Feasibility Study

TH 14 Pedestrian Bridge

Mankato/North Mankato Area Planning Organization

December 2021

Submitted by:
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I. Executive Summary

This study focused on developing alternatives for a safe and efficient pedestrian crossing of U.S. Highway 14 in upper North Mankato. The study was developed from guidance and collaboration amongst the following agencies: Mankato/North Mankato Area Planning Organization (MAPO), the City of North Mankato, and the Minnesota Department of Transportation (MnDOT). The study team looked at previous efforts (studies, plans, projects, etc.) associated with enhancing multimodal opportunities in upper North Mankato to help understand what has been done and what needs and concerns of the public remain. The study identified some of the constraints associated with a proposed pedestrian crossing of Highway 14 in upper North Mankato, including, but not limited to;

- Highway 14 future expansion
- Land uses in and around the area
- Existing pedestrian infrastructure in the area
- Property impacts associated with any proposed Highway 14 pedestrian crossing

These previous efforts and key considerations helped identify a location and pedestrian crossing alternatives that are recommended for further consideration after this study is complete.

The recommended location is between the Highway 14 interchanges with Lor Ray Drive and Lookout Drive. More specifically, a pedestrian crossing location was identified that is close to the Tower Boulevard/Commerce Drive intersection on the south side of Highway 14 and the Caswell Park Softball Complex on the north side of Highway 14. This location helps serve all segments of the population and aligns with current and future multimodal opportunities in upper North Mankato. Bridge alternatives that were considered include a clear span truss bridge that will span the entirety of Highway 14, and precast concrete beam bridges that require a pier support in the median of Highway 14. Abutment types include traditional concrete abutments with retaining walls to limit property impacts, and Helical style approaches that minimize property impacts. Flexibility exists so that bridge and abutment types can be interchanged as further exploration of a preferred alternative is undertaken. Planning-level costs for the various alternatives ranged from between $3 to $4 million dollars (2021 dollars). Multiple funding streams (including local matches and possibly federal funding sources) will need to be pursued to help minimize local cost impacts of any preferred alternative.

II. Purpose & Need Statement

To help guide the development of the feasibility study and the bridge alternatives identified, a purpose and need (P&N) statement was developed. The purpose and need statement was established by the members of the PMT (MAPO, North Mankato, MnDOT, Bolton & Menk) and helped identify the vision for the feasibility study. The purpose and need statement is as follows:

Build on past planning efforts to identify a pedestrian bridge location that spans US Highway 14 that will provide safe and efficient pedestrian connectivity for North Mankato. The bridge location will provide value to all segments of the population and should increase multimodal transportation options while considering current and future development, minimizing impacts to possible Highway 14 expansion, and sourcing future funding for the improvements.

III. Existing Literature Summary

As mentioned in the purpose and need statement, a pedestrian bridge spanning Highway 14 has been mentioned in numerous studies that have been completed by local agencies over the last six years. The study is meant to be a continuation of these efforts and has helped inform the

development of the considerations and alternatives associated with a possible Highway 14 pedestrian bridge. An existing literature summary document is included in the appendix. Highlighted below are the key studies and findings based off the research completed as part of this study.

- **North Mankato Safe Routes to School (SRTS) Plan (2015):** The safe routes to school plan included plans for the development and implementation of pedestrian facilities in North Mankato, including areas directly adjacent to Highway 14 in upper North Mankato. In and around the Highway 14 corridor, pedestrian facility upgrades included trail and sidewalk upgrades in and around the Dakota Meadows Middle School (including mid-block crossings at Howard Drive across from Caswell Park). Public Input was also included as part of the SRTS Plan. Through this public input process, numerous residents that participated noted the complications associated with school age children utilizing pedestrian facilities at the Lookout Drive and Lor Ray Drive interchanges with Highway 14. Public input noted safety concerns for children walking or biking to school at the same time that heavy traffic volumes are present at the interchanges. This traffic/pedestrian interaction was noted as the primary reasons for apprehension from parents to allow their children to utilize the inplace pedestrian infrastructure to walk or bike to school.
- **Commerce Drive Improvements (2019):** Pedestrian accommodations were upgraded along Commerce Drive in 2019 to include the addition of sidewalks throughout the majority of the corridor. This corridor was identified to have multiple destinations for pedestrians. Prior to the improvements, pedestrian facilities that allowed for safe pedestrian travel to and from these destinations were largely absent.

The SRTS upgrades, along with the Commerce Drive Improvements, provided pedestrian upgrades on either side of Highway 14. However, no pedestrian upgrades were undertaken at the Highway 14 interchange with Lor Ray Drive. These upgrades, in combination with vehicle traffic volumes at the interchange, identified the need to further study a safer pedestrian crossing of Highway 14 that did not include traversing the interchanges.

In addition to the plans and improvements associated with the immediate area, highlighted below are two additional efforts that are more regional in nature.

- **MAPO Long Range Transportation Plan (2020):** The 2020 updates to MAPO's Long Range Transportation Plan (LRTP) included a pedestrian and bicycle project that identified a "Grade Separated pedestrian and bicycle crossing" for Highway 14 in the Caswell Park area. The development of the LRTP includes input from various local agencies and is completed as part of MAPO's service to the local agencies within it's jurisdiction. The LRTP noted that this grade separated crossing could be completed in 2026-2030, or as funding allows.
- **Additional Development of Recreational Activities in the area (Ongoing):** Numerous recreational opportunities have been recently completed or are in the process of being designed and completed, including:
    - Caswell Park Expansions – Including a possible indoor recreation center just west of the Caswell Park Softball Facility
    - Fallenstein Park – An ADA compliant playground just west of the Caswell Park Softball Facility
    - Educational Facilities in the area – Including a new elementary school near Good Samaritan Lutheran Church along Lor Ray Drive
    - Numerous Trail Infrastructure Upgrades – Including trail Infrastructure around and within Benson Park on the north side of Highway 14
    - Caswell North Soccer Complex – Including new soccer fields just south of Good Samaritan Lutheran Church that will supplement the inplace fields at Good Samaritan

Church and help serve both local soccer clubs and host regional soccer tournaments

- Continued redevelopment of Commerce Drive and the South Central College Campus

IV. Existing Conditions

The existing conditions were evaluated from a pedestrian and recreational perspective. As discussed in the existing conditions literature, many inplace pedestrian and recreational opportunities exist on both the south and north side of Highway 14. A recreational corridor map has been included in the appendix that illustrates these opportunities. They are also listed below.

South of Highway 14:

- Education & Recreation: Hoover Elementary School & South Central College
- Recreation: Tennis Courts on Tower Boulevard, Forest Heights Park, Roe Crest Park, King Arthur Park, Bluff Park, and North Ridge Park
- Trails: An extensive sidewalk network that links neighborhoods from Lor Ray Drive to Rockford Road, including the Highway 14 trail that connects upper North Mankato to Lower North Mankato
- Commerce: Destination businesses that include restaurants, retail, and commercial land uses along Commerce Drive and areas south of Highway 14

North of Highway 14:

- Education & Recreation: Dakota Meadows Middle School, Concordia Classical Academy, Peter Pan Preschool & Child Care, and a new elementary school just south of Good Samaritan Church that is slated to be built in the near future
- Recreation: Caswell Park Softball and Soccer Complexes, a new Caswell Park indoor recreation center adjacent to the softball complex, the MAYBA Warehouse, Benson Park, Walter S Farm Park, and The Reserve Park
- Trails: An extensive trail and sidewalk system that connects the numerous parks, neighborhoods, and educational facilities

The list above highlights the key amenities that could be better accessed if a safer pedestrian crossing of Highway 14 was established. It is also important to note that North Mankato continues to see robust growth, specifically residential development north of Highway 14. As development continues, additional recreational opportunities will continue to unfold for area residents. Not noted, but present in the area, are numerous churches, assisted living facilities, and additional child care facilities.

After considering all of the variables associated with the various land uses in upper North Mankato, and in collaboration with local agencies and representatives, the preferred location to explore a possible grade separated crossing of Highway 14 was identified between the Lookout and Lor Ray Drive Interchanges, ideally lining up with Tower Boulevard on the south side of Highway 14 and Caswell Park on the north side of Highway 14. Additional considerations for this location are listed below in subsequent sections.

