Chapter 2: Inventory of the Existing Transportation System

A. Introduction

An inventory of the existing transportation system was taken as a baseline measurement for planning purposes. The baseline information will give a snap shot of the current state of the transportation system. This broad overview of the current state of the transportation system provides a basis for planning for the future.

B. System Inventory

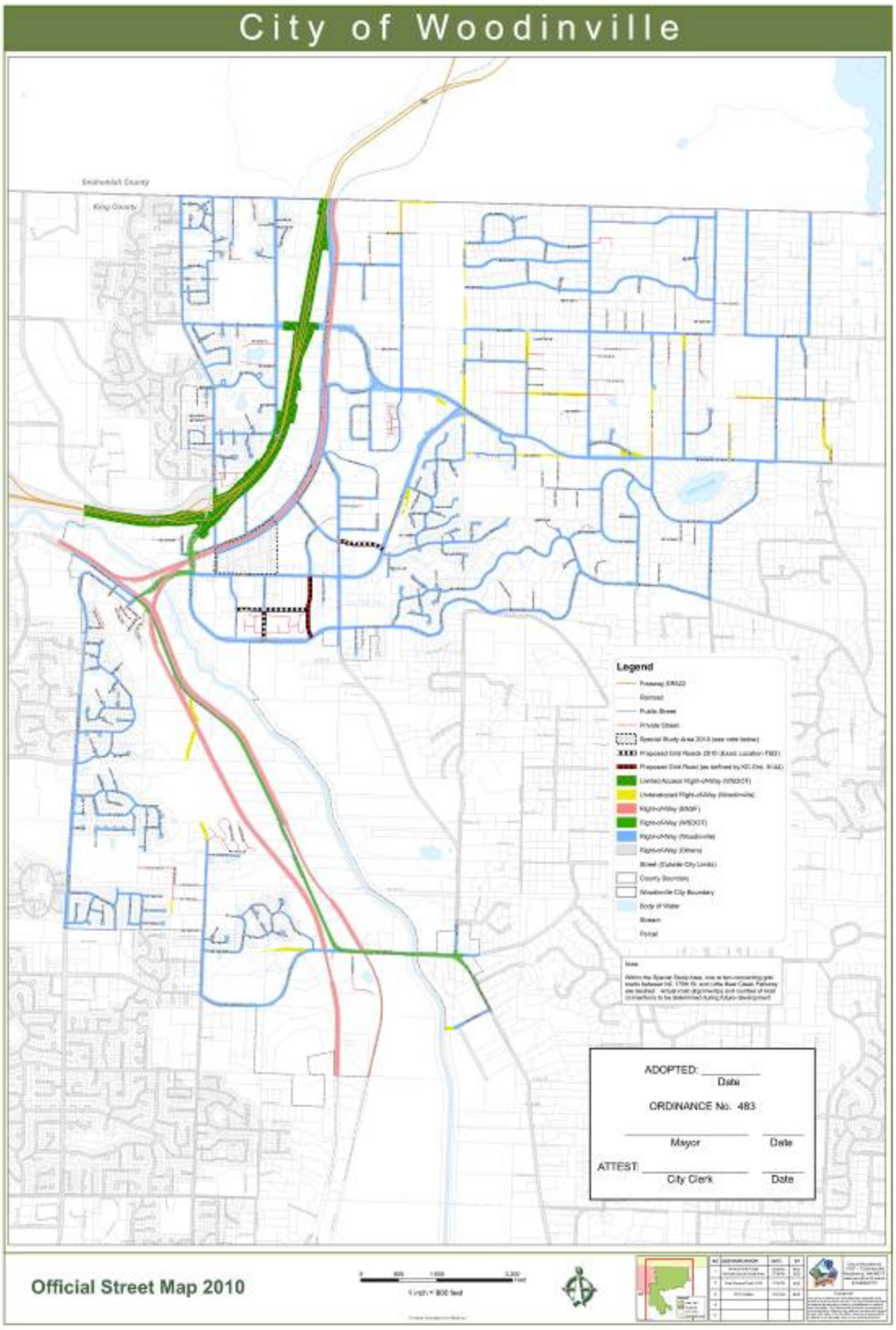
The system inventory consists of the following information:

- Official City Street Map (WMC 12.03 Revision Projected to be approved in 2010)
- Street Classification Map (WMC 12.12)
- Average Daily Traffic Woodinville Streets and State Highways
- Existing LOS
- Signal Locations and Ownership
- Citywide Accidents for the years of 2006, 2007, 2008
- Pavement Management Ratings
- Non-motorized system
- Transit
- Commute Trip Reduction

C. Official City Street Map

The official city street map shows all the public and private streets and right-of-way ownership. Woodinville has a total of 47.4 miles of public roads and 9.8 miles of private roads, and 2.81 miles of State Route 202 and 1.88 miles of State Highway 522. There are also 7 miles of railroad tracks though town (this includes both the Redmond line and Bellevue line). Even though Woodinville is a small city, Woodinville has major state highways, and several important transportation corridors and an extensive road network as part of its transportation system.

Map 2C-1 Official City Street Map (DRAFT as presented to the City Council)



Map 2C-2 Existing Street Classification Map per WMC 12.12

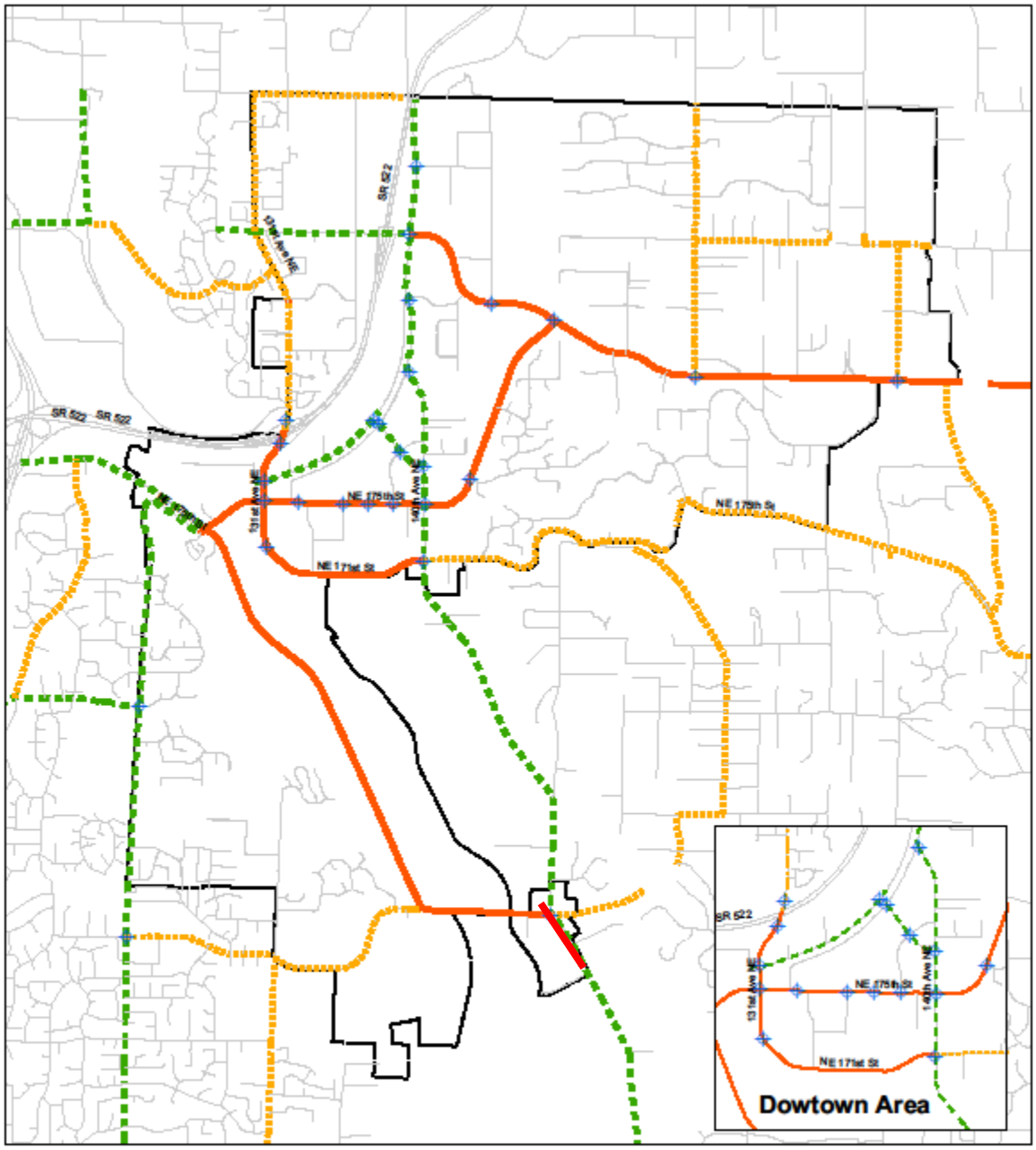


Figure 9-4

Woodinville Arterial Classification System

Per WMC 12.12

Functional Class Definitions

All of the streets in the city are classified into a functional class based on connectivity, service requirements, traffic characteristics, function and surrounding land use as codified in WMC 12.12. The city has 50.41 miles of streets including state highways SR 202 but not SR 522. There are four functional classes of roadways (streets) within the City: Principal Arterial, Minor Arterial, Collector Arterial and Local Street/Road. The definitions used for roads and streets in the city are:

Principal Arterial
Principal arterials serve the major centers of activity within the City and serve as the principal connection points with the road network outside of the City.

Minor Arterials
Minor arterials provide intra-community travel for areas bounded by the principal arterial system. These types of roadways serve trips of moderate length and provide direct access to abutting properties. Minor arterials are the connecting roads between collector arterials and principal arterials, but generally do not go into the neighborhood itself.

Collector
Collector arterials provide for land access and circulation within the community, including connecting neighborhoods with smaller community centers. Collector arterials also provide access from the local roads (street) network to minor and principal arterials. Property access is generally a higher priority than through traffic movements on this type of roadway.

Local Roads
Local streets provide access to abutting properties, serving individual neighborhoods, and provide connection of the properties to the arterial street system. Through traffic movements are discouraged on this type of road and design controls are usually in place to facilitate this.

The current functional classifications of streets within Woodinville, as defined by WMC 12.12, is shown on Map 2C-2 Existing Street Classification.

