LAYOUT HISTORY

Layout 1

Initial Layout Development
From 2005 to 2013 MnDOT completed numerous planning studies that include the I-35W project corridor from TH 36 to Lexington Avenue. These previous planning studies include:

- *Interstate 35 Corridor Management Plan* (2005)
- *MnPASS System Study Phase 1* (2005)
- *MnPASS System Study Phase 2* (2010)
- *Metropolitan Highway System Investment Study* (2010)
- *I-35W North Managed Lanes Corridor Study* (2013)

The final outcome of the I-35W North Managed Lanes Corridor Study was the I-35W North Managed Lanes Vision. The I-35W North Managed Lanes Vision represents the entire range of improvements identified for the I-35W corridor, including additional managed lane capacity, localized improvements to address existing congestion problems, and localized improvements to facilitate the implementation of managed lanes. For additional information on the project termini refer to the Logical Termini Report.

Prior to Layout 1 development, several meetings were held with FHWA, MnDOT Central Office Geometrics, State Patrol, and various MnDOT functional groups to determine the typical section, enforcement areas, barrier tapers and the layout scale.

A “Drainage Spread Report” was generated to assist in the determination of the typical section to be used on the corridor. Meetings were also held on December 23, 2014, March 26, 2015 and June 23, 2015 which resulted in the typical sections shown on the layout.

A meeting was held on May 7, 2015 with GDSU staff. The following directions regarding layout format and barrier design were implemented as a result of the meeting:
- A taper rate of 1:40 for the barrier transition should be used and if drainage issues occur a 1:25 taper could be considered.
- Layout should be done at 200 Scale.

Concept Design Review
A meeting was held on September 9, 2015 to discuss the concept layout with MnDOT Layout Approval Committee (LAC). The following changes were implemented into the concept layout:
- Changed labeling of State Patrol enforcement areas from "Enforcement Zone" to "Enforcement Shoulder".
- Shifted beginning of NB MnPASS lane further south to just north of the County Road C bridge.
- Updated future construction by others at the County Road E2 interchange.
- The horizontal sight distance for SB 35W at 95th Avenue was checked due to the median barrier placement and it meets 65 MPH (in the MnPASS Lane) a design exception will not be required as the design speed is 60 MPH in this area.
- Revised the MnPASS lane for NB 35W that ends between 95th Avenue and Lexington Avenue to a 1:200 transition from 1:70.

Project Scope Determination January 2016

Based on the VE Study completed in October 2015 narrow lanes widths were reviewed. As a result, 11.5' lanes are shown on this layout. Based on internal discussions at MnDOT along with FHWA the typicals used to create the layout were approved by the MnDOT project manager, Metro Assistant District Engineer, State Design Engineer and Federal Highway Administration.
Additionally the pavement rehabilitation limits and types were approved as shown on this layout and as indicated in the layout legends.
It was also determined that continuous lighting would be used along 35W from I-694 to the north TH 10 junction.

Several spot improvements were also determined to be included in the project which are listed below:
I-35W Southbound
- At the south termini extend 4 lanes across bridges at County Road C; tie into existing left add-lane to Cleveland. The northbound bridges will also be reconstructed as part of this project.
- On the entrance from I-694 eastbound add an auxiliary lane from I-694 EB entrance to County Road E2 exit.
- On the exit to I-694 westbound add an auxiliary lane from CSAH 96 entrance to I-694 WB exit.
- On the exit to TH 10 eastbound expand to 2-lane exit with option lane and 2-lane connection to TH 10 EB and SB 35W auxiliary lane from County Road I Ramp to TH 10.

I-35W Northbound
- Added an auxiliary lane on TH 10 WB from I-35W SB entrance to add-lane near 93rd Lane.
- Provided 2-lane entrance from WB TH 10 to I-35W NB and carry lane to TH 10 north interchange.
- Added an auxiliary lane along I-35W NB from I-694 WB entrance to CSAH 96 exit.
- Added a buffer lane through loop-to-loop weave and deceleration lane extending back to entrance from County Road E2.

February 2016 LAC Meeting

The layout was presented to the LAC on February 24, 2016 and the focus of the review was the Spot Improvements. The following comments were received:
- Increased the superelevation for the EB TH 10 to SB 35W to 0.07.
- Revised the EB CSAH 10 / NB TH 10 geometrics to match the "TH 10 RAMP TO NB 35W ULTIMATE BUILD" detail shown on the layout for SP 6284-162 (CR H).
- Revised the SB 35W exit to County Road 88 with a 1:25 taper and removed parallel deceleration lane.
- Added label for SP 6205-39 and ponds build for SP 6284-159.
- Revised the SB 35W shoulder from 10' to 12' from the exit to WB TH 10 to the entrance of EB TH 10.

April 2016 LAC Meeting

The layout was presented to the LAC on April 6, 2016 for approval. The following significant changes were made to the layout from the comments received:
- List of Design Exceptions was added and project description was added to the title block .
- A figure and table was provided to document bridge clearance dimensions on the project.
- A graphic was added to show proposed concrete overlay depths.
- Existing widths were added on 35W and TH 10 at the tie in points.
- Existing traffic signals and ramp meter signals were added.
- Added locations where ramp meters will be proposed or left in-place.
- HCADT percentages were added to the traffic figure.
- A 2040 peak hour ramp volume traffic figure was added.
- The TH 35W SB exit to CSAH 88 was adjusted to make the 1 lane distance longer before expanding to two lanes.
- The escape lane at the SB 35 exit to CR E2 was removed.

- Reconstruction of the following ramps to accommodate ramp meters:
CR D to SB 35W, EB 694 to SB 35W, EB 694 to NB 35W (Loop), Connection from Frontage Road to Lake Drive ramp to SB 35W.

The Layout was advanced to Layout 1A

LAYOUT No. 1A COPY No.
T.H. 35W VICINITY OF RAMSEY AND ANOKA COUNTIES
PROJECT DESCRIPTION: I35W FR CO RD B2 IN ROSEVILLE TO 0.1 MI N SUNSET AVE (ANOKA CR 53) IN LINO LAKES (12 MI) AND US 10 FR N JCT I35W TO 0.7 MI E CSAH J (0.7 MI), CONSTRUCT MNPASS LANE FR CR C TO LEXINGTON AVE. (ANOKA CSAH 17), CONC OVLY FR CR C TO CR 53, MISC PAVEMENT RECONSTRUCT & BIT M&O, REHAB 16 BR AND REPLACE 5 BR, ADD AUXILIARY LANES AT MULTIPLE LOCATIONS.
Prepared MAY 2016 Scale: Hor. 1 Inch = 200 ft.
By SRF Consulting Group, Inc.

