Project Description

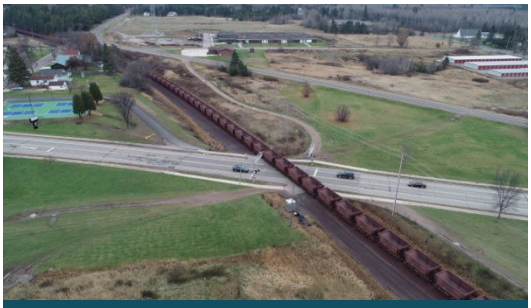
Description of the project to be constructed

St. Louis County, Minnesota (The County) is requesting $6,000,000 in BUILD grant funding to construct the County State Aid Highway (CSAH) 100 Rail Crossing Grade Separation Project in the City of Aurora. The County is contributing $2,626,200 (30.4%) to the over $8.6 million Project—an above-required level of match for a rural applicant, reflecting the County's strong commitment to the Project and its willingness to invest substantial local resources to ensure successful implementation. This transformative project will replace an aging at-grade railroad crossing on CSAH 100 (Main Street) with a modern grade-separated bridge, addressing critical challenges in safety, mobility, connectivity, accessibility, and economic development for the eastern Iron Range in northern Minnesota.

The at-grade crossing (USDOT #252305T) currently serves 5,400 vehicles per day, including 270 trucks, and intersects with a rail line carrying 12 trains daily, creating frequent delays and significant safety risks. FRA ranks this crossing in the top 20% for crash potential, even with the existing active gates and signals. Additionally, the St. Louis County Railroad Crossing Safety Plan prioritized this rail crossing as the #1 recommended grade separation.

The proposed grade-separated bridge will:

- **Eliminate a high-risk crossing**, improving safety for vehicles, pedestrians, bicyclists, ATVs, and snowmobiles.
- **Ensure reliable access to the City of Hoyt Lakes**, a community of roughly 2,000 residents that depends on this corridor through Aurora as its primary connection to the broader Iron Range.
- **Ensure uninterrupted emergency access**, critical for Aurora's hospital and fire hall, which are located on opposite sides of the tracks.
- **Provide reliable EMS and school transportation routes**, avoiding detours of 19–29 miles during closures.
- **Enhance rail and freight efficiency**, supporting mining, logging, and industrial operations—including future **critical mineral projects**—and strengthening regional supply chains.
- **Deliver multimodal connectivity**, with dedicated lanes for recreational vehicles and non-motorized users along with accommodating the planned multimodal trail extension of the regional Mesabi Trail network.
- **Reduce transportation costs and emissions,** eliminating long waits at train crossings, reducing fuel costs for drivers and greenhouse gases annually.

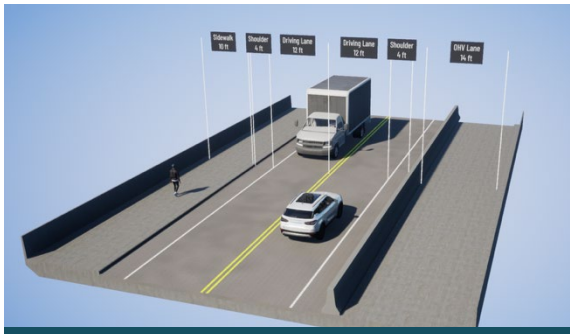


Current Crossing



Proposed Crossing Rendering

This project is essential for creating a safe, resilient, and economically competitive transportation network in northeastern Minnesota. By replacing outdated/inadequate infrastructure and removing a major barrier to industrial, commercial, and residential mobility, the CSAH 100 Rail Crossing Grade Separation Project will improve quality of life, support regional industries, and advance federal priorities for safety, state of good repair, and economic growth.



