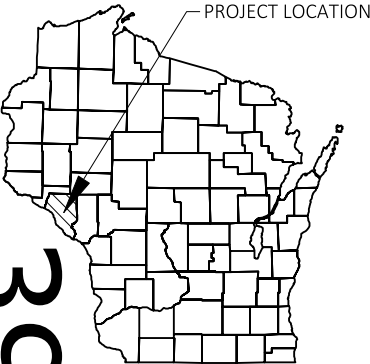


ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control 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 = 220



DESIGN DESIGNATION

	7160-04-76	7550-00-76
A.A.D.T. 2024	= 5,580	= 11,390
A.A.D.T. 2044	= 6,360	= 14,160
D.H.V.	= 690	= 1,190
D.D.	= 60/40	= 60/40
T.	= 8.3%	= 8.9%
DESIGN SPEED	= 55 MPH	= 50 MPH
ESALS	= 990,000	= 2,220,000

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

TREMPEALEAU - ALMA

OLD STH 35 TO INDIAN CREEK RD

STH 35
BUFFALO

WINONA - GALESVILLE

MN/WI STATE LINE TO STH 35

STH 54
BUFFALO

STATE PROJECT NUMBER
7160-04-76

STATE PROJECT NUMBER
7550-00-76

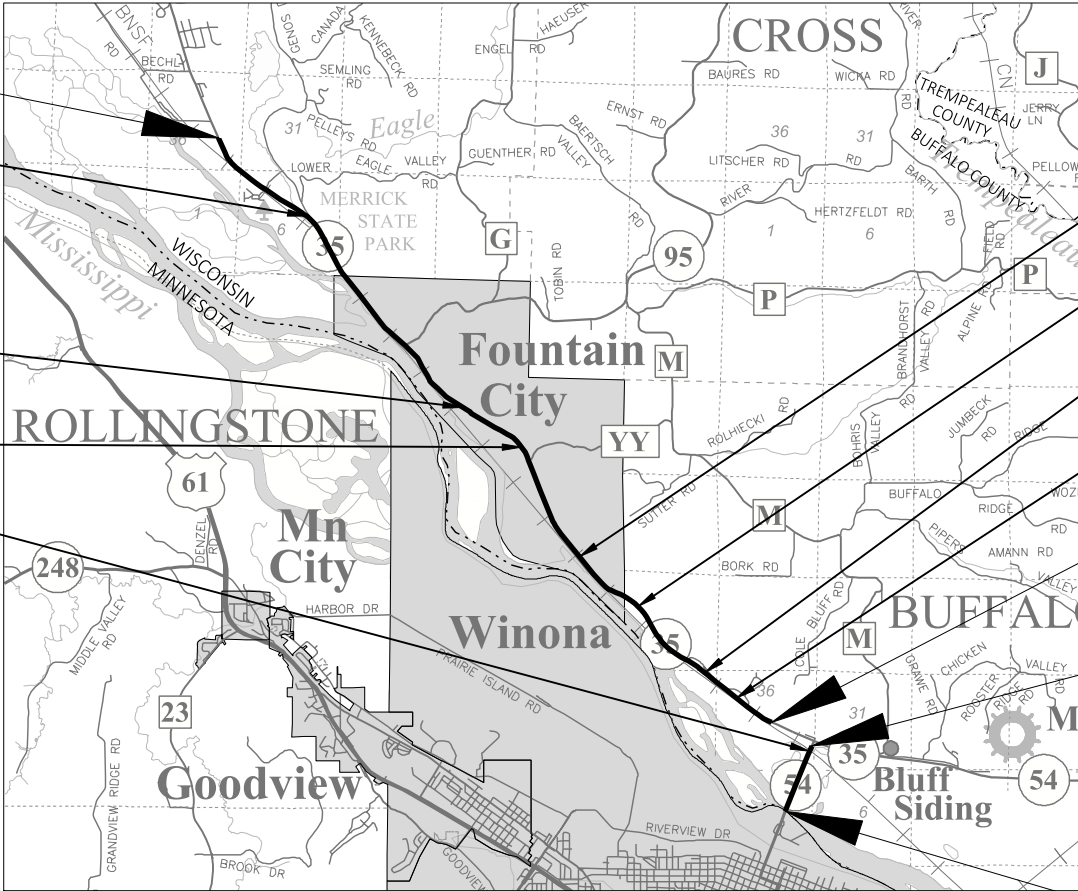
END PROJECT 7160-04-76
STA 659+80

STRUCTURE B-06-059
NET EXCEPTION TO CL LENGTH
STA 594+13.9 - STA 596+08.8

STRUCTURE B-06-206
NET EXCEPTION TO CL LENGTH
STA 451+56.4 - STA 452+68.0

STRUCTURE B-06-205
NET EXCEPTION TO CL LENGTH
STA 414+26.8 - STA 415+61.7

STRUCTURE B-06-754
NET EXCEPTION TO CL LENGTH
STA 176+93.5 - STA 178+71.3



R-12-W

R-11-W

R-10-W

LAYOUT
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 9.015 MI
TOTAL NET LENGTH OF CENTERLINE (7160-04-76) = 8.402 MI
TOTAL NET LENGTH OF CENTERLINE (7550-00-76) = 0.613 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), BUFFALO 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 12A.

STATE PROJECT

7160-04-76

7550-00-76

FEDERAL PROJECT

PROJECT

CONTRACT

ORIGINAL PLANS PREPARED BY



146 N. Central Ave. Suite 201 Marshfield, WI 54449
715-384-2133 1-800-362-4505 Fax: 715-384-9787



DATE: 10/16/2025
Alex Passow
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	MSA PROFESSIONAL SERVICES, INC.
Designer	MSA PROFESSIONAL SERVICES, INC.
Project Manager	KYLE MCLEAN
Regional Examiner	NW REGION
Regional Supervisor	NICHOLAS PITSCHE

APPROVED FOR THE DEPARTMENT
DATE: 10/17/2025
Kyle McLean
(Signature)

STANDARD ABBREVIATIONS

AC	ACRE	F/L	FLOW LINE	SALV	SALVAGED
AGG	AGGREGATE	FT	FOOT	SAN	SANITARY SEWER
<	ANGLE	GN	GRID NORTH	SECT	SECTION
ASPH	ASPHALTIC	HR	HANDICAP RAMP	SHLDR	SHOULDER
AC	ASPHALT CEMENT	HT	HEIGHT	SW	SIDEWALK
ADT	AVERAGE DAILY TRAFFIC	CWT	HUNDREDWEIGHT	S	SOUTH
B & B	BALLED AND BURLAPPED	HYD	HYDRANT	SB	SOUTHBOUND
BM	BENCH MARK	IN DIA	INCH DIAMETER	SPECS	SPECIFICATIONS
CB	CATCH BASIN	INL	INLET	SQ	SQUARE
" OR C/L	CENTER LINE	ID	INSIDE DIAMETER	SF OR SQ FT	SQUARE FEET
C-C	CENTER TO CENTER	I	INTERSECTION ANGLE	SY	SQUARE YARD
CONC	CONCRETE	IE	INVERT ELEVATION	SSPRC	STORM SEWER
CO	COUNTY	IP	IRON PIPE OR PIN		PIPE REINFORCED CONCRETE
CTH	COUNTY TRUNK HIGHWAY	JCT	JUNCTION	STD	STANDARD
CY	CUBIC YARD	L	LENGTH OF CURVE	SDD	STANDARD DETAIL DRAWINGS
CULV	CULVERT	LF	LINEAR FOOT	STH	STATE TRUNK HIGHWAYS
CP	CULVERT PIPE	LC	LONG CHORD OF CURVE	STA	STATION
CPRC	CULVERT PIPE	LCB	LONG CHORD BEARING	SS	STORM SEWER
	REINFORCED CONCRETE	LS	LUMP SUM	T	TANGENT
C & G	CURB AND GUTTER	MH	MANHOLE	TEL	TELEPHONE
D	DEGREE OF CURVE	N	NORTH	TEMP	TEMPORARY
DHV	DESIGN HOUR VOLUME	Y	NORTH GRID COORDINATE	TLE	TEMPORARY LIMITED EASEMENT
DIA OR I	DIAMETER	OE	OUTLET ELEVATION	T	TON
DIST	DISTRICT	OL	OUT LOT	TC	TOP OF CURB
DWY	DRIVEWAY	OD	OUTSIDE DIAMETER	TN	TOWN
E	EAST	OH	OVERHEAD LINES	TRANS	TRANSITION
X	EAST GRID COORDINATE	PAVT	PAVEMENT	T	TRUCKS (percent of)
EB	EASTBOUND	PLE	PERMANENT LIMITED EASEMENT	TYP	TYPICAL
ELEC	ELECTRIC	PC	POINT OF CURVATURE	UNCL	UNCLASSIFIED
EL OR ELEV	ELEVATION	PI	POINT OF INTERSECTION	USH	UNITED STATES HIGHWAY
EMB	EMBANKMENT	PT	POINT OF TANGENCY	VAR	VARIABLE
EW	ENDWALL	PCC	PORTLAND CEMENT CONCRETE	VERT	VERTICAL
ESALS	EQUIVALENT SINGLE	LB	POUND	VC	VERTICAL CURVE
	AXLE LOADS	PE	PRIVATE ENTRANCE	VOL	VOLUME
EXC	EXCAVATION	R OR RAD	RADIUS	WM	WATER MAIN
EBS	EXCAVATION BELOW	RR	RAILROAD	WV	WATER VALVE
	SUBGRADE	R	RANGE	W	WEST
EXIST	EXISTING	~ OR R/L	REFERENCE LINE	WB	WESTBOUND
EXP	EXPANSION	REQD	REQUIRED	YD	YARD
F-F	FACE TO FACE	RT	RIGHT		
FERT	FERTILIZER	R / W	RIGHT-OF-WAY		
FE	FIELD ENTRANCE	RD	ROAD		

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		2-6	6 & OVER	0-2	2-6	6 & OVER
MEDIAN STRIP TURF	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25 0.32	0.30 0.40
SIDE SLOPE TURF			0.25			0.27			0.28			0.30 0.38
PAVEMENT:	0.40 - 0.60											
ASPHALT:	0.70 - 0.95											
CONCRETE:	0.80 - 0.95											
BRICK:	0.70 - 0.80											
DRIVES, WALKS:	0.75 - 0.85											
ROOFS:	0.75 - 0.95											
GRAVEL ROADS, SHOULDERS	0.40 - 0.60											

7160-04-76 TOTAL PROJECT AREA = 167.0 ACRES
7160-04-76 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.6 ACRES
7550-00-76 TOTAL PROJECT AREA = 27.4 ACRES
7550-00-76 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.0 ACRES

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING SIDE SLOPES 0.30, PROPOSED SIDE SLOPES 0.30, EXISTING PAVEMENT 0.95, PROPOSED PAVEMENT 0.95.

UTILITY CONTACTS

COMMUNICATIONS

BRIGHTSPEED
TOM MURRAY
333 N. FRONT STREET
P.O. BOX 4800
LA CROSSE, WI 54602
PHONE (OFFICE): (608) 796-7869
EMAIL: TOM.L.MURRAY@LUMEN.COM

COCHRANE COOPERATIVE TELEPHONE COMPANY
MATT BIESTERVELD
103 W 5TH STREET
P.O. BOX 189
COCHRANE, WI 54622
PHONE (OFFICE): (608) 248-2323
EMAIL: MBIESTERVELD@CCTCOOP.COM

SPECTRUM
PERRY MCCLELLAN
1228 12TH AVENUE S
ONALASKA, WI 54650
PHONE (MOBILE): (608) 317-6213
EMAIL: PERRY.MCCLELLAN@CHARTER.COM

WINDSTREAM KDL, LLC
ERIC BECKER
314 N DANZ AVENUE
GREEN BAY, WI 54302
PHONE (OFFICE): (920) 461-9825
EMAIL: ERIC.BECKER@WINDSTREAM.COM

WINDSTREAM NTI, LLC
ERIC BECKER
314 N DANZ AVENUE
GREEN BAY, WI 54302
PHONE (OFFICE): (920) 461-9825
EMAIL: ERIC.BECKER@WINDSTREAM.COM

ELECTRIC

RIVERLAND ENERGY COOPERATIVE
TIM HOLTAN
N28988 STATE ROAD 93
P.O. BOX 277
ARCADIA, WI 54612
PHONE (OFFICE): (608) 323-3381
EMAIL: THOLTAN@RIVERLANDENERGY.COM

XCEL ENERGY
PAM TAYLOR
1414 W HAMILTON AVENUE
P.O. BOX 8
EAU CLAIRE, WI 54702
PHONE (OFFICE): (715) 737-4097
EMAIL: PAMELA.L.TURNER@XCELENERGY.COM

SEWER AND WATER

CITY OF FOUNTAIN CITY
GIL ADAMS
S3173 COUNTY ROAD M
FOUNTAIN CITY, WI 54629
PHONE (OFFICE): (507) 429-9779
EMAIL: GIL@FOUNTAINCITYWISCONSIN.COM

* - NOT A MEMBER OF DIGGERS HOTLINE



Dial 811 or (800)242-8511

www.DiggersHotline.com

SECTION 2 ORDER

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PAVEMENT MARKING & SIGNING
TRAFFIC CONTROL OVERVIEW
PEDESTRIAN ACCOMMODATIONS

AS-BUILTS

PROJECT: 7160-00-71 (2011)
PROJECT: 7161-07-61 (2005)
PROJECT: 7160-04-71 (2001)

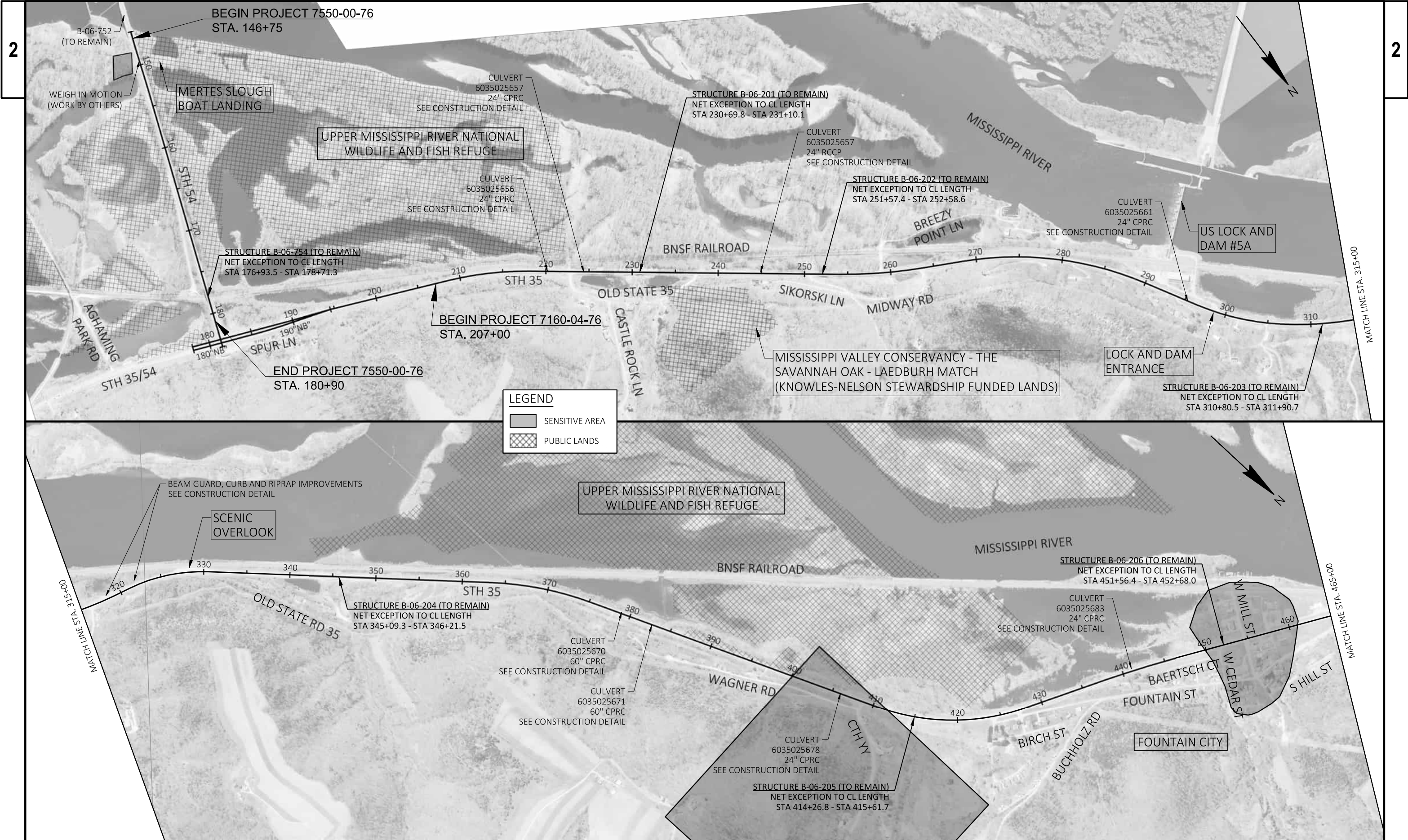
DNR LIASON

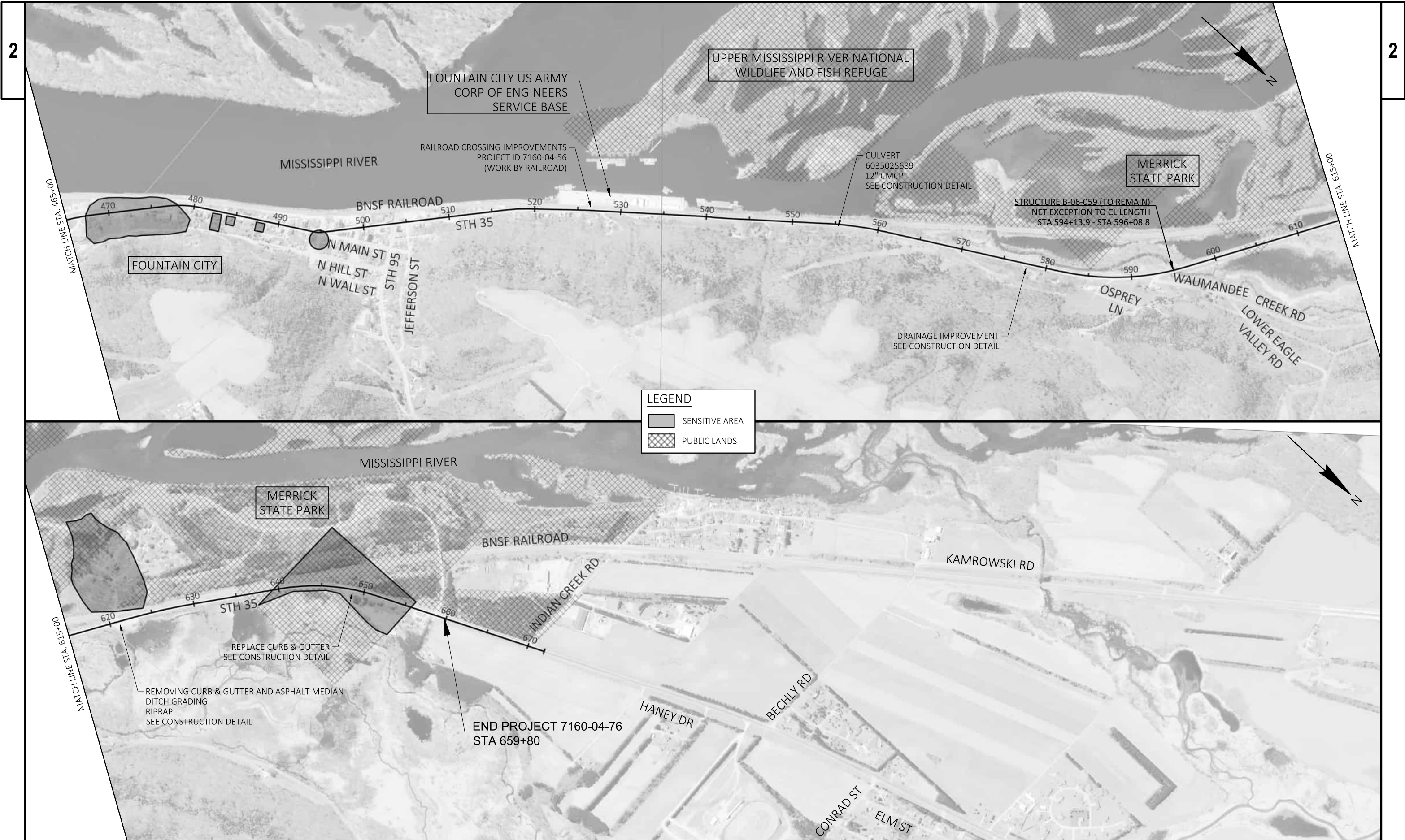
DEPARTMENT OF NATURAL RESOURCES
AMY LESIK
1300 W CLAIREMONT AVENUE
EAU CLAIRE, WI, 54701
PHONE: (715) 839-6571
EMAIL: AMYL.LESIK@WISCONSIN.GOV

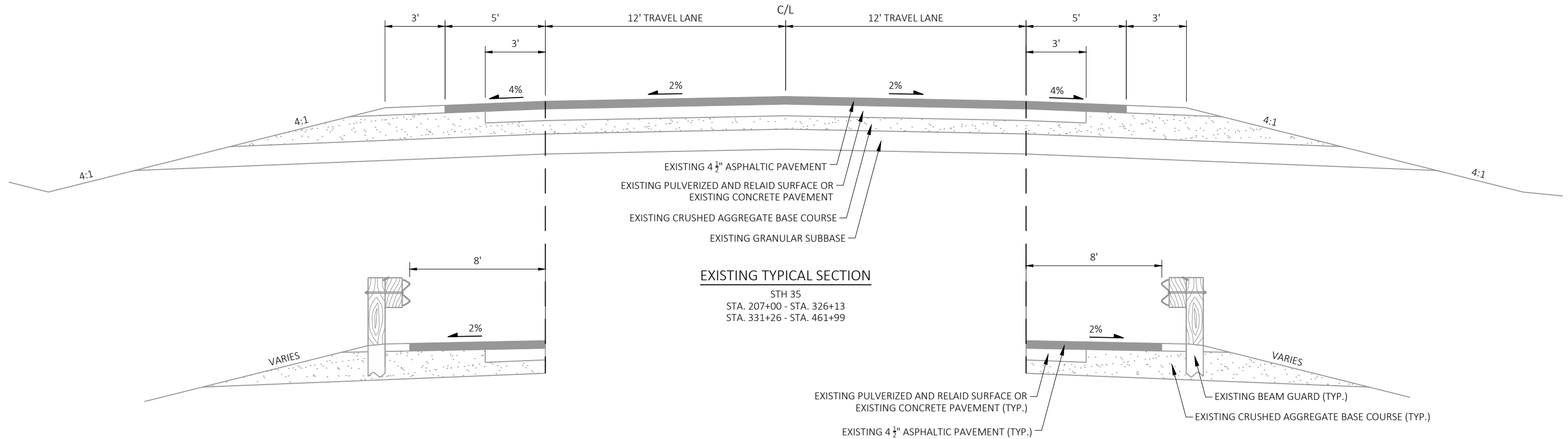
GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE.
THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE AREA THAT ARE NOT SHOWN.

R/W APPROXIMATED ON PLAN SHEETS BASED ON AS-BUILTS/GIS DATA.

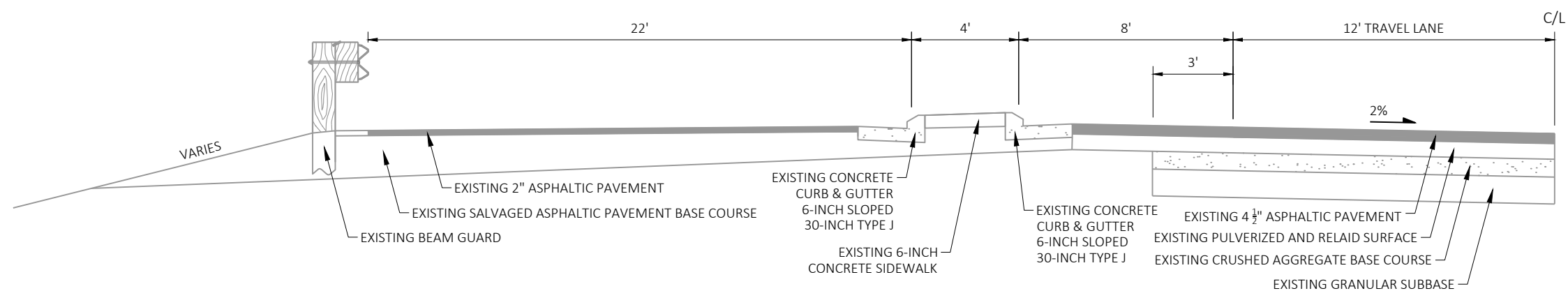


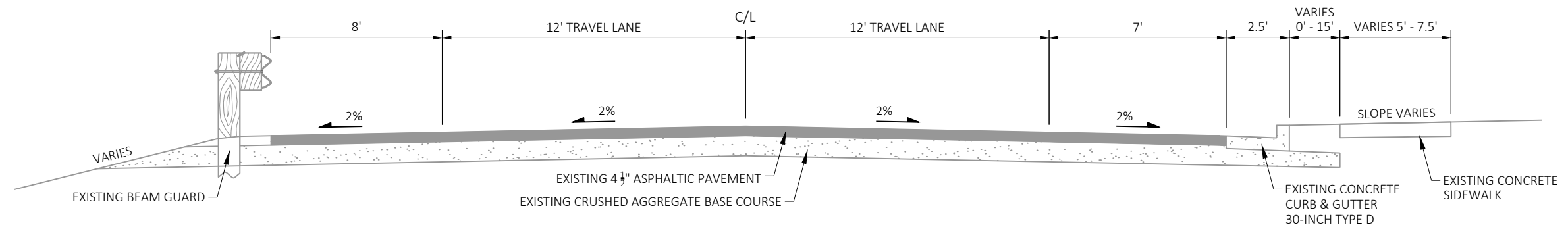




STH 35
STA. 223+46 - STA. 241+48
STA. 250+00 - STA. 258+28
STA. 259+48 - STA. 270+03
STA. 276+45 - STA. 297+53
STA. 304+43 - STA. 326+13
STA. 331+26 - STA. 331+53
STA. 334+95 - STA. 347+10
STA. 351+84 - STA. 359+62
STA. 366+43 - STA. 399+51
STA. 404+79 - STA. 434+98
STA. 439+97 - STA. 453+60

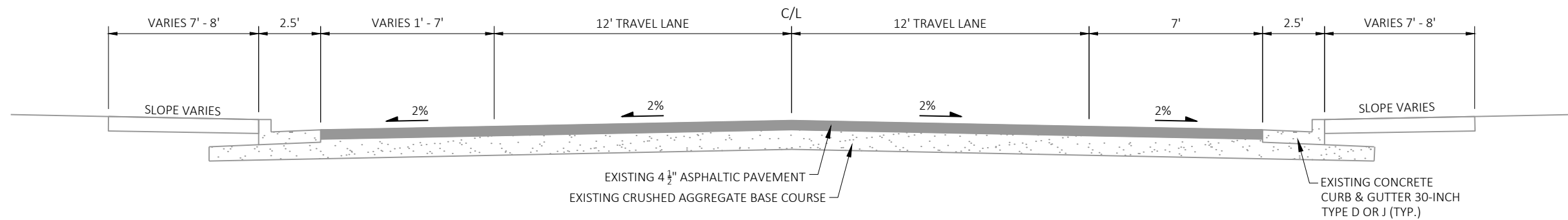
STH 35
STA. 223+46 - STA. 235+04
STA. 250+99 - STA. 263+02
STA. 308+50 - STA. 315+43
STA. 344+26 - STA. 347+11
STA. 410+60 - STA. 420+08
STA. 451+81 - STA. 453+61





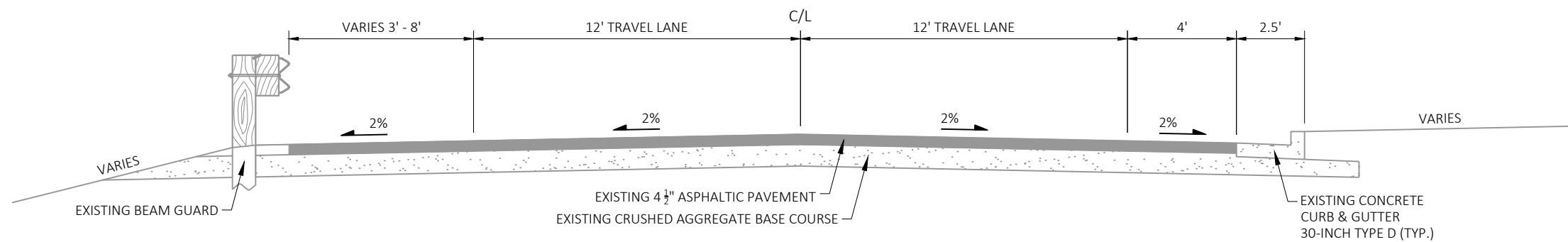
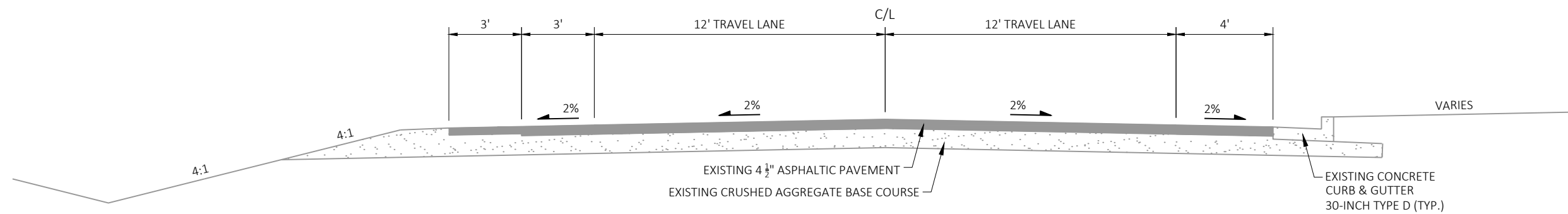
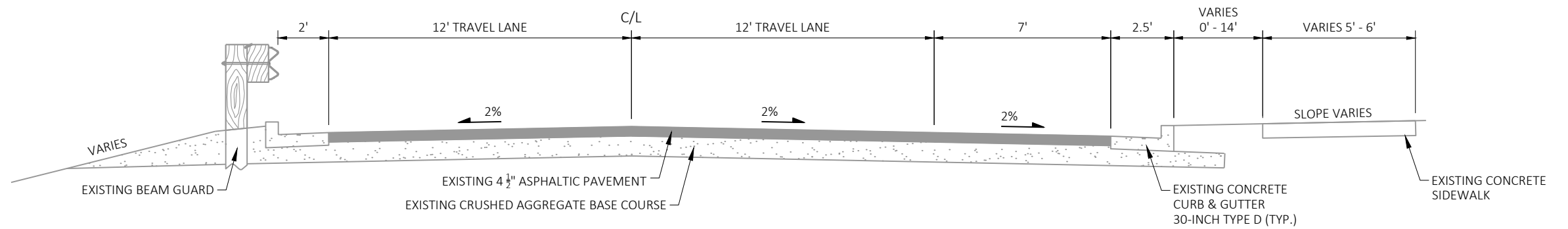
EXISTING TYPICAL SECTION

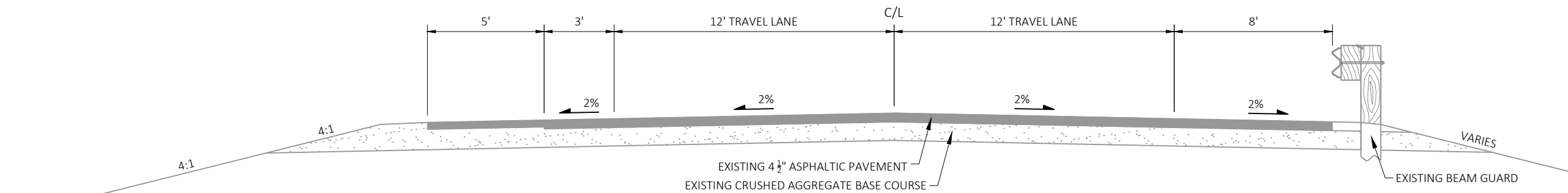
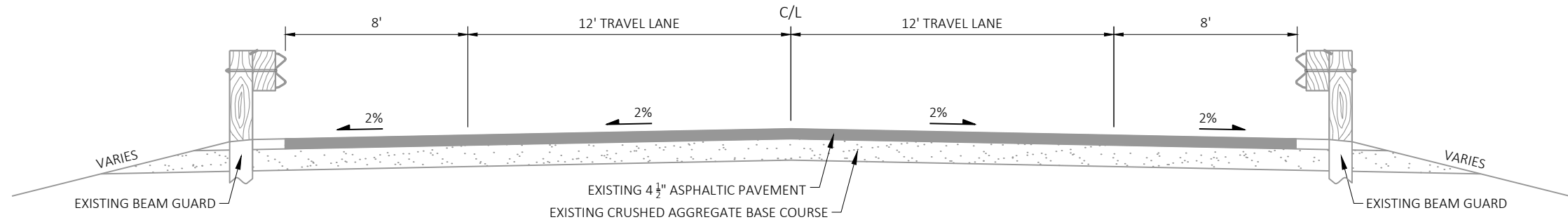
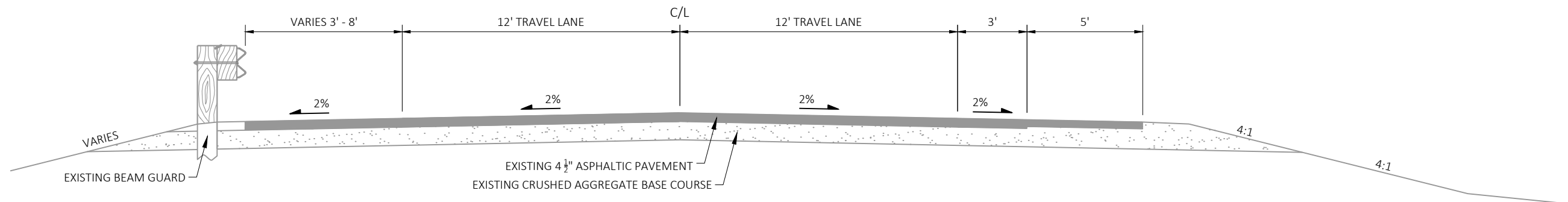
STH 35
STA. 461+99 - STA. 483+37

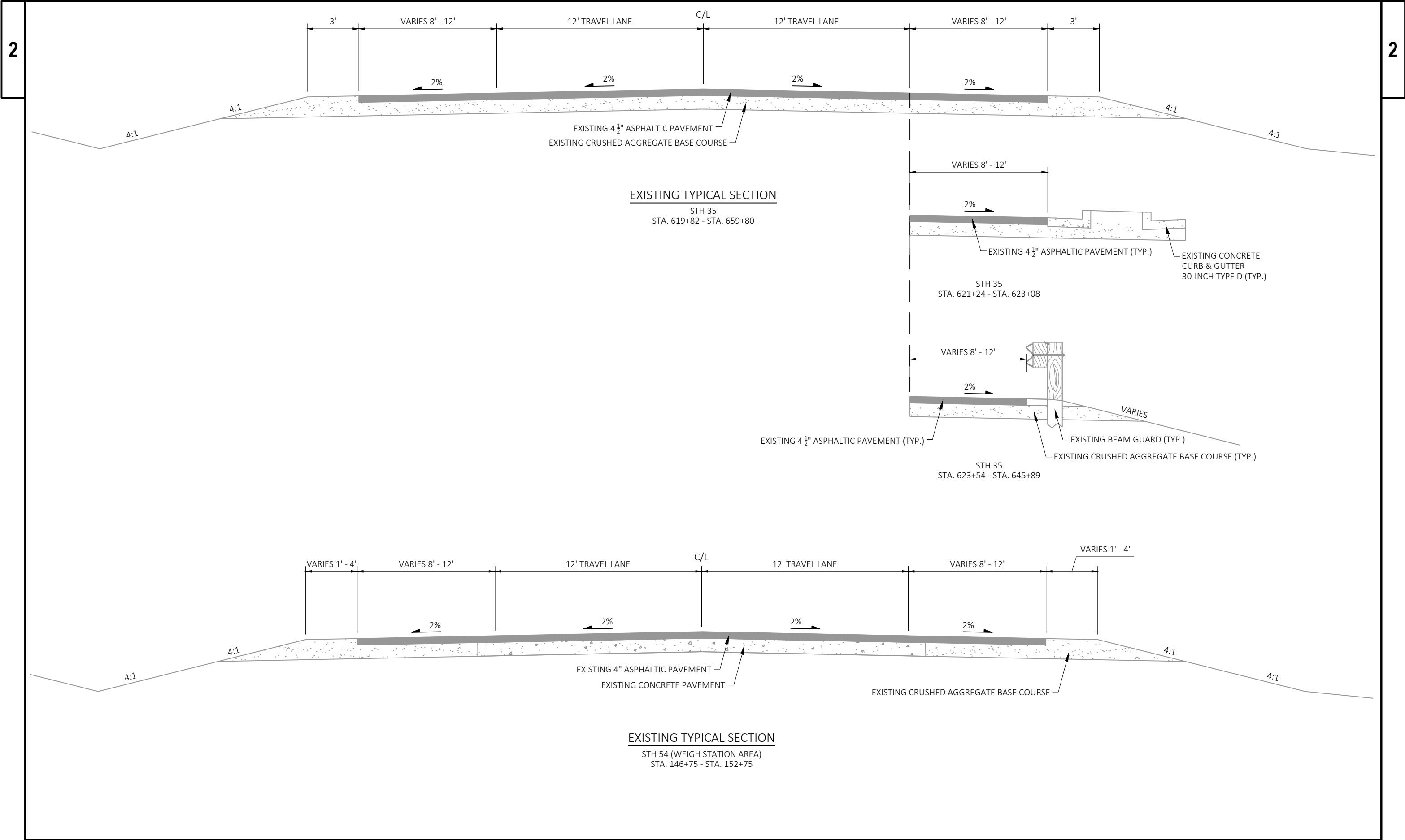


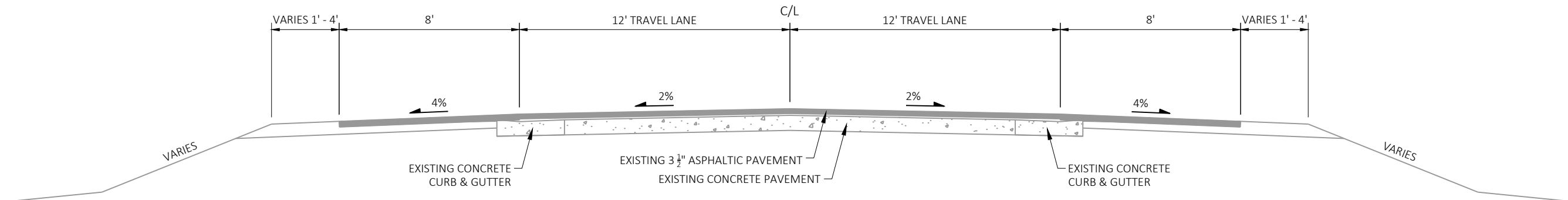
EXISTING TYPICAL SECTION

STH 35
STA. 483+37 - STA. 521+31

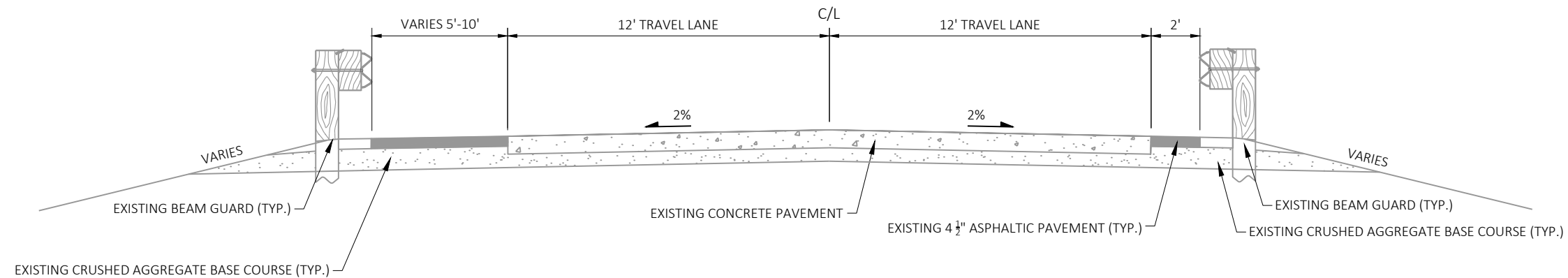




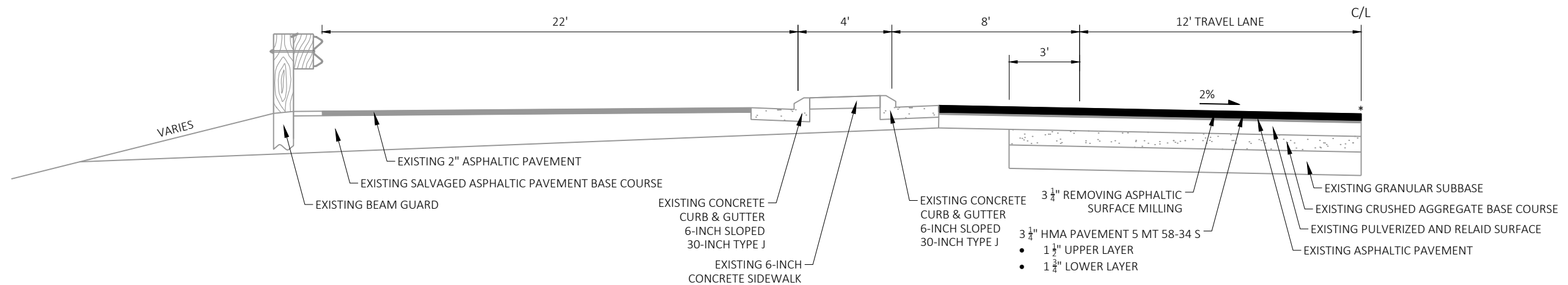
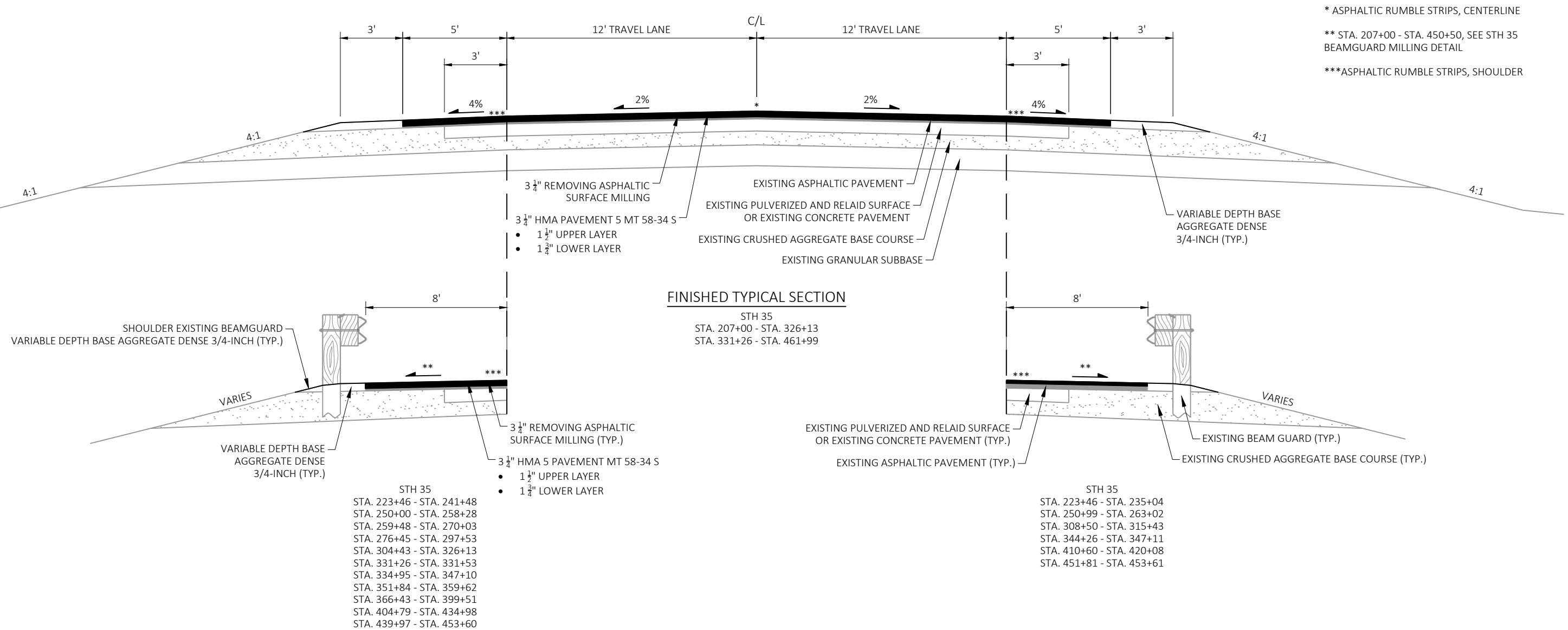


EXISTING TYPICAL SECTION

STH 54
STA. 152+75 - STA. 176+94

EXISTING TYPICAL SECTION

STH 54
STA. 178+71 - STA. 180+90

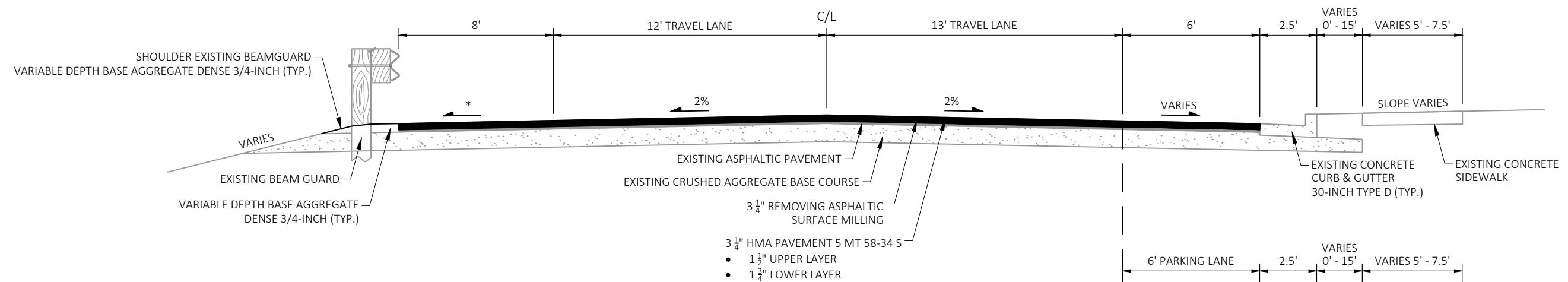


FINISHED TYPICAL SECTION

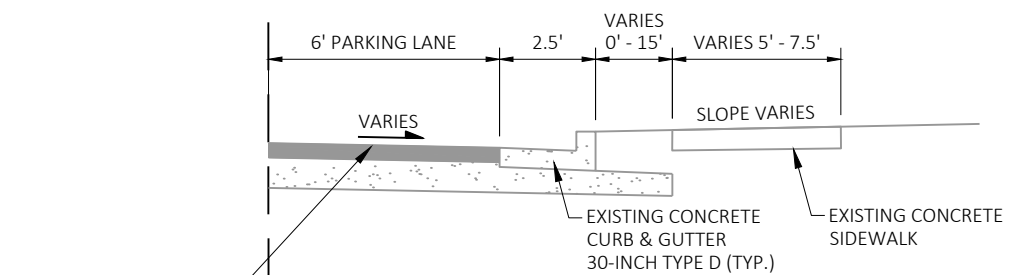
STH 35 - SCENIC OVERLOOK
STA. 326+13 - STA. 331+26

NOTE: EXISTING CURVE SUPER ELEVATION AND TRANSITIONS SHALL BE RESTORED IN-KIND.

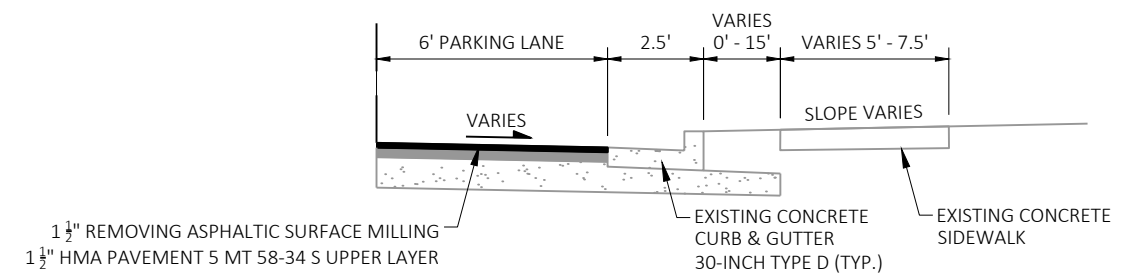
* SEE STH 35 BEAMGUARD MILLING DETAIL

**FINISHED TYPICAL SECTION**

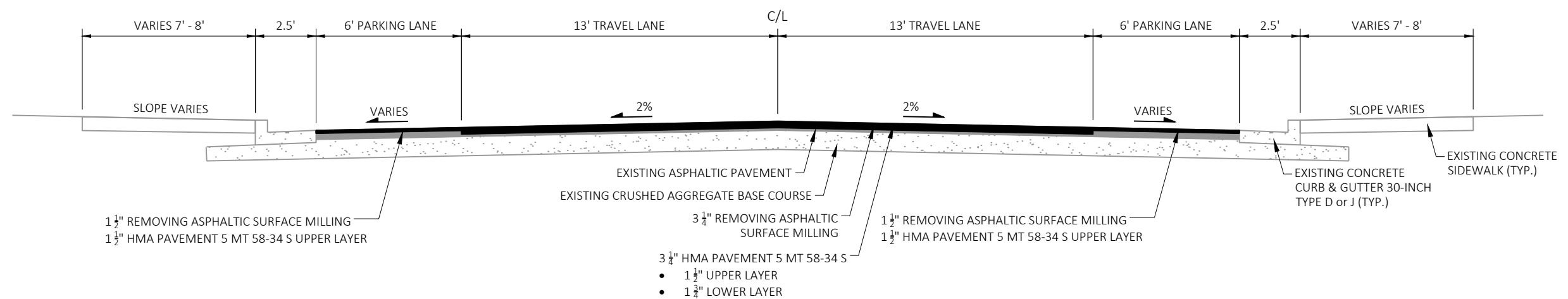
STH 35
STA. 461+99 - STA. 483+37



PARKING LANES
STA. 463+00 - STA. 468+00

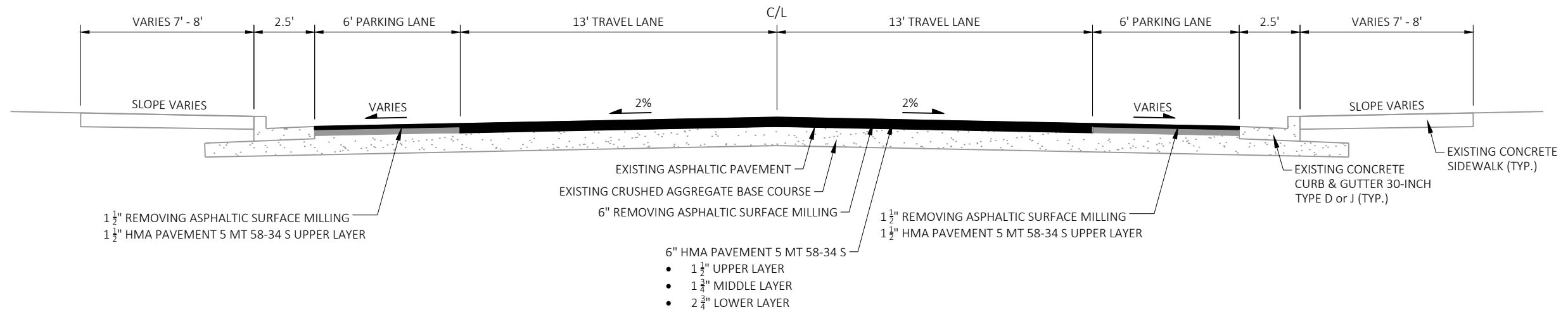


PARKING LANES
STA. 468+00 - STA. 483+37

**FINISHED TYPICAL SECTION**

STH 35
STA. 483+37 - STA. 494+50
STA. 505+50 - STA. 521+31

NOTE: EXISTING CURVE SUPER ELEVATION AND TRANSITIONS SHALL BE RESTORED IN-KIND.



FINISHED TYPICAL SECTION

STH 35
STA. 494+50 - STA. 505+50

NOTE: EXISTING CURVE SUPER ELEVATION AND TRANSITIONS SHALL BE RESTORED IN-KIND.

PROJECT NO: 7160-04-76

HWY: STH 35

COUNTY: BUFFALO

TYPICAL SECTIONS

SHEET

13

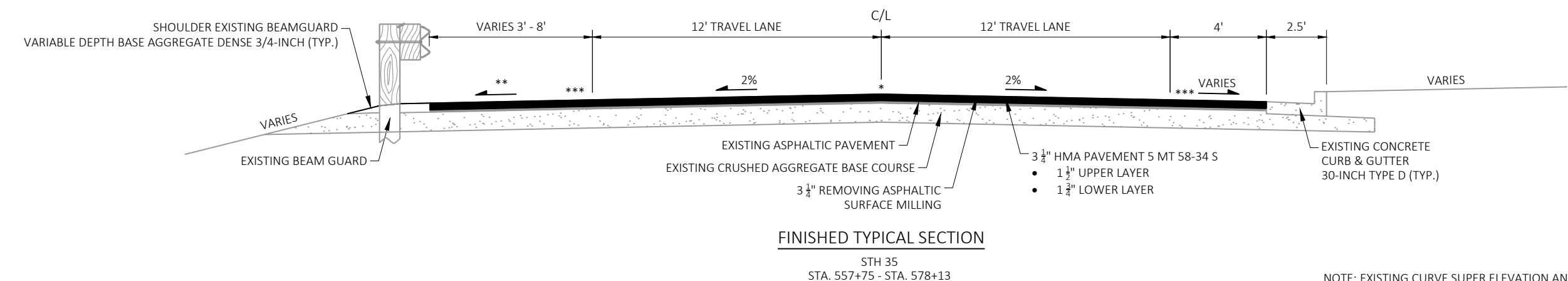
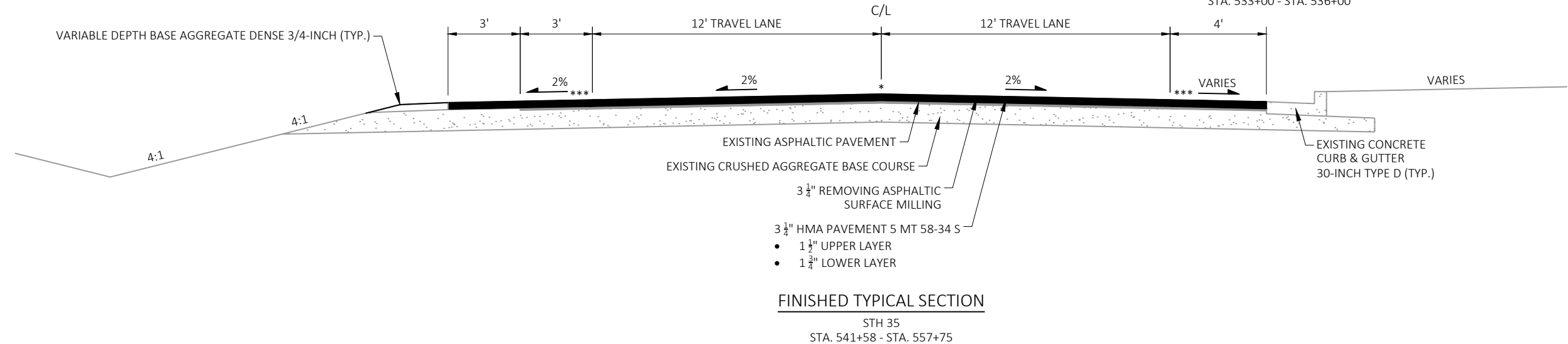
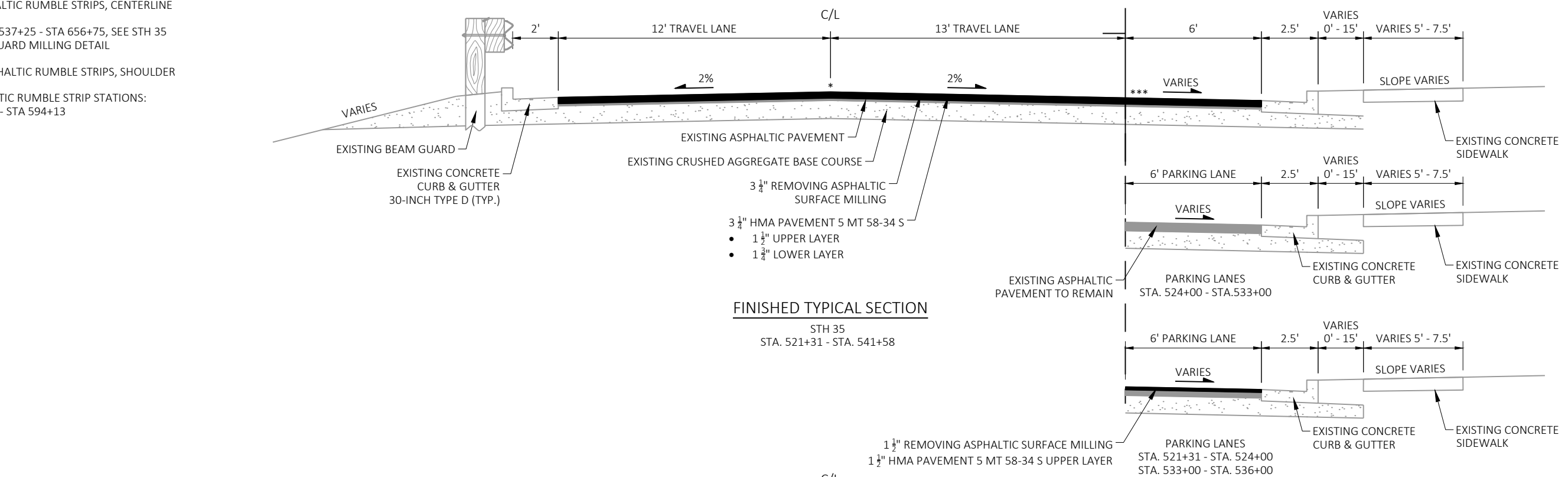
E

* ASPHALTIC RUMBLE STRIPS, CENTERLINE

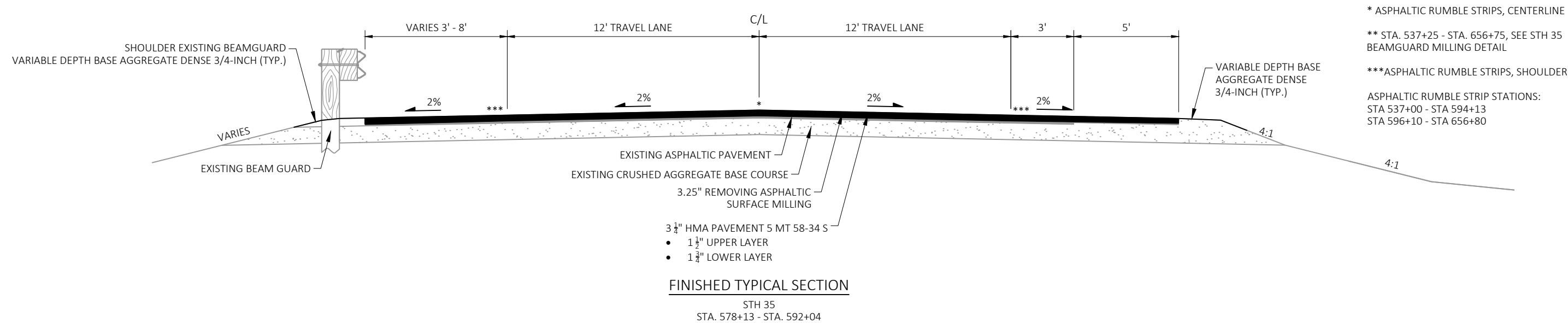
** STA. 537+25 - STA 656+75, SEE STH 35
BEAMGUARD MILLING DETAIL

***ASPHALTIC RUMBLE STRIPS, SHOULDER

ASPHALTIC RUMBLE STRIP STATIONS:
537+00 - STA 594+13



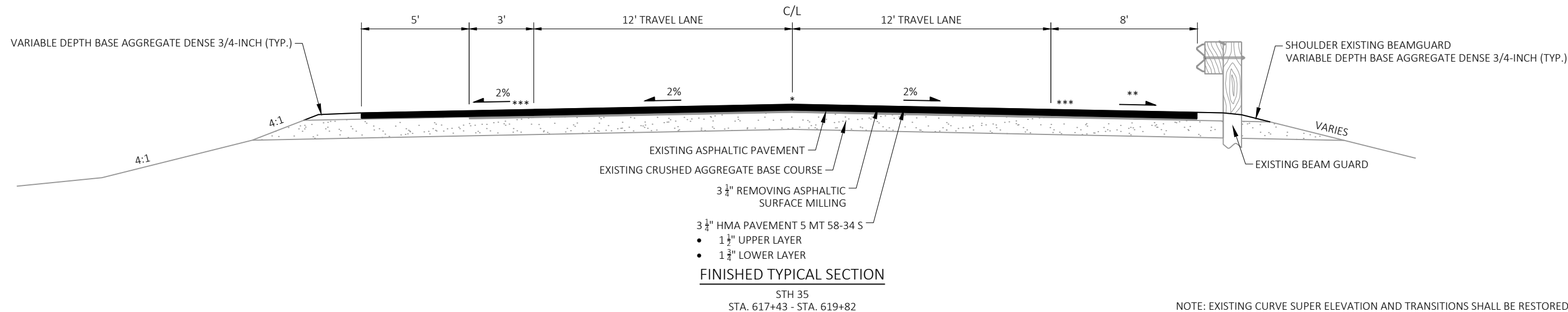
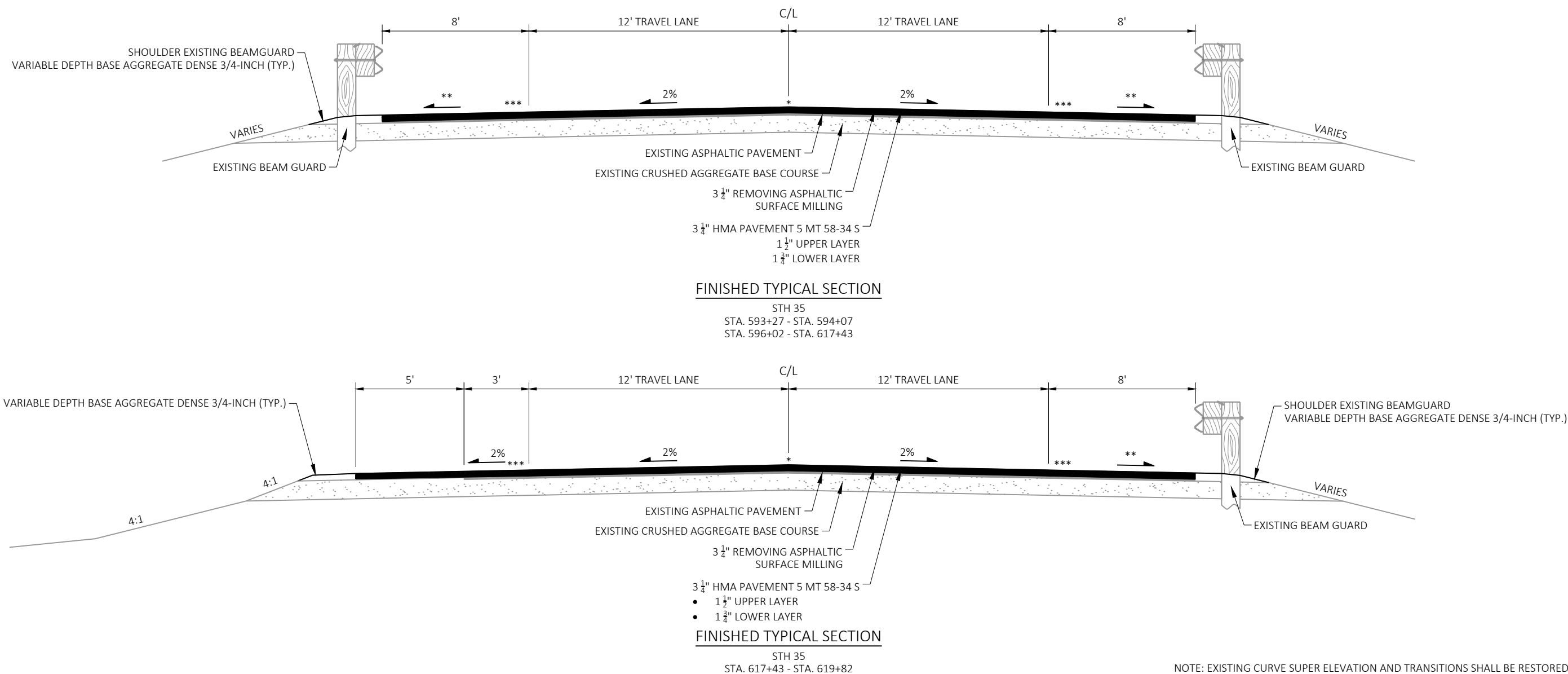
NOTE: EXISTING CURVE SUPER ELEVATION AND TRANSITIONS SHALL BE RESTORED IN-KIND.



