



City of Lake Elmo

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NOTICE OF MEETING

The City of Lake Elmo
Planning Commission will conduct a meeting on
Monday, April 13, 2009, at 7:00 p.m.

AGENDA

1. Pledge of Allegiance
2. Approve Agenda
3. Approve Minutes
 - a. March 9, 2009
4. Public Hearings
 - a. COMPREHENSIVE PLAN UPDATE: TRANSPORTATION CHAPTER.
5. Business Items
 - a. Comprehensive Plan Update: Park Plan; Review of Metropolitan Council's response
6. Informational Item: Village Area AUAR Update
7. City Council Updates
 - a. April 7, 2009 – Variance at 2931 Jonquil Trail North - tabled
8. Adjourn

The next meeting will be on WEDNESDAY, April 22nd.

**City of Lake Elmo
Planning Commission Meeting
Minutes of March 9, 2009**

Chairman Van Zandt called to order the meeting of the Lake Elmo Planning Commission at 7:00 p.m. COMMISSIONERS PRESENT: Anderson, Bidon, Britz, Fliflet, Hall, Pearson, Ptacek, Van Erem, Van Zandt, Ziertman. Absent: McGinnis. STAFF PRESENT: Planning Director Klatt, Planner Matzek, and Consulting Senior Planner Gozola.

Agenda

M/S/P, Ptacek/Hall, to approve the agenda as presented. Vote: 9:0.

Minutes - None.

Public Hearing – *Variance; 2931 Jonquil Trail North*

Planner Matzek summarized the requested variance to allow the construction of an in-ground pool, spa, pergola, and fireplace within the 100 foot buffer setback required from the edge of Open Space Preservation developments.

Commissioner Fliflet asked when the house and pool was built on the property to the east of the applicant's property.

Planner Matzek said that the home was permitted in November of 2005 and the pool was permitted in March of 2006.

Commissioner Pearson chose to recues himself as he is in the pool business.

Commissioner Anderson asked how far the trail in the Lake Elmo Regional Park Reserve was from the boundary of the park.

Planner Matzek stated that she did not have that distance, but it was near the edge of the park and the development boundary. The Washington County Park's Department had a concern about screening the trail from the proposed structures.

Dave Sonka, Applicant's Landscape Designer

Mr. Sonka outlined the process by which he met the applicants, developed their plans, and his communication with city staff. He identified that the Huges' bought the existing home in the winter of 2007 with the intention of building a pool as their children are in competitive swimming. Although he initiated contact with city staff in December, he did not know about the 100 foot setback until January 6th after he had many hours into designing the project. The grade rises four to six feet from the backyard of the property to the boundary of the Lake Elmo Regional Park Reserve.

THE CHAIRMAN OPENED THE PUBLIC HEARING AT 7:34 P.M.

Mrs. Silvia Hucec, applicant

Mrs. Hucec stated that she had moved here with her husband from Europe to live their American dream and is asking them to be able to build the pool to fulfill that dream.

Commissioner Fliflet asked if they built the house or if it was already built when they bought it.

Mrs. Hucec said that house was already built. She said if they had built the home, they would have built it closer to the road to have additional area in the back yard. They didn't think it was a possibility that they would not be able to build a pool.

Commissioner Hall said it seems that there are overlapping requirements. When there is already a buffered area, it seems excessive to also require this setback.

Commissioner Ziertman said the original buffer setback was 200 feet and was reduced to 100 feet. She asked how this could be communicated to people interested in property.

Planning Director Klatt stated that we as staff are going to ask developers to show this setback line in the future. It is difficult going backward and applying this code.

Rachel Meyers, attorney for applicant

Ms. Meyers went through the three variance criteria discussed in the staff report. As has been discussed, the applicant's home has a staggered edge to which they must apply the six foot setback making it difficult to find space in that area for a pool. She asked that the commission allow the applicant's to use and enjoy their property. Although there are other similar situations, many of the lots are not developed at this point so they are not experiencing the hardship yet. She believes everyone agrees that the conditions existed before they bought the home.

THE CHAIRMAN CLOSED THE PUBLIC HEARING AT 7:48 P.M.

Commissioner Britz asked if the pool could be placed on the east side of the property.

Mrs. Hucec said that there are no windows to the side from which the children can be supervised. The area is also dark and shadowed and more visible from the street which would create more disturbance.

Mr. Sonka said that all utilities for the house go through that area. The grading would be a challenge as it is a walk-out and the setbacks off the side lot line and screen porch creates limited space.

Commissioner Ptacek stated that when this development was reviewed, it was believed that the 200 foot setback was too much to require. He said that although other homes were built in the setback, multiple "wrongs" do not make a "right."

Chairman Van Zandt said that since both neighbors had a pool when the applicants moved in, there was no reason for them to believe a pool could not be built on that property as well.

Commissioner Fliflet said the hardship is that the applicants were not aware of the requirement, the city had previously permitted homes within the same setback, and they bought the home in its existing location on the property. She does not think there is a reasonable reason for the pergola and fireplace to be located within the setback.

M/S/P, Fliflet/Hall, move to recommend approval of the variance with conditions outlined in the staff report with the added condition that the pergola and the fireplace be placed to the side or outside the setback so as not to further encroach on the setback. Vote: 5:3:1 (Against: Bidon, Van Erem, and Ziertman; Abstention: Hall).

Public Hearing - Sign Ordinance

Consulting Senior Planner Gozola gave an overview of the outreach process used, the proposed language, overarching challenges, feedback to date, and the draft ordinance.

Commissioner Fliflet asked why both sides of a sign would be counted towards the total allotment.

Consultant Gozola stated that counting both sides of a sign is consistent with the existing code. He said the two sides advertise to two different directions.

Commissioner Fliflet asked that additional clarification be added to page thirteen regarding illumination as the intent may not be clear.

Commissioner Ziertman said page twelve mentions “sufficiently permanent material” and asked if this applied to temporary signs.

Consultant Gozola said this was existing language, but would say all signs including temporary signs would be included.

Commissioner Ziertman said that the requirement on page twelve regarding the posting of home addresses on the principle buildings does not make sense in some instances, such as when a home is far from the roadway. In such a case the fire department post would suffice. She said that banners, pennants, and streamers should be allowed as temporary signage. She then asked why on page twenty-five, the front lot line in the business district is one foot and it is five feet in all other districts.

Consultant Gozola found the setbacks in the chart to be existing requirements.

Chairman Van Zandt asked that the amount of window allowed to be covered by a sign be clarified.

Commissioner Fliflet said the city had previously banned monument signs, but believes they should be reconsidered if they are reasonably sized.

M/S/P, Fliflet/Ziertman, move to recommend allowing neighborhood identification signs. Vote: 7:2 (Ptacek, Van Erem)

M/S/P, Fliflet/Pearson, move to recommend adoption of optional language on page ten regarding sign faces. Vote: 9:0.

M/S/P, Ptacek/Van Zandt, move to recommend adding the language on page twenty-one with creating a special I-94 district. Motion was amended to address clarification on illumination and window sign allotment. Vote: 9:0.

M/S/P, Pearson/Ziertman, move to recommend adding the optional language of temporary off premises signs. Vote: 8:1.

THE CHAIRMAN OPENED THE PUBLIC HEARING AT 10:12 P.M.

Neil Krueger, 4452 Lake Elmo Avenue North

Mr. Krueger said that both sides of a sign should not be counted. He does not believe neighborhood monument signs are appropriate as they are not rural in character and given technology such as mapquest and satellites, it is not needed. He said that open house and parade of home signs are not just out on weekends and are sometimes left up for weeks. A rule is needed for realtors, but realizes this would be difficult to enforce.

Planner Matzek stated that resident Jeanie Snell had left earlier, but would like to encourage allowing more signage.

THE CHAIRMAN CLOSED THE PUBLIC HEARING AT 10:17 P.M.

Commissioner Pearson said that additional signage is needed for businesses and would like to see the maximum square footage raised.

Commissioner Fliflet said that the commission had just increased signage for businesses along I-94 and was not sure if it would be appropriate in the old village area.

Commissioner Fliflet suggested banners be allowed and that mural signs not be permitted.

Commissioner Ptacek said he thought murals should be regulated so as not to be abused, which could be addressed as it is being proposed to be permitted through a conditional use permit.

Commissioner Fliflet said page twenty identifies that freestanding signs shall not project higher than six feet and believes this is not high enough.

M/S/P, Fliflet/Pearson, move to recommend raising the height of freestanding signs to twelve feet. Vote: 6:3. (Hall, Ptacek, Van Erem)

M/S/P, Fliflet/Van Zandt, move to recommend removing the requirement that all signs shall be bordered with decorative material. Vote: 9:0.

M/S/P, Hall/Fliflet, move to recommend adding the use of banners to item number six for special temporary events. Vote: 9:0.

Break 10:50 p.m.

M/S/P, move to accept the draft ordinance with all the recommended changes and to bring the revised ordinance back to the next commission meeting. Vote: 8:1. Ptacek voted against because he is opposed to the neighborhood identification signage.

Chairman Van Zandt suggested holding a second meeting in March to address the remaining agenda items.

Planning Director Klatt said that additional future meetings would be needed due to a quick timeline for the Comprehensive Plan amendments. Future meetings will be held on March 23rd, April 13th, and April 22nd. He then provided information on the general updates on the agenda.

Meeting adjourned at 11:00 p.m.

Respectfully submitted,

Kelli Matzek
Planner

ITEM: Comprehensive Plan Update – Transportation Section

SUBMITTED BY: Kyle Klatt, Planning Director

REVIEWED BY: Kelli Matzek, City Planner
Ryan Stempski, Assistant Engineer

SUMMARY AND ACTION REQUESTED:

The City Engineer has completed work on the draft Transportation Section that will be included as part of Lake Elmo's 2030 Compressive Plan update submission to the Metropolitan Council. The Planning Commission is being asked to conduct the required public hearing for this plan amendment and make a recommendation to the City Council regarding adoption of this section of the City's Comprehensive Plan. The transportation section is one of three main sections of the Comprehensive Plan that must be updated to comply with the Metropolitan Land Planning Act and the Metropolitan Council 2030 Regional Development Framework. The Commission will be conducting a public hearing on the other sections (Water Supply and Surface Water) at its next meeting.

BACKGROUND:

The Metropolitan Land Planning Act requires every municipality and county within the seven-county metropolitan area to prepare and to submit a comprehensive plan to the Metropolitan Council. These plan updates must be submitted to the Metropolitan Council every ten years, with the exact timing based on the completion of a "systems statement" for each community in the metro area. Updated Comprehensive Plans for the current review cycle were due in December of 2008; however, the City of Lake Elmo was among a group of communities that received a six-month extension to complete its update. The new deadline for Lake Elmo to submit an updated Comprehensive Plan is May 29, 2009.

There are four primary elements that must be addressed in a community's comprehensive plan. These elements and a description of each from the Met Council's Local Planning Handbook are as follows:

Background

The **background** section of the plan delineates the community's vision and expectations. It includes the objectives, policies and forecasts that serve as the basis of the community's plans.

Land Use Plan

In the **land use** section the local comprehensive plan explains how the community has allocated and will allocate land use, how it will accommodate population growth, and how it protects special resources.

- Besides an inventory of existing land use, the land use section includes a description of the community's development plans, staging them in five-year increments.
- In the housing plan the community discusses plans for needed housing as these relate to housing needs throughout the region.
- In the special resources section the comprehensive plan identifies certain resources within the boundaries of the jurisdiction and outlines plans to ensure their protection.

Public Facilities Plans This section describes plans relating to transportation, water resources and parks. The expected population growth in the region places extraordinary pressures on these systems. For this reason, local plans relating to these systems must be thorough and appropriate.

- The **transportation** section must address the legal requirements for maintaining and developing roads, highways, transit, non-motor transportation and aviation.
- The **water resources** section addresses wastewater, water supply and surface water management. Maintaining an adequate and safe water supply is critical as population grows. This means assessing resources and attending to safe and thorough treatment methods.
- The **parks and open space** section must identify and describe parks and trails facilities within the jurisdiction.

Implementation In the **implementation** section, the jurisdiction shows how local official controls will ensure the continued viability of plans outlined in other sections of the comprehensive plan. This section also outlines the community's capital improvement program.

Lake Elmo last updated its Comprehensive Plan in 2006 after a lengthy negotiation process with the Metropolitan Council. Because this update occurred in the recent past, the City will not be required to submit the entire Plan to the Met Council for review by May of 2009 and will only need to update those sections that are impacted by the revised system statement for Lake Elmo. The specific sections that need to be addressed with the update fall under the heading of "Public Facilities Plans", including sections pertaining to transportation, water resources (including water supply and surface water management, and) and parks and open space. The other components that must be updated include "Protection of Special Areas" (solar access and aggregate deposits protection) under Land Use and Implementation.

The Background Information and Land Use Plan are not required to be updated at this time, and will therefore not be revised as a part of the 2030 update submission to the Met Council. All land use forecasts for the updated sections, including population projections, will be based on the current land use section.

The Commission is being asked to review and conduct a public hearing regarding the Transportation Plan at its April 13, 2009 meeting. The Water Resources sections will be reviewed at the April 22, 2009 meeting. Please note that the City already submitted an approved version of the Parks and Open Space plan to the Met Council, and has received comments back that must be incorporated into the final document before it can be formally adopted by the City. The Parks and Open space plan is therefore further along in the process than the other plans that must be updated.

The general process for submitting each of the required updates includes the following components:

- 1) Preparation of Draft Plan
- 2) Public Hearing and Review by Planning Commission
- 3) Review by City Council
- 4) Submission to Metropolitan Council
- 5) Review by Adjacent Communities (concurrent with submission to Met Council)
- 6) Incorporation of Comments into Plan
- 7) Final Adoption

The Parks and Open Space Plan has already gone through a public hearing process and has been submitted to the Met Council for comment. The final document will be submitted with the other plan elements when it is distributed to neighboring communities for review.

TRANSPORTATION PLAN:

The attached transportation plan is proposed to completely replace the existing section of the Comprehensive Plan with the same name (Chapter 8). The plan is broken down into the following components and relates to the existing plans as follows:

- **Introduction.** New section to introduce the contents of the transportation plan.
- **Goals and Policies.** Revised and expanded from the City-wide planning policy found in Chapter 2 of the Comprehensive Plan.
- **Roadway System.** Analysis and recommendations concerning the City's transportation system, incorporating updated traffic forecast information not available when the current plan was adopted. Includes new information documented as part of the Village Area AUAR.
- **Transit Facilities.** Incorporates updated information as identified in the Lake Elmo systems statement and Village Area AUAR.
- **Trail System.** Expanded based on the updated Parks and Open Space Plan.
- **Rail.** New section not currently addressed in the Comprehensive Plan.
- **Aviation.** Expanded and revised based on systems statement for Lake Elmo.

Please note that all of the maps and figures have not yet been incorporated directly into the document and are instead included as a separate package at the end of the plan.

The City Engineer will be in attendance at the April 13, 2009 meeting and will present a summary of the document at the public hearing.

ADDITIONAL INFORMATION:

- The goal of the proposed updates is to complete the minimal requirements of the Metropolitan Council's System Statements and watershed districts and to comply with the given deadlines. All plans will be completed on the basis of the current land use plan adopted in 2006.
- The Planning Commission's recommendation will be presented to the City Council along with the draft document. Once the City Council accepts this document it will be sent to the Met Council and neighboring communities for comment. There is a six-month review period for comments from neighboring communities that must be observed before the document can be formally adopted by the City.
- All of the Comprehensive Plan sections that must be updated will be submitted to the Met Council in one document once all of the public hearings and City reviews are complete. These sections will form an addendum to the current plan that replace the relevant Chapters in the City's plan.

RECOMMENDATION:

Staff is recommending that the Planning Commission recommend approval of the revised Transportation Plan to replace Chapter 8 Transportation Plan in the Lake Elmo Comprehensive Plan and that this document be submitted to the Metropolitan Council for review and comment as a portion of Lake Elmo's required 2008 Comprehensive Plan Update.

ATTACHMENTS:

1. Draft Transportation Plan

2. Transportation Plan Figures

ORDER OF BUSINESS:

- Introduction Kyle Klatt, Planning Director
- Presentation by staff Ryan Stempski, City Engineer
- Questions from the Commission Chair & Commission Members
- Open the Public Hearing Chair
- Close the Public Hearing Chair
- Call for a motion Chair Facilitates
- Discussion of Commission on the motion Chair Facilitates
- Action by the Planning Commission Chair & Commission Members

DRAFT PLAN

TRANSPORTATION PLAN

ADOPTION DATE:



City of Lake Elmo, Minnesota

April 2009
Project No. 14288.000



TKDA

ENGINEERS • ARCHITECTS • PLANNERS

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A. Introduction

The Transportation Plan serves as a guide for the development and improvement of the City of Lake Elmo's transportation network. The City's transportation network is the sum of different components working together for the movement of people and goods. This plan identifies the existing and proposed transportation system, examines potential deficiencies, and sets investment priorities. The elements discussed in this section of the Comprehensive Plan include:

- Roadway System
- Transit
- Trails
- Rail
- Aviation

Each of these elements is discussed in separate sections within this Transportation Plan. In addition, the goals and policies of the City are presented, which guide development of the transportation system. The last section of the Transportation Plan presents the implementation plan. The implementation plan sets the groundwork for investment and improvements to the transportation network consistent with the goals, analyses, and conclusions of this plan.

As with the other elements of the Comprehensive Plan, the Transportation Plan is intended to be dynamic and evolving. As the City's conditions change and improvements occur, the Transportation Plan will require review and revision to keep pace.

B. Goals and Policies

1. Overall Goals

The City of Lake Elmo primary goal is to achieve a safe, efficient, and environmentally sound transportation system that provides personal mobility for all residents and supports the City economy. In general, this goal can be separated into three specific categories:

- **Safety** - The main criteria for safety is reducing the potential for traffic crashes and provide for safe transportation throughout the City. In addition, safety can reflect providing compatible land uses with their adjacent transportation facilities and providing an efficient transportation system that does not impose undue delay.
- **Multimodal Interaction** - A fully developed transportation system enables the best use of the capabilities of individual and combined modes of travel. It encourages public transit as a viable alternative and creates a safe and acceptable environment for foot or bicycle travel.
- **Preserve Rural Character** - The development of the transportation system should not include major impacts to the rural setting that is so important to the City of Lake Elmo. It should look to minimize environmental disruption and strive to maintain a quality environment.

2. Policy Statements

Based upon the above overall goals, the City has developed these policy statements for the transportation plan:

- a. The focus of motorized transportation planning and resulting infrastructure will be trips with origins and/or destinations within the City servicing Lake Elmo residents and businesses.
- b. Vehicular trips, originating primarily within Lake Elmo, will be encouraged through planning or infrastructure improvements by local, County, State, or Federal Agencies.
- c. Interstate 94 and State Highway 36 shall remain the primary vehicular corridors for traffic with origins and/or destinations not in Lake Elmo. The City will seek measures to minimize the negative impact by through traffic within the City of Lake Elmo.
- d. The City shall investigate Street segments that may benefit from traffic calming and implement strategies to improve both pedestrian and vehicular circulation.