D. Average Daily Traffic (ADT) State Highways

Woodinville is highly impacted by state highways SR 202 and SR 522. These highways bisect the town and attract a large amount of pass through traffic. Both highways are managed by WSDOT. SR 522 is a limited access highway with WSDOT in complete control of the approaches, access, operation and maintenance including the interchange area in accordance with state law.

SR 202 is a managed access highway. The regulations for managed access highways were enacted in 1991 to address the portion of the state transportation system that is not limited access [RCW 47.50.010(2)]. Managed access regulation is based upon the

premise that the access rights of a property owner are subordinate to the public's interest in a safe and efficient highway system. Therefore, new access points on SR 202 are reviewed by WSDOT and approved by the City of Woodinville with the City as the permitting agency. The City of Woodinville has adopted Ordinance No. 232 establishing road and access standards that are in compliance with WAC 468-52, highway access management. State Route 202 has been designated a managed access highway.

Highways of Statewide Significance in proximity to Woodinville

The following highways are of statewide significance:

- State Route 522
- State Route 9
- Interstate 405

State Route 202 is not a highway of statewide significance.

The City of Woodinville has adopted Ordinance No. 232 establishing road and access standards that are in compliance with WAC 468-52, Highway Access Management. SR 202 has been designated a class managed access highway.

Responsibility for design, construction maintenance and operation of these highways is described in law by RCW 47.24. As the City of Woodinville's current population is less than 22,500, the responsibilities for SR 202 is shared between WSDOT and the City. The following table summarizes the responsibilities of each jurisdiction:

Table 2D-1 City and State Maintenance Responsibilities

City Maintenance Responsibility	WSDOT Maintenance Responsibility
Enclosed Drainage	Signing
Sidewalks	Striping
Street Lights	Traffic Signals
Snow plowing	Pavement Surface
Right-of-way behind curb	Open Ditches
Street Sweeping	Roadway Shoulders
	Curb
	Crosswalks
	Channelization of lanes

SR 522 is a limited access state highway and WSDOT is fully responsible for its maintenance and operation including its interchanges.

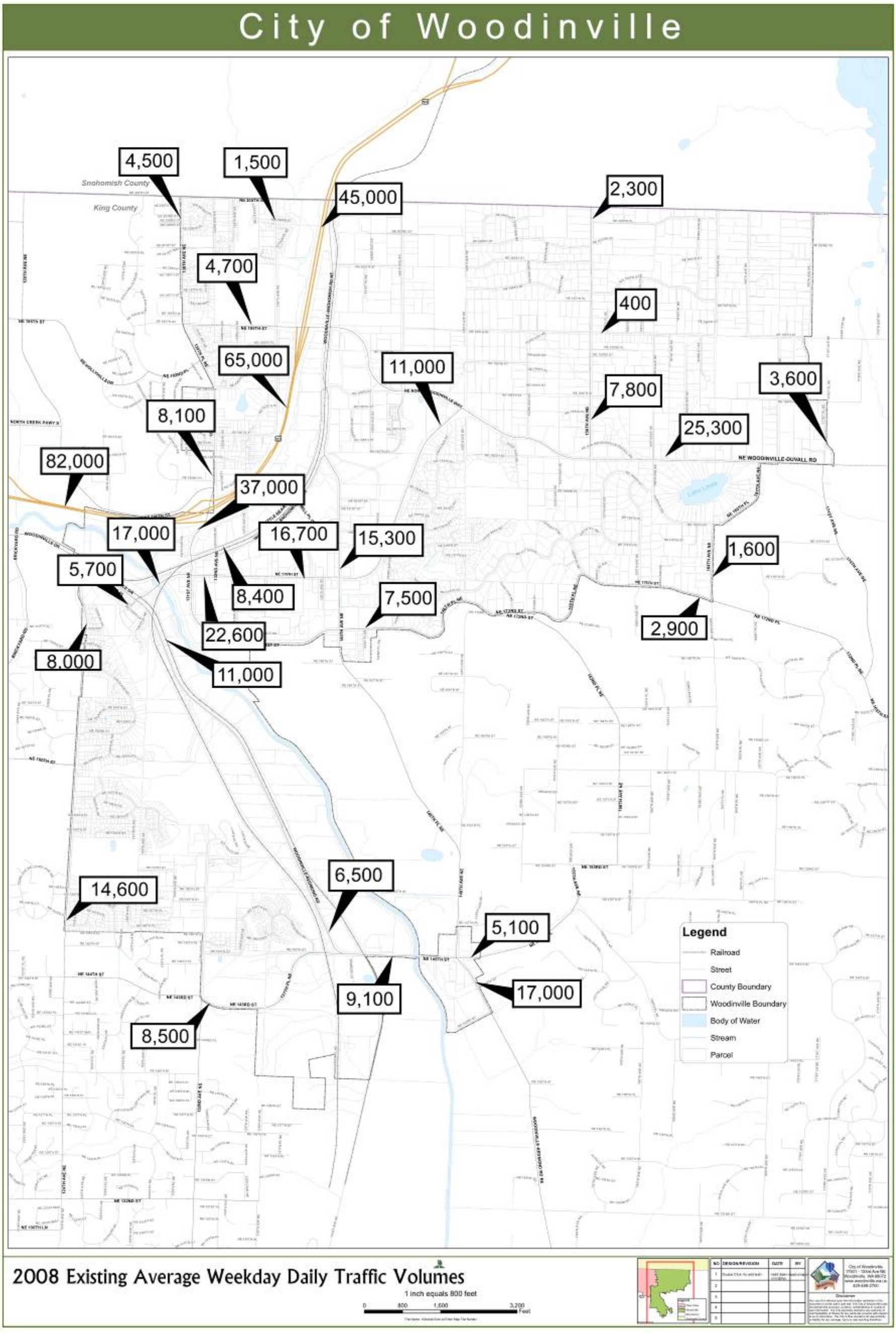
E. Concurrency and Highways of Statewide Significance

Under GMA, concurrency is one of 14 goals local governments must consider in land use planning. The concurrency goal is intended to ensure public facilities and development at the time of occupancy without decreasing service levels below locally established minimum standards [RCW 36.70A.020(12)]. The Washington Growth Management Hearings Board has determined that the concurrency goals do not apply to state highways [04-2-0038c, WWGMHB]. Highways of statewide significance are statutorily exempt from the concurrency requirement, except in Island and San Juan Counties [RCW 36.70A.070 (6)(a)(iii)(C)}. Approximately half of the state highway system is designated of statewide significance. The Legislature did not specifically address concurrency for state-owned transportation facilities that are not of statewide significance.

F. Average Weekday Traffic Volumes

Average weekday traffic volumes give a sense of which city roads receive a high volume of traffic. Woodinville-Duvall Road and NE 175th Street both have an average weekly traffic count of over 20,000 vehicles, making these two roads Woodinville's highest volume roads other than state highways.

Map 2E-1: Average Weekday Traffic Volume



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F. Existing LOS

The City's existing LOS has only three intersections at LOS E and no failing intersections. All other intersections have a higher LOS at PM peak hour, as shown in the table below.

