



Chapter 4: Project Lists and Level of Service

A. Introduction

With a system-wide inventory and growth scenarios showing which intersections have inadequate capacity to serve the projected need with future growth; this information was then used to develop new project lists. Projects were creatively developed that provided additional capacity so that these intersections functioned at an acceptable level of service, LOS E. As discussed in the previous chapter, the growth scenarios covered the entire spectrum of possible growth from very low growth projections to very high growth projections. A wide range of projects was therefore developed to fit this broad spectrum of possible growth. The project lists run, developed to improve the transportation system, was divided into different categories:

- Capacity Projects
- System Improvements
- Safety Improvements
- Low, Medium and High Scenarios
- Alternative Downtown Scenarios
- Non-Motorized Projects
- Adjacent Jurisdiction and Regional Projects

Additional transportation system scenarios for the downtown were also requested in the context of the low, medium and high growth scenarios. These scenarios are 2030 PM peak hour LOS with improvements with two medium scenarios and two high scenarios. The details of these alternative scenarios will be discussed in detail later on in the chapter.

This step of the planning process took into account, which intersections fail or degrade for different scenarios and then creatively came up with projects that solve these problem intersections. Additionally, there are many ways to solve future congestion and part of the process was trying to develop alternative ways to solve future congestion that fit in with the desired vision for the downtown.

Assumed Growth Targets

The capacity project list shown on Table 4-B-1, are projects necessary to meet medium growth projections and maintain LOS E for signalized intersections (not including state highways, which are out of the City's control). Unless otherwise stated, medium growth is the level of growth, agreed upon by the Planning Commission as a reasonable growth target for planning purposes.



B. Capacity Projects

Capacity projects are road projects that give the transportation system the ability to carry more trips and thus ease congestion. This is especially important for the PM peak hour commute, which typically is the most congested time of the day, and therefore this is the time of the day when those intersections that are nearing their total capacity begin to fail. All of the modeling for each of the scenarios in this document are modeled with PM peak hour congestion. Capacity projects improve LOS by allowing more trips to move through the system. These projects are what fix intersections, which are failing due to a high volume of traffic.



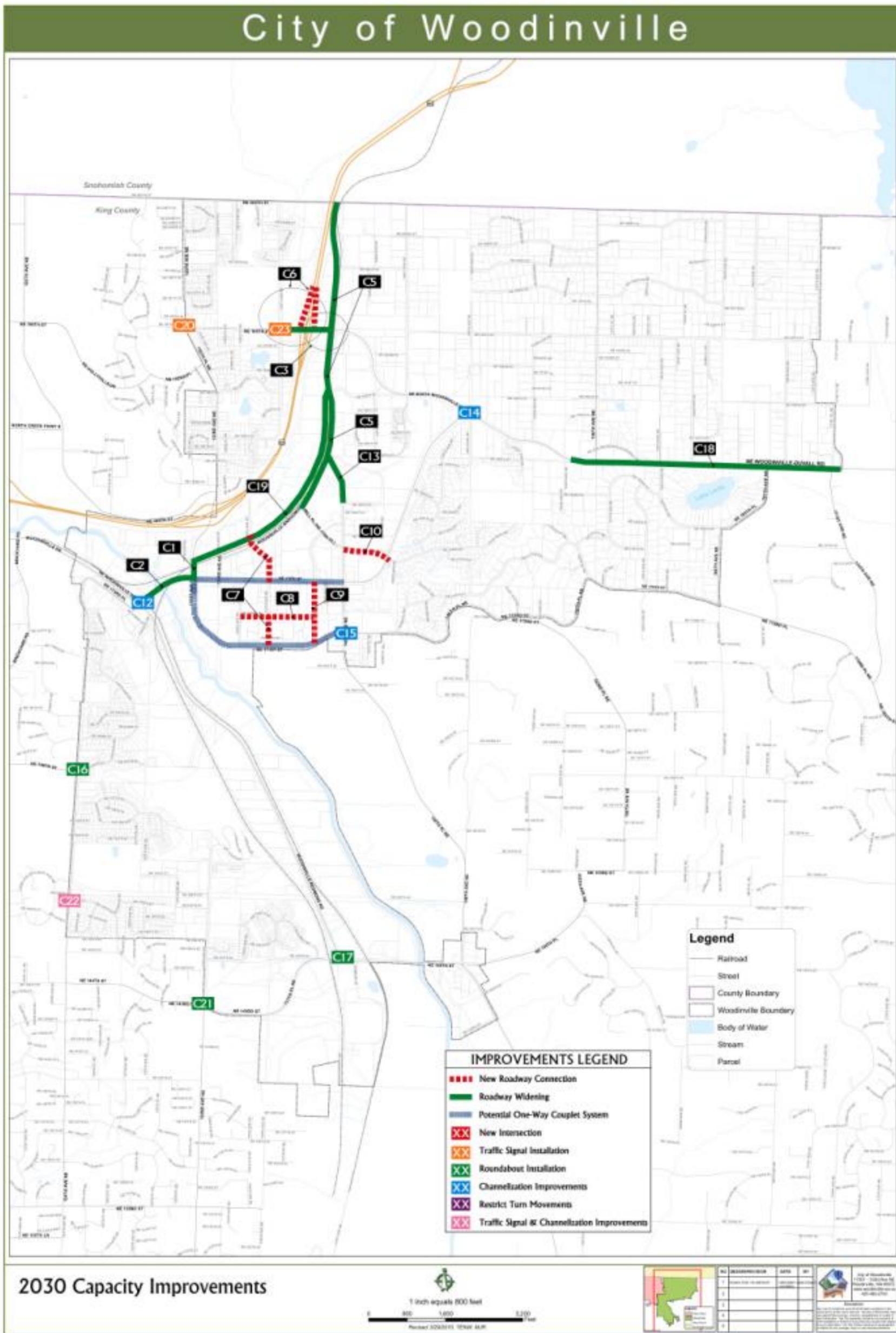
Table 4B-1 Capacity Projects

Capacity Projects						
Project Number	Project Name	Begin	End	Length (mi)	Scope	Cost (\$1,000)
C1	Trestle Replacement	Little Bear Creek Parkway	NE 175 th St	0.1	Replace the RR Crossing over SR 202 with a RR bridge that allows for 8 lanes on SR 202. Include non-motorized trail crossing with project.	8,030
C2	Sammamish Bridge Replacement	Woodinville Dr	131 st Ave NE	0.3	Build a new 2 lane bridge over the Sammamish River south of the existing Bridge. Provide 4 to 5 lanes from Woodinville Way to NE 131 st St with sidewalk.	6,490
C3	SR 522/195 th I/C (Interim)	136 th Ave NE	Woodinville-Snohomish Rd		Install traffic signals and channelization to improve traffic flow at this interchange.	557
C5	Woodinville Snohomish Widening	140 th Ave NE	North City Limits	1.2	Widen the road to a 5-lane section with curb, gutter, sidewalk, bike lanes, illumination and new traffic signals.	18,100
C6	SR 522/195 th I/C half diamond (Full Improvement 195 th)	NE 195 th St	MP 13.5	0.6	Construct the WB off and the EB on ramps at this interchange.	32,500
C7	Grid Roads: NE 135 th St	NE 171 st St	Little Bear Creek Parkway	0.5	Construct the NE 135 th grid road 2 to 3 lanes wide, from 171 st to Little Bear Creek Parkway. Traffic signals, a bridge, curb, gutter, sidewalk on street parking, landscaping. The alignment has not been determined yet.	6,028
C8	Grid Roads: 173 rd Ave NE	133 rd Ave NE	138 th Ave NE	0.3	Construct the 173 rd Ave grid road 2 lanes wide from NE 133 rd St to NE 138 th St. Curb, gutter, sidewalk, on-street parking, illumination, landscaping, and alignment to be determined.	2,118
C9	Grid Roads: NE 138 th St (Garden Way)	NE 171 st St	NE 175 th St	0.3	Construct the NE 138 th grid road 2 to 3 lanes wide from NE 171 st to NE 175 th . Curb, gutter, sidewalk, illumination, landscaping, traffic signals, bridge, Alignment per King County Ordinance #8144.	3,630
C10	Grid Road NE 178 th St (Park and Ride)	140 th Ave NE	Woodinville-Duvall Rd	0.2	Construct the 178 th Ave NE grid road from 140 th Ave NE/NE Mill Pl. I/S to Woodinville-Duvall Rd/NE178th I/S. Alignment to be determined.	7,335
C12	SR 202 Improvements	127 th I/S	127 th I/S	0.3	Widen the intersection to its ultimate configuration, curb gutter, sidewalk, channelization, illumination, traffic signal, railroad crossing improvements,	6,326
C13	140 th Ave NE Widen to 5 lanes	Woodinville-Snohomish Rd	NE 181 st St	0.2	Widen 140 th Ave NE to 5 lanes with curb, gutter, sidewalk, bike lanes, illumination, and modify traffic signals.	2,635
C14	Wood-Duvall / Woodinville Way Intersection dual left	North Woodinville Way	1,000 ft. east of intersection	0.2	Build a dual left turn pocket for the westbound to south bound left turn on the Woodinville-Duvall Rd to the Continuation of the same road	1,500
C15	171 st / 140 th Double Left Turn Lane	400 ft. north of intersection	1,000 ft south of intersection	0.3	Build a dual left turn pocket for the northbound to west bound left turn at the NE 171 st / 140 th Ave NE intersection.	3,750
C16	160 th /124 th Roundabout	400 ft. north of intersection	400 ft south of intersect.	0.2	Construct a single lane roundabout at the intersection of NE 160 th and 124 th Ave NE.	2,500
C17	SR 202 Winery Hill Roundabout	400 ft. north of intersection	500 ft south of intersection	0.2	Construct a single lane roundabout at the intersection of NE 145 th and SR 202.	1,750
C18	Woodinville-Duvall Road widening	1,000 ft. west of 156 th Ave NE	East City Limits	1.1	Widen the roadway to a 3-lane section with pedestrian facilities and bike lanes, illumination, new signals at 156 th and 168 th .	7,033
C19	Little Bear Creek Rd Widening	SR 202 (131 st Ave NE)	Woodinville-Snohomish Rd	1.0	Widen the roadway to a 3-lane section with curb, gutter, sidewalk on the northwest side, illumination, new signals at 134 th and NE Mill Place.	6,375
C20	NE 195 th /130 th Ave traffic signal	600 ft. north of intersection	600 ft south of intersection	0.2	Install a traffic signal, bulb-outs, channelization	1,000
C21	132 nd /143 rd roundabout	400 ft. north of intersection	400 ft south of intersection	0.2	Construct a single lane roundabout at the intersection of NE143rd St and 132 nd Ave NE, eliminating the offset intersection.	1,500
C22	124 th /149 th traffic signal	600 ft. north of intersection	600 ft south of intersection	0.3	Install traffic signal and left turn channelization at this intersection along with curb, gutter, sidewalk, illumination, bike lanes, and landscaping.	750
C23	136 th Ave NE/NE 195 th St Traffic Signal	600 ft. north of intersection	600 ft south of intersection	0.3	Install traffic signal, curb, gutter, and sidewalk. Interconnect with interchange signals.	750



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Map 4A-1: Capacity Projects





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C. System Improvements

System projects are projects that increase the function, safety and capacity in such a way that it benefits the system as a whole. Because of Woodinville's proximity to regional highways and because it is bisected by SR 202 most of the system projects are regional in nature. Projects SP1, SP4, and SP6 are all regional projects that improve the system. Project SP1 widens SR 202 to add a third lane for turning movements, which not only improves the system but also adds capacity. Additionally, this project includes pedestrian and bike improvements and bus pullouts so that this corridor can be served by transit. Project SP4 benefits the system by pulling some of the pass through traffic away from downtown and gives those trying to get to Bothell a more direct route. Project SP6 is a project to benefit the industrial area that is in Snohomish County and north Woodinville.

