

## **3.0 ALTERNATIVES**

This chapter of the FEIS briefly summarizes the Build and No-Build Alternatives studied in the DEIS and discusses the identification of DEIS Alternative C as the Preferred Alternative. In addition, the chapter summarizes the post-DEIS design modifications to the Preferred Alternative.

Reference can be made to Chapter 3 in the DEIS for a detailed description of the DEIS alternatives and the complete summary of the alternative development process, including early alternative locations studied and documented in the *Mississippi River Crossing Study* (1996 Study), the *I-94/TH 10 Regional Connection Scoping Document* (1997 Scoping Document) and the *I-94/TH 10 Regional Connection Scoping Decision Document* (2001 Scoping Decision Document).

### **3.1 SUMMARY OF DEIS ALTERNATIVES**

#### **3.1.1 No-Build Alternative**

The No-Build Alternative would continue to utilize the existing TH 24 corridor as the interregional connection between I-94 and TH 10, including existing at-grade access points, intersection/interchange configurations, and highway alignments and geometrics. The No-Build Alternative would include needed safety improvements and reconstruction of the existing TH 24 corridor (as required by routine maintenance) between I-94 and TH 10 within the study area. It is assumed that by 2040, the existing TH 24 bridge over the Mississippi River would need to be replaced as part of the No-Build Alternative. The No-Build Alternative could also include the consolidation of direct access points along TH 24 if safety conditions warrant it. Social, economic and environmental impacts of the No-Build Alternative were analyzed where relevant and compared to impacts of the Build Alternatives.

#### **3.1.2 Build Alternatives**

All four DEIS Build Alternatives analyzed included a four-lane freeway with interchanges at I-94 and TH 10, an overpass for CSAH 75, a bridge over the Mississippi River and a grade-separated crossing at the BNSF Railroad (see Figure 1). The differences among the alternatives are identified below. It was assumed that the existing TH 24 bridge over the Mississippi River would be reconstructed by 2040 as a separate project; however, for purposes of the Benefit/Cost Analysis completed for the DEIS, the cost of TH 24 bridge reconstruction was included in the cost of all corridor alternatives, including the No-Build alternative, to provide an even basis for comparing alternatives. Analysis of all Build Alternatives considered respective impacts to the Mississippi State Wild and Scenic River, an important state recreation and natural resource protection program, and considered impacts to other social, economic, or environmental resources.

##### **3.1.2.1 Alternative A**

Alternative A is located east of the City of St. Cloud. It intersects I-94 approximately 4.5 miles northwest of the TH 24 interchange. It continues northeasterly across the river, then heads north to TH 10. In addition to the common design elements identified for the Build Alternatives, this alternative includes four new overpasses at CSAH 75, CSAH 8, CR 60, and CR 65.

### 3.1.2.2 Alternative B

This alternative utilizes the existing TH 24 alignment from I-94 to approximately 70th Avenue, reconstructing it as a freeway facility. At 70th Avenue, the alignment shifts northward along 70th Avenue to its intersection with TH 10, approximately 1.2 miles northwest of the existing TH 24/TH 10 intersection. (Note: 70th Avenue is the same road alignment identified for Alternative C/Preferred Alternative.) This alternative includes a new local interchange at CR 57 and three new overpasses at CSAH 75, CSAH 8 and CR 76.

### 3.1.2.3 Alternative C/Preferred Alternative

Alternative C, the Preferred Alternative, intersects I-94 at a point approximately 1.6 miles southeast of the TH 24 interchange. It continues north-northeast on a new alignment across the river until it intersects with CSAH 8, where it then continues on the 70th Avenue alignment—same as Alternative B—before intersecting TH 10 1.2 miles northwest of the existing TH 24/TH 10 intersection (see Figures 3A-3C at the end of this chapter). In addition to the common design elements previously identified, the Preferred Alternative will include a local access interchange at TH 24 and three new overpasses at CSAH 75, CSAH 8 and CR 76.