Map 2F-1 Existing LOS

***Note: LOS for intersection 28, NE 145th/NE 148th assumes 2009 roundabout project has been completed.

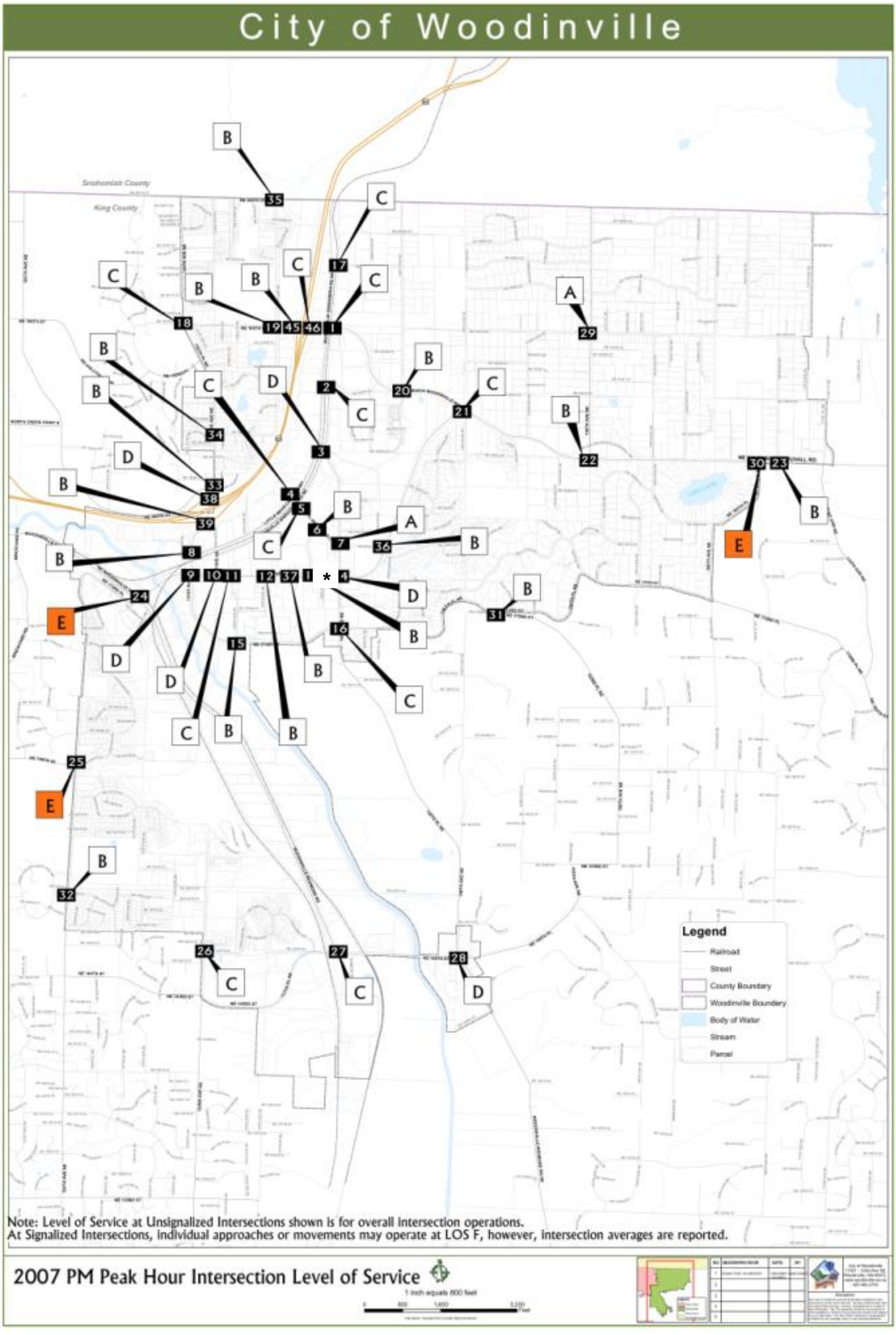

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Table 2F-1 Existing Level of Service		
Intersection ID#	**Location**	**2007 Level of Service**
1	Woodinville-Snohomish Rd / NE 195th St	C
2	Woodinville-Snohomish Rd / NE 190th St	C
3	Woodinville-Snohomish Rd / 140th Ave NE	D
4	NE 177th Pl / NE 178th Pl	C
5	Woodinville-Snohomish Rd / NE 178th Pl	C
6	138th Pl NE / NE 178th Pl	B
7	140th Ave NE / NE 178th Pl	A
8	SR 202 / NE 177th Pl	B
9	SR 202 / NE 175th St	D
10	132nd Ave NE / NE 175th St	D
11	133rd Ave NE / NE 175th St	C
12	135th Ave NE / NE 175th St	B
13	138th Pl NE / NE 175th St	B
14	140th Ave NE / NE 175th St	D
15	133rd Ave NE / NE 171st St	B
16	140th Ave NE / NE 171st St	C
17	Woodinville-Snohomish Rd / NE 200th St	C
18	130th Pl NE / NE 195th St	C
19	136th Ave NE / NE 195th St	B
20	144th Ave NE / NE Woodinville Way	B
21	NE Woodinville-Duvall Rd / NE Woodinville Way	C
22	156th Ave NE / NE Woodinville-Duvall Rd	B
23	168th Ave NE / NE Woodinville-Duvall Rd	B
24	NE Woodinville Dr / NE Woodinville-Duvall Rd / NE 175th St	E
25	124th Ave NE / NE 160th St	E
26	132nd Ave NE / NE 143rd St	C
27	Woodinville-Redmond Rd / NE 145th St	C
28	SR 202 / NE 145th St	D
29	156th Ave NE / NE 195th St	A
30	167th Ave NE / NE Woodinville-Duvall Rd	E
31	146th Pl NE / NE 173rd St	B
32	124th Ave NE / NE 149th St	B
33	132nd Ave NE / NE 180th St	B
34	132nd Ave NE / NE 186th St	B
35	136th Ave NE / NE 205th St	B
36	146th Ave NE / NE 178th Pl	B
37	136th Pl NE / NE 175th St	B
38	SR 202 (131st Ave NE) / SR 522 WB Ramps	D
39	SR 202 (131st Ave NE) / SR 522 EB Ramps	B
40	NE 180th St / New SR 522 Crossing	NO DATA
41	NE Woodinville Dr / New SR 522 Crossing	NO DATA
42	138th Pl NE / NE 171st St	NO DATA
43	133rd Ave NE / NE 177th St	NO DATA
44	133rd Ave NE / Woodinville-Snohomish Rd	NO DATA
45	NE 195th St / SR 522 SB On-Ramp	B
46	NE 195th St / SR 522 NB Off-Ramp	C
47	135th Ave NE / NE 171st St	NO DATA

G. Traffic Signal Locations and Jurisdictional Management of Signals

Woodinville has a total of 28 signalized intersections with six of those signals under WSDOT operations and control and one on the border of Woodinville and Bothell on the 131st corridor that is under Bothell's operational control. The City contracts with King County for signal maintenance and timing operations. The traffic and pedestrian signals on the NE 175th Street corridor from 131st Avenue NE to 140th Avenue NE are interconnected and operationally coordinated for improved operation and increased traffic flow along this street corridor.

Map 2G-1: Signal Ownership and Operations

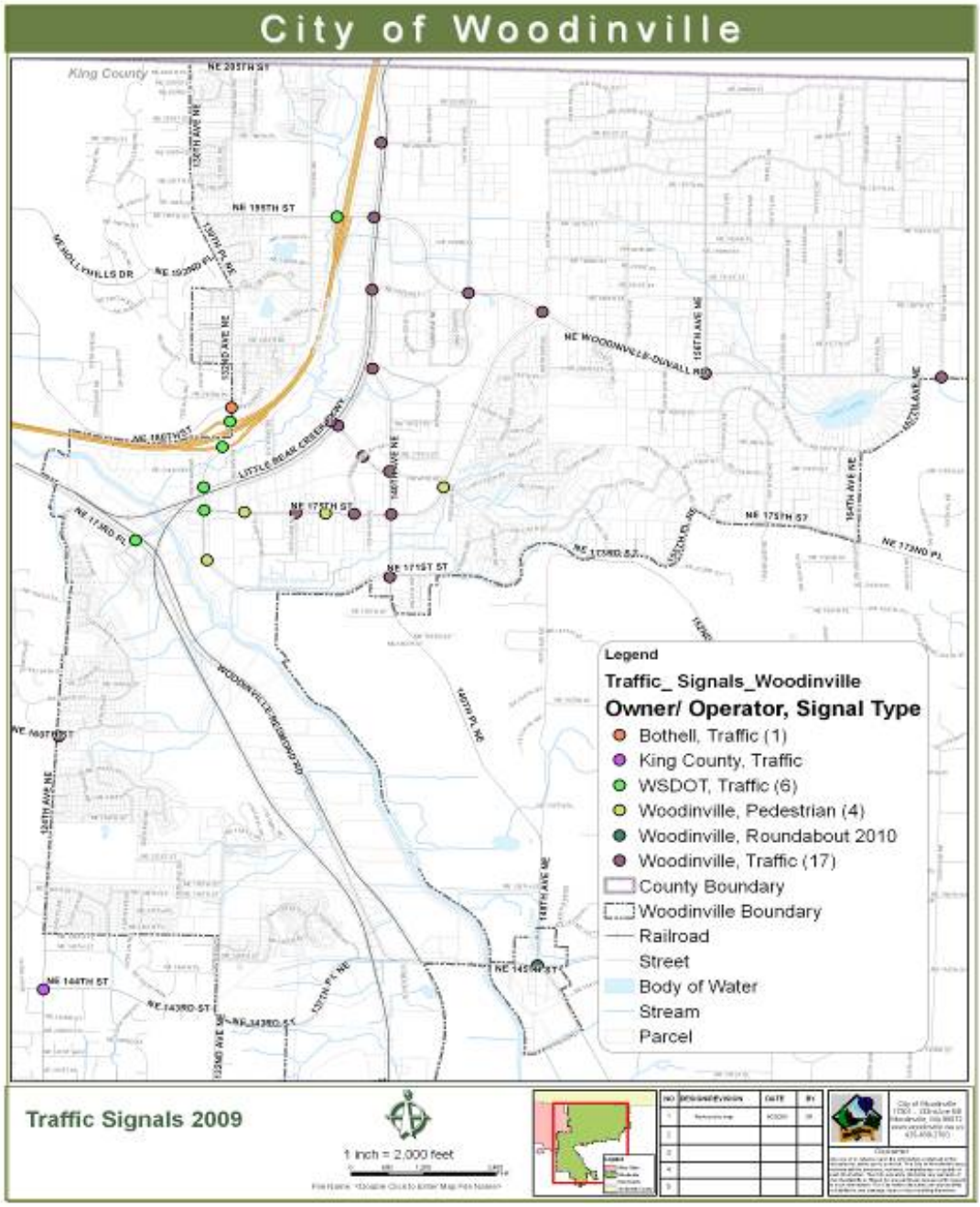

Table 2G-1 Signal Ownership and Operations		
Owner	**Signal Type**	**Location**
Bothell	Traffic	NE 180th St and 132nd Ave NE
King County	Traffic	124th Ave NE and NE 144th St
King County	Traffic	NE 132nd St and 124th Ave NE
King County	Traffic	NE 132nd St and 132nd Ave NE
Woodinville	Traffic	Woodinville-Snohomish Rd NE and 140th Ave NE
Woodinville	Pedestrian	NE 175th St and 133rd Ave NE
Woodinville	Pedestrian	NE Woodinville-Duvall Rd and NE 178th St
Woodinville	Pedestrian	NE 175th St at 13700 block (crosswalk)
Woodinville	Pedestrian	131st Ave NE and NE 171st St (crosswalk)
WSDOT	Roundabout	SR 202 and 148th Ave NE (Signal removed 2009)
Woodinville	Traffic	124th Ave NE and NE 160th St
Woodinville	Traffic	NE 171st St and 140th Ave NE
Woodinville	Traffic	NE 175th St and 140th Ave NE
Woodinville	Traffic	NE 175th St and 135th Ave NE
Woodinville	Traffic	NE 175th St and Garden Way NE
Woodinville	Traffic	Woodinville-Snohomish Rd NE and NE 190th St
Woodinville	Traffic	Woodinville-Snohomish Rd NE and NE 195th St
Woodinville	Traffic	NE North Woodinville Way and NE 190th St
Woodinville	Traffic	NE Woodinville-Duvall Rd and NE North Woodinville Way
Woodinville	Traffic	NE Woodinvillle-Duvall Rd and 156th Ave NE
Woodinville	Traffic	NE Woodinville-Duvall Rd and 168th Ave NE
Woodinville	Traffic	Garden Way NE and NE 178th Pl
Woodinville	Traffic	Woodinville-Snohomish Rd NE and NE 178th Pl
Woodinville	Traffic	Little Bear Creek Pkwy and NE 178th Pl
Woodinville	Traffic	NE 178th Pl and 140th Ave NE
Woodinville	Traffic	Woodinville-Snohomish Rd NE and NE 200th St
WSDOT	Traffic	131st Ave NE and NE 175th St
WSDOT	Traffic	131st Ave NE and Little Bear Creek Pkwy
WSDOT	Traffic	131st Ave NE and SR 522 (south side)
WSDOT	Traffic	131st Ave NE and SR 522 (north side)
WSDOT	Traffic	SR202/ Woodinville Dr and 127th Pl NE