- e. The City will design, construct, and maintain the minimum acceptable grid system of collector streets. Where State Aid funds are expended for such construction, State Aid design standards will be incorporated. Where State Aid funds are not used the collector streets will be constructed to a paved section designed to minimize impervious surfacing and piped storm water conveyance.
- f. The location of Stillwater Boulevard (Trunk Highway 5) in the center of the Village Area, coupled with the present and forecasted volume of traffic on that roadway, presents numerous safety and urban design issues which will require mitigation if the Village Area is to best serve as the centerpiece of the community. The City, with the cooperation and assistance of the Minnesota Department of Transportation and Washington County, will continue to explore measures to reduce or eliminate the issues that are caused by State Highway 5 in the center of the Village Area.
- g. Traffic volume and speed on Stillwater Boulevard (Trunk Highway 5) traversing through the center of the Village Area, is a safety problem; detracts from the sense of unity between the north and south portions of the Village Area; negatively impacts traffic circulation within the downtown portion of the Village Area, and seriously restricts pedestrian movements within the Village Area. Community planning/development shall address mitigation of these impacts.
- h. The City encourages, supports, and advocates public transit service to the City at appropriate geographic locations as determined by the City.
- i. Convenient and safe pedestrian/bike circulation within a community not only reduces the air quality degradation and accident risks of the vehicular alternative but also strengthens the sense of community through resident interaction. Much of the Village Area, particularly south of Highway 5, has historically developed at a density and in a pattern that encourages pedestrian/bike circulation. That development pattern shall be continued with new Village area development.
- j. While not located in Lake Elmo, the Lake Elmo Airport will continue to be a transportation facility that will impact the City. The City will continue to vigorously oppose all initiatives to broaden the operating capabilities of the Lake Elmo airport from the existing recreational aviation to corporate or commercial aviation by runway lengthening or other related improvements.

- k. City policy and plans will recognize Lake Elmo Airport safety and noise zones based on recreational aviation only.

3. Additional City Goals

The CSAH 17 and TH 36 Intersection Project is examining options for this current at-grade intersection. Led by Washington County, the first step established a Design Review Committee and Project Management Team who then determined goals for the project. The City supports the following goals outlined in the CSAH 17 and TH 36 Intersection Project as defined by those project groups with input from the public.

- Maintain east and west access to TH 36
- Minimize impacts to private property
- Increase the safety of the intersection
- Minimize the noise and visual impacts
- Minimize impacts to traffic flow on TH 36
- Make sure it fits the long term goals of both Lake Elmo and Grant
- Minimize the commuter traffic on local roads

These goals are consistent with the overall goals for the City and the policy statements provided above.

C. Roadway System

The roadway system is currently the primary piece of the transportation system for most residents and businesses in the City. Roads are used for commutes, deliveries, and other basic travel. This section examines the roadway system and provides guidance for development of the roads into the future.

1. Existing System

Their current roadway system conditions and characteristics are examined in this section. Examining the existing information provides a base upon which to build future system plans and development.

a. Roadway Jurisdiction

The City shares the jurisdiction for roadways within the City boundaries with the State of Minnesota and with Washington County. There are no federal roadways within the City as I-94 lies just south of the City border. The Minnesota Department of Transportation (Mn/DOT) maintains the Trunk Highway (TH) system. Washington County maintains the County State-Aid Highways (CSAH) and County Roads (CR). The City is responsible for and maintains the Municipal State-Aid (MSA) roads as well as local City roadways. The various types of roadways within the City and their names are provided in Table 1. Figure 1 shows this same information graphically.

Table 2 then shows the total centerline mileage for each type of roadway within the City as well as within Washington County and within Minnesota. For additional comparison purposes, Table 3 shows the total centerline mileage for two other nearby cities. Woodbury is located on the southern Lake Elmo border, but is a more developed city with a higher population and more roads. Grant is located on the northern Lake Elmo border, but is not a State Aid city reflecting its lower population.

As shown, the City has a higher percentage of Federal/State roadways in comparison to that of the County or the State. For County or local roadway ownership, Lake Elmo falls between the County and the State in terms of percentages. In comparison to adjacent cities, Lake Elmo again shows a higher percentage of its roads under Federal/State or County jurisdiction.

**Figure 1:
Existing Jurisdictional Classification**

**Table 1:
Roadway Jurisdiction and Names**

Roadway Jurisdiction	Roadway Type	Roadway Name
Federal	Interstate US Highway	none none
Minnesota	Trunk Highway	34th St/Stillwater Blvd (TH 5) TH 36
Washington County	County State-Aid County Road	Stillwater Blvd (CSAH 6) 10th St (CSAH 10) Ideal Ave/Olson Lake Tr (CSAH 13) Inwood Avenue (CSAH 13) 40th St (CSAH 14) Manning Ave (CSAH 15) Lake Elmo Ave (CSAH 17) Keats Ave (CSAH 19) 50th St (CSAH 35) Demontreville Tr (CR 13B) Lake Elmo Ave (CR 17B)
City of Lake Elmo	Municipal State-Aid Municipal/Local	Klondike Ave/33rd St (MSA 101) Lake Jane Tr/42nd St (MSA 102) Jamaca Ave (MSA 103) Lake Jane Tr/45th St/Julep Ave/47th St/Kimbrow Ave/43rd St (MSA 104) Keats Ave (MSA 105) Upper 33rd St/Laverne Ave (MSA 106) 20th St (MSA 107) 30th St (MSA 108) 31st St (MSA 109) 15th St (MSA 110) Kimbrow Ave/50th St (MSA 111) Eagle Point Blvd (MSA 112) Helmo Ave (MSA 113) 39th St (MSA 114) Manning Tr (MSA 115) Manning Ave (MSA 116) All remaining roads

**Table 2:
Roadway Jurisdiction and Mileage**

Roadway Jurisdiction & Type	Lake Elmo Mileage (%-age)	Wash. County Mileage (%-age)	Minnesota Mileage (%-age)
Federal			
Intersection	0.0 (0.0%)	26.6 (1.4%)	913.9 (0.7%)
US Highway	0.0 (0.0%)	30.2 (1.6%)	3,224.7 (2.4%)
Minnesota			
Trunk Highway	9.0 (8.9%)	82.1 (4.4%)	7,731.0 (5.7%)
Wash. County			
County State-Aid	18.3 (18.1%)	215.1 (11.6%)	30,506.9 (22.5%)
County Road	3.1 (3.1%)	68.1 (3.7%)	14,489.5 (10.7%)
Municipal			
Mun. State-Aid	14.6 (14.5%)	181.6 (9.7%)	3,063.5 (2.3%)
Municipal/Local	56.0 (55.4%)	1,083.1 (58.1%)	16,006.7 (11.8%)
Other			
Township, Park, etc.	0.0 (0.0%)	176.1 (9.5%)	59,583.3(43.9%)
Totals	101.0 (100%)	1,862.8 (100%)	135,519.4 (100%)

**Table 3
Roadway Jurisdiction and Mileage**

Roadway Jurisdiction & Type	Lake Elmo Mileage (%-age)	Woodbury Mileage (%-age)	Grant Mileage (%-age)
Federal			
Intersection	0.0 (0.0%)	8.9 (3.1%)	0.0 (0.0%)
US Highway	0.0 (0.0%)	0.0 (0.0%)	0.0 (0.0%)
Minnesota			
Trunk Highway	9.0 (8.9%)	6.0 (2.1%)	4.5 (5.3%)
Wash. County			
County State-Aid	18.3 (18.1%)	27.6 (9.7%)	14.4 (16.7%)
County Road	3.1 (3.1%)	0.0 (0.0%)	0.0 (0.0%)
Municipal			
Mun. State-Aid	14.6 (14.5%)	50.6 (17.9%)	0.0 (0.0%)
Municipal/Local	56.0 (55.4%)	190.2 (67.2%)	66.9 (78.0%)
Other			
Township, Park, etc.	0.0 (0.0%)	0.0 (0.0%)	0.0 (0.0%)
Totals	101.0 (100%)	283.3 (100%)	85.8 (100%)

b. Roadway Functional Classification

The Metropolitan Council has established a functional classification system for classifying roadways serving the Twin Cities Metropolitan Area. This system establishes a hierarchy of roads to collect and distribute traffic from local neighborhood properties to the metropolitan highway system. The functional classification system for roadways is broken down into four categories: principal arterials, minor arterials, collectors, and local roadways.

(1) Principal Arterials

Principal arterials, generally interstates and trunk highways, provide high-speed mobility between the Twin Cities and important locations outside the metropolitan area. They also connect the central business districts of Minneapolis and Saint Paul with other regional business centers. Principal arterials are generally constructed as limited access freeways in the urban area, but may also be constructed as multiple-lane divided highways. Principal arterials are primarily under federal or state jurisdiction. The City's only principal arterial is TH 36 which runs east-west along the northern border. Two other principal arterials, I-94 and I-694, lie just beyond the City's borders, but are still considered primary routes.

(2) Minor Arterials

Minor arterials also emphasize mobility over property access and connect cities with adjacent communities and the metropolitan highway system. Major business centers and other major traffic generators are often located on minor arterial roadways. Minor arterials are further classified as 'A' minor and 'B' minor arterials. 'A' minor arterials are roadways that are of regional importance because they relieve, expand, or complement the principal arterial system. Minor arterials other than 'A' minor arterials are classified as 'B' minor arterials. 'B' minor arterials provide City-wide or inter-city connections and generally serve shorter trips than 'A' minor arterials. Minor arterials of either type are generally under state or county jurisdiction. 34th Street/Stillwater Boulevard (TH 5) and 10th Street (CSAH 10) are examples of A Minor arterials, while CSAH 17, between 34th Street/Stillwater Boulevard (TH 5) and 10th Street (CSAH 10), is an example of a B Minor arterial.

(3) Collectors

Collectors supplement the arterial roadway system by providing access between neighborhoods and to the arterial system. They are designed to carry less traffic than arterials and to provide direct access to some properties. Collectors can be further divided into major and minor collectors. Major collectors typically provide access and mobility across neighborhoods and would connect to the arterial roadway system. Minor collectors are typically limited to one or two neighborhoods and may connect only to other collectors. Major collectors are typically under county or municipal jurisdiction. Minor collectors are primarily under local jurisdiction. 50th Street between Kimbro Avenue and 34th Street/Stillwater Boulevard (TH 5) is an example of a major collector within the City. The existing functional classification plan does not include minor collectors.

(4) Local Streets

Local streets consist of township roads and city streets and are under municipal jurisdiction. Their primary purpose is to provide direct access to local properties within neighborhoods. Local streets are designed for low speeds to discourage through traffic.

Figure 2 shows the existing functional classification of the roadways within the City.

**Figure 2:
Existing Functional Classification**

c. Traffic Operations

Figure 3 displays the volumes for key roadways within the City based on the 2005 and 2006 Mn/DOT Average Annual Daily Traffic (AADT) counts. Table 4 lists planning-level daily threshold volumes for different roadway design types as referenced in the Washington County Transportation Plan.

**Table 4:
Roadway Traffic Capacity Planning-Level Daily Thresholds**

Cross-Section	Volume Threshold (ADT)
Two-Lane: Undivided Urban Undivided Rural Divided Urban (Three-Lane)	10,000 15,000 17,000
Four-Lane: Undivided Urban Divided Urban Divided Rural	22,000 32,000 38,000
Freeway: Four-Lane Six-Lane	60,000 80,000
<p>Definitions:</p> <p><u>Undivided</u> - An undivided roadway does not have a raised median separating opposing traffic or left-turn lanes for turning traffic.</p> <p><u>Divided</u> - A divided roadway has a raised median separating opposing traffic, left-turn lanes and right-turn lanes.</p> <p><u>Rural</u> - A rural design implies higher speeds, fewer cross streets/accesses and cross streets/accesses with low volumes</p> <p><u>Urban</u> - An urban design implies lower speeds, more cross streets/accesses and cross streets/accesses with higher volumes.</p> <p><u>Freeway</u> - A freeway is a divided roadway with limited access and no traffic signals or other traffic control.</p> <p><i>The above table provides planning-level capacity thresholds for different roadway cross-sections. These thresholds can be used to identify existing and future capacity problems. However, because of variations in traffic as well as roadway characteristics, which do not always fall neatly into the above categories, capacity/operational issues should be confirmed through other sources if possible.</i></p>	

Source: Mn/DOT, Met Council, Washington County

**Figure 3:
Existing Annual Average Daily Traffic**

The average daily traffic volumes were compared to the design threshold capacities shown in the above table to determine the approximate level of congestion for each roadway segment analyzed. Each roadway segment was ranked according to the following categories:

- **Uncongested:** the existing average daily volume is less than 85-percent of the threshold volume, with a low probability of operational problems due to traffic flow.
- **Approaching congestion:** the existing average daily volume is between 85-percent and 100-percent of threshold volumes, with a moderate probability of operational problems due to restricted traffic flow.
- **Congested:** the existing average daily volume exceeds 100-percent of the threshold volume, with a high probability of operational problems due to restricted traffic flow.

Figure 4 shows roadway segments that are operating under, near, or over capacity today. As shown, several roadway sections currently have AADTs above the planning level thresholds and are experiencing congestion and delays, especially during the peak periods. These segments include:

- I-94; congested from Keats Avenue (CSAH 19) to the west and approaching congestion from Keats Avenue (CSAH 19) to the east. (Although not within the City, I-94 is an important regional route for the City and included in this plan).
- TH 36; approaching congestion through the entire City.
- 34th Street/Stillwater Boulevard (TH 5); approach congestion from approximately Jamaca Avenue east to Lake Elmo Avenue (CSAH 17) and congested from Manning Avenue (CSAH 15) northeast to about Marquess Trail.

The congested or approaching congestion roadway segments are all on Federal or State facilities. Of these, 34th Street/Stillwater Boulevard (TH 5) presents the most concern as it provides travel through the middle of the City, including the Village Area.

**Figure 4:
Existing Roadway Performance**

d. Safety

Public safety is an important component of a transportation plan. A key measurement of safety is crashes that occur on the roadway network within the City. Table 5 below shows the number of crashes and their severity that occurred within city limits between 2003 and 2007. As shown, 889 crashes occurred with more than half occurring on the state’s Trunk Highway System. Three fatalities due to traffic crashes also occurred in the City during this time period.

**Table 5:
2003 - 2007 Crashes by Roadway Classification and Severity**

Location	Fatal	Type A Injury	Type B Injury	Type C Injury	Property Damage	Total Crashes
Trnk Hwys	1	4	49	121	337	512
Cnty Rds	2	12	34	55	208	311
Mun. St	0	3	7	8	48	66
Total City Crashes	3	19	90	184	592	889

Crashes on TH 36 and 34th Street/Stillwater Boulevard (TH 5) represent the highest number of crashes in the City even though they are the smallest percentage of roads (8.9 percent). Conversely, municipal streets account for 69.9 percent of the roads yet have the lowest number of crashes. In addition, almost all crash locations on the municipal roads consisted of only one or two crashes, which does not necessarily indicate a safety issue.

Another way to examine crashes on the roadways is by the type of crash. In this case, crashes were divided into six broad categories: Multi-Vehicle, Single Vehicle, Rail, Bicycles, Pedestrians, and Animals. Table 6 shows the crashes according to these categories.

**Table 6:
2003 - 2007 Crashes by Roadway Classification and Type**

Location	Multi-Vehicle	Single Vehicle	Rail	Bikes	Peds	Animals	Total Crashes
Trnk Hwys	348	57	0	1	0	106	512
Cnty Rds	212	57	1*	2	1	38	311
Mun. St	30	29	0	0	1	6	66
Total City Crashes	590	143	1*	3	2	150	889

* Federal Railroad Administration reported crash at the Lake Elmo Ave (CSAH 17) at-grade crossing

Multiple vehicle crashes represent the majority of the crashes, with most again occurring on the Trunk Highway system. Reported crashes involving animals (the vast majority deer) represent approximately 17 percent of all crashes in the City.

To better identify whether these crashes correspond to safety issues on the roads, high crash areas were examined in more detail. Five areas on the Trunk Highway system were examined as well as five areas on the County or Municipal roadway system. Each high crash area was found to be an intersection, where most vehicle conflict points occur. Table 7 below shows all ten intersections with the crashes from 2003 to 2007. The table also presents the crash rate per million entering vehicles for each intersection with comparisons to the metropolitan area and state averages.

**Table 7:
2003 - 2007 High Crash Frequency and Crash Rate Locations**

Intersection Location	Number of Crashes (2003-2007)	Crash Frequency (crashes per year)	Intersection Crash Rate (crashes per million entering vehicles)	Average Int. Crash Rate (crashes per million entering vehicles)
<u>Signalized</u>				
TH 36 & Lake Elmo Ave (CSAH 17)	58	11.6	0.71	0.80 (Metro)
TH 36 & Manning Ave (CSAH 15)	40	8.0	0.47	
Stillwater (TH 5) & Manning Ave (CSAH 15)	35	7.0	0.98	0.80 (State)
10th St (CSAH 10) & Inwood Ave (CSAH 13)	17	3.4	0.53	
4th Avenue & Inwood Ave (CSAH 13)	14	2.8	0.55	
<u>All-Way Stop</u>				
10th St (CSAH 10) & Manning Ave (CSAH 15)	26	5.2	0.93	0.60 (Metro)
10th St (CSAH 10) & Lake Elmo Ave (CSAH 17)	12	2.4	0.80	0.60 (State)
<u>Side Street Stop</u>				
Stillwater (TH 5) & Lake Elmo Ave (CSAH 17)	21	4.2	0.73	0.20 (Metro)
34th/Stillwater (TH 5) & Jamaica Ave	14	2.8	0.50	
Stillwater Blvd (CSAH 6) & Inwood Ave (CSAH 15)	10	2.0	0.81	

All the unsignalized intersections examined in this table show crash rates above the metropolitan area and statewide averages. For the side-street stop controlled intersections, the intersection crash rates

are two to three times the average crash rates. These high crash rates indicate a potential problem that warrants further investigation to determine potential solutions. Depending upon the results of such a study, the intersections could be targeted for safety and/or operational improvements. Examples of safety/operational improvements are clearing of sight distance obstacles (like tree branches), increased enforcement of speeds and/or stopping at stop signs, providing intersection lighting, providing one or more turn lanes, and improving traffic control (like all-way stop, traffic signal, or roundabout). It should also be noted that a traffic signal will typically reduce some types of crashes (e.g., right-angle crashes), while other types (such as rear end) become more frequent resulting in a higher average crash rate than the side-street stop control average crash rate. This difference is shown in the table when comparing the metropolitan and state averages for signalized and unsignalized intersections. A safety audit or other detailed study of the intersections will determine if a crash problem does exist and appropriate solutions to improve the safety and lower the future crash rates.

