

MAD

PROJECT ID: 5755-00-11

COUNTY: ROCK

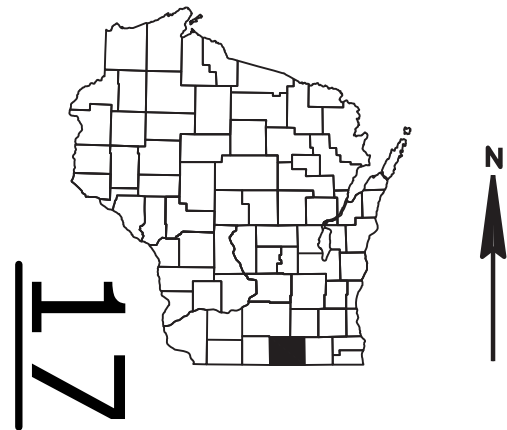
WITH:

APRIL 2024

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 162



DESIGN DESIGNATION

A.A.D.T.	=	9,300
A.A.D.T.	=	11,500
D.H.V.	=	---
D.D.	=	50/50
T.	=	4.0%
DESIGN SPEED	=	50 MPH
ESALS	=	520,000

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CITY OF BELOIT, CTH Q

CTH D TO USH 51

CTH Q

ROCK COUNTY

STATE PROJECT NUMBER
5755-00-11

BEGIN PROJECT
STA 301+00.00
Y=217007.180
X=485498.356

END PROJECT
STA 326+56.46
Y=217129.525
X=488044.643



LAYOUT
SCALE 0 0.5 MI
TOTAL NET LENGTH OF CENTERLINE = 0.484 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ROCK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18 WISCONSIN.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5755-00-11	WISC 2024331	1

ACCEPTED FOR
ROCK COUNTY
1/29/2024
(Date)
(DIRECTOR OF PUBLIC WORKS)

ORIGINAL PLANS PREPARED BY
Batterman
engineers surveyors planners

WISCONSIN
RYAN D. RUDZINSKI
E-43310
ELKHORN WIS.
PROFESSIONAL ENGINEER
1-26-2024

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	RH BATTERMAN
Designer	RH BATTERMAN
Project Manager	ZACHARY PEARSON
Regional Examiner	SW REGION
Regional Supervisor	KYLE HEMP

APPROVED FOR THE DEPARTMENT
DATE: 01/30/24
(Signature)

E

UTILITY CONTACTS

CABLE/COMMUNICATIONS

AT & T
MATT VACHALIK
411 7TH STREET
RACINE, WISCONSIN 53403
PHONE: 262-707-6216
EMAIL: MV5616@ATT.COM

WATER

CITY OF BELOIT
JOSHUA SHERE
2400 SPRINGBROOK CT
BELOIT, WISCONSIN 53511
PHONE: 608-364-5722
EMAIL: SHEREJ@BELOITWI.GOV

ELECTRIC

ROCK COUNTY
DUANE JORGENSEN, JR., P.E.
3715 N. NEWVILLE RD.
JANESVILLE, WISCONSIN 53545
PHONE: 608-757-5450
EMAIL: DUANE.JORGENSEN@CO.ROCK.WI.US

FIBER/COMMUNICATION

WINDSTREAM
LORI KETTER
969 WAUBE LANE
GREEN BAY, WISCONSIN 54304
PHONE: 920-410-6902
EMAIL: LORI.KETTER@WINDSTREAM.COM

GAS/ELECTRIC/OVERHEAD

WISCONSIN POWER AND LIGHT
NICHOLAS DACHNIWSKYJ
935 W. BR TOWNLINE ROAD
BELOIT, WISCONSIN 53511
PHONE: 608-444-9362
EMAIL: NICHOLASDACHNIWSKYJ@ALLIANTENERGY.COM

FIBER/COMMUNICATION

SPECTRUM
TOMMY ROWE
1348 PLAINFIELD AVE
JANESVILLE, WISCONSIN 53545
PHONE: 608-206-5741
EMAIL: TOMMY.ROWE@CHARTER.COM

SANITARY

TOWN OF BELOIT
JOHN ROSE
3629 S. WALTERS ROAD
BELOIT, WISCONSIN 53511
PHONE: 608-473-0512
EMAIL: JROSE@TOWN.BELOIT.WI.US

OTHER CONTACTS

WISDOT

ZACHARY PEARSON, P.E.
DTSD SW REGION
2101 WRIGHT ST.
MADISON, WI 53704
PHONE: (608) 246-5319
EMAIL: ZACHARY.PERARSON@DOT.WI.GOV

WISCONSIN DNR LIAISON

SHELLEY NELSON
SOUTH CENTRAL REGION
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: (608) 444-2835
EMAIL: SHELLEY.NELSON@WISCONSIN.GOV

DIRECTOR OF PUBLIC WORKS

DUANE JORGENSEN, JR.,P.E.
ROCK COUNTY
3715 N. NEWVILLE RD.
JANESVILLE, WI 53545
PHONE: (608) 757-5450
EMAIL: DUANE.JORGENSEN@CO.ROCK.WI.US

DESIGN PROJECT MANAGER

RYAN RUDZINSKI, P.E.
R.H. BATTERMAN & CO., INC.
1040 N WISCONSIN STREET
ELKHORN, WI 53121
PHONE: (608)365-4464
EMAIL: RRUDZINSKI@RHBATTERMAN.COM

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIPTURF:	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPETURF:			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT:	.70 - .95											
CONCRETE:	.80 - .95											
BRICK:	.70 - .80											
DRIVES, WALKS:	.75 - .85											
ROOFS:	.75 - .95											
GRAVEL ROADS, SHOULDERS:	.40 - .60											

TOTAL PROJECT AREA = 12.07 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 4.33 ACRES

STANDARD ABBREVIATIONS

AC	ACRES	EX	EXISTING	R/RAD	RADIUS
AEW	APRON ENDWALL	EXC	EXCAVATION	RCP	REINFORCED CONCRETE PIPE
ASPH	ASPHALT	EBS	EXCAVATION BELOW SUBGRADE	REQ'D	REQUIRED
AVG	AVERAGE	EXIST	EXISTING	RT	RIGHT
ADT	AVERAGE DAILY TRAFFIC	FF	FACE TO FACE	R/W	RIGHT-OF-WAY
BAD	BASE AGGREGATE DENSE	FERT	FERTILIZER	RHF	RIGHT HAND FORWARD
BM	BENCHMARK	FE	FEILD ENTRANCE	SALV	SALVAGED
CL	CENTERLINE OR CLASS	FG	FINISHED GRADE	SAN	SANITARY SEWER
CC	CENTER TO CENTER	FT	FOOT	SHLDR	SHOULDER
CE	COMMERCIAL ENTRANCE	GV	GAS VALVE	SDD	STANDARD DETAIL DRAWINGS
CONC	CONCRETE	IE	INVERT ELEVATION	STA	STATION
CMP	CORRUGATED METAL PIPE	INL	INLET	STM	STORM SEWER
CPRC	CULVERT PIPE CORRUGATED STEEL	INV	INVERT	SE	SUPERELEVATION
CSCP	CORRUGATED STEEL CULVERT PIPE	IP	IRON PIPE	SS	STORM SEWER
CSM	CERTIFIED SURVEY MAP	JCT	JUNCTION	SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
CTH	COUNTY TRUNK HIGHWAYS	LHF	LEFT HAND FORWARD	TAN	TANGENT
CULV	CULVERT	L	LENGTH	TLE	TEMPORARY LIMITED EASEMENT
CP	CULVERT PIPE	LS	LUMP SUM	T	TRUCKS
C&G	CURB & GUTTER	LT	LEFT	TYP	TYPICAL
D	DEGREE OF CURVATURE	MH	MANHOLE	VERT	VERTICAL
DHV	DESIGN HOURLY VOLUME	NC	NORMAL CROWN	VC	VERTICAL CURVE
DIA	DIAMETER	N	NORTH	VOL	VOLUME
DWY	DRIVEWAY	PT	POINT	WV	WATER VALVE
E	EAST	PC	POINT OF CURVATURE	W	WELL
ELEV	ELEVATION	PI	POINT OF INTERSECTION	X	EAST GRID COORDINATE
EW	ENDWALL	PT	POINT OF TANGENCY	Y	NORTH GRID COORDINATE
ENT	ENTRANCE	PL	PROPERTY LINE		
ESALS	EQUIVALENT SINGLE AXLE LOADS	PE	PRIVATE ENTRANCE		

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
CURB RAMP DETAILS
EROSION CONTROL PLAN
STORM SEWER PLAN
PERMANENT SIGNING
PAVEMENT MARKING
TRAFFIC CONTROL
DETOURS
ALIGNMENT PLAN
CONTROL POINTS & SOIL BORINGS

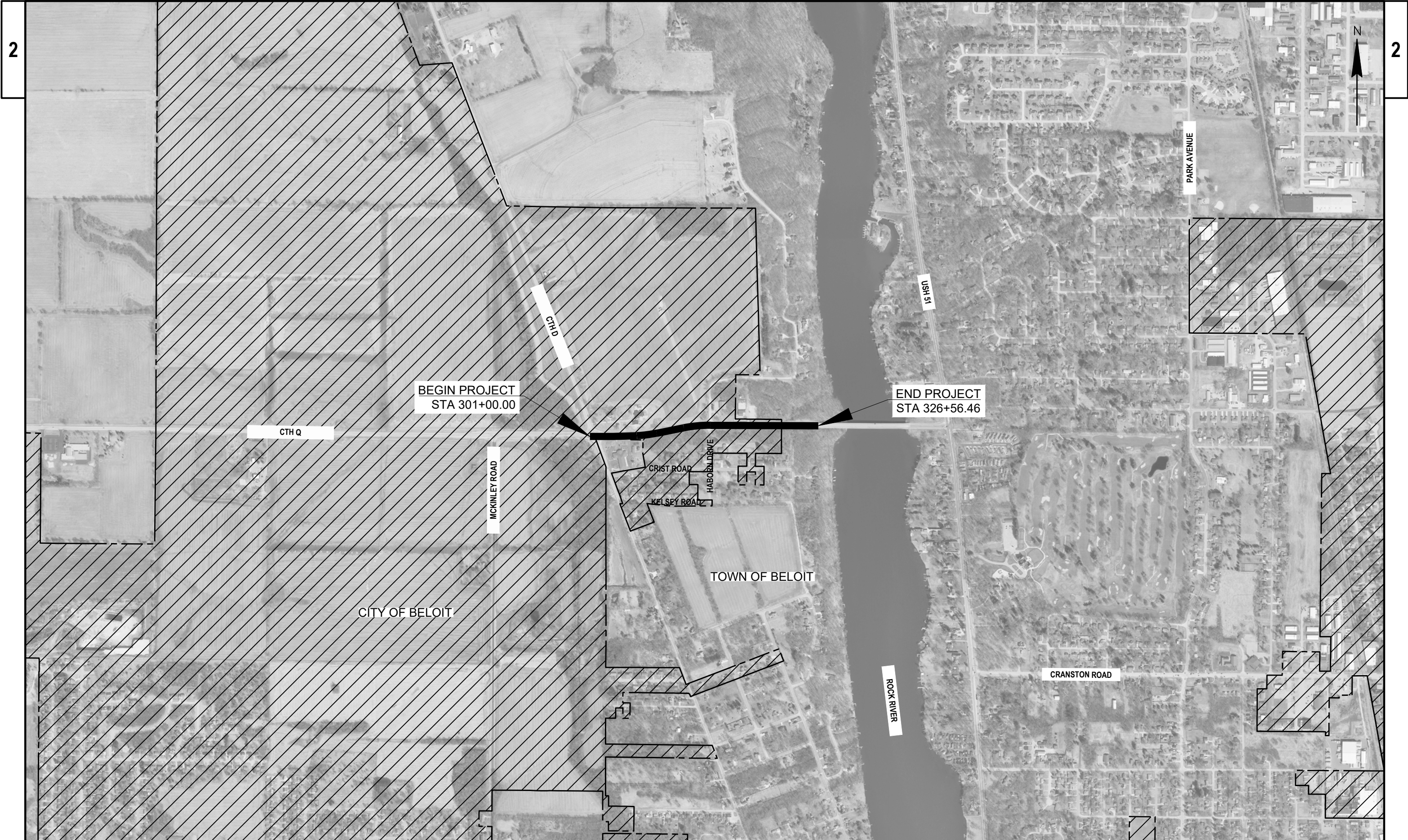
HMA PAVEMENT		
LAYER	THICKNESS	TYPE
LOWER LAYER	3.5"	3 LT 58-28 S
UPPER LAYER	2.25"	4 LT 58-28 S
UPPER LAYER	2"	ASPHALTIC SURFACE

GENERAL NOTES

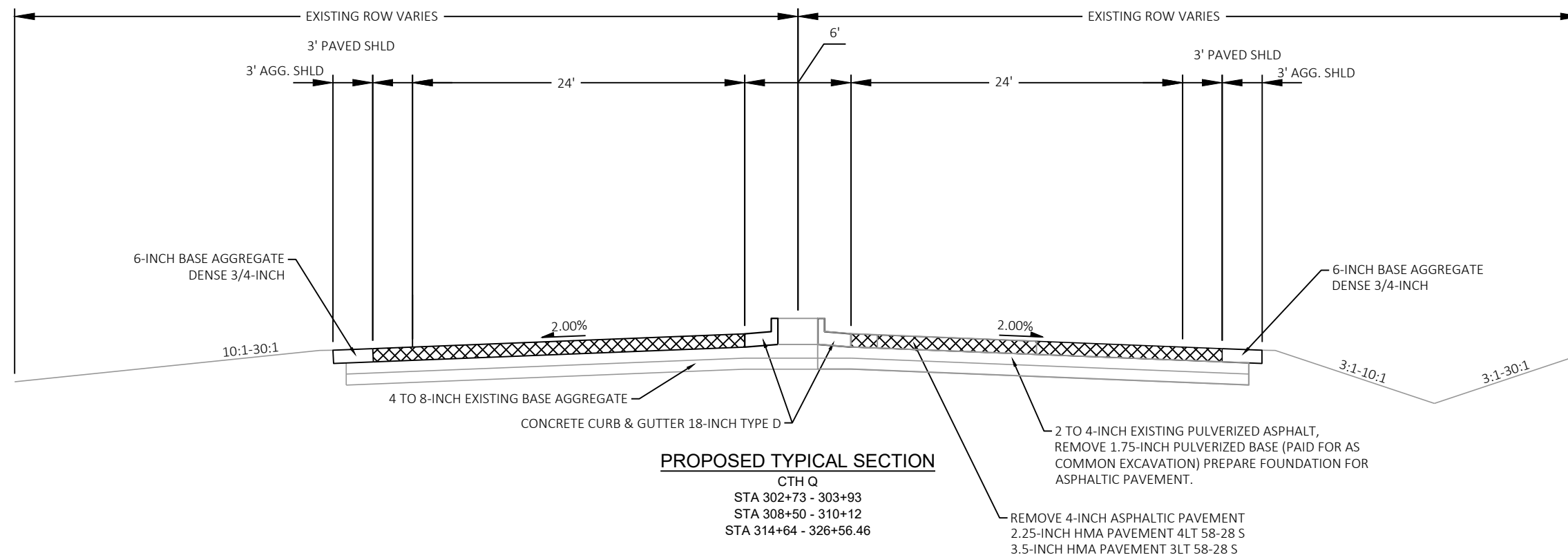
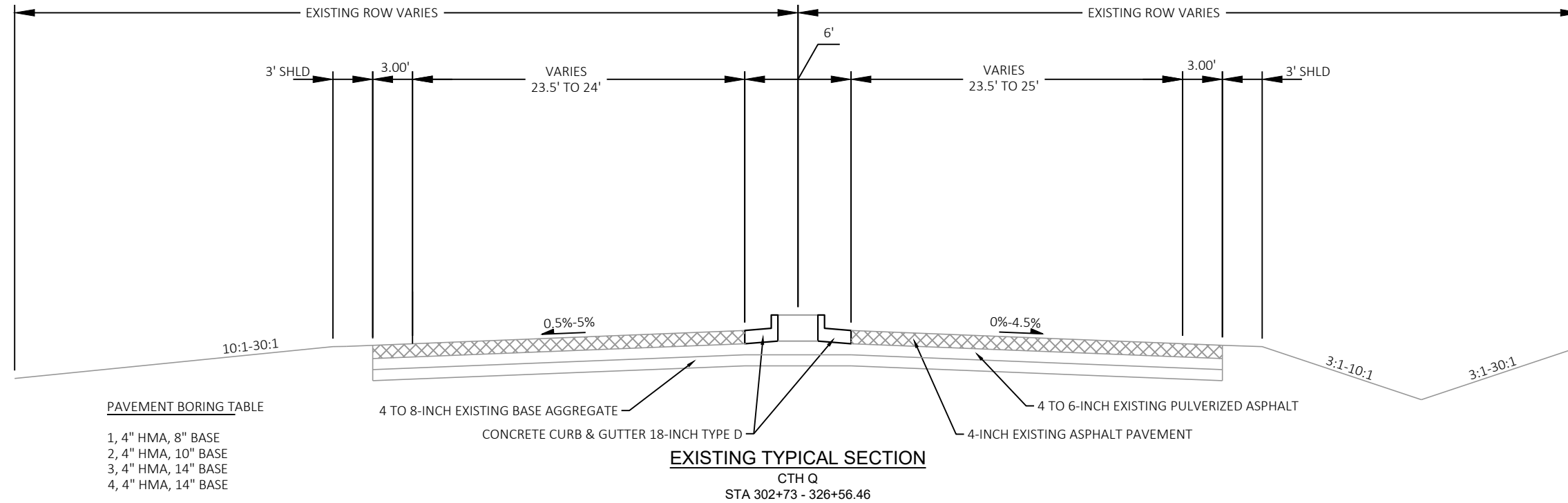
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE ARE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
- ADJUST PERMANENT SIGN LOCATIONS TO AVOID UTILITY IMPACTS. PROPOSED LOCATIONS TO BE REVIEWED AND APPROVED BY THE ENGINEER.
- NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
- HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/INCH.
- THE CONTRACTORS PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINT FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.
- PAVING LIMITS AT INTERSECTIONS ARE APPROXIMATE. EXACT DIMENSIONS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- LOCATIONS OF MANHOLES AS SHOWN ON THE STORM SEWER SHEETS ARE BY STATION AND OFFSET TO THE CENTER OF STRUCTURE (SEE CONSTRUCTION DETAILS).
- STORM SEWER AND CULVERT ENDWALL LOCATIONS ARE MARKED ON THE PLANS WITH A STATION AND OFFSET TO THE END OF PIPE, WHERE IT MEETS THE ENDWALL. UNLESS OTHERWISE NOTED IN THE PLANS, PIPE ENDWALLS SHALL BE LAID AT THE SAME SLOPE AS THE CONNECTING PIPE.

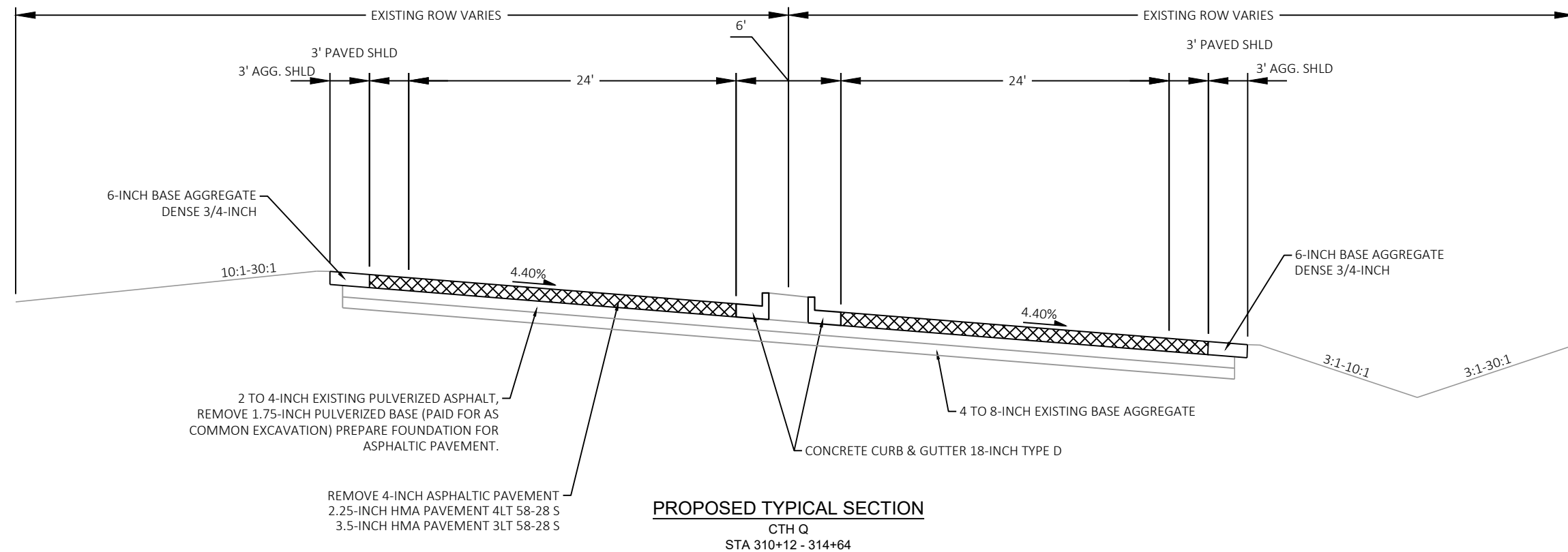
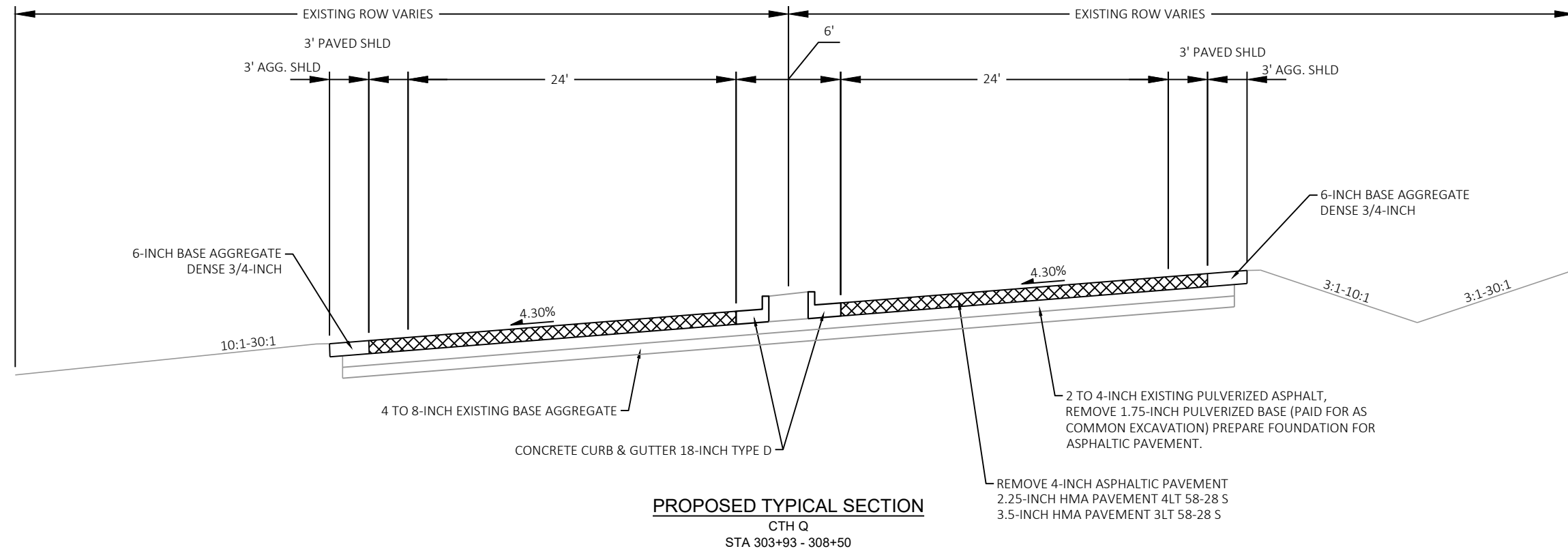


Dial  or (800)242-8511
www.DiggersHotline.com

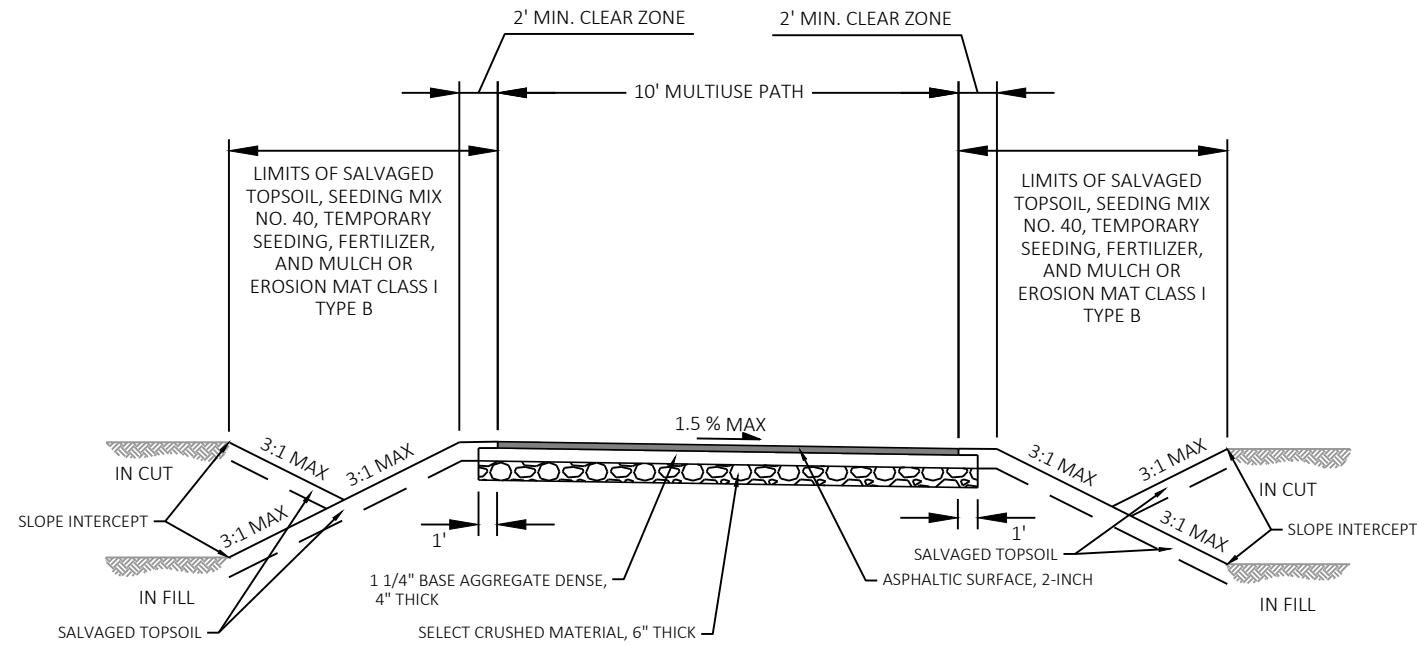


PROJECT NO: 5755-00-11	HWY: CTH Q	COUNTY: ROCK	PROJECT OVERVIEW	SHEET 3	E
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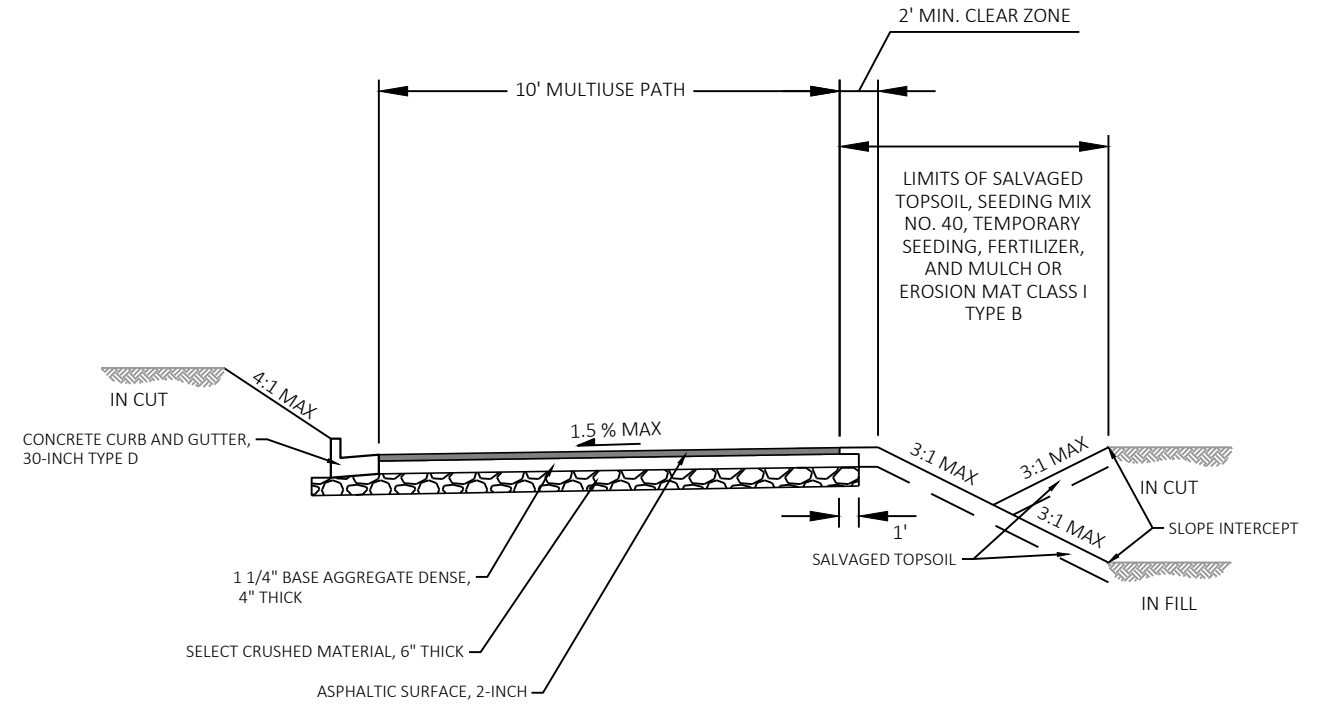
2



PROPOSED TYPICAL SECTION

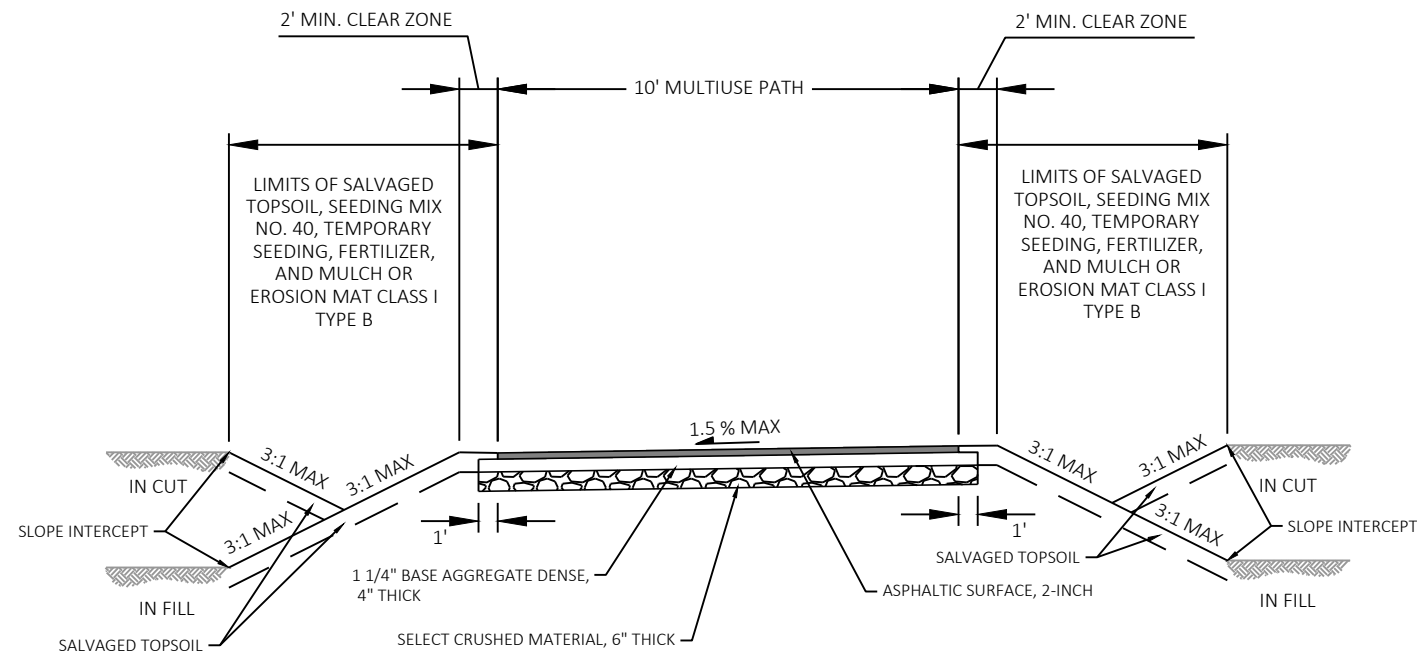
PATH
STA 9+64 - 12+75
STA 14+75 - 25+37

2



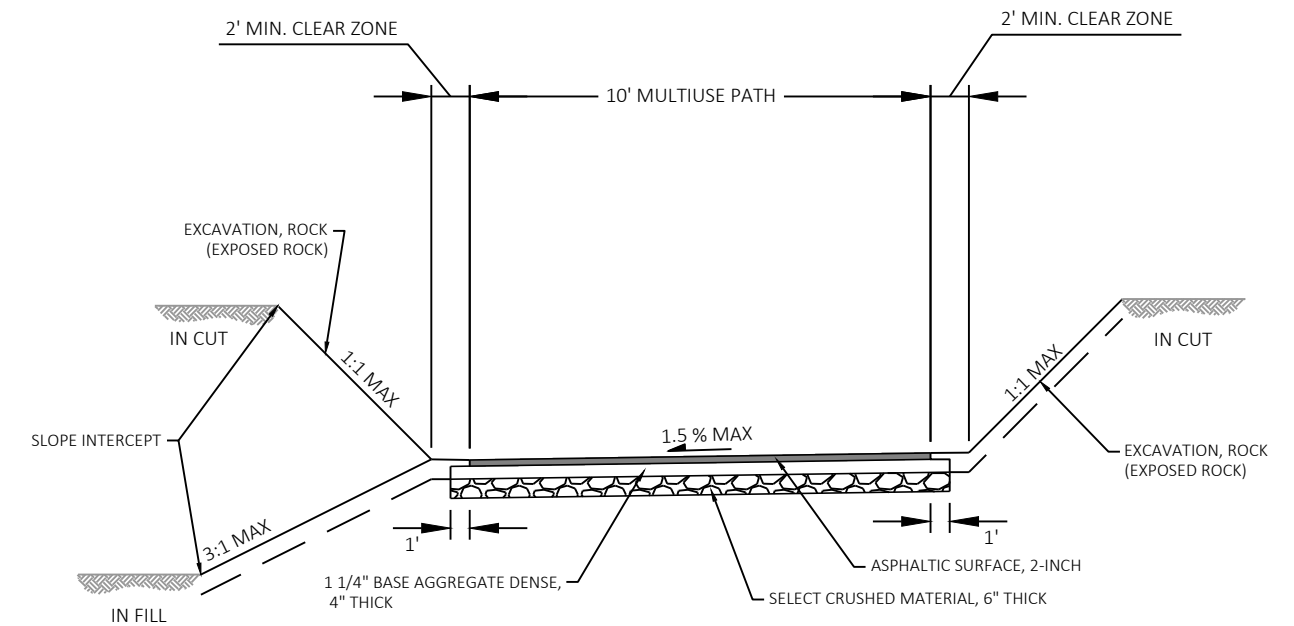
PROPOSED TYPICAL SECTION

PATH
STA 12+75 - 14+75



PROPOSED TYPICAL SECTION

PATH
STA 25+37 - 30+10
STA 50+00 - 54+00



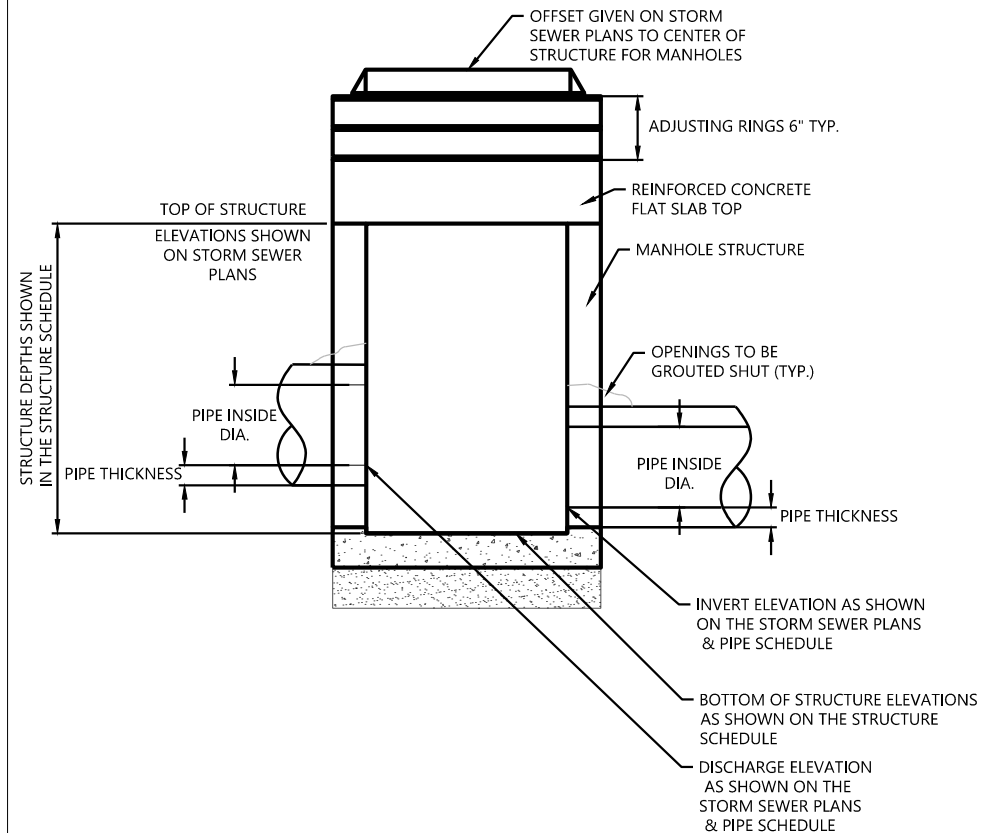
PROPOSED TYPICAL SECTION

PATH
STA 30+10 - 33+32.43
STA 54+00 - 54+62.23

GENERAL NOTES:

GRANULAR BACKFILL REQUIRED AROUND INLET
(INCIDENTAL TO CONSTRUCTION OF INLET)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT
SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT
REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE
SPECIAL PROVISIONS, AND S.D.D. FOR MANHOLES.

**DETAIL OF MANHOLE W/CASTING**

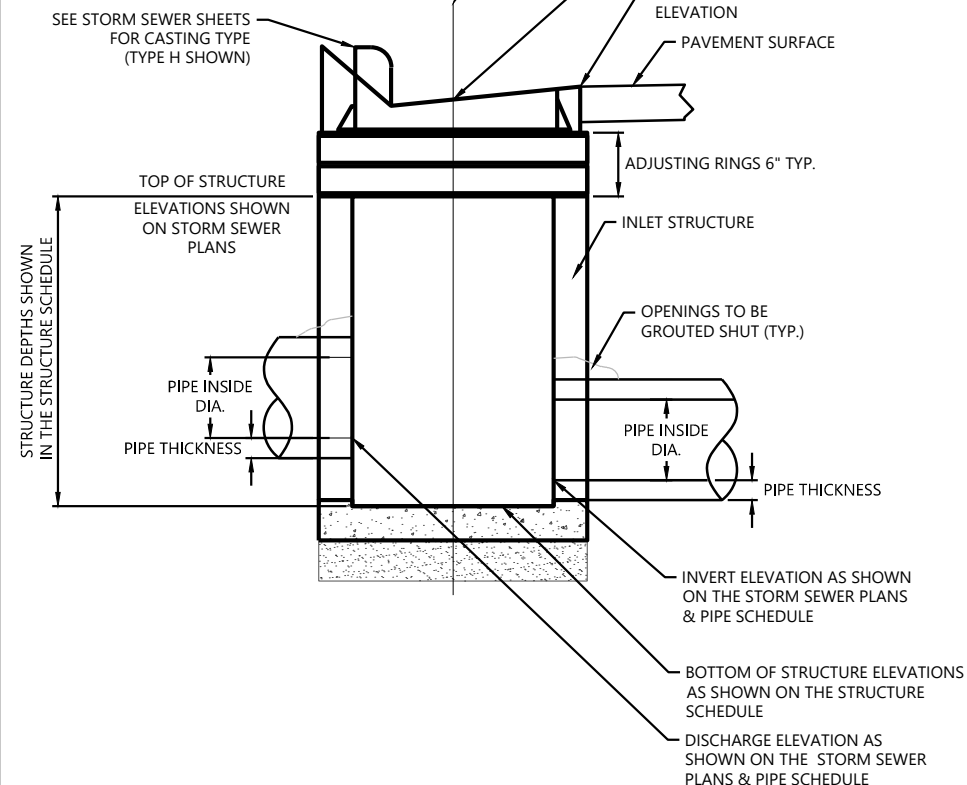
(SEE STORM SEWER PLANS FOR LOCATIONS)

GENERAL NOTES:

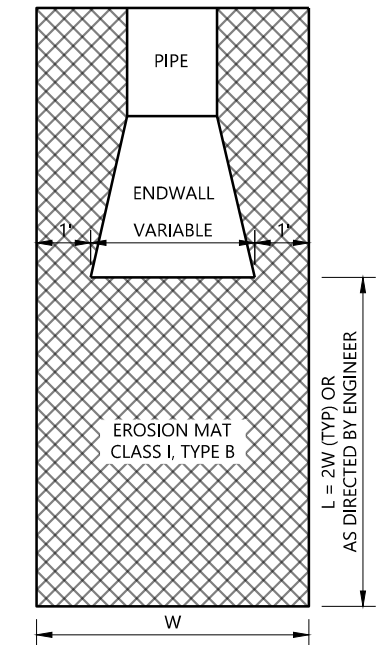
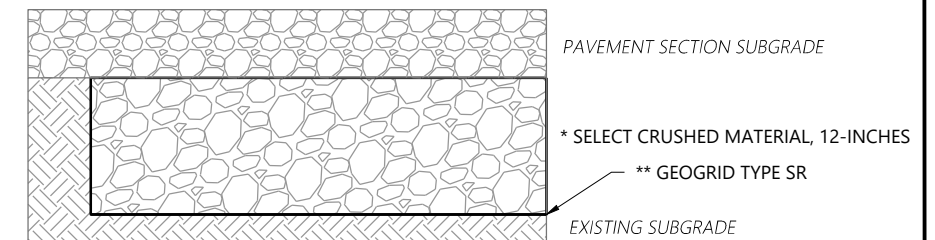
GRANULAR BACKFILL REQUIRED AROUND INLET
(INCIDENTAL TO CONSTRUCTION OF INLET)

DETAILS OF CONSTRUCTION, MATERIALS, AND
WORKMANSHIP NOT SHOWN ON THIS
DRAWING SHALL CONFORM TO THE
PERTINENT
REQUIREMENTS OF THE STANDARD
SPECIFICATIONS, APPLICABLE SPECIAL
PROVISIONS, AND S.D.D. FOR INLETS 3-FT &
4-FT DIAMETER, 2X2-FT, 2X2.5-FT, 2X3-FT,
CATCH BASINS 2X2-FT, 2X2.5-FT. & 2X3-FT,
AND PIPE UNDERDRAIN DETAIL.

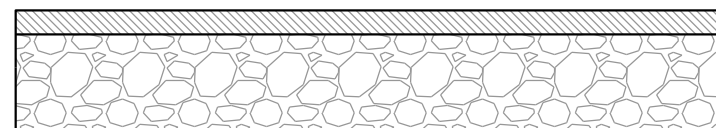
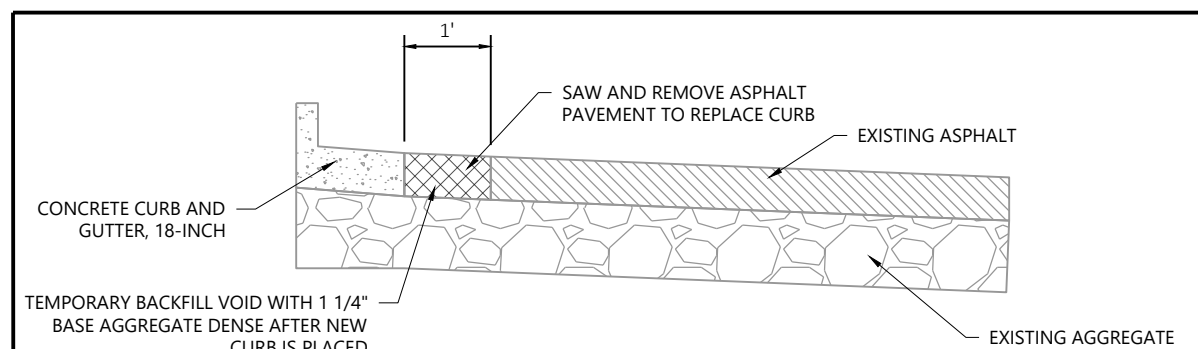
CONNECT PIPE UNDERDRAIN TO INLETS, SEE
S.D.D. "EDGEDRAIN OUTLET & OUTFALL
MARKERS" FOR DETAILS.

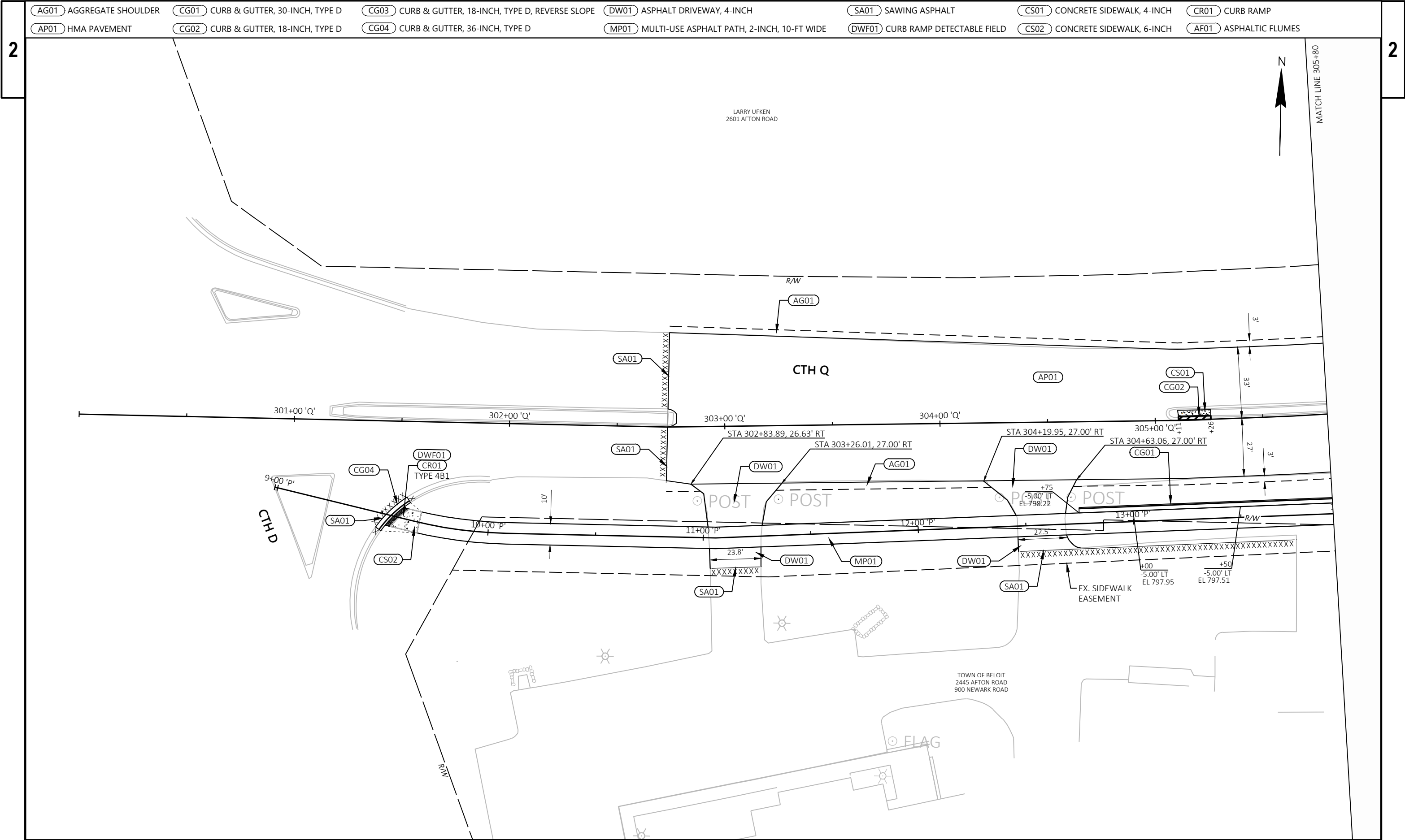
**DETAIL OF INLET W/CASTING**

(SEE STORM SEWER PLANS FOR LOCATIONS)

**EROSION MAT
TREATMENT AT CULVERTS**

*DEPTH OF UNDERCUT SHALL BE 1 FOOT MINIMUM OR AS DIRECTED BY ENGINEER
** USE OF GEOGRID SHALL BE APPROVED BY ENGINEER

UNDERCUT SECTION**BITUMINOUS DRIVEWAY SECTION****MEDIAN CURB REPLACEMENT DETAIL**



2

N

MATCH LINE 305+80

PROJECT NO: 5755-00-11

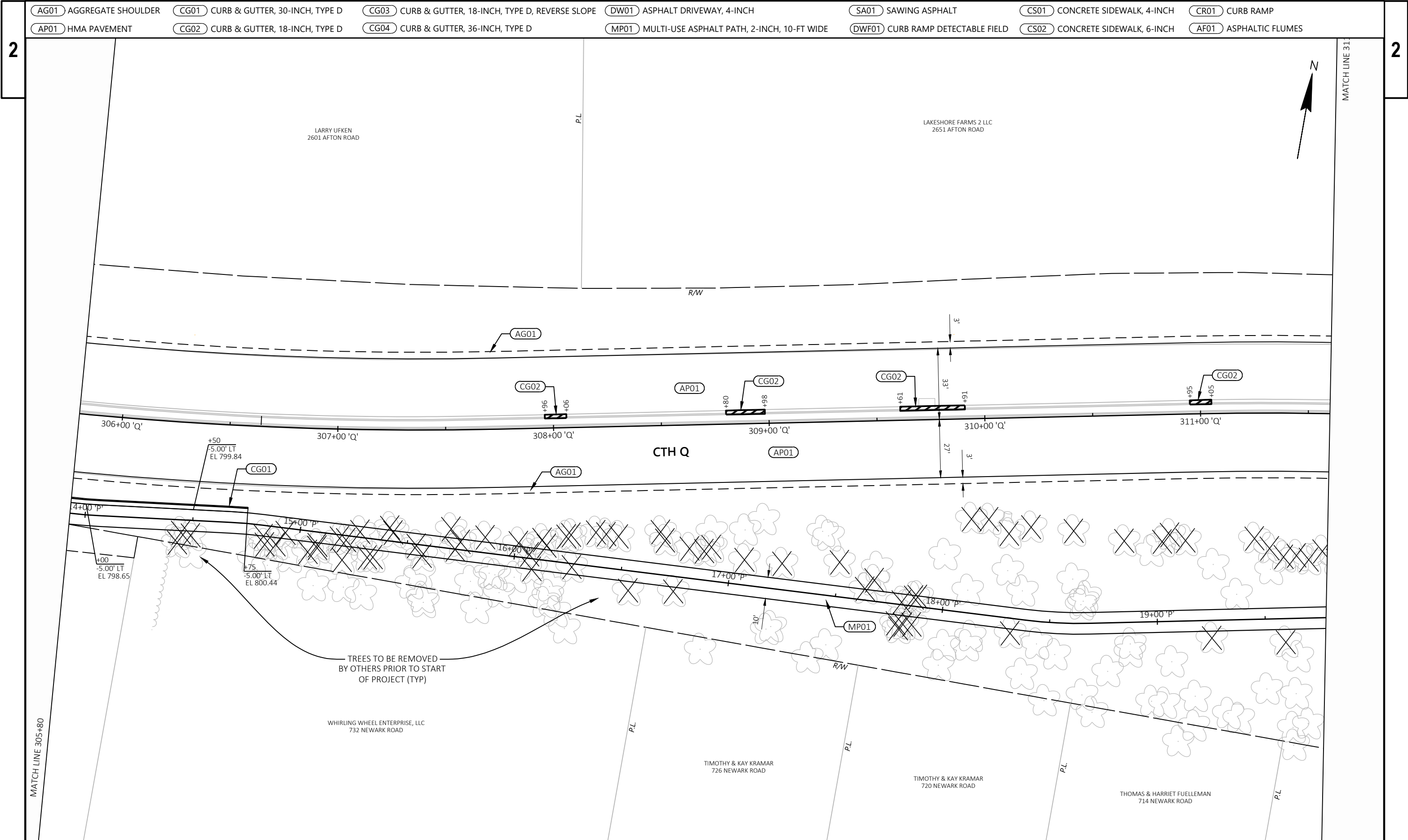
HWY: CTH Q

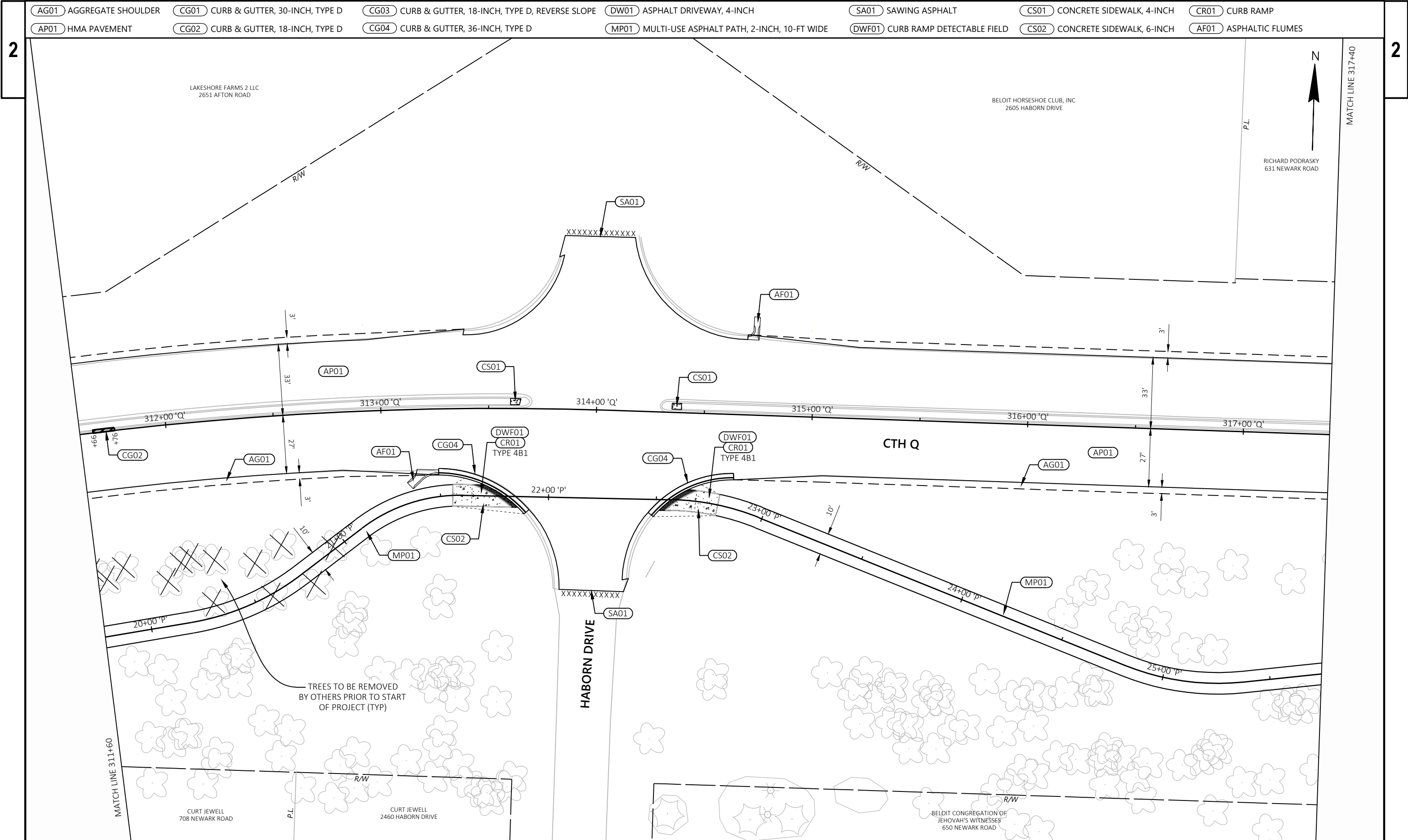
COUNTY: ROCK

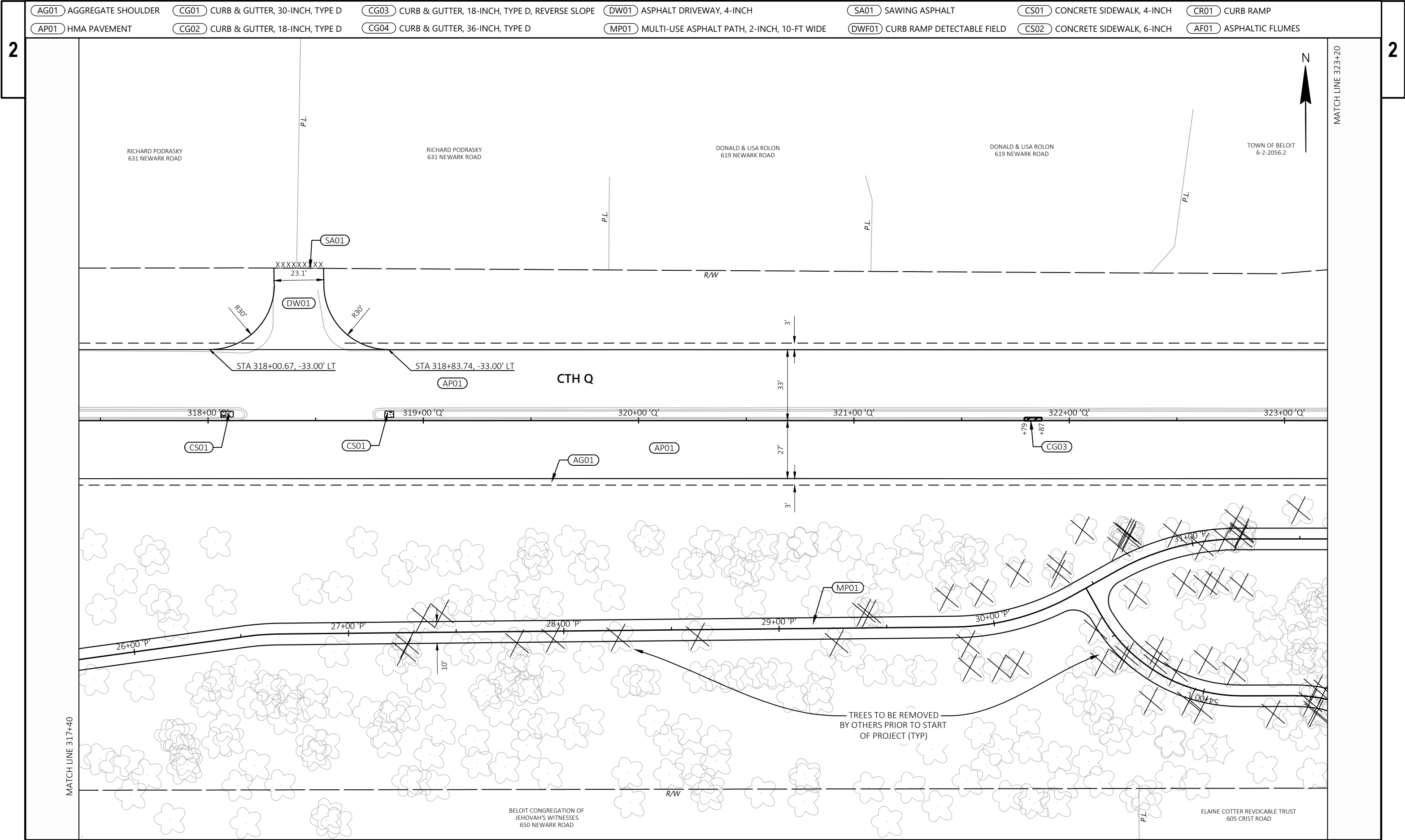
PLAN DETAILS

SHEET 8

E







2

XXXXXX

23.1'

SA01

R30'

DW01

R30'

STA 318+00.67, -33.00' LT

STA 318+83.74, -33.00' LT

AP01

318+00' Q

319+00' Q

320+00' Q

321+00' Q

322+00' Q

323+00' Q

CS01

CS01

AG01

AP01

CG03

3'

33'

27'

3'

MP01

26+00' P

27+00' P

28+00' P

29+00' P

30+00' P

31+00' P

32+00' P

33+00' P

10'

TREES TO BE REMOVED
BY OTHERS PRIOR TO START
OF PROJECT (TYP)

BELOIT CONGREGATION OF
JEHOVAH'S WITNESSES
650 NEWARK ROAD

ELAINE COTTER REVOCABLE TRUST
605 CRIST ROAD

MATCH LINE 317+40

MATCH LINE 323+20

PL

PL

PL

PL

PL

PL

RICHARD PODRASKY
631 NEWARK ROAD

RICHARD PODRASKY
631 NEWARK ROAD

DONALD & LISA ROLON
619 NEWARK ROAD

DONALD & LISA ROLON
619 NEWARK ROAD

TOWN OF BELOIT
6-2-2056.2

N

PROJECT NO: 5755-00-11

HWY: CTH Q

COUNTY: ROCK

PLAN DETAILS

SHEET 11

E

FILE NAME : J:\34500-34599\34549 - ROCK CO. - CTH Q 5755-00-10\DESIGN\5755-00-11\SHEETS\57550011_021201-PD (CTH Q).DWG

LAYOUT NAME - pd-04

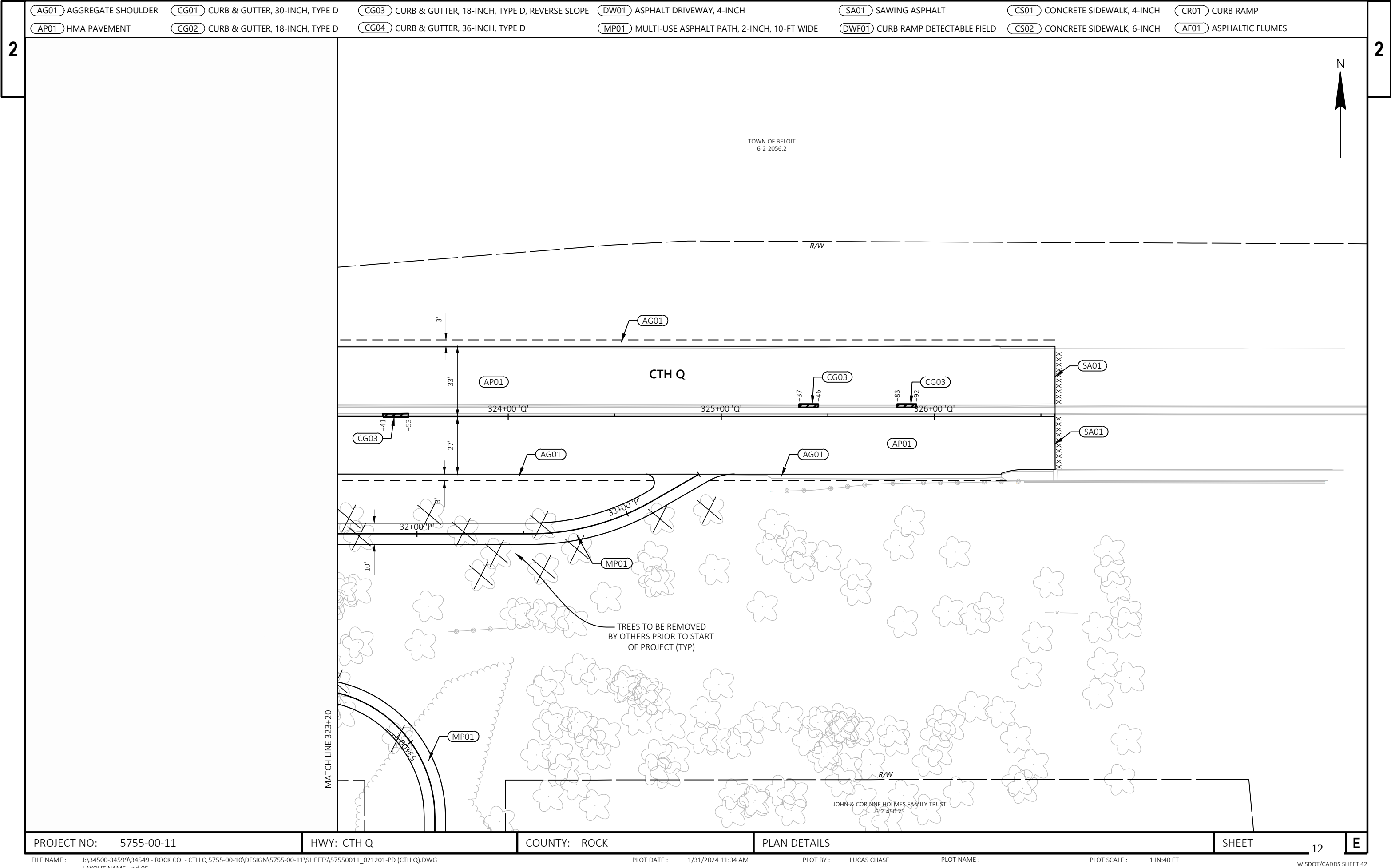
PLOT DATE : 1/31/2024 11:33 AM

PLOT BY : LUCAS CHASE

PLOT NAME :

PLOT SCALE : 1 IN=40 FT

WISDOT/CADDs SHEET 42



2

N

TOWN OF BELOIT
6-2-2056.2

R/W

AG01

AP01

CTH Q

324+00 "Q"

325+00 "Q"

326+00 "Q"

CG03

CG03

SA01

SA01

AG01

AG01

AP01

MP01

MP01

MP01

TREES TO BE REMOVED
BY OTHERS PRIOR TO START
OF PROJECT (TYP)

MATCH LINE 323+20

JOHN & CORINNE HOLMES FAMILY TRUST
6-2-450.25

R/W

PROJECT NO: 5755-00-11

HWY: CTH Q

COUNTY: ROCK

PLAN DETAILS

SHEET 12

E

FILE NAME : J:\34500-34599\34549 - ROCK CO. - CTH Q 5755-00-10\DESIGN\5755-00-11\SHEETS\57550011_021201-PD (CTH Q).DWG

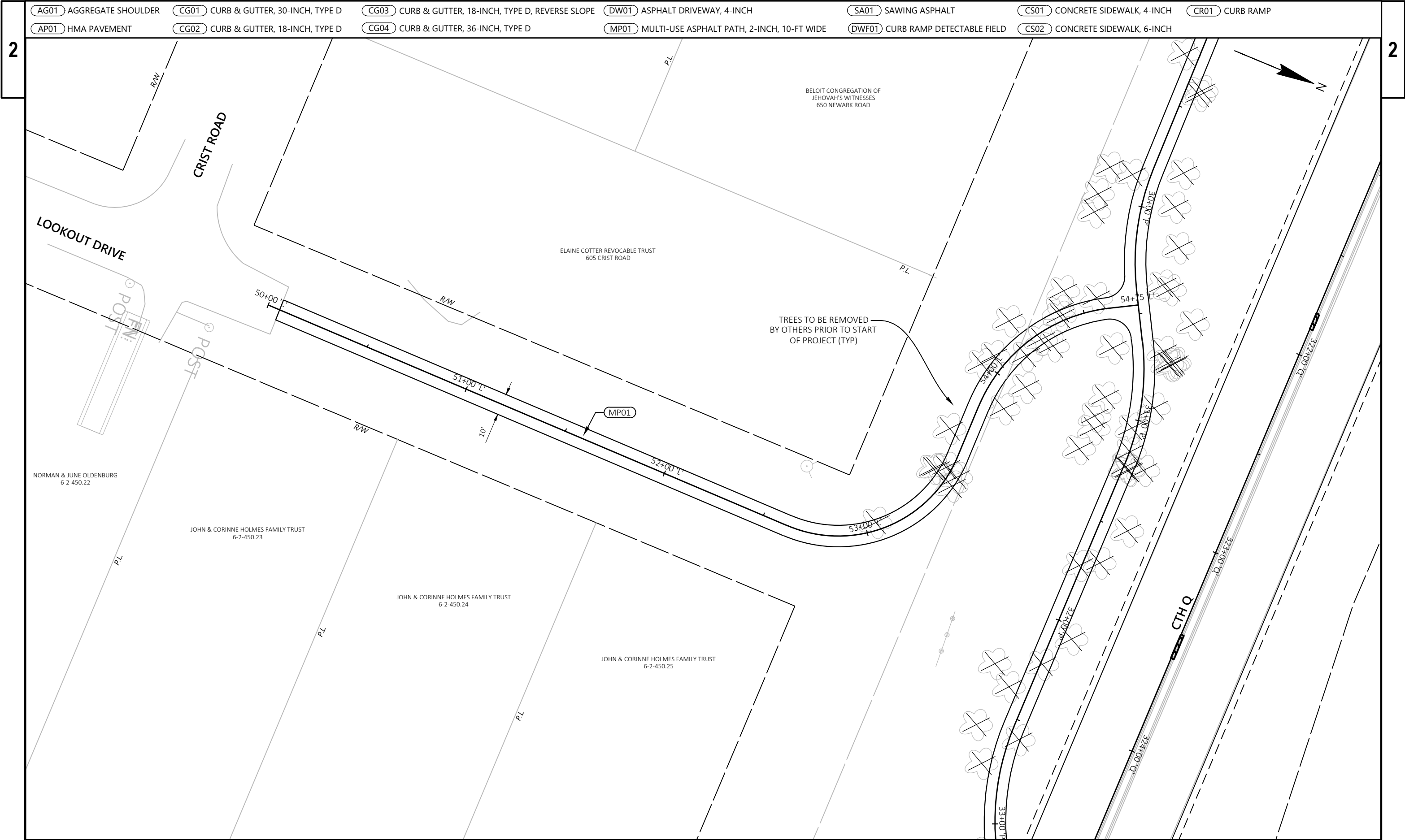
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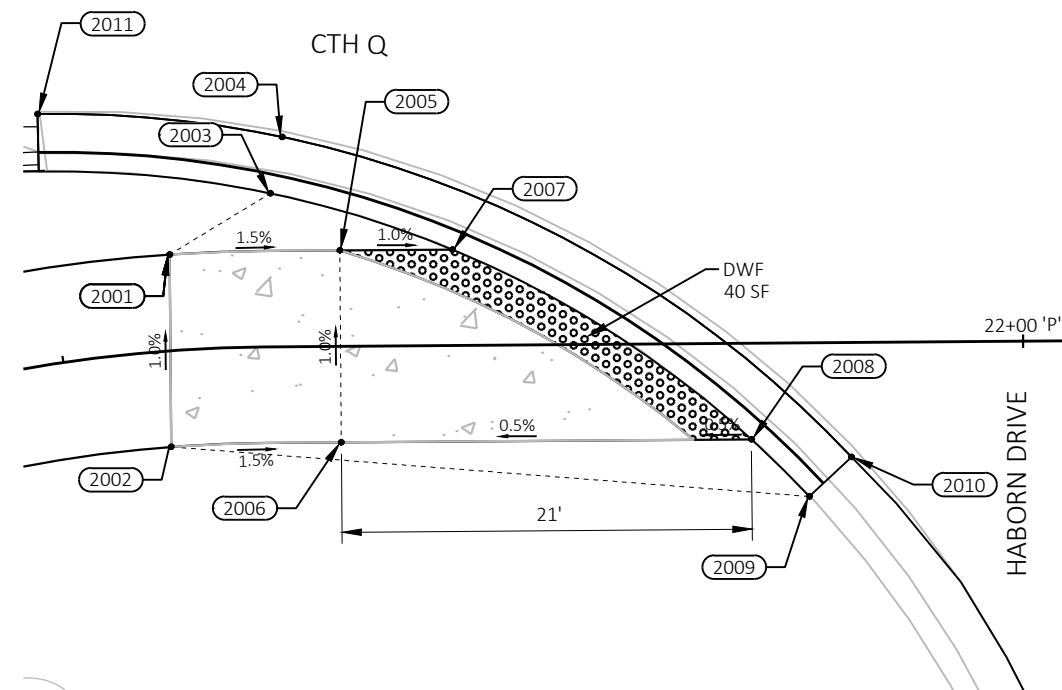
PLOT BY : LUCAS CHASE

PLOT NAME :

PLOT SCALE : 1 IN=40 FT

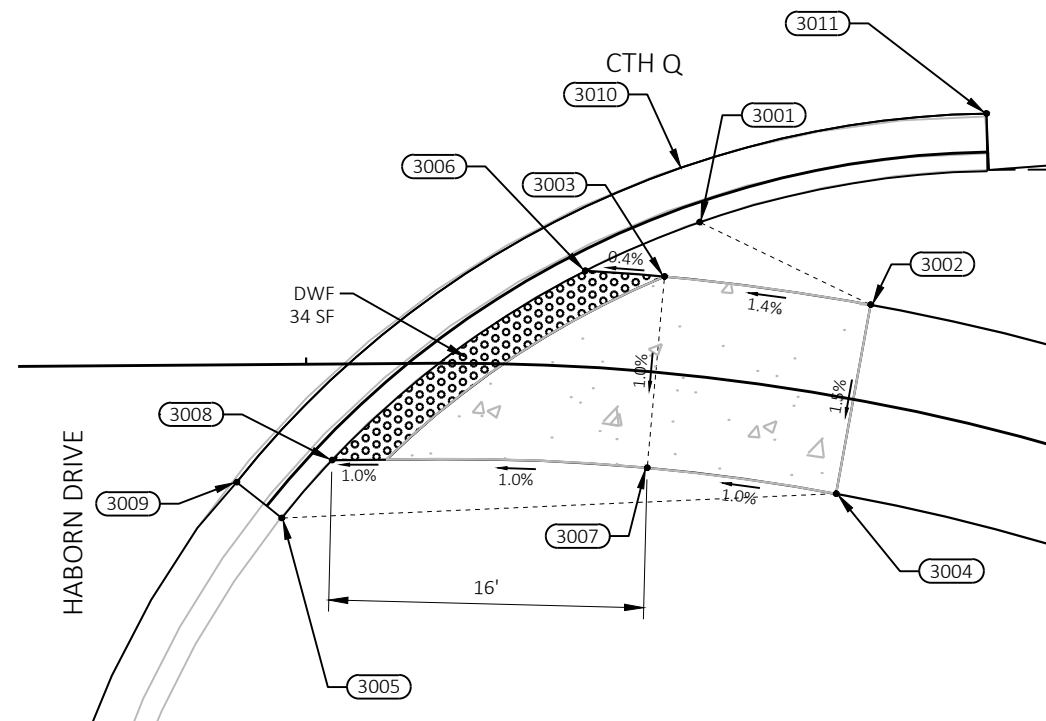
WISDOT/CADDs SHEET 42





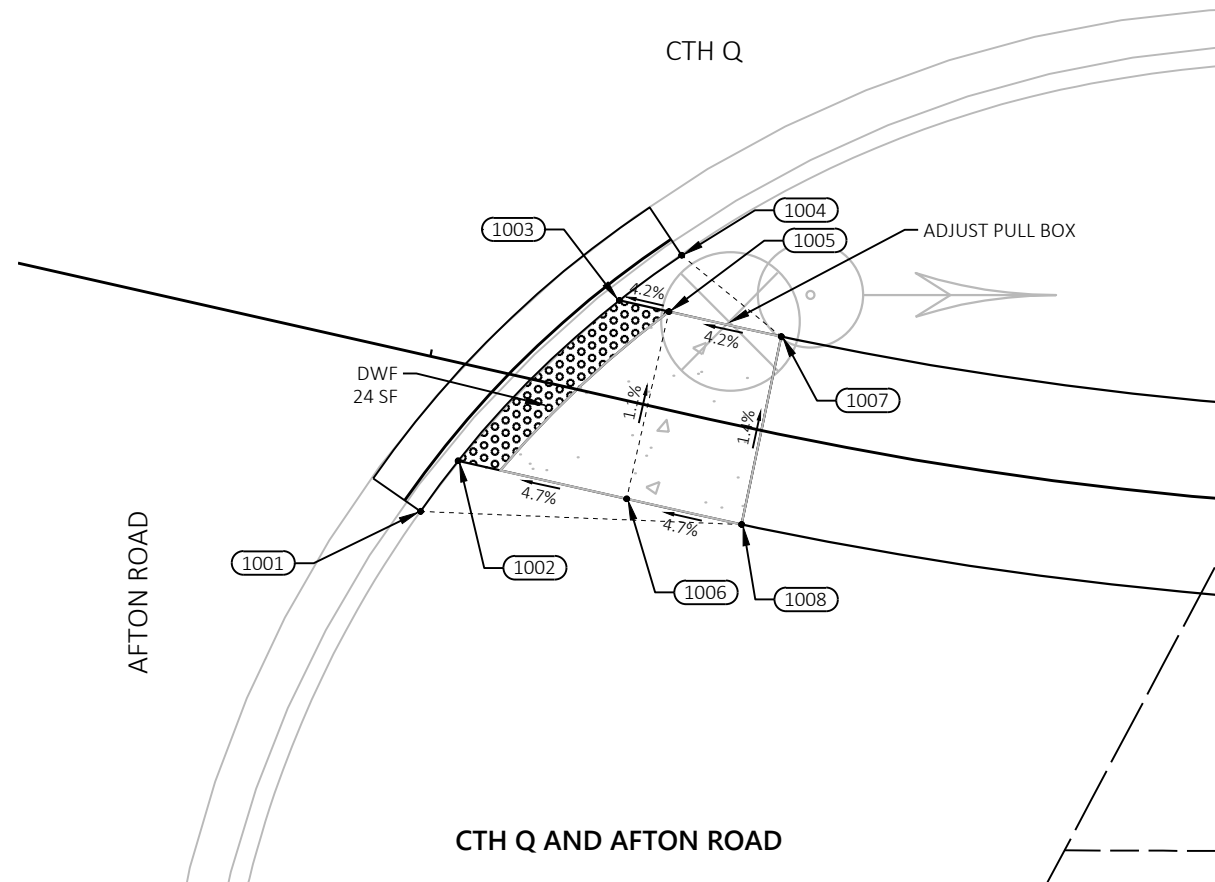
CTH Q AND HABORN DRIVE - SW CURB RAMP

HABORN DRIVE - SW CURB RAMP					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
2001	21+55.90	5.00' LT	811.69	217099.49	486722.68
2002	21+55.25	5.00' RT	811.79	217089.47	486722.76
2003	21+60.87	8.00' LT	811.85	217102.68	486727.93
2004	21+61.51	10.93' LT	811.51	217105.61	486728.54
2005	21+64.46	5.00' LT	811.56	217099.71	486731.54
2006	21+64.46	5.00' RT	811.66	217089.71	486731.62
2007	21+70.33	5.00' LT	811.50	217099.75	486737.41
2008	21+85.82	5.00' RT	811.76	217089.87	486752.97
2009	21+88.81	8.00' RT	812.19	217086.89	486755.99
2010	21+91.02	5.97' RT	811.92	217088.94	486758.18
2011	21+50.47	13.00' LT	811.31	217106.81	486715.80

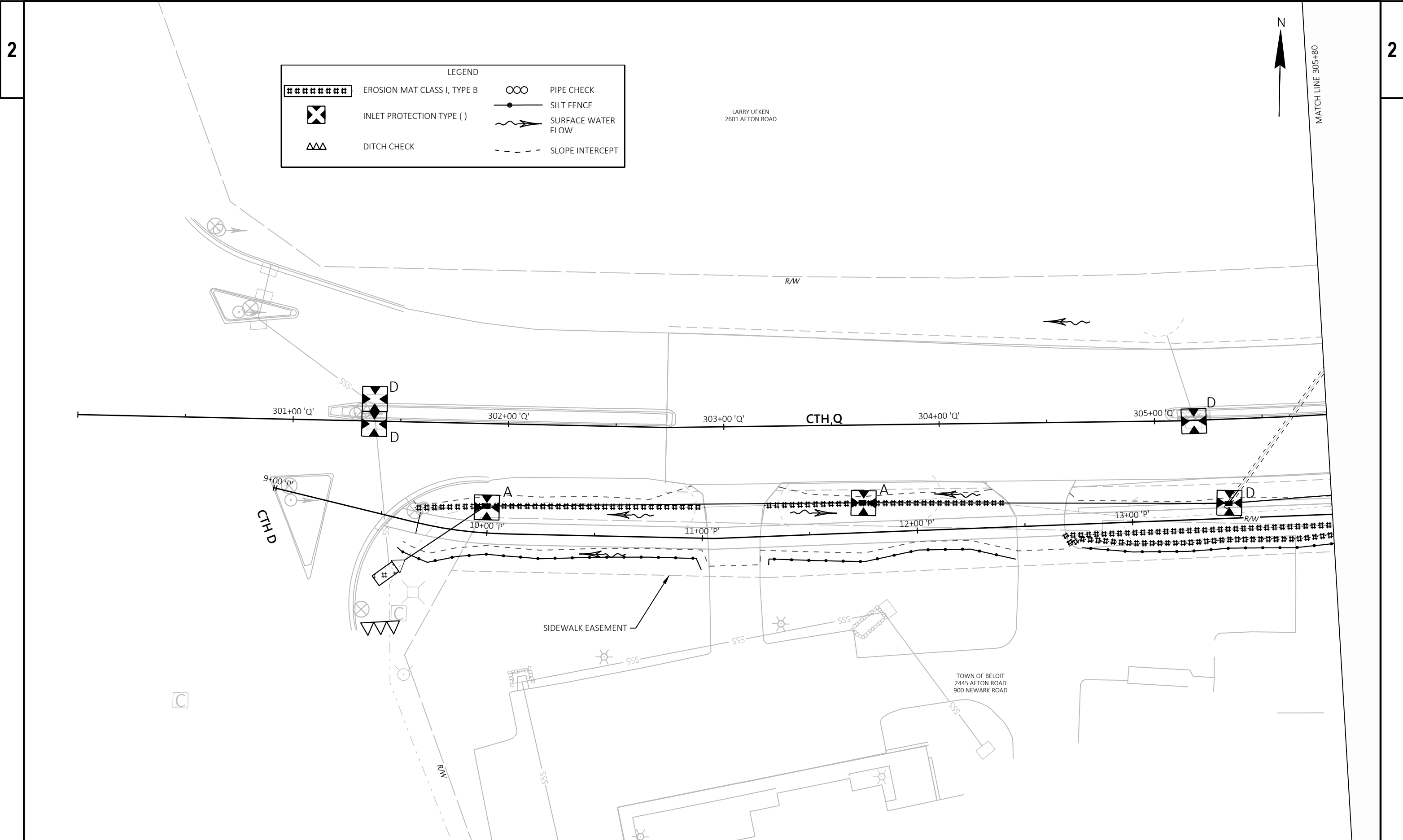


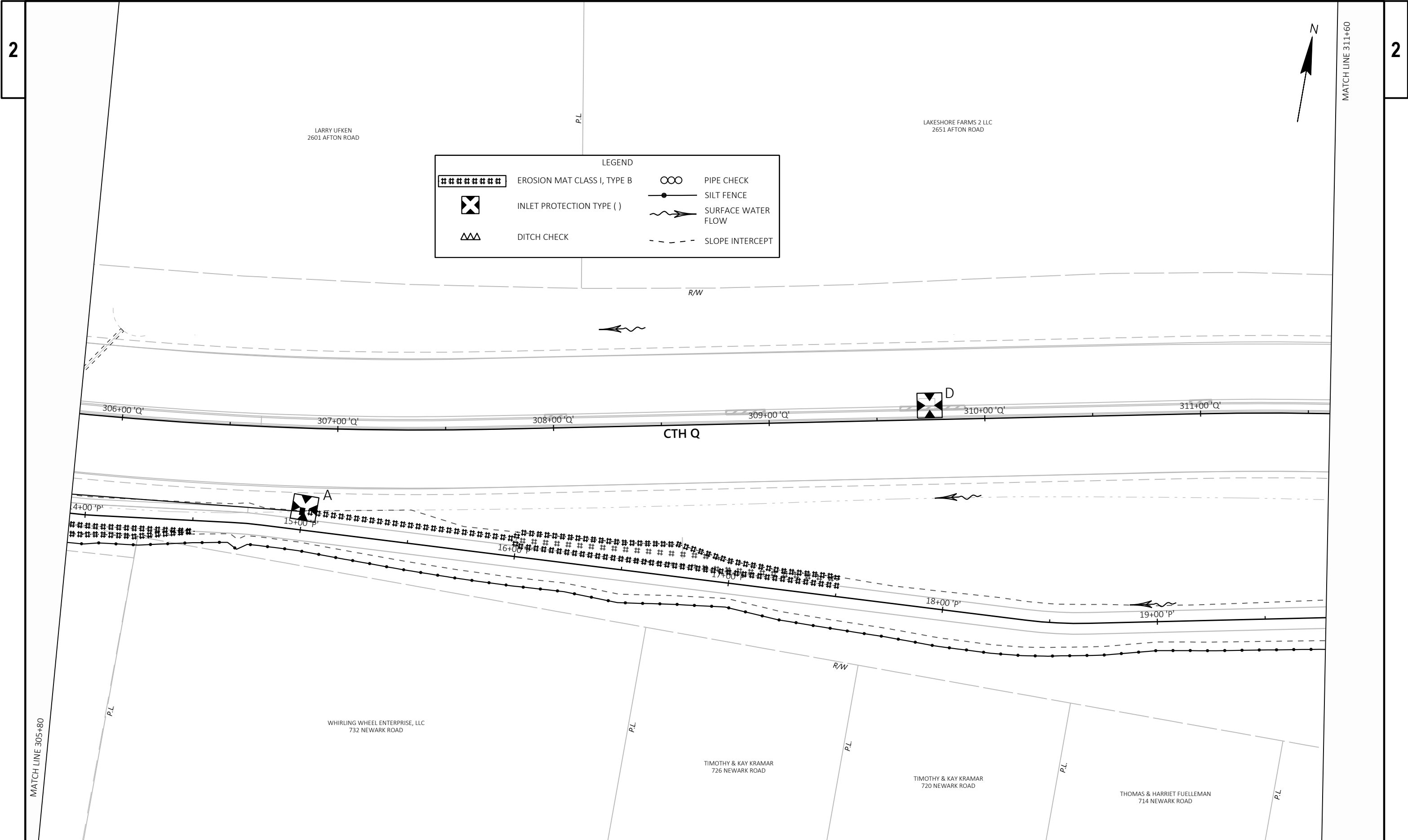
CTH Q AND HABORN DRIVE - SE CURB RAMP

HABORN DR - SE CURB RAMP					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
3001	22+69.69	8.00' LT	812.95	217102.76	486837.61
3002	22+78.61	5.00' LT	812.58	217098.46	486846.52
3003	22+68.23	5.00' LT	812.43	217099.92	486835.78
3004	22+78.61	5.00' RT	812.43	217088.62	486844.72
3005	22+48.67	8.00' RT	812.43	217087.35	486815.85
3006	22+64.26	5.00' LT	812.42	217100.23	486831.65
3007	22+68.23	5.00' RT	812.33	217089.96	486834.88
3008	22+51.31	5.00' RT	812.17	217090.37	486818.47
3009	22+46.34	6.11' RT	812.11	217089.22	486813.50
3010	22+68.53	10.72' LT	812.57	217105.59	486836.63
3011	22+82.25	15.95' LT	812.77	217108.41	486852.55



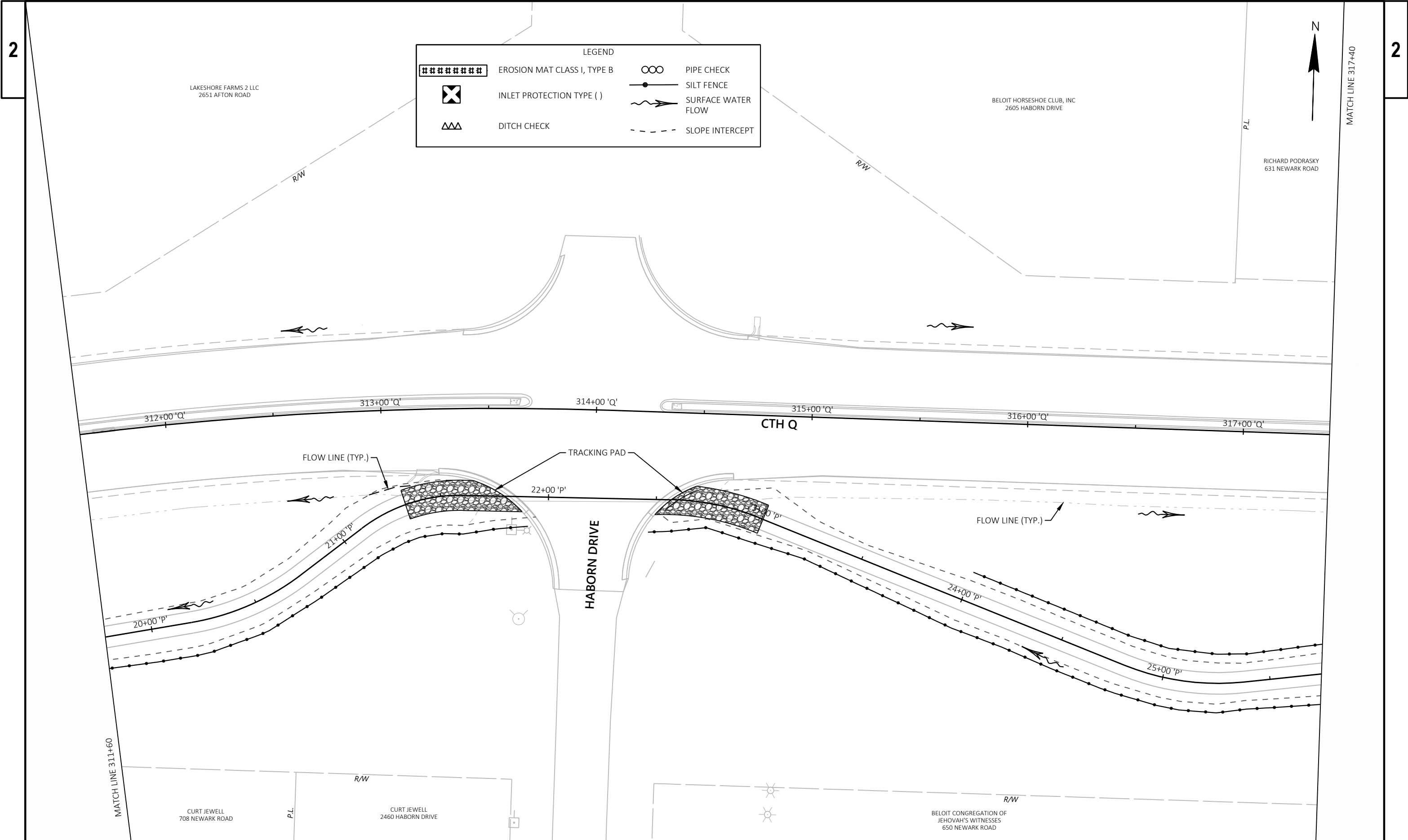
AFTON ROAD - SE CURB RAMP					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
1001	9+51.28	8.00' RT	795.43	216955.89	485539.47
1002	9+52.61	5.00' RT	795.04	216958.52	485541.43
1003	9+58.96	5.00' LT	795.25	216966.88	485549.82
1004	9+61.60	8.01' LT	795.77	216969.23	485553.07
1005	9+61.60	5.00' LT	795.36	216966.30	485552.40
1006	9+61.60	5.00' RT	795.47	216956.54	485550.20
1007	9+67.67	5.00' LT	795.61	216964.99	485558.26
1008	9+67.67	5.00' RT	795.75	216955.21	485556.19