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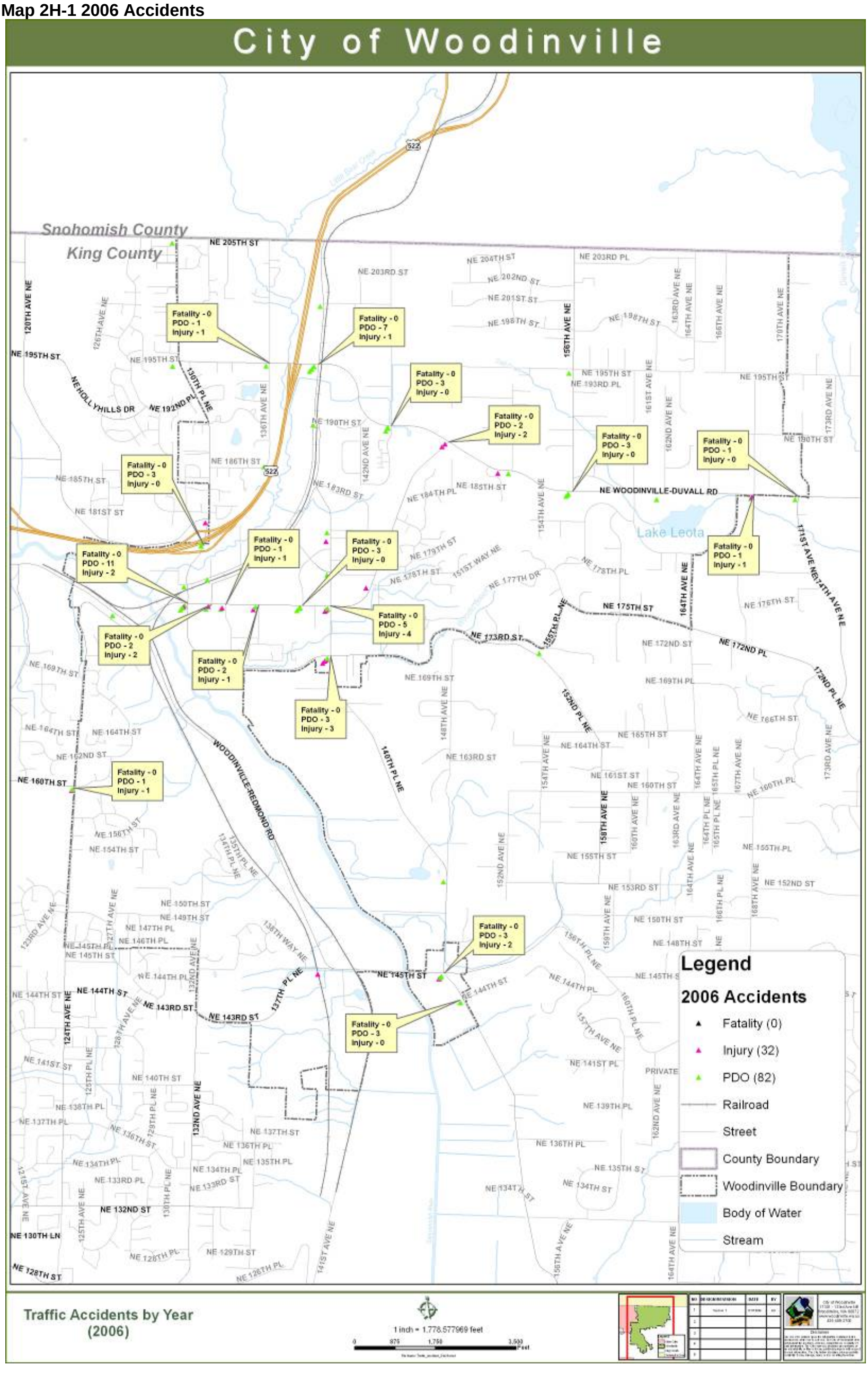
H. Accident History

The amount and location of accidents in the city are tracked closely to determine if there are safety issues that need to be addressed. Accidents have fluctuated over the years, but the recent accident data suggests that there was an anomaly in the data with accidents peaking in 2008, but that the number of accidents in the city is currently decreasing and is on the decline.

Map 2H-1 2006 Accidents



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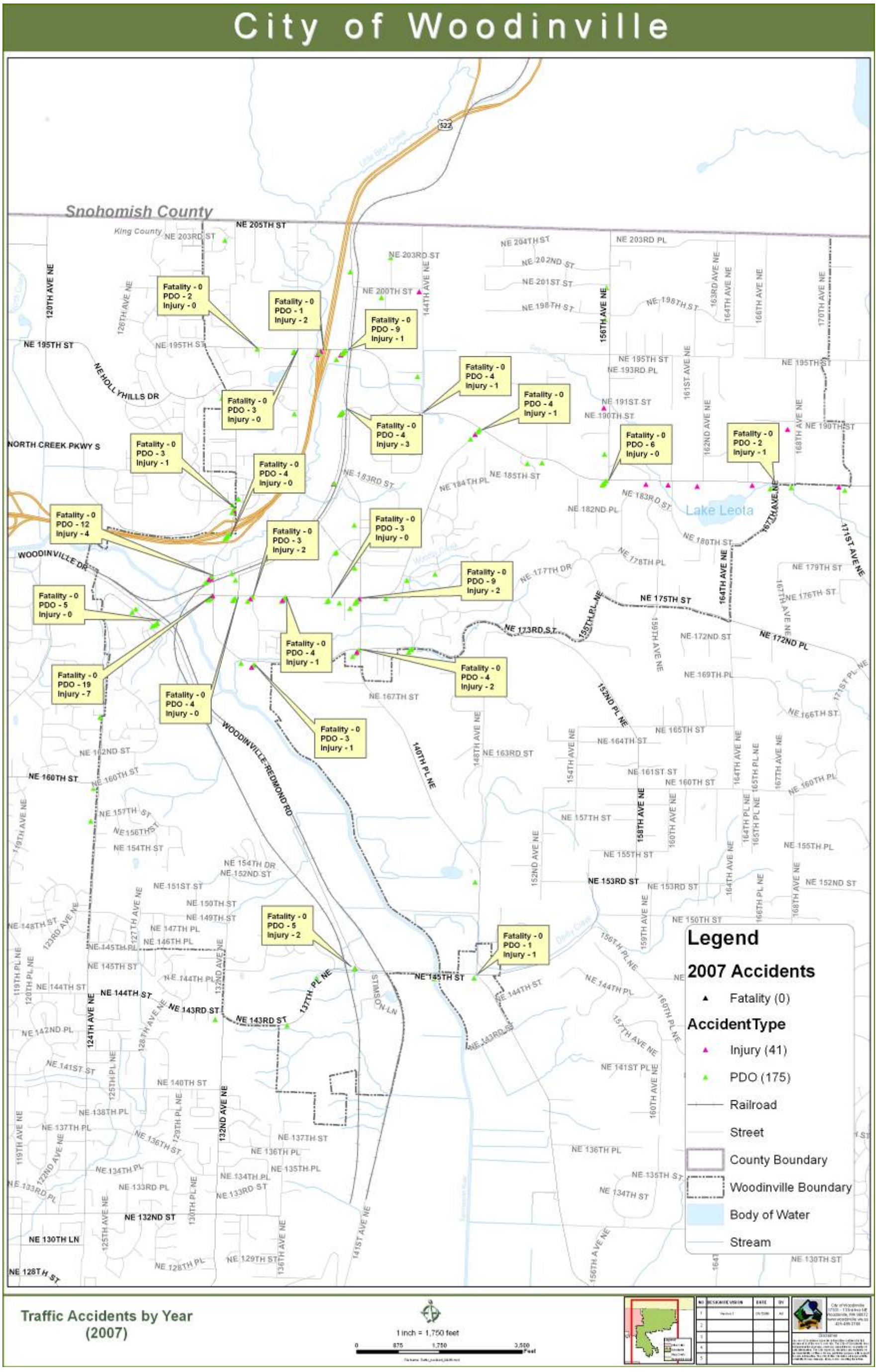
Map 2H-2 2007 Accidents:



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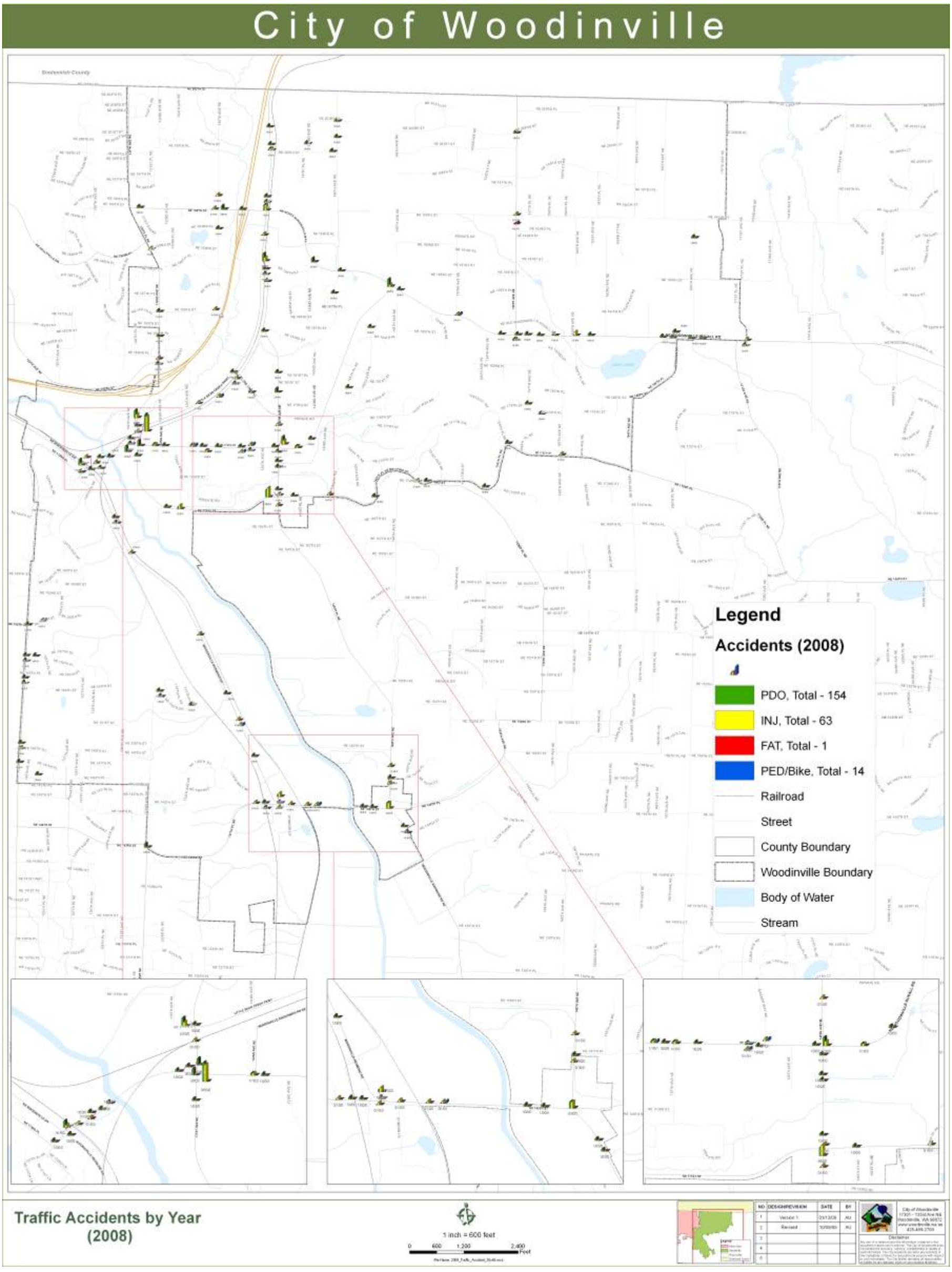
Map 2H-3 2008 Accidents



