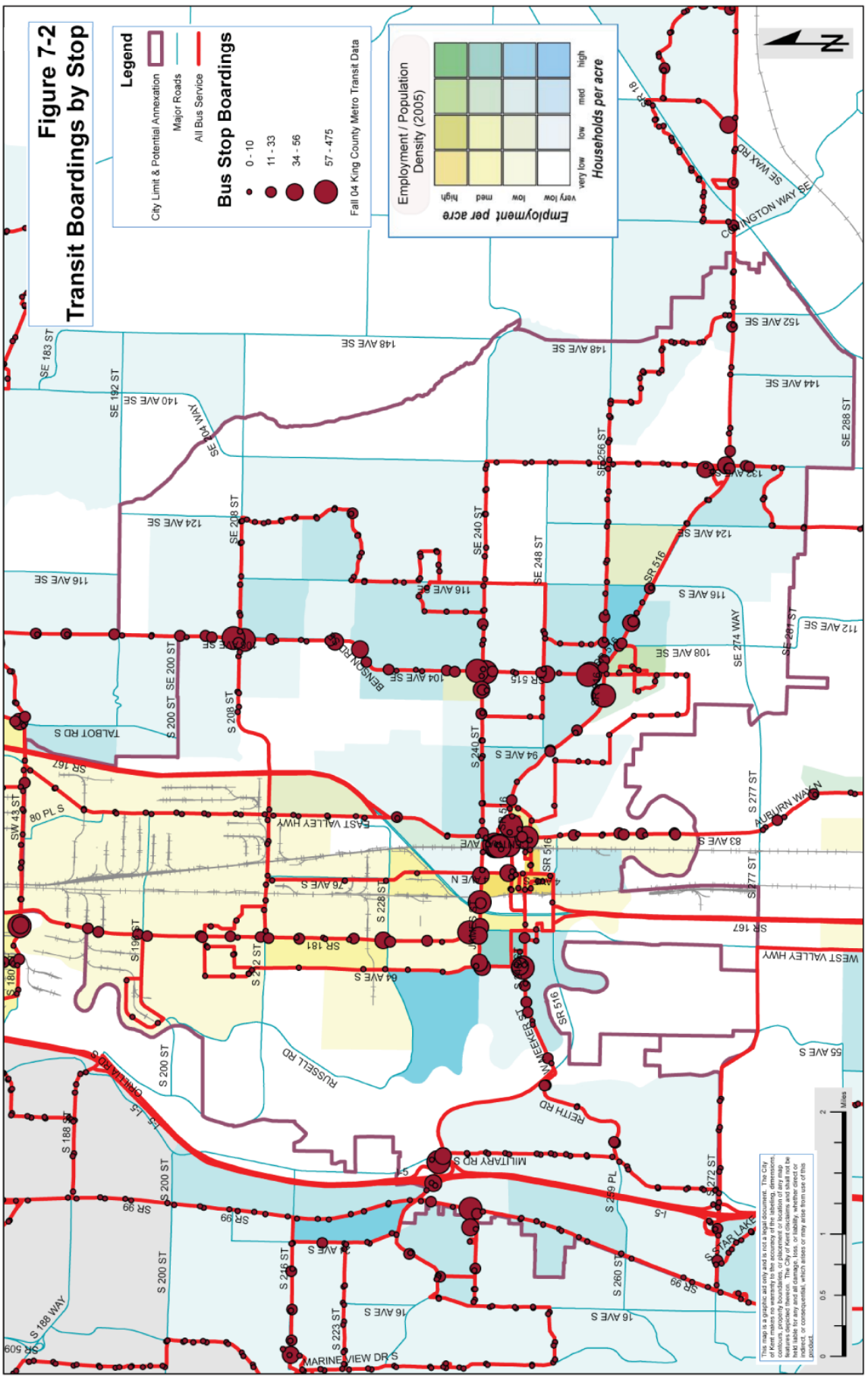
Fall 04 King County Metro Transit Data

Employment / Population Density (2005)

very low	low	med	high
very low	low	med	high
very low	low	med	high
very low	low	med	high

Households per acre

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Kent Commuter Shuttle (DART 918)

The City of Kent funds a local circulation service that connects the industrial area to downtown and the Kent Transit Center. This route provides peak-only service on weekdays. Despite limited hours of operation the route has been successful, carrying over 100 passengers each day.

ACCESS Transportation Service

KC Metro provides paratransit service within its service area through its ACCESS Transportation Service. Access service is available between the hours of 6:00 am and 10:00 pm Monday through Friday to individuals who meet ADA eligibility requirements. ACCESS service in the City of Kent exceeds the ADA ¾-of-a-mile requirement (from fixed bus service) mandated by King County. On the weekends ACCESS adheres to the ADA minimum requirements, providing service only within ¾-of-a-mile on either side of Metro fixed route bus service during the times they operate.

ACCESS Transportation Service provides about 7,350 trips per month in Kent. Just over a third of ACCESS trips within Kent are described as “work trips.” Only 9 percent of ACCESS riders described “Non-Emergency Medical” as their trip purpose, which correlates with the various medical trips cited in the demand center data.

Transit Service Characteristics

Several characteristics of transit service are important to understanding how the system operates. These include the fares charged and the performance of the transit routes.

Transit Fares

KC Metro and Sound Transit collect fares by zone for long-distance travel. Metro also charges a higher fare during peak travel times. Base fares range from \$1.25 (Metro off-peak) to \$4.00 (three-zone Sounder commuter rail). Discounts are often available for youth, seniors and residents with disabilities. KC Metro sells the one-month PugetPass for \$45 (off-peak) to \$72 (two-zone peak). The PugetPass is accepted as valid fare payment on KC Metro, Community Transit of Snohomish County, Pierce Transit, Everett Transit and Sound Transit service – up to the fare value purchased on the pass.

Transit Performance

KC Metro and Sound Transit use performance measurement systems to monitor bus and shuttle services. Performance measures, along with guidelines or standards, are often used to monitor the operation of individual bus routes and identify services requiring special attention.

KC Metro uses two performance categories when reviewing results against defined measures – “below minimum” and “strong.” Those routes termed as “below minimum” are evaluated for modification or termination if changes cannot improve performance. Routes rated as “strong” may be considered for expansion.

Sound Transit employs Express Service Standards and other performance measures to rate individual ST Express routes and to determine when remedial actions may be needed.

Route Performance Analyses

Data from the *2005 Annual Route Performance Report – South Planning Subarea* (October 2006) show Routes 153, 154 and 167 under performing relative to other peak services. Routes 150 and 169, however, are performing well during peak, midday and at nighttime periods. Route 162 only operates during peak periods and is the best performing service during commute times.

The Sound Transit *2006 Service Improvement Plan* (SIP) reviews route-level performance using the standards defined previously along with other assessments. The SIP acknowledges the unsatisfactory performance of Route 564 on an overall basis. It highlights the role of Route 564 in providing additional peak service and capacity when combined with Route 565 and that ridership has been steadily growing. The Sound Transit 2006 service changes include the extension of Route 564 south of Auburn to the South Hill Mall in Puyallup (replacing the service currently provided by Route 585); the SIP suggests these changes should raise the unsatisfactory performance to the marginal level. In response to Route 574's low productivity, late morning service was reduced from every 30 minutes to every 60 minutes in June 2005.

Transit-Related Infrastructure

The City of Kent, State of Washington and the regional transit agencies have invested in transit-related infrastructure in and around the City of Kent.

Kent Transit Center

In June 2005, KC Metro moved the Kent Transit Center at West James Street to Sound Transit's Kent Station on Railroad Avenue North (between West James Street and West Smith Street). The new center was designed to be a multi-modal transfer station for Sound Transit's express routes in Kent as well as the Sounder Commuter Rail and Metro routes serving the City of Kent.

The City of Kent contributed funds to help increase the parking capacity to 994 spaces (surface and garage) and improve passenger amenities such as bus shelters, lighting, sidewalks, bicycle racks and lockers, as well as rider information. The new Kent Transit Center is centrally located for riders to access key destinations such as the Regional Justice Center, the Kent Library, and downtown businesses.

Stop Amenities

KC Metro is responsible for bus shelters and has specific criteria for which routes merit a shelter. The minimum number of daily passenger boardings to qualify for shelter placement is 25 boardings. Stops meeting this first cut are further prioritized based on ridership (highest ridership zones) and ease of construction or right of way (ROW) availability. Additional shelters can be sited at stops with special needs, for example stops with large concentrations of elderly or stops close to health and social service facilities. All approved and built shelters include benches and litter receptacles, which are attached to the adjacent concrete pad or sidewalk.

Transit Performance Measures

KC Metro Route Performance Measures

- Riders per revenue hour
- Fare revenue to operating expense ratio
- Passenger miles per revenue hour
- Passenger miles per platform mile
- Route effectiveness rating

Sound Transit Performance Measures for Routes:

- Passengers per revenue hour
- Passengers per one-way trip
- Farebox recovery

Other Criteria:

- Consistency with Sound Move, Sound Transit's master plan
- Impacts on existing and future riders
- Likelihood of ridership growth and improved system productivity
- Affordability



Kent Park and Ride Facilities

KC Metro and Sound Transit provide transit patrons with nine park and rides in the Kent area, with varying levels of transit service and parking capacity. **Table 7-3** provides details on the park and ride capacity, utilization and the routes served.

Table 7- 3. Park and Ride Lots Serving the City of Kent

Park and Ride Lot	Parking Spaces	Utilization (2005)	Routes Served
Kent Transit Center** 301 Railroad Ave N			Metro:150, 153, 154, 158, 159, 162, 164, 166, 167, 168, 169, 183, 952
P&R Garage	869	36%	DART: 914, 916, 918
Surface Lot	125	91%	Sound Transit: 564, 565 Sounder Commuter Rail
Kent/James St P&R** 902 W James St, N. Lincoln Ave/ W. James St	713	34%	Metro: 150, 154, 158, 159, 162, 166, DART: 918
Star Lake P&R 27015 26th Ave S I-5/ 272nd St	540	83%	Metro: 152, 183, 190, 192, 194, 197, 941 Sound Transit: 574
Kent-Des Moines P&R* 23405 Military Rd S I-5/ Kent-Des Moines Rd	370	96%	Metro: 158, 159, 162, 166, 173, 175, 192, 194, 197, 941, 949 Sound Transit: 574
Lake Meridian P&R 26805 132nd Ave SE/ SE 272nd St	172	27%	Metro: 158, 159, 168, DART: 914
Kent United Methodist Church SE 248th St/ 110th Ave SE	23	13%	Metro: 163, DART: 914
Kent Covenant Church 12010 SE 240th St	20	25%	Metro: 158, DART: 914 916
Valley View Christian Church 124th Ave SE/ SE 256th St	20	5%	Metro: 168, DART: 914
St. Columba's Episcopal Church 26715 Military Rd S	15	20%	Metro: 183, 192

Source: Source: PSRC 2005 P&R Data, and King County Metro.

* Lot is filled to or above 90% by 9:00 am on weekdays.

**Bike Lockers on site



City Policies, Plans and Programs Supporting Transit

The City recognizes that transit services can improve livability, enhance mobility and increase economic development. Transit is a priority in the City's goals and policies, in local plans and is included in ordinances dictating the nature of development in the City.

Goals and Policies

The TMP promotes transit supportive land uses, including higher densities and enhanced pedestrian circulation. The goals and policies for transit are included in Chapter 3.

Commute Trip Reduction Program

Since 1991 the City of Kent has complied with the State's CTR Law by implementing a Commute Trip Reduction (CTR) program. Large employers, transit providers, and the City have partnered to encourage employees to reduce their drive-alone trips. The program supports the use of transit, ridesharing, walking, biking and telecommuting to reduce congestion; conserve energy; and improve air quality.

The City completed an update of the CTR plan in Fall 2007. Chapter 8 summarizes the CTR planning process and provides details of the plan. The Plan sets goals, identifies facility and service improvements and puts forth marketing strategies that support reductions in drive-alone trips and vehicle miles traveled by 2011. Consistency between the CTR Plan, this Transportation Master Plan, zoning code, design standards, concurrency regulations and other applicable City of Kent land use and transportation plans and codes is a key element of the CTR planning process.

Land Use and Parking Policies

City land use and planning policies can also serve to encourage or discourage the use of transit, dictating the impact of transit investment in vehicle trip reduction. In assessing existing service and possible service improvements, it is possible to see how the City's current land use policies impact transit use in the City. The City has implemented several strategies to encourage transit. In many areas land use patterns, street design issues and low residential densities have prohibited public transportation from having a more meaningful role in vehicle trip reduction.

Transit Efficient Land Use

The City's land use map (Figure 2-2) indicates several mixed-use zones; these areas typically have good proximity to transit. The City, throughout the Land Use Element of the Comprehensive Plan, emphasizes mixed-use development and its role in reducing future traffic demand. The City emphasizes mixed-use development as a priority; "Mixed-use development shall be encouraged in designated areas within the planning area (UG-5)". Goal LU-4 in the City's Comprehensive plan details the importance of developing and funding transportation in mixed-use corridors. The City has developed several mixed-use corridors served well by transit. Two in particular are: the mixed-use zone at SE 250/Highway 515 southeast of downtown (urban center), and the mixed-use zone at SR 167/ Meeker Street directly west of the downtown (urban center). However, the majority of Kent's new owner-occupied housing units remain single-family residences.

Parking Provisions

The City of Kent has enacted progressive policies related to parking, intended to reduce minimum parking requirements as a means to encourage transit and reduce SOVs in the downtown area. The City gives the Planning Director the authority to waive or modify minimum parking requirements; to impose additional off-street parking requirements in unique circumstances; and to allow for flexibility and innovation in design. These provisions allow developers to build less parking, saving costs and increasing useable square footage, when developing in areas where good transit service allows residents or employees to travel without a private vehicle.





