

Segment 2 (north of 13 Mile Road to north of Rochester Road):

Construction of Segment 2 is shown on **Figure 4-84**.

Stage 3 Traffic:

Stage 3 traffic schemes are shown on **Figures 4-85 through 4-88**.

Location of southern crossover: north of 13 Mile Road

- Right lane of NB I-75 closed south of 13 Mile Road

Location of northern crossover: south of Livernois Road

- Left lane of SB I-75 closed north of Big Beaver Road

Ramp Closures and Detours:

- **NB I-75 to EB 14 Mile Road**
Post detour for NB I-75 traffic to exit at 12 Mile Road, go east on 12 Mile and north on John R to 14 Mile Road.
- **NB I-75 to WB 14 Mile Road**
Post detour for NB I-75 traffic to exit at 12 Mile Road, go west on 12 Mile Road and north on Stephenson Highway to 14 Mile Road.
- **14 Mile Road to NB I-75**
Post detour for 14 Mile Road traffic to go north on Stephenson Highway, which becomes Rochester Road, continue north on Rochester Road, west on Big Beaver Road, and take the ramp from WB Big Beaver Road to NB I-75.
- **SB I-75 to EB 14 Mile Road**
Close ramp but maintain traffic via temporary left turn signal at the ramp from SB I-75 to WB 14 Mile Road.
- **NB I-75 to Rochester Road**
Post detour for NB I-75 traffic to exit at Big Beaver Road and go east on Big Beaver Road to Rochester Road.
- **Rochester Road to NB I-75**
Post detour for Rochester Road traffic to continue north on Rochester Road, go west on Big Beaver Road, and take the ramp from WB Big Beaver Road to NB I-75.
- **Rochester Road to SB I-75**
Post detour for Rochester Road traffic to continue south on Rochester Road, which becomes Stephenson Highway, continue south on Stephenson Highway, east on 12 Mile Road, and take the ramp from 12 Mile Road to SB I-75.
- **14 Mile Road – nights/weekends only (for bridge demo of NB I-75 bridge)**
Post detour to send traffic south to 13 Mile Road using Stephenson Highway to the west and John R to the east.

- **Maple Road – nights/weekends only (for bridge demo of NB I-75 bridge)**
Post detour to send traffic north to Big Beaver Road using Rochester Road to the west and John R to the east. Do not close Rochester Road at the same time.
- **Rochester Road – nights/weekends only (for bridge demo of NB I-75 bridge)**
Post detour to send traffic east to John R using Maple Road to the south and Big Beaver Road to the north. Do not close Maple Road at the same time.

Additional Stage 3 Traffic Notes:

- The ramp from NB I-75 to EB 14 Mile Road serves traffic destined for Oakland Mall. To minimize closure of this ramp, gap out the work area to maintain a temporary ramp crossover for this ramp. In addition, investigate the feasibility of providing a temporary signal to maintain left turns from this ramp onto WB 14 Mile Road. The temporary traffic signal operation was not investigated due to detailed analysis required when considering the proximity of the temporary traffic signal at the ramp from SB I-75 to EB 14 Mile Road.
- Reconstruction of a portion of Maple Road and Rochester Road under I-75 is required due to removal of existing I-75 bridge piers and construction of proposed I-75 bridge piers. Reconstruction may be accomplished using full closure or part-width construction. These options have not been fully investigated since they require more detailed analysis of Alternative 3 and will require input from local agencies.
- Close right lane of NB Rochester for a limited time during construction of ramp terminals.
- Some ramp closure detours may need to be revised during night/weekend closures of 14 Mile Road, Maple or Rochester Roads.

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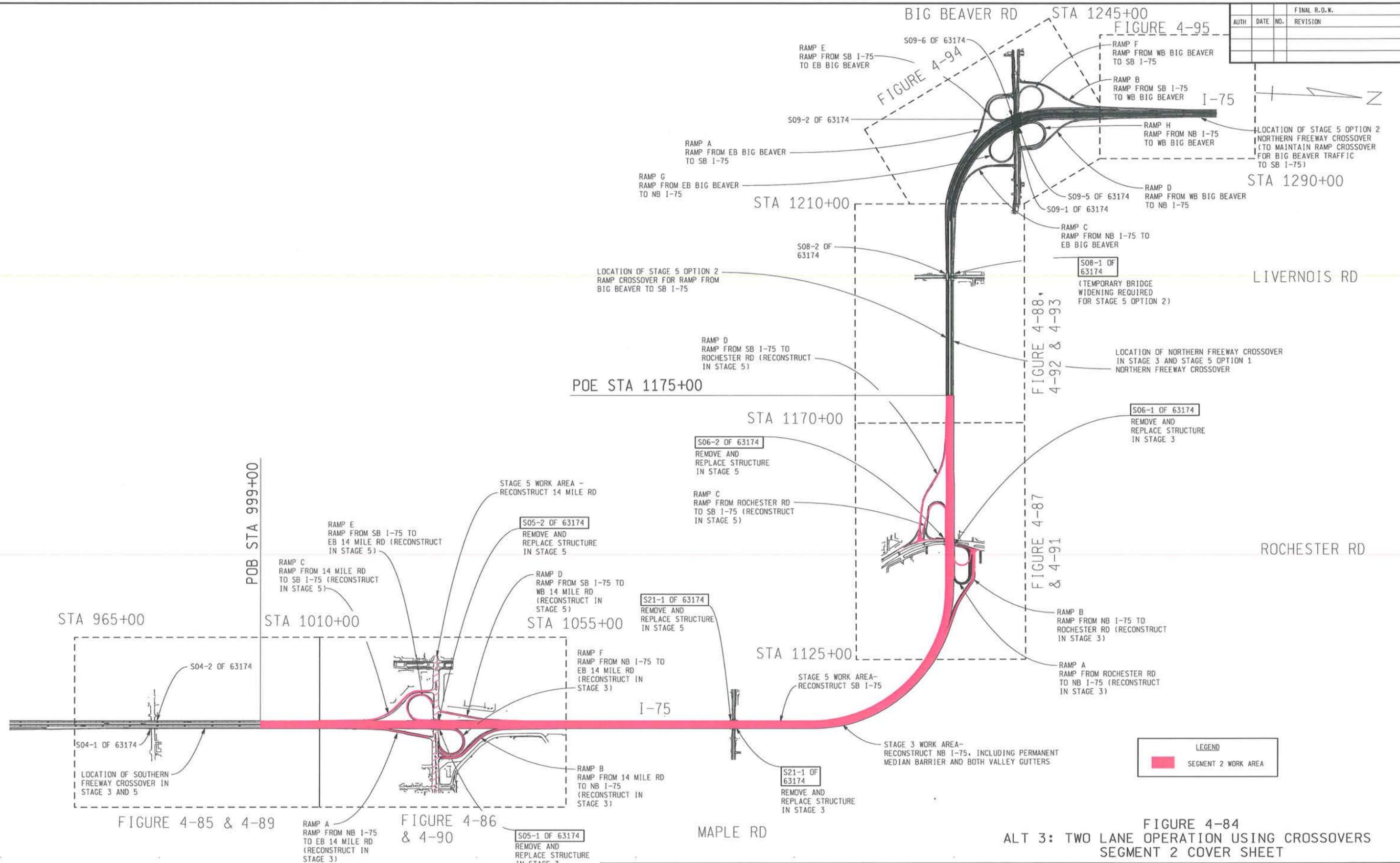


FIGURE 4-84
ALT 3: TWO LANE OPERATION USING CROSSOVERS
SEGMENT 2 COVER SHEET

SEGMENT 2, S. OF 13 MILE TO N. OF ROCHESTER

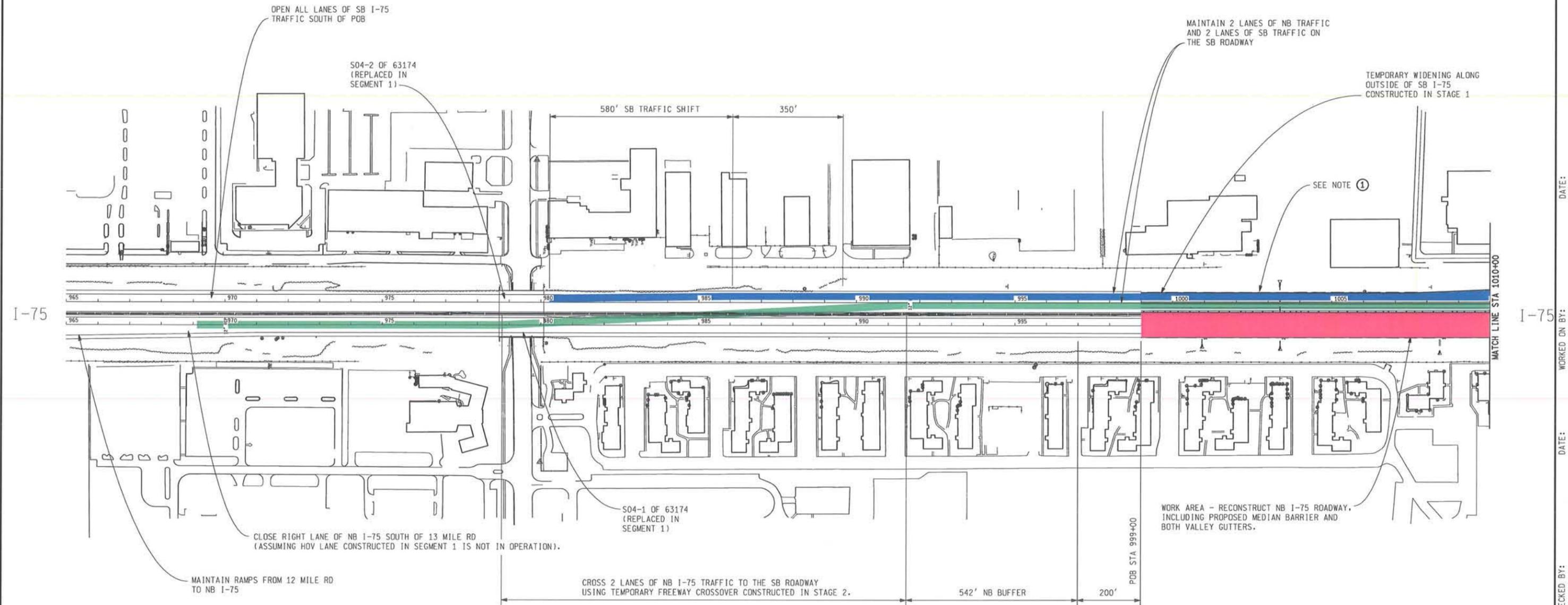
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13 MILE RD



LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.

MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.

13 MILE RD

FIGURE 4-85
ALT 3: STAGE 3 MAINTAINING TRAFFIC
I-75 POB STA 999+00 TO STA 1010+00

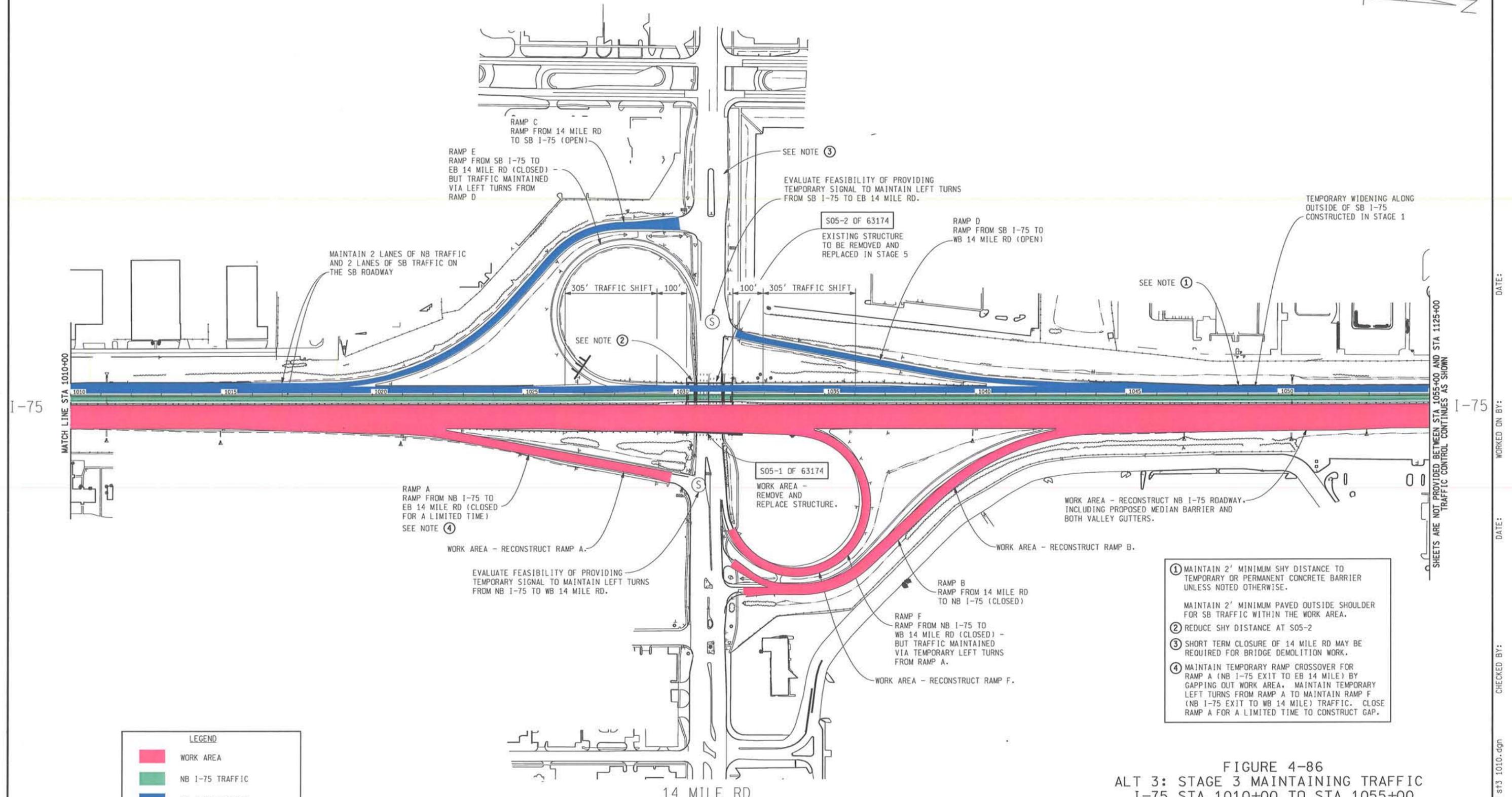


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14 MILE RD

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- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.
MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.
- ② REDUCE SHY DISTANCE AT S05-2
- ③ SHORT TERM CLOSURE OF 14 MILE RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.
- ④ MAINTAIN TEMPORARY RAMP CROSSOVER FOR RAMP A (NB I-75 EXIT TO EB 14 MILE) BY GAPPING OUT WORK AREA. MAINTAIN TEMPORARY LEFT TURNS FROM RAMP A TO MAINTAIN RAMP F (NB I-75 EXIT TO WB 14 MILE) TRAFFIC. CLOSE RAMP A FOR A LIMITED TIME TO CONSTRUCT GAP.

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

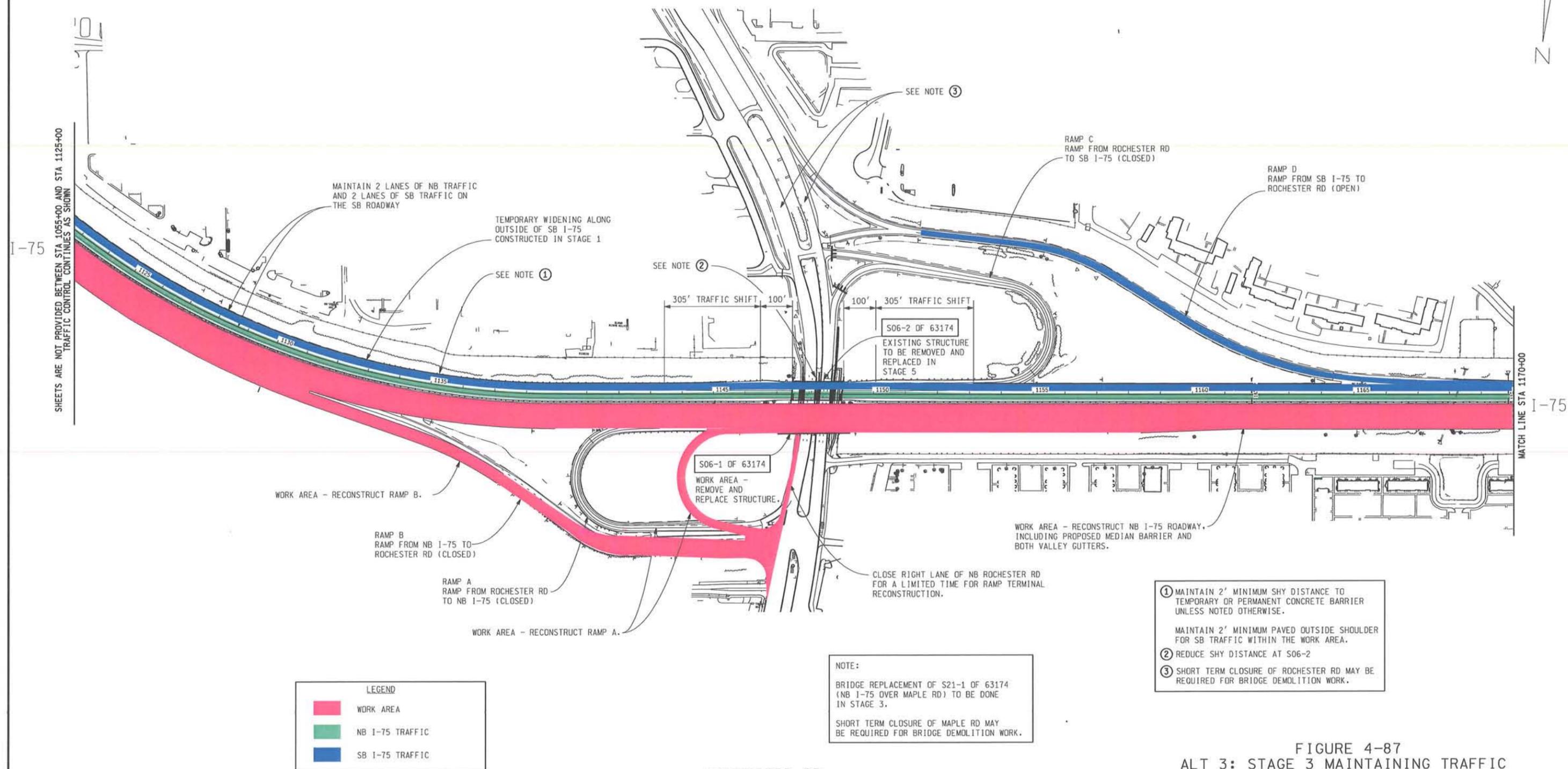
FIGURE 4-86
ALT 3: STAGE 3 MAINTAINING TRAFFIC
I-75 STA 1010+00 TO STA 1055+00

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ROCHESTER RD



SHEETS ARE NOT PROVIDED BETWEEN STA 1055+00 AND STA 1125+00 TRAFFIC CONTROL CONTINUES AS SHOWN

MATCH LINE STA 1170+00

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

NOTE:
 BRIDGE REPLACEMENT OF S21-1 OF 63174 (NB I-75 OVER MAPLE RD) TO BE DONE IN STAGE 3.
 SHORT TERM CLOSURE OF MAPLE RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.

- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.
 MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.
- ② REDUCE SHY DISTANCE AT S06-2
- ③ SHORT TERM CLOSURE OF ROCHESTER RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.