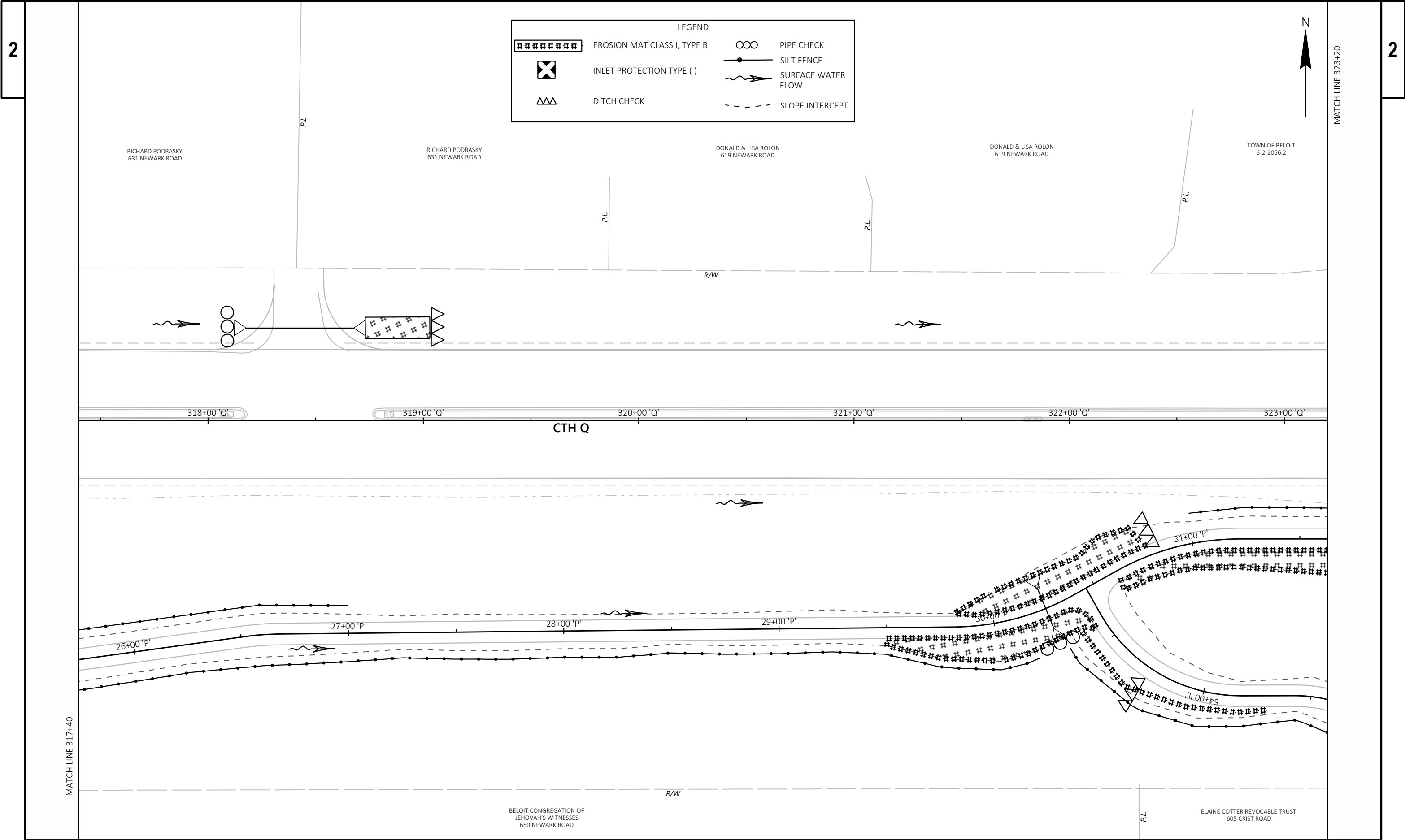
LEGEND

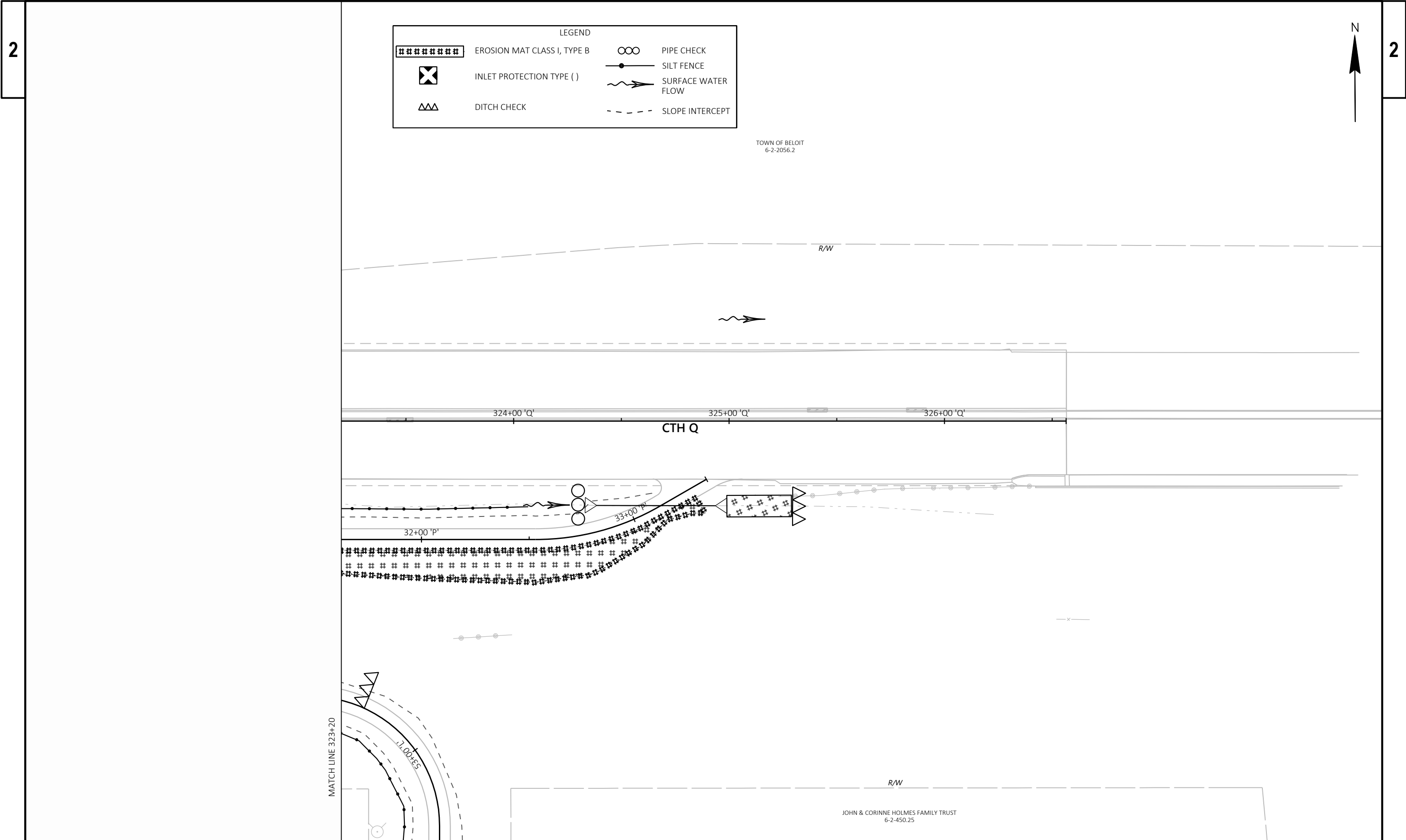
#####	EROSION MAT CLASS I, TYPE B	∞	PIPE CHECK
⊗	INLET PROTECTION TYPE ()	—●—	SILT FENCE
ΔΔ	DITCH CHECK	~>	SURFACE WATER FLOW
		- - -	SLOPE INTERCEPT

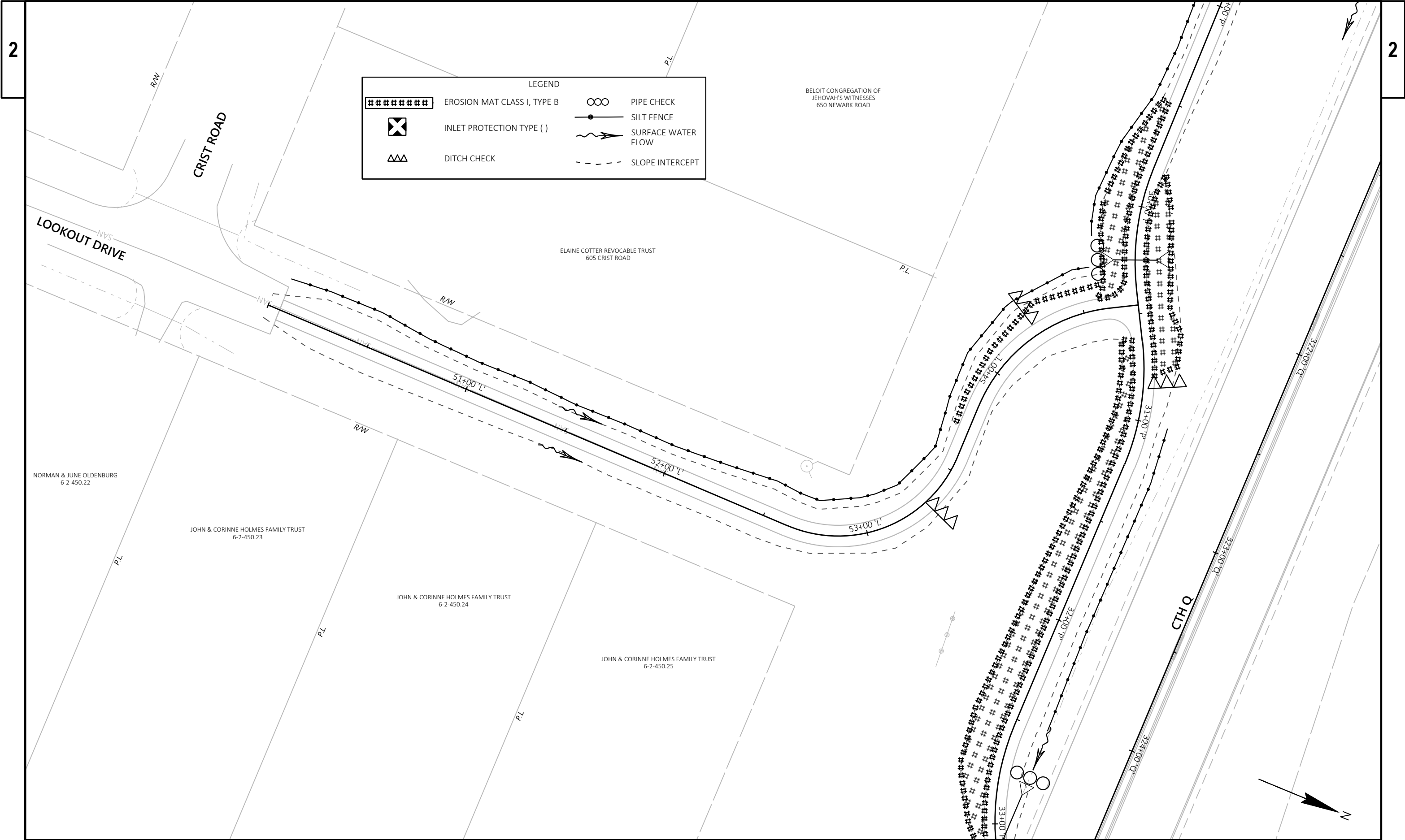


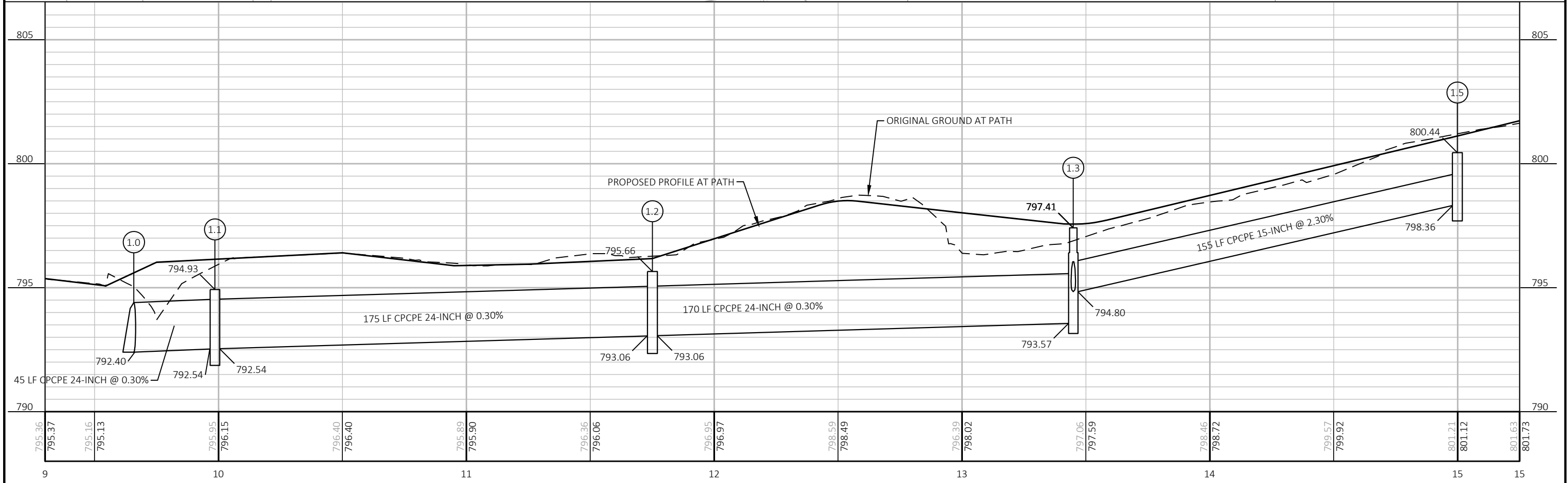
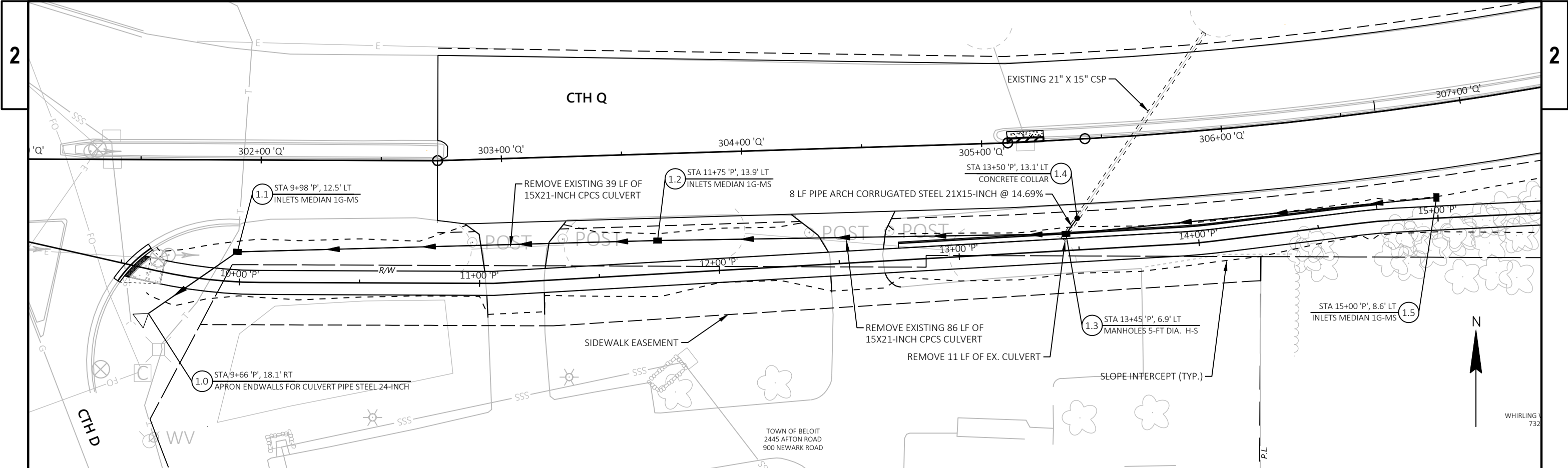
LEGEND

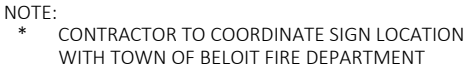
#####	EROSION MAT CLASS I, TYPE B	OO	PIPE CHECK
X	INLET PROTECTION TYPE ()	—●—	SILT FENCE
△△	DITCH CHECK	~>	SURFACE WATER FLOW
		- - -	SLOPE INTERCEPT

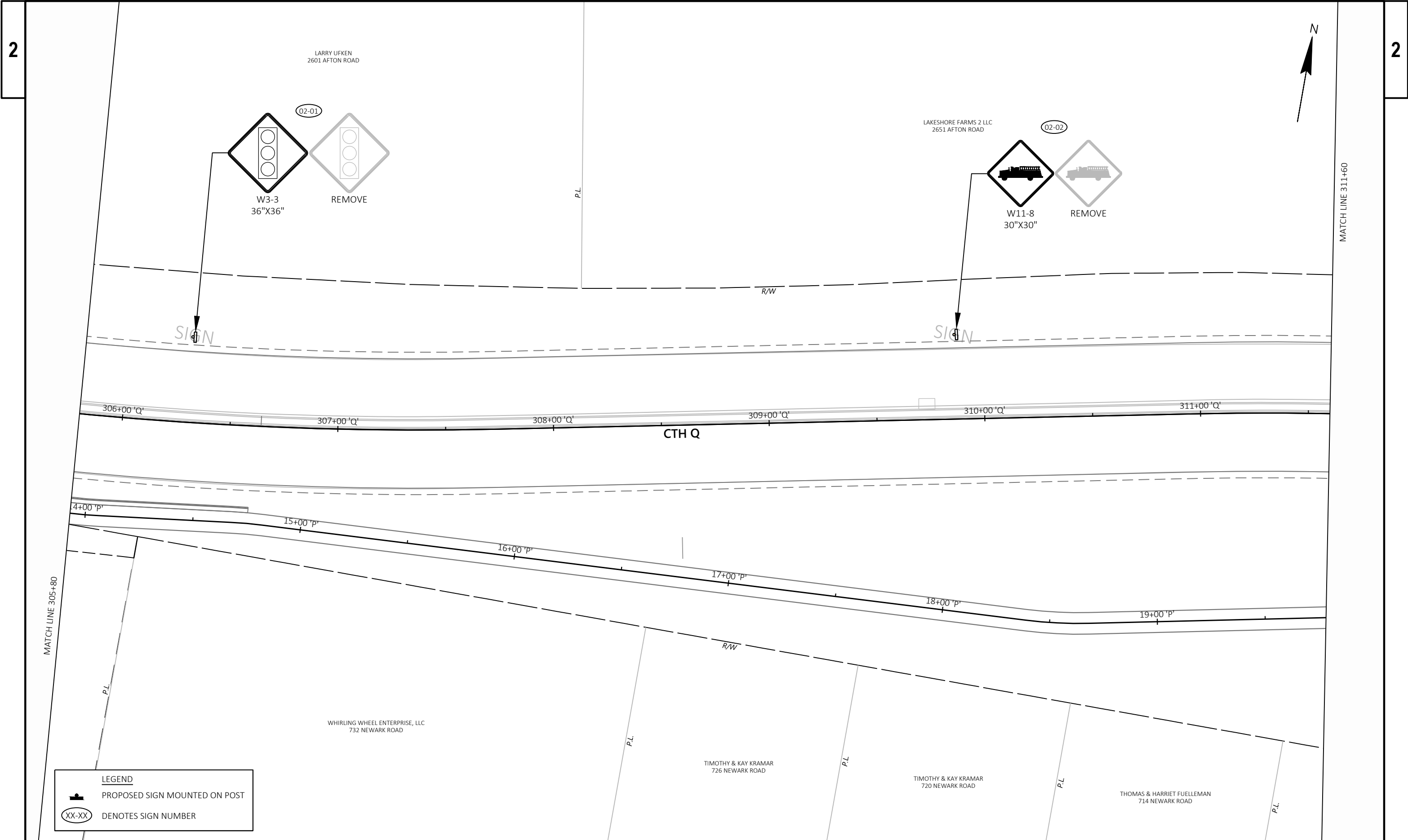












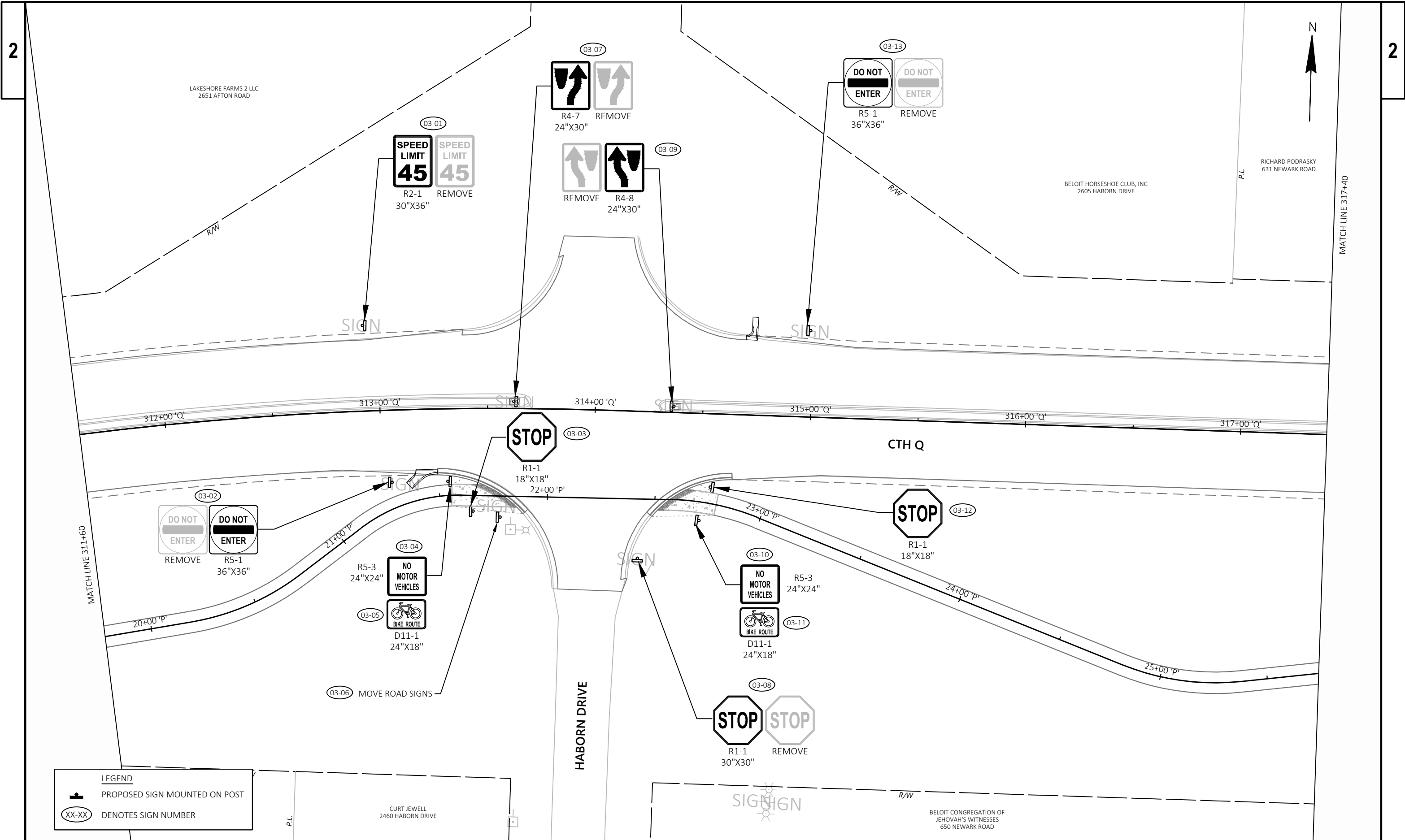
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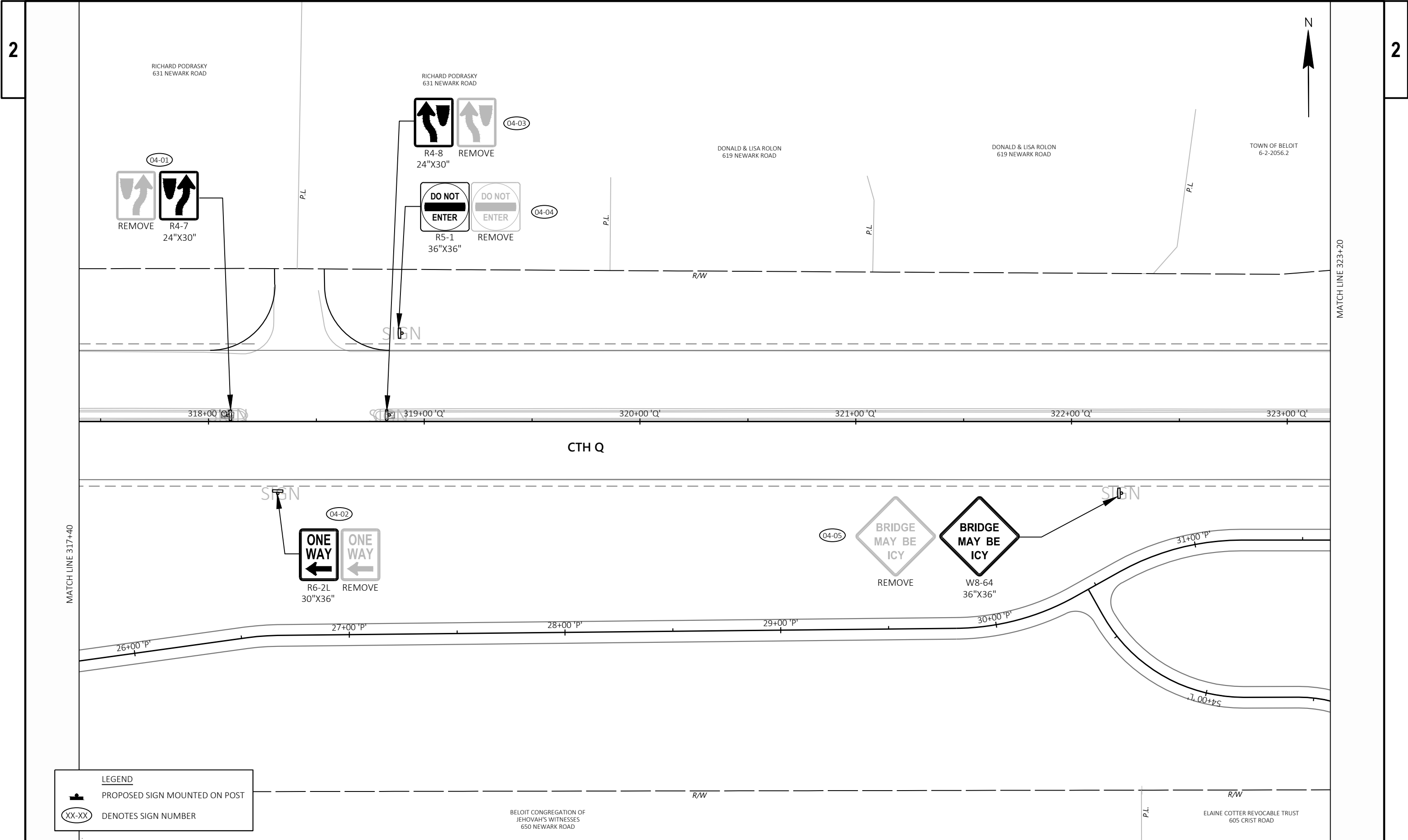
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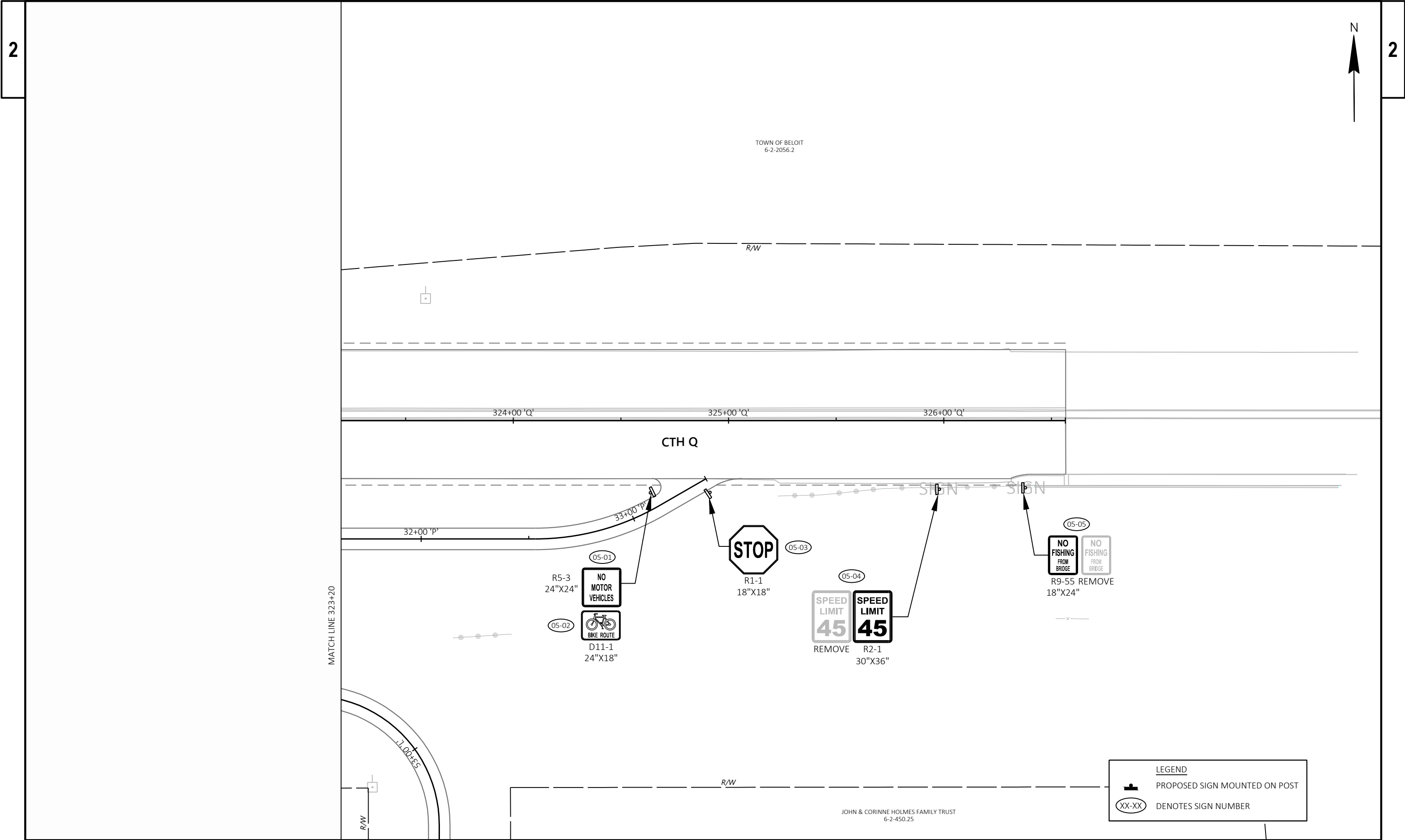
LEGEND

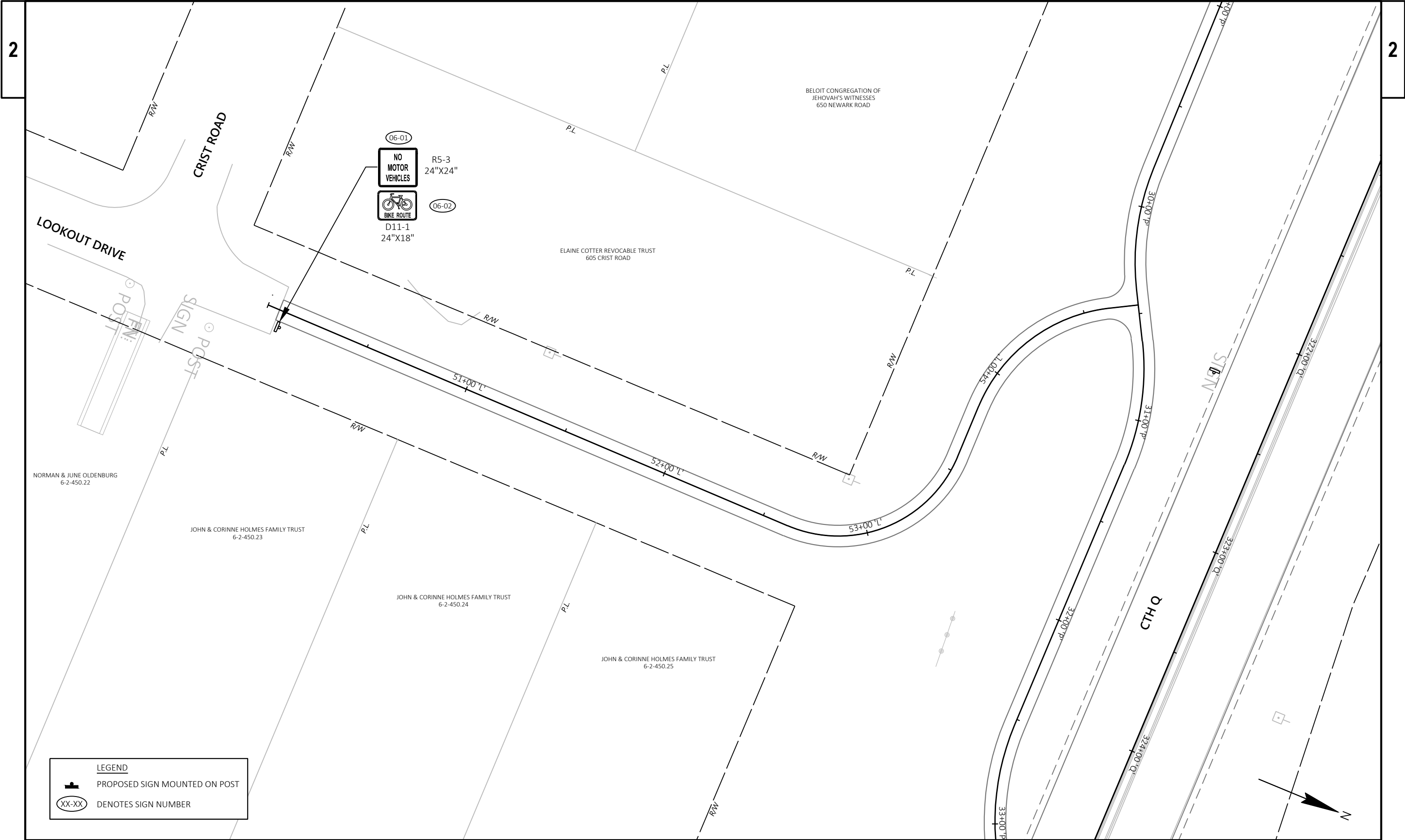
 PROPOSED SIGN MOUNTED ON POST

 DENOTES SIGN NUMBER









LEGEND

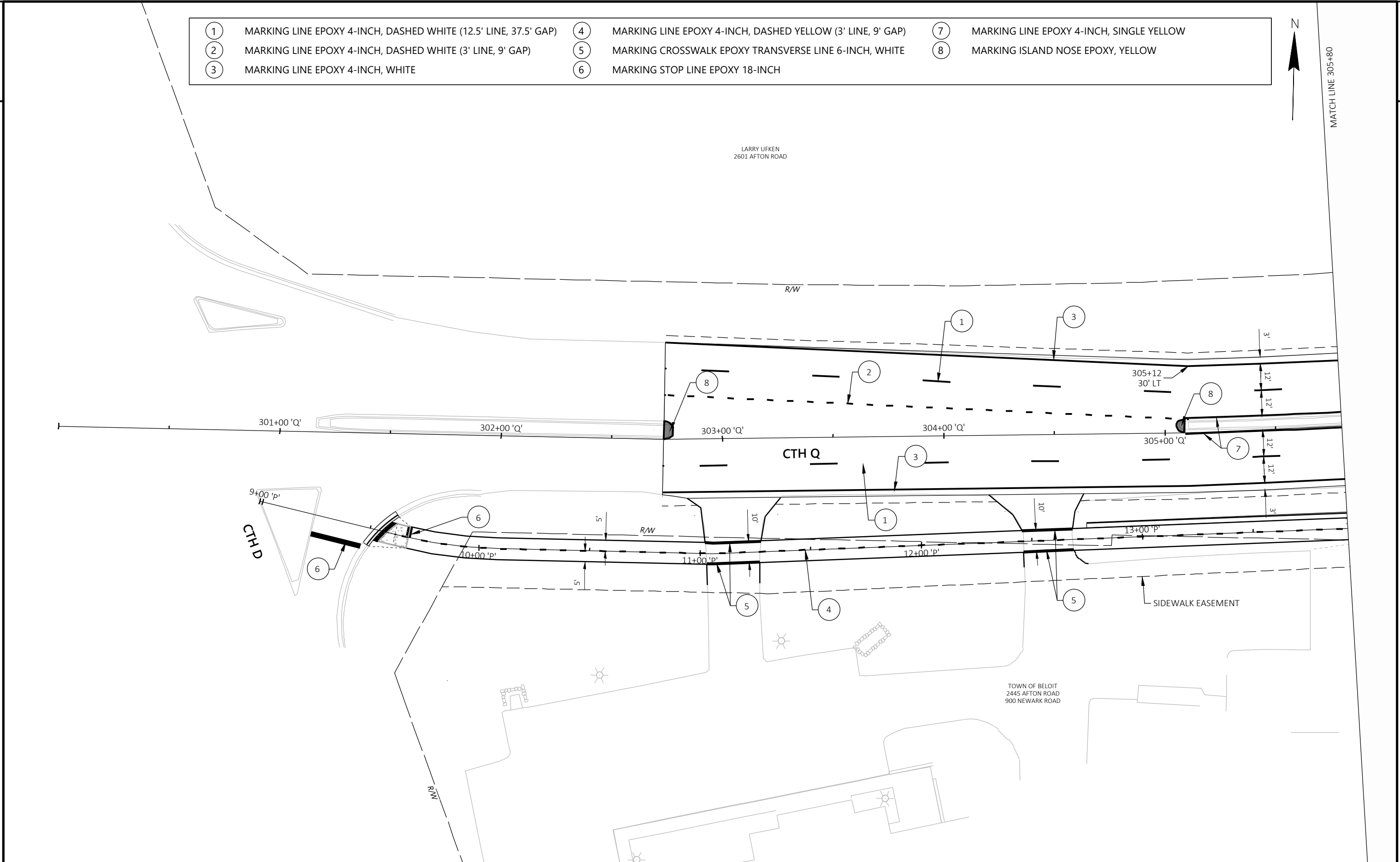
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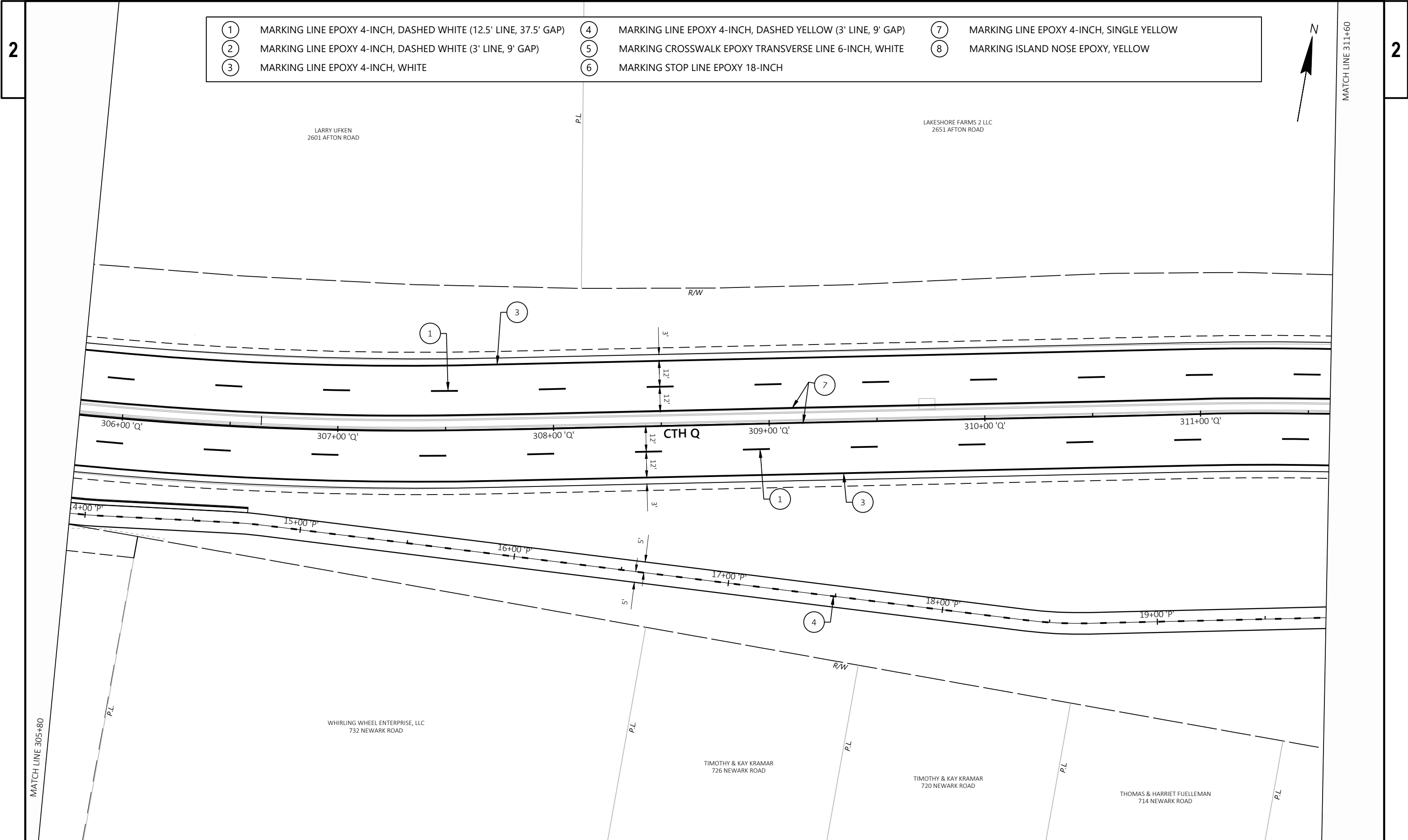
DENOTES SIGN NUMBER

- | | | | | | |
|---|---|---|--|---|--|
| 1 | MARKING LINE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP) | 4 | MARKING LINE EPOXY 4-INCH, DASHED YELLOW (3' LINE, 9' GAP) | 7 | MARKING LINE EPOXY 4-INCH, SINGLE YELLOW |
| 2 | MARKING LINE EPOXY 4-INCH, DASHED WHITE (3' LINE, 9' GAP) | 5 | MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE | 8 | MARKING ISLAND NOSE EPOXY, YELLOW |
| 3 | MARKING LINE EPOXY 4-INCH, WHITE | 6 | MARKING STOP LINE EPOXY 18-INCH | | |



MATCH LINE 305+80





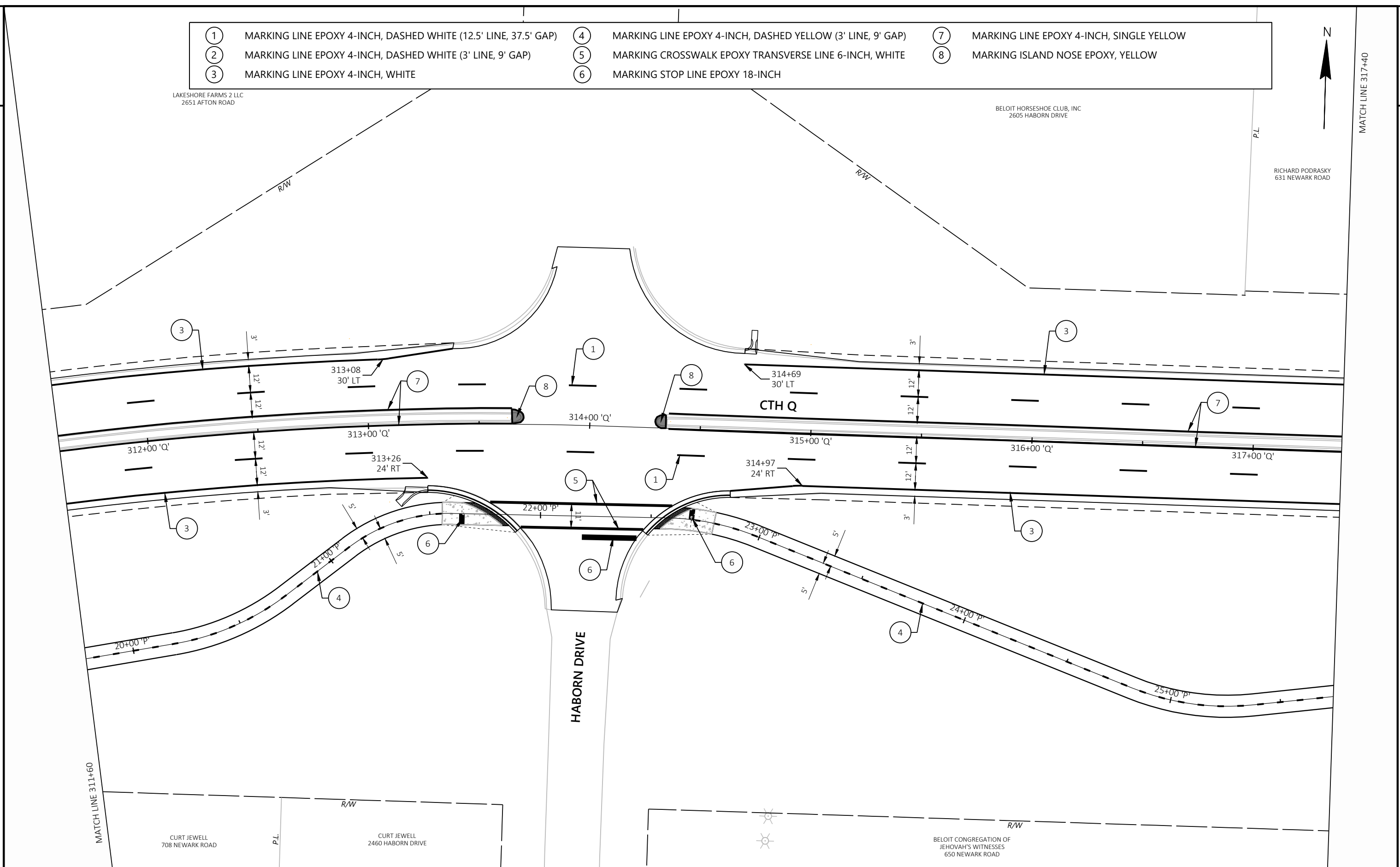
- | | | |
|---|--|--|
| ① MARKING LINE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP) | ④ MARKING LINE EPOXY 4-INCH, DASHED YELLOW (3' LINE, 9' GAP) | ⑦ MARKING LINE EPOXY 4-INCH, SINGLE YELLOW |
| ② MARKING LINE EPOXY 4-INCH, DASHED WHITE (3' LINE, 9' GAP) | ⑤ MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE | ⑧ MARKING ISLAND NOSE EPOXY, YELLOW |
| ③ MARKING LINE EPOXY 4-INCH, WHITE | ⑥ MARKING STOP LINE EPOXY 18-INCH | |



- | | | | | | |
|---|---|---|--|---|--|
| 1 | MARKING LINE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP) | 4 | MARKING LINE EPOXY 4-INCH, DASHED YELLOW (3' LINE, 9' GAP) | 7 | MARKING LINE EPOXY 4-INCH, SINGLE YELLOW |
| 2 | MARKING LINE EPOXY 4-INCH, DASHED WHITE (3' LINE, 9' GAP) | 5 | MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE | 8 | MARKING ISLAND NOSE EPOXY, YELLOW |
| 3 | MARKING LINE EPOXY 4-INCH, WHITE | 6 | MARKING STOP LINE EPOXY 18-INCH | | |



MATCH LINE 317+40



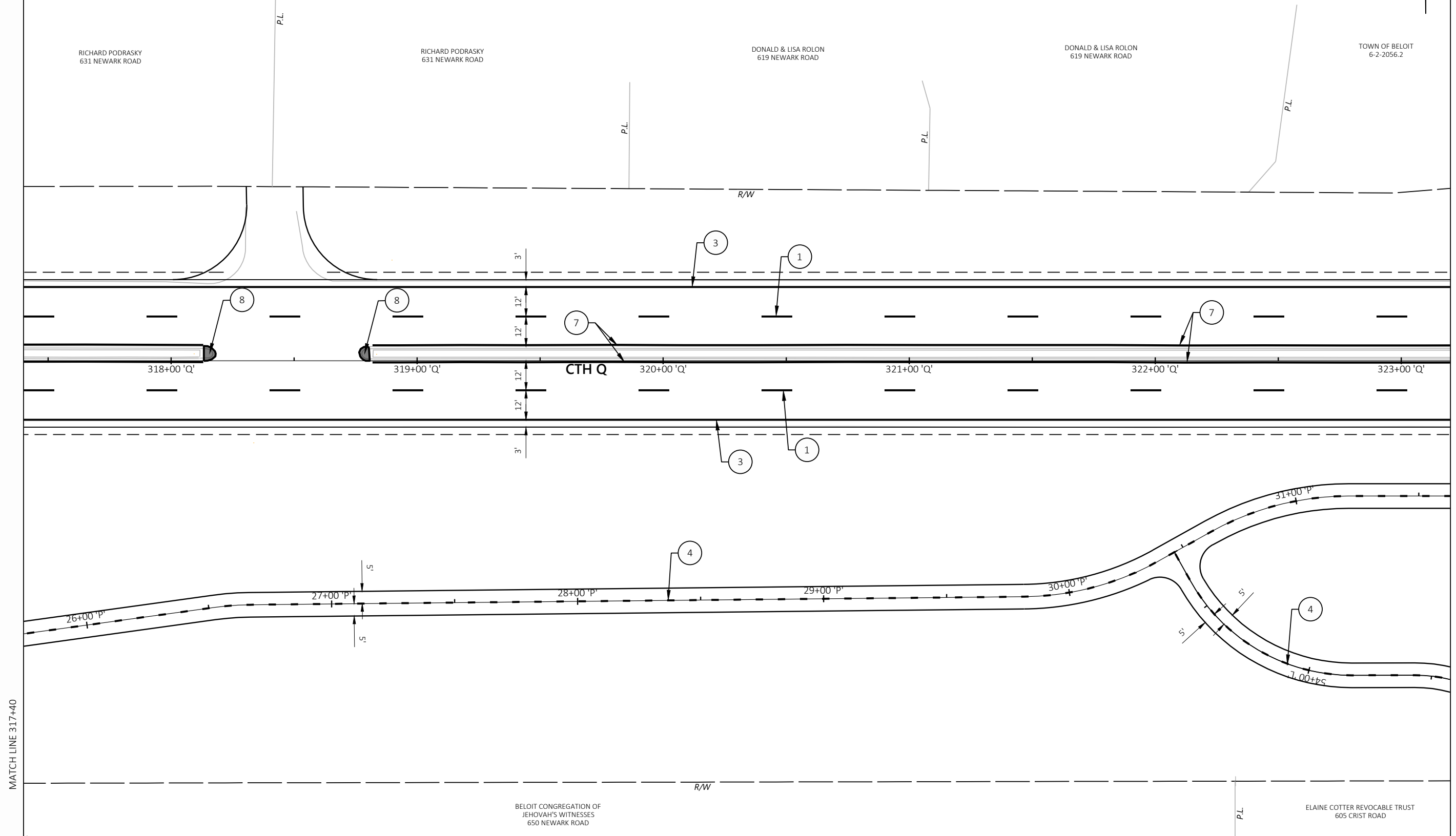
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- | | | | | | |
|---|---|---|--|---|--|
| ① | MARKING LINE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP) | ④ | MARKING LINE EPOXY 4-INCH, DASHED YELLOW (3' LINE, 9' GAP) | ⑦ | MARKING LINE EPOXY 4-INCH, SINGLE YELLOW |
| ② | MARKING LINE EPOXY 4-INCH, DASHED WHITE (3' LINE, 9' GAP) | ⑤ | MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE | ⑧ | MARKING ISLAND NOSE EPOXY, YELLOW |
| ③ | MARKING LINE EPOXY 4-INCH, WHITE | ⑥ | MARKING STOP LINE EPOXY 18-INCH | | |



MATCH LINE 323+20

2 |



PROJECT NO:	5755-00-11
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HWY: CTH Q

COUNTY: ROCK

PAVEMENT MARKING

SHEET

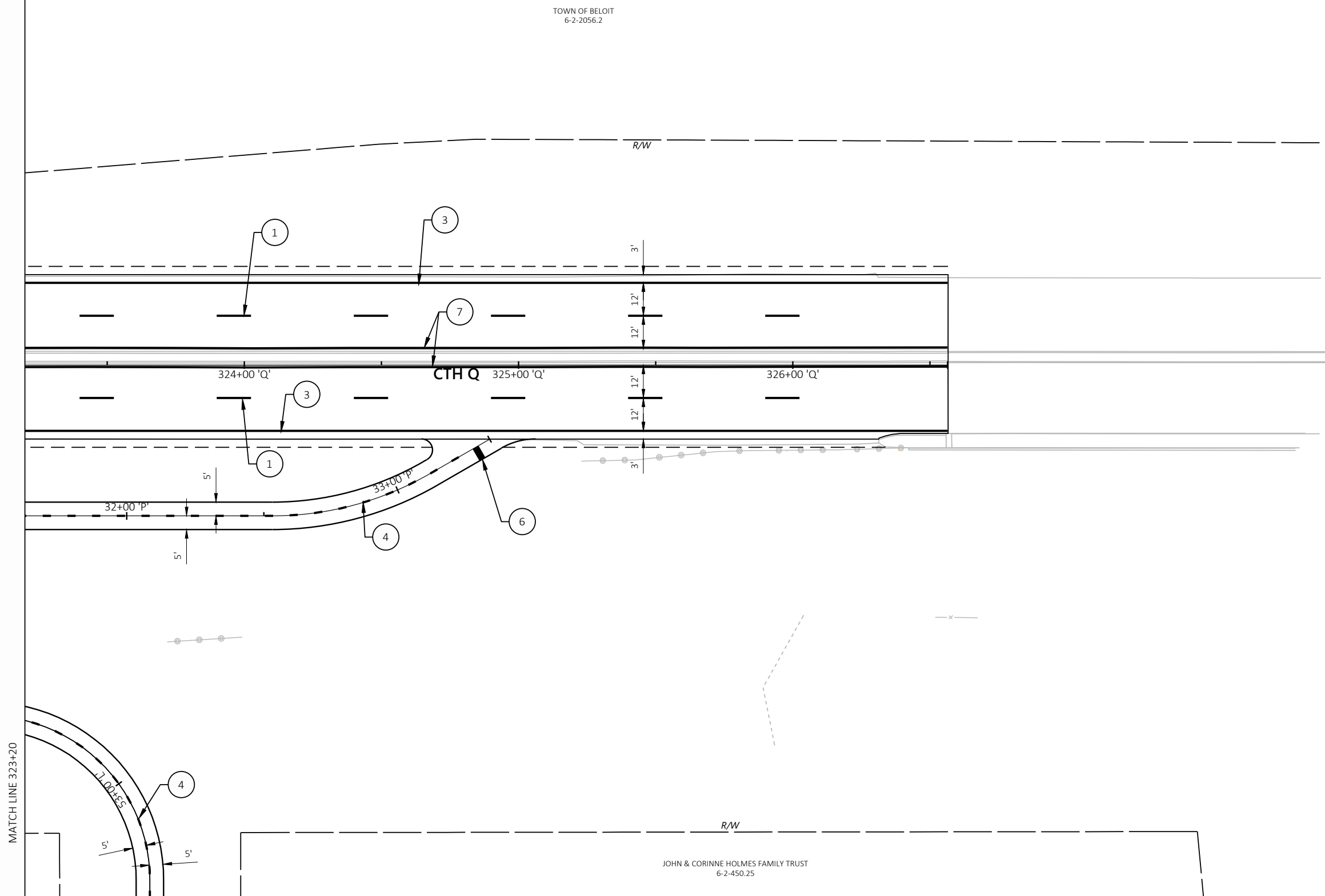
32

11

2

- | | | | | | |
|---|---|---|--|---|--|
| ① | MARKING LINE EPOXY 4-INCH, DASHED WHITE (12.5' LINE, 37.5' GAP) | ④ | MARKING LINE EPOXY 4-INCH, DASHED YELLOW (3' LINE, 9' GAP) | ⑦ | MARKING LINE EPOXY 4-INCH, SINGLE YELLOW |
| ② | MARKING LINE EPOXY 4-INCH, DASHED WHITE (3' LINE, 9' GAP) | ⑤ | MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH, WHITE | ⑧ | MARKING ISLAND NOSE EPOXY, YELLOW |
| ③ | MARKING LINE EPOXY 4-INCH, WHITE | ⑥ | MARKING STOP LINE EPOXY 18-INCH | | |

2 |



PROJECT NO:	5755-00-11
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HWY: CTH Q

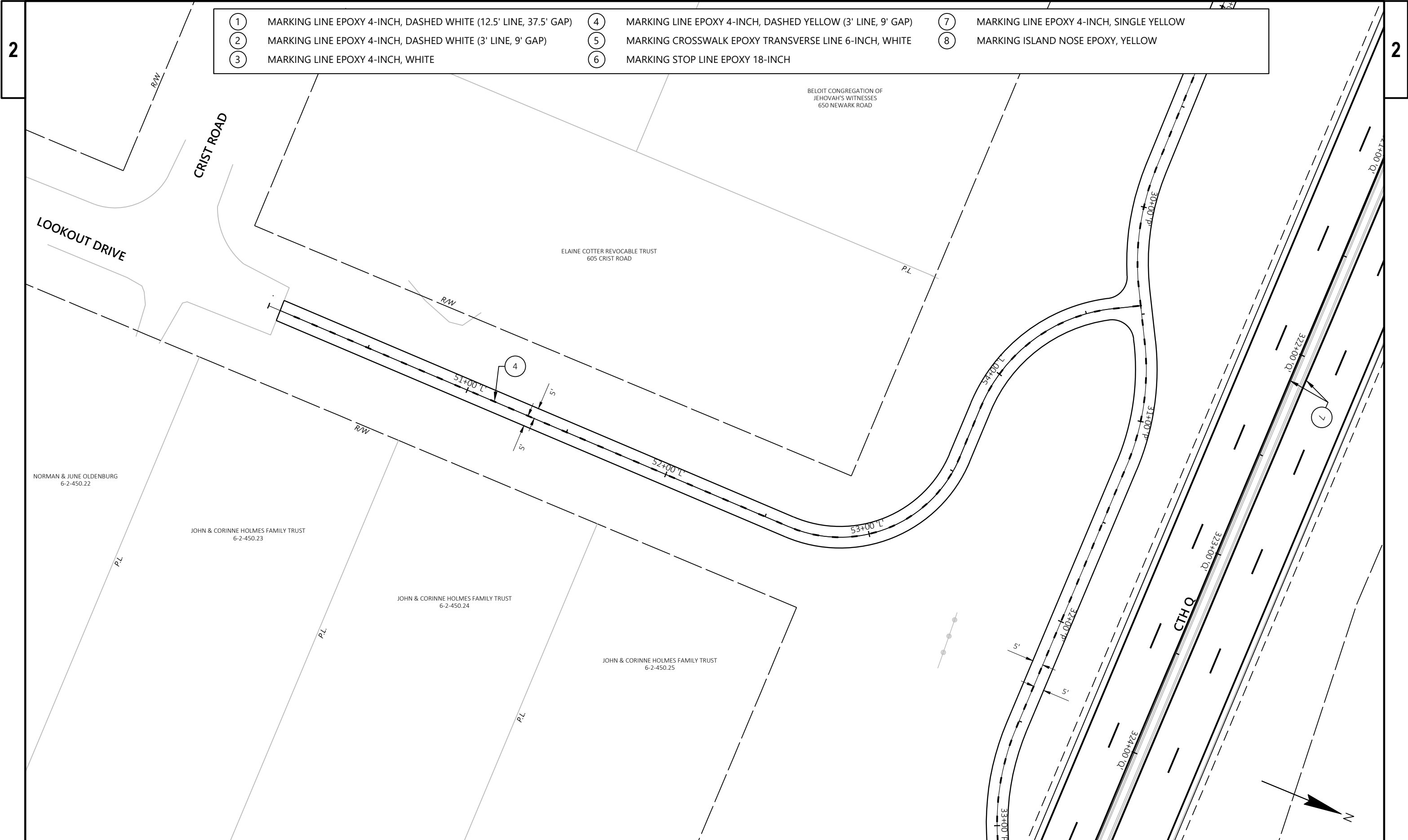
COUNTY: ROCK

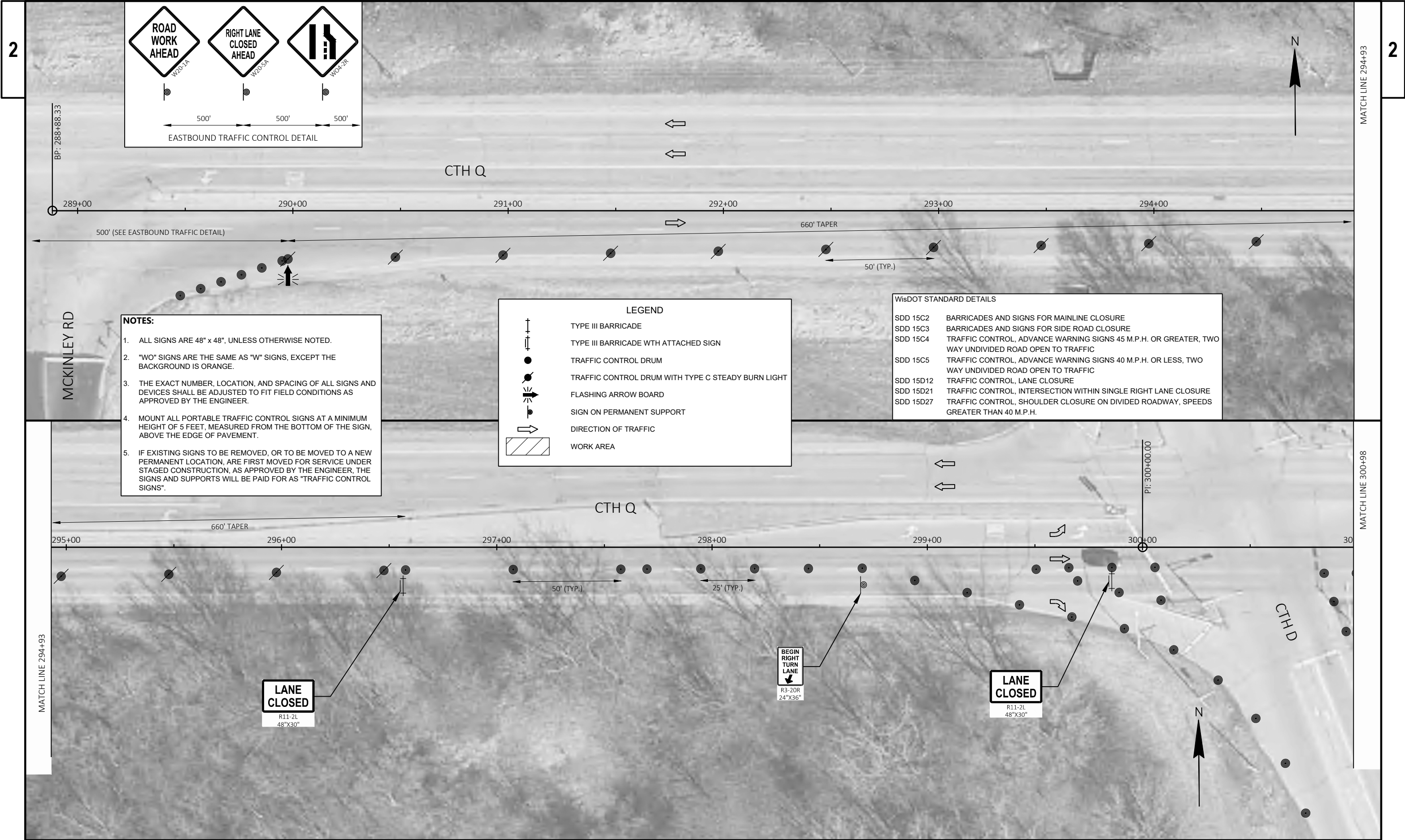
PAVEMENT MARKING

SHEET

3

-
-
-



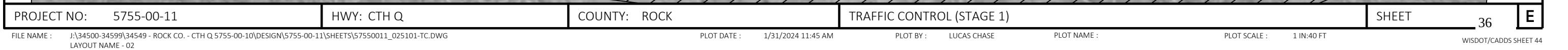


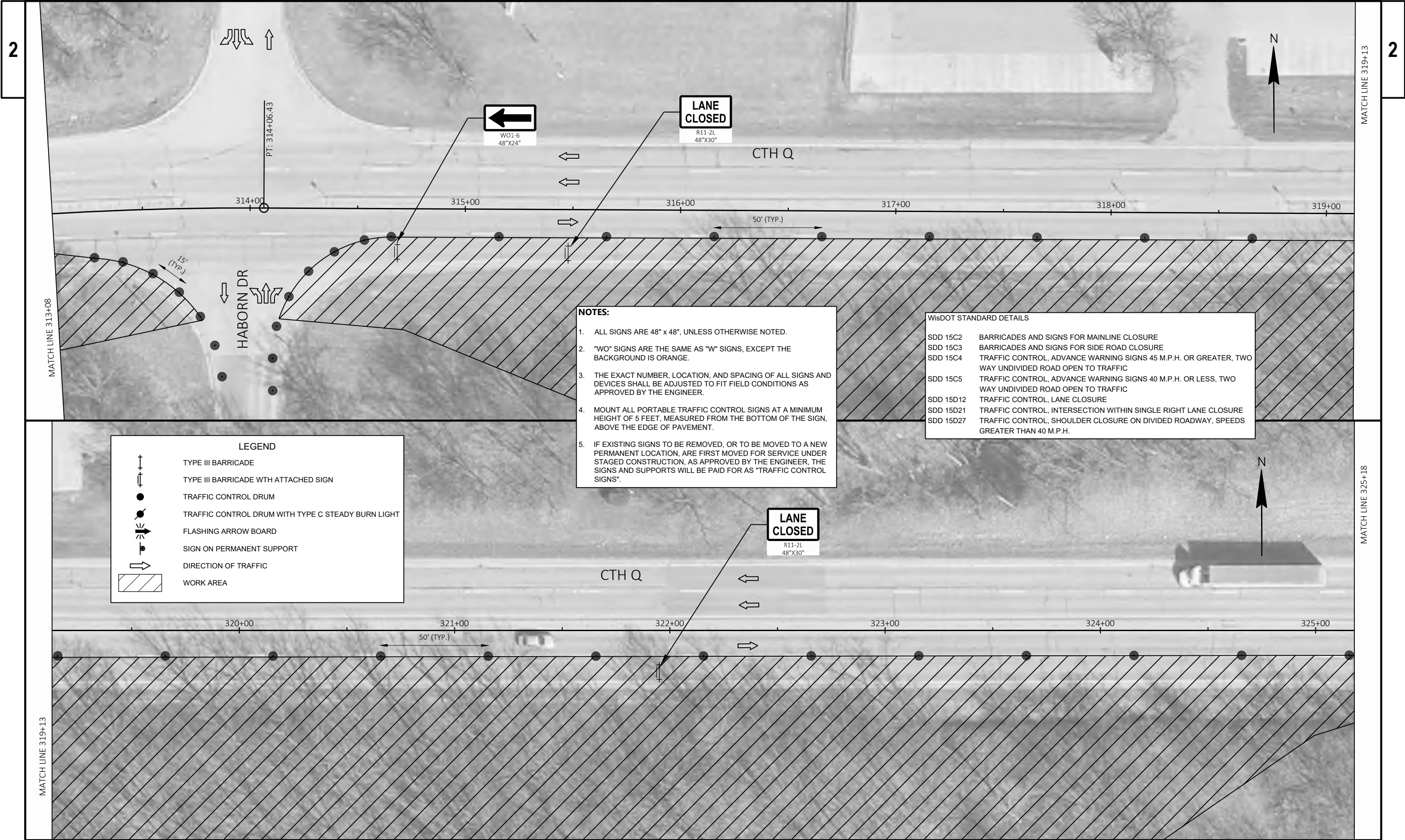
- NOTES:**
- ALL SIGNS ARE 48" x 48", UNLESS OTHERWISE NOTED.
 - "WO" SIGNS ARE THE SAME AS "W" SIGNS, EXCEPT THE BACKGROUND IS ORANGE.
 - THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
 - MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
 - IF EXISTING SIGNS TO BE REMOVED, OR TO BE MOVED TO A NEW PERMANENT LOCATION, ARE FIRST MOVED FOR SERVICE UNDER STAGED CONSTRUCTION, AS APPROVED BY THE ENGINEER, THE SIGNS AND SUPPORTS WILL BE PAID FOR AS "TRAFFIC CONTROL SIGNS".

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
	DIRECTION OF TRAFFIC
	WORK AREA

WisDOT STANDARD DETAILS	
SDD 15C2	BARRICADES AND SIGNS FOR MAINLINE CLOSURE
SDD 15C3	BARRICADES AND SIGNS FOR SIDE ROAD CLOSURE
SDD 15C4	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15C5	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15D12	TRAFFIC CONTROL, LANE CLOSURE
SDD 15D21	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
SDD 15D27	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.



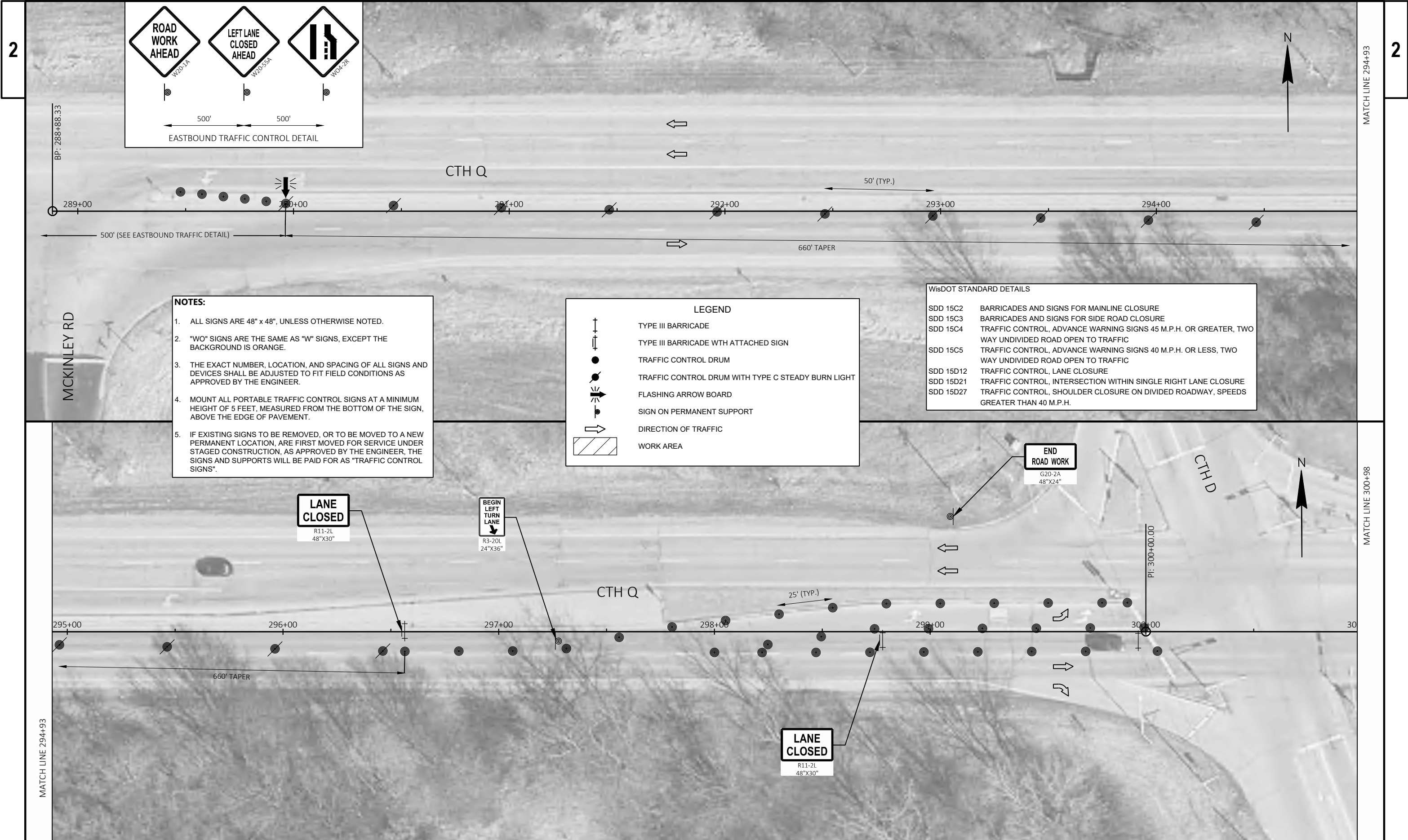


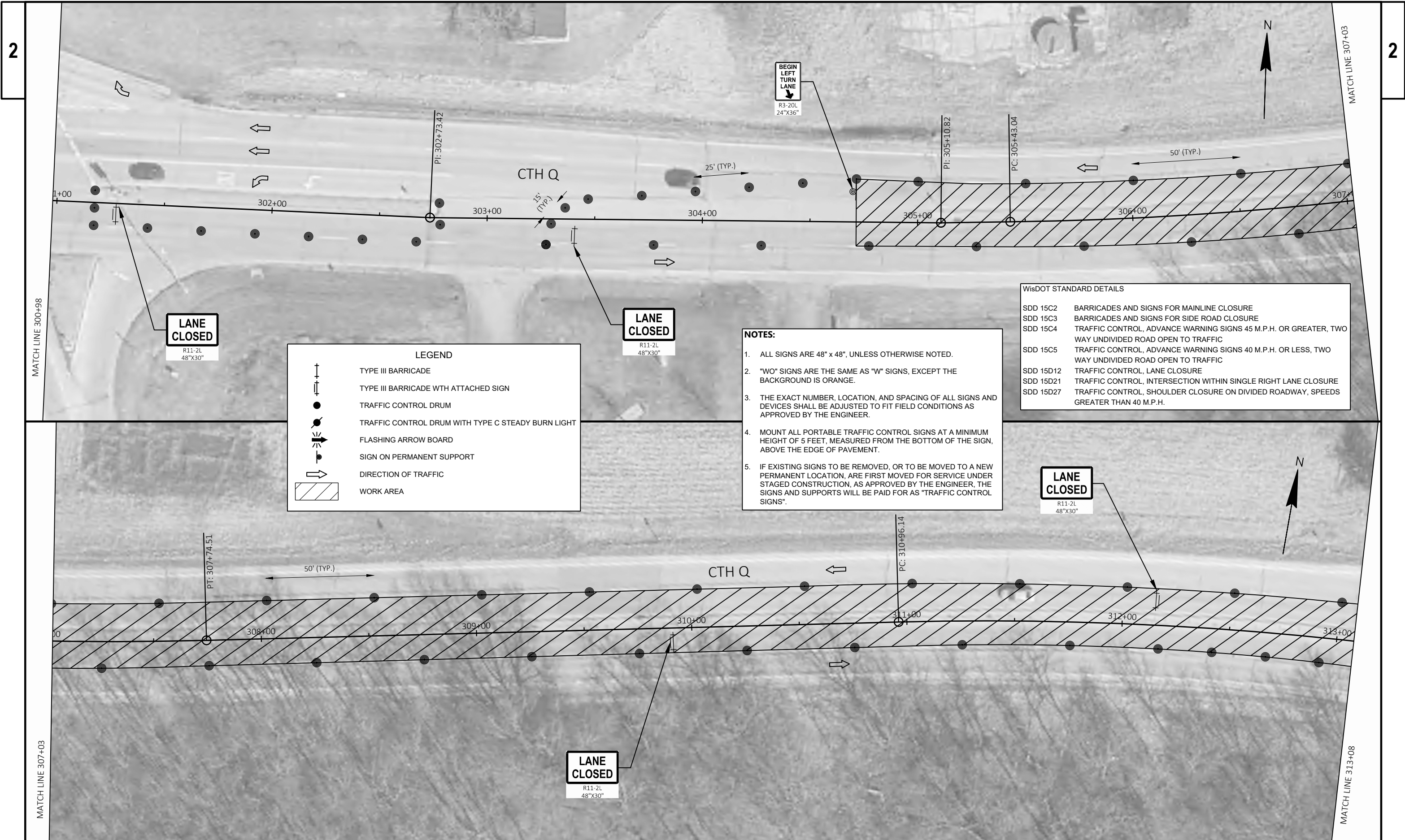


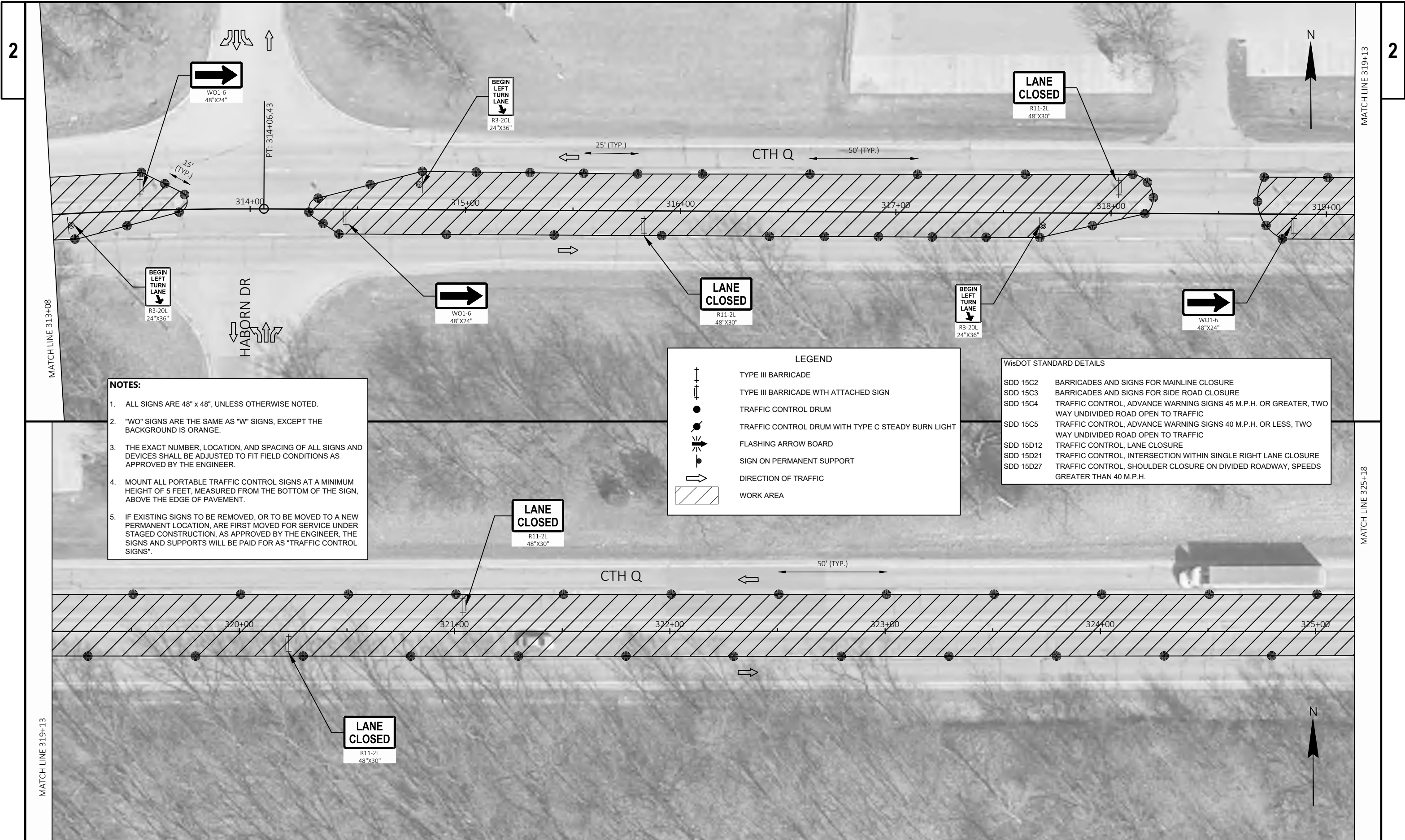
LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON PERMANENT SUPPORT
	DIRECTION OF TRAFFIC
	WORK AREA

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 - IF EXISTING SIGNS TO BE REMOVED, OR TO BE MOVED TO A NEW PERMANENT LOCATION, ARE FIRST MOVED FOR SERVICE UNDER STAGED CONSTRUCTION, AS APPROVED BY THE ENGINEER, THE SIGNS AND SUPPORTS WILL BE PAID FOR AS "TRAFFIC CONTROL SIGNS".

WisDOT STANDARD DETAILS	
SDD 15C2	BARRICADES AND SIGNS FOR MAINLINE CLOSURE
SDD 15C3	BARRICADES AND SIGNS FOR SIDE ROAD CLOSURE
SDD 15C4	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15C5	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15D12	TRAFFIC CONTROL, LANE CLOSURE
SDD 15D21	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
SDD 15D27	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.





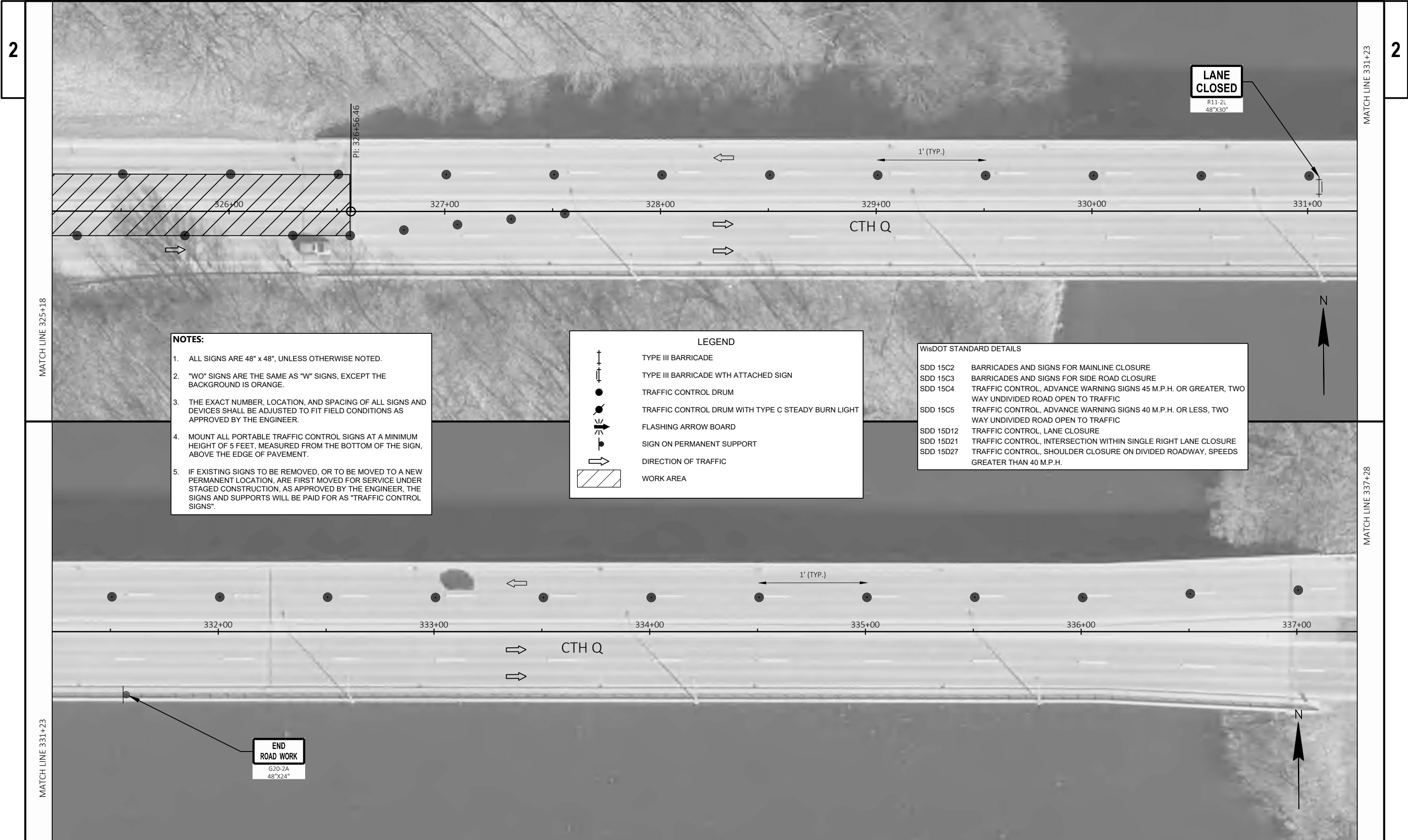


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LEGEND

	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
	DIRECTION OF TRAFFIC
	WORK AREA

WisDOT STANDARD DETAILS	
SDD 15C2	BARRICADES AND SIGNS FOR MAINLINE CLOSURE
SDD 15C3	BARRICADES AND SIGNS FOR SIDE ROAD CLOSURE
SDD 15C4	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15C5	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15D12	TRAFFIC CONTROL, LANE CLOSURE
SDD 15D21	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
SDD 15D27	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

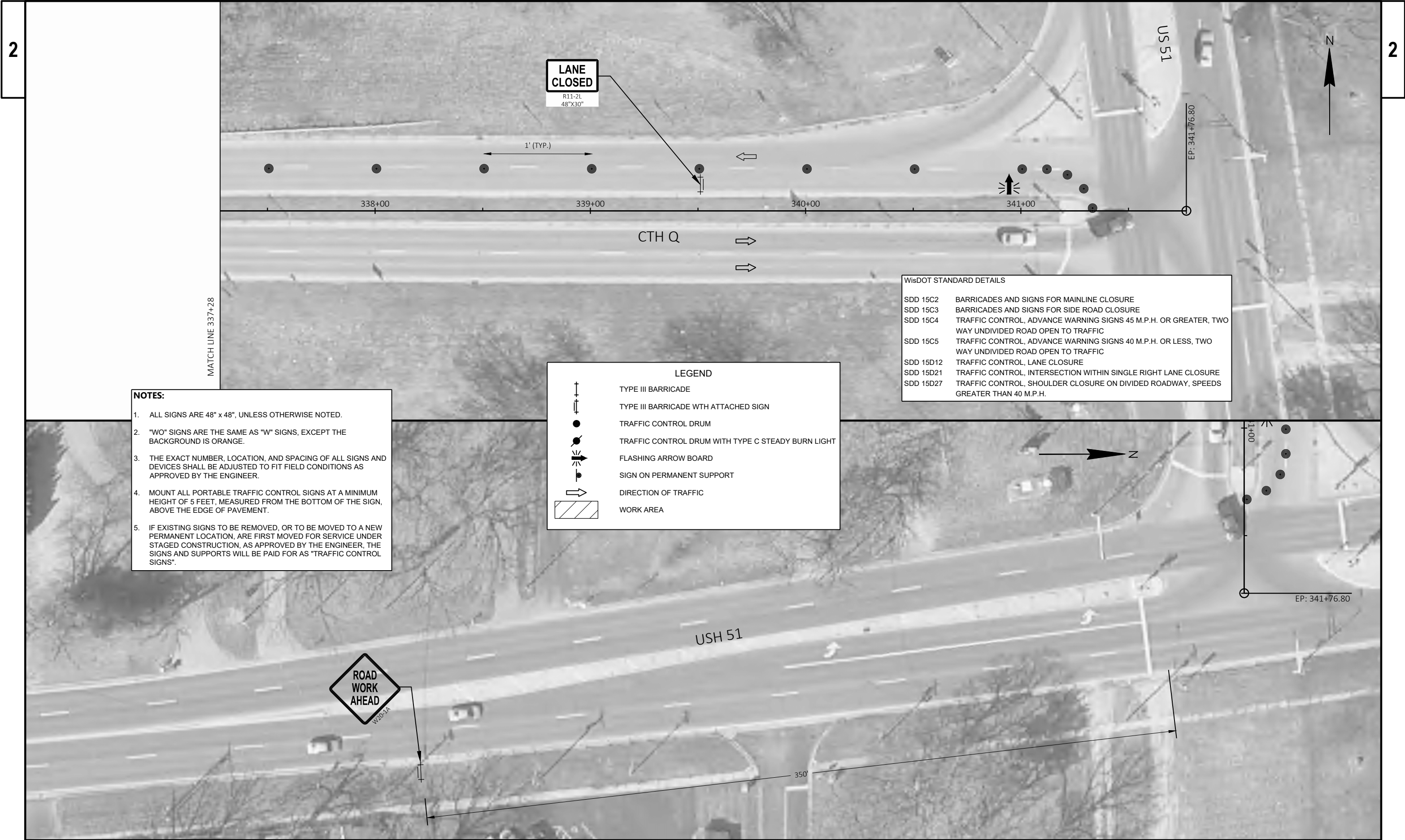


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LEGEND

- 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
- DIRECTION OF TRAFFIC
- WORK AREA

WisDOT STANDARD DETAILS	
SDD 15C2	BARRICADES AND SIGNS FOR MAINLINE CLOSURE
SDD 15C3	BARRICADES AND SIGNS FOR SIDE ROAD CLOSURE
SDD 15C4	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15C5	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15D12	TRAFFIC CONTROL, LANE CLOSURE
SDD 15D21	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
SDD 15D27	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

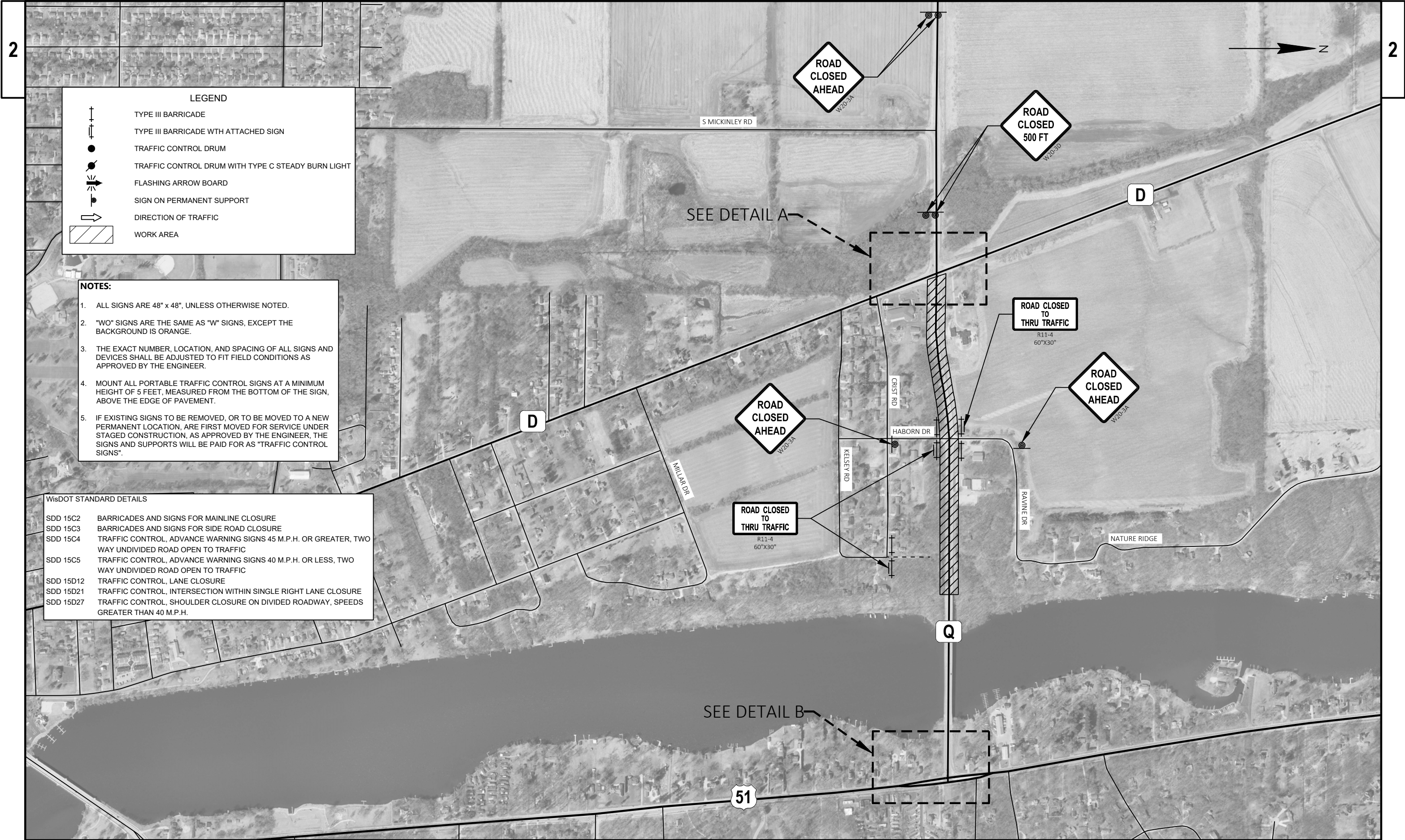


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LEGEND

- 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
- DIRECTION OF TRAFFIC
- WORK AREA

WisDOT STANDARD DETAILS	
SDD 15C2	BARRICADES AND SIGNS FOR MAINLINE CLOSURE
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SDD 15D21	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
SDD 15D27	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.



LEGEND

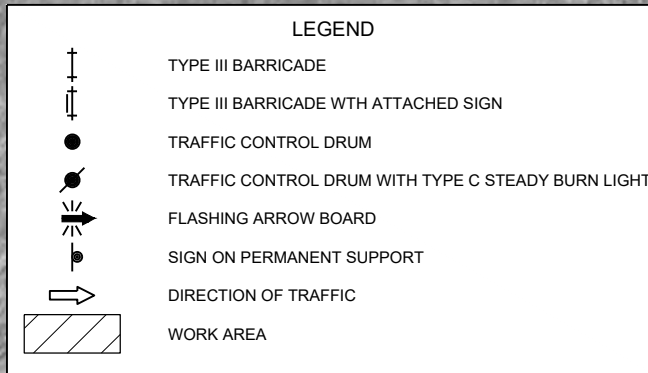
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

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WisDOT STANDARD DETAILS

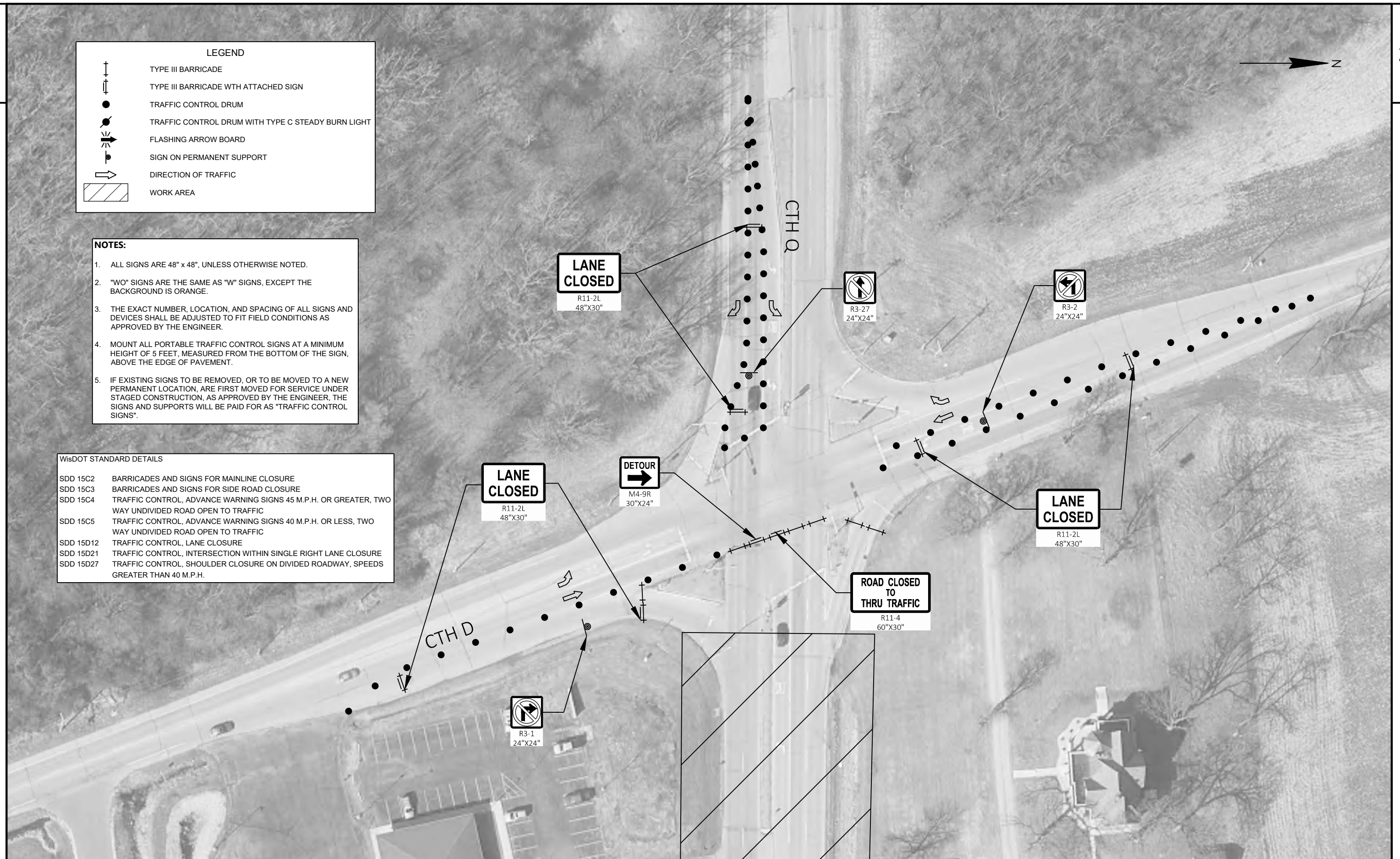
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SDD 15C4	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15C5	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15D12	TRAFFIC CONTROL, LANE CLOSURE
SDD 15D21	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
SDD 15D27	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.

