

La Center

Transportation Capital Facilities Plan



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Acknowledgements



DKS Associates

Reah Flisakowski, Project Manager – Transportation Engineer
Kevin Chewuk, Senior Transportation Planner



City of La Center

Jeff Sarvis, Public Works Director
Anthony Cooper, City Engineer

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Section I. Introduction

La Center is located east of Interstate 5 (I-5) at Exit 16, approximately 20 miles north of the Portland/Vancouver metropolitan area. Regional access is provided via La Center Road, which extends east from I-5 to downtown La Center. New development forecast for the City will result in increased traffic, particularly along the La Center Road corridor leading to and from I-5.

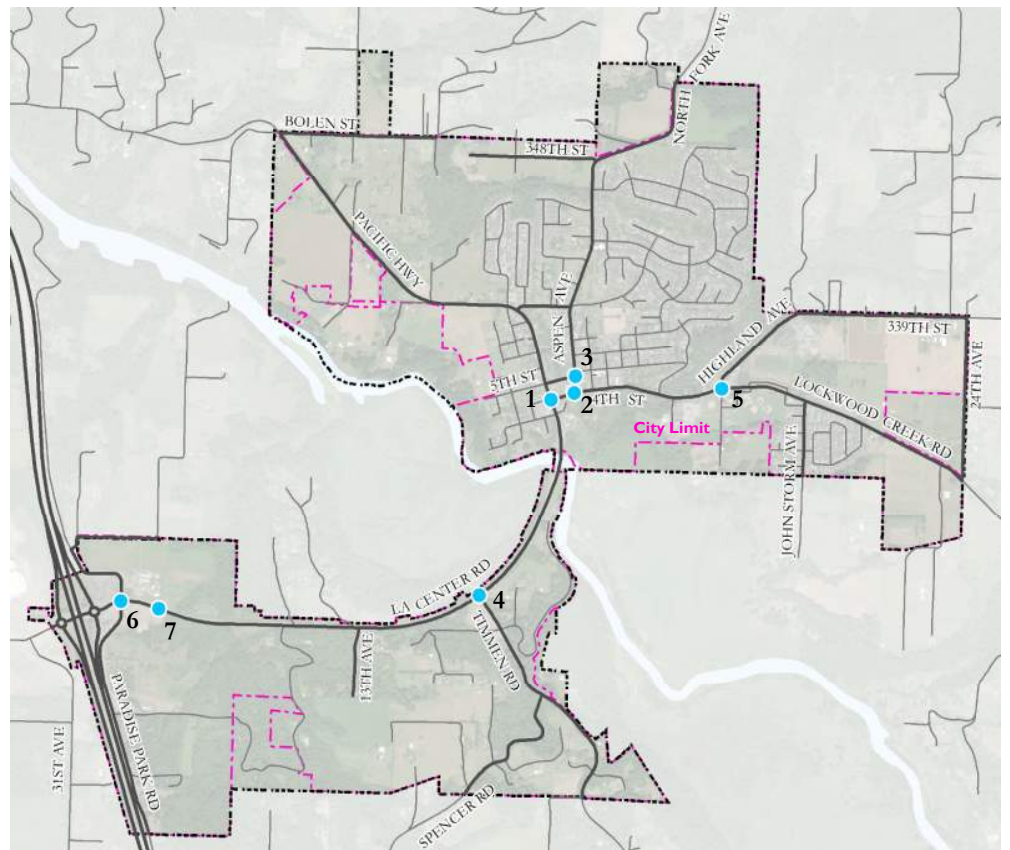
Employment and housing are planned within the La Center Urban Growth Area (UGA) to the east and the Cowlitz Tribe Reservation is currently developing 156 acres west of the I-5 interchange. In addition, the La Center Road Bridge provides one of only a few opportunities to cross the East Fork Lewis River, thereby attracting regional traffic.

An appropriate street network is required to adequately provide safe and efficient movement of people and goods. Major concerns involve the need for improvements at specific intersections, the need for additional bridge capacity over the East Fork Lewis River, and improvements to the I-5 interchange. La Center's existing roadway network within the current UGA is shown in Figure 1. The following seven intersections were evaluated as study intersections (see Figure 1):

1. Pacific Highway / 4th Street
2. 4th Street / Aspen Avenue
3. Aspen Avenue / 5th Street
4. La Center Road / Timmen Road
5. 4th Street / Highland Avenue-Ivy Avenue
6. La Center Road / Paradise Park Road
7. La Center Road / 26th Avenue extension (future intersection)

All existing study intersections are currently unsignalized, with stop sign control on the side street approaches.

Figure 1: Study Area



The Challenge

La Center must accommodate population and employment growth while maintaining acceptable service levels on its transportation network. The transportation system must serve regional through traffic, residents, and tourists in addition to local growth. With limited funding for transportation improvements, and built and natural environment challenges, the City must balance its investments to ensure that it can develop and maintain the transportation system adequately to serve the City and everyone who travels through it.

Transportation Capital Facilities Plan

The 2016 Transportation Capital Facilities Plan (CFP) prepares La Center for accommodating traffic within its UGA in the best manner possible through 2036. The Transportation CFP's big picture view allows it to guide the City in developing and maintaining acceptable transportation network performance more efficiently than a piecemeal or unorganized approach.

As the transportation element of the City's Comprehensive Plan, the Transportation CFP embodies the community's vision for an equitable and efficient transportation system. It outlines strategies and projects that are important for protecting and enhancing mobility in La Center through the next 20 years. The Transportation CFP is a collection of current inventory, forecasts, past and current project ideas, decisions, and standards into a single document. The City, Clark County, private developers, and state or federal agencies all have a role in implementing elements of the Transportation CFP.

By setting priorities for available and anticipated funds in the 20-year planning period, the Transportation CFP provides a foundation for budgeting, grant writing, and requiring public improvements with private development. The plan also identifies and advocates for the projects and services that the City would like to implement, but cannot reasonably expect to fund.

The State of Washington Growth Management Act (GMA) requires the Transportation CFP to include:

- An inventory of transportation facilities and services.
- A summary of land-use assumptions used in estimating travel forecasts.
- A summary of roadway Level of Service (LOS) standards.
- A summary of actions to address existing deficiencies (facilities not meeting level of service standards).
- A traffic demand forecast for at least ten years (in this case, twenty years based on the adopted regional land-use plan).
- A list of transportation system needs to meet current and forecasted demand.
- A finance plan that serves as the basis for the six-year transportation improvement program (TIP).

Section 2. Transportation Facilities and Standards

This section summarizes the existing transportation facilities and standards in the City. It includes an inventory of the existing pedestrian, bicycle, transit, roadway, air and waterway systems, and a summary of the City's roadway functional classification system, intersection and street mobility standards, and access spacing standards.

Transportation Facilities

Existing transportation infrastructure includes a range of facilities for people who walk, ride bikes, use transit, or drive. The following sections summarize the existing infrastructure for the pedestrian, bicycle, transit, roadway, air and waterway systems.

Pedestrian Network

Pedestrian facilities were inventoried along streets in the City, and shown in Figure 2. There are limited pedestrian facilities along streets outside of the downtown area. While adopted City road construction standards require sidewalks on all new streets, many of the older streets were developed to rural standards with no pedestrian facilities.

Most of the arterial and collector roadways within and connecting to the downtown area have sidewalks, including portions of La Center Road, Pacific Highway, Aspen Avenue, and 4th Street. There is a small section of sidewalk along Highland Avenue near La Center High School, and sidewalks along 5th Street through downtown. The newly developed subdivisions along Aspen Avenue and Lockwood Creek Road also contain sidewalks. Approximately 20 percent of arterial and collector roadways inside the UGA provide sidewalks on at least one side.

A pedestrian trail along Brezee Creek connects 4th Street near Stonecreek Drive, with 14th Circle east of Heritage Loop. A trail just north of 14th Circle also connects Heritage Loop to just north of 16th Street, west of Aspen Avenue. A trail is also available along a portion of the East Fork Lewis River, east of La Center Road.