FIGURE 4-87
 ALT 3: STAGE 3 MAINTAINING TRAFFIC
 I-75 STA 1125+00 TO STA 1170+00

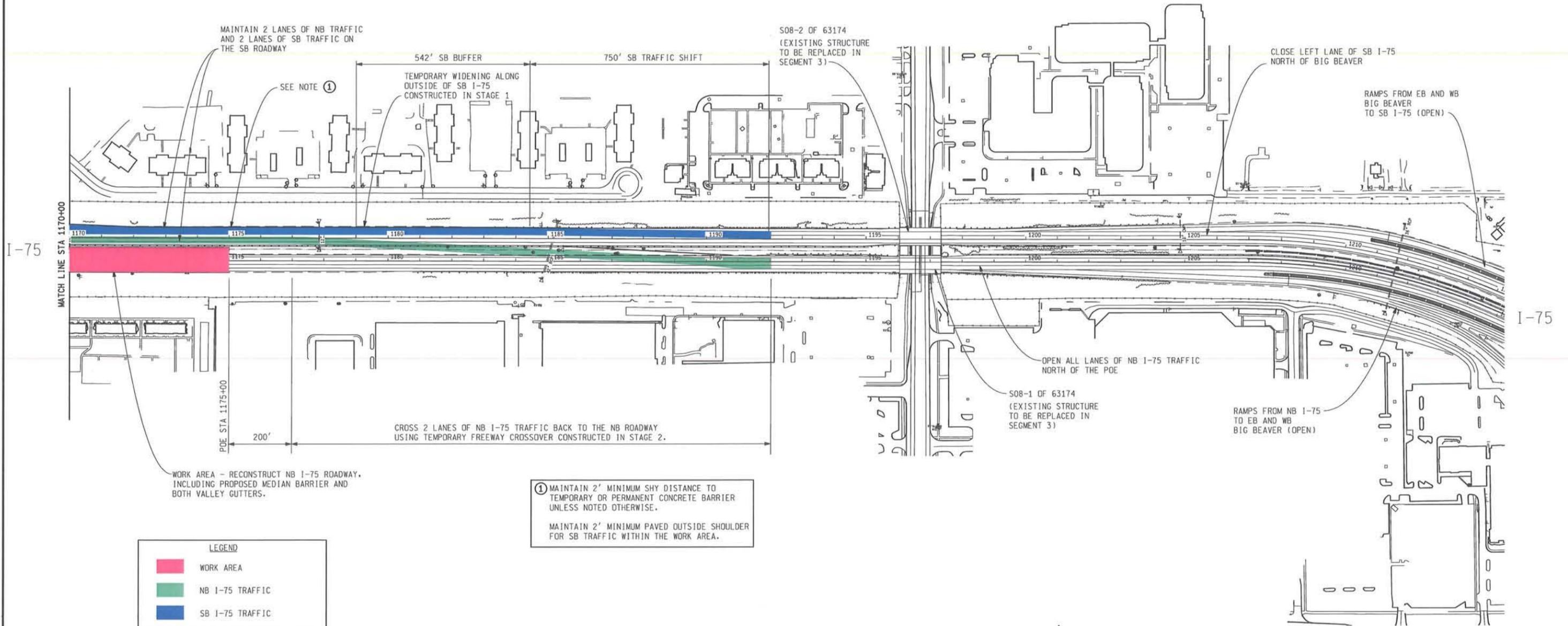
ROCHESTER RD

			SEGMENT 2, S. OF 13 MILE TO N. OF ROCHESTER			
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LIVEROIS RD

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LEGEND

	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.
 MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.

FIGURE 4-88
 ALT 3: STAGE 3 MAINTAINING TRAFFIC
 I-75 STA 1170+00 TO POE STA 1175+00

LIVEROIS RD



SEGMENT 2, S. OF 13 MILE TO N. OF ROCHESTER				
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Stage 5 Traffic:

Stage 5 traffic schemes are shown on Figures 4-89 through 4-95.

Location of southern crossover: north of 13 Mile Road (same as Stage 3)

- No lane closures on NB I-75 south of 13 Mile Road.

Location of northern crossover:

- Option 1: south of Livernois Road (same as Stage 3)
- Option 2: north of Big Beaver Road (to maintain ramp from EB Big Beaver to SB I-75)
- Right lane of SB I-75 closed north of Big Beaver Road for both options.

Ramp Closures and Detours:

- **NB I-75 to EB 14 Mile Road** – limited time only (during reconstruction of 14 Mile Road); open once 14 Mile Road reconstruction is complete.
Same detour as Stage 3.
- **NB I-75 to WB 14 Mile Road** – limited time only (during reconstruction of 14 Mile Road); open once 14 Mile Road reconstruction is complete.
Same detour as Stage 3.
- **14 Mile Road to NB I-75** - limited time only (during reconstruction of 14 Mile Road); open once 14 Mile Road reconstruction is complete.
Same detour as Stage 3.
- **14 Mile Road to SB I-75**
Post detour for 14 Mile Road traffic to go south on Stephenson Highway, east on 12 Mile Road, and take the ramp from 12 Mile Road to SB I-75.
- **SB I-75 to EB 14 Mile Road**
Post detour for SB I-75 traffic to exit at Big Beaver Road, go east on Big Beaver Road, and south on John R to 14 Mile Rod.
- **SB I-75 to WB 14 Mile Road**
Post detour for SB I-75 traffic to exit at Big Beaver Road, go east on Big Beaver Road, south on Rochester Road, which becomes Stephenson Highway, and continue south on Stephenson Highway to 14 Mile Road.
- **Rochester Road to SB I-75** – same detour as Stage 3
- **SB I-75 to Rochester Road**
Post detour for SB I-75 traffic to exit at Big Beaver Road, and go east on Big Beaver Road to Rochester Road.
- **EB Big Beaver Road to SB I-75** (for Option 1 location of northern crossover only)

Post detour for EB Big Beaver Road traffic to go south on Rochester Road, which becomes Stephenson Highway, continue south on Stephenson Highway, east on 12 Mile Road, and take the ramp from 12 Mile Road to SB I-75.

- **WB Big Beaver Road to SB I-75**

- Option 1 location of northern crossover: Post detour for WB Big Beaver Road traffic to go south on Rochester Road, which becomes Stephenson Highway, continue south on Stephenson Highway, east on 12 Mile Road, and take the ramp from 12 Mile Road to SB I-75.
- Option 2 location of northern crossover only: Post detour for WB Big Beaver Road traffic to use a signalized WB to EB median crossover at Big Beaver Road, and take the ramp from EB Big Beaver Road to SB I-75.

- **14 Mile Road** – nights/weekends only (for bridge demo of SB I-75 bridge); Same detour as Stage 3
- **Maple Road** – nights/weekends only (for bridge demo of SB I-75 bridge); Same detour as Stage 3
- **Rochester Road** – nights/weekends only (for bridge demo of SB I-75 bridge)
Same detour as Stage 3

Additional Stage 5 Traffic Notes:

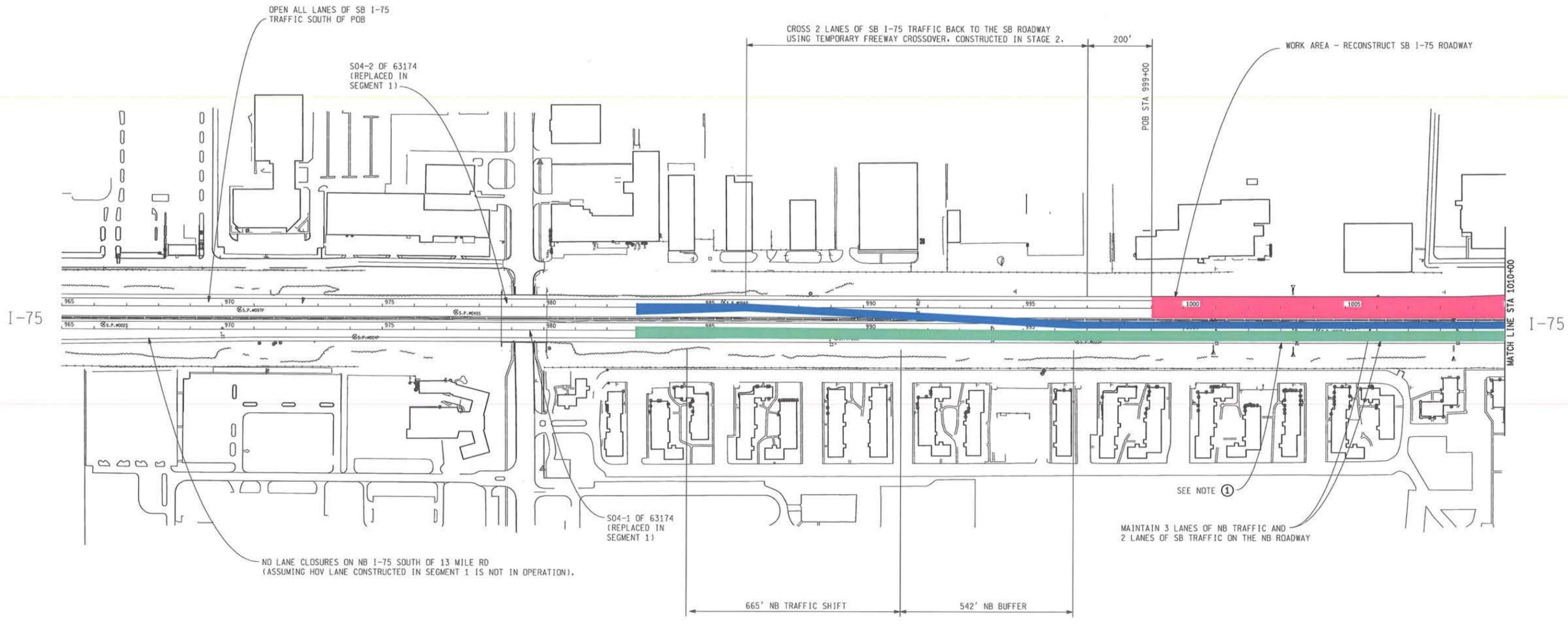
- Option 1 is recommended for the northern location of the crossover in Stage 5 based on traffic simulation, so the location of the northern crossover will be the same for Stage 3 and 5.
- The ramp from SB I-75 to EB 14 Mile Road serves traffic destined for Oakland Mall. To minimize closure of this ramp, evaluate the feasibility of gapping out the work area to maintain a temporary ramp crossover for the ramp from SB I-75 to WB 14 Mile Road. Provide a temporary left turn signal at this ramp to maintain SB I-75 to EB 14 Mile Road ramp traffic.
- Close right lane of SB Rochester Road for a limited time during construction of ramp terminals.
- Some ramp closure detours may need to be revised during night/weekend closures of 14 Mile Road, Maple or Rochester Roads.
- Reconstruction of 14 Mile Road may be accomplished using part-width construction, full closure, or a combination of both.
 - Full closure will shorten the construction time but will impact businesses between Stephenson Highway and John R, including Oakland Mall.
 - Part-width construction will allow 14 Mile Road through traffic to be maintained but will have limited ramp movements to and from I-75.

These options have not been fully investigated since they require more detailed analysis of Alternative 3 and will require input from local agencies.

Reconstruction of a portion of Maple Road and Rochester Road under I-75 is required due to removal of existing I-75 bridge piers and construction of proposed I-75 bridge piers. Reconstruction may be accomplished using full closure or part-width construction. These options have not been fully investigated since they require more detailed analysis of Alternative 3 and will require input from local agencies.

W.13 MILE RD

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LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

W.13 MILE RD

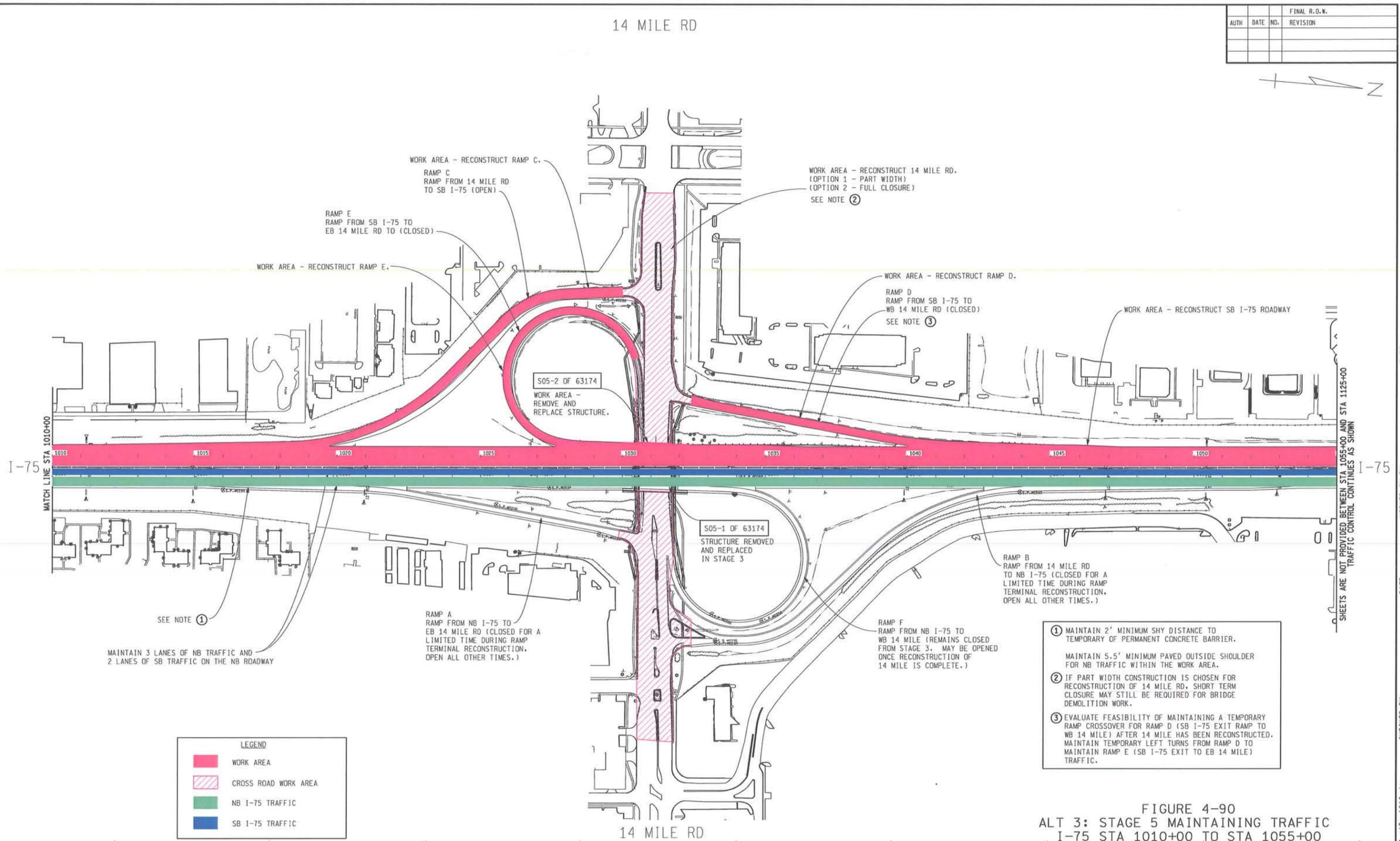
① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER.
 MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.

FIGURE 4-89
 ALT 3: STAGE 5 MAINTAINING TRAFFIC
 I-75 POB STA 999+00 TO STA 1010+00

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SEE NOTE ①
 MAINTAIN 3 LANES OF NB TRAFFIC AND 2 LANES OF SB TRAFFIC ON THE NB ROADWAY

LEGEND	
	WORK AREA
	CROSS ROAD WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER.
 MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.
- ② IF PART WIDTH CONSTRUCTION IS CHOSEN FOR RECONSTRUCTION OF 14 MILE RD, SHORT TERM CLOSURE MAY STILL BE REQUIRED FOR BRIDGE DEMOLITION WORK.
- ③ EVALUATE FEASIBILITY OF MAINTAINING A TEMPORARY RAMP CROSSOVER FOR RAMP D (SB I-75 EXIT RAMP TO WB 14 MILE) AFTER 14 MILE HAS BEEN RECONSTRUCTED. MAINTAIN TEMPORARY LEFT TURNS FROM RAMP D TO MAINTAIN RAMP E (SB I-75 EXIT TO EB 14 MILE) TRAFFIC.

FIGURE 4-90
 ALT 3: STAGE 5 MAINTAINING TRAFFIC
 I-75 STA 1010+00 TO STA 1055+00

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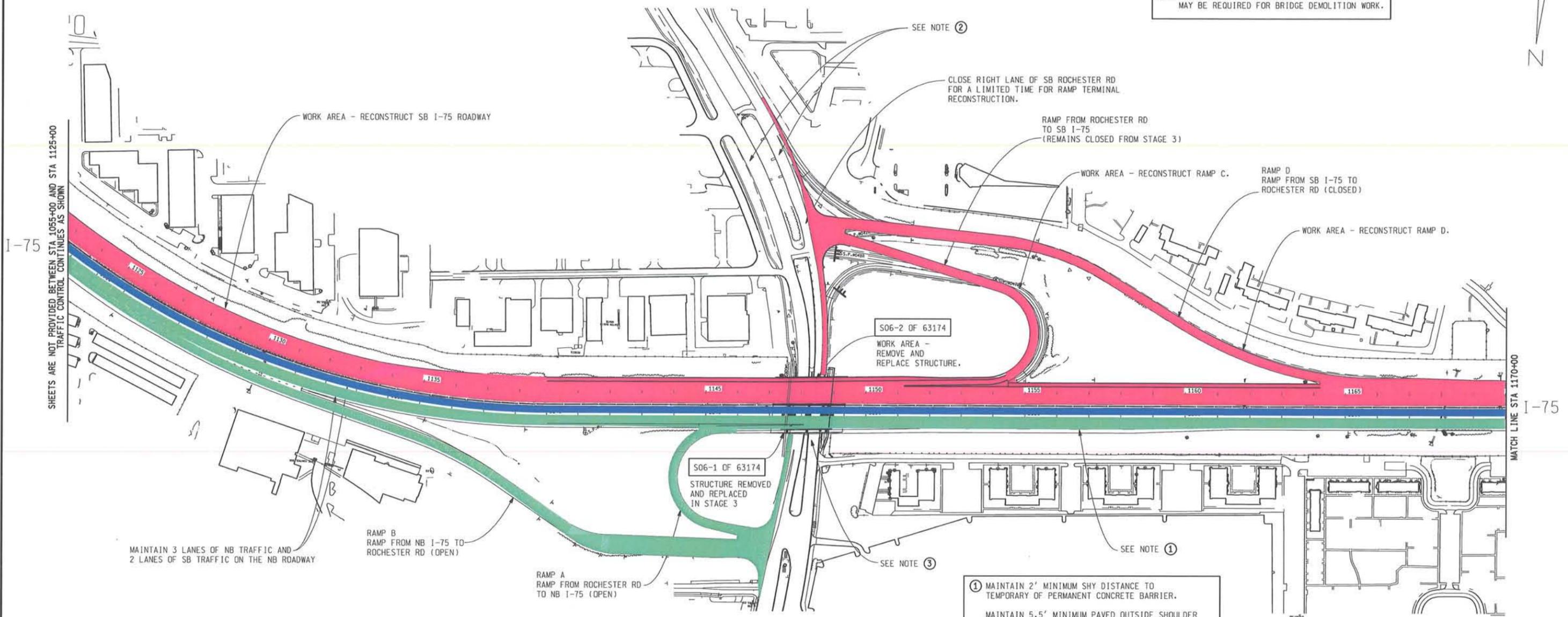
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ROCHESTER RD

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*** NOTE: SHORT TERM CLOSURE OF ROCHESTER RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.



NOTE:
 BRIDGE REPLACEMENT OF S21-2 OF 63174 (SB I-75 OVER MAPLE RD) TO BE DONE IN STAGE 5.
 SHORT TERM CLOSURE OF MAPLE RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.
 EVALUATE 2 OPTIONS FOR RECONSTRUCTION OF MAPLE ROAD UNDER I-75 TO BE DONE IN STAGE 5: FULL CLOSURE OR PART-WIDTH CONSTRUCTION.

- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER. MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.
- ② SHORT TERM CLOSURE OF ROCHESTER RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.
- ③ EVALUATE 2 OPTIONS FOR RECONSTRUCTION OF ROCHESTER ROAD UNDER I-75 TO BE DONE IN STAGE 5: FULL CLOSURE OR PART-WIDTH CONSTRUCTION.