Of the signalized intersections, only the 34th Street/Stillwater Boulevard (TH 5) and Manning Avenue (CSAH 15) intersection has a crash rate above the averages, although the TH 36 and Lake Elmo Avenue (CSAH 17) intersection is close to the average. For signalized intersections, potential improvements are similar to the examples listed for unsignalized intersections. Also similar, a safety audit or other detailed intersection study will determine if a crash problem exists and appropriate solutions.

2. **Traffic Forecasts**

An important component of future planning is determining expected traffic volumes. By establishing the projected demand, transportation network deficiencies within the City can be further recognized and potential improvements identified. The following sections describe the methodology and present the 2030 forecasts.

a. Methodology

Projected traffic volumes were determined through the development of a citywide travel demand model, which uses future growth and land development patterns. Travel demand models predict the amount of travel on roadways given assumptions about the future development and transportation system improvements.

Travel demand forecasts developed for the City were based on the modified Twin Cities regional travel demand model, which was

released by the Metropolitan Council. The citywide travel demand model was developed as a subset of the Washington County Transportation Model developed in coordination with the CSAH 17 Subarea Study.

The travel demand model uses planned development data as expressed by household, retail employment and non-retail employment to estimate vehicular travel. The City is represented by seven zones (transportation analysis zones, or TAZs) in the Metropolitan Council model, which were further divided into a total of ten zones by the County. These zones were again subdivided into 47 zones for this transportation plan, based upon the CSAH 17 Subarea Study. Figure 5 shows the TAZ boundaries in the City. Table 8 below breaks down the socioeconomic information by TAZ. The expected growth of each data set from 2000 to 2030 was provided by the City's Planning Department.

**Figure 5:
Transportation Analysis Zones (TAZ)**

**Table 8:
Travel Demand Model Assumed Development**

Transportation Analysis Zones			Households		Retail Employment		Non-retail Employment	
Regional Model	Wash. Co. Model	Lake Elmo Model ^A	2000 ^B	2030	2000 ^B	2030	2000 ^B	2030
1128	1128	13	449	459	-	-	-	-
1128	1128	14	86	125	-	-	-	-
1128	1128	15	190	249	-	-	-	-
1197	1274	16	3	5	-	-	-	-
1197	1274	17	2	41	-	-	-	-
1197	1274	18	4	49	-	-	-	-
1197	1274	19	1	23	-	-	-	-
1197	1274	20	5	30	-	-	-	-
1197	1274	21	10	80	-	-	-	-
1197	1274	22	21	34	-	-	-	-
1197	1274	23	15	90	-	-	-	-
1197	1274	24	132	200	-	-	60	80
1129	1230	25	158	337	-	-	-	-
1129	1230	26	50	159	-	-	20	20
1129	1230	27	65	124	-	-	-	-
1129	1230	28	28	39	-	-	-	-
1129	1230	29	-	-	-	-	-	-
1129	1230	30	-	-	-	-	-	-
1129	1230	31	-	-	-	-	-	-
1129	1230	32	9	41	-	-	-	-
1129	1230	33	130	169	-	-	-	-
1129	1230	34	1	1	-	-	-	-
1129	1129	36	-	-	-	-	-	-
1129	1129	37	-	153	-	94	-	70
1129	1129	38	-	-	-	-	-	-
1129	1129	39	-	-	-	-	-	-
1129	1129	40	-	-	95	269	603	733
1129	1129	41	20	20	-	-	-	-
1115	1115	42	27	27	33	58	100	118
1115	1115	43	1	1	-	-	-	-
1115	1115	44	90	90	-	-	10	10
1115	1115	45	32	331	33	221	147	288
1115	1115	46	4	94	-	100	-	264
1115	1115	47	60	202	-	-	10	10
1115	1115	48	5	199	-	19	-	127
1116	1116	49	2	2	-	-	-	-
1116	1116	50 A	3	54	-	-	133	160
1116	1116	50 B	300	798	-	-	-	-
1117	1117	1117 A	16	1,303	6	6	60	-
1117	1117	1117 B	505	525	10	10	100	1,620
1117	1117	1117 C	21	520	-	127	-	-
1117	1117	1117 D	2	210	10	71	100	4,778
1118	1118	1118	62	337	-	-	-	-
1115	1228	1228 A	209	289	-	-	-	-
1115	1228	1228 B	60	117	-	-	89	92
1118	1229	1229 A	-	404	-	-	-	-
1118	1229	1229 B	-	-	50	1,025	600	3,630
1118	1229	1229 C	2	796	300	-	50	-
Regional Control Totals			2,780	8,727	537	2,000	2,082	12,000

Notes: ^A Based on the CSAH 17 Subarea Study ^B Distribution within Regional model TAZs is estimated

b. 2030 Forecasts

Using the methodology described above, two future scenarios were examined for projected volumes in the City. Each is discussed separately below.

i. 2030 Base Scenario

A 2030 Base Scenario was developed to estimate future system performance under a financially-constrained system with only currently programmed improvements to the roadway network. Consistent with Mn/DOT, the Metropolitan Council, Washington County, and the Village Area development plans, the following improvements in or near the City were assumed to be complete by 2030:

- TH 36 St. Croix Bridge; a new bridge extension of TH 36 into Wisconsin over the St. Croix River.
- A new north-south roadway connecting the 39th Street/34th Street-Stillwater Boulevard (TH 5) intersection to the Lisbon Avenue/30th Street intersection.

Figure 6 shows the projected 2030 Base Scenario Average Daily Traffic (ADT) volumes based upon the improvements listed above and the expected growth detailed earlier.

Once established, these 2030 ADTs were compared to the planning level capacity thresholds. As done with existing volumes, this comparison identifies an approximate level of congestion for each roadway segment. Figure 7 shows the 2030 Base Scenario system performance graphically.

**Figure 6:
2030 Projected Volumes**

**Figure 7:
2030 Roadway Performance**

As shown, the 2030 Base Scenario analysis indicates the following segments may have traffic levels nearing or beyond the roadways' design capacity:

- I-94, along the entire southern City limits
- TH 36, through the City limits
- Stillwater Boulevard (TH 5), from just east of Stillwater Boulevard (CSAH 6) east through the Manning Avenue (CSAH 15) intersection to just northeast of the Marquess Trail intersection
- 10th Street (CSAH 10), from just east of the Inwood Avenue (CSAH 13) intersection east to about the Jasmine Avenue intersection
- 10th Street (CSAH 10), from the Keats Avenue (CSAH 19) intersection east to the Lake Elmo Avenue (CSAH 17/CR 17B) intersection
- Inwood Avenue (CSAH 13), from approximately Ivory Avenue south to just north of the 10th Street (CSAH 10) intersection
- Inwood Avenue (CSAH 13), from the 4th Street/Frontage Road intersection south through the I-94 interchange
- Manning Avenue (CSAH 15), from the 34th Street/Stillwater Boulevard (TH 5) intersection south to just north of the 10th Street (CSAH 10) intersection
- Keats Avenue (CSAH 19), from the Frontage Road intersection south through the I-94 interchange

The expected congestion is confined to the Federal, State, and County roadways, similar to the existing roadway performance results. In this case, more roadways are labeled as over capacity or congested and more County roads are showing capacity constraints.

These results do not show congestion on the local roadway system. However, it can be assumed that congested roadways will result in more motorists searching for alternative routes, potentially through local roads.

As congestion on all roadways builds, more safety issues will result in terms of "cut-through" traffic and crashes.

ii. 2030 Improved Roadway Scenario

As several roadways are expected to be congested in the 2030 Base Scenario, another scenario was examined with additional roadway improvements. This 2030 Improved Roadway System Scenario examined improvements to the State, County, and City

roadways to remove the identified deficiencies. The corridor enhancements assumed were:

- Revising the TH 36 corridor to freeway status. This includes removing all at-grade intersections through interchanges at Manning Avenue (CSAH 15), Lake Elmo Avenue (CSAH 17), and CSAH 36 as well as overpasses at Keats Avenue and Demontreville Trail (CR 13B). Highlands Trail will become a cul-de-sac, disconnected from TH 36. As part of these improvements, it is expected that the frontage road in Grant would be extended to the new TH 36 and CSAH 36 interchange, creating a complete connection from CSAH 36 east to Manning Avenue (CSAH 15).
- Combining the two “T” intersections of Stillwater Boulevard (TH 5)/Manning Avenue (CSAH 15) and Manning Avenue (CSAH 15)/40th Street (CSAH 14) into one four-legged intersection.
- Expanding of Manning Avenue (CSAH 15) from two- to four-lanes of traffic. The expansion would make Manning Avenue (CSAH 15) a four-lane facility from I-94 north through the new revised Stillwater Boulevard (TH 5) and 40th Street (CSAH 14) intersection to the TH 36 interchange.
- Providing a new east-west roadway between 10th Street (CSAH 10) and the I-94 frontage road, Hudson Boulevard. Designated as a minor collector, this route would allow local traffic to access the north-south county roads. Rather than a straight shot between points, this roadway would likely curve between new developments to provide access without inviting commuter or “cut-through” traffic. The exact alignment will depend upon development.

With these connections and improvements, volumes were re-examined. Figure 8 shows the projected 2030 ADT for the Improved Roadway Scenario. With these roadway improvements, volumes throughout the City changed. In particular, TH 36 and Manning Avenue (CSAH 15) saw an increase in volume. The 34th Street/Stillwater Boulevard (TH 5) and Lake Elmo Avenue (CSAH 17/CR 17B) volumes were reduced. In general, the Improved Roadway Scenario is better able to keep regional traffic on regional roads around the City borders, reducing the effects of commuter traffic within the City.

**Figure 8:
2030 Projected Volumes, Improved Scenario**

As with previous scenarios, the Improved Scenario ADTs were compared to the capacity thresholds. Figure 9 shows the 2030 Improved Roadway Scenario performance graphically. The roadway improvements reduced the approaching or at capacity areas to the following segments:

- I-94, along the entire southern City limits
- TH 36, through the City limits
- Stillwater Boulevard (TH 5), from just east of Stillwater Boulevard (CSAH 6) east to the connection at Manning Avenue (CSAH 15)
- Stillwater Boulevard (TH 5), from the TH 36 interchange south to 50th Street
- Inwood Avenue (CSAH 13), from approximately Ivory Avenue south to just north of the 10th Street (CSAH 10) intersection
- Inwood Avenue (CSAH 13), from the 4th Street/Frontage Road intersection south through the I-94 interchange
- Manning Avenue (CSAH 15), from 10th Street (CSAH 10) south through the I-94 interchange
- Keats Avenue (CSAH 19), from the Frontage Road intersection south through the I-94 interchange

Compared with the 2030 Base Scenario Performance, this Improved Scenario shows less overall congested or approaching congestion segments. In addition, most segments are on the borders of the City, suggesting residents and businesses within the City would have safe and efficient traffic operations.

**Figure 9:
2030 Roadway Performance, Improved Scenario**

iii. Recommendations

As shown in the 2030 projections, traffic volumes on all roadways are expected to increase with development of the City and the surrounding areas. In particular, the State and County roadways are expected to have a relatively large volume increases. Based on these results, another 2030 scenario was examined with improvements designed to limit congested areas in the City.

The 2030 Improved Scenario examined network changes that included:

- the upgrade of the TH 36 to “freeway” status
- the expansion of Manning Avenue (CSAH 15) to a four-lane facility
- the reconfiguration of the Stillwater Boulevard (TH 5)/Manning Avenue (CSAH 15) and Manning Avenue (CSAH 15)/40th Street (CSAH 14) intersections into one four-legged intersection
- the development of a new east-west minor collector between 10th Street (CSAH 10) and the I-94 frontage road, Hudson Boulevard

As shown in the figures, these improvements generally increase projected volumes on the regional roadways around the City borders; I-94, TH 36, Manning Avenue (CSAH 15). Other roadways within the City would generally decrease in projected volumes; Stillwater Boulevard (TH 5), Lake Elmo Avenue (CSAH 17-CR 17B), Inwood Avenue (CSAH 13). As shown in a comparison of the 2030 roadway performance figures, the overall number of segments of congested or nearing congestion is reduced. In addition, those remaining areas of congestion generally kept to regional roadways on the City borders. These improvements therefore appear to satisfy the goals and policies of the City by keeping regional traffic to the borders.

More specifically, these additional roadway improvements allow the City to examine Stillwater Boulevard (TH 5) and Lake Elmo Avenue (CSAH 17-CR 17B) in different terms. Stillwater Boulevard (TH 5) projected volume is reduced, but not quite beneath the planning level capacity of a two-lane facility with turn lanes. However, in combination with access management, non-traditional intersection control, transit opportunities, and the trail system, the Stillwater Boulevard (TH 5) projected may be further reduced beneath that planning-level capacity.

The City should be prepared to implement a four-lane facility on Stillwater Boulevard (TH 5), as recommended in the Village Area AUAR mitigation. However, investing in the identified roadway network improvements and other improvement options may result in delaying or eliminating the need for four lanes. The lower projections also give leeway to the City for enhanced landscaping and streetscaping as this area is redeveloped.

With lower volumes on Lake Elmo Avenue (CSAH 17-CR 17B) from Stillwater Boulevard (TH 5) to the south, the City is better able to preserve the rural character of the road and remain as a two-lane facility. The lower volume also suggests a jurisdictional transfer to the City and/or a functional classification downgrade to a Major Collector is appropriate.

The developer-driven new roadway between 10th Street (CSAH 10) and Hudson Boulevard reduces volumes on both the I-94 frontage road and the County facility. With reduced volume, both of these roads could remain as two-lane facilities, again keeping in-line with the City's goals and policies.

Since the additional roadway improvements demonstrate progress toward the City's goals of the transportation network, these improvements should be further explored and analyzed. With the exception of the new east-west roadway, these improvements are on the State or County roadway systems. As such, these agencies will need to be involved in their analysis and review. The City will discuss these options with the County and the State and further explore their feasibility.

As expansion of existing corridors and constructing new roadways require right-of-way (ROW), the City will also consider strategies to preserve needed ROW for the future. ROW preservation strategies for planned and programmed corridors helps reduce future construction costs and minimizes disruption to area residences and businesses. Information on various tools and techniques of ROW preservation are found in Mn/DOT's Interregional Corridors: A Guide for Plan Development and Corridor Management.

3. Regional Initiatives

As Lake Elmo and the surrounding area have developed, certain roadways and locations have been identified as having strategic importance, to either the City or region. These significant areas have undergone recent study and planning efforts to better focus potential

improvements and investment. Two such items are identified in this plan as having significant impact on the City’s roadway network, including:

- Lake Elmo Village Area Alternative Urban Areawide Review (AUAR)
- Minnesota Interregional Corridor System

Each of these initiatives is examined separately below.

a. Lake Elmo Village Area AUAR

The Alternative Urban Areawide Review (AUAR) for the Lake Elmo Village Area is an environmental document completed before development or redevelopment occurs. The AUAR anticipates development scenarios to determine potential deficiencies or impacts and appropriate mitigation to alleviate those issues. Through the AUAR process, the City is better prepared for planning and managing development, resulting in proactive evaluation and determination as oppose to reactive decisions that can occur if planning waits for development first.

The Lake Elmo Village Area AUAR assessed the potential environment issues and impacts associated with four different land use scenarios. The scenarios included the land use assumed in this Comprehensive Plan (Scenario D) and three others with various levels of residential development. Table 9 (Table 1 in the AUAR document) shows the comparison of the AUAR development scenarios.

**Table 9:
AUAR Development Scenario Comparison**

Land Use Type	Scenario A	Scenario B	Scenario C	Scenario D
Parks and Open Spaces	47%	47%	47%	64%
New Residential	32%	32%	32%	11%
• New Housing	600 Units	1,000 Units	1,600 Units	906 Units
New Commercial/Institutional	7%	7%	7%	7%
• New Commercial	300,000 ft ²	300,000 ft ²	300,000 ft ²	300,000 ft ²
• New Office	150,000 ft ²	150,000 ft ²	150,000 ft ²	150,000 ft ²
• New Institutional	200,000 ft ²	200,000 ft ²	200,000 ft ²	200,000 ft ²
Existing Village Built Area	14%	14%	14%	18%

Source: Lake Elmo Village Area AUAR, Table 1

The AUAR then examined, among other items, the impact of these development scenarios on the roadway network. Mitigation was presented to improve traffic operations with the development of the Village Area and includes:

- Signalizing intersections
- Adding left and right turn lanes for capacity and safety
- Upgrading Stillwater Boulevard (TH 5) from its current two lanes to a four-lane facility

The Lake Elmo Village Area AUAR document should be referred to for mitigation at individual intersections and specific roadway segments. In addition to this mitigation, information on other options to improve traffic operations was provided, including:

- Access Management; controlling the number of and spacing of private driveways and public roadways that connect to a roadway corridor
- Non-Traditional Intersection Control; using alternatives to traffic signals and stop signs, such as roundabouts, to control turning movements at intersections
- Transit Opportunities; providing regularly scheduled bus or rail service as well as car pool opportunities to provide an option to single-driver vehicles
- Trail Systems; providing a system that allows for non-motorized travel between land uses for recreation or commuting

In terms of this plan, the additional through lane on Stillwater Boulevard (TH 5) represents a potential roadway network change with significant impacts for the City. Based upon planning level capacities of roadway types, the projected volumes from the 2030 Base Scenario also show the Stillwater Boulevard (TH 5) corridor to be congested and in need of improvements. However, the Improved Roadway Scenario includes the network changes the result in a reduction of traffic volume on Stillwater Boulevard (TH 5) and other roadways around the Village Area. These network changes include upgrade of the TH 36 to “freeway” status, the expansion of Manning Avenue (CSAH 15) to a four-lane facility, and the reconfiguration of the Stillwater Boulevard (TH 5)/Manning Avenue (CSAH 15) and Manning Avenue (CSAH 15)/40th Street (CSAH 14) intersections into one four-legged intersection.

By themselves, these roadway network improvements do not reduce the projected volume on Stillwater Boulevard (TH 5) under the capacity of a two-lane facility with turn lanes. However, in combination with access management, non-traditional intersection control, transit opportunities, and the trail system, the Stillwater

Boulevard (TH 5) projected may be further reduced beneath that planning-level capacity.

The City will be prepared to implement a four-lane facility on Stillwater Boulevard (TH 5), as recommended in the AUAR. However, investing in the identified roadway network improvements and other improvement options may result in delaying or eliminating the need for four lanes. The City will work with the State and the County on these potential alternatives and continue to monitor traffic operations on Stillwater Boulevard (TH 5) before a four-lane facility is built.

b. Minnesota Interregional Corridor System

In January of 2000, Mn/DOT adopted the Interregional Corridor (IRC) Study as part of the State Transportation Plan. This study identified key corridors in Minnesota with an emphasis on providing efficient connections between regional trade centers. The goal of the IRC system is to tie the state together and enhance the economic vitality by safe, timely, and efficient movement of goods and people.