### 3.1.2.4 Alternative D

Alternative D is located west of the City of Becker. The alignment begins approximately 0.6 miles west of the I-94 rest area east of the Hasty interchange. It continues north on a new alignment parallel to existing Barton Avenue until it reaches the river. North of the river, Alternative D parallels CSAH 53 before intersecting TH 10 0.2 mile east of the existing TH 10/CR 53 intersection. With this alternative, TH 25 is realigned to connect with the new interregional connection interchange at TH 10. This alternative includes an overpass at CSAH 8.

## 3.2 ALTERNATIVES EVALUATION PROCESS

The process used to develop and evaluate alternatives for the I-94/TH 10 Interregional Connection included:

- Pre-scoping evaluation of eight alternative corridors (A, B, C, D, D1, E, F and G) in the *Mississippi River Crossing Study* (published in 1996). The study area extended from Elk River to St. Cloud, and the study process included local government participation in a Technical Advisory Committee (TAC) and public participation at open house public meetings. Four corridors (between St. Cloud and Becker) of the eight corridors studied were recommended for further study.
- Scoping level development and evaluation of the four corridors recommended for further study by the 1996 *River Crossing Study*. The scoping process included local government participation in a TAC, input at open house public meetings and comments received on the Scoping Document during the public/agency review period.

- Detailed analysis of four Build Alternative alignments (A, B, C and D) and a No-Build Alternative in the draft environmental impact statement (DEIS) conducted from 2001-2003. The DEIS document was released for public/agency comment in January 2004. The DEIS studies included data collection, environmental and transportation analyses, design development, input from local governments and agencies in TAC and River Corridor Advisory Committee (RCAC) meetings, and public input at open houses and the DEIS public hearing.

In addition to the TAC and the RCAC, input from other project stakeholders and the public was received during preparation of the DEIS, during the DEIS comment period and/or during post-DEIS meetings with key stakeholders to review the Preferred Alternative evaluation/selection process. This included input from the project cooperating agencies (MnDNR, COE, and St. Cloud APO); wetland regulatory agencies; and local governments.

Although several factors were considered in evaluating the alternatives, some factors were given greater consideration than others, based on the information obtained during the DEIS analyses and input from project stakeholders. The factors that were given greater consideration (‘primary considerations’) included:

- How well each alternative meets the regional transportation function (i.e., project purpose and need), because meeting the transportation purpose is the reason for the proposed action. Five of the 26 individual evaluation factors used to compare alternatives (refer to Table 1.3 in the DEIS)—IRC, safety, vehicle miles traveled (VMT), vehicle hours traveled (VHT) and benefit/cost ratio (B/C)—relate to this primary consideration.
- How each alternative impacts the Mississippi Scenic Riverway, because the *Mississippi Scenic Riverway Cumulative Impacts Study* (2003) identified new roadway crossings over the Riverway as having the potential for substantial cumulative impacts to the scenic and recreational values of the Riverway if they were not located and designed to minimize impacts to those Riverway values. This primary consideration directly relates to the ‘Wild and Scenic River’ factors presented in Table 1.1 of this FEIS. Eight other factors (cultural resources, parks/recreation areas, threatened and endangered species, other natural resources, wetlands, floodplain, water quality, and erosion/sedimentation) described in Table 1.1 of this FEIS represent other values for which the Mississippi River was designated part of the state Wild and Scenic River system.
- Negative impacts [including direct and indirect (secondary) impacts] of each alternative on acquisition of existing ‘downtown’ properties and local access (community cohesion) within communities in the study area, because the DEIS analyses and input from the cities of Clearwater and Clear Lake indicated that some alternatives could have substantial social and economic impacts on their communities. This primary consideration takes into account six of the 26 individual factors (visual impacts, residential acquisitions, commercial acquisitions, economic, social/community, and secondary impacts).

Factors that are not included in the primary considerations described above but were also considered to distinguish among alternatives include unique impacts such as Section 4(f) impacts (cultural resources), threatened and endangered species, fisheries, etc., that may occur with one alternative but not others.

