Minnesota Department of Transportation
Metropolitan District
Waters Edge Building
1500 W. County Road B-2
Roseville, Minnesota 55113-3175

Office Tel: 651/634-2103

March 10, 2007

TO WHOM IT MAY CONCERN:

Enclosed please find a copy or copies of the Environmental Assessment (EA) for S.P 19-605-24 & 1901-148, Trunk Highway (TH) 13 and Dakota County State Aid Highway (CSAH) 5 Interchange Project in the City of Burnsville. The proposed action involves constructing a grade separated interchange at the intersection of TH 13 and CSAH 5 and reconstructing frontage/backage roads within the project area.

Copies of the EA are being distributed to those agencies on the current MEQB document review list and other interested agencies. The comment period will begin on Monday, March 12, 2007 and will extend through Wednesday, April 11, 2007. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS. Comments should be directed to:

Victoria Nill
Mn/DOT Project Manager
1500 West County Road B-2
Roseville, MN 55113
victoria.nill@dot.state.mn.us

To afford an opportunity for all interested persons, agencies, and groups to comment on the EA, a public hearing/open house has been scheduled for Wednesday, March 28, 2007 from 6:30 pm to 8:30 pm, at the Burnsville City Hall, 100 Civic Center Parkway, Burnsville, MN. An informal open house format will be used with no formal presentation. The purpose of the public hearing/open house is to share information with the public regarding the project and encourage the public to comment and ask questions. The hearing/open house will also satisfy the environmental review legal requirements for the project.

The above referenced document is available in alternative formats to individuals with disabilities by calling the Mn/DOT Project Manager at 651/634-2103 or to individuals who are hearing or speech impaired by calling the Minnesota Relay Service at 1-800-627-3529. Individuals with a disability, who need a reasonable accommodation to participate in the public hearing/open house, please contact the Mn/DOT Project Manager or the Minnesota Relay Service as soon as possible.

Sincerely,

Victoria Nill

Victoria Nill
Mn/DOT Project Manager

Attachment

ENVIRONMENTAL ASSESSMENT

Trunk Highway(TH): TH 13 and Dakota County State Aid Highway (CSAH) 5
State Project Number: S.P. 19-605-24, S.P. 1901-148, and HPP 179-020-28

From: Interstate 35W on the east to Washburn Avenue on the west and Williams Drive on the south to 126th Street SW on the north
City(ies): Burnsville, in **County(ies):** Dakota of Minnesota
Section(s), Township(s), Ranges(s): Sec. 14, T 115 N, Rng 21 W

Submitted Pursuant to 42 USC 4332 and Minn. Statute 116D by the U.S Department of Transportation Federal Highway Administration and the Minnesota Department of Transportation for

Constructing a grade separated interchange at the intersection of TH 13 and Dakota CSAH 5 and reconstructing frontage/backage roads within the project area.

Contacts:

Federal Highway Administration
Phil Forst
Project Development Engineer
Galtier Plaza, Suite 500
380 Jackson Street
St. Paul, MN 55101

City of Burnsville
Bud Osmundson
Burnsville City Engineer
100 Civic Center Parkway
Burnsville, MN 55337
952-898-4544

Recommended:

B. Osmundson — City of Burnsville Engineer — 1-25-07 Date

Mark Kuzmik — Dakota County Transportation Director/County Engineer — 2/5/07 Date

Reviewed and Recommended for Approval:

for Thomas R. Sorel — District Engineer, Mn/DOT Metro District — 2/8/07 Date

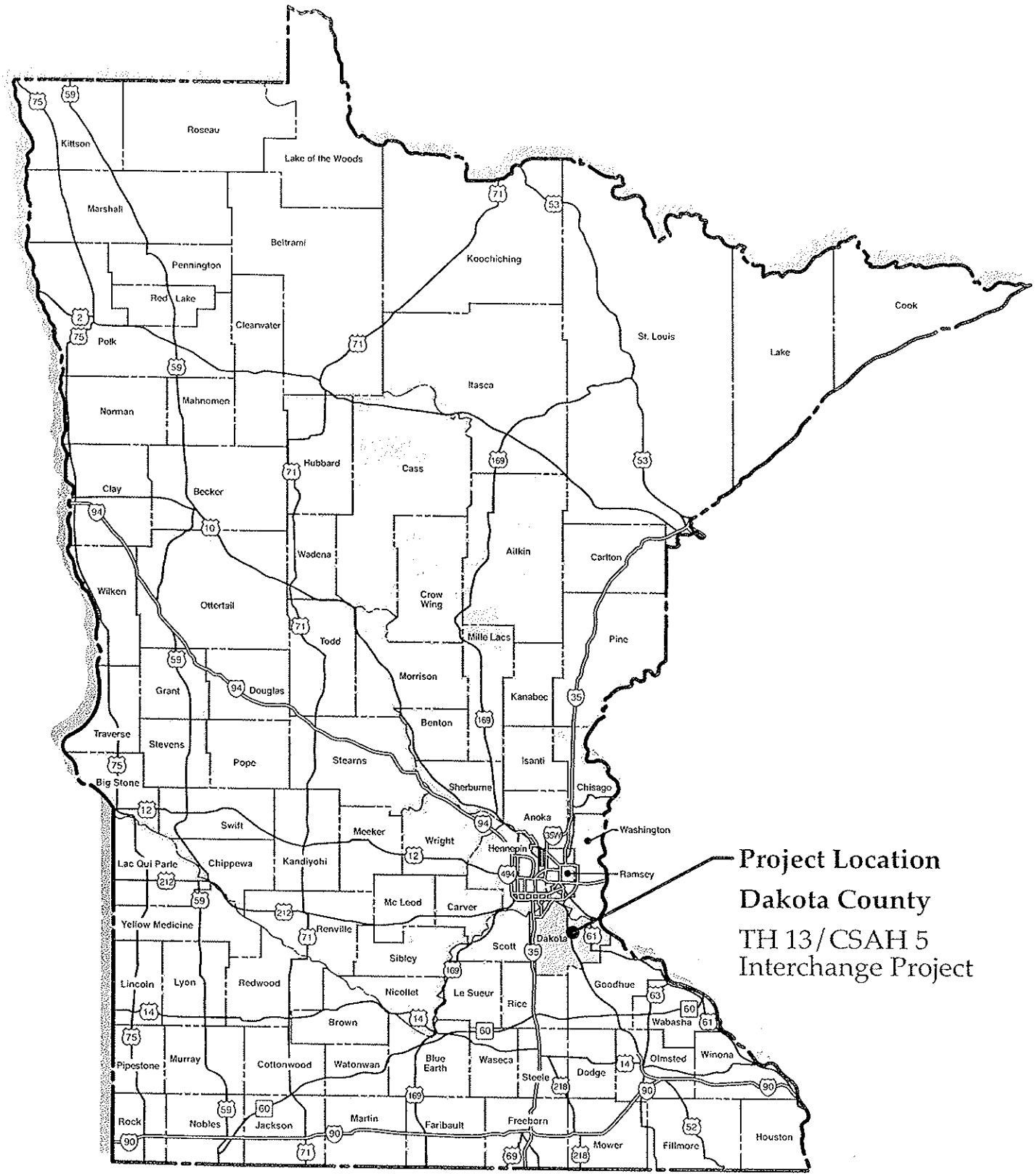
Approved:

Frank W Pafko — Chief Environmental Officer, Mn/DOT — 2/20/07 Date

Approved as Environmental Assessment per 23 CFR Part 771.119(c):

Jeanette Wallace — Project Development Engineer, Federal Highway Administration — 3/1/07 Date

This document is available in alternative formats to individuals with disabilities by calling the City of Burnsville contact person listed above or to individuals who are hearing or speech impaired by calling the Minnesota Relay Service at 1-800-627-3529.



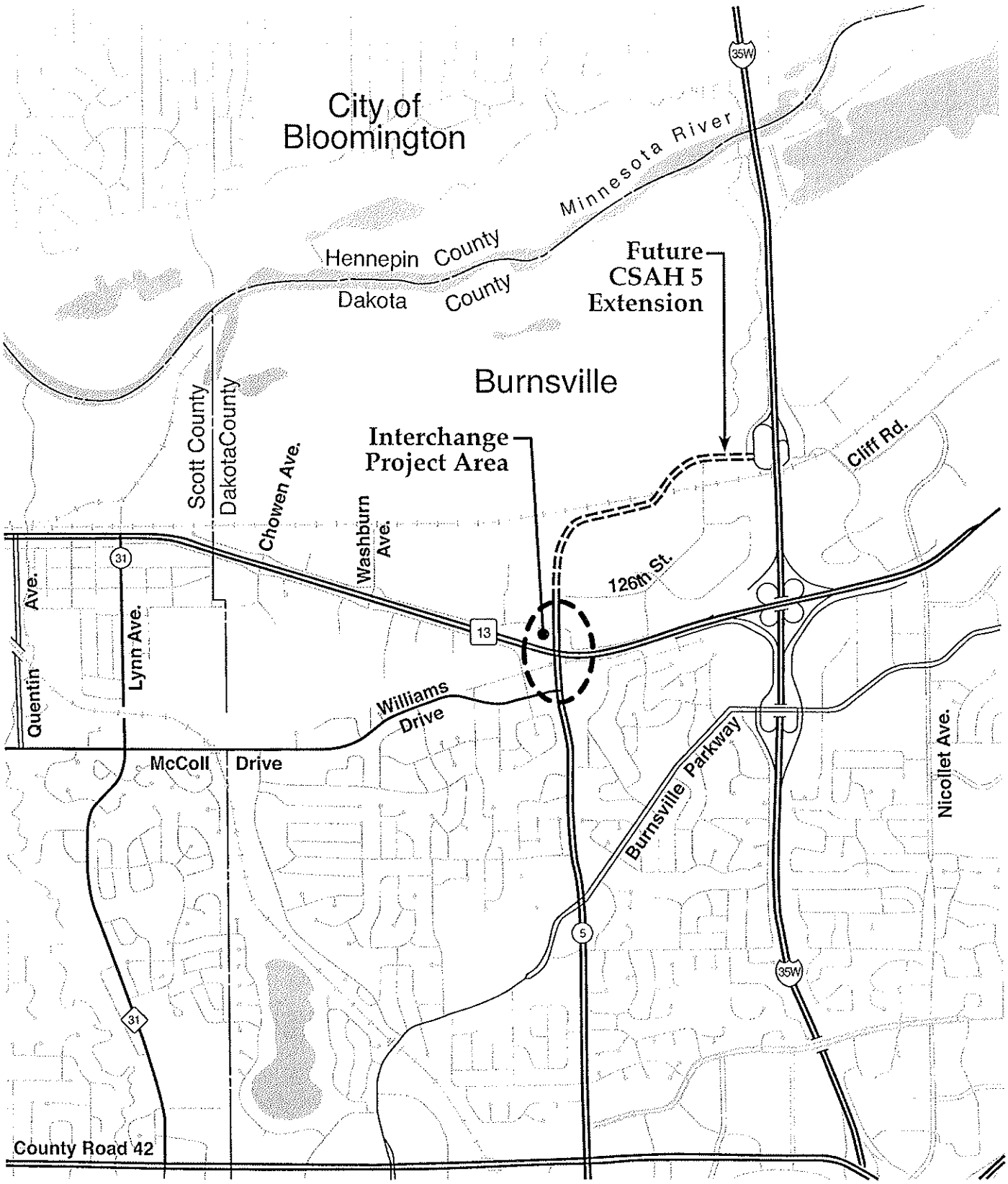
City of BURNSVILLE

TH 13/CSAH 5 Interchange Project
Environmental Assessment

Figure 1
State/County
Location Map

North

October 2005



City of BURNSVILLE

TH 13/CSAH 5 Interchange Project
Environmental Assessment

Figure 2
Project Location Map

North

October 2005

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I. REPORT PURPOSE

This Environmental Assessment (EA) provides background information for the proposed road improvements and interchange construction at the intersection of Trunk Highway (TH) 13 and County State Aid Highway (CSAH) 5, in the City of Burnsville, Dakota County, Minnesota. This document includes discussion of the following:

- Need for the proposed project
- Alternatives considered
- Environmental impacts and mitigation
- Agency coordination and public involvement

This EA was prepared as a part of the National Environmental Policy Act (NEPA) process and state environmental review process to fulfill requirements of both 42 USC 4332 and M.S. 116D. At the federal level, the EA is used to provide sufficient environmental documentation to determine the need for an Environmental Impact Statement (EIS) or that a Finding of No Significant Impact (FONSI) is appropriate. At the state level, the EA is used to provide sufficient environmental documentation to determine the need for a state EIS or that a Negative Declaration is appropriate.

At the state level, this document also serves as an Environmental Assessment Worksheet (EAW). Minnesota Rules 4410.1300 allows the EA to take the place of the EAW form, provided that the EA addresses each of the environmental effects identified in the EAW form. This EA includes each of the environmental effects identified in the EAW form.

The City of Burnsville is the proposer, and the Minnesota Department of Transportation (Mn/DOT) is the Responsible Governmental Unit (RGU) for this project. Preparation of an EAW is considered mandatory under Minnesota Rules 4410.4300 subpart 1, and Minnesota Rules 4410.4300 subp. 22 (C) – addition of one or more new interchanges to a completed limited access highway.

This document is made available for public review and comment in accordance with the requirements of 23 CFR 771.119 (d) and Minnesota Rules 4410.1500 through 4410.1600.

II. PURPOSE AND NEED FOR PROJECT

Project Location and Setting

The TH 13/CSAH 5 Interchange Project is located in the Twin Cities Metropolitan Area in northwest Dakota County (Figure 1). The project limits lie entirely within the City of Burnsville and extend from Interstate 35 West (I-35W) on the east to Washburn Avenue on the west and Williams Drive on the south to 126th Street SW on the north (Figure 2).

TH 13 is a rural (grass median) four-lane divided highway through the project area. CSAH 5 is an urban (raised concrete median) four-lane roadway through the project area. The land use characteristics within the project area are predominantly commercial/industrial developments adjacent to TH 13 and CSAH 5 with residential development located behind the commercial establishments on the south side of TH 13. Currently, CSAH 5 intersects TH 13 at an at-grade signalized intersection.

Purpose of the Proposed Action

The purpose for the TH 13/CSAH 5 Interchange Project is to identify and construct a preferred interchange alternative for a transportation system improvement designed to achieve the project need as described in the next section.

Need for Proposed Action

The project is needed to provide safety and operational benefits for the area transportation network. The TH 13 Corridor Study, completed in 2000, identified the intersection of TH 13 and CSAH 5 as the top priority for needing improvements along the TH 13 corridor. TH 13 serves as an important principal arterial serving transportation needs south of the Minnesota River, including critical freight movements. CSAH 5 is the only continuous minor arterial connecting CSAH 42 and TH 13 between I-35W and TH 13 to the west. As such, CSAH 5 serves a critically important role for both local and regionally oriented travel. Traffic volumes have increased in the project area to the point that the traffic demand is exceeding the capacity of the at-grade intersection, which in turn results in extended periods of heavy congestion and unacceptable levels of service (LOS) of E and F during peak hours.

Safety and Traffic Operations

The TH 13/CSAH 5 intersection currently experiences heavy levels of congestion during peak periods (AM and PM rush hours) and has been the site of numerous accidents. The severity of these problems will continue to increase as the traffic in the region continues to grow. As illustrated in Figure 3, located in Appendix A, the existing average annual daily traffic (AADT) volume on this segment of TH 13 is approximately 54,000 vehicles per day (vpd) east of CSAH 5 and approximately 46,000 vpd west of CSAH 5. The existing AADT on CSAH 5 is approximately 20,000 vpd between TH 13 and Williams Drive and approximately 18,800 vpd south of Williams Drive. No existing daily counts were available for CSAH 5 north of TH 13. Figure 3, located in Appendix A, also depicts the forecast traffic volumes that were developed using both the Metropolitan Council Twin Cities Regional Model (TCRM) and the Dakota County Forecast Travel Demand Model. In the year 2030 the traffic volumes on TH 13 east of CSAH 5 are forecast to be approximately 63,000 vpd and approximately 60,000 vpd west of CSAH 5. The 2030 AADT on CSAH 5 is forecast to be approximately 15,000 vpd north of TH 13, 29,000 vpd between TH 13 and Williams Drive, and 22,000 vpd south of Williams Drive.

A traffic operations analysis was conducted for the 2030 forecast year during the AM and PM peak hours. Several key intersections in the study area were modeled using traffic simulation software, SimTraffic. The traffic simulation was used to determine the average delay per vehicle and the related level of service for each intersection approach. In addition, the simulation was used to review the vehicular queues (length of back-ups) on the intersection approaches to further evaluate traffic operations within the study

area. The analysis indicates the No-Build Alternative (Do Nothing) would result in unacceptable levels of service (LOS E or F) at all intersections in the study area during the AM and PM peak hours and long vehicular queues would occur at virtually every intersection approach.

The TH 13 Corridor Study assessed the safety conditions at the TH 13/CSAH 5 intersection and found a crash rate of 1.32 crashes per million vehicle miles, which was higher that the average crash rate of 1.16 for similar intersections. This higher than average crash rate is in part due to the high number of vehicles using the signalized intersection as well as the number of access points within close proximity of the intersection. Currently, TH 13 has three right-in/right-out access points located just east of the CSAH 5 intersection and seven full access points along CSAH 5 both south and north of the TH 13. The presence of these access points creates conflicts between slower turning/merging traffic and higher speed through traffic.

III. ALTERNATIVES

A. NO-BUILD ALTERNATE

The No-Build Alternate would involve no improvements being made to the TH 13/CSAH 5 intersection. The existing number of lanes along each roadway and the signalized traffic control device would remain in place. The No-Build Alternate does not preclude ongoing maintenance work. The No-Build Alternate provides the basis of comparison, or benchmark, for the build alternates and includes the impacts associated with doing nothing.

The No-Build Alternative was not recommended because it would fail to address the safety and traffic operation issues at the TH 13/CSAH 5 intersection that were identified in Section II of this document.

B. LOCATION ALTERNATIVES

No location alternatives were considered feasible because TH 13 and CSAH 5 is an established route and the surrounding land uses (commercial/industrial and residential) in this highly developed urban environment severely limits the possibilities of an alternative alignment/new location. Substantial right-of-way and relocation impacts as well as higher construction costs would be realized with a new alignment.

C. ALTERNATIVES CONSIDERED

A full range of alternatives was developed to compare the potential impacts to the natural and built environments as well as the affect on traffic operations.

Six interchange alternatives and two at-grade designs were considered for reconstructing the TH 13/CSAH 5 intersection. All alternatives have been designed to accommodate the future expansion of TH 13 to a six-lane highway. Appendix B contains an illustration of each of the alternatives that were considered. The alternatives included the following:

- Alternative 1 – Compressed Diamond Interchange: The configuration of the interchange would be a diamond with the entrance/exit ramps pulled in towards the bridge to minimize right-of-way/relocation impacts. Traffic signals would be installed at the ramp terminal intersections. This alternative would require the closure of eleven access points and the realignment of frontage roads in the northwest, northeast, and southeast quadrants of the interchange.
- Alternative 2 – Compressed/Folded Diamond Interchange: This interchange configuration would consist of a compressed diamond with the exception of an exit loop in the northwest quadrant to allow for the removal of an exit ramp in the northeast quadrant. Traffic control would include traffic signals at the ramp terminal intersections. This alternative would require the closure of eleven access points and the realignment of the frontage roads in the northwest, northeast, and southeast quadrants.
- Alternative 3 – Button Hook Interchange: The configuration of the button hook interchange would consist of entrance/exit ramps in the northwest and southeast quadrants of the interchange. An intersection design option (roundabout intersection) was considered in the northwest quadrant where the buttonhook access/exit ramp intersects with the North Frontage Road. Both Alternative 3 and 3a would require the

closure of nine access points and the construction and/or realignment of supporting roads in the northwest and southeast quadrants of the interchange.

- Alternative 4 – Single Point Interchange: The configuration of the interchange would be a single point interchange with entrance ramps in the northwest and southeast quadrants and exit ramps in the northeast and southwest quadrants. Traffic control for the interchange would include a single traffic signal for all four ramp terminals. This alternative would require the closure of eleven access points and the realignment of the frontage roads in the northwest, northeast, and southeast quadrants of the interchange.
- Alternative 5 – Compressed Diamond/Button Hook with Roundabout: This interchange configuration combines the components of Alternative 1 and Alternative 3. Eastbound TH 13 (southern portion of the interchange) would be served by a compressed diamond configuration with a traffic signal at the southern ramp terminal intersection. Westbound TH 13 (northern portion of the interchange) would be served by a button hook design in the northwest quadrant of the interchange. A roundabout intersection would be constructed at the intersection of CSAH 5 and the North Frontage Road. This alternative would require the closure of nine access points and the realignment of the frontage road in the southeast quadrant of the interchange.
- Alternative 6 – At-Grade Intersection: This alternative would maintain the existing at-grade intersection at TH 13 and CSAH 5. However, additional capacity would be implemented including double left turn lanes and four through lanes on CSAH 5 north of TH 13. Traffic at the intersection would continue to be controlled by a traffic signal. Other improvements would include the closure of three access points along TH 13 and six access points along CSAH 5.
- Alternative 7 – Continuous Flow At-Grade Intersection: This at-grade intersection removes the conflict between left turning vehicles and oncoming traffic by introducing a left-turn bay at a mid-block signalized intersection on the approach where continuous flow is desired. The complete continuous flow intersection design operates as a set of two-phase signals. This design requires additional land (right-of-way) and an extensive signal system to ensure proper traffic operations. This alternative would also require the closure of five access points and potentially require the realignment of the frontage roads in the northeast and southeast quadrants of the intersection.
- Alternative 8 – Partial Cloverleaf Type B (Parclo B): The configuration of this interchange would consist of entrance ramps and exit loops in the northwest and southeast quadrants. The advantage with a Parclo B interchange is the loop exit ramps eliminate left turning traffic from the highway exit ramp to the cross street, which in turn creates more efficient operations at the ramp terminal intersections. This alternative would require the closure of eleven access points along TH 13 and CSAH 5.

Evaluation of Interchange Alternatives

Several evaluation criteria were identified for assessing the eight build alternatives. These criteria are listed below and focus on property and land use impacts and traffic operations.

- Property impacts (right-of-way needs/relocations)
- Compatibility with future development
- Overall area traffic operations and safety
- Major movement accommodation
- Cost
- Meets Driver Expectations

An interchange alternatives evaluation matrix was utilized during the alternatives screening phase to provide a comparison of how the interchange alternatives rank within the same criterion. Alternative 6 was not evaluated since this alternative involved an at-grade intersection.

Professional opinions and/or technical information, such as traffic modeling, land use plans, and right-of-way information were used to determine if an interchange alternative is more beneficial or creates minimal impact (+), neutral (∅), or has an adverse effect or high impact (–) in relation to the other alternatives under consideration. A summary of the interchange alternatives evaluation process is provided below:

Evaluation criteria	Alt. 1	Alt. 2	Alt. 3	Alt. 3a	Alt. 4	Alt. 5	Alt. 7	Alt. 8
Property impacts (right-of-way needs/relocations)	−	∅	∅	−	+	+	−	−
Compatibility with future development	+	+	−	+	+	∅	−	∅
Traffic operations & safety	∅	+	−	−	+	−	∅	+
Major traffic movement accommodation	∅	+	∅	−	∅	−	−	+
Cost	−	∅	+	+	−	∅	+	−
Meets Driver Expectations	+	∅	−	∅	∅	∅	−	∅

"+" indicates the alternative creates a beneficial effect or has a minimal impact on the evaluation criteria
"∅" indicates the alternative creates a neutral effect or has a moderate impact on the evaluation criteria
"–" indicates the alternative creates an adverse effect or has a high impact on the evaluation criteria

D. ALTERNATIVE CONSIDERED, BUT REJECTED

Based on the evaluation criteria discussed above, Alternatives 3, 4, 5, 6, 7, and 8 were dismissed from further consideration. While Alternative 4 appeared to rank well in the overall evaluation criteria, the substantially higher cost of constructing a single-point interchange resulted in the dismissal of this alternative.