Table 4C-1 System Projects: Motorized						
Project Number	Project Name	Begin	End	Length	Scope	Cost (Thousands)
SP1	SR202 3 lanes, ped improvement, bus pull outs	MP 2.50 (Sammamish Bridge)	MP 0.56 (127 th Ave NE)	2.0	Widen to a 3-lane roadway with curb, gutter, sidewalks (Westside only if railroad becomes a trail), illumination, bus pullouts, and landscaping.	20,000
SP4	Extension of NE 124 th to Bothell				Connect 124 th Ave NE near NE 173 rd St with CCRP (SP10) when constructed.	Cost in with SP10
SP6	144 th Extension	NE 200 th St	Woodinville-Snohomish Rd	0.3	Construct new 2/3 lane roadway extending 144 th Ave NE into Snohomish County.	6,480
SP8	Downtown Multimodal Transit/Parking Facility				Re-locate the Park and Ride lot to serve a new multi-modal facility next to BNSF tracks in the Little Bear Creek Area if or when passenger / commuter rail service is brought to the City (location to be determined).	15,000
SP9	SR522 Off Ramp to Northwest Gateway Area			1.0	Construct new off ramp from SR 522 to provide direct access to this area along with realigning northward the SR 202/Little Bear Creek Parkway intersection.	40,000
SP10	CCRP - SR522/SR202 Access	127 th Ave NE	NE 180 th St	0.6	Build new roadway connecting the SR 202/127 th Ave NE I/S with NE 180 th St in Bothell over the Sammamish River and SR 522. Ramp connections may be included. Coordinate with Willows Rd extension.	50,900
SP12	132 nd Ave NE - Culvert Removal			0.1	Remove culverts on 132 nd Ave NE for Little Bear Creek. Restore slopes and landscaping.	190
SP14	Woodinville-Snohomish Rd	NE 175 th St	140 th Ave NE	0.7	Widen roadway to 3 lanes with curb, sidewalk and bike lanes.	6,500
SP15	SR522 Bus Off Ramp	131 st Ave NE	Little Bear Creek Parkway	0.25	Construct Bus Only Off Ramp from SR522 EB On Ramp to downtown Woodinville vicinity to connect to future multimodal facility.	5,000
SP16	Annual Pavement Overlay Program				Overlay selected existing City streets	

Table 4C-2 System Projects Non Motorized						
Project Number	Project Name	Begin	End	Length	Scope	Cost (Thousands)
SP5	134 th Bridge	Little Bear Creek Parkway	SR 522 R/W	0.1	Install pedestrian bridge across Little Bear Creek, removing culverts, buying private parcel(s) on northwest side of creek, southeast of SR 522.	2,200
SP7	195 th /156 th Intersection	250 ft S of I/S	250 ft. N of I/S	0.1	Install pedestrian crossing lights across 156 th Ave NE, bulbouts, illumination, curb, gutter, sidewalk at this intersection	450

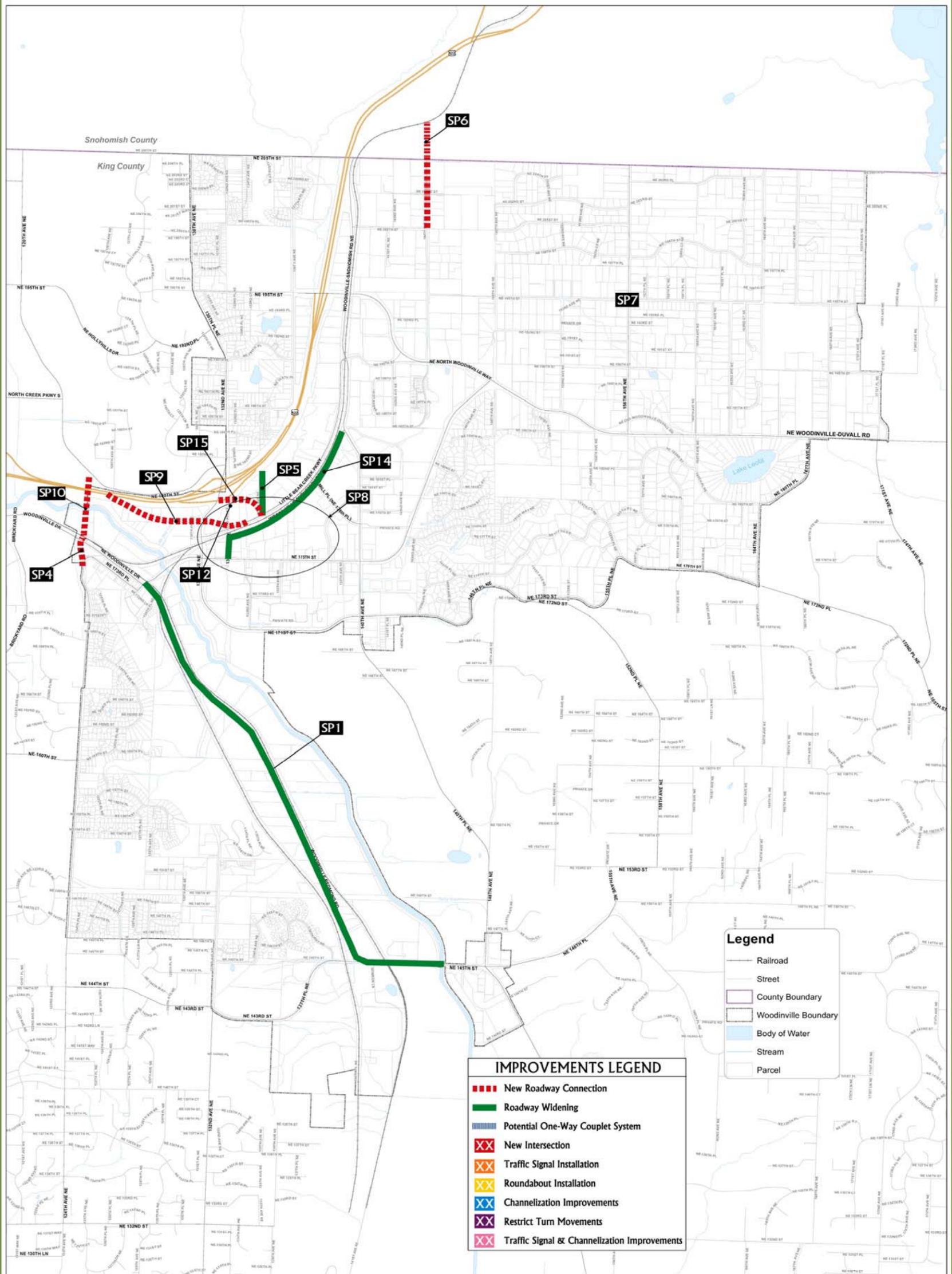


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Map 4C-1: System Projects

City of Woodinville



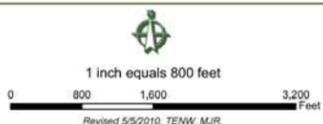
Legend

- Railroad
- Street
- County Boundary
- Woodinville Boundary
- Body of Water
- Stream
- Parcel

IMPROVEMENTS LEGEND

- New Roadway Connection
- Roadway Widening
- Potential One-Way Couplet System
- New Intersection
- Traffic Signal Installation
- Roundabout Installation
- Channelization Improvements
- Restrict Turn Movements
- Traffic Signal & Channelization Improvements

2030 System Improvements



NO	DESIGN/REVISION	DATE	BY
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2			
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D. Safety Projects

Safety projects include signaling intersections to provide protected turns to drivers. Traffic calming projects also provide safety by slowing traffic down on local streets. There is also a safety a project to take the left turns out of the NE 175th and NE 132nd intersection.

