

MILWAUKEE

PLOT BY : SCHUMACHER, JAMES D PLOT NAME :

GENERAL NOTES

- 1. THE LOCATIONS OF EXISTING OR PROPOSED UTILITIES, AS NOTED ON THE PLANS, ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- 2. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPERATELY.
- 3. NO SHRUBS OR TREES ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- 4. ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE BACKFILLED WITH SUITABLE MATERIAL, OR AS DIRECTED BY THE ENGINEER.
- 5. DIMENSIONS GIVEN FOR EXISTING FEATURES SHALL BE CONSIDERED AS APPROXIMATE AND SHALL BE MEASURED IN THE FIELD FOR MATCHING PURPOSES.
- 6. CURB AND GUTTER RADII, GRADES AND OFFSETS ARE TO THE FLANGE UNLESS NOTED OTHERWISE.
- 7. EXCAVATION BELOW SUBGRADE (EBS) SHALL BE MEASURED AND PAID FOR AS EXCAVATION COMMON. THE EXACT LOCATION OF EBS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 8. TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL SHALL NOT BE PERMITTED IN WETLANDS.
- 9. ALL DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCLUDING ROAD BED, ARE TO BE TOPSOILED OR SALVAGED TOPSOILED, FERTILIZED, AND SEEDED, SODDED, MULCHED OR INSTALLED EROSION-MAT AS DIRECTED BY THE ENGINEER.
- 10. EROSION CONTROL BMP'S ARE SHOWN AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND BY THE ENGINEER.
- 11. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.
- 12. EROSION CONTROL FEATURES ARE TO BE PLACED IN SEQUENCE WITH CONSTRUCTION STAGING AND MAINTAINED THROUGH EACH STAGE OR AS DETERMINED BY THE ENGINEER.
- 13. WHEN TEMPORARY PAVEMENT MARKING REMOVABLE TAPE IS REQUIRED, IT SHALL BE CUT THROUGH ITS FULL WIDTH AND THICKNESS AT 25-FOOT INTERVALS TO CONTROL RAVELING.
- 14. A SAWED JOINT IS REQUIRED WHERE NEW HMA SURFACE MEETS EXISTING ASPHALTIC CONCRETE SURFACE.
- 15. FINISHING ROADWAY SHALL INCLUDE CLEANOUT OF EXISTING DRAINAGE STRUCTURES AS DIRECTED BY THE ENGINEER.

STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
A.D.T.	AVERAGE DAILY TRAFFIC
B.F.	BACK FACE
B.M.	BENCH MARK
B.O.C.	BACK OF CURB
CTR.	CENTER
C.L.	CENTERLINE
D.	LANE DISTRIBUTION
D.H.V.	DESIGN HOURLY VOLUME
DIA.	DIAMETER
DIM.	DIMENSION
EL. OR ELEV.	ELEVATION
EXC.	EXCAVATION
F.F.	FRONT FACE
MAX.	MAXIMUM
MIN.	MINIMUM
NORM.	NORMAL
O.H.	OVERHEAD POWER LINE
P.O.L.	POINT ON LINE
REQ'D	REQUIRED
RDWY.	ROADWAY
R.H.F.	RIGHT HAND FORWARD
S.E.	SUPERELEVATIOON
SPA.	SPACE
STA.	STATION
SYM.	SYMMETRICAL
T.	PERCENT TRUCKS
TYP.	TYPICAL
V.	DESIGN SPEED

ORDER OF SECTION 2
DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS
- PAVING DETAILS
- EROSION CONTROL
- STORM SEWER PLAN
- LIGHTING PLAN
- PAVEMENT MARKING
- TRAFFIC CONTROL
- DETOURS
- ALIGNMENT LAYOUT



PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS
4 LT 58-28 S	3 1/2"	1 3/4" UPPER LAYER 1 3/4" LOWER LAYER
4 SMA 58-28H OVER 3 HT 58-28H	4 1/2"	1 3/4" UPPER LAYER 2 3/4" LOWER LAYER
4 SMA 58-28H OVER 3 HT 58-28H	5"	1 3/4" UPPER LAYER 3 1/4" LOWER LAYER
4 SMA 58-28H OVER 3 HT 58-28H*	6"	2 3/4" UPPER LAYER 3 1/4" LOWER LAYER
3 MT 58-28 S*	7 1/2"	2" UPPER LAYER 2 3/4" UPPER LOWER 2 3/4" LOWER LOWER

*TO BE VERIFIED ONCE SOIL BORINGS ARE COMPLETED FOR SHOULDER WIDENING AND INSIDE MEDIAN/CROSSOVER AREAS

UTILITY CONTACTS

ATC MANAGEMENT, INC.
ELECTRICITY - TRANSMISSION
TRANS 220 MAILBOX
801 O'KEEFE ROAD
DE PERE, WI 54115
PHONE: (920) 338-6582
dl-atcdotnotifications@atcllc.com

AT&T LOCAL NETWORK -
COMMUNICATION LINE
JENNIFER NAVARRO
6070 N. FLINT ROAD
GLENDALE, WI 53209
PHONE: (414) 459-3564
j.navarro@northwindtech.com

AT&T WISCONSIN -
COMMUNICATION LINE
JAY BULANEK
2005 PEWAUKEE ROAD
WAUKESHA, WI 53188
PHONE: (262) 896-7669
jb5175@att.com

CHARTER COMMUNICATIONS -
COMMUNICATION LINE
BEAU ABUYA
1320 N. DR. MARTIN LUTHER
KING JR DRIVE
MILWAUKEE, WI 53212
PHONE: (414) 908-1343
wis.engineering@charter.com

CITY OF MILWAUKEE - ELECTRICITY
SAMIR AMIN
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: (414) 286-3301
samin@milwaukee.gov

CITY OF MILWAUKEE - ROAD FACILITY
SAMIR AMIN
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: (414) 286-3301
samin@milwaukee.gov

CITY OF MILWAUKEE - SEWER
SAMIR AMIN
841 N. BROADWAY ROOM 501
MILWAUKEE, WI 53202
PHONE: (414) 286-3301
samin@milwaukee.gov

CITY OF MILWAUKEE - WATER
SAMIR AMIN
841 N. BROADWAY
MILWAUKEE, WI 53202
PHONE: (414) 286-3301
samin@milwaukee.gov

FCTATC (TIMMERMAN FIELD) -
AIRPORT FACILITY
JAMES ZSEBE
5300 S. HOWELL AVENUE
MILWAUKEE, WI 53207
PHONE: (414) 747-5394
jzsebe@mitchellairport.com

LEVEL 3 COMMUNICATIONS LLC -
COMMUNICATION LINE
NETWORK RELOCATIONS
1025 ELDORADO BLVD
BROOMFIELD, CO 80021
nationalrelo@centurylink.com

MIDWEST FIBER NETWORKS LLC
COMMUNICATION LINE
RICHARD TRGOVEC
6070 N. FLINT ROAD
GLENDALE, WI 53209
PHONE: (414) 459-3554
rtrgovec@midwestfibernetworks.com

MILWAUKEE COUNTY PARKS
DEPARTMENT - ELECTRICITY
BLAKE PRUSAK
1150 N. 68TH STREET
MILWAUKEE, WI 53213
blake.prusak@milwaukeecountywi.gov

MILWAUKEE COUNTY DEPARTMENT
OF PUBLIC WORKS - ROAD FACILITY
DANIEL MURPHY
10320 WATERTOWN PLANK ROAD
WAUWATOSA, WI 53226
PHONE: (414) 257-5942
daniel.murphy@milwaukeecountywi.gov

MILWAUKEE METROPOLITAN
SEWERAGE DISTRICT - SEWER
MICKI KLAPPA-SULLIVAN
260 SEEBOTH STREET
MILWAUKEE, WI 53204
PHONE: (414) 225-2178
mklappasullivan@mmsd.com

PAETEC COMMUNICATIONS, LLC -
COMMUNICATION LINE
MARY FISHER
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
PHONE: (262) 792-7938
mary.b.fisher@windstream.com

SPRINT COMMUNICATIONS CO LP
COMMUNICATION LINE
JASON JARVIS
7459 W 79TH STREET
BRIDGEVIEW, IL 60455
PHONE: (219) 433-4091
jason.m.jarvis@sprint.com

VILLAGE OF BUTLER - SEWER
KAYLA CHADWICK
12621 W. HAMPTON AVENUE
BUTLER, WI 53007
PHONE: (262) 783-2525
kchadwick@butlerwi.gov

VILLAGE OF BUTLER - WATER
KAYLA CHADWICK
12621 W. HAMPTON AVENUE
BUTLER, WI 53007
PHONE: (262) 783-2525
kchadwick@butlerwi.gov

VILLAGE OF MENOMONEE FALLS
PUBLIC WORKS - ROAD FACILITY
ARLYN JOHNSON
W156 N8480 PILGRIM ROAD
MENOMONEE FALLS, WI 53051
PHONE: (262) 532-4700
pw@menomonee-falls.org

VILLAGE OF MENOMONEE FALLS
PUBLIC WORKS - STREET LIGHTING
ARLYN JOHNSON
W156 N8480 PILGRIM ROAD
MENOMONEE FALLS, WI 53051
PHONE: (262) 532-4700
pw@menomonee-falls.org

WISCONSIN DEPARTMENT OF
TRANSPORTATION -
COMMUNICATION LINE
JEFF MADSON
433 W. ST. PAUL AVENUE, STE. 300
MILWAUKEE, WI 53203
PHONE: (414) 225-3723
jeffrey.madson@dot.wi.gov

WISCONSIN DEPARTMENT OF
TRANSPORTATION -
WISCONSIN SIGNAL
DERRIN WOLFORD
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (262) 521-4409
derrin.wolford@dot.wi.gov

WISCONSIN DEPARTMENT OF
TRANSPORTATION -
STREET LIGHTING
ERIC PEREA
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (262) 574-5422
eric.perea@dot.wi.gov

WISDOT ATR PULL BOXES -
ELECTRICITY
CHAD BIGLER
TRAVEL SURVEY SHOP
3633 PIERSTORFF STREET
P.O. BOX 2583
MADISON, WI 53704
PHONE: (608) 535-7413
chad.bigler@dot.wi.gov

WISCONSIN INDEPENDENT NETWORK,
LLC - COMMUNICATION LINE
DICK HAMMETTER
800 WISCONSIN AVENUE, STE. 219
EAU CLAIRE, WI 54703
PHONE: (715) 838-4406
hammetter@wins.net

WE ENERGIES - ELECTRICITY
NICOLE SMULLEN
333 WEST EVERETT STREET ROOM A299
MILWAUKEE, WI 53203
PHONE: (414) 221-5617
nicole.smullen@wecenergygroup.com

WE ENERGIES - GAS/PETROLEUM
NICOLE SMULLEN
333 WEST EVERETT STREET ROOM A299
MILWAUKEE, WI 53203
PHONE: (414) 221-5617
nicole.smullen@wecenergygroup.com

WEST SHORE PIPE LINE COMPANY -
GAS/PETROLEUM
DAVID JONES
FIVE TEK PARK
9999 HAMILTON BOULEVARD
BREINIGSVILLE, PA 18031
PHONE: (610) 904-4409
dajones@buckeye.com

WINDSTREAM KDL, LLC -
COMMUNICATION LINE
MARY FISHER
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
PHONE: (262) 792-7938
mary.b.fisher@windstream.com

WINDSTREAM NTI, LLC -
COMMUNICATION LINE
MARY FISHER
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
PHONE: (262) 792-7938
mary.b.fisher@windstream.com

STATE AGENCIES

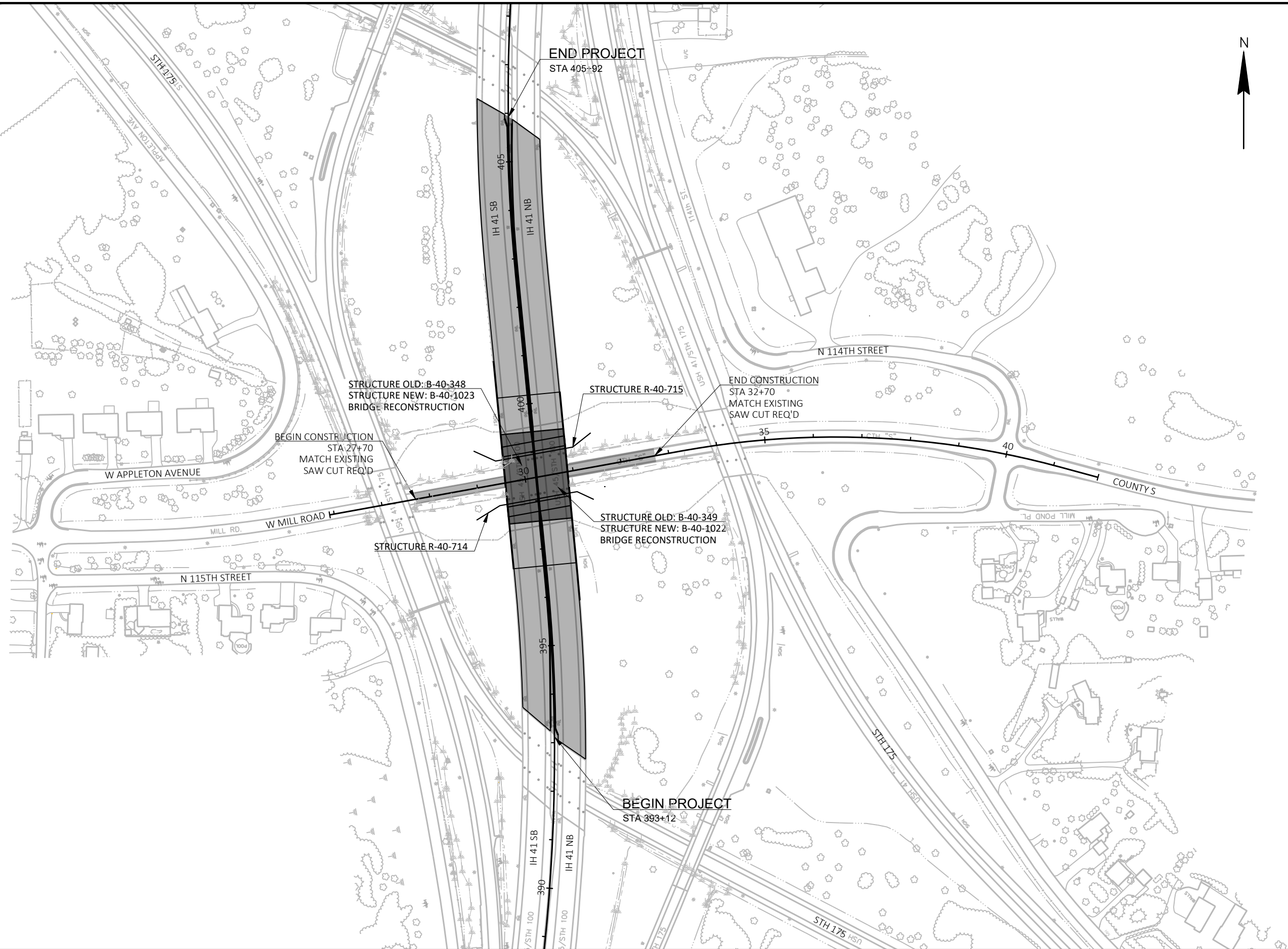
WISCONSIN DEPARTMENT OF
NATURAL RESOURCES
KRISTINA BETZOLD
2300 N. MARTIN LUTHER
KING JR DRIVE
MILWAUKEE, WI 53212
PHONE: (414) 507-4946
kristina.betzold@wisconsin.gov

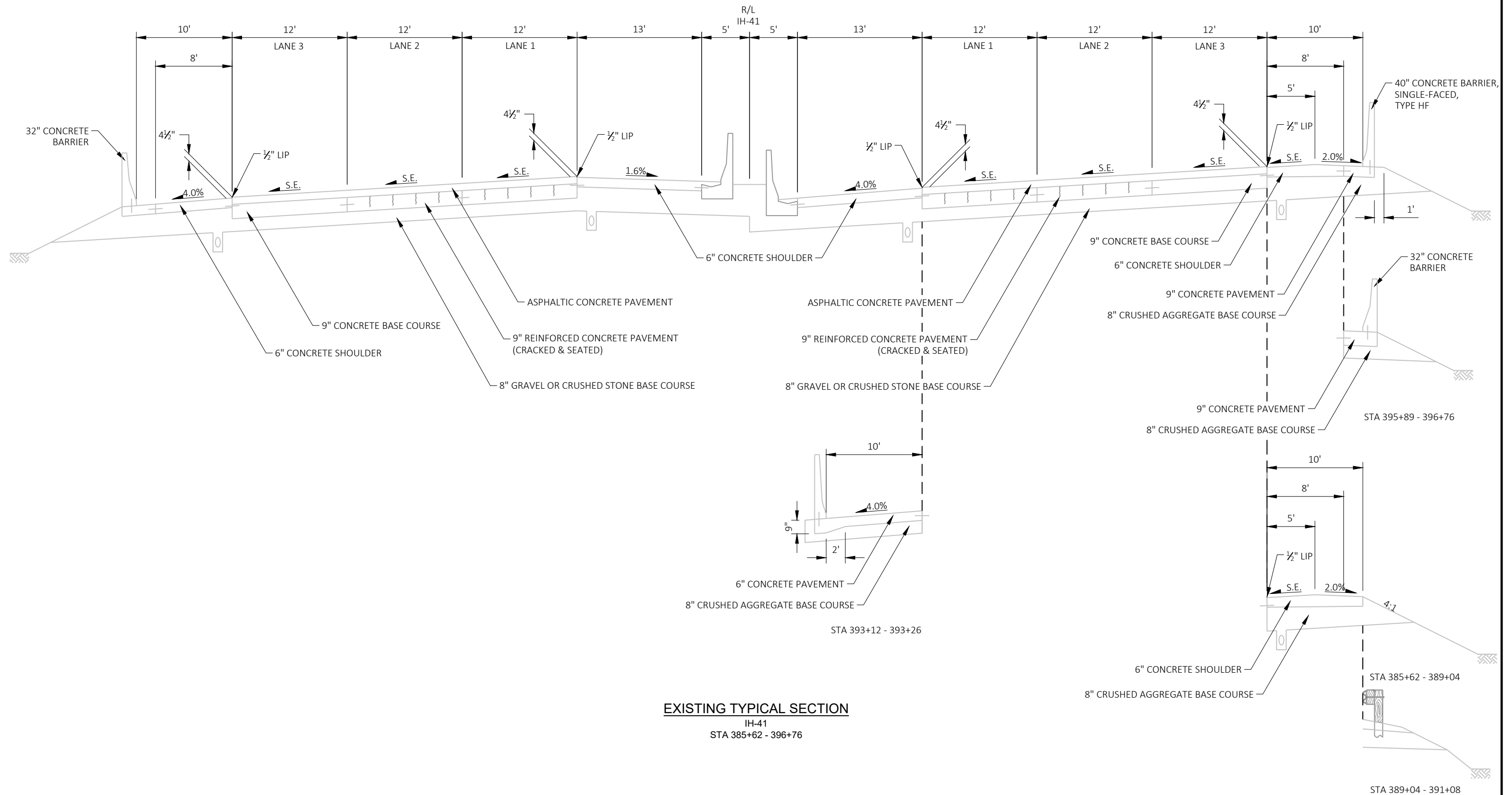
WISCONSIN DEPARTMENT OF
TRANSPORTATION
GEORGIA VERGOU-ORNEK
PROJECT MANAGER
141 NW BARSTOW STREET
WAUKESHA, WI 53187
PHONE: (262) 548-8812
georgia.vergou@dot.wi.gov

OTHER CONTACTS

MILWAUKEE COUNTY DEPARTMENT
OF TRANSPORTATION
ANDREA WEDDLE-HENNING
10320 WATERTOWN PLANK ROAD
WAUWATOSA, WI 53226
PHONE: (414) 257-5900
andrea.weddle-henning@milwaukeecountywi.gov

MILWAUKEE COUNTY DEPARTMENT
OF PUBLIC WORKS
KEVIN KENT
10320 WATERTOWN PLANK ROAD
WAUWATOSA, WI 53226
PHONE: (414) 257-6580
kevin.kent@milwaukeecountywi.gov





PROJECT NO: 1100-21-71

HWY: IH 41

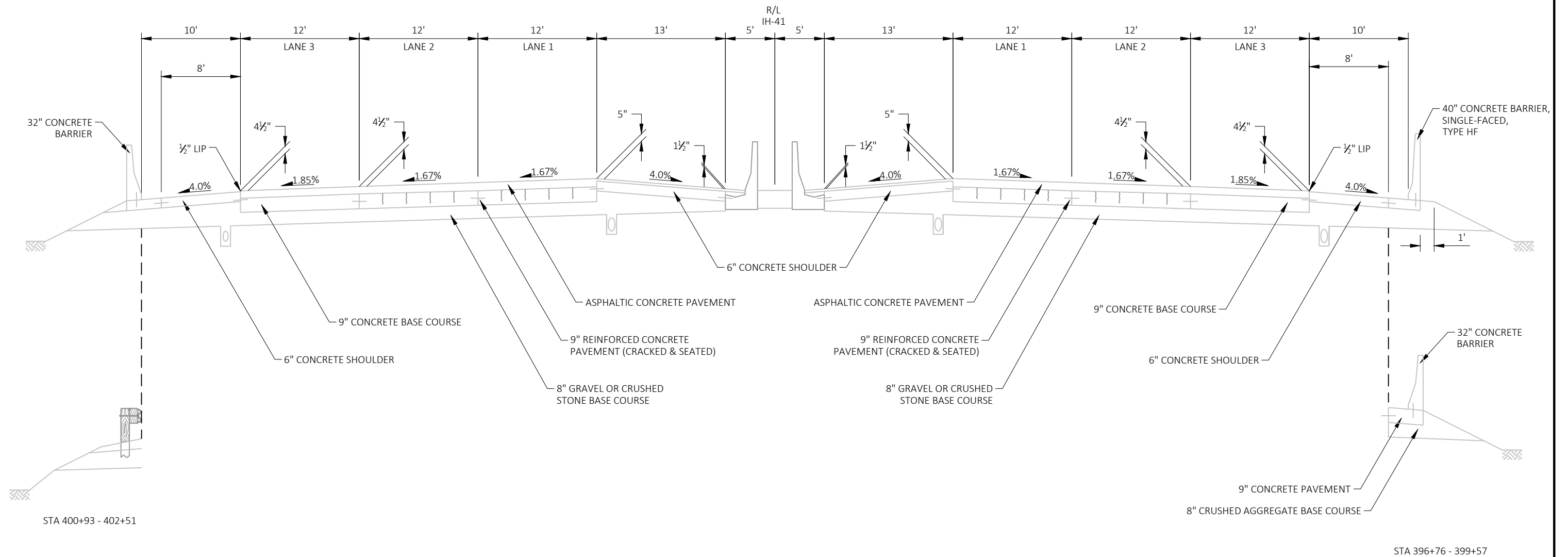
COUNTY: MILWAUKEE

EXISTING TYPICAL SECTION

SHEET

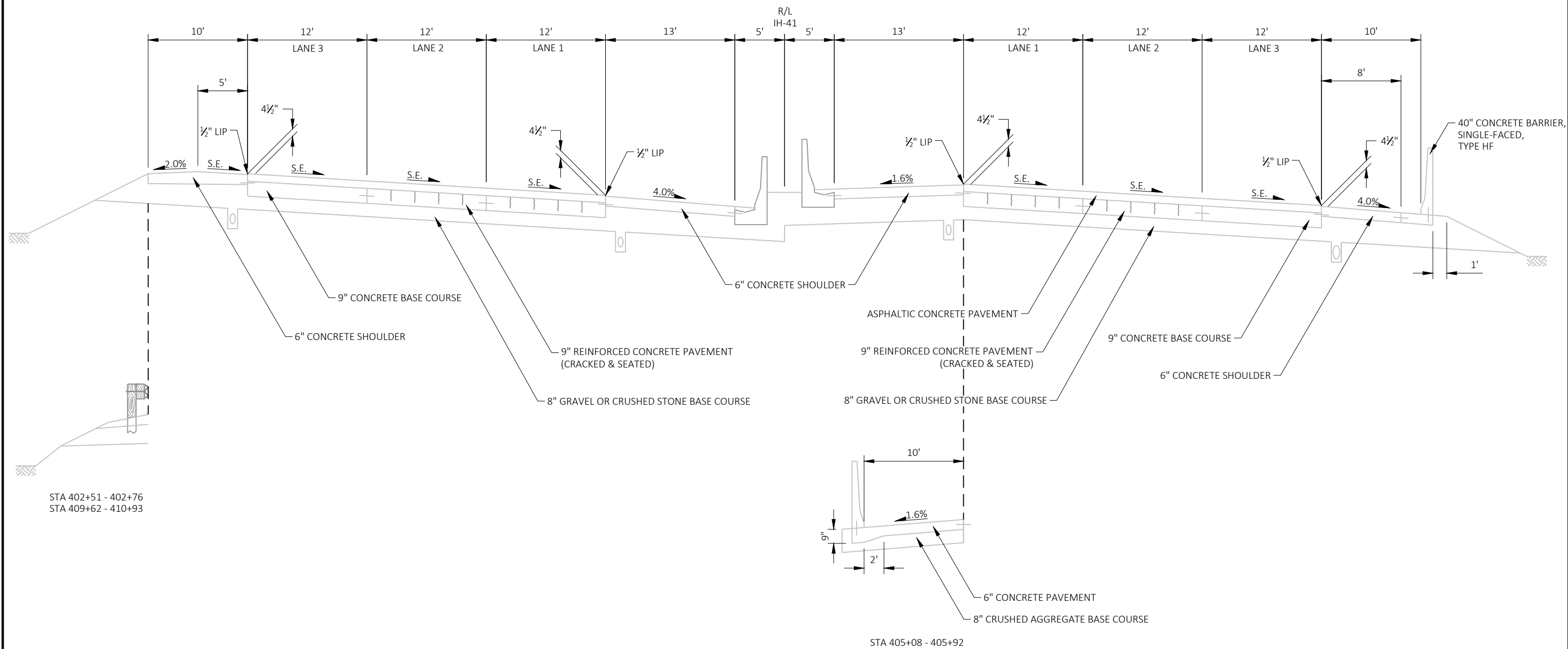
PRE_5

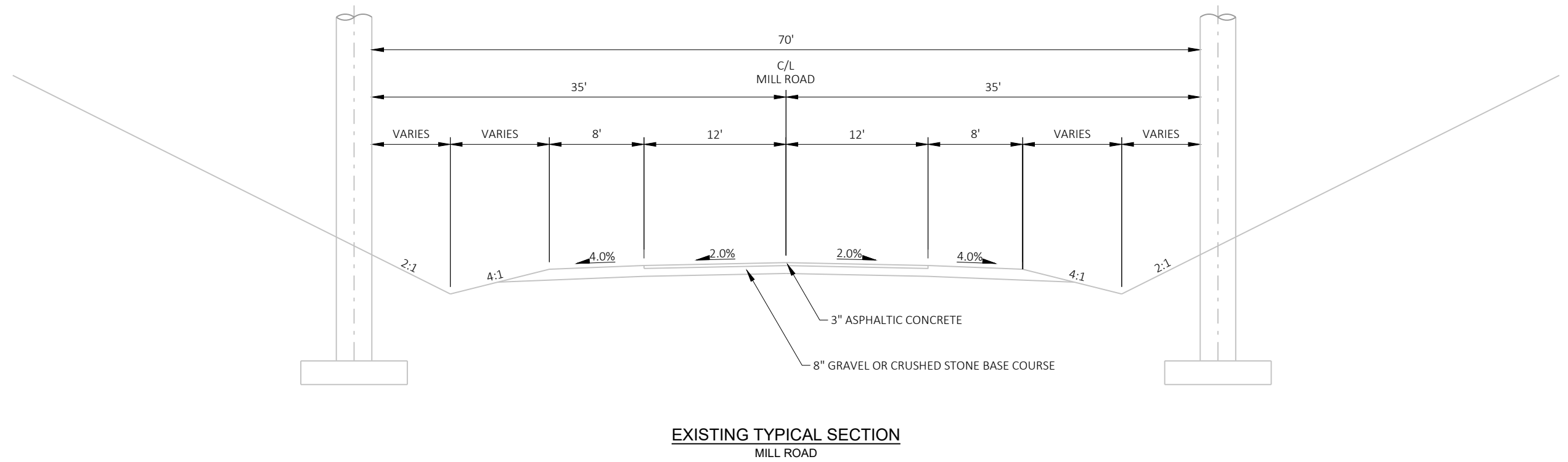
E

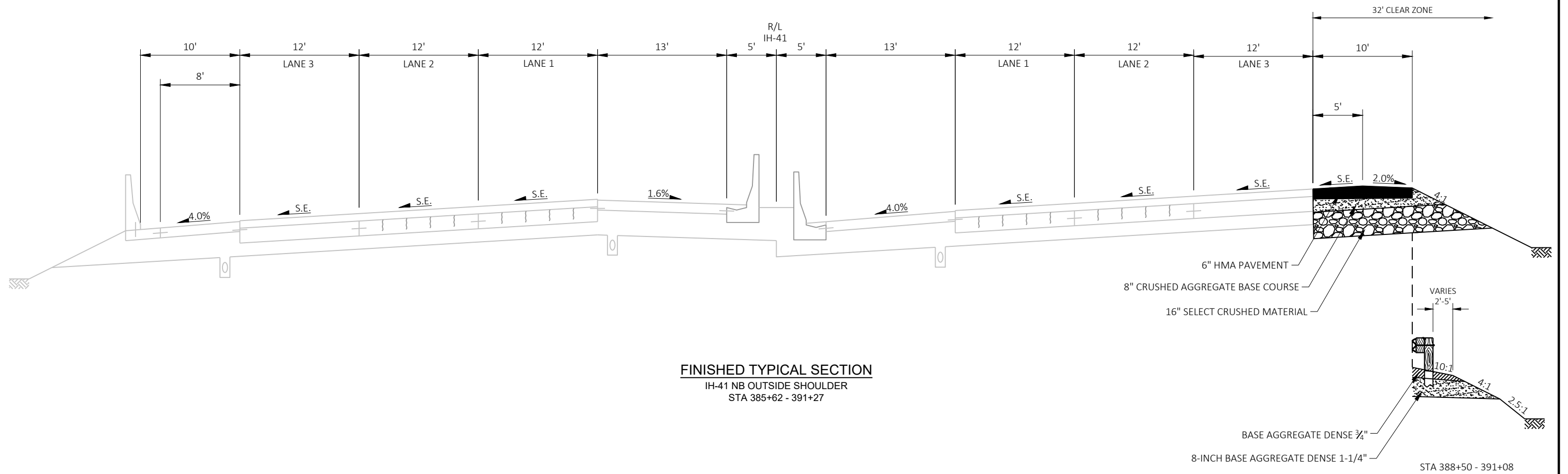


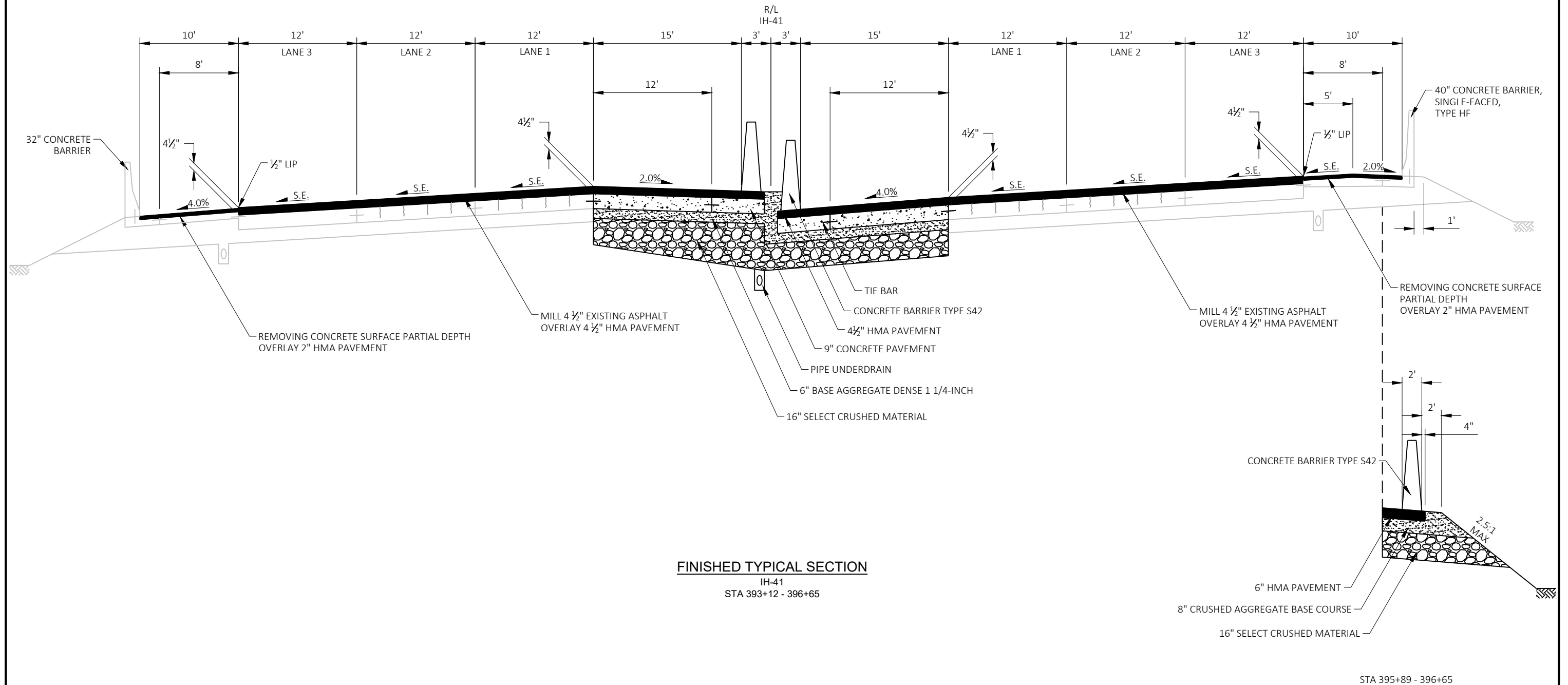
EXISTING TYPICAL SECTION

IH-41
STA 396+76 - 402+51
STA 411+01 - 415+26

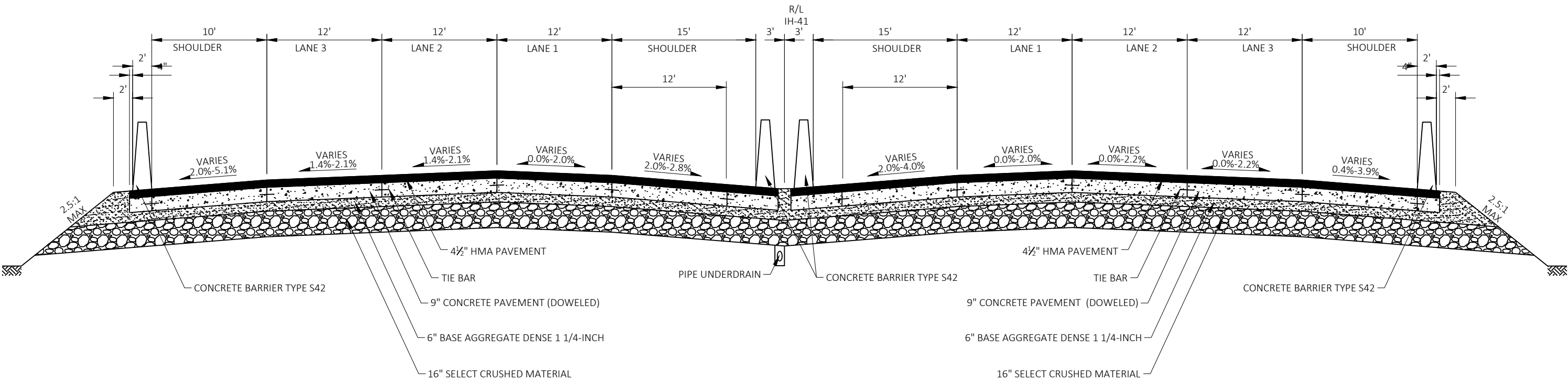






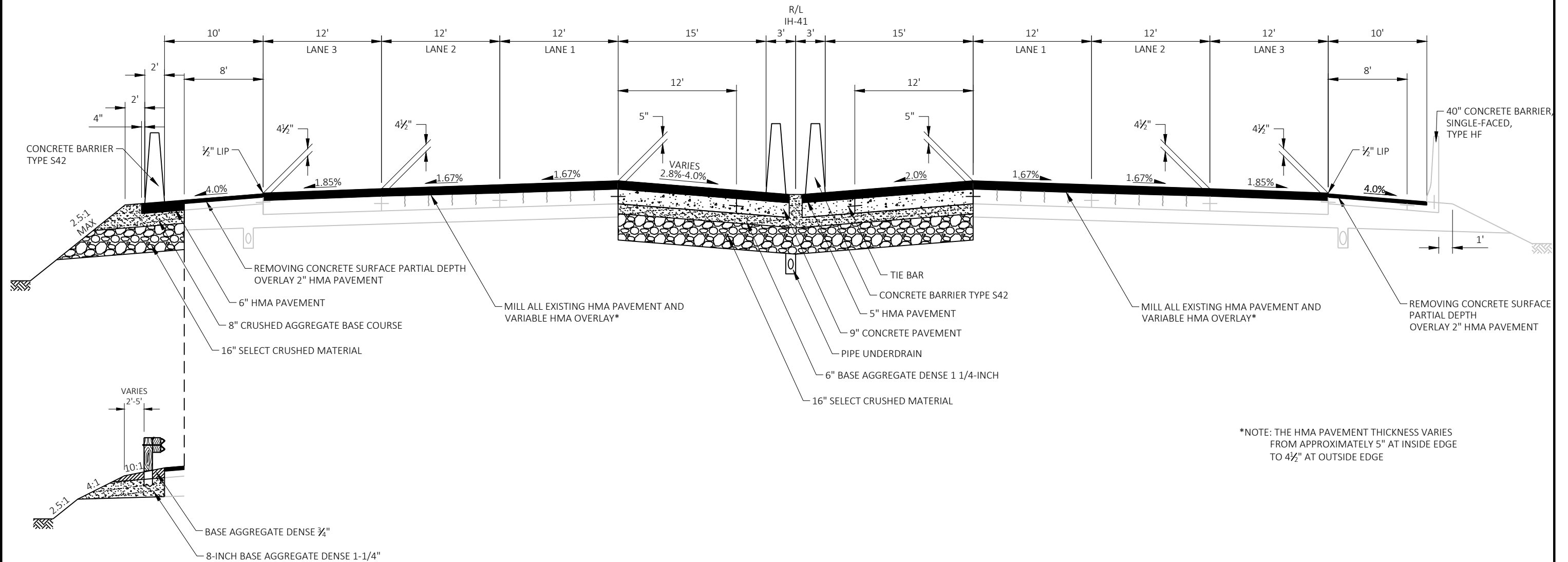


NOTE: SEE PAVEMENT GRADES SHEET FOR MORE INFORMATION REGARDING PAVEMENT CROSS SLOPES



FINISHED TYPICAL SECTION

IH-41
STA 396+65 - 397+59
STA 399+41 - 400+18



STA 400+93 - 402+51
STA 411+01 - 411+35

FINISHED TYPICAL SECTION

IH-41
STA 400+18 - 402+51

PROJECT NO: 1100-21-71

HWY: IH 41

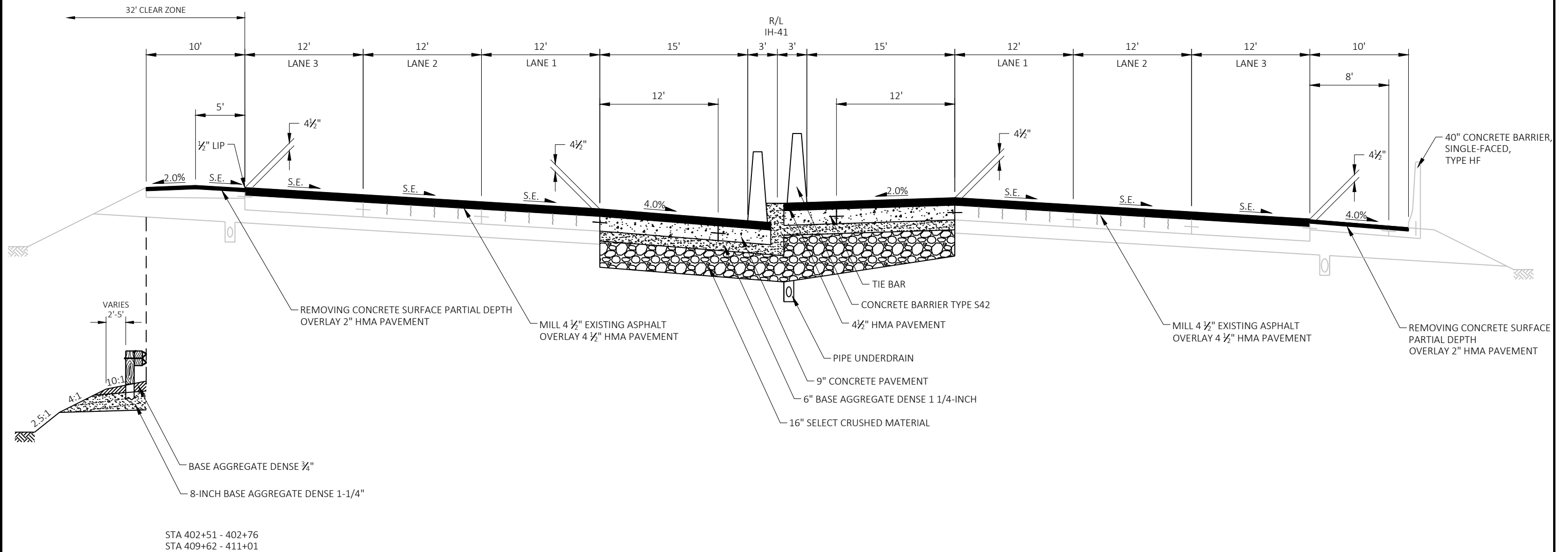
COUNTY: MILWAUKEE

FINISHED TYPICAL SECTION

SHEET

PRE_12

E

**FINISHED TYPICAL SECTION**IH-41
STA 402+51 - 405+92

PROJECT NO: 1100-21-71

HWY: IH 41

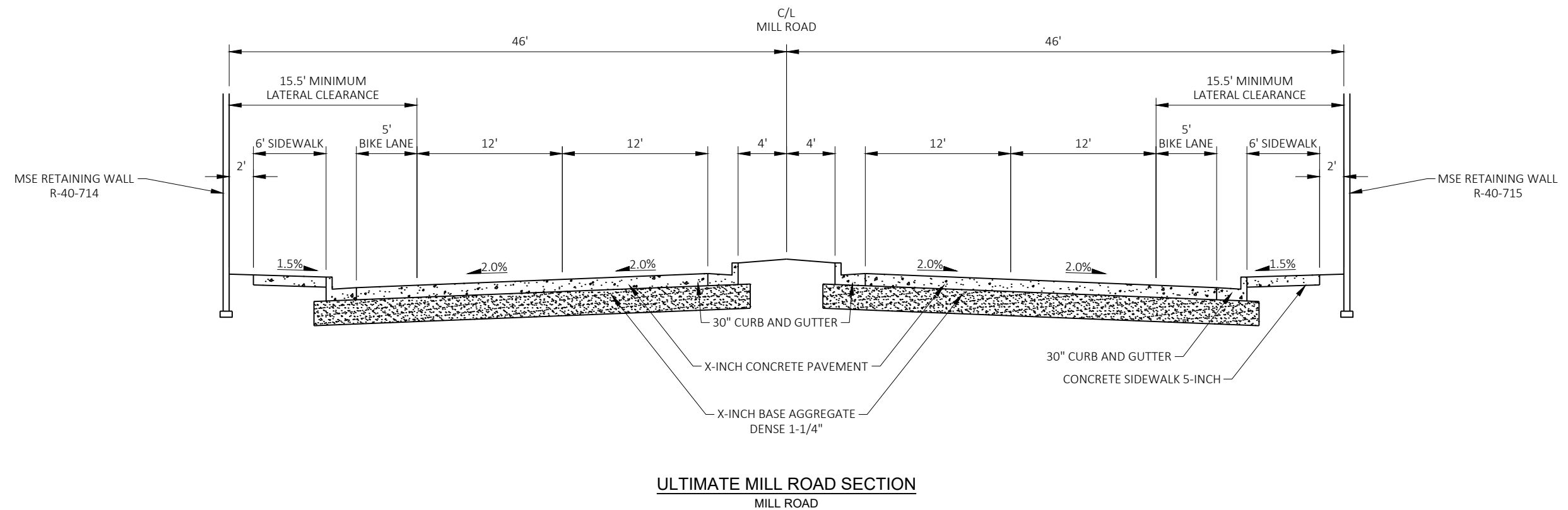
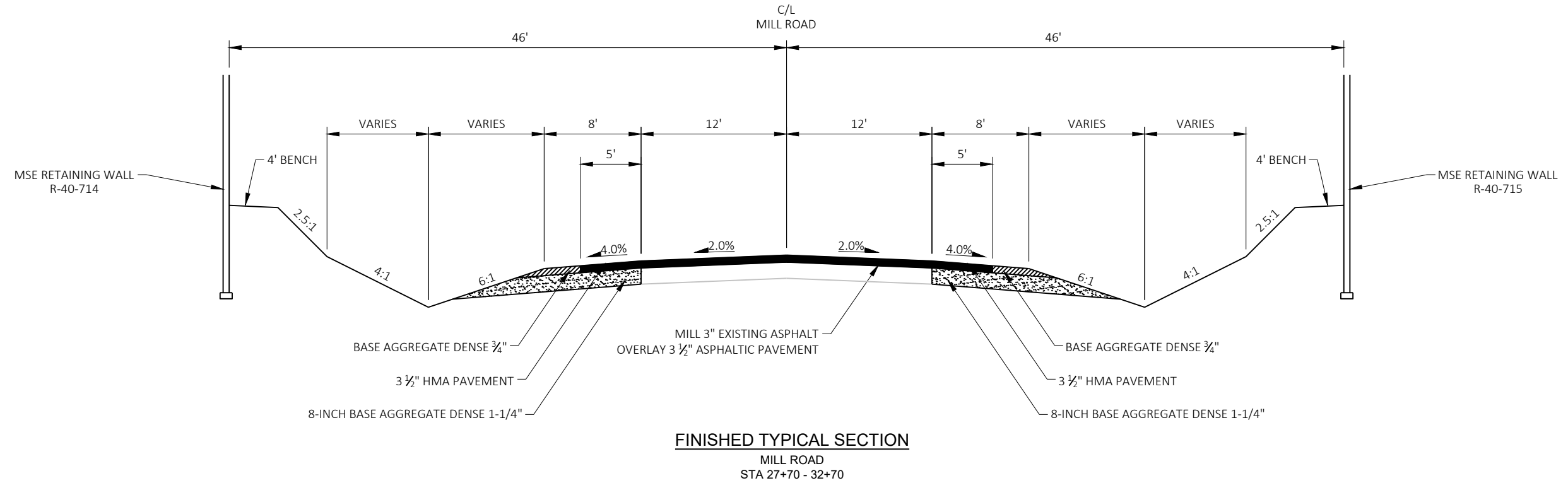
COUNTY: MILWAUKEE

FINISHED TYPICAL SECTION

SHEET

PRE_13

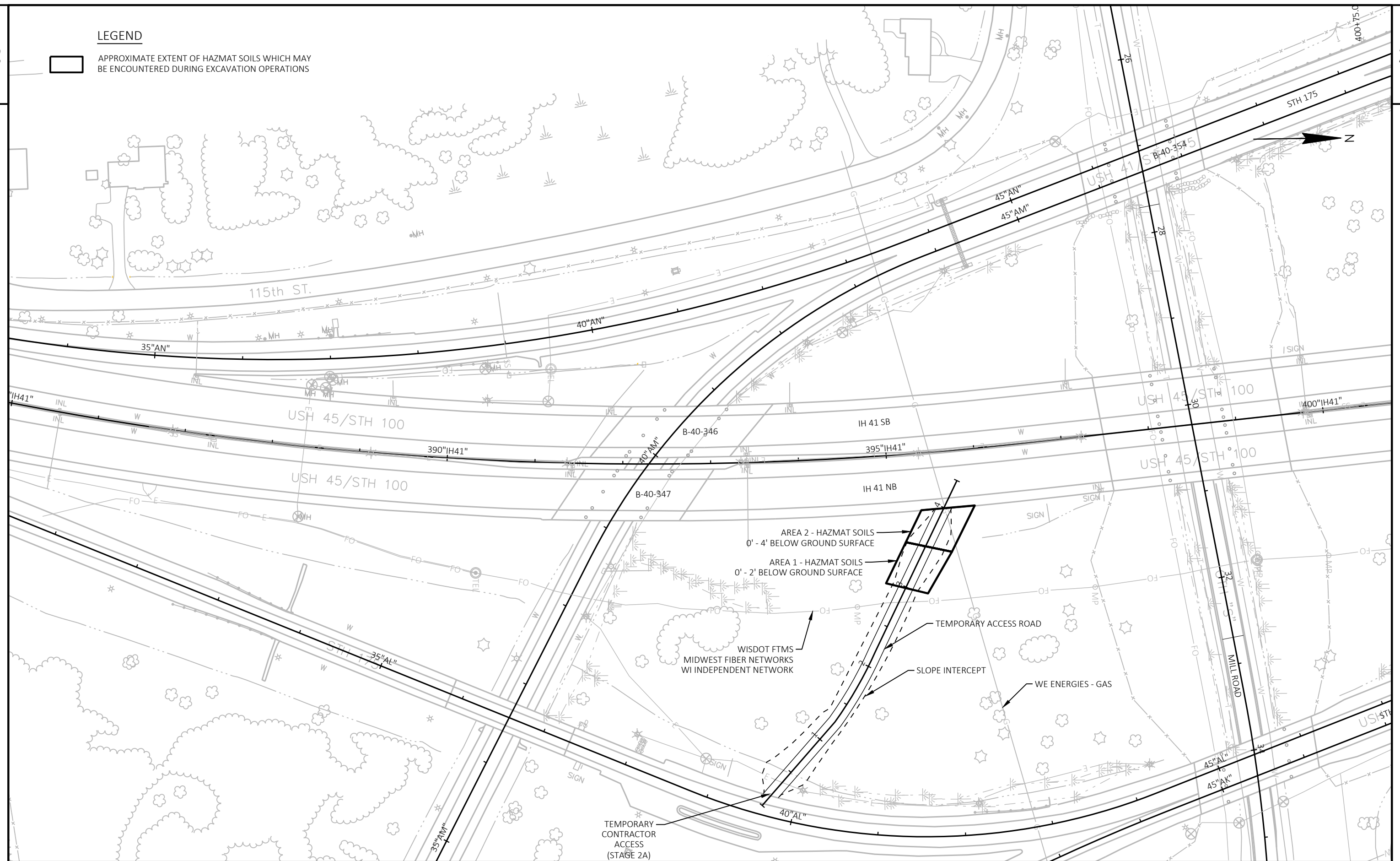
E



LEGEND



APPROXIMATE EXTENT OF HAZMAT SOILS WHICH MAY
BE ENCOUNTERED DURING EXCAVATION OPERATIONS



PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

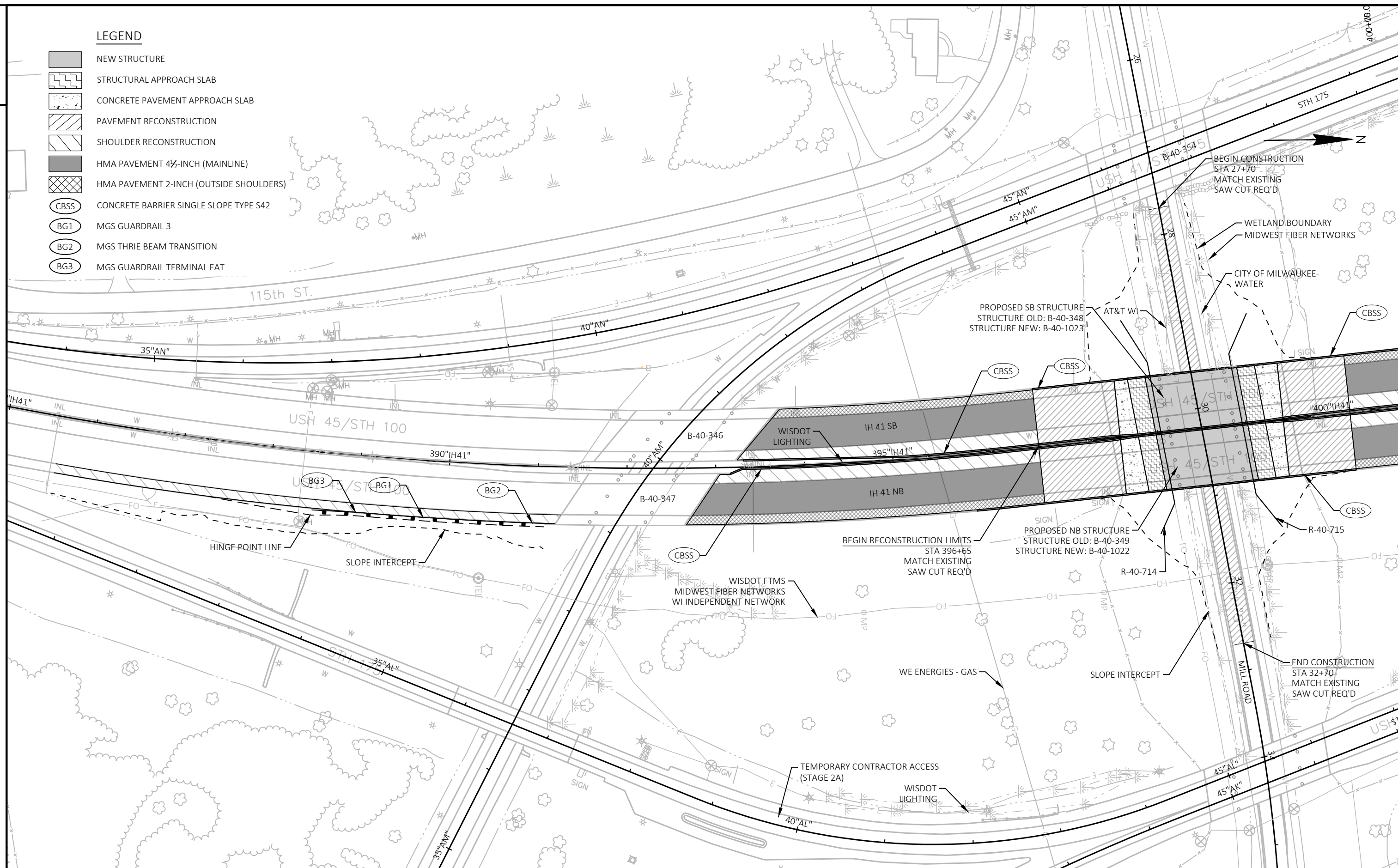
CONSTRUCTION DETAIL: HAZMAT SOILS

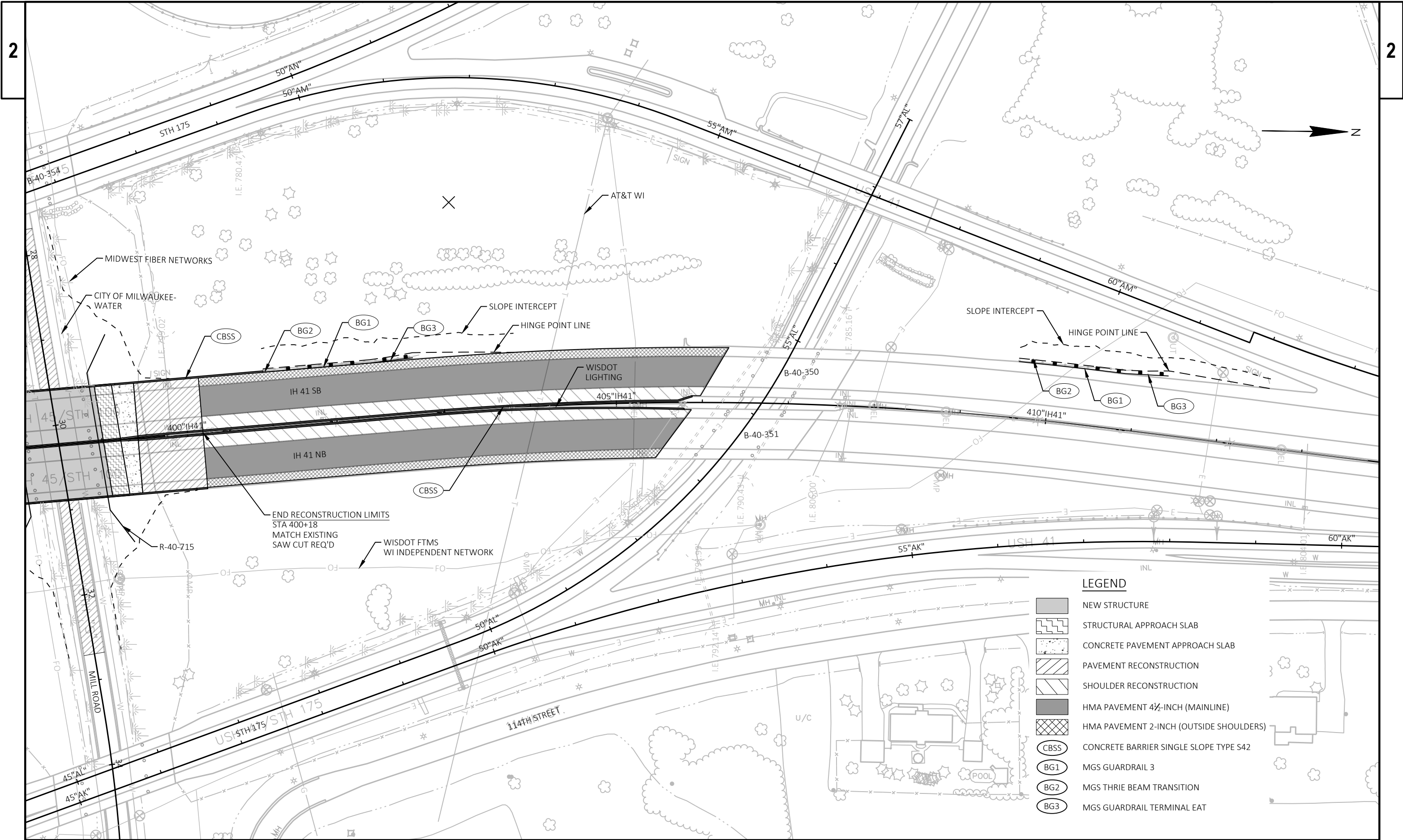
SHEET

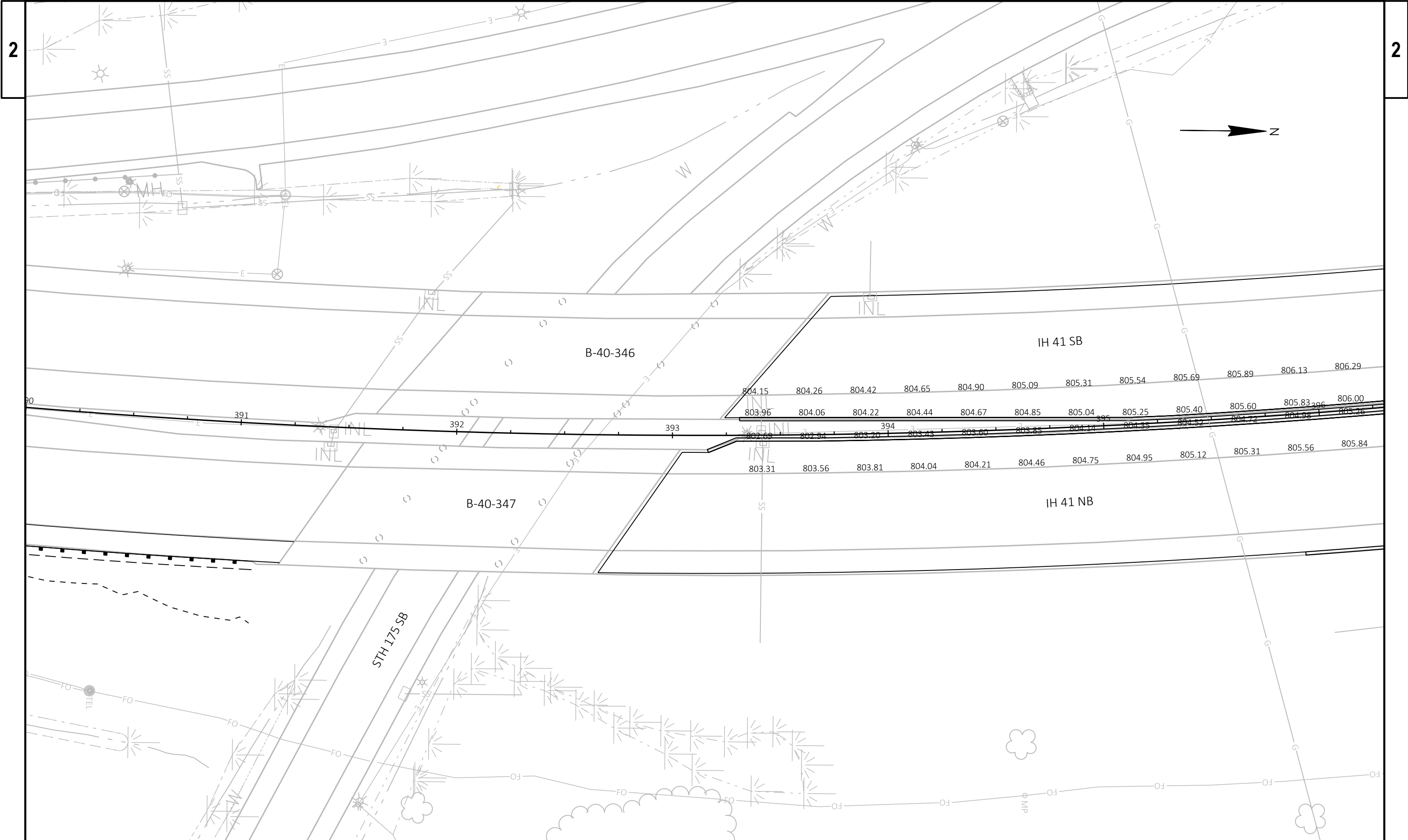
PRE_15

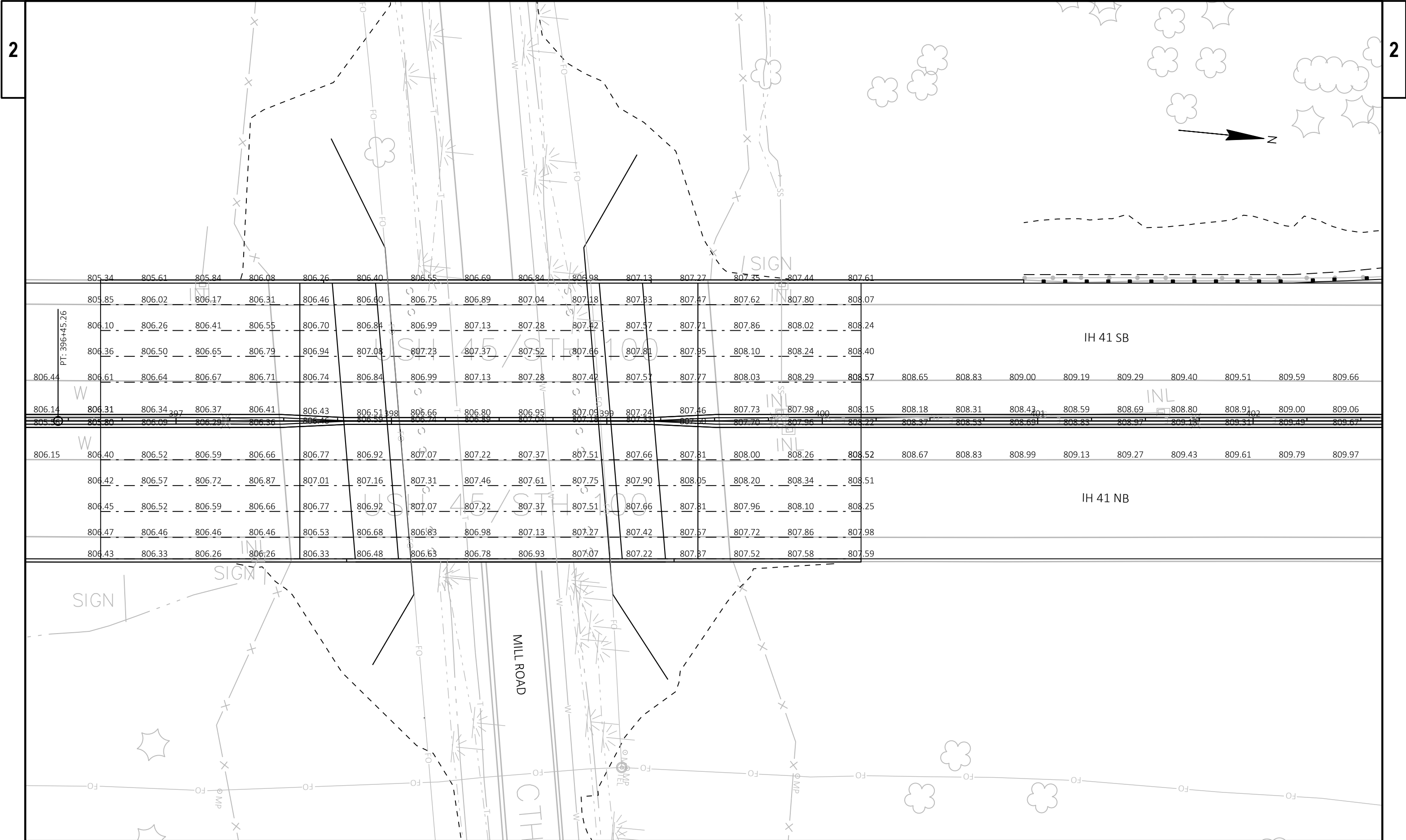
E

	NEW STRUCTURE
	STRUCTURAL APPROACH SLAB
	CONCRETE PAVEMENT APPROACH SLAB
	PAVEMENT RECONSTRUCTION
	SHOULDER RECONSTRUCTION
	HMA PAVEMENT 4½-INCH (MAINLINE)
	HMA PAVEMENT 2-INCH (OUTSIDE SHOULDERS)
	CONCRETE BARRIER SINGLE SLOPE TYPE S42
	MGS GUARDRAIL 3
	MGS THREE BEAM TRANSITION
	MGS GUARDRAIL TERMINAL EAT

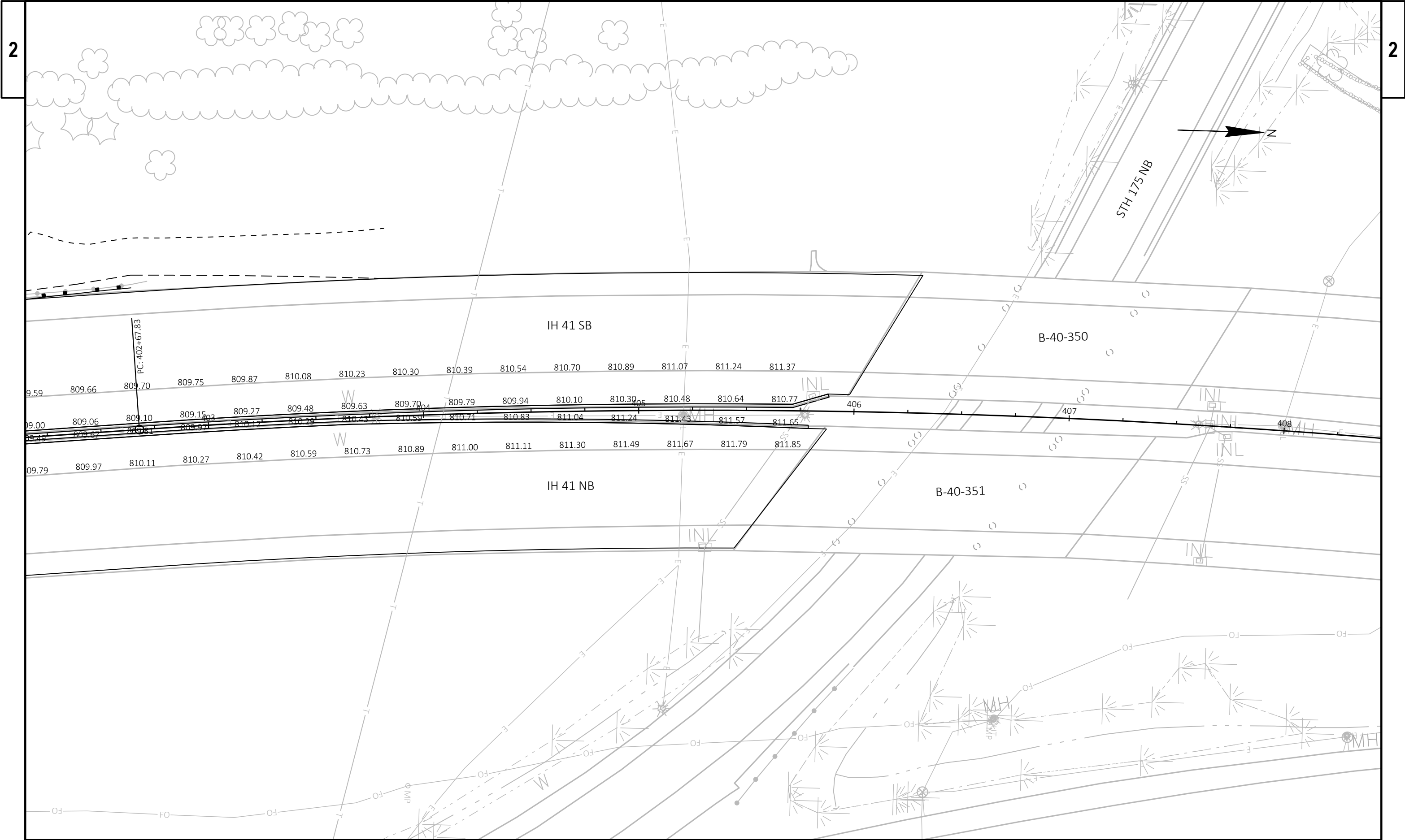




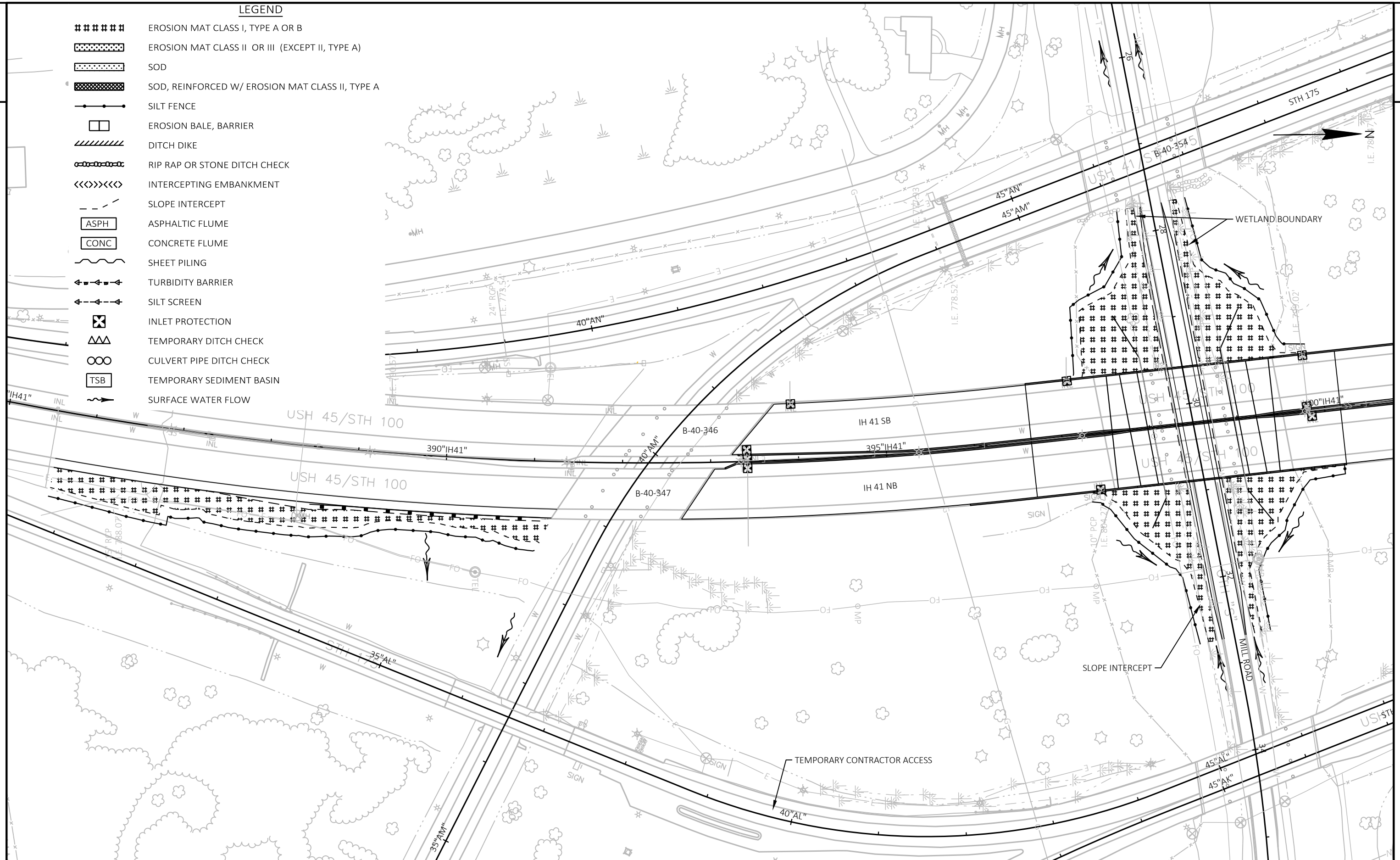


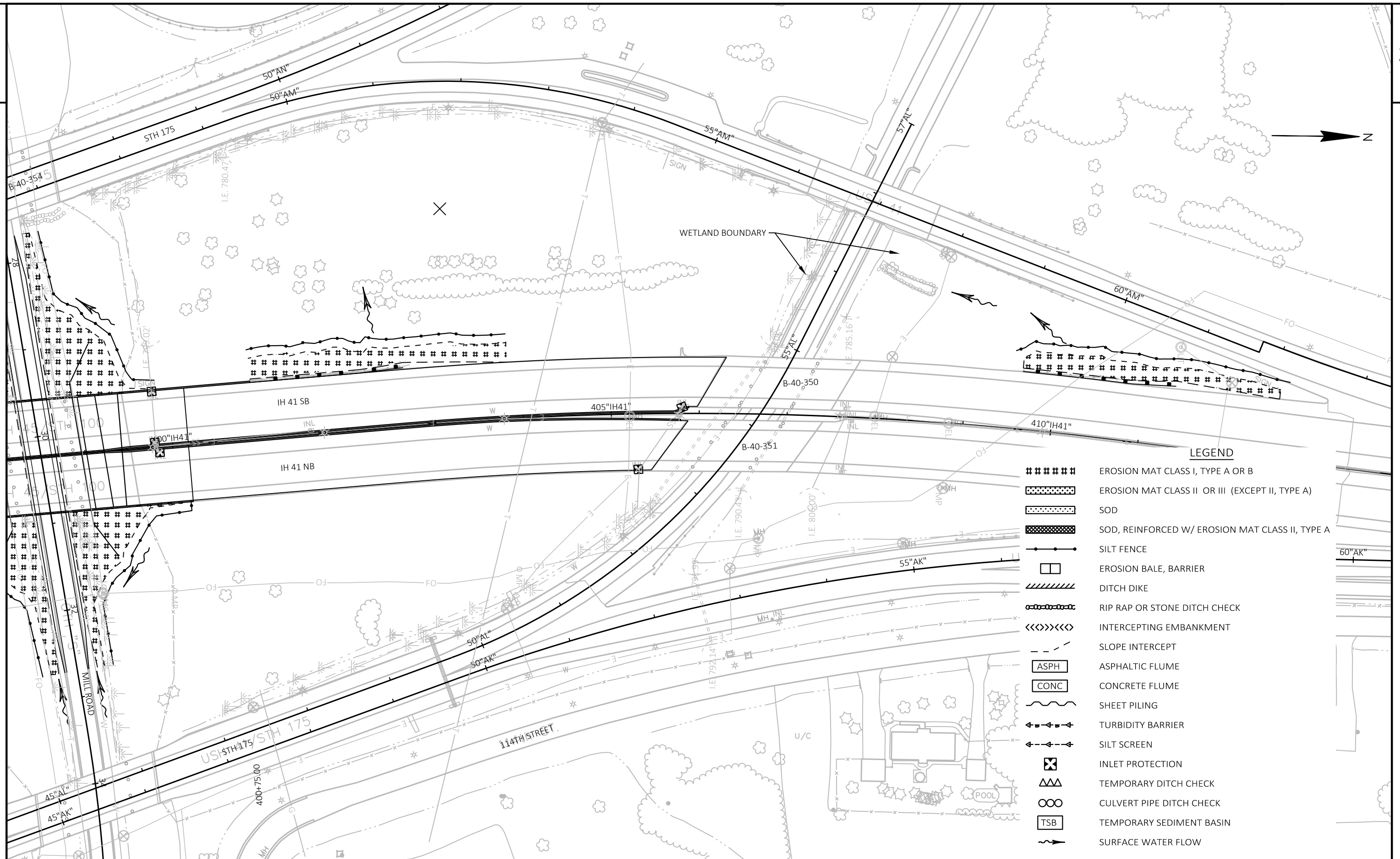


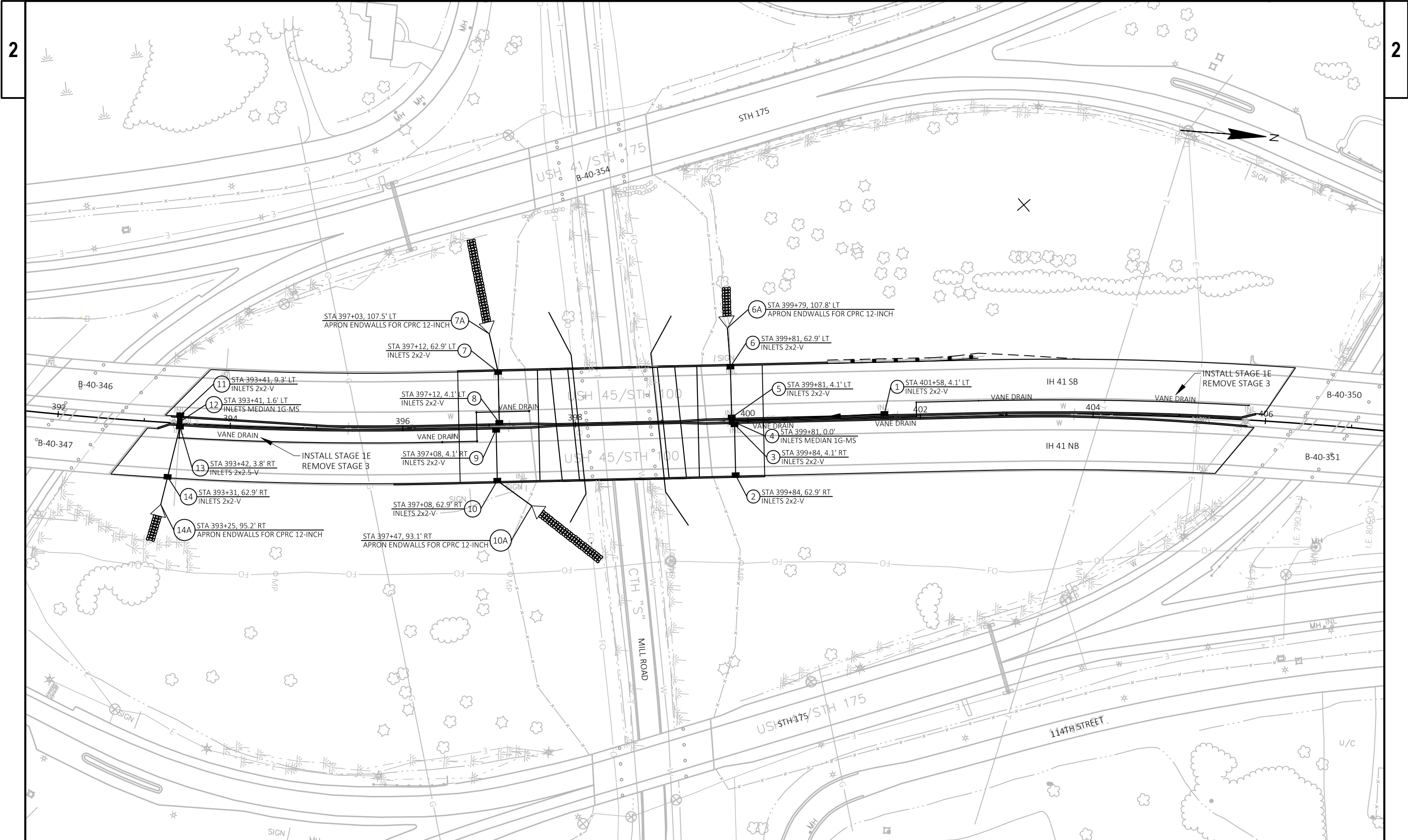
PROJECT NO: 1100-21-71	HWY: IH 41	COUNTY: MILWAUKEE	PAVEMENT GRADES	SHEET	PRE_20 E
------------------------	------------	-------------------	-----------------	-------	----------

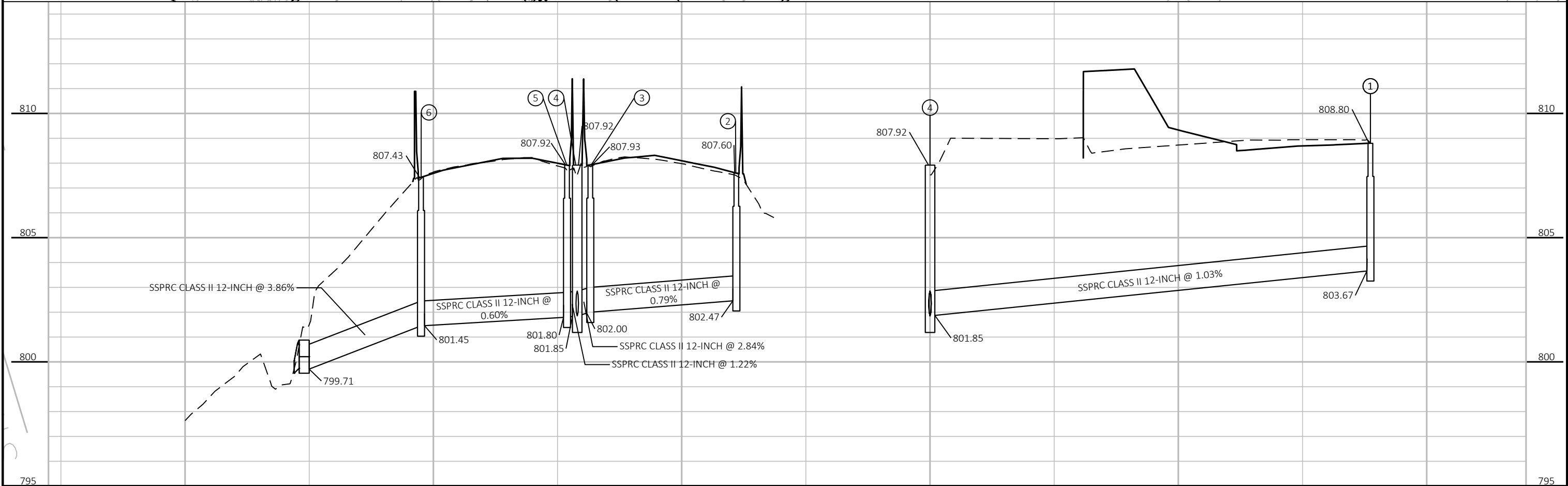
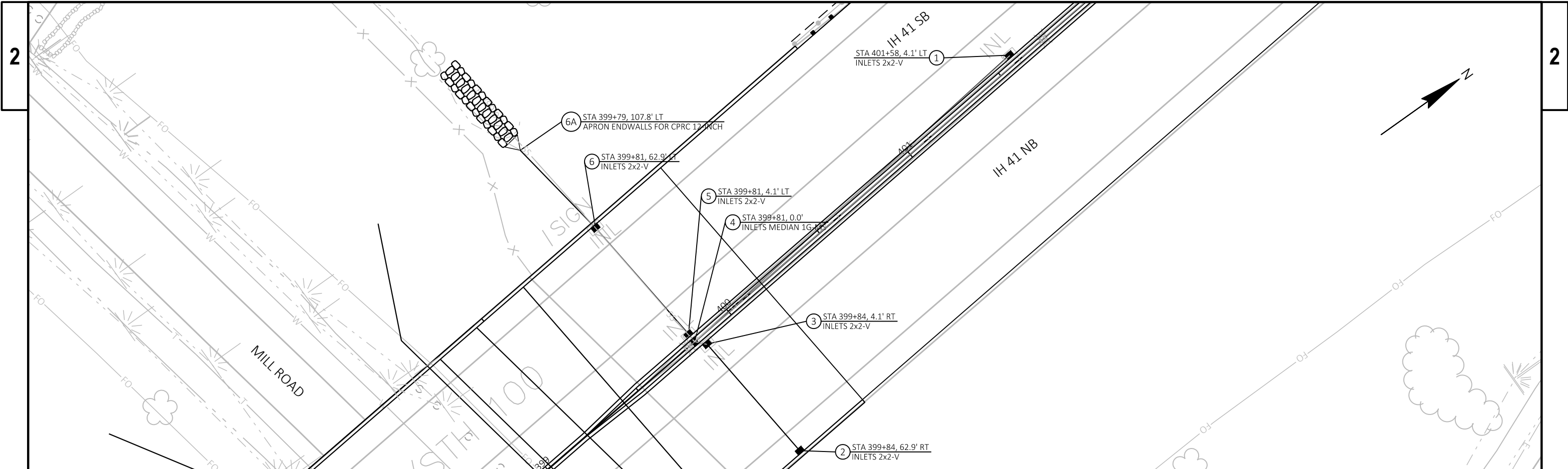