E. BUILD ALTERNATIVES RETAINED FOR FURTHER CONSIDERATION

Alternatives 1 and 2 were retained for further consideration. A more detailed comparison of traffic operations (traffic weaving), property impacts, and cost were considered. The evaluation process concluded with the following pros/cons for Alternatives 1 and 2.

Alternative 1: Pros: – Overall fewer right-of-way impacts, standard diamond design meets driver expectations, acceptable LOS at intersections, improved safety through grade separation and access closures.

Cons: – Requires a wider and more costly bridge to accommodate left turn lanes, north ramp is less effective than Alt. 2 due to heavy westbound left turns, reduces the weaving distance with I-35W.

Alternative 2: Pros: – Concentrates north side right-of-way impacts in one quadrant (NW), improves exit ramp spacing/weaving distance from I-35W, heavy westbound left turn movement is accommodated with an exit loop ramp, acceptable LOS at intersections, improved safety through grade separation and access closures.

Cons: – Southeast frontage road impacts existing commercial properties.

F. PREFERRED ALTERNATIVE

Alternative 2 – Compressed/Folded Diamond Interchange: The compressed/folded diamond configuration has been selected as the preferred interchange alternative because it provides acceptable operations (LOS) along TH 13 and CSAH 5, accommodates future development in the study area, minimizes impacts on the local street system (frontage roads), minimizes right-of-way impacts in the northeast quadrant of the interchange, improves exit ramp spacing from I-35W, is cost feasible, and provides safety benefits through crossing access points in close proximity of the intersection and through grade separating the roadways. The compressed/folded diamond design also provides operational benefits in that motorists exiting westbound TH 13 onto CSAH 5 do not have to make left turns to proceed southbound on CSAH 5, which is a heavy traffic movement at the intersection. Traffic control would include traffic signals at the ramp terminal intersections. This alternative would require the closure of ten access points, including three along TH 13 (Dupont Avenue South, an access along the South Frontage road, and Valley Drive) and seven access points along CSAH 5. The preferred alternative also includes the realignment of the frontage roads in the northwest and southeast quadrants of the intersection. Figure 4, located in Appendix A, depicts the all proposed improvements associated with the preferred alternative.

The preferred alternative includes constructing a bridge on CSAH 5 over TH 13, the construction of entrance and exit ramps/loop to and from TH 13, and the realignment/construction of frontage roads in the northwest and southeast quadrants of the interchange. Construction of the proposed improvements will require lowering the vertical profile of TH 13 by approximately 21-feet and raising the vertical profile of CSAH 5 by approximately 2-feet.

Figure 4, located in Appendix A, illustrates the proposed improvements associated with the preferred alternative. The interchange and overpass components include:

- The proposed CSAH 5 bridge will be approximately 128-feet wide. On the bridge, northbound CSAH 5 will have two through lanes and a single left turn lane for traffic turning westbound onto TH 13. Southbound CSAH 5 will have three through lanes and a single left turn lane for traffic turning eastbound onto TH 13. There will be 8-foot outside shoulders included for both directions of traffic. The proposed bridge width includes a 12-foot width on east side of the bridge to accommodate an 8-foot trail, plus the required 2-foot clearances on each side of the trail. Figure 5, located in Appendix A, depicts the bridge typical. The bridge will be constructed in a fashion that would accommodate future capacity expansion (additional through lanes) along TH 13.
- The northwest entrance ramp for accessing westbound TH 13 from CSAH 5 is proposed to be approximately 790 lineal feet with the full ramp length, including taper, to be 2,190- feet. Lane geometry consists of a single lane ramp with an added parallel acceleration lane, approximately 310-feet in length.
- The northwest loop exiting westbound TH 13 to CSAH 5 is proposed to be approximately 760 lineal feet with the full ramp length, including taper, to be 1,475-feet. Lane geometry consists of a left and right turn lane, with a free right turn allowed at the intersection.
- The southwest ramp exiting eastbound TH 13 to CSAH 5 is proposed to be approximately 1,045 lineal feet with the full ramp length, including taper, to be 1,570-feet. Lane geometry consists of a left/through lane and a right turn lane.

- The southeast entrance ramp for accessing eastbound TH 13 from CSAH 5 is proposed to be approximately 730 lineal feet with the full ramp length, including taper, to be 1,875-feet. Lane geometry consists of two lanes merging into a single lane as they approach TH 13. One lane accounts for southbound CSAH 5 traffic turning onto the entrance ramp and the second lane accommodates northbound CSAH 5 traffic turning onto the entrance ramp.
- The interchange ramp terminal intersection on both sides of the bridge will be signalized. The signal systems will be full-traffic-actuated traffic control systems with overhead mast arm mounted indications with LED lenses for all approaches. The signals will provide for protected left turn phasing and emergency vehicle preemption.
- Williams Drive intersection improvements include the addition of a second left turn lane from eastbound Williams Drive to northbound CSAH 5. There will also be a left turn lane added from westbound Williams Drive to southbound Morgan Avenue. A sidewalk will be added on the north side of Williams Drive between CSAH 5 and Morgan Avenue. The sidewalk will need to be partially located on private property, due to the widening of Williams Drive to accommodate the added left turn lane.
- The proposed improvements include the construction/reconstruction of approximately 1.4 miles (7,500-feet) of frontage/access roads in the northwest, northeast, and southeast quadrants of the interchange and the closure of three direct access points to TH 13 and seven access points along CSAH 5. Drainage on CSAH 5, the bridge, and the ramps will be carried by roadway gutters, storm sewers to adjacent drainage facilities. Signing will be installed, in accordance with the Minnesota Manual of Uniform Traffic Control Devices guidelines, to provide direction to motorists.
- Two storm water ponds are planned to receive storm water runoff from the proposed roadway improvements. One pond, approximately 0.75 acres in size, is planned in the southeast corner of the CSAH 5 and 126th Street intersection. A second pond, approximately 0.25 acres in size is planned to be constructed in the westbound TH 13 exit loop ramp, which is located in the northwest quadrant of the interchange.

Roadway construction and operations will consist of removing the existing roadway material and topsoil within the proposed project's construction limits, excavating material from under the proposed new roadway areas, laying storm sewer, and placing and compacting material for new roadway embankments. It is anticipated the material excavated during the project will be reused for aggregate or embankment purposes where appropriate and in accordance with best management practices (BMPs) established in Mn/DOT's Standard Specifications for Construction. Bridge construction will involve placing approaching roadway embankments, driving pile, constructing abutments and piers, installing bridge girders, and constructing the concrete deck. BMPs will be used to control construction-related sedimentation, and turf areas will be re-established.

G. PROJECT FUNDING, COST, AND SCHEDULE

Project Funding

Federal High Priority Project (HPP) funds have been approved for FY 2005-2009for planning and design work and total $2.4 million. The construction and the purchase of necessary right-of-way for the TH 13/CSAH 5 Interchange Project is expected to be funded federally. The matching funds will likely come from a combination of city, county, State Aid, and state sources. Other funding appropriations will likely be solicited in an effort to obtain adequate

funding. Depending on the success of securing funds the construction letting date listed under the project schedule may have to be delayed to a later date.

Project Cost

The estimated construction cost for the interchange and associated roadway improvements is approximately $20.0 million. An additional $7.0 million is anticipated for right-of-way needs.

Project Schedule

As reflected in the project schedule, the timing for construction of these elements is yet to be finalized and will be dependent upon the availability of funding.

Environmental Assessment	November 2006
Public Hearing	January 2007
EIS Need Decision	March 2007
Right-of Way Acquisition	Beginning in spring 2007
Construction Letting	2007 at earliest dependent on funding

IV. SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS

This section discusses environmental impacts of alternatives identified in the Alternatives section. It contains two sub-sections:

- State Environmental Assessment Worksheet (EAW)
- Additional Federal Issues

The EAW is a standard format used in Minnesota for environmental review of projects meeting certain thresholds outlined in Minnesota Rule 4410.4300. Federal environmental regulations not addressed in the EAW are addressed in separate sub-sections.

ENVIRONMENTAL ASSESSMENT WORKSHEET

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the EQB Monitor. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project Title: **Trunk Highway (TH) 13/Dakota County State Aid Highway (CSAH) 5 Interchange Project**

2. Proposer: **City of Burnsville**

Contact Person **Bud Osmundson, PE**

And Title **Burnsville City Engineer**

Address **100 Civic Center Parkway**
Burnsville, MN 55337

Phone **(952) 895-4544**

Fax **(952) 895-4404**

3. RGU: **Mn/DOT**

Contact Person **Victoria Nill**

and Title **Mn/DOT Project Manager**

Address **1500 W County Road B2**
Roseville, MN 55113

Phone **651.634.2094**

Fax **651.634.2162**

4. Reason for EAW Preparation:

EIS Scoping		Mandatory EAW	X	Citizen Petition		RGU Discretion		Proposer Volunteered	

If EAW or EIS is mandatory give EQB rule category subpart number and name: **4410.4300 Subp. 22C**

5. Project Location: County **Dakota** City/Twp **Burnsville**

N ½ ____ ¼ Section **14** Township **115N** Range **21W**

Tables, Figures, and Appendices attached to the EAW:

- State/County Map **(Figure 1)**
- Project Location Map **(Figure 2)**
- Existing and Forecast Traffic Volumes Map **(Figure 3)**
- Preferred Alternative **(Figure 4)**
- Bridge Layout and Typical Section **(Figure 5)**
- Potentially Contaminated Properties **(Figure 6)**
- FIRM Floodplain Map **(Figure 7)**
- Soil Survey Map **(Figure 8)**
- PM Peak Hour Turning Movements (year 2030) **(Figure 9)**
- TH 13 and CSAH 5 Intersection USGS Map **(Figure 10)**
- Known and Potentially Contaminated Properties **(Table 1)**
- Peak Hour Intersection Level of Service (LOS) and Seconds of Vehicle Delay (s/veh) **(Table 2)**
- Minnesota State Noise Standards **(Table 3)**
- Federal Noise Abatement Criteria **(Table 4)**
- Monitored Noise Level **(Table 5)**
- Modeled Noise Levels (dBA) **(Table 6)**
- 20-foot Noise Wall Analysis **(Table 7)**

- 10-foot Noise Wall Analysis **(Table 8)**

6. Description:

a. Provide a project summary of 50 words or less to be published in the *EQB Monitor.*

The proposed improvements include constructing a grade separated interchange at the intersection of TH 13 and CSAH 5, in the City of Burnsville, Dakota County. The preferred interchange configuration is a compressed/folded diamond with an exit loop ramp in the northwest quadrant. Other improvements include reconstructing frontage/backage road and limiting access within the project area.

b. Give a complete description of the proposed project and related new construction. Attach additional sheets as necessary. Emphasize construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes. Include modifications to existing equipment or industrial processes and significant demolition, removal or remodeling of existing structures. Indicate the timing and duration of construction activities.

EA Section III.F. contains a complete description of the proposed action. Also, see Figures 4 and 5, located in Appendix A, for illustrations of the preferred alternative.

c. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

EA Section II provides a complete description of the project's purpose and need.

The project will be carried out by the City of Burnsville in conjunction with Dakota County and Mn/DOT. Beneficiaries of the project will include motorists in the region since the new interchange is anticipated to improve operations along both TH 13 and CSAH 5.

d. Are future stages of this development including development on any outlots planned or likely to happen?
☐Yes ☒No
If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

e. Is this project a subsequent stage of an earlier project? ☐ Yes ☒ No
If yes, briefly describe the past development, timeline and any past environmental review.

7. Project Magnitude Data

Total Project Area (acres) **60 acres** or Length (miles) **N/A**
Number of Residential Units: Unattached **N/A** Attached _____ Maximum units per building **N/A**
Commercial/Industrial/Institutional Building Area (gross floor space): Total square feet **N/A**
Indicate area of specific uses (in square feet):

Office	**N/A**	Manufacturing	**N/A**
Retail	**N/A**	Other Industrial	**N/A**
Warehouse	**N/A**	Institutional	**N/A**
Light Industrial	**N/A**	Agricultural	**N/A**
Other Commercial (specify)	**N/A**		

Building height **N/A** If over 2 stories, compare to heights of nearby buildings _____

8. **Permits and approvals required.** List all known local, state and federal permits, approvals and financial assistance for the project. Include modifications of any existing permits, governmental review of plans, and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure.

Unit of Government	Type of Application/Permit	Status
Federal Highway Administration	**Environmental Assessment**	**Approval**
	EIS-Need-Decision	**To be requested**
Mn/DOT	**Environmental Assessment**	**Approval**
	EIS-Need-Decision	**Pending**
	Study Report	**Pending**
	Geometric Layout Approval	**Pending**
	Construction Plan Approval	**Pending**
	Cultural Resource Determination – Section 106 Compliance	**Finding of No Effect**
	Federal Endangered Species Review	**Complete**
	Permit to Construct	**To be requested**
	Drainage Permit	**To be requested**
Minnesota Department of Natural Resources	**State Endangered Species Review**	**Complete**
Minnesota Pollution Control Agency	**National Pollutant Discharge Elimination System – Phase II Permit**	**To be requested**
Dakota County	**Construction Plan Approval**	**To be requested**
Black Dog Watershed Management Organization (WMO)	**Project Consultation**	**To be requested**

Funding

Section III G., of the EA contains a description of the project funding.

9. **Land use.** Describe current and recent past land use and development on the site and on adjacent lands. Discuss project compatibility with adjacent and nearby land uses. Indicate whether any potential conflicts involve environmental matters. Identify any potential environmental hazards due to past site uses, such as soil contamination or abandoned storage tanks, or proximity to nearby hazardous liquid or gas pipelines.

Land Use

The proposed project area is in a highly developed area within the City of Burnsville. Commercial/light industrial developments primarily lie adjacent to TH 13 and CSAH 5 within the project area. Residential developments are typically located south of the intersection in the second tier of development from the highway corridors. Land uses north of the intersection include a large quarry and several industrial developments. This area, located between TH 13 and the Minnesota River, is referred to as the Minnesota River Quadrant (MRQ) and is slated for redevelopment. The MRQ is planned to include a lake, marina, golf course, office retail and a convention center.

Environmental Hazards

The presence of known and potentially-contaminated properties (defined as properties where soil and/or groundwater contain pollutants, contaminants, or hazardous wastes) is a concern

in the development of highway projects. Liabilities are associated with ownership of such properties, their cleanup costs, and various safety concerns, especially where encountered by personnel with unsuspected wastes or contaminated soil or groundwater are possible. Contaminated materials encountered during highway construction projects must be properly handled and treated in accordance with state and federal regulations. Improper handling of contaminated materials can worsen their impact on the environment. Contaminated materials also cause adverse impacts on highway projects by increasing construction costs and causing construction delays, which also can increase general project costs.

A Phase I Environmental Site Assessment (ESA) has been completed for the TH 13/CSAH 5 Interchange Project. The ESA included a review of historical records and an environmental database search, which identified several sites with possible soil and/or groundwater contamination within the study area. Table 1 and Figure 6, located in Appendix A, present twenty-six known and potentially contaminated properties and the level of risk for encountering contaminants. Figure 6, located in Appendix A, also depicts six Dakota County Waste Sites and the type of waste associated with each site.

Prior to right-of-way acquisition it was recommended that Phase II investigations (soil borings and/or ground water samples) be conducted at properties that are to be acquired and that have been identified as potentially contaminated. The recommended number of borings or ground water samples varies by individual property and level of risk for encountering contamination.

Table 1
Known and Potentially Contaminated Properties

Site ID	Risk	Environmental Concerns
1	Low	RCRA-SQG
2	Low	RCRA-SQG
3	Low	RCRA-SQG
4	High	LUST, UST, RCRA-SQG
5	Medium	RCRA-SQG, poor housekeeping
6	Medium	RCRA-SQG, construction site
7	Medium	Dump Site
8	High	LUST, RCRA-SQG
9	Low	RCRA-SQG
10	Low	RCRA-SQG
11	Low	RCRA-SQG
12	Low	RCRA-SQG
13	High	LUST, RCRA-SQG
14	Medium	LUST, AST, RCRA-SQG
15	Medium	AST
16	Low	RCRA-SQG
17	High	LUST, UST
18	High	LUST, RCRA-SQG
19	High	LUST

Site ID	Risk	Environmental Concerns
20	Low	RCRA-SQG
21	Low	Drums, monitoring well near site
22	Low	RCRA-SQG
23	Medium	AST
24	Low	RCRA-SQG
25	Low	ERNS

RCRA-SQG: Small quantity hazardous waste generator
LUST: Leaking underground storage tank
UST/AST: Underground/aboveground storage tank
ERNS: Emergency response notification system for spill sites

Copies of the Phase I ESA are available for review at the City of Burnsville City Hall and Dakota County Physical Development Division. If any hazardous materials are encountered during construction, the City of Burnsville, Dakota County, and/or Mn/DOT will properly handle and treat the material in accordance with all applicable state and federal regulations. The project partners will work with the Minnesota Pollution Control Agency (MPCA) Voluntary Investigation and Cleanup (VIC) Unit and/or the Voluntary Petroleum Investigation and Cleanup (VPIC) Unit, if appropriate, to obtain assurances that contaminated site cleanup work, and/or contaminated site acquisition, will not associate Burnsville, Dakota County, or Mn/DOT with long-term environmental liability for the contamination.

Demolition of Structures

A demolition survey and asbestos/lead-based paint survey will be necessary for all structures to be removed prior to demolition.

Dewatering

If dewatering is planned in order to construct the improvements, groundwater sampling should be conducted in the previously discussed areas of concern. Shallow groundwater flow in the area is assumed to be generally north, although local flow patterns may exist following topography and surface water features.

10. Cover Types. Estimate the acreage of the site with each of the following cover types before and after development:

	Before	After		Before	After
Types 1-8 wetlands	**0**	**0**	Impervious Surfaces	**18**	**23**
Wooded/forest	**0**	**0**	Storm Water Pond	**0**	**1**
Brush/grassland	**42**	**36**	Other	**0**	**0**
Cropland/Farmland	**0**	**0**			
			Total Project Area Acres	**60**	**60**

If **Before** and **After** totals are not equal, explain why:

The cover type areas shown above represent the roadway improvements within the entire project area. These improvements include the proposed interchange, as well as the reconstruction of surrounding frontage/backage roads.

11. Fish, Wildlife, and Ecologically Sensitive Resources.

a. Identify fish and wildlife resources and habitats on or near the site and describe how they would be affected by the project. Describe any measures to be taken to minimize or avoid impacts.

The project area is located within the Minnesota River Valley. However, the project area is comprised of suburbanized land uses such as commercial/light industrial and residential developments. Wildlife and ecologically sensitive resources are limited in the project area due to the disturbed habitats. The characteristics of wildlife habitats are urban in nature including green spaces such as vacant lands, landscaped surfaces, planted vegetation, and residential parcels. Ditches, wetlands, or other water features are absent within and immediately adjacent to the project area. Wildlife common within the area include small mammals, birds, and insects. The number and type of birds within the project area varies considerably from season to season.

Federal Threatened and Endangered Species

For the FHWA, Mn/DOT's Office of Environmental Services was contacted regarding potential impacts to fish, wildlife, and habitats of national interest (refer to Appendix C, letter dated November 1, 2005). The project was reviewed by a wildlife biologist to determine potential impacts on species protected under the Federal Endangered Species Act. It was determined that the project is within the distribution range of the bald eagle (Haliaeetus leucocephalus), Higgins' eye pearlymussel (Lampsilis higginsii), dwarf trout lily (Erythronium propullans), and the prairie bush-clover (Lespedeza leptostachya), which are all Federally-Listed Species. However, Mn/DOT's Office of Environmental Services determined there are no known occurrences of Federally-Listed T&E Species within the TH 13/CSAH 5 Interchange Project area. In addition, due to the location of the proposed project, the improvements will have no effect on Federally-Listed T&E Species.

In accordance with the federal Fish and Wildlife Coordination Act, no impacts are anticipated to designated fish or wildlife habitats, state or federal wildlife management areas, refuges, or preserves, properties acquired through the LAWCON, or hunting preserves.

b. Are any state (endangered or threatened) species, rare plant communities or other sensitive ecological resources such as native prairie habitat, colonial waterbird nesting colonies or regionally rare plant communities on or near the site? ☒ Yes ☐ No
If yes, describe the resource and how it would be affected by the project. Indicate if a site survey of the resources has been conducted and describe the results. If the DNR Natural Heritage and Nongame Research program has been contacted give the correspondence reference number. **ERDB 20060309**
Describe measures to minimize or avoid adverse impacts.

No impacts are anticipated to any state-listed species within the project area. Available information regarding reported occurrences of rare, threatened, and endangered (RT&E) species or critical habitats in proximity to the proposed alignment was obtained from the Minnesota Department of Natural Resources (MNDNR) National Heritage

Program for state-listed species. The database search covered an area within one mile of the alignment. Based on this review, the MNDNR replied there are six known occurrences of a rare species or natural community in the study area. However, the MNDNR correspondence indicates that the Blanding's Turtle (Emydoide blandingii) is the only rare species that could potentially be affected by the proposed project. The response from the MNDNR and results of the review are included in Appendix C. A list of recommendations for avoiding and minimizing impacts to Blanding's Turtles was included in the correspondence. These recommendations will be implemented to the extent practical without minimizing the safety and operations of the proposed roadway improvements.

12. Physical Impacts on Water Resources. Will the project involve the physical or hydrologic alteration (dredging, filling, stream diversion, outfall structure, diking, and impoundment) of any surface waters such as a lake, pond, wetland, stream or drainage ditch? ☐ Yes ☒ No
If yes, identify water resource affected. Describe alternatives considered and proposed mitigation measures to minimize impacts. Give the DNR Protected Waters Inventory (PWI) number(s) if the water resources affected are on the PWI.

A review of the National Wetland Inventory (NWI) mapping was completed. Furthermore, a field reconnaissance was conducted in September 2005 to verify and correct the NWI mapping, as necessary. Field notes and photographs were taken throughout the project area. Based on NWI mapping and the field review, it has been determined that the proposed transportation improvements will not involve the physical and/or hydrologic alteration of any wetland basins.

13. Water Use. Will the project involve installation or abandonment of any water wells, connection to or changes in any public water supply or appropriation of any ground or surface water (including dewatering)? ☒ Yes ☐ No
If yes, as applicable, give location and purpose of any new wells; public supply affected, changes to be made, and water quantities to be used; the source, duration, quantity and purpose of any appropriations; and unique well numbers and DNR appropriation permit numbers, if known. Identify any existing and new wells on the site map. If there are no wells known on site, explain methodology used to determine.

The project does not require any creation, connection, or change to public water supply. No wells in or near the project area will be used as water sources. No wells will be installed for any of the proposed project improvements; therefore, no appropriation of water is anticipated. No known wells exist within the proposed right-of-way and/or construction limits of the proposed improvements. If any wells are discovered during right-of-way acquisition or construction, they will be abandoned and sealed in accordance with Minnesota Department of Health (MDH) Regulations.

Dewatering of excavated areas may be necessary during construction of the proposed TH 13 and CSAH 5 interchange and roadway improvements. If it is determined dewatering is required and dewatering exceeds 10,000 gallons, a permit application will be completed and submitted to the MNDNR. The permit application process will require approval prior to any dewatering activities taking place.

14. Water-related land use management districts. Does any part of the project involve a shoreland zoning district, a delineated 100-year flood plain, or a state or federally designated wild or scenic river land use district? ☐ Yes ☒ No
If yes, identify the district and discuss project compatibility with district land use restrictions.

The Minnesota Valley National Wildlife/Recreation Area is located north of the project area. This wildlife and recreation area serves to preserve part of the Minnesota River Valley and stretches along the river from the Fort Snelling area to the City of Jordan. The area is used for hiking, biking, cross-country skiing, mountain biking, and snowmobiling. Diverse landscapes within the area include wetlands, floodplain forest, and blufftop oak savanna. Wildlife observation and birdwatching are other popular activities within the wildlife/recreation area.

A review of the Flood Insurance Rate Map (FIRM), Community Panel Number 2701020001B, indicates the project study area is not located within a delineated 100-year floodplain district (see Figure 7, located in Appendix A).