The alignment and grades shown on this map are tentative and subject to change without notice.	Staff Approval Date:	The traffic volumes shown are estimated for year 2040 Prepared July 2015

S.P. 6284-172 T.H. 35W A.J. T9R368 PPMS Activity 1140
Copy To: For:

DESIGN FILE: H:\Projects\8598\Design\Layouts\Preliminary\CP6284172_loh.dgn
DATE: 5/25/2016 - DATE PLOTTED

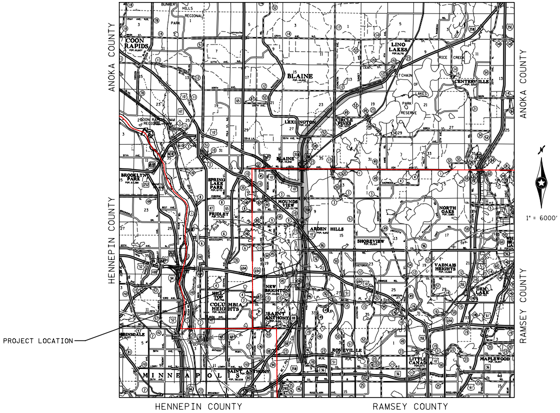
Level 1 LAYOUT APPROVAL

Programmed Letting Date FALL 2017
Prepared By Aaron Vanderwerf SRF Consulting Group, Inc. 20 16
Reviewed By Metro District Preliminary Design Engineer 20
Reviewed By Metro District Maintenance Operations Engineer 20
Reviewed By Metro District Traffic Engineer 20
Reviewed By State Geometrics Engineer 20
Approved By Metro District Engineer 20
Approved By State Design Engineer 20

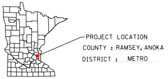
I HEREBY CERTIFY THAT THIS LAYOUT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE: 5/25/2016 LIC. NO.: 44277 ENGR.: Aaron Vanderwerf

LOCATION MAP

ANOKA COUNTY


ANOKA COUNTY
HENNEPIN COUNTY
ANOKA COUNTY
RAMSEY COUNTY
PROJECT LOCATION
COON RAPIDS
BLAINE
LINO LAKES
CENTERVILLE
CIRCLE PINES
LEXINGTON
SPRING LAKE PARK
FRIDLEY
MOUNDS VIEW
NORTH OAKS
ARDEN HILLS
SHOREVIEW
NEW BRIGHTON
VADNAIS HEIGHTS
COLUMBIA HEIGHTS
ST. ANTHONY
ROSEVILLE
LITTLE CANADA
MAPLEWOOD
BROOKLYN PARK
MINNEAPOLIS
1" = 6000'

HENNEPIN COUNTY RAMSEY COUNTY


PROJECT LOCATION

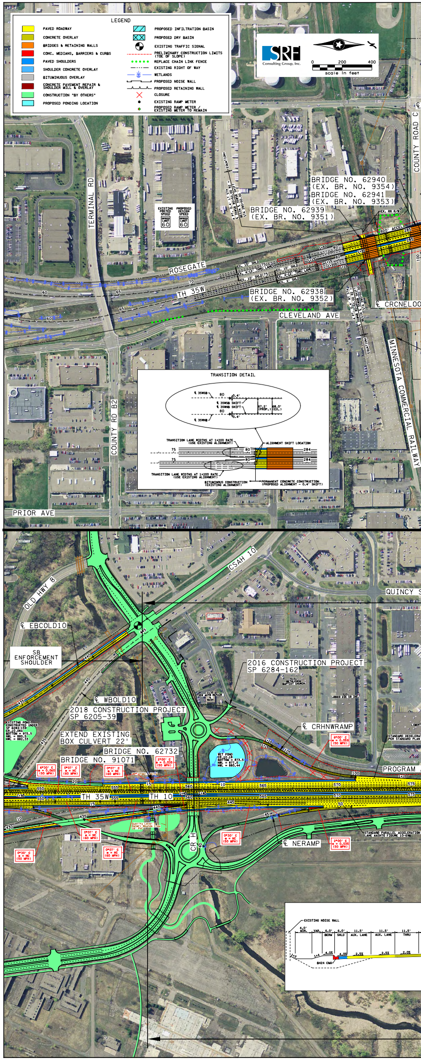
COUNTY : RAMSEY, ANOKA
DISTRICT : METRO

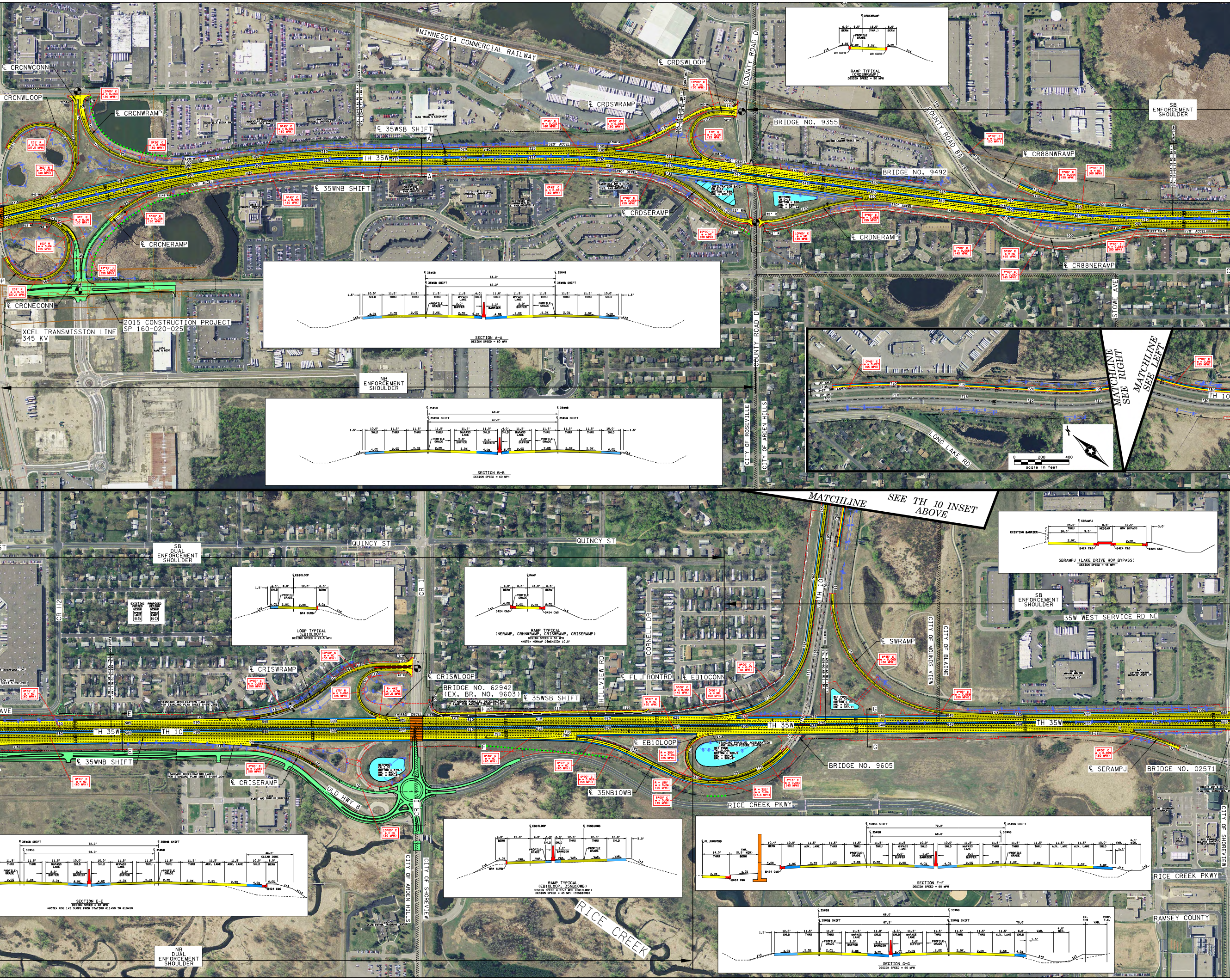
Design Exceptions:

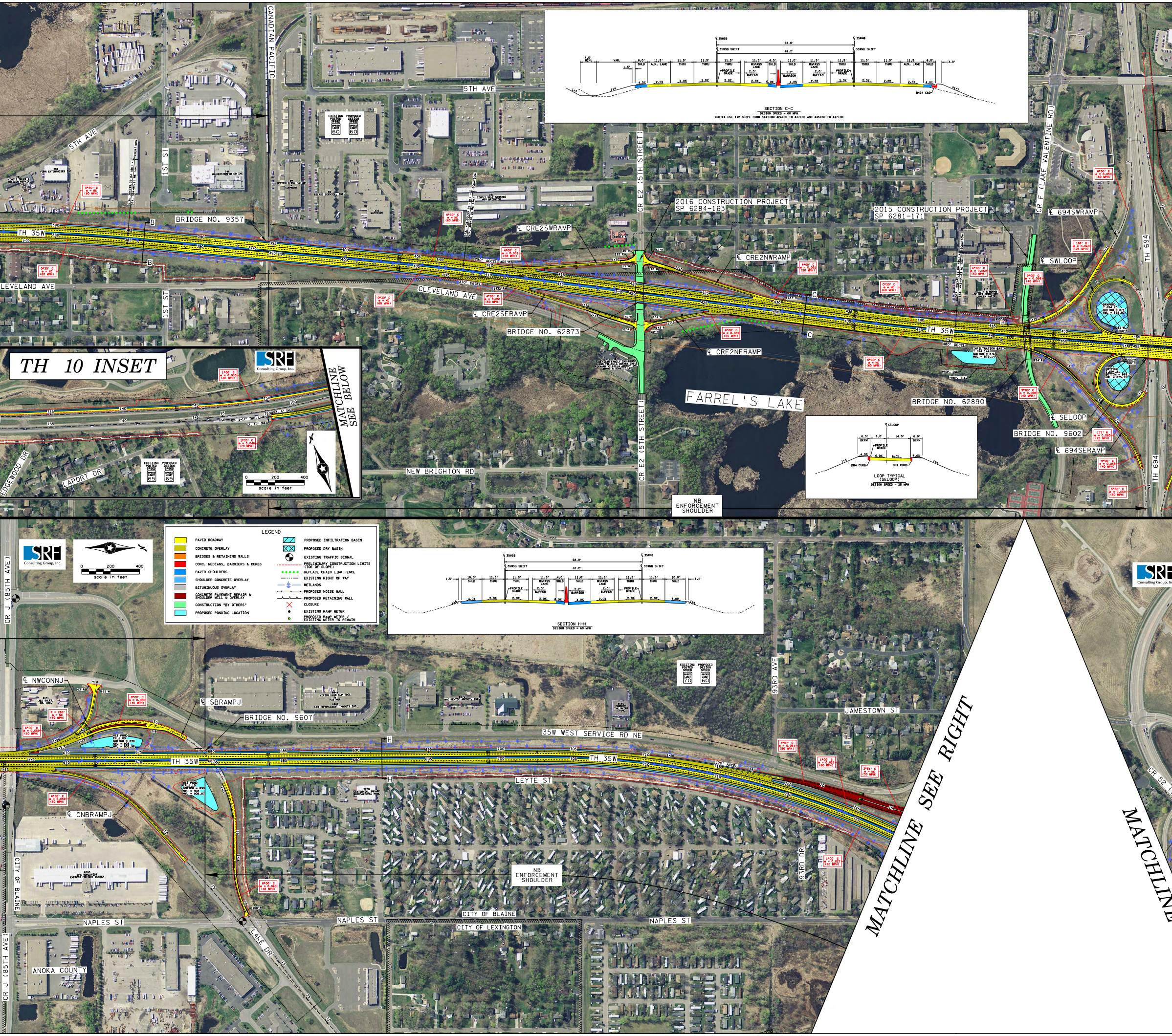
1. Vertical Bridge Clearance at County Road D, County Road 88, CP Rail, EB & WB I-694 and Sunset Avenue bridges
2. Right Bridge Lateral Clearance on I-35W at several existing bridge locations
3. Left Bridge Lateral Clearance on I-35W at several existing bridge locations
4. Inside Shoulder width adjacent to MnPASS Lane
5. MnPASS Buffer: I-35W MnPASS buffer is 2 ft instead of 4 ft minimum
6. 11.5 ft General Purpose and MnPASS Lane Widths
7. Inside should width adjacent to the MnPASS Lane
8. Inside shoulder width on WB TH 10
9. Outside shoulder width on WB TH 10
10. Ramp Design Exceptions
– Acceleration / Deceleration Length at SB 35W / TH 694 Loops
– Loop widths at CR C NB exit, CR D SB exit, TH 694 NB exit, TH 694 SB exit, TH 694 SB entrance, CR I SB exit
– Inside shoulder width and stopping sight distance for ramp from I-35W NB to TH 10 WB (35NB10WB)

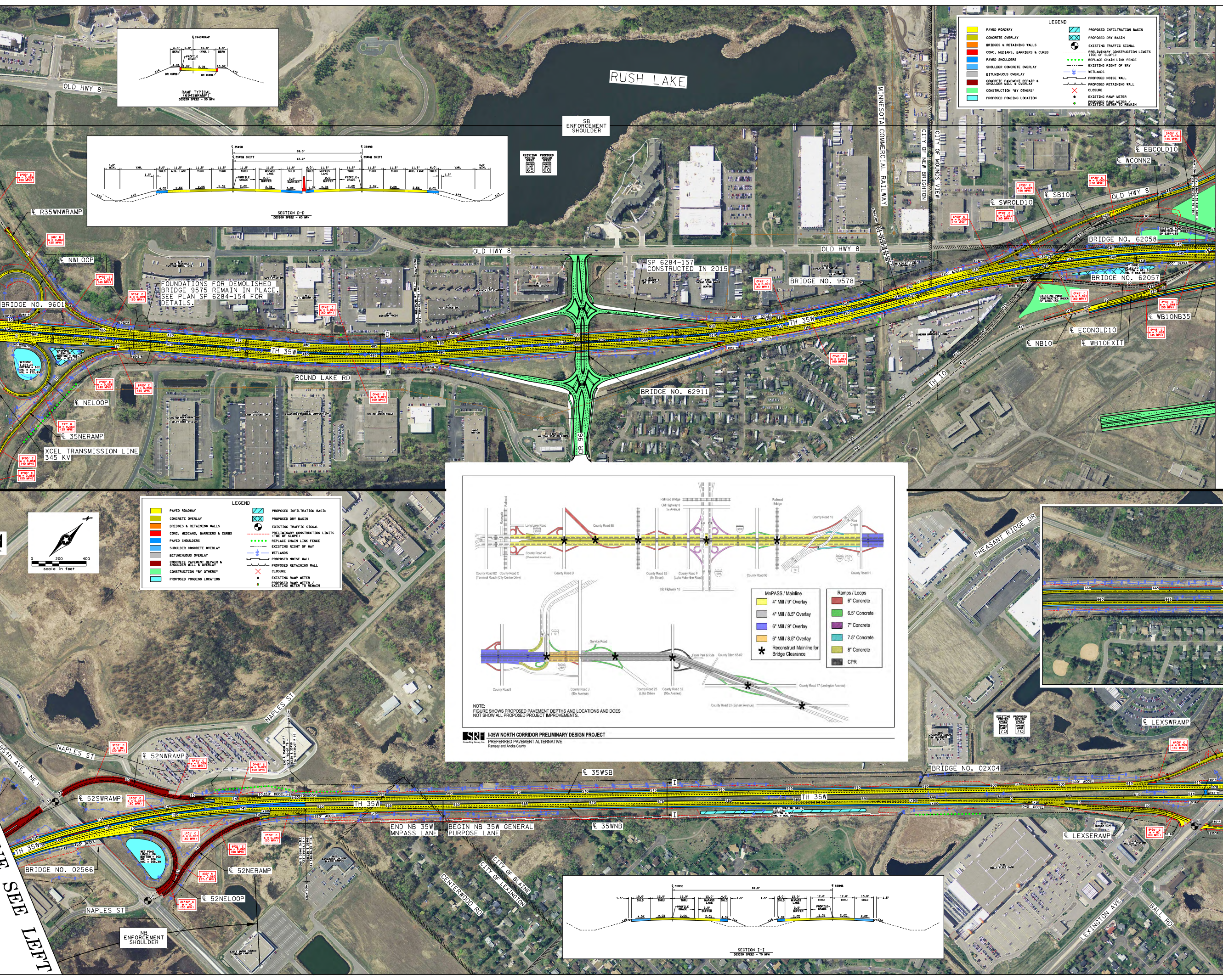
General Notes:

- Profiles have not been included as part of the Layout submittal.
- Ramp alignments have not been revised where only an overlay is included, however the last curve adjustment has been noted.
- Where ramps and loops tie to mainline, a 1:100 taper has been utilized to account for the 11.5' lane width.
- Geometrics of the ramps and loops with overlay will match the existing design and not meet new standards except at the accel and decel lanes as prescribed.
- Specific ADA improvement locations will be provided in a separate document. Any existing pedestrian ramps impacted by construction shall be reconstructed per ADA/PROWAG requirements.
- T.H. 35W is a superload OSOW corridor.

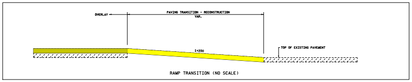

LEGEND
PAVED ROADWAY
CONCRETE OVERLAY
BRIDGES & RETAINING WALLS
CONC. MEDIANS, BARRIERS & CURBS
PAVED SHOULDERS
SHOULDER CONCRETE OVERLAY
BITUMINOUS OVERLAY
CONCRETE PAVEMENT REPAIR & SHOULDER MILL & OVERLAY
CONSTRUCTION "BY OTHERS"
PROPOSED PONDING LOCATION
PROPOSED INFILTRATION BASIN
PROPOSED DRY BASIN
EXISTING TRAFFIC SIGNAL
PRELIMINARY CONSTRUCTION LIMITS (TOE OF SLOPE)
REPLACE CHAIN LINK FENCE
EXISTING RIGHT OF WAY
WETLANDS
PROPOSED NOISE WALL
PROPOSED RETAINING WALL
CLOSURE
EXISTING RAMP METER
PROPOSED RAMP METER / EXISTING METER TO REMAIN
SRF Consulting Group, Inc.
0 200 400
scale in feet
TERMINAL RD
COUNTY ROAD C
BRIDGE NO. 62940 (EX. BR. NO. 9354)
BRIDGE NO. 62941 (EX. BR. NO. 9353)
BRIDGE NO. 62939 (EX. BR. NO. 9351)
ROSEGATE
TH 35W
BRIDGE NO. 62938 (EX. BR. NO. 9352)
CRCNELOO
CLEVELAND AVE
MINNESOTA COMMERCIAL RAILWAY
TRANSITION DETAIL
35WSB
35WSB SHIFT
35WNB SHIFT
35WNB
80
0.4'
67.2' (PROP.)
68.0' (EX.)
TRANSITION LANE WIDTHS AT 1:200 RATE (USE EXISTING ALIGNMENT)
ALIGNMENT SHIFT LOCATION
75
284
BITUMINOUS CONSTRUCTION (EXISTING ALIGNMENT)
PERMANENT CONCRETE CONSTRUCTION (PROPOSED ALIGNMENT - 0.4' SHIFT)
COUNTY RD B2
PRIOR AVE
CSAH 10
OLD HWY 8
QUINCY S
EBCOLD10
SB ENFORCEMENT SHOULDER
2016 CONSTRUCTION PROJECT SP 6284-162
WBOLD10
2018 CONSTRUCTION PROJECT SP 6205-39
EXTEND EXISTING BOX CULVERT 22'
CRHNWRAMP
BRIDGE NO. 62732
BRIDGE NO. 91071
PROGRAM
TH 35W
TH 10
CR H
NERAMP
EXISTING NOISE WALL
4.0' MIN.
VAR.
6.0' BERM
6.0' SHLD
11.5' AUX. LANE
11.5' AUX. LANE
11.5' THRU
4.0%
2.5%
2.0%
1:3
1:4
B424 C&G


MINNESOTA COMMERCIAL RAILWAY
℄ CRCNWCONN
CRCNWLOOP
℄ CRCNWRAMP
℄ 35WSB SHIFT
TH 35W
℄ 35WNB SHIFT
℄ CRCNERAMP
℄ CRCNECONN
2015 CONSTRUCTION PROJECT
SP 160-020-025
XCEL TRANSMISSION LINE
345 KV
℄ CRDSWLOOP
℄ CRDSWRAMP
COUNTY ROAD D
BRIDGE NO. 9355
℄ CRDSERAMP
℄ CRDNERAMP
BRIDGE NO. 9492
COUNTY ROAD 88
℄ CR88NWRAMP
℄ CR88NERAMP
SB ENFORCEMENT SHOULDER
NB ENFORCEMENT SHOULDER
STOWE AVE
CITY OF ROSEVILLE
CITY OF ARDEN HILLS
RAMP TYPICAL
(CRDSWRAMP)
DESIGN SPEED = 50 MPH
SECTION A-A
DESIGN SPEED = 60 MPH
SECTION B-B
DESIGN SPEED = 60 MPH
MATCHLINE SEE RIGHT
MATCHLINE SEE LEFT
LONG LAKE RD
TH 10
scale in feet
0
200
400
MATCHLINE
SEE TH 10 INSET ABOVE
QUINCY ST
SB DUAL ENFORCEMENT SHOULDER
CR H2
CR I
EXISTING POSTED SPEED
PROPOSED DESIGN SPEED
65
60
LOOP TYPICAL
(EB10LOOP)
DESIGN SPEED = 27.5 MPH
RAMP TYPICAL
(NERAMP, CRHNWRAMP, CRISWRAMP, CRISERAMP)
DESIGN SPEED = 50 MPH
NOTE NERAMP DIMENSION 10.0'
SBRAMPJ (LAKE DRIVE HOV BYPASS)
DESIGN SPEED = 45 MPH
SB ENFORCEMENT SHOULDER
35W WEST SERVICE RD NE
℄ CRISWRAMP
℄ CRISWLOOP
BRIDGE NO. 62942
(EX. BR. NO. 9603)
℄ 35WSB SHIFT
HILLVIEW RD
CORNELL DR
℄ FL_FRONTRD
℄ EB10CONN
℄ SWRAMP
CITY OF MOUNDS VIEW
CITY OF BLAINE
TH 35W
TH 10
℄ 35WNB SHIFT
℄ CRISERAMP
OLD HWY 8
℄ EB10LOOP
℄ 35NB10WB
BRIDGE NO. 9605
℄ SERAMPJ
BRIDGE NO. 02571
RICE CREEK PKWY
CITY OF SHOREVIEW
CITY OF ARDEN HILLS
SECTION E-E
DESIGN SPEED = 60 MPH
RAMP TYPICAL
(EB10LOOP, 35NB10WB)
DESIGN SPEED = 27.5 MPH (EB10LOOP)
DESIGN SPEED = 45 MPH (35NB10WB)
SECTION F-F
DESIGN SPEED = 60 MPH
SECTION G-G
DESIGN SPEED = 60 MPH
RICE CREEK
NB DUAL ENFORCEMENT SHOULDER
RAMSEY COUNTY