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

ROCHESTER RD

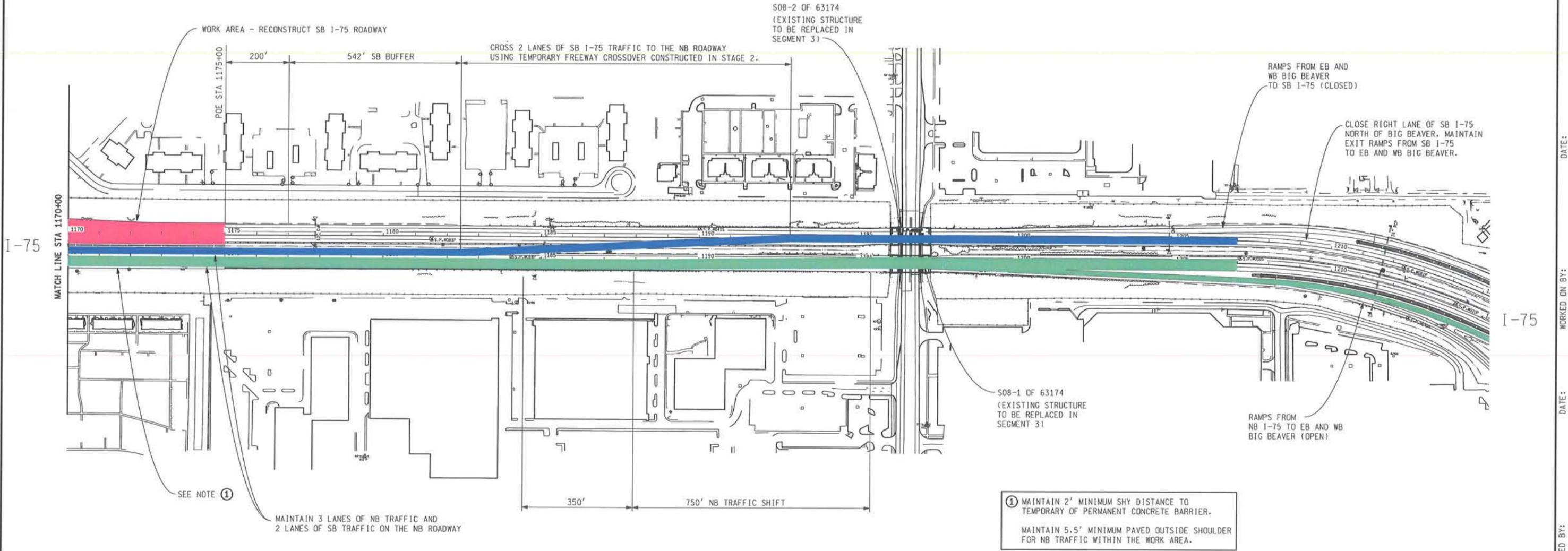
FIGURE 4-91
 ALT 3: STAGE 5 MAINTAINING TRAFFIC
 I-75 STA 1125+00 TO STA 1170+00

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LIVERNOIS RD

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① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER.
MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

FIGURE 4-92
ALT 3: STAGE 5 MAINTAINING TRAFFIC (OPTION 1)
I-75 STA 1170+00 TO POE STA 1175+00

LIVERNOIS RD

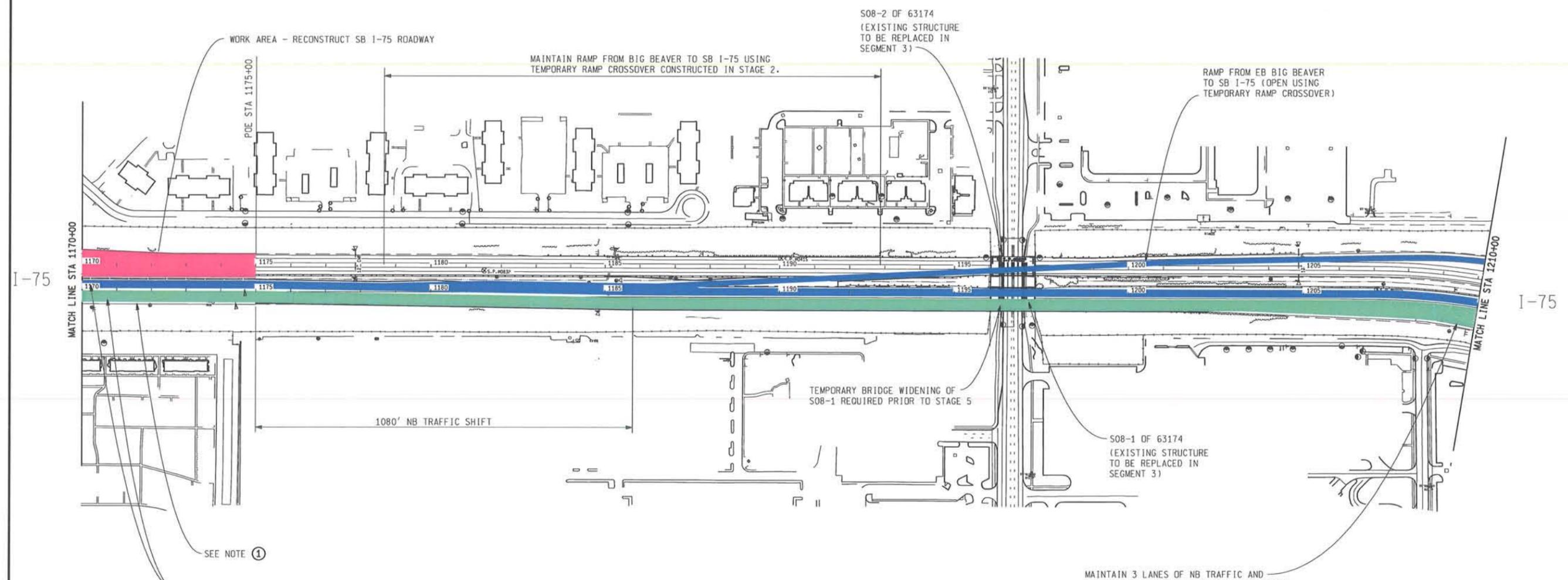


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LIVEROIS RD

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MAINTAIN 3 LANES OF NB TRAFFIC AND 2 LANES OF SB TRAFFIC ON THE NB ROADWAY

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER.
MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.

MAINTAIN 3 LANES OF NB TRAFFIC AND 2 LANES OF SB TRAFFIC ON THE NB ROADWAY. 2 LANES OF NB TRAFFIC SPLIT TO GO TO THE NB C-D ROADWAY AT BIG BEAVER

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

FIGURE 4-93
ALT 3: STAGE 5 MAINTAINING TRAFFIC (OPTION 2)
I-75 STA 1170+00 TO STA 1210+00

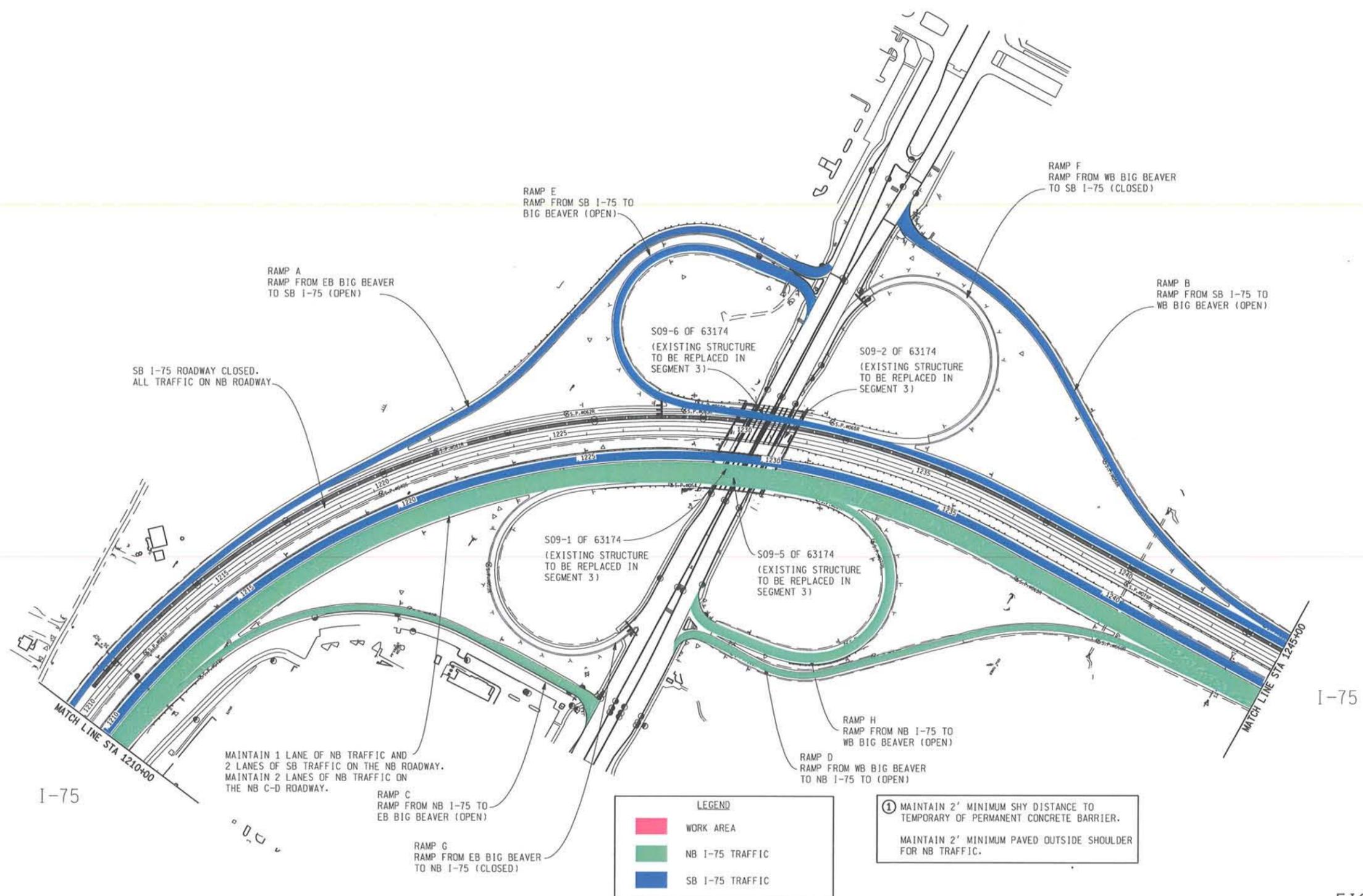


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BIG BEAVER RD



SB I-75 ROADWAY CLOSED.
ALL TRAFFIC ON NB ROADWAY

RAMP A
RAMP FROM EB BIG BEAVER
TO SB I-75 (OPEN)

RAMP E
RAMP FROM SB I-75 TO
BIG BEAVER (OPEN)

RAMP F
RAMP FROM WB BIG BEAVER
TO SB I-75 (CLOSED)

RAMP B
RAMP FROM SB I-75 TO
WB BIG BEAVER (OPEN)

S09-6 OF 63174
(EXISTING STRUCTURE
TO BE REPLACED IN
SEGMENT 3)

S09-2 OF 63174
(EXISTING STRUCTURE
TO BE REPLACED IN
SEGMENT 3)

S09-1 OF 63174
(EXISTING STRUCTURE
TO BE REPLACED IN
SEGMENT 3)

S09-5 OF 63174
(EXISTING STRUCTURE
TO BE REPLACED IN
SEGMENT 3)

RAMP H
RAMP FROM NB I-75 TO
WB BIG BEAVER (OPEN)

RAMP D
RAMP FROM WB BIG BEAVER
TO NB I-75 TO (OPEN)

MAINTAIN 1 LANE OF NB TRAFFIC AND
2 LANES OF SB TRAFFIC ON THE NB ROADWAY.
MAINTAIN 2 LANES OF NB TRAFFIC ON
THE NB C-D ROADWAY.

RAMP C
RAMP FROM NB I-75 TO
EB BIG BEAVER (OPEN)

RAMP G
RAMP FROM EB BIG BEAVER
TO NB I-75 (CLOSED)

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

① MAINTAIN 2' MINIMUM SHY DISTANCE TO
TEMPORARY OR PERMANENT CONCRETE BARRIER.

MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER
FOR NB TRAFFIC.

I-75

I-75

FIGURE 4-94
ALT 3: STAGE 5 MAINTAINING TRAFFIC (OPTION 2)
I-75 STA 1210+00 TO STA 1245+00

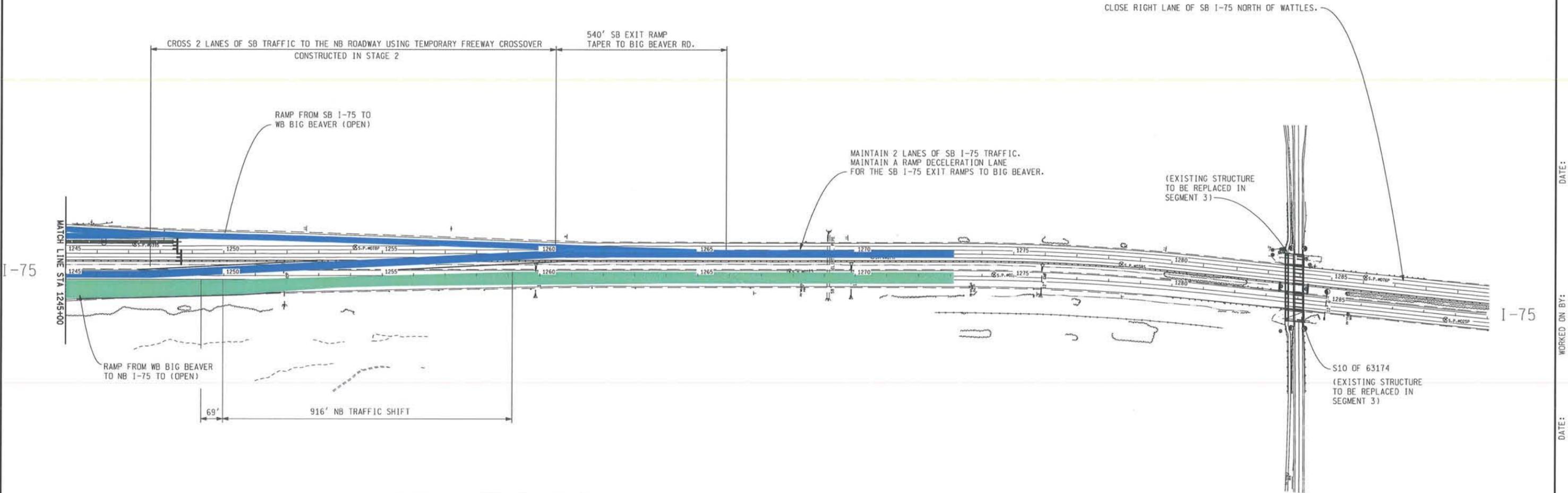
BIG BEAVER RD



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LEGEND	
	SB I-75 TRAFFIC
	NB I-75 TRAFFIC
	WORK AREA

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER.
 MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC.

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FIGURE 4-95
 ALT 3: STAGE 5 MAINTAINING TRAFFIC (OPTION 2)
 I-75 STA 1245+00 TO STA 1290+00



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Segment 3 (north of Rochester Road to south Long Lake Road):

Construction of Segment 3 is shown on Figure 4-96.

Stage 3 Traffic:

Stage 3 traffic schemes are shown on Figures 4-97 through 4-99.

Location of southern crossover: north of Rochester Road

- Right lane of NB I-75 closed south of Rochester Road.

Location of northern crossover: south of Long Lake Road

- Left lane of SB I-75 closed north of Long Lake Road.

Ramp Closures and Detours:

- **Rochester Road to NB I-75**
Post detour for Rochester traffic to continue north on Rochester Road, go west on Big Beaver Road, north on Crooks Road, east on Corporate Drive, and take the ramp from Corporate Drive to NB I-75.
- **NB I-75 to EB Big Beaver Road**
Post detour for NB I-75 traffic to exit at Rochester Road, and go north on Rochester Road to Big Beaver Road.
- **EB Big Beaver Road to NB I-75**
Post detour for EB Big Beaver Road traffic to go north on Crooks Road, east on Corporate Drive, and take the ramp from Corporate Drive to NB I-75.
- **NB I-75 to WB Big Beaver Road**
Post detour for NB I-75 traffic to exit at Rochester Road, go north on Rochester Road, east on Big Beaver Road, and use the first signalized EB to WB median crossover to go west on Big Beaver Road.
- **WB Big Beaver Road to NB I-75**
Post detour for WB Big Beaver Road traffic to go north on Crooks Road, east on Corporate Drive, and take the ramp from Corporate Drive to NB I-75.
- **WB Big Beaver Road to SB I-75**
Post detour for WB Big Beaver Road traffic to go south on Rochester Road, and take the ramp from Rochester Road to SB I-75.
- **Big Beaver Road – nights/weekends only (for bridge demo of NB I-75 bridge)**
Post detour to send traffic south to Maple Road using Crooks Road to the west and Livernois Road to the east.
- **Wattles Road – long term (for bridge work over I-75)**
Post detour to send traffic north to Long Lake Road using Crooks Road to the west and Livernois Road to the east.

- **NB I-75 – nights/weekends only (for bridge demo of Wattles bridge and Wattles pedestrian bridge)**
Post detour for NB I-75 traffic to go west on I-696, north on US-24, east on I-75 BL (Square Lake Road) and north on I-75, as shown on Figure 4-72.
- **SB I-75 – nights/weekends only (for bridge demo of Wattles bridge and Wattles ped bridge)**
Post detour for SB I-75 traffic to go west on I-75 BL (Square Lake Road), south on US-24, east on I-696 and south on I-75, as shown on Figure 4-74.

Additional Stage 3 Traffic Notes:

- Close right lane in each direction of Big Beaver Road for a limited time during construction of ramp terminals.
- Some ramp closure detours may need to be revised during night/weekend closures of Big Beaver Road.
- If HOV lane constructed in Segments 1 and 2 is in operation prior to construction of Segment 3, close the HOV lane along NB I-75 in addition to closure of the right lane of NB I-75.

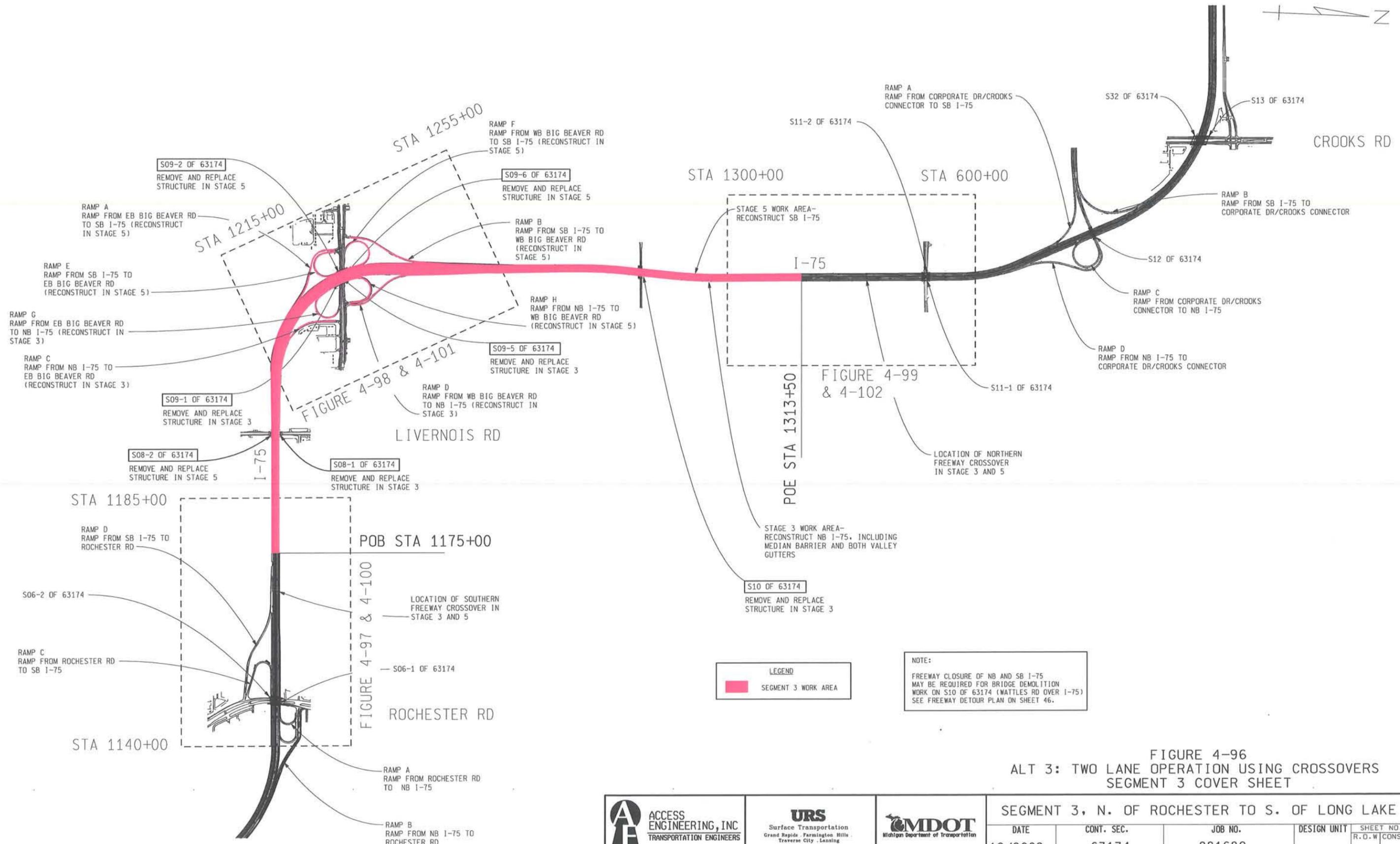
FINAL R.O.W.		
AUTH	DATE	REVISION

BIG BEAVER RD

WATTLES RD

LONG LAKE RD

CORPORATE DR



LEGEND

SEGMENT 3 WORK AREA

NOTE:
 FREEWAY CLOSURE OF NB AND SB I-75 MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK ON S10 OF 63174 (WATTLES RD OVER I-75) SEE FREEWAY DETOUR PLAN ON SHEET 46.

