

**City of Carnation  
2015 Comprehensive Plan  
TRANSPORTATION ELEMENT**

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## **CHAPTER 7 – TRANSPORTATION ELEMENT**

### ***I. INTRODUCTION***

The Transportation Element is required by the Growth Management Act (GMA), and is the basis for the City's capital planning for transportation improvement projects. The Transportation Element examines the transportation impacts of the long range development of the City as provided for in the Land Use Element, and provides for a program of transportation projects needed to maintain adopted level of service standards to support the future development. This analysis provides the City with documentation and justification to apply for funding grants for transportation improvement projects, and serves as a guideline for prioritizing transportation projects.

The development of the City of Carnation Transportation Element Update was first commissioned by the City Council in October 2003 for the 2004 Comprehensive Plan Update to address future land use growth and transportation needs to support the expected growth. The 2004 Transportation Plan Update provided a revised Transportation Improvement Plan through the year 2030, and recommended the adoption of a Traffic Impact Fee Program based on the report findings and concurrency objectives for the short term and long range land use.

Since the adoption of the 2004 Comprehensive Plan, the City's funding program has been supplemented by the adoption of a transportation impact fee program to assist in funding projects that will accommodate traffic growth associated with the future land use development of the City and its arterial system.

In 2011, the City updated the Transportation Element with a 2030 forecast year. The model used for the traffic forecast incorporated the land use assumptions from the Land Use Element and Zoning Map as updated at that time.

In 2012, the City initiated a planning effort for SR203 (Tolt Avenue) funded in part by a Rural Corridors grant from the Puget Sound Regional Council. The planning effort incorporated an extensive public process that included public workshops as well as input from several stakeholders groups including local businesses, community members and partners such as the Riverview School District, the Washington State Department of Transportation, Puget Sound Energy, the Snoqualmie Tribe, and others. This extensive public process resulted in an Action Plan for redevelopment of the Tolt Avenue corridor from the bridge over the Tolt River to NE 60<sup>th</sup> Street. The final concept of the Tolt Corridor Plan includes:

- A Greenway which provides a shared use path along the eastern portion of the right-of-way from the Tolt River Bridge to Entwistle Street. The

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Greenway would bring pedestrians and bicyclists into the downtown from the south.

- Retrofits to the pedestrian facilities along the west side of Tolt Avenue from the Tolt River Bridge to Eugene Street
- Full street improvements to the Central Business District (CBD) from Eugene Street to Rutherford Street, including placing the overhead power lines underground, providing wider sidewalks, street furnishings, landscaping and wayfinding to provide an enhanced pedestrian experience.
- Improvements to Bird Street to support its role as a central civic space
- Continuation of the Greenway north of the CBD from just south of Rutherford Street to NE 55th, providing a link for pedestrians and bicyclists from the north of the City to the downtown.
- A pedestrian walkway from the eastside of Tolt Avenue from NE 55th to NE 60th to serve existing and future residential development.

In addition, the Tolt Corridor Plan provides for wayfinding throughout the Tolt corridor, and connections to looped pedestrian paths just outside the Tolt corridor. Signage is proposed to prevent conflicts between bicyclists and pedestrians within the Greenways, and will assist the transitions for bicyclists between the Greenways and the downtown. Other projects called for include identification of the need for a traffic signal at Tolt Hill Road, and for aesthetic improvements to the Tolt River Bridge.

The projects that comprise the Tolt Corridor Plan are not generally included in the Transportation Improvements Plan of this Transportation Element as they would not increase the traffic carrying capacity of the City's transportation network. However, the Plan does meet many of the City's goals for non-motorized transportation, recognizing and promoting pedestrian and bicycle movement as a basic means of circulation, and assuring adequate and safe accommodation of pedestrians, bicycles and handicapped persons' needs.

The Tolt Corridor Plan divides the improvements into various projects, and calls for the improvements to be made incrementally, depending upon the availability of grant funding. Implementation of the Tolt Corridor Plan over the next years will move Carnation in the direction of fulfilling its goals for integrated pedestrian and bicycle access and safety, improved downtown streetscape, and in general creating a more inviting and integrated use of the City's primary arterial.

The 2015 Update of the Comprehensive Plan is a statutory requirement of the Growth Management Act and provides an opportunity to embrace all of the changes within the City that have occurred since 2010 when the City began its Update. Transportation modeling was accomplished with funds from the Department of Commerce and reflects land use development that has been

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underway as well as projected changes in land use. The Transportation modeling was based on a 2035 projection of traffic, based on build-out assumptions for land use within the City of Carnation. The current Update of the Transportation Element incorporates a docket request to change the land use designation of a significant acreage from commercial and industrial to high density residential development.

**CONSISTENCY WITH VISION 2040**

The Puget Sound Regional Council (PSRC) is tasked with developing Multi-countywide Planning Policies (MPPs) for the four counties of King, Snohomish, Pierce and Kitsap, plus all of the cities within those counties. The PSRC has developed its MPPs in VISION 2040. Carnation's Comprehensive Plan must show its consistency with the goals and policies of VISION 2040. The Transportation Element is consistent with VISION 2040 in that it advances cleaner and more sustainable mobility by promoting non-motorized trips through its compact urban form. The City's goals for safe and attractive pedestrian and bicycle linkages to the designated City center (the downtown area along SR203) are also consistent with VISION 2040. The Transportation Element encourages the development of a street system that provides adequate levels of service while also minimizing environmental impacts of roadway development. While transit service is provided by regional entities, citizens, City staff and elected officials have worked to promote transit service to serve Carnation residents and others within the Snoqualmie Valley. In general, Carnation seeks to coordinate its planning efforts with neighboring jurisdictions, such as King County, as well as with the other Valley cities, the Snoqualmie Tribe, and any other service providers. The PSRC reviews local plans for consistency with VISION 2040, and must certify the Transportation Element in order for the City to be eligible for transportation funding.

**GENERAL DESCRIPTION OF EXISTING TRANSPORTATION SYSTEM**

State Route (SR) 203, or Tolt Avenue, is the City's principle arterial and connection to the rest of the Snoqualmie Valley. Running north-south, SR 203 connects Carnation with Duvall to the north and Fall City to the south. Maintained by WSDOT, this two lane rural highway has a general speed limit of 50 mph. As SR 203 passes through Carnation it is known as Tolt Avenue. Tolt Avenue is Carnation's main business street in the downtown area, with a speed limit of 30 mph. Due to the large volume of local and through traffic carried through the center of town, residents are concerned with pedestrian and bicycle safety, especially pedestrians and bicycles crossing SR203, as well as local automobile mobility. Roads surrounding the downtown business district are east-west oriented streets which are typically paved, have gravel shoulders or no shoulder, and are without road markings. Stop signs regulate traffic flow at intersections. A traffic signal has recently been completed at the intersection of SR203 and Entwistle; this is Carnation's first signalized intersection.

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SR203 has two travel lanes, curb, gutter and sidewalk on both sides and parking on one or both sides from Bagwell Street on the north, to just beyond NE 40<sup>th</sup> on the west side of the highway, and to the southerly end of Tolt Middle School on the east side. A Transportation Improvement Board (TIB) project added bulb-outs and ADA ramps at key intersections in the downtown. The pavement condition of SR203 varies from good to fair in some areas. The Washington State Department of Transportation (WSDOT) is responsible for maintenance of the roadway from the fog line inwards; the City is responsible for the area between fog line and the property lines.

The pavement condition of Carnation streets are generally substandard in the older portions of the City. Roadways in the more recent subdivisions are newer and in better condition. The original plat of the City included 60 foot rights-of-way as well as 16 foot alleys. However, on the local access streets, pavement width varies from 12 feet to 40 feet, with 20 feet being the average. This is substandard for two lanes of traffic, and does not permit on-street parking. Very few residential streets in the older portions of the City have curb, gutter and sidewalk. Carnation also has an extensive system of alleys in the older parts of town. Sixteen foot alleys were dedicated and developed as part of the original plat of Tolt. A few of the alleys which receive heavy use have been paved.

Two Transportation Improvement Board (TIB) projects have been completed in recent years that improved to arterial standards Blanche Street between SR203 and Stossel Avenue, and Stossel Avenue (King Street) between Entwistle and Blanche Street. These streets now have curb, gutter and sidewalk on both sides and parking on one or both sides. Street lights and landscaping are also provided.

Entwistle Street, the city's east-west arterial, has curb, gutter and sidewalk on the south side from Larson Avenue to 329<sup>th</sup> Ave NE. The north side of the street has curb, gutter and sidewalk from Larson Avenue to 326<sup>th</sup> Ave NE.

The Brumbaugh Addition and Regal Glen are subdivisions that were completed in the 1970s and 1980s, respectively. The streets in the Brumbaugh neighborhood do not have curb, gutter or sidewalk, and pavement is in poor condition. Regal Glen has curb and gutter on both sides and sidewalk on one side. In general, the pavements of the streets in Regal Glen are in fair or good condition.

The newer subdivisions which were completed in the 1990s generally have streets with curb, gutter and sidewalk on both sides.

Carnation's transportation network and an inventory of street conditions are depicted in more detail in the Inventory and Analysis section below.

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**CONCURRENCY**

The Levels of Service (LOS) Standards that are adopted in the Transportation Element are maintained through upkeep of the existing circulation system and expansion of transportation services where needed. The City has adopted Link (A-F) Level of Service standards for the arterials that handle the most significant volume of local traffic in the city. These standards provide measurable criteria to judge the adequacy of roadway service provision. General design standards for all road classifications within the City, including local streets, collectors and arterials are adopted in the City of Carnation Street and Storm Sewer Standards.