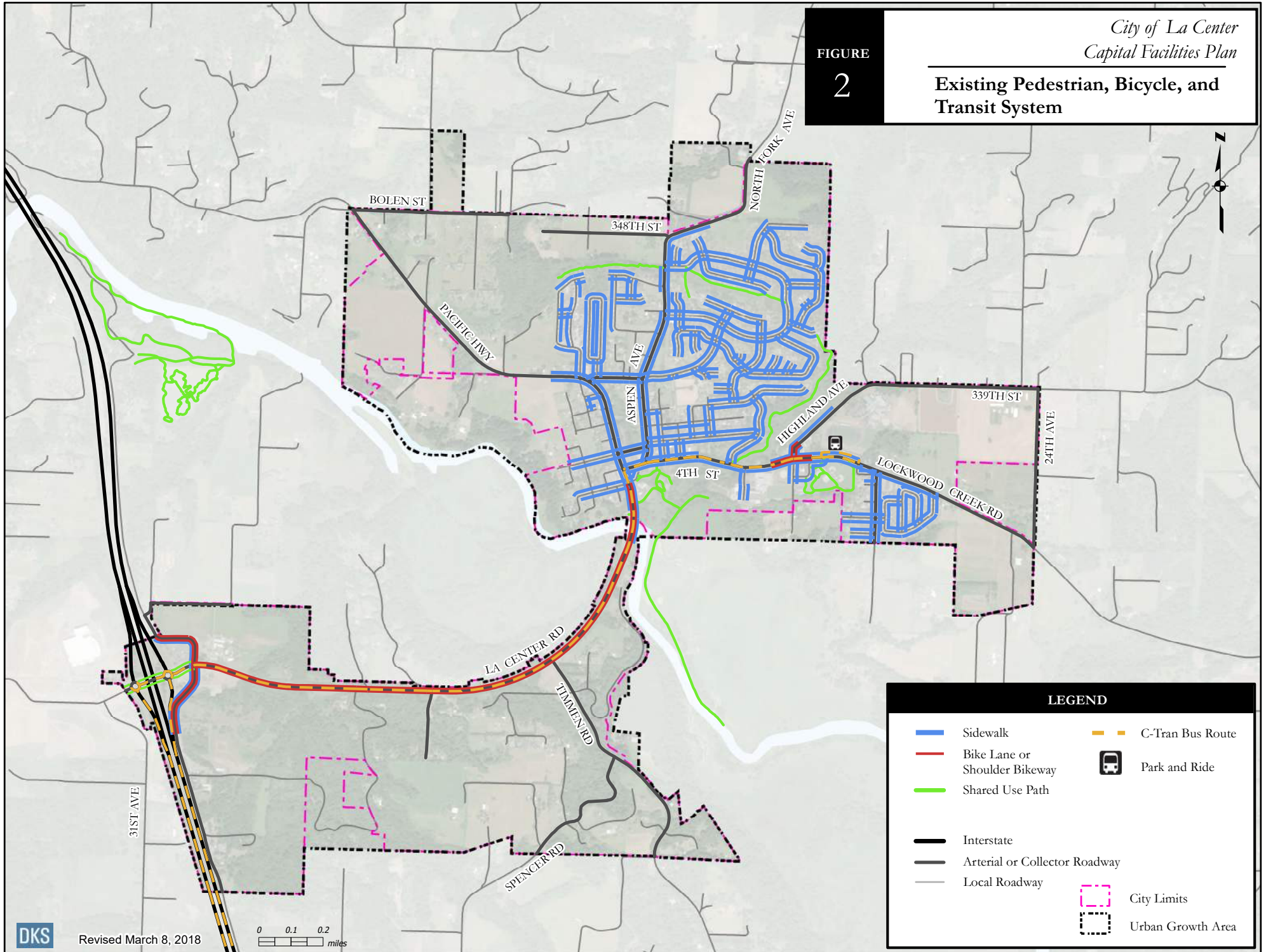
Bicycle Network

Bicycle facilities were inventoried along streets in the City, and shown in Figure 2. Striped shoulders exist along La Center Road between I-5 and 4th Street. While not officially designated bike lanes, the shoulders do provide refuge wide enough for bicyclists and pedestrians. Bike lanes are present along a short segment of Highland Avenue, north of 4th Street- Lockwood Creek Road, and along 4th Street- Lockwood Creek Road near Highland Avenue. On other streets within the City, bicyclists currently share the roadway with motorized traffic. City road construction standards require bike lanes on all principal arterial, minor arterial, and major collector streets. There is a key bicycle system gap on 4th Street between the downtown area and the schools near Highland Avenue.

FIGURE

2

Existing Pedestrian, Bicycle, and Transit System



Transit Network

Transit service for La Center is provided by C-TRAN's "Connector" service (see Figure 2). The Connector serves La Center with fully accessible dial-a-ride (reservation based service) and scheduled stop service (no reservation required) at designated stops. Fixed route service is provided from the La Center park-and-ride facility to the 99th Street Transit Center in Vancouver. Buses leave La Center twice during weekday mornings for the 99th Street Transit Center, and return three times during weekday evenings. Midday service is also provided, with one bus arriving, and one leaving for the 99th Street Transit Center during weekday afternoons. The Connector bus service is not available on weekends. A park-and-ride facility is located along Lockwood Creek Road, between La Center High School and Holly Park.

Motor Vehicle Network

The major transportation route in La Center, La Center Road, connects I-5 to the downtown area of the City, and is the City's only direct connection to I-5. Here La Center Road intersects two other major roadways through the City, Pacific Highway which runs north to south, and 4th Street which runs east to west. Timmen Road, a major north to south route in the City, connects to La Center Road between I-5 and downtown.

The existing traffic control, lane configurations, and traffic volumes at study intersections are shown later in this document in Figure 4. The existing street network is made up entirely of two-lane roadways, with the exception of the short three-lane roadway segments along La Center Road. Traffic control is presently provided by posted stop sign control at the minor street approach to most intersections. The highest traffic volumes occur along La Center Road, between I-5 and 4th Street.

Air

La Center does not have an airport. The closest general aviation airport, Woodland State Airport, is about six miles north of La Center. Other airports within a 30-mile radius of La Center include Southwest Washington Regional Airport in Kelso, and Pearson Field in Vancouver. Portland International Airport (PDX), located approximately 25 miles south of La Center, provides regional and international air service for passengers and freight.

Waterway

La Center is bisected by the East Fork Lewis River and Brezee Creek. These waterways are for recreation only.

Transportation Standards

The Transportation Capital Facility Plan sets standards and regulations to ensure future development or redevelopment of property is consistent with the City's transportation goals. The following sections summarize the roadway functional classification system, intersection and street mobility standards, and access spacing standards.

Functional Classification

The functional classification of a roadway determines the level of mobility for all travel modes and anticipated level of access and usage. The functional classification system recognizes that individual streets do not act independently of one another, but instead form a network that serves travel needs on a local and regional level. From highest to lowest intended usage, the classifications are: principal arterial, minor arterial, major collector, minor collector, and local streets. Roadways with higher intended usage generally limit access to adjacent property in favor of more efficient motor vehicle traffic movement (i.e., mobility). Local roadways with lower intended usage have more driveway access and intersections, and generally accommodate shorter trips to nearby destinations.

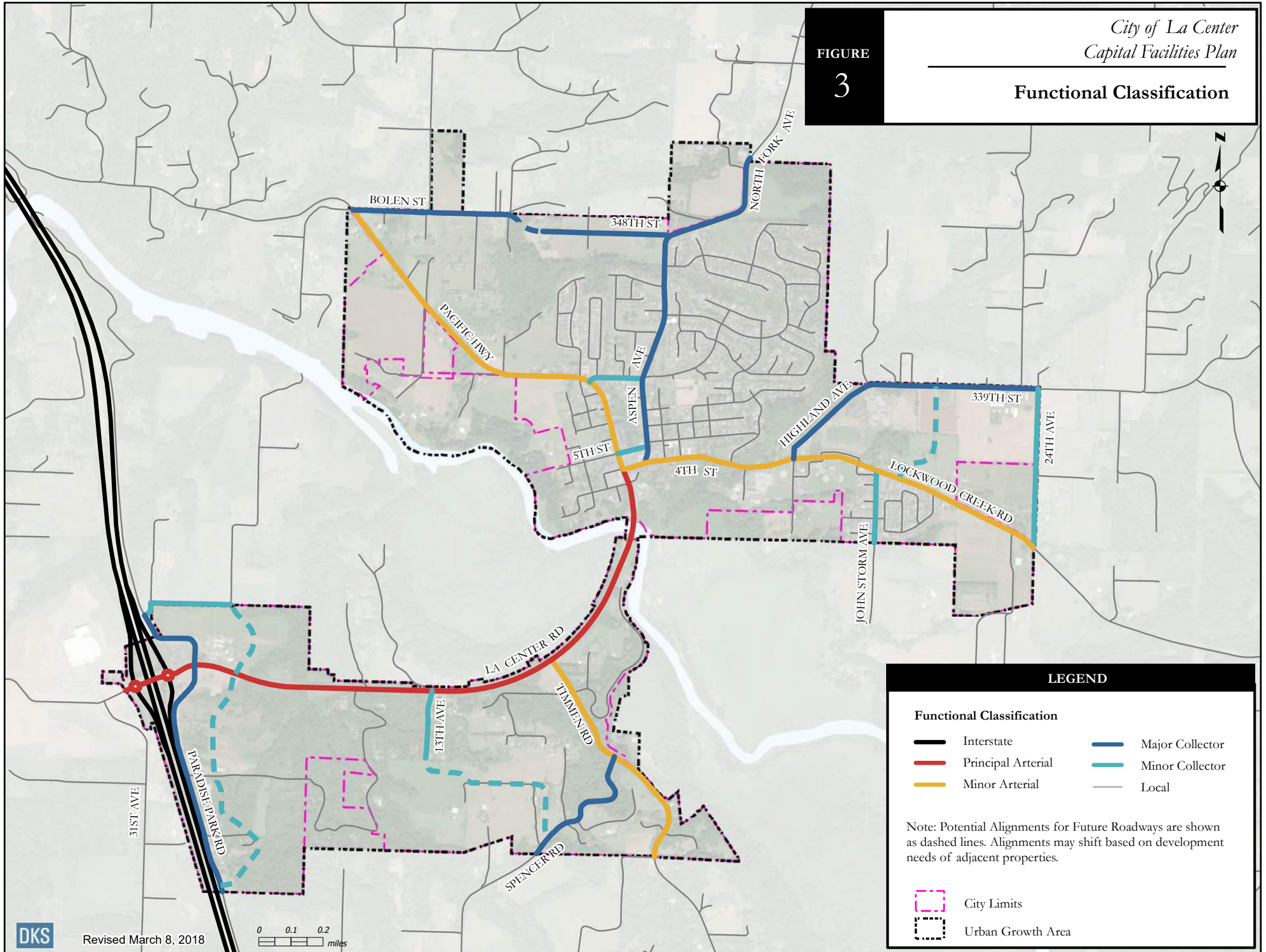
- **Principal Arterial** roadways serve as the main travel routes through the City. These roadways serve the highest volume of motor vehicle traffic and are primarily used for longer distance regional trips.
- **Minor Arterials** roadways connect many parts of the City and serve traffic traveling to and from principal arterial roadways. These roadways provide greater accessibility to neighborhoods, connect to major activity generators, and provide efficient through movement for local traffic.
- **Major Collector** roadways connect neighborhoods to minor arterials. These roadways serve as major neighborhood routes and generally provide more direct property access or driveways than arterial roadways.
- **Minor Collector** roadways provide more direct access to residences in La Center and only serve limited-through travel. These roadways generally are lined with residences and serve lower volumes of traffic.
- **Local** roadways provide more direct access to residences without serving through travel in La Center. These roadways generally are lined with residences and are designed to serve lower volumes of traffic.