Lake Elmo is bracketed on the north and south by two roadways identified in the IRC Study as Interregional Corridors: TH 36 and I-94. Under this identification, Mn/DOT has certain goals and performance targets for each corridor. Mn/DOT is implementing measures to maintain and improve the IRC System through completion of corridor plans, which include management plans on each roadway in cooperation with local units of government. More information regarding the Minnesota IRC System can be found on Mn/DOT's website.

(1) Trunk Highway (TH) 36

TH 36 has been identified as a Medium Priority Interregional Corridor under the IRC Study. The TH 36 Corridor Management Plan was published in May 2001 detailing the study of TH 36, from I-694 to the Wisconsin border. This includes the segment in Lake Elmo. The key reasoning for this designation includes:

- Its connection to the Stillwater area
- Its service as one of the major routes connecting with western Wisconsin
- Its service to the adjacent communities of Stillwater, Oak Park Heights, Grant, Lake Elmo, Mahtomedi, Willernie, Pine Springs, and Oakdale
- Its high volume of commuter traffic and recreational/tourist traffic

- Its expected traffic increases due to continued growth in Stillwater and Oak Park Heights, which serve as the commercial activity center for the St. Croix Valley, and continued growth in western Wisconsin.

Lake Elmo does not agree with this designation or the reasoning presented by Mn/DOT. An October 2001 resolution, Resolution 2001-94, declined City acceptance and participation in the TH 36 Corridor Management Plan for, among other reasons, not giving the City the opportunity to respond to the designation and the belief that closing access on TH 36 will prove harmful to the City's residents and businesses.

Despite City objections, planning for TH 36 as a Medium Priority IRC has continued. The strategies and goals for TH 36 with this designation include a 55-mph average peak hour operating speed, elimination of traffic signals, and access via interchange or right in/right out only without median breaks. The original TH 36 IRC plan envisioned City access to TH 36 via a new Manning Avenue (CSAH 15) interchange or right in/right out access from Keats Avenue and some select private access driveways. DeMontreville Trail (CR 13B) and Lake Elmo Avenue (CSAH 17) would become overpasses without connection to TH 36. Highlands Trail and most other private access points would be eliminated or reduced to right in/right out access only.

As the City has continued to work with the County and Mn/DOT on the future of TH 36, both agencies have been open to changes to original ICR plan. For instance, the current intersection of TH 36 with Lake Elmo Avenue is now being examined as a potential interchange. The City is working in earnest with other agencies to determine the final configuration. The City will need to continue to work with Mn/DOT, the County, and adjacent communities to determine the final configuration of access to TH 36 at this and other locations. In addition, the City will also need to decide how to serve properties adjacent to TH 36 as access is reduced or eliminated. Options for access to and from TH 36 as well as to adjacent property includes creating a frontage road, creating a backage road, using the north frontage road, or a combination of two or more of these methods.

There are two primary benefits to the City from the potential improvements to TH 36. The first is reduced commuter traffic on City roadways. As TH 36 is improved with higher average operating speeds, commuters will have less desire to seek other

routes. Wisconsin commuters would travel through the City on TH 36 without impact to City residential areas. Without the improvements, travel times on TH 36 will likely be reduced in the future. As observed on other routes in the Metropolitan area, as a major route gets congested, motorists will seek out County and local roads that show at least a perceived improvement in travel time. A comparison of projected 2030 traffic volumes in the previous sections shows this to be the case here.

The other potential benefit to the City from the potential improvements to TH 36 is increased safety. Current at-grade intersections with TH 36 represent some of the most dangerous areas of the City in terms of crashes. By consolidating access into interchanges and limited right in/right out access, residential and business traffic to and from the City will be able to more safely enter and exit this corridor.

(2) Interstate 94

The I-94 corridor, including the segments adjacent to the southern border of the City, has been designated High Priority IRC. Under this designation, I-94 has a goal 60-mph average peak hour operating speeds with minimal conflicts and interruptions to traffic flow. A corridor management plan has not yet been developed to examine the existing operations and determine future plans to meet those goals. It is expected that such a plan will be developed in the near future. It is also anticipated that Lake Elmo will have the opportunity to participate on some type of advisory panel in conjunction with development of that plan to express the City's views and opinions on the corridor. The City will work with the Mn/DOT, the County, and adjacent communities on a corridor plan that is effective for all involved.

Although an IRC plan has not been developed for I-94, a recent traffic impact study involving the corridor was completed under the direction of the City of Woodbury. The October 2008 Woodbury Northeast Area Traffic Impact Study examined impacts from the development of an approximately 580-acre site between Keats Avenue (CSAH 19) and Manning Avenue (TH 95), south of I-94. This development is planned for mixed-use including retail, office, some residential, parkland, and a new park-and-ride facility. Although the report focuses on transportation improvements necessary to accommodate a development not located in Lake Elmo, the potential mitigation

options affect the I-94 corridor and potentially Lake Elmo's transportation network.

4. **System Analysis**

With the traffic forecasts completed, the City of Lake Elmo's transportation system elements were re-examined to identify potential issues, recommend potential improvements, and provide guidance for development of the system through 2030. These elements are examined separately below.

a. **Jurisdiction Transfers**

As the City, County, and Mn/DOT work towards their recommended 2030 transportation networks, the ownership of particular roadways may need to change. Ownership is important as that agency becomes responsible for the roadway, including regulatory, maintenance, construction, etc. The goal, however, is to match the roadway's function with the appropriate agency. For instance, a road that serves regional trips should be controlled by a regional agency, such as the State or the County. A road that serves local interest should be controlled by that local agency.

Currently, Demontreville Trail (CR 13B) is the only roadway identified for transfer from the County to the City. Both agencies recognized that the corridor was primarily serving local interests and agreed to this transfer. With this change to the City, the ownership will now match how the corridor is already being used, as a local connection between land uses.

The Lake Elmo Avenue (CR 17B) segment from 10th Street (CSAH 10) to the I-94 interchange is another roadway that has been mentioned for potential jurisdictional transfer to the City. With ownership, the City would be better able to maintain its rural character. However, more analysis of the potential benefits and drawbacks to City ownership is needed before a recommendation can be made.

As the City works towards its primary goals of safety and preserving the rural character, other roadway corridors may also need a transfer in ownership to match their function. The City will work with the County and the State for appropriate ownership and efficient ownership transfer for overall improvement of transportation network.

b. **Functional Classification Changes**

The functional classification system creates a hierarchy of roads that carries traffic between destinations in a safe and efficient manner, as

described earlier. Principal Arterials and Minor Arterials are generally well spaced around the City. Taking into account the 2030 projected volumes, regional initiatives, and proposed roadway improvements, Lake Elmo Avenue (CSAH 17) could change its current designation of a B Minor Arterial. With the proposed improvements, the 2030 projected volume decreases as regional traffic shifts to Manning Avenue (CSAH 15). This suggests the roadway serves more local than regional traffic and could be designated as a Major Collector.

The City's Collector system is also less than desired and lacking appropriate connections between the arterials. In general, these connections already exist in the form of the State Aid system. MSA routes are designed to accommodate higher levels of traffic and truck traffic, similar to the function of collector roadways. In addition, residents already use these roads as routes to access the arterial roadways and other land uses.

Identifying these routes in the functional classification system reinforces their need as MSA routes and better identifies the routes to existing and future residents and businesses. The functional classification system is also related to access management, which can help the City maintain the balance between mobility and access as development occurs. The functional classification can also be used to help determine the appropriate location of intersection improvements and traffic control, such as traffic signals. The following changes and additions are proposed for the City's functional classification map.

Proposed function classification changes:

- Lake Elmo Avenue (CSAH 17), Stillwater Boulevard (TH 5) south to 10th Street (CSAH 10), will change from a B Minor Arterial to a Major Collector
- Lake Jane Trail, 42nd Street north and east to Jamaca Avenue, will change from its current Major Collector designation to a local road

Proposed functional classifications additions:

- Keats Avenue, TH 36 south to 47th Avenue, will be designated as a Major Collector
- 42nd Street, Lake Jane Trail east to Jamaca Avenue, will be designated as a Major Collector
- Jamaca Avenue, Stillwater Boulevard (TH 5) north to Lake Jane Trail, will be designated as a Major Collector
- Hudson Boulevard, Inwood Avenue (CSAH 13) east to Manning Avenue (CSAH 15), will be designated as a Major Collector

- Kimbro Avenue, 43rd Street north to 47th Street, will be designated as a Minor Collector
- 43rd Street, Kimbro Avenue east to Lake Elmo Avenue (CSAH 17), will be designated as a Minor Collector
- 39th Avenue, Lake Elmo Avenue (CSAH 17) east to Stillwater Boulevard (TH 5), will be designated as a Minor Collector
- Laverne Avenue, Upper 33rd Street north to 39th Street, will be designated as a Minor Collector
- Upper 33rd Street, Lake Elmo Avenue (CSAH 17) east to Laverne Avenue, will be designated as a Minor Collector
- Klondike Avenue, 33rd Street north to Stillwater Boulevard (TH 5), will be designated as a Minor Collector
- 33rd Street, Klondike Avenue east to Lake Elmo Avenue (CSAH 17), will be designated as a Minor Collector
- The new planned road in the Village Area, connecting the Stillwater Boulevard (TH 5)/39th Street intersection to the 30th Street/Lisbon Avenue intersection, will be designated as a Minor Collector
- 31st Street, Stillwater Boulevard (CSAH 6) east to Stillwater Boulevard (TH 5), will be designated as a Minor Collector
- 20th Street, Lake Elmo Avenue (CSAH 17) east to Manning Trail, will be designated as a Minor Collector
- Manning Trail, 20th Street north to the City border, will be designated as a Minor Collector
- 15th Street, the City border east to Inwood Avenue (CSAH 13), will be designated as a Minor Collector
- A new connector roadway through development, from Inwood Avenue (CSAH 13) east to Manning Avenue (CSAH 15) (this new roadway is discussed more in the traffic forecasts section), will be designated as a Minor Collector
- Eagle Point Boulevard, Inwood Avenue (CSAH 13) east and south to Hudson Boulevard, will be designated as a Minor Collector

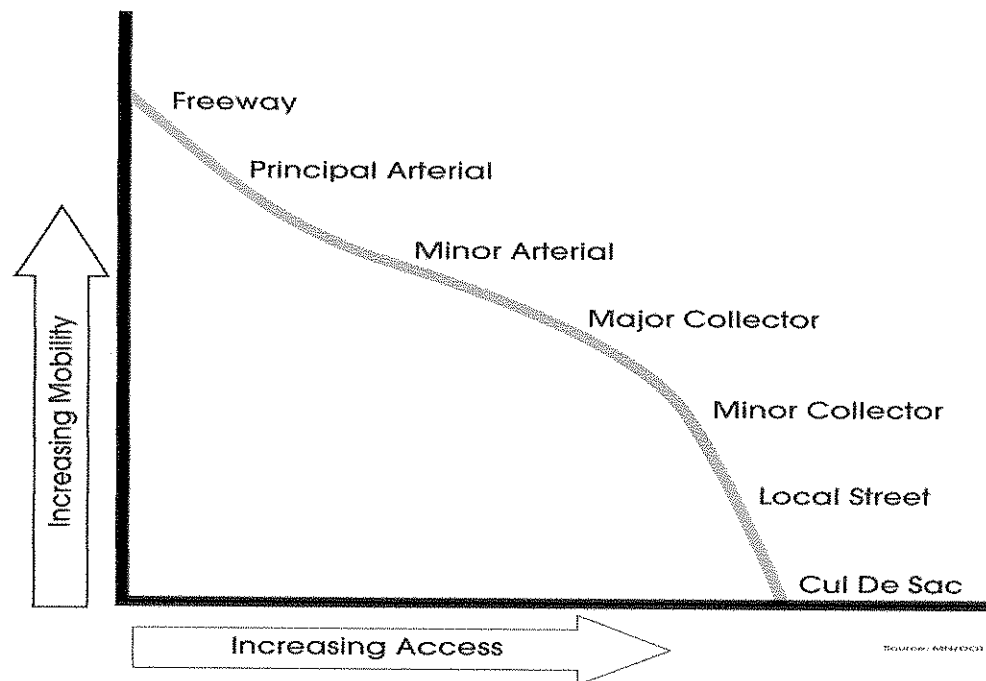
This proposed functional classification plan is shown in Figure 10. The majority of these changes could occur now as most of the roadways currently exist. As stated, these changes would align the City's MSA routes with its Functional Classification Map in addition to other benefits. The new roadways will need to be designated and developed as development occurs. This also means the City will plan access and mobility along each roadway according to its classification's characteristics. As development occurs and travel patterns change, the functional classification map will need to be reviewed to evolve and to continue to serve its function.

**Figure 10:
Proposed Functional Classification**

c. Access Management

Access management is the balance between corridor mobility and property access. Increased access to a road leads to more vehicle turning movements as motorists enter and exit properties. This increase in turning movements results in a decrease in mobility on the corridor. Similarly, increasing the mobility corresponds with a decrease in access.

The relationship between access and mobility is further defined with the functional classification of roadways. An Interstate Freeway provides the greatest mobility as access is limited to grade-separated interchanges. On the opposite side, a local roadway cul-de-sac provides the greatest access with multiple driveways and limited spacing between those driveways. However, with only one connection to other roadways, the cul-de-sac offers almost no mobility. The Mn/DOT graph below shows this relationship between access and mobility.



In terms of safety, as the access to a road increase, whether public or private, the crash rate increases. This relationship has been confirmed by Technical Study No. 4, Toward An Access Classification System and Spacing Guidelines, by the Minnesota Department of Transportation (Mn/DOT) and by the Federal Highway Administration's (FHWA) Access Research Report No. FHWA-RD-91-0444.

Based upon this relationship, the safest transportation network would have no access. Such a network is completely unrealistic all roadway users need access for every destination. Thus, access management guidelines were developed to provide that balance between safe, efficient travel and sufficient property access on different types of roadways.

When a transportation network provides effective access management, the benefits include:

- Reduced congestion and improved safety with fewer crashes
- Improved travel times
- Improved movement between destinations
- Improved economic development

The Mn/DOT website, www.oim.dot.state.mn.us/access/index.html, provides additional information regarding access management.

Each agency is responsible for the access management of their roadways. In some cases, the State and County will consult with the City as the roadway travels through important land uses or existing access that may be difficult to move or remove. As proper access management provides benefits to all agencies, there are advantages to having consistency across the agencies. Therefore, the City will use the Washington County access spacing guidelines. Table 10 shows these guidelines that are based upon the functional classification. The table identifies recommended distances for full access locations. This chart is part of the Washington County Transportation Plan and more information regarding these guidelines can be found in that document.

Some existing public and private connections may not currently satisfy these guidelines. In addition, access that does not adhere to these guidelines may need to be granted for special circumstances or specific reasons. Flexibility is required in these and other cases, depending upon the exact situation and conditions. It is important to note that these spacing guidelines are goals and not absolute laws or regulations. The City will work with the State, the County, developers, and its community to improve roadway safety and mobility through these guidelines.

**Table 10:
Access Management Guidelines**

Type of Access	Functional Classification of Roadway				
	Principal Arterial	Minor Arterial > 7,500 ADT	Minor Arterial < 7,500 ADT	Collector	Local
A. Private Residential Driveways	No Direct Access	No Direct Access	(3)	(3)	(3)
B. Commercial Driveways or Non-Continuous Commercial Street	No Direct Access	No Direct Access	1/8 Mile	1/8 Mile	(3)
C. Non-Continuous Residential Streets	No Direct Access	1/8 Mile with No Median Opening	1/8 Mile	1/8 Mile	(3)
D. Continuous Local Streets and Collector Streets	1/2 Mile	1/4 Mile	1/4 Mile	1/8 Mile	1/8 Mile
E. Minor Arterials	1/2 Mile	1/2 Mile	1/2 Mile	1/2 Mile	1/2 Mile
(1) Distances are minimums. (2) "Non-Continuous" streets refer to cul-de-sacs or short length streets (less than 1/2 mile) which do not cross the roadway in question. (3) Determination based on other criteria, such as sight distance, speed, traffic volume, etc. (4) Distances may be increased over these minimums based on other criteria, such as sight distance, speed, traffic volume, etc.					

Source: Washington County Transportation Plan

In addition to working with these spacing guidelines, the City will use best access management practices in its urban, developing, and rural areas. These practices include:

- Minimizing new access locations and reducing/consolidating existing access points.
- Protecting and improving intersection functional and sight distance areas.
- Properly designing of driveway and intersection (grade, lane width, etc.).
- Developing turn lanes
- Avoiding offset intersections and driveways.

D. Transit Facilities

Transit represents a major component of transportation planning. Several factors influence the potential use of transit. However, the primary predictors are density of origination and destination. With consideration of these primary factors, the Metropolitan Council identifies four key conditions to identify transit market areas:

- Population density
- Employment concentration and job density
- Trip volumes and patterns
- Transit dependent segments of the population

Using these criteria, distinct market areas have been developed recognizing different types and levels of transit service for each market. A table showing the different transit markets, suggested service type, and suggested service characteristics is provided in the appendix.

Lake Elmo is currently within the Metropolitan Transit Taxing District and is designated as Market Area IV. This transit type suggests service involving peak period express service and a public dial-a-ride service.

1. Existing Transit Facilities

Lake Elmo has existing transit facilities consistent with its Market Area IV designation, which includes limited fixed route express and dial-a-ride service, rideshare program, and park-and-ride lots. Each component of the existing system is discussed below.

a. Transit Service

Metro Transit, a division of the Metropolitan Council, provides transit service along one fixed route through the City. Route 294 provides service between downtown Saint Paul and Stillwater via on 34th Street/Stillwater Boulevard (TH 5). The route includes stops in Lake Elmo.

Demand-response transit service is currently offered by Metro Mobility through the provider HSI Transporter Services. HSI Transporter Services provides door-through-door transit services for adults 59 years or older and persons with disabilities who are residents of Washington County. Door-through-door service means that drivers will help riders through the first set of doors at both their pick-up points and their destinations.

The transporter is available Monday through Friday between 7:30 a.m. and 5 p.m. HSI Transporter Services can take you anywhere in

Washington County. Trips outside of the county also are available to specific destinations and medical facilities in St. Paul. In addition, the transporter can take riders to a Metro Transit bus line to make connections to destinations throughout the metro area.

b. Rideshare

Rideshare is a Metro Transit program that matches motorists with others traveling in the same direction and time. There are two types of rideshare opportunities available to Lake Elmo residents: carpool matching and trip matching. Carpool matching finds commuters in the same area who travel to and from the same work area. Trip matching helps individuals share rides to concerts, sporting events, business conferences, or other one-time trips. In either case, people register with Metro Transit, who then notifies them when a carpool or trip match opportunity exists. It is up to the individuals to contact each other and follow through on the pool.

c. Park-and-Ride Lots

To facilitate use of transit, either using the bus or carpool, parking lots are available across the twin cities. Motorists are able to park for free at these lots and then continue to their destination using the bus or carpooling. Lake Elmo provides one park-and-ride lot within the City. Located at the intersection of Laverne Avenue and 34th Street/Stillwater Boulevard (TH 5), the lot provides eight spaces and is served by transit line 294. A study completed in 2004 determined an estimated daily use of three of those spaces. In addition to this site, there are five lots in the adjacent cities that could be used by Lake Elmo commuters, including:

- St. Croix Valley Recreation Center in Stillwater. This lot provides a vehicle capacity of 100 spaces and is served by transit line 294 to and from downtown Saint Paul. Current usage is about 40 vehicles per day.
- Guardian Angels Church in Oakdale. Its current capacity of 150 vehicles is served by two transit lines, 353 and 375, providing express service trips to and from downtown Minneapolis and Saint Paul. Usage of this lot was not provided in the 2004 study.
- Walton Park in Oakdale. This lot is served by lines 219 and 294, which provides service to and from downtown Saint Paul. Current daily usage is about 35 vehicles per day of the 60 spaces available.
- Woodbury Mall Theater in Woodbury. This is one of the larger lots in the twin cities. Its 550 spaces are served by transit lines 353 and 355, express bus service to and from downtown

Minneapolis and Saint Paul. The 2004 study determined a daily use of 399 spots.

