

**HIGHWAY 10 ELK RIVER
ENVIRONMENTAL ASSESSMENT/ENVIRONMENTAL ASSESSMENT WORKSHEET
EXECUTIVE SUMMARY**

INTRODUCTION

The Trunk Highway (Highway) 10 corridor is an important east-west principal arterial route in central Minnesota connecting Minneapolis-St. Paul to Fargo-Moorhead and beyond. Increasing congestion and traffic volumes along the corridor threaten the ability of Highway 10 to deliver safe and efficient transportation service.

Identifying possible solutions to transportation problems along the Highway 10 project corridor within Elk River requires an understanding of the context of the highway and surrounding lands. Existing land use through the majority of the project corridor is categorized as “Old Town” in the *City of Elk River Comprehensive Plan* (August 2004), which reflects a unique land use mixture in and around downtown Elk River including commercial uses, residential uses, civic features, and public spaces. South of downtown Elk River is the Mississippi River. Lake Orono is located just to the west of the project terminus. A BNSF Railway line is located parallel to Highway 10 through downtown Elk River and directly intersects several local roadways (e.g., Main Street, Jackson Avenue, and Proctor Avenue). According to Mn/DOT railroad maps, this rail line is one of the busiest lines in Minnesota, and also includes additional traffic from the Northstar Commuter Rail service. The proposed solution to the transportation problems has taken into account the potential negative impacts on the surrounding environment and strived to avoid or minimize these impacts.

PURPOSE AND NEED

The purpose of the proposed project is to address safety, mobility, and operational issues to maintain the functionality of Highway 10 as a principal arterial route, while also addressing and improving local transportation connectivity within Elk River. In meeting the project purpose, improvements must also provide for long-term local access and mobility for all transportation modes (e.g., motorized and non-motorized modes such as bicycles/pedestrians).

The eastern project terminus is located approximately 1,000 feet west of the Highway 10/101/169 system interchange in Elk River. The western project terminus is located approximately 1,900 feet west of Upland Avenue. The project termini were established based on the need for safety, capacity, and operational improvements along Highway 10 within downtown Elk River. Existing Highway 10 through Elk River is an urban arterial roadway characterized by lower speeds (existing Highway 10 speed limit through downtown is 35 miles per hour [mph]) and at-grade access. The east and west project termini match the existing Highway 10 expressway (posted speed limits of 60 mph) on the east and west ends of downtown.

The purpose of the current Environmental Assessment/Environmental Assessment Worksheet (EA/EAW) is to document the potential impacts to the human and natural environment as a result of the proposed Highway 10¹ improvements in the City of Elk River. There is no funding for construction of the proposed action. The purpose of the project is to identify long-term improvements to Highway 10 in Elk River that will enhance regional mobility, address traffic operations, and preserve local connectivity/accessibility while facilitating comprehensive planning in the City of Elk River. It is anticipated that when funding for construction of the proposed project becomes available, or funding for portions of the proposed project becomes available, a re-evaluation of the EA/EAW will be necessary prior to project implementation.

Summary of Transportation Issues

The long-term transportation needs for the project are summarized below.

- **Highway 10 Safety Within Elk River:** Over 340 crashes occurred on the Highway 10 mainline between the Highway 10/101/169 system interchange and Upland Avenue (CR 44) between 2003 and 2007. While the crash rates on Highway 10 do not exceed the statewide average for similar facilities, the potential for additional crashes is high due to increasing traffic volumes, the number of local street and business access points, and diversion of more volume to local streets that have higher crash rates.
- **Capacity and Traffic Operations:** Under year 2006 conditions, average annual daily traffic volumes on Highway 10 through Elk River are 29,000-34,000 vehicles per day (vpd). By year 2030, average annual daily traffic volumes on Highway 10 through Elk River are expected to be 52,000-66,000 vpd, exceeding the capacity of the existing four-lane facility.

Traffic operations analysis results indicate that three intersections within the Highway 10 study area currently operate at an unacceptable LOS E or worse in the p.m. peak hour. One of these is on the Highway 10 mainline at Proctor Avenue. Traffic operations are expected to deteriorate in the future (2030), with all key Highway 10 intersections operating at an unacceptable LOS F in the p.m. peak hour. Both regional and local traffic are experiencing these intersection delays.

In addition to unacceptable levels of service, both regional and local motorists will also experience greater delays under future 2030 No Build conditions compared to existing conditions. These delays contribute to reductions in average speeds on the Highway 10 corridor. Based on a simulation model, speeds are estimated to be 14 to 20 mph slower than existing conditions in the p.m. and a.m. peak hours, respectively. These operational problems result in an overall corridor performance below the 55 mph target for medium-priority interregional corridors (IRCs).

- **Access Considerations:** Frequency of at-grade access points coupled with high mainline travel speeds contribute to increased accidents. Crash data indicates there are a high number

¹ Highway 10 is a US Highway. All US Highways in Minnesota are on the state trunk highway (TH) system. The segment of Highway 10 in the study area through Elk River is not on the National Highway System.

of rear end crashes, which indicates congestion or unexpected conditions such as high speeds combined with frequent at-grade access. Existing direct access to Highway 10 needs to be redesigned to reduce existing hazards and increase the efficiency of the main route, while still providing adequate local roadway connections for businesses and residences along the project corridor.

- **Local Connectivity and Accessibility:** The lack of a continuous frontage road system parallel to Highway 10 through Elk River contributes to the level of direct public and private access to Highway 10 and also results in a large number of local trips being diverted to Highway 10. Highway 10 and the BNSF Railway bisect the City of Elk River, resulting in disruptions to both regional and local traffic as local north-south traffic circulating within Elk River across the BNSF Railway and Highway 10 conflicts with through, regional trips on Highway 10. This also contributes to unsafe conditions for non-motorized traffic (e.g., pedestrians, bicycles) crossing Highway 10 and the BNSF Railway.

IDENTIFICATION OF PREFERRED ALTERNATIVE

The evaluation of Highway 10 concepts and the identification of the preferred alternative was a collaborative effort that included input from Mn/DOT staff, City of Elk River and Sherburne County staff, and local officials. Input from the public and business community throughout the project development process was also important in identifying the preferred alternative design.