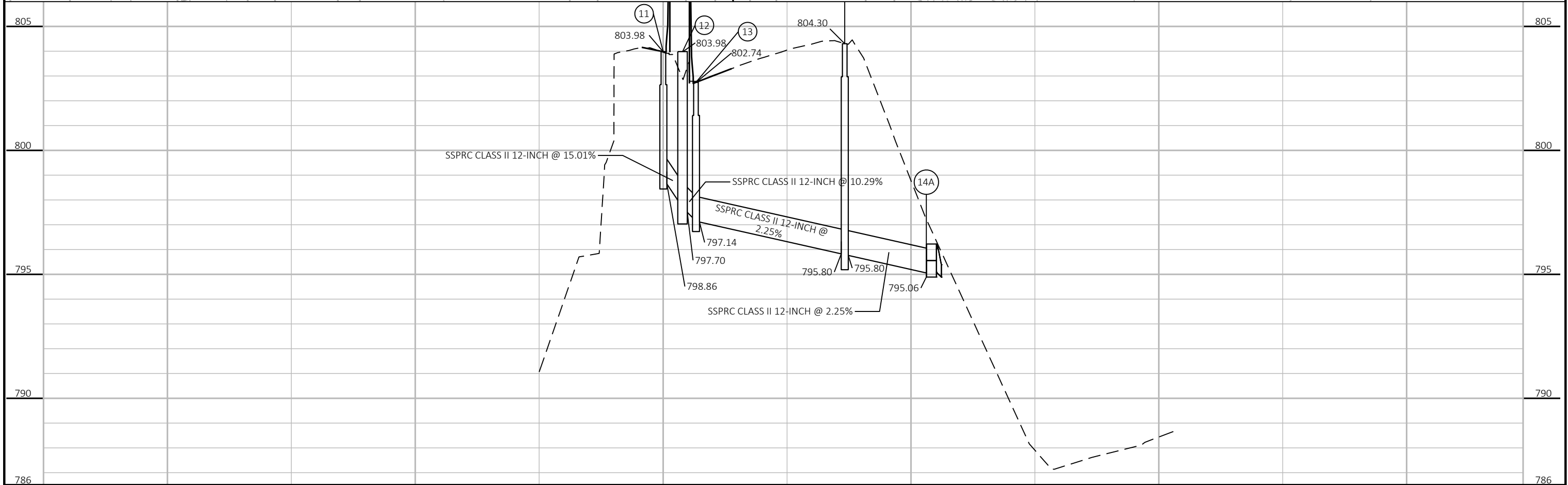
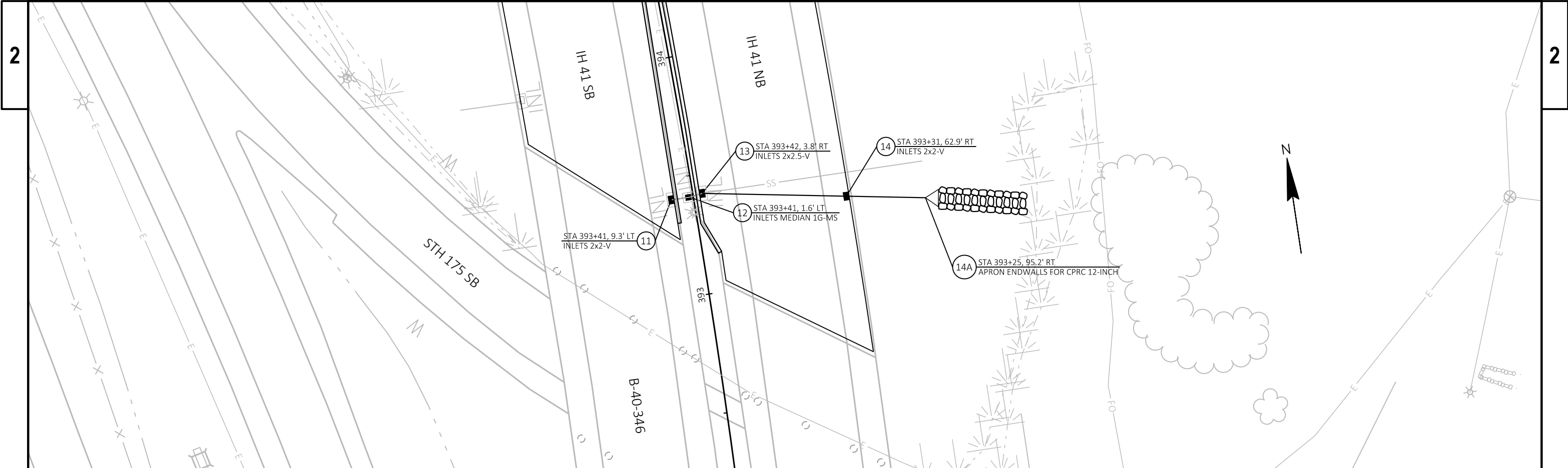
	EROSION MAT CLASS I, TYPE A OR B
	EROSION MAT CLASS II OR III (EXCEPT II, TYPE A)
	SOD
	SOD, REINFORCED W/ EROSION MAT CLASS II, TYPE A
	SILT FENCE
	EROSION BALE, BARRIER
	DITCH DIKE
	RIP RAP OR STONE DITCH CHECK
	INTERCEPTING EMBANKMENT
	SLOPE INTERCEPT
	ASPHALTIC FLUME
	CONCRETE FLUME
	SHEET PILING
	TURBIDITY BARRIER
	SILT SCREEN
	INLET PROTECTION
	TEMPORARY DITCH CHECK
	CULVERT PIPE DITCH CHECK
	TEMPORARY SEDIMENT BASIN
	SURFACE WATER FLOW

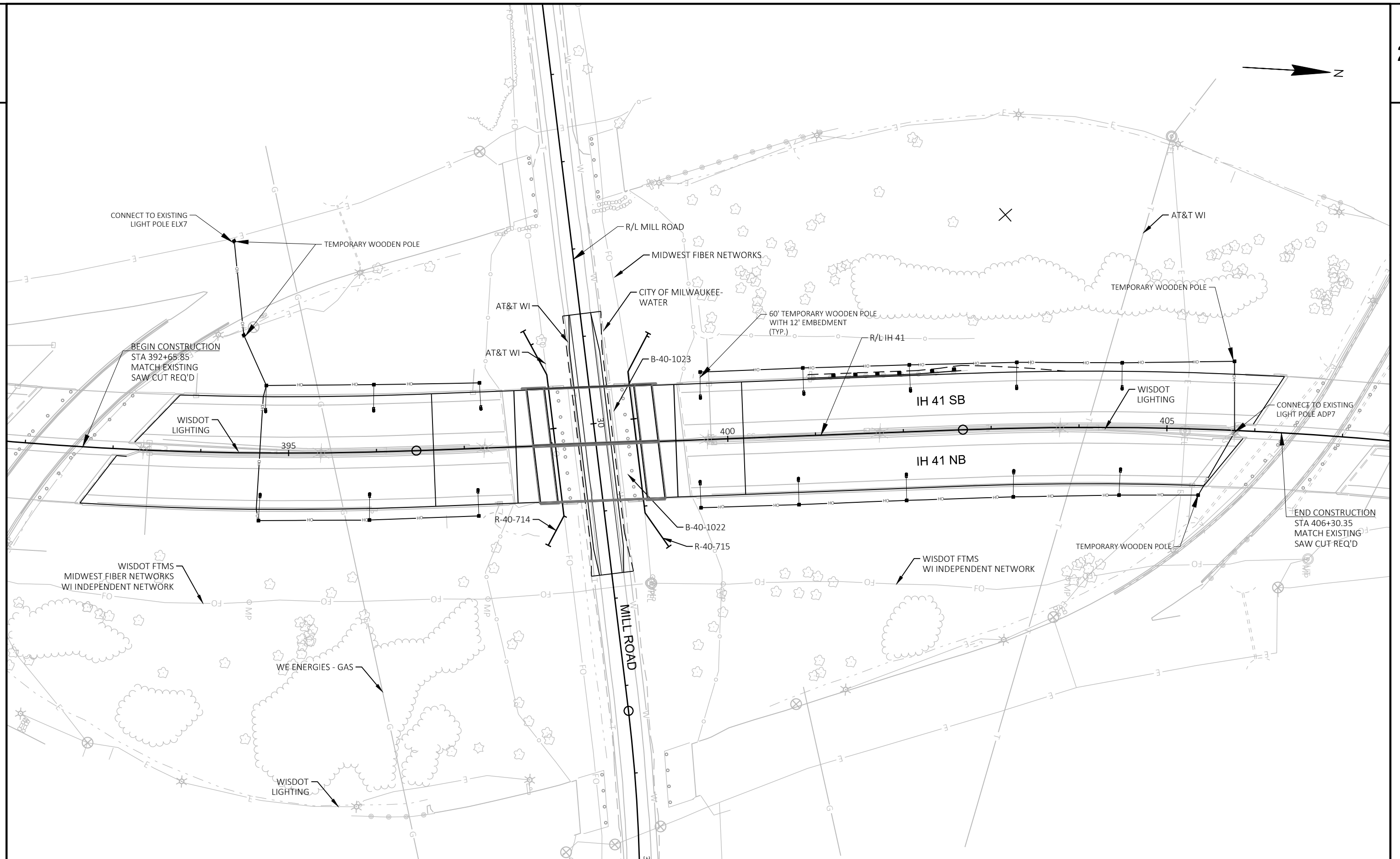












PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

LIGHTING PLAN - TEMPORARY

SHEET

PRE_28

E

FILE NAME : I:\59975\B1\ROAD BASE_1100-21-71_MILL\LIGHTING\023500-LP-TEMP.DWG
LAYOUT NAME - 023500-lp

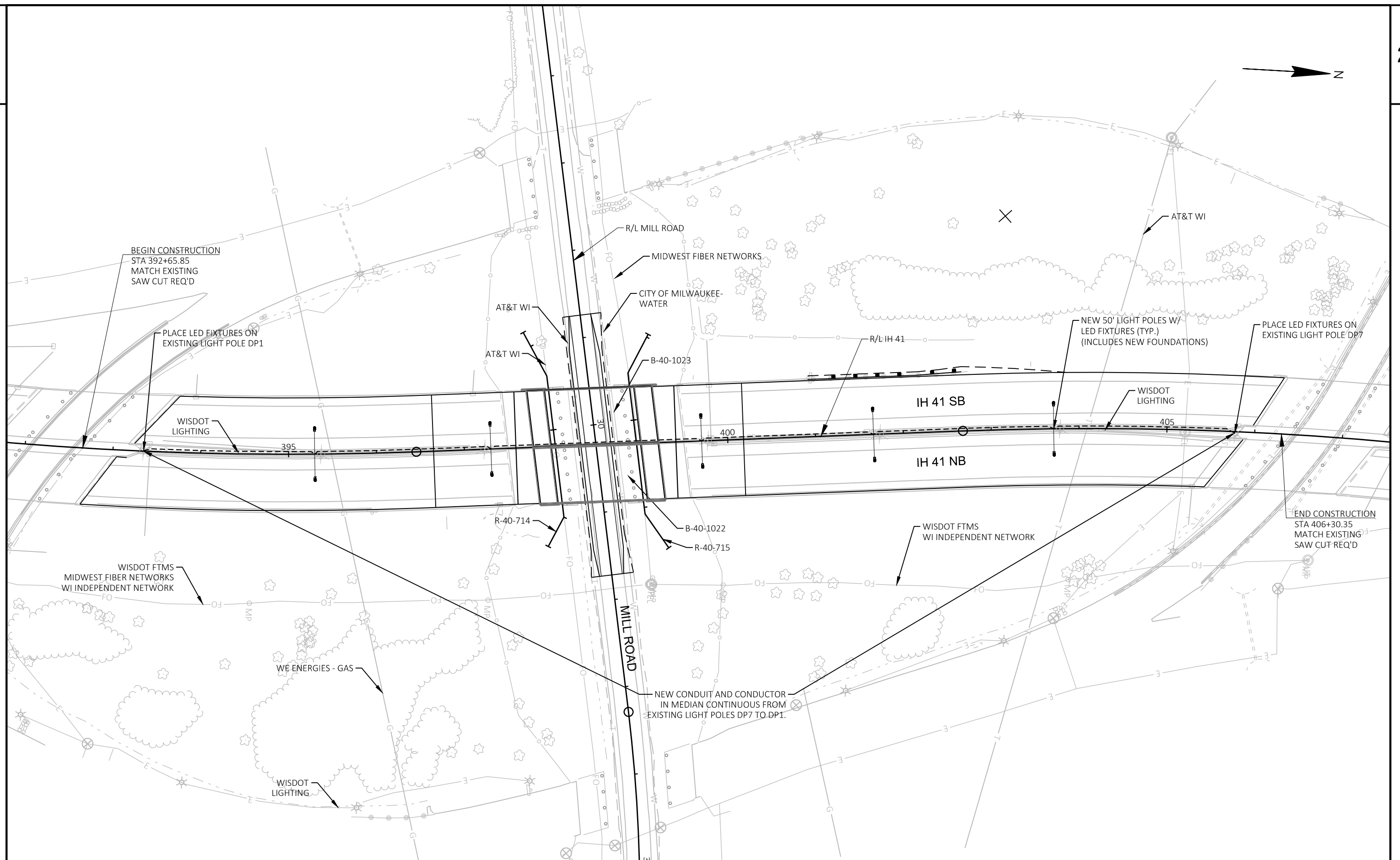
PLOT DATE : 10/29/2020 9:31 AM

PLOT BY : CECELIA KASTEN

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42



PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

LIGHTING PLAN - PERMANENT

SHEET

PRE_29

E

FILE NAME : I:\59975\B1\ROAD BASE_1100-21-71_MILL\LIGHTING\023500-LP.DWG
LAYOUT NAME - 023500-lp

PLOT DATE : 10/29/2020 10:08 AM

PLOT BY : CECELIA KASTEN

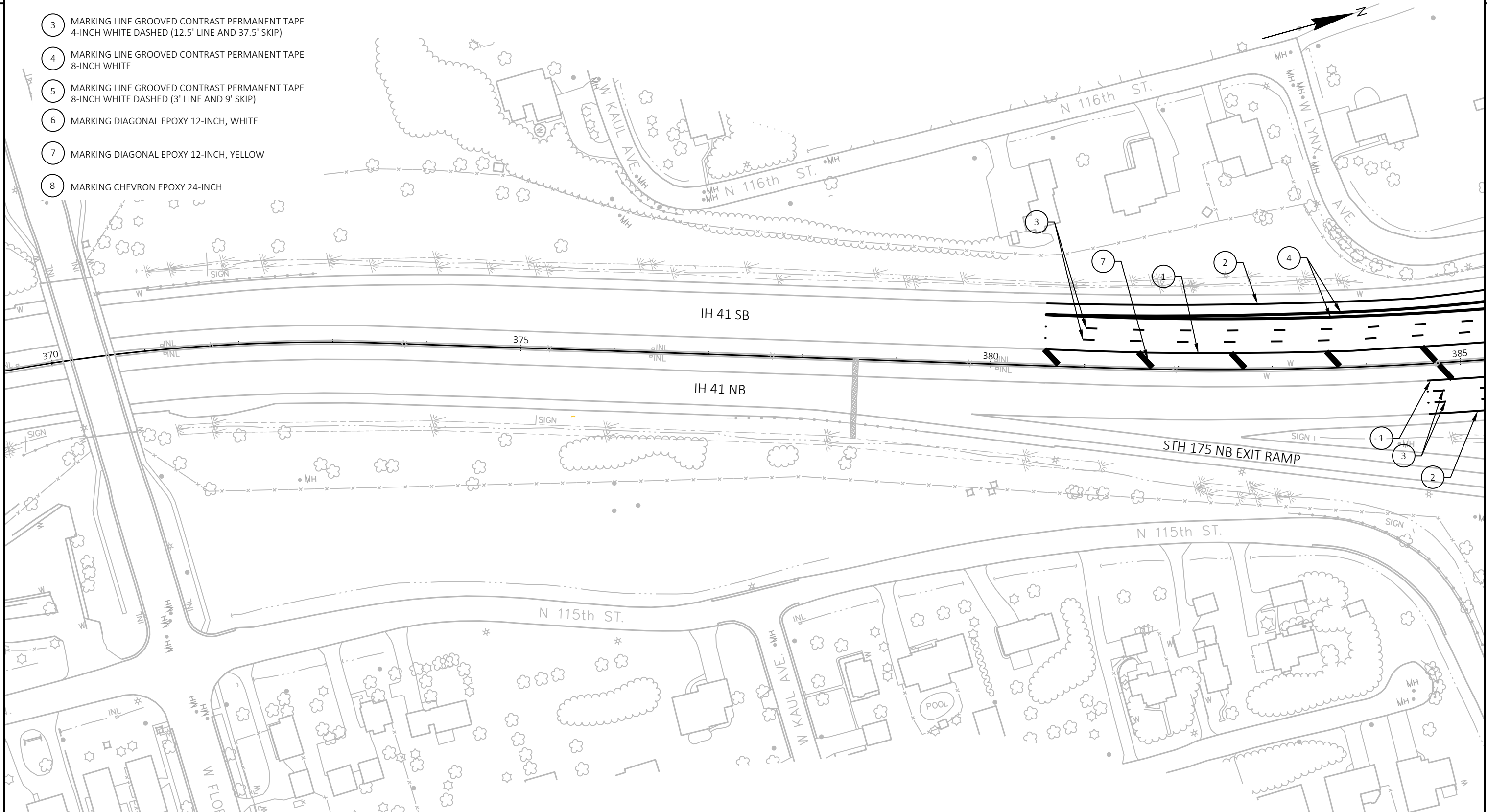
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42

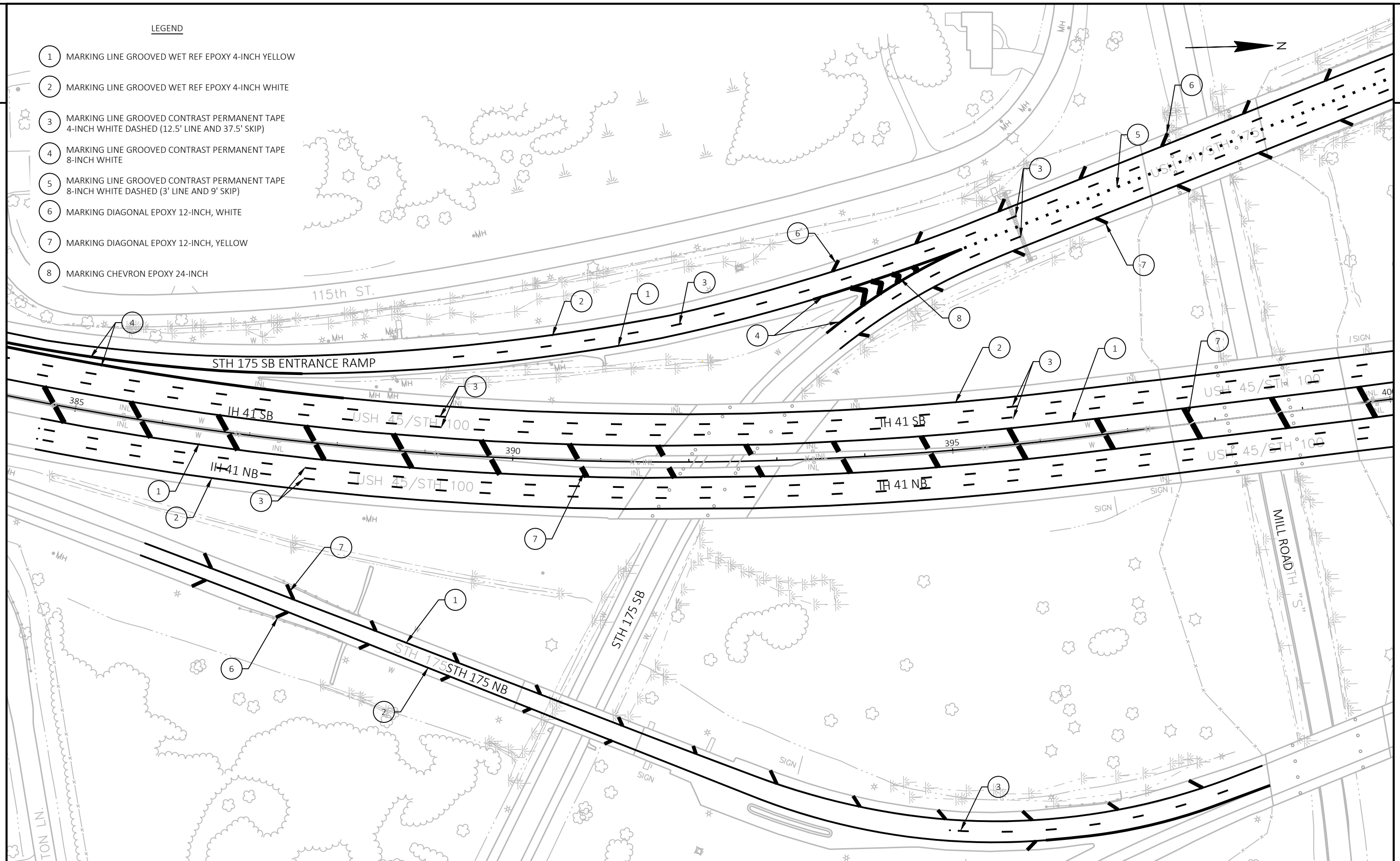
LEGEND

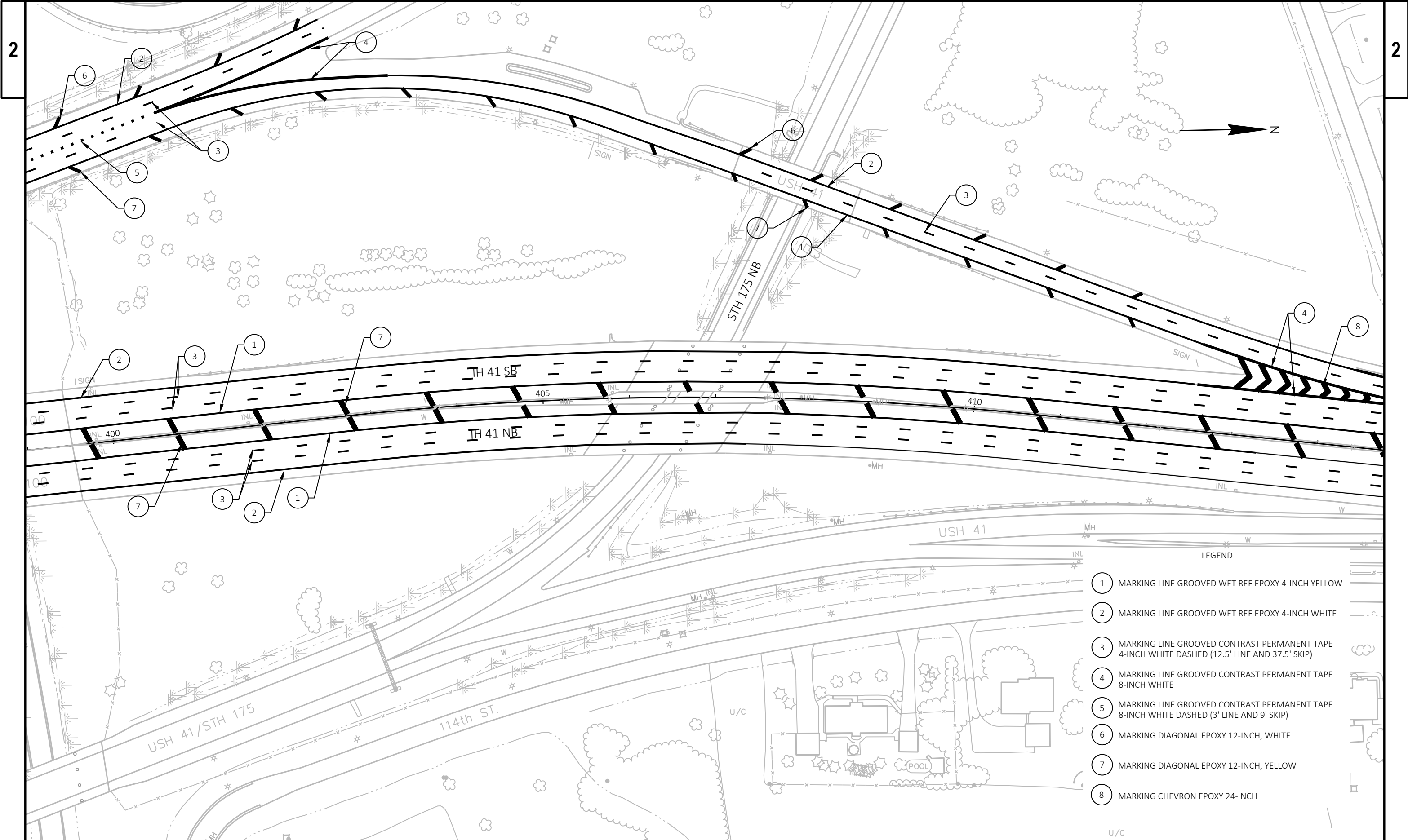
- 1 MARKING LINE GROOVED WET REF EPOXY 4-INCH YELLOW
- 2 MARKING LINE GROOVED WET REF EPOXY 4-INCH WHITE
- 3 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH WHITE DASHED (12.5' LINE AND 37.5' SKIP)
- 4 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE
- 5 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE DASHED (3' LINE AND 9' SKIP)
- 6 MARKING DIAGONAL EPOXY 12-INCH, WHITE
- 7 MARKING DIAGONAL EPOXY 12-INCH, YELLOW
- 8 MARKING CHEVRON EPOXY 24-INCH



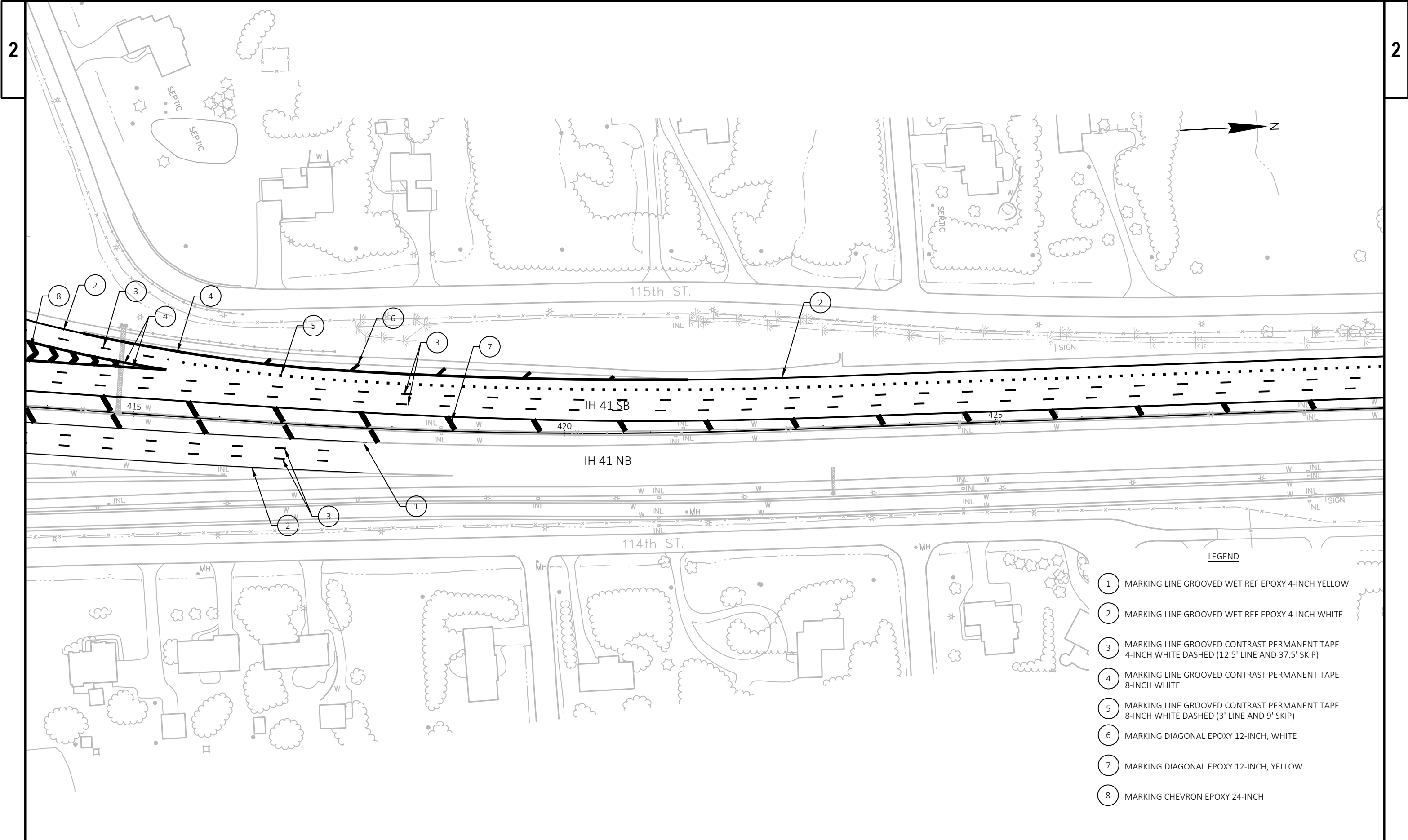
PROJECT NO: 1100-21-71	HWY: IH 41	COUNTY: MILWAUKEE	PAVEMENT MARKINGS	SHEET	PRE_30 E
------------------------	------------	-------------------	-------------------	-------	----------

- 1 MARKING LINE GROOVED WET REF EPOXY 4-INCH YELLOW
- 2 MARKING LINE GROOVED WET REF EPOXY 4-INCH WHITE
- 3 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH WHITE DASHED (12.5' LINE AND 37.5' SKIP)
- 4 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE
- 5 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE DASHED (3' LINE AND 9' SKIP)
- 6 MARKING DIAGONAL EPOXY 12-INCH, WHITE
- 7 MARKING DIAGONAL EPOXY 12-INCH, YELLOW
- 8 MARKING CHEVRON EPOXY 24-INCH

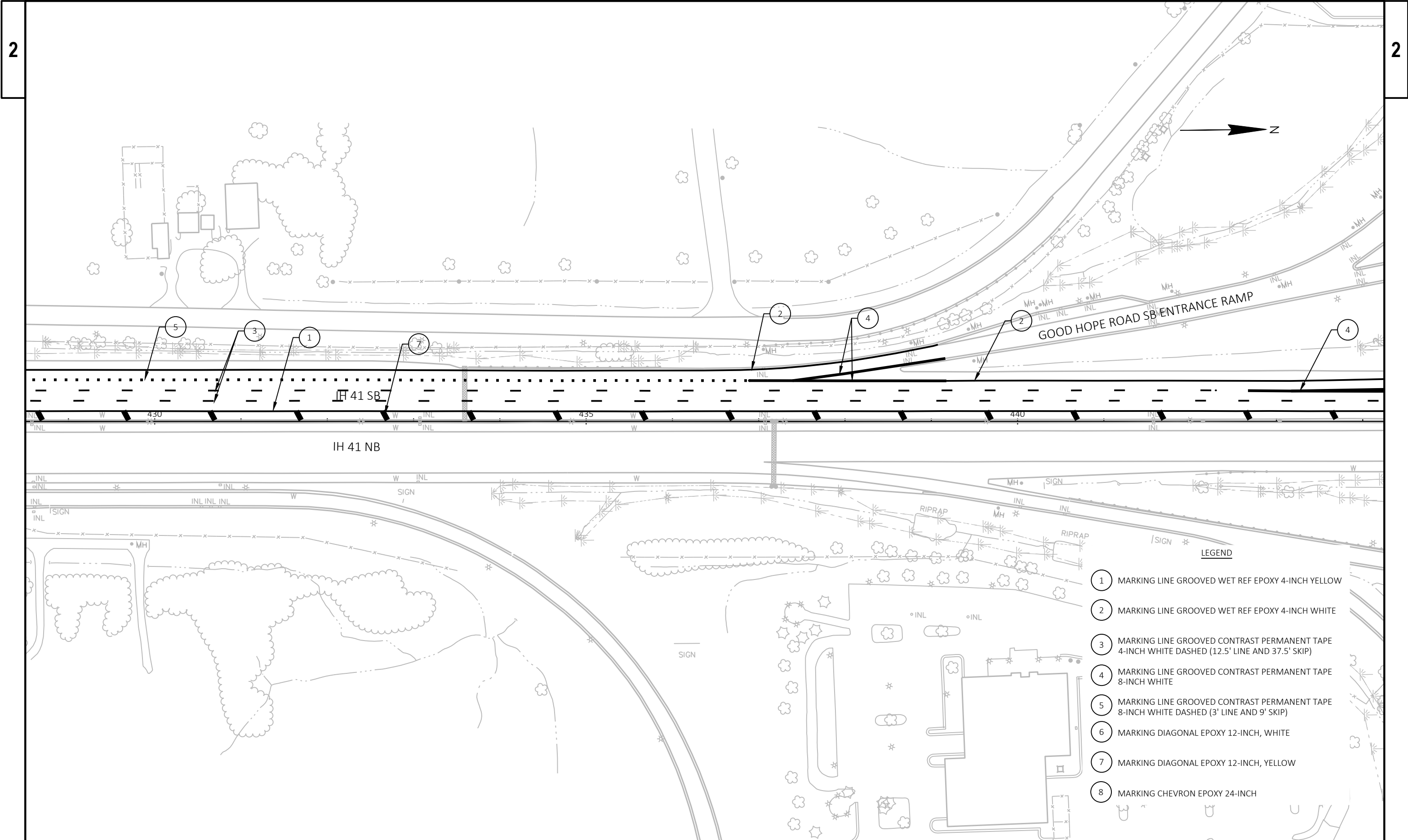




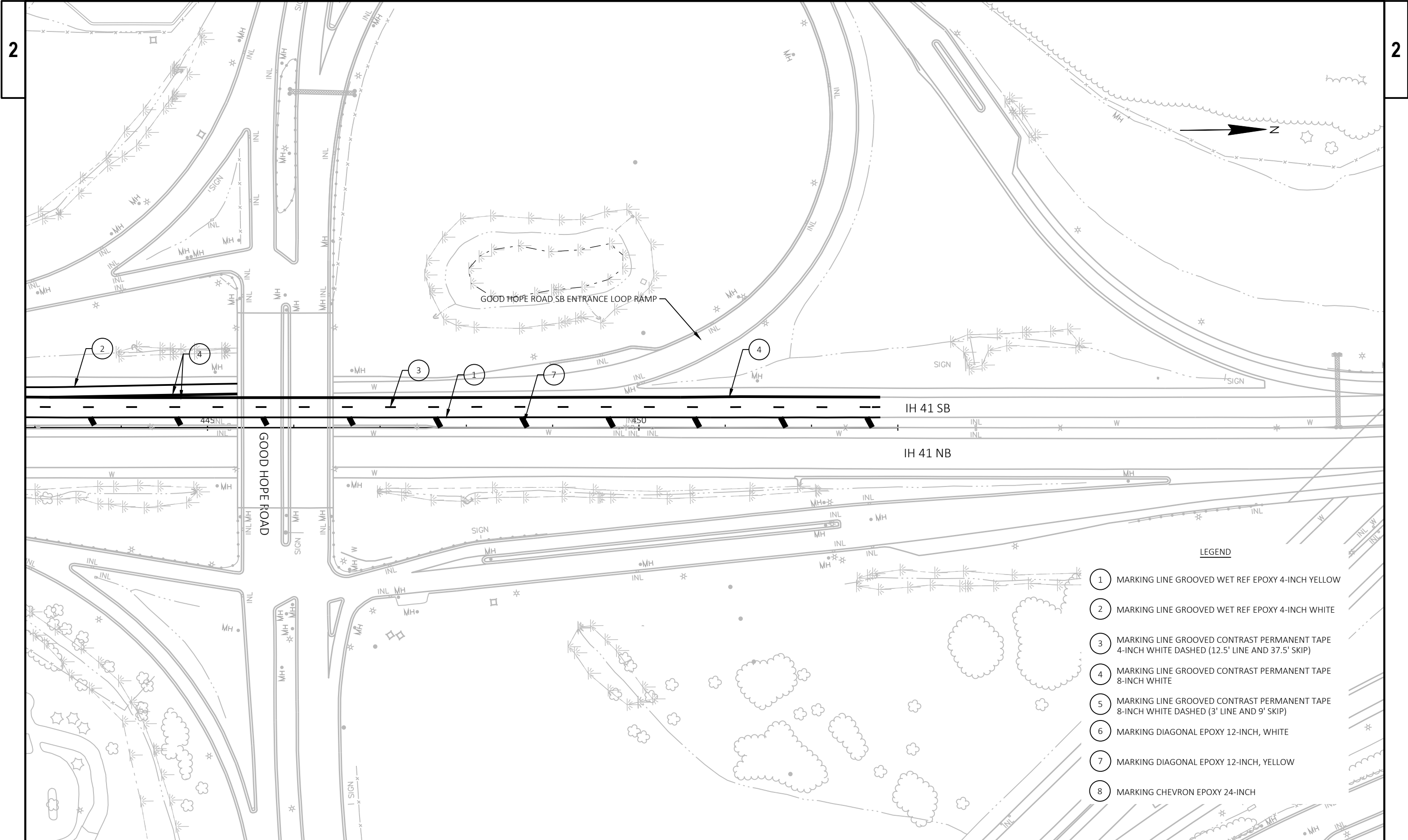
- LEGEND
- 1 MARKING LINE GROOVED WET REF EPOXY 4-INCH YELLOW
 - 2 MARKING LINE GROOVED WET REF EPOXY 4-INCH WHITE
 - 3 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH WHITE DASHED (12.5' LINE AND 37.5' SKIP)
 - 4 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE
 - 5 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE DASHED (3' LINE AND 9' SKIP)
 - 6 MARKING DIAGONAL EPOXY 12-INCH, WHITE
 - 7 MARKING DIAGONAL EPOXY 12-INCH, YELLOW
 - 8 MARKING CHEVRON EPOXY 24-INCH



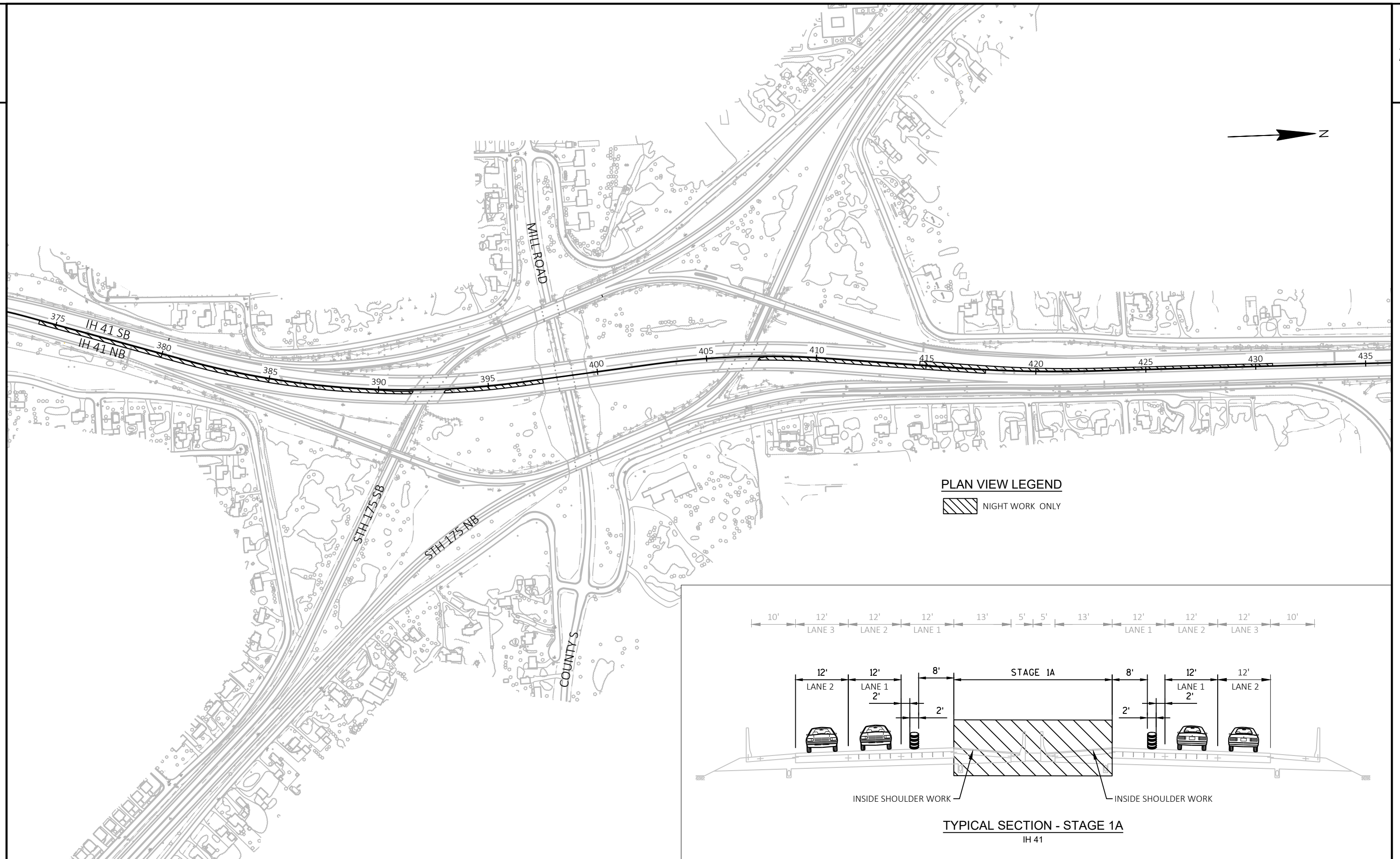
- LEGEND
- 1 MARKING LINE GROOVED WET REF EPOXY 4-INCH YELLOW
 - 2 MARKING LINE GROOVED WET REF EPOXY 4-INCH WHITE
 - 3 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH WHITE DASHED (12.5' LINE AND 37.5' SKIP)
 - 4 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE
 - 5 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE DASHED (3' LINE AND 9' SKIP)
 - 6 MARKING DIAGONAL EPOXY 12-INCH, WHITE
 - 7 MARKING DIAGONAL EPOXY 12-INCH, YELLOW
 - 8 MARKING CHEVRON EPOXY 24-INCH

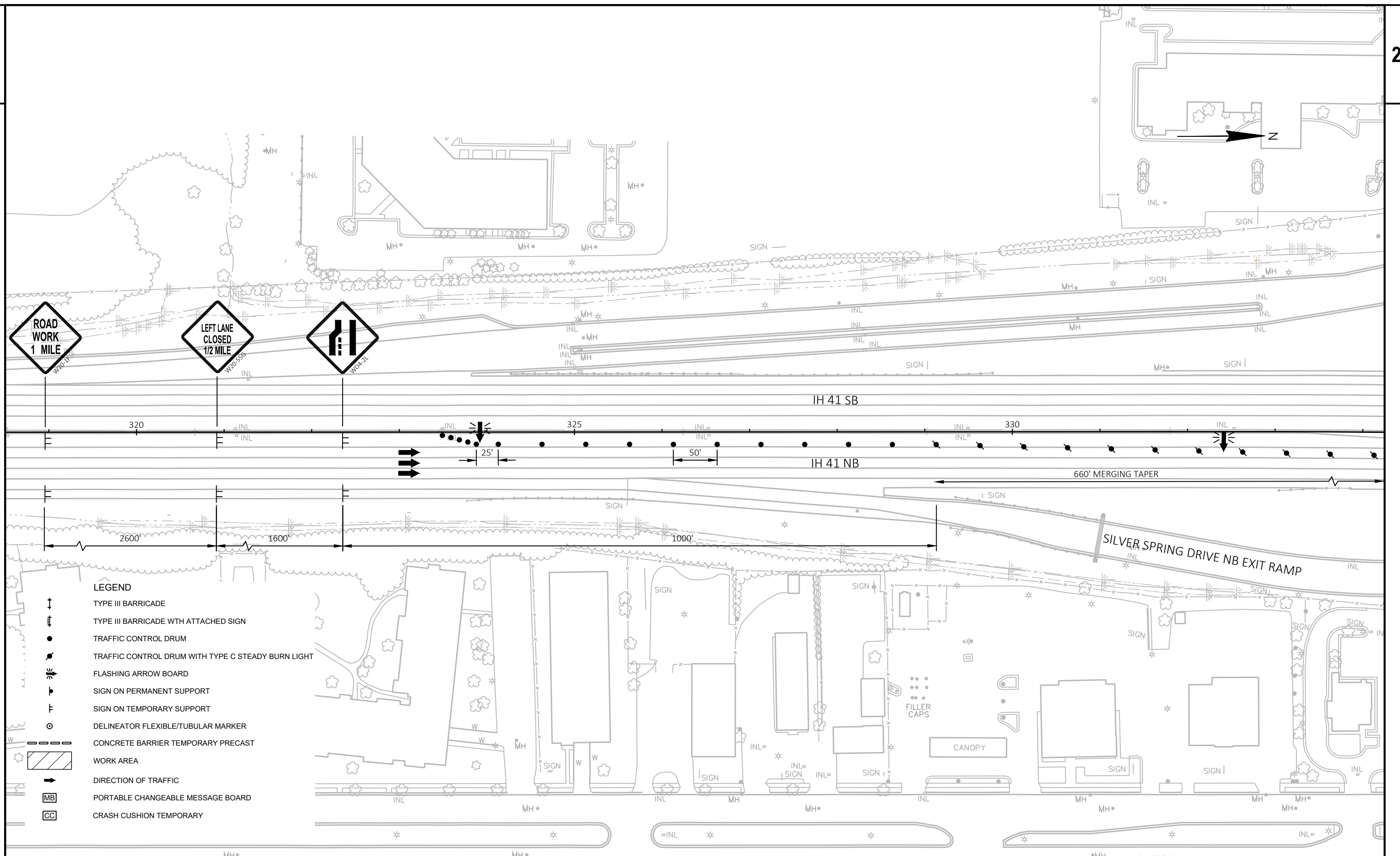


- LEGEND**
- 1 MARKING LINE GROOVED WET REF EPOXY 4-INCH YELLOW
 - 2 MARKING LINE GROOVED WET REF EPOXY 4-INCH WHITE
 - 3 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH WHITE DASHED (12.5' LINE AND 37.5' SKIP)
 - 4 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE
 - 5 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE DASHED (3' LINE AND 9' SKIP)
 - 6 MARKING DIAGONAL EPOXY 12-INCH, WHITE
 - 7 MARKING DIAGONAL EPOXY 12-INCH, YELLOW
 - 8 MARKING CHEVRON EPOXY 24-INCH



- LEGEND**
- 1 MARKING LINE GROOVED WET REF EPOXY 4-INCH YELLOW
 - 2 MARKING LINE GROOVED WET REF EPOXY 4-INCH WHITE
 - 3 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 4-INCH WHITE DASHED (12.5' LINE AND 37.5' SKIP)
 - 4 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE
 - 5 MARKING LINE GROOVED CONTRAST PERMANENT TAPE 8-INCH WHITE DASHED (3' LINE AND 9' SKIP)
 - 6 MARKING DIAGONAL EPOXY 12-INCH, WHITE
 - 7 MARKING DIAGONAL EPOXY 12-INCH, YELLOW
 - 8 MARKING CHEVRON EPOXY 24-INCH





PROJECT NO: 1100-21-71

HWY: IH 41

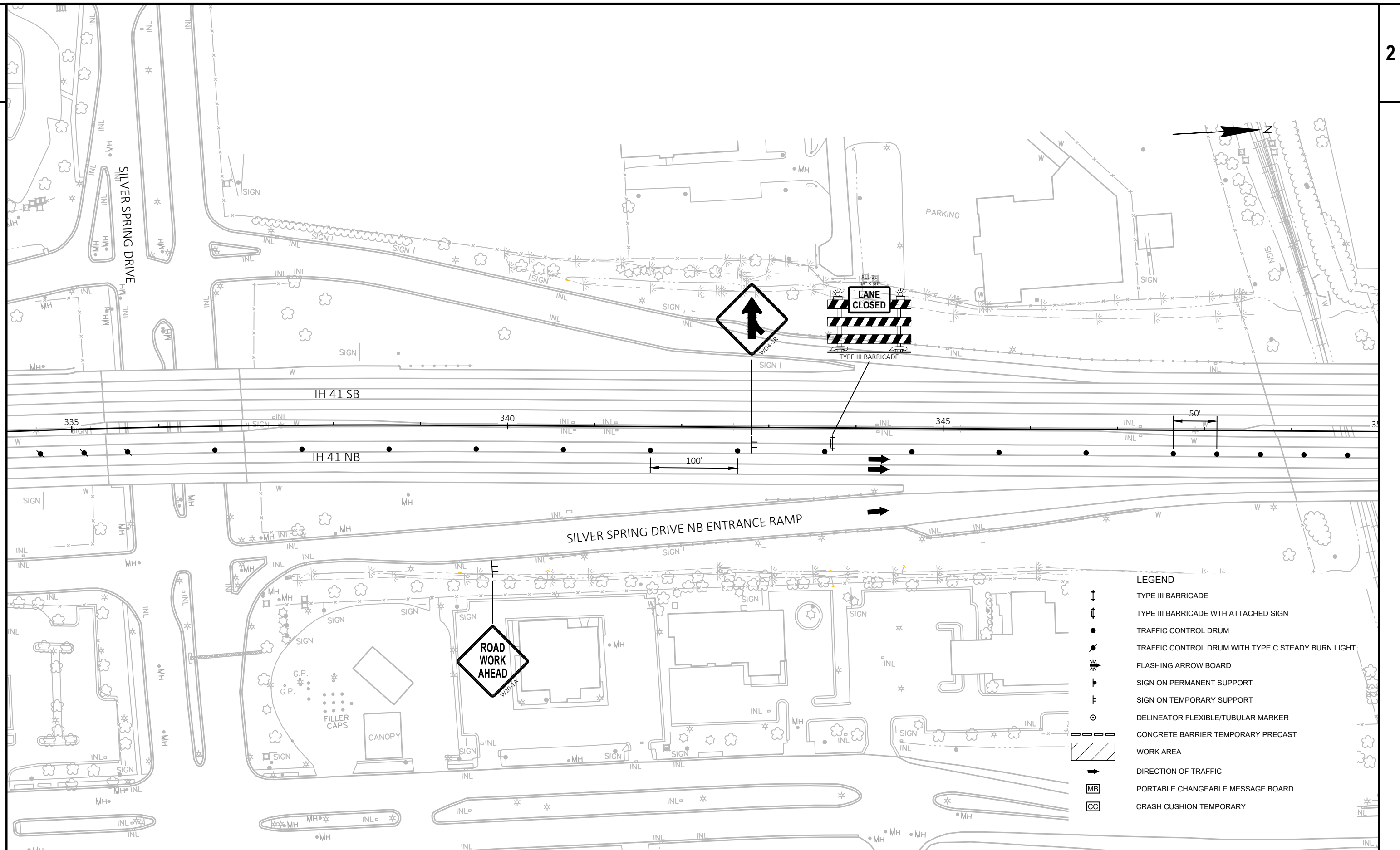
COUNTY: MILWAUKEE

STAGE 1A - INSIDE SHOULDER WORK - NIGHT WORK ONLY

SHEET

PRE_37

E



PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 1A - INSIDE SHOULDER WORK - NIGHT WORK ONLY

SHEET

PRE_38

E

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\SHEETSPLAN\2018\60% PLANS\TRAFFIC STAGING\026002_STAGE 1A_DETAILS.DWG
LAYOUT NAME - Stage 1A (1)

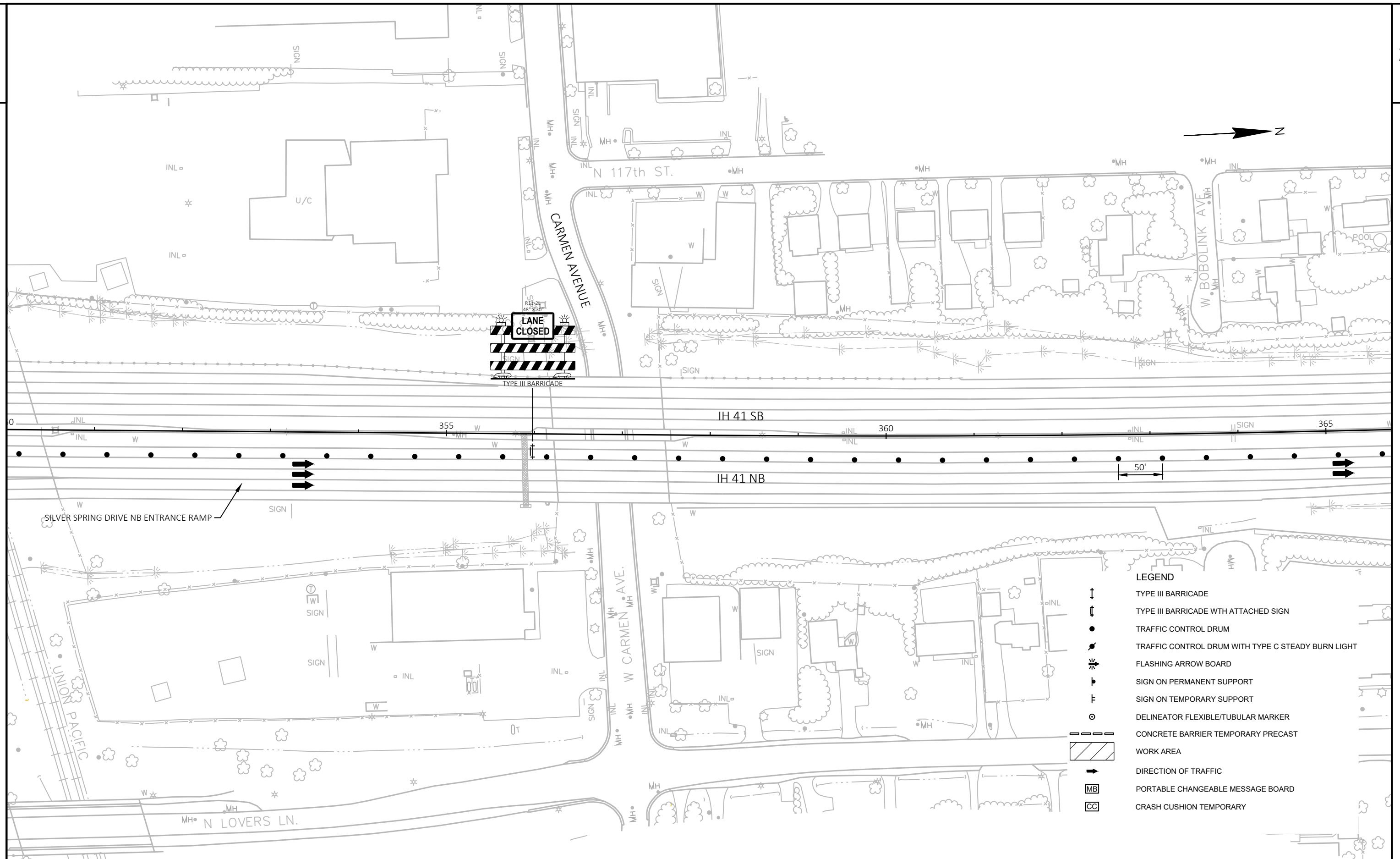
PLOT DATE : 10/26/2020 1:29 PM

PLOT BY : SCHUMACHER, JAMES D

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42



PROJECT NO: 1100-21-71

HWY: IH 41

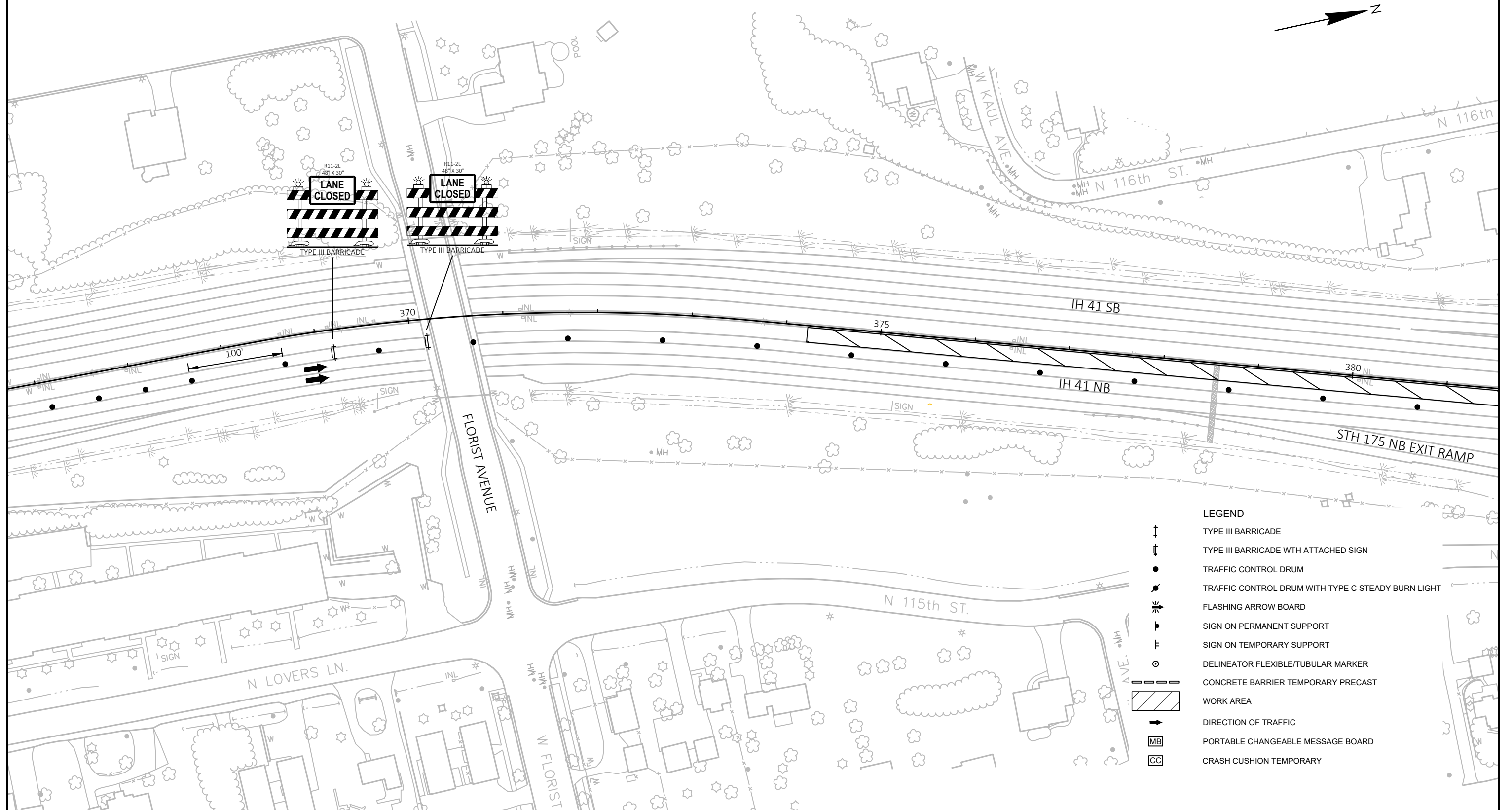
COUNTY: MILWAUKEE

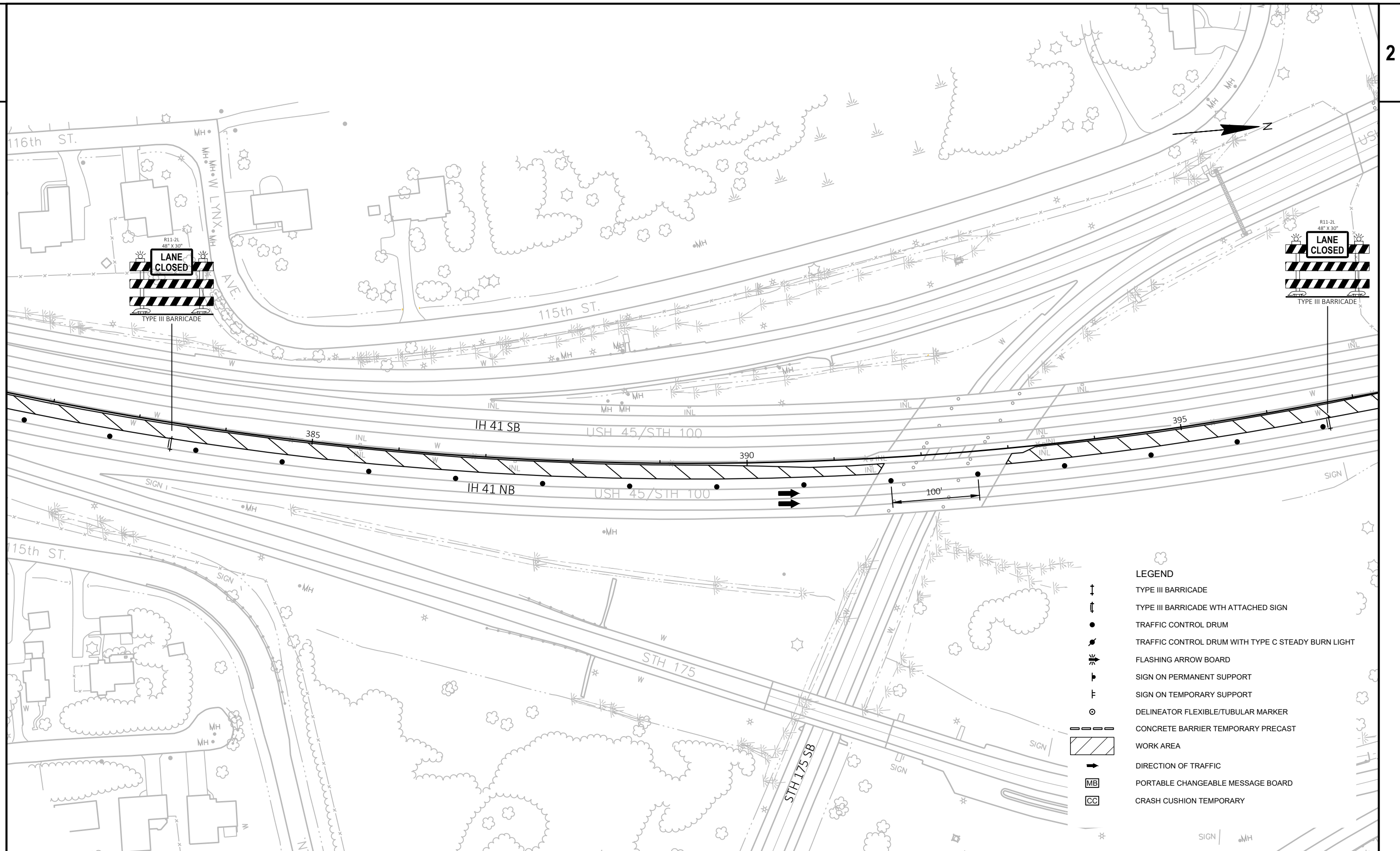
STAGE 1A - INSIDE SHOULDER WORK - NIGHT WORK ONLY