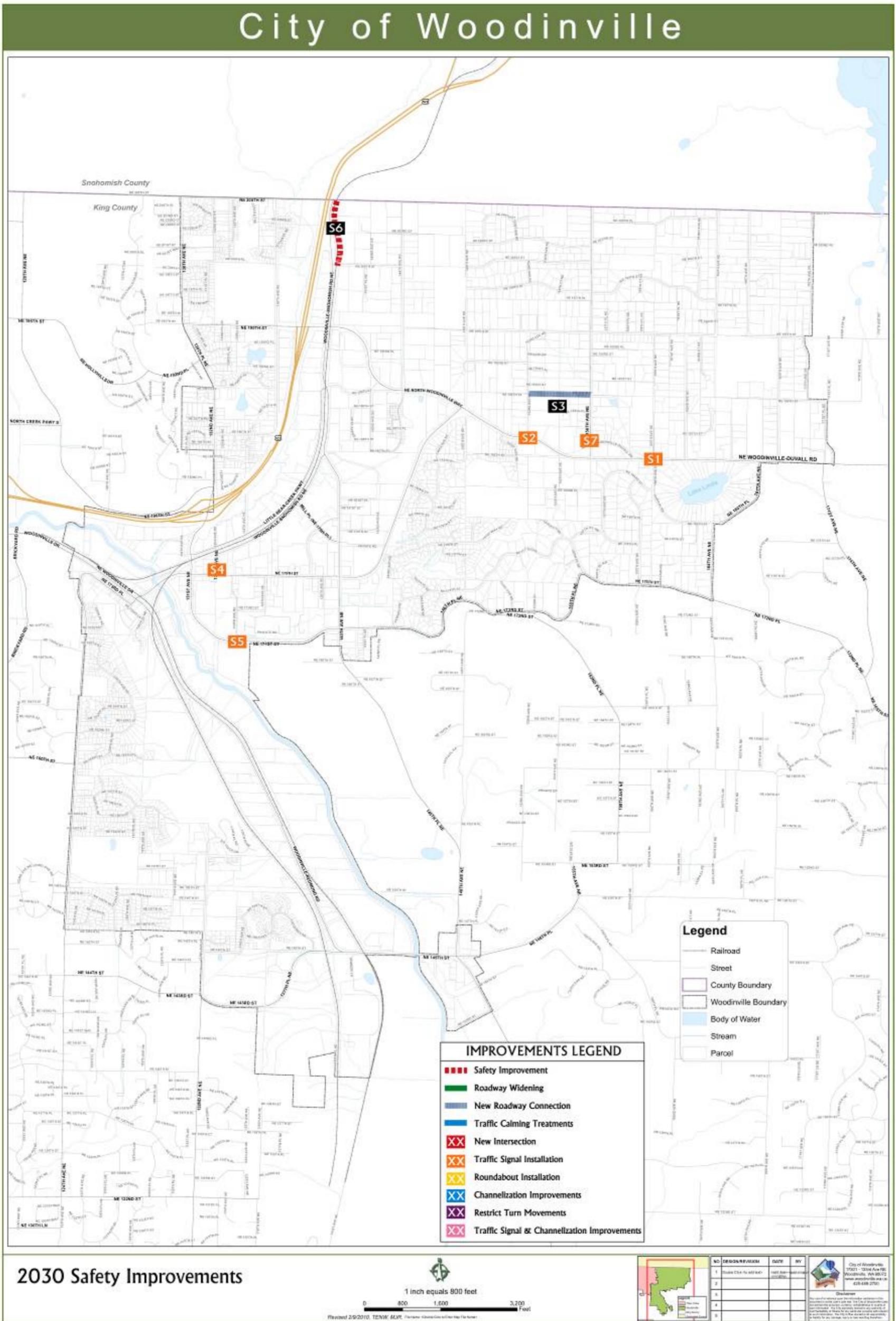
Table 4D-1 Safety Projects						
Project Number	Project Name	Begin	End	length	Scope	Cost (Thousands)
S1	160 th Ave NE / Wood-Duvall Signal	500ft. S of I/S	Woodinville-Duvall Rd	0.1 mile	Install new traffic signal.	750
S2	152 nd Ave NE / Wood-Duvall Signal	500ft. N of I/S	Woodinville-Duvall Rd	0.1 mile	Install new traffic signal or consider constructing NE 190 th between 152 nd Ave NE and 156 th Ave NE.	750
S3	Future Road 190 th	152 nd Ave NE	156 th Ave NE	0.3 mile	Future Road	2,500
S4	175 th /132 nd Signal	600ft. north of intersection	NE 175th Street	0.2 mile	Install new traffic signal. Consider also restricting southbound to eastbound left turns in conjunction with installing the new traffic signal at NE175 th St. and 133 rd Ave NE instead.	750
S5	171 st /133 rd Signal	171 st /133 rd I/S	171 st /133 rd I/S	N/A	Install new traffic signal.	800
S6	Guard Rail on Woodinville Snohomish Rd	NE 200 th St	North City limits	N/A	Guard Rail on Woodinville-Snohomish Rd, NE 200 th St to NCL.	30
S7	156 th Safety Improvements	156 th Ave NE/Woodinville Duvall Road I/S	NE 190 th St/156 th Ave NE	.20 mile	Make safety improvements to address sight distance problems on this roadway.	2,400
S8	Traffic Calming (warranted)	N/A	N/A	N/A	Install traffic calming measures throughout the City when and where warranted (locations not shown on map).	200



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Map 4D-1: Safety Projects





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E. Low, Medium and High Growth Scenarios

Each growth scenario had needed projects to improve LOS. The project needs for each scenario and the resulting LOS is discussed for each growth scenario.

Low Growth Scenario

The low growth scenario model run with only improvements made at intersections #18 (134th/195th) and #25 (NE 124th/NE 160th) resulted in five failing City intersections and one failing WSDOT intersection. Additionally, there were five intersections at LOS E. Table E-2 below lists the projects that are needed for the low growth scenario.

These are the intersections that would need to be improved under the low growth scenario:

City Intersections - LOS F

- 132nd / 175th Left turn SB to EB
- 133rd / 175th Left turn NB to WB
- 136th / 195th
- 132nd / 143rd (Winery Hill)
- Wood-Sno / Mill Place

WSDOT Intersection - LOS F

- SR 202/127th

Table 4E-1 2030 Model Results Low Growth Land Use, LOS F and E:

With Transportation Improvements at Intersections #18 and #25

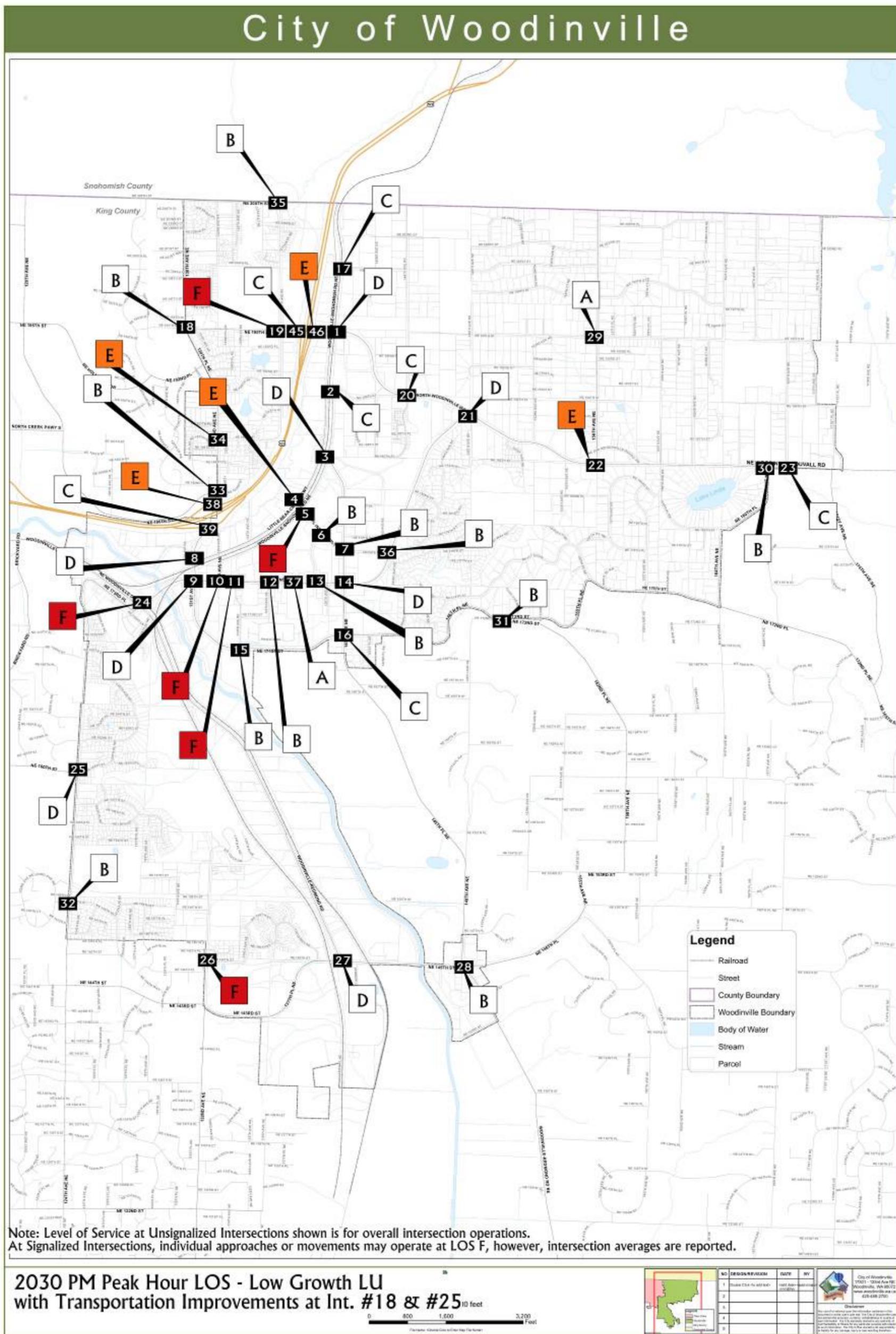
Intersection	LOS Low*
(24) NE 173 rd /SR 202	F
(26) 132 nd Ave NE/NE 145 th PL	F
(10) NE 175 th /132 nd	F
(11) NE 175 th /133 rd	F
(5) Wood/Sno/Mill Place	F
(38) 132 nd /522 Interchange	E
(34) 132 nd /186 th	E
(4) Little Bear Creek/Mill Place	E
(19) 195 th /136 th	F
(46) 522/195 th	E
(22) Wood-Duvall/156 th	E

The low growth scenario resulted in the need to build out the grid road network in the downtown core and address isolated intersections to provide the necessary capacity to accommodate the growth under this land use scenario. The NE 175th/ 133rd corridor issues result in failing intersections that also need to be addressed.



Projects needed to fix failing intersections under the low growth scenario.