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4. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
5. IF EXISTING SIGNS TO BE REMOVED, OR TO BE MOVED TO A NEW PERMANENT LOCATION, ARE FIRST MOVED FOR SERVICE UNDER STAGED CONSTRUCTION, AS APPROVED BY THE ENGINEER, THE SIGNS AND SUPPORTS WILL BE PAID FOR AS "TRAFFIC CONTROL SIGNS".

WisDOT STANDARD DETAILS

SDD 15C2	BARRICADES AND SIGNS FOR MAINLINE CLOSURE
SDD 15C3	BARRICADES AND SIGNS FOR SIDE ROAD CLOSURE
SDD 15C4	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15C5	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15D12	TRAFFIC CONTROL, LANE CLOSURE
SDD 15D21	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
SDD 15D27	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.



PROJECT NO: 5755-00-11

HWY: CTH Q

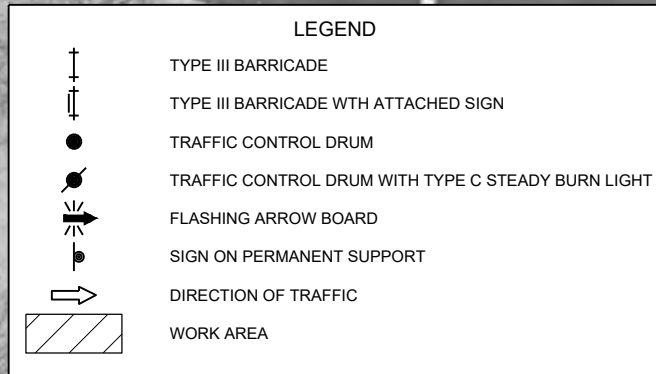
COUNTY: ROCK

TRAFFIC CONTROL (STAGE 3) DETAIL A

SHEET

45

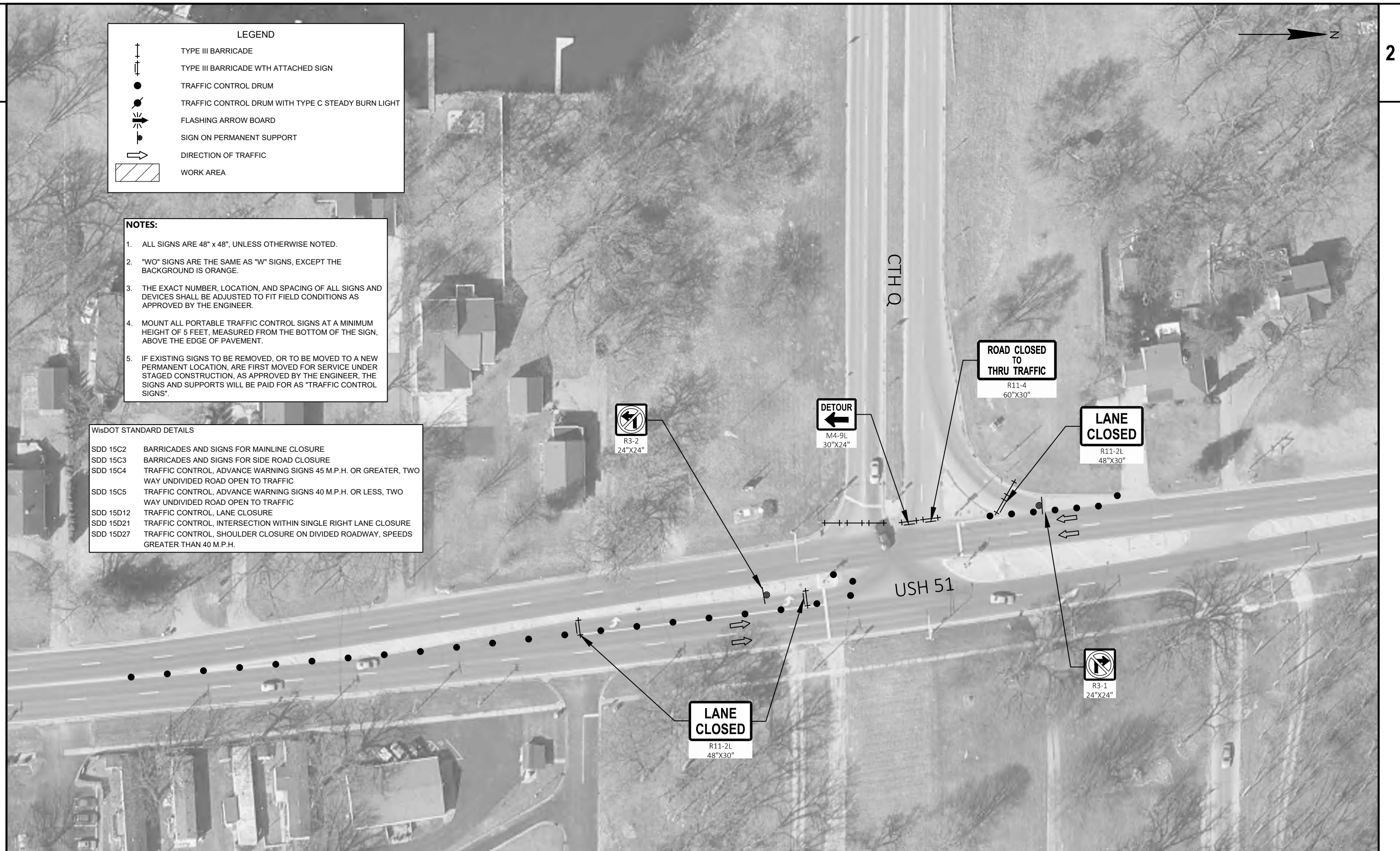
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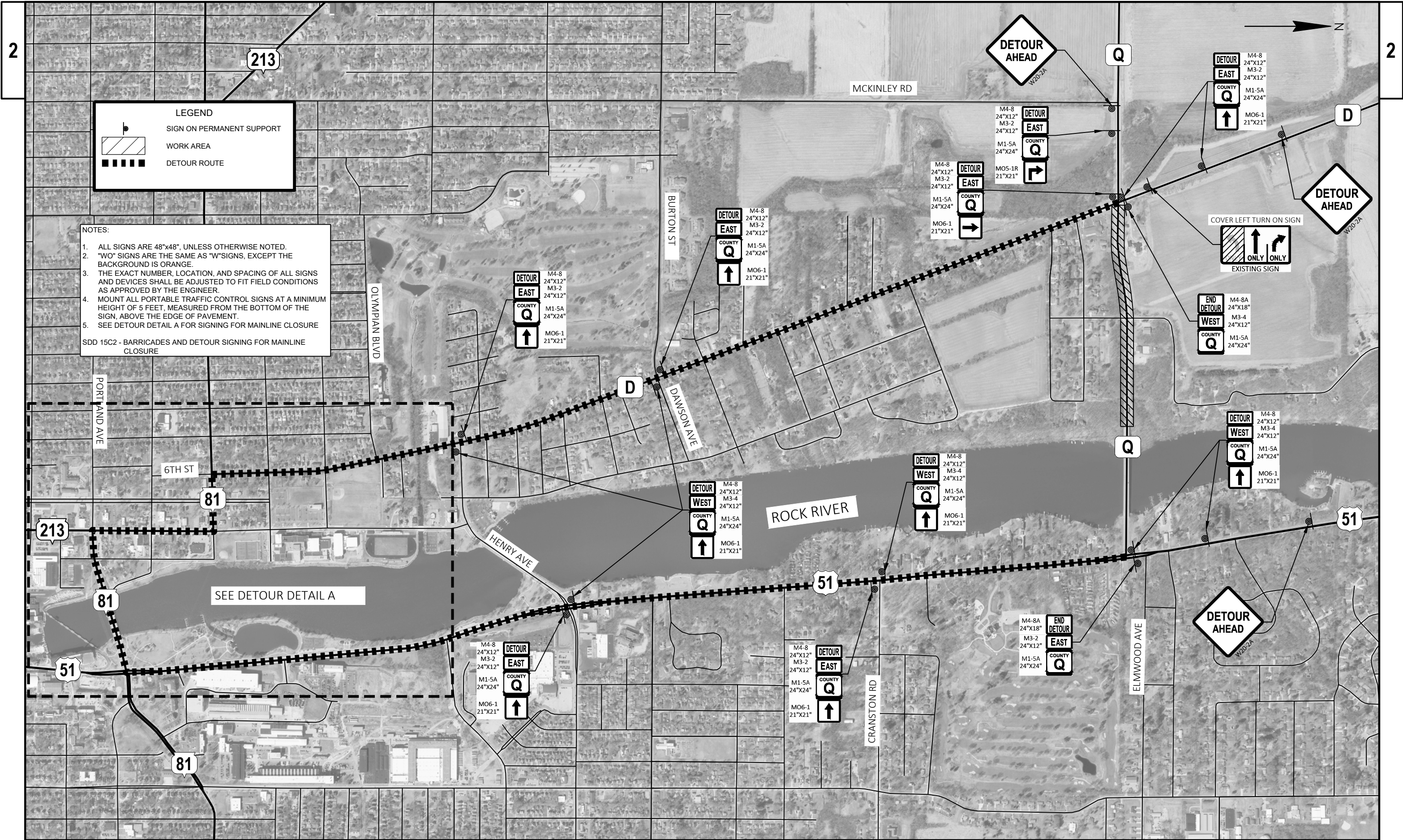
**NOTES:**

1. ALL SIGNS ARE 48" x 48", UNLESS OTHERWISE NOTED.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS, EXCEPT THE BACKGROUND IS ORANGE.
3. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
5. IF EXISTING SIGNS TO BE REMOVED, OR TO BE MOVED TO A NEW PERMANENT LOCATION, ARE FIRST MOVED FOR SERVICE UNDER STAGED CONSTRUCTION, AS APPROVED BY THE ENGINEER, THE SIGNS AND SUPPORTS WILL BE PAID FOR AS "TRAFFIC CONTROL SIGNS".

WisDOT STANDARD DETAILS

SDD 15C2	BARRICADES AND SIGNS FOR MAINLINE CLOSURE
SDD 15C3	BARRICADES AND SIGNS FOR SIDE ROAD CLOSURE
SDD 15C4	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15C5	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
SDD 15D12	TRAFFIC CONTROL, LANE CLOSURE
SDD 15D21	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE
SDD 15D27	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.





LEGEND

SIGN ON PERMANENT SUPPORT

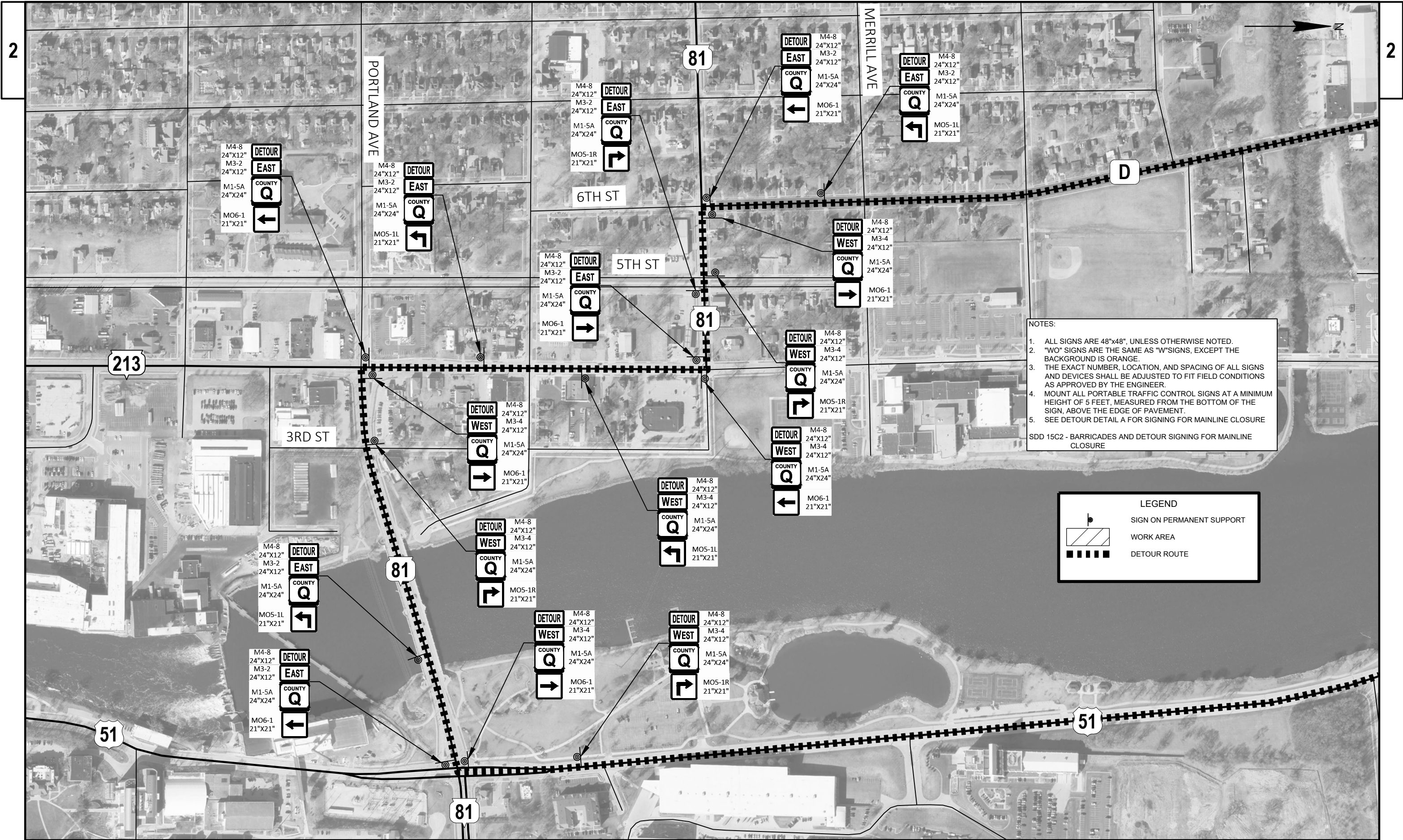
WORK AREA

DETOUR ROUTE

NOTES:

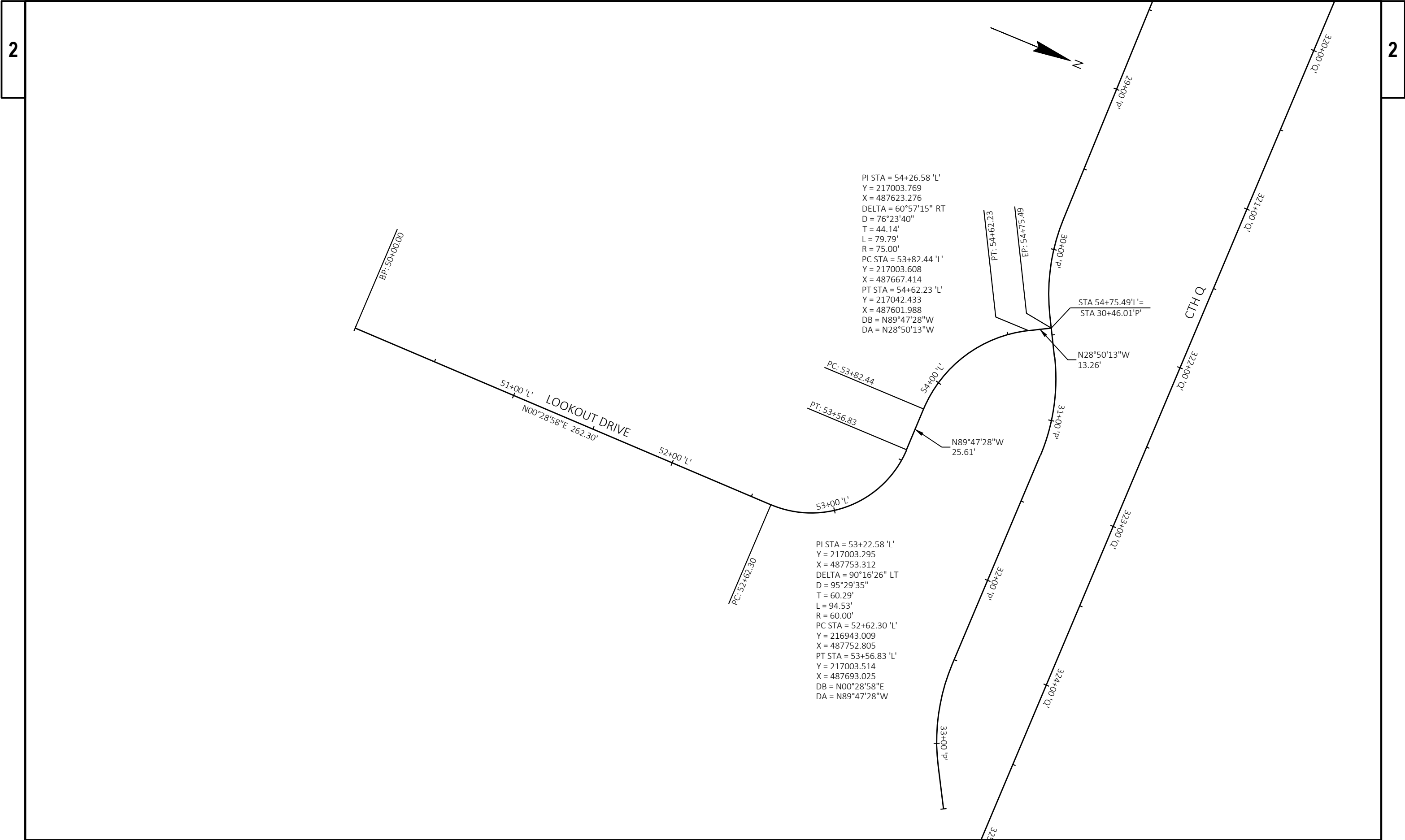
1. ALL SIGNS ARE 48"x48", UNLESS OTHERWISE NOTED.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS, EXCEPT THE BACKGROUND IS ORANGE.
3. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
4. MOUNT ALL PORTABLE TRAFFIC CONTROL SIGNS AT A MINIMUM HEIGHT OF 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN, ABOVE THE EDGE OF PAVEMENT.
5. SEE DETOUR DETAIL A FOR SIGNING FOR MAINLINE CLOSURE

SDD 15C2 - BARRICADES AND DETOUR SIGNING FOR MAINLINE CLOSURE



2

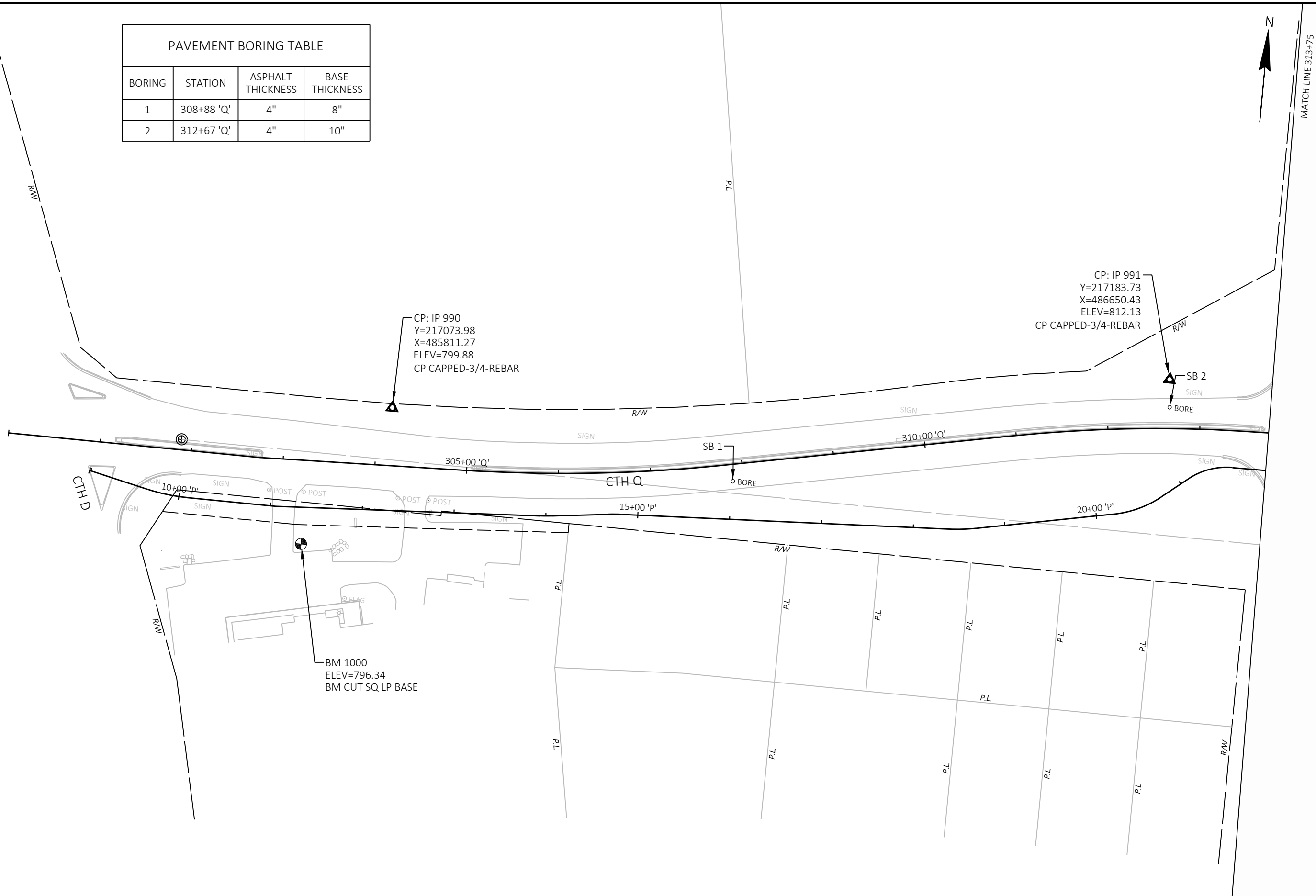




2

PAVEMENT BORING TABLE			
BORING	STATION	ASPHALT THICKNESS	BASE THICKNESS
1	308+88 'Q'	4"	8"
2	312+67 'Q'	4"	10"

2 |



PROJECT NO:	5755-00-11
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HWY: CTH Q

COUNTY: ROCK

CONTROL POINTS & SOIL BORINGS

SHEET

51

11

FILE NAME : J:\34500-34599\34549 - ROCK CO. - CTH Q 5755-00-10\DESIGN\5755-00-11\SHEETS\57550011_027301-CP.DWG
LAYOUT NAME - cp-01

PLOT DATE : 1/31/2024 11:52 AM

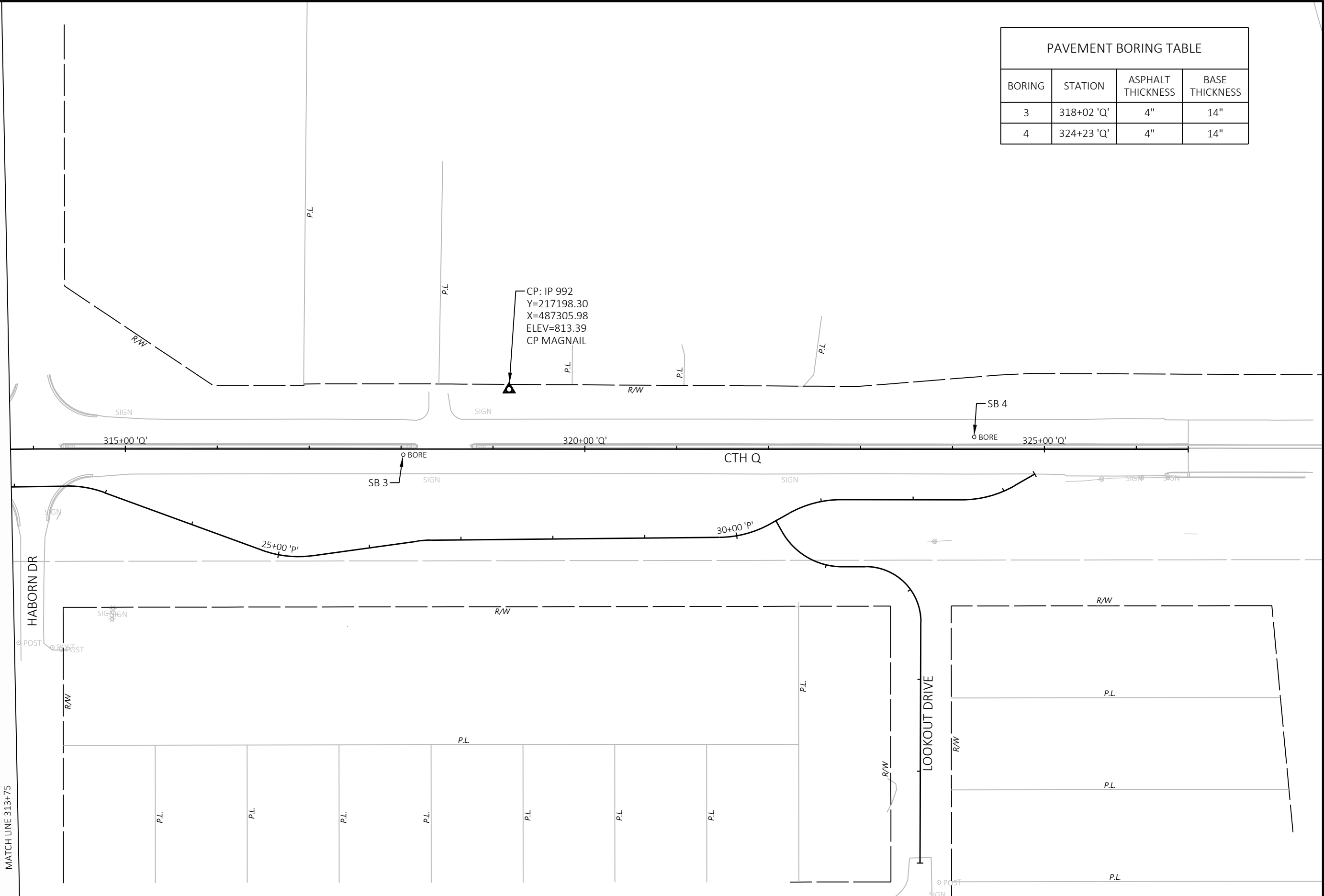
PLOT BY : LUCAS CHASE

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

PAVEMENT BORING TABLE			
BORING	STATION	ASPHALT THICKNESS	BASE THICKNESS
3	318+02 'Q'	4"	14"
4	324+23 'Q'	4"	14"



Estimate Of Quantities

5755-00-11					
Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	16.000	16.000
0004	203.0100	Removing Small Pipe Culverts	EACH	4.000	4.000
0006	204.0110	Removing Asphaltic Surface	SY	15,700.000	15,700.000
0008	204.0150	Removing Curb & Gutter	LF	350.000	350.000
0010	204.0155	Removing Concrete Sidewalk	SY	25.000	25.000
0012	204.0245	Removing Storm Sewer (size) 01. 21x15-Inch	LF	8.000	8.000
0014	205.0100	Excavation Common	CY	2,736.000	2,736.000
0016	205.0200	Excavation Rock	CY	818.000	818.000
0018	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 5755-00-11	EACH	1.000	1.000
0020	213.0100	Finishing Roadway (project) 01. 5755-00-11	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	550.000	550.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,700.000	1,700.000
0026	312.0110	Select Crushed Material	TON	2,900.000	2,900.000
0028	455.0605	Tack Coat	GAL	1,200.000	1,200.000
0030	460.2000	Incentive Density HMA Pavement	DOL	3,400.000	3,400.000
0032	460.5223	HMA Pavement 3 LT 58-28 S	TON	3,200.000	3,200.000
0034	460.5224	HMA Pavement 4 LT 58-28 S	TON	2,100.000	2,100.000
0036	465.0105	Asphaltic Surface	TON	400.000	400.000
0038	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	100.000	100.000
0040	465.0315	Asphaltic Flumes	SY	8.000	8.000
0042	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0044	521.1015	Apron Endwalls for Culvert Pipe Steel 15-Inch	EACH	6.000	6.000
0046	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	1.000	1.000
0048	521.3721	Pipe Arch Corrugated Steel 21x15-Inch	LF	8.000	8.000
0050	530.0115	Culvert Pipe Corrugated Polyethylene 15-Inch	LF	280.000	280.000
0052	530.0124	Culvert Pipe Corrugated Polyethylene 24-Inch	LF	390.000	390.000
0054	601.0407	Concrete Curb & Gutter 18-Inch Type D	LF	240.000	240.000
0056	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	200.000	200.000
0058	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	110.000	110.000
0060	602.0405	Concrete Sidewalk 4-Inch	SF	500.000	500.000
0062	602.0415	Concrete Sidewalk 6-Inch	SF	760.000	760.000
0064	602.0615	Curb Ramp Detectable Warning Field Radial Natural Patina	SF	100.000	100.000
0066	611.0639	Inlet Covers Type H-S	EACH	1.000	1.000
0068	611.0642	Inlet Covers Type MS	EACH	3.000	3.000
0070	611.2005	Manholes 5-FT Diameter	EACH	1.000	1.000
0072	611.3901	Inlets Median 1 Grate	EACH	3.000	3.000
0074	611.8110	Adjusting Manhole Covers	EACH	1.000	1.000
0076	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0078	619.1000	Mobilization	EACH	1.000	1.000
0080	624.0100	Water	MGAL	90.000	90.000
0082	625.0500	Salvaged Topsoil	SY	4,500.000	4,500.000
0084	627.0200	Mulching	SY	3,000.000	3,000.000
0086	628.1504	Silt Fence	LF	1,800.000	1,800.000
0088	628.1520	Silt Fence Maintenance	LF	1,800.000	1,800.000
0090	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0092	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0094	628.2004	Erosion Mat Class I Type B	SY	2,000.000	2,000.000
0096	628.7005	Inlet Protection Type A	EACH	3.000	3.000
0098	628.7020	Inlet Protection Type D	EACH	5.000	5.000
0100	628.7504	Temporary Ditch Checks	LF	50.000	50.000

Estimate Of Quantities

5755-00-11

Line	Item	Item Description	Unit	Total	Qty
0102	628.7555	Culvert Pipe Checks	EACH	3.000	3.000
0104	628.7560	Tracking Pads	EACH	2.000	2.000
0106	629.0210	Fertilizer Type B	CWT	4.000	4.000
0108	630.0140	Seeding Mixture No. 40	LB	90.000	90.000
0110	630.0200	Seeding Temporary	LB	100.000	100.000
0112	630.0500	Seed Water	MGAL	100.000	100.000
0114	633.5200	Markers Culvert End	EACH	5.000	5.000
0116	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	18.000	18.000
0118	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	9.000	9.000
0120	637.2210	Signs Type II Reflective H	SF	146.300	146.300
0122	637.2230	Signs Type II Reflective F	SF	15.250	15.250
0124	638.2102	Moving Signs Type II	EACH	6.000	6.000
0126	638.2602	Removing Signs Type II	EACH	19.000	19.000
0128	638.3000	Removing Small Sign Supports	EACH	18.000	18.000
0130	638.4000	Moving Small Sign Supports	EACH	5.000	5.000
0132	642.5201	Field Office Type C	EACH	1.000	1.000
0134	643.0300	Traffic Control Drums	DAY	15,000.000	15,000.000
0136	643.0420	Traffic Control Barricades Type III	DAY	2,000.000	2,000.000
0138	643.0705	Traffic Control Warning Lights Type A	DAY	4,000.000	4,000.000
0140	643.0715	Traffic Control Warning Lights Type C	DAY	1,500.000	1,500.000
0142	643.0800	Traffic Control Arrow Boards	DAY	100.000	100.000
0144	643.0900	Traffic Control Signs	DAY	6,000.000	6,000.000
0146	643.0920	Traffic Control Covering Signs Type II	EACH	50.000	50.000
0148	643.1050	Traffic Control Signs PCMS	DAY	30.000	30.000
0150	643.3960	Temporary Marking Removable Mask Out Tape 6-Inch	LF	1,500.000	1,500.000
0152	643.5000	Traffic Control	EACH	1.000	1.000
0154	645.0220	Geogrid Type SR	SY	2,600.000	2,600.000
0156	646.1020	Marking Line Epoxy 4-Inch	LF	10,700.000	10,700.000
0158	646.3020	Marking Line Epoxy 8-Inch	LF	60.000	60.000
0160	646.6120	Marking Stop Line Epoxy 18-Inch	LF	70.000	70.000
0162	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	250.000	250.000
0164	646.8220	Marking Island Nose Epoxy	EACH	6.000	6.000
0166	646.9000	Marking Removal Line 4-Inch	LF	400.000	400.000
0168	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0170	650.4500	Construction Staking Subgrade	LF	2,750.000	2,750.000
0172	650.5000	Construction Staking Base	LF	5,150.000	5,150.000
0174	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	310.000	310.000
0176	650.6000	Construction Staking Pipe Culverts	EACH	3.000	3.000
0178	650.8000	Construction Staking Resurfacing Reference	LF	2,400.000	2,400.000
0180	650.9000	Construction Staking Curb Ramps	EACH	3.000	3.000
0182	650.9911	Construction Staking Supplemental Control (project) 01. 5755-00-11	EACH	1.000	1.000
0184	650.9920	Construction Staking Slope Stakes	LF	2,750.000	2,750.000
0186	653.0900	Adjusting Pull Boxes	EACH	1.000	1.000
0188	690.0150	Sawing Asphalt	LF	750.000	750.000
0190	690.0250	Sawing Concrete	LF	60.000	60.000
0192	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0194	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0196	SPV.0060	Special 01. Sanitary Manhole Adjustment	EACH	1.000	1.000
0198	SPV.0060	Special 02. Utility Line Opening	EACH	5.000	5.000
0200	SPV.0060	Special 03. Locate and Reference Property Corners	EACH	4.000	4.000

Estimate Of Quantities

					5755-00-11
0202	SPV.0060	Special 04. Reset Property Corners	EACH	4.000	4.000

3

204 - ROADWAY REMOVALS

					201.0205	204.0110	204.0150	204.0155
					GRUBBING	REMOVING ASPHALTIC SURFACE	REMOVING CURB & GUTTER	REMOVING CONCRETE SIDEWALK
CATEGORY	STATION	TO	STATION	LOCATION	STA	SY	LF	SY
0010	302+73	-	326+57	CTH Q	-	15,500	140	15
0010	9+50	-	50+00	MULTI-USE PATH	16	30	110	-
0010	UNDISTRIBUTED			CURB	-	170	100	10
TOTAL 0010					16	15,700	350	25

305-645 - BASE AGGREGATE

					211.0101.01	305.0110	305.0120	312.0110	624.0100	645.0220
					PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) (01. 5755-00-11) EACH	BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	SELECT CRUSHED MATERIAL TON	WATER MGAL	GEOGRID TYPE SR SY
CATEGORY	STATION	TO	STATION	LOCATION						
0010	302+73	-	326+57	CTH Q	-	490	-	-	40	-
0010	9+50	-	50+00	MULTI-USE PATH	-	-	870	1,390	50	-
0010	UNDISTRIBUTED			PROJECT	1	60	-	-	-	-
0010	UNDISTRIBUTED EBS			PROJECT	-	-	830	1,510	-	2,600
TOTAL 0010					1	550	1,700	2,900	90	2,600

DIVISION	FROM/TO STATION	205.0100 COMMON EXCAVATION (1)		AVAILABLE MATERIAL (5)	205.0200 ROCK EXCAVATION (7)	EXPANDED ROCK (12)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE
		CUT (2)	EBS EXCAVATION (3)			FACTOR 1.00		FACTOR 1.00		
DIVISION 1										
ERWK-CTH-Q-PATH-WEST	10+00.00/21+50.00	300	45	300	0	0	180	180	120	120
ERWK-CTH-Q-PATH-EAST	23+00.00/33+00.00	229	45	229	728	728	87	-641	870	870
LOOKOUT-DR-PATH	50+50.00/54+70.00	57	10	57	90	90	62	-28	85	85
DIVISION 1 SUBTOTAL		586	100	586	818	818	329	-489	1,075	1,075
DIVISION 2										
CTH-Q	302+73.00/326+56.00	900	1,150	900	0	0	0	0	900	900
DIVISION 2 SUBTOTAL		900	1,150	900	0	0	0	0	900	900
GRAND TOTAL		1,486	1,250	586	818	818	329	-489	1,975	1,975
TOTAL COMMON EXC		2,736								

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) EBS EXCAVATION TO BE BACK FILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACK FILLED WITH BORROW, OR CUT AS WELL.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(6) MARSH EXCAVATION - TO BE BACK FILLED WITH SELECT BORROW MATERIAL. NOTE: THIS IS DESIGNERS CHOICE, CAN BE BACK FILLED WITH BORROW, OR CUT AS WELL. ITEM NUMBER 205.0500

(7) ROCK EXCAVATION ITEM NUMBER 205.0200

(12) EXPANDED ROCK FACTOR = 1.00

(13) EXPANDED FILL FACTOR = 1.00

DEPENDING ON SELECTIC EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

455-465 - HMA PAVEMENT																
				213.0100.01	455.0605	460.5223	460.5224	465.0105	465.0120	465.0315						
				FINISHING ROADWAY (PROJECT) (01. 5755-00-11)	TACK COAT	HMA PAVEMENT 3 LT 58-28 S	HMA PAVEMENT 4 LT 58-28 S	ASPHALTIC SURFACE	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	ASPHALTIC FLUMES						
CATEGORY	STATION	TO	STATION	LOCATION	EACH	GAL	TON	TON	TON	TON	TON	SY				
0010	302+73	-	326+57	CTH Q	1	1,200	3,200	2,100	-	100	8					
0010	9+50	-	50+00	MULTI-USE PATH	-	-	-	-	400	-	-					
TOTAL 0010					1	1,200	3,200	2,100	400	100	8					
520-530 - PIPES AND ENDWALLS																
				203.0100	204.0245.01	520.8000	521.1015	521.1024	521.3721	530.0115	530.0124	628.7555	633.5200			
				REMOVING SMALL PIPE CULVERTS	REMOVING STORM SEWER (SIZE) (01. 21X15-INCH)	CONCRETE COLLARS FOR PIPE	APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH	APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH	PIPE ARCH CORRUGATED STEEL 21X15- INCH	CULVERT PIPE CORRUGATED POLYETHYLENE 15-INCH	CULVERT PIPE CORRUGATED POLYETHYLENE 24- INCH	CULVERT PIPE CHECKS	MARKERS CULVERT END	STEEL THICKNESS	INVERT ELEVATIONS INLET	OUTLET
CATEGORY	FROM STRUCTURE	TO STRUCTURE	LOCATION	EACH	LF	EACH	EACH	EACH	LF	LF	LF	EACH	EACH			
0010	INL 1.1	EW 1.0	MULTI-USE PATH	-	-	-	-	1	-	-	45	-	1	0.064	792.54	792.40
0010	INL 1.2	INL 1.1	MULTI-USE PATH	1	-	-	-	-	-	-	175	-	-	0.064	793.06	792.54
0010	INL 1.3	INL 1.2	MULTI-USE PATH	1	-	-	-	-	-	-	170	-	-	0.064	793.57	793.06
0010	EX PIPE 1.4	INL 1.3	MULTI-USE PATH	-	8	1	-	-	8	-	-	-	-	0.064	795.9±	794.80
0010	INL 1.5	INL 1.3	MULTI-USE PATH	-	-	-	-	-	-	155	-	-	-	0.064	798.36	794.80
0010	EX PIPE AT HABORN	HABORN		1	-	-	-	-	-	-	-	-	-	-	-	-
0010	EW 2.1	EW 2.0	CTH Q	1	-	-	2	-	-	50	-	1	-	0.064	808.40	807.75
0010	EW 3.1	EW 3.0	MULTI-USE PATH	-	-	-	2	-	-	20	-	1	2	0.064	805.78	805.63
0010	EW 4.1	EW 4.0	MULTI-USE PATH	-	-	-	2	-	-	55	-	1	2	0.064	795.55	794.25
TOTAL 0010				4	8	1	6	1	8	280	390	3	5			

601-602 - CONCRETE ITEMS												
					601.0407	601.0411	601.0557	602.0405	602.0415	602.0615		
					CONCRETE CURB & GUTTER 18- INCH TYPE D	CONCRETE CURB & GUTTER 30- INCH TYPE D	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D	CONCRETE SIDEWALK 4-INCH	CONCRETE SIDEWALK 6-INCH	CURB RAMP DETECTABLE WARNING FIELD RADIAL NATURAL PATINA		
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	SF	SF	SF		
0010	302+73	-	326+57	CTH Q	140	-	-	100	-	-		
0010	9+50	-	50+00	MULTI-USE PATH	-	200	110	-	760	100		
0010	UNDISTRIBUTED			CURB	100	-	-	400	-	-		
TOTAL 0010					240	200	110	500	760	100		

3

3

611 - STORM STRUCTURES

CATEGORY	STRUCTURE	STATION	OFFSET	LOCATION	611.0639	611.0642	611.2005	611.3901	RIM ELEVATION	HIGH	LOW	SUMP ELEVATION	DEPTH (FT)
					INLET COVERS TYPE H-S EACH	INLET COVERS TYPE MS EACH	MANHOLES 5-FT DIAMETER EACH	INLETS MEDIAN 1 GRATE EACH		STRUCTURE INV. ELEV.	STRUCTURE INV. ELEV.		
0010	INL 1.1	9+98	LT	MULTI-USE PATH	-	1	-	1	794.93	792.54	792.54	792.54	2.39
0010	INL 1.2	11+75	LT	MULTI-USE PATH	-	1	-	1	795.66	793.06	793.06	793.02	2.64
0010	INL 1.3	13+45	LT	MULTI-USE PATH	1	-	1	-	797.41	794.80	793.57	793.57	3.84
0010	INL 1.5	15+00	LT	MULTI-USE PATH	-	1	-	1	800.44	-	798.36	798.36	2.08
TOTAL 0010					1	3	1	3					

611 - ADJUSTMENTS

CATEGORY	STATION	LOCATION	611.8110	611.8115	653.0900	SPV.0060.01	PROPOSED ADJUSTMENT
			ADJUSTING MANHOLE COVERS EACH	ADJUSTING INLET COVERS EACH	ADJUSTING PULL BOXES EACH	SPECIAL (01. SANITARY MANHOLE ADJUSTMENT) EACH	
0010	9+63	MULTI-USE PATH	-	-	1	-	-
0010	305+18	CTH Q	-	1	-	-	-
0010	309+75	CTH Q	-	1	-	-	-
0010	326+30	CTH Q	1	-	-	-	-
0020	52+17	MULTI-USE PATH	-	-	-	1	+0.36
TOTAL 0010			1	2	1	1	

MISCELLANEOUS AND SPECIALS

CATEGORY	STATION	LOCATION	642.5201	SPV.0060.02
			FIELD OFFICE TYPE C EACH	SPECIAL (02. UTILITY LINE OPENING) EACH
0010	UNDISTRIBUTED	CTH Q	1	-
0010	UNDISTRIBUTED	MULTI-USE PATH	-	5
TOTAL 0010			1	5

625-630 - LANDSCAPING ITEMS

					625.0500	627.0200	628.2004	629.0210	630.0140	630.0200	630.0500
					SALVAGED		EROSION MAT	FERTILIZER TYPE	SEEDING	SEEDING	
					TOPSOIL	MULCHING	CLASS I TYPE B	B	MIXTURE NO. 40	TEMPORARY	SEED WATER
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	SY	CWT	LB	LB	MGAL
0010	302+73	-	326+57	CTH Q	100	100	-	1	5	5	5
0010	9+50	-	50+00	MULTI-USE PATH	4,000	2,500	1,500	2	65	70	80
0010	UNDISTRIBUTED			PROJECT	400	400	500	1	20	25	15
TOTAL 0010					4,500	3,000	2,000	4	90	100	100

628-633 - EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520	628.1905	628.1910	628.7005	628.7020	628.7504	628.7560
					SILT FENCE LF	SILT FENCE MAINTENANCE LF	MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EROSION CONTROL EACH	INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE D EACH	TEMPORARY DITCH CHECKS LF	TRACKING PADS EACH
0010	302+73	-	326+57	CTH Q	-	-	1	1	3	-	-	-
0010	9+50	-	50+00	MULTI-USE PATH	1,800	1,800	1	1	-	5	50	2
TOTAL 0010					1,800	1,800	2	2	3	5	50	2

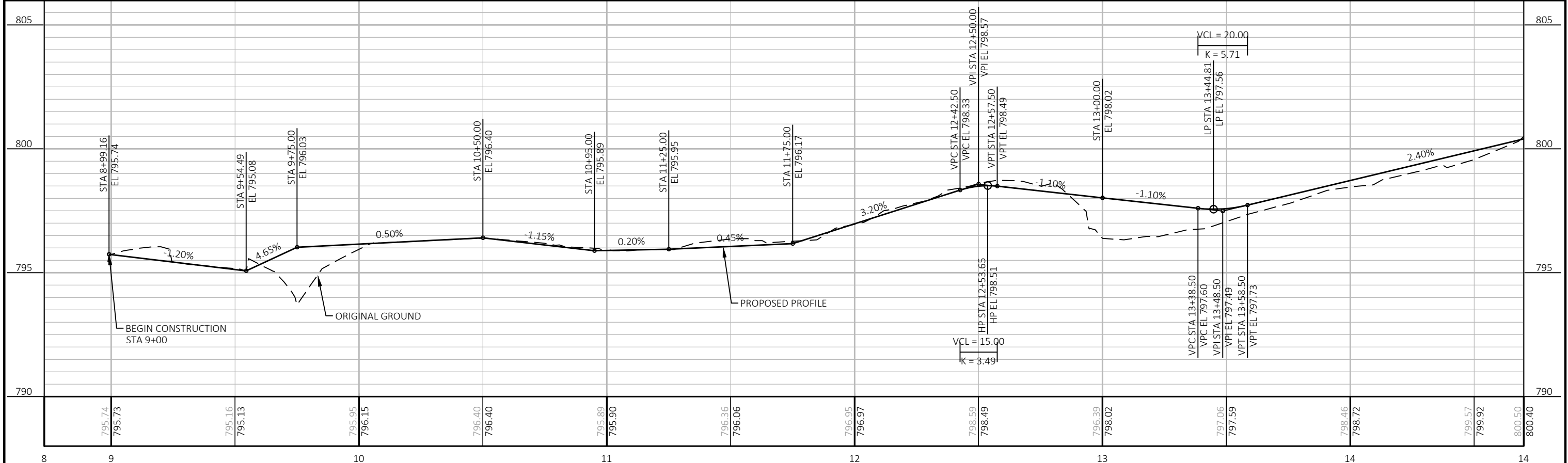
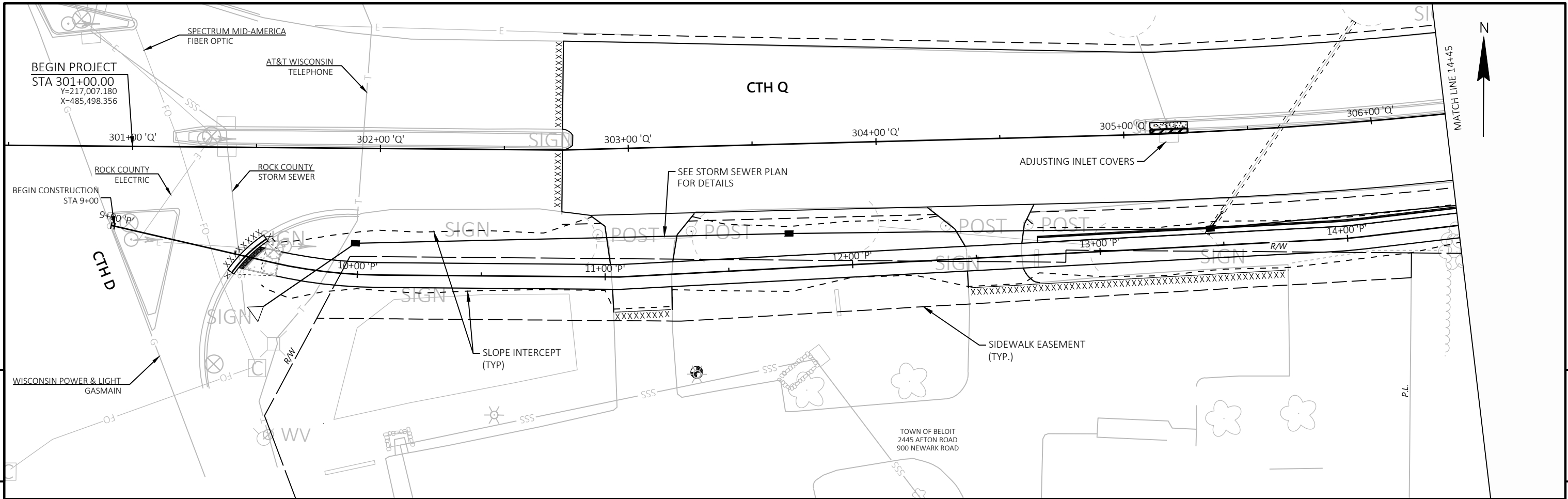
634-638 - SIGNS													
WisDOT				634.0616	634.0812	637.2210	637.2230	638.2102	638.2602	638.3000	638.4000		
				POSTS WOOD	TUBULAR STEEL	SIGNS TYPE II	SIGNS TYPE II	MOVING SIGNS	REMOVING	REMOVING	MOVING SMALL		
				4X6-INCH X 16-	2X2-INCH X 12-	REFLECTIVE H	REFLECTIVE F	TYPE II	SIGNS TYPE II	SMALL SIGN	SIGN SUPPORTS		
CATEGORY	SIGN PLAN	SERIES	SIZE	LOCATION	FT	SF	SF	EACH	EACH	EACH	EACH	EACH	REMARKS
NUMBER	CODE	(INXIN)			EACH								
0010	01-01	R1-1	30X30	CTH Q	1	-	5.18	-	-	1	1	-	-
0010	01-02	R5-3	24X24	MULTI-USE PATH	-	1	4.00	-	-	-	-	-	-
0010	01-03	D11-1	24x18	MULTI-USE PATH	-	-	3.00	-	-	-	-	-	SAME POST AS 01-02
0010	01-04	R1-1	18X18	MULTI-USE PATH	-	1	1.86	-	-	-	-	-	-
0010	01-05	R1-53	-	CTH Q	-	-	-	-	1	-	-	-	-
0010	01-06	R2-1	24X30	CTH Q	1	-	7.50	-	-	1	1	-	-
0010	01-07	-	-	MULTI-USE PATH	-	-	-	-	1	-	-	1	-
0010	01-08	-	-	MULTI-USE PATH	-	-	-	-	2	-	-	2	-
0010	01-09	R4-7	24X30	CTH Q	1	-	5.00	-	-	1	1	-	-
0010	01-10	-	-	MULTI-USE PATH	-	-	-	-	1	-	-	1	-
0010	02-01	W3-3	36X36	CTH Q	1	-	-	9.00	-	1	1	-	-
0010	02-02	W11-8	30X30	CTH Q	1	-	-	6.25	-	1	1	-	-
0010	03-01	R2-1	30X36	CTH Q	1	-	7.50	-	-	1	1	-	-
0010	03-02	R5-1	36X36	CTH Q	1	-	9.00	-	-	1	1	-	-
0010	03-03	R1-1	18X18	MULTI-USE PATH	-	1	1.86	-	-	-	-	-	-
0010	03-04	R5-3	24x24	MULTI-USE PATH	-	1	4.00	-	-	-	-	-	-
0010	03-05	D11-1	24x18	MULTI-USE PATH	-	-	3.00	-	-	-	-	-	SAME POST AS 03-04
0010	03-06	-	-	CTH Q	-	-	-	-	2	-	-	1	-
0010	03-07	R4-7	24x30	CTH Q	1	-	5.00	-	-	1	1	-	-
0010	03-08	R1-1	30X30	HABORN	1	-	5.18	-	-	1	1	-	-
0010	03-09	R4-8	24x30	CTH Q	1	-	5.00	-	-	1	1	-	-
0010	03-10	R5-3	24x24	MULTI-USE PATH	-	1	4.00	-	-	-	-	-	-
0010	03-11	D11-1	24x18	MULTI-USE PATH	-	-	3.00	-	-	-	-	-	SAME POST AS 03-10
0010	03-12	R1-1	18X18	MULTI-USE PATH	-	1	1.86	-	-	-	-	-	-
0010	03-13	R5-1	36X36	CTH Q	1	-	9.00	-	-	1	1	-	-
0010	04-01	R4-7	24x30	CTH Q	1	-	5.00	-	-	1	1	-	-
0010	04-02	R6-2L	30X36	CTH Q	1	-	7.00	-	-	1	1	-	-
0010	04-03	R4-8	24x30	CTH Q	1	-	5.00	-	-	1	1	-	-
0010	04-04	R5-1	36X36	CTH Q	1	-	9.00	-	-	1	1	-	-
0010	04-05	W8-64	36X36	CTH Q	1	-	9.00	-	-	1	1	-	-
0010	05-01	R5-3	24x24	MULTI-USE PATH	-	1	4.00	-	-	-	-	-	-
0010	05-02	D11-1	24x18	MULTI-USE PATH	-	-	3.00	-	-	-	-	-	SAME POST AS 05-01
0010	05-03	R1-1	18X18	MULTI-USE PATH	-	1	1.86	-	-	-	-	-	-
0010	05-04	R2-1	30X36	CTH Q	1	-	7.50	-	-	1	1	-	-
0010	05-05	R9-55	18X24	CTH Q	1	-	3.00	-	-	1	1	-	-
0010	06-01	R5-3	24x24	MULTI-USE PATH	-	1	4.00	-	-	-	-	-	-
0010	06-02	D11-1	24x18	MULTI-USE PATH	-	-	3.00	-	-	-	-	-	SAME POST AS 06-01
TOTAL 0010					18.00	9.00	146.30	15.25	6	19	18	5	

3

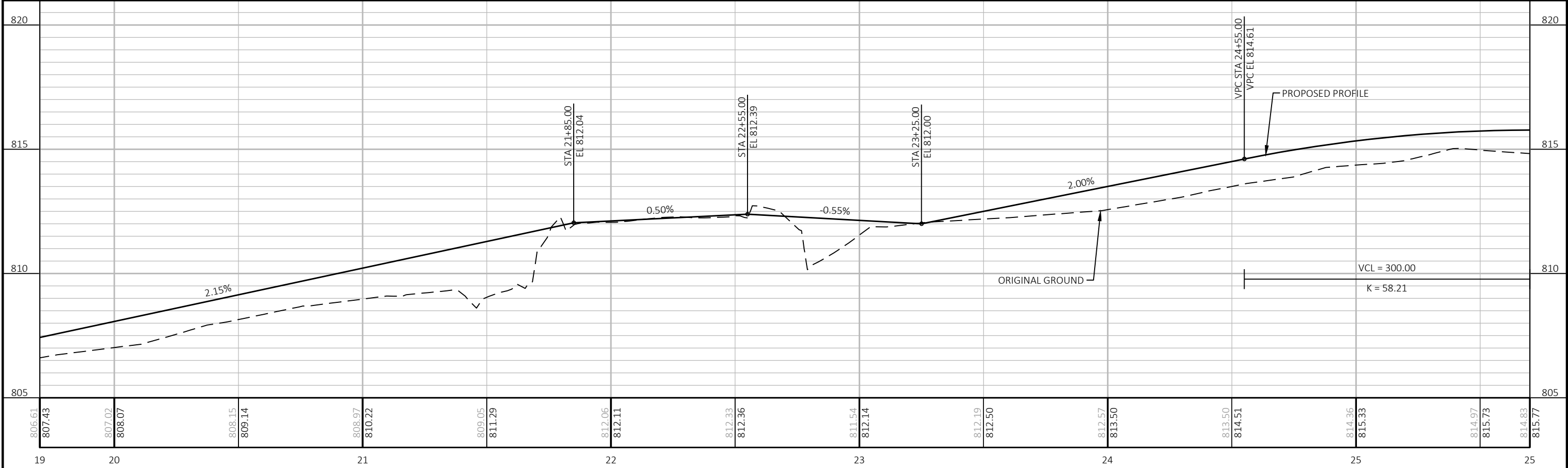
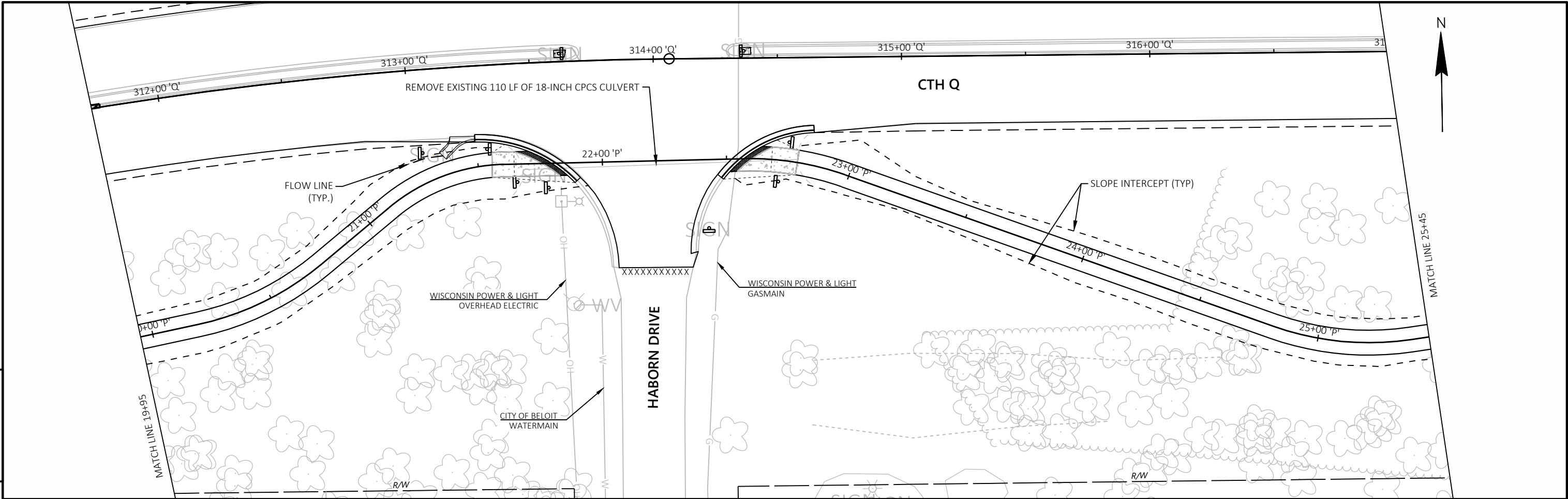
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* Covering Signs used for one cycle (Stage 3)

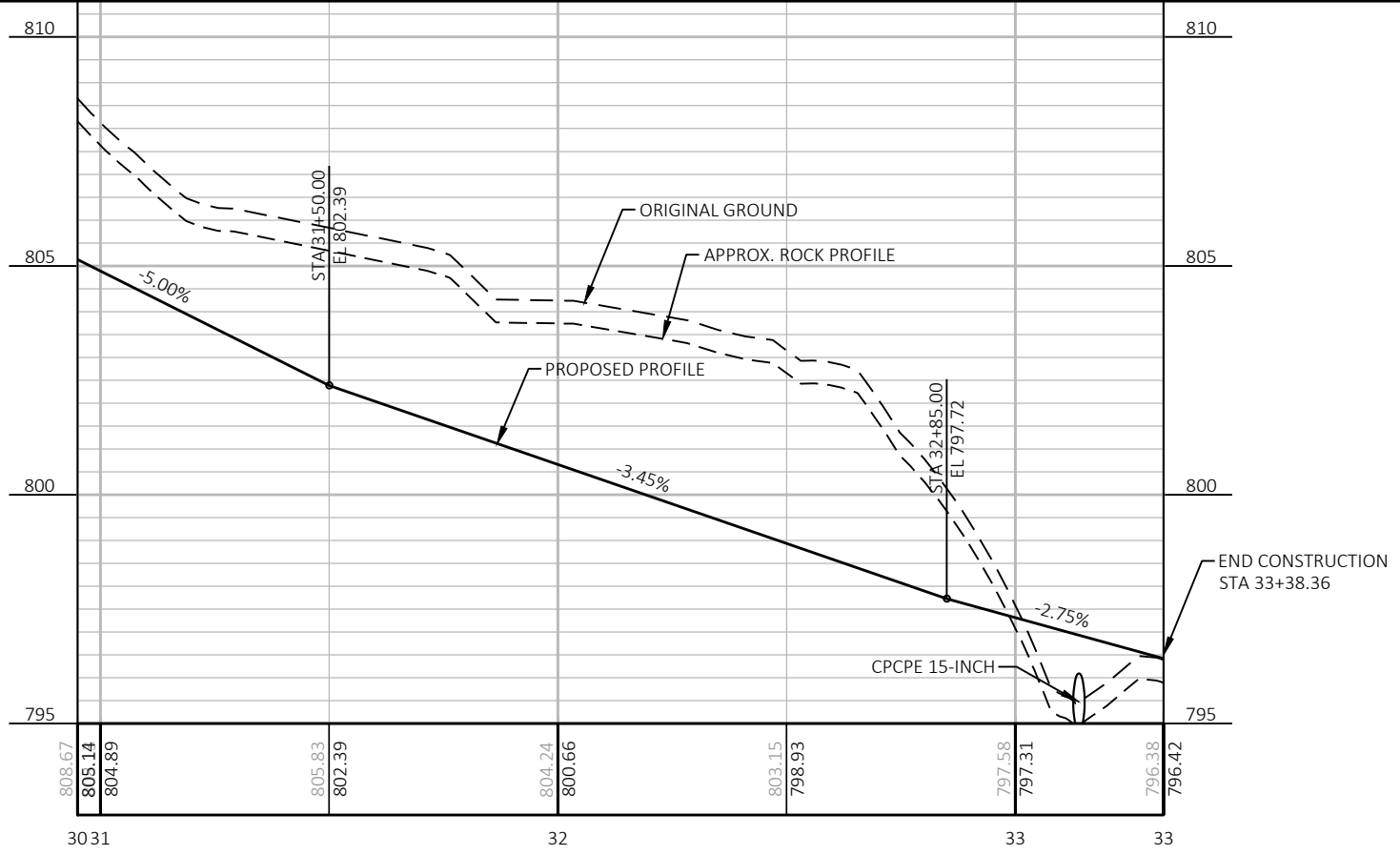
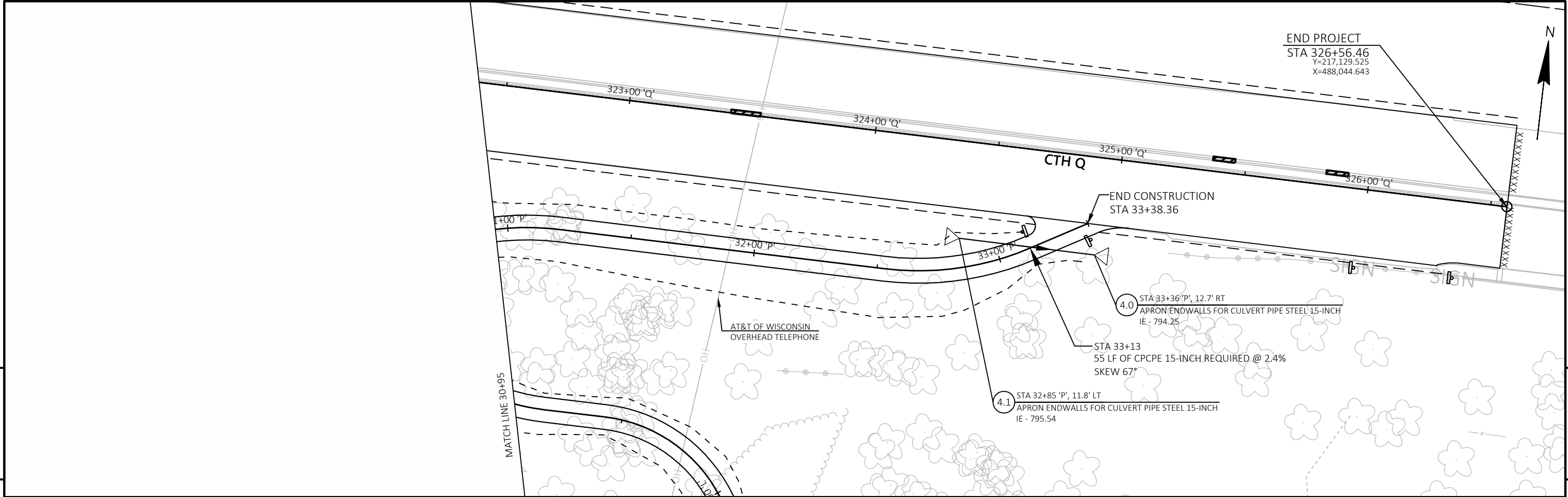
TOTAL 0010TOTAL 0010TOTAL 0010

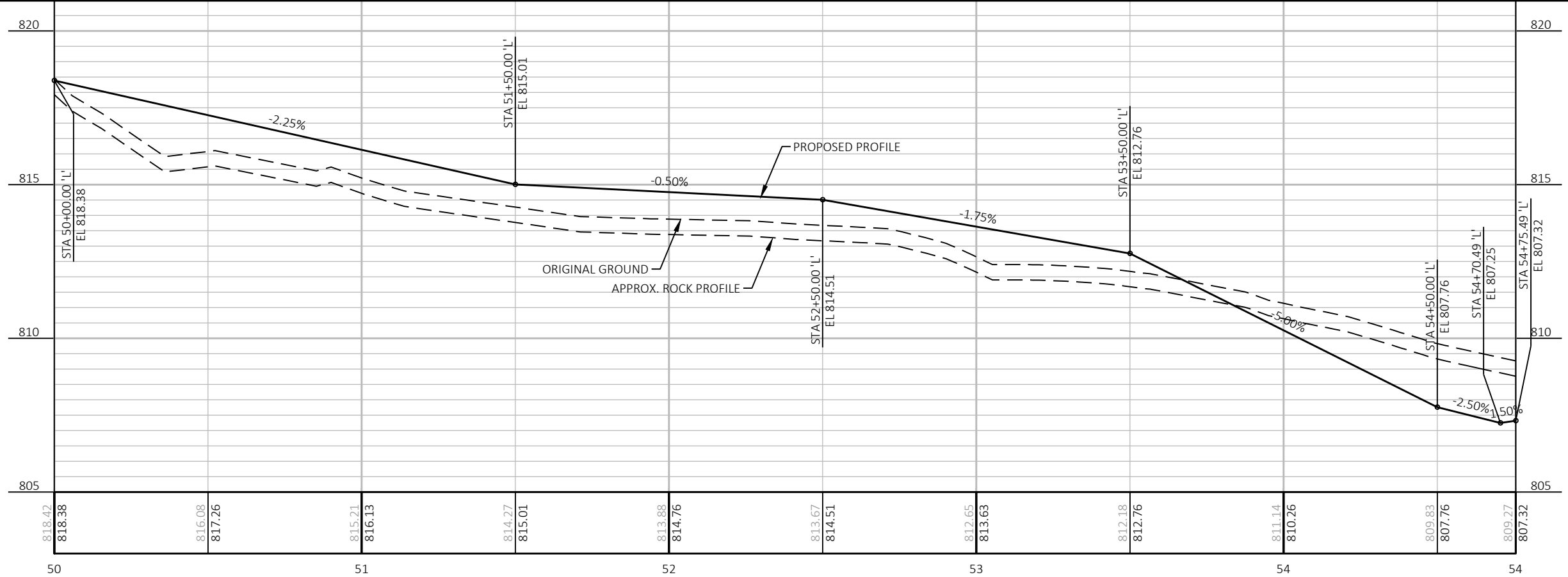
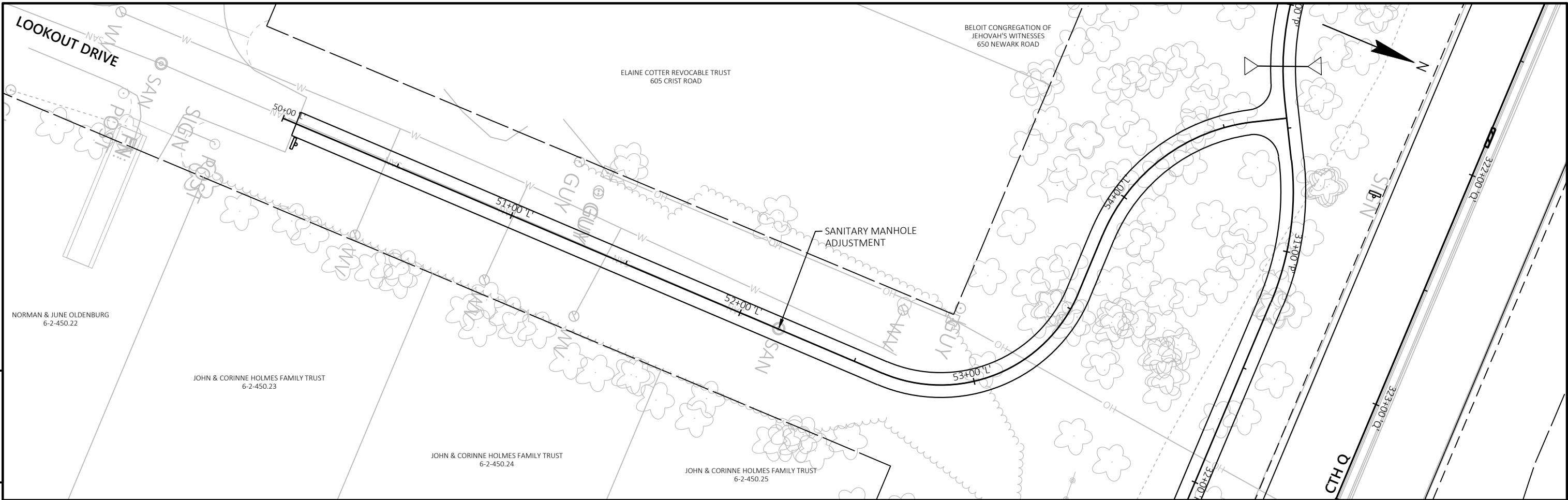


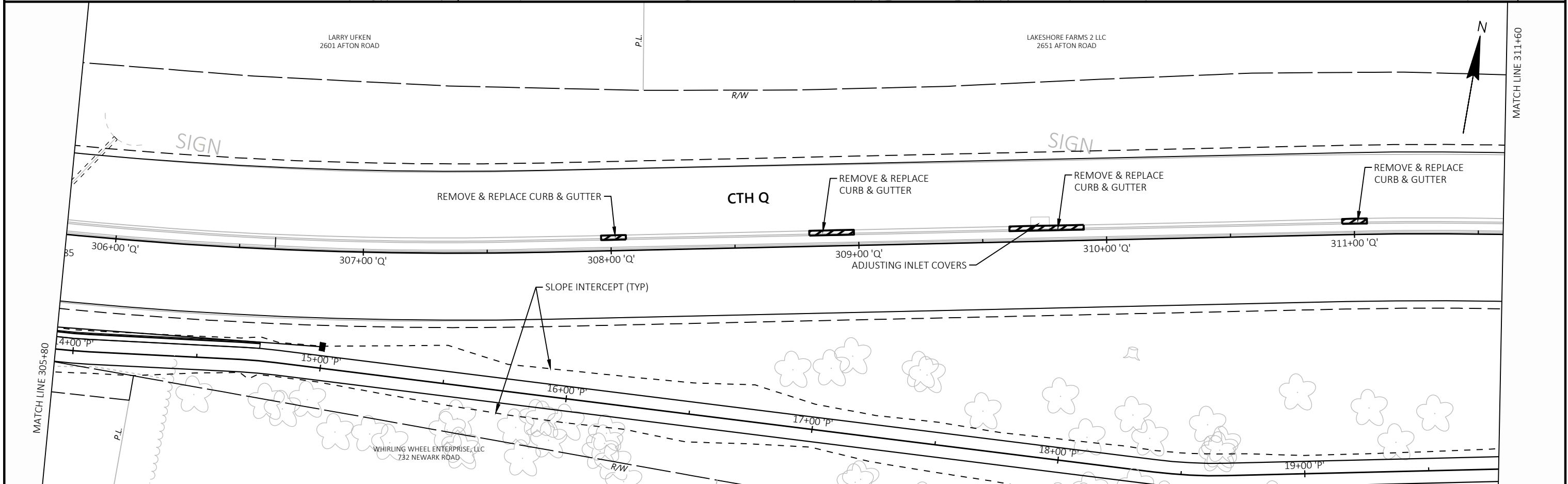
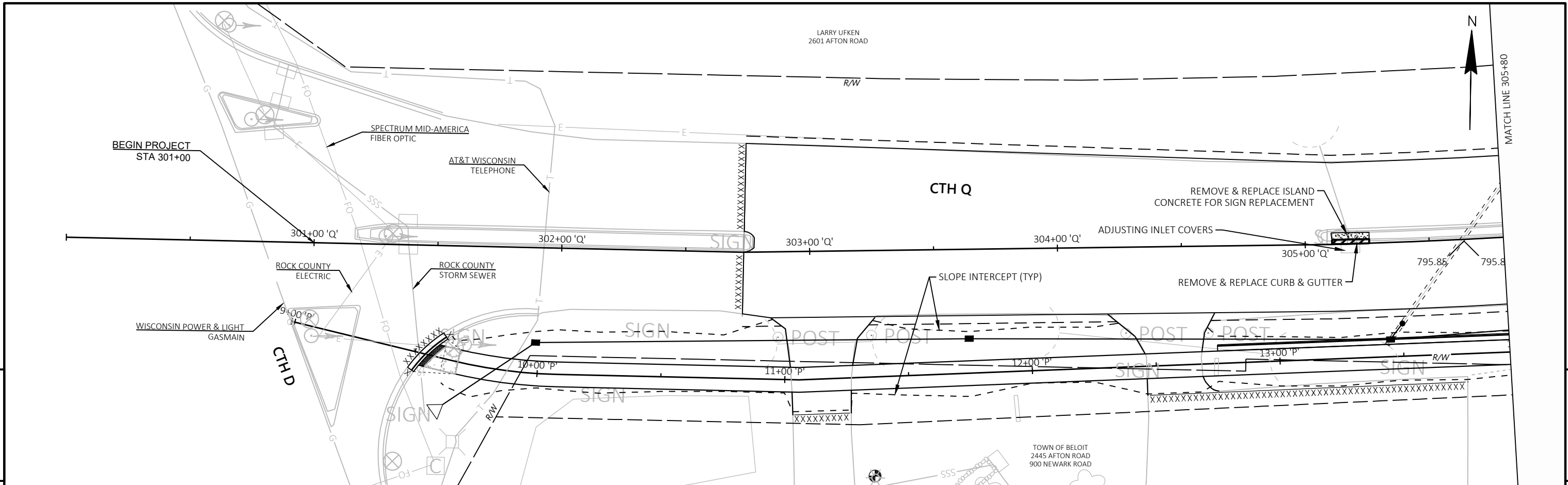
PROJECT NO:	5755-00-11	HWY:	CTH Q	COUNTY:	ROCK	PLAN AND PROFILE:	CTH Q BIKE PATH	SHEET	61	E
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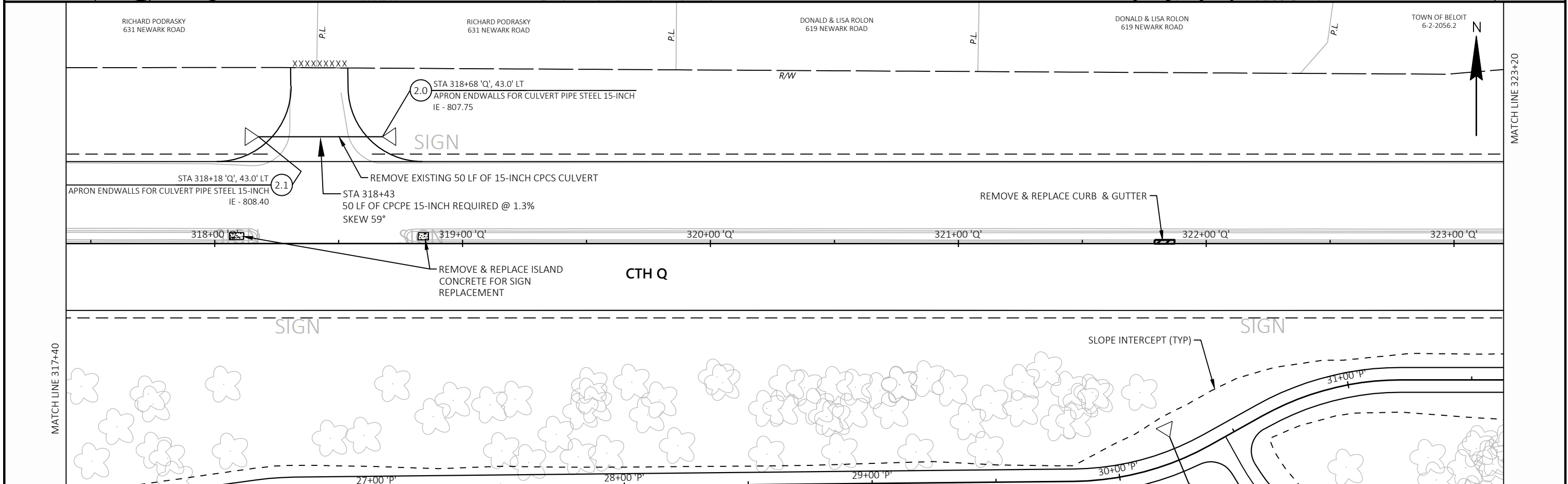
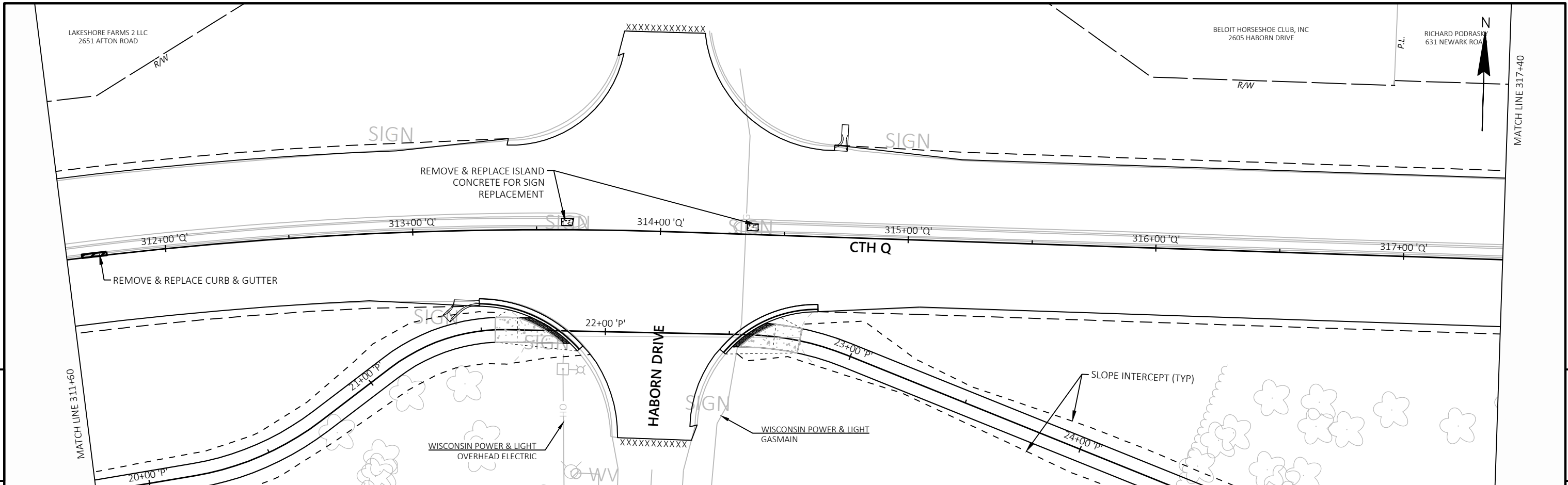
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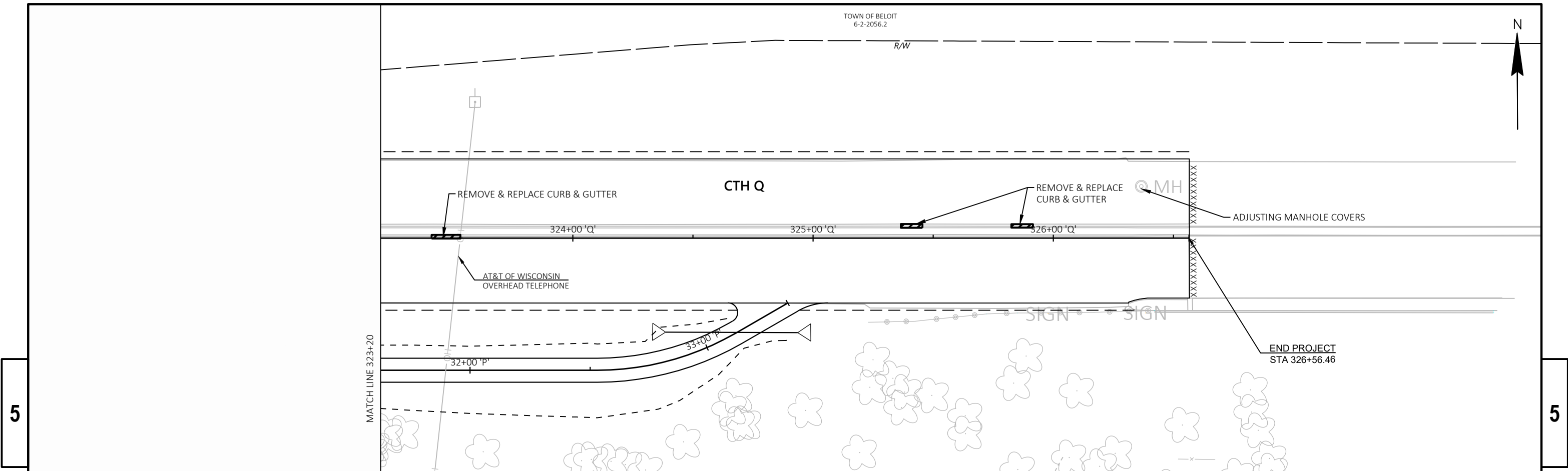




PROJECT NO: 5755-00-11	HWY: CTH Q	COUNTY: ROCK	CTH Q ROADWAY PLAN	SHEET 67	E
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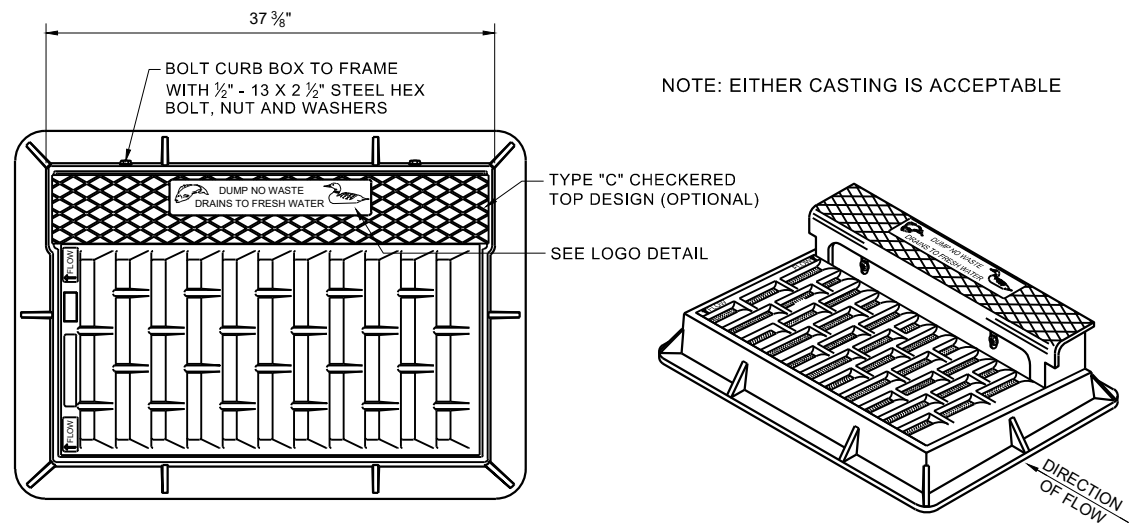


PROJECT NO: 5755-00-11	HWY: CTH Q	COUNTY: ROCK	CTH Q ROADWAY PLAN	SHEET 68
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Standard Detail Drawing List

08A05-20A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-20B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-20C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A09-02	CATCH BASINS 2X3-FT AND 2.5X3-FT
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-02	INLETS 3-FT AND 4-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-21A	CURB RAMPS TYPES 1 AND 1-A
08D05-21B	CURB RAMPS TYPES 2 AND 3
08D05-21C	CURB RAMPS TYPES 4A AND 4A1
08D05-21D	CURB RAMPS TYPE 4B AND 4B1
08D05-21E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-21F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-21G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D15-05A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08D17-06	MANHOLES, MANHOLE & INLET COVERS
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13C19-03	HMA LONGITUDINAL JOINTS
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C18-08A	MEDIAN ISLAND MARKING PAVEMENT MARKINGS
15C18-08B	MEDIAN ISLAND MARKING MEDIAN ISLAND NOSE
15C18-08C	MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D12-12A	TRAFFIC CONTROL, LANE CLOSURE, WITH TEMPORARY RUMBLE STRIPS
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D20-07B	TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D20-07C	TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL

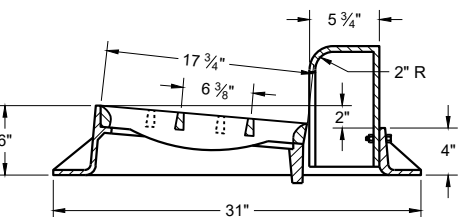
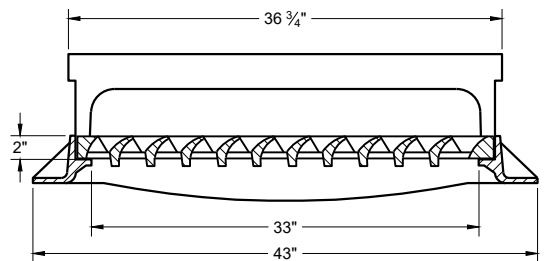
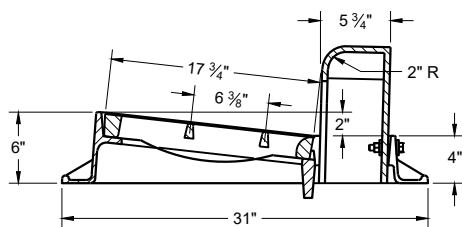
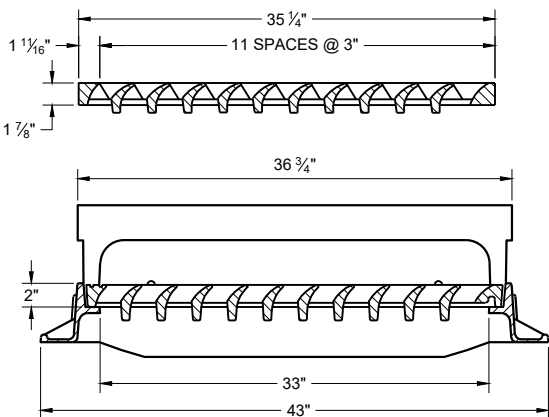


NOTE: EITHER CASTING IS ACCEPTABLE

TYPE "C" CHECKERED TOP DESIGN (OPTIONAL)

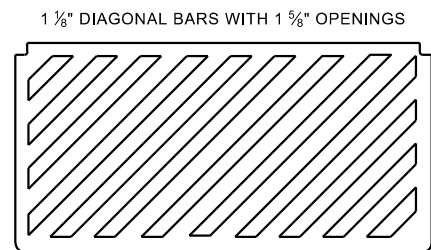
SEE LOGO DETAIL

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"



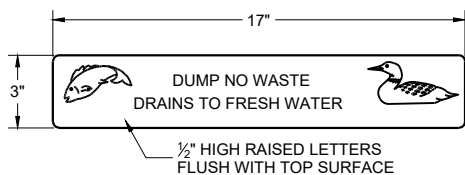
TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



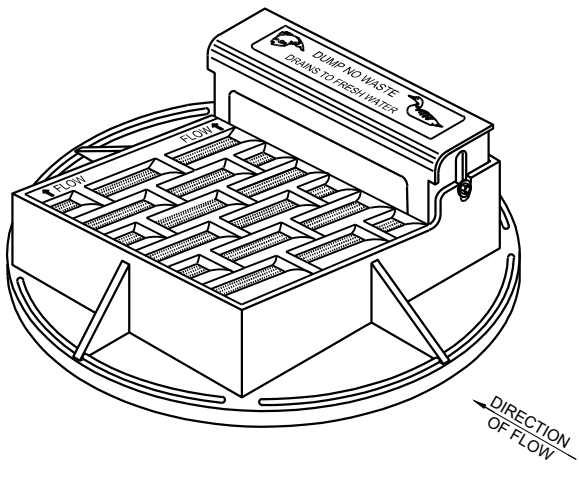
LOGO DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

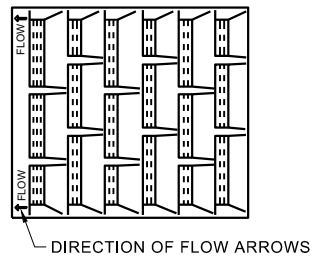
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

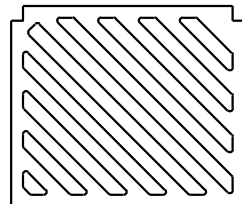


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE

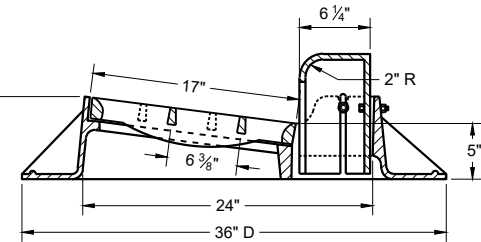
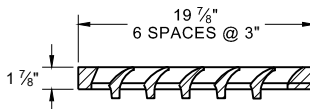
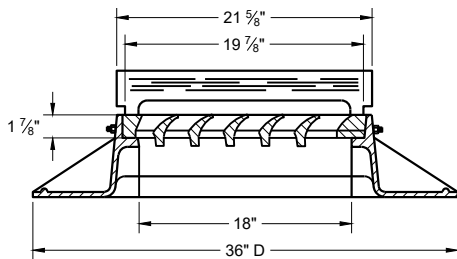


1" DIAGONAL BARS WITH 1 1/2" OPENINGS

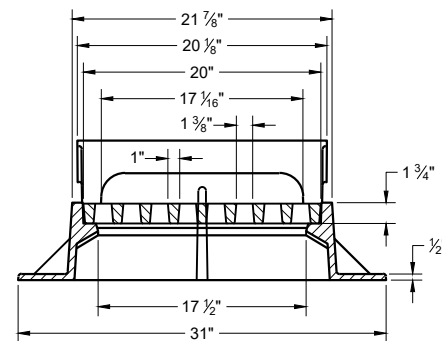
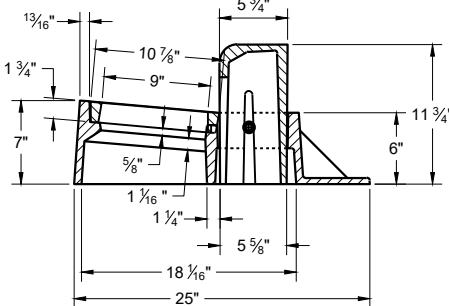


SPECIAL GRATE FOR TYPE "A" COVER

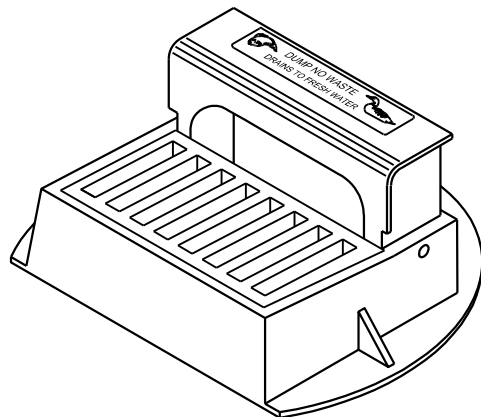
(MEASURES 19 3/4" X 17" X 1 7/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



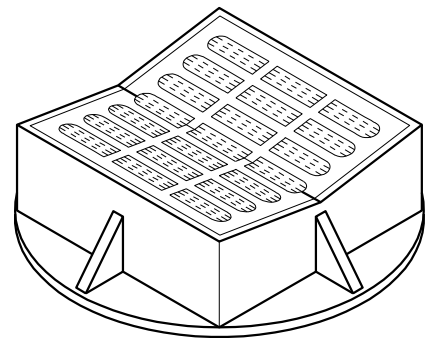
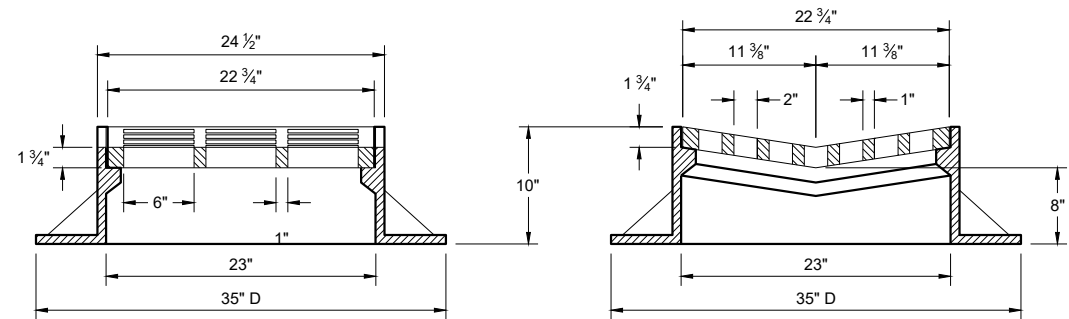
TYPE "Z"



**INLET COVERS
TYPES A, H, A-S, H-S AND Z**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

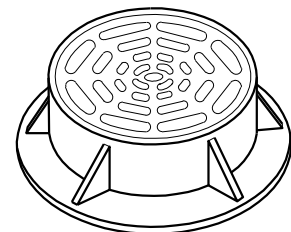
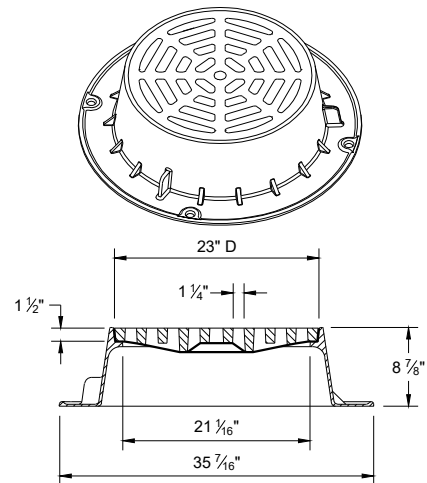
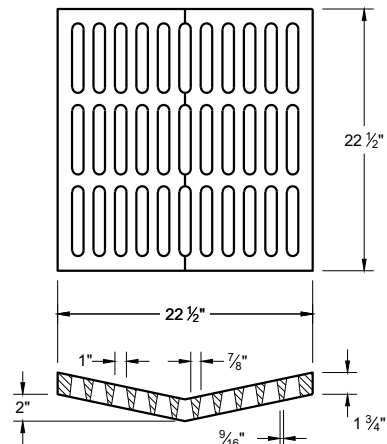
APPROVED
July 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



TYPE "B"

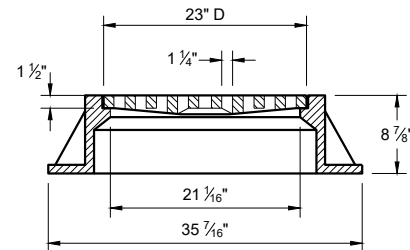
**ALTERNATIVE GRATE FOR
TYPE "B" COVER**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE
NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

NOTE: EITHER CASTING IS ACCEPTABLE

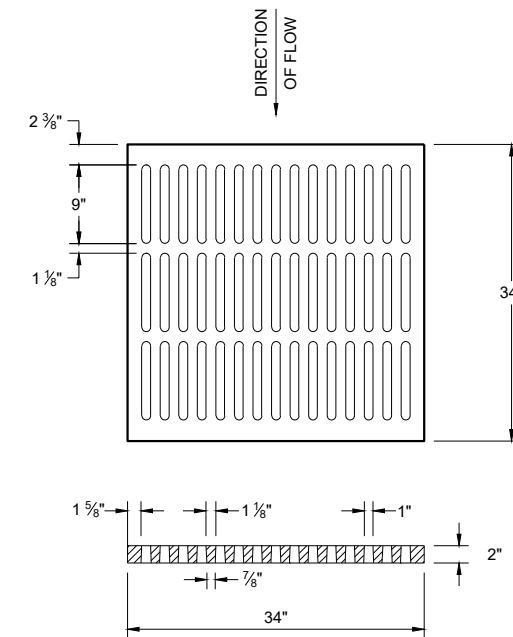


GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

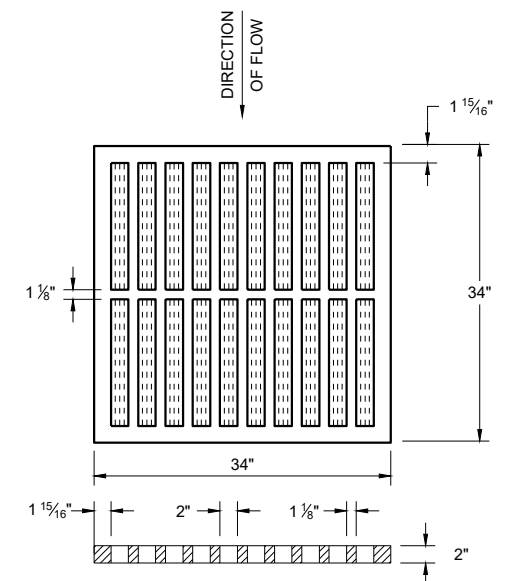
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



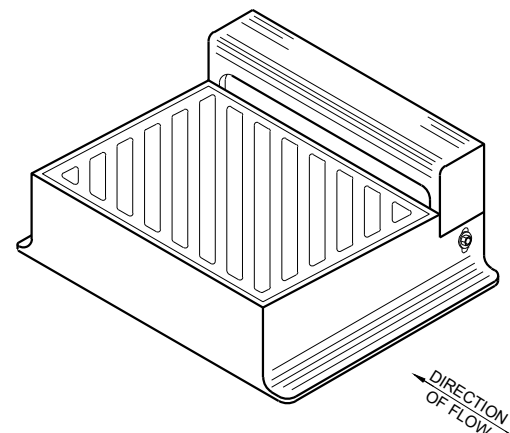
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

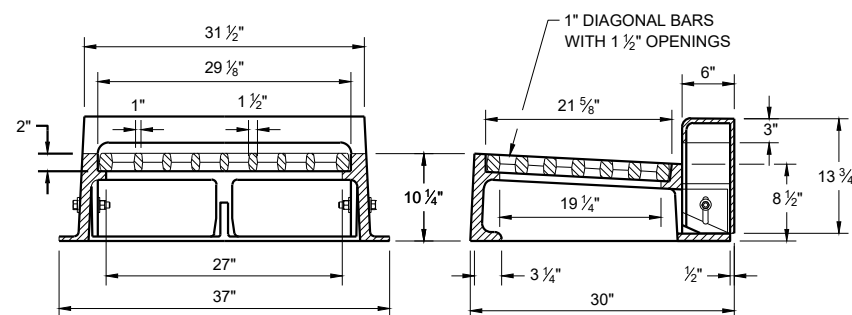


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON THE DRAINAGE TABLE



DIAGONAL SLOTS SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



TYPE "WM"

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

**INLET COVERS
TYPES B, B-A, C,
MS, MS-A AND WM**

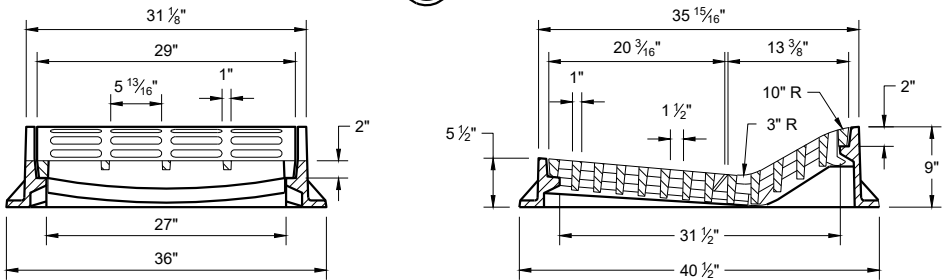
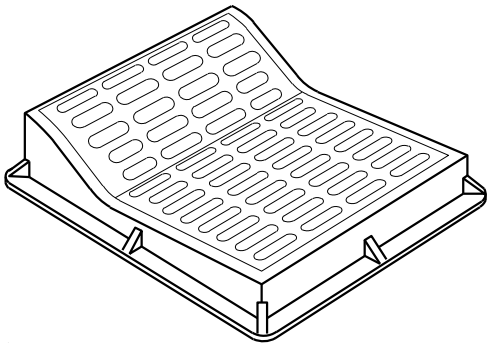
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

GENERAL NOTES

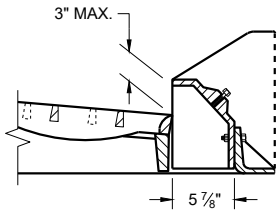
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "F"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

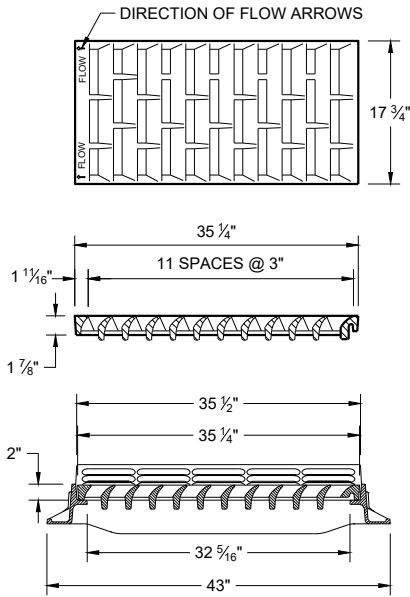


ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES "G" AND "J" CONCRETE CURB AND GUTTER, 30 INCH NOTED AS TYP "HM-GJ" ON DRAINAGE TABLE

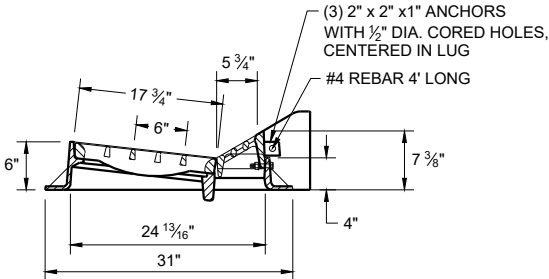
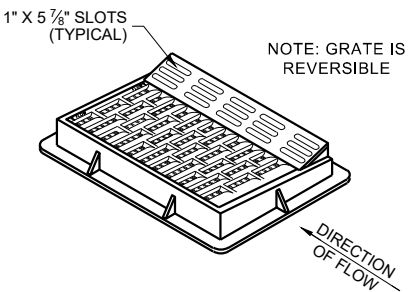
NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.



