

APPENDIX B

Access Management Assessment

Exhibit 1 – Access Modifications



Technical Memorandum

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Reference: US 52 Southbound Reconstruction

From: Darwin Yasis, PE

TKDA Project No.: 16421.010

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Routing:

This technical memorandum summarizes the access management strategies utilized during the development of preliminary design alternatives for the Highway 52 Project Corridor.

Access management is the planning, design, and implementation of land use and transportation strategies that maintain a safe flow of traffic while accommodating the access needs of adjacent development. In general, too many driveways, intersections, and closely spaced traffic signals along major roads cause safety, operational, and community problems.

Management of roadway access, both in terms of cross-street spacing and driveway placement, is a critical means of preserving and enhancing a roadway's intended function and its efficient operation. In addition, providing access management in some form, whether through grade-separated crossings, frontage and backage roads, median closures, or right-in/right-out access, reduces the number of vehicle conflict points resulting in improved safety. A number of studies have demonstrated a direct relationship between the number of access points and the rate of crashes, showing a positive correlation between access density (access points per mile) and the frequency of crashes (crash rates). Given this relationship, access management is an important roadway safety tool.

The functional roadway network hierarchy, as shown on **Figure 1**, provides and promotes an orderly balance between mobility and access needs. Freeways and principal arterial roadways provide the mobility for high volumes of traffic. This system of roadways is meant to serve longer trips (6 miles or more) at higher speeds (greater than 45mph) and with limited access points. On the other hand, collectors and local streets are meant to serve shorter trips (less than 1 mile to 2 miles) at lower speeds (45mph and less) and provide more frequent access points to individual parcels and land developments.

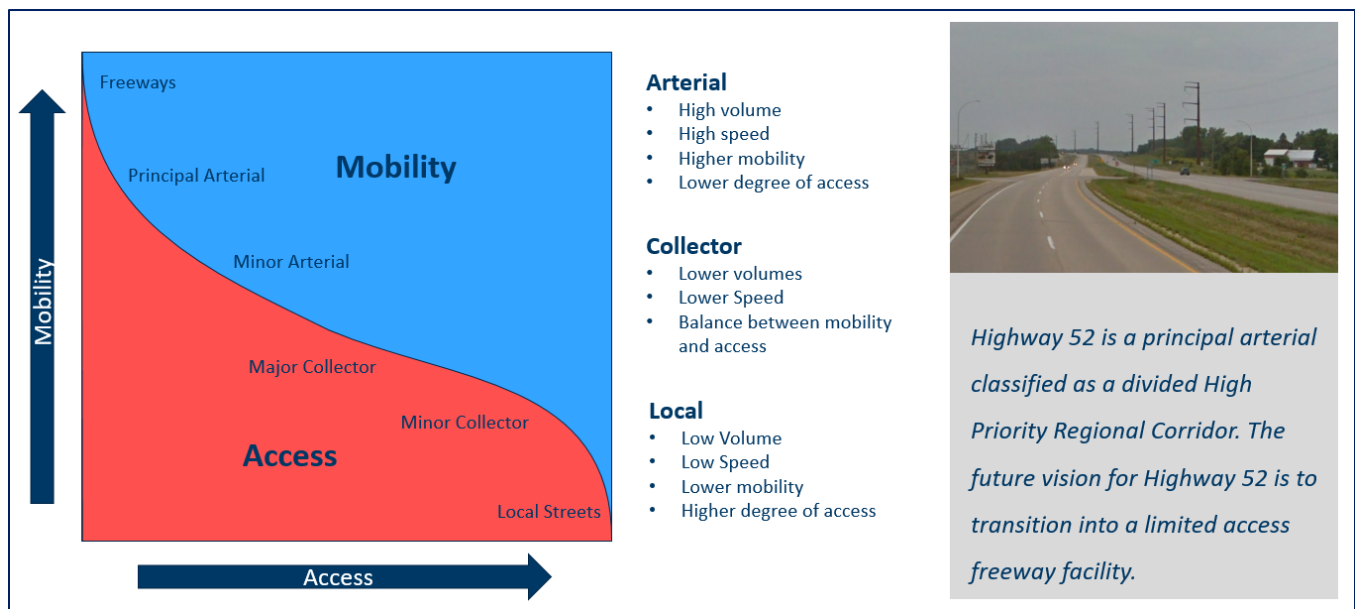


Figure 1 – Access/Mobility Relationship and Characteristics

I. Introduction

Highway 52 corridor has been identified by MnDOT as a High Priority Inter-Regional Corridor (IRC). The long term vision is to convert US 52 to a fully access-controlled freeway facility between I-90 and I-494. The current scope of SP 2506-83 is to reconstruct about 13 miles of southbound US 52 to improve pavement condition. It also includes the reconstruction of six existing bridges as well as a series of access management treatments throughout the corridor to improve mobility, safety, and operations of the highway that would be compatible to its long term vision.

II. Project Location

The US 52 SB Reconstruction Project Corridor is a 20-mile section of Highway 52 located from just south of US 52 and CR24 interchange in Cannon Falls to the south junction of US 52 and TH60 south of Zumbrota. See **Figure 2**.

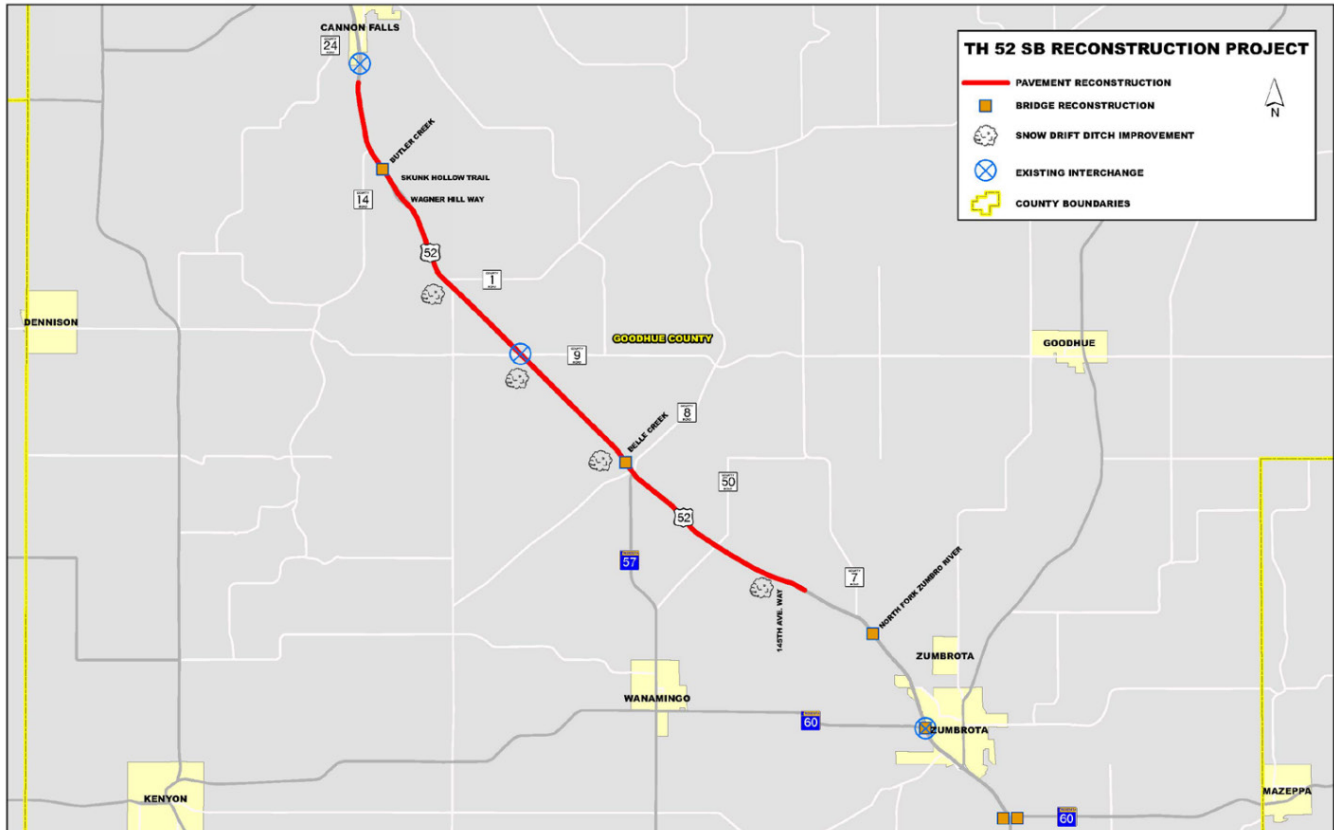


Figure 2 – Project Location Map

III. Existing Conditions

A. Existing Highway Corridor Characteristics

Highway 52 is 4-lane divided principal arterial which is classified as a Category 1AF (non-interstate freeway) facility. The 2017 Annual Average Daily Traffic (AADT) in the project corridor is 20,800, with a Heavy Commercial Average Daily Traffic (HCADT) of about 2,200. Construction is scheduled to begin in 2021. The average forecasted traffic volume growth for year 2041 for the segment of TH52 from Cannon Falls to Zumbrota is 1.09%.