**TRANSPORTATION PLAN ISSUES AND CHALLENGES**

Fortunately, Carnation has few traffic congestion problems when compared to other King County cities. There are, however, a number of unique issues and challenges that must be considered in order to achieve a viable transportation system that is consistent with the other system needs. Some of these issues include the following:

1. Carnation is bisected by State Route 203 which carries a substantial amount of fast moving through traffic. SR203 is also Carnation's main street, passing through the downtown commercial area. It is a challenge to develop a more pedestrian oriented downtown while at the same time providing for efficient traffic flows through town. Large volumes of traffic passing through town on SR203 decrease local traffic mobility within town and are a hazard for pedestrians and bicyclists.
2. A City of Carnation goal is to create an attractive pedestrian environment within the downtown commercial area by promoting non-motorized access. Improvements such as clearly defined and safe crosswalks, bicycle racks as well as signage, lighting and street furniture are necessary to achieve this goal. Long term planning for the downtown also needs to incorporate sufficient parking to support economic development.
3. There is currently only limited public transit service linking Carnation to the rest of the Snoqualmie Valley. Service to other Valley cities that are connected by regional transit and to population and employment centers to the west is the only access to transit service that links Carnation residents to the regional transit system.
4. Many of Carnation's existing streets are narrow and without sidewalks or pathways. Improved access and safety for pedestrians and bicyclists is an important goal for the City of Carnation. Additional pathways as well as amenities for pedestrians and bicycles are needed in order to achieve Carnation's goal of providing substantial opportunity for non-motorized travel throughout the City.

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## ***II. INVENTORY AND ANALYSIS***

This section of the Transportation Element presents an inventory and description of the existing transportation system, and begins to analyze current and projected needs based on estimates of projected land use and growth in Carnation.

### **STREETS CLASSIFICATIONS**

Public streets are classified according to their function in terms of mobility and land access. Carnation's functional street classifications are defined below:

***Arterial:*** A highway or roadway connecting neighborhoods and facilities within the community and providing some access to abutting properties. The facility stresses mobility and circulation needs over providing specific access to properties.

***Collector:*** A street connecting two or more neighborhoods as well as carrying traffic within neighborhoods. Collectors also channel traffic onto the arterials. Typically, they carry moderate traffic volumes, have relatively shorter trips than arterials, and carry very little through traffic.

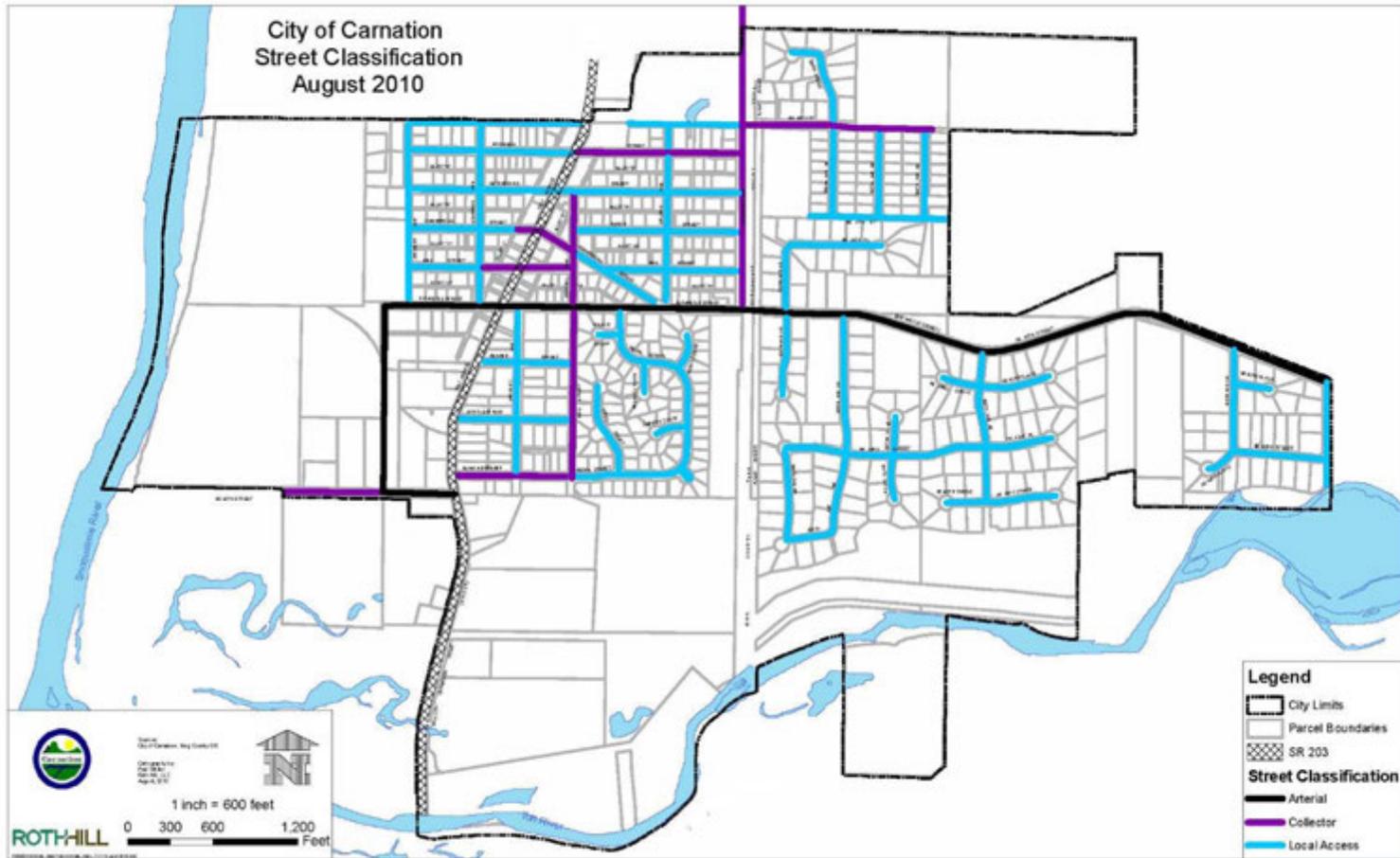
***Local Access Street:*** This category comprises all local roadways and streets not otherwise classified. Their main function is providing direct access to abutting properties, sometimes at the expense of traffic movements. Traffic generally moves slowly on these streets and delays are caused by turning vehicles.

***Alley:*** A local access street, generally undeveloped and consisting of a 1 lane 16 foot right of way that provides access to such amenities or services as rear yards, garages, or refuse collection.

Figure T-1 shows a Street Classification Map for the City of Carnation.

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Figure T-1  
Street Classification Map



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City arterials identified in the Map include Tolt Avenue (SR203 within the City of Carnation) Entwistle Street, Larson Avenue and a segment of NE 40<sup>th</sup> Street. Tolt Avenue acts as both the City's Main Street and also as a state highway that links Carnation to the rest of the Snoqualmie Valley. Tolt Avenue consists of a 70 foot right-of-way starting at the City limits at Bagwell Street to Entwistle Street. From Entwistle Street southward, the right of way is 60 feet. There are two travel lanes, shoulder, and sidewalk on both sides for most of Tolt Avenue. Entwistle Street provides east-west access from Larson Avenue to the easterly extent of the City. Entwistle has a 60 foot right-or-way, which carries 2 lanes of traffic and curb, gutter and sidewalk from Larson Avenue to 329<sup>th</sup> Avenue NE in Swiftwater on the south side, and to opposite 326<sup>th</sup> Street on the north side. Larson Avenue is designed to be a north-south arterial that provides access to the industrial area west of SR203. Currently only the northern 380 feet of Larson Avenue has been improved to serve the wastewater treatment plant and sewer vacuum station; the remainder of the corridor identified for Larson Avenue would link Entwistle to NE 40<sup>th</sup> with the purpose of providing access for industrial development. The segment of NE 40<sup>th</sup> from SR203 westerly to Larson Avenue (extended) is also classified as an arterial; its purpose is to link Larson Avenue to SR203 to serve existing and potential industrial development.

Collectors within the City include NE 40<sup>th</sup> Street from its intersection with the Larson Avenue (extended) corridor westerly to Tolt McDonald Park; Blanche Street and Stossel Avenue, which serve the area of intense development (Mixed Use and/or high density residential) east of SR203; Commercial Street between Alley 'J' and Stossel, which provide east west access in the commercial core, and Milwaukee Avenue, which provides north south access between Entwistle and NE 50<sup>th</sup> Street. Future development of the Potential Annexation Area north of the Carnation Elementary School would also be served by an extension of Milwaukee Avenue, in order to link residential development of that portion of the UGA to the rest of the city's street grid. Finally, East Morrison Street between Milwaukee and SR203 and NE 50<sup>th</sup> east of Milwaukee Avenue provides access for existing and future development of the northeastern part of the City. Some of these collector streets such as Blanche and a portion of Stossel Avenue have recently been improved, but other collectors are substandard.

Other City streets are classified as Local Access. The main purpose of these streets is to provide access to the land uses that are adjacent. Current conditions and rights-of way for these roadways vary widely throughout the City. In most of the older portions of the City, 60 foot rights-of-way are typical, but by and large the streets consist of minimal pavement, in many cases less than twenty feet in width and only a few inches in depth, with no paved parking, and no sidewalk or pathway for pedestrians. Some of these roads are in very poor condition. Newer subdivisions generally have 50 foot rights-of-way, and have newer roadway, with pedestrian amenities that include curbs and sidewalks. The City's goal is to

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provide pedestrian and bicycle access, but there is some concern that improvements to pedestrian amenities in the older portions of the City should be consistent with the design and scale of these areas. The City has developed alternative roadway profiles that seek to provide pedestrian and bicycle pathways but do not detract from the aesthetic appeal of older neighborhoods.

As development occurs within the City, the existing street system should be reviewed for the primary purpose of the roadway, the future volumes, and the spacing between similar use roadways. The review would be used to identify and designate the roadways which will carry the higher volumes for through traffic and the gateway corridors into the city. The designation of these roadways will provide the City with the framework to guide city and developer capacity improvements to accommodate the future traffic demands. The designated roadways would then be monitored for accessibility from adjacent properties and levels of service to ensure the capacity, efficiency, and safety of the regional arterial system within the City. Recognizing the corridors that will carry the majority of traffic in and out of the city will allow the City to start planning for the preservation of right-of-way and management of the access locations to these corridors to maintain higher capacity conditions.

**STREET CONDITIONS**

Table T-1 below contains an inventory of street conditions through-out the City. Note that street names with east or west refer to east or west of SR203. The inventory was visually checked in 2011 and then updated in April 2015 using the Transportation Improvement Board (TIB) Small City Maintenance Street Inventory.

