

Lino Lakes I-35E Corridor Alternative Urban Areawide Review (AUAR)

Five-Year Update

October 2010

I-35E Corridor Alternative Urban Areawide Review (AUAR)

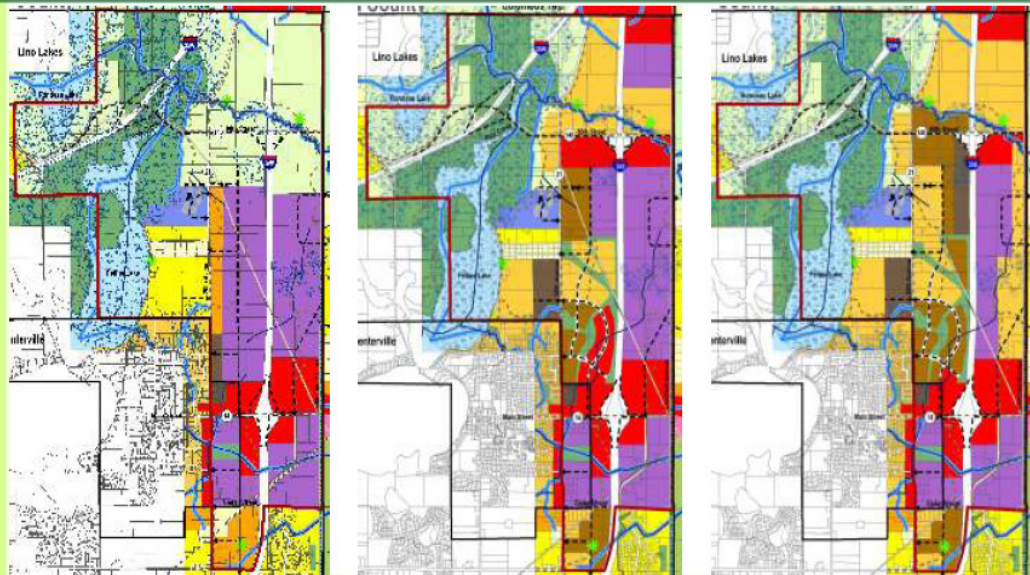


Table of Contents

I. INTRODUCTION AND SUMMARY OF AUAR	1
A. Introduction	1
B. Summary of AUAR	2
Overview	2
Process	3
Major Issues	4
II. UPDATES, REVISIONS TO AUAR	4
A. Traffic and Transportation System	4
Traffic and Transportation Summary	4
Traffic and Transportation Update	5
CSAH 14 Improvements	5
I-35E Interchange Reconstruction	6
B. Regional Sanitary Sewer	6
Regional Sanitary Sewer Summary	6
Regional Sanitary Sewer Update	7
C. Stormwater Management and Ecologically Sensitive Resources	7
Stormwater Management Summary	7
Ecologically Sensitive Resources Summary	8
Stormwater Management & Ecologically Sensitive Resources Update	9
Rice Creek Watershed District's Resource Management Plan and RMP-3 Rule	9
AUAR Revision	11
D. Cultural Resources	11
Cultural Resources Summary	11
Cultural Resources Update	12
E. Development Projects	12
Hardwood Creek Comprehensive Plan Amendment (2006)	12
Moon Marsh (2007)	14
Main Street Village (2008)	16
F. Draft New Comprehensive Plan	17

FIGURES

Project Location (Figure 5-1 of AUAR)	19
AUAR Boundary (Figure 5-2 of AUAR)	20
Scenario One (Figure 6-2 of AUAR)	21
Scenario Two (Figure 6-3 of AUAR)	22
Scenario Three (Figure 6-4 of AUAR)	23
Reconstruction of Interchange at CSAH 14 and I-35E	24

I. INTRODUCTION AND SUMMARY OF AUAR

A. Introduction

The I-35E Corridor Alternative Urban Areawide Review (AUAR), dated September 26, 2005, was prepared, reviewed, and approved in accordance with MN Rules 4410.3610. The final document was formally adopted by the Lino Lakes City Council on October 24, 2005.

Under the rules, an AUAR is a substitute form of environmental review that eliminates the requirement for most other reviews as long as a project is consistent with the assumptions of the AUAR analysis and complies with the AUAR's mitigation plan. In order to remain valid as a substitute form of review, the AUAR and its mitigation plan must be revised under certain criteria listed in 4410.3610, Subp. 7. One of the criteria is the passing of five years since the adoption of the original AUAR. October 24, 2010 marks the passing of five years.

There has been little development activity in the AUAR study area since the 2005 approval. That is, very little has changed. Two development projects have received preliminary plat approval from the City, but neither have begun construction. Both of these projects are consistent with the assumptions behind the AUAR analysis and the mitigation plan. The City also approved an amendment of the comprehensive plan in the study area, but no construction has occurred on that site, either. This AUAR five-year update describes these projects and how they compare to the AUAR, especially its Mitigation Plan.

One transportation infrastructure project has been completed and one has begun since approval of the Final AUAR. Both were included in the AUAR analysis. They are described in this update.

A sanitary sewer infrastructure project also has been completed. A new interceptor that was anticipated and analyzed in the AUAR has been constructed

The other important update element is the adoption of two important documents by the Rice Creek Watershed District. The Lino Lakes Resource Management Plan and the subsequent RMP-3 rule support the "Conservation Design Framework" that forms the foundation of the AUAR's Mitigation Plan. This update describes these documents and how they further the goals of the AUAR

Lino Lakes has completed a draft new comprehensive plan update but it has not yet been adopted by the City. This new comprehensive plan incorporated land uses and other elements of the AUAR analysis. In fact, the AUAR analysis formed the basis for planning in the study area.

Descriptions of the activity and changes that have occurred, such as they are, follow in their own sections. Items in the original AUAR that have not changed are not discussed, and the reviewer can assume the information in the AUAR for those items remains as written.

Five of the figures in this five-year AUAR update are taken directly from the AUAR, including the figure numbers and names. Keeping the same figure names and numbers is intended to facilitate comparison to the original AUAR document for agency staff and members of the public who choose to do so. The locations of the two new development approvals and a comprehensive plan amendment have been added to Figure 5-2. The figure showing the design of the I-35E interchange was prepared for the project by Anoka County. A note has been added regarding the alignment of a local street, which varies slightly from what was envisioned in the AUAR.

B. Summary of AUAR

Overview: The I-35E Corridor Final AUAR was prepared for the City of Lino Lakes in accordance with Minnesota Rules Chapter 4410. The AUAR process was prompted by the fact that large portions of the AUAR area were facing development pressure, that the city has a strong commitment to conserving natural resources, and that the city wants to balance development with natural resource conservation. The city determined that undergoing the AUAR process would provide the city with an invaluable tool as it plans for and manages growth within the northeastern portion of the city (Figure 5-2). The AUAR follows the format of an Environmental Assessment Worksheet (EAW) and provides a level of analysis commensurate with an Environmental Impact Statement (EIS).

The large geographic scope of the AUAR area (over 4,500 acres) allows for a comprehensive analysis of the cumulative impacts of development within the AUAR area. The Rules state that, “the Responsible Governmental Unit (RGU) may specify more than one scenario of anticipated development provided that at least one scenario is consistent with the adopted comprehensive plan. At least one scenario must be consistent with any known development plans of property owners within the area,” (MN Rules. Chapter 4410.3610 subp.3). The AUAR includes a review of three development scenarios.

1. Scenario One is consistent with the city’s comprehensive plan adopted in 2002 and allows for an additional 2,237 housing units, 2,985,733 ft² of commercial uses, and 11,175,035 ft² of industrial uses (see Figure 6-2).
2. Scenario Two is based on known development plans of property owners within the AUAR area and has a commercial and industrial emphasis (Figure 6-3). Scenario Two allows for an additional 5,715 housing units, 5,617,890 ft² of commercial uses, and 9,570,045 ft² of industrial uses.
3. Scenario Three has a residential emphasis and allows for an additional 8,659 housing units, 4,141,554 ft² of commercial uses, and 5,829,722 ft² of industrial uses (Figure 6-4).

Approval of the Final AUAR did not constitute approval of any specific project pursuant to zoning, subdivision, or other official controls of the City of Lino Lakes. Any proposed specific project within the AUAR area remains subject to applicable local zoning, subdivision, or other official controls. Specific projects that are consistent with the assumptions of the adopted Final

AUAR and which comply with the mitigation plan within the Final AUAR are exempt from further environmental review pursuant to Minnesota Rules Section 4410.3610 Subp. 5 E.

Each item/section of the AUAR includes a discussion of the proposed mitigation measures that address the identified impacts and issues. A comprehensive summary of potential impacts and the proposed mitigation strategies are included in the AUAR Mitigation Plan, which makes up its own section of the AUAR. The Mitigation Plan was intended to serve as an important component of planning in the study area to ensure that the city will avoid, minimize, or mitigate significant environmental impacts from the development of the AUAR area. The Mitigation Plan continues to serve in this role.