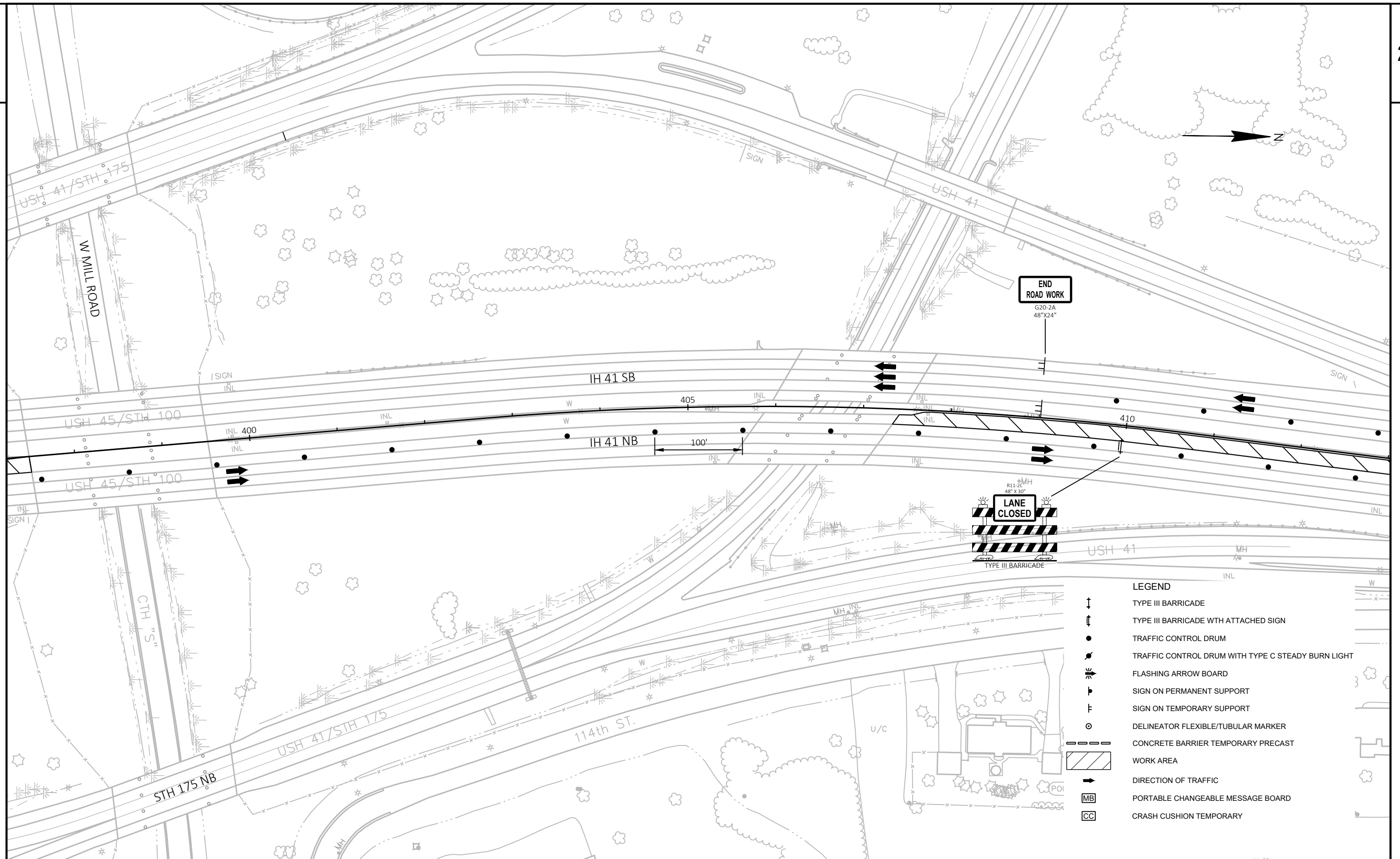
SHEET

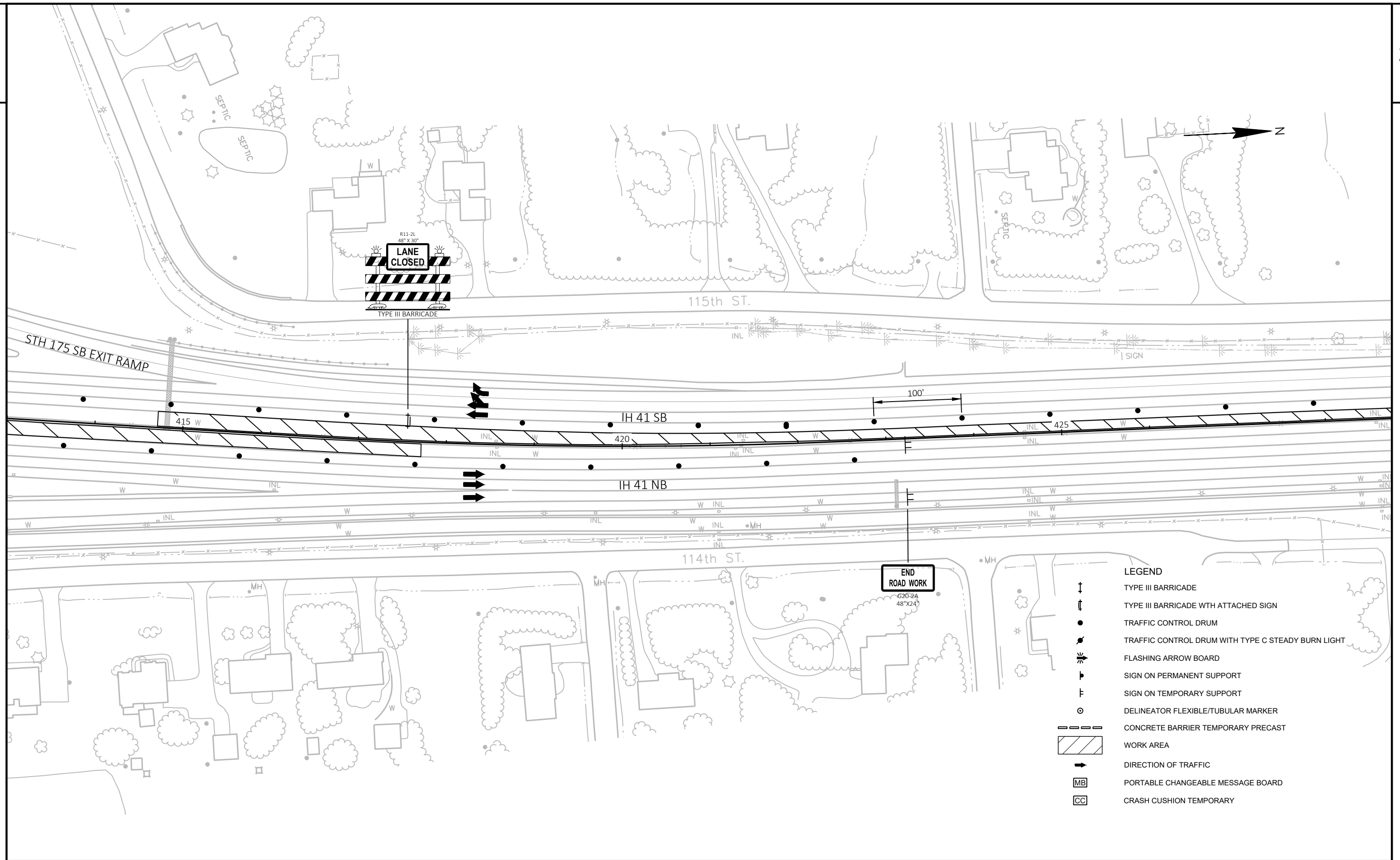
PRE_39

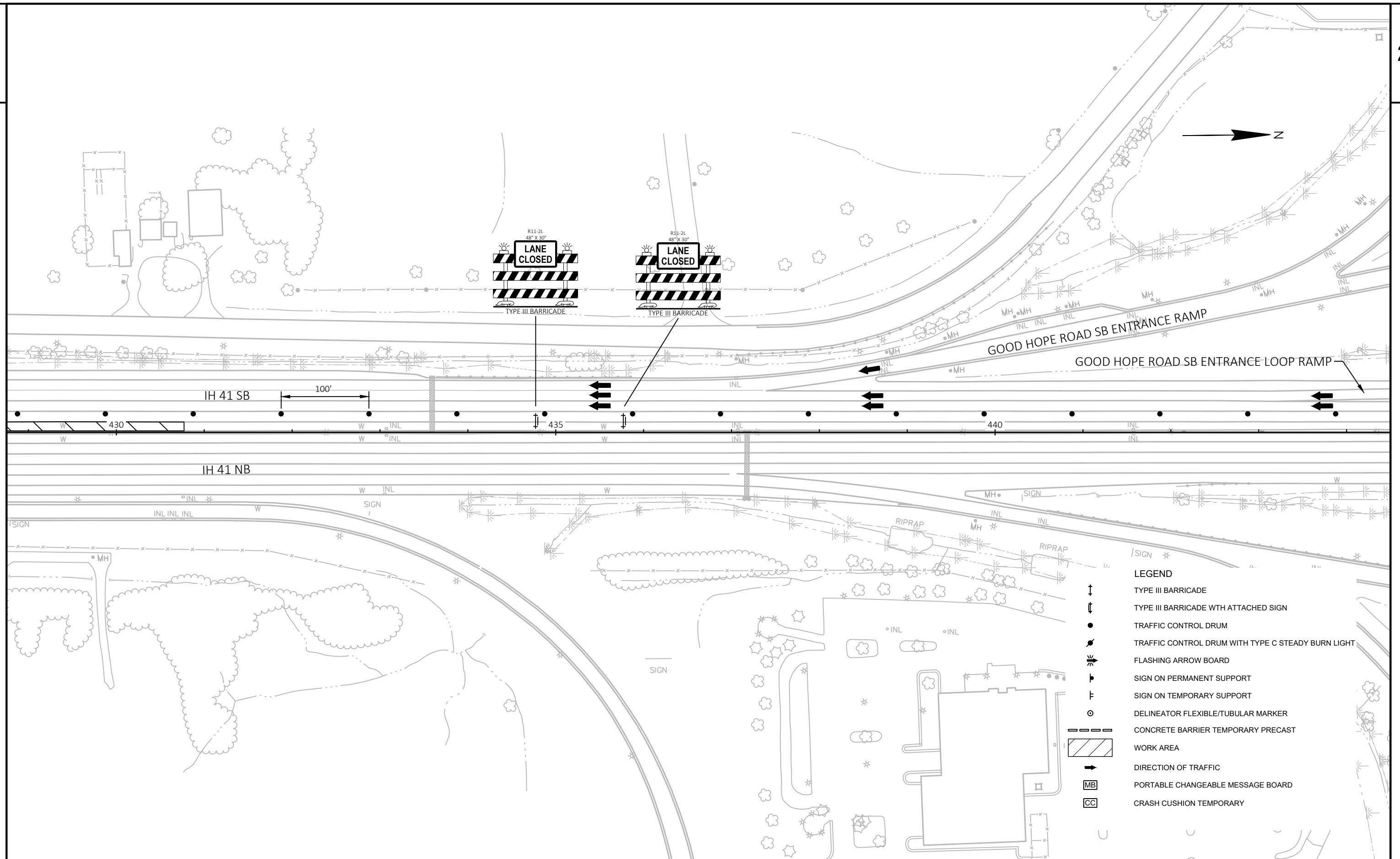
E

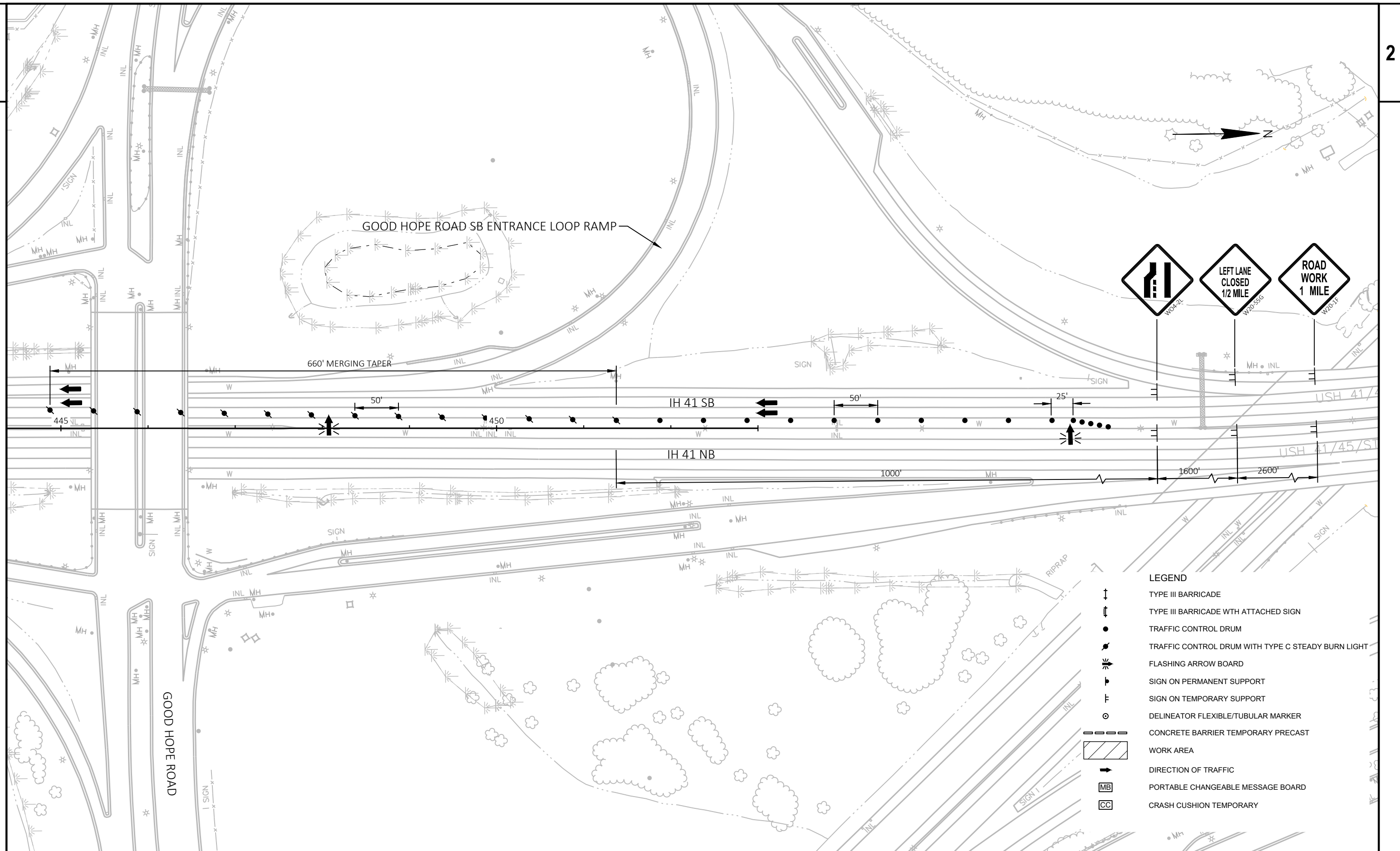


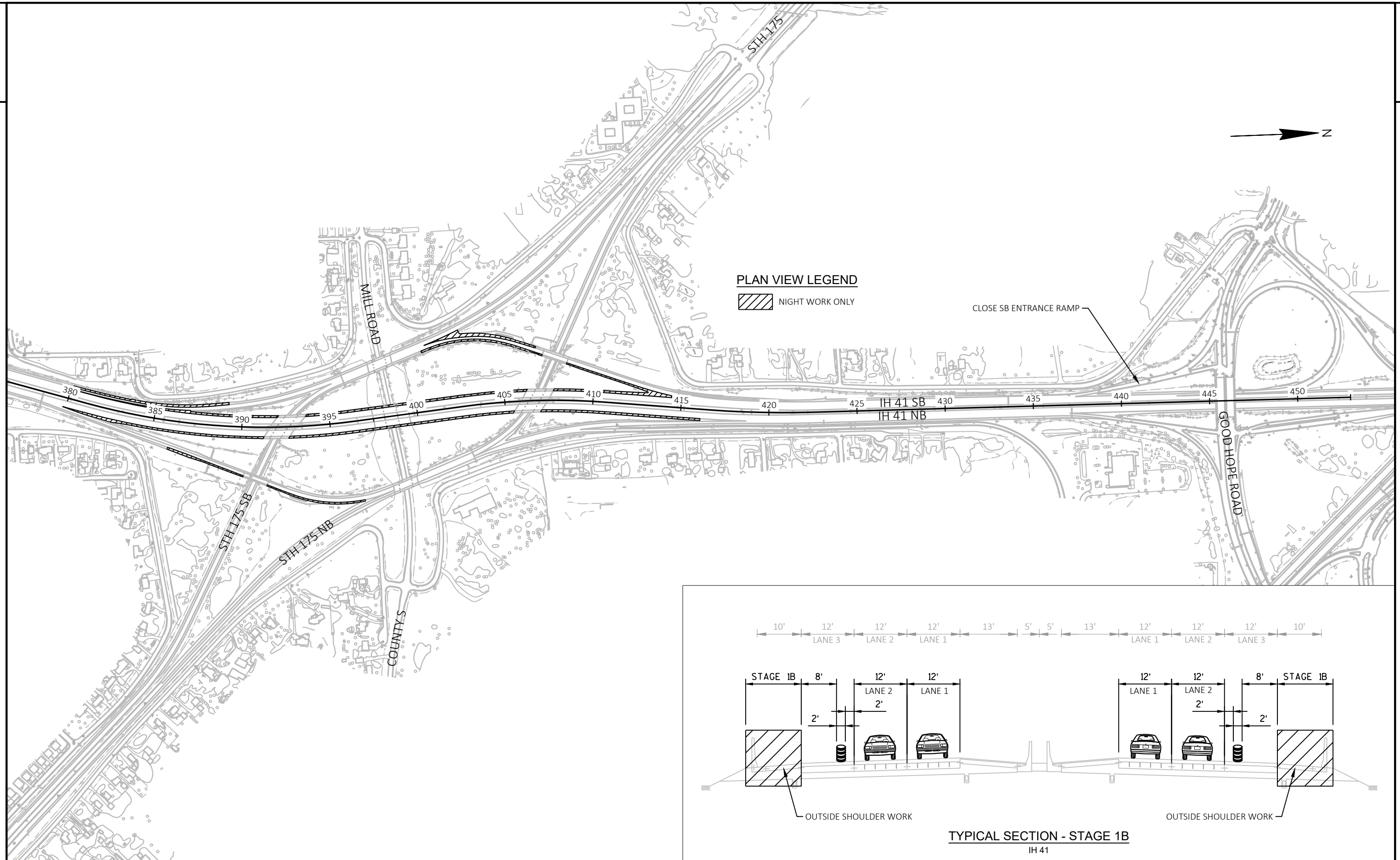


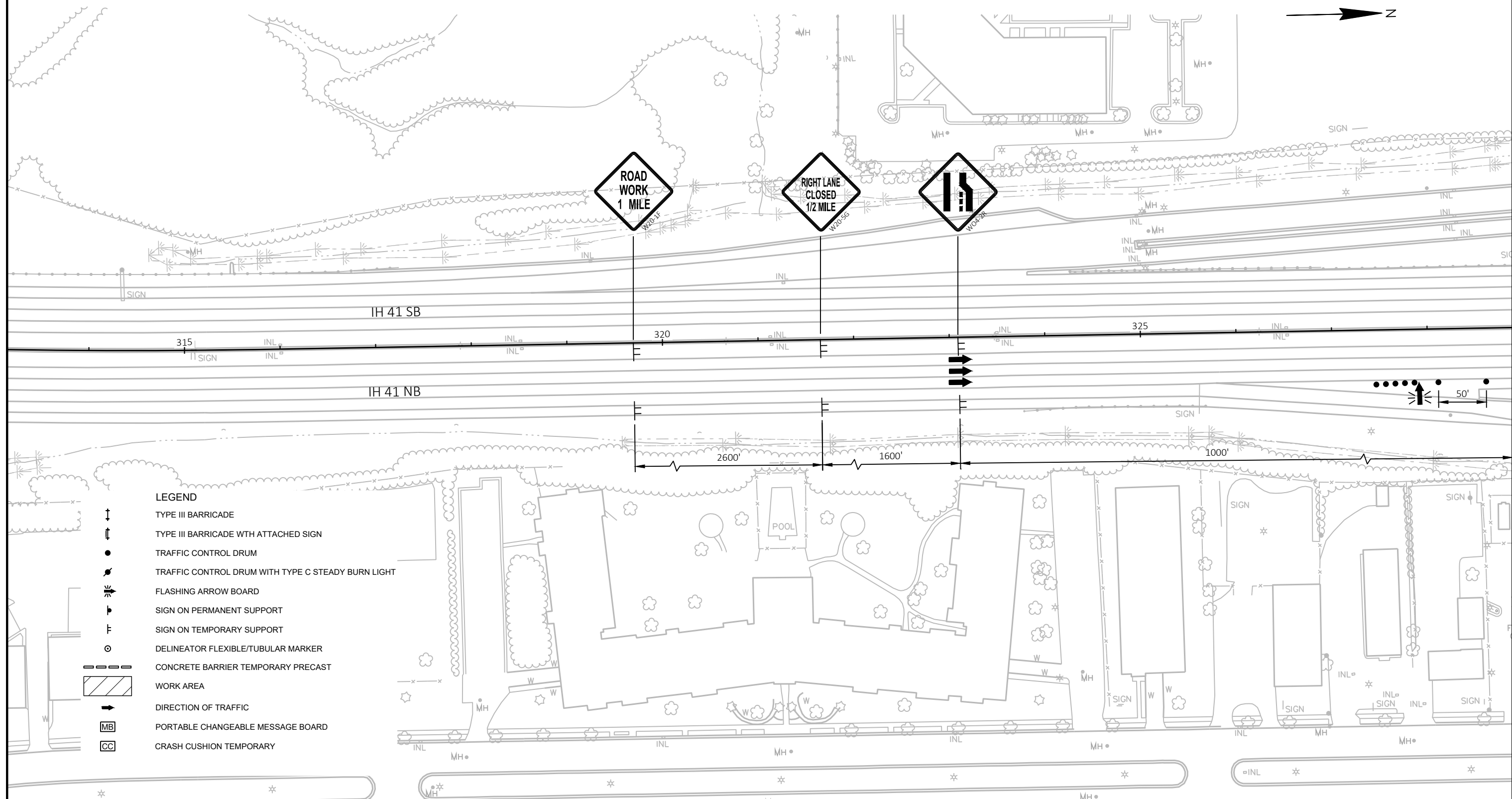


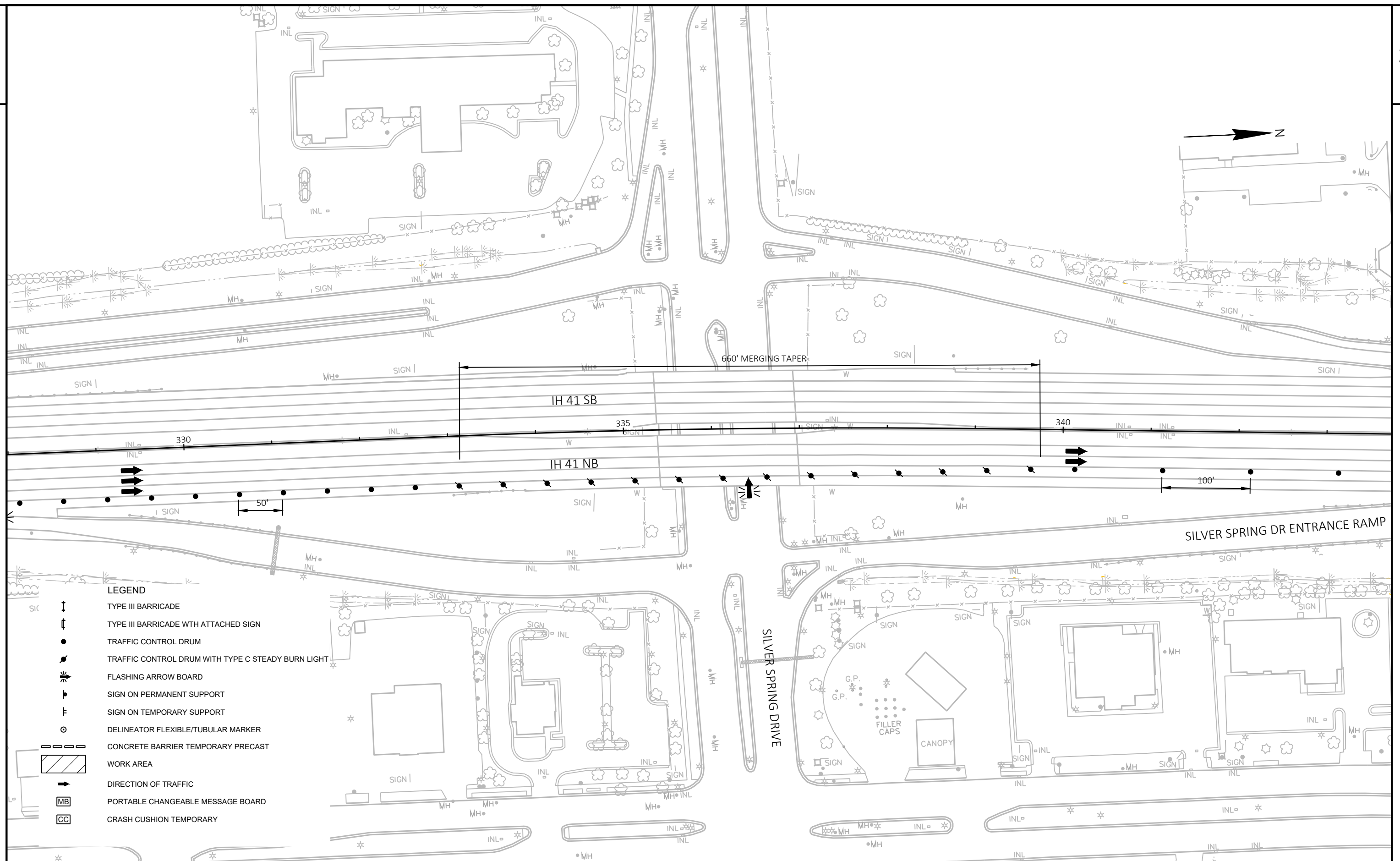












PROJECT NO: 1100-21-71

HWY: IH 41

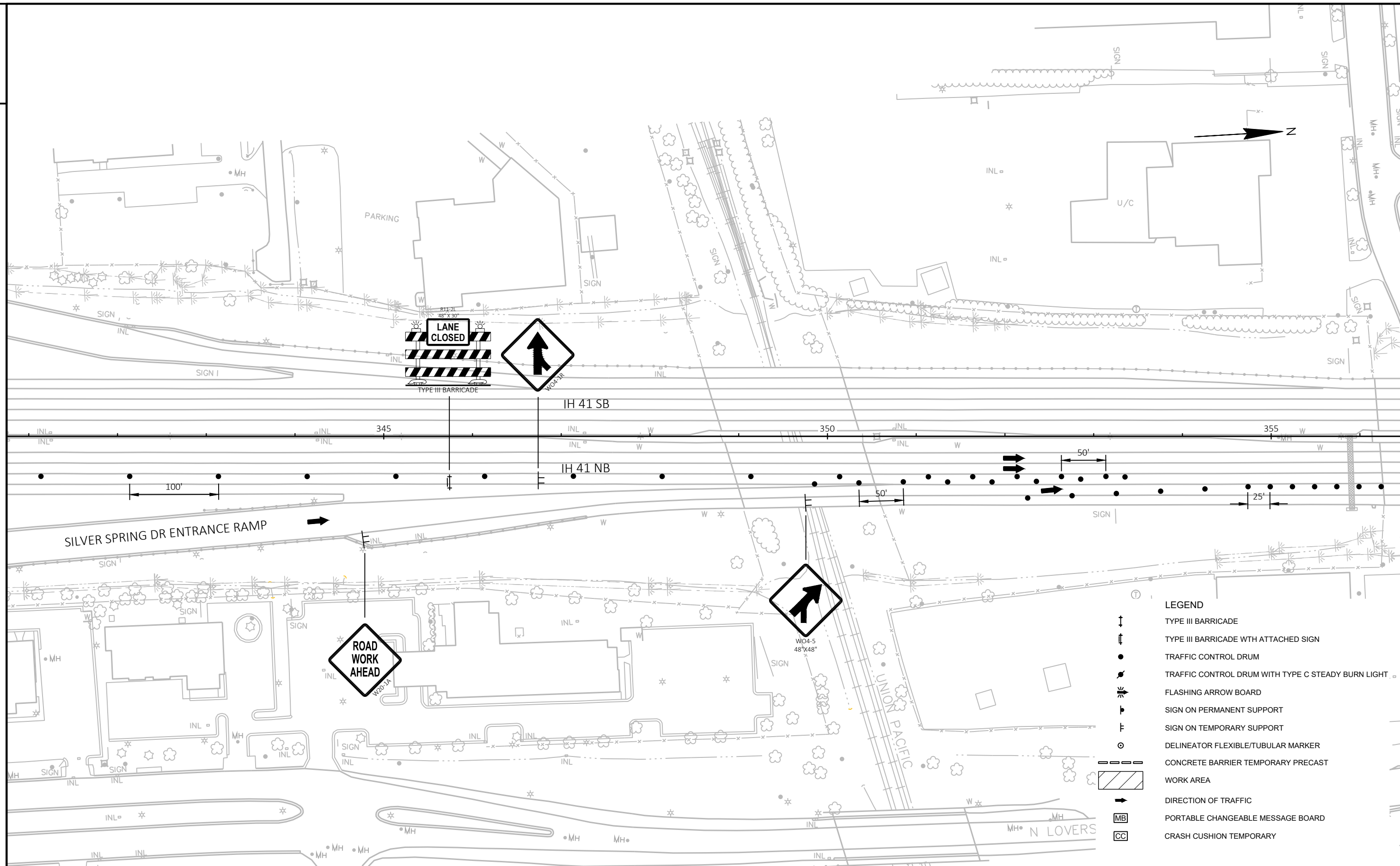
COUNTY: MILWAUKEE

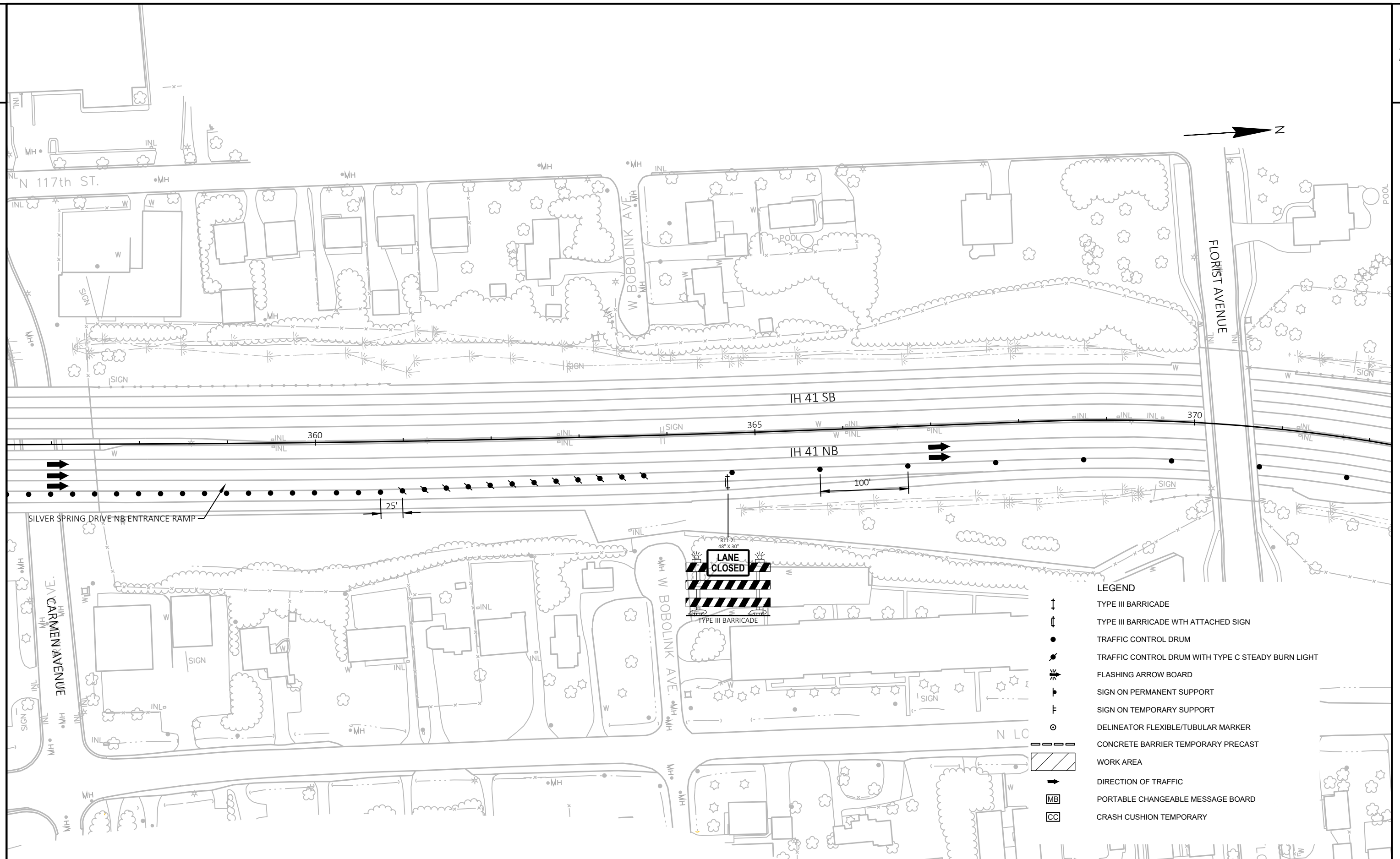
STAGE 1B - OUTSIDE SHOULDER AND RAMP SHOULDER WORK - NIGHT WORK ONLY

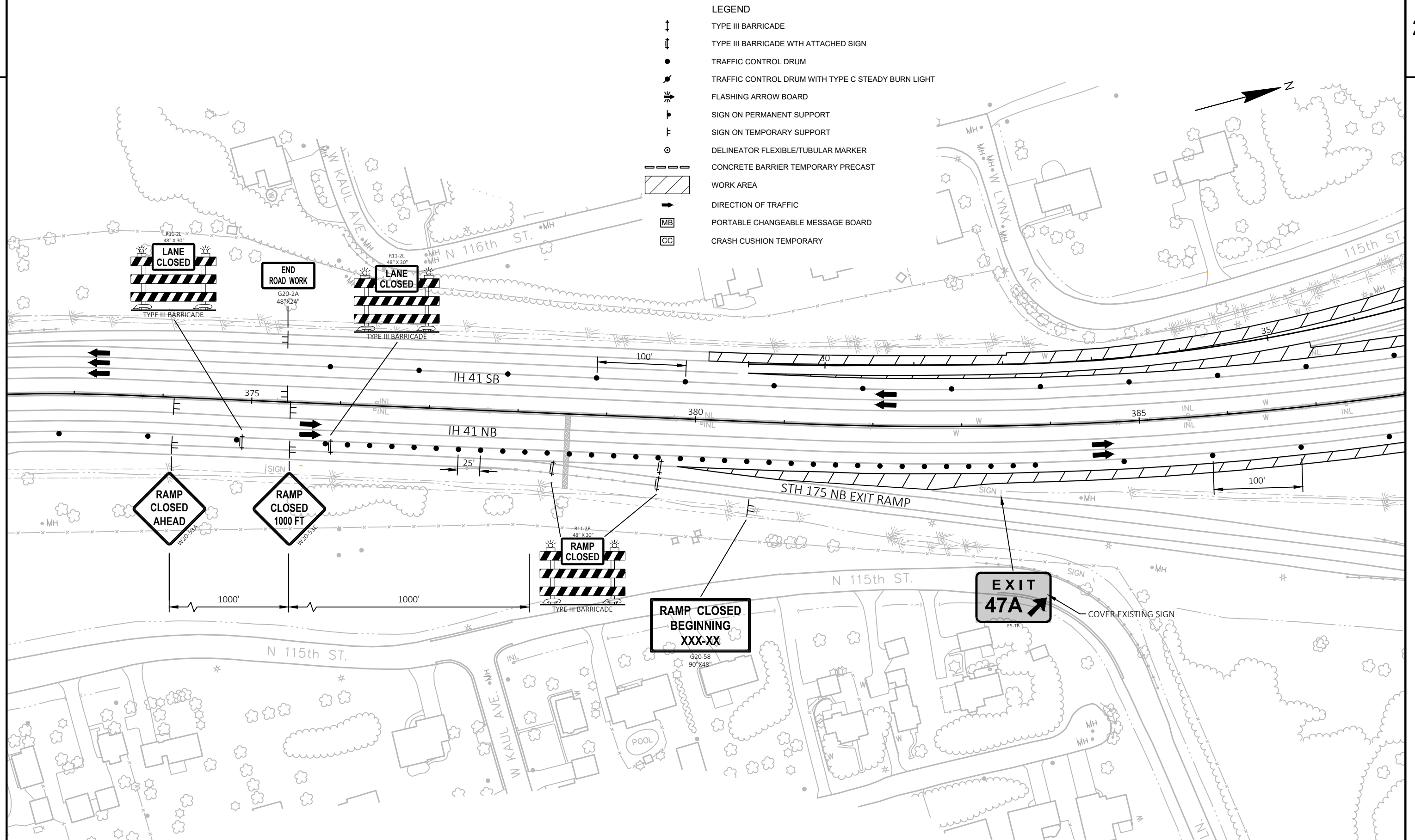
SHEET

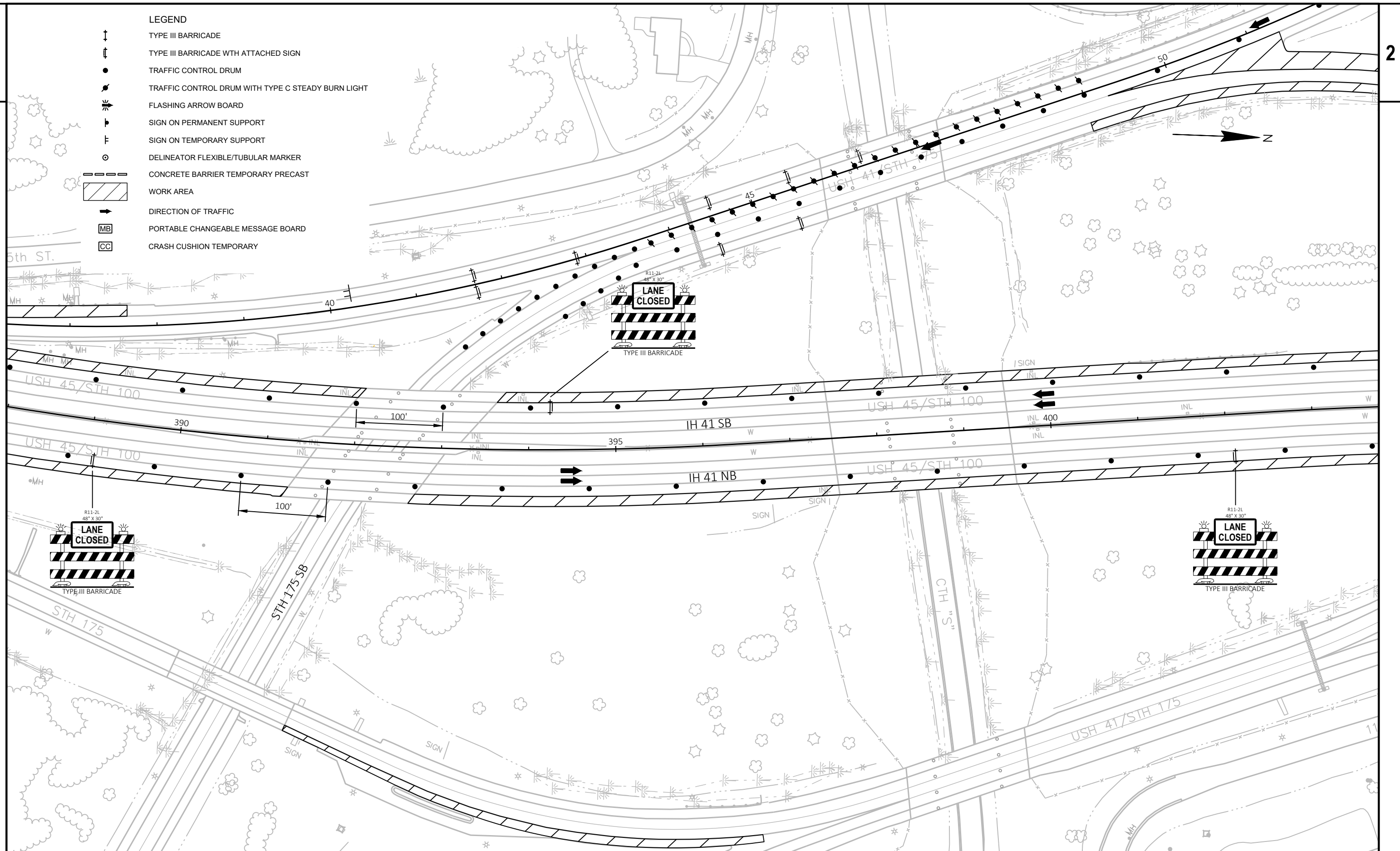
PRE_48

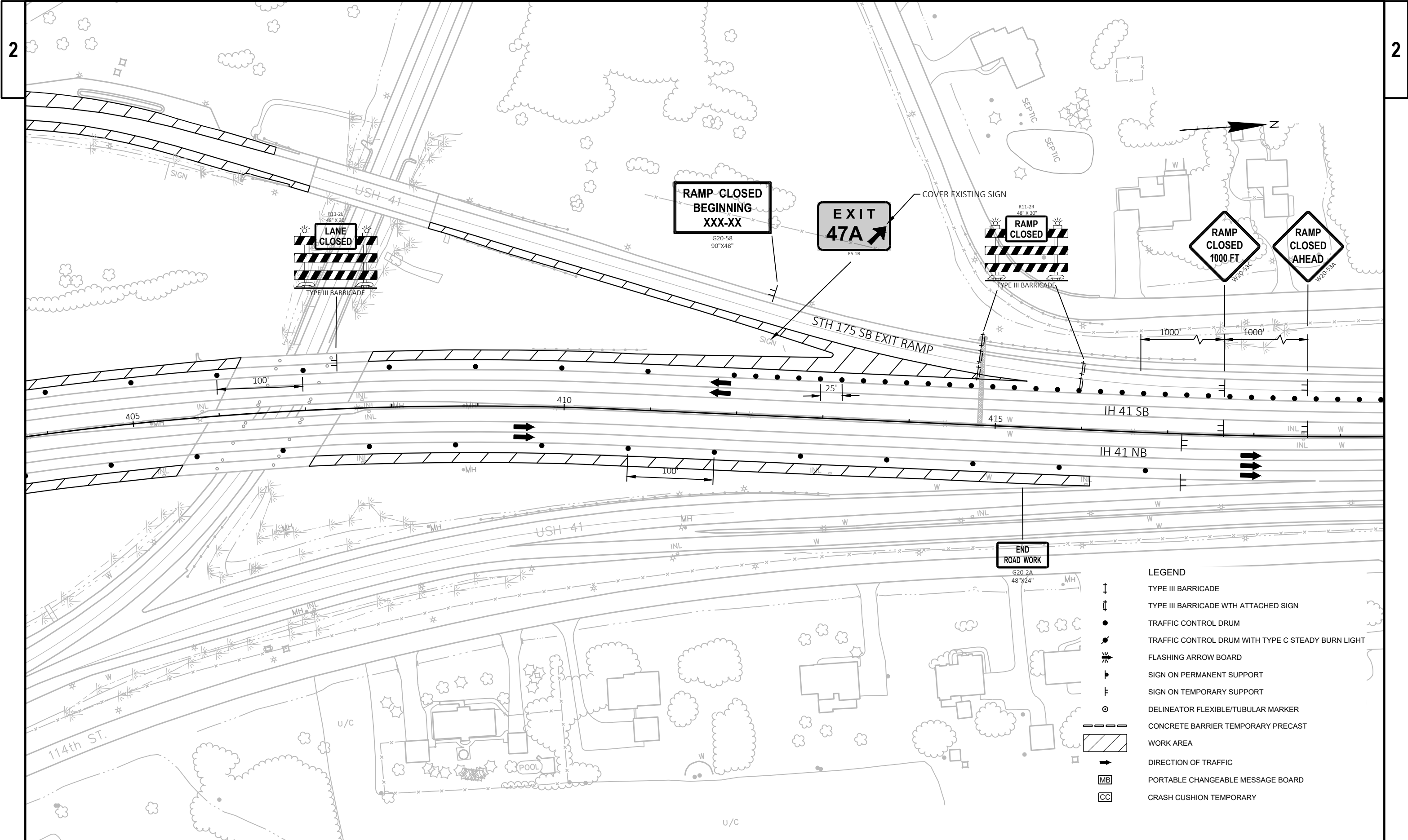
E

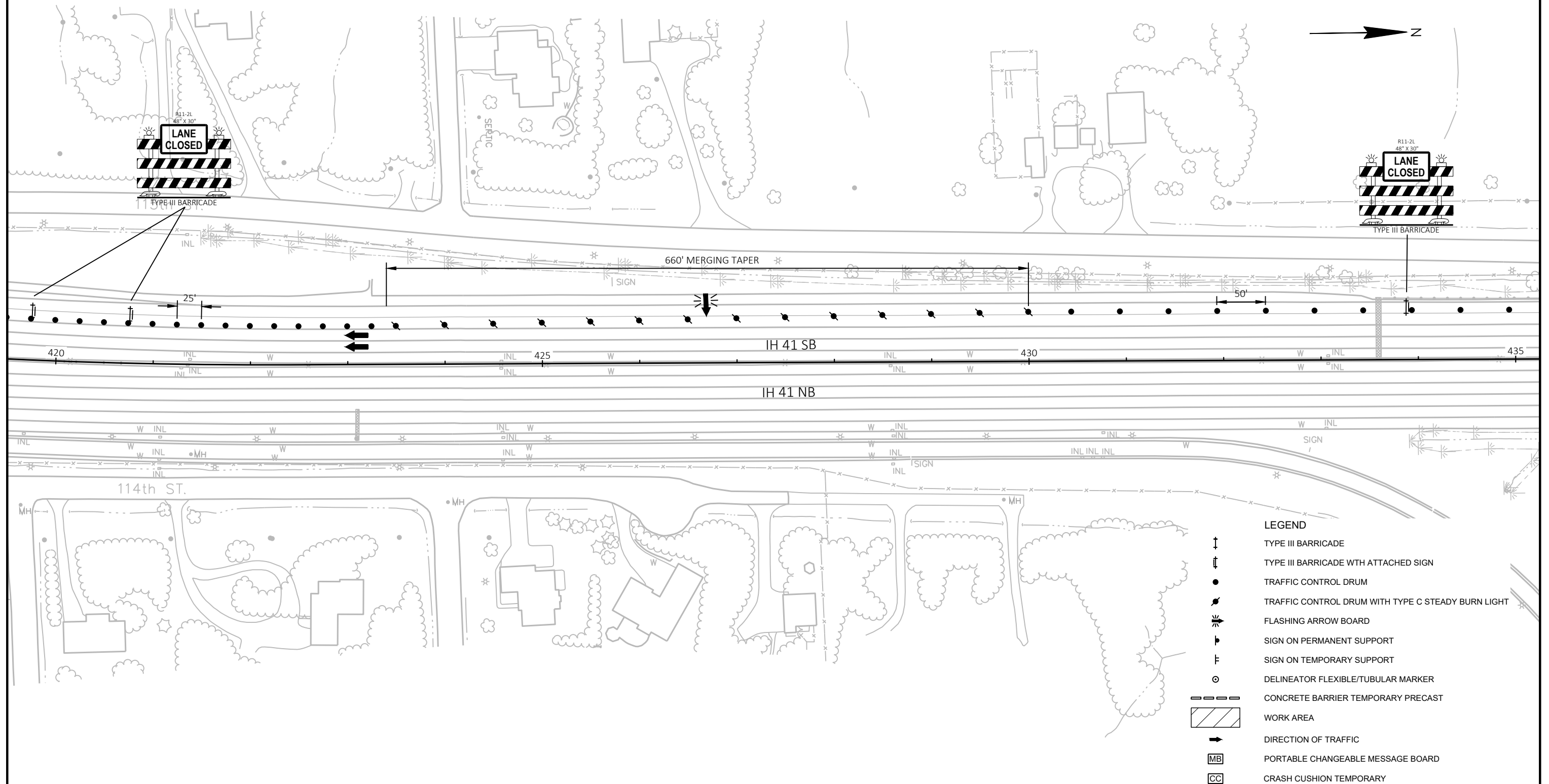












PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 1B - OUTSIDE SHOULDER AND RAMP SHOULDER WORK - NIGHT WORK ONLY

SHEET

PRE_54

E

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\SHEETSPLAN\2018\60% PLANS\TRAFFIC STAGING\026004_STAGE 1B_DETAILS.DWG
LAYOUT NAME - Stage 1B (7)

PLOT DATE : 10/26/2020 1:41 PM

PLOT BY : SCHUMACHER, JAMES D

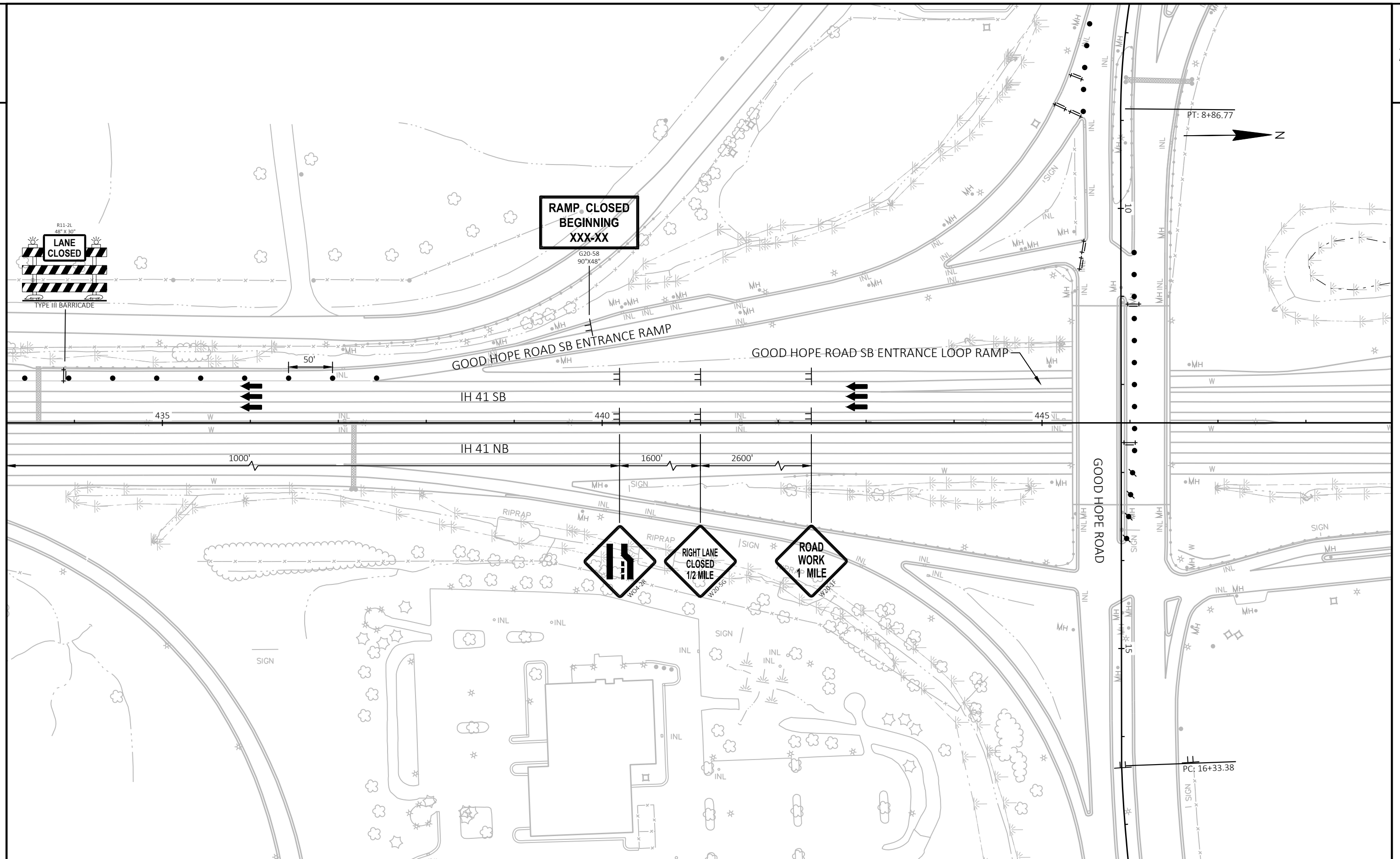
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42

2

2 |



PROJECT NO:	1100-21-71
-------------	------------

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 1B - OUTSIDE SHOULDER AND RAMP SHOULDER WORK - NIGHT WORK ONLY

SHEET

PRE_55

-
-
-

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\SHEETS\PLAN\2018\60% PLANS\TRAFFIC STAGING\026004_STAGE 1B_DETAILS.DWG
LAYOUT NAME - Stage 1B (8)

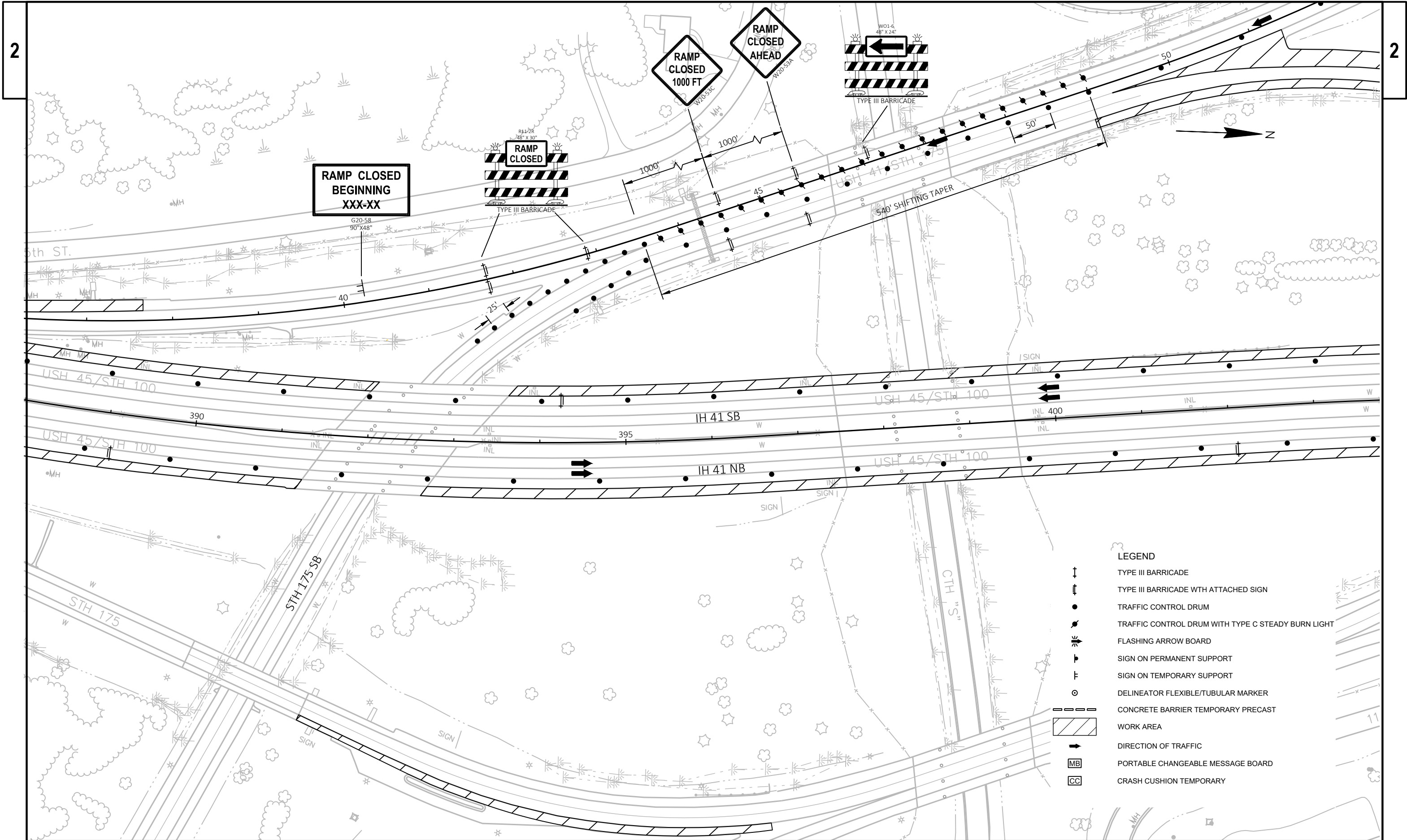
PLOT DATE : 10/26/2020 1:41 PM

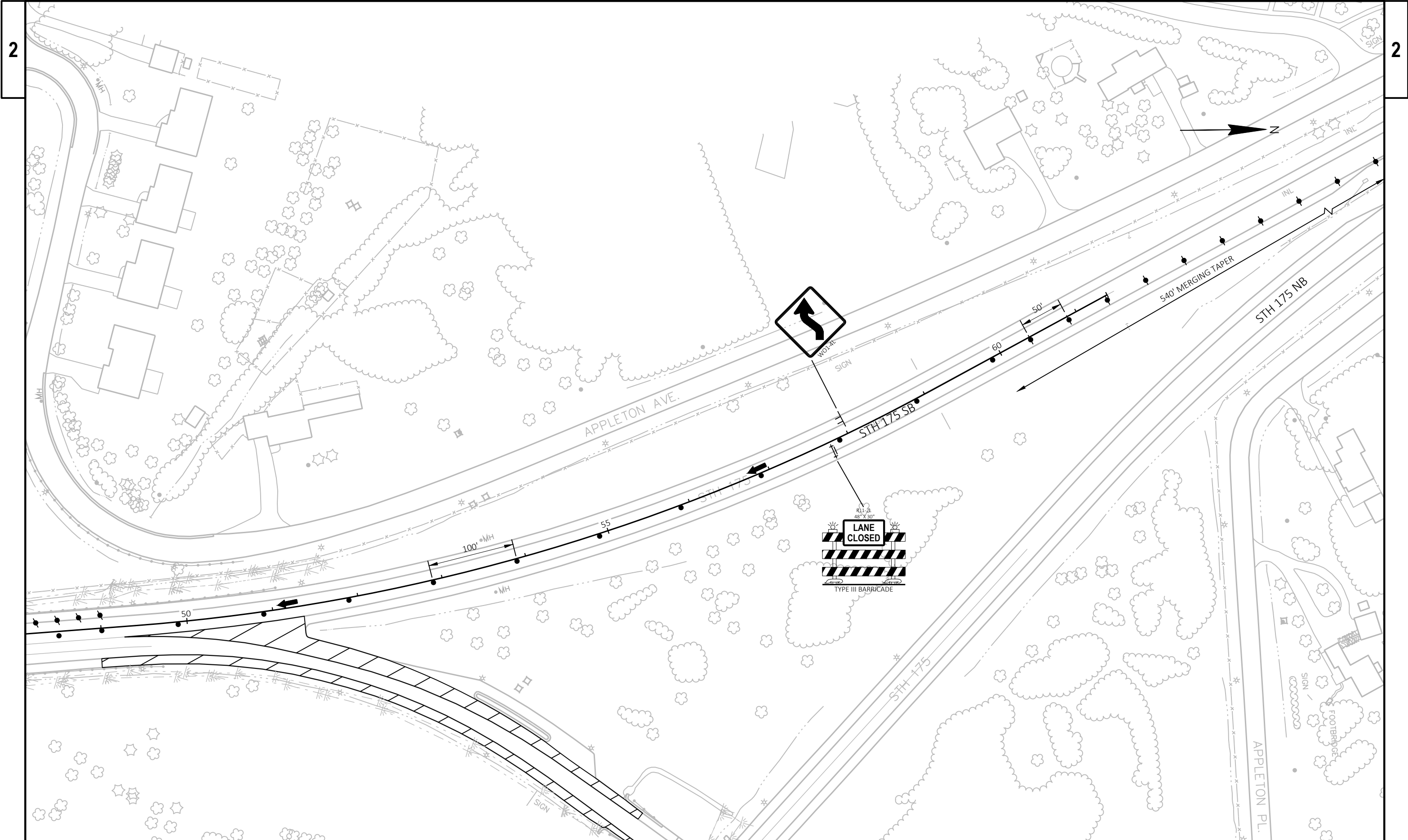
PLOT BY : SCHUMACHER, JAMES D

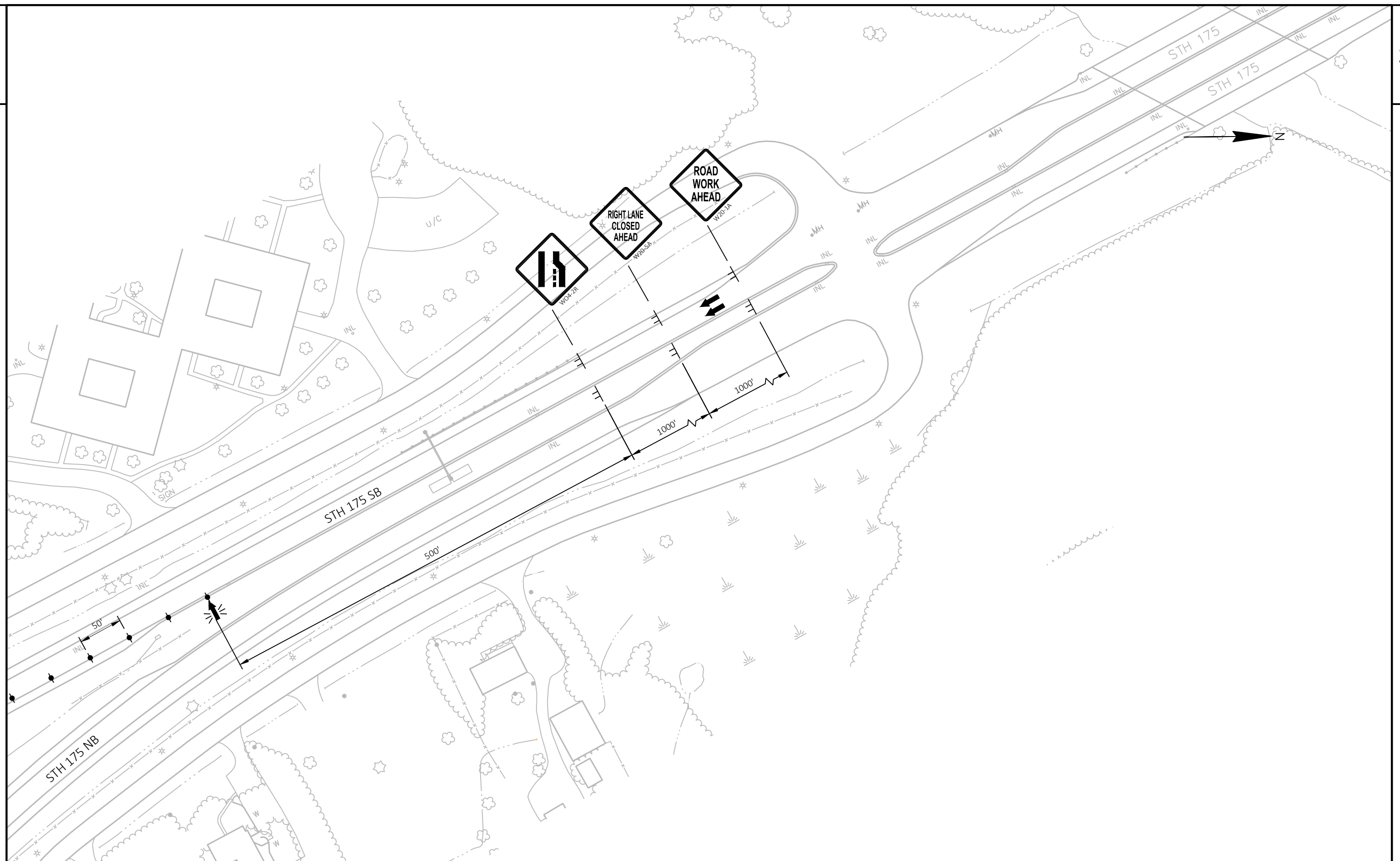
PLOT NAME :

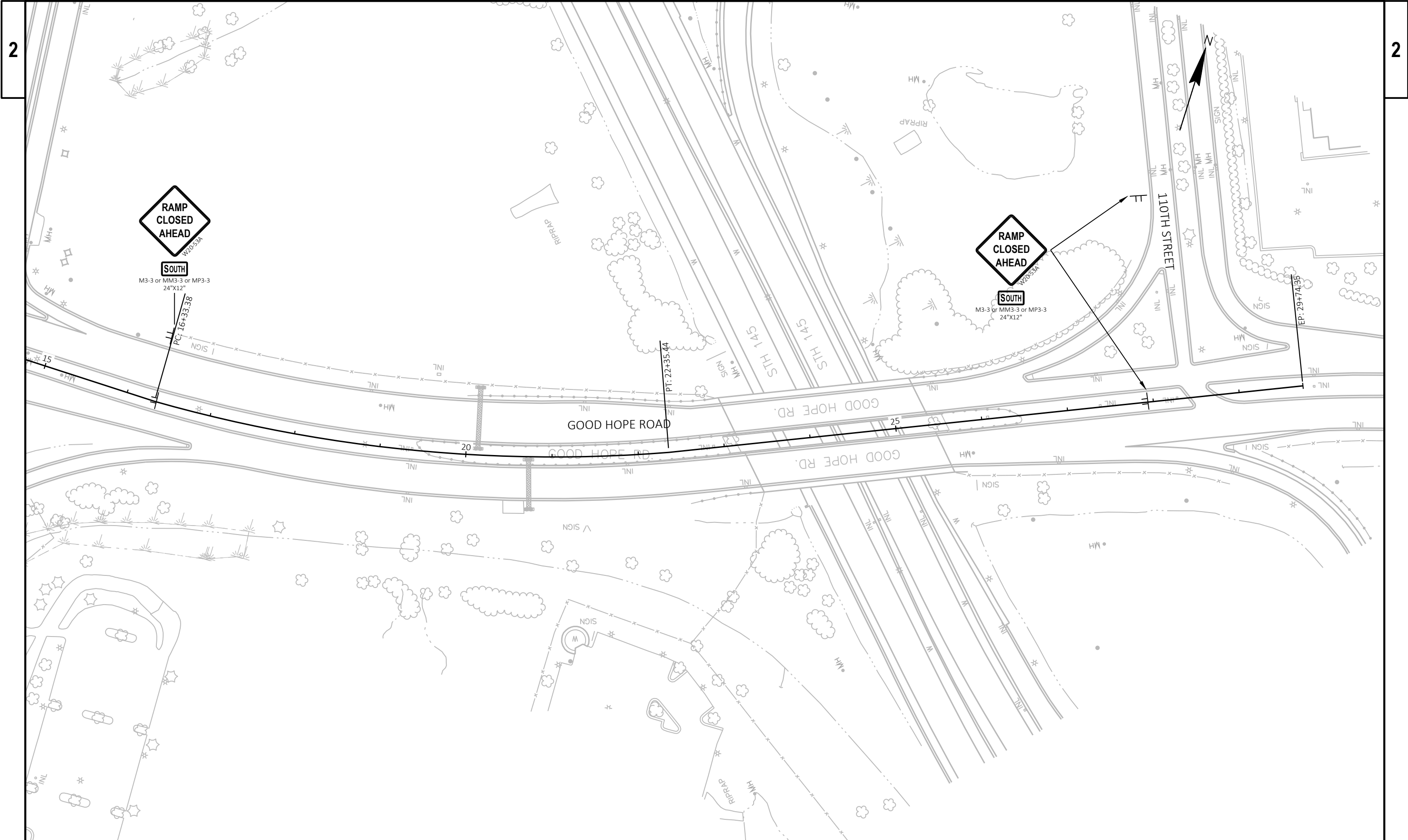
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42





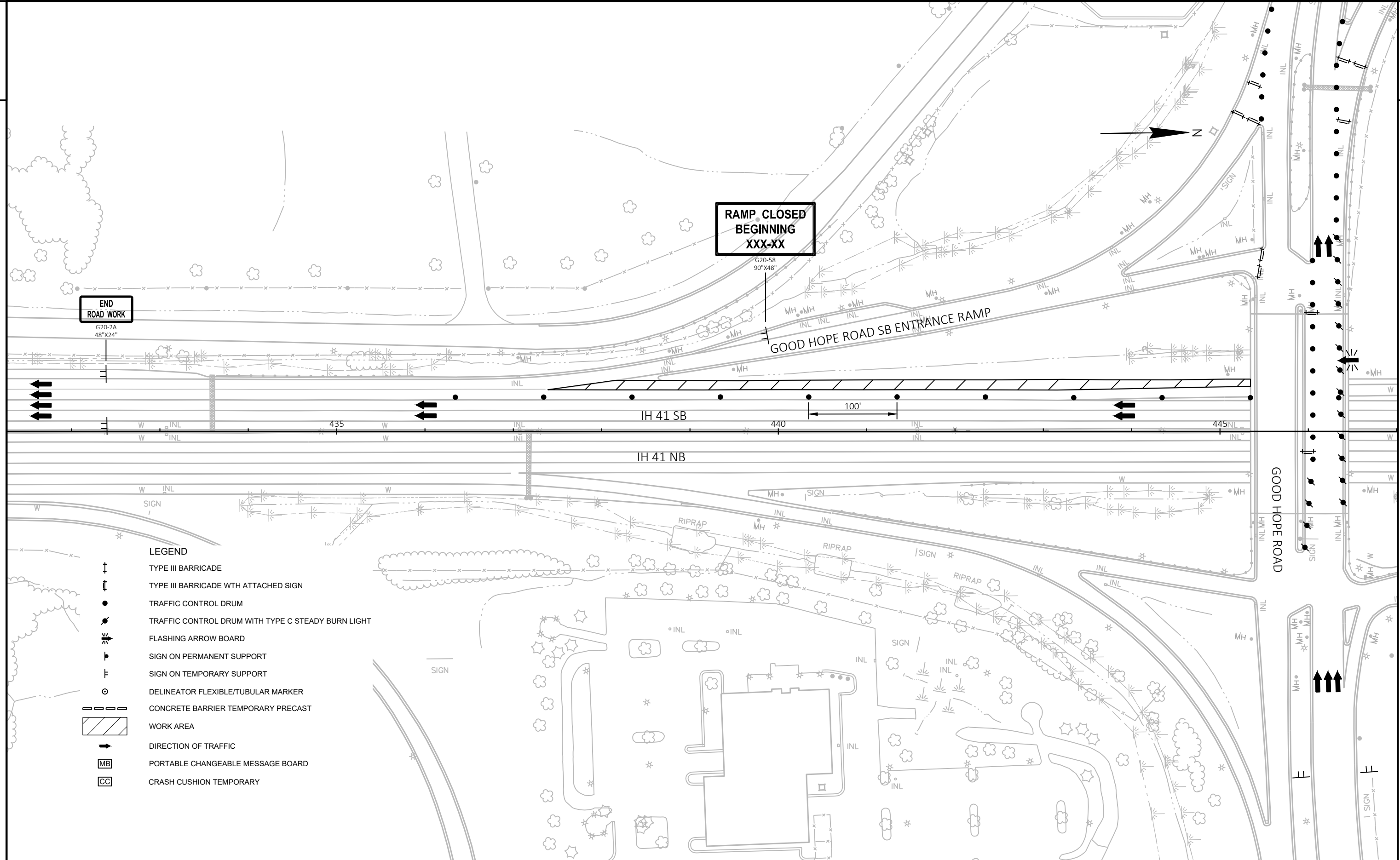






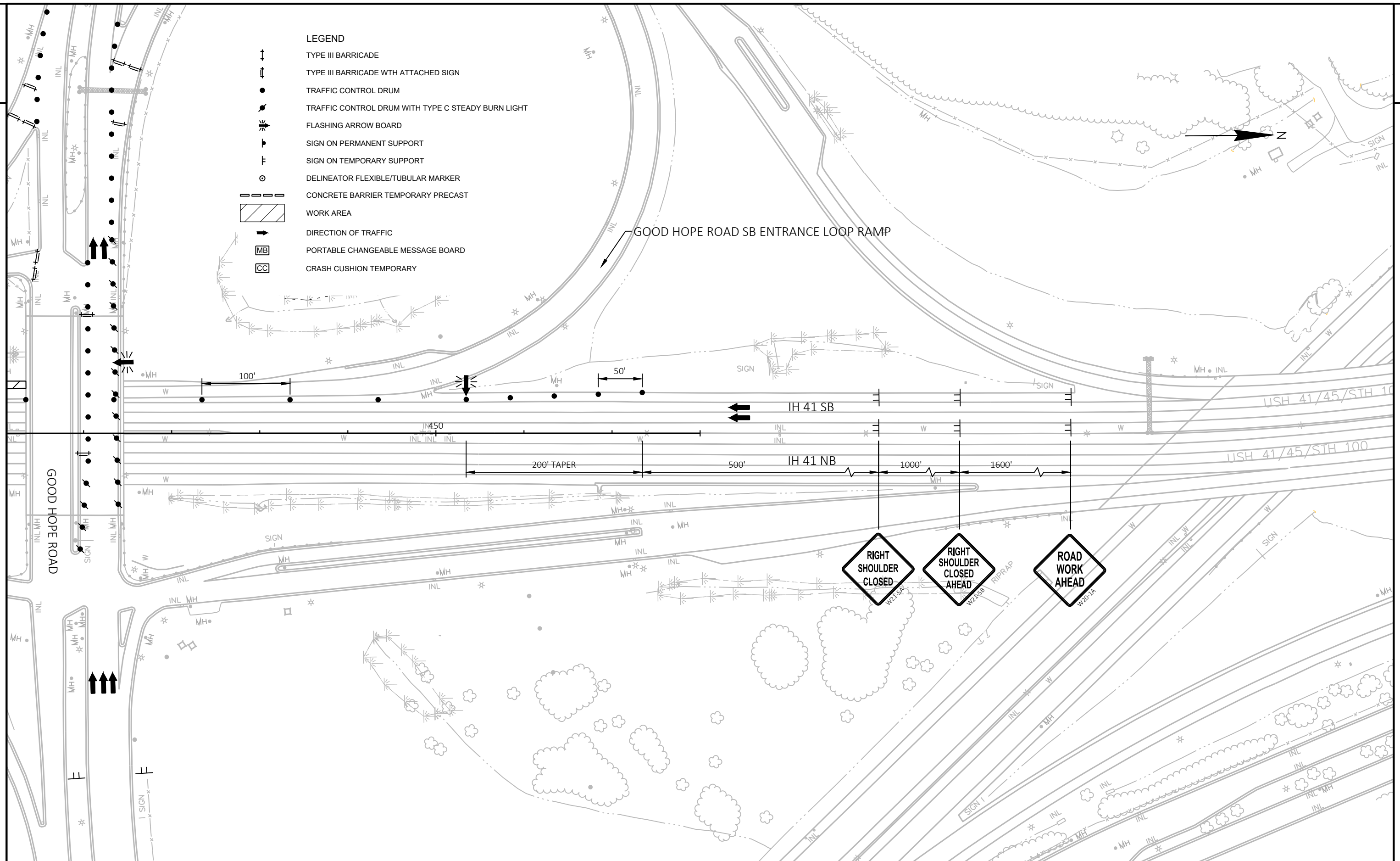
2

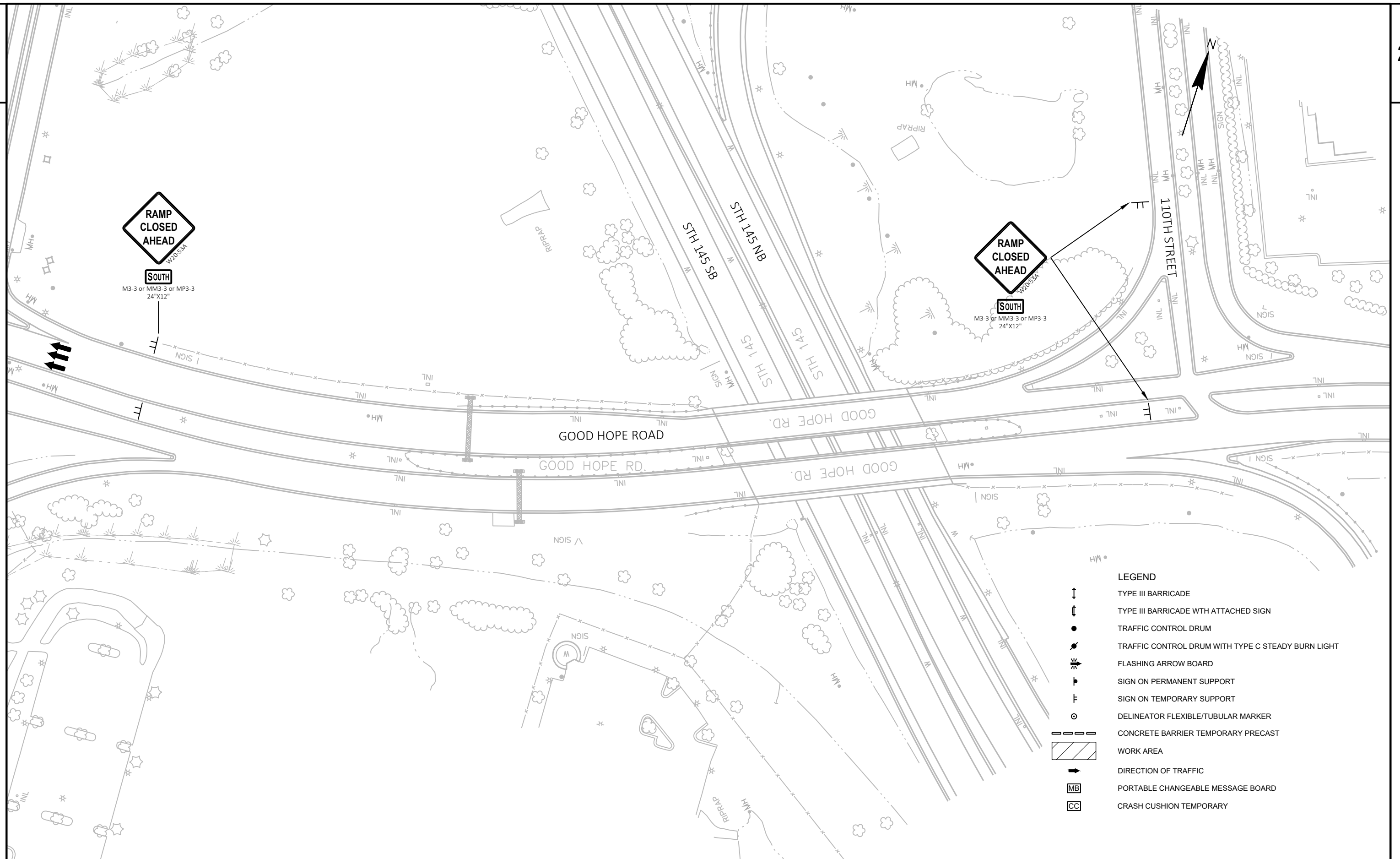
2

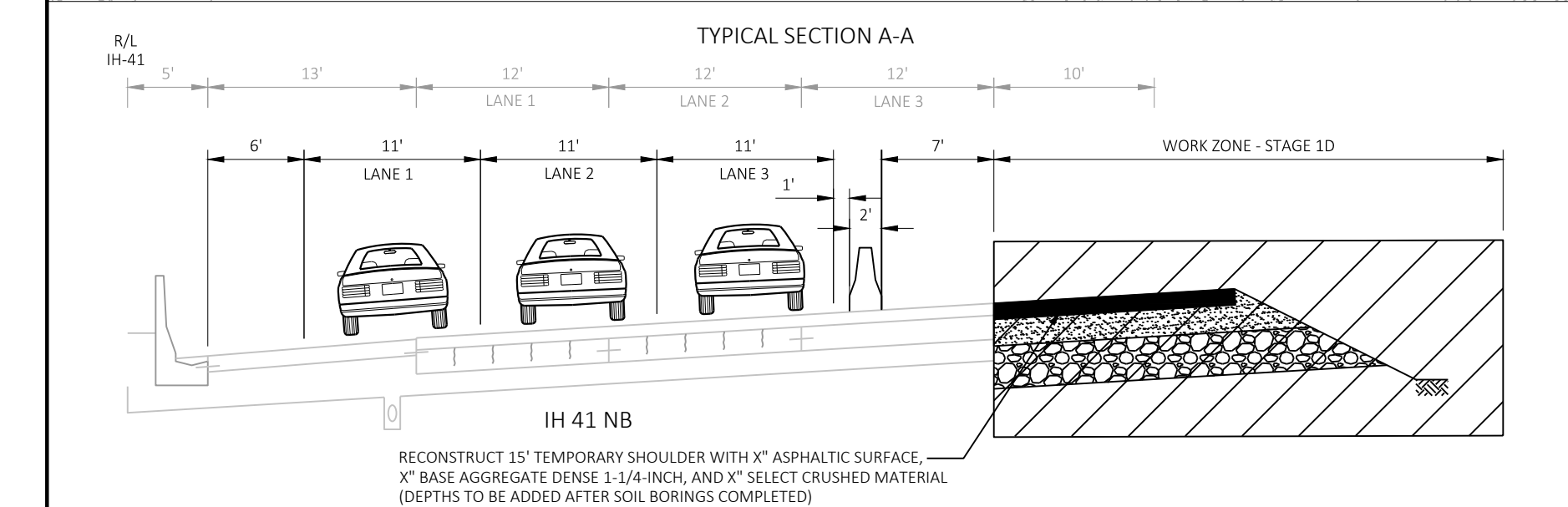
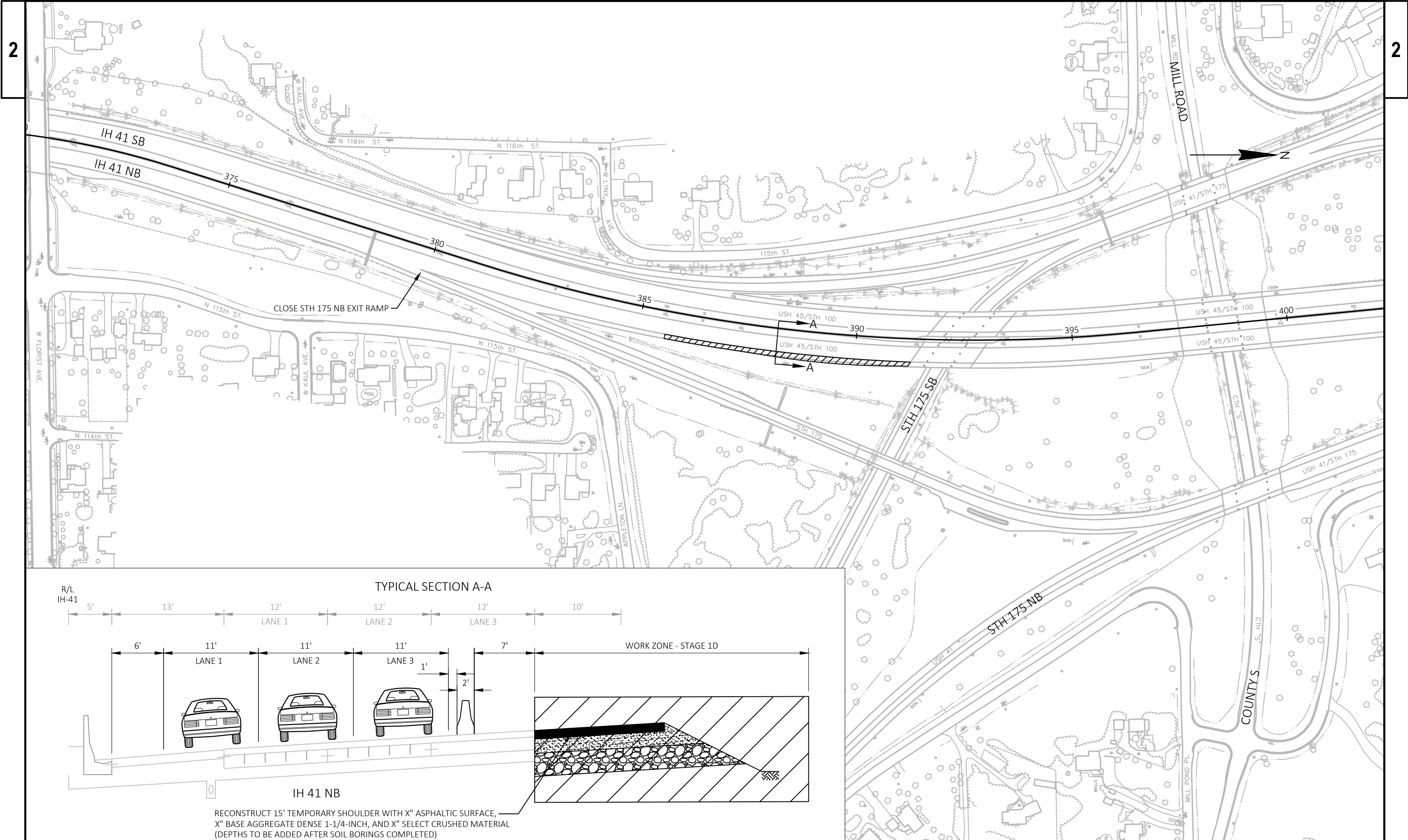


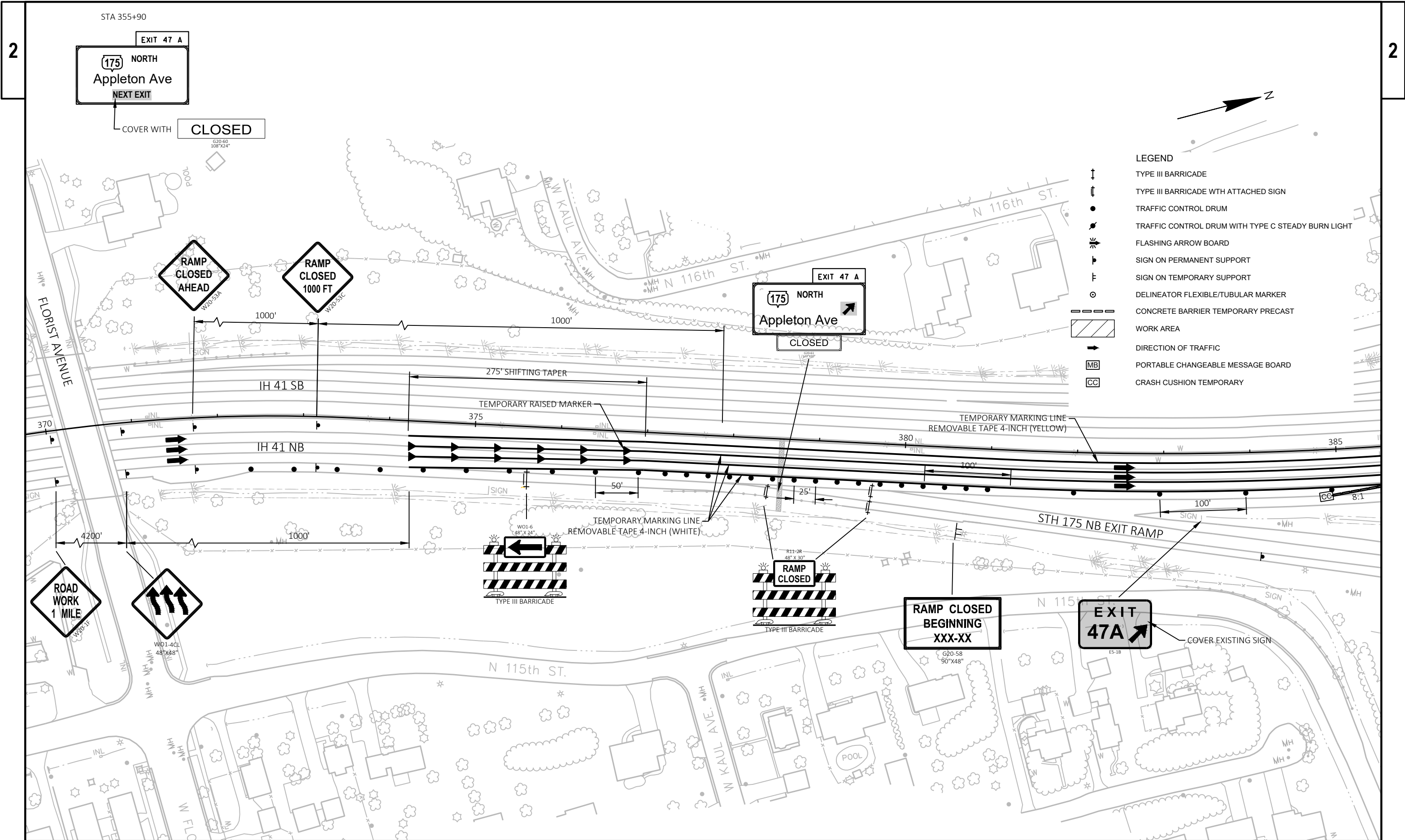
PROJECT NO: 1100-21-71	HWY: IH 41	COUNTY: MILWAUKEE	STAGE 1C - GOOD HOPE ROAD SB RAMP SHOULDER WORK - NIGHT WORK ONLY	SHEET PRE 62 E
------------------------	------------	-------------------	---	----------------

FILE NAME :	C:\CIVIL 3D PROJECTS\11002101\SHEETSPLAN\2018\60% PLANS\TRAFFIC STAGING\026006_STAGE 1C_DETAILS.DWG	PLOT DATE :	10/26/2020 1:47 PM	PLOT BY :	SCHUMACHER, JAMES D	PLOT NAME :		PLOT SCALE :	1 IN=100 FT	WISDOT/CADD SHEET 42
LAYOUT NAME - Stage 1C - IH 41										

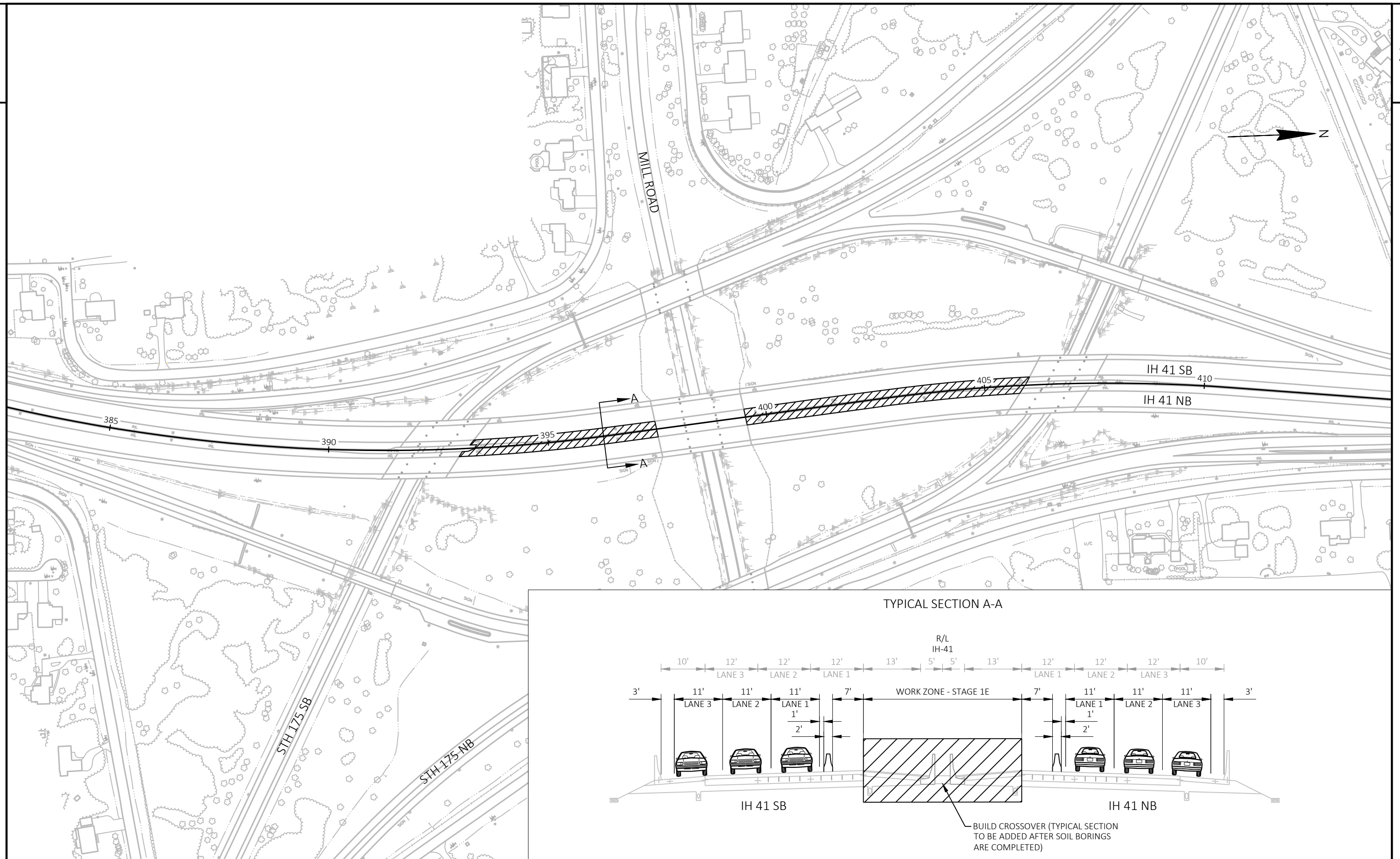






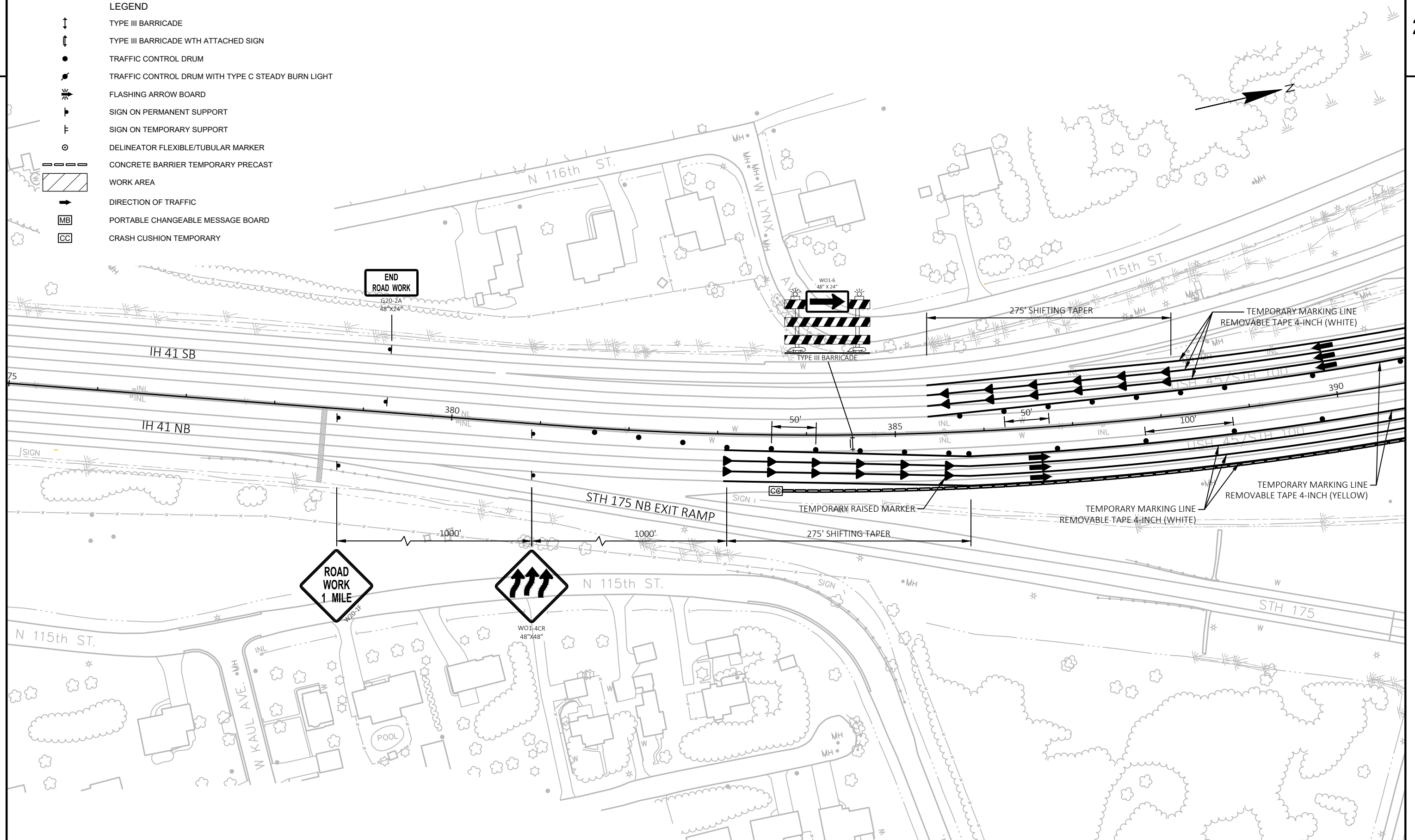






LEGEND

- ↑ TYPE III BARRICADE
- ↑ TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- DELINEATOR FLEXIBLE/TUBULAR MARKER
- ▬ CONCRETE BARRIER TEMPORARY PRECAST
- ▬ WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD
- CC CRASH CUSHION TEMPORARY



PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 1E - CROSSOVER WORK

SHEET

PRE_70

E

FILE NAME: C:\CIVIL 3D PROJECTS\11002101\SHEETPLAN\2018\60% PLANS\TRAFFIC STAGING\026010_STAGE 1E_DETAILS.DWG
LAYOUT NAME - Stage 1E

PLOT DATE: 10/26/2020 1:54 PM

PLOT BY: SCHUMACHER, JAMES D

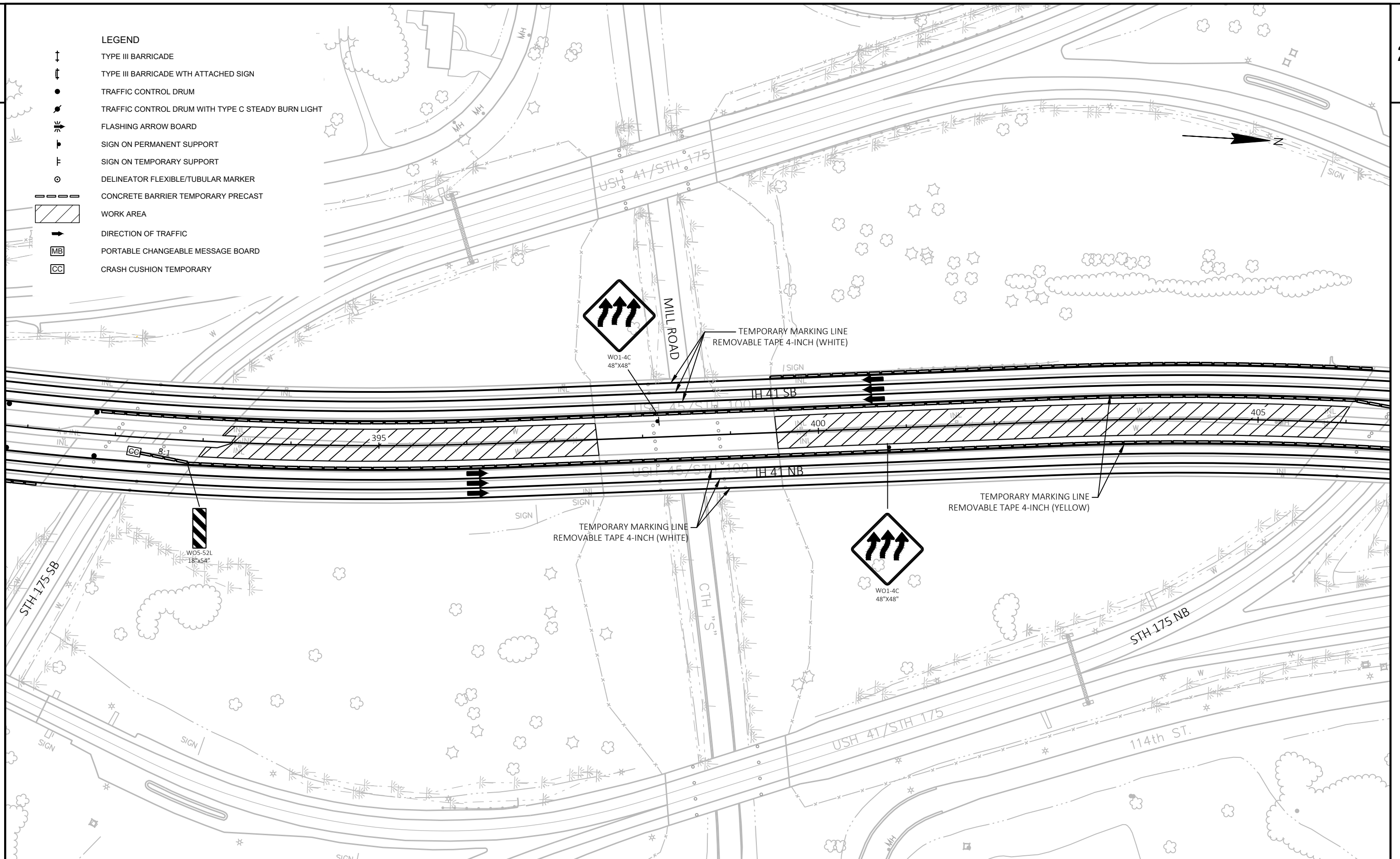
PLOT NAME:

PLOT SCALE: 1 IN:100 FT

WISDOT/CADDs SHEET 42

LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
-  FLASHING ARROW BOARD
-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  DELINEATOR FLEXIBLE/TUBULAR MARKER
-  CONCRETE BARRIER TEMPORARY PRECAST
-  WORK AREA
-  DIRECTION OF TRAFFIC
-  PORTABLE CHANGEABLE MESSAGE BOARD
-  CRASH CUSHION TEMPORARY



PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 1E - CROSSOVER WORK

SHEET

PRE_71 E

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\SHEETPLAN\2018\60% PLANS\TRAFFIC STAGING\026010_STAGE 1E_DETAILS.DWG
LAYOUT NAME - Stage 1E (1)

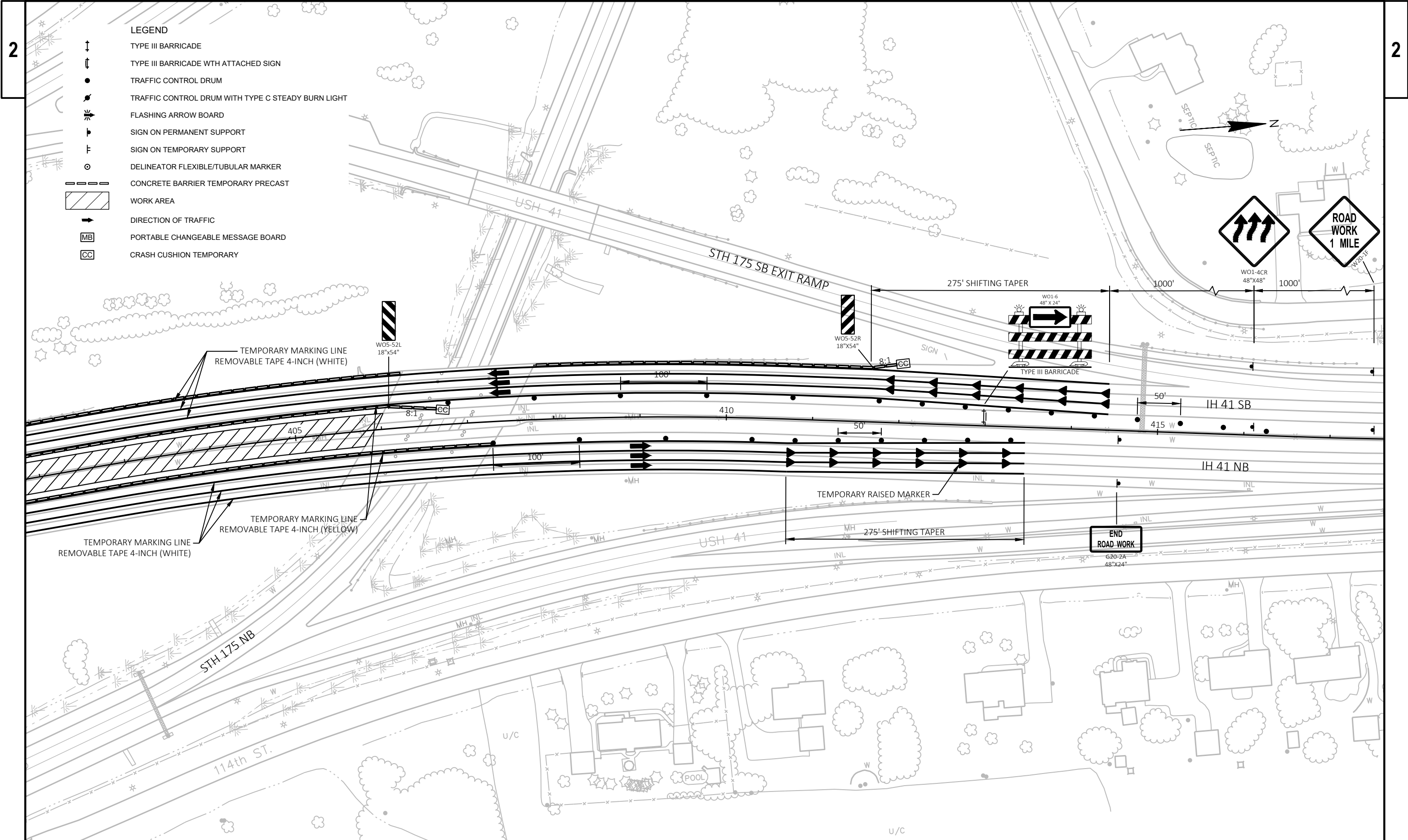
PLOT DATE : 10/26/2020 1:54 PM

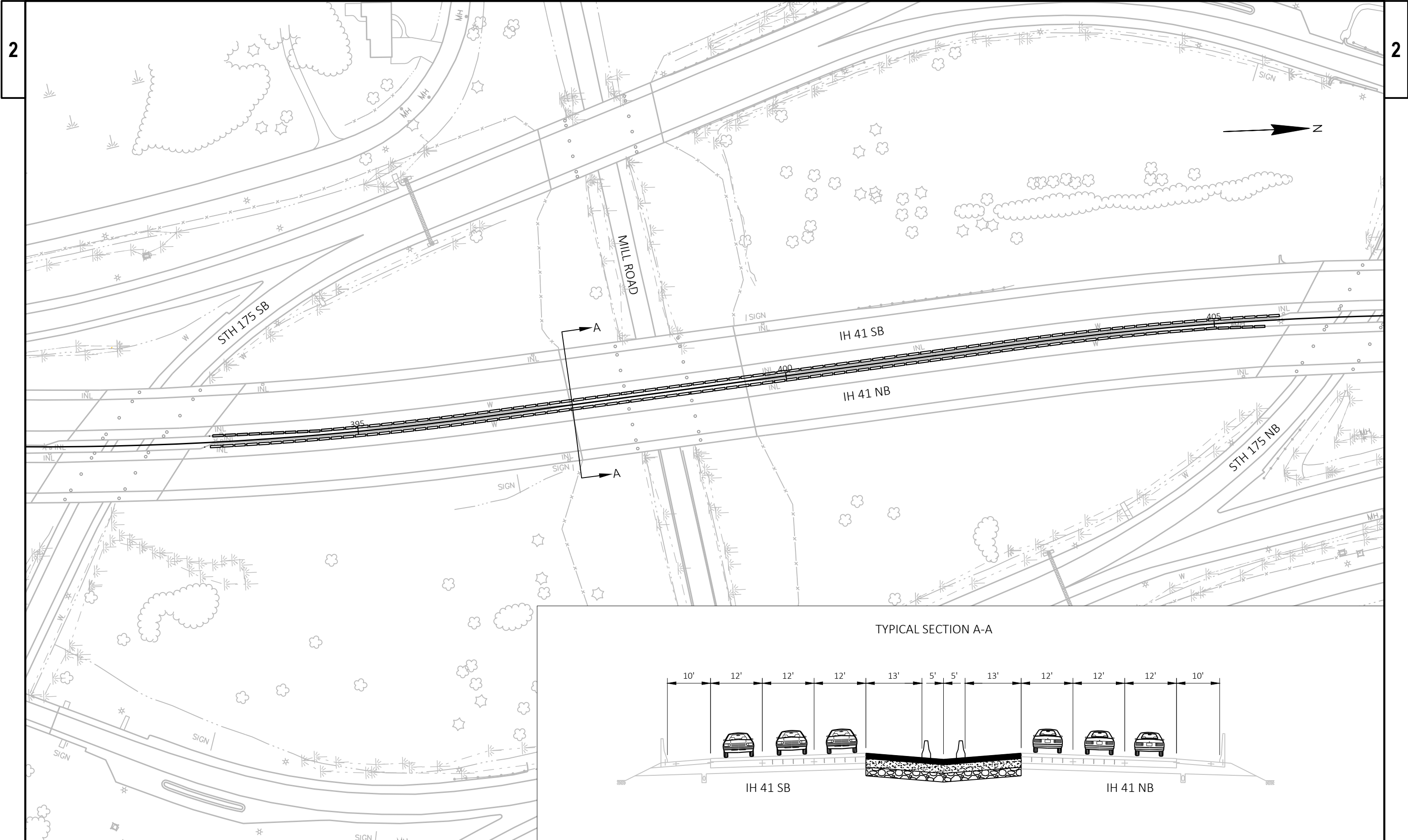
PLOT BY : SCHUMACHER, JAMES D

PLOT NAME :

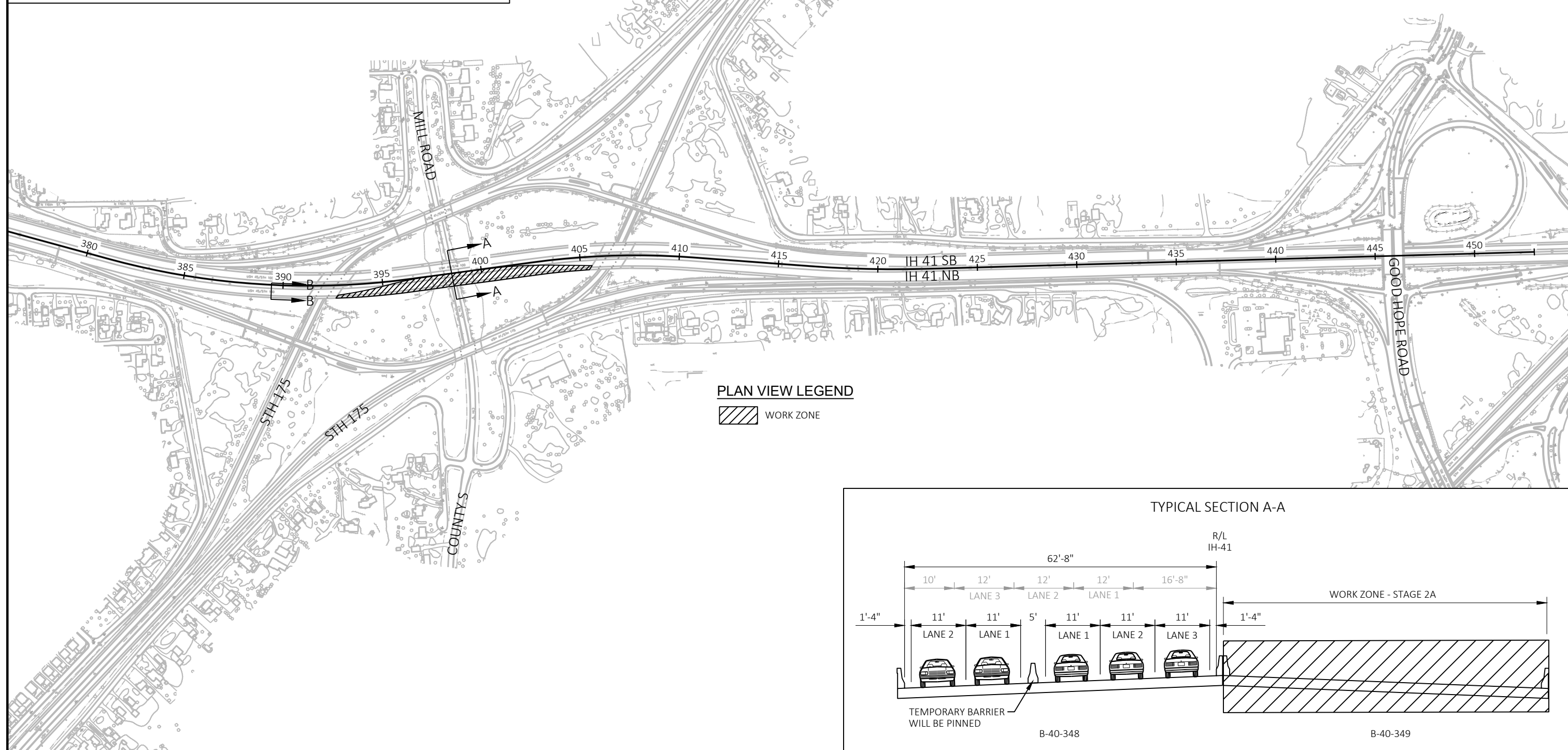
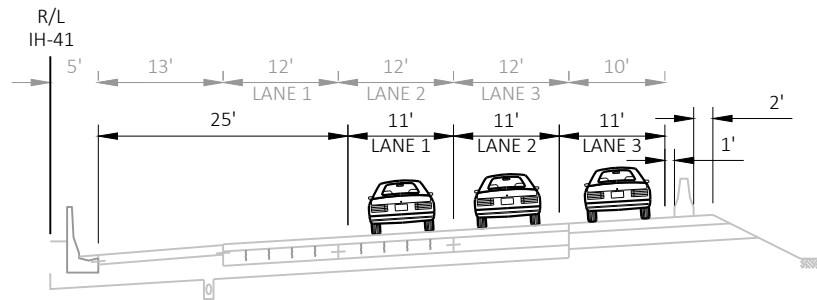
PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42