2005 Downtown Strategic Plan

The City's 2005 Downtown Strategic Plan recommends concentrating growth in the downtown core and to using public transportation as a means to reduce dependency on the automobile. The Plan envisions downtown Kent as a pedestrian-oriented business, shopping and residential destination, accessible by multiple transportation modes (including pedestrian, bicycle, and transit). The Downtown Plan suggests new levels of service standards for all modes, designed to facilitate a more balanced downtown transportation system. The Plan recommends improvements, such as increased commuter rail service, improved transit circulation, better pedestrian and bicycle connections, and housing development close to jobs that will help mitigate the probable adverse environmental impacts on traffic levels and service in and near downtown.

Kent's Transit Needs

The City used community input and technical gaps analyses to assess transit service and facilities within the City of Kent. Both of these key inputs led to a set of recommendations for future service and the supporting infrastructure that would be needed.

Community Identified Needs

The community TMP Task Force identified a set of existing and future transit needs. The Task Force considered a number of factors when determining unmet needs including:

- community stakeholder inputs;
- a household survey of Kent residents; and
- the technical analyses of transit service and facilities.

A number of community issues came up repeatedly representing gaps in the existing transit system and also matching the technical analysis completed for this plan. These common concerns addressed service and facility improvements that meet the City's land use goals and policies.

During the development of the Transit Plan, there were several opportunities for the community to comment, including the stakeholder interviews, telephone survey, the task force meetings and the City's open houses.

Community Stakeholder Interviews

Project team staff spoke with major employers, politicians, business owners, and community representatives to gather their feedback on major transit issues, needs and gaps in service. Stakeholders identified a number of deficiencies in the transit services offered in Kent as shown on the right.

All stakeholders interviewed felt that transit improvements were critical to meeting future transportation demand and accommodating growth in a sustainable manner.

We need local routes on 132nd Ave SE. Closer coordination of Sounder with local transit routes.

*More frequent Sounder and local transit routes.
... Stakeholder interviews*

*East-West transit routes are non-existent except for on South 272nd Street. We need more connecting runs over a longer time period (midday, evening)
... Stakeholder Interviews*

Needs Identified by Community

- ◆ Increase frequency – particularly on Sounder commuter rail;
- ◆ Extend service hours – particularly for shift workers in the industrial area;
- ◆ Limit transfers;
- ◆ Decrease travel time;
- ◆ Decrease transfer waiting time;
- ◆ Add bus shelters;
- ◆ Improve east-west service;
- ◆ Increase Auburn service;
- ◆ Improve passenger information for immigrant/low-income populations;
- ◆ Promote bike use;
- ◆ Reduce employee parking;
- ◆ Improve pedestrian access – particularly in the areas outside of the downtown core;
- ◆ Enhance safety at bus stops and park and rides; and
- ◆ Increase parking at park and rides lots.
- ◆ Specific service improvements cited for the Kent Shopper Shuttle (DART 914/916) were to:
 - ◇ Expand service area
 - ◇ Better serve senior housing
 - ◇ Provide more senior shopping
 - ◇ Promote Kent Shopper Shuttle
 - ◇ Add bus stop at Great Wall Mall
 - ◇ Increase medical stops

Public Transportation Household Survey

To assess Kent residents' use of and opinions about public transportation, a random public household telephone survey was conducted in the spring 2006. The survey provided a statistically valid sampling, meaning that enough people were surveyed to provide a reasonable approximation of the sentiments of the entire Kent community. The survey included several questions regarding usage, routes, frequency, location of bus stops, length of trips, and safety.

A research firm conducted the surveys over the phone with 401 randomly selected Kent households. The data were used to identify transit issues and determine effective improvements in transit service. Chapter 7 reports on these findings in detail.

The key findings from the general public telephone survey include:

Single occupancy trips - More than 80 percent of Kent residents drive alone to work or school.

Carpooling - Carpooling is the most common alternative to driving alone for both work/school commute trips (8 percent) and non-commute trips (14 percent). Fixed route transit is the second most common alternative to driving alone (6 percent).

Commuting - Two-thirds of respondents commuting outside of Kent do not travel to Seattle, which is the focal point for most of the transit serving Kent.

Transit use - Out of the 30 percent of survey respondents who said they use transit, the majority only use it a few times a year.

Pedestrian access - Slightly more than half of transit users walk to their transit stop.

Telephone Survey asked respondents about:

- Household demographics
- Commutes to work and/or school
- Current use of transit within Kent and the region
- Suggestions for improving transit within Kent
- Opinions on public transportation

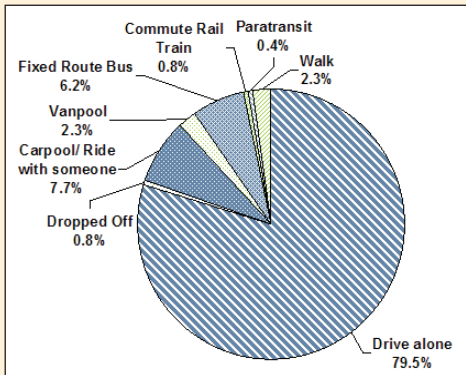
Most Frequent Responses to the Telephone Survey

Transit Service Improvements

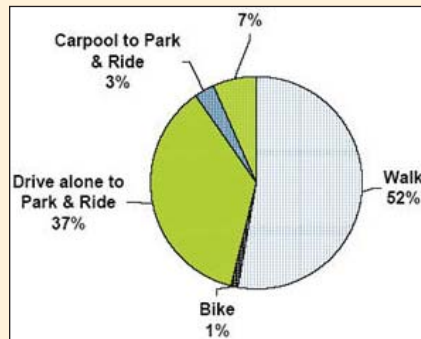
- ▶ Frequent service- More frequent service on bus as well as Sounder commuter rail services;
- ▶ Travel Time- Reduce travel time;
- ▶ Pedestrian and passenger safety- Improve safety at stops, stations, and Park and rides.

Example Survey Questions

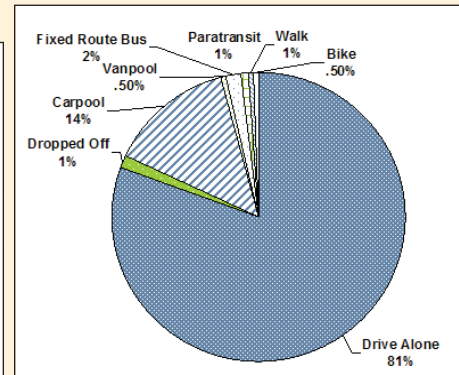
Mode for Commute (School/Job) Trips



Get Dropped off at Stop or Park & Ride



Mode for Personal Trips



Service frequency - Approximately 57 percent of respondents agreed that they would be more likely to ride the bus or train if service was offered every 15 minutes. Respondents are sensitive to frequency, indicating that improvements in this area could positively impact ridership.

Stop proximity - Almost half of respondents said they would be more likely to ride the bus or train if there was a stop near their home.

Travel time - About 45 percent of respondents would be more likely to take the bus or train if travel time to their destination was no more than 30 percent longer via the bus, showing that travel time is an important consideration for potential riders and that many non-riders view the travel time difference between transit and drive alone as considerable.

Passenger information - While many respondents knew where to get information about bus and rail service, there is a substantial gap (25 percent) in knowledge about where to access information needed to use the transit systems.

Traffic congestion - Congestion is the major transportation issue facing Kent in the next five years, according to the majority of respondents.

Tax increase/fee hike - Over 60 percent of respondents said they would support some increases in taxes or fees to fix the transportation system.

The Technical Analysis of the Transit System

The project team presented the TMP Task Force with a series of technical analyses illustrating existing and future constraints and opportunities with respect to the use of transit. These included:

- Community demographics impacting transit use
- Current and future land uses
- Gaps in current transit service
- Gaps in supportive capital infrastructure

Key Community Demographics

Public transit performance can be linked to a number of demographics. These include seniors over 65 years of age, persons with disabilities, residents living below

the poverty level and households without access to an automobile (either by choice or due to financial constraints). All these groups tend toward a higher than average use of transit services.

The City of Kent is home to slightly fewer seniors than the rest of Washington, has roughly the same percentage of residents with a disability and a slightly higher percent earning below the poverty level. As mentioned in the community profile (Chapter 2), many seniors in the City live in the downtown area and overall make up 7 percent of the population. Just over 17 percent are defined as disabled according to the 2000 US Census. The US Census defines a disability as “a long-lasting physical, mental, or emotional condition that makes it difficult for a person to do normal activities” including driving an automobile. Almost 12 percent of the population lived below the poverty level making it difficult for them to afford to own and operate an automobile.

Current and Future Land Use

Research has shown that population and employment (land use density) are by far the two most crucial factors in determining ridership demand in a transit corridor or service area. Development patterns also cause challenges for transit service providers.

The largest concentration of jobs in the City is in the manufacturing and industrial area between the SR 167 and West Valley Highway and James Street and the northern City Limits (SW 43rd Street). Transit accessibility from these sites varies based on the proximity to major north-south transit carrying streets, such as the West Valley Highway. Business stakeholders would like to see better transit circulation within this district.

The City of Kent has several pockets of high-density residential development, including several multi-family developments in the downtown area, the Lakes at Kent, and to the southeast on Kent-Kangley Road. These areas are served via primary and secondary arterial streets, but in few cases does transit penetrate residential or commercial developments. Two serious impediments to growth in transit ridership are the heavy traffic volumes and low levels of pedestrian amenities and safety features on major transit carrying arterials.

Gaps or Missing Service in Current Transit System

Gaps in service occur because service is not frequent enough nor close enough to be used, or it doesn't go to the destination of the travelers. Neighborhoods with the density for transit or important destinations without service are identified as areas of missing service.

Gaps in Peak-only Service

Peak period transit service is shown in **Figure 7-3**. Gradations of green indicate the intensity of combined population and employment activity.

The majority of the routes operating in Kent are peak-only services oriented towards commuters, particularly those bound for Seattle. Total coverage is the greatest during the weekday peak and midday periods. Residential areas northeast of Lake Meridian and north of North Meridian Park, along with the industrial area along 84th Avenue have peak-only service. The Downtown shopper shuttles provide additional midday coverage in downtown and along Meeker Street to the west. Evening and Sunday service is limited to the major corridors with a loss of service in East Hill. (east of 104th Street).

Figure 7-3 Peak Period-Only Transit Service

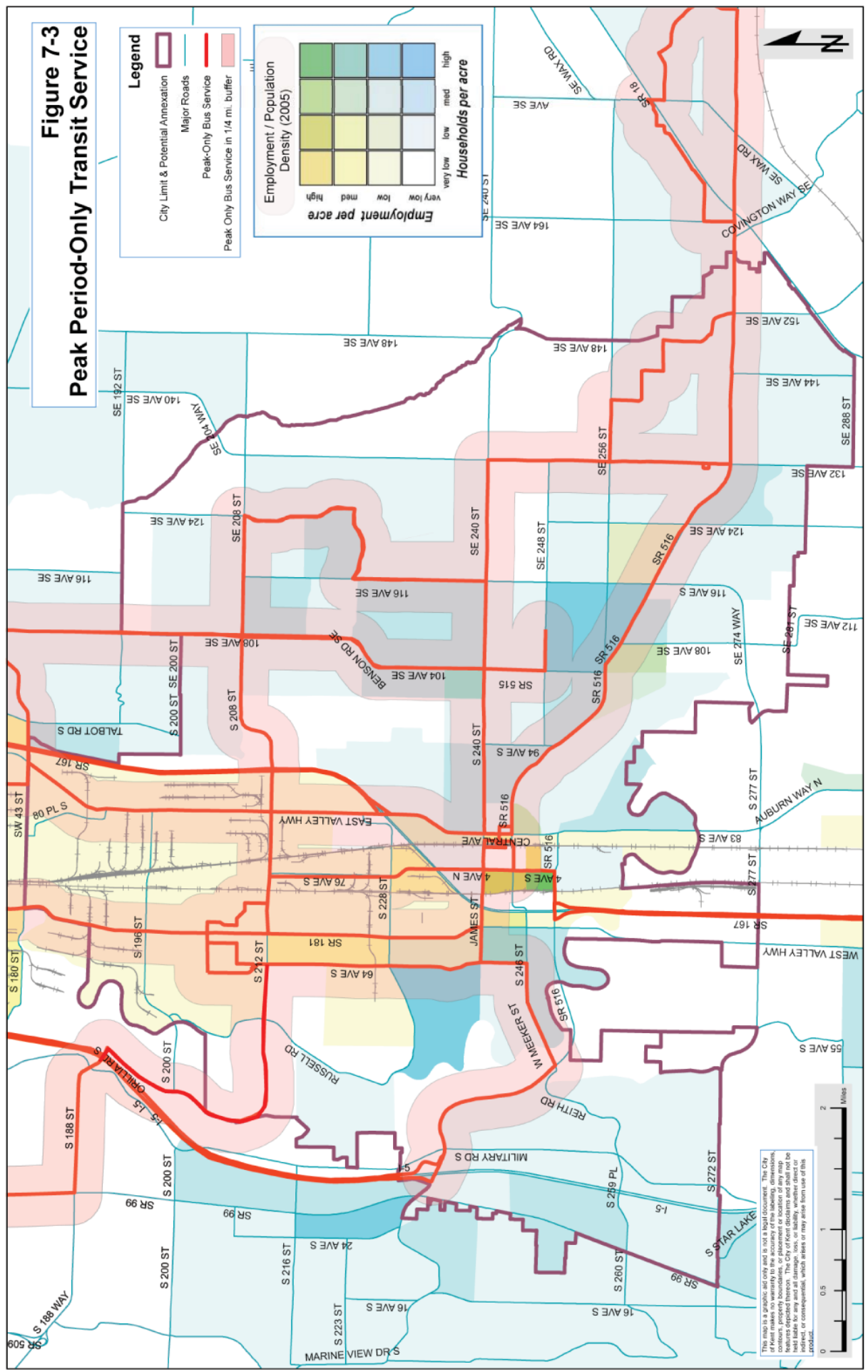
Legend

- City Limit & Potential Annexation
- Major Roads
- Peak-Only Bus Service
- Peak Only Bus Service in 1/4 mi. buffer

Employment / Population Density (2005)

very low	low	med	high
very low	low	med	high
very low	low	med	high
very low	low	med	high

Households per acre



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Missing Service Coverage

Several areas in the City of Kent have moderate to high population or employment densities (see Figure 7-3), indicating a strong level of transit demand. However, there is little or no transit service available in some of the densest neighborhoods.