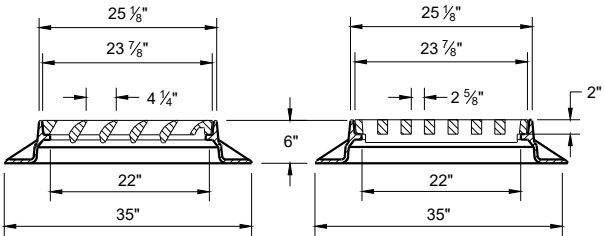
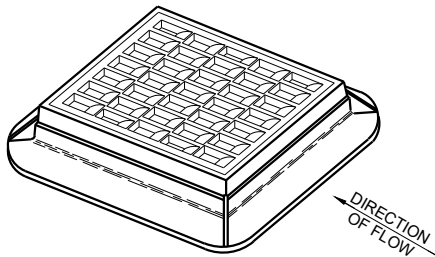
TYPE "HM"

USE WITH TYPES "A" AND "D" CONCRETE CURB AND GUTTER, 36"

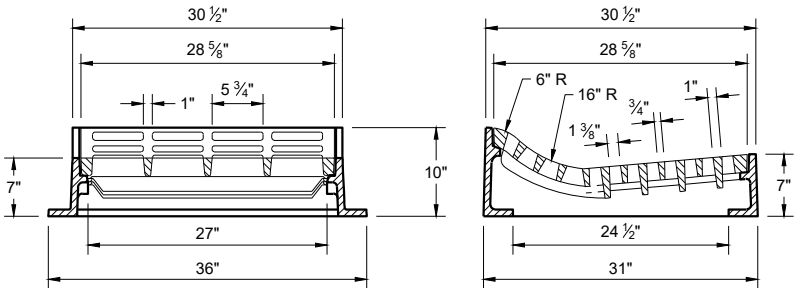
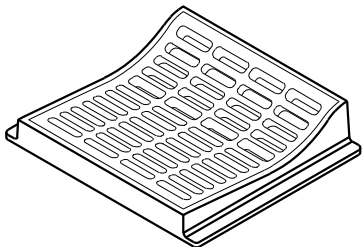


NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

NOTED AS TYPE HM-GJ-S ON THE DRAINAGE TABLE.

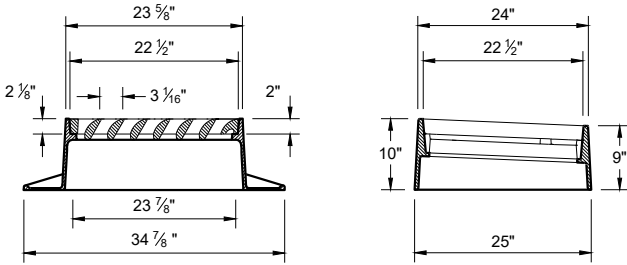
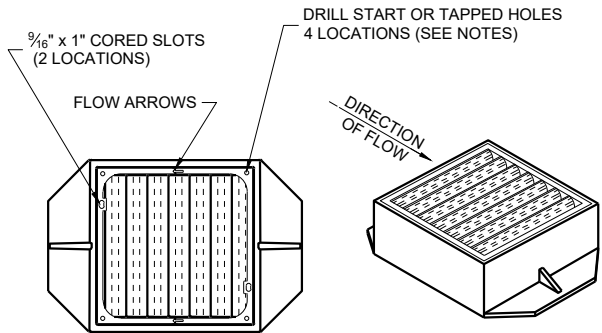


TYPE "S"



TYPE "T"

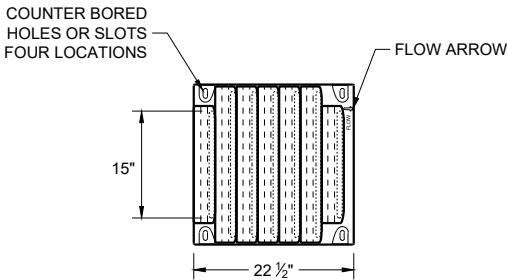
USE WITH TYPES "R" AND "T" CONCRETE CURB AND GUTTER, 36"



TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A
3/8" DIA. X 1/16" DRILL START IN 4 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR TYPE "V" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER NOTED AS TYPE "V-B" ON DRAINAGE TABLE

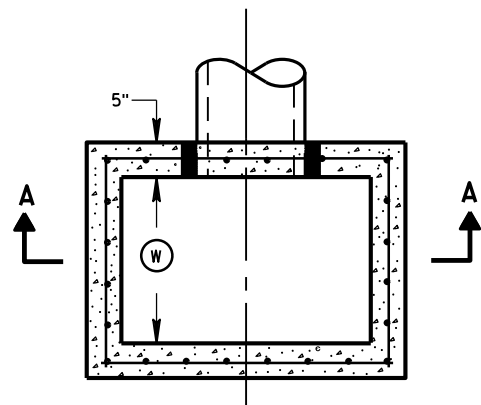
TAP 1/2" -13 HOLES IN FOUR LOCATIONS IN FRAME TO BOLT GRATE FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD BOLTS - 1/2" -13 STAINLESS STEEL BOLTS WITH WASHERS TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

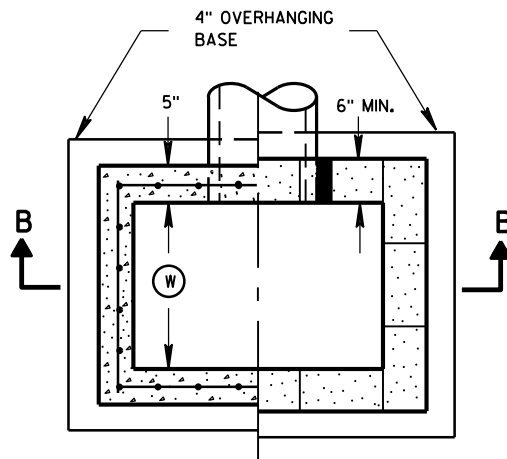
INLET COVERS
TYPES F, HM, HM-S, S, T, V,
HM-GJ AND HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

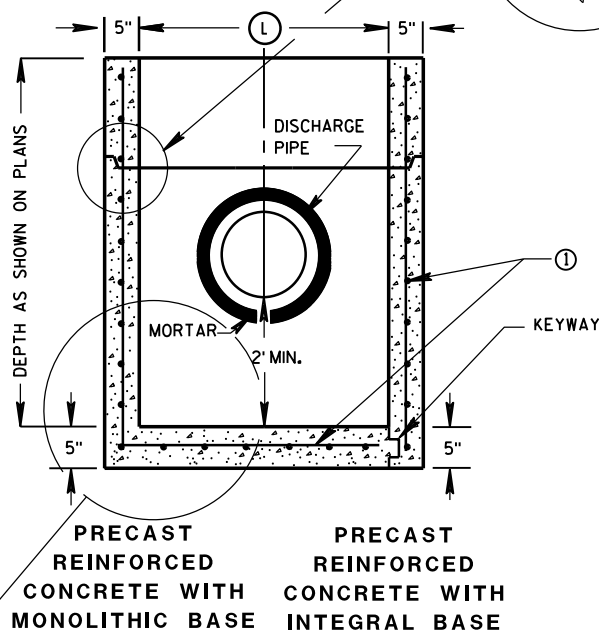
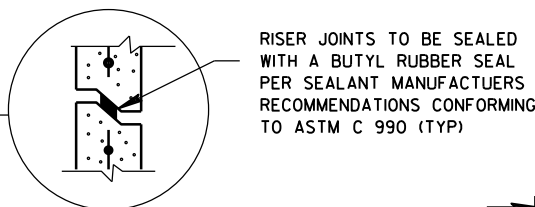
APPROVED
July 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



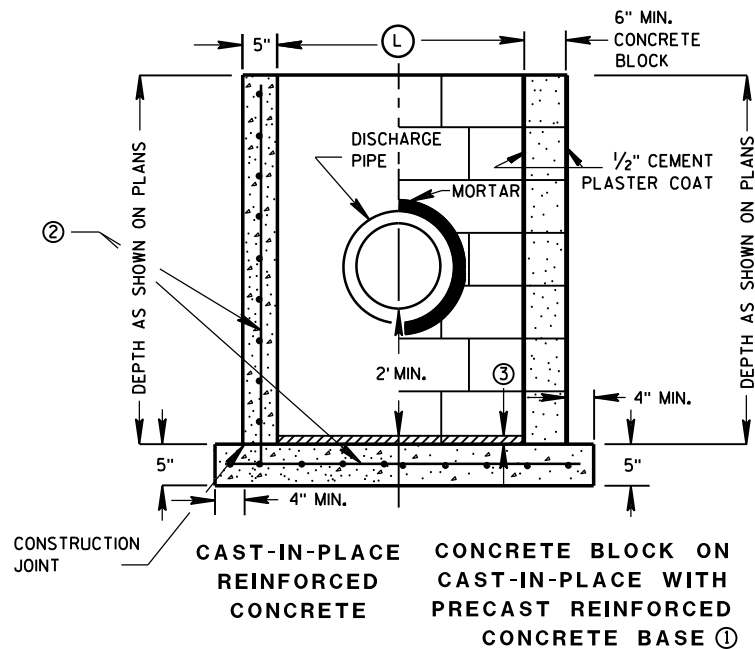
PLAN VIEW



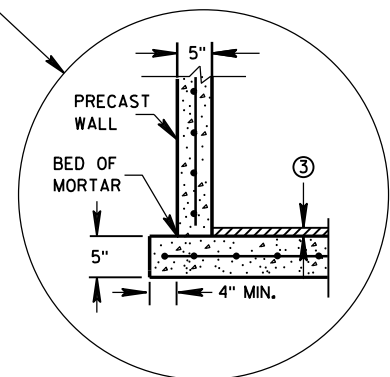
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

CATCH BASINS 2X3-FT AND 2.5X3-FT

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST CATCH BASIN UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

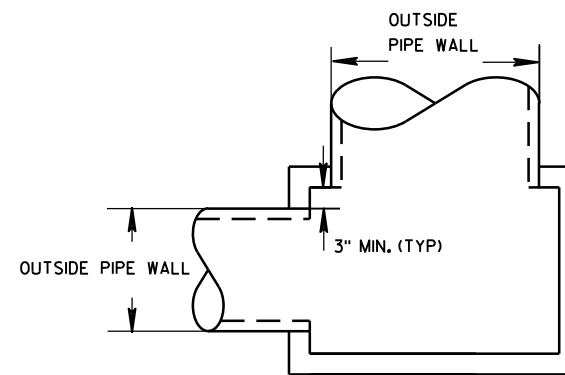
- ① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
- ③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

CATCH BASIN SIZE	WIDTH ① (FT)	LENGTH ② (FT)	F	ALL H'S
2X3-FT	2	3		X
2.5X3-FT	2.5	3	X	

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2X3-FT	12	24
2.5X3-FT	18	24

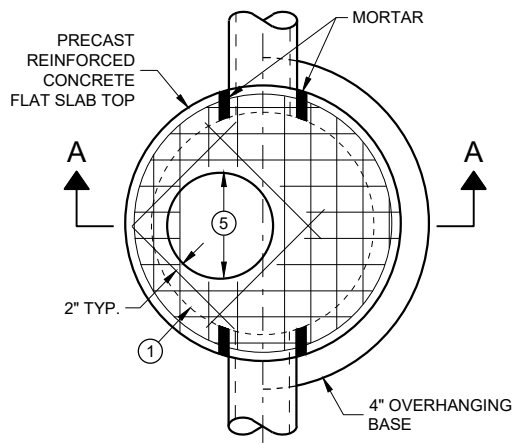


DETAIL "A"

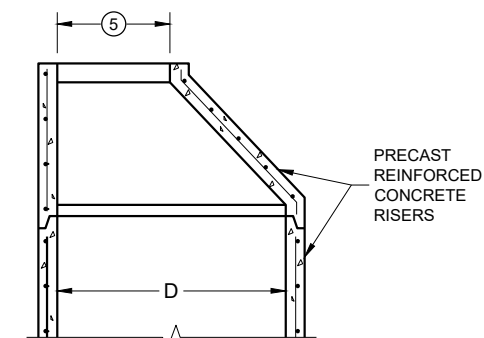
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

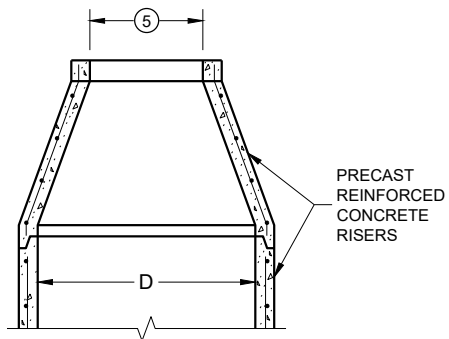
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS 74 NT
FHWA UNIT SUPERVISOR



PLAN VIEW
CIRCULAR OPENING



OPTIONAL PRECAST
REINFORCED CONCRETE
ECCENTRIC TOP



OPTIONAL PRECAST
REINFORCED CONCRETE
CONCENTRIC TOP

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE OPENING SIZE (FT.)	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42 *	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

* A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

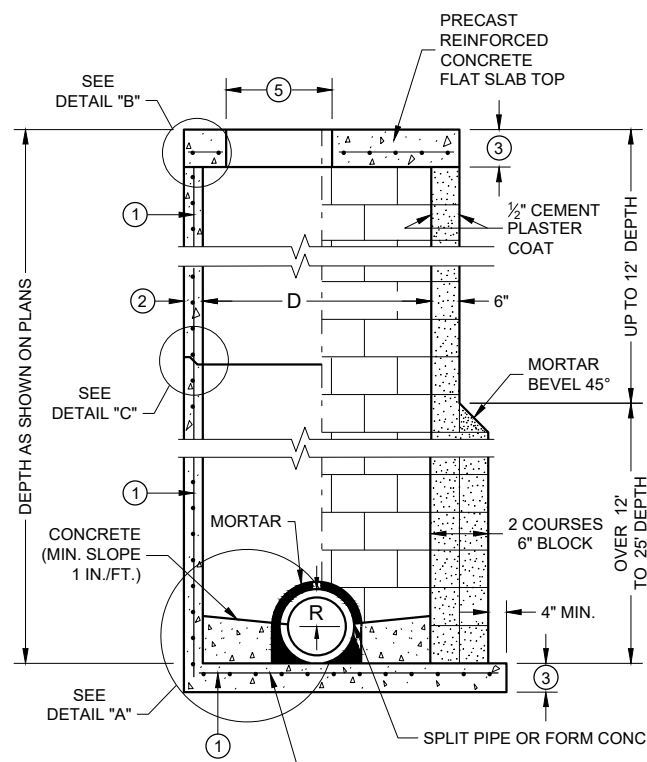
PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

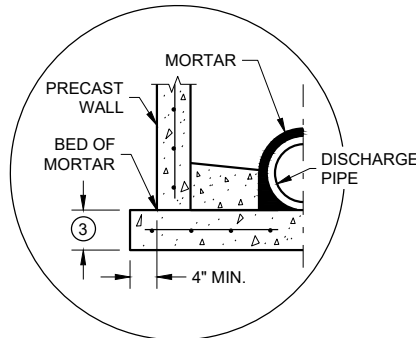
- FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).
- SEE MANHOLE COVER OPENING MATRIX.



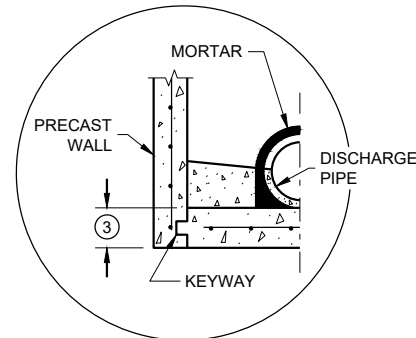
SECTION A - A

PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

CONCRETE BLOCK WITH
CAST IN PLACE OR
PRECAST REINFORCED
CONCRETE BASE ①

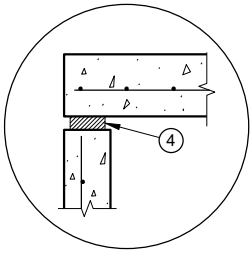


SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

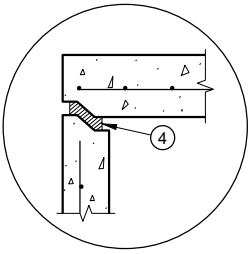


PRECAST REINFORCED CONCRETE
WITH INTEGRAL BASE OPTION

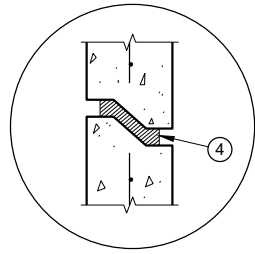
DETAIL "A"



TOP WITH PLAIN
END JOINT



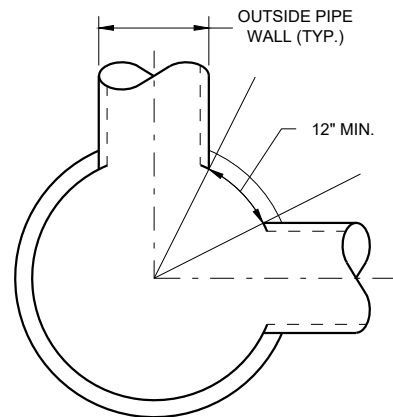
TOP WITH TONGUE
AND GROOVE JOINT



RISER WITH TONGUE
AND GROOVE JOINT

DETAIL "B"

DETAIL "C"



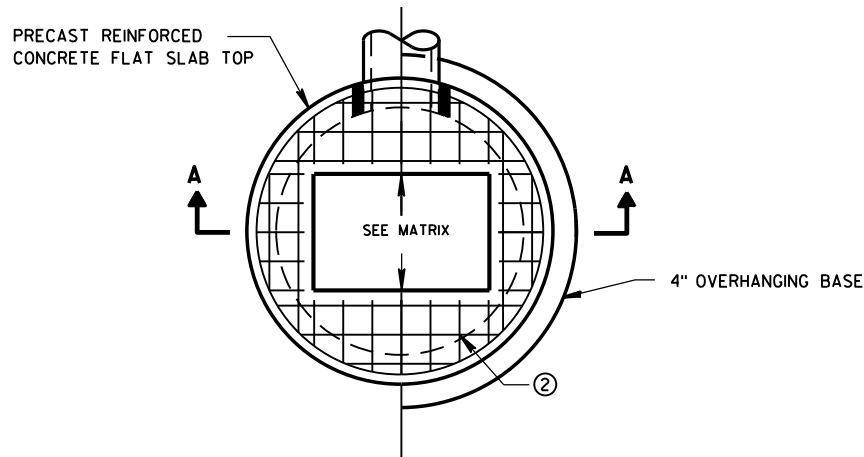
MINIMUM HORIZONTAL
PIPE SEPARATION

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

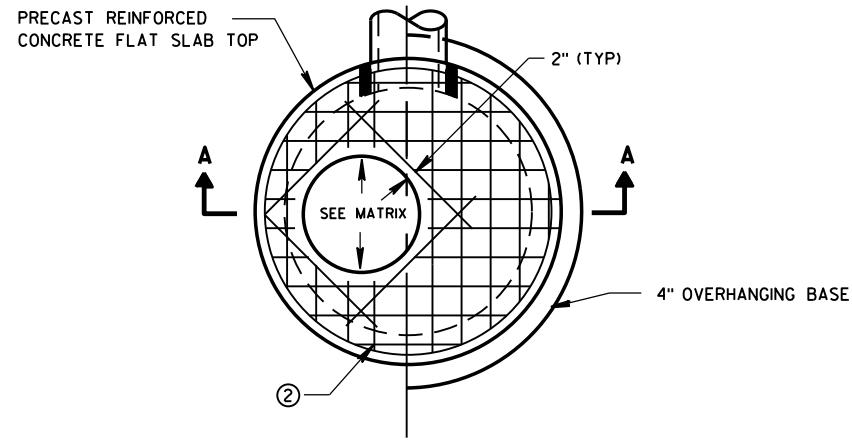
MANHOLES, 3-FT, 4-FT
5-FT, 6-FT, 7-FT, 8-FT, 9-FT
AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

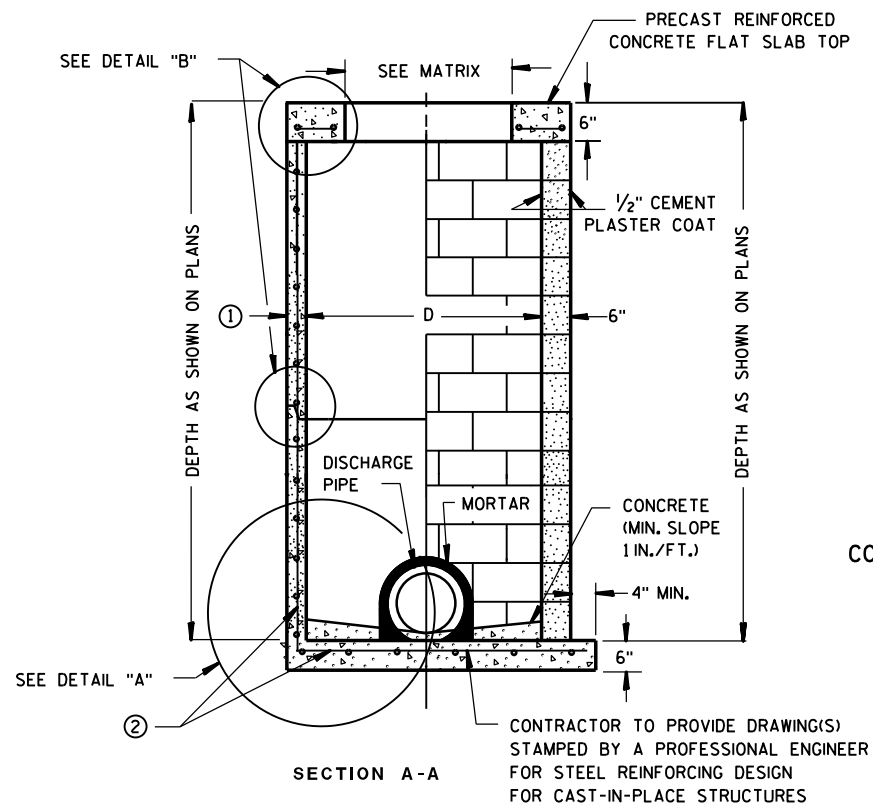
APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVE 75
ENGINEER
FHWA



PLAN VIEW RECTANGULAR OPENING

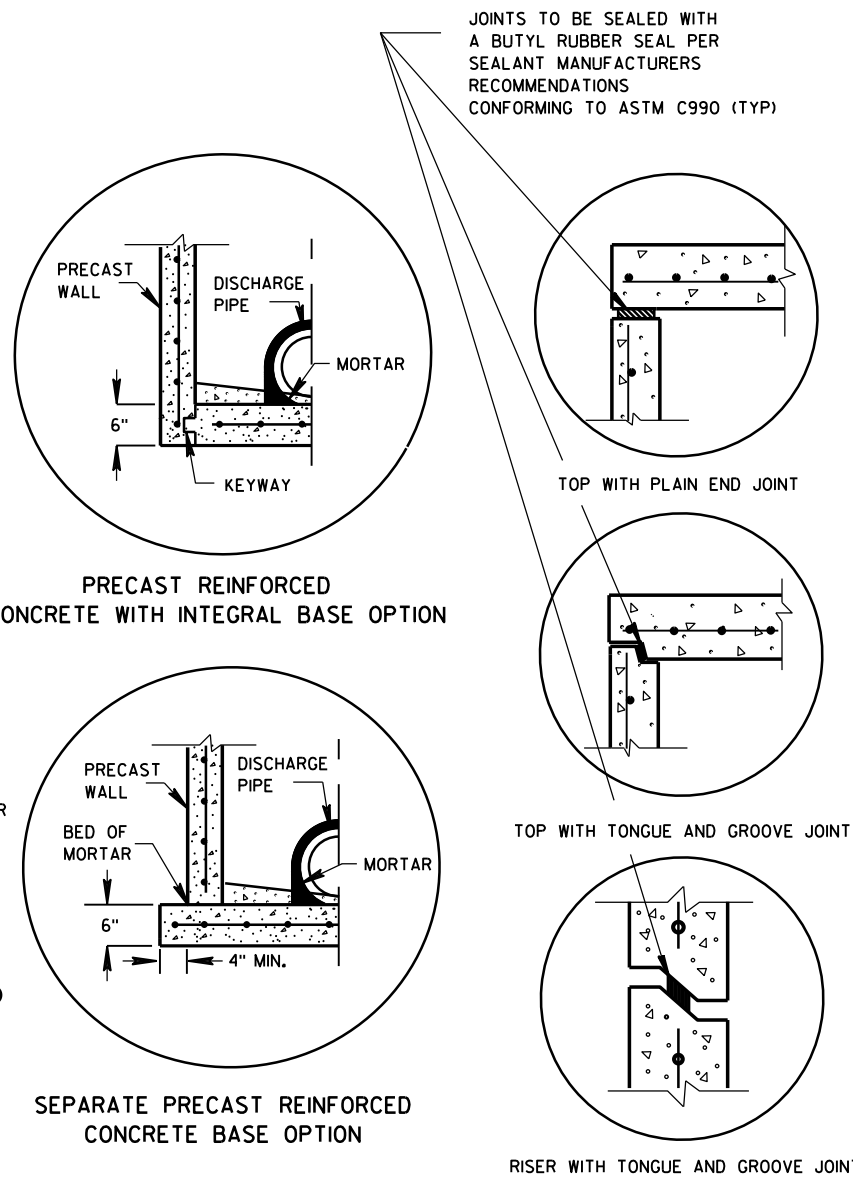


PLAN VIEW CIRCULAR OPENING



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP



DETAIL "A"

DETAIL "B"

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

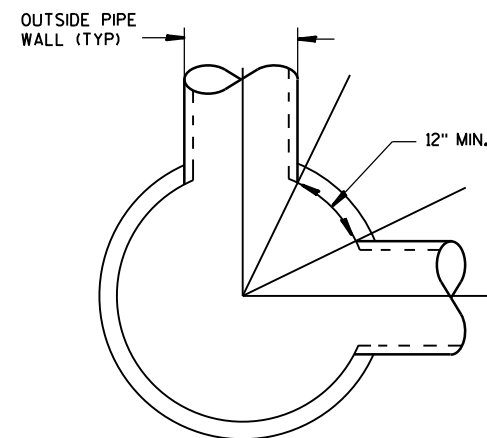
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

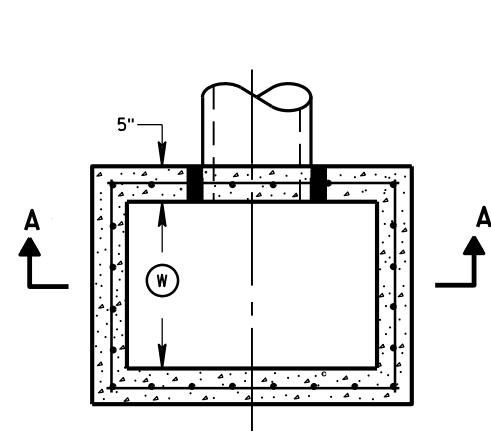
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

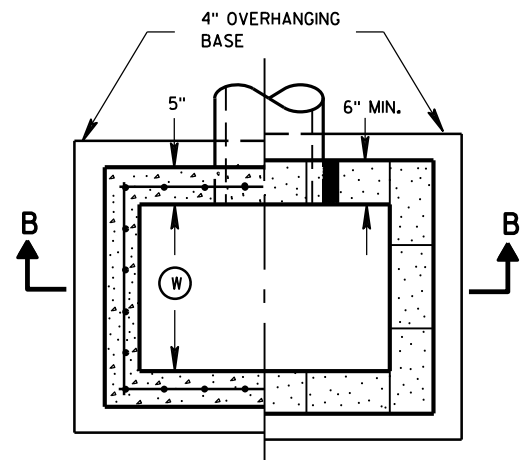
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

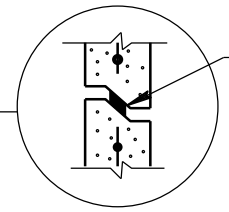
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERVISOR
FHWA 76 ENT



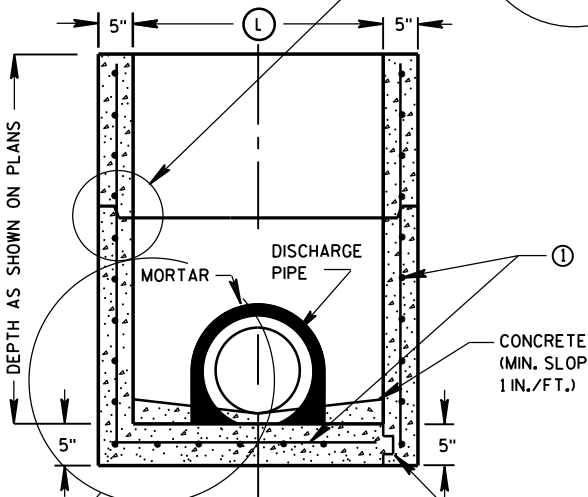
PLAN VIEW



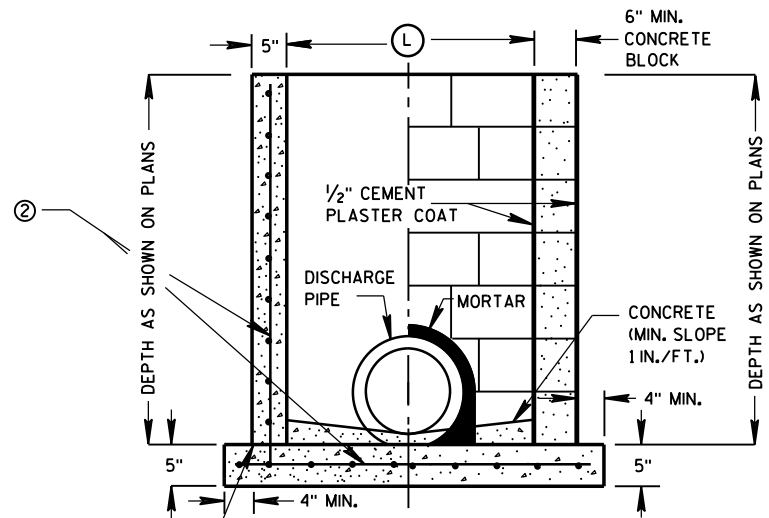
PLAN VIEW



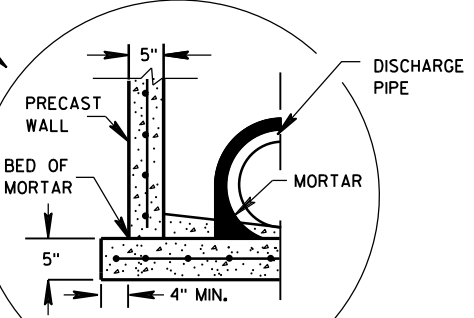
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

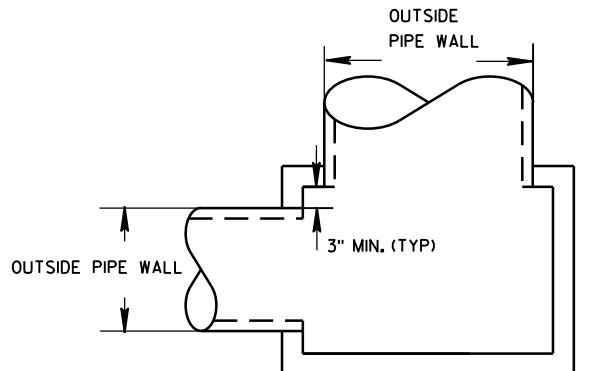
- 1 FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- 2 CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	WIDTH ① (FT)	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
		LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



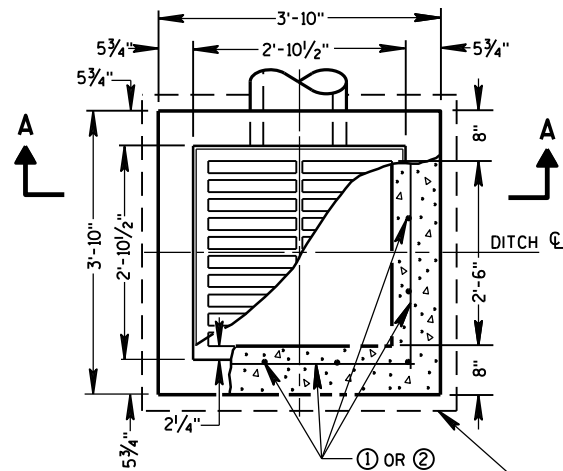
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

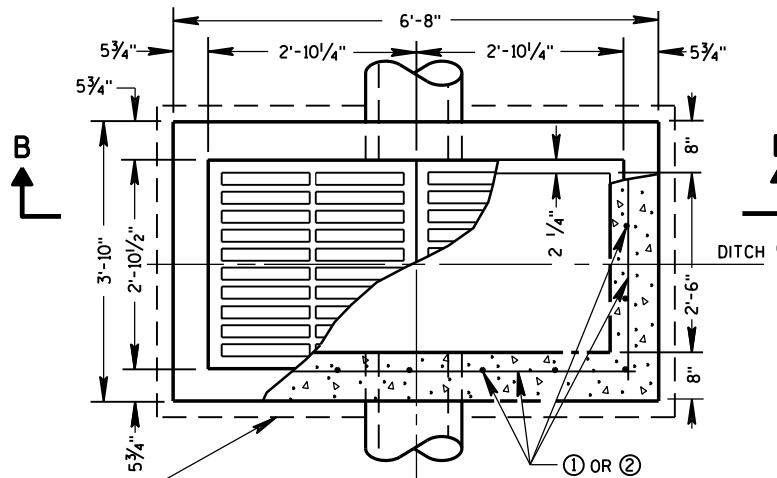
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS D 77 IT
FHWA UNIT SUPERVIS

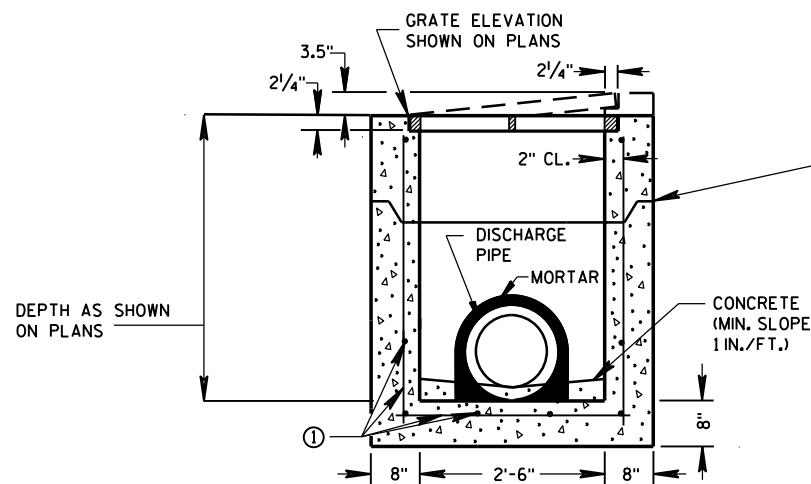


PLAN VIEW

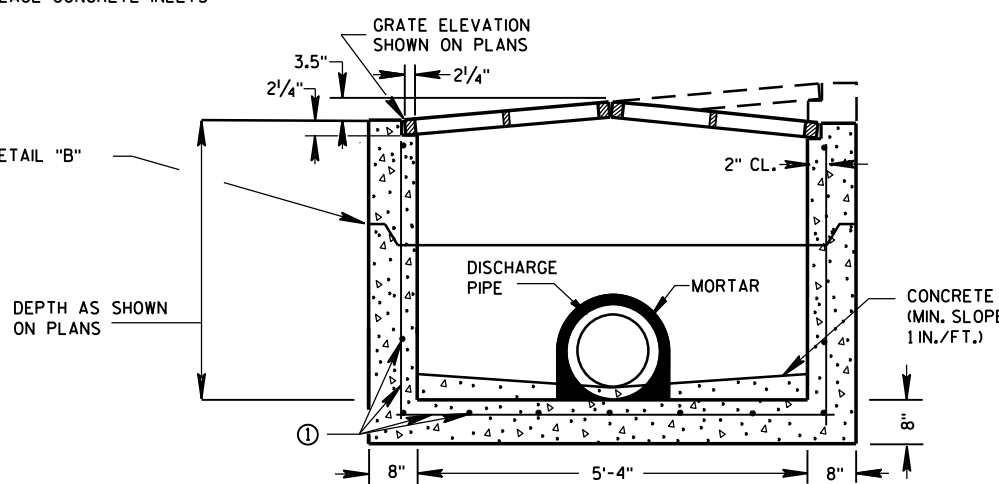
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



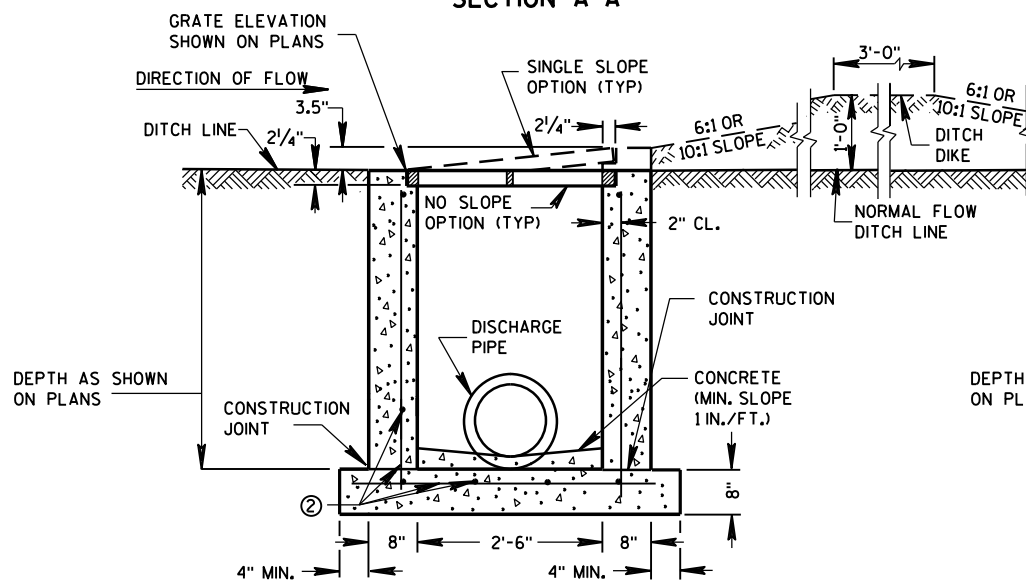
PLAN VIEW



PRECAST REINFORCED CONCRETE SECTION A-A

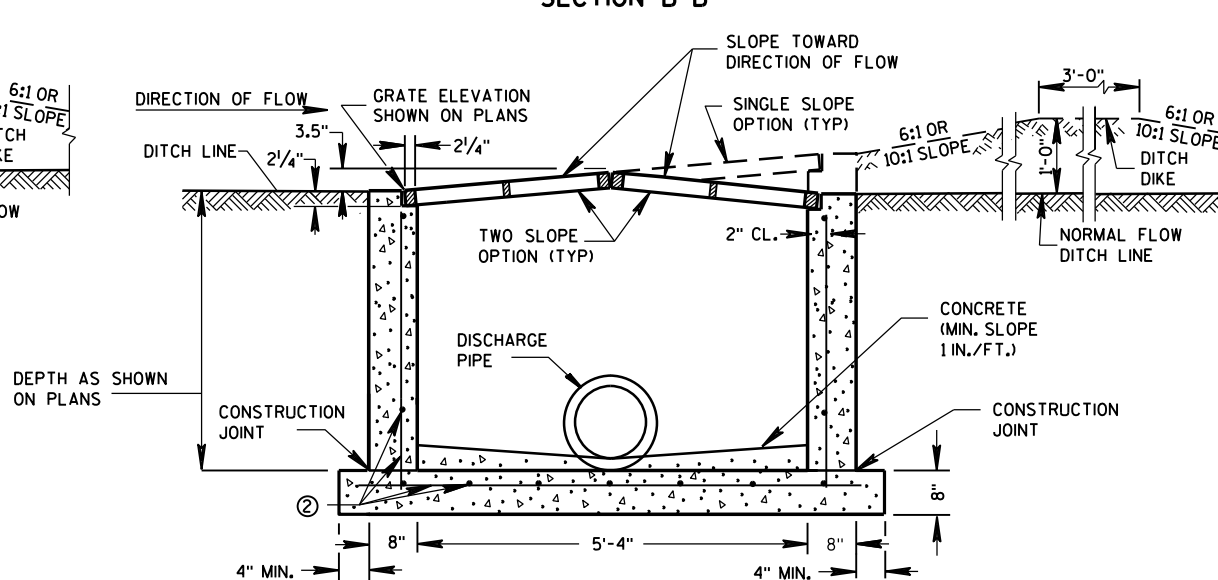


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, IG-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT. BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

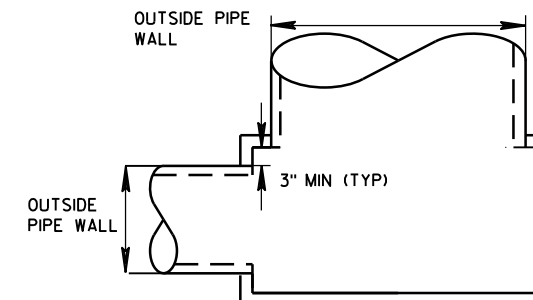
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

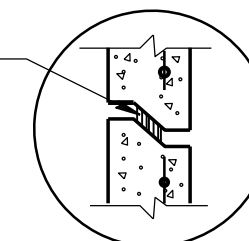
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)

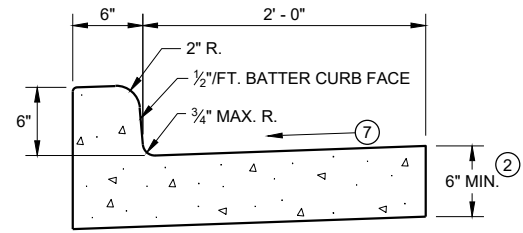


DETAIL "B"

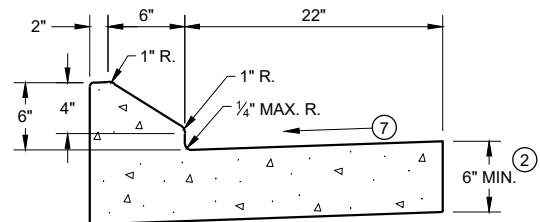
INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

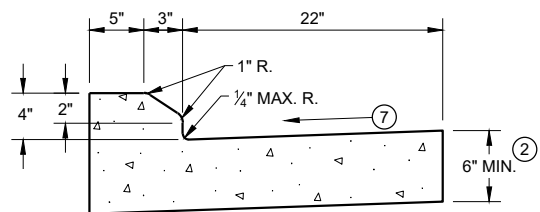
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERVISOR
FHWA



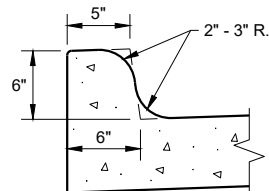
TYPES A^① & D



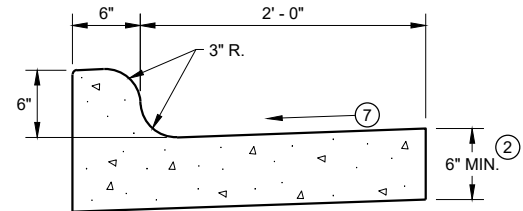
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

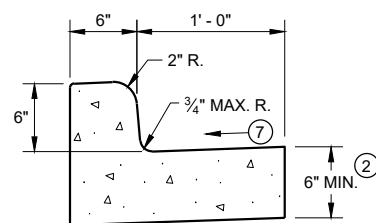


TYPES K^① & L
(OPTIONAL CURB SHAPE)



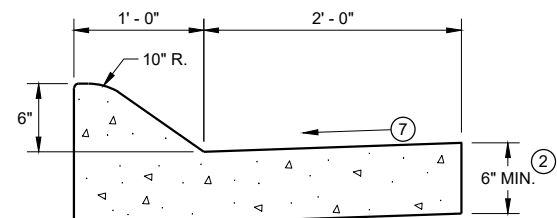
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

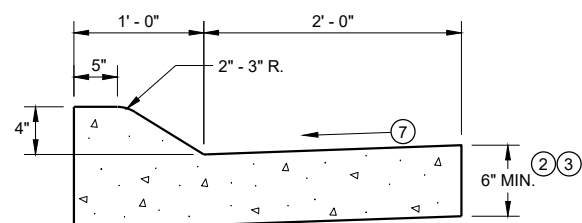


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

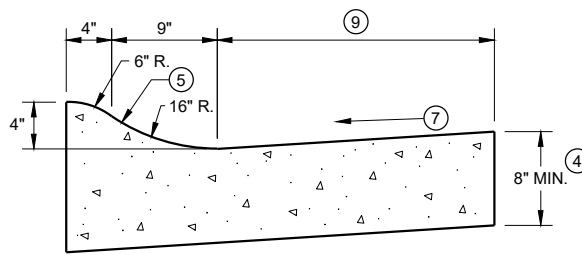


6" SLOPED CURB TYPES A^① & D



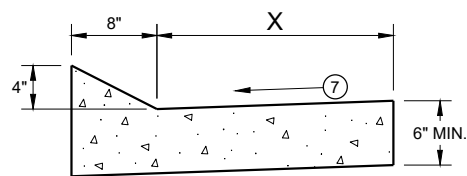
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

TBT & TBTT	X
30"	22"
36"	28"

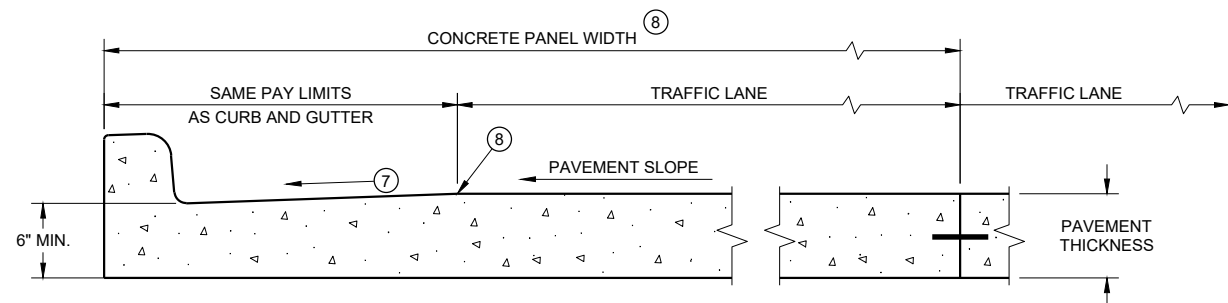


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

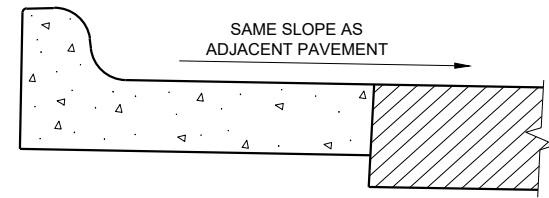
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT*
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

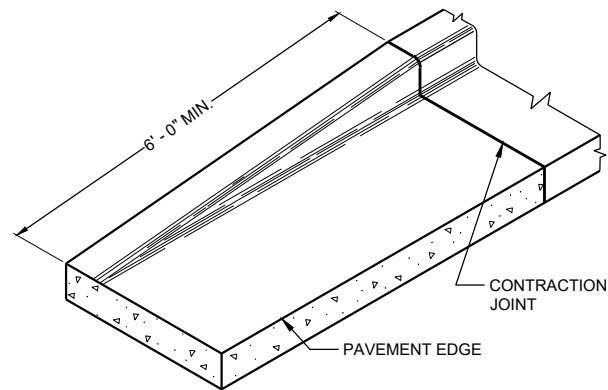
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

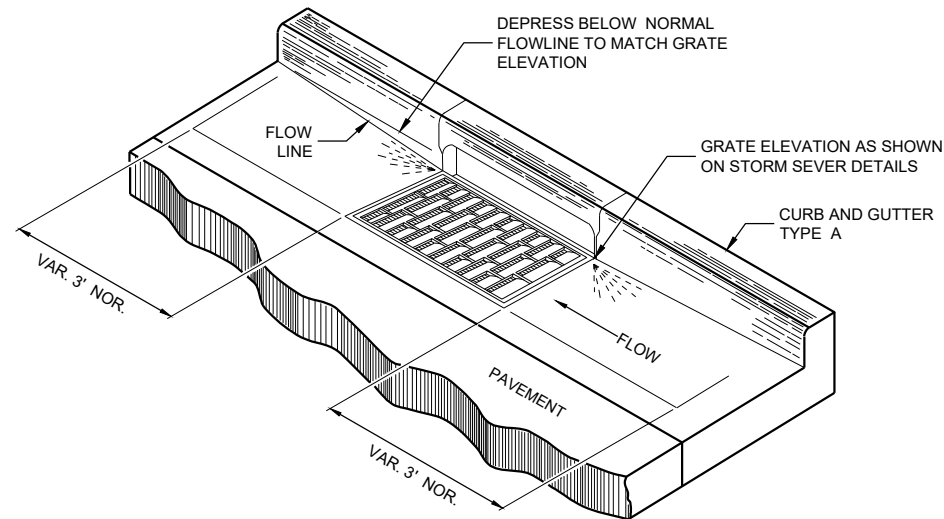
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

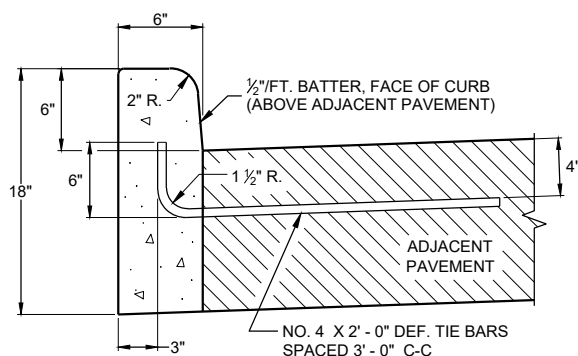


END SECTION CURB AND GUTTER

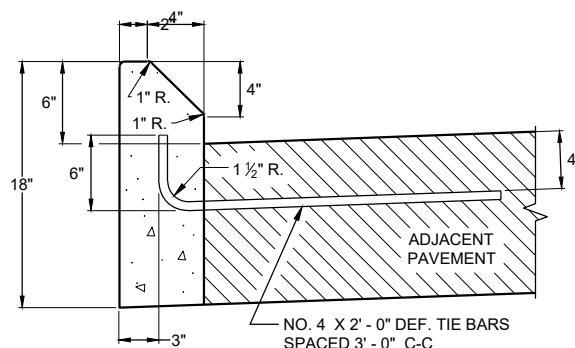


DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

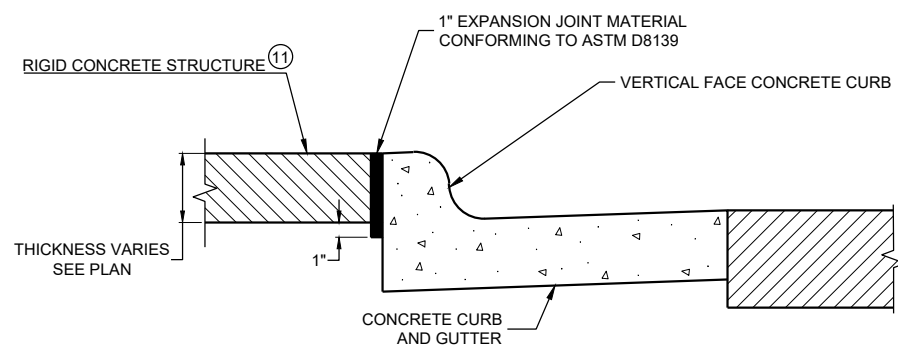


TYPES A^① & D

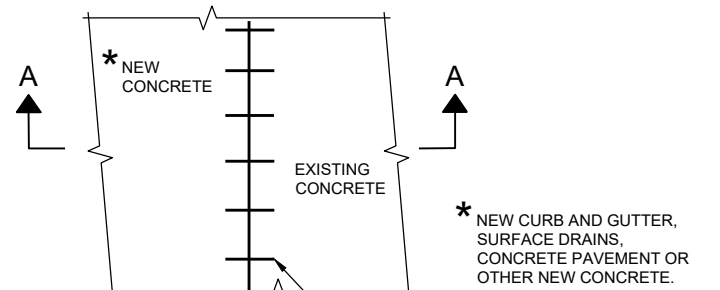


TYPES G^① & J

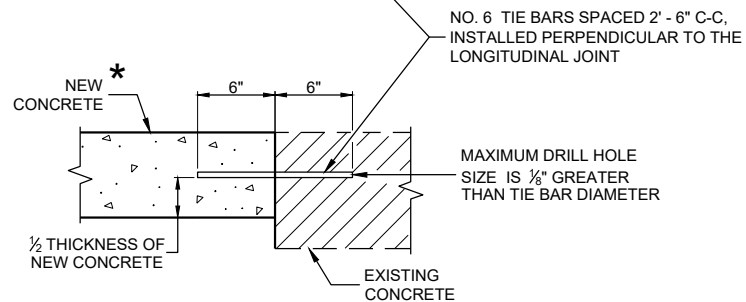
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE^⑪



PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT

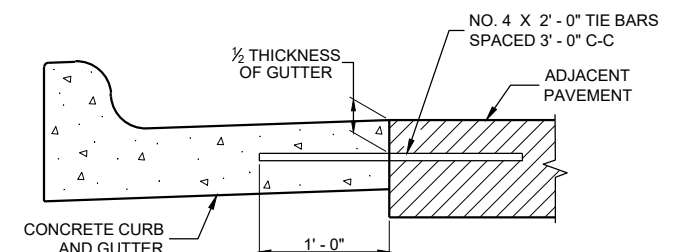
GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

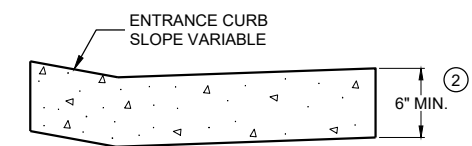
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑩
(WHEN DIRECTED BY THE ENGINEER)

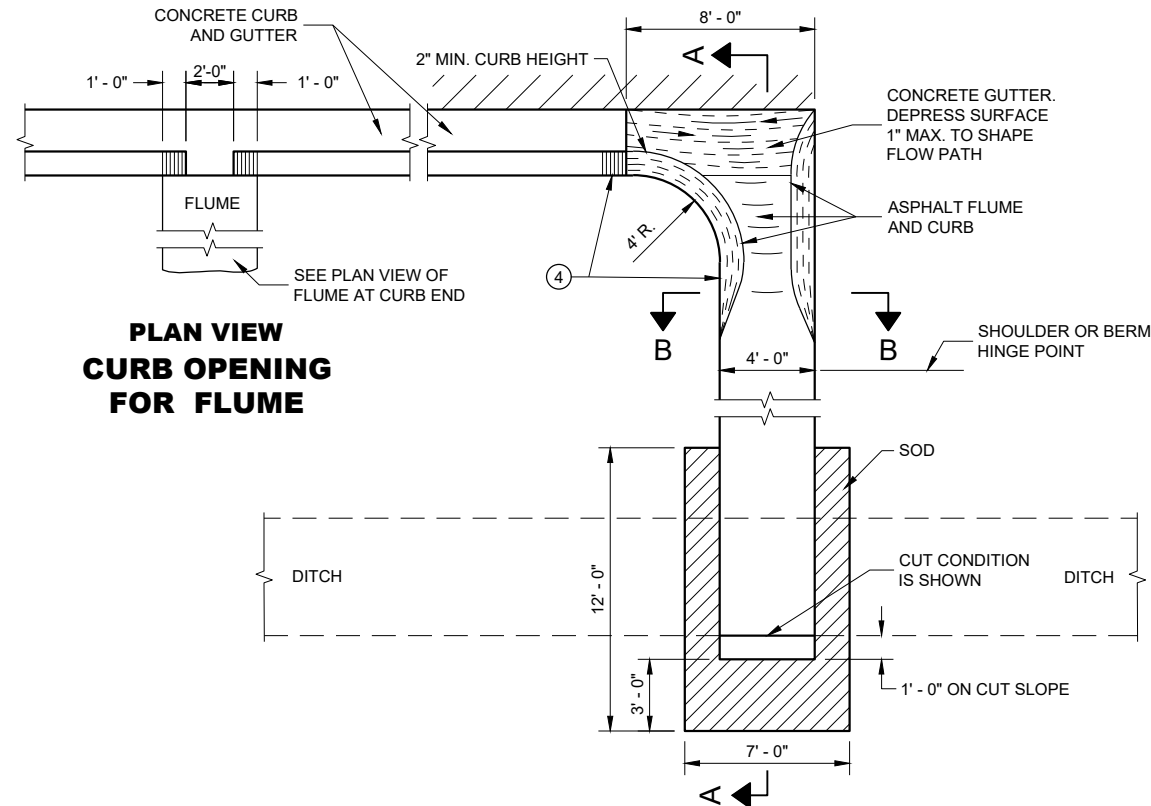
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 80
FHWA

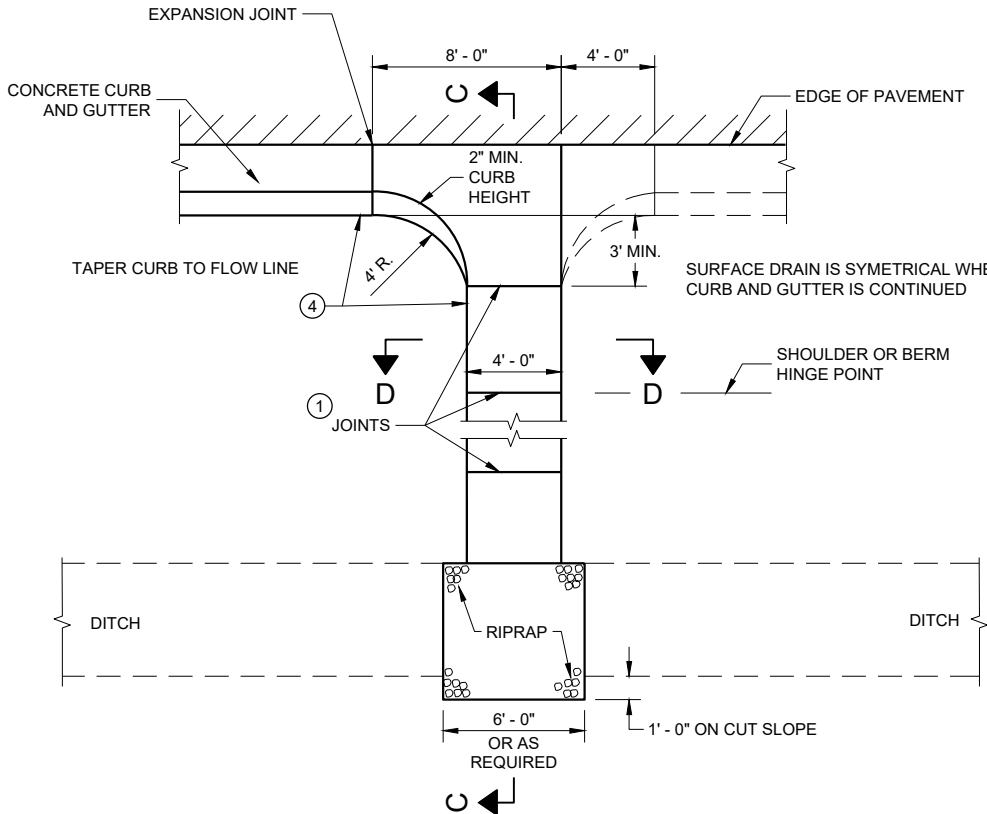
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING
FOR FLUME

PLAN VIEW
FLUME AT CURB END



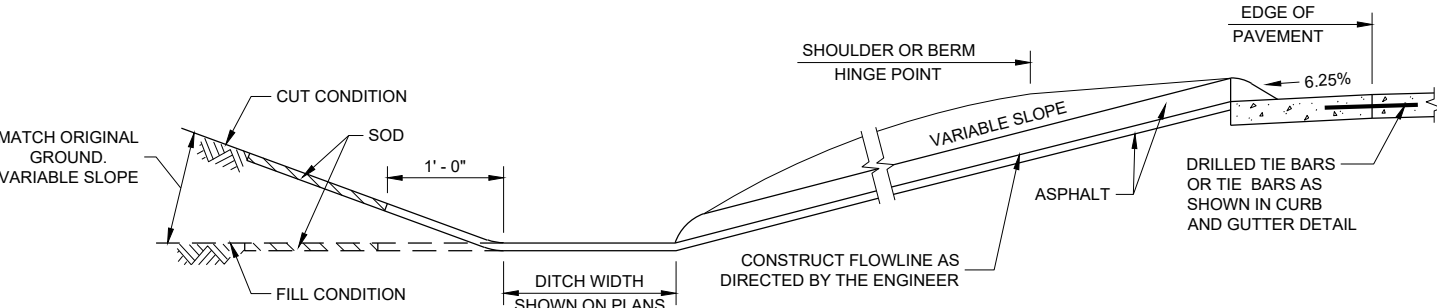
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

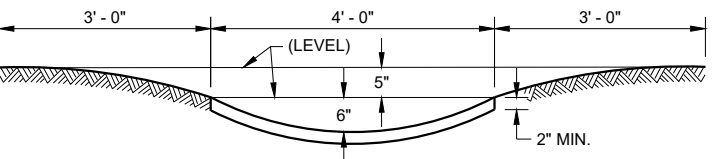
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

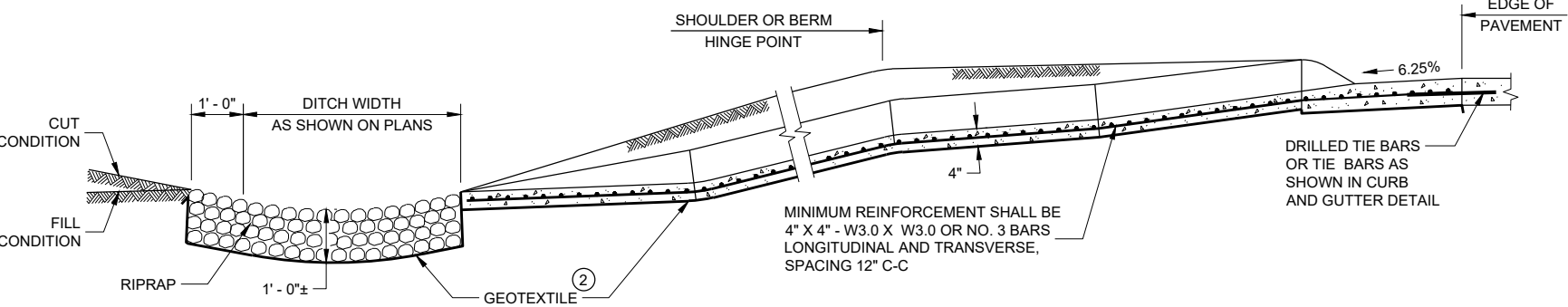
- JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



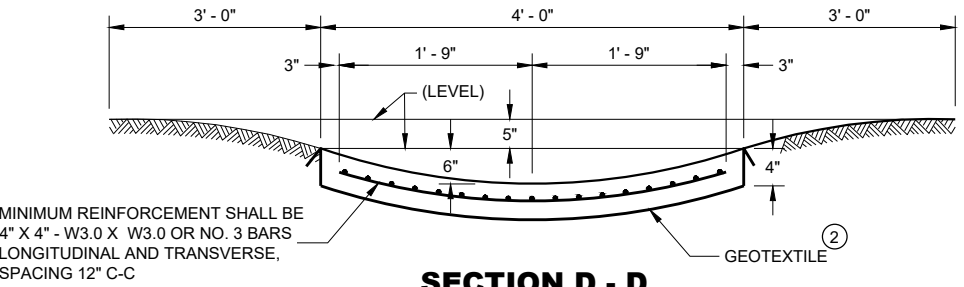
SECTION A - A



SECTION B - B



SECTION C - C

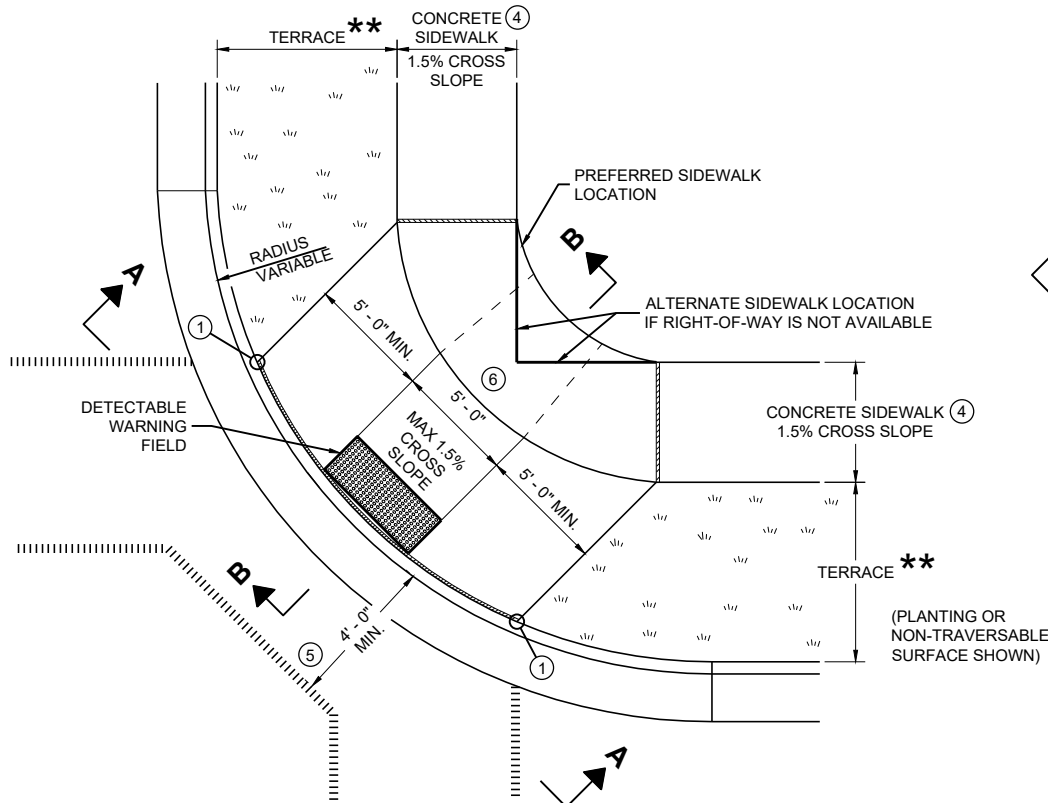


SECTION D - D

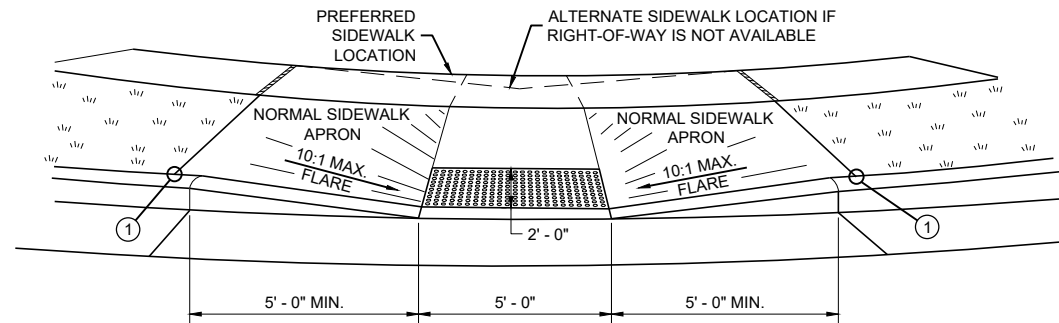
CONCRETE SURFACE
DRAINS AND
ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA 81

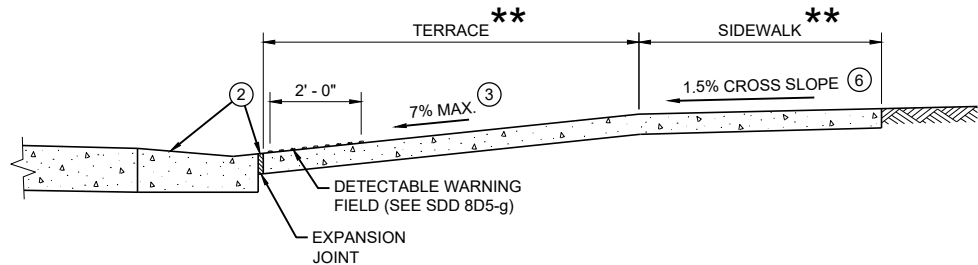


PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)

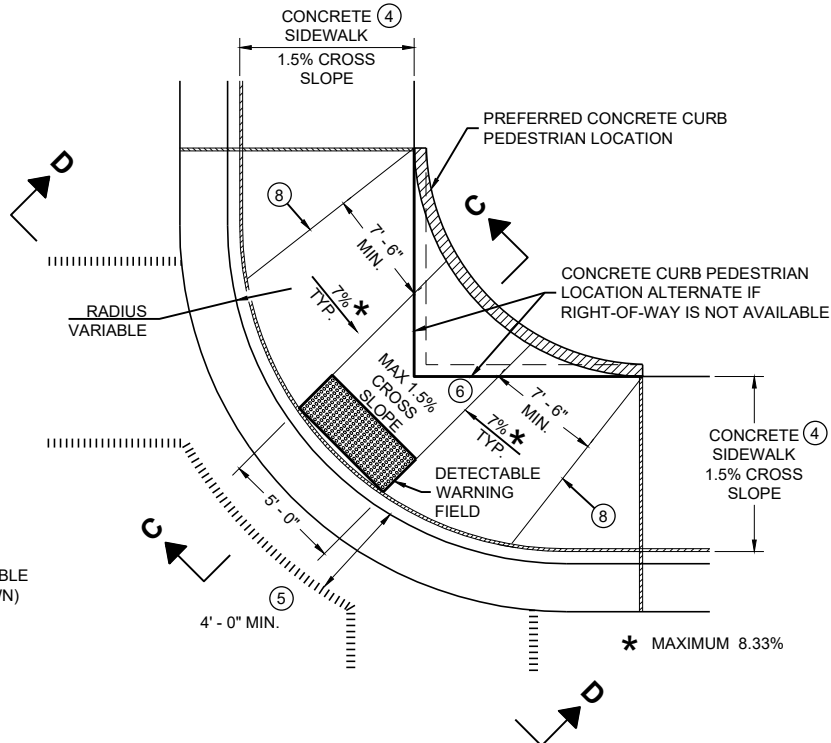


VIEW A - A FOR TYPE 1

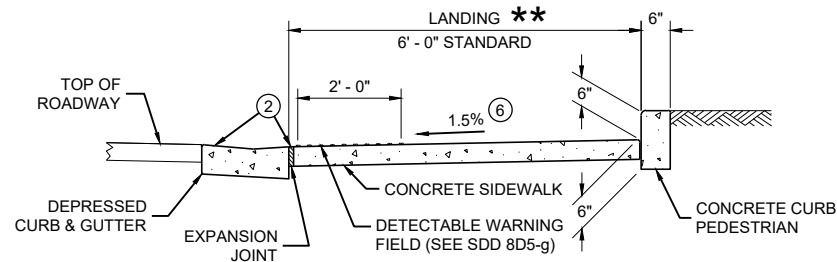
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



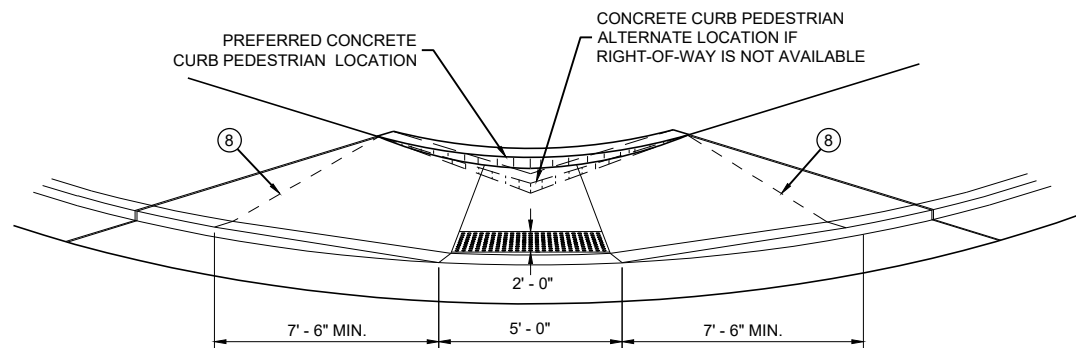
SECTION B - B FOR TYPE 1



PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

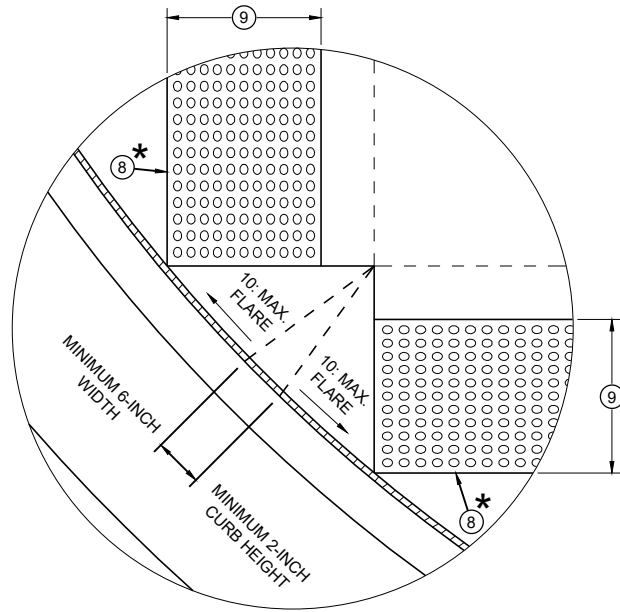
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.
- TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.
- DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.
- SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
 - ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - ③ MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA. 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE
 - ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
 - ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

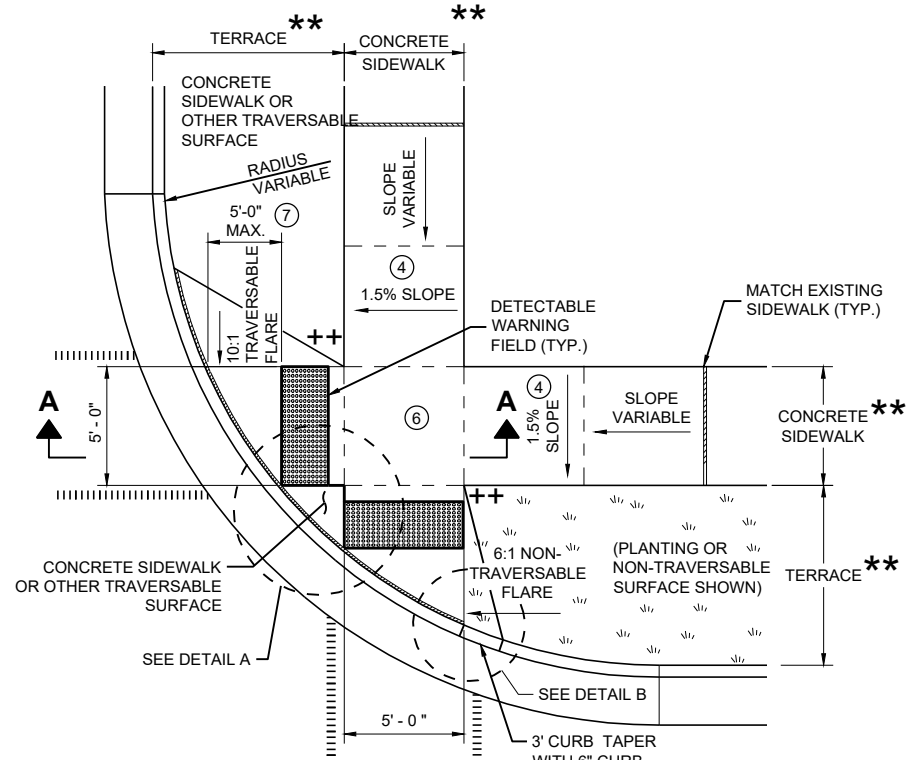
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

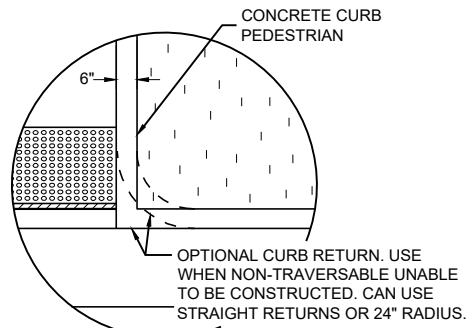
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



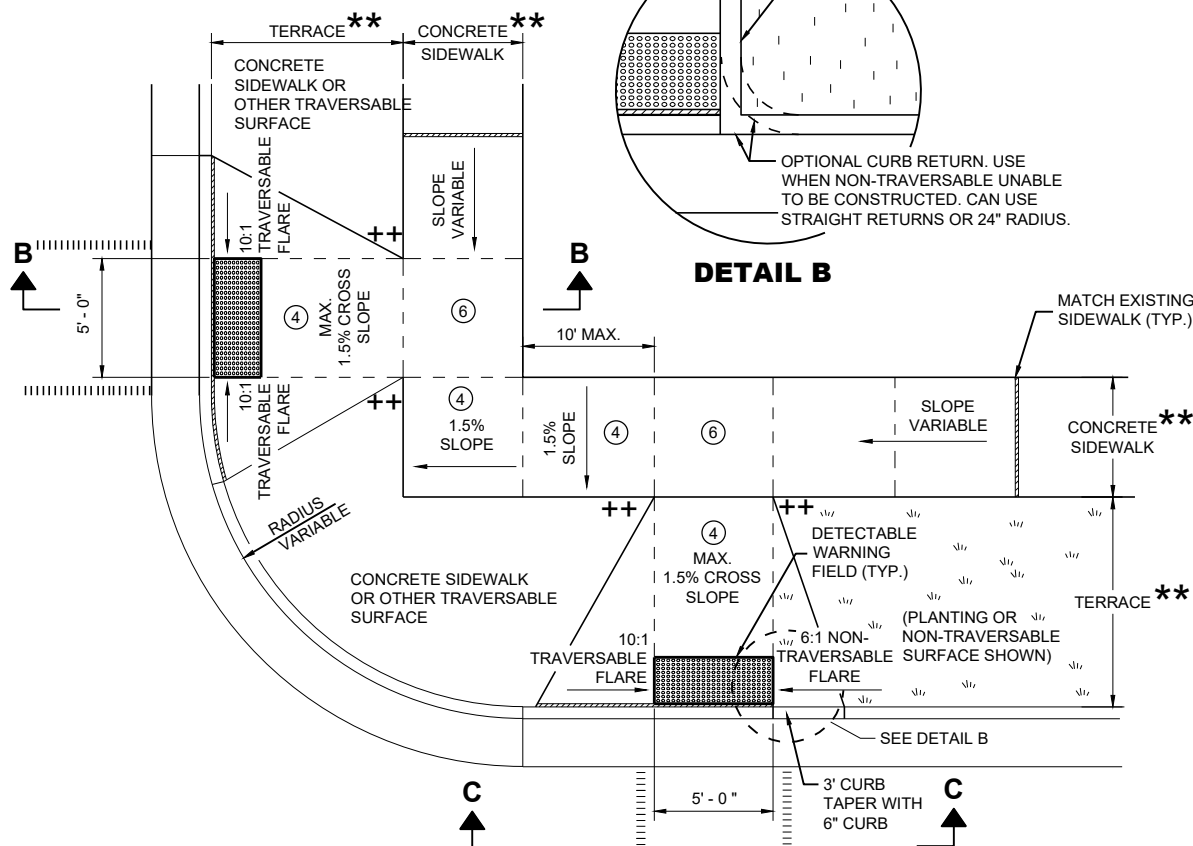
DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)



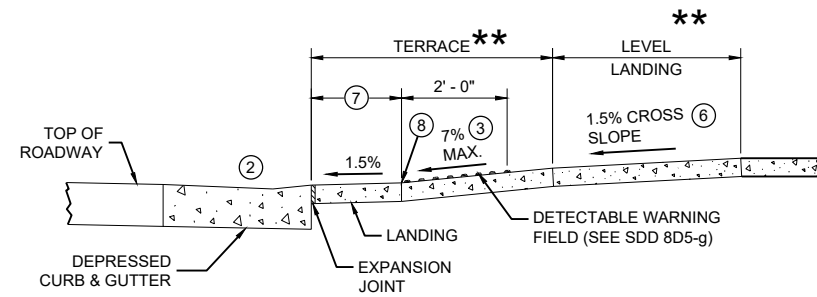
DETAIL B



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
 - ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
 - ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
 - ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

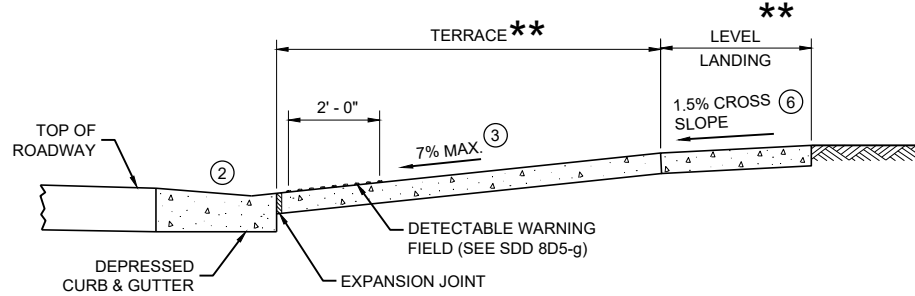


SECTION A - A FOR TYPE 2

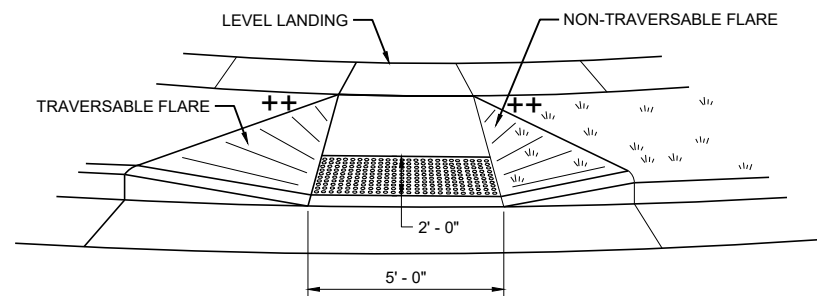
- ★ MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ★★ WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



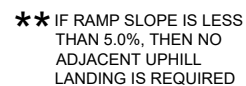
SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

CURB RAMPS
TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SECTION B - B FOR TYPE 4A AND TYPE 4A1

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"

INTERMEDIATE RADII CAN BE INTERPOLATED



GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN $\frac{1}{4}$ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