Functional Classification Changes

Table 1 shows the changes to the existing functional classifications of roadways in La Center to better reflect their intended use. Since La Center Road serves as the regional travel route through the City, it is a principal arterial roadway. Roadways providing primary access to principal arterial roadways are minor arterials (e.g., Timmen Road, Pacific Highway, 4th Street, and Lockwood Creek Road). Roadways providing primary access to neighborhoods and activity generators in La Center are major or minor collectors. All other roadways are classified as local streets. The updated functional classifications can be seen in Figure 3. These changes will trigger new access spacing standards for the affected roadways.

Table 1: Functional Classification Changes

Roadway	From	To	Change from Prior Functional Classification
La Center Road	West UGA Boundary	4th Street	Upgrade from Major Collector to Principal Arterial
Paradise Park Road	North UGA Boundary	South UGA Boundary	Upgrade from Local Street to Major Collector
31st Avenue	Paradise Park Road	324th Street	Upgrade from Local Street to Minor Collector
324th Street	31st Avenue	26th Avenue	Upgrade from Local Street to Minor Collector
13th Avenue	La Center Road	South terminus	Upgrade from Local Street to Minor Collector
Timmen Road	La Center Road	South UGA Boundary	Upgrade from Major Collector to Minor Arterial
Spencer Road	Timmen Road	South UGA Boundary	Upgrade from Minor Collector to Major Collector
Pacific Highway	4th Street	North UGA Boundary	Upgrade from Major Collector to Minor Arterial
4th Street-Lockwood Creek Road	La Center Road	East UGA Boundary	Upgrade from Major Collector to Minor Arterial
5th Street	Pacific Highway	Aspen Avenue	Upgrade from Local Street to Minor Collector
5th Street	Aspen Avenue	Stonecreek Drive	Downgrade from Minor Collector to Local Street
10th Street	Pacific Highway	Aspen Avenue	Upgrade from Local Street to Minor Collector
Aspen Avenue-North Fork Avenue	18th Street	North UGA Boundary	Upgrade from Minor Collector to Major Collector
348th Street	Aspen Avenue-North Fork Avenue	West terminus	Upgrade from Local Street to Major Collector
Highland Avenue-339th Street	4th Street	East UGA Boundary	Upgrade from Minor Collector to Major Collector
John Storm Avenue	Lockwood Creek Road	South terminus	Upgrade from Local Street to Minor Collector
24th Avenue	Lockwood Creek Road	339th Street	Upgrade from Local Street to Minor Collector



LEGEND

Functional Classification

	Interstate		Major Collector
	Principal Arterial		Minor Collector
	Minor Arterial		Local

Note: Potential Alignments for Future Roadways are shown as dashed lines. Alignments may shift based on development needs of adjacent properties.

	City Limits
	Urban Growth Area

Mobility Standards

Mobility standards for streets and intersections in La Center provide a metric to assess the impacts of new development on the existing transportation system. They are the basis for requiring improvements needed to sustain the transportation system as development and traffic growth occur. Two methods to gauge intersection operations include volume-to-capacity (v/c) ratios and level of service (LOS).

- **Level of service (LOS):** A “report card” rating (A through F) based on the average delay experienced by vehicles at the intersection. LOS A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hour travel demand. LOS D and E are progressively worse operating conditions. LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity. This condition is typically evident in long queues and delays.
- **Volume-to-capacity (V/C) ratio:** A decimal representation (between 0.00 and 1.00) of the proportion of capacity that is being used (i.e., the saturation) at a turn movement, approach leg, or intersection. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases and performance is reduced. If the ratio is greater than 1.00, the turn movement, approach leg, or intersection is oversaturated and usually results in excessive queues and long delays.

Jurisdictional Mobility Standards

All streets and intersections in La Center must operate at or below the adopted mobility standards. Any new development that would cause operations to exceed mobility targets is responsible to provide mitigation, such as improvements to the affected streets and intersections, which could include infrastructure or funding for transportation demand management or alternative transportation modes. The following mobility targets are for streets under the city’s jurisdiction.

Signalized Intersections: The intersection as a whole must meet Level of Service (LOS) “D” or better, and have a Volume-to-Capacity (V/C) ratio not higher than 0.95 during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 p.m. and 6 p.m.).

All-way Stop, Two-way Stop, Yield, or Roundabout Controlled Intersections: All movements during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 p.m. and 6 p.m.) shall be LOS “E” or better.

Mid-Block Street Segments: All street segments during the highest one-hour period on an average weekday (typically, but not always the evening peak period between 4 p.m. and 6 p.m.) shall have a Volume-to-Capacity (V/C) ratio not higher than 0.90 (roughly equivalent to a LOS “D”).

Access Spacing Standards

Access management is a broad set of techniques that balance the need to provide for efficient, safe, and timely travel with the ability to allow access to individual destinations. Appropriate access management standards and techniques can reduce congestion and accident rates, and may lessen the need for construction of additional roadway capacity.

Table 2 identifies the minimum and maximum public street intersection and minimum private access spacing standards for streets in La Center. New streets or redeveloping properties must comply with these standards to the extent practical, as determined by the City. As the opportunity arises through redevelopment, streets not complying with these standards could improve with strategies such as shared access points, access restrictions (through the use of a median or channelization islands), or closure of unnecessary access points, as feasible.

Table 2: Street and Access Spacing Standards

	Principal Arterial	Minor Arterial	Major Collector	Minor Collector	Local
Maximum Block Size (Public Street to Public Street)	N/A	N/A	500 feet*	500 feet*	500 feet*
Minimum Block Size (Public Street to Public Street)	600 feet	600 feet	275 feet	275 feet	None
Minimum Driveway Spacing (Public Street to Driveway and Driveway to Driveway)	600 feet**	600 feet**	130 feet	130 feet	None

* If the maximum block size is exceeded, mid-block 15-foot wide pedestrian and bicycle accessways must be provided at spacing no more than 500 feet, unless the connection is impractical due to existing development, topography, or environmental constraints.

** Driveway access should be prohibited, unless no other option is available.

Section 3. Travel Conditions

This section summarizes the existing and future travel conditions for the study area.

Existing Travel Conditions

This section summarizes existing travel conditions with an operational analysis of the study intersections and a safety evaluation of the study area.

Motor Vehicle Operations

Motor vehicle operations were evaluated by analyzing the performance of the study intersections. The study intersections are monitored through mobility targets intended to maintain a minimum level of efficiency for motor vehicle travel. La Center mobility targets for intersections are based on LOS (as detailed earlier in this document).

To determine intersection operations, turn movement counts were conducted at study area intersections during the weekday morning peak period (7 to 9 a.m.), and evening peak period (4 to 6 p.m.)¹. The raw traffic count data is included in the Appendix. The existing peak period traffic volumes developed for the study intersections are displayed in Figure 4.

The purpose of the intersection analysis is to determine if the transportation network operates within desired performance levels as required by the City of La Center mobility targets, which were described earlier in this document. Intersections are the focus of the analysis because they are the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is nearly always diminished in their vicinity.

The motor vehicle performance evaluation utilized 2010 Highway Capacity Manual² methodology for unsignalized intersections. During the peak hours, most study intersections operate well within the adopted mobility standards (see Table 3). An exception is the 4th Street / Highland Avenue intersection, the northbound left-turn operates with a LOS F during the a.m. peak hour. This approach (northbound Ivy Avenue) generally experiences high delay due to steady volumes on the uncontrolled roadway (4th Street). This approach typically requires more time for an acceptable gap in traffic to make a left turn onto the mainline, therefore, the delay of the side street is high and capacity is reduced. The detailed intersection operational analysis is included in the Appendix.

¹ Based on traffic counts conducted on Thursday, April 21, 2016.

² 2010 Highway Capacity Manual, Transportation Research Board, Washington DC, 2010.

Table 3: Existing Peak Hour Intersection Operations

Intersection	Mobility Standard	AM Peak			PM Peak		
		Delay	LOS	V/C	Delay	LOS	V/C
Pacific Highway / 4 th Street	LOS E	38.3	A/E	0.76	15.9	A/C	0.40
4 th Street / Aspen Avenue	LOS E	18.3	A/C	0.19	22.5	A/C	0.16
Aspen Avenue / 5 th Street	LOS E	12.2	A/B	0.16	11.0	A/B	0.04
La Center Road / Timmen Road	LOS E	20.2	A/C	0.05	20.9	A/C	0.20
4 th Street / Highland Avenue-Ivy Avenue	LOS E	> 200	A/F	0.74	26.1	A/D	0.15
La Center Road / Paradise Park Road	LOS E	23.6	A/C	0.13	26.1	A/D	0.13
La Center Road / 26th Avenue extension (future intersection)	LOS E	N/A- future intersection			N/A- future intersection		

Bolded red values indicate intersection exceeds LOS mobility target.