The Lakes at Kent development south of Russell Road/228th Street at 54th Avenue is identified as a high population density zone but is not directly served by transit. This area is characterized by a concentration of high-density multi-family units. Some moderately dense neighborhoods (east of 104th/108th Avenues, between 208th and 240th Streets) have peak-only service with many residents living more than one-quarter mile from any transit route.

The principal east side routes operate on 240th Street and Kent Kangley Road out to 132nd Avenue. There are pockets of dense residential and commercial development at the center of, and around the perimeter of, this triangular route configuration. There is no service on the west side, between I-5 and SR 99 and north of 260th Street, an area with moderate residential densities and several large multifamily units. Route 166 provides service nearby, but runs on the other side of the interstate highway.

Gaps in Transit Related Infrastructure

Transit is more convenient if there are bus shelters and good sidewalks to and from the bus stop.

Bus Stops

Based on November 2005 boarding data, there were roughly 20 stops in Kent that exceeded 25 daily boardings but did not have a shelter. Based on the ridership criteria and/or KC Metro's 6 Year Plan or Partnerships program, Metro has seven shelter projects planned for Kent stops during 2006 and 2007. Similarly, stops with greater than 15 boardings qualify for a standalone bench. Metro is proposing benches at five Kent locations and investigating another five for future installation.

Pedestrian Access

All transit trips start and end as walking trips. Missing, narrow or deteriorated sidewalks are deterrents to the use of transit. Similarly, dangerous intersections or a lack of crosswalks put transit riders at risk and also cuts down on the number of residents willing to use transit when they otherwise could. Chapter 6 summarizes the pedestrian network identifying missing sidewalks, poor sidewalk surfaces, narrow sidewalks and missing curb ramps. **Figure 7-4** shows streets within one-quarter mile of transit service that are missing sidewalks. Results from this inventory and subsequent analysis identified a need for better sidewalks for many transit riders and guided the selection of projects for the Non-Motorized System.

Prioritized Needs

The development of the TMP was guided by a community Task Force, which reviewed and confirmed needs, identified priorities, and supported the final recommendations of the Study.

The TMP Task Force assisted in finalizing the transit needs assessment based on the findings. At the June 2006 task force meeting, the Task Force discussed the gaps and missing services in transit and voted on the set of priorities, which are detailed in **Table 7-4**. These priorities served as a guide to the City of Kent as transit recommendations were selected.



Table 7-4. Task Force Priority Needs

Task Force Priority Needs
Provide more local circulation service connecting residential neighborhoods to Kent Transit Center
Add new midday service on Sounder Commuter Rail
Improve pedestrian crossings on 104th/ Benson
Add more peak hour trains on Sounder Commuter Rail (more frequency)
Improve sidewalk connections to transit stops
Provide more local circulation service connecting industrial area to Kent Transit Center
Decrease transit travel time to Seattle
Rapidly developing areas around 108th-274th underserved by transit
Provide direct transit service to SeaTac
Provide better route and schedule information at stops and other locations.

Programmed Improvements by Transit Providers

Recent and pending service changes by King County Metro Transit and Sound Transit address a variety of problems and opportunities in the Puget Sound region. Many of these service changes impact the City of Kent and have the opportunity to address specific needs identified in this plan.

Short Term Service Improvements

King County Metro

In response to service performance and/or changes in population and employment patterns, Metro restructures service every few years, under the guidance of King County’s Six-Year Transit Development Plan. In 2006 Metro addressed service changes in South County services.

Due to budget constraints, a very limited number of new service hours were available for new service in all of South King County. Several of the September 2006 service changes involved the reallocation of service hours from poorly performing services to meet high priority transit needs.

Sound Transit

Sound Move, Sound Transit’s master plan, calls for the Sounder Commuter Rail service to provide nine round trips each day, up from the current number of four on the South Line serving the City of Kent. In September 2007 two additional round trips were added. Preliminary 2008 –2012 planning efforts call for the implementation of the seventh, eighth and ninth round trips on Sounder’s South Line.



Figure 7-4 Transit Service and Missing Sidewalks

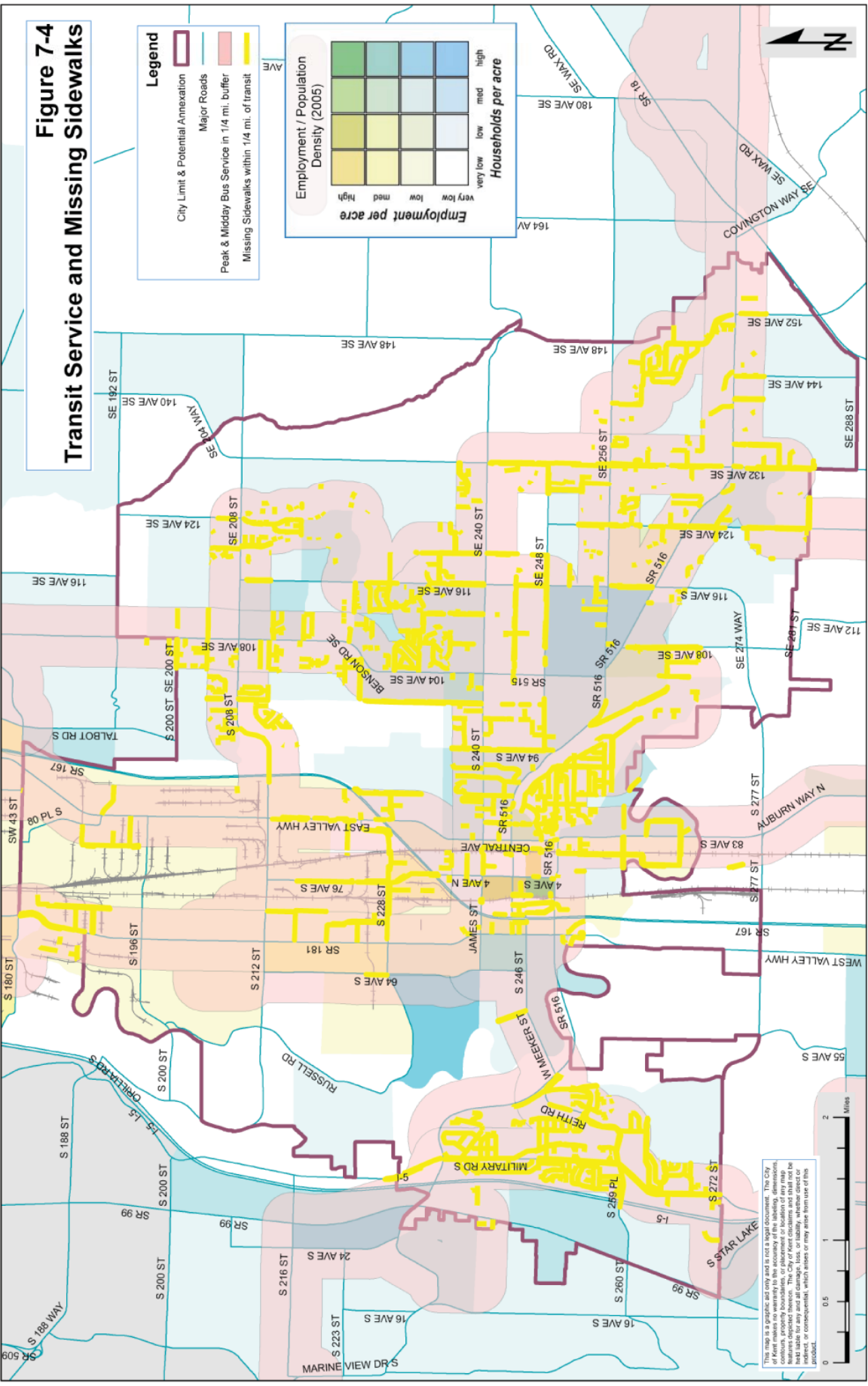
Legend

- City Limit & Potential Annexation
- Major Roads
- Peak & Midday Bus Service in 1/4 mi. buffer
- Missing Sidewalks within 1/4 mi. of transit

Employment / Population Density (2005)

very low	low	med	high
very low	low	med	high
very low	low	med	high
very low	low	med	high

Households per acre



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Long-Range Transit Improvements

There are a number of long-range transit plans and unfunded initiatives that will impact how public transportation is delivered in South King County and in the City of Kent in the future. Sound Transit Phase II and King County Metro's *Transit Now* initiative could have considerable impacts on the quality of public transportation services available to Kent residents. However, the regional focus of these initiatives may put resources needed for local and South County service improvements in direct competition with expensive high capacity services that meet interregional travel needs and focus investment in a more limited number of corridors.

King County Metro "Transit Now"

Transit Now is a five-point initiative approved by King County voters in November 2006. The initiative is intended to develop transit services that will attract 21 million more annual rides within ten years, helping the region keep pace with employment and population growth and addressing congestion. *Transit Now* funding comes from a one-tenth of one percent sales tax. The initiative's five-point strategy includes:

- Developing a "bus rapid transit" (BRT) system (RapidRide)
- Improving current services
- Providing new service in growing areas
- Developing service partnerships with major employers and cities
- Additional improvements such as expanding ride-share and improving paratransit programs.

How Does Transit Now Serve Kent

Transit Now improvements proposed for South King County include

- A new east-west route connecting Kent to Des Moines and Sea-Tac would provide new service that has been identified by Kent stakeholders as a critical service gap.
- Kent would receive span and frequency improvements on key north-south services to Renton, Seattle and Sea-Tac. East-west connections would improve with new frequency improvements to Maple Valley and Covington service and frequency and span improvements on Kent -Kangley/124th.
- The Transit Now Service Partnership requires a minimum contribution from the partner of \$100,000 per year for five (5) years to add service on an existing route or routes or \$200,000 per year for five (5) years to add a new route or routes. The City of Kent is currently exploring partnership opportunities for new shuttle service (proposed Route 913) to the Lakes and Riverview communities as well as for midday service on Route 153 to Renton.
- RapidRide, is scheduled to begin in February 2010. It will replace Route 174 along Pacific Highway S/International Boulevard between S 316th Street in Federal Way and S 154th Street (International Boulevard) in Tukwila. RapidRide buses will link up with Light Rail in Tukwila as well as local routes destined to Tacoma, Federal Way, Des Moines, Auburn, Tukwila, and Burien.



Sound Transit 2

Sound Transit has worked extensively with the public and communities throughout the Puget Sound region to set the priorities for Sound Transit 2 (ST2), which is the next set of public transit investments to improve and increase the service that Sound Transit

offers today. ST2 outlines priority projects that would increase service levels and expand the coverage of Link Light Rail, Sounder Commuter Rail and ST express bus services.

The proposed light rail extension between Sea-Tac and Tacoma along SR 99 provides benefits to City of Kent residents, especially for high-frequency service to Tacoma. The draft package does not include a number of Sounder and express bus projects that were previously considered. Expanded Sounder service during peak, off-peak and weekend service required extensive track improvements and significant increases in operating costs. Other projects that did not advance to the draft package include Transit Signal Priority (TSP) on SR 161 and HOV access ramps at Smith Street to improve the reliability of express bus service and new express bus service shadowing Sounder service during off-peak times.

Transit Recommendations

This section presents a set of regional and local service improvements and capital projects to address the identified transit needs. Service recommendations are presented by route type. Bus routes in the City of Kent can be categorized into three route types based on the markets they serve. Primary Transit Network (PTN) service provides frequent service (typically 15 minute or better) over a long service span, in a market where there is high demand for travel throughout the day. It is narrowly focused on the densest corridors in the region, because that's where potential ridership is highest. More than just bus service, the PTN is a joint commitment, by both the City of Kent and KC Metro Transit to protect the speed and reliability of transit operations in identified corridors. It is also a policy tool to help focus transit-oriented development around corridors where transit can be provided cost-effectively.

Local Urban service provides all-day service but at lower frequencies (20 to 60 minute) in lower density areas. These services should provide connections from moderately dense areas to PTN services as well as local destinations. Specialized Commute service runs at very specific high-demand times and only operates at the times of day when that demand exists.

Recommended Transit Projects

The study recommendations focus on current and expected gaps in PTN and Local Urban services. In some cases, recommendations enhance existing commuter service, creating all-day PTN service to address the need for reverse-commute travel and off-peak connections. Service recommendations are presented by route type and by implementation timeframe. Short-term projects are envisioned in the next 5 years, mid-term in a 6 to 15 year timeframe, and long-term in the 16 to 25 year period.

Figure 7- 5 and **Figure 7-6** highlight potential project corridors for service improvement projects in the mid- and long-term timeframes.

Table 7-5 presents a summary of these transit recommendations in response to the needs identified in the *Transit Master Study*, which provides more detail for each project. The table includes initial costs estimates. Costs for the Sound Transit 2 projects are from the project estimates used during ST2 evaluation. Other service improvements are estimated at \$80.54 per hour. This represents Metro's marginal operating cost for 2007 and is used when Metro provides additional service to a local jurisdiction.