15. Water Surface Use. Will the project change the number or type of watercraft on any water body?
☐ Yes ☒ No
If yes, indicate the current and projected watercraft usage and discuss any potential overcrowding or conflicts with other uses.

16. Erosion and Sedimentation. Give the acreage to be graded or excavated and the cubic yards of soil to be moved: **410,000** cubic yards. Describe any steep slopes or highly erodible soils and identify them on the site map. Describe any erosion and sedimentation control measures to be used during and after project construction.

The area inside the proposed right-of-way limits is approximately 60 acres. The project consists of constructing a compressed/folded diamond interchange (CSAH 5 overpass bridge and access/exit ramps) and the construction or realignment of frontage/backage roads. The majority of the excavation will be associated with the bridge embankments and interchange ramps. The amount of soil to be moved is estimated at 320,000 cubic yards of cut and 90,000 cubic yards of fill. These quantities are estimates based on preliminary design and are subject to change as final design progresses.

The topography of the project area is gently rolling. Soil types that may be encountered during construction are identified in Question 19 of this EAW. According to the soil classifications and descriptions the soils in the project area are not expected to exceed 12 percent, which according to the EAW Guidelines (Minnesota EQB, 2000) is considered a steep slope. However, constructed side slopes are expected to exceed 12 percent. Slopes within the project area are not expected to exceed a 1:4 ratio for the side slopes and 1:3 for the ditch back slopes. Soils that are not prone to erosion will be used when constructing side slopes. Furthermore, BMPs will also be employed during construction to limit erosion and sedimentation that would potentially result from constructing steep slopes.

Erosion and sediment control measures will be implemented to protect all drainage areas leading to water resources. A National Pollutant Discharge Elimination System (NPDES) Phase II Permit (NPDES general permit MN# R100001) will be required for this project, which will have to be obtained from the MPCA to ensure that potential damage from erosion and sedimentation will not impact water quality adversely. This permit has both temporary directives used primarily during construction, as well as permanent requirements, which the

project must meet. Below is a summary of the requirements and techniques that may be used for this project. The NPDES permit will specifically identify which BMPs will be used and what purpose they will serve in minimizing potential short-term and long-term erosion and sedimentation that could adversely affect water quality.

- **Uses of horizontal slope grading, construction phasing, and other techniques designed to reduce erosion.**

Implementation of temporary controls to protect exposed soil areas, such as wood chip cover, seeding and mulching, silt fences, and stabilization of steep slopes.

- **Prior to any connection of a pipe or outfall structure to a water of the state, temporary energy dissipation method to control the outfall water must be implemented.**

- **Sediment control BMPs will be in place on all down gradient perimeters before up gradient construction disturbance begins.**

- **There will be minimization of vehicle soil tracking onto paved surfaces.**

- **Temporary sedimentation basins must be provided prior to any runoff leaving the construction sites.**

17. Water Quality – Surface Water Runoff.

a. Compare the quantity and quality of site runoff before and after the project. Describe permanent controls to manage or treat runoff. Describe any storm water pollution prevention plans.

Quality of Runoff

Traffic-related pollutants consist of copper, lead, zinc, and phosphorus. A study conducted by the U.S. Environmental Protection Agency (EPA) entitled, *Results of the Nationwide Urban Runoff Program*, December 1983, have identified the above pollutants as the predominant constituents in highway runoff. Other common pollutants are total suspended solids (TSS) and chloride. TSS and chloride are introduced into highway runoff primarily from winter deicing practices. The amounts vary depending upon the application rates and the number of ice/snowfall events in a given year. An effective means of reducing the level of pollutants discharged into the receiving stream/water body is to provide grass side slopes and ditches and sedimentation ponds. The proposed improvements to the TH 13/CSAH 5 Interchange Project will generate additional storm water runoff from the project area. Approximately 5 acres of new impervious surface will be created by this project.

In accordance with the requirements of the NPDES permit, the proposed project includes storm water treatment and ponding provisions. Storm water ponds and grass ditches/swales are being planned with the proposed improvements. Single cell ponds are planned in the northwest quadrants of the interchange and in the southeast corner of the CSAH 5/126th Street intersection between CSAH 5 and the frontage road. These ponds will be designed to be large enough to treat and store runoff from the interchange and associated roadway improvements. Storm water ponds will be constructed to meet National Urban Runoff Program (NURP) standards for the removal of TSS and

phosphorus. All ponds and grass swales will intercept site runoff and remove pollutants and sediment prior to discharging from Mn/DOT or Dakota County right-of-way.

The surface water runoff treatment strategies have been incorporated into the construction of the preferred alternative to provide rate control and treatment for all storm water runoff that results from the proposed improvements. The City of Burnsville and Dakota County will continue to coordinate efforts with the resource agencies to ensure water quality and surface water drainage concerns are addressed in the final design of the proposed improvements.

Quantity of Runoff

The volume of runoff is expected to increase as a result of the additional impervious area. The runoff rates will be managed through the use of grassed roadside ditches and storm water retention ponds in accordance with City standards. As noted above, two storm water NURP ponds are being planned to receive runoff from the proposed highway improvements.

b. Identify routes and receiving water bodies for runoff from the site; include major downstream water bodies as well as the immediate receiving waters. Estimate impact runoff on the quality of receiving waters.

Existing drainage patterns in the project area consist of surface water to grass ditches and culverts passing under the roadway. The downstream receiving water bodies include the Minnesota River and several wetland basins located north of the project study area. The SWPPP will detail the measures that will be taken to minimize negative impacts on these receiving water bodies.

18. Water Quality – Wastewater.

a. Describe sources, composition and quantities of all sanitary, municipal and industrial wastewater produced or treated at the site.

No sanitary, municipal, or industrial wastewater will be produced or treated on site.

b. Describe waste treatment methods or pollution prevention efforts and give estimates of composition after treatment. Identify receiving waters, including major downstream water bodies, and estimate the discharge impact on the quality of receiving waters. If the project involves on-site sewage systems, discuss the suitability of site conditions for such systems.

None

c. If wastes will be discharged into a publicly owned treatment facility, identify the facility, describe any pretreatment provisions and discuss the facility's ability to handle the volume and composition of wastes, identifying any improvements necessary.

None

d. If the project requires disposal of liquid animal manure, describe disposal technique and location and discuss capacity to handle the volume and composition of manure. Identify any improvements necessary. Describe any required setbacks for land disposal systems.

None

19. Geologic hazards and soil conditions.

a. Approximate depth (in feet) to Ground water: **0** minimum; **>6 feet** Average.
Bedrock: **>50 feet** minimum; **> 50 feet** Average.

Describe any of the following geologic site hazards to ground water and also identify them on the site map: sinkholes, shallow limestone formations or karst conditions. Describe measures to avoid or minimize environmental problems due to any of these hazards.

According to the Dakota County Soil Survey, the depth to groundwater along the project alignment varies from greater than 6 feet to near the ground surface. However, based on several soil borings taken, in November 2005, within the project area it is believed the average depth to groundwater is greater than 6 feet. Evidence of ground water was encountered in one soil boring taken within the project area. The depth of the ground water and was recorded at greater than fourteen feet. Due to the depth of excavation anticipated for the improvements, a detailed geotechnical investigation will be undertaken at the being of the final design phase of the project.

No geologic site hazards to groundwater are known to occur within the corridor. Sinkholes, shallow limestone formations, and karst features are not known to exist within the project area. Furthermore, there are no known abandoned or unused wells within the construction limits of the proposed project. According to soil logs, no evidence of bedrock was encountered during soil boring. The depth to bedrock is estimated to be greater than 50 feet below the ground surface based on the soil logs and information in the Dakota County Geologic Atlas.

b. Describe the soils on the site, giving SCS classifications, if known. Discuss soil granularity and potential for groundwater contamination from wastes or chemicals spread or spilled onto the soils. Discuss any mitigation measures to prevent such contamination.

Soil information was obtained from the *Dakota County Soil Survey* (1980). Figure 8, located in Appendix A, contains a copy of the Soil Survey Map for the project area. There are four primary types of soils found in the project area as listed and described below. Erosion and sedimentation will be controlled through protective and mitigation measures as described in the water quality section of this document.

- **39B2 – Wadena Loam, 2 to 6 percent slopes**
- **408 – Faxon Silty Clay Loam, 0 to 2 percent slopes**
- **957B – Urban Land-Waukegan Complex, 1 to 8 percent slope**
- **1039 – Urban Land**

<u>39B2 – Wadena Loam</u>

Wadena soil series consists of deep, well drained soils commonly found on outwash plains and stream terraces. The 39B2 series is gently sloping with slopes ranging from 2 to 6 permeable in the upper part and rapidly permeable in the lower part.

The Wadena soil series has no frequency of flooding and the seasonal high water table is typically greater than 6 feet.

408 – Faxon Silty Clay Loam

The Faxon series consists of moderately deep, poorly drained soils on bedrock-controlled terraces along flood plains of major rivers. These soils are moderately permeable. The Faxon soils experiences frequent, but short durations of flooding. The seasonal high water table is typically ranges from at the surface to 1-foot below ground.

857B – Urban Land-Waukegan Complex
This map unit is found on gently sloping outwash plains. It consists mostly of urban land and the well drained Waukegan soil. The urban areas typically consist of more than 90 percent of the area being occupied by urban land uses such as residential and commercial structures and associated facilities (roads, parking lots, etc). Areas of undisturbed Waukegan soil have moderate permeability in the upper silty layers and rapidly permeability in the underlying layer. The Waukegan soils have no frequency of flooding and the seasonal high water table is typically greater than 6 feet below the ground surface.

1039 – Urban Land

These level to gently sloping areas are typically more than 90 percent occupied by residential and commercial land uses including roads, buildings, parking lots, and other structures. The characteristics of the original soils are so altered or obscured that identification is not feasible.

There are no known sinkholes, shallow limestone formations, karst conditions, or abandoned or unused wells within the construction limits of the proposed project.

20. Solid Wastes, Hazardous Wastes, Storage Tanks.

a. Describe types, amounts and compositions of solid or hazardous wastes, including solid animal manure, sludge and ash, produced during construction and operation. Identify method and location of disposal. For projects generating municipal solid waste, indicate if there is a source separation plan; describe how the project will be modified for recycling. If hazardous waste is generated, indicate if there is a hazardous waste minimization plan and routine hazardous waste reduction assessments.

Wastes generated by the proposed project will include demolition debris due to the demolition of existing structures. It is possible waste disposal or contaminated release sites may be exposed during construction of the preferred interchange alternative. If a disposal site and/or contaminated release site is encountered, it will be reported within 24 hours to the State Duty Officer. The Dakota County Environmental Management Department will also be contacted.

Petroleum products will be used to fuel construction equipment, but will be contained in proper storage tanks. A project staging plan will be developed during the final design phase that will identify equipment and material (petroleum products) storage areas. A spill contingency plan will be developed by the project contractor prior to construction activities. If a spill does occur, the State Duty Officer will be contacted.

b. Identify any toxic or hazardous materials to be used or present at the site and identify measures to be used to prevent them from contaminating groundwater. If the use of toxic or hazardous materials will lead to a regulated waste, discharge or emission, discuss any alternatives considered to minimize or eliminate the waste, discharge or emission.

Materials anticipated to be present on-site are those normally associated with the operation/maintenance of construction equipment including petroleum products such as gasoline and other engine fluids. No other toxic or hazardous materials are anticipated to be present during construction, and none will be present following construction.

c. Indicate the number, location, size and use of any above or below ground tanks to store petroleum products or other materials, except water. Describe any emergency response containment plans.

No aboveground or underground storage tanks are planned for permanent use in conjunction with this project. Temporary storage tanks for petroleum products are likely to be located in the project area for the purpose of refueling construction equipment. Appropriate measures would be taken during construction to avoid spills that could contaminate groundwater or surface water in the project area. In the event a leak or spill occurs during construction, appropriate action to remedy the situation would be taken immediately in accordance with MPCA guidelines and regulations.

21.	**Traffic.** Parking spaces added:	**Not Applicable**	Existing spaces (if project involves expansion):	**N/A**
	Estimated average daily traffic generated for the year 2030:	**CSAH 5: 15,000-29,000 TH 13: 60,000-63,000**	Estimated 2030 peak hour traffic: **PM peak hour turning movements are shown on Figure 9, located in Appendix A.**	
	Generated (if known) and its timing:	**Turning Movements shown on Figure 9, located in Appendix A, are forecast for the year 2030**		

Provide an estimate of the impact on traffic congestion affected roads and describe any traffic improvements necessary. If the project is within the Twin Cities metropolitan area, discuss its impact on the regional transportation system.

The TH 13/CSAH 5 intersection currently experiences heavy levels of congestion during peak periods (AM and PM rush hours) and has been the site of numerous accidents. The severity of these problems will continue to grow as the traffic in the region continues to grow.

As illustrated in Figure 3 located in Appendix A, the existing average annual daily traffic (AADT) volume on this segment of TH 13 is approximately 54,000 vehicles per day (vpd) east of CSAH 5 and approximately 46,000 vpd west of CSAH 5. The existing AADT on CSAH 5 is approximately 20,000 vpd between TH 13 and Williams Drive and approximately 18,800 vpd south of Williams Drive. No existing daily counts were available for CSAH 5 north of TH 13. Figure 3. located in Appendix A, also depicts the forecast traffic volumes that were developed using both the Metropolitan Council Twin Cities Regional Model (TCRM) and the Dakota County Forecast Travel Demand Model. In the year 2030 the traffic volumes on TH 13 east of CSAH 5 are forecast to be approximately 63,000 vpd and approximately 60,000 vpd west of CSAH 5. The 2030 AADT on CSAH 5 is forecast to be approximately 15,000 vpd north of TH 13, 29,000 vpd between TH 13 and Williams Drive, and 22,000 vpd south of Williams Drive.

A traffic operations analysis was conducted for the 2030 forecast year during the AM and PM peak hours. The key intersections in the study area were modeled using traffic simulation software. The traffic simulation was used to determine the average delay per vehicle and the

related level of service for each intersection approach. In addition, the simulation was used to review the vehicular queues (length of back-ups) on the intersection approaches to further evaluate traffic operations within the study area. Table 2 presents the level of service and delay time at each intersection approach. PM peak hour turning movements for the forecast year 2030 are illustrated on Figure 9, located in Appendix A.

Table 2
Peak Hour Intersection Level of Service (LOS) and Seconds of Vehicle Delay (s/veh)

		No-Build Alternative				Alternative 2: Compressed/Folded Diamond			
		AM Peak		PM Peak		AM Peak		PM Peak	
CSAH 5 at:		**Delay (s/veh)**	**LOS**	**Delay (s/veh)**	**LOS**	**Delay (s/veh)**	**LOS**	**Delay (s/veh)**	**LOS**
126th St.	Intersection					21.9	C	18.0	B
	EB Approach					33.1	C	22.3	C
	WB Approach					33.2	C	31.8	C
	NB Approach					17.2	B	15.8	B
	SB Approach					15.1	B	15.4	B
North Frontage Rd. "No-Build"	Intersection	1787.6	F	447.9	F				
	EB Approach		F	5481.0	F				
	WB Approach	764.5	F	1005.7	F				
	NB Approach	20.6	C	11.5	B				
	SB Approach	1239.2	F	28.2	D				
North Ramp Terminal	Intersection					12.0	B	11.2	B
	EB Approach					14.4	B	11.7	B
	WB Approach								
	NB Approach					13.1	B	11.0	B
	SB Approach					8.1	A	10.6	B
South Ramp Terminal	Intersection					7.9	A	8.8	A
	EB Approach					18.7	B	18.5	B
	WB Approach								
	NB Approach					5.2	A	5.8	A
	SB Approach					12.6	B	9.2	A
At-Grade Intersection "No-Build"	Intersection	369.0	F	306.0	F				
	EB Approach	796.3	F	292.7	F				
	WB Approach	52.0	F	418.9	F				
	NB Approach	93.0	F	119.9	F				
	SB Approach	405.6	F	165.1	F				
Williams Dr.	Intersection	273.9	F	93.7	F	32.2	C	26.3	C
	EB Approach	52.9	D	66.1	E	22.8	C	25.5	C
	WB Approach	17.0	B	24.0	C	35.1	D	38.8	D
	NB Approach	642.6	F	229.9	F	48.4	D	40.4	D
	SB Approach	39.8	D	34.2	C	18.3	B	18.1	B
Williams Drive at:									
Morgan Ave.	Intersection	200.8	F	145.5	F	5.6	A	7.8	A
	EB Approach	328.5	F	273.2	F	4.6	A	4.1	A
	WB Approach	2.6	A	9.3	A	2.3	A	6.6	A
	NB Approach	73.6	E	56.6	E	15.8	B	24.7	C
	SB Approach	82.2	F	54.9	D	25.7	C	34.3	C

The No-Build Alternative assumes forecast 2030 traffic volumes on existing roadway (no improvements).
Shades cells indicate levels of service that are considered unacceptable.

The analysis indicates the No-Build Alternative (Do Nothing) would result in unacceptable levels of service (LOS E or F) at all intersections in the study area during the AM and PM peak hours and would result in long vehicular queues that would occur at the majority of the intersection approaches. Alternative 2 (Compressed/Folded Diamond Interchange and associated roadway improvements) accommodates the 2030 forecast peak AM and PM traffic volumes at all intersections and the vehicular queues remain relatively short.

22. **Vehicle-related Air Emissions.** Estimate the effect of the project's traffic generation on air quality, including carbon monoxide levels. Discuss the effect of traffic improvements or other mitigation measures on air quality impacts. Note: If the project involves 500 or more parking spaces, consult *EAW Guidelines* about whether a detailed air quality analysis is needed.

This project is located in an area in which conformity requirements apply and has been designated by United States Environmental Protection Agency (USEPA) as a maintenance area for carbon monoxide. When funding is secured for this project, it will be evaluated for regional significance through an interagency consultation process.

Coordination with the MPCA occurred in March and April 2006 regarding the proposed interchange improvement project. Construction of the TH 13/CSAH 5 interchange improvements will result in free flow conditions on TH 13 and improved mobility on CSAH 5, which will result in fewer vehicles stopped idling at the intersections within the project area and improved air quality for the region. Furthermore, the interchange configuration includes a loop exit ramp in the northwest quadrant and free right turn onto CSAH 5, which will eliminate the need for double left turn lanes at the north ramp terminal intersection for southbound CSAH 5 traffic.

MPCA determined that since the TH 13/CSAH 5 interchange would improve safety, help alleviate traffic congestion, and improve mobility and operations at the existing signalized at-grade intersection, that no detailed air quality analysis was needed. Furthermore, the USEPA has approved a screening method to determine which intersections need hot-spot analysis. Mn/DOT demonstrates by the results of the screening procedure that the intersections located within this project area do not require hot-spot analysis. Therefore, no further air quality analysis is necessary.

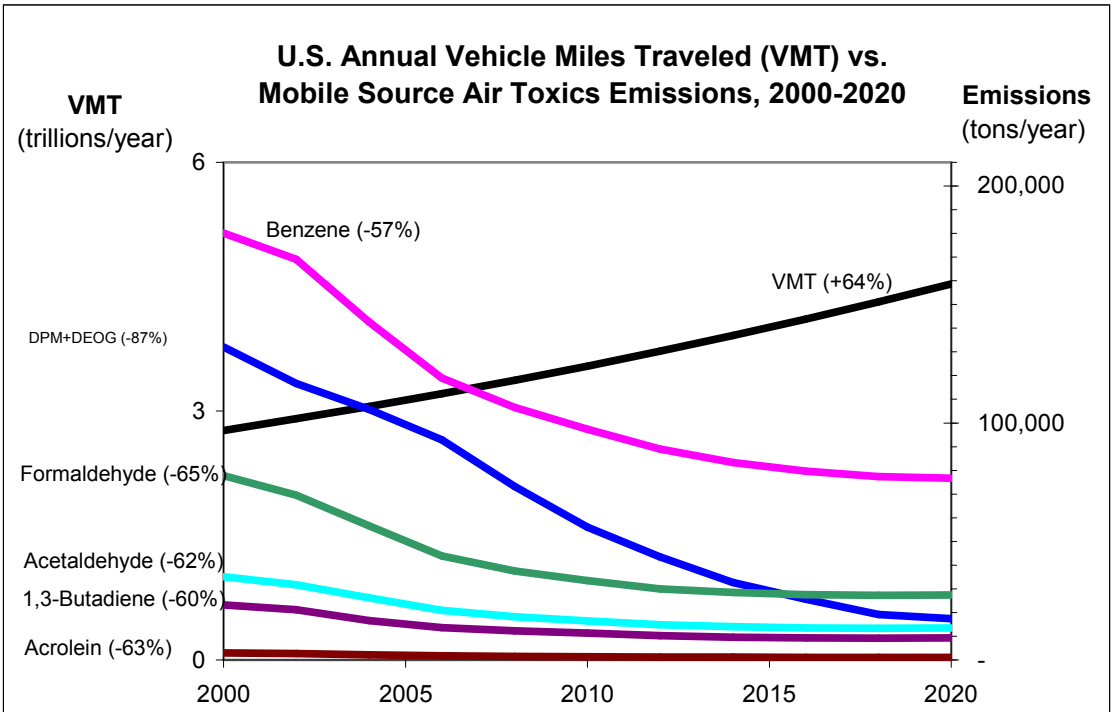
<u>Mobile Source Air Toxics</u>

In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), USEPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The USEPA is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The USEPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources. 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air

Act. In its rule, the USEPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in VMT, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown in the following graph:



Notes: For on-road mobile sources. Emissions factors were generated using MOBILE6.2. MTBE proportion of market for oxygenates is held constant, at 50%. Gasoline RVP and oxygenate content are held constant. VMT: *Highway Statistics 2000*, Table VM-2 for 2000, analysis assumes annual growth rate of 2.5%. "DPM + DEOG" is based on MOBILE6.2-generated factors for elemental carbon, organic carbon and SO4 from diesel-powered vehicles, with the particle size cutoff set at 10.0 microns.

As a result, USEPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of Clean Air Act Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary six MSATs.

<u>Unavailable Information for Project Specific MSAT Impact Analysis</u>

This EA includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the preferred alternative in this EA. Due to these limitations, the following discussion is included in accordance with the CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

1. ***Emissions*: The USEPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model--emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, USEPA has identified problems with MOBILE6.2 as an obstacle to quantitative analysis.**

   These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE6.2 is an adequate tool for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

2. ***Dispersion:* The tools to predict how MSATs disperse are also limited. The USEPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The NCHRP is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project-specific MSAT background concentrations.**

3. ***Exposure Levels and Health Effects:* Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific**

location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs.

Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of USEPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.

The USEPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The USEPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at http://www.epa.gov/iris. The following toxicity information for the six prioritized MSATs was taken from the IRIS database *Weight of Evidence Characterization* summaries. This information is taken verbatim from USEPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene is characterized as a known human carcinogen.**
- **The potential carcinogenicity of acrolein cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.**
- **Formaldehyde is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.**
- **1,3-butadiene is characterized as carcinogenic to humans by inhalation.**
- **Acetaldehyde is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.**

- **Diesel exhaust (DE) is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.**

- **Diesel exhaust also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.**

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by USEPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes--particularly respiratory problems[1]. Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.

Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. As noted above, the current emissions model is not capable of serving as a meaningful emissions analysis tool for smaller projects. Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have "significant adverse impacts on the human environment."

In this document, FHWA has provided a qualitative assessment and has acknowledged that some of the project alternatives may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

For each alternative in this EA, the amount of MSATs emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for the No-Build Alternative is slightly higher than that of the preferred alternative because drivers are expected to seek out alternative routes as

[1] South Coast Air Quality Management District, Multiple Air Toxic Exposure Study-II (2000); Highway Health Hazards, The Sierra Club (2004) summarizing 24 Studies on the relationship between health and air quality); NEPA's Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.

congestion levels increase under the No-Build Alternative. Therefore, higher levels of regional MSATs are not expected for the preferred alternatives compared to the No-Build Alternative. In addition, because the estimated VMT under each of the Build Alternatives (interchange concepts) considered are nearly the same, varying by less than 1-percent, it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of USEPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent from 2000 to 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the USEPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the project area are likely to be lower in the future in virtually all locations.