Two concepts were evaluated as part of Highway 10 study: an expressway concept and a freeway concept. The expressway concept was determined to not fully address the transportation purpose and need for the project. While the six-lane expressway concept meets regional mobility goals, it does not address capacity and traffic operations needs and maintains some of the existing at-grade access.

While the freeway alternative represents the long-term vision for Highway 10 improvements through Elk River, there are components of the proposed project that can be implemented over time as funding becomes available. These elements are described below.

- **BNSF Railway:** Realignment of the BNSF Railway can occur as a separate project prior to conversion of Highway 10 to a freeway facility. The existing tracks will remain while the new alignment is constructed to maintain railroad operations.
- **Interim Expressway:** Prior to construction of Highway 10 as the proposed freeway facility, Highway 10 can be reconstructed as an expressway facility as an interim condition. While the expressway concept does not solve long-term mobility and traffic operations needs for Highway 10 through Elk River, it can provide additional time for acceptable traffic operations until funding for construction of the freeway facility can be secured.

Preferred Alternative Description

Highway 10 Mainline

The proposed project will reconstruct Highway 10 to a four-lane freeway facility. The Highway 10 alignment is shifted to the north from Main Street to Proctor Avenue adjacent to the BNSF Railway. This alignment shift accommodates a two-way frontage road along the existing Highway 10 alignment through downtown. From west of Upland Avenue to east of Proctor Avenue, Highway 10 will be depressed to pass underneath overpasses at Upland Avenue, Bridge Street, and Proctor Avenue. The extent to which Highway 10 can be depressed at this location is limited by the presence of groundwater.

Access between Highway 10 and local streets would be provided at Upland Avenue (interchange ramps to and from the west), Proctor Avenue (interchange ramps to and from the east) and Main Street (interchange ramps to and from the east). One-way frontage roads along the north and south sides of Highway 10 would connect the interchange ramps at Upland/Proctor Avenues. The westbound Highway 10 off-ramp at Main Street crosses under the highway to create a new intersection with Main Street and the proposed frontage road south of Highway 10.

Highway 10 Frontage Road System

Direct access to Highway 10 will be replaced with a continuous frontage road system from Upland Avenue to Main Street. Local access to downtown Elk River, businesses, and residences will be provided by these newly constructed interchanges and frontage roads. The frontage road system includes a two-lane, one-way westbound frontage road from Upland Avenue to Proctor Avenue along the north side of Highway 10, and a two-lane, one-way eastbound frontage road from Upland Avenue to Proctor Avenue along the south side of Highway 10. The frontage roads intersect with interchange ramps to and from the west at Upland Avenue.

Local Road Connections

Local roads will be reconstructed as needed to accommodate grade separations with Highway 10 and to connect to the frontage road system. Overpass bridges will be built over Highway 10 at Upland Avenue, Bridge Street, and Proctor Avenue. Jackson Avenue and Main Street will pass under Highway 10. Jackson Avenue will also pass under the proposed frontage road. A modern roundabout will be constructed just south of Highway 10 at the intersection of Main Street and CSAH 42.

BNSF Railway

The BNSF Railway will be realigned to the north of its current location from the Great River Energy (GRE) site to a point east of Proctor Avenue. At Main Street, the proposed BNSF Railway alignment is located approximately 100 feet north of the existing alignment.² The

² Distance as measured at the existing Main Street/Highway 10 intersection from the south tracks of the existing BNSF Railway alignment to the center tracks of the proposed BNSF Railway alignment.

proposed BNSF Railway right of way is 100 feet wide, and has been identified to accommodate a potential future third rail. Existing at-grade railroad crossings will be replaced with grade-separated crossings at Proctor Avenue, Jackson Avenue, and Main Street.

PREFERRED ALTERNATIVE IMPACTS

The Preferred Alternative would have both beneficial and adverse impacts on human and natural elements within the project area. Table ES-2 (provided at the end of this Executive Summary) provides a summary of the anticipated impacts of the Preferred Alternative. The table also provides information on where (chapter/section) impacts are discussed in detail within the EA/EAW. Brief summaries of the anticipated project impacts and mitigation are provided below.

Transportation Impacts

- **Highway 10 Safety within Elk River:** The freeway alternative eliminates existing at-grade access to Highway 10 through Elk River from the Lake Orono bridge west of Upland Avenue to the Highway 10/101/169 interchange. The proposed Highway 10 freeway through Elk River will eliminate conflicting movements at at-grade intersections and eliminate at-grade access points. The freeway alternative also includes grade-separation of the BNSF Railway at Proctor Avenue, Jackson Avenue, and Main Street, eliminating vehicle-train exposure.
- **Capacity and Traffic Operations:** Forecast (2030) ADT for the Highway 10 freeway alternative is 34,000 vpd to 78,000 vpd. The Highway 10 freeway alternative is consistent with the planning-level threshold capacity for a four-lane freeway facility.

The freeway alternative eliminates at-grade intersections on Highway 10 through downtown Elk River. As such, local and regional delays and congestion associated with at-grade intersections would be eliminated with conversion to a freeway facility. An intersection operations analysis of the freeway alternative shows that under future (2030) conditions, local roadway intersections are forecast to operate at an acceptable LOS D or better during the a.m. and p.m. peak hours (see Table 10).

- **Access Guidelines:** The freeway alternative is consistent with Mn/DOT access spacing guidelines for a medium priority IRC, principal arterial roadway. The freeway alternative eliminates direct private access to Highway 10 and redirects local roadways to the local network. The freeway alternative also eliminates traffic signals along Highway 10.
- **Local Connectivity and Accessibility:** The freeway alternative includes grade-separated crossings of the BNSF Railway at Main Street, Jackson Avenue, and Proctor Avenue, and grade-separated crossings of Highway 10 at Main Street, Jackson Avenue, Proctor Avenue and Bridge Street/Upland Avenue. These grade-separated crossings eliminate conflicts between local traffic circulating within Elk River and regional traffic on Highway 10. These grade separations also improve local connectivity across the highway between north and south Elk River.