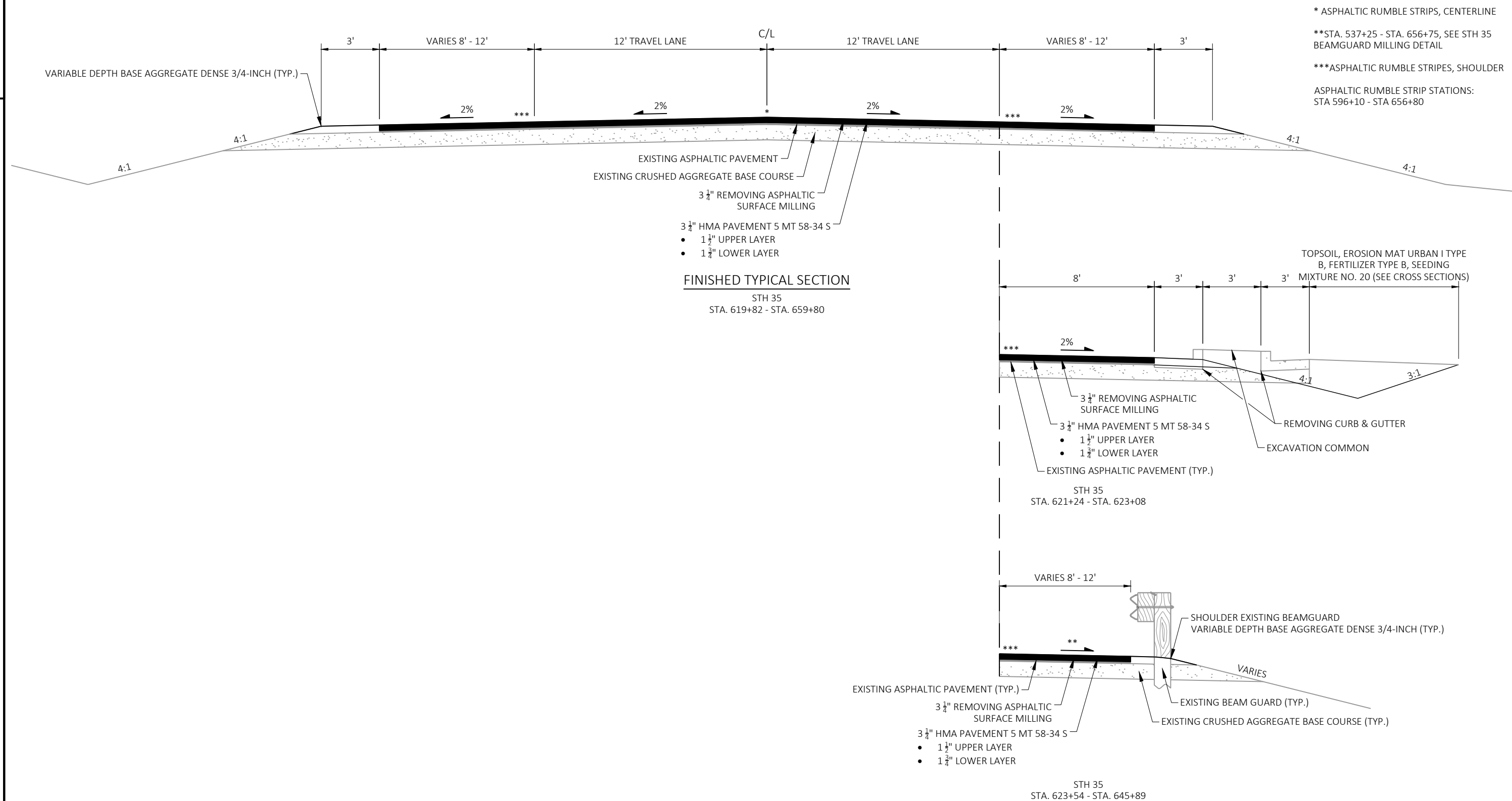
* ASPHALTIC RUMBLE STRIPS, CENTERLINE

** STA. 537+25 - STA. 656+75, SEE STH 35 BEAMGUARD MILLING DETAIL

*** ASPHALTIC RUMBLE STRIPS, SHOULDER

ASPHALTIC RUMBLE STRIP STATIONS:
STA 537+00 - STA 594+13
STA 596+10 - STA 656+80

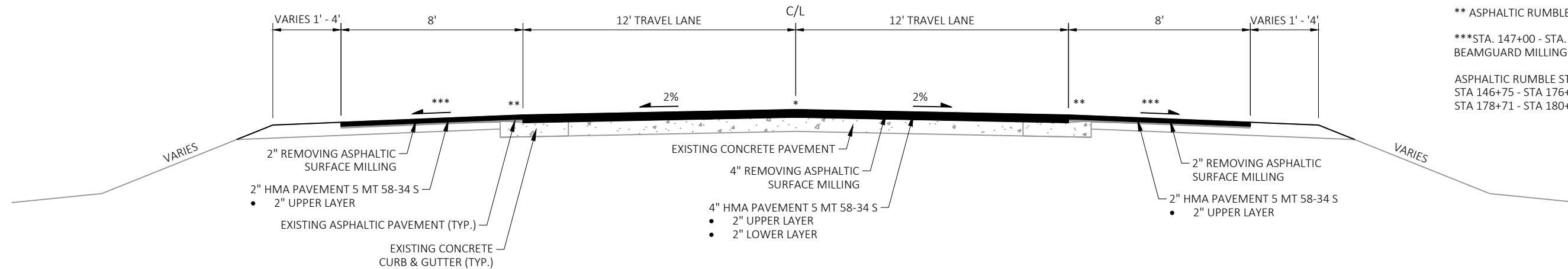
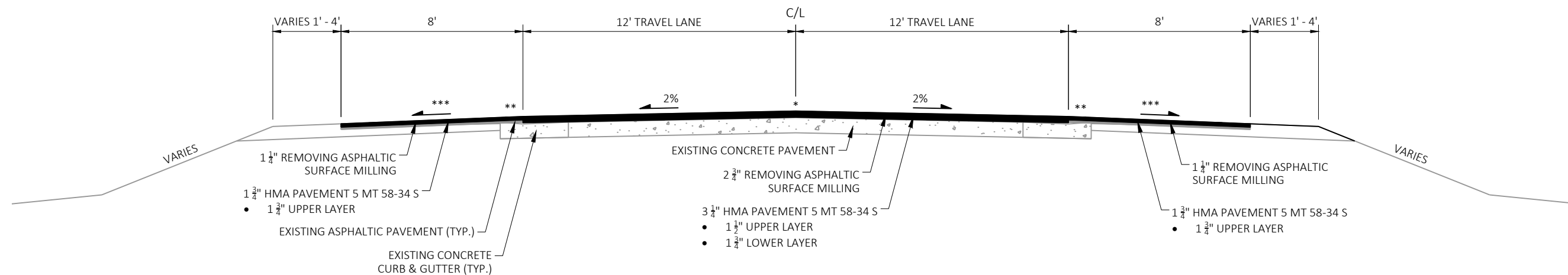
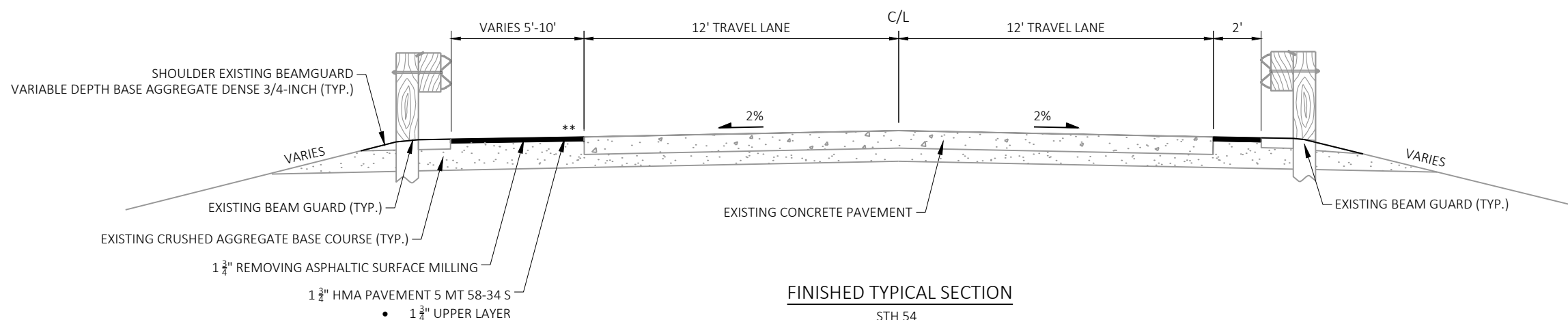
NOTE: EXISTING CURVE SUPER ELEVATION AND TRANSITIONS SHALL BE RESTORED IN-KIND.



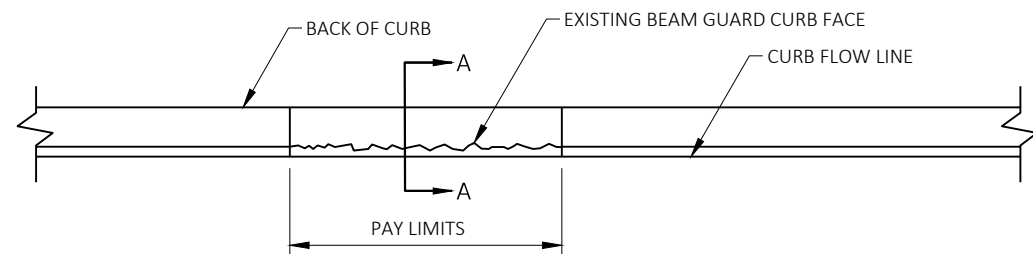
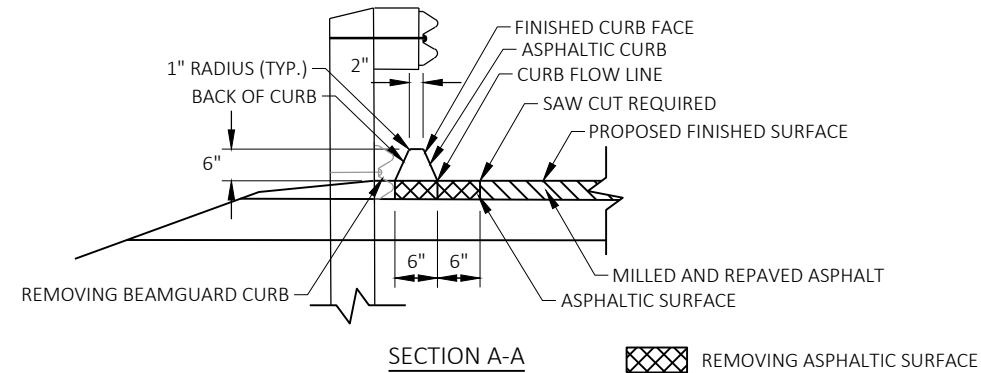
NOTE: EXISTING CURVE SUPER ELEVATION AND TRANSITIONS SHALL BE RESTORED IN-KIND.

* ASPHALTIC RUMBLE STRIPS, CENTERLINE

** ASPHALTIC RUMBLE STRIP, SHOULDER

***STA. 147+00 - STA. 176+68, SEE STH 54
BEAMGUARD MILLING DETAILASPHALTIC RUMBLE STRIP STATIONS:
STA 146+75 - STA 176+94
STA 178+71 - STA 180+90**FINISHED TYPICAL SECTION**STH 54 (WEIGH STATION AREA)
STA. 146+75 - STA. 152+75**FINISHED TYPICAL SECTION**STH 54
STA. 152+75 - STA. 176+94**FINISHED TYPICAL SECTION**STH 54
STA. 178+71 - STA. 180+90

NOTE: EXISTING CURVE SUPER ELEVATION AND TRANSITIONS SHALL BE RESTORED IN-KIND.



PLAN VIEW

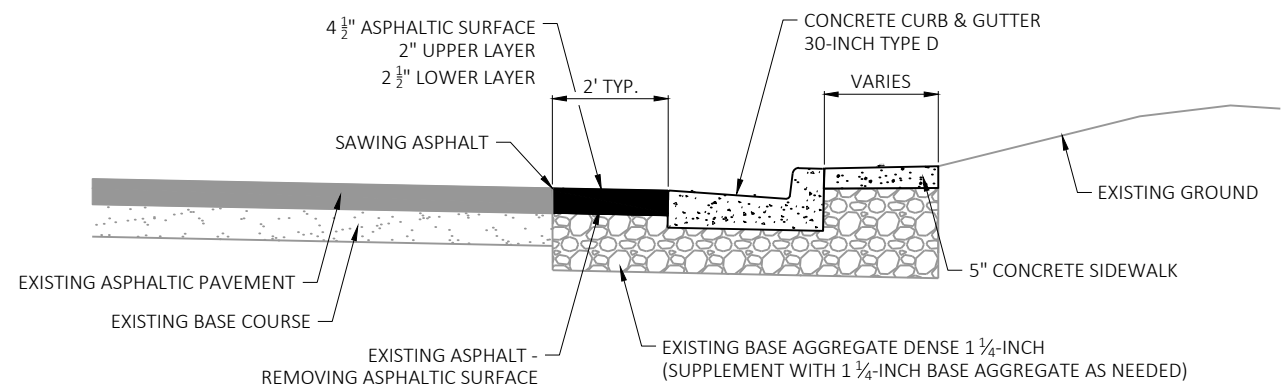
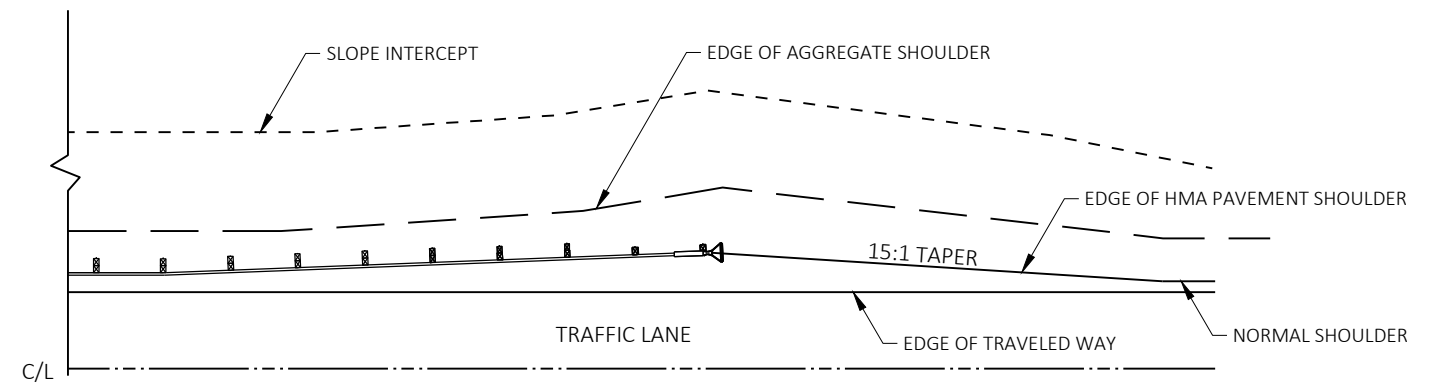
ASPHALT CURB DETAIL

LOCATIONS TO BE DETERMINED BY ENGINEER

STA. 315+50 - STA. 317+62.5
STA. 319+40 - STA. 320+15

6 INCH ASPHALT AREA IN FRONT OF ASPHALTIC CURB
IS INCIDENTAL TO ASPHALTIC CURB ITEM

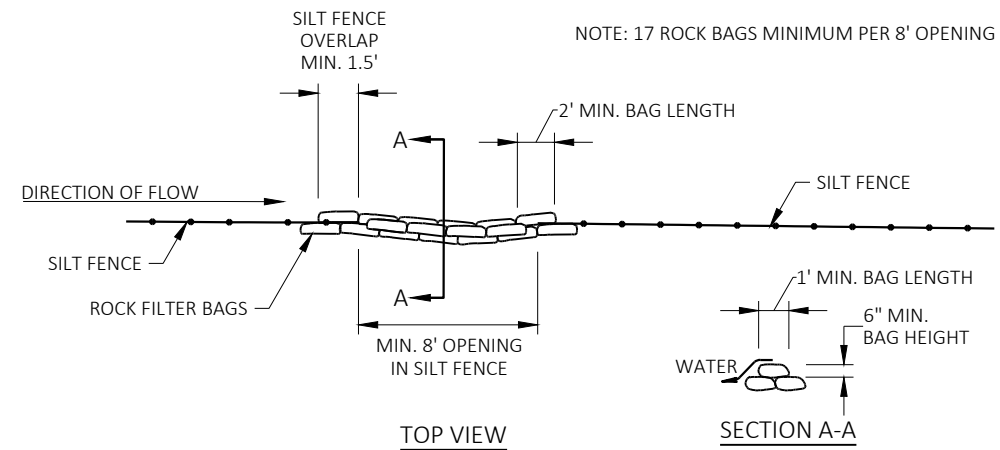
EXISTING ASPHALTIC SURFACE DEPTH 4 1/2-INCHES



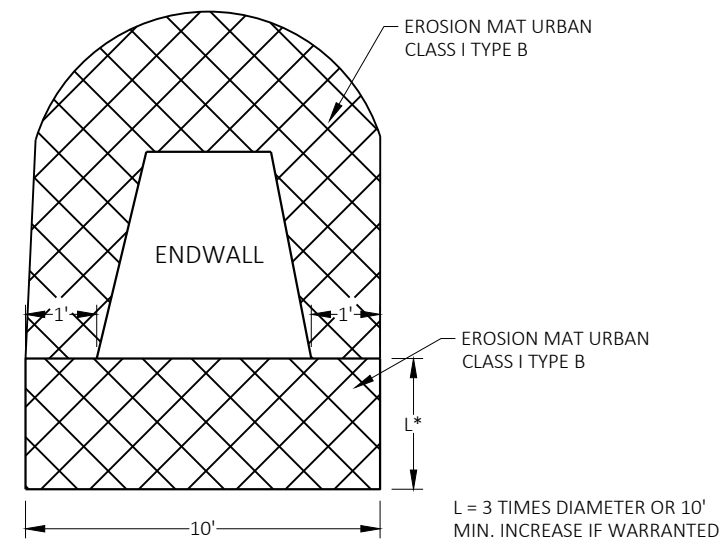
CURB AND GUTTER REPLACEMENT AT CURB RAMPS DETAIL

NOT TO SCALE

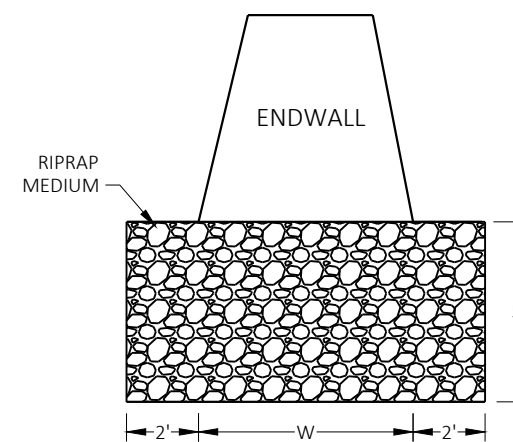
PATCH EXISTING ASPHALT PRIOR TO
MILLING ASPHALTIC SURFACE



ROCK BAGS USED FOR SILT FENCE RELIEF

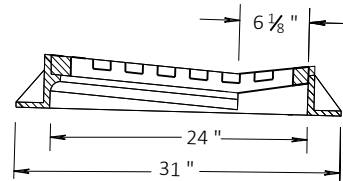
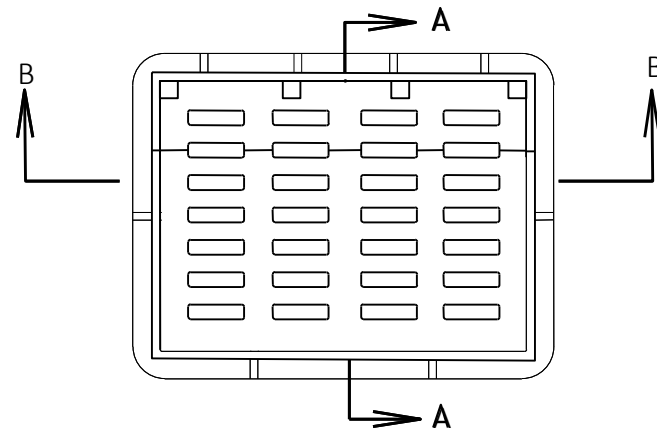


EROSION CONTROL AT PIPE ENDS



RIPRAP AT PIPE ENDS

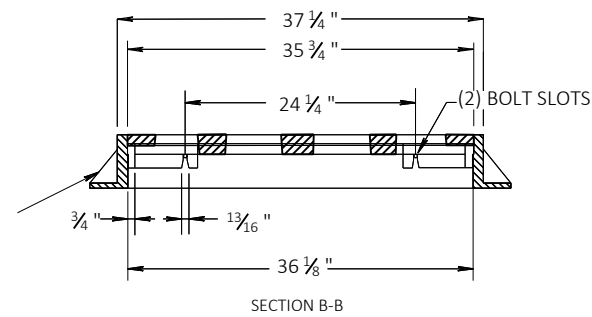
18" MINIMUM THICKNESS
FOR RIPRAP MEDIUM



SECTION A-A

INLET COVER TYPE H-D
(WITH MOUNTABLE CURB PLATE)

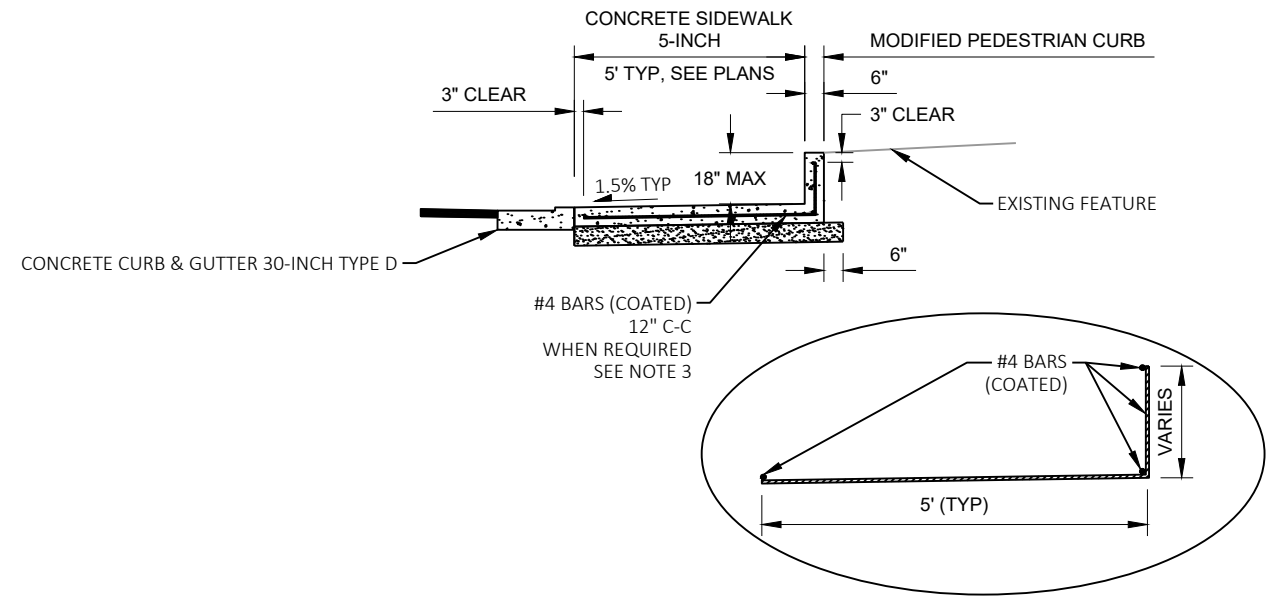
STA 494+80 LT
STA 499+58 LT



SECTION B-B

GENERAL NOTES:

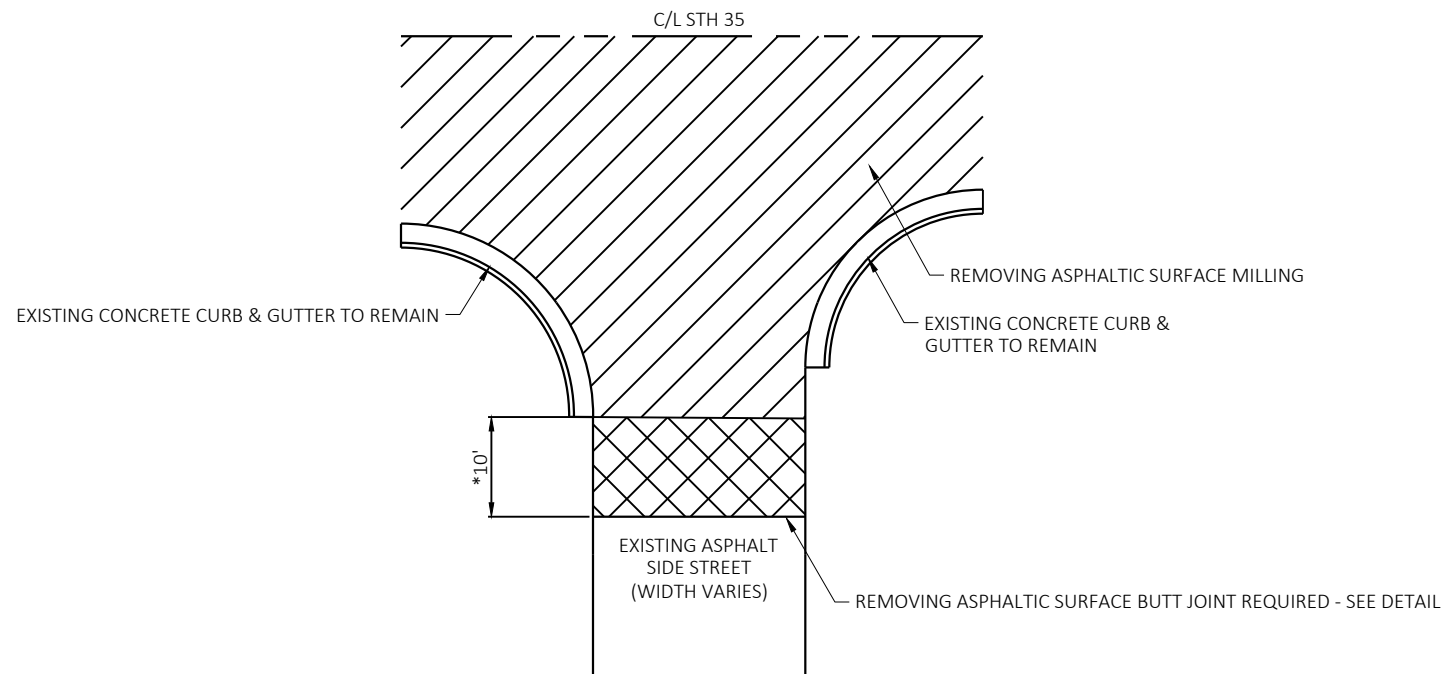
1. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
2. FINISH: NOT PAINTED



MODIFIED PEDESTRIAN CURB
SEE CURB RAMP DETAILS

NOTES:

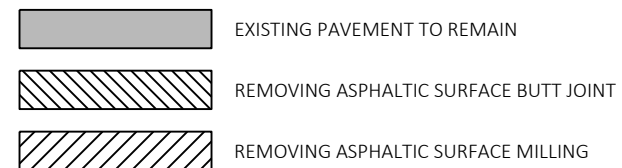
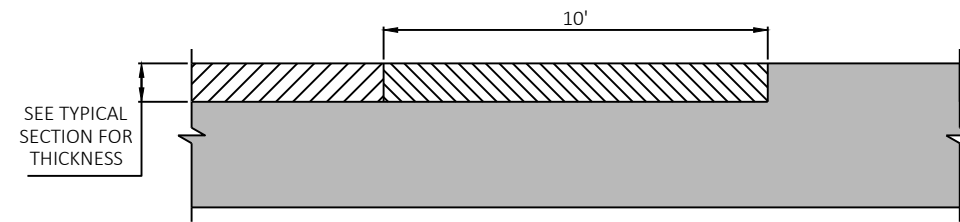
1. THE HEIGHT OF THE CURB SHALL VARY BETWEEN 0 INCHES AND 18 INCHES BASED ON THE EXISTING GROUND BEHIND THE PEDESTRIAN CURB.
2. THE MODIFIED PEDESTRIAN CURB SHALL BE POURED MONOLITHICALLY WITH THE CONCRETE SIDEWALK.
3. WHEN THE HEIGHT OF THE PEDESTRIAN CURB IS GREATER THAN 6 INCHES IN HEIGHT, THE CURB SHALL BE TIED TO THE SIDEWALK USING #4 TIE BARS SPACED 12" CENTER TO CENTER WITH #4 LONGITUDINAL BARS. STEEL REINFORCEMENT IS NOT REQUIRED WHEN THE HEIGHT OF THE MODIFIED PEDESTRIAN CURB IS 6 INCHES OR LESS.
4. ALL TIE BARS AND LONGITUDINAL BARS FOR PEDESTRIAN CURB AND SIDEWALK ARE INCIDENTAL TO THE BID ITEM "MODIFIED PEDESTRIAN CURB".
5. ALL BAR STEEL SHALL BE COATED.
6. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.



RURAL ASPHALTIC SURFACE SIDE ROAD DETAIL

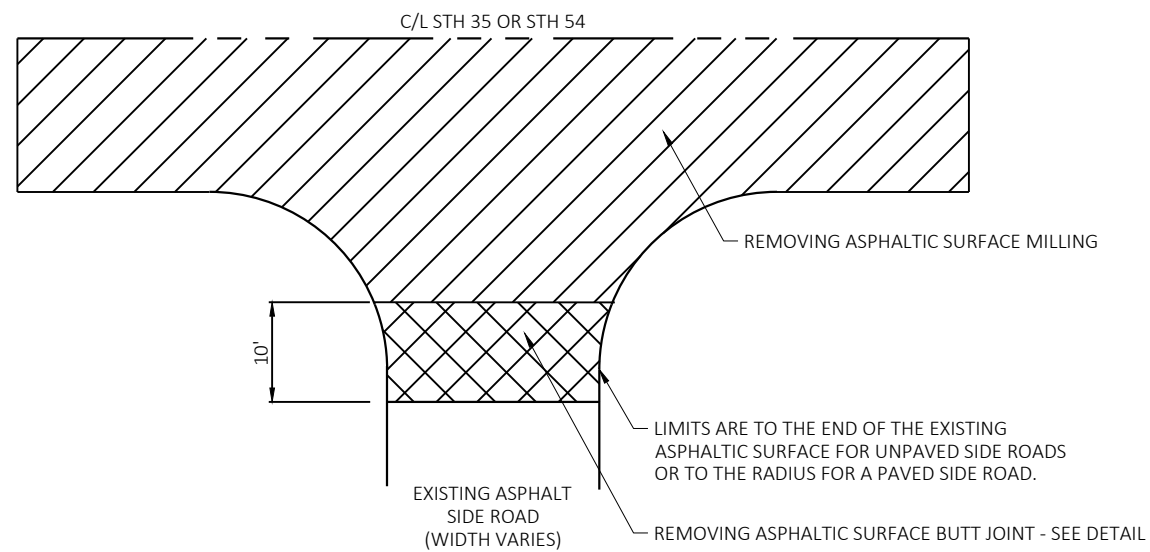
SIDE ROAD WITH CURB AND GUTTER TO REMAIN

* OMIT 10' BEYOND CURB & GUTTER AT STA 526+50 LT
ARMY CORPS OF ENGINEERS BOAT YARD.



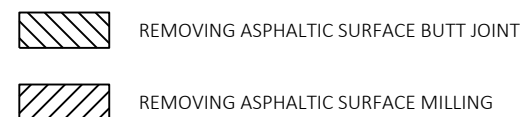
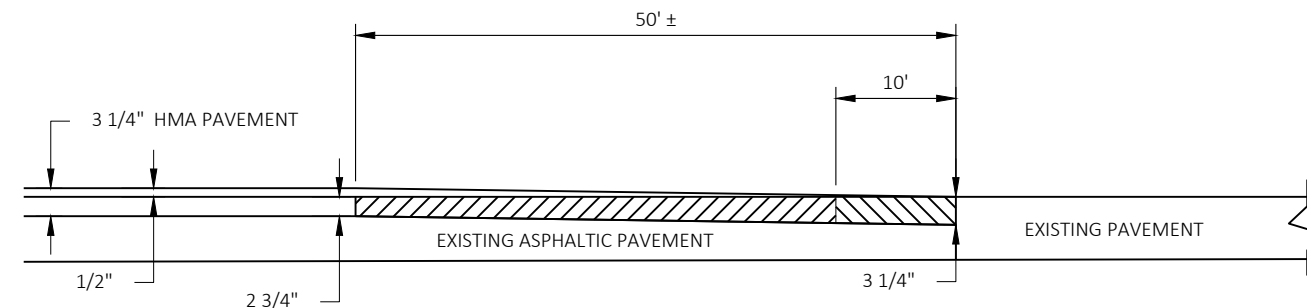
STH 35 & STH 54 MAINLINE BUTT JOINT DETAIL

NOT TO SCALE
USE WHERE MILLING ABUTS PAVEMENT TO BE LEFT IN PLACE
EXACT LOCATIONS TO BE DETERMINED IN FIELD BY ENGINEER
STH 54: STA 146+75 - STA 146+85



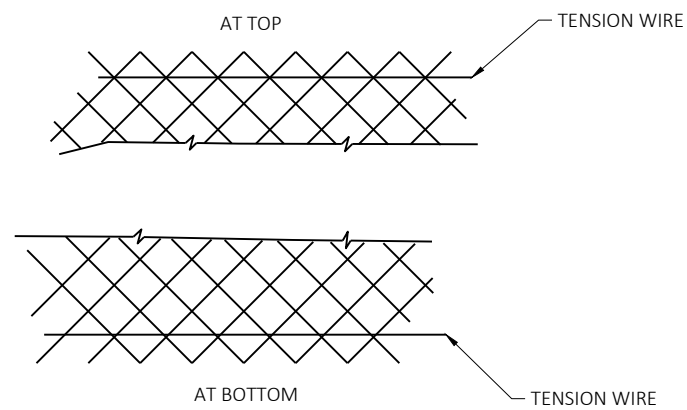
RURAL ASPHALTIC SURFACE SIDE ROAD DETAIL

SIDE ROAD WITH NO CURB AND GUTTER

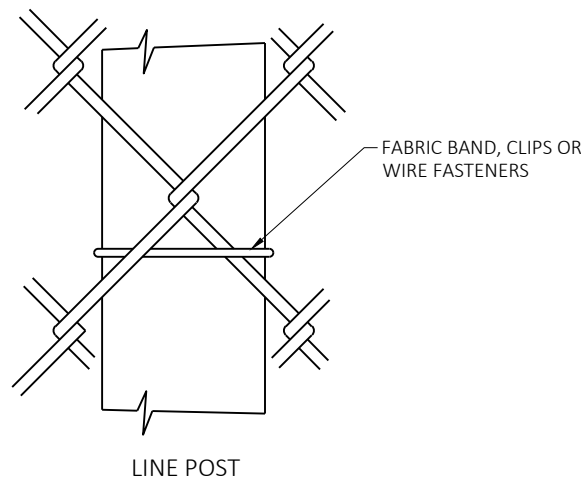


STH 54 MAINLINE BUTT JOINT DETAIL

STA. 152+75 - STA. 153+75
STA. 176+43 - STA. 176+93
* EXACT DIMENSIONS TO BE DETERMINED
BY ENGINEER IN THE FIELD

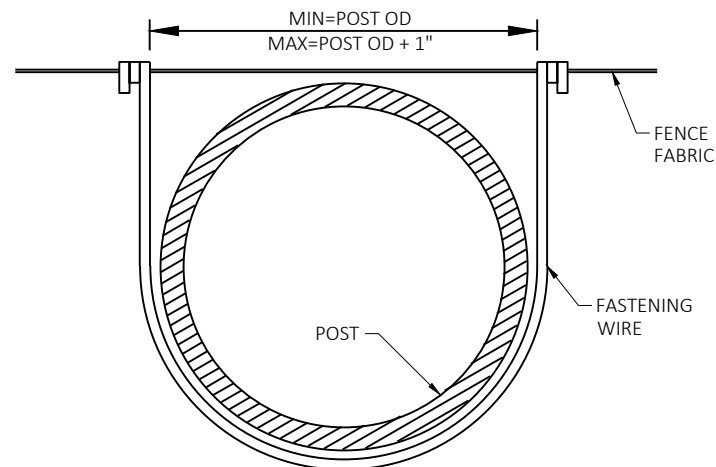


SELVAGES

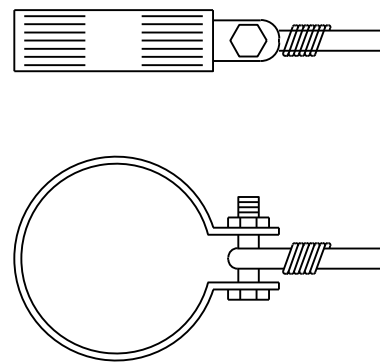


1) FABRIC FASTENERS:
MINIMUM 3/16" X 3/4" STRETCHER BAR BANDED TO TERMINAL POSTS,
OR INDUSTRIAL FABRIC FITTINGS ON TERMINAL POSTS. ALL FASTENERS ARE
NO. 6 ALUMINUM SPACED 14" MAX. VERTICALLY.

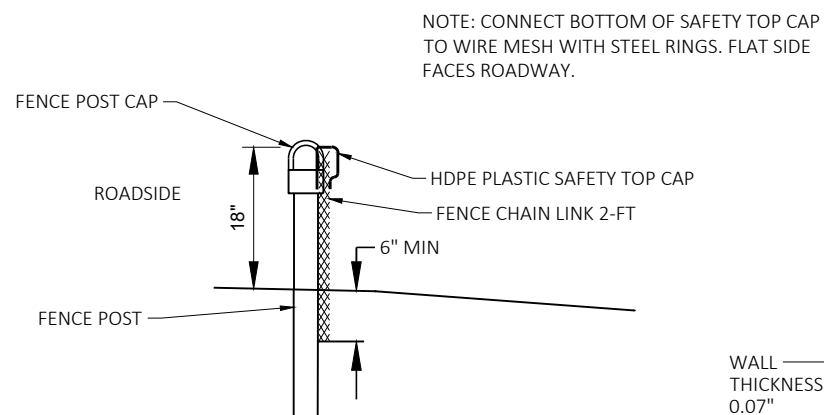
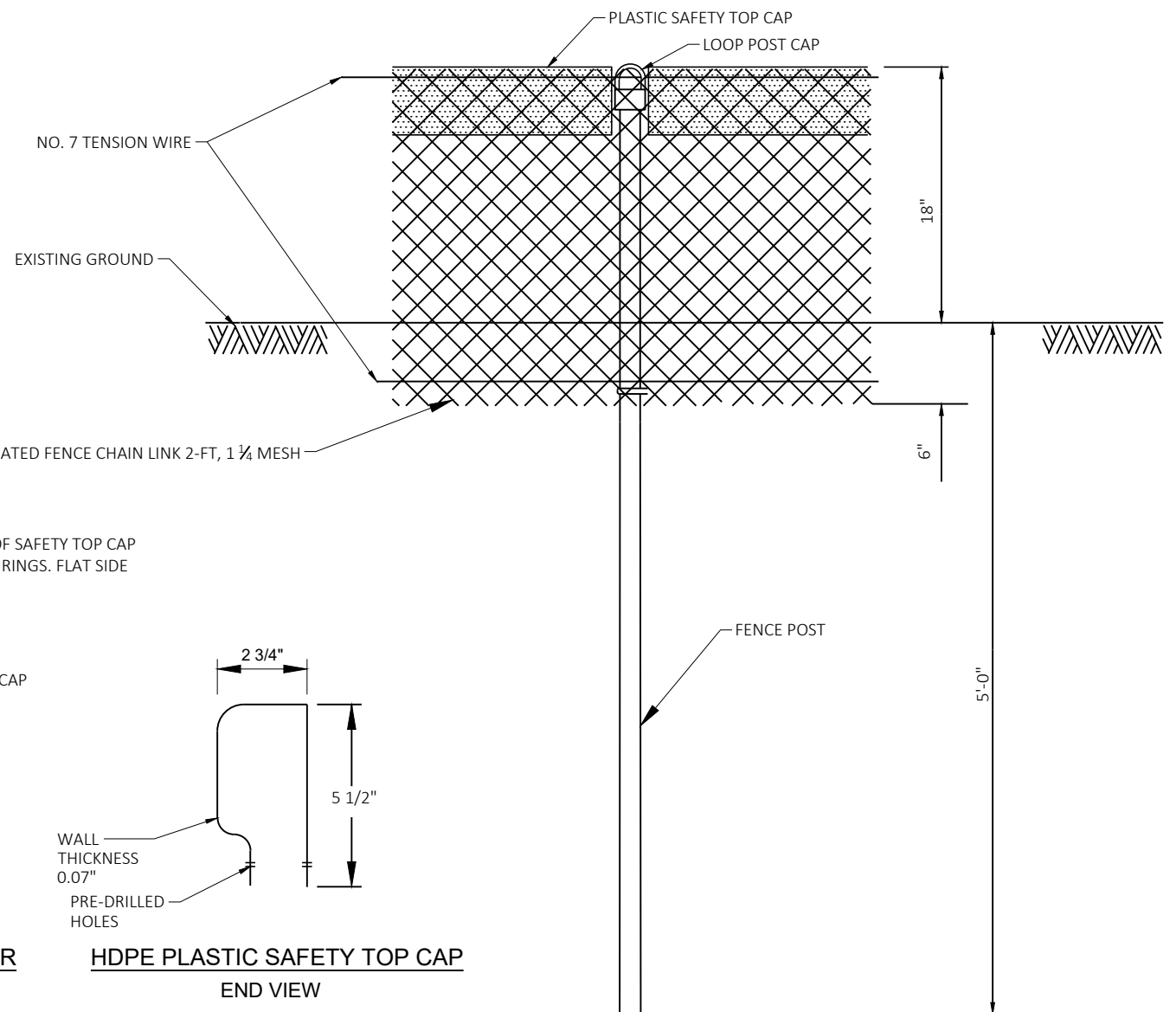
2) FENCE HEIGHT:
THE FABRIC HEIGHT IS THE NOMINAL FENCE HEIGHT.



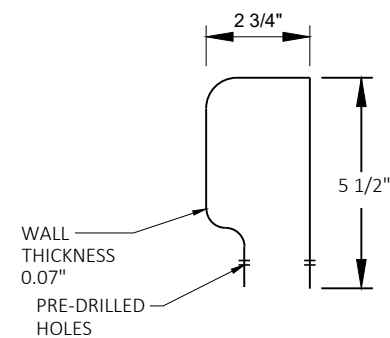
FABRIC FASTENING DETAIL



TENSION WIRE END CLAMP

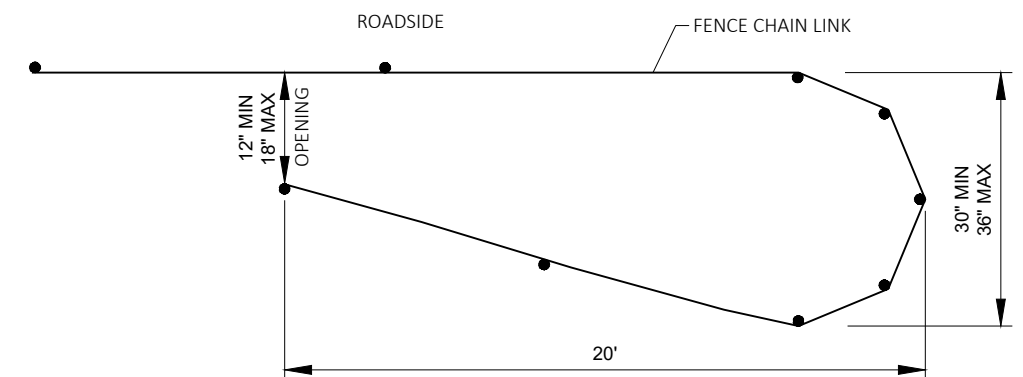
FENCE CHAIN LINK SMALL ANIMAL BARRIER
END VIEW

FENCE CHAIN LINK SMALL ANIMAL BARRIER

HDPE PLASTIC SAFETY TOP CAP
END VIEW

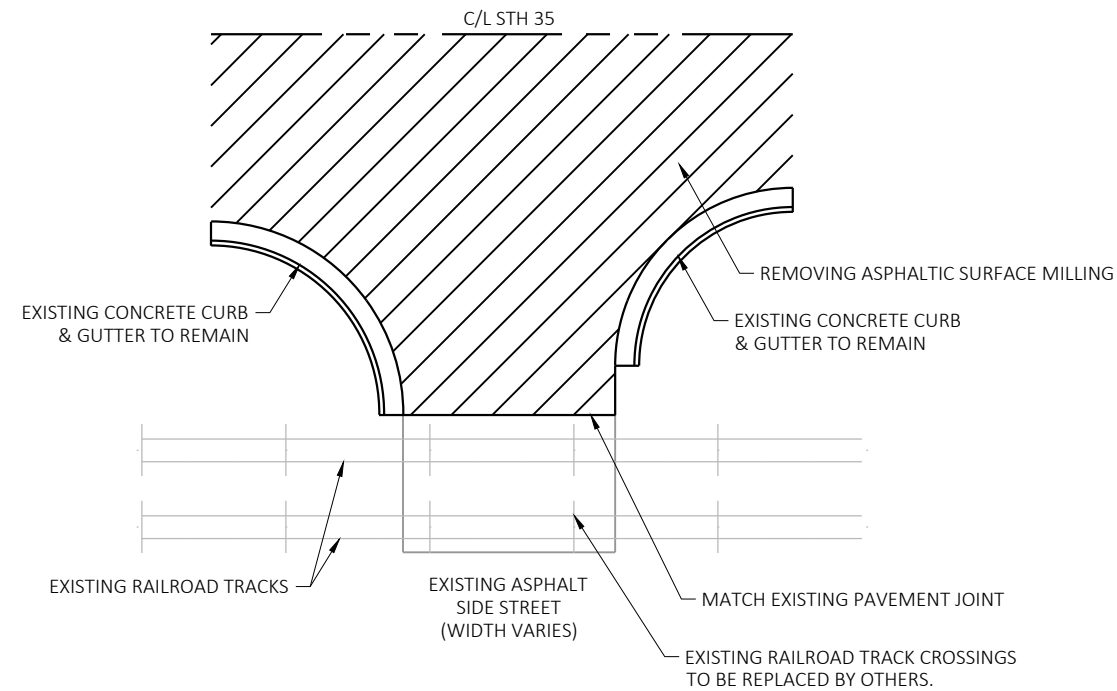
GENERAL NOTES:

- 1) ALL FENCING SHALL MEET FEDERAL SPECIFICATION F-162 AND RR-F-00191.
- 2) 6" FLEXIBLE PLASTIC PIPE MAY BE USED IN PLACE OF HDPE PLASTIC SAFETY TOP CAP IN RURAL, NON-POPULATED AREAS WITH THE APPROVAL OF THE ENGINEER.
- 3) UNLESS OTHERWISE SPECIFIED, ATTACH CHAIN-LINK FABRIC TO POSTS AND RACES WITH STANDARD TIE WIRE MEETING SPECIFICATIONS.
- 4) SAFETY TOP CAP REQUIRED ON THE ENTIRE LENGTH OF FENCE CHAIN LINK, 2-FT, ANIMAL BARRIER.
- 5) ALL FENCE COMPONENTS SHALL BE PVC COATED, DARK GREEN IN COLOR.
- 6) DO NOT PLACE SAFETY TOP CAP AROUND TURN-AROUND RADIUS
- 7) TENSION WIRE SHALL HAVE NO VISIBLE SAG WHEN FULLY TENSIONED.



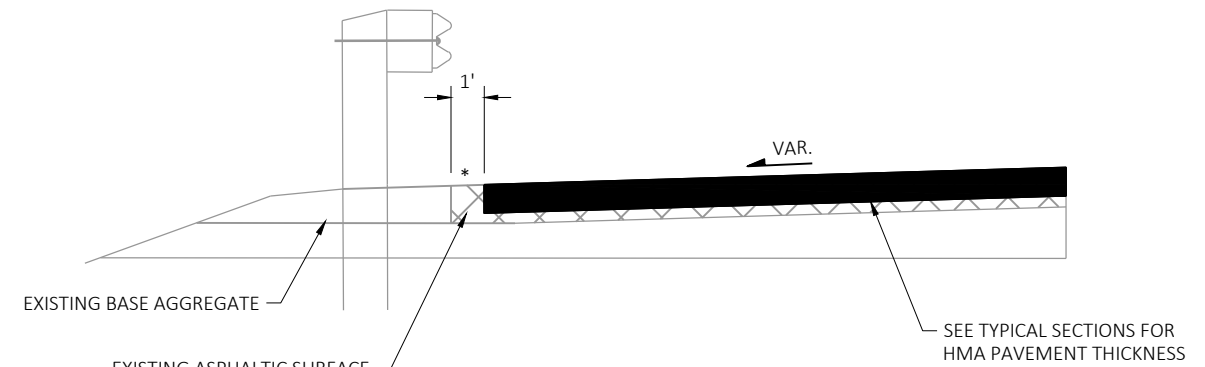
NOTES
THE PURPOSE OF THE SMALL ANIMAL TURN AROUNDS ARE TO REDIRECT THE TURTLES AWAY FROM THE ROADWAY.
PLACE FENCE POSTS ON THE UPSLOPE SIDE OF FENCE. TURTLE BARRIER POSTS FOR THE TURN-AROUND SHOULD
BE ON THE INSIDE OF THE TURN-AROUND. 5 POSTS MINIMUM WITHIN ARC OF TURN-AROUND.

SMALL ANIMAL TURN-AROUND DETAIL



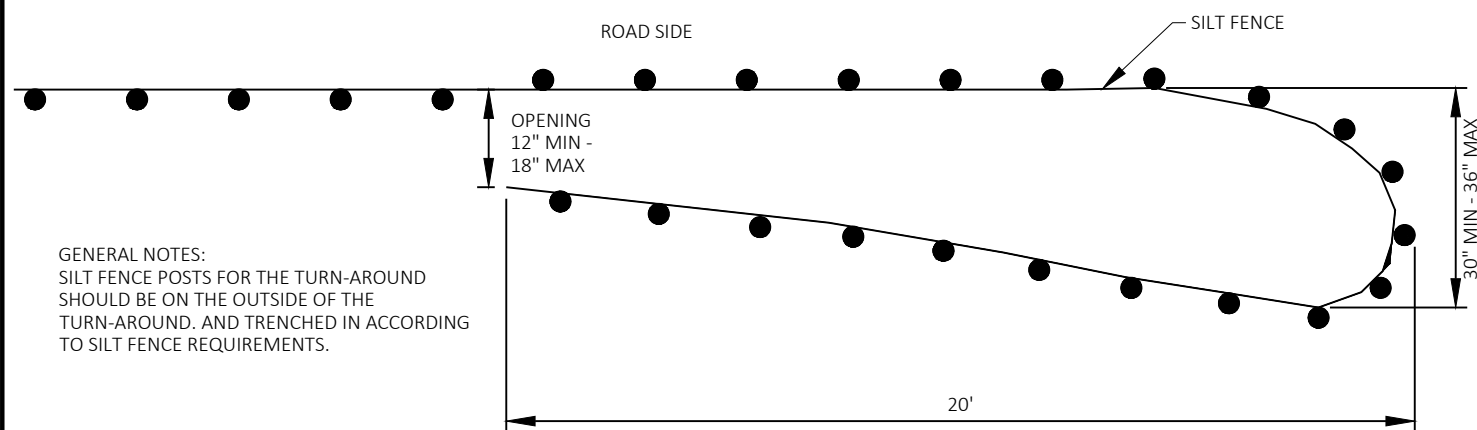
ARMY CORPS OF ENGINEERS BOAT YARD SIDE ROAD DETAIL

SIDE ROAD WITH CURB AND GUTTER TO REMAIN
STA 526+50 LT



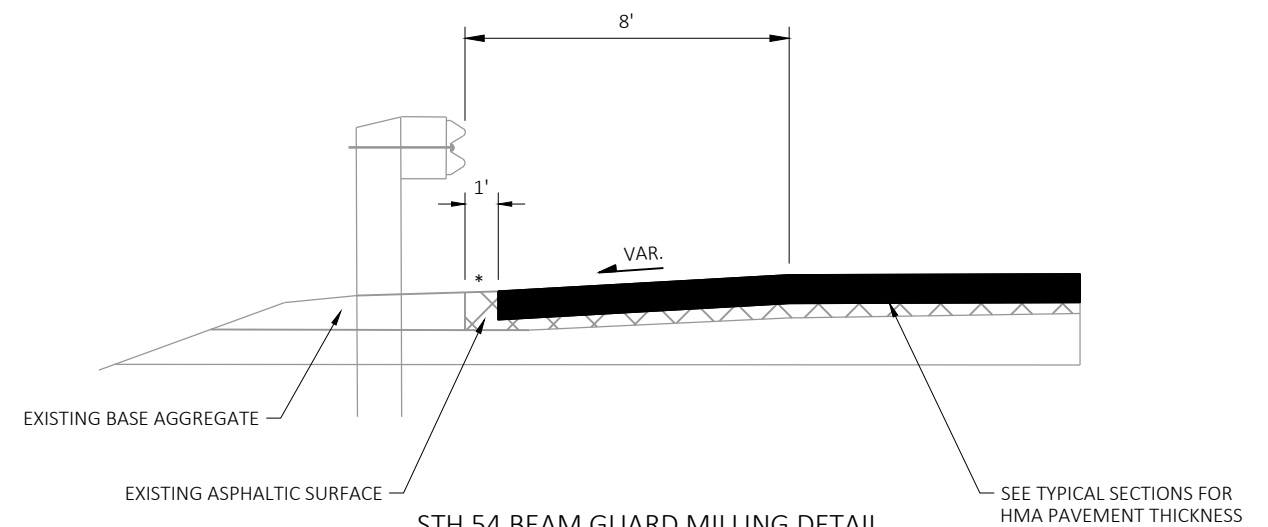
STH 35 BEAM GUARD MILLING DETAIL

* MAINTAIN EXISTING PAVEMENT ELEVATION
AT BEAM GUARD FACE OF RAIL



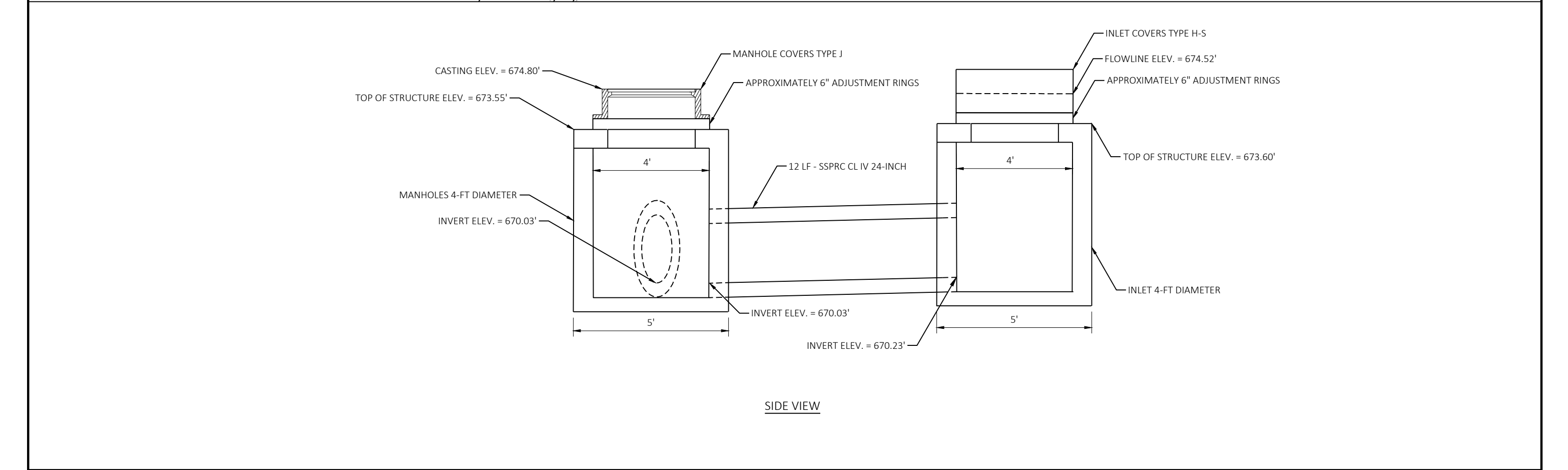
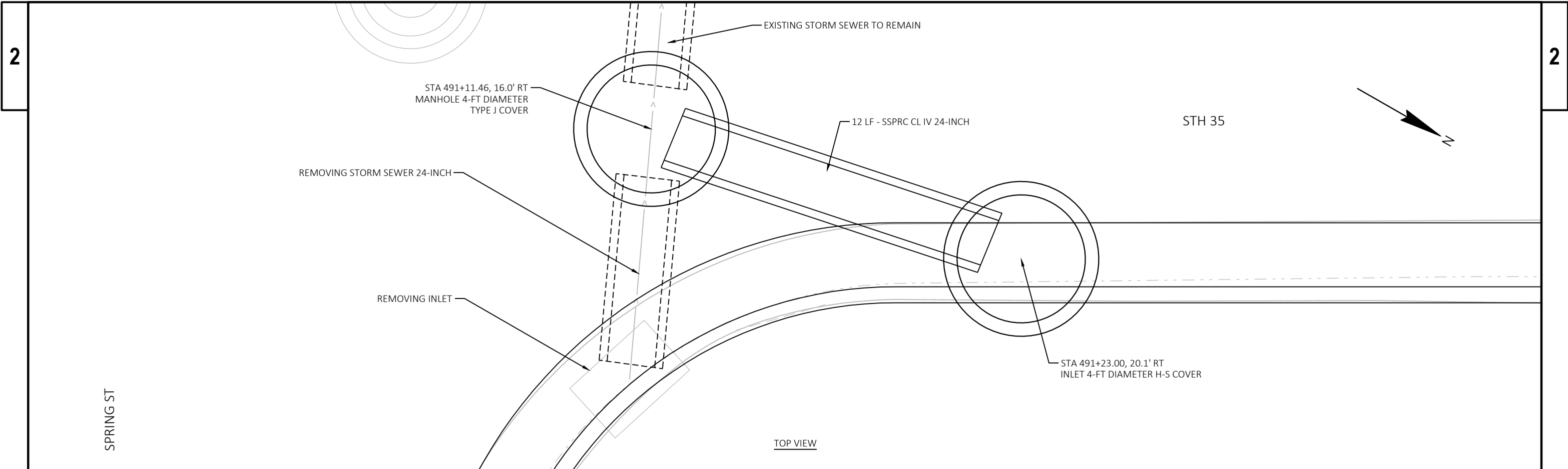
PLAN VIEW

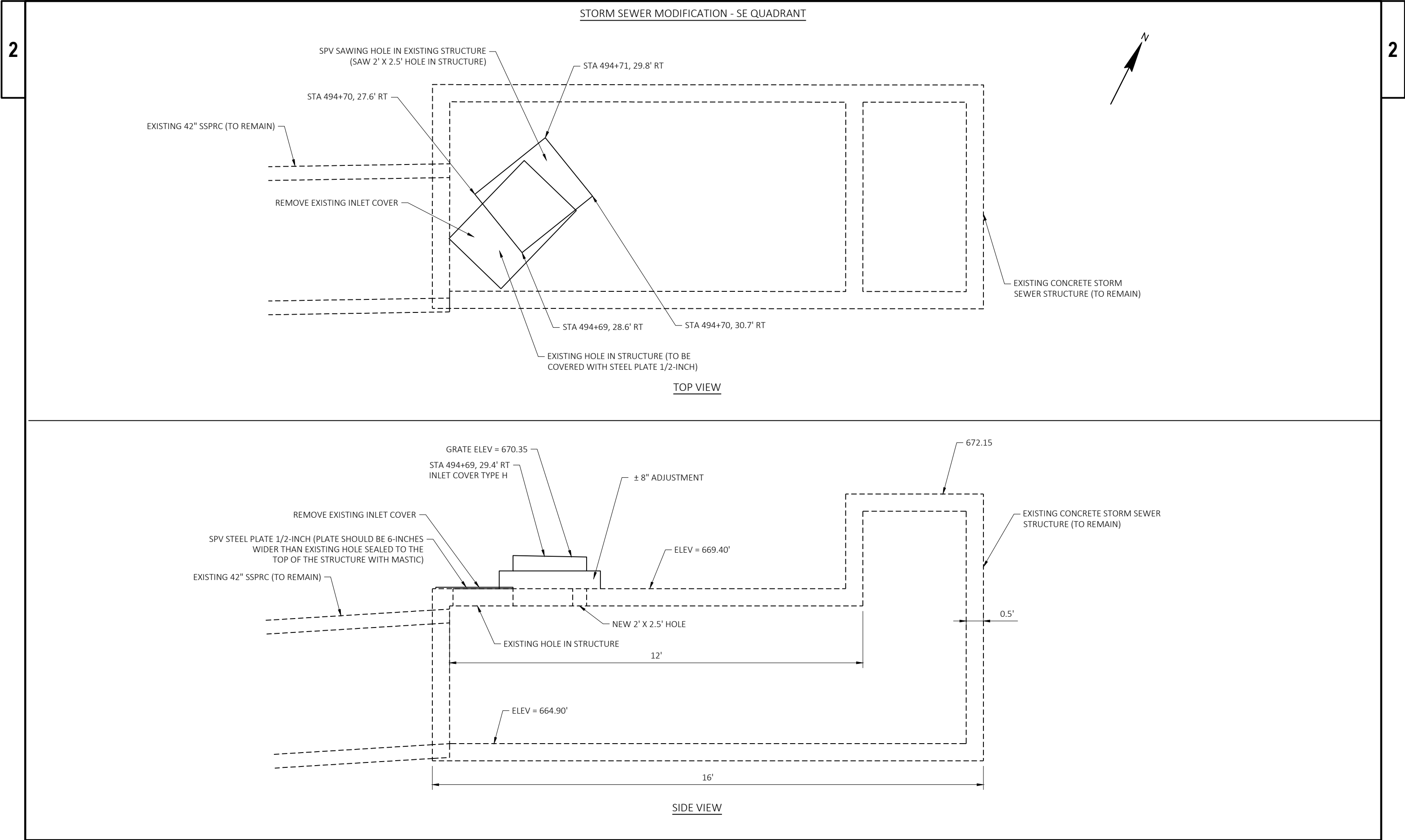
TEMPORARY SMALL ANIMAL TURN-AROUND

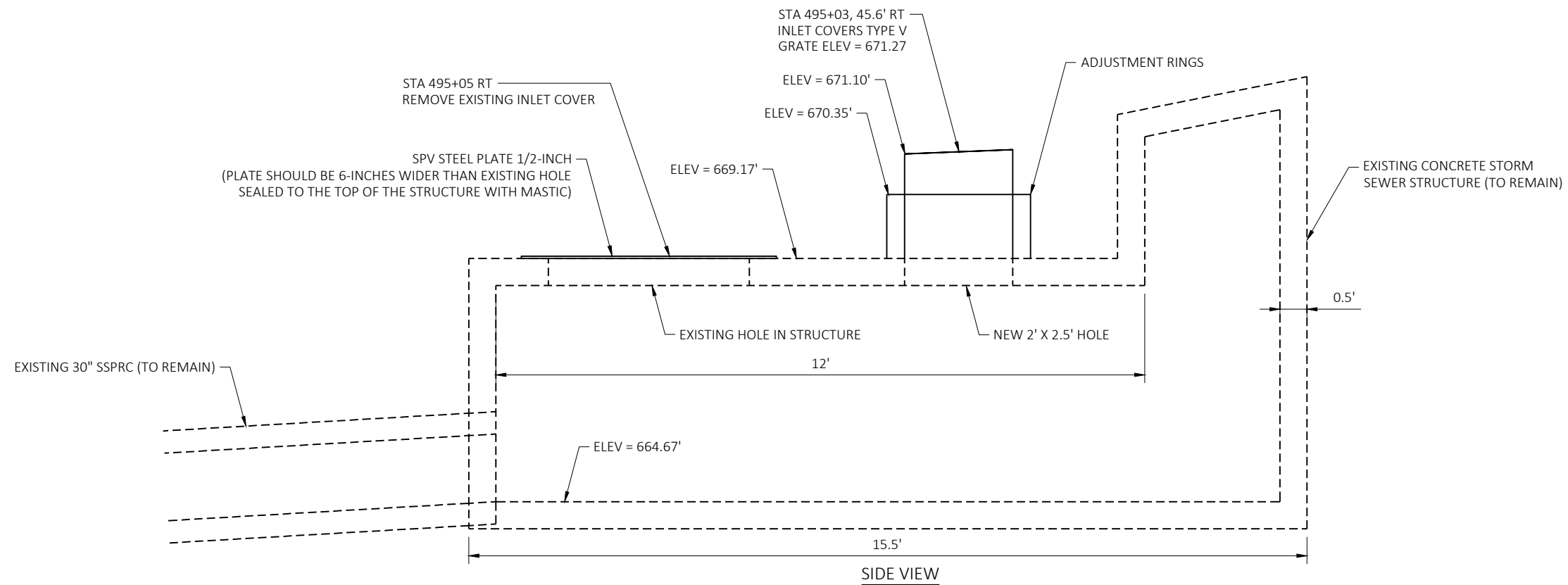
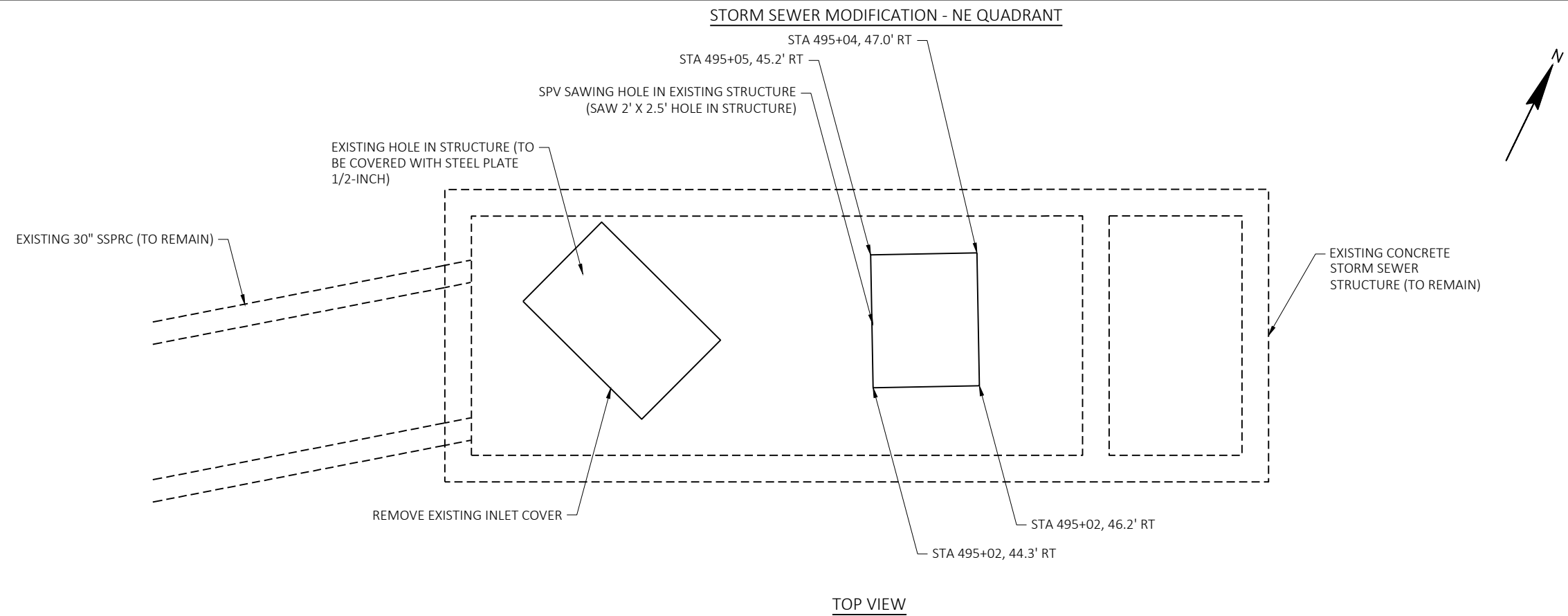


STH 54 BEAM GUARD MILLING DETAIL

* MAINTAIN EXISTING PAVEMENT ELEVATION
AT BEAM GUARD FACE OF RAIL









LEGEND

- ##### EROSION MAT URBAN CLASS I TYPE B
- ∞ CULVERT PIPE CHECK
- ~> SURFACE WATER FLOW
- SILT FENCE
(REMOVE UPON COMPLETION
OF GRADING & RESTORATION)
- x-x- FENCE CHAIN LINK SMALL ANIMAL BARRIER *
(INSTALLED UPON COMPLETION OF GRADING
& RESTORATION)
- ▨ MITIGATED WETLAND IMPACT AREA

NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".