V. Evaluation Criteria

As discussed in the purpose and need statement, various considerations need to be vetted as preferred locations and grade separated configurations are considered. The major considerations identified as part of this study are listed below:

- Minimize Private Property Impacts: A Highway 14 pedestrian crossing should minimize

impacts to private property to every extent practical so that future redevelopment is not inhibited by the placement of a pedestrian crossing.

- Future Expansion of Highway 14: As the region continues to grow, Highway 14 may need upgrades or expansions to facilitate the efficient flow of traffic. Any grade separated pedestrian crossing should accommodate future Highway 14 expansion so that upgrades or modifications to the pedestrian crossing are not needed.
- Pedestrian Utilization: A Highway 14 crossing should be located and configured such that all pedestrian users are able to be accommodated. The goal of the crossing is to maximize pedestrian usage so that pedestrian safety and opportunities are enhanced in the area and multimodal transportation opportunities continue to be fostered as future growth occurs.

The preferred location to study a grade separated crossing, as mentioned in the existing conditions section of this report, is between the Lor Ray Drive and Lookout Drive interchanges. More specifically, the south side connection point is preferred to be near the intersection of Tower Boulevard and Commerce Drive. The north side connection point is preferred to be west of the Caswell Park Softball Complex. The following section identifies key issues that were identified and considered as this location and crossing configurations were explored further.

VI. Issues Identification

The preferred location between Lor Ray Drive and Lookout Drive was explored further for issues and complications associated with this location. They are discussed in further detail below.

Private property impacts are unavoidable given the current land use configuration at the preferred location. As part of the study development, PMT members discussed crossing locations with the impacted properties, more specifically the properties on the south side of Highway 14. There are two key properties that will see some impacts from any of the preferred crossing configurations. While the property owners are generally supportive of a pedestrian crossing at this location and seemed willing to participate in acquisitions, they do have the following concerns:

- Coloplast Manufacturing: Coloplast is a manufacturing company in the northwest quadrant of the Tower Boulevard/Commerce Drive intersection. Their site requires and is configured for truck circulation to allow for shipping operations. The preferred crossing configuration will need to accommodate these circulation patterns while allowing for future expansion of their warehouse/production facilities. Security is also a concern if additional pedestrian traffic is routed around or in the general vicinity of their property, additional fencing will likely be required to negate this concern.
- Lloyd Lumber & Rental: Lloyds operations include lumber sales and distribution along with equipment rentals. Any crossing configuration should limit impacts to their inventory storage areas. They also have security concerns associated with additional pedestrian traffic. Their current fence configuration is 4’-6’ tall and will not exclude pedestrians from easily accessing their site and possibly impacting their operations. It is likely that additional fencing will be needed to negate this concern.

As discussed previously, future Highway 14 expansions should not be impacted by any pedestrian crossing. In discussion with MnDOT, Highway 14 may be expanded to a 6-lane section (3-lanes in each direction), but this expansion is not currently in any short- or long-term MnDOT funding streams. Because of the design life of any pedestrian crossing, it will be imperative that it is designed to allow for future expansion of Highway 14.

Private utility infrastructure is also in and around the preferred location. Xcel Energy has large transmission lines that cross Highway 14 at this location. These transmission lines are in an easement that was secured by Xcel Energy at the time of construction. Any required alterations to

these lines that result from the construction of a pedestrian crossing will need to be funded by the agency that is causing the impacts. Mapping was provided by Xcel Energy to help ensure that any impacts to these transmission lines from a pedestrian crossing are avoided, as these impacts carry a significant financial burden. Xcel Energy estimated that any alterations to these facilities would be at least $200,000. CenterPoint Energy also has natural gas infrastructure in the preferred location. It is likely that minimal impacts will occur from any of the preferred alternatives, but this infrastructure was nevertheless noted. Xcel and CenterPoint Energy mapping is provided in the appendix.

VII. Alternatives Development

Alternatives were developed at the preferred location based off the existing conditions and issues identification that were explained in previous sections. The alternatives are discussed below.

A grade separated crossing could be either above ground (bridge) or below ground (tunnel). A tunnel option was explored as a screening level alternative to identify the viability of a proposed tunnel in this location. A 12' Span x 10' Tall tunnel alternative was dismissed for the following reasons:

- Safety: Any tunnel would need to be in excess of 240' long. This length of tunnel has various safety complications which include; tunnel lighting and ventilation concerns, security concerns associated with this length of tunnel and the inability to monitor the tunnel for illegal activities.
- Private Property Impacts: The tunnel would need to be placed significantly lower (8' +/-) than the existing ground on either side of Highway 14. In order to get trail infrastructure down to the tunnel elevation, significant impacts would manifest themselves, specifically at either Coloplast or Lloyds. Retaining walls could help limit private property impacts.
- Highway 14 Impacts: Directionally boring a tunnel of this size is infeasible. Without boring, Highway 14 would need to be closed and detoured to allow for construction of the tunnel. This would introduce significant costs to the project and impacts to the travelling public.
- Maintenance: Because of the surface grades in the area, stormwater runoff could not be adequately drained away from the tunnel entrances by gravity systems. Without the ability to drain runoff by gravity systems, the installation of a stormwater lift station to keep ponding water out of the tunnel system would be warranted. These systems are costly to install and require significant ongoing maintenance when compared to conventional stormwater systems.

After eliminating a tunnel as a viable option, bridge alternatives were developed. The key components of the bridge alternatives are the pier types and bridge types. Abutment and bridge types are described below. The City of North Mankato will be responsible for ongoing maintenance, including snow clearing, repairs, etc. MnDOT will provide bridge inspections as required by bridge maintenance standards. These alternatives are then combined into formal bridge configuration alternatives in the alternatives evaluation section of this report.

Two different types of abutments were identified as part of the study, which include a conventional and a helical style abutment. For either alternative, the abutments must be located outside of the Highway 14 clear zone so that they are not considered an obstruction for Highway 14 traffic. This includes the clear zone associated with any Highway 14 future expansions. Both styles of abutments will provide ADA compliant facilities for pedestrians. The abutment types are described below:

- Conventional Abutment: Conventional abutments are utilized as piers on the vast majority of roadway bridges in Minnesota. They typically include a concrete abutment on which the bridge structure is placed. Retaining walls or earthen embankment would be utilized to bring the pedestrian facility up to the bridge crossing. Conventional abutments are a cost effective

approach to bridge structures. They do however, create additional private property impacts due to their width and embankment needs (even with retaining walls).

Conventional Abutment with Retaining Wall

- Helical Style Abutment: A helical style approach abutment employs a corkscrew configuration that would bring pedestrian traffic down from the bridge to the inplace ground. This corkscrew approach is utilized often in parking structures to bring parking vehicles to different levels within a parking ramp. The main advantage of the helical style approach is the greatly reduced impact. While costs are somewhat elevated, these types of approaches are often utilized in constrained areas where pedestrian bridges are desired.

Helical Style Abutment

Multiple bridge structures were also looked at based off the location and alternatives desired. For both types of bridges, the vertical clearance between Highway 14 and the bottom of the bridge structure will be a minimum of 17'-4" to meet MnDOT standards for pedestrian facilities. An assumed beam depth of 4.5' would put the walking surface of the bridge approximately 22' above Highway 14. The bridge deck itself is anticipated to be 16' wide to accommodate standards. Both types of bridges would be operable during summer and winter months. Two different types of

bridge structures were identified:

- Precast Concrete Beams: Precast concrete beam bridges are often utilized given their relative availability within the bridge industry. They consist of concrete beams and a bridge deck that can meet all standards associated with pedestrian facilities. Concrete beam bridges, at the preferred bridge location, would require a center pier in the median of TH 14. Guardrail will be required along Highway 14 to ensure that vehicle strikes do not compromise the integrity of the bridge. While beam bridges are cost effective, there are certain site conditions, notably the inplace vehicle crossover, that complicate utilizing this type of bridge as an alternative. These will be discussed in more detail in the alternatives evaluation segment of this study.