- Woodbury Lutheran Church in Woodbury has a 90 vehicle capacity and is served by lines 351, 353, and 355, express bus service to and from downtown Minneapolis and Saint Paul. Based on the 2004 study, this lot is almost at capacity each day with 84 spots used.

Separately, there is one park and pool lot is available in Grant, near the intersection of TH 36 and Manning Avenue (CSAH 15). Bus service is not provided at this lot, but commuters may still park for free and carpool from this location. According to the 2004 study, two out of 12 spaces were used daily at this location.

Figure 11 shows the existing transit facilities, including current bus routes and park-and-ride lot locations.

2. **Transit Planning**

Transit alternatives to automobile travel are both encouraged and advocated by the City. According to Metro Transit information, commuter growth is expected in most areas of Lake Elmo. The Village Area in particular represents an opportunity to expand transit with the City. Two other areas of potential transit expansion include the TH 36 corridor on the north border of the City and the I-94 corridor on the south border of the City. Each area is discussed separately below.

a. Village Area

Transit service to the Village Area is an important component for the City and in keeping with regional transportation goals. The Village Area is now and will continue to be the largest concentration of commerce and urban scale housing in the City. The relationship of the Village Area to future transit is enhanced by its location adjacent to 34th Street/Stillwater Boulevard (TH 5) and the existing east-west Union Pacific rail corridor.

The Metropolitan Council initially studied the 34th Street/Stillwater Boulevard (TH 5) and/or the Union Pacific rail corridor in its 2030 Transit Master Study of August 2008. In that document, this corridor was one alternative for I-94 East, connecting Saint Paul to western Wisconsin. This route for the I-94 East was examined as commuter rail. The study determined both low projected ridership and low estimated costs. Potential issues for consideration included the operating railroad, potential St. Croix crossing, and potential cost-sharing with Wisconsin. While this study did not recommend moving forward with this commuter rail at this time, it did recognize

limits to its analysis. Due to these limits, the study further recommended re-examining the demand for commuter rail after Northstar is operational.

The County continues to identify this route as a potential commuter rail route across the County. This route would provide transportation benefits to the City assuming a stop is provided in the Village Area. These benefits could include reduced volumes on 34th Street/Stillwater Boulevard (TH 5) as well as bringing more exposure for the Village Area commercial zones without an increase in traffic.

Lake Elmo's only park-and-ride is situated within the Village Area and is served by an existing express bus route. As development continues in the area, this service will need to be re-evaluated to determine if the location is appropriate, if enough spaces are provided, if additional facilities such as a shelter are needed, and if the express bus route is the preferred transit option. These issues could be part of a new study regarding the potential for commuter rail on the Union Pacific rail corridor.

**Figure 11:
Transit Features**

b. TH 36 Transit Corridor

The TH 36/NE corridor extends from downtown Minneapolis to the Wisconsin border primarily along TH 36. In the Metropolitan Council's 2030 Transit Master Study, the TH 36 corridor was studied as light rail transit and determined to have a medium projected ridership and high estimated cost. Potential issues include requiring additional right-of-way, reconstruction of roadway and interchanges, and cost-sharing with Wisconsin. From these results, the TH 36 corridor was recommended for future study to determine the appropriate mode (light rail transit, busway, bus rapid transit, or commuter rail) and determine an alignment.

This corridor is also listed as a potential express bus corridor with transit advantages. In this case, the transit advantage would be bus-only shoulders that allow buses to by-pass congestion on the roadway shoulders. The express bus service could serve as a precursor to another mode of transit in the long-term future. It is also possible for the corridor to develop both express bus service and another transit mode that cooperate in serving future transit needs.

As part of the development of this corridor, two park-and-ride lots are planned near the City on the TH 36 corridor. The first lot is an expansion of the existing St. Croix Valley Recreation Center near the TH 36 interchange with Stillwater Boulevard (TH 5) in Stillwater. The second location is a new lot near the TH 36 interchange with I-694 in Pine Springs. Both lots could be served by either express bus or another transit mode.

A transit corridor and expanded park-and-ride lots on the northern border of Lake Elmo would provide residents an alternative to driving as well as reduce congestion on TH 36. Reduced congestion on TH 36 could result in fewer commuters using alternative routes through the City, such as on 34th Street/Stillwater Boulevard (TH 5) or other roads.

c. I-94 Transit Corridor

The 2030 Transit Master Study examined the corridor from Saint Paul to western Wisconsin. One alternative was discussed earlier that considered commuter rail through the Village Area. Another alternative examined transit in this corridor directly along I-94 into Hudson, Wisconsin. First considered as light rail transit, the corridor projected medium ridership with high estimated cost. The corridor was then re-examined considering a dedicated busway either to Saint Paul or extending the route to Minneapolis. In all the busway scenarios, the projected ridership was low with medium estimated

costs. Issues for the studied alternatives directly along I-94 included requiring additional right-of-way, reconstruction of roadways and interchanges, the St. Croix River crossing, and cost-sharing with Wisconsin. Without clear results and recognizing limitations of the study with the I-94 commuter rail route, the study recommended the I-94 corridor for future examination to determine the most appropriate mode and alignment.

The corridor on I-94 is also listed as a potential express bus corridor with transit advantages. As with TH 36, the transit advantage here would be bus-only shoulders that allow buses to by-pass congestion on the roadway shoulders. The express bus service could serve as a precursor to another mode of transit in the long-term future or work in conjunction with another transit mode to better serve transit needs.

As part of the development of this transit corridor, one new park-and-ride lot is planned near Lake Elmo with another two close areas planned for expansion. The new lot is planned for the south side of I-94 in Woodbury, between Keats Avenue (CSAH 19) and Manning Avenue (CSAH 15). The exact location is unknown and will depend upon future roadway improvements and area development. The two existing areas planned for expansion are the Woodbury Mall Theater/Woodbury Lutheran Church in Woodbury on the south side of I-94 and Walton Park in Oakdale. The current express bus service to the existing lots would be improved and extended east to the new park-and-ride lot. In the future, if another mode of transit is selected for either supplementing or replacing the express bus service, the current configurations may need to change. That issue will need to be dealt with if and when another mode of transit is selected to move forward.

Expanding the existing transit corridor on the southern border of Lake Elmo would serve residents with an improved option to driving and could reduce congestion on I-94. Reduced congestion on I-94 would result in fewer commuters using alternative routes through the City on the frontage road. It would also reduce potential congestion from continued development in Woodbury. Improved transit could also impact the cost-benefit of a new interchange at I-94 and Lake Elmo Avenue (CSAH 17), listed as potential mitigation option for planned Woodbury development. Lake Elmo is not currently in favor of the new interchange and views improved transit on I-94 as one method that reduces the need for that system change.

The City encourages and advocates the continued improvement of existing transit routes and the development of new transit alternatives. As regional agencies are often better able to advocate for improved transit in

the area, the Metropolitan Council and the County are encouraged to continue examining these potential transitway corridors and associated issues. However, support and assistance from the local governments is needed. The City will work with these and other agencies in pursuit of their common and City-specific transit goals. Participating in a future transit advisory committee, if formed for the area or one or more corridors, is one method that will increase the City's voice on transit coverage and improvements. Another method for active City participation could include leading or assisting in more detailed studies of proposed transit improvements, such as expansion of the City's current park-and-ride or providing transit facilities like a shelter.

E. Trail System

A comprehensive trail plan provides an overall strategy for developing a coordinated, efficient system of trails through the community. The plan provides assistance with locations in addition to standards and operations policies. It can also help establish priorities.

The City and the transportation system benefit from a comprehensive trail plan through its recreation and commuter routes. Recognizing the limitations of seasonality in our climate, these routes provide connections for pedestrians and non-motorized vehicles between parks and open spaces, neighborhoods and developments, adjacent cities, and regional trails. A properly designed trail system will help to reduce reliance on automobiles and the volume of auto traffic on the City roadways.

Currently, on- and off-road trails, dedicated bicycle lanes, and private trails are provided within the City. Several miles of private trails developed as an infrastructure component of Open Space Development (cluster) neighborhoods provide little substitute for intra-city vehicular trips. These private trails are generally designed to serve the recreational needs of the neighborhood rather than the transportation needs of the community. At the same time, many of the private trails are designed with an 'outlet' at the periphery of the neighborhood to accommodate extensions to future adjoining developments and/or a future community trail link. Focusing on public pedestrian/bicycle trail planning and development complements both the private trail development in several Open Space Development neighborhoods and the 'central place' philosophy, policy, and planning of the City regarding the Old Village.

One of the primary visions of the Lake Elmo Comprehensive Plan is the orientation of the entire 25 square mile area of the City to the Old Village Area - an effort to retain community identity and character in the path and norm of nondescript 'suburbanization.' The City's ability to influence that central point focus is in part, a function of its efforts to provide reasons for citizens to travel to the Old Village (public buildings and uses as well as goods/services), and the means to travel there. Development of a public trail system, focused on the Old Village, is an ingredient in realizing the Old Village vision. A system so designed would have a likely impact on intra-city vehicular trip generation.

The City is committed to providing a comprehensive trail system. This is reflected in the vision statement developed by the Lake Elmo Parks Commission, which states:

"The City will develop a safe, convenient and integrated system of trails linking neighborhoods, schools, the "Old Village," and parks that will focus on the natural resources and character of Lake Elmo and help safely meet the recreation, health/fitness, and transportation needs of its residents."

More information regarding the trail system's vision, goals and objectives, and development of the network, including maps, can be found in the Park Plan and Trails System Plan of this Comprehensive Plan.

F. Rail

1. Existing Characteristics

There is one active railway in Lake Elmo, owned by Union Pacific Railroad Company. This east-west rail line travels through the middle of the City, generally adjacent to 34th Street/Stillwater Boulevard (TH 5). According to current Mn/DOT records, the track shows an average of four trains per day with a top speed of 40 mph. This is in conflict with information from Union Pacific, which states an average use of five trains per day at 30 mph. Additional information from Union Pacific indicates two of these trains operate at night.

There are four public at-grade crossings in the City, located at the crossings of 31st Street, Klondike Avenue, Lake Elmo Avenue (CSAH 17), and Manning Avenue (CSAH 15). The Lake Elmo Avenue (CSAH 17) and Manning Avenue (CSAH 15) crossings have flashing lights and warning bells for oncoming trains. The other two public at-grade crossings are under stop sign control. In addition to these public at-grade crossings, there are several private at-grade crossings. In general, these private crossings are controlled with stop signs.

2. Safety

Crossing of the railway should only occur at those marked locations. Crossing at unauthorized locations is illegal and dangerous. A fully loaded train moving at 40 mph can take close to a mile or more to come to a complete stop. When the train engineer sees something on the track, such as a vehicle or pedestrian, it is often too late to stop the train. Because of this and as required by law, all other modes of traffic must yield to trains at the crossing locations, including emergency services, bicycles, and pedestrians.

Depending upon the speed and length of the train, stopping for a train can add noticeable delay to a trip. The size of a train also leads to a perception of a slower traveling speed. Combining this perception with the potential delay, motorists or others may attempt to 'beat' the train creating a significant safety risk.

To date, the risk has not translated into a problem. Mn/DOT crash records did not show any vehicle-train crashes in the years 1998 through 2007. However, the Federal Railroad Administration (FRA) did provide records for one crash at the Lake Elmo Avenue (CSAH 17) crossing. From FRA records, a single vehicle crashed into a train at this location in 2007. The crash caused property damage only with neither the vehicle driver nor train personnel injured.

3. **Rail Planning**

A potential public at-grade crossing could be also added in the Village area. The exact location will depend upon the route of a planned north-south roadway connecting the 39th Street/34th Street-Stillwater Boulevard (TH 5) intersection to the Lisbon Avenue/30th Street intersection. This new public crossing would replace an existing private crossing.

The number of trains may increase on the Union Pacific line whether through a general increase in freight deliveries or a possible commuter rail, as described in the Transit Section. This rail line is part of a primary route between the Twin Cities and Chicago as well as through Milwaukee. The connection of these major cities creates the potential for increased rail traffic at any time.

Projected traffic volumes show motorized traffic increasing around the rail corridor. Non-motorized traffic is also expected to increase in the area and at rail crossings. As these volumes increase into the future, potential delays at the crossings will increase and the potential safety issues subsequently increase. Consideration of safety and the crossing locations is particularly important for the higher density expected in the Village Area as well as its planned new public at-grade crossing. To combat the increase in potential risk, the City will work to improve conditions through:

- Providing education focused on safe driving, biking, and walking behaviors at crossing locations
- Closing private crossings when feasible and development or redevelopment occurs
- Upgrading existing crossings to include lights and warning bells, or improve to full lights and guard arms
- Including safety components in any new at-grade crossing

Ultimately, all users of the transportation network may benefit from grade-separated crossings at one or more of the public locations. Grade-separated crossings physically separate the trains from other modes of travel. The City will need to work with the other agencies and the railroad as opportunities arise and traffic volumes increase into the future. When opportunities arise, the City will work with other agencies or organizations to provide rail crossing information and safety tips.

Quiet Zones are another option to consider for the railroad crossings. The term "Quiet Zone" pertains to a single highway/railroad at-grade crossing or a consecutive stretch of highway/railroad at-grade crossings (rail corridor) in which a train engineer, under normal conditions, is ordered not to blow the train horn while approaching the crossing. From the

community's point of view, the result can be improved living conditions as loud train horns are silenced. From the railroad's perspective, a warning and safety device, the loud train horn, has been silenced. The City will consider the potential safety implications, monetary cost, community benefits, and other factors before implementing a Quiet Zone. The City will also work with other agencies and the railroad in determining the need/desire for a Quiet Zone and/or implementing the Quiet Zone.

G. Aviation

While Lake Elmo does not directly host an airport, the Lake Elmo Airport is located in Baytown Township adjacent to the Lake Elmo eastern border. The runways of the airport are oriented such that aviation safety and clear zones extend into the City. With airport approach patterns extending over Lake Elmo, residents and businesses of the community are impacted by airport operations and the policies and planning of the Metropolitan Airports Commission (MAC).

Located on approximately 640 acres of land, this airport first opened for operations in 1951. During its time in operation, the Lake Elmo Airport has existed as a General Aviation “good neighbor” to the City. To ensure the continuance of this good neighbor environment, elected and appointed City officials regularly monitor the activities of the MAC. The MAC assists in this effort through the study and planning of this and all airports in the region. The most recent long-term comprehensive plan for the Lake Elmo Airport was prepared in 2007. A summary of this information is provided in the following text.

1. Existing Conditions

The current definition or classification of the Lake Elmo Airport depends upon the agency. Four agencies each classify this airport in their terms, which is provided below. While differing in language, the common theme of each agency is general aviation activity focused on personal or recreational use with minor business use.

- The MAC considers the Lake Elmo Airport as a “complimentary reliever,” serving as a recreation use airport.
- The Federal Aviation Administration (FAA) classifies the Lake Elmo Airport as B-II, which is based upon the size and type of aircraft served. The “B” refers to airplanes with an approach speed of less than 121 knots and the “II” relates to wingspans up to but not including 79 feet.
- Mn/DOT classifies the Lake Elmo Airport as an Intermediate System Airport, suggesting a paved runway of 5,000 feet or less and capable of accommodating all single engine and most twin engine aircraft as well as some light jet aircraft.
- The Metropolitan Council considers the Lake Elmo Airport a Minor Airport, meaning a primary runway length between 2,500 and 5,000 feet that can accommodate personal use and recreation aircraft, business general aviation and air taxi traffic, flight training, and military operations. This airport is also considered a “secondary reliever” by the Metropolitan Council with a focus on general aviation and recreational aircraft.

There are two paved runways serving this airport. The primary runway is 2,850 feet long with a full length parallel taxiway. The primary runway is lighted with Medium Intensity Runway Edge Lights and also has end identifier lights and precision approach path indicators. The crosswind runway is 2,497 feet long and also has a full length parallel taxiway. This runway is not lighted. Approximately 228 aircraft were based at this airport in 2007 with total annual operations of 38,617. With a capacity of approximately 230,000 operations in annual service volume, the airport is at about 17% capacity. An estimated 256 indoor hanger spaces are available, translating into a current landside capacity of 89%.

According to MAC projections, the airport averages 203 aircraft operations per day, based on the 12-month period ending August 31, 2007. However, observations from the City suggest the actual number is quite lower. In any case, the operations are generally split into the following categories:

- 61% local general aviation
- 39% transient general aviation
- <1% military

The report indicated several deficiencies of the current airport. The runways are the shortest of the area's reliever airports and do not satisfy all the guidelines of Lake Elmo Airport's classification. Pilots currently use the weather station from Saint Paul, about 12 miles away. This weather station may not always represent the weather conditions at Lake Elmo. The registered aircraft is almost up to the capacity of the hanger areas. The airport is currently using wells and septic systems rather than sanitary sewer and water facilities.

Runway Protection Zones and State Safety Zones extend into the City. These areas restrict land use off runway ends to help ensure the safety of people and property on the ground. The dimensions of Runway Protection Zones are based upon the aircraft approach category and runway approach visibility minimums. The runways at the Lake Elmo Airport require a Runway Protection Zone of 500 feet by 1,000 feet by 700 feet (inner width by length by outer width).

Based on FAA guidelines, Mn/DOT further has designated State Safety Zones A and B to control the type of development allowed off runway ends. Safety Zone A restricts land use to agriculture, livestock, cemeteries, and auto parking areas. This zone extends 2/3 of the total runway length. Safety Zone B does not allow places of public or semipublic assembly and is subject to site-to-building area ratios and site population limits. This zone is 1/3 of the total runway length and extends from Safety Zone A.

Another restriction to development around airports is noise or Day-Night Average Sound Level (DNL). The FAA requires the DNL noise metric to determine and analyze noise exposure and aid in the determination of aircraft noise and land use compatibility issues. The MAC suggests that the 60 DNL contour be used for planning purposes inside the Metropolitan Urban Service Area (MUSA). Since Lake Elmo is not within the MUSA, the planning report also provides the 55 DNL. More information regarding the location of the Runway Protection Zones, Safety Zones, and DNL contour impact areas, including graphics, can be found in the MAC's Long Term Comprehensive Plan for the Lake Elmo Airport.