Because of the specific characteristics of the preferred alternative there may be localized areas where VMT would increase, and other areas where VMT would decrease. Therefore it is possible that localized increases and decreases in MSAT emissions may occur. The localized increases in MSAT emissions would likely be most pronounced along sections of new frontage roads that would be built to accommodate access closures and local circulation. However, even if these increases do occur, they too will be substantially reduced in the future due to implementation of USEPA's vehicle and fuel regulations.

In sum, under the preferred alternative in the design year it is expected there will be reduced MSAT emissions in the immediate area of the project, relative to the No-Build Alternative, due to the reduced VMT associated with more direct routing, and due to USEPA's MSAT reduction programs. In comparing various project alternatives, MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. However, on a regional basis, USEPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

23. Stationary Source Air Emissions. Describe the type, sources, quantities and compositions of any emissions from stationary sources of air emissions such as boilers, exhaust stacks or fugitive dust sources. Include any hazardous air pollutants (consult *EAW Guidelines* for a listing), any greenhouse gases (such as carbon dioxide, methane, and nitrous oxides), and ozone-depleting chemicals (chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons or sulfur hexafluoride). Also describe any proposed pollution prevention techniques and proposed air pollution control devices. Describe the impacts on air quality.

The project will not involve any stationary sources of air emissions.

24. Odors, noise and dust. Will the project generate odors, noise or dust during construction or during operation? ☒ Yes ☐ No
If yes, describe sources, characteristics, duration, quantities or intensity and any proposed measures to mitigate adverse impacts. Also identify locations of nearby sensitive receptors and estimate impacts on them. Discuss potential impacts on human health or quality of life. (Note: fugitive dust generated by operations may be discussed at item 23 instead of here.)

<u>Odors:</u> No long-term odors will be generated by the proposed project. Odors may be generated by exhaust from engines engaged in construction activities. All such machinery will be properly equipped to control emissions.

Construction Noise: **In addition to traffic noise from the surrounding roadway systems, there will be temporary noise generated during construction caused by the machinery used to excavate, transport, drive bridge pilings, and soil compaction. At this time, construction is anticipated to last for a full construction season. The pile driving associated with the project is anticipated to be the noisiest construction activity. The noise associated with this activity would be minimized in intrusiveness by restricting the hours of operation as much as possible. Construction equipment will be properly muffled and receive proper maintenance to control construction noise. Construction noise will be regulated by the MPCA and by standards set forth by the EPA.**

Note: Noise associated with traffic operations is discussed on page 40.

Dust: **Fugitive dust will be generated during the grading and construction of the highway improvements. The construction activities will disturb existing vegetative ground cover and allow soil material to become airborne. This will be a temporary impact primarily associated with grading activities. Dependent upon the wind and construction conditions, some nearby properties may be affected temporarily. During construction, the following dust control measures would be used as necessary:**

- **Minimize the period and extent of area being exposed at any one time**
- **Spray construction areas with water**
- **Minimize the use of vehicles on unpaved surfaces**
- **Cover or spray materials and truck loads.**

25. **Nearby resources.** Are any of the following resources on or in proximity to the site?

a. Archaeological, historical, or architectural resources? ☐ Yes ☒ No
b. Prime or unique farmlands or land within an agricultural preserve? ☐ Yes ☒ No
c. Designated parks, recreation areas, or trails? ☐ Yes ☒ No
d. Scenic views and vistas? ☐ Yes ☒ No
e. Other unique resources? ☐ Yes ☒ No

If yes, describe the resource and identify any project-related impacts on the resources. Describe any measures to minimize or avoid adverse impacts.

Archaeological, Historical, or Architectural Resources

The Mn/DOT Cultural Resources Unit

The Mn/DOT Cultural Resources Unit reviewed the proposed project and concluded there are no archaeological sites within the project area of potential effect (APE). The MnModel Survey Implementation Model depicts the project APE as "low" to "unknown" potential for containing intact archaeological resources. The APE has a low probability for containing undisturbed or unknown archaeological sites because of past road construction and residential and commercial developments. Furthermore, the FHWA consulted with 25 tribes who have expressed an interest in reviewing projects in Minnesota. No responses were received from the tribes. All of the buildings along the corridor are of recent construction.

It has been determined by the Mn/DOT Cultural Resources Unit that no historic properties will be affected by the proposed interchange project. This determination is found in a letter correspondence dated January 12, 2006 (see Appendix C).

Prime or Unique Farmland

The project area is within the Twin Cities urban boundary as defined by the Metropolitan Council and approved by FHWA on August 29, 2003. Therefore, provisions of the Farmland Protection Policy Act (FPPA) do not apply to this project.

Designated Parks, Recreational Areas, or Trails

The project will not affect any designated parks, recreational areas, or trails. The Minnesota Valley National Wildlife/Recreation Area is located north of the project area; however, the proposed transportation improvements will not impact the area.

Scenic Views/Vistas An Other Unique Resources

The project area is located within the Minnesota river valley. However, the location of the TH 13/CSAH 5 intersection does not provide any scenic views of the river valley. Furthermore, there are no unique resources within the project area. Therefore, no affects to scenic views/vistas or other unique resources are anticipated.

26. **Visual impacts**. Will the project create adverse visual impacts during construction or operation? Such as glare from intense lights, lights visible in wilderness areas and large visible plumes from cooling towers or exhaust stacks? ☐ Yes ☒ No
If yes, explain.

The setting of this project is urban with adjacent commercial and light industrial land uses. Existing TH 13 and CSAH 5 are the two dominant features on the landscape and will not be substantially altered. Therefore, most views in the project area will remain unchanged.

27. **Compatibility with plans and land use regulations.** Is the project subject to an adopted local comprehensive plan, land use plan or regulation, or other applicable land use, water, or resource management plan of a local, regional, state or federal agency? ☒ Yes ☐ No
If yes, describe the plan, discuss its compatibility with the project and explain how any conflicts will be resolved. If no, explain.

The project area is subject to an adopted local comprehensive plan and is zoned as General Business, General Industry, and Residential. The construction of the preferred interchange alternative would not cause any conflict with the designated land use of this area. The City of Burnsville has a Comprehensive Plan (2000 Update) that is intended to assist decision-makers faced with guiding development and providing specific direction regarding future land use changes. The Comprehensive Plan contains a transportation section that identifies the need for safety, operational, and capacity improvements to the TH 13 and CSAH 5 intersection. More specifically, the Plan suggests the construction of a grade separated interchange at the intersection to handle future traffic volumes.

The construction of an interchange at this intersection is also identified in the Dakota County Comprehensive/Transportation Plans.

28. Impact on infrastructure and public services. Will new or expanded utilities, roads, other infrastructure or public services be required to serve the project? ☒ Yes ☐ No
If yes, describe the new or additional infrastructure or services needed. (Note: any infrastructure that is a connected action with respect to the project must be assessed in the EAW; see *EAW Guidelines* for details.)

Lighting and signing improvements will be necessary to serve the project. Lighting will be provided at the interchange. Signing will be provided, in accordance with the Minnesota Manual of Uniform Traffic Control Devices guidelines to provide direction to motorists.

No new utility infrastructure is required to serve the project other than that constructed as part of the project.

Overhead electrical distribution lines are located within the project area. Prior to the final design phase, these utilities will be further evaluated, and a determination will be made as to whether they need to be relocated and where relocation will occur. All the proper agreements will be prepared at that time to meet federal and state standards.

Maintenance of the new interchange at TH 13 and the improvements along CSAH 5 will be the responsibility of Mn/DOT and Dakota County, respectively. Improvements made to the local street network (frontage roads, Williams Drive, etc.) will be the responsibility of the City of Burnsville.

29. Cumulative impacts. Minn. R. 4410.1700, subp. 7, item B requires that the RGU consider the "cumulative potential effects of related or anticipated future projects" when determining the need for an environmental impact statement. Identify any past, present or reasonably foreseeable future projects that may interact with the project described in this EAW in such a way as to cause cumulative impacts. Describe the nature of the cumulative impacts and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to cumulative impacts (or discuss each cumulative impact under appropriate item(s) elsewhere on this form).

The TH 13 and CSAH 5 Interchange Project has three categories of potential effects: direct, cumulative, and secondary.

<u>Direct Effects:</u> Direct effects are well-defined, occur within the proposed highway corridor, and are a specific result of the proposed improvements (i.e., right-of-way acquisition, loss of vegetation, removing agricultural land from production, etc.).

Secondary and cumulative impacts are defined by the Council on Environmental Quality (CEQ) as the following.

<u>Secondary (Indirect) Effects:</u> Secondary effects as defined by the Council of Environmental Quality (CEQ) are "Effects caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induce changes in the pattern of land use, population density, or growth rate and related effects on air and water or other natural systems, including ecosystems." (40 CFR 1508.8(b))

<u>Cumulative Effects:</u> The CEQ defines cumulative effects as "Impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." (40 CFR 158.7)

In an effort to account for potential secondary or cumulative effects of the TH 13 and CSAH 5 Interchange Project, the CEQ guidance was applied to first define the geographic scope and then identify those projects that are reasonable foreseeable actions. For purposes of this assessment, the geographic boundary has been defined as the area approximately ½-mile from the study limits addressed in this EA.

The reasonably foreseeable future actions within this geographic boundary include the following:

- **Extension of CSAH 5 approximately 1.2 miles north to the I-35W/Cliff Road Interchange.**
- **Land development and redevelopment as defined in the Burnsville Comprehensive Plan.**
- **The reconstruction of the I-35W and TH 13 interchange.**

Each of these actions is described in greater detail below, along with an assessment of the potential effects that may result from each action.

Northern Extension of CSAH 5

The City of Burnsville Comprehensive Plan, the TH 13 Corridor Study, and the Dakota County Comprehensive/Transportation Plan all identify the concept of extending CSAH 5 from its current northern terminus at 126th Street to the I-35W/Cliff Road Interchange. The project would include the construction of approximately 1.2 miles of new urban four-lane roadway. This new alignment would enhance north-south connectivity in the City and would provide transportation system benefits independent of whether the TH 13/CSAH 5 interchange is constructed.

The proposed northern extension of CSAH 5 underwent independent environmental review (EAW) in October, 2001. The findings of the EAW concluded that the project would have minimal adverse impacts on natural resources, but would be highly beneficial on traffic operations for the local and regional transportation systems.

At this time, this project has been programmed in the City of Burnsville and Dakota County Capital Improvement Plans. However, the construction schedule for the CSAH 5 Extension Project is dependent on obtaining additional funding. This project is also contingent on identifying a future interchange location on I-35W that will work with potential future land uses.

Land Development and Redevelopment

Both the Minnesota River Quadrant (MRQ) Redevelopment Project and the Heart of the City (HOC) Town Center Redevelopment Project are located in close proximity to the TH 13/CSAH 5 Interchange Project.

The MRQ project is located in the northwest quadrant of I-35W and TH 13. The existing land use in the 1,500-acre site is made up primarily of a large quarry, landfill, and some industrial development. The City of Burnsville has created a redevelopment concept plan that includes a 300-acre lake with marina, a golf course, commercial/office space, and a convention center. The redevelopment of this area is anticipated to occur over the next 10-15 years.

The HOC project is located in the southeast quadrant of I-35W in the area of Nicollet Avenue. The redevelopment plan for the 54-acre site is a pedestrian-friendly, mixed use, downtown area for the City of Burnsville. Land uses in the redevelopment area will primarily consist of medium and high residential developments, commercial/retail space, and open space. The HOC redevelopment project underwent independent environmental review (EAW). The findings of the EAW concluded that the project would result in minimal adverse impacts on natural resources, but would have an affect on traffic and the existing public infrastructure. To date, several projects within the redevelopment area have been completed or nearly completed and several more are underway.

Potential effects of these land development/redevelopment project include additional storm water runoff and traffic. It is important to note that increased traffic volumes from future development were accounted for in the traffic analysis for the TH 13/CSAH 5 Interchange Project. The interchange and associated improvements around the intersection are being designed to accommodate new traffic generated from within and outside the project area.

Future land development in the area will be required to follow applicable environmental review regulations including potential documentation and permitting.

Reconstruction of the I-35W and TH 13 Interchange

Mn/DOT has identified the segment of I-35W in Burnsville to be an area of increasing congestion and safety concerns. As a result, Mn/DOT, in cooperation with the City of Burnsville and several other key stakeholders, has begun the process to define a long-term vision for this segment of the interstate system. Several conceptual design options for the I-35W and TH 13 interchange have been developed, but no preferred alternative has been identified. The extent of potential impacts resulting from reconstructing this segment of I-35W, including the interchange, will not be known until the project is designed. This action will be required to follow applicable environmental review regulations including potential documentation and permitting.

30. **Other Potential Environmental Impacts.** If the project may cause any adverse environmental impacts not addressed by items 1 to 28, identify and discuss them here, along with any proposed mitigation.

There are no additional environmental impacts associated with the proposed highway, interchange, and park and ride lot improvements.

31. **Summary of issues.** List any impacts and issues identified above that may require further investigation before the project is begun. Discuss any alternatives or mitigative measures that have been or may be considered for these impacts and issues, including those that have been or may be ordered as permit conditions.

The analysis conducted to address the preceding questions did not reveal any substantial impacts that would require further investigation prior to proceeding with development of the proposed improvements to the TH 13 and CSAH 5 intersection. All necessary permits and approvals will be obtained at the appropriate times during the project development process.

The relevant issues related to the roadway improvements are: erosion/sedimentation.

Erosion/Sedimentation

Construction of the project will disturb more than 1 acre of land and, therefore, must obtain a NPDES permit. A storm water runoff and erosion control plan will be prepared. The collection and treatment of runoff through BMPs, such as temporary sediment basins, storm water detention ponds, silt fencing, silt curtains, and vegetative filter/buffer strips, will be utilized to avoid and minimize potential erosion impacts that may result during construction activities.

RGU CERTIFICATION.

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minn. R. 4410.0200, subps. 9b and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Name and Title of Signer: Frank W Peffer Chief Environmental Officer. Mn/DOT

Date: 2/20/07

Environmental Assessment Worksheet was prepared by the staff of the Environmental Quality Board at Minnesota Planning. For additional information, worksheets or for *EAW Guidelines*, contact: Environmental Quality Board, 658 Cedar St., St. Paul, MN 55155, 651-296-8253, or www.mnplan.state.mn.us.

A. ADDITIONAL FEDERAL SOCIAL, ECONOMIC AND ENVIRONMENTAL ISSUES

1. Section 4(f) Park and Recreational Property

The project has been reviewed for potential Section 4(f) involvement. The project will not require acquisition of any publicly owned parklands, waterfowl or wildlife refuges, recreational areas, any land from a historic site, or any other property determined to be subject to the provisions of Section 4(f).

2. Section 6(f) Property

The project has been reviewed for potential Section 6(f) involvement. The project will not use any outdoor recreational land acquired, planned, or developed with Land and Water Conservation Act (LAWCON) funds. As a result, Section 6(f) does not apply to the proposed project.

3. Right-of-Way and Relocation

Within the project area, the construction of a grade separated interchange at TH 13 and CSAH 5 and the associated local road improvements will require acquisition of approximately 10.1 acres of permanent right-of-way from 28 parcels. This includes areas that are currently outside of either state, county, or city owned right-of-way. The preferred interchange alternative will require the relocation of 6 commercial properties. In general, the businesses identified below, which are proposed for acquisition, are presently on sites that offer good highway access and visibility.

Brooks Automotive

Brooks Automotive, located in the northeast quadrant of the proposed interchange, will be impacted as a result of frontage road reconstruction (see Figure 4). The business is an auto repair shop and service station and employs approximately 5 to 10 people.

Famous Dave's

Famous Dave's, located in the southeast quadrant of the proposed interchange, will be impacted as a result of access closures on CSAH 5 (see Figure 4). The business is a restaurant and employs approximately 10 to 15 people.

Flooring Expo

Flooring Expo, located in the southeast quadrant of the proposed interchange, will be impacted as a result of realignment/construction of the frontage road (see Figure 4). The business sells and installs flooring products and employs approximately 10 to 15 people.

Little Saigon Restaurant

Little Saigon Restaurant, located in the northwest quadrant of the proposed interchange, will be impacted as a result of construction of entrance and exit ramps/loop to and from TH 13 (see Figure 4). The business is a restaurant and employs approximately 15 to 20 people.

Taco Bell

Taco Bell, located in the northwest quadrant of the proposed interchange, will be impacted as a result of construction of entrance and exit ramps/loop to and from TH 13 (see Figure 4). The business is a quick-service restaurant and employs approximately 25 people.

Valvoline Oil Change

Valvoline Oil Change, located in the northwest quadrant of the proposed interchange, will be impacted as a result of construction of entrance and exit ramps/loop to and from TH 13 (see Figure 4). The business offers automotive maintenance services and products and employs approximately 10 people.

To the extent practical, attempts will be made to limit these impacts through design measures. Details regarding right-of-way and easement impacts will be further defined during the final design of the proposed improvements.

The project will also require the closure of ten access points. However, direct access to all existing developments will be provided via frontage/backage roads. Multiple access points to a single parcel may also be consolidated.

In order to better understand business relocation impacts associated with the proposed improvements, the City of Burnsville conducted individual one-on-one meetings in late April 2006 with each of the six commercial properties proposed for acquisition. The purpose of the meetings was to inform the owners of the preferred alternative and address questions or concerns they might have at this time. A second public information meeting was held in early May 2006 for the business owners near the proposed improvements. The purpose of the meeting was to present the preferred alternative, including the preliminary layout, to provide an update on the project schedule, and to discuss redevelopment/relocation opportunities within the City of Burnsville.

Although the City of Burnsville is highly developed, commercial land is still available for development and there is a reasonably good chance of finding suitable replacement sites for these businesses. New projects such as the Heart of the City Development and the Minnesota River Quadrant Redevelopment Project are bringing increased retail, housing and event space to Burnsville. Utilities are already in place throughout the City making it easier for businesses to relocate. Some or all of these businesses may be able to find new locations in redevelopment areas along the TH 13 and County Road 42 corridor. However, the distance from the highway, type of access, and visibility may be different from existing conditions.

The City of Burnsville is fully committed to the creation of employment opportunities and the continued retention of jobs. Tax Increment Financing and Tax Abatement are available incentives in the City of Burnsville to assist manufacturing businesses, as well as small commercial or industrial businesses.

a. Mitigation of Relocation Impacts

Property acquisition and relocation of displaced households and businesses will be conducted in accordance with the Uniform Relocation and Real Property Acquisition Act of 1970, as amended by the Surface Transportation and the Uniform Relocation

Assistance Act of 1987 and 49 Code of Federal Regulations, Part 24, effective April 1989. Relocation resources are available to all relocatees without discrimination.

4. Social Impacts

The project is expected to have a beneficial effect on access for emergency vehicles, such as police, fire trucks or ambulances. The TH 13 and CSAH 5 interchange will provide a safe and efficient intersection of two high volume roadways. Emergency vehicle response times within the project area and beyond are anticipated to improve as a result of the interchange project.

Residents within close proximity of the project area are expected to experience beneficial effects from the proposed improvements. Benefits will result from having improved access to TH 13 and I-35W. The improvements will also reduce congestion on local streets (Williams Drive), reduce travel times, and possibly reduce miles traveled. Adverse effect may result as the number of trips along CSAH 5 increase causing additional traffic noise.

There are no community resources within the project area that would be affected by the proposed improvements.

5. Considerations Relating to Pedestrians and Bicycles

Currently, a 5-foot sidewalk is located on the east side of CSAH 5 south of Williams Drive/Greenwood Drive. The proposed project has provided for the extension of the pedestrian/bicycle facility to the north along the east side of CSAH 5. A 10-foot trail will be added adjacent to CSAH 5 from Williams Drive/Greenwood Drive to the north limits of the project area. The bridge structure will accommodate a 12-foot trail (includes the required 2-foot clearance on each side of the trail) on the east side of the bridge, which will provide a safe facility for pedestrians/bicyclists crossing over TH 13. The trail will be compliant with Americans with Disability Act regulations.

6. Environmental Justice

This section has been prepared in accordance with E*xecutive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, dated February 11, 1994. Executive Order 12898 requires each federal agency (i.e. FHWA), to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, to achieve environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

Analysis of the affected populations in the project area included: review of 2000 US Census data, direct observations of the residential structures and commercial/industrial businesses and several one-on-one conversations with area residential and commercial property owners. As a result of this analysis and these observations, it can be concluded no readily identifiable minority or low-income populations are present within the project area.

7. Noise

a. Traffic Noise

A detailed noise analysis study has been completed for the TH 13 and CSAH 5 Interchange Project. An analysis of the existing, No-Build, and Build traffic noise levels was conducted using the Mn/DOT augmented Federal noise program, MINNOISE computer model, and traffic predictions prepared as part of this EA. Modeled results were compared to Minnesota State Noise Standards and Federal noise abatement criteria to determine the potential effects of the project. Furthermore, this project will be evaluated using Federal noise abatement criteria contained in 23 CFR Part 772. The rule provides procedures for noise studies and noise abatement measures to help protect the public health and welfare, it describes noise abatement criteria, and establishes requirements for information to be given to local officials for use in planning and design.

Noise is defined as any unwanted sound. Sound travels in a wave motion and produces a sound pressure level. This sound pressure level is commonly measured in decibels. Decibels represent the logarithmic measure of sound energy relative to a reference energy level. For highway traffic noise, an adjustment, or weighting, of the high- and low-pitched sounds is made to approximate the way that an average person hears sounds. The adjusted sound levels are stated in units of "A-weighted decibels" (dBA). A sound increase of three dBA is barely perceptible to the human ear, a five dBA increase is clearly noticeable, and a 10 dBA increase is heard as twice as loud. For example, if the sound energy is doubled (e.g., the amount of traffic doubles), there is a 3 dBA increase in noise, which is just barely noticeable to most people. On the other hand, if traffic increases to where there is 10 times the sound energy level over a reference level, then there is a 10 dBA increase and it is heard as twice as loud.

The following list provides a rough comparison of the noise levels of some common noise sources.

Sound Pressure Level (dBA)	Noise Source
140	Jet Engine (at 25 meters)
130	Jet Aircraft (at 100 meters)
120	Rock and Roll Concert
110	Pneumatic Chipper
100	Jointer/Planer
90	Chainsaw
80	Heavy Truck Traffic
70	Business Office
60	Conversational Speech
50	Library
40	Bedroom
30	Secluded Woods
20	Whisper

Source: "A Guide to Noise Control in Minnesota," Minnesota Pollution Control Agency, http://www.pca.state.mn.us/programs/pubs/noise.pdf and "Highway Traffic Noise," FHWA, http://www.fhwa.dot.gov/environment/htnoise.htm.

Along with the volume of traffic and other factors (i.e., topography of the area and vehicle speed) that contribute to the loudness of traffic noise, the distance of a receptor from a sound's source is also an important factor. Sound levels decrease as distance from a source increases. The common rule of thumb used to describe sound decreases due to distance states that, beyond approximately 50 feet, each time the distance between a line source (such as a road) and a receptor is doubled, sound levels decrease by 3 decibels over hard ground, such as pavement or water, and by 4.5 decibels over vegetated areas.

In Minnesota, traffic noise impacts are evaluated by measuring and/or modeling the traffic noise levels that are exceeded 10 percent and 50 percent of the time during the hour of the day and/or night that has the total traffic and heavy truck volumes and travel speeds that generate the highest noise levels. These numbers are identified as the L_{10} and L_{50} levels. The L_{10} value is compared to Federal Highway Administration (FHWA) noise abatement criteria.

Minnesota State Noise Standards have been established for residential, commercial, and industrial land uses during specific daytime and nighttime periods. The Minnesota State Noise Standards are shown in Table 4. Residential land uses include apartments, churches, and schools.

Table 3
Minnesota State Noise Standards

Land Use*	Code	Day (7 a.m.–10 p.m.) dBA		Night (10 p.m.–7 a.m.) dBA	
Residential	NAC-1	L_{10} of 65	L_{50} of 60	L_{10} of 55	L_{50} of 50
Commercial	NAC-2	L_{10} of 70	L_{50} of 65	L_{10} of 70	L_{50} of 65
Industrial	NAC-3	L_{10} of 80	L_{50} of 75	L_{10} of 80	L_{50} of 75

* Specific land use definitions are provided in Minnesota Rules for each NAC category. Residential, commercial, and industrial are a generalization of the land uses included in each category.