Process: This I-35E Corridor AUAR process was unique. The City wanted to ensure very strong and timely communication and the participation of numerous key stakeholder groups throughout the planning process. To that end, it included an agency participation component and strong public participation and throughout the process—rather than the standard practice of involving the public and reviewing agencies only after the Draft AUAR was completed, the process required by Minnesota Rules.

To engage reviewing agencies early in the AUAR process, a series of agency meetings were held to present background research, to solicit initial comments on the research, and to help the AUAR team scope out the level of detail needed in the AUAR analysis. Staff from the following agencies attended some or all of the meetings: MN Department of Natural Resources, MN Department of Transportation, Metropolitan Council, Anoka County, Washington County, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, Anoka Conservation District, Rice Creek Watershed District, and MN Environmental Quality Board.

In addition, an Advisory Panel was selected to serve as the primary working group during the course of the research, planning and environmental review process. The Advisory Panel included property and business owners within the AUAR area as well as members of the city's Planning and Zoning Board, Environmental Board, and Economic Development Advisory Committee. All information, work products, findings and recommendations developed by the AUAR consultant team were presented to the Advisory Panel for its review and comment. Also, this information was made available to the general public on the city's website. The Environmental Board held several meetings devoted to the draft and final AUAR, especially the mitigation plan. In addition to the Advisory Panel, City Council, and agency workshops, a public open house was held to give the general public the opportunity to review and submit comments on the background research and the draft development scenarios.

All of the information provided by the Advisory Panel and Environmental Board, including comments, suggestions, and concerns, was assembled and delivered to the Mayor and City Council prior to their review and consideration of the work completed. The City Council discussed the information at numerous work sessions throughout the process. The Draft AUAR, including a draft Mitigation Plan Outline was prepared and distributed to the Environmental Quality Board (EQB) and persons and agencies on the official EQB mailing list in accordance

with EQB rules. In addition, the Draft AUAR was transmitted to the Advisory Panel and surrounding communities. The 30-day comment period occurred and comments were received.

The City Council authorized distribution of the Final AUAR and Mitigation Plan at its September 26, 2005 meeting. City Council approval of the document followed on October 24.

Major Issues: The Draft AUAR and the comment letters on the draft identified some potential impacts and major issues. These fell into five categories. The categories are:

- traffic
- regional sanitary sewer capacity
- storm water management
- ecologically sensitive resources
- cultural resources.

These categories form the organizational framework for this five-year update. Two additional sections address changes that have occurred in or will affect the AUAR study area. One section describes new development projects: two received preliminary plat approval but have not been constructed, and; a comprehensive plan amendment was approved, but no construction has occurred in the amendment area. Another section describes the draft new comprehensive plan that is awaiting final approval by the city council. Other items in the original AUAR that are not discussed in this five-year update remain unchanged.

II. UPDATES, REVISIONS TO AUAR

A. Traffic and Transportation System

Traffic and Transportation Summary: The AUAR included preparation of a detailed traffic impact analysis to fully investigate the effects of the proposed land use scenarios on the local and regional roadway systems (AUAR Item 21, Traffic). Evaluating the development scenarios involved the complex process of developing and distributing background and scenario-related traffic through the area's roadway network. The network includes a system of collector and arterial roadways that will assist in the circulation of traffic through the area. This roadway system, which was presented to the City and Anoka County early in the AUAR process, was used as a guideline in determining where to put the various developments.

The traffic analysis focused on the operation of the primary roadways and their intersections during the p.m. peak period, which is typically the time when the most severe traffic congestion is incurred. To address comments received on the Draft AUAR, the traffic analysis was expanded to include a noise impact analysis, a 2020 no-build traffic analysis (Appendix E), and a 2030 a.m. peak analysis (Appendix F).

In general, the overall land use/development scenarios resulted in significant increases in traffic to/from the AUAR area. Roadways that are projected to see large increases include CSAH 14, CSAH 21, and CR 144 (80th Street E.) Identified mitigation includes adding traffic signals and turn lanes and widening roads as necessary during the various stages of development. In general, Scenario One had the least impact on traffic congestion with two intersections performing at LOS F, without mitigation. Scenario Two had four intersections and Scenario Three had six intersections operating at LOS F, respectively. With reasonable mitigation measures all the intersections in Scenarios One and Two were able to operate at LOS E or better. Even with reasonable mitigation measures, Scenario Three, which has a residential emphasis, still had intersections performing at LOS F. These include the east ramps at the proposed Northerly Bypass/I-35W interchange, and the intersection of CSAH 14 and Otter Lake Road.

To mitigate the impact of the additional traffic on the on the regional system, specifically Interstates 35W and 35E, both interstate highways would need to be reconstructed to provide a six-lane cross-section. It should be noted that it was determined that an expansion will be necessary even without the land use scenarios analyzed in the AUAR. The interstates serve a much larger area and impacts of the projected growth of the entire Twin Cities region exceeds local mitigation options. Nonetheless, future right of way needs should be considered when local development projects are reviewed.

Pedestrian and bicycle paths are another way to improve mobility within and to the AUAR area. Roadway improvements being planned in the AUAR area should include provisions for the addition of pedestrian / bicycle facilities.

Figures 21-8, 21-9, and 21-10 in the AUAR display the intersection LOS for each of the scenarios and also display the mitigation measures that were identified to address the deficiencies. These figures represent general/conceptual improvements that were shown to improve overall traffic operations for the respective development scenarios. The improvements are intended to represent the minimum level of infrastructure investment that would be needed to meet acceptable level of service standards. Additional roadway and non-motorized improvements, beyond the minimum level, may be identified to accommodate specific development needs that are identified within the AUAR area.

Traffic and Transportation Update

CSAH 14 Improvements: The primary east/west road through the AUAR study area is CSAH 14, a minor arterial also known as Main Street. It is an “A” Minor Reliever and an “A” Minor Expander that connects Lino Lakes, Centerville and areas to the west to I-35E via an interchange. Planning for significant improvements to this road was underway prior to the AUAR analysis: the improvements are listed as “funded and programmed for construction” in the AUAR Mitigation Plan. In fact, much of the analysis performed for the CSAH 14 planning was incorporated into the AUAR’s analysis. The CSAH 14 improvement project was completed in 2009. CSAH 14 now is a four lane road just west of I-35E, a three lane road through the City of Centerville’s central business district, and a two lane road west of there to the bridge overpass at I-35W. The improvements also included reconstructing the intersection at 20th Avenue North

(formerly CSAH 21, currently CSAH 54). These improvements are consistent with the AUAR's analysis and the mitigation plan for transportation impacts.

I-35E Interchange Reconstruction: As noted above, CSAH 14 is a minor arterial that connects Anoka County to I-35E via an interchange in the AUAR study area. Reconstruction of the interchange is one of the most important mitigation measures described in the AUAR. Reconstruction of the interchange began in 2010 and is expected to be completed in 2011. This includes replacing the bridge and all ramps, as well as the ramp intersections with CSAH 14.

At the time of AUAR, the "Diamond Plus Northwest Loop" design was the design with the most support and was the alternative identified as the most appropriate for evaluation as part of the AUAR. However, the analysis notes that "additional interchange analysis and design is needed to determine the ultimate interchange configuration" (footnote 6, page 86). Interchanges on the interstate highway system require multijurisdictional cooperation, planning, and funding. Planning for the interchange ratcheted up since completion of the AUAR and has evolved through the planning and design process. The final design includes two loop ramps rather than one, and additional expansions of right of way. The design is shown in the figure at the end of this five-year update.

The AUAR also analyzed a new intersection on CSAH 14, between I-35E and the existing 21st Avenue intersection. This was studied further as part of the interchange design. The design of the southbound ramp intersections creates an atypical situation. The existing location of the CSAH 14/21st Ave. intersection is not acceptable as a full intersection because of the proximity to the new ramps. The final interchange design includes a new intersection that accommodates the redirection of traffic on 21st Ave. (south of CSAH 14) to a point opposite the southbound exit ramp on the north of CSAH 14. Though the "new city street" will not be constructed as envisioned in the AUAR, the adopted design still creates a full intersection for a local collector street (21st Ave.) and still provides access to commercial and industrial land to the south of CSAH 14. The existing 21st Ave. intersection will have limited turning movements.

Improvements to the interchange and intersections along CSAH 14 were analyzed for the AUAR traffic analysis and included in the mitigation plan. Some revisions occurred, as described above. The AUAR, including the Mitigation Plan, is revised accordingly with this update.

B. Regional Sanitary Sewer

Regional Sanitary Sewer Summary: The city met with Metropolitan Council Environmental Services (MCES) staff on several occasions from 2003 through Spring 2005 to discuss existing and future MCES sanitary sewer service to Lino Lakes. The MCES was in the process of updating their comprehensive planning for the "Northeast Region," which includes Lino Lakes, Centerville, North Oaks, Forest Lake, Hugo, White Bear Lake, and White Bear Township. They anticipated the need to provide additional capacity in the Forest Lake Interceptor and

downstream facilities to serve the future needs of those communities. At the time, MCES was engaged in plans to construct additional capacity support for the Forest Lake Interceptor.