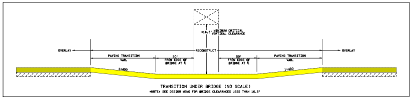

SECTION C-C
DESIGN SPEED = 60 MPH
NOTE USE 1:2 SLOPE FROM STATION 426+00 TO 437+00 AND 445+50 TO 447+00
℄ 35WSB
℄ 35WNB
℄ 35WSB SHIFT
℄ 35WNB SHIFT
68.0'
67.2'
4.0' MIN.
VAR.
1.5'
6.0' SHLD
11.5' AUX. LANE
11.5' THRU
11.5' MnPASS LANE
4.0' SHLD
11.0' SHLD
PROFILE GRADE
2.0' BUFFER
2.2' BARRIER
3.0'
B424 C&G
5TH AVE
CANADIAN PACIFIC
1ST ST
BRIDGE NO. 9357
TH 35W
CLEVELAND AVE
℄ CRE2SWRAMP
℄ CRE2NWRAMP
℄ CRE2SERAMP
℄ CRE2NERAMP
BRIDGE NO. 62873
CR E2 (5TH STREET)
2016 CONSTRUCTION PROJECT
SP 6284-163
2015 CONSTRUCTION PROJECT
SP 6281-171
CR F (LAKE VALENTINE RD)
℄ 694SWRAMP
℄ SWLOOP
℄ SELOOP
℄ 694SERAMP
TH 694
BRIDGE NO. 62890
BRIDGE NO. 9602
FARREL'S LAKE
NEW BRIGHTON RD
LOOP TYPICAL (SELOOP)
DESIGN SPEED = 25 MPH
NB ENFORCEMENT SHOULDER
EXISTING POSTED SPEED
PROPOSED DESIGN SPEED
SPEED LIMIT 60
SPEED LIMIT 65
SPEED LIMIT 70
TH 10 INSET
SRF Consulting Group, Inc.
MATCHLINE SEE BELOW
EDGEWOOD DR
LAPORT DR
0 200 400
scale in feet
LEGEND
PAVED ROADWAY
CONCRETE OVERLAY
BRIDGES & RETAINING WALLS
CONC. MEDIANS, BARRIERS & CURBS
PAVED SHOULDERS
SHOULDER CONCRETE OVERLAY
BITUMINOUS OVERLAY
CONCRETE PAVEMENT REPAIR & SHOULDER MILL & OVERLAY
CONSTRUCTION "BY OTHERS"
PROPOSED PONDING LOCATION
PROPOSED INFILTRATION BASIN
PROPOSED DRY BASIN
EXISTING TRAFFIC SIGNAL
PRELIMINARY CONSTRUCTION LIMITS (TOE OF SLOPE)
REPLACE CHAIN LINK FENCE
EXISTING RIGHT OF WAY
WETLANDS
PROPOSED NOISE WALL
PROPOSED RETAINING WALL
CLOSURE
EXISTING RAMP METER
PROPOSED RAMP METER / EXISTING METER TO REMAIN
SECTION H-H
DESIGN SPEED = 60 MPH
10.0' SHLD
CR J (85TH AVE)
℄ NWCONNJ
℄ SBRAMPJ
℄ CNBRAMPJ
BRIDGE NO. 9607
35W WEST SERVICE RD NE
LEYTE ST
JAMESTOWN ST
93RD AVE
93RD DR
LAKE DR
NAPLES ST
CITY OF BLAINE
CITY OF LEXINGTON
ANOKA COUNTY
MATCHLINE SEE RIGHT
MATCHLINE
CR 52


RAMP TYPICAL
(694SWRAMP)
DESIGN SPEED = 50 MPH
OLD HWY 8
RUSH LAKE
SB ENFORCEMENT SHOULDER
SECTION D-D
DESIGN SPEED = 60 MPH
EXISTING POSTED SPEED 65
PROPOSED DESIGN SPEED 60
MINNESOTA COMMERCIAL RAILWAY
CITY OF NEW BRIGHTON
CITY OF MOUNDS VIEW
LEGEND
PAVED ROADWAY
CONCRETE OVERLAY
BRIDGES & RETAINING WALLS
CONC. MEDIANS, BARRIERS & CURBS
PAVED SHOULDERS
SHOULDER CONCRETE OVERLAY
BITUMINOUS OVERLAY
CONCRETE PAVEMENT REPAIR & SHOULDER MILL & OVERLAY
CONSTRUCTION "BY OTHERS"
PROPOSED PONDING LOCATION
PROPOSED INFILTRATION BASIN
PROPOSED DRY BASIN
EXISTING TRAFFIC SIGNAL
PRELIMINARY CONSTRUCTION LIMITS (TOE OF SLOPE)
REPLACE CHAIN LINK FENCE
EXISTING RIGHT OF WAY
WETLANDS
PROPOSED NOISE WALL
PROPOSED RETAINING WALL
CLOSURE
EXISTING RAMP METER
PROPOSED RAMP METER / EXISTING METER TO REMAIN
℄ EBCOLD10
℄ WCONN2
℄ SB10
OLD HWY 8
℄ SWROLD10
BRIDGE NO. 62058
BRIDGE NO. 62057
BRIDGE NO. 9578
℄ WB10NB35
℄ ECONOLD10
℄ NB10
℄ WB10EXIT
TH 10
TH 35W
℄ R35WNWRAMP
℄ NWLOOP
BRIDGE NO. 9601
FOUNDATIONS FOR DEMOLISHED BRIDGE 9575 REMAIN IN PLACE. SEE PLAN SP 6284-154 FOR DETAILS.
SP 6284-157 CONSTRUCTED IN 2015
ROUND LAKE RD
BRIDGE NO. 62911
CR 96
℄ NELOOP
℄ 35NERAMP
XCEL TRANSMISSION LINE 345 KV
D
scale in feet
0 200 400
County Road B2 (Terminal Road)
County Road C (City Centre Drive)
Railroad
Rosegate
Long Lake Road
County Road 46 (Cleveland Avenue)
County Road D
County Road 88
County Road E2 (5th Street)
County Road F (Lake Valentine Road)
Railroad Bridge
Old Highway 8 5th Avenue
Old Highway 10
County Road 96
Railroad Bridge
County Road 10
Rice Creek
County Road H
County Road I
County Road J (85th Avenue)
Service Road
County Road 23 (Lake Drive)
County Road 52 (95th Avenue)
From Park & Ride
County Ditch 53-62
County Road 17 (Lexington Avenue)
County Road 53 (Sunset Avenue)
MnPASS / Mainline
4" Mill / 9" Overlay
4" Mill / 8.5" Overlay
6" Mill / 9" Overlay
6" Mill / 8.5" Overlay
Reconstruct Mainline for Bridge Clearance
Ramps / Loops
6" Concrete
6.5" Concrete
7" Concrete
7.5" Concrete
8" Concrete
CPR
NOTE:
FIGURE SHOWS PROPOSED PAVEMENT DEPTHS AND LOCATIONS AND DOES NOT SHOW ALL PROPOSED PROJECT IMPROVEMENTS.
SRF Consulting Group, Inc.
I-35W NORTH CORRIDOR PRELIMINARY DESIGN PROJECT
PREFERRED PAVEMENT ALTERNATIVE
Ramsey and Anoka County
PHEASANT RIDGE DR
NAPLES ST
95th AVE. NE
℄ 52NWRAMP
℄ 52SWRAMP
℄ 35WSB
TH 35W
BRIDGE NO. 02X04
I
END NB 35W MNPASS LANE
BEGIN NB 35W GENERAL PURPOSE LANE
℄ 35WNB
BRIDGE NO. 02566
℄ 52NERAMP
℄ 52NELOOP
NB ENFORCEMENT SHOULDER
CENTERWOOD RD
CITY OF BLAINE
CITY OF LEXINGTON
EXISTING POSTED SPEED 70
PROPOSED DESIGN SPEED 70
℄ LEXSWRAMP
℄ LEXSERAMP
LEXINGTON AVE
BALL RD
SECTION I-I
DESIGN SPEED = 70 MPH
SEE LEFT