**Table T-1:**  
**Carnation Street Inventory and Condition Analysis**

<b>STREET</b>	<b>SIDEWALK</b>	<b>CURB &amp; GUTTER</b>	<b>PAVEMENT CONDITION</b>	<b>COMMENTS</b>
<b>ARTERIALS</b>				
Tolt Ave. (SR 203)	Yes	Yes	Fair-Good	Sidewalk both side in most areas in City limits. Sidewalk 1 side from Morrison to NE 55 <sup>th</sup> in PAA
Entwistle Street/NE 45 <sup>th</sup> Street	Yes	Yes	Fair - Good	Sidewalk both sides from Larson to opposite 326 <sup>th</sup> on the north and slightly east of 329 <sup>th</sup> on the south
Larson Avenue	1 side (part)	1 side (part)	Good	Unimproved r-o-w from Vacuum station southward
NE 40 <sup>th</sup> between SR203 and Larson Avenue	1 side (part)	1 side (part)	poor	narrow
<b>COLLECTORS</b>				

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<b>STREET</b>	<b>SIDEWALK</b>	<b>CURB &amp; GUTTER</b>	<b>PAVEMENT CONDITION</b>	<b>COMMENTS</b>
<i>Stossel Rutherford to Entwistle</i>	<i>No</i>	<i>No</i>	<i>Poor-Fair</i>	<i>Narrow uneven pavement</i>
<i>Stossel (King) Entwistle to Blanche</i>	<i>Yes</i>	<i>Yes</i>	<i>Good</i>	<i>TIB improvements completed in 2009</i>
<i>Milwaukee (Milwaukee to 326<sup>th</sup>)</i>	<i>*One side</i>	<i>Yes</i>	<i>Good</i>	<i>*Pavement on east side has been extended and striped for walkway; even road surface.</i>
<i>NE 50<sup>th</sup> Street</i>	<i>1 side</i>	<i>1 side</i>	<i>Poor</i>	<i>New roadway segment and paving of portion of existing street to be completed as part of new subdivision activity</i>
<i>East Morrison Street</i>	<i>Yes</i>	<i>Yes</i>	<i>Fair</i>	<i>Pavement width sufficient for on-street parking</i>
<i>Commercial Street between Stossel and Alley 'J'</i>	<i>Yes</i>	<i>1 side</i>	<i>Good</i>	
<i>Bird Street between Stossel and Stephens Avenues</i>	<i>1 side</i>	<i>1 side</i>	<i>Good</i>	<i>Angled parking between SR203 and Stossel</i>
<i>Blanche Street between Stossel and SR203</i>	<i>Yes</i>	<i>Yes</i>	<i>Good</i>	<i>TIB improvements completed in 2009</i>
<i>NE 40<sup>th</sup> Street west of Larson Avenue</i>	<i>no</i>	<i>no</i>	<i>poor</i>	<i>Narrow pavement</i>
<b>LOCAL STREETS</b>				
<b>Tolt Townsite Plat of Tolt</b>				
<i>Bagwell (west of SR203)</i>	<i>No</i>	<i>No</i>	<i>non-existent</i>	<i>30 Ft. ROW; Undeveloped from Stephens West; 1 lane from Stephens to Tolt. Pavement width less than 12 ft.</i>
<i>Bagwell (east of SR 203) to be re-named NE 50th</i>	<i>1 side (part)</i>	<i>1 side (part)</i>	<i>Good</i>	<i>Recent improvements for Riverview School project</i>
<i>West Morrison</i>	<i>No</i>	<i>No</i>	<i>Poor</i>	<i>Narrow pavement.</i>
<i>Rutherford</i>	<i>No</i>	<i>No</i>	<i>Poor-Fair</i>	<i>Narrow pavement</i>
<i>Commercial (except between Alley 'J' and Stossel)</i>	<i>Partial</i>	<i>Yes</i>	<i>Good</i>	<i>Curb in very poor condition</i>
<i>Reitze</i>	<i>No</i>	<i>No</i>	<i>Fair</i>	<i>Narrow pavement width</i>
<i>East Bird)</i>	<i>No</i>	<i>No</i>	<i>Poor</i>	<i>Narrow pavement</i>
<i>Stewart Avenue</i>	<i>No</i>	<i>No</i>	<i>Good</i>	<i>Narrow pavement</i>
<i>Stephens Avenue</i>	<i>No</i>	<i>No</i>	<i>Good</i>	

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<b>STREET</b>	<b>SIDEWALK</b>	<b>CURB &amp; GUTTER</b>	<b>PAVEMENT CONDITION</b>	<b>COMMENTS</b>
Spilman Avenue	No	No	Poor	Narrow pavement. To be overlaid as part of watermain replacement project
<b>Hamilton Re-plat</b>				
Eugene	Yes (partial)	Yes (partial)	Good	
Myrtle	No	No	Poor	
McKinley (Entwistle to Eugene)	One side	Yes	Good	on-street parking on 1 side
McKinley (Eugene to Blanche)	No	No	Fair	Narrow
<b>Regal Glen</b>				
Regal Street	One side	Yes	Good	Pavement wide enough for on-street parking 1 side
Palace Ct.	One side	Yes	Fair	Pavement wide enough for on-street parking 1 side
King Ct.	One side	Yes	Good	Pavement wide enough for on-street parking 1 side
Queens Ct.	One side	Yes	Fair	Pavement wide enough for on-street parking 1 side
Regency Place	One side	Yes	Fair	Pavement wide enough for on-street parking 1 side
Royal Ct.	One side	Yes	Poor	Pavement wide enough for on-street parking 1 side
<b>Swiftwater</b>				
325th Ave NE	1 side	Yes	Good	
NE 40 <sup>th</sup> Street	Both sides	Yes	Good	
326 <sup>th</sup> Ave NE (Swiftwater)	Both sides	Yes	Good	
327th Pl. NE (Swiftwater)	1 side	Yes	Good	
NE 40th Circle	1 side	Yes	Good	
NE 40th Place	1 side	Yes	Good	
NE 42nd Street	Both sides	Yes	Good	
NE 42nd Place	1 side	Yes	Good	
NE 43rd Circle	1 side	Yes	Good	
NE 43rd Place	1 side	Yes	Good	
329th Ave NE	Both sides	Yes	Good	
<b>River's Edge</b>				
334 <sup>th</sup> Ave NE	1 side	Yes	Good	Rolled curbs

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336 <sup>th</sup> Ave NE	1 side	1 side	Good	
NE 42 <sup>nd</sup> St	Both sides	Yes	Good	Rolled curbs
NE 42 <sup>nd</sup> Place	Both sides	Yes	Good	Rolled curbs
NE 43 <sup>rd</sup> Place	Yes	Yes	Good	Rolled curbs
<b>Brumbaugh Addition</b>				
NE 47 <sup>th</sup> Street	No	No	Poor/non-existent	Narrow pavement.; unpaved from 327th to 328th
NE 50 <sup>th</sup> Street (Brumbaugh)	No	No	Poor	Narrow (half street)
326 <sup>th</sup> Ave NE (Brumbaugh)	No	No	Good	
327th Ave NE	No	No	Good	
328th Ave NE	One side	Yes	Good	
<b>Carnation Meadows II</b>				
326th (Carnation Meadows)	One side	Yes	Good	
<b>Cascade View</b>				
325th Ave (Cascade View)	One side	Yes	Good	
<b>Carnation Meadows</b>				
325th Ave (Carnation Meadows)	One side	Yes	Good	
NE 46 <sup>th</sup> Place	One side	Yes	Good	
<b>Unplatted</b>				
331st Ave NE	No	No	Poor/None	Undeveloped private gravel road
332nd Ave NE	No	No	Poor/None	New roadway to be built as part of subdivision
<b>PAA (Garden Tracts)</b>				
316th NE	No	No	None	Undeveloped ROW
318th NE	No	No	Good	NE 55th to NE56th only (road developed for 1 blk. only)
320th NE	No	No	Fair	NE 55th to NE 60th
322nd NE	No	No	Fair	NE 55th to NE 60th
324th NE	No	No	None	Undeveloped ROW along Sno-Valley Trail (old RR ROW)
NE 55th	No	No	Fair-Good	Narrow
NE 60th	No	No	Fair-Good	Some unevenness and buckling

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<i>STREET</i>	<i>SIDEWALK</i>	<i>CURB &amp; GUTTER</i>	<i>PAVEMENT CONDITION</i>	<i>COMMENTS</i>
<b>Notes:</b>				
Except for roadways in the PAA, ratings reflect the Transportation Improvement Board (TIB) Small City Maintenance Street Inventory, with some adjustments. The inventory consists of a Pavement Conditions Rating (PCR) as provided for in the WSDOT Pavement Surface Condition Rating Manual and based on a visual inspected by a TIB region engineer. The Pavement Condition Ratings system and recommended treatment is as follows:				
Greater than 90	Excellent Condition		No treatment needed	
Between 70 and 90	Good Condition		No treatment needed	
Between 50 and 70	Fair Condition		Chip Seal	
Between 25 and 50	Poor Condition		Overlay or FDR	
Less than 25	Needs reconstruction		Reconstruction or FDR	

The existing poor quality of many roadways within the City is a community concern. Unlike improvements that add capacity to the roadway network, funding for improvements to pavement are not eligible for impact fees. Revenues for road maintenance come from the city’s proportionate share of the State’s motor vehicle fuel tax, supplemented by real property taxes. Given the city’s small population and relatively small assessed value, revenues for street maintenance have been insufficient to address deficient roadway conditions. The Transportation Improvement Board (TIB) has recently initiated the Small City Preservation Program, which is well designed to help preserve and improve local street conditions. A Recommended Treatment program provided by the TIB indicates approximately 10,765 feet of roadway would be eligible for pavement overlays, and approximately 22,329 feet would be eligible for seal coat. However, funding at the state level for this program is not certain.

**INFLUENCE OF REGIONAL TRAFFIC**

Regional traffic influences traffic volumes within the City, especially along SR203. The Puget Sound Regional Council (PSRC) Rural Town Centers and Corridors Program studied overall corridor improvement concepts. Key corridor “hot spots” have been identified as strategic areas needing additional study to address short and long-term safety, development and mobility needs along the corridor. No immediate changes in regional traffic flow through the city are expected, although the PSRC has projected a 1% increase per year in through traffic on SR203. The City’s Tolt Corridor Plan described in more detail elsewhere in the Element was funded through the PSRC.