As the Lake Elmo Airport is not located within the City limits, it is primarily the Runway Protection Zones, Safety Zones, and noise restriction guidelines that affect land use planning within the City. Currently, land use around the airport is zoned Agricultural, Open Space, or Single Family Detached. A significant portion of the area affected by these zones is expected to be redeveloped with the Lake Elmo Village Area. To minimize land use compatibility issues, the City is working with a Joint Airport Zoning Board. This work will result in an airport zoning ordinance prior to any new development.

In addition, Federal Regulation Title 14 Part 77 establishes standards and notification requirements for objects affecting navigable airspace. Each sponsor who proposes certain types of construction or alteration, which includes buildings/structures and roadways, shall notify the FAA. This notification allows the FAA to identify potential aeronautical hazards in advance to prevent or minimize adverse impacts to the safe and efficient use of navigable airspace. Once notified, the FAA will conduct an aeronautical study to determine the impact to air navigation. One of three responses is then typically issued:

- No Objection - subject construction did not exceed obstruction standards and marking/lighting is not required.
- Conditional Determination - proposed construction/alteration would be acceptable contingent upon implementing mitigating measures (Marking & Lighting, etc.)
- Objectionable - proposed construction/alteration is determined to be a hazard and is thus objectionable.

Source: Federal Aviation Regulations Part 77: Objects Affecting Navigable Airspace

The FAA's Form 7460-1, Notice of Proposed Construction or Alteration, can be found through this link to the FAA's website:

<http://forms.faa.gov/forms/faa7460-1.pdf>

2. Airport Planning

Forecasts were completed for airport operations and based aircraft in the Long Term Comprehensive Plan. The projected 2025 baseline for operations is 91,119, an increase of approximately 135%. Despite the relatively large increase, the 2025 estimated operations are still within the current capacity of the airport. The projected 2025 baseline for based aircraft is 312, about 37% above the current number. However, this 2025 estimate is more than the current indoor hanger spaces available.

Using the projections for the airport, noting the existing deficiencies, and in consideration of several concepts, costs, benefits, and negative issues, the long term plan recommended a preferred alternative for future development of the Lake Elmo Airport. Table 11 below provides the summary of the recommendations and the timeline for these changes.

**Table 11:
Lake Elmo Airport Long Term Comprehensive Plan Preferred Alternative**

Recommendation	Timeline
Pursue installation of an Automated Weather Observation System (AWOS) through Mn/DOT	Immediately
Construct new hanger area to accommodate 2025 needs	0 - 5 Years - first phase 5 - 15 Years - second phase
Construct full parallel taxiway in conjunction with new hanger area	In conjunction with new hanger area
Pursue agreements with the communities to provide limited sewer & water services	0 - 5 Years
Review alternatives and feasibility of serving hangar area(s) with a public or private systems	0 - 5 Years
Reconstruct existing primary runway	0 - 5 Years
Extend crosswind runway and taxiway to 3,200 feet, including runway lighting and precision approach path indicators	0 - 5 Years
Reconstruct existing crosswind runway	10 - 15 Years
Continue to show need for relocated primary runway and include future approach areas in the upcoming zoning effort	Beyond 20-year planning period

Source: Metropolitan Airports Commission's Lake Elmo Airport Long-Term Comprehensive Plan

In general, the preferred alternative for the Lake Elmo Airport does not change its impact on the City. The location of the Runway Protection Zones, Safety Zones, and DNL contour impact areas within the City remain the same. Land use compatibility is therefore expected to remain

consistent. For the crosswind runway, areas within the protection and noise contour impact areas are primarily developed. Very limited development, if any, is expected in this area in the future. For the primary runway, the future development is a part of the Village Area.

Development scenarios for the Village Area include a greenbelt/buffer along Manning Avenue (CSAH 15) specifically to provide a buffer to the airport. The development scenarios do include residential uses within the safety zones and noise contour impact areas.

These future residential developments located within the safety zones and noise contour impact areas will be subject to development restrictions established by state statute and the City. As mentioned, the City is working with a Joint Airport Zoning Board to minimize land use compatibility issues. This work will result in an airport zoning ordinance prior to any new development.

The exception to unchanged impacts from the preferred alternative is the potential for a relocated primary runway. Under this option, the primary runway would be rebuilt to the northeast of the current primary runway and extended to 3,900 feet. This change would remove the Runway Protection Zone from City limits and shift the Safety Zones and noise contour impact areas northeast within the Village Area. The City will need to account for this potential shift when approving development within this portion of the Village Area.

As mentioned earlier, development of structures or roadways around the airport, subject to certain criteria, will require notice to the FAA.

Another impact from the shifted and extended primary runway is the potential growth in airport traffic. In particular, a growth in jet powered (jet prop and pure jet) business aircraft based in the Region may necessitate additional tower control. Lake Elmo could be a candidate for a control tower if that type of growth were realized. Such a scenario is not envisioned in the current Long Term Comprehensive Plan for the Lake Elmo Airport. This scenario is also not in the interest of the City as the character of aviation operations and the infrastructure of the airport would change significantly. The City will aggressively oppose control tower operations to the Lake Elmo Airport if ever advocated by the Metropolitan Airports Commission.

3. Amphibian and Float-Equipped Plane Operations

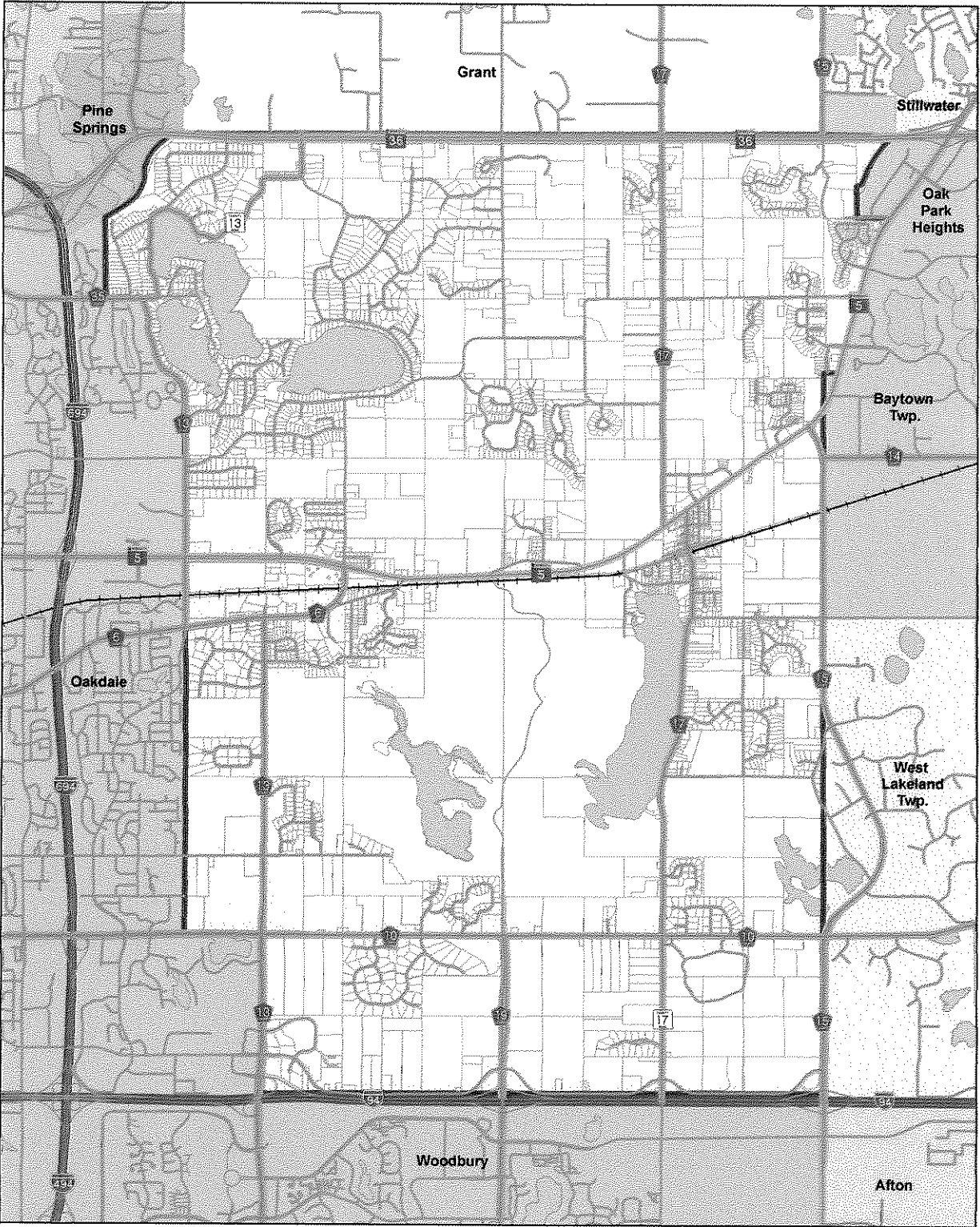
Seaplanes are allowed to operate on several lakes within the metro area. When lakes are frozen, aircraft equipped with either wheels or skis may operate on the lakes if such operations can be conducted in a safe and reasonable manner relative to lake traffic and use. These types of aircraft

are under multiple Minnesota State Statutes to guide their operation and promote safety. These Statutes include:

- Minnesota Rules 8800.2600, Compliance with Marine Traffic Rules: All seaplanes must comply with marine traffic rules to the extent that such rules do not interfere with the safe operation of aircraft.
- Minnesota Rules 8800.2700, Approaches and Takeoffs: All approaches to and takeoffs from the water area shall be made in such a manner as to clear all structures on the lane by at least 100 feet, and wherever the area of body of water will permit, such landing and takeoffs shall be made at a distance of not less than 300 feet, both laterally and vertically, from any boat or person on the surface of the water, or as near to 300 feet as the area of water will permit.
- Minnesota Rules 8800.2800; Seaplanes operations are permitted only on the following public waters within Washington County - Big Carnelian Lake, Big Marine Lake, Clear Lake, Forest Lake, Lake Elmo, Mississippi River, Oneka Lake, and St. Croix River. Seaplane operations are prohibited on all other public waters within Washington County.

In addition, the Minnesota Department of Natural Resources and the Federal Government have restrictions and guidelines on seaplanes that may affect their operations within the City of Lake Elmo. The Mn/DOT Office of Aeronautics and Aviation should be consulted for more details on the rules and guidelines regarding these types of aircraft.

Information regarding this type of plane activity on the allowed lakes is not available. As such, projections of usage on the lakes for these types of aircraft are not available either. In any case, the City is committed to safe and lawful plane activity on its lakes.



**FIGURE 1:
EXISTING JURISDICTIONAL
CLASSIFICATION**

Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:



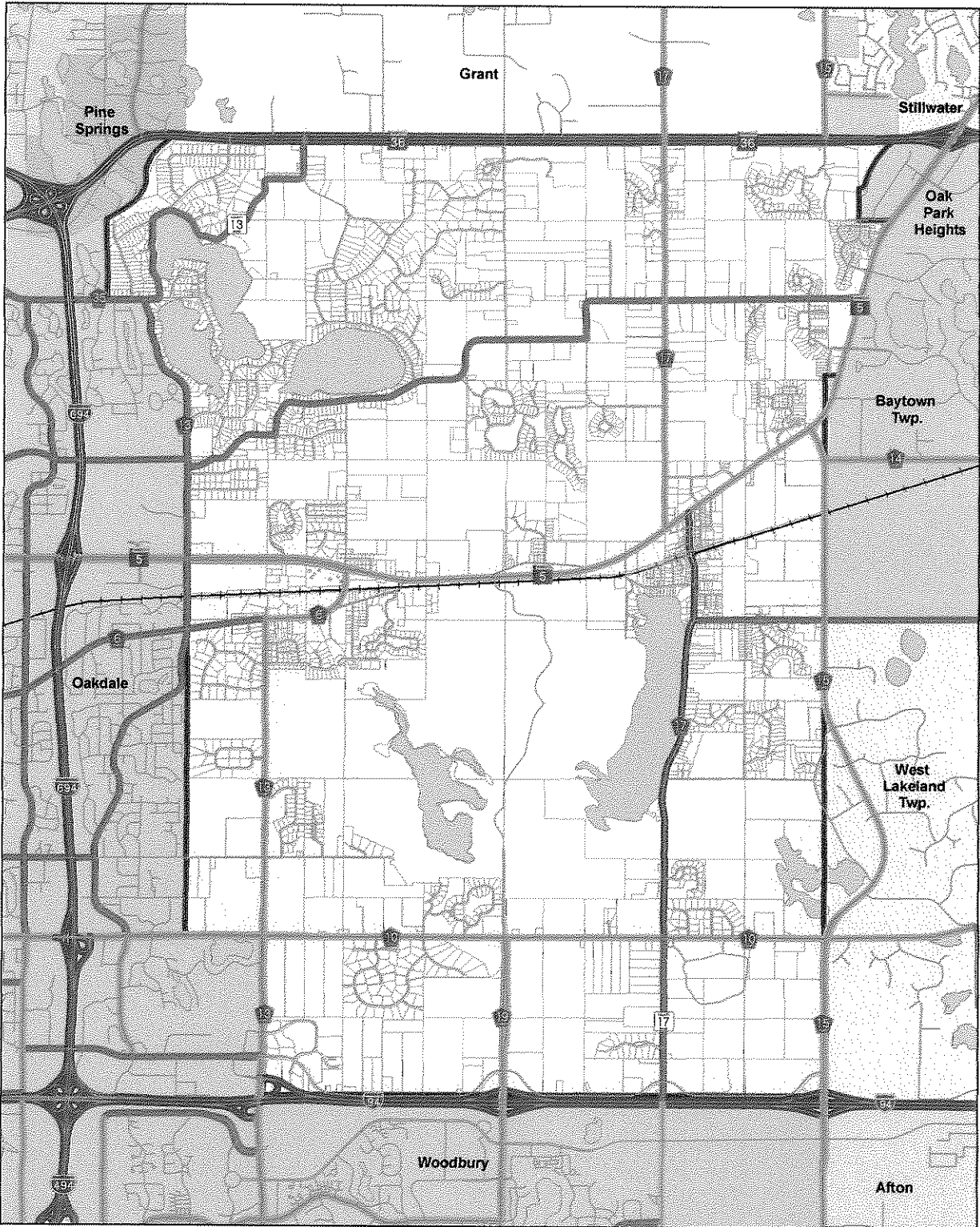
LEGEND

- City Boundary
- Roadways
- Parcels
- Lakes

**EXISTING JURISDICTIONAL
CLASSIFICATION**

- Federal
- State
- County
- Municipal

LIMITATION OF LIABILITY
This document is not a legally recorded map or survey and is not intended to be used as one. This map is a compilation of records and information from various state, county, and city offices, and other sources.



**FIGURE 2:
EXISTING FUNCTIONAL
CLASSIFICATION**

Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:

TKDA
ENGINEERS • ARCHITECTS • PLANNERS



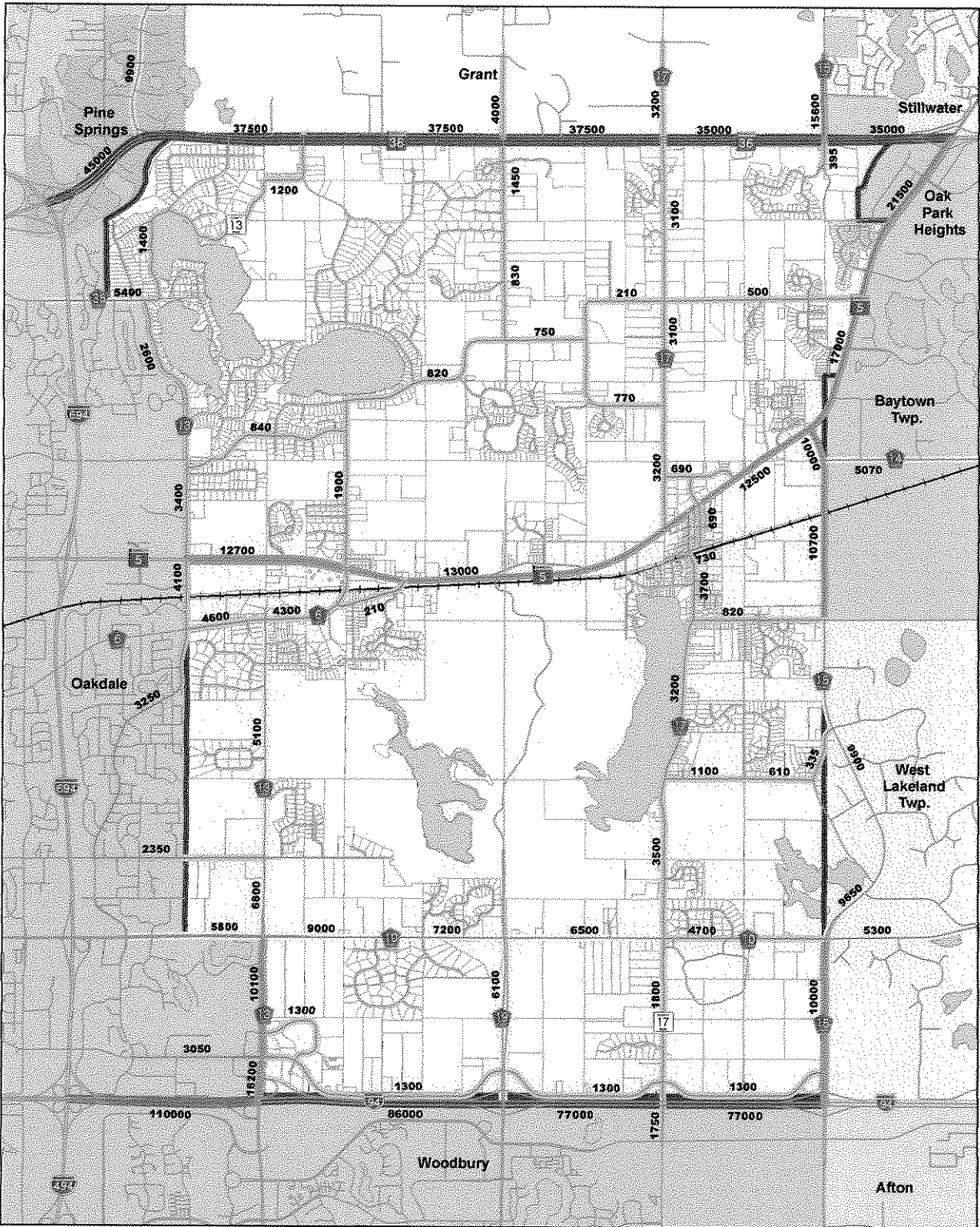
LEGEND

- City Boundary
- Roadways
- Parcels
- Lakes

EXISTING FUNCTIONAL CLASSIFICATION

- Principal Arterial
- A Minor Arterial
- B Minor Arterial
- Major Collector
- Minor Collector