Table 4E-2 Low Growth Projects Needed			
Project Number	Project Name	Scope	Cost (Thousands)
C7	Grid Roads: NE 135 th St	Construct the NE 135 th grid road 2 to 3 lanes wide, from 171 st to Little Bear Creek Parkway. Traffic signals, a bridge, curb, gutter, sidewalk on street parking, landscaping. The alignment is uncertain north of NE 175 th St	6,028
C8	Grid Roads: 173 rd Ave NE	Construct the 173 rd Ave grid road 2 lanes wide from NE 133 rd St to NE 138 th St. Curb, gutter, sidewalk, on- street parking, illumination, landscaping	2,118
C9	Grid Roads: NE 138 th St (Garden Way)	Construct the NE 138 th grid road, 2 to 3 lanes wide from NE 171 st to NE 175 th . Curb, gutter, sidewalk, illumination, landscaping, traffic signals, bridge	3,630
C10	Grid Roads: NE 178 th St (Park & Ride)	Construct the 178 th Ave NE grid road from 140 th Ave NE/NE Mill PI I/S to Woodinville Duvall Rd / NE178 th I/S	7,335
S3	130 th / 195 th Signal	Install new traffic signal	600
S4	175 th / 132 nd Signal	Install new traffic signal. Consider also restricting left southbound to eastbound left turns in conjunction with installing the new traffic signal at NE175 th St. and 133 rd Ave NE	750
C16	160 th / 124 th Roundabout	Construct a single lane roundabout at the intersection of NE 160 th and 124 th Ave NE	1,500
S10	175 th / 133 rd Signal	Install traffic signal changing this from a pedestrian signal to a fully signalized intersection	600
C21	132 nd / 143 rd roundabout	Construct a single lane roundabout at the intersection of NE143 rd St and 132 nd Ave NE, eliminating the offset intersection	1,500
C23	136 th Ave NE/NE 195 th St Traffic Signal	Install traffic signal, curb, gutter, and sidewalk. Interconnect with interchange signals	750





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Medium Growth Scenario

The medium growth scenario is a little higher growth scenario than the Puget Regional Council growth projections for the City. Implementing 16 projects not including the CCRP, the medium growth scenario has three failing intersections (all failing intersections are State Route intersections that are not under the City's control), and one intersection at LOS E.

The medium growth scenario with the CCRP has no failing intersections and one intersection (NE 173rd/202) which is at LOS E. The addition of the CCRP project removes pass through traffic by diverting trips from the 131st corridor to the overpass.

Table 4E-3: Projects for Medium Growth Scenario

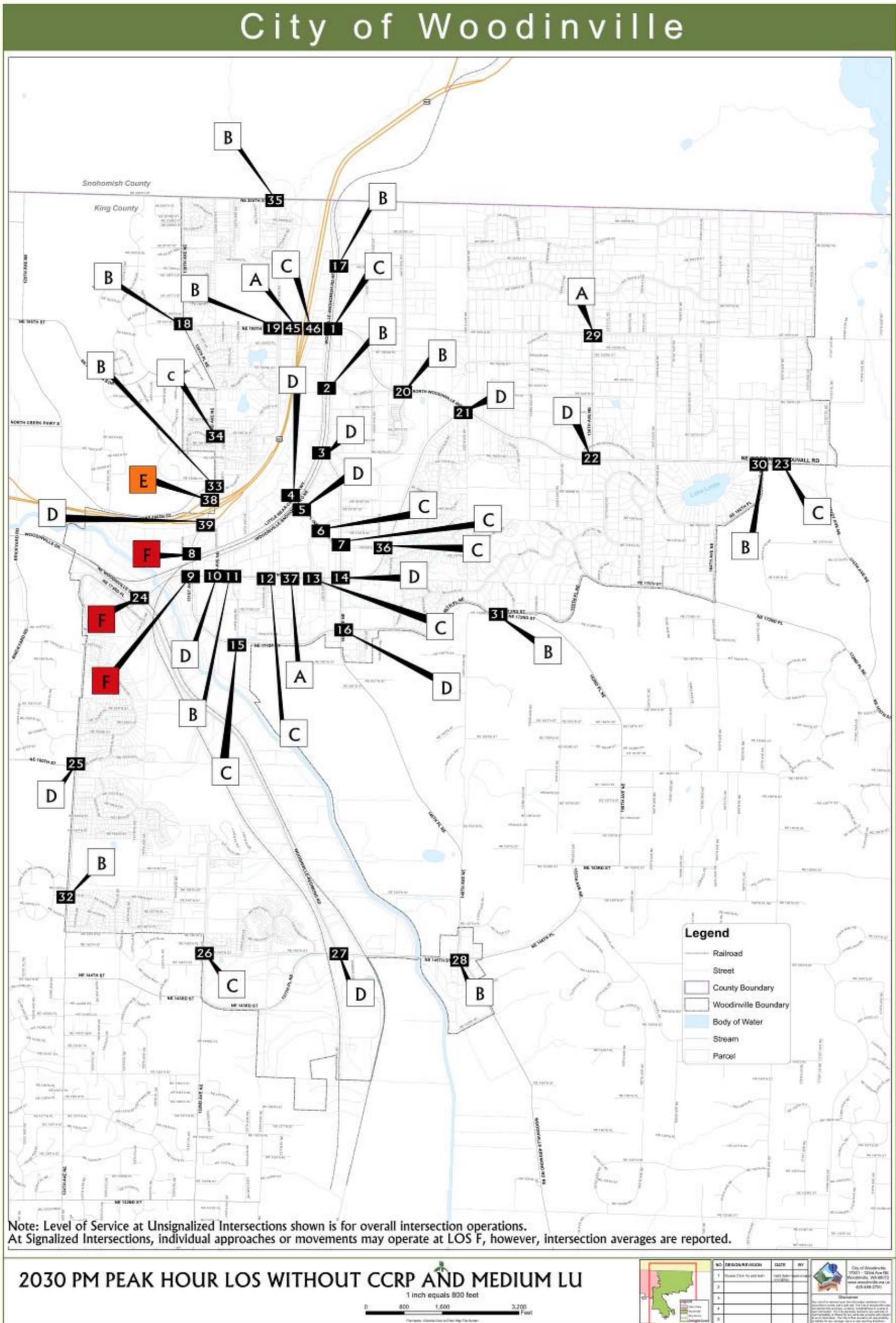
Projects for Medium Growth Scenario (excluding CCRP)	
C1	Trestle Replacement – SR 202 Corridor
C2	Sammamish Bridge Replacement (SBRP)
C3	SR 522/195 th I/C (Interim)
C5	Wood-Sno Widening
C6	SR 522/195 th I/C half diamond (Full improvement 195 th)
C7	Grid Roads: 135 th
C8	Grid Roads: 173 rd
C9	Grid Roads: 138 th (Garden Way)
C10	Grid Roads: 178 th (Park and Ride)
C12	SR 202/127 th Full Improvement
C13	140 th Ave NE – Widen to 5 lanes
C14	Wood-Duvall/Woodinville Way Intersection – dual left
C15	171 st /140 th Double Left Turn Lane
C16	160 th /124 th Roundabout
C17	SR 202 Winery Hill Roundabout
C18	Woodinville Duvall Road Widening
C19	Little Bear Creek Widening
C20	NE 195 th /130 th Traffic Signal
C21	132 nd / 143 rd Roundabout
C22	124 th /149 th Traffic Signal
C23	136 th Ave NE/NE 195 th St Traffic Signal



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Map 4E-2: 2030 Medium Growth LOS without CCRP





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Table 4E-4: 2030 Failing Intersections Medium Growth Land Use

(*Includes Projects in Table E-3 (does not include CCRP))

Intersection	LOS Medium*
(24) NE 173 rd /SR 202	F
(9) SR 202/NE 175 th	F
(8) SR 202/NE 177 th	F
(38) SR 202 (131 st)/SR 522 WB Ramps	E

High Growth Scenario:

2030 LOS with Capacity Improvements High Growth Scenario with CCRP and One-Way Couplets

The high growth scenario was a very high projection of future growth with 75% more total dwelling units and 182% more full time employees (FTE) than Puget Sound Regional Council growth projections. Because this was such a high growth projection, the CCRP and the one-way couplets projects were included, in addition to all projects listed under the medium growth scenario. These projects increase the capacity of the system in order to handle the large amount of population and job growth in this scenario. The one-way couplet project would turn the NE 175th and NE 171st into one-way couplets, the direction of each couplet dependent on the existing grid road layout. The one-way couplet works to take trips off NE 175th and instead put those trips on to NE 171st, which has excess capacity. Considering the high growth scenario was a very high projection, with well over the Puget Sound Regional Council's estimates, with the suggested capacity and system improvements the system functions well. The problem intersections in the high scenario continue to be on the 131st corridor even with these two large capacity projects.