Based on evaluation of alternatives with respect to the three primary factors, with additional consideration of the other distinguishing evaluation factors—as summarized in Table 1.1 of this FEIS—Mn/DOT staff, with the support of a majority of the project stakeholders convened following the DEIS comment period, and concluded the following:

- Alternative A meets the transportation need; however there is another alternative (Alternative C) that was rated better with respect to vehicle miles traveled (VMT), vehicle hours traveled (VHT) and benefit/cost (B/C). Alternative A was not identified as having negative impacts on the communities of Clearwater or Clear Lake (and is supported by both communities). However, the location of Alternative A within the relatively undeveloped ‘scenic’ section of the Mississippi Riverway makes it an unacceptable Alternative with respect to this primary consideration, since there are other feasible Build Alternatives (e.g., Alternative C) located outside of the ‘scenic’ section of the Riverway. In addition, this alternative is located upstream from good fisheries habitat; within areas identified as locations of ‘known concentrations’ (north of TH 10 in the Alternative A study area) and ‘potentially important’ habitat for Blandings turtles (between I-94 and the Mississippi River near the southern portion of Alternative A); and in an area identified as a Loggerhead Shrike nesting area (north of the Mississippi River along Alternative A). There is also a farmstead identified as potentially eligible for the National Register of Historic Places that would be directly impacted by this alternative, resulting in possible Section 106 and Section 4(f) impacts. For these reasons, Alternative A is recommended to be eliminated from consideration.
- Alternative B should be eliminated from consideration due to its substantial negative local access (business access and community cohesion) and property acquisition impacts in Clearwater. There are other alternatives that meet the transportation need as well as or better than Alternative B and, although this Build Alternative would minimize impacts to the Mississippi Scenic Riverway, the impacts to Clearwater do not justify retaining this alternative solely for its lesser impacts to the Riverway. This position was supported by the MnDNR comment letter on the DEIS (refer to this letter in Appendix A). Alternative B could impact a potential archaeological resource.
- Alternative C was found to best meet the transportation purpose and was identified by MnDNR staff as the alternative that “could have the least environmental impact, while still satisfying the purpose of the proposal” because it is located in the vicinity of the existing TH 24 crossing and in the relatively developed area within the City of Clearwater (refer to this March 23, 2004 letter in Appendix A). Alternative C has no Section 4(f) impacts. This alternative is located at the southern end of the City of Clearwater and it bypasses downtown Clear Lake, so direct impacts to concentrated development in these communities will not result. A heron rookery is located along the river, in the vicinity of the Alternative C crossing, but at a distance that should not be disrupted by the crossing. The majority of other environmental impacts resulting from Alternative C were found to be on the same order of magnitude as other alternatives.
- Alternative D meets the transportation need; however there is another alternative (Alternative C) that was rated better with respect to VMT, VHT, and B/C. Although Alternative D does not directly impact Clearwater or Clear Lake, it could have indirect negative impacts. Secondary impacts from regional system improvements related to Alternative D (i.e., construction of TH 10 as a freeway to St. Cloud) would restrict access for

Clear Lake residents, emergency vehicles and farmers across TH 10 and result in direct construction impacts at the TH 10/ TH 24 commercial area for construction of an overpass needed to maintain TH 24 access across TH 10. In addition, both Clearwater and Clear Lake have identified the potential for loss of drive-by retail customers, since their communities would be by-passed by the new regional connection system. This alternative would not impact any Section 4(f) resources. Alternative D would have substantial impacts to the Mississippi Scenic Riverway. In their comment letter on the DEIS, MnDNR staff indicated that this alternative would “significantly impact the river and river users’ experiences” since it is located in a relatively scenic, natural area near an island campsite and at the public boat landing at Snuffy’s Landing. Good fisheries habitat and locations of a bald eagle nest and heron rookery nearby (both of which are located on the northeast side of Alternative D’s proposed crossing) are other reasons for concern about potential impacts from this alternative. For these reasons, Alternative D is recommended to be eliminated from consideration.

The comments and resolutions submitted during the DEIS public comment period did not demonstrate a clear consensus in public or local government support for any one alternative over the others. The regulatory agency comments focused more on general technical issues, impacts, and mitigation strategies to be discussed in the FEIS, and did not focus on stating positions opposing or supporting specific alternatives (with the exception of the MnDNR comments described in the Alternative B and Alternative C conclusions above). Therefore, based on the above findings, Mn/DOT staff, with the support of the project stakeholders, recommended Alternative C as the Preferred Alternative for the I-94/TH 10 Interregional Connection. The Mn/DOT Commissioner identified Alternative C as the Preferred Alternative in May 2004. All comments that have been received related to the proposed project are available on file at the Mn/DOT District 3 offices and are incorporated by reference where applicable in this FEIS.