Proposed Bridge Typical Section

Scope of work covering technical and engineering aspects

The Project proposes to eliminate the existing at-grade rail crossing on CSAH 100 (Main St) and replace it with a bridge overpass (grade separation). The bridge will consist of two vehicular lanes with space on the east side of the bridge deck for recreational vehicle users (snowmobiles and ATVs) and space on the west side of the bride deck for a shared-use path. The recreational vehicle lane will be separated from the vehicular travel lanes by a concrete barrier. The total width of the bridge deck will be 56 feet to include two 12-foot vehicular travel lanes, 10 feet for the shared-use path, and 14 feet for the recreational vehicles. The width of the recreational vehicle lane was determined by the minimum width to accommodate a snowmobile trail groomer. The bridge will include a box culvert structure on the south approach as an underpass to accommodate pedestrians and bicyclists and function as the alignment for the future extension of the Mesabi Trail. On the north side of the bridge, the west leg of Central Ave will be provided with a full access connection to CSAH 100, and the east leg of Central Ave will provide a right-turn lane for northbound traffic to access the City's pickleball courts and eastern residential areas. A retaining wall is anticipated for the northeast quadrant to support the northbound right-turn only lane and ensure the pickleball court is not impacted. Otherwise, embankments will be utilized where retaining walls are not required throughout the four quadrants of the bridge project to improve cost efficiency. Lastly, CSAH 130 will be rerouted along the existing 2nd St East and 3rd Ave South alignments to reconnect to CSAH 100. The remnant corridor of CSAH 130 will be utilized by the Mesabi Trail.

Current design level

St. Louis County started corridor planning & preliminary engineering in March 2024 for the larger CSAH 100 corridor through the City of Aurora beginning at MN Trunk Highway (TH) 135 and ending at CSAH 110 for a total approximate distance of two miles.

As part of the CSAH 100 corridor planning and preliminary engineering process, St. Louis County completed a Feasibility Study for a grade separation at the CSAH 100 railroad crossing. This feasibility study determined that a grade separation through a bridge over the railroad is feasible and cost effective. Feasibility considered the minimum clearance above the railroad tracks, the footprint of the bridge approaches, impact on adjacent real estate, the connections of the approaches to the existing street network, the maximum grades of the approaches, and the construction cost.

Preliminary engineering and design are currently at 15%. A Categorical Exclusion is expected for the project, and the County is committed to completing final design and NEPA prior to grant obligation.



Description of the project location

The project area is located on CSAH 100 in Aurora, Minnesota, a rural community with a population of 1,678 (2020 Census).

Aurora lies in the heart of St. Louis County, with nearby City of Biwabik to the west and City of Hoyt Lakes, home to the Laskin Industrial Park, to the east. The proposed NewRange Copper Nickel mine in northeastern Minnesota will be accessed through the City of Hoyt Lakes on CR 665 (Kensington Dr). These cities are located near Giants Ridge Golf and Ski Resort, a premier recreational and entertainment destination for Northern Minnesota. The City of Aurora serves as the nexus of several snowmobile and ATV trails which link the Eastern Iron Range to major destinations, such as Lake Superior and the North Shore of Minnesota. ATVs and snowmobiles are a significant contributor to the local economy. Additionally, Aurora is the beginning of the Superior National Forest Scenic Byway, extending from Aurora to Silver Bay, MN on the north shore of Lake Superior. The proposed bridge will be located on this scenic byway. The Project directly benefits the three regional transportation routes: State Highway 135 (MNTH 135), CSAH 100, and CSAH 110. The Project will begin on



CSAH 100 at 3rd Ave South and end at 1st Ave North for a total project length of approximately 0.30 mile.

Transportation challenges project will solve

Safety and Crash Risk

The CSAH 100 rail crossing poses a significant safety hazard. According to the FRA Highway-Rail Grade Crossing Accident Prediction System, it ranks 45th out of 226 crossings in St. Louis County, placing it in the top 20% for crash potential, even with the existing active gates and signals. The danger is not just theoretical; Aurora experienced a train-related fatality in 2012 involving a pedestrian. In June 2024, St. Louis County completed their Railroad Crossing Safety Plan with the CSAH 100 crossing ranked as the County's #1 priority for an independent grade separation project. Eliminating this at-grade crossing is the most effective way to reduce the risk of future tragedies. In addition to vehicular safety risks, there are known risks involving ATVs and snowmobiles that are currently utilizing this crossing.