The freeway alternative also includes a continuous frontage road system parallel to Highway 10 from Upland Avenue to Main Street. This frontage road system provides direct access to adjacent parcels and provides a primary route for local trips circulating through downtown Elk River. As a result, local trips would no longer be forced to use Highway 10 under the freeway alternative. The proposed east-west frontage road is forecast to attract approximately 20,000 vpd to 30,000 vpd with the freeway alternative.

The freeway alternative also maintains accessibility to and from Highway 10, and provides accessibility across Highway 10. Access between Highway 10 and the local roadway system is provided at three locations: Upland Avenue, Proctor Avenue, and Main Street. Interchange ramps at Upland Avenue provide access to Highway 10 to and from the west. Interchange ramps at Proctor Avenue provide access to Highway 10 to and from the east. The Main Street interchange provides access to and from Highway 10 to the east. These three access points are interconnected by the frontage road system parallel to Highway 10.

- **Multi-Modal Considerations:** The proposed design includes non-motorized traffic accommodations along local roadways that would be grade separated from the highway, accommodating bicycle/pedestrian movements from facilities and residential land uses north of Highway 10 to commercial uses south of Highway 10 in downtown Elk River. The freeway alternative also provides grade separated crossings of Highway 10 and the BNSF Railway that will improve bicycle and pedestrian safety for north-south movements across Highway 10 and the railroad.

Contaminated Sites

A Phase I Environmental Sites Assessment identified 33 sites of documented or potential contamination within the current study area. Eight (8) sites were identified as having high risk potential for contamination, and 18 were identified as medium risk potential sites. Four (4) high potential sites would be affected by right of way acquisition (2 total, 2 partial); 9 medium potential sites would be affected by right of way acquisition (8 total, 1 partial). Medium and high potential properties that are identified as total acquisitions are identified in Table 12.

All potentially contaminated properties identified in the Phase I will be evaluated for their likelihood to be impacted by construction and/or acquired as right of way. Any properties with a potential to be impacted by the project will be drilled and sampled if necessary to determine the extent and magnitude of contaminated soil or groundwater in the areas of concern. The results of the drilling investigation will be used to determine if the contaminated materials can be avoided, or the project's impacts to the properties minimized. If necessary, a plan will be developed for properly handling and treating contaminated soil and/or groundwater during construction.

Protected Species

State-Listed Species

Black sandshell mussels (*Lingumia recta*), which are identified by the DNR as a state species of special concern, have been identified in the Mississippi River. The Mississippi River (a Public Waters) runs along the project area, but the project will not have any direct impacts on the Mississippi River.

The project is not anticipated to result in any physical impacts to the Mississippi River; however, reconstruction of Highway 10 east of Main Street is in close proximity to the river. As noted by the DNR in their initial review of the project, mussels in general are vulnerable to decreases in water quality, and in particular, increased siltation. Construction of the project could result in impacts to any mussels within the Mississippi River near the project area as a result of erosion and sedimentation. Temporary construction erosion and sediment control measures in accordance with Minnesota Pollution Control Agency (MPCA) best management practices in place at the time of construction will be followed to minimize any sedimentation impacts. Removal of erosion control measures will not occur until all disturbed areas have been stabilized.

Blanding's turtles (*Emydoidea blandingii*), a state threatened species, have also been identified in the vicinity of the project area. A copy of the Blanding's Turtle Fact Sheet and Flyer will be included in the project special provisions to make project contractors aware of the possible presence of these turtles, and to help project contractors recognize the turtle in the field.

Federally-Listed Species

There are no federally listed endangered, threatened, or proposed candidate species or listed critical habitat identified in Sherburne County. A determination of effect for federally listed species will be made closer to the time of project construction.

Land Use

The proposed project is located within the urban core of the City of Elk River. Current land use along the project corridor consists primarily of developed land uses such as residential, commercial, and industrial uses. Land use changes are likely to occur prior to construction of the proposed project. The Preferred Alternative for Highway 10 was developed in coordination with the City of Elk River. Completion of the EA/EAW at this time will allow the City of Elk River to incorporate the future Highway 10 design into their comprehensive planning activities.

Impacts on Wetlands

Approximately 2.36 acres of wetland impacts will result from the proposed project. After design is finalized, a wetland mitigation plan for replacement of the affected wetland areas will be developed. That plan will reassess the areas of wetland impacts (and mitigation needed) based on formal wetland delineations, final design, and the current and applicable laws and regulations in place at the time of project construction.

Water Wells and Drinking Water Supply Management Area

Water Wells

As the project corridor is located in the urban core of Elk River, land uses throughout the study area are serviced by municipal utilities. Two wells were identified near the western terminus of the project corridor at Lake Orono. No impacts to the two identified wells are anticipated. If any unused or unsealed wells are discovered in the project area during construction, they will be addressed in accordance with rules in place at the time of construction.

Drinking Water Management Supply Area

There are three delineated Drinking Water Management Supply Areas (DWMSA) located within the project area. Based on information from the Minnesota Department of Health, all three have very low vulnerability for contamination. Final design studies will determine whether additional measures such as lining of proposed stormwater ponds are necessary to prohibit infiltration into groundwater. No impact to the drinking water supply is anticipated as a result of the proposed project.

Water-Related Land Use Management District

Floodplain Impacts

The project will result in fill impacts to the Lake Orono floodplain near the western project terminus. Approximately 670 feet of transverse impact to the floodplain is anticipated. A floodplain assessment was completed in accordance with Presidential Executive Order 11988. No substantial floodplain impacts are anticipated as a result of the project.

Local Land-Use Management Districts

State highways such as Highway 10 are not subject to local regulations; however, compatibility of the proposed action with local ordinances is an important consideration.

- **Shoreland Overlay District:** The City of Elk River has designated a shoreland overlay district adjacent to the Mississippi River and Lake Orono. The boundary of the shoreland overlay district along the Mississippi River corresponds to the Mississippi wild and scenic river land use district. The Elk River shoreland zoning ordinance is concerned with erosion control and utilizing natural vegetation and topography to screen views from public waters.

Erosion control and re-vegetation will follow best management practices and Mn/DOT standard practices in place at the time of final design and construction.