LEGEND

- #####· EROSION MAT URBAN CLASS I TYPE B
- ∞ CULVERT PIPE CHECK
- ~> SURFACE WATER FLOW
- SILT FENCE
(REMOVE UPON COMPLETION
OF GRADING & RESTORATION)
- x-x- FENCE CHAIN LINK SMALL ANIMAL BARRIER *
(INSTALLED UPON COMPLETION OF GRADING
& RESTORATION)
- ▨ MITIGATED WETLAND IMPACT AREA

BNSF RAILROAD

APPROX. R/W

STA 244+86 - 6035025657
EXISTING 24-INCH CIRC - 62 LF
1 EA - APRON ENDWALLS FOR CIRC 24-INCH (LT)
1 EA - CONCRETE COLLARS (LT)
2 EA - MARKERS CULVERT END
RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR (LT)
EOP STA 244+86.95, 32.4' LT INV (O) = 656.38'

FIBER OPTIC
(COCHRANE COOPERATIVE TELEPHONE COMPANY)

ROCK BAGS SILT FENCE RELIEF, SEE DETAIL

TEMPORARY SMALL ANIMAL TURN-AROUND (TYP.), SEE DETAIL

STH 35

DELINEATED WETLANDS

APPROX. R/W

NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".

PROJECT NO: 7160-04-76

HWY: STH 35

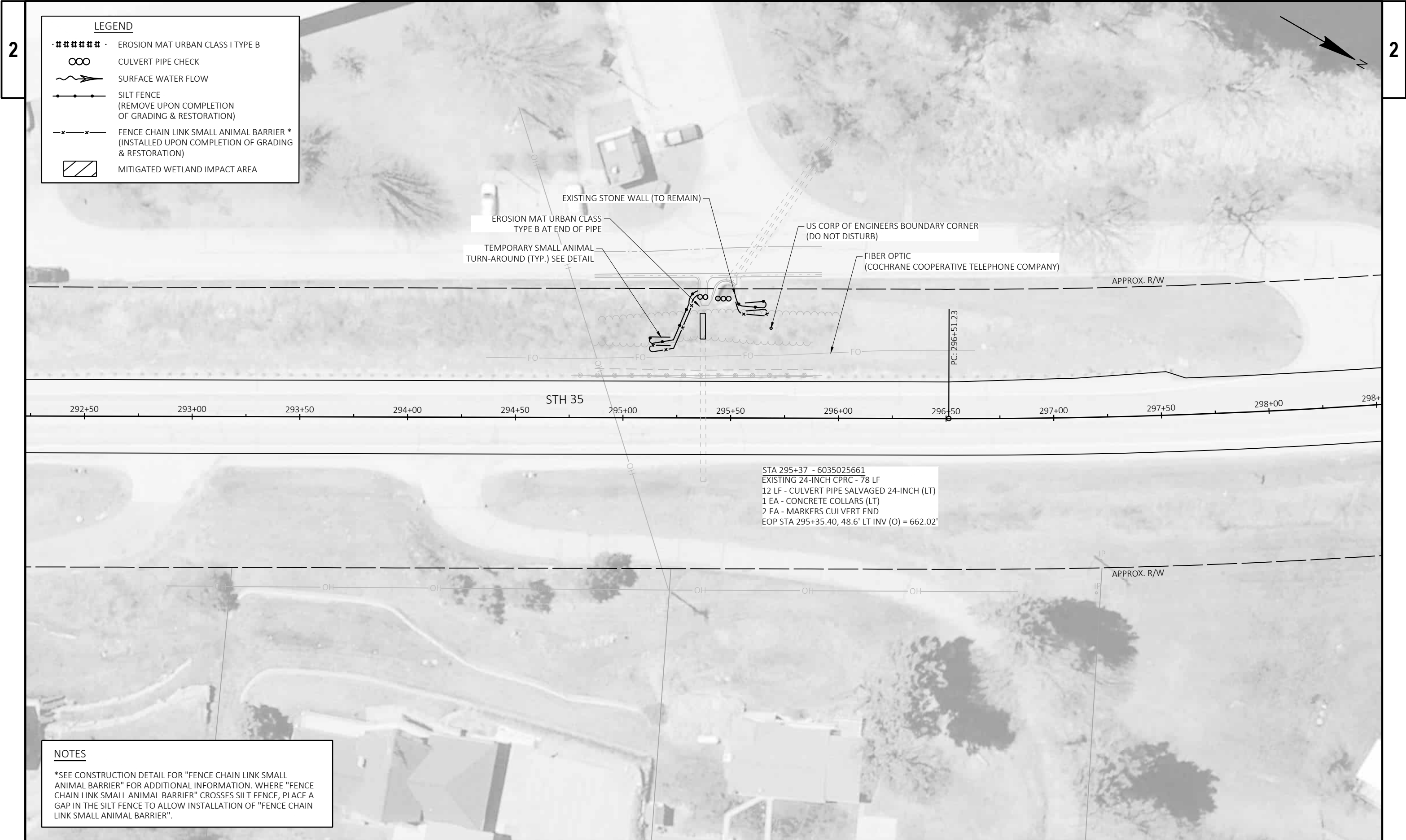
COUNTY: BUFFALO

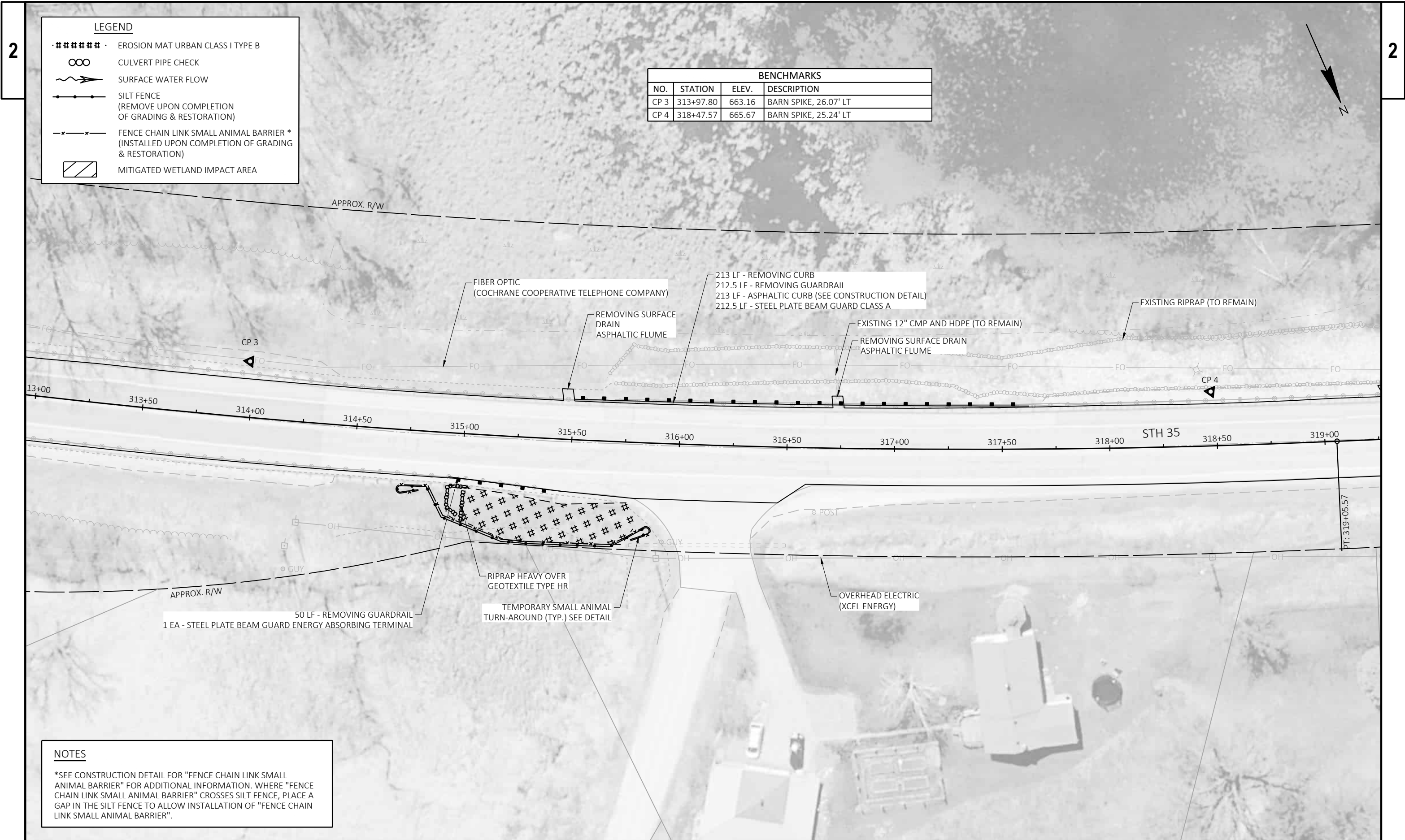
CONSTRUCTION DETAIL

SHEET

28

E





BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
CP 3	313+97.80	663.16	BARN SPIKE, 26.07' LT
CP 4	318+47.57	665.67	BARN SPIKE, 25.24' LT

LEGEND

#####

EROSION MAT URBAN CLASS I TYPE B

∞

CULVERT PIPE CHECK

SURFACE WATER FLOW

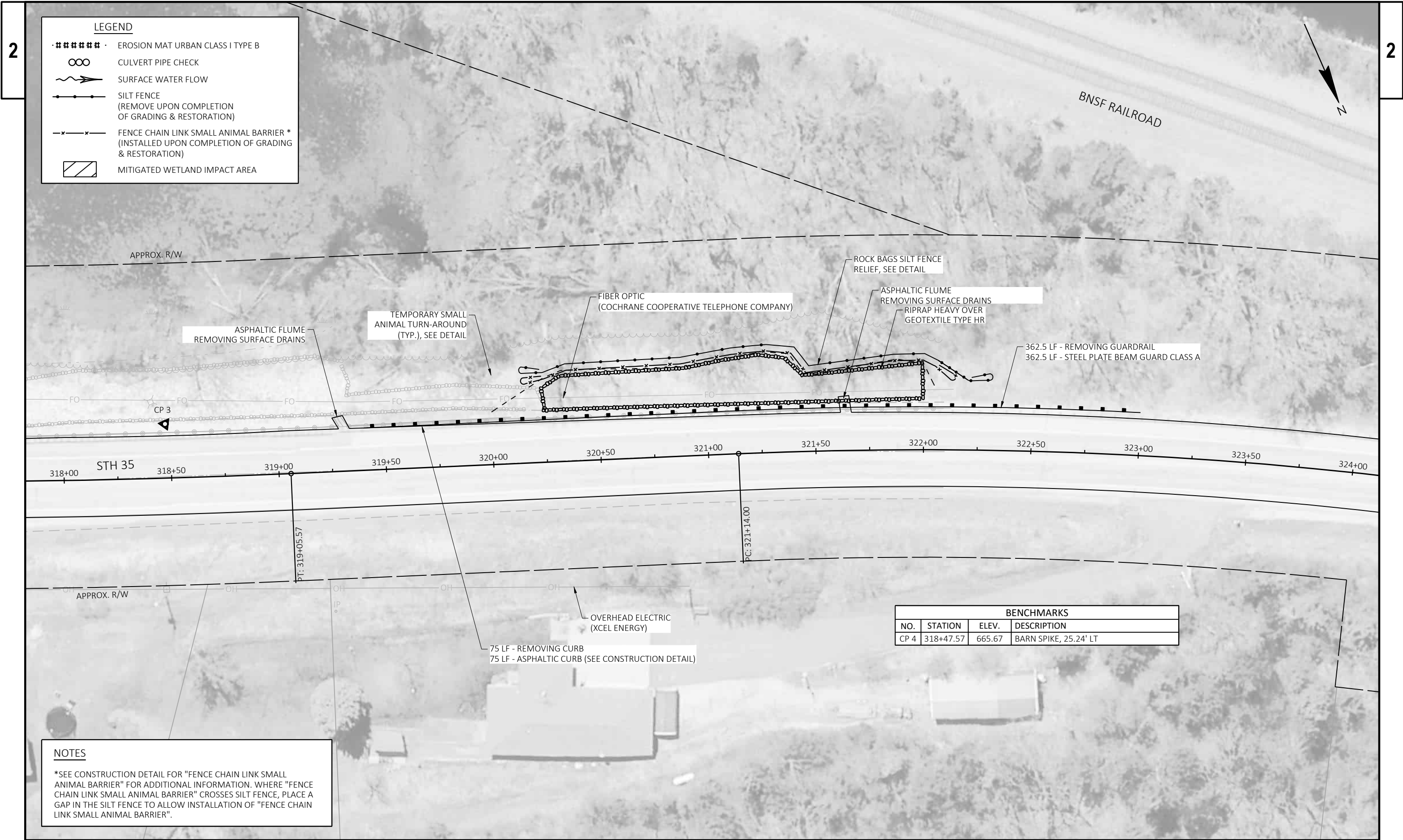
SILT FENCE
(REMOVE UPON COMPLETION
OF GRADING & RESTORATION)

FENCE CHAIN LINK SMALL ANIMAL BARRIER *
(INSTALLED UPON COMPLETION OF GRADING
& RESTORATION)

MITIGATED WETLAND IMPACT AREA

NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".



LEGEND

- ##### EROSION MAT URBAN CLASS I TYPE B
- ∞ CULVERT PIPE CHECK
- SURFACE WATER FLOW
- SILT FENCE
(REMOVE UPON COMPLETION
OF GRADING & RESTORATION)
- x-x- FENCE CHAIN LINK SMALL ANIMAL BARRIER *
(INSTALLED UPON COMPLETION OF GRADING
& RESTORATION)
- ▨ MITIGATED WETLAND IMPACT AREA

APPROX. R/W

ASPHALTIC FLUME
REMOVING SURFACE DRAINS

TEMPORARY SMALL
ANIMAL TURN-AROUND
(TYP.), SEE DETAIL

FIBER OPTIC
(COCHRANE COOPERATIVE TELEPHONE COMPANY)

ROCK BAGS SILT FENCE
RELIEF, SEE DETAIL

ASPHALTIC FLUME
REMOVING SURFACE DRAINS
RIPRAP HEAVY OVER
GEOTEXTILE TYPE HR

362.5 LF - REMOVING GUARDRAIL
362.5 LF - STEEL PLATE BEAM GUARD CLASS A

STH 35

318+00 318+50 319+00 319+50 320+00 320+50 321+00 321+50 322+00 322+50 323+00 323+50 324+00

PT: 319+05.57

PC: 321+14.00

APPROX. R/W

OVERHEAD ELECTRIC
(XCEL ENERGY)

75 LF - REMOVING CURB
75 LF - ASPHALTIC CURB (SEE CONSTRUCTION DETAIL)

BENCHMARKS

NO.	STATION	ELEV.	DESCRIPTION
CP 4	318+47.57	665.67	BARN SPIKE, 25.24' LT

NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".

PROJECT NO: 7160-04-76

HWY: STH 35

COUNTY: BUFFALO

CONSTRUCTION DETAIL

SHEET

31

E

FILE NAME : G:\00\00093\00093543\CADD\SHEETS\PLAN\021008_CD.DWG
LAYOUT NAME - 18

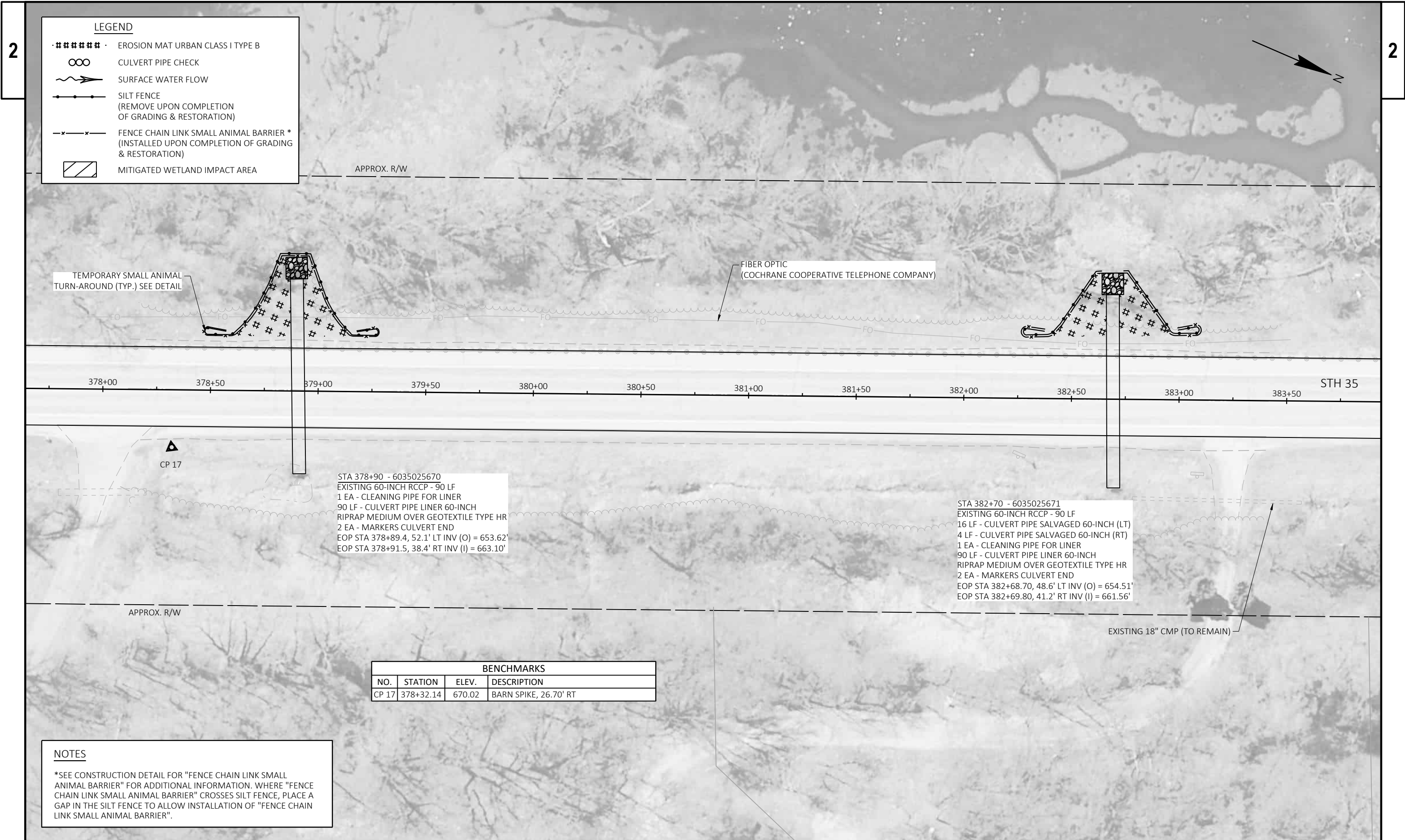
PLOT DATE : 10/31/2025 9:08 AM

PLOT BY : BOBBI MAXWELL

PLOT NAME :

PLOT SCALE : 1 IN=40 FT

WISDOT/CADDs SHEET 42



LEGEND

- ##### EROSION MAT URBAN CLASS I TYPE B
- ∞ CULVERT PIPE CHECK
- ~> SURFACE WATER FLOW
- SILT FENCE
(REMOVE UPON COMPLETION
OF GRADING & RESTORATION)
- x-x-x- FENCE CHAIN LINK SMALL ANIMAL BARRIER *
(INSTALLED UPON COMPLETION OF GRADING
& RESTORATION)
- ▨ MITIGATED WETLAND IMPACT AREA

APPROX. R/W

TEMPORARY SMALL ANIMAL
TURN-AROUND (TYP.) SEE DETAIL

FIBER OPTIC
(COCHRANE COOPERATIVE TELEPHONE COMPANY)

378+00 378+50 379+00 379+50 380+00 380+50 381+00 381+50 382+00 382+50 383+00 383+50

STH 35

CP 17

STA 378+90 - 6035025670
EXISTING 60-INCH RCCP - 90 LF
1 EA - CLEANING PIPE FOR LINER
90 LF - CULVERT PIPE LINER 60-INCH
RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
2 EA - MARKERS CULVERT END
EOP STA 378+89.4, 52.1' LT INV (O) = 653.62'
EOP STA 378+91.5, 38.4' RT INV (I) = 663.10'

STA 382+70 - 6035025671
EXISTING 60-INCH RCCP - 90 LF
16 LF - CULVERT PIPE SALVAGED 60-INCH (LT)
4 LF - CULVERT PIPE SALVAGED 60-INCH (RT)
1 EA - CLEANING PIPE FOR LINER
90 LF - CULVERT PIPE LINER 60-INCH
RIPRAP MEDIUM OVER GEOTEXTILE TYPE HR
2 EA - MARKERS CULVERT END
EOP STA 382+68.70, 48.6' LT INV (O) = 654.51'
EOP STA 382+69.80, 41.2' RT INV (I) = 661.56'

APPROX. R/W

EXISTING 18" CMP (TO REMAIN)

BENCHMARKS

NO.	STATION	ELEV.	DESCRIPTION
CP 17	378+32.14	670.02	BARN SPIKE, 26.70' RT

NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".

PROJECT NO: 7160-04-76

HWY: STH 35

COUNTY: BUFFALO

CONSTRUCTION DETAIL

SHEET

32

E

FILE NAME : G:\00\00093\00093543\CADD\SHETSPLAN\021008_CD.DWG
LAYOUT NAME - 19

PLOT DATE : 10/31/2025 9:08 AM

PLOT BY : BOBBI MAXWELL

PLOT NAME :

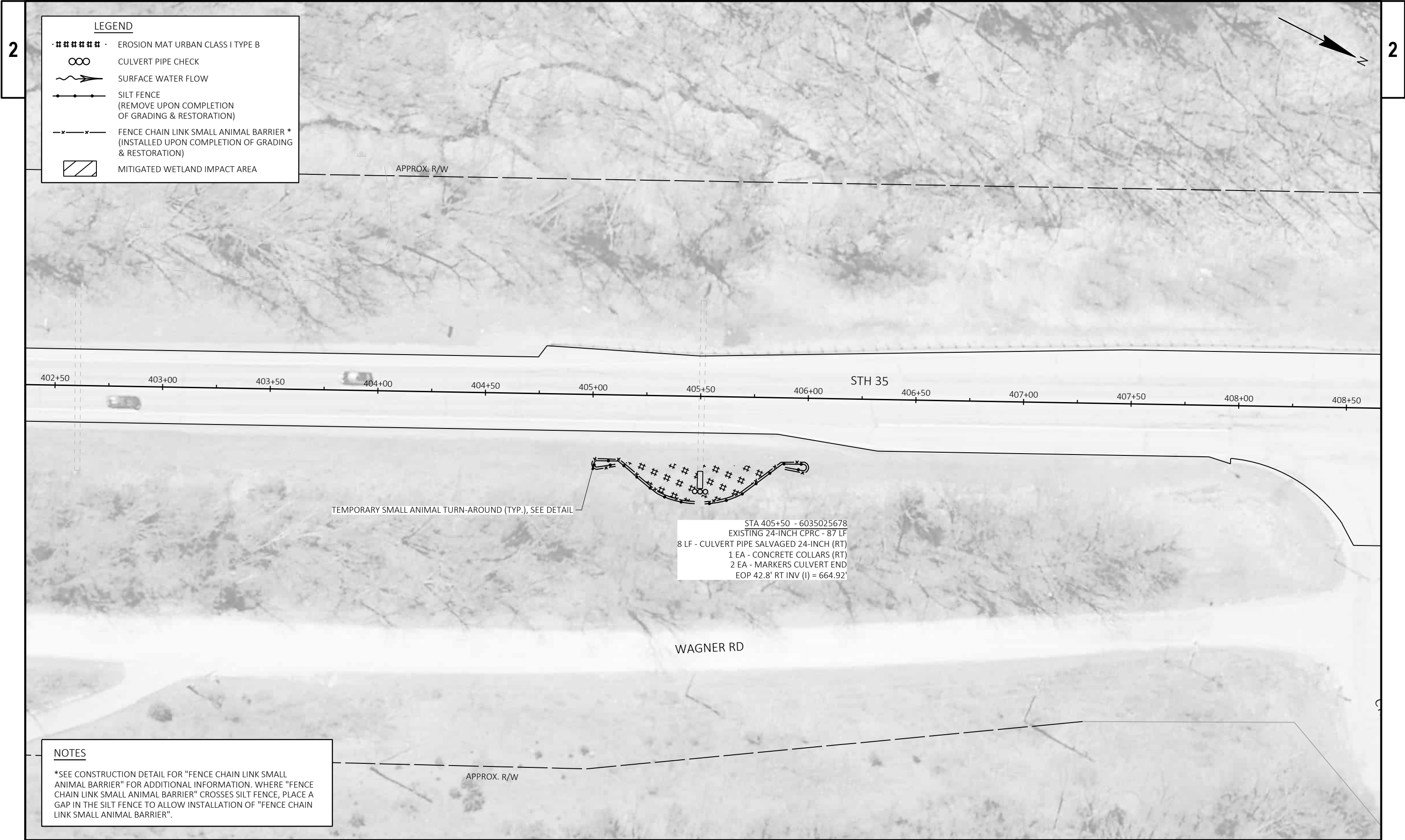
PLOT SCALE : 1 IN=40 FT

WISDOT/CADDs SHEET 42



NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".



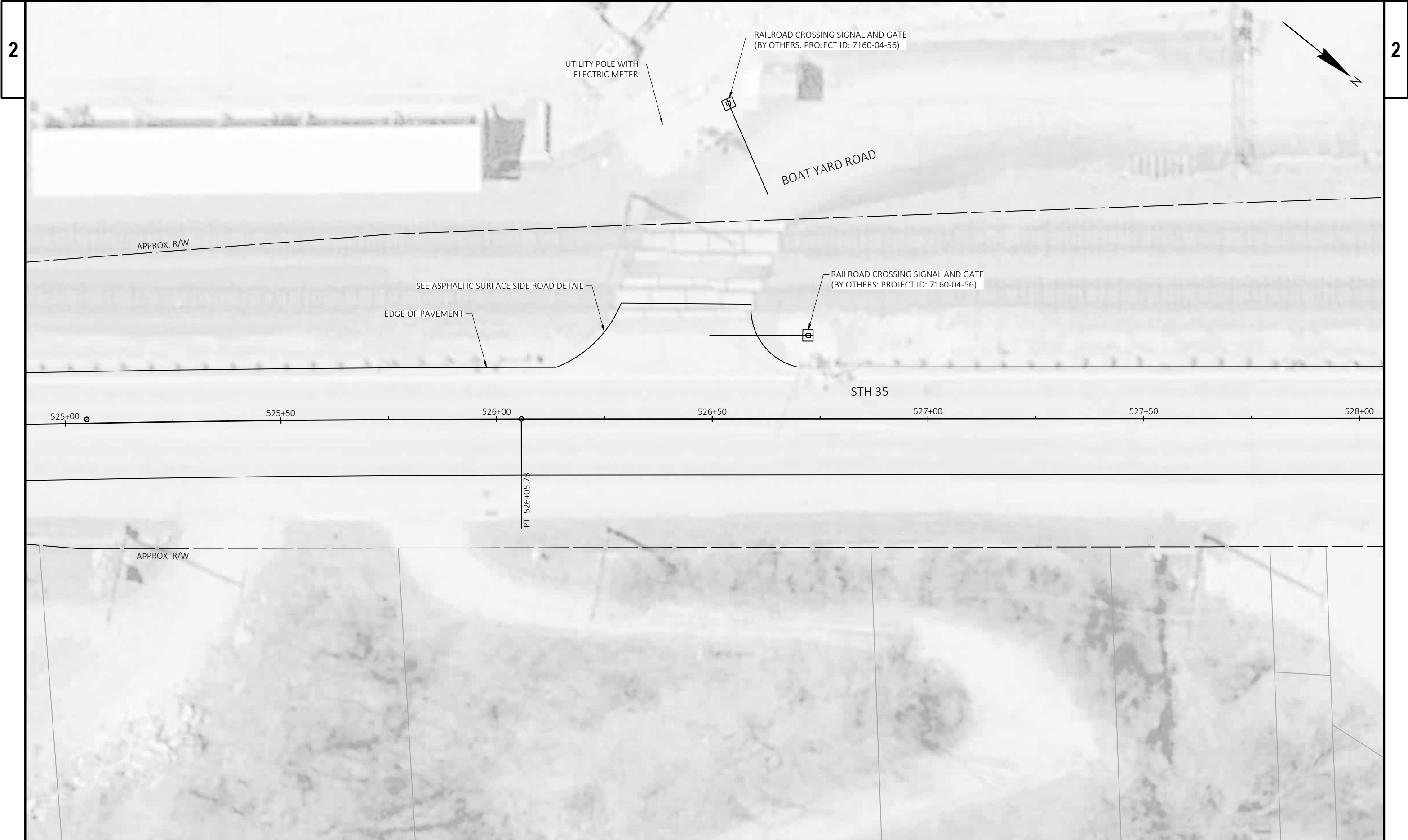
NOTES

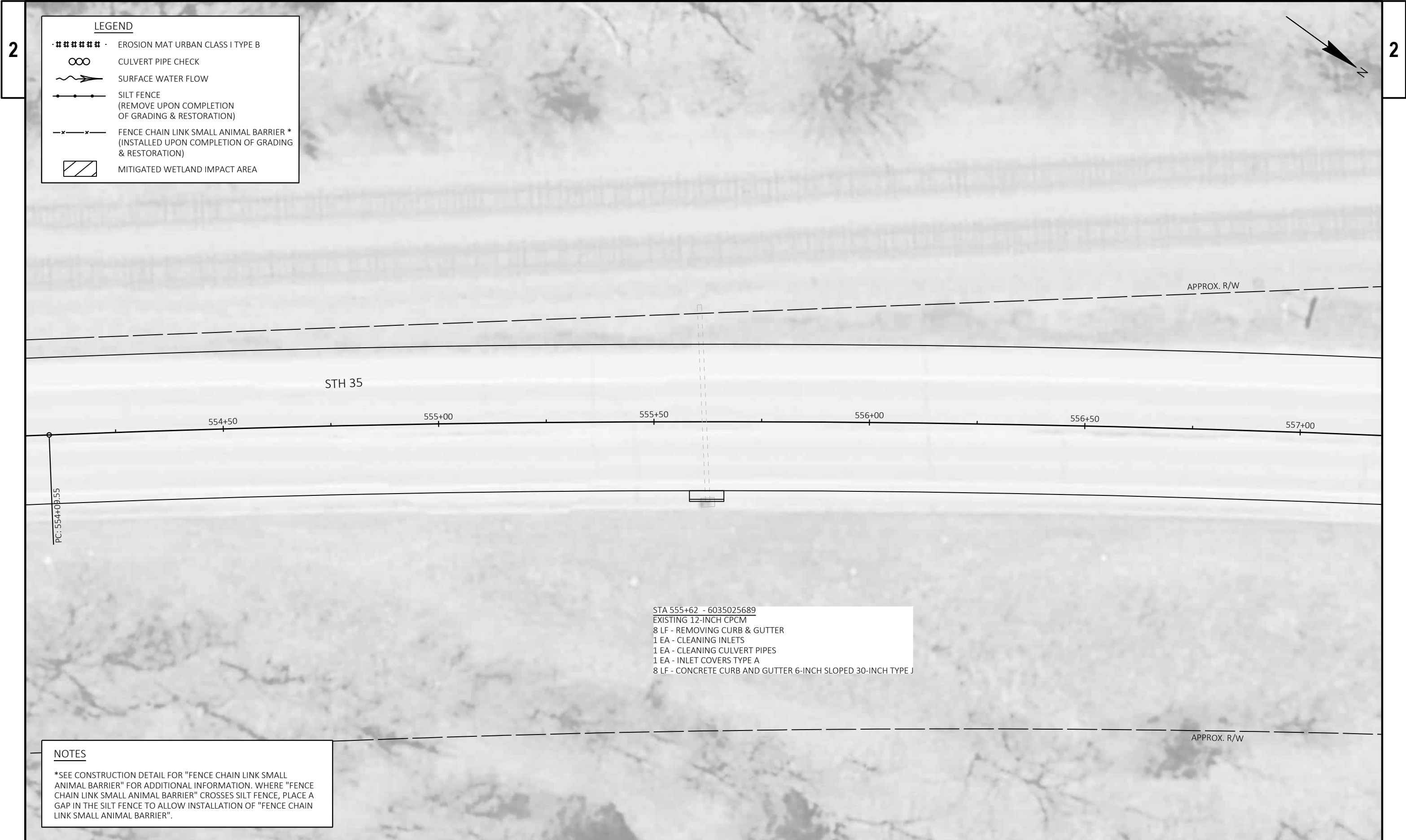
*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".



NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".

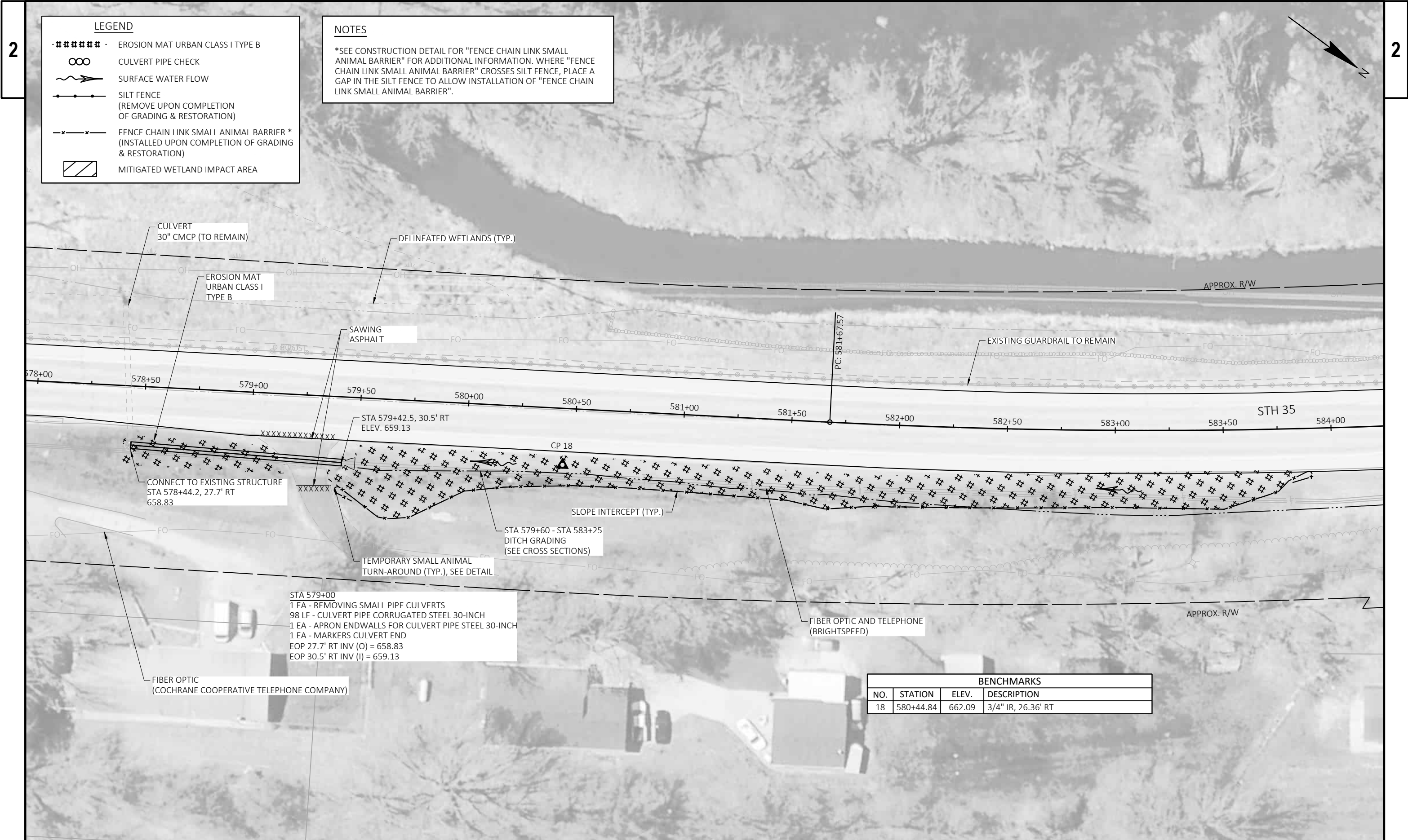




NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".

STA 555+62 - 6035025689
EXISTING 12-INCH CPCM
8 LF - REMOVING CURB & GUTTER
1 EA - CLEANING INLETS
1 EA - CLEANING CULVERT PIPES
1 EA - INLET COVERS TYPE A
8 LF - CONCRETE CURB AND GUTTER 6-INCH SLOPED 30-INCH TYPE J



LEGEND

#####

EROSION MAT URBAN CLASS I TYPE B

∞

CULVERT PIPE CHECK

~>

SURFACE WATER FLOW

—•—•—•—

SILT FENCE
(REMOVE UPON COMPLETION
OF GRADING & RESTORATION)

—x—x—x—

FENCE CHAIN LINK SMALL ANIMAL BARRIER *
(INSTALLED UPON COMPLETION OF GRADING
& RESTORATION)

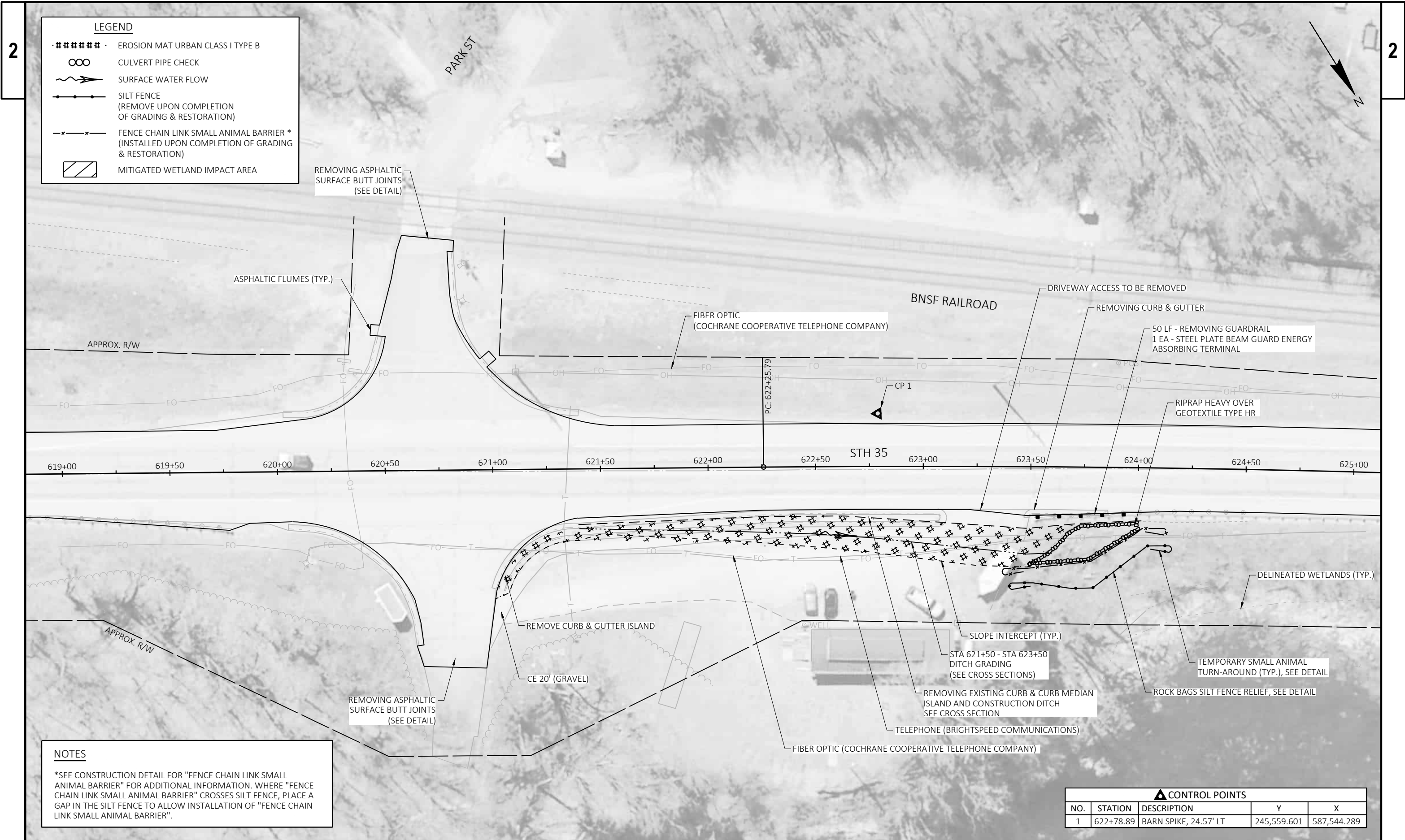
▨

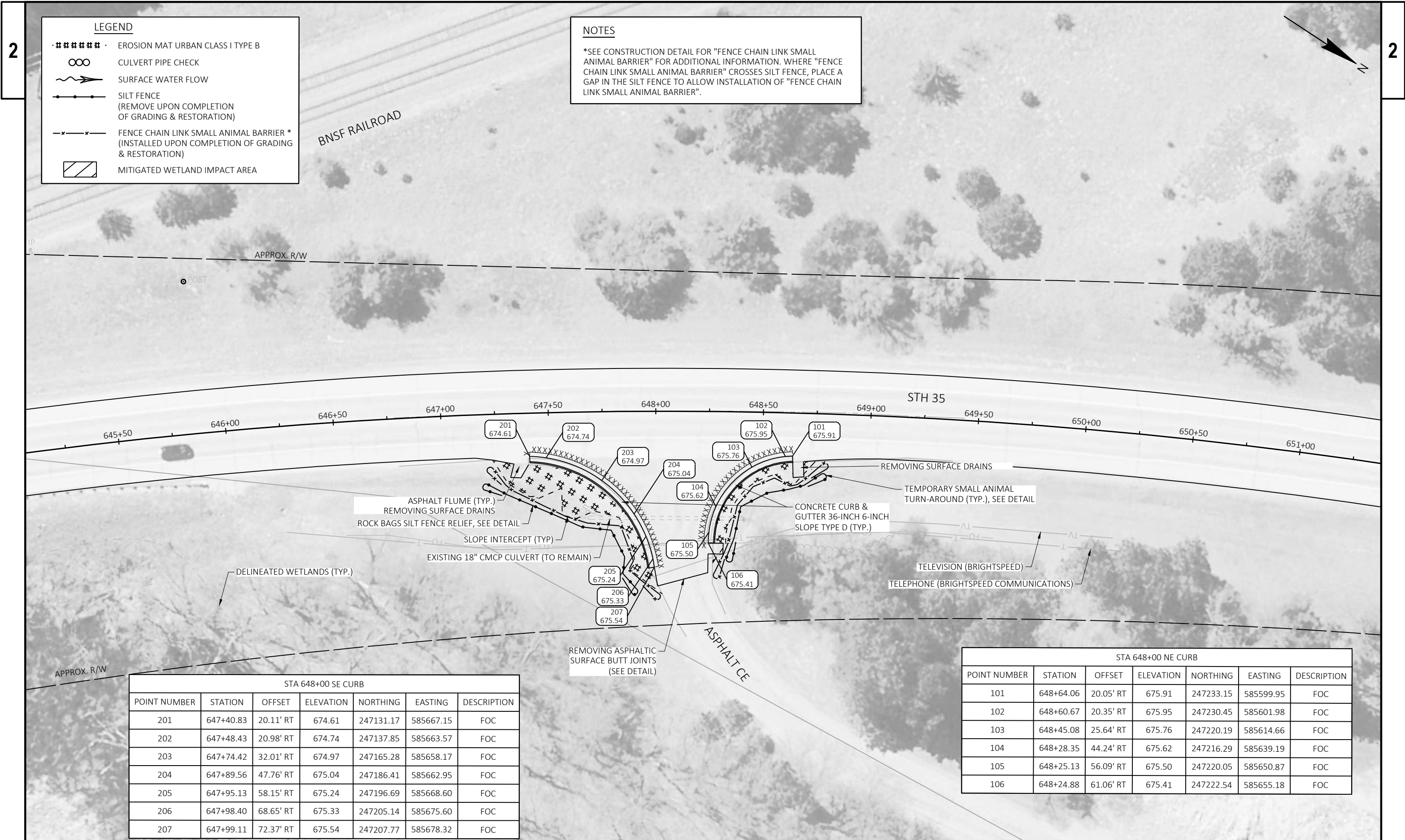
MITIGATED WETLAND IMPACT AREA

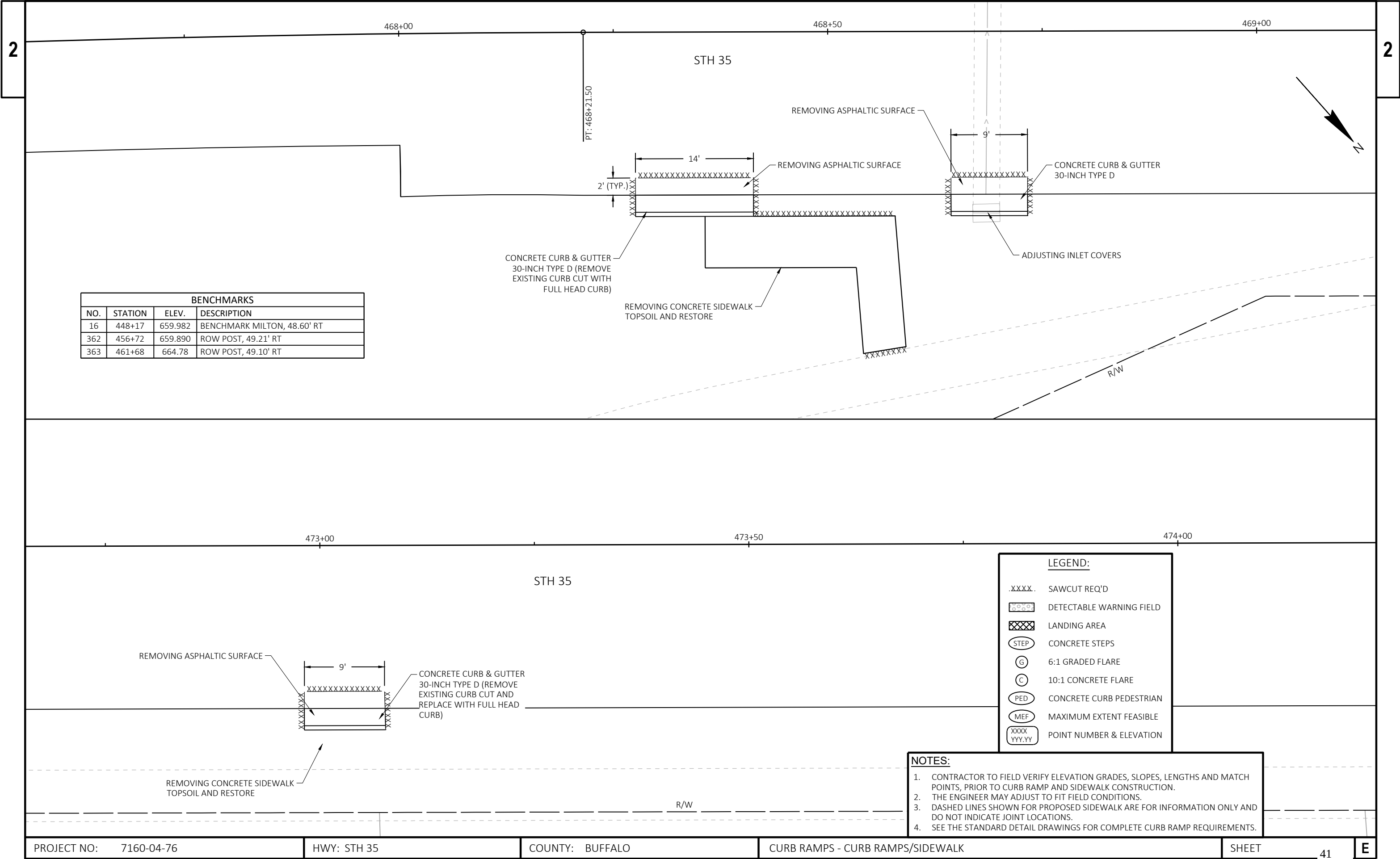
NOTES

*SEE CONSTRUCTION DETAIL FOR "FENCE CHAIN LINK SMALL ANIMAL BARRIER" FOR ADDITIONAL INFORMATION. WHERE "FENCE CHAIN LINK SMALL ANIMAL BARRIER" CROSSES SILT FENCE, PLACE A GAP IN THE SILT FENCE TO ALLOW INSTALLATION OF "FENCE CHAIN LINK SMALL ANIMAL BARRIER".

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
18	580+44.84	662.09	3/4" IR, 26.36' RT



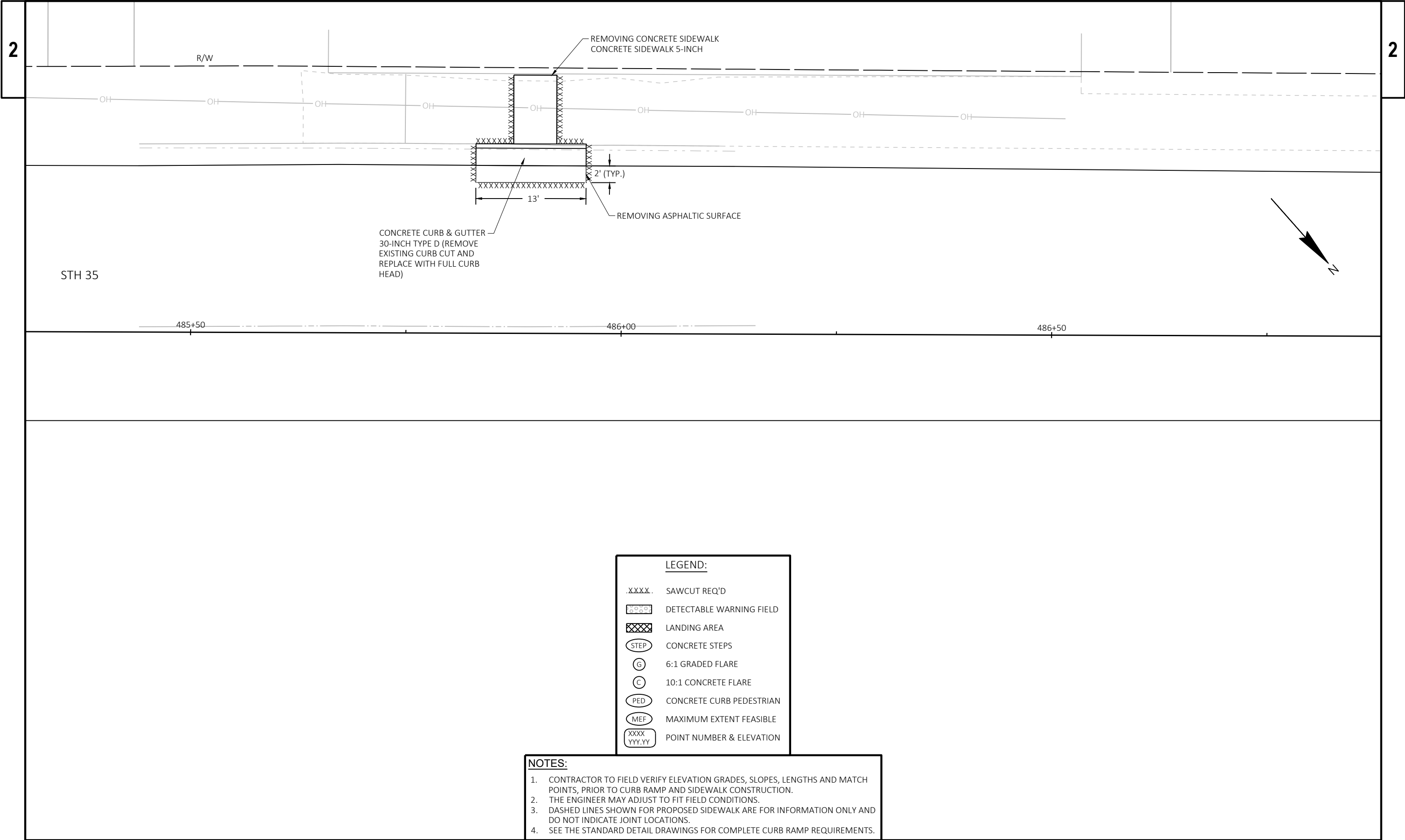




BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
16	448+17	659.982	BENCHMARK MILTON, 48.60' RT
362	456+72	659.890	ROW POST, 49.21' RT
363	461+68	664.78	ROW POST, 49.10' RT

LEGEND:	
.XXXX.	SAWCUT REQ'D
XXXXXX	DETECTABLE WARNING FIELD
XXXXXX	LANDING AREA
STEP	CONCRETE STEPS
G	6:1 GRADED FLARE
C	10:1 CONCRETE FLARE
PED	CONCRETE CURB PEDESTRIAN
MEF	MAXIMUM EXTENT FEASIBLE
XXXX YYY.YY	POINT NUMBER & ELEVATION

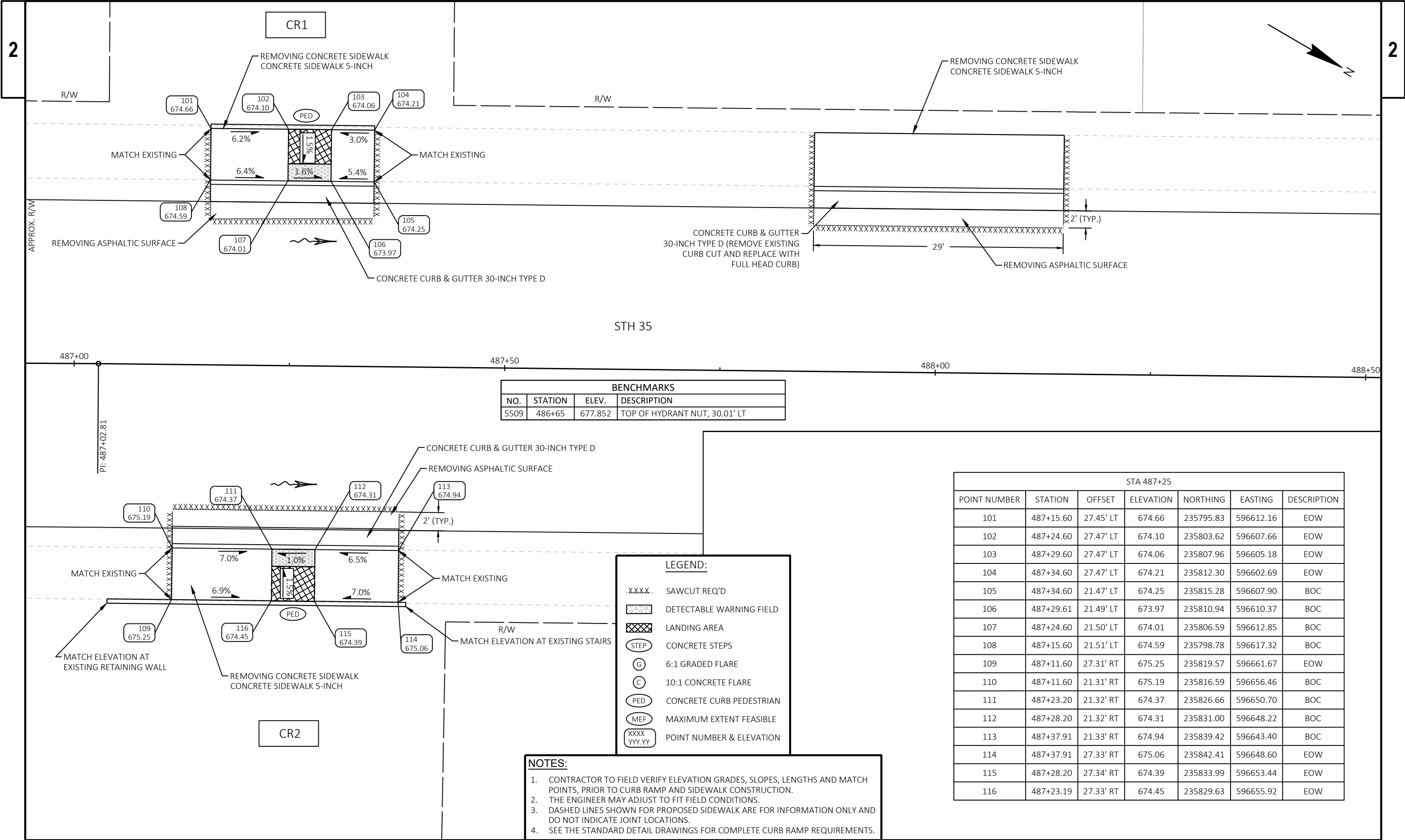
- NOTES:**
1. CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 2. THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
 4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

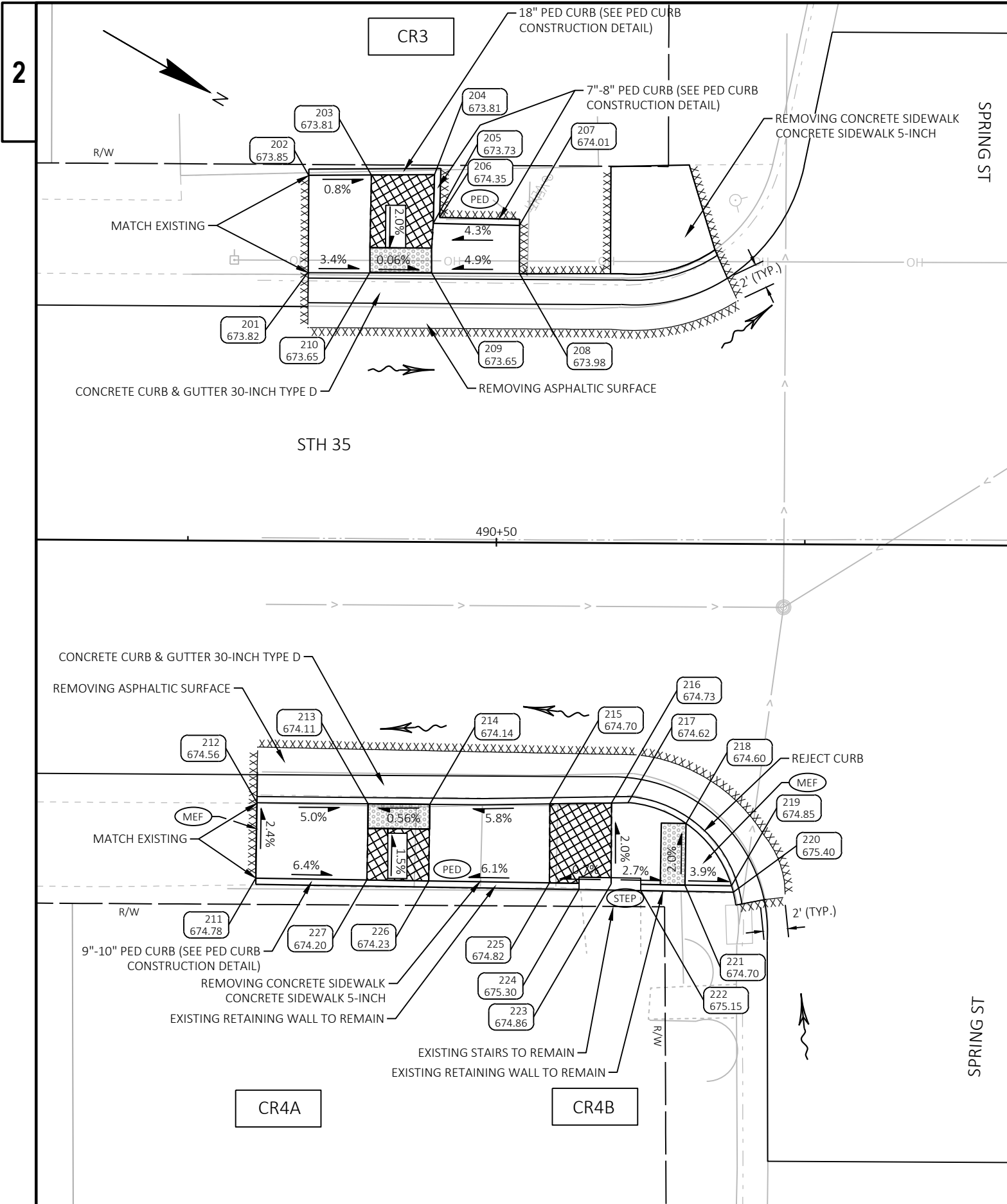


LEGEND:

.XXXX.	SAWCUT REQ'D
	DETECTABLE WARNING FIELD
	LANDING AREA
	CONCRETE STEPS
	6:1 GRADED FLARE
	10:1 CONCRETE FLARE
	CONCRETE CURB PEDESTRIAN
	MAXIMUM EXTENT FEASIBLE
	POINT NUMBER & ELEVATION

- NOTES:**
1. CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 2. THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
 4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.