Following a series of meetings in early 2005, MCES agreed to construct an additional interceptor to serve the easterly portion of Lino Lakes. The MCES planned to construct this pipe in 2006, in conjunction with a proposed county highway improvement project (Washington County CSAH 8, a.k.a. Frenchman's Road). The new interceptor would need to be designed to convey the excess flow not accommodated by the existing Centerville Interceptor. Discussions continued between Lino Lakes and MCES regarding the capacity to be provided in the new interceptor. Ultimate development as projected by Scenarios Two and Three could eventually exceed the capacity of the sewer plan in effect in 2005. If the city were to choose to amend its Comprehensive Plan to accommodate components of Scenarios Two or Three, then a subsequent revision to the Comprehensive Sanitary Sewer Plan would be required. The Comprehensive Planning process, including review by the Metropolitan Council, is the appropriate process to resolve any potential sewer capacity issues.

Regional Sanitary Sewer Update: It became clear that the lower capacity would not be adequate, and the draft 2030 Comprehensive Plan Update process included the need for higher capacity in the new interceptor in order to accommodate the land uses analyzed in the AUAR. The new Lino Lakes Relief Interceptor ultimately was designed and constructed with a capacity of 5.6 MGD. It extends west from the Forest Lake Interceptor to the Lino Lakes/Hugo border. City trunk lines will connect to this interceptor to serve new development in its service area. In the AUAR, the service area was called the "NE Area". With the update of the Comprehensive Plan, the service area will be Sewer District 5.

The Metropolitan Council has reviewed the draft 2030 Comprehensive Plan Update and in December 2009 sent notification that the City can put the Update into effect. As of October 2010, the City has not yet adopted a final approval of the Update, but that is expected soon.

C. Stormwater Management and Ecologically Sensitive Resources

Stormwater Management Summary: Effective stormwater management and planning within the AUAR area is a challenging pursuit, but one that is critical to prudent and environmentally sound development. The AUAR process presented an opportunity for logical and innovative stormwater management that integrates traditional stormwater detention and water quality requirements with environmental restoration and conservation objectives. This ideal can be implemented on both a regional and site scale to minimize the impact of development on runoff rates and volumes, water quality, and the region's aquatic resources. The stormwater analysis is fully discussed under Item 17 of the AUAR, and Appendix D contains the Hydrologic Analysis.

The majority of the AUAR area faces many obstacles to effective stormwater management. In many cases agricultural ditch and tile networks have significantly altered drainage basins and changed sub-watershed divides. The drainage capacity of these existing tile networks will be insufficient to convey stormwater runoff from further residential, commercial, or industrial

development. The recommendations made within the AUAR document are intended to improve post-development runoff water quality; attenuate runoff release rates downstream; ensure adequate drainage infrastructure capacities for both frequent and occasional rainfall events; and enhance groundwater recharge as the AUAR area is developed.

Stormwater management will play a critical role in mitigating potential impacts from stormwater following development of the AUAR area. Appropriate design, construction, and maintenance of stormwater management areas will enable development to occur without compromising the integrity of the region's aquatic resources. The stormwater management approach outlined in AUAR provides adequate detention of runoff for post-development conditions. It also provides a framework for water quality enhancement and increased groundwater recharge. The stormwater detention facility design will provide hydraulic properties appropriate for native plant species to thrive. All of these factors will help mitigate potential water quality problems associated with development in the AUAR area.

The most effective approach to addressing stormwater issues is by implementing an integrated system of stormwater management elements. The Conservation Design Framework, described in Item 10 of the AUAR, provides an appropriate layout for the regional implementation of an integrated system. Within the greenway corridors shown in the Framework, bio-swales, wet prairie, and wetlands can be oriented in series to effectively retard runoff rates, reduce stormwater volume, and enhance water quality. Runoff rates and volumes are decreased due to increased infiltration, evapotranspiration, and increased friction imparted on the flow. These decreased rates also reduce the ability of runoff to generate and carry sediment and associated pollutants.

The runoff volume into the receiving waters will likely increase with development due to the increased impervious area constructed in the AUAR area. However, the recommended large area stormwater management elements will result in relatively small water level fluctuations, provide area to enhance the groundwater recharge necessary to provide base flow to the receiving streams, and provide the detention time necessary to cleanse the runoff of contaminants and meter the increased runoff volume in compliance with Rice Creek Watershed District (RCWD) Rules.

Ecologically Sensitive Resources Summary: The AUAR study area contains a wealth of ecologically sensitive resources including high quality natural and semi-natural areas, wildlife corridors, rare animals, the Peltier Lake Island Heron Rookery, rare plant communities, and portions of the Rice Creek Chain of Lakes Regional Park. Mitigating impacts to ecologically sensitive resources is discussed throughout the AUAR.

The Conservation Design Framework is designed to conserve wildlife habitat and natural plant communities, and will provide an invaluable tool for conservation of wildlife and rare features within the AUAR area. Most importantly, the Conservation Design Framework protects the existing significant fish, wildlife, and ecological sensitive resources in the northwest portion of the AUAR. The Framework also identifies and protects the most significant outlier habitats by

buffering them and connecting them with greenway corridors. In brief, conservation design principles behind the Framework include:

- protect streams, lakes, and groundwater by purifying, filtering, and infiltrating surface runoff to the maximum extent possible
- preserve, restore, and enhance existing natural and semi-natural areas and wildlife habitat
- create wildlife opportunities by restoring and managing wildlife habitat
- establish wide buffers and connections around and between core and outlier habitats

The greenway corridors are designed to connect the larger and higher quality natural areas. These corridors will provide three main services: 1) stormwater collection and conveyance, 2) ecological corridors for wildlife movement and native plant dispersal, and 3) recreational trails for people. Certain greenway corridors may warrant design for specific wildlife species, may provide certain stormwater management opportunities, or may need to accommodate different types of trails or passive recreational uses. Design considerations may include corridor width, appropriate vegetation structure, human access and use, and whether or not it is appropriate for a corridor to cross a particular type of roadway.

New developments represent opportunities to plan and carry out ecological restoration and management. Ecological restoration, enhancement, and/or expansion will help mitigate potential impacts on wildlife and rare features, and if these activities are planned, scheduled, and carried out at the recommended broad scale, will likely result in a net increase in conservation and ecological benefits within the AUAR area compared with existing conditions.

Various tools exist or can be developed to ensure the protection and stewardship of the preserved, restored, and enhanced natural resources in the AUAR area. These tools can be used to establish a consistent set of standards for treating the open space across different areas as they are developed. For example, the buffers shown on the Conservation Design Framework (Figure 10-3) are conceptual and will allow the city the flexibility to consider several land protection and preservation tools in these areas. The variety of tools listed throughout this Final AUAR will enable public and private sectors to cooperate in creating this natural open space network over time in a realistic market and regulatory context.

Stormwater Management and Ecologically Sensitive Resources Update

Rice Creek Watershed District's Resource Management Plan and RMP-3 Rule: The Lino Lakes Resource Management Plan (RMP) came about through a partnership between the Rice Creek Watershed District (RCWD) and the City of Lino Lakes. This collaboration was initiated in 2006 and included extensive coordination between the City, the Watershed District and other regulatory agencies.

The RMP provides a watershed-based approach to wetland management that is consistent with RCWD goals. The approach uniquely addresses management in the context of wetland functions and the effects of anticipated future land use. The RMP was developed in close coordination with state and federal permitting authorities and has been prepared to be consistent with both state and federal wetland regulations. It is intended that components of the plan be incorporated into Clean

Water Act Section 404 permit evaluations. The approach is unique as a means to develop a comprehensive wetland management plan according to the State of Minnesota Wetland Conservation Act because it not only includes the required assessment of existing wetland functions and values, but it also forecasts future functions in light of anticipated land use and watershed-based approaches for no net loss of wetland function.

The primary issues to address through the RMP process were restoring groundwater hydrology to groundwater-dependent wetlands; restoring naturally fluctuating hydrology to wetland open space systems; maintaining ditch systems being used for agricultural benefit; establishing habitat complexes and connected greenways; mitigating flood-prone areas; and reducing phosphorus loading to impaired lakes. Fundamental to addressing these issues is the acknowledgement that stormwater management is the foundation for preserving ecologically sensitive resources such as wetlands and other habitat. Urban land use most notably affects these resources through stormwater volume. As such, a strategy of broad-based source reduction in volume was needed.

Green infrastructure is the unifying strategy to address volume effects. Stormwater should be considered an asset to ‘retain for recharge’ instead of a waste to ‘collect and dispose’. In this strategy, retained storm water at its source eliminates downstream flooding and recharges shallow aquifers to sustain wetlands and lakes during drought. Natural resource management in a green infrastructure strategy means linking and integrating resources and compatible land uses. Wetland/upland habitat and stormwater management features work in concert to sustain ecological processes.