B. Existing Arterial Crossroads Spacing

Arterial roadways within the project segment crossing Highway 52 are shown on **Figure 3**. These arterial roadways are mostly State and County Highways, which include: CR24, CR14, CR1 (N & S Jct), CR9, TH57/CR8, CR50, CR7, TH60 (N Jct), CR10, and TH60 (S Jct). Spacing between these arterials ranges from 1.0 to 3.2 miles.



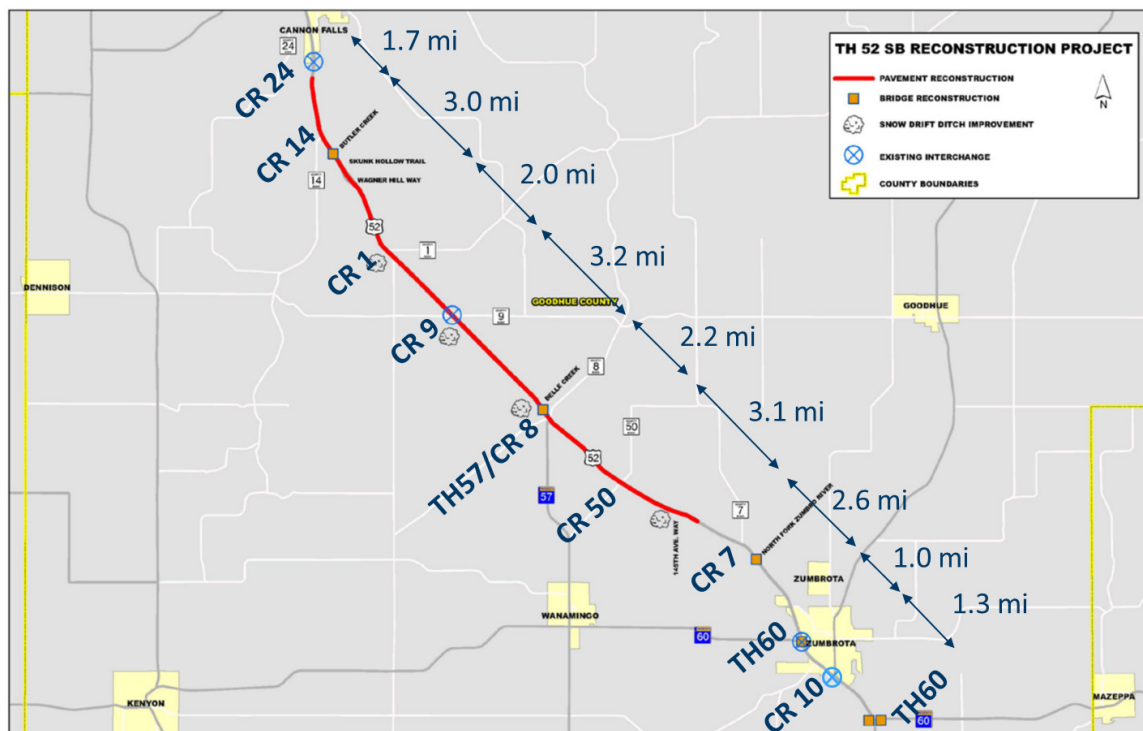


Figure 3 – Highway 52 Existing Arterial Crossroads Spacing

C. Existing Key Intersections

During the preliminary design phase, key intersections have been identified by MnDOT Design Team. Key intersections were generally identified as intersections which may require additional traffic investigation or analysis due to higher traffic volumes or significant access need. These key intersections are as follows:

Table 1 – Key Intersections

Key Intersection	Average Daily Traffic (Year)
County Highway 24	4000 (2015)
County Highway 14	810 (2015)
County Highway 1 (N Jct / S Jct)	770 (2015) / 465 (2015)
County Highway 9	1550 (2015)
100th Avenue	47 (2018)
State Highway 57 / County Highway 8	1700 (2017) / 460 (2015)
County Highway 50	200 (2018)
145th Avenue Way	38 (2018)
County Highway 7	600 (2015)
State Highway 60	1750 (2015)

D. Existing Access Points

There are 74 at-grade access points along the project corridor, not including intermediate median openings and existing interchange ramps. Access points include public roadways (state highways, county roads, and local roads), commercial property entrances, residential/farm driveways, and field accesses. The access inventory is as follows:

Table 2 – Access Point Inventory

Access Points	Full Access	Partial Access	Total Access
State Highway	1		1
County Highway	4	4	8
Township Road	20	3	23
Commercial			



Access Points	Full Access	Partial Access	Total Access
Residential/Farm	23	7	30
Field	11	1	12
Total	59	15	74

E. Existing Highway Safety Performance

The most recent 3-year (2016-2018) crash data from MnDOT has been evaluated and is summarized on **Figure 4**. Overall, the project segment from Cannon Falls to Zumbrota has an elevated crash rate of 0.55 compared to an average statewide average of 0.36 for a similar roadway facility. The segment crash rate is more than 1.5 times higher than average and also has a critical index of 1.28.

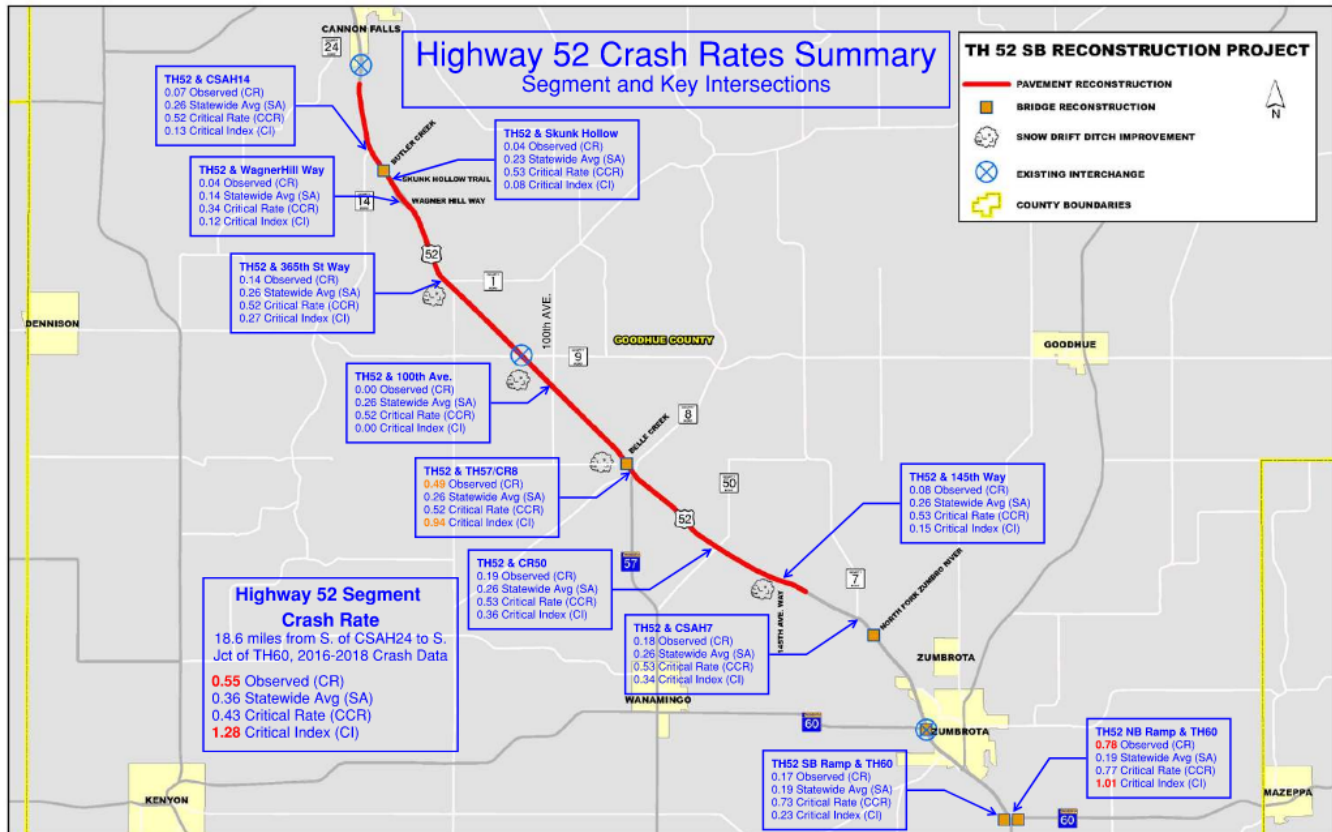


Figure 4 – Highway 52 Segment and Key Intersection Crash Rate Summary

IV. MnDOT Access Management Guidelines

As a state highway, MnDOT is the public agency with jurisdiction over Highway 52 and is responsible for ensuring adequate access management. The access management policy for Highway 52 begins at the state level with MnDOT's Access Management Strategies and Resource Guidance (MnDOT Access Management Manual, January 2, 2008.), which provides guidelines for access management on all state routes. Generally, access management guidelines are applied by category, with category assignments made based on a statewide classification network (i.e., interstate highway, interregional corridor, state highway, etc.). The access management guidelines identify recommended design criteria for intersection spacing based on a roadway's category, including primary intersections (i.e., full movement), secondary intersections (i.e., mid-way between primary intersections), and private driveways. Guidelines also include recommendations for traffic signal and interchange spacing. According to the MnDOT Access Management category map for District 6, the project corridor of Highway 52 is classified as category 1AF (non-interstate freeway facility). As shown in **Table 3**, the access management guidelines for Category 1AF is by interchange only, with at-grade intersections permitted only by exception and on an interim basis.