LOS = Level of Service of Major Street / Minor Street

V/C = Volume-to-Capacity Ratio of Worst Movement

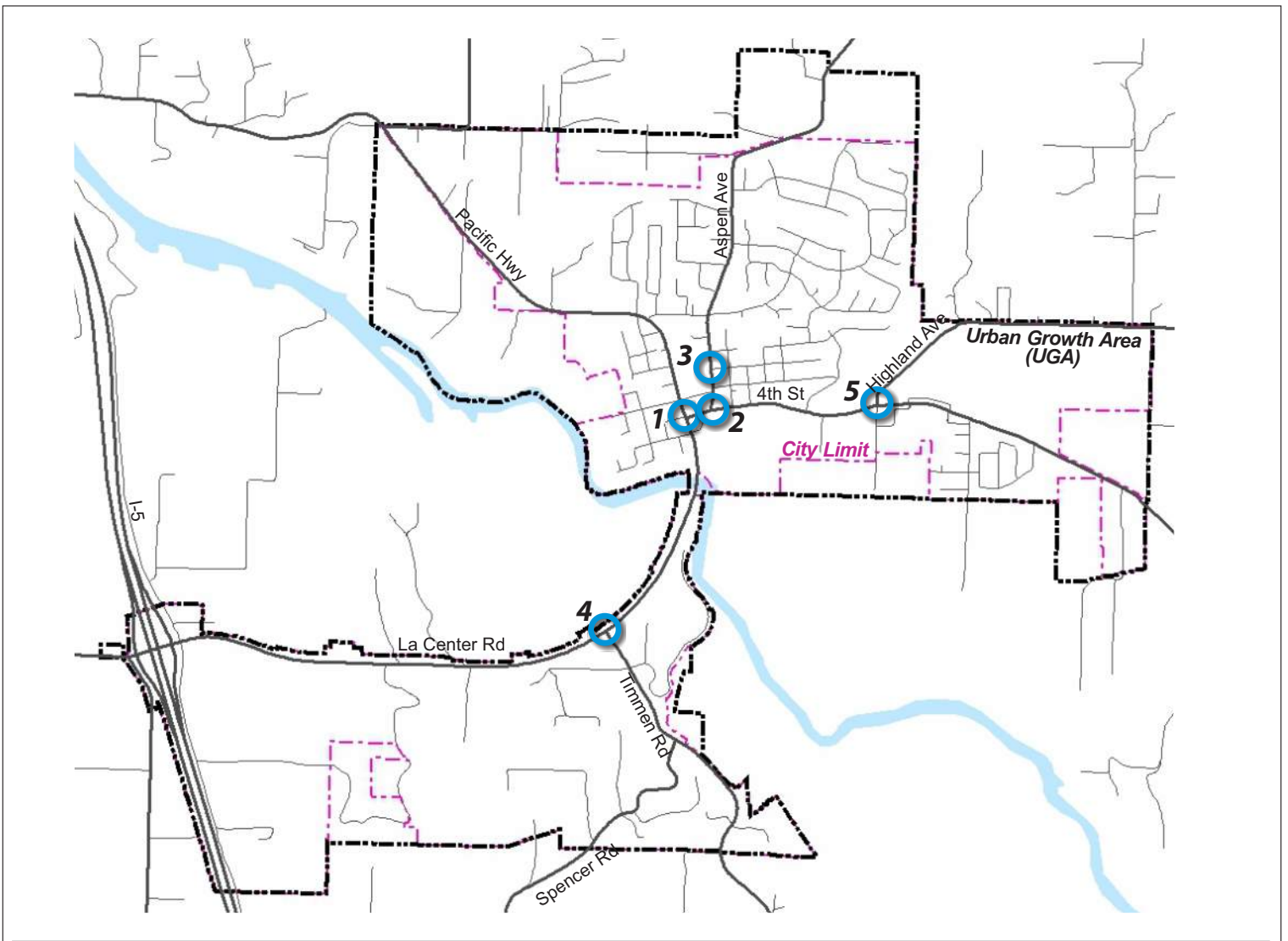
Delay = Average Delay of Worst Movement (seconds per vehicle)

Safety Evaluation

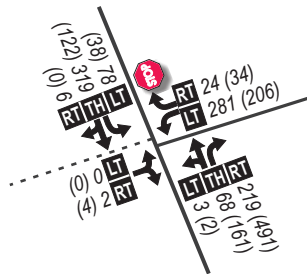
Safety of the roadways and intersections in La Center was assessed through historic collision data to identify deficiencies. The data along the roadways and intersections was reviewed to identify potential patterns for motor vehicle, pedestrian, and bicyclist collisions.

Collision data from the past five years (January 2011 through December 2015) was obtained from the Washington State Department of Transportation (WSDOT) for all roadways within La Center. Over the past five years, 129 collisions, or an average of about 26 per year, were identified along study area roadways. Of these collisions, 49 occurred along I-5, and 80 along surface streets. A majority of the collisions along surface streets (58 of the 80) involved drivers running into fixed objects or turning into another vehicle. The collision data is included in the Appendix.

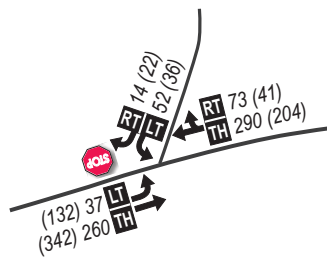
The severity of the collisions along surface streets was generally low, with most (69 of the 80 collisions) involving either property damage only (no injuries) or minor injuries. There were four collisions involving major injuries, seven involving moderate injuries, and no fatalities over the past five years. The four major injury collisions include: one near the 4th Street intersection with Aspen Avenue, when an intoxicated driver ran into a building; one near the La Center Road intersection with 31st Avenue, when a motorcyclist struck a utility pole; one along Paradise Park Road when an intoxicated driver hit a pedestrian; and one along 5th Street near Pacific Highway when a driver hit a pedestrian.



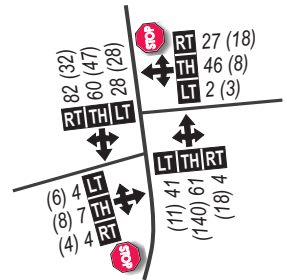
1. Pacific Hwy. @ 4th St.



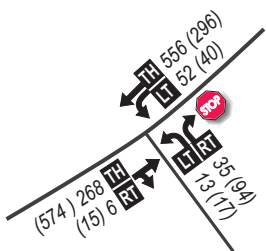
2. 4th St. @ Aspen Ave.



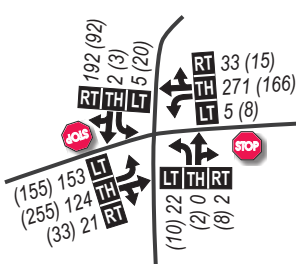
3. 5th St. @ Aspen Ave.



4. La Center Rd. @ Timmen Rd.



5. 4th St. @ Highland Ave.



LEGEND

- # - Study Intersection
- Stop Sign
- Traffic Signal
- Lane Configuration
- AM (PM) - Peak Hour Traffic Volumes
- LT TH RT - Volume Turn Movement (Left Thru Right)

DKS

No Scale

Figure 4
Existing (2016)
Traffic Volumes
 (Weekday AM and PM Peak Hour)

Intersection Collisions

Crash rates at study intersections were calculated to identify problem areas in need of mitigation. The total number of crashes experienced at an intersection is typically proportional to the number of vehicles entering it, therefore, a crash rate describing the frequency of crashes per million entering vehicles (MEV) is used to determine if the number of crashes should be considered high. Using this technique, a collision rate of 1.0 MEV or greater is commonly used to identify when collision occurrences are higher than average and should be further evaluated. As shown in Table 4, crash rates calculated at all study intersections are well below this threshold, indicating the frequency of collisions is typical for the volume of traffic served.

Table 4: Summary of Intersection Collision History (2011-2015)

Intersection	Total Collisions	Collision Type					Collision Severity		Collision Rate per MEV*
		Rear-end	Fixed Object	Turning	Side-swipe	Backing	Property Damage Only	Injury	
Pacific Highway / 4 th Street	8	1	0	6	0	1	4	4	0.41
4 th Street / Aspen Avenue	3	2	1	0	0	0	2	1	0.20
Aspen Avenue / 5 th Street	0	0	0	0	0	0	0	0	0.00
La Center Road / Timmen Road	2	1	0	1	0	0	1	1	0.11
4 th Street / Highland Avenue-Ivy Avenue	2	0	1	1	0	0	2	0	0.14
La Center Road / Paradise Park Road	4	1	0	3	0	0	2	2	0.20

Source: WSDOT

* Collision rate = number of collisions per million entering vehicles (MEV)

Roadway Segment Safety

Of the 80 surface street collisions, most occurred along La Center Road (29 collisions) or 4th Street-Lockwood Creek Road (17 collisions). The one mile segment of La Center Road between Timmen Road and Paradise Park Road experienced 18 collisions, with most involving drivers leaving the roadway and running into fixed objects. The 0.20 mile segment of 4th Street through the downtown La Center area experienced eight collisions, with most being rear-end type collisions.

Future Travel Conditions

The following section summarizes the peak hour transportation operating conditions for the planning horizon year of 2036. Future traffic operating conditions were analyzed at the study intersections to determine if the transportation network can support forecasted traffic growth. If intersection mobility standards are not met then mitigations may be necessary to improve network performance.

Estimating Motor Vehicle Trips

A determination of future street network needs requires the ability to accurately forecast travel demand resulting from estimates of future population and employment for the La Center UGA, and the rest of the region. The objective of the transportation planning process is to provide the information necessary for making decisions about how and where improvements should be made to create a safe and efficient transportation system that provides travel options.

The travel demand forecasting process generally involves estimating travel patterns for new development based on the decisions and preferences demonstrated by existing residents, employers and institutions around the region. Travel demand models are mathematical tools that help us understand future travel patterns. Model forecasts are refined by comparing outputs with observed counts and behaviors on the local system. This refinement step is completed before any evaluation of system performance is made. Once the traffic forecasting process is complete, the 2036 volumes are used to determine the areas of the street network that are expected to be congested and that may need future investments to accommodate growth.

Southwest Washington Regional Transportation Council (RTC) has a regional travel demand model (base year 2010 and future year 2035) that covers the La Center UGA. A refined Growth Management Act (GMA) version of the future year travel demand model, provided by RTC, was used for this plan to reflect higher land use growth in the rural portion of the County³. The modified GMA version was developed for Clark County for their Transportation Impact Fee (TIF) update process and better reflects land use, particularly in the rural areas surrounding La Center.

³ Based on phone conversations with Mark Harrington, RTC, April 13, 2016 and Eric Eisemann, City of La Center Planning Consultant, April 15, 2016.

Land Use and Motor Vehicle Trip Assumptions

The land use growth assumptions that were used for future traffic volume forecasts are shown in Table 5. The residential and employment land use estimates were obtained from the RTC travel demand models. Overall, the La Center UGA is expected to generate about 4,126 motor vehicle trip ends during the p.m. peak hour of the 2036 horizon year, almost doubling the current traffic volumes.