Concrete Beam Bridge

- Clear Span Steel Truss Bridge: A steel truss bridge was identified as an additional alternative. The "clear span" annotation illustrates that the bridge will span the entirety of the Highway 14 corridor, eliminating the need for a center pier in the Highway 14 median. The clear span bridge, because of it's truss design, has elements of the required bridge railing that are not present in a concrete beam bridge. The clear span bridge is considered by most a more aesthetically pleasing bridge element when compared to a concrete beam bridge. During construction, it is likely that a clear span bridge would be staged and pieced together in the Highway 14 median, after which a night closure of Highway 14 would occur to lift the bridge into place. This can act as a community event to watch the bridge lift take place. The clear span bridge does have more cost when compared to the concrete beam bridge, but has the benefits of no pier in the Highway 14 median (eliminating vehicle crossover concerns) and the aesthetic elements that are not a part of the concrete beam bridge.

Clear Span Truss Bridge

As summarized above, the study looked at two bridge types and two abutment types to help develop site specific alternatives. The following section highlights the three alternatives that were explored and discusses the benefits and complications of each alternative.

VIII. Alternatives Evaluation

Three different alternatives were studied. The findings of the study are discussed below and shown graphically in the figures on subsequent pages.

Alternative A:

Bridge Alternative A is located just east of the existing Highway 14 vehicle crossover, traversing Highway 14 between Lloyd Lumber and the existing parking lot for the Caswell Softball Complex. The Highway 14 vehicle crossover is a section of paved median that facilitates traffic shifts from one segment of the highway to another for maintenance and construction activities on Highway 14. To minimize impacts to both Lloyd and Caswell, Helical style approaches are proposed with this alternative. A clear span or pier supported concrete beam bridge would be possible in this alternative, as the location of the bridge should not impact the Highway 14 vehicle crossover. The alternative eliminates any impacts to the Xcel power lines and Highway 14 crossover but does require approximately 0.25 acres of property acquisition from Lloyd Lumber. To connect the bridge to the pedestrian infrastructure on the south side of Highway 14, the preferred trail route traverses the green space between Lloyd and Coloplast and connects to Commerce Drive directly at the Tower Boulevard intersection. An alternative pedestrian connection could traverse the MnDOT R/W to the east and run down to Commerce Drive just east of the C&N Sales building. MnDOT verified that a trail is allowable along their Right-Of-Way with the caveat that a limited use permit will be needed. On the north side of Highway 14, the bridge could be connected to the trail system by a new trail along the west end of the Caswell Park Softball Complex that would eventually tie into the sidewalk along the proposed Caswell Recreation Center. Using helical style approaches results in a planning-level cost estimate of $3.9 million dollars for Alternative A.

Alternative B:

Bridge Alternative B is located just west of the Coloplast property and crosses Highway 14 at a slight angle so that the north bridge abutment is placed on the west side of the Caswell Sports property (between Caswell Sports and North Central International). Conventional abutments are included with this alternative that include retaining walls to limit the embankment needs (and subsequent property impacts) associated with the conventional abutments. To eliminate impacts to the inplace vehicle crossover on Highway 14, a clear span truss bridge is included with this alternative. While no impacts will take place on the Lloyd property, Coloplast properties will be slightly impacted. To facilitate continued truck circulation on the Coloplast property, a secondary bridge is proposed to span the inplace parking lot on the north end of the Coloplast property. This secondary bridge will allow for continued loading and unloading in the Coloplast loading docks. The bridge also traverses the west Coloplast property line so that full expansion capabilities are maintained for Coloplast in the future. On the south end of the bridge, a proposed trail will run down the west side of Coloplast's property to Commerce Drive and will need to be extended east to the Commerce Drive/Tower Boulevard intersection. On the north end of the bridge, a proposed trail would traverse the west property line of Caswell Sports, eventually tying into the Howard Drive pedestrian infrastructure (or Caswell Park Rec Center pedestrian facilities). The approximate cost of this alternative is $3.0 million dollars.

Alternative C:

Alternative C is located at the same location as alternative B (west side of Coloplast and Caswell Sports) and is different from Alternative B by including a helical approach on the north side of Highway 14. This could allow for multiple trail routes leaving the helical approach (one to Howard Drive, one to the Caswell Softball Complex). Because of the helical approach on the north end, Alternative C costs are higher than Alternative B and are anticipated to be $3.5 million dollars.

Overall, there is flexibility in all of the alternatives. As additional design and public engagement is undertaken, approach and span types can be swapped between alternatives to arrive at a preferred build alternative. Because all of these alternatives are ADA compliant, elevators or other

NORTH MANKATO MINNESOTA

MAPO TH 14 Pedestrian Bridge Study

City of North Mankato, Minnesota

ALTERNATIVE A $3.9 Million Approx Cost

July 2021

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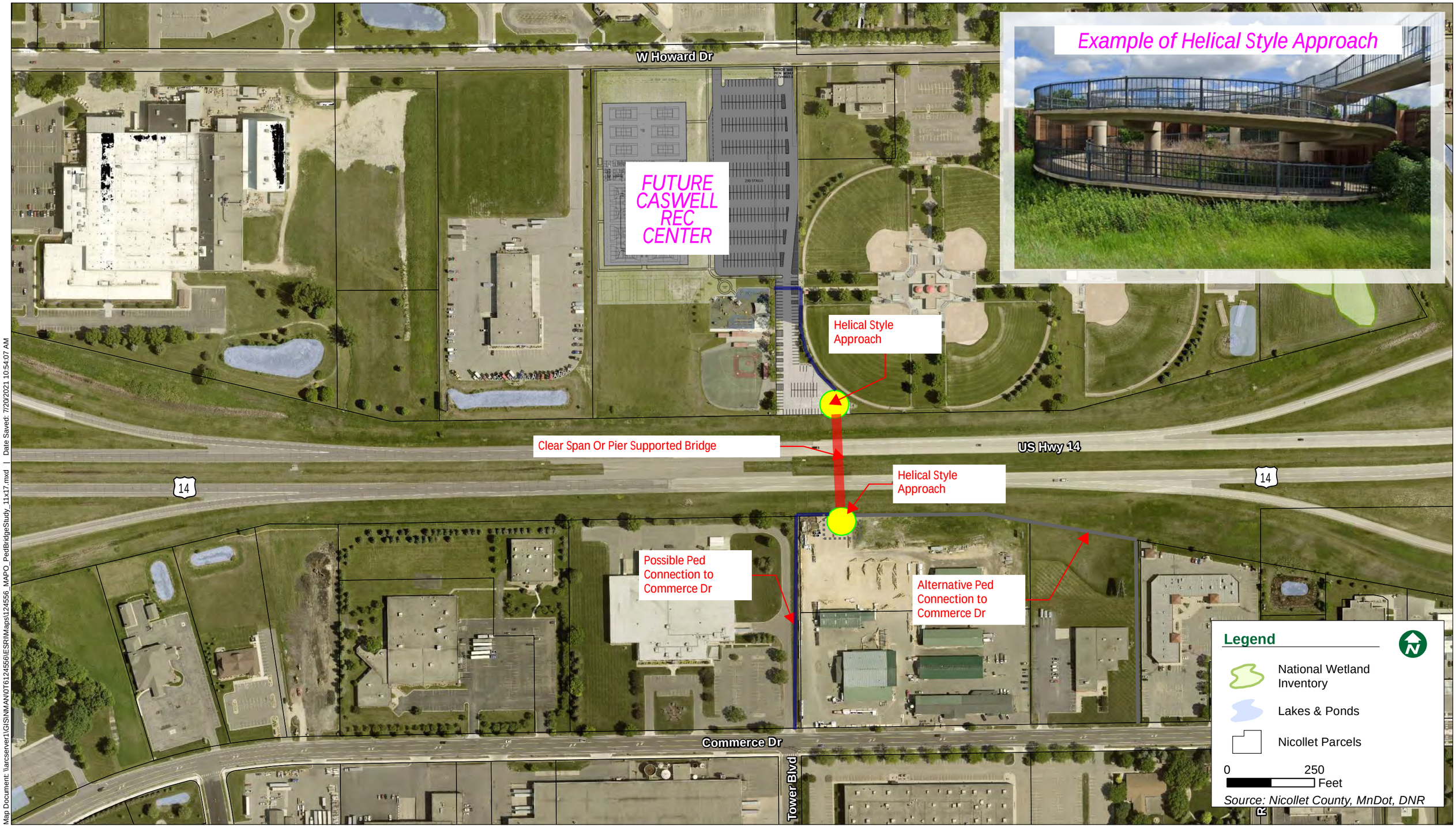