Several meetings were held following the close of the DEIS comment period to review that document and the comment period findings about the relative impacts and benefits of each alternative, as well as Mn/DOT’s staff recommendation that Alternative C be carried forward as the Preferred Alternative. The project Technical Advisory Committee (TAC), River Corridor Advisory Committee (RCAC), and St. Cloud Area Planning Organization (APO) each concurred with the Mn/DOT staff recommendation of Alternative C as the Preferred Alternative. In addition, representatives from wetland regulatory agencies (e.g., the Army Corps of Engineers, Minnesota Board of Soil and Water Resources, among others) met with Mn/DOT project staff following the DEIS comment period, and agreed that the process used to identify Alternative C as the Preferred Alternative was valid with respect to wetland regulations.

### 3.3 POST-DEIS DESIGN MODIFICATIONS OF THE PREFERRED ALTERNATIVE

Based on additional survey and mapping data obtained subsequent to the DEIS, input from the local communities, and additional guidance received from Mn/DOT design staff regarding the centerline spacing and interchange designs, the following modifications were incorporated into the Preferred Alternative design.

- 124-foot centerline spacing reduced to 90 feet. The original (DEIS) 300- to 325-foot corridor was tightened to a 300-foot corridor for study in the FEIS.

- The design speeds on the following ramps were evaluated to identify the best balance between minimizing project impacts and meeting safe design standards, in response to concerns expressed by property owners and resource agencies.
  - I-94 interchange “horseshoe” ramp (eastbound I-94 to northbound river crossing) revised from a 35-mph design to a 40-mph design.
  - TH 10 interchange “horseshoe” ramp (westbound TH 10 to southbound river crossing) revised from a 35-mph design to a 40-mph design speed.
  - Ramp from westbound I-94 to northbound river crossing modified from 60-mph design speed to 70-mph design speed. The ramp from southbound river crossing to eastbound I-94 remains at a 60-mph design speed.
  - Ramp from eastbound TH 10 to southbound river crossing modified from 60-mph design speed to 70-mph design speed. Ramp from northbound river crossing to westbound TH 10 remains at a 60-mph design speed.
  - The ramps for southbound river crossing to westbound I-94 and northbound river crossing to eastbound TH 10 use 50-mph design speeds; the alignment radii of both these ramps have been reduced to the minimum acceptable radii for a 50-mph design speed, in order to minimize property impacts.

The design modifications listed above would have been applied to any of the alternatives. The following modifications are specific to the Final Alternative C alignment.

- Mainline design adjusted to more closely follow the section line. Efforts made to avoid splitting areas of impact (e.g., residential properties, farmland, and irrigated agricultural areas) on both sides of the proposed roadway. Compared to the alignment for Alternative C in the DEIS, the alignment has been shifted approximately 42 feet west from a point 2,500 feet south of the TH 24 interchange and returned to the previous alignment at a point 1,000 feet north of County Road 57. This shift results in wetland impacts in this area additional to what was evaluated in the DEIS (e.g., Wetland C-3).
- The proposed roadway has been realigned from 430 feet south of CSAH 8 through the I-94 interchange based on updated mapping and community input. The shift was necessary to avoid substantial impacts to a private golf course, as well as minor impacts to the Clearwater/Clear Lake Wastewater Treatment facility, which was the original intent of the Alternative C alignment. The modification will shift the I-94 interchange approximately 1,300 feet southeast of the original proposed interchange location.
- The alignment radii on the second curve for both exit ramps to TH 24 (at the interchange with the proposed river crossing) were reduced to minimize right of way impacts.
- To minimize impacts to Fish Creek, the Fish Creek culvert is now anticipated to require a 10-foot extension, rather than the initially-anticipated 20-foot extension.
- The construction of a cul-de-sac on Gowan Avenue (along the south side of I-94, northwest of Fish Lake) is no longer required in order to accommodate the southbound river crossing to eastbound I-94 ramp.