LIMITATION OF LIABILITY
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**FIGURE 3:
EXISTING AADT**

Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:

TKDA
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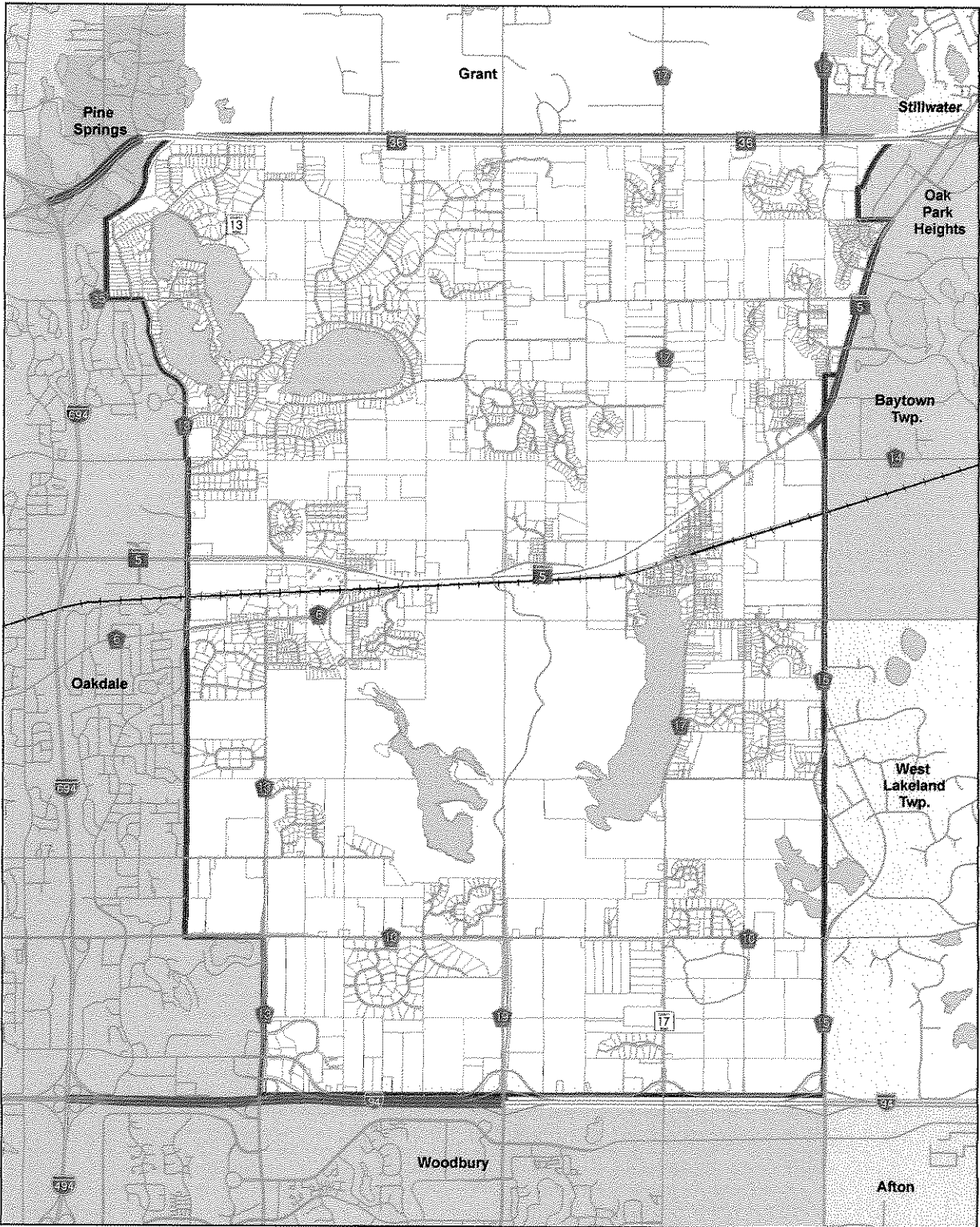
LEGEND

- City Boundary
- Roadways
- Parcels
- Lakes

EXISTING AADT

- < 5,000
- 5,000 - 9,999
- 10,000 - 24,999
- 25,000 - 49,999
- 50,000 - 99,999
- 100,000 OR >

LIMITATION OF LIABILITY
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**FIGURE 4:
EXISTING ROADWAY
PERFORMANCE**
Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:

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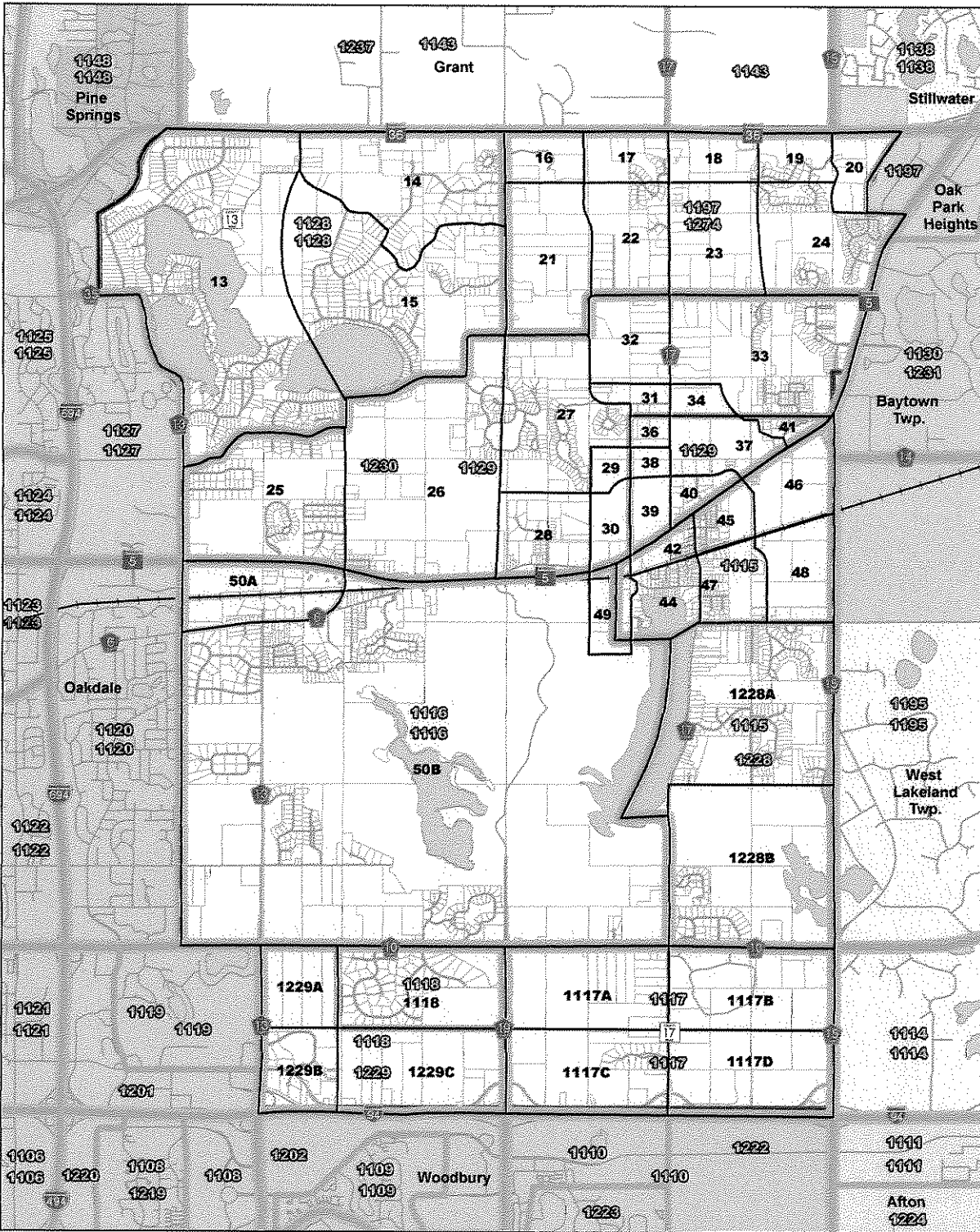


LEGEND

- City Boundary
- Roadways
- Parcels
- Lakes

EXISTING ROADWAY PERFORMANCE

- Approaching Capacity
- Over Capacity



**FIGURE 5:
TRANSPORTATION ANALYSIS
ZONES (TAZ)**
Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:

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LEGEND

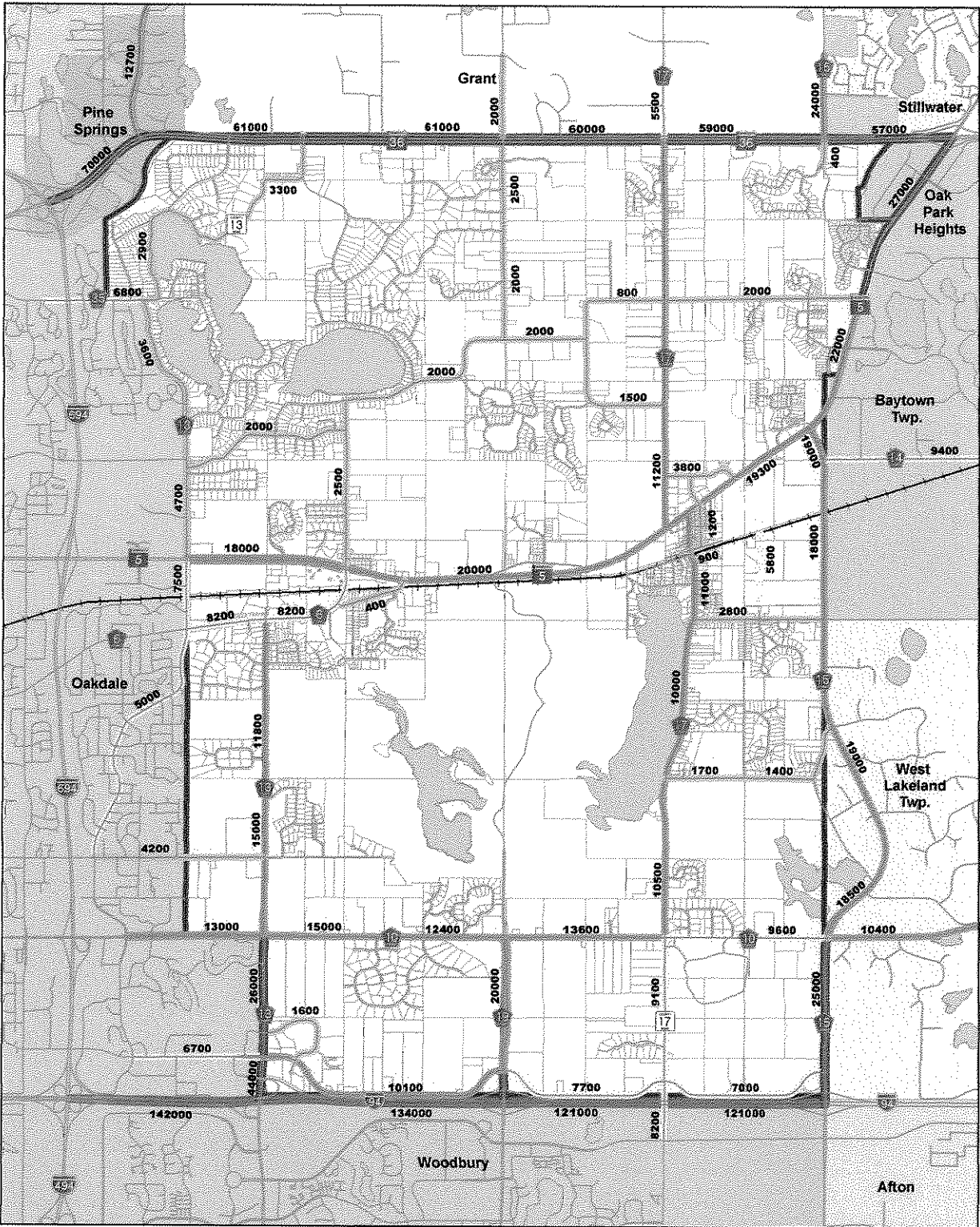
- City Boundary
- Roadways
- Parcels
- Lakes

TRANSPORTATION ANALYSIS ZONES

- Lake Elmo TAZ*
- Washington County TAZ
- Metropolitan Council TAZ

LIMITATION OF LIABILITY
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*Based on CSAH 17 Subarea TAZ boundaries.



**FIGURE 6:
2030 PROJECTED VOLUMES**

Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:



LEGEND

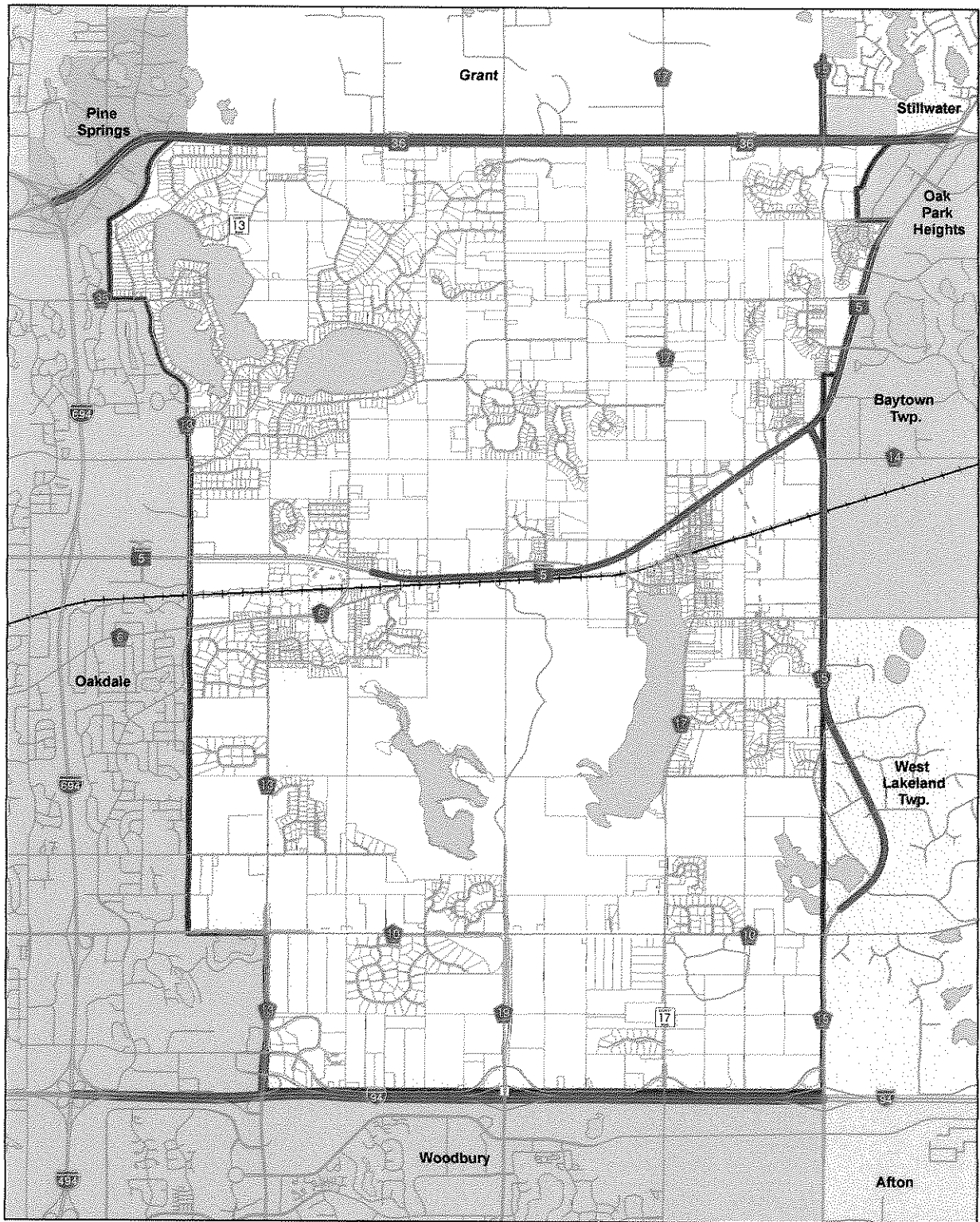
- City Boundary
- Roadways
- Parcels
- Lakes

2030 PROJECTED VOLUMES

- < 5,000
- 5,000 - 9,999
- 10,000 - 24,999
- 25,000 - 49,999
- 50,000 - 99,999
- 100,000 OR >

Note: Dashed lines represent future roadways not currently in place.

LIMITATION OF LIABILITY
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**FIGURE 7:
2030 ROADWAY PERFORMANCE**

Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:

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LEGEND

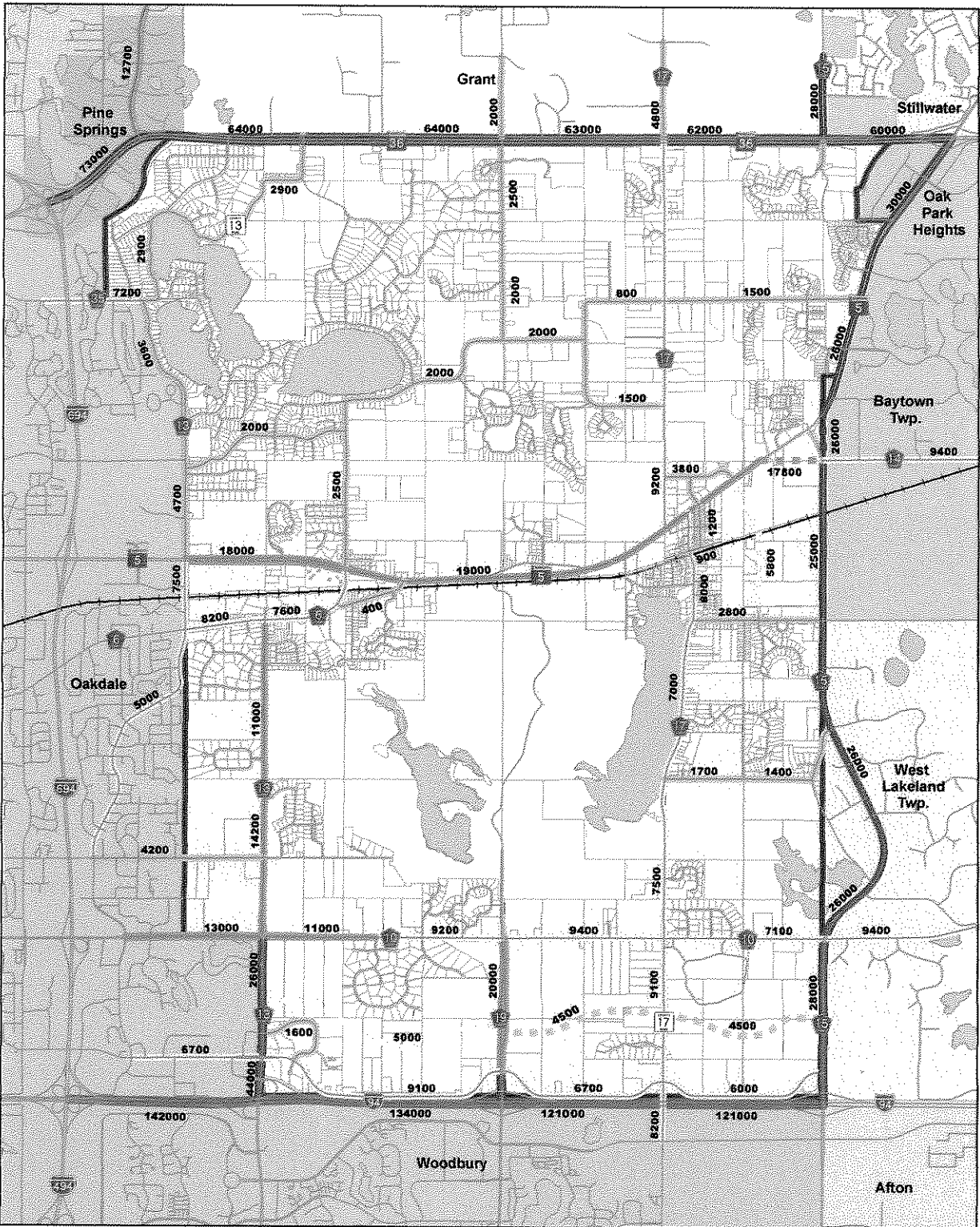
- City Boundary
- Roadways
- Parcels
- Lakes

2030 ROADWAY PERFORMANCE

- Approaching Capacity
- Over Capacity

LIMITATION OF LIABILITY
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Note: Dashed lines represent future roadways not currently in place.