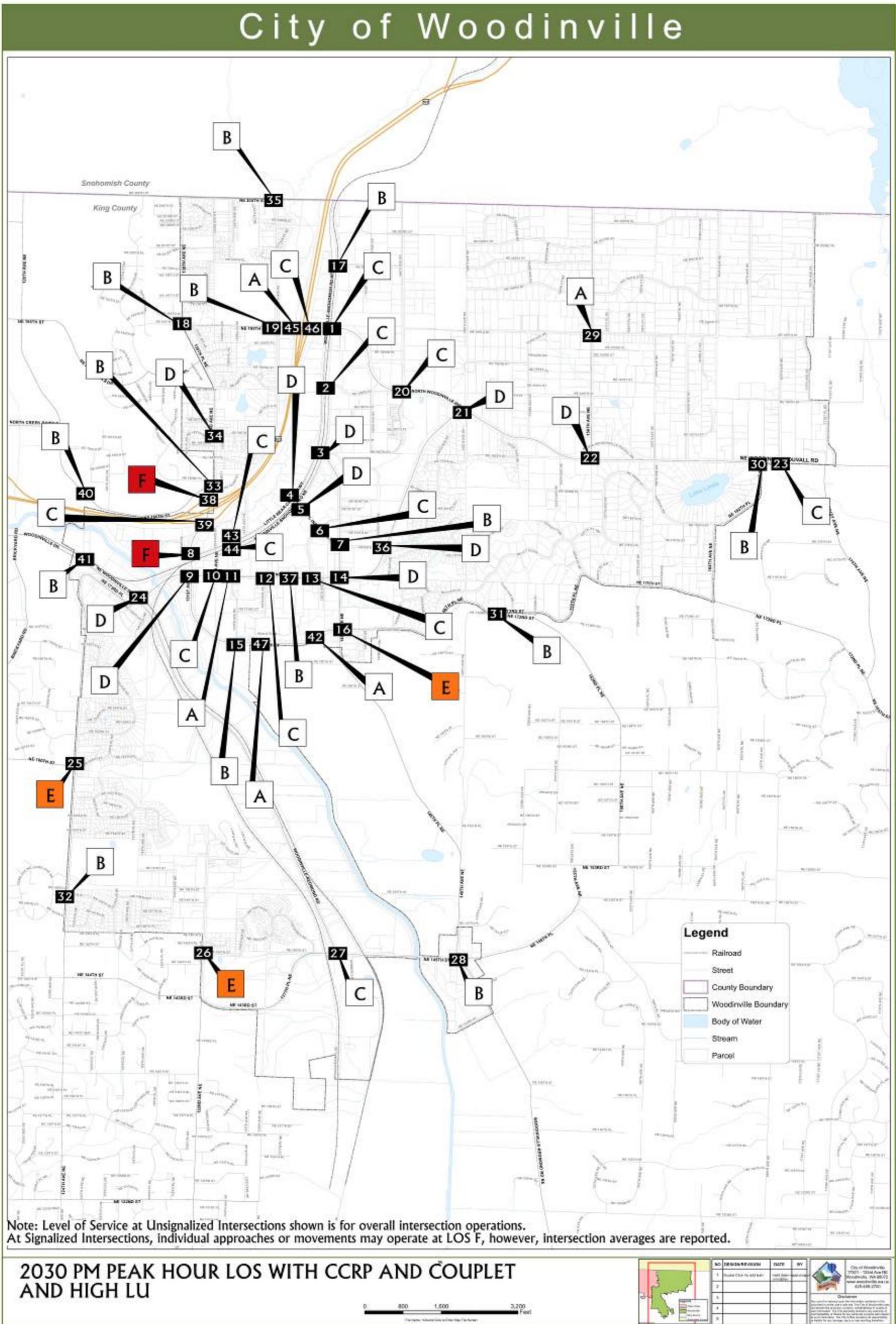


Table 4E-5: Additional High Growth Projects Needed

Project Number	Project Name	Begin	End	length	Scope	Cost (Thousands)
SP10	CCRP - SR522/SR 202 Access	127 th Ave NE	NE 180 th St	0.6	Build new roadway connecting the SR 202/127 th Ave NE I/S with NE 180 th St in Bothell over the Sammamish River and SR 522	85,000
	One-way Couplets	171 st / 175 th Corridor			Turn the 175 th /171 st corridors into one-way couplets – the direction of the couplet would depend on the grid roads that have been completed. The purpose of this would be to route more traffic to the 171 st bi-pass, which would take congestion off of the NE 175 th corridor.	

Table 4E-6 2030 PM Peak Hour LOS with CCRP and One-way Couplet and High LU

Intersection	LOS High LU
(25) NE 124 th / NE 160 th	E
(26) 132 nd Ave NE / NE 145 th PL	E
(16) 140 th / 171 st	E
(8) 131 st / SR 202	F





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F. Downtown Scenarios

The Planning Commission requested some additional transportation system scenarios for the downtown be considered in the context of the low, medium, and high growth scenarios and their desired plans for future downtown development. The Planning Commission requested that the following options be analyzed:

- 1) Cars win on 175th
- 2) Pedestrians win on 175th
- 3) Little Bear Creek/Woodinville Snohomish Road Couplet – Boulevard
- 4) Minimal improvements with low growth scenario
- 5) Grid roads sensitivity test (one removed)

Each of these scenarios was analyzed with and without grid roads except for scenario five the grid roads sensitivity test.

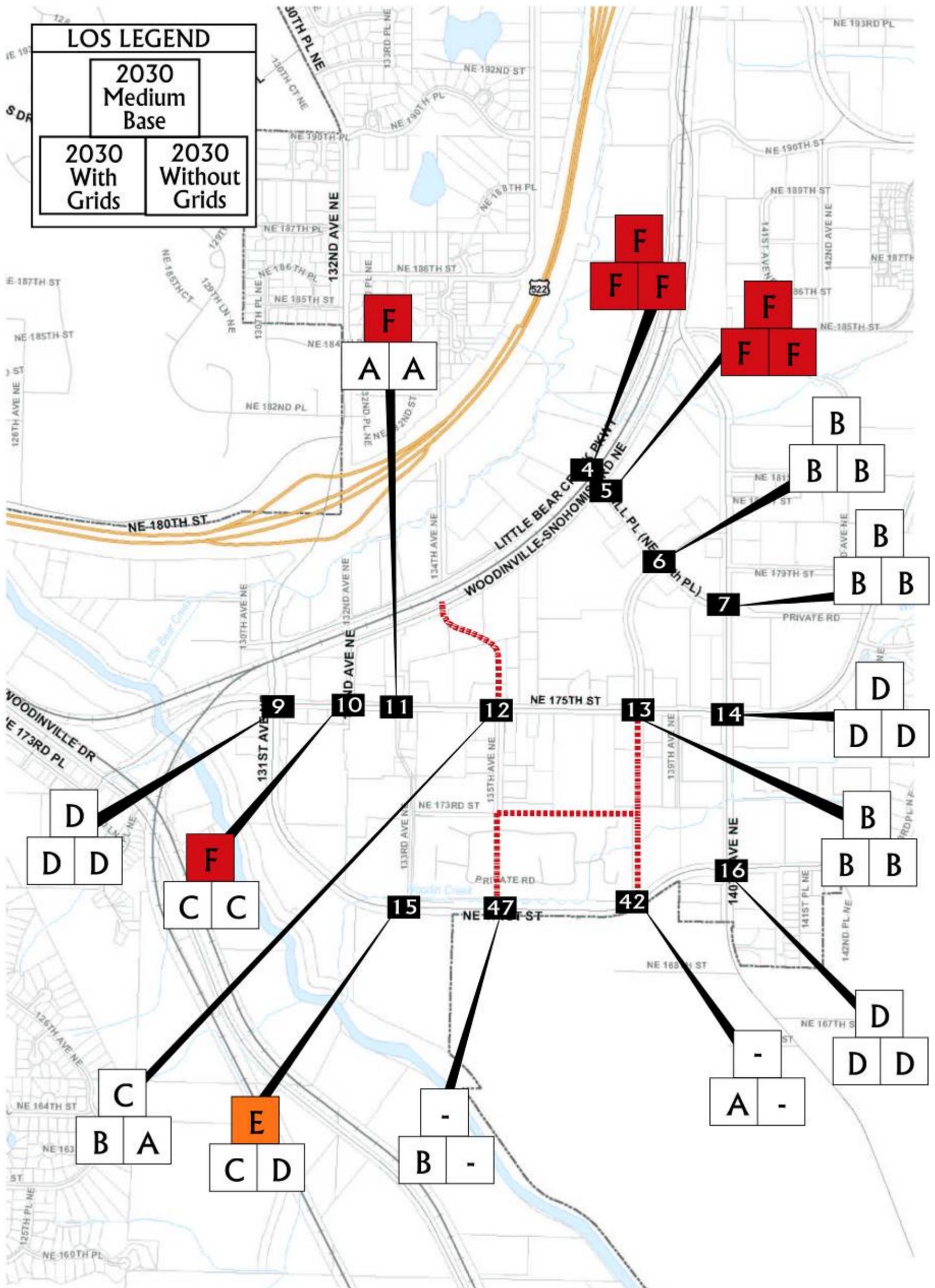
Cars win on NE 175th

This scenario widens 175th to its maximum capacity which results in getting rid of the center turn lane and bike lanes. As a result, left turns are eliminated at the driveway and intersections of 132nd, 133rd, 135th, 138th and 139th, which may impact access to businesses especially if the grid road system has not yet been fully built. Additionally, there is minimal room for any pedestrian improvements and bike lanes have been removed. The LOS is improved or remains the same at all intersections. The car does win, however at the cost of all other modes.



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Map 4F-1: Cars Win on NE 175th



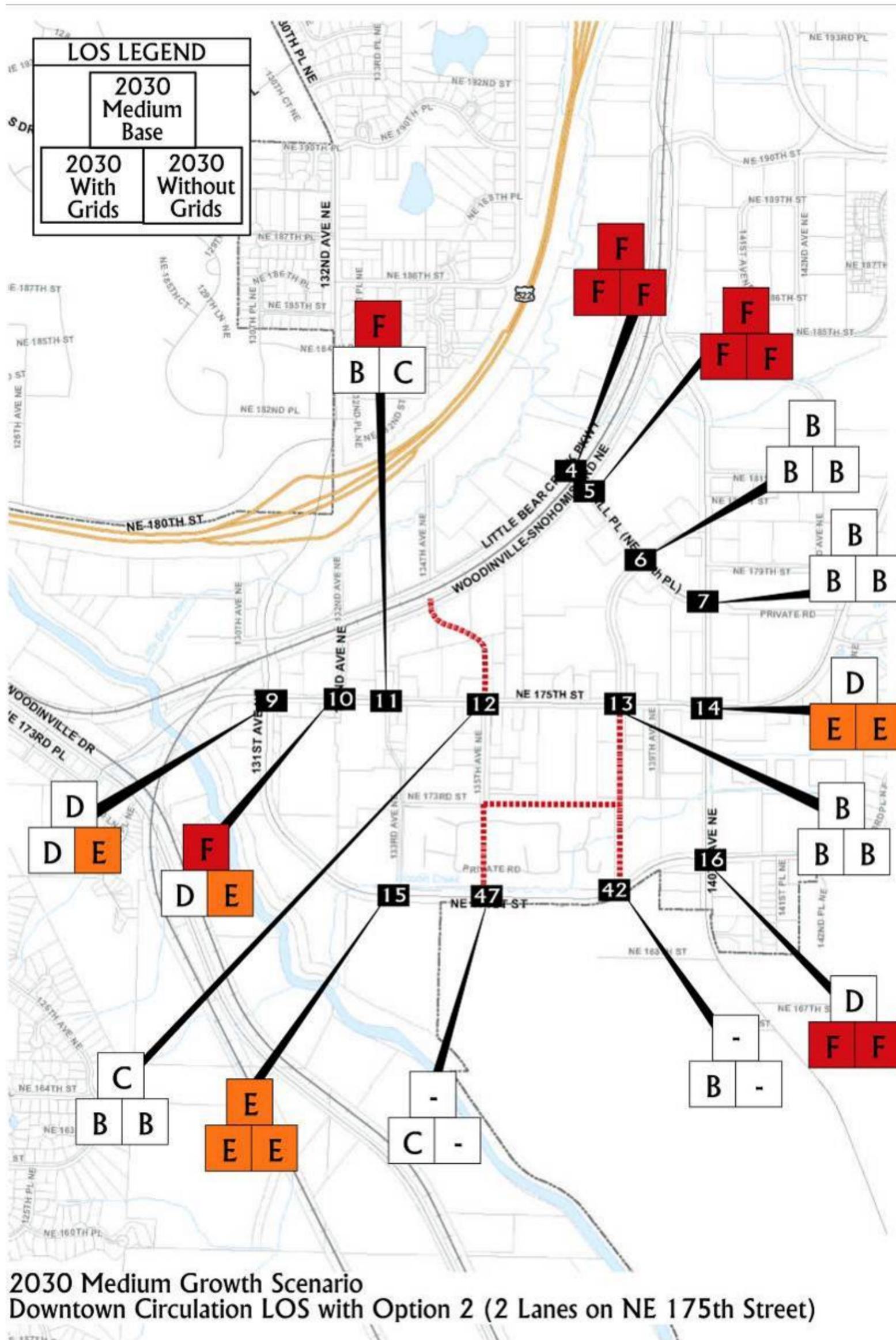


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Pedestrians win on 175th

This scenario allows more room for bicycle and pedestrian improvements that would result in 175th no longer being the thoroughfare that it is today. This results in an elimination of left turns at driveways and intersections for the benefit of pedestrians, which may impact access to businesses if the grid road network is not fully completed. The LOS for cars decreases at most intersections as the bi-pass routes are currently not effective in routing traffic around to access state highways; therefore, this option is not recommended at this time.