Federal noise abatement criteria have also been established for five land use categories. Federal criteria do not differentiate daytime and nighttime noise levels. The Federal criteria are shown in Table 5. Locations where noise levels are "approaching" (defined as being within 1-decibel of the criteria threshold, e.g. 69 dBA in a residential area) or exceeding the criteria level must be evaluated for noise abatement reasonableness.

Table 4

Federal Noise Abatement Criteria

Category	L_{10} dBA	Land Use
A	60	Special areas requiring serenity
B	70	Residential and recreational areas (playgrounds, active sports areas, parks)
C	75	Commercial and industrial areas (developments not included in Categories A or B above).
D	NA	Undeveloped areas
E	55	Residential, schools, churches, libraries, and hospitals

* Applies to interior noise levels. All other land uses are exterior levels.

In addition to the identified noise criteria, the FHWA also defines a noise impact as a "substantial increase" in the future noise levels over the existing noise levels.

Mn/DOT considers an increase of 5 dBA or greater to be a substantial noise level increase.

b. Noise Monitoring

Noise level monitoring is commonly performed during a noise study to document existing noise levels. Existing noise levels can be used as a baseline against which future scenarios are compared. In addition, when studying future noise levels projected with computer models, monitored noise levels for existing conditions are compared to modeled results for existing conditions to validate the computer modeling techniques and results.

The existing noise levels in the TH 13/CSAH 5 project area were monitored on October 26, 2005 and November 1, 2005 to establish base case conditions and to assist in calibrating the noise prediction model. Three noise receptor locations were chosen for monitoring sites within the project area (see Figure 4, located in Appendix A). Monitoring results for existing noise levels (2005) are provided in Table 6. Sound levels are expressed in dBA.

Table 5
Monitored Noise Level

Location	General Location	Time	Monitored Noise Level (dBA)	
			L_{10}	L_{50}
M1	Residential area on Woodhill Rd. approximately 135 feet south of the eastbound TH 13 lanes	4:15–5:15 PM (Daytime)	64	61
		4:10-5:10 AM (Nighttime)	62	58
M2	Residential area on Old CR 34 approximately 900 feet south of the eastbound TH 13 lanes	5:25-6:25 PM (Daytime)	63	60
		4:51-5:51 AM (Nighttime)	61	57
M3	Residential area on Woodhill Rd. approximately 1000 feet south of the eastbound TH 13 lanes	5:10-6:10 PM (Daytime)	67	64
		5:58-6:58 AM (Nighttime)	59	56

Shaded cells represent noise levels currently above MPCA State standards

Model results for M1, M2, and M3 have been calibrated to monitoring results that reflect topography and vegetation not easily incorporated into the model.

c. Model

Traffic noise impacts were assessed by modeling noise levels at residential receptor sites along the corridor likely to be most affected by changes in roadway alignment as a result of the proposed project. Noise monitoring locations (M1, M2, and M3) are shown on Figure 4, located in Appendix A. All receptor sites are classified within the definition of State of Minnesota NAC-1 or NAC-2 and Federal Land Use Categories B and C.

Noise modeling was done using the MINNOISE Noise Prediction Program, a version of the FHWA STAMINA model adapted by Mn/DOT. This model uses vehicle numbers, speed, class of vehicle, and the typical characteristics of the roadway being

analyzed. As noted above, adjustments were made to receptor sites to bring predicted and monitored existing level into agreement, where necessary.

d. MINNOISE Model Results

The augmented FHWA noise prediction software MINNOISE was used to predict noise levels at 32 receptor sites within the study area (see Figure 4, located in Appendix A for receptor locations). These receptors were placed in and around the locations where the noise monitoring took place and also represent residential housing and commercial areas in the project area. Table 7 shows the results of the noise modeling analysis for the existing (2005) daytime and nighttime, 2030 No-Build, and 2030 Build (Preferred Alternative) scenarios.

The model predicts several receptors potentially exceeding the MPCA State Noise Standards as well as several receptors that will approach or exceed the FHWA NAC under the existing (2005) conditions, the 2030 No-Build, and the Build (preferred alternative) condition for both the daytime and nighttime condition. Traffic noise impacts occur when traffic noise levels approach or exceed the FHWA NAC-1 (70dB) level by one decibel or when impacts are modeled exceeding State Noise Standards, or those which exceed the FHWA NAC Category B criteria of 5dB or more. The models also shows several receptors experiencing a substantial increase (>5 dba) in noise levels.

A mitigation analysis was performed to gauge the effectiveness of a 20-foot and 10-foot noise wall placed at these receptors. The following section describes the noise mitigation analysis process, including a potential walls effectiveness and cost feasibility.

e. Noise Mitigation Analysis

Noise barriers are considered where residential and/or commercial locations have modeled future (2030) noise levels above the Federal criteria and/or State Standards. The only location in the TH 13/CSAH 5 project area identified for analyzing a barrier was the southeast quadrant of the interchange (see Figure 4, located in Appendix A).

Noise barrier construction decisions are based on a study of feasibility and reasonableness. Feasibility is determined by physical and/or engineering constraints (i.e., whether a noise barrier could feasibly be constructed on the site). Reasonableness is a more subjective measure and is based on a number of factors. For a noise barrier to be considered acoustically effective, it must achieve a noise reduction of 5 dBA or more. To be considered cost-effective, the cost per dBA of reduction per residence should be equal to or less than $3,250. Cost-effectiveness of the barrier is calculated by dividing the cost of the noise barrier ($15 per square foot for noise walls) by the product of the average decibel reduction and the total number of residences affected.

The result of this calculation is a cost per decibel per residence. This overall approach is outlined in *Mn/DOT Noise Policy for Type I and Type II Federal-Aid Projects as per 23 CFR 772*. If noise mitigation is found to be cost-effective, additional reasonableness factors, such as the desires of affected property owners, are considered.

Table 6
Modeled Noise Levels (dBA)

MINNOISE Receiver	Daytime					Nighttime				
	Existing L_{10} (dBA)	Year 2030 L_{10} No-Build (dBA)	dB Difference Existing vs. No-Build	Year 2030 L_{10} Build	dB Difference Existing vs. Build	Existing L_{10} (dBA)	Year 2030 L_{10} No-Build (dBA)	dB Difference Existing vs. No-Build	Year 2030 L_{10} Build	dB Difference Existing vs. Build
R1	61	62	1	61	0	61	61	0	61	0
R2	60	61	1	60	0	60	60	0	60	0
R3	58	59	1	59	1	59	58	-1	59	0
R4	62	62	0	61	-1	63	61	-2	62	-1
R5	65	64	-1	63	-2	65	63	-2	64	-1
R6	**70**	68	-2	67	-3	**70**	67	-3	**69**	-1
R7	**70**	**74**	4	**73**	3	**70**	**71**	1	**72**	2
R8	**70**	**75**	5	**75**	5	**71**	**72**	1	**74**	3
R9	**71**	**77**	6	**76**	5	**71**	**73**	2	**75**	4
R10	**71**	**80**	9	**80**	9	**71**	**75**	4	**78**	7
R11	**71**	**83**	12	**82**	11	**71**	**78**	7	**81**	10
R12	**72**	**83**	11	**82**	10	**72**	**77**	5	**80**	8
R13	**72**	**80**	8	**79**	7	**72**	**75**	3	**78**	6
R14	**71**	**77**	6	**77**	6	**72**	**74**	2	**76**	4
R15	**71**	**75**	4	**75**	4	**72**	**72**	0	**74**	2
R16	**71**	**74**	3	**74**	3	**72**	**72**	0	**73**	1
R17	**71**	**73**	2	**73**	2	**71**	**71**	0	**72**	1
R18	**71**	**73**	2	**73**	2	**72**	**71**	-1	**72**	0
R19	**71**	**72**	1	**72**	1	**71**	**71**	0	**72**	1
R20	**71**	**73**	2	**73**	2	**72**	**71**	-1	**72**	0
R21	**71**	**72**	1	**72**	1	**71**	**71**	0	**72**	1
R22	**71**	**72**	1	**72**	1	**71**	**71**	0	**72**	1
R23	66	68	2	68	2	66	66	0	67	1
R24	62	64	2	64	2	63	63	0	64	1
R25	60	62	2	61	1	61	60	-1	61	0
R26	58	60	2	59	1	59	58	-1	59	0
R27	57	58	1	58	1	58	57	-1	58	0
R28	65	**76**	11	**76**	11	66	**72**	6	**74**	8
Rc29*	67	69	2	69	2	69	69	0	70	1
Rc30*	62	62	0	62	0	65	62	-3	62	-3
Rc31*	70	72	2	72	2	71	73	2	73	2
Rc32*	72	67	-5	67	-5	**77**	67	-7	68	-7

Table Notes: Shaded values represent those locations exceeding the State noise standards. Bold values represent noise levels that approach or exceed the FHWA Criteria. * Receptors (Rc29*-Rc32*) depict commercial use receptors within the MPCA NAC 2 and Federal NAC-C.

Taking these factors into consideration, there are twenty receptors within this noise analysis that merit noise mitigation consideration (R6 through R22, R28, Rc29, and Rc30). A 20-foot noise wall (Mn/DOT maximum) and a 10-foot noise wall, 2,000-feet long were placed in the southeast quadrant of the interchange and modeled separately to gauge their effectiveness in decreasing noise level on the receptors. The noise walls were situated between the TH 13 eastbound lanes and the south frontage road. Tables 8 and 9 present the complete noise impact survey including existing conditions, FHWA NAC noise impact figures, MINNOISE modeled noise figures, resulting differences, and noise wall reduction figures.

Table 7
20-foot Noise Wall Analysis

MINNOISE Receptors	Protected Residences	L_{10} 2030 Build Levels (Nighttime[1])	L_{10} 2030 Build Levels with 20-foot Wall (Nighttime[1])	L_{10} Reduction with 20-foot Wall	Total Noise Reduction
R1	1	61	61	<5	0
R2	1	60	60	<5	0
R3	1	59	59	<5	0
R4	1	61	61	<5	0
R5	1	62	62	<5	0
R6	1	66	66	<5	0
R7	1	69	59	10	9
R8	1	69	58	11	11
R9	1	69	58	11	11
R10	1	70	58	12	11
R11	1	70	58	12	11
R12	1	70	58	12	11
R13	1	70	58	12	11
R14	1	69	57	12	12
R15	1	68	57	11	11
R16	1	68	57	11	11
R17	1	68	57	11	10
R18	1	68	57	11	11
R19	1	68	56	12	11
R20	1	68	56	12	12
R21	1	69	56	13	12
R22	1	69	56	13	12
R23[(2)]	8	65	55	8	80
R24	1	62	55	7	7
R25	1	60	54	6	6
R26	1	58	53	5	5
R27	1	57	52	5	5
R28	1	65	59	6	6
Rc29[(*)]	1	69	69	<5	0
Rc30[(*)]	1	62	62	<5	0
Rc31[(*)]	1	72	72	<5	0
Rc32[(*)]	1	67	67	<5	0
Totals		N/A	N/A	N/A	286
Length of Walls: 2,000 feet		Cost of 20-foot walls (@$15/sq.ft) =$600,000			$2,098

(1) Nighttime standards were used in this analysis because the peak hour traffic volume occurs between 6-7 am.
(2) Represents eight additional homes extending along TH 13 and in a second tier of development.
Asterisk (*) represent commercial properties

Table 8
10-foot Noise Wall Analysis

MINNOISE Receptors	Protected Residences	L_{10} 2030 Build Levels (Nighttime[1])	L_{10} 2030 Build Levels with 10-foot Wall (Nighttime[1])	L_{10} Reduction with 10-foot Wall	Total Noise Reduction
R1	1	61	61	<5	0
R2	1	60	60	<5	0
R3	1	59	59	<5	0
R4	1	61	61	<5	0
R5	1	62	62	<5	0
R6	1	66	66	<5	0
R7	1	69	64	5	5
R8	1	69	63	6	6
R9	1	69	62	7	7
R10	1	70	61	9	9
R11	1	70	61	9	9
R12	1	70	61	9	9
R13	1	70	61	9	9
R14	1	69	61	8	8
R15	1	68	61	7	7
R16	1	68	61	7	7
R17	1	68	61	7	7
R18	1	68	61	7	7
R19	1	68	61	7	7
R20	1	68	61	7	7
R21	1	69	61	8	8
R22	1	69	62	7	7
R23[(2)]	8	65	59	6	48
R24	1	62	58	<5	0
R25	1	60	57	<5	0
R26	1	58	55	<5	0
R27	1	57	54	<5	0
R28	1	65	62	<5	0
Rc29*	1	69	69	<5	0
Rc30*	1	62	62	<5	0
Rc31*	1	72	72	<5	0
Rc32*	1	67	67	<5	0
Totals		N/A	N/A	N/A	167
Length of Wall: 2,000 feet			Cost of 10-foot walls (@$15/sq.ft) =$300,000		$1,796

(1) Nighttime standards were used in this analysis because the peak hour traffic volume occurs between 6-7 am.
(2) Represents eight additional homes extending along TH 13 and in a second tier of development.
Asterisk (*) represent commercial properties.

As Tables 8 and 9 show, both a 20-foot noise wall and a 10-foot noise wall placed within the model to maximize decibel reduction at impacted receptors will substantially reduce noise levels. Results from the MINNOISE model show cost

effectiveness (wall construction cost divided by decibel reduction) for a 20' noise wall of $2,098 per decibel reduction and cost effectiveness for a 10' noise wall of $1,796 per decibel reduction. According to Mn/DOT's maximum feasibility criteria of $3,250 per decibel reduced, both noise walls are cost-effective. Those reductions less than 5dB are not included within the total noise reduction amount per Mn/DOT policy.

On August 23, 2006, a meeting was held with the residential neighborhood in the southeast quadrant of the interchange to explain the noise analysis that was conducted for the proposed project. As part of the meeting feedback was sought to determine the desire for a noise wall and the preferred height. Based on the meeting the City of Burnsville will pursue the construction of a noise wall and will determine the height of the wall during the final design phase.

f. CSAH 5 Noise

Noise levels were also examined along the CSAH 5 corridor for possible noise level increases due to the heightened level of traffic using the design year access to TH 13. CSAH 5 is exempt from Mn/DOT and MPCA noise standards; however, CSAH 5 is not exempt from FHWA noise abatement criteria. While noise levels are expected to increase at adjacent residences along this corridor, noise abatement in the form of noise walls is not feasible due to the constrained right-of-way, lack of proper setback for noise walls, and the level of access afforded to existing residential and commercial development. Noise walls will be impractical due to the numerous breaks along the noise wall needed for residential/commercial access (driveways) and public street access.

g. Noise Analysis Report

The TH 13/CSAH 5 Noise Analysis Report has been made available for state and local officials, as well as to the general public. Input received during the 30-day public comment period will also be used in the development of potential abatement plans, which will identify specific mitigation measures (wall height, length, etc.) for noise impacts.

8. Section 404 Permit

A Section 404 General Permit/Letter of Permission (GP/LOP) will not be required for this project since there are no anticipated wetland impacts with the proposed interchange and other supporting improvements.

9. Other Effects

The project may require the temporary shutdown of CSAH 5 for the construction of the interchange. A construction staging plan will be developed as part of the final design. The staging plan will identify potential measures to minimize travel delays and detour routes. Access to local properties will be maintained to the greatest extent possible throughout the construction process.

IV. PUBLIC AND AGENCY INVOLVEMENT (AND PERMITS/APPROVALS)

A. PUBLIC/AGENCY INVOLVEMENT

The TH 13 and CSAH 5 interchange project development process included a public and agency involvement program that was initiated at the on-set of the study, and was ongoing and active throughout the project development process. There were several elements to the involvement program, each of which is detailed below.

1. Public Meeting

A public information meeting was held during the scoping process of selecting a preferred interchange alternative. The purpose of the meeting was to provide information on the project, receive comments and suggestions, and answer questions. The public meeting was held on December 14, 2005 at the Burnsville City Hall. Meeting notifications were mailed to property owners within close proximity of the project, as well as a meeting notice was published in local newspapers. Several interchange alternatives were presented at the meeting. Verbal and written comments were received from the public including alternative preference, potential issues and impacts, and other project concerns.

2. Business Owner Meetings

On April 25th and 27th, 2006 the City of Burnsville conducted individual meetings with the businesses owners immediately adjacent to the proposed improvement project. The purpose of the meetings were to inform the owners of the preferred alternative and address and questions or concerns they might have at this time.

A second public information meeting was held on May 2, 2006 for the business owners near the proposed improvements. The purpose of the meeting was to present the preferred alternative, including the preliminary layout, and to provide an update on the project schedule. Again the public meeting was held at the Burnsville City Hall and meeting notifications were mailed to business owners within close proximity of the project, as well as a meeting notice was published in local newspapers

3. Project Management Team (PMT)

The project development process has been guided by a PMT consisting of staff from the City of Burnsville, Dakota County, and Mn/DOT. The PMT has met on a regular basis to guide the development of alternatives, recommend solutions, and to review and comment on the preliminary design of the interchange improvements.

4. Neighborhood Noise Analysis Meeting

As discussed earlier, a meeting was held on August 23, 2006 with residential property owners located in the southeast quadrant of the interchange. The purpose of the meeting was to explain the noise analysis that was conducted for the proposed project. As part of the meeting feedback was sought to determine the desire for a noise wall and the preferred height. The City of Burnsville, in cooperation with Mn/DOT, will pursue the construction of a noise wall and will determine the height of the wall during the final design phase.

5. Summary of Early Coordination Comments

As a result of the above early coordination meetings and contacts, comments and concerns about the proposed project were received, both verbally and in writing. Those substantive comments and concerns received are summarized below:

- Comments were received with concerns over potential business impacts and/or relocations.
- Several comments were received supporting the interchange project due to the heavy levels of congestion at the current intersection.
- Concerns were raised regarding residential and commercial access closures, which will result from the proposed improvements.
- Several comments were received with concerns over additional traffic on local streets and the speeds at which vehicle travel along the roadway.
- Comments were received regarding future redevelopment plans north of TH 13.
- Questions were received regarding future plans along I-35W and the potential for reconstructing the interchange at I-35W and TH 13.

This early coordination process and extensive public involvement effort has provided the opportunity for interested individuals to express their ideas and concerns. The City of Burnsville will continue to cooperatively work with the public and other agencies to address these and additional concerns.

B. PUBLIC COMMENTS PERIOD AND PUBLIC HEARING

A public hearing will be held during the EQB mandated 30-day comment period for the EA/EAW. The public hearing will include a presentation of the environmental documentation followed by a formal public testimony period. Comments will be received at the hearing and for a minimum of 10 days thereafter and will become a part of the official hearing record.

C. REPORT DISTRIBUTION

Copy(ies) of this document have been sent to agencies, local government units, libraries, and others as per Minnesota Rule 4410.1500 (Publication and Distribution of an EAW).

D. PROCESS BEYOND THE HEARING

Following the comment period, the City of Burnsville, Dakota County, and Mn/DOT will make a determination as to the adequacy of the environmental documentation. If further documentation is necessary, it could be accomplished by preparing an EIS, by revising the EA, or clarification in the Findings of Fact and Conclusion, whichever is appropriate.

When the environmental documentation is determined adequate, City of Burnsville, Dakota County, and Mn/DOT will choose a project alternative, either the No-Build or one of the alternatives under consideration.

If an EIS is not necessary, as currently anticipated, Mn/DOT will prepare a "Negative Declaration" for the state environmental requirements. Mn/DOT will also prepare a request for a FONSI that will be submitted to the FHWA. If the FHWA agrees this finding is appropriate, it will issue a FONSI.

Notices of the federal and state decisions and availability of the above documents will be placed in the Minnesota Environmental Quality Boards (MEQB) Monitor. The City of Burnsville will distribute the Negative Declaration and FONSI to the EAW distribution list and publish notices in local newspapers announcing the environmental and project alternative decisions that were made.

V. GEOMETRIC DESIGN STANDARDS AND EXCEPTIONS

The following design standards have been applied to the design of the proposed improvements:

- The project will be designed in accordance with the Mn/DOT "Road Design Manuals", including the Mn/DOT State Aid Manual and Operation Rules.

- Design standards for CSAH 5 will follow the State Aid Geometric Design Standards: Urban; New or Reconstruction.

- All work included in this project will conform to the current edition of the "Mn/DOT's Standard Specifications for Construction," including all supplemental specifications.

- The pedestrian facilities associated with the project will be design in accordance with the Americans with Disabilities Act (ADA).

- Signing, striping, and other traffic control devices will be in accordance with the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD).