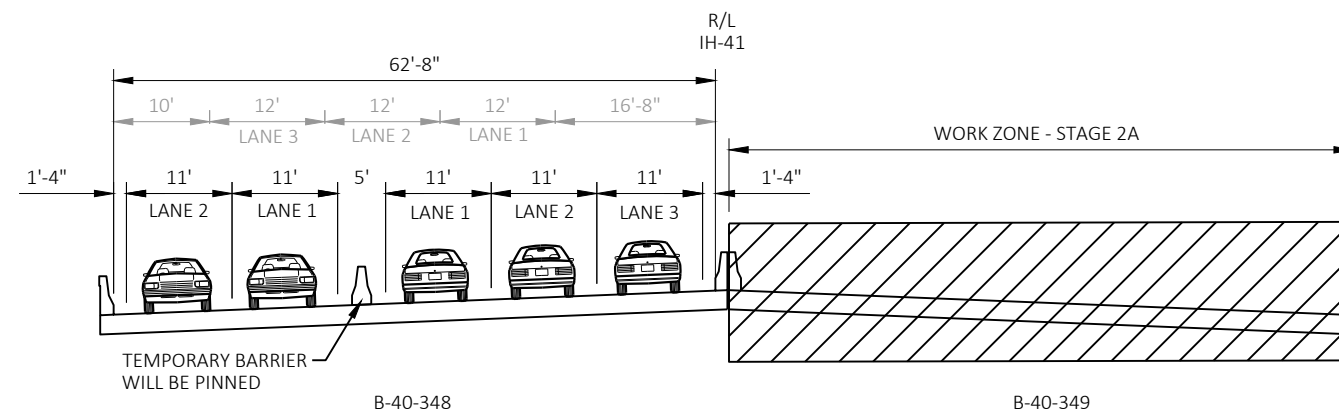




TYPICAL SECTION B-B



TYPICAL SECTION A-A



PROJECT NO: 1100-21-71

HWY: IH 41

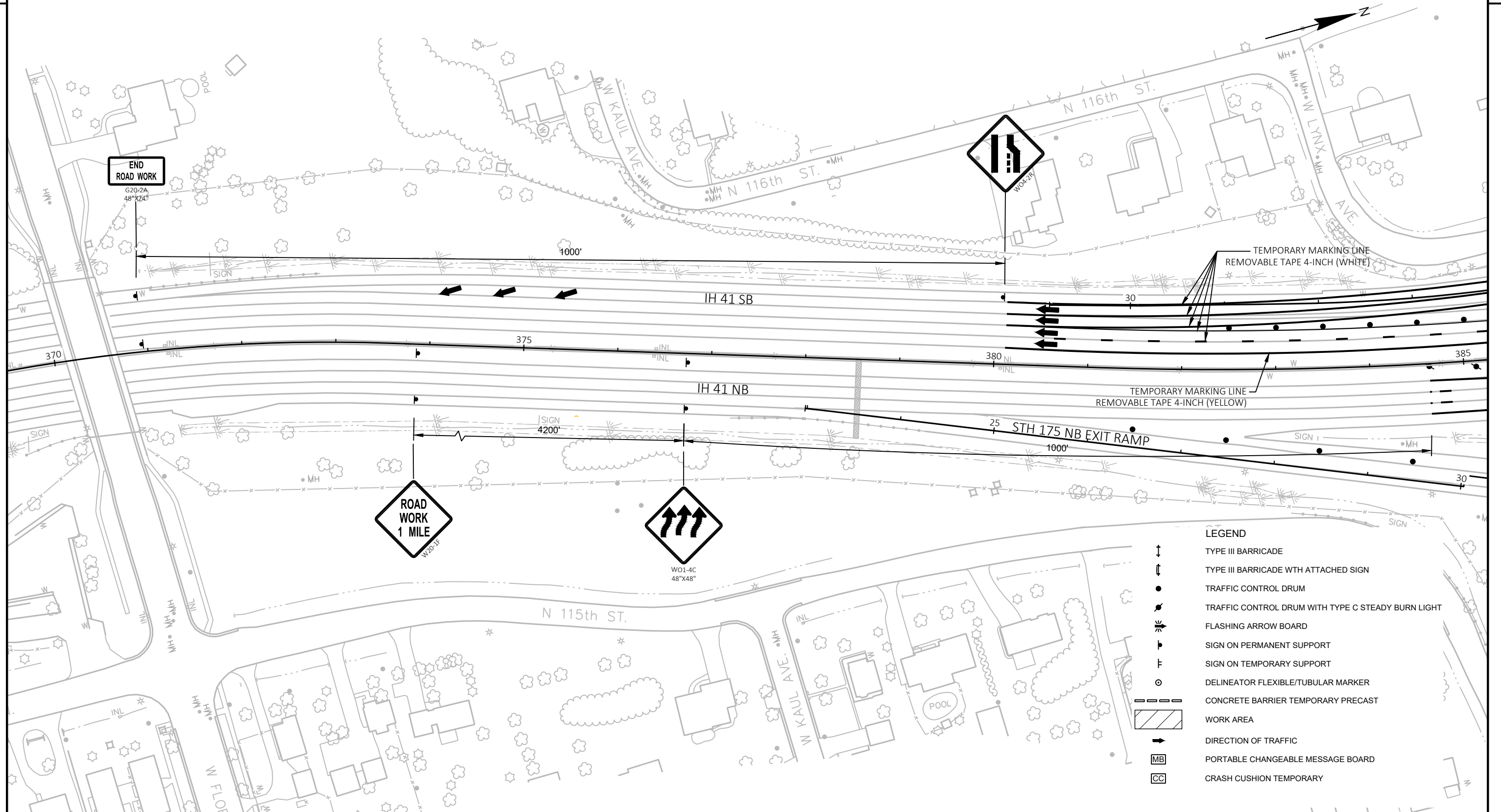
COUNTY: MILWAUKEE

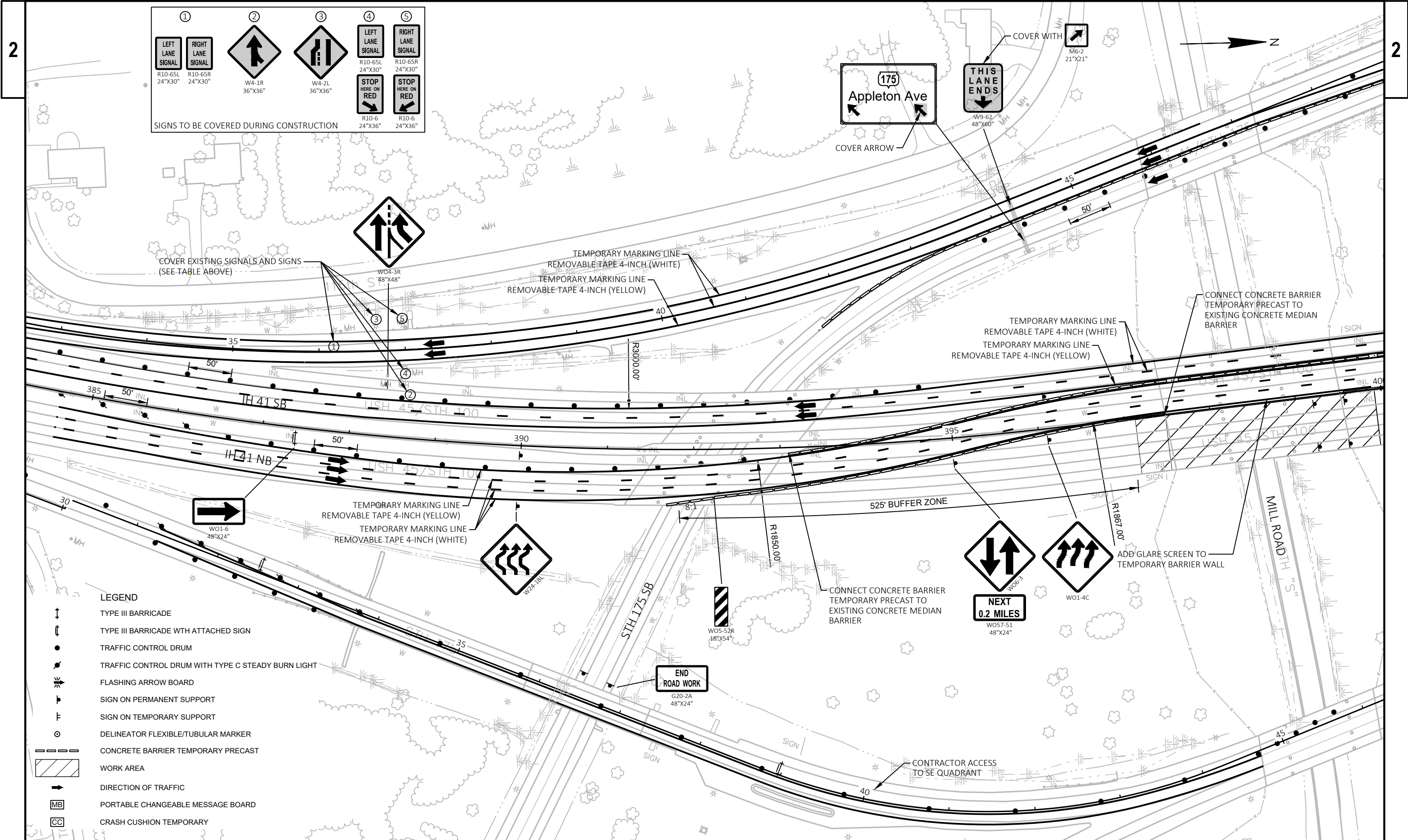
CONSTRUCTION OVERVIEW - STAGE 2A - RECONSTRUCT NB STRUCTURE

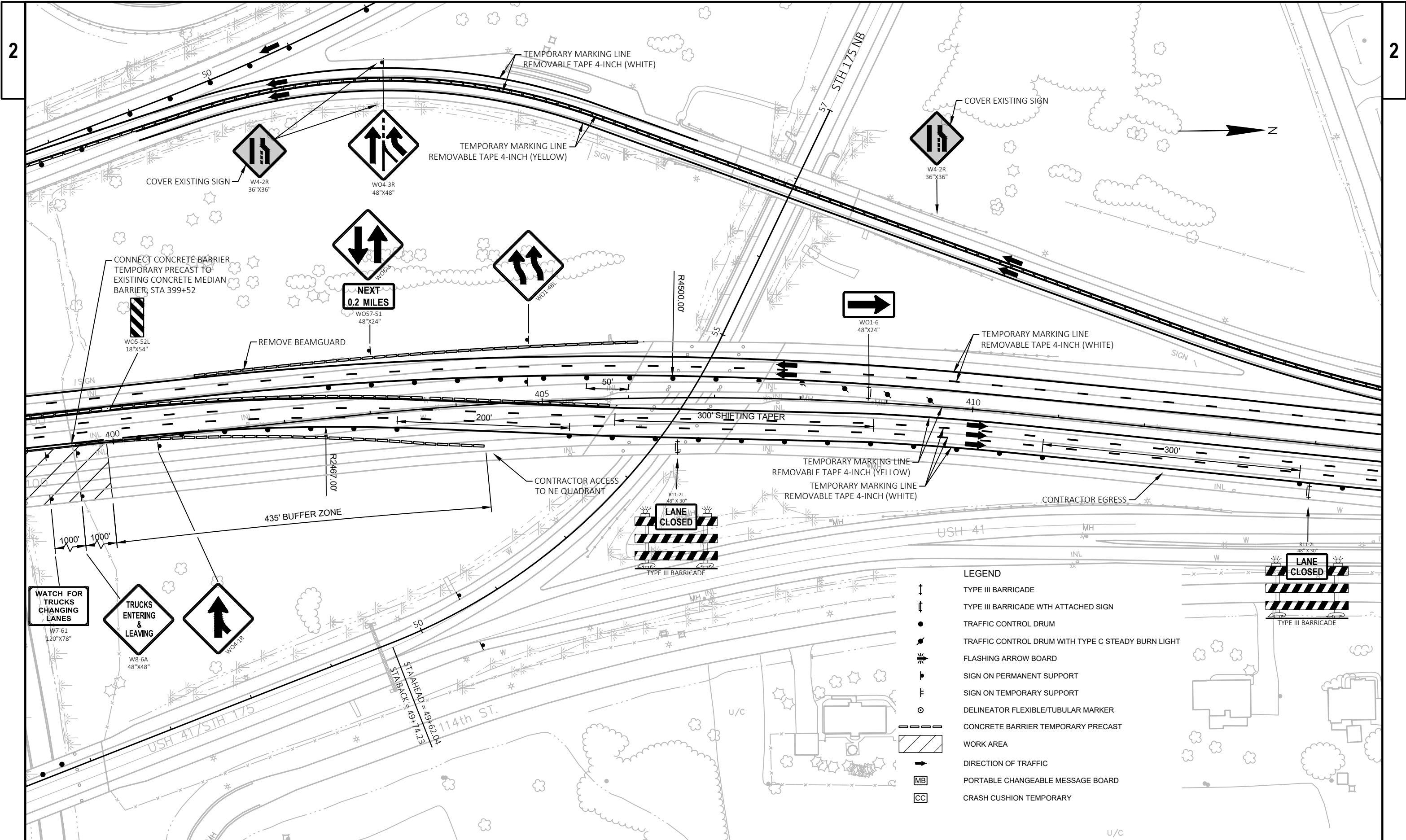
SHEET

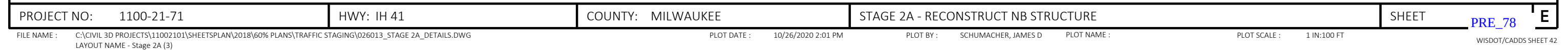
PRE_74

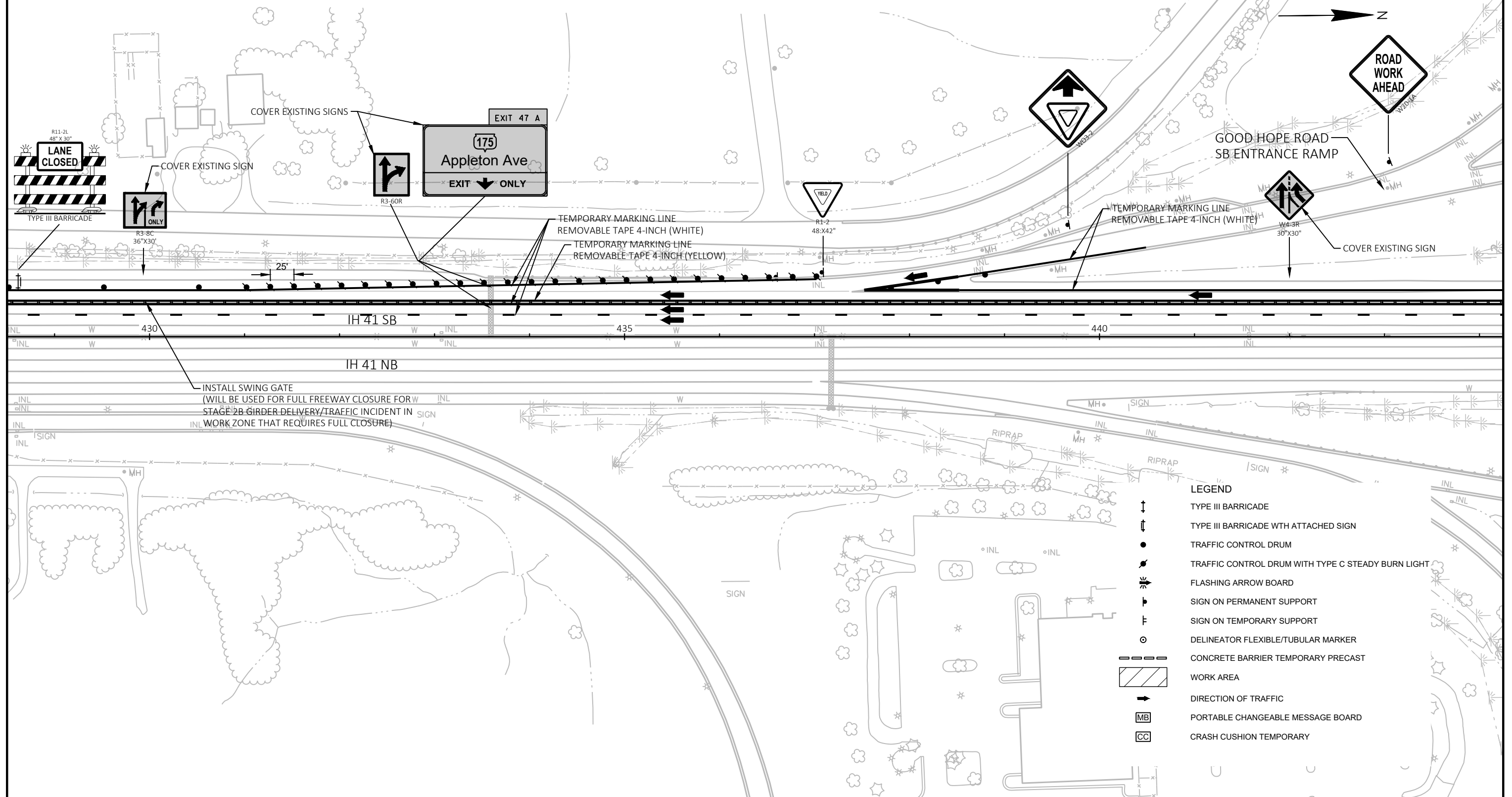
E











PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 2A - RECONSTRUCT NB STRUCTURE

SHEET

PRE_79

E

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\1\SHEETSPLAN\2018\60% PLANS\TRAFFIC STAGING\026013_STAGE 2A_DETAILS.DWG
LAYOUT NAME - Stage 2A (4)

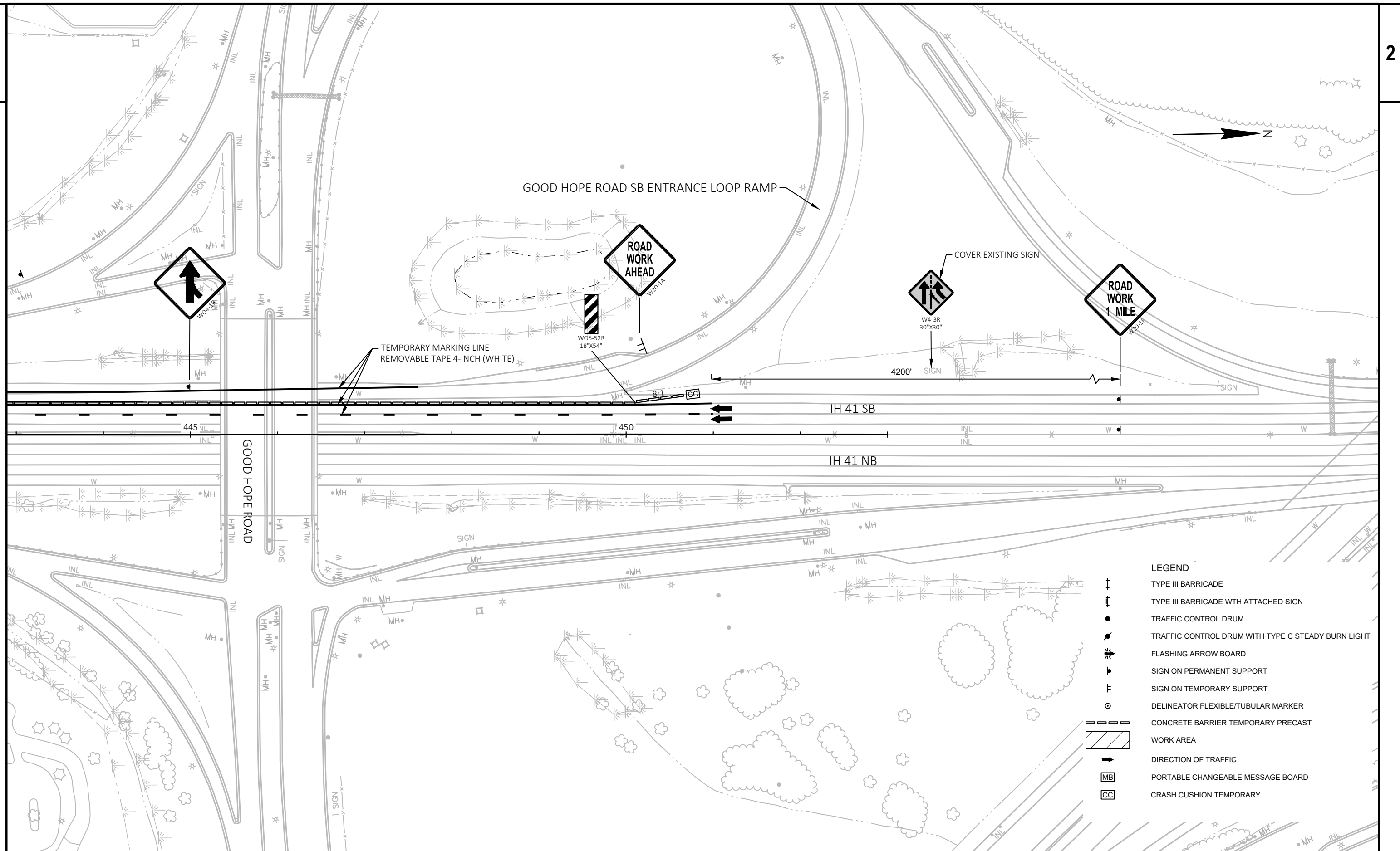
PLOT DATE : 10/26/2020 2:02 PM

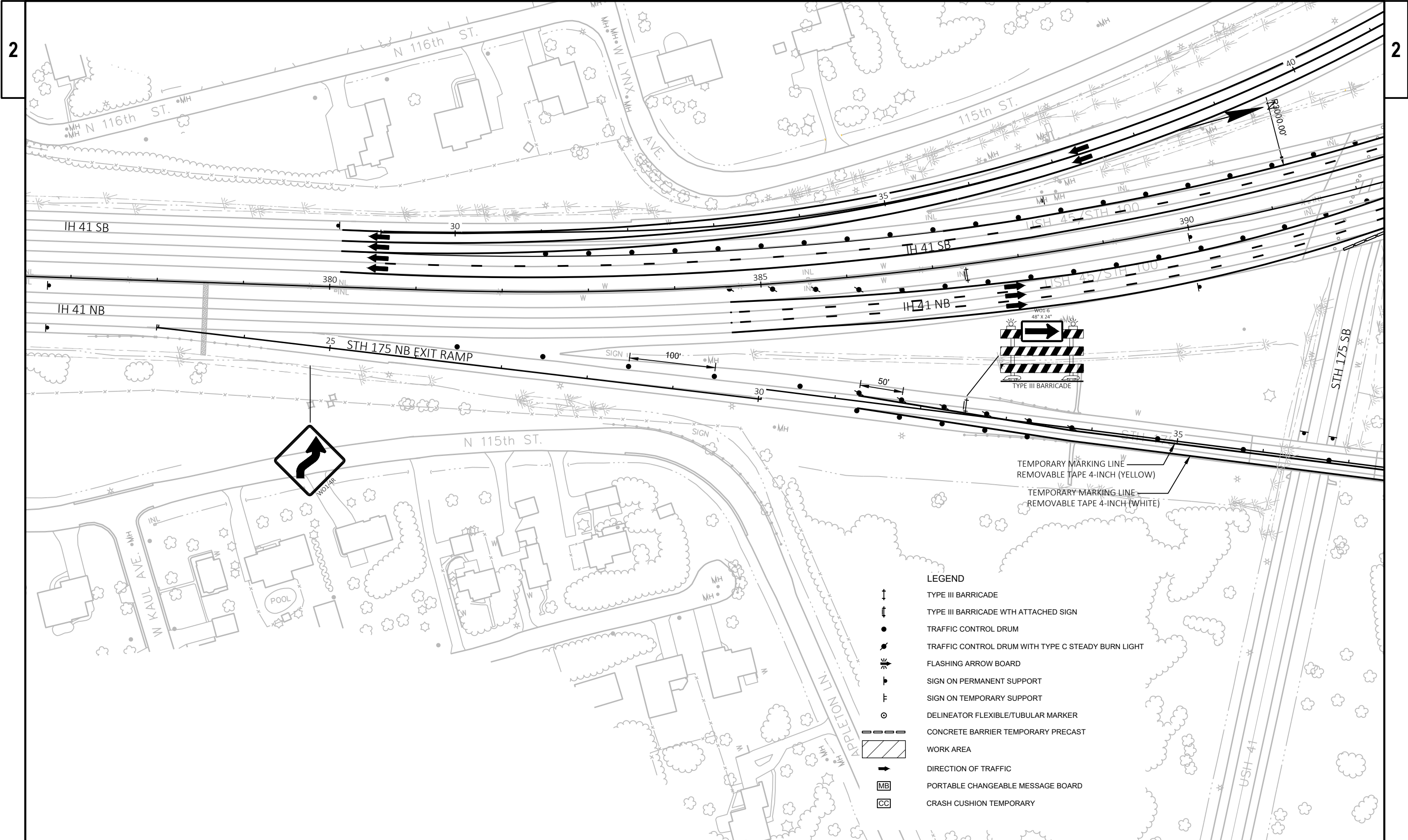
PLOT BY : SCHUMACHER, JAMES D

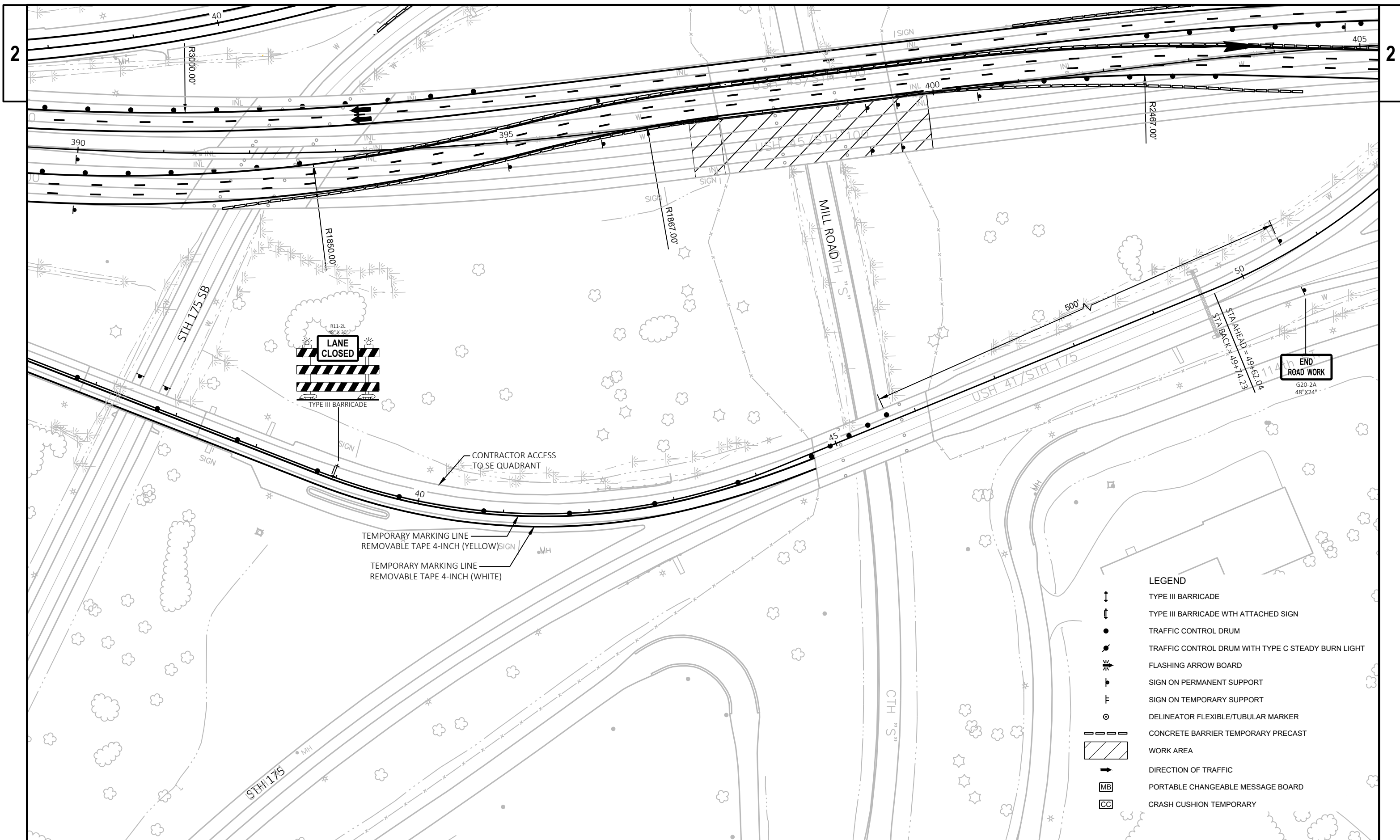
PLOT NAME :

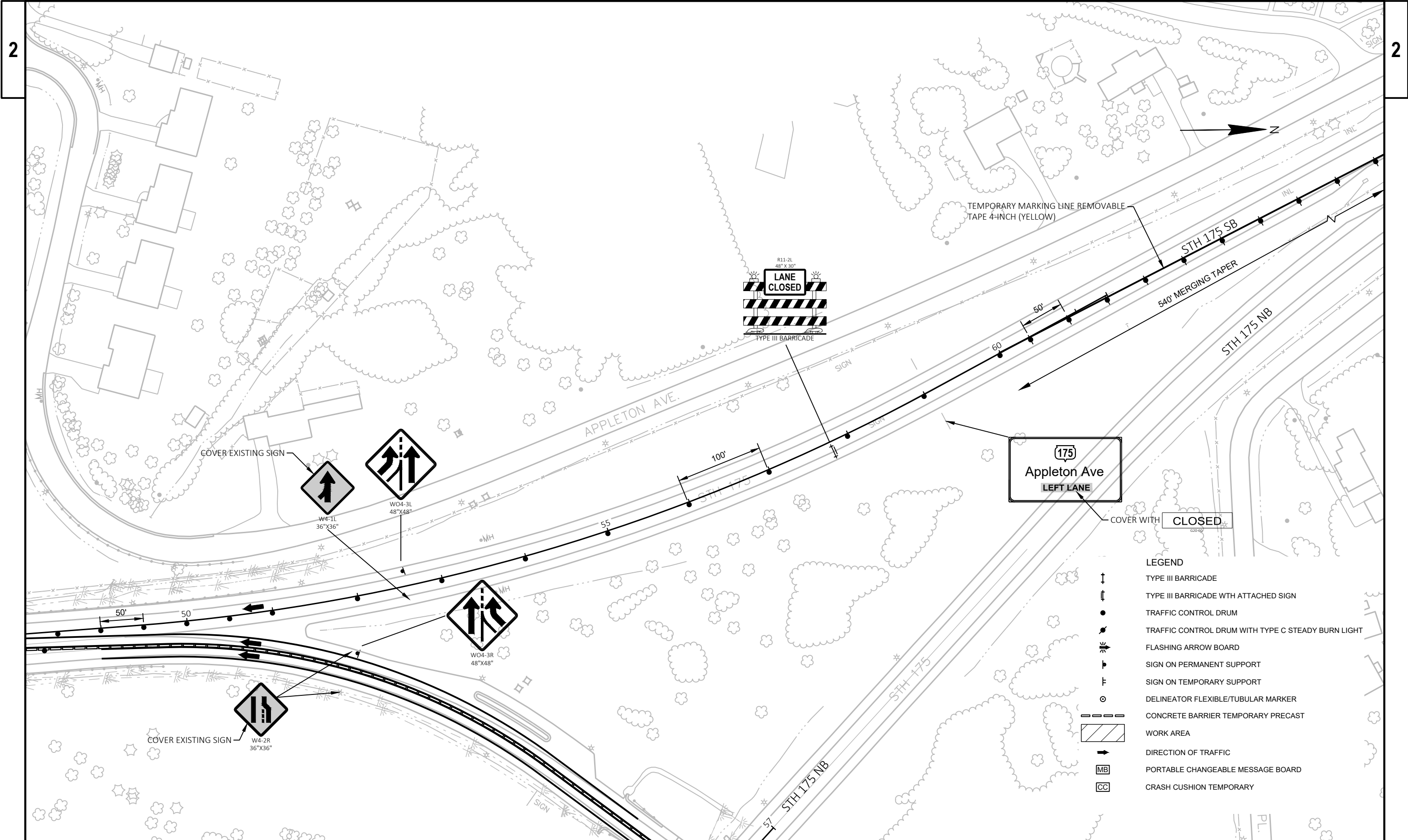
PLOT SCALE : 1 IN:100 FT

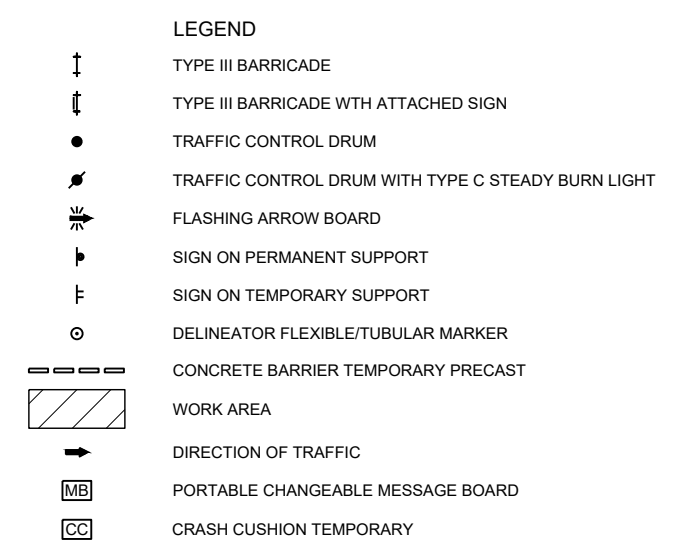
WISDOT/CADDs SHEET 42

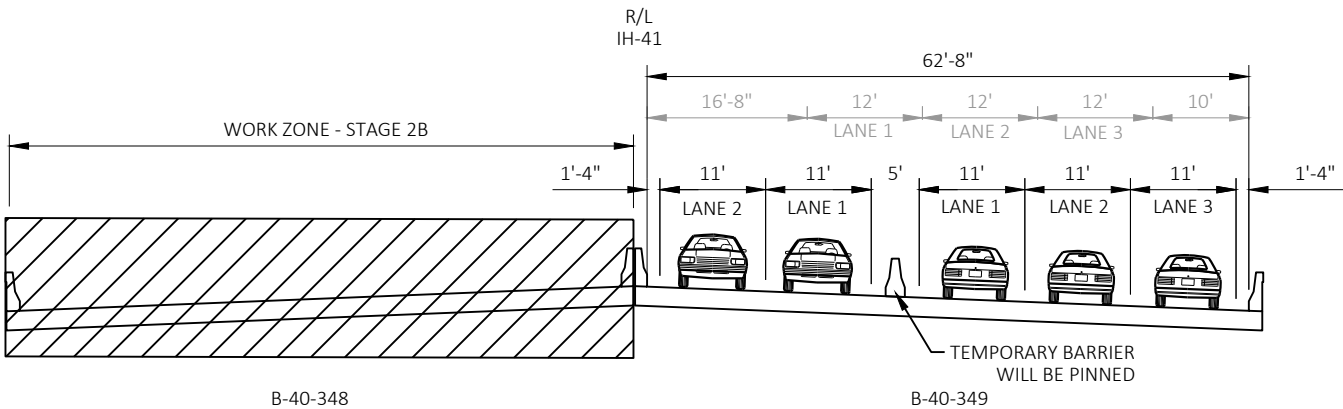


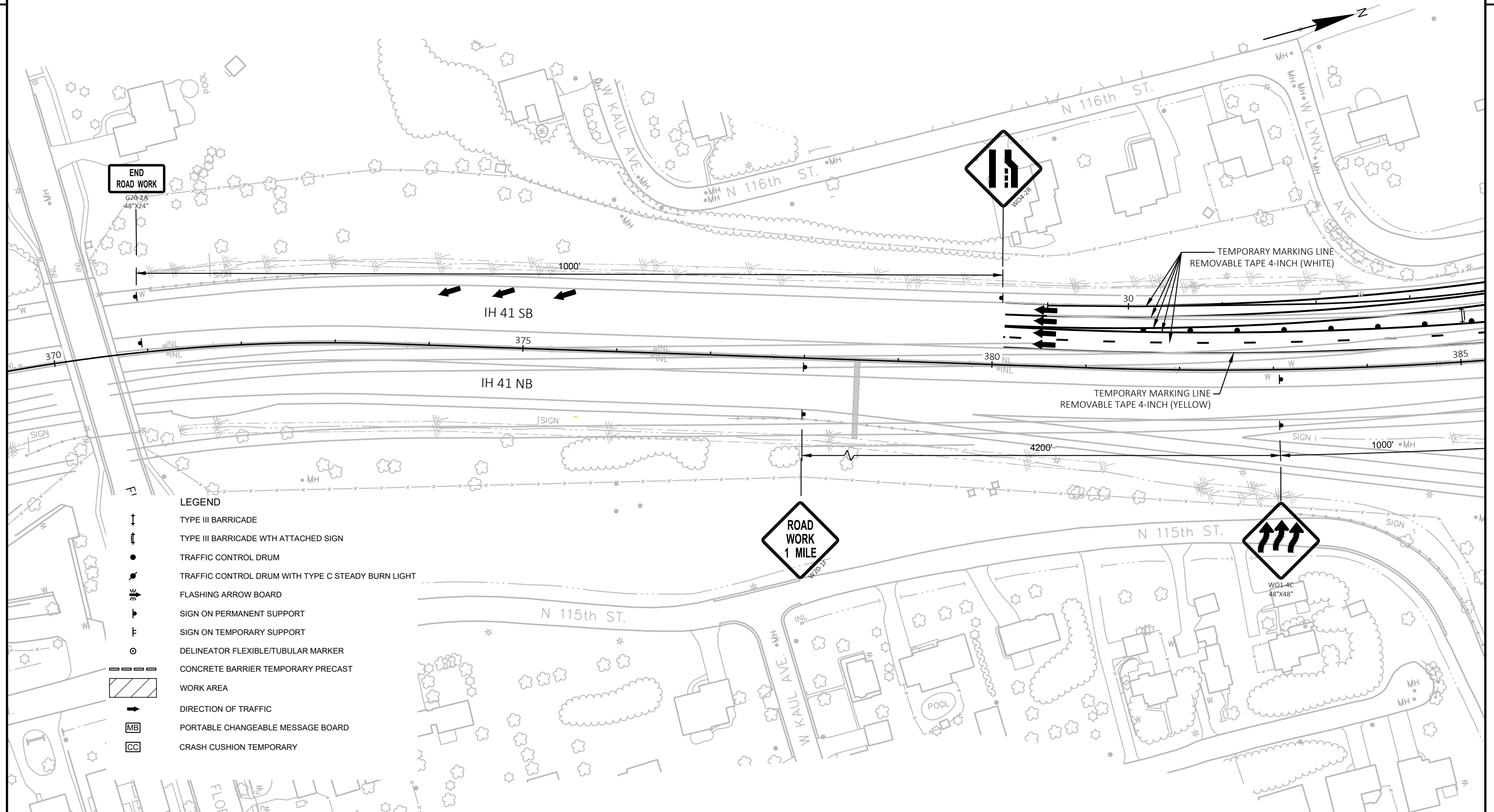












PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 2B - RECONSTRUCT SB STRUCTURE

SHEET

PRE_86

E

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\11002101\2018\60% PLANS\TRAFFIC STAGING\026015_STAGE 2B_DETAILS.DWG
LAYOUT NAME - Stage 2B

PLOT DATE : 10/26/2020 2:07 PM

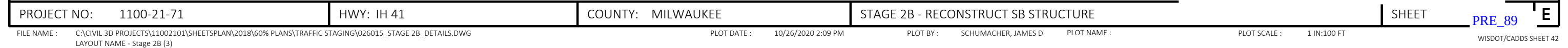
PLOT BY : SCHUMACHER, JAMES D

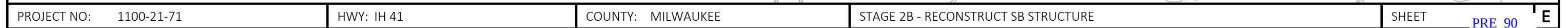
PLOT NAME :

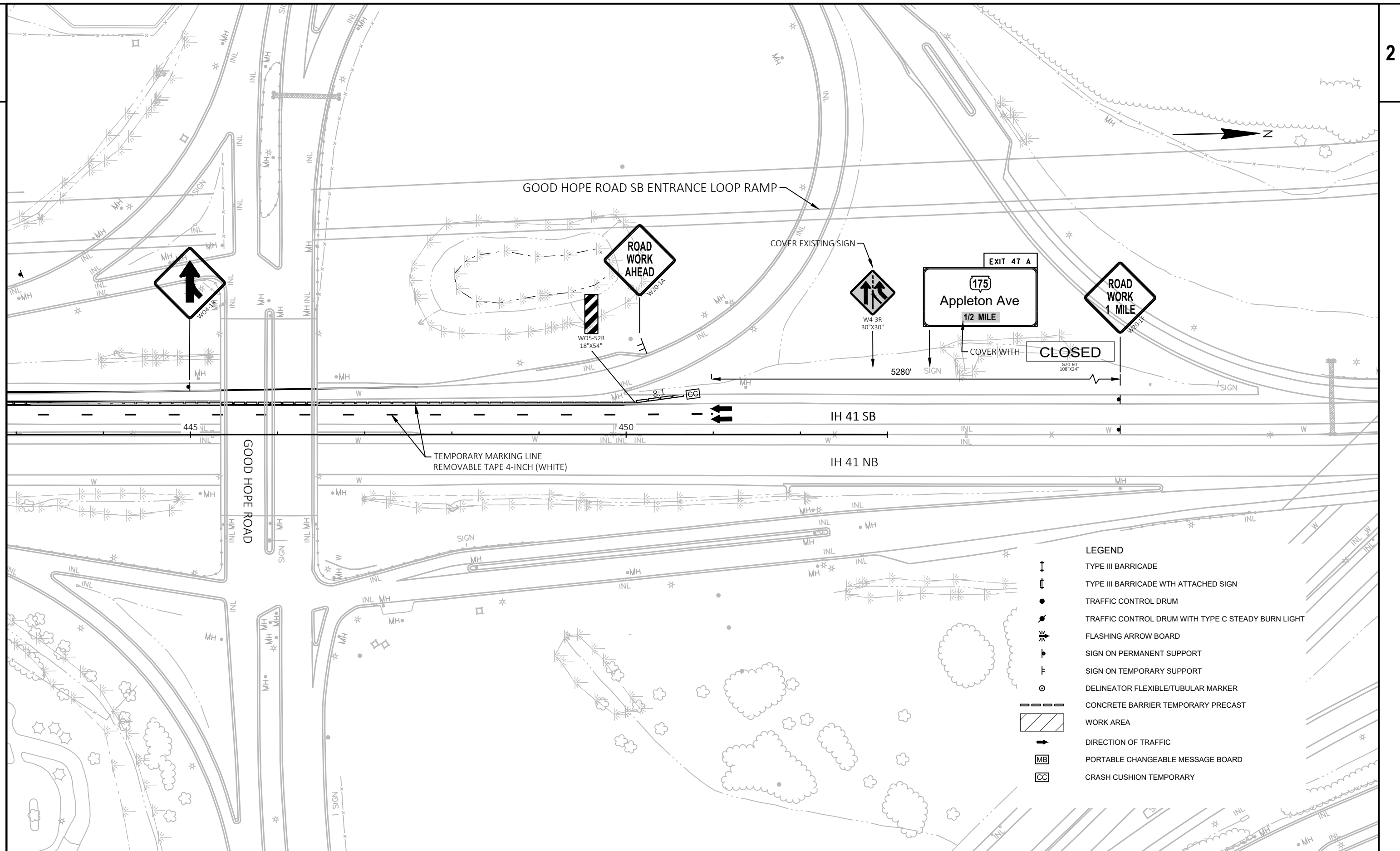
PLOT SCALE : 1 IN:100 FT

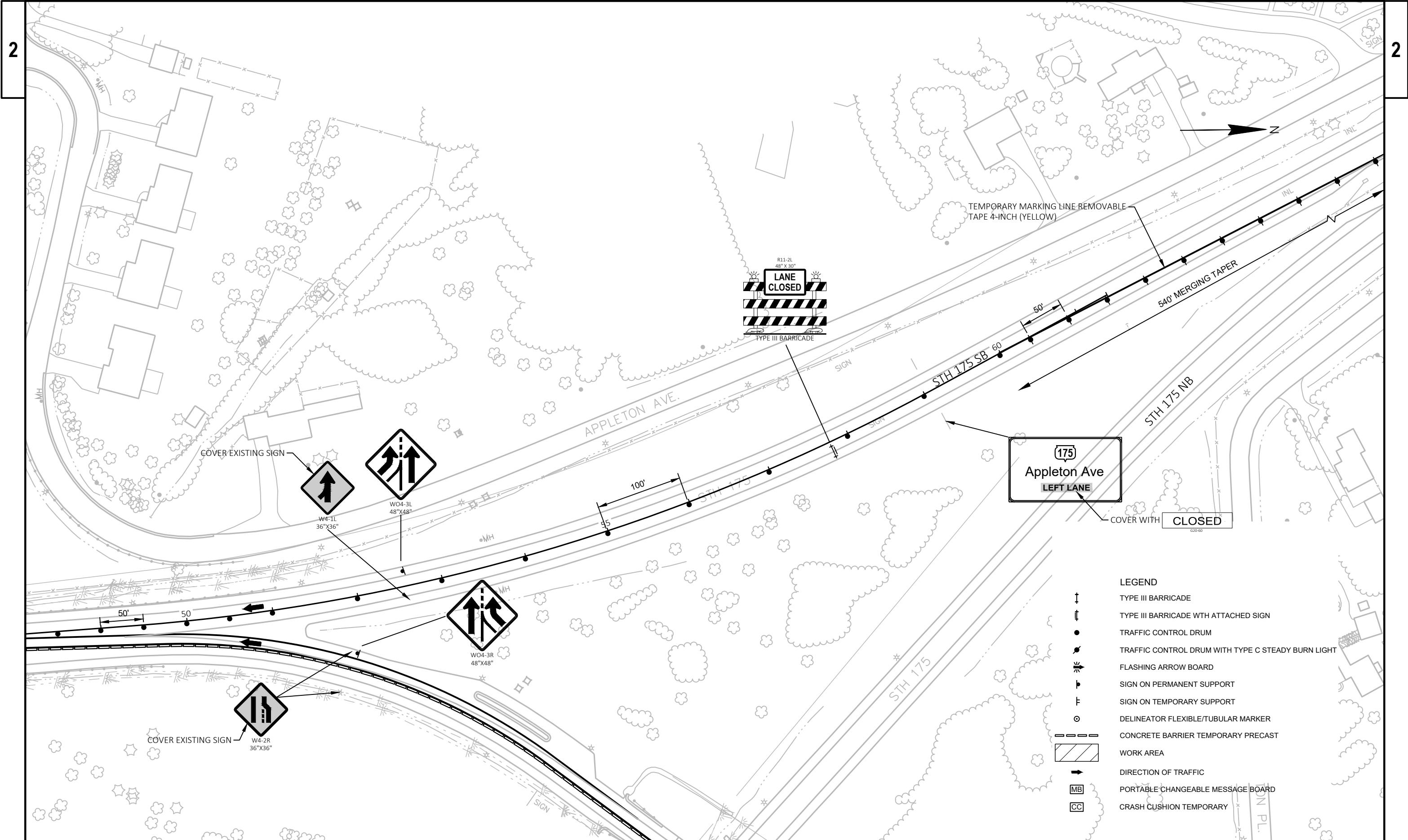
WISDOT/CADDs SHEET 42

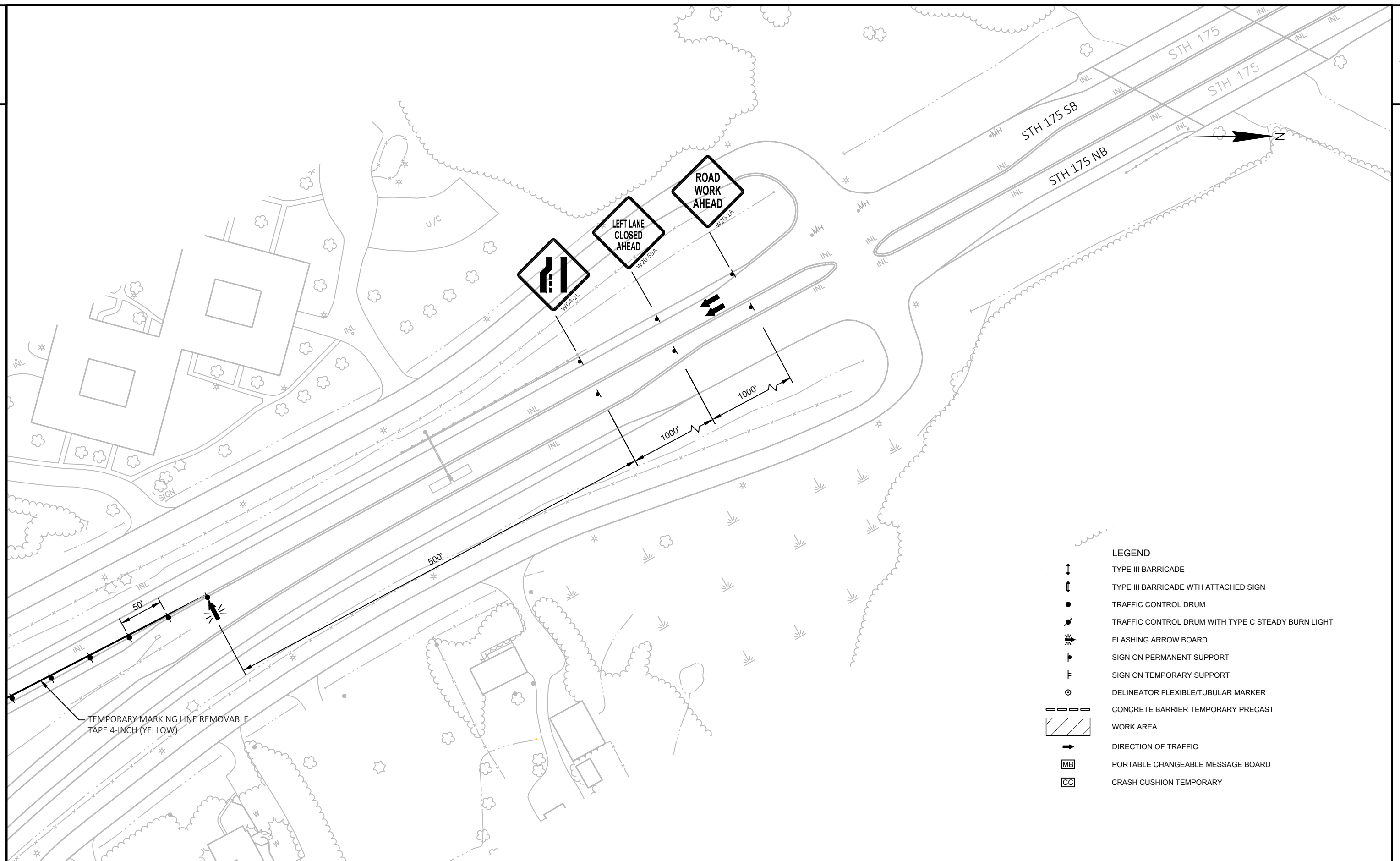


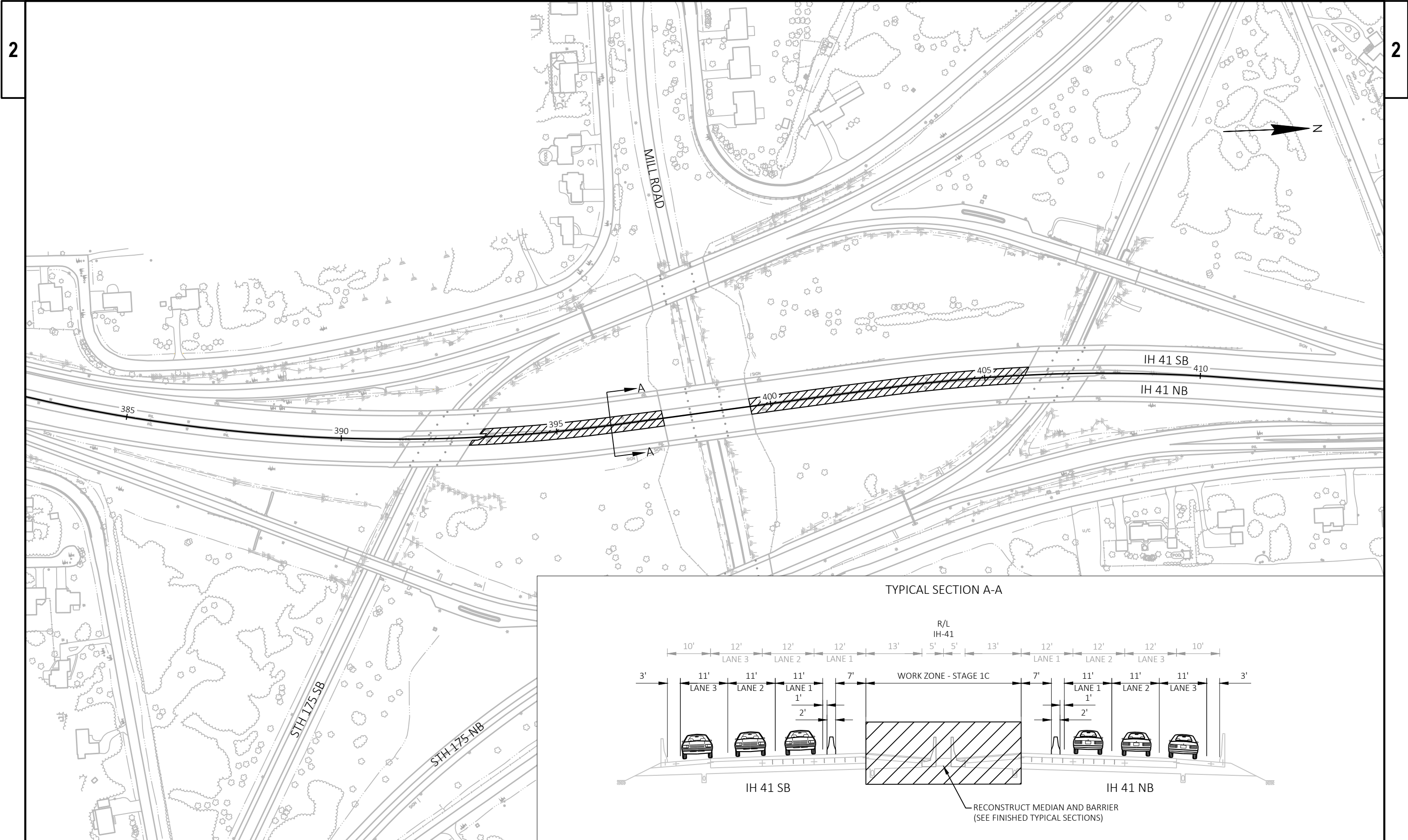


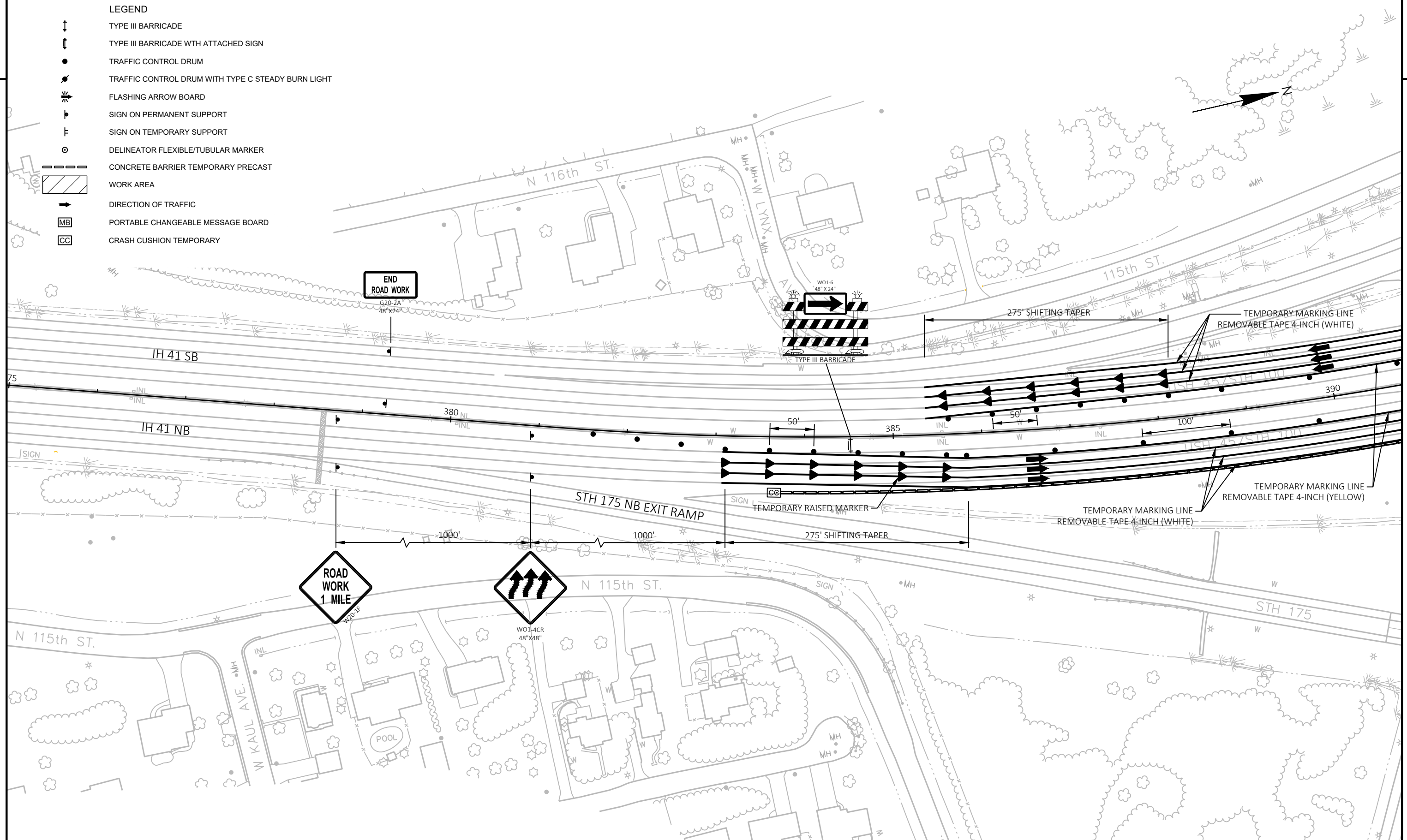


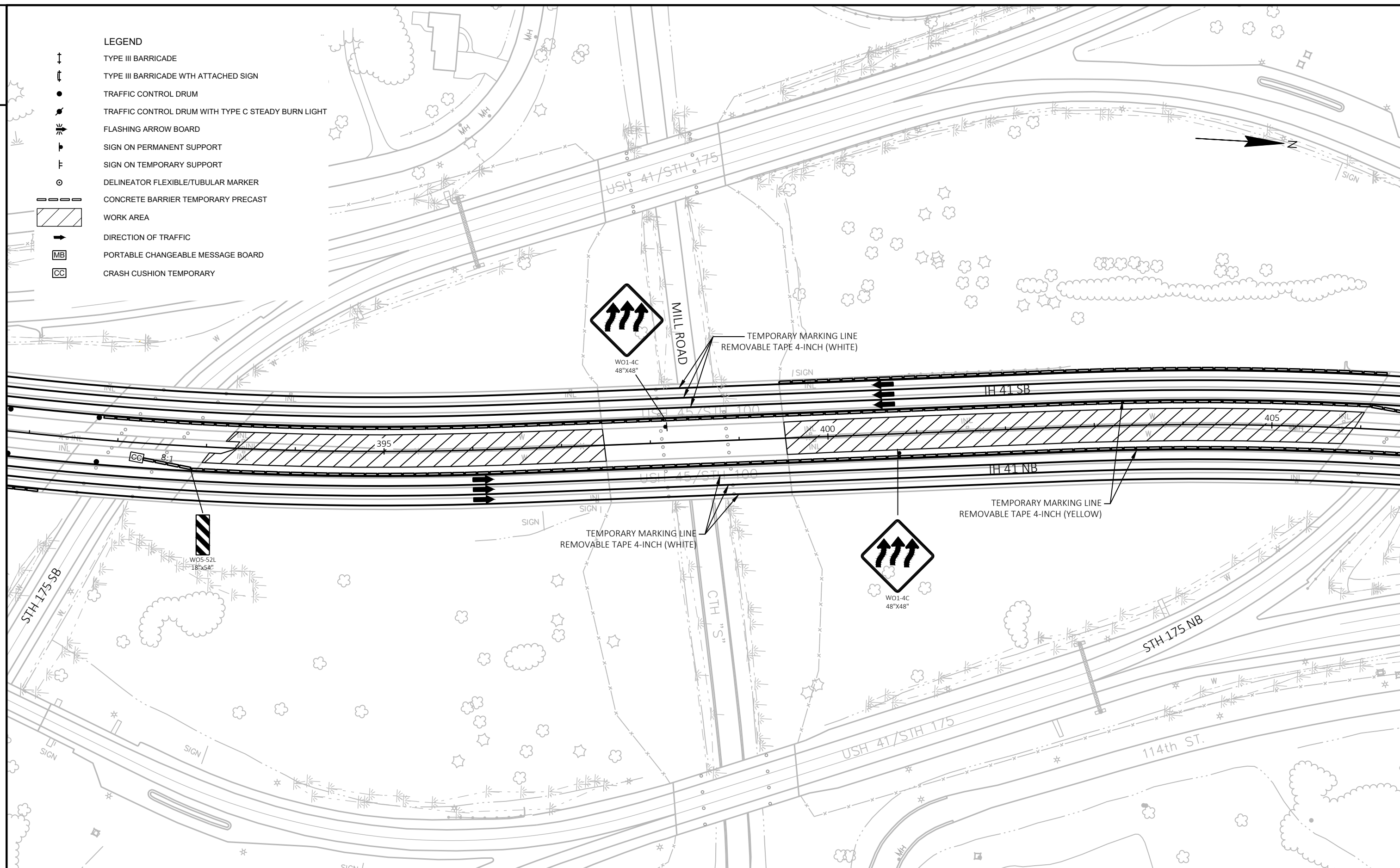


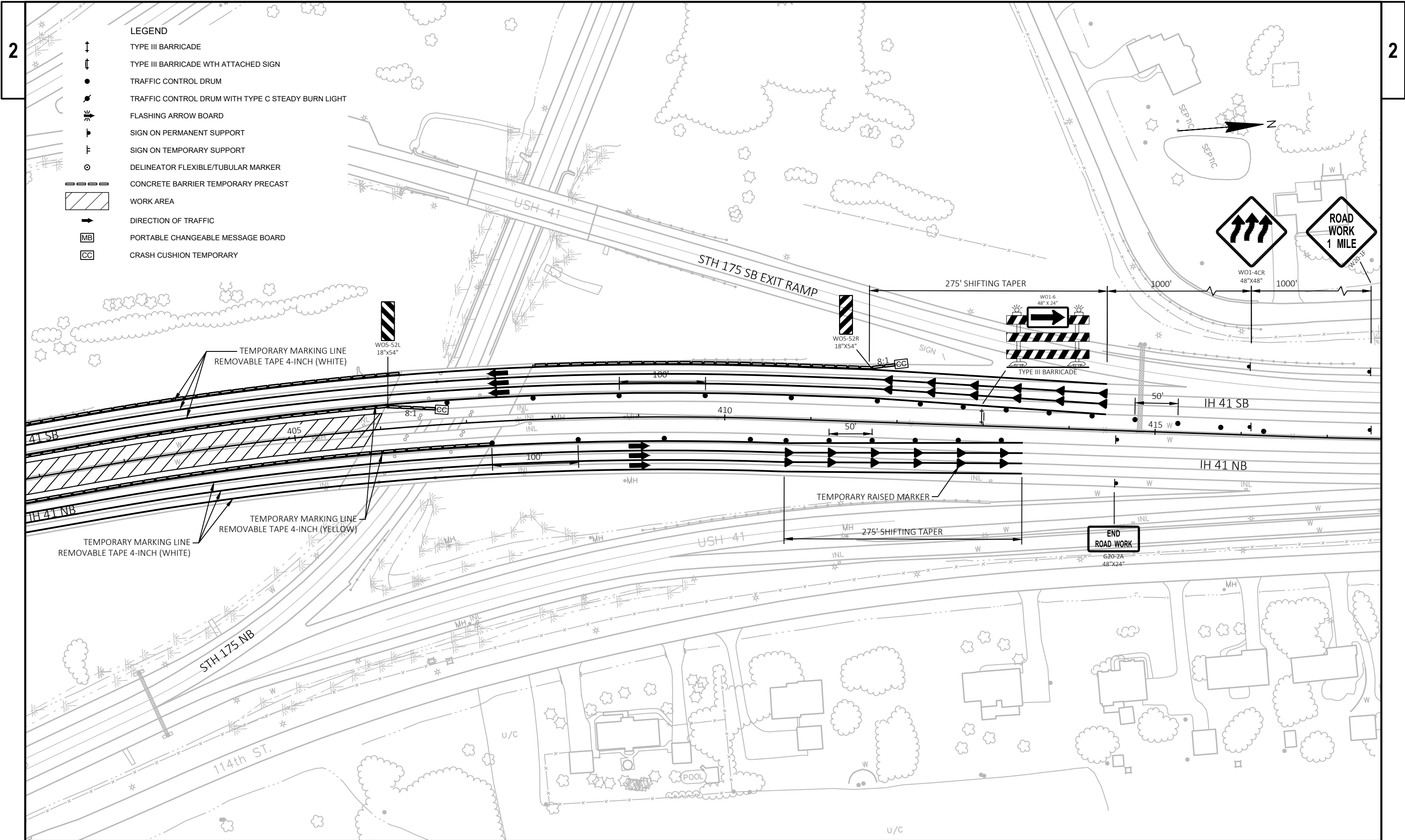




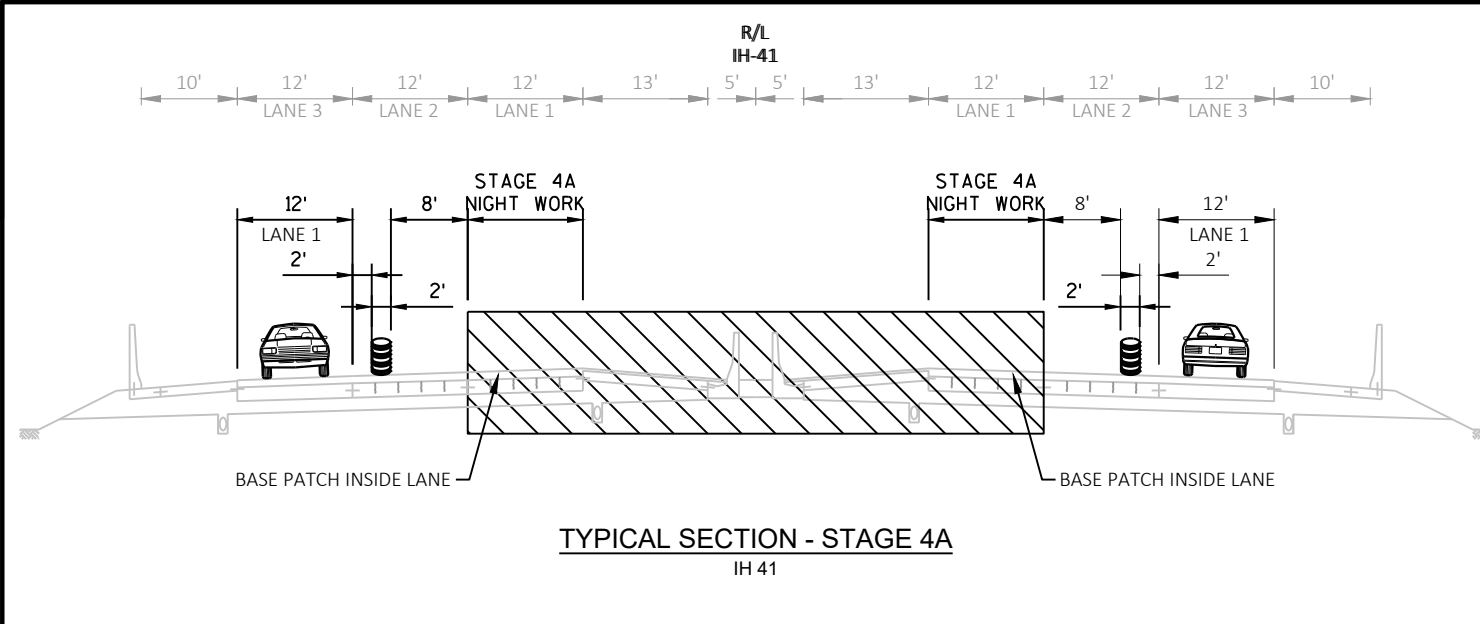




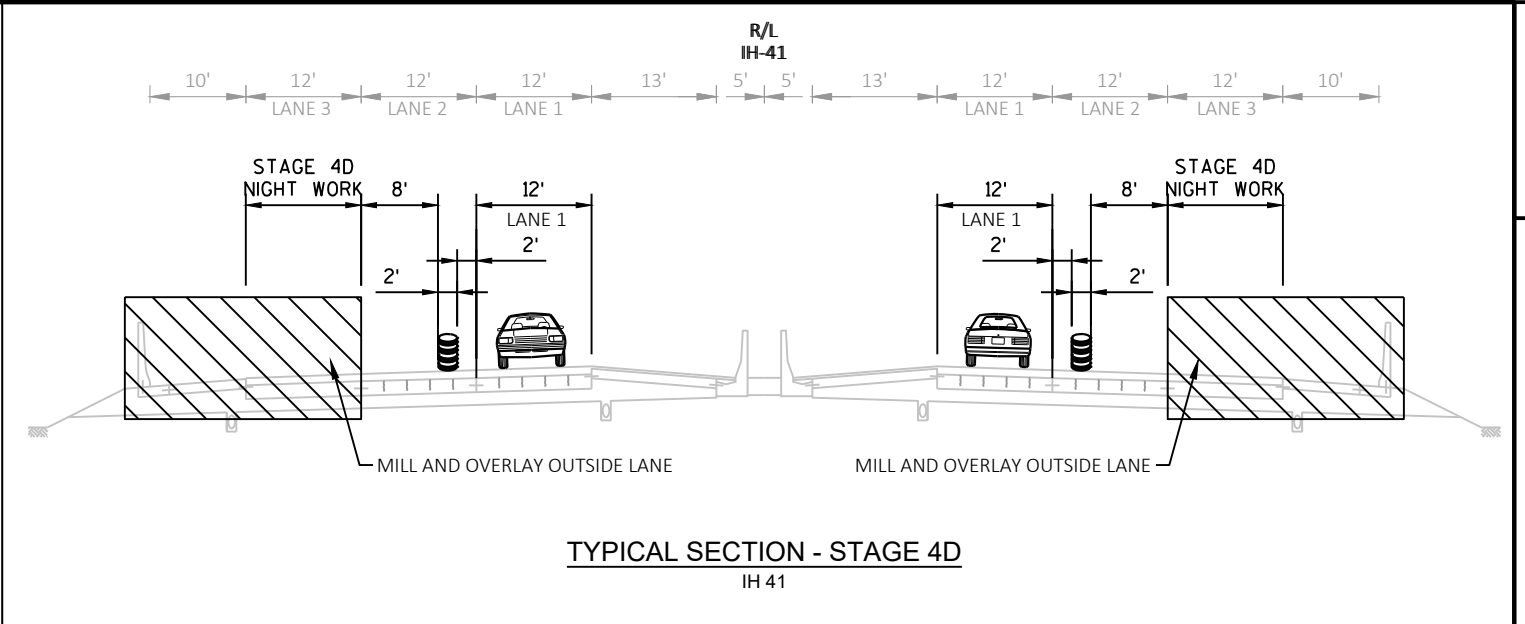




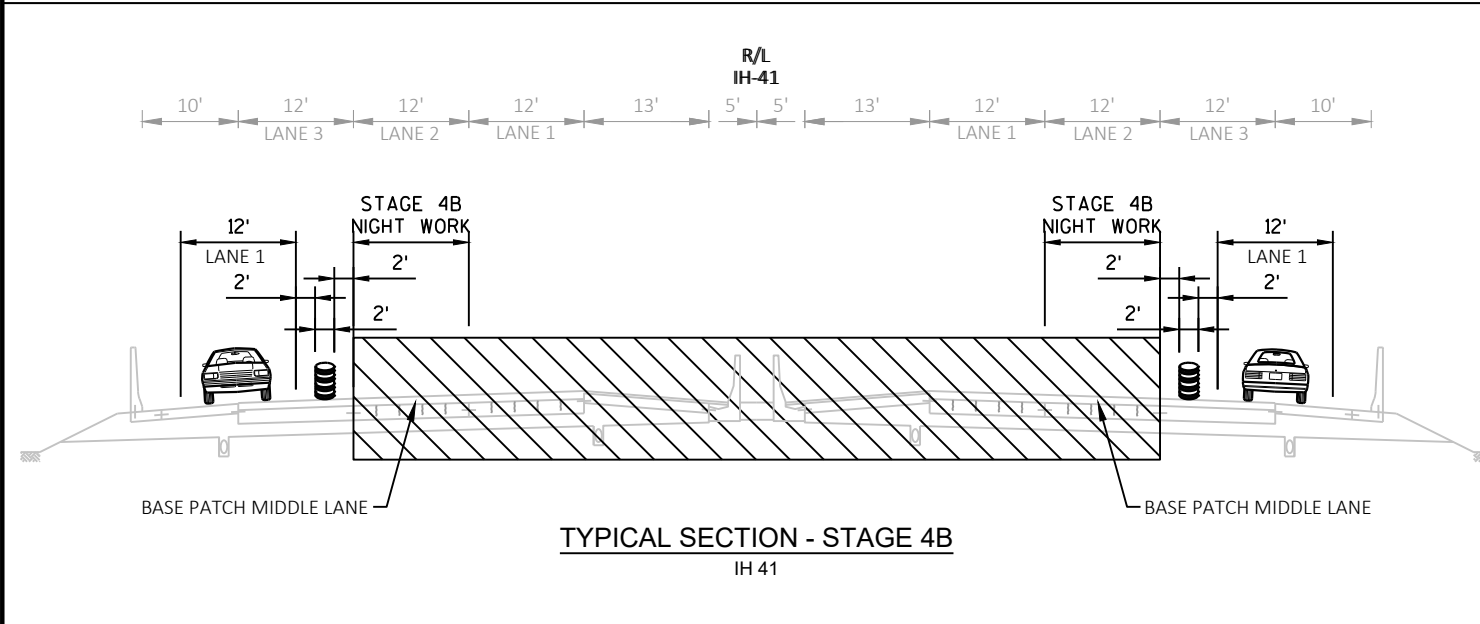




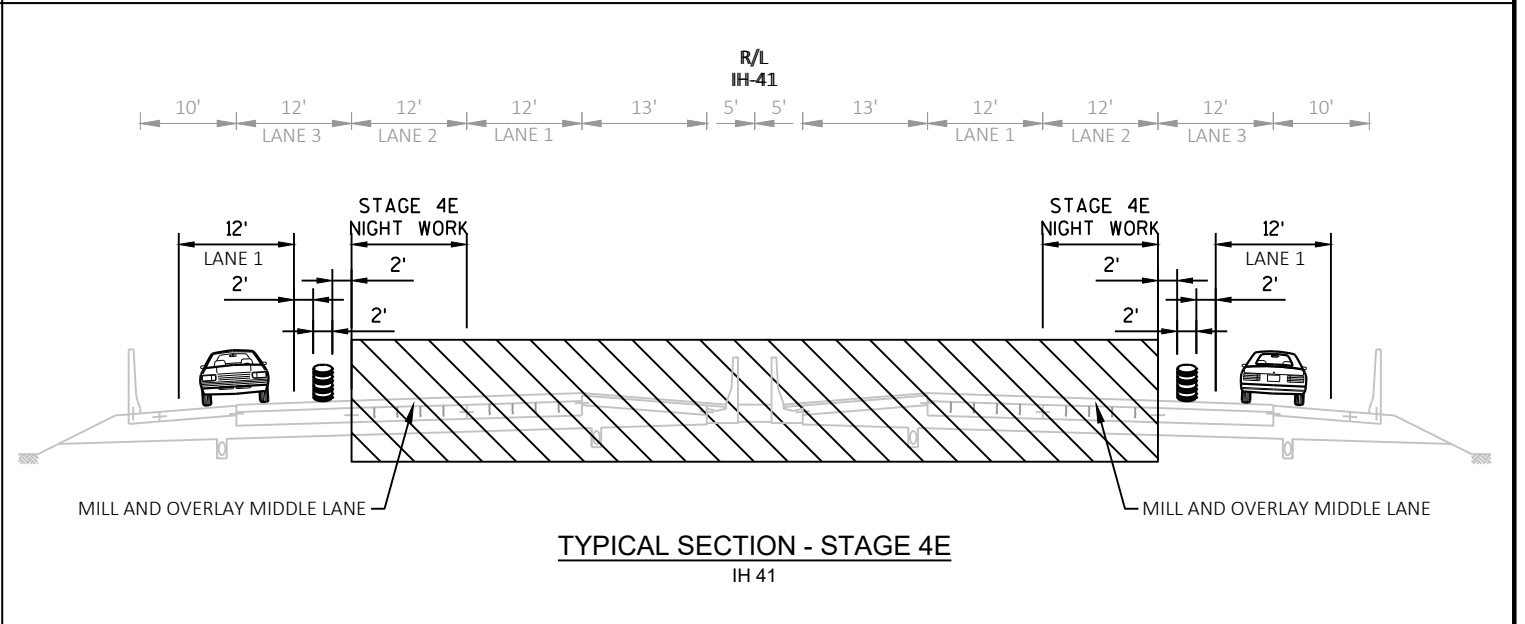
TYPICAL SECTION - STAGE 4A
IH 41



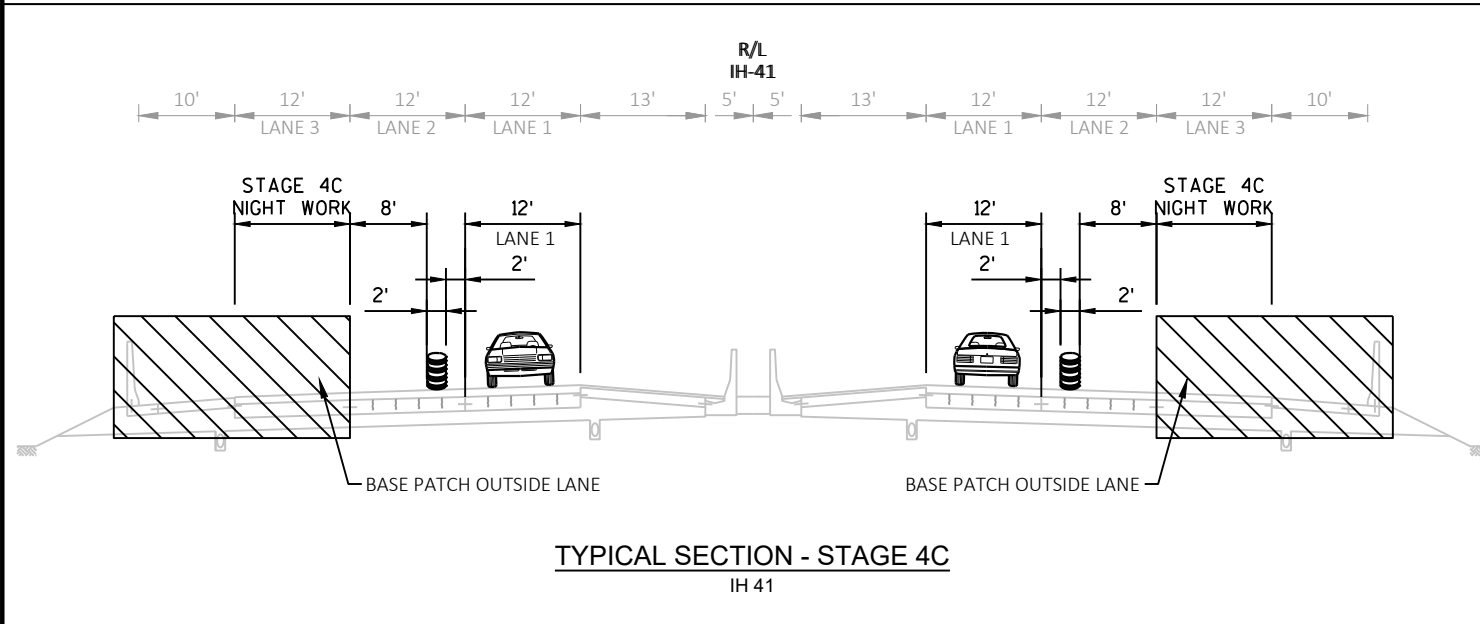
TYPICAL SECTION - STAGE 4D
IH 41



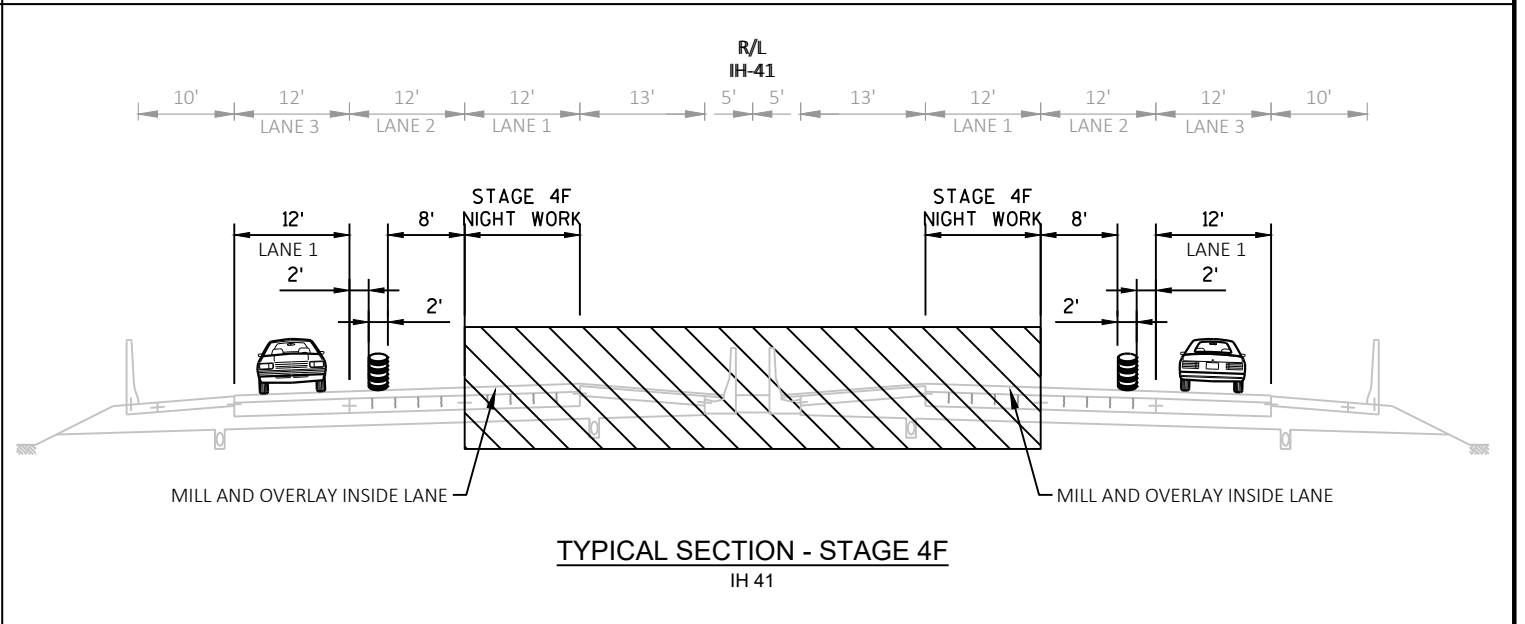
TYPICAL SECTION - STAGE 4B
IH 41



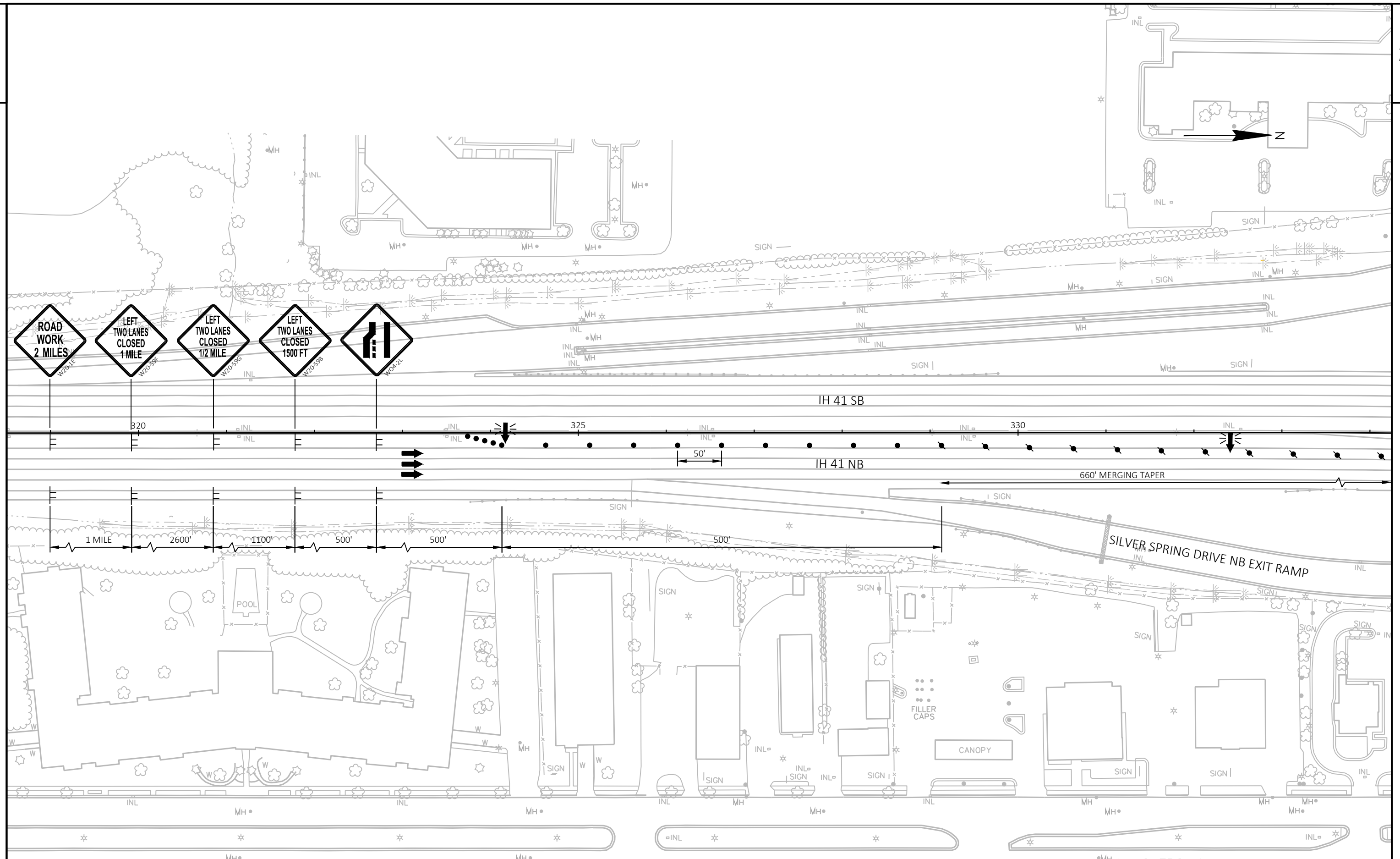
TYPICAL SECTION - STAGE 4E
IH 41

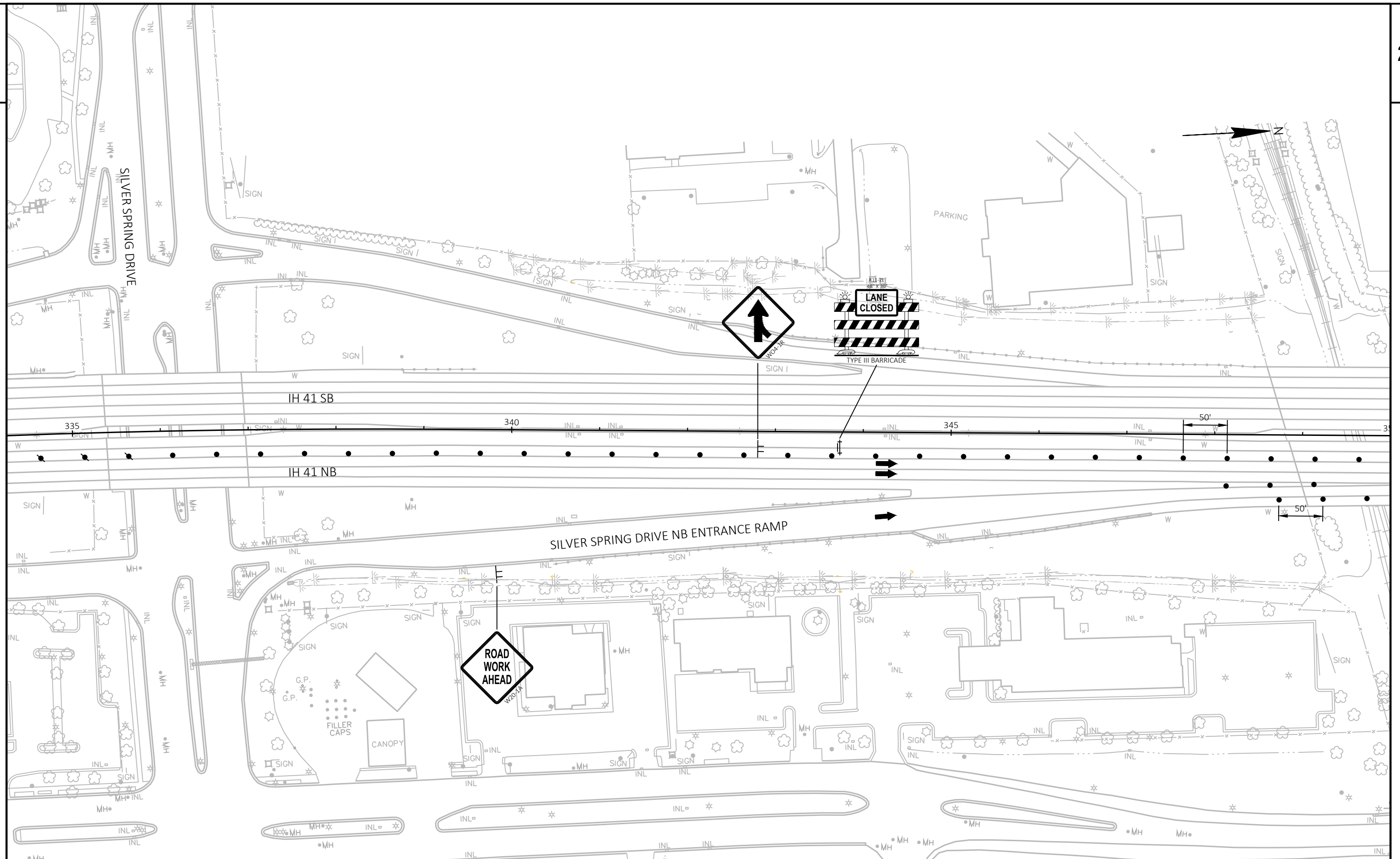


TYPICAL SECTION - STAGE 4C
IH 41



TYPICAL SECTION - STAGE 4F
IH 41





PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 4A/4F - INSIDE LANE WORK - NIGHT WORK ONLY