What the Community said about... Transit improvements

The community voiced their ideas about the most important transit needs after attending one of the City's TMP open houses, reading the TMP newsletter, or reviewing the TMP website. Respondents most often listed the following transit needs:

- ▶ improved local bus service;
- ▶ more bus trips to regional destinations, particularly South County; and
- ▶ greater park and ride lot capacity

Table 7-5. Transit Recommendations

Project Category	Project Details	Timing*	Costs
A) Add midday express service from Kent Transit Center to downtown Seattle	A1a) Midday ST express bus per ST 2 Project S11 ("shadow" bus service between Tacoma and Seattle serving all Sounder rail stations)	MT	\$1,300,000
	Not identified in the July 06 set of three investment options		
	A1b) Metro operated Kent-Seattle Express (4 round trips/weekday)	MT	\$126,000
	A2) Sounder service per ST 2 Project S24 (6 additional round trips on top of 9 peak roundtrips in place by 2008)	LT	\$11.4 M O/M; \$163.5 to \$188.0 M Capital
	Not identified in the July 06 set of three investment options		
B) Regional Primary Transit Network	B1) Renton: Increase frequency of Route 169	LT	\$1,100,000
	B2) Auburn: Increase frequency of Route 180	LT	\$1,100,000
	B3) Bellevue: Add 15-minute frequency for reverse-commute times on 564/565	LT	\$190,000
	B4) SeaTac: Increase frequency of Route 180 to 15-minute	LT	\$750,000
C) Local Primary Transit Network	C1) Canyon/104th/108th: Increase frequency of Route 169 (part of regional PTN project) or create short line with turn around at 208th St. (Transit Now improvement identified for Route 169)	MT	\$750,000
	C2) James/240th St from Kent TC to north and south 116th Ave. Two routes combing on east/west segment for 30-minute frequency of service	MT	\$480,000
	C3) James/240th St from Kent TC to north and south 116th Ave. Two routes combining on east/west segment for 15-minute frequency of service	LT	\$ 390,000 (+ project C2)
	C4) Increase frequency of Route 166 to 15-minute M-Sa, 30-minute Sundays	LT	\$840,000
	C5) Replace Route 918 with two weekday all-day services - east and west industrial areas. 30-minutes all-day with limited 60-minute night service	MT	\$1,100,000
D) Local Service Improvements	D1) Add 30-minute all day service on 132nd Ave, connecting with other services at Kent Kangley Road (Transit Now improvement identified for Route 164)	MT	\$430,000
	D2) Increase frequency of Route 164 to 30 minutes and add Sa service	MT	\$480,000
E) Bus Shelters	E1) Construct shelters at 15 stops identified for possible stops in 2008 along with 7 not identified, yet exceeding standards.	ST	\$770,000 @ \$35,000 ea (05\$)
F) East Kent Interceptor P&R	F1) Expand capacity in/near Lake Meridian P&R by 200 spaces	LT	\$1 M plus land acquisition for surface lot expansion, \$4 M for structured parking
G) Sidewalk improvements	Identification of potential projects pending review of non-motorized and roadway improvements	ST	

* Note: ST refers to Short Term (0-5 year timeframe), MT to Medium Term (6-15 years) and LT to Long Term (16-25 years)

Figure 7-5
Mid-Term Local Transit
Service Recommendations

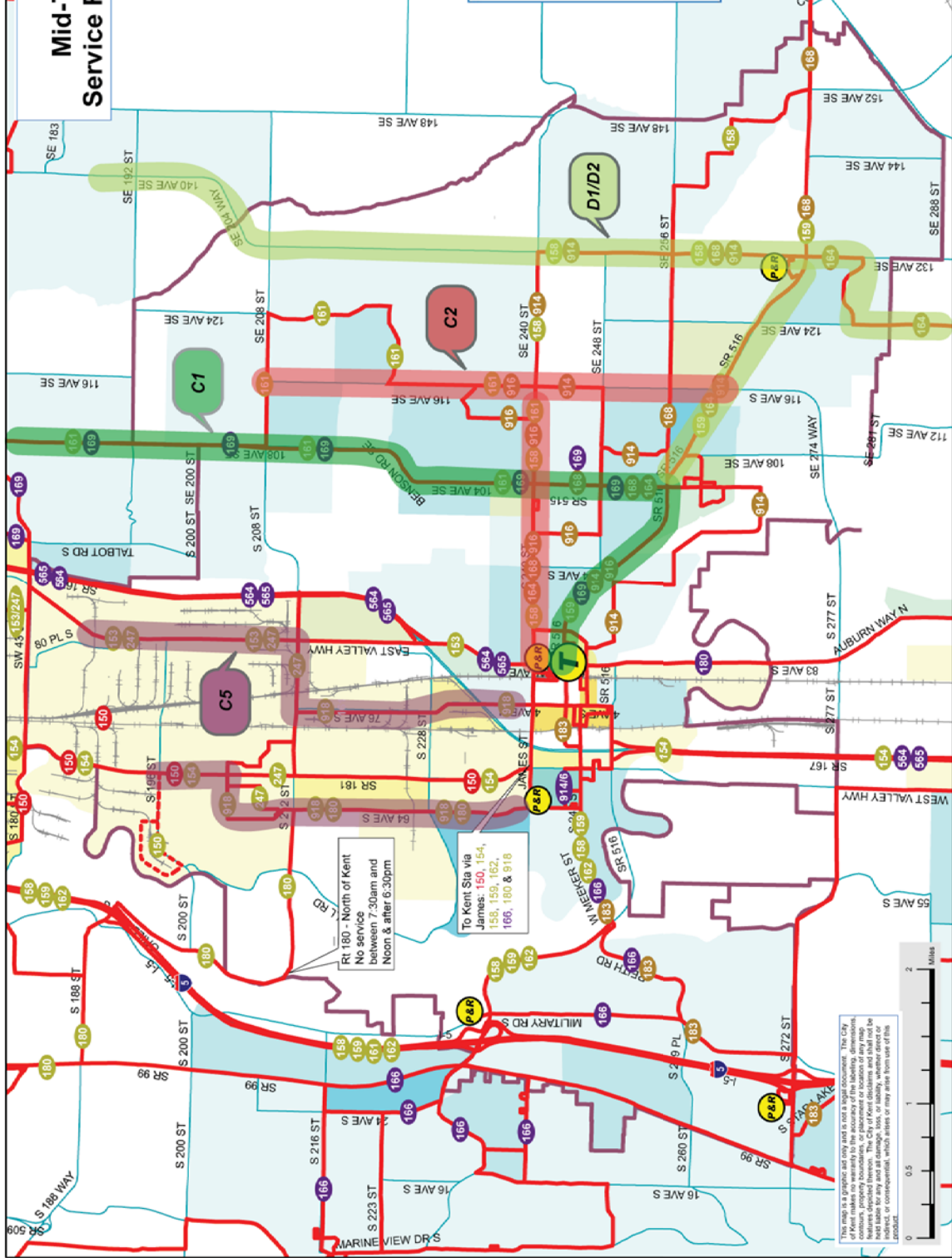
Legend

- City Limit & Potential Annexation
- All Bus Service
- Routes Serving Kent**
 - Peak Only Service 159
 - 60-minute Midday Service 168
 - 30-minute Midday Service 169
 - 15-minute Midday Service 180
- Recommended Transit Project Corridor
- Transit Center and P&R
- Park & Ride (>100 Spaces)

Employment / Population Density (2005)

very low	low	med	high
very low	low	med	high
very low	low	med	high
very low	low	med	high

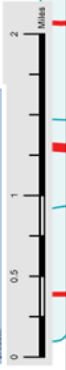
Households per acre



Rt 180 - North of Kent
 No service between 7:30am and Noon & after 6:30pm

To Kent Site via James: 150, 154, 158, 159, 162, 166, 180 & 918

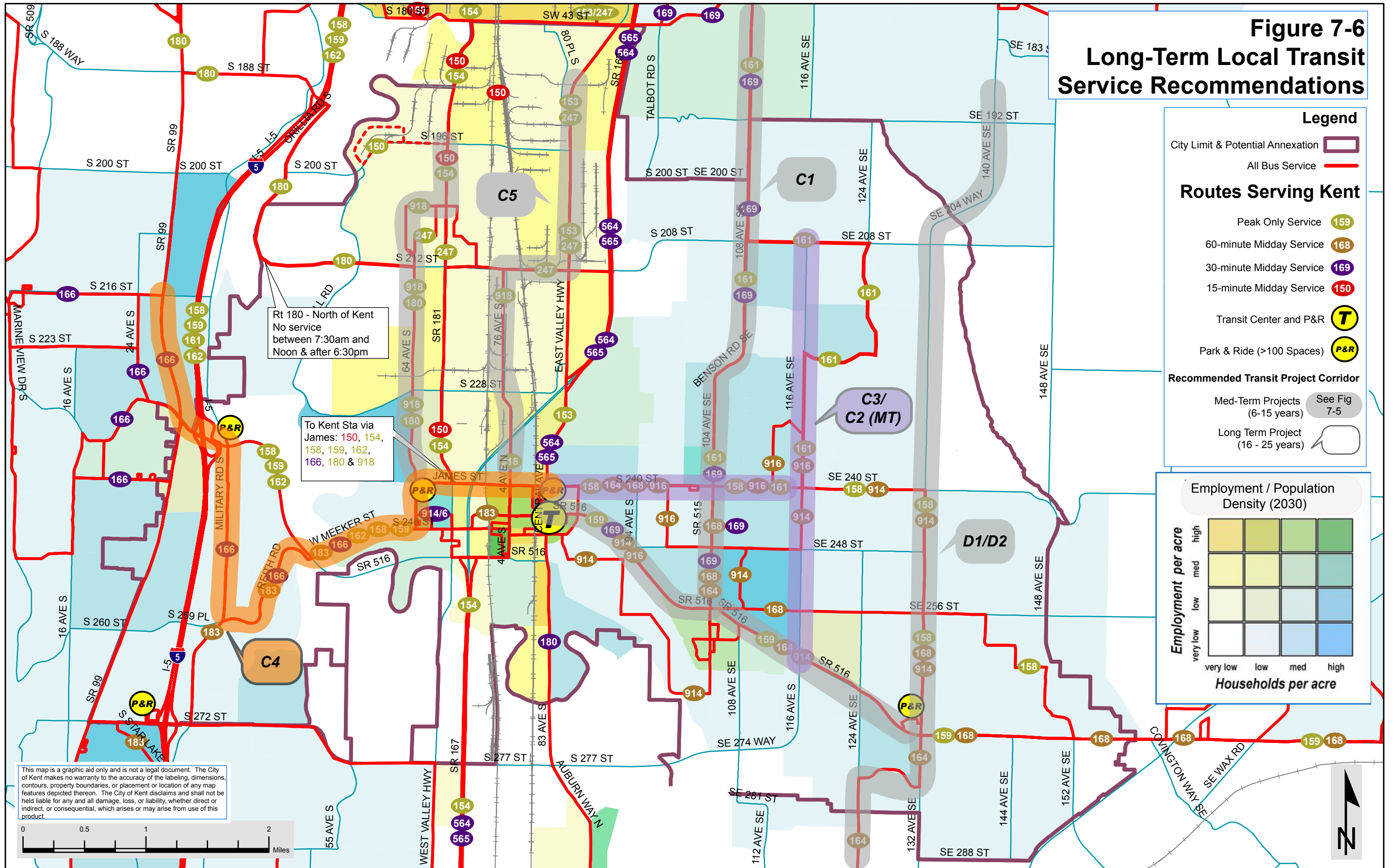
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Figure 7-6 Long-Term Local Transit Service Recommendations



Legend

- City Limit & Potential Annexation
- All Bus Service

Routes Serving Kent

- Peak Only Service
- 60-minute Midday Service
- 30-minute Midday Service
- 15-minute Midday Service
- Transit Center and P&R
- Park & Ride (>100 Spaces)

Recommended Transit Project Corridor

- Med-Term Projects (6-15 years) See Fig 7-5
- Long Term Project (16-25 years)

Employment / Population Density (2030)

Employment per acre	high				
	med				
	low				
	very low				
		very low	low	med	high
Households per acre					

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Chapter 8 | Managing Demand

Using the existing network of streets more efficiently is a fiscally sound way to improve traffic conditions and safety. Transportation demand management (TDM) policies and strategies are designed to reduce automobile travel and shift some trips to non-peak periods (before or after commute hours). Transportation system management (TSM) manages the flow of traffic by adding in turn lanes, Business Access and Transit (BAT) lanes, or coordinating signals. The City of Kent's efforts in implementing TDM and TSM are detailed in this chapter.

Transportation Demand Management

Managing demand makes the best use of the transportation system through various strategies that maximize unused capacity. TDM emphasizes personal access rather than vehicular mobility. TDM strives to treat roadway, transit and sidewalk capacity as valuable, limited assets to be carefully managed.

TDM strategies include: encouraging ride sharing (car- and van-pooling); providing alternative mode subsidies (e.g. transit passes); providing telecommuting, flex schedules, and compressed work weeks; and enforcing parking fees/restrictions. TDM strategies go beyond increasing vehicle occupancy and can range from simple marketing programs to complex land uses. City land use policies reduce dependence on private automobile travel by focusing growth in specific locations and changing land use development patterns. Land use densities, mixed-use activity, urban design,

Chapter Contents

- ▶ Transportation Demand Management
 - Commute Trip Reduction Program
 - Commute Alternatives
 - Marketing and Incentives
 - Planning for the Future
- ▶ Transportation System Management

Primary Source:

The CTR Program for Kent is detailed in an annual report to the state. Chapter 8 explains the program and provides information on ways the City is managing travel demand and encouraging the use of alternatives.

Transportation Demand Management (TDM) is a set of low cost strategies that reduces the demand by vehicles on the transportation system. TDM focuses on the AM and PM Peak Hour Trips. If the commute demand can be managed, the system capacity can meet commuters' needs.

transit station areas and other concentrated points of activity support frequent transit service and pedestrian facilities for centers and along major travel corridors.

Kent is a major industrial center with multiple work sites that operate outside of the typical peak transit hours. Vanpool and vanshare programs alone are not flexible enough to meet the scheduling needs of employees. In addition, ample free parking contributes to the high SOV rate at many work sites. The City's TDM program is focused to maximize alternative mode options for all travels.

Commute Trip Reduction Program

In 1991, the Washington State legislature passed the Commute Trip Reduction (CTR) Law (RCW 70.94.521) to reduce traffic congestion, increase air quality, and decrease fuel consumption. The CTR law is incorporated into the Washington State Clean Air Act. The City of Kent adopted its CTR ordinance (Ordinance No. 3474) in 1993. Currently, the City's CTR program serves 35 work sites providing support to over 15,000 employees and other interested firms.