- **Mississippi River Wild and Scenic Land Use District:** The City of Elk River has designated a wild and scenic river land use district adjacent to the Mississippi River. The wild and scenic river district boundaries within the City of Elk River are defined in Minnesota Rules parts 6105.0910 and 6105.0959. The proposed reconstruction of the Main Street intersection with CSAH 42, and the Main Street connection to the proposed Highway 10 frontage road, are located within the Mississippi wild and scenic land use district boundaries.

The Elk River wild and scenic river district ordinance is concerned with erosion control and utilizing natural vegetation and topography to screen views from public waters. Erosion control will follow best management practices and Mn/DOT practices in place at the time of final design and construction. Vegetation and aesthetic enhancements (i.e., landscaping) will be identified prior to construction, consistent with Mn/DOT practices in place at the time of project implementation.

Mississippi River (State-Designated Wild and Scenic River)

This segment of the Mississippi River is designated by the DNR as “recreational.” Recreational rivers are those rivers that may have undergone some impoundment or diversion in the past and that may have adjacent lands which are considerably developed, but that are still capable of being managed so as to further the purposes of the State Wild and Scenic Rivers Act.

Based on preliminary design of the Preferred Alternative, construction limits are not anticipated to extend into the Mississippi River. No substantial changes to the characteristics of this segment of the Mississippi River are anticipated with the proposed project. Recreational users of the Mississippi River are not anticipated to be affected by project construction activities.

Erosion and Sedimentation

There is a potential for erosion during construction, due to the presence of areas of Highly Erodible and Potentially Highly Erodible land and steep slopes within the project area, primarily along the Mississippi River. The potential for erosion during construction will exist, as soils are disturbed by excavation and grading. Erosion and sedimentation of all exposed soils within the project corridor will be minimized by utilizing the appropriate best management practices (BMPs) during construction. Temporary and permanent erosion control plans will be identified in the final site grading and construction plans for each stage as required by the National Pollutant Discharge Elimination System (NPDES) construction stormwater permit in place at the time of project implementation.

Water Quality

The project will increase the amount of impervious surface in the corridor, thereby increasing stormwater runoff that may contain roadway pollutants. The proposed project will include a combined urban and rural stormwater conveyance system. The urban stormwater conveyance system will feature storm sewer and discharge to designated stormwater treatment facilities; the rural stormwater conveyance system will utilize vegetated ditches. All stormwater generated from the Highway 10 corridor and interchanges will be directed to stormwater detention basins and/or infiltration/filtration basins located throughout the extents of the proposed project. The proposed best management practices are expected to mitigate the adverse effects of the increased impervious surfaces and pollutant generation. In addition to providing water quality treatment, the stormwater detention basins will also provide discharge attenuation. The project will be revisited during final design to ensure that the design is consistent with water quality and quantity regulations in place at that time.

Air Quality

This project does not lie in an area where conformity requirements apply. A qualitative analysis indicates that the Preferred Alternative for Highway 10 would result in an improvement of air quality conditions. Under existing conditions, there is significant queuing at traffic signals on Highway 10. This causes increased levels of carbon monoxide emissions and concentrations in the project area. The proposed design on Highway 10 would remove the signals and eliminate queuing on Highway 10 resulting in lower carbon monoxide emissions and concentrations.

Improvements in vehicle technology and in motor fuel regulations continue to cause reductions in vehicle emission rates. The EPA Mobile 6.2 emissions model estimates that emission rates will fall by at least 15 to 25 percent from 2006 to 2030. Consequently, 2030 vehicle-related CO concentrations in the study area are likely to be lower than existing concentrations even considering the increase in project-related and background traffic.

Emissions of projected priority mobile source air toxics (e.g., acetaldehyde; acrolein; benzene; 1,3-butadiene; formaldehyde; and diesel particulate matter) are expected to decline as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2030.

The improvements to Highway 10 contemplated as part of Preferred Alternative will have the effect of moving some traffic closer to nearby homes, schools and businesses. In summary, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build alternative could be higher relative to the No Build alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSATs will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA'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.

Noise

State daytime and nighttime noise standards are exceeded along the project corridor under existing conditions. State daytime and nighttime noise standards are predicted to be exceeded with future (2030) Build conditions. Construction of the project will result in increases in traffic noise due to changes in traffic volumes and changes in the vertical and horizontal alignment of project-area roadways. Cost-effectiveness of noise barriers was calculated; one 15-foot high wall located along the south side of Highway 10 between Proctor Avenue and Bridge Street that achieved a 5 dBA reduction was found to be cost-effective and is proposed.

Traffic noise impacts and mitigation will be re-assessed in the future at the time of project implementation, based on conditions and land uses in place at that time. Decisions on noise mitigation to be included in the project will be based on the results of the future noise impact reassessment. Final mitigation decisions will be subject to community input, input from affected property owners, and final design considerations.

Archaeological and Historic Resources

The proposed project has been reviewed pursuant to Section 106 of the National Historic Preservation Act of 1966 (as amended), in accordance with 36 CFR 800. This project would result in an adverse effect to the St. Paul and Pacific (BNSF) Railroad Corridor, a historic resource eligible for listing in the National Register of Historic Places (NRHP). Mitigation for adverse effects to the St. Paul and Pacific (BNSF) Railroad Corridor are described in detail in a Memorandum of Agreement (MOA). This MOA is included as Appendix E of the EA/EAW.

A Phase I archaeological survey was completed for the proposed project. The Phase I survey area for archaeology includes two locations, one on the eastern end and one on the western end of the APE. The eastern survey area was visually inspected and determined to have low archeological potential. For this reason, no additional work is recommended for the eastern survey area. The western survey area is located near Tipton Circle, northeast of Lake Orono. Landowner permission to access this survey area was denied. A Phase I survey of the western survey area will be conducted once access is obtained.

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Farmland

No prime farmland or farmland of statewide importance will be affected by the proposed project. The proposed project area is located in the urban core of Elk River and is characterized by predominately residential and commercial/industrial development. The proposed project will not cause any adverse impact to agricultural land or operations. No agricultural land will be acquired and no farms will be severed or triangulated. The project will not have an effect upon agricultural production in Sherburne County.