SHEET

PRE_101 E

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\SHEETSPLAN\2018\60% PLANS\TRAFFIC STAGING\026019_STAGE 4A_DETAILS.DWG
LAYOUT NAME - Stage 4A (1)

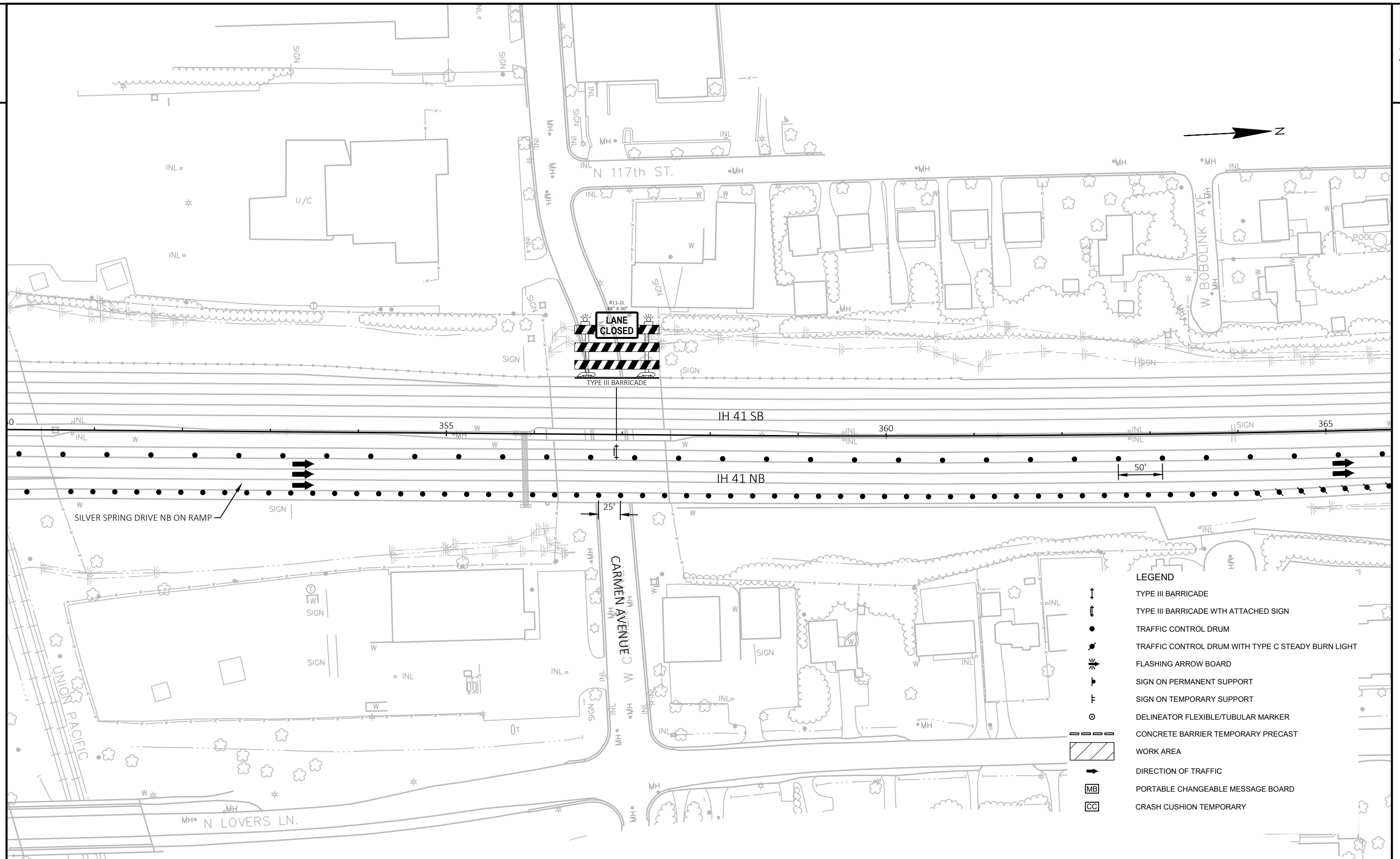
PLOT DATE : 10/26/2020 2:21 PM

PLOT BY : SCHUMACHER, JAMES D

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42



PROJECT NO: 1100-21-71

HWY: IH 41

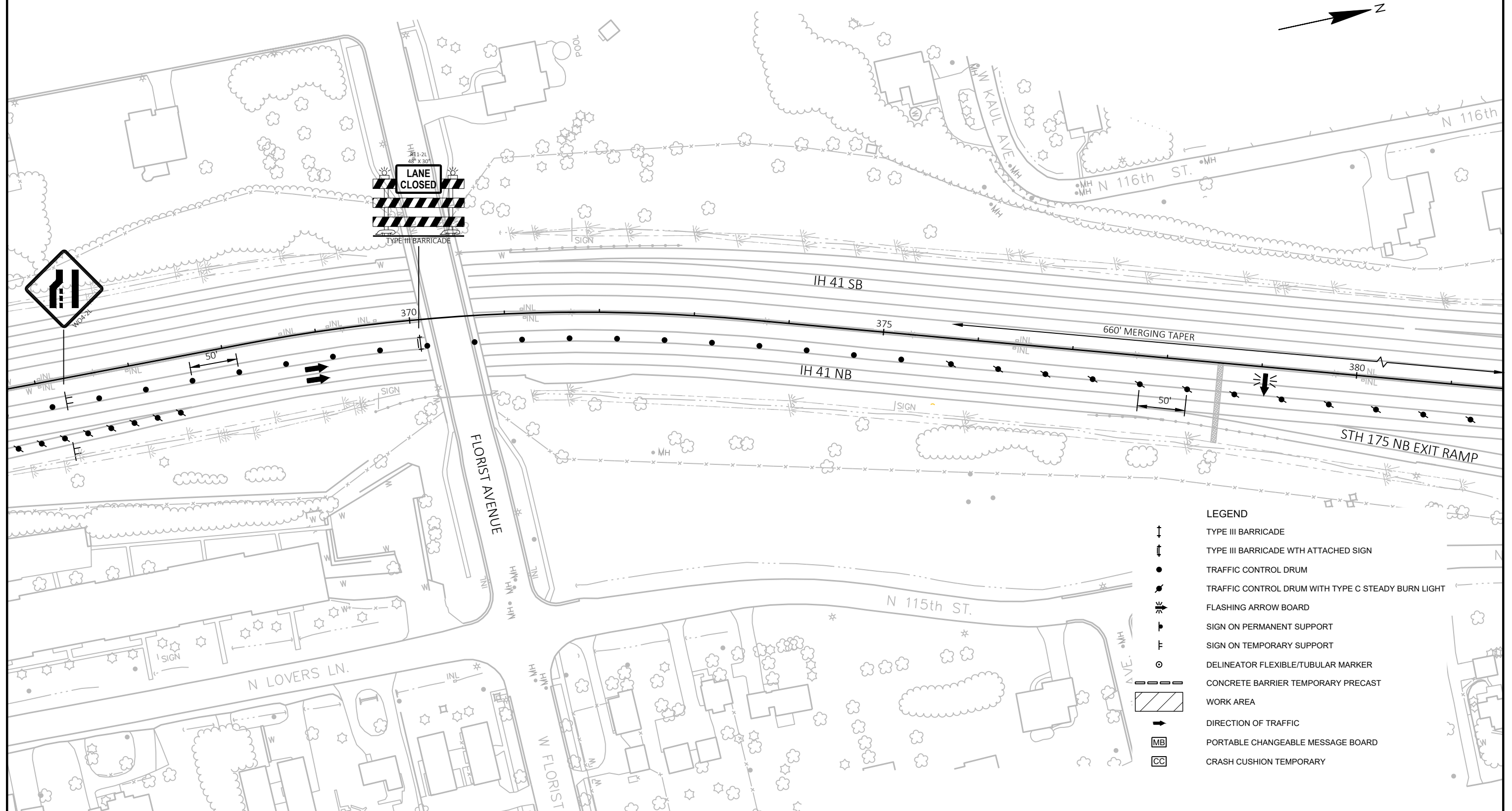
COUNTY: MILWAUKEE

STAGE 4A/4F - INSIDE LANE WORK - NIGHT WORK ONLY

SHEET

PRE_102

E



PROJECT NO: 1100-21-71

HWY: IH 41

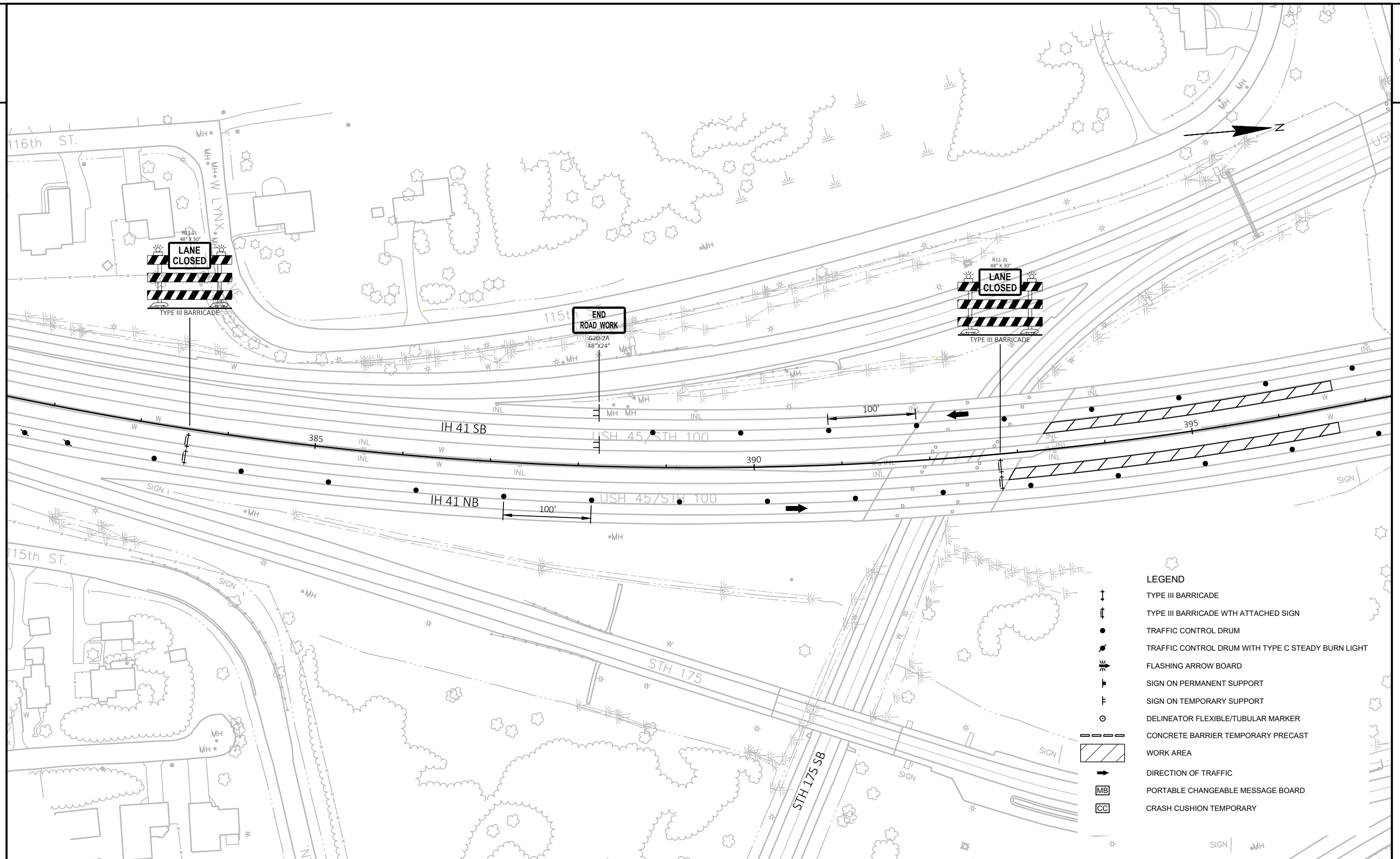
COUNTY: MILWAUKEE

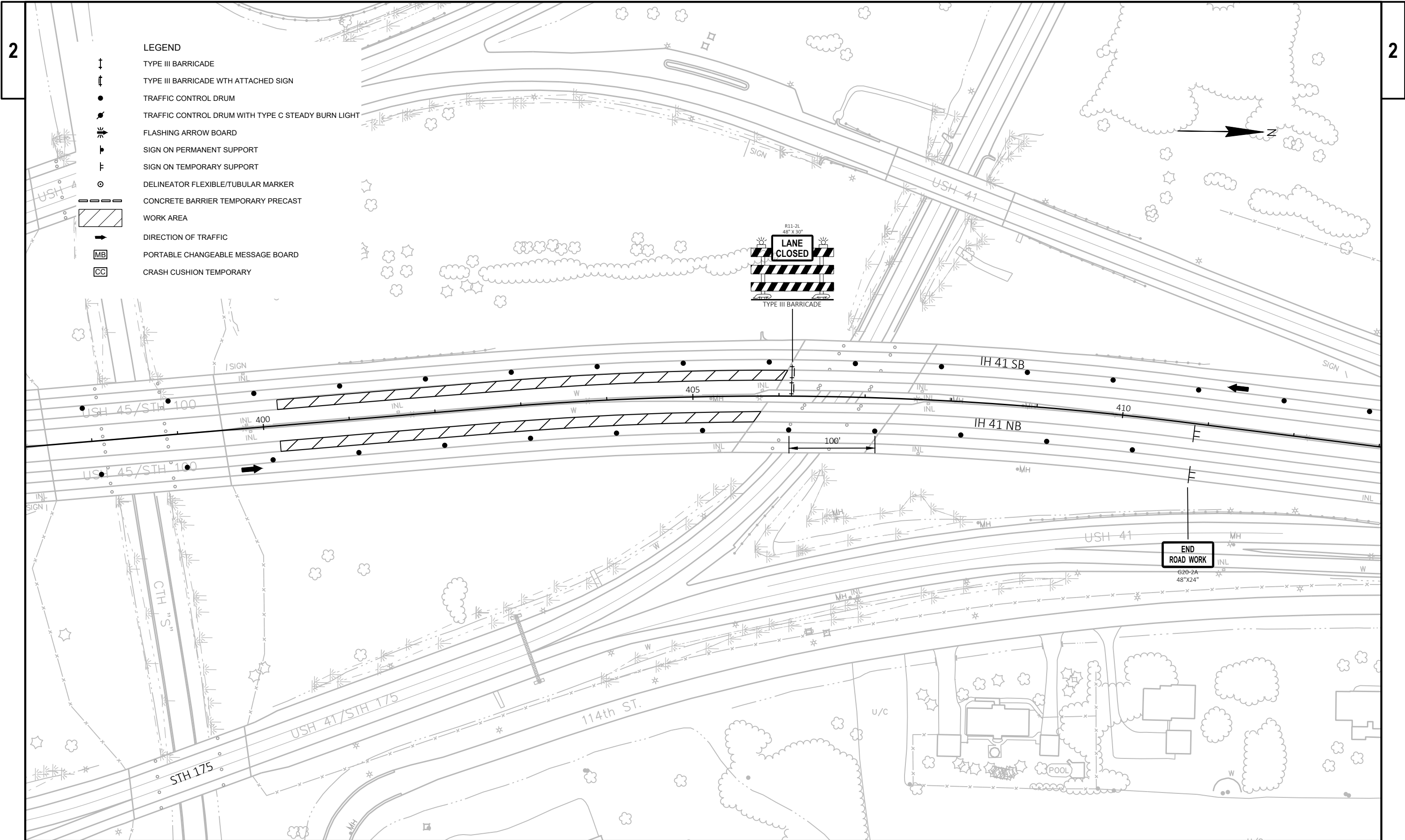
STAGE 4A/4F - INSIDE LANE WORK - NIGHT WORK ONLY

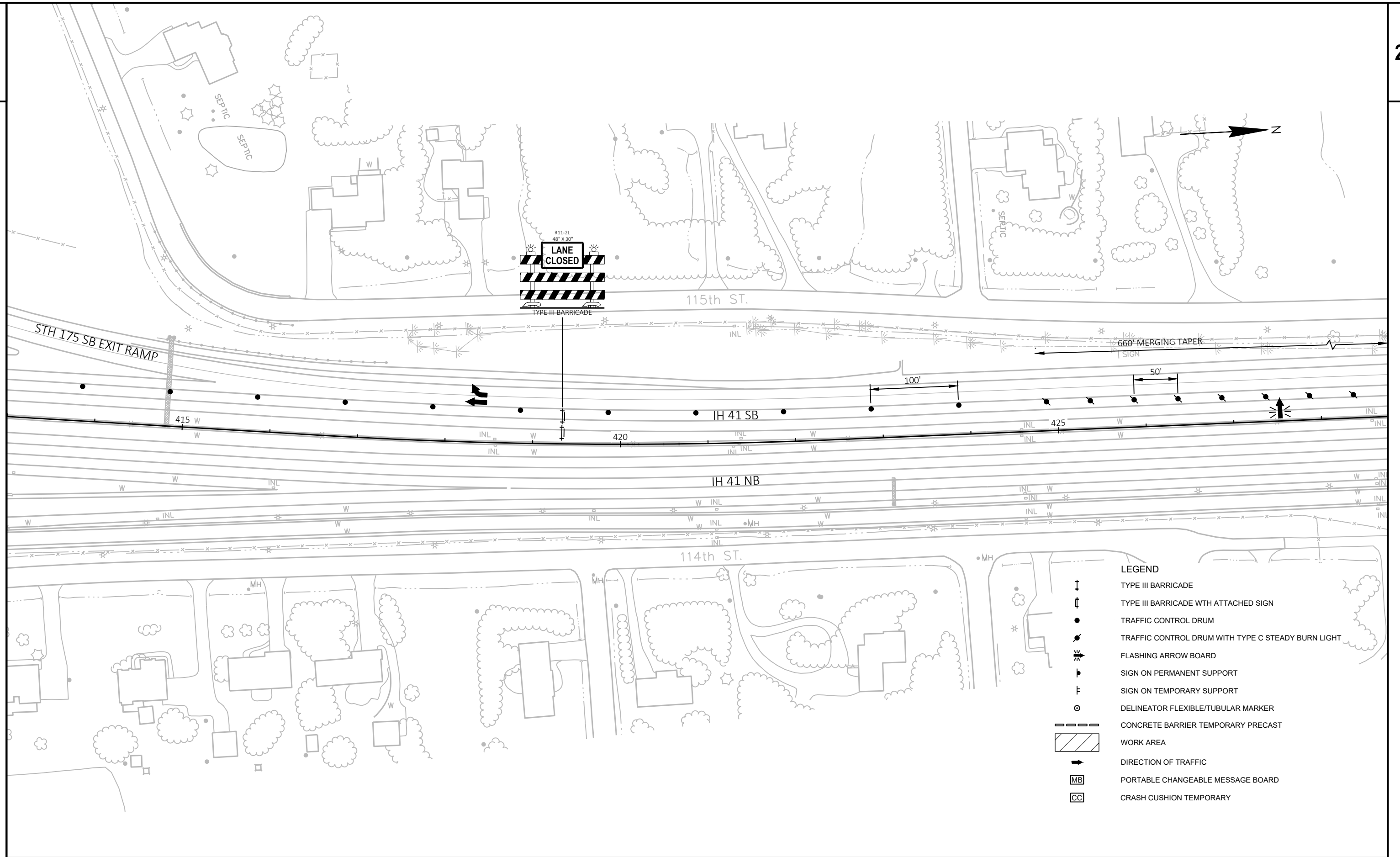
SHEET

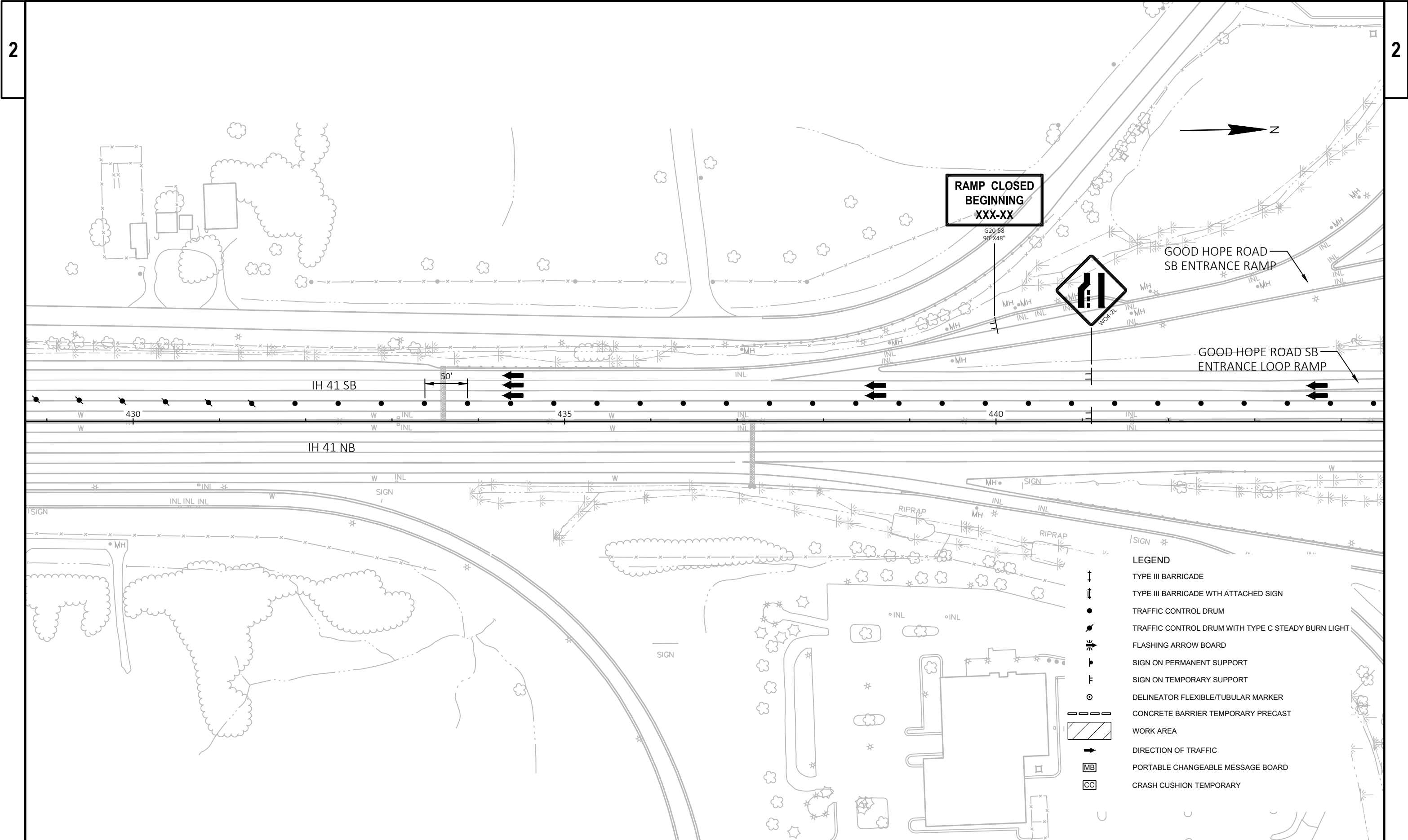
PRE_103

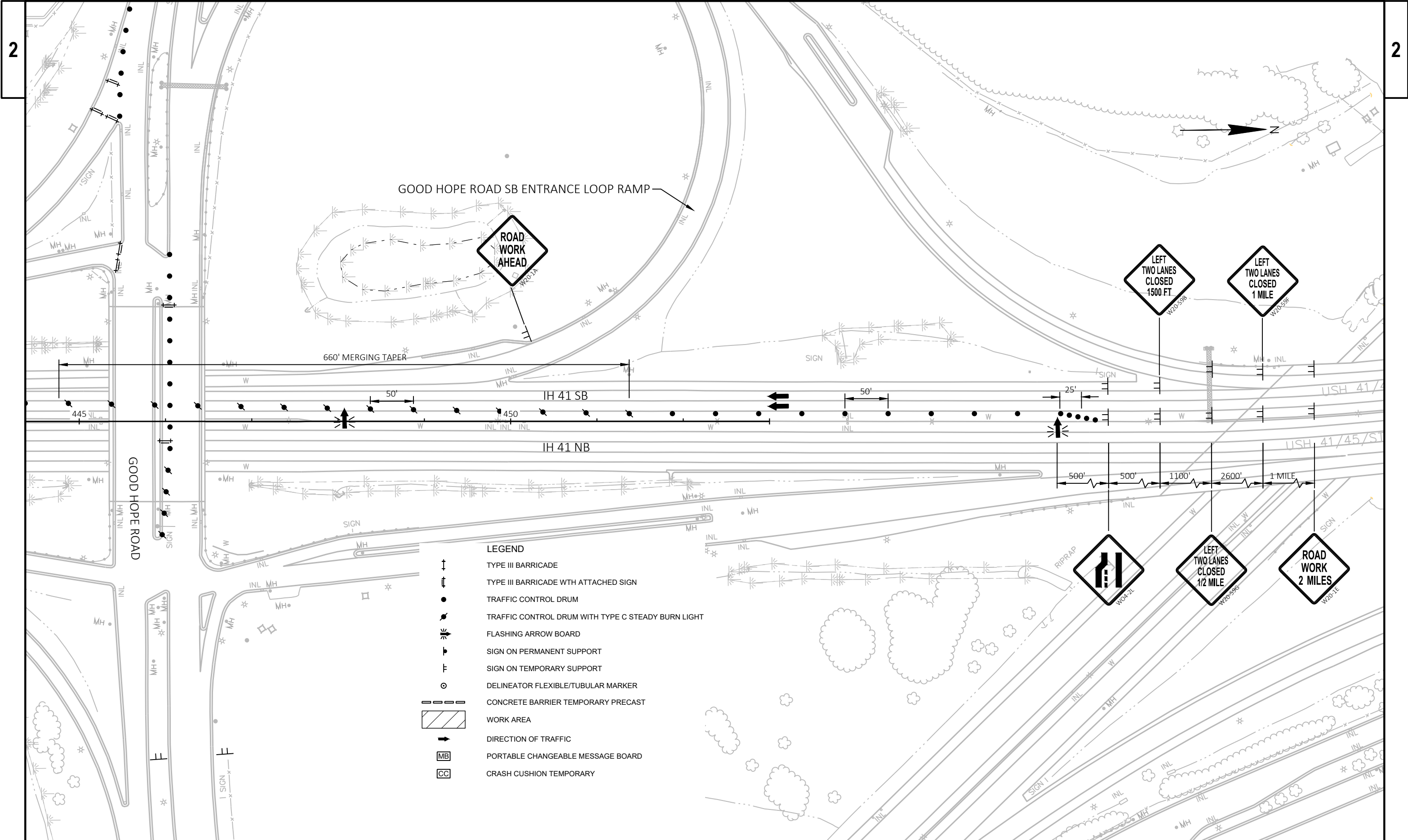
E

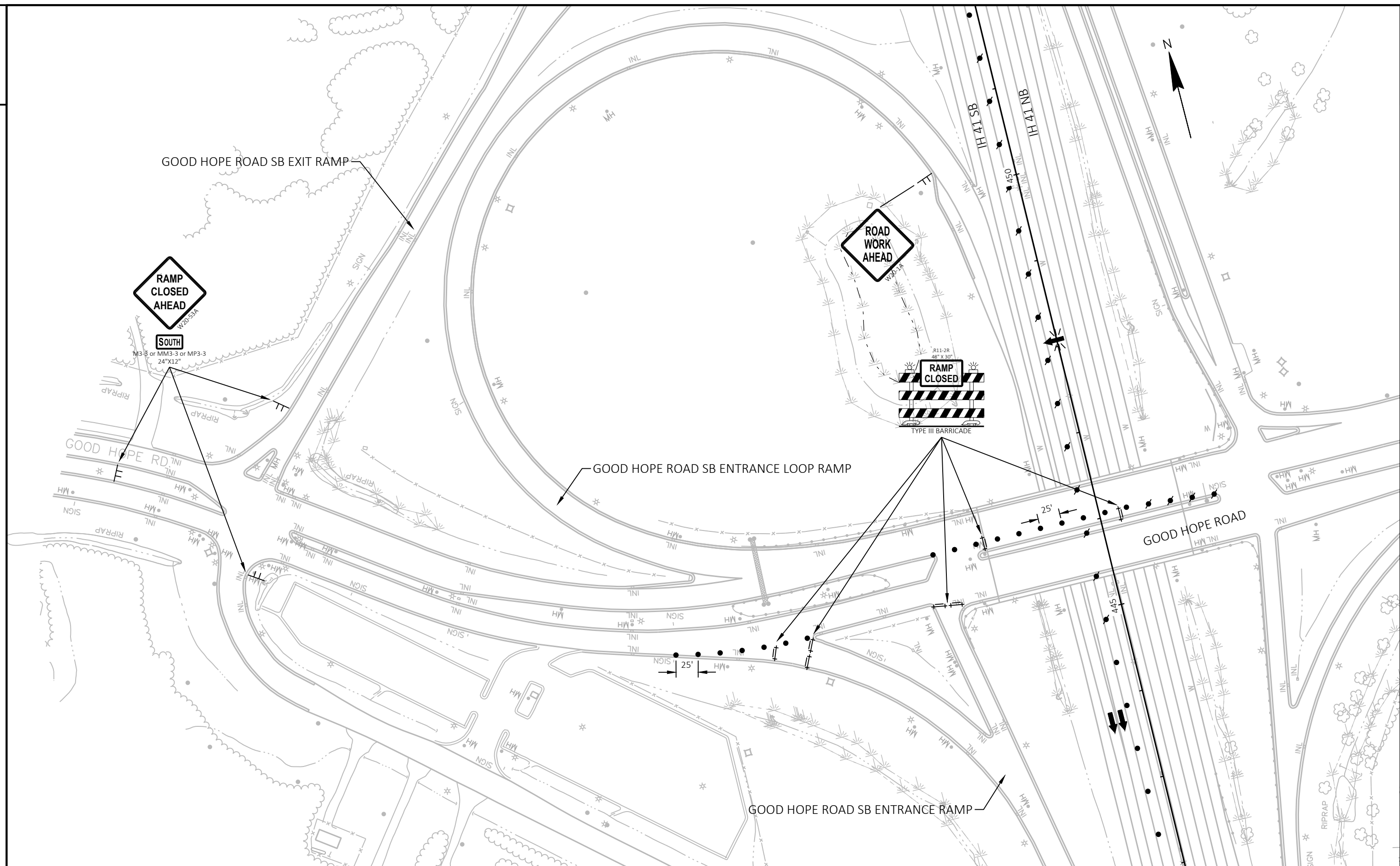




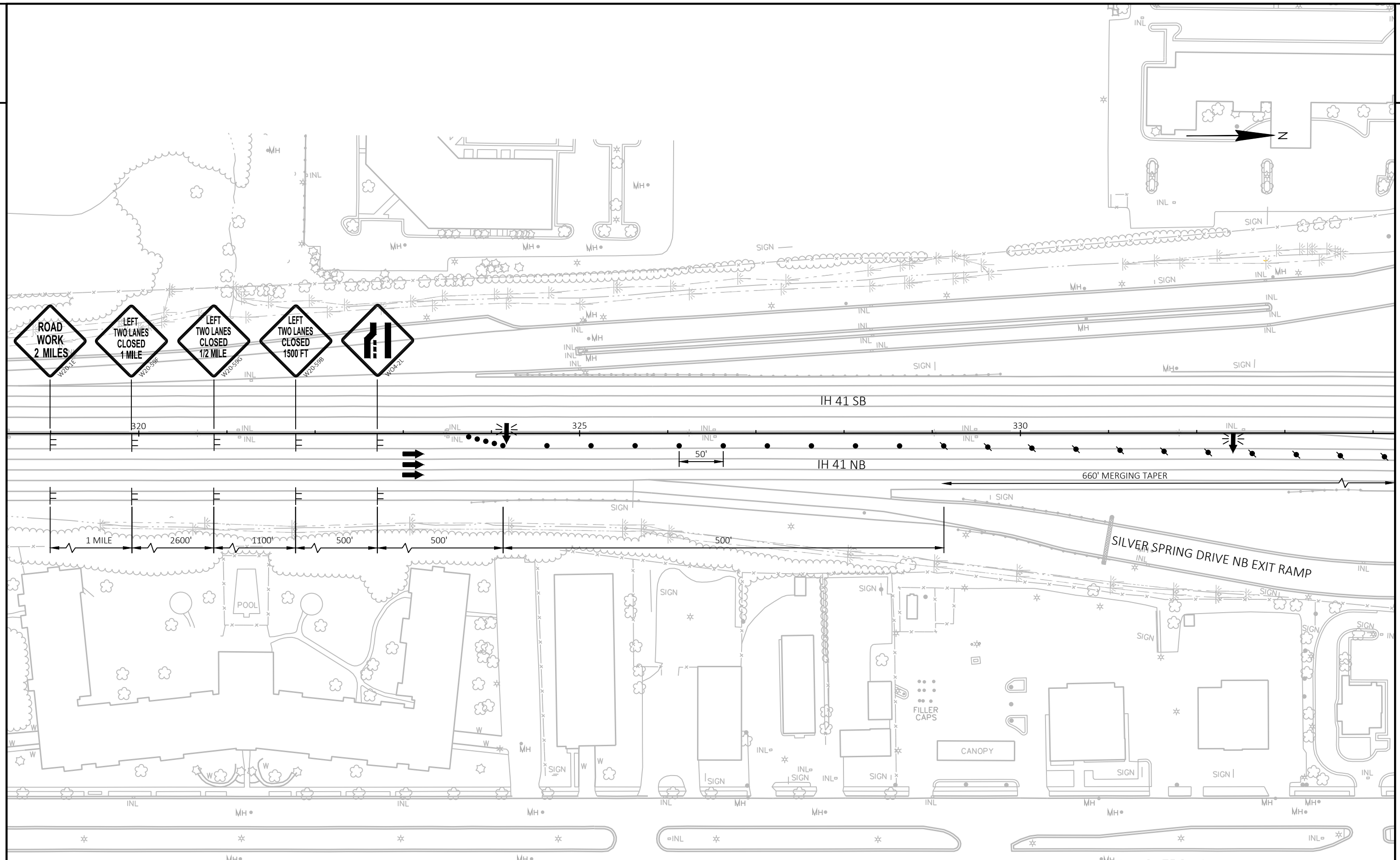




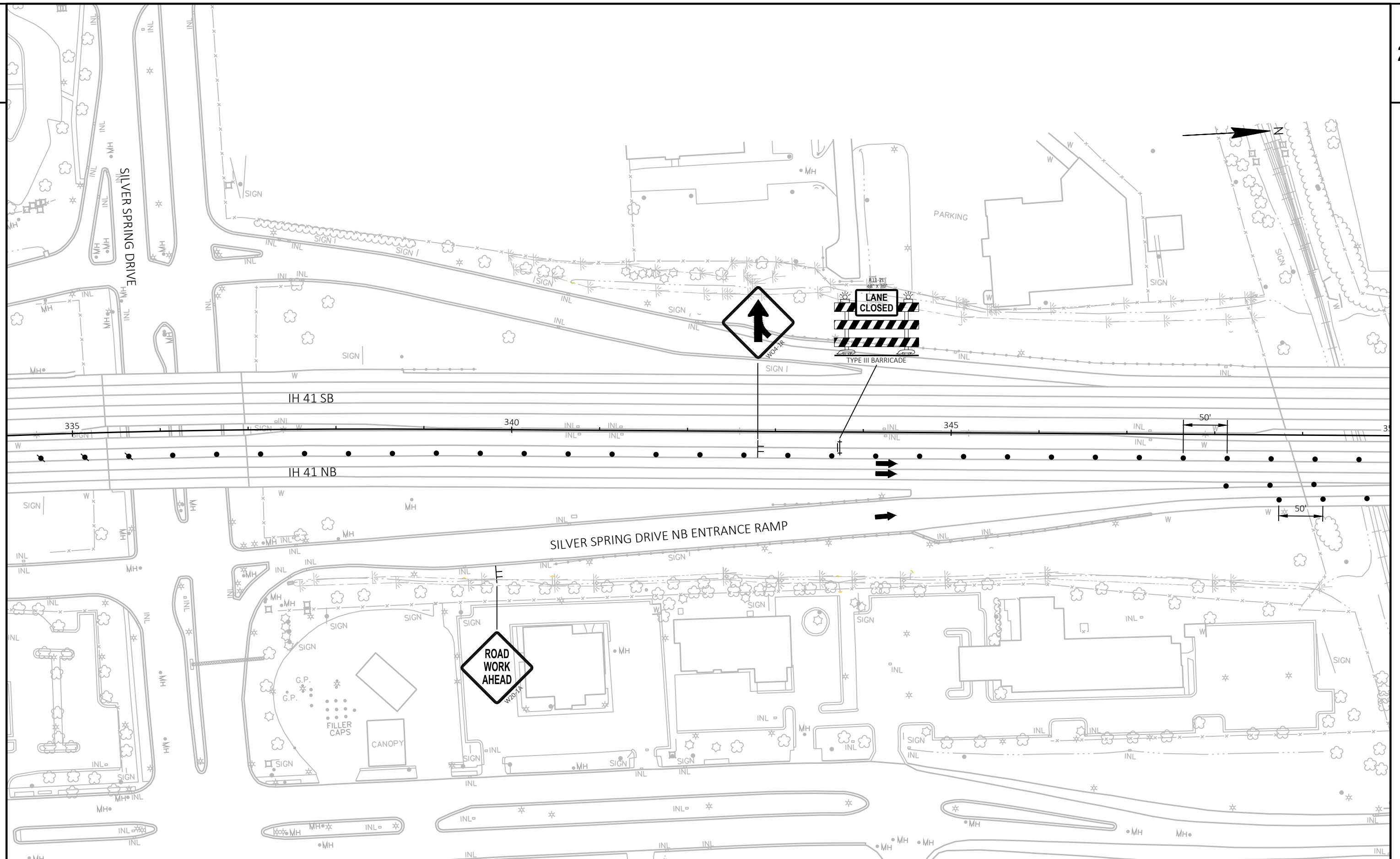




PROJECT NO: 1100-21-71	HWY: IH 41	COUNTY: MILWAUKEE	STAGE 4A/4F - OUTSIDE SHOULDER AND RAMP SHOULDER WORK - NIGHT WORK ONLY	SHEET PRE_109 E
------------------------	------------	-------------------	---	-----------------



PROJECT NO: 1100-21-71	HWY: IH 41	COUNTY: MILWAUKEE	STAGE 4B/4E - MIDDLE LANE WORK - NIGHT WORK ONLY	SHEET PRE_111 E
------------------------	------------	-------------------	--	-----------------



PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 4B/4E - MIDDLE LANE WORK - NIGHT WORK ONLY

SHEET

PRE_112 E

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\SHEETSPLAN\2018\60% PLANS\TRAFFIC STAGING\026020_STAGE 4B_DETAILS.DWG
LAYOUT NAME - Stage 4B (1)

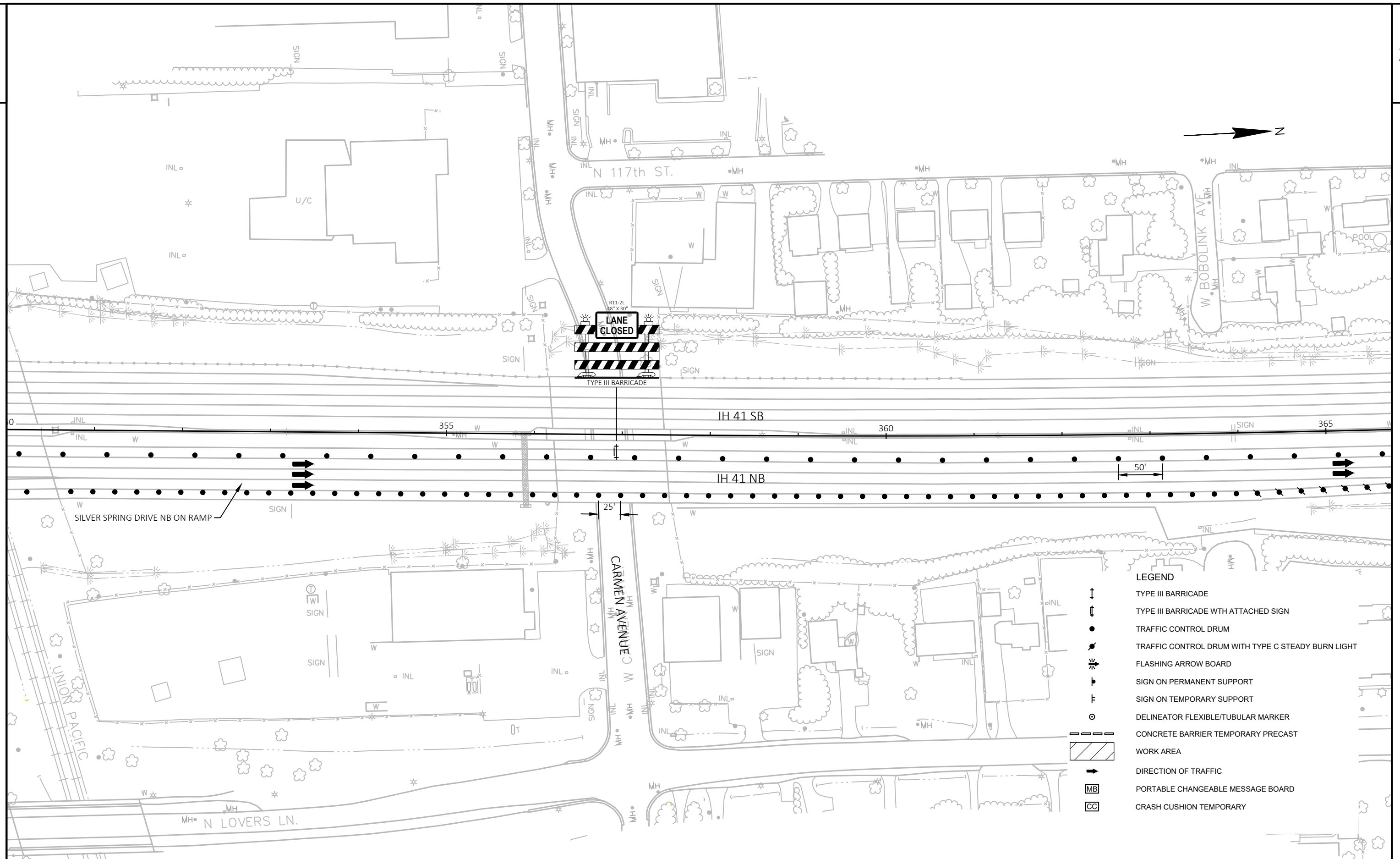
PLOT DATE : 10/26/2020 2:28 PM

PLOT BY : SCHUMACHER, JAMES D

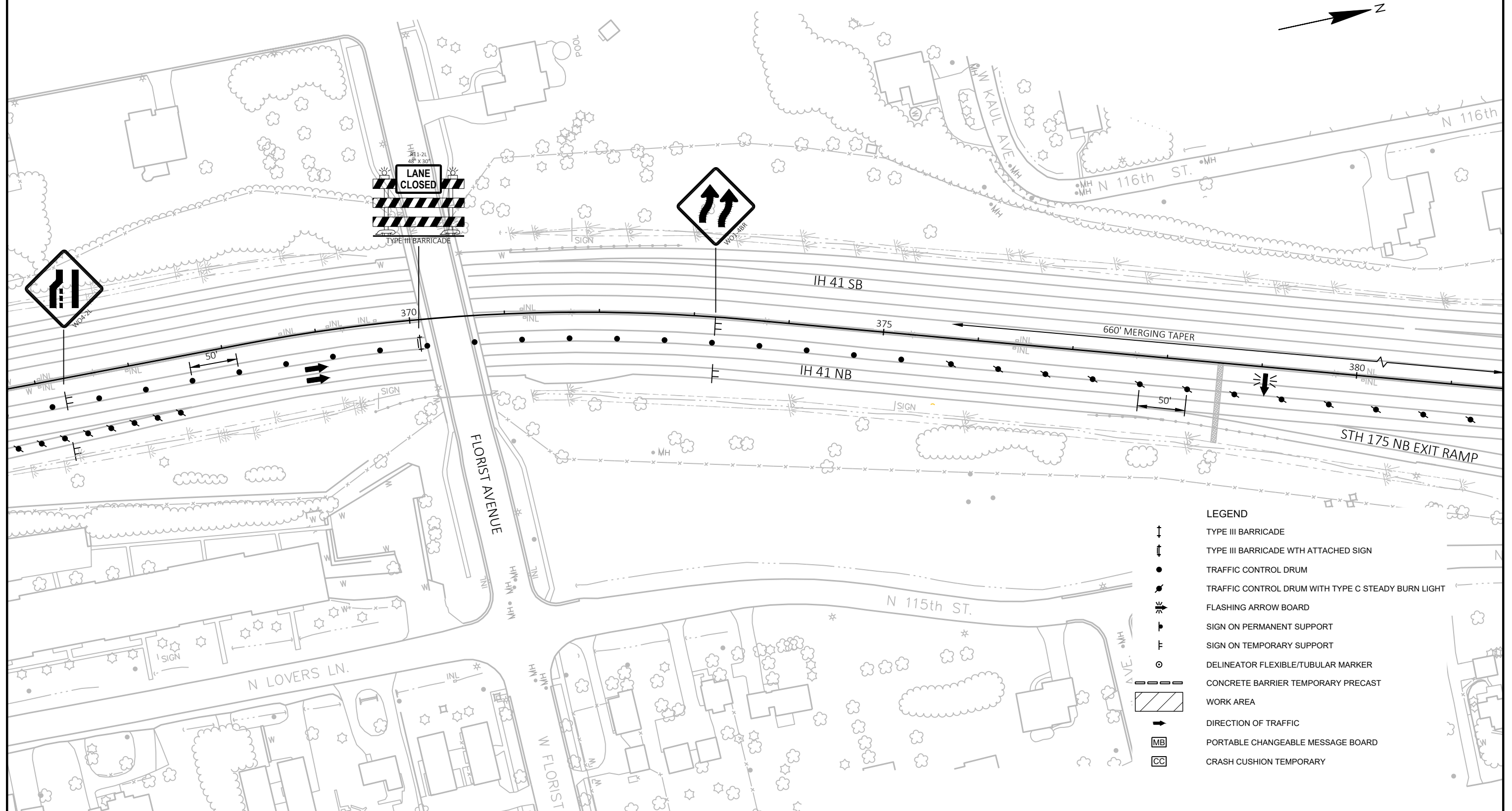
PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDs SHEET 42



- LEGEND
- TYPE III BARRICADE
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TRAFFIC CONTROL DRUM
 - TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
 - FLASHING ARROW BOARD
 - SIGN ON PERMANENT SUPPORT
 - SIGN ON TEMPORARY SUPPORT
 - DELINEATOR FLEXIBLE/TUBULAR MARKER
 - CONCRETE BARRIER TEMPORARY PRECAST
 - WORK AREA
 - DIRECTION OF TRAFFIC
 - PORTABLE CHANGEABLE MESSAGE BOARD
 - CRASH CUSHION TEMPORARY



PROJECT NO: 1100-21-71

HWY: IH 41

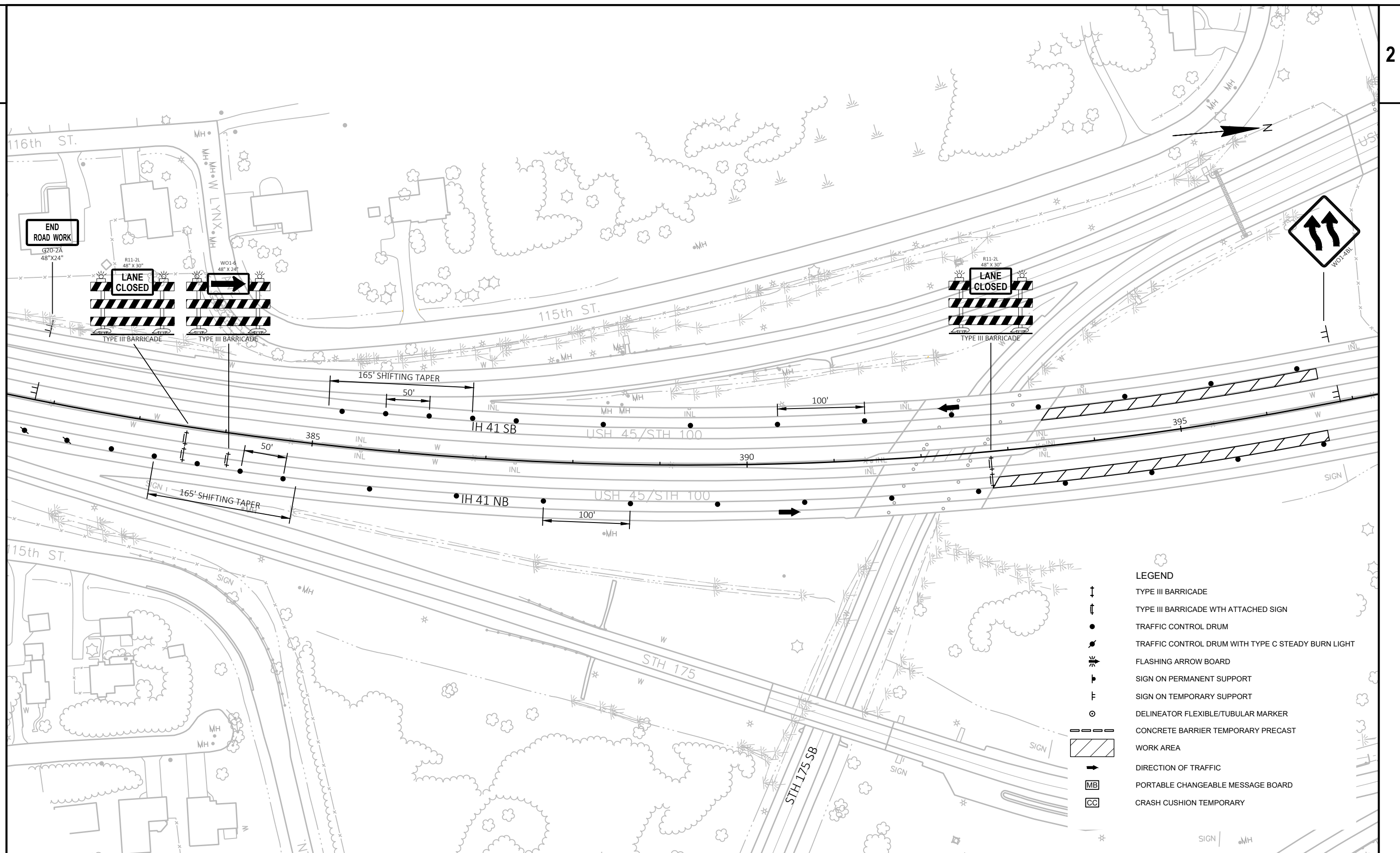
COUNTY: MILWAUKEE

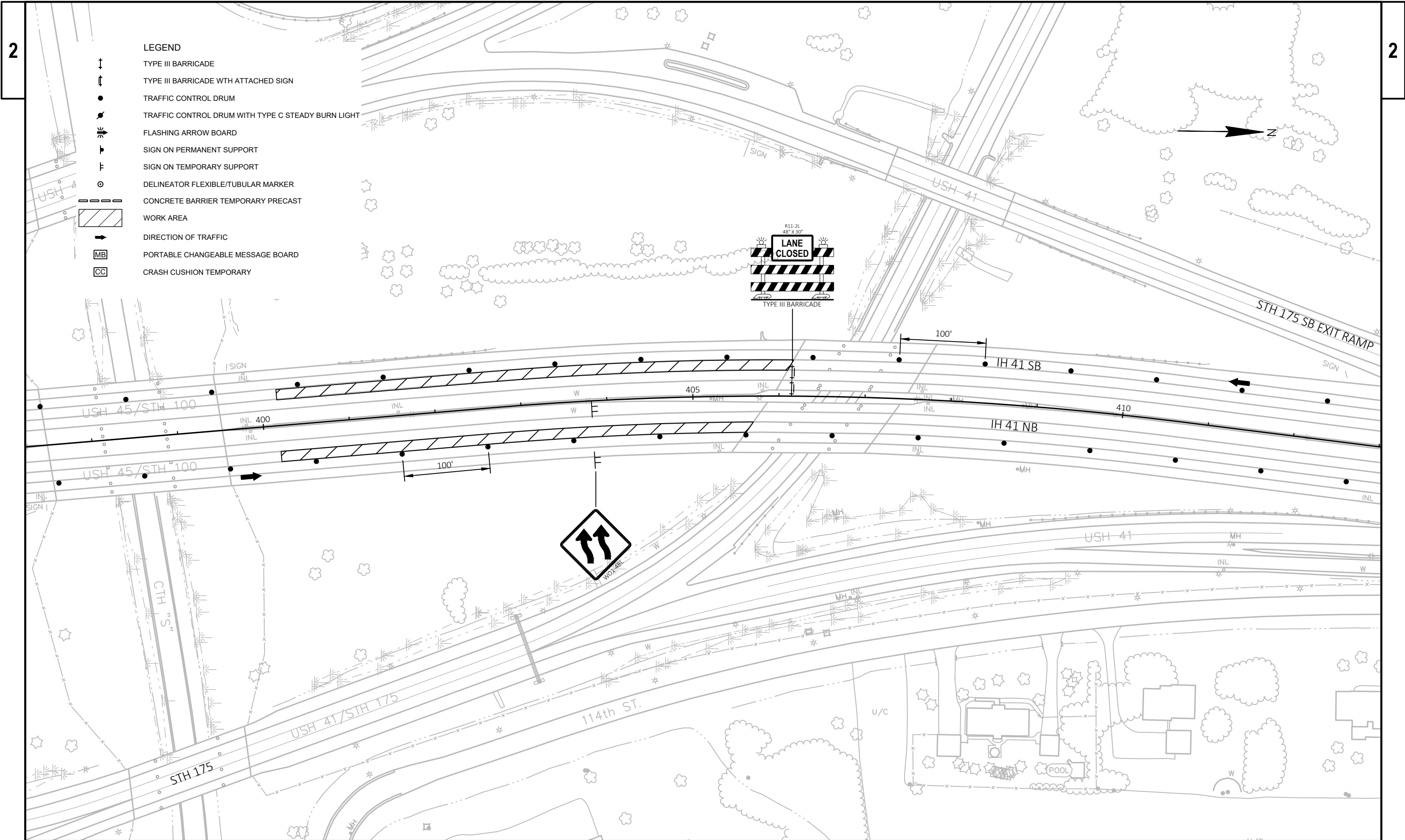
STAGE 4B/4E - MIDDLE LANE WORK - NIGHT WORK ONLY

SHEET

PRE_114

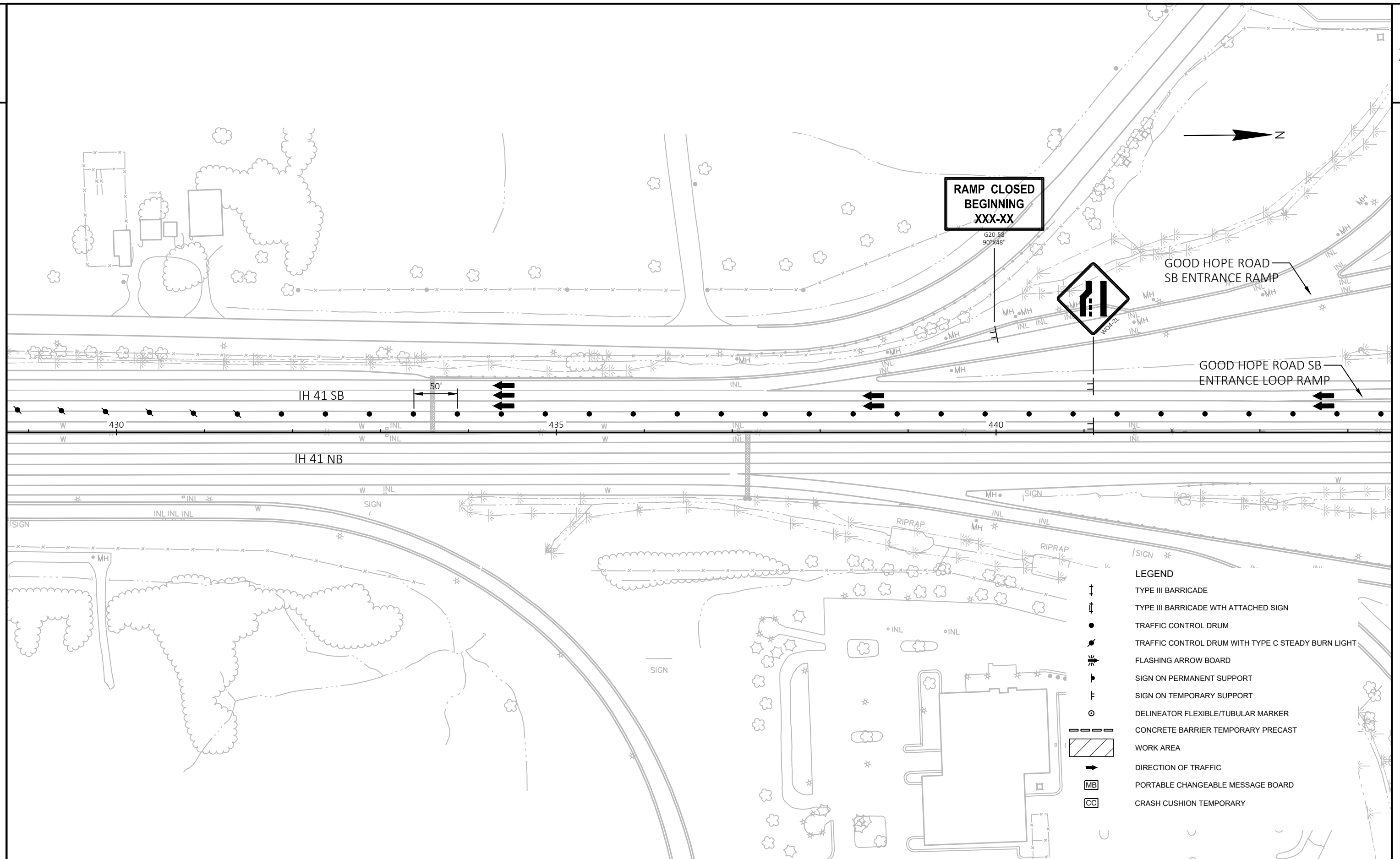
E

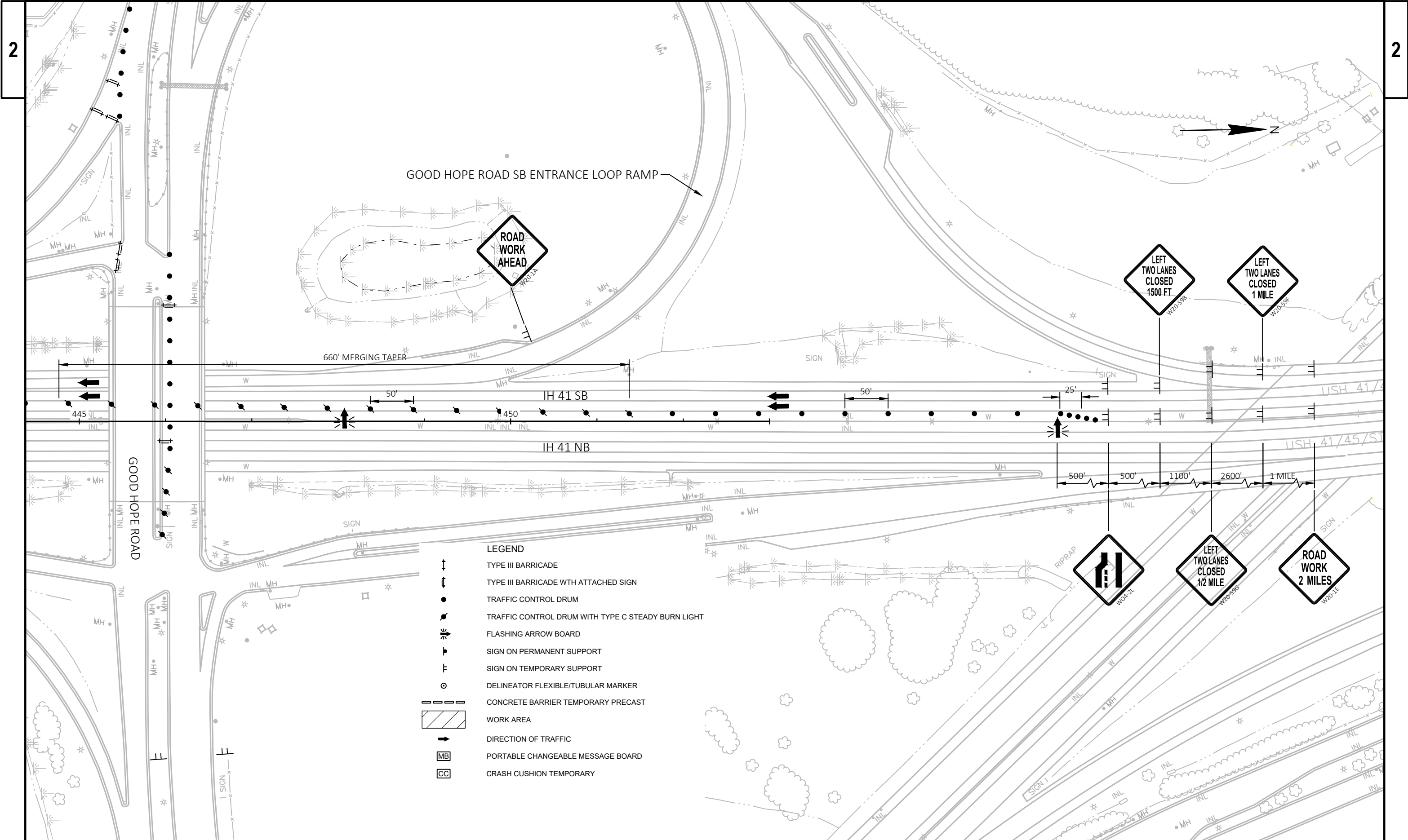


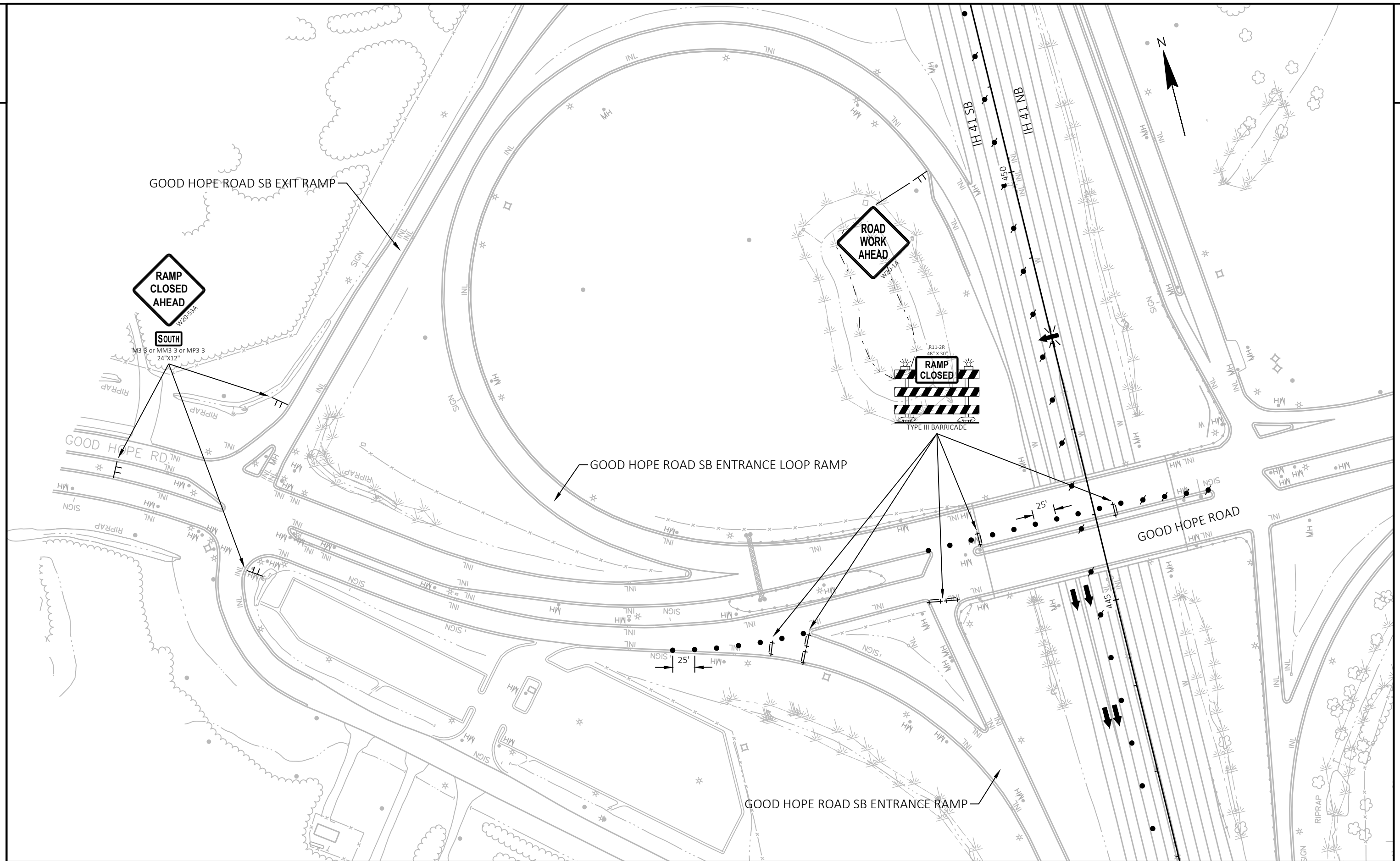


- LEGEND
- TYPE III BARRICADE
 - TYPE III BARRICADE WTH ATTACHED SIGN
 - TRAFFIC CONTROL DRUM
 - TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
 - FLASHING ARROW BOARD
 - SIGN ON PERMANENT SUPPORT
 - SIGN ON TEMPORARY SUPPORT
 - DELINEATOR FLEXIBLE/TUBULAR MARKER
 - CONCRETE BARRIER TEMPORARY PRECAST
 - WORK AREA
 - DIRECTION OF TRAFFIC
 - PORTABLE CHANGEABLE MESSAGE BOARD
 - CRASH CUSHION TEMPORARY



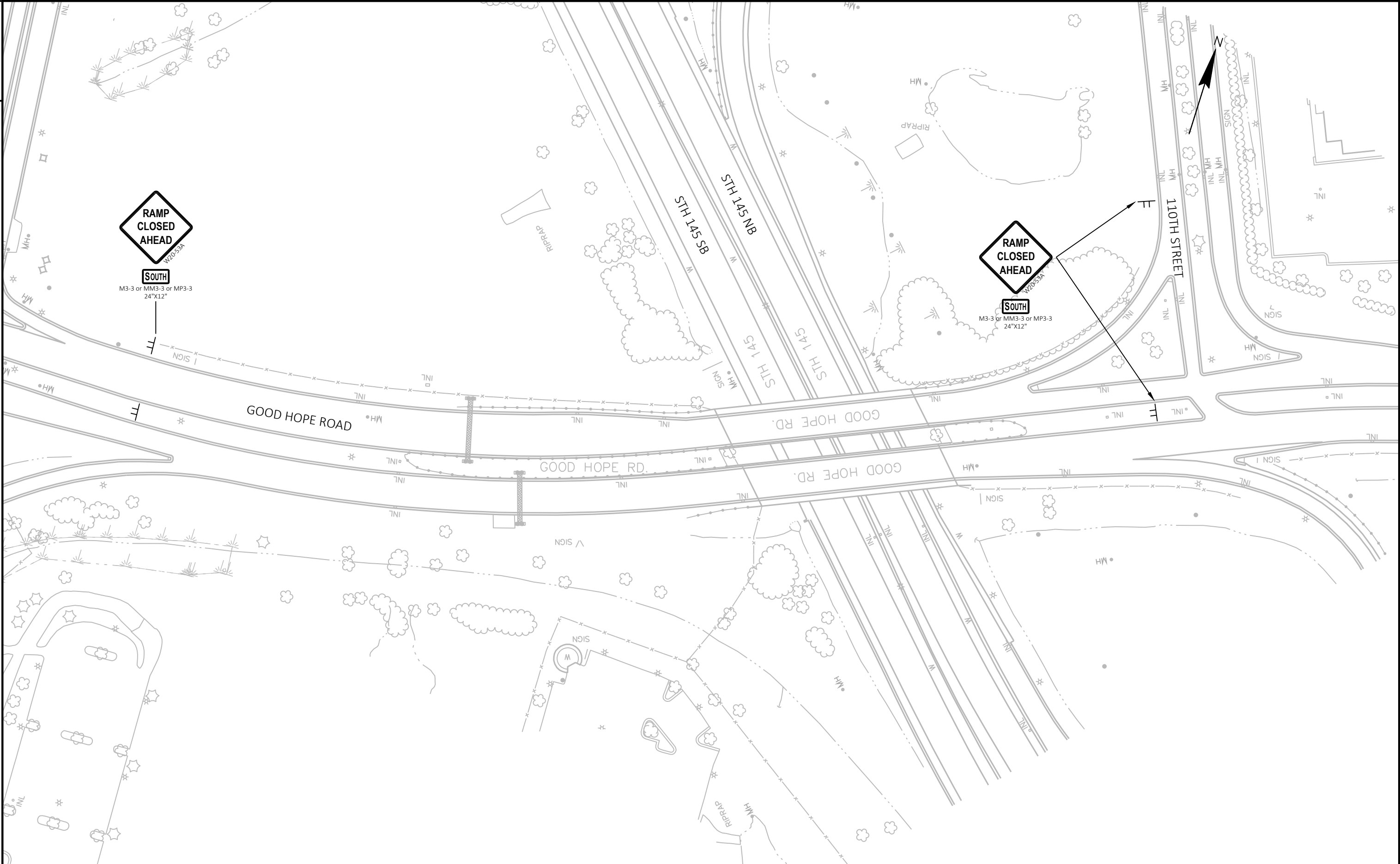






2

2



PROJECT NO: 1100-21-71	HWY: IH 41	COUNTY: MILWAUKEE	STAGE 4B/4E - MIDDLE LANE WORK - NIGHT WORK ONLY	SHEET PRE 121 E
------------------------	------------	-------------------	--	--

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\SHEETSPLAN\2018\60% PLANS\TRAFFIC STAGING\026020_STAGE 4B_DETAILS.DWG
LAYOUT NAME - Stage 4B - Good Hope Rd (1)

PLOT DATE : 10/26/2020 2:33 PM

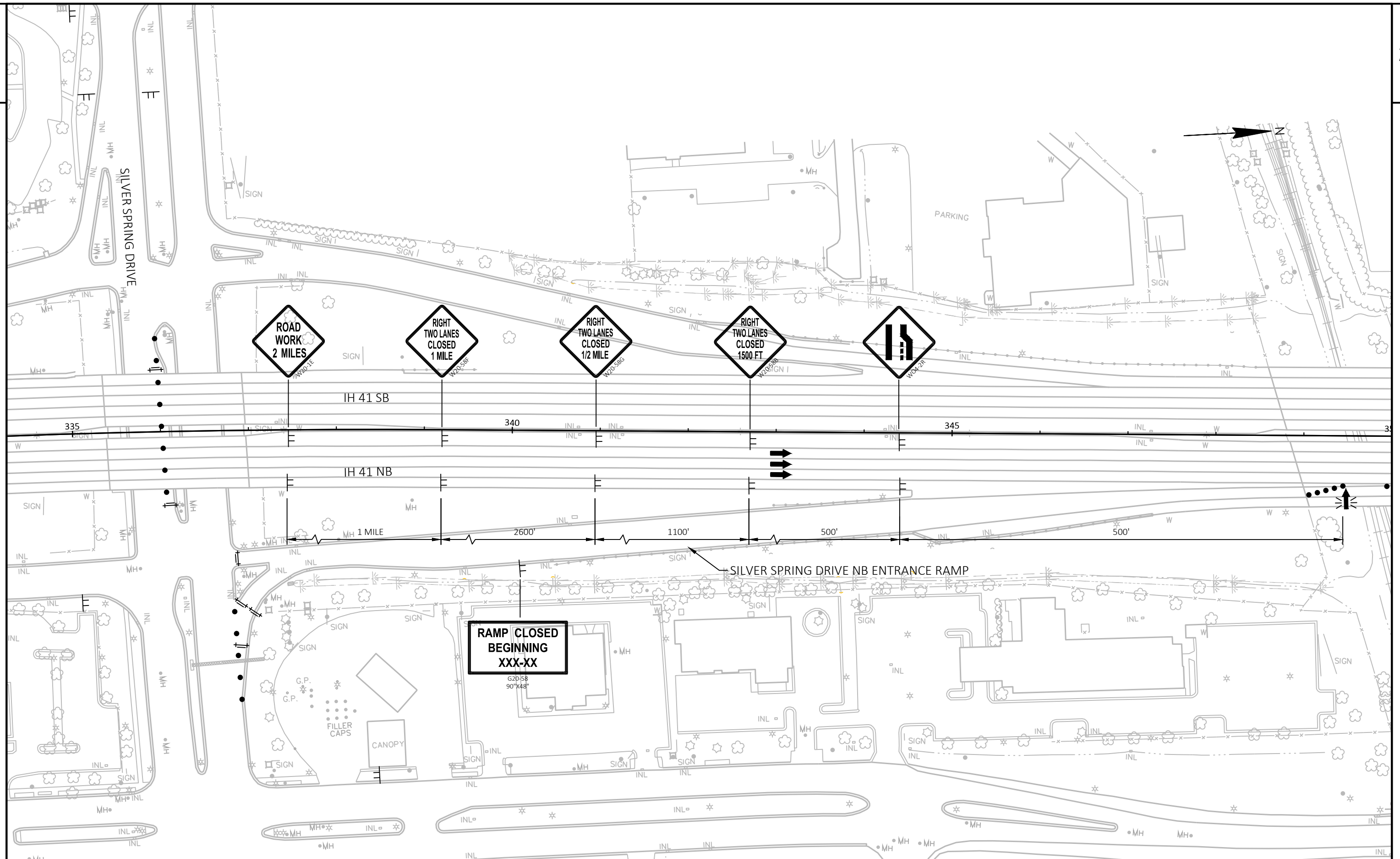
PLOT BY : SCHUMACHER, JAMES D

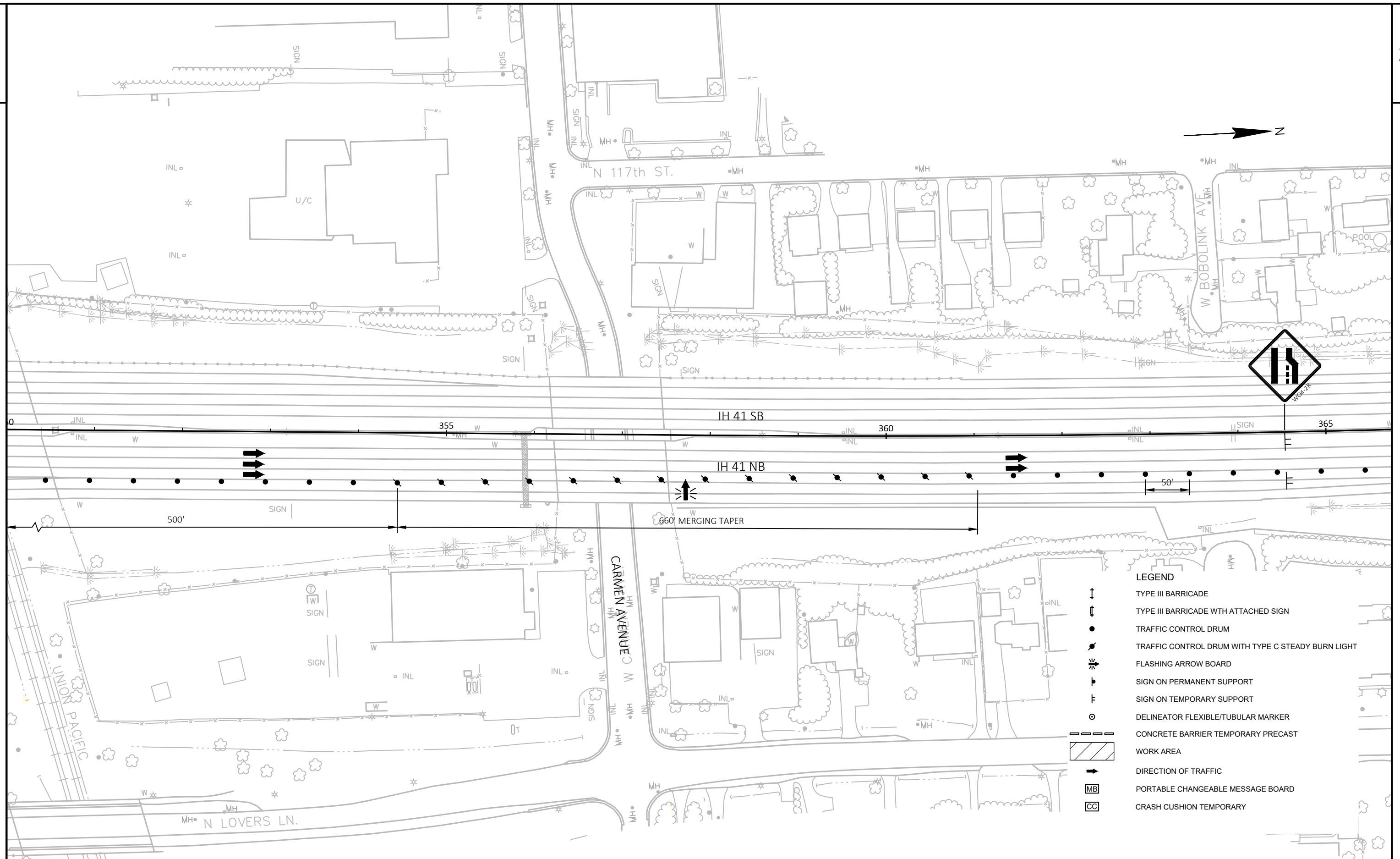
PLOT NAME :

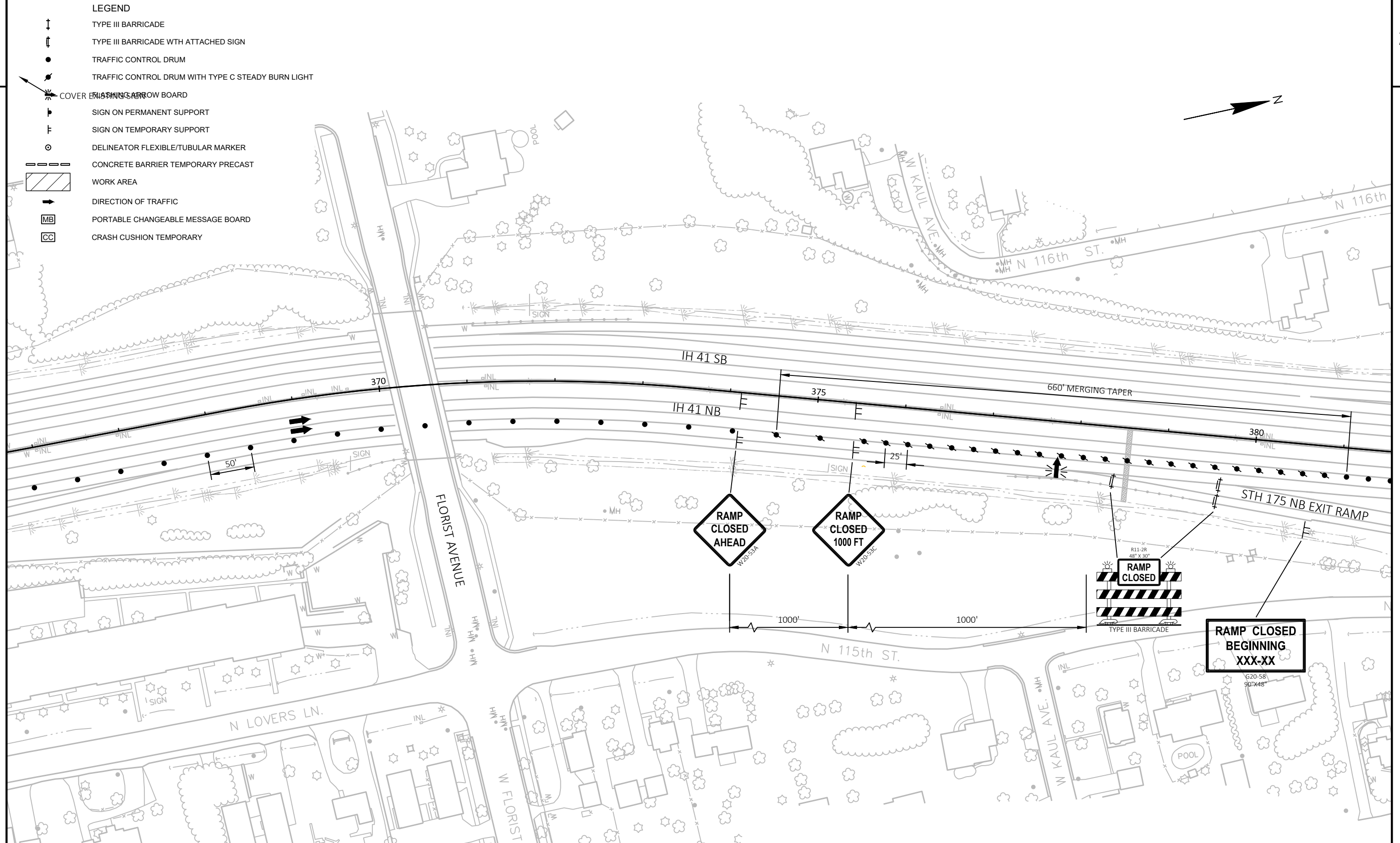
PLOT SCALE : 1 IN:100 FT

PRE 121 E

WISDOT/CADDS SHEET 42







PROJECT NO: 1100-21-71

HWY: IH 41

COUNTY: MILWAUKEE

STAGE 4C/4D - OUTSIDE LANE WORK - NIGHT WORK ONLY

SHEET

PRE_124

E

FILE NAME : C:\CIVIL 3D PROJECTS\11002101\11002101\2018\60% PLANS\TRAFFIC STAGING\026021_STAGE 4C_DETAILS.DWG
LAYOUT NAME - Stage 4C (2)