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NORTH MANKATO MINNESOTA

MAPO TH 14 Pedestrian Bridge Study

City of North Mankato, Minnesota

ALTERNATIVE B $3.0 Million Cost

July 2021

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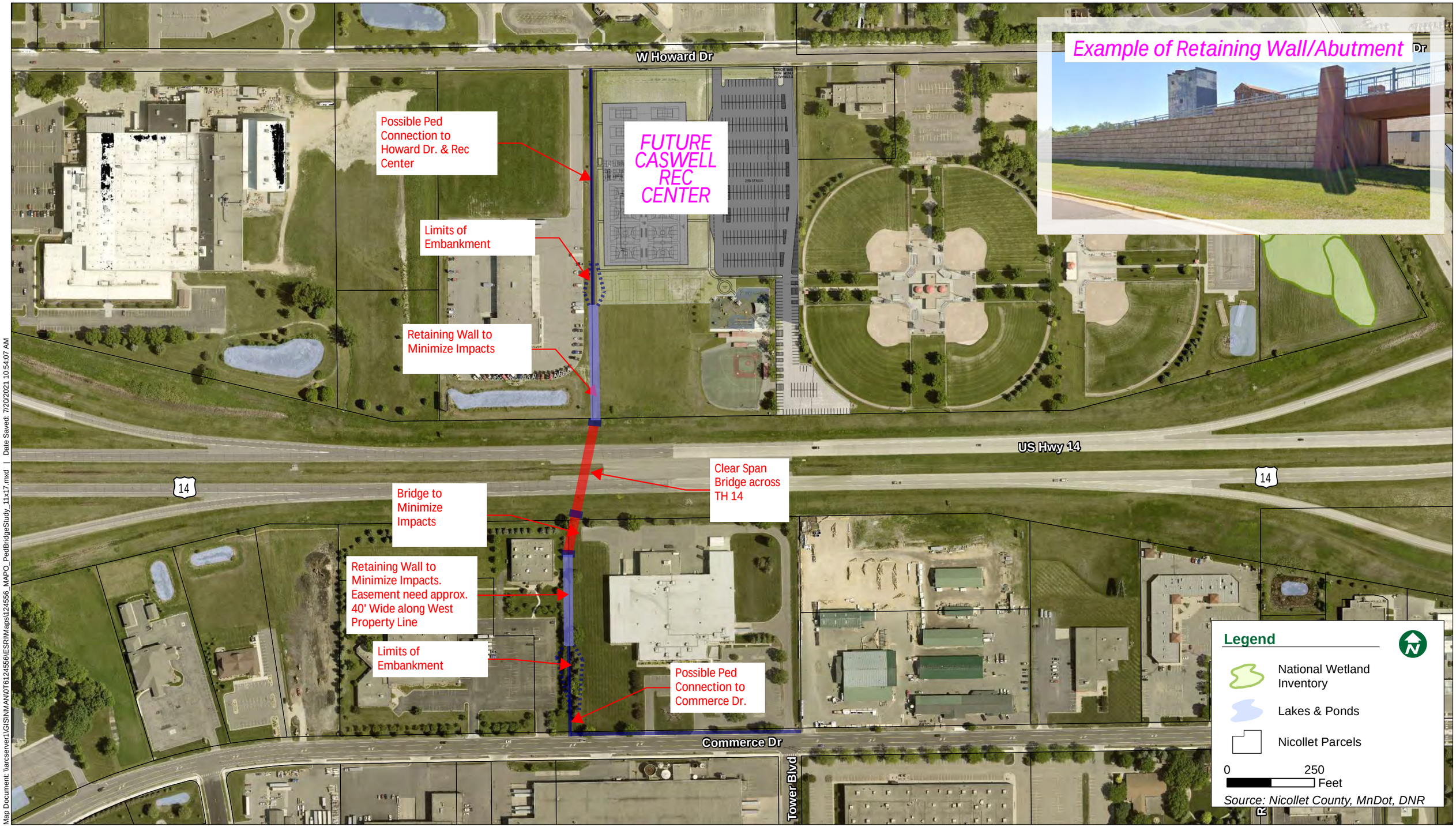

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NORTH MANKATO MINNESOTA

MAPO TH 14 Pedestrian Bridge Study

City of North Mankato, Minnesota

ALTERNATIVE C $3.5 Million Cost

July 2021

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W Howard Dr

Possible Ped Connection to Howard Dr.

FUTURE CASWELL REC CENTER

Possible Ped Connection Caswell Park

Helical Style Approach

Clear Span Bridge across TH 14

Bridge to Minimize Impacts

Retaining Wall to Minimize Impacts. Easement need approx. 40' Wide along West Property Line

Limits of Embankment

Possible Ped Connection to Commerce Dr.

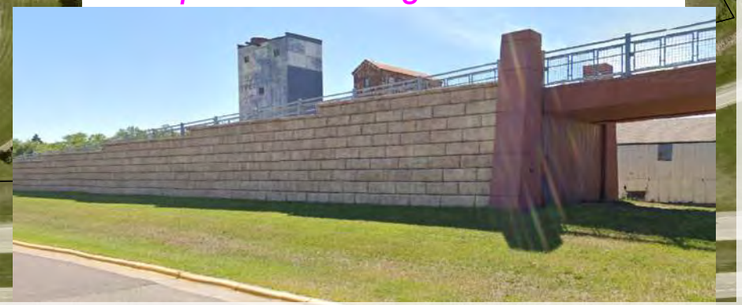
14

Commerce Dr

Tower Blvd

Example of Helical Style Approach

Example of Retaining Wall/Abutment



Legend

- National Wetland Inventory
- Lakes & Ponds
- Nicollet Parcels

0 250 Feet

Source: Nicollet County, MnDot, DNR

mechanical devices were not considered. If elevators or other additions are desired, they could be added; however, they would incur significant additional cost. This report stops short of recommending a preferred alternative to give maximum flexibility as recreational activities in the area continue to evolve.

IX. Environmental Justice Summary

Identifying any adverse or beneficial impacts for those living in the area is a key consideration of the study. It is important to note the beneficial impacts that increased multimodal opportunities provide for disadvantaged populations.

For Dakota Meadows Middle School, a 2-mile radius from the school currently exists in which no bus service is provided for area students. This can be a challenge for those that do not have vehicles to transport school aged children to their place of education. In lieu of these students traversing the busy interchanges at Lor Ray and Lookout Drive, the proposed pedestrian bridge will provide a safer means to travel to and from school. A pedestrian bridge may provide additional options and benefits to families living in the area who have limited or no access to a vehicle, and who incur greater burdens in trying to arrange or provide safe transportation for their children A separated bridge increases transportation options for everyone, but might be more helpful to those with limited or no access to a private vehicle.

The proposed pedestrian bridge and corresponding trail infrastructure will be fully ADA compliant, providing opportunities for handicapped or elderly community members to efficiently traverse Highway 14 without having to navigate the busy interchanges at Lor Ray and Lookout Drive.

Finally, the pedestrian bridge could be a source of additional potential for community events that strive at bringing community members from all walks of life together. Running, biking, and other events could include the bridge as a feature, either as a means to access the event, or as part of the event itself, thereby improving access for nearby residents and building a sense of inclusivity within the community.

X. Environmental Impact Summary

A desktop review of possible environmental considerations was completed as part of the study. No known wetlands, contamination sites, drinking water wells, septic systems, or other environmental concerns were uncovered as part of this review. There is minimal risk of encountering atypical environmental conditions during design or construction of any of the alternatives. If the project progresses from study to design, the required environmental due diligence will be performed to confirm this desktop review.

XI. Possible Funding Mechanisms

Given the three- to four-million dollar estimates for bridge construction, funding options need to be identified to help facilitate the construction of the bridge. It is likely that multiple funding streams will be needed due to the costs associated with the project, and the relatively low level of funds available to construct standalone pedestrian facilities. A review of possible funding streams was completed as part of this study. These possible funding streams could be combined to help maximize local dollars. It should also be noted that funding mechanisms are constantly evolving, and new funding sources are constantly being identified. Local agencies can use this report to help tailor funding applications to have a greater chance of success in securing funding. A list of possible funding sources is provided below.