Parkland/Recreational Areas

There are no designated parks or recreation areas adjacent to Highway 10 within the project area. Babcock Memorial Rest Area is located just east of the Highway 10 Project eastern terminus. The Department of Natural Resources (DNR) supervises, operates, and maintains the easternmost portion of the site as a Water Access Site (WAS) through an interagency agreement and limited use permit with Mn/DOT. The Highway 10 Project will not affect Babcock Memorial Rest Area. The City of Elk River Parks Master Plan identifies a future trail along the Mississippi River from Main Street/CR 42 through the Babcock Memorial Rest Area property. The proposed project does not preclude construction of a future trail at this location.

Visual Impacts

The proposed project will not create adverse visual impacts during construction or operation. The existing project environment includes the BNSF Railway, roadways, traffic signals, as well as the existing built environment within downtown Elk River. The proposed project will alter the existing visual elements with views of additional pavement, new retaining walls, new storm water ponds, and new bridges and interchange ramps. Mn/DOT will coordinate with the City of Elk River prior to project implementation to identify appropriate aesthetic enhancements for the Highway 10 project corridor, consistent with Mn/DOT policies in place at that time.

Railroad

The proposed project includes realignment of the BNSF Railway to consolidate the Highway 10 corridor and BNSF Railway corridor through Elk River and to accommodate grade-separations at Main Street, Jackson Avenue, and Proctor Avenue. A 6,000-foot long segment of the BNSF Railway will be realigned to the north of its existing alignment from the Great River Energy (GRE) site to east of Proctor Avenue, including construction of three new bridges over/under local roadways. The proposed BNSF Railway alignment is located approximately 100 feet north of its existing alignment at Main Street. The proposed railroad right of way width is 100 feet. The proposed railroad right of way is designed to accommodate a future third track.

Impacts associated with the BNSF Railway realignment within Elk River as part of the Highway 10 Project are summarized below.

- **Right of way:** BNSF Railway realignment will require 13.1 acres of new right of way. The proposed realignment will require the total acquisition and relocation of 4 residential units and the total acquisition of 18 parcels currently in commercial uses. Acquisition of the 18 commercial parcels would currently result in 17 business relocations. Additional partial acquisitions will be necessary.
- **Train Noise:** Train noise will be evaluated as part of future project documentation based on Mn/DOT practice and methodology in place at that time.
- **Vernon Cemetery:** The Vernon Cemetery was determined not eligible for listing on the NRHP (see SHPO correspondence in Appendix B). Realignment of the BNSF Railway to the north will require minor realignment of an access road within the Vernon Cemetery. Additional studies will be undertaken during final design to confirm that the access road will not impact any burial sites.
- **Railroad Operations:** Maintenance of railroad operations was a key consideration in project development. Because the BNSF Railway would be constructed on a new alignment, the existing tracks would remain in operation during construction of the proposed alignment. When construction is complete, train traffic would be shifted to the new alignment and construction of the Highway 10 freeway section at Main Street could be completed. The existing tracks could then be removed.

Mn/DOT District 3 is also proposing reconstruction of Highway 169 to a freeway facility through Elk River (SP 7106-73). The Highway 169 Project includes construction of the BNSF Railway on a new alignment to the north of its existing alignment from the GRE Site east to 171st Avenue, including construction of a new railroad bridge over Highway 169. Construction of the BNSF Railway on a new alignment allows the existing tracks and bridge to remain in operation while the new tracks and bridge are under construction.

The BNSF Railway realignment associated with the Highway 10 Project and Highway 169 Project have been designed so that it is feasible for each to be constructed to match existing conditions or proposed future conditions on the BNSF Railway. However, it is likely that construction of the proposed BNSF Railway alignment, grade separations through downtown Elk River, and new bridge over Highway 169 would occur as one project.

Cumulative Potential Effects

Impacts resulting from the project include contaminated properties; wetlands; water quality; groundwater; traffic noise; and cultural resources. Given laws, rules and regulations in place, as well as local regulatory requirements and comprehensive planning and zoning controls, adverse cumulative impacts to these resources are not anticipated.

Social Impacts

Access Changes

The proposed project will result in the closure of access along Highway 10. This includes the closure of all private driveways within the project limits with access to Highway 10. Under Build conditions, businesses that had direct driveway access to Highway 10 will have traffic redirected to proposed frontage roads and the local road system. Local residents will access Highway 10 via interchange ramps at Upland Avenue (westbound), Proctor Avenue (eastbound), and Main Street (eastbound). Although these access changes result in more circuitous travel routes for some properties, the increased travel distances are offset by improved safety and traffic operations within the study area (compared to the No Build Alternative).

Community Facilities

The proposed project is not expected to cause any adverse impact to any community or neighborhood. No categories of people uniquely sensitive to transportation (e.g. children, elderly, minorities, persons with mobility impairments) will be unduly impacted by the proposed project. There are no community facilities located within or adjacent to the project area.

Considerations Related to Pedestrians and Bicyclists

Existing paved sidewalks along Main Street, Jackson Avenue and Proctor Avenue will be replaced with pedestrian facilities along Main Street and Jackson Avenue under Highway 10 and at the proposed bridges over Highway 10 at Proctor Avenue and Bridge Street. The proposed action would improve safety for pedestrians and bicyclists by providing grade-separated crossings of Highway 10 and the BNSF Railway at Proctor Avenue, Jackson Avenue and Main Street.

Proposed trails and sidewalks along local roadways within the project area will be within public right of way. These facilities will serve to connect neighborhoods and residential land uses with other land uses (commercial, business) on both sides of the Highway 10 corridor. The proposed project will be designed to be consistent with ADA accessibility requirements in place at the time of final design and construction.

Section 4(f) Involvement and Section 6(f) Involvement

The project has been reviewed for Section 4(f) involvement. The project will cause an adverse effect to the St. Paul and Pacific Railroad Corridor, a historic district that has previously been determined as eligible for listing in the National Register of Historic Places. A Section 4(f) review was completed for this property.

The project has been reviewed for Section 6(f) involvement. The project will not cause the conversion of any land acquired, planned, or developed with funds from the Land and Water Conservation Fund (LAWCON). Therefore, there is no Section 6(f) involvement on this project.