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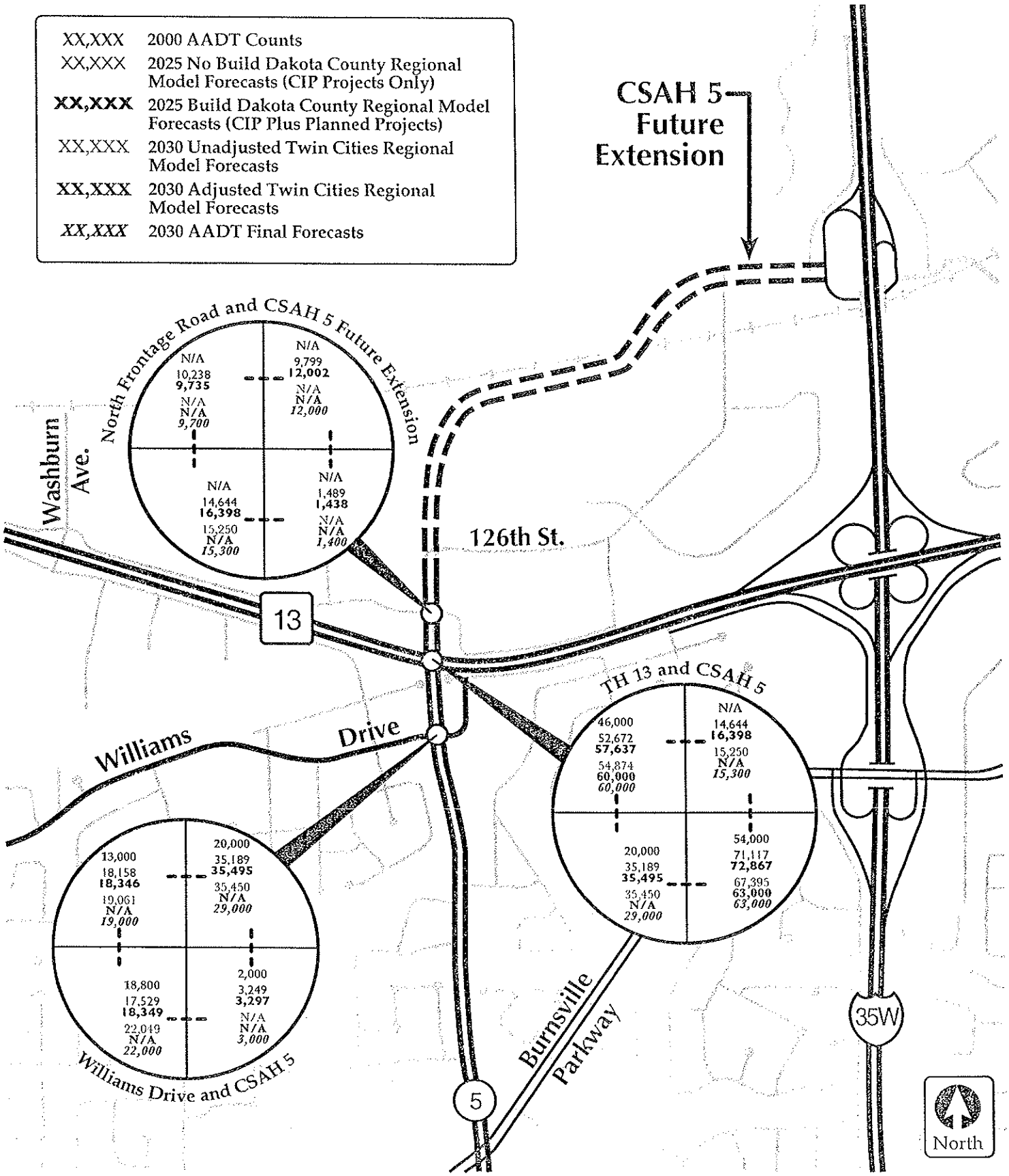
Appendices

Appendix A

Figures 3 through 10

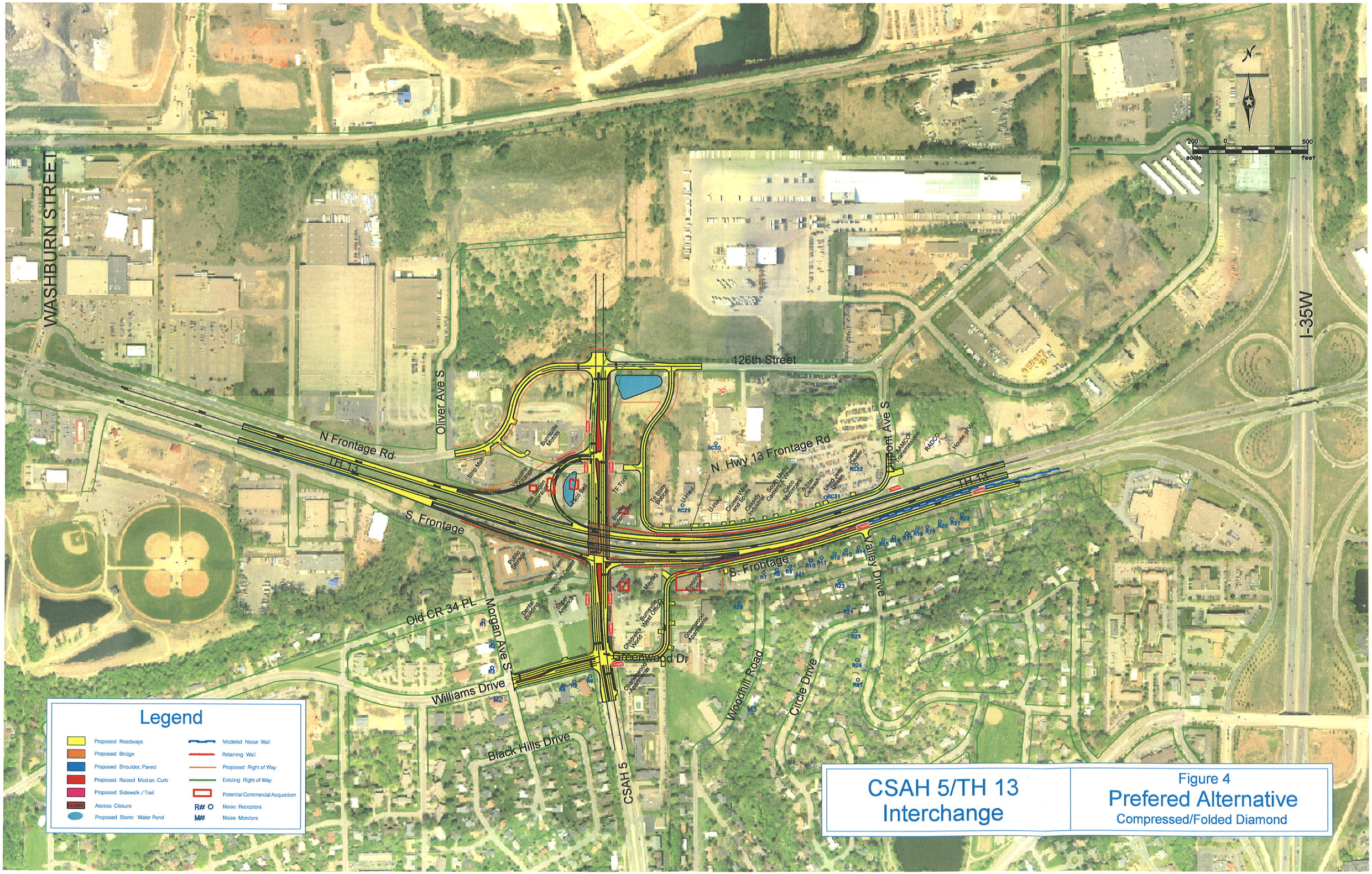
- **Existing and Forecast Traffic Volumes Map**
- **Preferred Alternative**
- **Bridge Typical Section**
- **Known and Potentially Contaminated Properties**
- **FIRM Floodplain Map**
- **Soil Survey Map**
- **PM Peak Hour Turning Movements (year 2030)**
- **TH 13 and CSAH 5 Intersection USGS Map**



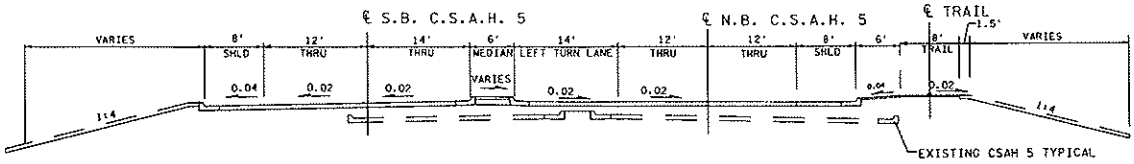
City of BURNSVILLE

TH 13/CSAH 5 Interchange Project
Traffic Forecast Report

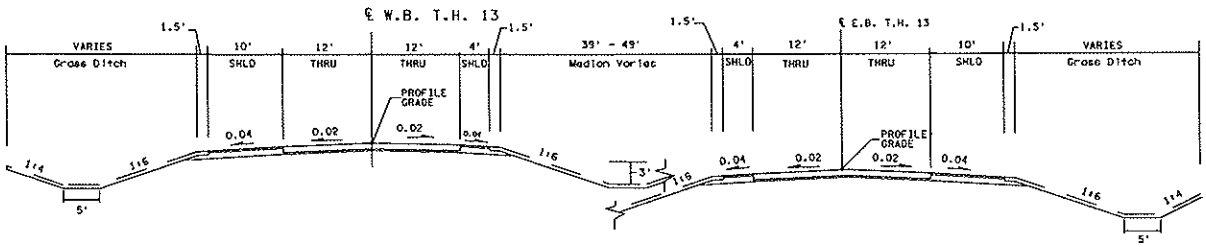
Figure 3
Existing and Forecast Traffic Map


WASHBURN STREET
I-35W
126th Street
Oliver Ave S
Morgan Ave S
Valley Drive
Woodhill Road
Circle Drive
N Frontage Rd
TH 13
S. Frontage
N. Hwy 13 Frontage Rd
Old CR 34 PL
Williams Drive
Black Hills Drive
Greenwood Dr
CSAH 5
Legend
Proposed Roadways
Proposed Bridge
Proposed Shoulder, Paved
Proposed Raised Median Curb
Proposed Sidewalk / Trail
Access Closure
Proposed Storm Water Pond
Modeled Noise Wall
Retaining Wall
Proposed Right of Way
Existing Right of Way
Potential Commercial Acquisition
R# Noise Receptors
M# Noise Monitors
200 0 500
scale feet
CSAH 5/TH 13
Interchange
Figure 4
Prefered Alternative
Compressed/Folded Diamond

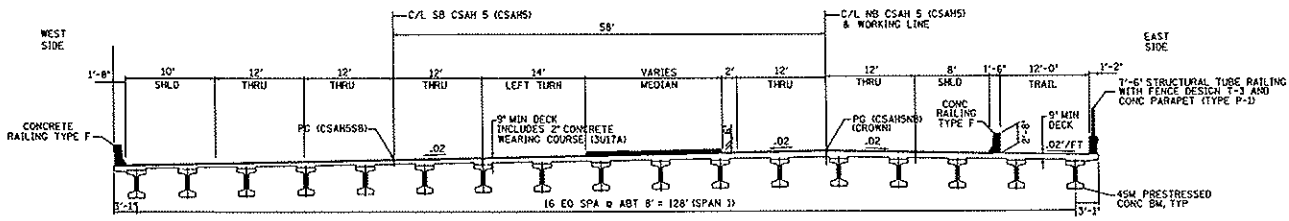
CSAH 5 TYPICAL



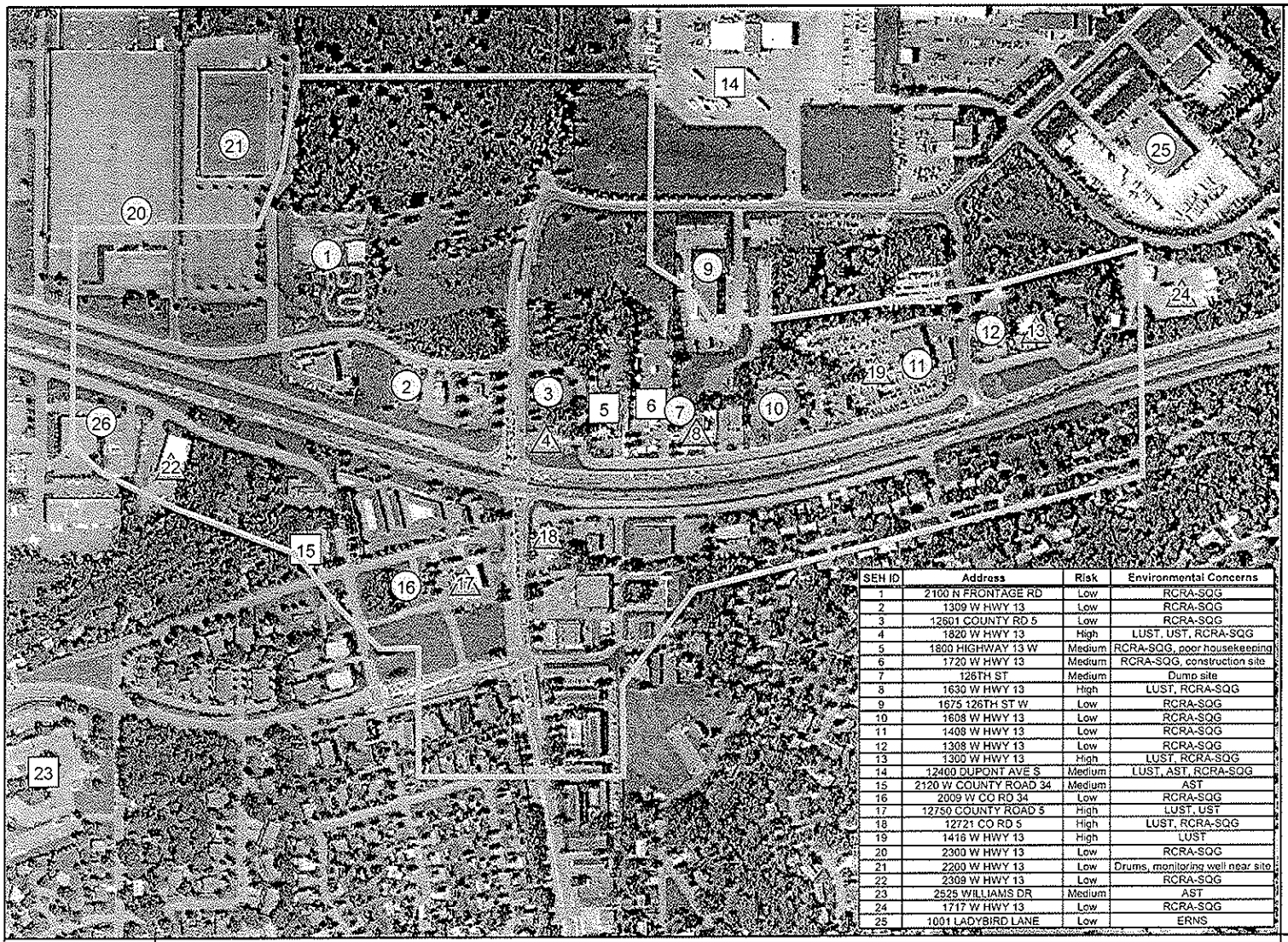
TH 13 TYPICAL



BRIDGE TYPICAL



	CSAH 5/TH 13 Interchange	Figure 5 Typical Sections



SEH ID	Address	Risk	Environmental Concerns
1	2100 N FRONTAGE RD	Low	RCRA-SQG
2	1309 W HWY 13	Low	RCRA-SQG
3	12601 COUNTY RD 5	Low	RCRA-SQG
4	1820 W HWY 13	High	LUST, UST, RCRA-SQG
5	1800 HIGHWAY 13 W	Medium	RCRA-SQG, poor housekeeping
6	1720 W HWY 13	Medium	RCRA-SQG, construction site
7	126TH ST	Medium	Dump site
8	1630 W HWY 13	High	LUST, RCRA-SQG
9	1675 126TH ST W	Low	RCRA-SQG
10	1608 W HWY 13	Low	RCRA-SQG
11	1408 W HWY 13	Low	RCRA-SQG
12	1308 W HWY 13	Low	RCRA-SQG
13	1300 W HWY 13	High	LUST, RCRA-SQG
14	12400 DUPONT AVE S	Medium	LUST, AST, RCRA-SQG
15	2120 W COUNTY ROAD 34	Medium	AST
16	2009 W CO RD 34	Low	RCRA-SQG
17	12750 COUNTY ROAD 5	High	LUST, UST
18	12721 CO RD 5	High	LUST, RCRA-SQG
19	1416 W HWY 13	High	LUST
20	2300 W HWY 13	Low	RCRA-SQG
21	2200 W HWY 13	Low	Drums, monitoring well near site
22	2309 W HWY 13	Low	RCRA-SQG
23	2525 WILLIAMS DR	Medium	AST
24	1717 W HWY 13	Low	RCRA-SQG
25	1001 LADYBIRD LANE	Low	ERNS

Legend

Approximate Corridor Boundary

Risk Level

Low

Medium

High

0 200 400 800 Feet

1 inch equals 618.181818 feet

Source:
Ramsey County, Metropolitan Council, and MnDOT.
Projection:
UTM Zone 15, NAD83 Meters
Map by:
sh

FILE NO. ABURNS0504.00

DATE: 09/25/2006

TH 13 and CSAH 5 INTERSECTION PROJECT

BURNSVILLE, MINNESOTA

Known and Potentially Contaminated Properties

Figure 6

Map Document: (S:\AE\B\Burns\0504\00\GIS\Fig06_PotentiallyContaminatedProperties.mxd)
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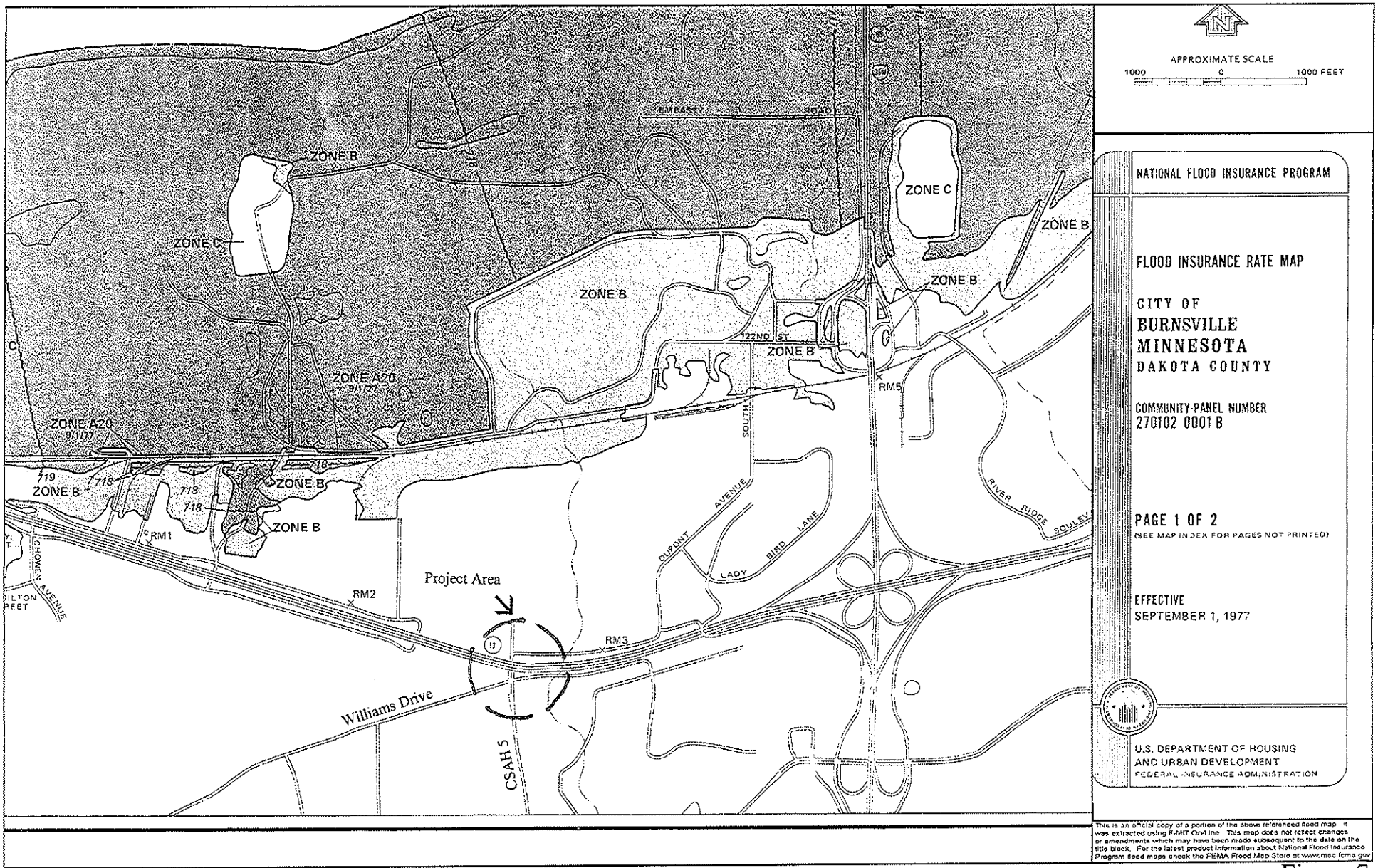


Figure 7
FIRM Floodplain Map

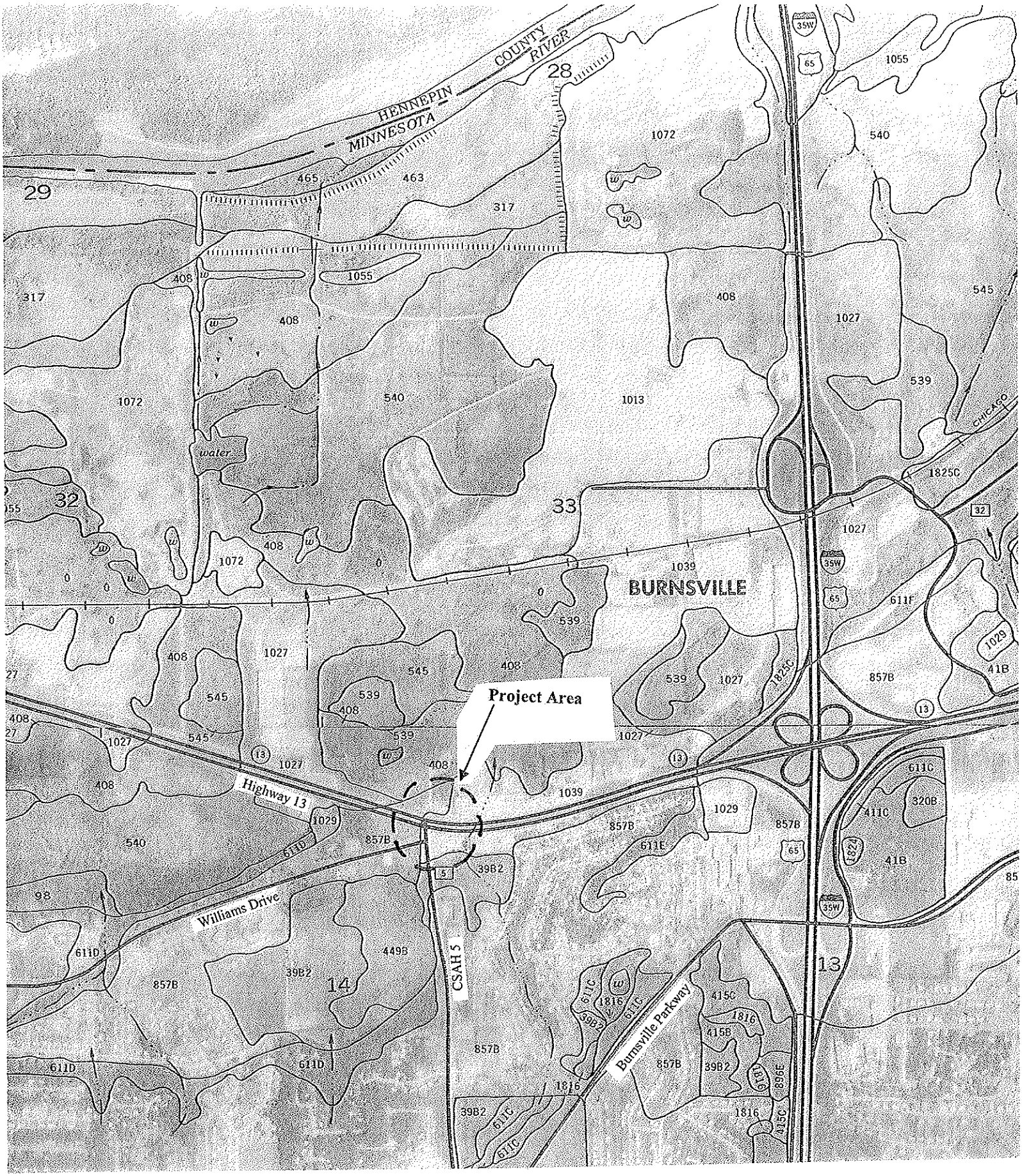
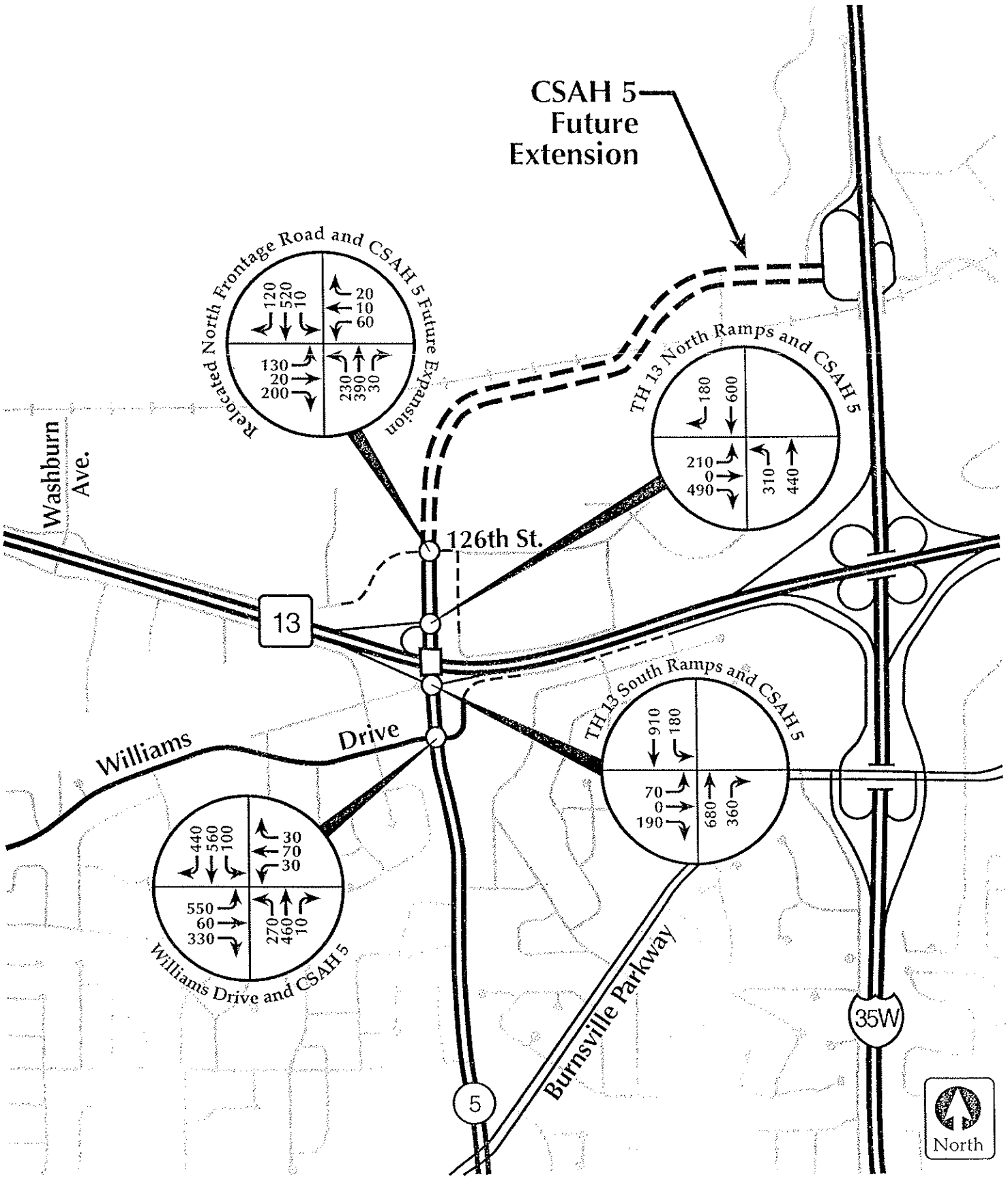