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**NATURAL TRAFFIC BARRIERS**

A number of rivers and steep hills create natural barriers to efficient traffic access to and circulation within Carnation. Motorized traffic originating in the eastern portion of the City, wanting to move in a southerly direction must proceed west to SR203, proceed south on SR203 across the Tolt River bridge. Traffic desiring to move in a westerly direction must proceed either north to NE 60th Street or Carnation Farm road, or proceed south to the Tolt River Bridge, and then turn west on NE Tolt Hill Road. The only Carnation street providing eastern access to unincorporated King County is Tolt River Road (NE 45th Street). SR203 forms a barrier for non-motorized traffic.

**PARKING**

Parking has been an issue raised by the community during the planning process. The principal concern is adequate parking in the downtown commercial core. Increases in development will create added pressures on parking availability. In addition, some community members feel that existing public parking should be better identified and located more conveniently for shops.

A City of Carnation goal for the downtown commercial area is to create an attractive pedestrian environment and to link Carnation's neighborhoods through trails and pathways with the downtown area. The goal is to encourage people to use alternative modes of transportation to access the downtown commercial area.

The community must strike a balance between parking shortages and parking supply. Too little available parking may contribute to stunting economic growth. Excess parking wastes money and takes up space that could be used for valuable development or environmentally useful open space. Excess parking contributes to impervious surface which requires stormwater treatment and flow control facilities. Development regulations should provide sufficient off-street parking to meet needs without creating deterrence to development.

**TRANSIT SERVICE**

There is limited public transit service to Carnation which is currently limited to service within the Snoqualmie Valley. Recent cutbacks to METRO Transit service have resulted in a partnership with other transit providers in the Snoqualmie Valley. The Valley Shuttle provides bus service between the Valley cities from morning to evening on a 90 minute headway. Connections at other Valley cities such as Duvall can provide connections to transit service to employment centers such as Redmond and Seattle. However, transit service linking Carnation to centers outside the Valley is far from convenient.

Carnation's transit stop is located at SR203 (Tolt Avenue) and Bird Street. In recent years the transit stop has been enhanced through artwork provided by the students from Carnation Elementary School and the Snoqualmie Tribe. Other

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improvements such as an informational kiosk, or newspaper and bicycle racks should also be considered. City goals to promote a pedestrian friendly environment and land use policies that channel denser land uses within walking distance of the downtown also work to make transit use more attractive for City residents.

In addition to fixed route transit provided within Snoqualmie Valley by the Shuttle, bus service is available for senior citizens through the Sno-Valley Senior Center Shuttle bus. Service is limited to the Snoqualmie Valley.

**PEDESTRIAN CIRCULATION**

Carnation's compact urban form and centralized business district (the Town Center) create an opportunity for excellent pedestrian access, both within the downtown and linking the nearby neighborhoods to the downtown area. The Carnation Urban Growth Area is just over a square mile in size. Most goods, services and public facilities within the City are located along SR203, between Bagwell Street (the Carnation Elementary School and the Library) and important facilities just south of the Tolt Town Center, including the Tolt Middle School and Memorial Park. Higher density residential development is concentrated within a half mile of SR203, in the original development platted in the early twentieth century. In addition, important regional activities are located in the southern portion of the City, such as Remlinger Farms and Tolt McDonald Park, and in the northern portion of the Potential Annexation Area, such as the u-pick berry farms. These activities draw an estimated half million people to the Carnation area over the course of a year. Encouraging these visitors to shop in Carnation's downtown is integral to the City's economic development strategy.

Sidewalks are present on both sides of Tolt Avenue (SR203) within City limits and both sides of Entwistle (with one gap between the River's Edge and Swiftwater neighborhoods). Sidewalks are present on one or both sides of most of the City's collectors, including NE 50<sup>th</sup>, Milwaukee Avenue, East Morrison, Stossel/King Streets, and the portions of Commercial and Bird Streets that are in the City center. Sidewalks are also present in the newer neighborhoods, while much of the older portions of the City do not have sidewalks. However, given the very low average daily traffic, pedestrians and bicyclists are still able to access the City even where there are no sidewalks present. Plans for improved non-motorized access are discussed in the Future Needs and Alternatives section below.

As described above, curbs and sidewalks are present throughout most of the SR203 corridor, and bulb-outs and ADA ramps were recently added to the curbs in the Central Business District. However, traffic on SR203 works as a barrier to pedestrians, especially in the afternoon peak traffic hour. The signalization of the intersection at Entwistle and the cross-walk improvements at Morrison have provided two improved pedestrian crossings, but improved pedestrian safety

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through-out the SR203 corridor is necessary to promote pedestrian access to the downtown core. Continued attention to preventing speeding and other traffic violations on SR203 as well as better identified crosswalks will be important to maintaining pedestrian safety. The Tolt Corridor Plan provides the blue-print for future investments in Carnation's downtown.

In addition to pedestrian safety, the visual experience for pedestrians is also a consideration. Concerns about how the downtown would develop once public sewers became available lead the City to adopt commercial Design Standards and Guidelines for new development along SR203 in 2005. The Guidelines promote an attractive pedestrian experience through attention to facades and amenities at the sidewalk. Public improvements to SR203 will also be crucial to achieving the goal of an attractive and lively downtown. The recently completed Tolt Action Plan includes full street improvements of Tolt Avenue through Carnation's downtown, including street re-grading and paving, landscaping, undergrounding power, street and pedestrian lighting, storm drainage improvements and street furnishings. These improvements will greatly improve the pedestrian experience in Carnation's downtown and will promote economic development.

Non-motorized access for students to the Carnation Elementary School and the Tolt Middle School, both located along SR203, has been identified as a concern. The proposed Tolt Action Plan, if implemented, would greatly improve safety for school children walking to these facilities. Currently there is no sidewalk north of Morrison on the east side of SR203, and there is a non-standard pedestrian extruded curb walkway on the west side between Morrison and NE 55<sup>th</sup> Street. Two projects identified in the Tolt Action Plan would improve pedestrian safety in this area: the North Entry project would retrofit the west side from Rutherford Street to NE 55<sup>th</sup> Street with a new curb, sidewalk and planting strip, while on the east side, the North Greenway project provides a pedestrian and bicycle shared use pathway with a five foot separation from the roadway. The shared path Greenway meets the American Association of State Highway and Transportation Officials (AASHTO) definition of a "sidepath": a facility that provides pedestrian and bicycle access adjacent to a roadway segment where high volume motor vehicle traffic discourages bicyclists and pedestrians. Further north, another project between NE 55<sup>th</sup> Street and NE 60<sup>th</sup> would provide a pedestrian walkway along the east side of Tolt Avenue. The recommended walkway is an at-grade facility separated from the roadway by a landscape buffer. A traffic median would be retrofitted into the existing road in this portion of the Potential Annexation Area. These proposed improvements would work together to calm traffic coming from the rural roadway to the north, providing ample indication to south-bound traffic that they are entering a more urbanized area and should reduce speed.

Current access to the Carnation Elementary School for pedestrians on the west side of SR203 is provided at Morrison Street. It should be noted that the entry to

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the Elementary School is located on Morrison Street, not on Tolt Avenue. The city will need to coordinate with the Riverview School District if other crossings are necessary to serve Elementary School students.

Spilman Avenue is used by children walking to the Carnation Elementary School from the neighborhoods to the south. The pavement on Spilman Avenue is in very poor condition, with less than the minimum drive surface required for two travel lanes. There is no sidewalk present. The road shoulders have many pot-holes, and poor drainage is evident during any rain event. The City has applied for a Safe Routes to School grant to install a pedestrian pathway and storm water facilities on the east side of Spilman Avenue. The proposed improvement to Spilman would not add capacity to the City's transportation network, and therefore the project is not included in the Transportation Improvement Plan in this Transportation Element; however it is in the City's Six Year Transportation Improvement Plan (STIP).

Similar to the improved access to Carnation Elementary School, the Tolt Corridor Plan includes projects to the south of the downtown that will improve pedestrian and bicycle access to Tolt Middle School. The South Greenway is a shared pathway for walking and biking planned for the east side of SR203 between the Tolt River Bridge and Eugene Street, where the downtown improvements begin. Similar to the North Greenway, the South Greenway improvement meets the AASHTO definition of a "sidepath", and the plan includes a buffer from the road by a traffic curb and a 4.5 foot planting strip. On the west side of SR203, the South Entry project provides a new curb, gutter, sidewalk and planting strip from the existing pedestrian crossing at the Fire Station northward to opposite Eugene Street. This retrofit of Tolt Avenue south of the downtown replaces the existing sidewalk and provides plantings and street trees to buffer pedestrians from vehicular traffic and create a more welcoming street environment. In general these and other projects in the Tolt Action Plan, such as improvements at the bridge, would calm north-bound traffic on SR203. The South Greenway and Entrance segments of the Tolt Corridor Plan would provide pedestrian access from the proposed residential development of the former Earth to Earth and Custom Concrete parcels that were included in the 2015 Docket request. The proposed new development would be linked to the downtown through the improvements on Tolt Avenue. In addition, the Snoqualmie Valley Trail would provide pedestrian connections to the City's system of trails from the new development.

Much of Carnation's existing and proposed residential development is east of SR203. Entwistle Street is the arterial which connects many of the City's neighborhoods to the downtown. The signalization of the intersection of SR203 and Entwistle has significantly improved pedestrian safety in the downtown. Pedestrian access via Entwistle Street is provided for much of the City, but the River's Edge neighborhood does not have adequate pedestrian access, as there

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is no sidewalk between their neighborhood and Swiftwater. Development of several subdivisions that are in process will include frontage improvements on NE 45<sup>th</sup> Street/Entwistle that incorporate a pedestrian facility, but a gap will remain. As Entwistle serves through traffic, traffic and speeds can be significantly higher than on other City streets.

Recent improvements to Blanche Street and Stossel Avenue as far north as Entwistle Street provide an attractive pedestrian environment, although the wider improved roadways appear to have created some temptation for speeding. Other collectors, such as East Morrison and NE 50<sup>th</sup>, provide curbs and sidewalks.