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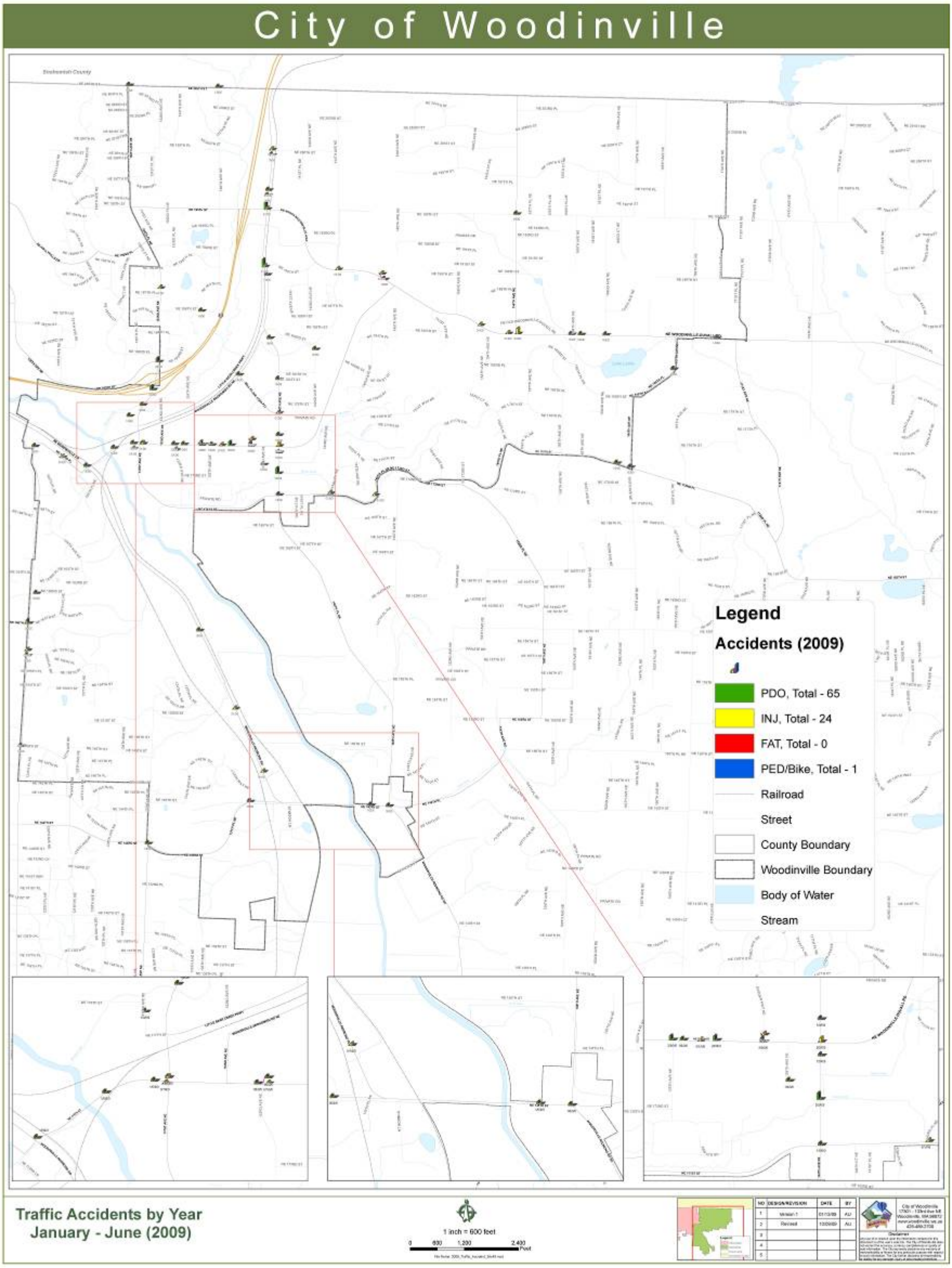
Map 2H-4 Accidents January – June 2009



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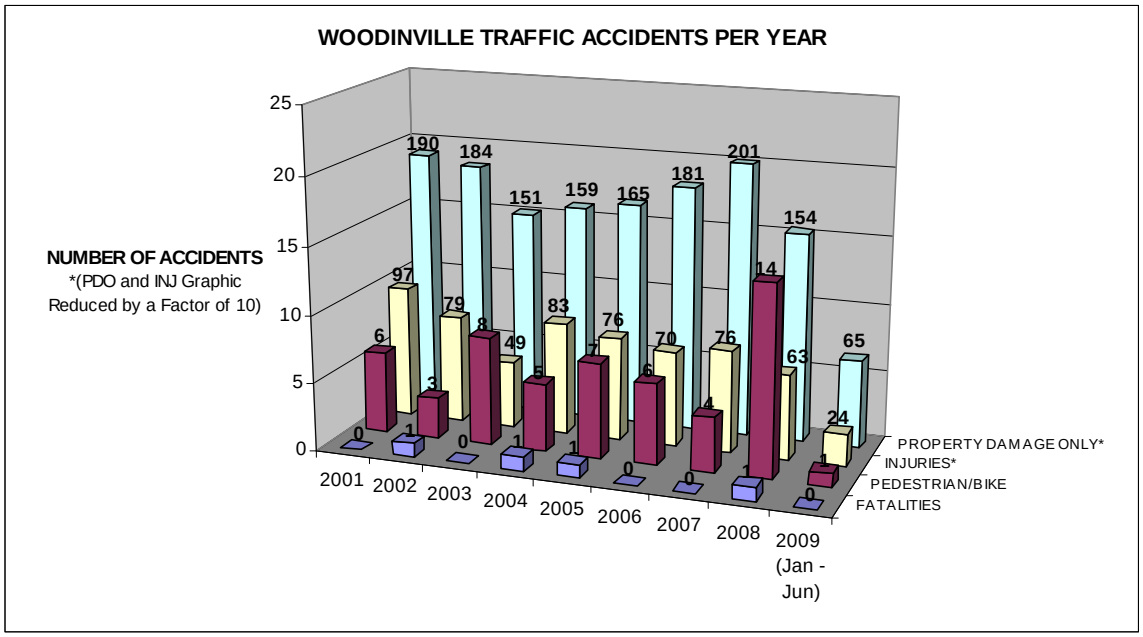
Comparing data between the dates of January 1st and June 18th, 30 fewer accidents occurred this year from last year, and 50 fewer than occurred in 2007, during the same period.

Table 2H-1 Annual Accident Numbers				
Type of Accident	**2006**	**2007**	**2008**	**2009**
Fatality	0	0	1	0
Pedestrian or Bike	6	4	14	1
Injuries	24	63	76	70
Property Damage	65	154	201	181

Figure 2H-1: Woodinville Traffic Accidents per Year



Pedestrian Accidents

The year of 2008 showed a large number of pedestrian accidents. The number of pedestrian accidents is on the decline but learning from these accidents will help promote safety in the future. The City of Woodinville shows a majority of bicycle accidents that occurred within the City limits took place at or near driveway egresses onto public roads. Pedestrian accidents occurred at various locations, including intersections, driveways, and along various stretches of roadway.

I. Pavement Condition

In 2008, the City hired Northwest Management Systems to develop a pavement management system and to assess the existing pavement condition of the City's streets and roadways. The study made an assessment of each street segment and rated its pavement condition. The study also provided guidance on possible rehabilitation, maintenance and repair measures to keep the streets in operating condition, pavement rehabilitation schedules, and projected budgetary needs based upon the selected maintenance activities.

The report established an "Overall Condition Index" (OCI) for pavement condition based upon a visual survey looking at pavement distress. This established a rating number for the condition of each road segment.

Table 2I-1: Overall Condition Index Criteria

OCI Range	Conditions
85 to 100	Excellent
70 to 85	Very Good
55 to 70	Good
40 to 55	Fair
25 to 40	Poor
10 to 25	Very Poor
0 to 10	Failed

At the time of the study, the condition of the City's street network was on the average of 62.