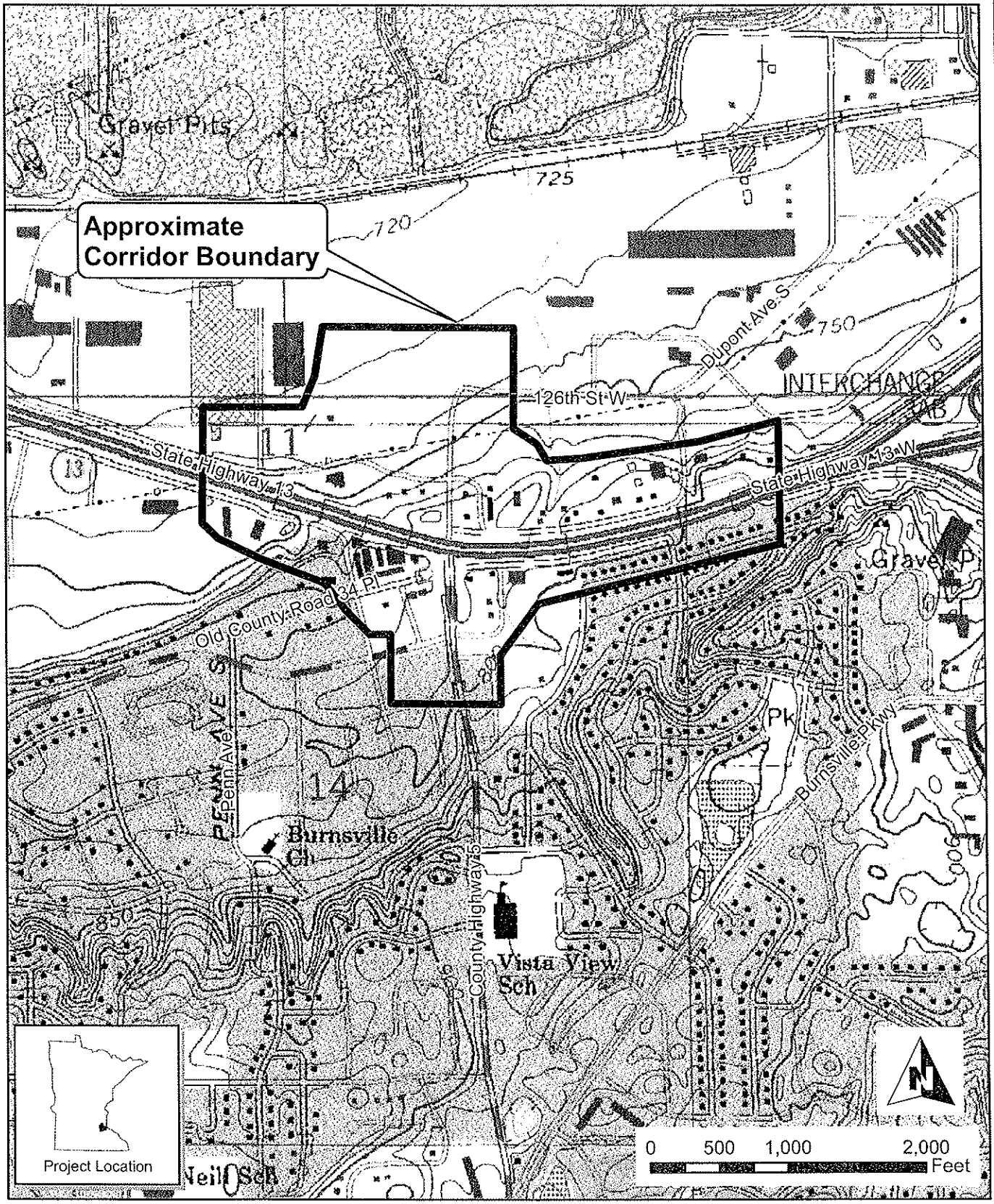
Figure 8
Soil Survey Map



City of BURNSVILLE

TH 13/CSAH 5 Interchange Project
Traffic Operations Report

Figure 9
PM Peak Hour
Turning Movements



3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110
PHONE: (651) 490-2000
FAX: (651) 490-2150
WATTS: 800-325-2055
www.sehinc.com

FILE NO.
ABURNS0504.00

DATE:
01/09/2006

TH 13 and CSAH 5 Intersection
USGS Map

Figure 10

Map Document: (X:\AE\Burns\050400\GIS\Fig01_SiteLocation.mxd)
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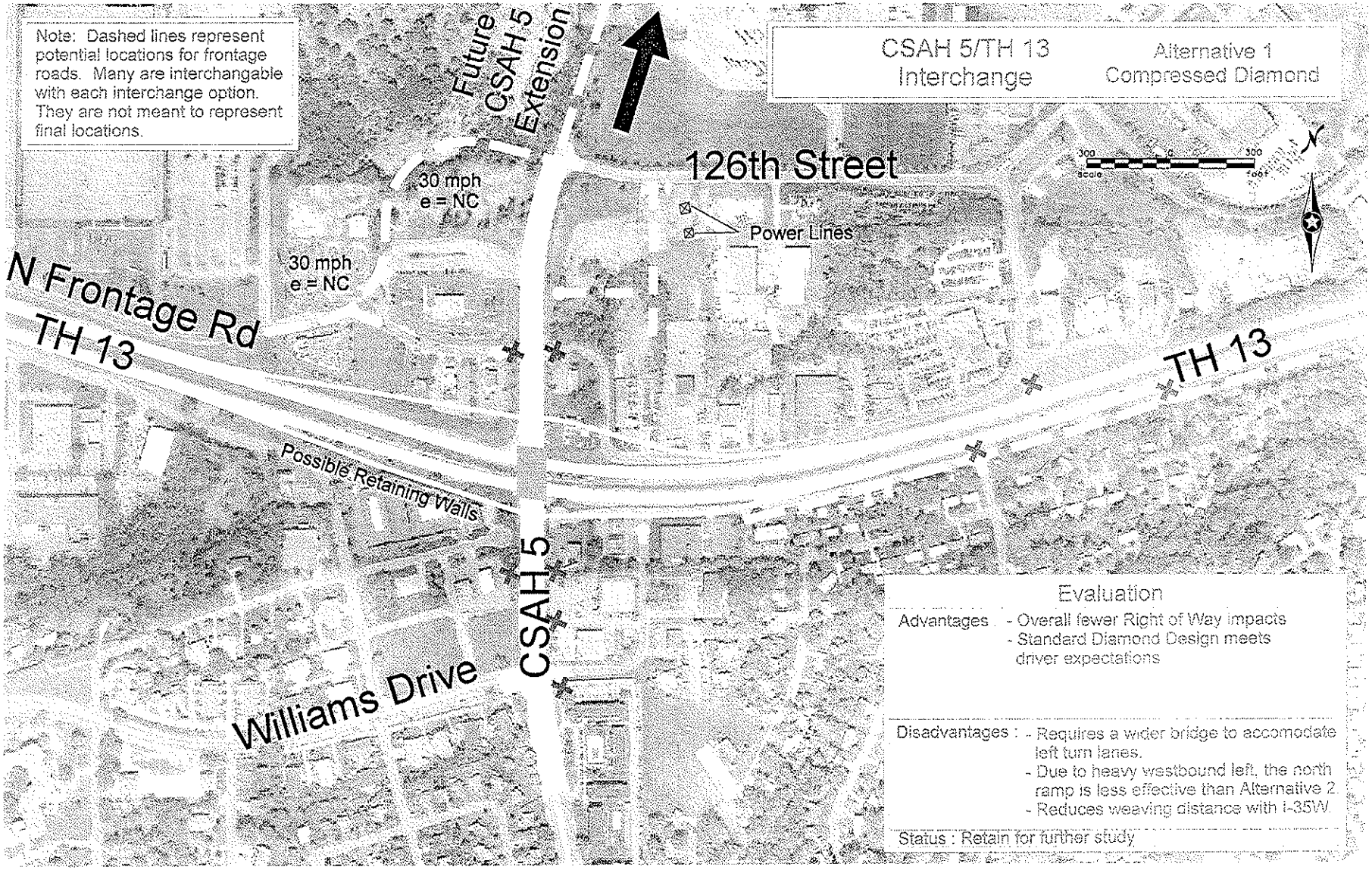
Appendix B

Interchange Alternatives Considered



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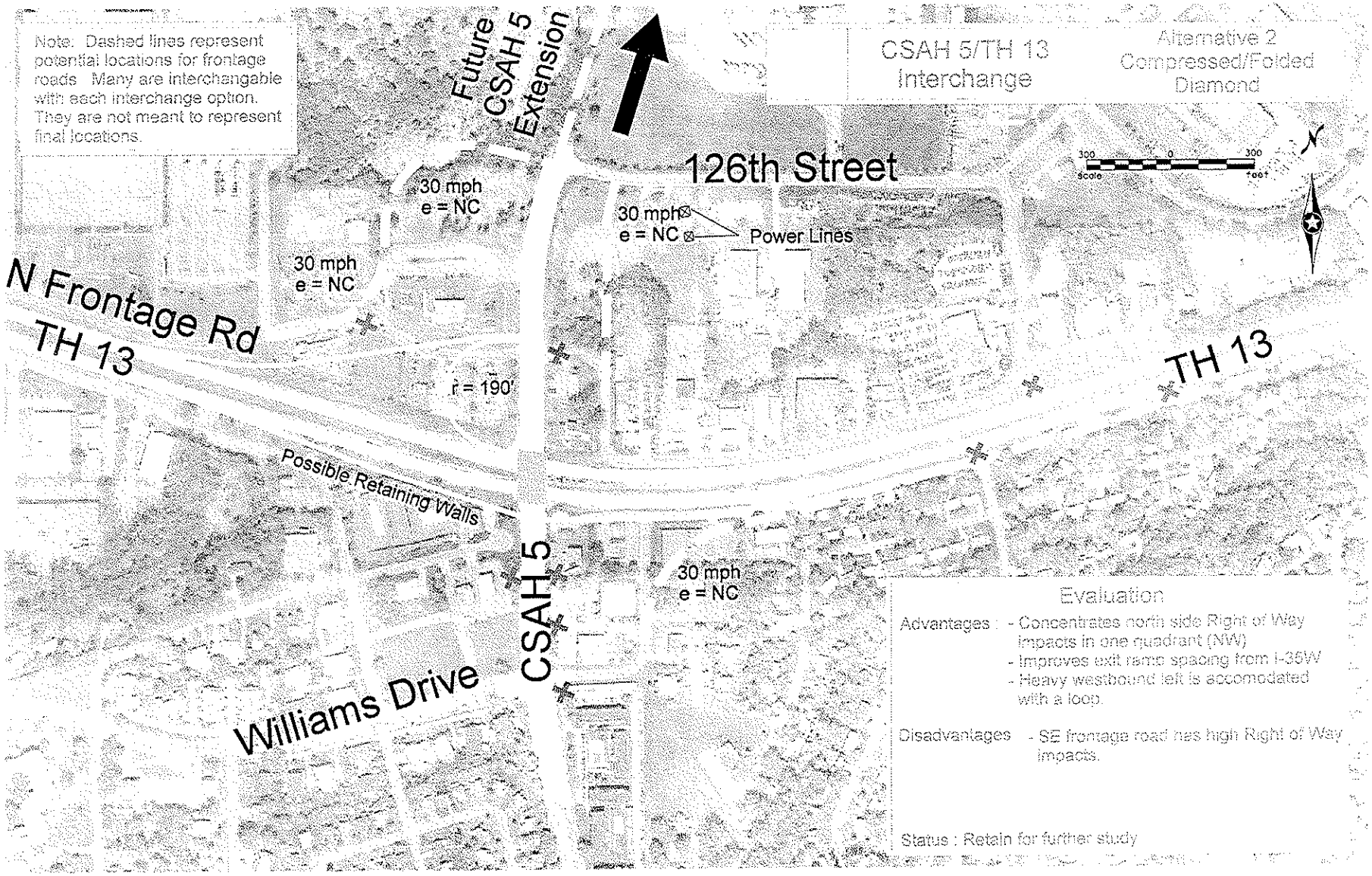

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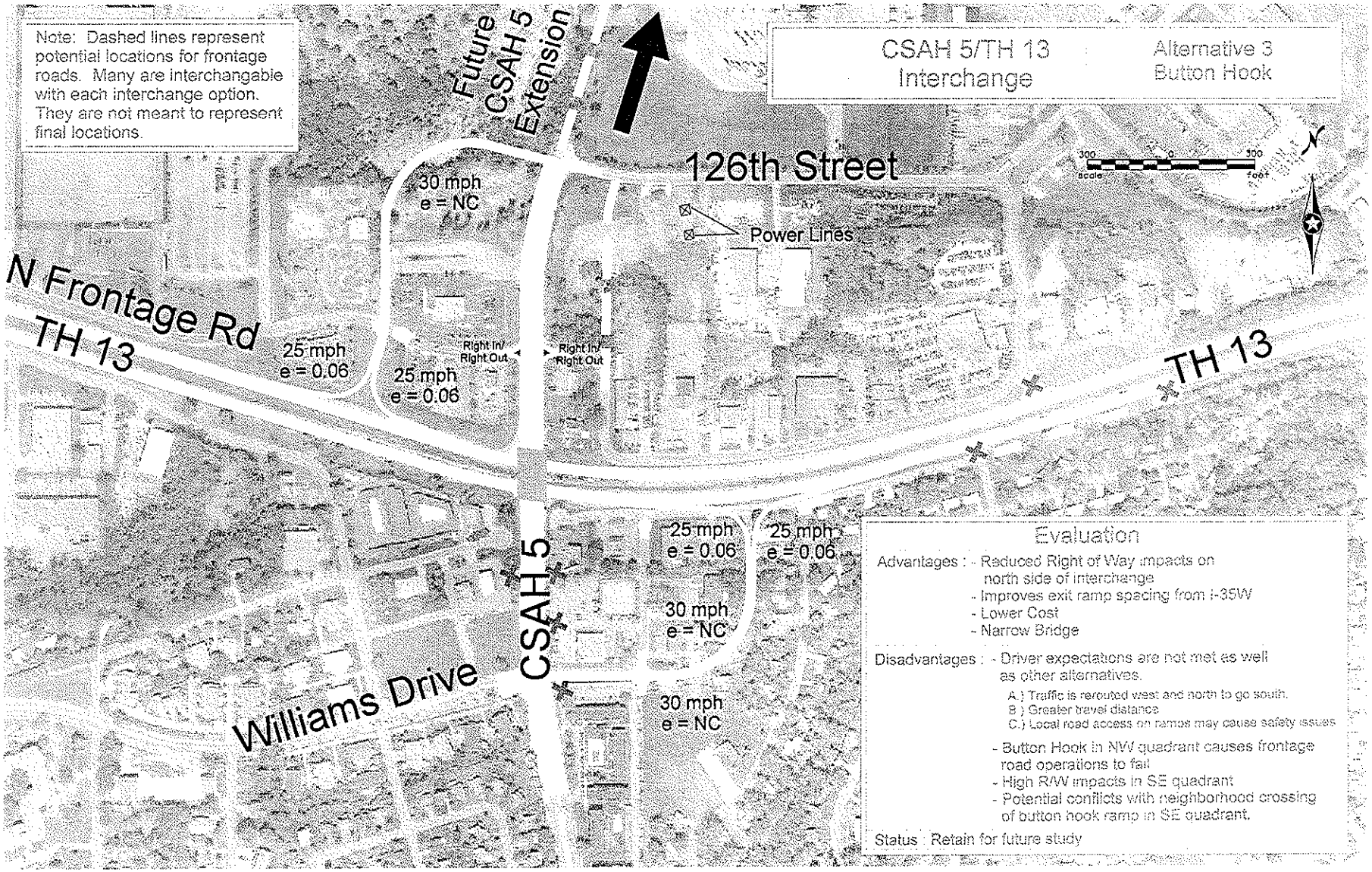

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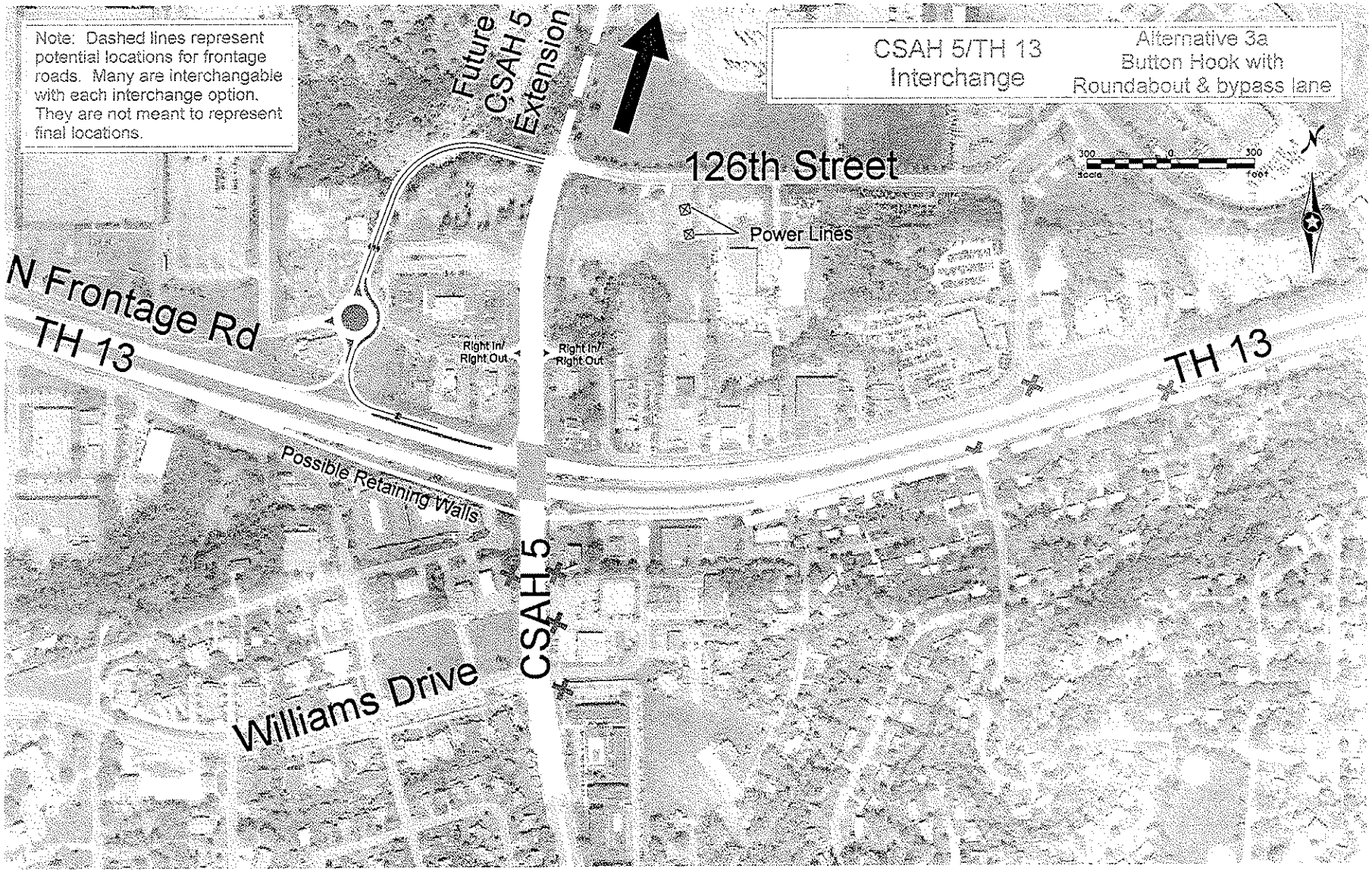

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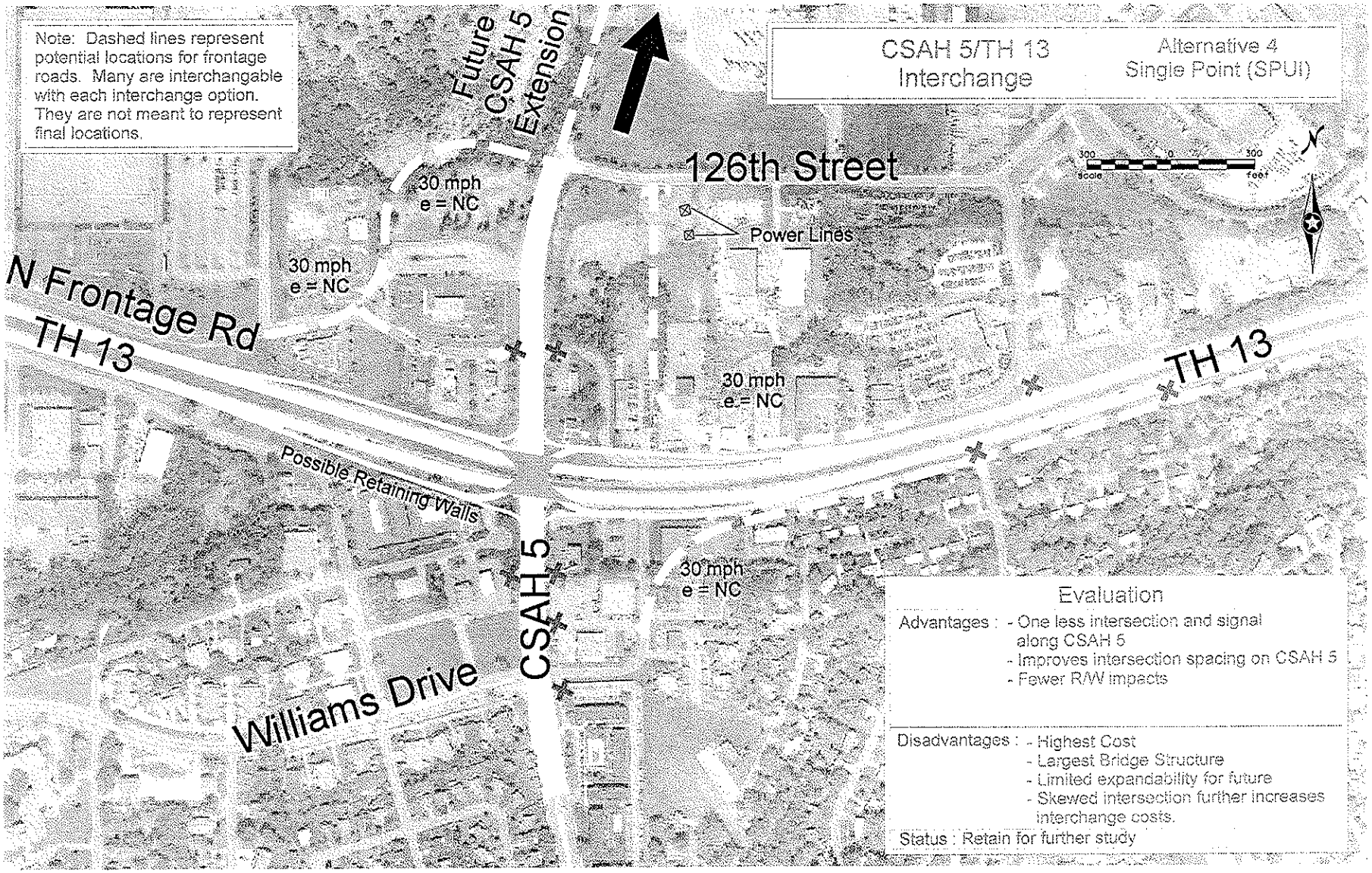