The iterative collaboration between the Watershed District and Lino Lakes was intended to meet the following objectives:

- Provide maximum consistency with Minnesota Wetland Conservation Act (WCA) requirements for a Comprehensive Wetland Management Plan and no net loss in acreage and function of wetland resources;
- Be consistent with the Federal Clean Water Act requirements for Section 404;
- Provide an implementation strategy for multiple Total Maximum Daily Load projects;
- Provide watershed-based context to the public Ditch Repair process proceeding on a parallel track;
- Through an iterative process, provide guidance to the City of Lino Lakes for ecological based land use decisions during their Comprehensive Plan Update process;
- Provide stormwater management guidance to the City of Lino Lakes for their Comprehensive Plan Update requirements and municipal stormwater permitting.

Stormwater management has a significant effect on wetland function, water quality, and overall preservation of ecologically sensitive resources in Lino Lakes. Clearly, the RMP focuses on wetlands and stormwater. Thus, the RMP dovetailed into the Conservation Design Framework of the AUAR. More specifically for the purposes of implementation, the RMP formed the policy basis for and led to the creation of a new Watershed District rule: RMP-3. Watershed District’s rules are the equivalent of a city’s ordinances: they are the District’s official controls. The RMP-3 rule governs wetland impacts as well as stormwater management.

AUAR Revision: There is a specific requirement included in the AUAR's Mitigation Plan that runoff volumes will be no less than 80% and no more than 150% of existing conditions. These wide parameters have led to some confusion in designing stormwater facilities for new development. One of the problems is that this requirement has been seen as inconsistent with the Watershed District's rules, including the new RMP-3 rule. Entire sections of these rules address stormwater management, including volume control.

Section 8 of rule RMP-3 lists specific requirements for volume control. Some examples:

- The design must "retain the one-year event by providing at least the volume equal to the runoff from a 2.3-inch, 24-hour storm over the tributary area within the site under proposed conditions."
- Infiltration BMPs must be incorporated in areas with A & B hydrologic soil groups, and stormwater from impervious surfaces other than rooftops must be pretreated before discharge to infiltration BMPs.
- Volume "is to be provided by bio-filtration features or two-cell wetland treatment systems in areas of C or D soils; areas with groundwater table within three feet of surface; or areas where soil contamination is present."

Rule C, which existed prior to RMP-3, requires that future peak rates of runoff are less than or equal to existing rates. The AUAR includes a similar requirement.

Though these are only some examples of the regulatory requirements of the Rice Creek Watershed District, they show how the District's rules will serve to promote the Conservation Design Framework of the AUAR. Toward that end, and to ensure consistency, the stormwater management requirements in the Mitigation Plan of the AUAR are amended with this update. The 80%-150% requirement is deleted and the Mitigation Plan now includes the volume control and other stormwater management rules of the Watershed District, as may be amended.

D. Cultural Resources

Cultural Resources Summary: Ten precontact archaeological sites had been recorded in the north and western portions of the AUAR area, and numerous others have been documented in proximity to it (Table 25-1 in the AUAR). For the most part, the sites are located in proximity to water: Centerville Lake, George Watch Lake, Peltier Lake, Rondeau Lake, Clearwater Creek, Hardwood Creek, and Rice Creek. The undisturbed landforms adjacent to these bodies of water have the greatest potential for containing intact archaeological sites. Several sites were identified on slight rises within the wetlands surrounding Rice Creek; therefore, those wetlands, and the northern portion of Peltier Lake, have high potential to contain intact archaeological resources. Further, those undisturbed areas adjacent to known sites are also considered to have high archaeological potential.

Most of the sites are located within the Rice Creek Chain of Lakes Regional Park Reserve. However, because of the high level of archaeological sites in the AUAR area, appropriate levels of historical and archaeological surveys in areas identified as having high potential for containing cultural resources must occur prior to future development. This is intended to mitigate any intentional or unintentional damage to, or destruction of, important archaeological sites and historic properties without due process and consideration.

The 106 Group created a map that shows areas with a high potential for archaeological sites. Given the sensitive nature of this information, this map cannot be included in the AUAR document, nor can it be made available to the public. The city will have this map on file and consult it when development applications are submitted for review. If a development application falls within an area that is considered to have a high potential for archaeological sites, the city will require that the following steps and procedures involved in the identification and analysis of any archaeological sites are followed prior to development:

- Conduct a Phase I archaeological survey within the area of potential effect (APE). The objective of the archaeological fieldwork is to determine if there are archaeological sites in the areas identified as having high potential for such, and define the extent of those sites that may be impacted by development plans.
- Conduct a Phase II archaeological survey. If archaeological resources are uncovered within the APE that may be eligible for listing on the National Register of Historic Places (NRHP) a Phase II survey should be conducted. The objective of the investigation is to determine whether archaeological resources are eligible for listing on the NRHP.
- Plan for avoidance or conduct Phase III data recovery. If a significant archaeological site is identified that will be impacted by development, avoidance is recommended. If this is not possible, then a data recovery of the site should occur.

Cultural Resources Update: Two development projects received preliminary plat approval since 2005. Neither project has begun construction, however. One project is a commercial retail center abutting the I-35E interchange at Main Street. The other is a four-lot rural residential clustering project on the northern city border. The review of both projects included appropriate levels of historical and archaeological surveys. These are described below in the section on new developments.

E. Development Projects

Hardwood Creek Comprehensive Plan Amendment (2006)

The site comprises 363 acres west of 35E and east of 20th Ave. The application included an amendment of the comprehensive plan but did not include approvals of a development project. It is important to note that approval of this comprehensive plan amendment did not grant or imply any right to an approval of any development application that would follow. Design specifics would be part of a full review of any development application. However, discussions with the

developer began several years prior, and a concept plan was considered as part of the review in order to guide the discussion of the amendment. In fact, the types of development envisioned for the site by the developer and the concept plan itself was plugged directly into Scenario Two of the AUAR.

Land Use and Transportation: Scenario One of the AUAR analyzed the site for mostly Industrial land uses, with strips of Medium and High Density Residential along the site's western edge, fronting 20th Avenue. Scenario One reflects the land uses of the 2002 comprehensive plan, which was in effect at the time of the adoption of the AUAR and continues in effect until adoption of the new 2030 plan.

The development layout envisioned for the site by the developer was plugged directly into Scenario Two of the AUAR and analyzed. Scenario Two analyzed the site as a mixture of Commercial land use as well as Medium and High Density Residential. This scenario also includes large Public/Semi-Public greenways laced through the site. Scenario Three analyzed more High Density Residential, slightly less Medium Density Residential, and much less Commercial land uses than Scenario Two. The greenways are the same, however.

The AUAR lays out a transportation framework to guide future planning, and recognizes the importance of managing access to major transportation infrastructure. All three scenarios in the AUAR include a local collector roadway system. Scenario One's roads are very fundamental. Scenarios Two and Three include a somewhat more complex road system. The Hardwood Creek concept plan discussed for the comprehensive plan amendment—and incorporated into Scenario Two—accommodated the circulation and access needs analyzed in the AUAR.

Conservation Development Framework, Stormwater Management, Water Quality: The findings of the approval state that the site is within the area of the AUAR; that the Mitigation Plan requires that the Conservation Development Framework be a fundamental precept for all development within the AUAR area; and that every project can and must incorporate conservation development design and/or low impact development techniques and be otherwise consistent with requirements of the AUAR mitigation plan. Any development plan within the comprehensive plan amendment area will be required to include an extensive open space network. This would comprise stormwater management features, parkland, and trails combined into a large greenway system consistent with a number of public values. Natural resource protection and the enhancement of sensitive ecological features were discussed as part of the review and approval of the comprehensive plan amendment.

Stormwater management to promote water quality is an important concern throughout the AUAR area, but of particular interest on the Hardwood Creek plan amendment site. Several branches of the county ditch system lay in tiles crossing the site. In addition, many drain tiles that are not part of the ditch system were placed on the site over the years to drain the land for agriculture. Much of the potential for incorporating conservation development elements into the development lies with the stormwater management design. Utilizing infiltration to the greatest extent possible will be important, as will accommodating the flow currently carried by the numerous drain tiles.

To implement the AUAR's Conservation Design Framework, the resolution that approved the comprehensive plan amendment includes a number of requirements taken right out of the AUAR Mitigation Plan, such as:

- infiltration through sheet flow, swales, rain gardens
- control of runoff rate
- control of runoff volume
- providing 1-foot contours with a development submittal
- breaking up impervious surfaces
- dispersing outflow from storm facilities (to create sheet flow, infiltration)
- stormwater management areas with shallower slopes for more infiltration

Since conceptual planning of this site formed the basis for land use analyses of the site in a scenario of the AUAR, the comprehensive plan amendment was consistent with the AUAR analysis.