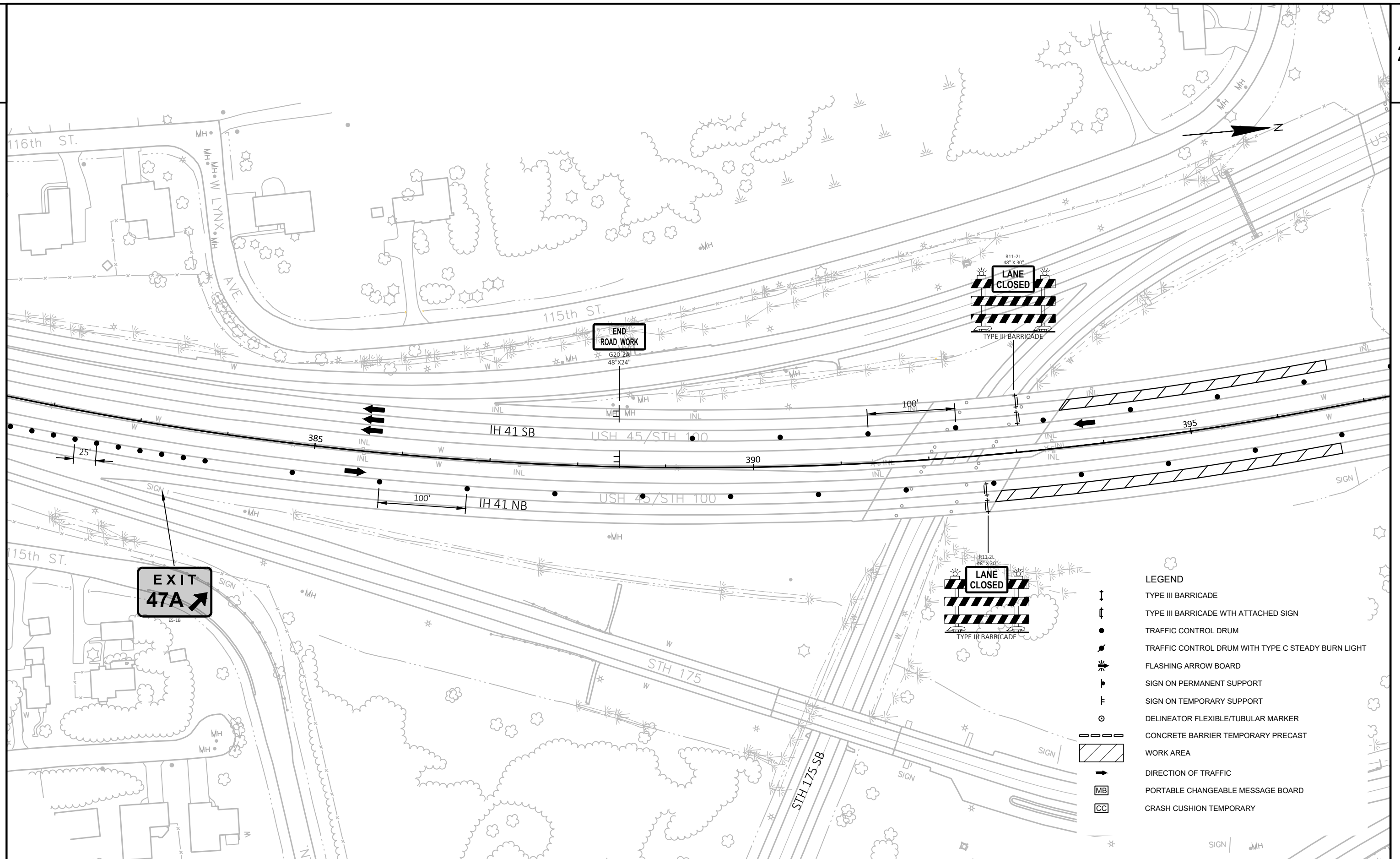
PLOT DATE : 10/26/2020 2:35 PM

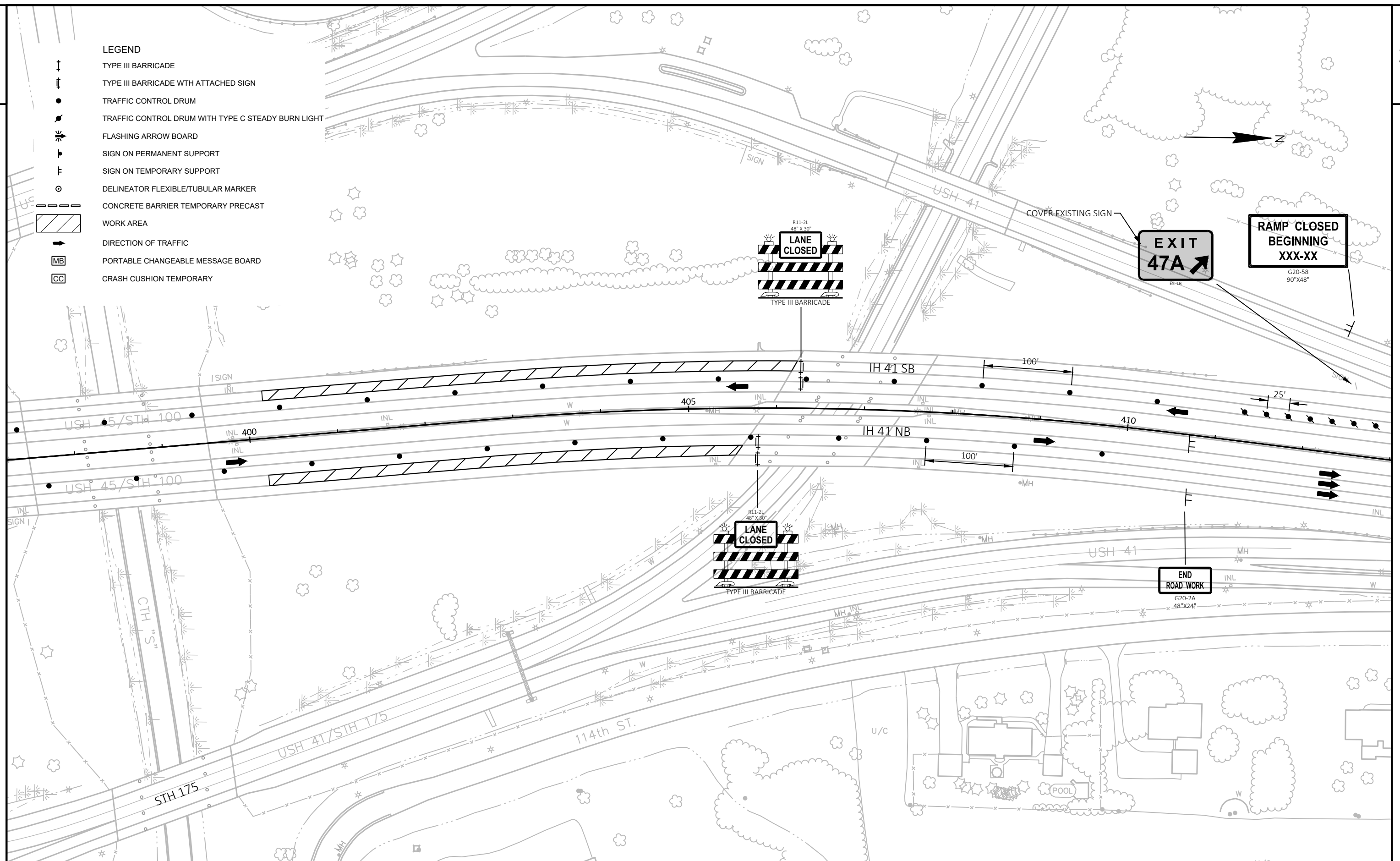
PLOT BY : SCHUMACHER, JAMES D

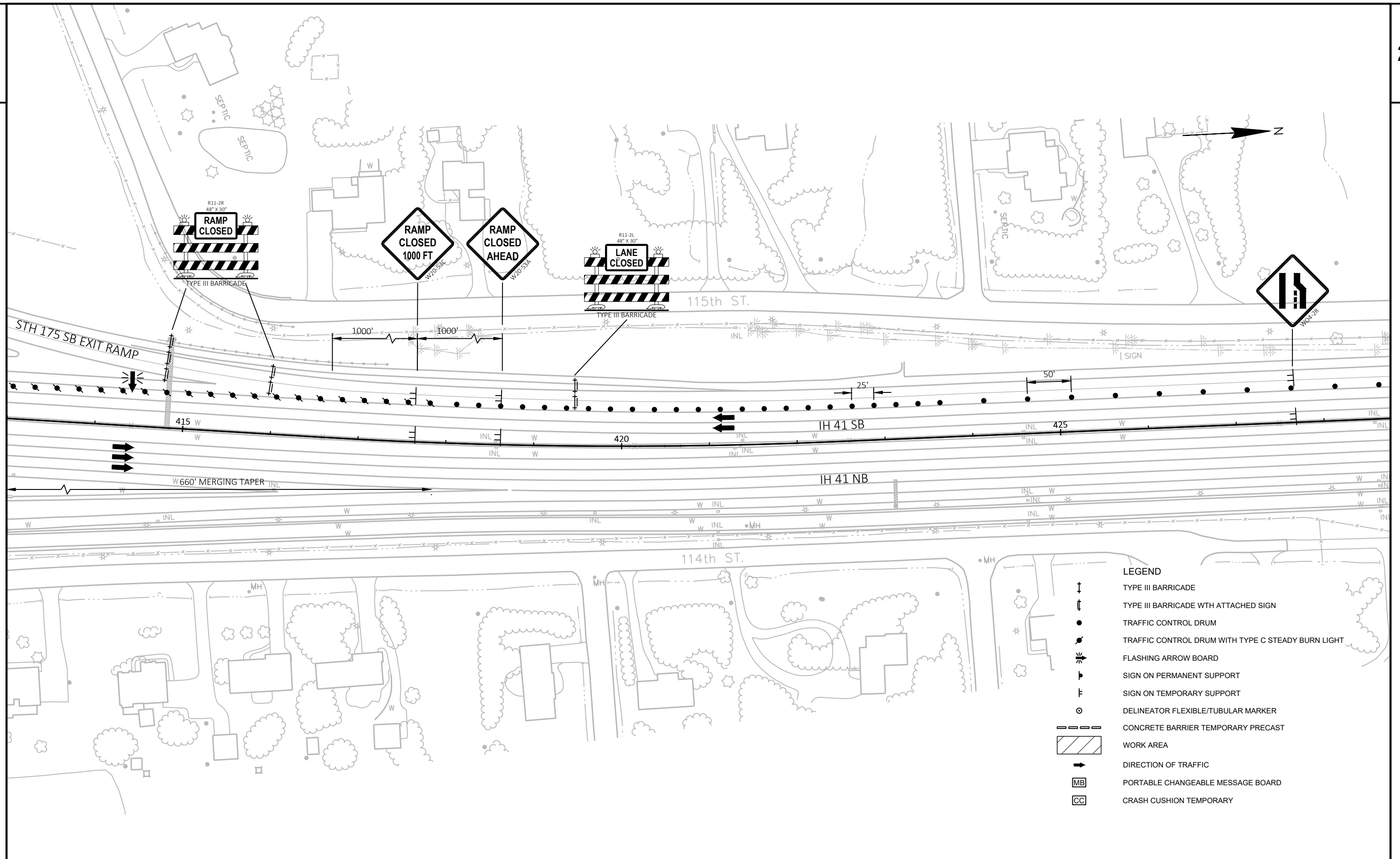
PLOT NAME :

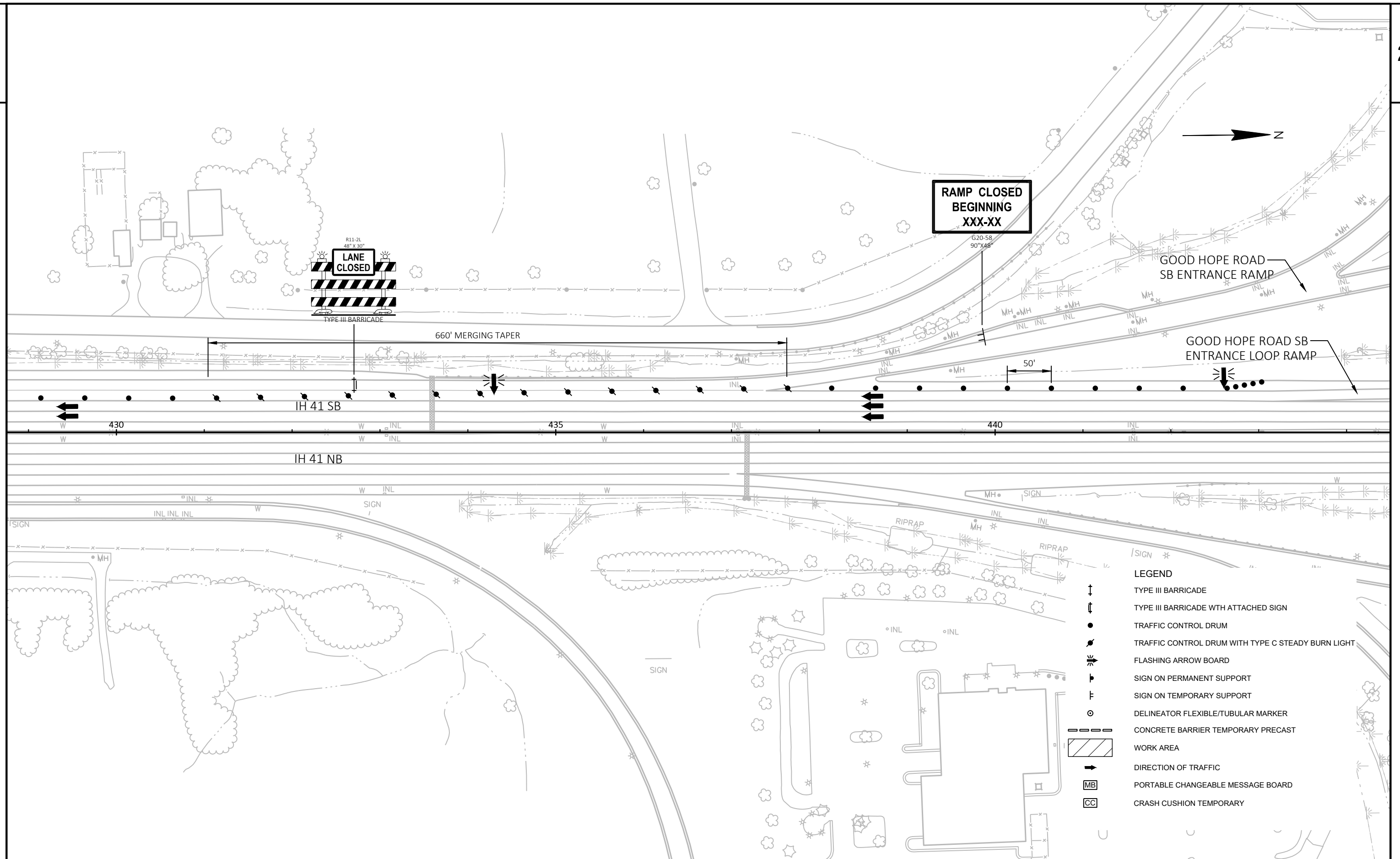
PLOT SCALE : 1 IN:100 FT

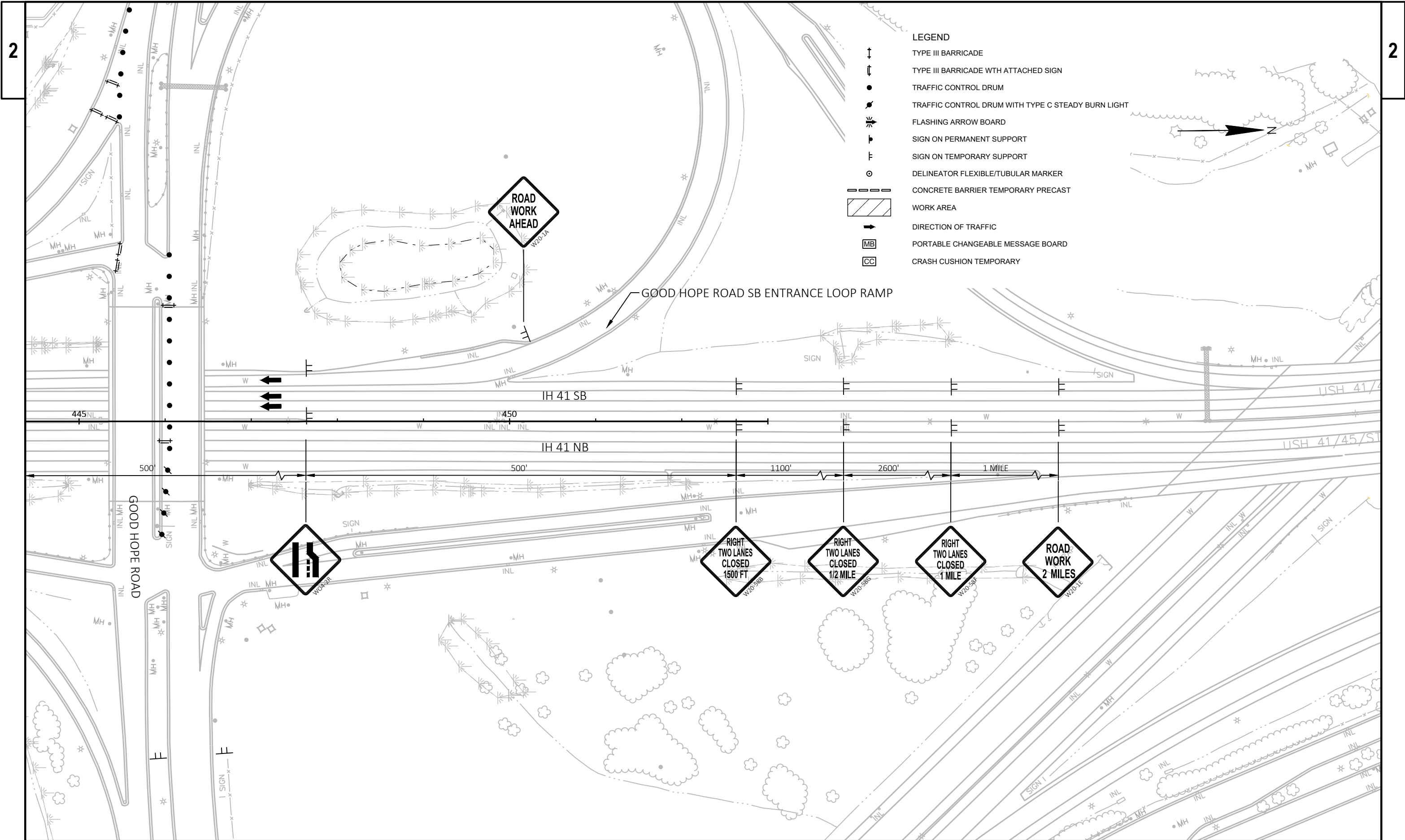
WISDOT/CADDs SHEET 42

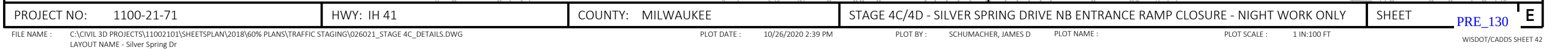


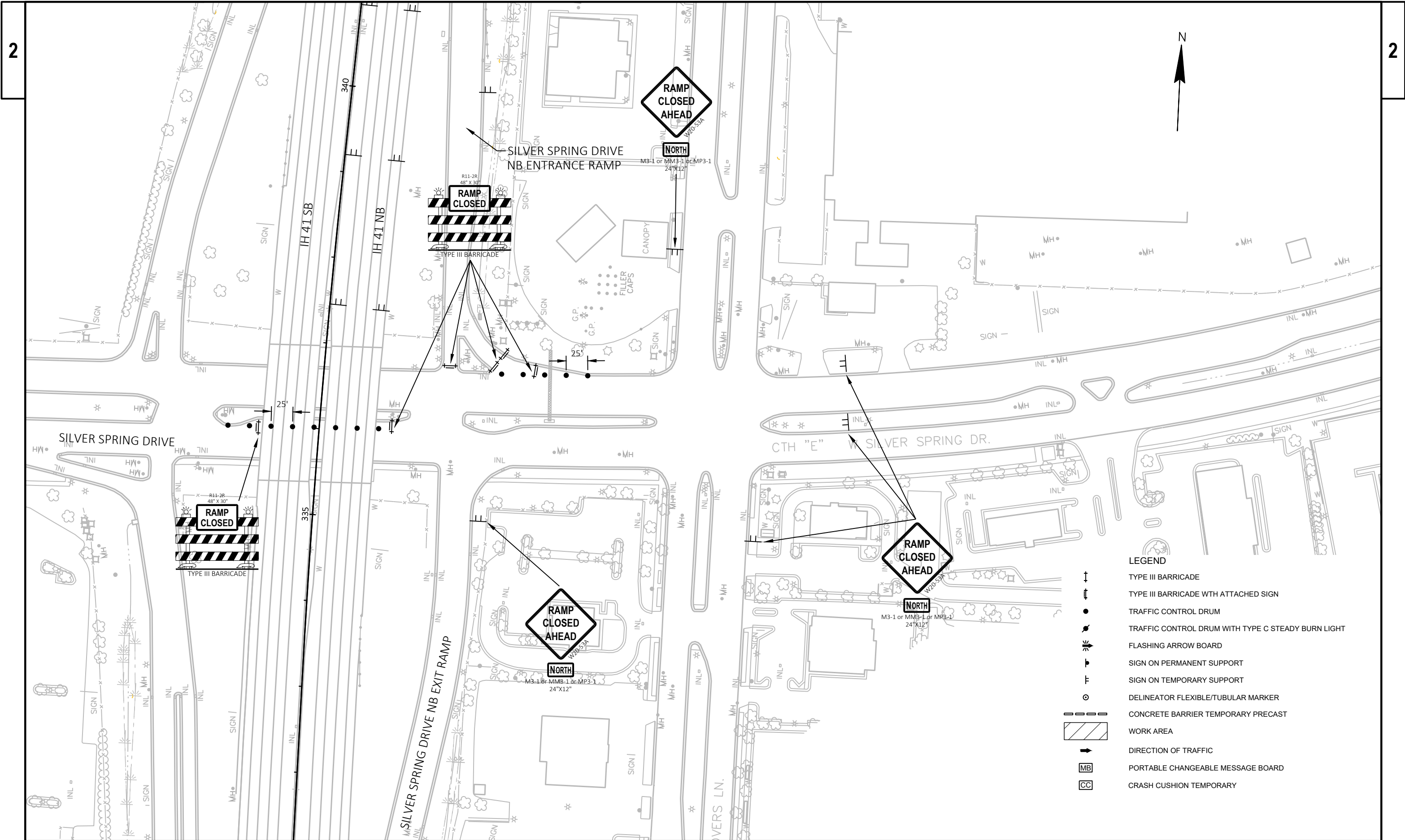


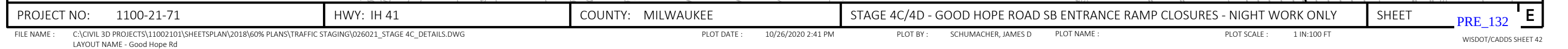


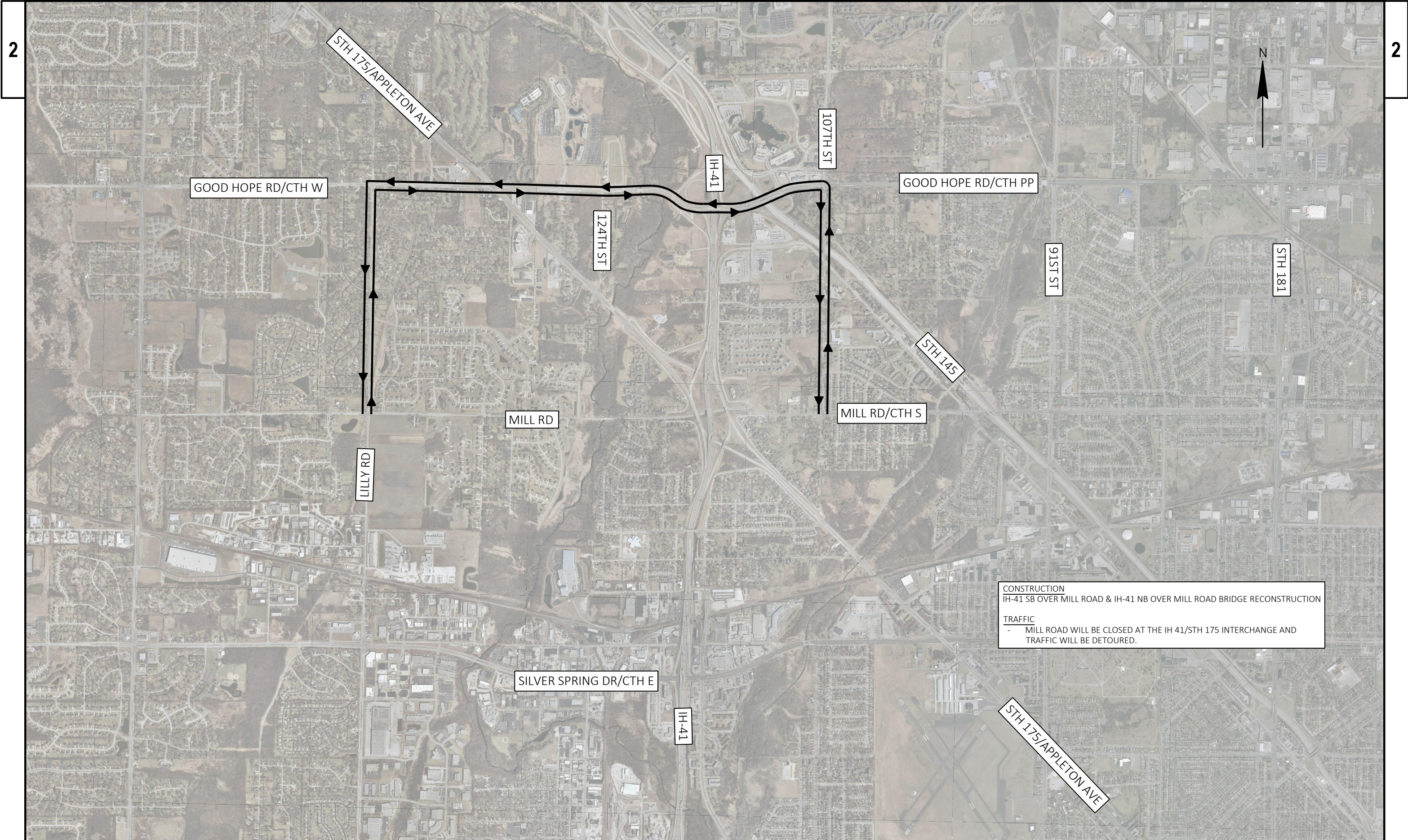






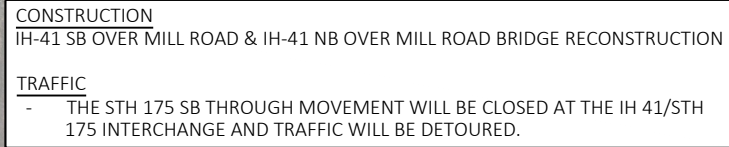




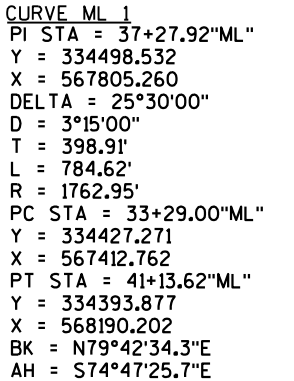


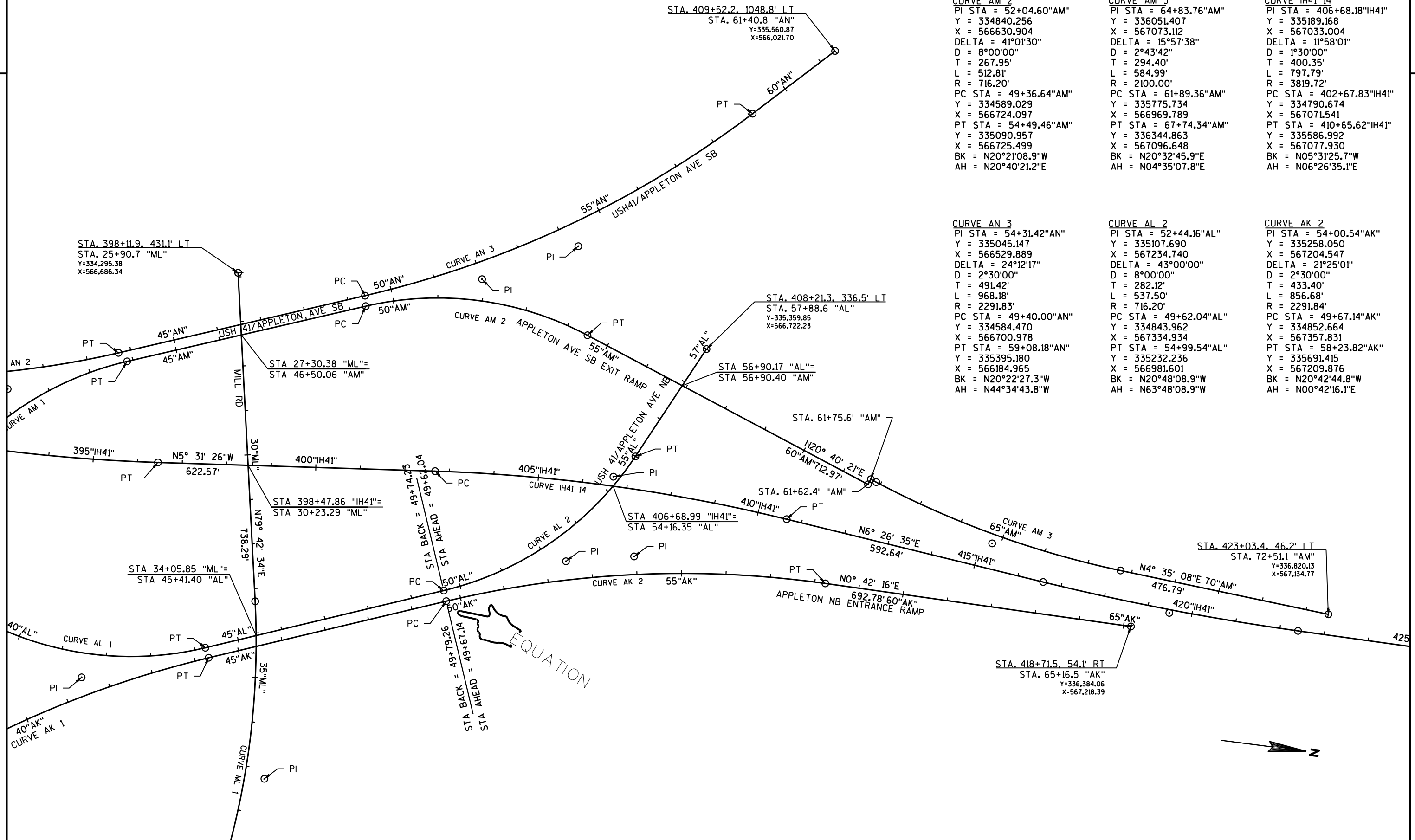
CONSTRUCTION
IH-41 SB OVER MILL ROAD & IH-41 NB OVER MILL ROAD BRIDGE RECONSTRUCTION

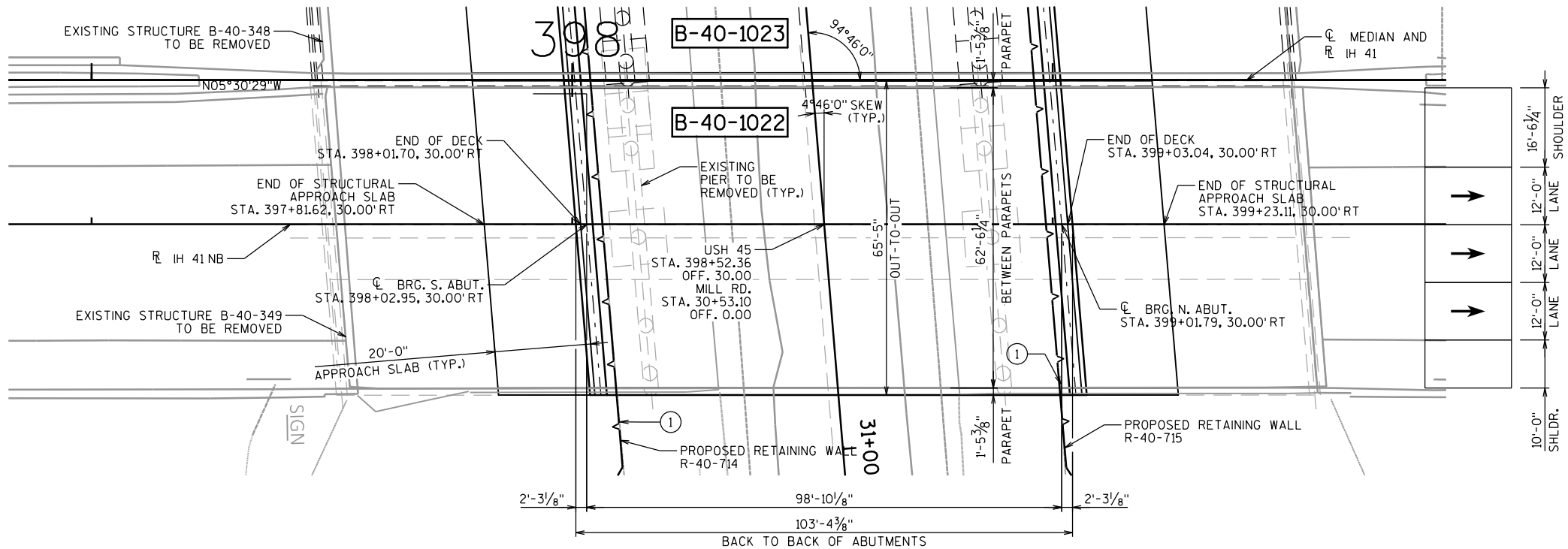
TRAFFIC
- MILL ROAD WILL BE CLOSED AT THE IH 41/STH 175 INTERCHANGE AND TRAFFIC WILL BE DETOURED.











LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION
3. GENERAL NOTES & QUANTITIES
4. MILL RD. SECTIONS
5. SUBSURFACE EXPLORATION

LEGEND

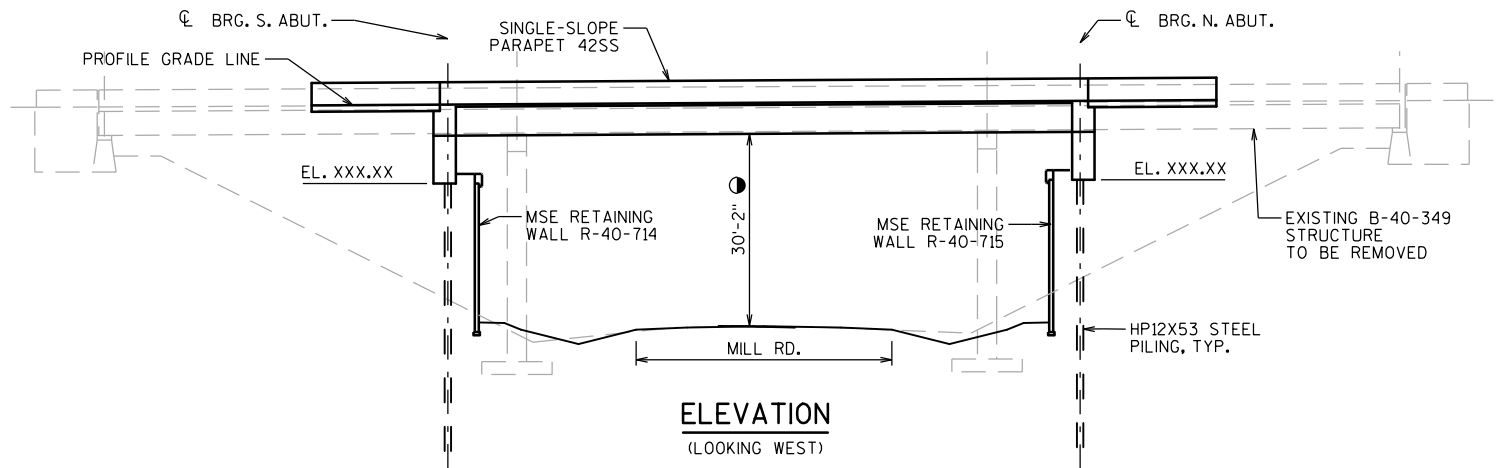
- TRAFFIC DIRECTION
- LOCATION PER EXISTING PLANS AND MIN. CLEARANCE TAKEN FROM HSI SYSTEM 9-29-2016
- ★ ITEMS INCLUDED WITH R-40-714 AND R-40-715
- ☆ ITEMS INCLUDED WITH B-40-1022

UTILITY NOTES

- 1 EXISTING AT&T FIBER OPTIC LINE
- 2 UTILITY
- 3 UTILITY
- 4 UTILITY

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK (608) 261-0261
CONSULTANT:
PAT CASHIN (414) 359-2300



TRAFFIC DATA

IH 41 SB
EXISTING A.D.T. = 55,250 (2014)
FUTURE A.D.T. = 65,600 (2040)
R.D.S. = 60 M.P.H.
MILL RD
EXISTING A.D.T. = 2,500 (2013)
FUTURE A.D.T. = 2,850 (2040)
R.D.S. = 40 M.P.H.

DESIGN DATA

LIVE LOAD
DESIGN LOADING: HL93
INVENTORY RATING FACTOR: RF = X.XX
OPERATING RATING FACTOR: RF = X.XX
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = XXX KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES

CONCRETE MASONRY:
SUPERSTRUCTURE..... f'c = 4,000 psi
SUBSTRUCTURE..... f'c = 4,000 psi
54W-INCH PRESTRESSED GIRDERS..... f'c = 8,000 psi
STEEL PILING..... fy = 50,000 psi
BAR STEEL REINFORCEMENT..... fy = 60,000 psi
PRESTRESSED STRANDS..... ULTIMATE TENSILE STRENGTH = 270,000 psi

FOUNDATION DATA

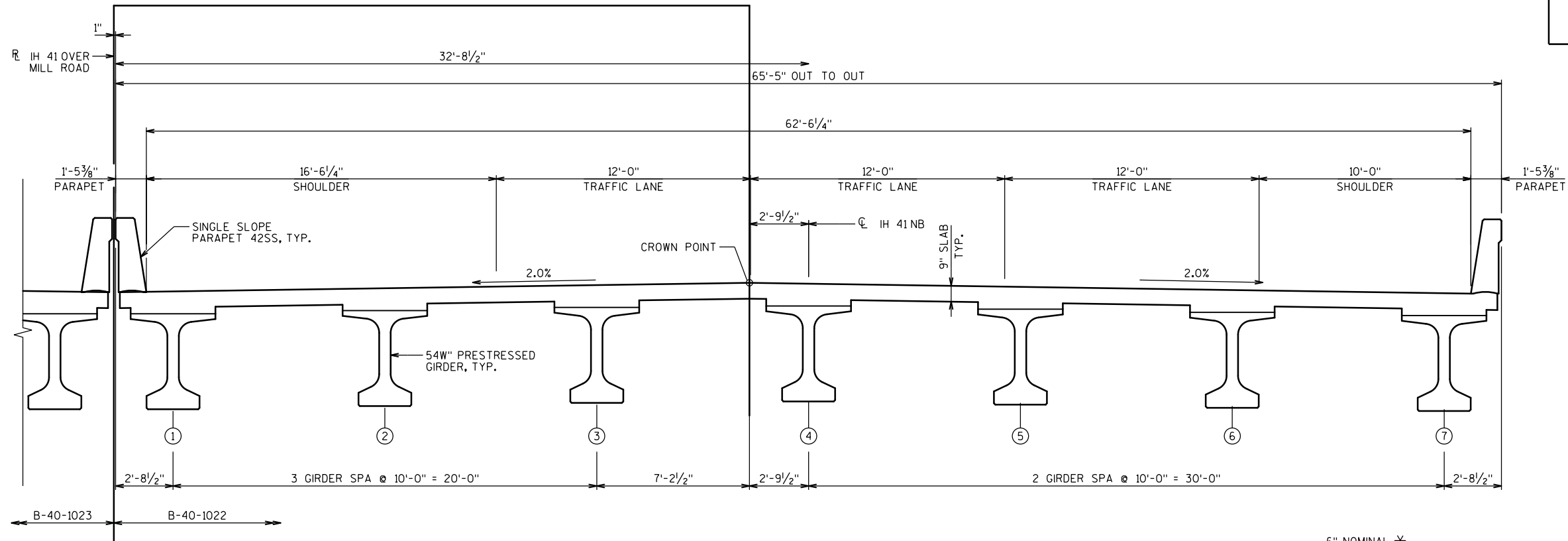
ABUTMENTS SHALL BE SUPPORTED ON HP12X53 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF XXX TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.

THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACROT OF 0.65 USING THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.

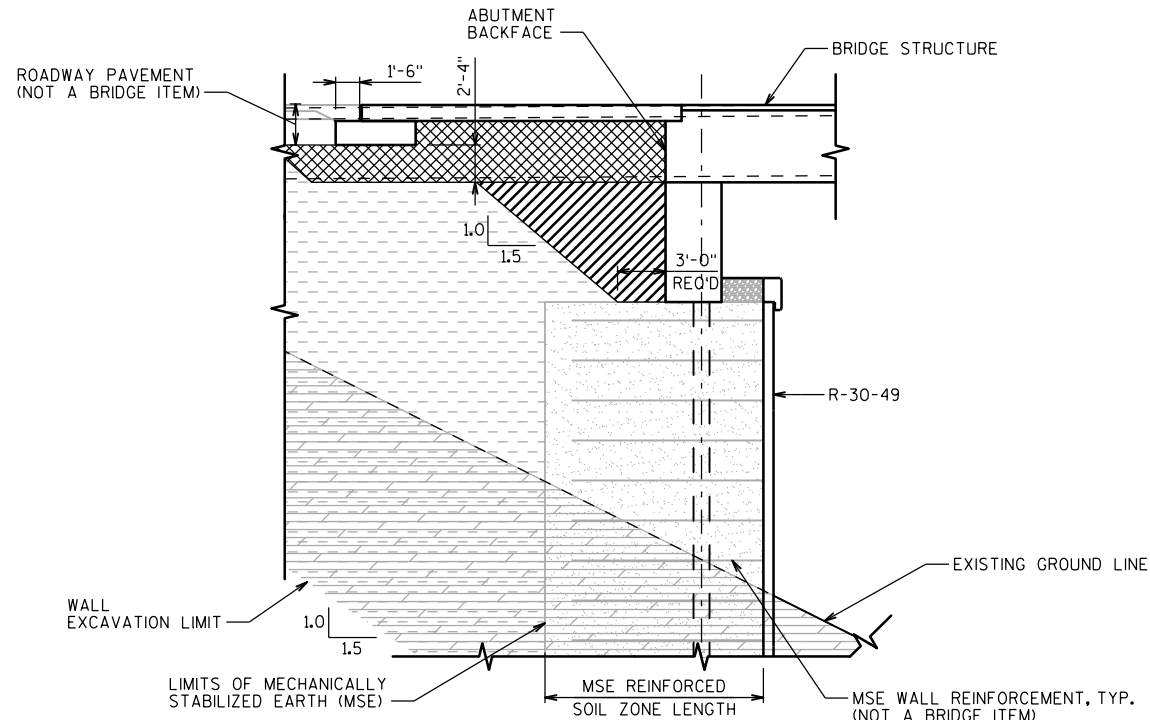
ESTIMATED PILE LENGTHS:
NORTH ABUTMENT: XX FEET
SOUTH ABUTMENT: XX FEET

PRELIMINARY PLANS

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
HNTB 250 E. WISCONSIN AVE. MILWAUKEE, WI 53202 (414) 359-2800			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		CHIEF STRUCTURES DESIGN ENGINEER	DATE
STRUCTURE B-40-1022			
IH 41NB OVER MILL ROAD			
COUNTY	MILWAUKEE	CITY	MILWAUKEE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
GENERAL PLAN AND ELEVATION			SHEET 1 OF 5

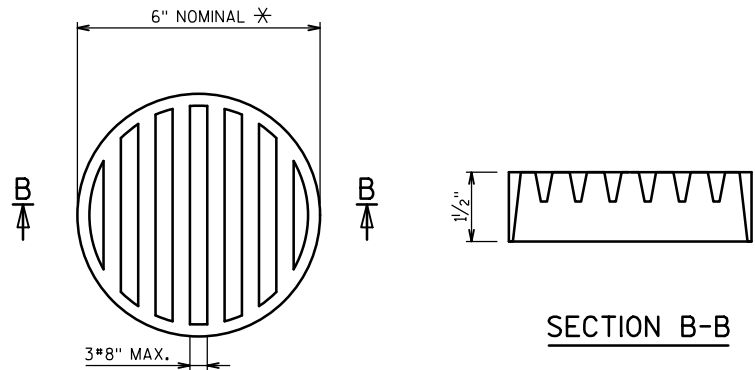


TYPICAL SECTION
(LOOKING NORTH)



BACKFILL LIMITS

DIMENSIONS ARE MEASURED NORMAL TO ABUTMENT



* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

PRELIMINARY PLANS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-1022			
DRAWN BY	NNM	PLANS CK'D.	---
TYPICAL SECTION			SHEET 2 OF 5

PRE_140

GENERAL NOTES

DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECICATIONS 8TH EDITION, 2017, UNLESS OTHERWISE NOTED.

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY, NAD 1983 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2007) ADJUSTED.

THE UTILITY AND STORM SEWER INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF THE UTILITIES AND STORM SEWERS AS MAY BE NECESSARY TO AVOID DAMAGE.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "HPC MASONRY STRUCTURES". FABRICATE IN ACCORDANCE TO S.D.D. 12 A 3-10.

THE EXISTING BRIDGE B-40-349 IS A 3 SPAN CONTINUOUS 45" PRESTRESSED GIRDER STRUCTURE. THE STRUCTURE WILL BE REMOVED AND PAID FOR UNDER "REMOVING OLD STRUCTURE STA. XXXX+XX". LENGTH IS 204'-9" BACK TO BACK OF ABUTMENTS, WIDTH IS 65'-5" OUT TO OUT.

THE CONCTRACTOR MUST COORDINATE THE REMOVAL OF EXISTING STRUCTURE B-40-349 AND CONSTRUCTION OF THE BRIDGE B-40-1022 WITH RETAINING WALLS R-40-714 AND R-40-715.

PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER.

STRUCTURE STAGES DO NOT CORRESPOND TO ROADWAY STAGES, SEE ROADWAY PLANS FOR COMPLETE STAGING INFORMATION.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF JOINT FILLER WITH NON-STAINING NON-ASPHALTIC JOINT SEALER (1-INCH DEEP AND HOLD 1/8" BELOW SURFACE OF THE CONCRETE). COLOR TO MATCH ADJACENT SURFACES.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M153 TYPE 1, 2, OR 3, OR AASHTO M213.

AT THE BACKFACE OF THE ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYONE PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO ROADWAY EMBANKMENTS.

STRUCTURE EXCAVATION BEHIND THE ABUTMENTS IS COVERED IN THE R-40-714 AND R-40-715 PLANS. SEE THOSE PLANS FOR ADDITIONAL INFORMATION.

BEVEL EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT-TO-OUT OF BAR.

FOR BARS NOTED IN THE BILL OF BARS TABLE AS STAINLESS STEEL, PROVIDE STAINLESS STEEL REINFORCEMENT PER THE STANDARD SPECIAL PROVISION "BAR STEEL REINFORCEMENT HS STAINLESS STRUCUTRES".

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES:
- TOP OF DECK SLAB
- TOP OF STRUCTURAL APPROACH SLABS
- PAVING NOTCH (PRIOR TO PLACING APPROACH SLABS)

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES:
- TOP AND INSIDE FACES OF PARAPET ON BIRDGE AND APPROACH SLABS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "PRESTRESSED GIRDER DETAILS" SHEET.

THE CONCRETE QUANTITY FOR THE ABUTMENTS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".

THE CONCRETE QUANTITY FOR THE DECK SLAB, HAUNCHES, AND PARAPETS SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

THE CONCRETE QUANTITY FOR THE STRUCTURAL APPROACH SLAB FOOTINGS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES". THE REMAINING CONCRETE QUANTITY FOR THE STRUCTURAL APPROACH SLABS, INCLUDING PARAPETS, SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

RODENT SHIELDS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH". REFER TO S.D.D. "REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN" FOR DETAILS.

STATE PROJECT NUMBER

1100-01-77

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SOUTH APPROACH SLAB	SOUTH ABUTMENT	NORTH ABUTMENT	NORTH APPROACH SLAB	SUPER	TOTAL
203.0200	REMOVING OLD STRUCTURE STA. 112EW+24	LS	-	-	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-871	LS	-	-	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	-	327	464	-	-	791
305.0120	BASE AGGREGATE DENSE 1 1/4 - INCH	TON	275	-	-	275	-	550
502.0100	CONCRETE MASONRY BRIDGES	CY	25	78	69	23	-	195
502.3200	PROTECTIVE SURFACE TREATMENT	SY	207	-	-	207	1,432	1,846
503.0155	PRESTRESSED GIRDER TYPE 154W-INCH	LF	-	-	-	-	1,995	1,995
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	16,420	6,880	6,040	16,300	69,800	115,440
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	-	-	-	-	2,990	2,990
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	15	15	-	-	30
506.4000.0014	STEEL DIAPHRAGMS B-40-871	EACH	-	-	-	-	28	28
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	21	18	-	-	39
517.1010.S.0103	CONCRETE STAINING B-40-871	SF	140	378	374	180	3,734	4,806
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	-	60	-	-	-	60
550.0500	PILE POINTS	EACH	-	16	15	-	-	31
550.1120	PIILING STEEL HP 12-INCH X 53 LB	LF	-	1,120	975	-	-	2,095
604.0400	SLOPE PAVING CONCRETE	SY	-	370	28	-	-	398
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	-	60	-	-	-	60
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	20	273	-	-	-	293
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	27	-	-	21	18	66
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	36	-	-	42	386	464
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	92	-	-	92	513	697
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	-	2	2	-	-	4
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	-	2	2	-	-	4
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,680	-	-	1,680	11,300	14,660
	NON-BID ITEMS							
	FILLER	SIZE						1/2", 3/4", 1 1/2", 2"
	POLYSTYRENE	SIZE						1"
	NAME PLATE	EACH						1
	SIZE 2 COARSE AGGREGATE	CY						-
	RODENT SHIELD	EACH						3
	CORK FILLER	SIZE						3/4"

ALL ITEMS ARE CATEGORY 2210

8

PRELIMINARY PLANS

8

NO. DATE

REVISION

BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-1022

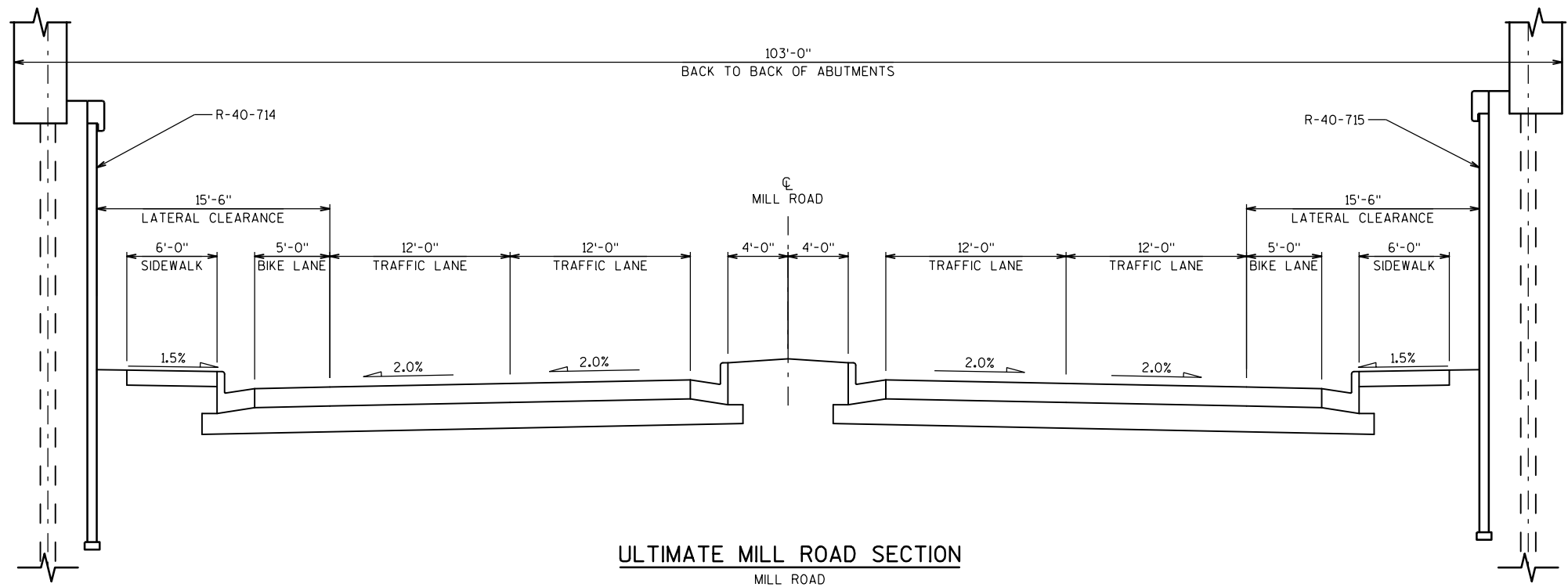
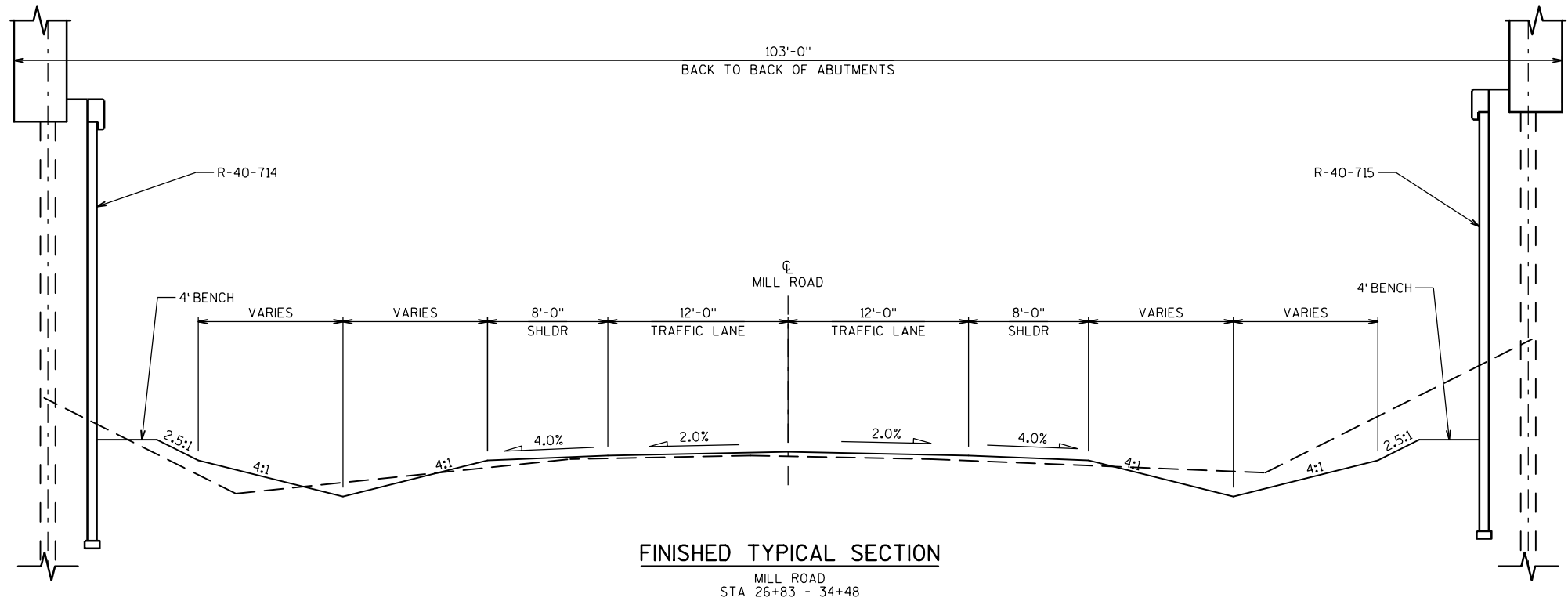
DRAWN BY

NNM

PLANS CK'D.

GENERAL NOTES
AND QUANTITIES

SHEET 3 OF 5



PRELIMINARY PLANS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-1022			
DRAWN BY		NNM	PLANS CK'D. XXX
MILL RD. SECTIONS			SHEET 4 OF 5

PRE_142

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-3	DECEMBER 19, 2019	334250	567183
B-4	JANUARY 31, 2020	334509	567156
B-7	DECEMBER 11, 2019	334367	567200
B-8	DECEMBER 11, 2019	334413	567194

BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.
REPORT COMPLETED BY: HNTB CORP.
ALL COORDINATES REFERENCED TO WCCS NAD 83(2007) MILWAUKEE COUNTY

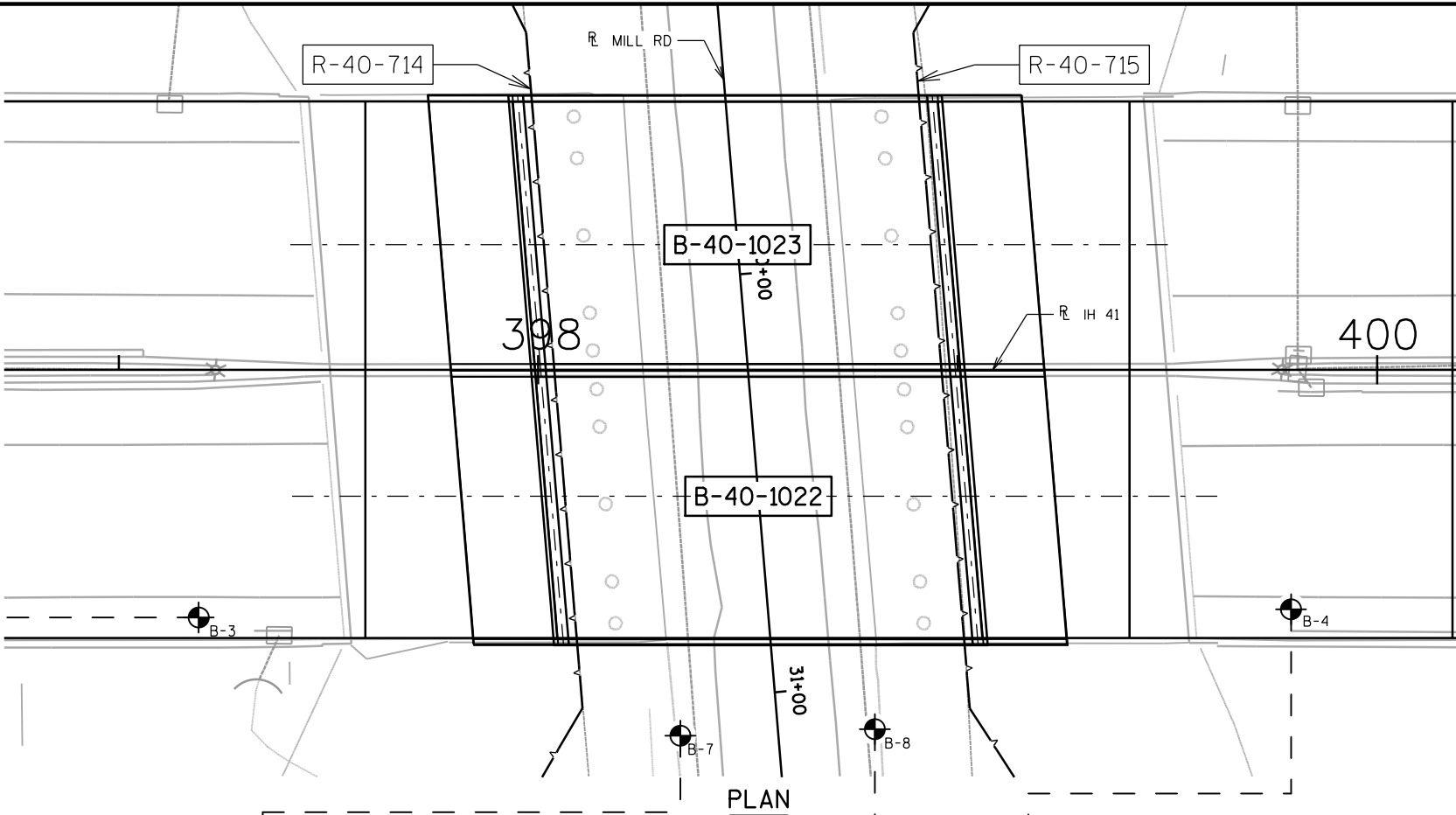
NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

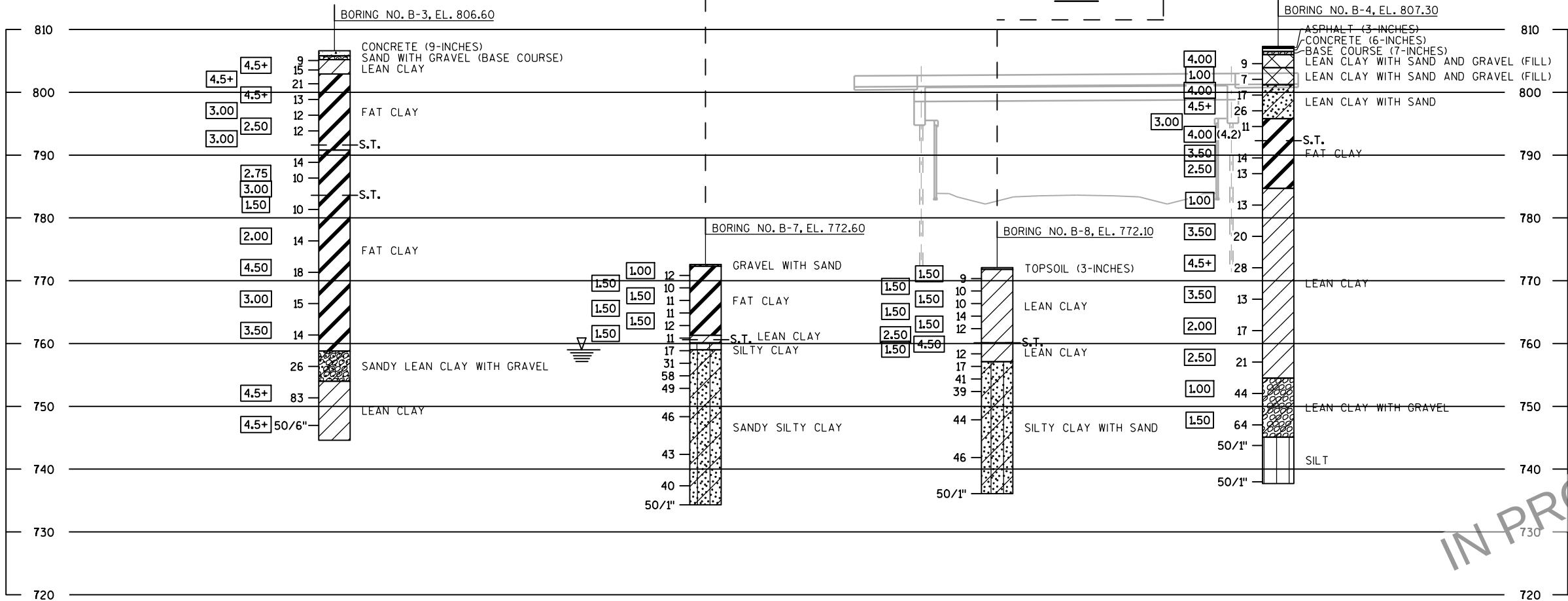
WATER LEVELS INDICATED MAY NOT BE REPRESENTATIVE OF HYDROSTATIC WATER LEVELS.

HISTORICAL BORING LOCATIONS ARE APPROXIMATE. ADDITIONAL INFORMATION IS AVAILABLE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

- ⊙ DENOTES SOIL BORING LOCATION
- ⊙ DENOTES MONITORING WELL LOCATION
- ▲ DENOTES HISTORICAL BORING



PLAN



ELEVATION
LOOKING WEST

STATE PROJECT NUMBER
1210-10-72

ASPHALT

CONCRETE

SAND

BOULDERS OR COBBLES

SHALE

TOPSOIL

FILL

CLAY

LIMESTONE

SANDSTONE

PEAT

GRAVEL

SILT

BEDROCK (UNKNOWN)

IGNEOUS/META

BORING * EL. STA./OFF-SET

TOPSOIL

CLAY S.T.

SILT

F-C SAND COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1 - 24'-29' REC-80%, RQD=72%

(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNCONFINED STRENGTH, AS DETERMINED BY UNCONFINED COMPRESSION TEST

(3) UNLESS OTHERWISE SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE S.T.-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO. DATE

REVISION

BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-1022

DRAWN BY NNM

PLANS CKD. HDA

SUBSURFACE EXPLORATION

SHEET 5 OF 5

FILE NAME : \\milw00\ingrproj\59975\b1\B-40-1022 (old 349)\cds\1022-080201-se.dgn

PLOT DATE : 8/7/2020 3:17:15 PM

PLOT BY : ejelinek

PLOT NAME : \$FILE\$

PLOT SCALE : 40:1

PRE_143

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. TYPICAL SECTION
3. GENERAL NOTES & QUANTITIES
4. MILL RD. SECTIONS
5. SUBSURFACE EXPLORATION

LEGEND

- TRAFFIC DIRECTION
- ① LOCATION PER EXISTING PLANS AND MIN. CLEARANCE TAKEN FROM HSI SYSTEM 9-29-2016
- ★ ITEMS INCLUDED WITH R-40-714 AND R-40-715
- ☆ ITEMS INCLUDED WITH B-40-1023

UTILITY NOTES

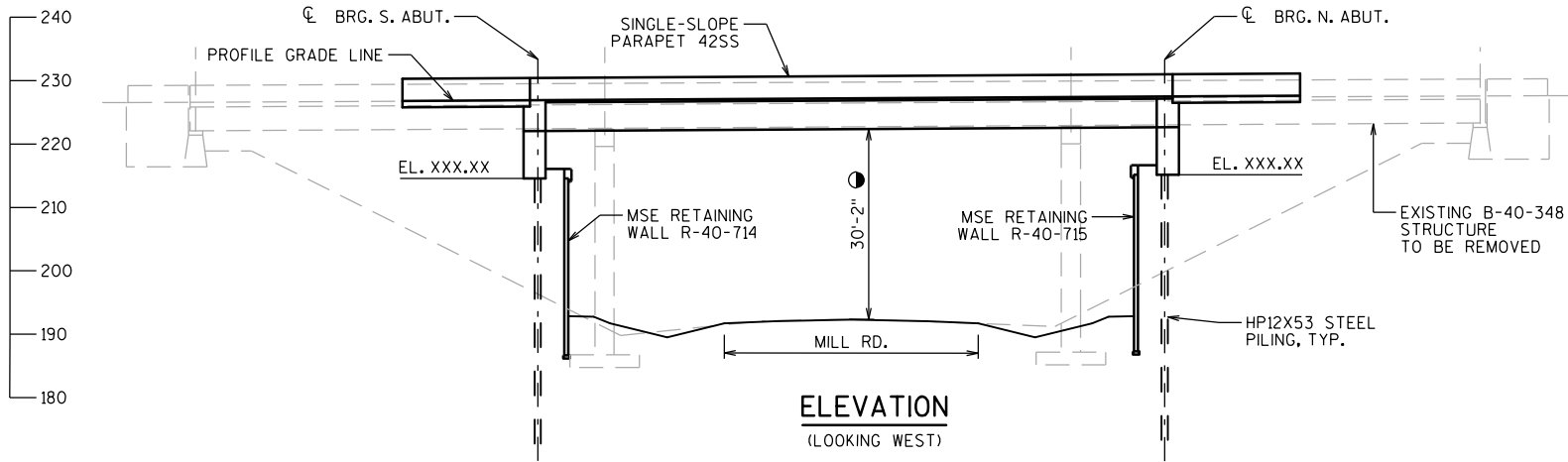
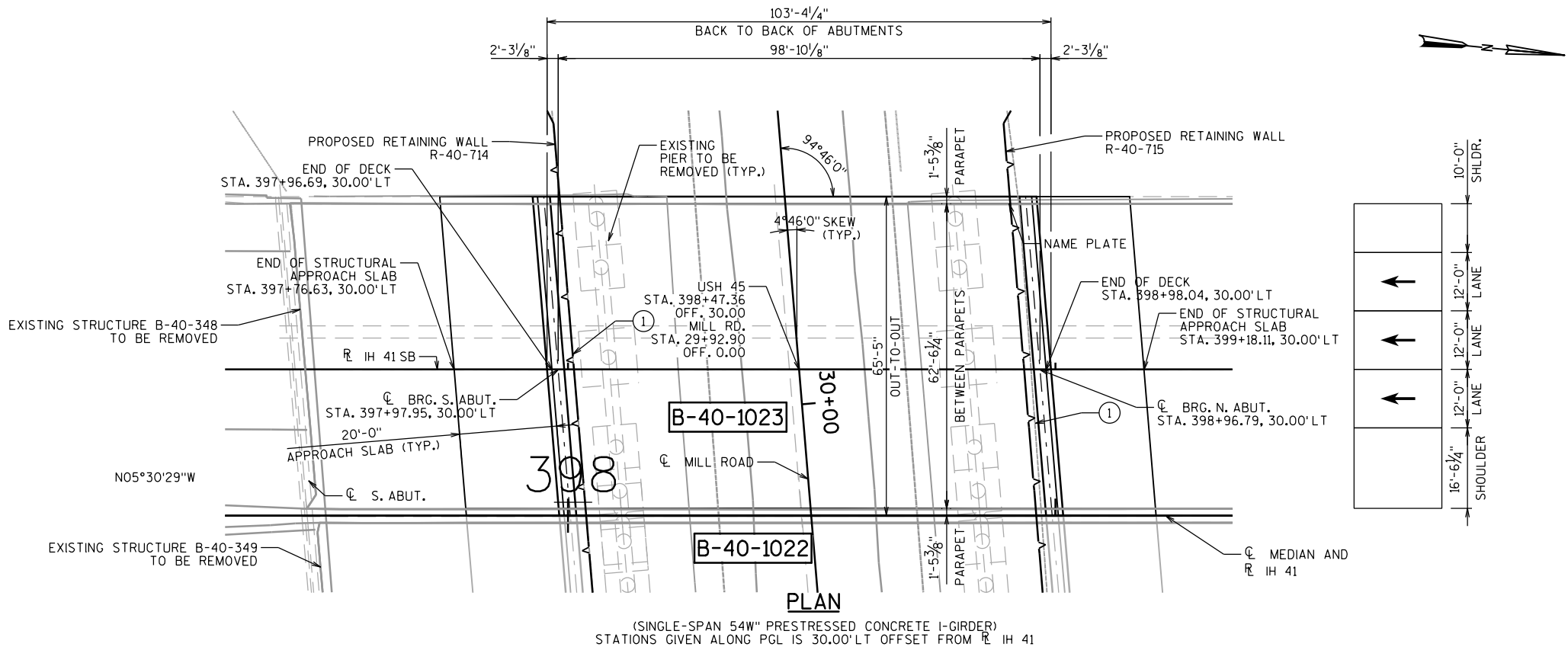
- ① EXISTING AT&T FIBER OPTIC LINE
- ② UTILITY
- ③ UTILITY
- ④ UTILITY

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK (608) 261-0261
CONSULTANT:
PAT CASHIN (414) 359-2300

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
HNTB 11414 W. PARK PLACE MILWAUKEE, WI 53224 (414) 359-2800			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		CHIEF STRUCTURES DESIGN ENGINEER	DATE
STRUCTURE B-40-1023			
IH 41 SB OVER MILL ROAD			
COUNTY	MILWAUKEE	CITY	MILWAUKEE
DESIGN SPEC. REHABILITATION N/A			
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
GENERAL PLAN AND ELEVATION			SHEET 1 OF 5

PRE_144



TRAFFIC DATA

IH 41 SB
EXISTING A.D.T. = 55,250 (2014)
FUTURE A.D.T. = 65,600 (2040)
R.D.S. = 60 M.P.H.
MILL RD
EXISTING A.D.T. = 2,500 (2013)
FUTURE A.D.T. = 2,850 (2040)
R.D.S. = 40 M.P.H.

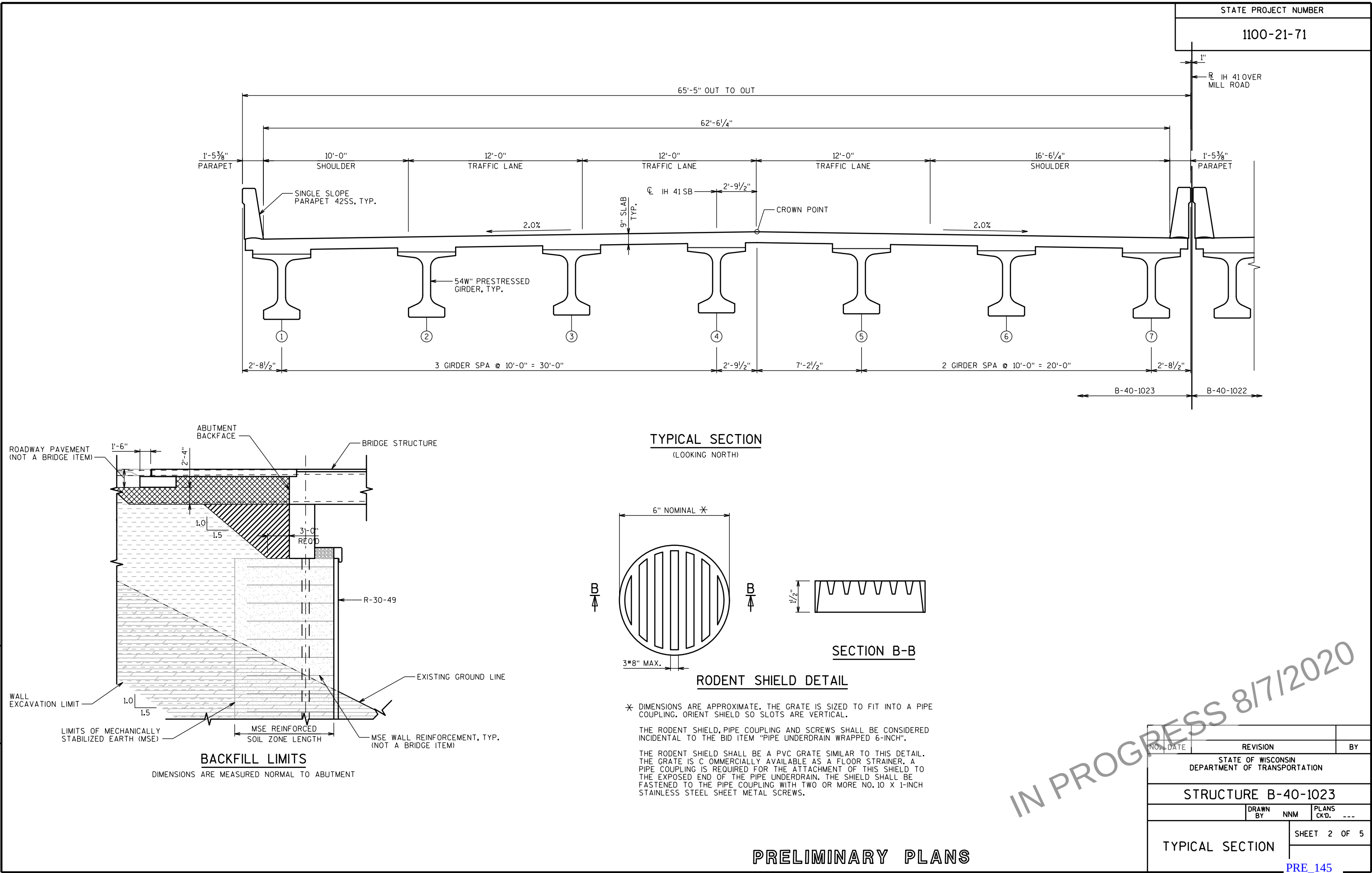
DESIGN DATA

LIVE LOAD
DESIGN LOADING: HL93
INVENTORY RATING FACTOR: RF = X.XX
OPERATING RATING FACTOR: RF = X.XX
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = XXX KIPS
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.
MATERIAL PROPERTIES
CONCRETE MASONRY:
SUPERSTRUCTURE..... f'c = 4,000 psi
SUBSTRUCTURE..... f'c = 4,000 psi
54W-INCH PRESTRESSED GIRDERS..... f'c = 8,000 psi
STEEL PILING..... f_y = 50,000 psi
BAR STEEL REINFORCEMENT..... f_y = 60,000 psi
PRESTRESSED STRANDS..... ULTIMATE TENSILE STRENGTH = 270,000 psi

FOUNDATION DATA

ABUTMENTS SHALL BE SUPPORTED ON HP12X53 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF XXX TONS PER PILE AS DETERMINED BY THE PDA/CAPWAP ACCEPTANCE METHOD.
THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACROT OF 0.65 USING THE PDA/CAPWAP ACCEPTANCE METHOD TO DETERMINE DRIVEN PILE CAPACITY.
ESTIMATED PILE LENGTHS:
NORTH ABUTMENT: XX FEET
SOUTH ABUTMENT: XX FEET

PRELIMINARY PLANS



GENERAL NOTES

DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIICATIONS 8TH EDITION, 2017, UNLESS OTHERWISE NOTED.

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY, NAD 1983 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2007) ADJUSTED.

THE UTILITY AND STORM SEWER INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF THE UTILITIES AND STORM SEWERS AS MAY BE NECESSARY TO AVOID DAMAGE.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "HPC MASONRY STRUCTURES". FABRICATE IN ACCORDANCE TO S.D.D. 12 A 3-10.

THE EXISTING BRIDGE B-40-348 IS A 3 SPAN CONTINUOUS 45" PRESTRESSED GIRDER STRUCTURE. THE STRUCTURE WILL BE REMOVED AND PAID FOR UNDER "REMOVING OLD STRUCTURE STA. XXXX+XX". LENGTH IS 204'-9" BACK TO BACK OF ABUTMENTS, WIDTH IS 65'-5" OUT TO OUT.

THE CONTRACTOR MUST COORDINATE THE REMOVAL OF EXISTING STRUCTURE B-40-348 AND CONSTRUCTION OF THE BRIDGE B-40-1023 WITH RETAINING WALLS R-40-714 AND R-40-715.

PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER.

STRUCTURE STAGES DO NOT CORRESPOND TO ROADWAY STAGES, SEE ROADWAY PLANS FOR COMPLETE STAGING INFORMATION.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF JOINT FILLER WITH NON-STAINING NON-ASPHALTIC JOINT SEALER (1-INCH DEEP AND HOLD 1/8" BELOW SURFACE OF THE CONCRETE). COLOR TO MATCH ADJACENT SURFACES.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M153 TYPE 1, 2, OR 3, OR AASHTO M213.

AT THE BACKFACE OF THE ABUTMENTS ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYONE PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO ROADWAY EMBANKMENTS.

STRUCTURE EXCAVATION BEHIND THE ABUTMENTS IS COVERED IN THE R-40-714 AND R-40-715 PLANS. SEE THOSE PLANS FOR ADDITIONAL INFORMATION.

BEVEL EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT-TO-OUT OF BAR.

FOR BARS NOTED IN THE BILL OF BARS TABLE AS STAINLESS STEEL, PROVIDE STAINLESS STEEL REINFORCEMENT PER THE STANDARD SPECIAL PROVISION "BAR STEEL REINFORCEMENT HS STAINLESS STRUCUTRES".

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES:
- TOP OF DECK SLAB
- TOP OF STRUCTURAL APPROACH SLABS
- PAVING NOTCH (PRIOR TO PLACING APPROACH SLABS)

PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE FOLLOWING COMPLETED SURFACES:
- TOP AND INSIDE FACES OF PARAPET ON BIRDGE AND APPROACH SLABS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "PRESTRESSED GIRDER DETAILS" SHEET.

THE CONCRETE QUANTITY FOR THE ABUTMENTS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES".

THE CONCRETE QUANTITY FOR THE DECK SLAB, HAUNCHES, AND PARAPETS SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

THE CONCRETE QUANTITY FOR THE STRUCTURAL APPROACH SLAB FOOTINGS SHALL BE PAID FOR UNDER BID ITEM "CONCRETE MASONRY BRIDGES". THE REMAINING CONCRETE QUANTITY FOR THE STRUCTURAL APPROACH SLABS, INCLUDING PARAPETS, SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".

RODENT SHIELDS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH". REFER TO S.D.D. "REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN" FOR DETAILS.

STATE PROJECT NUMBER

1100-01-77

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SOUTH APPROACH SLAB	SOUTH ABUTMENT	NORTH ABUTMENT	NORTH APPROACH SLAB	SUPER	TOTAL
203.0200	REMOVING OLD STRUCTURE STA. 112EW+24	LS	-	-	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-871	LS	-	-	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	-	327	464	-	-	791
305.0120	BASE AGGREGATE DENSE 1 1/4 - INCH	TON	275	-	-	275	-	550
502.0100	CONCRETE MASONRY BRIDGES	CY	25	78	69	23	-	195
502.3200	PROTECTIVE SURFACE TREATMENT	SY	207	-	-	207	1,432	1,846
503.0155	PRESTRESSED GIRDER TYPE 154W-INCH	LF	-	-	-	-	1,995	1,995
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	16,420	6,880	6,040	16,300	69,800	115,440
505.0800.S	BAR STEEL REINFORCEMENT HS STAINLESS STRUCTURES	LB	-	-	-	-	2,990	2,990
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	15	15	-	-	30
506.4000.0014	STEEL DIAPHRAGMS B-40-871	EACH	-	-	-	-	28	28
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	21	18	-	-	39
517.1010.S.0103	CONCRETE STAINING B-40-871	SF	140	378	374	180	3,734	4,806
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	-	60	-	-	-	60
550.0500	PILE POINTS	EACH	-	16	15	-	-	31
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	-	1,120	975	-	-	2,095
604.0400	SLOPE PAVING CONCRETE	SY	-	370	28	-	-	398
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	-	60	-	-	-	60
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	20	273	-	-	-	293
652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	27	-	-	21	18	66
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	36	-	-	42	386	464
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	92	-	-	92	513	697
SPV.0060.4110	PILE DYNAMIC ANALYZER (PDA) TESTING	EACH	-	2	2	-	-	4
SPV.0060.4115	PILE DYNAMIC ANALYZER (PDA) RESTRIKES	EACH	-	2	2	-	-	4
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	1,680	-	-	1,680	11,300	14,660
	NON-BID ITEMS							
	FILLER	SIZE						1/2", 3/4", 1 1/2", 2"
	POLYSTYRENE	SIZE						1"
	NAME PLATE	EACH						1
	SIZE 2 COARSE AGGREGATE	CY						-
	RODENT SHIELD	EACH						3
	CORK FILLER	SIZE						3/4"

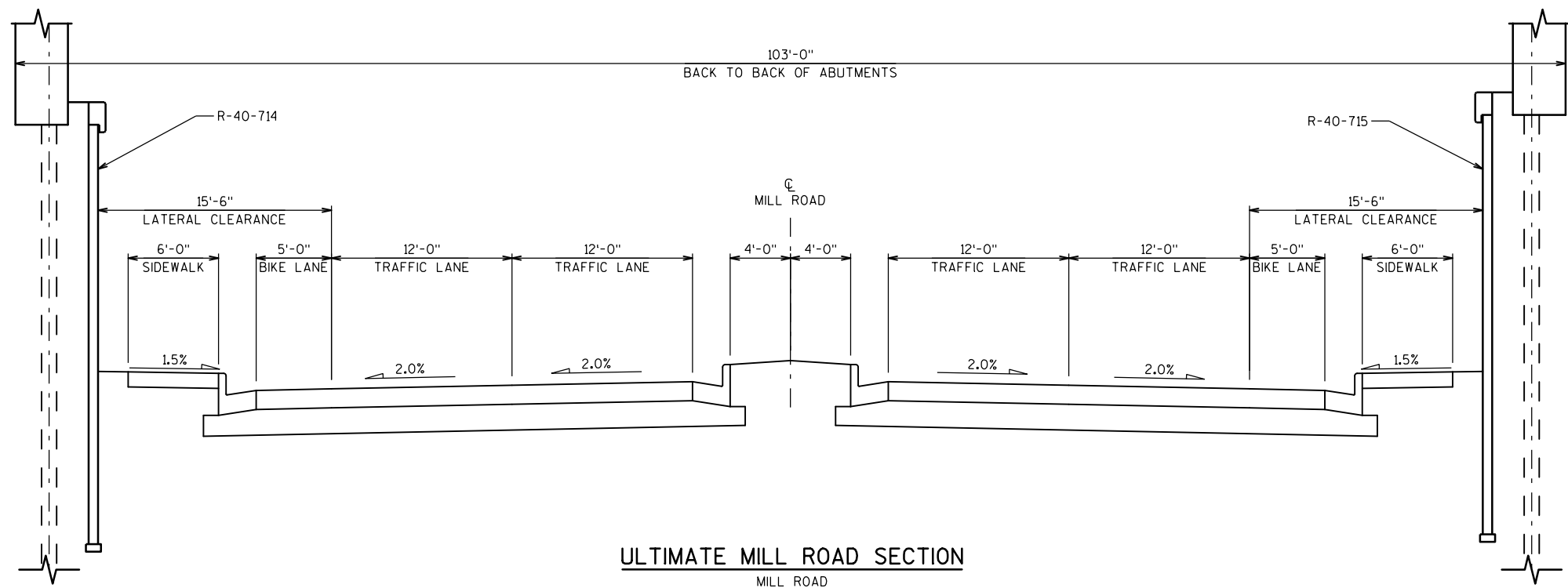
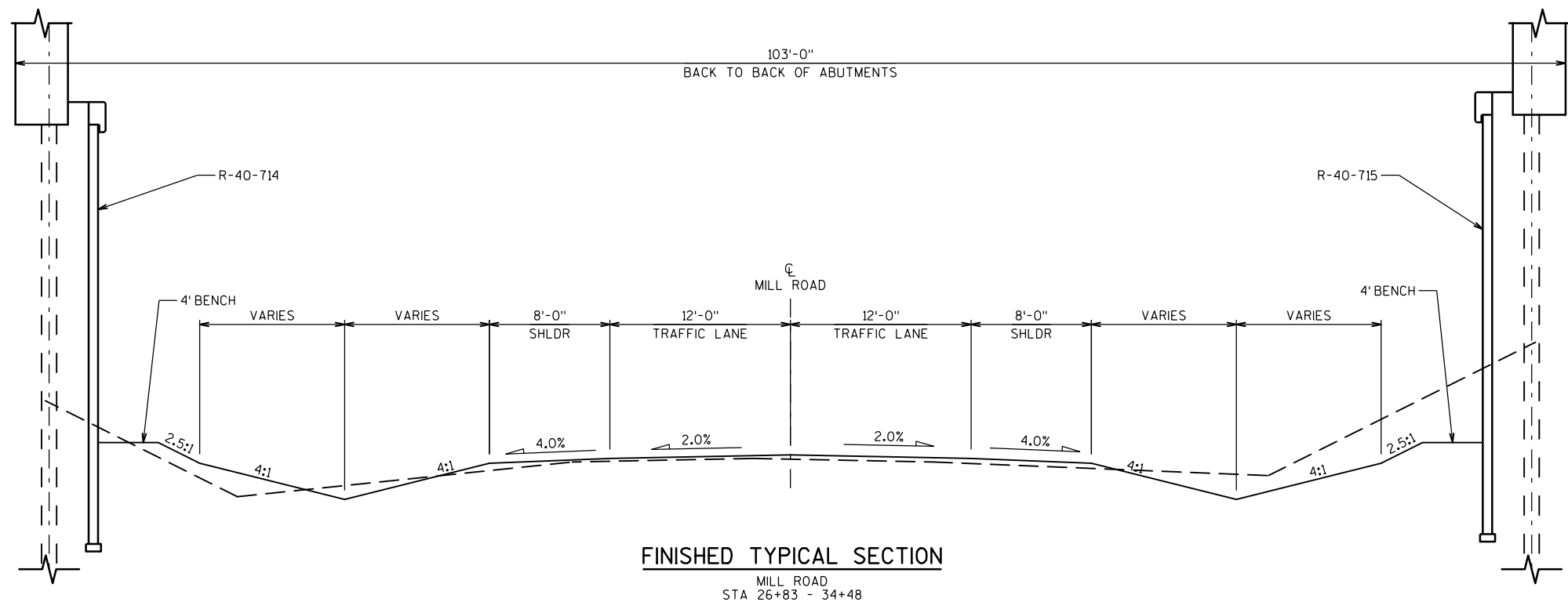
ALL ITEMS ARE CATEGORY 2210

8

PRELIMINARY PLANS

8

NO. DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE B-40-1023		
DRAWN BY	NNM	PLANS CK'D. ---
GENERAL NOTES AND QUANTITIES		SHEET 3 OF 5



PRELIMINARY PLANS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-40-1023			
DRAWN BY		NNM	PLANS CK'D. XXX
MILL RD. SECTIONS			SHEET 4 OF 5

PRE_147

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	DECEMBER 20, 2019	334242	567050
B-2	JANUARY 06, 2020	334486	567027
B-5	DECEMBER 12, 2019	334335	567020
B-6	DECEMBER 12, 2019	334385	567029

BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.
REPORT COMPLETED BY: HNTB CORP.
ALL COORDINATES REFERENCED TO WCCS NAD 83(2007) MILWAUKEE COUNTY

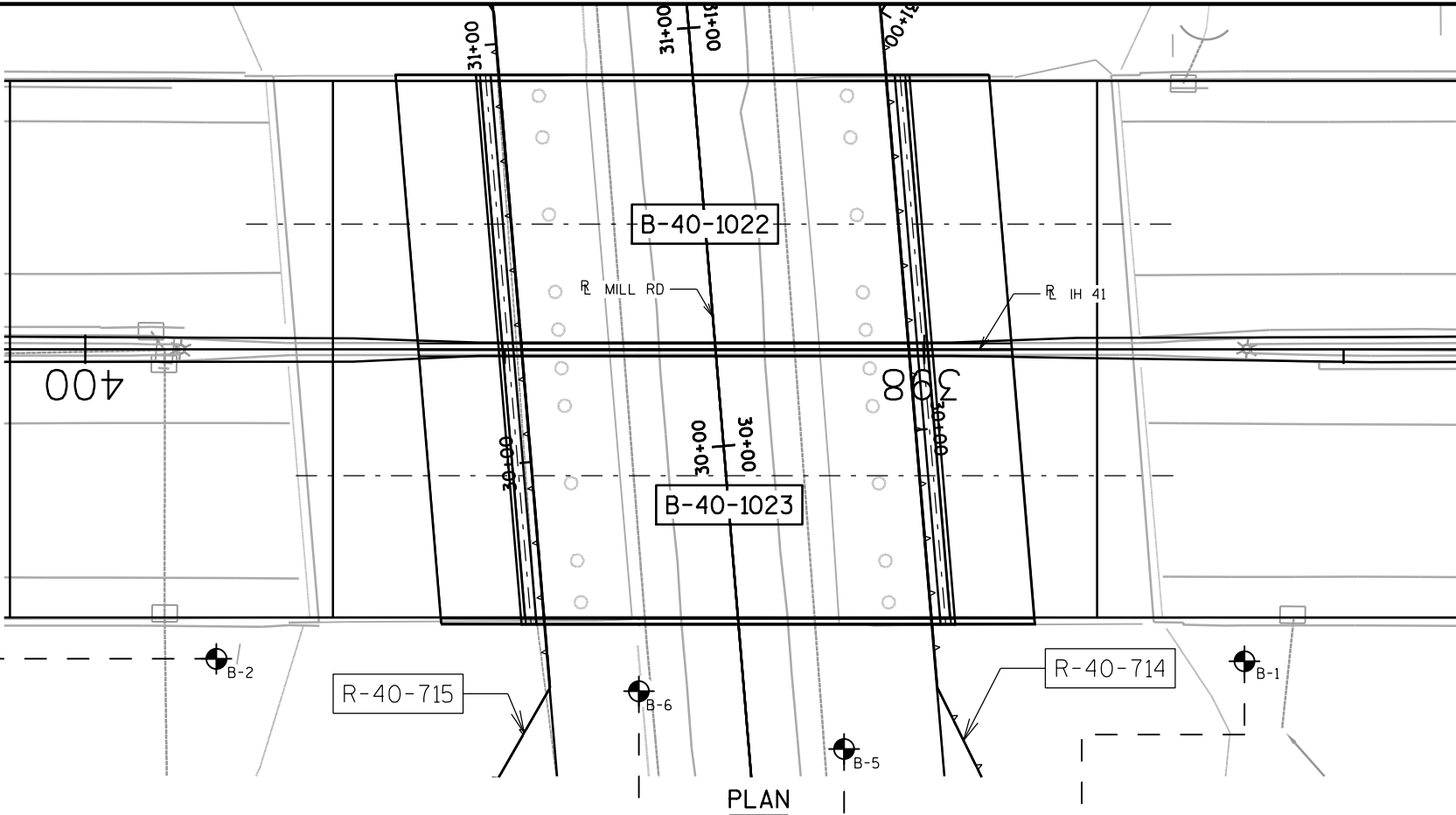
NOTE:

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

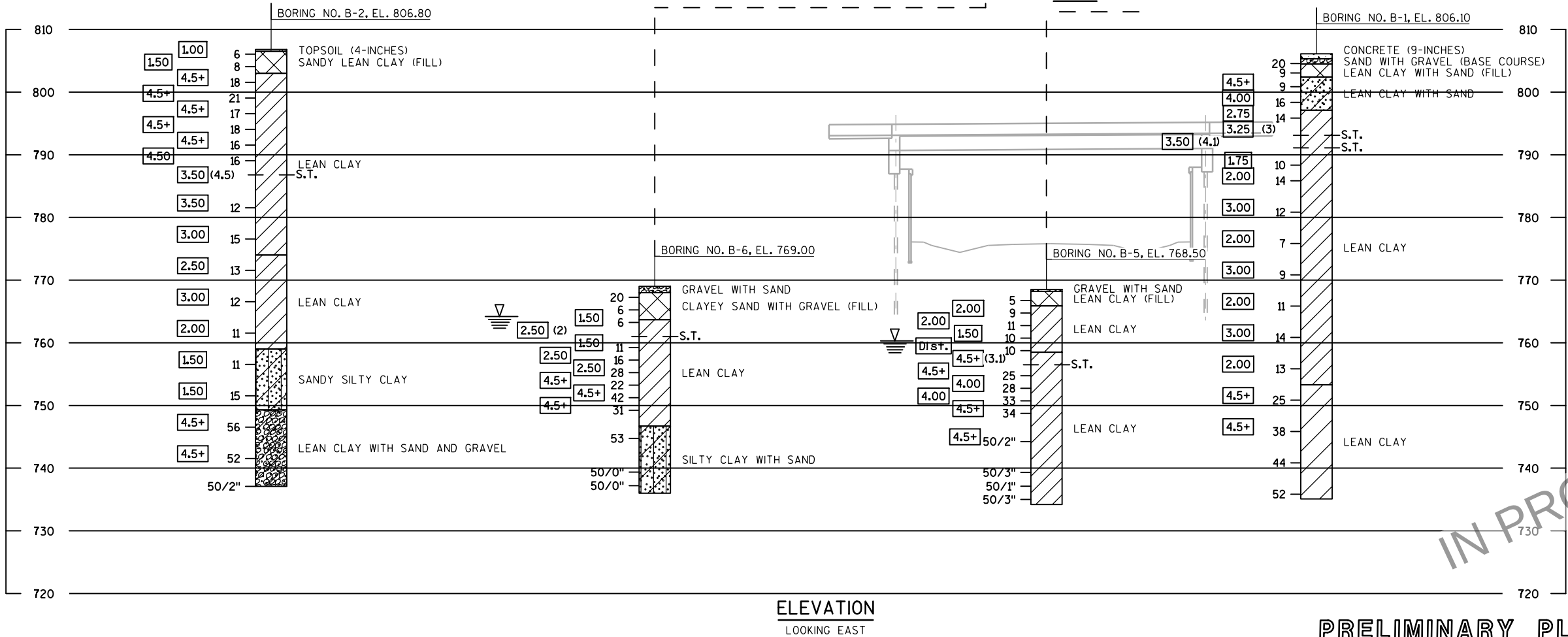
WATER LEVELS INDICATED MAY NOT BE REPRESENTATIVE OF HYDROSTATIC WATER LEVELS.