- The following design features have been incorporated to avoid impacting Wetland BC-4 (Cater Lake):
  - The 60-mph design speed for the northbound river crossing to westbound TH 10 ramp has eliminated the Preferred Alternative’s initial impact on Wetland BC-4 and reduced its impact on Wetland BC-3.
  - The cross-section of mainline TH 10 has been tightened by shifting westbound TH 10 to the south 24 feet and introducing median barriers (medians are approximately 2,300 feet long).
  - The inside shoulder at Cater Lake has been reduced from a 10-foot shoulder to a six-foot shoulder.
  - The addition of urban-type median, revisions to TH 10 alignment, and shoulder width reduction creates an opportunity to flatten the inslope (from 1:2 to 1:4) between TH 10 and Cater Lake. This permits improved infiltration and reduces erosion potential.
  - South Lake Cater Pond was added to treat runoff from the roadway east of Cater Lake. The pond was pulled in toward TH 10 and elongated in order to minimize property impacts.
  - North Cater Lake pond was added to treat runoff from the roadway west of Cater Lake. This pond was located adjacent to CSAH 66 in old road right of way.
- The bridge for the eastbound TH 10 to southbound river crossing ramp, and that of the westbound TH 10 to southbound river crossing ramp, were combined into one bridge structure in order to minimize crossings over the railroad, as well as to reduce overall project costs.
- A 12-foot trail was incorporated on the north side of the CSAH 75 bridge over the proposed interregional connection roadway.
- A 12-foot trail has been incorporated on the south side of the CSAH 8 overpass over the proposed interregional connection roadway in order to accommodate bicycles and pedestrians.
- A 12-foot trail was incorporated on the north/west side of the TH 24 interchange area’s bridge over the proposed interregional connection roadway.

The modifications that have been made to the original Alternative C since the DEIS are outlined here in order to guide readers to what alignment specifics have changed since that document’s publication. However, the Preferred Alternative considered in this FEIS reflects all modifications outlined above. Henceforth, this document’s use of the term “Preferred Alternative” refers to this comprehensive alignment, including its post-DEIS modifications, unless otherwise noted.

Because the impacts that the DEIS alignment of Alternative C would have had on the golf course were so great (it would have required the removal of three holes, essentially removing the overall functionality of the course), the Preferred Alternative as evaluated in this FEIS is identified as a better overall option than the DEIS Alternative C. The impacts to the golf course would have

been substantial without the alignment modification and could have required relocation of the entire golf course at a substantial cost. In addition, the Preferred Alternative evaluated in this FEIS avoids impacts to the Clearwater/Clear Lake Wastewater Treatment facility.

Questions have been raised as to the need for minor movement ramps—particularly those designed with a “horseshoe” configuration (I-94 eastbound to northbound, TH 10 westbound to southbound)—because this configuration results in substantial right of way impacts. Project traffic forecast analyses found that 10 percent of the total daily traffic projected to use the Preferred Alternative would use the I-94 eastbound to northbound river crossing, and nine percent would use the TH 10 westbound to southbound movement. While these percentages are relatively low compared to 75 percent of the volume that is using the main ramps, the volumes on these minor movements are not unimportant. Placing these minor ramp volumes on a local arterial street (e.g., TH 24) with at-grade intersections would require an additional lane in each direction to accommodate this volume. In other words, while these numbers are considered “minor” when compared to the mainline movements, they are substantial when considered in the context of magnitude with TH 24 volumes.

Further, users generally select routes with the shortest travel time (not necessarily distance) and the most reliability. The alternate route to the Preferred Alternative’s river crossing (old TH 24) will have a minimum of five signals and a busy rail crossing that limits flow and at times disrupts traffic. The old TH 24 route, while shorter for some minor movement trip patterns, is not as reliable due to the possibility of stops and railroad crossing interruption.

Finally, federal access policy governing interstate routes strongly supports access for all movements; partial movement interchanges are discouraged. As a result, removing the minor movements without justification would not be permitted.