Table 2I-2: Roadway Classification Pavement Status

Category Condition	PCI Range	Percent of Network
Good	70>PCI<= 100	41%
Fair	50> PCI <= 70	33%
Poor	25> PCI<= 50	19%
Very Poor	0> PCI <= 25	7%

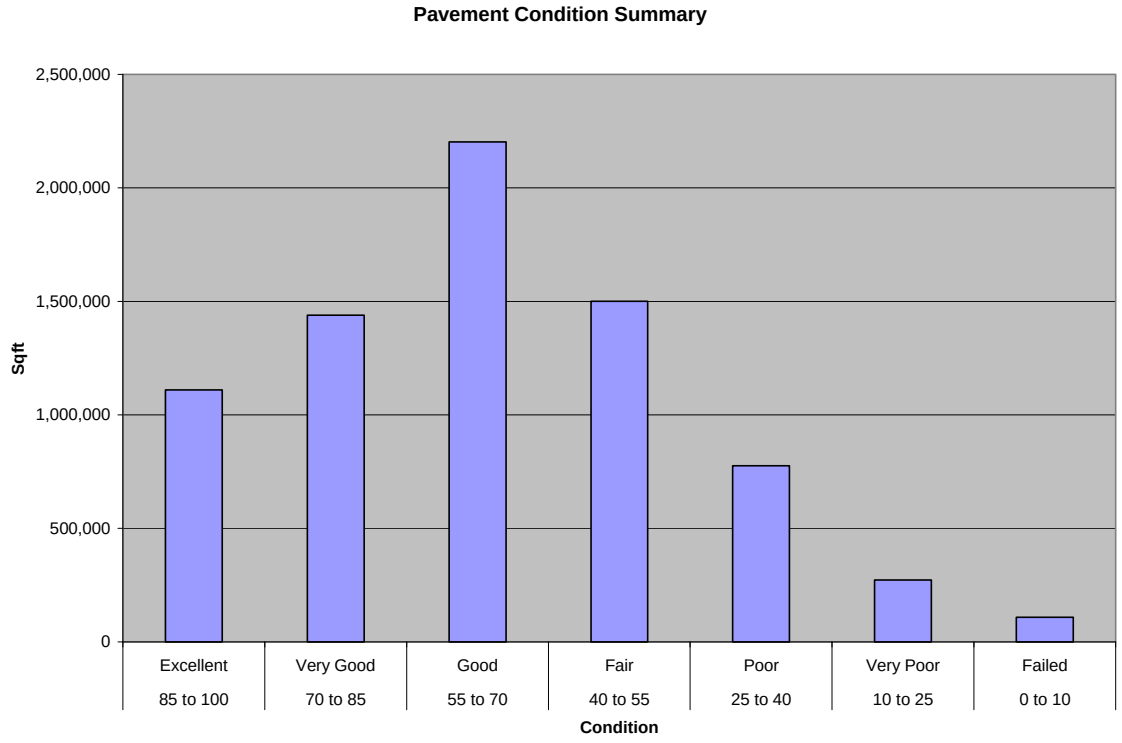
Table 2I-3 Roadway conditions of Woodinville Street Classification Types

Functional Classification	Centerline Miles	Lane Miles	Average PCI	Good	Fair	Poor	Very Poor
Principal Arterial	8.27	31.03	62	23%	49%	25%	3%
Minor Arterial	2.08	4.28	76	57%	43%	-	-
Collector	6.13	16.81	62	32%	40%	28%	-
Residential	31.97	64.28	68	43%	30%	19%	8%

Table 2I-4 Condition Categories for Miles of Streets

Condition Category	PCI Range	Miles of Streets
Good	71-100	19.1
Fair	51-70	16.7
Poor	26-50	12.5
Very Poor	0-25	2.8

Figure 2I-2 Graph of Pavement Conditions



J. Sidewalk Inventory and Existing Bike Lanes

A comprehensive sidewalk inventory was completed in 2009 as a baseline for analyzing where sidewalk gaps exist and to assess pedestrian connectivity in different neighborhoods. The different types of walking paths were divided up into four different categories.

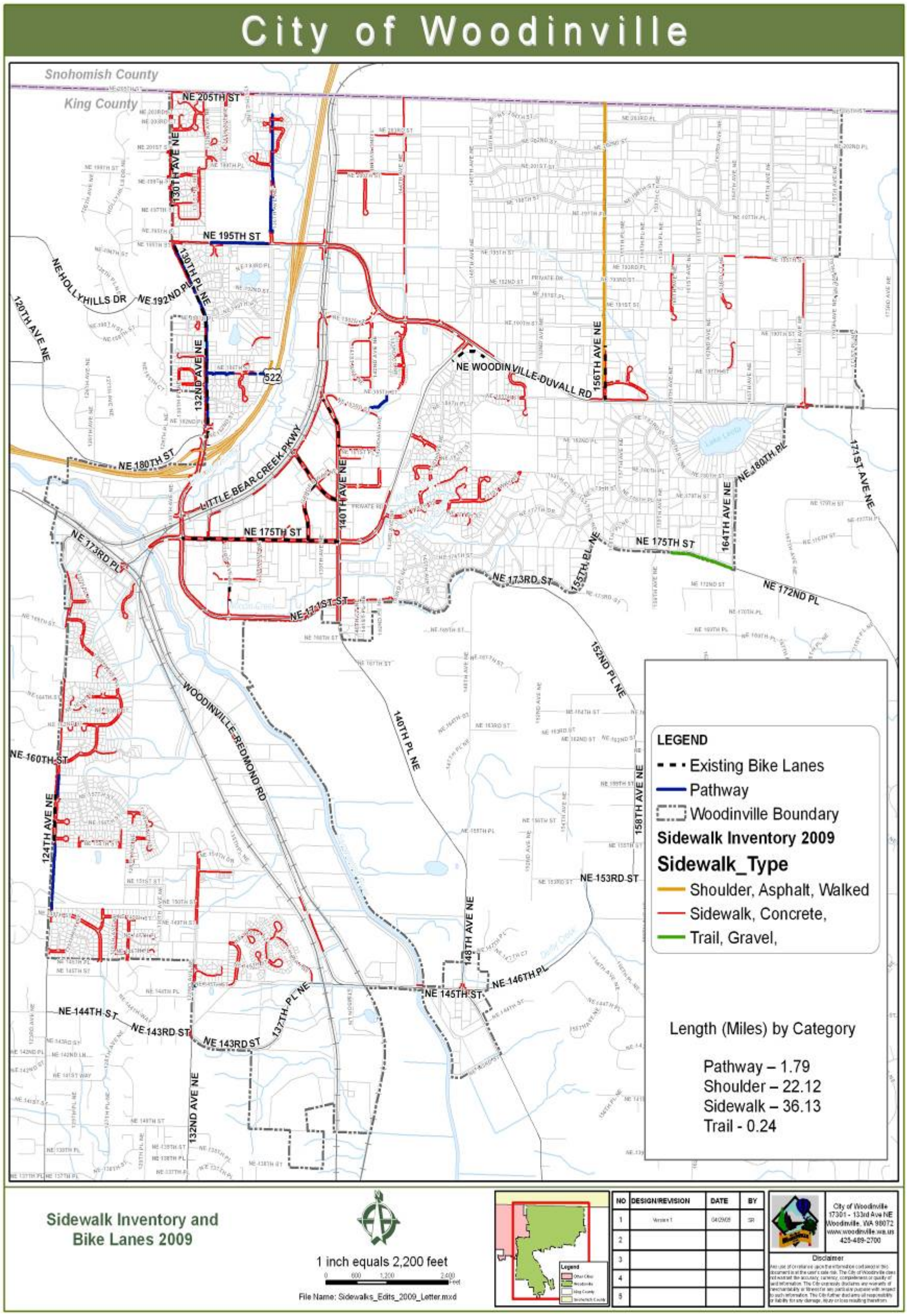
Shoulder, Asphalt, Walked
Areas of roadway shoulder wider than a normal road section and therefore may be used by pedestrians or bikes.

Sidewalk, Concrete
Typical sidewalk infrastructure within the City; the width of the sidewalk varies but it is constructed of concrete with curb and gutter.

Trail, Gravel
An unpaved trail that is wide enough for pedestrians and bicycles. In some areas of the City this includes gravel pave construction, a low impact development material to replace asphalt pervious surfaces.

Pathway
A designated path to walk or bike on that either is separated from the road or has a concrete curb to protect pedestrians and bicyclists from traffic.

Map 2J-1 Sidewalk Inventory and Bike Lanes



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K. School Zone Projects

It is the goal of the City and the School District to provide safe walking routes for children to walk to school. Traffic calming improvements such as speed humps and Speed Awareness Monitors (SAM units) have been added to the school zones. School Districts are required by State regulations to develop suggested walk route plans ("official" school walk routes) for every elementary school where children walk to school. The walk route plan must cover a one-mile radius from the school and the suggested route to school map must be distributed to all elementary school students and their parents. These school walk routes are not necessarily the most direct way to get to school but instead these routes take into consideration the safest way to get to school. The city does not participate or have any say in the development of the official school walk route, as this is the sole responsibility of the school district. The City is responsible for the maintenance and development of infrastructure, which provides a safe school zone, but does not participate in the development of the official school walk route map that is distributed to students.

The Manual on Uniform Traffic Control Devices (MUTCD) sets specific policies, standards and practices as a way provide safe and effective traffic control in the school zones. These procedures include guidance on the placement of school zone signage and school walk routes.

The MUTCD guidance on the placement of school zone signs suggests that, "the reduced speed zones should begin either at a point 200 feet from the crosswalk, or at a point 100 feet from the school property line, based on whichever is encountered first as traffic approaches the school." (MUTCD, sect. 7B.11) The City has designated school zones and signs to warn drivers of reduced speed zones (see School Zones maps for the boundaries of the designated school zone for each school).