- Safe Routes to School (SRTS) – Infrastructure
- Transportation Alternatives (TA) - MnDOT

- Active Transportation (AT) program - MnDOT
- Surface Transportation Block Grant Program (STBGP) - FHWA
- Local Partnership Program (LPP) - MnDOT
- Federal Recreational Trail Program – MnDNR

Local matching funding is likely needed on many of these grant opportunities. Monitoring funding agencies for additional opportunities and engaging agency representatives before and during the solicitation process could help bring multiple funding sources together so that project funding is achieved.

Open House

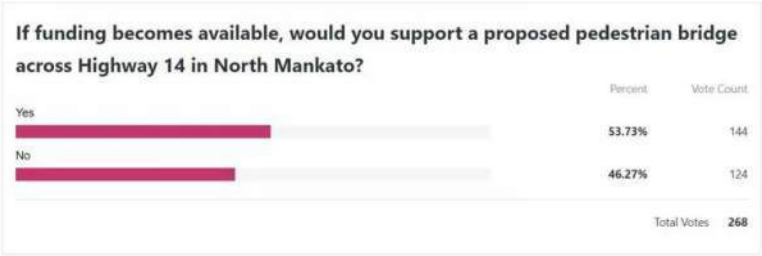
XII. Public Input

Public input was solicited during the development of the study. An open house was completed on September 13th, 2021 to solicit opinions from interested members of the public and present the alternatives and locations of the bridge alternatives. Approximately 10 people attended the open house. Support for the proposed bridge was mixed, as some attendees viewed the improvement as valuable while others questioned the need for the facility. The majority of questions raised at the open house centered on the funding mechanisms and ability of local agency budgets to help fund the bridge. MAPO also hosted an online comment session. The comments from this are included in the appendix of this study.

The Mankato Free Press also conducted an online survey with the following question: *If funding becomes available, would you support a proposed pedestrian bridge across Highway 14 in North Mankato?* The results of the survey, in which 268 people participated, showed that 54% of participants supported the pedestrian bridge, 46% did not support.

Presentations to local elected officials also took place, notably a presentation to the City Council during a work session on September 27th, 2021. Topics that were raised by the council largely echoed some of the concerns that were voiced during the Safe Routes to School Plan and Study Open House, notably the safety concerns with children at the Lor Ray and Lookout Drive interchanges. Additional conversations with representatives from the local school district indicated planning for a new school to be constructed in the vicinity of the existing soccer fields. This forthcoming development is anticipated to further increase demand for multimodal services.

Generally speaking, based on the input that was gathered from various initiatives (open house, survey, online comments), public support exists for the pedestrian bridge location. The questions largely centered on securing funding for the improvements to ease the burden on local taxpayers.



Free Press Poll Results

Appendix A: Electronic Inventory of Existing Literature

Electronic Inventory of Existing Literature

Item	Location
MAPO Long Range Transportation Plan	https://mnmapo.files.wordpress.com/2020/11/mapo_lrtp_2045_update_final.pdf
MAPO Previously Completed Studies	https://mnmapo.org/planning-documents/
North Mankato Safe Routes to School Plan	https://www.northmankato.com/sites/default/files/images/Safe%20Routes%20to%20School.pdf
Commerce Drive 2019 Improvements	https://clients.bolton-menk.com/commercedrive/#:~:text=The%20improvements%20proposed%20for%20this,entrance%20construction%20and%20modifications%2C%20street
City of North Mankato Comprehensive Plan	https://www.northmankato.com/citynorthmankato/comprehensive-plan
North Mankato Capital Improvement Plan	https://www.northmankato.com/sites/default/files/documents/2022-2026%20CIP%20Memo%20and%20Attachments%20-%20UPDATED%2011-4-21.pdf
Highway 14 Construction Plans Inventory (Control Section 5203)	https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/ProfileSearch
MnDOT Roadway Design Manual	https://roaddesign.dot.state.mn.us/
MnDOT Bridge Design Manual	https://www.dot.state.mn.us/bridge/lrfd.html
MnDOT Statewide ITS Plan	https://www.dot.state.mn.us/its/projects/2006-2010/mnitsarchitecture/statewideitsplan.pdf
MnDOT Towards Zero Deaths	https://www.minnesotatzd.org/
US Census Data	https://data.census.gov/cedsci/
Property Owner Information & Linework	https://beacon.schneidercorp.com/Application.aspx?AppID=371&LayerID=6438&PageTypeID=1&PageID=3375
North Mankato GIS Mapping	https://gis.bolton-menk.com/Html5Viewer/Index.html?configBase=https://gis.bolton-menk.com/Geocortex/Essentials/REST/sites/NorthMankato/viewers/Mobile/virtualdirectory/Resources/Config/Default#
Topographic Information	http://arcgis.dnr.state.mn.us/maps/mntopo/

Appendix B: Recreational Corridor Map

MAPO
MANKATO/NORTH MANKATO AREA PLANNING ORGANIZATION

Recreational Corridor

MAPO - City of North Mankato, Minnesota

PEDESTRIAN BRIDGE STUDY

September 2021

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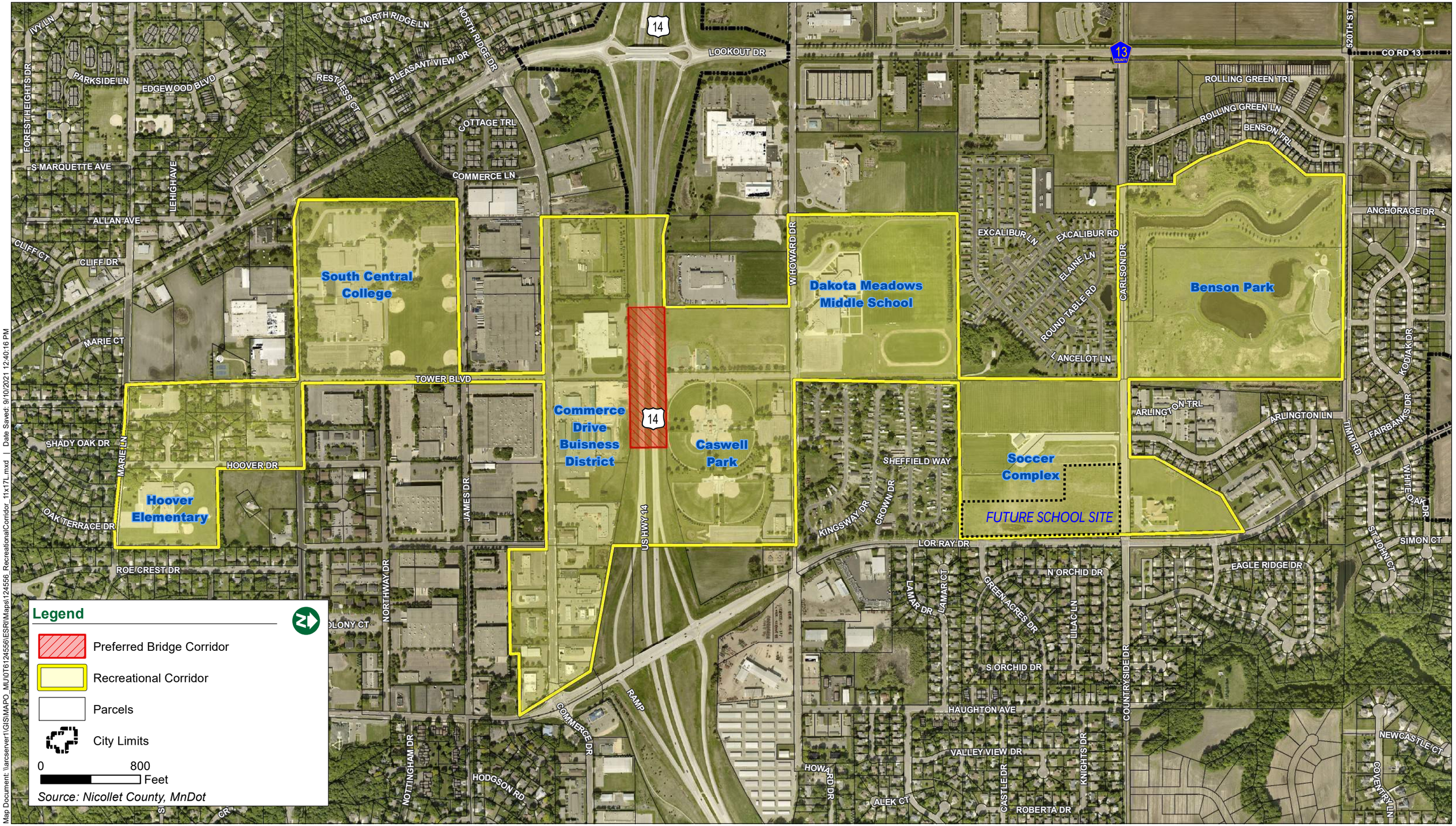