As the State of Washington's population has grown, the need for programs such as CTR has significantly increased. The CTR program encourages companies to work with their employees to reduce the drive-alone and vehicle miles traveled (VMT) rates. Since the start of the CTR program the overall State single occupancy vehicle (SOV) rate has remained constant even though the volume of commuters has increased - commuters are choosing alternative modes of transportation.

Since the start of the program in 1993 there have been several changes throughout the Puget Sound Region. Job growth has exploded in King County in recent years; whereas, the majority of residential population growth has occurred outside of King County. CTR employees are commuting from greater distances, extending the hours of peak congestion. It is becoming increasingly essential to develop specific strategies that focus on VMT. Kent is located near the county line which impacts several of our employers. Commuting across the county line increases transit fares and can cause transfer difficulty. At several of the CTR work sites the SOV rate has been steadily decreasing; however, the vehicle miles of travel (VMT) rate continues to slowly rise. Employees have to travel greater distances to find affordable housing and to connect with transit service.

The Washington State CTR Law requires employers to:

- Develop a CTR program,
- Appoint an Employee Transportation Coordinator (ETC),
- Regularly distribute information promoting commute alternatives,
- Report their progress, and,
- Implement measures designed to achieve their goals.

The Commute Trip Reduction Law

The Washington State CTR Law is unlike many of the required trip reduction programs established in other states through federal air pollution regulations. Washington's CTR program relies on a partnership between the public and private sectors to make progress towards meeting goals. The CTR program is based on cooperation and collaboration rather than a punitive approach administered based on regulation and enforcement.

The State's CTR law requires counties of 150,000 or more residents to enact local CTR ordinances. King, Kitsap, Pierce, and Snohomish Counties are all part of the Puget Sound Regional Council which contains the majority of the CTR sites in the State. The Law requires that employers with more than 100 full time employees commuting to work between the hours of 6 am and 9 am participate in the CTR program. In order to be considered an affected employee the employee must commute at least two days a week for a minimum of twelve continuous months.

The program is not limited to employers affected by the law; the program includes any local business that has an approved CTR plan which seeks to promote commute alternatives such as ridesharing, tele-working, and flexible work schedules.

Changes to the CTR Law in 2006

In 2006, the Washington State Legislature passed the Commute Trip Reduction Efficiency Act in 2006 (RCW 70.94.521). The goal of the CTR Efficiency Act is to improve the efficiency of the overall transportation system by focusing on the most congested areas of the state and increasing the planning coordination between local, regional, and state organizations.

Kent's local CTR plan provides the City's goals and policies for CTR, identifies facility and service improvements, and adopts marketing strategies to reduce drive alone trips and vehicle miles traveled over the next four years. The City plan focuses on work sites that require more attention.

The new law requires Regional Transportation Planning Organizations (RTPOs) to coordinate the development of local CTR Plans, create a regional CTR Plan, and to measure regional progress. Regional and local CTR plans are then scheduled to be reviewed by the CTR board, which will allocate funding. The modified CTR Program is scheduled to begin in March of 2008.

Affected CTR Work Sites

The City manages its CTR program proactively by providing public outreach to the entire business community, not just the businesses required by law to participate in the CTR program. The CTR program makes good business sense for Kent employers because it helps to retain good employees.

Kent's CTR program provides information and connections for employees to a variety of alternative commute options including flex schedules, compressed work weeks, tele-working, transit, and ridesharing. The City also actively coordinates with transit organizations that administer marketing campaigns such as Wheel Options, Rideshare, and the Commuter Challenge.

Currently 35 CTR work sites, 28 active and 7 voluntary, participate in the program. The City's CTR program is the fourth largest program in King County following Seattle, Bellevue, and Redmond. Work sites range from 64 to more than 4000 employees with a mean size around 300 employees. CTR work sites are shown in **Figure 8-1**. Participating sites include public entities such as King County Regional Justice Center and the Kent School District, and private firms including Boeing, Starbucks, Alaska Airlines, Oberto Sausage and REI. (A detailed list is included in the CTR Report).

In 2005, the majority of CTR employees reported that their employees commute from within Kent or the neighboring jurisdictions of Seattle, Tacoma, Renton, Puyallup, Auburn and Sumner. The average daily commute for Kent CTR employees is approximately 32 round trip miles per day.

Under the new CTR Efficiency Act, Kent will reduce the SOV and VMT rate by focusing on strategies specific to Kent. The local goal for the new program is to reduce the SOV rate by 10 percent and the VMT rate by 13 percent by 2011. The 2011 drive alone goal for the overall jurisdiction is 83 percent and the VMT goal is 13.7 miles per commuter per day.



The CTR Law requires that employers with more than 100 full time employees commuting to work between the hours of 6 am and 9 am participate in the CTR program.



Kent currently has thirty-five CTR work sites, twenty eight active and seven voluntary, which will be participating in the new program.

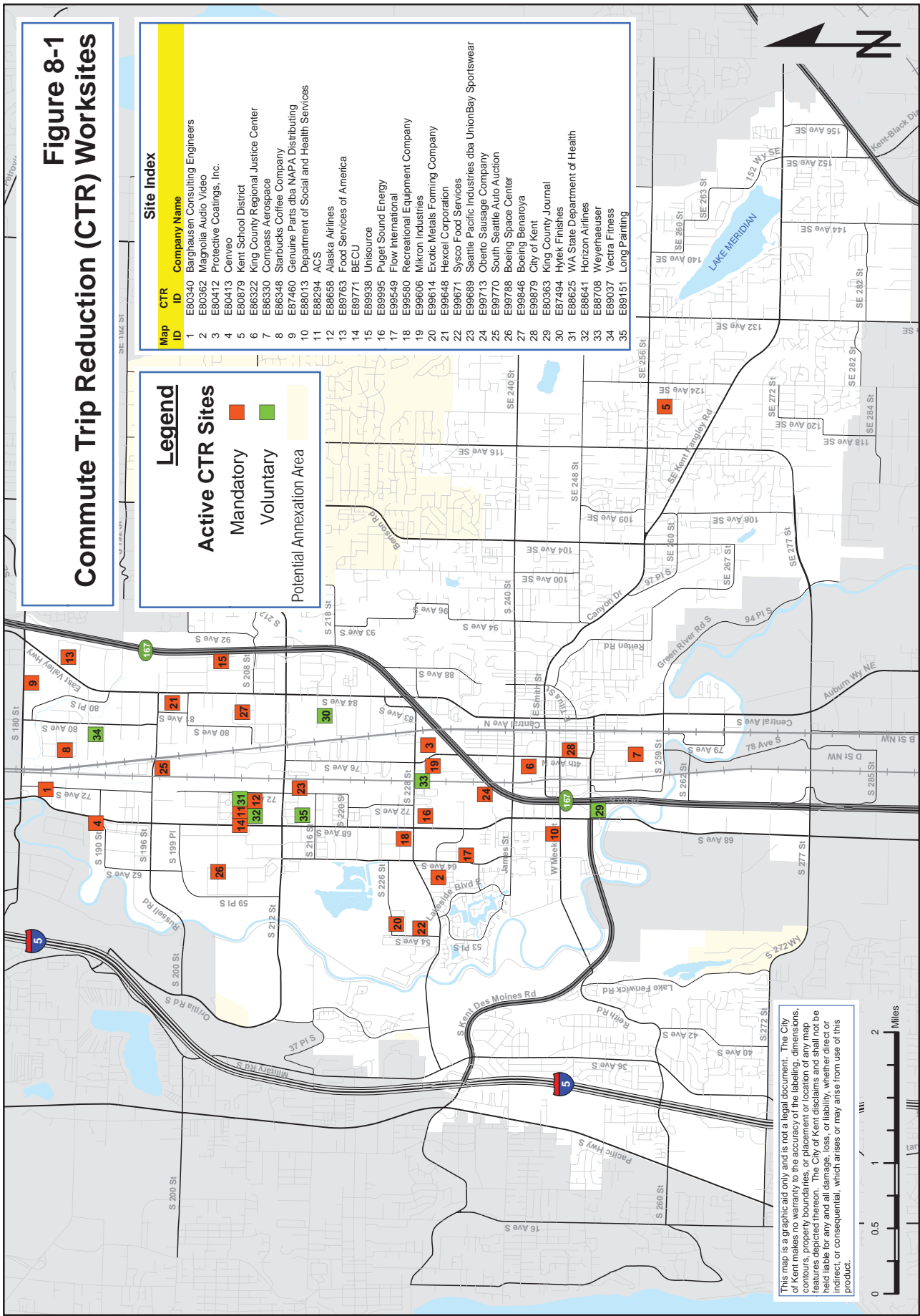
Figure 8-1 Commute Trip Reduction (CTR) Worksites

Map ID		CTR ID	Company Name
1	1	E80340	Barghausen Consulting Engineers
2	2	E80362	Magnolia Audio Video
3	3	E80412	Protective Coatings, Inc.
4	4	E80413	Cenveo
5	5	E80879	Kent School District
6	6	E86322	King County Regional Justice Center
7	7	E86330	Compass Aerospace
8	8	E86348	Starbucks Coffee Company
9	9	E87460	Genuine Parts dba NAPA Distributing
10	10	E88013	Department of Social and Health Services
11	11	E88294	ACS
12	12	E88658	Alaska Airlines
13	13	E89763	Food Services of America
14	14	E89771	BECU
15	15	E89938	Unisource
16	16	E89995	Puget Sound Energy
17	17	E99549	Flow International
18	18	E99580	Recreational Equipment Company
19	19	E99606	Mikron Industries
20	20	E99614	Exotic Metals Forming Company
21	21	E99648	Hexcel Corporation
22	22	E99671	Sysco Food Services
23	23	E99689	Seattle Pacific Industries dba UnionBay Sportswear
24	24	E99713	Obero Sausage Company
25	25	E99770	South Seattle Auto Auction
26	26	E99788	Boeing Space Center
27	27	E99846	Boeing Benaroya
28	28	E99879	City of Kent
29	29	E80363	King County Journal
30	30	E87494	Hylek Finishes
31	31	E88625	WA State Department of Health
32	32	E88641	Horizon Airlines
33	33	E88708	Weyerhaeuser
34	34	E89037	Vectra Fitness
35	35	E89151	Long Painting

Legend

Active CTR Sites

- Mandatory (Red square)
- Voluntary (Green square)
- Potential Annexation Area (Yellow shaded area)



This map is a graphic aid only and is not a legal document. The City of Kent makes no warranty to the accuracy of the labeling, dimensions, contours, property boundaries, or placement or location of any map features depicted thereon. The City of Kent disclaims and shall not be held liable for any and all damage, loss, or liability, whether direct or indirect, or consequential, which arises or may arise from use of this product.

Commute Alternatives

There are a number of alternative ways for commuters to travel to work and reduce the number of SOV work trips.

Transit Service

KC Metro and Sound Transit provide transit services in Kent. In addition to regular local service KC Metro provides Express service, Dial-A-Ride Transit (DART) circulators, and park and ride facilities. Sound Transit provides commuter rail and express bus service from park and rides linking regional urban centers in Pierce and King County. Sound Transit's Sounder commuter rail is a popular alternative for employees commuting to Kent CTR work sites.

As detailed in the Transit Chapter (chapter 7), Route 918, an innovative commuter shuttle, is an example of the City's commitment to the local business community to provide an accessible transportation system. The commuter shuttle links Sound Transit and Metro Transit centers to CTR work sites including: Boeing, REI, Horizon Air, Alaska Airlines, ACS, and Flow International. The commuter shuttle provided over 3,362 door-to-door trips in October of 2007. In addition to serving CTR sites, the commuter shuttle is used by several employees that work at smaller employment sites along the route. Employees have expressed the desire for this peak only route to extend into the midday and evening hours to support the multiple shifts at this active manufacturing and industrial center.

Rideshare Programs

Ridesharing, particularly carpooling, is one of the most popular and convenient alternatives used by commuters. Ridesharing is particularly helpful for employees that lack convenient, reliable transit service. Rideshare commuters are able to use the high occupancy vehicle (HOV) lanes, which can greatly reduce their commute time.

Several Kent CTR work sites provide reserved parking and financial incentives for rideshare commuters. The online ridesharing program (www.rideshareonline.com) offered by KC Metro connects rideshare participants throughout the region. Some Kent CTR work sites offer their own internal ridesharing programs connecting their employees to each other.

In a 2005 survey, 52 percent of the CTR work sites reported that they provided vanpool subsidies for their employees. Vanpool riders contribute a monthly rate determined by the number of miles traveled and the number of passengers. The Metro vanpool program provides the fuel, insurance, and maintenance for each of their vehicles.

The Vanshare program is another alternative for employees that commute by bus, train, or ferry that need help getting from the transit center to their work location. The majority of Kent Vanshare participants commute from the Tukwila and Kent commuter rail stations to Boeing, Alaska Airlines, and Barghausen Engineering. The Kent Transit Center is used as a main transfer point for commutes to SYSCO, FSA, Boeing, REI, and the Centerpoint Business Complex.

Non-Motorized Options

Metro and Sound Transit buses and trains are equipped to accommodate passengers with bicycles. Bicycling is often a practical travel mode for commuters who are located further than walking distance from transit services and whose schedules are

Sometimes "Inside the Box" strategies are more effective than "Outside the Box". CTR strategies that are new and creative or that employ new and expensive strategies are not always the most effective strategies. Knowing your market 'is knowing what will work.'



CTR employees currently using the vanpool program are primarily commuting from Seattle, Puyallup, and Tacoma. REI and Boeing are the two leading City of Kent participants in the Vanpool program.

too inflexible to use Vanshare programs. The City of Kent has numerous bicycle and pedestrian facilities that connect to CTR work sites including the Green River Trail and the Interurban Trail. Both of these trails are available for all users – walkers, commuters and recreational bicyclists. The Interurban Trail parallels the Union Pacific Rail Road in the Kent Valley and is known as the bicycle I-5 to cyclists who regularly use the trail. The regional trail covers 14 miles from I-405 in Tukwila to 3rd Avenue SW, just south of Pacific. The other regional trail, the Green River Trail, features spectacular views of Mount Rainier and currently covers 16 miles. When the trail is completed it will cover over thirty miles spanning from the Green River in Kent to Alki Beach in West Seattle.