Emergency Access

The crossing divides critical emergency services with Aurora's fire hall north of the tracks and the hospital and emergency room are south. The East Range Police Department, which is the local police department that provides law enforcement coverage for Aurora, is located in Hoyt Lakes which places the police hall south of the tracks. Train blockages averaging 3-4 minutes routinely push EMS response times beyond the national five-minute standard, to 8-9 minutes, jeopardizing patient outcomes during life-threatening emergencies. In the event of a derailment or prolonged closure, detours range from 18.8 to 29.1 miles, with longer routes for trucks restricted to paved roads due to weight limits.

Mobility and Quality of Life

This crossing is used daily for residents and school buses. While the school is north of the railroad tracks, one-third of Aurora's population lives south of the tracks, and when blocked, families and students face lengthy detours that disrupt school schedules and increase transportation costs. The project area falls within a transportation-disadvantaged census tract, where many households lack reliable vehicle access and older adults depend on consistent connectivity. The grade separation project will include a 10-ft shared-use pathway to connect to CSAH 100, enhancing accessibility and reliable mobility for all users and function as a key Safe Routes to School infrastructure improvement.

Freight Reliability and Economic Impact

CSAH 100 is a primary freight corridor serving the Laskin Industrial Park and future NewRange Copper Nickel Mine operations, which will transport critical minerals essential to national supply chains. Train blockages and detours increase costs, reduce efficiency, and create safety risks for hazardous material shipments. A grade-separated crossing will ensure reliable freight

movement, support regional industries and strengthen economic competitiveness across the eastern Iron Range. Transportation reliability is particularly a key priority for freight movement.

ATV and Snowmobile Usage

A grade separation will ensure ATVs and snowmobiles can continue to safely cross the railroad track. ATVs and snowmobiles currently utilize this railroad crossing through an unplanned routing network. The CN Railroad has expressed concerns about ATVs and snowmobiles crossing the railroad track. The nearest opportunities for ATVs and snowmobiles to cross this particular rail line are 4.7 miles to the west at CSAH 4 (Vermilion Trail) and 6.2 miles to the east at CR 665 (Kensington Dr).

Project's history

The CSAH 100 corridor has served the City of Aurora and surrounding communities for more than six decades. The existing roadway infrastructure was originally constructed in 1958–1959, including the curb and gutter system and storm sewer. Since that time, only three resurfacing projects (1986, 2003, and 2018 (the most recent including culvert replacement)) have been completed. The corridor has not undergone a full reconstruction in over 60 years, leaving infrastructure that no longer meets multimodal needs, emergency response requirements, or the growing demands of regional freight movement.

How project fits within the applicant's broader transportation infrastructure investments

The Project is a critical component of the larger CSAH 100 Corridor Improvements Project through the City of Aurora, Minnesota. While this grade separation will be delivered as a stand-alone project, it is designed to complement and complete the overall corridor modernization effort, ensuring a safe, efficient, and multimodal transportation network for the eastern Iron Range.

The County has already demonstrated its commitment to this corridor through significant investment. In 2023, the Minnesota Legislature appropriated $3,000,000 toward CSAH 100 corridor reconstruction scheduled for 2026–2027, which includes roadway upgrades, drainage improvements, and multimodal enhancements. The estimated cost of the 2026 reconstruction project is $7,000,000. The estimated cost of the future reconstruction of CSAH 100 south of 3rd Ave South is $3,500,000. In summary, the County has committed to completing $10,500,000 in reconstruction of CSAH 100 outside of the proposed rail crossing grade separation project. The grade separation project builds on this foundation by addressing the most critical safety and mobility challenge along the corridor—the at-grade rail crossing—while aligning with regional and statewide transportation plans.