Environmental Justice

Based on Census 2000 data, populations within and adjacent to the proposed project area are not considered to be predominantly low-income or minority populations. Based on the location of Section 8 and Section 202 housing facilities, low-income populations are located in Elk River but outside of the project area. Project impacts are distributed evenly throughout the project corridor, and the proposed improvements will provide benefits for all who utilize the corridor. Therefore, the proposed action will not have disproportionately high and adverse human health or environmental effects to any minority or low-income populations.

Economic Impacts

Tax losses due to property acquisition for the proposed project are less than one percent of the year 2007 property tax revenue and less than 0.5 percent of year 2007 Sherburne County general revenue. Tax losses for the City of Elk River due to property acquisition for the proposed project represent approximately 3.2 percent of the property taxes payable in year 2008.

The Build Alternative could result in the relocation of 30 commercial businesses located in Elk River. It is expected that businesses at these locations may change over time; some of the affected commercial parcels may undergo total redevelopment during the planning timeframe of the project. Where redevelopment does occur, it will provide the opportunity for Mn/DOT to work with the City of Elk River to preserve right of way with minimal impact to existing business owners and employees.

Right of Way Acquisitions and Relocation

Approximately 46.5 acres of right of way (135 affected parcels) would potentially be required as either total or partial acquisitions for the proposed project. The proposed project would potentially require the total acquisition of 44 individual parcels currently in residential land uses. Of these 44 parcels, 41 represent single-family residences and one represents an apartment building along the east side of Proctor Avenue south of School Street. This apartment building houses 21 units.

The timing of these acquisitions and relocations would be dependent upon funding for the proposed project. The project is not funded or programmed at this time. Because the timing of future acquisition and relocation is unknown, the supply of replacement housing in Elk River may fluctuate over time. However, given the current available housing supply, residential growth patterns in Elk River, and potential redevelopment of downtown Elk River, there is no reason to believe that adequate replacement housing would not be available in the future at the time of project construction.

The proposed project would potentially require the total acquisition of 47 individual parcels in commercial land uses representing 30 businesses. Eighteen of the affected commercial parcels are vacant, and four of the commercial parcels are parking lots.

The City of Elk River recently redeveloped a portion of downtown south of Highway 10 with available retail/commercial space. Other commercial/retail space is available within Elk River along the Highway 169 commercial corridor. Future redevelopment of downtown north of Highway 10 will likely create additional commercial/retail opportunities, although no specific plans are in place at this time. Therefore, there is no reason to believe that adequate space would not be available for business relocations in the future at the time of project construction.

Construction Impacts

Construction activities will result in temporary construction impacts related to air quality, noise dust generation, vibration, traffic and access. Construction of the proposed improvements will be staged to minimize impacts associated with construction such as traffic and access impacts, air quality, and noise.

Traffic patterns will be affected during construction of the proposed project. There may be temporary roadway closures to accommodate certain construction activities. Temporary access changes may also be necessary during reconstruction. Coordination with businesses will be conducted in compliance with Mn/DOT standard practices and requirements in place at the time of project construction.

The project would be staged to maintain train operations on the BNSF Railway line. The existing BNSF Railway mainline would remain in operation during construction of the railroad new alignment. After the new alignment has been constructed, train traffic would be shifted to the new alignment and the existing BNSF Railway mainline tracks would be removed. Continued coordination with BNSF Railway will be necessary through final design and construction.

A plan for management and disposal of any excess materials associated with construction of the project will be developed as needed. Regulated materials/waste will be managed on this project in accordance with Mn/DOT special provisions.

PROJECT SCHEDULE, COSTS, AND FUNDING

The estimated cost of the proposed project (construction, right of way, engineering) is \$210 to \$230 million (2008 dollars). The right of way cost estimate (approximately \$37 million) was based on 2008 assessed values from Sherburne County. The conversion of Highway 10 to a freeway facility through the City of Elk River is not programmed for construction at this time. Right of way costs (acquisitions and relocations) would be subject to change as a result of land use changes/redevelopment and future land costs/property values between the present and time of construction.

The proposed project is not listed in the Mn/DOT *2010-2013 State Transportation Improvement Program (STIP)* (September 2009). The proposed project is not identified for construction in the Mn/DOT *Ten-Year Highway Work Plan (2010–2019)* (March 2010).

Construction of the proposed improvements to Highway 10 in Elk River are currently identified in the *Mn/DOT District 3 20-Year Highway Investment Plan 2009-2028* (August 2009) as a project that warrants consideration under Policy 5: Statewide Connections (investments that enhance mobility on IRCs) for the 2019-2028 planning period. There is no funding in place for construction of the Preferred Alternative.

The anticipated project schedule is summarized below.

Anticipated Project Schedule

Activity	Anticipated Date
• Corridor Study and Preliminary Design Studies	2008
• EA/EAW	2009 – 2010
• Public Hearing/Opportunity for Public Hearing	Summer 2010
• EIS Need Determination	Fall 2010
• Right of Way Acquisition	To be determined
• Begin Construction	To be determined

ANTICIPATED PERMITS AND APPROVALS

Table ES-1 identifies the permits and approvals anticipated for the construction of the proposed project.