Table 5: Land Use Assumptions for La Center

Scenario	Housing Units	Employees	PM Peak Hour Vehicle Trip Ends
Base Year Model (2010) Land Use	1,333	1,199	1,458
Future Year Model (2035) Land Use	3,210	3,544	4,023
Land Use Growth (2035 – 2010)	1,877	2,345	2,565
Prorated Land Use for 2016	1,783	1,762	2,074
Prorated Land Use for 2036 Horizon Year	3,285	3,638	4,126
Prorated Land Use Growth (2036 – 2016)	1,502	1,876	2,052

Baseline Transportation System Improvements

The starting point for the 2036 performance analysis relied on the list of funded street system improvement projects. These projects (shown later in this document in Figure 8) represent only those that are expected to be funded, and therefore can be used in the baseline traffic forecasts for the La Center UGA analysis for 2036. Additional transportation projects will be needed to support growth in the La Center UGA, however, they cannot be assumed for the baseline traffic analysis. The improvements that were assumed include:

- Reconstruction of the I-5 / La Center Road interchange to just south of the existing interchange, with a new four-lane overpass and multi-lane roundabouts at the ramp terminals, realignment of 319th Street and Paradise Park Road and signalization of the La Center Road / Paradise Park Road intersection⁴.
- Installation of a single lane roundabout at the Pacific Highway / 4th Street intersection, with a northbound right-turn lane from Pacific Highway to 4th Street.

⁴ Projects from Interchange Justification Report completed for the NW La Center Road/I-5 Interchange. Growth includes Cowlitz Reservation Development (casino, resort and tribal center) west of I-5, and growth in La Center.

2036 Baseline Motor Vehicle Operations

Motor vehicle conditions were evaluated during the 2036 evening peak hour at the seven study intersections, with the traffic volumes shown in Figure 5. The evaluation utilized 2000 Highway Capacity Manual methodology⁵ for signalized intersections and 2010 Highway Capacity Manual methodology for unsignalized and roundabout intersections⁶. Future forecast volume data was not developed for the a.m. peak hour since there is no a.m. travel demand forecast model available for this time period. However, based on existing count data, p.m. peak hour volumes are higher and represent higher congestion levels.

After assuming the street system improvement projects with expected funding, several intersections are forecast to exceed mobility targets during the p.m. peak hour by 2036, as shown in Table 6. The La Center Road/Timmen Road, 4th Street/Aspen Avenue, 4th Street/Highland Avenue and La Center Road/26th Avenue extension intersections are expected to operate at level of service F for side street traffic due to steady volumes on the uncontrolled roadway. The travel demand model indicates that the eastbound direction of La Center Road between I-5 and 4th Street is expected to operate with a v/c ratio higher than 0.90 under the 2036 Baseline scenario, as shown in Figure 6. All other roadway segments are expected to operate with a v/c ratio less than 0.90 through 2036. The detailed intersection operational analysis is included in the Appendix.

Table 6: 2036 Baseline Peak Hour Intersection Operations

Intersection (control)	Mobility Standard	PM Peak*		
		Delay	LOS	V/C
Pacific Highway / 4th Street (roundabout)	LOS E	13.5	B	0.68
4th Street / Aspen Avenue (unsignalized)	LOS E	63.0	A/F	0.64
Aspen Avenue / 5th Street (unsignalized)	LOS E	11.6	A/B	0.07
La Center Road / Timmen Road (unsignalized)	LOS E	57.9	B/F	0.89
4th Street / Highland Avenue-Ivy Avenue (unsignalized)	LOS E	117.7	A/F	0.63
La Center Road / Paradise Park Road (signalized)	LOS E	31.4	C	0.80
La Center Road / 26th Avenue extension (unsignalized)	LOS E	140.3	B/F	0.59

Bolded red values indicate intersection exceeds LOS mobility target.

Signalized: LOS, V/C and Delay reported for the intersection

Unsignalized: LOS = Level of Service of Major Street / Minor Street

V/C = Volume-to-Capacity Ratio of Worst Movement

Delay = Average Delay of Worst Movement (seconds per vehicle)

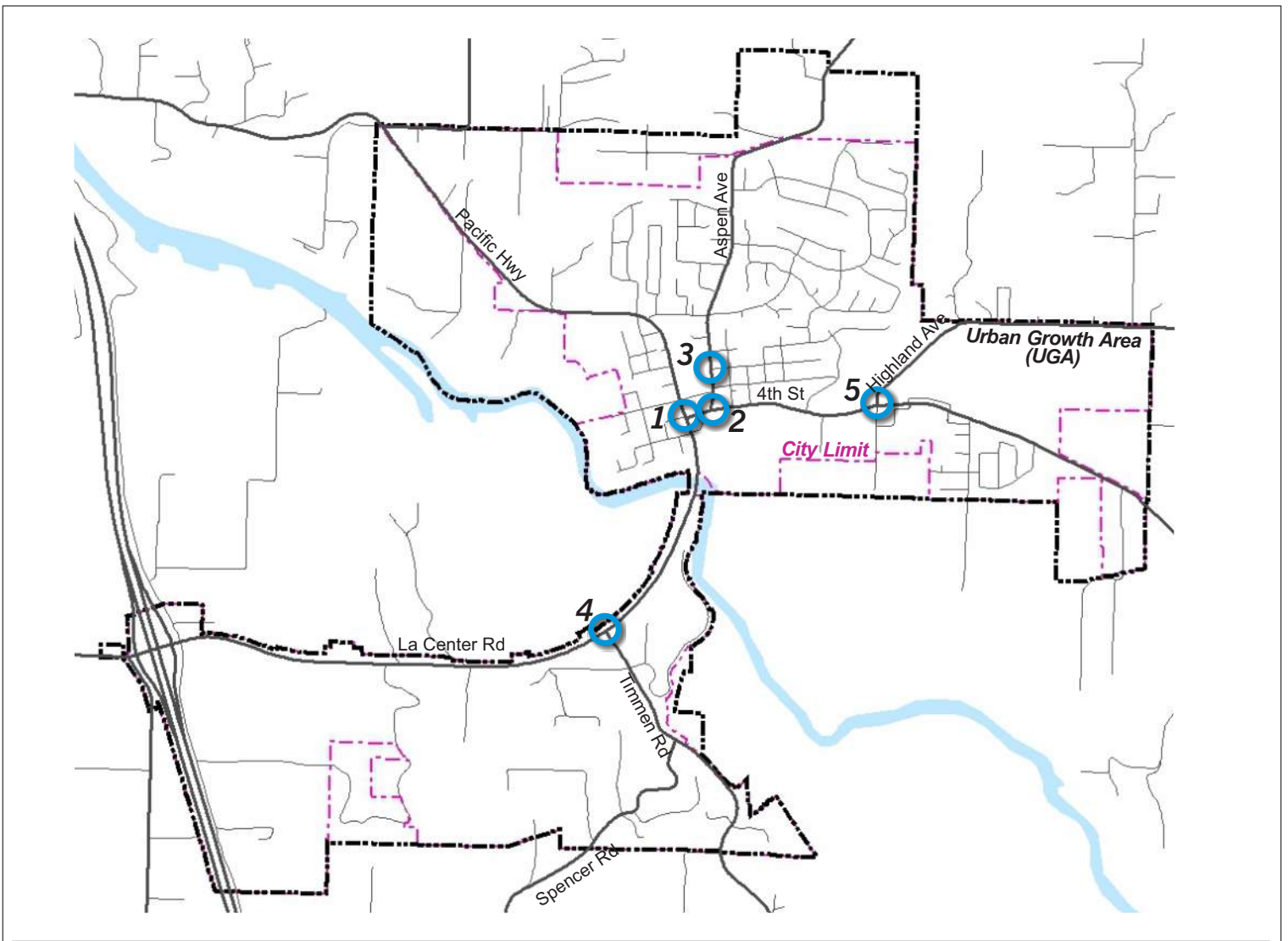
Roundabout: LOS = Level of Service of Worst Movement

V/C = Volume-to-Capacity Ratio of Worst Movement

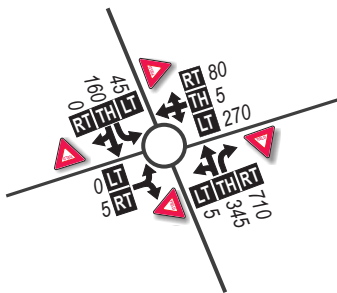
Delay = Average Delay of Worst Movement (seconds per vehicle)

⁵ 2000 Highway Capacity Manual, Transportation Research Board, Washington DC, 2000.

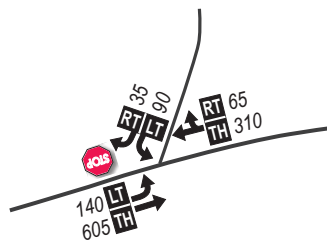
⁶ 2010 Highway Capacity Manual, Transportation Research Board, Washington DC, 2010.



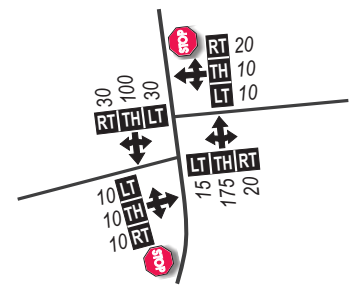
1. Pacific Hwy. @ 4th St.



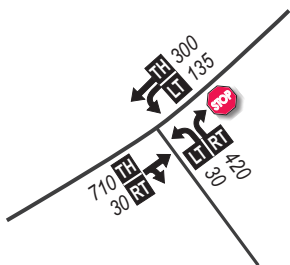
2. 4th St. @ Aspen Ave.



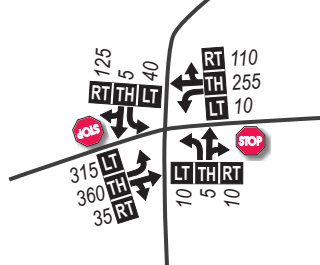
3. 5th St. @ Aspen Ave.



4. La Center Rd. @ Timmen Rd.



5. 4th St. @ Highland Ave.