FIGURE 4-96
 ALT 3: TWO LANE OPERATION USING CROSSOVERS
 SEGMENT 3 COVER SHEET

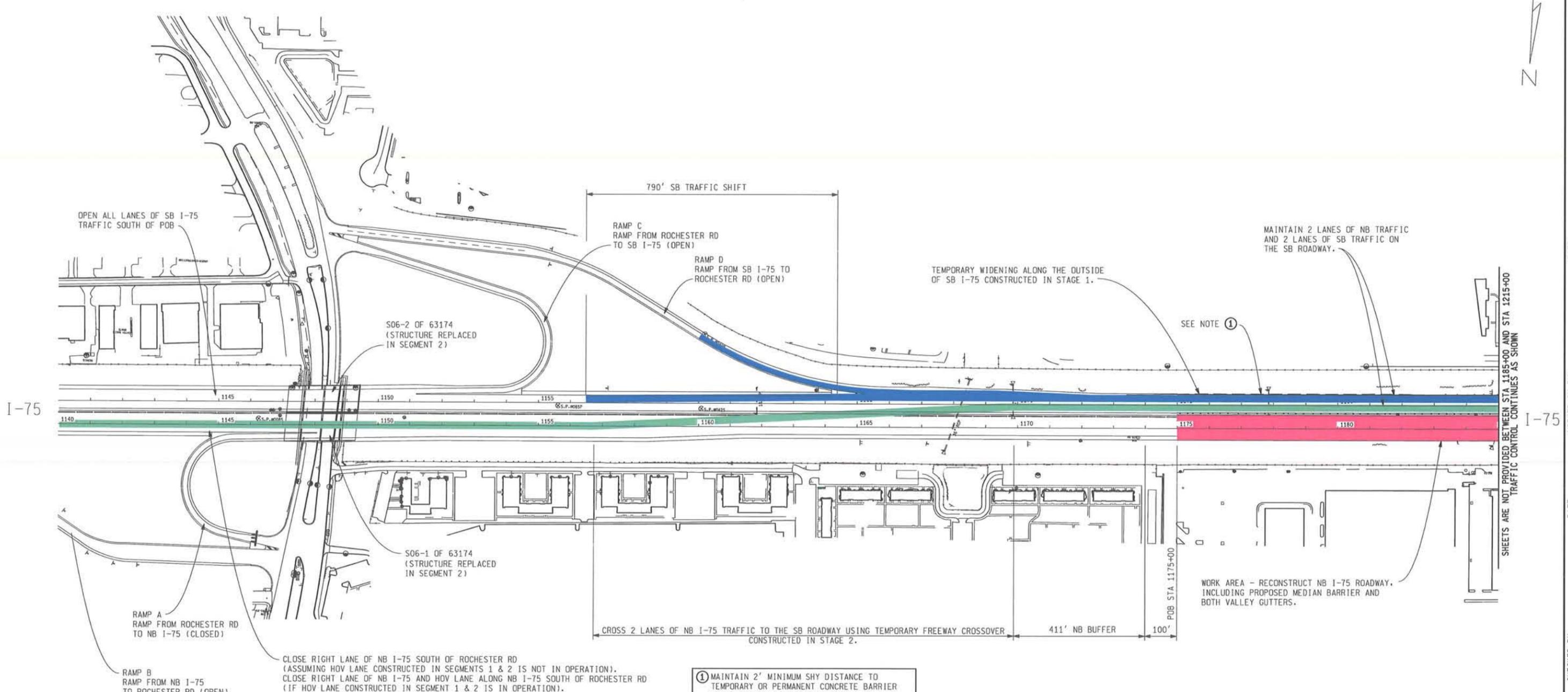


SEGMENT 3, N. OF ROCHESTER TO S. OF LONG LAKE				
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ROCHESTER RD

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LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.

MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.

FIGURE 4-97
 ALT 3: STAGE 3 MAINTAINING TRAFFIC
 I-75 POB STA 1175+00 TO STA 1185+00

ROCHESTER RD



SEGMENT 3, N. OF ROCHESTER TO S. OF LONG LAKE				
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BIG BEAVER RD

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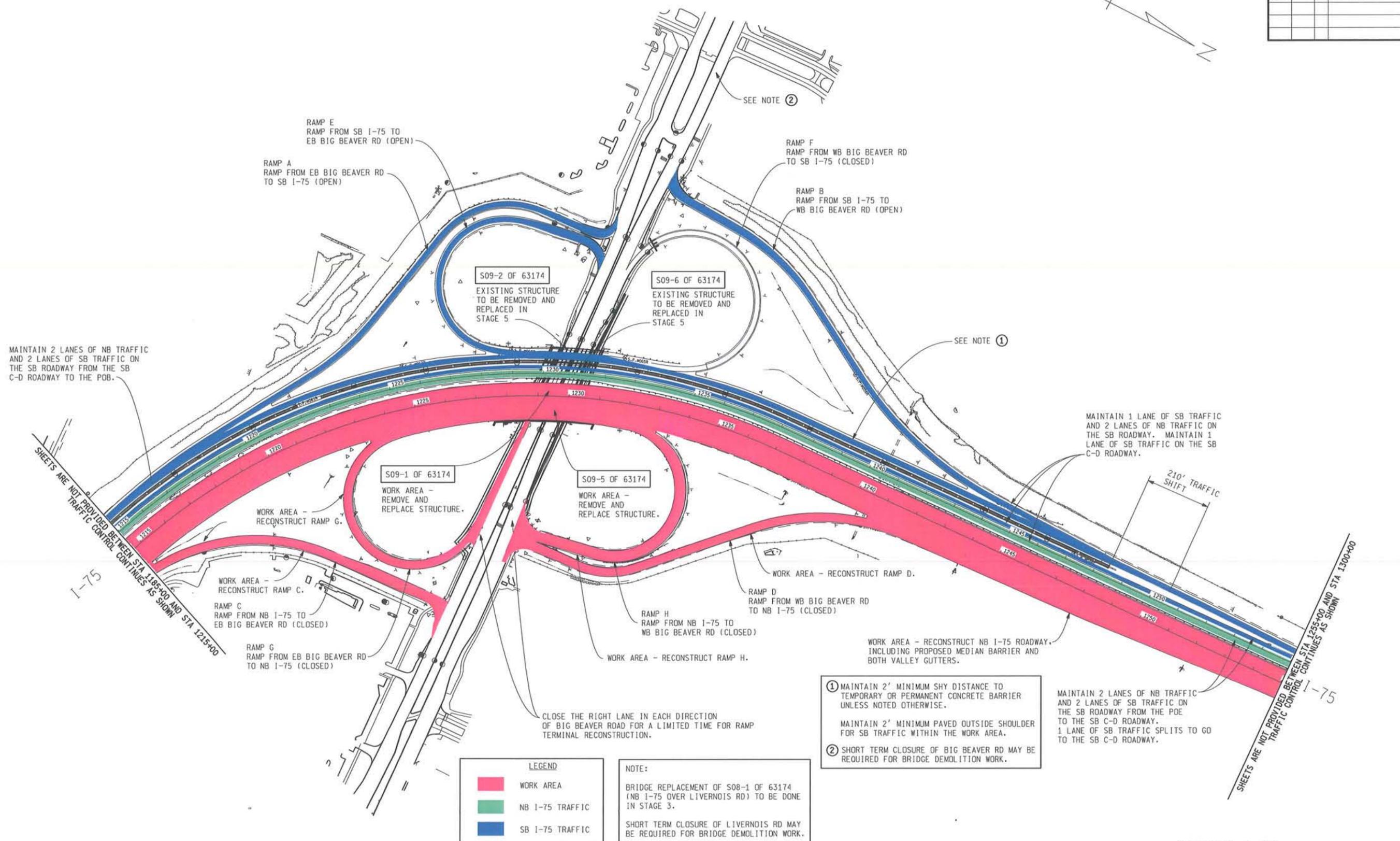
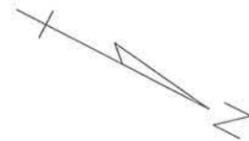


FIGURE 4-98
 ALT 3: STAGE 3 MAINTAINING TRAFFIC
 I-75 STA 1215+00 TO STA 1255+00

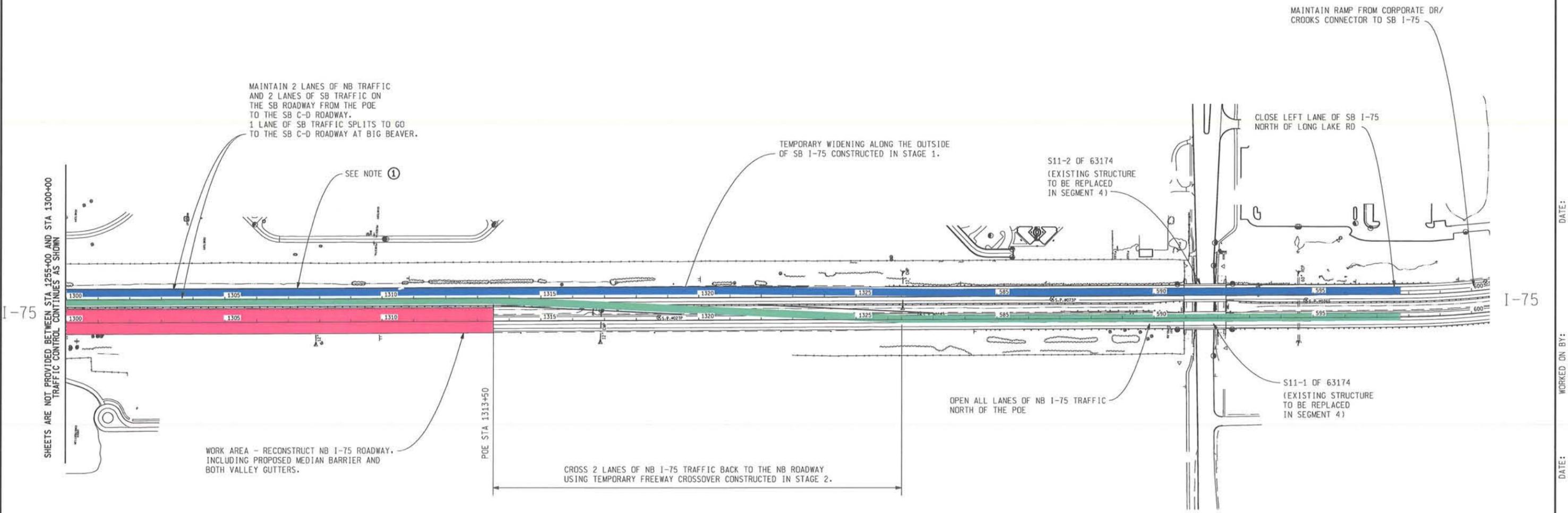
BIG BEAVER RD



SEGMENT 3, N. OF ROCHESTER TO S. OF LONG LAKE				
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SHEETS ARE NOT PROVIDED BETWEEN STA 1255+00 AND STA 1300+00 TRAFFIC CONTROL CONTINUES AS SHOWN

I-75

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.
MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

NOTE:
BRIDGE REPLACEMENT OF S10 OF 63174 (WATTLES RD OVER I-75) TO BE DONE UNDER FULL CLOSURE OF WATTLES RD.
FREEWAY CLOSURE OF NB & SB I-75 MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK ON S10 OF 63174.

LONG LAKE RD
FIGURE 4-99
ALT 3: STAGE 3 MAINTAINING TRAFFIC
I-75 STA 1300+00 TO POE STA 1313+50

			SEGMENT 3, N. OF ROCHESTER TO S. OF LONG LAKE				
			DATE 12/2009	CONT. SEC. 63174	JOB NO. 88168C	DESIGN UNIT DATTA	SHEET NO. R.O.W CONST.

DATE: WORKED ON BY: CHECKED BY: FILE NAME: seg3_st3 1300.dgn

Stage 5 Traffic:

Stage 5 traffic schemes are shown on Figures 4-100 through 4-102.

Location of southern crossover: north of Rochester Road

- No lane closures on NB I-75 south of Rochester Road.

Location of northern crossover: south of Long Lake Road

- Right lane of SB I-75 closed north of Long Lake Road.

Ramp Closures and Detours:

- **EB Big Beaver Road to SB I-75**

Post detour for EB Big Beaver Road traffic to go south on Rochester Road, and take the ramp from Rochester Road to SB I-75.

- **SB I-75 to EB Big Beaver Road**

Post detour for SB I-75 traffic to exit at Rochester Road, and go north on Rochester Road to Big Beaver Road. The ramp from SB I-75 to Rochester Road (if ramp closure is needed) may not be closed at the same time.

- **WB Big Beaver Road to SB I-75**

Post detour for WB Big Beaver Road traffic to go south on Rochester Road, and take the ramp from Rochester Road to SB I-75.

- **SB I-75 to WB Big Beaver Road**

Post detour for SB I-75 traffic to exit at Rochester Road, go north on Rochester Road, east on Big Beaver Road, and use a signalized EB to WB median crossover to go west on Big Beaver Road. The ramp from SB I-75 to Rochester Road (if ramp closure is needed) may not be closed at the same time.

- **EB Big Beaver Road to NB I-75**

Same detour as Stage 3.

- **Big Beaver Road – nights/weekends only (for bridge demo of SB I-75 bridge)**

Same detour as Stage 3.

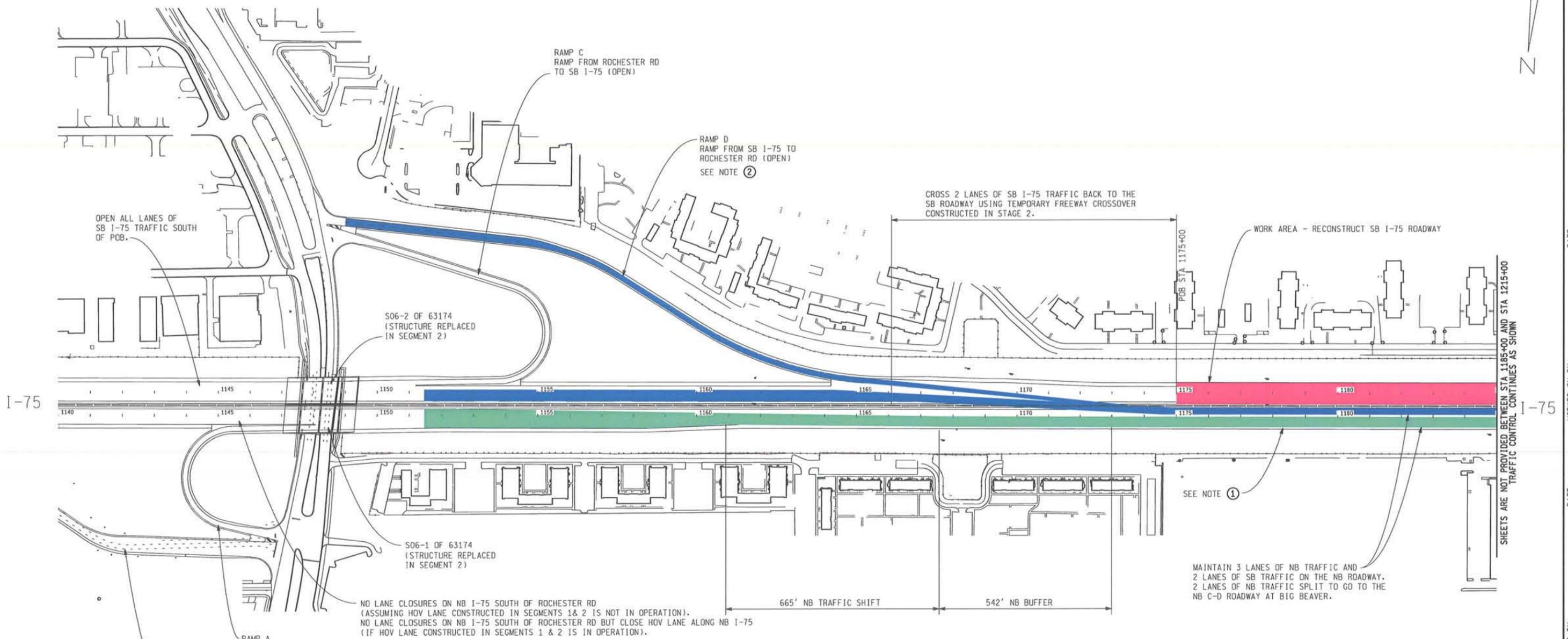
Additional Stage 5 Traffic Notes:

- The ramp from SB I-75 to Rochester Road may need to be closed to construct a portion of mainline I-75 at the POB. Gap out work area at the POB as needed to maintain this ramp during closure of the ramps from SB I-75 to EB and WB Big Beaver Road.
- The ramp from SB I-75 to WB Big Beaver Road serves traffic destined for Somerset Mall. To minimize closure of this ramp, evaluate the feasibility of gapping out the work area to maintain a temporary ramp crossover for the ramp from SB I-75 to WB Big Beaver Road. This ramp may be used to detour SB I-75 to EB Big Beaver Road ramp traffic, which can then use the first signalized WB to EB median crossover to go east on Big Beaver Road.
- Close right lane in each direction of Big Beaver Road for a limited time during construction of ramp terminals.

- Some ramp closure detours may need to be revised during night/weekend closures of Big Beaver Road.
- Reconstruction of a portion of Livernois Road and Big Beaver Road under I-75 is required due to removal of existing I-75 bridge piers and construction of proposed I-75 bridge piers. Reconstruction may be accomplished using full closure or part-width construction. These options have not been fully investigated since they require more detailed analysis of Alternative 3 and will require input from local agencies.
- If HOV lane constructed in Segments 1 and 2 is in operation prior to construction of Segment 3, close the HOV lane along NB I-75.

ROCHESTER RD

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OPEN ALL LANES OF SB I-75 TRAFFIC SOUTH OF POB.

RAMP C
RAMP FROM ROCHESTER RD TO SB I-75 (OPEN)

RAMP D
RAMP FROM SB I-75 TO ROCHESTER RD (OPEN)
SEE NOTE ②

CROSS 2 LANES OF SB I-75 TRAFFIC BACK TO THE SB ROADWAY USING TEMPORARY FREEWAY CROSSOVER CONSTRUCTED IN STAGE 2.

WORK AREA - RECONSTRUCT SB I-75 ROADWAY

S06-2 OF 63174
(STRUCTURE REPLACED IN SEGMENT 2)

S06-1 OF 63174
(STRUCTURE REPLACED IN SEGMENT 2)

NO LANE CLOSURES ON NB I-75 SOUTH OF ROCHESTER RD (ASSUMING HOV LANE CONSTRUCTED IN SEGMENTS 1 & 2 IS NOT IN OPERATION).
NO LANE CLOSURES ON NB I-75 SOUTH OF ROCHESTER RD BUT CLOSE HOV LANE ALONG NB I-75 (IF HOV LANE CONSTRUCTED IN SEGMENTS 1 & 2 IS IN OPERATION).

RAMP A
RAMP FROM ROCHESTER RD TO NB I-75 (OPEN)

RAMP B
RAMP FROM NB I-75 TO ROCHESTER RD (OPEN)

LEGEND

■	WORK AREA
■	NB I-75 TRAFFIC
■	SB I-75 TRAFFIC

- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OF PERMANENT CONCRETE BARRIER.
MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.
- ② GAP OUT WORK AREA AT POB AS NEEDED TO MAINTAIN SB I-75 EXIT RAMP TO ROCHESTER RD. CLOSE RAMP TO CONSTRUCT GAP BUT MAINTAIN TEMPORARY RAMP CROSSOVER FOR SB I-75 EXIT RAMP TO BIG BEAVER.

SEE NOTE ①

MAINTAIN 3 LANES OF NB TRAFFIC AND 2 LANES OF SB TRAFFIC ON THE NB ROADWAY. 2 LANES OF NB TRAFFIC SPLIT TO GO TO THE NB C-D ROADWAY AT BIG BEAVER.