Legend

- Preferred Bridge Corridor
- Recreational Corridor
- Parcels
- City Limits

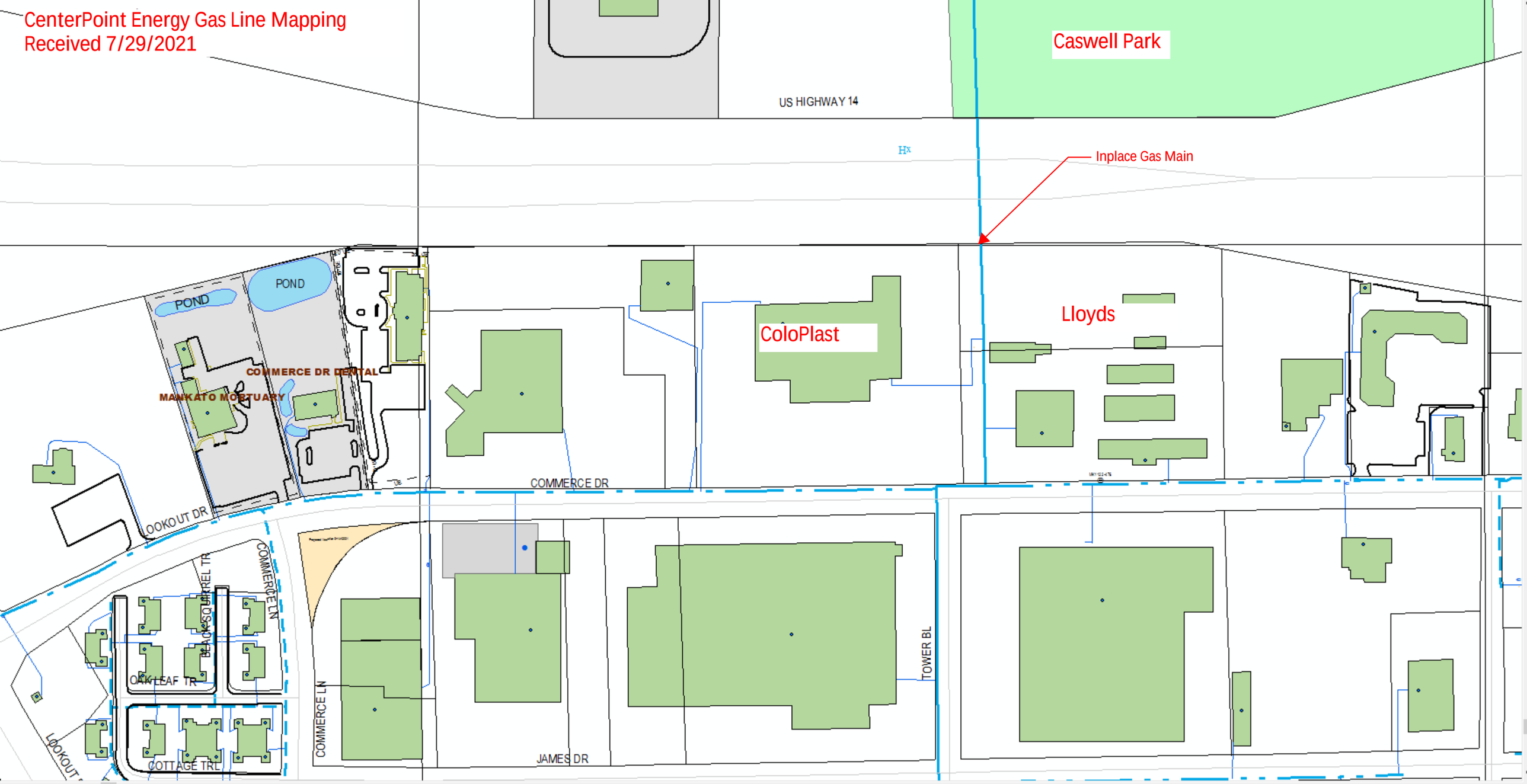
0 800 Feet

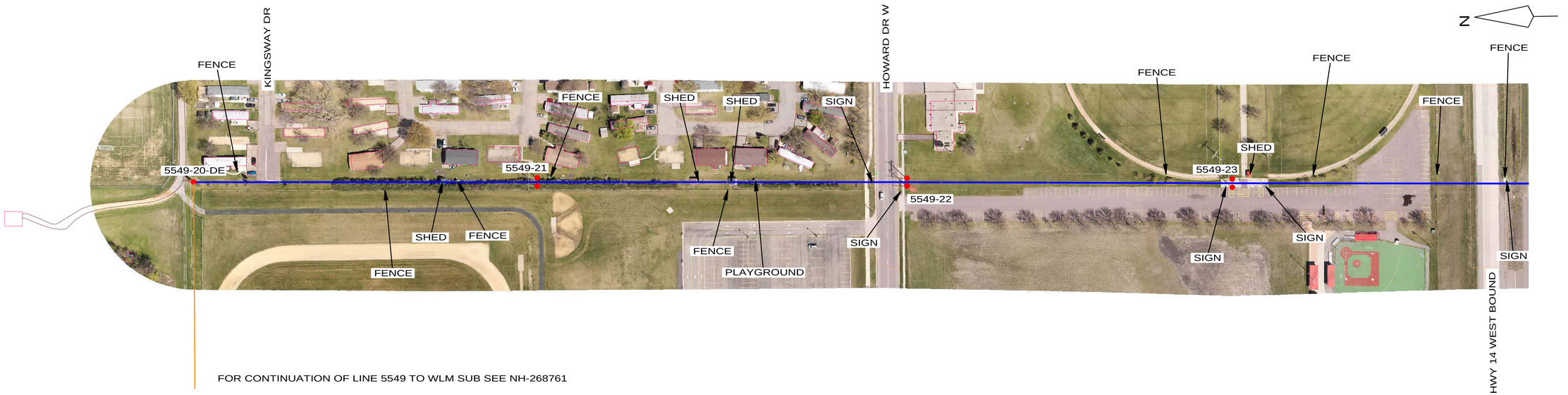
Source: Nicollet County, MnDot

Map Document: \\arcserver1\GIS\MAPO_MU\0T6124556\ESRIMaps\124556_RecreationalCorridor_11x17L.mxd | Date Saved: 9/10/2021 12:40:16 PM