Map 4F-2 Pedestrians win on 175th



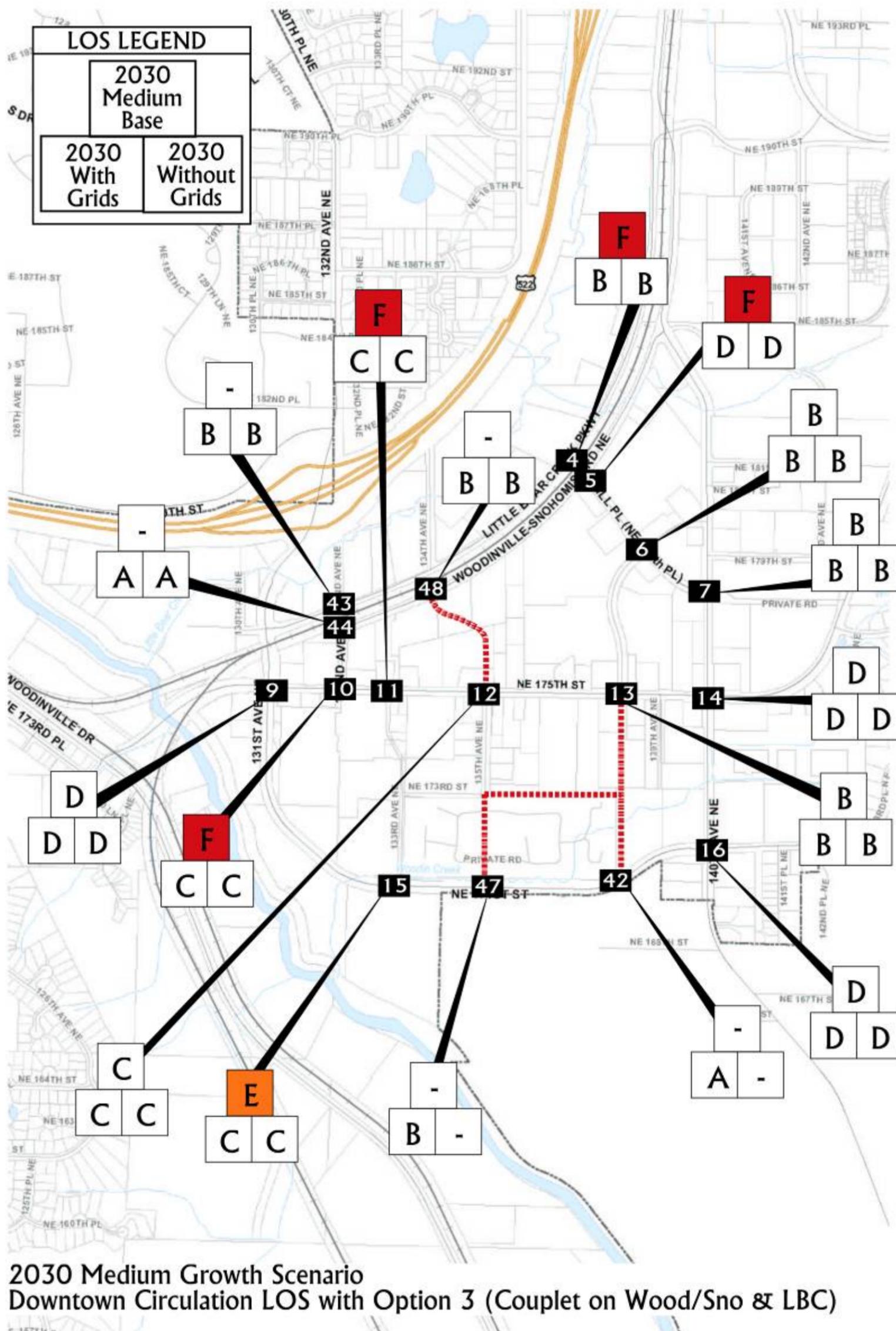


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Little Bear Creek Parkway Boulevard Option

This scenario creates two one-way couplets on Woodinville Snohomish Road and Little Bear Creek Parkway, two lanes westbound on Little Bear Creek Parkway and two lanes eastbound on Woodinville-Snohomish Road. This scenario includes a new railroad crossing at 132nd and the scenario was run with and without grid roads. The model results showed that the LOS and functioning of the Mill Place and railroad crossing improved; with minimal affect to the rest of the road network with or without the grid roads. This scenario may affect the access to adjoining properties on Little Bear Creek Parkway and Woodinville-Snohomish road so this scenario is only recommended if the land use planning in the downtown master plan is able to compliment this scenario.

Map 4F-3 Little Bear Creek Parkway Boulevard Option



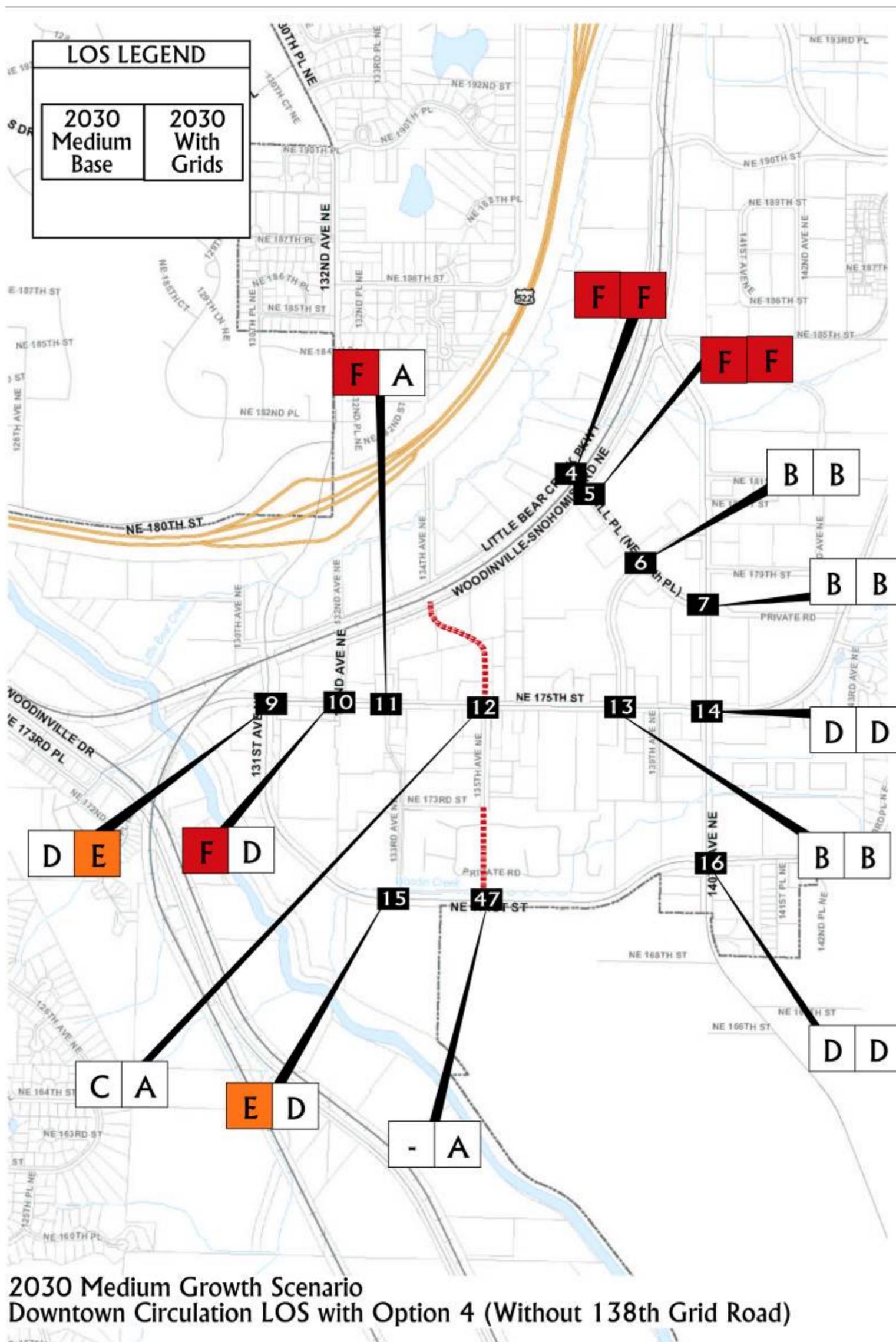


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Grid Road Sensitivity

Growth scenarios were run which compared the LOS in the downtown with and without grid roads to test the sensitivity of the LOS of the downtown. The results showed that even one north south grid road provides congestion relief. This modeling work demonstrates the importance of constructing grid roads in the downtown as it develops.