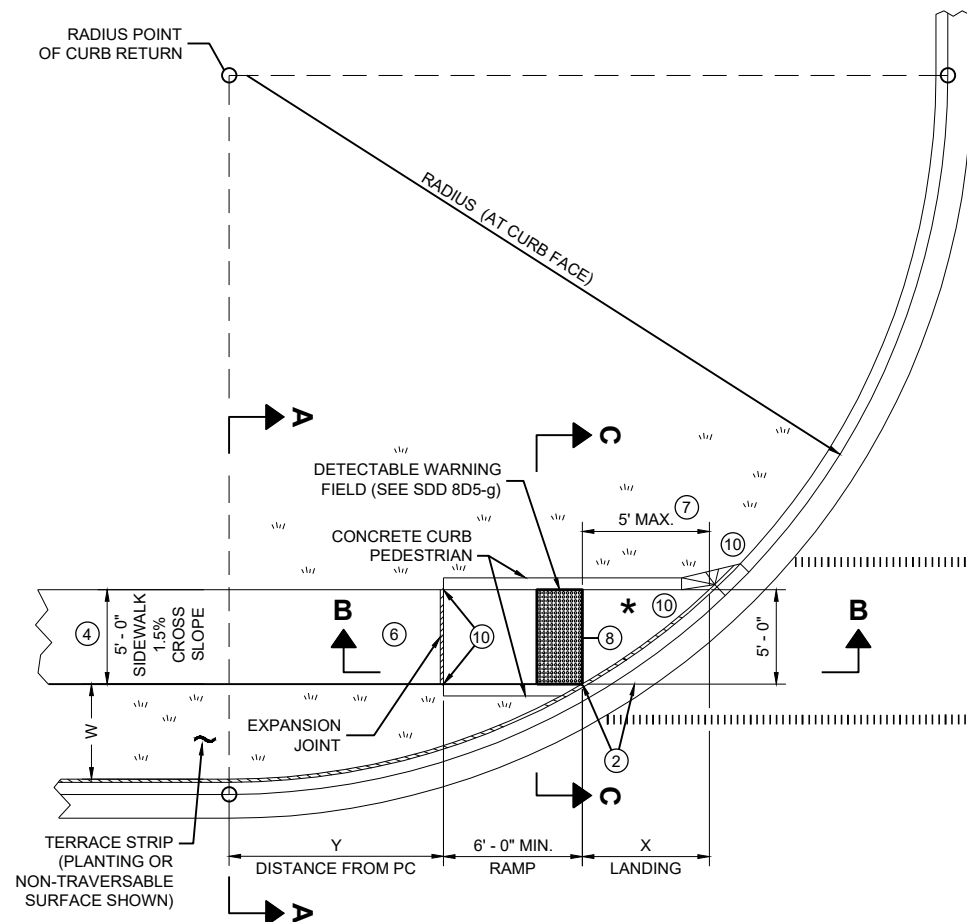
LEGEND

- | | |
|---|------------------------------------|
|  | 1/2" EXPANSION JOINT SIDEWALK |
|  | CONTRACTION JOINT SIDEWALK |
|  | PAVEMENT MARKING CROSSWALK (WHITE) |

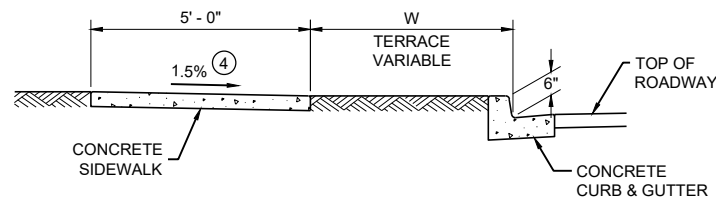


CURB RAMPS TYPE 4A AND 4A1

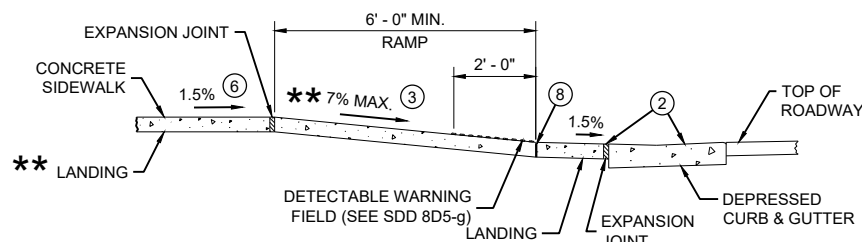
STATE OF WISCONSIN
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**PLAN VIEW
CURB RAMP TYPE 4B**



SECTION A - A FOR TYPE 4B



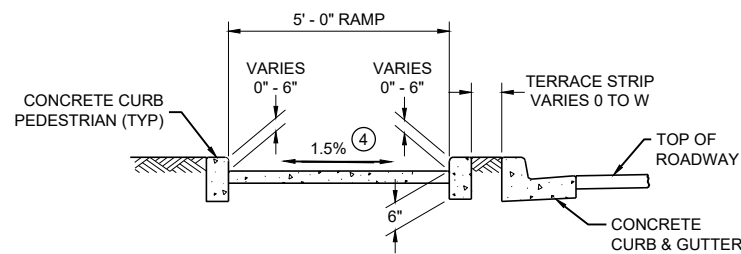
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

**SECTION B - B FOR
TYPE 4B AND TYPE 4B1**

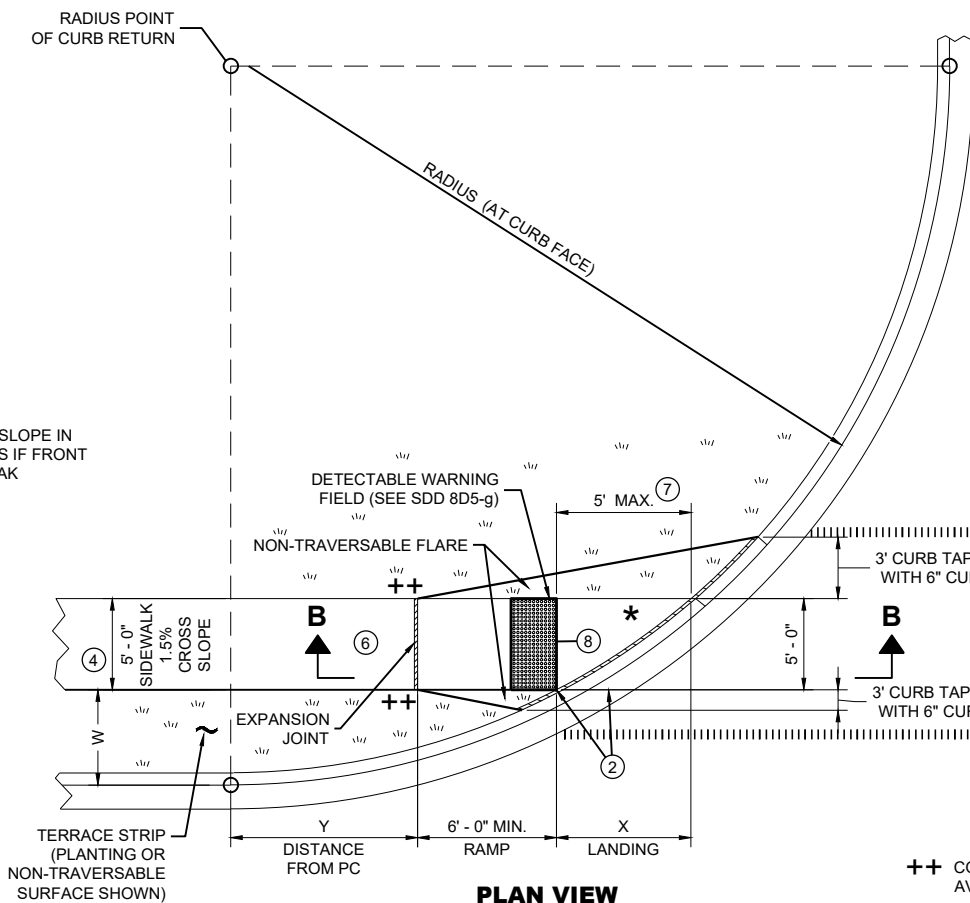
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET			4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET									4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET															4' - 10 3/4"	19' - 8 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

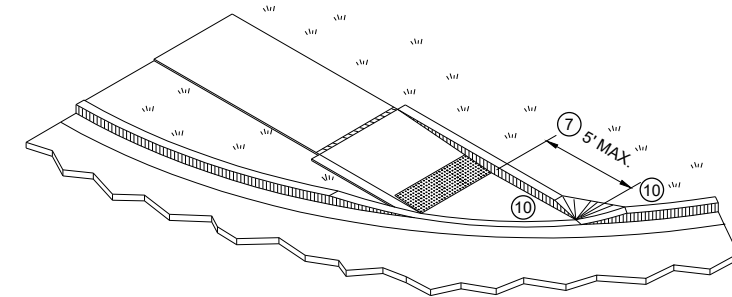


SECTION C - C FOR TYPE 4B

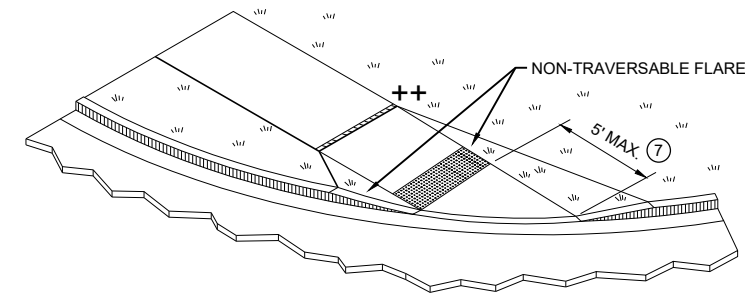


**PLAN VIEW
CURB RAMP TYPE 4B1**

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

**CURB RAMPS
TYPE 4B AND 4B1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- - - CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

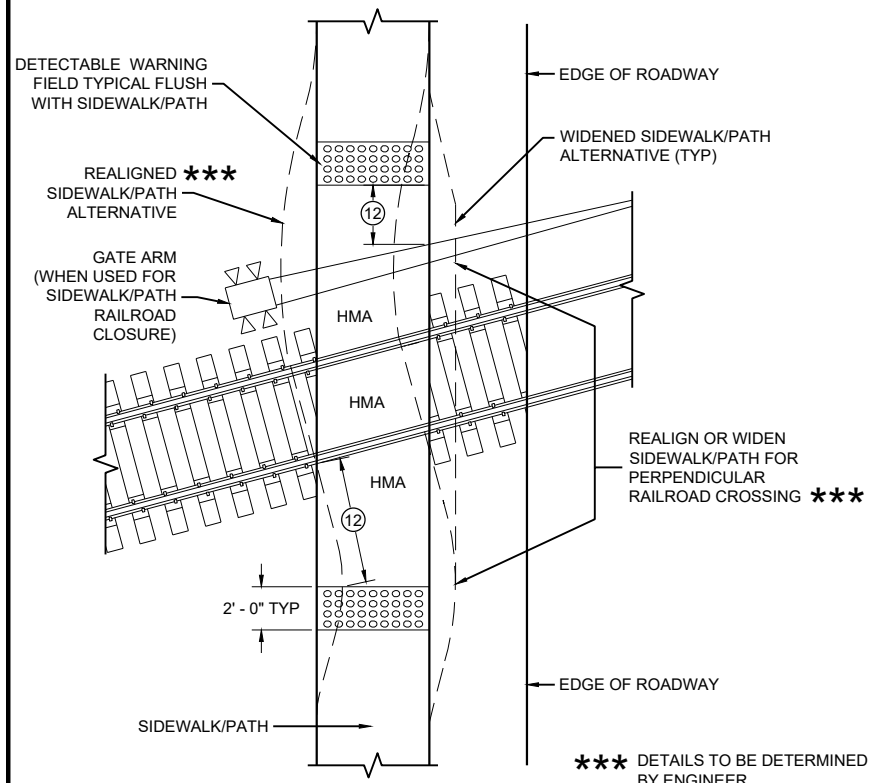
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

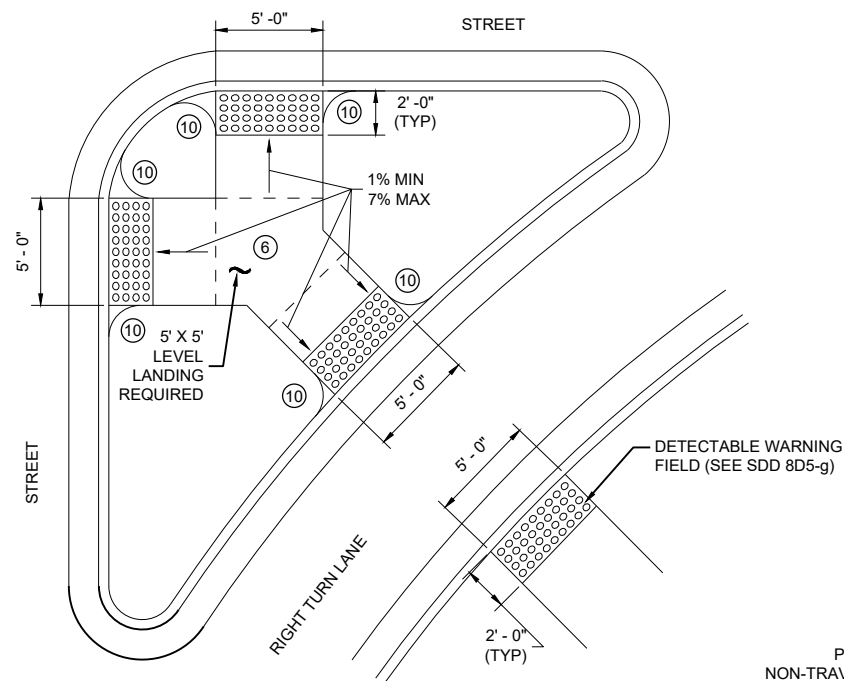
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- (7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



CURB RAMP TYPE 8

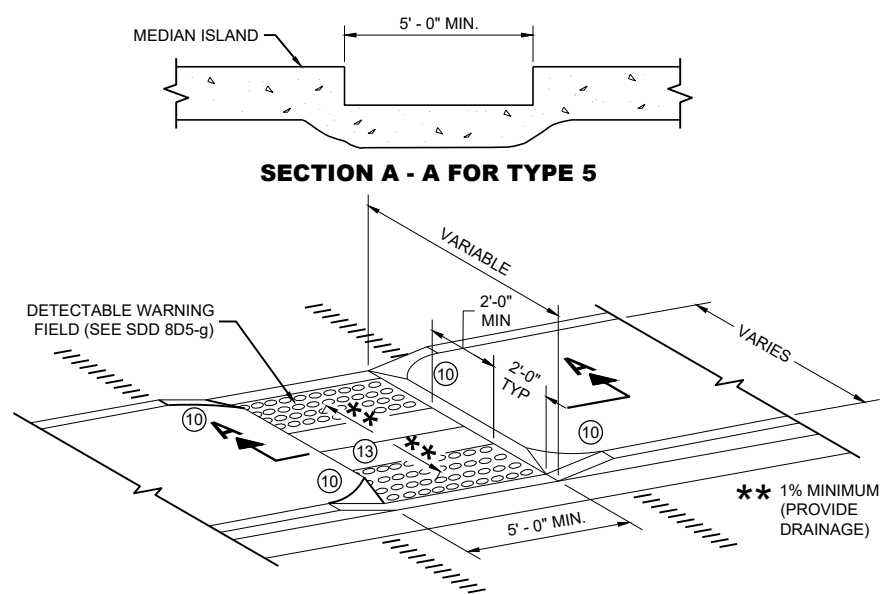
DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



CURB RAMP TYPE 6

DETECTABLE WARNING AT ISLANDS

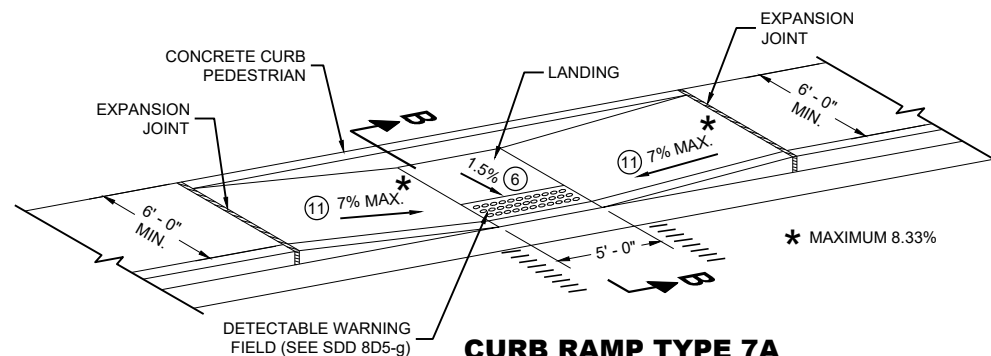
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMPS



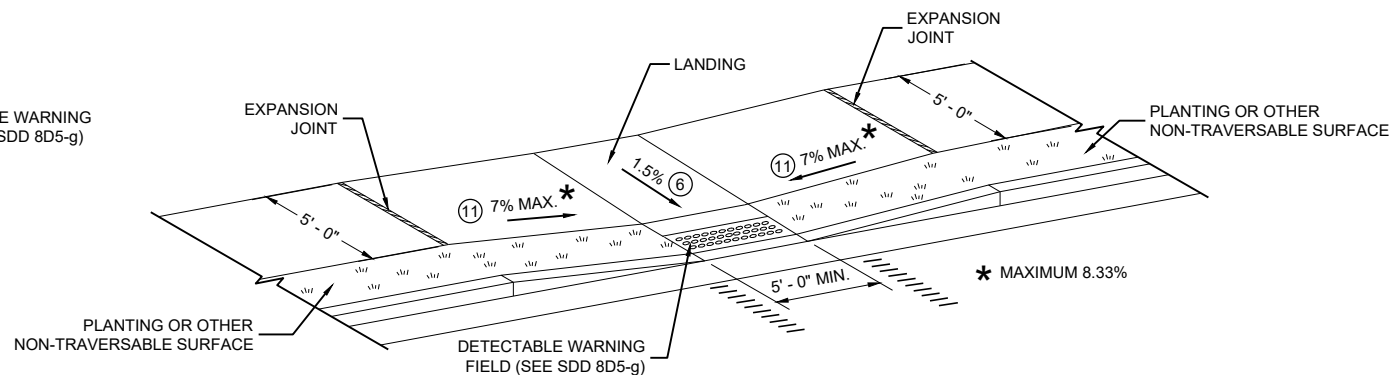
SECTION A - A FOR TYPE 5

CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A FOR INTERSECTIONS AND MID BLOCK CROSSINGS



CURB RAMP TYPE 7B FOR INTERSECTIONS AND MID BLOCK CROSSINGS

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

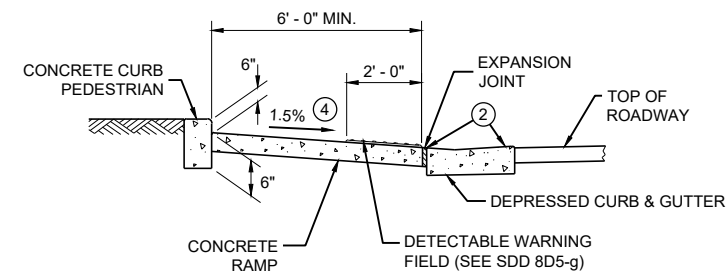
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/8 INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET $\pm 0.1'$ FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

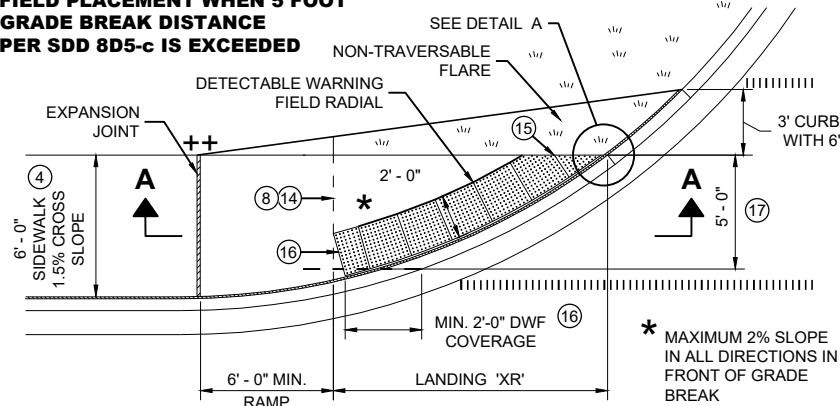


SECTION B - B FOR TYPE 7A

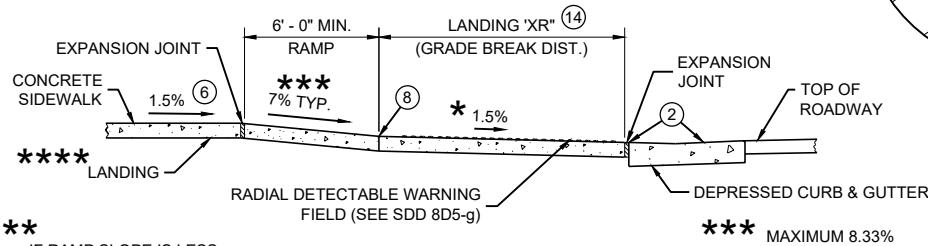
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

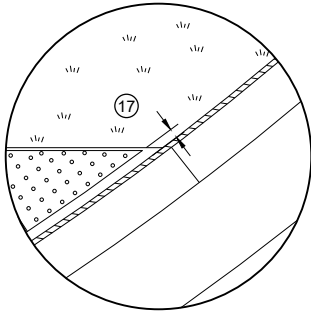
**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-c IS EXCEEDED**



**PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

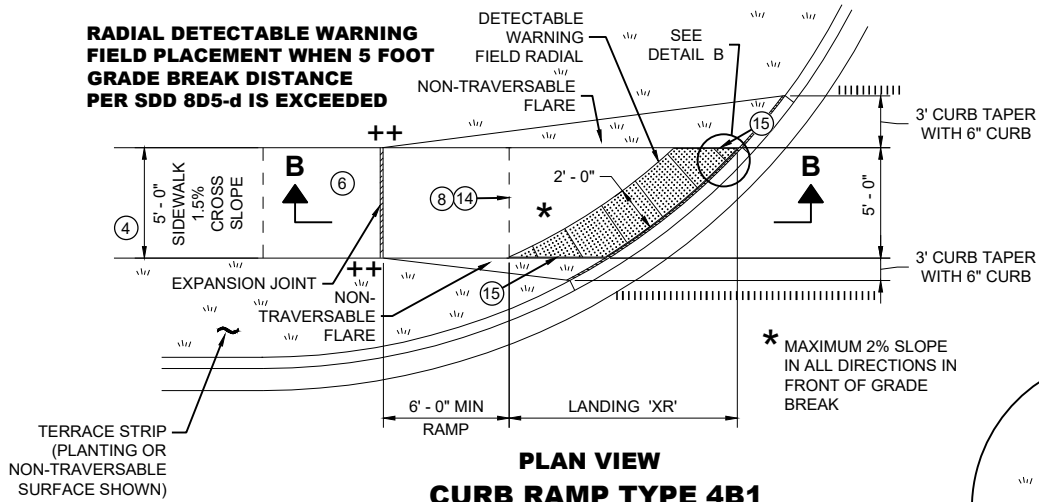


SECTION A - A FOR TYPE 4A1

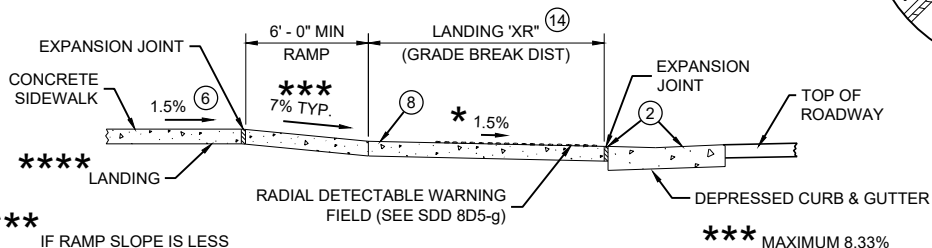


DETAIL A

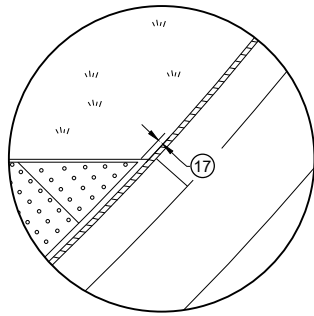
**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-d IS EXCEEDED**



**PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



SECTION B - B FOR TYPE 4B1



DETAIL B

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

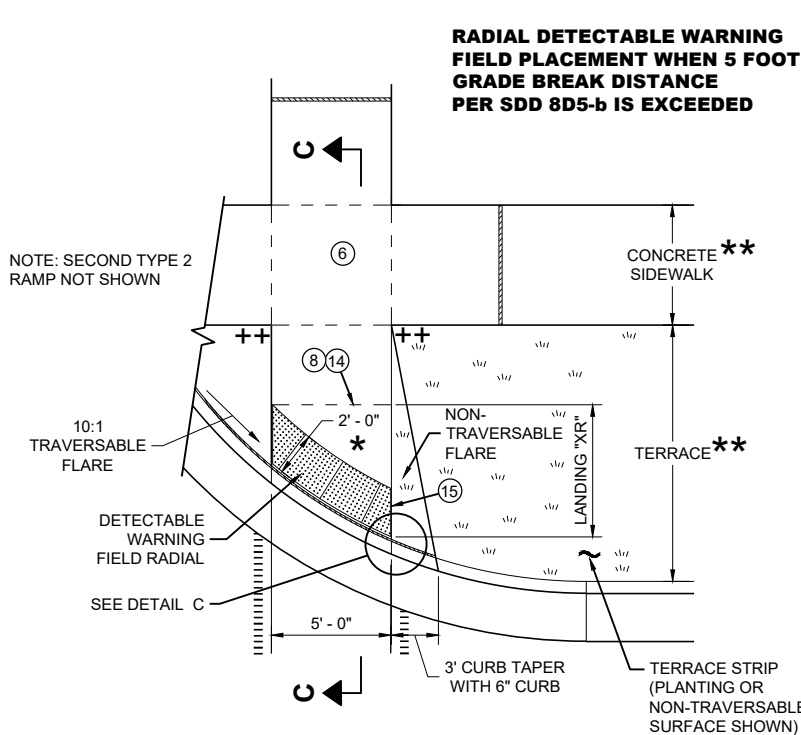
REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

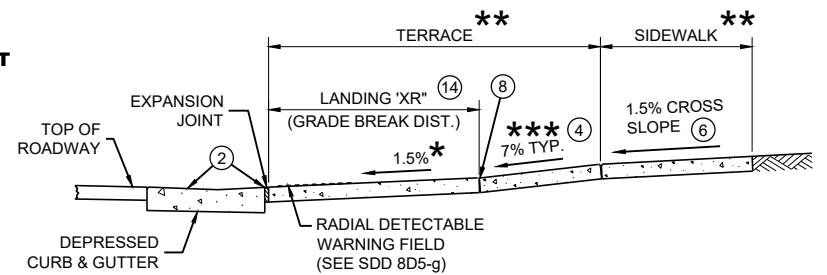
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/2" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17 A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

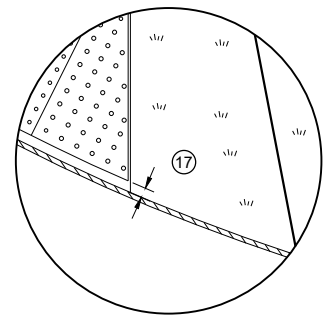
**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-b IS EXCEEDED**



**PLAN VIEW
CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)**



SECTION C - C FOR TYPE 2



DETAIL C

*** MAXIMUM 2% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE
BREAK

** WIDTH SHOWN ELSEWHERE
IN THE PLANS

*** MAXIMUM 8.33%

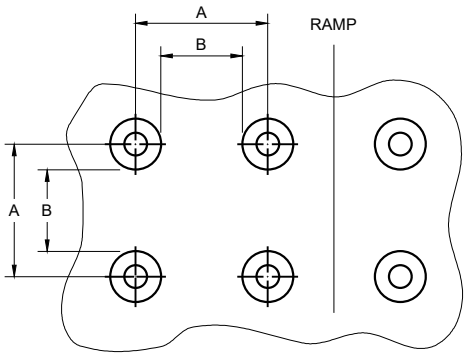
++ CONSTRUCT 6" WEDGE TO
AVOID CONCRETE BREAKAGE

**CURB RAMPS
RADIAL DETECTABLE WARNING**

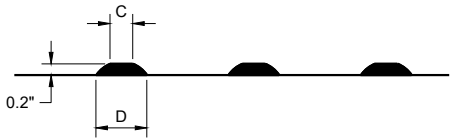
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

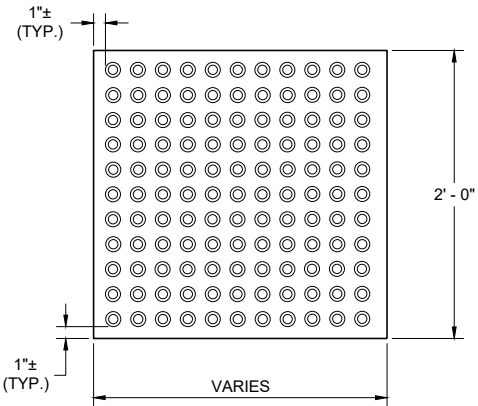


PLAN VIEW

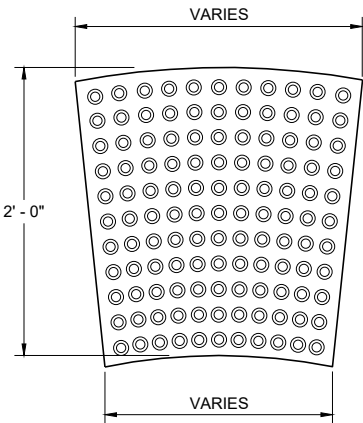


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

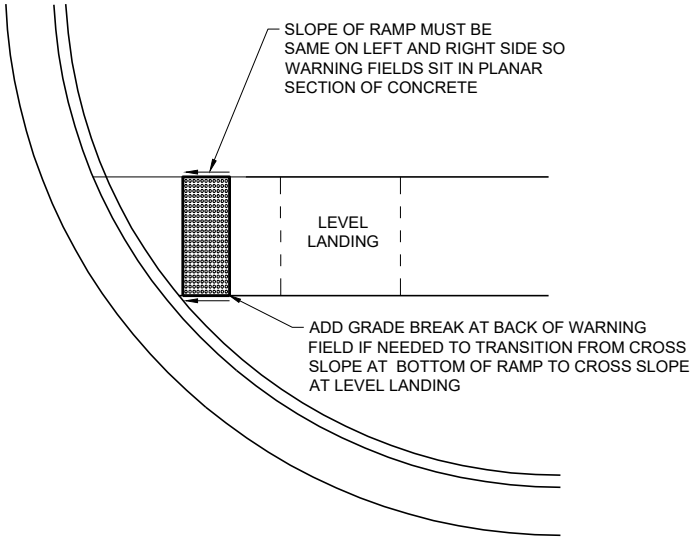


RECTANGULAR
PLATES

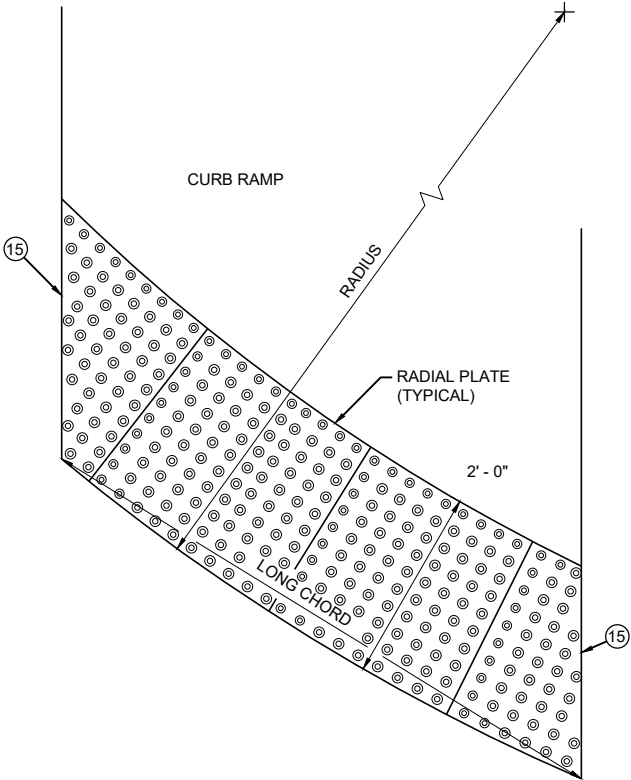


RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



DETECTABLE WARNING FIELD
PLANAR INSTALLATION



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

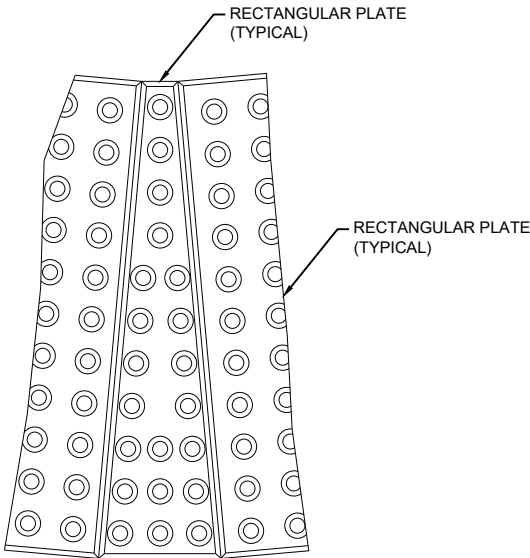
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

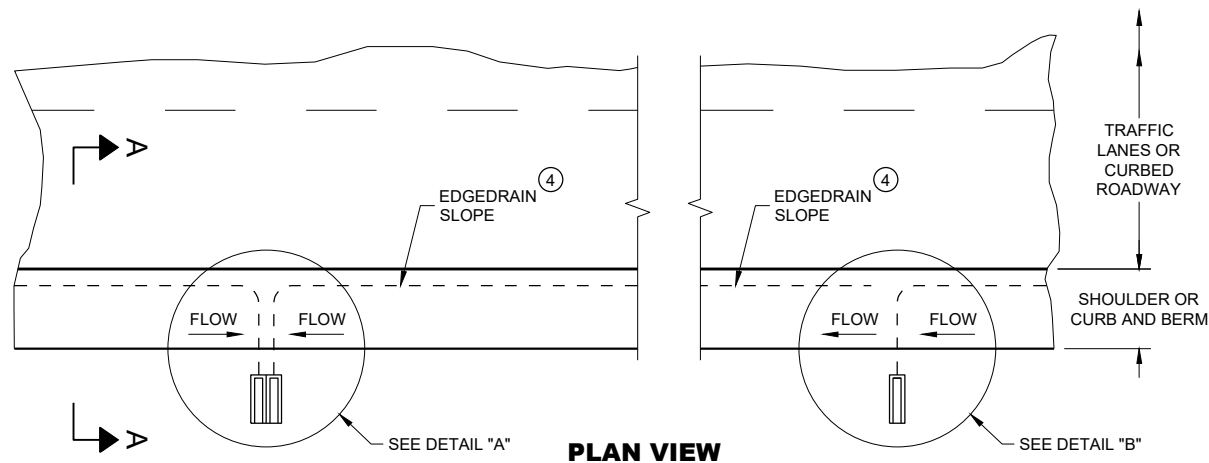


PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

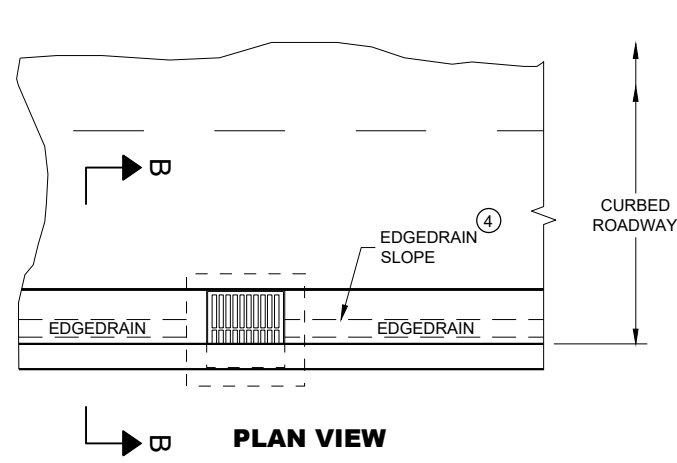
CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

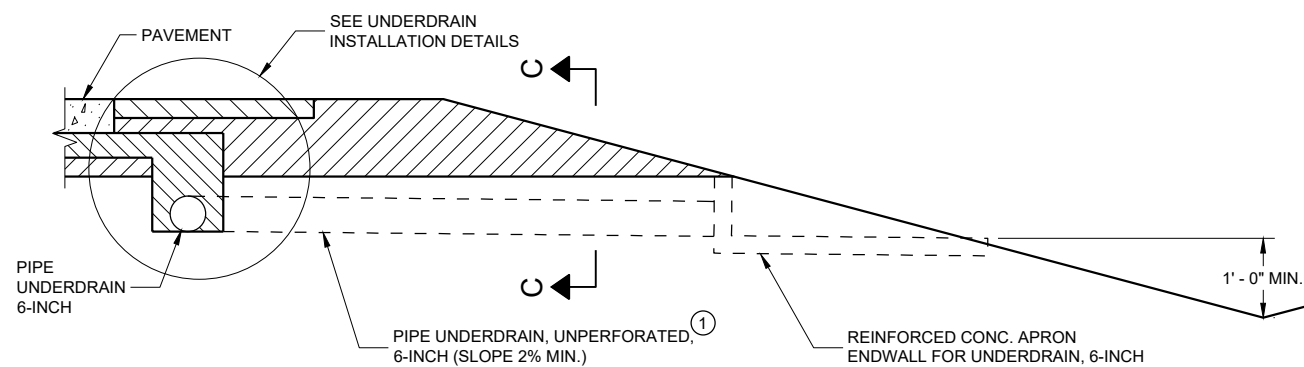
APPROVED
July 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



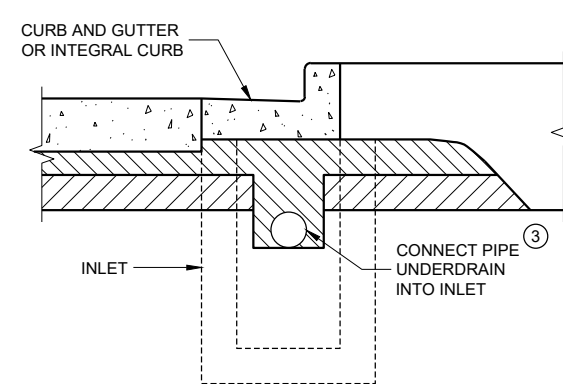
**ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN CONNECTS TO ROADSIDE) ②**



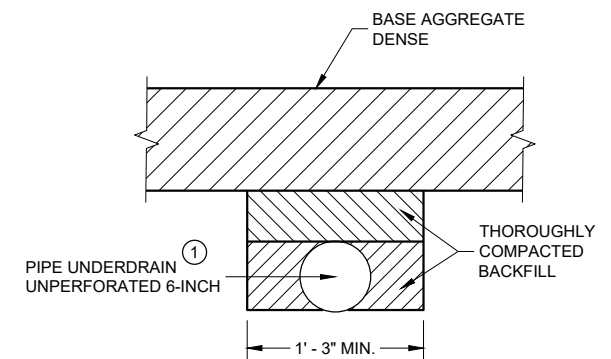
**ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)**



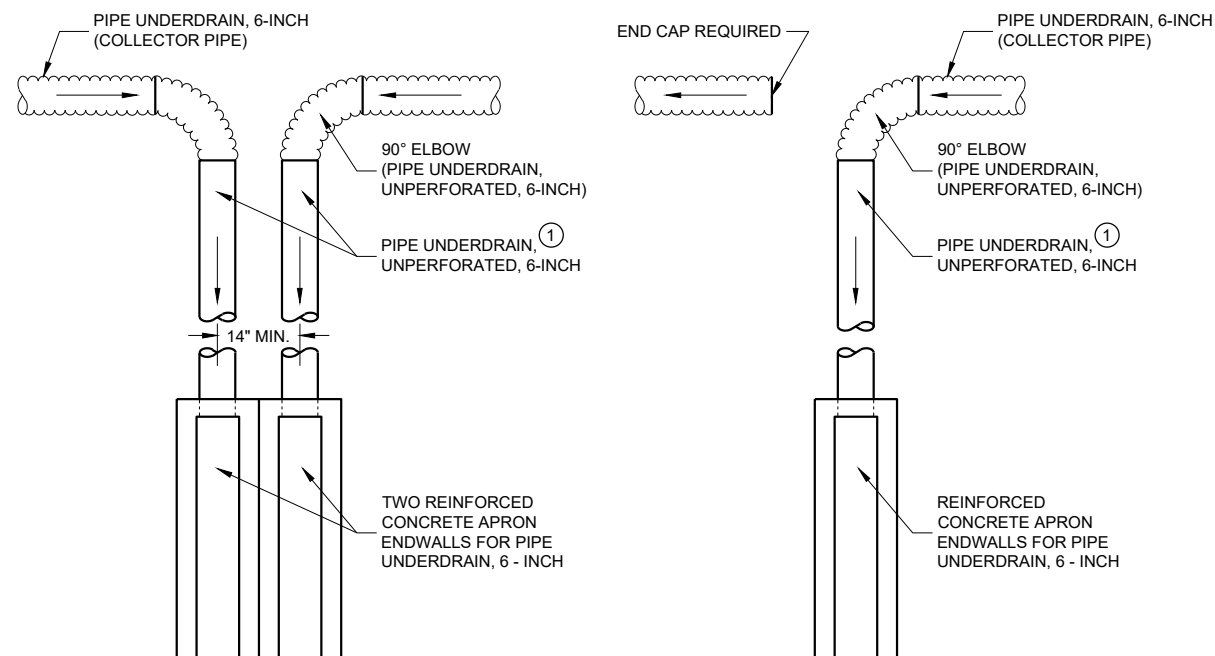
**SECTION A - A
RURAL CROSS SECTION**



**SECTION B - B
URBAN CROSS SECTION**



**SECTION C - C
TRENCH FOR OUTFALL PIPE**



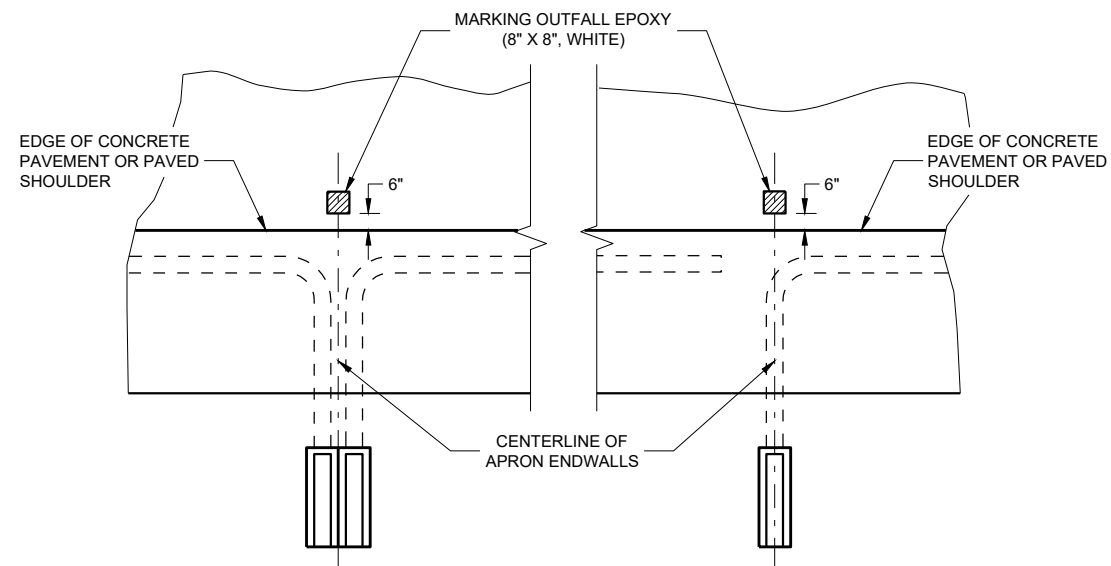
DETAIL "A"

TO BE USED AT LOW POINT LOCATIONS

DETAIL "B"

TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



LOW POINT LOCATIONS

INTERMEDIATE LOCATIONS

PAVEMENT MARKINGS FOR OUTFALL MARKERS

**EDGEDRAIN OUTLET
AND OUTFALL MARKERS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

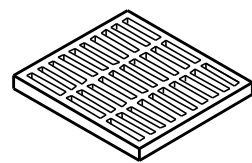
TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

- ② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
- ③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
- ④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.

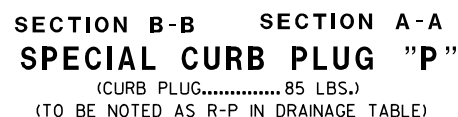
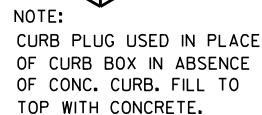
6



SHOWING SPECIAL GRATE NO.1
(TO BE NOTED AS R-1 IN DRAINAGE TABLE)



A diagram of a horizontal beam. At the left end, there is an upward-pointing arrow labeled 'A'. At the right end, there is a downward-pointing arrow labeled 'A'. In the middle of the beam, there are two horizontal arrows pointing to the left, both labeled 'B'.



(GRATE..... 150 LBS.)
(TO BE USED UNLESS OTHERWISE NOTED IN DRAINAGE TABLE)

The drawing consists of two views of a mechanical assembly. The left view is a top-down perspective showing a rectangular base with a curved top surface. Dimensions include overall width of 31 1/2", an inner width of 29 1/8", a base thickness of 3 1/4", and a base width of 27". The right view is a side elevation showing the profile of the assembly. It includes a base width of 31 3/8", a base thickness of 3 1/4", and a total height of 10". The top surface is curved with a radius 'R'. Other dimensions include a top width of 21 5/8", a top thickness of 1 1/2", a base thickness of 1", a base width of 19 1/2", a base thickness of 6", a base width of 5 1/2", a base thickness of 8 1/2", and a base width of 3 1/4". The right view also shows a vertical section with a width of 7" and a height of 10".

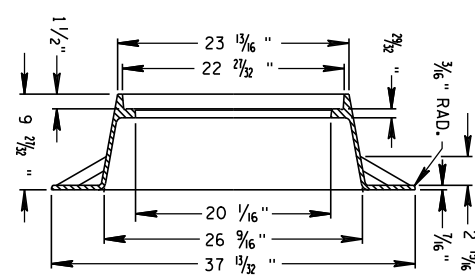
(APPROX. WEIGHT - 670 LBS.)	
FRAME.....	350 LBS.
CURB BOX.....	135 LBS.
GRATE.....	185 LBS.



(APPROX. WEIGHT - 470 LBS.)

Diagram of a 48-inch diameter manhole cover with the following features labeled:

- 1/4" FLUSH LETTERS
- TYPE "C" PERMAGRIP SURFACE DESIGN
- C (Curved arrow pointing up)
- SEWER
- 2 1/2" LETTERS RAISED 1/8" HIGH
- (8) 1" DIA. VENT HOLE
- (2) 1" OPEN PICK HOLE



(APPROX. WEIGHT - 290 LBS.)

TYPE	'A'	'B'	'C'
11	3'-6"	2'-8"	12" - 36"*
12	4'-0"	3'-8"	12" - 42"**
13	5'-0"	5'-8"	42" - 48"
14	6'-0"	7'-8"	54" - 60"

THE FIRST STEP SHALL BE PLACED
16" ABOVE THE BENCH.

Diagram illustrating the internal structure of a manhole. The diagram shows a cross-section of the manhole with the following components labeled:

- PIPE SEWER
- MANHOLE STEPS
- 18" DIA.

The diagram also includes a north arrow pointing upwards, labeled 'E'.

DEPTH AS SHOWN ON PLANS

D

X'

A' DIA.

5" PRECAST REINF. CONC.,
12" CONC., 12" BRICK OR
12" CONCRETE BLOCK

OVER 12' DEPTH

C' 2

12"

GRADE A CONCRETE FOOTING

SLOPE 1/2" PER FT.

C' DIA.

PRIMER CONCRETE
STEPS OF APPROX. 12"
BE ACCEPTABLE

45° MORTAR BEVEL

1/2" CEMENT MORTAR ON BLOCK OR BRICK

TYPES 11, 12, 13 & 14

COVER				
TYPE	DESCRIPTION	OPENING	'E'	'F'
"Q"	ROUND	2'-2" DIA.	—	—
"W"	CURB BOX	1'-8" X 2'-6"	—	1'
"X"	INLET	1'-10" X 2'-6"	—	—
"R"	CURB BOX	2'-0" X 2'-1"	4"	—

STRUCTURE WALL THICKNESS 'X' TO BE 8" BRICK, 6" CONCRETE BLOCK,
6" GRADE A CONCRETE OR 5" PRECAST REINFORCED CONCRETE.

STRUCTURE FOOTINGS ARE TO BE GRADE A CONCRETE OF THE THICKNESS
SHOWN IN THE DETAIL OR 5" PRECAST REINFORCED CONCRETE.

REINFORCEMENT FOR 5" PRECAST REINFORCED CONCRETE SHALL BE 6" X 6" W16 X W16 WELDED SREEL WIRE FABRIC AND SHALL BE EMBEDDED 2" CLEAR.

PRECAST INLET UNITS AND BASES SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

PRECAST CONCRETE FLAT SLAB TOPS MAY BE USED ON THE STRUCTURES.
THE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

PRECAST REINFORCED BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6" IN DEPTH, WHICH MEETS THE REQUIREMENTS FOR GRANULAR BACK-FILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

SET FRAME ELEVATION 0.03 FT. LOWER THAN ELEVATION INDICATED ON THE PLANS.

THE CONTRACTOR MAY FORM AND POUR MONOLITHIC CONCRETE INVERT PROVIDED THE PIPE ENDS ARE EXTENDED INTO THE M.H. AND NOT TERMINATED WITHIN THE M.H. WALLS.

MANHOLE STEPS

STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAX. SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM WALL EMBEDMENT OF 3 INCHES IN PRECAST MANHOLE AND 6 INCHES IN 8 INCH BRICK OR 6 INCH BLOCK MANHOLE; TREAD OF STEP SHALL HAVE A NON-SKID SURFACE AND BE FLANKED BY CLEATS, WITH A MINIMUM OF 10 INCHES CLEAR BETWEEN CLEATS, TO PREVENT FOOT SLIPPING OFF THE EDGE CLEATS SHALL BE A MINIMUM OF $\frac{3}{4}$ INCH HIGH BY $\frac{3}{4}$ INCH WIDE HAVING A MINIMUM THICKNESS OF $\frac{3}{8}$ INCH. STEPS SHALL BE CAPABLE OF SUPPORTING A CONCENTRATED LOAD OF 300 LBS. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

SOLID ALUMINUM STEPS SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 0.75 INCH. ALUMINUM SURFACES TO BE EMBEDDED IN CONCRETE SHALL BE GIVEN ONE COAT OF SUITABLE QUALITY PAINT, SUCH AS ZINC CHROMATE PRIMER CONFORMING TO FEDERAL SPECIFICATION TT-P-645 OR EQUIVALENT. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCING BAR WILL BE ACCEPTABLE.

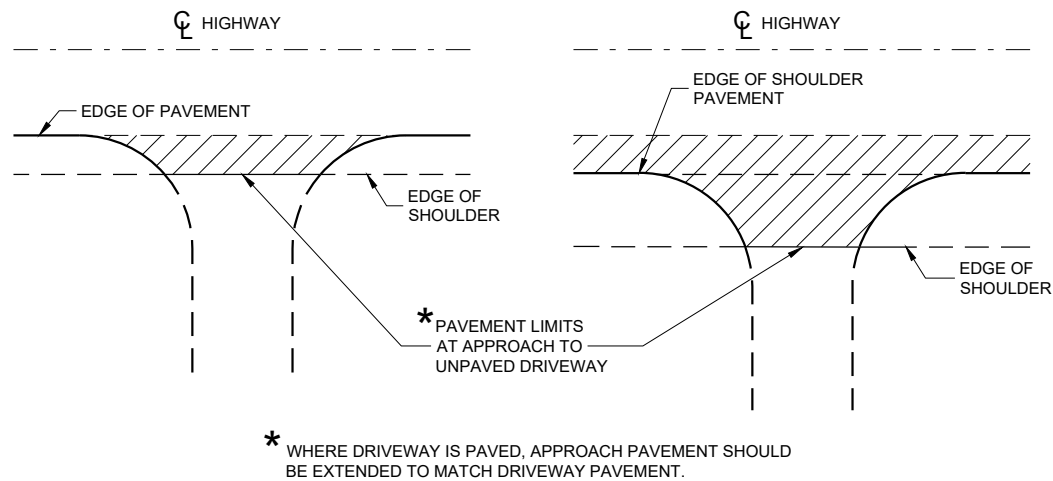
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

DATE _____

ROADSIDE STANDARDS 90

FHWA

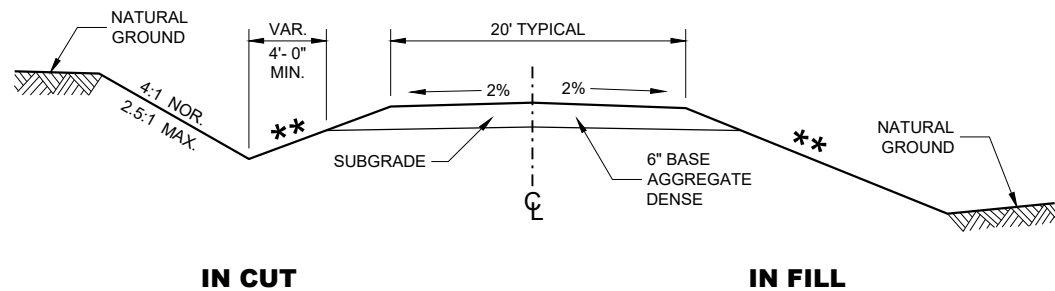
S.D.D. 8 D 17-6



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

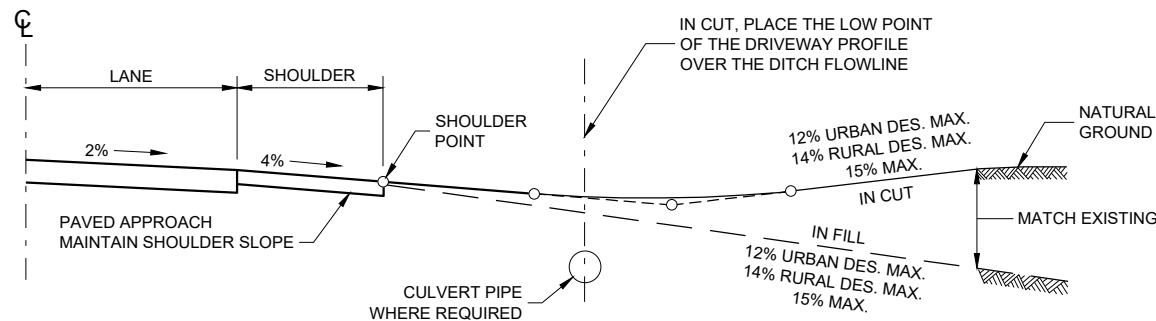
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



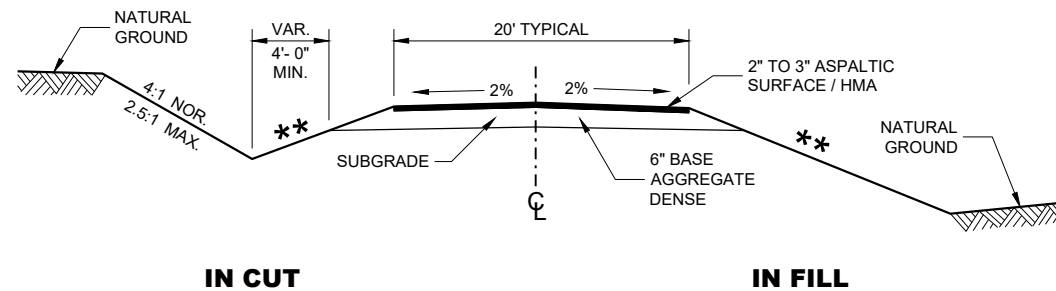
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

****** SLOPE CAN VARY WITH
SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



TYPICAL DRIVEWAY PROFILES

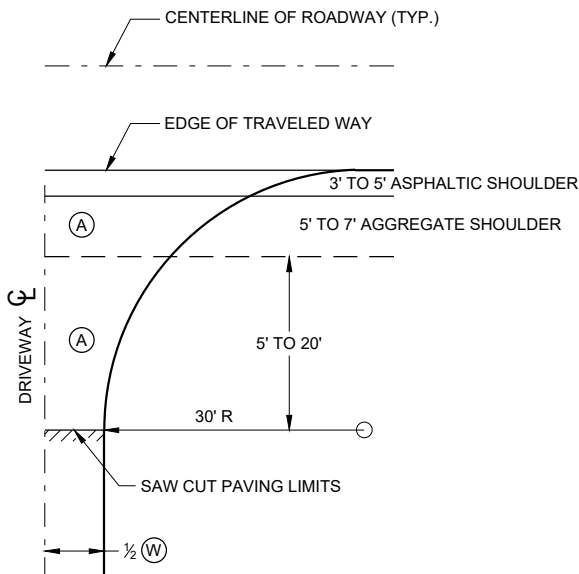


**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

**DRIVEWAYS WITHOUT
CURB AND GUTTER**

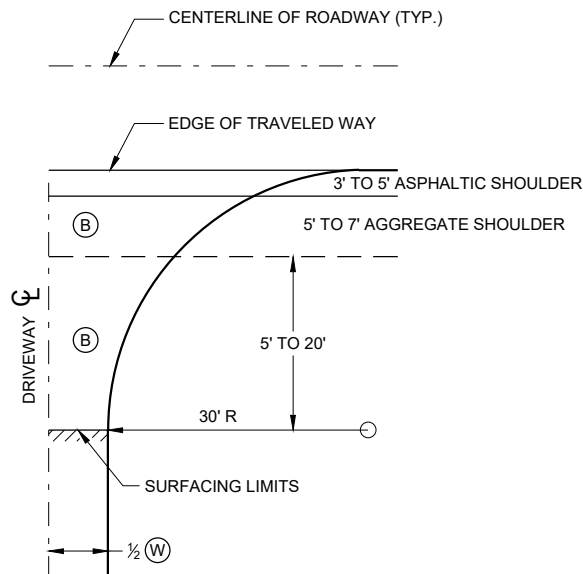
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

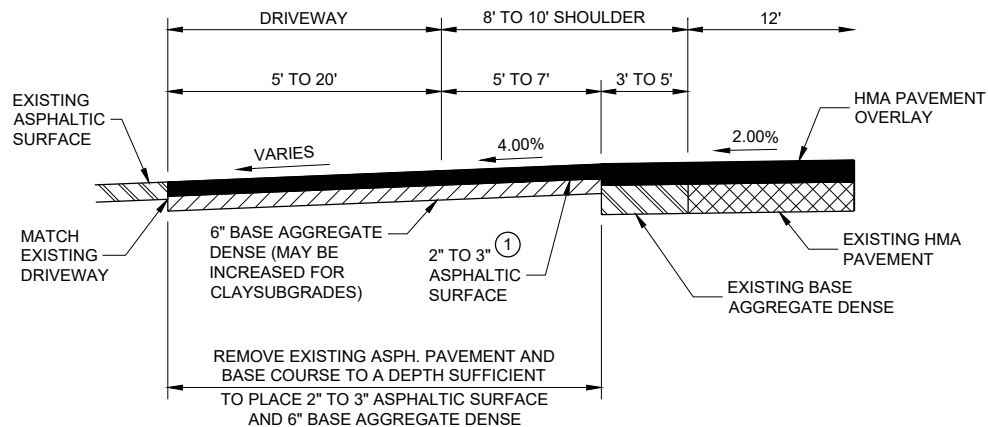


**PLAN VIEW
HALF SECTION**

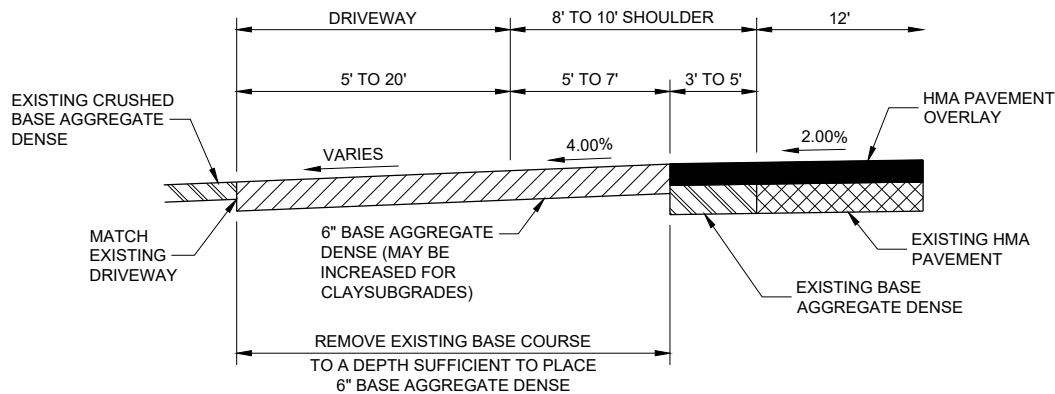
- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- (B) : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- (W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



**PLAN VIEW
HALF SECTION**



**PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS**



**PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS**

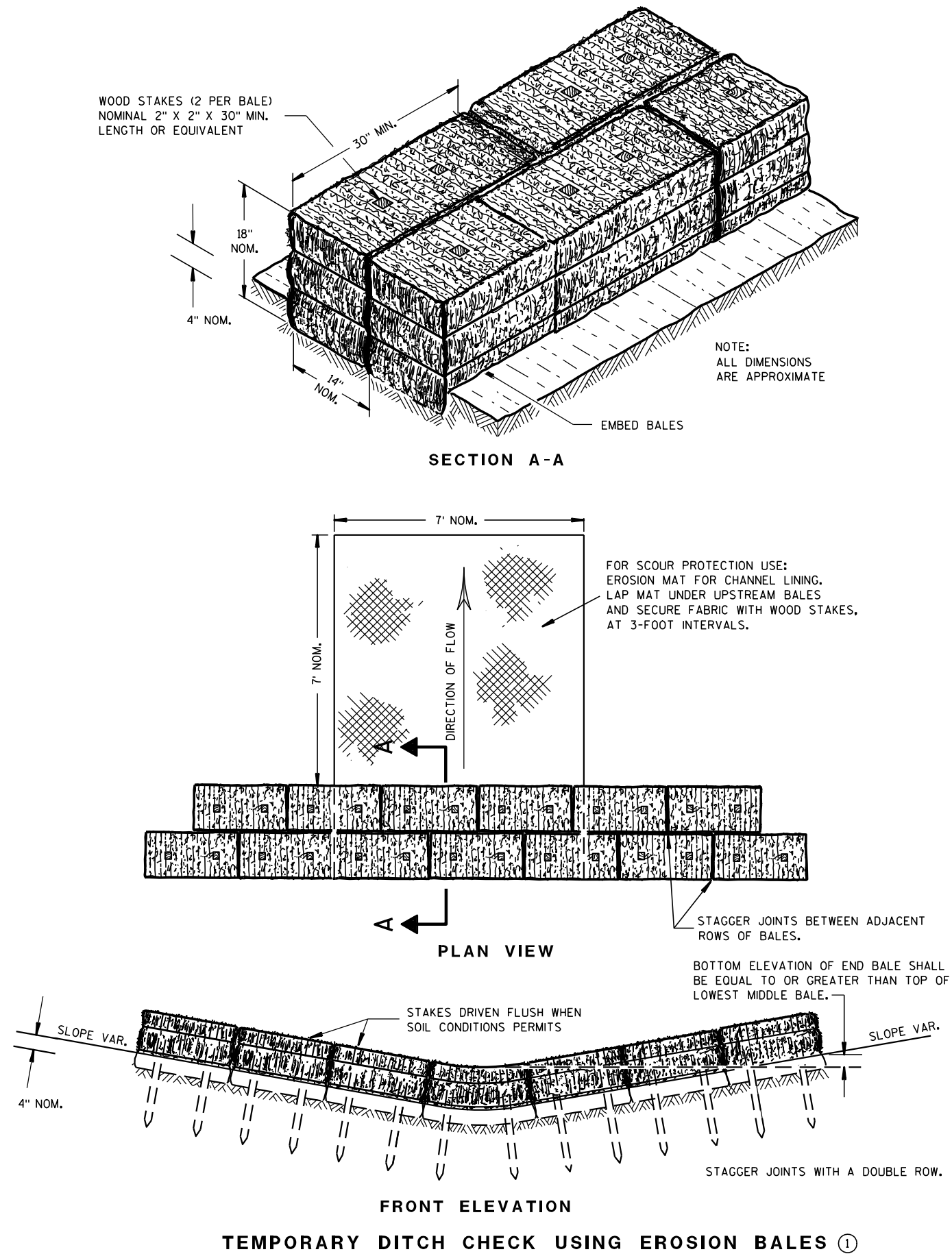
GENERAL NOTES

- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.

**DRIVEWAYS WITHOUT CURB
AND GUTTER RESURFACING
PROJECTS RURAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

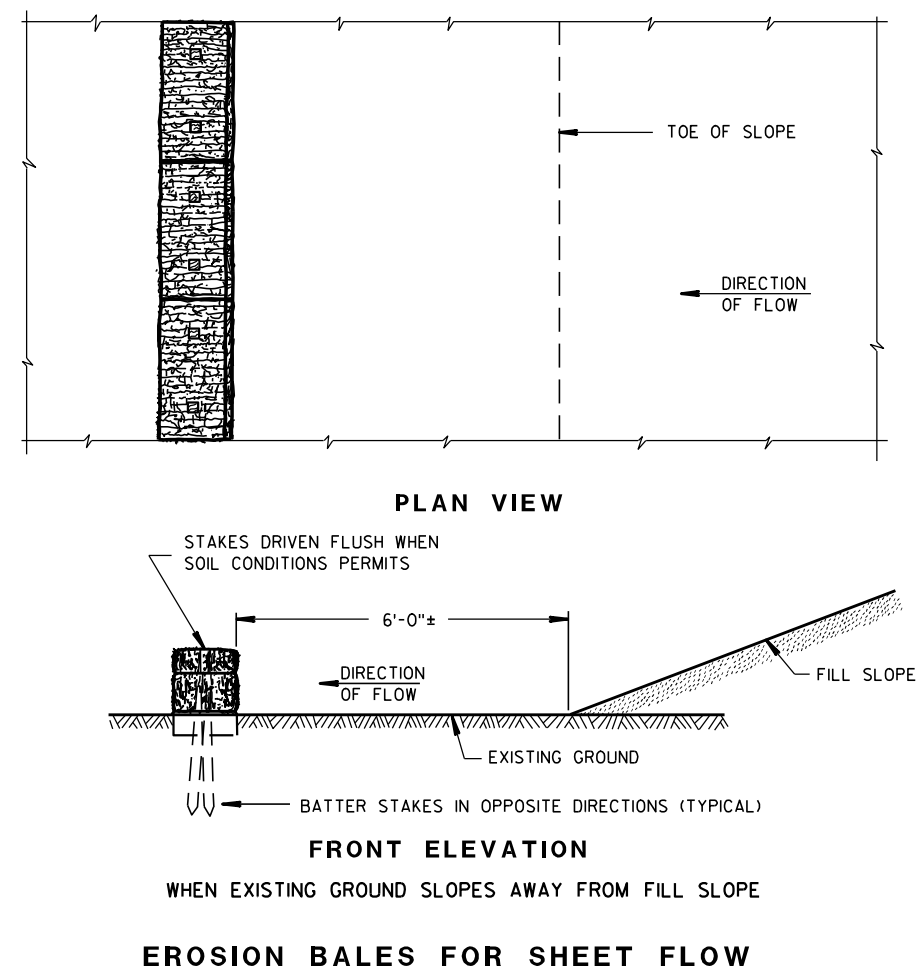
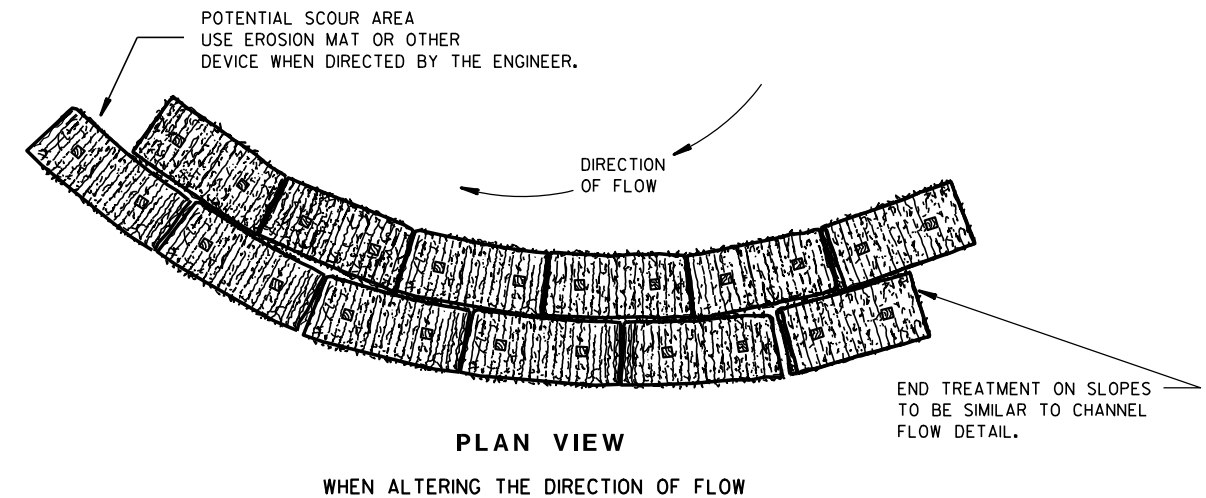
APPROVED
December 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 92
FHWA



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE/S/ Beth Connors
CHIEF ROADWAY DEVELOPER

ENGINEER

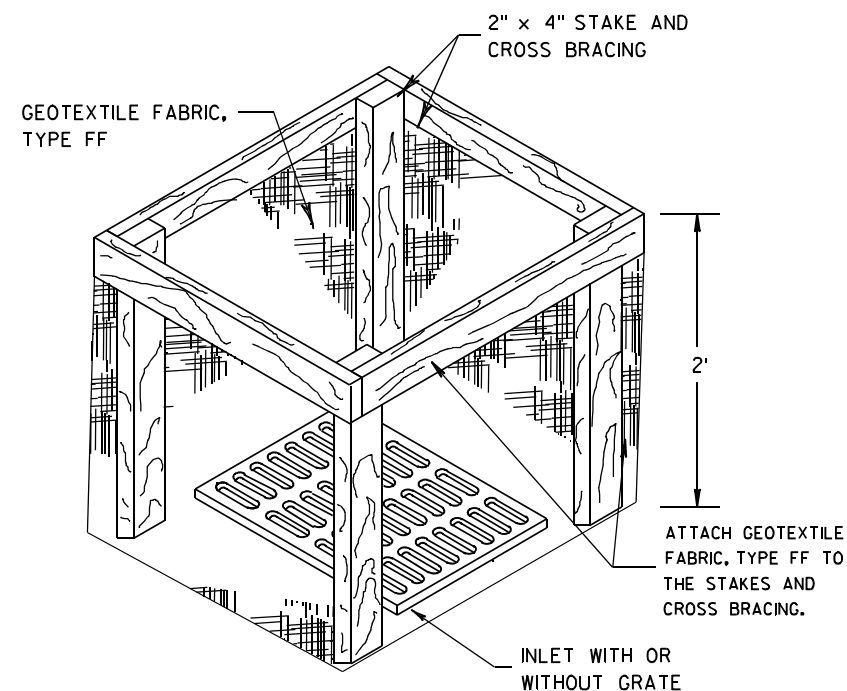
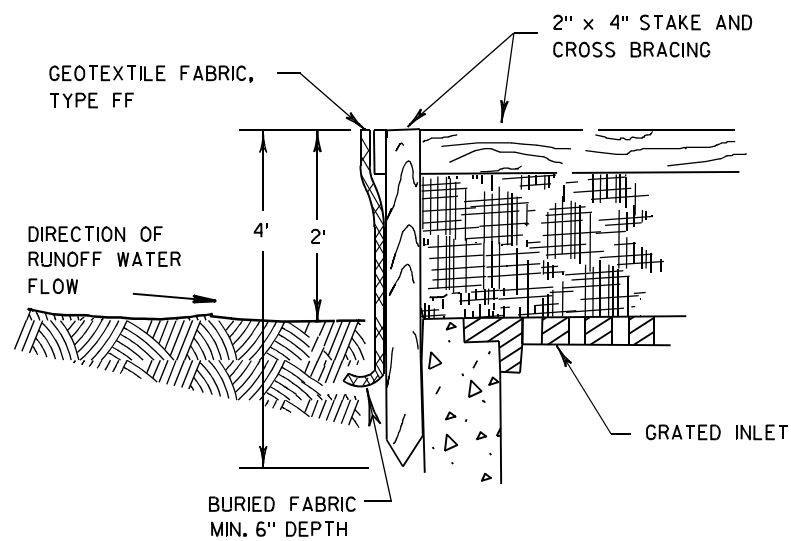
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Diagram illustrating the installation of a geotextile fabric. The fabric is shown being laid over a surface, with the flow direction indicated by an arrow labeled 'FLOW DIRECTION'. The fabric is labeled 'GEOTEXTILE FABRIC'. The area where the fabric is being laid is labeled 'EXCESS FABRIC'. A circled number '2' indicates the second step in the process.

A cross-sectional diagram of a tieback system. A vertical line represents the silt fence, with the label "SILT FENCE" and an arrow pointing to it. A diagonal line, labeled "TIEBACK BETWEEN FENCE POST AND ANCHOR" with an arrow, connects the top of the fence to an "ANCHOR STAKE MIN. 18\" LONG". The anchor stake is shown as a dashed line driven into the ground, with a label and arrow pointing to it. A horizontal arrow labeled "FLOW DIRECTION" points from left to right, indicating the direction of water flow relative to the fence.

APPROVED
4-29-05 /S/ Beth Cann
DATE CHIEF ROADWAY DEVELOPER 94 INEER
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INLET PROTECTION, TYPE A

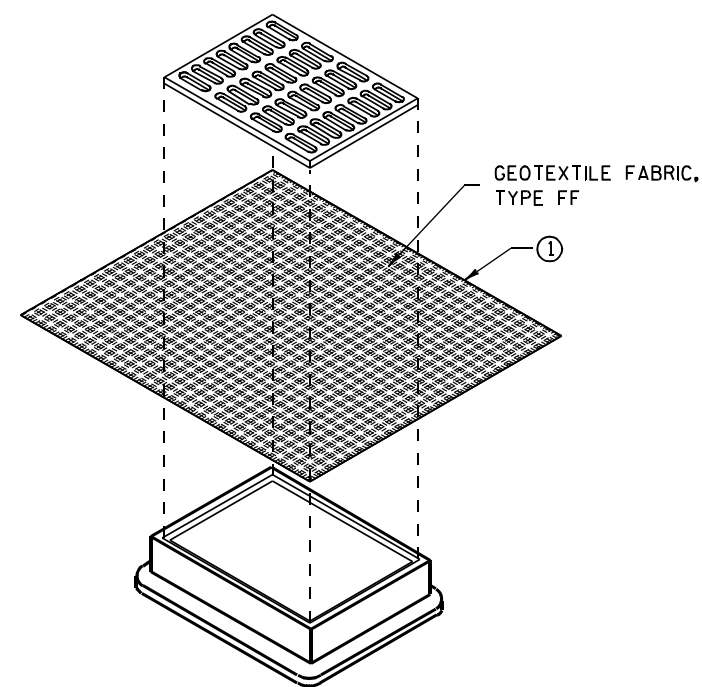
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

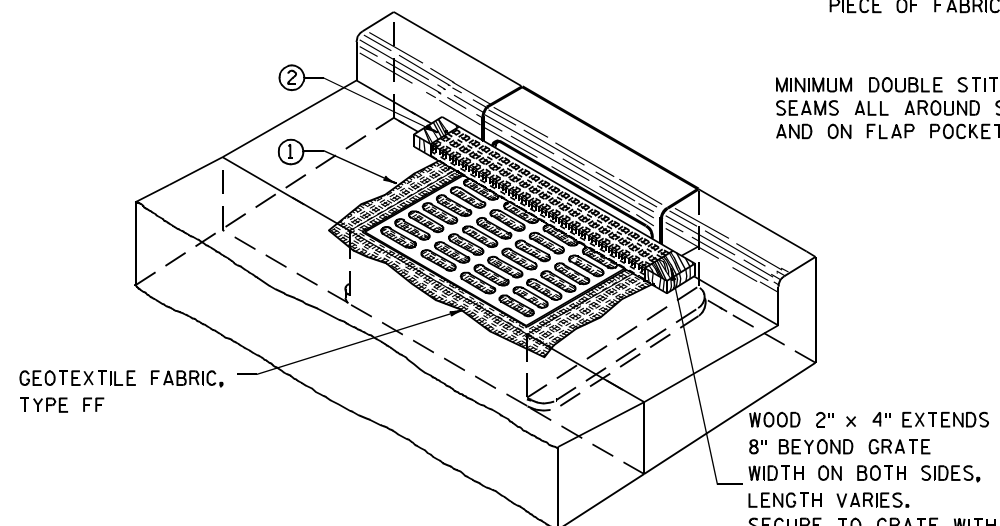
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

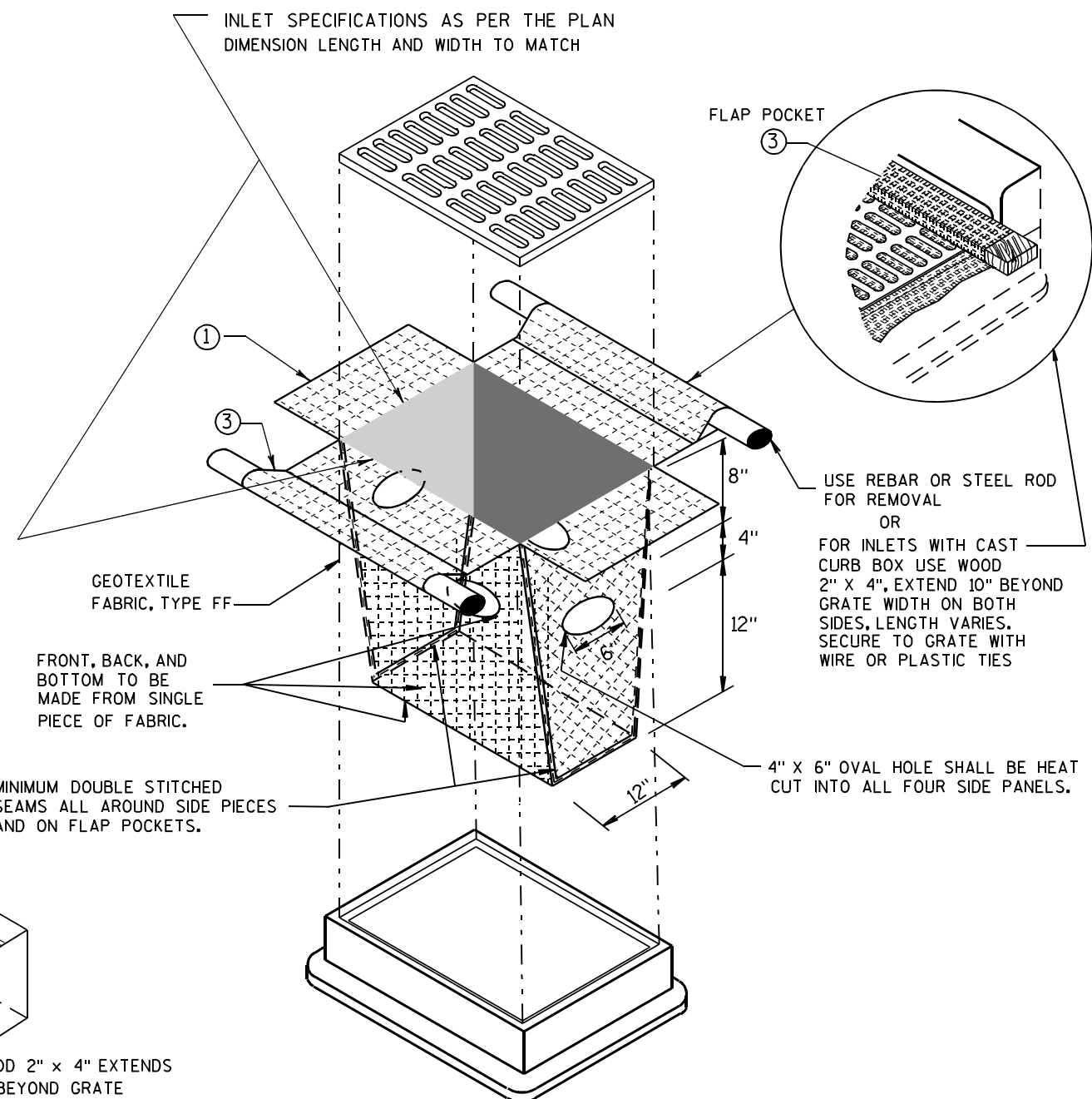
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



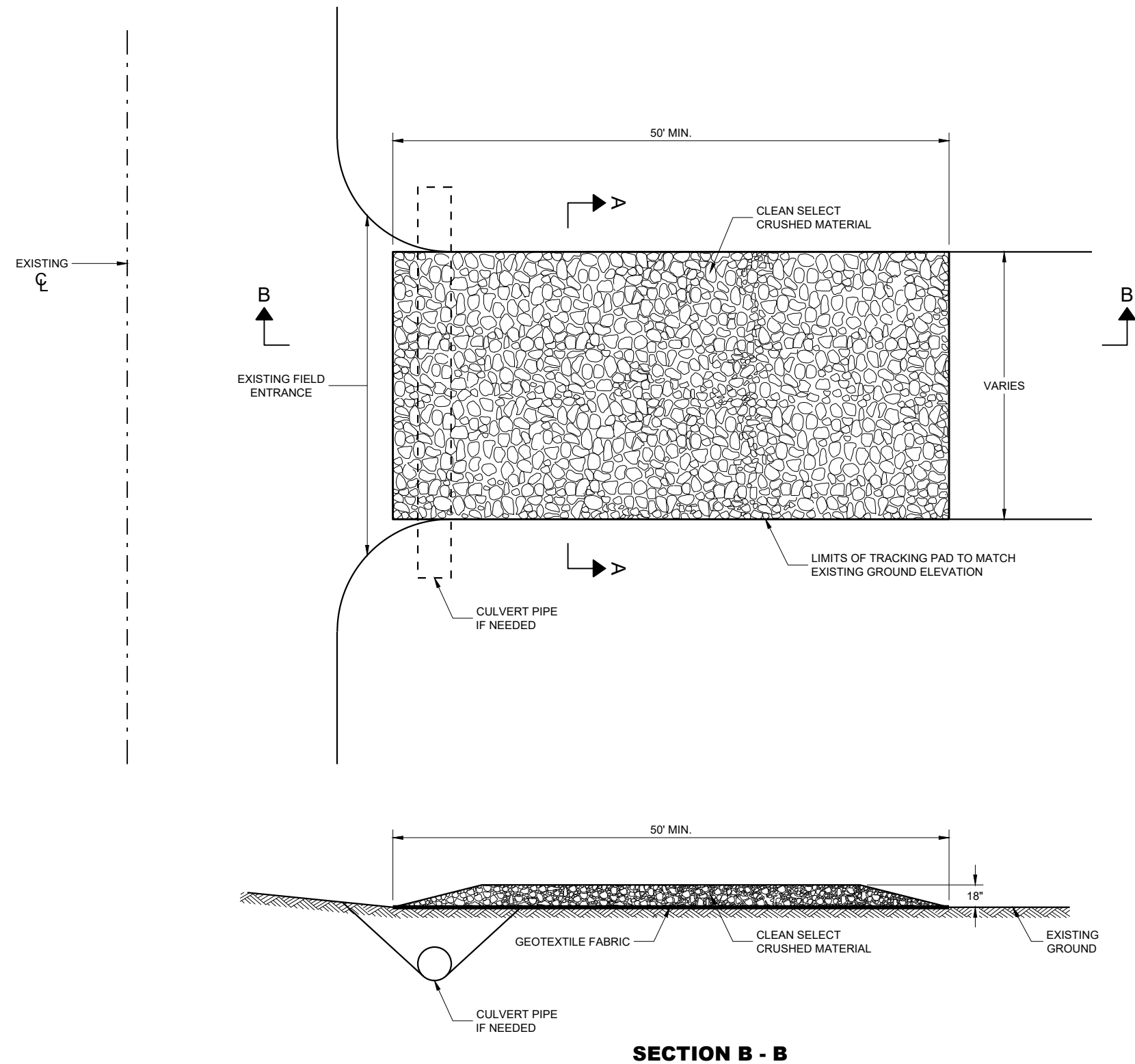
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Connolly
DATE 95
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

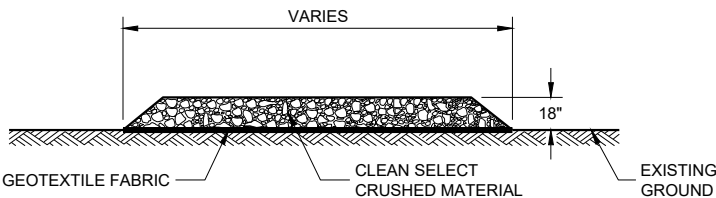
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011

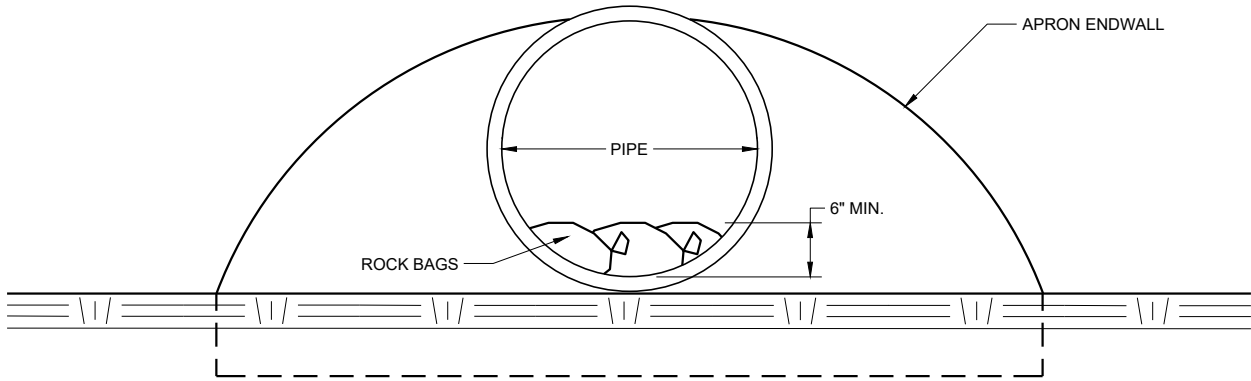
DATE

FHWA

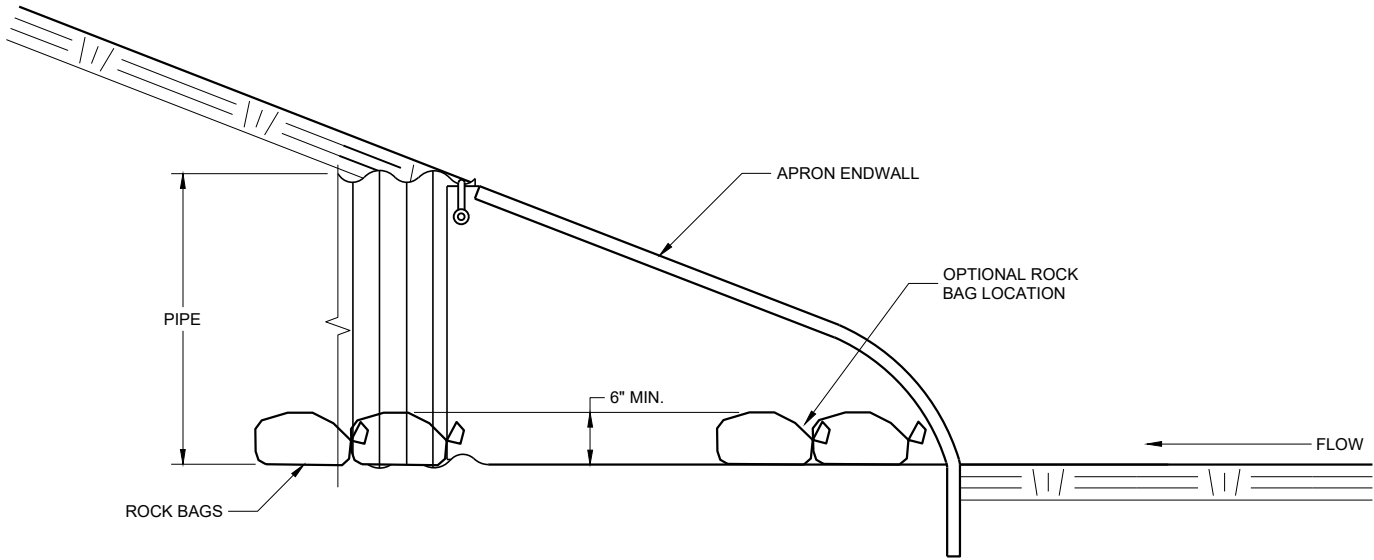
/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT ENGINEER

96



END VIEW



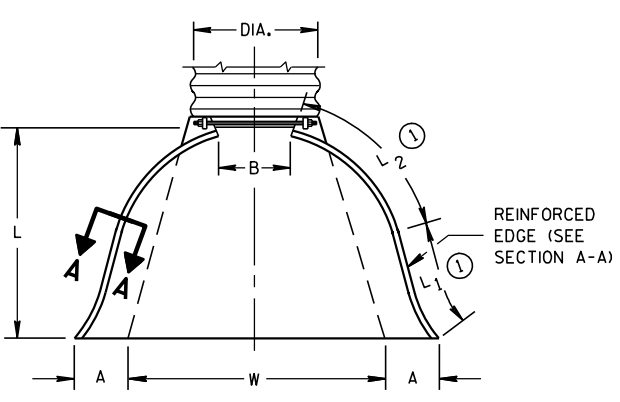
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGR	97
FHWA		

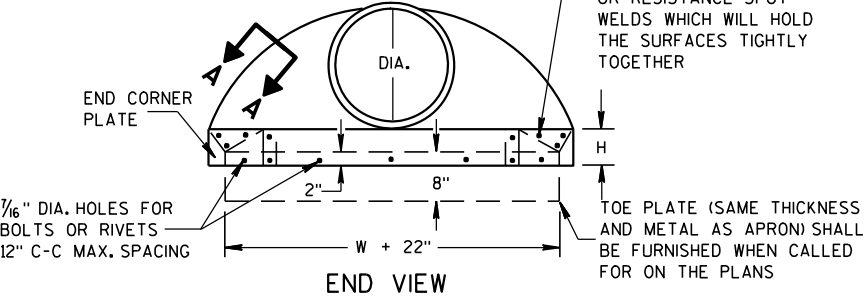
METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2	Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2	Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3	Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3	Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3	Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3	Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3	Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3	Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3	Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3	Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3	Pc.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES

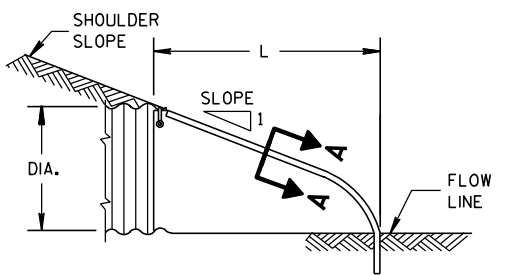


PLAN VIEW

END CORNER PLATES MAY
BE FASTENED TO APRON
PROPER BY BOLTS, RIVETS,
OR RESISTANCE SPOT
WELDS WHICH WILL HOLD
THE SURFACES TIGHTLY
TOGETHER



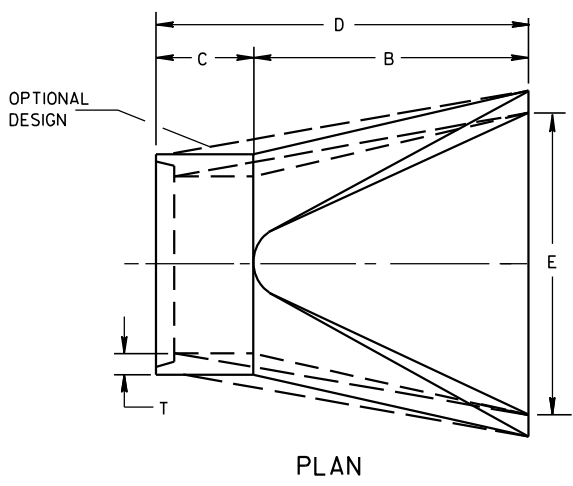
END VIEW



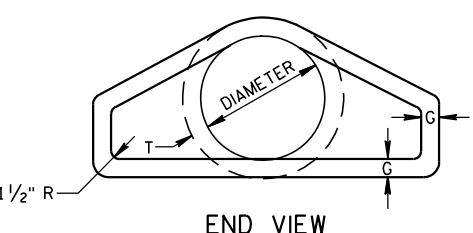
SIDE ELEVATION
METAL ENDWALLS

REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1				
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1				
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1				
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1				
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1				
48	5	24	72	26	98	84	5	3 to 1				
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1				
60	6	30-35	60	39	99	96	5	2 to 1				
66	6 1/2	24-30	72-78	21-27	99	102	5 1/2	2 to 1				
72	7	24-36	78	21	99	108	6	2 to 1				
78	7 1/2	24-36	78	21	99	114	6 1/2	2 to 1				
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1				
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1				

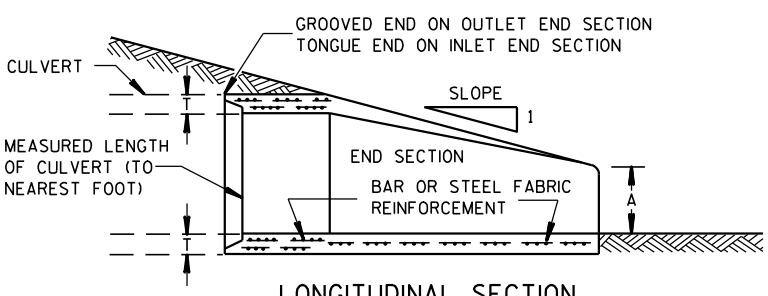
* MINIMUM
** MAXIMUM



PLAN

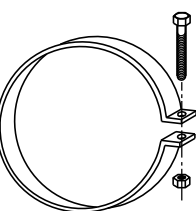


END VIEW

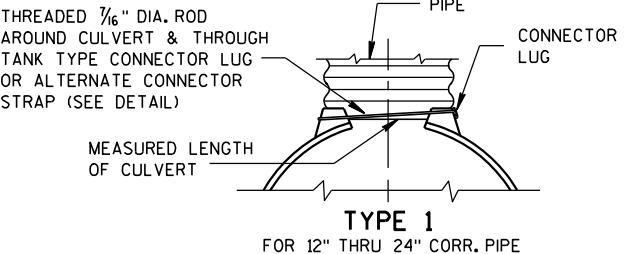


LONGITUDINAL SECTION
CONCRETE ENDWALLS

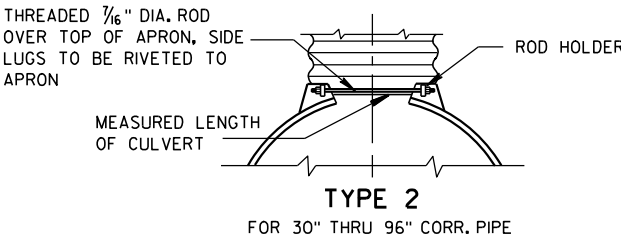
1" WIDE, 12 GA. (0.109"
THICK) GALVANIZED STRAP
WITH STANDARD 6" X 1/2"
BAND BOLT AND NUT



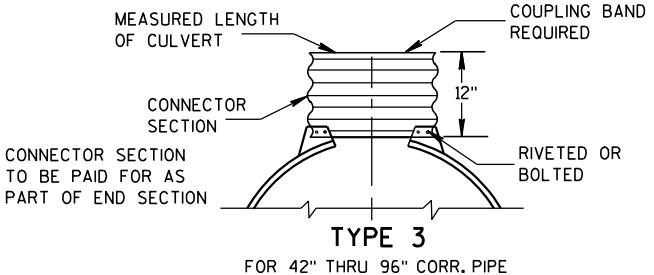
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



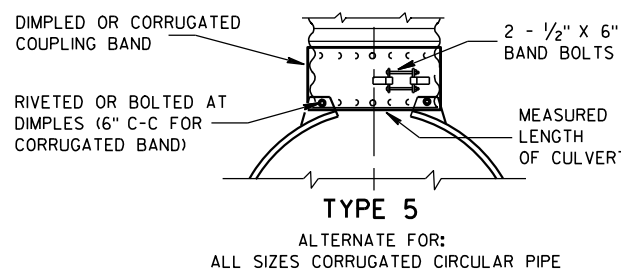
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

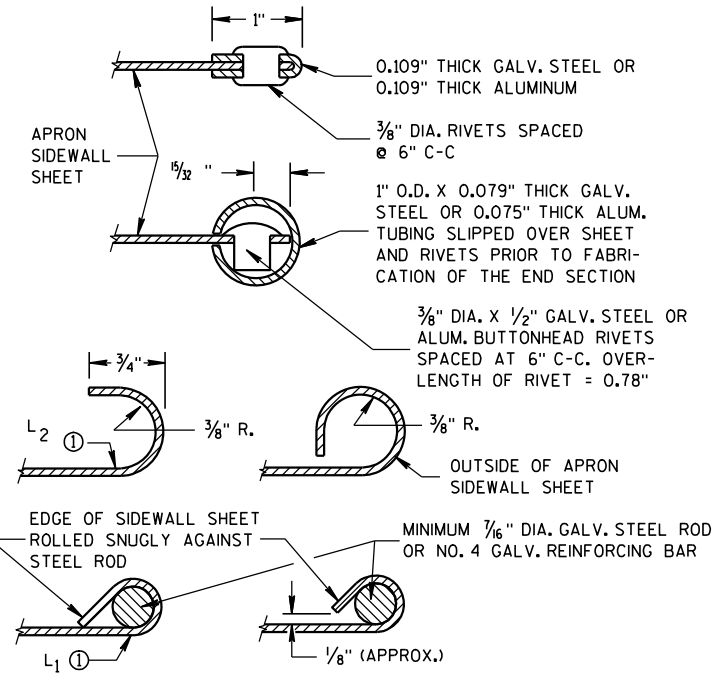
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE
ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5
AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL
CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO
CIRCUMFERENTIAL CORRUGATIONS AT EACH END
USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON
THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE
STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL
OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR
ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE
OF THE SAME METAL.