MATCHLINE SEE BELOW

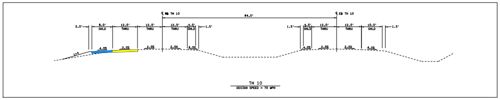

OVERLAY
PAVING TRANSITION - RECONSTRUCTION
VAR.
1:200
TOP OF EXISTING PAVEMENT

RAMP TRANSITION (NO SCALE)


16.5' MINIMUM CRITICAL VERTICAL CLEARANCE
OVERLAY
PAVING TRANSITION
VAR.
50'
FROM EDGE OF BRIDGE AT ℄
RECONSTRUCT
1:400

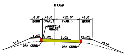
TRANSITION UNDER BRIDGE (NO SCALE)

*NOTE: SEE DESIGN MEMO FOR BRIDGE CLEARANCES LESS THAN 16.5'


℄ WB TH 10
℄ EB TH 10
84.0'
SHLD
THRU
1:4

TH 10

DESIGN SPEED = 70 MPH


℄ RAMP
6.0' BERM
*6.0' (VAR.)
*12.0' (VAR.)
*6.0' BERM
PROFILE GRADE
4.0%
2.0%
DR4 CURB
1:4
*1:4

RAMP TYPICAL
(OVERLAY)

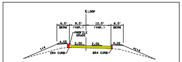
DESIGN SPEED = 50 MPH

TYPICAL APPIES TO RAMPS: CRCNERAMP, CRCNWRAMP, CRCNWCONN*, CRDNERAMP, CRDSERAMP*, CRE2SERAMP, CRE2SWRAMP, CRE2NWRAMP, CRE2NERAMP*, 694SERAMP*, 35NERAMP*, R35NWRAMP*, WB10EXIT*, SWROLD10, ECONOLD10, SWRAMP, SERAMPJ, CNBRAMPJ, NWCONNJ*, LEXSWRAMP, LEXNERAMP

*SEE TABLE FOR RAMP LOCATIONS THAT VARY FROM TYPICAL

RAMP VARIATIONS					
RAMP ALIGNMENT	BERM WIDTH (FT)	BERM SLOPE (%)	TIE SLOPE (1:X)	OFFSET RT (FT)	OFFSET LT (FT)
CRCNWCONN	-	-	-	-	8.0
CRDSERAMP	-	-	-	10.0	8.0
CRE2NERAMP	-	-	-	10.0	8.0
694SERAMP	4.0	-10.0	1:3	10.0	-
35NERAMP	4.0	-10.0	1:3	-	-
**R35NWRAMP	4.0	-10.0	1:3	-	-
WB10EXIT	-	-	-	-	8.0
NWCONNJ	-	-	-	7.0	15.0

NOTES: ** CLEAR AND GRUB TO CLEAR ZONE

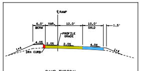

℄ LOOP
6.0' BERM
8.0' (VAR.)
12.0' (VAR.)
6.0' BERM
PROFILE GRADE
4.0%
2.0%
DR4 CURB
BR4 CURB
1:4
*1:4

LOOP TYPICAL
(OVERLAY)

DESIGN SPEED = 27.5 MPH

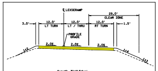
*NOTE: CRCNELOOP SLOPE OF 1:3.

TYPICAL APPLIES TO LOOPS: CRCNWLOOP, CRCNELOOP, CRDSWLOOP, SWLOOP, NWLOOP, NELOOP


℄ RAMP
6.0' BERM
VAR.
12.0'
10.0' SHLD
1.5'
PROFILE GRADE
4.0%
2.0%
DR4 CURB
1:4

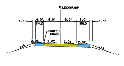
RAMP TYPICAL
(CR88NWRAMP, CR88NERAMP)

DESIGN SPEED = 50 MPH


℄ LEXSERAMP
3.0'
12.0' LT TURN
12.0' LT / THRU
12.0' RT TURN
29.0' CLEAR ZONE
1.5'
PROFILE GRADE
2.0%
1:2
1:4
1:3

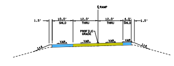
RAMP TYPICAL
(LEXSERAMP)

DESIGN SPEED = 50 MPH


℄ LEXNWRAMP
1.5'
4.0' SHLD
8.0'
8.0'
6.0' SHLD
PROFILE GRADE
2.0%
1:4

RAMP TYPICAL
(LEXNWRAMP)

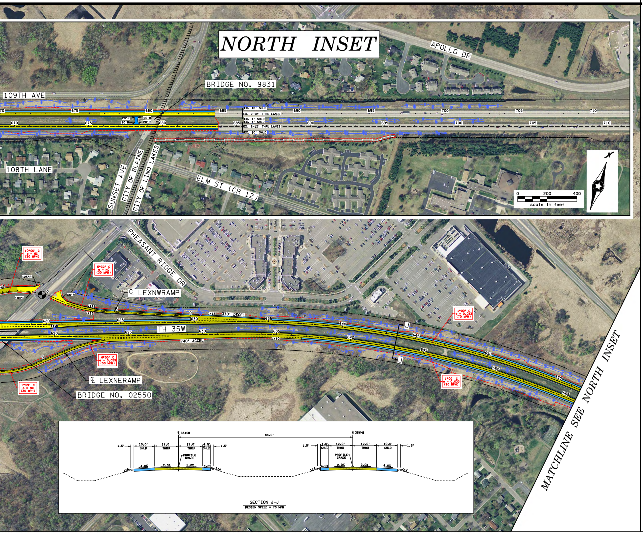
DESIGN SPEED = 50 MPH


℄ RAMP
1.5'
10.0' SHLD
12.0' THRU
12.0' THRU
4.0' SHLD
PROFILE GRADE
VAR.
1:4

RAMP TYPICAL
(EBCOLD10 & EB10CONN)

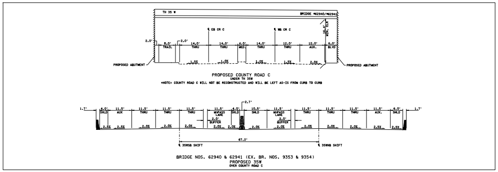
DESIGN SPEED = 45 MPH (EB10CONN) - RAMP FROM EB TH 10 TO SB 35W / TH 10 NORTH INTERCHANGE

DESIGN SPEED = 50 MPH (EBCOLD10) - EB CSAH 10 / TH 10 SOUTH INTERCHANGE


NORTH INSET
APOLLO DR
BRIDGE NO. 9831
109TH AVE
108TH LANE
SUNSET AVE
CITY OF BLAINE
CITY OF LINO LAKES
ELM ST (CR 12)
0 200 400
scale in feet
N
PHEASANT RIDGE DR
℄ LEXNWRAMP
TH 35W
℄ LEXNERAMP
BRIDGE NO. 02550
370' DECEL
740' ACCEL
J
MATCHLINE SEE NORTH INSET
℄ 35WSB
℄ 35WNB
84.0'
SHLD
THRU
PROFILE GRADE