Table 3 – Access Management Guidelines – Highway 52 Category 1AF (non-interstate freeway)

Access Type	Design Guideline
Public Roadways (primary and secondary intersections)	Interchange Access Only
Driveways	Permitted by Exception Only
Traffic Signals	Permitted by Exception Only

Source: MnDOT Access Management Manual, January 2, 2008

The MnDOT Access Management Manual also includes provisions for Category 1AF highways which are transitioning to a freeway, such as Highway 52. These provisions acknowledge that it is likely that both at-grade intersections and interchanges will be present on such facilities. According to the MnDOT guidelines, all existing at-grade intersections should be considered interim. The following guidelines apply to the interim intersections along Highway 52 within the project area:

Table 4 – Interim Access Spacing Guidelines - Highway 52 Category 1AF (non-interstate freeway)

Interim Access Spacing	Design Guideline
Interim at-grade intersection and merge point of closest interchange ramp	½ mile
Between two interim at-grade intersections	1 mile
Driveways	Permitted by Exception Only
Traffic Signals	Permitted by Exception Only

Source: MnDOT Access Management Manual, January 2, 2008

Since many of the existing high volume intersections along the project corridor of Highway 52 are county highways (i.e., CSAH 14, CSAH 1, CSAH 9, CSAH 8, CSAH 50, CSAH 7), Goodhue County has a shared responsibility on implementing access management within the project area. The supporting access management guidelines for Goodhue County are presented in the Goodhue County Transportation Plan (2004), which recognizes MnDOT's access management policy and guidelines for Highway 52 within the project area. These policies and guidelines support the previously established vision to convert Highway 52 to a fully access controlled (i.e., access by interchange only) freeway facility. As part of the Highway 52 IRC Management Plan (2002), a long-term vision to convert Highway 52 to a fully access controlled freeway facility was approved. Under this vision, all access points along US 52 would be closed as safety and traffic needs dictate.

V. AASHTO Access Management Guidelines

The AASHTO Access Management Manual recommends a minimum of 3 miles of spacing between interchanges in urban areas for “good route guidance” under high-speed, high-volume urban/suburban conditions. The manual recommends a minimum of 6 miles in rural areas. Meanwhile, as a rule of thumb, the AASHTO Green Book recommends a 1-mile minimum spacing between interchanges in urban areas and 2 miles in rural areas between crossroads.

Other states have established more stringent policies than AASHTO that reflect the importance of providing sufficient access control lengths and/or separation distances along crossroads (arterials) at interchanges.

VI. Access Management Strategies

To ensure compatibility with *MnDOT IRC Management Plan (2002)* and *Goodhue County Transportation Plan (2004)*, access management strategies that would promote efficient flow of traffic and improve safety is of particular importance. Previous Highway 52 studies, including *US 52 Safety, Access, and Interchange Location Study (2012)*, have identified several corridor-wide access management strategies. For this project, the access management strategies focused on the following.

Proactive Safety Improvement – Increasing traffic volume on Highway 52 begins to limit the available gaps in mainline traffic. Crossing conflicts from crossroads and driveways are further escalated when delays increase and drivers take riskier maneuvers. **Figure 5** shows a Gap Risk Assessment based on Conflicting Traffic Volume and Crossroad Traffic Volume. With the current Highway 52 mainline and crossroads traffic volumes, the condition is currently at the low/high risk threshold. The strategy is to provide solutions before the risk gets much higher in the future.



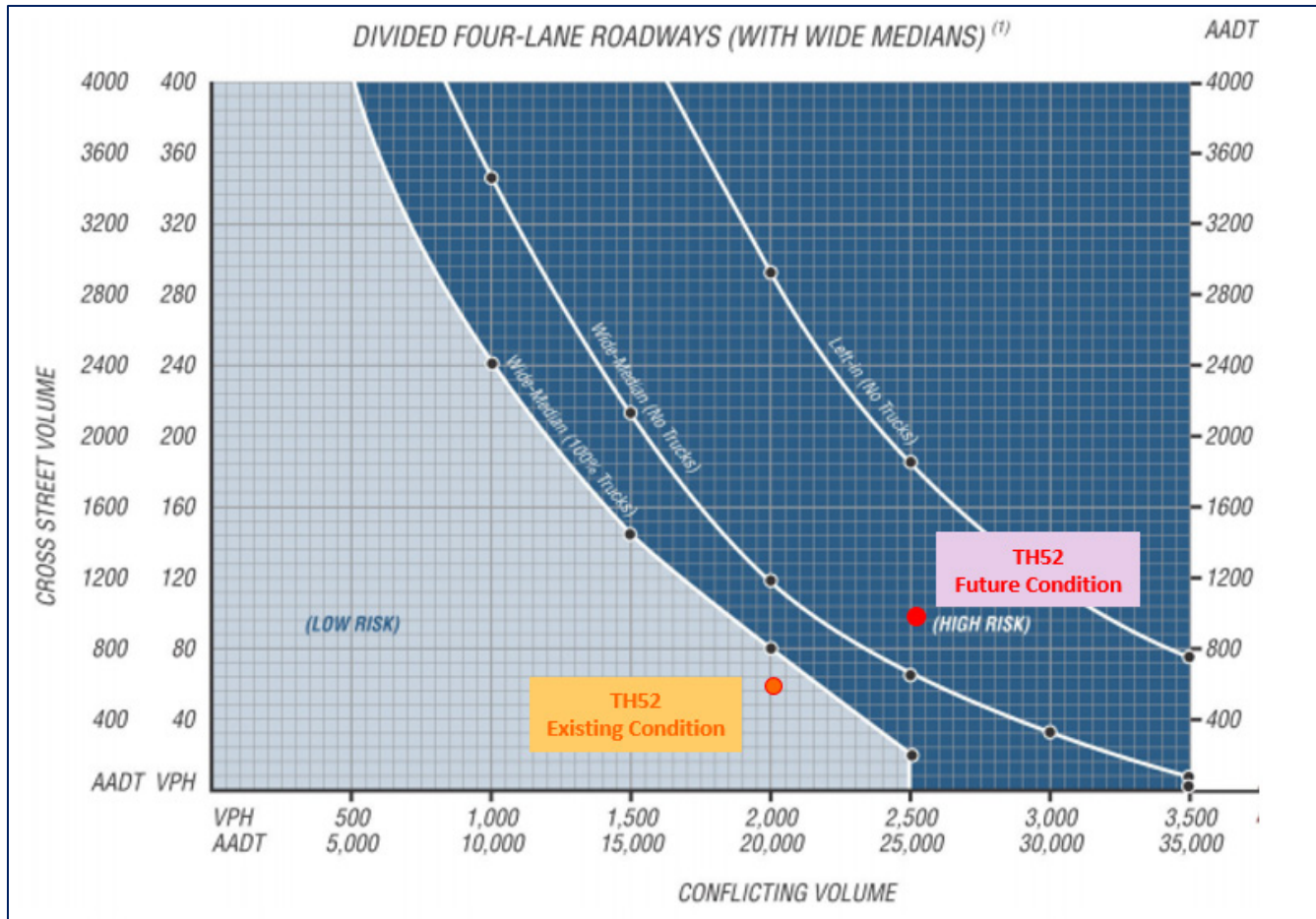


Figure 5 – Conflicting Volume Risk Assessment

Access Spacing – As previously discussed, all existing at-grade crossroads and driveways along Highway 52 are considered interim. MnDOT and AASHTO Access Spacing Guidelines differ from each other. While MnDOT recommends 1 mile and 2 miles interchange spacing, AASHTO recommends 3 miles and 6 miles, in urban and rural areas, respectively.

Access spacing has been historically developed to quantitatively evaluate the need for traffic operations. Most research studies have not initially focused on safety performance. Nonetheless, safety is an important factor to evaluate especially when conducting benefit-cost analysis for interchanges and transforming rural arterials to controlled-access freeway facilities. **Figure 6A** shows the typical interchange influence areas when merging and diverging to and from the highway. The typical distance required within this speed-change lane is 1500 feet. Meanwhile, **Figure 6B** shows the total crash rate in relation to the distance away from ramp gores. The crash rates begin to flatten between 1.5 and 3 miles way from the ramp gore. Hence, from a safety perspective, there are safety benefits to maintaining greater access spacing in comparison with current MnDOT Access Management Guidelines.

