

9.0 CONSTRUCTION IMPACTS

This chapter describes potential construction-related impacts that may occur in the Preferred Alternative corridor and has been updated to reflect changes made since the DEIS. Impacts associated with construction will not be firmly determined until final design, but may include: traffic congestion; impacts to the transportation system; impacts to business access; noise; air quality; visual; water quality and soil erosion; river substrate/habitat impacts; canoe/boat use; potential contaminated substance spills/leaks; borrow and excess materials; utility disruption; and earthborne vibrations. All applicable precautions will be taken to limit impacts connected with the Preferred Alternative's highway, interchange and bridge construction activities.

9.1 AFFECTED ENVIRONMENT

The area affected by the Preferred Alternative includes the City of Clearwater (southeast of the existing TH 24/I-94 interchange) north to the City of Clear Lake, including the existing alignment of 70th Avenue and future connections to TH 24, CSAH 8 and TH 10, as well as the Mississippi River. Previous chapters of this FEIS describe the existing transportation system, land use and natural resources in the project area.

9.2 ENVIRONMENTAL CONSEQUENCES

9.2.1 Traffic Congestion

It is expected that construction of the Preferred Alternative will take approximately three to five years to complete. Construction is likely to cause temporary traffic delays and temporarily make it more difficult to access development adjacent to the Preferred Alternative corridor. Refer to the DEIS for a more detailed discussion of the traffic impacts anticipated with the construction of the Preferred Alternative (Alternative C, as discussed in the DEIS).

The anticipated impacts to traffic resulting in congestion will continue until construction is complete. A construction staging plan will be developed during final design and will further assess potential traffic congestion problems that may arise due to construction. The staging plan will attempt to balance the need for property access with minimizing the total duration of construction. Traffic control measures will be used in accordance with the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD).

9.2.2 Transportation System

A construction staging plan will be completed during the final design stage of the project, and will identify the potential to either maintain or detour traffic within the Preferred Alternative corridor. The construction staging plan will attempt to minimize disruptions to traffic patterns while maximizing the directness of detoured routes, thereby minimizing short-term impacts on emergency services (police, fire, rescue, and hospital access) and transit services throughout the

project area. The impact of detours on travelers would most likely be experienced around the I-94 and TH 10 interchanges as well as other intersecting county roadways (e.g., CSAH 75 and CSAH 8). Other roadways involved in the detour routes may also experience impacts.

The BNSF Railroad parallels the south side of the TH 10 corridor within the project area. The Preferred Alternative includes grade-separation of the railroad and the interregional connection. Mn/DOT will coordinate with the railroad regarding construction activities so that rail operations will not be affected during construction.

9.2.3 Economic (Business Access)

Section 9.2.3 of the DEIS describes efforts that will be taken to minimize impacts on existing businesses along the Preferred Alternative corridor during construction. As part of the construction staging plan, efforts will be made to ensure that traffic movements and access to these businesses is maintained during construction.

9.2.4 Noise

Noise will be generated by construction equipment used in the construction of highway improvements. All construction equipment will be properly muffled and held to the manufacturer's specifications as they pertain to operational noise levels. Construction methods that could result in noise of inordinate levels or intrusiveness (such as pile driving) may be necessary. The noise associated with these activities will be minimized in intrusiveness by restricting the hours of operation as much as possible.

Refer to Section 9.2.4 of the DEIS and Section 6.2 of this FEIS for a detailed examination of potential noise impacts that may result from construction of the Preferred Alternative.

9.2.5 Air Quality

Air quality impacts include increased dust and airborne particulates caused by grading, filling, removals and other construction activities, and may also result from emissions from construction equipment and possibly from traffic stopped at intersecting roadways or on potential detour routes. These impacts are expected to be minimal and of short duration.

Refer to Section 9.2.5 of the DEIS for additional information on air quality impacts from construction.

9.2.6 Visual

Temporary visual impacts will include the presence of equipment and workers, temporary changes in the views of travelers when rerouting is necessary and the addition of traffic or increased time during which traffic remains in a particular area due to increased congestion.

Refer to Section 9.2.6 of the DEIS for additional discussion of the visual impacts that will occur with the construction of the Preferred Alternative.