The condition and presence of pedestrian amenities on the local access streets within Carnation are quite varied, as described above. In general, traffic on many of the local streets is limited. However, certain roadways that are well used by school children to access Carnation Elementary School are in especially poor condition; the City has applied for a Safe Routes to School grant to address Spilman Avenue. Concern that curb, gutter and sidewalk improvements would not be consistent with the small town feel of the older portions of the City resulted in a local street standard that provides pedestrian pathways that are not grade separated from the roadway but are separated by drainage swales or parking.

In general, pedestrian amenities are present in most of the newer subdivisions. Pedestrian linkages between neighborhoods and access to the downtown remain a concern.

In addition to the linkages provided by sidewalks and roadways, Carnation has excellent trails for recreation. The Snoqualmie Valley Trail, which uses the abandoned Chicago, Milwaukee & Saint Paul Railroad right-of-way from Duvall to North Bend, is a 315 mile regional trail serving all of the Snoqualmie Valley. This trail provides a north-south “spine” through Carnation. Trail connections include the trail north of the Wastewater Treatment Plant which links Entwistle Street to trails along the Snoqualmie River that connect in Tolt McDonald Park with a new trail system along the Tolt Levee Setback project. The trail system continues along the Tolt levee system, crossing under SR203 and connecting with the Snoqualmie Valley Trail, as well as continuing upriver. The linkage is lost between the Swiftwater and River’s Edge communities, where the levee does not include public access across several properties that are located in unincorporated King County. While these trails are within King County jurisdiction, they help form the linked trail system and are well used by local residents. With the exception of the lost connection along the Tolt River and another area just south of NE 40<sup>th</sup> west of SR203, Carnation’s trail system links the Carnation’s residents to both recreational access and pedestrian access to the downtown when combined with Entwistle Street. Other pedestrian amenities include a pedestrian path through Memorial Park that continues through the Regal Glen neighborhood to connect to Loutsis

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Park and the Snoqualmie Valley Trail, and the Evacuation Trail, through a city-owned parcel east of the City.

**BICYCLE ROUTES**

The scenic roads in the Carnation area are frequently utilized by bicycle touring groups and clubs. However, some of these routes are potentially dangerous due to traffic, winding roadways and poor visibility, particularly during peak weekday commuting periods. The Tolt Corridor Plan, if implemented, would greatly improve bicycle access and safety through the City. The Greenway shared paths would be available for bicyclists who desire separation from motorized traffic, while the overall effect of the Plan would slow vehicular traffic, thus improving safety for bicyclists who use the travel lanes. The Action Plan provides for bicycle racks in the Central Business District.

The King County Bicycle Plan: Focus 1990, was completed in 1975 and has been updated. The plan classifies bicycle facilities as Class I, II, or III. According to the Plan, Class I facilities are separate off-road paths or trails, Class II facilities are signed and have pavement markings, and Class III facilities are only signed. Within Carnation city limits, there are no roadways designated as bicycle paths by King County. King County has designated Carnation Farm Road NE as a Class III bicycle facility. Carnation-Fall City Road NE and SR 203 are designated bicycle facilities, but are not classified. Nonetheless, it is quite common to see many bicyclists along SR203 when weather conditions are favorable.

The Snoqualmie Valley Trail described above is also a very popular facility for bicyclists.

Other mountain biking trails that bring visitors to the Carnation area include the off-road biking at Tolt McDonald Park. A survey of bicyclists taken in March 2010 showed that Carnation is a popular destination for both mountain and road biking, with many respondents citing the “rural/serene/scenic” qualities and good trails as unique. Most respondents bike in the Carnation area one to five times a month. When asked how Carnation could better serve their needs, many called for more and improved trails, as well as adding a shoulder to SR203.

Bicycle access for residents is very good overall, despite the lack of bicycle lanes. The average daily traffic within the city neighborhoods is low and the terrain is flat. The Tolt Action Plan would address bicycle access on SR203. Plans for improved non-motorized access are discussed in the Future Needs and Alternatives section below.

**ALLEYS**

Carnation has an extensive system of alleys in the older parts of town. Sixteen foot alleys were dedicated and developed as part of the original plat of Tolt. A few of

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the alleys which receive heavy use have been paved but most are not paved.

## **EXISTING CONDITIONS**

### ***Traffic Volumes***

Traffic volume data were collected for the City arterial system as part of the Tolt Corridor Action Plan in 2012 and the data were utilized for transportation modeling performed for this update of the Transportation Element. Hourly traffic data were collected on Tolt Avenue, south of Eugene Street, for five days beginning June 18, 2012. The counts indicated that Average Weekday Daily Traffic (AWDT) on Tolt Avenue was 10,300 vehicles per day. The hourly data were compiled to confirm the times of day in which the peak traffic occurs. The data indicate typical daily traffic pattern with distinct peaks in the AM and PM. The highest volumes of the day were the PM peak, with 870 vehicles per hour.

In addition to AWDT, turning movement counts were conducted at Morrison Street, Commercial Street, Eugene Street and NE 40<sup>th</sup> Street/Blanche Streets. Turning movement volumes at Entwistle Street were estimated based on 2007 traffic count data provided by the WSDOT and field observations, and were balanced against adjacent intersection counts. Four of these intersections (Morrison, Commercial, Entwistle and NE 40<sup>th</sup> Street/Blanche) are defined as key intersections in this Transportation Element. The analysis of Eugene Street was included because it provides access to and from the Tolt Town Center, which is Carnation's anchor shopping center. The west leg of this intersection is not a public street but is an access driveway to the shopping center. (Tolt Corridor Action Plan Technical Memorandum dated September 17, 2012 prepared by Heffron Transportation).

### ***Level of Service***

Levels of service provide a measurement of the quality of service provided by the transportation system. The Growth Management Act (GMA) requires the establishment of a Level of Service (LOS) Standard as a guideline for evaluating the performance of the existing transportation system. It is also used to determine whether transportation improvements or services will be available to serve proposed development at the time of development or within six years of the development. This requirement is called Concurrency. If services which will operate at the adopted LOS standard will not be concurrent with a proposed development, then either funding for the improvements must be identified or the development cannot be granted approval as proposed.

The level of service standard may also be used to identify transportation funding priorities of planned improvements.

Evaluating the transportation arterial system, particularly at intersections, is typically described in terms of congestion, which can be measured by average

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vehicle delay or travel speed, vehicular density, or volume-to-capacity ratio. The volume-to-capacity ratio (V/C) is the ratio of existing or forecasted traffic volumes to the traffic capacity of the roadway or intersection. The level of service analysis conducted for existing and future conditions at the City's critical intersections were based on average vehicle delay and the methodology outlined in the 2010 Updated Highway Capacity Manual (2010 HCM), Third Edition, Special Report 209, Transportation Research Board. A summarized description for the various levels of service as outlined in the (1998 HCM) is shown in Table T-2.

**Table T-2  
Level of Service Description**

Level of Service	General Description	Average Delay at Intersections*	
		Signalized	Unsignalized
A	Free flow conditions. Vehicles have minimal or no delay at the intersection. V/C = 0.0 to 0.60	≤10	≤10
B	Stable traffic flow. Some minor delay may be experienced at intersections. V/C = 0.61 to 0.70	>10 and ≤20	>10 and ≤15
C	Stable traffic flow. Average delay can be expected at intersections with occasional signal cycle failure. V/C = 0.71 to 0.80	>20 and ≤35	>15 and ≤25
D	Traffic flow becoming unstable with noticeable traffic congestion. Delay is longer than average but generally tolerable. Cycle failure becoming noticeable. V/C = 0.81 to 0.90	>35 and ≤55	>25 and ≤35
E	Unstable traffic flow conditions. High delay can be expected with frequent cycle failure occurrence. Many agencies view this as the limit of tolerable or acceptable delay. V/C = 0.91 to 1.0	>55 and ≤80	>35 and ≤50
F	Forced traffic flow conditions. Delay is unacceptable to most drivers due to exceeded intersection capacity. V/C = 1.0 or greater	>80	>50

\*Delay is measured in terms of seconds per vehicle.

The Puget Sound Regional Council (PSRC) adopted LOS standards for all Highways of Regional Significance in 2003, which included SR203. To be consistent with the PSRC, the City of Carnation has adopted LOS D for SR203. This means in effect that all of the intersections along SR203 must meet or exceed LOS D, including all turning movements.

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The levels of service (LOS) for intersections along SR203 was determined as part of the 2012 traffic study performed as part of the Tolt Corridor Action Plan. Table T-3 provides the 2012 levels of service. Only delays for the stop controlled approaches are presented.

**Table T-3  
2012 Level of Service Summary – PM Peak Hour**

<b>Intersection</b>	<b>LOS</b>	<b>Delay</b>
<b>Signalized Intersection</b>		
Tolt Avenue/Entwistle Street	A	8.3
<b>Two-Way Stop Controlled Intersections</b>		
Tolt Avenue/Morrison Street		
Eastbound movement (stop control)	C	22.2
Westbound movement (stop control)	C	20.1
Tolt Avenue/Commercial Street		
Eastbound movement (stop control)	C	21.1
Westbound movement (stop control)	C	18.5
Tolt Avenue/Eugene Street		
Eastbound left-through (stop control)	F	54.0
Eastbound right (stop control)	B	11.1
Westbound left (stop control)	E	44.8
Westbound right-through (stop control)	C	16.4
Tolt Avenue/NE40th Street/Blanche Street		
Eastbound movement (stop control)	C	23.1
Westbound movement (stop control)	C	19.9

(Source: Tolt Corridor Action Plan Technical Memorandum dated September 17, 2012 prepared by Heffron Transportation)

With the exception of the SR203/Eugene intersection, which as described above was counted because it is the access to Carnation’s shopping center, all of the key intersections currently function above the adopted level of service D.

**LAND USE AND TRAFFIC VOLUME FORECASTS**

***Land Use and Trip Generation Projections.***

The land use assumptions used to determine the 2035 traffic volumes within the City were based on the City’s proposed Land Use Map including the docket request to change the land use designation for 34 acres from commercial and industrial to high density residential development. These land use assumptions

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include a commercial core located between Rutherford and Myrtle Streets, with mixed use development allowed to the north and south along SR203; higher density residential development allowed between the Mixed Use Zone and Stossel Avenue and east of SR203 in the Potential Annexation Area; single family development in the Potential Annexation Area west of SR203 and in lands not yet platted east of the Snoqualmie Valley Trail. In addition substantial infill residential development may occur in the original platted areas; plus continued and expanded industrial uses west of the SR203 corridor.