LEGEND

- # - Study Intersection
- STOP - Stop Sign
- Yield Sign - Yield Sign
- ← - Lane Configuration
- LT TH RT - Volume Turn Movement (Left Thru Right)
- # - PM Peak Hour Traffic Volumes
- Traffic Signal - Traffic Signal

DKS

No Scale

Figure 5
Future Forecast (2036)
AM (PM) Peak Hour
Traffic Volumes

FIGURE
6

**Baseline 2036 Traffic Conditions
(Weekday PM Peak Hour)**



LEGEND

Volume-to-Capacity Ratio

- V/C > 1.0
- V/C > 0.90
- V/C > 0.80
- V/C > 0.70
- V/C ≤ 0.70

2036 Mitigated Motor Vehicle Operations

Table 7 shows the p.m. peak hour operations at the study intersections with the recommended improvements. It should be noted that the 2035 Regional Transportation Plan (RTP) for Clark County recommends various improvements without committed funding, including:

- Widening La Center Road to four/five lanes between Timmen Road and 4th Street and reconstruction of the Lewis River Bridge
- Roadway improvements along 4th Street, Lockwood Creek Road, and Highland Avenue-339th Street
- Intersection improvements along 5th Street at Aspen Avenue
- Construction/reconstruction of collector streets between North Fork Avenue and Bolen Street, and Lockwood Creek Road and 339th Street

City staff also suggested constructing a new collector street between La Center Road and Spencer Road. This updated system analysis confirms/re-affirms the need for capacity and safety improvements at these RTP and City identified locations.

Several intersections are not expected to meet mobility targets in 2035 without additional improvements, as shown in Table 7. Further improvement details are provided.

Table 7: 2036 Mitigated Peak Hour Intersection Operations

Intersection (control)	Mobility Standard	PM Peak			Mitigated Intersection Improvement
		Delay	LOS	V/C	
Pacific Highway / 4 th Street (roundabout)	LOS E	14.4	B	0.70	None*
4 th Street / Aspen Avenue (unsignalized)	LOS E	56.5	A/F	0.55	No mitigation, alternate local street connections available
Aspen Avenue / 5 th Street (unsignalized)	LOS E	11.5	A/B	0.07	None*
La Center Road / Timmen Road (roundabout)	LOS E	30.7	D	0.89	Install two-lane roundabout (preferred) or traffic signal. Roundabout should be striped with single lane until La Center Road is widened to four lanes.
4 th Street / Highland Avenue (unsignalized)	LOS E	84.6	A/F	0.37	No mitigation, alternate local street connections available
La Center Road / Paradise Park Road (signalized)	LOS E	34.6	C	0.82	None*
La Center Road / 26th Avenue extension (unsignalized)	LOS E	19.8	B/C	0.21	Restrict turn movements at the intersection to left-in, right-in and right-out.

Bolded red values indicate intersection exceeds LOS mobility target.

Signalized: LOS, V/C and Delay reported for the intersection

Unsignalized: LOS = Level of Service of Major Street / Minor Street; V/C = Volume-to-Capacity Ratio of Worst Movement; Delay = Average Delay of Worst Movement (seconds per vehicle)

Roundabout: LOS = Level of Service of Worst Movement; V/C = Volume-to-Capacity Ratio of Worst Movement; Delay = Average Delay of Worst Movement (seconds per vehicle)

*The intersection operations change slightly from the 2036 Baseline results, despite no intersection improvements, due to network improvements changing motor vehicle travel patterns.

Although the 4th Street / Aspen Avenue and 4th Street / Highland Avenue intersections fail to meet the mobility target (shown in Table 7), the condition was related to high delays experienced by a small number of projected vehicles attempting to turn out of the side street onto 4th Street. It is likely that under such conditions, these drivers will avoid the area and reroute to nearby streets. Street connectivity improvements, including local street extensions in the downtown area, and between Lockwood Creek Road and 339th Street, including the extension of John Storm Avenue to the north and reconstruction of 24th Avenue, will be expected to further alleviate some of the motor vehicle trip demand in these areas. Even a small shift in such trips would be enough to mitigate the impacts to the 4th Street / Aspen Avenue and 4th Street / Highland Avenue intersections. Therefore, no mitigation is recommended for these intersections.

A sensitivity test was conducted to ensure that improvements identified based on p.m. peak hour traffic volumes would accommodate a.m. peak hour commute patterns. The a.m. volumes were estimated at study intersections by using similar growth rates as p.m. peak hour volumes and no additional improvements were identified. The northbound left-turn at the 4th Street / Highland Avenue intersection is expected to operate at LOS F in 2036 during the a.m. peak hour. However, the movement is expected to have a relatively low v/c (0.41), and only 25 vehicles are expected to experience this level of congestion. Therefore, no additional improvements are recommended.

With these improvements in place, all roadway links will be expected to operate with a volume-to-capacity ratio less than 0.90, with the exception of La Center Road between Paradise Park Road and 13th Avenue (as shown in Figure 7). However, this segment of La Center Road is still expected to operate with a volume-to-capacity ratio under 1.0 and has very few accesses. The capacity of this segment will be managed given that future private driveway access is generally prohibited (see access spacing section earlier in this document). Therefore, no improvements are recommended to mitigate this level of congestion.

The following improvements included in the 2035 RTP or identified for evaluation by City staff were not recommended in this updated Transportation CFP:

- Construction of new collector streets, following an alignment between La Center Road and Pacific Highway, including a second bridge over the East Fork Lewis River, and between Pacific Highway and Bolen Street (Source: RTP).
- Creation of a downtown couplet along 4th and 5th Streets (Source: RTP).
- Construction of a new roadway crossing of Brezee Creek, between Stonecreek Drive and Highland Avenue (Source: City Staff).

These projects were considered to have limited utility relative to their cost. A sensitivity test was conducted to determine the potential use of a new Brezee Creek roadway crossing north of 4th Street, however, it is not expected to attract enough motor vehicle traffic to warrant the cost. A trail (pedestrian and bicycle use) creek crossing is recommended as an alternative to a full street connection since it would provide a direct connection between the neighborhoods on the west side of Brezee Creek and the schools and parks on the east side.

**FIGURE
7**

**Mitigated 2036 Traffic Conditions
(Weekday PM Peak Hour)**



LEGEND

Volume-to-Capacity Ratio

- $V/C > 1.0$
- $V/C > 0.90$
- $V/C > 0.80$
- $V/C > 0.70$
- $V/C \leq 0.70$

Section 4. Transportation Improvements

The recommended improvements can be seen in Figure 8, with the project numbers corresponding with those in Table 8. While the estimated project costs are shown, the responsibility will be shared by the City, Clark County, Southwest Washington Regional Transportation Council, and private development, with the cost shares to be sorted out at a later date. Not all recommended improvements are required to be in place prior to developing land within the UGA. The need to upgrade the existing streets or construct new ones will be driven by the multi-modal access needs of the adjacent properties. The project design elements depicted are identified for the purpose of creating a reasonable cost estimate for planning purposes. The actual design elements for any project are subject to change, and will ultimately be determined through a preliminary and final design process, and are subject to agency approval.

The Transportation CFP identifies several transportation projects that will not have funding by 2036, unless additional sources become available. Some of the projects require City funding and resources beyond what would be available in the time frame of this plan. Others are contingent upon future grants, development, or redevelopment.

Table 8: Six and Twenty-Year Capital Improvements

Project ID	Project Description	Primary Funding Source	Timing	Estimated Cost (2016 Dollars)	TIF Eligible	Project Source
T1	Improve the La Center Road / Paradise Park Road intersection to include a traffic signal.	Cowlitz Tribe	0-6 Years	Funded	Funded	La Center Road / I-5 Interchange Justification Report
T2	Improve Paradise Park Road between La Center Road and the North UGA Boundary. This roadway should be reconstructed as a Major Collector with pedestrian and bicycle facilities.	County/ Development	7-20 Years	\$1,025,000	No/Urban Upgrade	Junction Subarea Plan
T3	Improve 31 st Avenue-324 th Street between Paradise Park Road and 26 th Avenue. This roadway should be reconstructed as a Minor Collector with pedestrian facilities.	City/ Development	7-20 Years	\$1,800,000	No/Urban Upgrade	Junction Subarea Plan
T4	Extend 26 th Avenue to La Center Road. This roadway should be constructed as a Minor Collector with pedestrian facilities. Restrict the connection to La Center Road to left-in, right-in, and right-out access.	City/ Development	7-20 Years	\$1,600,000	Yes/ Connectivity Need	Junction Subarea Plan
T5	Construct 26 th Avenue from La Center Road to Paradise Park Road. This roadway should be constructed as a Minor Collector with pedestrian facilities. Restrict the connection to La Center Road to left-in, right-in, and right-out access.	City/ Development	7-20 Years	\$4,900,000	Yes/ Connectivity Need	Junction Subarea Plan