665' NB TRAFFIC SHIFT 542' NB BUFFER

SHEETS ARE NOT PROVIDED BETWEEN STA 1185+00 AND STA 1215+00 TRAFFIC CONTROL CONTIGUES AS SHOWN

FIGURE 4-100
ALT 3: STAGE 5 MAINTAINING TRAFFIC
I-75 POB STA 1175+00 TO STA 1185+00

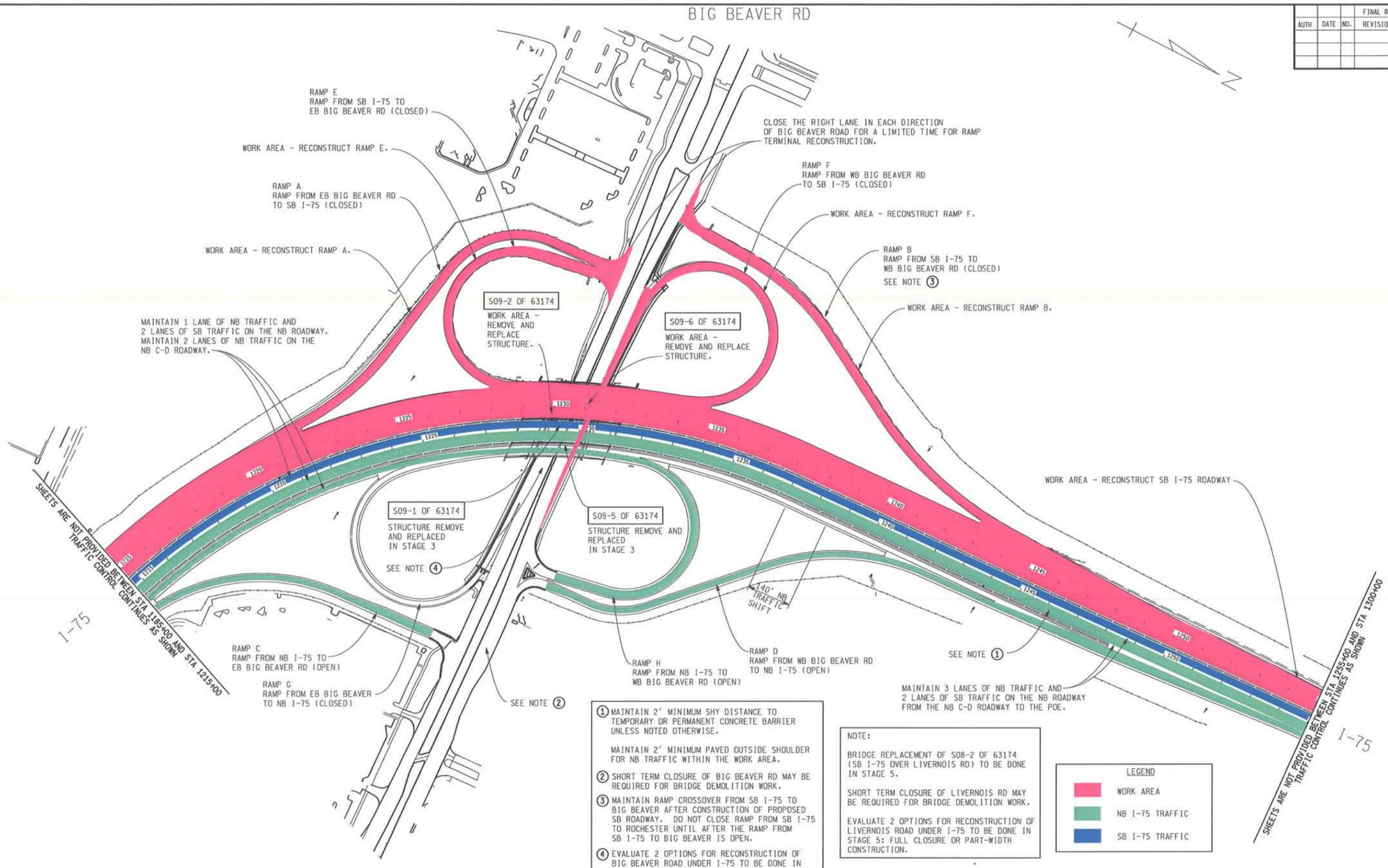
ROCHESTER RD



SEGMENT 3, N. OF ROCHESTER TO S. OF LONG LAKE				
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- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.
MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.
- ② SHORT TERM CLOSURE OF BIG BEAVER RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.
- ③ MAINTAIN RAMP CROSSOVER FROM SB I-75 TO BIG BEAVER AFTER CONSTRUCTION OF PROPOSED SB ROADWAY. DO NOT CLOSE RAMP FROM SB I-75 TO ROCHESTER UNTIL AFTER THE RAMP FROM SB I-75 TO BIG BEAVER IS OPEN.
- ④ EVALUATE 2 OPTIONS FOR RECONSTRUCTION OF BIG BEAVER ROAD UNDER I-75 TO BE DONE IN STAGE 5: FULL CLOSURE OR PART-WIDTH CONSTRUCTION.

NOTE:
BRIDGE REPLACEMENT OF S08-2 OF 63174 (SB I-75 OVER LIVERNOIS RD) TO BE DONE IN STAGE 5.
SHORT TERM CLOSURE OF LIVERNOIS RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.
EVALUATE 2 OPTIONS FOR RECONSTRUCTION OF LIVERNOIS ROAD UNDER I-75 TO BE DONE IN STAGE 5: FULL CLOSURE OR PART-WIDTH CONSTRUCTION.

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

FIGURE 4-101
ALT 3: STAGE 5 MAINTAINING TRAFFIC
I-75 STA 1215+00 TO STA 1255+00

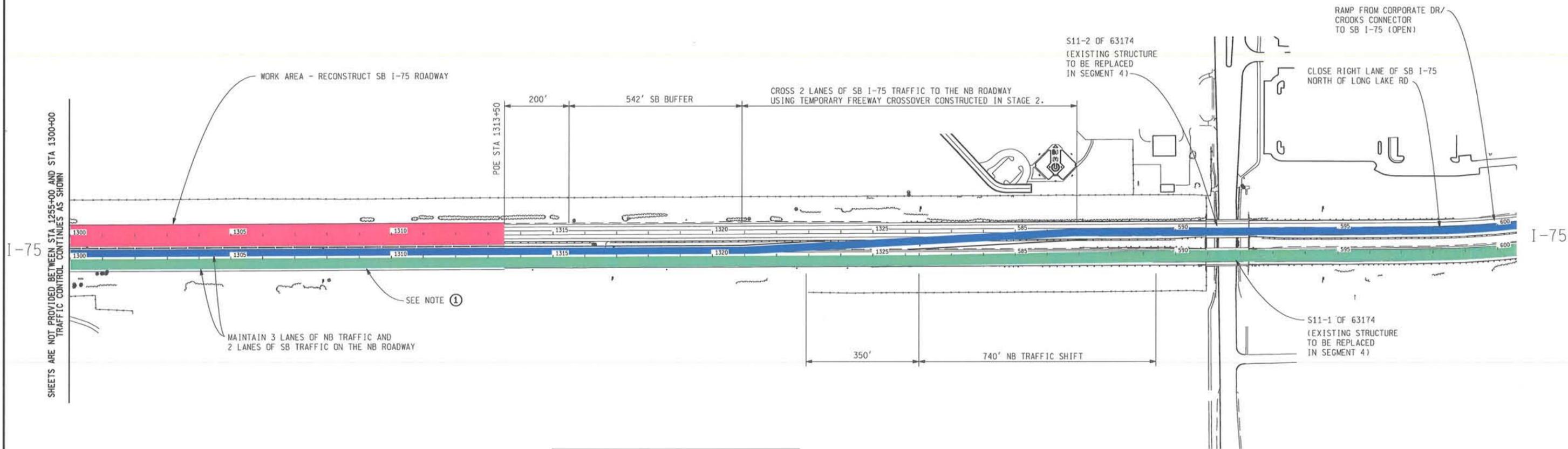
BIG BEAVER RD



SEGMENT 3, N. OF ROCHESTER TO S. OF LONG LAKE				
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SHEETS ARE NOT PROVIDED BETWEEN STA 1255+00 AND STA 1300+00 TRAFFIC CONTROL CONTIGUES AS SHOWN

SEE NOTE ①

MAINTAIN 3 LANES OF NB TRAFFIC AND 2 LANES OF SB TRAFFIC ON THE NB ROADWAY

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER.
MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.

LONG LAKE RD
 FIGURE 4-102
 ALT 3: STAGE 5 MAINTAINING TRAFFIC
 I-75 STA 1300+00 TO POE STA 1313+50



SEGMENT 3, N. OF ROCHESTER TO S. OF LONG LAKE				
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Segment 4 (north of Wattles Road to north of Adams Road):

Construction of Segment 4 is shown on **Figure 4-103**.

Stage 3 Traffic:

Stage 3 traffic schemes are shown on **Figures 4-104 through 4-107**.

Location of southern crossover: north of Wattles Road

- Right lane of NB I-75 and HOV lane along NB I-75 closed south of Wattles Road

Location of northern crossover: south of Squirrel Road

- Right lane of SB I-75 closed south of Ramp SW (ramp from SB I-75 to WB I-75 BL/Square Lake Road)

Ramp Closures and Detours:

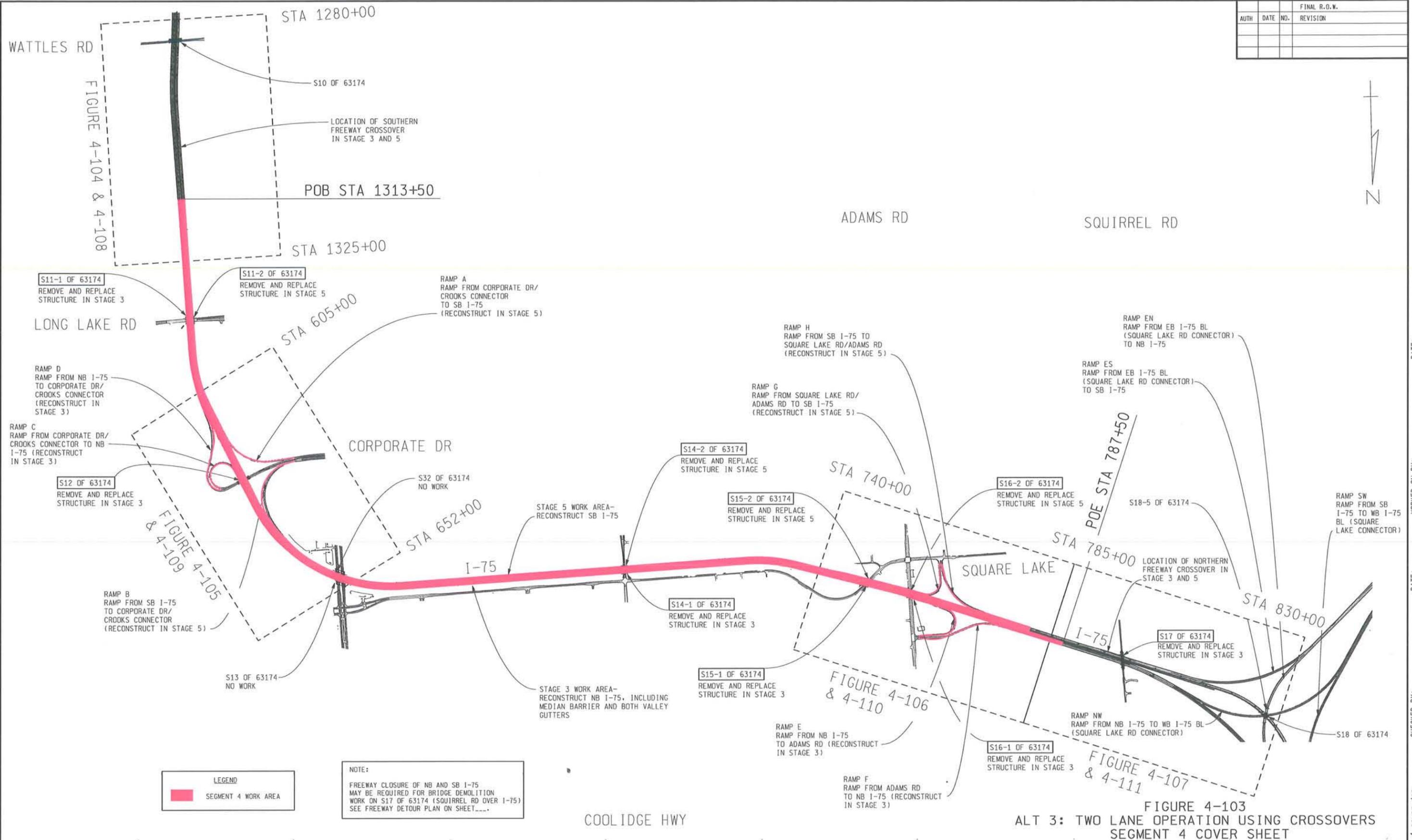
- **NB I-75 to Crooks Road Interchange**
Post detour for NB I-75 traffic to exit at WB Big Beaver Road, go west on Big Beaver Road, and north on Crooks Road to Corporate Drive.
- **Crooks Road Interchange to NB I-75**
Post detour for Crooks Road Interchange traffic to go north on Crooks Road, take the ramp from Crooks Road to WB M-59, go west on M-59; Traffic destined for NB I-75 will take the ramp from WB M-59 to NB I-75. Traffic destined for WB I-75 BL (Square Lake Road) will take the ramp from WB M-59 to SB I-75, go south on SB I-75, and take the ramp from SB I-75 to WB I-75 BL (Square Lake Road).
- **NB I-75 to Adams Road**
Post detour for NB I-75 traffic to exit at WB Big Beaver Road, go west on Big Beaver Road, north on Crooks Road to Adams Road.
- **Adams Road to NB I-75**
Post detour for Adams Road traffic to go north on Adams Road, west on Auburn Road, north on Squirrel Road, take the ramp from Squirrel Road to WB M-59, go west on M-59, and take the ramp from WB M-59 to NB I-75.
- **Long Lake Road – nights/weekends only (for bridge demo of NB I-75 bridge)**
Post detour to send traffic south to Wattles Road using Crooks Road to the west and Livernois Road to the east.
- **Coolidge Road – nights/weekends only (for bridge demo of NB I-75 bridge)**
Post detour to send traffic east to Crooks Road using Long Lake Road to the south and Square Lake Road to the north.
- **Square Lake Road – nights/weekends only (for bridge demo of NB I-75 bridge)**
Post detour to send traffic north to South Boulevard Road using Adams Road to the west and Coolidge Road to the east. Do not close Adams Road at the same time.

- **Adams Road – nights/weekends only (for bridge demo of NB I-75 bridge)**
Post detour to send traffic east to Coolidge Road using Square Lake Road to the south and South Boulevard Road to the north. Do not close Square Lake Road at the same time.
- **Squirrel Road – long term (for bridge work over I-75)**
Post detour to send traffic west to Opdyke Road using Square Lake Road to the south and South Boulevard Road to the north.
- **NB I-75 – nights/weekends only (for bridge demo of Squirrel Road bridge)**
Post detour for NB I-75 traffic to go west on I-696, north on US-24, east on I-75 BL (Square Lake Road) and north on I-75, as shown on Figure 4-74.
- **SB I-75 – nights/weekends only (for bridge demo of Squirrel Road bridge)**
Post detour for SB I-75 traffic to go west on I-75 BL (Square Lake Road), south on US-24, east on I-696 and south on I-75, as shown on Figure 4-74.

Additional Stage 3 Traffic Notes:

- Reconstruct ramp tie-ins at the Crooks Road Connector part-width to maintain the ramp from Crooks Road Interchange to SB I-75 and the ramp from SB I-75 to Crooks Road Interchange.
- Close right lane of SB Adams Road for a limited time during construction of ramp terminals.
- Close left lane on ramp from EB I-75 BL (Square Lake Road) to SB I-75.
- Some ramp closure detours may need to be revised during night/weekend closures of Long Lake Road , Coolidge Road , Square Lake Road, and Adams Road.
- It is assumed that the HOV lane constructed in Segments 1 through 3 is in operation prior to construction of Segment 4.

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LEGEND	
	SEGMENT 4 WORK AREA

NOTE:
 FREEWAY CLOSURE OF NB AND SB I-75
 MAY BE REQUIRED FOR BRIDGE DEMOLITION
 WORK ON S17 OF 63174 (SQUIRREL RD OVER I-75)
 SEE FREEWAY DETOUR PLAN ON SHEET.....

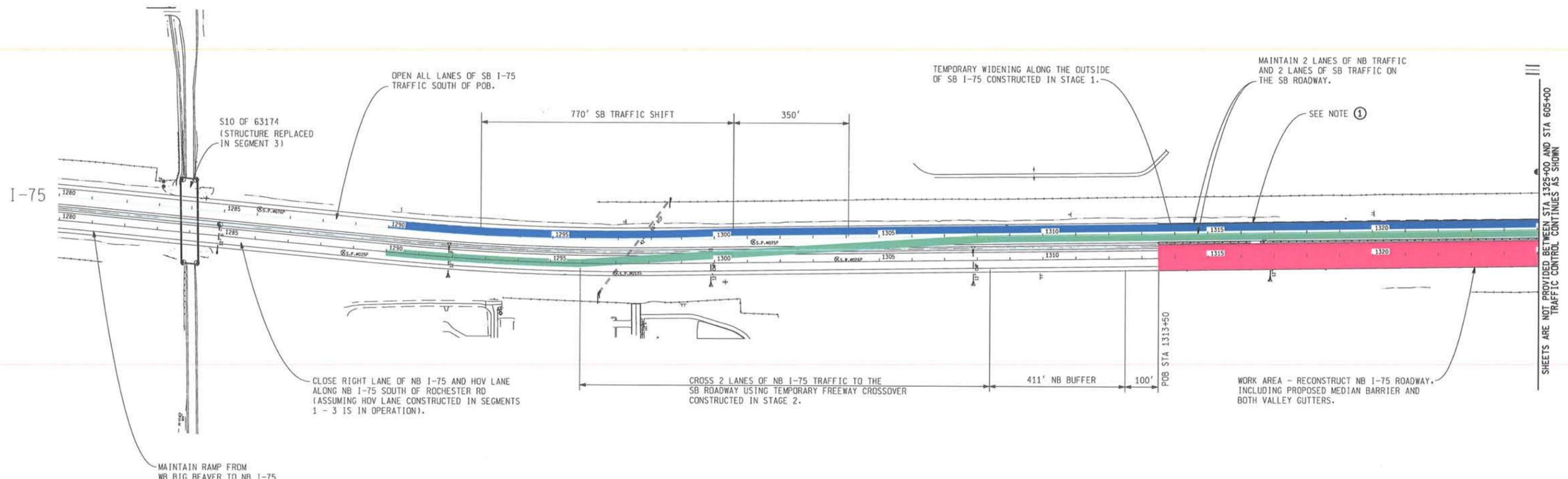
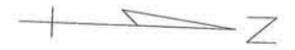
FIGURE 4-103
 ALT 3: TWO LANE OPERATION USING CROSSOVERS
 SEGMENT 4 COVER SHEET



SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS				
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LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.
 MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.