9.2.7 Water Quality and Soil Erosion

The potential for soil erosion and impacts on water quality are greatest during construction, when removal of vegetation for initial clearing, grubbing, and grading activities exposes soil and makes it more susceptible to erosion. Areas adjacent to the Mississippi River, lakes, streams, and wetlands have the highest potential for adverse impacts. A National Pollutant Discharge Elimination System (NPDES) permit is required for this project. The erosion prevention and sediment control requirements of the NPDES permit will be followed, as will best management practices (BMPs); previous sections of this FEIS (e.g., 7.2.3, Section 6.9.3) discuss these measures in more detail. An erosion control plan will be developed as part of the final design.

Construction in or near waterways and wetlands will be undertaken in accordance with Mn/DOT's Standard Specifications for Road and Bridge Construction or special provisions to minimize erosion and sedimentation. Temporary and permanent erosion control methods may include silt fences, flotation silt curtains, retention basins, detention ponds, interceptor ditches, seeding and sodding, riprap of exposed embankments, erosion mats, and mulching. Drainage systems, including ditches on private lands, will be maintained, restored or re-established in a manner that will not impound water. Storm water detention ponds will be constructed in the floodplain on the river's north bank (downstream of the new crossing) and on the south bank (to intercept runoff before it enters the river); see Section 6.5.2 of this FEIS for additional detail.

9.2.8 River Substrate/Habitat Impacts

Construction of the bridge piers for the Preferred Alternative will result in some disturbance of the river substrate. Based on river analyses conducted since the DEIS, it is anticipated that construction barges will be used during bridge construction. The construction activities will also include coffer dams and steel pile foundation (refer to February 7, 2006 minutes of meeting with MnDNR in Appendix A). As stated in Section 6.5.1.3 of this FEIS, the river in the area of the Preferred Alternative appears to be relatively unstable with steep banks and erosion evident at the sharp bend downstream from the alignment. No major fish habitat is present at the river crossing site. Fish Creek, an outlet channel from Fish Lake to the Mississippi River, provides high quality fish habitat, but does not provide amphibian habitat. In August 2001, all mussels encountered near the Preferred Alternative's river crossing were collected and moved out of the corridor by the MnDNR to avoid any future impacts from bridge construction. Another mussel survey will be conducted prior to project construction, and any identified mussels will be relocated at that time. A prominent deep wintering hole is present at a sharp bend in the river approximately one mile downstream of the Preferred Alternative.

Water quality/sedimentation impacts to aquatic species will be minimized and mitigated with the implementation of appropriate BMPs, as discussed in Section 9.2.7 above. Direct impacts to river substrate/habitat will be avoided to the greatest extent possible by planning construction activities to minimize disturbance of the river bottom.

9.2.9 Canoe/Boat Use

Construction impacts to the river (which is designated as a State Canoe and Boating route) are expected to be temporary, and are discussed in detail in Section 6.10 of this FEIS.

9.2.10 Potential Contaminated Substance Spills/Leaks

If a spill or leak of hazardous or toxic substances should occur during construction of the Preferred Alternative, it will be addressed according to MPCA containment and remedial action procedures. Of specific concern is the potential release of hazardous or toxic substance (e.g., during refueling) into the river - a source water protection area. A spill containment plan is required to be in place prior to construction to minimize these potential impacts.

9.2.11 Borrow or Excess Material

Preliminary estimates indicate that approximately 850,000 cubic yards of borrow may be required for this project. This figure is an estimate and is subject to refinement closer to construction; furthermore, it excludes any excess material obtained from subgrade and pond excavation. No excess material will be disposed into sensitive areas (e.g., wetlands, floodplains).

9.2.12 Utility Disruption

The Preferred Alternative corridor includes an above-ground high tension electric power line from the Xcel Energy SHERCO Plant parallel to CSAH 8. Identification of other above- and underground utilities will be completed during final design, which will minimize potential impacts to utilities and include coordination with service providers to move utilities.

9.2.13 Earthborne Vibrations

This project is not anticipated to require blasting; however, it could involve pile driving, compacting and/or pavement breaking or the operation of other construction equipment that may result in temporary earthborne vibrations. Refer to Section 6.9.2 of this FEIS for additional information on soil stability.

9.3 MITIGATION

Mitigation of construction-related impacts will include implementation of a detailed erosion control plan; a plan for management and disposal of excess material; a construction staging plan; special construction techniques for river bridge construction; traffic flow management techniques; and access maintenance and/or detour plans. Construction activities will follow standard specifications, and noise restrictions will be incorporated in areas deemed appropriate. In addition, safety measures (e.g., fencing, signage) will be used to prevent the public from entering construction areas or from passing beneath bridge construction (when overhead activities are a concern).