SPRING ST SE & SW QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
201	490+34.61	21.82' LT	673.82	236075.43	596458.48	BOC
202	490+34.60	29.65' LT	673.85	236071.53	596451.68	EOW
203	490+39.69	29.71' LT	673.81	236075.92	596449.11	EOW
204	490+44.80	29.77' LT	673.81	236080.32	596446.51	EOW
205	490+44.73	25.82' LT	673.73	236082.23	596449.98	EOW
206	490+45.24	26.30' LT	674.35	236082.42	596449.30	PED
207	490+51.71	25.69' LT	674.01	236088.35	596446.61	EOW
208	490+51.73	21.82' LT	673.98	236090.28	596449.97	BOC
209	490+44.61	21.82' LT	673.65	236084.11	596453.51	BOC
210	490+39.61	21.82' LT	673.65	236079.77	596455.99	BOC
211	490+30.67	27.34' RT	674.78	236096.45	596503.09	EOW
212	490+30.73	21.23' RT	674.56	236093.46	596497.76	BOC
213	490+39.73	21.25' RT	674.11	236101.28	596493.31	BOC
214	490+44.73	21.27' RT	674.14	236105.63	596490.83	BOC
215	490+54.46	21.17' RT	674.70	236114.02	596485.91	BOC
216	490+59.46	21.07' RT	674.73	236118.31	596483.34	BOC
217	490+60.79	21.04' RT	674.62	236119.45	596482.66	BOC
218	490+65.50	22.69' RT	674.60	236124.36	596481.75	BOC
219	490+69.22	27.73' RT	674.85	236130.09	596484.27	BOC
220	490+69.36	28.23' RT	675.40	236130.47	596484.63	PED
221	490+65.45	27.69' RT	674.70	236126.80	596486.11	EOW
222	490+61.86	28.15' RT	675.15	236123.92	596488.29	PED
223	490+59.46	27.63' RT	674.86	236121.57	596489.03	EOW
224	490+56.86	28.10' RT	675.30	236119.55	596490.74	PED
225	490+54.47	27.58' RT	674.82	236117.22	596491.47	EOW
226	490+44.68	27.48' RT	674.23	236108.67	596496.25	EOW
227	490+39.67	27.43' RT	674.20	236104.30	596498.70	EOW

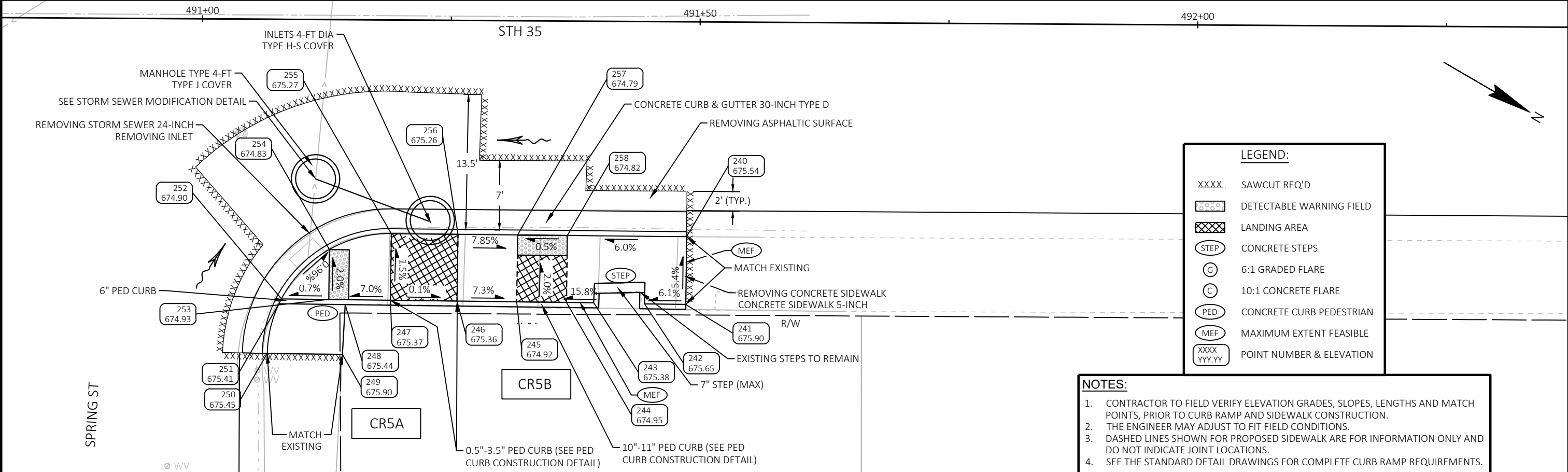
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
CP6	490+00	674.41	BARN SPIKE, 28.15' RT

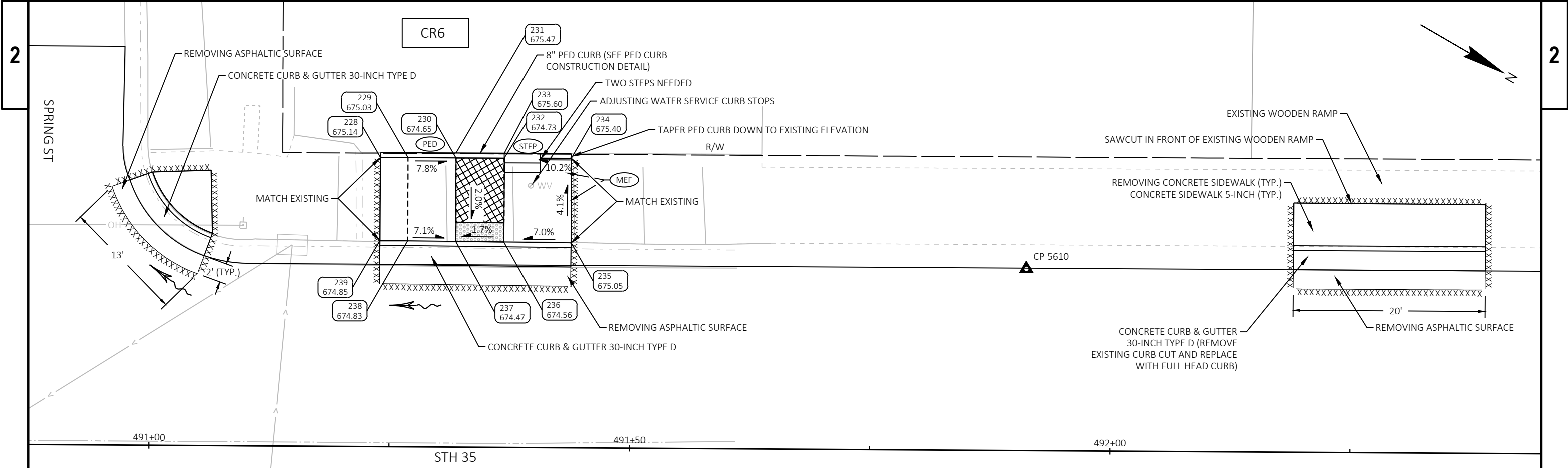
LEGEND:	
XXXX.	SAWCUT REQ'D
XXXX	DETECTABLE WARNING FIELD
XXXX	LANDING AREA
STEP	CONCRETE STEPS
G	6:1 GRADED FLARE
C	10:1 CONCRETE FLARE
PED	CONCRETE CURB PEDESTRIAN
MEF	MAXIMUM EXTENT FEASIBLE
XXXX YYY.YY	POINT NUMBER & ELEVATION

- NOTES:
- CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 - THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
 - DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
 - SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

SPRING ST NE QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
240	491+48.78	21.58' RT	675.54	236196.06	596439.38	BOC
241	491+48.71	28.37' RT	675.90	236199.39	596445.31	EOW
242	491+44.60	28.34' RT	675.65	236195.80	596447.33	EOW
243	491+39.48	28.27' RT	675.38	236191.32	596449.81	EOW
244	491+36.74	28.25' RT	674.95	236188.94	596451.15	EOW
245	491+31.74	28.22' RT	674.92	236184.59	596453.61	EOW
246	491+25.74	28.18' RT	675.36	236179.36	596456.56	EOW
247	491+19.06	28.13' RT	675.37	236173.54	596459.85	EOW
248	491+14.50	28.61' RT	675.44	236169.82	596462.52	PED
249	491+14.27	33.60' RT	675.90	236172.10	596466.97	EOW
250	491+06.71	33.56' RT	675.45	236165.51	596470.69	BOC
251	491+07.86	28.56' RT	675.41	236164.03	596465.79	PED
252	491+08.10	28.06' RT	674.90	236164.00	596465.23	BOC
253	491+12.86	28.09' RT	674.93	236168.14	596462.89	EOW
254	491+12.89	23.09' RT	674.83	236165.68	596458.53	BOC
255	491+19.10	21.46' RT	675.27	236170.26	596454.03	BOC
256	491+25.81	21.48' RT	675.26	236176.09	596450.72	BOC
257	491+31.79	21.51' RT	674.79	236181.29	596447.77	BOC
258	491+36.79	21.53' RT	674.82	236185.64	596445.30	BOC

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
5610	491+91	674.714	PK NAIL, 18.92' LT





BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
5610	491+91	674.714	PK NAIL, 18.92' LT

LEGEND:	
.XXXX.	SAWCUT REQ'D
	DETECTABLE WARNING FIELD
	LANDING AREA
	CONCRETE STEPS
	6:1 GRADED FLARE
	10:1 CONCRETE FLARE
	CONCRETE CURB PEDESTRIAN
	MAXIMUM EXTENT FEASIBLE
	POINT NUMBER & ELEVATION

- NOTES:**
1. CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 2. THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
 4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

SPRING ST NW QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
228	491+23.92	30.12' LT	675.14	236148.80	596406.88	EOW
229	491+26.80	30.12' LT	675.03	236151.30	596405.45	EOW
230	491+31.80	30.10' LT	674.65	236155.65	596402.98	EOW
231	491+31.80	30.63' LT	675.47	236155.38	596402.52	PED
232	491+36.80	30.12' LT	674.73	236159.98	596400.48	EOW
233	491+36.80	30.64' LT	675.60	236159.72	596400.03	STEP
234	491+43.77	30.15' LT	675.40	236166.02	596396.99	EOW
235	491+43.82	21.33' LT	675.05	236170.43	596404.62	BOC
236	491+36.81	21.38' LT	674.56	236164.33	596408.05	BOC
237	491+31.81	21.42' LT	674.47	236159.97	596410.51	BOC
238	491+26.81	21.45' LT	674.83	236155.62	596412.96	BOC
239	491+23.93	21.47' LT	674.85	236153.11	596414.38	BOC

EAGLE ST - SE QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
301	494+49.13	28.20' RT	671.60	236461.23	596294.74	EOW
302	494+49.39	21.43' RT	671.23	236457.78	596288.92	BOC
303	494+57.63	22.36' RT	671.13	236465.99	596284.37	BOC
304	494+59.36	22.60' RT	670.94	236467.71	596283.40	BOC
305	494+64.62	24.35' RT	670.53	236473.54	596281.12	BOC
306	494+67.92	27.57' RT	670.47	236478.54	596281.20	BOC
306A	494+69.49	29.40' RT	670.44	236481.13	596281.42	FLOW
307	494+70.13	32.50' RT	671.33	236483.72	596283.29	BOC
308	494+70.81	39.29' RT	672.22	236488.76	596287.90	FLOW
308A	494+70.42	39.20' RT	672.22	236488.34	596288.15	BOC
309	494+65.38	31.11' RT	670.54	236478.47	596285.83	EOW
310	494+65.54	31.67' RT	671.44	236478.96	596286.15	PED
311	494+60.77	29.93' RT	670.64	236473.43	596288.27	EOW
312	494+55.69	28.82' RT	671.06	236467.95	596290.93	EOW
313	494+53.66	28.60' RT	671.23	236465.86	596292.11	EOW

LEGEND:

- .XXXX. SAWCUT REQ'D
- DETECTABLE WARNING FIELD
- LANDING AREA
- CONCRETE STEPS
- 6:1 GRADED FLARE
- 10:1 CONCRETE FLARE
- CONCRETE CURB PEDESTRIAN
- MAXIMUM EXTENT FEASIBLE
- POINT NUMBER & ELEVATION

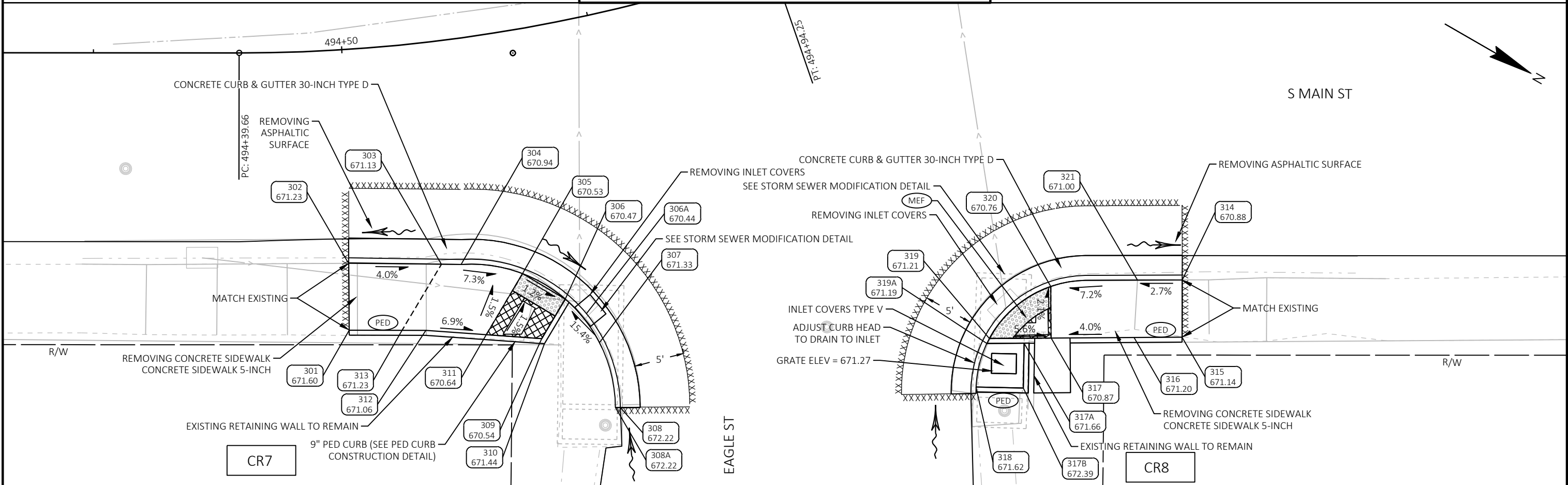
NOTES:

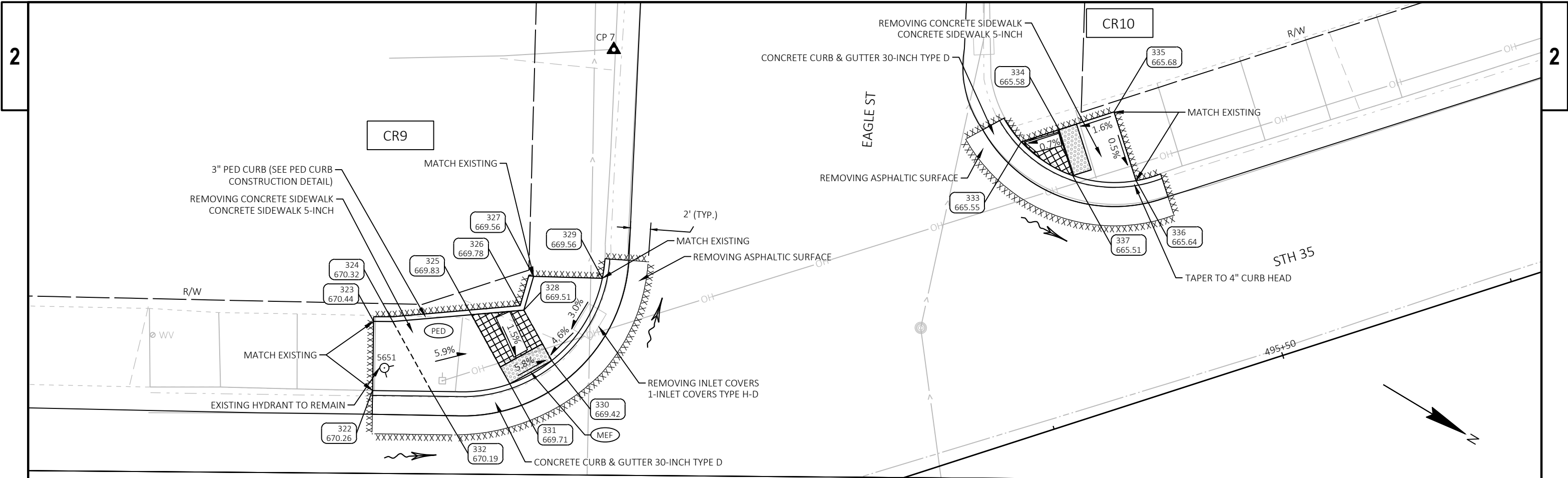
- CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
- THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
- DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
- SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

EAGLE ST - NE QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
314	495+22.96	43.59' RT	670.88	236531.48	596248.63	BOC
315	495+21.05	49.02' RT	671.14	236534.32	596253.63	EOW
316	495+16.47	47.47' RT	671.20	236530.14	596256.06	EOW
317	495+08.56	44.79' RT	670.87	236522.92	596260.27	EOW
317A	495+05.83	44.39' RT	671.66	236520.83	596262.06	PED
317B	495+04.29	48.62' RT	672.39	236523.00	596266.00	PED
318	494+99.81	46.98' RT	671.62	236518.82	596268.30	BOC
319	495+02.68	42.80' RT	671.21	236517.56	596263.39	BOC
319A	495+02.27	43.19' RT	671.19	236517.58	596263.95	PED
320	495+10.23	39.87' RT	670.76	236520.31	596255.78	BOC
321	495+18.69	42.13' RT	671.00	236527.58	596250.89	BOC

BENCHMARKS

NO.	STATION	ELEV.	DESCRIPTION
5651	494+55	672.75	TOP OF HYDRANT NUT, 23.34' LT





EAGLE ST - SW QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
322	494+53.04	21.15' LT	670.26	236437.09	596251.52	BOC
323	494+53.69	28.28' LT	670.44	236433.50	596245.34	EOW
324	494+56.10	28.12' LT	670.32	236435.23	596244.33	EOW
325	494+66.01	27.94' LT	669.83	236441.86	596239.50	EOW
326	494+72.22	28.07' LT	669.78	236445.72	596236.08	PED
327	494+74.58	30.81' LT	669.56	236445.35	596232.74	EOW
328	494+72.58	27.54' LT	669.51	236446.29	596236.28	EOW
329	494+83.08	29.07' LT	669.56	236451.58	596229.22	BOC
330	494+74.79	21.84' LT	669.42	236451.49	596239.28	BOC
331	494+69.36	20.22' LT	669.71	236448.99	596243.61	BOC
332	494+60.02	20.53' LT	670.19	236442.40	596248.47	BOC

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
5651	494+55	672.751	TOP OF HYDRANT NUT, 23.34' LT
7	494+93	667.987	BARN SPIKE, 51.62' LT

EAGLE ST - NW QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
333	495+30.90	29.50' LT	665.55	236481.61	596194.61	BOC
334	495+35.05	29.50' LT	665.58	236484.34	596191.47	EOW
335	495+41.05	29.50' LT	665.68	236488.28	596186.95	EOW
336	495+41.05	21.98' LT	665.64	236493.95	596191.89	BOC
337	495+34.96	24.50' LT	665.51	236488.04	596194.83	BOC

LEGEND:

- .XXXX. SAWCUT REQ'D
- DETECTABLE WARNING FIELD
- LANDING AREA
- CONCRETE STEPS
- 6:1 GRADED FLARE
- 10:1 CONCRETE FLARE
- CONCRETE CURB PEDESTRIAN
- MAXIMUM EXTENT FEASIBLE
- POINT NUMBER & ELEVATION

- NOTES:**
- CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 - THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
 - DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
 - SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

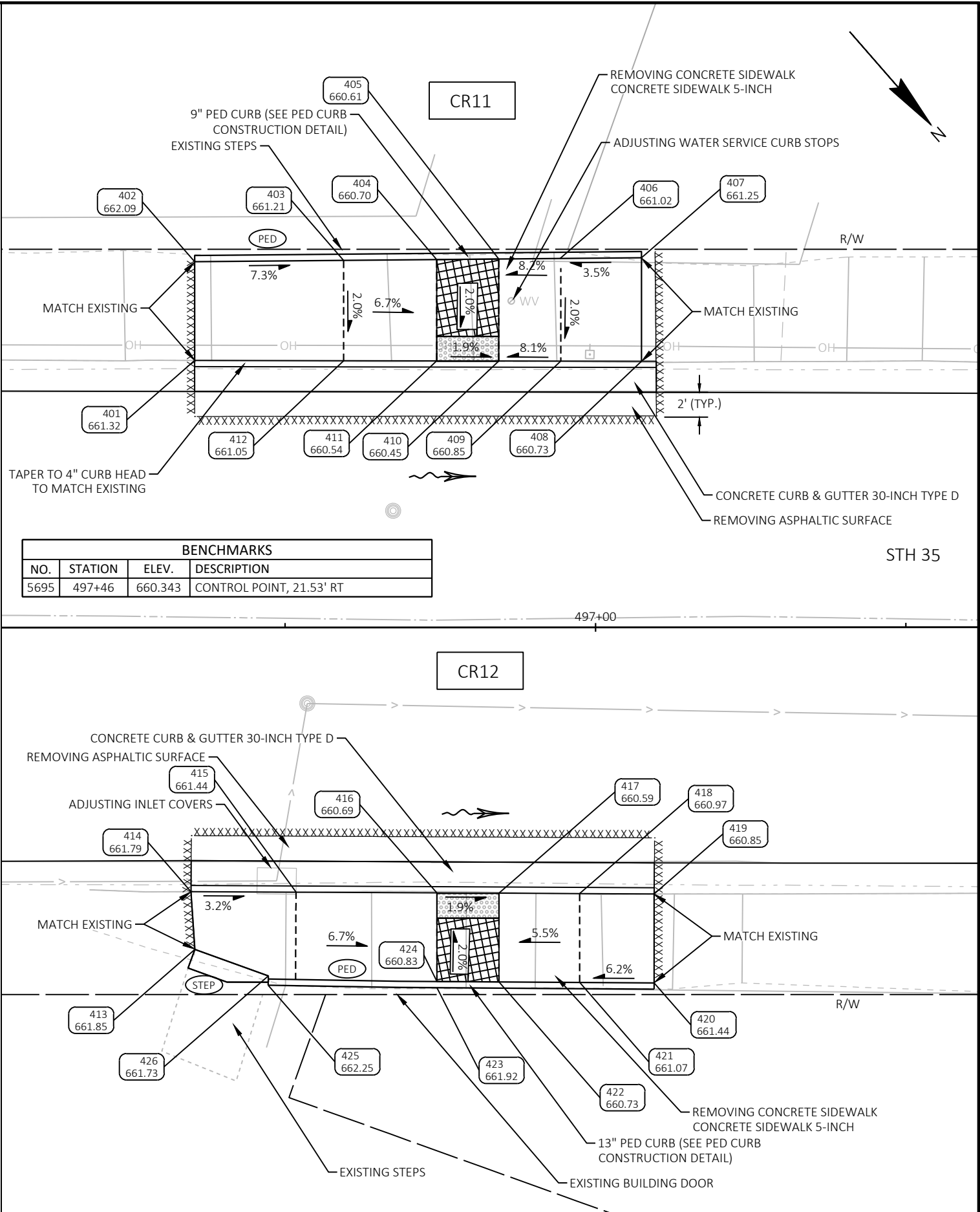
STA 496+90 - CURB RAMPS						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
401	496+67.72	21.50' LT	661.32	236577.56	596096.74	BOC
402	496+67.72	29.44' LT	662.09	236571.57	596091.52	EOW
403	496+79.72	29.55' LT	661.21	236579.39	596082.40	EOW
404	496+87.22	29.61' LT	660.70	236584.26	596076.71	EOW
405	496+92.22	29.65' LT	660.61	236587.52	596072.92	EOW
406	496+97.15	29.69' LT	661.02	236590.73	596069.17	EOW
407	497+03.72	29.75' LT	661.25	236595.00	596064.18	EOW
408	497+03.72	21.42' LT	660.73	236601.28	596069.66	BOC
409	496+97.22	21.44' LT	660.85	236597.00	596074.55	BOC
410	496+92.22	21.45' LT	660.45	236593.70	596078.31	BOC
411	496+87.22	21.46' LT	660.54	236590.41	596082.07	BOC
412	496+79.72	21.47' LT	661.05	236585.47	596087.71	BOC
413	496+67.72	25.92' RT	661.85	236613.30	596127.90	EOW
414	496+67.41	21.27' RT	661.79	236609.59	596125.08	BOC
415	496+75.87	21.31' RT	661.44	236615.18	596118.74	BOC
416	496+87.22	21.38' RT	660.69	236622.69	596110.22	BOC
417	496+92.22	21.40' RT	660.59	236626.00	596106.47	BOC
418	496+98.72	21.44' RT	660.97	236630.30	596101.60	BOC
419	497+04.72	21.47' RT	660.85	236634.27	596097.10	BOC
420	497+04.72	28.63' RT	661.44	236639.66	596101.80	EOW
421	496+98.72	28.59' RT	661.07	236635.68	596106.30	EOW
422	496+92.22	28.55' RT	660.73	236631.38	596111.17	EOW
423	496+87.22	29.01' RT	661.92	236628.45	596115.24	PED
424	496+87.22	28.51' RT	660.83	236628.07	596114.91	EOW
425	496+73.63	28.81' RT	662.25	236619.36	596125.35	PED
426	496+73.64	28.05' RT	661.73	236618.80	596124.85	EOW

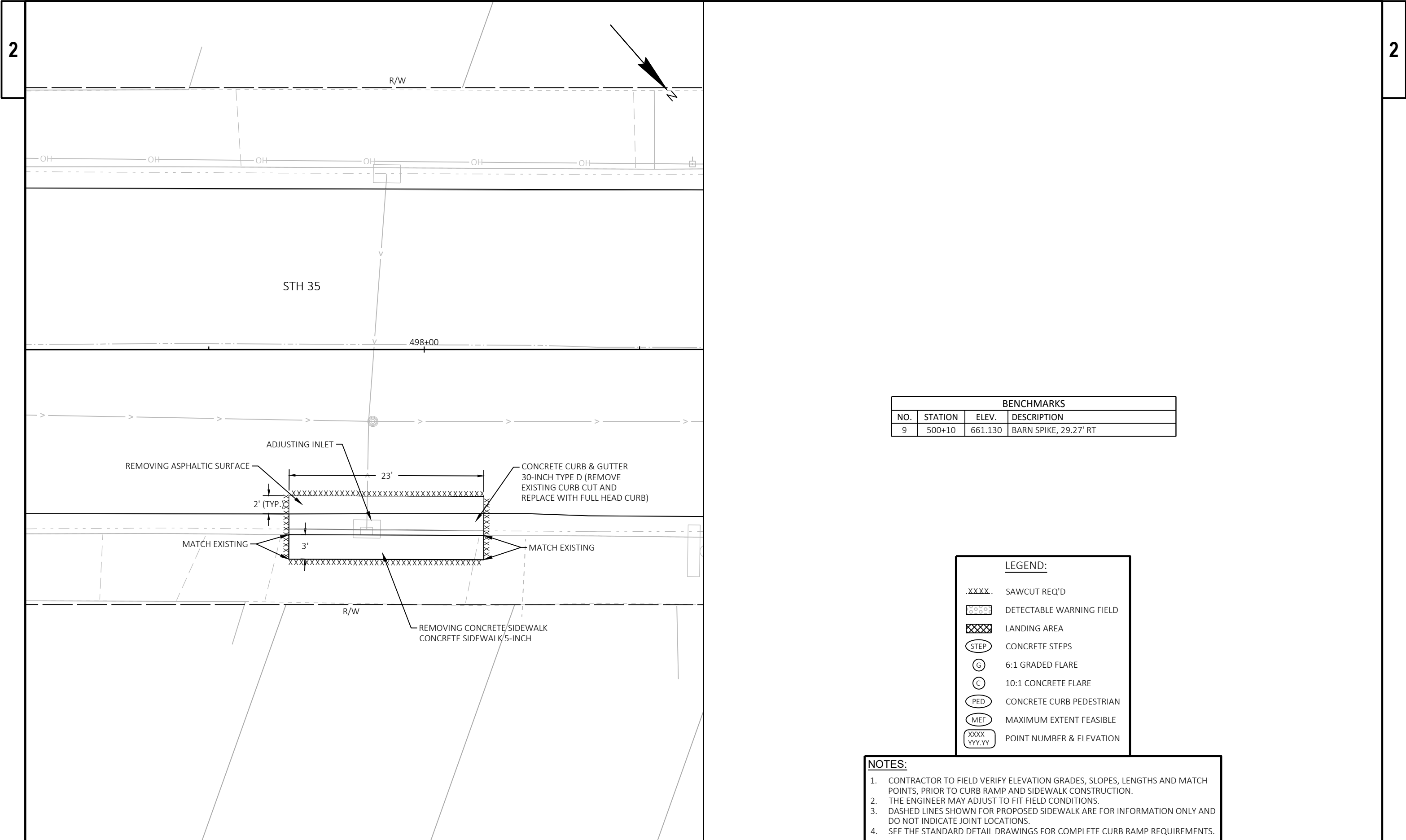
LEGEND:

- .XXXX.
- SAWCUT REQ'D
-
- DETECTABLE WARNING FIELD
-
- LANDING AREA
- STEP
- CONCRETE STEPS
- G
- 6:1 GRADED FLARE
- C
- 10:1 CONCRETE FLARE
- PED
- CONCRETE CURB PEDESTRIAN
- MEF
- MAXIMUM EXTENT FEASIBLE
- XXXX
YYY.YY
- POINT NUMBER & ELEVATION

NOTES:

1. CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

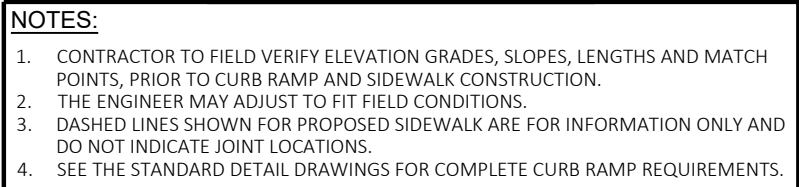




BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
9	500+10	661.130	BARN SPIKE, 29.27' RT

LEGEND:	
.XXXX.	SAWCUT REQ'D
	DETECTABLE WARNING FIELD
	LANDING AREA
	CONCRETE STEPS
	6:1 GRADED FLARE
	10:1 CONCRETE FLARE
	CONCRETE CURB PEDESTRIAN
	MAXIMUM EXTENT FEASIBLE
	POINT NUMBER & ELEVATION

- NOTES:**
- CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 - THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
 - DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
 - SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.



LIBERTY ST - SE QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
545	498+74.60	21.99' RT	660.15	236746.30	595969.40	BOC
546	498+79.64	22.01' RT	659.69	236749.63	595965.61	BOC
547	498+85.19	23.51' RT	659.76	236754.41	595962.42	BOC
548	498+85.16	29.40' RT	659.88	236758.83	595966.31	EOW
549	498+91.14	30.71' RT	660.08	236763.74	595962.66	BOC
550	498+85.16	29.90' RT	660.57	236759.20	595966.64	PED
551	498+85.16	31.71' RT	660.39	236760.58	595967.83	EOW
552	498+79.55	29.37' RT	659.84	236755.12	595970.51	EOW
553	498+74.55	29.34' RT	660.71	236751.82	595974.26	EOW
554	498+74.55	29.84' RT	660.86	236752.19	595974.59	PED

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
9	500+10	661.130	BARN SPIKE, 29.27' RT

LEGEND:

.XXXX.

SAWCUT REQ'D

DETECTABLE WARNING FIELD

LANDING AREA

STEP

CONCRETE STEPS

G

6:1 GRADED FLARE

C

10:1 CONCRETE FLARE

PED

CONCRETE CURB PEDESTRIAN

MEF

MAXIMUM EXTENT FEASIBLE

XXXX
YYY.YY

POINT NUMBER & ELEVATION

- NOTES:
1.

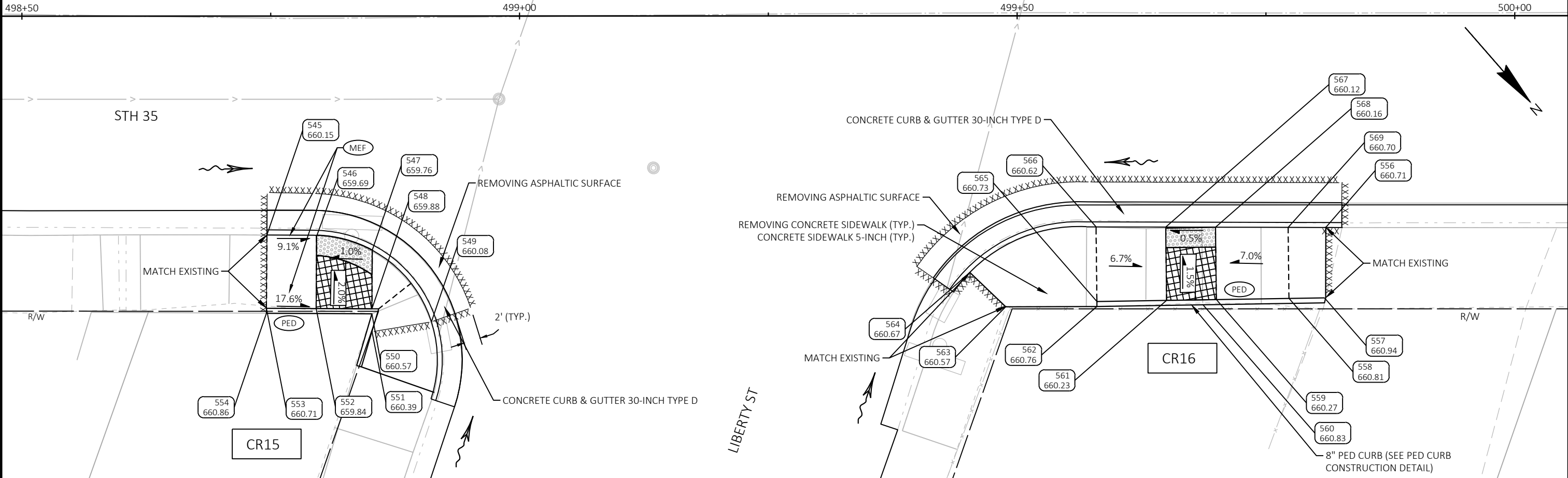
CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2.

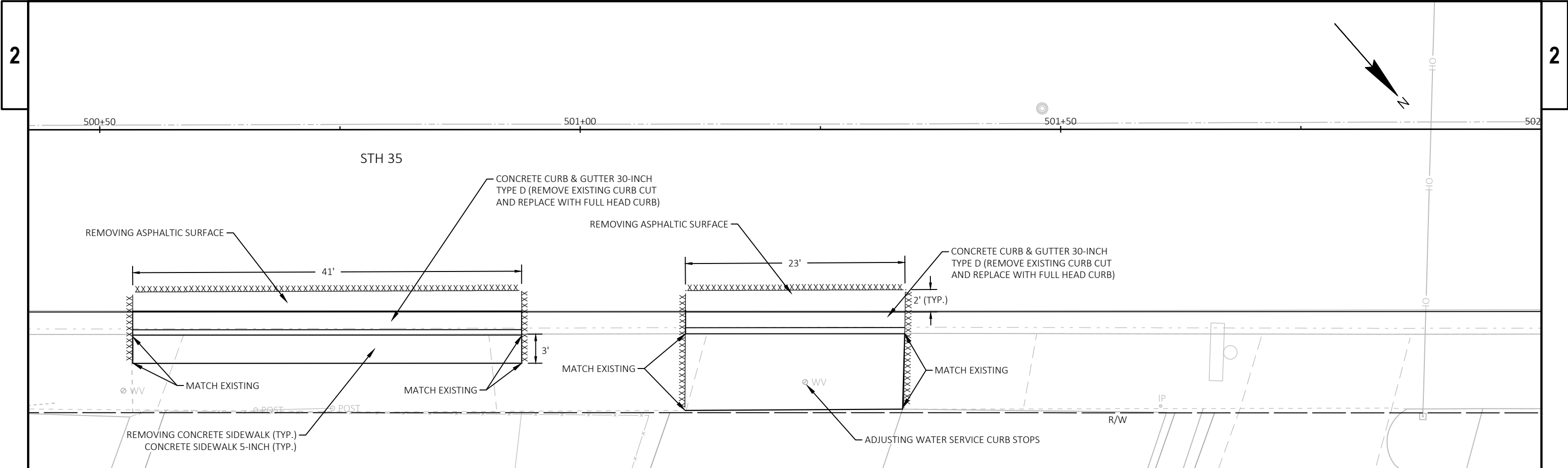
THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
3.

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

LIBERTY ST - NE QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
556	499+81.01	21.26' RT	660.71	236815.69	595888.72	BOC
557	499+80.86	28.33' RT	660.94	236820.92	595893.48	EOW
558	499+77.30	28.39' RT	660.81	236818.62	595896.20	EOW
559	499+70.00	28.50' RT	660.27	236813.91	595901.77	EOW
560	499+68.62	28.97' RT	660.83	236813.36	595903.13	PED
561	499+65.00	28.58' RT	660.23	236810.68	595905.59	EOW
562	499+58.01	29.18' RT	660.76	236806.54	595911.26	PED
563	499+48.84	29.21' RT	660.57	236800.54	595918.19	EOW
564	499+45.24	25.78' RT	660.67	236795.58	595918.65	BOC
565	499+58.00	28.68' RT	660.73	236806.16	595910.94	EOW
566	499+57.92	21.19' RT	660.62	236800.46	595906.07	BOC
567	499+64.92	21.21' RT	660.12	236805.07	595900.81	BOC
568	499+69.92	21.22' RT	660.16	236808.37	595897.05	BOC
569	499+77.22	21.25' RT	660.70	236813.18	595891.57	BOC

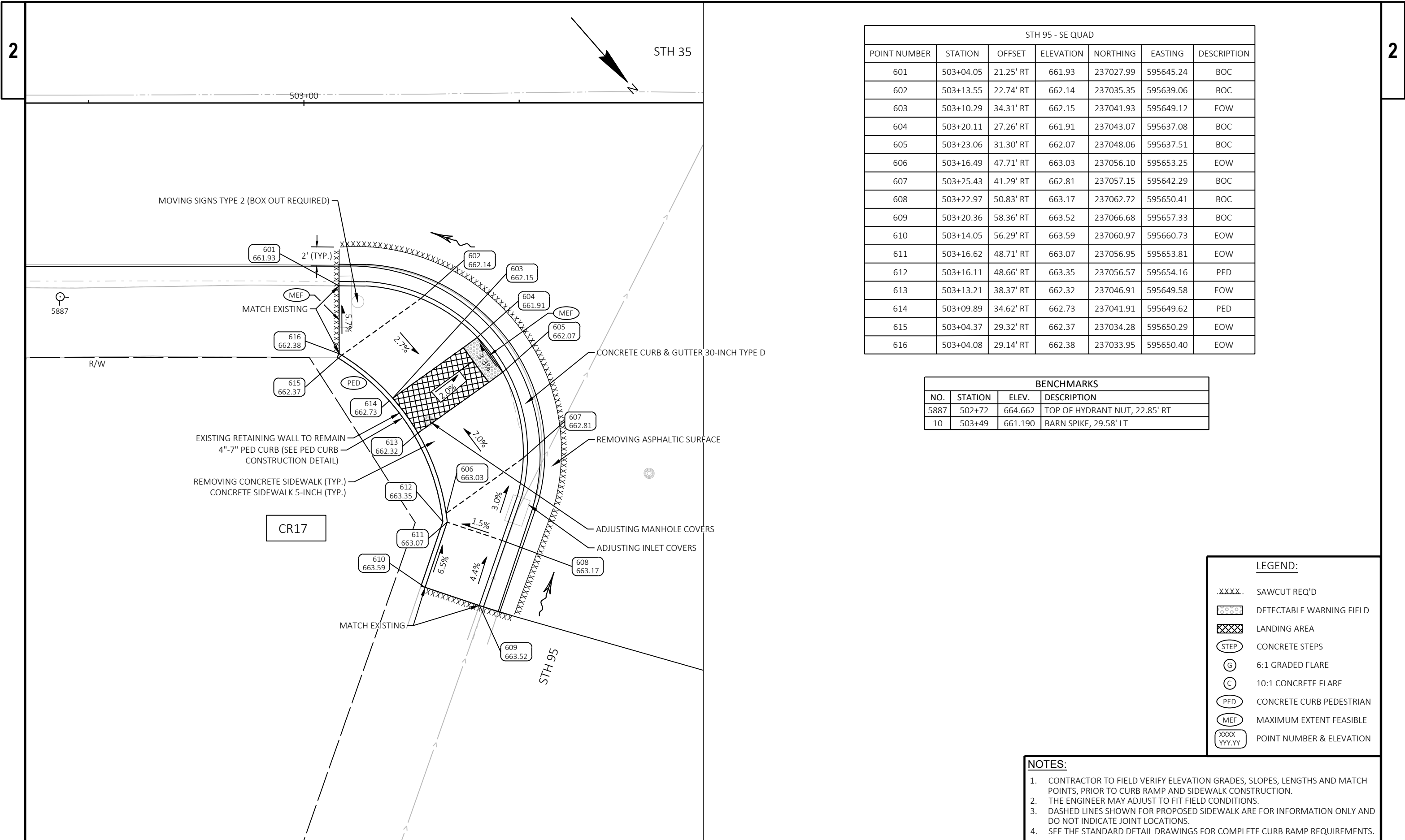




BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
CP 9	500+10	661.130	BARN SPIKE, 29.27' RT

LEGEND:	
.XXXX.	SAWCUT REQ'D
	DETECTABLE WARNING FIELD
	LANDING AREA
	CONCRETE STEPS
	6:1 GRADED FLARE
	10:1 CONCRETE FLARE
	CONCRETE CURB PEDESTRIAN
	MAXIMUM EXTENT FEASIBLE
	POINT NUMBER & ELEVATION

- NOTES:**
1. CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 2. THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
 4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.



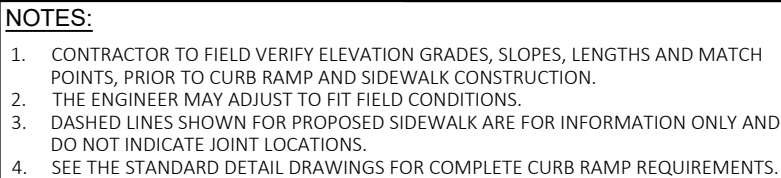
STH 95 - SE QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
601	503+04.05	21.25' RT	661.93	237027.99	595645.24	BOC
602	503+13.55	22.74' RT	662.14	237035.35	595639.06	BOC
603	503+10.29	34.31' RT	662.15	237041.93	595649.12	EOW
604	503+20.11	27.26' RT	661.91	237043.07	595637.08	BOC
605	503+23.06	31.30' RT	662.07	237048.06	595637.51	BOC
606	503+16.49	47.71' RT	663.03	237056.10	595653.25	EOW
607	503+25.43	41.29' RT	662.81	237057.15	595642.29	BOC
608	503+22.97	50.83' RT	663.17	237062.72	595650.41	BOC
609	503+20.36	58.36' RT	663.52	237066.68	595657.33	BOC
610	503+14.05	56.29' RT	663.59	237060.97	595660.73	EOW
611	503+16.62	48.71' RT	663.07	237056.95	595653.81	EOW
612	503+16.11	48.66' RT	663.35	237056.57	595654.16	PED
613	503+13.21	38.37' RT	662.32	237046.91	595649.58	EOW
614	503+09.89	34.62' RT	662.73	237041.91	595649.62	PED
615	503+04.37	29.32' RT	662.37	237034.28	595650.29	EOW
616	503+04.08	29.14' RT	662.38	237033.95	595650.40	EOW

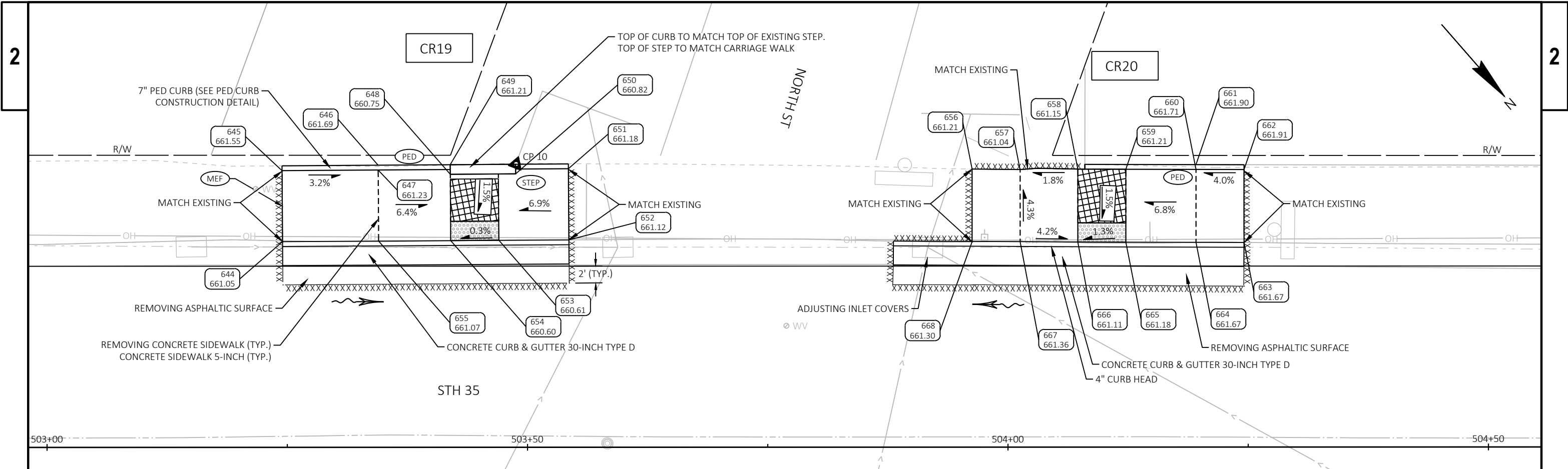
BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
5887	502+72	664.662	TOP OF HYDRANT NUT, 22.85' RT
10	503+49	661.190	BARN SPIKE, 29.58' LT

LEGEND:	
.XXXX.	SAWCUT REQ'D
	DETECTABLE WARNING FIELD
	LANDING AREA
	CONCRETE STEPS
	6:1 GRADED FLARE
	10:1 CONCRETE FLARE
	CONCRETE CURB PEDESTRIAN
	MAXIMUM EXTENT FEASIBLE
	POINT NUMBER & ELEVATION

- NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
 2. THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
 3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
 4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
5887	502+72	664.662	TOP OF HYDRANT NUT, 22.85' RT
10	503+49	661.190	BARN SPIKE, 29.58' LT
5765	505+04	662.228	CONTROL POINT, 24.55' LT





NORTH ST - SW QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
644	503+24.51	21.43' LT	661.05	237009.27	595601.77	BOC
645	503+24.46	28.82' LT	661.55	237003.67	595596.94	EOW
646	503+34.46	29.39' LT	661.69	237009.81	595589.03	PED
647	503+34.46	28.88' LT	661.23	237010.19	595589.36	EOW
648	503+41.97	28.43' LT	660.75	237015.46	595584.00	EOW
649	503+41.96	29.43' LT	661.21	237014.70	595583.35	PED
650	503+48.77	28.47' LT	660.82	237019.90	595578.85	EOW
651	503+54.26	29.01' LT	661.18	237023.11	595574.36	EOW
652	503+54.31	21.60' LT	661.12	237028.72	595579.19	BOC
653	503+47.02	21.56' LT	660.61	237023.96	595584.71	BOC
654	503+42.01	21.53' LT	660.60	237020.69	595588.51	BOC
655	503+34.51	21.49' LT	661.07	237015.80	595594.19	BOC

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
CP 10	503+49	661.190	BARN SPIKE, 29.58' LT

LEGEND:

.XXXX.

SAWCUT REQ'D

DETECTABLE WARNING FIELD

LANDING AREA

CONCRETE STEPS

6:1 GRADED FLARE

10:1 CONCRETE FLARE

CONCRETE CURB PEDESTRIAN

MAXIMUM EXTENT FEASIBLE

POINT NUMBER & ELEVATION

- NOTES:
1.

CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2.

THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
3.

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

NORTH ST - NW QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
656	503+96.27	28.97' LT	661.21	237050.74	595542.72	EOW
657	504+01.26	28.91' LT	661.04	237054.07	595539.00	EOW
658	504+07.27	28.96' LT	661.15	237057.98	595534.44	EOW
659	504+12.27	28.94' LT	661.21	237061.28	595530.69	EOW
660	504+19.57	28.92' LT	661.71	237066.10	595525.20	EOW
661	504+19.57	29.42' LT	661.90	237065.72	595524.87	PED
662	504+24.57	28.91' LT	661.91	237069.39	595521.44	EOW
663	504+24.57	21.31' LT	661.67	237075.11	595526.43	BOC
664	504+19.57	21.33' LT	661.67	237071.82	595530.19	BOC
665	504+12.27	21.34' LT	661.18	237067.01	595535.68	BOC
666	504+07.27	21.36' LT	661.11	237063.71	595539.43	BOC
667	504+01.27	21.39' LT	661.36	237059.75	595543.94	BOC
668	503+96.28	21.41' LT	661.30	237056.45	595547.69	BOC

JEFFERSON ST - SE QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
701	504+70.96	31.16' RT	662.35	237145.16	595525.95	EOW
702	504+72.16	33.41' RT	662.39	237147.64	595526.52	EOW
703	504+74.25	25.65' RT	661.97	237143.17	595519.84	BOC
704	504+77.43	30.62' RT	662.33	237149.00	595520.72	BOC
705	504+78.31	35.64' RT	662.14	237153.36	595523.35	BOC
706	504+78.26	40.64' RT	662.40	237157.10	595526.68	BOC
707	504+72.23	40.52' RT	662.49	237153.05	595531.14	EOW
708	504+72.31	35.52' RT	662.23	237149.33	595527.80	EOW

LEGEND:

.XXXX.

SAWCUT REQ'D

DETECTABLE WARNING FIELD

LANDING AREA

STEP

CONCRETE STEPS

G

6:1 GRADED FLARE

C

10:1 CONCRETE FLARE

PED

CONCRETE CURB PEDESTRIAN

MEF

MAXIMUM EXTENT FEASIBLE

XXXX
YYY.YY

POINT NUMBER & ELEVATION

- NOTES:
1.

CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2.

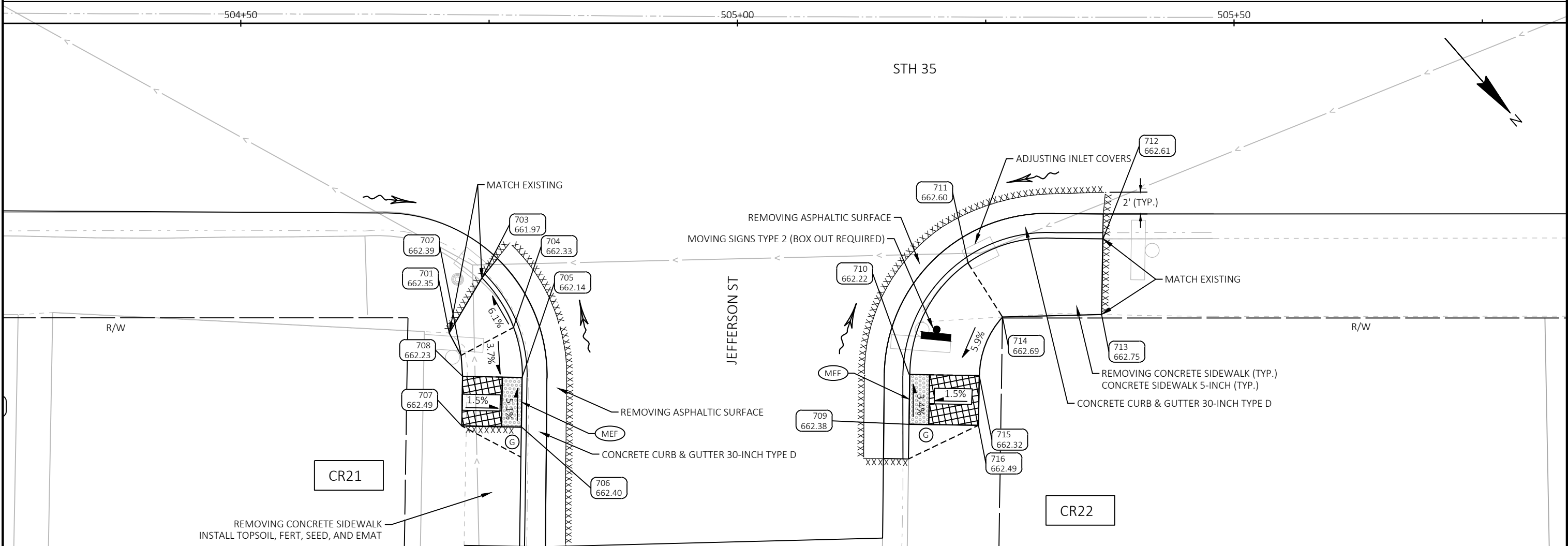
THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
3.

DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

JEFFERSON ST - NE QUAD						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
709	505+17.22	40.37' RT	662.38	237182.50	595497.13	BOC
710	505+17.26	35.35' RT	662.22	237178.74	595493.81	BOC
711	505+23.22	24.17' RT	662.60	237174.23	595481.96	BOC
712	505+36.80	21.71' RT	662.61	237181.31	595470.11	BOC
713	505+36.65	29.33' RT	662.75	237186.95	595475.23	EOW
714	505+26.67	29.57' RT	662.69	237180.57	595482.91	EOW
715	505+24.33	35.47' RT	662.32	237183.47	595488.55	EOW
716	505+24.25	40.46' RT	662.49	237187.19	595491.90	EOW

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
5765	505+04	662.228	CONTROL POINT, 24.55' LT



STA 509+50 - CURB RAMPS						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
801	509+42.99	29.65' LT	674.46	237409.55	595130.21	EOW
802	509+46.99	29.65' LT	674.14	237412.18	595127.20	EOW
803	509+51.99	29.65' LT	674.33	237415.47	595123.43	EOW
804	509+68.09	29.64' LT	675.42	237426.05	595111.30	EOW
805	509+68.09	21.26' LT	675.18	237432.37	595116.80	BOC
806	509+51.99	21.26' LT	674.16	237421.78	595128.94	BOC
807	509+46.99	21.26' LT	673.97	237418.50	595132.71	BOC
808	509+42.99	21.27' LT	674.32	237415.87	595135.72	BOC
809	509+42.87	29.13' RT	674.35	237453.77	595168.93	EOW
810	509+42.87	21.63' RT	674.23	237448.12	595164.00	BOC
811	509+47.17	21.63' RT	673.88	237450.95	595160.76	BOC
812	509+52.17	21.63' RT	674.05	237454.23	595157.00	BOC
813	509+65.97	21.63' RT	674.97	237463.30	595146.59	BOC
814	509+65.97	29.11' RT	675.10	237468.94	595151.51	EOW
815	509+52.17	29.12' RT	674.16	237459.88	595161.92	EOW
816	509+47.17	29.13' RT	673.99	237456.60	595165.69	EOW

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
5903	508+99	675.492	TOP OF HYDRANT NUT, 22.87' LT

LEGEND:

- .XXXX.
- XXXX
- XXXX
- STEP
- G
- C
- PED
- MEF
- XXXX
YYY.YY
- SAWCUT REQ'D
- DETECTABLE WARNING FIELD
- LANDING AREA
- CONCRETE STEPS
- 6:1 GRADED FLARE
- 10:1 CONCRETE FLARE
- CONCRETE CURB PEDESTRIAN
- MAXIMUM EXTENT FEASIBLE
- POINT NUMBER & ELEVATION

NOTES:

1.

CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2.

THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.
3.

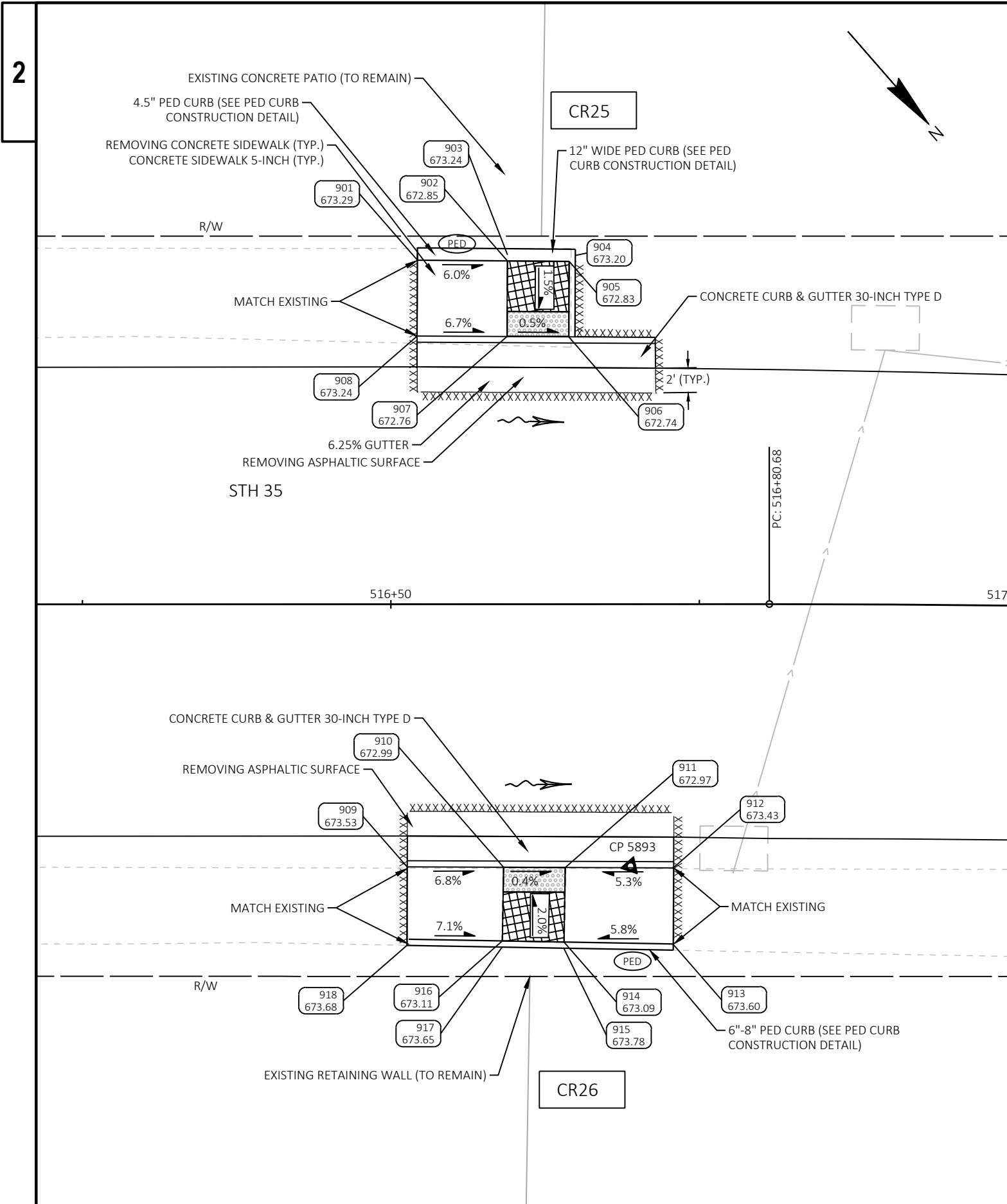
DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATE JOINT LOCATIONS.
4.

SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.

STH 35

509+50

CR24



STA 516+50 - CURB RAMPS						
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
901	516+52.16	27.89' LT	673.29	237876.96	594596.87	EOW
902	516+59.46	27.82' LT	672.85	237881.80	594591.41	EOW
903	516+59.46	28.32' LT	673.24	237881.43	594591.08	PED
904	516+64.96	28.28' LT	673.20	237885.08	594586.96	PED
905	516+64.46	27.78' LT	672.83	237885.12	594587.66	EOW
906	516+64.43	21.67' LT	672.74	237889.70	594591.70	BOC
907	516+59.43	21.70' LT	672.76	237886.39	594595.45	BOC
908	516+52.15	21.75' LT	673.24	237881.57	594600.91	BOC
909	516+51.32	21.28' RT	673.53	237913.47	594629.81	BOC
910	516+59.14	21.32' RT	672.99	237918.63	594623.94	BOC
911	516+64.14	21.34' RT	672.97	237921.93	594620.19	BOC
912	516+72.90	21.36' RT	673.43	237927.71	594613.60	BOC
913	516+72.88	27.57' RT	673.60	237932.38	594617.70	EOW
914	516+64.03	27.38' RT	673.09	237926.41	594624.25	EOW
915	516+64.02	27.88' RT	673.78	237926.78	594624.58	PED
916	516+59.03	27.29' RT	673.11	237923.05	594627.95	EOW
917	516+59.02	27.79' RT	673.65	237923.43	594628.29	PED
918	516+51.30	27.64' RT	673.68	237918.24	594634.02	EOW

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
5893	516+69	673.327	CONTROL POINT, 21.24' RT
5970	517+58	676.206	TOP OF HYDRANT NUT, 25.46' LT

LEGEND:

.XXXX.

SAWCUT REQ'D

DETECTABLE WARNING FIELD

LANDING AREA

CONCRETE STEPS

6:1 GRADED FLARE

10:1 CONCRETE FLARE

CONCRETE CURB PEDESTRIAN

MAXIMUM EXTENT FEASIBLE

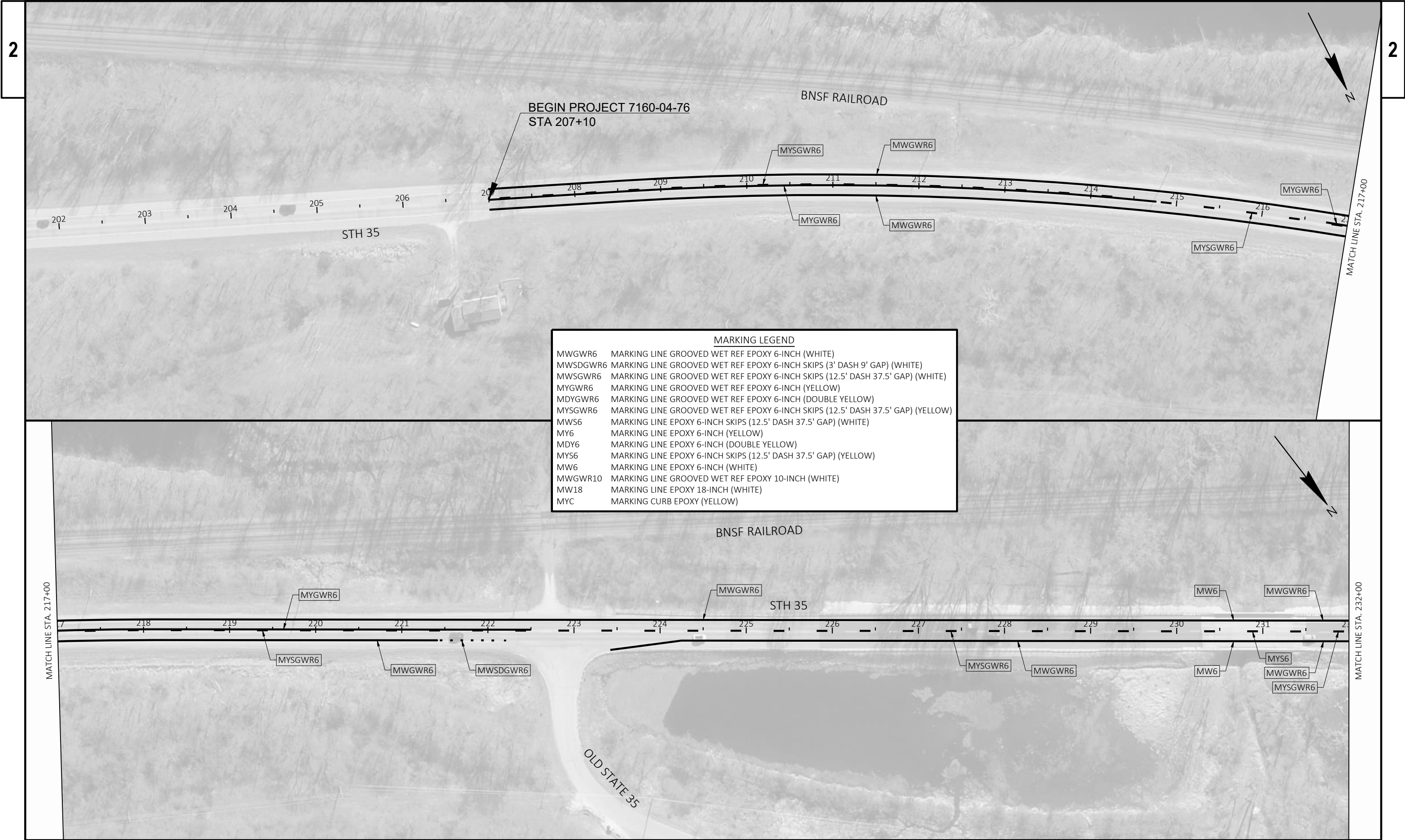
POINT NUMBER & ELEVATION

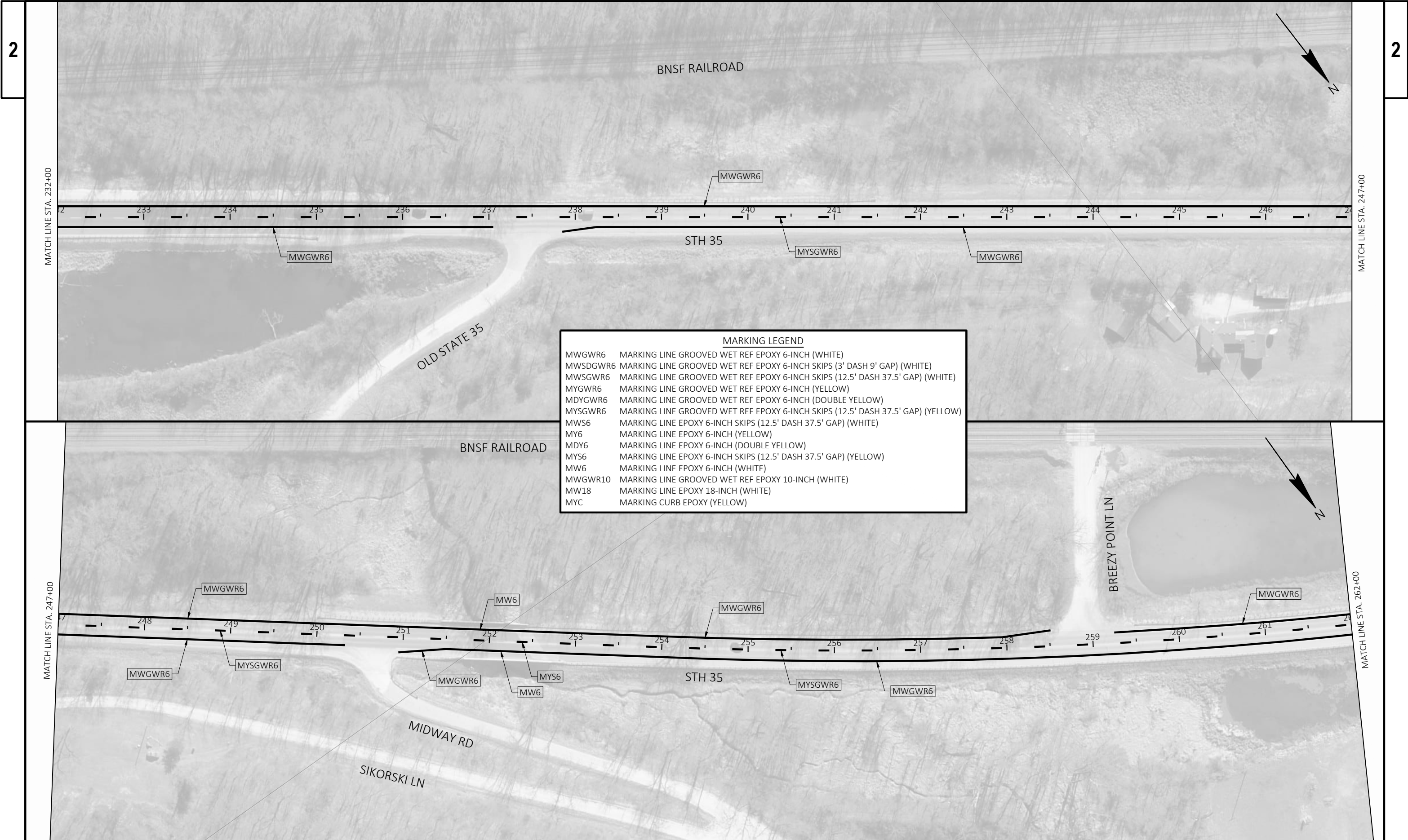
- NOTES:
1.

CONTRACTOR TO FIELD VERIFY ELEVATION GRADES, SLOPES, LENGTHS AND MATCH POINTS, PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2.
- THE ENGINEER MAY ADJUST TO FIT FIELD CONDITIONS.