FIGURE 4-104
 ALT 3: STAGE 3 MAINTAINING TRAFFIC
 I-75 POB STA 1313+50 TO STA 1325+00

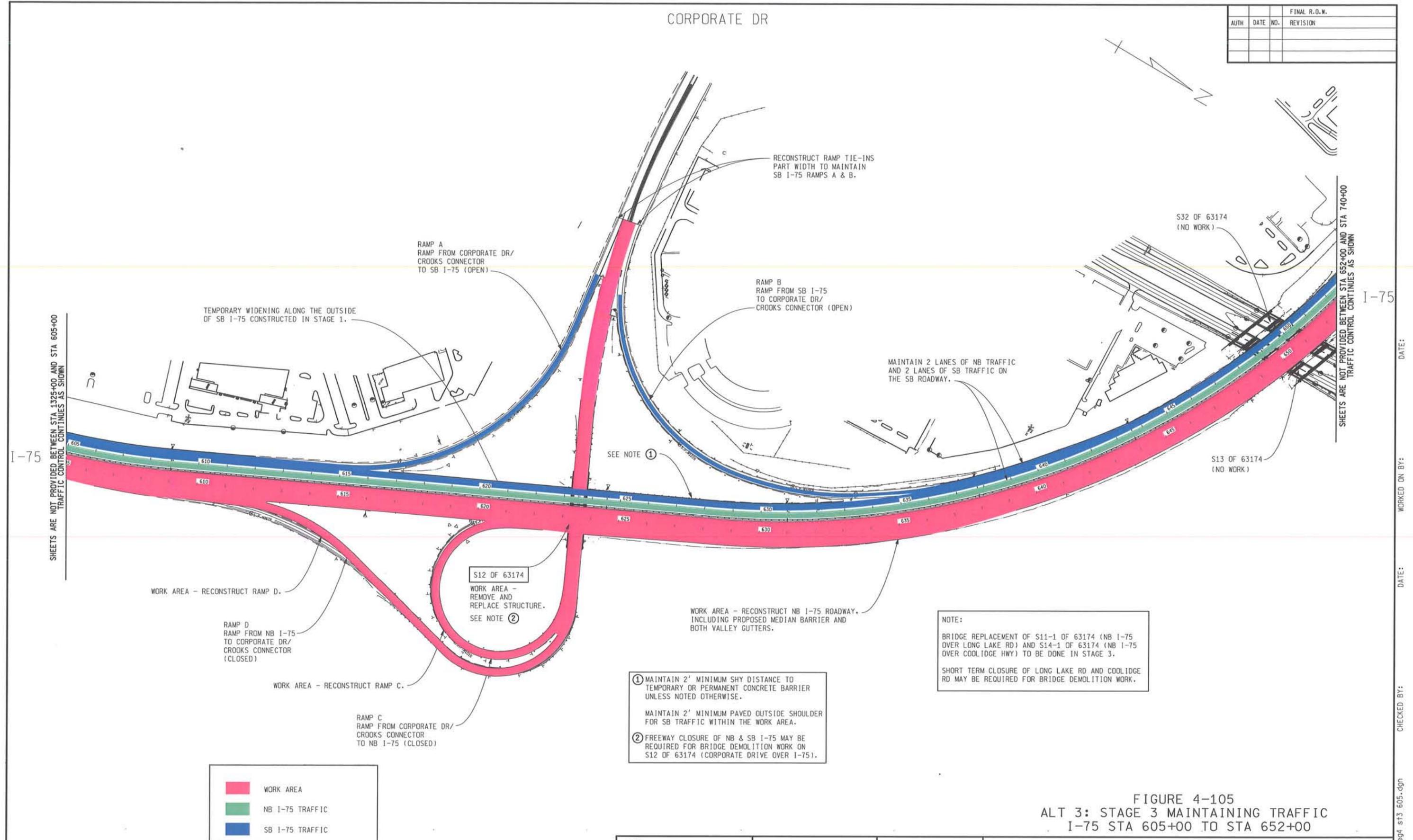


SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS				
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	SB I-75 TRAFFIC
	NB I-75 TRAFFIC
	WORK AREA

FIGURE 4-105
ALT 3: STAGE 3 MAINTAINING TRAFFIC
I-75 STA 605+00 TO STA 652+00

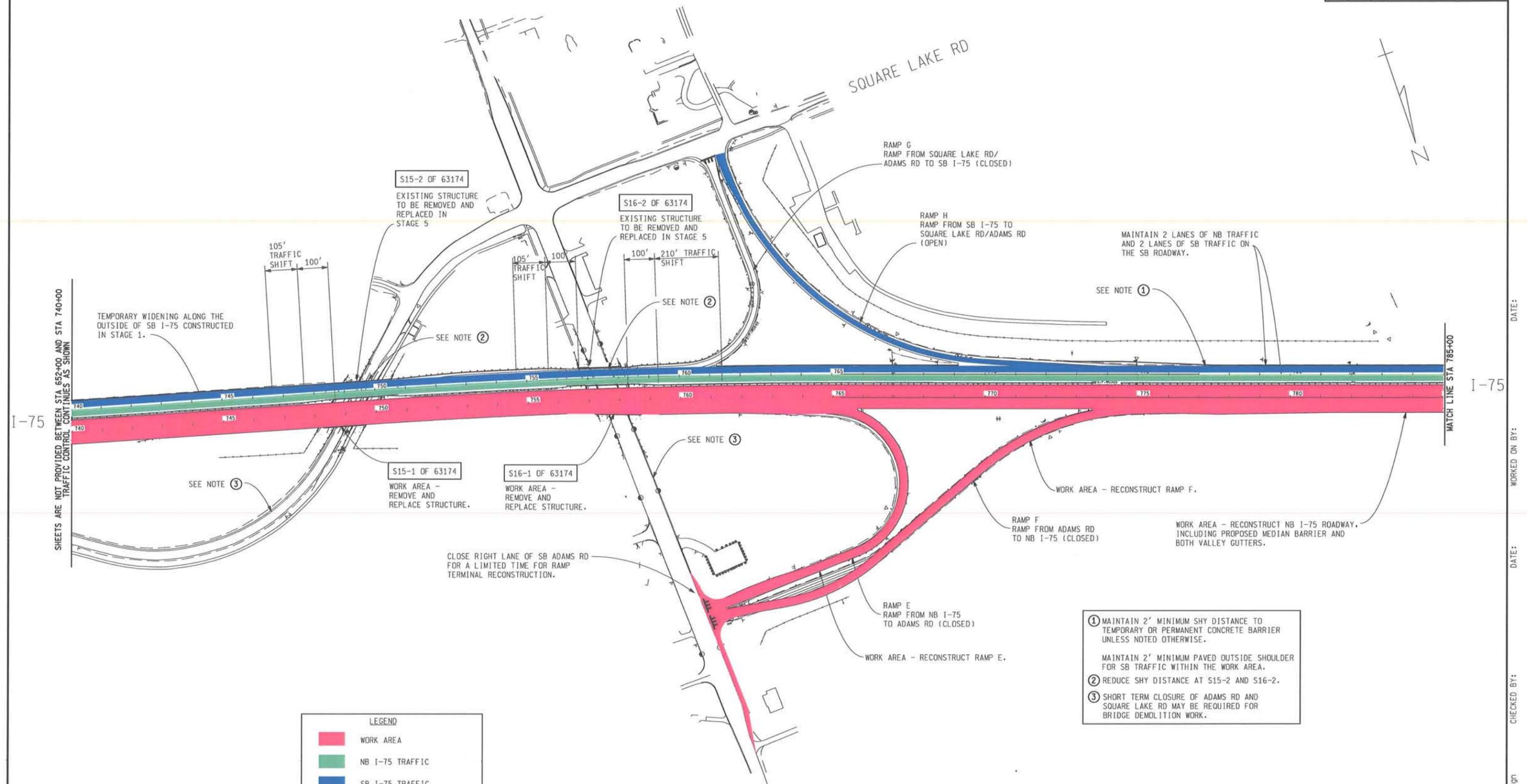
			SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS			
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N. ADAMS RD

SQUARE LAKE RD



SHEETS ARE NOT PROVIDED BETWEEN STA 652+00 AND STA 740+00 TRAFFIC CONTROL CONT LINES AS SHOWN

MATCH LINE STA 785+00

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.
MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.
- ② REDUCE SHY DISTANCE AT S15-2 AND S16-2.
- ③ SHORT TERM CLOSURE OF ADAMS RD AND SQUARE LAKE RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.

FIGURE 4-106
ALT 3: STAGE 3 MAINTAINING TRAFFIC
I-75 STA 740+00 TO STA 785+00

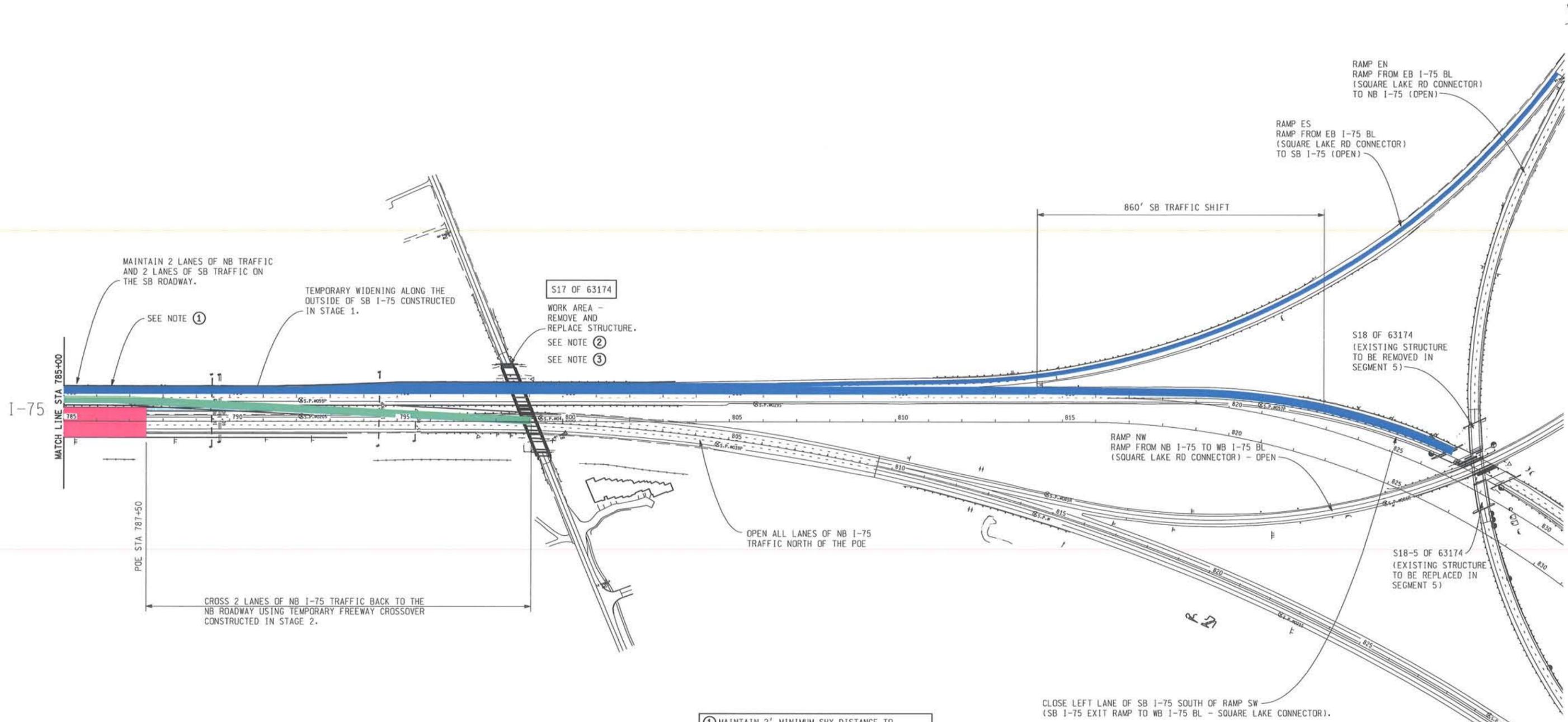


SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS				
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SQUIRREL RD

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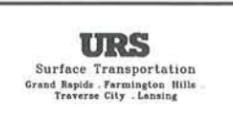
CROSS 2 LANES OF NB I-75 TRAFFIC BACK TO THE NB ROADWAY USING TEMPORARY FREEWAY CROSSOVER CONSTRUCTED IN STAGE 2.

LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER UNLESS NOTED OTHERWISE.
MAINTAIN 2' MINIMUM PAVED OUTSIDE SHOULDER FOR SB TRAFFIC WITHIN THE WORK AREA.
- ② BRIDGE REPLACEMENT WORK ON S17 OF 63174 (SQUIRREL ROAD OVER I-75) TO BE DONE UNDER FULL CLOSURE OF SQUIRREL ROAD.
- ③ FREEWAY CLOSURE OF NB & SB I-75 MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK ON S17 OF 63174.

SQUIRREL RD

FIGURE 4-107
ALT 3: STAGE 3 MAINTAINING TRAFFIC
I-75 STA 785+00 TO POE STA 787+50



SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS				
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Stage 5 Traffic:

Stage 5 traffic schemes are shown on Figures 4-108 through 4-111.

Location of southern crossover: north of Wattles Road

- No lane closures on NB I-75 south of Wattles Road but HOV lane closed along NB I-75.

Location of northern crossover: south of Squirrel Road

- Left lane of SB I-75 closed south of Ramp SW (ramp from SB I-75 to WB I-75 BL/Square Lake Road).

Ramp Closures and Detours:

- **Crooks Road Interchange to NB I-75**

Same detour as Stage 3.

- **Crooks Road Interchange to SB I-75**

Post detour for Crooks Road Interchange traffic to go south on Crooks Road, east on Big Beaver Road, and take the ramp from EB Big Beaver Road to SB I-75.

- **SB I-75 to Crooks Road Interchange**

Post detour for SB I-75 traffic to exit at WB Big Beaver Road, go west on Big Beaver Road, and north on Crooks Road to Corporate Drive.

- **Square Lake Road/Adams Road to SB I-75**

Post detour for 14 Mile Road traffic to go east on Square Lake Road, south on Crooks Road, east on Big Beaver Road, and take the ramp from EB Big Beaver Road to SB I-75.

- **SB I-75 to Adams Road/Square Lake Road**

Post detour for SB I-75 traffic to exit at WB I-75 BL (Square Lake Road), go west on I-75 BL, take the ramp from WB I-75 BL to Opdyke Road, go south on Opdyke Road, and east on Square Lake Road to Adams.

- **EB I-75 BL (Square Lake Road) to SB I-75**

Post detour for EB I-75 BL traffic to go south on US-24, take the ramp from SB US-24 to EB I-696, go east on I-696, and take the ramp from EB I-696 to SB I-75.

- **Long Lake Road** – nights/weekends only (for bridge demo of SB I-75 bridge)

Same detour as Stage 3.

- **Coolidge Road** – nights/weekends only (for bridge demo of SB I-75 bridge)

Same detour as Stage 3.

- **Square Lake Road** – nights/weekends only (for bridge demo of SB I-75 bridge)

Same detour as Stage 3.

- **Adams Road** – nights/weekends only (for bridge demo of SB I-75 bridge)

Same detour as Stage 3.

Additional Stage 5 Traffic Notes:

- Reconstruct ramp tie-ins at the Crooks Road Connector part-width to maintain the ramp from NB I-75 to Crooks Road Interchange.
- Close center lane of Square Lake Road for a limited time during construction of ramp terminals.
- Some ramp closure detours may need to be revised during night/weekend closures of Long Lake Road, Coolidge Road, Square Lake Road, and Adams Road.
- Reconstruction of a portion of Long Lake Road, Coolidge Road, Square Lake Road and Adams Road under I-75 is required due to removal of existing I-75 bridge piers and construction of proposed I-75 bridge piers. Reconstruction may be accomplished using full closure or part-width construction. These options have not been fully investigated since they require more detailed analysis of Alternative 3 and will require input from local agencies.
- It is assumed that the HOV lane constructed in Segments 1 through 3 is in operation prior to construction of Segment 4.

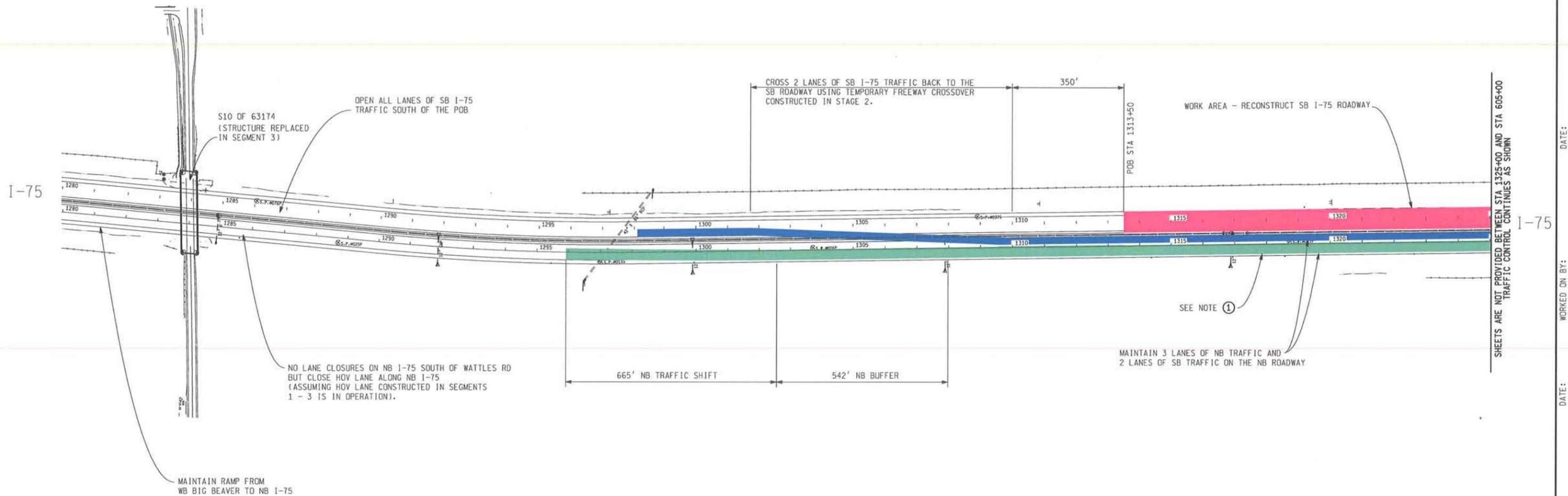
Once the project is in the design phase, the following details can be further investigated for Alternative 3 for Segments 1 through 4:

- Advantage, if any, of maintaining three SB lanes and two NB lanes in Stage 5.
- Feasibility of maintaining temporary ramp crossovers in some segments.
- Get approval of detour routes for ramp and roadway closures or investigate better alternatives depending on other construction projects within the area and with input from MDOT and local agencies.
- Need for traffic signal upgrades along local detour routes for ramp traffic.
- Options for location of northern crossover for Stage 5 of Segment 1.
- Simulate the effect of roadway and ramp closures when combining Segment 1 with the southern section from I-696 to south of 12 Mile Road.
- Need for utility relocations prior to construction.
- Need for advance contract to reduce construction duration and cost.
- Full closure or part-width options for construction of the local roadways under I-75.
- Feasibility of additional temporary widening in certain locations to minimize temporary sheet piling requirements.
- Condition of existing shoulders for maintaining traffic at the time of design.
- Use of temporary barrier gates for emergency access.
- Locations for emergency shoulders and pull off areas.
- Consider using temporary real-time work zone systems to aid and inform traffic during construction.
- Strategies for incident management and coordination with emergency response agencies.
- Strategies for community involvement and development of public information plan.

Another variation of Alternative 3 for Segments 1 through 4 is to construct each direction of I-75 part-width while maintaining two lanes of NB and SB I-75 traffic in their respective roadways, without using temporary freeway crossovers. This concept was not investigated due to the same reasons stated under discussion of Alternative 4. Furthermore, there were adequate clear widths on 24 out of 26 bridges within the northern section of the I-75 corridor to make Alternative 3 a more ideal option.

WATTLES RD

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LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OF PERMANENT CONCRETE BARRIER.
 MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.

FIGURE 4-108
 ALT 3: STAGE 5 MAINTAINING TRAFFIC
 I-75 POB STA 1313+50 TO STA 1325+00

WATTLES RD



SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS				
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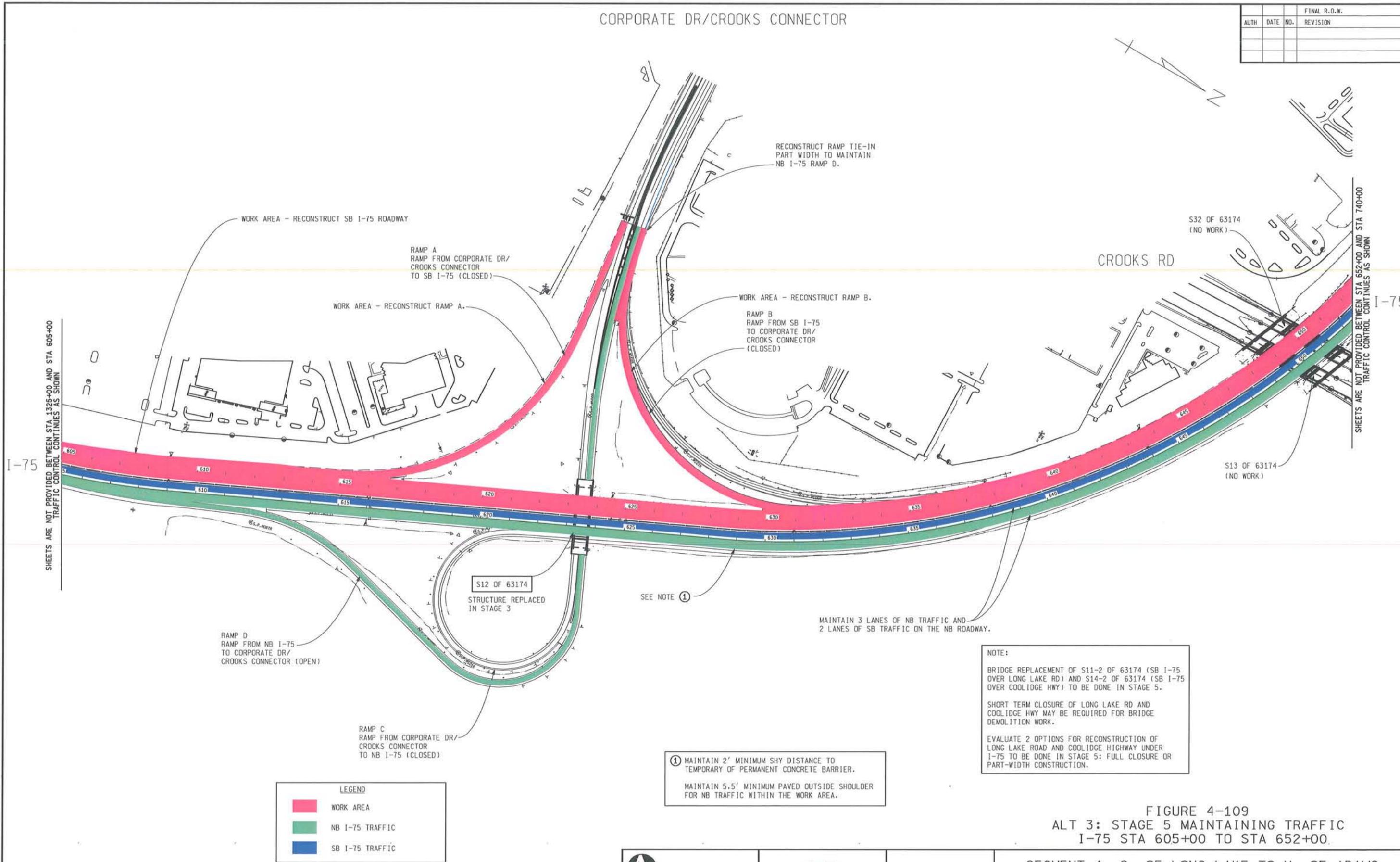


FIGURE 4-109
ALT 3: STAGE 5 MAINTAINING TRAFFIC
I-75 STA 605+00 TO STA 652+00.