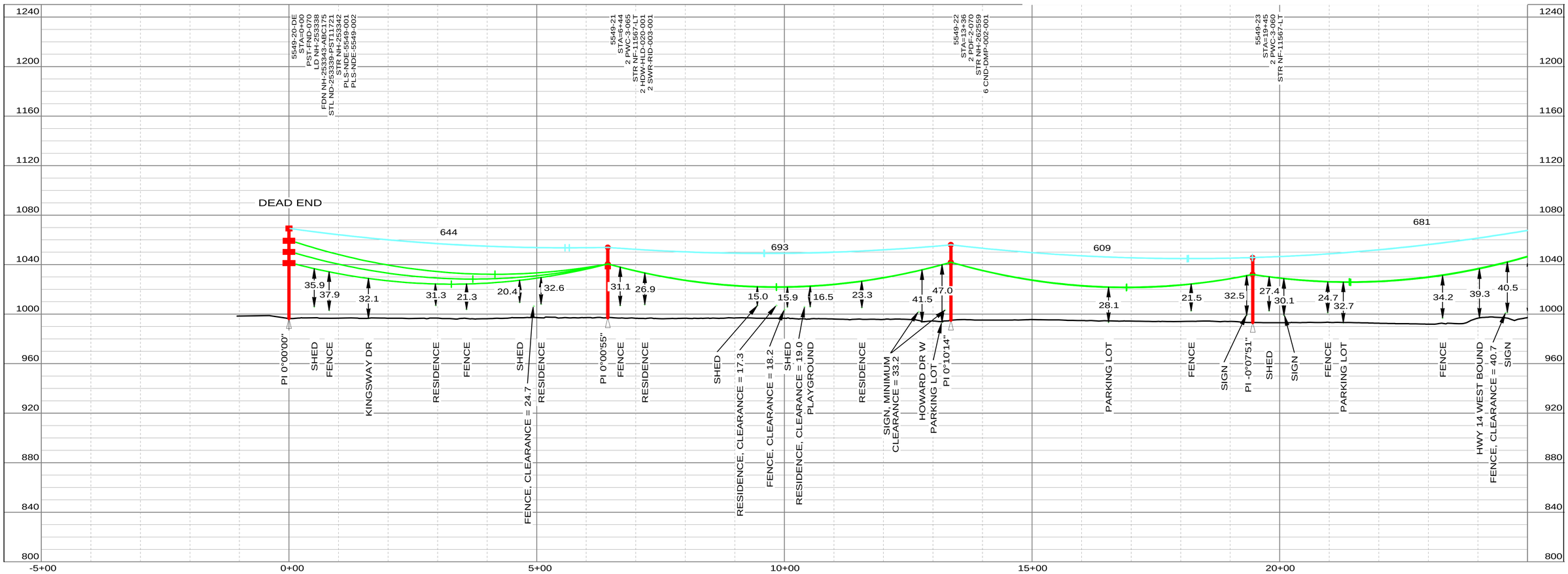
Appendix C: Utility Mapping

CenterPoint Energy Gas Line Mapping
Received 7/29/2021





FOR CONTINUATION OF LINE 5549 TO WLM SUB SEE NH-268761



TRANSMISSION ENGINEERING DEPARTMENT

Xcel Energy®

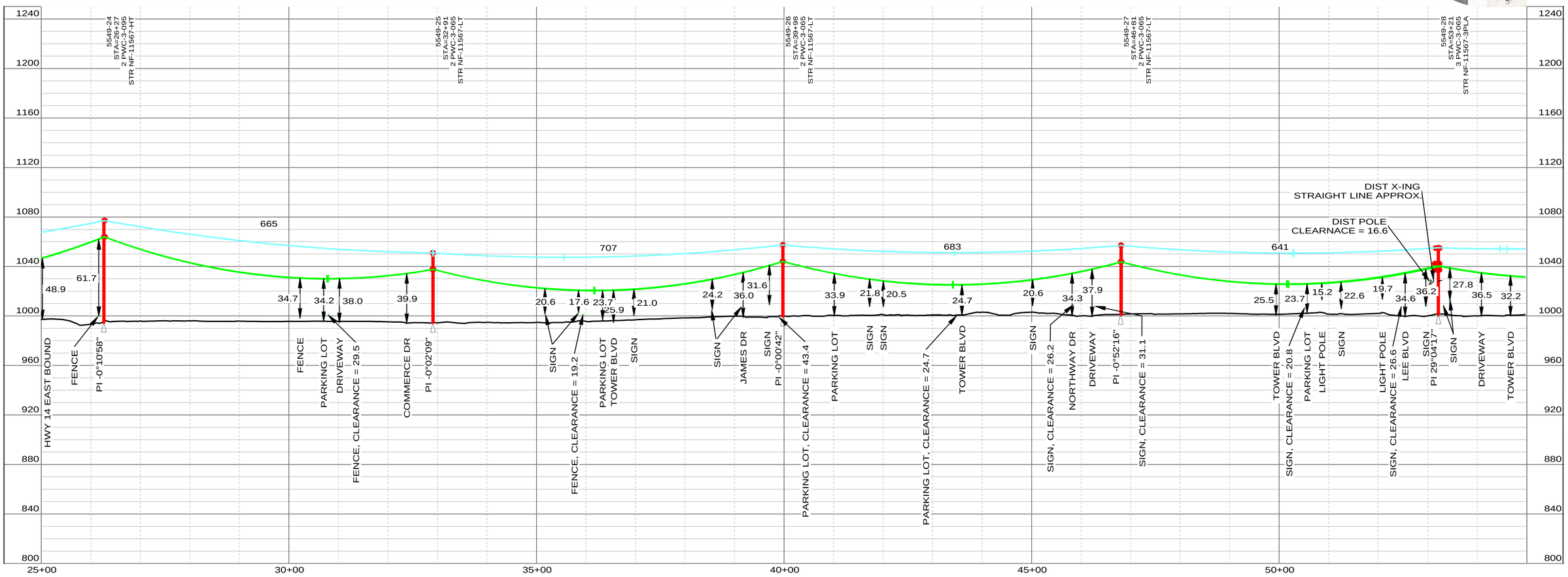
100.0 FT. HORIZ. SCALE
40.0 FT. VERT. SCALE

LINE 5549 115 KV
NOP_IC TO SBD SUB

STR. 5549-20-DE TO 5549-23

NH-268742- 6 | OF 17 | REV 0

5549(5549)_NOP_IC-SBD 11/23/2015



TRANSMISSION ENGINEERING DEPARTMENT

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LINE 5549 115 KV

NOP_IC TO SBD SUB

STR. 5549-24 TO 5549-28

NH-268742- 7

OF 17

REV 0

5549(5549)_NOP_IC-SBD 11/12/2015

Appendix D: Public Comment Log

Public Comment Log - Highway 14 Pedestrian Bridge Feasibility Study

Comment Number	Comment
1	I absolutely love the idea of a pedestrian bridge lining Caswell to the other side of highway 14! Far fast for childre getting to school boys walking and biking, far more convenient to walk to restaurants or games to and from Casw and while signal options too! We need to feel connected as a city and this does that sound with adding safety and travel options that aren't cars
2	A waste of taxpayer dollars unless 100% paid for by Federal or State Tax dollars. Homeowners in the city of North Mankato and Nicollet County (example $325,000 assessed value) pay $600 per year more in taxes than Mankato a Blue Earth County. It is time that North Mankato gets responsible and forget about a bridge that will cost millions dollars that will go mostly unused by anyone. A complete waste of money. North Mankato will never be a commu who has anything to offer other than high taxes. The bridge downtown in Mankato from Hy Vee over to the Mall a disaster, dangerous and a eyesore. They tore it down because it was only used by those needing a place to live worse things that are unmentionable. Just saying.
3	1. How many if any pedestrian/auto accidents have there been in this area? To my knowledge none. So what sa concerns are you addressing?
4	2. Isn't there already multimodal access across Hwy 14 in two locations those being Lor Ray and the Lookout Dri roundabout? Both of these locations are in a reasonable (pedestrian) distance to Caswell.
5	3. There are 23 Parks in North Mankato so isn't it a stretch to make this expenditure on the rationale to access (one) Benson Park?
6	4. North Mankato's population growth is less than one percent a year so isn't it also a stretch to make this expenditure to aid future development?
7	5. The Caswell complex is a regional asset therefore the user comes from the greater Mankato area. How likely this class of participants, use this bridge?
8	6. Will the bridge, as shown be of any use in freezing temperatures?
9	7. What assurances are available that the motorist under the bridge will not be subject to debris thrown from a top?
10	8. Safe routes to school? North Mankato has already spent thousands on "safe routes to school" on Howard Dri and Carlson Drive and the trail connecting each(recently) and intersections.
11	9. Is there an implied guarantee the fabled North Mankato Indoor Recreation Center will be built especially in lie of Bethany's $10 million dollar indoor recreation center which is shovel ready?
12	10. Where is there land available to support "future development" of Commerce Drive or Howard Drive commercial business districts? There is basically only one parcel on Howard Drive and that is earmarked for a recreation center not a parcel to support future business development (unfortunately).
13	I think that this pedestrian bridge would be a waste of money and time and that NO one would use it and it would torn down in 10 years just like the one in Mankato we have better things to spend our money on. There are alrea crossings that are under utilized or maybe on game nights you could run buses or shuttle vans to cross the highwa is simply NOT worth the time and money.
14	Is it an option to put a stop sign at or lights [at potential bridge location]
15	Option to put in a tunnel?
16	"This would have been really awesome ten years ago for my boys"
17	Concern for lack of sidewalks on Commerce Drive
18	Questions about connectivity to greater sidewalk network
19	Potential trail along Hwy 14?
20	"We feel this is totally not necessary. Where is this money supposed to come from. If the Caswell ball players w it, they should pay for it. If they come to play ball they shouldn't mind walking to the intersection, to get to the other side."
21	Alternative B: possible to take a 90 degree turn East on the North abutment to connect to Caswell parking lot on other side.
22	Snow removal a concern – can't push snow over onto 14