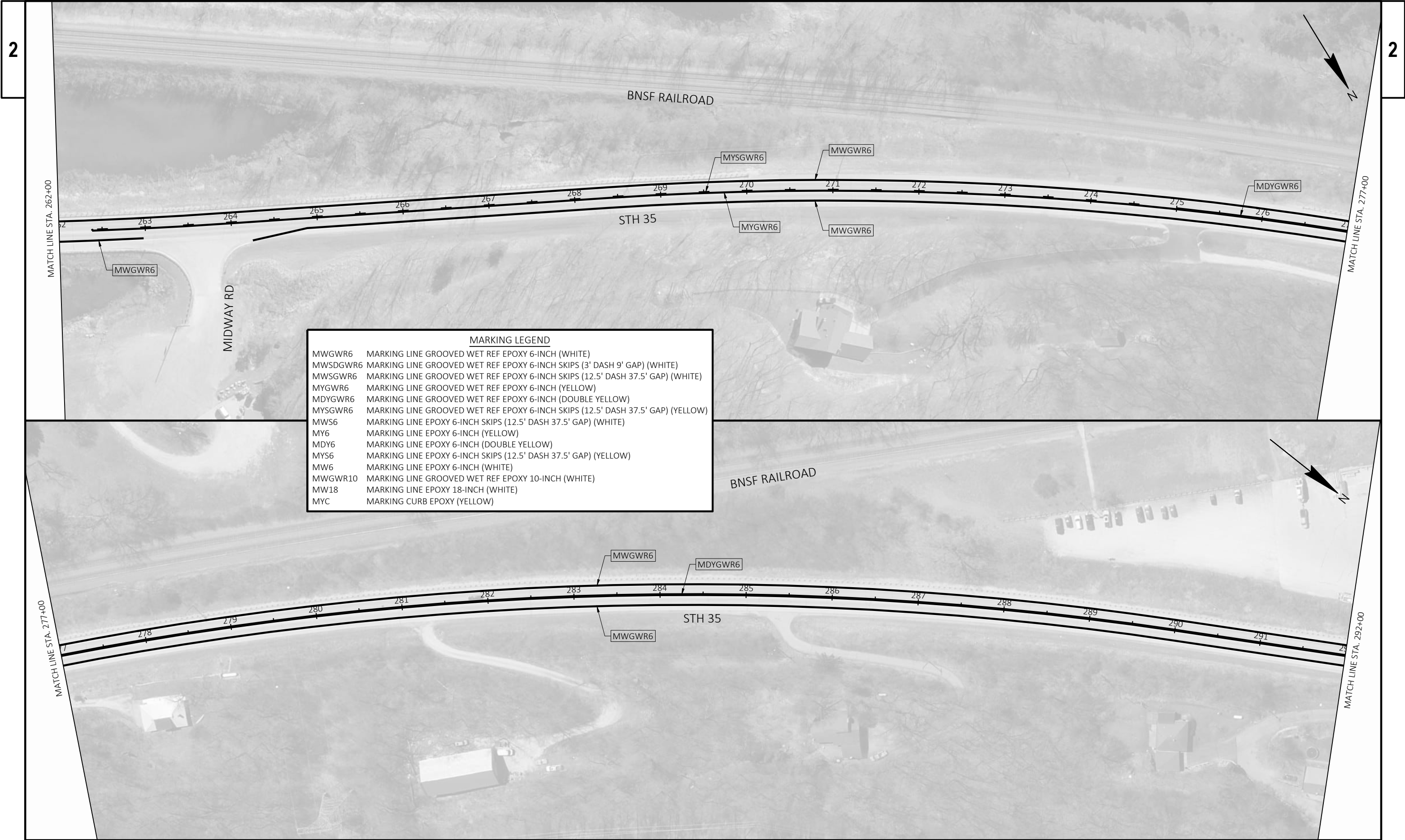
3.

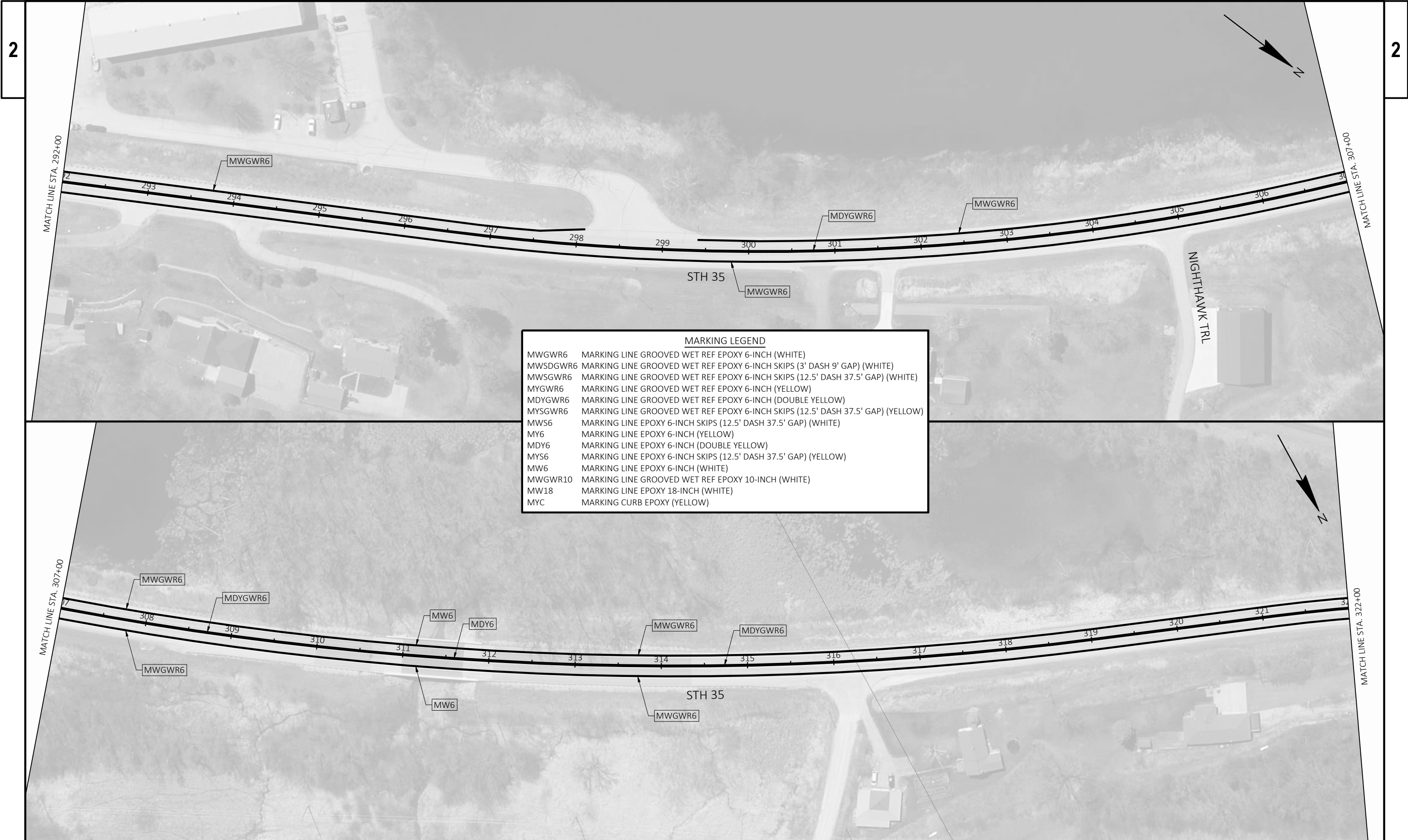
4.





MARKING LEGEND	
MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)

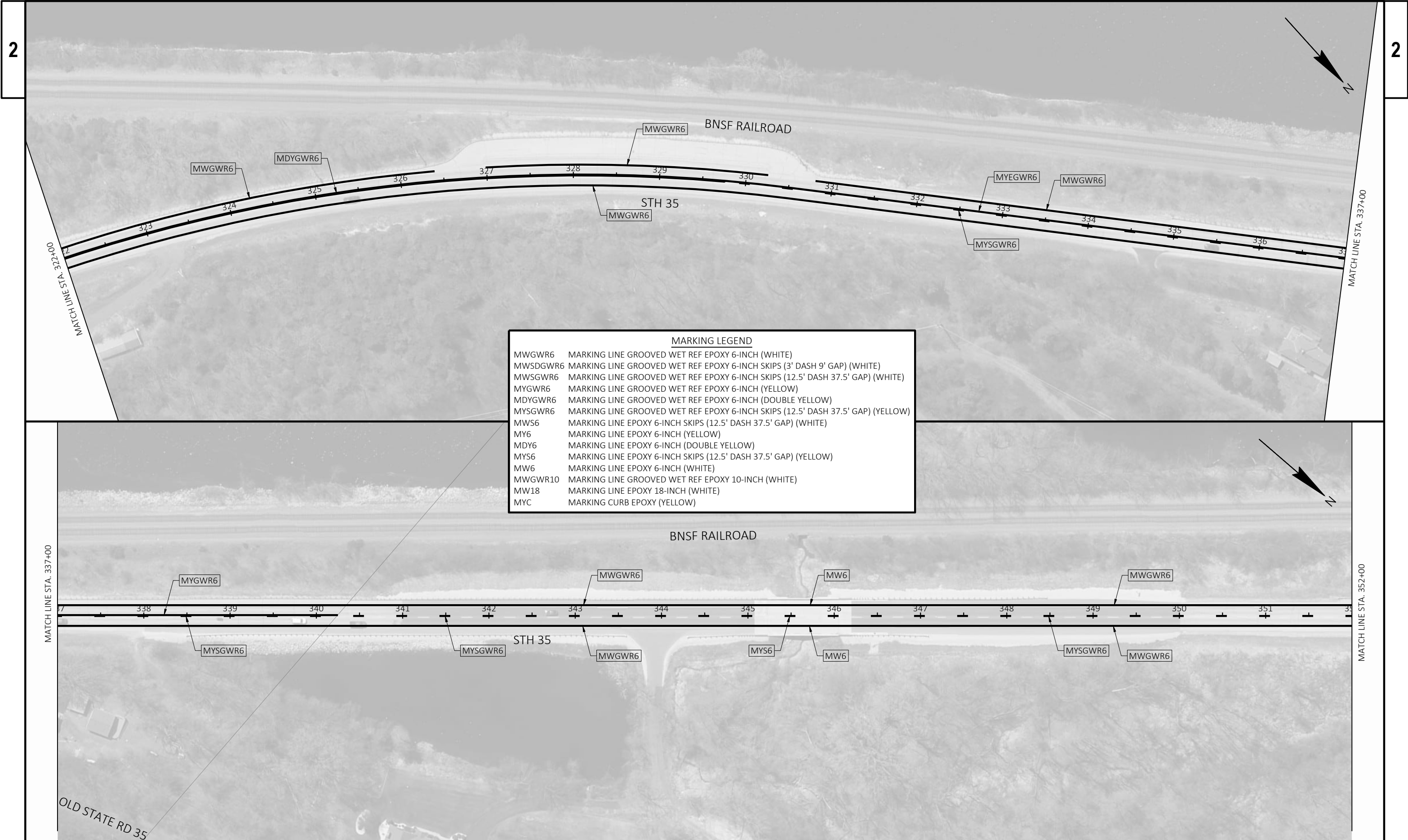




2

2

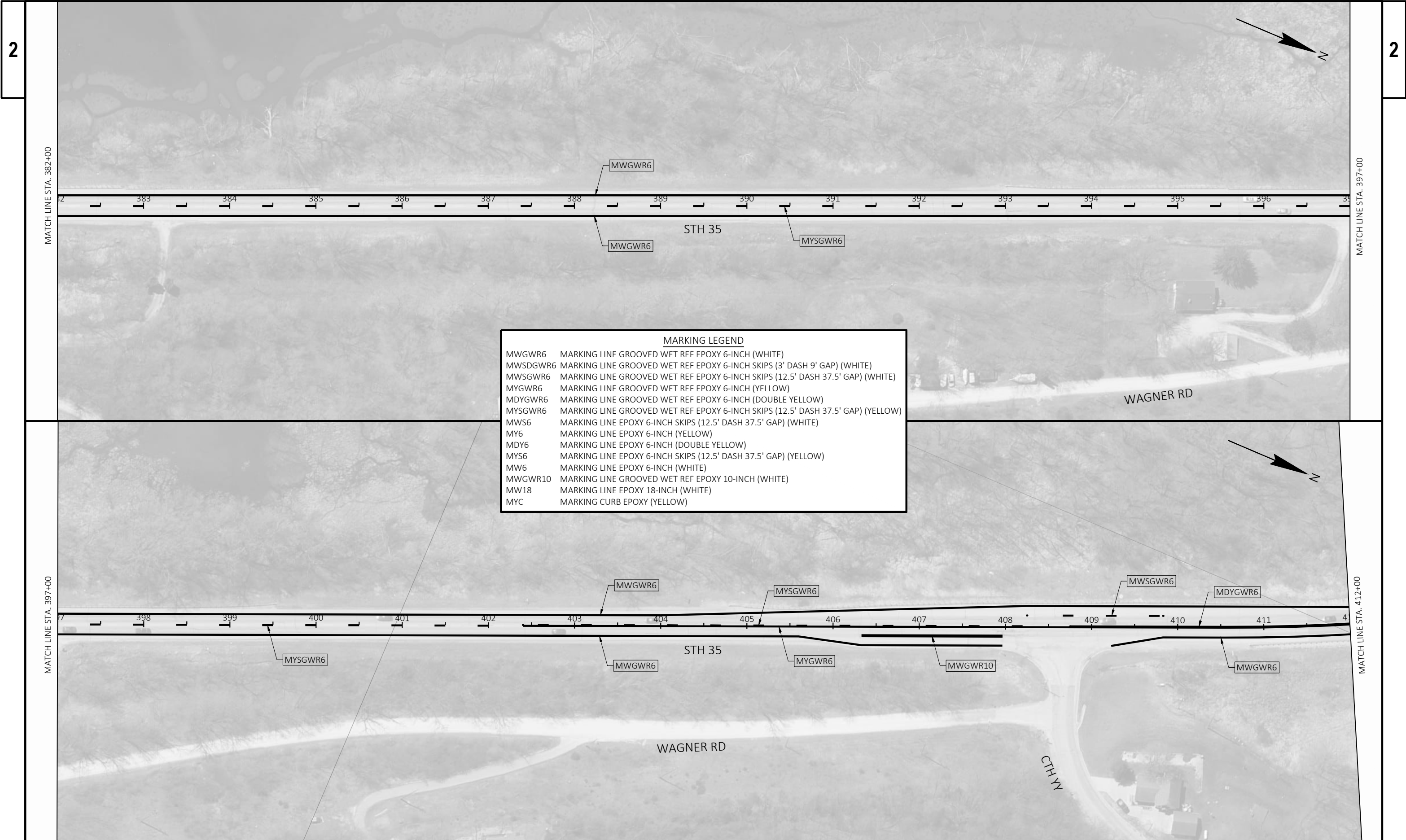
MARKING LEGEND	
MWGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGW10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)



MARKING LEGEND	
MWGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGW10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)



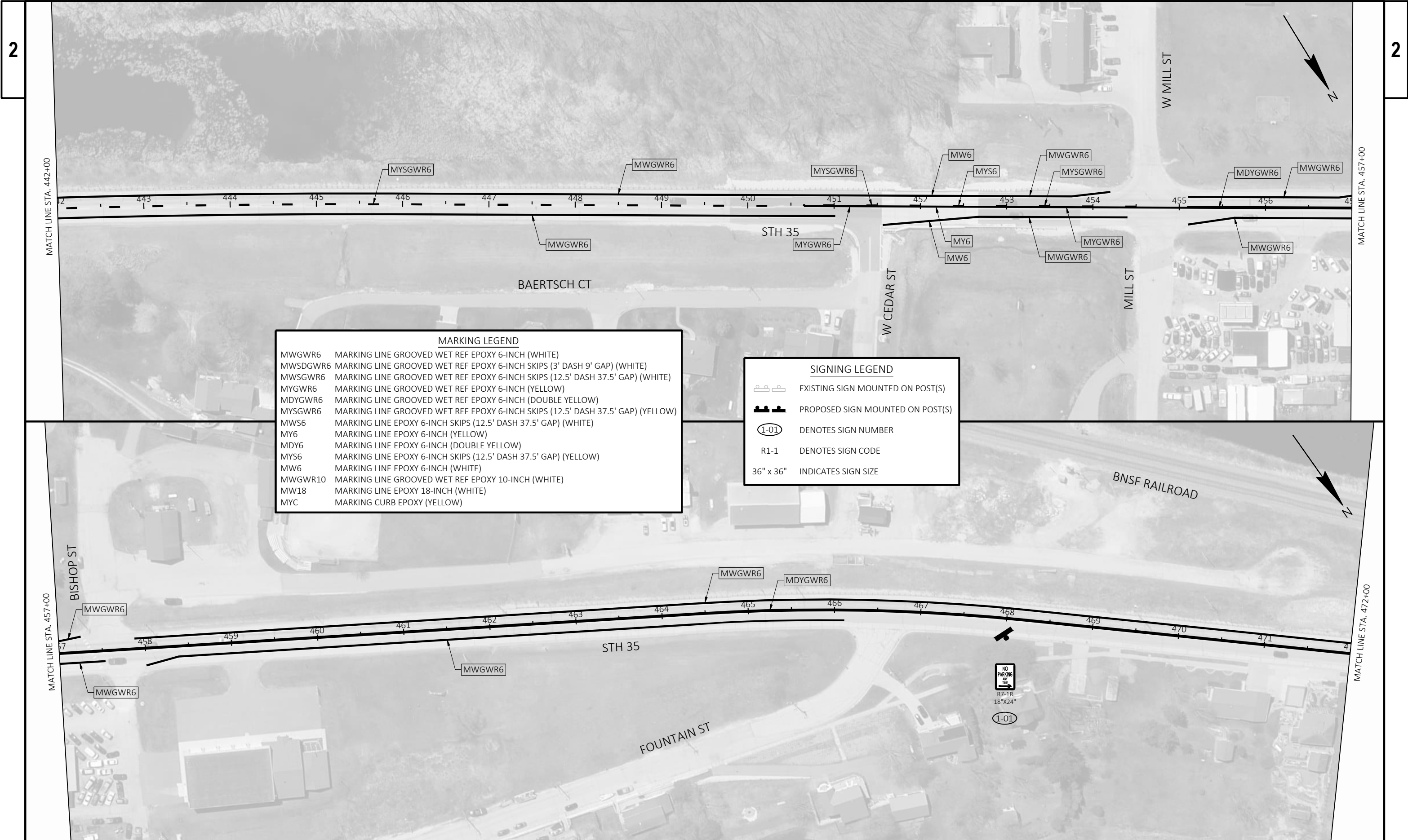
MARKING LEGEND	
MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)

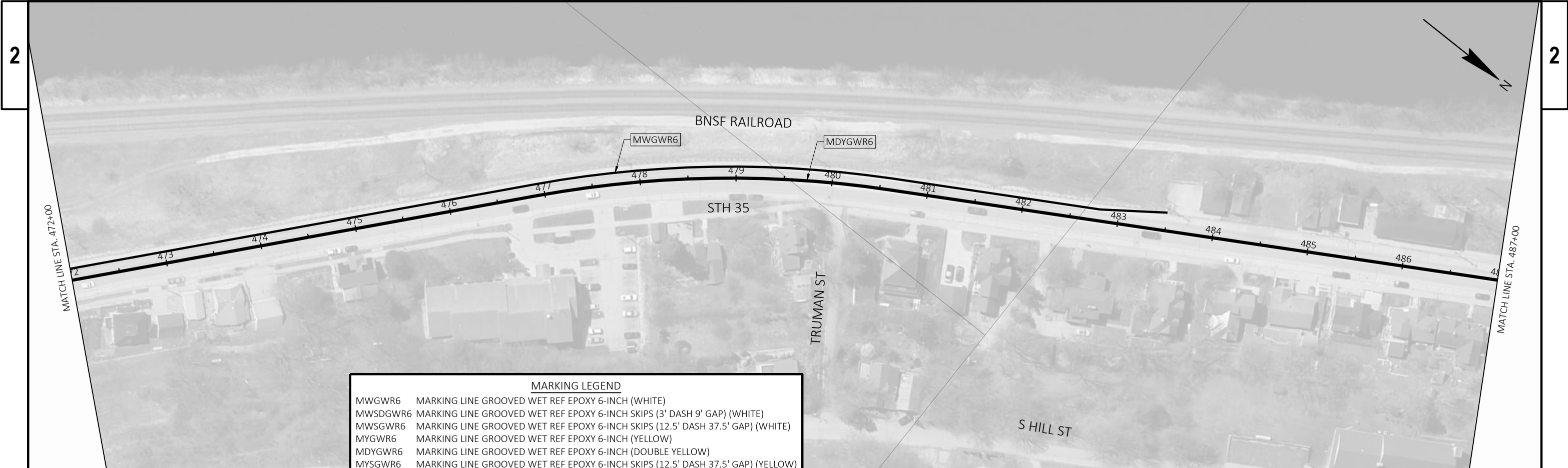


MARKING LEGEND	
MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)

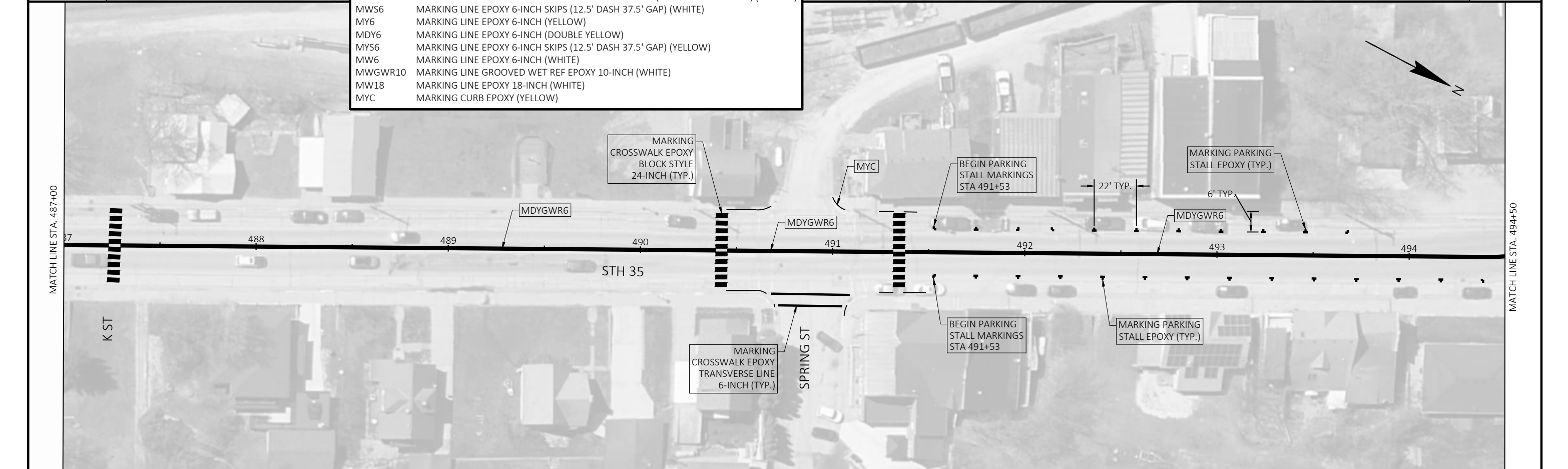


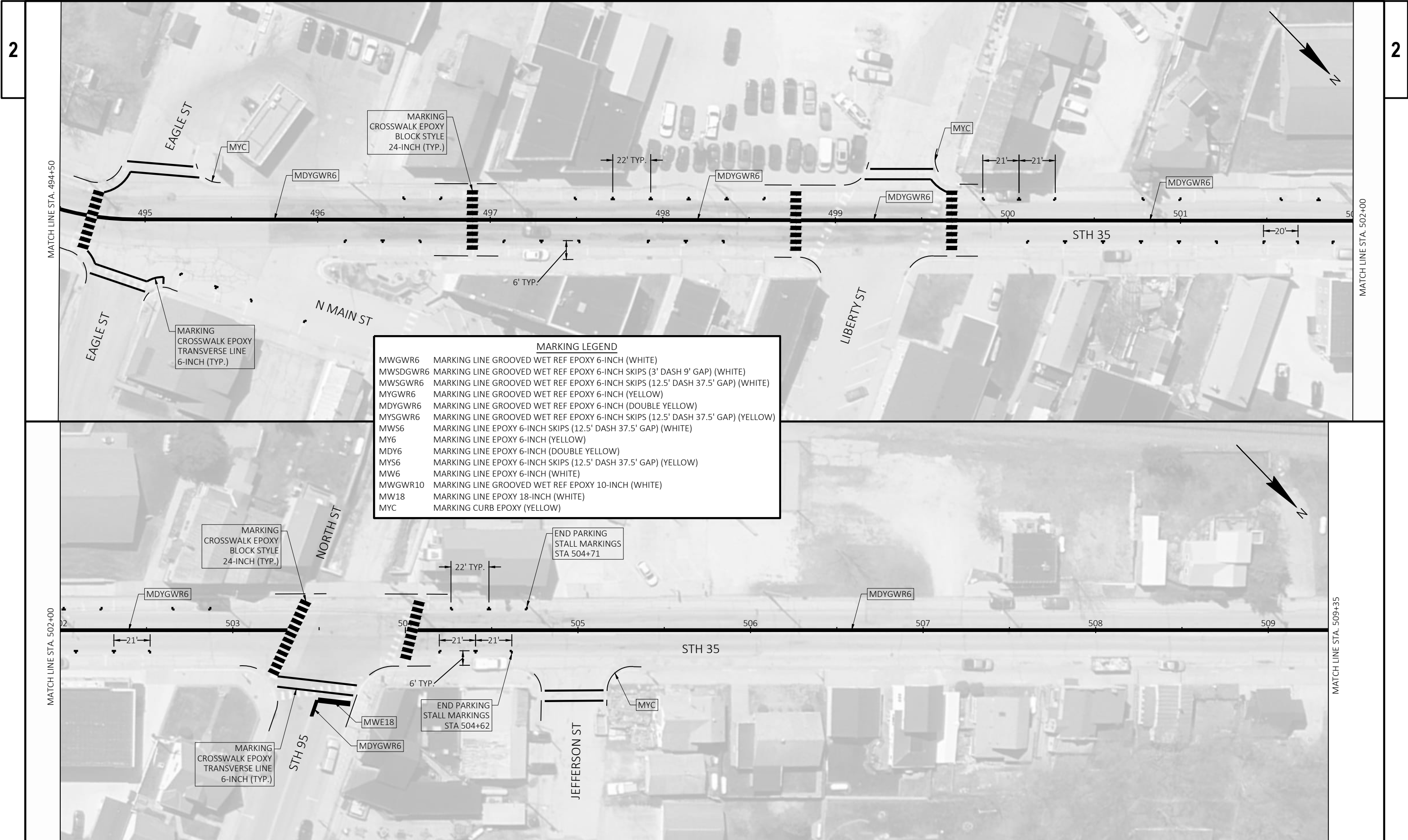
MARKING LEGEND	
MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)

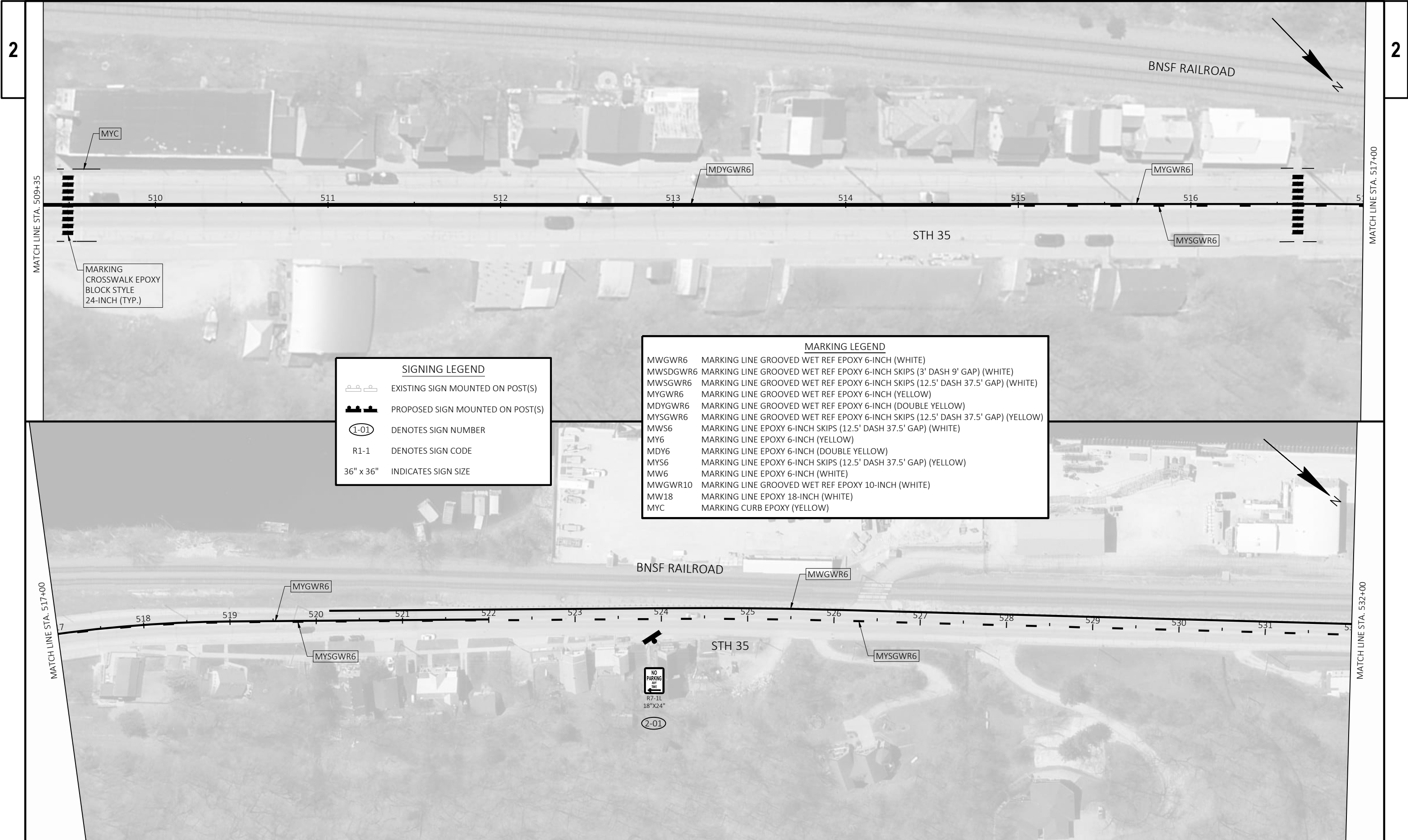




MARKING LEGEND	
MWGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGW6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGW10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)

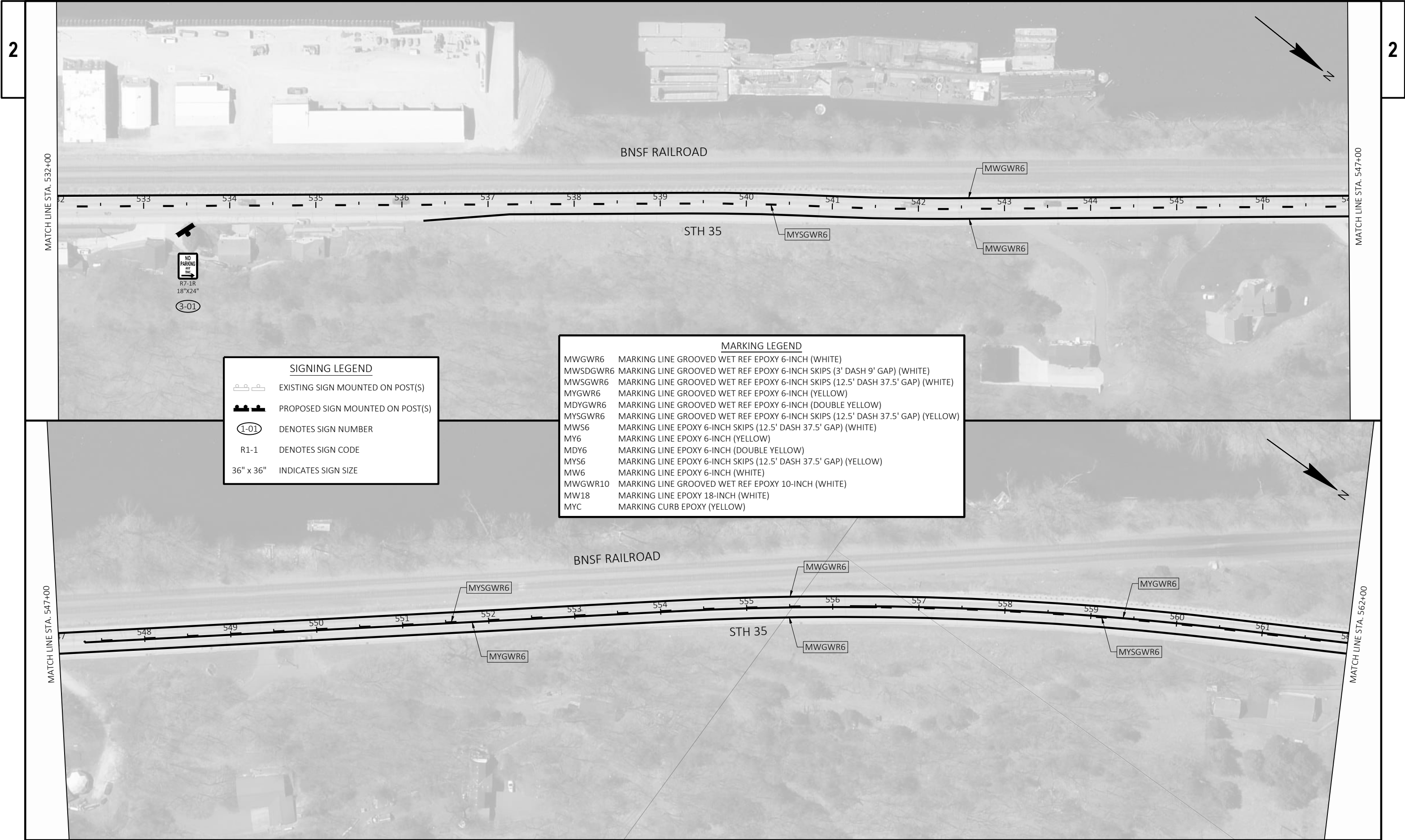






SIGNING LEGEND	
	EXISTING SIGN MOUNTED ON POST(S)
	PROPOSED SIGN MOUNTED ON POST(S)
	DENOTES SIGN NUMBER
R1-1	DENOTES SIGN CODE
36" x 36"	INDICATES SIGN SIZE

MARKING LEGEND	
MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)



 EXISTING SIGN MOUNTED ON POST(S)

 PROPOSED SIGN MOUNTED ON POST(S)

 DENOTES SIGN NUMBER

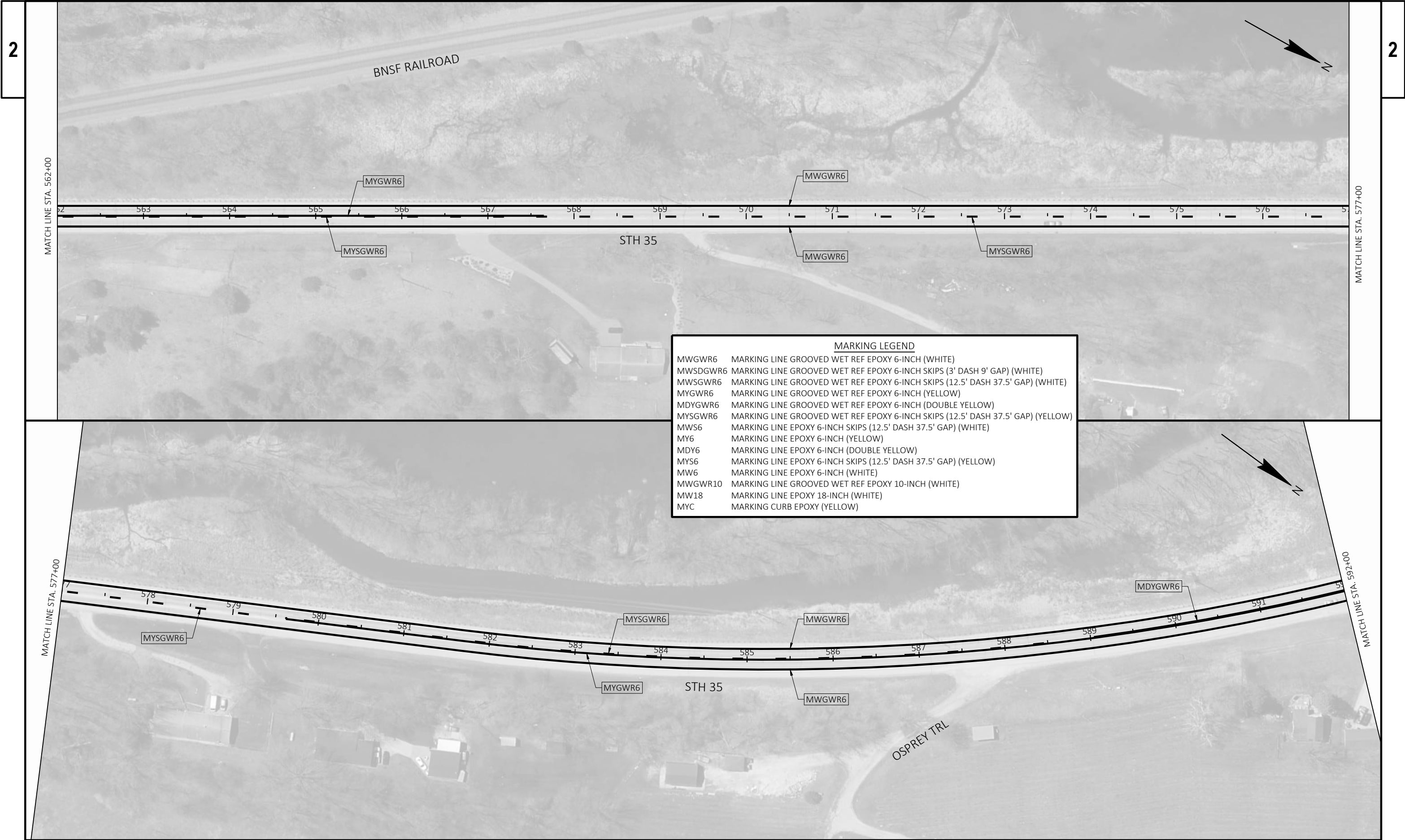
 DENOTES SIGN CODE

 INDICATES SIGN SIZE

SIGNING LEGEND

MARKING LEGEND

MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)



MATCH LINE STA. 562+00

MATCH LINE STA. 577+00

MATCH LINE STA. 577+00

MATCH LINE STA. 592+00

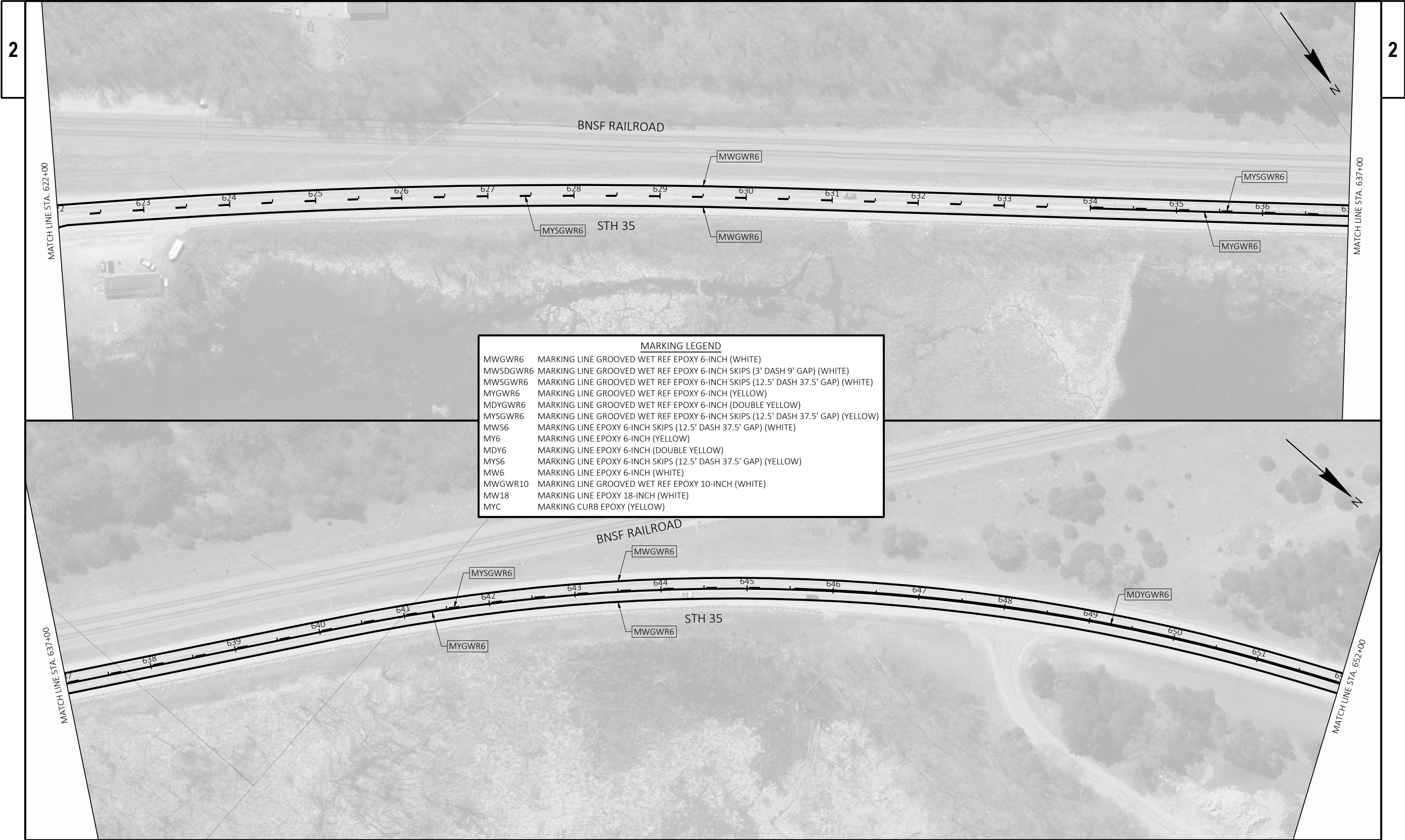
MARKING LEGEND	
MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)

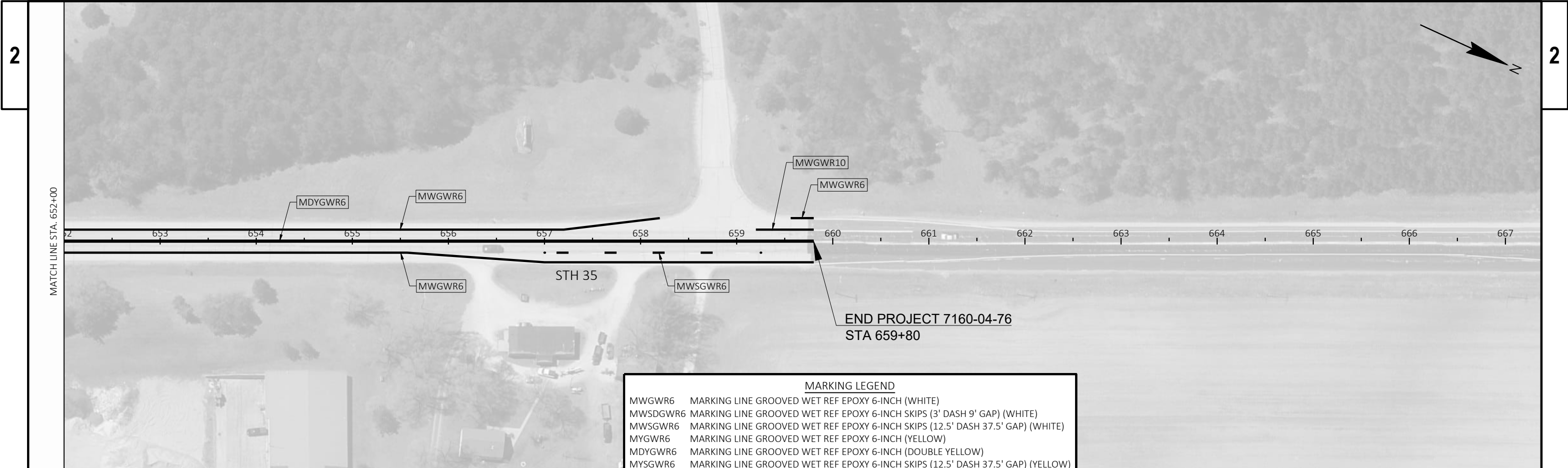


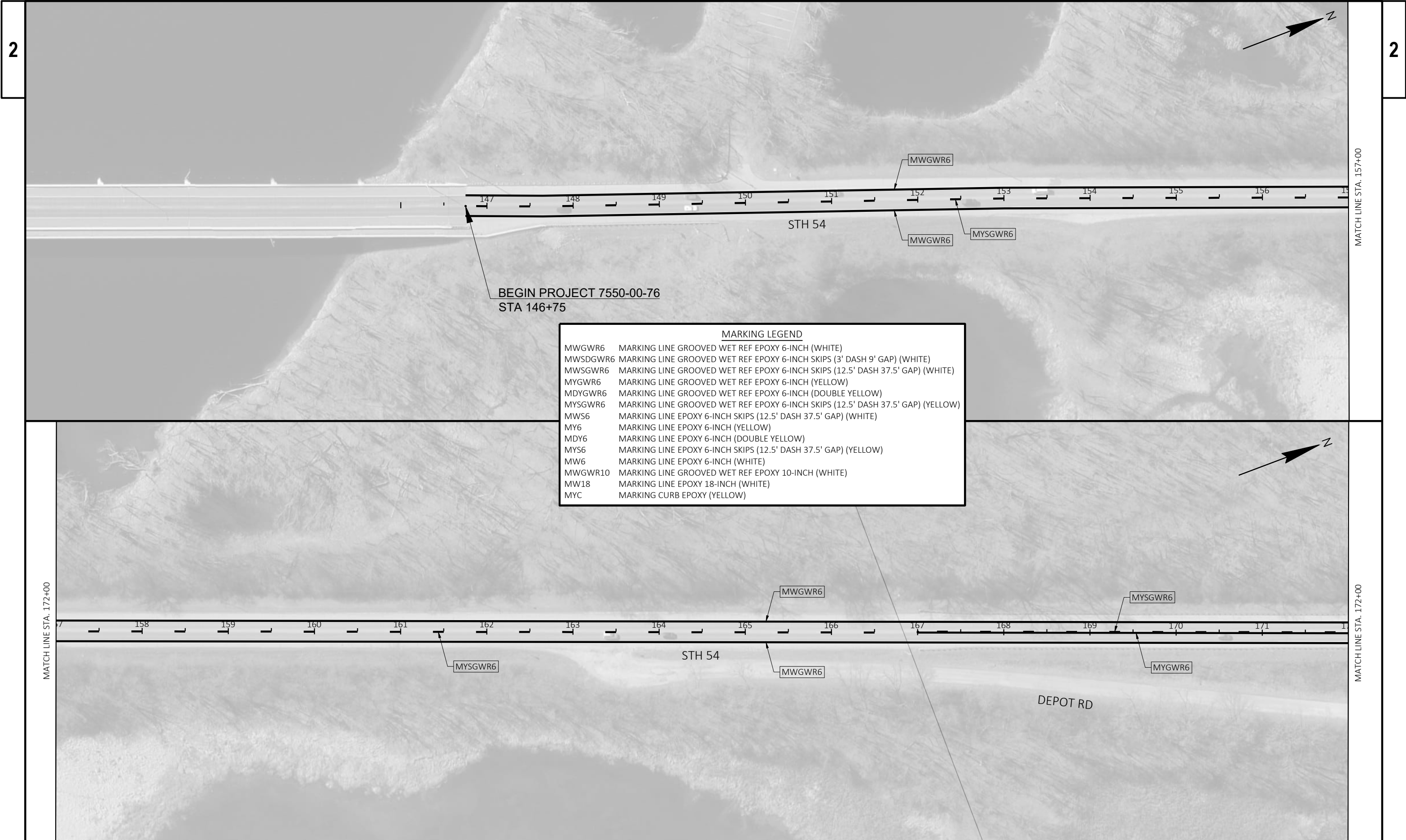
2

2

MARKING LEGEND	
MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)

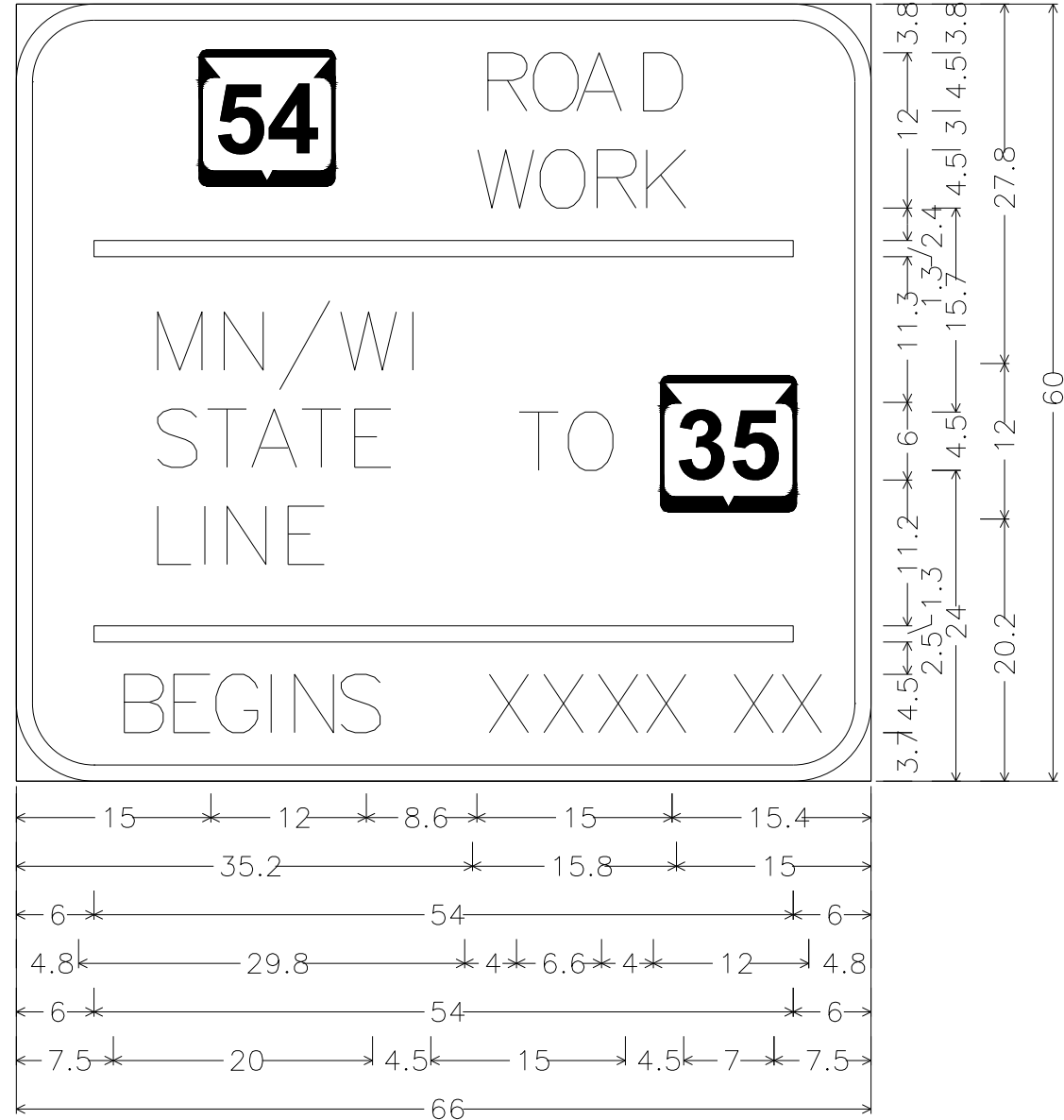








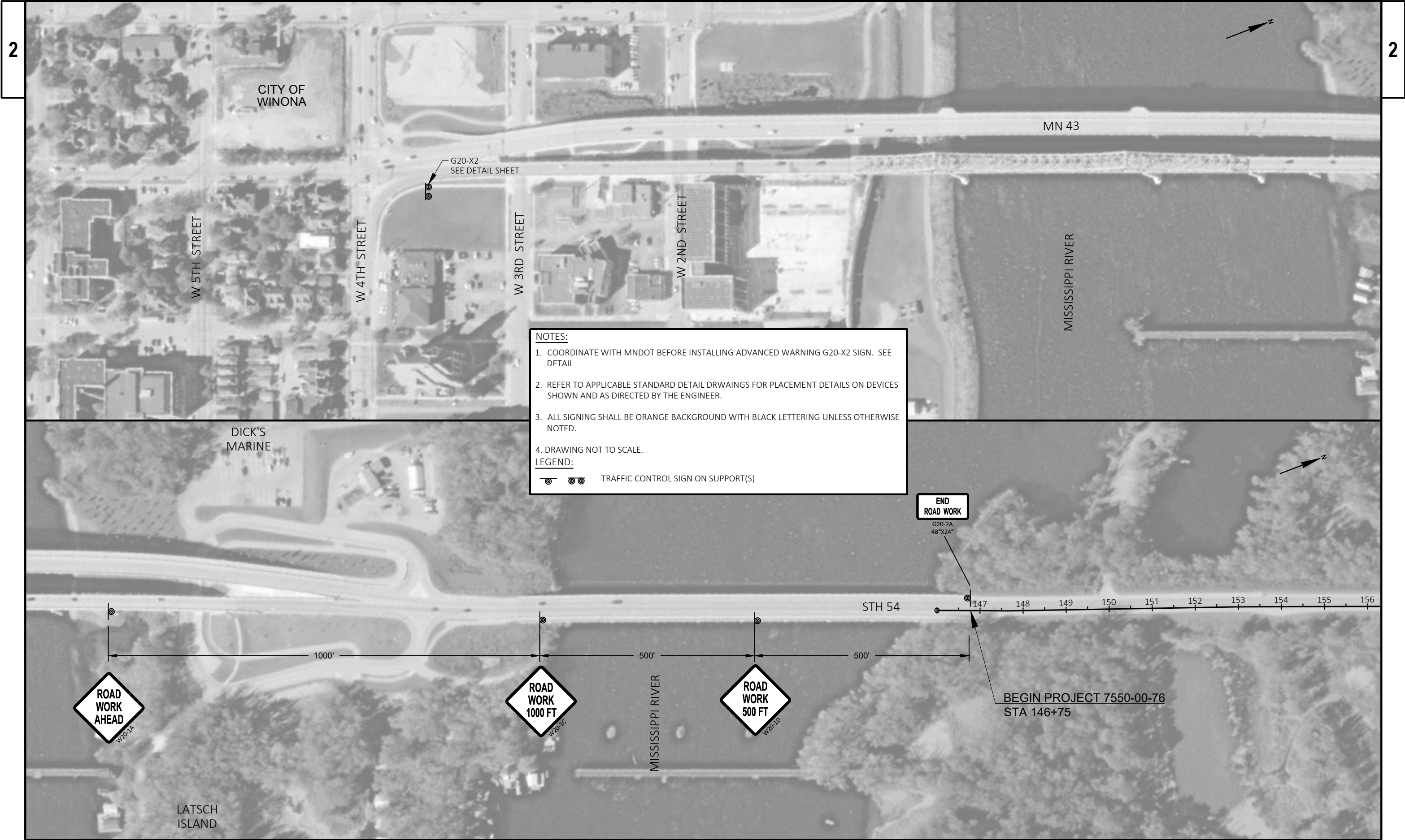
MARKING LEGEND	
MWGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (WHITE)
MWSDGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (3' DASH 9' GAP) (WHITE)
MWSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (YELLOW)
MDYGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH (DOUBLE YELLOW)
MYSGWR6	MARKING LINE GROOVED WET REF EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MWS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (WHITE)
MY6	MARKING LINE EPOXY 6-INCH (YELLOW)
MDY6	MARKING LINE EPOXY 6-INCH (DOUBLE YELLOW)
MYS6	MARKING LINE EPOXY 6-INCH SKIPS (12.5' DASH 37.5' GAP) (YELLOW)
MW6	MARKING LINE EPOXY 6-INCH (WHITE)
MWGWR10	MARKING LINE GROOVED WET REF EPOXY 10-INCH (WHITE)
MW18	MARKING LINE EPOXY 18-INCH (WHITE)
MYC	MARKING CURB EPOXY (YELLOW)



G20-X2(B);
6.0" Radius, 1.3" Border, Black on, Orange;
State Highway 7 M1-5b; "ROAD", D 2K; "WORK", D 2K;
"Location", D 2K; "TO", D 2K; State Highway 41 M1-5b;
"BEGINS", D 2K; "JUNE 24", D 2K;

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. COLOR - BLACK LEGEND AND BORDER ON ORANGE REFLECTORIZED BACKGROUND. ROUTE MARKERS SHALL BE THE COLORS STATED IN THE STANDARD SIGNS MANUAL.
3. MORE THAN ONE ROUTE MARKER MAY BE USED ON TOP, AND ROUT MARKERS MAY BE USED IN THE CENTER PORTION.
4. HORIZONTAL SPACING BETWEEN WORDS SHOULD BE EQUAL TO LETTER HEIGHT.
5. LEGEND LINES SHALL BE CENTERED HORIZONTALLY ON PANEL.
6. "BEGINS..." SHALL BE COVERED AFTER WORK STARTS WITH ENDING DATE OR BLANK ORANGE PANEL.

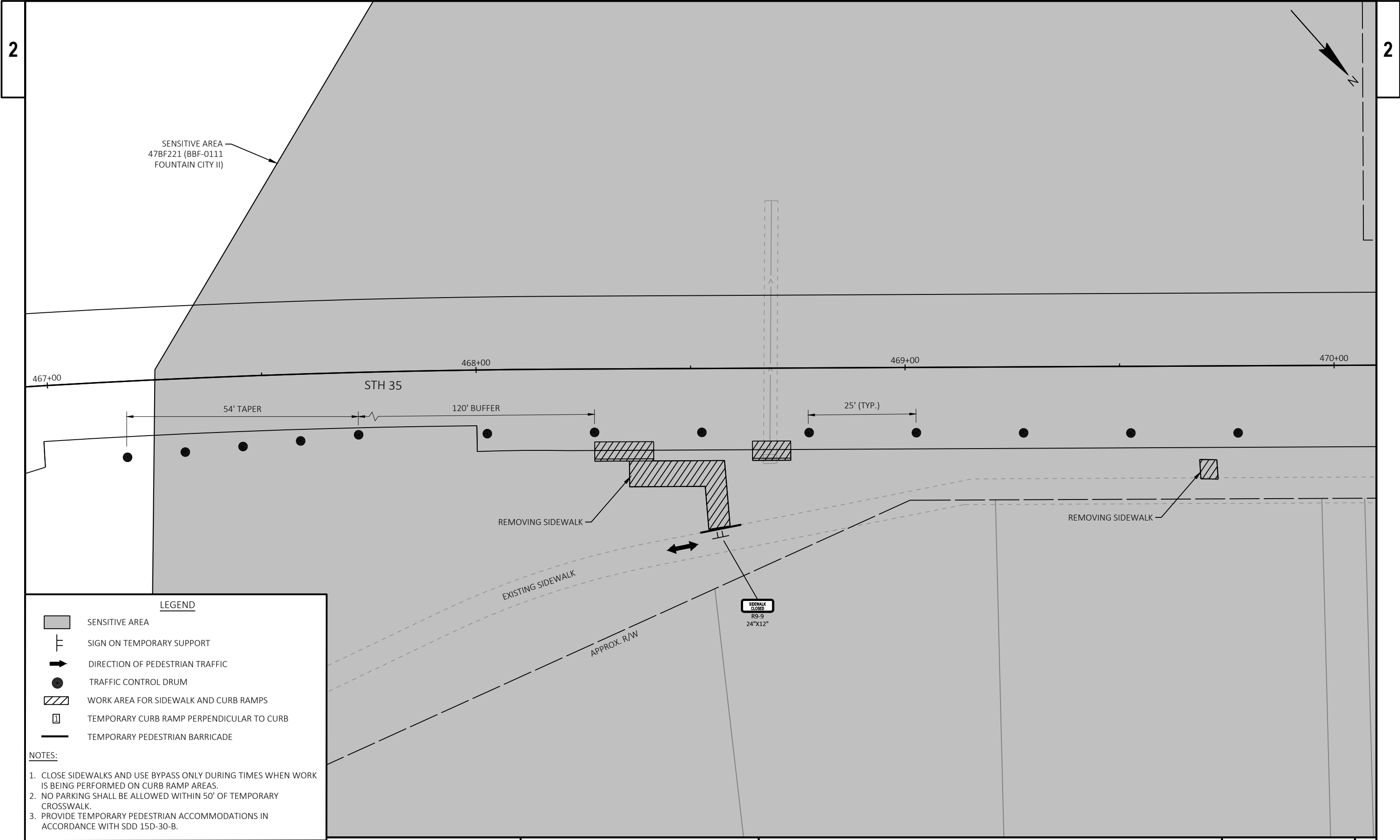


NOTES:

1. COORDINATE WITH MNDOT BEFORE INSTALLING ADVANCED WARNING G20-X2 SIGN. SEE DETAIL
2. REFER TO APPLICABLE STANDARD DETAIL DRWAINGS FOR PLACEMENT DETAILS ON DEVICES SHOWN AND AS DIRECTED BY THE ENGINEER.
3. ALL SIGNING SHALL BE ORANGE BACKGROUND WITH BLACK LETTERING UNLESS OTHERWISE NOTED.
4. DRAWING NOT TO SCALE.

LEGEND:

⊙ ⊗ ⊗ TRAFFIC CONTROL SIGN ON SUPPORT(S)

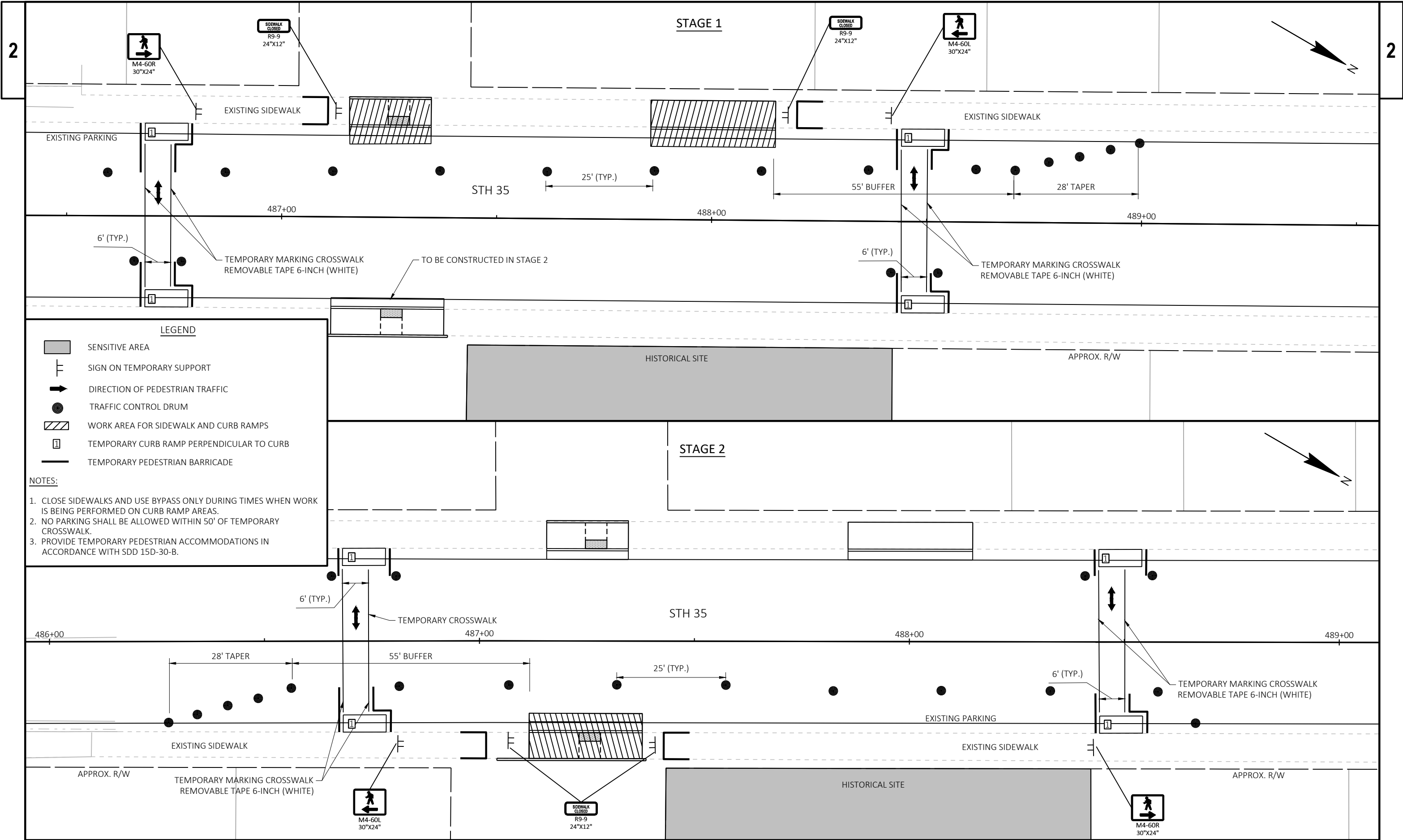


LEGEND

- SENSITIVE AREA
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF PEDESTRIAN TRAFFIC
- TRAFFIC CONTROL DRUM
- WORK AREA FOR SIDEWALK AND CURB RAMP
- TEMPORARY CURB RAMP PERPENDICULAR TO CURB
- TEMPORARY PEDESTRIAN BARRICADE

NOTES:

1. CLOSE SIDEWALKS AND USE BYPASS ONLY DURING TIMES WHEN WORK IS BEING PERFORMED ON CURB RAMP AREAS.
2. NO PARKING SHALL BE ALLOWED WITHIN 50' OF TEMPORARY CROSSWALK.
3. PROVIDE TEMPORARY PEDESTRIAN ACCOMMODATIONS IN ACCORDANCE WITH SDD 15D-30-B.