Project ID	Project Description	Primary Funding Source	Timing	Estimated Cost (2016 Dollars)	TIF Eligible	Project Source
T6	Improve Paradise Park Road between La Center Road and the South UGA Boundary. This roadway should be reconstructed as a Major Collector with pedestrian and bicycle facilities.	City/ Development	7-20 Years	\$2,450,000	No/Urban Upgrade	Junction Subarea Plan
T7	Improve La Center Road between Paradise Park Road and Timmen Road, which would include five travel lanes. This roadway should be reconstructed as a Principal Arterial with pedestrian and bicycle facilities, including a multi-use path on south side.	City/ Development	7-20 Years	\$8,175,000	No/ Capacity Need	New Project
T8	Improve 13 th Avenue between La Center Road and the south terminus. This roadway should be reconstructed as a Minor Collector with pedestrian facilities.	City/ Development	7-20 Years	\$1,075,000	No/ Connectivity Need	New Project
T9	Extend 13 th Avenue to Spencer Road. This roadway should be constructed as a Minor Collector with pedestrian facilities.	City/ Development	7-20 Years	\$3,500,000	No/ Connectivity Need	New Project
T10	Improve Spencer Road between Timmen Road and the south UGA boundary. This roadway should be reconstructed as a Major Collector with pedestrian and bicycle facilities.	City/ Development	7-20 Years	\$1,550,000	No/Urban Upgrade	New Project
T11	Improve Timmen Road between La Center Road and the south UGA boundary. This roadway should be reconstructed as a Minor Arterial with pedestrian and bicycle facilities.	City/ Development	7-20 Years	\$2,850,000	No/Urban Upgrade	New Project
T12	Improve the La Center Road / Timmen Road intersection with a roundabout (preferred) or traffic signal.	City/ Development	7-20 Years	\$1,500,000	No/ Capacity Need	2012 La Center Transportation CFP
T13	Improve La Center Road between 4 th Street and Timmen Road, which would include a widened bridge and four travel lanes. This roadway should be reconstructed as a Principal Arterial with pedestrian and bicycle facilities, including a multi-use path on the south/east side.	City/ County/ Region	7-20 Years	\$5,705,000 (35% city contribution of \$16,300,000)	No/ Capacity Need	Regional Transportation Plan for Clark County
T14	Improve the Pacific Highway / 4 th Street intersection, to include a roundabout.	City/ County/ Region	0-6 Years	Funded	Yes/ Funded	Regional Transportation Plan for Clark County

Project ID	Project Description	Primary Funding Source	Timing	Estimated Cost (2016 Dollars)	TIF Eligible	Project Source
T15	Improve the 5 th Street / Aspen Avenue intersection, which would include realigning the east leg of 5 th Street south to intersect with the west leg.	City	7-20 Years	\$875,000	Yes/ Safety Need	Regional Transportation Plan for Clark County
T16	Improve Pacific Highway between D Avenue and the north UGA boundary. This roadway should be reconstructed as a Minor Arterial with pedestrian and bicycle facilities.	City/ Development	0-6 Years	\$3,400,000	No/Urban Upgrade	New Project
T17	Improve Bolen Street between Pacific Highway and 9 th Avenue. This roadway should be reconstructed as a Major Collector with pedestrian and bicycle facilities.	City/ Development	0-6 Years	\$1,750,000	No/Urban Upgrade	New Project
T18	Extend Bolen Street to 348 th Street. This roadway should be constructed as a Major Collector with pedestrian and bicycle facilities.	City/ Development	0-6 Years	\$1,000,000	Yes/ Connectivity Need	2012 La Center Transportation CFP
T19	Improve 348 th Street between Aspen Avenue-North Fork Avenue and the west terminus. This roadway should be reconstructed as a Major Collector with pedestrian and bicycle facilities.	City/ Development	7-20 Years	\$2,575,000	No/Urban Upgrade	2012 La Center Transportation CFP
T20	Improve Aspen Avenue-North Fork Avenue between 15 th Street and the north UGA boundary. This roadway should be reconstructed as a Major Collector with pedestrian and bicycle facilities.	City/ Development	7-20 Years	\$2,250,000	No/Urban Upgrade	New Project
T21	Improve 4 th Street from east of Cedar Avenue to west of Highland Avenue. This roadway should be reconstructed as a Minor Arterial with new Brezee Creek bridge and pedestrian and bicycle facilities.	City	0-6 Years	\$4,416,000	Yes/Urban Upgrade	Regional Transportation Plan for Clark County
T22	Install enhanced pedestrian and bicycle signage at the 4 th Street / Stonecreek Drive intersection.	City	0-6 Years	Funded	Funded	Regional Transportation Plan for Clark County
T23	Install enhanced pedestrian and bicycle signage near the Holly Park parking lot entrance along Lockwood Creek Road.	City	0-6 Years	Funded	Funded	Regional Transportation Plan for Clark County
T24	Construct a pedestrian/bicycle crossing of Brezee Creek, connecting the existing trail on the west side of the creek to La Center High School. This includes trail connections to Pioneer Loop east of Timmen Court and 7 th Street at the end of the cul-de-sac.	City	0-6 Years	\$1,000,000	No/ Connectivity Need	New Project

Project ID	Project Description	Primary Funding Source	Timing	Estimated Cost (2016 Dollars)	TIF Eligible	Project Source
T25	Improve Highland Avenue-339 th Street from north of 4 th Street to the east UGA boundary. This roadway should be reconstructed as a Major Collector with pedestrian and bicycle facilities.	City/Development	7-20 Years	\$2,850,000	No/Urban Upgrade	Regional Transportation Plan for Clark County
T26	Improve Lockwood Creek Road from east of Highland Avenue to the east UGA boundary. This roadway should be reconstructed as a Minor Arterial with pedestrian and bicycle facilities.	City/Development	7-20 Years	\$2,725,000	Yes/Urban Upgrade	Regional Transportation Plan for Clark County
T27	Extend John Storm Avenue to 339 th Street. This roadway should be constructed as a Minor Collector with pedestrian facilities.	City/Development	7-20 Years	\$2,600,000	No/Connectivity Need	Regional Transportation Plan for Clark County
T28	Improve 24 th Avenue between Lockwood Creek Road and 339 th Street. This roadway should be reconstructed as a Minor Collector with pedestrian facilities.	City/Development	7-20 Years	\$1,275,000	No/Urban Upgrade	2012 La Center Transportation CFP
Total Projects				\$62,845,000		
TIF Eligible Projects				\$15,515,000		
Non-TIF Eligible Projects				\$47,330,000		
Capital Improvement Plan Projects (0-6 Years Timing)				\$11,560,000 (mix of TIF and Non-TIF Eligible Projects)		

Note: Projects identified for the Capital Improvement Plan (0 to 6 Years) highlighted in blue

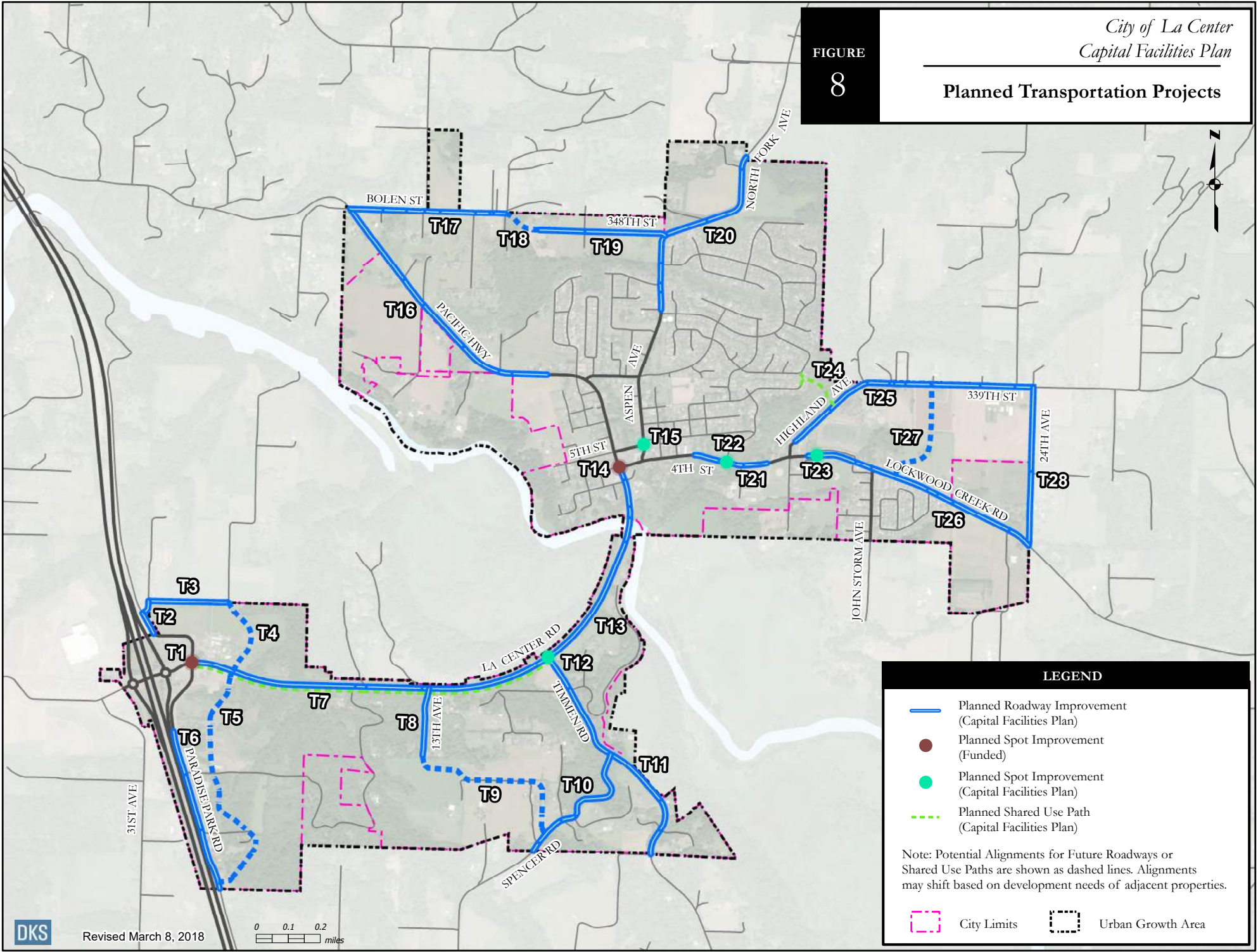
Overall, an estimated \$63 million in transportation system improvements are expected to be needed to support the growth planned in the UGA over the next 20 years. This includes a mix of projects to be built by the City, Clark County, Cowlitz Tribe and WSDOT, as well as several new streets likely be built or reconstructed by new development.

Several projects were identified in studies or plans by other agencies (see Project Source in Table 8). Many of these improvements are generally driven by regional traffic issues, and are not entirely triggered by growth within the La Center UGA. Project T13 is a significant investment (\$16,300,000) which would provide benefits to the regional transportation system. The RTC 2035 travel demand model was used to estimate trips generated within the La Center UGA will contribute about 35% of total traffic demand on La Center Road at the Lewis River Bridge. Therefore, the cost estimate for Project T13 has been reduced to reflect the City’s proportional share and potential financial contribution.