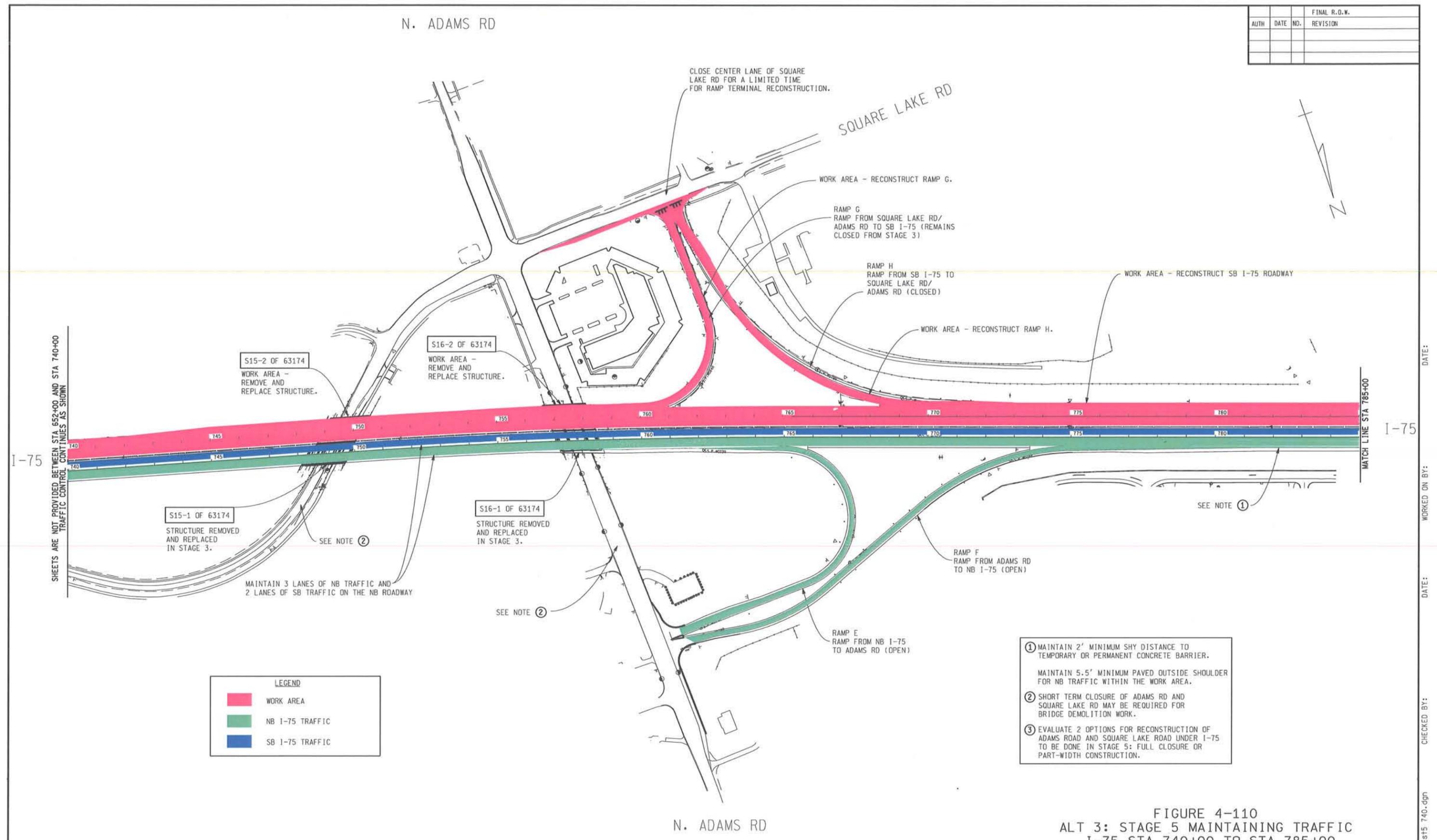


SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS				
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N. ADAMS RD



LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

- ① MAINTAIN 2' MINIMUM SHY DISTANCE TO TEMPORARY OR PERMANENT CONCRETE BARRIER.
MAINTAIN 5.5' MINIMUM PAVED OUTSIDE SHOULDER FOR NB TRAFFIC WITHIN THE WORK AREA.
- ② SHORT TERM CLOSURE OF ADAMS RD AND SQUARE LAKE RD MAY BE REQUIRED FOR BRIDGE DEMOLITION WORK.
- ③ EVALUATE 2 OPTIONS FOR RECONSTRUCTION OF ADAMS ROAD AND SQUARE LAKE ROAD UNDER I-75 TO BE DONE IN STAGE 5: FULL CLOSURE OR PART-WIDTH CONSTRUCTION.

FIGURE 4-110
ALT 3: STAGE 5 MAINTAINING TRAFFIC
I-75 STA 740+00 TO STA 785+00

			SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS			
			DATE 12/2009	CONT. SEC. 63174	JOB NO. 88168C	DESIGN UNIT DATT

SHEETS ARE NOT PROVIDED BETWEEN STA 652+00 AND STA 740+00 TRAFFIC CONTROL CONTINUES AS SHOWN

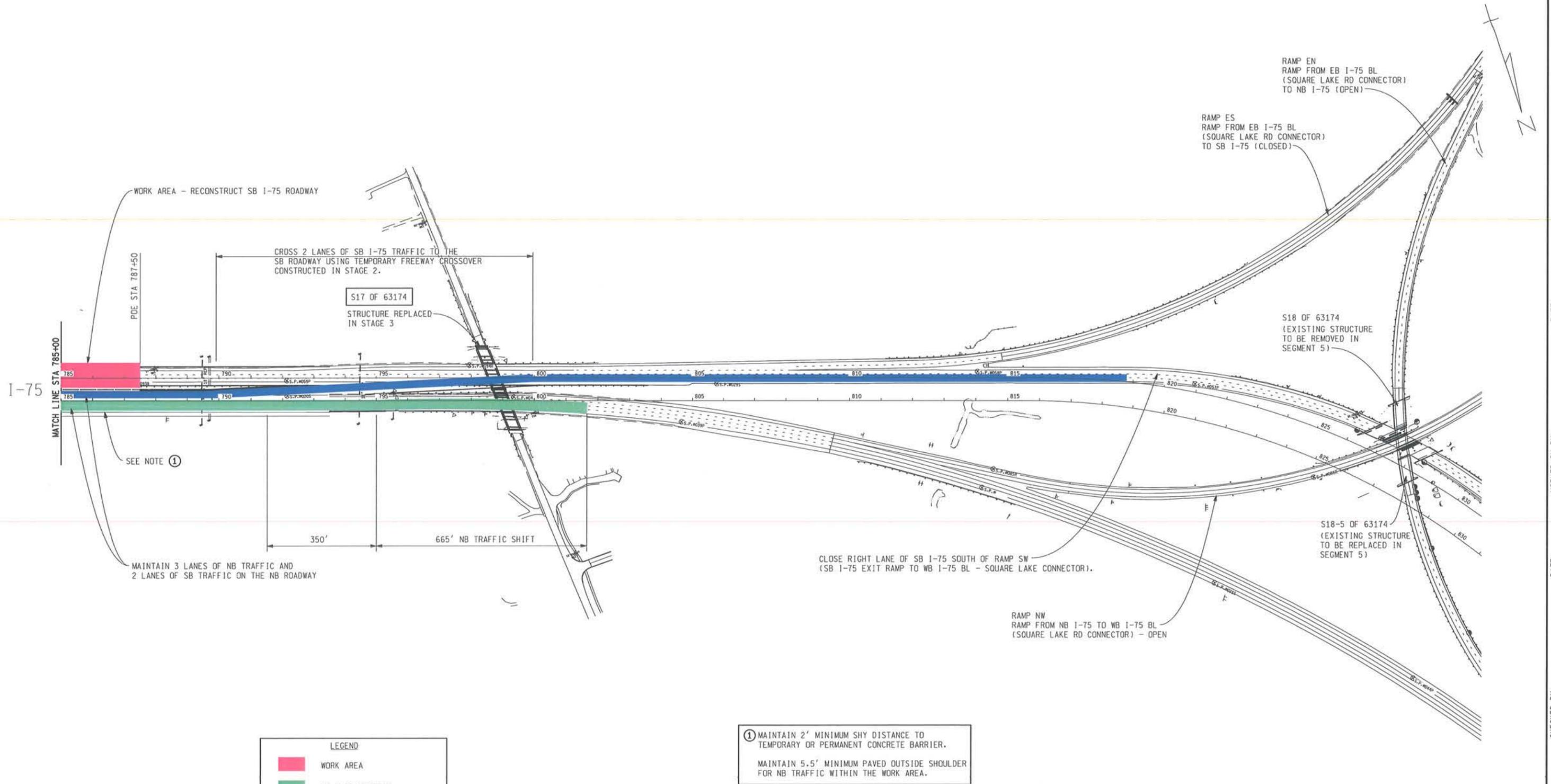
MATCH LINE STA 785+00

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SQUIRREL RD

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LEGEND	
	WORK AREA
	NB I-75 TRAFFIC
	SB I-75 TRAFFIC

SQUIRREL RD

FIGURE 4-111
 ALT 3: STAGE 5 MAINTAINING TRAFFIC
 I-75 STA 785+00 TO POE STA 787+50



SEGMENT 4, S. OF LONG LAKE TO N. OF ADAMS				
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Staging for Segment 5 is described below.

Segment 5 (north of Adams Road to south of M-59):

Stage 1 Construction:

- Construct temporary pavement widening on the outside of the NB and SB I-75 roadway.

Stage 1 Traffic:

- Close right lane of NB and SB I-75 as shown on Figure 4-112.

Stage 2 Construction:

- Construct temporary pavement widening on the median of the NB I-75 roadway.
- Construct temporary freeway crossovers.

Stage 2 Traffic:

- Close left lane in each direction of I-75 as shown on Figures 4-112 through 4-114.

Stage 3A Construction:

- Reconstruct the median half of SB I-75 from POB to Ramp ES (ramp from EB I-75 BL/Square Lake Road to SB I-75), including median barrier and both valley gutters.
- Reconstruct full width of SB I-75 roadway, including median barrier and both valley gutters, between Ramp ES and Ramp SW (ramp from SB I-75 to WB I-75 BL/Square Lake Road).
- Reconstruct the median half of SB I-75 from Ramp SW to POE, including median barrier and both valley gutters.
- Reconstruct all bridges and all ramps within Segment 5, including a portion of Ramp ES and Ramp SW.
- Construct temporary freeway and temporary ramp connections for maintaining traffic in Stage 3B.

Stage 3A Traffic:

- Maintain three NB lanes and two SB lanes on the NB roadway as shown in Figures 4-114 through 4-116.
- Maintain Ramp ES on the outside of the SB I-75 roadway as shown in Figure 4-114.
- Maintain Ramp SW on the outside of the SB I-75 roadway as shown in Figure 4-116.
- Refer to discussion of Stage 3A traffic schemes, locations of temporary crossovers, and additional ramp closure details.

Stage 3B Construction:

Same as Stage 3A Construction with the following changes:

- Reconstruct the outside half of SB I-75 from POB to Ramp ES.
- Reconstruct the outside half of SB I-75 from Ramp SW to POE.

Stage 3B Traffic:

Same as Stage 3A Traffic with the following changes:

- Maintain Ramp ES on the median side of the SB I-75 roadway as shown in Figure 4-117.
- Maintain Ramp SW on the median side of the SB I-75 roadway as shown in Figure 4-117.

- Refer to discussion of Stage 3B traffic schemes, locations of temporary crossovers, and additional ramp closure details.

Stage 4 Construction:

- Set up traffic switch for Stage 5.

Stage 4 Traffic:

- Maintain three NB lanes on the NB roadway (set up from Stage 3) as shown in Figure 4-118.
- Maintain three SB lanes on the SB roadway (set up for Stage 5) as shown in Figure 4-118.

Stage 5 Construction:

- Reconstruct full width of NB I-75 roadway.
- Continue construction of the bridges and the NB I-75 ramps.

Stage 5 Traffic:

- Maintain two NB lanes and three SB lanes on the SB roadway as shown in Figures 4-66 through 4-68.
- Refer to discussion of Stage 5 traffic schemes, locations of temporary crossovers, and additional ramp closure details.

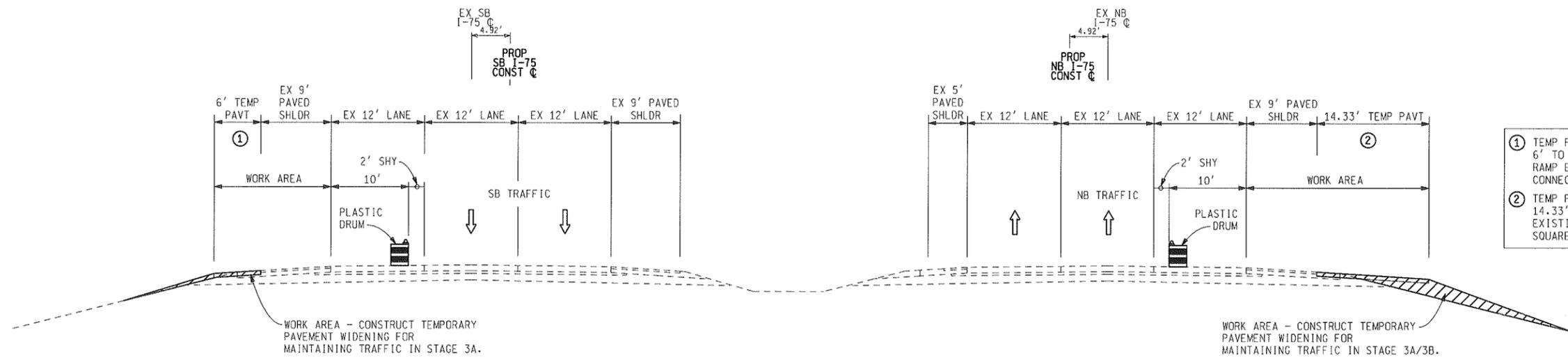
Stage 6 Construction:

- Remove temporary freeway and ramp connections and construct slope to permanent condition.
- Restore existing freeway section outside the limits of the work area to existing configuration prior to construction.

Stage 6 Traffic:

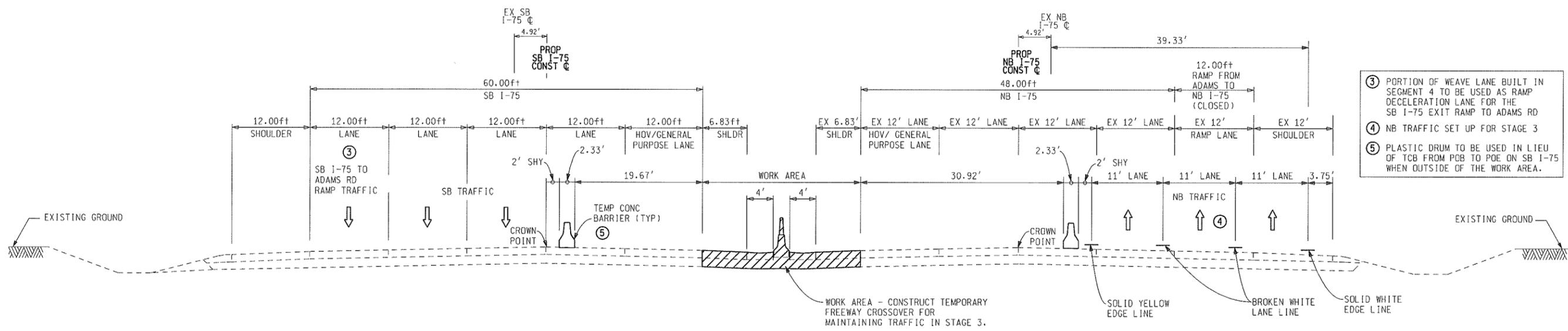
- Maintain three NB lanes and three SB lanes in their respective roadways as shown in Figure 4-69.
- Open all ramps.

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- ① TEMP PAVEMENT WIDENING VARIES 6' TO 0' APPROACHING EXISTING RAMP ES (SQUARE LAKE RD CONNECTOR TO SB I-75).
- ② TEMP PAVEMENT WIDENING VARIES 14.33' TO 0' APPROACHING EXISTING RAMP NW (NB I-75 TO SQUARE LAKE RD CONNECTOR).

STAGE 1 MAINTAINING TRAFFIC TYPICAL
SEGMENT 5
POB TO RAMP ES (SQUARE LAKE RD CONNECTOR TO SB I-75)



- ③ PORTION OF WEAVE LANE BUILT IN SEGMENT 4 TO BE USED AS RAMP DECELERATION LANE FOR THE SB I-75 EXIT RAMP TO ADAMS RD
- ④ NB TRAFFIC SET UP FOR STAGE 3
- ⑤ PLASTIC DRUM TO BE USED IN LIEU OF TCB FROM POB TO POE ON SB I-75 WHEN OUTSIDE OF THE WORK AREA.

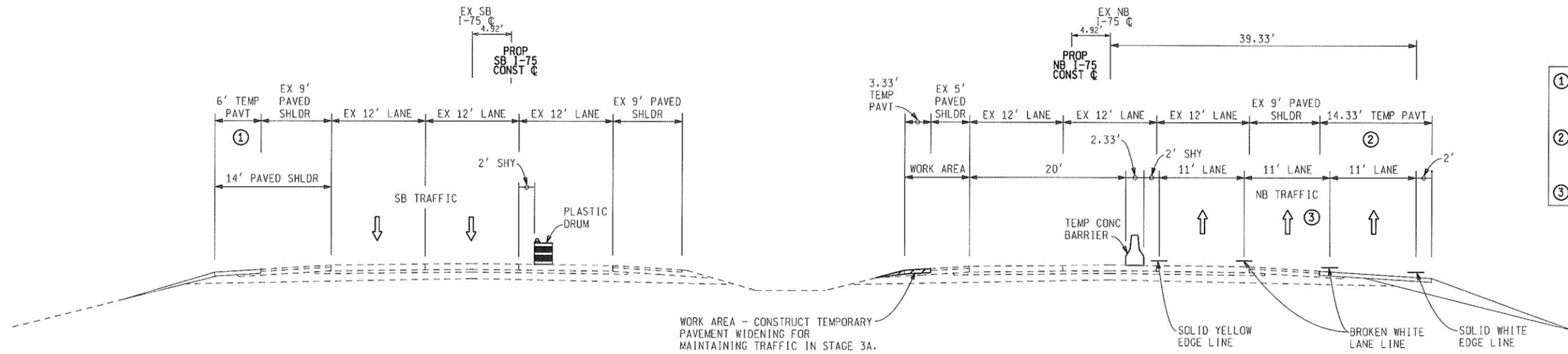
STAGE 2 MAINTAINING TRAFFIC TYPICAL 1
SEGMENT 5
SOUTH OF POB (AT FREEWAY CROSSOVER)

FIGURE 4-112
 ALT 3: TWO LANE OPERATION USING CROSSOVERS
 STAGE CONSTRUCTION TYPICALS

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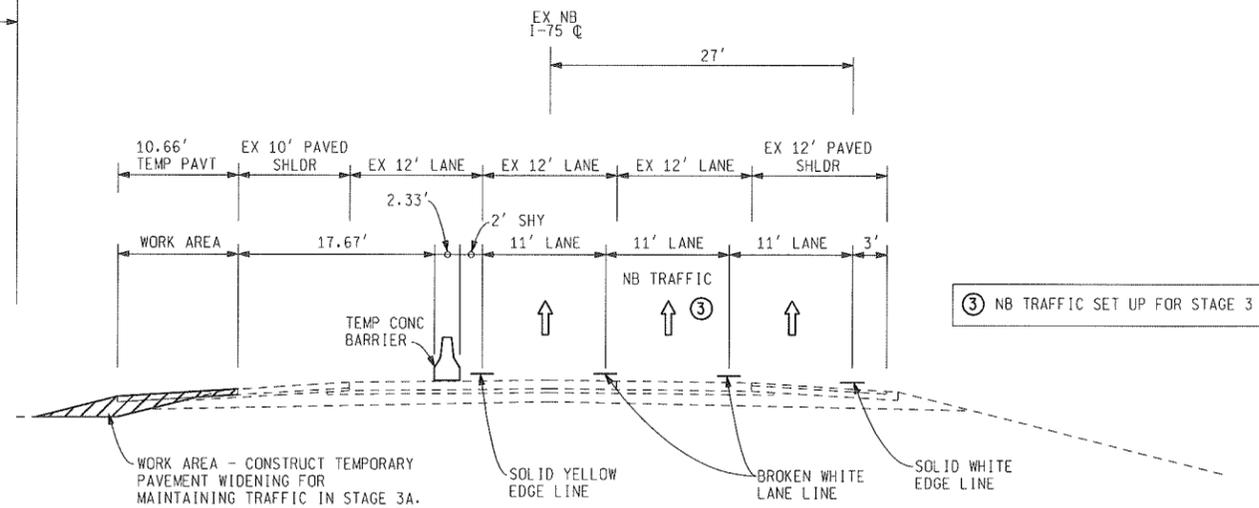
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- ① TEMP PAVEMENT WIDENING VARIES 6' TO 0' APPROACHING EXISTING RAMP ES (SQUARE LAKE RD CONNECTOR TO SB I-75).
- ② TEMP PAVEMENT WIDENING VARIES 14.33' TO 0' APPROACHING EXISTING RAMP NW (NB I-75 TO SQUARE LAKE RD CONNECTOR).
- ③ NB TRAFFIC SET UP FOR STAGE 3