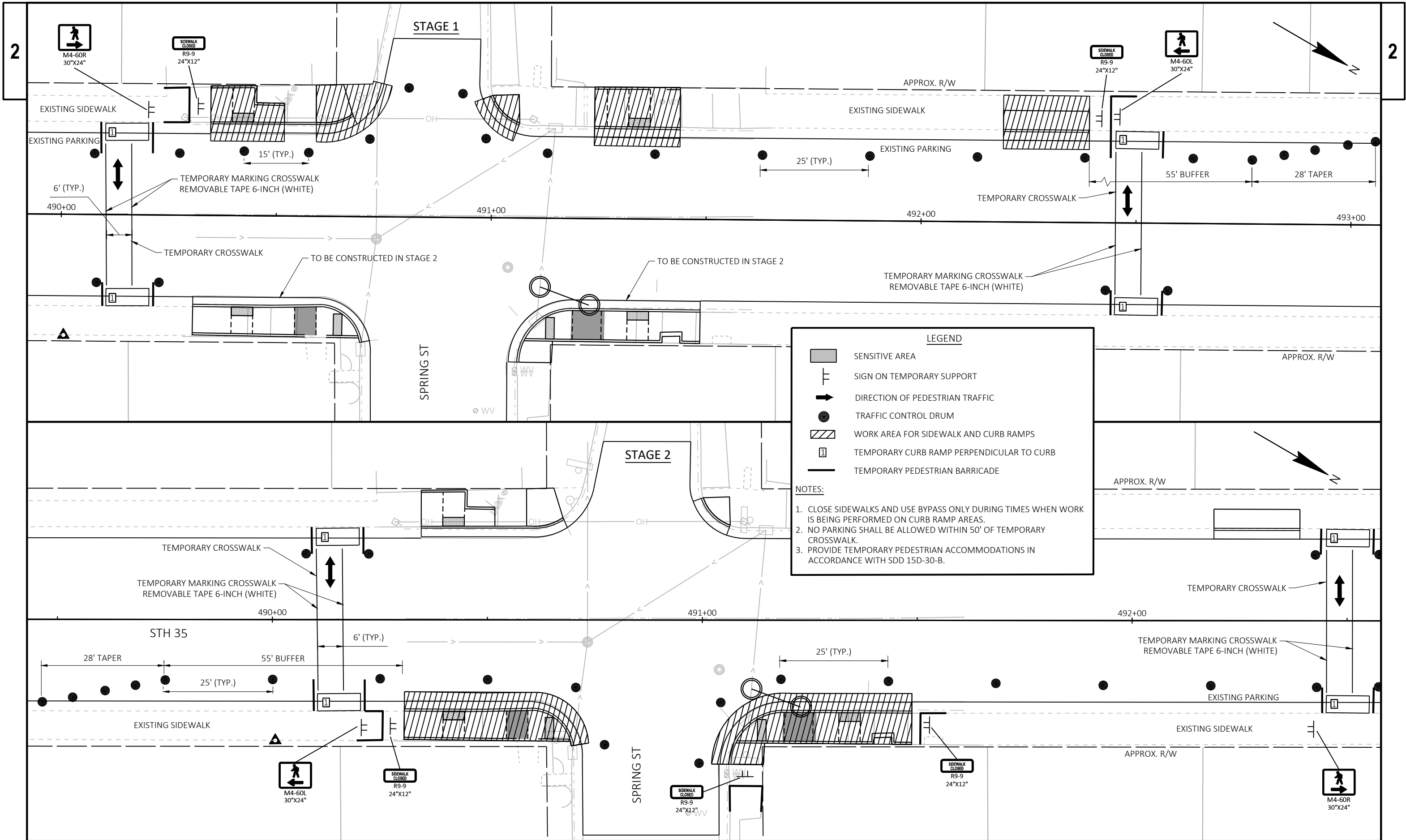


LEGEND

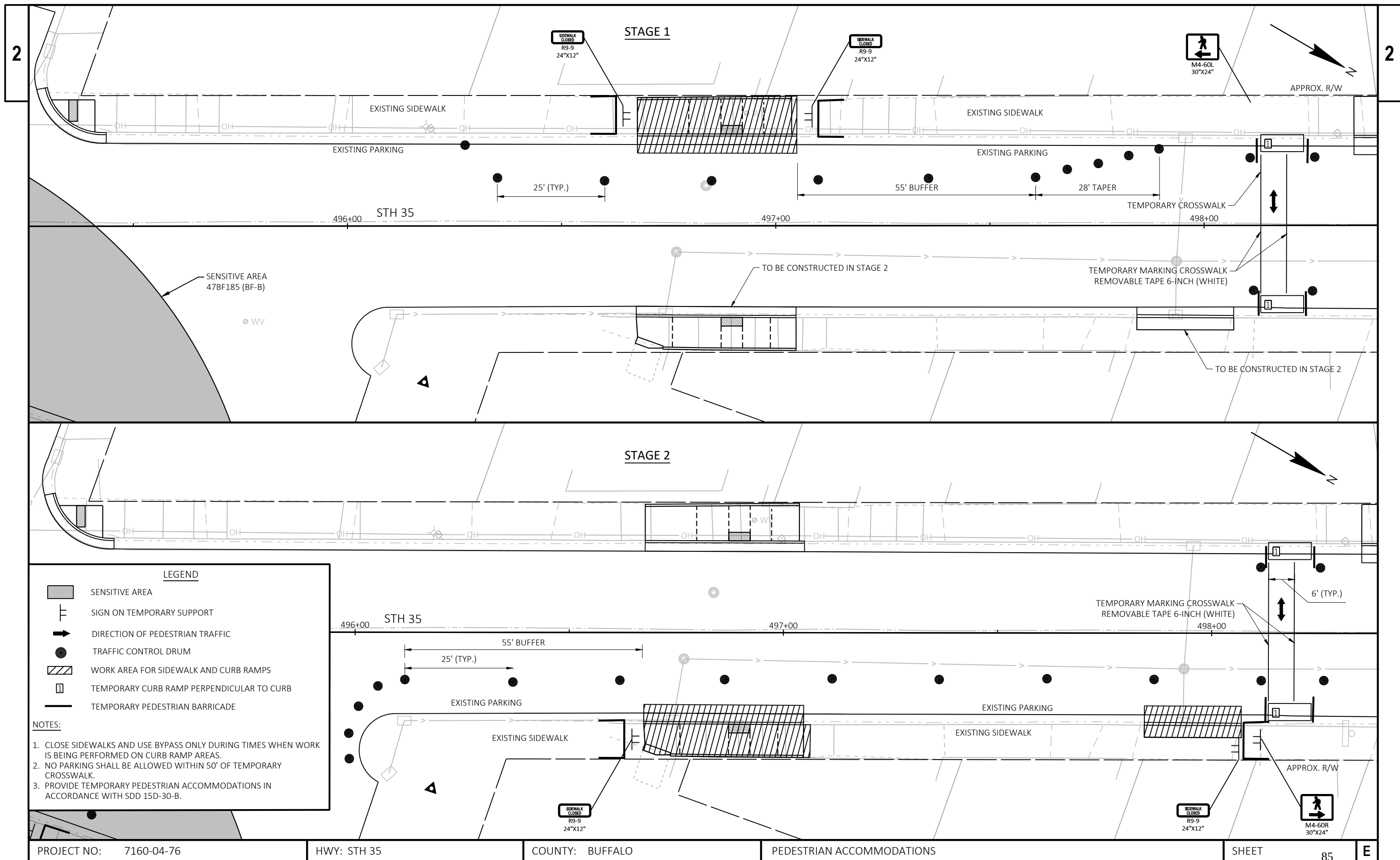
- SENSITIVE AREA
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF PEDESTRIAN TRAFFIC
- TRAFFIC CONTROL DRUM
- WORK AREA FOR SIDEWALK AND CURB RAMP
- TEMPORARY CURB RAMP PERPENDICULAR TO CURB
- TEMPORARY PEDESTRIAN BARRICADE

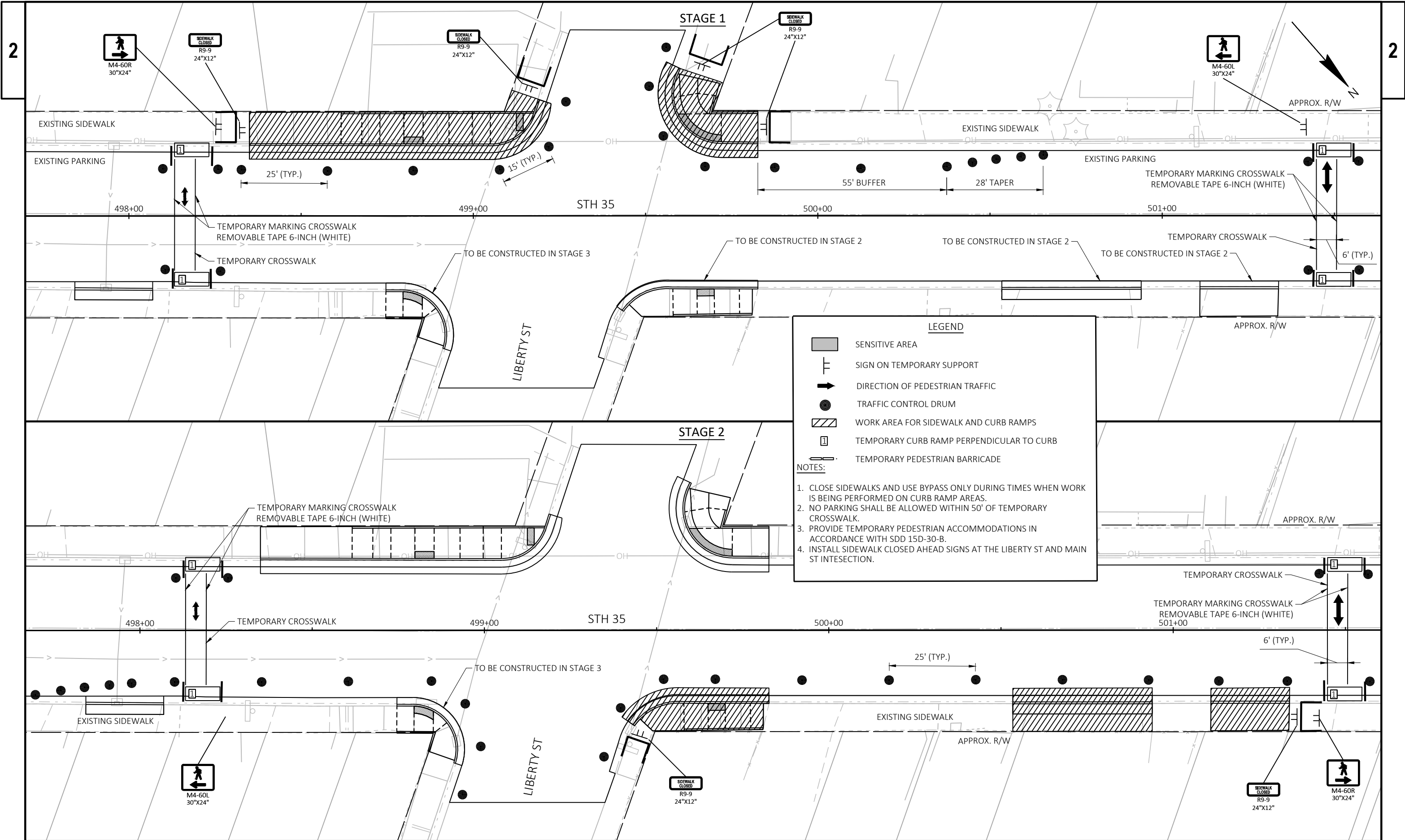
NOTES:

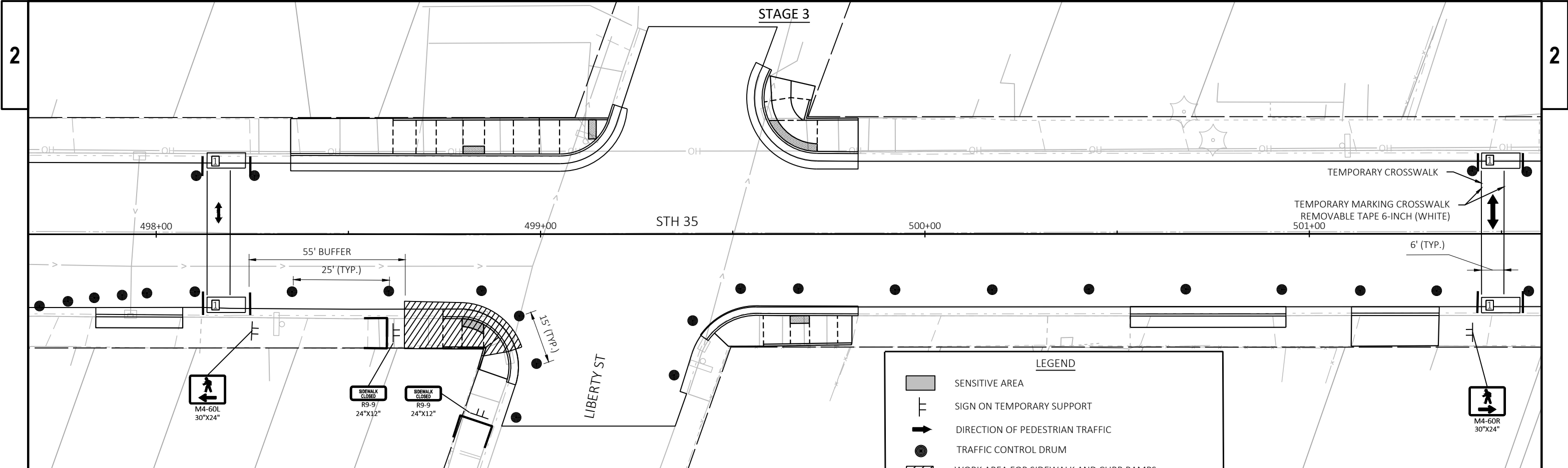
- CLOSE SIDEWALKS AND USE BYPASS ONLY DURING TIMES WHEN WORK IS BEING PERFORMED ON CURB RAMP AREAS.
- NO PARKING SHALL BE ALLOWED WITHIN 50' OF TEMPORARY CROSSWALK.
- PROVIDE TEMPORARY PEDESTRIAN ACCOMMODATIONS IN ACCORDANCE WITH SDD 15D-30-B.









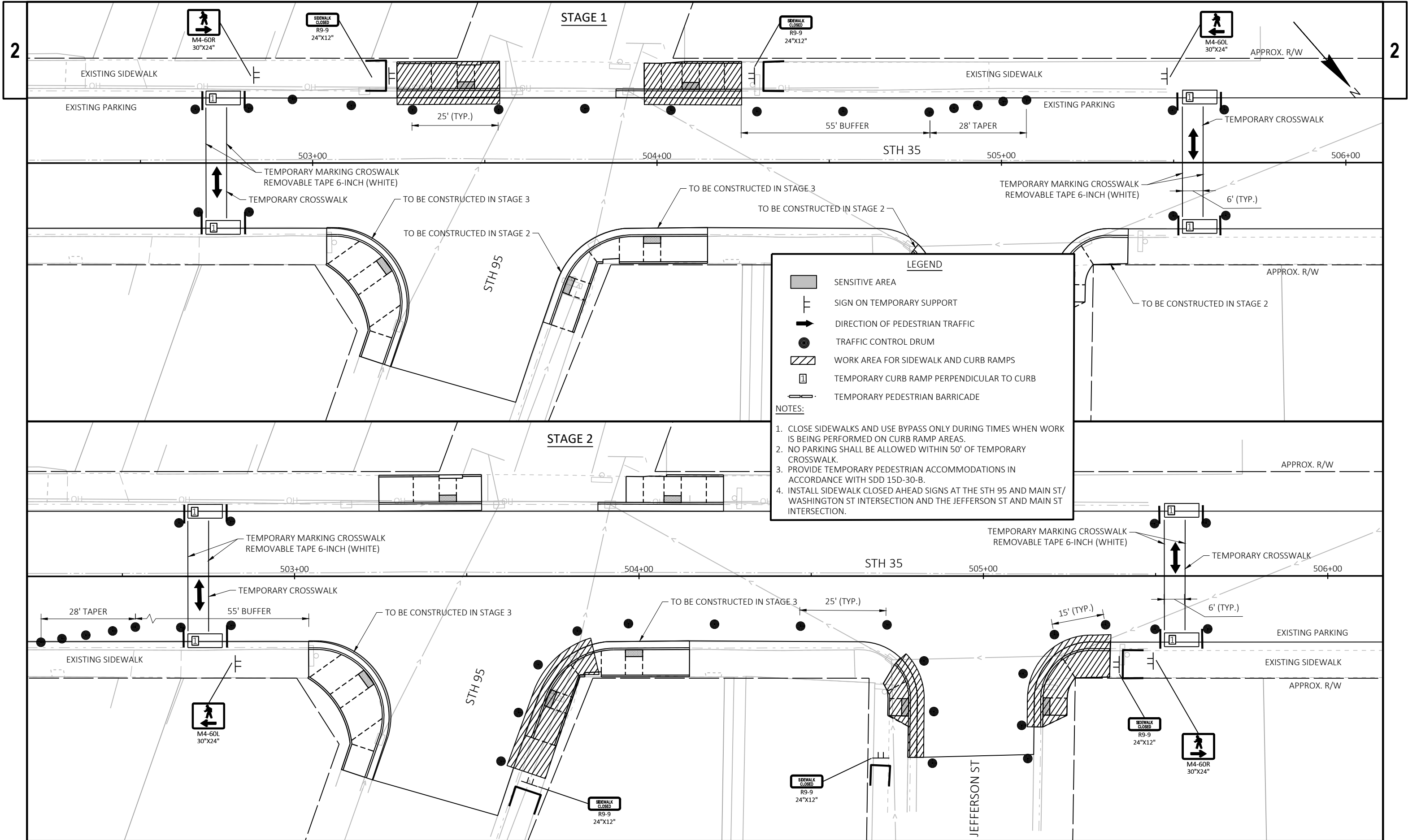


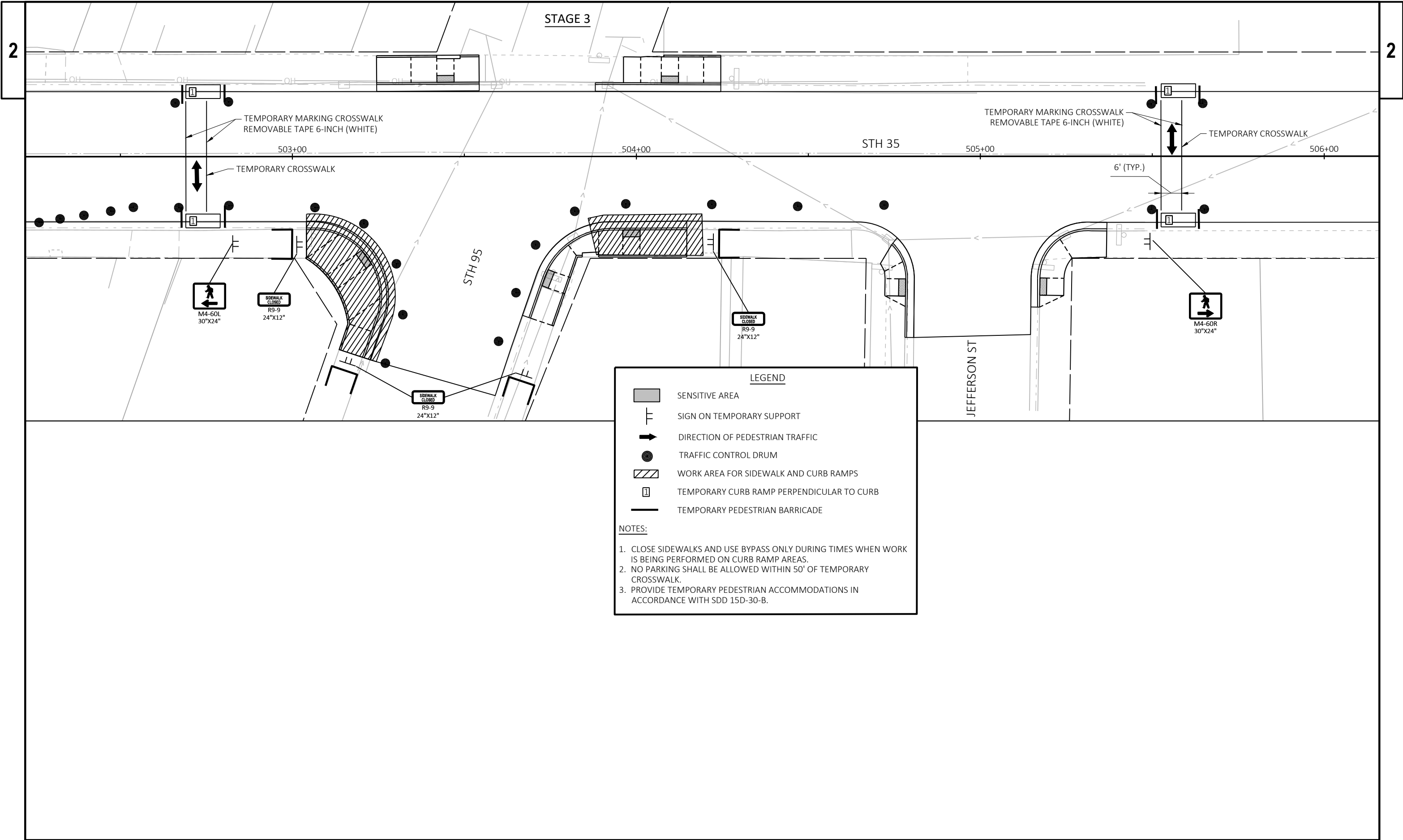
LEGEND

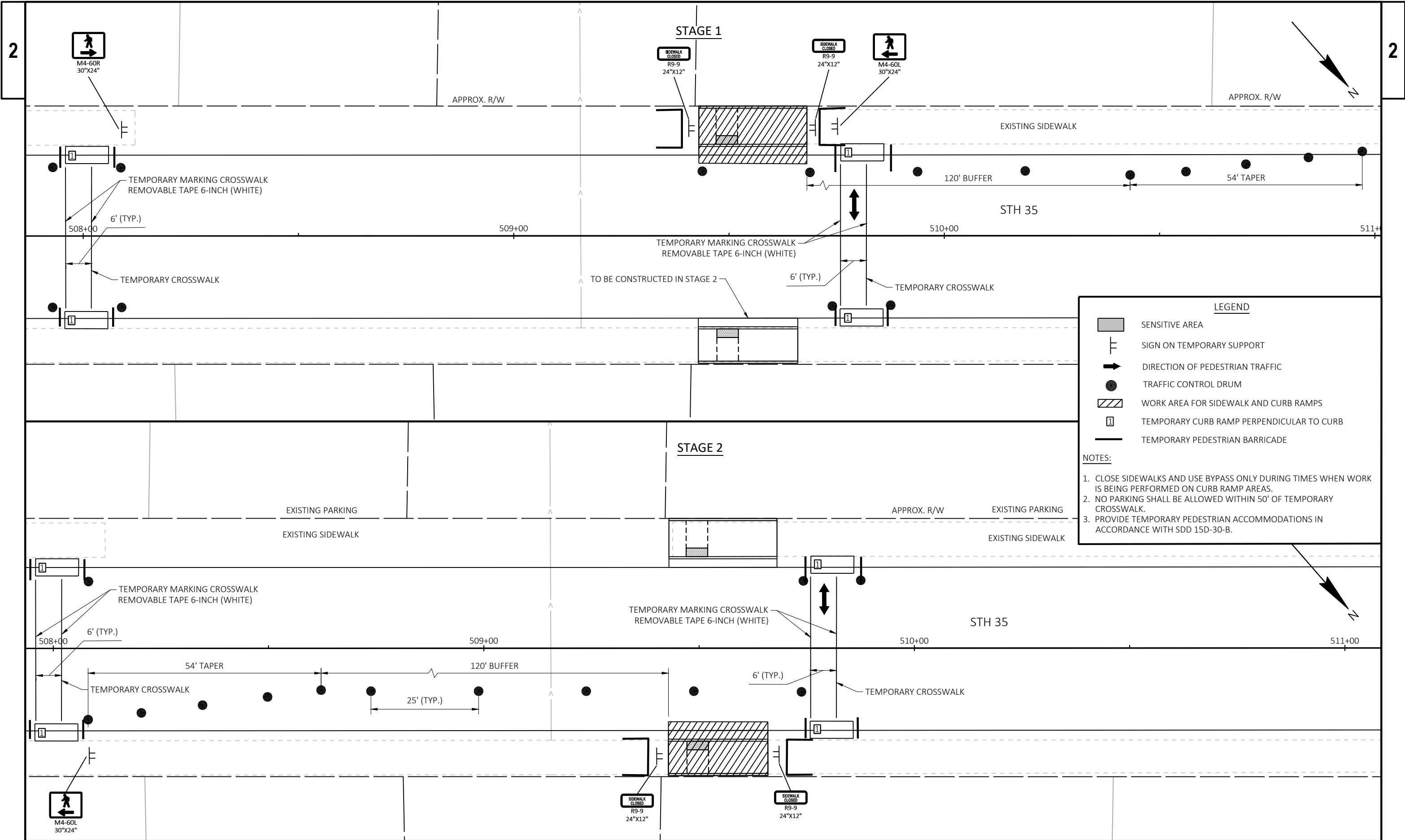
- SENSITIVE AREA
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF PEDESTRIAN TRAFFIC
- TRAFFIC CONTROL DRUM
- WORK AREA FOR SIDEWALK AND CURB RAMPS
- TEMPORARY CURB RAMP PERPENDICULAR TO CURB
- TEMPORARY PEDESTRIAN BARRICADE

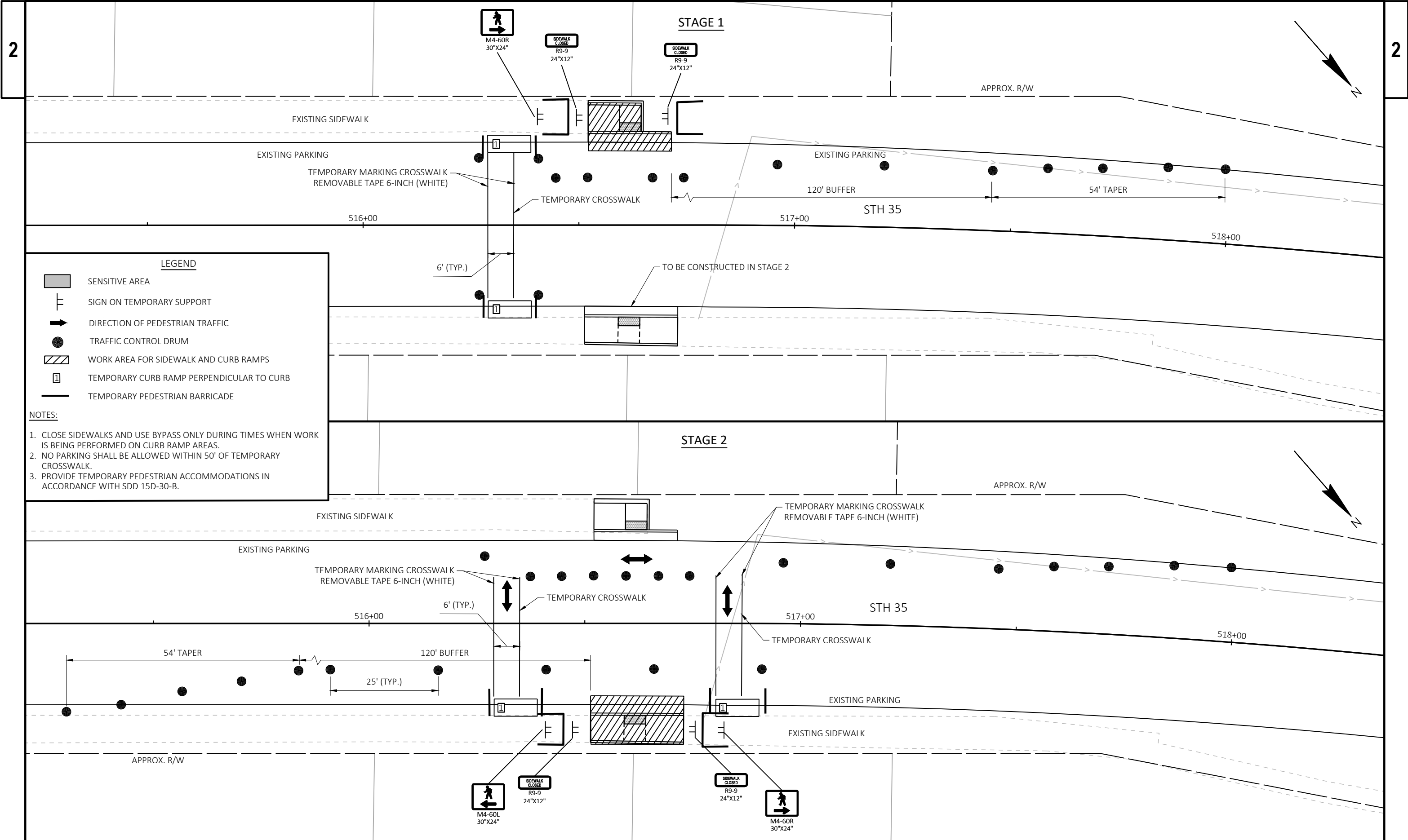
NOTES:

- CLOSE SIDEWALKS AND USE BYPASS ONLY DURING TIMES WHEN WORK IS BEING PERFORMED ON CURB RAMP AREAS.
- NO PARKING SHALL BE ALLOWED WITHIN 50' OF TEMPORARY CROSSWALK.
- PROVIDE TEMPORARY PEDESTRIAN ACCOMMODATIONS IN ACCORDANCE WITH SDD 15D-30-B.
- INSTALL SIDEWALK CLOSED AHEAD SIGNS AT THE LIBERTY ST AND MAIN ST INTESECTION.









Estimate Of Quantities

					7160-04-76	7550-00-76
Line	Item	Item Description	Unit	Total	Qty	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000	
0004	204.0110	Removing Asphaltic Surface	SY	425.000	425.000	
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	3,042.000	2,575.000	467.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	197,768.000	183,775.000	13,993.000
0010	204.0130	Removing Curb	LF	288.000	288.000	
0012	204.0150	Removing Curb & Gutter	LF	1,709.000	1,709.000	
0014	204.0155	Removing Concrete Sidewalk	SY	746.000	746.000	
0016	204.0165	Removing Guardrail	LF	788.000	788.000	
0018	204.0190	Removing Surface Drains	EACH	6.000	6.000	
0020	204.0220	Removing Inlets	EACH	1.000	1.000	
0022	204.0245	Removing Storm Sewer (size) 01. 24-Inch	LF	12.000	12.000	
0024	204.9060.S	Removing (item description) 01. Inlet Covers	EACH	4.000	4.000	
0026	204.9060.S	Removing (item description) 02. Removing Endwall	EACH	1.000	1.000	
0028	204.9090.S	Removing (item description) 01. Beamguard Curb	LF	288.000	288.000	
0030	205.0100	Excavation Common	CY	252.000	252.000	
0032	208.0100	Borrow	CY	103.000	103.000	
0034	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 7160-04-76	EACH	1.000	1.000	
0036	211.0101	Prepare Foundation for Asphaltic Paving (project) 02. 7550-00-76	EACH	1.000		1.000
0038	213.0100	Finishing Roadway (project) 01. 7160-04-76	EACH	1.000	1.000	
0040	213.0100	Finishing Roadway (project) 02. 7550-00-76	EACH	1.000		1.000
0042	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,555.000	2,145.000	410.000
0044	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	380.000	380.000	
0046	416.0610	Drilled Tie Bars	EACH	148.000	148.000	
0048	455.0605	Tack Coat	GAL	23,346.000	22,108.000	1,238.000
0050	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000	
0052	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000	
0054	460.2005	Incentive Density PWL HMA Pavement	DOL	21,510.000	21,510.000	
0056	460.2005	Incentive Density PWL HMA Pavement	DOL	1,650.000		1,650.000
0058	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	19,030.000	17,730.000	1,300.000
0060	460.2010	Incentive Air Voids HMA Pavement	DOL	33,850.000	33,850.000	
0062	460.2010	Incentive Air Voids HMA Pavement	DOL	2,130.000		2,130.000
0064	460.6245	HMA Pavement 5 MT 58-34 S	TON	35,981.000	33,847.000	2,134.000
0066	460.9000.S	Material Transfer Vehicle	EACH	0.200		0.200
0068	460.9000.S	Material Transfer Vehicle	EACH	0.800	0.800	
0070	465.0105	Asphaltic Surface	TON	1,118.000	1,118.000	
0072	465.0110	Asphaltic Surface Patching	TON	500.000	400.000	100.000
0074	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	145.000	140.000	5.000
0076	465.0310	Asphaltic Curb	LF	288.000	288.000	
0078	465.0315	Asphaltic Flumes	SY	26.000	26.000	
0080	465.0520	Asphaltic Rumble Strips, Shoulder	LF	56,108.000	51,103.000	5,005.000
0082	465.0560	Asphaltic Rumble Strips, Centerline	LF	32,085.000	29,091.000	2,994.000
0084	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	1.000	1.000	
0086	520.8000	Concrete Collars for Pipe	EACH	10.000	10.000	
0088	520.8700	Cleaning Culvert Pipes	EACH	6.000	6.000	
0090	520.9700.S	Culvert Pipe Liners (size) 01. 60-Inch	LF	180.000	180.000	
0092	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	2.000	2.000	
0094	521.1030	Apron Endwalls for Culvert Pipe Steel 30-Inch	EACH	1.000	1.000	
0096	521.3130	Culvert Pipe Corrugated Steel 30-Inch	LF	98.000	98.000	
0098	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	3.000	3.000	

Estimate Of Quantities

		7160-04-76		7550-00-76	
Line	Item	Item Description	Unit	Total	Qty
0100	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	1.000	1.000
0102	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	1.000	1.000
0104	524.0124	Culvert Pipe Salvaged 24-Inch	LF	36.000	36.000
0106	524.0160	Culvert Pipe Salvaged 60-Inch	LF	20.000	20.000
0108	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	1,098.000	1,098.000
0110	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	31.000	31.000
0112	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	140.000	140.000
0114	601.0600	Concrete Curb Pedestrian	LF	186.000	186.000
0116	602.0410	Concrete Sidewalk 5-Inch	SF	6,420.000	6,420.000
0118	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	270.000	270.000
0120	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	56.000	56.000
0122	602.1500	Concrete Steps	SF	34.000	34.000
0124	606.0200	Riprap Medium	CY	28.000	28.000
0126	606.0300	Riprap Heavy	CY	317.000	317.000
0128	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	12.000	12.000
0130	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0132	611.0600	Inlet Covers Type A	EACH	1.000	1.000
0134	611.0624	Inlet Covers Type H	EACH	1.000	1.000
0136	611.0639	Inlet Covers Type H-S	EACH	1.000	1.000
0138	611.0654	Inlet Covers Type V	EACH	1.000	1.000
0140	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0142	611.3004	Inlets 4-FT Diameter	EACH	1.000	1.000
0144	611.8110	Adjusting Manhole Covers	EACH	14.000	14.000
0146	611.8115	Adjusting Inlet Covers	EACH	7.000	7.000
0148	611.8120.S	Cover Plates Temporary	EACH	6.000	6.000
0150	614.0305	Steel Plate Beam Guard Class A	LF	688.000	688.000
0152	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	2.000	2.000
0154	614.0400	Adjusting Steel Plate Beam Guard	LF	3,900.000	3,900.000
0156	614.0950	Replacing Guardrail Posts and Blocks	EACH	319.000	319.000
0158	614.0951	Replacing Guardrail Rail and Hardware	LF	1,270.000	1,270.000
0160	614.0953	Replacing EAT Reflective Panel	EACH	4.000	4.000
0162	614.2300	MGS Guardrail 3	LF	100.000	100.000
0164	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7160-04-76	EACH	1.000	1.000
0166	618.0100	Maintenance and Repair of Haul Roads (project) 02. 7550-00-76	EACH	1.000	1.000
0168	619.1000	Mobilization	EACH	1.000	0.800
0170	624.0100	Water	MGAL	45.000	38.600
0172	625.0100	Topsoil	SY	3,169.000	3,169.000
0174	628.1504	Silt Fence	LF	2,000.000	2,000.000
0176	628.1520	Silt Fence Maintenance	LF	2,000.000	2,000.000
0178	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0180	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0182	628.2008	Erosion Mat Urban Class I Type B	SY	3,169.000	3,169.000
0184	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0186	628.7015	Inlet Protection Type C	EACH	45.000	45.000
0188	628.7504	Temporary Ditch Checks	LF	144.000	144.000
0190	628.7555	Culvert Pipe Checks	EACH	29.000	29.000
0192	628.7570	Rock Bags	EACH	82.000	82.000
0194	629.0210	Fertilizer Type B	CWT	3.800	3.800
0196	630.0120	Seeding Mixture No. 20	LB	130.300	130.300

Estimate Of Quantities

		7160-04-76		7550-00-76		
Line	Item	Item Description	Unit	Total	Qty	Qty
0198	630.0140	Seeding Mixture No. 40	LB	13.400	13.400	
0200	630.0200	Seeding Temporary	LB	50.000	50.000	
0202	630.0500	Seed Water	MGAL	88.000	88.000	
0204	633.0200	Delineators Flexible	EACH	44.000	44.000	
0206	633.5200	Markers Culvert End	EACH	32.000	32.000	
0208	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	3.000	3.000	
0210	637.2210	Signs Type II Reflective H	SF	9.000	9.000	
0212	642.5201	Field Office Type C	EACH	1.000	0.800	0.200
0214	643.0300	Traffic Control Drums	DAY	7,300.000	7,100.000	200.000
0216	643.0420	Traffic Control Barricades Type III	DAY	20.000	20.000	
0218	643.0715	Traffic Control Warning Lights Type C	DAY	500.000	500.000	
0220	643.0900	Traffic Control Signs	DAY	6,450.000	6,200.000	250.000
0222	643.1000	Traffic Control Signs Fixed Message	SF	90.000	54.000	36.000
0224	643.1050	Traffic Control Signs PCMS	DAY	40.000		40.000
0226	643.3170	Temporary Marking Line Epoxy 6-Inch	LF	155,030.000	147,830.000	7,200.000
0228	643.3250	Temporary Marking Line Removable Tape 8-Inch	LF	1,320.000	1,320.000	
0230	643.3350	Temporary Marking Crosswalk Removable Tape 6-Inch	LF	1,120.000	1,120.000	
0232	643.5000	Traffic Control	EACH	1.000	0.800	0.200
0234	644.1601	Temporary Pedestrian Curb Ramp	DAY	440.000	440.000	
0236	644.1810	Temporary Pedestrian Barricade	LF	1,400.000	1,400.000	
0238	645.0120	Geotextile Type HR	SY	649.000	649.000	
0240	646.2020	Marking Line Epoxy 6-Inch	LF	1,080.000	960.000	120.000
0242	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	139,860.000	130,750.000	9,110.000
0244	646.4040	Marking Line Grooved Wet Ref Epoxy 10-Inch	LF	532.000	480.000	52.000
0246	646.6120	Marking Stop Line Epoxy 18-Inch	LF	22.000	22.000	
0248	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	300.000	300.000	
0250	646.7520	Marking Crosswalk Epoxy Block Style 24-Inch	LF	385.000	385.000	
0252	646.8120	Marking Curb Epoxy	LF	690.000	690.000	
0254	646.8320	Marking Parking Stall Epoxy	LF	321.000	321.000	
0256	648.0100	Locating No-Passing Zones	MI	9.223	8.576	0.647
0258	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000	
0260	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	1,717.000	1,717.000	
0262	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000	
0264	650.8000	Construction Staking Resurfacing Reference	LF	48,695.000	45,280.000	3,415.000
0266	650.9000	Construction Staking Curb Ramps	EACH	26.000	26.000	
0268	650.9500	Construction Staking Sidewalk (project) 01. 7160-04-76	EACH	1.000	1.000	
0270	650.9911	Construction Staking Supplemental Control (project) 01. 7160-04-76	EACH	1.000	1.000	
0272	650.9911	Construction Staking Supplemental Control (project) 02. 7550-00-76	EACH	1.000		1.000
0274	650.9920	Construction Staking Slope Stakes	LF	917.000	917.000	
0276	690.0150	Sawing Asphalt	LF	1,959.000	1,909.000	50.000
0278	690.0250	Sawing Concrete	LF	911.000	911.000	
0280	740.0440	Incentive IRI Ride	DOL	33,573.000	33,573.000	
0282	740.0440	Incentive IRI Ride	DOL	2,454.000		2,454.000
0284	SPV.0060	Special 01. Adjusting Sanitary Manholes	EACH	24.000	24.000	
0286	SPV.0060	Special 02. Adjusting Water Valves	EACH	17.000	17.000	
0288	SPV.0060	Special 03. Adjusting Water Service Curb Stops	EACH	4.000	4.000	
0290	SPV.0060	Special 04. Steel Plate 1/2-Inch	EACH	2.000	2.000	
0292	SPV.0060	Special 05. Sawing Hole In Existing Structure	EACH	2.000	2.000	
0294	SPV.0060	Special 06. Traffic Control Signs Fixed Message MnDOT	EACH	1.000		1.000

Estimate Of Quantities

				7160-04-76	7550-00-76		
Line	Item	Item Description	Unit	Total	Qty	Qty	
0296	SPV.0060	Special 07. Cleaning Inlets	EACH	4.000	4.000		
0298	SPV.0060	Special 08. Connect To Existing Structure	EACH	1.000	1.000		
0300	SPV.0060	Special 09. Inlet Covers Type H-D	EACH	2.000	2.000		
0302	SPV.0060	Special 10. Site Mowing Project 7160-04-76	EACH	1.000	1.000		
0304	SPV.0060	Special 11. Site Mowing Project 7550-00-76	EACH	1.000		1.000	
0306	SPV.0090	Special 01. Shoulder Existing Beamguard	LF	5,500.000	5,000.000	500.000	
0308	SPV.0090	Special 02. Modified Pedestrian Curb	LF	448.000	448.000		
0310	SPV.0090	Special 03. Fence Chain Link Small Animal Barrier	LF	2,500.000	2,500.000		
0312	SPV.0090	Special 04. Cleaning Ditch	LF	500.000	500.000		

3

3

REMOVING CULVERTS					CONTINUED FROM PREVIOUS COLUMN				REMOVING ASPHALT												
CATEGORY	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	REMARKS					204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS									
0010	579+00	RT	1	18" CMP X 95'																	
7160-04-76 TOTAL 0010			1																		
REMOVING ASPHALT																					
CATEGORY	STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS													
0010	207+00	-	207+10	MAINLINE	---	38	---														
0010	207+10	-	230+20	MAINLINE	---	---	8,959														
0010	230+20	-	230+30	MAINLINE	---	41	---														
0010	231+50	-	231+60	MAINLINE	---	41	---														
0010	231+60	-	251+24	MAINLINE	---	---	7,613														
0010	251+24	-	251+34	MAINLINE	---	40	---														
0010	252+82	-	252+92	MAINLINE	---	41	---														
0010	252+92	-	310+54	MAINLINE	---	---	22,943														
0010	310+54	-	310+64	MAINLINE	---	38	---														
0010	312+05	-	312+15	MAINLINE	---	38	---														
0010	312+15	-	344+98	MAINLINE	---	---	13,200														
0010	315+50	-	317+63	LT	24	---	---	ASPHALT CURB AREA													
0010	319+40	-	320+15	LT	8	---	---	ASPHALT CURB AREA													
0010	344+98	-	345+08	MAINLINE	---	43	---														
0010	346+20	-	346+30	MAINLINE	---	42	---														
0010	346+30	-	414+17	MAINLINE	---	---	27,489														
0010	414+17	-	414+27	MAINLINE	---	35	---														
0010	415+61	-	415+71	MAINLINE	---	37	---														
0010	415+71	-	451+46	MAINLINE	---	---	15,613														
0010	451+46	-	451+56	MAINLINE	---	39	---														
0010	452+68	-	452+78	MAINLINE	---	41	---														
0010	452+78	-	594+03	MAINLINE	---	---	49,049														
0010	579+10	-	579+40	RT	58	---	---	DRIVEWAY CULVERT PIPE													
0010	594+03	-	594+13	MAINLINE	---	45	---														
0010	596+10	-	596+20	MAINLINE	---	44	---														
0010	596+20	-	659+70	MAINLINE	---	---	28,244														
0010	620+94	-	621+02	LT	5	---	---	ASPHALT FLUME													
0010	659+70	-	659+80	MAINLINE	---	54	---														
0010	--	-	--	CASTLE ROCK LN	---	52	189														
0010	--	-	--	BURT LN	---	31	149														
0010	--	-	--	MIDWAY RD	---	37	95														
0010	--	-	--	BREEZY POINT LN	---	35	128														
0010	--	-	--	MIDWAY RD	---	52	248														
0010	--	-	--	NIGHTHAWK TRL	---	22	81														
0010	--	-	--	OLD STH 35	---	16	73														
0010	--	-	--	CTH YY	---	39	357														
0010	--	-	--	COURT LN	---	61	182														
0010	--	-	--	OAK ST	---	54	189														
0010	--	-	--	W CEDAR ST	---	29	119														
0010	--	-	--	MILL ST EAST	---	42	134														
CONTINUED IN NEXT COLUMN																					
7160-04-76 TOTAL 0010									425	2,575	178,339										
7160-00-76 TOTAL 0020									0	0	5,436										
7160-04-76 SUBTOTAL									425	2,575	183,775										
7550-00-76 TOTAL 0010																					
TOTALS									425	3,041	197,767										
PROJECT NO: 7160-04-76 / 7550-00-76				HWY: STH 35 / STH 54				COUNTY: BUFFALO				MISCELLANEOUS QUANTITIES				SHEET		96		E	

3

REMOVING CURB

						204.0130	204.9090.S.01
						REMOVING	REMOVING (01.
						CURB	BEAMGUARD
						LF	CURB)
CATEGORY	STATION	TO	STATION	LOCATION		LF	LF
0010	315+50	-	317+63	LT		213	213
0010	319+40	-	320+15	LT		75	75
7160-04-76 TOTAL 0010						288	288

REMOVING ENDWALL

					204.9060.S.02
					REMOVING (02.
					REMOVING
					ENDWALL)
CATEGORY	STATION		LOCATION		EACH
0010	630+80		LT		1
7160-04-76 TOTAL 0010					1

REMOVING GUARDRAIL

						204.0165
						REMOVING
						GUARDRAIL
						LF
CATEGORY	STATION	TO	STATION	LOCATION		LF
0010	223+30	-	223+42	RT		12.5
0010	314+94	-	315+43	RT		50
0010	315+50	-	317+63	LT		212.5
0010	319+40	-	323+00	LT		362.5
0010	623+51	-	624+02	RT		50
0010			UNDISTRIBUTED			100
7160-04-76 TOTAL 0010						788

REMOVING INLET

			204.0220	204.0245.01	204.9060.S.01
				REMOVING	REMOVING
				STORM SEWER	(ITEM
				(SIZE)	DESCRIPTION)
				(01. 24-INCH)	(01. INLET
					COVERS)
CATEGORY	STATION	LOCATION	REMOVING	LF	EACH
INLETS			EACH		
0010	491+10	RT	1	12	---
0010	494+69	RT	---	---	1
0010	494+80	LT	---	---	1
0010	495+03	RT	---	---	1
0010	499+58	LT	---	---	1
7160-04-76 TOTAL 0010			1	12	4

REMOVING CURB & SIDEWALK

						204.0150	204.0155
						REMOVING	REMOVING
						CURB & GUTTER	CONCRETE
						LF	SIDEWALK
CATEGORY	STATION	TO	STATION	LOCATION		LF	SY
0010	468+28	-	468+41	RT		14	21
0010	468+64	-	468+73	RT		9	--
0010	469+68	-	469+72	RT		--	2
0010	472+98	-	473+08	RT		10	--
0010	485+83	-	485+96	LT		13	5
0010	487+04	-	487+38	RT		27	18
0010	487+16	-	487+35	LT		19	14
0010	487+86	-	488+15	LT		29	22
0010	490+34	-	490+69	LT		34	20
0010	490+30	-	490+72	RT		44	26
0010	490+95	-	491+44	LT		30	23
0010	491+02	-	491+49	RT		50	32
0010	492+19	-	492+39	LT		20	10
0010	494+50	-	494+72	RT		36	16
0010	494+53	-	494+87	LT		33	20
0010	495+28	-	495+44	LT		20	6
0010	494+97	-	495+24	RT		29	16
0010	496+67	-	497+05	LT		38	33
0010	496+67	-	497+05	RT		38	31
0010	497+84	-	498+07	RT		23	8
0010	498+75	-	498+94	RT		30	16
0010	498+36	-	499+20	LT		92	79
0010	499+40	-	499+83	RT		42	28
0010	499+55	-	499+83	LT		42	32
0010	500+54	-	500+94	RT		41	14
0010	501+11	-	501+34	RT		23	20
0010	503+25	-	503+54	LT		30	25
0010	503+04	-	503+25	RT		52	45
0010	503+64	-	504+15	RT		60	41
0010	503+88	-	504+24	LT		37	24
0010	504+71	-	504+81	RT		29	9
0010	505+14	-	505+37	RT		37	22
0010	509+43	-	509+68	LT		25	24
0010	509+43	-	509+66	RT		23	20
0010	516+52	-	516+71	LT		20	9
0010	516+51	-	516+73	RT		22	15
0010	555+58	-	555+66	RT		8	--
0010	621+00	-	623+10	RT		440	--
0010	647+40	-	648+64	RT		140	--
7160-04-76 TOTAL 0010						1,709	746

3

COMMON									
CATEGORY	STATION	TO	STATION	205.0100	(1) UNUSABLE	UNEXPANDED	(2) EXPANDED	(3) MASS	208.0100
				EXCAVATION COMMON CY	MATERIAL CY	FILL CY	FILL CY	ORDINATE (+/-) CY	BORROW CY
0010	314+94	-	315+75	22	0	84	105	-83	83
0010	320+00	-	322+00	25	0	36	45	-20	20
0010	579+61	-	583+50	68	0	49	61	7	--
0010	621+50	-	623+97	137	46	13	16	75	--
7160-04-76 TOTAL 0010				252					103

(1) EXISTING ASPHALT IS ASSUMED TO BE UNUSABLE MATERIAL
(2) EXPANDED FILL FACTOR = 1.25
(3) THE MASS ORDINATE + OR - QUANTITY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION.
MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

BASE AGGREGATE								
CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	624.0100	SPV.0090.01
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	WATER MGAL	SPECIAL (01. SHOULDER EXISTING BEAMGUARD) LF
0010	207+00	-	659+80	LT & RT	1,500	--	22.6	--
0010	314+94	-	315+70	RT	15	--	0.3	--
0010	579+20	-	579+40	RT	--	10	0.3	--
0010	--	-	--	SIDEWALK	--	370	5.7	--
0010	--	-	--	BEAM GUARD AREAS	400	--	6.1	5,000
0010	--	-	--	UNDISTRIBUTED	230	--	3.6	--
7160-04-76 TOTAL 0010					2,145	380	38.6	5,000
0010	149+67	-	180+90	LT & RT	210	--	3.3	--
0010	--	-	--	BEAM GUARD AREAS	200	--	3.1	500
0010	--	-	--	UNDISTRIBUTED	--	--	--	--
7550-00-76 TOTAL 0010					410	0	6.4	500

ASPHALTIC PAVEMENT										
						455.0605	460.6245	465.0105	465.0110	
						TACK COAT	HMA PAVEMENT	ASPHALTIC	ASPHALTIC	
						5 MT 58-34 S	SURFACE	SURFACE	PATCHING	
CATEGORY	STATION	TO	STATION	LOCATION	THICKNESS (IN)	GAL	TON	TON	TON	REMARKS
0010	207+00	-	230+30	UPPER LAYER	1.50	450	756	---	---	
0010	207+00	-	230+30	LOWER LAYER	1.75	630	882	---	---	
0010	231+50	-	251+34	UPPER LAYER	1.50	385	647	---	---	
0010	231+50	-	251+34	LOWER LAYER	1.75	539	754	---	---	
0010	252+82	-	310+64	UPPER LAYER	1.50	1,153	1,936	---	---	
0010	252+82	-	310+64	LOWER LAYER	1.75	1,614	2,259	---	---	
0010	312+05	-	345+08	UPPER LAYER	1.50	664	1,116	---	---	
0010	312+05	-	345+08	LOWER LAYER	1.75	930	1,302	---	---	
0010	315+50	-	317+63	UPPER LAYER	1.50	1	---	2	---	
0010	315+50	-	317+63	LOWER LAYER	3.00	2	---	4	---	
0010	319+40	-	320+15	UPPER LAYER	1.50	1	---	1	---	
0010	319+40	-	320+15	LOWER LAYER	3.00	1	---	1	---	
0010	346+20	-	414+27	UPPER LAYER	1.50	1,383	2,324	---	---	
0010	346+20	-	414+27	LOWER LAYER	1.75	1,937	2,711	---	---	
0010	415+61	-	451+56	UPPER LAYER	1.50	792	1,330	---	---	
0010	415+61	-	451+56	LOWER LAYER	1.75	1,108	1,552	---	---	
0010	452+68	-	494+50	UPPER LAYER	1.50	719	1,208	---	---	
0010	452+68	-	494+50	LOWER LAYER	1.75	1,007	1,409	---	---	
0010	494+50	-	505+50	UPPER LAYER	1.50	179	300	---	---	
0010	494+50	-	505+50	MIDDLE LAYER	1.75	179	350	---	---	
0010	494+50	-	505+50	LOWER LAYER	2.75	250	550	---	---	
0010	505+50	-	594+13	UPPER LAYER	1.50	1,559	2,620	---	---	
0010	505+50	-	594+13	LOWER LAYER	1.75	2,183	3,056	---	---	
0010	596+10	-	659+80	UPPER LAYER	1.50	1,418	2,382	---	---	
0010	596+10	-	659+80	LOWER LAYER	1.75	1,985	2,779	---	---	
0010	CASTLE ROCK LN	-		UPPER LAYER	1.50	12	20	---	---	
0010	CASTLE ROCK LN	-		LOWER LAYER	1.75	17	24	---	---	
0010	BURT LN	-		UPPER LAYER	1.50	9	15	---	---	
0010	BURT LN	-		LOWER LAYER	1.75	13	18	---	---	
0010	MIDWAY RD	-		UPPER LAYER	1.50	7	11	---	---	
0010	MIDWAY RD	-		LOWER LAYER	1.75	9	13	---	---	
0010	BREEZY POINT LN	-		UPPER LAYER	1.50	8	14	---	---	
0010	BREEZY POINT LN	-		LOWER LAYER	1.75	11	16	---	---	
0010	MIDWAY RD	-		UPPER LAYER	1.50	15	25	---	---	
0010	MIDWAY RD	-		LOWER LAYER	1.75	21	29	---	---	
0010	NIGHTHAWK TRL	-		UPPER LAYER	1.50	5	9	---	---	
0010	NIGHTHAWK TRL	-		LOWER LAYER	1.75	7	10	---	---	
0010	OLD STH 35	-		UPPER LAYER	1.50	4	7	---	---	
0010	OLD STH 35	-		LOWER LAYER	1.75	6	9	---	---	
0010	CTH YY	-		UPPER LAYER	1.50	20	33	---	---	
0010	CTH YY	-		LOWER LAYER	1.75	28	39	---	---	
0010	COURT LN	-		UPPER LAYER	1.50	12	20	---	---	
0010	COURT LN	-		LOWER LAYER	1.75	17	24	---	---	
0010	OAK ST	-		UPPER LAYER	1.50	12	20	---	---	
0010	OAK ST	-		LOWER LAYER	1.75	17	24	---	---	

CONTINUED ON NEXT PAGE

3

3

3

CONTINUED FROM PREVIOUS PAGE

ASPHALTIC PAVEMENT

					455.0605	460.6245	465.0105	465.0110		
						HMA PAVEMENT	ASPHALTIC	ASPHALTIC		
						5 MT 58-34 S	SURFACE	SURFACE		
								PATCHING		
CATEGORY	STATION	TO	STATION	LOCATION	THICKNESS (IN)	TACK COAT GAL	TON	TON	TON	REMARKS
0010	146+75	-	152+75	UPPER LAYER MAINLINE	2.00	80	179	---	---	WEIGH-IN MOTION STATION
0010	146+75	-	152+75	LOWER LAYER MAINLINE	2.00	112	179	---	---	WEIGH-IN MOTION STATION
0010	146+75	-	152+75	UPPER LAYER SHOULDERS	2.00	66	147	---	---	
0010	152+75	-	176+94	UPPER LAYER MAINLINE	1.50	322	542	---	---	
0010	152+75	-	176+94	LOWER LAYER MAINLINE	1.75	451	632	---	---	
0010	152+75	-	176+94	UPPER LAYER SHOULDERS	1.75	188	369	---	---	
0010	178+71	-	180+90	UPPER LAYER SHOULDERS	1.75	18	36	---	---	
0010				UNDISTRIBUTED		---	50	---	100	REPAIRS
				7550-00-76 TOTAL 0020		1,238	2,134	0	100	
				TOTALS		23,346	35,981	1,118	500	

TEST STRIPS

				460.0105.S	460.0110.S
				HMA PERCENT	HMA PERCENT
				WITHIN LIMITS	WITHIN LIMITS
				(PWL) TEST STRIP	(PWL) TEST STRIP
				VOLUMETRICS	DENSITY
				EACH	EACH
0010	207+00	-	659+80	1	1
				7160-04-76 TOTAL 0010	1

3

HMA MIXTURE ACCEPTANCE

7160-04-76								
							QUALITY MANAGEMENT PROGRAM TO BE USED	
LOCATION	STA - STA	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANE	207+00 - 659+80	UPPER LAYER	HMA 5 MT 58-34S	5 MT 58-34S	10,233	1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
SHOULDERS, SIDEROADS, BEAMGUARD WIDENINGS	VARIOUS	UPPER LAYER	HMA 5 MT 58-34S	5 MT 58-34S	5,721	1.5"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGBLE FOR INCENTIVE
12 FOOT DRIVING LANE	207+00 - 659+80	LOWER LAYER	MILLED SURFACE	5 MT 58-34S	11,939	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
SHOULDERS, SIDEROADS, BEAMGUARD WIDENINGS	VARIOUS	LOWER LAYER	MILLED SURFACE	5 MT 58-34S	6,617	1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGBLE FOR INCENTIVE
ASPHALTIC SURFACE	VARIOUS	LOWER & UPPER LAYERS	HMA SURFACE OR BASE AGGREGATE	ASPHALTIC SURFACE	970	VARIES	SS 465	ACCEPTED BY ORDINARY COMPACTION
PATCHING	VARIOUS	LOWER LAYER	MILLED SURFACE	ASPHALTIC SURFACE PATCHING	400	VARIES	QMP as per SS 465	ACCEPTED BY ORDINARY COMPACTION
DRIVEWAYS	VARIOUS	UPPER LAYER	MILLED EXISTING HMA SURFACE OR BASE AGGREGATE	ASPHALTIC SURFACE DRIVEWAYS	148	1.75"	QMP as per SS 465	ACCEPTED BY ORDINARY COMPACTION

PROJECT NO: 7160-04-76 / 7550-00-76

HWY: STH 35 / STH 54

COUNTY: BUFFALO

MISCELLANEOUS QUANTITIES

SHEET 100

E

FILE NAME : G:\00\00093\00093543\CADD\SHEETSO\OTHER\030201_MQ.DWG

LAYOUT NAME - 030201-mq

PLOT DATE : 10/31/2025 9:56 AM

PLOT BY : MSA

PLOT NAME :

WISDOT/CADDs SHEET 42

3

HMA MIXTURE ACCEPTANCE								
7550-00-76								
							QUALITY MANAGEMENT PROGRAM TO BE USED	
LOCATION	STA - STA	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FOOT DRIVING LANE	146+75 - 152+75, 152+75 - 176+94	UPPER LAYER	HMA 5 MT 58-34S	5 MT 58-34S	728	2", 1.25"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
12 FOOT DRIVING LANE	146+75 - 152+75, 152+75 - 176+94	LOWER LAYER	MILLED SURFACE	5 MT 58-34S	819	2", 1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	PWL INCENTIVE DENSITY HMA PAVEMENT 460.2005
SHOULDERS, WEIGH STATION SHOULDERS	152+75 - 176+94, 146+75 - 152+75, 178+71 - 181+90	UPPER LAYER	MILLED SURFACE	5 MT 58-34S	683	2", 1.75"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTED BY DEPARTMENT TESTING, NOT ELIGIBLE FOR INCENTIVE
DRIVEWAYS	VARIOUS	UPPER LAYER	MILLED EXISTING HMA SURFACE OR BASE AGGREGATE	ASPHALTIC SURFACE DRIVEWAYS	20	3.25"	QMP as per SS 465	ACCEPTED BY ORDINARY COMPACTION

3

ASPHALTIC CURB & FLUMES

CATEGORY	STATION	TO	STATION	LOCATION	465.0310	465.0315
					ASPHALTIC CURB LF	ASPHALTIC FLUMES SY
0010	315+70	-	317+63	LT	213	---
0010	319+40	-	320+15	LT	75	---
0010	315+48	-	-	LT	---	3
0010	316+73	-	-	LT	---	3
0010	319+30	-	-	LT	---	4
0010	321+64	-	-	LT	---	4
0010	647+37	-	-	RT	---	7
0010	648+67	-	-	RT	---	5
7160-04-76 TOTAL 0010					288	26

RUMBLE STRIPS

CATEGORY	STATION	TO	STATION	LOCATION	465.0520	465.0560
					ASPHALTIC RUMBLE STRIPS, SHOULDER LF	ASPHALTIC RUMBLE STRIPS, CENTERLINE LF
0010	207+00	-	449+40		34,390	18,868
0010	537+00	-	656+80		16,713	10,223
7160-04-76 TOTAL 0010					51,103	29,091
0010	146+75	-	176+94	STH 54	4,830	2,994
0010	178+71	-	180+90	STH 54 LT	175	--
7550-00-76 TOTAL 0010					5,005	2,994
TOTALS					56,108	32,085

DRIVEWAYS

CATEGORY	STATION	LOCATION	465.0120
			ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
0010	275+25	DRIVEWAY RT	8
0010	285+50	DRIVEWAY RT	7
0010	293+00	DRIVEWAY RT	8
0010	294+25	DRIVEWAY RT	8
0010	298+66	DRIVEWAY LT	23
0010	300+80	DRIVEWAY RT	7
0010	301+60	DRIVEWAY RT	5
0010	316+19	DRIVEWAY RT	14
0010	323+25	DRIVEWAY RT	9
0010	334+74	DRIVEWAY RT	6
0010	344+00	DRIVEWAY RT	8
0010	378+00	DRIVEWAY RT	7
0010	456+50	DRIVEWAY RT	11
0010	457+75	DRIVEWAY RT	9
0010	579+25	DRIVEWAY RT	10
7160-04-76 TOTAL 0010			140
0010	150+00	DRIVEWAY RT	5
7550-00-76 TOTAL 0010			5
TOTAL			145

3

3

520.1024	520.8000	521.1030	521.3130	522.1024	522.1030	522.1036	524.0124	524.0160	633.5200	650.6000
----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

7160-04-76 TOTAL 0010	1	10	1	98	3	1	1	36	20	32	1
-----------------------	---	----	---	----	---	---	---	----	----	----	---

520.8700 520.9750.S 520.9700.S.01 SPV.0060.07 SPV.0090.04

7160-04-76 TOTAL 0010	6	2	180	4	500
-----------------------	---	---	-----	---	-----

3

3

SIDEWALK																
CATEGORY	STATION	TO	STATION	LOCATION	416.0610	601.0411	601.0415	601.0557	601.0600	602.0410	602.0505	602.0605	602.1500	SPV.0090.02	650.5500	REMARKS
					DRILLED TIE BARS EACH	CONCRETE CURB & GUTTER 30- INCH TYPE D LF	CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J LF	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D LF	CONCRETE CURB PEDESTRIAN LF	CONCRETE SIDEWALK 5- INCH SF	CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	CURB RAMP DETECTABLE WARNING FIELD RADIAL YELLOW SF	CONCRETE STEPS SF	SPECIAL (02. MODIFIED PEDESTRIAN CURB) LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	
0010	468+28	-	468+41	RT	4	14	--	--	--	--	--	--	--	--	14	
0010	468+64	-	468+73	RT	4	9	--	--	--	--	--	--	--	--	9	
0010	472+98	-	473+08	RT	4	10	--	--	--	--	--	--	--	--	10	
0010	485+83	-	485+96	LT	4	13	--	--	--	40	--	--	--	--	13	
0010	487+04	-	487+38	RT	4	27	--	--	35	160	10	--	--	--	27	
0010	487+16	-	487+35	LT	4	19	--	--	19	120	10	--	--	--	19	
0010	487+86	-	488+15	LT	4	29	--	--	--	190	--	--	--	--	29	
0010	490+34	-	490+69	LT	4	34	--	--	--	180	10	--	--	21	55	SW CORNER OF SPRING ST & STH 35
0010	490+30	-	490+72	RT	4	44	--	--	--	230	20	--	5	34	78	SE CORNER OF SPRING ST & STH 35
0010	490+95	-	491+44	LT	8	30	--	--	--	200	10	--	8	16	46	NW CORNER OF SPRING ST & STH 35
0010	491+02	-	491+49	RT	4	50	--	--	--	280	20	--	5	40	90	NE CORNER OF SPRING ST & STH 35
0010	492+19	-	492+39	LT	4	20	--	--	--	89	--	--	--	--	20	
0010	494+50	-	494+72	RT	4	36	--	--	--	140	10	--	--	25	61	SE CORNER OF EAGLE ST & STH 35
0010	494+53	-	494+87	LT	4	33	--	--	--	180	10	--	--	20	53	SW CORNER OF EAGLE ST & STH 35
0010	495+28	-	495+44	LT	4	20	--	--	--	52	10	--	--	--	20	NW CORNER OF EAGLE ST & STH 35
0010	494+97	-	495+24	RT	4	29	--	--	27	140	--	14	--	--	29	NE CORNER OF EAGLE ST & STH 35
0010	496+67	-	497+05	LT	4	38	--	--	--	300	10	--	--	37	75	
0010	496+67	-	497+05	RT	4	38	--	--	--	270	10	--	9	32	70	
0010	497+84	-	498+07	RT	4	23	--	--	--	65	--	--	--	--	23	
0010	498+75	-	498+94	RT	4	30	--	--	18	150	--	13	--	--	30	SE CORNER OF LIBERTY ST & STH 35
0010	498+36	-	499+20	LT	4	92	--	--	--	710	20	--	--	56	148	SW CORNER OF LIBERTY ST & STH 35
0010	499+40	-	499+83	RT	4	42	--	--	--	250	10	--	--	23	65	NE CORNER OF LIBERTY ST & STH 35
0010	499+55	-	499+83	LT	4	42	--	--	--	290	--	29	--	20	62	NW CORNER OF LIBERTY ST & STH 35
0010	500+54	-	500+94	RT	4	41	--	--	--	120	--	--	--	--	41	
0010	501+11	-	501+34	RT	4	23	--	--	--	180	--	--	--	--	23	
0010	503+25	-	503+54	LT	4	30	--	--	--	220	10	--	7	23	53	SW CORNER OF NORTH ST & STH 35
0010	503+04	-	503+25	RT	4	52	--	--	--	400	10	--	--	32	84	SE CORNER OF NORTH ST & STH 35
0010	503+64	-	504+15	RT	4	60	--	--	--	370	20	--	--	49	109	NE CORNER OF NORTH ST & STH 35
0010	503+88	-	504+24	LT	4	37	--	--	17	220	10	--	--	--	37	NW CORNER OF NORTH ST & STH 35
0010	504+71	-	504+81	RT	4	29	--	--	--	78	10	--	--	--	29	SE CORNER OF JEFFERSON ST & STH 35
0010	505+14	-	505+37	RT	4	37	--	--	--	200	10	--	--	--	37	NE CORNER OF JEFFERSON ST & STH 35
0010	509+43	-	509+68	LT	4	25	--	--	25	210	10	--	--	--	25	
0010	509+43	-	509+66	RT	4	--	23	--	23	180	10	--	--	--	23	
0010	516+52	-	516+71	LT	4	20	--	--	--	76	10	--	--	20	40	
0010	516+51	-	516+73	RT	4	22	--	--	22	130	10	--	--	--	22	
0010	555+58	-	555+66	RT	4	--	8	--	--	--	--	--	--	--	8	
0010	647+40	-	648+64	RT	--	--	--	140	--	--	--	--	--	--	140	
7160-04-76 TOTAL 0010					148	1,098	31	140	186	6,420	270	56	34	448	1,717	