SECTION J-J

DESIGN SPEED = 70 MPH


TH 35 W
BRIDGE #62940/#62941
℄ EB CR C
℄ WB CR C
16.4' MIN. CLR
2.0'
8.0' TRAIL
14.0' THRU
4.0' MED.
12.0' THRU
12.0' AUX.
6.0' BLVD
PROPOSED ABUTMENT
1.5%
1.0%
2.0%

PROPOSED COUNTY ROAD C

UNDER TH 35W

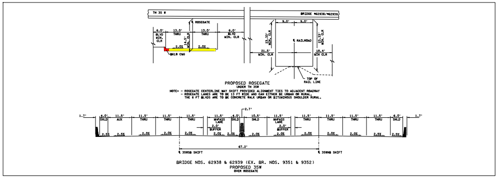
*NOTE: COUNTY ROAD C WILL NOT BE RECONSTRUCTED AND WILL BE LEFT AS-IS FROM CURB TO CURB

1.7'
4.0' SHLD
11.5' AUX
11.5' THRU
11.5' MnPASS LANE
2.0' BUFFER
10.5' SHLD
6.0' SHLD
2.7'
2.5%
2.0%
67.2'
℄ 35WSB SHIFT
℄ 35WNB SHIFT

BRIDGE NOS. 62940 & 62941 (EX. BR. NOS. 9353 & 9354)

PROPOSED 35W

OVER COUNTY ROAD C


TH 35 W
BRIDGE #62938/#62939
℄ ROSEGATE
6.0' BLVD MIN. CLR
13.0' THRU
14.5' MIN. CLR
B618 C&G
2.0%
9.0'
℄ RAILROAD
23.33' MIN. CLR
21.5' MIN. CLR
18.4' MIN CLR
TOP OF RAIL LINE

PROPOSED ROSEGATE

UNDER TH 35W

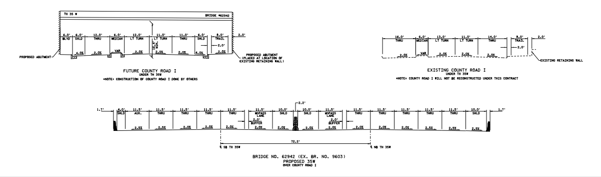
NOTE: - ROSEGATE CENTERLINE MAY SHIFT PROVIDED ALIGNMENT TIES TO ADJACENT ROADWAY
- ROSEGATE LANES ARE TO BE 13 FT WIDE AND CAN EITHER BE URBAN OR RURAL,
THE 6 FT BLVDS ARE TO BE CONCRETE WALK URBAN OR BITUMINOUS SHOULDER RURAL.

1.7'
4.0' SHLD
11.5' AUX
11.5' THRU
11.5' MnPASS LANE
2.0' BUFFER
10.5' SHLD
6.0' SHLD
2.7'
67.2'
℄ 35WSB SHIFT
℄ 35WNB SHIFT

BRIDGE NOS. 62938 & 62939 (EX. BR. NOS. 9351 & 9352)

PROPOSED 35W

OVER ROSEGATE


TH 35 W
BRIDGE #62942
6.0' BLVD
6.0' SHLD
12.0' THRU
6.0' MEDIAN
12.0' LT TURN
11.0' LT TURN
11.0' THRU
8.0' TRAIL
2.0'
16.4' MIN.
VAR
PROPOSED ABUTMENT
PROPOSED ABUTMENT (PLACED AT LOCATION OF EXISTING RETAINING WALL)

FUTURE COUNTY ROAD I

UNDER TH 35W

*NOTE: CONSTRUCTION OF COUNTY ROAD I DONE BY OTHERS

16.0' THRU
6.0' MEDIAN
13.0' LT TURN
11.0' LT TURN
14.0' THRU
8.0' TRAIL
2.0'
EXISTING RETAINING WALL

EXISTING COUNTY ROAD I

UNDER TH 35W

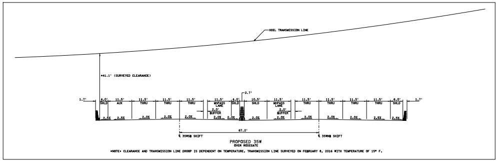
*NOTE: COUNTY ROAD I WILL NOT BE RECONSTRUCTED UNDER THIS CONTRACT

1.7'
4.0' SHLD
11.5' AUX.
11.5' THRU
11.5' MnPASS LANE
2.0' BUFFER
10.0' SHLD
2.2'
72.2'
℄ SB TH 35W
℄ NB TH 35W

BRIDGE NO. 62942 (EX. BR. NO. 9603)

PROPOSED 35W

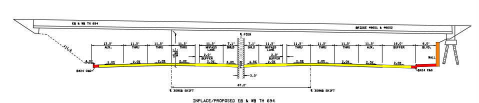
OVER COUNTY ROAD I


XCEL TRANSMISSION LINE
*41.1' (SURVEYED CLEARANCE)
1.7'
4.0' SHLD
11.5' AUX
11.5' THRU
11.5' MnPASS LANE
2.0' BUFFER
10.5' SHLD
6.0' SHLD
2.7'
67.2'
℄ 35WSB SHIFT
℄ 35WNB SHIFT

PROPOSED 35W

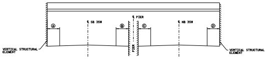
OVER ROSEGATE

*NOTE: CLEARANCE AND TRANSMISSION LINE DROOP IS DEPENDENT ON TEMPERATURE. TRANSMISSION LINE SURVEYED ON FEBRUARY 8, 2016 WITH TEMPERATURE OF 15° F.


EB & WB TH 694
BRIDGE #9601 & #9602
℄ PIER
13.5' AUX.
11.5' THRU
11.5' MnPASS LANE
2.0' BUFFER
7.1' SHLD
16.0' BUFFER
6.0' BLVD.
WALL
B424 C&G
3.0'
67.2'
℄ 35WSB SHIFT
℄ 35WNB SHIFT

INPLACE/PROPOSED EB & WB TH 694

OVER TH 35W


℄ SB 35W
℄ PIER
℄ NB 35W
Ⓐ
Ⓑ
Ⓒ
Ⓓ
VERTICAL STRUCTURAL ELEMENT

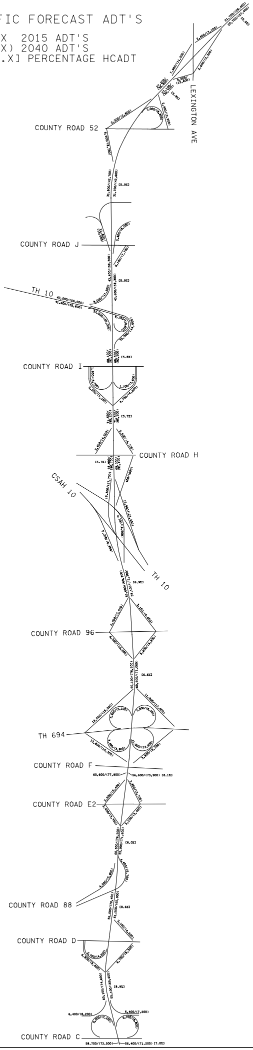
BRIDGE HORIZONTAL AND VERTICAL CLEARANCES