Alternative Work Schedules

Alternative work scheduling is beneficial to both the employee and the employer. Businesses are able to provide coverage for additional hours and employees are able to work their schedules around transit and ridesharing. Alternative schedules including flextime, compressed work weeks, and staggered shifts are a significant component of the CTR program in Kent. Flextime allows employees to work a variable work schedule, contrary to a standard 9 am to 5 pm work schedule. Flex schedules reduce employee anxiety over being late and help facilitate carpools. Another option, the compressed work week, allows employees to work fewer days by working longer shifts, reducing their total VMT by completely eliminating a trip. Staggered shifts allow employees to start and complete their workday outside the peak periods.



Telecommuting

Telecommuting is an arrangement that allows employees to work from their home or a mobile location. Telecommuting eliminates the travel time for employees making their time more productive and allowing them more flexibility within their day. Telecommuting is a great way to reduce congestion and increase air quality by completely eliminating a trip.

Travel Demand Marketing and Incentives

Each CTR work site has an employee transportation coordinator (ETC) that serves as the employer representative to the City and is charged with promoting commute alternatives to employees. ETCs are the alternative transportation experts at their work sites. They get the word out to their employees through new employee orientations, advertising in common areas, flyers, posters, emails, company newsletters, paycheck inserts, and promotional campaigns. Marketing campaigns such as the October Rideshare week and Wheel Options Campaigns promote increased ridership through prizes like a vacation for two or a shopping spree. The City facilitates promotional events at CTR work sites that help encourage employees to use the alternative commute options that are available to them.

Employee subsidies offset commuting costs and encourage employees to break the habit of driving alone. Common subsidies include discount bus, ferry, or train passes, reduced vanpool fees, reserved HOV parking, and/or gift vouchers for walking or biking to work. Employers that offer subsidies for parking, transit, and/or ridesharing experience increased participation in their CTR program.

The Guaranteed Ride Home (GRH) program provides employees who regularly commute to work with a free ride when unexpected situations at work or home arise. This incentive eliminates the anxiety that many commuters have over being stuck at

work without a personal vehicle. GRH is a cost effective solution that employers can utilize to promote their CTR program.

By investing more in employees' work environments, CTR employers are able to reduce their employees' needs to make midday trips. Showers and storage lockers are key features for promoting a successful walking or biking program. On-site amenities such as daycare, cafeterias, and ATM machines reduce the need for midday trips. The Boeing Company and Centerpoint Business Park in Kent offer their employees many of these amenities, leading the way in on-site amenities and providing a positive work environment that supports the needs of employees who choose to use alternative commute options.

Planning for the Future

The City will coordinate with local, regional, and state transportation agencies to increase transportation efficiencies. Future city, state, and regional construction projects will greatly impact both regional and local congestion. Alternative mode commute programs will become increasingly more critical.

The City will continue to promote alternative commute programs particularly through ridematching programs that link carpool, vanpool, and vanshare participants. The City will also encourage businesses in the community to voluntarily participate in the CTR program. The City will review and update the City's CTR Ordinance biannually in order to meet the needs of employers and the community.

City Actions Supporting the CTR Program

The City proposes to take the following actions in support of the CTR Program.

- Continue to work with King County Metro and Sound Transit to increase local transit service and programs.
- Support shuttle service through the Lakes and Riverview communities connecting to the Kent Transit Center.
- Increase frequencies on Route 153 between Kent and Renton.
- Increase frequencies on Route 183 through the West Hills of Kent.
- Provide all day service on Route 918 to serve CTR employment sites in the manufacturing and industrial center.
- Support KC Metro's RapidRide, scheduled to begin in February 2010. It will replace Route 174 along Pacific Highway S/International Boulevard between S 316th Street in Federal Way and S 154th Street (International Boulevard) in Tukwila. RapidRide will pass through Kent along Pacific Highway South. RapidRide buses will link up with Sound Transit's light rail in Tukwila as well as local routes destined to Tacoma, Federal Way, Des Moines, Auburn, Tukwila, and Burien.
- Enhance existing bicycle and pedestrian facilities.
- Incorporate non-motorized improvements into new projects.
- Continue to work collaboratively with neighboring jurisdictions and King County to provide incentives for CTR participants.

Tax benefits are available for eligible employers and their employees

Employers can offer their employees federal tax commute-to-work fringe benefits. Employees are eligible for a pre-tax payroll deduction to help offset the cost of transit or vanpooling. Employers can annually claim up to fifty percent of the amount paid to or on behalf of each employee for ride sharing, car sharing, using public transportation, or non-motorized commuting. The credit may not exceed a total of \$200,000 or \$60 per employee per fiscal year.

One's choice of travel mode is influenced by complex daily life patterns. Changing travel patterns often require a long-term approach.



Transportation System Management



Using Transportation system management techniques, the City can maximize the efficiency of the street network.

Transportation system management (TSM) techniques, which make more efficient use of the existing transportation system, can reduce the need for costly system capacity expansion projects. These techniques can also be used to improve LOS when travel corridors approach the adopted LOS standard. TSM techniques include:

- Rechannalization/restriping, adding turn lanes, adding /increasing number of through lanes;
- Signal interconnect and optimization;
- Signalization;
- Turn movement restrictions;
- Access Management; and
- Intelligent Transportation Systems (ITS).

The City uses TSM techniques to maximize the efficiency of the street network. ITS is a relatively new technology that has proven itself a successful and cost effective means of increasing system capacity. With an ITS system the City is able to change traffic signals in real-time, thereby handling unusual increases in traffic or traffic obstacles, such as event related traffic and accidents. ITS is included in the City's new Transportation Center which will be part of the Kent East Hill Operations Center, which is expected to be operating by 2012. The City will assess the opportunity for ITS capabilities on corridors around the City.

In addition to TSM strategies, the City strives to provide viable alternatives for the traveler, to ensure freedom of choice among several transportation modes (such as transit, biking and walking) as alternatives to the automobile. The City stresses the development of pedestrian-friendly environments such as bicycle routes and pedestrian paths as the non-motorized system expands.



Chapter 9 | Funding The TMP

A major component of the Transportation Master Plan is the financial element. A key GMA planning requirement is the concept of fiscal restraint in transportation planning. The purpose of the financial element is to balance the transportation projects recommended for implementation with the ability of the city to build and maintain transportation facilities and services. The remainder of this chapter summarizes funding strategies for Kent’s Transportation Master Plan.

The “Big Picture” – Overview of Costs and Revenues

The proposed 2006-2030 Transportation Master Plan for the City of Kent contains a variety of projects that will cost between \$511 and 595 million¹ over 25 years. **Table 9-1** summarizes the costs of the major types of transportation improvements. Street improvement projects comprise approximately \$360 million, grade separation projects \$170 million, transit projects \$4 million, and non-motorized projects up to \$40 million. The transit costs represent a six-year City commitment to fund the existing transit shuttles program and to partner with King County in the new *Transit Now* program.

¹ This cost is consistent with the City’s past investment in transportation improvements. During the past eleven years, the City of Kent built \$260 million of transportation capital improvements (in 2006 dollars). The annual average was \$23.6 million. If the City continues to find ways to fund transportation projects during the next 25 years at the same level as the past eleven years, the City would pay \$592 million for transportation capital improvement projects

Chapter Contents

- ▶ The “Big Picture” Overview of Costs and Revenues
- ▶ Estimates of Specific Sources of Revenue
 - Existing Revenues
 - Potential Additional Revenues
- ▶ Transit Funding

These costs represent the portion of the projects located within the City of Kent. An additional \$100 million of street needs were identified within the potential annexation area of the City, within King County. These costs are not included in Table 9-1 since they are not currently the responsibility of the City of Kent.

Table 9-1. Costs of Kent Transportation Master Plan (\$ Millions)

Project Needs 2006 - 2030*	Without Grade Separation Projects	Grade Separation Projects	All Projects
Street Projects*	\$ 341-373	\$ 162-179	\$ 503-552
Non-Motorized Projects	4-38	0	4-38
Transit Projects	4-5	0	4-5
Total	\$ 349-416	\$ 162-179	\$ 511-595

* Note: The street projects also include 16 miles of new bicycle routes representing approximately \$36 million of additional bicycle investment. The street projects also include 15 miles of new sidewalks.

Table 9-2 summarizes the projections of potential 25-year revenues from existing and new sources.

Table 9-2. Potential Revenues for Kent Transportation Master Plan (\$ Millions)

Projected Revenue 2006 - 2030	Without Grade Separation Projects	Grade Separation Projects	All Projects
Existing Revenues	\$ 131-234	\$ 18-73	\$ 149-307
Potential Additional Revenue	\$ 164-383	0	\$ 164-383
Total	\$ 295-617	\$ 18-73	\$ 313-690

Estimates of Specific Sources of Revenue

The estimates of existing funding and potential additional funding summarized in Table 9-2 are from a detailed analysis of each source of revenue and identification of the assumptions that are appropriate to each source. Table 9-3 presents 25-year revenue estimates for five existing and six potential additional sources of revenue for transportation capital improvements for the City of Kent. Each source of revenue has a low estimate, a high estimate, and the average of the two.

The estimate of each of the existing and potential additional revenue sources listed in Table 9-3 is described below. The existing revenue sources are numbered 1 to 5, and the potential additional revenue sources are lettered A to F.

All revenue estimates are in 2007 dollars to match the costs of projects that are a blend of 2006 and 2007 dollars; therefore, the two sets of data are comparable.

**Table 9-3. Estimates of Specific Revenue Sources 2006-2030
(\$ Millions)**

	Source of Revenue	Low Estimate	High Estimate	Average
I. Existing Revenue Sources for Capital				
1.	Committed Funding	\$ 77.3	\$ 77.3	\$ 77.3
2.	Grants - Annual Average*	11.6	63.9	37.8
3.	Grants for Grade Separation Projects	17.8	73.3	45.6
4.	Local Improvement Districts (LIDs)*	35.2	75.0	55.1
5.	Transfer from Street Fund*	7.2	17.6	12.4
	Total: Existing Revenue for Capital	\$ 149.6	\$ 307.6	\$ 228.7
	Source of Revenue	Low Estimate	High Estimate	Average
II. Potential Additional Revenue Sources for Capital				
A.	Impact Fees - City of Kent ¹	\$ 45.0	\$ 180.0	\$ 112.5
B.	Impact Fees - Reciprocal from King County	5.0	10.0	7.5
C.	Business License Fee for Transportation	73.8	98.7	86.3
D.	Voted General Obligation Bonds	5.5	27.5	16.5
E.	Real Estate Excise Tax	4.5	22.3	13.4
F.	Vehicle License Fee for Transportation Benefit District ²	30.0	44.0	37.0
	Total: Potential Additional Revenue for Capital	\$ 163.8	382.5	273.2
	Combined Total for Capital: Existing + Potential	\$ 313.4	\$ 690.1	\$ 273.2

* Net of Committed Funds

- 1- Impact Fees. The low estimate is based on rates of approximately \$3,000 per PM peak hour trip; the high estimate is based on the potential maximum of approximately \$15,000 per trip.
- 2- Vehicle License Fee. The range of estimates is based on a \$20 per vehicle fee using varying estimates of registered vehicles in Kent and the percent of license fee revenues that would be used for the TMP Projects.

Existing Revenues for Transportation Capital Projects

1. Committed Funding

The City of Kent has already secured funding for some of the projects in the Transportation Master Plan. The estimate is based on a list of the specific projects with committed funding, and the amounts and sources of the committed funds. The committed funds total \$77.3 million, of which \$56.8 million is from grants, \$4.5 million is from local improvement districts, \$12.6 million is from environmental mitigation fees, and \$3.2 million is from City revenues.

The \$77.3 million of committed revenue is listed as both the low estimate and the high estimate because the amounts are known, and are not estimated.



2. Grants – Annual Average (net of Committed Grants)

The estimate is based on the annual average of \$4.2 million of grants received by the City since 1990, other than grants for grade separation projects.

The low estimate of \$11.6 million is based on 50 percent of the historical average, but the estimate is then reduced by \$40.6 million of grants already committed (other than grants for grade separation projects, which are estimated separately).

A high estimate of \$63.9 million is based on 100 percent of the historical average, but the high estimate is also reduced by \$40.6 million of grants already committed to City projects.

The average of these values is \$37.8 million.

3. Grants for Grade Separation Projects (net of Committed Grants)

The low estimate of grants for grade separation projects is based on the annual average of \$2.7 million of grants received by the City since 2004 for grade separation projects. The low estimate of \$17.8 million is based on 50 percent of the historical average, reduced by \$16.2 million of grants for grade separation that are already committed.

A conservative high estimate of \$73.3 million was based on 50 percent of the cost of the grade separation projects in the TMP, reduced by \$16.2 million of grants already committed to City grade separation projects. The high estimate uses the cost of projects as the basis because the City's policy has been to only build grade separation projects if there is substantial funding from grant sources. While the grants have typically covered 85 percent of the project cost, it is unlikely that grants will continue to fund grade separation projects at this level. A more conservative high estimate would be 50 percent, so the high estimate is now 50 percent of \$179 million, reduced by \$16.2 million of grants already committed to City grade separation projects for a high estimate of \$73.3 million.

The net low estimate of grant revenue for grade separations is \$17.8 million, and the net high estimate is \$73.3 million. The average is \$45.6 million.

The City's match would need to come from City revenues, such as LIDs, transfers from the street fund, real estate excise tax, vehicle license fee for transportation benefit district, and/or a business license fee for transportation.

4. Local Improvement Districts (net of Committed LIDs)

Local Improvement Districts (LIDs) have been a major source of transportation funding for the City during the past 20 years. The City anticipates that LID's will continue to be used.