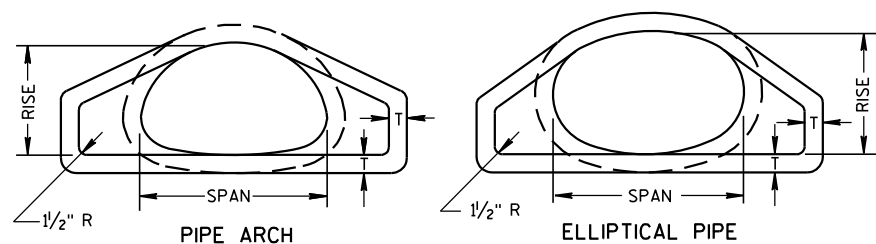
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE
PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS
FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS.
FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED
EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH
GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE
ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM
NUTS AND BOLTS FOR ALUMINUM UNITS.

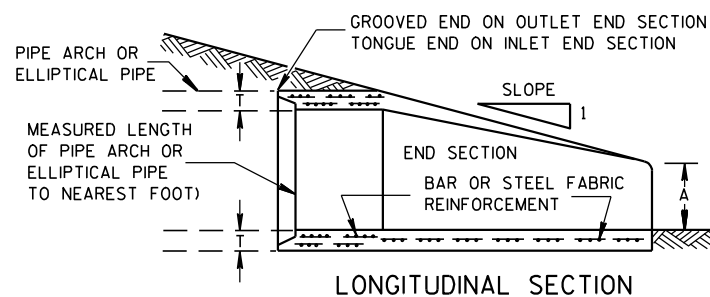
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED
INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOP 98	NEER	
FHWA			

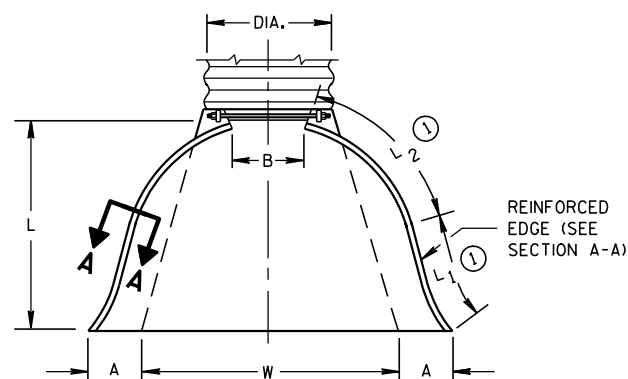


END VIEW



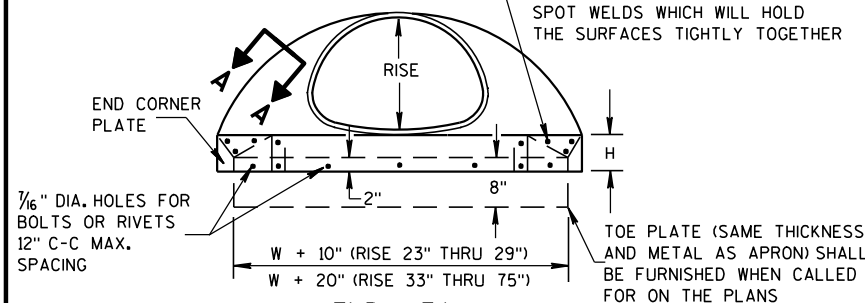
LONGITUDINAL SECTION

CONCRETE ENDWALLS

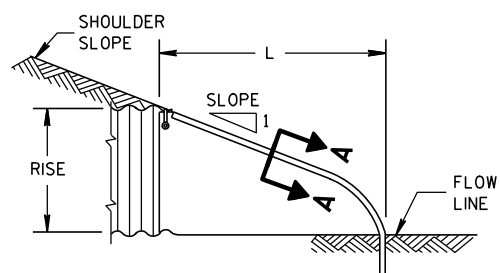
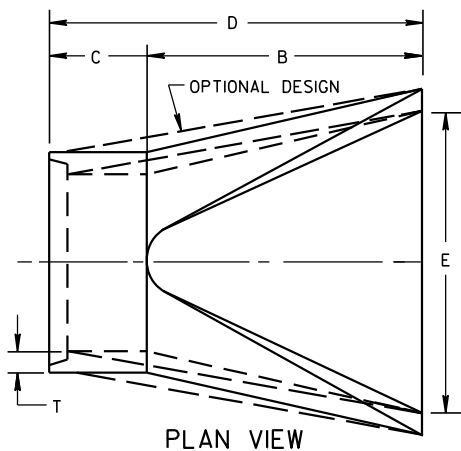


PLAN VIEW

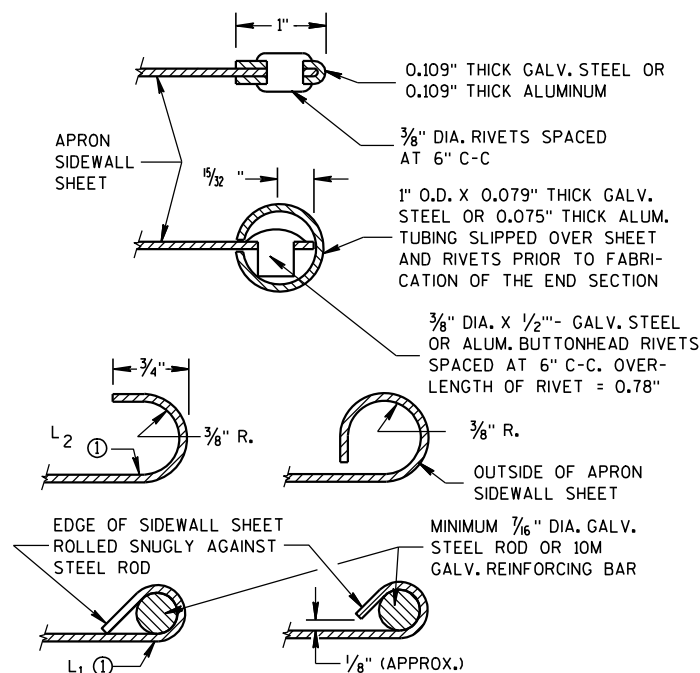
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



END VIEW

SIDE ELEVATION
METAL ENDWALLS

PLAN VIEW



SECTION A-A

2- 2 2/3" X 1/2" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
15	17	13	.064	.060	7	9	6	19	14	16	30	2 1/2 to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2 1/2 to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21 3/4	42	2 1/2 to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27 1/2	48	2 1/2 to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2 1/2 to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2 1/2 to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54 3/4	85	2 1/2 to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2 1/2 to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72 3/4	102	2 1/4 to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82 1/4	114	2 1/4 to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

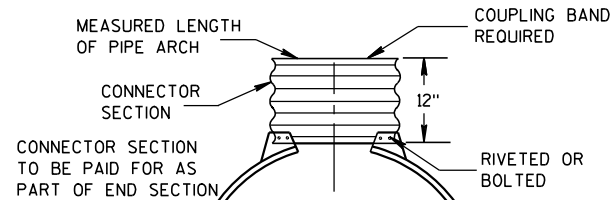
3" X 1" CORRUGATIONS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	SPAN	RISE	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
48	53	41	.109	.105	18	26	12	63	24	72 3/4	90	2 1/2 to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82 1/4	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1 1/2 to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1 1/2 to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1 1/2 to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1 1/2 to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1 1/2 to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1 1/2 to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES

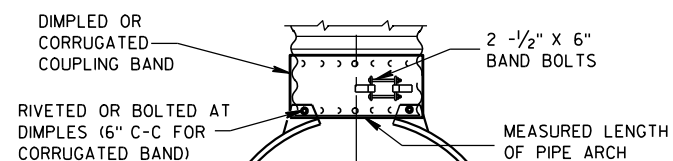
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
24	29	18	3	8 1/2	39	33	72	48	3 to 1
30	36	22	3 1/2	9 1/2	50	46	96	60	3 to 1
36	44	27	4	11 1/8	60	36	96	72	3 to 1
42	51	31	4 1/2	15 1/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5 1/2	25 1/2	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28 1/2	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

EQUIV. DIA. (Inches)	DIMENSIONS (Inches)								APPROX. SLOPE
	** SPAN	** RISE	T	A	B	C	D	E	
24	30	19	3 1/4	8 1/2	39	33	72	48	3 to 1
30	38	24	3 3/4	9 1/2	54	18	72	60	3 to 1
36	45	29	4 1/2	11 1/8	60	24	84	72	2 1/2 to 1
42	53	34	5	15 1/4	60	36	96	78	2 1/2 to 1
48	60	38	5 1/2	21	60	36	96	84	2 1/2 to 1
54	68	43	6	25 1/2	60	36	96	90	2 1/2 to 1
60	76	48	6 1/2	30	60	36	96	96	2 1/2 to 1

**NOMINAL SIZE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
PIPE ARCH AND
ELLIPTICAL PIPESTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94

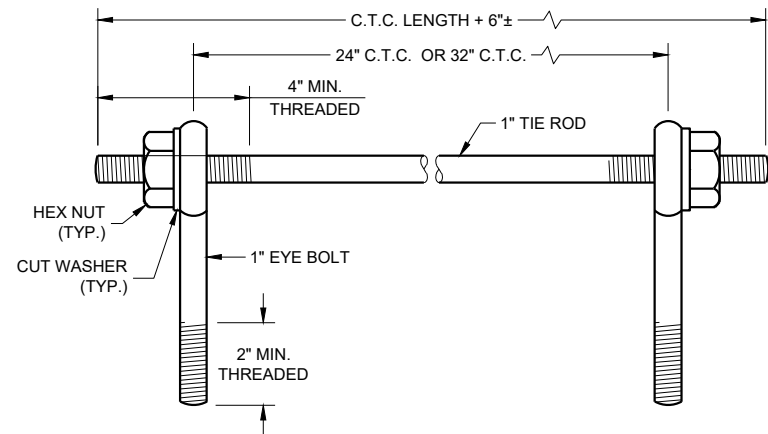
DATE

/S/ Rory L. Rhinehart

CHIEF ROADWAY DEVELOPER

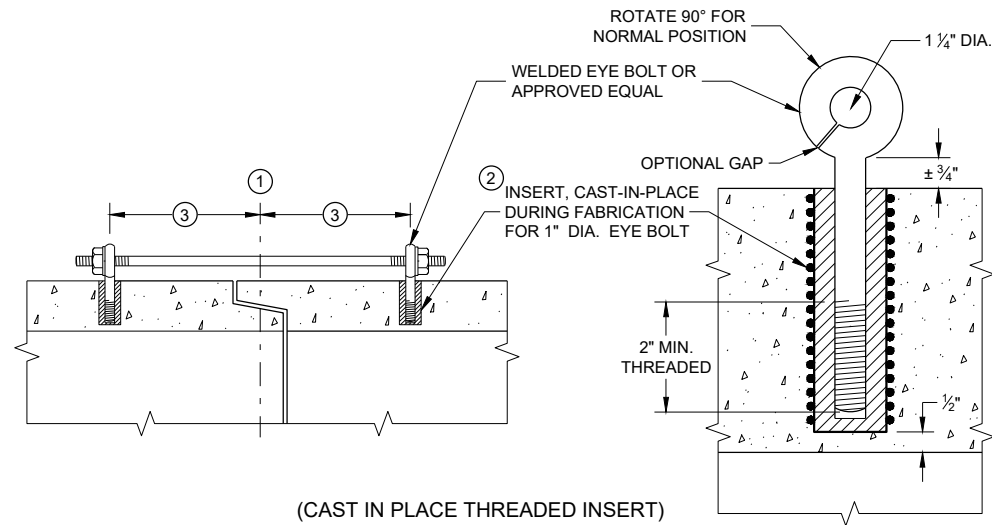
ENGINEER

FHWA



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

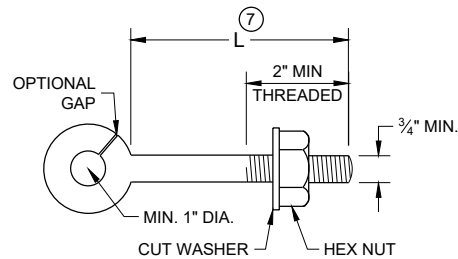
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

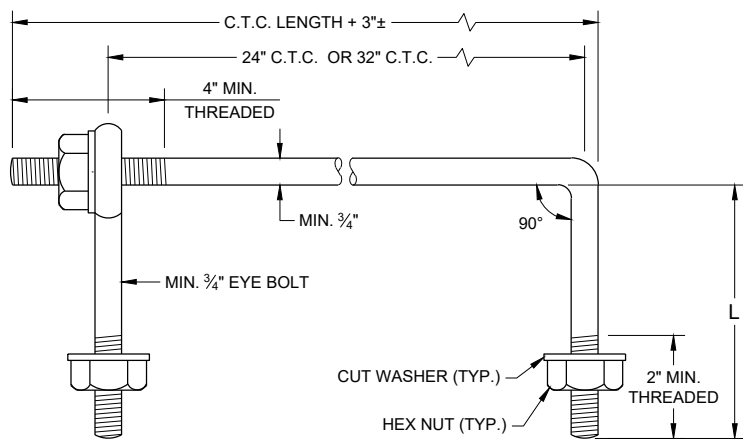
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 1 CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- 2 THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- 3 HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- 5 OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- 6 LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- 7 EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

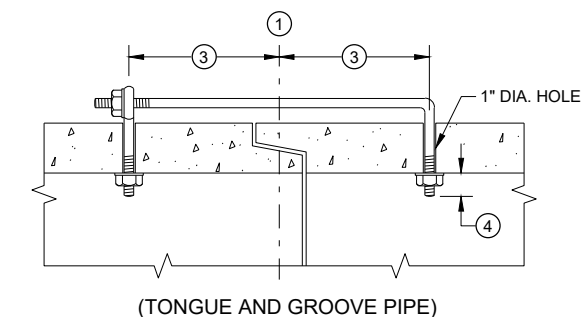


EYE BOLT 7

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



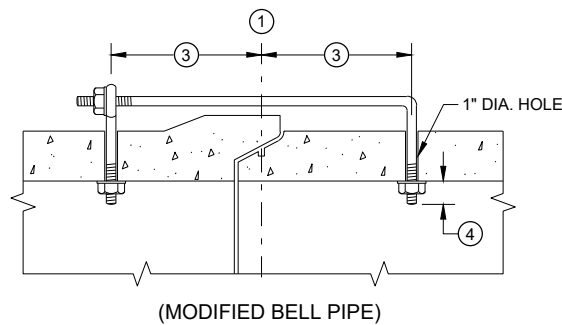
EYE BOLT AND TIE ROD



LONGITUDINAL SECTION

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

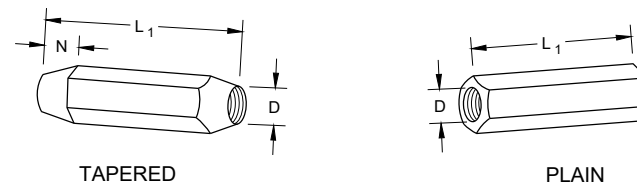


(MODIFIED BELL PIPE)

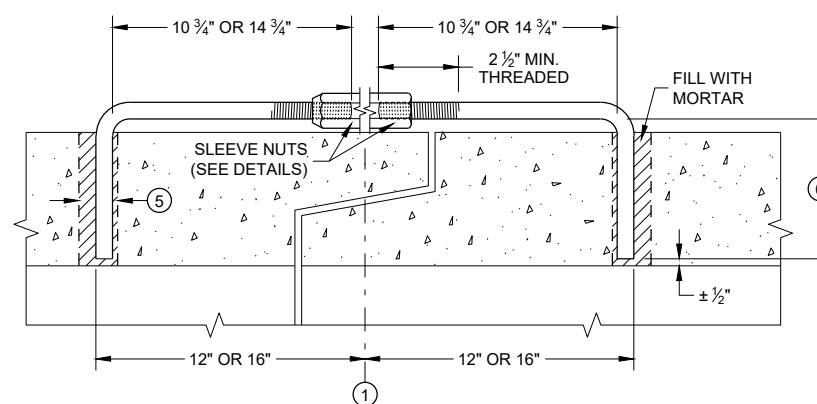
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12 - 60	5/8	5/8	5	1/2
66 - 84	3/4	3/4	5	1/2
90 - 144	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

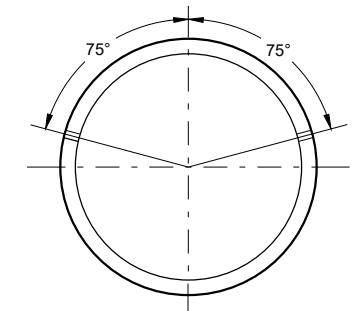


RIGHT AND LEFT THREADS
SLEEVE NUTS



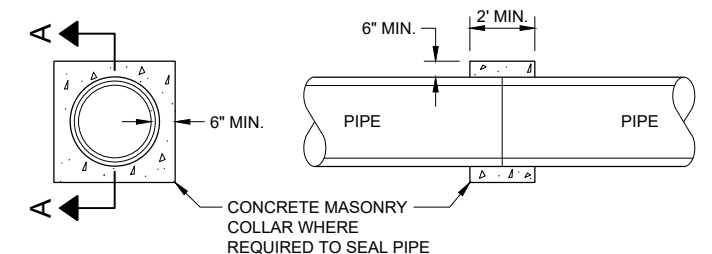
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



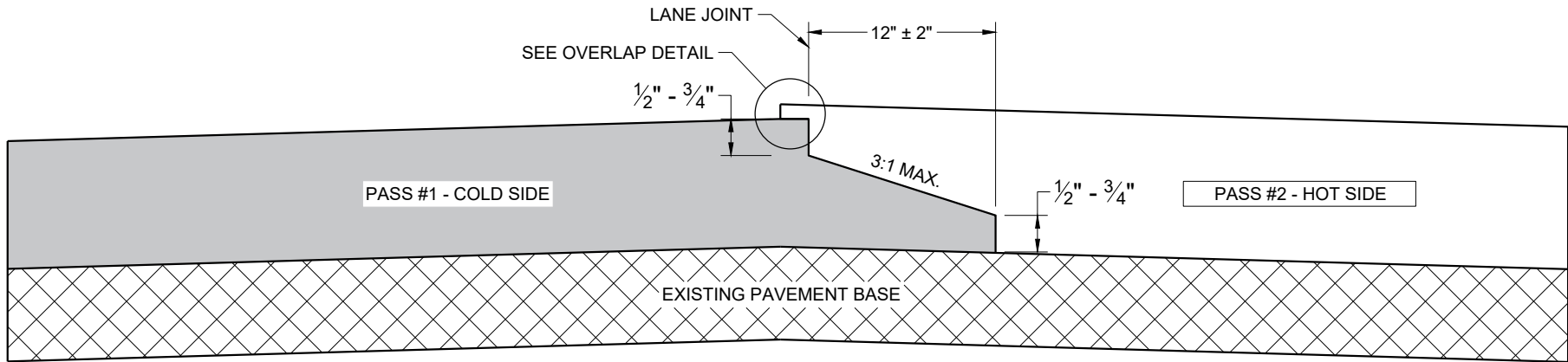
SECTION A - A

CONCRETE COLLAR DETAIL

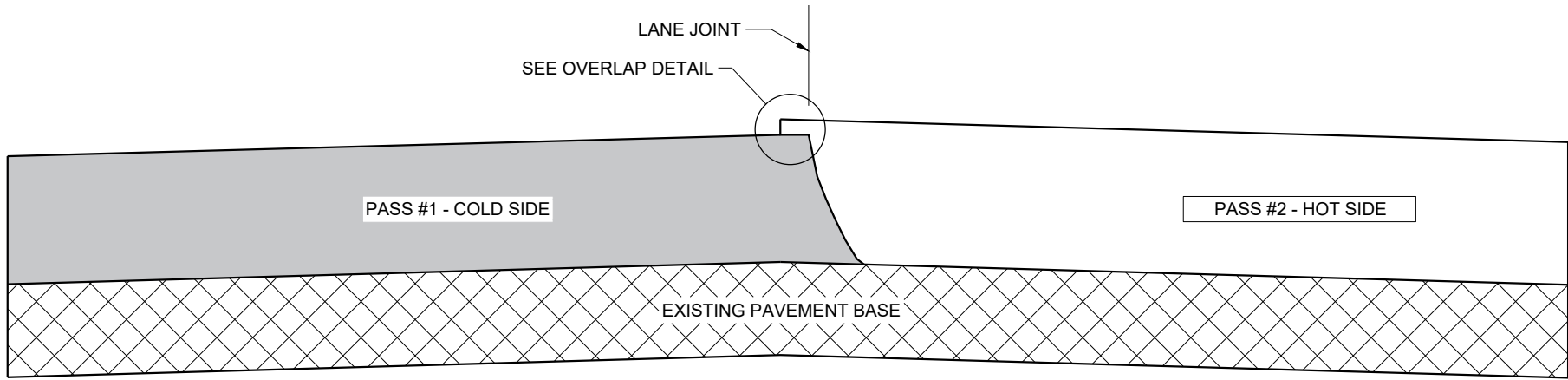
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

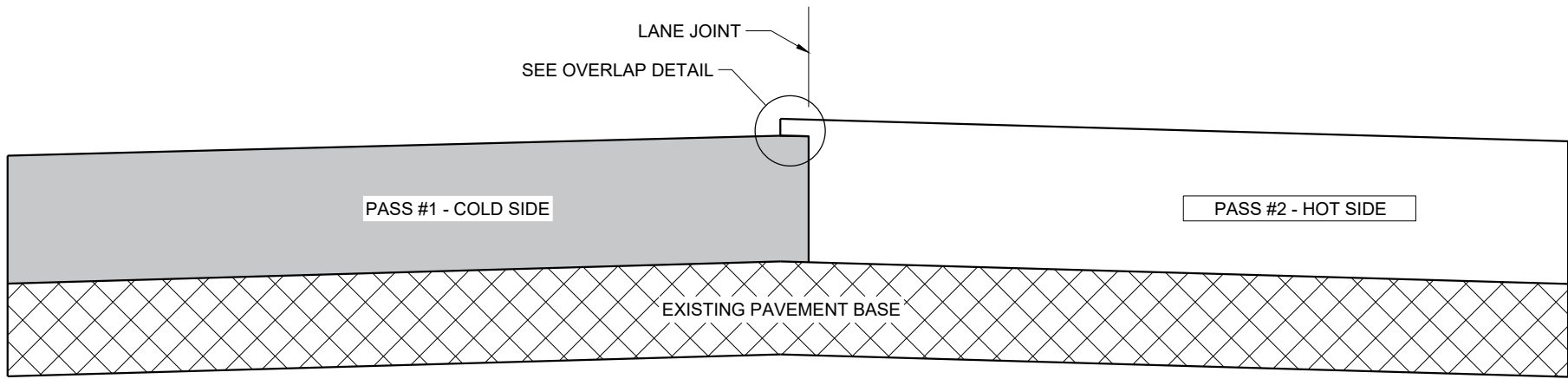
APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 100
FHWA



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

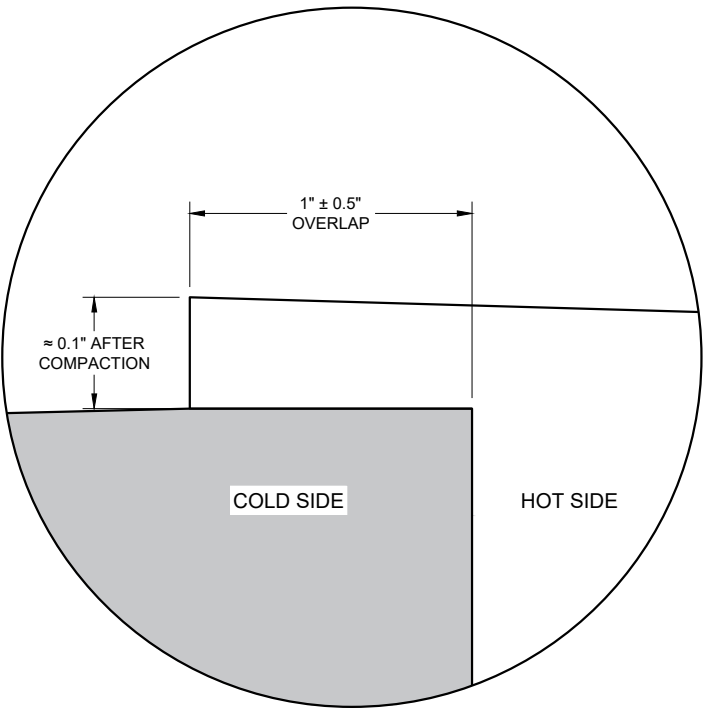
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

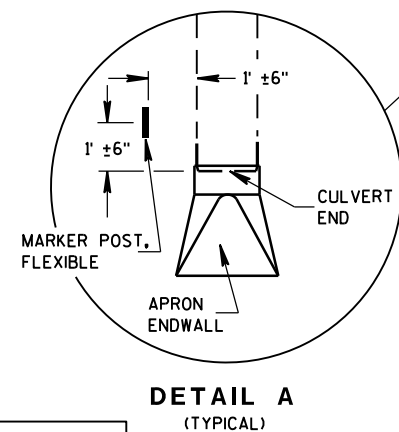
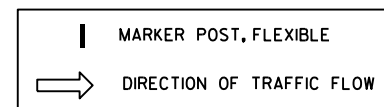
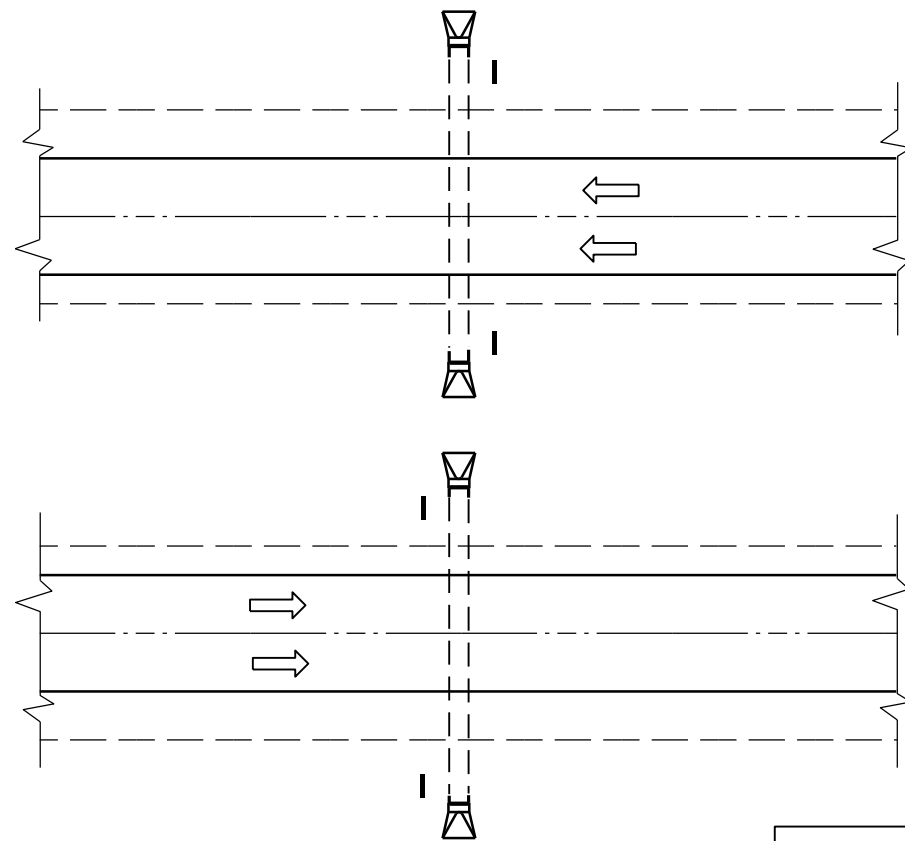
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 101

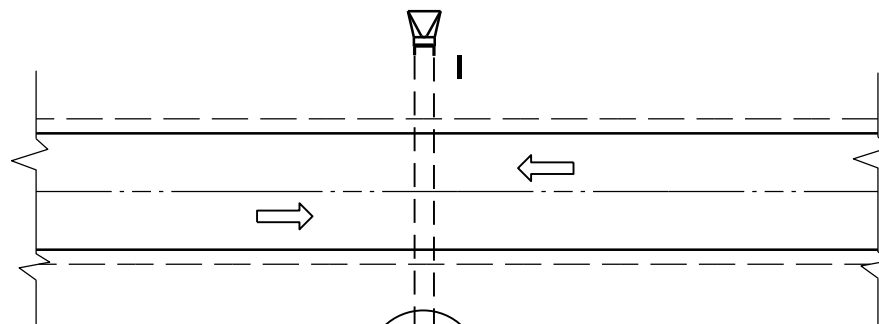
FHWA

PLAN VIEW
DIVIDED HIGHWAY

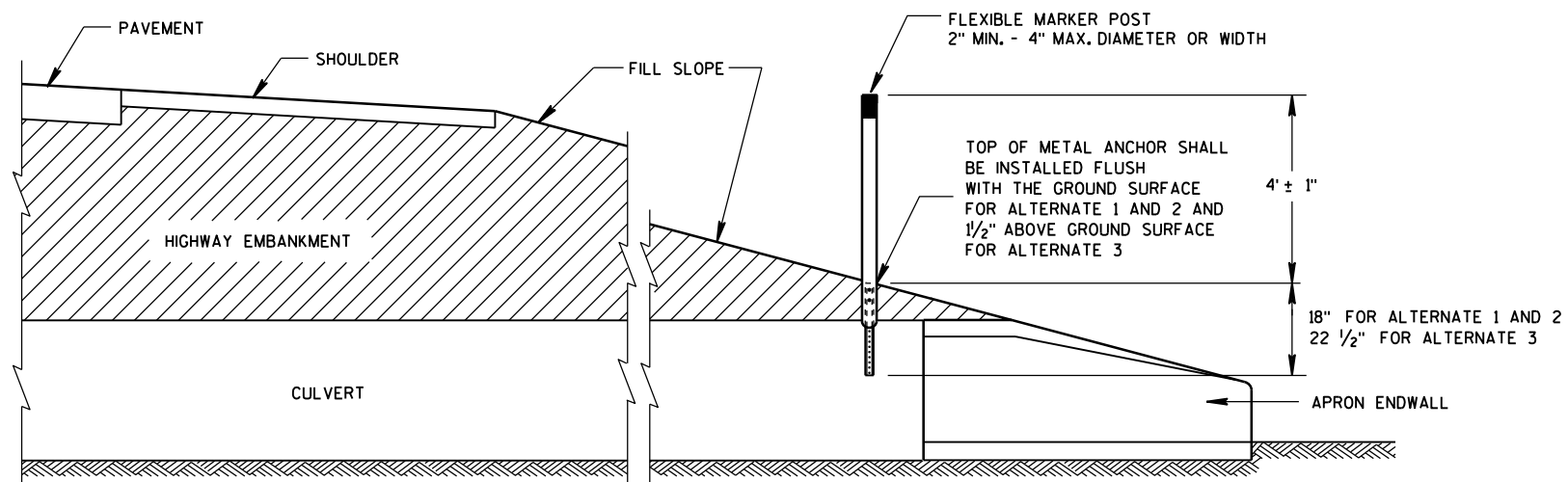


DETAIL A
(TYPICAL)

PLAN VIEW
UNDIVIDED HIGHWAY



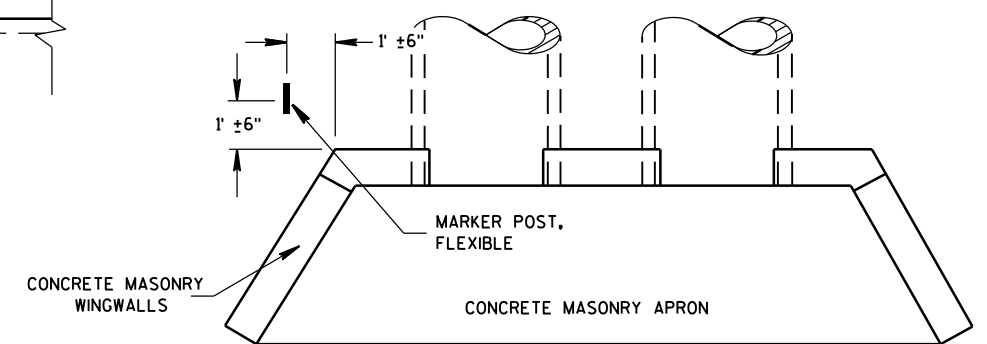
FLEXIBLE MARKER POST LOCATION



CROSS SECTION
FLEXIBLE MARKER POST

GENERAL NOTES

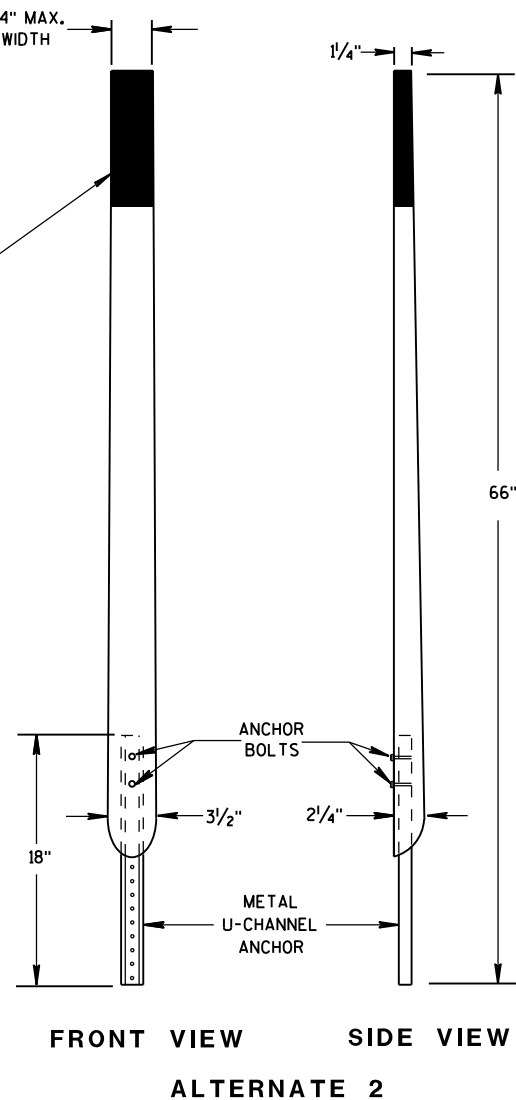
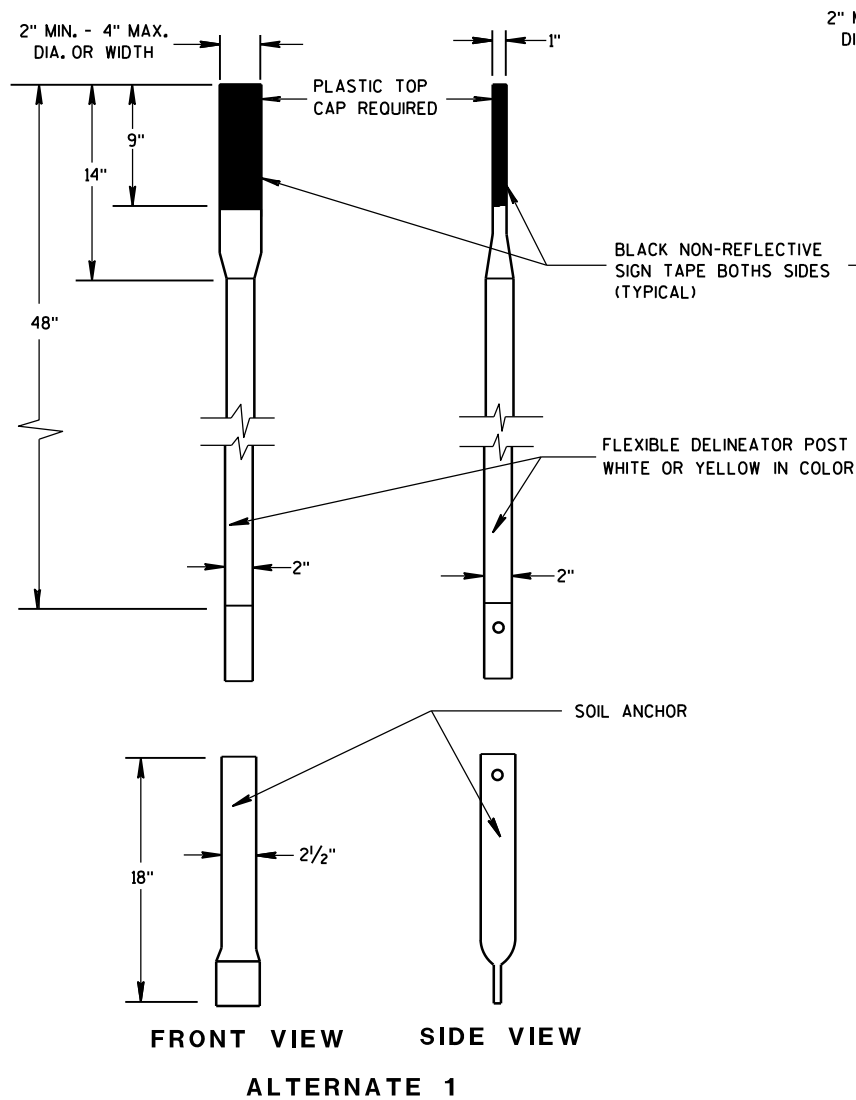
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



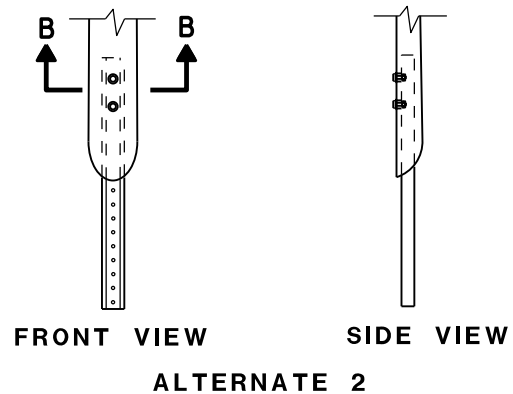
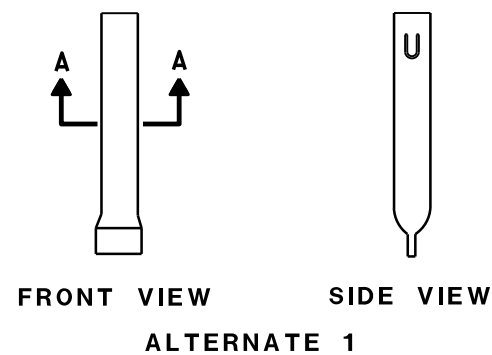
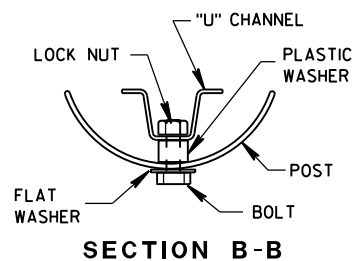
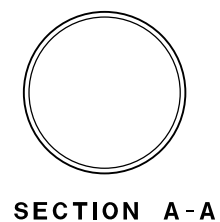
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST
FOR CULVERT END

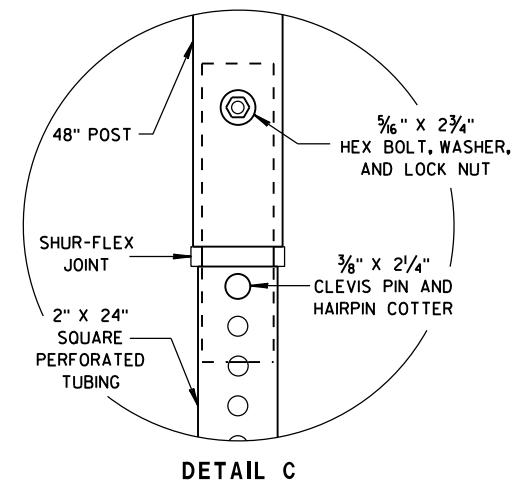
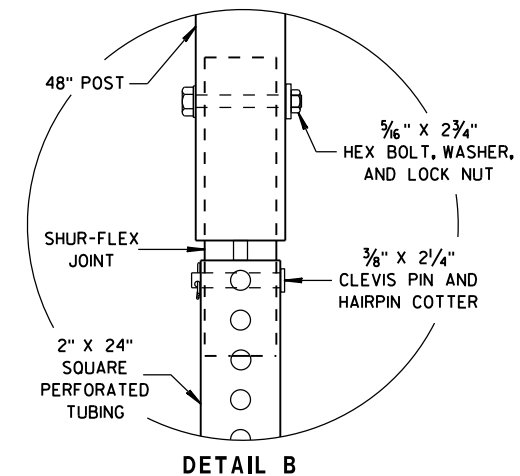
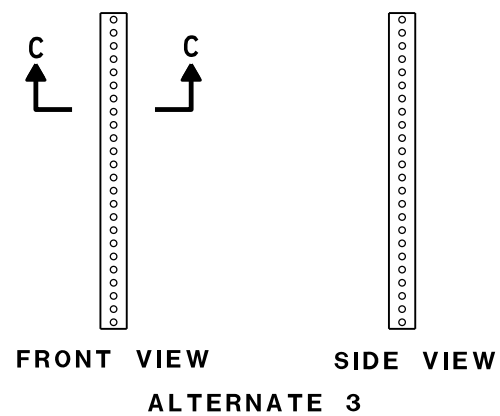
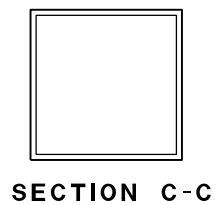
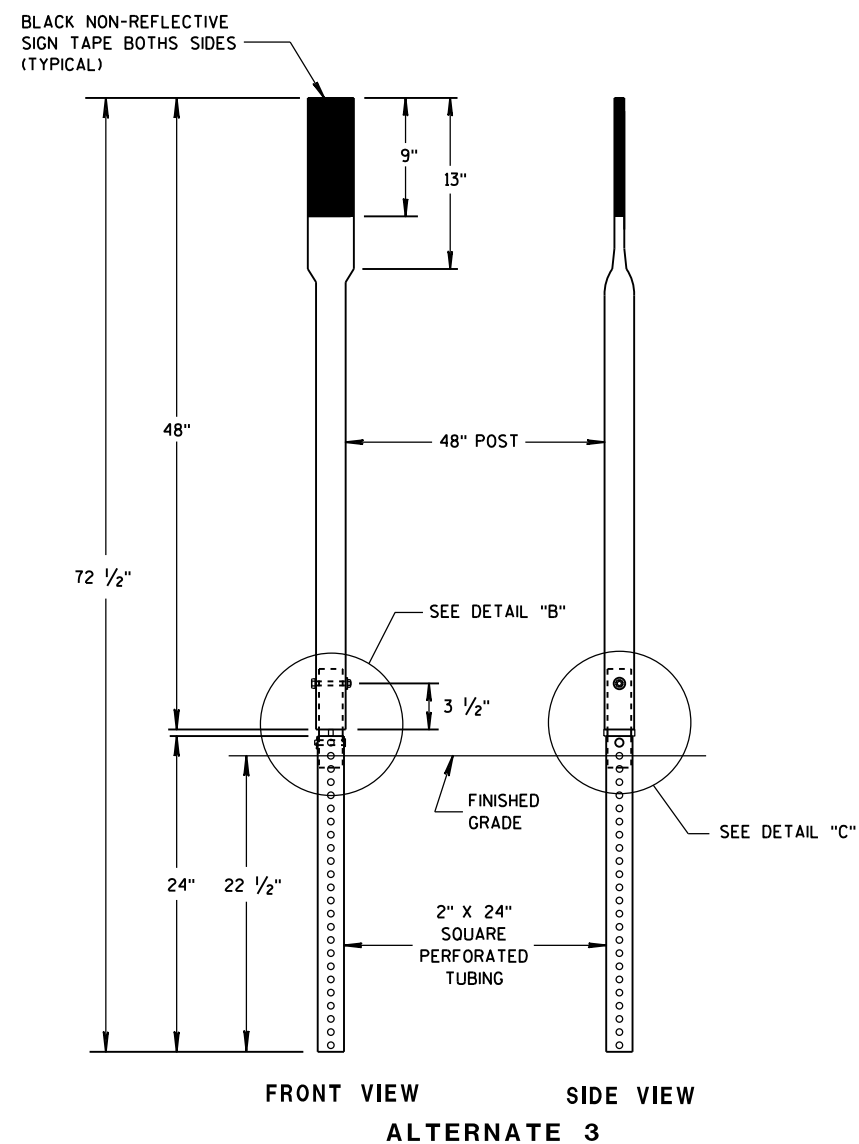
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 102



FLEXIBLE MARKER POSTS



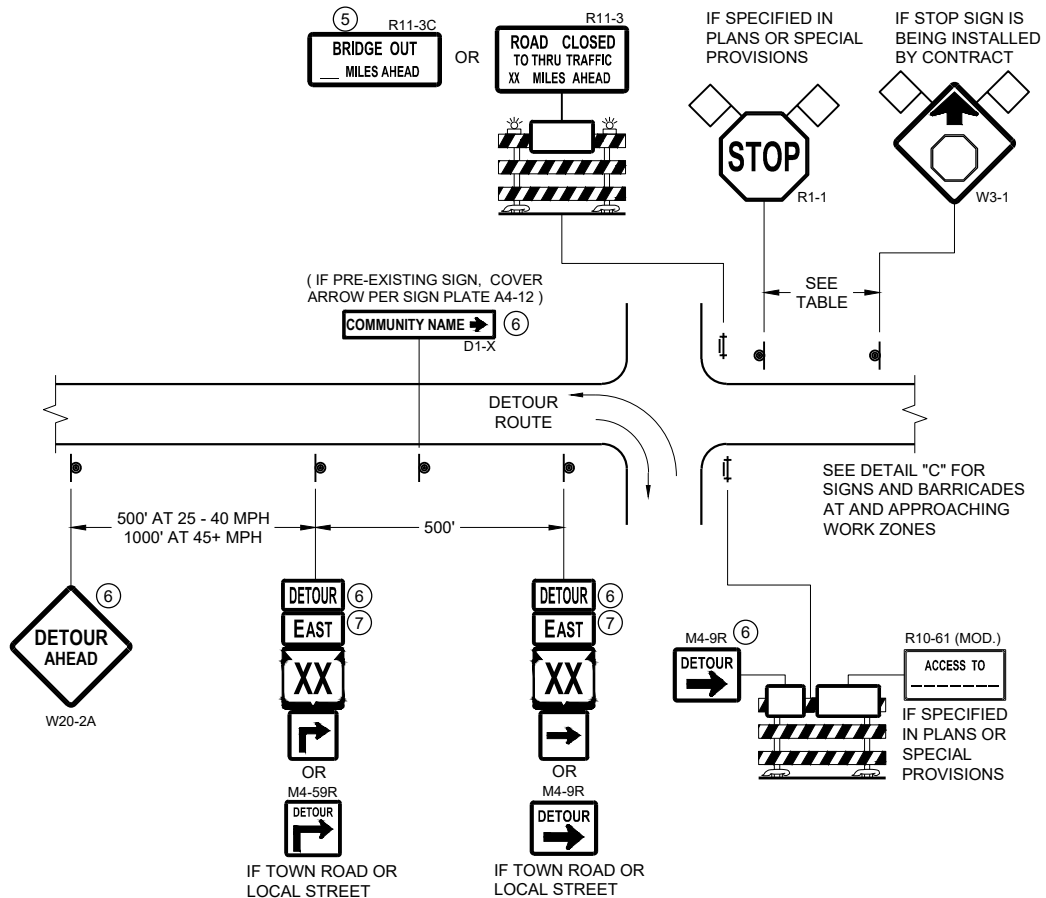
FLEXIBLE MARKER POST ANCHORS



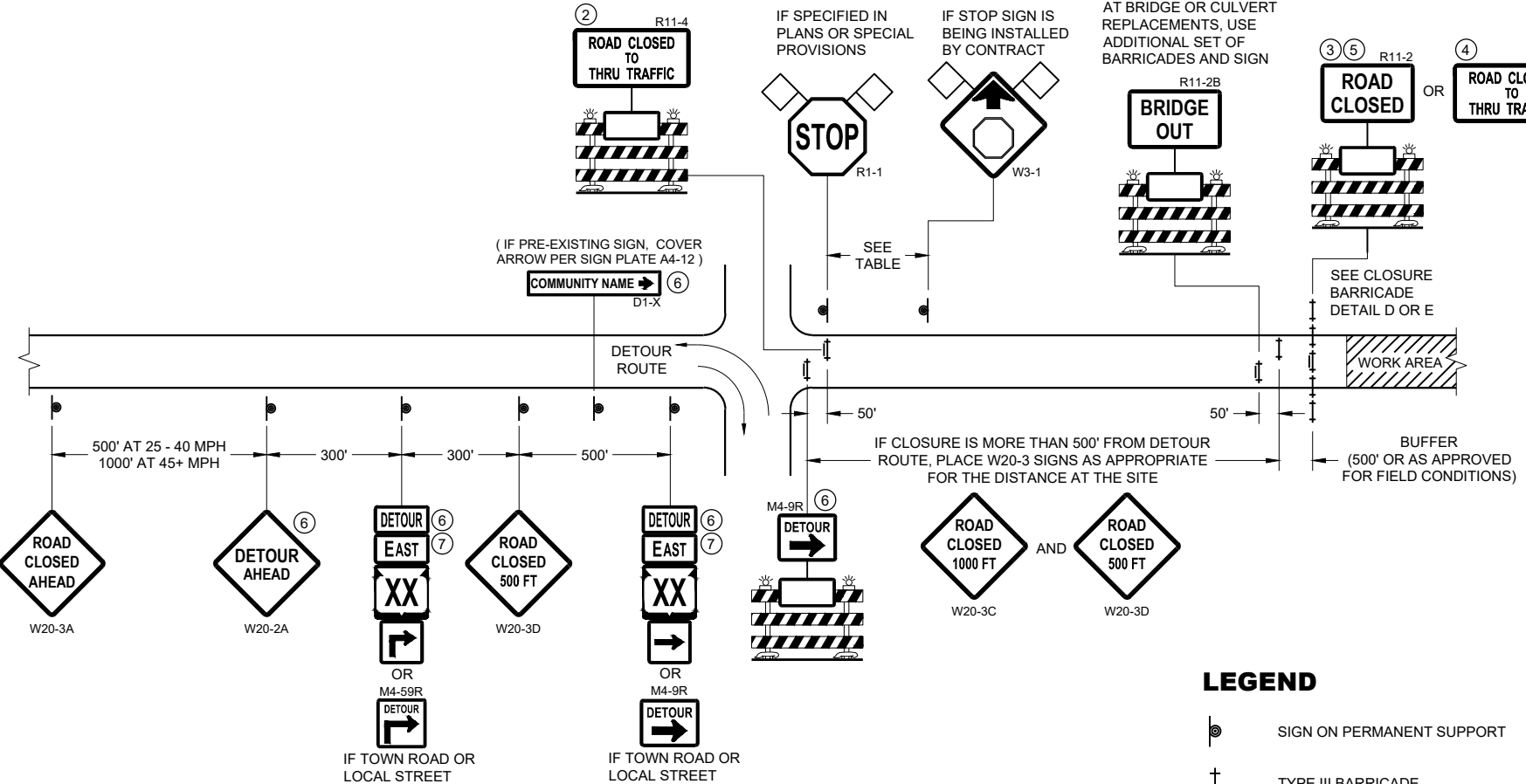
FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER 103 IGN
FHWA



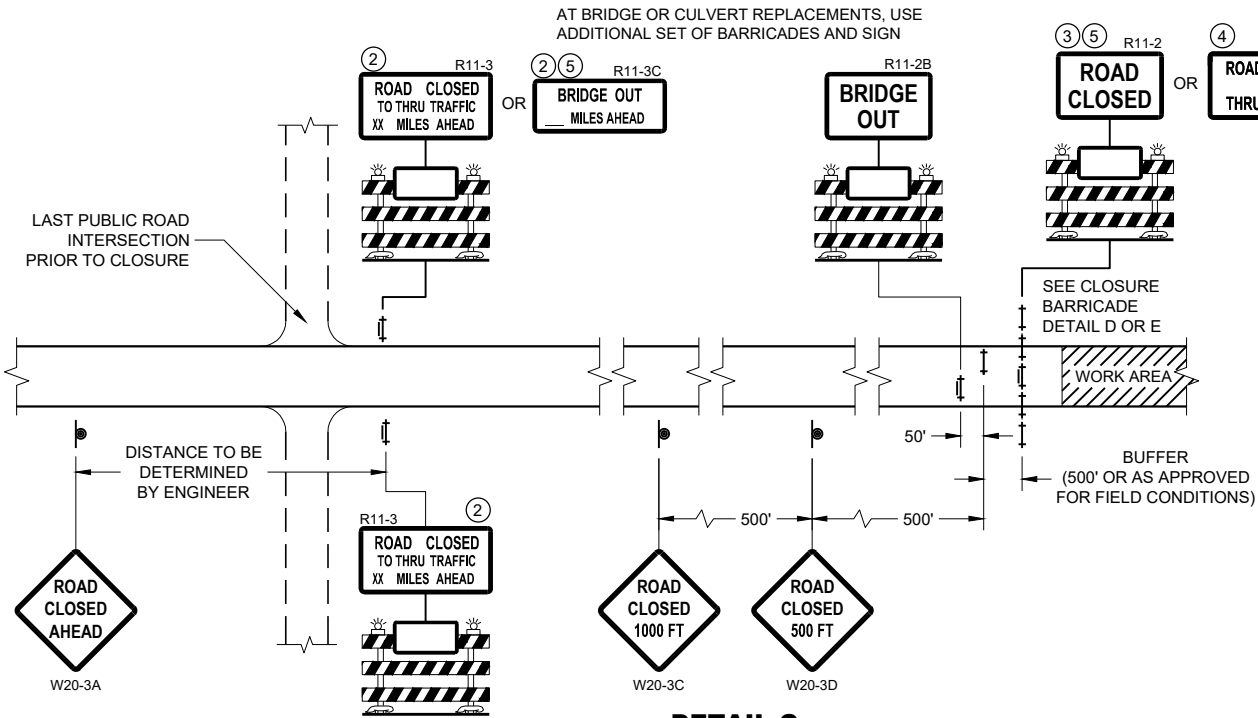
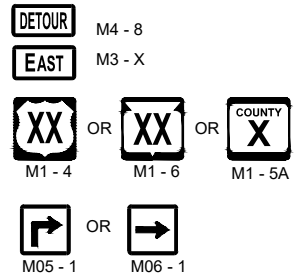
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

- LEGEND**
- SIGN ON PERMANENT SUPPORT
 - TYPE III BARRICADE
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TYPE "A" WARNING LIGHT (FLASHING)
 - WORK AREA
 - FLAGS, 16" X 16" MIN. (ORANGE)

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 104

FHWA



SEE SDD 15C2 - SHEET "a" FOR LEGEND

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

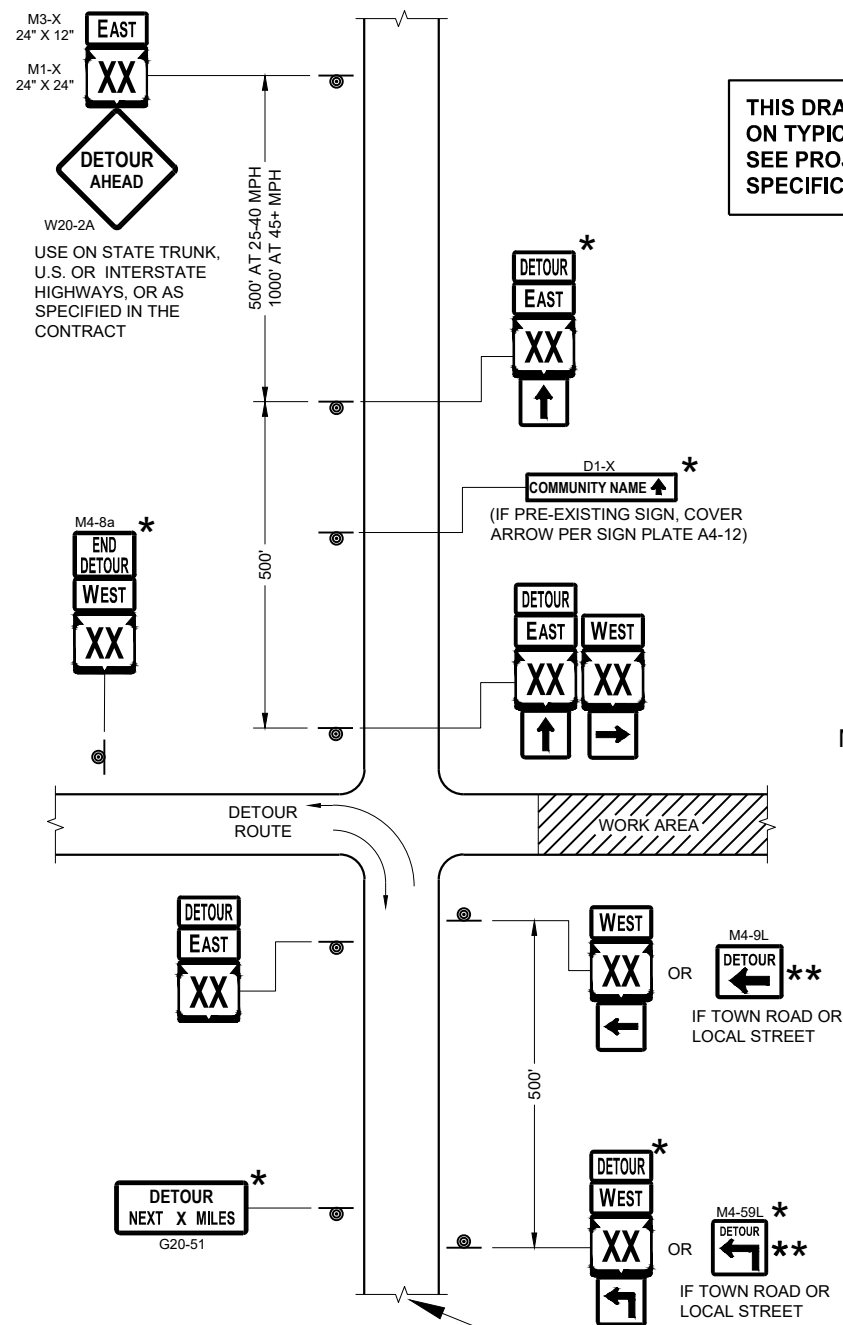
THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11 - 2 SHALL BE 48" X 30"
R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
M4 - 9 SHALL BE 30" X 24"
M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
R1 - 1 SHALL BE 36" X 36"

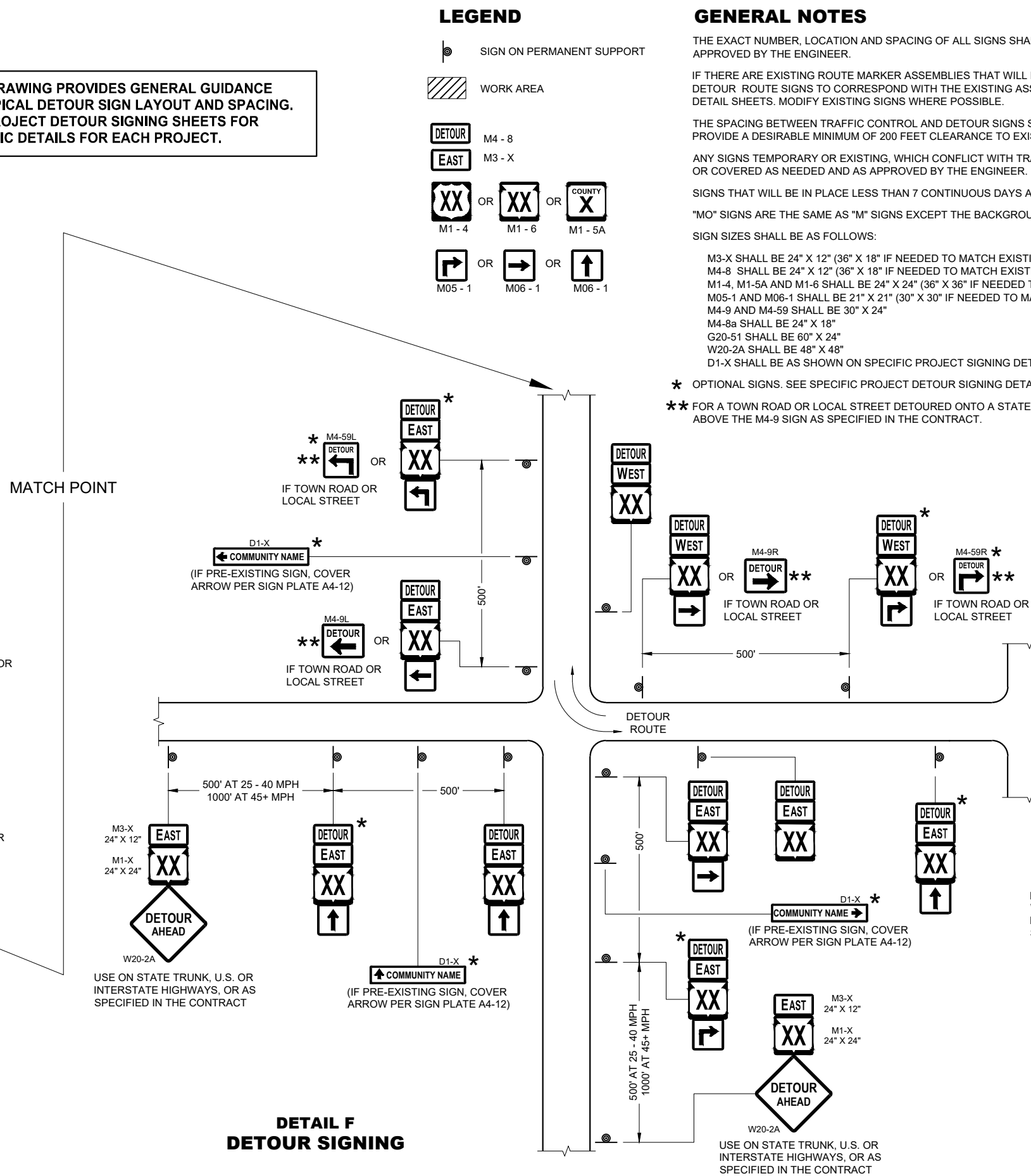
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.



**THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.**

SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

SDD 15C02 - 09c



DETAIL F DETOUR SIGNING

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
M4-9 AND M4-59 SHALL BE 30" X 24"
M4-8a SHALL BE 24" X 18"
G20-51 SHALL BE 60" X 24"
W20-2A SHALL BE 48" X 48"
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

**** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.**

PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

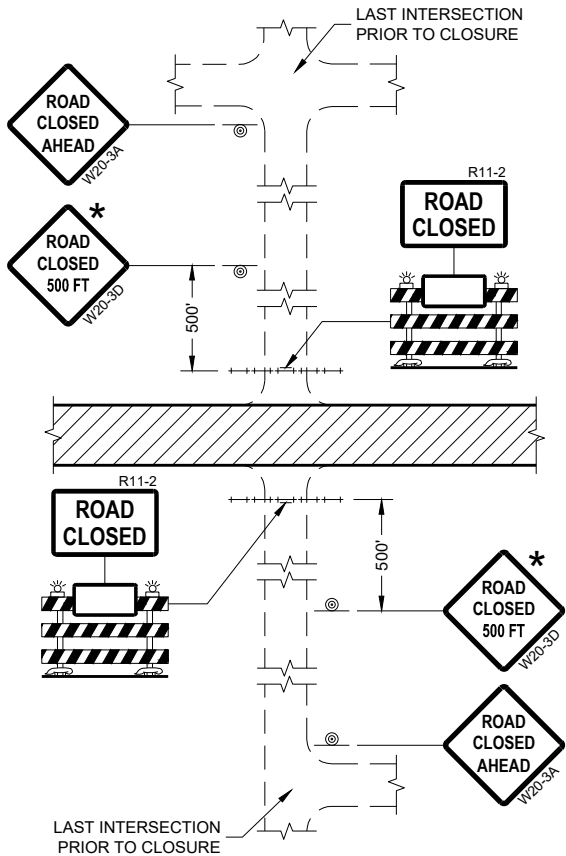
APPROVED
May 2023
 DATE

/S/ Andrew Heidtke
 WORK ZONE ENGINEER

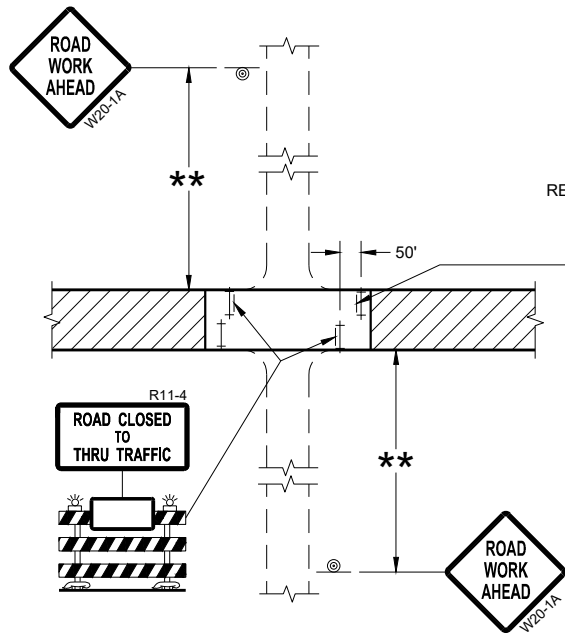
106

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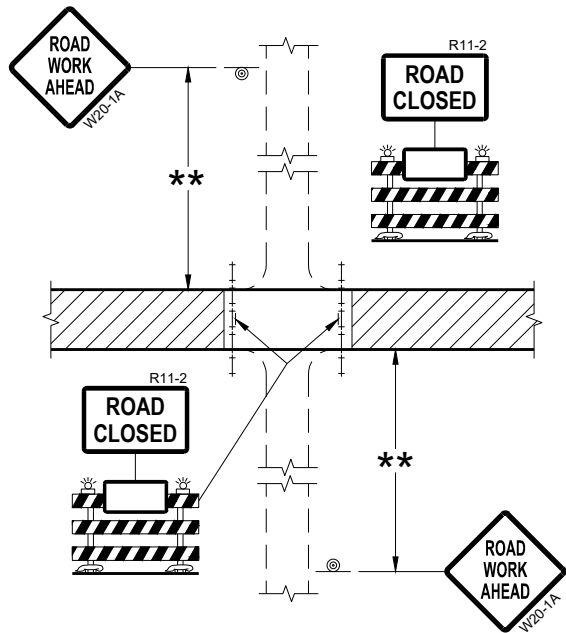
SDD15C02 - 09c



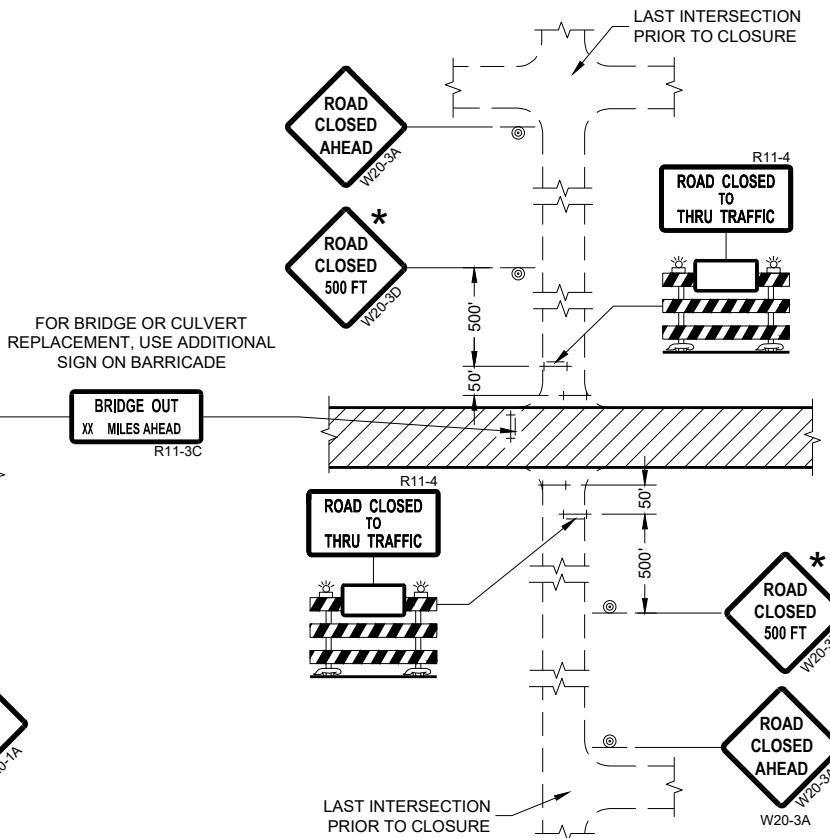
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 107

FHWA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

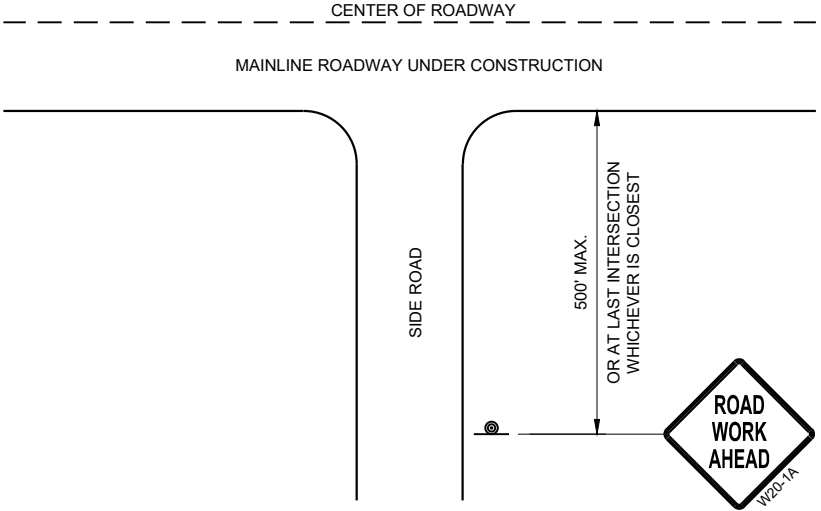
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

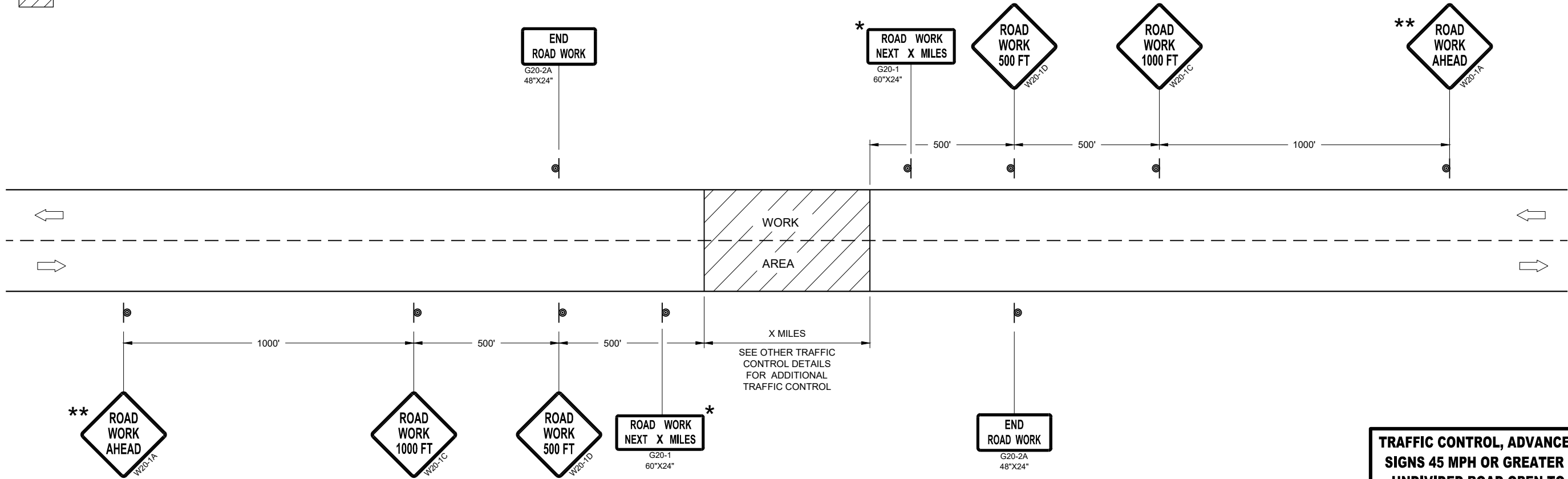
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 108

FHWA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

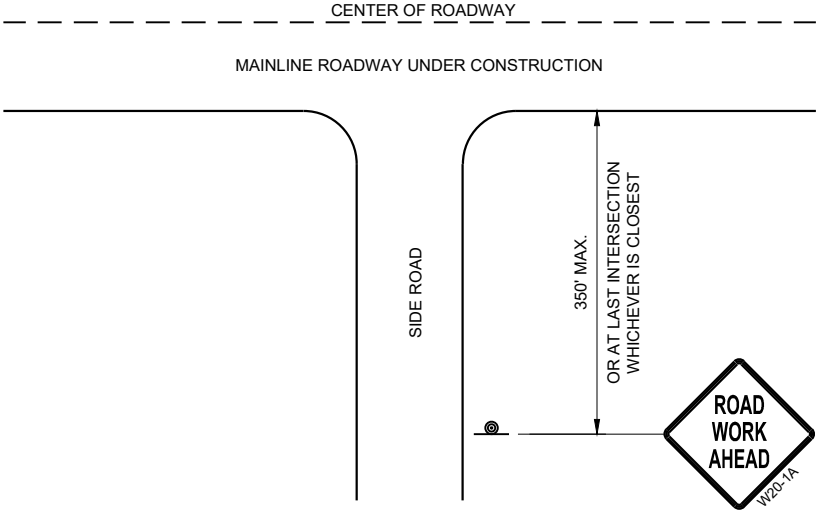
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

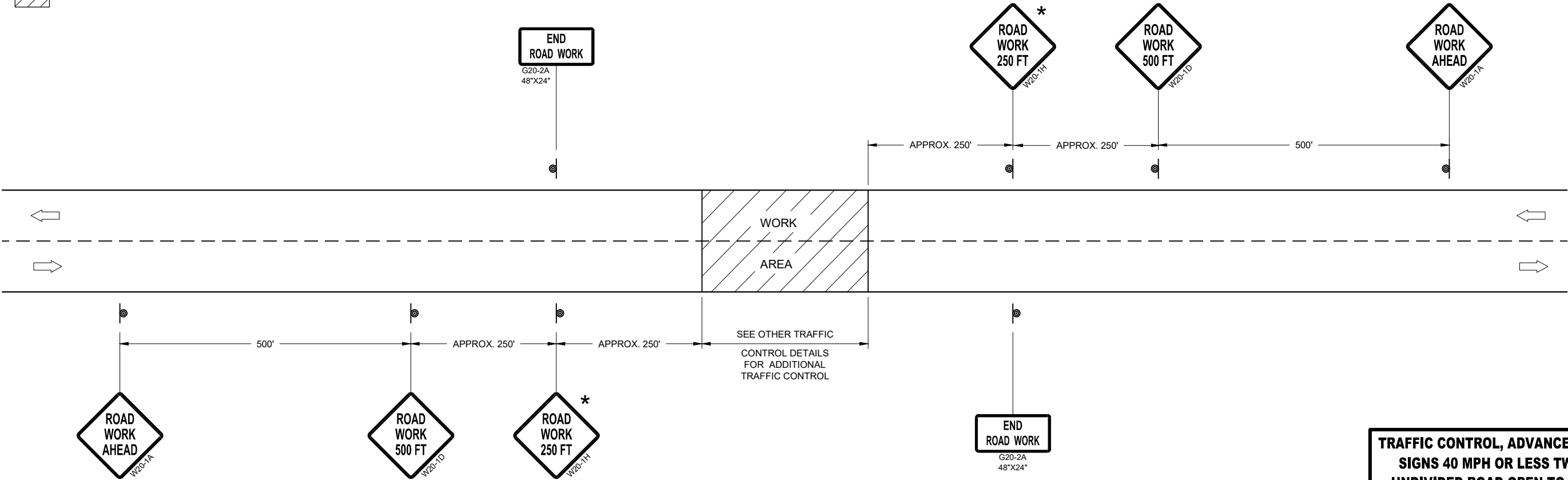
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
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July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 109

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PERMANENT PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM
TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

-  "T" MARKING
 SIGN ON PERMANENT SUPPORT
 DIRECTION OF TRAFFIC

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

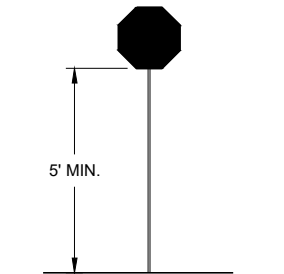
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



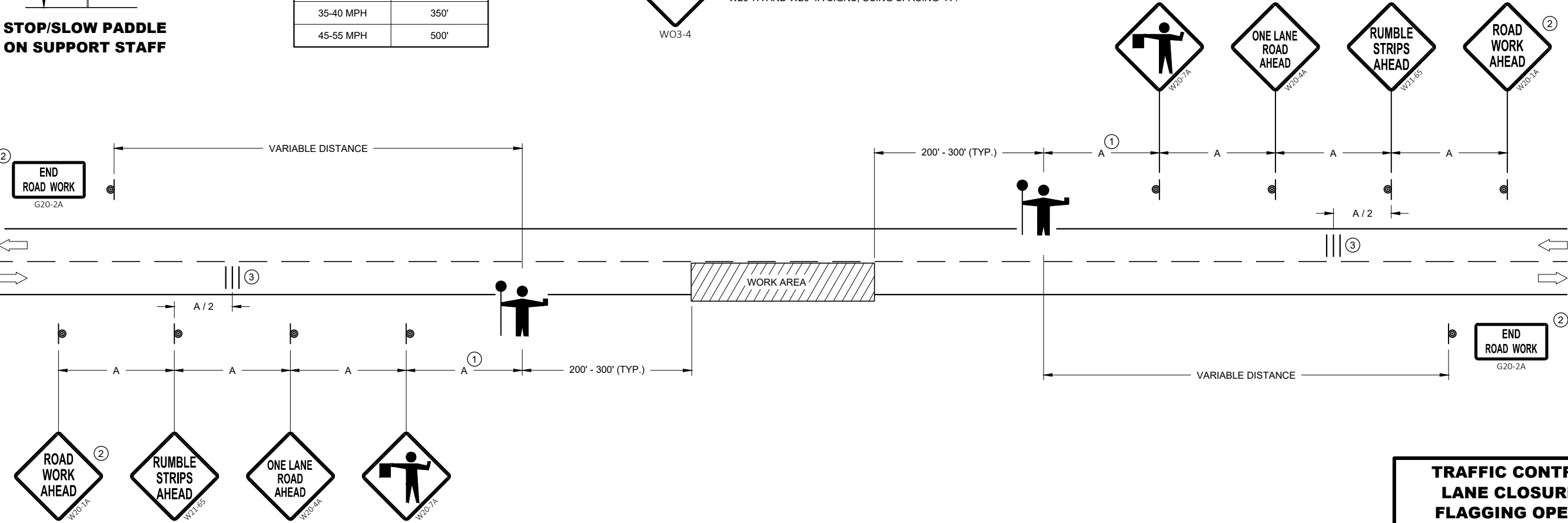
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".

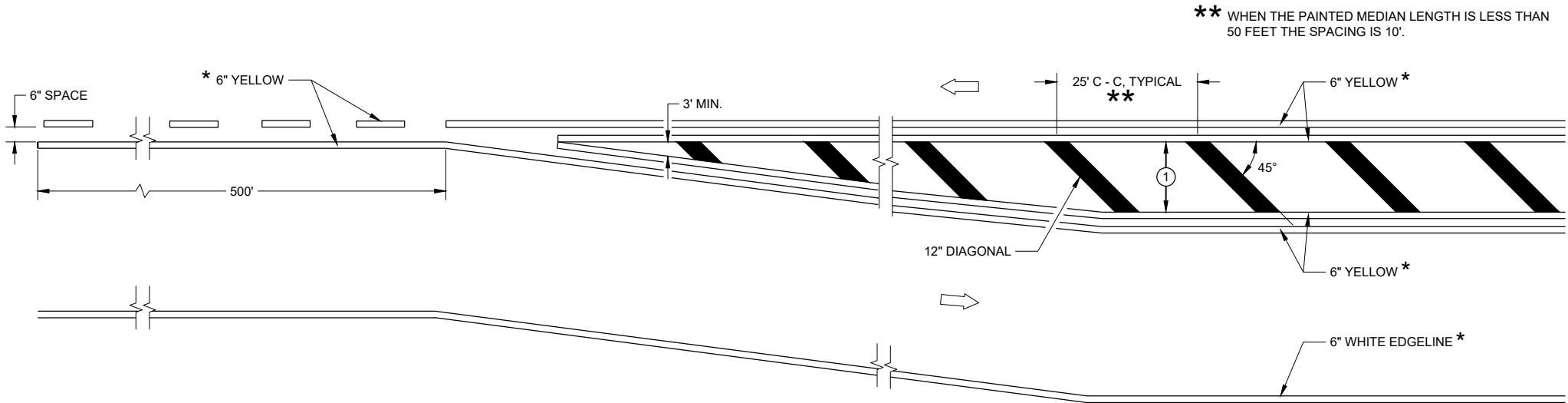


**TRAFFIC CONTROL FOR
LANE CLOSURE WITH
FLAGGING OPERATION**

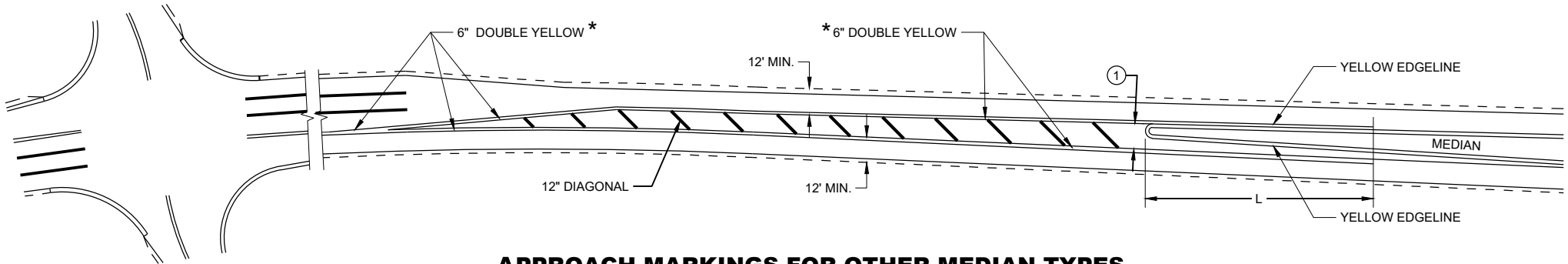
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 111

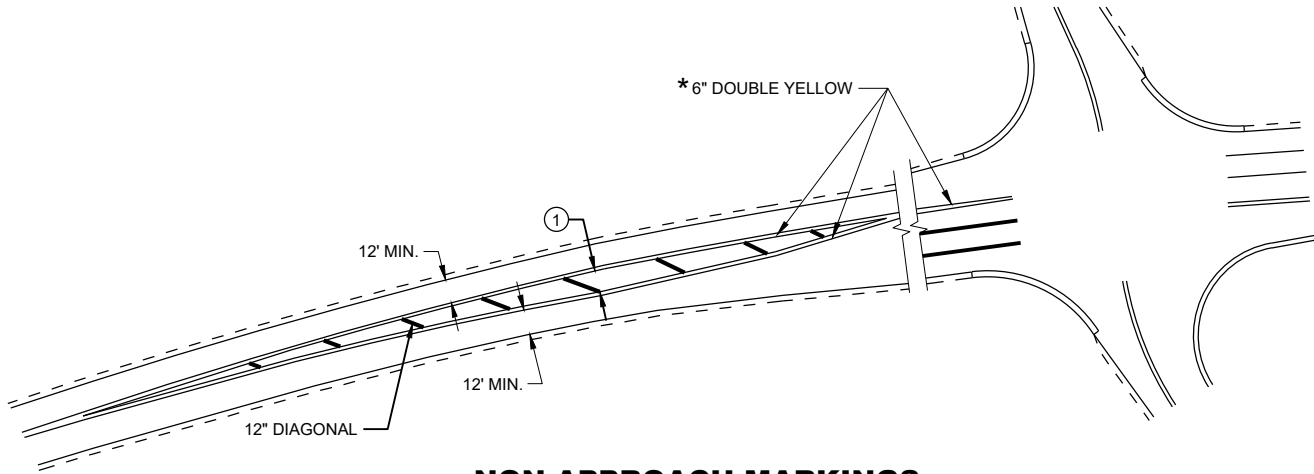
FHWA



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

GENERAL NOTES

- 1 DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

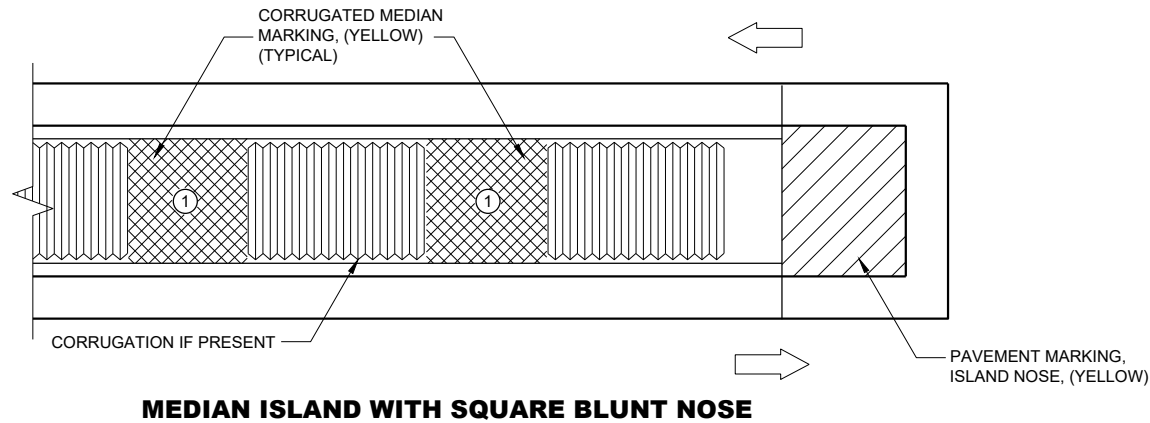
SPEED LIMIT	L
<35 MPH	5'
35> MPH	50'

MEDIAN ISLAND PAVEMENT MARKINGS

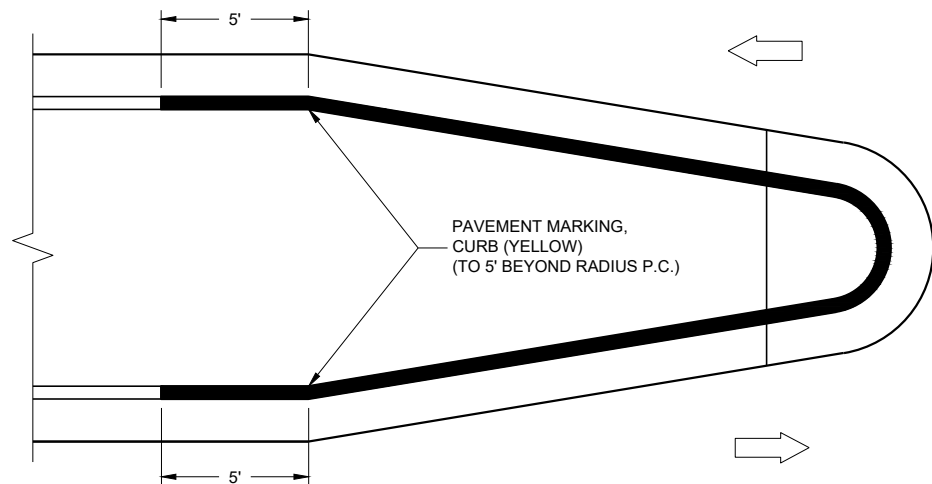
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATE SIGNING AND MAF ENGINEER 112

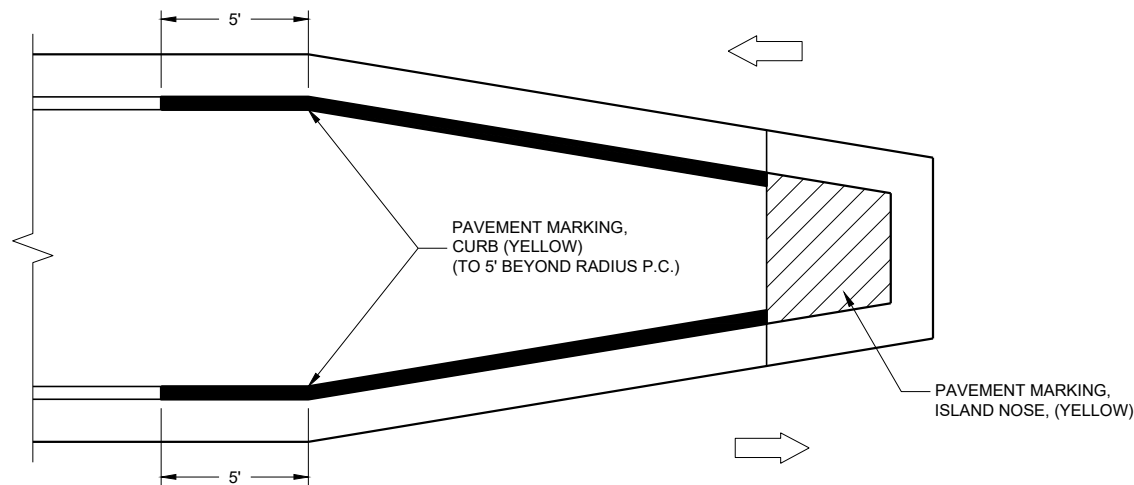
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MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

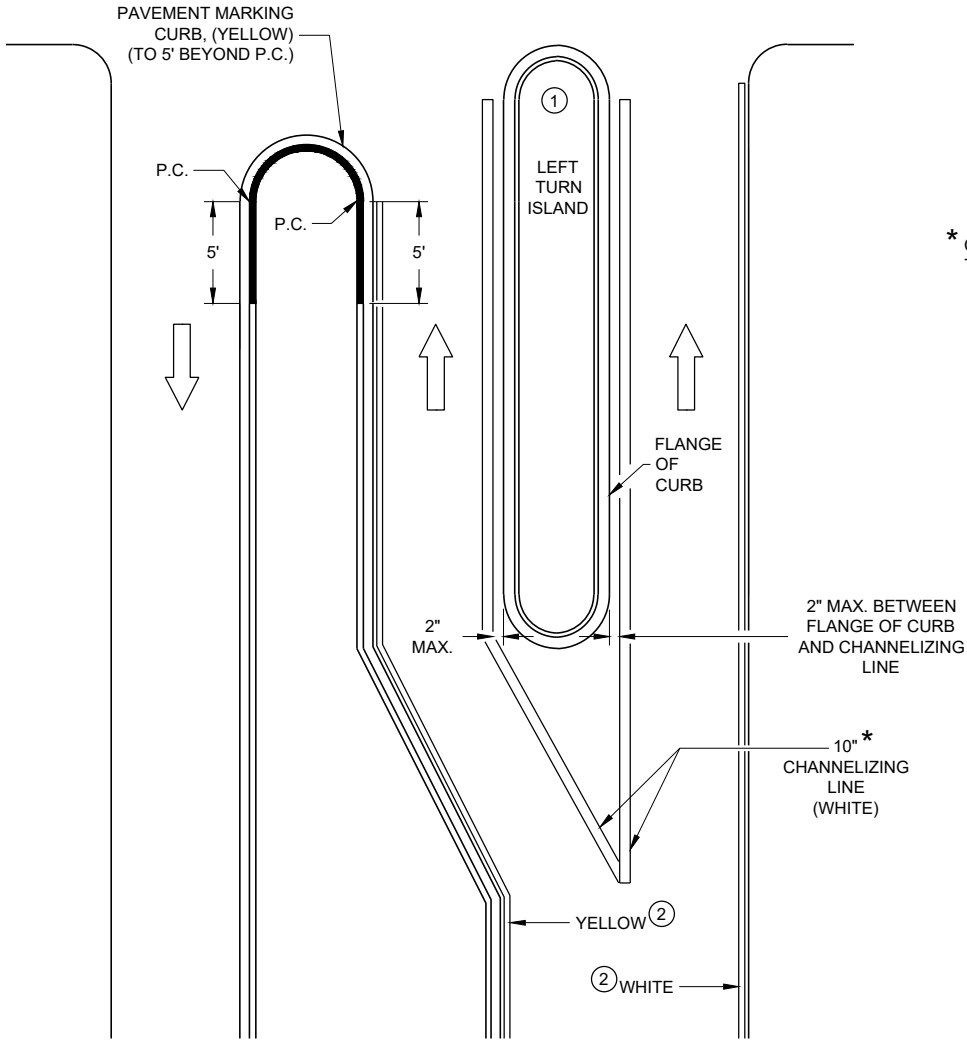
WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION, YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

- ① APPLY PAVEMENT MARKING TO THE FLAT PORTION OF CORRUGATED MEDIAN.