**TABLE ES-1
AGENCY PERMITS, APPROVALS, AND OTHER REQUIRED ACTIONS**

Permit	Agency	Action Required
Federal		
Environmental Assessment	FHWA	Approval
EIS Need Decision	FHWA	Determination
Section 106	Mn/DOT CRU on behalf of FHWA	Determination of Effect
Section 404 – General Permit/Letter of Permission (GP/LOP)	U.S. Army Corps of Engineers	Permit
State		
Environmental Assessment	Mn/DOT	Approval
EIS Need Decision	Mn/DOT	Approval
Public Waters Work Permit (if necessary)	Minnesota Department of Natural Resources (DNR)	Permit
Wetland Conservation Act (Replacement Plan) for new roads and capacity expansion projects	Mn/DOT with review by Board of Soil and Water Resources, and Minnesota Department of Natural Resources	Approval/Review

TABLE ES-1 continued
AGENCY PERMITS, APPROVALS, AND OTHER REQUIRED ACTIONS

Permit	Agency	Action Required
State		
Temporary Water Appropriation Permit (if needed for dewatering)	DNR	Permit
National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Permit	Minnesota Pollution Control Agency (MPCA)	Permit
Section 401	MPCA	Certification
Section 106 (Historic / Archeological)	Minnesota State Historic Preservation Officer (SHPO)	Concurrence
Local		
Municipal Consent	City of Elk River	Approval
Other		
Railroad Agreement	Mn/DOT and BNSF Railway	Written Agreement
Railroad Permit	Mn/DOT and BNSF Railway	Permit (stand-alone or part of Agreement)

**TABLE ES-2
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS
(Highway 10 in Elk River)**

Impact	Related EA/EAW Section	Preferred Alternative Impact	Mitigation
Total Cost (millions of dollars)	V.A.	Estimated cost of the project is \$210 million to \$230 million (year 2008 dollars).	Not applicable.
Benefit-Cost Analysis (compared to No Build Alternative)	IV.C	Preferred Alternative would result in B/C ratio of 1.6. Project is economically justified as B/C ratio is greater than 1.0.	Not applicable.
Land Use	II.B and VII. A Item 9	Current land uses along the project corridor includes developed land uses (residential, commercial, and industrial uses). Work on the State Trunk Highway system is not subject to any adopted local plans.	Not applicable.
Potentially Contaminated Sites (medium-risk and high-risk sites)	VII.A Item 9	Thirty-three (33) known / potentially contaminated sites along project corridor. Eighteen (18) sites identified as medium-risk sites. Eight (8) sites identified as high-risk sites.	All potentially contaminated properties identified in the Phase I will be evaluated for their likelihood to be impacted by construction and/or acquired as right of way. If necessary, a plan will be developed for properly handling and treating contaminated soil and/or groundwater during construction.
Fish, Wildlife and Ecologically Sensitive Resources	VII.A Item 11	Black sandshell mussels (<i>Lingumia recta</i>) (state species of special concern), have been identified in the Mississippi River. Construction could result in impacts to any mussels near the project area as a result of erosion and sedimentation.	Temporary construction erosion and sediment control measures in accordance best management practices in place at the time of construction.
		Blanding's turtles (<i>Emydoidea blandingii</i>), a state threatened species, have been identified in the vicinity of the project area.	Fact Sheet and Flyer included in the project special provisions.
		There are no federally listed endangered, threatened, or proposed, candidate species or listed critical habitat identified in Sherburne County.	Re-evaluation for federally-protected species and critical habitat prior to construction.

TABLE ES-2 continued
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS
(Highway 10 in Elk River)

Impact	Related EA/EAW Section	Preferred Alternative Impact	Mitigation
Wetlands	VII.A Item 12	Approximately 2.36 acres of wetland impacts.	Unavoidable wetland impacts will be replaced following current laws and rules in place at time of construction.
Drinking Water Management Supply Area (DWMSA)	VII.A Item 13	Three delineated Drinking Water Management Supply Areas (DWMSA) located within the project area. No impact to the drinking water supply is anticipated.	Final design studies to determine if stormwater treatment practices should be designed to prevent infiltration to groundwater.
Water-Related Land Use Management District	VII.A Item 14	<i>Local Land Use Management Districts</i> Shoreland overlay district and wild and scenic river land use district in Elk River. State highways such as Highway 10 are not subject to local regulations.	No mitigation necessary. Erosion control and re-vegetation consistent with aesthetic enhancements identified for the project, consistent with Mn/DOT practices in place at the time of project implementation.
		<i>Floodplain Impacts</i> Approximately 670 feet of transverse impact to the Lake Orono (Elk River) floodplain near western project terminus.	Final design to minimize floodplain impacts. No mitigation necessary as Preferred Alternative does not result in substantial floodplain impacts.
		<i>Mississippi River (State Wild and Scenic River)</i> No changes to recreational designation anticipated with reconstruction of the Highway 101 river crossing; crossing is consistent with guidance to use existing river crossing locations.	No mitigation necessary as no changes to designation are anticipated.
Erosion and Sedimentation	VII.A Item 16 and VII.A Item 19	Steep slopes and highly erodible land (HEL) and potentially highly erodible land (PHEL) within project area. Potential for erosion during construction as soils are disturbed by excavation and grading.	Best management practices (BMPs) implemented during construction. Temporary and permanent erosion control plans identified in the final plans as required by NPDES permitting for construction sites.

TABLE ES-2 continued
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS
(Highway 10 in Elk River)

Impact	Related EA/EAW Section	Preferred Alternative Impact	Mitigation
Water Quality: Surface Water Runoff	VII.A Item 17a and VII.A Item 17b	Increase in impervious surface area. Stormwater treatment BMPs expected to mitigate the adverse effects of increased impervious surfaces and pollutant generation, and also provide discharge attenuation. Stormwater discharged from the proposed project will not likely have a substantial impact on the water quality of the identified receiving water bodies.	Standards and rules in place at time of construction to be followed to mitigate the water quality and quantity impacts created by the project to the greatest extent practicable. Regulatory framework revisited during final design.
Safety	IV.B.2	Preferred Alternative eliminates existing at-grade access to Highway 10 through Downtown Elk River. Eliminates conflicting movements at at-grade intersections and access points. Includes grade-separation of the BNSF Railway, eliminating vehicle-train exposure.	No mitigation necessary.
Traffic Operations	VII.A Item 21	<p>Freeway alternative eliminates at-grade intersections on Highway 10 through downtown Elk River. Local and regional delays and congestion associated with at-grade intersections would be eliminated with conversion to a freeway facility.</p> <p>Local roadway intersections are forecast to operate at an acceptable LOS D or better during the a.m. and p.m. peak hours under future (year 2030) conditions.</p>	No impacts associated with traffic operations analysis; no mitigation necessary.
Access Changes	VII.B.1	Closure of existing at-grade access to Highway 10.	Interchange access at Upland Avenue (to/from west), Proctor Avenue (to/from east) and Main Street (to/from east).
Air Quality	VII.A Item 22	2030 vehicle-related carbon monoxide (CO) concentrations in the study are likely to be lower than existing concentrations even considering the increase in project-related and background traffic. Overall future mobile source air toxics (MSATs) expected to be substantially lower than today due to implementation of EPA's vehicle and fuel regulations.	No mitigation necessary.