The City is subdivided into 30 traffic analysis zones (TAZ) for determining trip generation and distribution. Trip generation calculations for projected land use development within each TAZ were then conducted based on trip rates or regression equations published in the Institute of Transportation Engineers (ITE) *Trip Generation* manual, 9<sup>th</sup> Edition. The trip generation assumes full build out of the City by the forecast year 2035.

A total of approximately 19,160 average daily trips (ADT) and 1,613PM peak hour trips (approximately 858 inbound and 755 outbound trips) were estimated from new development for the buildout of the study area. It should be noted that this reduces the number of both average daily and peak hour trips from the last traffic model that was performed as previous retail space was modified by the docket request to reflect residential uses which have a lower trip generation.

***Transportation Network and Trip Distribution Assumptions***

Trip distribution of the projected year 2035 trip generation was based on the existing transportation system and projected infrastructure improvements to determine intersection and corridor deficiencies. The transportation network improvements included the following roadway connection projects to provide additional north-south access and capacity through the City arterial system. The extension of 316<sup>th</sup> Avenue west of SR203 and the extension of Milwaukee Avenue east of SR203 are designed to connect projected development in the Potential Annexation Area to the existing roadway grid system. The extension of Larson Avenue improves north-south connectivity within the City, to serve the industrial area west of SR203. These three improvements are summarized below:

1. 316<sup>th</sup> Avenue NE from NE 55<sup>th</sup> Street to Morrison Street to tie into Stewart Avenue
2. Larson Avenue NE from Entwistle Street to NE 40<sup>th</sup> Street
3. Milwaukee Avenue from NE 50<sup>th</sup> Street to NE 55<sup>th</sup> Street, to tie into 324<sup>th</sup> Avenue NE.

No other network or significant capacity improvements other than signalization of intersections are currently planned by the City. The distribution methodology used to assign future trips assumed just under seven percent of all trips would be

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captured internally between the residential and commercial land uses within City of Carnation city limits. The trips external to the City were assigned along SR203 per existing traffic patterns, with 40 percent heading north of the City and 60 percent heading south of the City.

**FUTURE TRAFFIC CONDITIONS – YEAR 2035**

***Traffic Forecasts and Impacts***

The level of service analysis conducted for the year 2035 conditions at the critical arterial intersections was performed for the p.m. peak hour assuming existing traffic control and channelization with the inclusion of the proposed link connections on Milwaukee Avenue, Larson Avenue and 316<sup>th</sup> Avenue NE. The results of the LOS analysis are summarized in Table T-4.

**Table T-4  
Year 2035 Level of Service Summary**

Intersection	Existing Channelization				With Transportation Improvements				
	Traffic Control	LOS	Delay	WM	Traffic Control	LOS	Delay	WM	Comments
East Morrison	Side-street stop	F	299	WB	Signalized	A	6		Signal in TIP
East Commercial	Side-street stop	F	269	EB	Side-street stop	F	281	WB	Rely on local circulation and traffic shift
Entwistle	Signalized	B	13		Signalized	B	15		Project completed
East Eugene	Side-street stop	F	>300		Side-street stop	F	>300	EB	Rely on local circulation and traffic shift
Blanche	Site-street stop	F	>300	WB	Signalized	C	35		Add signalization to TIP

The level of service analysis indicates that all of the concurrency study intersections would deteriorate to LOS F conditions under existing infrastructure conditions with the exception of the Entwistle Street and SR203, due to the signalization project that has been completed. Implementation of a traffic signal at the East Morrison and Blanche Street intersections with SR203 will improve their service grades to LOS D or better.

Implementation of a traffic signal at three State highway (SR-203) intersections will improve their service to meet the LOS D standard or better. However, the SR203/Commercial Street and SR203/East Eugene intersections would remain at LOS F. While this LOS F for the minor street approaches are below the acceptable standard, it is anticipated that traffic would shift to the signalized intersections or utilize side streets, which have adequate capacity to accommodate the additional traffic. The other alternative is to signalize Commercial Street, but this would result in four signalized intersections within a half-mile. Furthermore, the traffic volumes

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are not likely to reach a level in which signal warrants would be met.

***Determining Existing LOS - Transit***

Level of Service for Transit is projected to be poor due to Carnation's small population in comparison with other cities in King County. At this time, transit service within Snoqualmie Valley is the only service available. Connections to employment and services located in population centers to the west is only through connections to Duvall, where Metro service is available to Redmond and Bellevue. Given that the regional employment base will likely continue to be located west of the Snoqualmie Valley, feeder service to transit and employment centers such as Redmond or Issaquah may have the most potential to improve transit availability for Carnation citizens,. Long-range planning for regional transit service includes high capacity transit to Redmond; feeder service to Redmond may be the most crucial service for Carnation policy makers to pursue.

**III. FUTURE NEEDS AND ALTERNATIVES**

All study intersections were evaluated using existing channelization and traffic control to determine the build-out scenario traffic growth impacts and the capacity improvements needed to obtain the City level of service standard in 2035. Proposed transportation system improvements were prioritized and described below, based on the results of the level of service analysis, a review of the improvement locations, and the estimated cost for the recommended improvements. It should be noted that these transportation projects are specifically designed to improve the capacity of the city's transportation network. Construction of these projects will ensure that traffic generated by new development will not result in deterioration below adopted levels of service for transportation.

***Priority No. 1: SR203 and Morrison Street Intersection***

This intersection is currently unsignalized, although pedestrian improvements were completed in 2011. Under existing conditions, this intersection operates at LOS D. The signalization of this intersection is proposed to primarily serve the future growth and build-out of the north part of Carnation. With traffic growth, recommended signalization will improve the projected operations of the intersection to LOS A in 2035. The project is estimated to cost approximately \$495,000 if implemented as planned in 2017. It should be noted that signalization of intersections on SR203 will require a warrant from WSDOT, which will impact when the project can be implemented.

***Priority No. 2: Larson Avenue NE Connector***

This connection will allow traffic to access the lands zoned for industrial use west of SR203 and south of the wastewater treatment plan. Larson Avenue would connect Entwistle Street to NE 40<sup>th</sup> which provides access to SR203. The project is estimated to cost approximately \$2.1 million if implemented in 2018.

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**Priority No. 3: SR203 and Blanche Street Intersection**

This intersection is currently unsignalized. This intersection operates at LOS D under existing conditions and is projected to deteriorate to LOS F by 2035, with increased traffic volumes. The recommended signalization will improve the projected operations of the intersection with traffic growth to LOS C in 2035. The project is estimated to cost approximately \$562,500 if implemented as planned in 2020. It should be noted that signalization of intersections on SR203 will require a warrant from WSDOT, which will impact when projects can be implemented.

**Priority No. 4: Milwaukee Avenue Connector**

This connection is designated to accommodate future north-south travel with a parallel route to the State highway on the east side of the SR-203 to complete the Milwaukee Avenue Corridor to the north City limits. The project is estimated to cost approximately \$2.7 million if implemented as planned in 2023.

**Priority No. 5: 316th Avenue NE Connector**

This connection will connect future development of the Potential Annexation Area to the existing roadway network. The project is estimated to cost approximately \$2.8 million if implemented as planned in 2024.

**TRANSPORTATION IMPROVEMENT PROGRAM**

The proposed signalization improvements and new roadway connections recommended within the City and PAA totals approximately \$8.8 million. The improvement program to supplement the City's current 6-Year Transportation Improvement Plan (TIP) is summarized in Table T-5 for an expected 20-year development implementation period.

**Table T-5: Proposed Transportation Improvement Program**

Improvement Project	Implementation Year	Grant Share (75%)	Grant Type	Impact Fees (25%)	Total in 2015 dollars	Total in Year of Implementation dollars
SR-203/Morrison Street Signal	2017	371,250	TIB-SC <sup>1</sup> / STP <sup>2</sup>	123,750	450,000	495,000
Larson Avenue Connector	2018	1,642,200	TIB-SC	547,400	1,955,000	2,189,600
SR-203/Blanche Street Signal	2020	421,875	TIB-SC	140,625	450,000	562,500
Milwaukee Avenue Connector	2023	2,049,894	TIB-SC/ STP	683,298	1,952,280	2,733,192

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316 <sup>th</sup> Avenue Connector	2024	2,092,350	TIB-SC/ STP	697,450	1,924,000	2,789,800
20-Year Totals		6,577,569		2,192,523	6,731,280	8,770,092

1 Transportation Improvement Board - Small Cities

2 Surface Transportation Program (WSDOT)

**Funding for the Transportation Improvement Program**

In 2006, the City adopted a Transportation Impact Fee Ordinance in order to fund improvements to the transportation system that will be needed to serve new development. **Through the imposition of impact fees, new development pays its proportionate share of traffic impacts based on the amount of traffic generated.**

As adopted in Chapter 3.50 CMC Transportation Impact Fee Program 25% percent of the total system improvement costs shown in Table T-5 shall be funded by new growth or development through the imposition of impact fees. Grant programs such as the Transportation Improvement Board (TIB) would provide the bulk of the cost. The impact fees would be used to generate the local match, which is generally 25% for TIB grants.

This study has identified a total trip generation of 19,160 new daily trips associated with the build-out of the Land Use Element. The transportation improvements necessary to meet concurrency standards as required by the GMA are identified in the Transportation Improvements Plan, which has a total cost of approximately 8.8 million dollars. The GMA allows local governments to impose a Transportation Impact Fee to raise the revenues for transportation improvements in order to meet concurrency standards. The impact fee to provide local match at 25% is \$114 per trip or approximately \$1,144 per new single family dwelling.

The revenue raised by impact fees imposed on new development will be the source of local match for grant programs to fund the majority of the project costs. The Transportation Improvement Board (TIB) Small Cities Arterial Program is the most likely source of grant funding for the two signalization project and the extension of Larson Avenue. As described in Table T-5 above, the estimated costs of the signalization projects are on the order of \$500,000. Given the location of the Morrison signal opposite the Carnation Elementary School, the City may also apply for a Safe Routes to School program to augment the TIB funds.