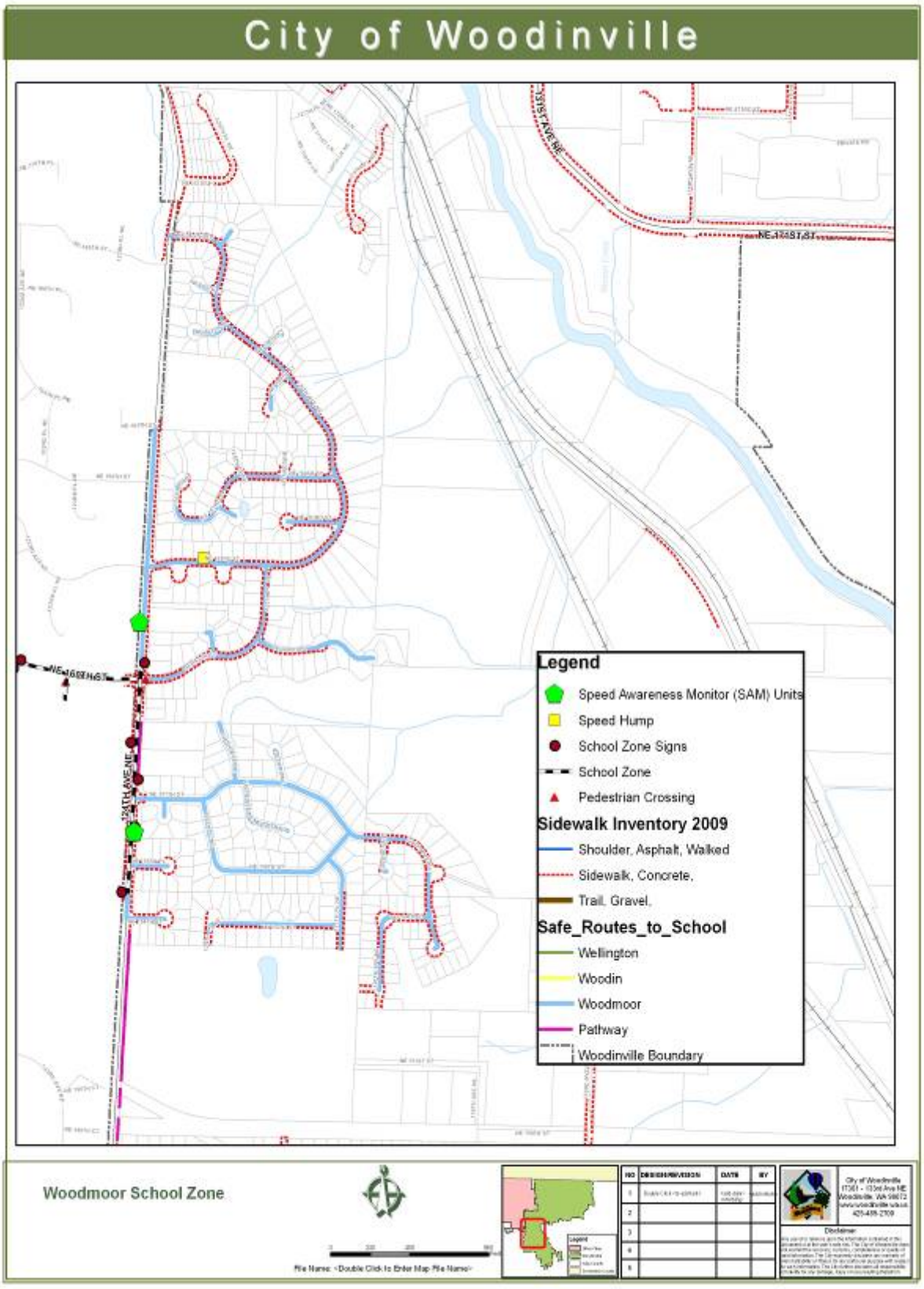
WAC 392-151-025 School Route Plans

Suggested route plans shall be developed for each elementary school that has students who walk to and from school. It shall recommend school routes based on considerations of traffic patterns one block to and from school. The route to school plan shall be distributed to all students with instructions that it be taken home and discussed with the parents.

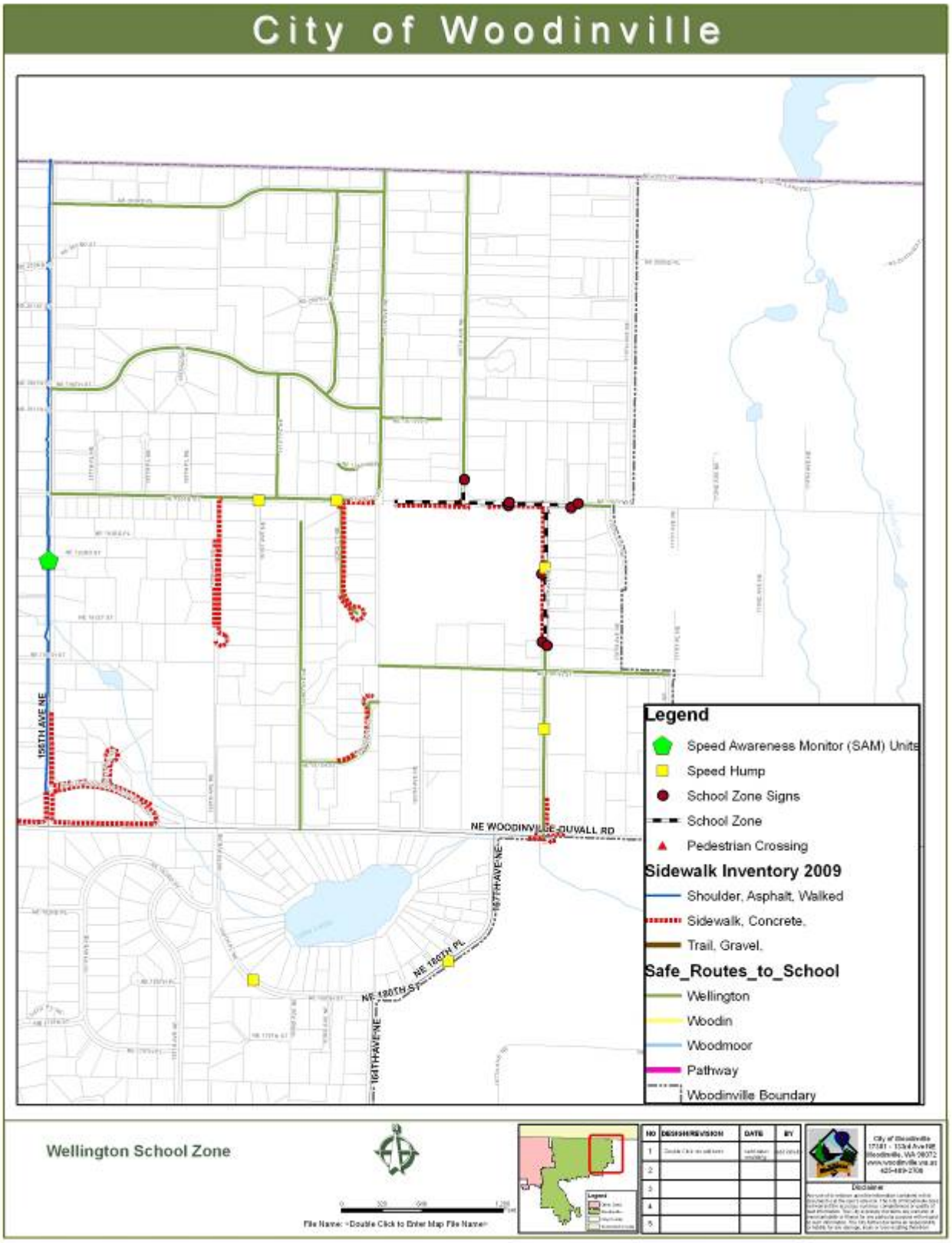
School Walk Route Maps

Each school zone was mapped to show the school walk route plans, the placement of signage, school zone crossing locations, and any safety improvements, all overlaid with the sidewalk inventory to show gaps in the sidewalk network in relation to the school walk routes. These maps are helpful in analyzing what infrastructure exists and where it is placed in the school zone. The maps also show which school walk routes have gaps in the sidewalk network and need new CIP projects to address those sidewalk gaps.