The estimate of future revenue from local improvement districts (LIDs) is based on the annual average of \$3.18 million of LIDs established by the City since 1986.

A low estimate of \$35.2 million is based on 50 percent of the historical average, reduced by \$4.6 million of LIDs already committed.

The high estimate of \$75.0 million is based on 100% of the historical average, reduced by the \$ 4.6 million of LIDs already committed to City projects.

The net low estimate of LID revenue is \$35.2 million, and the net high estimate is \$75.0 million. The average is \$55.1 million.



5. Transfer from Street Fund (net of committed funds)

The City of Kent has a separate fund, the “Street Fund” in which it deposits a portion of the City’s utility tax and all of the City’s share of the state’s tax on motor fuels. The Street Fund is used primarily for ongoing operating and maintenance expenses of the street system. However, the City transfers a portion of the Street Fund money to the City’s capital improvement program (CIP) for transportation projects. The estimate is based on the annual average of \$0.8 million of Street Fund revenue budgeted to be transferred to the CIP and available for capital projects during the 2007 – 2012 CIP. In other words, the estimate is based on extending the 2007 – 2012 commitment for the whole 25 years of the TMP. Continued use of the Street Fund for capital improvements will reduce the amount of money in the Street Fund for the Pavement Management Program.

A low estimate of \$7.2 million is based on 50 percent of the historical average, reduced by \$3.2 million of Street Fund money already committed.

The high estimate of \$17.6 million is based on 100 percent of the historical average, also reduced by \$3.2 million of Street Fund money already committed.

The average of these values is \$12.4 million.

Potential Additional Revenues for Transportation Capital Projects

A. Impact Fees – City of Kent

The Growth Management Act created RCW 82.02.050 et seq. that authorizes impact fees for streets and roads. The fees must be based on, and used for, specific improvement projects in the Transportation Master Plan. The projects must be “system improvements” that provide service and benefits to the community, and not “project improvements” that provide service and benefits to individual developments. Impact fees are calculated by identifying the cost of the road projects that serve new development, adjusting for other sources of revenue that would pay for part of the same projects, and then dividing the remaining cost by the number of trips that the road projects will accommodate. The result is the cost per trip. The amount of impact fee to be paid by each new development is calculated by multiplying the cost per trip times the number of trips that the new development will add to the roadway system.

The forecast of impact fees assumes that they would supplement or replace the existing program of environmental mitigation fees. The City would continue to use the State Environmental Policy Act (SEPA) to ensure that new development adequately mitigates its impacts on the transportation system.

Impact fees can only be imposed if the City prepares and adopts an impact fee ordinance that follows the requirements of RCW 82.02.050 et seq. The estimates are based on forecasts of future growth from 2006 to 2030.

The low estimate of \$45.0 million is based on low to moderate impact fee rates charged by other cities in the area, and the high estimate of \$180.0 million is based on initial estimates of the maximum amount the City of Kent could legally charge to new development for projects in the draft TMP.



B. Impact Fees – Reciprocal from King County

The reciprocal impact fees that could be received from King County are based on the same methodology as the impact fees for the City of Kent, but the growth forecasts are for the Potential Annexation Areas.

The low estimate of \$5.0 million is based on low to moderate impact fee rates charged by other cities in the area, and the high estimate of \$10.0 million is based on estimates of the impact on Kent roads from development in King County and review of higher impact fee rates charged by other cities in the area.

The fees would be negotiated with King County; the City would be required to raise its own impact fees in order to make reciprocal payments to the County. An alternative would be to pursue annexations and then charge Kent's mitigation fees (i.e., EMAs or impact fees) rather than to negotiate reciprocal payments from the County.

C. Business License Fee for Transportation

The cities of Renton and Redmond have used their authority to license businesses to impose a license fee that is used to build transportation improvements that benefit businesses. The fee would be on the basis of employee count or other measure of potential business impact on City facilities and demand on the transportation system. The estimate below indicates how much revenue could be generated from a similar business license in Kent, using employee count as the measure, similar to the approaches in Renton and Redmond.

The low estimate of \$73.8 million uses a low estimate of 67,050 employees in Kent, the lower rate of \$55 per employee count per year charged by Renton, and the lower portion of 80 percent of the license revenue committed to transportation by Renton.

The high estimate of \$98.7 million uses a higher estimate of 71,915 employees in Kent, Redmond's rate of \$83.25 per employee count per year, and 66 percent of the license revenue committed to transportation by Redmond.

The Renton program began in the early 1980s to finance the Oaksdale Avenue underpass under I-5, then it was continued to fund other transportation projects. There was a sunset for the first ten years. The fee was developed after significant discussions with Boeing, the Chamber of Commerce, and other key businesses. A committee met every year to review the program. The City was able to leverage the money, typically obtaining \$3.00 of state and federal money for every \$1.00 of business license fee. After the initial 10 years, the business community felt that the City was putting the money to good use and agreed to continue the program, and to remove the sunset clause. Renton's business license fee applies to for-profit businesses, so governments and non-profits do not pay. Renton's transportation money has been used for street projects.

The Redmond program was developed in active consultation with the business community. The initial fee was authorized at \$65 per employee per year between 1997 and 2000. The program was extended for 2001 to 2004 and the rate was increased to \$67.50. The program was extended again for 2005 to 2006 and the rate was increased to \$83.25. Some of the transportation money is used for transportation demand management and intelligent transportation programs.



D. Voted General Obligation Bonds

The City of Kent can issue bonds to borrow money for a variety of purposes. The legal limit on such borrowing is an amount equal to 2.5% of the taxable value of the property in the City. In order to borrow the funds, and to authorize an additional property tax to repay the bonds, the City would be required to obtain approval by 60 percent or more of the voters. The estimates are based on remaining debt capacity of the City.

The low estimate of \$5.5 million is based on a bond issue of 10 percent of the remaining debt capacity, and the high estimate of \$27.5 million is based on a bond issue of 50 percent of the City's remaining debt capacity.

Other potential projects may, or may not, compete for the City's borrowing capacity. If the City proposes a voted general obligation bond for the aquatic center, the bond could be proposed under RCW 39.36.020 (4) for "... park facilities ..." and thus not use any of the statutory debt limit of the City under RCW 39.36.020 (2)(b), and thus preserve that authority for transportation. Furthermore, if the City were to propose a voted bond issue for specific transportation projects that support jobs, employment and the economy, the bond could be considered part of the borrowing authority of RCW 39.36.020 (4) for "... capital facilities associated with economic development..." The City Attorney and/or bond counsel could provide information on applicability of these potential strategies.

E. Real Estate Excise Tax (REET)

The City of Kent has adopted both 0.25% real estate excise taxes (REET) authorized by the state law. REET is collected each time a real estate transaction occurs in the city. The money is used for many types of infrastructure improvements, including transportation projects. Kent uses half of its REET money for parks and recreation, and the other half for a variety of other capital improvements. This analysis does not change the REET for parks and recreation, but it does examine the potential revenue for transportation from the other half of the REET.

The estimate is based on the annual average of \$1.8 million the City receives for the half of REET that is not used for parks and recreation. While there is significant competition among Kent's capital projects for funding by REET, the City could choose to dedicate a portion of its REET for major transportation projects.

The low estimate of \$4.5 million is based on 10 percent of the annual revenue, and the high estimate of \$22.3 million is based on 50 percent of the annual revenue.

F. Vehicle License Fee for Transportation Benefit District

In 2007, the legislature passed and the Governor signed a law authorizing a \$20 vehicle license fee.² In order to obtain this revenue, the following would have to occur:

1. King County would have to decide to not impose the fee (County's have right of first refusal), or the County would need to adopt a program and share revenue with cities.
2. Kent would have to create a city-wide transportation benefit district as the entity that would charge or expend the fee.

² The law authorizes a \$20 per vehicle license fee using Council approval. An additional incremental fee up to \$80 per vehicle can be imposed with voter approval.



3. Kent would have to identify specific transportation projects to be funded by the vehicle license fee. The projects must be necessitated by current or future congestion levels on roads of statewide or regional significance.
4. Kent would need to ensure that the eligible project(s) are listed in a state or regional transportation plan.
5. The City would need to adopt the license fee, or enter into an agreement with King County regarding sharing of the revenue from the County, including a provision that it would “sunset” when the project(s) were paid for.

The estimate is based on the \$20 vehicle license fee and an estimate of the number of registered vehicles in Kent and assumptions about how much of the money would be used for TMP projects, as opposed to a portion that could be used for operations and maintenance (as allowed by the new law).

The low estimate of \$30.0 million is based on an estimate of 80,000 registered vehicles and 75 percent of the revenue being used for TMP projects. The high estimate of \$44.0 million is based on an estimate of 88,000 registered vehicles and 100 percent of the revenue being used for TMP projects.

Transit Funding

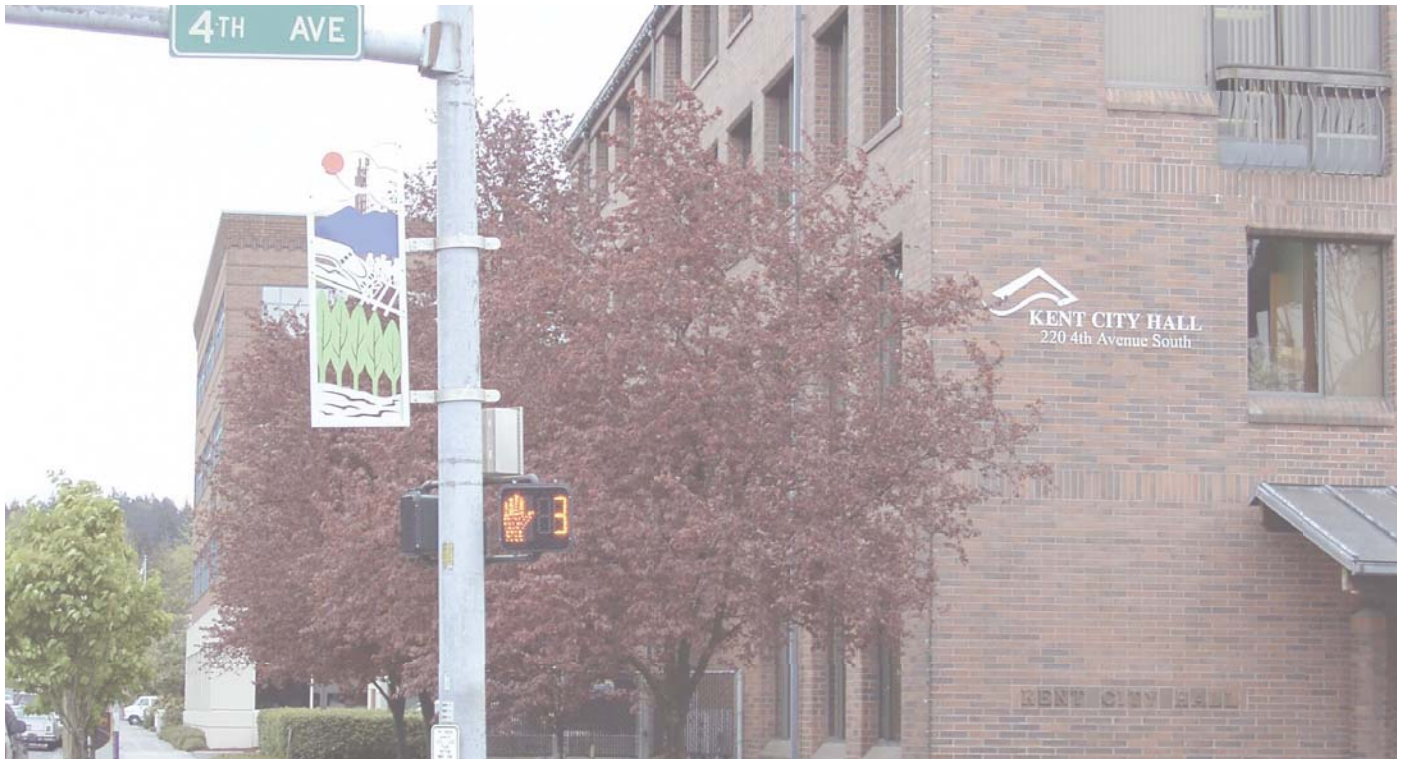
Operating funding for transit services primarily comes from local (regional) sales tax revenues, farebox revenues and in the case of Sound Transit, a Motor Vehicle Excise Tax. Capital funding primarily comes from federal grants. Metro bus service is allocated to three subareas of the County, the East, South, and West (Seattle/north suburban) subareas. The West subarea has 63 percent of the bus service, and the current *Six-Year Transit Development Plan* provides that every 200,000 hours of additional bus service will be allocated among the three subareas on a 40:40:20 basis with the East and South subareas each receiving 40 percent of new service hours and the West subarea receiving 20 percent.

The City of Kent currently contributes \$21,265 annually toward the farebox replacement for the Shopper Shuttles. In 2006 the City paid \$43,174 for 10 months of operation of the Commuter Shuttle. Estimated 2007 expenses are \$70,250 to provide two additional runs, meeting up with the additional Sounder trains.

Conclusion

It appears that the City has several viable options for raising significant revenue for the City of Kent’s Transportation Master Plan. These options will be presented to the City Council for consideration as additional revenue is needed to complete projects. The public will have opportunities to participate in these decisions.





Chapter 10 | Implementing the TMP

Implementing the Transportation Master Plan will require close coordination among the City departments, along with key actions to be taken by the City Council. This chapter identifies the high priority implementation actions and their potential schedule.

The TMP is a living document, and as incorporated into the City's Comprehensive Plan, will serve as the blueprint for transportation in Kent over the next several years. Realistically, the actions in the plan are most useful over the next three to five years, at which point a plan update will be required. Several implementation steps should be initiated over the next couple of years to determine if changes are needed, or to reaffirm a particular strategy.

Table 10-1 summarizes the recommended short- and medium term actions in a schedule framework that allows for a reasonable phase-in of the key TMP actions.