Moon Marsh (2007)

The Moon Marsh project is a rural planned unit development (PUD) of four residential lots on 25 acres of property. It is located on the northern city border, on the east side of East Rondeau Lake Road (see Figure 5-2). The property owners currently reside in the existing home on the site. The project would create three more residential lots with a private loop road, a community sewage treatment system, and 12 acres of open space. Though the normal density in rural areas is one lot per ten acres, the zoning ordinance allows for up to eight units on forty acres in a PUD that has a common septic system. (This translates to four units on the 25-acre site.) This is allowed only in areas outside the growth areas defined in the Comprehensive Plan. The purpose of this de facto density bonus is to provide for some development that permanently preserves open space in areas that will not have municipal utilities. The alternative would be two individual lots with no provision for permanent open space preservation.

Moon Marsh received approval for the preliminary plat stage of the PUD in 2007. As with several projects in the city, the economic slow down in the real estate market has prevented the project from proceeding to the final plat stage. Because of this, there has been no site or construction work for the project.

This site is within the area analyzed by the AUAR and is subject to the mitigation plan adopted with the AUAR. The mitigation plan requires some information and review criteria that are not normally applied to development projects elsewhere in the community. The mitigation plan includes some specific, quantified requirements, but many of the requirements are Best Management Practices intended to achieve the best results possible, depending on the site. The review of the project included the following AUAR elements.

Land Use: All three scenarios of the AUAR analyzed Moon Marsh site for Rural land use.

Conservation Development Framework: The Conservation Development Framework provides the foundation for most of the conservation objectives within the AUAR area. Implementation of the Framework is intended to: conserve the most ecologically significant natural resources within the AUAR area (in particular, the “core” and “outlier” habitats); protect ecologically significant natural resources from adjacent land uses by implementing buffering; and connect ecologically significant natural resources via multi-functional greenway corridors. The goals of the Conservation Development Framework can be pursued through a variety of methods.

The maps in the AUAR provide summary information and guidance. For example, the Minnesota Land Cover Classification System map (AUAR Fig. 10-1) shows several cover types on the Moon Marsh site. The upland area where the new lots would be are classified as *planted or cultivated vegetation*, relating to the agriculture that has occurred. The existing driveway and house site show as *artificial surfaces and associated areas*. The western part, which corresponds to a large wetland in a proposed outlot, is *herbaceous* and there are small *forest* areas where the wetlands are in different outlots. These latter areas hold promise for preservation and merit special attention.

The Wetland/Aquatic and Upland Habitats map (AUAR Fig. 10-2) show the west wetland area as *core wetland & aquatic habitat*. It is these core areas that the city wants to preserve. Large core habitat areas can provide habitat for a wide range of wetland-dependent and aquatic species as well as rare natural features. Therefore, the larger wetland area as well as the other outlots will be protected with a conservation easement. This will preserve land adjacent to larger, off-site greenway areas to the east and south, which are part of the Rice Creek Chain of Lakes Regional Park Reserve. The conservation easement should provide for the possibility of future restoration work.

Water quality, stormwater management, erosion and sedimentation: The AUAR includes analyses of surface water runoff issues which lead to requirements for including infiltration elements and other techniques. It also includes estimated stormwater management recommendations for specific development areas. These estimates in the AUAR cannot be considered strict requirements because they were broad and based on general soil types and assumptions about impervious areas related to development. However, they do provide some guidance. The most general estimate is that 0%-5% of the developable area would be needed for stormwater management (AUAR Fig. 17-3). On a little less general estimate, the Moon Marsh site is labeled development area A-FR, with an estimated need of 0.13 acre (5660 sf) for stormwater management (AUAR Table 17-5). The specific analysis and design for the project includes 4200 sf as infiltration basins. This falls within the broad estimate range and, considering the scale of the site, is comparable to the less broad estimate.

The stormwater management design was reviewed against the AUAR requirements for runoff rate and volume. Runoff *rates* must be at or below pre-development conditions. This is a standard requirement everywhere in the city, enforced on all projects. The AUAR also requires that runoff *volume* be no more than 150% of pre-development runoff. The proposed design meets this requirement.

Archaeological Survey: A Phase 1 archaeological survey was completed for the site and submitted with the project, as required by the AUAR. Records include an identified site to the east, but only low density artifact scatter was found on the Moon Marsh site itself. The survey investigator does not recommend further evaluation.

Rare Plant Survey: The AUAR mitigation plan states that due to the incidence of rare plant species in nearby wetland habitats, the City will require rare plant surveys and the mapping of rare plant locations prior to disturbance of areas of certain soil characteristics. The project site includes these soil characteristics and so a rare plant survey was performed. Several of the higher quality wetland habitats within the site contain suitable habitats for select rare plant species. However, no state-listed or otherwise rare plant species were detected. The wetland areas of suitable habitat are within the conservation easement areas.

Main Street Village (2008)

Main Street Village is a planned unit development (PUD) at the southeast quadrant of the I-35E interchange at Main Street called Main Street Village (see Figure 5-2). The proposal included creating four commercial lots on approximately nine acres of the 28-acre property. Development on the remaining 19 acres has not been designed. However, because of stormwater and transportation planning needs, and because of the existing bank site that is not owned by the developer, the use of the entire site had to be considered.

Main Street Village received approval for the preliminary plat stage of the PUD in 2008. As with several projects in the city, the economic slow down in the real estate market has prevented the project from proceeding to the final plat stage. Because of this, there has been only preliminary grading work but no construction.

The site is within the area analyzed by the I-35E Alternative Urban Areawide Review (AUAR). The AUAR's mitigation plan and conservation development framework have requirements that typically are not applied to development elsewhere in the community. The review of the project included the following AUAR elements.

Land Use: All three scenarios of the AUAR analyzed Main Street Village site for Commercial land use.

Conservation Development Framework: The Minnesota Land Cover Classification System map (AUAR Fig. 10-1) shows *artificial surfaces and associated areas* on the sites of an existing bank and an old farmhouse; *planted or cultivated vegetation* across most of the site; and *herbaceous* over the larger wetland areas.

The Wetland/Aquatic and Upland Habitats map (AUAR Fig. 10-2) does not show any core or outlier habitat areas to preserve.

Water quality, stormwater management, erosion and sedimentation: The AUAR includes analyses of surface water runoff issues which lead to requirements for including infiltration

elements and other techniques. It also includes estimated stormwater management recommendations for specific development areas. These estimates in the AUAR cannot be considered strict requirements. However, they do provide guidance for mitigation. The approach is that stormwater management areas would be designed consistent with strict criteria for maximum filtration and/or infiltration of stormwater.

The site is labeled development area Y-TD in the AUAR. The most general estimate suggests that 16%-20% of the developable area would be needed for stormwater management (AUAR Fig. 17-3). A somewhat more refined estimate suggests a need of 5 acres for stormwater management (AUAR Table 17-5). These estimates are calculated for the entire 28-acre site and are high compared to standard development practices. The submitted project only includes about a third of the total site (less than 9 of the 28 acres), so it is difficult to compare against the AUAR. Nonetheless, we can see that stormwater treatment is a challenging issue and it is important to consider the entire site rather than individual pieces.

While those stormwater management areas are estimates and not mandatory, the AUAR does include specific requirements. Runoff *rates* must be at or below pre-development conditions. This is a standard requirement everywhere in the city, enforced on all projects. The AUAR also requires that runoff *volume* must be no more than 150% of pre-development runoff. (This is one reason the stormwater management area estimates are higher than standard practice: standard practice does not address limiting runoff volume, only rate.) The AUAR also requires that stormwater management areas have a 6:1 slope rather than the normal, steeper slope.

The plans for phase one of the development will meet the rate, volume, and slope requirements of the AUAR. Future development (phase two) will require review to ensure it meets these requirements as well. Since the City's approval of the preliminary plat stage, the Rice Creek Watershed District adopted new stormwater management rules. These rules are better defined and more comprehensive than the broad mitigation measures in the AUAR. As described below in the "Ecologically Sensitive Resources and Stormwater Management" section, the new rules replace the broader AUAR criteria.

Archaeological Survey: A Phase 1 cultural resources survey was completed for the site and submitted with the project, as required by the AUAR. The farmstead site was found to be not eligible for historic listing. The survey investigators recommend that no further cultural resources work is necessary.