BRIDGE CLEARANCE							
		LATERAL CLEARANCE				VERTICAL CLEARANCE	
		SB 35W		NB 35W			
BRIDGE LOCATION	BRIDGE NUMBER	OUTSIDE (RIGHT) Ⓐ	INSIDE (LEFT) Ⓑ	INSIDE (LEFT) Ⓒ	OUTSIDE (RIGHT) Ⓓ	PROPOSED MINIMUM CLEARANCE	MINIMUM CLEARANCE LOCATION
COUNTY ROAD D	9355	7.8' *	7.1'	7.0'	11.5' *	15.3' *	C/L - SB
COUNTY ROAD 88	9492	11.5' *	6.1'	4.0' *	11.6' *	14.9' *	23' RT - NB
CP RAIL BRIDGE	9357	12.8' *	6.3'	6.3'	12.8' *	16.2' *	C/L - NB
COUNTY ROAD E2	62873	30.0'	6.3'	6.3'	30.0'	16.6'	C/L - NB
COUNTY ROAD F	62890	20.0'	4.0' *	6.3'	20.0'	16.6'	23' LT - SB
EB TH 694	9602	4.0' *	7.2'	7.3'	6.0' *	14.9' *	C/L - SB
WB TH 694	9601	4.0' *	7.2'	7.3'	6.0' *	15.0' *	C/L - SB
COUNTY ROAD 96	62911	33.0'	6.5'	6.5'	33.0'	16.6'	C/L - NB
TWIN CITIES ARSENAL RAIL BRIDGE	9578	14.6' *	5.6' *	4.0' *	14.0' *	16.5'	25' RT - SB
TH 10 (SOUTH COMMONS)	62058	18.6'	6.3'	4.0' *	17.3'	16.5'	23' LT - SB
CSAH 10	62057	20.2'	6.3'	4.0' *	5.7' *	16.9'	11.5' RT - NB
COUNTY ROAD H	62732	7.5 *	9.1'	9.1'	16.0'	16.5'	C/L - NB
TH 10 (NORTH COMMONS)	9605	31.0'	6.9'	5.2' *	7.4' *	16.5'	C/L - SB
COUNTY ROAD J	2571	83.5'	6.6'	4.0' *	87.0'	16.7'	C/L - NB
LAKE DRIVE	9607	31.0'	4.0' *	4.0' *	30.8'	16.5'	C/L - NB
95TH AVENUE	2566	46.8'	4.0' *	5.9' *	26.7'	16.5'	11.5' LT - SB
LEXINGTON AVENUE	2550	30.7'	13.9'	28.1'	30.4'	16.5'	C/L - SB
SUNSET AVENUE	9831	12.2' *	13.7'	13.7'	12.2' *	16.2' *	C/L - SB

NOTE: "*" INDICATES A DESIGN EXCEPTION DIMENSION

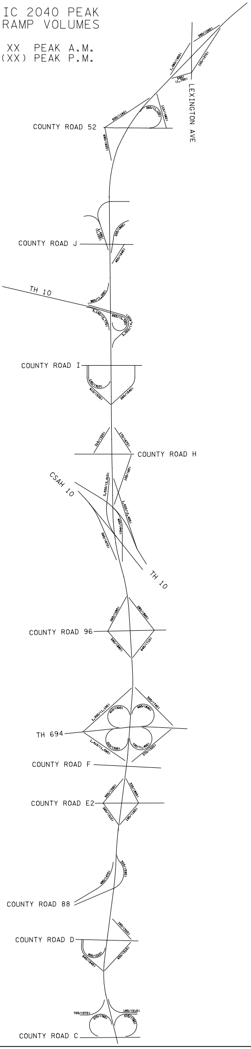
TRAFFIC FORECAST ADT'S

XX 2015 ADT'S
(XX) 2040 ADT'S
[X.X] PERCENTAGE HCADT


21,700/(28,400)
20,700/(27,400)
[5.9%]
2,400/(3,100)
7,900/(11,500)
2,600/(3,300)
27,200/(36,800)
27,100/(36,700)
[5.9%]
9,000/(12,600)
LEXINGTON AVE
2,300/(2,800)
7,000/(8,600)
2,400/(2,900)
COUNTY ROAD 52
6,900/(8,700)
31,800/(42,700)
31,700/(42,600)
[5.9%]
11,800/(11,800)
5,800/(8,000)
COUNTY ROAD J
6,100/(7,700)
43,600/(58,300)
43,600/(58,300)
[5.9%]
TH 10
42,000/(56,000)
41,600/(55,600)
9,000/(11,500)
33,500/(45,000)
8,100/(10,600)
33,000/(44,500)
68,100/(91,800)
68,500/(92,200)
[5.8%]
COUNTY ROAD I
1,800/(3,700)
1,700/(3,600)
5,200/(7,100)
4,700/(6,600)
71,500/(96,200)
71,500/(95,200)
[5.7%]
3,600/(4,500)
2,600/(4,700)
COUNTY ROAD H
[5.7%]
68,900/(90,700)
69,300/(91,100)
400/(600)
CSAH 10
18,300/(27,700)
15,900/(25,300)
4,700/(6,500)
5,000/(6,800)
TH 10
55,600/(69,800)
58,100/(72,300)
[6.9%]
2,000/(3,500)
3,100/(4,600)
COUNTY ROAD 96
6,500/(10,200)
5,600/(9,300)
60,100/(76,500)
60,600/(77,000)
[6.6%]
13,500/(15,200)
3,600/(5,100)
7,800/(8,200)
11,900/(13,400)
TH 694
13,800/(15,300)
3,400/(3,800)
11,900/(13,600)
3,800/(5,300)
COUNTY ROAD F
60,600/(77,900)
56,600/(73,900) [8.1%]
3,500/(5,400)
3,800/(5,700)
COUNTY ROAD E2
3,400/(3,700)
3,100/(3,400)
60,500/(76,200)
55,900/(71,600)
[8.0%]
4,500/(5,800)
4,400/(5,700)
COUNTY ROAD 88
56,000/(70,400)
51,500/(65,900)
[8.6%]
3,100/(4,600)
COUNTY ROAD D
2,700/(4,200)
6,800/(8,400)
6,700/(8,300)
60,100/(74,600)
55,100/(69,600)
[8.9%]
6,400/(8,200)
5,400/(7,200)
5,000/(7,100)
6,700/(8,800)
COUNTY ROAD C
58,700/(73,500)
56,400/(71,200) [7.0%]

TRAFFIC 2040 PEAK HOUR RAMP VOLUMES

XX PEAK A.M.
(XX) PEAK P.M.


390/(280)
1,080/(950)
120/(370)
590/(1,700)
LEXINGTON AVE
500/(160)
260/(1,120)
110/(480)
COUNTY ROAD 52
690/(620)
1,490/(1,120)
220/(890)
COUNTY ROAD J
450/(640)
TH 10
960/(1,200)
5,140/(2,770)
660/(1,720)
2,020/(4,600)
COUNTY ROAD I
140/(410)
610/(530)
260/(540)
310/(320)
170/(670)
COUNTY ROAD H
CSAH 10
3,030/(2,010)
100/(60)
1,520/(2,400)
400/(440)
960/(670)
TH 10
260/(280)
280/(860)
COUNTY ROAD 96
590/(680)
640/(710)
1,300/(1,100)
410/(320)
660/(840)
300/(740)
TH 694
1,410/(1,090)
210/(300)
730/(1,400)
370/(320)
COUNTY ROAD F
350/(390)
330/(800)
COUNTY ROAD E2
260/(310)
190/(160)
490/(470)
320/(590)
COUNTY ROAD 88
160/(520)
COUNTY ROAD D
400/(210)
640/(640)
430/(510)
700/(570)
180/(510)
270/(760)
570/(780)
COUNTY ROAD C