Map 4F-4: Downtown Circulation without 138th Grid Road

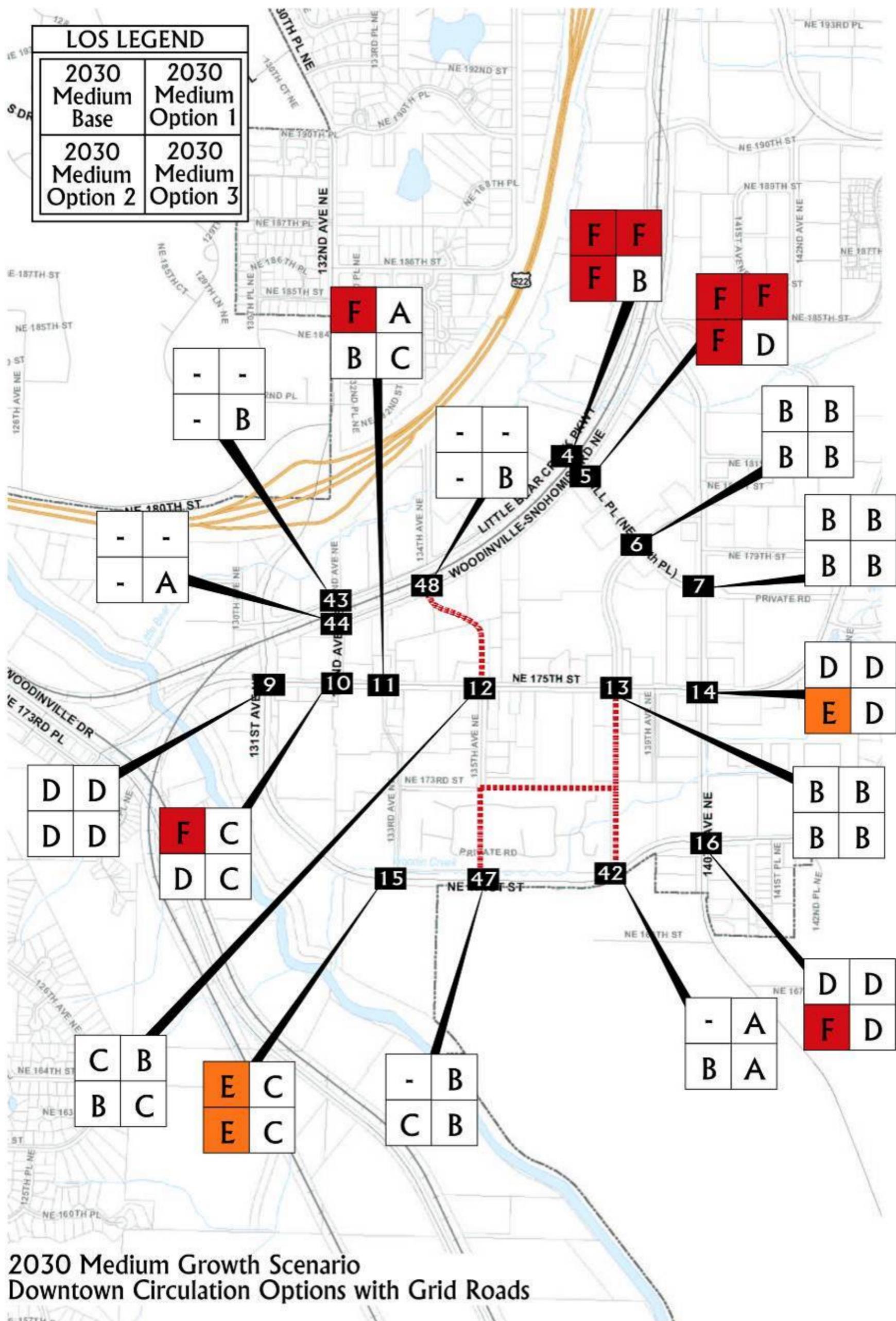




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Map 4F-5: Downtown Circulation with 138th Grid Road





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G. Summary of Downtown Scenarios

At the time of publication of this plan, downtown master plan implementation in terms of standards and codes, are currently being discussed. The options laid out by this plan therefore were designed to give multiple options for downtown planning. However, some conclusions were made in the course of the discussion of how to plan for traffic and circulation in the downtown. Those conclusions were to stay within the existing right-of-way for NE 175th Street and not to consider one-way couplets for NE 175th Street except in the case of very high growth. Wider sidewalks for NE 175th Street were recommended for consideration in the downtown design of new standards for the street. The conclusion was also made that grid road projects should be pursued whenever possible, especially grid road projects which allow for additional crossing across Woodinville-Snohomish Road to connect and integrate Little Bear Creek and Woodinville-Snohomish Road into the downtown.



Non-Motorized Projects

Woodinville incorporated to become a city in 1993; therefore, a large portion of the City's infrastructure was inherited from its past as unincorporated King County. As a result, the sidewalk network in the city is not well developed. Downtown Woodinville has sidewalks and some bike lanes but because of the large parking lots and multiple access points that break up the downtown, even short distances can be an uncomfortable walk or bike because of the many potential vehicle conflict points.

One of the essential ingredients in creating a more pedestrian friendly city is creating linkages from Woodinville neighborhoods to downtown. Currently there are many gaps in the sidewalk network that prevent Woodinville neighborhoods from being connected to downtown. This has created a situation where it is necessary to drive short distances to get to city parks, restaurants and shopping. As the downtown grows and develops, creating linkages so that Woodinville residents can walk to restaurants, parks and shops, the farmers market and other events will take cars off the road, make Woodinville a more vibrant city, and promote healthy lifestyles. For those reasons the capital improvement projects in this section of the plan put a lot of emphasis on building sidewalks and bike lanes that connect Woodinville neighborhoods to downtown.

In summary, there are many projects on the non-motorized capital improvement plan that need to be completed in order to make the City of Woodinville a pedestrian friendly city. On the bright side, there is great opportunity to make a major difference in Woodinville's pedestrian network just by implementing a few of the major non-motorized projects. As the downtown grows and more downtown master plan streetscapes and CIP's are implemented it will become more pedestrian friendly. Once this happens, there will be more incentive for citizens to walk to downtown. Conversely, if there are better connections to downtown from Woodinville neighborhoods, the demand for more pedestrian friendly streetscapes downtown will increase. Woodinville has great potential to be a multi-modal city, which provides healthy alternatives to driving and becomes a vibrant multi-modal community.



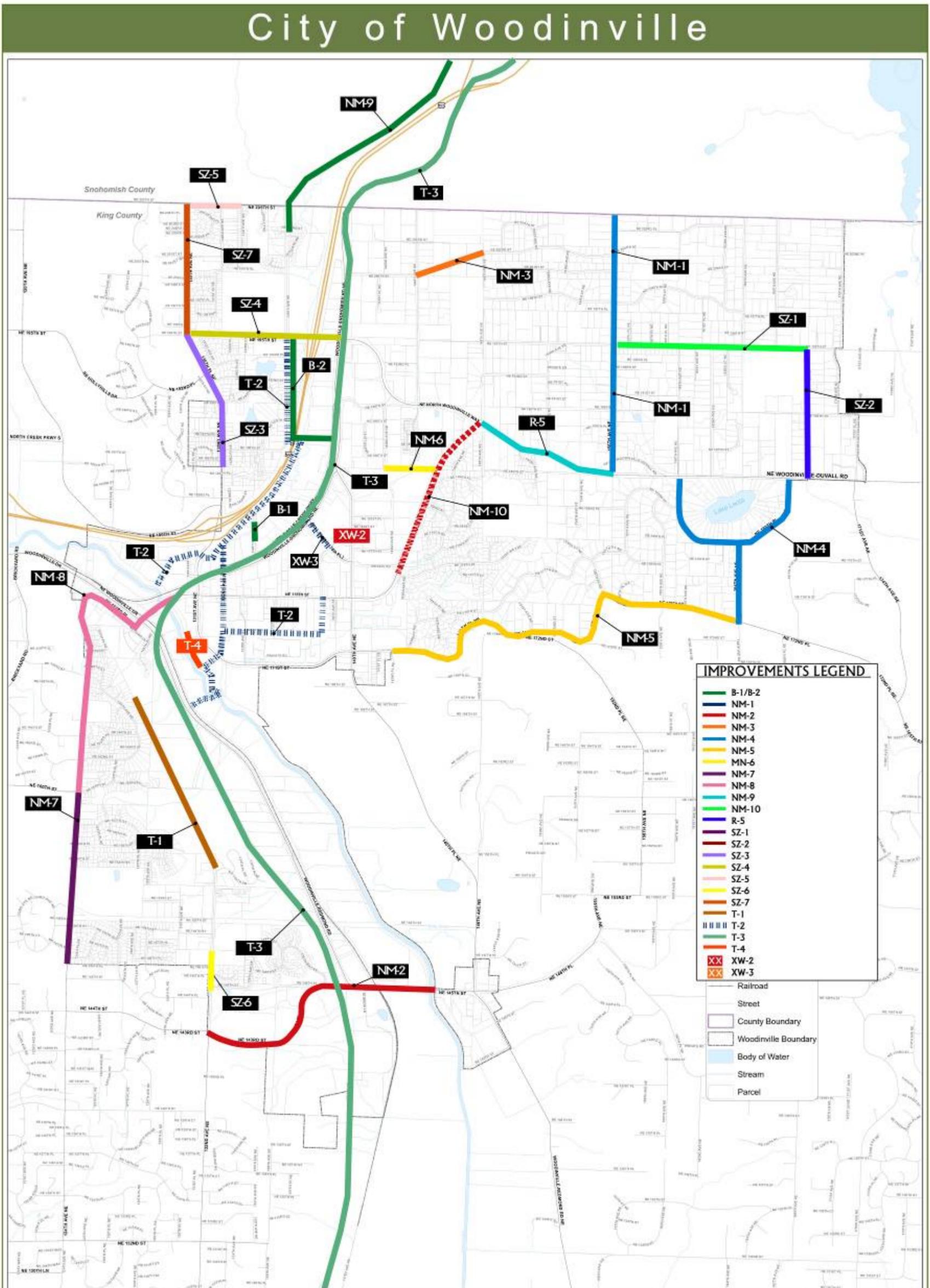
Table 4G-1: List of Non-Motorized Projects