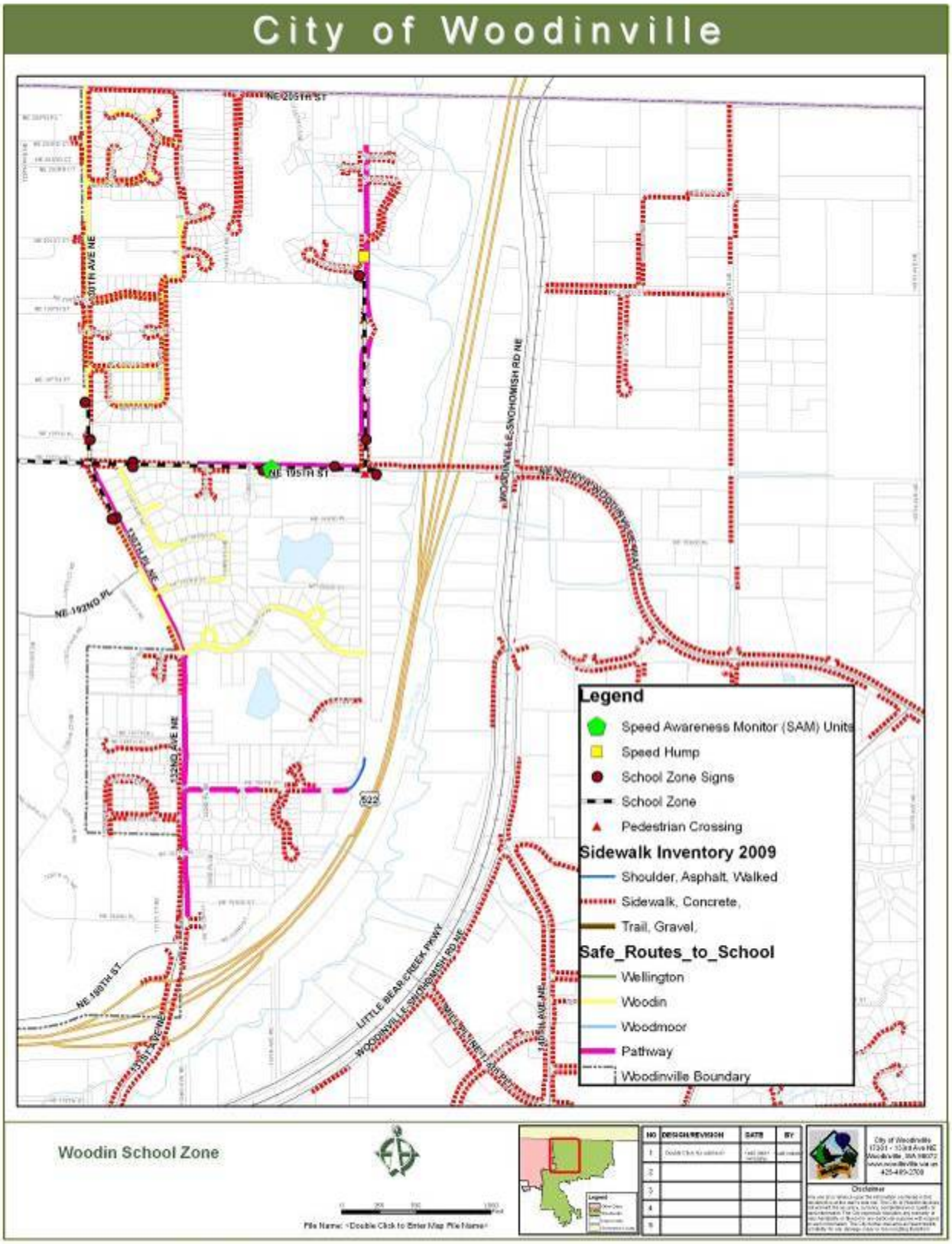
Map 2K-1: Woodmoor School Zones



Map 2K-2: Wellington School Zones



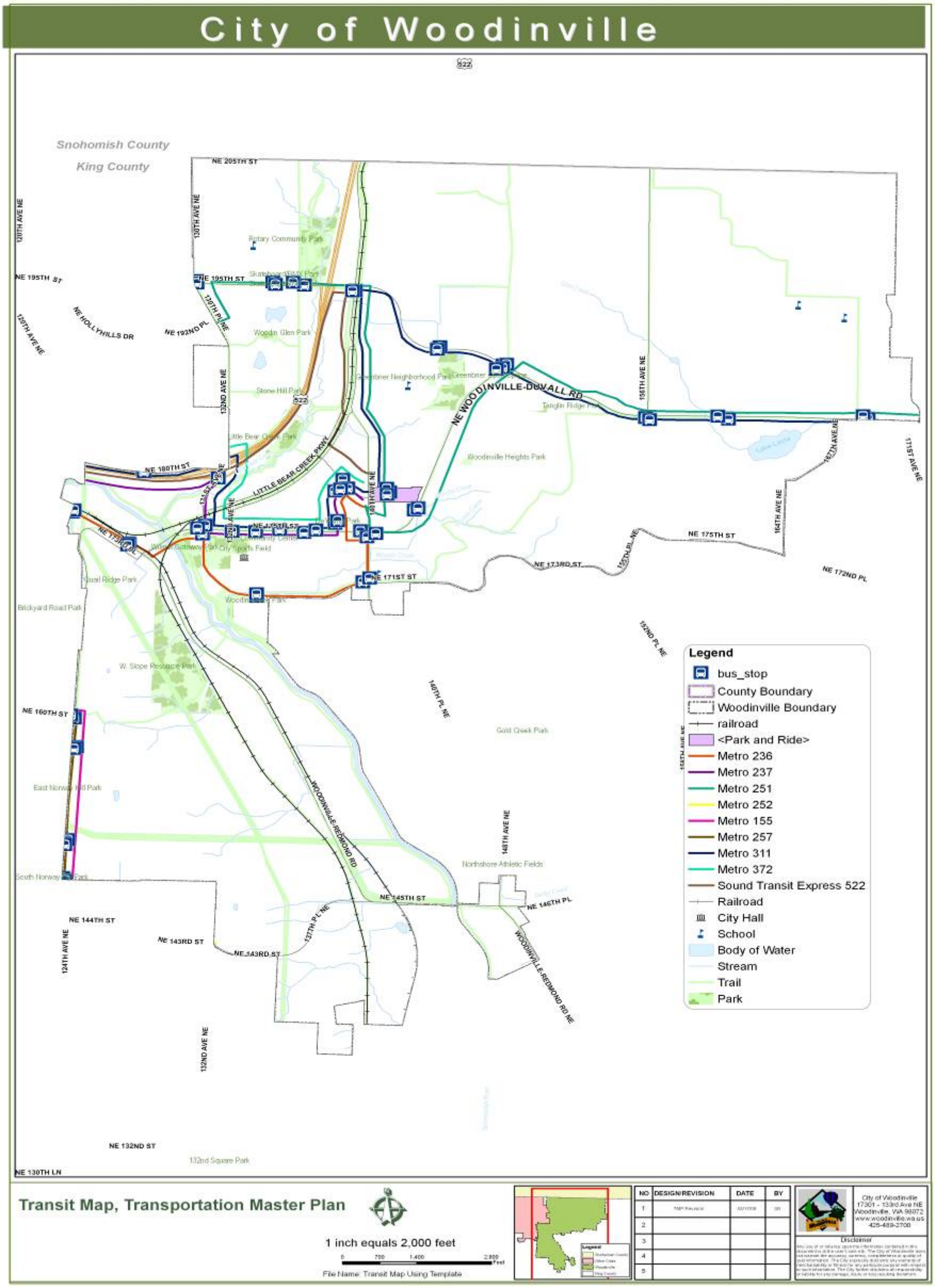
Map 2K-3: Woodin School Zones



L. Existing Transit Routes

King County Metro and Sound Transit are the public transit providers for the City of Woodinville. Metro offers fixed route service on routes 236, 237, 251, 255, 257, 311 and 372. Sound Transit provides one express regional bus route 522, which follows SR 522 from Woodinville to Seattle.

Map 2L-1 Existing Transit Routes



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Existing Transit Services

The chart and map below lists the frequency and route descriptions of the Woodinville transit service.

Table 2L-1 Existing Transit Routes
Regional Routes
(Route has one or more stops in or adjacent to City of Woodinville)

Origin	Destinations	Park and Ride Stop	Peak Frequency (minutes)	Weekend Service	One Way Service	Two Way Service
Woodinville	Kingsgate, Juanita, Kirkland	Yes	30 peak 60 off peak	Sat, Sun daytime only	X	
Woodinville	Houghton, Bellevue	Yes	3 trips AM peak 3 trips PM peak	None	X	
UW Bothell / Cascadia	Woodinville, English Hill Redmond	Yes	30 peak and off peak	Sat. daytime only	X	
Brickyard	Kingsgate, Kirkland, Downtown Seattle	No	15-30 AM peak 10-20 PM peak	Sat, Sun daytime and evening	X	
Brickyard	Houghton, Downtown Seattle	No	30 AM, PM peak	None	X	
Redmond	Kingsgate	No	30 AM, PM peak	None		X
Duvall	Woodinville, Downtown Seattle	Yes	15-30 AM, PM peak	None	X	
Woodinville	Bothell, Lake City, University District	Yes	7-30 AM peak 10-30 PM peak	None	X	
Woodinville	Bothell, Lake City, Downtown Seattle	Yes	15-30 peak 30-60 off peak	Sat, Sun daytime and evening	X	

The City has one park and ride lot located in downtown on 140th Avenue NE. This is the hub of the public transit service in the City. This park and ride has a capacity of 459 stalls is historically underutilized as seen from the numbers provided by King County Metro below. There has been some discussion about relocating the park and ride for better freeway access and access to the rail line if a rail corridor becomes a reality. The extra capacity of the park and ride maybe needed in the future if King County Metro cuts bus service to Duvall

Table 2L-2 Park and Ride Utilization 2000-2008

Year	Quarter	Park & Ride Parking Spaces Used	Percent Capacity Used
2000	4	260	57%
2001	4	277	60%
2002	4	265	58%
2003	4	188	41%
2004	4	206	45%
2005	4	222	48%
2006	4	189	41%
2007	4	264	58%
2008	4	161	37%

* Data provided by King County Metro

Table 2L-3: Weekday Transit Ridership Trends from 2005-2008						
2008 Routes	Origin	Destinations	Weekday Ridership Fall 2005	Weekday Ridership Fall 2006	Weekday Ridership Fall 2007	Weekday Ridership Fall 2008
Metro 236	Woodinville	Kingsgate, Juanita, Kirkland	698	760	763	743
Metro 237	Woodinville	Houghton, Bellevue	69	71	88	118
Metro 251	UW Bothell/Cascadia	Woodinville, English Hill Redmond	350	348	457	336
Metro 255	Brickyard	Kingsgate, Kirkland, Downtown Seattle	3,135	3,260	3,602	3,643
Metro 257	Brickyard	Houghton, Downtown Seattle	378	312	390	441
Metro 311	Duvall	Woodinville, Downtown Seattle	649	618	661	701
Metro 372	Woodinville	Bothell, Lake City, University District	3,426	3,526	3,909	4,428
Sound Transit 522	Woodinville	Bothell, Lake City, Downtown Seattle	2,529	2,687	2,893	3,379
Total Weekday Ridership of Woodinville Routes* (listed in table, first quarter fall ridership numbers) Data provided by KC Metro			**11,234**	**11,582**	**12,763**	**13,789**

M. Commute Trip Reduction (CTR) and Transportation Demand Management (TDM)

In 1993 the City of Woodinville adopted its first Commute Trip Reduction (CTR) Ordinance. Commute trip reduction (CTR) is a statewide program aimed at reducing drive-alone work commutes. Washington's Commute Trip Reduction Law (RCW 70.94.521-555) was enacted and incorporated into the state's Clean Air Act in 1991. It requires major employers with 100 or more employees commuting to a worksite between 6:00 AM and 9:00 AM for 12 consecutive months to implement programs to reduce their employees' vehicle commutes and vehicle miles travelled. It also requires jurisdictions that have CTR-affected worksites within their boundaries to adopt CTR ordinances and to include their own worksites as affected, regardless of whether they meet the CTR law's major employer's definition. This means that the City of Woodinville itself is considered a CTR affected worksite. The total number of CTR affected sites in the City typically ranges from four to six employers who participate. The goal of the program, which affects all four counties in the central Puget Sound region, is to reduce congestion and delay air pollution and fuel consumption through programs that decrease the number of commute trips made by people driving alone.

There is enough historical data to show that commute trip reduction works. In 2005, employees at CTR worksites around the state made nearly 20,000 fewer vehicle trips each weekday morning than when the worksite entered the program. Of that number, 14,200 were in the central Puget Sound Region. This resulted in reduced delay by an estimated 11.6% during peak travel period on average mornings in the region (Puget Sound Regional Technical Memorandum on Commute Trip Reduction - 2007 Destination 2030 Update).

The King County Rideshare, which is part of the CTR program, has been very valuable to Woodinville employees and businesses. The rideshare program provides vans to groups of commuters who would like to form their own group carpool. It also provides an online community database (Rideshare.com) of commuters to help those who would like to find a commute partner find one. Woodinville's Rideshare.com data file now has 25 participants from 18 different employer sites. As of 2009 there are now a total of six vanpools in Woodinville. Of these six vanpools, four of them formed in 2008 so the program has grown considerably in the last couple of years. Overall, CTR has been a very successful program in Woodinville, especially with for those worksites located on SR 202 that has no bus service.

Recently, legislature has made some changes to CTR policies, with the Commute Trip Reduction Efficiency Act bill passing in 2006. As a result, the City passed Ordinance No. 474 in 2008, which put the City into compliance with the new CTR rules.