F. Draft New Comprehensive Plan

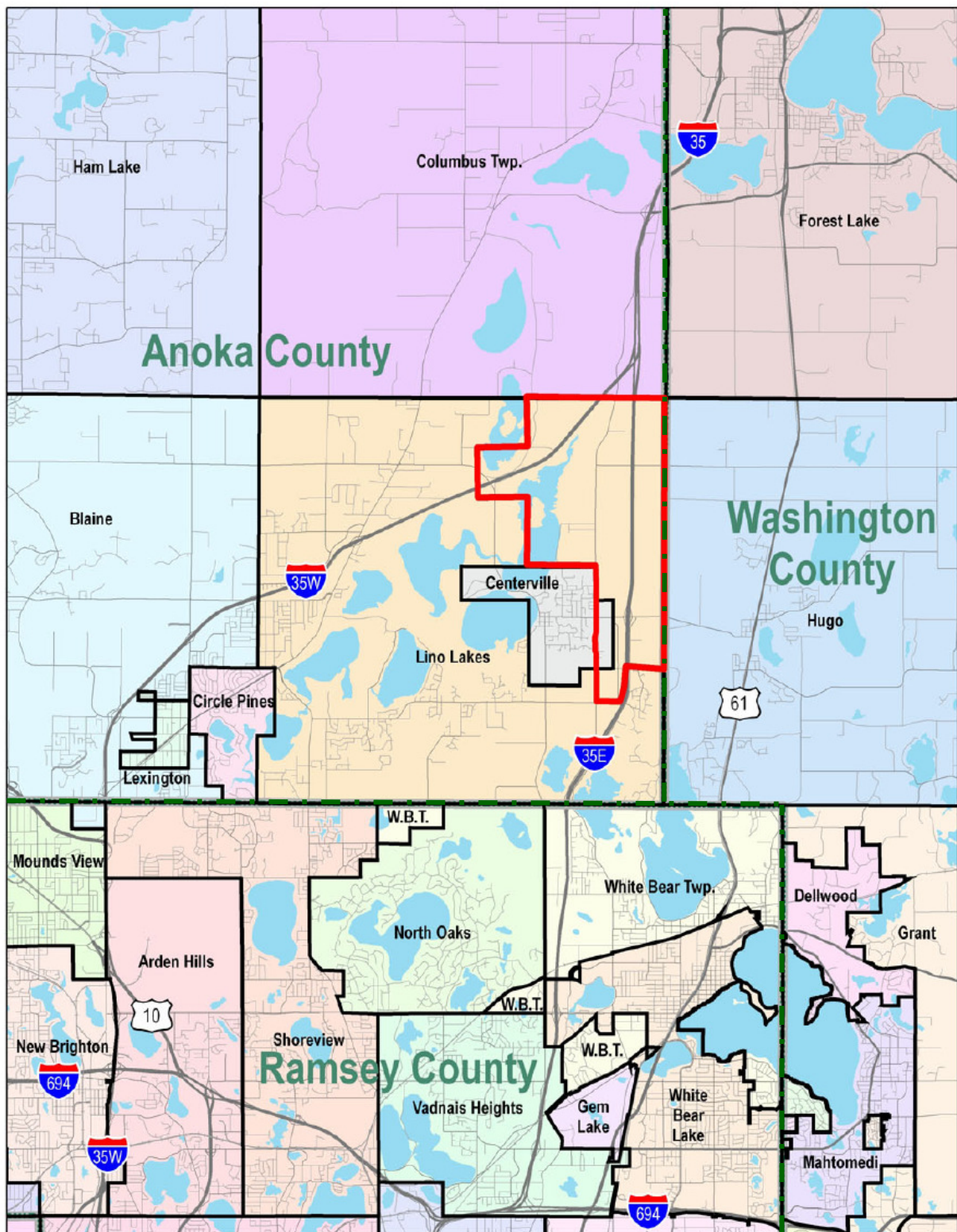
Lino Lakes has completed a draft 2030 Comprehensive Plan Update. In December 2009 the Metropolitan Council notified the City that the Update is consistent with the 2030 Regional Development Framework, compatible with plans of other jurisdictions, and that the City can put the Update into effect. However, the Comprehensive Plan Update has not yet been finally adopted by the City. It is scheduled for adoption in 2010.

This new comprehensive plan incorporated land uses and other elements of the AUAR analysis. In fact, Scenario Two of the AUAR formed the basis for planning the part of the city that fell within the AUAR study area. That is, the future land use map for full build-out is almost identical to Scenario Two in the AUAR. The only difference is that the future land use map in the draft Comprehensive Plan includes some areas of Medium Density Residential land use that were analyzed as High Density Residential in the AUAR. This would result in less intense development (less density) than was analyzed in the AUAR, and therefore less potential for significant environmental effects.

The draft 2030 Comprehensive Plan Update also includes a revision of the capacity of the new sanitary sewer interceptor serving the northeastern portion of Lino Lakes. This is described above in the section on regional sewer service. The 2030 Update reflects that Scenario Two in the AUAR became the basis for planning in the AUAR area. This required greater capacity than what was needed for the existing Comprehensive Plan of 2002 (represented by Scenario One). The process of updating the Comprehensive Plan included cooperation with the Metropolitan Council in designing the new interceptor. The interceptor has been constructed.

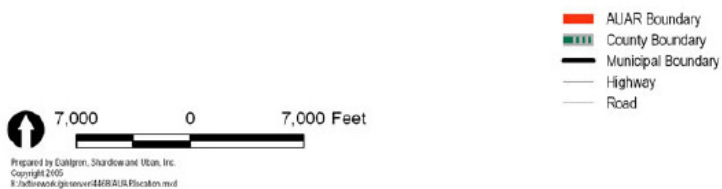
The draft 2030 Comprehensive Plan Update also includes the improvements to transportation infrastructure, as noted in the above section on transportation projects. Main Street (CSAH 14) has been reconstructed as planned. The Main Street/I-35E interchange reconstruction began in 2010. Both projects were included in the AUAR's Mitigation Plan.

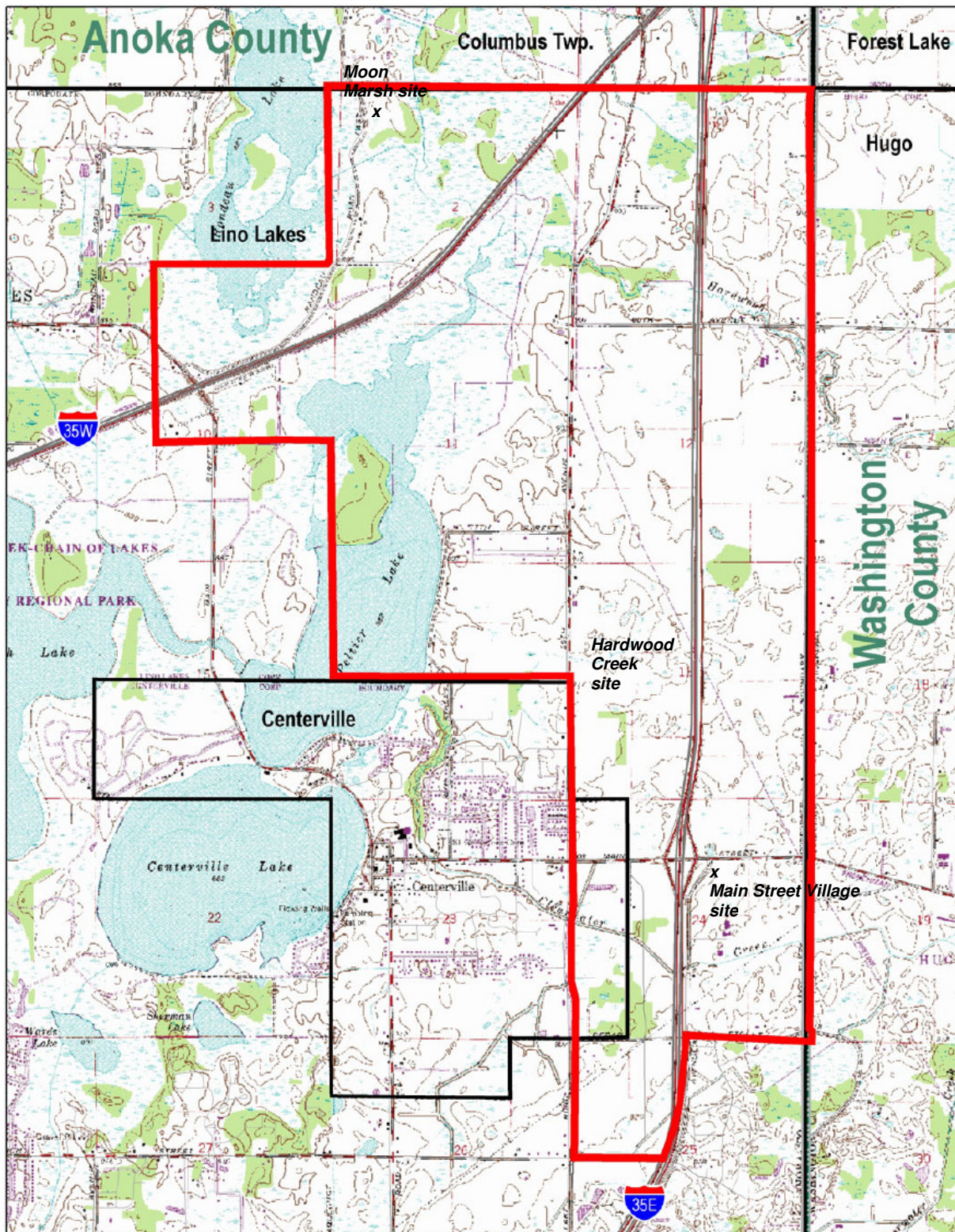
The draft 2030 Comprehensive Plan Update establishes the basis for the City's efforts to coordinate with the Rice Creek Watershed District in managing stormwater and protecting sensitive environmental resources. Chapter two lays out the Resource Management System Plan, which parallels the Watershed District's Resource Management Plan. The overall vision is to establish an open space system of greenways throughout the community. The City's document is the policy basis for pending revisions to official controls such as the zoning and subdivision ordinances. These revisions will establish requirements for new development that are important to the implementation of the City's vision.