The Larson Avenue extension project has an economic development component, and may meet the criteria for the funds set aside for projects that promote economic development within the TIB Small Cities program. In addition, the

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Larson Avenue project may be eligible for a Commercial Economic Revitalization Board (CERB) grant to augment the TIB funding. The estimated cost of the Larson Avenue extension is approximately \$2 million.

While the two signalization projects and the extension of Larson Avenue are slated for the near term, the timing of these improvements will depend on many factors. Signalization projects on SR203 are subject to the requirements for a warrant from the Washington State Department of Transportation (WSDOT).

The two remaining projects, the Milwaukee Avenue and 316<sup>th</sup> Connectors, will not be required until annexation and development occurs in the Potential Annexation Area north of the current city limits. Future development of the large parcels between current city limits and NE 55<sup>th</sup> Street will create the need for these roadway extensions to connect the new development with the City's roadway network. The developer will be required to participate in the extensions of the roadways as part of the development process for credit for impact fees that would otherwise be imposed. The Milwaukee Avenue and 316<sup>th</sup> Avenue Connector roadway projects are estimated to cost \$2.7 and \$2.8 million, respectively, in their projected years of construction.

**Bicycle and Pedestrian Access**

Carnation enjoys an integrated system for non-motorized access that links the city's neighborhoods to each other, to public facilities such as parks and schools, to the downtown center and to open space and natural areas. The compact urban form and flat topography of the City create an excellent opportunity to enjoy non-motorized travel. Most local streets have low average daily traffic, and even if there are no sidewalks or bicycle lanes present, in general local residents can safely walk or bicycle.

Figure T-2 shows a Map of Trails and Sidewalks, including a system of linked access for pedestrians, bicyclists and equestrians. There are two components of the linked system, sidewalks within rights-of-way that also serve vehicular traffic, and non-motorized trails such as the Snoqualmie Valley Trail and the trail along the Tolt River. This trail and sidewalk system links Carnation to the region, through the state highway and through the Snoqualmie Valley Trail. Within the local area, the sidewalk/trail system links neighborhoods to each other and the rest of the City. Most neighborhoods are within a half-mile walk of Tolt Avenue with access to parks, schools, the library, etc. With its planned improvements, this system will provide ample opportunity for physical activity and connection within the community, to be enjoyed by the young, the elderly, those with disabilities, and those who do not or prefer not to drive.

Figure T-2 indicates several "missing links" in the sidewalk/trail system. Sidewalks

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on Entwistle Street are missing between 329<sup>th</sup> Avenue and 334<sup>th</sup> Avenue, effectively isolating the River's Edge neighborhood. Frontage improvements will be provided by two subdivisions located between River's Edge and Swiftwater that are currently in process, which will reduce the gap. However, these improvements do not provide pedestrian access for the full length of the gap. The East Entwistle Pedestrian Improvements project has been identified to complete the missing link in this segment. This project is identified in the Six-Year Transportation Program (STIP) in Table CF-5 in the Capital Facilities Element. The project cost has been estimated at \$485,000, and the City will pursue a Transportation Improvement Board (TIB) Small City Sidewalk (SCSP) grant for funding.

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Figure T-2  
Map of Trails and Sidewalks



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There is a section of trail along the Tolt River levee between the open space south of Swiftwater and the River's Edge neighborhood where the access along the levee is lost. The Tolt River levee is a King County flood control facility which has access for the public. However, this portion of the Tolt levee trail does not have an access easement, and property owners have not been willing to provide access. This segment of the trail is outside City jurisdiction in rural King County. The City will continue to work with King County to try to close this missing link.

Another segment of the sidewalk/trail system that is missing is the link between the trail in Tolt McDonald Park west of Tolt Avenue and the western side of Tolt Avenue across from the Tolt Middle School. While there is a pedestrian crossing to the sidewalk in front of the Middle School on the eastern side of SR203, there is no sidewalk on SR203 from the edge of the park to the sidewalk in front of the storage facility. This highway frontage is in the Potential Annexation Area, and so sidewalks have not been provided as part of any development.

In general, the pedestrian and bicycle experience of SR203/Tolt Avenue could be improved. While SR203 has sidewalks on both sides through most the City's jurisdiction, sidewalks are relatively narrow. At the north end of the corridor, pedestrian facilities are limited to a walkway separated from the travel lanes by an extruded curb. There is no separate bicycle lane in the corridor; bicyclists share the travel lanes with vehicular traffic. The speed limit on SR203/Tolt Avenue is 30 mph in City jurisdiction and 40 mph through the Potential Annexation Area to the north. Speed limits north and south of the UGA are 50 mph. Accident data for pedestrian facilities is not available, although one automobile/bicycle accident has been recorded along Tolt Avenue/SR203 in front of the Tolt Middle School. Pedestrian access has been improved with the signalization at Entwistle and the school crossing at Morrison. However, the highway still feels like a barrier for pedestrians. The steep grade of the highway that is the result of many years of overlays exceeds the standard for accessibility. ADA crosswalks that have been installed in the downtown in the last decade create barriers for bicyclists.

The City received a Rural Corridors grant through the PSRC to develop a plan for Tolt Avenue/SR203 including improved non-motorized safety and access. The Tolt Corridor Plan addressed ways to create safe, convenient and welcoming pedestrian and bicycle access within the entire Tolt Avenue corridor from the Tolt River Bridge at the south end to NE60<sup>th</sup> on the north. The Tolt Corridor Plan includes the following improvements:

- Retrofits to the pedestrian facilities along the west side of Tolt Avenue from the Tolt River Bridge to Eugene Street
- A Greenway which provides a shared use path along the eastern portion of the right-of-way from the Tolt River Bridge to Entwistle Street. The Greenway would bring pedestrians and bicyclists into the downtown from

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- the south. A pedestrian pathway on the western side of SR203 is also part of the “south entryway” segment.
- Full street improvements to the Central Business District (CBD) from Eugene Street to Rutherford Street, including placing the overhead power lines underground, providing wider sidewalks, street furnishings, landscaping and wayfinding to enhance the pedestrian experience.
  - Continuation of the Greenway north of the CBD from just south of Rutherford Street to NE 55<sup>th</sup>, providing a link for pedestrians and bicyclists from the north of the City to the downtown.
  - A pedestrian walkway from the eastside of Tolt Avenue from NE 55<sup>th</sup> to NE 60<sup>th</sup> to serve existing and future residential development.
  - A system of wayfinding signage throughout the Tolt corridor to prevent conflicts between bicyclists and pedestrians within the Greenways. Signage will also assist the transitions for bicyclists between the Greenways and the downtown.
  - Connections to looped pedestrian paths just outside the Tolt corridor.

The Tolt Corridor Plan presented the improvements to SR203 as a series of discrete segments to assist the City in its implementation efforts. The first segment undertaken by the City is engineering design of the Central Business District segment. This project has been funded by a Transportation Alternatives grant from the PSRC and is now underway. Engineering is expected to be complete in 2016, and the City will pursue grant funding in 2016. If adequate project funding can be obtained in 2016, construction of the Central Business District improvements will begin in 2017. The City expects to pursue grants from a variety of agencies, such as the Transportation Improvement Board (TIB) Small City Arterial or Small City Sidewalk programs, the PSRC Transportation Alternatives or Rural Town Center and Corridors grants, the Washington State Department of Transportation (WSDOT) H+LP Pedestrian and Bicycle Program, the Washington State Department of Ecology State Revolving Fund (SRF) for stormwater facilities, the Puget Sound Energy Overhead to Underground Conversion grant for undergrounding utilities, and the Washington State Department of Commerce CERB grant. Construction of the Central Business District is listed in Table CF-5 in the Capital Facilities Element.

Although not identified as a missing link in Figure T-2, another safety concern has been the lack of sidewalk on Spilman Avenue which is the primary path for school children to reach Carnation Elementary. The City recently received a Safe Routes to School grant to construct a pedestrian pathway and stormwater improvements in Spilman Avenue. Engineering design is underway, and construction is expected this fall. The design and construction of the Spilman pathway is being coordinated with a CDBG grant to replace the water main and pavement in Spilman Avenue.

With the planned improvements to Spilman Avenue, East Entwistle and the Tolt

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Avenue corridor, the City will provide a connected system for pedestrian and bicycle traffic that serves each neighborhood of the City and connects to the wider Snoqualmie Valley. Carnation's flat topography and compact urban form allow access within a square mile that is safe and convenient for residents, including the elderly, persons with disabilities, youth and low income populations. The linked sidewalk/trail system promotes physical activity, connects neighborhoods to each other and to schools, libraries and the Senior Center, and to goods and services available in the commercial center, and to the natural areas along the rivers and hillsides to the east and west. As such it is one of Carnation's most valuable amenities.

#### ***IV. TRANSPORTATION GOALS AND POLICIES***

City of Carnation Transportation Goals and Policies incorporate the Countywide Planning Policies as well as the Multi-county Planning Policies expressed in VISION 2040.

##### **GOAL T1**

**To ensure that transportation facilities and services needed to support development are available concurrent with the impacts of such development, which protects investments in existing transportation facilities and services, maximizes the use of these facilities and services, and promotes orderly compact growth.**

Policy T1.1 A minimum level of service standard D for arterial intersections, and a level of service standard D for State highway intersections, .76 to 1.0 passengers per seat for vanpool services.

Policy T1.2 Development permits will only be issued when projects which require transportation improvements do not exceed the City's ability to provide these in accordance with the adopted level of service standards. However, these necessary improvements in transportation facilities and services, or development of strategies to accommodate the impacts of development may be provided by the developer.

Policy T1.4 The City will design and improve its transportation system to accommodate not only existing conditions, but projected growth based on adopted City, County and state planning policies and projections.

Policy T1.5 The City will allow new development only when and where all transportation facilities are adequate at the time of development, or unless a financial commitment is in place to complete the necessary improvements or strategies which will accommodate the impacts

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within six years; and only when and where such development can be adequately served by essential transportation facilities without reducing the adopted level of service elsewhere.