STAGE 2 MAINTAINING TRAFFIC TYPICAL 2
 SEGMENT 5
 POB TO RAMP NW (NB I-75 TO SQUARE LAKE RD CONNECTOR)

← VARIES TO EXISTING SB I-75 ROADWAY →



- ③ NB TRAFFIC SET UP FOR STAGE 3

STAGE 2 MAINTAINING TRAFFIC TYPICAL 3
 SEGMENT 5
 RAMP NW (NB I-75 TO SQUARE LAKE RD CONNECTOR) TO
 RAMP EN (SQUARE LAKE RD CONNECTOR TO NB I-75)

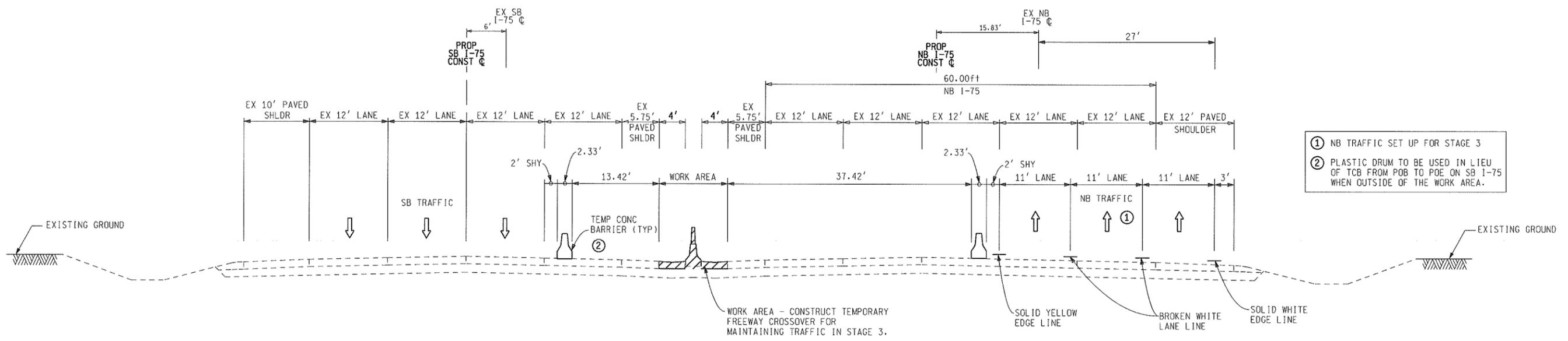
FIGURE 4-113
 ALT 3: TWO LANE OPERATION USING CROSSOVERS
 STAGE CONSTRUCTION TYPICALS



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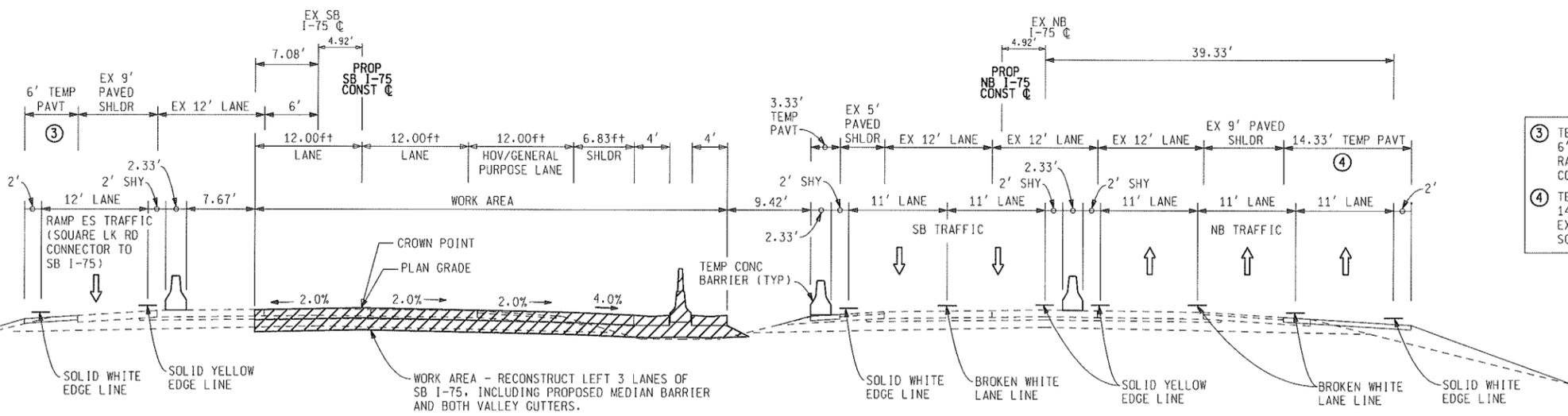
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- ① NB TRAFFIC SET UP FOR STAGE 3
- ② PLASTIC DRUM TO BE USED IN LIEU OF TCB FROM POB TO POE ON SB I-75 WHEN OUTSIDE OF THE WORK AREA.

STAGE 2 MAINTAINING TRAFFIC TYPICAL 4
SEGMENT 5
NORTH OF POE (AT FREEWAY CROSSOVER)



- ③ TEMP PAVEMENT WIDENING VARIES 6' TO 0' APPROACHING EXISTING RAMP ES (SQUARE LAKE RD CONNECTOR TO SB I-75).
- ④ TEMP PAVEMENT WIDENING VARIES 14.33' TO 0' APPROACHING EXISTING RAMP NW (NB I-75 TO SQUARE LAKE RD CONNECTOR).

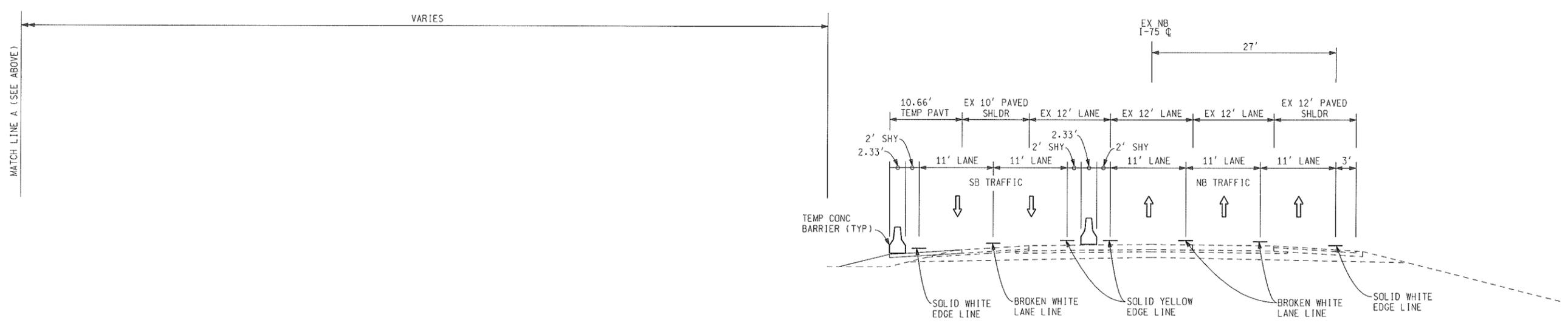
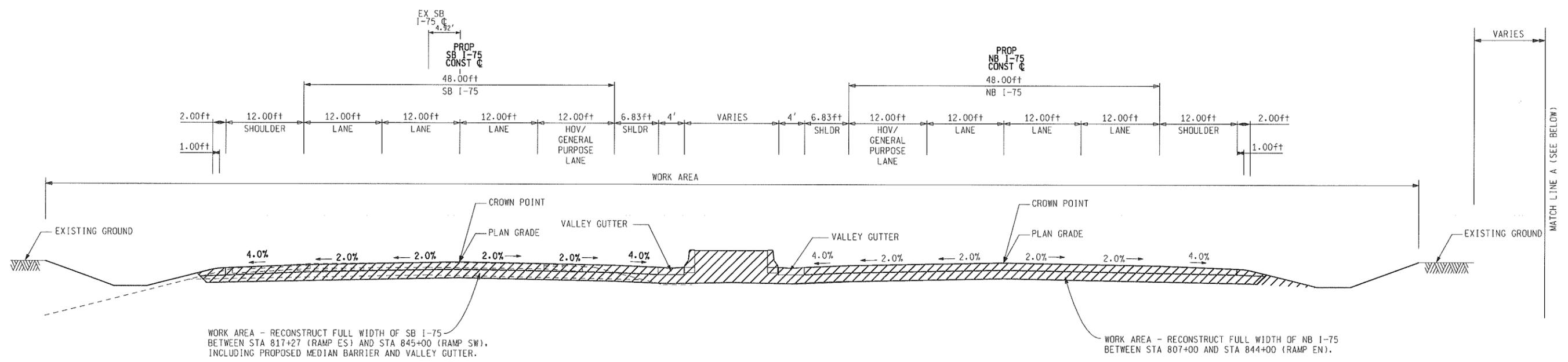
STAGE 3A MAINTAINING TRAFFIC TYPICAL 1
SEGMENT 5
POB TO RAMP ES (SQUARE LAKE RD CONNECTOR TO SB I-75)

FIGURE 4-114
 ALT 3: TWO LANE OPERATION USING CROSSOVERS
 STAGE CONSTRUCTION TYPICALS

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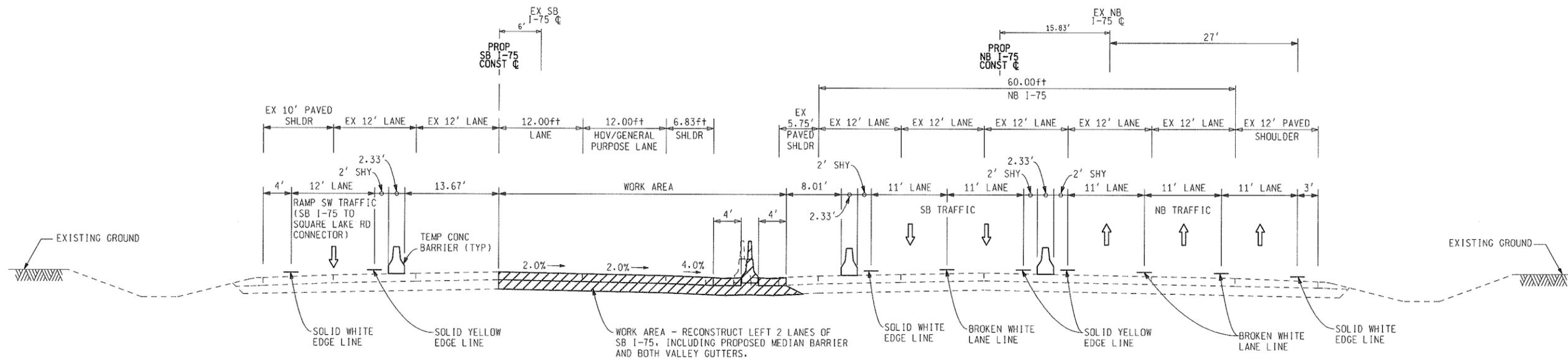
STAGE 3A MAINTAINING TRAFFIC TYPICAL 2
SEGMENT 5
 RAMP ES (SQUARE LAKE RD CONNECTOR TO SB I-75) TO
 RAMP SW (SB I-75 TO SQUARE LAKE RD CONNECTOR)

FIGURE 4-115
 ALT 3: TWO LANE OPERATION USING CROSSOVERS
 STAGE CONSTRUCTION TYPICALS

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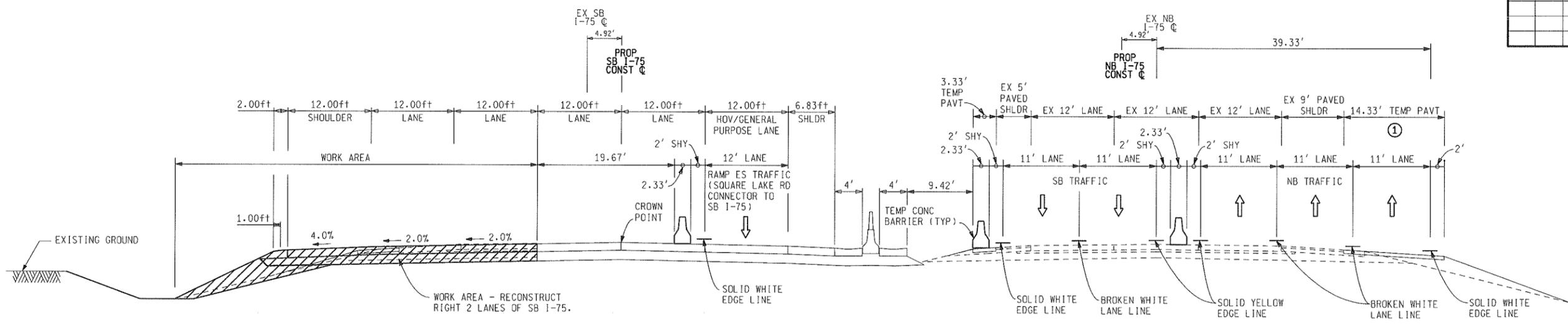
STAGE 3A MAINTAINING TRAFFIC TYPICAL 3
SEGMENT 5
RAMP SW (SB I-75 TO SQUARE LAKE RD CONNECTOR) TO POE

FIGURE 4-116
 ALT 3: TWO LANE OPERATION USING CROSSOVERS
 STAGE CONSTRUCTION TYPICALS

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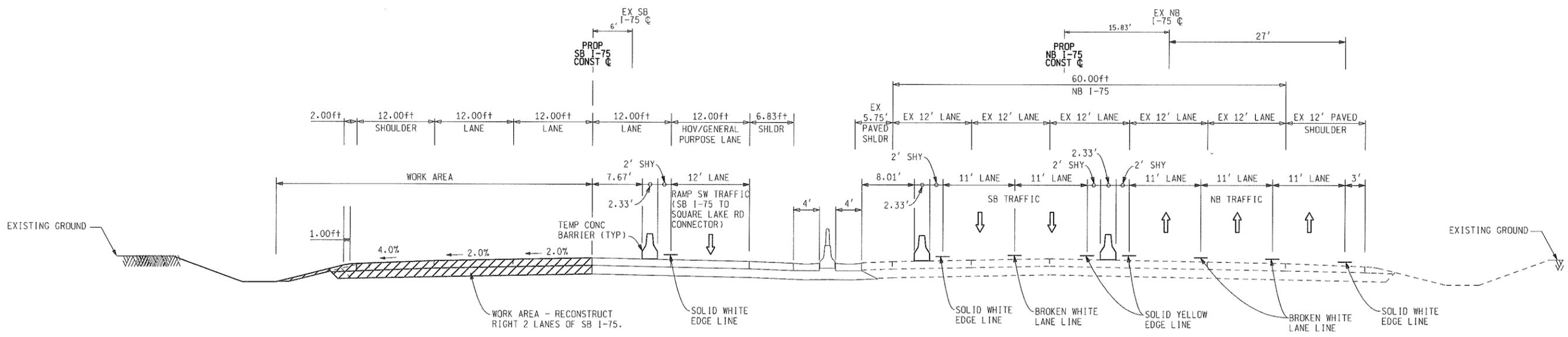
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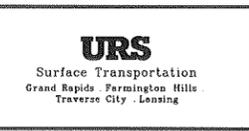
STAGE 3B MAINTAINING TRAFFIC TYPICAL 1
SEGMENT 5
POB TO RAMP ES (SQUARE LAKE RD CONNECTOR TO SB I-75)

① TEMP PAVEMENT WIDENING VARIES 14.33' TO 0' APPROACHING EXISTING RAMP NW (NB I-75 TO SQUARE LAKE RD CONNECTOR).



STAGE 3B MAINTAINING TRAFFIC TYPICAL 2
SEGMENT 5
RAMP SW (SB I-75 TO SQUARE LAKE RD CONNECTOR) TO POE

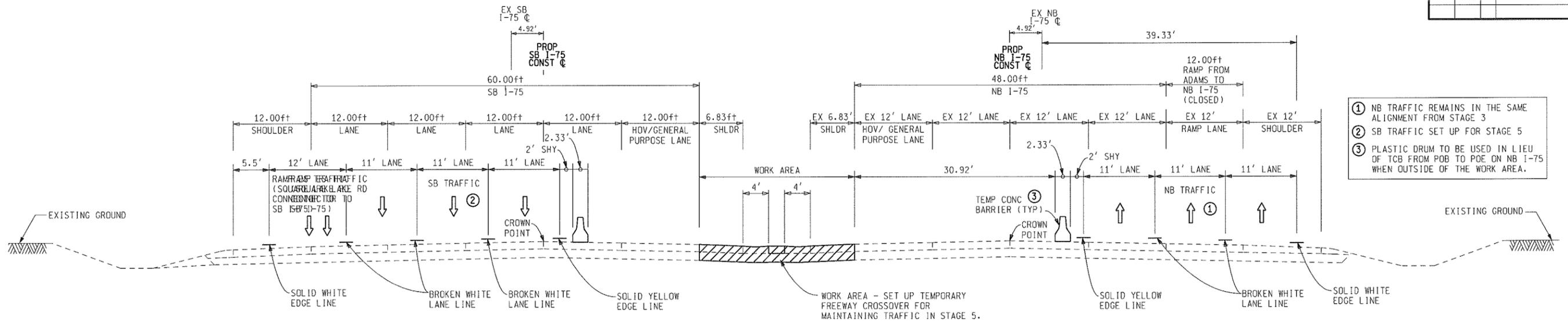
FIGURE 4-117
 ALT 3: TWO LANE OPERATION USING CROSSOVERS
 STAGE CONSTRUCTION TYPICALS



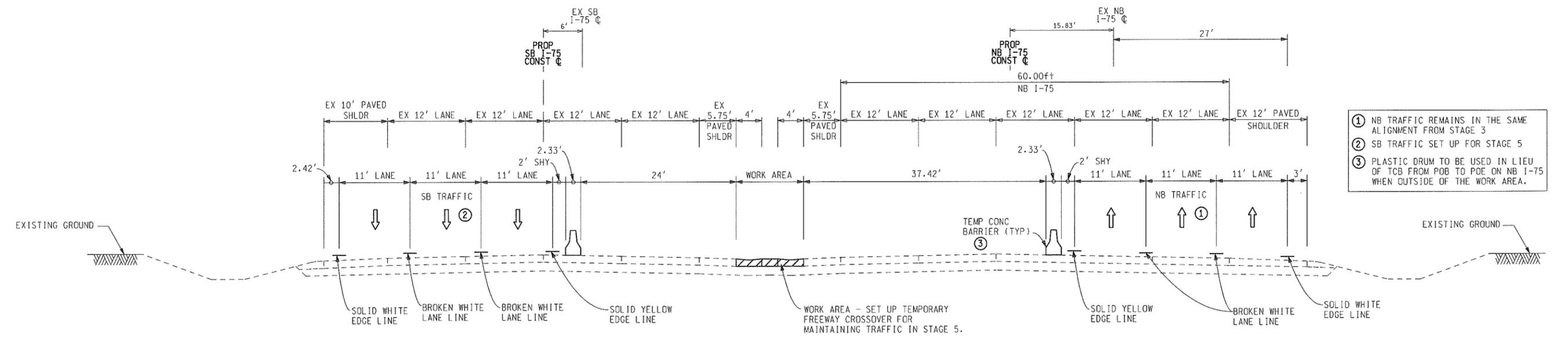
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STAGE 4 MAINTAINING TRAFFIC TYPICAL 1
SEGMENT 5
SOUTH OF POB (AT FREEWAY CROSSOVER)



STAGE 4 MAINTAINING TRAFFIC TYPICAL 2
SEGMENT 5
NORTH OF POE (AT FREEWAY CROSSOVER)

FIGURE 4-118
ALT 3: TWO LANE OPERATION USING CROSSOVERS
STAGE CONSTRUCTION TYPICALS

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