FIGURE

8

Planned Transportation Projects



LEGEND

- Planned Roadway Improvement (Capital Facilities Plan)
- Planned Spot Improvement (Funded)
- Planned Spot Improvement (Capital Facilities Plan)
- - - Planned Shared Use Path (Capital Facilities Plan)

Note: Potential Alignments for Future Roadways or Shared Use Paths are shown as dashed lines. Alignments may shift based on development needs of adjacent properties.

- - - City Limits
- Urban Growth Area

Section 5. Funding

This section details the future transportation funding to help prioritize City investments in the transportation system to meet identified needs over the next 20 years.

Current Funding Sources

The City uses three funding sources for transportation infrastructure, as summarized below.

- **State Fuel Tax**

The state motor vehicle fuel tax revenues are distributed on a per capita basis to Cities and counties, and by statute may use the money for any road-related purpose, including walking, biking, bridge, street, signal, and safety improvements. The gas tax in Washington increased on August 1, 2015 by seven cents, to 44.5 cents per gallon, and will increase to 49.4 cents per gallon during the summer of 2016. Over the past five years, La Center averaged annually \$60,000 in State gas tax revenue. The city typically uses State gas tax revenue for system maintenance needs.

- **Miscellaneous Grants and General Fund Transfers**

The City has received approximately \$470,000 in other revenues annually (e.g., Grant money, general fund transfers, and monies from the Capital Projects Fund), based on the past five years of revenue history. This revenue could be available on a project-specific basis, but none will be assumed for funding the Transportation CFP.

- **Transportation Impact Fee (TIF)**

The City also collects TIF's from new developments, which provide a funding source for transportation system capacity projects. The funds collected can pay for constructing or improving portions of roadways impacted by new development and increased traffic demands. The TIF is a one-time fee.

Traffic Impact Fees

The TIF structure for La Center is designed to determine the fair share of improvement costs that may be charged for new development. Traffic impact fees are therefore only paid by new developments or redevelopment which would add trips compared to its current use. For the purposes of La Center's traffic impact fee program, the bounds of the La Center UGA are also the bounds of the traffic impact fee service area.

In simple terms, the TIF rate is determined by dividing the cost of all necessary improvements required by growth by the number of new trips generated by that growth. The TIF eligible projects (shown in Table 8) are those that are triggered by future growth and expected to be completed within the next 20 years. The non-TIF eligible projects are projects needed in the long-term (7 to 20 years) that are not triggered by growth or those located in the unincorporated UGA.

It is forecasted that by the year 2036, there will be an increase of 2,052 p.m. peak hour trips over current traffic volumes (shown in Table 5). The detailed TIF rate calculation is shown below.

$$\text{TIF Eligible Project Cost (\$15,515,000) / New PM Peak Hour Trips (2,052)} \\ = \text{Cost per new Trip (\$7,561)}$$

To fully fund the recommended TIF eligible projects, the TIF rate would have to be \$7,561 per p.m. peak hour trip. Traffic impact fees are assessed for each new development/redevelopment by multiplying the number of new p.m. peak hour trips generated by the TIF rate. Table 9 lists a variety of land uses, but as an example, a single-family home (code 210) would pay an impact fee of \$7,561 (1.00 x \$7,561) based on the proposed TIF rate. The TIF rate will be adopted as a separate resolution after the adoption of the Capital Facility Plan.

TIF Exemptions: The City Council may grant an impact fee exemption to low-income housing, as defined in LCMC 3.35.150; provided, any exemption shall be paid into the impact fee fund established under LCMC 3.35.180 by the City out of its general funds. No other exemptions are allowed.

TIF reductions for pass-by trips: Pass-by-trips are those trips already on the system that access new developments as they pass-by (e.g. gas stations, fast food, etc.). Table 9 lists pass-by trips by land use. The advantages of pass-by traffic impact fee reductions are:

- Development does not pay for trips that are not generated solely by that development
- Pass-by traffic impact fee reductions are allowed by most jurisdictions
- Institute of Transportation Engineers' *Trip Generation Manual*⁷ provides specific guidance on pass-by trips by land use

TIF Summary: A summary of the TIF provisions is provided below.

- The TIF rate needed to fully fund TIF eligible projects is \$7,561 per p.m. peak hour trip
- TIF credits can be used city-wide
- TIFs are calculated based on the TIF share of project costs, thus, credits will be issued based on TIF share of project cost up to proportionate TIF cost in the CFP
- Previously issued TIF credits will be honored
- The City Council may grant TIF exemptions to low-income housing
- TIF exemptions are allowed for pass-by trips

⁷ ITE Trip Generation Manual, ninth edition

Table 9 - Trip Generation Schedule

ITE Code	Land Use	Unit of Measure	PM Peak No.	Pass-By Trip*
110	General light industrial	1000 sq. ft. GFA	0.83 (X)	NA
151	Mini-warehousing	1000 sq. ft. GFA	0.20 (X)	NA
210	Single family housing	dwelling units	1.00 (X)	NA
221	Low-rise apartment - 1 or 2 levels	dwelling units	0.41(X)	NA
222	High-rise apartment - 3 or more levels	dwelling units	0.39 (X)	NA
240	Mobile home park	dwelling units	0.49 (X)	NA
253	Congregate care facility	dwelling units	0.20 (X)	NA
270	Residential Planned Unit Development	dwelling units	0.72 (X)	NA
310	Hotel	rooms	0.61 (X)	NA
320	Motel	rooms	0.44 (X)	NA
444	Movie Theater	screens	37.83 (X)	NA
492	Health/Fitness Club	1000 sq. ft. GFA	3.92 (X)	NA
520	Elementary school	students	0.34 (X)	NA
530	High school	students	0.33 (X)	NA
560	Church	1000 sq. ft. GFA	0.80 (X)	NA
565	Day care center	1000 sq. ft. GFA	11.82 (X)	NA
610	Hospital	1000 sq. ft. GFA	0.97 (X)	NA
620	Nursing home	beds	0.37 (X)	NA
630	Clinic	1000 sq. ft. GFA	4.64 (X)	NA
710	General office building	1000 sq. ft. GFA	1.42 (X)	NA
720	Medical-dental office building	1000 sq. ft. GFA	4.10 (X)	NA
750	Office park	1000 sq. ft. GFA	1.33 (X)	NA
770	Business park	1000 sq. ft. GFA	1.26 (X)	NA
812	Building material/lumber store	1000 sq. ft. GFA	2.77 (X)	NA
814	Specialty retail center	1000 sq. ft. GFA	7.42 (X)	NA
820	Shopping center	1000 sq. ft. GFA	4.21 (X)	34
850	Supermarket	1000 sq. ft. GFA	7.60 (X)	36
851	Convenience market	1000 sq. ft. GFA	53.51 (X)	51
911	Walk-in bank	1000 sq. ft. GFA	12.13 (X)	NA
912	Drive-in bank	1000 sq. ft. GFA	26.40 (X)	35
931	Quality restaurant	1000 sq. ft. GFA	8.28 (X)	44
932	High turnover restaurant	1000 sq. ft. GFA	17.41 (X)	43
933	Fast food restaurant–without drive thru	1000 sq. ft. GFA	48.70 (X)	NA
934	Fast food restaurant–with drive thru	1000 sq. ft. GFA	51.36 (X)	50
944	Service station	Fueling positions	14.41 (X)	42
947	Car wash	Wash stalls	8.00 (X)	NA

Source: ITE Trip Generation Manual, 10th edition, PM peak hour of generator rate

* PM Peak Hour Pass-by Percentage. Pass-by rates are available for other land uses, please review current ITE manual.

GFA = Gross Floor Area

Potential Additional Funding Sources

New transportation funding options include local taxes, assessments and charges, and state and federal appropriations, grants, and loans. Factors that constrain these resources, include the willingness of local leadership and the electorate to burden citizens and businesses with taxes and fees; the portion of available local funds dedicated or diverted to transportation issues from other competing City programs; and the availability of state and federal funds. The City should consider all opportunities for providing or enhancing funding for the transportation improvements included in the Transportation CFP.

Counties and Cities have used the following sources to fund the capital and maintenance aspects of their transportation programs. As described below and summarized in Table 10, they may help to address existing or new needs identified in La Center’s Transportation CFP.

Table 10: La Center Potential Funding Sources

Funding Agency	Funding Program	Uses
WSDOT/Federal	Bridge Replacement & Rehabilitation	Rehabilitation or replacement of local agency bridges
WSDOT/RTC	Surface Transportation Program (federal)	Construction of improvements on federally classified roads
WSDOT	STP Hazard Elimination Program (federal)	Construction of improvements to enhance safety by eliminating hazards
WSDOT/RTC	STP Enhancement Program (federal)	Construction of non-motorized transportation projects
WSDOT	“Nickel Gas Tax” Package	Special tax for specified project list
WSDOT	Main Street Pavement Program	Establish and promote pavement maintenance systems in cities with populations under 10,000
WSDOT	School Safety Enhancements	Construct projects for traffic and pedestrian safety improvements near schools
WSDOT	Local Government Traffic Engineering Services	Assistance to local governments for all aspects of traffic analysis and transportation engineering
RTC	Congestion Mitigation and Air Quality Improvement (federal)	Construct projects that improve air quality (general capacity increasing projects are not eligible)
TIB	Small City BRAC Program	Match program to assist small cities with the required match for federally funded bridge projects
TIB	Small City Pedestrian Safety and Mobility Program	Funds to enhance and promote pedestrian mobility and safety
TIB	Small City Program	Funds to preserve and improve the roadway system
Public Works Board	Public Works Trust Fund Construction Loan Program	Revolving low interest loan fund to help local government finance critical public works needs
County Road Board	Rural Arterial Program (RAP)	County road and bridge reconstruction
County Road Board	County Arterial Preservation Program (CAPP)	Preserve existing paved county arterial road networks