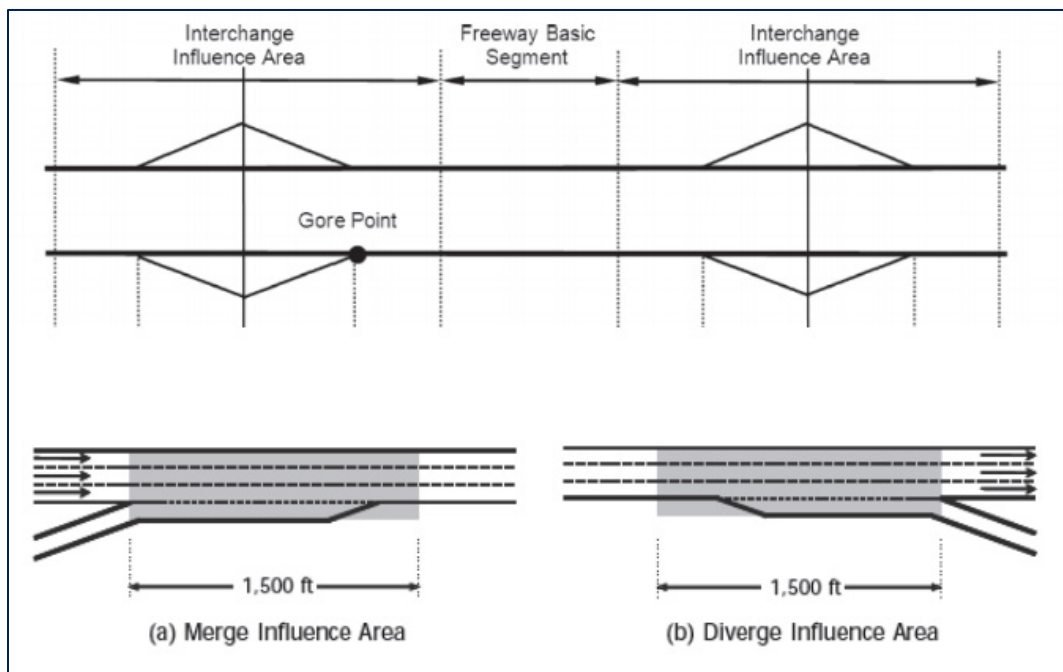


Figure 6A – Interchange Influence Area

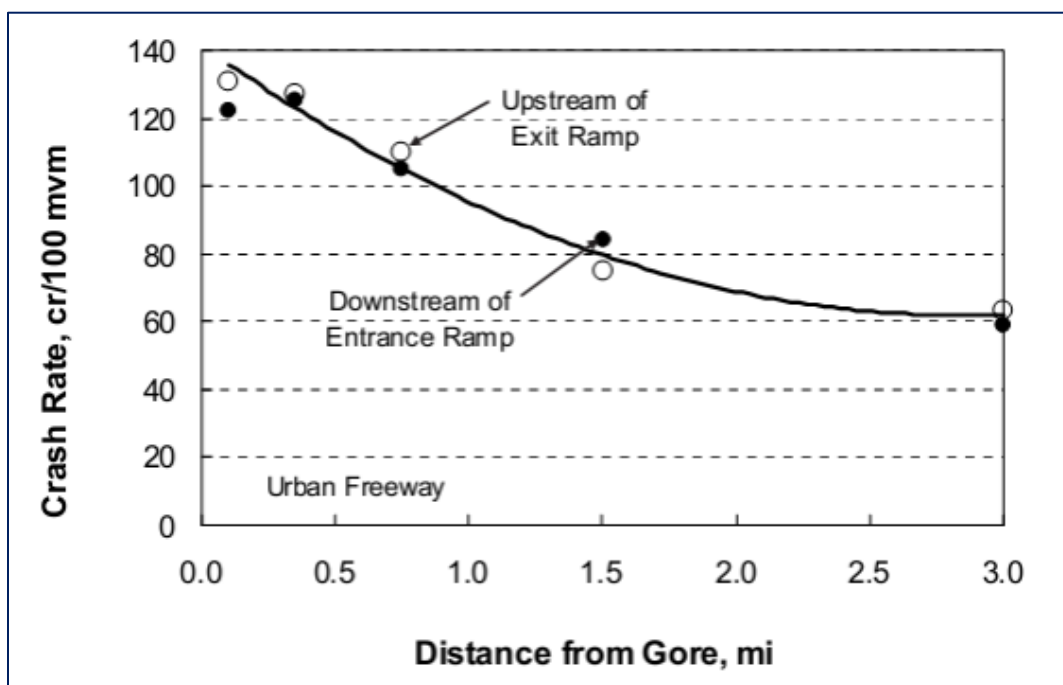

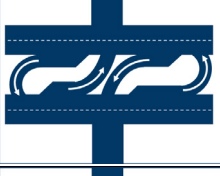





Figure 6B – Total Crash Rate as a Function of Distance from Ramp Gore

Reduction of conflict points – There are 74 access points and an average of 4.5 accesses per mile within the project area from Cannon Falls to Zumbrota. The proliferation of these conflict points is a contributing factor to the increasing crash incidents. Research studies validate that crash rates increase as access density increases. Opportunities to modify access types along the project corridor will have significant improvement and reduction of conflict points; and thereby reducing crash exposure and improving safety. **Table 5** shows the different access types and their corresponding conflict points.

Table 5 – Access Types and Conflict Points

	Access Type	Total Conflict Points	% Conflict Point Reduction
	Full Access – 4-legged intersection	32	-
	Full Access – Reduced Conflict Intersection	14	56%
	3/4 Access	10	69%
	3/8 Access	8	75%
	Right In/Right Out Access	4	88%

It is worth noting, converting a 4-legged full access intersection into a right-in/right-out access will generally result in a very high benefit/cost ratio since a simple median closure yields the largest conflict point reduction. Likewise, if maintaining full access is very important, converting a 4-legged intersection into a reduced conflict intersection maintains full access and reduces the number of conflict points by more than half.

Grade-Separated Interchange – A grade-separated interchange will provide the highest level of mobility and safety when converting existing at-grade intersections. However, this treatment is also more expensive and typically results in more impacts to adjacent lands. The intersection of US 52 and TH57/CR8 in Hader was identified by the community as the most critical intersection within the project segment. Based on the general crossing traffic volume from TH57/CR8 of 1,700 average daily traffic in year 2017, the justification to build an interchange may seem unwarranted. However, upon closer investigation and further public outreach collaboration, it became apparent with the ongoing operational and safety issues, an interchange was needed.

Grade-separated Overpass – Candidate bridge overpass locations were also evaluated. Similar to interchanges, bridge overpass will eliminate at-grade conflict points and allow crossing movements from communities on either side of the highway but is more costly build. Regional and local transportation plans were evaluated. No overpass locations have been identified as a critical need and none have been included as part of this project.

Access Consolidation – Locations of high density of driveway and access point are good candidates for access consolidation. Aside from consolidating multiple driveways, it may also present an opportunity to construct frontage/backage roads which may connect to existing or future roadway networks. For this project, a review of relevant regional and local transportation plans were conducted. Four public meetings were also conducted to solicit feedback from businesses and residents in the community. As a result of the background research and public outreach, the following access consolidations have been identified and incorporated to the project.



Table 6 – Access Consolidation Sites

Access Consolidation Sites	Length (ft)	Description
County Road 14 Frontage Road	7,600	Extend CR14 to connect to CR24 interchange and close CR14 access to Highway 52
Wagner Hill Frontage Road	4,500	Extend and consolidate 5 driveways between Wagner Hill Way and 360th Street Way
County Road 1 East Leg Extension	1,400	Connect 3 residential driveways to CR1 and close CR1 access to Highway 52
County Road 50 Frontage Road	4,200	Close access to Hwy 52 and connect 415th St, CR50, and 135th Ave
142nd Ave Way Frontage Road	1,700	Close 142nd Ave Way access to Hwy 52 and connect to 145th Ave Way
Total	19,400	



Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
1	Private Driveway	Driveway	Full-at-grade	Full Closure/new backage road	Driveway to NB US 52	via CSAH 24 interchange	2.04
1	Private Driveway	Driveway	Full-at-grade	Full Closure/new backage road	Driveway to SB US 52	via CSAH 24 interchange	3.12
1	Private Driveway	Driveway	Full-at-grade	Full Closure/new backage road	NB US 52 to Driveway	via CSAH 24 interchange	3.26
1	Private Driveway	Driveway	Full-at-grade	Full Closure/new backage road	SB US 52 to Driveway	via CSAH 24 interchange	2.00
2	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Field Access to NB US 52	None	N/A
2	Field Access	Driveway	Full-at-grade	Median Closure/local access from property	Field Access to SB US 52	via CSAH 24 interchange	2.96
2	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Field Access	None	N/A
2	Field Access	Driveway	Full-at-grade	Median Closure/local access from property	SB US 52 to Field Access	via Left Turn @ Skunk Hollow Trail	2.04
3	County Rd. 14	County-State Aid System	Full-at-grade	Full Closure/new backage road	EB CSAH 14 to NB US 52	via CSAH 24 interchange	2.41
3	County Rd. 14	County-State Aid System	Full-at-grade	Full Closure/new backage road	EB CSAH 14 to SB US 52	via CSAH 24 interchange	3.85
3	County Rd. 14	County-State Aid System	Full-at-grade	Full Closure/new backage road	NB US 52 to CSAH 14	via CSAH 24 interchange	4.00
3	County Rd. 14	County-State Aid System	Full-at-grade	Full closure/new backage road	SB US 52 to CSAH 14	via CSAH 24 interchange	2.31
4	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to NB US 52	None	N/A
4	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to SB US 52	via CSAH 24 interchange	3.65
4	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
4	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Driveway	via Left Turn @ Skunk Hollow Trail	1.36
5	Field Access	Driveway	Full-at-grade	Median Closure/redirect	Field Access to NB US 52	via Left Turn @ Skunk Hollow Trail	0.87
5	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Field Access to SB US 52	None	N/A
5	Field Access	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Field Access	via CSAH 24 interchange	4.14
5	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Field Access	None	N/A
6	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to NB US 52	None	N/A
6	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to SB US 52	via CSAH 24 interchange	4.14
6	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
6	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Driveway	via Left Turn @ Skunk Hollow Trail	0.86
7	Private Driveway	Driveway	Full-at-grade	Median Redesign/redirect	Driveway to NB US 52	via Left Turn @ Wagner Hill Way	1.87
7	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to SB US 52	None	N/A
7	Private Driveway	Driveway	Full-at-grade	Median Redesign/redirect	NB US 52 to Driveway	via Median U-Turn @ Skunk Hollow Trail	0.65
7	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Driveway	None	N/A
8	Skunk Hollow Trail	Township Road	Full-at-grade	Right-In-Right-Out	WB Skunk Hollow Trail to NB US 52	None	N/A
8	Skunk Hollow Trail	Township Road	Full-at-grade	NB Median U-Turn	WB Skunk Hollow Trail to SB US 52	via Median U-Turn @ Skunk Hollow Trail	0.67
8	Skunk Hollow Trail	Township Road	Full-at-grade	Right-In-Right-Out	NB US 52 to Skunk Hollow Trail	None	N/A
8	Skunk Hollow Trail	Township Road	Full-at-grade	SB Median Left Turn	SB US 52 to Skunk Hollow Trail	Left Turn	N/A
9	Wagner Hill Way	Township Road	Full-at-grade	Median Closure/redirect	EB Wagner Hill Way to NB US 52	via Median U-Turn near CSAH 1	3.20
9	Wagner Hill Way	Township Road	Full-at-grade	Right-In-Right-Out	EB Wagner Hill Way to SB US 52	None	N/A
9	Wagner Hill Way	Township Road	Full-at-grade	Median Closure/redirect	NB US 52 to Wagner Hill Way	via Median U-Turn @ Skunk Hollow Trail	2.50
9	Wagner Hill Way	Township Road	Full-at-grade	Right-In-Right-Out	SB US 52 to Wagner Hill Way	None	N/A

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.

Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
10	Wagner Hill Way	Township Road	Full-at-grade	Right-In-Right-Out	WB Wagner Hill Way to NB US 52	None	N/A
10	Wagner Hill Way	Township Road	Full-at-grade	Median Closure/redirect	WB Wagner Hill Way to SB US 52	via Median U-Turn @ Skunk Hollow Trail	2.50
10	Wagner Hill Way	Township Road	Full-at-grade	Right-In-Right-Out	NB US 52 to Wagner Hill Way	None	N/A
10	Wagner Hill Way	Township Road	Full-at-grade	SB Median Left Turn	SB US 52 to Wagner Hill Way	None	N/A
11	75th Ave. Way	Township Road	Full-at-grade	Median Closure/redirect	EB 75th Ave. Way to NB US 52	via Median U-Turn near CSAH 1	1.90
11	75th Ave. Way	Township Road	Full-at-grade	Right-In-Right-Out	EB 75th Ave. Way to SB US 52	None	N/A
11	75th Ave. Way	Township Road	Full-at-grade	Median Closure/redirect	NB US 52 to 75th Ave. Way	via Median U-Turn @ Skunk Hollow Trail	3.79
11	75th Ave. Way	Township Road	Full-at-grade	Right-In-Right-Out	SB US 52 to 75th Ave. Way	None	N/A
12	75th Ave. Way	Township Road	Full-at-grade	Full Closure/new backage road	WB 75th Ave. Way to NB US 52	via Wagner Hill Way north access	0.70
12	75th Ave. Way	Township Road	Full-at-grade	Full Closure/new backage road	WB 75th Ave. Way to SB US 52	via Median U-Turn @ Skunk Hollow Trail	3.85
12	75th Ave. Way	Township Road	Full-at-grade	Full Closure/new backage road	NB US 52 to 75th Ave. Way	via Wagner Hill Way north access	1.30
12	75th Ave. Way	Township Road	Full-at-grade	Full Closure/new backage road	SB US 52 to 75th Ave. Way	via Wagner Hill Way north access	0.70
13	360th St. Way	Township Road	Full-at-grade	Median Closure/redirect	EB 360th St. Way to NB US 52	via Median U-Turn near CSAH 1	1.55
13	360th St. Way	Township Road	Full-at-grade	Right-In-Right-Out	EB 360th St. Way to SB US 52	None	N/A
13	360th St. Way	Township Road	Full-at-grade	NB Median Left Turn	NB US 52 to 360th St. Way	None	N/A
13	360th St. Way	Township Road	Full-at-grade	Right-In-Right-Out	SB US 52 to 360th St. Way	None	N/A
14	360th St. Way	Township Road	Full-at-grade	Full Closure/new backage road	WB 360th St. Way to NB US 52	via Wagner Hill Way north access	0.85
14	360th St. Way	Township Road	Full-at-grade	Full Closure/new backage road	WB 360th St. Way to SB US 52	via Median U-Turn @ Skunk Hollow Trail	4.18
14	360th St. Way	Township Road	Full-at-grade	Full Closure/new backage road	NB US 52 to 360th St. Way	via Wagner Hill Way north access	1.70
14	360th St. Way	Township Road	Full-at-grade	Full Closure/new backage road	SB US 52 to 360th St. Way	via Wagner Hill Way north access	0.85
15	Private Driveway	Driveway	No Access	No Access	Driveway to NB US 52	via Median U-Turn near CSAH 1	0.87
15	Private Driveway	Driveway	Right-In-Right-Out	Right-In-Right-Out	Driveway to SB US 52	None	N/A
15	Private Driveway	Driveway	No Access	No Access	NB US 52 to Driveway	via Left Turn @ 360th St. Way	0.16
15	Private Driveway	Driveway	Right-In-Right-Out	Right-In-Right-Out	SB US 52 to Driveway	None	N/A
16	Private Driveway	Driveway	No Access	No Access	Driveway to NB US 52	via Median U-Turn near CSAH 1	0.66
16	Private Driveway	Driveway	Right-In-Right-Out	Right-In-Right-Out	Driveway to SB US 52	None	N/A
16	Private Driveway	Driveway	No Access	No Access	NB US 52 to Driveway	via Left Turn @ 360th St. Way	0.58
16	Private Driveway	Driveway	Right-In-Right-Out	Right-In-Right-Out	SB US 52 to Driveway	None	N/A
17	Maple Way	Township Road	No Access	No Access	EB Maple Way to NB US 52	via Median U-Turn near CSAH 1	0.58
17	Maple Way	Township Road	Right-In-Right-Out	Right-In-Right-Out	EB Maple Way to SB US 52	None	N/A
17	Maple Way	Township Road	No Access	No Access	NB US 52 to Maple Way	via Left Turn @ 360th St. Way	0.73
17	Maple Way	Township Road	Right-In-Right-Out	Right-In-Right-Out	SB US 52 to Maple Way	None	N/A
18	Private Driveway	Driveway	Right-In-Right-Out	Full Closure/new backage road	Driveway to NB US 52	via CSAH 9 interchange	7.05
18	Private Driveway	Driveway	No Access	Full Closure/new backage road	Driveway to SB US 52	via CSAH 9 interchange	5.05
18	Private Driveway	Driveway	Right-In-Right-Out	Full Closure/new backage road	NB US 52 to Driveway	via CSAH 9 interchange	4.71
18	Private Driveway	Driveway	No Access	Full Closure/new backage road	SB US 52 to Driveway	via CSAH 9 interchange	7.10

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.

Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
19	365th St. Way	Township Road	Full-at-grade	Median Closure/redirect	EB 365th St. Way to NB US 52	via Median U-Turn near CSAH 1	0.35
19	365th St. Way	Township Road	Full-at-grade	Right-In-Right-Out	EB 365th St. Way to SB US 52	None	N/A
19	365th St. Way	Township Road	Full-at-grade	Median Closure/redirect	NB US 52 to 365th St. Way	via Left Turn @ 360th St. Way	1.20
19	365th St. Way	Township Road	Full-at-grade	Right-In-Right-Out	SB US 52 to 365th St. Way	None	N/A
20	County Rd. 1	County-State Aid System	Full-at-grade	Full Closure/new backage road	WB CSAH 1 to NB US 52	via CSAH 9 interchange	6.74
20	County Rd. 1	County-State Aid System	Full-at-grade	Full Closure/new backage road	WB CSAH 1 to SB US 52	via CSAH 9 interchange	4.55
20	County Rd. 1	County-State Aid System	Full-at-grade	Full Closure/new backage road	NB US 52 to CSAH 1	via CSAH 9 interchange	4.55
20	County Rd. 1	County-State Aid System	Full-at-grade	Full Closure/new backage road	SB US 52 to CSAH 1	via CSAH 9 interchange	6.78
21	County Rd. 1	County-State Aid System	No Access	No Access/Cul-de-sac	NB CSAH 1 to NB US 52	via CSAH 9 interchange	4.80
21	County Rd. 1	County-State Aid System	Right-In-Right-Out	No Access/Cul-de-sac	NB CSAH 1 to SB US 52	via CSAH 9 interchange	2.73
21	County Rd. 1	County-State Aid System	No Access	No Access/Cul-de-sac	NB US 52 to CSAH 1	via CSAH 9 interchange	2.83
21	County Rd. 1	County-State Aid System	Right-In-Right-Out	No Access/Cul-de-sac	SB US 52 to CSAH 1	via CSAH 9 interchange	4.26
22	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to NB US 52	via CSAH 9 interchange	3.55
22	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to SB US 52	None	N/A
22	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Driveway	via Left Turn @ 360th St. Way	2.25
22	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Driveway	None	N/A
23	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to NB US 52	None	N/A
23	Field Access	Driveway	Full-at-grade	Median Closure/redirect	Driveway to SB US 52	via Left Turn @ 360th St. Way	2.25
23	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
23	Field Access	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Driveway	via CSAH 9 interchange	3.55
24	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to NB US 52	via CSAH 9 interchange	3.10
24	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to SB US 52	None	N/A
24	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Driveway	via Left Turn @ 360th St. Way	2.70
24	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Driveway	None	N/A
25	Field Access	Driveway	No Access	No Access	Field Access to NB US 52	via CSAH 9 interchange	2.50
25	Field Access	Driveway	Right-In-Right-Out	Right-In-Right-Out	Field Access to SB US 52	None	N/A
25	Field Access	Driveway	No Access	No Access	NB US 52 to Field Access	via Left Turn @ 360th St. Way	3.32
25	Field Access	Driveway	Right-In-Right-Out	Right-In-Right-Out	SB US 52 to Field Access	None	N/A
26	Field Access	Driveway	Full-at-grade	Median Closure/redirect	Field Access to NB US 52	via CSAH 9 interchange	1.80
26	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Field Access to SB US 52	None	N/A
26	Field Access	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Field Access	via Left Turn @ 360th St. Way	3.85
26	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Field Access	None	N/A
27	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Field Access to NB US 52	None	N/A
27	Field Access	Driveway	Full-at-grade	Median Closure/redirect	Field Access to SB US 52	via Left Turn @ 360th St. Way	3.85
27	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Field Access	None	N/A
27	Field Access	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Field Access	via CSAH 9 interchange	1.80

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.

Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
28	90th Ave.	Township Road	No Access/Cul-de-sac	No Access/Cul-de-sac	N/A	None	N/A
28	90th Ave.	Township Road	No Access/Cul-de-sac	No Access/Cul-de-sac	N/A	None	N/A
28	90th Ave.	Township Road	No Access/Cul-de-sac	No Access/Cul-de-sac	N/A	None	N/A
28	90th Ave.	Township Road	No Access/Cul-de-sac	No Access/Cul-de-sac	N/A	None	N/A
29	90th Ave.	Township Road	Right-In-Right-Out	Closed Access/Cul-de-sac	SB 90th Ave. to NB US 52	via CSAH 9 interchange	5.16
29	90th Ave.	Township Road	No Access	No Access	SB 90th Ave. to SB US 52	via CSAH 9 interchange	4.85
29	90th Ave.	Township Road	Right-In-Right-Out	Closed Access/Cul-de-sac	NB US 52 to 90th Ave.	via CSAH 9 interchange	4.51
29	90th Ave.	Township Road	No Access	No Access	SB US 52 to 90th Ave.	via CSAH 9 interchange	5.21
30	100th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	NB 100th Ave. to NB US 52	via CSAH 9 interchange	4.95
30	100th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	NB 100th Ave. to SB US 52	via Hader interchange	3.50
30	100th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	NB US 52 to 100th Ave.	via Hader interchange	3.78
30	100th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	SB US 52 to 100th Ave.	via CSAH 9 interchange	4.64
31	100th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	SB 100th Ave. to NB US 52	via CSAH 9 interchange	1.23
31	100th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	SB 100th Ave. to SB US 52	via CSAH 9 interchange	2.50
31	100th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	NB US 52 to 100th Ave.	via CSAH 9 interchange	1.94
31	100th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	SB US 52 to 100th Ave.	via CSAH 9 interchange	1.55
32	Field Access	Driveway	Full-at-grade	Median Closure/redirect	Field Access to NB US 52	via Hader interchange	3.77
32	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Field Access to SB US 52	None	N/A
32	Field Access	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Field Access	via CSAH 9 interchange	3.44
32	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Field Access	None	N/A
33	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to NB US 52	None	N/A
33	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to SB US 52	via CSAH 9 interchange	3.45
33	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
33	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Driveway	via Hader interchange	3.67
34	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to NB US 52	via Hader interchange	2.90
34	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to SB US 52	None	N/A
34	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Driveway	via CSAH 9 interchange	4.30
34	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Driveway	None	N/A
35	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to NB US 52	None	N/A
35	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to SB US 52	via CSAH 9 interchange	4.30
35	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
35	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Driveway	via Hader interchange	2.90
36	Field Access	Driveway	Full-at-grade	Closed/Remove Driveway	Field Access to NB US 52	N/A	N/A
36	Field Access	Driveway	Full-at-grade	Closed/Remove Driveway	Field Access to SB US 52	N/A	N/A
36	Field Access	Driveway	Full-at-grade	Closed/Remove Driveway	NB US 52 to Field Access	N/A	N/A
36	Field Access	Driveway	Full-at-grade	Closed/Remove Driveway	SB US 52 to Field Access	N/A	N/A

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.

Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
37	110th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	SB 110th Ave. to NB US 52	via CSAH 9 interchange	3.21
37	110th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	SB 110th Ave. to SB US 52	via Hader interchange	4.53
37	110th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	NB US 52 to 110th Ave.	via Hader interchange	4.50
37	110th Ave.	Township Road	Full-at-grade	Full Closure/Cul-de-sac	SB US 52 to 110th Ave.	via CSAH 9 interchange	3.50
38	Private Driveway	Driveway	Right-In-Right-Out	Closed/Remove Driveway	Driveway to NB US 52	via Hader interchange	1.85
38	Private Driveway	Driveway	Right-In-Right-Out	Closed/Remove Driveway	Driveway to SB US 52	via Hader interchange	1.28
38	Private Driveway	Driveway	Right-In-Right-Out	Closed/Remove Driveway	NB US 52 to Driveway	via Hader interchange	1.55
38	Private Driveway	Driveway	Right-In-Right-Out	Closed/Remove Driveway	SB US 52 to Driveway	via Hader interchange	1.97
39	113th Ave. Way	Township Road	Full-at-grade	Full Closure/redirect	NB 113th Ave. Way to NB US 52	via Hader interchange	1.61
39	113th Ave. Way	Township Road	Full-at-grade	Full Closure/redirect	NB 113th Ave. Way to SB US 52	via Hader interchange	1.04
39	113th Ave. Way	Township Road	Full-at-grade	Full Closure/redirect	NB US 52 to 113th Ave. Way	via Hader interchange	1.31
39	113th Ave. Way	Township Road	Full-at-grade	Full Closure/redirect	SB US 52 to 113th Ave. Way	via Hader interchange	1.53
40	Private Driveway	Driveway	Full-at-grade	Closed/Remove Driveway	Driveway to NB US 52	N/A	N/A
40	Private Driveway	Driveway	Full-at-grade	Closed/Remove Driveway	Driveway to SB US 52	N/A	N/A
40	Private Driveway	Driveway	Full-at-grade	Closed/Remove Driveway	NB US 52 to Driveway	N/A	N/A
40	Private Driveway	Driveway	Full-at-grade	Closed/Remove Driveway	SB US 52 to Driveway	N/A	N/A
41	MN 57	Minnesota State Highway	Full-at-grade	Diamond Interchange	NB MN 57 to NB US 52	via Hader interchange	N/A
41	MN 57	Minnesota State Highway	Full-at-grade	Diamond Interchange	NB MN 57 to SB US 52	via Hader interchange	N/A
41	MN 57	Minnesota State Highway	Full-at-grade	Diamond Interchange	NB US 52 to MN 57	via Hader interchange	N/A
41	MN 57	Minnesota State Highway	Full-at-grade	Diamond Interchange	SB US 52 to MN 57	via Hader interchange	N/A
42	County Rd. 8	County-State Aid System	Full-at-grade	Diamond Interchange	SB CSAH 8 to NB US 52	via Hader interchange	N/A
42	County Rd. 8	County-State Aid System	Full-at-grade	Diamond Interchange	SB CSAH 8 to SB US 52	via Hader interchange	N/A
42	County Rd. 8	County-State Aid System	Full-at-grade	Diamond Interchange	NB US 52 to CSAH 8	via Hader interchange	N/A
42	County Rd. 8	County-State Aid System	Full-at-grade	Diamond Interchange	SB US 52 to CSAH 8	via Hader interchange	N/A
43	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to NB US 52	None	N/A
43	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to SB US 52	via Hader interchange	2.20
43	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
43	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Driveway	via Left Turn @ Access Pt. 46	1.46
44	Private Driveway	Driveway	Right-In-Right-Out	Right-In-Right-Out	Driveway to NB US 52	None	N/A
44	Private Driveway	Driveway	No Access	No Access	Driveway to SB US 52	via Hader interchange	2.75
44	Private Driveway	Driveway	Right-In-Right-Out	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
44	Private Driveway	Driveway	No Access	No Access	SB US 52 to Driveway	via Left Turn @ Access Pt. 46	0.90
45	415th St.	Township Road	Full-at-grade	Full Closure/new backage road	EB 415th St. to NB US 52	via Hader interchange	2.75
45	415th St.	Township Road	Full-at-grade	Full Closure/new backage road	EB 415th St. to SB US 52	via Hader interchange	4.16
45	415th St.	Township Road	Full-at-grade	Full Closure/new backage road	NB US 52 to 415th St.	via Hader interchange	4.36
45	415th St.	Township Road	Full-at-grade	Full Closure/new backage road	SB US 52 to 415th St.	via Hader interchange	2.75

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.

Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
46	415th St.	Township Road	Full-at-grade	Right-In-Right-Out	WB 415th St. to NB US 52	None	N/A
46	415th St.	Township Road	Full-at-grade	Median Closure/redirect	WB 415th St. to SB US 52	via Hader interchange	3.65
46	415th St.	Township Road	Full-at-grade	Right-In-Right-Out	NB US 52 to 415th St.	None	N/A
46	415th St.	Township Road	Full-at-grade	SB Median Left Turn	SB US 52 to 415th St.	via Left Turn @ Access Pt. 46	N/A
47	County Rd. 50	County-State Aid System	Full-at-grade	Full Closure/new backage road	EB CR 50 to NB US 52	via Hader interchange	3.10
47	County Rd. 50	County-State Aid System	Full-at-grade	Full Closure/new backage road	EB CR 50 to SB US 52	via Median U-Turn @ CSAH 7	4.80
47	County Rd. 50	County-State Aid System	Full-at-grade	Full Closure/new backage road	NB US 52 to CR 50	via Median U-Turn @ CSAH 7	5.00
47	County Rd. 50	County-State Aid System	Full-at-grade	Full Closure/new backage road	SB US 52 to CR 50	via Hader interchange	3.10
48	County Rd. 50	County-State Aid System	Full-at-grade	Full Closure/Cul-de-sac	WB CR 50 to NB US 52	via Hader interchange	4.20
48	County Rd. 50	County-State Aid System	Full-at-grade	Full Closure/Cul-de-sac	WB CR 50 to SB US 52	via Hader interchange	6.05
48	County Rd. 50	County-State Aid System	Full-at-grade	Full Closure/Cul-de-sac	NB US 52 to CR 50	via Hader interchange	5.97
48	County Rd. 50	County-State Aid System	Full-at-grade	Full Closure/Cul-de-sac	SB US 52 to CR 50	via Hader interchange	4.20
49	135th Ave.	Township Road	Full-at-grade	Full Closure/new backage road	NB 135th Ave. to NB US 52	via Hader interchange	3.45
49	135th Ave.	Township Road	Full-at-grade	Full Closure/new backage road	NB 135th Ave. to SB US 52	via Median U-Turn @ CSAH 7	4.50
49	135th Ave.	Township Road	Full-at-grade	Full Closure/new backage road	NB US 52 to 135th Ave.	via Median U-Turn @ CSAH 7	4.68
49	135th Ave.	Township Road	Full-at-grade	Full Closure/new backage road	SB US 52 to 135th Ave.	via Hader interchange	3.50
50	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Field Access to NB US 52	None	N/A
50	Field Access	Driveway	Full-at-grade	Median Closure/redirect	Field Access to SB US 52	via Hader interchange	5.00
50	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Field Access	None	N/A
50	Field Access	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Field Access	via Median U-Turn @ CSAH 7	5.91
51	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to NB US 52	via Median U-Turn @ CSAH 7	5.25
51	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to SB US 52	None	N/A
51	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Driveway	via Hader interchange	5.65
51	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Driveway	None	N/A
52	420th Street	Township Road	Full-at-grade	Full Closure/Cul-de-sac	WB 420th St. to NB US 52	via CSAH 7	5.65
52	420th Street	Township Road	Full-at-grade	Full Closure/Cul-de-sac	WB 420th St. to SB US 52	via Median Crossing @ CSAH 7	3.18
52	420th Street	Township Road	Full-at-grade	Full Closure/Cul-de-sac	NB US 52 to 420th St.	via CSAH 7	3.18
52	420th Street	Township Road	Full-at-grade	Full Closure/Cul-de-sac	SB US 52 to 420th St.	via Median U-Turn @ CSAH 7	5.63
53	Private Driveway	Driveway	Full-at-grade	Full Closure/new backage road	Driveway to NB US 52	via Median U-Turn @ CSAH 7	4.25
53	Private Driveway	Driveway	Full-at-grade	Full Closure/new backage road	Driveway to SB US 52	via 145th Ave. Way	0.35
53	Private Driveway	Driveway	Full-at-grade	Full Closure/new backage road	NB US 52 to Driveway	via Left Turn @ 145th Ave. Way	0.38
53	Private Driveway	Driveway	Full-at-grade	Full Closure/new backage road	SB US 52 to Driveway	via 145th Ave. Way	0.65
54	Field Access	Driveway	Full-at-grade	Close/Remove Driveway	Field Access to NB US 52	N/A	N/A
54	Field Access	Driveway	Full-at-grade	Close/Remove Driveway	Field Access to SB US 52	N/A	N/A
54	Field Access	Driveway	Full-at-grade	Close/Remove Driveway	NB US 52 to Field Access	N/A	N/A
54	Field Access	Driveway	Full-at-grade	Close/Remove Driveway	SB US 52 to Field Access	N/A	N/A

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.

Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
55	145th Ave. Way	Township Road	Full-at-grade	Median Closure/redirect	NB 145th Ave. Way to NB US 52	via Median U-Turn @ CSAH 7	4.10
55	145th Ave. Way	Township Road	Full-at-grade	Right-In-Right-Out	NB 145th Ave. Way to SB US 52	None	N/A
55	145th Ave. Way	Township Road	Full-at-grade	NB Median Left Turn	NB US 52 to 145th Ave. Way	via Left Turn @ 145th Ave. Way	N/A
55	145th Ave. Way	Township Road	Full-at-grade	Right-In-Right-Out	SB US 52 to 145th Ave. Way	None	N/A
56	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to NB US 52	None	N/A
56	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to SB US 52	via Hader interchange	7.22
56	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
56	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Driveway	via Median U-Turn @ CSAH 7	4.10
57	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to NB US 52	via Median U-Turn @ CSAH 7	3.05
57	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to SB US 52	None	N/A
57	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Driveway	via Left Turn @ 145th Ave. Way	1.10
57	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Driveway	None	N/A
58	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	Driveway to NB US 52	None	N/A
58	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	Driveway to SB US 52	via Left Turn @ 145th Ave. Way	1.10
58	Private Driveway	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
58	Private Driveway	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Driveway	via Median U-Turn @ CSAH 7	3.05
59	Field Access	Driveway	Full-at-grade	Median Closure/redirect	Field Access to NB US 52	via Median U-Turn @ CSAH 7	2.26
59	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Field Access to SB US 52	None	N/A
59	Field Access	Driveway	Full-at-grade	Median Closure/redirect	NB US 52 to Field Access	via Left Turn @ 145th Ave. Way	1.90
59	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	SB US 52 to Field Access	None	N/A
60	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	Field Access to NB US 52	None	N/A
60	Field Access	Driveway	Full-at-grade	Median Closure/redirect	Field Access to SB US 52	via Left Turn @ 145th Ave. Way	1.90
60	Field Access	Driveway	Full-at-grade	Right-In-Right-Out	NB US 52 to Field Access	None	N/A
60	Field Access	Driveway	Full-at-grade	Median Closure/redirect	SB US 52 to Field Access	via Median U-Turn @ CSAH 7	2.26
61	Sherwood Trail	Township Road	Full-at-grade	Median Redesign	EB Sherwood Trail to NB US 52	via Median U-Turn @ CSAH 7	0.83
61	Sherwood Trail	Township Road	Full-at-grade	Median Redesign	EB Sherwood Trail to SB US 52	None	N/A
61	Sherwood Trail	Township Road	Full-at-grade	Median Redesign	NB US 52 to Sherwood Trail	via Median U-Turn @ CSAH 7	0.36
61	Sherwood Trail	Township Road	Full-at-grade	Median Redesign	SB US 52 to Sherwood Trail	None	N/A
62	County Rd. 7	County-State Aid System	Full-at-grade	Median Redesign	SB CSAH 7 to NB US 52	None	N/A
62	County Rd. 7	County-State Aid System	Full-at-grade	Median Redesign	SB CSAH 7 to SB US 52	via Median U-Turn @ CSAH 7	0.36
62	County Rd. 7	County-State Aid System	Full-at-grade	Median Redesign	NB US 52 to CSAH 7	None	N/A
62	County Rd. 7	County-State Aid System	Full-at-grade	Median Redesign	SB US 52 to CSAH 7	via Median U-Turn @ CSAH 7	0.84
63	Sherwood Trail	Township Road	Full-at-grade	Median Closure/redesign	EB Sherwood Trail to NB US 52	via Median U-Turn @ CSAH 7	0.35
63	Sherwood Trail	Township Road	Full-at-grade	Right-In-Right-Out	EB Sherwood Trail to SB US 52	None	N/A
63	Sherwood Trail	Township Road	Full-at-grade	Median Closure/redesign	NB US 52 to Sherwood Trail	via Median U-Turn @ CSAH 7	0.86
63	Sherwood Trail	Township Road	Full-at-grade	Right-In-Right-Out	SB US 52 to Sherwood Trail	None	N/A

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.

Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
64	Sherwood Trail	Township Road	Full-at-grade	Close/Remove	WB Sherwood Trail to NB US 52	via SB 165th Ave.	1.05
64	Sherwood Trail	Township Road	Full-at-grade	Close/Remove	WB Sherwood Trail to SB US 52	via SB 165th Ave. to CSAH 7 RCI	1.90
64	Sherwood Trail	Township Road	Full-at-grade	Close/Remove	NB US 52 to Sherwood Trail	via 165th Ave.	0.58
64	Sherwood Trail	Township Road	Full-at-grade	Close/Remove	SB US 52 to Sherwood Trail	via existing Left Turn @ 445th St.	3.13
65	165th Ave.	Township Road	Full-at-grade	Close/Remove	NB 165th Ave. to NB US 52	via MN 60 interchange	4.43
65	165th Ave.	Township Road	Full-at-grade	Close/Remove	NB 165th Ave. to SB US 52	via MN 60 interchange	2.66
65	165th Ave.	Township Road	Full-at-grade	Close/Remove	NB US 52 to 165th Ave.	via MN 60 interchange to 165th Ave.	2.66
65	165th Ave.	Township Road	Full-at-grade	Close/Remove	SB US 52 to 165th Ave.	via MN 60 interchange to 165th Ave.	4.28
66	165th Ave.	Township Road	Full-at-grade	Right-In-Right-Out	SB 165th Ave. to NB US 52	None	N/A
66	165th Ave.	Township Road	Full-at-grade	Median Closure/redirect	SB 165th Ave. to SB US 52	via Median U-Turn @ CSAH 7	1.81
66	165th Ave.	Township Road	Full-at-grade	Right-In-Right-Out	NB US 52 to 165th Ave.	None	N/A
66	165th Ave.	Township Road	Full-at-grade	Median Closure/redirect	SB US 52 to 165th Ave.	via existing Left Turn @ 445th St.	2.17
67	440th Ave.	Township Road	Full-at-grade	Close/Remove	EB 440th St. to NB US 52	via MN 60 interchange	3.85
67	440th Ave.	Township Road	Full-at-grade	Close/Remove	EB 440th St. to SB US 52	via MN 60 interchange	2.47
67	440th Ave.	Township Road	Full-at-grade	Close/Remove	NB US 52 to 440th St.	via MN 60 interchange	2.30
67	440th Ave.	Township Road	Full-at-grade	Close/Remove	SB US 52 to 440th St.	via MN 60 interchange	3.70
68	440th Ave.	Township Road	Full-at-grade	Right-In-Right-Out	WB 440th St. to NB US 52	None	N/A
68	440th Ave.	Township Road	Full-at-grade	Median Closure/redirect	WB 440th St. to SB US 52	via Median U-Turn @ CSAH 7	2.71
68	440th Ave.	Township Road	Full-at-grade	Right-In-Right-Out	NB US 52 to 440th St.	None	N/A
68	440th Ave.	Township Road	Full-at-grade	Median Closure/redirect	SB US 52 to 440th St.	via existing Left Turn @ 445th St.	1.28
69	Private Driveway	Driveway	Right-In-Right-Out	Right-In-Right-Out	Driveway to NB US 52	None	N/A
69	Private Driveway	Driveway	No Access	No Access	Driveway to SB US 52	via Median U-Turn @ CSAH 7	2.95
69	Private Driveway	Driveway	Right-In-Right-Out	Right-In-Right-Out	NB US 52 to Driveway	None	N/A
69	Private Driveway	Driveway	No Access	No Access	SB US 52 to Driveway	via existing Left Turn @ 445th St.	1.04
70	445th St.	Township Road	Right-In-Right-Out	Right-In-Right-Out	WB 445th St. to NB US 52	None	N/A
70	445th St.	Township Road	No Access	No Access	WB 445th St. to SB US 52	via CSAH 7 RCI	4.00
70	445th St.	Township Road	Right-In-Right-Out	Right-In-Right-Out	NB US 52 to 445th St.	None	N/A
70	445th St.	Township Road	Left Turn	Left Turn	SB US 52 to 445th St.	None	N/A
71	Private Driveway	Driveway	Full-at-grade	Full-at-grade	Driveway to NB US 52	None	N/A
71	Private Driveway	Driveway	Full-at-grade	Full-at-grade	Driveway to SB US 52	None	N/A
71	Private Driveway	Driveway	Full-at-grade	Full-at-grade	NB US 52 to Driveway	None	N/A
71	Private Driveway	Driveway	Full-at-grade	Full-at-grade	SB US 52 to Driveway	None	N/A
72	Field Access	Driveway	Full-at-grade	Full-at-grade	Field Access to NB US 52	None	N/A
72	Field Access	Driveway	Full-at-grade	Full-at-grade	Field Access to SB US 52	None	N/A
72	Field Access	Driveway	Full-at-grade	Full-at-grade	NB US 52 to Field Access	None	N/A
72	Field Access	Driveway	Full-at-grade	Full-at-grade	SB US 52 to Field Access	None	N/A

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.

Exhibit 1 - Access Management

Access Point No.	Access Point Description	Functional Classification	Current Access w/ US 52	Proposed Treatment	Affected Movement	Alt. Route - Movement	Alt. Route - Distance (Mile)
73	Field Access	Driveway	Full-at-grade	Full-at-grade	Field Access to NB US 52	None	N/A
73	Field Access	Driveway	Full-at-grade	Full-at-grade	Field Access to SB US 52	None	N/A
73	Field Access	Driveway	Full-at-grade	Full-at-grade	NB US 52 to Field Access	None	N/A
73	Field Access	Driveway	Full-at-grade	Full-at-grade	SB US 52 to Field Access	None	N/A
74	Private Driveway	Driveway	Full-at-grade	Full-at-grade	Driveway to NB US 52	None	N/A
74	Private Driveway	Driveway	Full-at-grade	Full-at-grade	Driveway to SB US 52	None	N/A
74	Private Driveway	Driveway	Full-at-grade	Full-at-grade	NB US 52 to Driveway	None	N/A
74	Private Driveway	Driveway	Full-at-grade	Full-at-grade	SB US 52 to Driveway	None	N/A
Average Alternative Route Distance (All Movements)							2.92
Average Alternative Route Distance (State Highways, CSAH's, and Township Roads only)							3.06
Average Alternative Route Distance (Driveways and Field Accesses only)							2.71
Shortest Detour Distance							0.16
Longest Detour Distance							7.22
Total Number of Movements							296
Number of Movements with No Change, "None"							107

Note: Refer to Figure 1 in Appendix A for a depiction of the access point location.