Name of Project	Limits of the Project	Project Number	Cost (thousands)
195 th School Sidewalks	156 th Ave to Wellington Elementary	SZ -1	1,000
168 th Ave - School Sidewalk Project	Fill Gaps on 168 th from Wood-Duvall to 195 th	SZ -2	500
Sidewalks East side of 156 th	156 th – Wood-Duvall to North City Limits	NM -1	1,500
South Power line Trail	Lower West Ridge Neighborhood Trail along power lines to Chateau Ridge	T -1	500
Winery Hill Road	SR 202/143 rd /145 th to 132 nd Ave NE, including Ped Bridge over Sammamish River (south side) Construct Pedestrian Facility	NM-2	2,600
Downtown Master Plan Ped Bike Trail	Downtown Loop per LBC downtown plan	T-2	2,000
Rails/Trails Project	Trail on Rail Corridor throughout City	T-3	7,000
134 th Ave NE	LBC Parkway to Lumpkin property	B-1	250
Wellington to N. Industrial Area	144 th Ave NE to Wellington Neighborhood	NM-3	600
NE 180 th , 164 th Ave NE, 160 th Pl NE Ped Bike Facility	Wood-Duvall to NE 175 th around Lake Leota	NM-4	1,400
NE 173 rd Ped Bike Project Southern Border	143 rd Pl NE to 164 th Ave NE	NM-5	2,500
Greenbrier/Wood-Duvall Road Trail	142 nd Ave NE to Wood-Duvall	NM-6	62
Non Motorized Boat Launch	Along Sammamish River Trail	T-4	58
Existing crosswalk at 140 th , north of 183 rd Place converted to a flashing Pedestrian Crossing Lights	Crosswalk 140 th /138 th Place	XW-2	60
Existing mid-block crosswalk on Mill Place in TRF converted to a flashing Pedestrian Crossing Lights	Mid Block Crosswalk on Mill Place between Garden Way and Wood-Sno	XW-3	60
Sidewalk Gap Project NE 124 th	Fill gaps on 124 th from 145 th to NE 173 rd	NM-7	600
Sidewalk to connect West Ridge to downtown via NE 173 rd	173 rd , 127 th Pl across Sammamish River to 175 th	NM-8	1,200
Wedge School Zone Sidewalk Gaps NE 130 th , 132 nd	Multiple Gaps to fill	SZ-3	200
136 th Ave to Future Brightwater	136 th from 203 rd to Brightwater	NM-9	1,000
School Zone Sidewalk Project NE 195 th - Wedge	Fill gaps in sidewalk network from Wood-Sno to 132 nd	SZ-4	1,200
School Zone Sidewalk Gap Project 205 th - Wedge	Fill gaps in sidewalk network on 205 th from 130 th to 136 th	SZ-5	600
Bridge over SR 522 connecting Wedge neighborhood to Downtown	136 th to Little Bear Creek Trail Walkway along 136 th	B-2	3,000
Woodinville-Duvall Road Gap – Ped Bike Facility	North Woodinville Way to NE 178 th St	NM-10	1,200
School Zone Sidewalk Gap Project 132 nd Ave NE	Fill in gaps in sidewalk walkway network from NE 195 th St to NE 205 th Street	SZ-7	300
School Zone side 132 nd Ave NE	145 th Vicinity	SZ-6	300
Woodinville-Duvall Road – Ped Bike Facilities	156 th Ave NE to NE North Woodinville Way	R-5	1,500

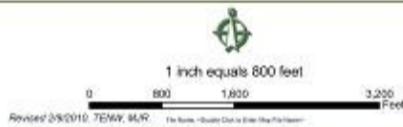
*School Zone projects (SZ) are higher priority projects than other non-motorized CIP projects



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2030 Nonmotorized Improvements



NO	DESCRIPTION	DATE	BY
1	Final design	10/10/09	TEW
2			
3			
4			
5			

City of Woodinville
 10000 - 10000 Ave NE
 Woodinville, WA 98092
 Phone: 425-486-2700
 Fax: 425-486-2700

Note: This map shows the general location of sidewalk gap projects and bike lane projects in a conceptual manner -- to show the non-motorized corridors that need to be completed. There may be existing sidewalks and bike lanes in these locations, these project lines just indicate that there are CIP projects in this general area needed to complete non-motorized connectivity for these corridors.



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H. Other Agency, Projects, and Review

A list of other agency projects within the vicinity of the city has been compiled so that Woodinville's transportation planning considers these improvements in its planning process. The city will work with these agencies in its planning process and communicate with these agencies on solutions to regional transportation issues.

Table 4H-1: Other Agency Projects

Jurisdiction	Location	Type of Project	Project Number	Comments
King County	NE 175 th /NE 172 nd PL From 155 th PI NE to DuRocher Rd (174 th NE)	Capacity Minor	OP-RD-18	Reconstruct Roadway
King County	176 th Ave NE & Wood-Duvall Rd	Safety	HAL-35	Preliminary suggested scope Add left-turn lane in EB/WB directions
King County	176 th Ave NE from Wood-Duvall Rd to NE 195 th	Non-motorized	N-89.40	Construct neighborhood pathway
King County	NE 144 th St ITS from 124 th Ave NE to 148 th Ave NE	ITS	ITS-17	Provide Intelligent Transportation System improvements which could include vehicle direction; cameras; traveler information
King County	Du Rocher Rd From 172 nd PI NE to Wood-Duvall Rd	Non-motorized	N-89.30	Provide non motorized facility
King County	124 th Ave NE ITS From NE 132 nd St to NE 160 th	ITS	ITS-21	Provide Intelligent Transportation System which could include cameras, vehicle detection, fiber optic communications
King County	146 th PI NE from SR-202 to 155 th Ave NE	Preservation	RC-48	15 ft tall wall
King County	Juanita-Woodinville Way NE From 112 th Ave NE to I-405	Capacity Minor	CP-4	HOV highway access
King County	Avondale Road NE & NE 159 th St	Safety	HAL-11	Preliminary suggested scope- Install signal. Add left turn lane in NB/SB direction
King County	Wood-Duvall Rd From 171 st Ave NE to Avondale Rd	Capacity Minor	CP-12	Widen roadway to increase capacity
King County	Wood-Duvall Rd ITS Phase I From 168 th Ave NE to 212 th Ave NE	ITS	ITS-6	Provide intelligent transportation system improvement which could include synchronized signals, cameras, vehicle detection, fiber optic communications, dynamic message signs
King County	176 th Ave NE & Wood-Duvall Rd	Safety	HAL-35	Preliminary suggested scope – add left turn lane in EB/WB directions
King County	Wood-Duvall Rd from NE 183 rd St to 185 th Ave NE	Safety	HARS-6	Preliminary suggested scope – widen road for TWLTL
King County	Willows Road Extension from NE 124 th to NE 145 th	Capacity Major	CP-18	Construct missing arterial link
King County	Avondale Road NE Ph II from NE 155 th St to NE 168 th St	Capacity Minor	CP-13	Widen roadway to 3 lanes including 2 eight foot shoulders and a walkway
King County	Wood-Duvall Rd and Avondale Rd NE	Capacity Minor	CP-16	Widen the interstate for additional turn lanes, signal improvements, illumination, curb, gutter, sidewalks, bike lanes
Snohomish County	SR 522 to 176 th St SE	Capacity, Safety	WS-21	Widen to 5 lanes with access management; limiting signal spacing to 1 mi. or greater, no new signalized intersections, raised median treatments, limitations on driveway and private road access.
Snohomish County	SR 522 to UGA Boundary	Urban 3 lane standards	AC-35	Paradise Lake Road
Snohomish County	212 St SE to 240 th St SE	Urban 2 lane standards	AS-44	45 th Avenue SE
Snohomish County	SR 522 to King County Line	Rural 2 Lane Standards	AS-46	Echo Lake Road / 131 st Ave SE
Redmond	Eastside BNSF Rail Corridor	Non-motorized rail banking	21	Build a non-motorized trail on existing rail corridor.
Bothell	SR 22 Stage 2A and 2B Improvements	Safety and capacity	Sheets 18 and 19	2A: West End: Wayne Curve to 91 st Ave NE 2B: Wayne Curve to NE 180 th St
Bothell	39 th Ave Extension: 240 th St to 228 th	Capacity – road extension	Sheet 25	Bothell Connector
WSDOT	SR 9 Widening from Woodinville border to Arlington	Capacity, Safety		SR 9 Widening
WSDOT	SR 522 widening so that there is 2 lanes from King Snohomish Border to Monroe	Capacity Safety		SR 522 Widening
WSDOT	I-405 Widening	Capacity, Safety		



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This DRAFT document is being sent to the following agencies:

- King County
- Snohomish County
- Puget Sound Regional Council
- Redmond
- Kirkland
- Bothell
- WSDOT
- CTED

I. Eastside Rail Corridor

Burlington Northern Santa Fe is in the process of negotiating a sale (2009-2010) of the eastside railroad corridor, which runs from North Renton to Snohomish, (including the Redmond spur) to the Port of Seattle. This includes the Bellevue and Redmond lines, both which run through Woodinville. This will result in a change of ownership of the rail corridor and a change in who operates the rail line. King County intends to purchase an easement for a trail from the Port of Seattle along the portion of the corridor from Renton to Woodinville. King County has expressed their interest in making this a non-motorized corridor with a trail. At a regional level the discussion for the possible uses of this rail corridor, include; freight, an excursion train, commuter rail and a non-motorized trail.

The City would encourage the use of this corridor for a pedestrian corridor as well as encourage a rail station in Woodinville for future excursion rail service or a commuter rail service. Consideration should be given to locating a future rail station along the Little Bear Creek Corridor, as this would support the downtown planning to add more density and residential dwellings to the downtown. If a rail station is located in Woodinville, when this occurs the city would encourage moving the existing park and ride to the rail station in order to create a multi-modal station.

J. Traffic Impact Fees

Existing

The current transportation impact fee methodology assigns a share of transportation project costs to each of the four Transportation Service Areas (TSA) within the City. Impact fees are based on the amount of roadway capacity used by a development. This capacity is measured in Vehicle Miles Traveled (VMT). VMT is based on the developer's share of the average cost of capacity. The average cost of capacity is based on a 20-year list of projects in the Transportation Facilities Plan (TFP). The developer's share of the average cost of capacity is based on the share of each project that is designed to add capacity to serve new growth.



Future

Future recommendation is to change the traffic impact fee system to simplify and update it with the new project lists developed as part of this plan. The existing multi-zone system and vehicle miles travelled metric that currently exists is complex, and therefore hard to understand and administer. In the future, a one-zone system with a charge per PM peak hour trip is desired in order to make traffic impact fees easier to understand and administer while still achieving the purpose of charging development per unit of road capacity taken. In the appendix a rough estimate of traffic impact fees has been developed. However, a new traffic impact fee will need a new ordinance and discussion with elected bodies before it is implemented.

K. Financing

This document does not address the financing of the plan. The financing of this plan will be addressed as part of the Capital Facilities Plan, which will be developed in 2010-2011. The Capital Facilities Plan will address the financing of transportation in a comprehensive manner in coordination with other City needs.

L. Concurrency and Adopted Level of Service (LOS)

Currently, the City has adopted LOS "E" for operation of its road system per WMC 21.28.070 for concurrency. It was requested that a different level of service be considered for roads within and serving single-family residential neighborhoods. The purpose of the higher level of service standard for these roads is to preserve the look, feel, and operational characteristics of residential streets as "residential" and not allow them to be used for through traffic and the fulfill network capacity needs.

Upon analysis and review, it is recommended that a LOS "C" is established for local roads and intersections, contained within the R-1, R-4, and R-6 zones, as shown on the currently approved Zoning Map, subject to the following conditions:

- 1) This applies to local roads and intersections (residential) only.
- 2) This does not apply to designated arterial roads within or adjacent to these zones.
- 3) This does not apply to an intersection of a local street and an arterial street. This intersection would be considered part of the arterial street network.