HISTORICAL BORING LOCATIONS ARE APPROXIMATE. ADDITIONAL INFORMATION IS AVAILABLE FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

- ⊙ DENOTES SOIL BORING LOCATION
- ⊙ DENOTES MONITORING WELL LOCATION
- ▲ DENOTES HISTORICAL BORING



PLAN



ELEVATION
LOOKING EAST

PRELIMINARY PLANS

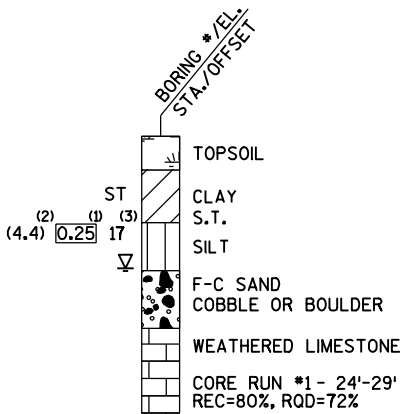
STATE PROJECT NUMBER

1210-10-72

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNCONFINED STRENGTH, AS DETERMINED BY UNCONFINED COMPRESSION TEST

(3) UNLESS OTHERWISE SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▽ END OF DRILLING
- ▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE S.T.-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO. DATE REVISION BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-1023

DRAWN BY NNM PLANS CKD. XXX

SUBSURFACE
EXPLORATION

SHEET 5 OF 5

PRE_148

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES, QUANTITIES, EXCAVATION & BACKFILL DIAGRAMS
3. DESIGN DATA
4. TYPICAL SECTIONS
5. SUBSURFACE EXPLORATION

MATERIAL PROPERTIES

CONCRETE MASONRY:
CAST-IN-PLACE COPING f'c = 4,000 P.S.I.
LEVELING PAD f'c = 3,500 P.S.I.
PRECAST CONCRETE WALL PANEL f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 fy = 60,000 P.S.I.

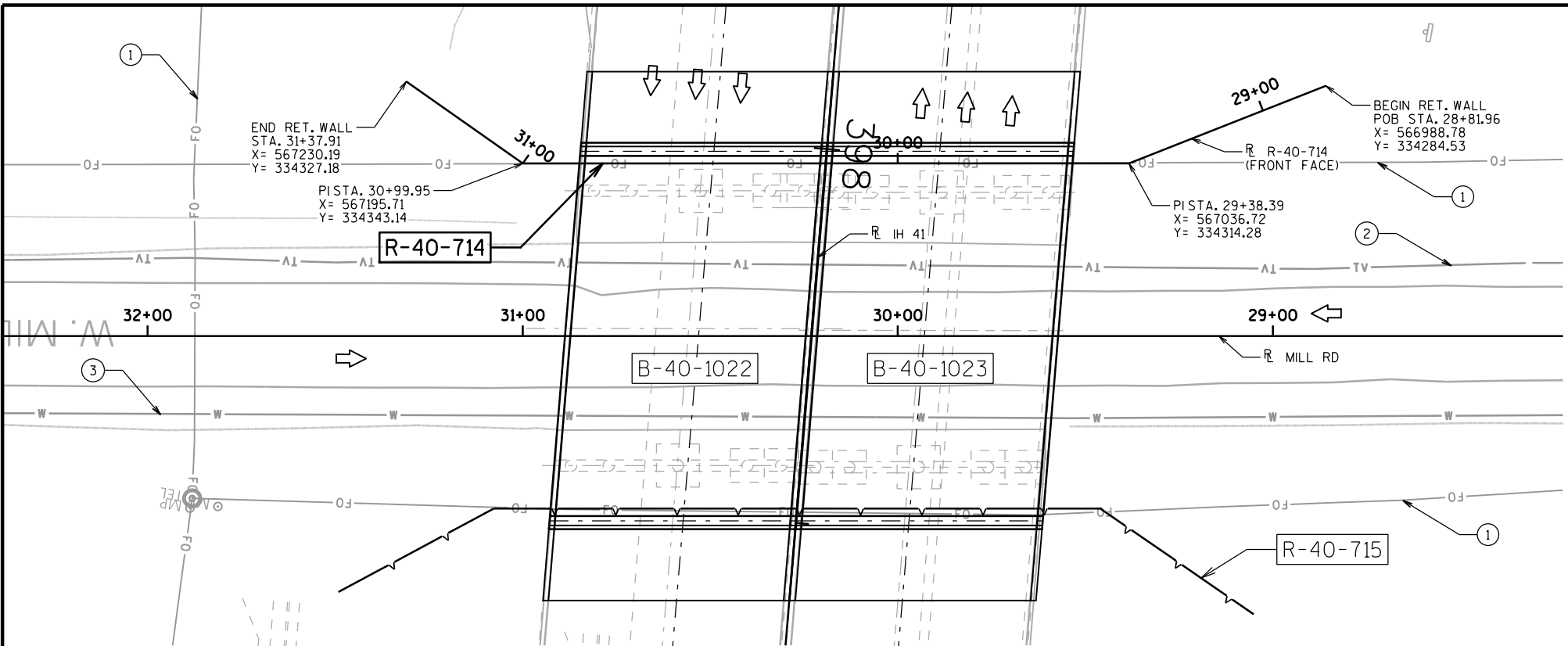
LEGEND

- ➡ DIRECTION OF TRAFFIC
- ⬡ EXPANSION JOINT
- ⚠ PROPOSED SLIP JOINT

UTILITY & STORM SEWER NOTES **

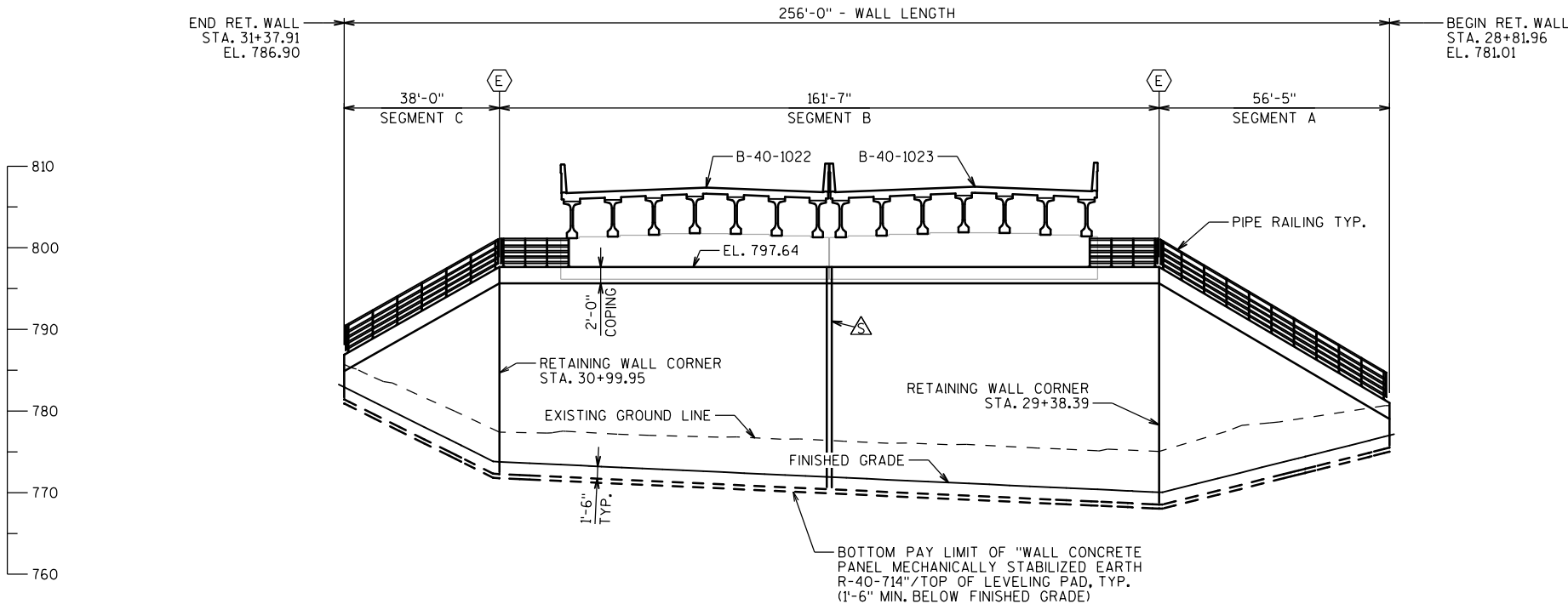
- ① EXISTING FIBER OPTIC
- ② EXISTING CABLE TV LINE
- ③ EXISTING WATER LINE

** THE FOLLOWING ITEMS TBD (IF APPLICABLE) -
DISPOSITION, OWNERSHIP & SIZE



PLAN

MSE WALL



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

PRELIMINARY PLANS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE R-40-714			
DRAWN BY		NNM	PLANS CK'D. EAJ
GENERAL PLAN & ELEVATION		SHEET 1 OF 5	

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-714".

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN IN THESE PLANS.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPE BEHIND WALL AS SHOWN.

DESIGN RETAINING WALL FOR A LIVE LOEAD SURCHARGE OF (INSERT VALUE).

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY, NAD 83 (2011). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2012).

ALL STATIONS AND DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR CAST-IN-PLACE COPING ARE PAID FOR UNDER "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-714".

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AND STORM SEWERS AS MAY BE NECESSARY TO AVOID DAMAGE.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN IN THESE PLANS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST RESULTS.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-714" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS TAKEN AS A CONSTANT 1'-6" DEPTH BELOW FINISHED GRADE FOR MEASUREMENT PURPOSES. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT. <<DEPTH TO BE VERIFIED IN FINAL DESIGN>>

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-714". FABRICATE IN ACCORDANCE TO S.D.D. 12 A 3-10.

ONLY WALL CONCRETE PANEL MSE SYSTEMS THAT USE STRIP SOIL TYPE REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

THE COST OF FURNISHING AND PLACING THE MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-714".

THE CONTRACTOR MAY ELECT TO USE 5'-0" x 5'-0" OR 5'-0" x 10'-0" PRECAST PANELS.

COORDINATE CONSTRUCTION OF R-40-714 WITH THE SOUTH ABUTMENTS OF B-40-1022 AND B-40-1023.

THE REMOVAL OF EXISTING STRUCTURES IS INCLUDED AS A LUMP SUM PAY ITEM AS PART OF THE B-40-1022 AND B-40-1023 QUANTITIES.

STRUCTURE STAGES DO NOT CORRESPOND TO ROADWAY STAGES. SEE ROADWAY PLANS FOR COMPLETE STAGING INFORMATION.

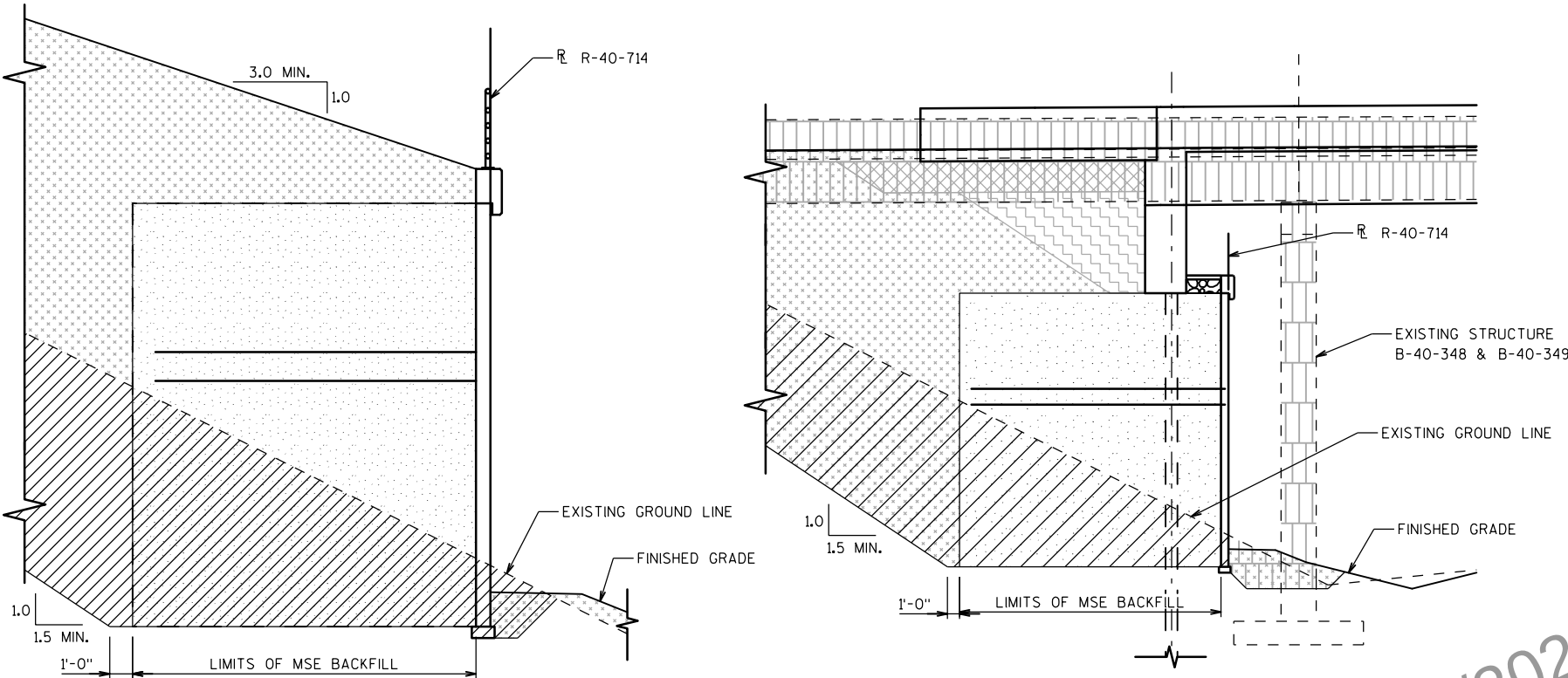
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	TOTALS
513.2001	RAILING PIPE	LF	--	--	--	--
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	--	--	--
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	--	--	--	--
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	--	--	--	--
SPV.0165.XXXX	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-714	SF	--	--	--	--
SPV.0165.XXXX	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH	SF	--	--	--	--
	NON BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				3/4"
	NON-BITUMINOUS JOINT SEALER	SIZE				3/4"
	NAME PLATE	EACH				1
	RODENT SHIELD	EACH				1
	EXPANDED POLYSTYRENE	SIZE				1"

ALL ITEMS ARE CATEGORY XXXX

STATE PROJECT NUMBER

1100-21-71



EXCAVATION AND BACKFILL LIMITS

LEGEND

WALL EXCAVATION - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-714".

MSE BACKFILL - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-714".

BASE AGGREGATE DENSE 1 1/4" - NOT A RETAINING WALL ITEM. SEE BRIDGE PLANS.

BACKFILL STRUCTURE TYPE A - NOT A RETAINING WALL ITEM. SEE BRIDGE PLANS.

FILL MATERIAL NOT A RETAINING WALL ITEM - SEE ROADWAY PLANS

REMOVING OLD STRUCTURE - NOT A RETAINING WALL ITEM. SEE BRIDGE PLANS.

MSE BACKFILL OR SIZE 2 COARSE AGGREGATE - NOT A RETAINING WALL ITEM. SEE BRIDGE PLANS.

PRELIMINARY PLANS

NO. DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE R-40-714		
DRAWN BY	NNM	PLANS CK'D. EAJ
GENERAL NOTES, QUANTITIES, EXCAVATION & BACKFILL DIAGRAMS		SHEET 2 OF 5

[illegible]

8

[illegible][illegible][illegible]

☒ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

DIMENSIONS		
WALL HEIGHT (FEET)		
EXPOSED WALL HEIGHT (FEET)		
MINIMUM LENGTH OF REINFORCEMENT/WALL WIDTH (FEET)		
REINFORCEMENT LENGTH/RETAINED HEIGHT RATIO		
WALL STATION		
BORING USED		
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING		
ECCENTRICITY		
BEARING		
GLOBAL STABILITY		

(10) THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND GLOBAL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGNED LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

DESIGN DATA

		BY
INSIN PORTATION		
-40-714		
NNM	PLANS CVD	E.A.

SEE ROADWAY PLANS FOR
ADDITIONAL INFORMATION

BACKFILL STRUCTURE
TYPE A, SEE
B-40-1022/1023 PLANS

BRG SOUTH
ABUTMENT B-40-1022
& B-40-1023

RETAINING
WALL R-40-714
(FRONT FACE
OF WALL)

SLOPE PAVING CONCRETE
(NOT A RETAINING WALL
ITEM)

LIMITS OF MECHANICALLY
STABILIZED EARTH WALL

MSE BACKFILL MATERIAL OR
SIZE 2 COARSE AGGREGATE
(NOT A RETAINING WALL ITEM)

MSE BACKFILL
MSE WALL REINFORCING
STRIPS, TYP.

LIMITS OF MECHANICALLY
STABILIZED EARTH WALL

(A03) PIPE UNDERDRAIN WRAPPED
(6-INCH) SLOPE 0.5% MIN.
TO SUITABLE DRAINAGE.

TYPICAL SECTION AT ABUTMENT - SEGMENT B

STA. XX+XX.XX TO STA. XX+XX.XX
(LOOKING WEST)

LEGEND

- (A01) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. PAY LIMITS BASED ON MINIMUM DIMENSION.
- (A02) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.
- (A03) CONNECT PIPE UNDERDRAIN WRAPPED TO SUITABLE DRAINAGE OR DAYLIGHT AND ATTACH RODENT SHIELDS TO ENDS. TO BE DETERMINED IN FINAL DESIGN.

SEE ROADWAY PLANS FOR
ADDITIONAL INFORMATION

PIPE RAILING

RETAINING
WALL R-40-714
(FRONT FACE
OF WALL)

TOP OF WALL

1" EXPANDED
POLYSTYRENE

3/4" CONTINUOUS
DRIP GROOVE

6" MSE WALL
PRECAST
CONCRETE FACING
PANELS

FRONT FACE TO
BE PLUMB

1'-0"
MIN.

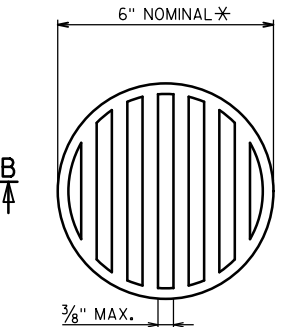
SOIL REINFORCEMENT LENGTH

(A03) PIPE UNDERDRAIN WRAPPED
(6-INCH) SLOPE 0.5% MIN.
TO SUITABLE DRAINAGE.

LIMITS OF MECHANICALLY
STABILIZED EARTH WALL

TYPICAL SECTION

SEGMENT A - STA. XX+XX.XX TO STA. XX+XX.XX
SEGMENT C - STA. XX+XX.XX TO STA. XX+XX.XX
(LOOKING WEST)



SECTION B-B

RODENT SHIELD DETAIL

*
DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

C NAME PLATE WALL
STA. XX+XX <<TBD IN
FINAL DESIGN>>
TOP OF WALL
CENTER NAME PLATE
VERTICALLY ON COPING

NAME PLATE DETAIL

NO. DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE R-40-714		
DRAWN BY	NNM	PLANS CKD. EAJ
TYPICAL SECTIONS		SHEET 4 OF 5

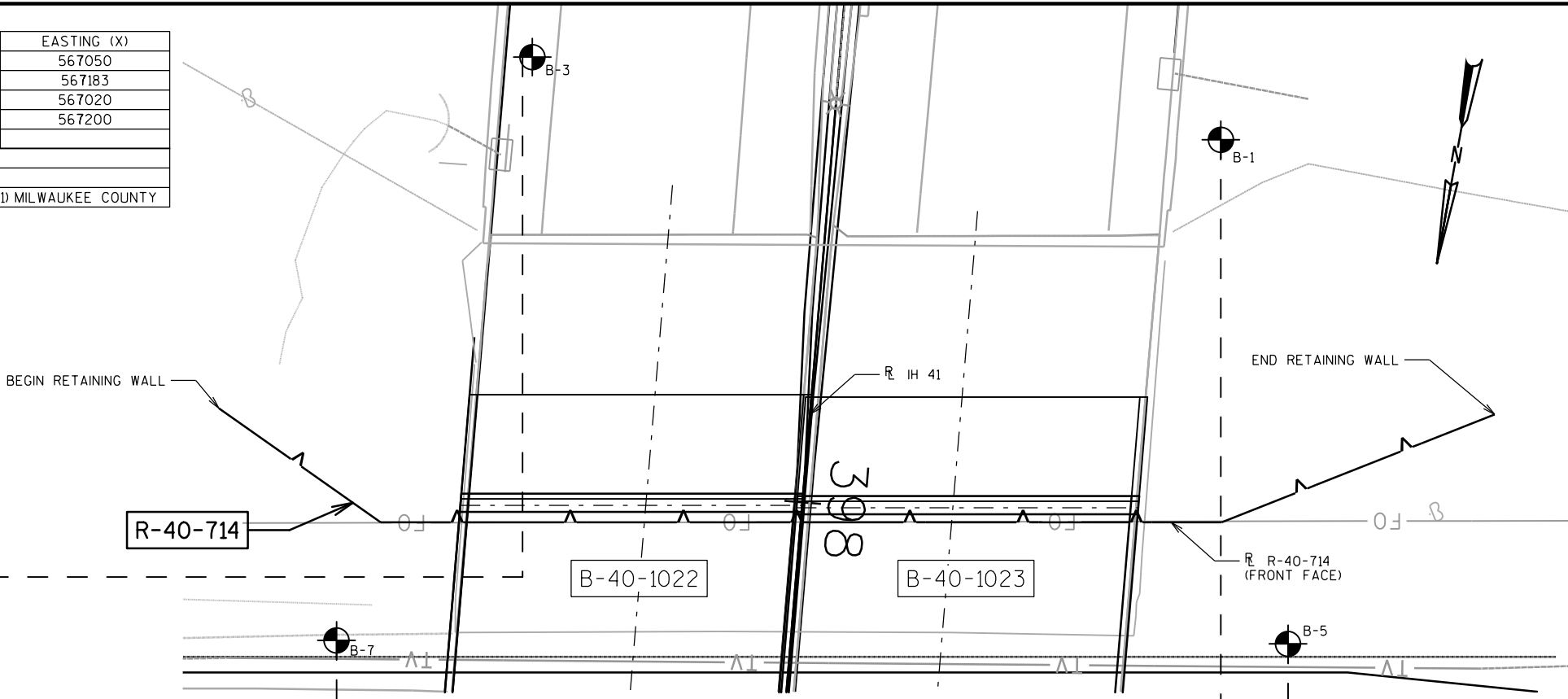
PRELIMINARY PLANS

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	DECEMBER 20, 2019	334242	567050
B-3	DECEMBER 19, 2019	334250	567183
B-5	DECEMBER 12, 2019	334335	567020
B-7	DECEMBER 11, 2019	334367	567200

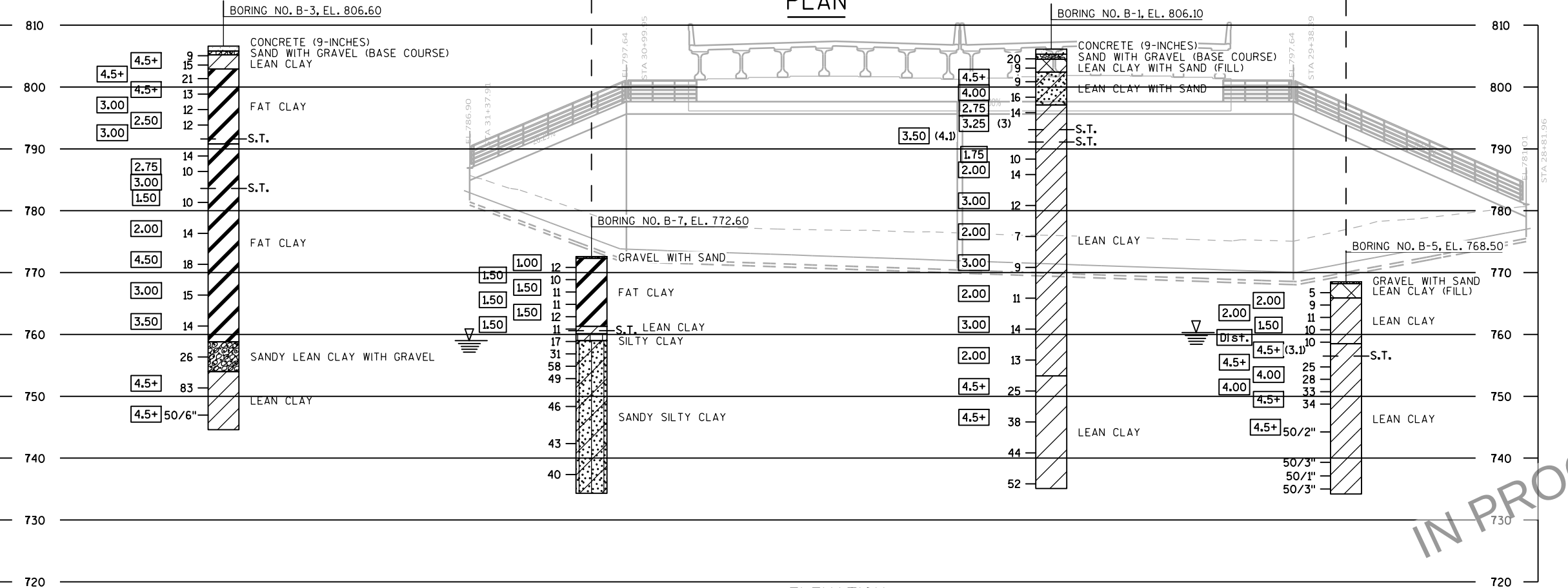
BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.
REPORT COMPLETED BY: HNTB CORP.
ALL COORDINATES REFERENCED TO WCCS NAD 83(2011) MILWAUKEE COUNTY

LEGEND

⊙ DENOTES SOIL BORING LOCATION



PLAN



ELEVATION

LOOKING SOUTH AT FRONT FACE OF WALL

PRELIMINARY PLANS

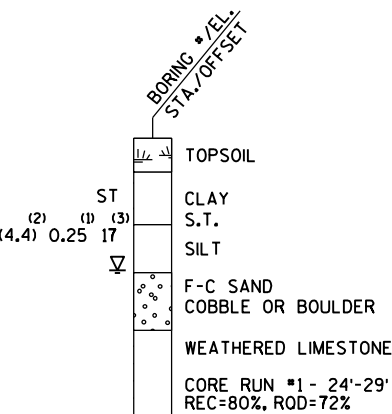
STATE PROJECT NUMBER

1100-21-71

MATERIAL SYMBOLS

ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNCONFINED STRENGTH, AS DETERMINED BY UNCONFINED COMPRESSION TEST

(3) UNLESS OTHERWISE SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING
▽ END OF DRILLING
▽ AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE S.T.-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO. DATE REVISION BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-714

DRAWN BY NNM PLANS CKD. EAJ

SUBSURFACE
EXPLORATION

SHEET 5 OF 5

PRE_153

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES, QUANTITIES, EXCAVATION & BACKFILL DIAGRAMS
3. DESIGN DATA
4. TYPICAL SECTIONS
5. SUBSURFACE EXPLORATION

MATERIAL PROPERTIES

CONCRETE MASONRY:
CAST-IN-PLACE COPING f'c = 4,000 P.S.I.
LEVELING PAD f'c = 3,500 P.S.I.
PRECAST CONCRETE WALL PANEL f'c = 4,000 P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 fy = 60,000 P.S.I.

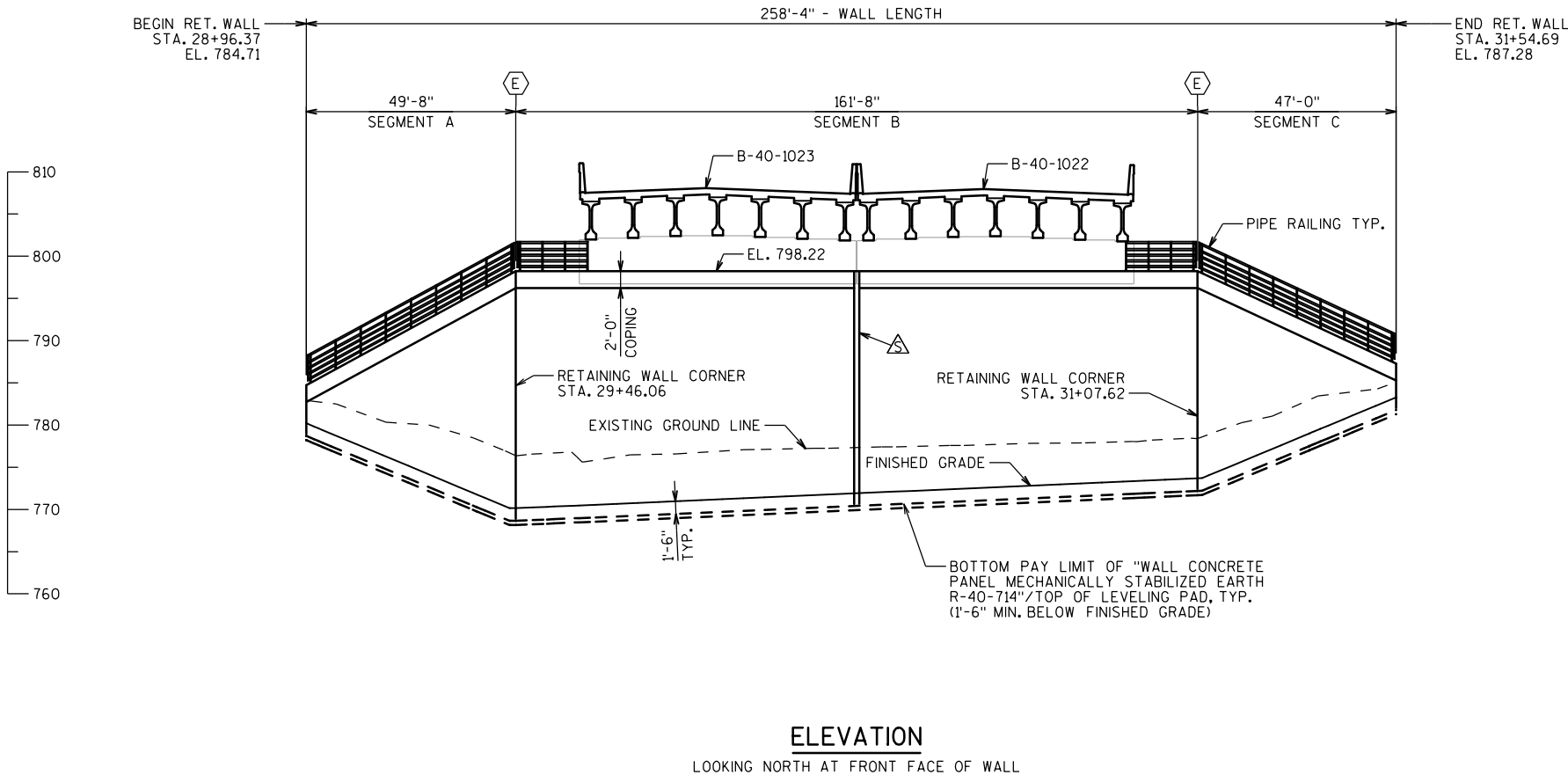
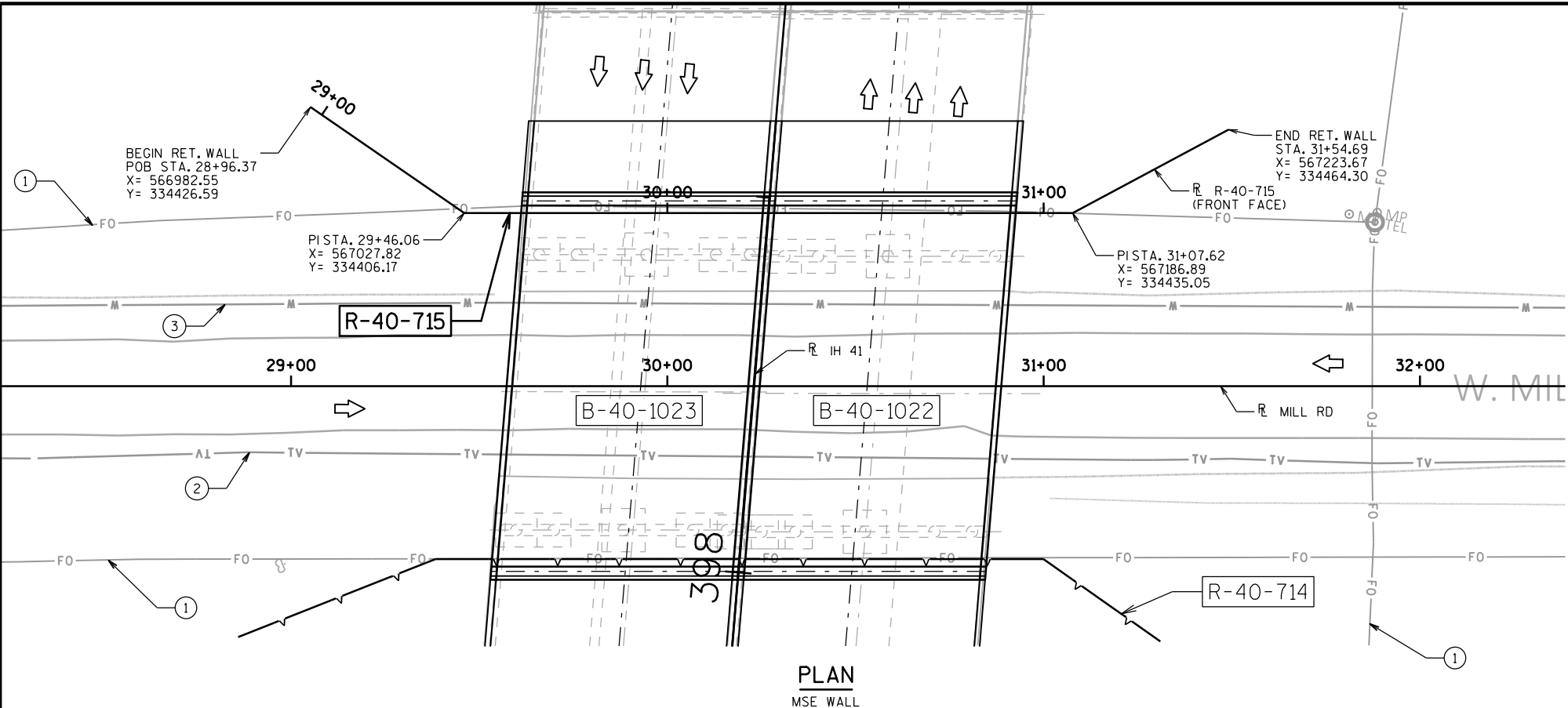
LEGEND

- ➡ DIRECTION OF TRAFFIC
⬢ EXPANSION JOINT
⚠ PROPOSED SLIP JOINT

UTILITY & STORM SEWER NOTES **

- ① EXISTING FIBER OPTIC
② EXISTING CABLE TV LINE
③ EXISTING WATER LINE

** THE FOLLOWING ITEMS TBD (IF APPLICABLE) -
DISPOSITION, OWNERSHIP & SIZE



PRELIMINARY PLANS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE R-40-715			
DRAWN BY		NNM	PLANS CK'D. EAJ
GENERAL PLAN & ELEVATION		SHEET 1 OF 5	

DESIGN DATA

THE CONTRACTOR SHALL PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS SHALL BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-715".

PLANS, ELEVATIONS AND DETAILS SHOWN ON THESE DRAWINGS ARE INTENDED TO INDICATE WALL LOCATIONS, LENGTHS, HEIGHTS, AND DETAILS COMMON TO THE WALL SYSTEM SELECTED. THE CONTRACTOR SHALL VERIFY THAT THE WALL SYSTEM SELECTED WILL CONFORM TO THE REQUIRED ALIGNMENTS AND DETAILS.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN IN THESE PLANS.

DESIGN FOR RETAINING WALL TO PROVIDE FOR FINISHED GRADE SLOPE BEHIND WALL AS SHOWN.

DESIGN RETAINING WALL FOR A LIVE LOEAD SURCHARGE OF (INSERT VALUE).

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST VALUES.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BEVEL EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED OTHERWISE.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY, NAD 83 (2011). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2012).

ALL STATIONS AND DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

ALL BAR STEEL REINFORCEMENT WITHIN CAST-IN-PLACE CONCRETE IS TO BE EPOXY COATED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. BAR DIMENSIONS ARE OUT TO OUT OF BAR.

THESE PLANS ARE FOR A PRECAST CONCRETE PANEL MECHANICALLY STABILIZED EARTH (MSE) RETAINING WALL.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR CAST-IN-PLACE COPING ARE PAID FOR UNDER "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-715".

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AND STORM SEWERS AS MAY BE NECESSARY TO AVOID DAMAGE.

THE RETAINING WALL IS TO BE DESIGNED USING THE ELEVATIONS GIVEN IN THESE PLANS.

THE MAXIMUM VALUE OF THE ANGLE OF INTERNAL FRICTION OF THE WALL BACKFILL MATERIAL IN THE REINFORCED ZONE SHALL BE ASSUMED TO BE 30° WITHOUT CERTIFIED TEST RESULTS.

THE PLAN QUANTITY FOR THE ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-715" IS BASED ON A WALL HEIGHT MEASURED FROM THE TOP OF THE LEVELING PAD TO THE TOP OF WALL AS SHOWN IN THE PLANS. THE TOP OF LEVELING PAD IS TAKEN AS A CONSTANT 1'-6" DEPTH BELOW FINISHED GRADE FOR MEASUREMENT PURPOSES. WALL AREAS CONSTRUCTED OUTSIDE THESE LIMITS WILL NOT BE MEASURED FOR PAYMENT. <<DEPTH TO BE VERIFIED IN FINAL DESIGN>>

SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

NAME PLATE SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-715". FABRICATE IN ACCORDANCE TO S.D.D. 12 A 3-10.

ONLY WALL CONCRETE PANEL MSE SYSTEMS THAT USE STRIP SOIL TYPE REINFORCEMENT THAT ARE HINGED AT THE PANEL CONNECTION CAN BE USED FOR THIS PROJECT.

THE COST OF FURNISHING AND PLACING THE MSE BACKFILL WITHIN THE REINFORCED SOIL ZONE IS TO BE INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-715".

THE CONTRACTOR MAY ELECT TO USE 5'-0" x 5'-0" OR 5'-0" x 10'-0" PRECAST PANELS.

COORDINATE CONSTRUCTION OF R-40-715 WITH THE NORTH ABUTMENTS OF B-40-1022 AND B-40-1023.

THE REMOVAL OF EXISTING STRUCTURES IS INCLUDED AS A LUMP SUM PAY ITEM AS PART OF THE B-40-1022 AND B-40-1023 QUANTITIES.

STRUCTURE STAGES DO NOT CORRESPOND TO ROADWAY STAGES. SEE ROADWAY PLANS FOR FOR COMPLETE STAGING INFORMATION.

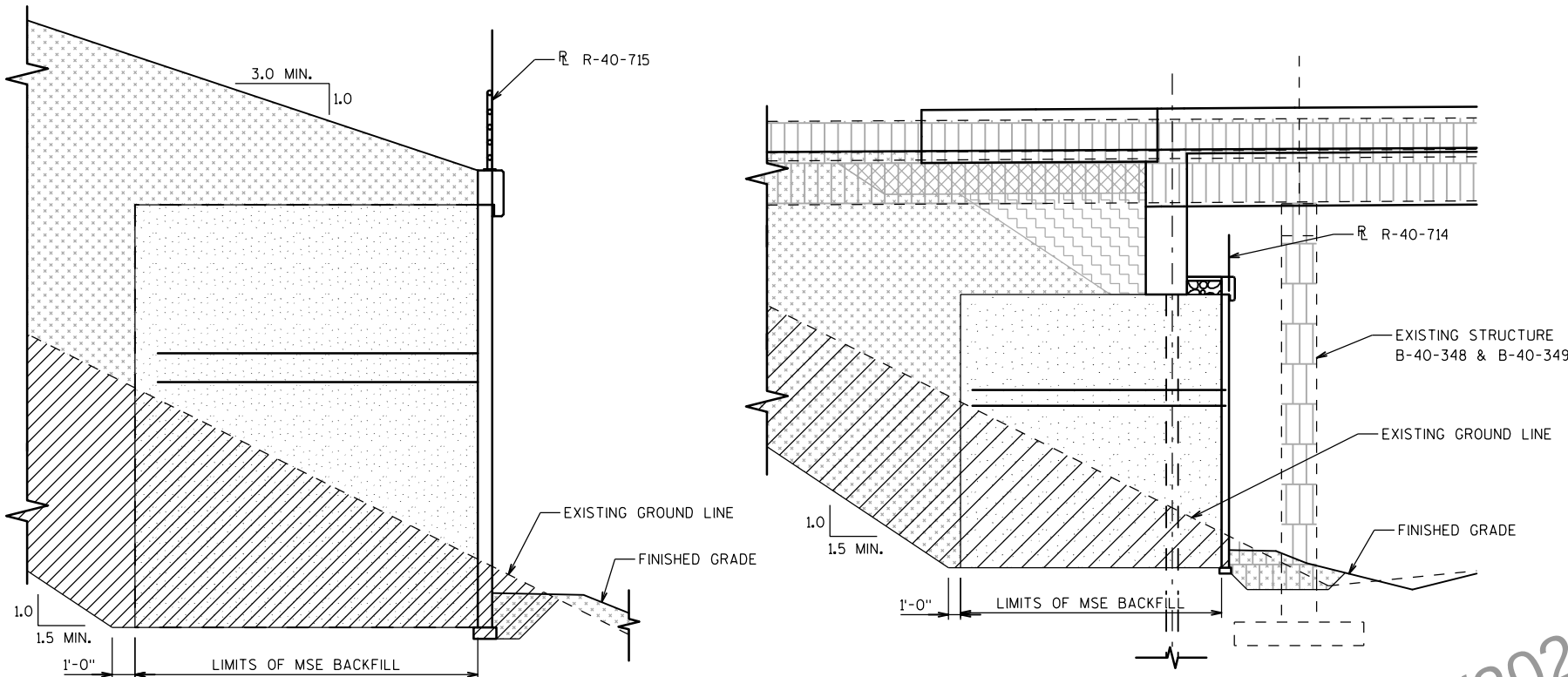
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	TOTALS
513.2001	RAILING PIPE	LF	--	--	--	--
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	--	--	--
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	--	--	--	--
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	--	--	--	--
SPV.0165.XXXX	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-715	SF	--	--	--	--
SPV.0165.XXXX	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH	SF	--	--	--	--
	NON BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				3/4"
	NON-BITUMINOUS JOINT SEALER	SIZE				3/4"
	NAME PLATE	EACH				1
	RODENT SHIELD	EACH				1
	EXPANDED POLYSTYRENE	SIZE				1"

ALL ITEMS ARE CATEGORY XXXX

STATE PROJECT NUMBER

1100-21-71



EXCAVATION AND BACKFILL LIMITS

LEGEND

WALL EXCAVATION - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-715".

MSE BACKFILL - INCLUDED IN THE BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH R-40-715".

BASE AGGREGATE DENSE 1 1/4" - NOT A RETAINING WALL ITEM. SEE BRIDGE PLANS.

BACKFILL STRUCTURE TYPE A - NOT A RETAINING WALL ITEM. SEE BRIDGE PLANS.

FILL MATERIAL NOT A RETAINING WALL ITEM - SEE ROADWAY PLANS

REMOVING OLD STRUCTURE - NOT A RETAINING WALL ITEM. SEE BRIDGE PLANS.

MSE BACKFILL OR SIZE 2 COARSE AGGREGATE - NOT A RETAINING WALL ITEM. SEE BRIDGE PLANS.

PRELIMINARY PLANS

NO. DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE R-40-715		
DRAWN BY	EAJ	PLANS CK'D. NNM
GENERAL NOTES, QUANTITIES, EXCAVATION & BACKFILL DIAGRAMS		SHEET 2 OF 5

[illegible]

8

[illegible][illegible][illegible]

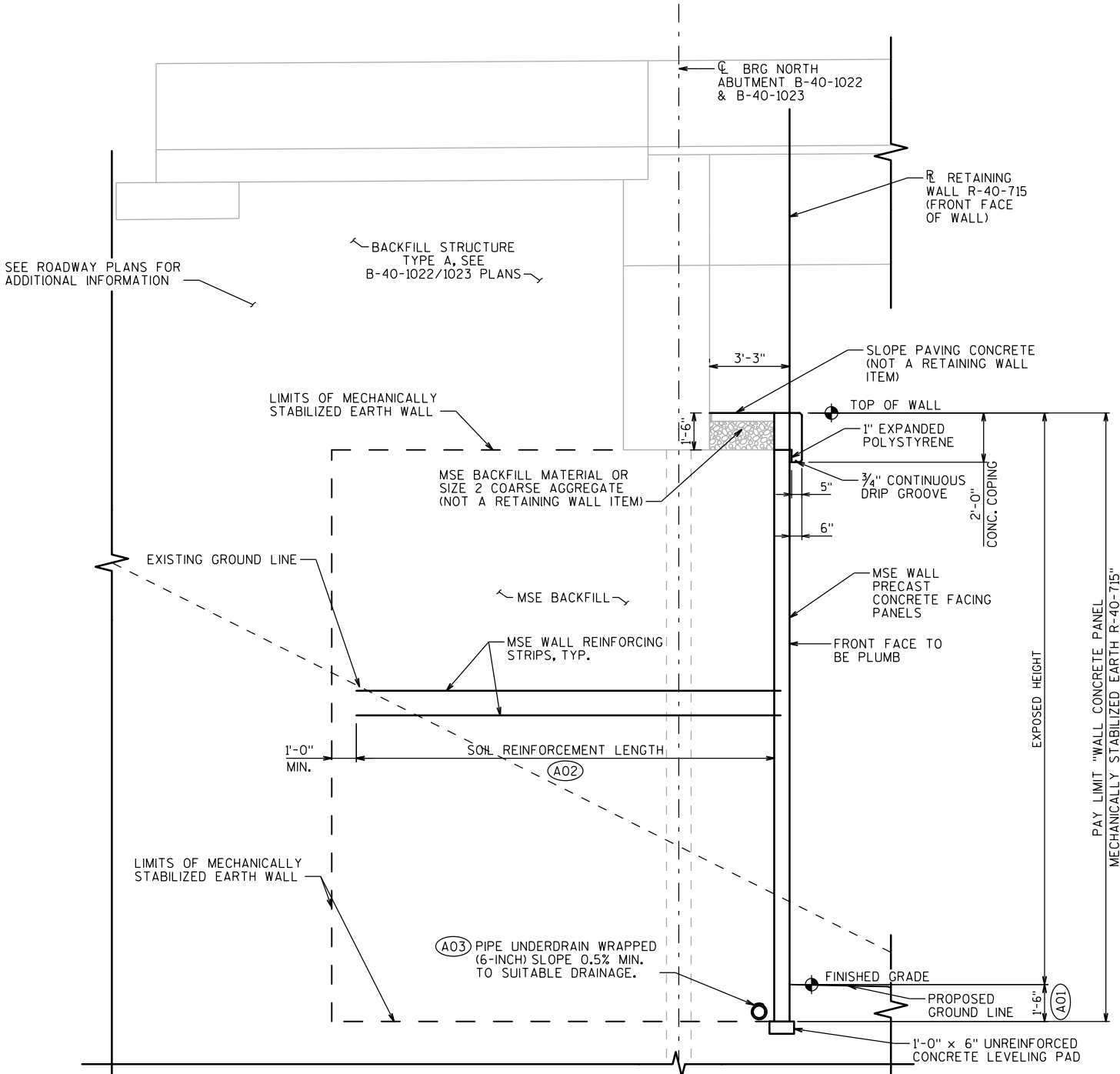
☒ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

DIMENSIONS		
WALL HEIGHT (FEET)		
EXPOSED WALL HEIGHT (FEET)		
MINIMUM LENGTH OF REINFORCEMENT/WALL WIDTH (FEET)		
REINFORCEMENT LENGTH/RETAINED HEIGHT RATIO		
WALL STATION		
BORING USED		
CAPACITY TO DEMAND RATIO (CDR)		
SLIDING		
ECCENTRICITY		
BEARING		
GLOBAL STABILITY		

(10) THE LENGTHS PROVIDED IN THE TABLE ARE THE MINIMUM REQUIRED REINFORCEMENT LENGTHS BASED UPON THE MINIMUM DESCRIBED IN THE WALL SYSTEM SPECIAL PROVISIONS OR EXTERNAL AND GLOBAL STABILITY AT THE DESIGNATED LOCATIONS. THESE DESIGNATED LOCATIONS REPRESENT TYPICAL AND CRITICAL WALL LOCATIONS, BUT SHALL NOT BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR DESIGNED LENGTHS SHALL MEET OR EXCEED THE MINIMUM VALUES REPRESENTED IN THE TABLE AT THESE DESIGNATED LOCATIONS.

DESIGN DATA

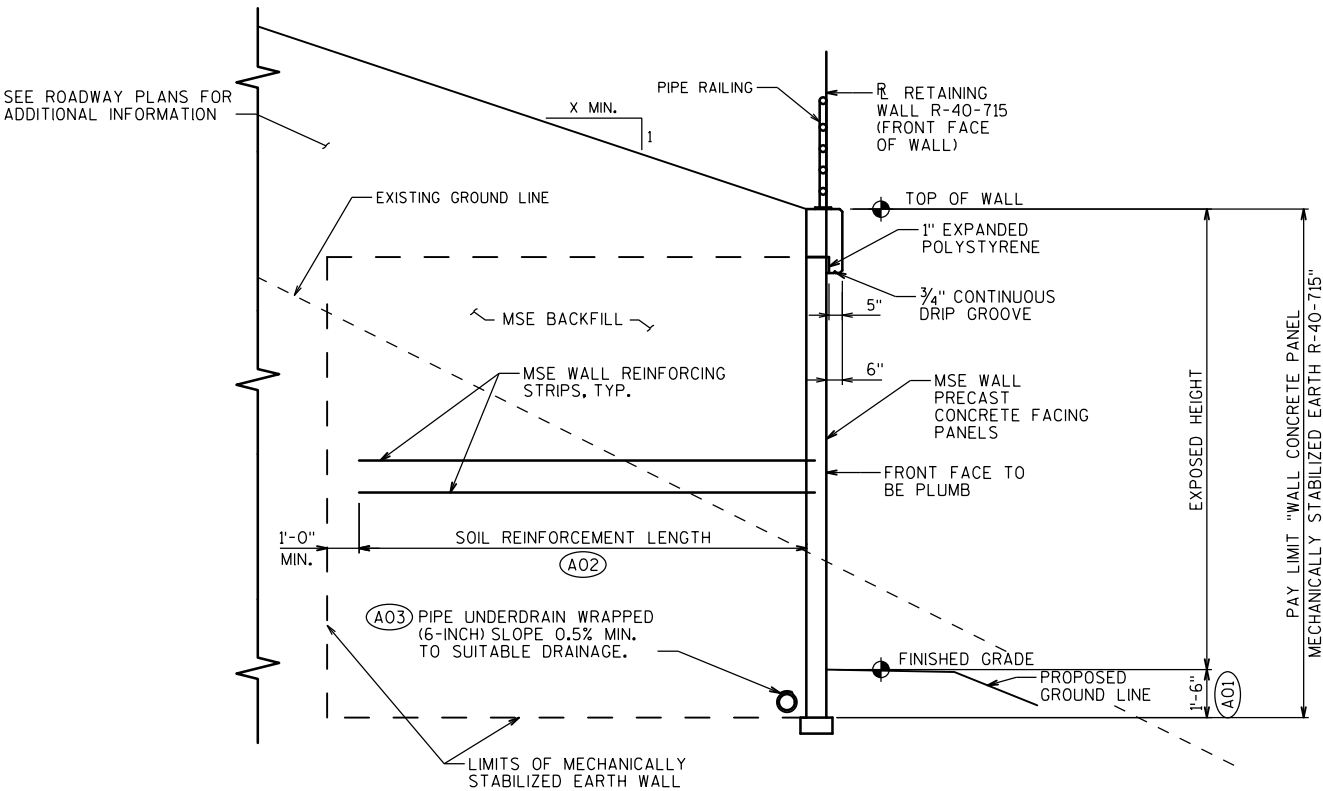
		BY
INSIN PORTATION		
-40-715		
FA-I	PLANS CVD	NNM



TYPICAL SECTION AT ABUTMENT - SEGMENT B
STA. XX+XX.XX TO STA. XX+XX.XX
(LOOKING EAST)

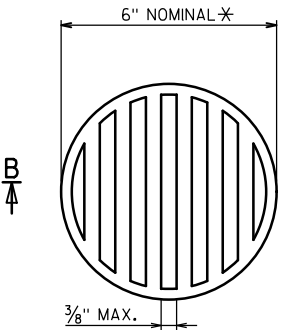
LEGEND

- (A01) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD AS SHOWN. PAY LIMITS BASED ON MINIMUM DIMENSION.
- (A02) SEE WALL EXTERNAL STABILITY EVALUATION TABLE ON "DESIGN DATA" SHEET FOR MINIMUM LENGTH OF MSE WALL REINFORCING STRIPS. SOIL REINFORCEMENT MUST EXTEND A MINIMUM OF 3.0 FEET BEYOND THE FAILURE PLANE FOR INTERNAL STABILITY AS DEFINED BY AASHTO SPECIFICATIONS.
- (A03) CONNECT PIPE UNDERDRAIN WRAPPED TO SUITABLE DRAINAGE OR DAYLIGHT AND ATTACH RODENT SHIELDS TO ENDS. TO BE DETERMINED IN FINAL DESIGN.



TYPICAL SECTION

SEGMENT A - STA. XX+XX.XX TO STA. XX+XX.XX
SEGMENT C - STA. XX+XX.XX TO STA. XX+XX.XX
(LOOKING EAST)



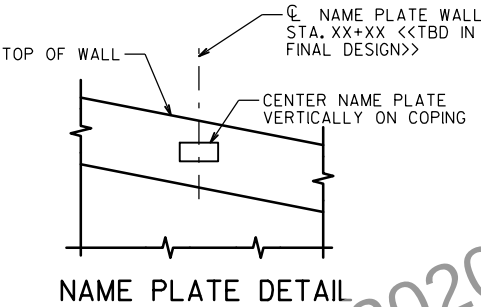
SECTION B-B

RODENT SHIELD DETAIL

* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SHIELD SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

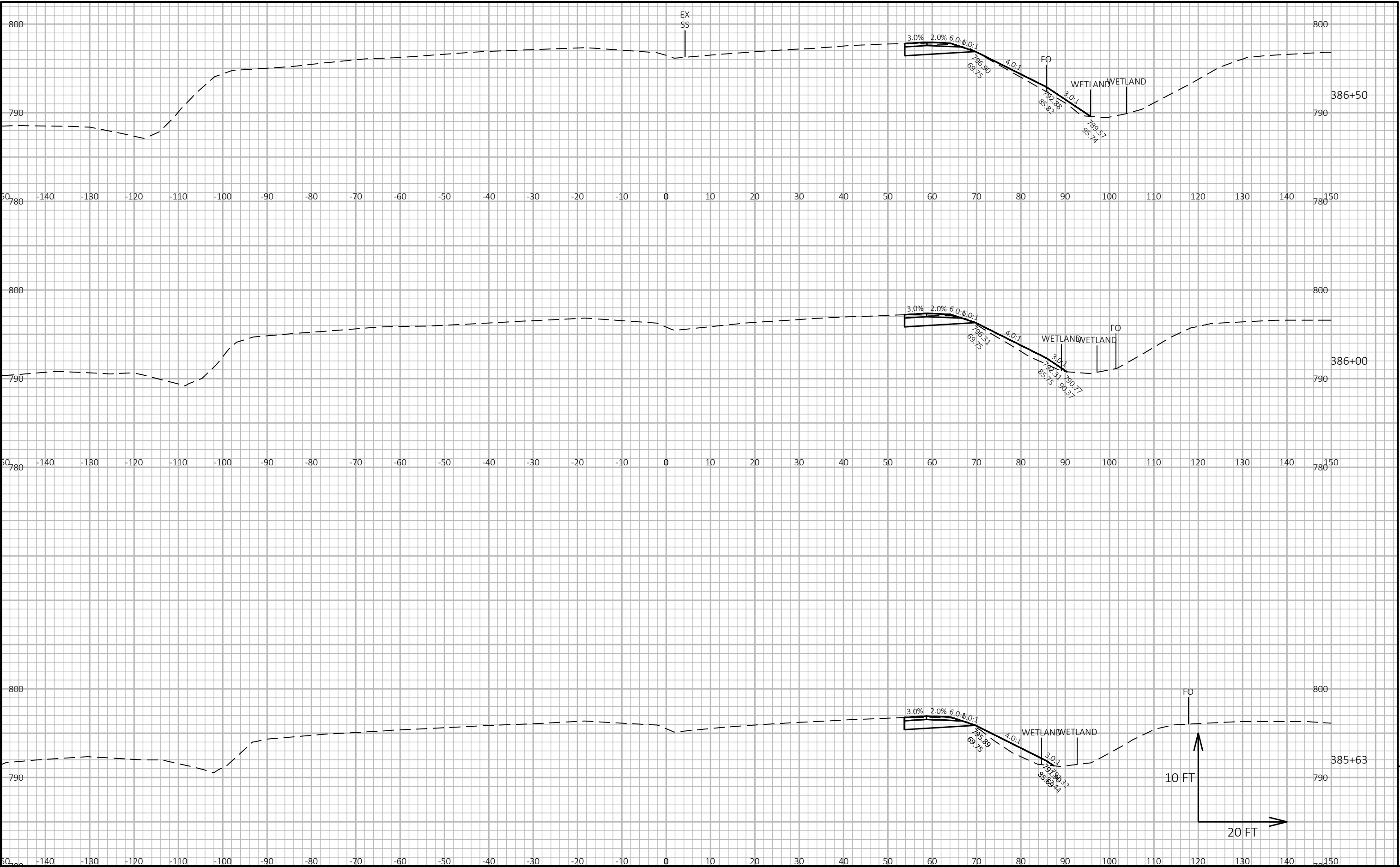


NAME PLATE DETAIL

NO. DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
STRUCTURE R-40-715		
DRAWN BY EAJ	PLANS CK'D. NNM	
TYPICAL SECTIONS		SHEET 4 OF 5

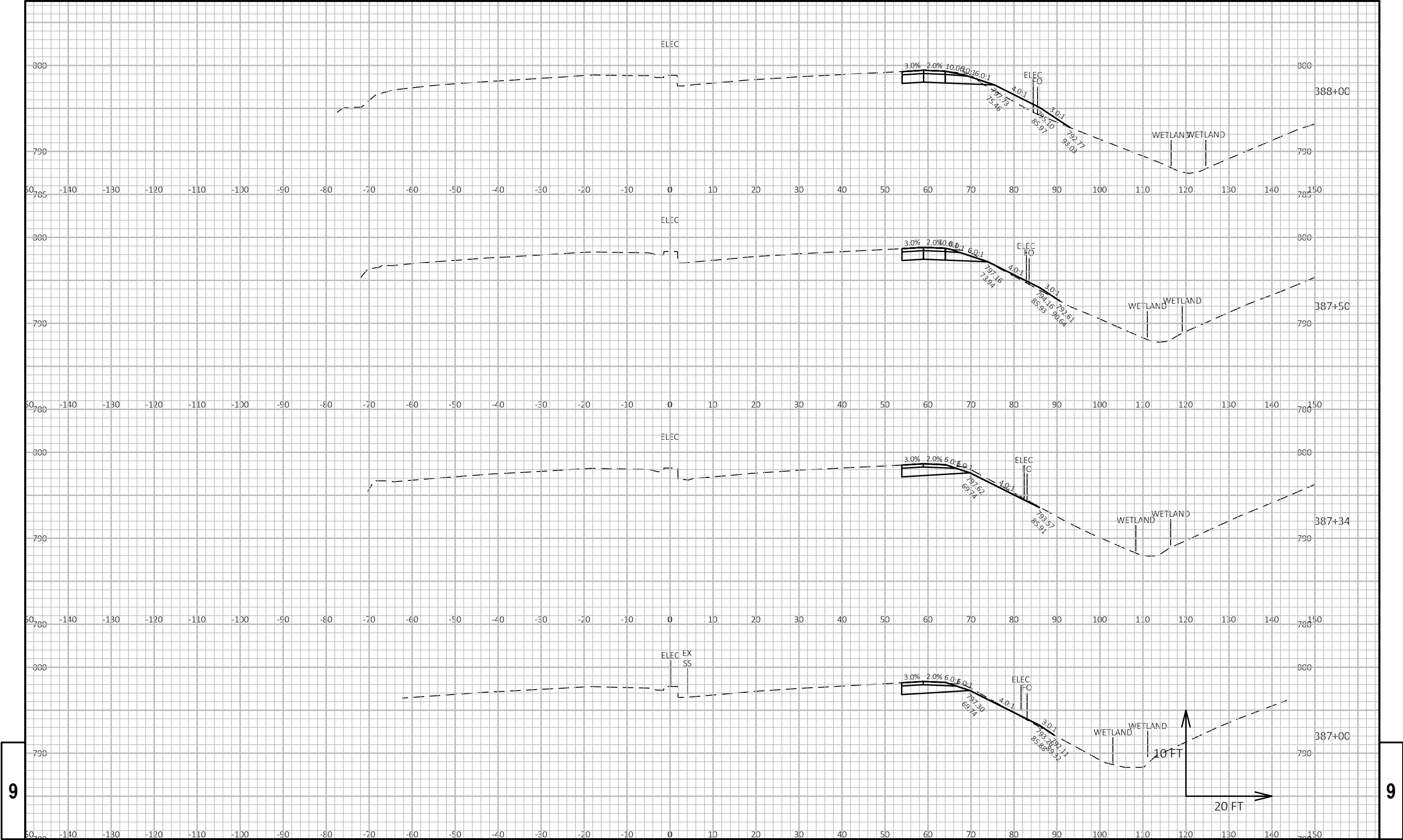
PRELIMINARY PLANS

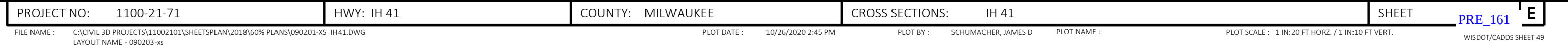
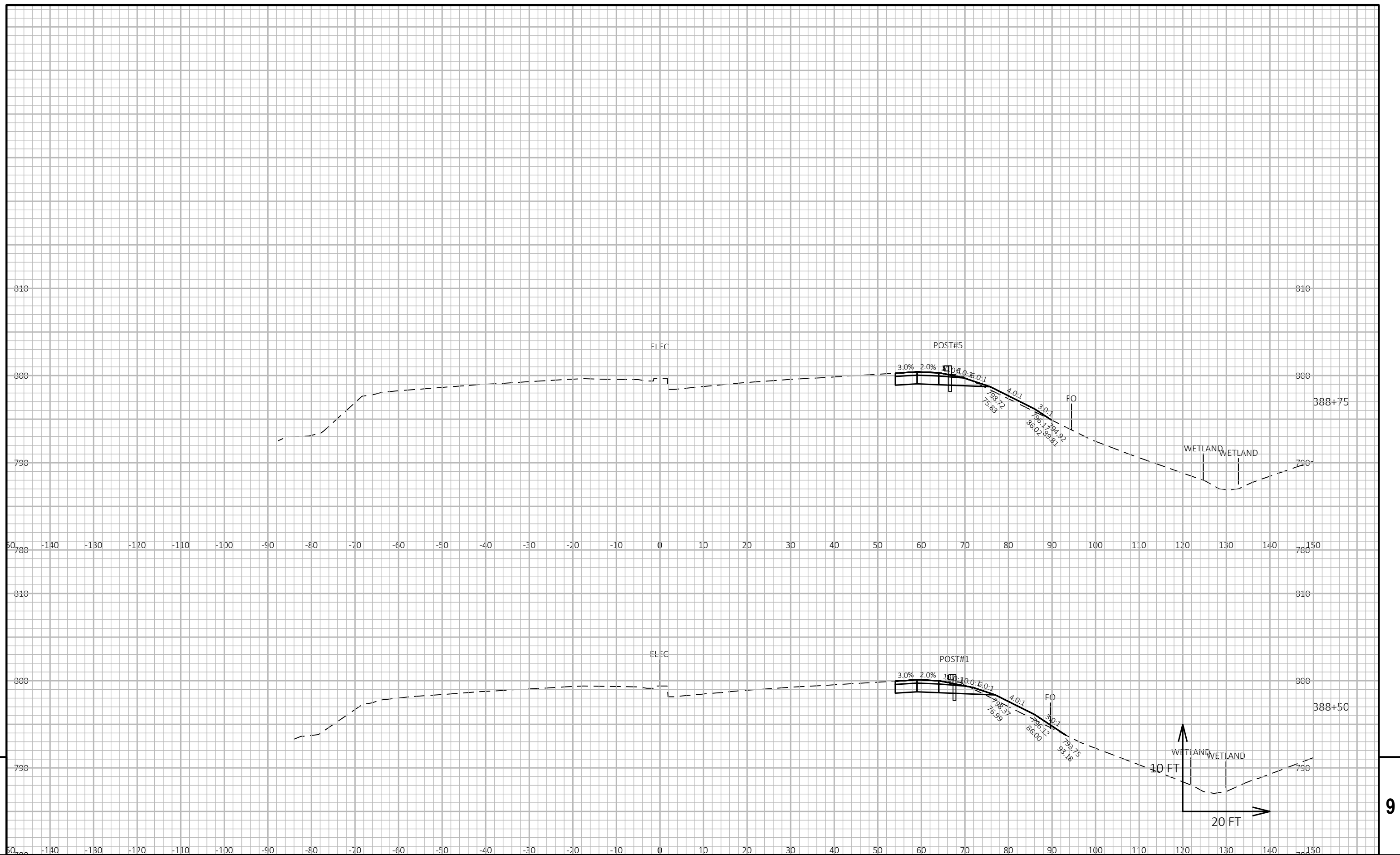
PRE_157