Project Location
City of Lino Lakes, Minnesota
I-35E Corridor AUAR

Figure 5-1

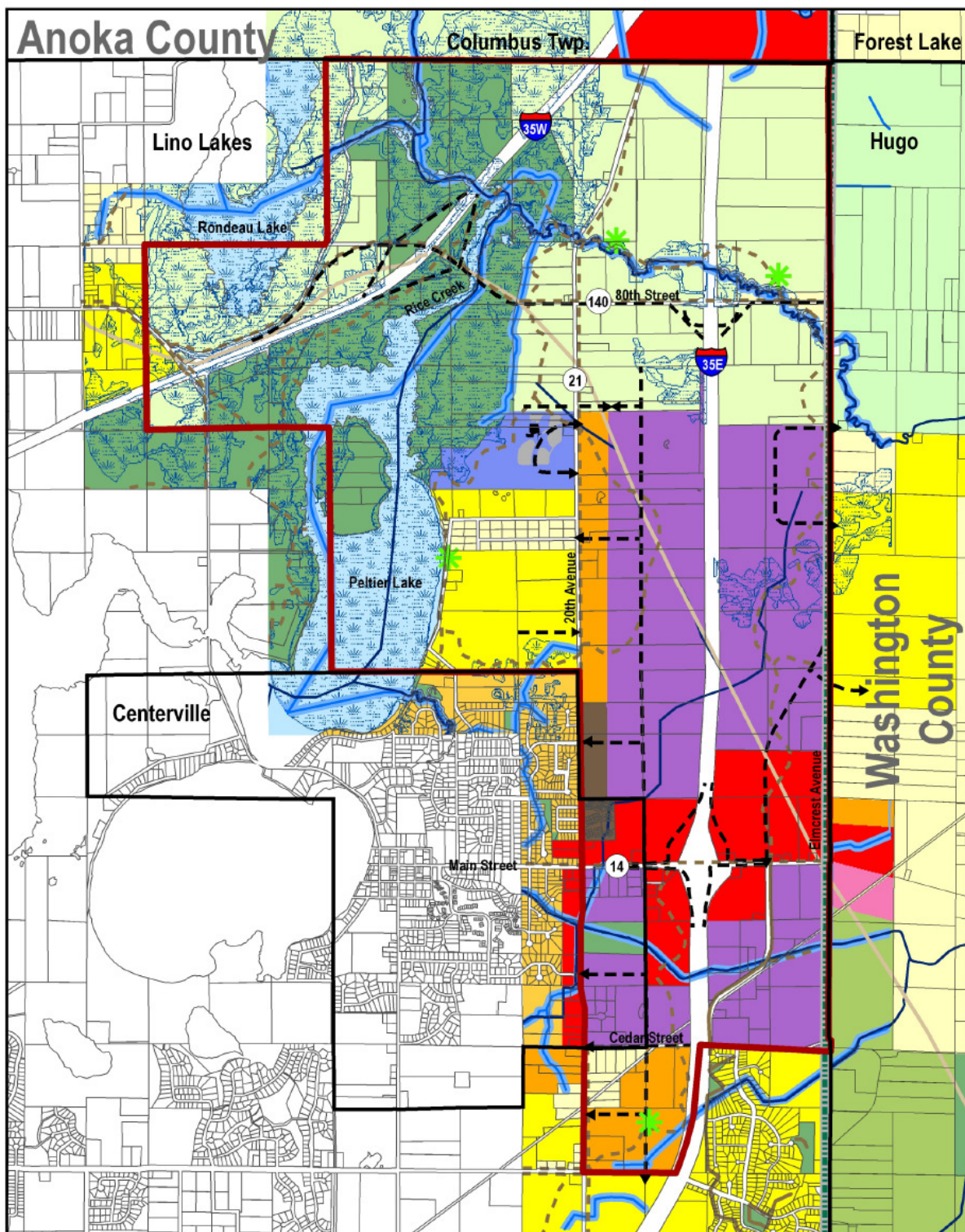




AUAR Boundary and USGS
City of Lino Lakes, Minnesota
I-35E Corridor AUAR

Figure 5-2

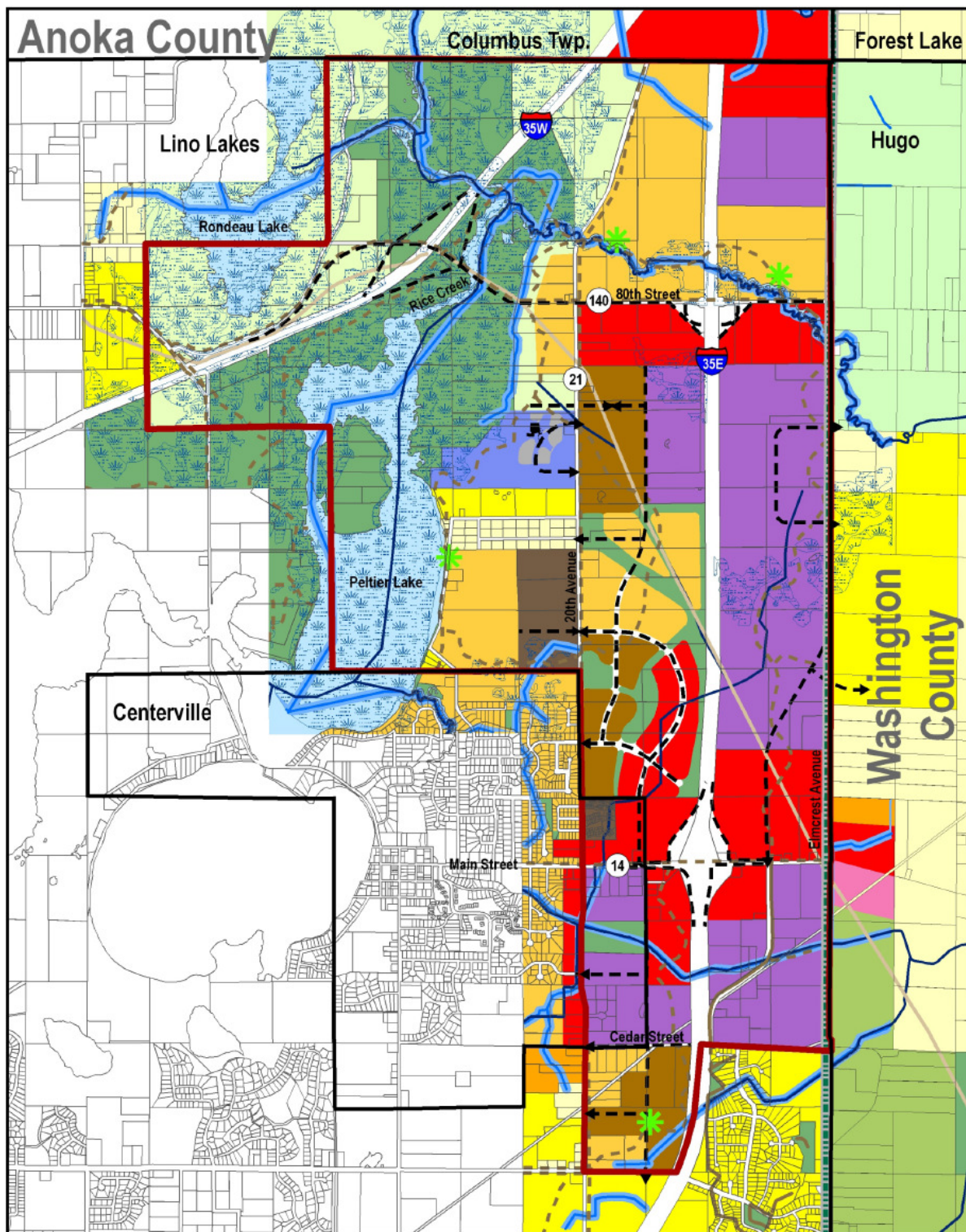
- AUAR Boundary
- County Boundary
- Municipal Boundary
- Highway
- Road