RIPRAP									
CATEGORY	STATION	TO	STATION	LOCATION	606.0200	606.0300	645.0120		
					RIPRAP MEDIUM CY	RIPRAP HEAVY CY	GEOTEXTILE TYPE HR SY		
0010		-	220+17	LT	6	---	18		
0010		-	244+86	LT	6	---	18		
0010	314+91	-	315+00	RT	---	6	17		
0010	320+25	-	322+00	LT	---	213	405		
0010		-	378+90	LT	6	---	18		
0010		-	382+70	LT	6	---	18		
0010	623+50	-	624+00	RT	---	34	26		
0010		-	UNDISTRIBUTED		6	63	130		
7160-04-76 TOTAL 0010					28	317	649		

3

3

608.0424	611.0530	611.0600	611.0624	611.0639	611.0654	611.2004	611.3004	611.8120.S	650.4000	SPV.0060.04	SPV.0060.05	SPV.0060.08	SPV.0060.09
----------	----------	----------	----------	----------	----------	----------	----------	------------	----------	-------------	-------------	-------------	-------------

CATEGORY	STATION	TO	STATION	LOCATION	GRATE	TOS	INV	DEPTH	STORM SEWER PIPE						MANHOLES		COVER PLATES TEMPORARY	CONSTRUCTION STAKING STORM SEWER	SPECIAL (04. STEEL PLATE 1/2-INCH)	SPECIAL (05. SAWING HOLE IN EXISTING STRUCTURE)	SPECIAL (08. CONNECT TO EXISTING STRUCTURE)	SPECIAL (09. INLET COVERS TYPE H-D)	REMARKS
									REINFORCED CONCRETE CLASS	MANHOLE COVERS TYPE J	INLET COVERS TYPE A	INLET COVERS TYPE H	INLET COVERS TYPE H-S	INLET COVERS TYPE V	4-FT DIAMETER	INLETS 4-FT DIAMETER							
									IV 24-INCH LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH							
0010	491+11	-	--	16' RT	674.80	673.55	670.03	3.52	---	1	---	---	---	---	1	---	1	---	---	---	---	SPRING ST	
0010	491+11	-	491+23	--	--	--	--	--	12	---	---	---	---	---	---	---	---	---	---	---	---	SPRING ST	
0010	491+23	-	--	20.1' RT	674.52	674.02	670.23	3.79	---	---	---	1	---	---	1	---	1	---	---	---	---	SPRING ST	
0010	494+69	-	--	29.4' RT	670.35	EXISTING	--	--	---	---	---	1	---	---	---	---	1	1	---	---	---	EAGLE ST	
0010	494+80	-	--	24.8' LT	668.89	EXISTING	EXISTING	--	---	---	---	---	---	---	---	---	---	---	---	---	1	EAGLE ST	
0010	495+03	-	--	45.6' RT	671.27	EXISTING	--	--	---	---	---	---	1	---	---	---	---	---	---	---	---	EAGLE ST	
0010	495+05	-	--	40.4' RT	--	--	--	--	---	---	---	---	---	---	---	---	1	1	---	---	---	EAGLE ST	
0010	499+58	-	--	31.3' LT	659.12	EXISTING	EXISTING	--	---	---	---	---	---	---	---	---	---	---	---	---	1	LIBERTY ST	
0010	555+62	-	--	RT	EXISTING	EXISTING	EXISTING	--	---	---	1	---	---	---	---	---	---	---	---	---	---	---	
0010	578+44	-	--	27.7' RT	--	--	--	--	---	---	---	---	---	---	---	---	---	---	1	---	---	DRIVEWAY CULVERT	
UNDISTRIBUTED									---	---	---	---	---	---	5	---	---	---	---	---	---		
7160-04-76 TOTAL 0010									12	1	1	1	1	1	1	1	6	2	2	2	1	2	

ADJUSTING COVERS

CATEGORY	STATION	LOCATION	611.8110	611.8115	SPV.0060.01	SPV.0060.02	SPV.0060.03	REMARKS
			ADJUSTING MANHOLE COVERS EACH	ADJUSTING INLET COVERS EACH	SPECIAL (01. ADJUSTING SANITARY MANHOLES) EACH	SPECIAL (02. ADJUSTING WATER VALVES) EACH	SPECIAL (03. ADJUSTING WATER SERVICE CURB STOPS) EACH	
0010	468+68	RT	--	1	--	--	--	
0010	468+95	RT	1	--	--	--	--	
0010	476+15	RT	1	--	--	--	--	
0010	479+90	LT	1	--	--	--	--	
0010	480+76	RT	1	--	--	--	--	
0010	496+74	RT	--	1	--	--	--	
0010	496+77	RT	1	--	--	--	--	
0010	497+92	RT	--	1	--	--	--	
0010	497+94	RT	1	--	--	--	--	
0010	498+98	RT	1	--	--	--	--	
0010	503+14	RT	1	--	--	--	--	
0010	503+25	RT	--	1	--	--	--	
0010	503+82	RT	--	1	--	--	--	
0010	503+91	LT	--	1	--	--	--	
0010	504+72	RT	1	--	--	--	--	
0010	505+24	RT	--	1	--	--	--	
0010	510+91	LT	1	--	--	--	--	
0010	512+20	LT	1	--	--	--	--	
0010	518+62	LT	1	--	--	--	--	
0010	519+80	LT	1	--	--	--	--	
0010	526+00	RT	1	--	--	--	--	
7160-04-76 TOTAL 0010			14	7	0	0	0	

CONTINUED ON NEXT PAGE

3

3

CONTINUED FROM PREVIOUS PAGE

ADJUSTING COVERS

CATEGORY	STATION	LOCATION	611.8110	611.8115	SPV.0060.01	SPV.0060.02	SPV.0060.03	REMARKS
			ADJUSTING MANHOLE COVERS EACH	ADJUSTING INLET COVERS EACH	ADJUSTING SANITARY MANHOLES) EACH	SPECIAL (02. ADJUSTING WATER VALVES) EACH	SPECIAL (03. ADJUSTING WATER SERVICE CURB STOPS) EACH	
0020	467+25	LT	--	--	--	1	--	
0020	473+55	LT	--	--	--	2	--	
0020	480+00	RT	--	--	1	--	--	
0020	480+00	LT	--	--	1	--	--	
0020	483+41	RT	--	--	1	--	--	
0020	485+66	RT	--	--	1	--	--	
0020	486+55	RT	--	--	--	1	--	
0020	487+50	LT	--	--	--	1	--	
0020	490+73	RT	--	--	1	--	--	
0020	490+97	RT	--	--	--	1	--	
0020	491+04	RT	--	--	1	--	--	
0020	491+40	LT	--	--	--	--	1	SIDEWALK
0020	494+28	RT	--	--	1	--	--	
0020	494+70	LT	--	--	--	1	--	
0020	494+88	RT	--	--	1	--	--	
0020	494+89	LT	--	--	--	1	--	
0020	494+94	LT	--	--	--	1	--	
0020	495+16	LT	--	--	1	--	--	
0020	495+76	RT	--	--	--	1	--	
0020	496+84	LT	--	--	1	--	--	
0020	496+93	LT	--	--	--	--	1	SIDEWALK
0020	498+70	LT	--	--	1	--	--	
0020	499+14	RT	--	--	1	--	--	
0020	499+28	LT	--	--	1	--	--	
0020	499+40	LT	--	--	--	1	--	
0020	499+48	LT	--	--	--	1	--	
0020	501+23	RT	--	--	--	--	1	SIDEWALK
0020	501+48	LT	--	--	1	--	--	
0020	503+40	RT	--	--	1	--	--	
0020	503+58	LT	--	--	1	--	--	
0020	503+77	LT	--	--	--	1	--	
0020	503+92	RT	--	--	--	--	1	SIDEWALK
0020	506+80	RT	--	--	1	--	--	
0020	508+40	RT	--	--	1	--	--	
0020	509+10	LT	--	--	--	1	--	
0020	510+81	RT	--	--	1	--	--	
0020	513+20	LT	--	--	--	1	--	
0020	517+88	RT	--	--	1	--	--	
0020	522+64	LT	--	--	--	1	--	
0020	523+00	LT	--	--	1	--	--	
0020	525+50	LT & RT	--	--	--	1	--	
0020	529+75	RT	--	--	1	--	--	
0020	532+20	RT	--	--	1	--	--	
0020	534+80	RT	--	--	1	--	--	
7160-04-76 TOTAL 0020			0	0	24	17	4	
TOTAL			14	7	24	17	4	

3

3

GUARDRAIL

					614.0305	614.0370	614.0400	614.0950	614.0951	614.0953	614.2300	633.0200
					STEEL PLATE BEAM GUARD CLASS A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	ADJUSTING STEEL PLATE BEAM GUARD	REPLACING GUARDRAIL POSTS AND BLOCKS	REPLACING GUARDRAIL RAIL AND HARDWARE	REPLACING EAT REFLECTIVE PANEL	MGS GUARDRAIL 3	DELINEATORS FLEXIBLE
CATEGORY	STATION	TO	STATION	LOCATION	LF	EACH	LF	EACH	LF	EACH	LF	EACH
0010	223+30	-	223+42	RT	12.5	--	--	--	--	--	--	--
0010	237+00	-	238+00	LT	--	--	100	9	--	--	--	2
0010	223+08	-	226+00	RT	--	--	--	7	--	--	--	2
0010	254+00	-	258+28	LT	--	--	--	5	--	--	--	2
0010	254+00	-	263+50	RT	--	--	200	3	25	--	--	2
0010	259+47	-	270+02	LT	--	--	--	36	50	--	--	2
0010	276+44	-	297+54	LT	--	--	300	25	25	--	--	2
0010	304+45	-	330+80	LT	--	--	200	36	75	--	--	2
0010	308+49	-	314+93	RT	--	--	100	2	--	--	--	2
0010	314+93	-	315+47	RT	--	1	--	--	--	--	--	--
0010	315+50	-	317+63	LT	212.5	--	--	--	--	--	--	--
0010	319+40	-	323+00	LT	362.5	--	--	--	--	--	--	--
0010	334+94	-	347+09	LT	--	--	--	16	25	--	--	2
0010	351+82	-	359+61	LT	--	--	775	--	--	--	--	2
0010	366+41	-	385+01	LT	--	--	--	16	250	--	--	2
0010	392+99	-	399+52	LT	--	--	650	6	--	--	--	2
0010	404+77	-	435+06	LT	--	--	--	42	325	1	--	2
0010	417+50	-	420+09	RT	--	--	150	1	--	--	--	2
0010	440+00	-	449+80	LT	--	--	25	11	25	--	--	2
0010	462+30	-	483+36	LT	--	--	25	17	100	1	--	2
0010	521+20	-	526+00	LT	--	--	--	1	--	--	--	2
0010	526+69	-	541+24	LT	--	--	--	2	--	--	--	2
0010	557+75	-	617+42	LT	--	--	--	37	200	2	--	2
0010	593+27	-	619+77	RT	--	--	575	3	--	--	--	2
0010	623+48	-	624+02	RT	--	1	--	--	--	--	--	2
0010	624+02	-	645+20	RT	--	--	200	4	--	--	--	2
0010	--	-	--	UNDISTRIBUTED	100	--	600	40	170	--	100	--
7160-04-76 TOTAL 0010					688	2	3,900	319	1,270	4	100	44

RESTORATION															
				625.0100	628.2008	628.7504	628.7555	628.7570	629.0210	630.0120	630.0140	630.0200	630.0500		
				TOPSOIL	EROSION MAT	TEMPORARY	CULVERT PIPE	ROCK BAGS	FERTILIZER TYPE	SEEDING	SEEDING	SEEDING	SEED WATER		
				SY	URBAN CLASS I	DITCH CHECKS	CHECKS	EACH	B	MIXTURE NO. 20	MIXTURE NO. 40	TEMPORARY	MGAL		
CATEGORY	STATION	TO	STATION	LOCATION	TYPE B	LF	EACH	EACH	CWT	LB	LB	LB		REMARKS	
0010	220+17	-		LT	116	116	---	17	0.1	5.3	---	---	3		
0010	244+86	-		LT	83	83	---	8	0.1	3.8	---	---	2		
0010	295+37	-		LT	94	94	---	8	0.1	4.3	---	---	3		
0010	315+00	-	315+80	RT	166	166	---	---	0.2	7.5	---	---	4		
0010	378+60	-	379+15	LT	109	109	---	---	0.1	5.0	---	---	3		
0010	382+38	-	382+98	LT	109	109	---	---	0.1	5.0	---	---	3		
0010	399+87	-		LT	22	22	---	---	0.1	1.0	---	---	1		
0010	405+14	-	405+85	RT	89	89	---	8	0.1	4.1	---	---	3		
0010	429+70	-		RT	87	87	---	---	0.1	3.9	---	---	2	DITCHING	
0010	440+42	-	440+99	RT	53	53	---	---	0.1	2.4	---	---	2		
0010	468+28	-	468+58	RT	28	28	---	---	0.1	---	1.3	---	1	REMOVE SIDEWALK	
0010	469+68	-	469+72	RT	3	3	---	---	0.1	---	0.2	---	1	REMOVE SIDEWALK	
0010	472+98	-	473+08	RT	5	5	---	---	0.1	---	0.3	---	1		
0010	487+03	-	487+38	RT	31	31	---	---	0.1	---	1.4	---	1	BEHIND PED CURB	
0010	487+15	-	487+35	LT	17	17	---	---	0.1	---	0.8	---	1	BEHIND PED CURB	
0010	504+69	-	504+81	RT	3	3	---	---	0.1	---	0.2	---	1		
0010	505+14	-	505+37	RT	4	4	---	---	0.1	---	0.2	---	1		
0010	555+36	-	555+66	RT	2	2	---	---	0.1	0.1	---	---	1		
0010	578+40	-	583+84	RT	966	966	90	---	0.7	43.5	---	---	22	DITCHING	
0010	621+00	-	623+71	RT	368	368	30	17	0.3	16.6	---	---	9	DITCHING	
0010	647+20	-	648+02	RT	100	100	---	17	0.1	4.5	---	---	3		
0010	648+26	-	648+75	RT	36	36	---	---	0.1	1.6	---	---	1		
0010				CURB RAMPS	150	150	---	---	0.1	---	6.8	--	4		
0010				UNDISTRIBUTED	528	528	24	5	0.6	21.7	2.2	50	15		
7160-04-76 TOTAL 0010					3,169	3,169	144	29	3.8	130.3	13.4	50	88		

INLET PROTECTION

CATEGORY	STATION	LOCATION	628.7005	628.7015
			INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE C EACH
0010	468+68	RT	---	1
0010	490+70	RT	---	1
0010	491+14	LT	---	1
0010	491+23	RT	---	1
0010	494+69	RT	---	1
0010	494+80	LT	---	1
0010	495+03	RT	---	1
0010	495+30	LT	---	1
0010	496+08	RT	---	1
0010	496+11	RT	---	1
0010	496+74	RT	---	1
0010	497+93	RT	---	1
0010	497+95	LT	---	1
0010	498+92	RT	---	1
0010	499+42	RT	---	1
0010	499+57	LT	---	1
0010	503+15	LT	---	1
0010	503+24	RT	---	1
0010	503+59	LT	---	1
0010	503+82	RT	---	1
0010	503+92	LT	---	1
0010	504+73	RT	---	1
0010	505+24	RT	---	1
0010	540+70	RT	---	1
0010	540+71	LT	---	1
0010	546+12	RT	---	1
0010	548+00	RT	---	1
0010	548+05	RT	---	1
0010	550+57	RT	---	1
0010	553+12	RT	---	1
0010	555+62	RT	---	1
0010	557+29	RT	---	1
0010	559+12	RT	---	1
0010	573+60	RT	---	1
0010	576+14	RT	---	1
0010	578+44	RT	1	---
UNDISTRIBUTED			1	10
7160-04-76 TOTAL 0010			2	45

MOBILIZATION EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1905	628.1910
					MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	207+00	-	659+80	PROJECT	6	2
TOTAL 0010					6	2

SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520	SPV.0090.03 SPECIAL (03. FENCE CHAIN LINK SMALL ANIMAL BARRIER)
					SILT FENCE LF	SILT FENCE MAINTENANCE LF	LF
0010		-	220+17	LT	140	140	140
0010		-	244+86	LT	140	140	140
0010		-	295+37	LT	60	60	60
0010	314+91	-	315+80	RT	160	160	160
0010	319+98	-	322+30	LT	270	270	270
0010		-	378+90	LT	150	150	150
0010		-	382+70	LT	140	140	140
0010		-	399+88	RT & LT	120	120	120
0010		-	405+50	RT	140	140	140
0010		-	440+67	RT	120	120	120
0010			583+31	RT	---	---	470
0010	621+00	-	624+00	RT	110	110	110
0010			648+74	RT	220	220	250
0010			UNDISTRIBUTED		230	230	230
7160-04-76 TOTAL 0010					2,000	2,000	2,500

SIGNING

CATEGORY	SIGN NO.	STATION	LOCATION	SIGN CODE	SIZE	634.0614	637.2210	REMARKS
						POSTS WOOD 4X6-INCH X 14-FT EACH	SIGNS TYPE II REFLECTIVE H SF	
0010	1-01	468+00	RT	R7-1R	18"X24"	1	3	NO PARKING
0010	2-01	524+00	RT	R7-1L	18"X24"	1	3	NO PARKING
0010	3-01	533+50	RT	R7-1R	18"X24"	1	3	NO PARKING
7160-04-76 TOTAL 0010						3	9	

TRAFFIC CONTROL								
CATEGORY	STATION	LOCATION	DAYS	643.0300		643.0420	643.0715	REMARKS
				TRAFFIC CONTROL DRUMS EACH	TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	
0010	PROJECT	--	132	---	---	---	---	ADVANCED WARNING
0010	PROJECT	--	5	250	1,250	---	---	CULVERT WORK
0010	PROJECT	--	5	200	1,000	---	---	BEAMGUARD WORK
0010	PROJECT	--	5	40	200	---	---	GRADING AREAS
0010	468+61	RT	5	16	80	---	---	
0010	487+63	LT	5	28	140	---	---	STAGE 1
0010	487+27	RT	5	28	140	---	---	STAGE 2
0010	490+86	LT	7	40	280	---	---	SPRING ST STAGE 1
0010	490+86	RT	7	40	280	---	---	SPRING ST STAGE 2
0010	495+03	LT	7	24	168	---	---	EAGLE ST STAGE 1
0010	495+03	RT	7	22	154	---	---	EAGLE ST STAGE 2
0010	496+86	LT	7	20	140	---	---	STAGE 1
0010	496+86	RT	7	21	147	---	---	STAGE 2
0010	499+25	LT	7	40	280	---	---	LIBERTY ST STAGE 1
0010	499+25	RT	7	50	350	---	---	LIBERTY ST STAGE 2
0010	49+25	RT	7	50	350	---	---	LIBERTY ST STAGE 3
0010	503+20	LT	7	40	280	---	---	STH 95 STAGE 1
0010	503+20	RT	7	40	280	---	---	STH 95 STAGE 2
0010	503+20	RT	7	45	315	---	---	STH 95 STAGE 3
0010	509+50	LT	5	36	180	---	---	STAGE 1
0010	509+50	RT	5	36	180	---	---	STAGE 2
0010	517+45	LT	5	32	160	---	---	STAGE 1
0010	517+45	RT	5	32	160	---	---	STAGE 2
0010	UNDISTRIBUTED		---	---	586	20	500	
7160-04-76 TOTAL 0010					7,100	20	500	
0010	PROJECT		20	10	200	---	---	
7550-00-76 TOTAL 0010					200	0	0	
TOTAL					7,300	20	500	

TRAFFIC CONTROL SIGNS										
				643.0900	643.1000		643.1050	SPV.0060.06 SPECIAL (06. TRAFFIC CONTROL SIGNS FIXED MESSAGE MNDOT)		
CATEGORY	STATION	LOCATION	DAYS	TRAFFIC CONTROL SIGNS EACH	TRAFFIC CONTROL SIGNS DAY	TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	TRAFFIC CONTROL SIGNS PCMS EACH	TRAFFIC CONTROL SIGNS PCMS DAY		REMARKS
0010	PROJECT	--	--	---	---	54	--	---	---	STH 35 ROAD WORK BEGINS XX-XX
0010	PROJECT	--	132	35	4,620	---	---	---	---	ADVANCED WARNING
0010	PROJECT	--	5	10	50	---	---	---	---	CULVERT WORK
0010	PROJECT	--	5	10	50	---	---	---	---	BEAMGUARD WORK
0010	PROJECT	--	5	5	25	---	---	---	---	GRADING AREAS
0010	468+61	RT	5	1	5	---	---	---	---	STAGE 1
0010	487+63	LT	5	8	40	---	---	---	---	
0010	487+27	RT	5	8	40	---	---	---	---	STAGE 2
0010	490+86	LT	7	9	63	---	---	---	---	SPRING ST STAGE 1
0010	490+86	RT	7	9	63	---	---	---	---	SPRING ST STAGE 2
0010	495+03	LT	7	7	49	---	---	---	---	EAGLE ST STAGE 1
0010	495+03	RT	7	7	49	---	---	---	---	EAGLE ST STAGE 2
0010	496+86	LT	7	5	35	---	---	---	---	STAGE 1
0010	496+86	RT	7	5	35	---	---	---	---	STAGE 2
0010	499+25	LT	7	10	70	---	---	---	---	LIBERTY ST STAGE 1
0010	499+25	RT	7	9	63	---	---	---	---	LIBERTY ST STAGE 2
0010	499+25	RT	7	9	63	---	---	---	---	LIBERTY ST STAGE 3
0010	503+20	LT	7	9	63	---	---	---	---	STH 95 STAGE 1
0010	503+20	RT	7	10	70	---	---	---	---	STH 95 STAGE 2
0010	503+20	RT	7	10	70	---	---	---	---	STH 95 STAGE 3
0010	509+50	LT	5	8	40	---	---	---	---	STAGE 1
0010	509+50	RT	5	8	40	---	---	---	---	STAGE 2
0010	517+45	LT	5	5	25	---	---	---	---	STAGE 1
0010	517+45	RT	5	8	40	---	---	---	---	STAGE 2
0010	UNDISTRIBUTED		--	---	532	---	---	---	---	
7160-04-76 TOTAL 0010					6,200	54		0	0	
0010	PROJECT		---	---	---	36	---	---	1	STH 54 ROAD WORK BEGINS XX-XX
0010	PROJECT		20	---	---	---	2	40	---	NIGHT WORK 6PM - 6AM BEGINNING XX-XX
0010	UNDISTRIBUTED		25	10	250	---	---	---	---	ADVANCED WARNING
7550-00-76 TOTAL 0010					250	36		40	1	
TOTAL					6,450	90		40	1	

*G20-57 FIXED MESSAGE SIGNS TO BE PLACED AT PROJECT TERMINI 7 DAYS PRIOR TO CONSTRUCTION AND REMOVED WHEN CONSTRUCTION BEGINS.
**G20-X2(B) FIXED MESSAGE MndOT SIGN TO BE PLACED AT PROJECT TERMINI 7 DAYS PRIOR TO CONSTRUCTION AND REMOVED WHEN CONSTRUCTION ENDS.

PEDESTRIAN TRAFFIC CONTROL

				643.3250		643.3350	644.1601	644.1810		
				TEMPORARY MARKING LINE REMOVABLE TAPE 8-INCH	TEMPORARY PEDESTRIAN CURB RAMP	TEMPORARY CROSSWALK REMOVABLE TAPE 6-INCH	TEMPORARY PEDESTRIAN CURB RAMP	TEMPORARY PEDESTRIAN BARRICADE		
CATEGORY	STATION	LOCATION	DAY	LF	EACH	LF	DAY	LF	REMARKS	
0010	468+61	RT	5	--	--	--	--	18		
0010	487+63	LT	5	160	4	--	20	48	STAGE 1	
0010	487+27	RT	5	--	4	--	20	48	STAGE 2	
0010	490+86	LT	7	160	4	120	28	66	SPRING ST STAGE 1	
0010	490+86	RT	7	--	4	120	28	48	SPRING ST STAGE 2	
0010	495+03	LT	7	80	2	120	14	84	EAGLE ST STAGE 1	
0010	495+03	RT	7	--	2	120	14	48	EAGLE ST STAGE 2	
0010	496+86	LT	7	80	2	--	14	48	STAGE 1	
0010	496+86	RT	7	--	2	--	14	48	STAGE 2	
0010	499+25	LT	7	160	4	100	28	84	LIBERTY ST STAGE 1	
0010	499+25	RT	7	--	4	100	28	66	LIBERTY ST STAGE 2	
0010	49+25	RT	7	--	4	100	28	66	LIBERTY ST STAGE 3	
0010	503+20	LT	7	160	4	120	28	48	STH 95 STAGE 1	
0010	503+20	RT	7	--	4	100	28	84	STH 95 STAGE 2	
0010	503+20	RT	7	--	4	120	28	102	STH 95 STAGE 3	
0010	509+50	LT	5	160	4	--	20	48	STAGE 1	
0010	509+50	RT	5	--	4	--	20	66	STAGE 2	
0010	517+45	LT	5	80	2	--	10	66	STAGE 1	
0010	517+45	RT	5	80	4	--	20	66	STAGE 2	
0010	UNDISTRIBUTED		---	200	---	--	50	248		
7160-04-76 TOTAL 0010				1,320	62	1,120	440	1,400		

PAVEMENT MARKING

					643.3170	646.2020	646.2040	646.4040	646.6120	646.7420 MARKING CROSSWALK EPOXY	646.7520	646.8120	646.8320		
					TEMPORARY MARKING LINE EPOXY 6-INCH LF	MARKING LINE EPOXY 6-INCH LF	MARKING LINE GROOVED WET REF EPOXY 6-INCH LF	MARKING LINE GROOVED WET REF EPOXY 10-INCH LF	MARKING STOP LINE EPOXY 18-INCH LF	TRANSVERSE LINE 6-INCH LF	MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH LF	MARKING CURB EPOXY LF	MARKING PARKING STALL EPOXY LF		
CATEGORY	STATION	TO	STATION	LOCATION										REMARKS	
0010	207+00	-	659+80	STH 35	52,610	---	---	---	---	---	---	---	---	FOR PLACEMENT ON CENTERLINE PRIOR TO MILLING RUMBLE STRIPS FOR PLACEMENT ON CENTERLINE MILLING SURFACE AND BINDER SURFACE FOR PLACEMENT ON CENTERLINE AFTER MILLING RUMBLE STRIPS EDGE LINES	
0010	207+00	-	659+80	STH 35	95,220	---	---	---	---	---	---	---	---		
0010	207+00	-	659+80	STH 35	---	960	52,610	---	---	---	---	---	---		
0010	207+00	-	659+80	STH 35	---	---	78,090	---	---	---	---	---	---		
0010	207+00	-	659+80	STH 35	---	---	---	480	---	300	385	---	---		
0010		-		STH 95	---	---	50	---	22	---	---	690	---		
7160-04-76 TOTAL 0010					147,830	960	130,750	480	22	300	385	690	0		
0020	485+00	-	510+00	PARKING LANE	---	---	---	---	---	---	---	---	321		
7160-04-76 TOTAL 0020					0	0	0	0	0	0	0	0	321		
SUBTOTAL					147,830	960	130,750	480	22	300	385	690	321		
0010	146+75	-	180+90	STH 54	2,720	---	---	---	---	---	---	---	---	FOR PLACEMENT ON CENTERLINE PRIOR TO MILLING RUMBLE STRIPS FOR PLACEMENT ON CENTERLINE MILLING SURFACE AND BINDER SURFACE FOR PLACEMENT ON CENTERLINE AFTER MILLING RUMBLE STRIPS	
0010	146+75	-	180+90	STH 54	4,480	---	---	---	---	---	---	---	---		
0010	146+75	-	180+90	STH 54	---	---	2,280	---	---	---	---	---	---		
0010	146+75	-	180+90	STH 54	---	120	6,830	---	---	---	---	---	---		
0010	146+75	-	180+90	STH 54	---	---	---	52	---	---	---	---	---		
7550-00-76 TOTAL 0010					7,200	120	9,110	52	0	0	0	0	0		

3

NO PASSING

CATEGORY	STATION	TO	STATION	LOCATION	648.0100 LOCATING NO- PASSING ZONES MI
0010	207+00	-	659+80	PROJECT	8.576
7160-04-76 TOTAL 0010					8.576
0010	146+75	-	180+90	PROJECT	0.647
7550-00-76 TOTAL 0010					0.647

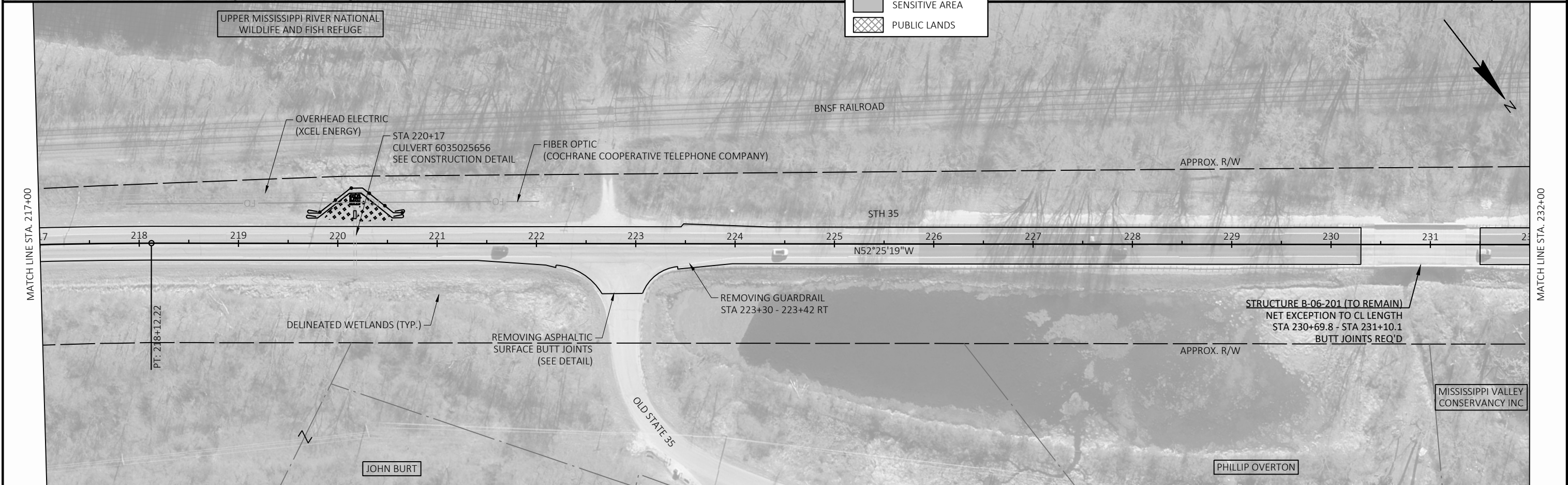
SAWING

					690.0150 SAWING ASPHALT	690.0250 SAWING CONCRETE	
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	REMARKS
0010	315+50	-	317+63	LT	213	--	ASPHALT CURB
0010	319+40	-	320+15	LT	75	--	ASPHALT CURB
0010	579+20	-	579+40	RT	55	--	DRIVEWAY CULVERT PIPE
0010				CURB RAMPS	1,366	861	SIDEWALK AND CURB & GUTTER
0010				UNDISTRIBUTED	200	50	
7160-04-76 TOTAL 0010					1,909	911	
0010	150+00	-		LT	50	--	
7550-00-76 TOTAL 0010					50	0	
TOTAL					1,959	911	

3

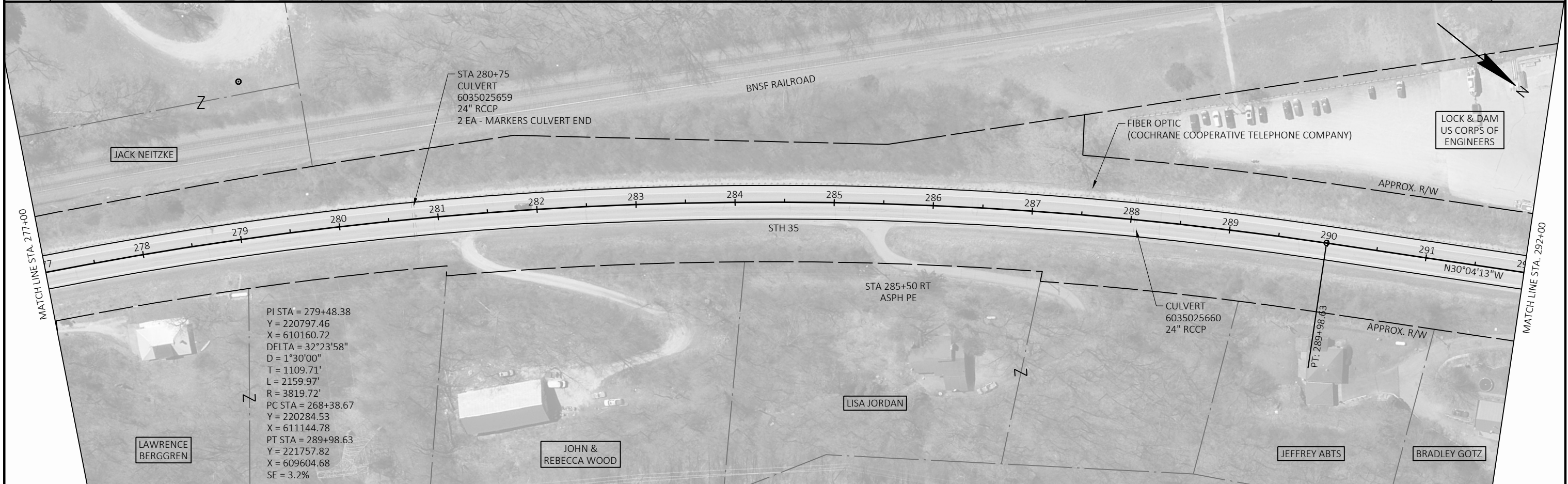
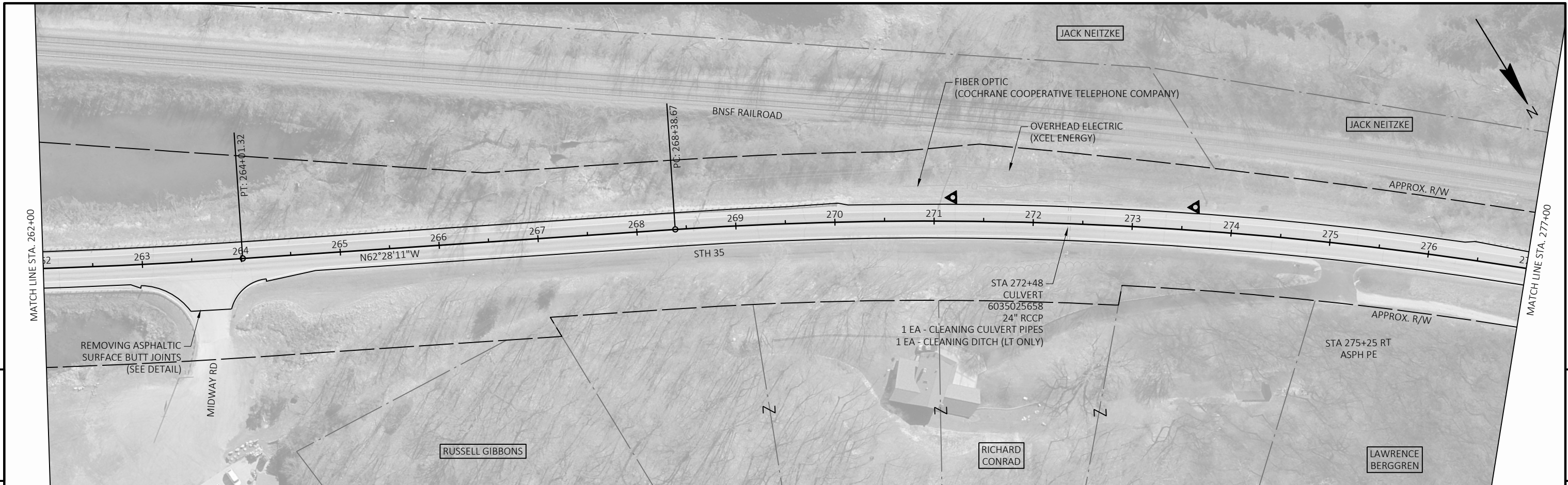
STAKING

					650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9500 CONSTRUCTION STAKING SIDEWALK EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
CATEGORY	STATION	TO	STATION	LOCATION				
0010	207+00	-	659+80	STH 35	45,280	---	---	---
0010	314+94	-	315+75	STH 35	---	---	---	81
0010	320+00	-	322+00	STH 35	---	---	---	200
0010	579+61	-	583+50	STH 35	---	---	---	389
0010	621+50	-	623+97	STH 35	---	---	---	247
0010	STH 35				---	26	1	---
7160-04-76 TOTAL 0010					45,280	26	1	917
0010	146+75	-	180+90	STH 54	3,415	---	---	---
7550-00-76 TOTAL 0010					3,415	---	---	0

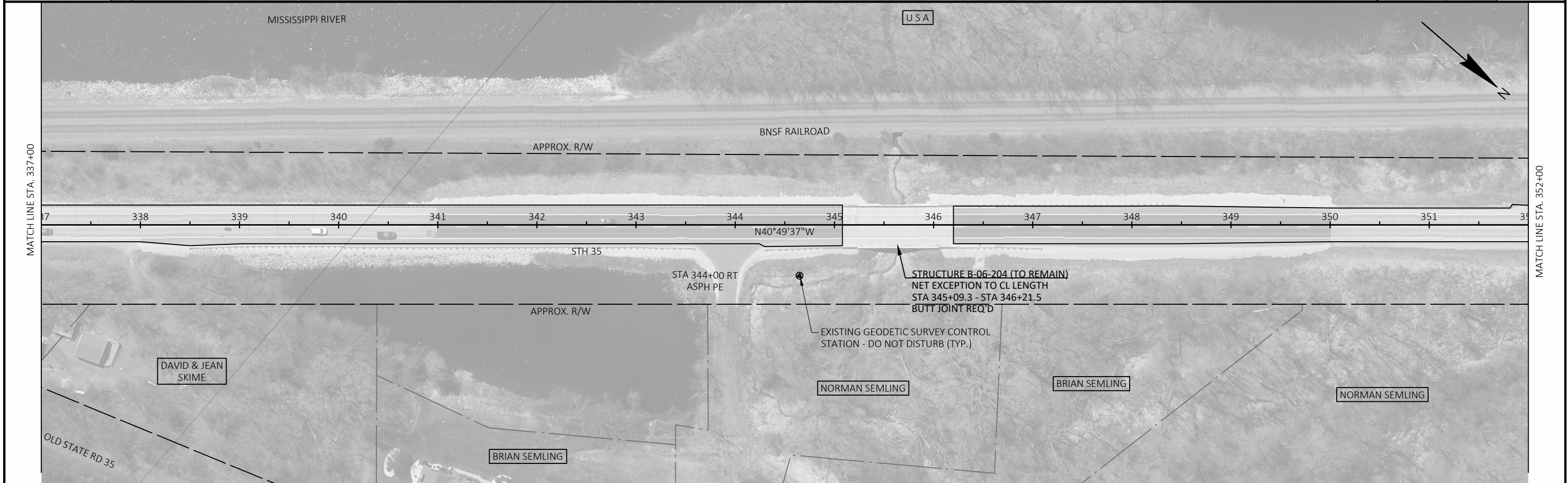
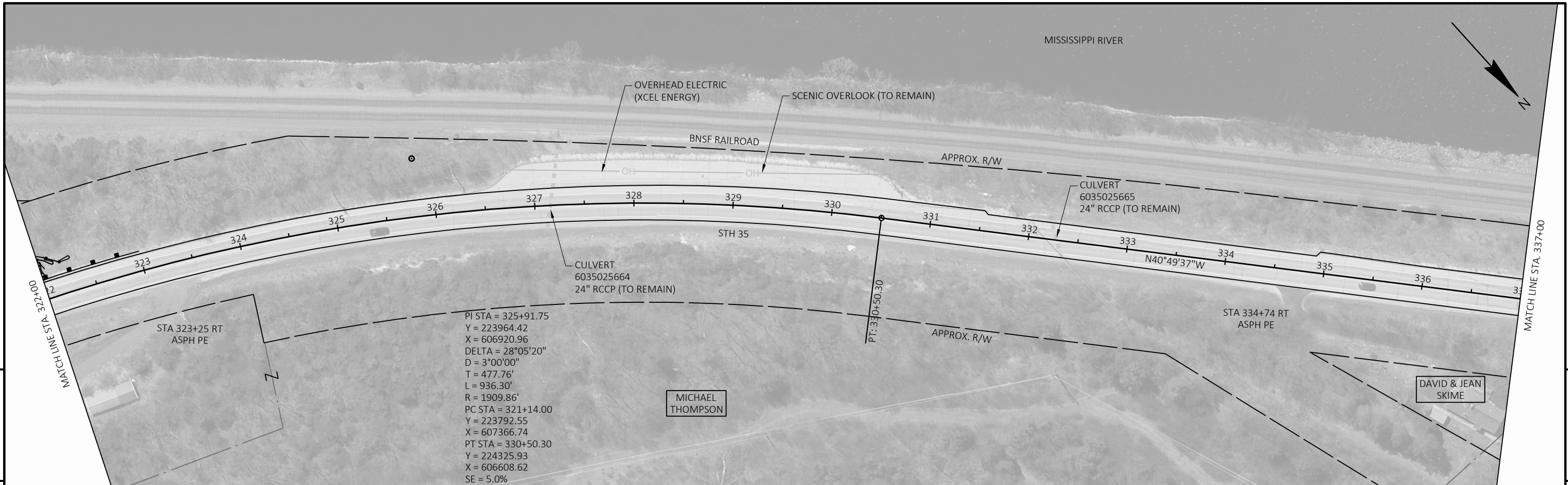


PROJECT NO: 7160-04-76	HWY: STH 35	COUNTY: BUFFALO	PLAN	SHEET 113	E
------------------------	-------------	-----------------	------	-----------	---

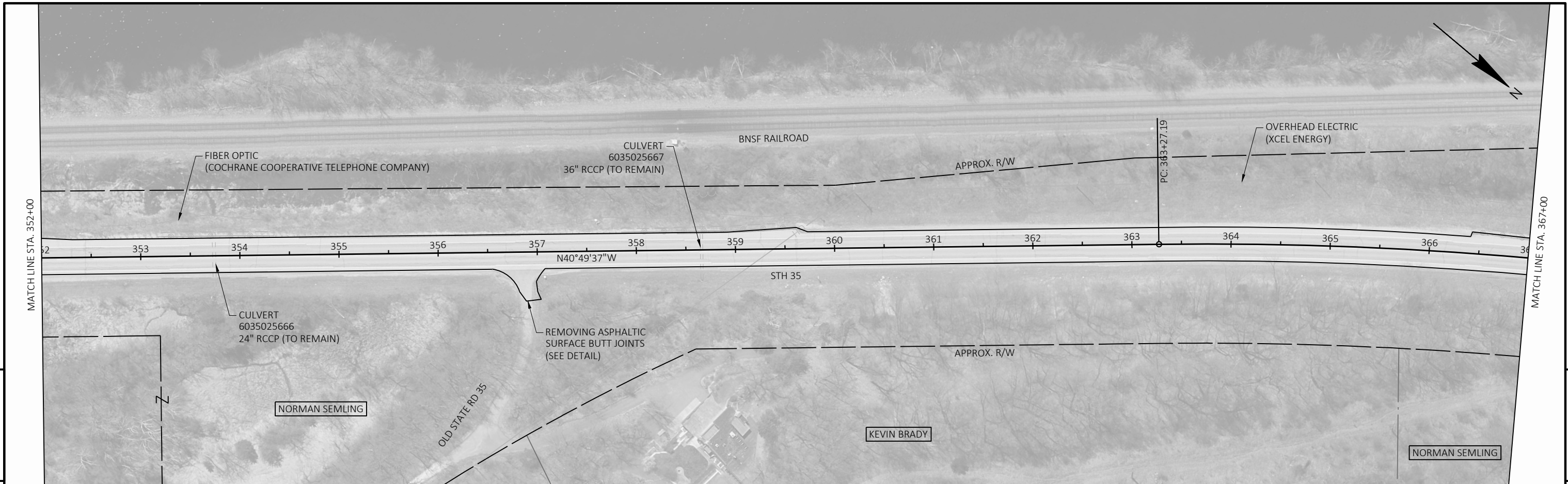




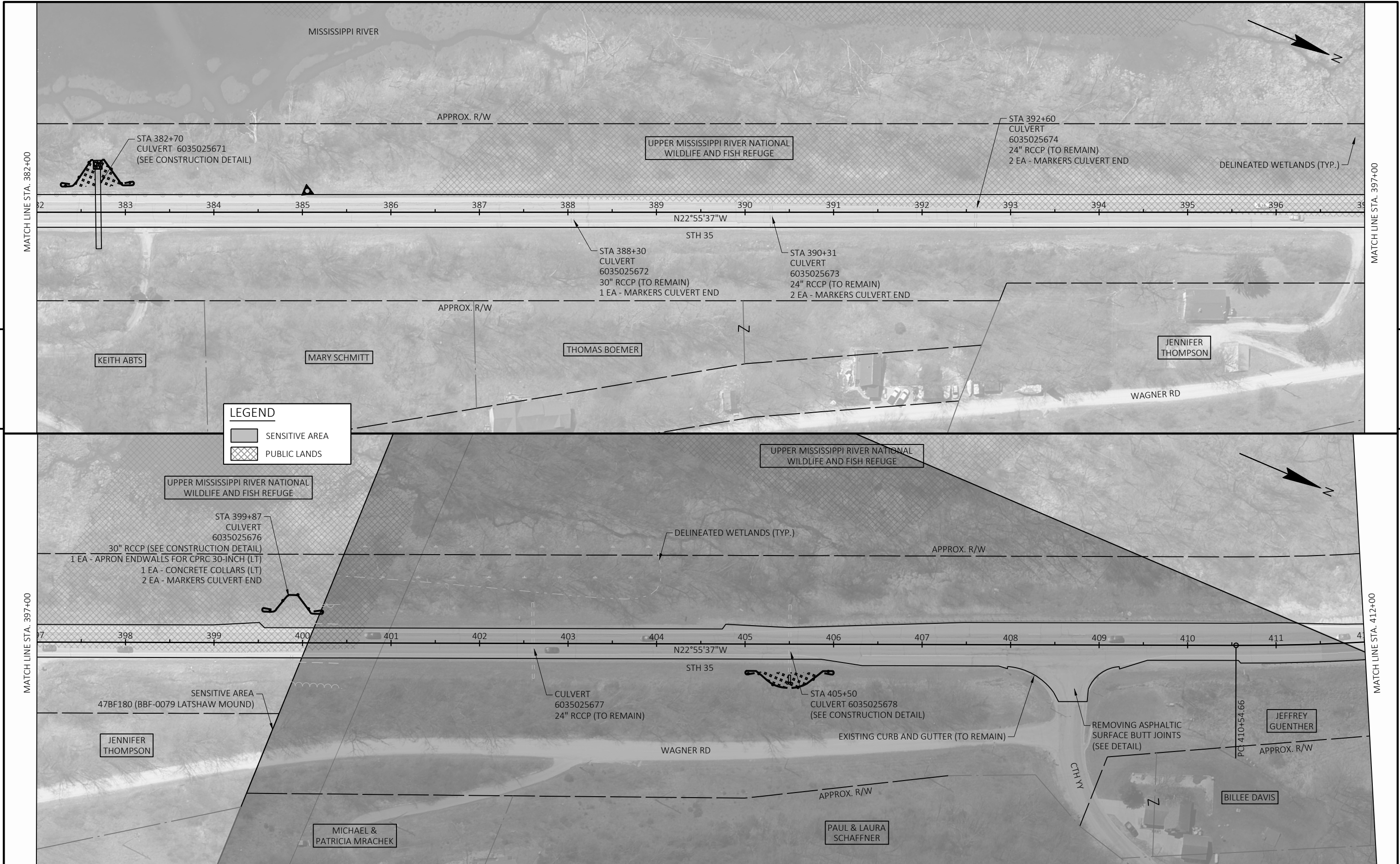
PROJECT NO: 7160-04-76	HWY: STH 35	COUNTY: BUFFALO	PLAN	SHEET 115	E
------------------------	-------------	-----------------	------	-----------	---

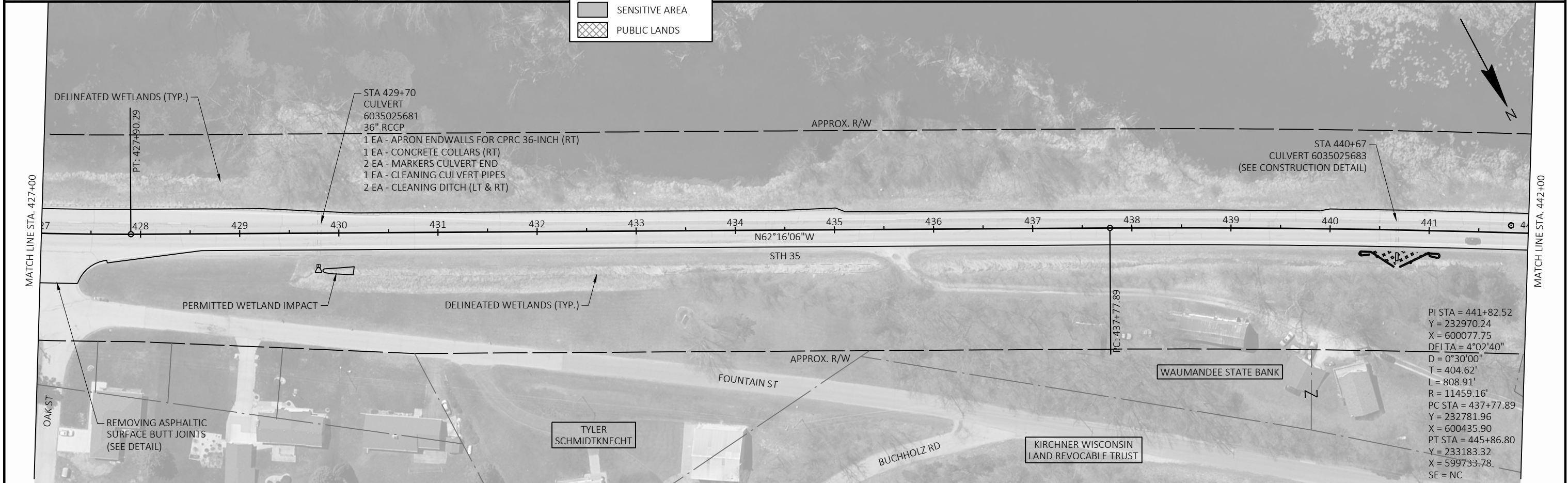
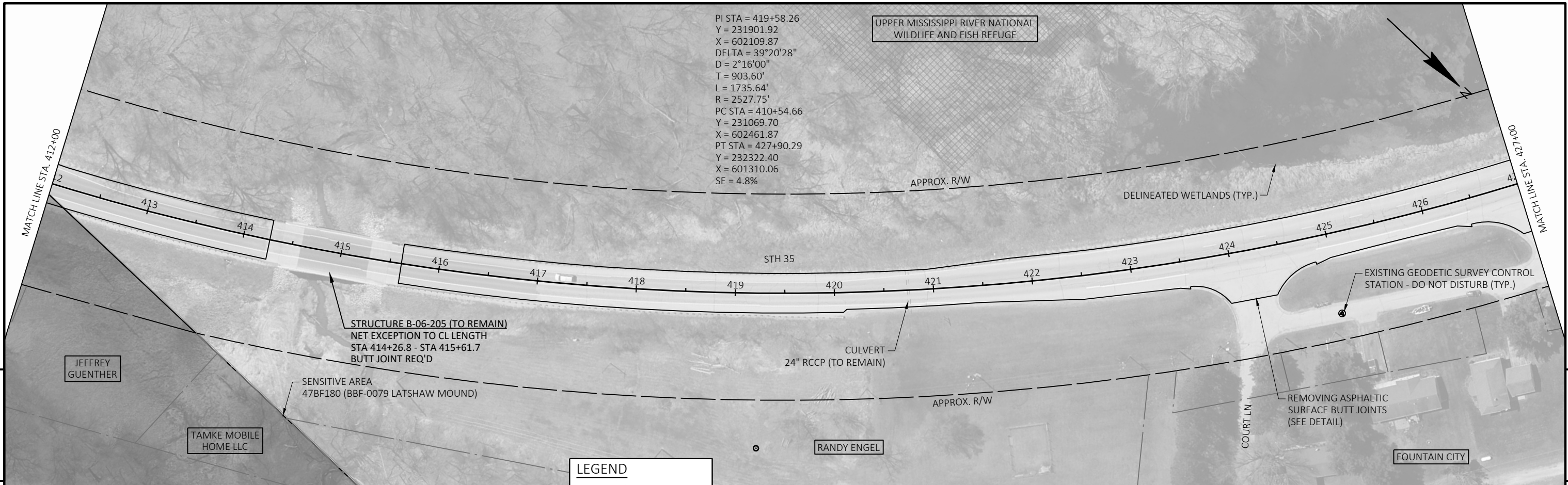


PROJECT NO: 7160-04-76	HWY: STH 35	COUNTY: BUFFALO	PLAN	SHEET 117	E
------------------------	-------------	-----------------	------	-----------	---

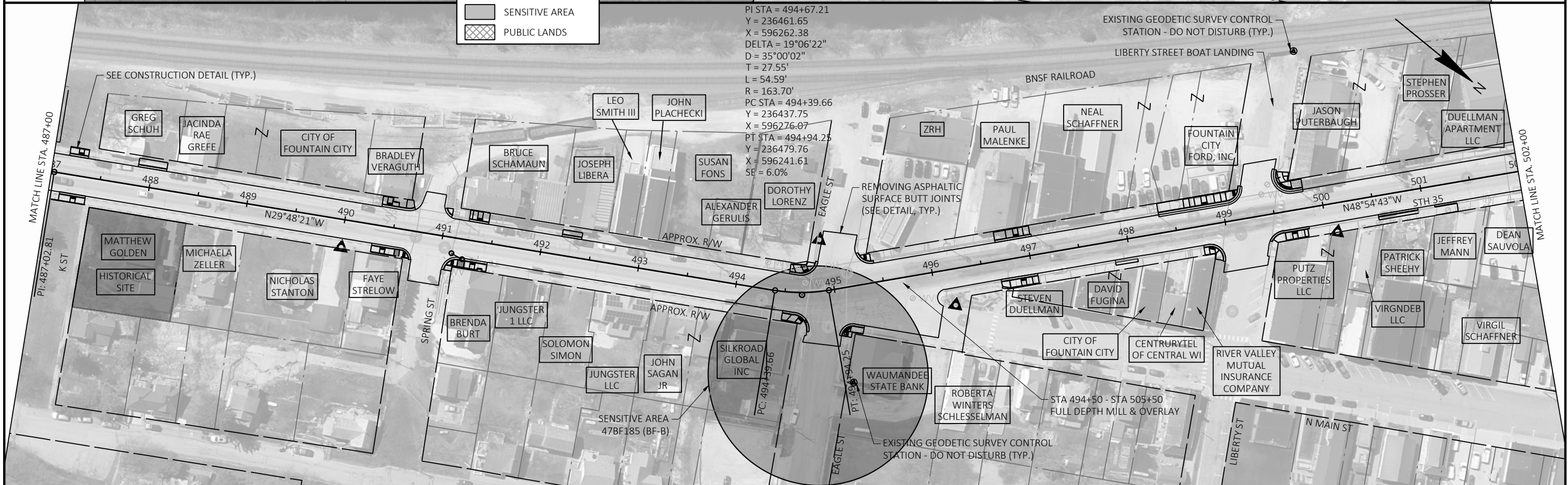
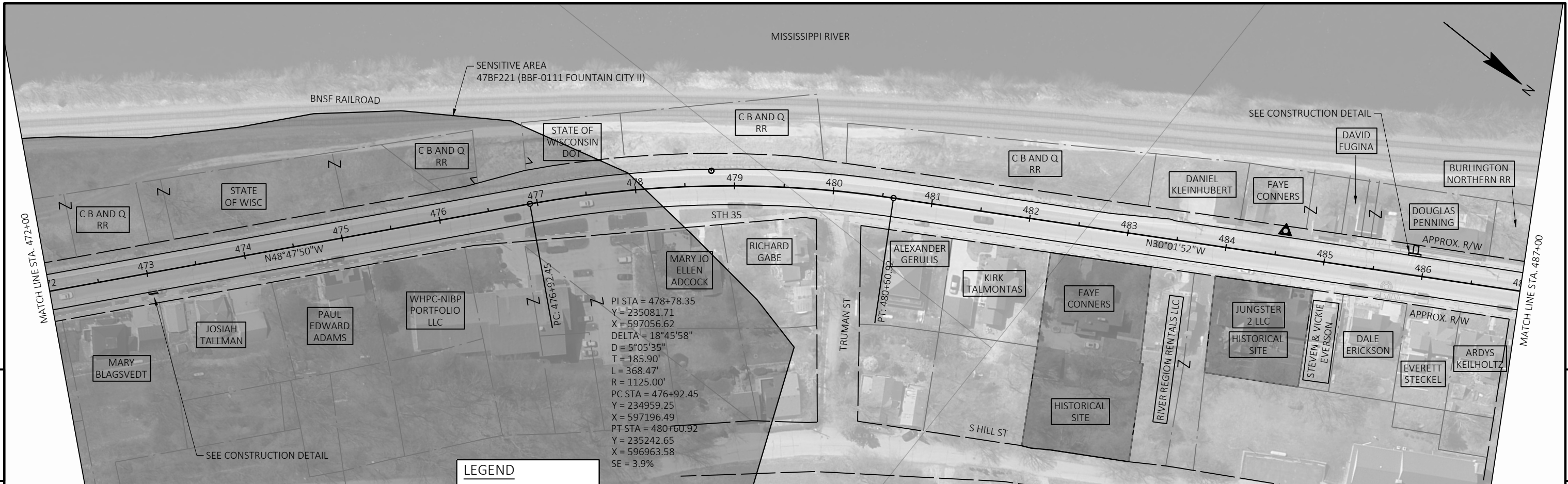


PROJECT NO: 7160-04-76	HWY: STH 35	COUNTY: BUFFALO	PLAN	SHEET 118	E
------------------------	-------------	-----------------	------	-----------	---

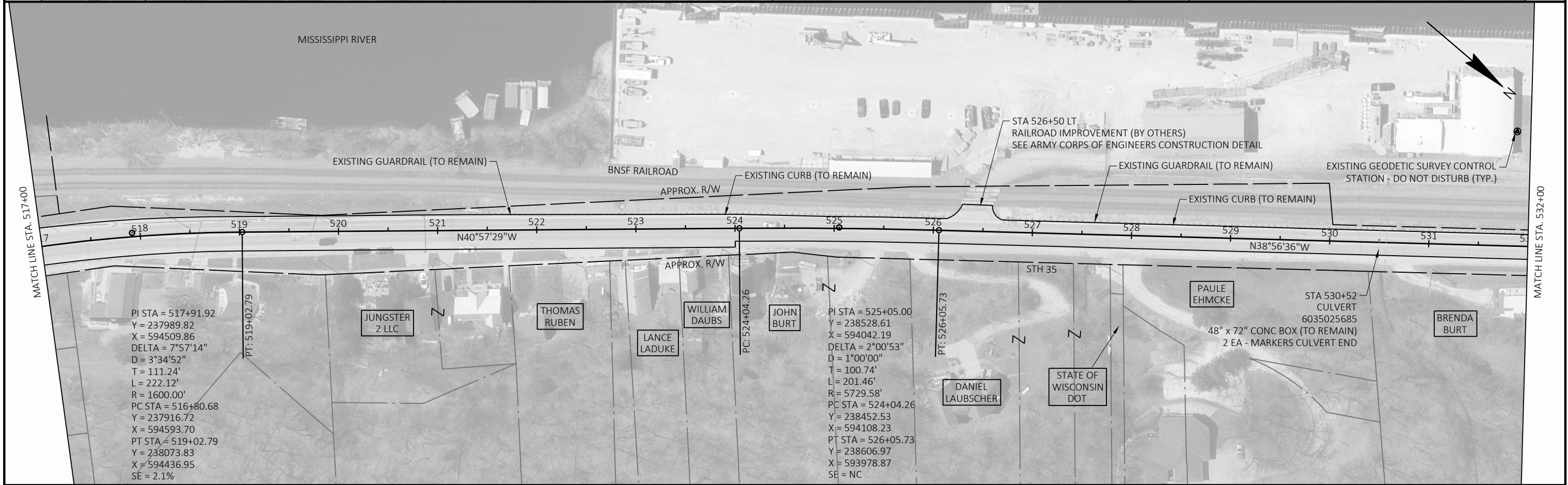
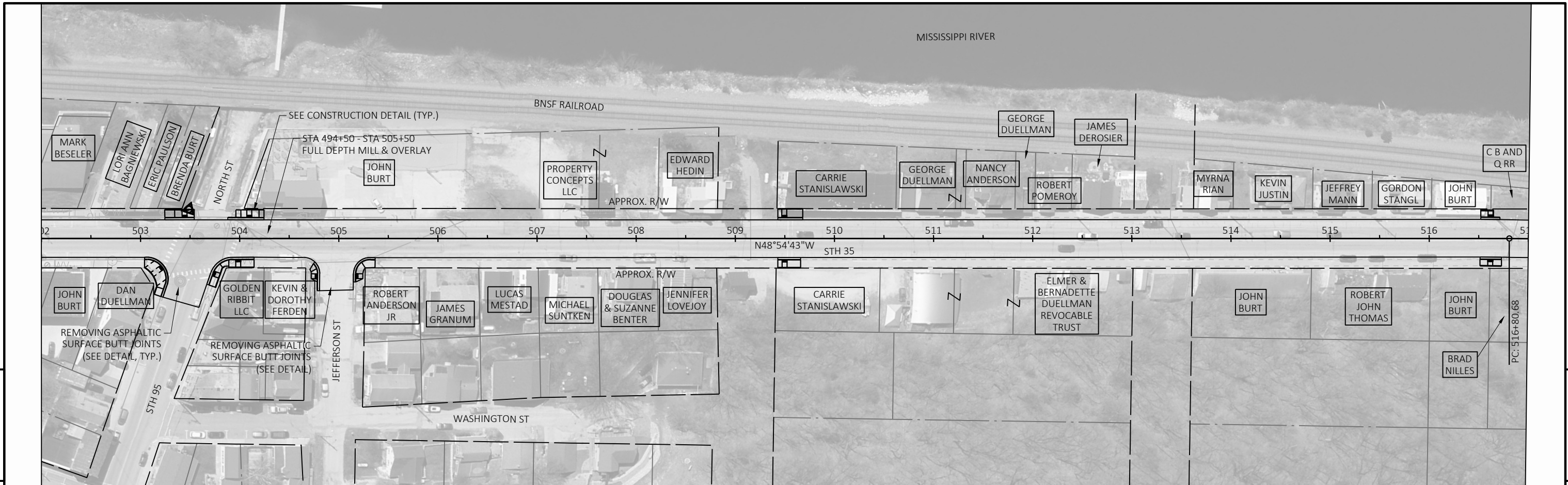