**FIGURE 8:
2030 PROJECTED VOLUMES
IMPROVED SCENARIO**

Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:



LEGEND

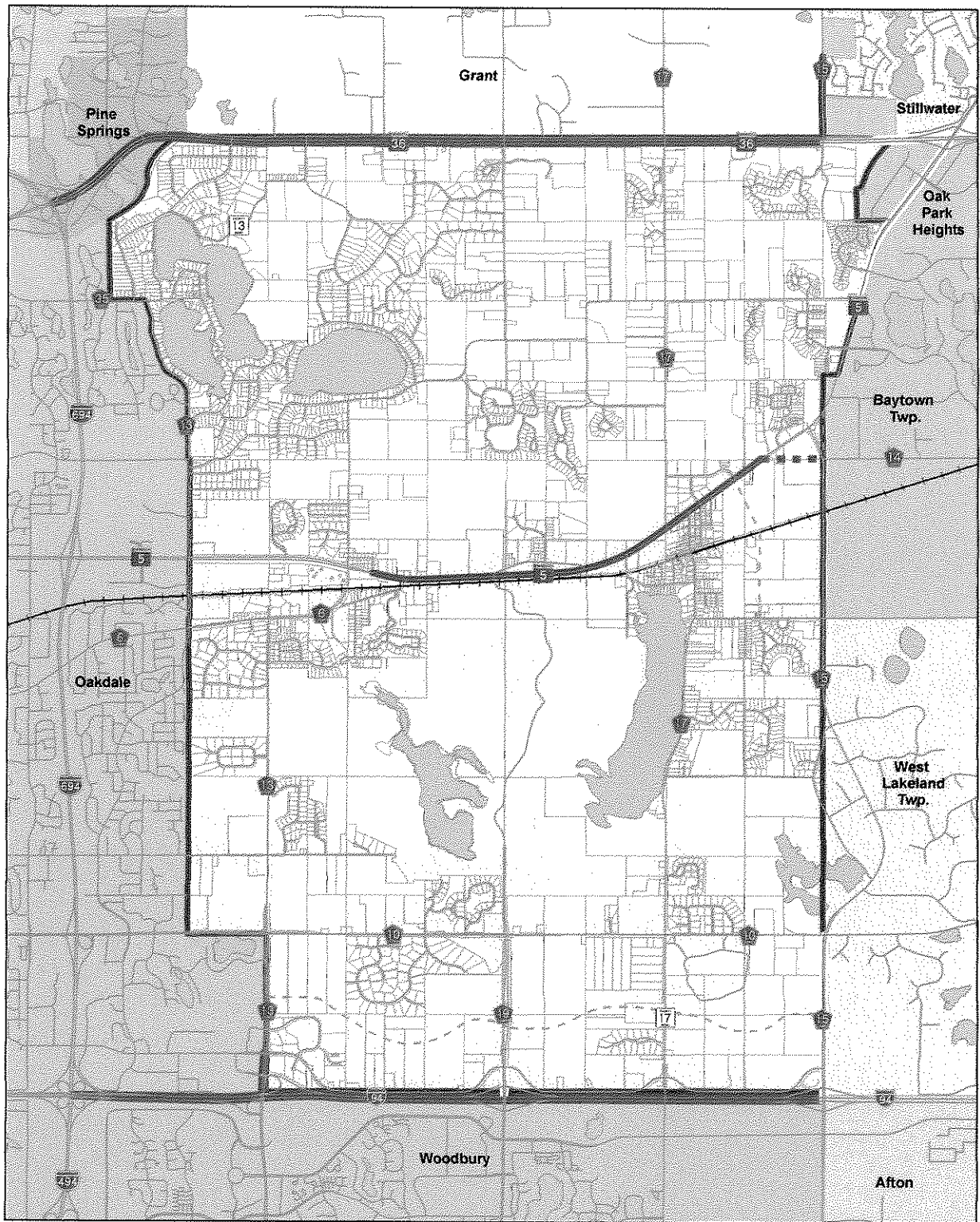
- City Boundary
- Roadways
- Parcels
- Lakes

**2030 PROJECTED VOLUMES
IMPROVED SCENARIO**

- < 5,000
- 5,000 - 9,999
- 10,000 - 24,999
- 25,000 - 49,999
- 50,000 - 99,999
- 100,000 OR >

Note: Dashed lines represent future roadways not currently in place.

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**FIGURE 9:
2030 ROADWAY PERFORMANCE
IMPROVED SCENARIO**

Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:



LEGEND

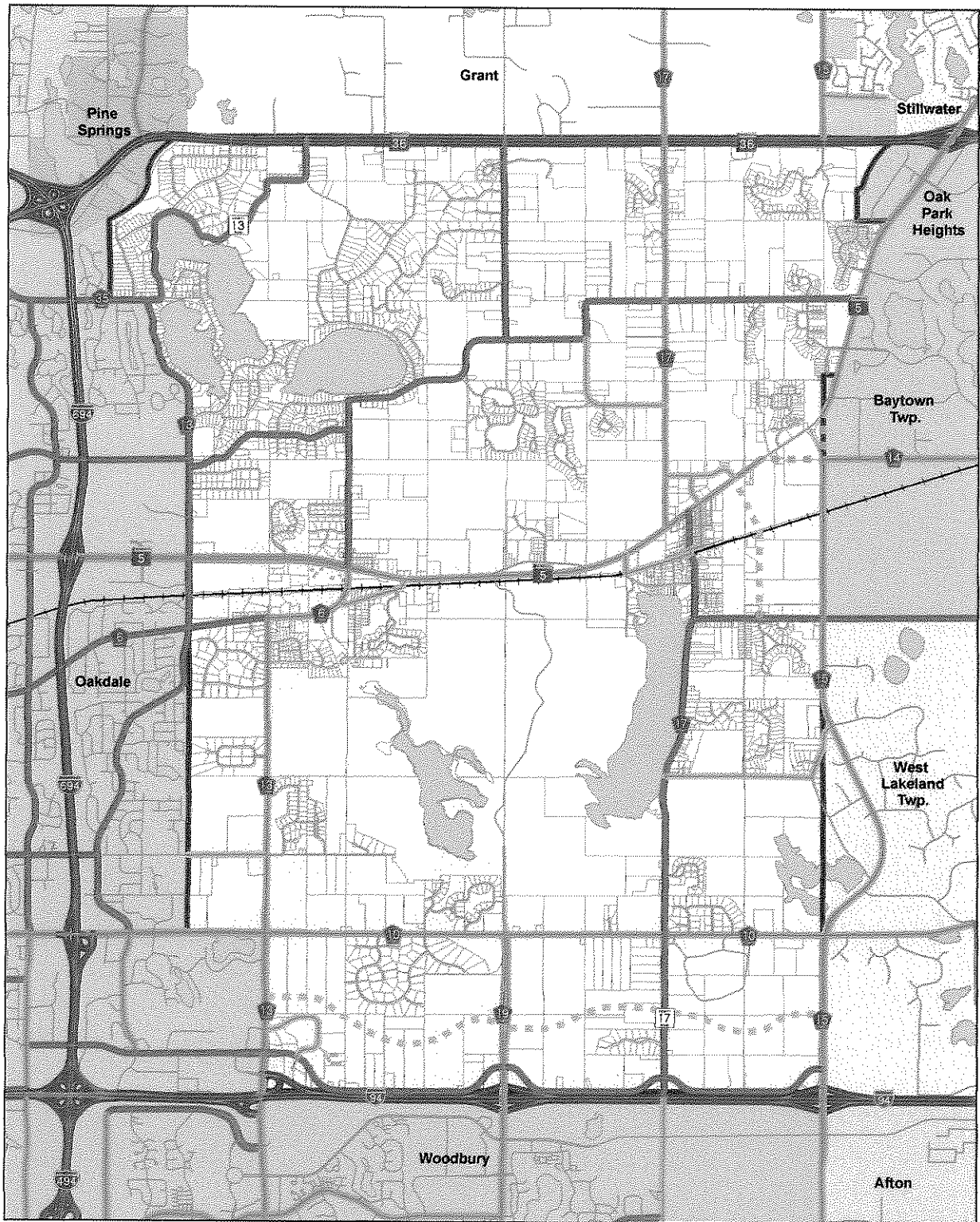
- City Boundary
- Roadways
- Parcels
- Lakes

**2030 ROADWAY PERFORMANCE
IMPROVED SCENARIO**

- Approaching Capacity
- Over Capacity

LIMITATION OF LIABILITY
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Note: Dashed lines represent future roadways not currently in place.



**FIGURE 10:
PROPOSED FUNCTIONAL
CLASSIFICATION**

Transportation Plan

2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:

TKDA
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LEGEND

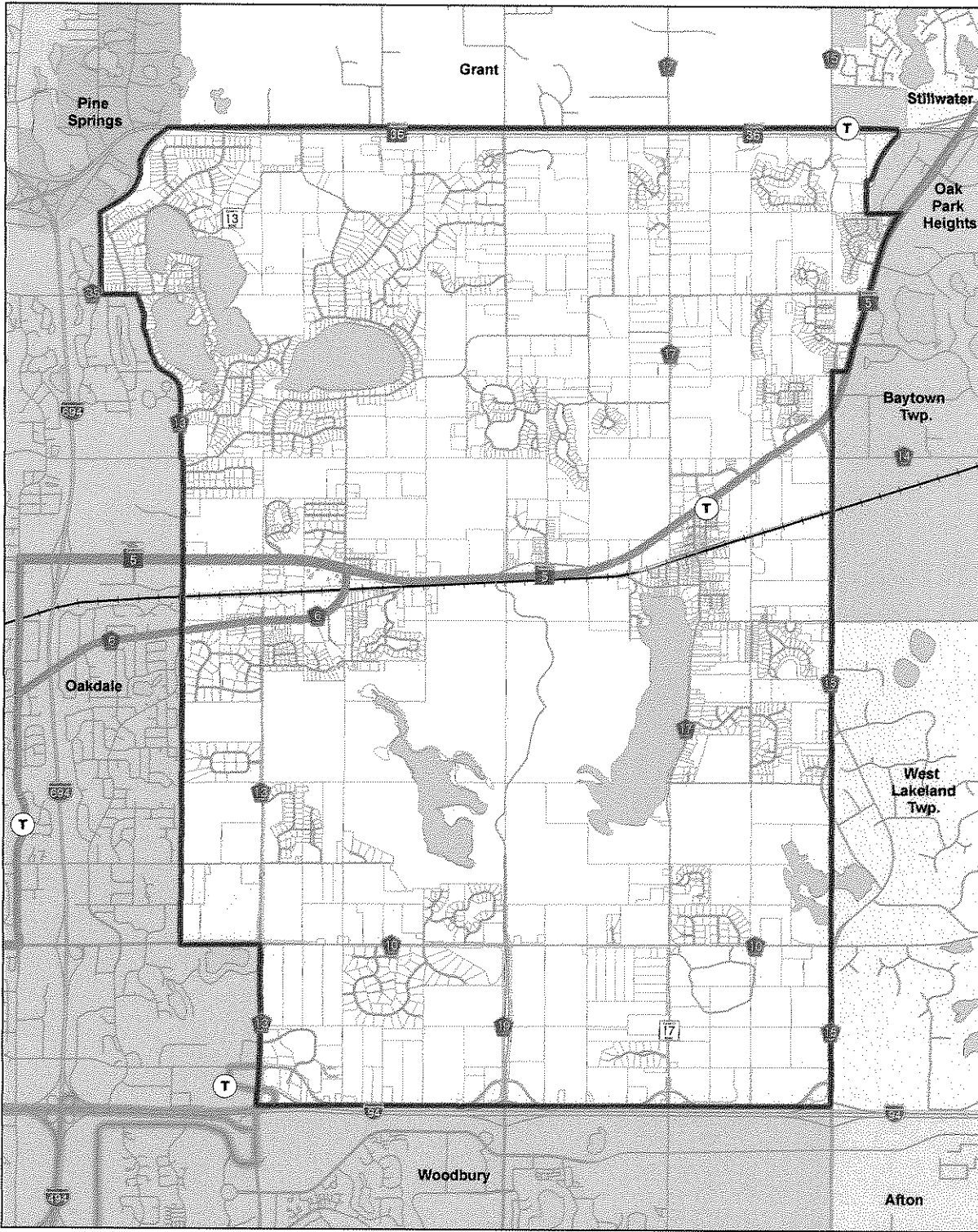
- City Boundary
- Roadways
- Parcels
- Lakes

PROPOSED FUNCTIONAL CLASSIFICATION

- Principal Arterial
- A Minor Arterial
- Major Collector
- Minor Collector

LIMITATION OF LIABILITY
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Note: Dashed lines represent future roadways not currently in place.



**FIGURE 11:
TRANSIT FEATURES**

Transportation Plan
2030 Comprehensive Plan
City of Lake Elmo, Minnesota



Map date: April 2009
Prepared by:

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Legend

- City Boundary
- Parcels
- Roadways
- Lakes

Transit

- Park and Rides
- Metro Transit Route**
- 294
- 351
- 375

LIMITATION OF LIABILITY
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*Source: Met. Council

Planning Commission
Date: 4/14/09
REGULAR
Item: 5a

ITEM: Update on Comprehensive Park Plan; Review of Metropolitan Council's response

SUBMITTED BY: Kelli Matzek, Planner

REVIEWED BY: Kyle Klatt, Planning Director

SUMMARY:

The Lake Elmo Comprehensive Park and Recreation Plan was formed through many public meetings held in 2006, 2007 and 2008. The Planning Commission held a public hearing in December of 2007, reviewed the document and recommend approval. The City Council reviewed the document in early 2008 and approved the document with a few changes. Since then, the city has submitted the approved document to the Metropolitan Council for an initial and informal review. The Metropolitan Council reviewed the document and submitted a letter outlining four items to be incorporated into the Lake Elmo Comprehensive Park and Recreation Plan.

METROPOLITAN COUNCIL COMMENT: The Metropolitan Council's approved master-plan boundaries for Lake Elmo Park Preserve include 8 "in-holding" parcels to be acquired by Washington County. These in-holdings should be shown on the 2030 Park System Plan Map as land proposed to be acquired for the park reserve.

CITY RESPONSE: The 2030 Park System Plan Map will be updated to identify the eight parcels as land proposed to be acquired for the park reserve.

METROPOLITAN COUNCIL COMMENT: The 2030 Park System Plan Map shows a local Special Use Park Search Area on the southeastern shore of Lake Elmo. This local park search area appears to be within the boundaries of Lake Elmo Park Reserve. If that is the case, the land is already preserved as parkland and specifying a park search area would be duplicative.

CITY RESPONSE: City staff will clarify to the Metropolitan Council that in the existing search area there are two privately owned parcels. In addition, within the text of the document (page 3-22), it identifies that "A different location may be sought if the southeast location should prove to be infeasible or if a preferred alternative is found."

METROPOLITAN COUNCIL COMMENT: The Park Plan needs to include a discussion of the proposed Washington County Greenway Regional Trail in the text of the plan.

CITY RESPONSE: A short narrative will be added to the document regarding the proposed county trail.

METROPOLITAN COUNCIL COMMENT: When the city submits the comprehensive plan update for official review, the update needs to include the Trail Guide Plan for review as well.

CITY RESPONSE: The Trail Guide Plan will be submitted.

ADDITIONAL INFORMATION; PARK PLAN PROCESS

- Since September of 2006, the Park Commission discussed the Park Plan at nine public meetings during 2006 and 2007. The commission worked with the park planning consultants over the year and a half to formulate the recommended document.
- A well attended public open house was held on February 15, 2007. Twenty-five residents signed in at the door and five written comments were received. A number of verbal comments were received by commissioners, staff, and the consultants at the meeting as well.
- On March 14, 2007, the Village Area Master Plan consultants presented the village plan and discussed with the Park Commission the vision for parks in the village area.
- A joint City Council and Park Commission meeting was held on April 24, 2007. At this meeting, the commission received comments and feedback from the Council on the draft plan.
- A preference menu was conducted during the months of September and October to further engage public input. Fifty-two responses were received and reviewed by the commission for potential integration into the park plan.
- After twelve months of discussion, public input, and editing, the Park Commission recommended the approval of the Comprehensive Park Plan at their September 17, 2007 meeting.
- The Planning Commission reviewed the park plan and held a public hearing on December 10, 2007 at which no one from the public spoke for or against the plan. After discussion, the commission unanimously recommended approval of the plan.
- The City Council reviewed the park plan and had a few changes which were then incorporated into the document. The City Council approved the Park Plan in 2008.
- The Lake Elmo Comprehensive Park and Recreation Plan was submitted to the Metropolitan Council for an informal review.

SUGGESTED MOTION FOR CONSIDERATION:

Move to recommend incorporating the changes to the final document to respond to the Metropolitan Council's requirements.

ORDER OF BUSINESS:

- Introduction..... Kelli Matzek, Planner
- Discussion/Questions..... Planning Commissioners
- Call for a motion Chair Facilitates
- Discussion of Commission on the motion Chair Facilitates
- Action by the Planning Commission..... Chair & Commission Members