- Policy T1.6 The City will actively solicit action by the State and King County to program and construct those improvements to State and County arterial systems which may be needed to maintain the level of service standards adopted in Carnation.
- Policy T1.7 The City will adopt development regulations which will require developers to construct streets directly serving new development, and pay a fair-share fee for specific off-site improvements needed to mitigate the impacts of the development. This fee may be in the form of a Transportation Impact Fee adopted by the City.
- Policy T1.8 The City will coordinate land use and public works planning activities with an on going program of long range financial planning, in order to conserve fiscal resources available to implement the Transportation Impact Plan (TIP).
- Policy T1.9 The City will base the timing of implementing actions under the Comprehensive Plans and elements on the financial resources available to fund the necessary public facilities.
- Policy T1.10 The City will grant high priority for funding to projects which are consistent with the goals and objectives adopted by the City Council and as specified in the Comprehensive Plan. Improvements that will serve the Town Center and that promote economic viability for the community will be given highest priority.
- Policy T1.11 The City will fund projects only when incorporated into the City budget, as adopted by the City Council.
- Policy T1.12 The City will encourage the maintenance and safety improvements of Carnation's existing roads as a priority over the creation of new roads.

**GOAL T2**

**To develop, maintain and operate a balanced, safe, and efficient multi-modal transportation system to serve all persons, special needs populations and activities in the community.**

- Policy T2.1 The City will develop a future transportation system which encourages flexible, adaptive and multiple uses of transportation

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facilities and services.

- Policy T2.2 The City will implement measures that will relieve pressures on the existing transportation infrastructure by approaches that include, but are not limited to:
- a. Multi-modal transportation alternatives
  - b. Land use coordination
  - c. Prioritized improvements
- Policy T2.3 The City will integrate, coordinate and link the connections and transfer points between all modes of transportation.
- Policy T2.4 The City will work with King County, WSDOT, the Snoqualmie Tribe, and other local jurisdictions in improving transit service and adequately siting park and ride and park and pool lots in the Carnation area.
- Policy T2.5 The City will minimize potential conflicts between bicycle and automobile traffic by providing signage at intersections of bike trails with roadways.
- Policy T2.6 The City will encourage the location of bicycle racks at appropriate destination points, such as within the downtown, parks, schools, transit, and park and ride lots.
- Policy T2.7 The City will provide and promote the development of pedestrian and bicycle paths to schools, parks, transit and activity centers, as well as linkages between these paths.
- Policy T2.8 The City will include the need to accommodate bicycle safely in its management and design of the City street network, including designating bicycle routes throughout the city.
- Policy T2.9 The City will encourage the siting of bicycle-related commercial activities in the Central Business District and Mixed Use areas.
- Policy T2-10 The City will implement the adopted Comprehensive Emergency Management Plan in the event of an emergency that impacts transportation facilities.

**GOAL T3**

**To recognize and promote pedestrian and bicycle movement as a basic means of circulation and to assure adequate accommodation of pedestrians, bicycles and handicapped persons' needs in all transportation policies and**

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**facilities. New development will be encouraged or in some cases required to implement Pedestrian Oriented Development design features that have been incorporated into City codes and standards, such as providing sidewalks or pathways and amenities such as street trees and street lighting, and site design that encompasses connectivity with existing transportation facilities and between uses.**

Policy T3.1 Require developers to include pedestrian facilities such as sidewalks or pathways within formal subdivisions, and to provide links to existing walking trails and pathways that form the City's looped trails system.

Policy T3.2 Carnation will strive to reduce the pedestrian barrier created by Tolt Avenue (SR 203) by:

- Providing pedestrian crossings at key points along SR203, including on the northern, central and southern ends of the roadway corridor through the City.
- Promote accessibility by reducing travel distance on busy cross streets.
- As allowed by the WSDOT, enhance the visibility of the pedestrian crosswalk by using different materials, textures or patterns, and adding landscaping or installing sidewalk design elements such as color or art.
- Coordinate access management on SR203 with WSDOT to promote alternative access and/or shared access points for developments that front this street.

Policy T3.3 Carnation will promote the creation of a pedestrian oriented downtown commercial area by:

- Implementing design standards for commercial development along SR203 which encourage a pedestrian environment by requiring parking at the side or rear of building.
- Modifying the placement of new buildings in ways that encourage pedestrian activities by making streets more attractive routes for walking.

Policy T3.4 Improve pedestrian amenities in the downtown through public improvements, sign regulations, and development standards. The maintenance of public and private improvements should be given priority commensurate with downtown's role as the focal point of the community.

Policy T3.5 Work with WSDOT to develop mechanisms to reduce traffic speed on SR203 through the city to increase public safety and enhance

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local mobility, yet maintain the regional movement of traffic through the city.

- Policy T3.6 Work with WSDOT to evaluate potential pedestrian improvements along SR203, as well as coordinate implementation strategies for such improvements.
- Policy T3.7 Seek to improve the appearance of existing street corridors and incorporate high standards of design when developing new streets, including construction of sidewalks. Where appropriate landscaping, street furniture, lighting and other measures should be implemented to enhance the appearance of city street corridors. Existing trees along street rights-of-way should be preserved when trees are healthy and can be maintained, while at the same time introducing new trees where appropriate.
- Policy T3.8 Include construction of pedestrian amenities such as pathways, trails, sidewalks whenever significant development or major maintenance work occurs on city streets. This may include the identification of potential funding sources such as concomitant agreements, Local Improvement Districts, and including sidewalks as an "alternate" in construction bid documents.
- Policy T3.9 Where these are feasible and will promote public safety, the City will consider traffic calming techniques especially on non-arterial roadways that carry significant traffic.
- Policy T3.10 The City will support and promote bicycle use as an alternative to motorized transportation through improvements such as designated bicycle paths, signage, bicycle parking, etc. Improvements to the transportation system must balance the needs of motorists, pedestrians and bicyclists.

**GOAL T4**

**To ensure adequate parking in the downtown commercial area which is consistent with downtown design and pedestrian circulation goals.**

- Policy T4.1 Allow on-street parking in the downtown area to form a buffer between pedestrians and street traffic, reduce the speed of traffic, and provide for short term parking needs.
- Policy T4.2 Explore alternative methods of ensuring the adequate provision of parking for new and existing commercial and residential development in the downtown commercial area, while reducing the

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amount of parking provided by individual developments and influencing the location and type of parking in ways that promote pedestrian mobility and minimize pedestrian/vehicular conflicts. This includes, but is not limited to:

- Installing directional signage to public parking areas.
- Encouraging the use of joint-use parking opportunities utilizing existing parking for churches, public buildings and stores.
  - Separating short (< 2 hrs), intermediate (2-5 hrs) and long term (> 5 hrs) parking uses; on street parking reserved for short term, and long term parking provided in lots on the periphery of the downtown commercial area.

**GOAL T5**

**To manage, conserve and protect Carnation's natural resources through a balance of development activities complemented with sound environmental practices. Where consistent with mobility goals, encourage green streetscapes that incorporate natural drainage, reduced impervious surface, and vegetation. Incorporate non-motorized transportation facilities into roadway improvements and new roadways.**

Policy T5.1 New transportation facilities should be designed in a manner which minimizes impacts on natural drainage patterns, soil profiles and habitat.

Policy T5.2 Promote the use and development of routes and methods of alternative modes of transportation, such as transit, bicycling and walking, which reduce Carnation's consumption of non-renewable energy sources and reduce emission of greenhouse gases.

Policy T5.3 Assist all major employers in complying with current federal and state policies aimed at reducing auto-related air pollution by implementing programs to reduce the number of employees commuting in single occupancy vehicles. This compliance can be realized through such transportation demand strategies as preferential parking for carpools/vanpools, alternative work hours, bicycle parking, and distribution of transit and ridesharing information. Cooperate with major employers located outside the City with their ridesharing or van pooling resources that serve Carnation residents.

Policy T5.4 Carnation will seek to reduce levels of air pollutants and greenhouse gas emissions in an effort to maintain or do better than existing state and federal air quality goals and standards, by: providing a compact urban form that promotes non-motorized trips within the City; promoting economic development to increase local employment

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opportunities and to maximize the goods and services that are locally available; by working with partners such as King County, the Snoqualmie Tribe and the other Snoqualmie Valley cities to create transit service that provides real options for commuting to reduce trips to work; and by cooperating with regional employers to promote ride-share options.

Policy T5.5 Site, design, and buffer (through extensive screening and/or landscaping) transportation facilities and services to fit in harmoniously with their surroundings. When sited within or adjacent to residential areas, special attention should be given to minimizing noise, light and glare impacts.

**GOAL T6**

**To actively influence the future character of the City by managing land use change and by developing City facilities and services in a manner that directs and controls land use patterns and intensities.**

Policy T6.1 Coordinate Land Use with the facility/utility planning activities of agencies and utilities identified in this Comprehensive Plan element. Adopt procedures that encourage providers of public services and private utilities to utilize the Land Use Element of this Plan in planning future facilities.

Policy T6.2 The cities and counties in the region should coordinate transportation planning and infrastructure development in order to:

- Ensure a supply of buildable land sufficient in area and services to meet the region's housing, commercial and employment needs; located so as to be efficiently provided with public facilities and services.
- Ensure protection of important natural resources.
- Avoid unnecessary duplication of services.
- Avoid overbuilding of public infrastructure in relation to future needs.

Policy T6.3 Recognize the important role that public facilities and programs such as sidewalks, bike lanes, walking trails and street lights play in providing a healthy family environment within the community.

Policy T6.4 Work with local, regional and state jurisdictions to craft land use development strategies that will support public transportation.

Policy T6.5 Consider the impacts of land use decisions on adjacent roads. Likewise, road improvements should be consistent with proposed

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land use densities.

Policy T6.6 Regional traffic should be discouraged in Carnation's residential areas.

**GOAL T7**

**To encourage pedestrian and bicycle transportation modes by providing a comprehensive system of walkways and trails that links residential areas to each other and to needed services. In addition to promoting non-motorized trips within the City, the trail system should be designed to provide for the recreational, cultural, environmental and aesthetic needs of City residents. As resources allow, the City will update the map of pedestrian and bicycle trails that serve Carnation.**

Policy T7.1 Coordinate with King County Parks to support continued improvement of the Snoqualmie Valley Trail through Carnation as part of a regional trail system.

Policy T7.2 Support the development of paths, signage, and marked roadways which link the Snoqualmie Valley Trail with Carnation's other trails and resources such as the rivers, parks and downtown commercial areas.

Policy T7.3 Coordinate with land owners to develop a community trail system along the banks of the Tolt and Snoqualmie Rivers which is linked to the downtown commercial district, parks and the Snoqualmie Valley Trail.