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKINGS, MEDIAN ISLAND NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2023 DATE	/S/ Jeannie Silver STATE SIGNING AND MAP ENGINEER 113
FHWA	

REQUIREMENTS FOR EDGE LINES		
POSTED SPEED	IS THERE CONTINUOUS LIGHTING?	
	YES	NO
≤ 30 MPH	NO	OPTIONAL
35 OR 40 MPH	OPTIONAL	RECOMMENDED
≥ 45 MPH	RECOMMENDED	REQUIRED



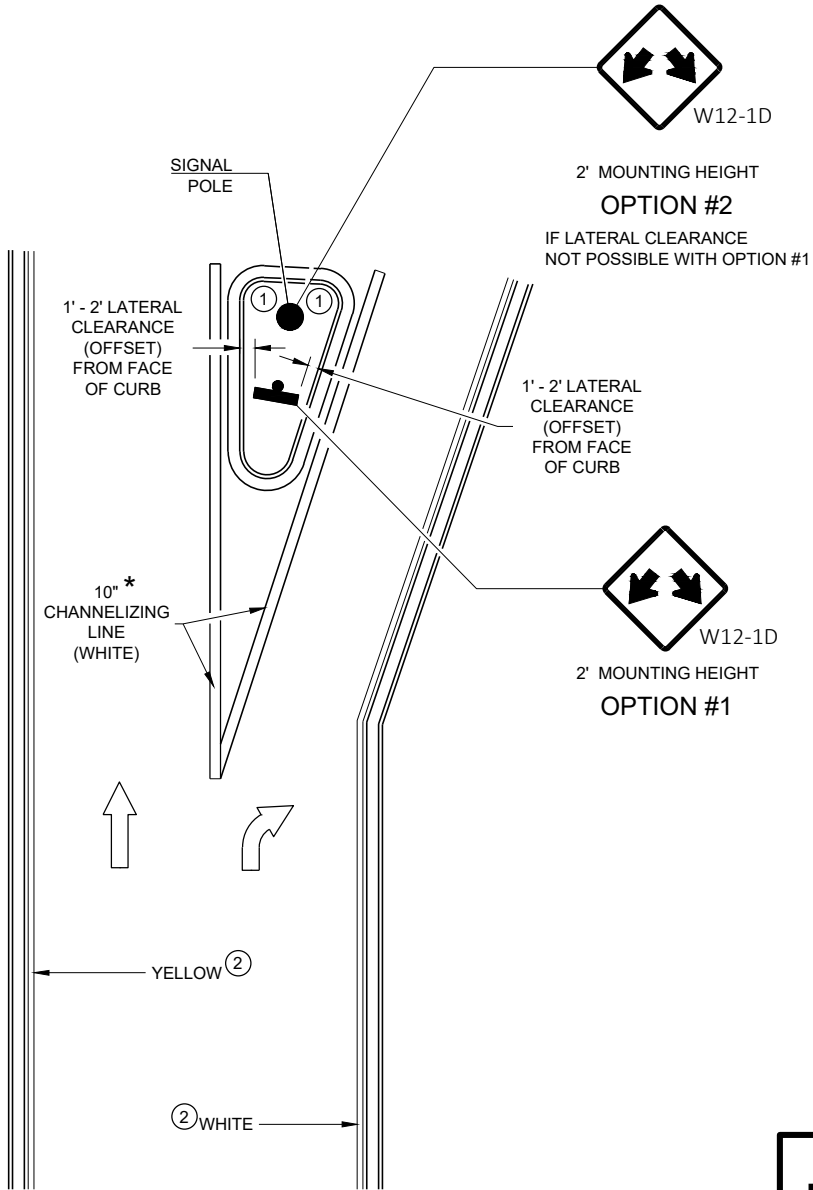
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.

➡ DIRECTION OF TRAVEL



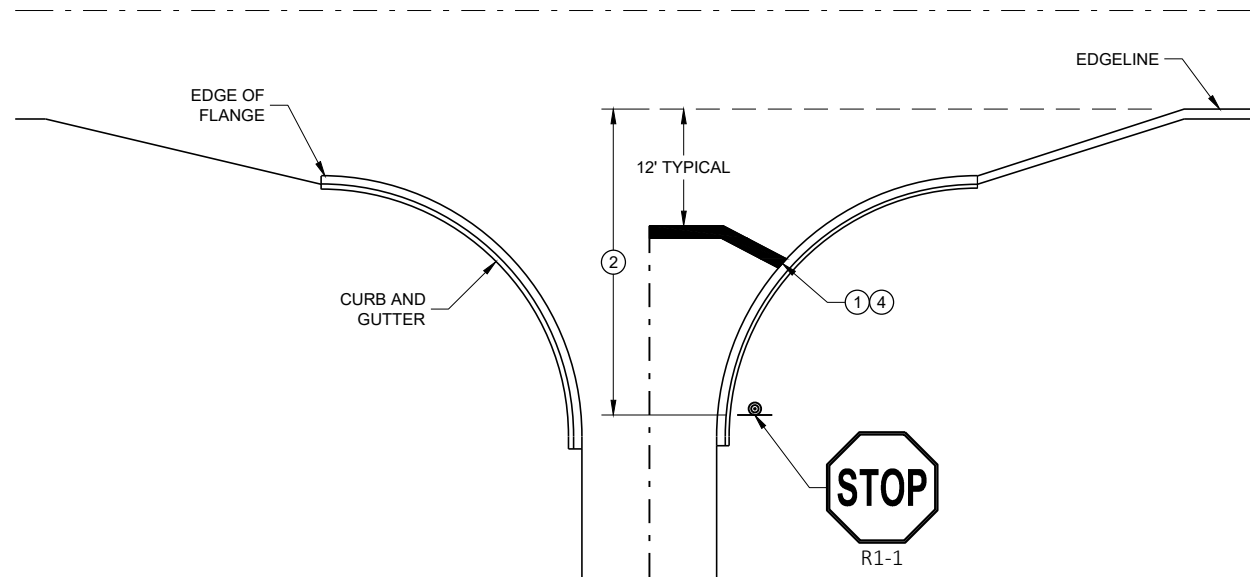
RIGHT TURN ISLAND

MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT

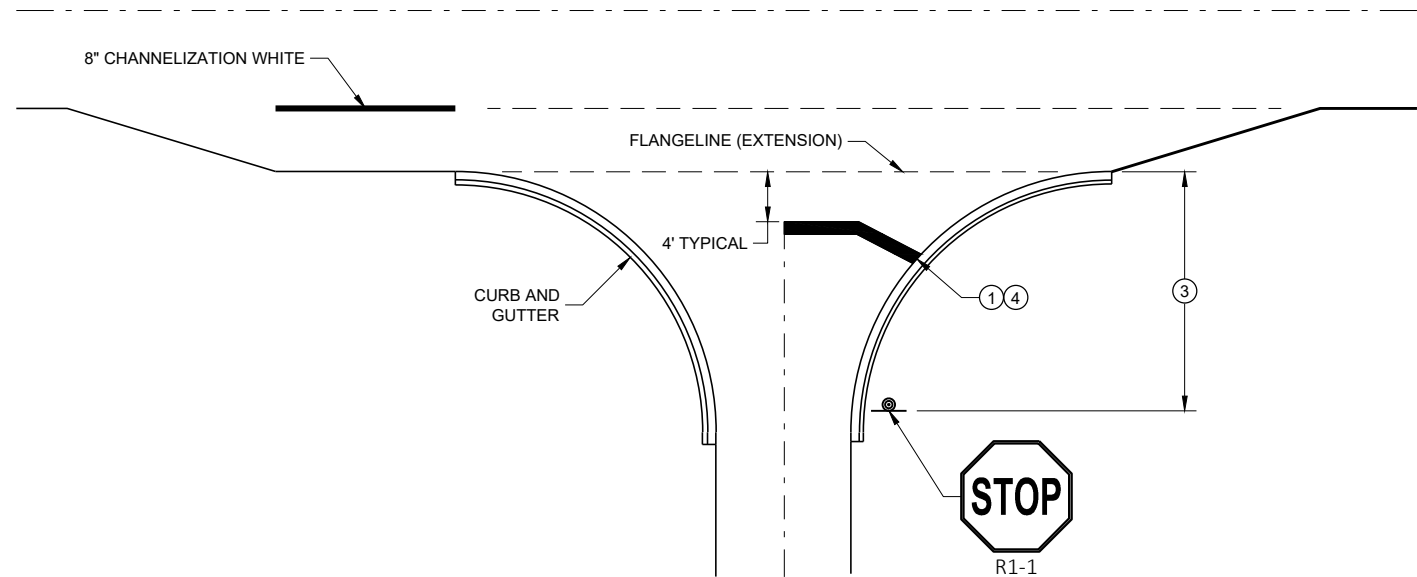
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE STATE SIGNING AND MAP ENGINEER 114

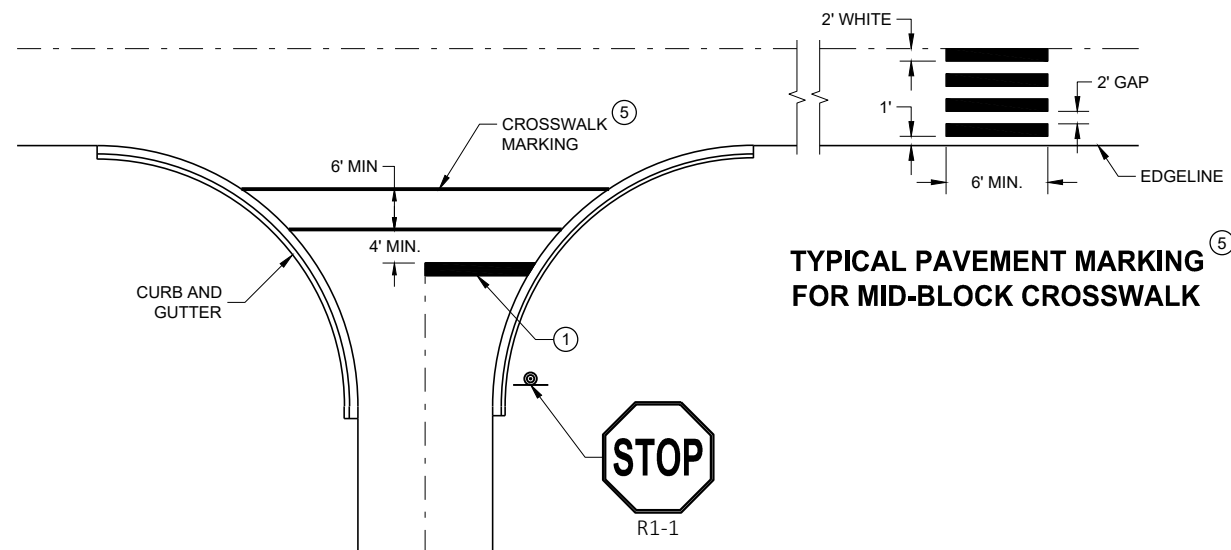
FHWA



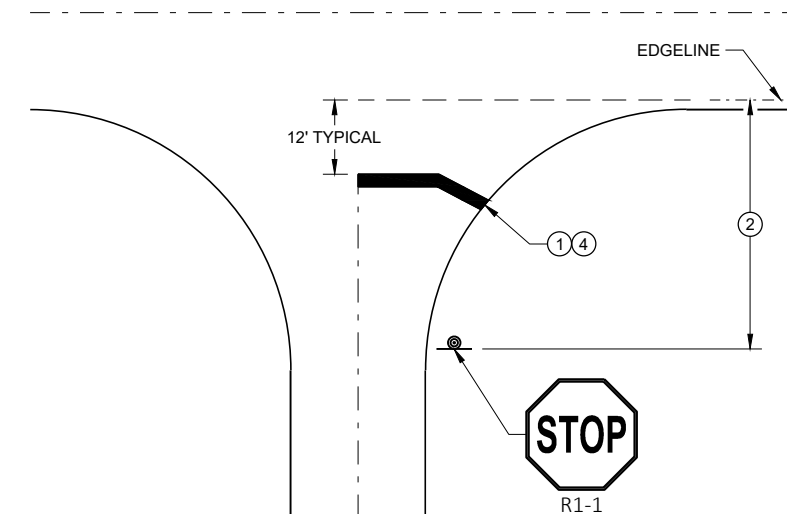
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR
SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

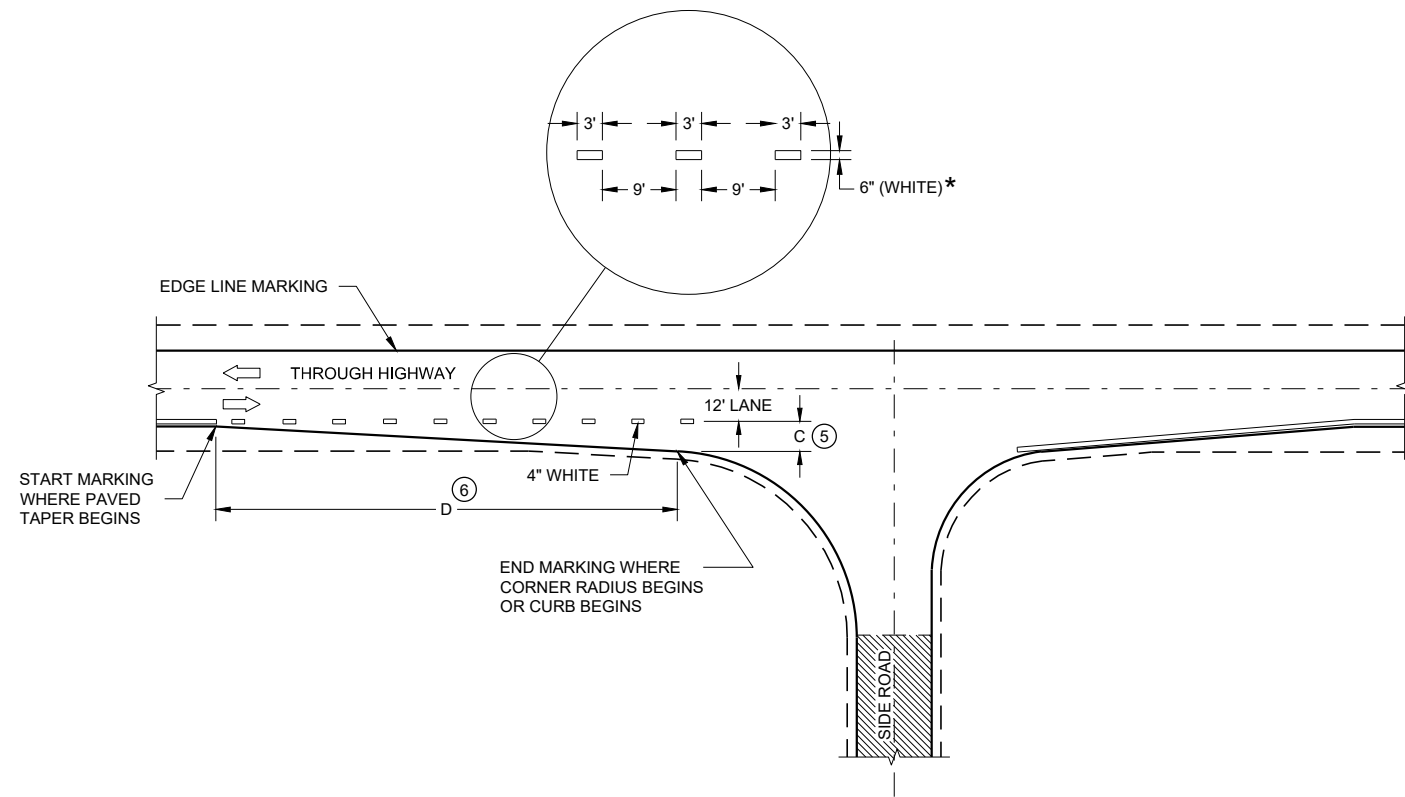
STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.

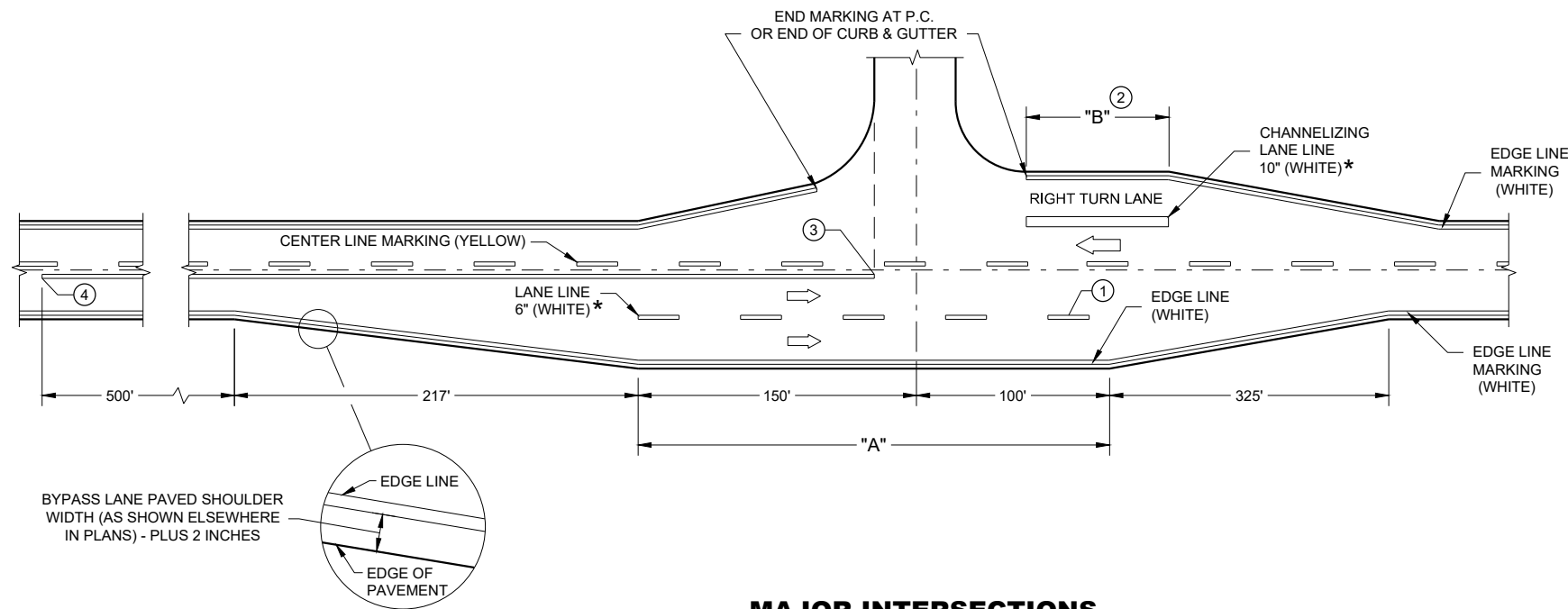
STOP LINE AND CROSSWALK
PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MAP ENGINEER 115
FHWA



MINOR INTERSECTION



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

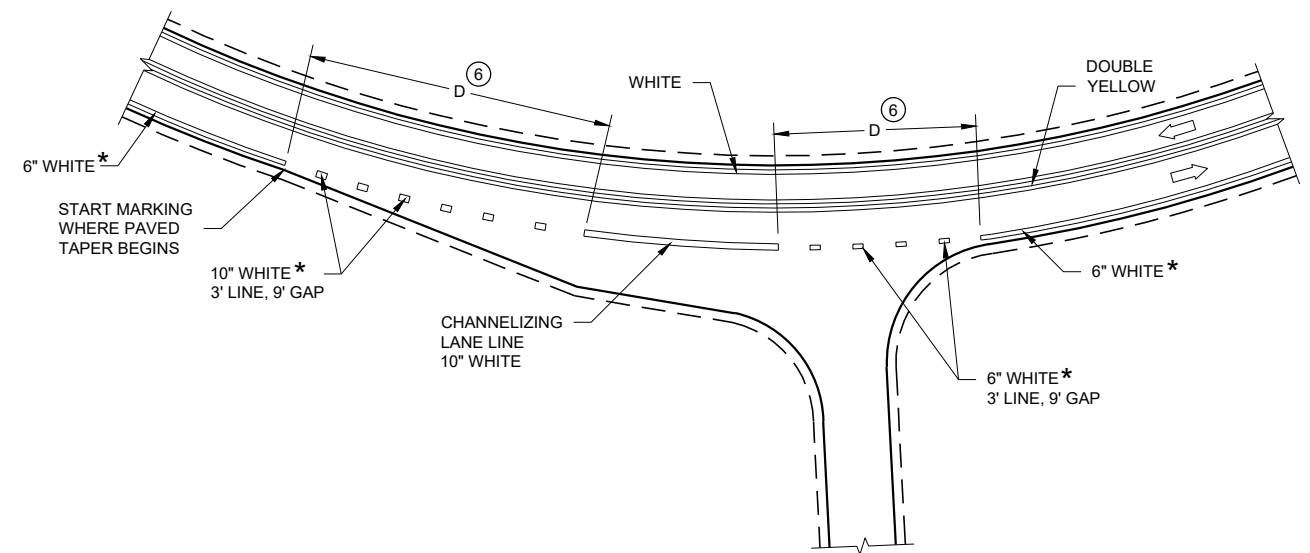
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 116

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48" x 48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

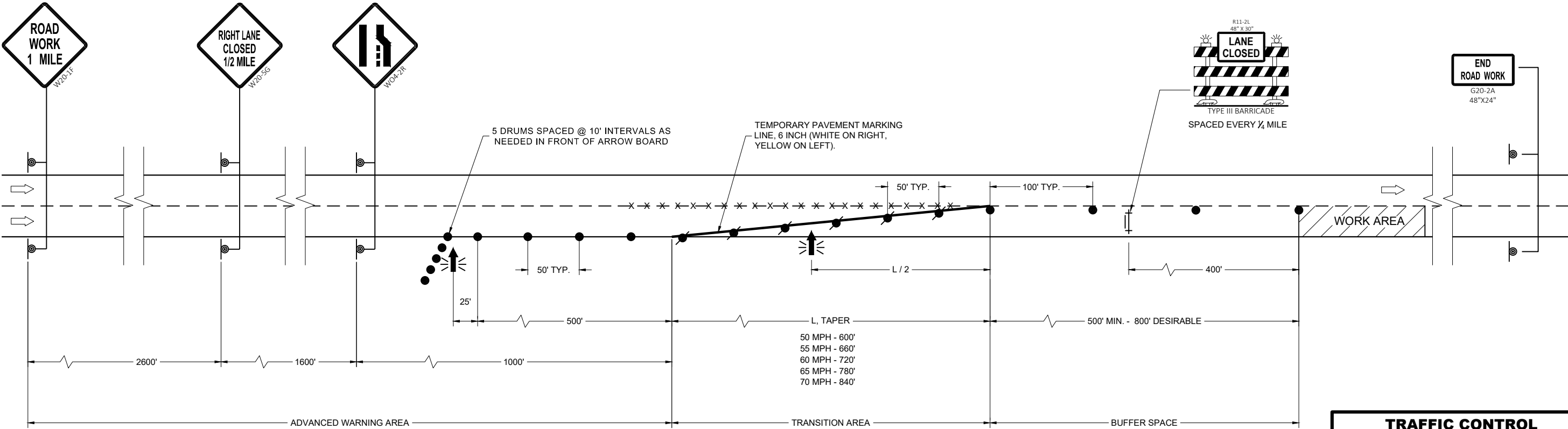
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD

6



SDD 15D12-12a

**TRAFFIC CONTROL
LANE CLOSURE**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

6

SDD 15D12-12a

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  FLASHING ARROW BOARD
-  DIRECTION OF TRAFFIC
-  REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
-  WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

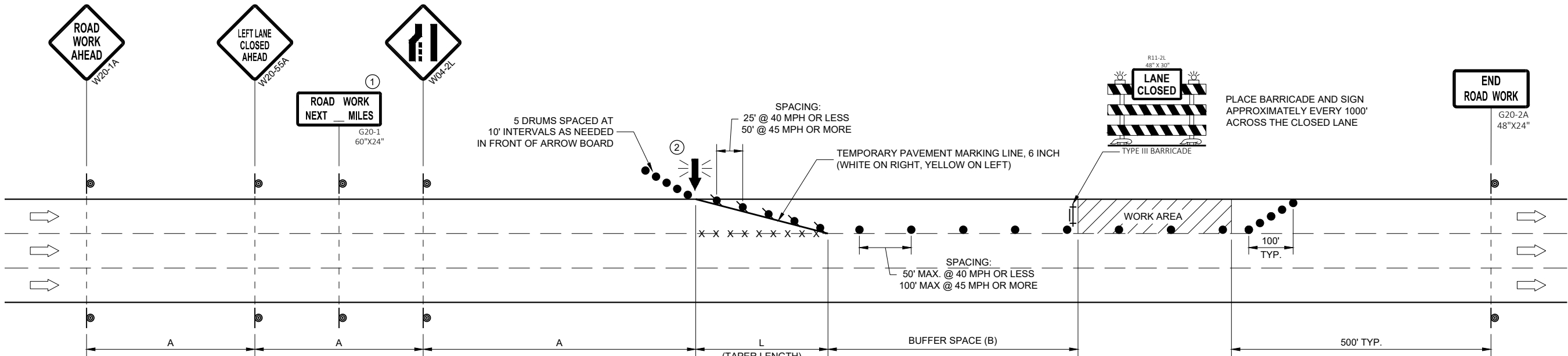
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 118

FHWA

	SIGN ON PERMANENT SUPPORT
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
	TYPE III BARRICADE WITH ATTACHED SIGN
	TYPE "A" WARNING LIGHT (FLASHING)
	FLASHING ARROW BOARD
	DIRECTION OF TRAFFIC
	REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
	WORK AREA

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

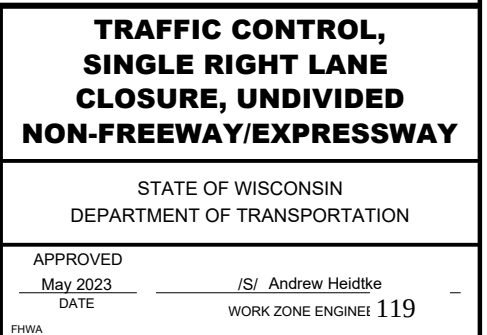
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'



LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

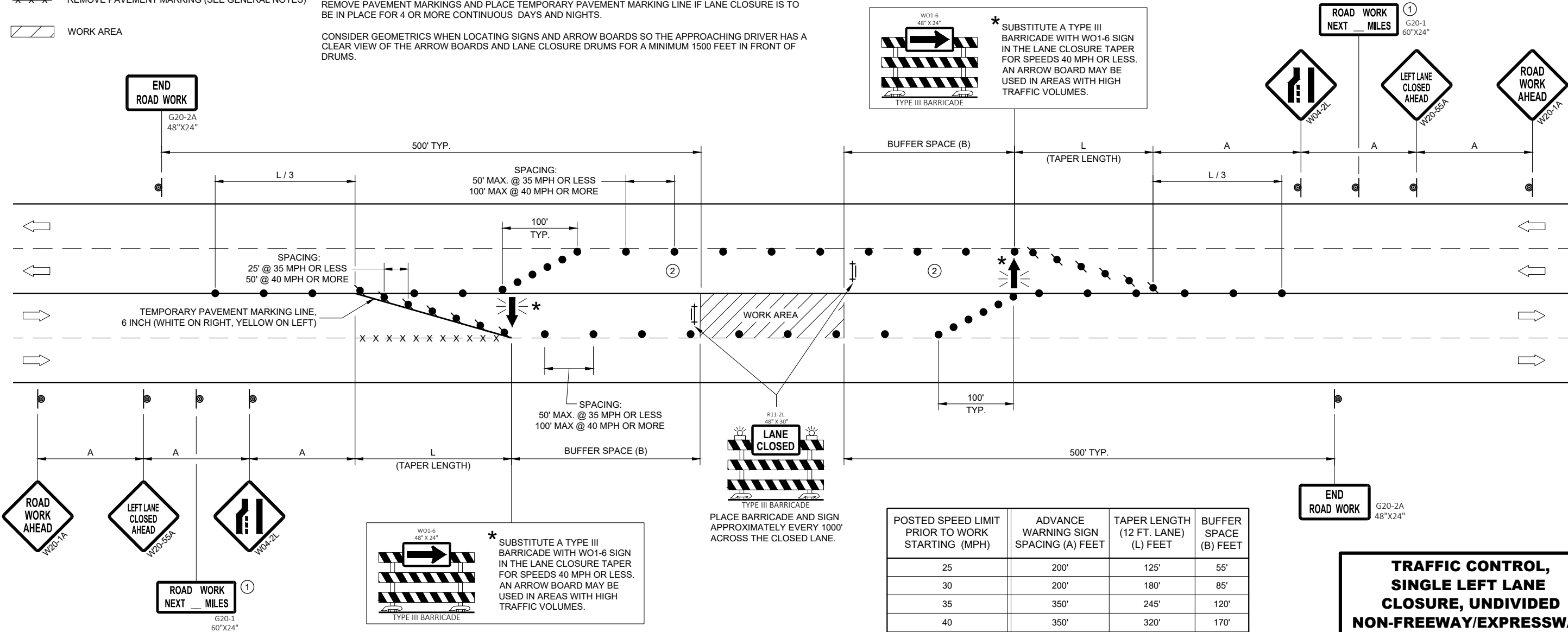
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



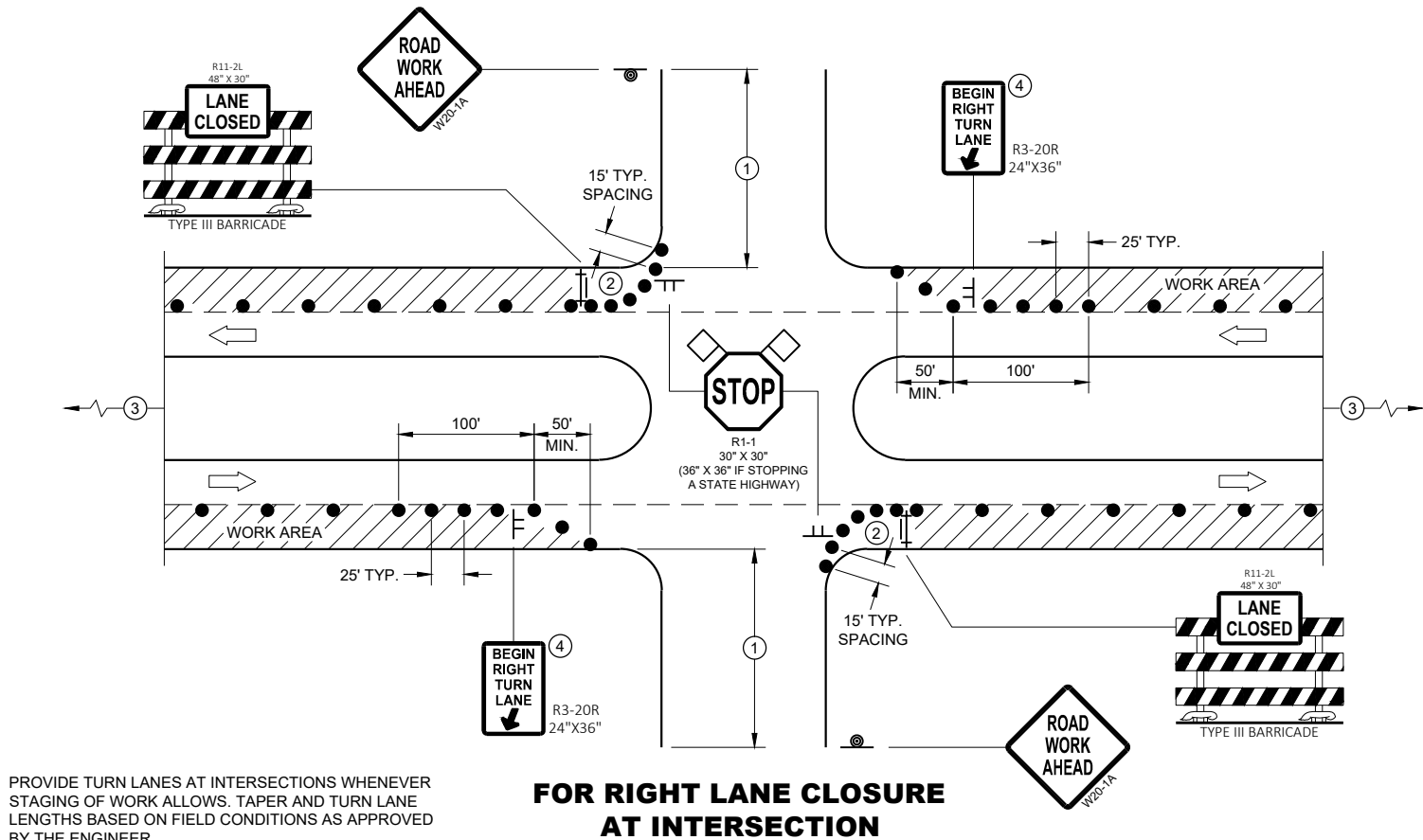
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

**TRAFFIC CONTROL,
SINGLE LEFT LANE
CLOSURE, UNDIVIDED
NON-FREEWAY/EXPRESSWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 120

FHWA



GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

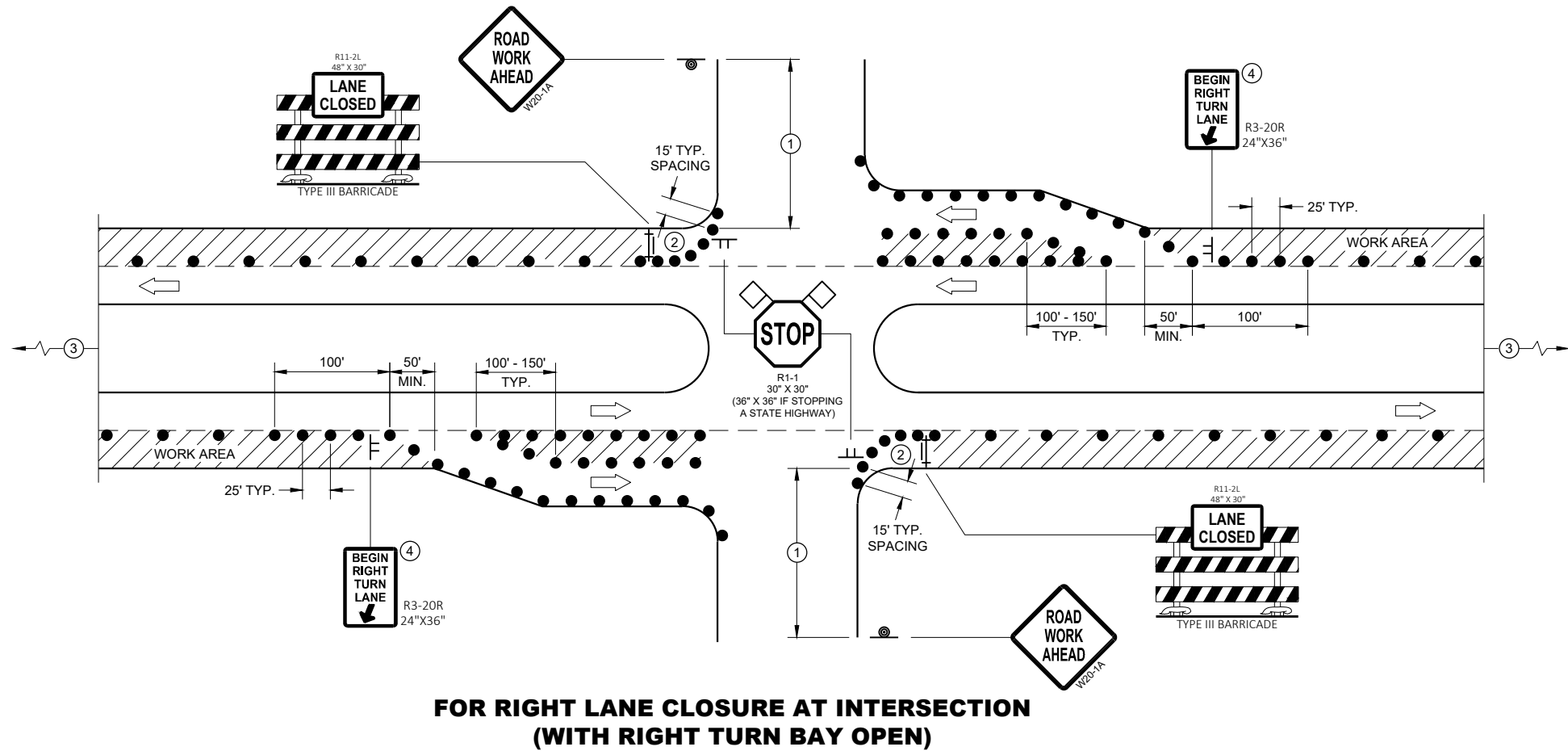
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

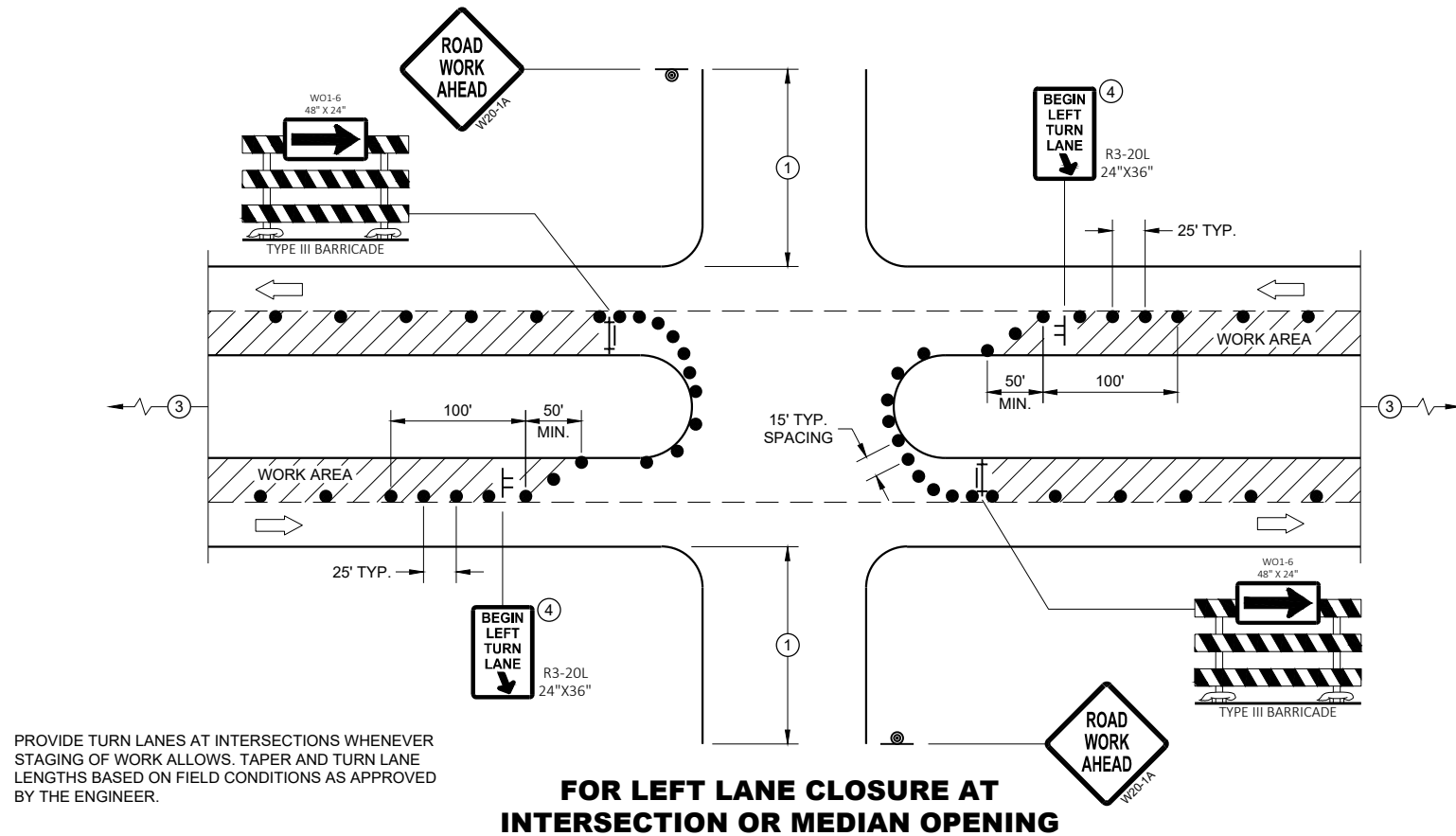
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA



GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 122
FHWA

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

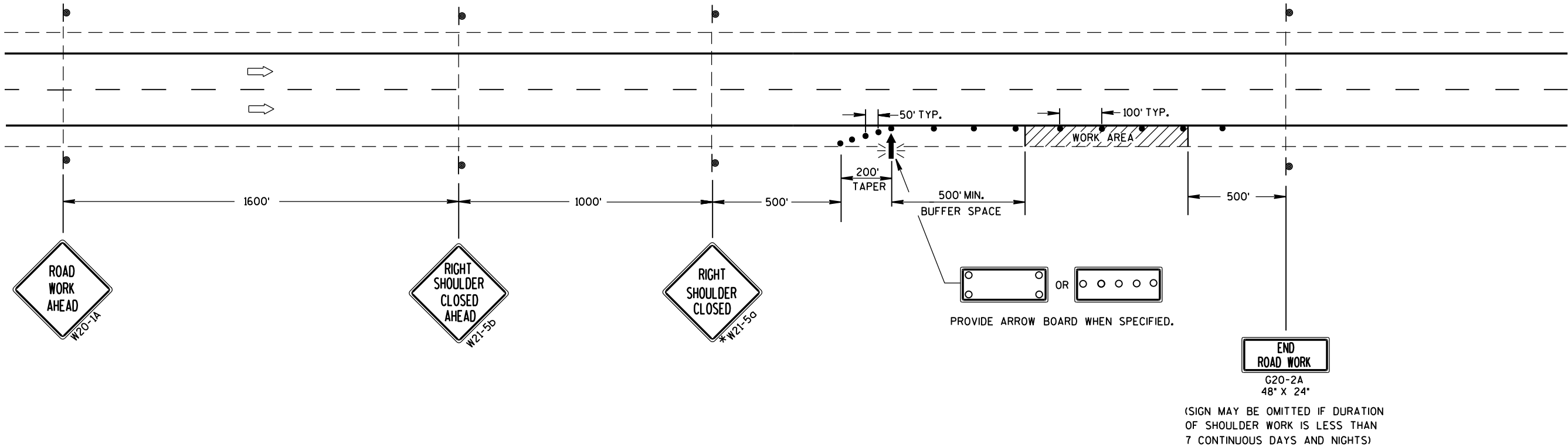
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

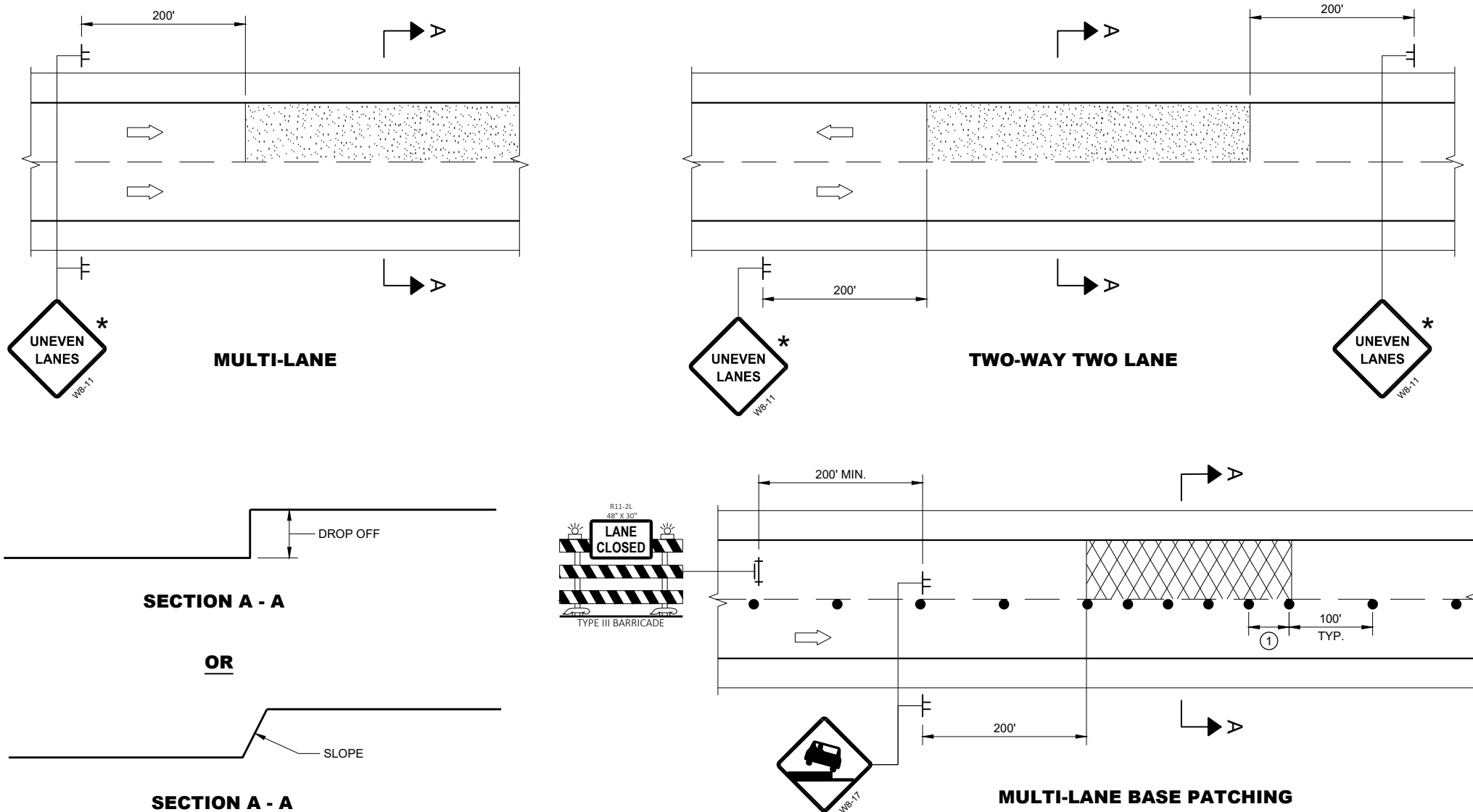
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE SAFETY ENGINEER 123 IC
FHWA	



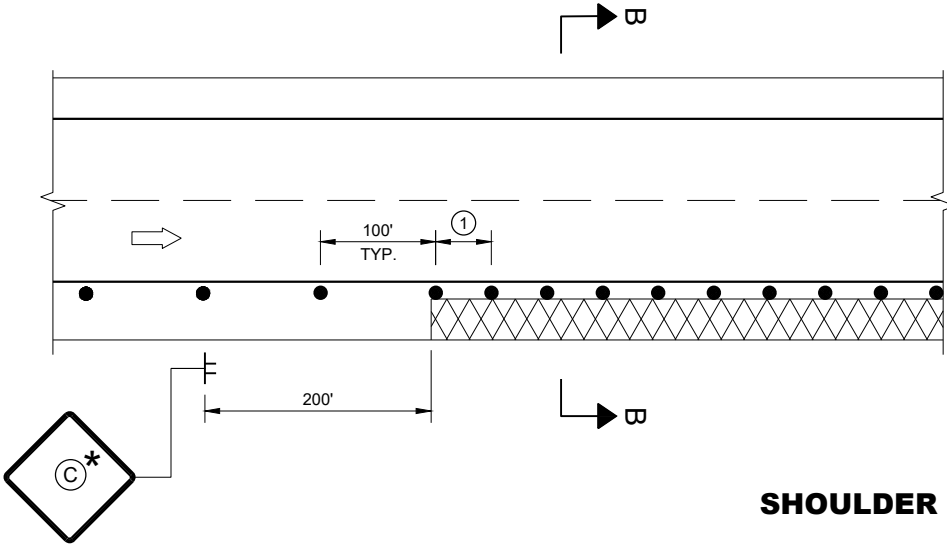
ADJACENT LANE DROP-OFFS

GENERAL NOTES

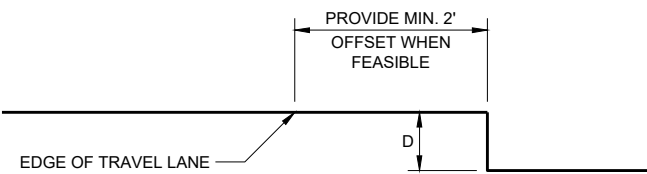
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- ├ SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- ├ TYPE III BARRICADE WITH ATTACHED SIGN
- ☼ TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA WITH DROP-OFF
- ▤ MILLED SURFACE



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN C
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL,
DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 124
FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

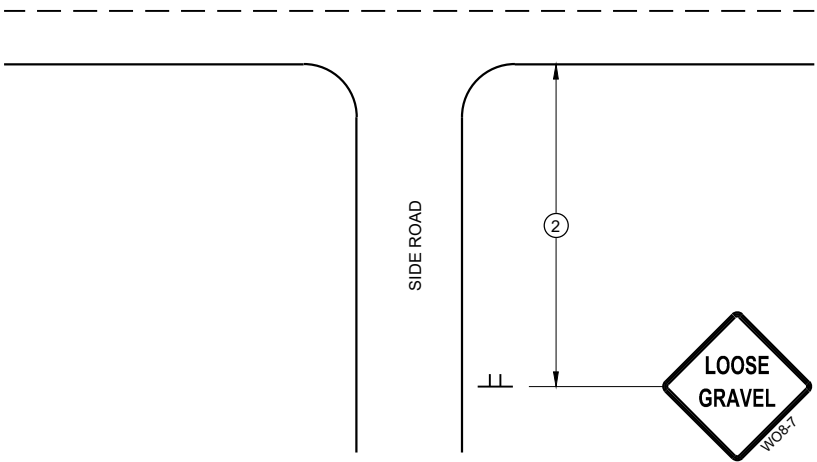
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

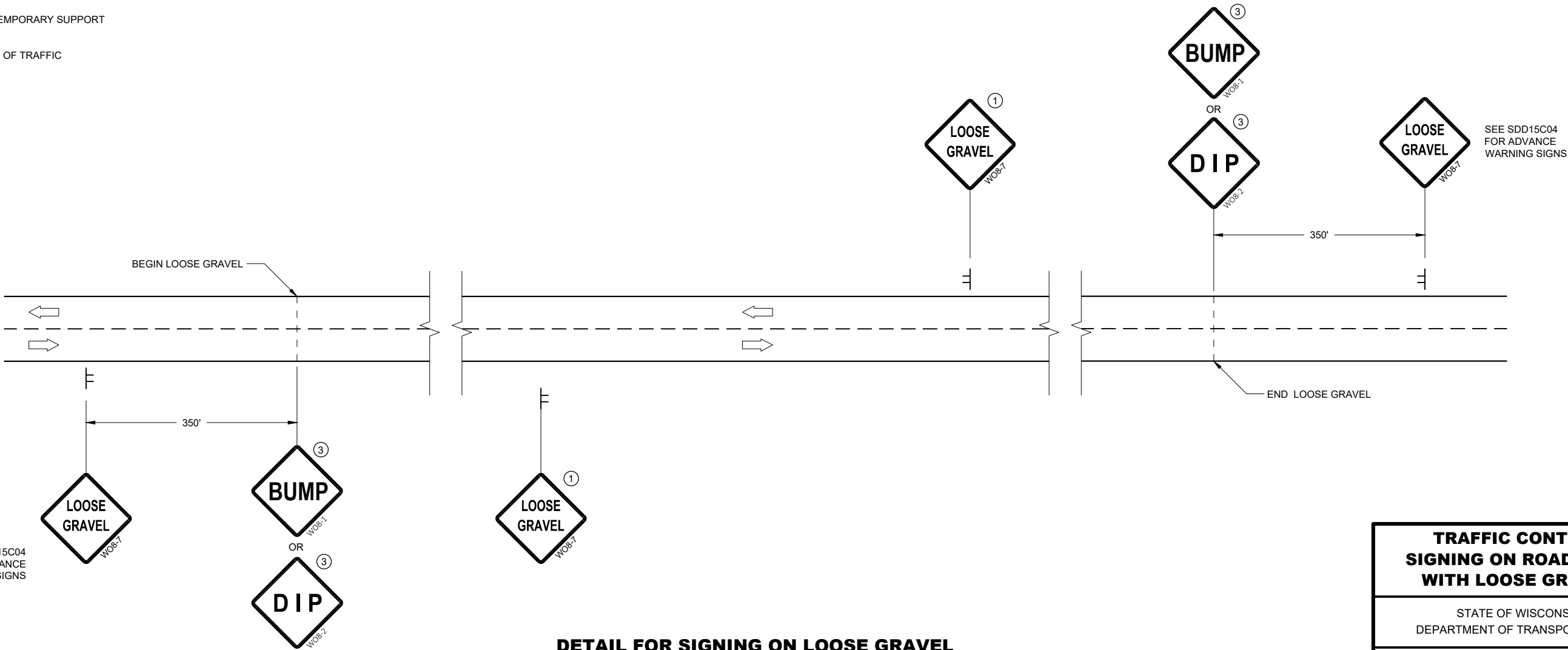
- 1 PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- 2 PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- 3 ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



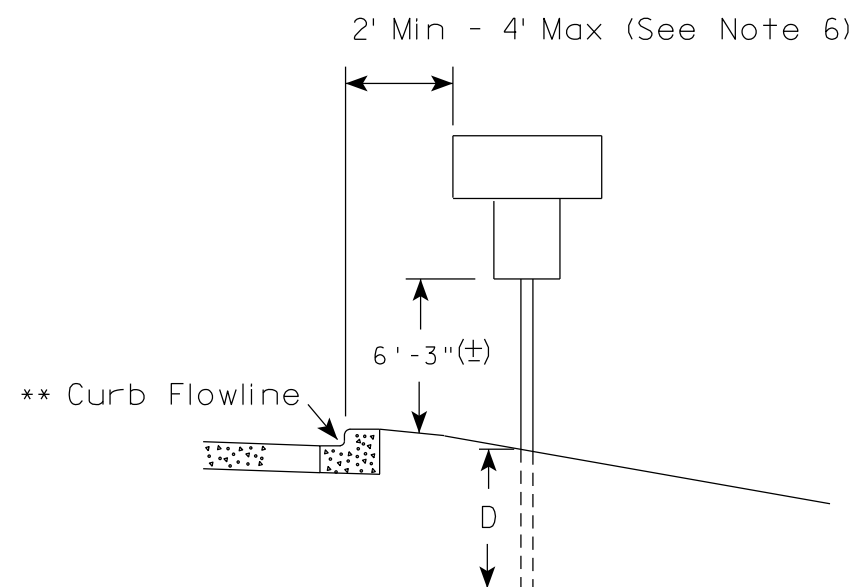
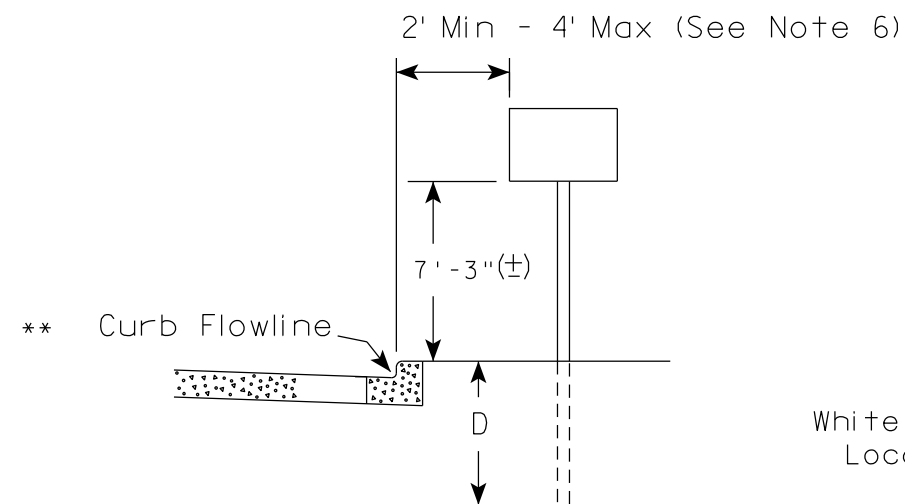
DETAIL FOR SIGNING ON LOOSE GRAVEL
OR CHIP SEALED SURFACES

TRAFFIC CONTROL
SIGNING ON ROADWAYS
WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

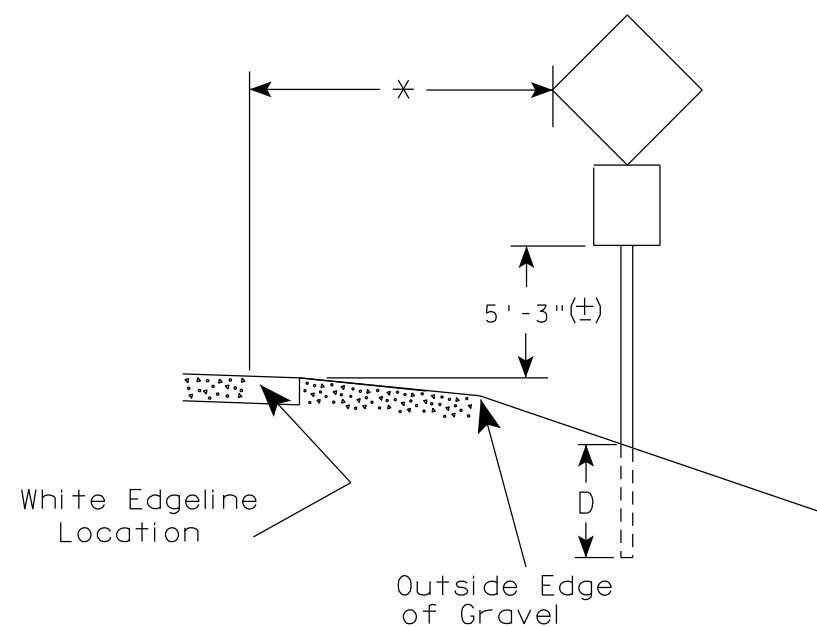
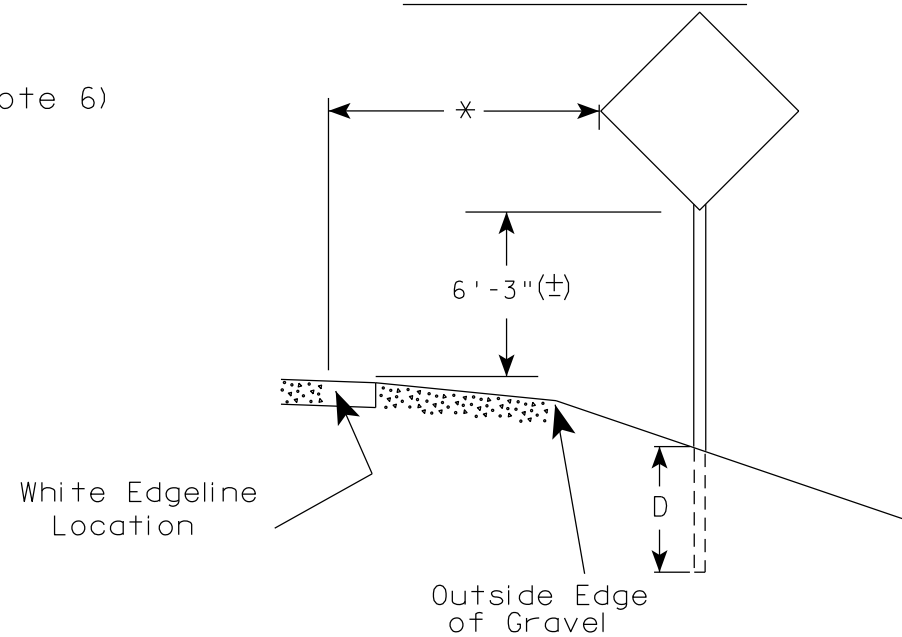
APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 125
FHWA

URBAN AREA



** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

RURAL AREA (See Note 2)



* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
- For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- The (±) tolerance for mounting height is 3 inches.
- Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

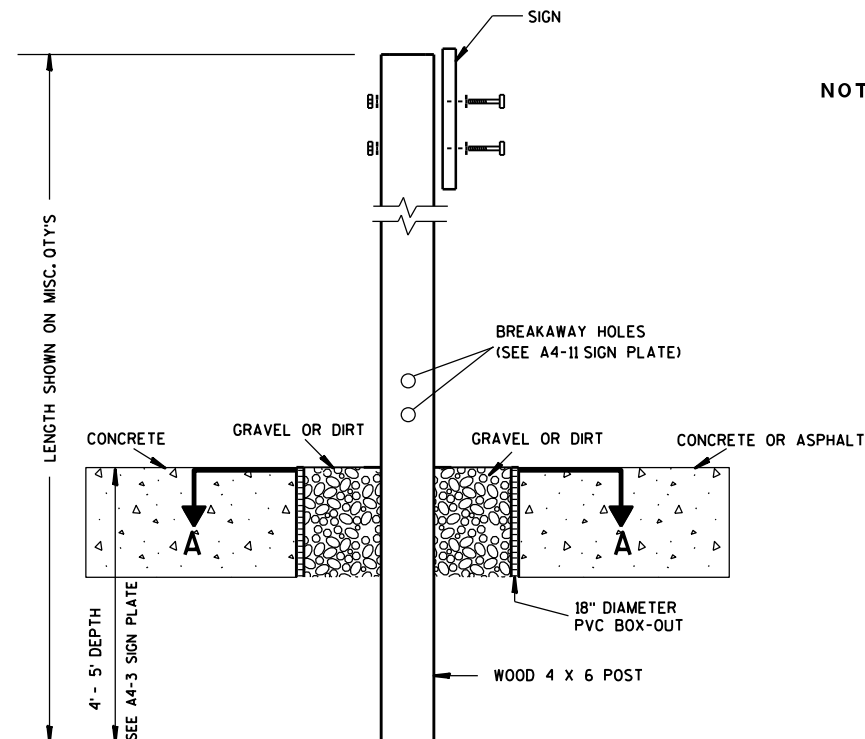
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 126

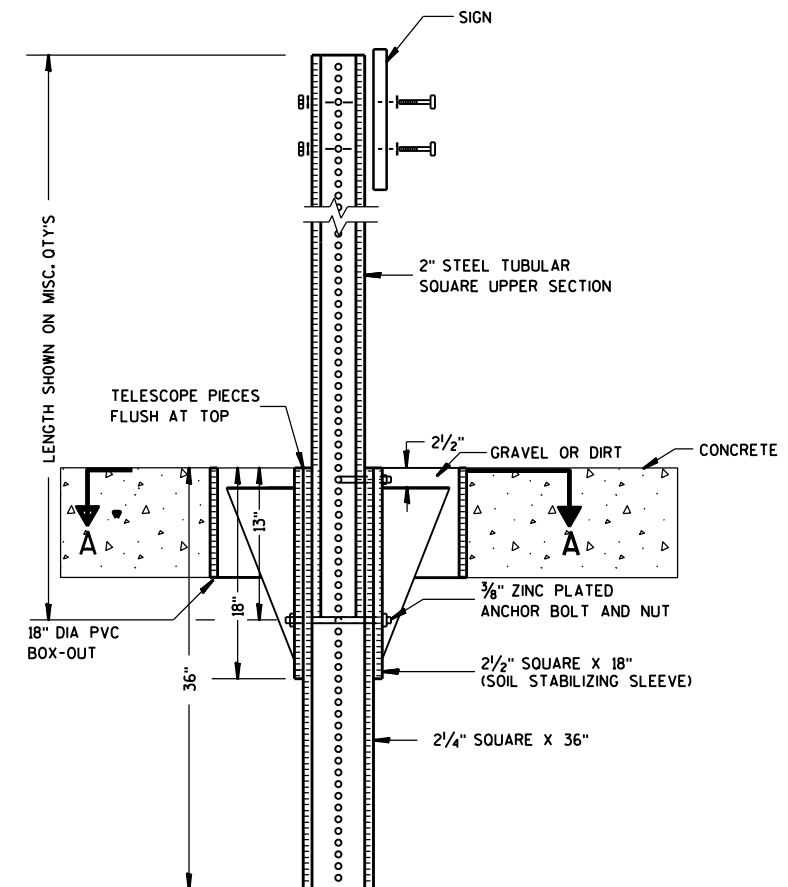
E



ELEVATION VIEW

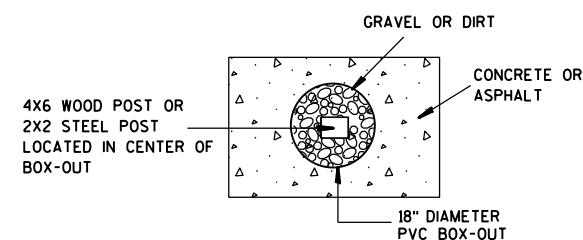
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 127 A4-3B.1

PROJECT NO:

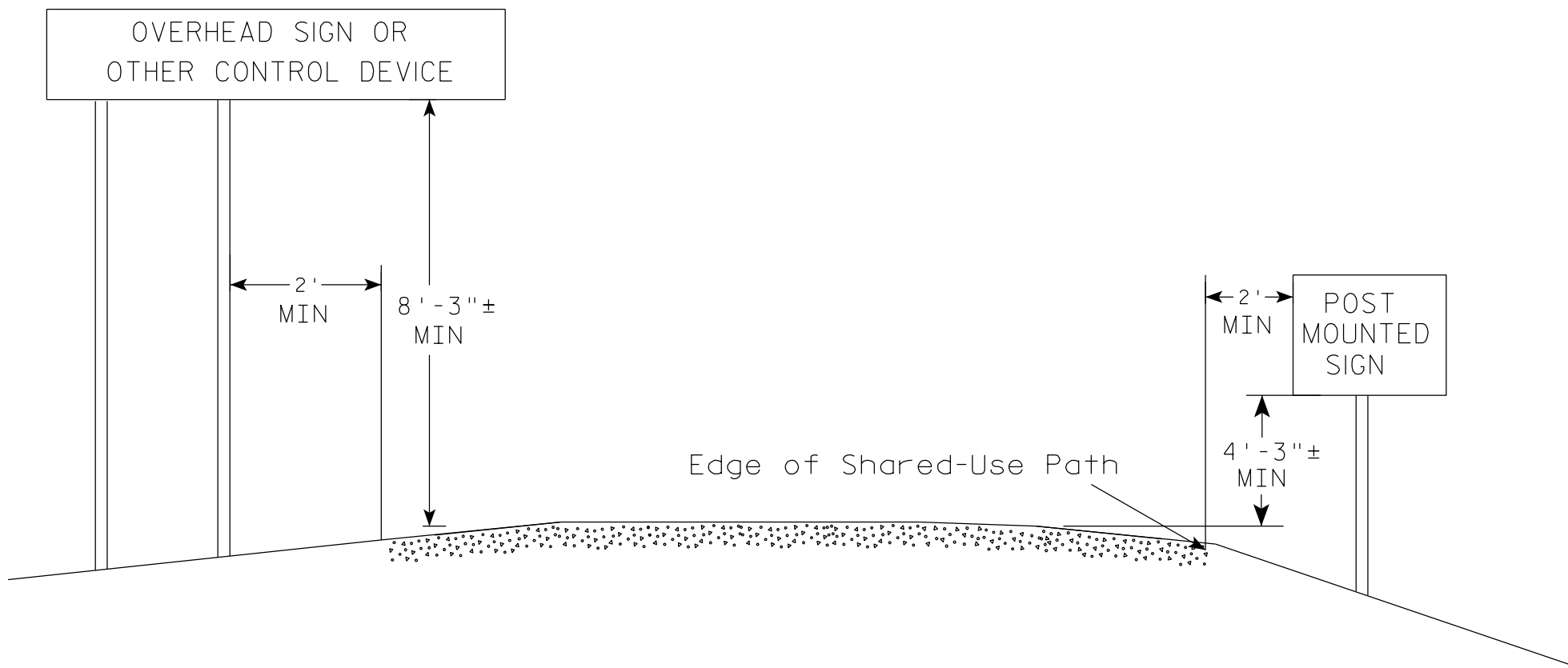
HWY:

COUNTY:

SHEET NO:

E

7



GENERAL NOTES

- 1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
- 2. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 3. The height from ground level to the sign is $8' - 3'' \pm$ min. for the Overhead sign or other control device.
- 4. The height from ground level to the sign is $4' - 3'' \pm$ min. for the Post mounted sign.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

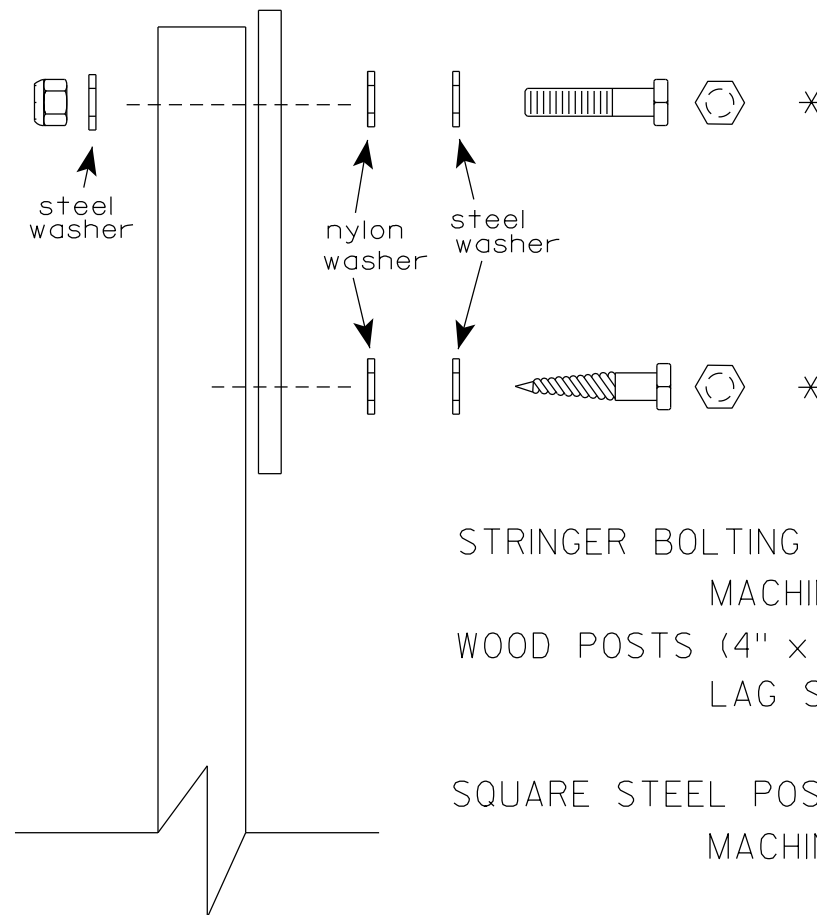
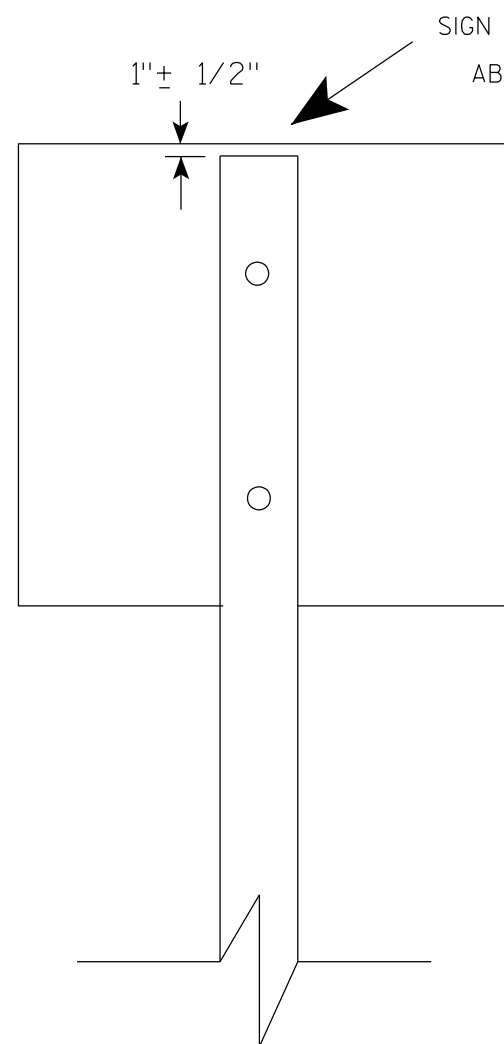
7

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON MULTI USE PATHS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/26/2020 PLATE NO. A4-3S.2



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

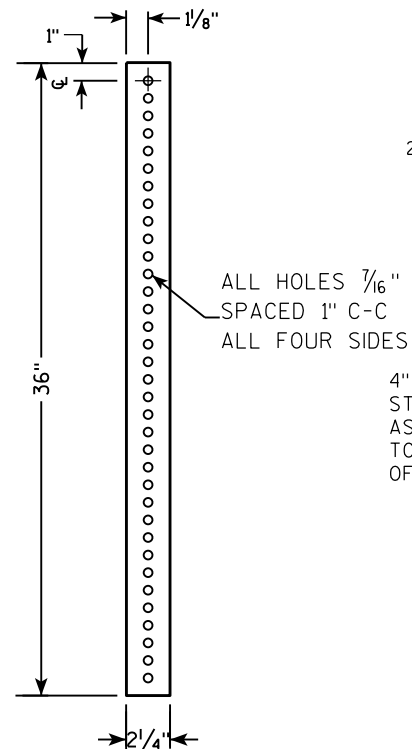
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

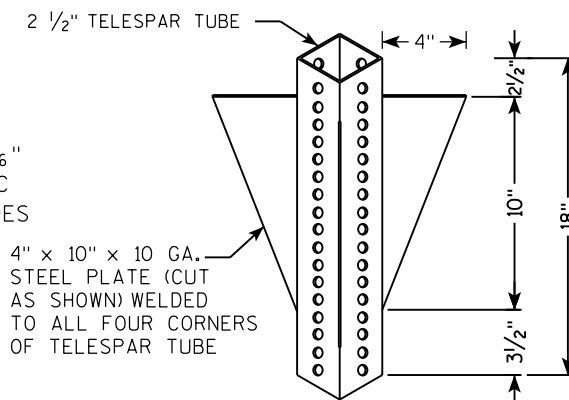
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



LENGTH SHOWN ON MISC. QTY'S
 18" DIA SCHEDULE 40 PVC BOX-OUT
 TELESCOPE PIECES FLUSH AT TOP
 36"
 18"
 13"
 2 1/2"
 2 1/4" SQUARE X 36"
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 3/8" ZINC PLATED ANCHOR BOLT AND NUT
 2 1/2" GRAVEL OR DIRT
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
 2" STEEL TUBULAR SQUARE UPPER SECTION
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

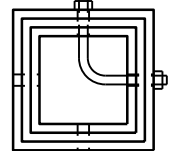
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthieu R. Rauch

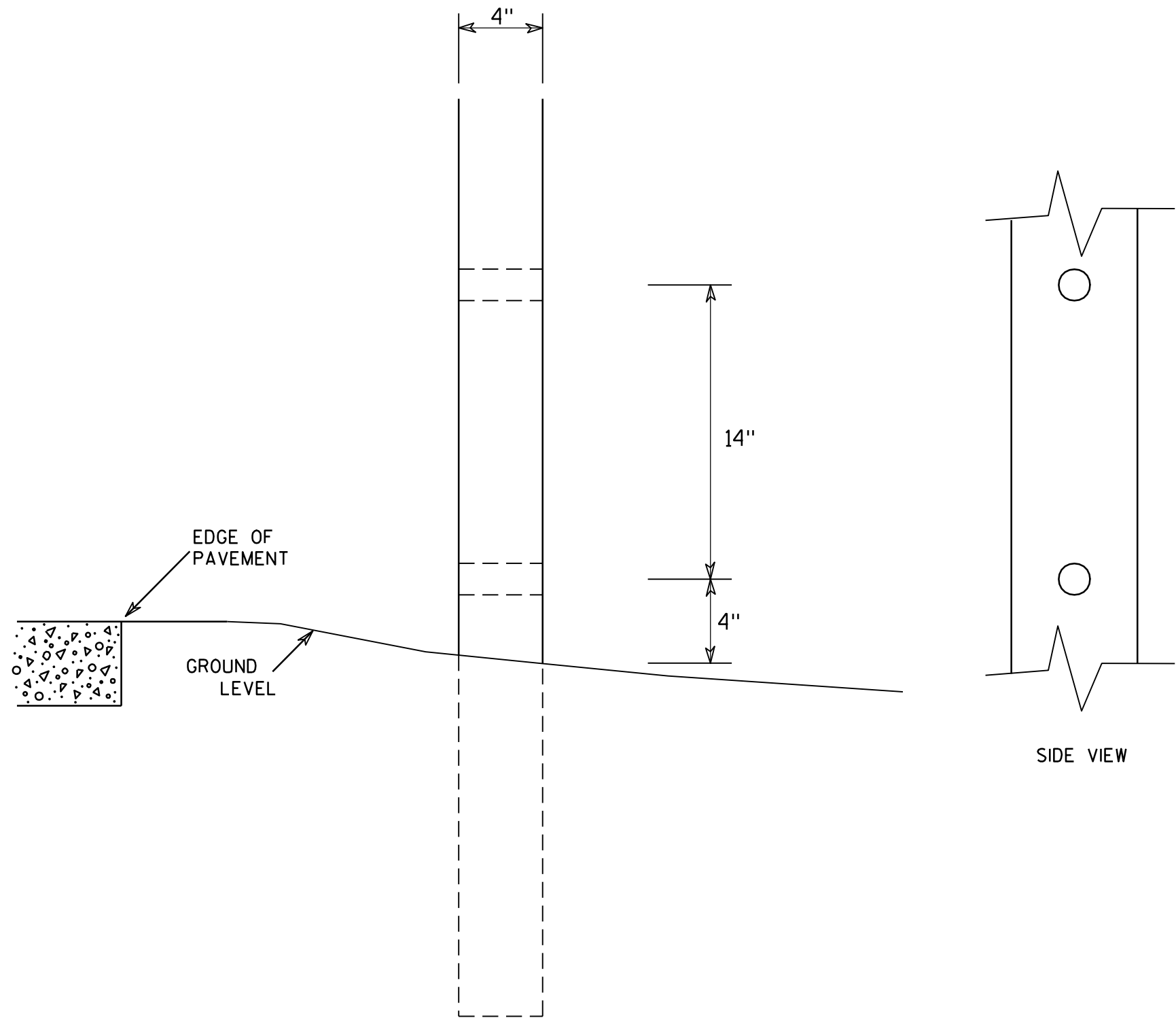
for State Traffic Engineer

DATE 2/05/15 PLATI 130 14-9.9

SHEET NO: E

PROJECT NO:	HWY:	COUNTY:	SHEET NO:
-------------	------	---------	-----------

7



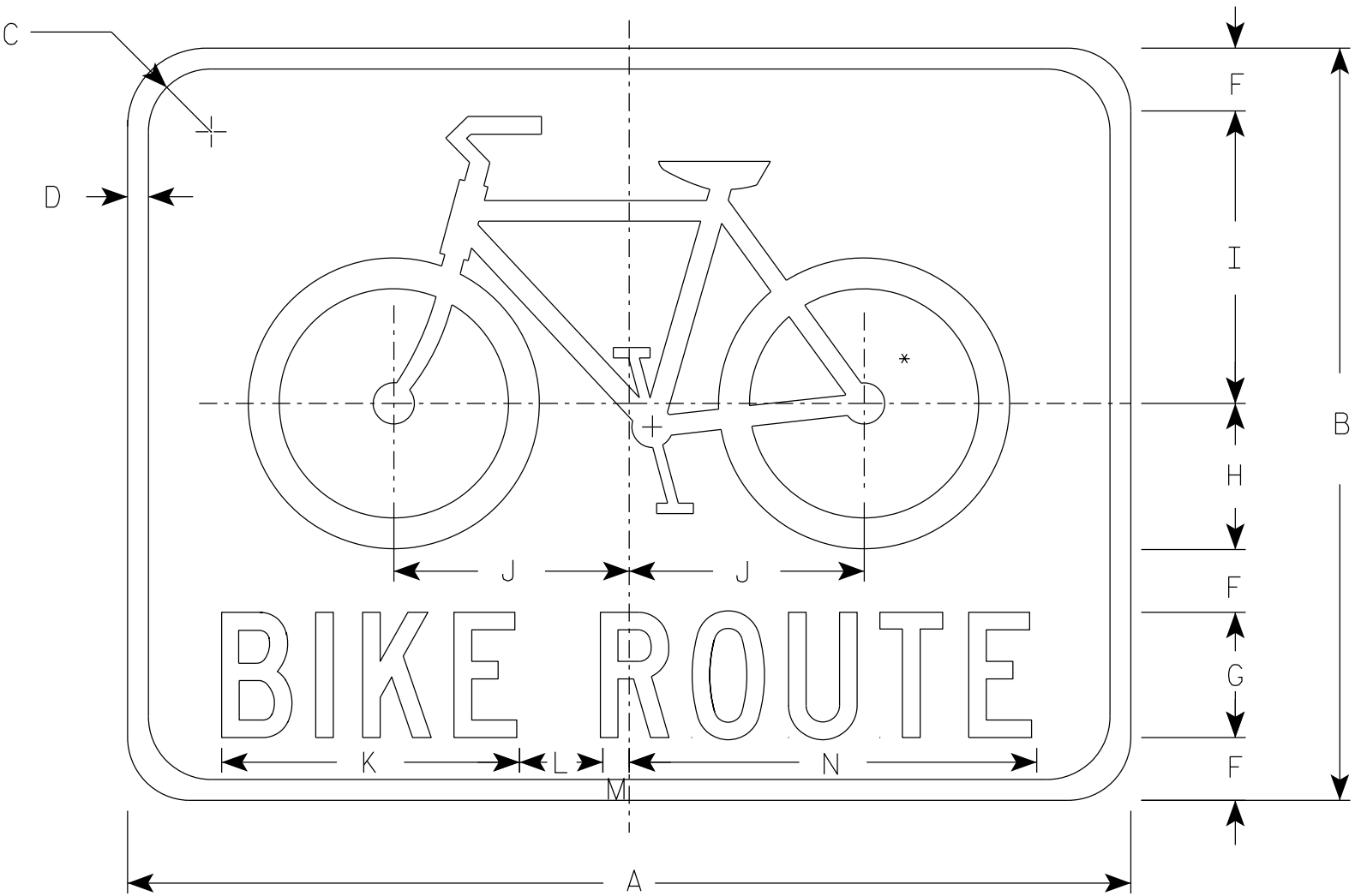
GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

4 X 6 WOOD POST MODIFICATIONS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Chester J. Spang</i> for State Traffic Engineer
DATE 3/27/97	PLATE NO. A4-11.2

7



D11-1

* See W11-1 for symbol design

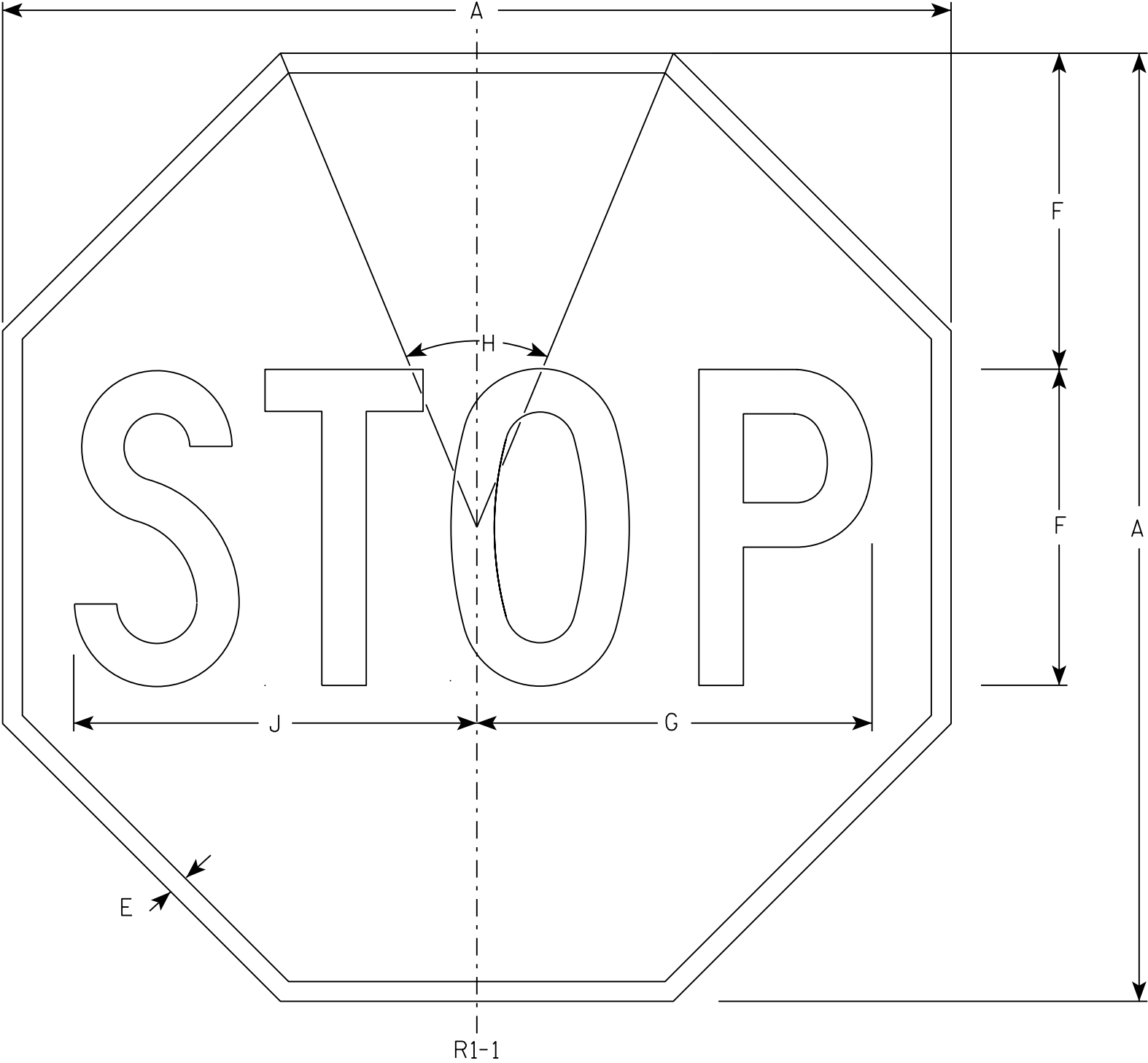
NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - GREEN
 - Message - WHITE
- 3. Message Series - C

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1																											
2S	24	18	1 1/2	1/2		1 1/2	3	3 1/2	7	5 5/8	7 1/8	2	5/8	9 3/4													3.0
2M	24	18	1 1/2	1/2		1 1/2	3	3 1/2	7	5 5/8	7 1/8	2	5/8	9 3/4													3.0
3	30	24	1 1/4	5/8		2	4	4 3/4	9 1/4	7 1/2	9 1/2	2 5/8	7/8	13													5.0
4																											
5																											

7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
Message - White
- 3. Message Series - C

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

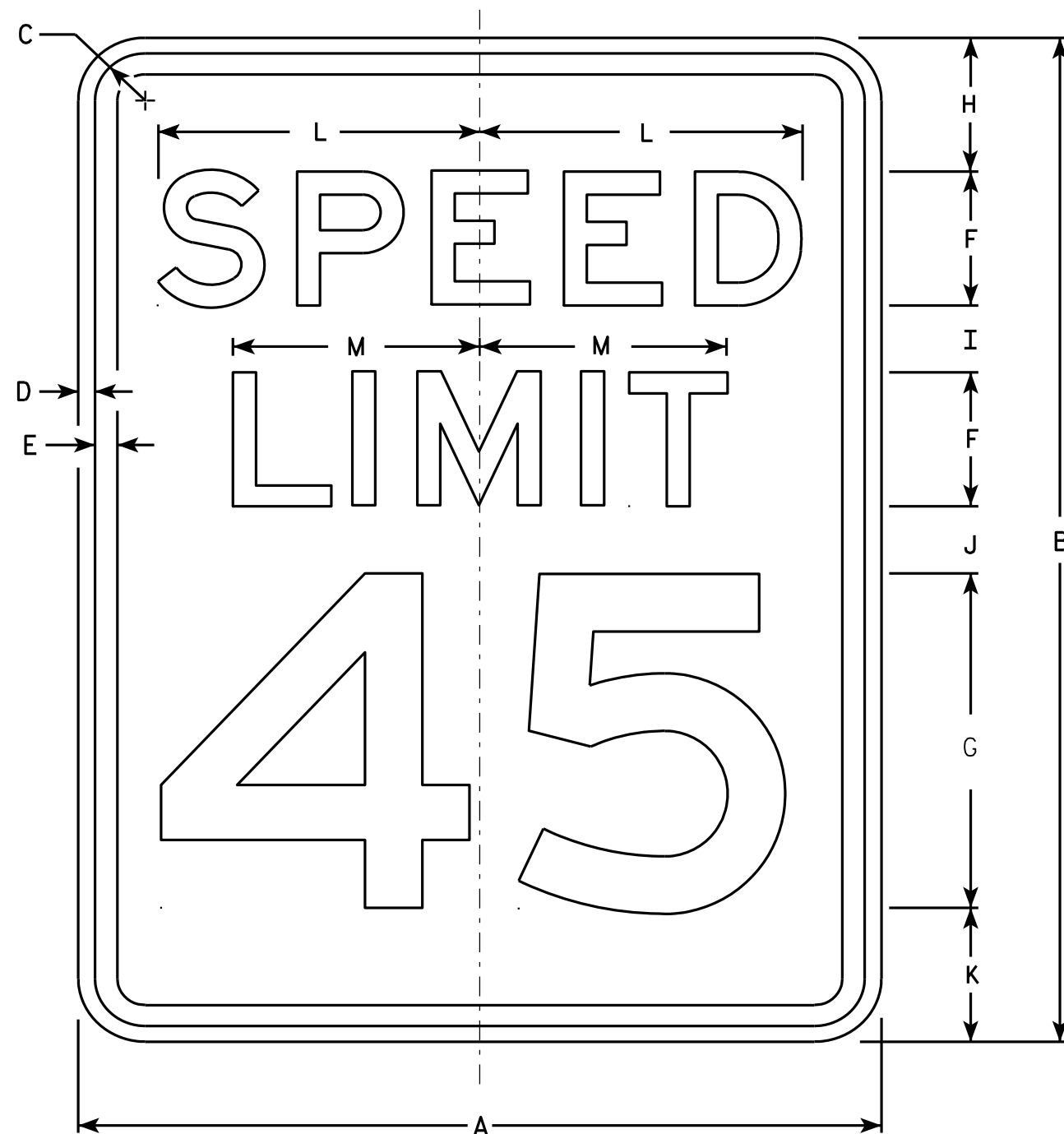
STANDARD SIGN

R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

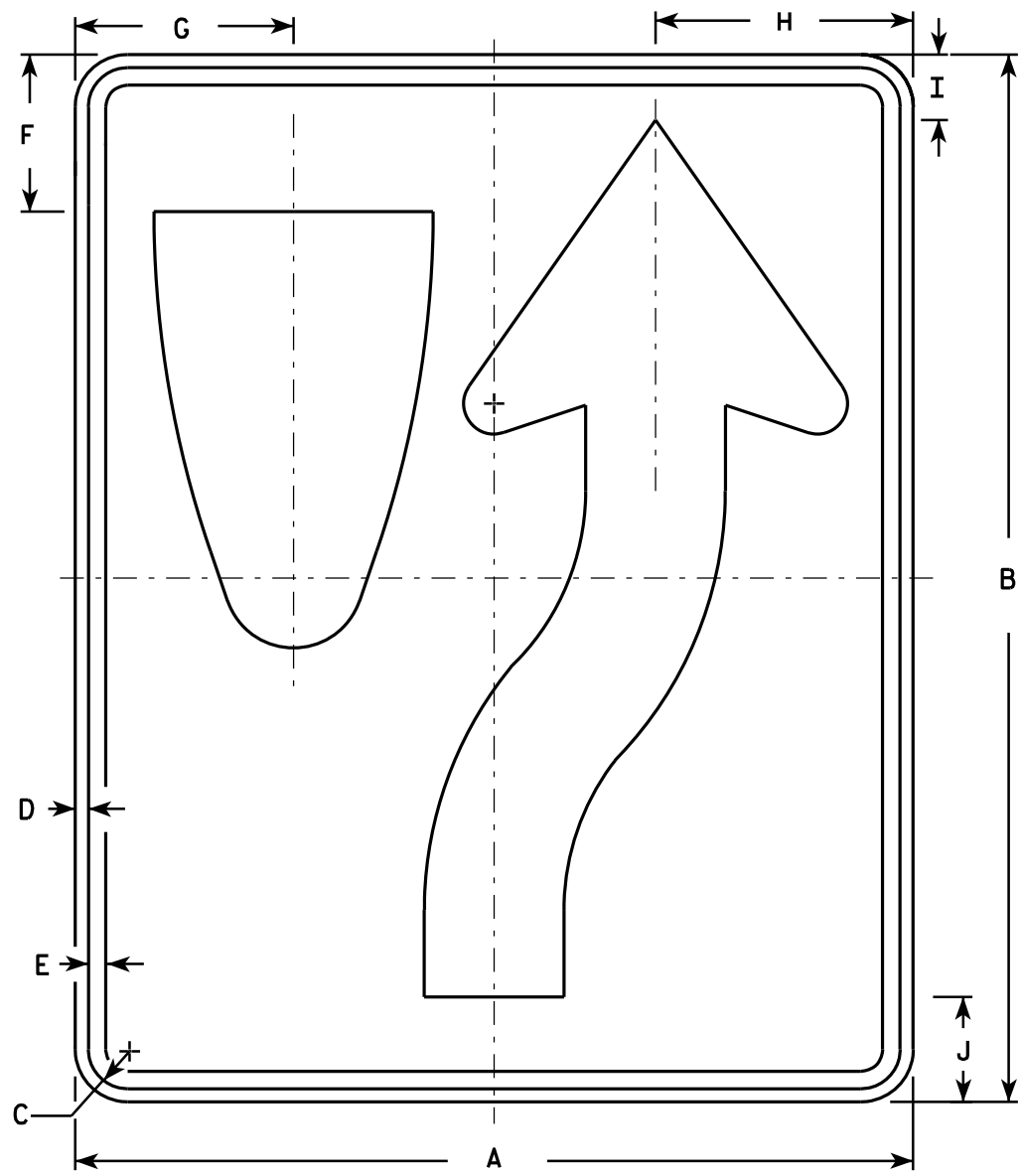
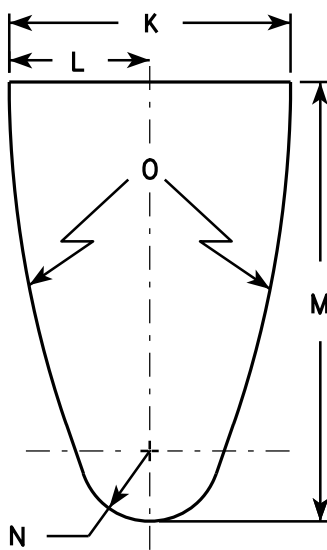
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

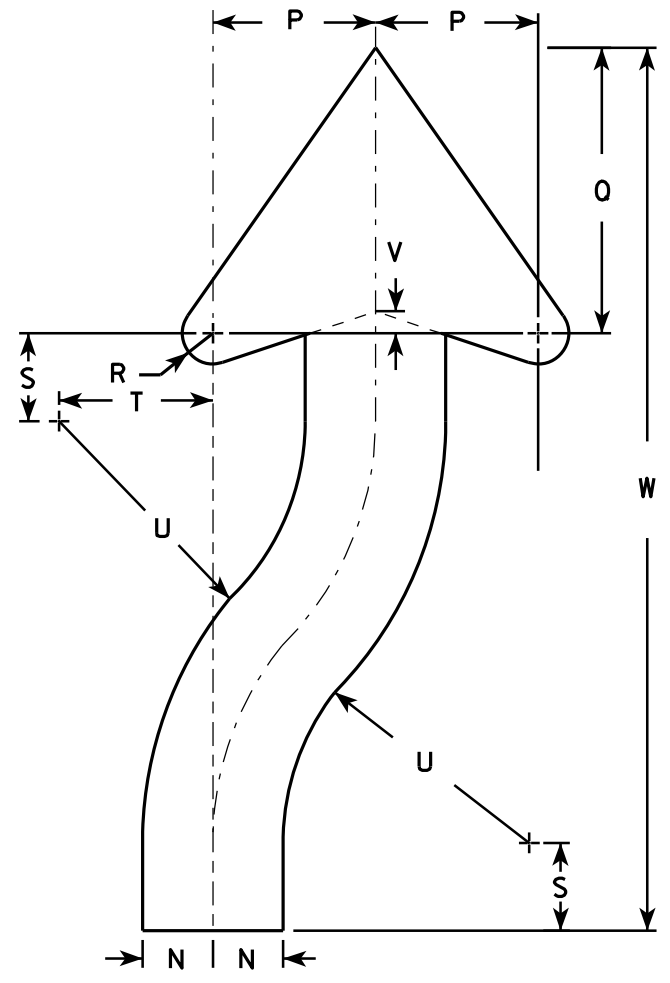
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
- 2. Color:
Background - White
Message - Black
- 3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
- 4. R4-8 is the same as R4-7 except Legend is reversed.