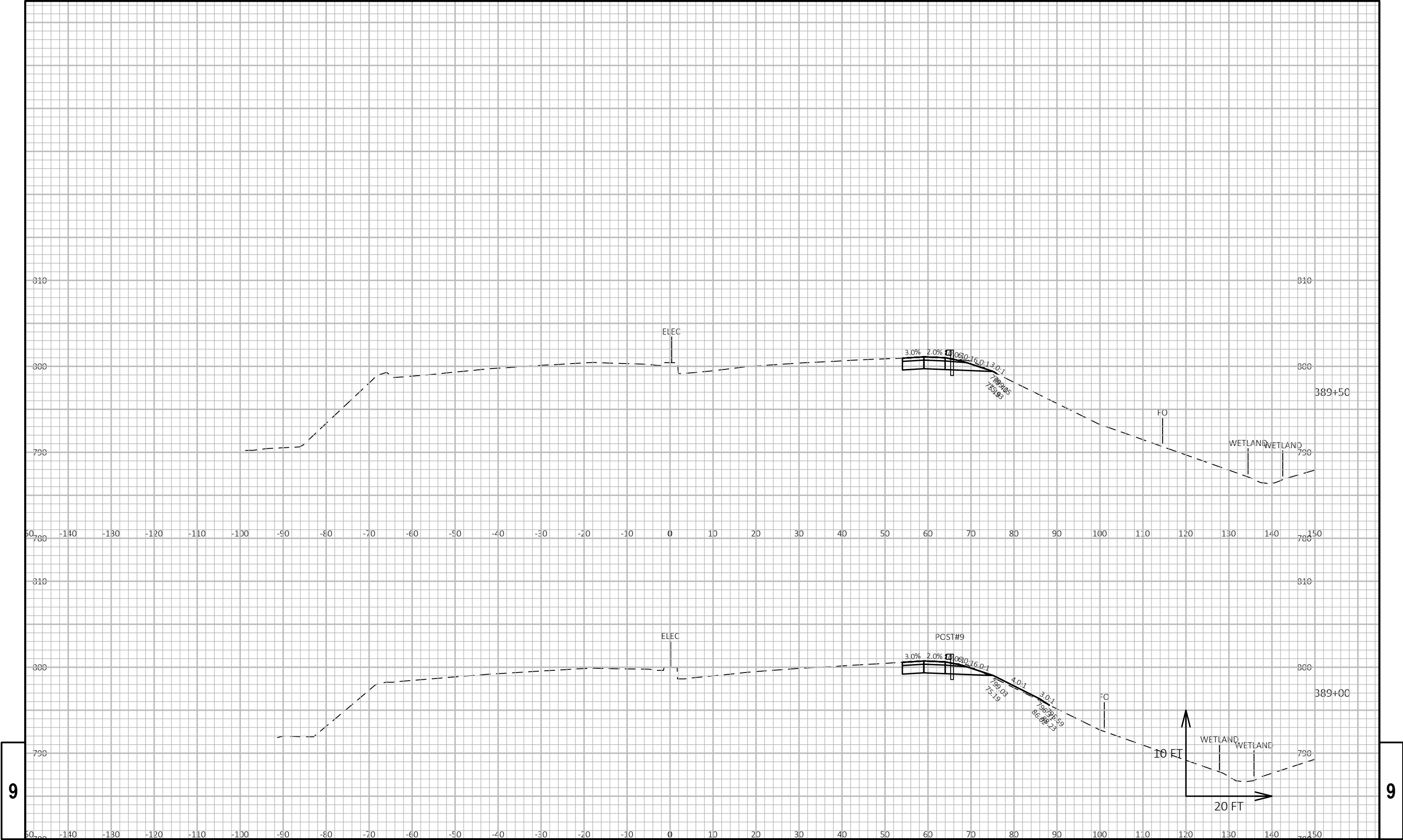


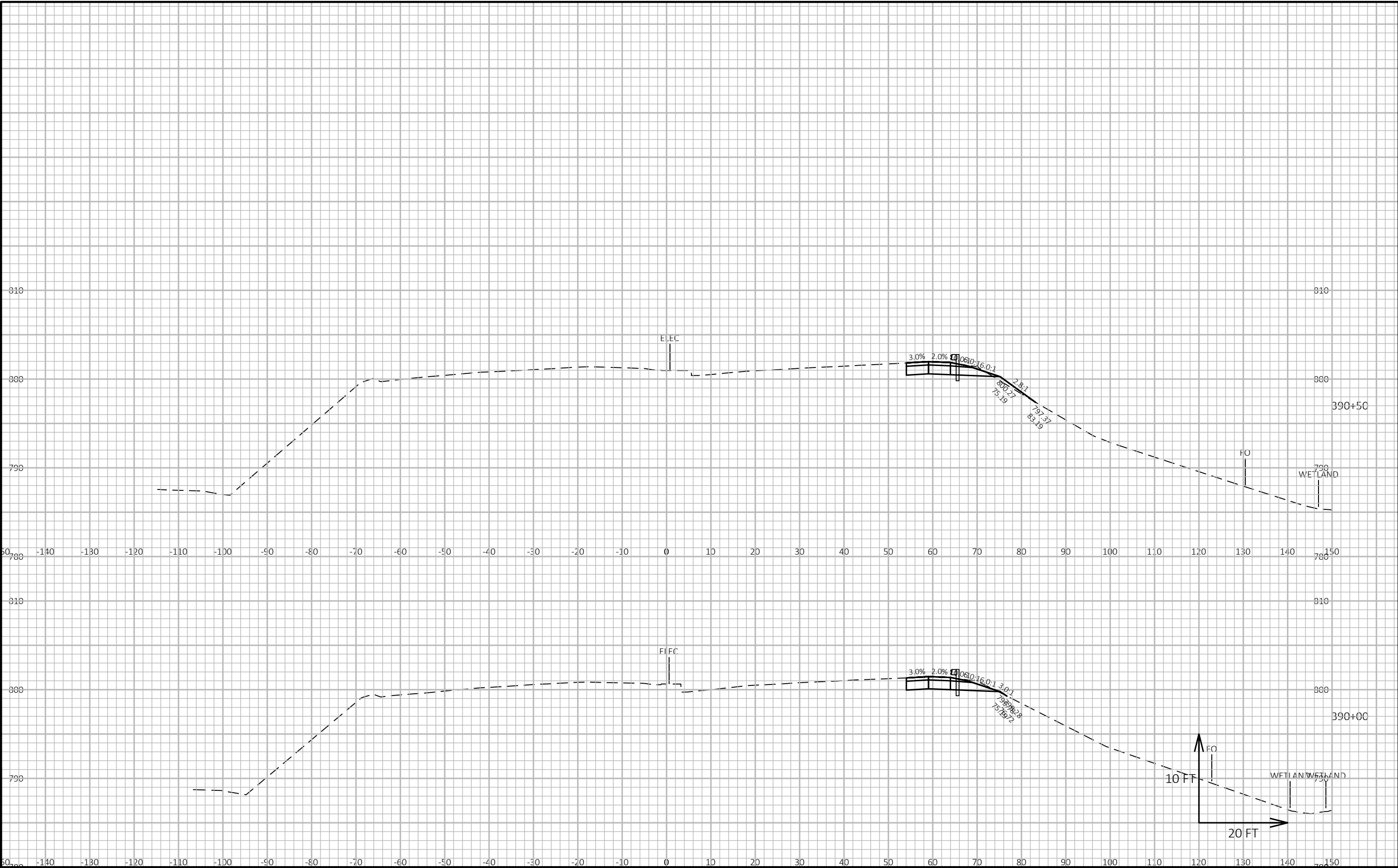
9

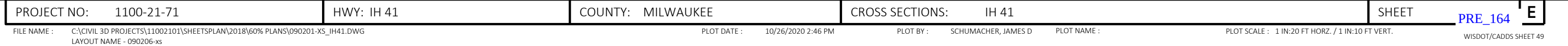
9

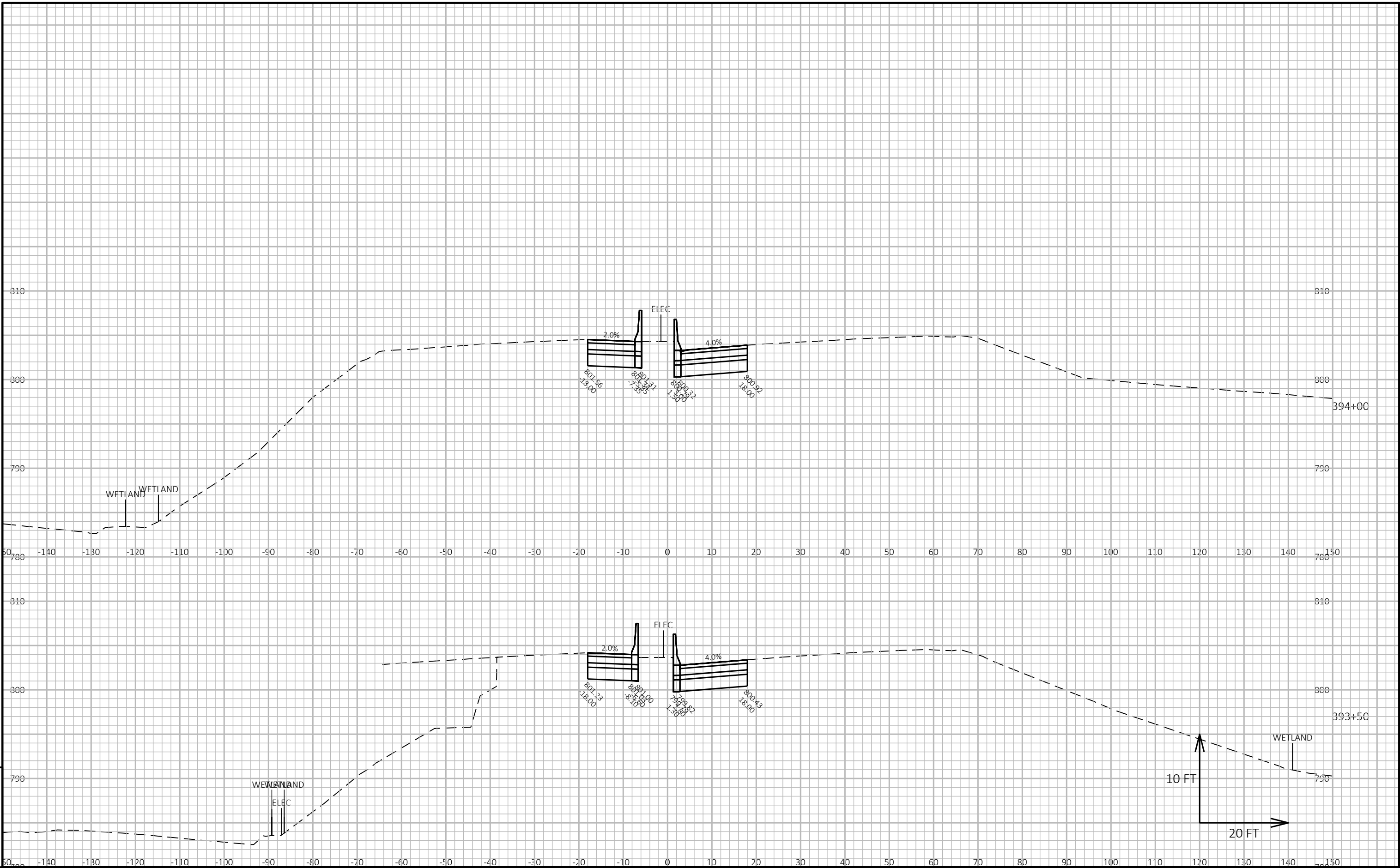


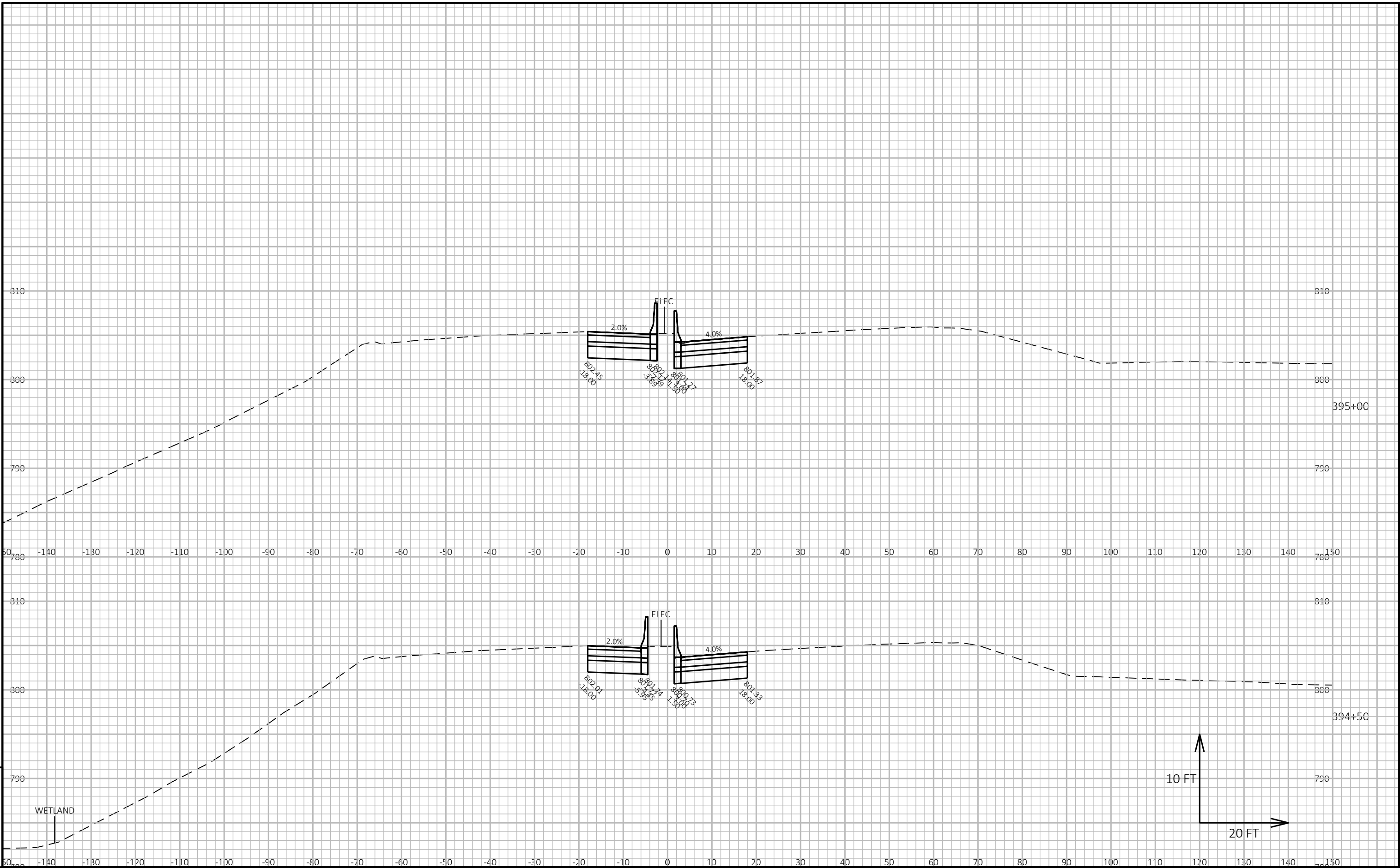


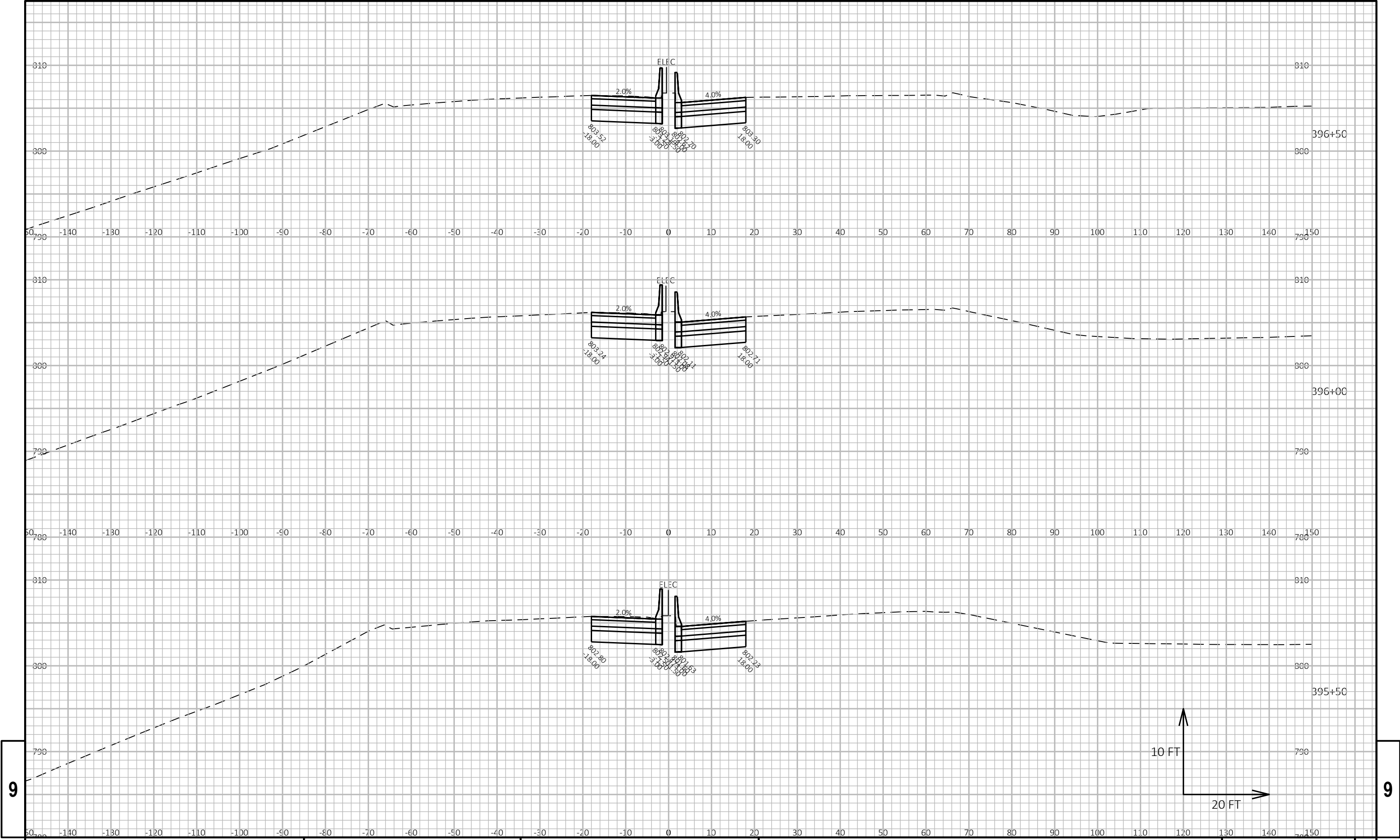






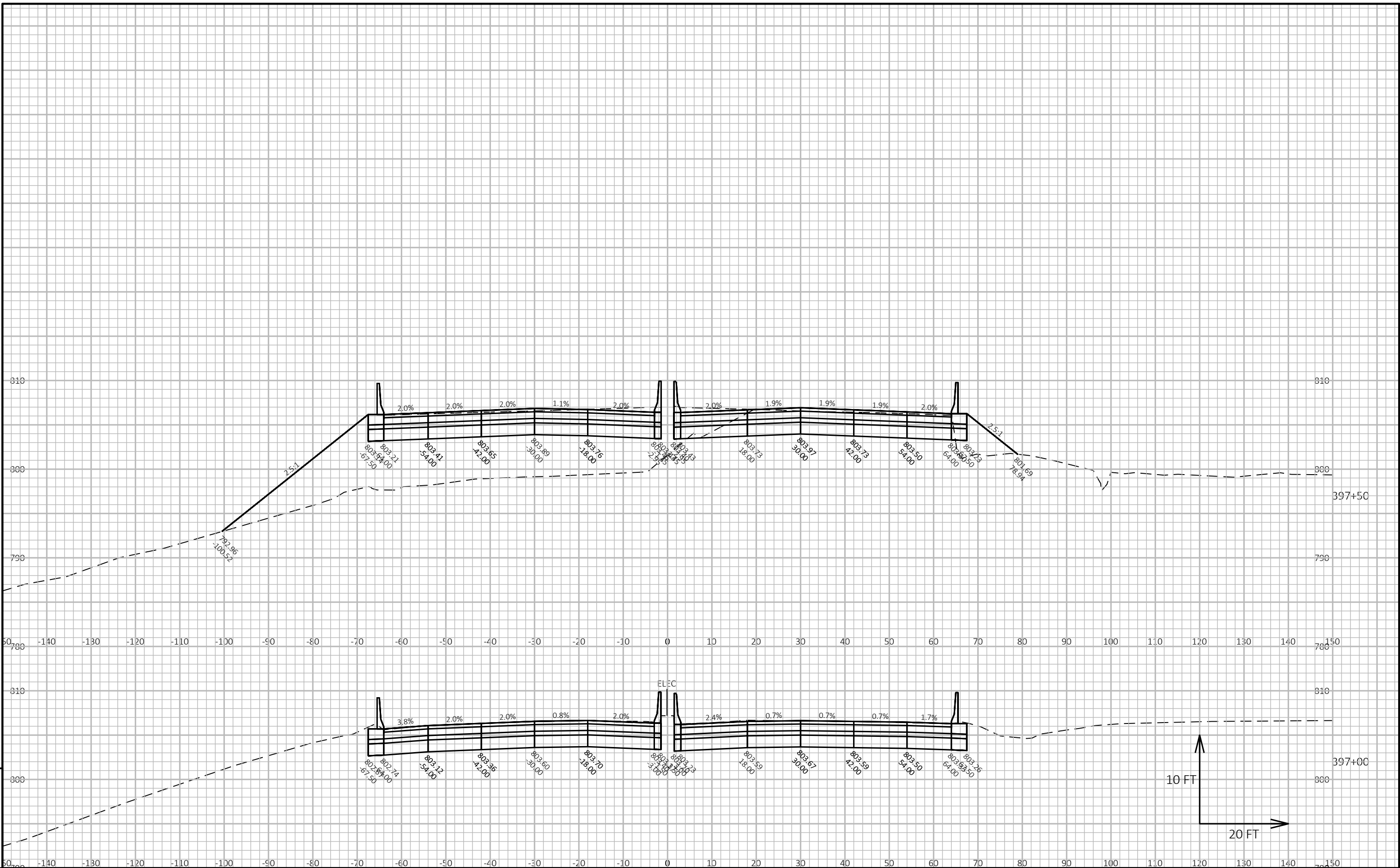


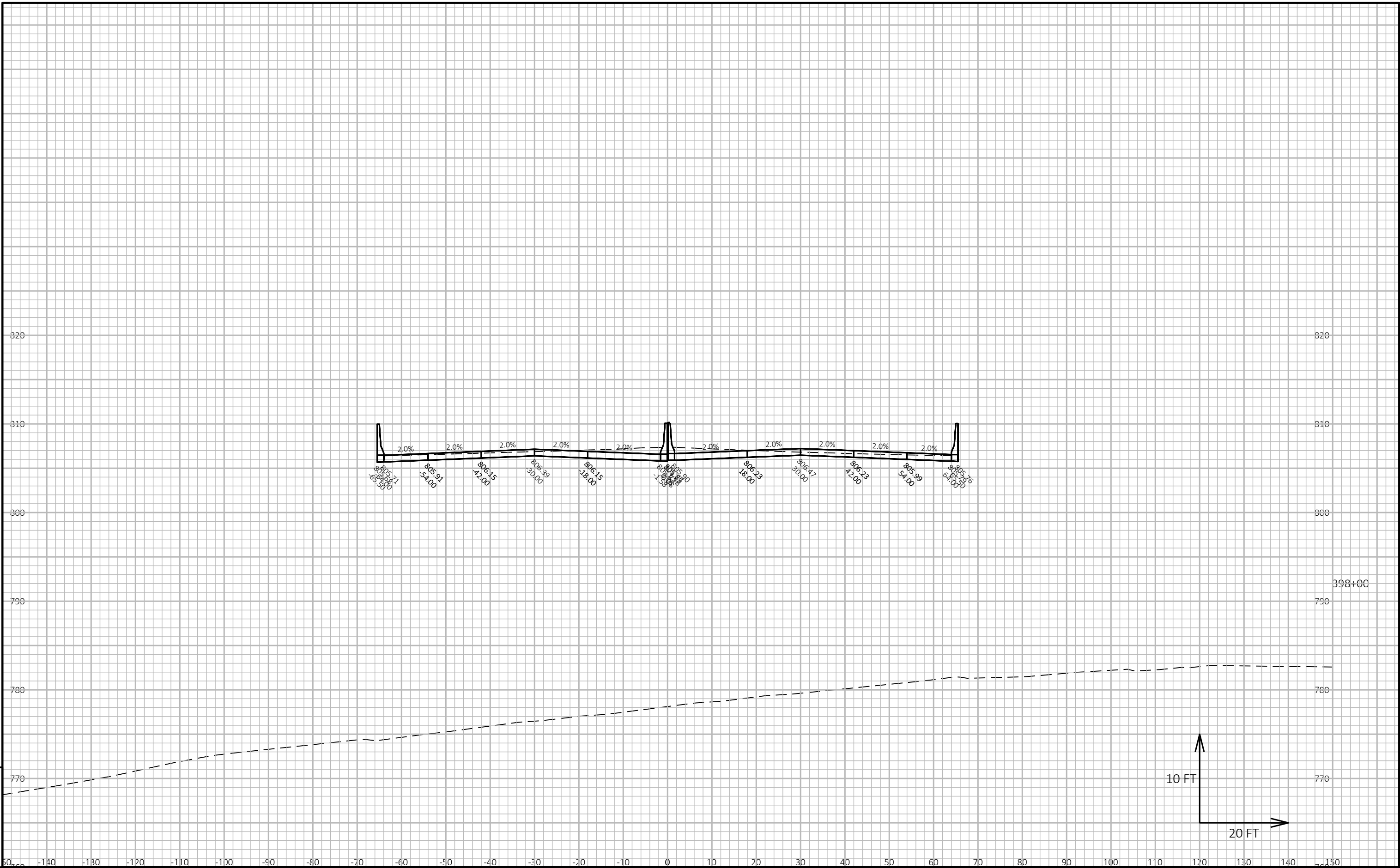


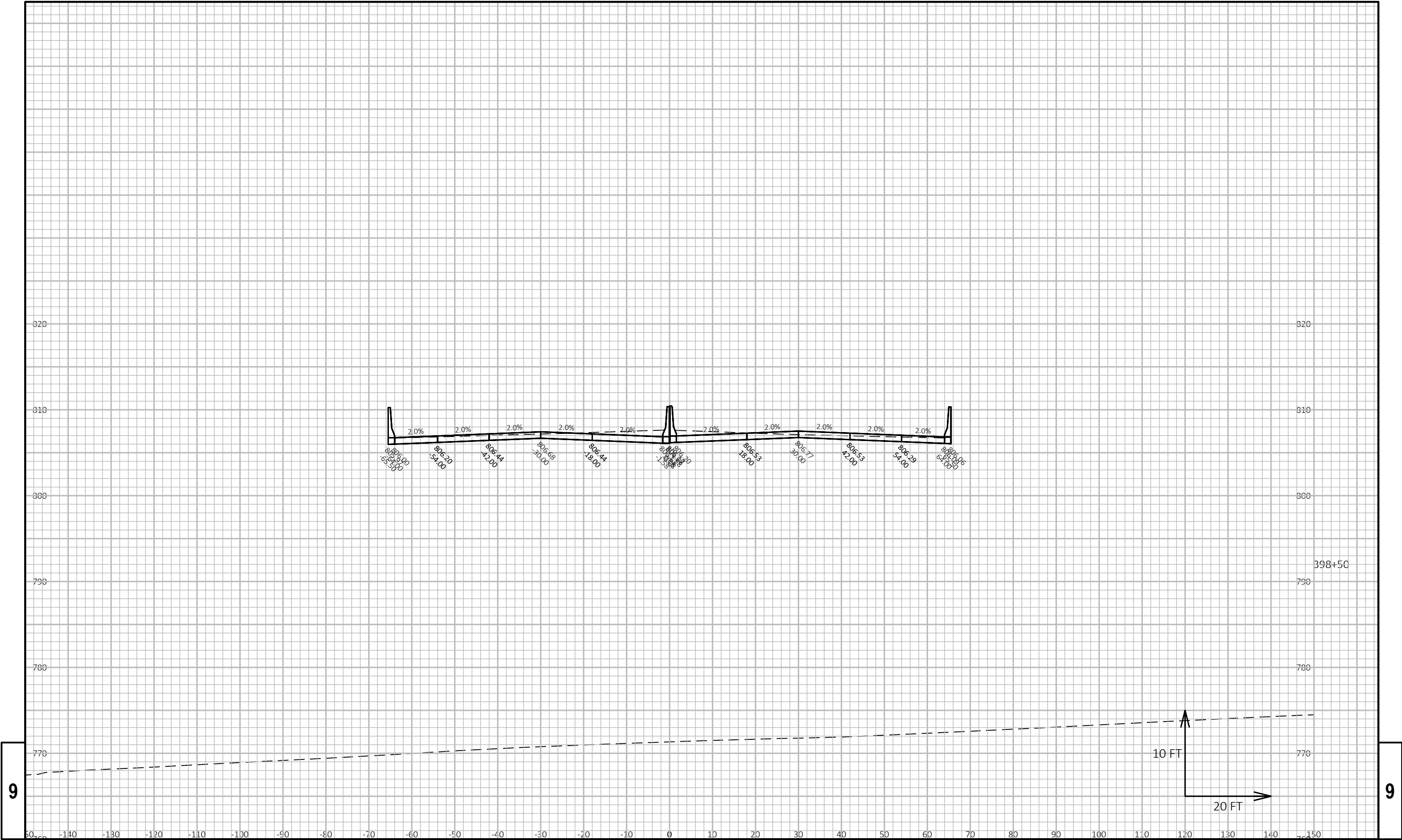


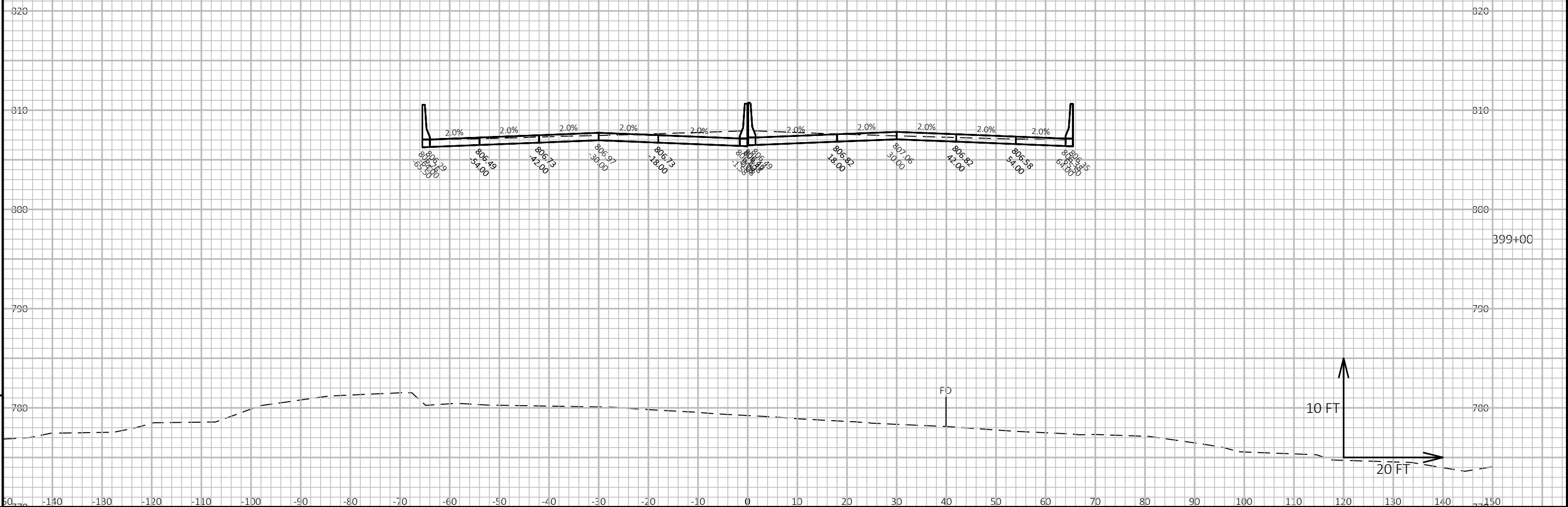
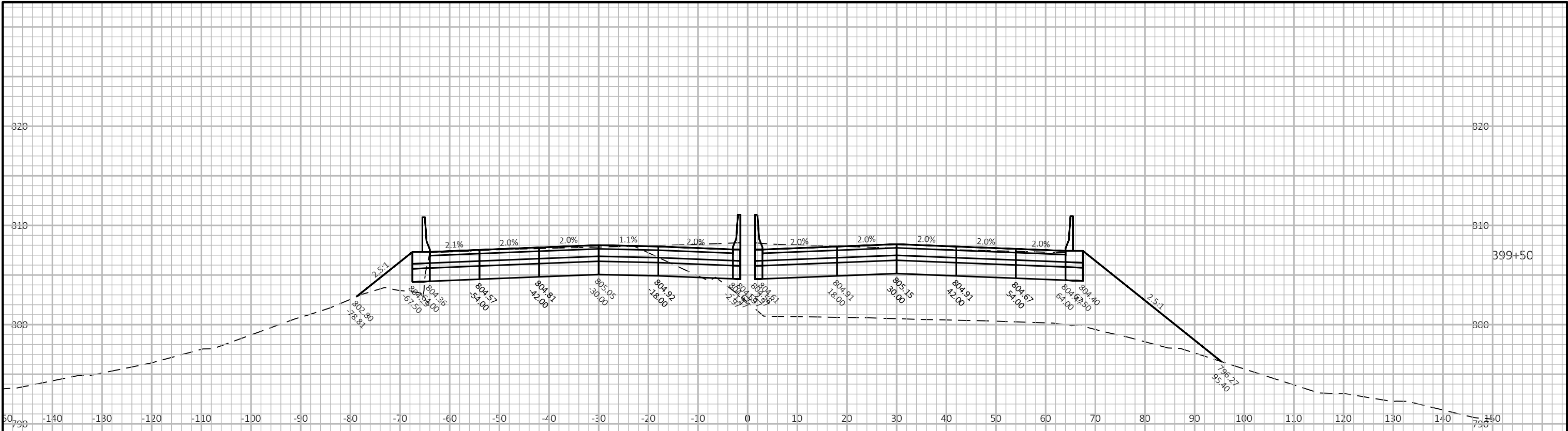
9

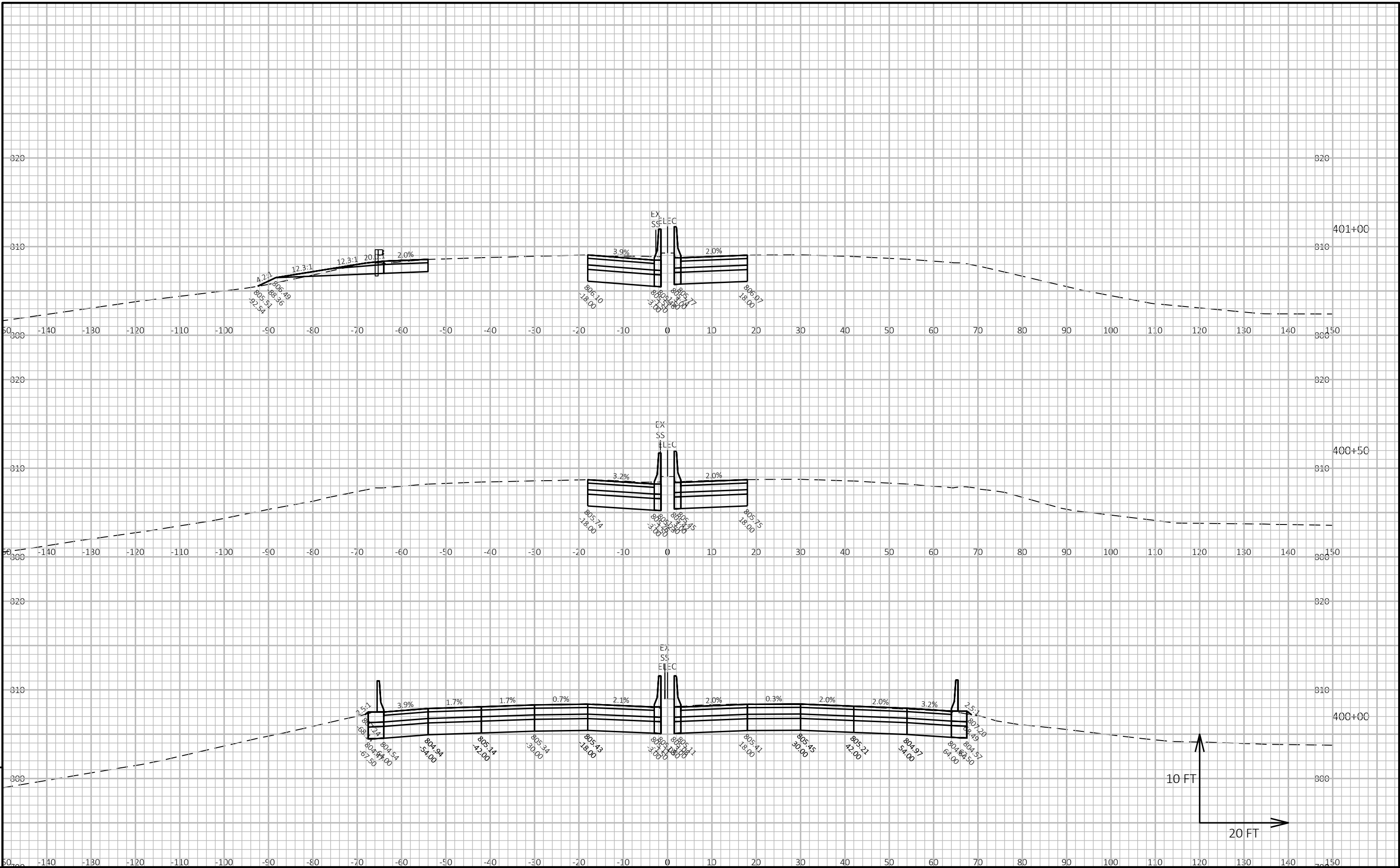
9

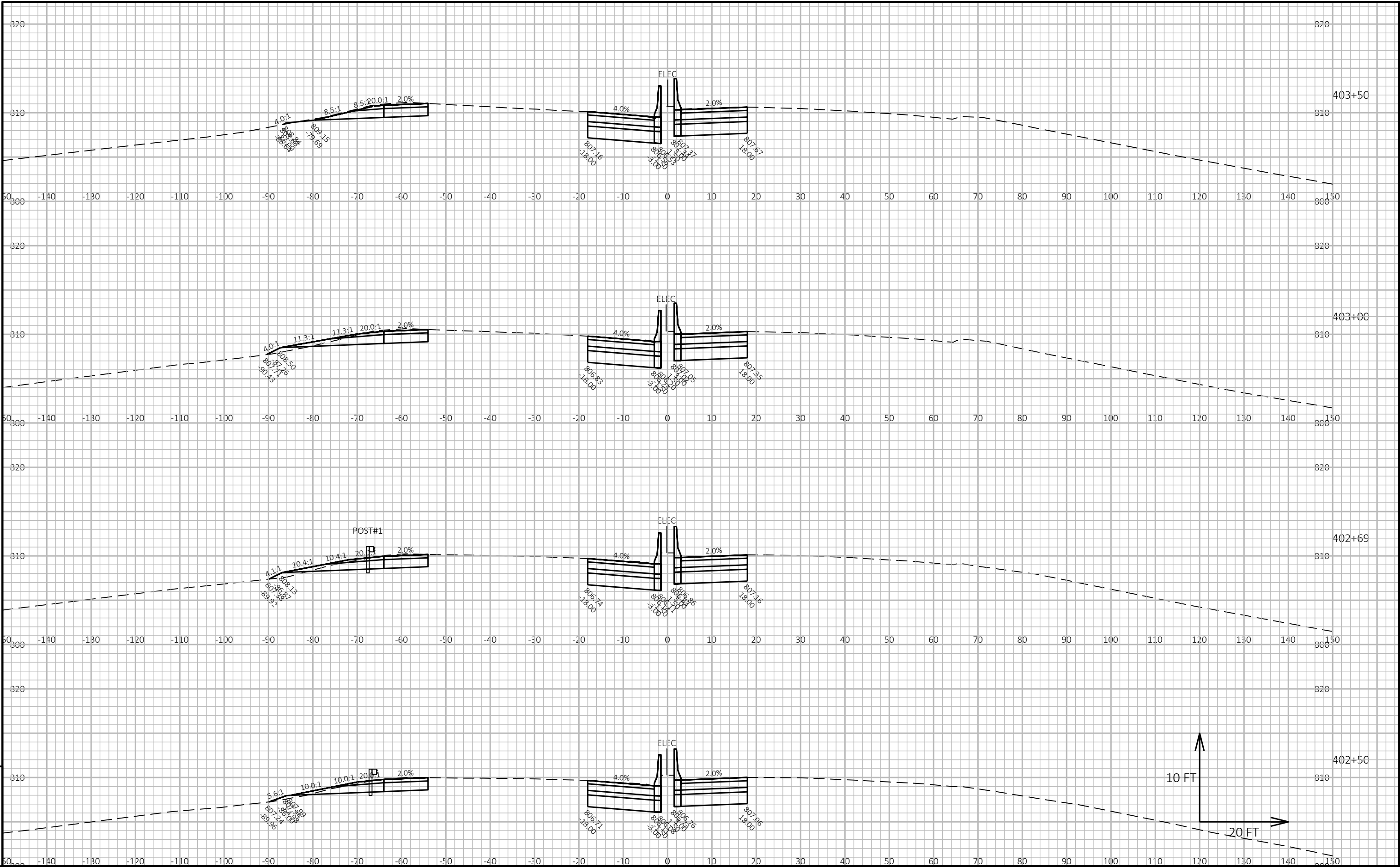


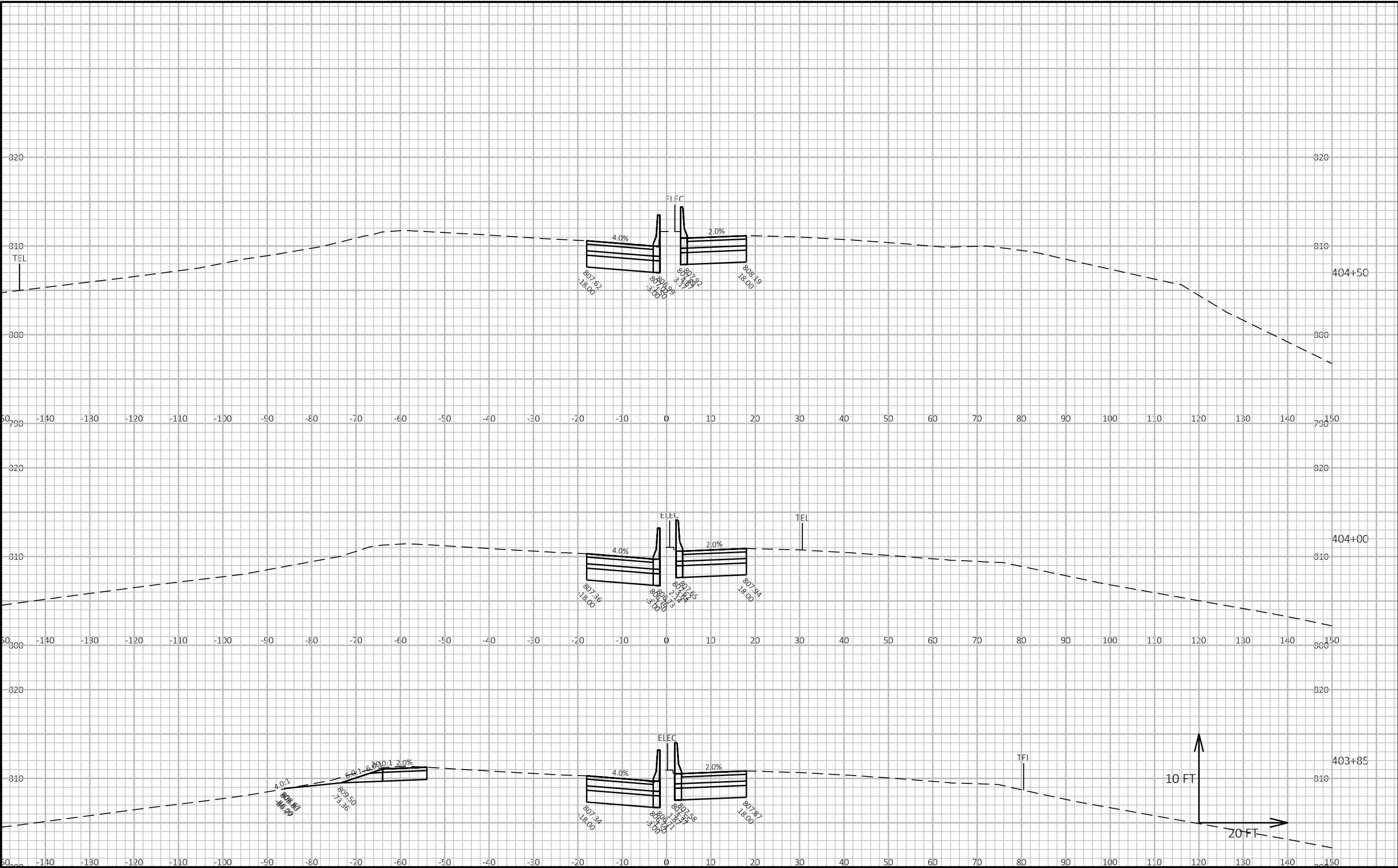


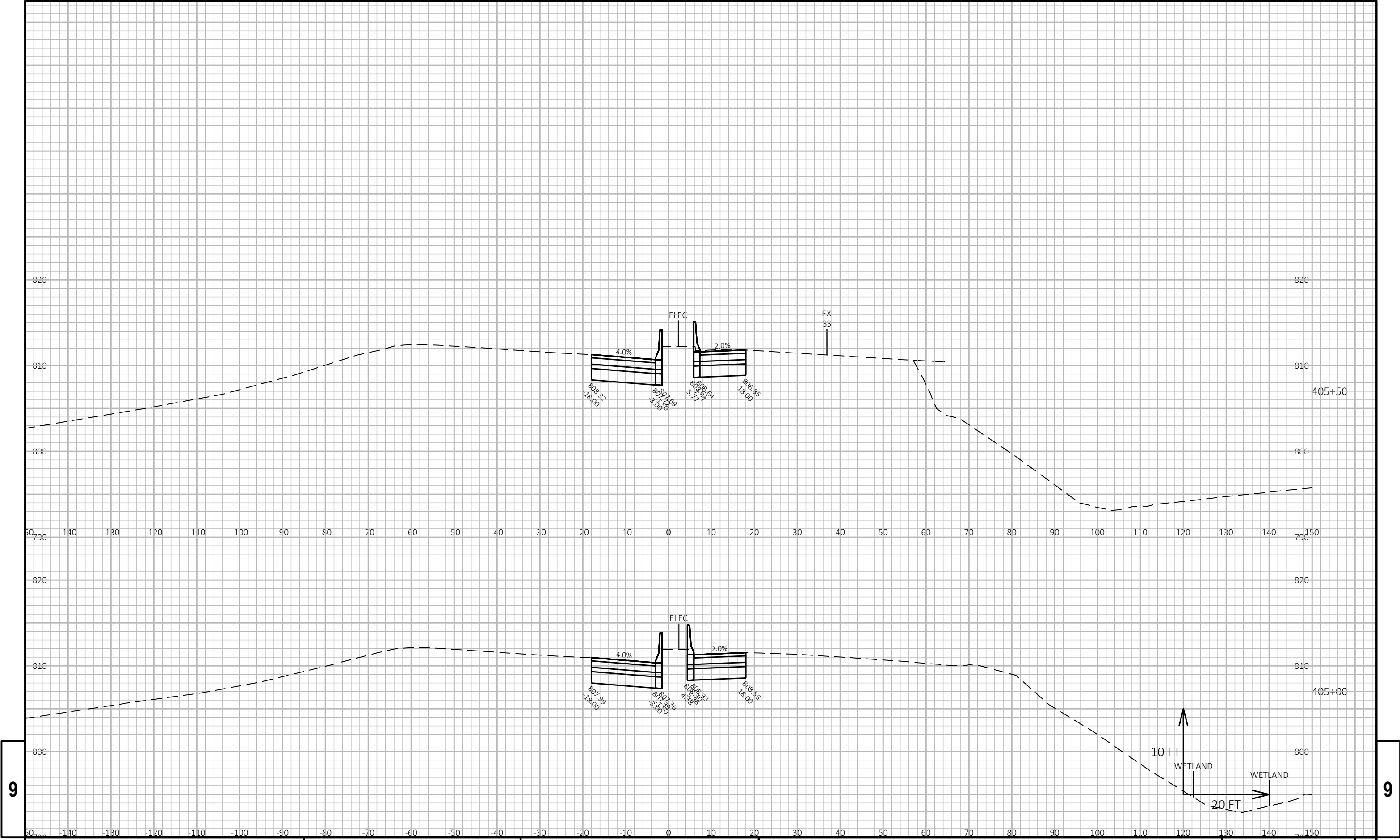






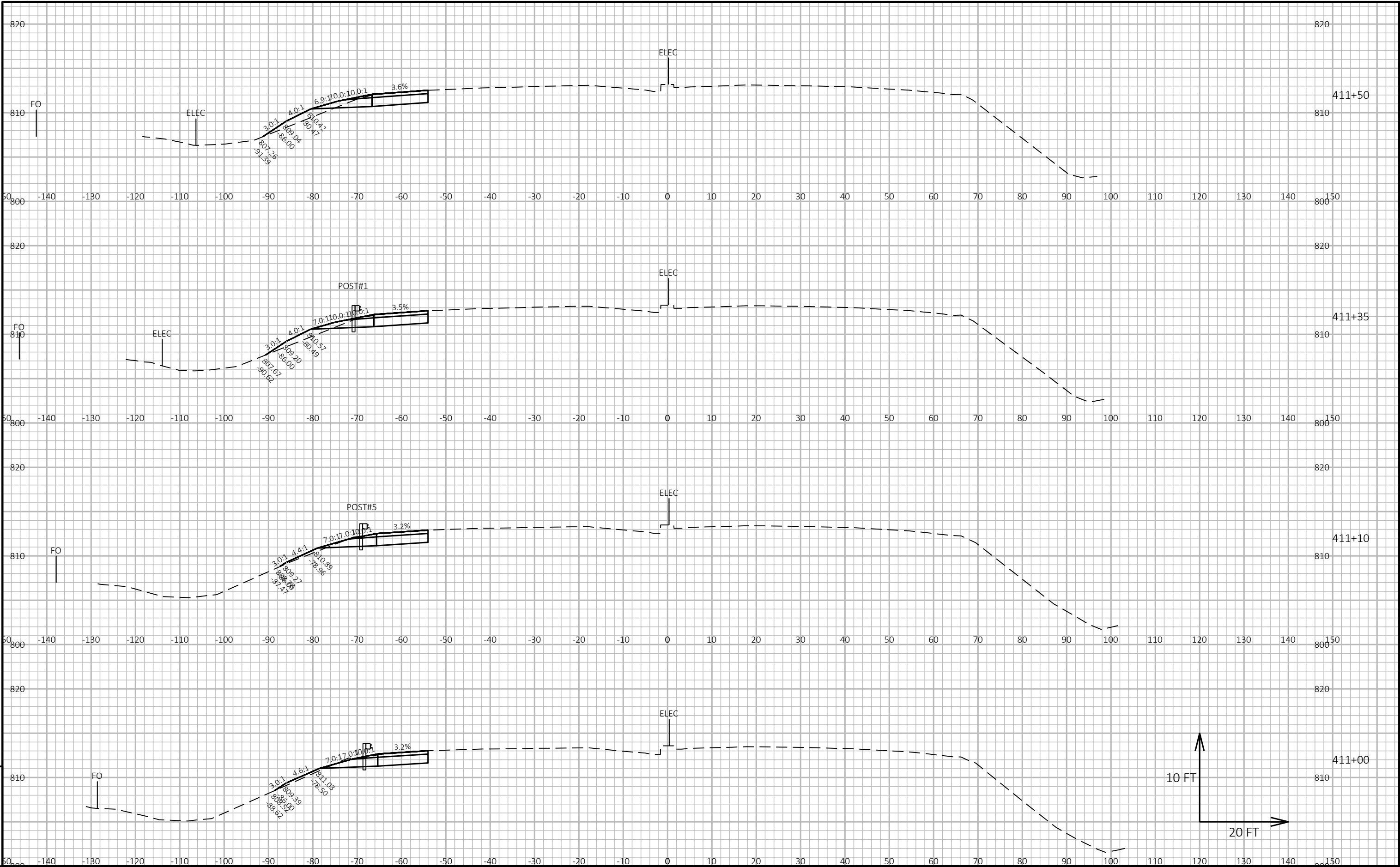






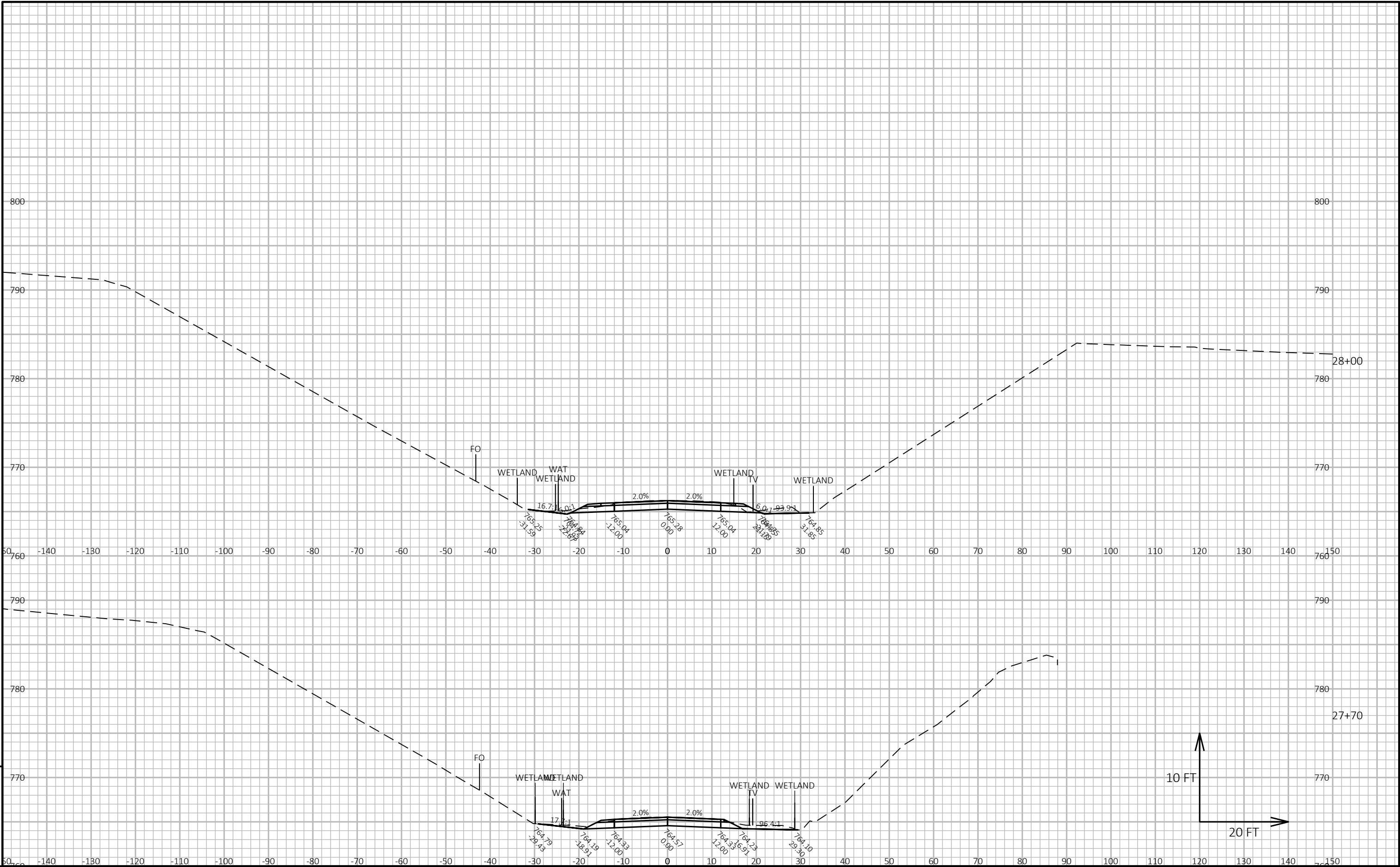
9

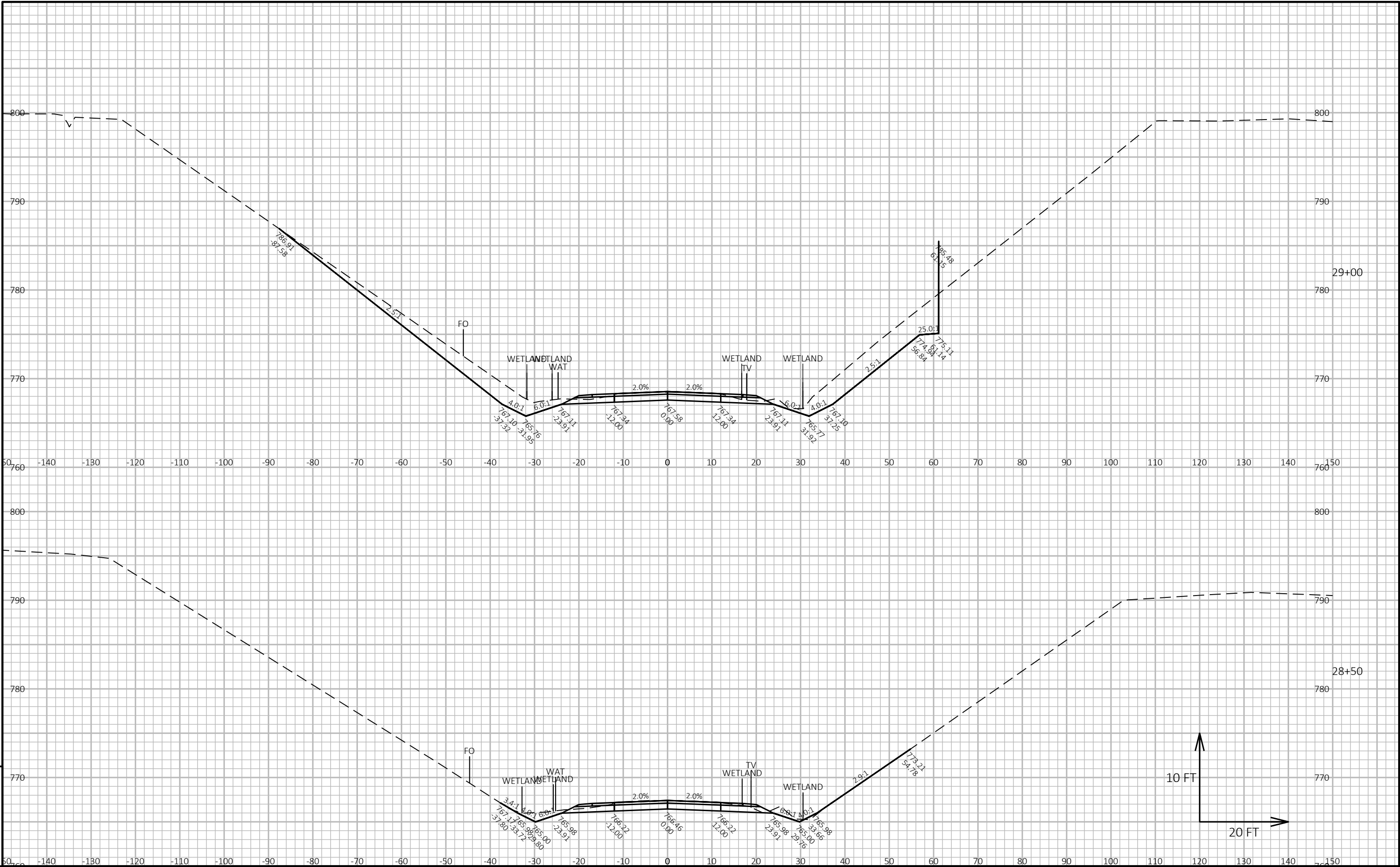
9

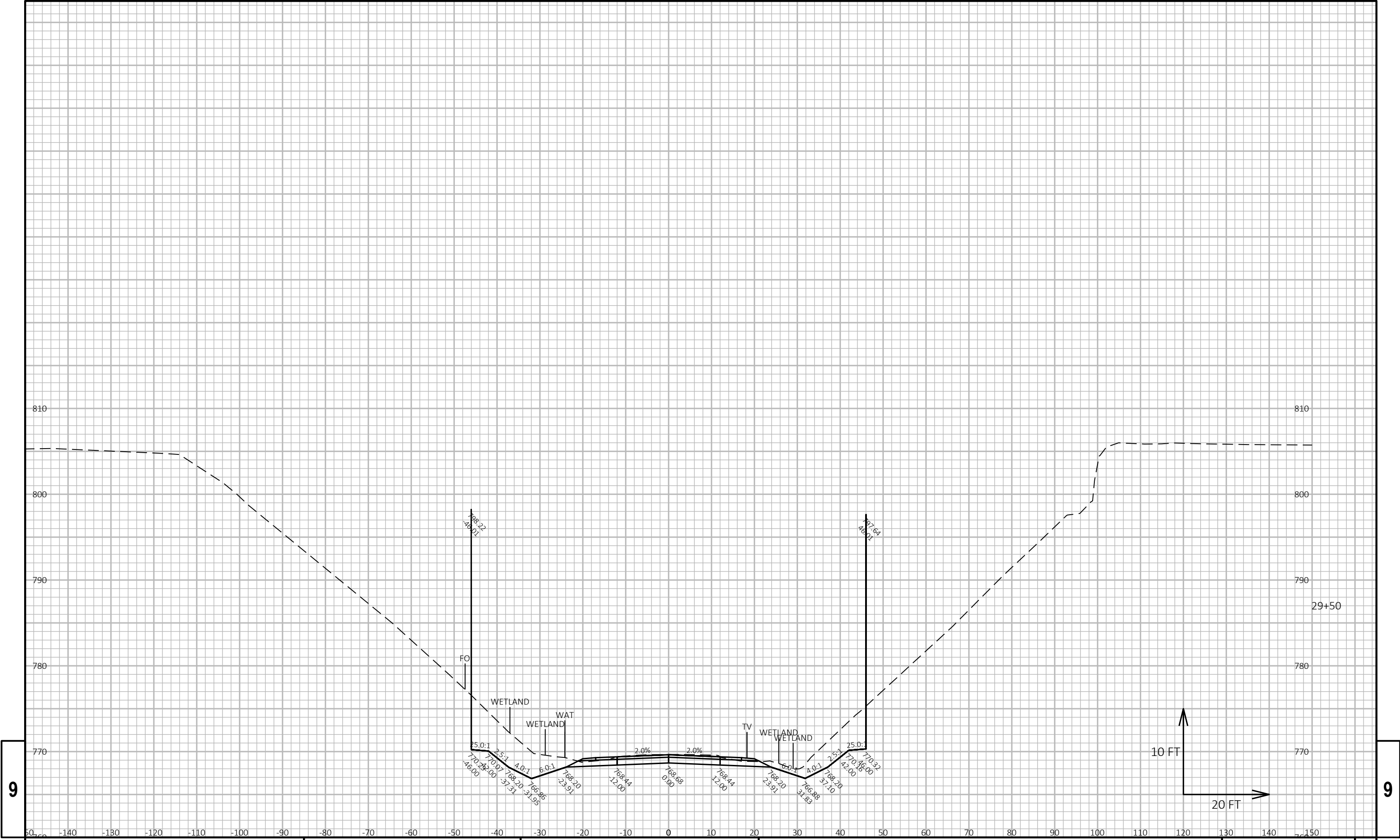


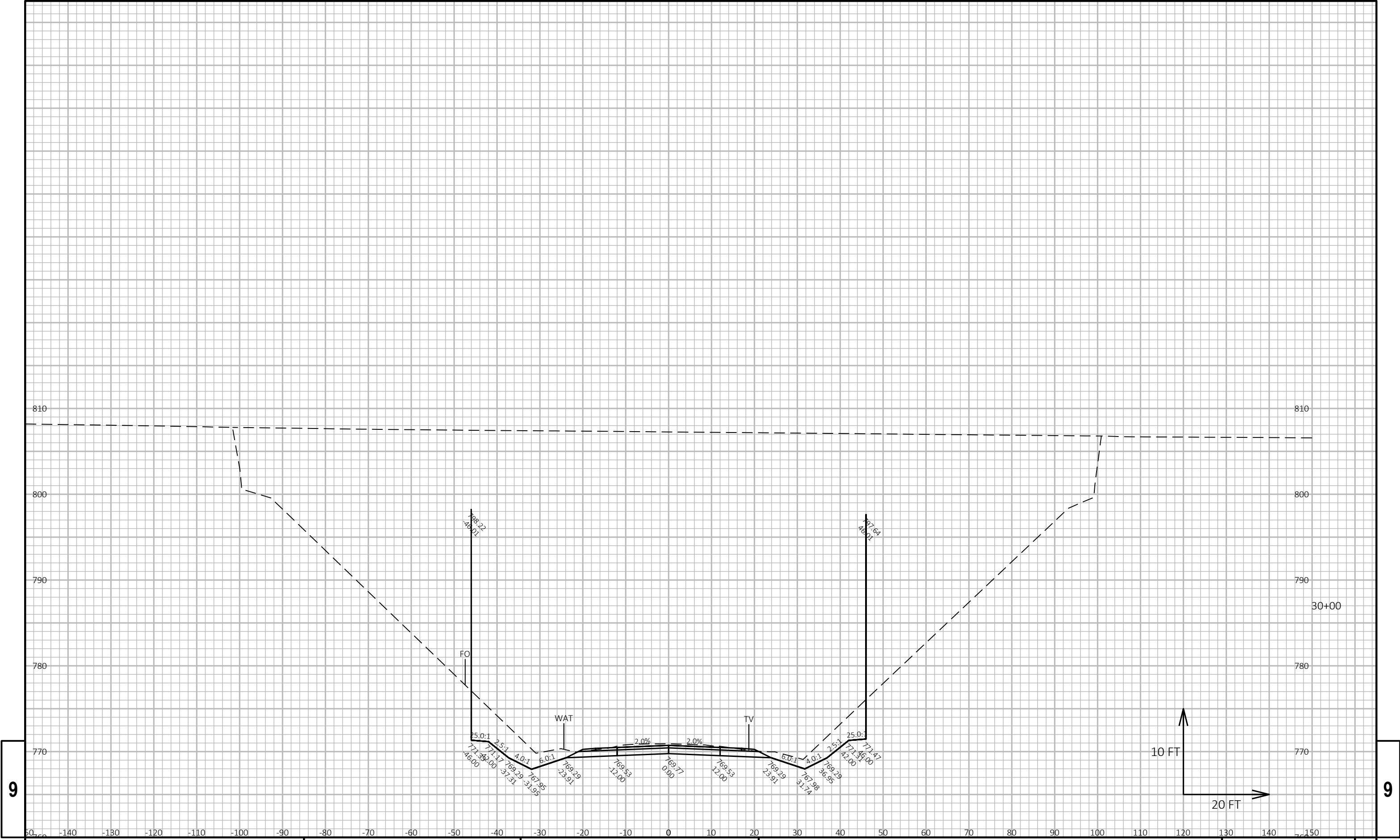
9

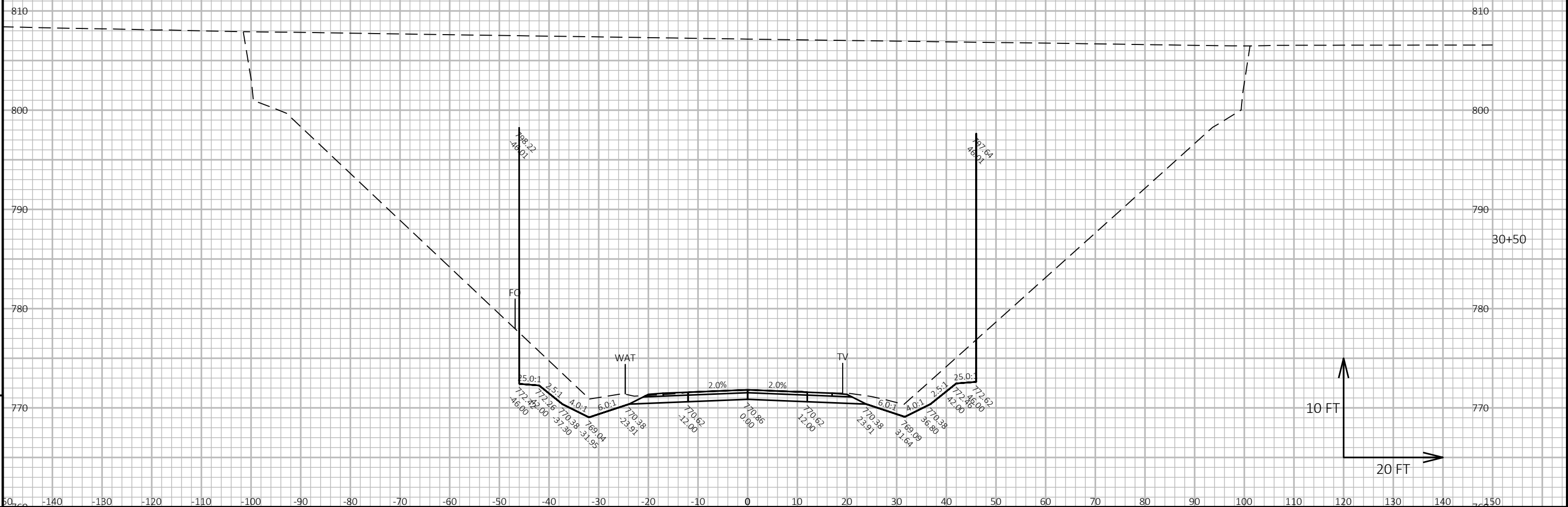
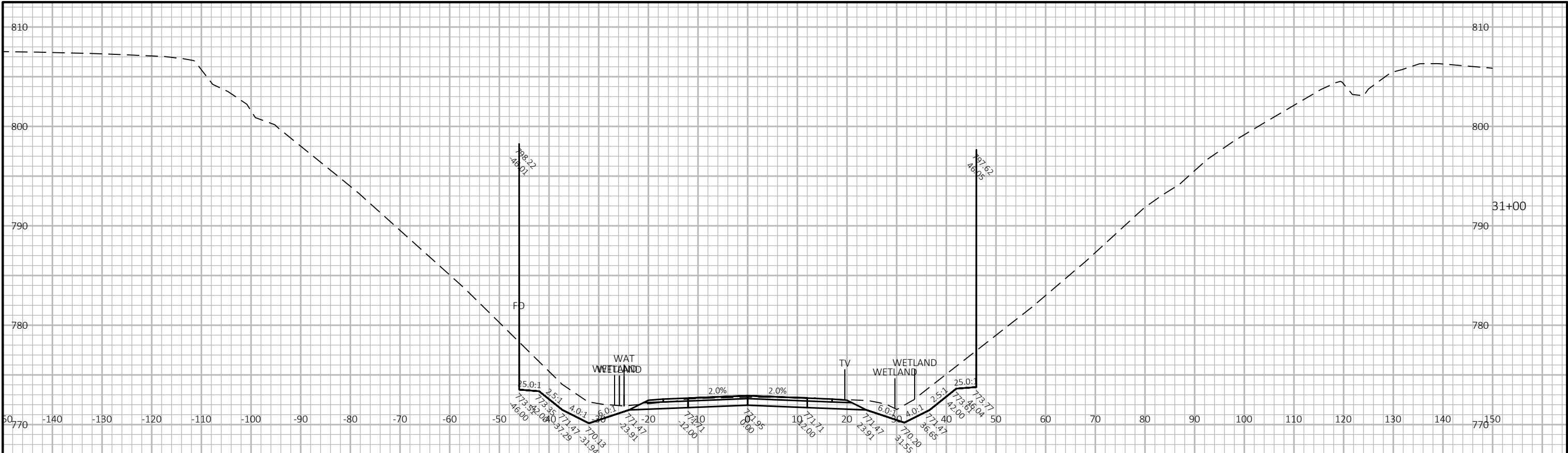
9

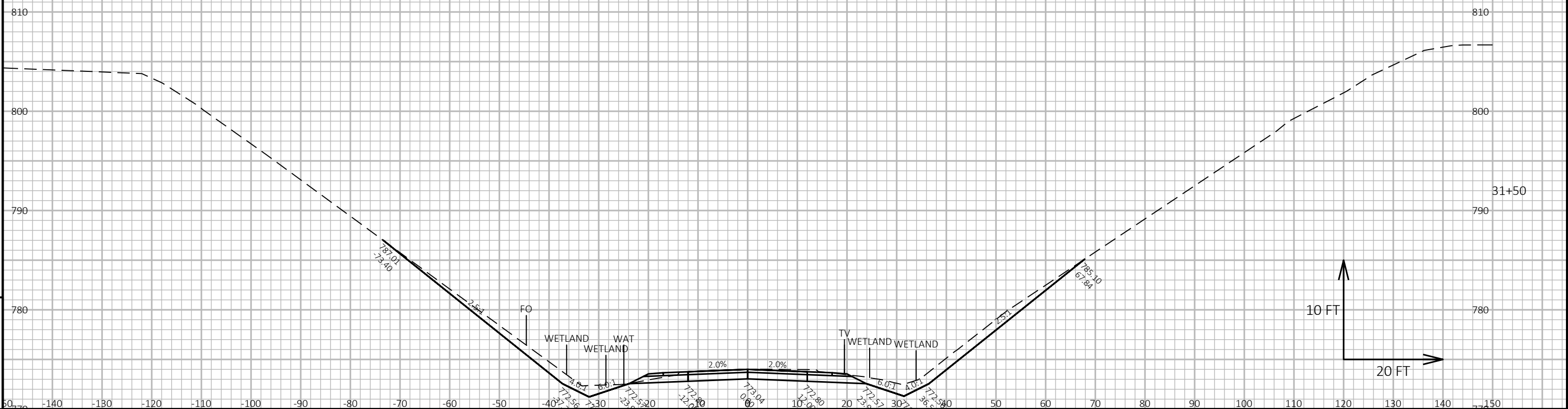
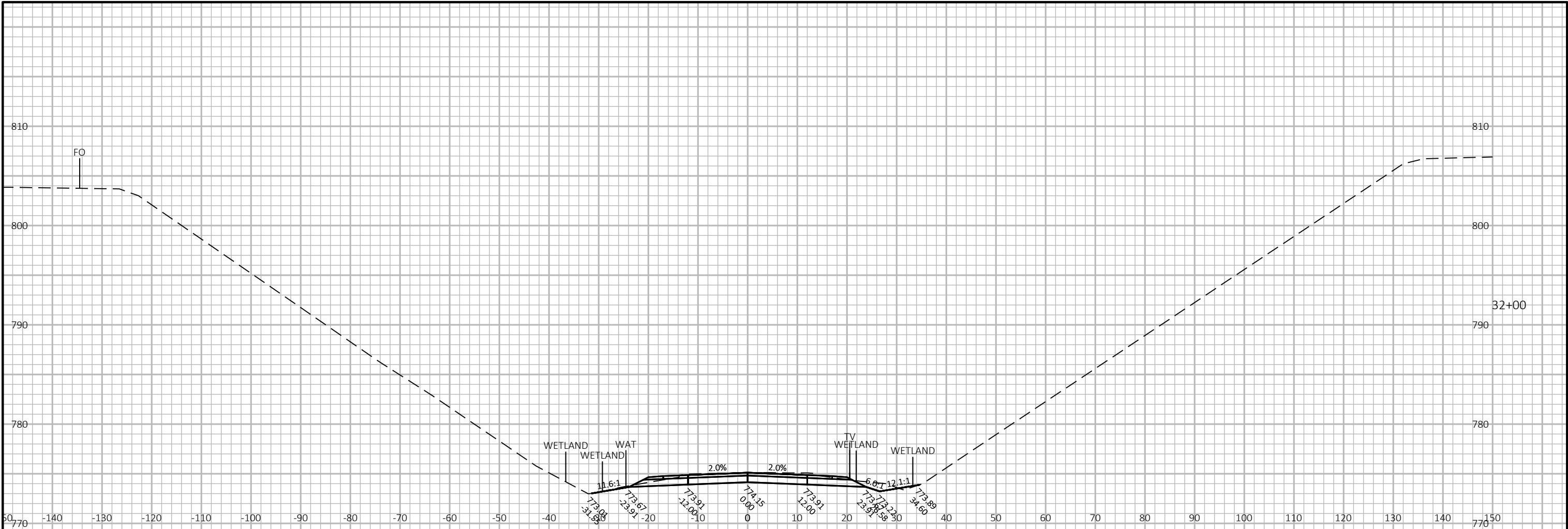


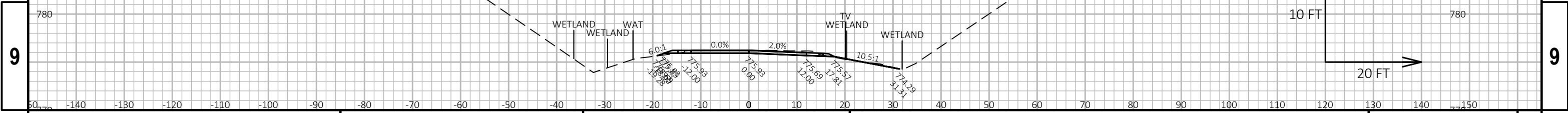
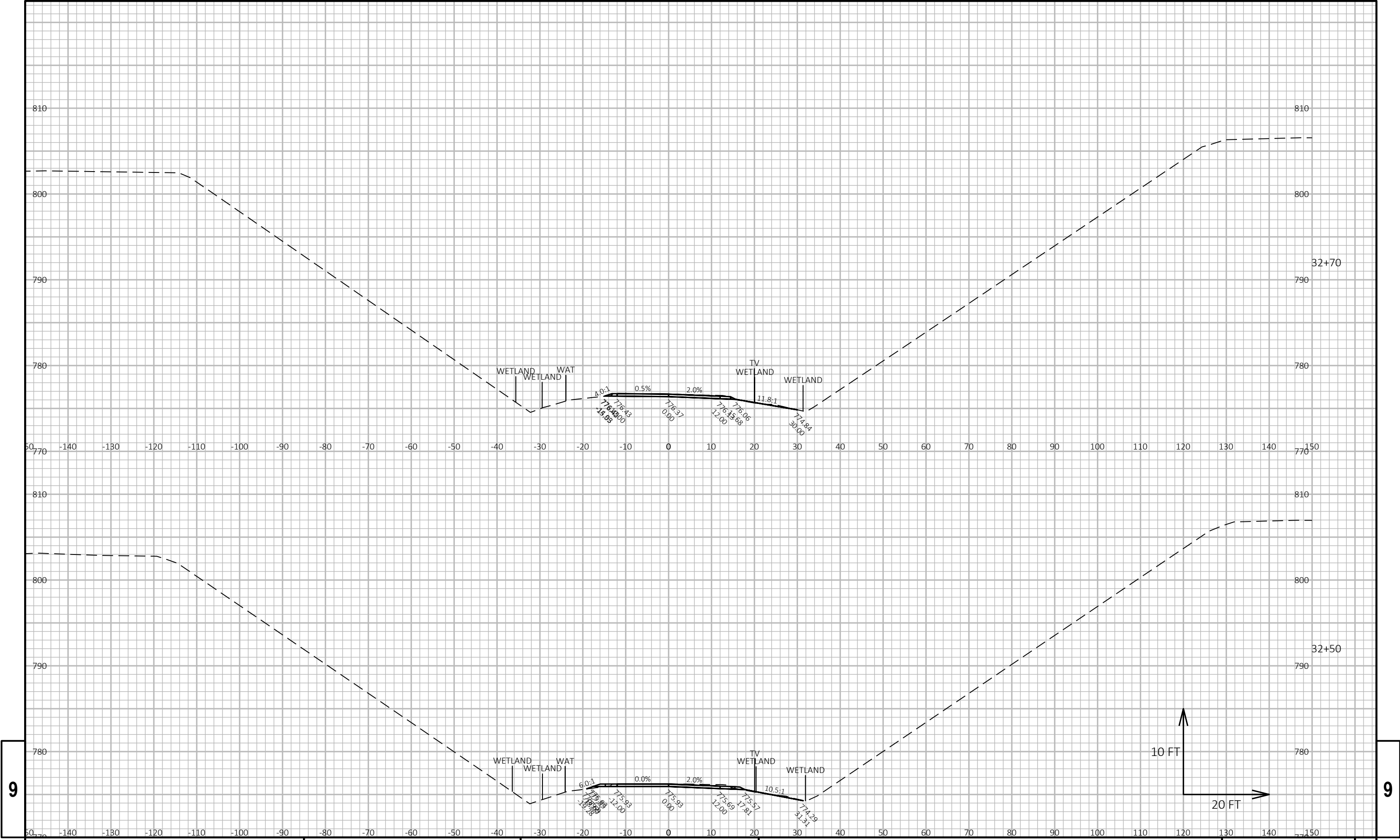


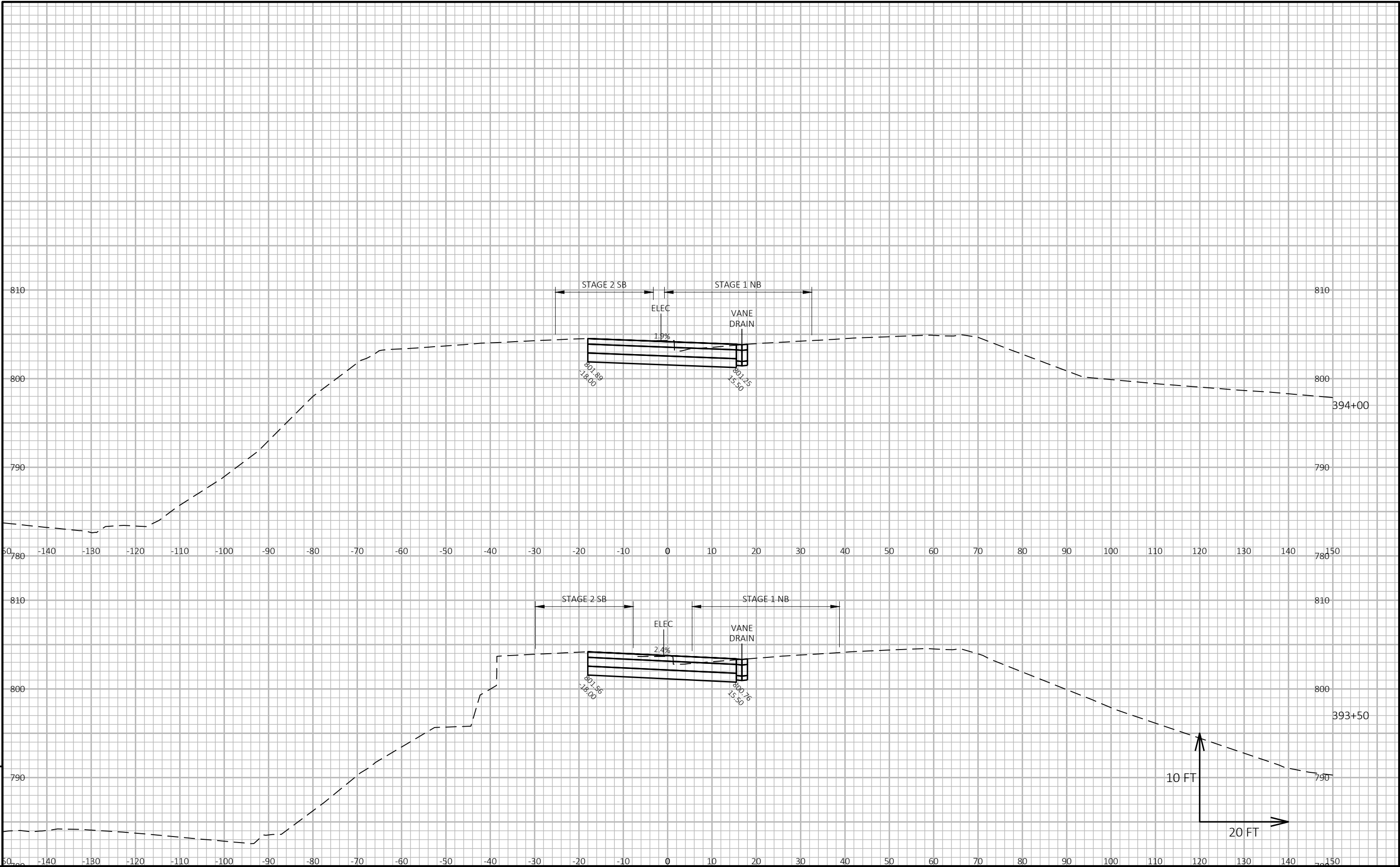


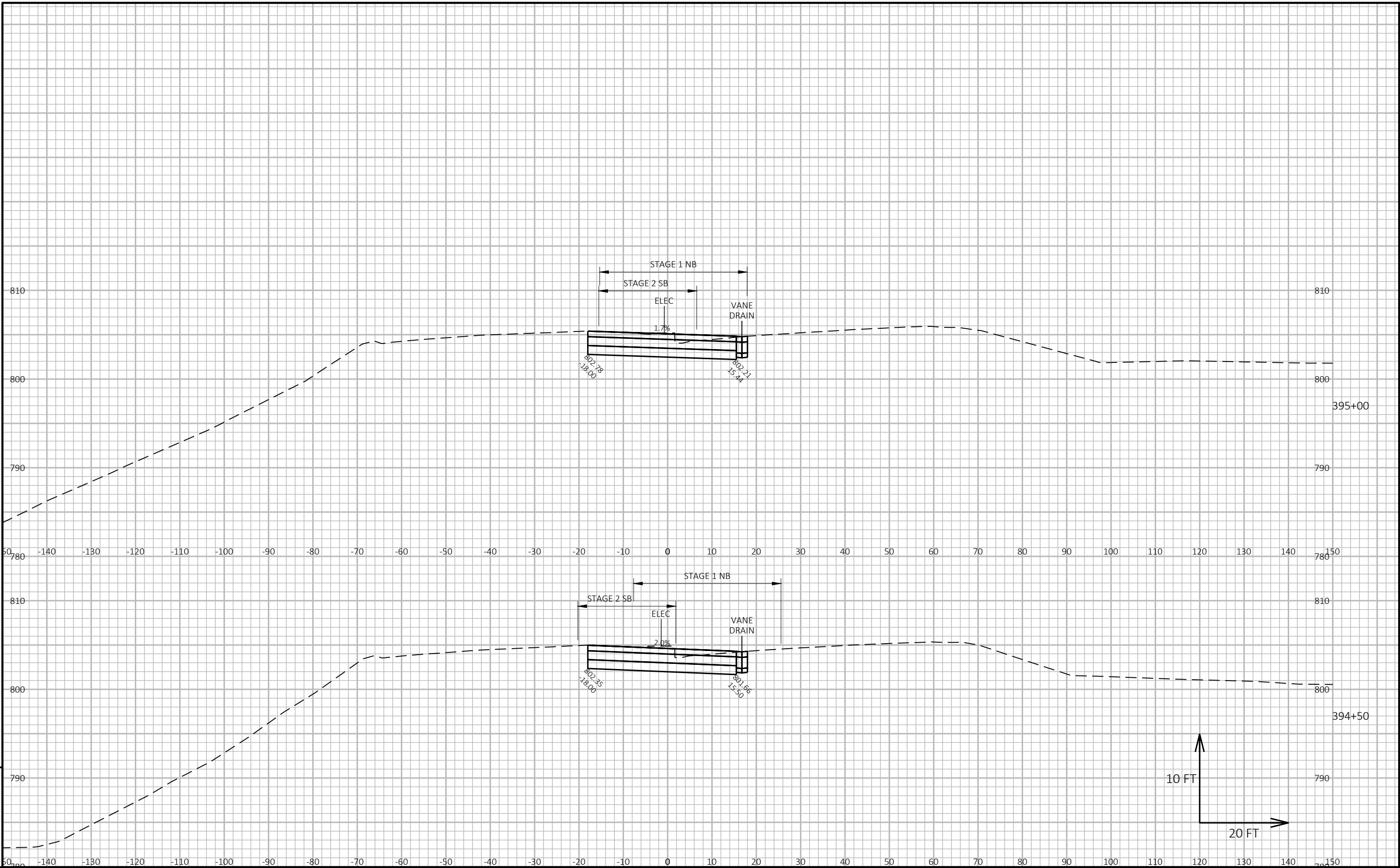


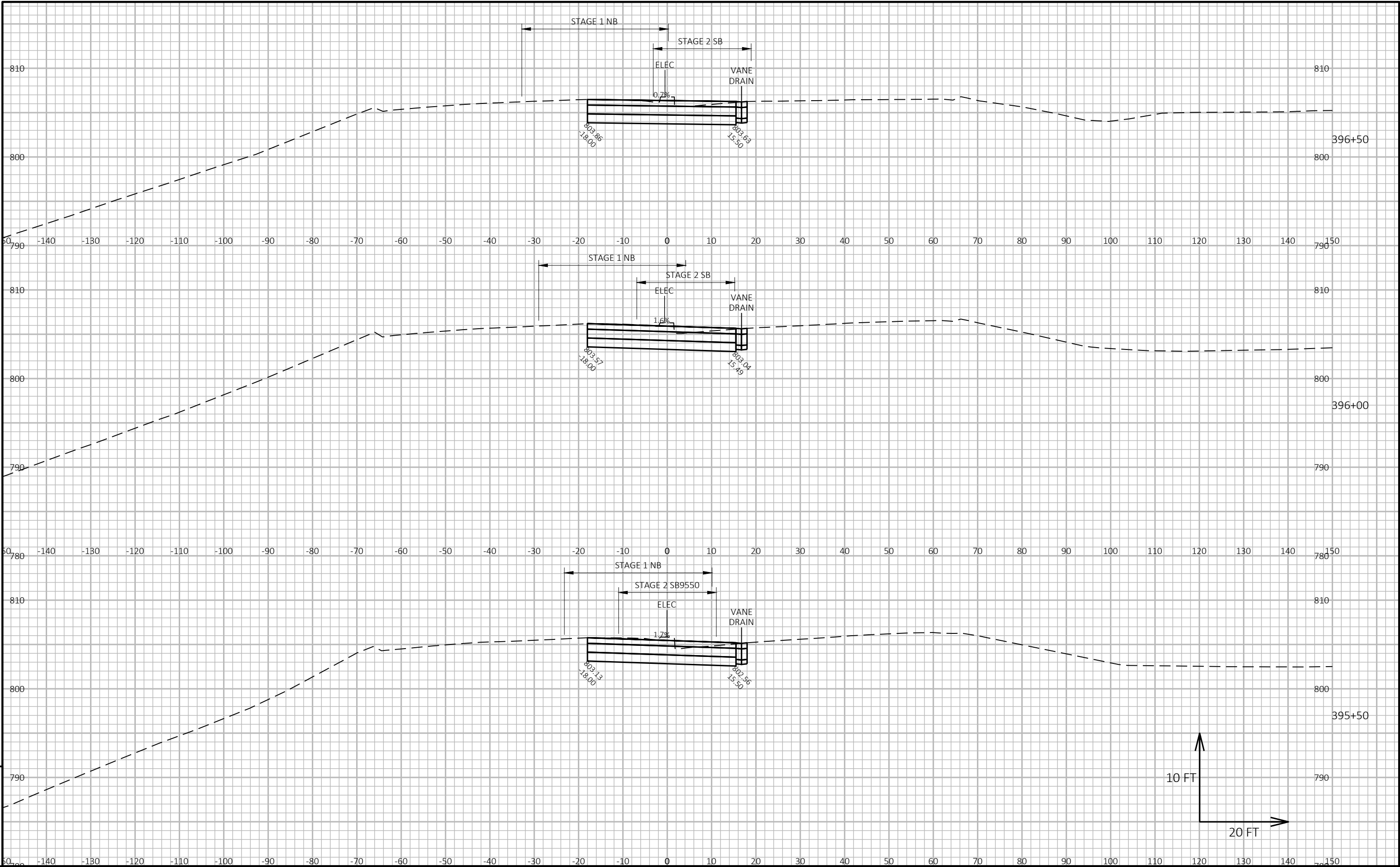






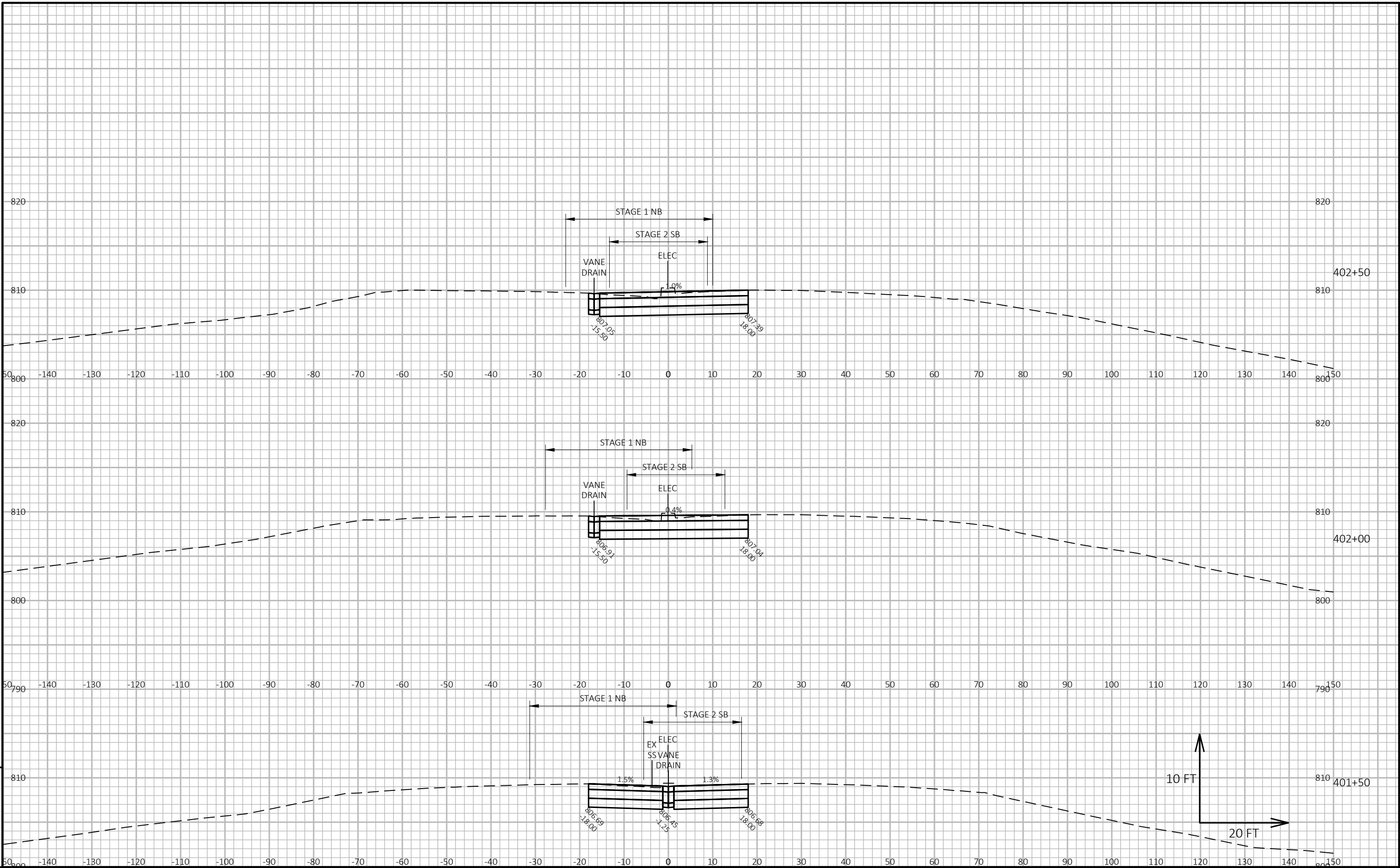


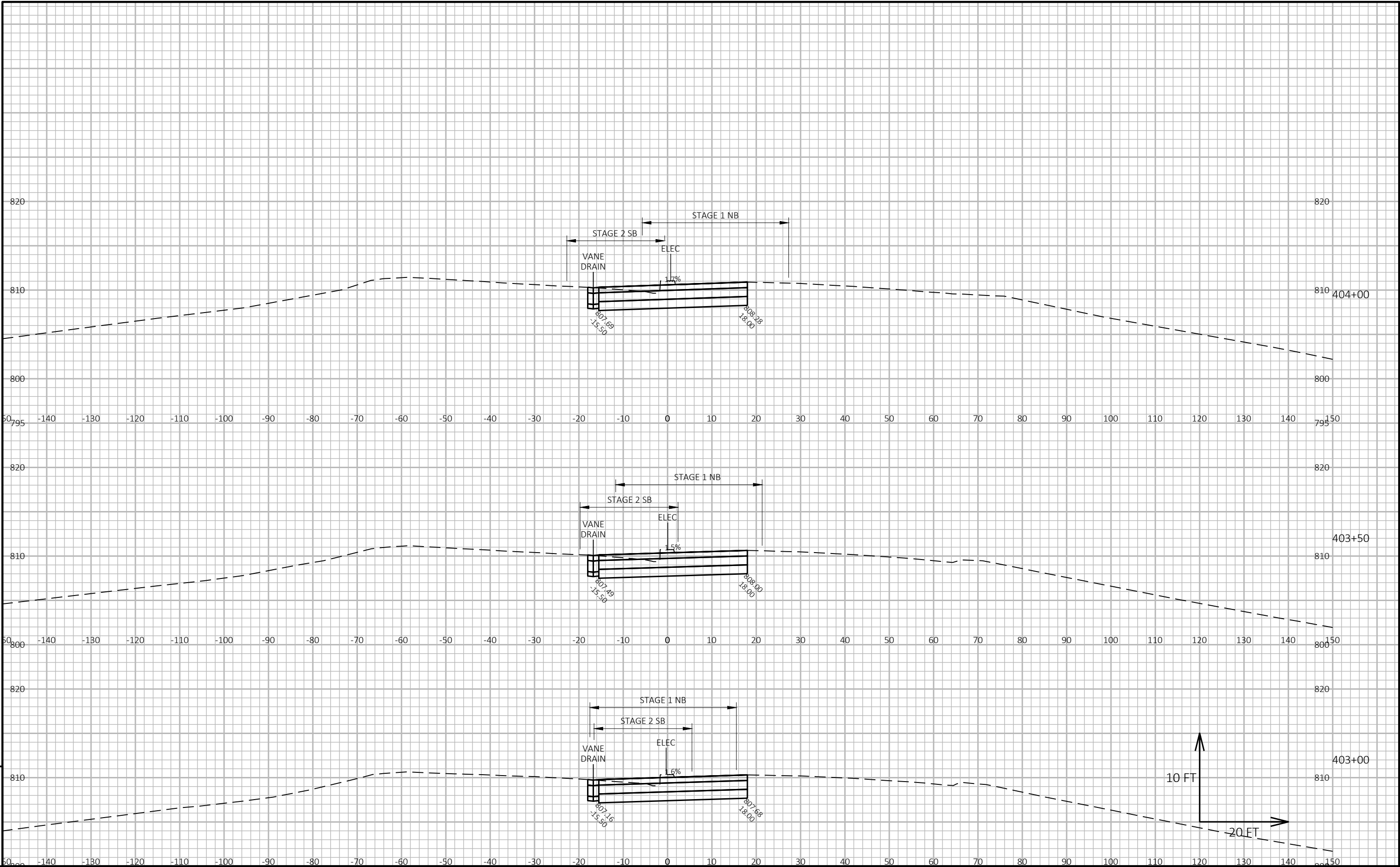


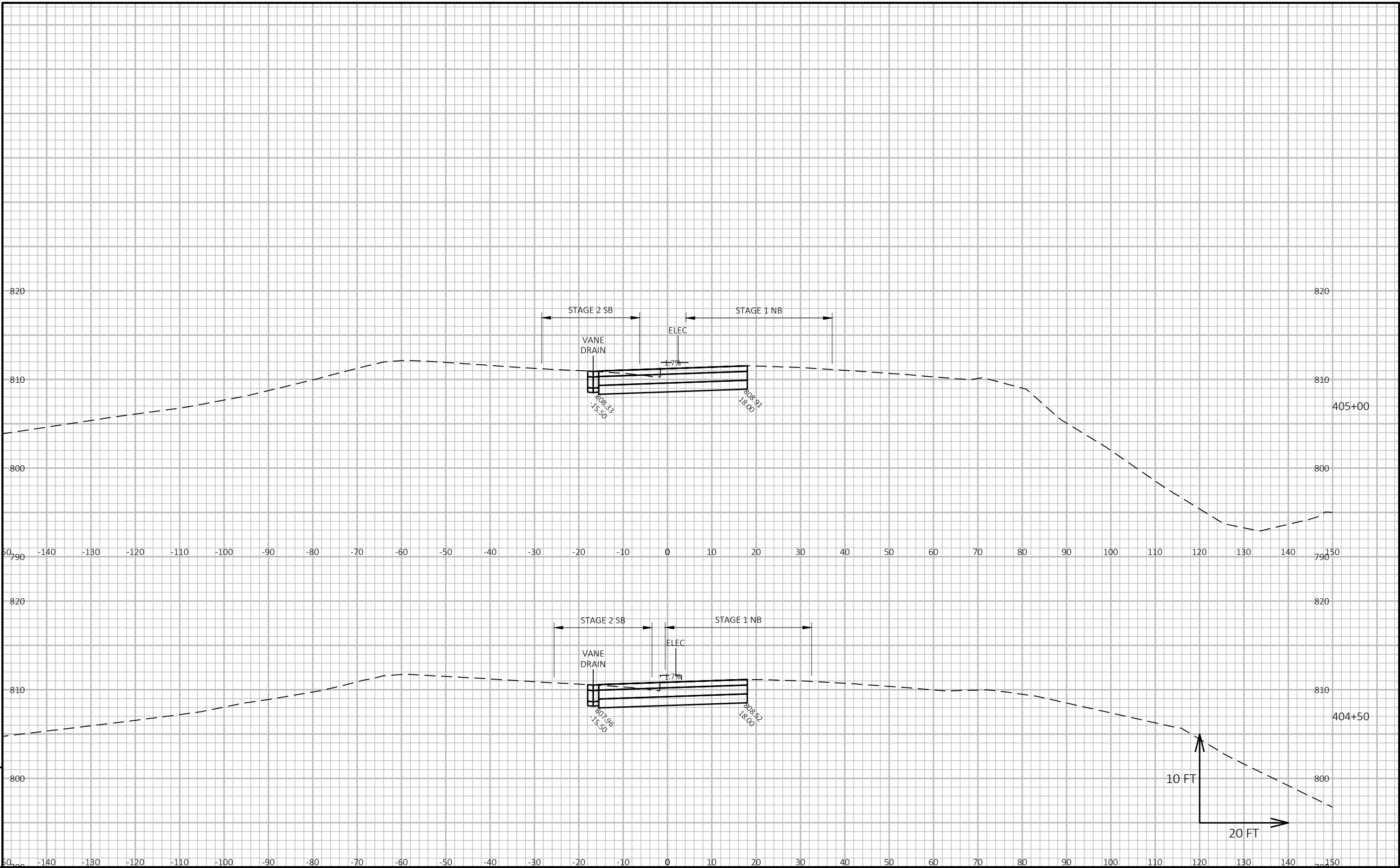


9

9







EPlans Preliminary Sheet Numbering Tool

This sheet: ftp://ftp.dot.state.wi.us/transp/roads/eplans/prelim_sheet_numbers.pdf

Notes

- Acrobat 5 or higher is required to use this tool.
- The Bureau of Highway Construction places sheet numbers in the final plan.
- This sheet is for placing preliminary sheet numbers with a "PRE_" prefix.
- If a plan contains multiple projects, number each plan individually.
- Leave this sheet in the plan.

TO ADD PRELIMINARY SHEET NUMBERS

- 1. Insert this sheet at the end of the plan**
 - a. With the plan open in Acrobat, select Document > Insert Pages.
 - b. In the Select File to Insert dialog box, select this file (prelim_sheet_numbers.pdf)
 - c. In the Insert dialog box, choose After for Location and Last page for Page.
 - d. Click OK.
- 2. Click the Place Preliminary Sheet Numbers button**
 - a. Go to the last sheet of the plan.
 - b. Click the Place Preliminary Sheet Numbers button once.
(The preliminary sheet number appears in the bottom right corner of the sheets.
The number should match te page number in the Acrobat Status bar).
- 3. Re-Save the PDF**
 - a. Select File > Save As and save the PDF.



TO REMOVE PRELIMINARY SHEET NUMBERS