Public Comment Log - Highway 14 Pedestrian Bridge Feasibility Study

23	Potentially have two approaches on one end; helical and stairs for peds who want to use stairs and avoid "long walk up" helical ramp
24	Potentially install ½ helical, then transition the helical into retaining wall approach mid-way up.
25	Why not just make Lookout and Lor Ray safer? "Instead of spending way too much money."
26	Has anyone tracked the visitors to Benson Park to identify their transportation methods to access the park? Are most visitors walking? In the many times we have walked around Benson Park, we rarely see anyone and so wou contend Mr. Hagen's assessment is correct.
27	It is my feeling that the majority of usage, at this time, for Caswell Park includes individuals/teams from the other cities. Therefore, in most of these instances, they are using their own vehicle/bus transportation to access Caswe If they choose to utilize Benson Park, they are already on the same side of Hwy 14 and a special pedestrian acces across Hwy 14 would not be necessary.
28	Considering the cost, I feel a closer look should be taken to determine the method of transportation people are using to get to the park and a new survey (the other school survey was from 2015) on the pedestrian traffic that would be using the bridge to access schools.
29	I would only be in favor of this if it's funded from money outside the city budget as I am skeptical about the amou of use it will get. That being said, I definitely like the clear span truss model better than the helical approach (whic had lots of experience with both biking and walking at the University of Iowa years ago). Alternative C seems to connect best to the playground, ball diamonds and Dakota Meadows. Since there's no bike or walking trail on the north side of Commerce, I would be concerned about people crossing without a light. It's a very busy street that I' on several times every day. How would the crossing of Commerce Dr. be handled? Last comment: I think people o the east side of LorRay Blvd would just use the LorRay bridge to cross 14 and people on the west side of Lookout I would use the Lookout Drive bridge which has a very wide (new) sidewalk. That leaves only the middle residences between Lookout and LorRay as possibly having this pedestrian bridge be a more convenient crossing point. Havir been a sports parent, I honestly believe people at the hotel for tournaments, etc. will drive to Caswell. Too much gear to carry.
30	Having safe foot passage between caswell and commerce dr. business district is vital to the growth and redevelopment of upper north. Connections between both ends of the corridor.
31	I like Alternative "B". I like the ramp style approach verses the helical approach.
32	I think the bridge is a good idea. It most importantly, a stop light at the four way stop signs of lor ray and Howard. This is so dangerous especially during all times of the year when people are trying to cross, bike or get to their destination safely. During school, the traffic so so horrible no one takes turns! The bridge will help with this for school age biking or walking to school but the traffic is so horrible.
33	I think a pedestrian bridge over Hwy 14 would be a huge waste of money. I don't think there would be enough foo traffic to justify the cost.
34	Ultimately, the fundamental question for this project is: Who will use this bridge? The likely answer is school aged children traveling to and from the schools, Caswell park users, and recreational bikers.
35	One of the main issues with this idea is that there are minimal residential neighborhoods on the south side of 14 t are proximal to any of the options that would utilize this bridge. There are also sparingly low residential neighborhoods north of the proposed bridge. I live in Northridge and it would make no sense for my children to travel a further distance west to cross a pedestrian bridge when the Lookout Drive has an ample over pass bridge closer to my neighborhood. The same can be said for the Mary Circle residential areas to the East and Lor Ray Driv If you look at the residential areas further south around Hoover, those neighborhoods likely exceed distances tha allow for bussing; so projecting school aged children to utilize this bridge does not make sense.
36	The second possible group to utilize this bridge are people utilizing Caswell park; but this is fundamentally flawed thinking because as teams wait between games, the most important aspect is that parents and coaches are lookin for areas to allow for rest and/ or cool environments on a hot summer day in order to not exacerbate the athletes who are utilizing the park. This bridge will not attract users of caswell park to walk out of way distances to be connected to the limited options on the south side of highway 14 for the athletes.

Public Comment Log - Highway 14 Pedestrian Bridge Feasibility Study

37	The third possible group is recreational bikers to utilize the bridge. Let me first ask the question of how many recreational bikers currently utilize Benson park? And is this an appropriate park to encourage bike traffic by tryin to create a connective path from the bike route that runs along Pleasant View Drive to Commerce to Bluff Park? I appreciate the ability to walk at Benson Park without having to worry about which side of the path a biker may be trying to pass me. Attempting to link this park with that of Bluff park seems wasteful and will serve more harm tha good. Development of new trails or bike routes in areas of future growth for the city seems to be a much better option if trying to appease recreational bikers.
38	This bridge would be a huge success if there were more proximal and heavily populated neighborhoods close to it whom could utilize it. Unfortunately the closest neighborhoods are at least 0.5 mile or greater from the bridge an the amount of foot traffic of people who would utilize the bridge does not seem justifiable for the expense. My recommendation would be to scrap this idea and look at ideas for foot bridges that connect Mankato's Riverfront park with the new developments that are being planned around Webster Ave. Finding ways to utilize the river to develope a riverwalk type attraction for retail and restaurants would turn North Mankato into more a destination place similar to a place like Stillwater and would only improve the city of North Mankato.
39	I would like to provide comment on the proposed highway 14 pedestrian bridge.
40	Many years ago I recall the MSU students requesting a pedestrian bridge that would span the intersection across Stadium Road. It was a busy intersection for both pedestrian and vehicle traffic, resulting in long waiting lines for both. It was determined that the cost was prohibitive - the initial cost as well as the ongoing maintenance costs fo such a bridge in Minnesota climate. At the time, I felt it was a legitimate request for something that was needed.
41	When I heard about the proposal for the bridge across highway 14 (1/4/ mile? 1/2 mile?) I wondered how much i would be used. Were there many strong supporters for the project at the meeting? That usually gives a good indication of the probable usage, doesn't it?
42	I also wondered if the millions of dollars from state and federal funding could
43	fill other more important needs? And what about local funding? Don't we have more pressing needs? I guess if we don't we must be in pretty great shape.
44	Thank you for allowing me to convey my thoughts on this issue!
45	One thing that comes to mind around this proposed pedestrian bridge would be the connections on the south sid (commerce drive side) of the bridge. Putting this proposed bridge directly into the Caswell Park area is a no braine and would be awesome! The other side of the bridge is kind of polar opposite. What I mean by that is that I am concerned the bridge won't be utilized as much without clear and safe routes connecting the residential neighborhoods of Upper North Mankato to the bridge on the Commerce Drive side. If the lets say North Ridge neighborhood had this bridge line up with it and go directly into Caswell that would be amazing. Obviously the alignments of the neighborhoods won't support this. So I'd suggest focusing on getting the bridge very well and clearly connected to the neighborhoods so that the bridge is fully utilized and not just a hey that's great we have i but I don't want my kid riding through the Commerce Drive area to use it type of deal.
46	Please continue to keep us in the loop and again thanks so much for thinking of us. I hope this project comes to fruition and let us know how we can help.
47	Great opportunity for area recreation. Awesome north/south connection for pedestrians and bicycles
48	Provides a safe connection for peds/bikes rather than interchanges with Hwy 14 that are unsafe. Have seen mar children and other individuals crossing at highway ramps in sketchy situations
49	This bridge connection will be a great benefit to the community for bicyclists
50	This will provide a safe route to schools for children crossing the highway where children now cross at unsafe interchanges
51	This will be a great connection for Caswell Park visitors to access businesses and the hotel on Commerce Drive
52	Many had a preference for option A in line with Tower Boulevard