The types of priority actions are covered in this chapter below, including:

- Council Actions
- Monitoring and Evaluation
- Plans and Programs

Each modal element of the TMP includes implementation actions that are summarized within these categories.

Chapter Contents

- ▶ Council Actions
- ▶ Monitoring and Evaluation
- ▶ Plans and Programs
- ▶ Action Strategies Schedule

Table 10-1. Kent TMP Action Strategies Schedule

		Year of Project Initiation			
		2008	2009	2010	2011-2012
A. Council Actions					
A1	Adopt Impact Fee Ordinance			Update Rates every 2 years	
A2	Revise Concurrency Management System		2009 Annual Concurrency Report	2010 Annual Concurrency Report	2011, 2012 Annual Concurrency Reports
A3	Establish Business Community Funding Process		Implement Initial Funding sources	Implement Remaining Funding Sources	
A4	Transportation Staffing and Resources	Ongoing			
A5			Establish a Traffic Advisory Committee		
B. Monitoring and Evaluation					
B1	Annual Report Card (Establish Structure; collect data)		2009 Mobility Report Card	2010 Mobility Report Card	2011,2012 Mobility Report Cards
B2					TMP Review
B3			Travel Model Update		
B4	Refine Project Prioritization		2009 TIP	2010 TIP	2011,2012 TIPS
B5	Public Involvement	Ongoing Public Involvement			
C. Plans and Programs					
C1	Modify Street Design Standards				
C2	Operations and Maintenance Costs				
C3	Neighborhood Traffic Calming				
C4	Design and Upgrade Traffic Signal System			Active Traffic Management System	

A. Council Actions

The adoption of the TMP will lead to a number of ordinance updates, resolutions and budget decisions requiring City Council action. These include the following:

- Adopt the Transportation Impact Fee Program
- Revise the Concurrency Management System
- Establish a Business Community Funding Process
- Assess Transportation Staffing Needs and Resources
- Establish a Traffic Advisory Committee

Each of these actions are discussed below.

A1- Adopt Transportation Impact Fee Program

The City will adopt a new GMA-based Transportation Impact Fee Program as an integral part of the transportation funding program. The actions will include adopting an impact fee ordinance and rates (with a documented impact fee rate study), and establishing administrative procedures for implementing the impact fee program.

A2- Revise the Concurrency Management System

The City's concurrency management system will be updated to implement a new 'plan-based' approach to transportation concurrency. Concurrency is part of the overall transportation context, tying land use and transportation together. The City expects to use concurrency as a means to better monitor the transportation-land use connection as the TMP is implemented, rather than as a regulatory tool.

In Kent, as long as the growth of the city and the implementation of the city's transportation plan are in balance, then transportation concurrency requirements will be met. This is the plan-based approach to concurrency- ensuring, at the plan level, that the pace of development reasonably matches the pace of transportation investments. This balance will be examined yearly as part of a Concurrency Report Card (see Monitoring and Evaluation action). If the report card shows a transportation/land use imbalance, then the city will take actions to adjust the land use plan or the pace of project implementation. The city may also choose in the future to institute a more rigorous 'checks and balances' approach of measuring land use and transportation.

A3- Establish a Business Community Funding Process

The City will establish a process to engage the business community regarding proposed funding sources that affect business. The City Council will determine the most appropriate mechanism to establish this dialog with the intent to obtain a consensus on appropriate funding sources and magnitude of funding.

A4- Assess Transportation Staffing Needs and Resources

The implementation of the TMP will require focused attention by the City's Transportation Section to ensure success. Several new programs are identified, including the transportation impact fees, annual plan monitoring and evaluation, concurrency status monitoring, traffic counting and analysis, non-motorized system, and follow-up implementation studies. Current Transportation Section resources are not expected to be adequate to implement these actions while maintaining its ongoing community functions. The city will closely examine the staffing and resource needs of the Transportation Section as part of the 2008 work plan.



Specific staffing needs not currently allocated within the city include the following:

- Traffic counting and analysis¹
- Transportation report card analysis and documentation
- Transportation impact fee administration
- Microsimulation modeling for small area traffic studies
- Transportation funding support (e.g. Grant applications)
- Traffic Calming program
- Traffic Signal System Management
- Non-Motorized Transportation System (NMTS) Coordinator. The Coordinator's general responsibilities could include:
 - ▷ Monitoring of ADA federal policy refinements and local policy compliance
 - ▷ City-wide crosswalk study
 - ▷ Non-Motorized GIS database management
 - ▷ Site Plan review to help ensure the Non-Motorized transportation system goals and policies are implemented
 - ▷ Revised pedestrian and bicycle design standards
 - ▷ Pedestrian and bicycle signage and channelization inventory and maintenance
 - ▷ School safe-walking route development and bicycle education
- WSDOT project development and plan coordination
- Transit stop development/management
- Support of other City department priorities (Community Development Subarea Plans, Police Department Grants, etc.)



A5- Establish a Traffic Advisory Committee

The TMP Citizen Task Force set a high standard for demonstrating how a body of volunteers committed to finding solutions for the entire City will set aside their own self-interests and give a thoughtful review to difficult transportation issues. This group of neighborhood representatives, small and large businesses, young adults and senior citizens, worked for almost two years to find compromise positions on many complex subjects.

The Council should consider the establishment of a Traffic Advisory Committee as a continuation of the Task Force experience. This Committee could be a transportation sounding board for citizens and businesses and provide objective input to the Council on emerging transportation issues and city transportation policies. The Committee could then make recommendations to the Public Works Committee and/or City staff. Based upon the lessons learned from the TMP Task Force, this new Traffic Advisory Committee should be kept very balanced to allow all interests to be fairly represented. Such a body of citizen-volunteers could bring a wealth of knowledge, energy, and goodwill to the ongoing transportation needs of the Kent community.

¹ Ongoing program to gather traffic data to determine Average Daily Traffic and Peak Hour Volumes on the arterial road network; turn movement counts at all signal-controlled and multi-way stop-controlled intersections; and traffic collision investigation reports

B. Monitoring and Evaluation

The TMP is a long-range plan that anticipates the needs and conditions of the future transportation system in 2030, enabling the City to plan for its current and future needs. Nonetheless, the transportation network is dynamic, constantly changing due to circumstances beyond the scope and influence of this plan. Hence, regular updates are necessary to ensure the plan remains current and relevant.

B1- Annual Mobility Report Card

An annual mobility report card will be developed to document progress towards plan implementation and to monitor the transportation system performance. The City will use this information to provide accurate information to the public regarding the City's actions, and results, related to the TMP. The report card will also provide a basis for future updates of the TMP.

The report card is expected to report on the following topics:

- Land Use and Transportation Trends
- Transportation Performance
- Concurrency Status

The following sections briefly describe the expected contents of these topics.

Land Use and Transportation Trends

These data will describe general land use and transportation trends within Kent. Information provided will include:

- Current population and employment levels and growth rates
- Summary of yearly development activity
- Summary of growth in traffic volumes, transit service and other trends

Transportation Performance

These data will focus on documenting the current performance of the transportation system, by mode. Information provided is expected to include:

- Transit route ridership
- Park-and-ride lot utilization
- Commuter mode shares
- Traffic growth
- Collisions (current trends and assess potential remedial actions)
- Traffic level of service (by corridor)
- Traffic signal system (monitor performance by corridor and by individual intersection)
- Non-motorized facility usage

Specific data needs will be refined as part of the first report card preparation.

Concurrency Status

A key part of the yearly report card will be a report on meeting transportation concurrency. The following information is anticipated as part of the concurrency status report:



Development Activity

Identify the location and intensity of development that has occurred in relation to where it was forecast to occur. Produce maps comparing forecast 2007-2030 land use with actual yearly development activity. Describe land uses by type and geographic location.

Corridor Level of Service performance

Prepare tabular summary of existing traffic levels of service (LOS), by corridor. These results will be based on actual traffic counts. Corridor LOS will also be forecast into a near-term future using the traffic anticipated from approved development and expected TIP projects.

Project Implementation Status

For the funded TIP, identify project milestones that have been accomplished relative to what was planned. Summarize information, by mode, showing the progress towards implementing projects identified within the city’s TIP. Compare the forecast construction benchmarks to actual benchmarks met. In addition to street projects, summarize the completion of pedestrian and bicycle projects, both stand-alone improvements and those that are installed with roadway widening or new street projects identified in the TIP. In this manner the City can recognize the completion of pedestrian and bicycle improvements.

Summary of Concurrency Status

Summarize the pace of development activity, travel growth, and transportation performance to determine whether the city’s transportation system is concurrent. Identify how short term and long term land use and project plans could be modified to provide a more balanced system.

B2- TMP Review

The TMP is adopted in summary into the Transportation Element of the City’s Comprehensive Plan, and will be amended as needed as part of the City’s regular Comprehensive Plan amendment cycle. The process ensures that proposed changes go through a public review process before the amended plan is adopted by the City Council. In preparation for the amendment cycle, the City will review the plan and propose updates as needed. These proposed updates may be due to shifts in City priorities, the availability of new information, or the relevance of certain plan components.

As part of the process, the City will review the future list of projects and update the Capital Facilities Plan as needed. The City will submit all changes into the Regional Transportation Improvement Plan so that they can be evaluated by the regional air quality model and become eligible for federal grants. The City will also review and update the Policies and Funding chapters, in order to remain consistent with the City’s vision and current with available funding strategies.

B3- Travel Model Update

The City will update the travel demand model on a regular basis (every few years), as new land use, employment, and housing data become available. Model updates are important as they ensure the City has an accurate understanding of how land use patterns, employment, and other factors impact future transportation conditions.



The travel demand model will be a critical tool for measuring the transportation system performance for determining Concurrency. The model also provides an understanding of the impacts associated with different projects, allowing the City to devise a revised list of future projects to improve capacity and safety, as well as achieve other City priorities. The City Council can make informed policy decisions using updated travel model data.

B4- Project Prioritization

The projects recommended in the TMP have been prioritized within their respective modes (e.g. street, transit, non-motorized). As part of the annual TIP process, the City will need to allocate resources and set priorities for the full range of projects, across modes. In particular, the non-motorized transportation projects have not yet been fully prioritized. In Phase II of the TMP, the City will further prioritize projects and needs.

Refine Non-motorized Plan Priorities

The Non-Motorized Transportation Plan (NMTP) recommends ongoing refinement to projects, particularly to identify specific short and mid-term sidewalk and bicycle priorities. The City will create a process to itemize and rate specific street segments for new sidewalks and repairs. For example, the City will conduct follow-up planning efforts to focus on critical walk-to-school routes. These actions will guide City planners to establish a sidewalk upgrade program that can be systematically applied throughout the city.

B5- Continue Public Involvement

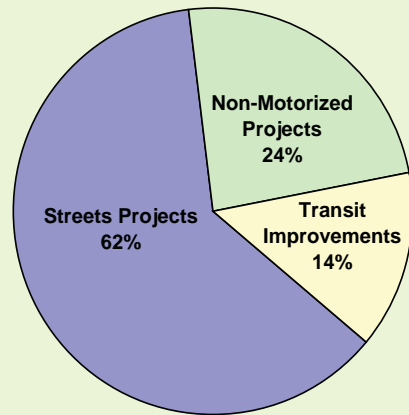
While the public involvement program to develop the plan has lasted over two years, the TMP is a long-range plan. Now that effective communication has been established, the City and the Transportation Section should build on the existing momentum. By maintaining proactive, open channels of two-way communication and remaining responsive to stakeholders, the trust that has been built with residents will lead to lasting public endorsement of the TMP as it is implemented over the next 25 years.

What we heard from the Community about Priorities

The public involvement program offered several avenues for public input, including direct discussion at the project task force and community meetings, open house comment cards, reader-reply cards in the second newsletter, web site comment opportunities, a transportation hotline, and a TMP e-mail address. As a result of these opportunities, the City received community input on what types of projects should be considered 'high priority'.

Based upon the variety of comments received (see chart below), most Kent residents place the greatest priority on street projects.

Among the most cited street projects were fixing the Kent-Kangley/SR 516/ SE 256th St "Y", doing improvements to James Street, and building the railroad trade separations. For non-motorized projects, people most commonly cited the need for improved sidewalks and walking connections throughout the City. Many people also mentioned specific bicycle facility needs. The most cited transit project needs were more frequent local bus service, expanded park-and-ride facilities, and improved regional bus connections.



First Priority Project Types
Based upon Citizen Feedback

Plans and Programs

Several implementation actions will require additional technical and policy work by City staff in order to meet the expectations of the TMP. These actions include:

C1- Modify Street Design Standards

The City will review and update the current street design standards and recommend possible revisions to roadway sections and other geometric features. Elements from the TMP, including the non-motorized design guidance, will be integrated into the street design standards to ensure consistent design of street, pedestrian and bicycle facilities. It is also very likely that more detailed federal policies and ADA rules are forthcoming in the near future. These policies may require the city to expand its efforts to develop and refine internal policies and standards to guide pedestrian plans and projects.



C2- Operations & Maintenance Cost Analysis

The City will conduct an in-depth analysis to better incorporate operations and maintenance (O & M) costs into the City's ongoing transportation funding program. New transportation capital investments require an ongoing commitment to O&M costs, such as for pavement maintenance and traffic control. Other ongoing costs include the City's annual transit subsidy, pavement management, scheduled maintenance, equipment replacement cycles, support for TDM, safety programs, and neighborhood traffic calming efforts.

C3- Neighborhood Traffic Control Program

The City will update and simplify the current Neighborhood Traffic Control Program (NTCP). The current program is poorly understood by the public and citizen participation in the program is less than the City has anticipated. There is a need for streamlining the program to ensure faster implementation of recommended NTCP strategies. The plan would include preparation of a model NTCP program for Council review and approval.



C4- Active Traffic System Management

The City will continue its program to update the management of traffic throughout the City. This effort can lead to the development of a citywide ITS strategic plan to enable the City to take advantage of new transportation technology innovations as they become available. The traffic management program compiles best practices related to traffic signal design and operation, new traffic control systems, and Intelligent Transportation Systems.



City of Kent
Transportation Master Plan