R4-7



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN

R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:

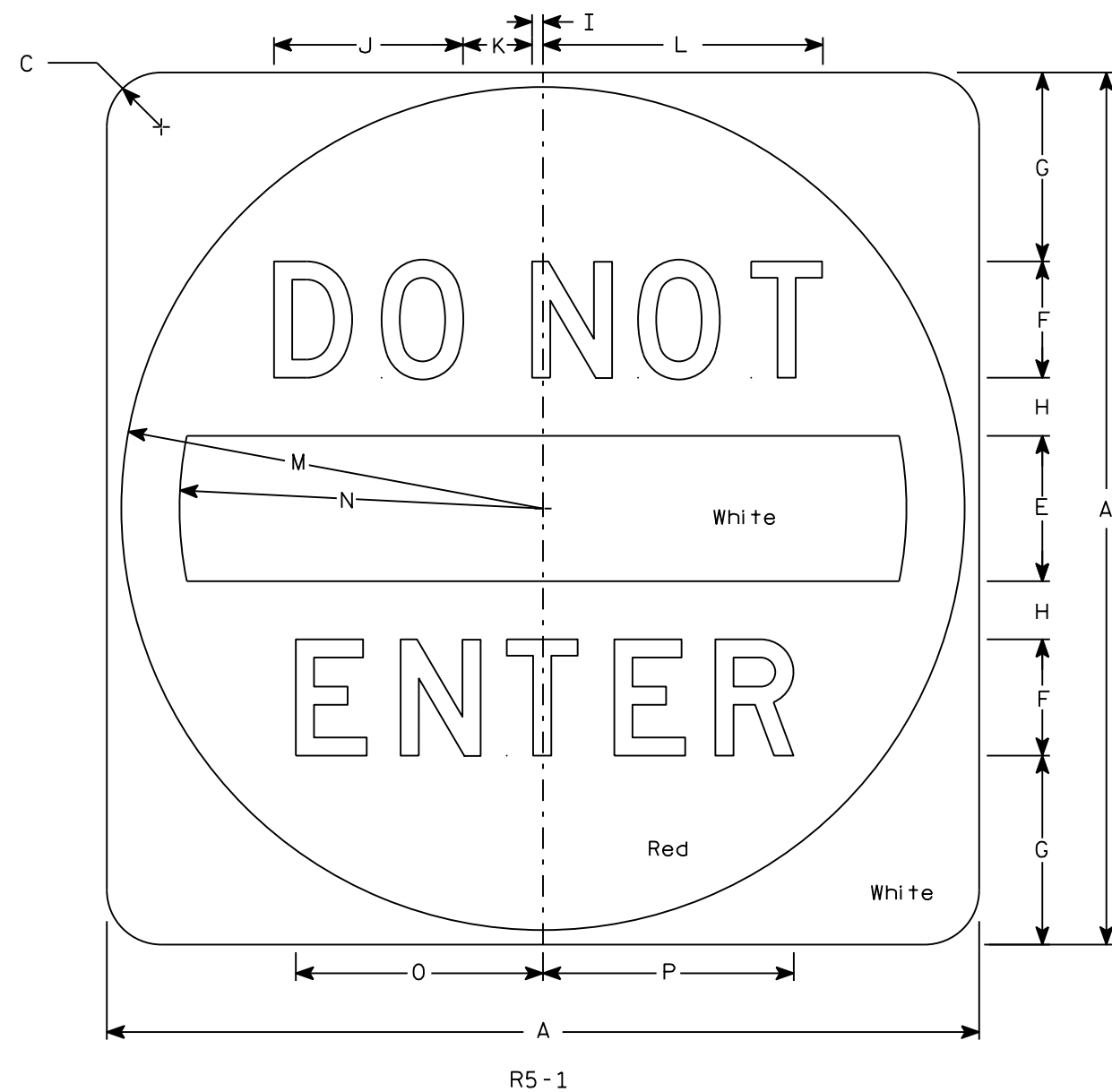
HWY:

COUNTY:

SHEET NO: 135

E

7



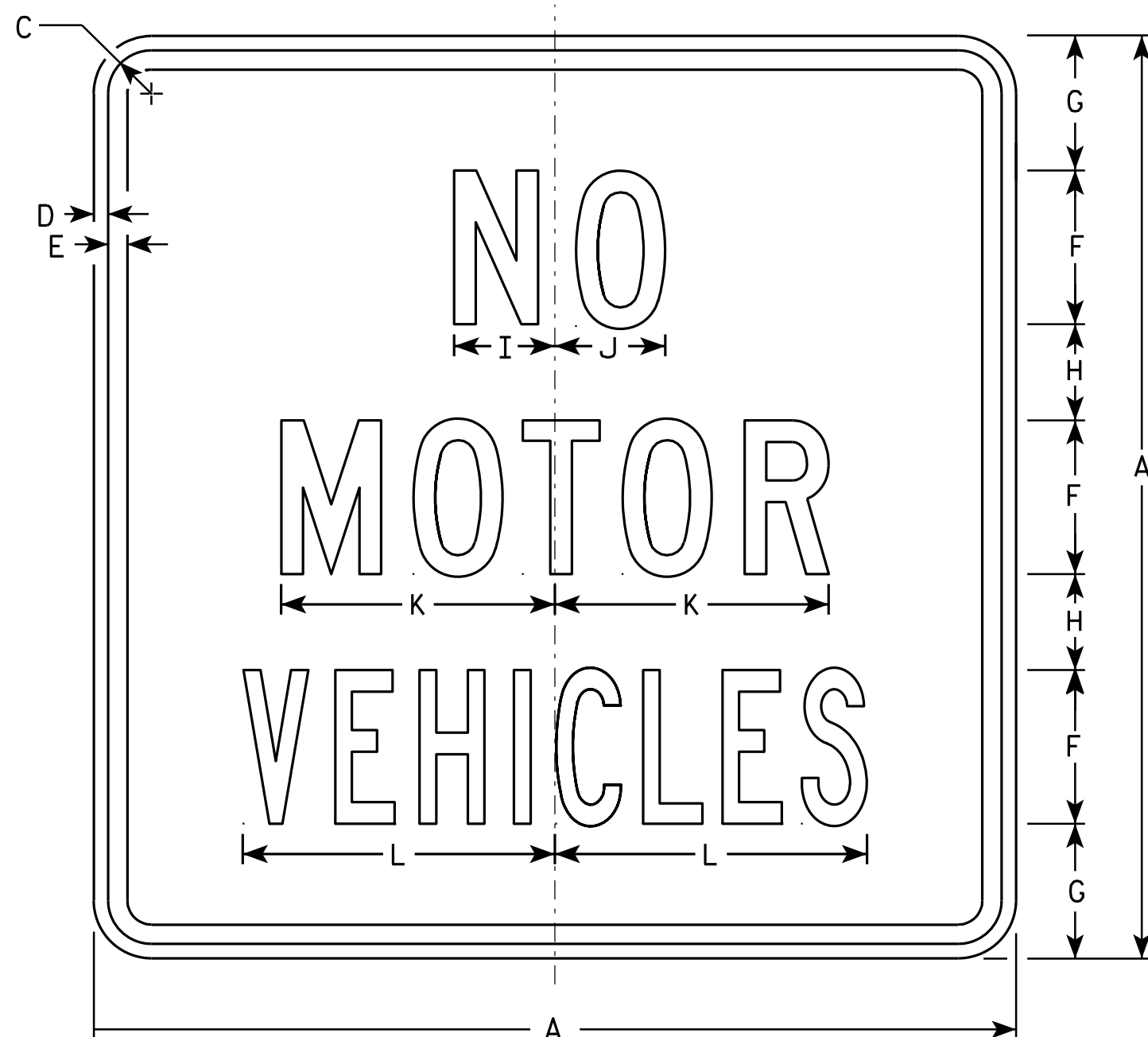
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See detail
Message - White
3. Message Series - D

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.25
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN R5-1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/15/18	PLATE NO. R5-1.16



R5-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - See Note 5.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 & 2 are Series C.
Line 3 is Series B.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	2 5/8	2 7/8	7 1/8	8 1/8															4.0
2M	24		1 1/8	3/8	1/2	4	3 1/2	2 1/2	2 5/8	2 7/8	7 1/8	8 1/8															4.0
3																											
4																											
5																											

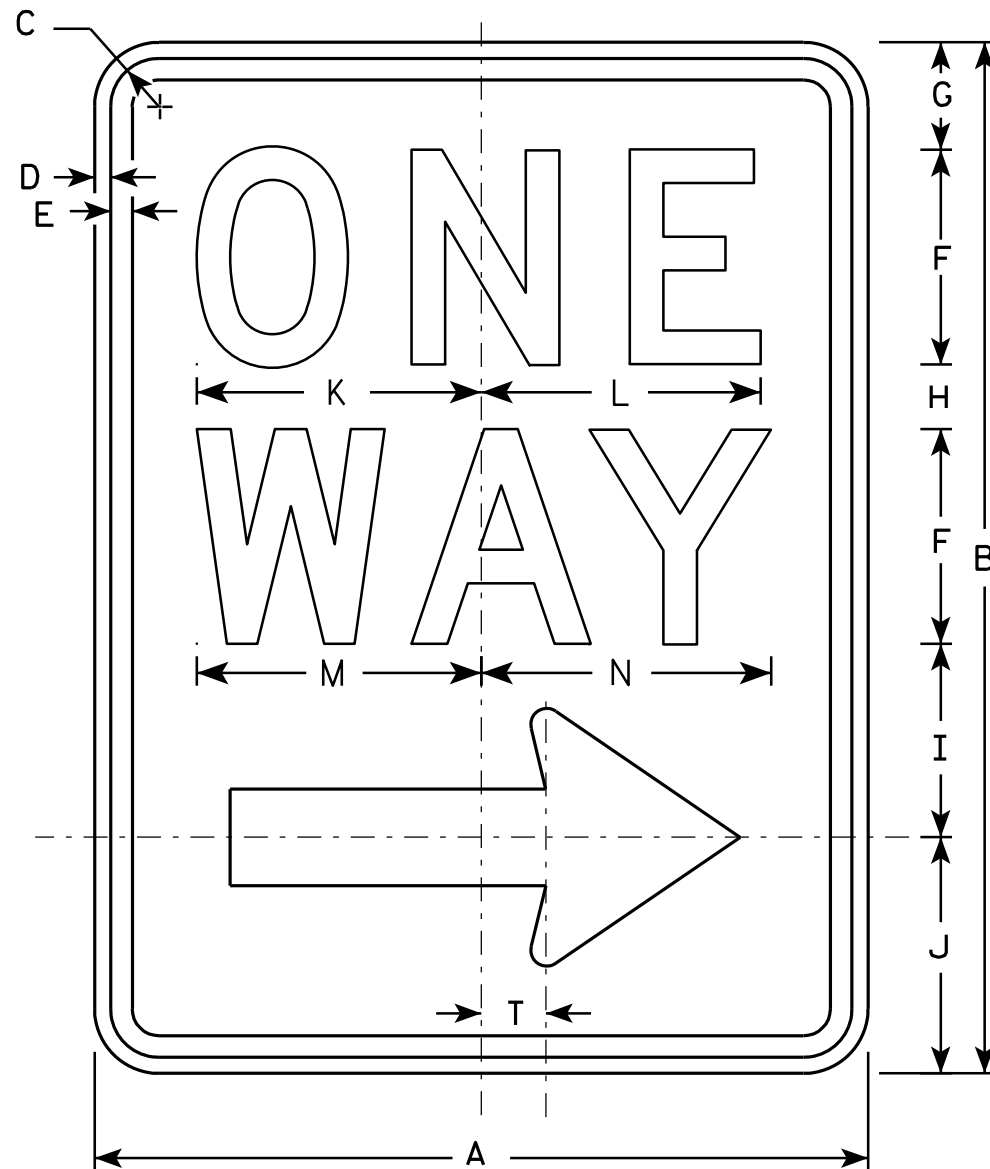
STANDARD SIGN R5-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-3.2

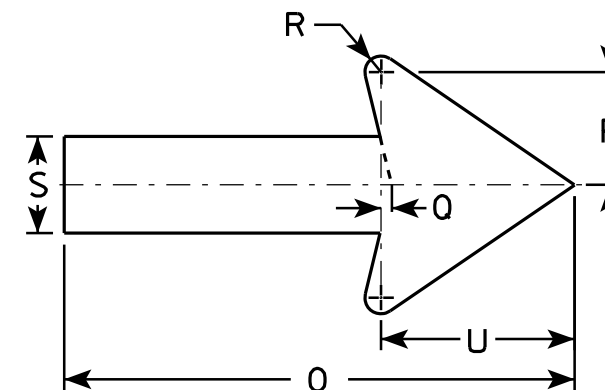
PROJECT NO: HWY: COUNTY: SHEET NO: 137 E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO: HWY: COUNTY: SHEET NO: 138 E



R9-55

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series E.
Lines 2, 3 and 4 are Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	18	24	1 1/8	3/8	1/2	4	3	2 1/2	1 7/8	2 1/8	1 1/4	2 1/4	3 3/4	7 1/4	7 1/2	5 1/2											3.0
2M	18	24	1 1/8	3/8	1/2	4	3	2 1/2	1 7/8	2 1/8	1 1/4	2 1/4	3 3/4	7 1/4	7 1/2	5 1/2											3.0
3																											
4																											
5																											

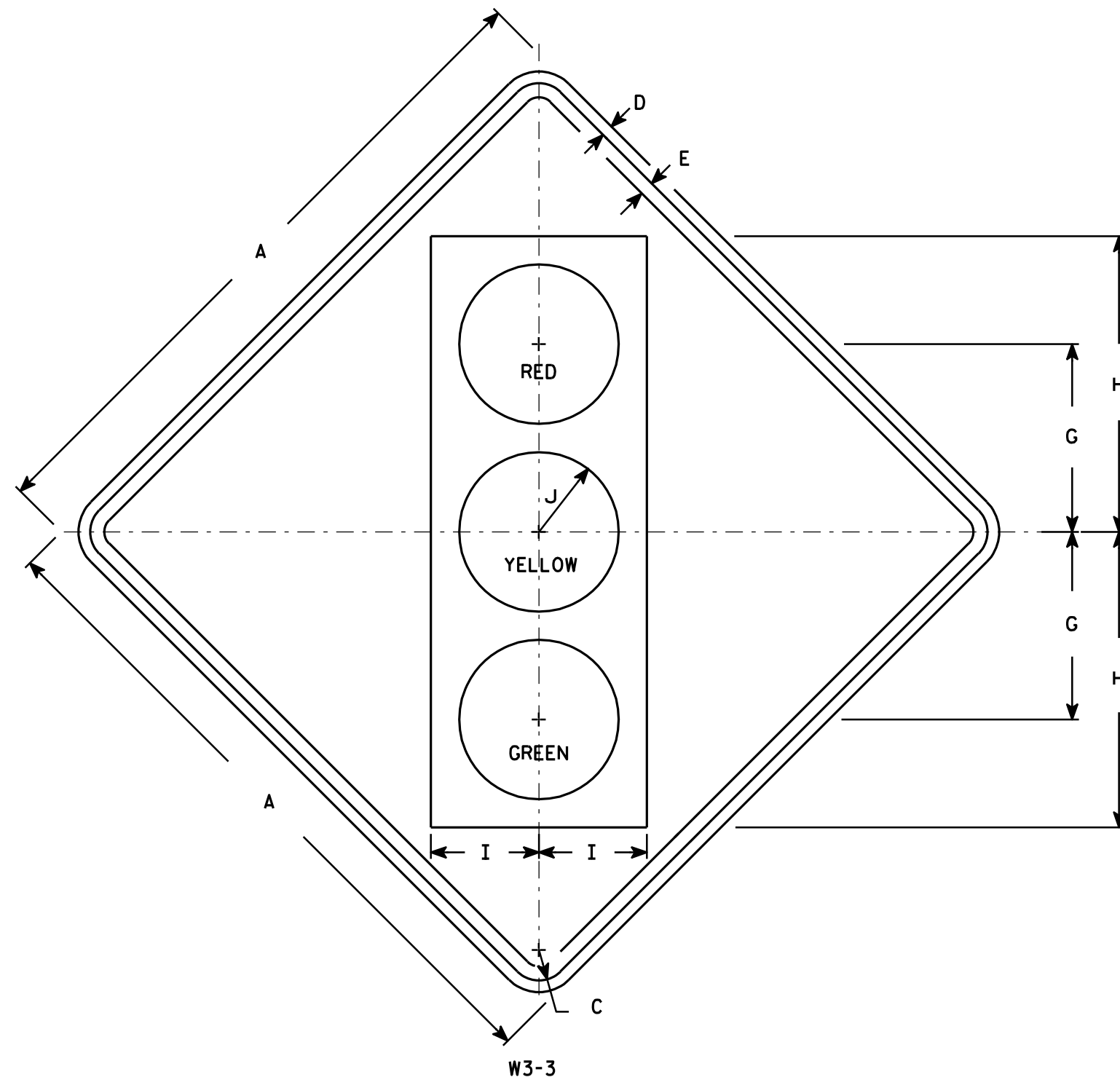
STANDARD SIGN R9-55

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/4/2011 PLATE NO. R9-55.6

PROJECT NO: HWY: COUNTY: SHEET NO: 139 E



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Symbol and border are non-reflective black.
Top circle - Type H Reflectorized Red
Center circle - Same as background
Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 ³ / ₈	1/2	5/8		8 ³ / ₄	13 ³ / ₄	5	3 ³ / ₄																	6.25
2S	36		1 ⁵ / ₈	5/8	3/4		10	15 ³ / ₄	5 ³ / ₄	4 1/4																	9.0
2M	36		1 ⁵ / ₈	5/8	3/4		10	15 ³ / ₄	5 ³ / ₄	4 1/4																	9.0
3	36		1 ⁵ / ₈	5/8	3/4		10	15 ³ / ₄	5 ³ / ₄	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

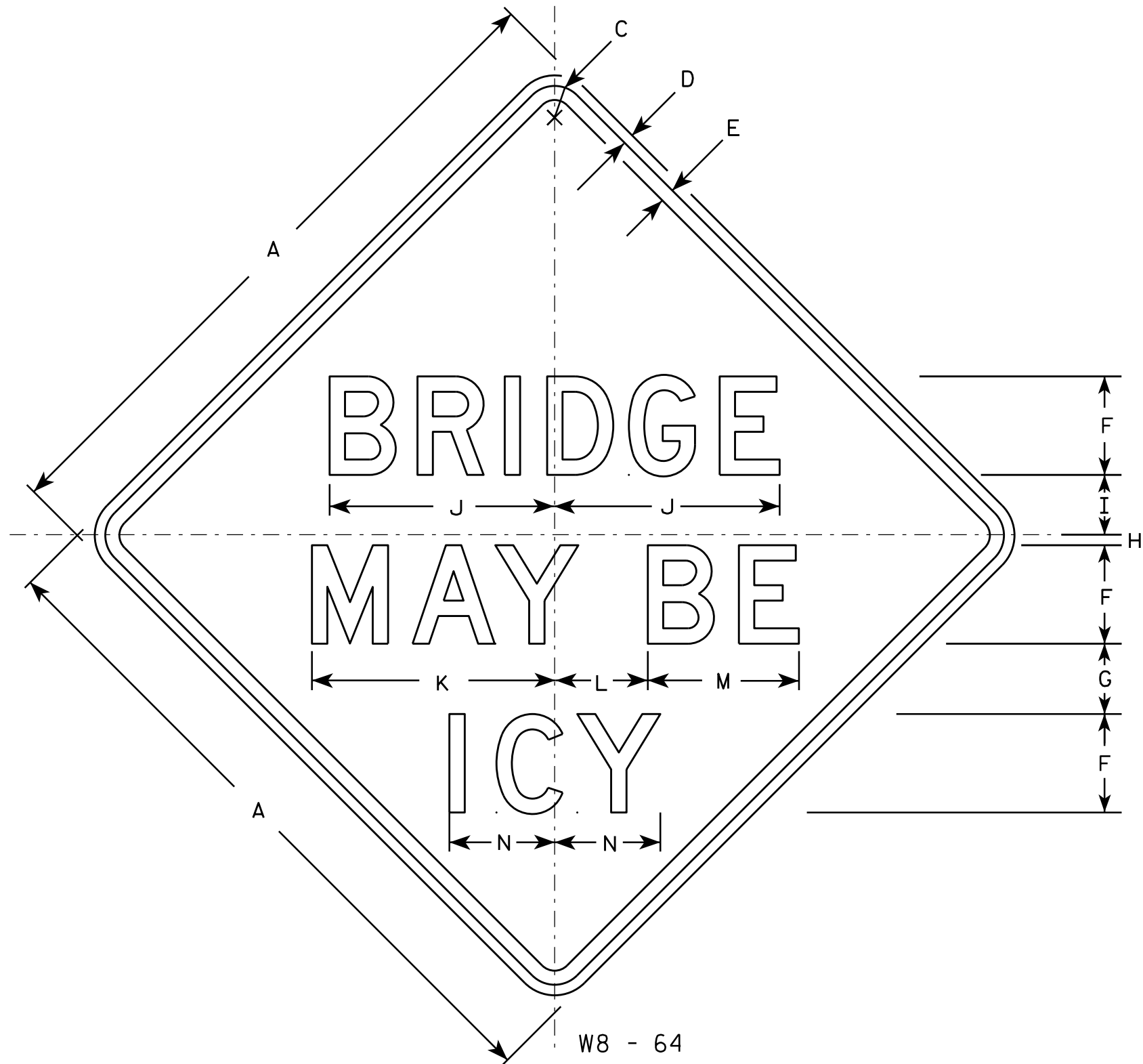
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 140	E
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STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

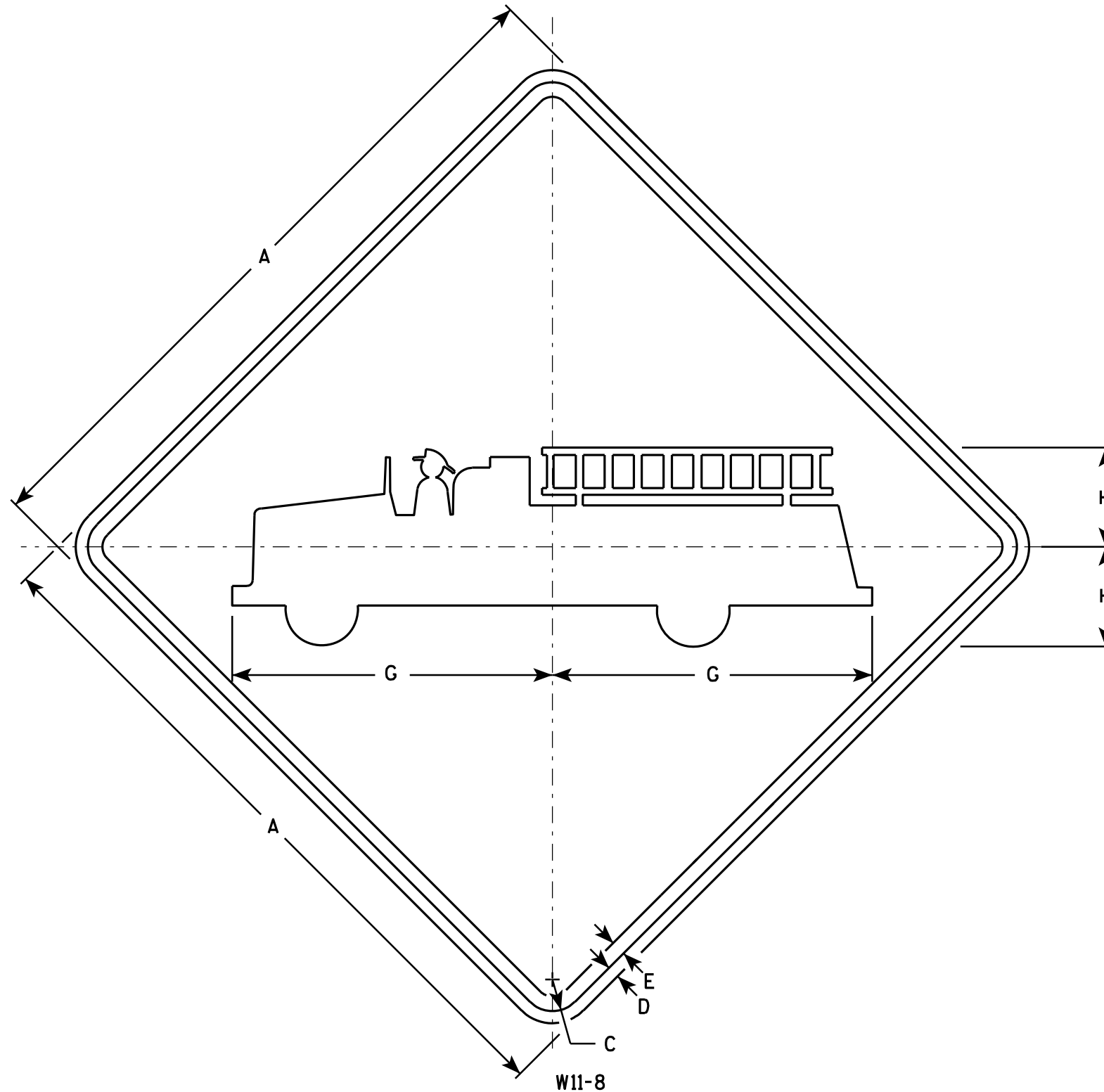
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	5	3 3/4	5/8	3 1/8	12	13	5	8	5 5/8													9.0
2M	36		1 5/8	5/8	3/4	5	3 3/4	5/8	3 1/8	12	13	5	8	5 5/8													9.0
3																											
4	48		2 1/4	3/4	1	7	5	3/4	4 1/4	16	17 1/4	6 5/8	10 3/4	7 1/2													16.0
5	48		2 1/4	3/4	1	7	5	3/4	4 1/4	16	17 1/4	6 5/8	10 3/4	7 1/2													16.0

STANDARD SIGN
W8-64

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/14/13 PLATE 141 ^{W8-64.6}



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

W11-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		11	3 3/8																			4.0
2S	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
2M	30		1 3/8	1/2	5/8		13 3/4	4 3/8																			6.25
3	36		1 5/8	5/8	3/4		16 1/2	5 1/4																			9.0
4	48		2 1/4	3/4	1		22	7																			16.0
5																											

STANDARD SIGN W11-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-8.7

PROJECT NO:

SHEET NO: 142

E

DIVISION 1 - CTH Q PATH

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 3	NOTE 1	1.00	NOTE 8
10+00.00	1000.00	0.00	7.42	4.89	0	0	0	0	0
10+50.00	1050.00	50.00	9.00	5.95	15	10	15	10	5
11+00.00	1100.00	50.00	9.93	0.01	18	6	33	16	17
11+50.00	1150.00	50.00	13.48	5.95	22	6	55	22	33
12+00.00	1200.00	50.00	9.87	5.10	22	10	77	32	45
12+50.00	1250.00	50.00	31.92	0.00	39	5	116	37	79
13+00.00	1300.00	50.00	1.98	7.66	31	7	147	44	103
13+50.00	1350.00	50.00	7.80	1.54	9	9	156	53	103
14+00.00	1400.00	50.00	8.19	2.59	15	4	171	57	114
14+50.00	1450.00	50.00	10.18	0.13	17	3	188	60	128
15+00.00	1500.00	50.00	11.54	0.07	20	0	208	60	148
15+50.00	1550.00	50.00	10.07	0.94	20	1	228	61	167
16+00.00	1600.00	50.00	7.77	1.69	17	2	245	63	182
16+50.00	1650.00	50.00	12.36	1.87	19	3	264	66	198
17+00.00	1700.00	50.00	6.94	0.82	18	2	282	68	214
17+50.00	1750.00	50.00	0.06	7.18	6	7	288	75	213
18+00.00	1800.00	50.00	1.18	7.67	1	14	289	89	200
18+50.00	1850.00	50.00	0.35	6.46	1	13	290	102	188
19+00.00	1900.00	50.00	3.41	2.64	3	8	293	110	183
19+50.00	1950.00	50.00	2.42	3.67	5	6	298	116	182
20+00.00	2000.00	50.00	0.27	6.89	2	10	300	126	174
20+50.00	2050.00	50.00	0.25	5.48	0	11	300	137	163
21+00.00	2100.00	50.00	0.00	10.42	0	15	300	152	148
21+50.00	2150.00	50.00	0.00	19.85	0	28	300	180	120

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - CTH Q PATH

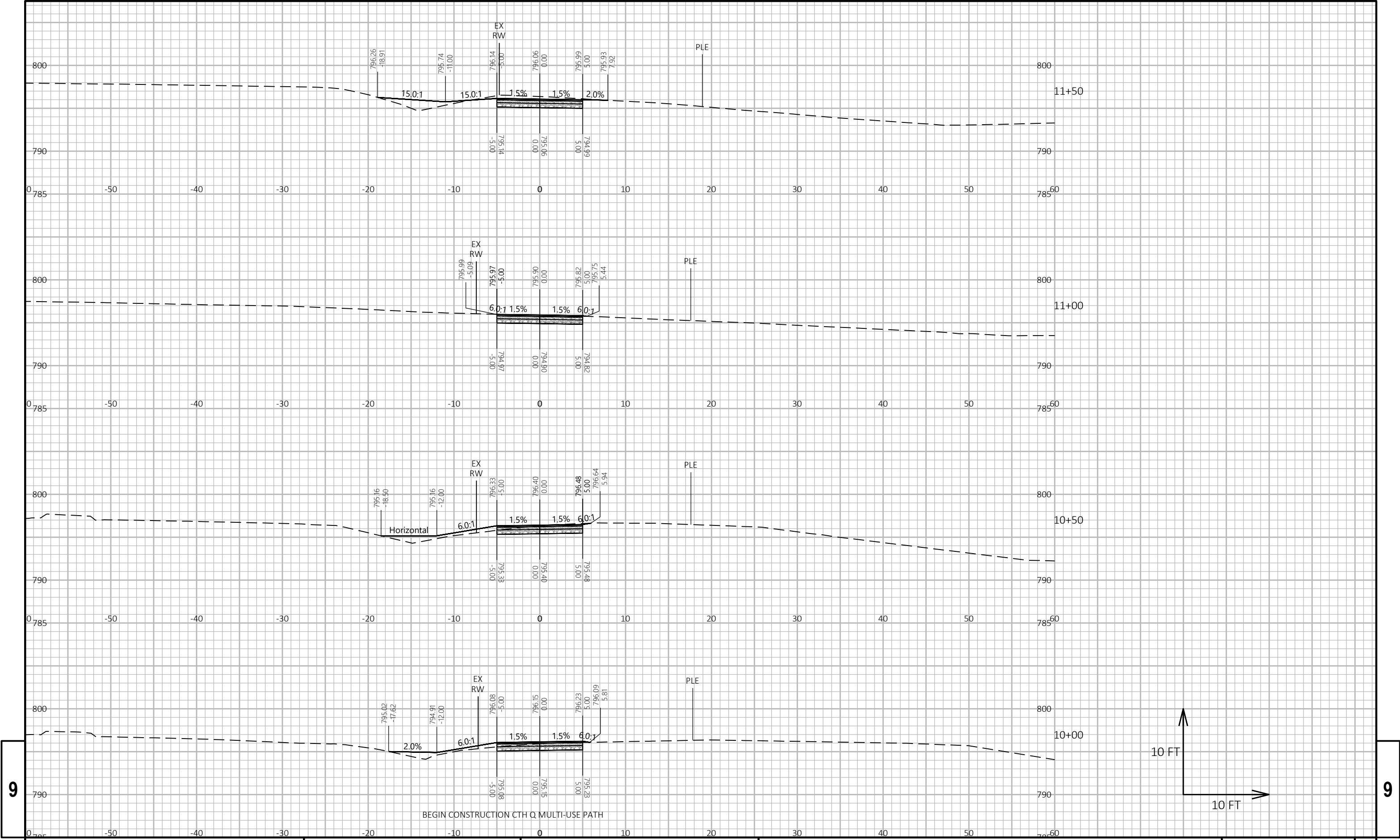
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	FILL	ROCK EXC	CUT	FILL	ROCK EXC	CUT 1.00 NOTE 1	EXPANDED FILL 1.00	EXPANDED ROCK 1.00	MASS ORDINATE NOTE 8
23+00.00	2300.00	0.00	3.60	11.01	0.00	0	0	0	0	0	0	0
23+50.00	2350.00	50.00	6.86	0.72	0.00	10	11	0	10	11	0	-1
24+00.00	2400.00	50.00	0.65	4.81	0.00	7	5	0	17	16	0	1
24+50.00	2450.00	50.00	0.18	5.85	0.00	1	10	0	18	26	0	-8
25+00.00	2500.00	50.00	0.27	4.85	0.00	0	10	0	18	36	0	-18
25+50.00	2550.00	50.00	2.36	3.19	0.00	2	7	0	20	43	0	-23
26+00.00	2600.00	50.00	1.06	4.34	0.00	3	7	0	23	50	0	-27
26+50.00	2650.00	50.00	0.06	5.29	0.00	1	9	0	24	59	0	-35
27+00.00	2700.00	50.00	2.36	3.28	0.00	2	8	0	26	67	0	-41
27+50.00	2750.00	50.00	3.51	2.40	0.00	5	5	0	31	72	0	-41
28+00.00	2800.00	50.00	4.44	1.68	0.00	7	4	0	38	76	0	-38
28+50.00	2850.00	50.00	6.40	0.81	0.00	10	2	0	48	78	0	-30
29+00.00	2900.00	50.00	4.11	1.71	0.00	10	2	0	58	80	0	-22
29+50.00	2950.00	50.00	8.62	0.28	0.00	12	2	0	70	82	0	-12
30+00.00	3000.00	50.00	14.16	0.00	14.33	21	0	13	91	69	13	22
30+31.90	3031.90	31.90	16.93	0.00	43.21	18	0	34	109	35	47	74
30+35.00	3035.00	3.10	11.68	0.00	39.33	2	0	5	111	30	52	81
30+40.00	3040.00	5.00	11.65	0.00	42.75	2	0	8	113	22	60	91
30+45.00	3045.00	5.00	11.67	0.00	46.51	2	0	8	115	14	68	101
30+50.00	3050.00	5.00	11.67	0.00	49.76	2	0	9	117	5	77	112
30+55.00	3055.00	5.00	11.58	0.00	52.08	2	0	9	119	-4	86	123
30+60.00	3060.00	5.00	11.50	0.00	54.01	2	0	10	121	-14	96	135
30+61.03	3061.03	1.03	13.44	0.00	60.12	0	0	2	121	-16	98	137
31+00.00	3100.00	38.97	10.33	0.00	55.75	17	0	84	138	-100	182	238
31+50.00	3150.00	50.00	12.20	0.00	74.20	21	0	120	159	-220	302	379
32+00.00	3200.00	50.00	13.39	0.00	82.92	24	0	145	183	-365	447	548
32+50.00	3250.00	50.00	14.84	0.00	100.70	26	0	170	209	-535	617	744
33+00.00	3300.00	50.00	7.11	5.64	19.67	20	5	111	229	-641	728	870

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR)]

DIVISION 1 - LOOKOUT DRIVE PATH

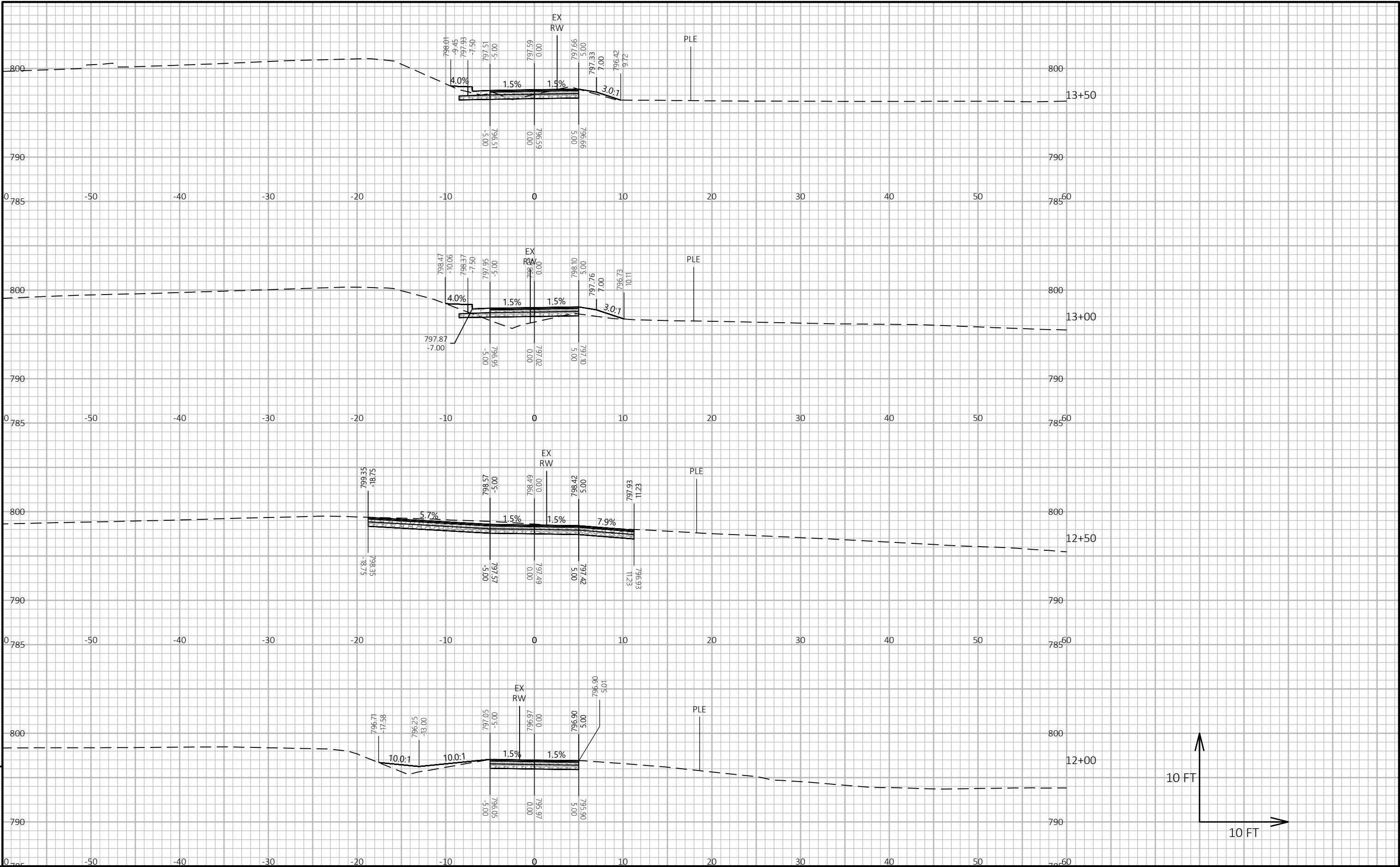
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	FILL	ROCK EXC	CUT	FILL	ROCK EXC	CUT	EXPANDED FILL	EXPANDED ROCK	MASS ORDINATE
						NOTE 1	NOTE 3		1.00 NOTE 1	1.00	1.00	NOTE 8
50+50.00	5050.00	0.00	0.00	11.34	0.00	0	0	0	0	0	0	0
51+00.00	5100.00	50.00	0.79	5.17	0.00	1	15	0	1	15	0	-14
51+50.00	5150.00	50.00	2.59	3.30	0.00	3	8	0	4	23	0	-19
52+00.00	5200.00	50.00	1.17	4.75	0.00	3	7	0	7	30	0	-23
52+50.00	5250.00	50.00	1.58	6.26	0.00	3	10	0	10	40	0	-30
53+00.00	5300.00	50.00	0.28	6.25	0.00	2	12	0	12	52	0	-40
53+50.00	5350.00	50.00	4.08	2.49	0.00	4	8	0	16	60	0	-44
54+00.00	5400.00	50.00	9.70	0.00	17.12	13	2	16	29	46	16	-17
54+50.00	5450.00	50.00	14.41	0.00	42.76	22	0	55	51	-9	71	60
54+57.17	5457.17	7.17	14.29	0.00	42.57	4	0	11	55	-20	82	75
54+60.00	5460.00	2.83	12.26	0.00	42.05	1	0	4	56	-24	86	80
54+65.00	5465.00	5.00	0.00	0.00	0.00	1	0	4	57	-28	90	85
54+70.00	5470.00	5.00	0.00	0.00	0.00	0	0	0	57	-28	90	85

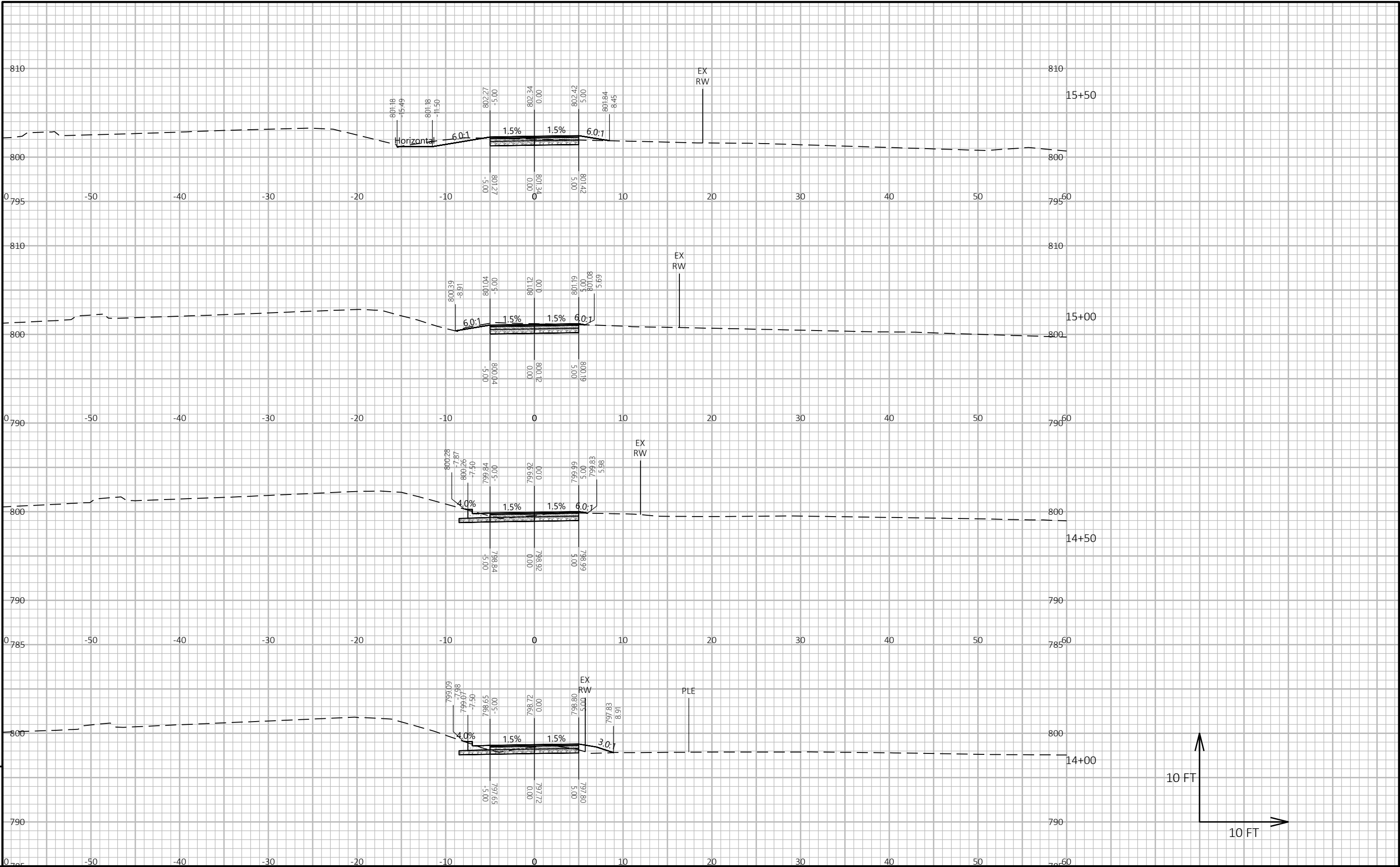
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
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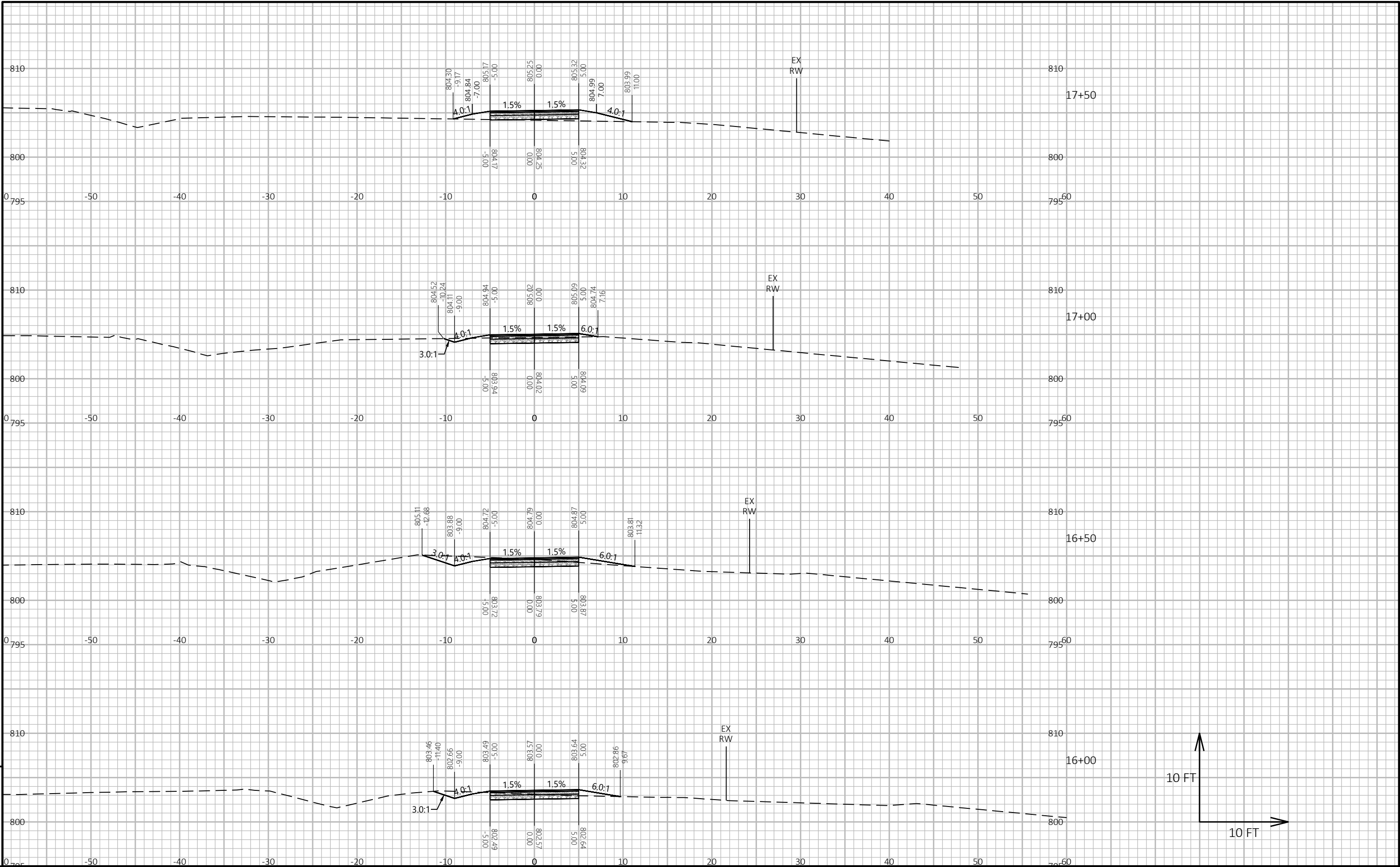




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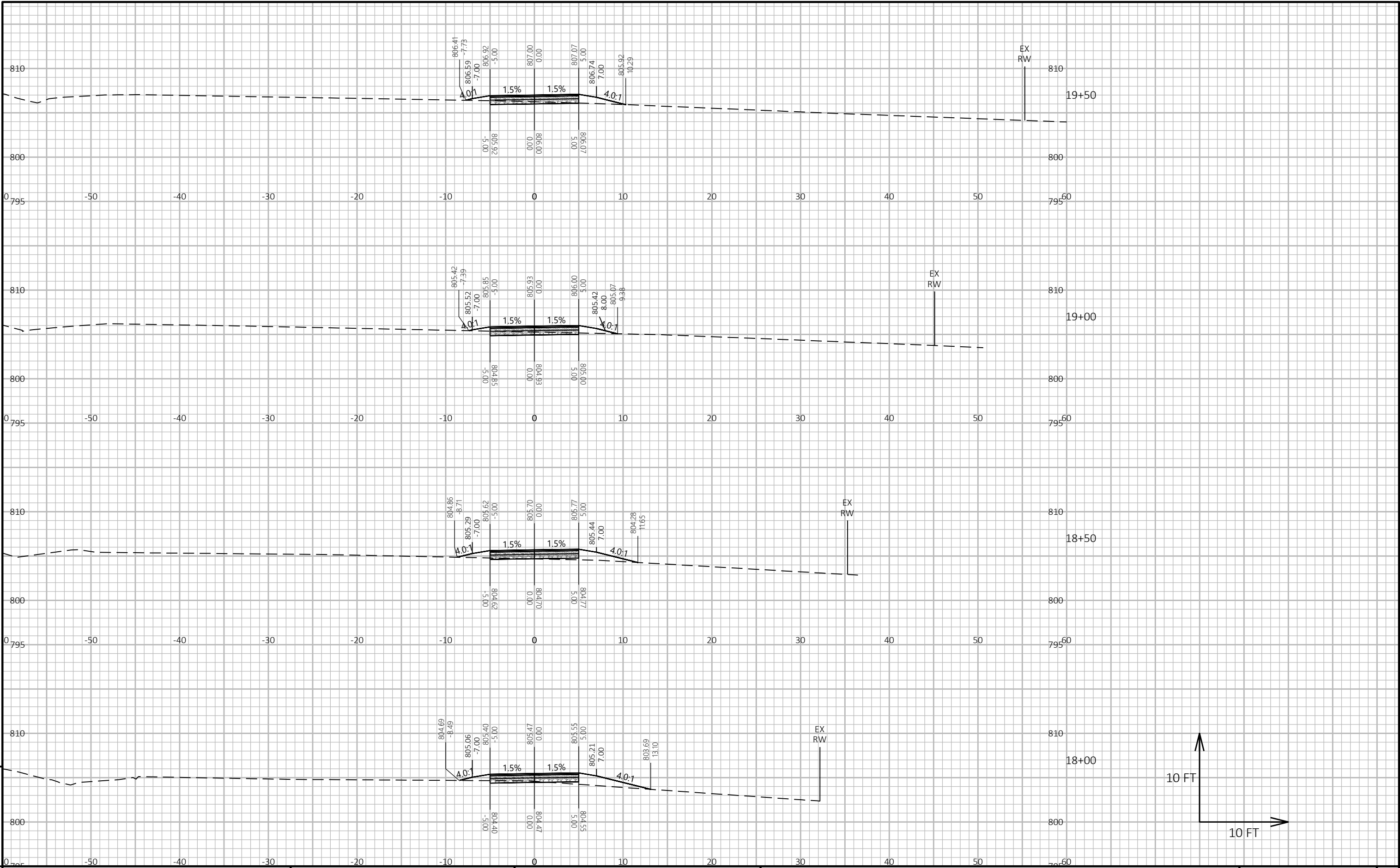
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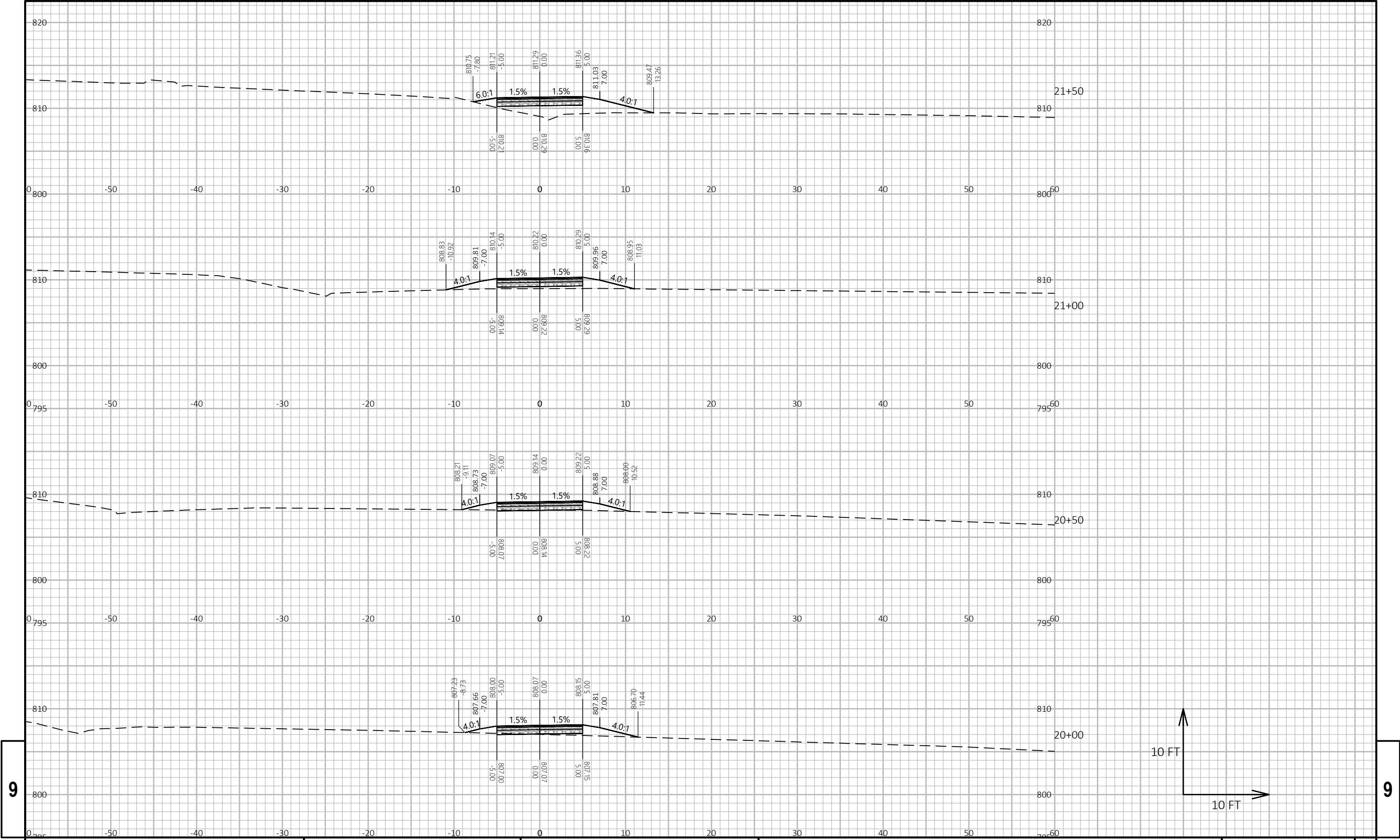
PROJECT NO: 5755-00-11	HWY: CTH Q	COUNTY: ROCK	CROSS SECTIONS: CTH Q MULTI-USE PATH	SHEET 148	E
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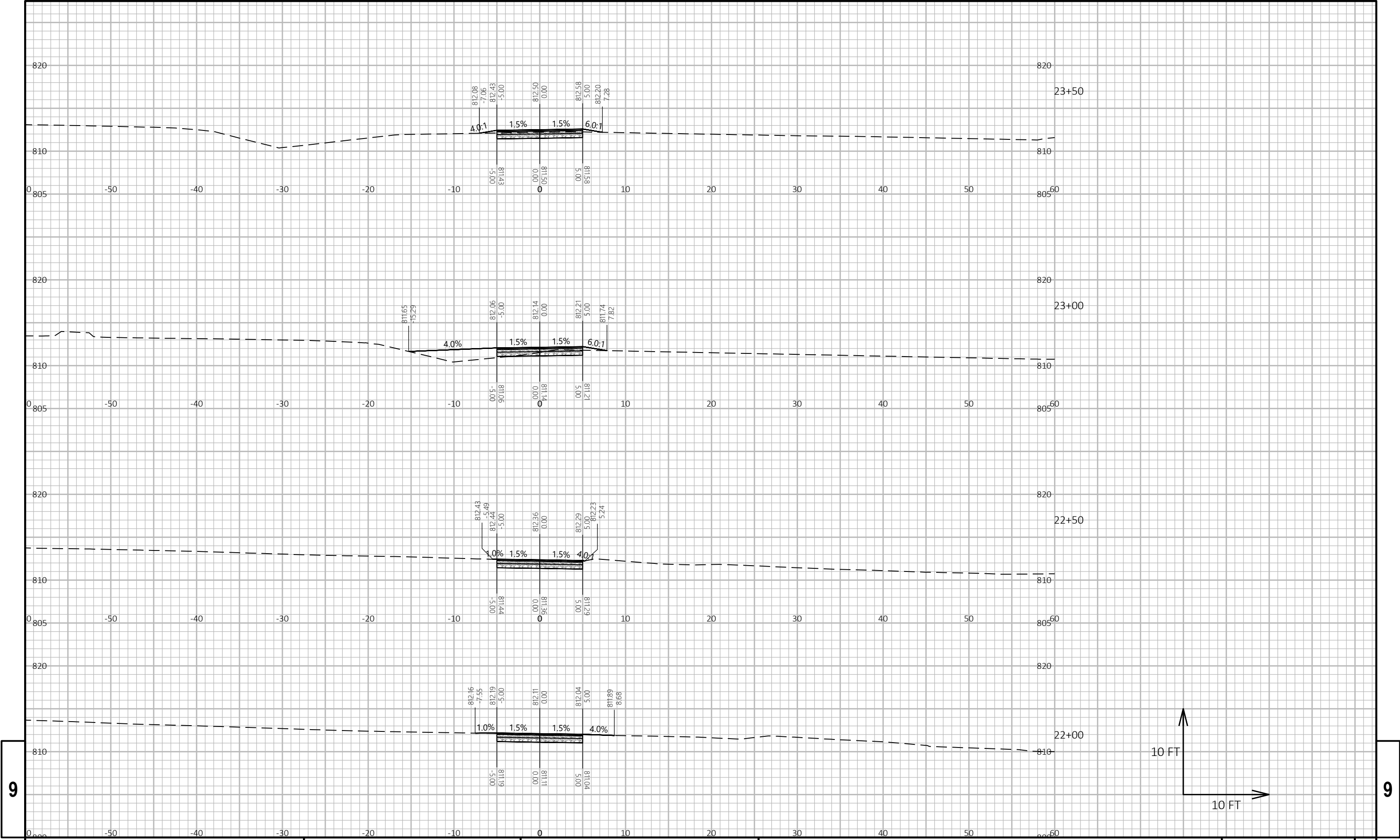


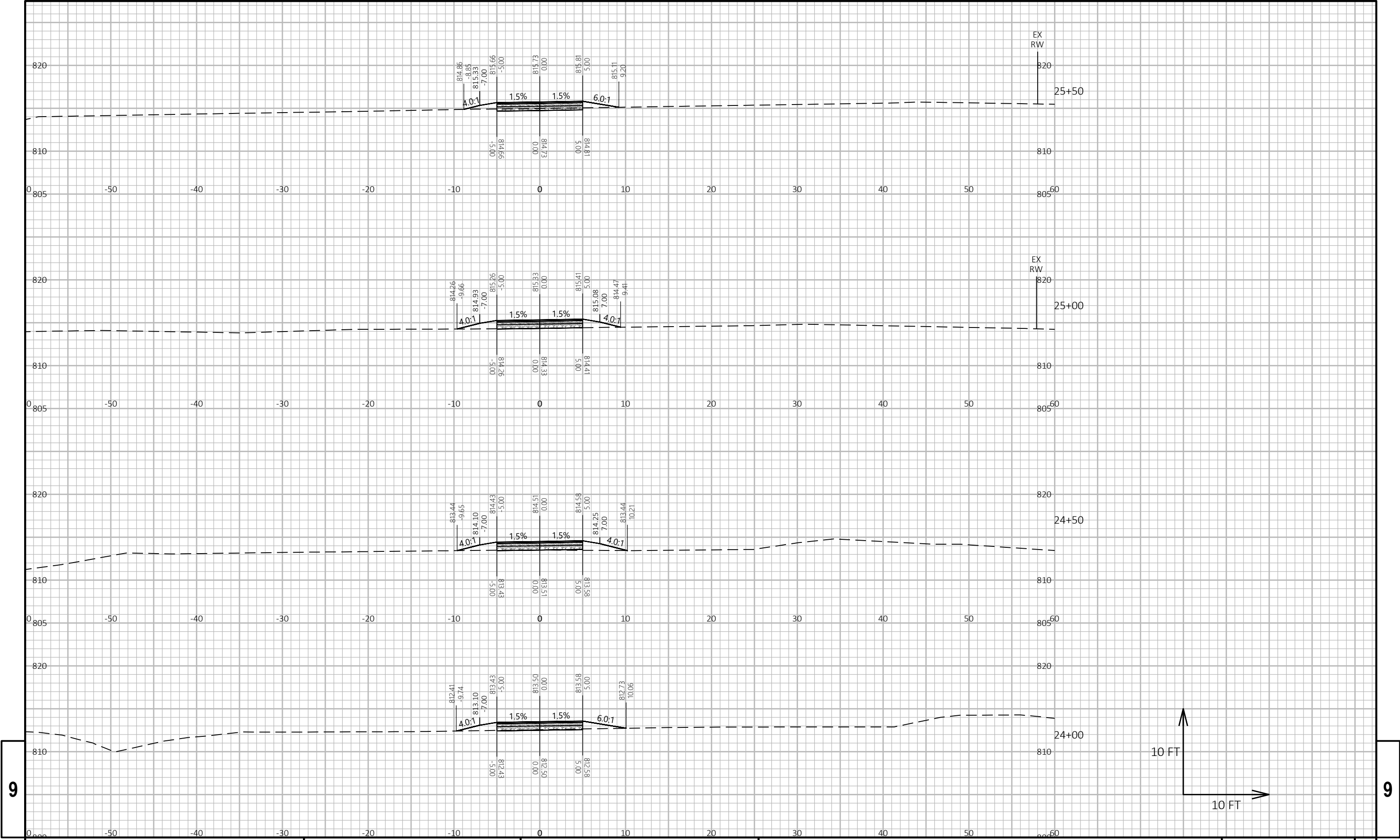
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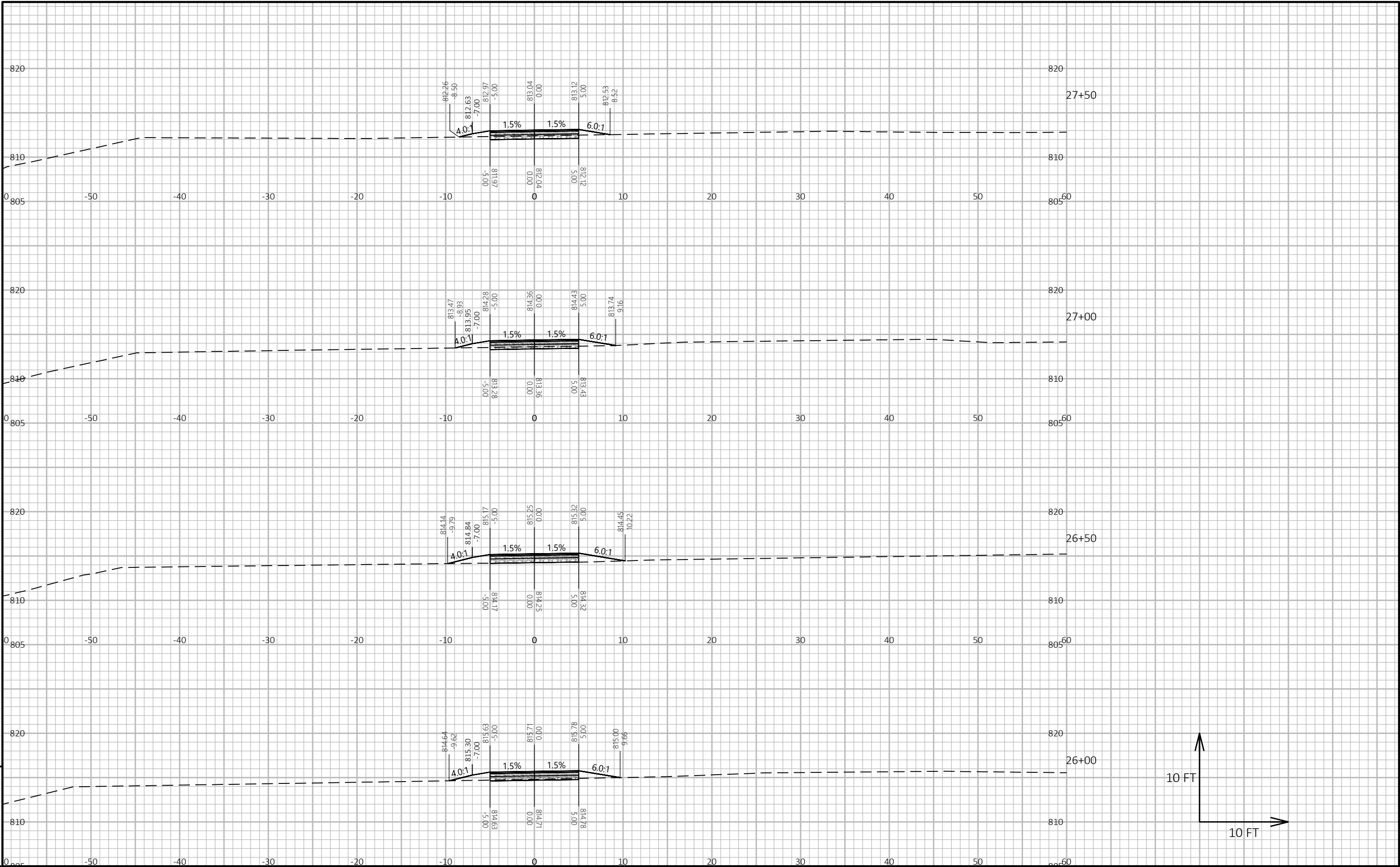
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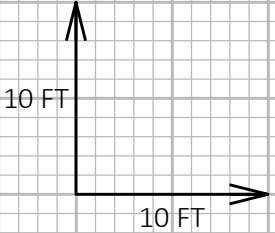
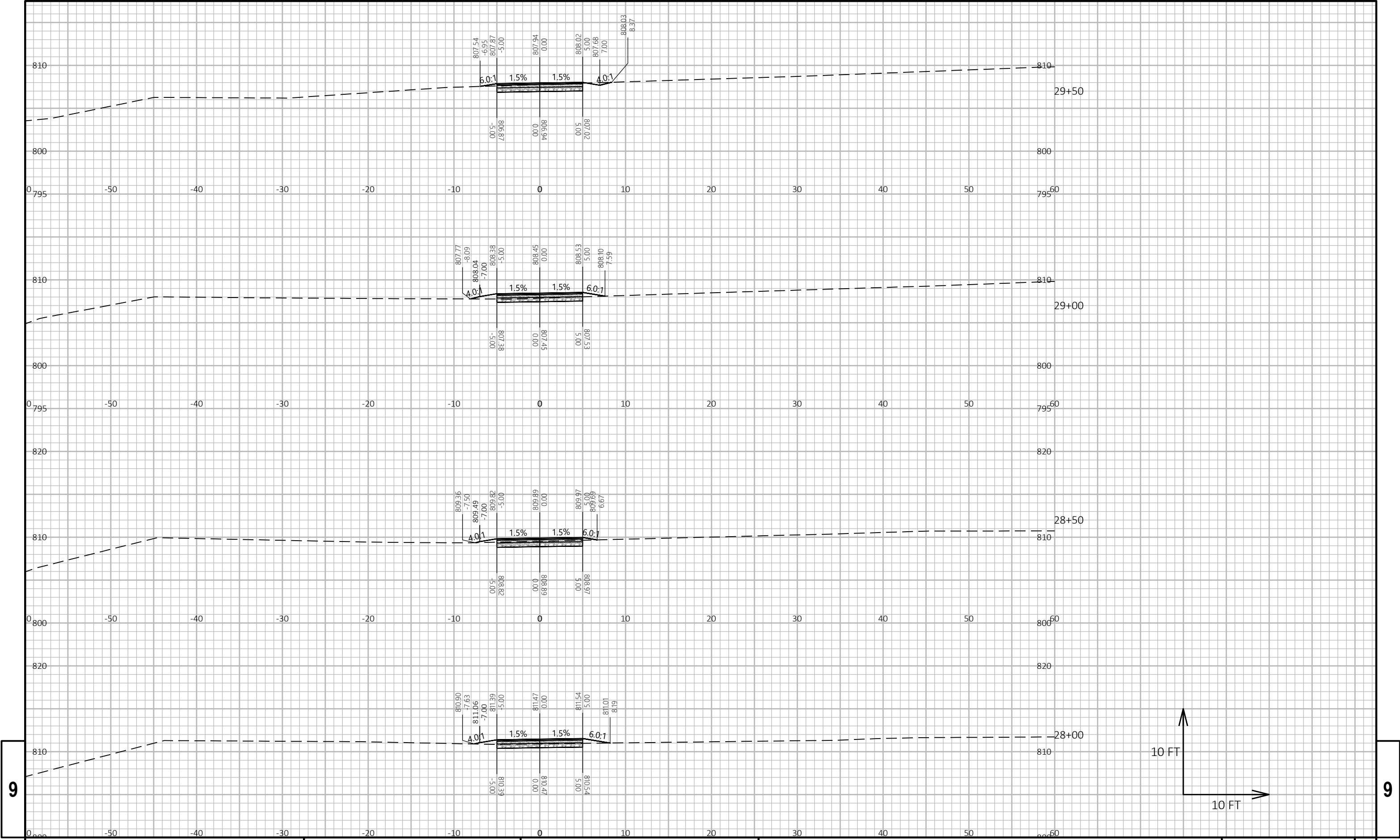


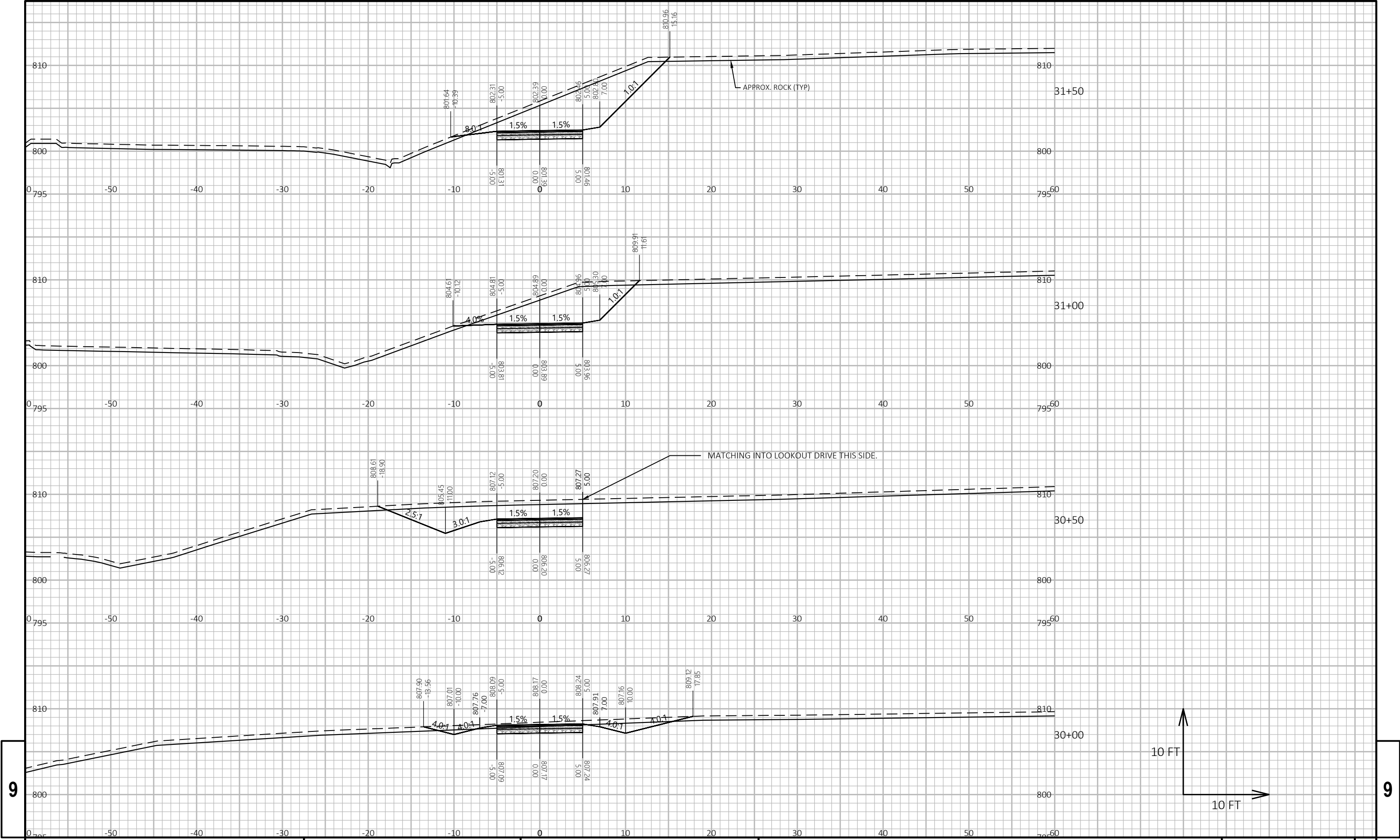






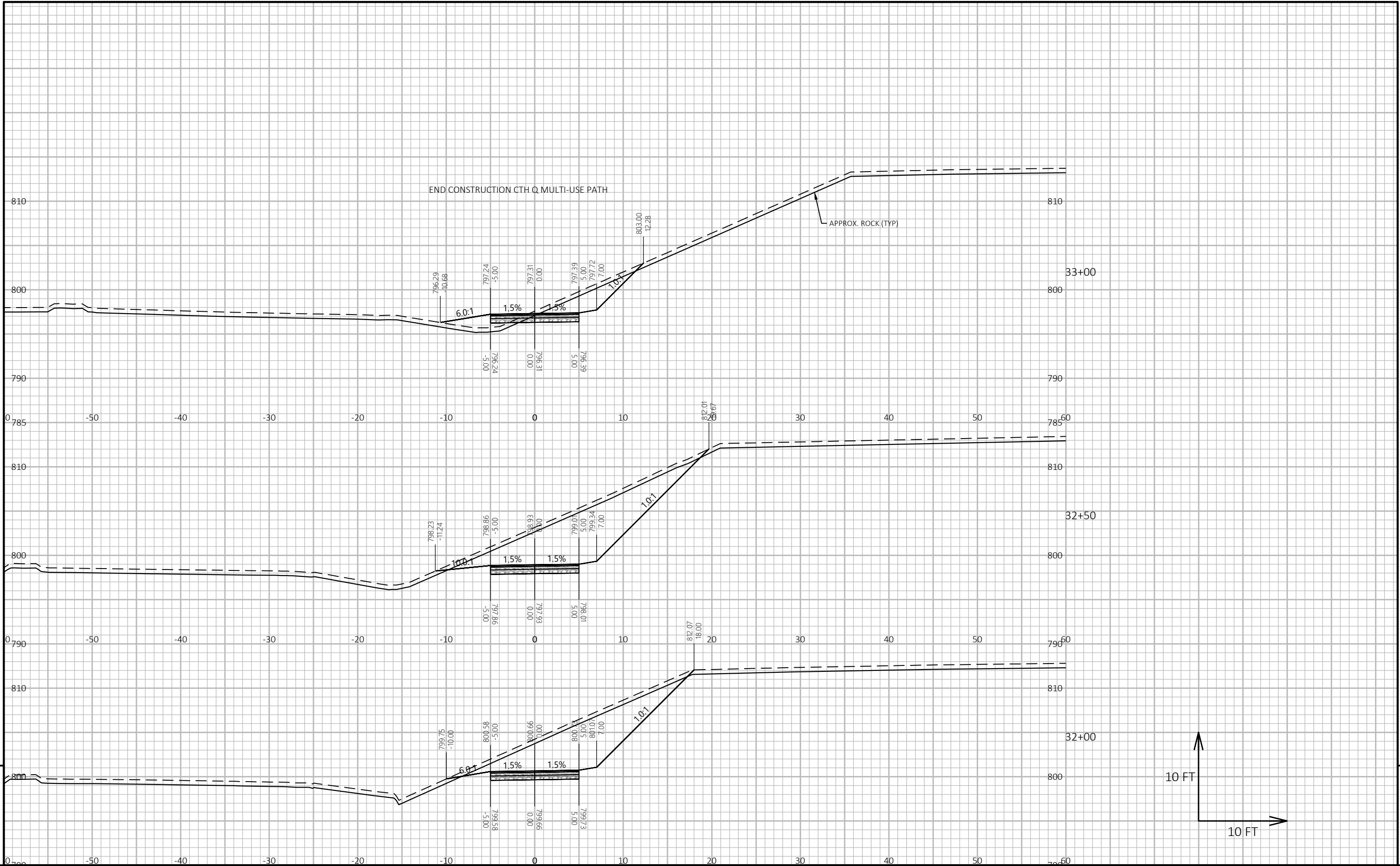


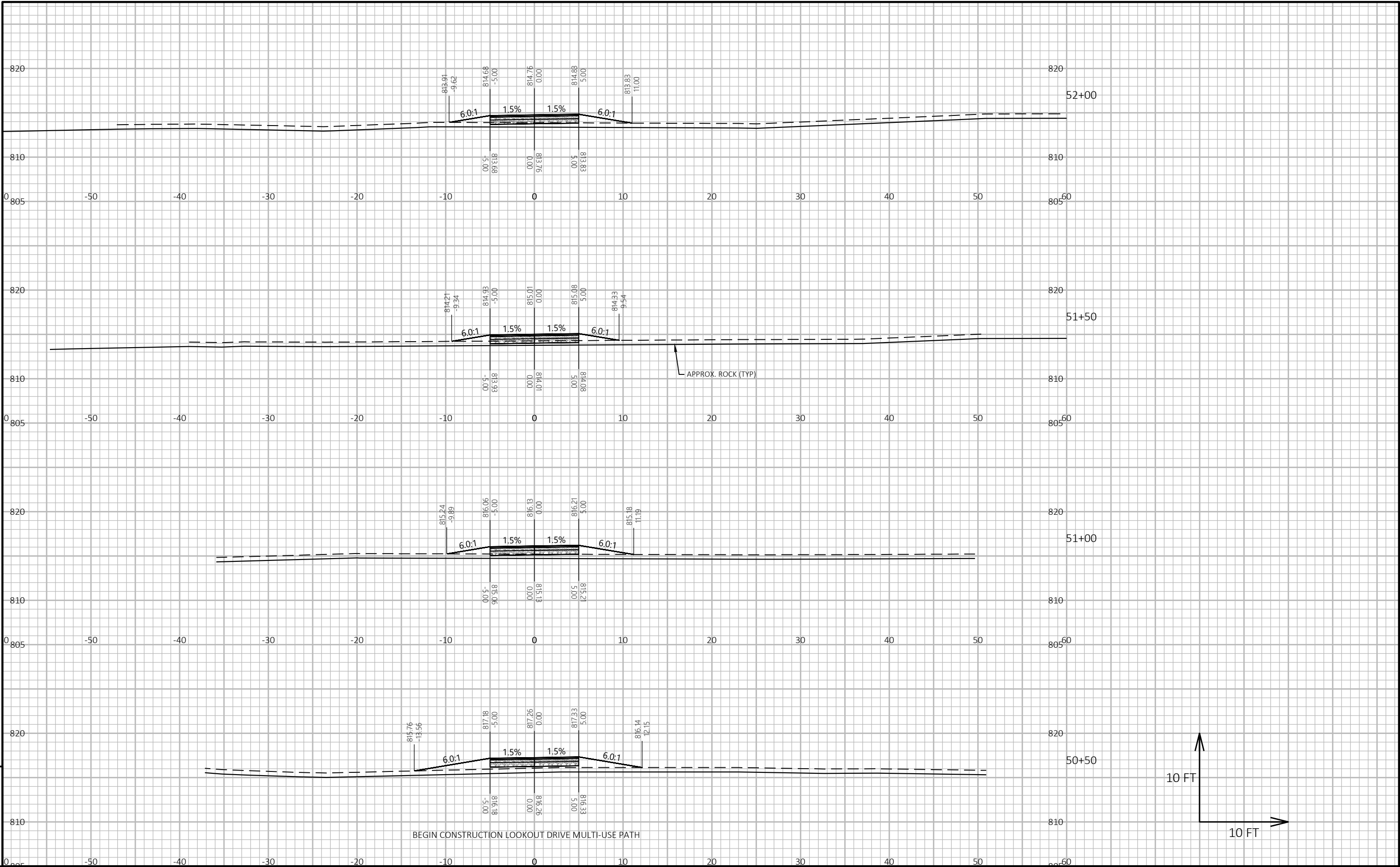


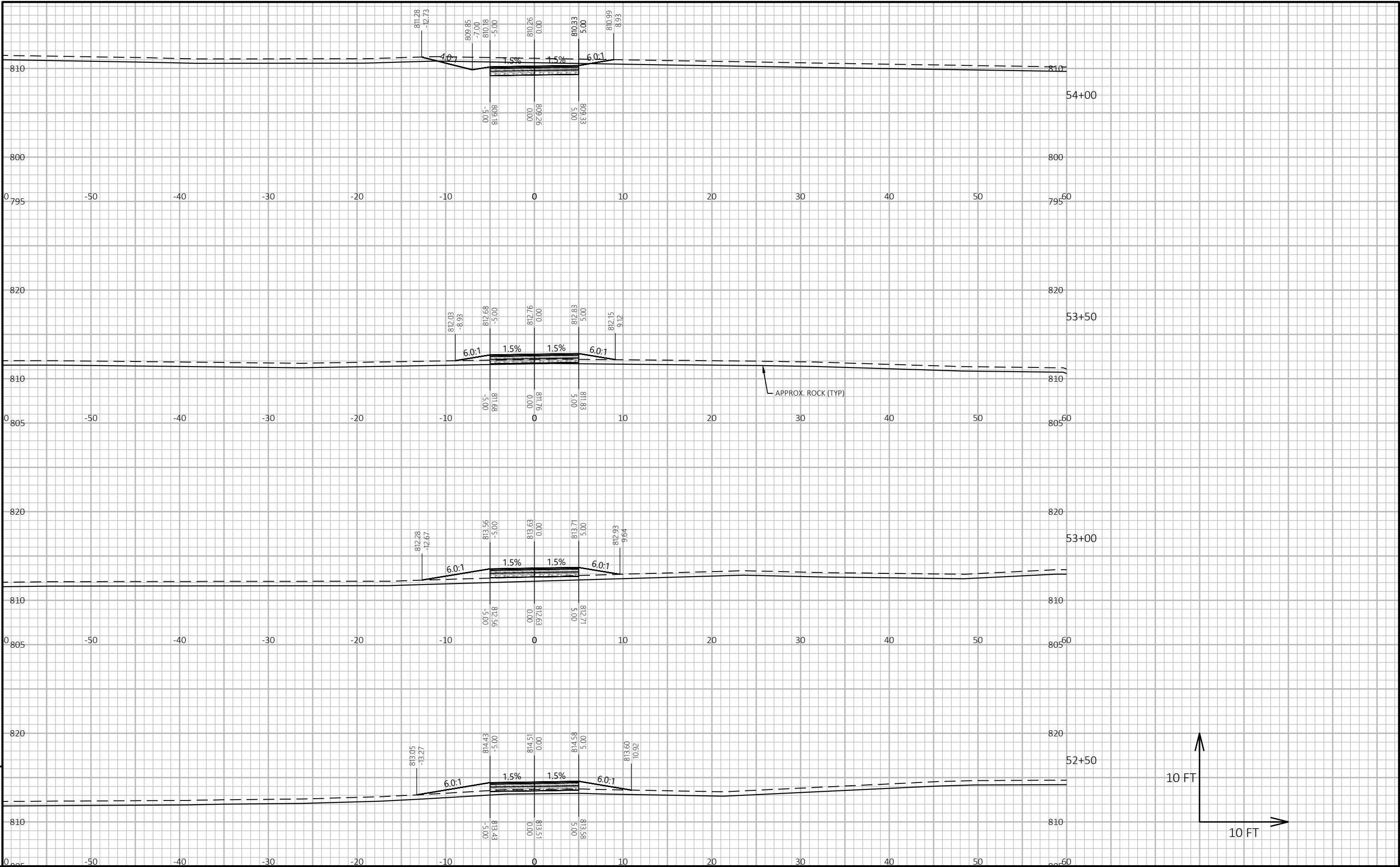


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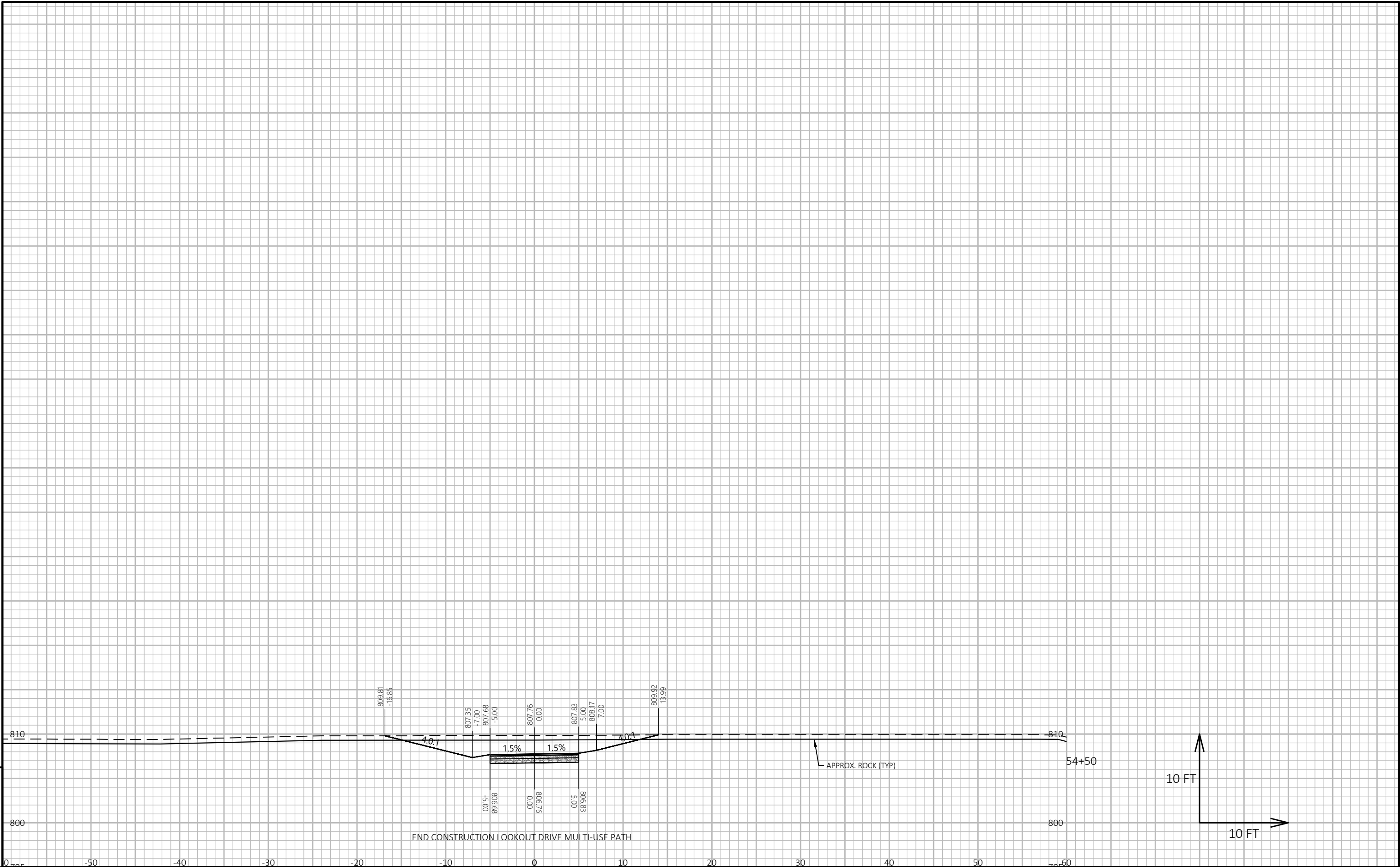
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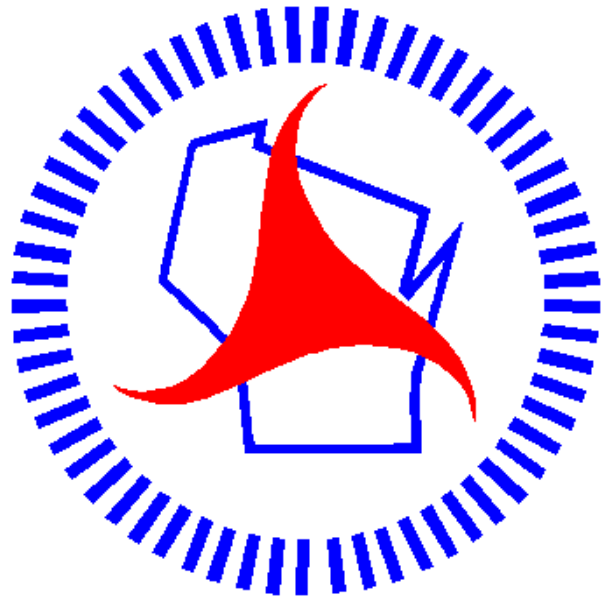


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Notes



Wisconsin Department of Transportation

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