Scenario 1
City of Lino Lakes, Minnesota
I-35E Corridor AUAR

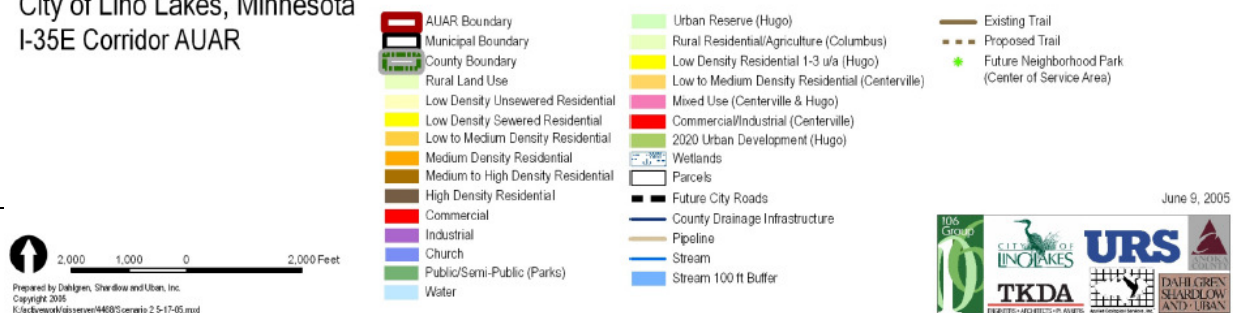
Figure 6-2

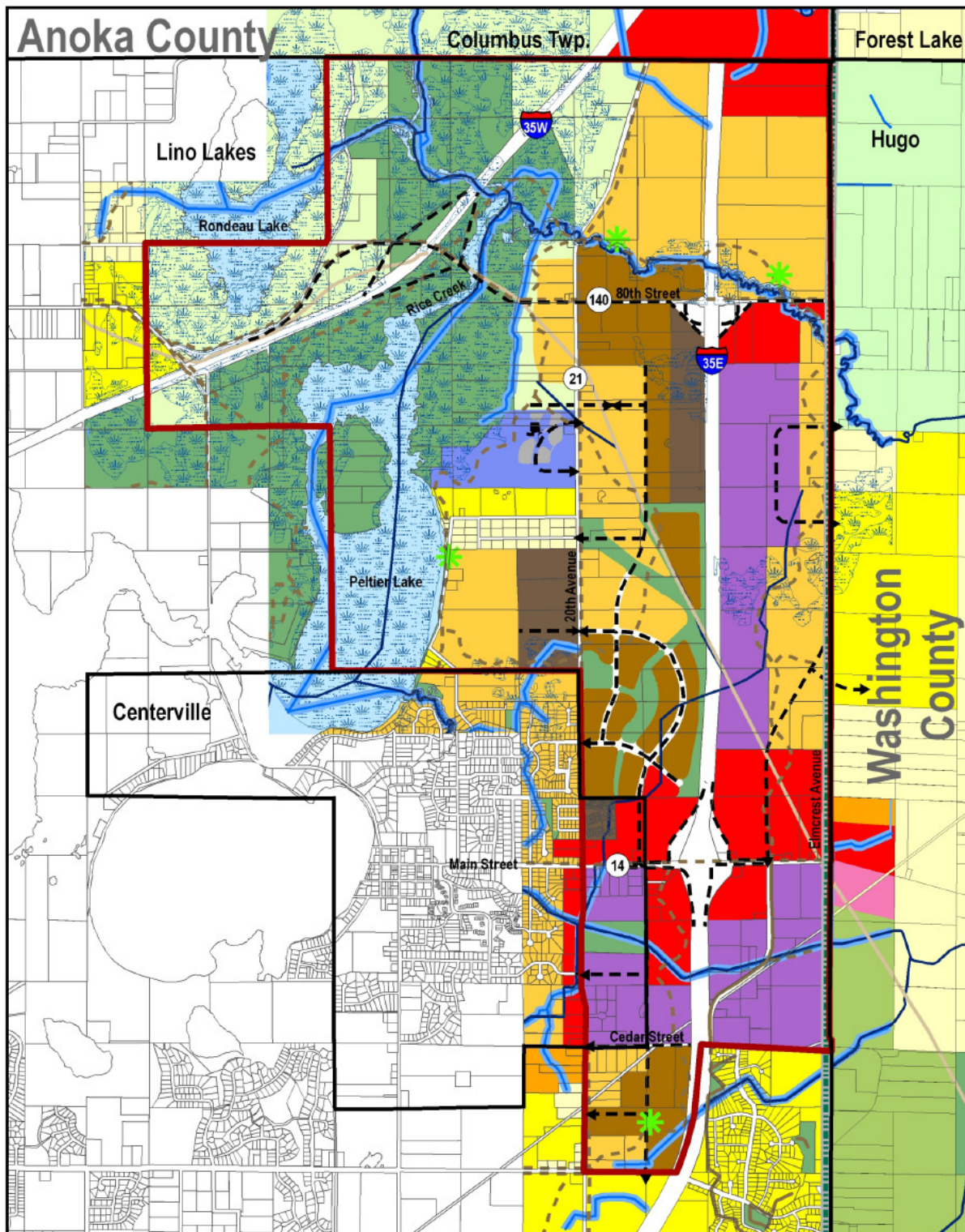




Scenario 2
City of Lino Lakes, Minnesota
I-35E Corridor AUAR

Figure 6-3



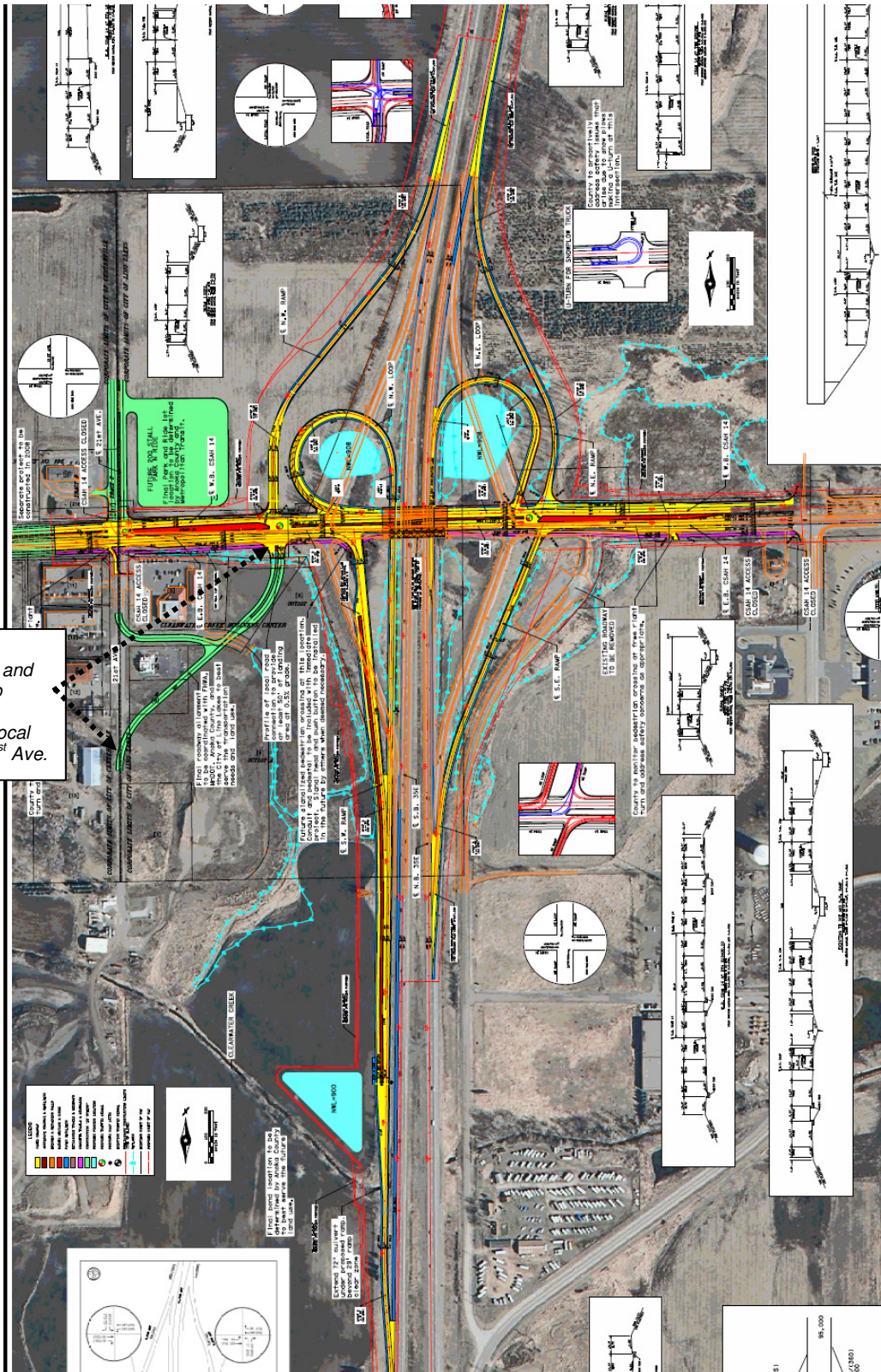


Scenario 3
City of Lino Lakes, Minnesota
I-35E Corridor AUAR

Figure 6-4



redesigned
intersection and
city street to
provide full
access for local
collector 21st Ave.



T.H. 35E VICINITY OF _____ CSAH 14
FROM _____ Reconstruction of Interchange
_____ at CSAH 14 and I-35E
Prepared _____ JUNE _____ 20 08 Scale: Hor. 1 inch = 100 ft.