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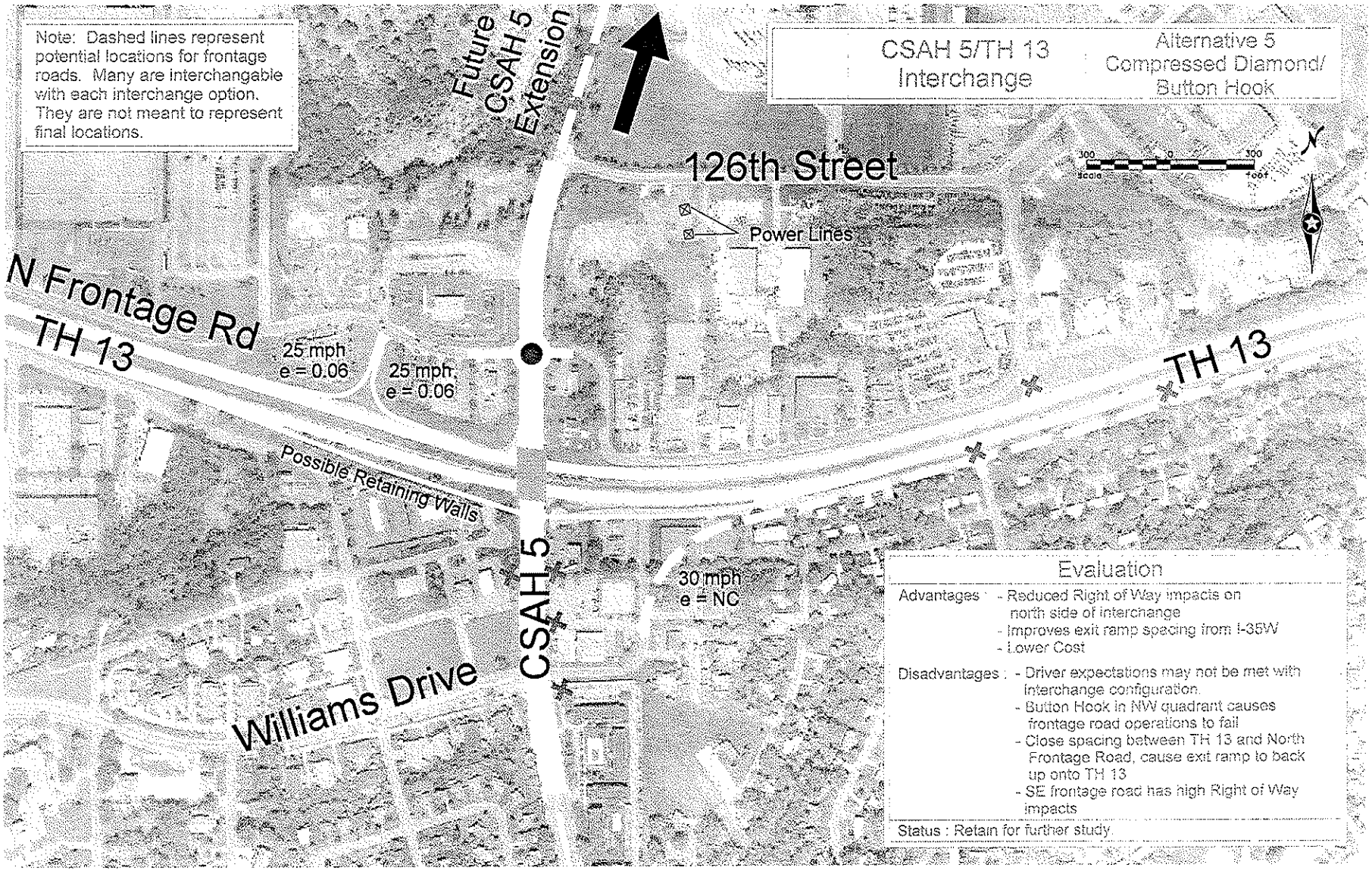

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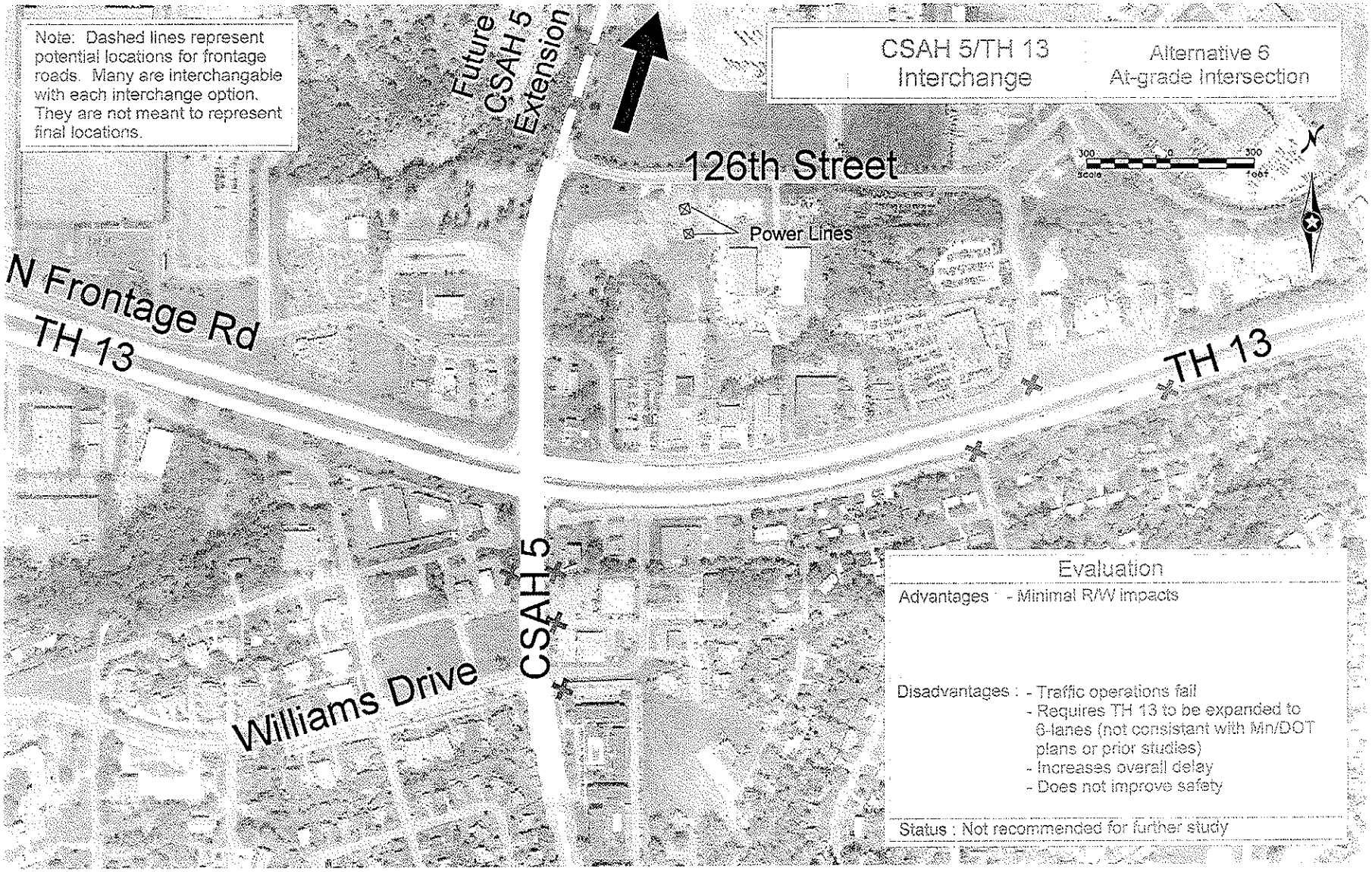

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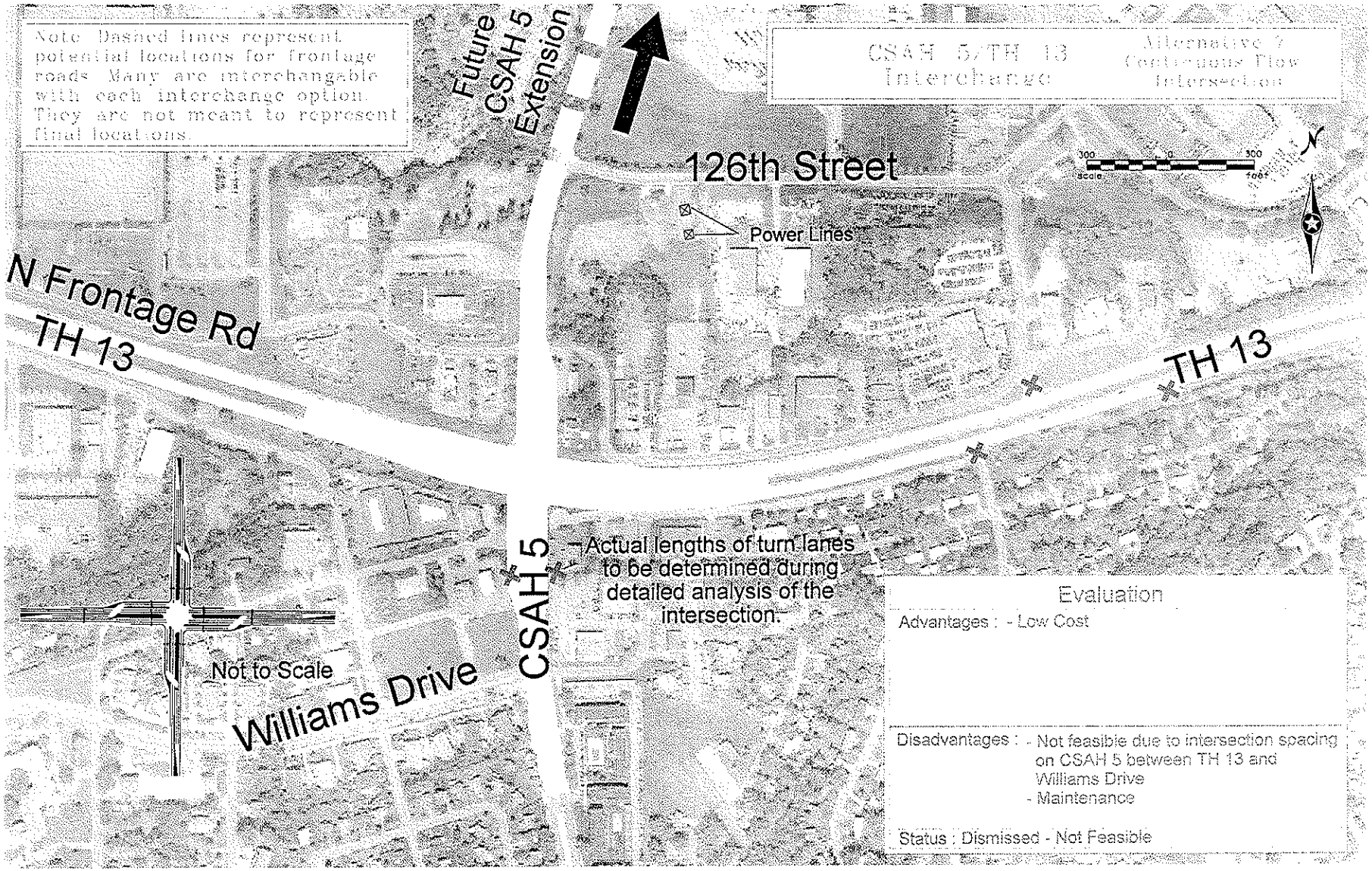

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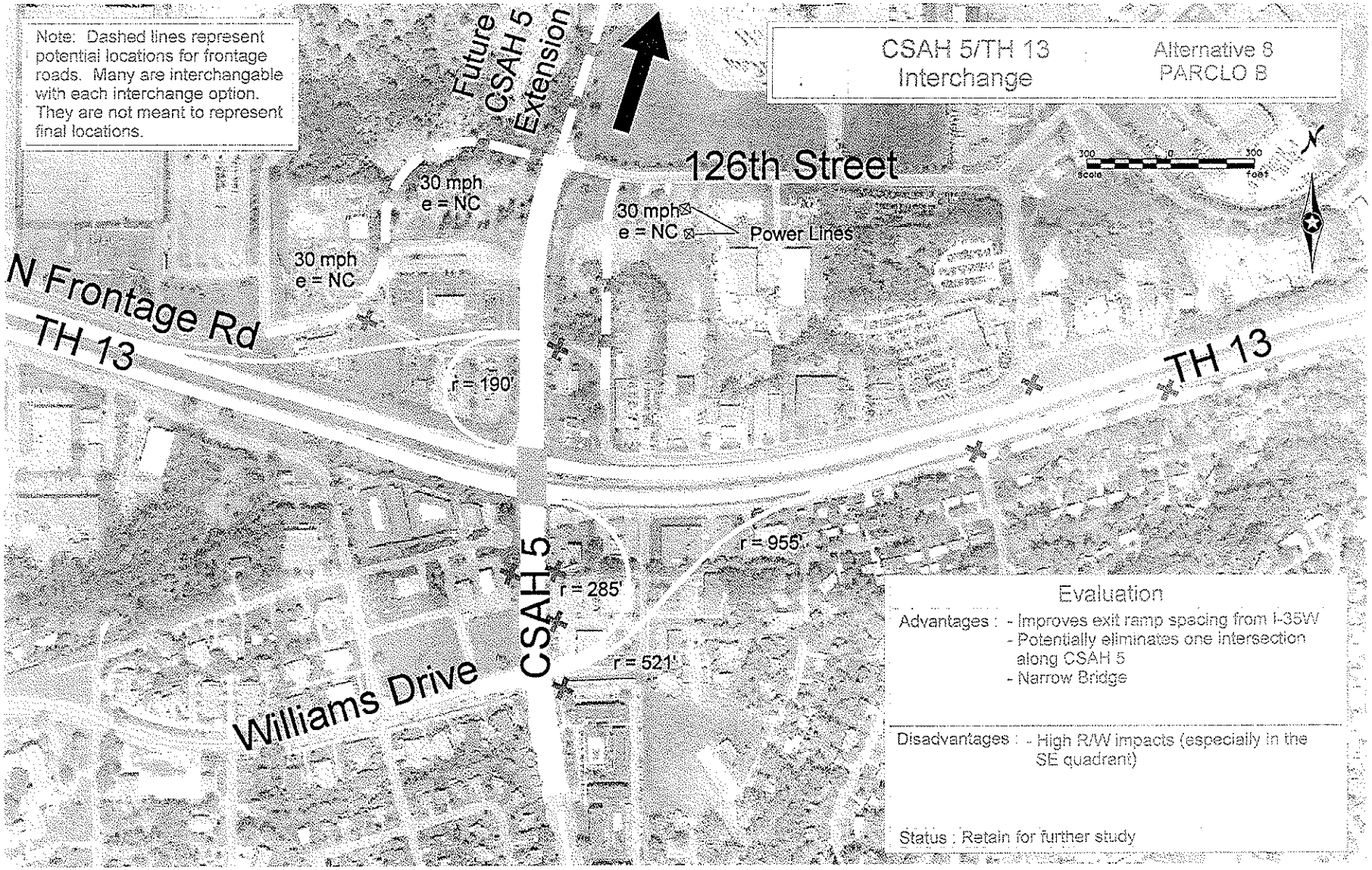

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Appendix C

Mn/DOT and MNDNR Letters
State and Federal Threatened and Endangered Species Review

Minnesota Department of Transportation

Office of Environmental Services
395 John Ireland Boulevard, MS 620
St. Paul, MN 55155-1899

Fax: 651/ 284-3754
Phone: 651/ 284-3750

November 1, 2005

Bob Rogers
Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110-5196

RE: Federal Threatened and Endangered Species
S.P. 1901-148, Trunk Highway 13, County State Aid Highway 5
Interchange Reconstruction
City of Burnsville
Dakota County

Dear Mr. Rogers:

As you have requested, the above referenced project has been reviewed for potential effects to Federally-Listed Threatened and Endangered (T&E) Species. According to the County Distribution of Minnesota's Federally-Listed Threatened, Endangered, Proposed, and Candidate Species list maintained by the U.S. Fish and Wildlife Service (USFWS), Dakota County is within the distribution range of the bald eagle (*Haliaeetus leucocephalus*), Higgins eye pearlymussel (*Lampsilis higginsii*), dwarf trout lily (*Erythronium propullans*) and the prairie bush-clover (*Lespedeza leptostachya*), all Federally-Listed Species.

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its delegated agent, is required to evaluate whether the proposed action "may affect" listed species. If it is determined that the action "may affect" a listed species, then the responsible Federal agency shall request Section 7 consultation with the USFWS. If the consultation shows "no effect" on the listed species, further consultation is not necessary.

According to the information provided by the Natural Heritage Database (updated 10-13-05) maintained by the Minnesota Department of Natural Resources, there are no known occurrences of Federally-Listed T&E Species within the project area. In addition, due to the location of the proposed project, we conclude that the project will have no effect on Federally-Listed T&E Species. If the project is modified or new information becomes available which indicates that listed species may be affected, please contact this office.

This review was completed for Federally-Listed T&E Species only. For information on State-Listed T&E Species, contact the Natural Heritage and Nongame Research Program of the Minnesota Department of Natural Resources.

Sincerely,

Jason Alcott
Natural Resource Specialist

cc: USFWS, Nick Rowse
OES, Gerry Larson Greg Busacker file

Minnesota Department of Natural Resources

Natural Heritage and Nongame Research Program, Box 25
500 Lafayette Road
St. Paul, Minnesota 55155-40__

Phone: (651) 296-7863 Fax: (651) 296-1811 E-mail: sarah.hoffmann@dnr.state.mn.us

October 24, 2005

Mr. Bob Rogers
SEH, Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110

Re: Request for Natural Heritage information for vicinity of proposed Highway 13 & County Highway 5 Interchange, T115N R21W Section 14, Dakota County
NHNRP Contact #: ERDB 20060309

Dear Mr. Rogers,

The Minnesota Natural Heritage database has been reviewed to determine if any rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the area indicated on the map enclosed with your information request. Based on this review, there are 6 known occurrences of rare species in the area searched (for details, see enclosed database printout and explanation of selected fields). Following are specific comments for **only those elements that *may* be impacted** by the proposed project. Rare feature occurrences not listed below are not anticipated to be affected by the proposed project.

- Blanding's Turtles (*Emydoidea blandingii*), a state-listed threatened species, have been reported from the vicinity of the project area. For your information, I have attached a fact sheet and a flyer about the Blanding's Turtle. The fact sheet is intended to provide you with background information regarding habitat use, life history, and reasons for the species' decline, as well as recommendations for avoiding and minimizing impacts to this rare turtle. As you will note, there are two lists of recommendations. The first list contains recommendations to prevent harm to turtles during construction work, and is relative to all areas inhabited by Blanding's Turtles. Please refer to this first list of recommendations for your project. The second column expands on the first column, and contains greater protective measures to be considered for areas known to be of state-wide importance to Blanding's Turtles, or any area where greater protection for turtles is desired. Your project area is not within one of these priority areas. The flyer, which should be given to all contractors working in the area, contains an illustration and description of the Blanding's Turtle, as well as a summary of the recommendations provided in the fact sheet.

The Natural Heritage database is maintained by the Natural Heritage and Nongame Research Program, a unit within the Division of Ecological Services, Department of Natural Resources. It is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. Its purpose is to foster better understanding and protection of these features.

Because our information is not based on a comprehensive inventory, there may be rare or otherwise significant natural features in the state that are not represented in the database. A county-by-county survey of rare natural features is now underway, and has been completed for Dakota County. Our information about native plant communities is, therefore, quite thorough for that county. However, because survey work for rare plants and animals is less exhaustive, and because there has not been an on-

site survey of all areas of the county, ecologically significant features for which we have no records may exist on the project area.

The enclosed results of the database search are provided in two formats: index and full record. To control the release of locational information, which might result in the damage or destruction of a rare element, both printout formats are copyrighted.

The index provides rare feature locations only to the nearest section, and may be reprinted, unaltered, in an Environmental Assessment Worksheet, municipal natural resource plan, or report compiled by your company for the project listed above. If you wish to reproduce the index for any other purpose, please contact me to request written permission. **The full-record printout includes more detailed locational information, and is for your personal use only. If you wish to reprint the full-record printouts for any purpose, please contact me to request written permission.**

Please be aware that review by the Natural Heritage and Nongame Research Program focuses only on *rare natural features*. It does not constitute review or approval by the Department of Natural Resources as a whole. If you require further information on the environmental review process for other natural resource-related issues, you may contact your Regional Environmental Assessment Ecologist, Wayne Barstad, at (651) 772-7940.

An invoice in the amount of $73.59 will be mailed to you under separate cover within two weeks of the date of this letter. You are being billed for map and database search and staff scientist review. Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

Sarah D. Hoffmann
Endangered Species Environmental Review Coordinator

encl: Database search results
Fact sheets: Blanding's Turtle

Appendix D

Mn/DOT Cultural Resource Unit Review Letter

Minnesota Department of Transportation

Office of Environmental Services
Mail Stop 620
395 John Ireland Boulevard

Office Tel: (651) 296-3243
Fax: (651) 282-9834

January 12, 2006

Bob Rogers, SEH
3535 Vadnais Center Drive
St. Paul, MN 55110-5196

Dear Mr. Rogers:

Regarding: S.P. 1901-148 (TH 13 and CSAH 5 Interchange, Burnsville, Dakota County)
T 115N, R 21W, S 14

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the Programmatic Agreement (PA) between the FHWA and the Minnesota State Historic Preservation Office (SHPO) (June 2005).

The proposed improvements include constructing an interchange at the intersection of TH 13 and CSAH 5 in the City of Burnsville, Dakota County. A number of interchange configurations are being considered, however, it is assumed that a bridge overpass will be constructed along CSAH 5 and the vertical alignment of TH 13 will generally remain unchanged. In addition, the improvements will include reconstructing surrounding frontage/backage roads and access closures/restrictions. The project is anticipated to require the acquisition of commercial properties for right-of-way purposes.

The FHWA consulted with the 25 tribes who have expressed an interest in reviewing projects in Minnesota (letter sent on November 16, 2005). No responses were received from the tribes.

The area of potential effects (APE) for archaeological resources consists of the proposed construction area, and for standing structures is the first tier of adjacent properties. Staff from Mn/DOT's Cultural Resources Unit performed a field review of the project area to determine if there were any undisturbed areas that might require archaeological testing or if there were architectural history properties that were eligible for the National Register of Historic Places. The project area has been impacted through previous road construction and residential and commercial development. Mn/Model rates the general area as having "low" to "unknown" potential for containing archaeological deposits. Since all proposed construction activities will occur in previously impacted areas, it is unlikely that the APE contains intact, significant archaeological deposits. All of the buildings along the corridor are of recent construction.

We have determined that there will be **no historic properties affected** by the project as currently proposed. As there are no historic properties within the project APE, the section 106 review of this project is now complete and no SHPO comment period and response are required under the terms of the new PA. If the project scope changes, please provide our office with the revised information and we will conduct an additional review.

Sincerely,

Kristen Zschomler

Kristen Zschomler, RPA
Historian/Archaeologist
Cultural Resources Unit (CRU)

cc: Dr. Scott Anfinson, State Archaeologist
Joe Hudak, Mn/DOT CRU
Mn/DOT CO/CRU Project File