TABLE ES-2 continued
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS
(Highway 10 in Elk River)

Impact	Related EA/EAW Section	Preferred Alternative Impact	Mitigation
Traffic Noise	VII.A Item 24 and Appendix G	Modeled noise receptor locations projected to exceed State daytime and nighttime noise standards under future (year 2030) Build conditions. Traffic noise impacts and mitigation to be re-assessed in the future at the time of project implementation based on rules, regulations and land uses in place at that time.	Noise wall proposed at one location along the south side of Highway 10 between Proctor Avenue and Bridge Street. Other analyzed locations did not meet Mn/DOT's reasonableness criteria or cost-effectiveness criteria.
Cultural Resources	VII.A Item 25	St. Paul and Pacific (BNSF) Railroad Corridor determined eligible for NRHP. Adverse effect to St. Paul and Pacific (BNSF) Railroad Corridor as a result of Preferred Alternative. Landowner permission to access the western survey area (near Tipton Circle, northeast of Lake Orono) was denied. A Phase I survey of the western survey area will be conducted once access is obtained.	Memorandum of Agreement (MOA) documents mitigation for adverse effect to St. Paul and Pacific (BNSF) Railroad Corridor.
Farmland	VII.A Item 25	The proposed project area is located in the urban core of Elk River and is characterized by predominately residential and commercial/industrial development. The proposed project will not cause any adverse impact to agricultural land or operations. No agricultural land will be acquired and no farms will be severed or triangulated.	No mitigation necessary.
Parks, Recreation Areas or Trails	VII.A Item 25	There are no designated parks or recreation areas adjacent to Highway 10 within the project area. The Highway 10 Project will not affect Babcock Memorial Rest Area. The proposed project does not preclude construction of a future trail along the Mississippi River from Main Street/CR 42 through the Babcock Memorial Rest Area property.	No mitigation necessary.
Visual Impacts	VII.A Item 26	The proposed project not anticipated to create adverse visual impacts. The proposed project will alter the existing visual elements with views of new transportation infrastructure.	Design and visual quality elements consistent with Mn/DOT policy in place at time of construction.

TABLE ES-2 continued
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS
(Highway 10 in Elk River)

Impact	Related EA/EAW Section	Preferred Alternative Impact	Mitigation
Compatibility With Plans and Land Use Regulations	VII.A Item 27	Work on the State Trunk Highway system is not subject to any adopted local plans. Completion of EA/EAW at this time to allow the City of Elk River to incorporate the future Highway 10 design into their comprehensive planning activities.	No mitigation necessary.
Infrastructure and Public Services	VII.A Item 28	Relocation of BNSF Railway to north of existing alignment to accommodate local road grade separations and Highway 10 alignment.	No mitigation necessary. Coordination and Railroad Agreement with BNSF Railway during final design.
Cumulative Impacts	VII.A Item 29	Low potential for adverse cumulative impacts to resources directly or indirectly affected by the project.	Not applicable.
Social Impacts	VII.B.1	Closure of existing access to Highway 10. Highway 10 access replaced with frontage roads and interchanges at Upland Avenue, Proctor Avenue and Main Street. Proposed project is not expected to cause any adverse impact to any community or neighborhood.	No mitigation necessary.
Considerations Related to Pedestrians and Bicyclists	VII.B.2	Pedestrian facilities along frontage roads, Main Street and Jackson Avenue under Highway 10, and proposed bridges over Highway 10 at Proctor Avenue and Bridge Street. Improved safety for pedestrians and bicyclists by providing grade-separated crossings of Highway 10 and the BNSF Railway.	No mitigation necessary. Project to be designed to be consistent with ADA accessibility requirements in place at the time of final design and construction.
Section 4(f) Resources and Section 6(f) Involvement	VII.B.3	Section 4(f) evaluation for adverse effect to St. Paul and Pacific (BNSF) Railroad Corridor. No Section 6(f) properties within the project area.	Mitigation for impacts to St. Paul and Pacific (BNSF) Railroad Corridor documented in Memorandum of Agreement.
Environmental Justice	VII.B.4	No low-income or minority populations within the project area. Proposed action will not have disproportionately high and adverse human health or environmental effects to any minority or low-income populations.	No mitigation necessary.

TABLE ES-2 continued
SUMMARY OF PREFERRED ALTERNATIVE IMPACTS
(Highway 10 in Elk River)

Impact	Related EA/EAW Section	Preferred Alternative Impact	Mitigation
Fiscal Impacts	VII.B.5	Tax losses due to property acquisition for the proposed project are less than one percent of the year 2007 property tax revenue and less than 0.5 percent of year 2007 Sherburne County general revenue.	Not applicable.
		Tax losses due to property acquisition for the proposed project represent approximately 3.2 percent of the property taxes payable for the City of Elk River in year 2008.	
Right of Way and Relocation	VII.B.6	Approximately 46.5 acres of right of way (135 affected parcels) would potentially be required for the proposed project. Total residential relocations include 44 parcels in residential uses (41 single-family houses, 1 apartment building). Total commercial relocations include 44 businesses (commercial businesses, professional offices). Total acquisitions also include 47 parcels in commercial land uses, currently representing 30 businesses.	The acquisition and relocation of property due to the proposed project will be conducted in compliance with state and federal laws and requirements in place at the time of final design, right of way acquisition, and construction.
Construction Impacts	VII.B.7	Temporary construction impacts related to traffic, access, air quality, noise, railroad operations, and disposal of excess materials.	Standard construction best management practices (in place at time of construction) to be implemented to minimize temporary construction-related impacts.
Indirect Effects	VII.B.8	The project area currently consists of developed land uses (residential, commercial, industrial). Highway 10 improvements are recognized in City's long-range land use planning. Construction of interchanges and closure of access not anticipated to result in substantial changes to current or future land use patterns and level or intensity of development.	No mitigation necessary.