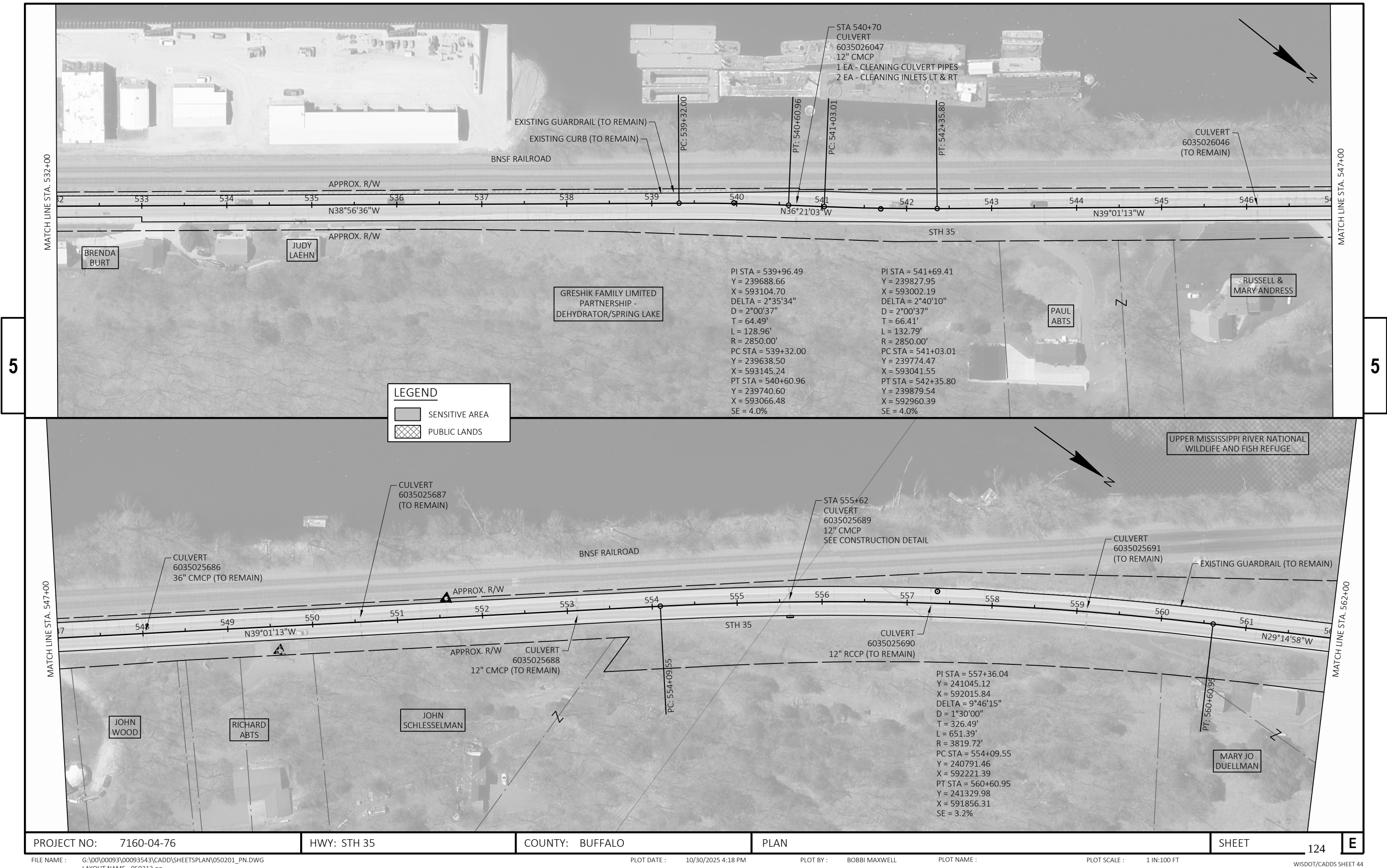


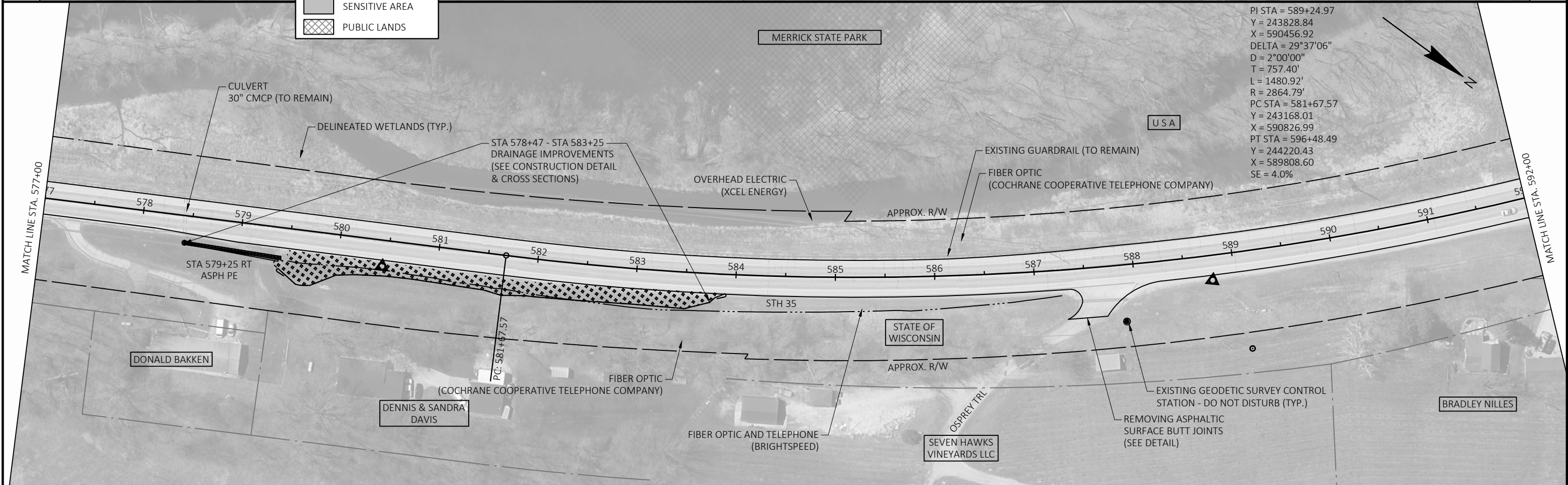
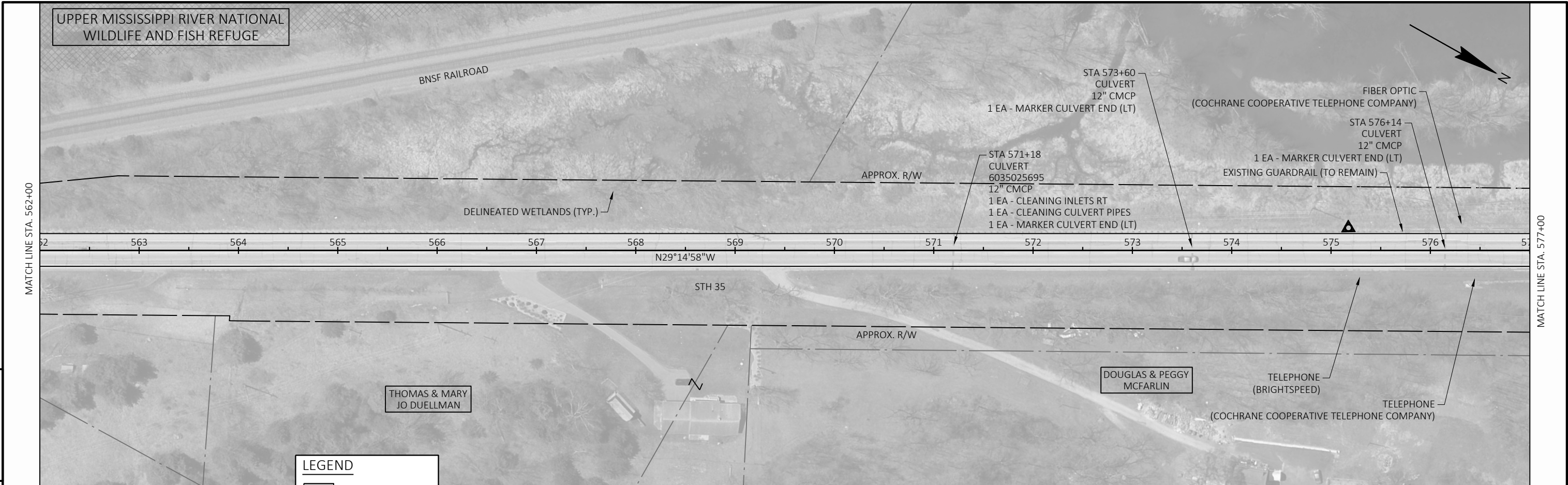


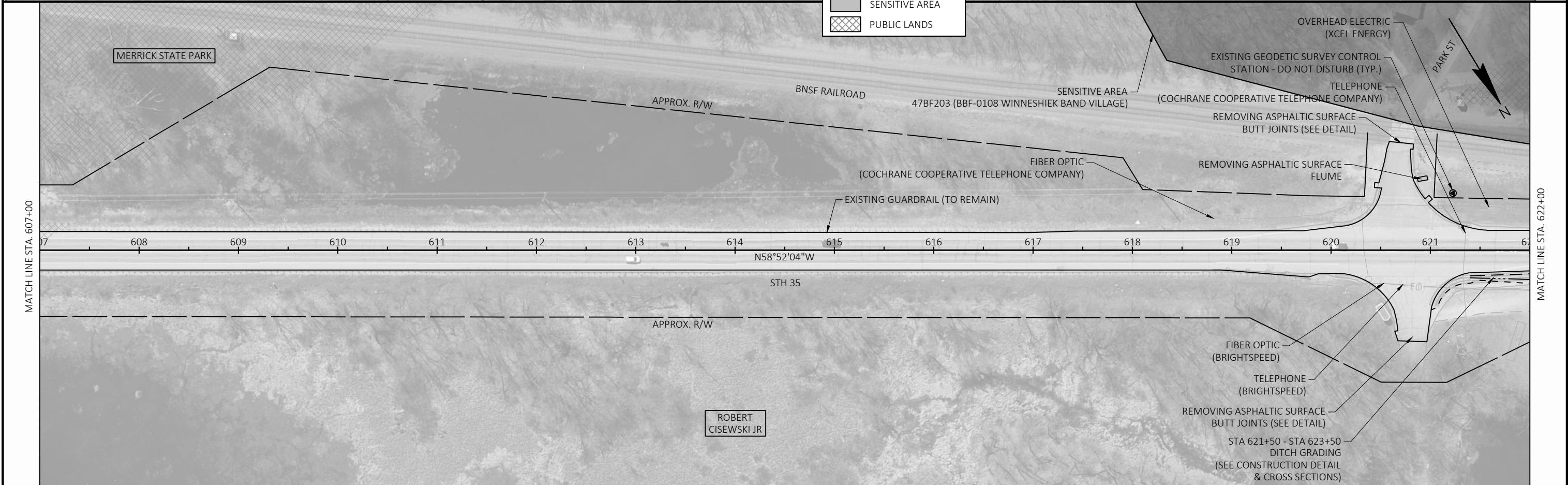
PROJECT NO: 7160-04-76	HWY: STH 35	COUNTY: BUFFALO	PLAN	SHEET 122	E
------------------------	-------------	-----------------	------	-----------	---

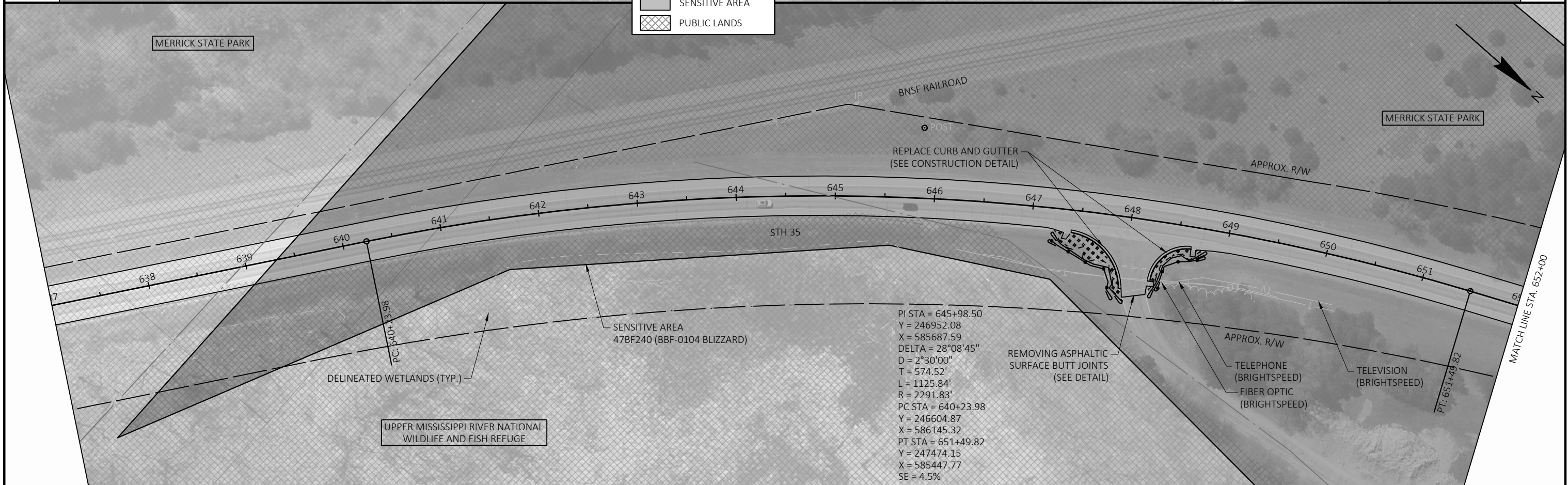
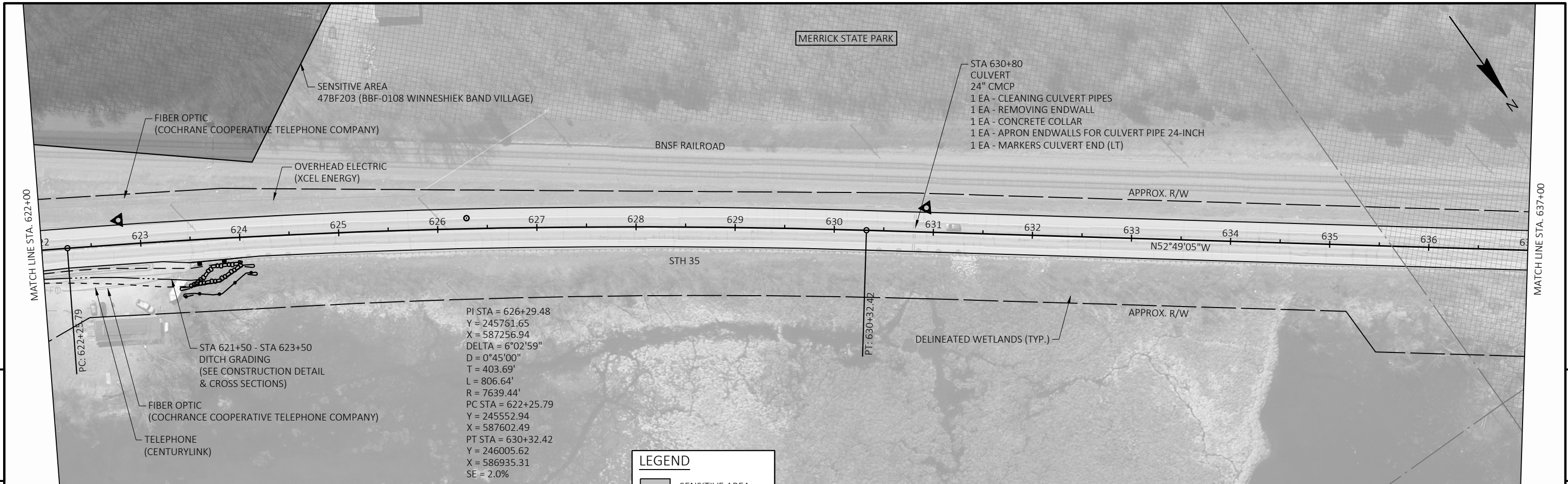


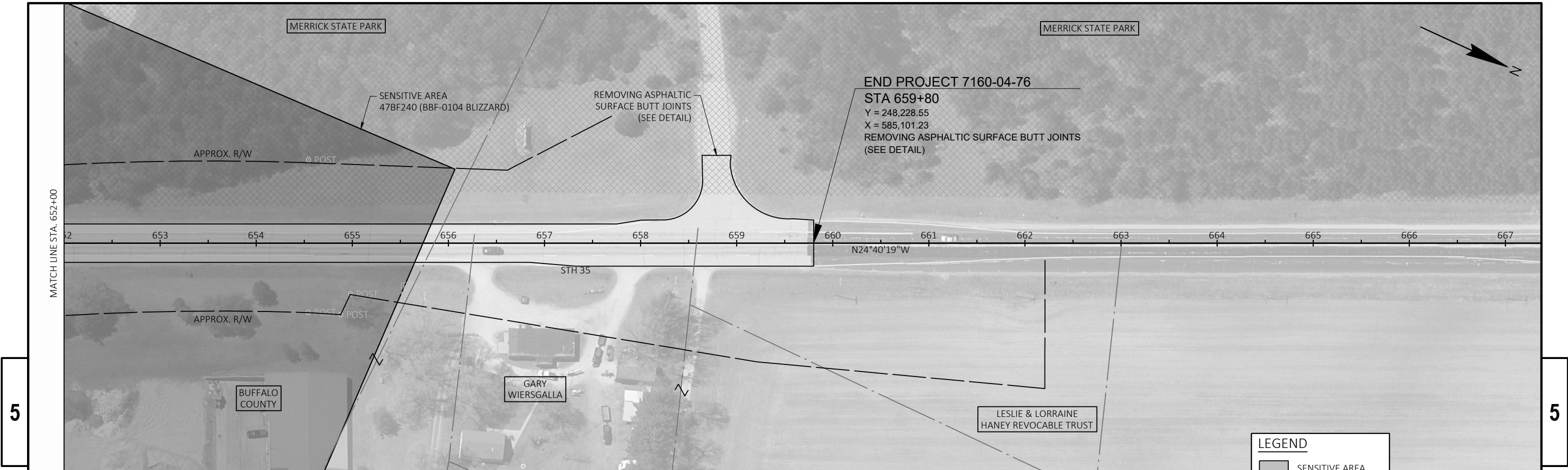
PROJECT NO: 7160-04-76	HWY: STH 35	COUNTY: BUFFALO	PLAN	SHEET 123	E
------------------------	-------------	-----------------	------	-----------	---

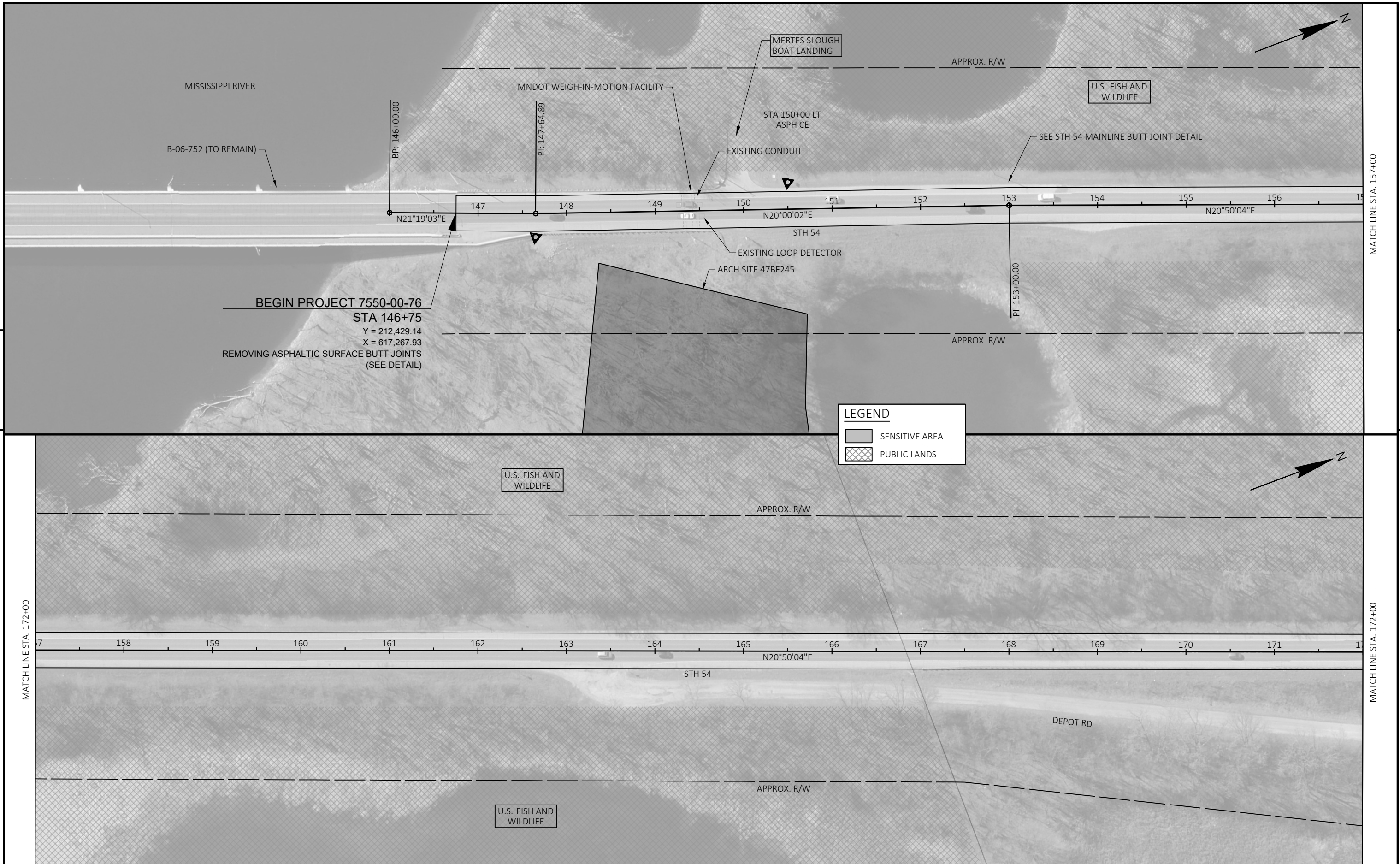






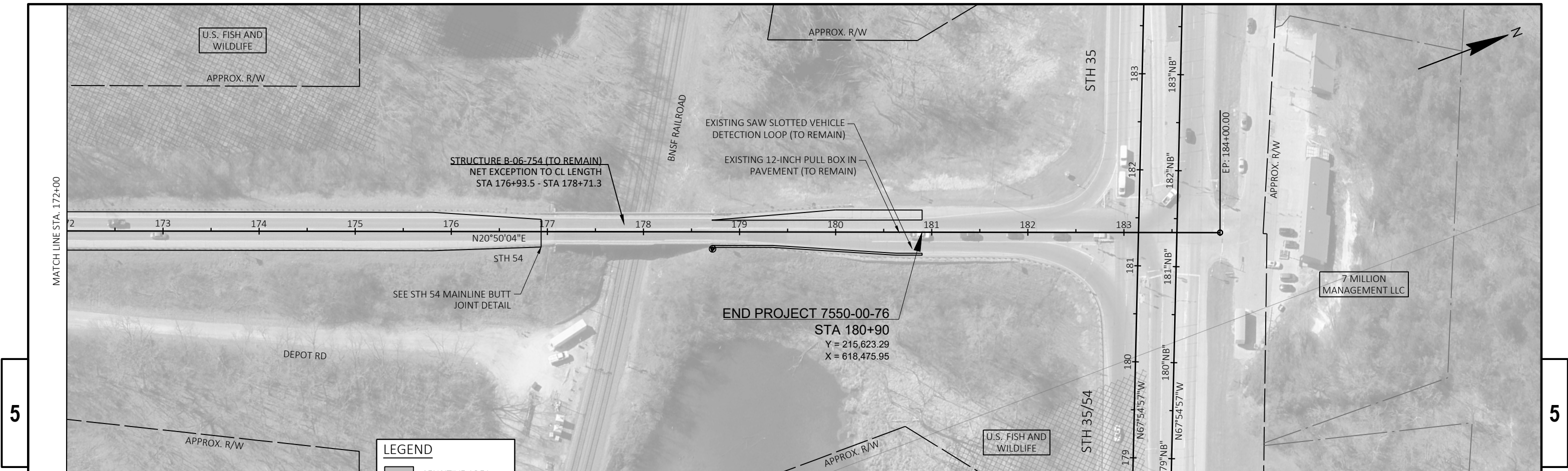






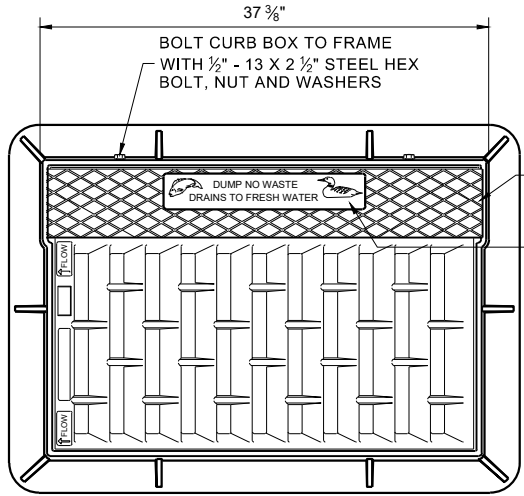
5

5



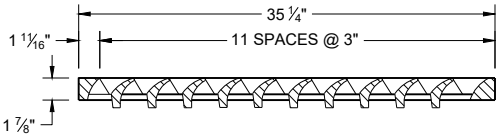
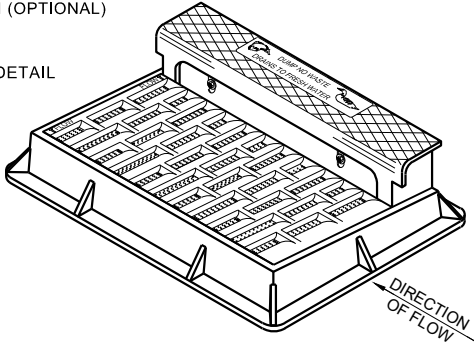
Standard Detail Drawing List

08A05-22A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-22C	INLET COVERS TYPE F, HM, HM-S, S, T, HM-GJ & HM-GJ-S
08A05-22D	INLET COVERS TYPE V, V-B, & VV-B
08A05-22E	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-04	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C06-03	INLETS 3-FT AND 4-FT DIAMETER
08D01-24A	CONCRETE CURB & GUTTER
08D01-24B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-22A	CURB RAMPS TYPES 1 AND 1-A
08D05-22B	CURB RAMPS TYPES 2 AND 3
08D05-22C	CURB RAMPS TYPES 4A AND 4A1
08D05-22D	CURB RAMPS TYPES 4B AND 4B1
08D05-22E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-22F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-22G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D18-05	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08D19-05	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
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
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A10-03A	SHOULDER RUMBLE STRIPS - ASPHALT
13A11-04A	CENTERLINE RUMBLE STRIPS - ASPHALT
13C19-03	HMA LONGITUDINAL JOINTS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-08A	FLEXIBLE DELINEATOR POST
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 TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-10A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-10B	MOVING PAVEMENT MARKING OPERATION MULTI-LANE UNDIVIDED ROADWAY
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15C36-01	PARKING STALL MARKING
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-11A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11B	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11D	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11E	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11F	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11G	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11H	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11I	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11J	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11K	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-11L	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D39-03	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL

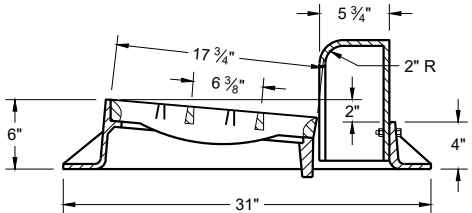
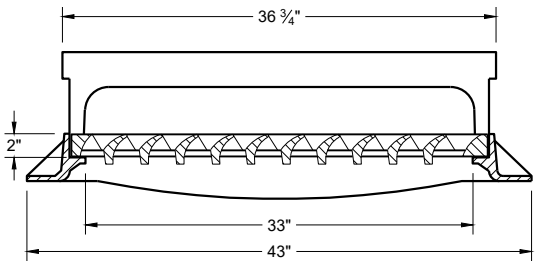
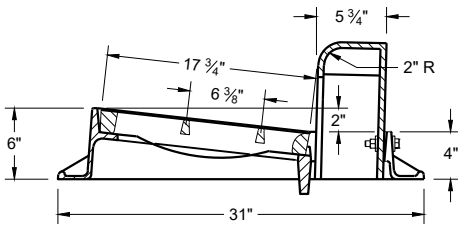
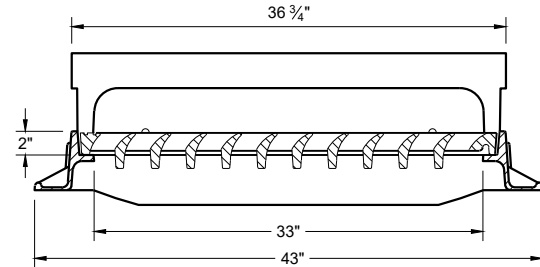


NOTE: EITHER CASTING IS ACCEPTABLE

TYPE "C" CHECKERED TOP DESIGN (OPTIONAL)
SEE LOGO DETAIL

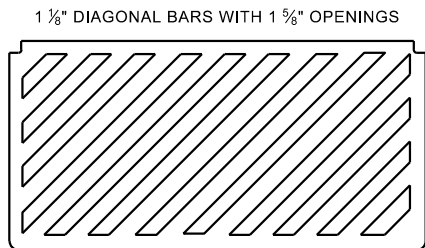


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

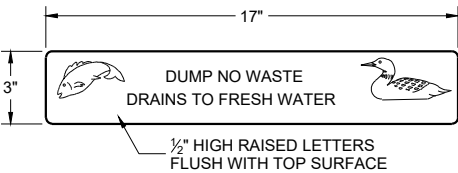


TYPE "H"

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)



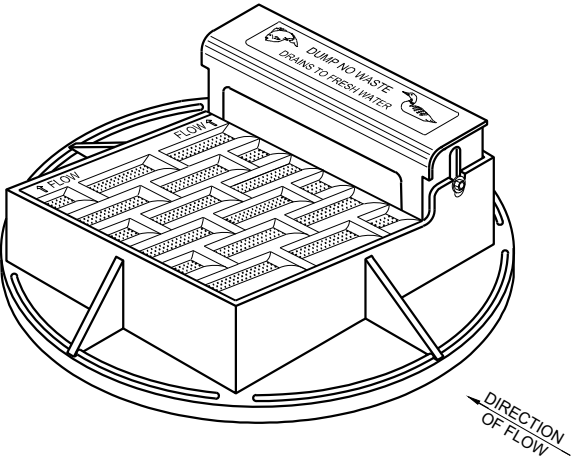
LOGO DETAIL

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.

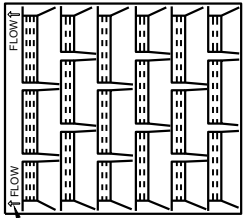
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

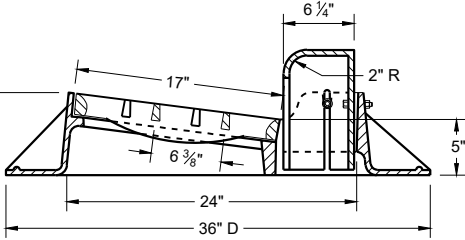
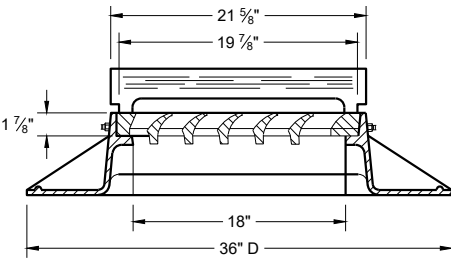
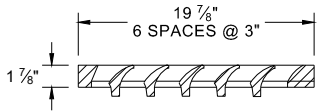


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

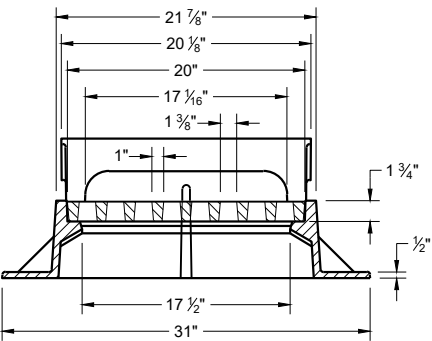
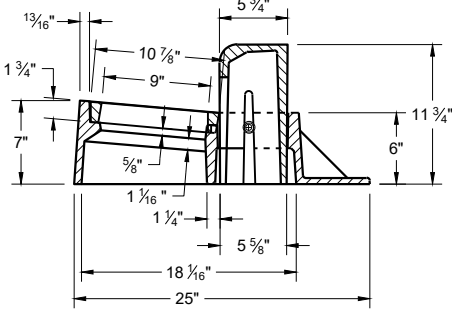
NOTE: EITHER CASTING IS ACCEPTABLE



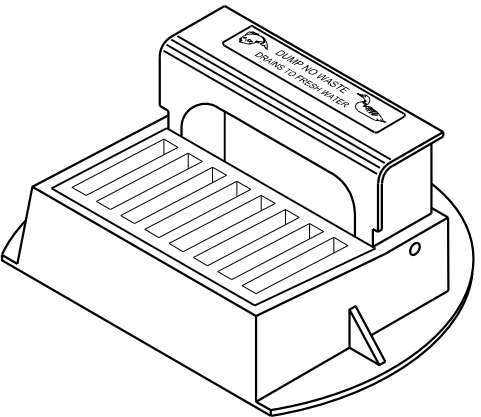
DIRECTION OF FLOW ARROWS



TYPE "A"



TYPE "Z"



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

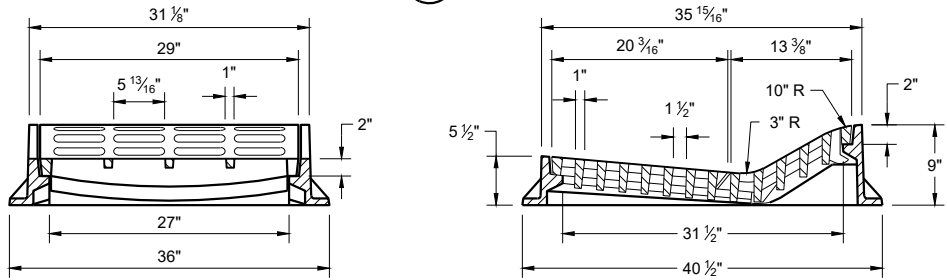
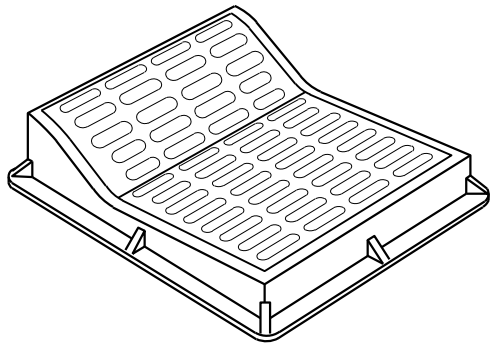
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

GENERAL NOTES

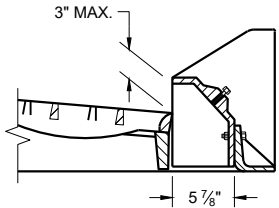
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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"

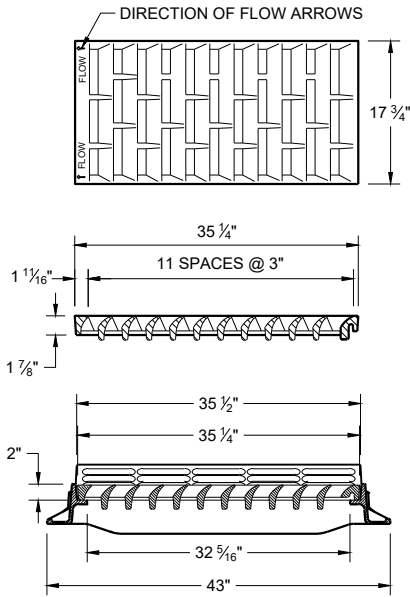


ALTERNATIVE CURB BOX
FOR TYPE "HM" COVER

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

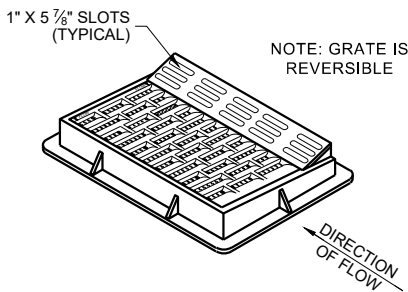
NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

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

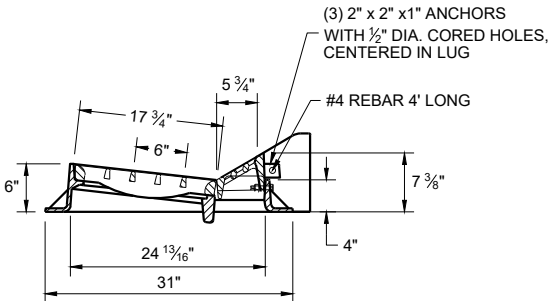


TYPE "HM"

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

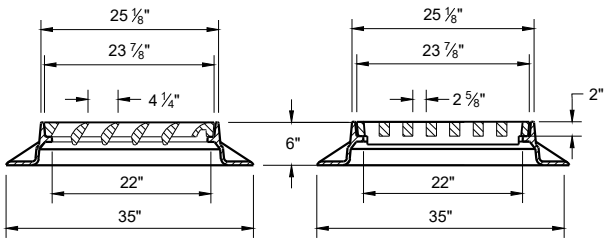
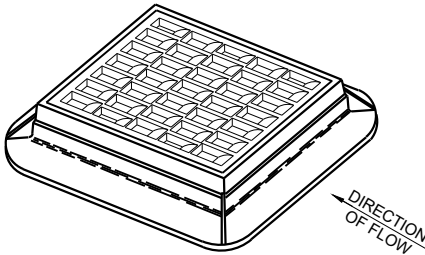


NOTE: GRATE IS REVERSIBLE

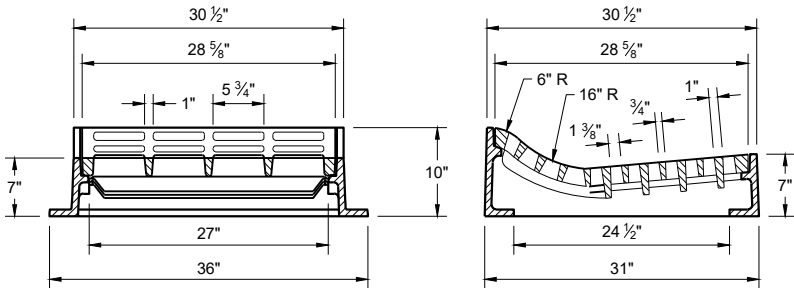
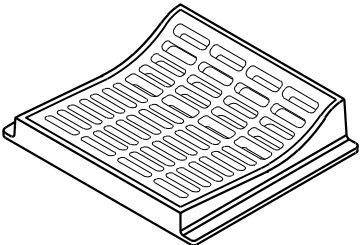


NOTE:
SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER.

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"

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2025
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

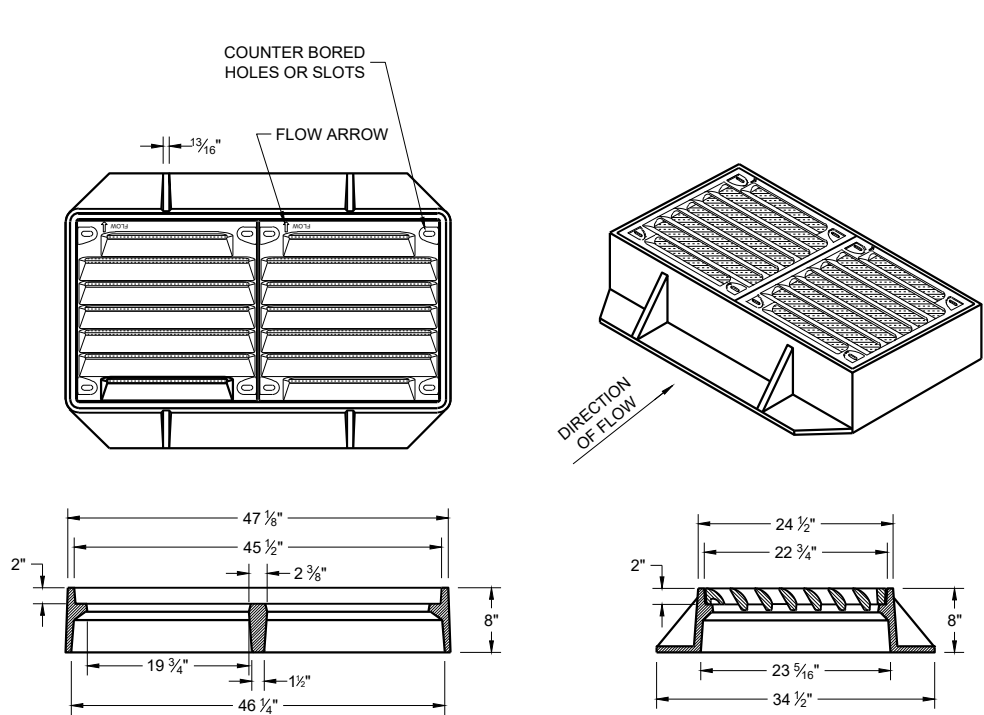
FHWA

133

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.

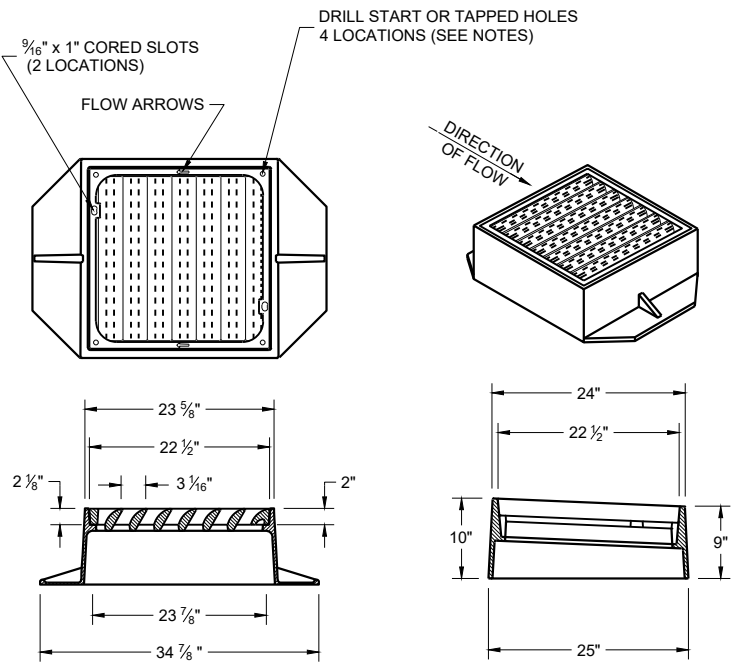
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "VV-B"

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

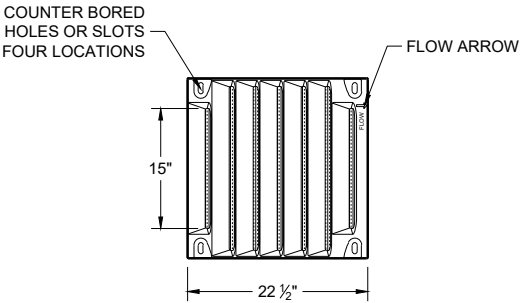
TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 35B
3/8" DIA. X 1/16" DRILL START IN 8 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



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" AND "VV-B" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER
NOTED AS TYPE "V-B" OR "VV-B" (FOR DOUBLE GRATE) ON
DRAINAGE TABLE

TAP 1/2" -13 HOLES IN FOUR LOCATIONS PER GRATE IN FRAME TO
BOLT GRATE(S).
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 V, V-B, AND VV-B

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2025
DATE

FHWA

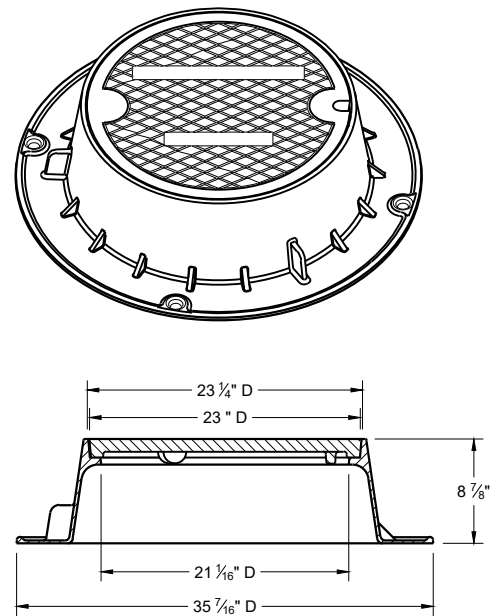
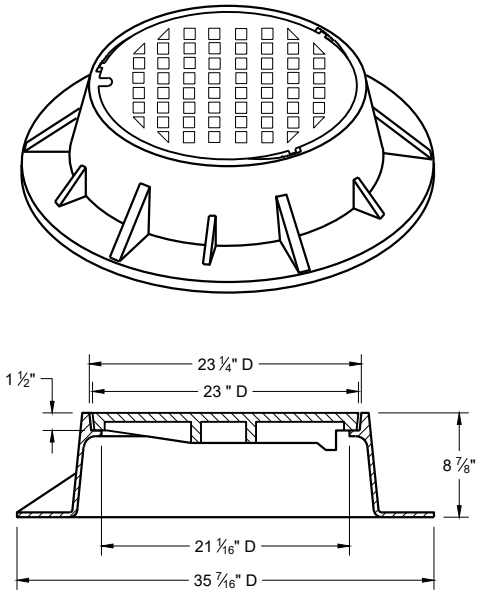
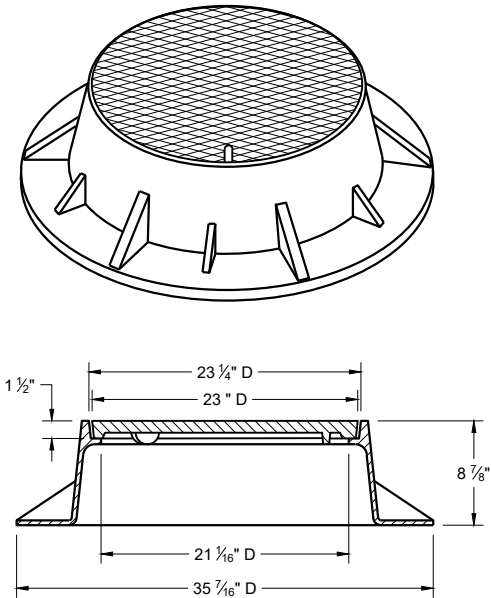
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

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.

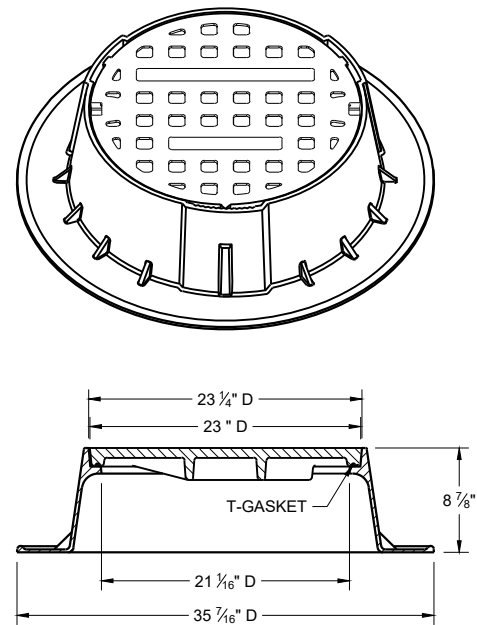
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



TYPE "J"

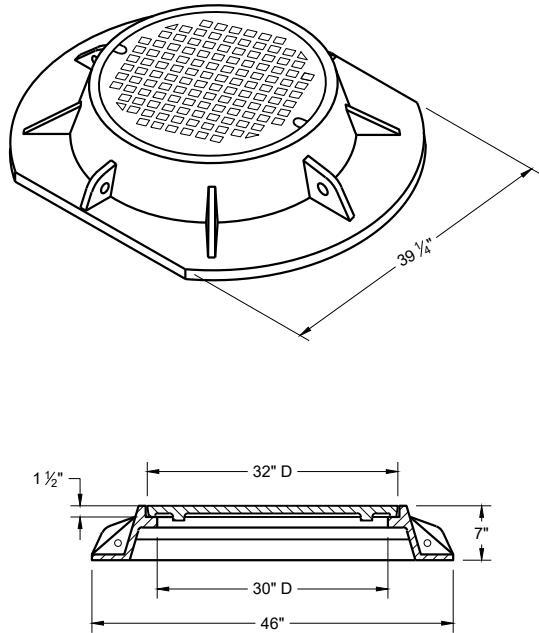
NOTE: EITHER CASTING IS ACCEPTABLE



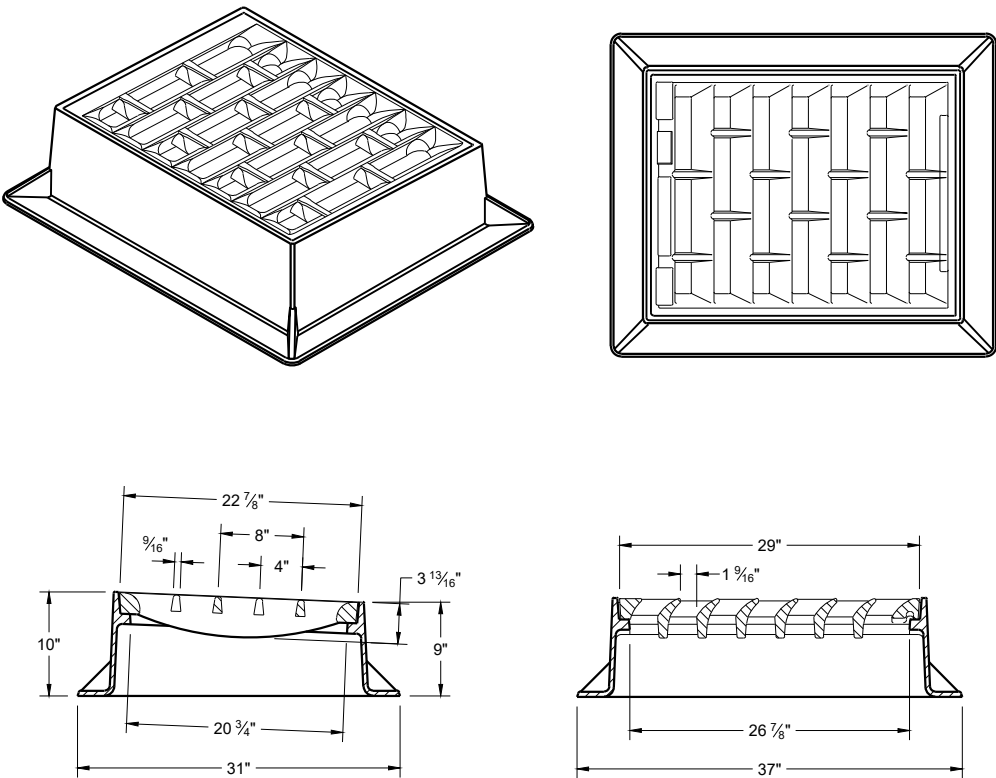
TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID (NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

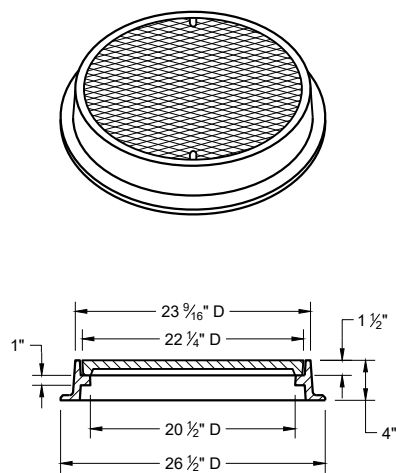
NOTE: EITHER CASTING IS ACCEPTABLE



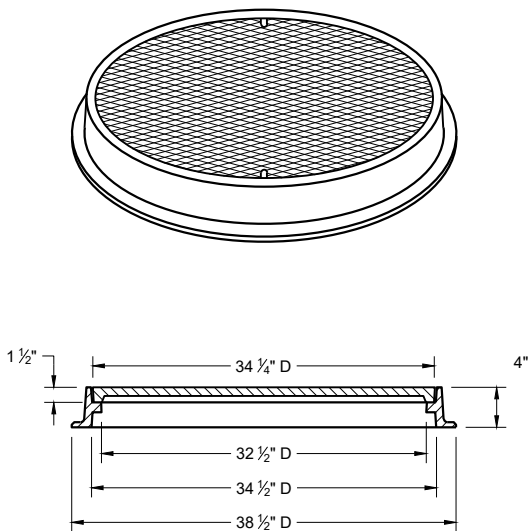
TYPE "K"



INLET COVER TYPE "BW"



TYPE "L"

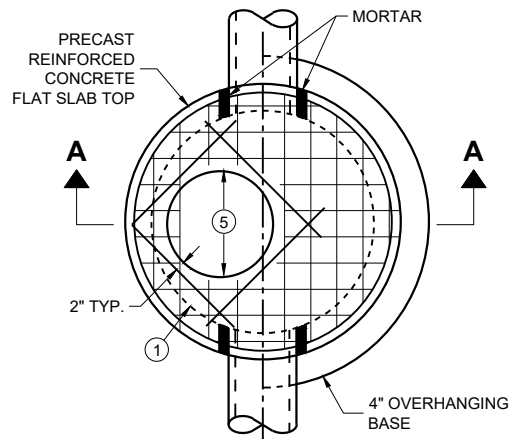


TYPE "M"

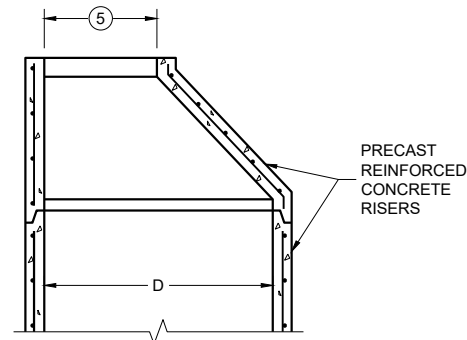
INLET COVERS TYPES BW
MANHOLE COVERS TYPES K,
J, J-S, L, AND M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

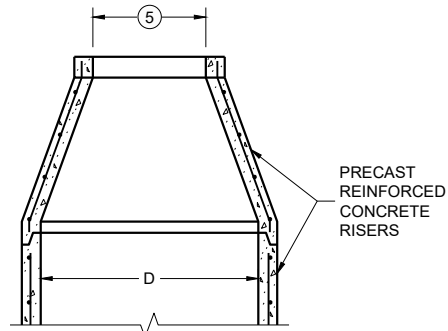
APPROVED
February 2025 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



PLAN VIEW
CIRCULAR OPENING



OPTIONAL PRECAST
REINFORCED CONCRETE
ECCENTRIC TOP



OPTIONAL PRECAST
REINFORCED CONCRETE
CONCENTRIC TOP

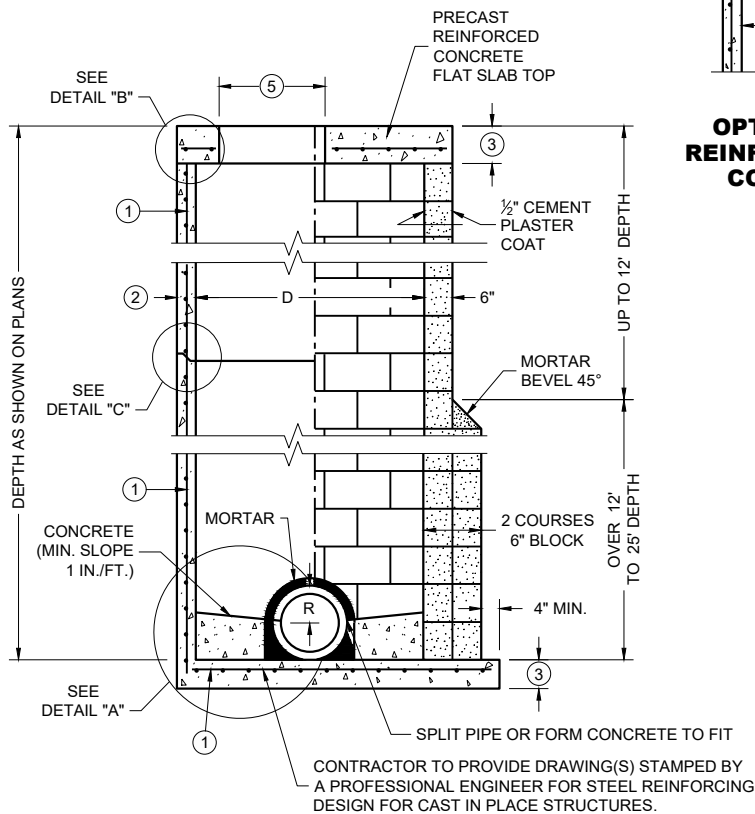
MANHOLE COVER OPENING MATRIX

MANHOLE COVER OPENING SIZE (FT.)	MANHOLE COVER TYPE	C	ALL JS	K	L	M
2 DIA.	5	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

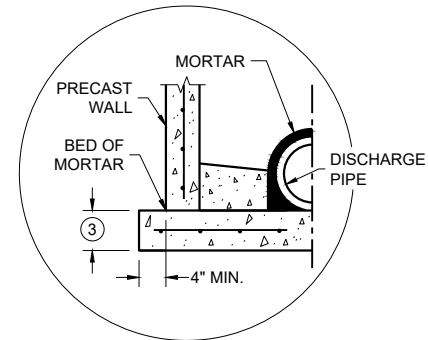
*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES.
SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.



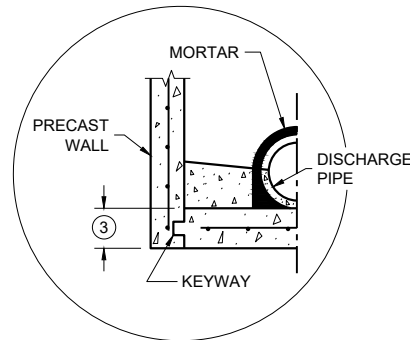
SECTION A - A

PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

CONCRETE BLOCK WITH
CAST IN PLACE OR
PRECAST REINFORCED
CONCRETE BASE

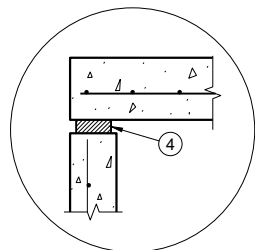


SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

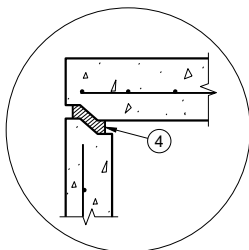


PRECAST REINFORCED CONCRETE
WITH INTEGRAL BASE OPTION

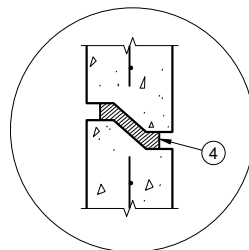
DETAIL "A"



TOP WITH PLAIN
END JOINT



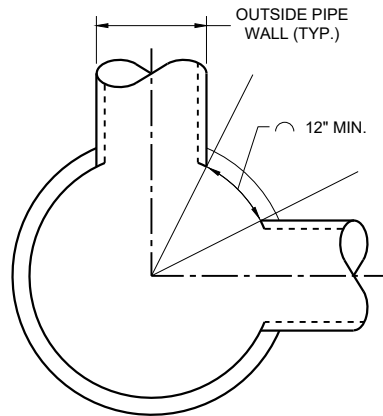
TOP WITH TONGUE
AND GROOVE JOINT



RISER WITH TONGUE
AND GROOVE JOINT

DETAIL "B"

DETAIL "C"



MINIMUM HORIZONTAL
PIPE SEPARATION

DETAIL "D"

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 MANHOLE 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 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.

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 IMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 3/8 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.

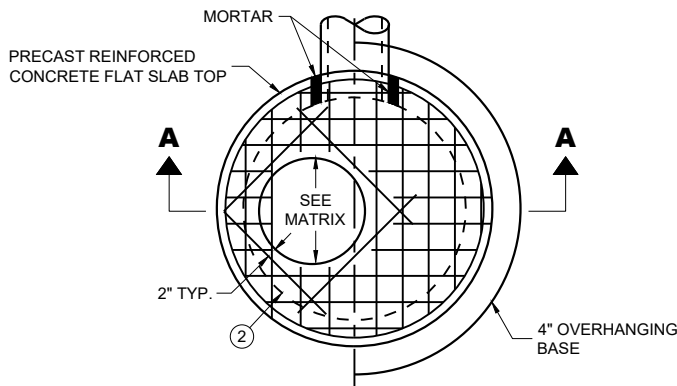
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

- 1 FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- 2 SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- 3 SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- 4 JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.
- 5 SEE MANHOLE COVER OPENING MATRIX.

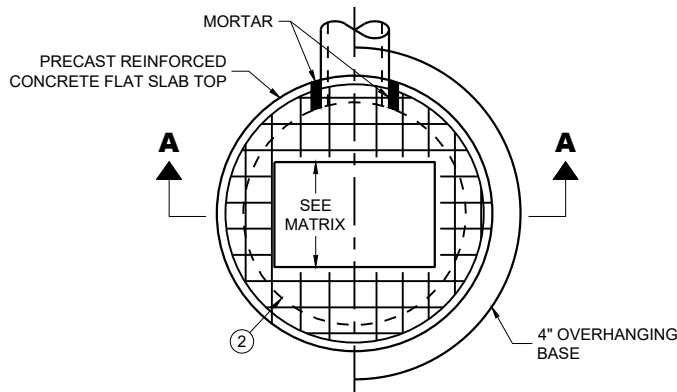
MANHOLES, 3-FT, 4-FT
5-FT, 6-FT, 7-FT, 8-FT, 9-FT
AND 10-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

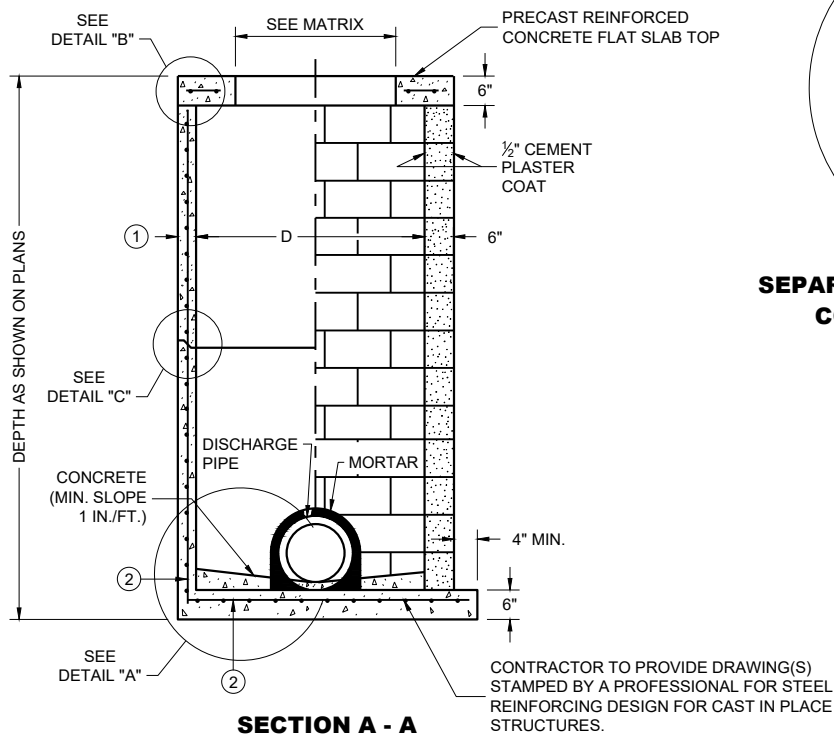
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA



PLAN VIEW CIRCULAR OPENING



PLAN VIEW RECTANGULAR OPENING



SECTION A - A

PRECAST REINFORCED
CONCRETE WITH
MONOLITHIC BASE

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

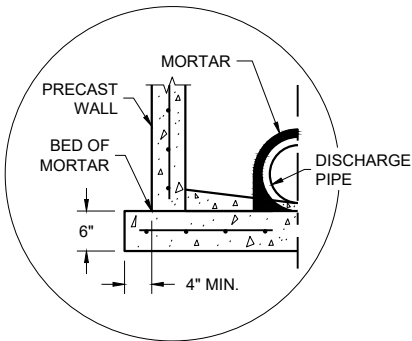
CIRCULAR INLETS WITH FLAT TOP

CATCH BASIN COVER OPENING MATRIX

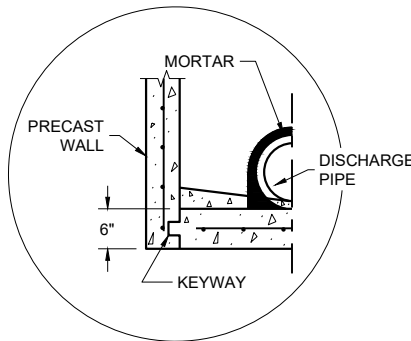
INLET SIZE	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V V-B	WM	Z
	OPENING SIZE (FT.)											
3-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
4-FT	2 DIA.				X							X
	2 X 2	X	X					X		X		
	2 X 2.5			X				X	X	X	X	
	2 X 3						X					
	2.5 X 3					X						

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

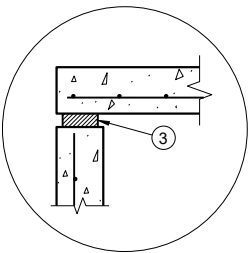


SEPARATE PRECAST REINFORCED
CONCRETE BASE OPTION

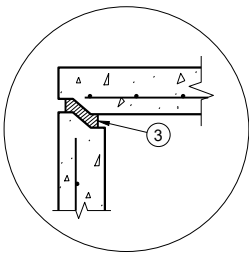


PRECAST REINFORCED CONCRETE
WITH INTEGRAL BASE OPTION

DETAIL "A"

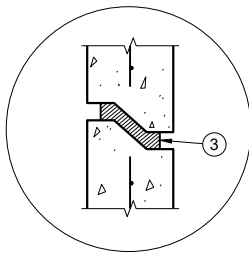


TOP WITH PLAIN
END JOINT



TOP WITH TONGUE
AND GROOVE JOINT

DETAIL "B"



RISER WITH TONGUE
AND GROOVE JOINT

DETAIL "C"

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.

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 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.

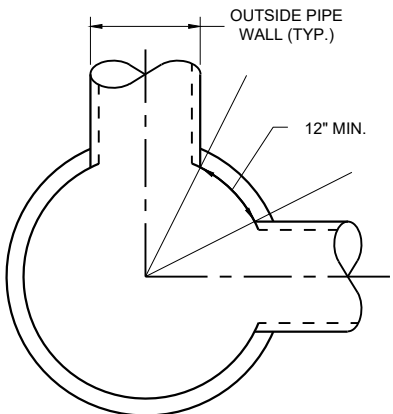
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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 "D".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

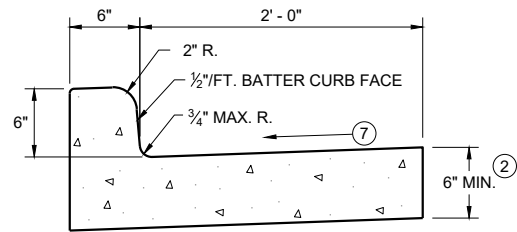


MINIMUM HORIZONTAL PIPE
SEPARATION
DETAIL "D"

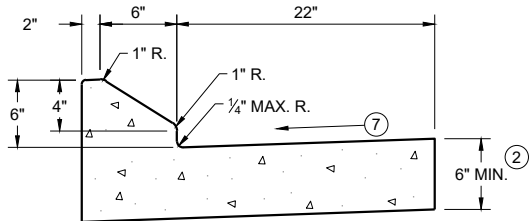
INLETS 3-FT
AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

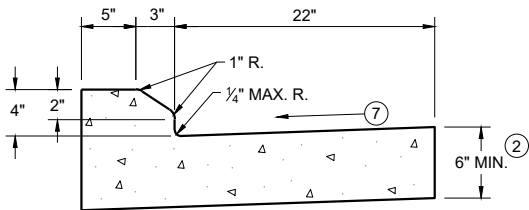
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



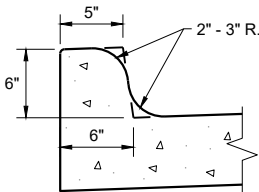
TYPES A^① & D



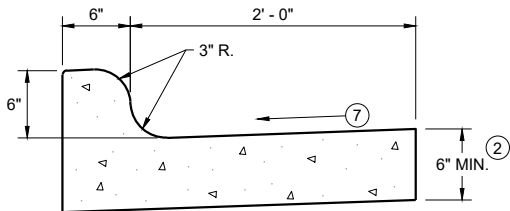
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

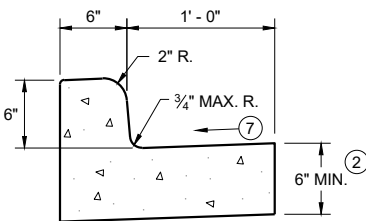


TYPES K^① & L
(OPTIONAL CURB SHAPE)



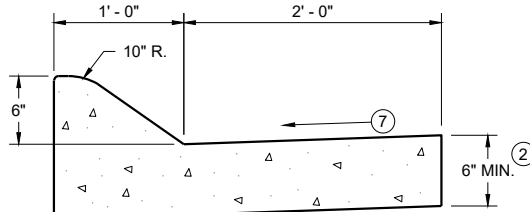
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

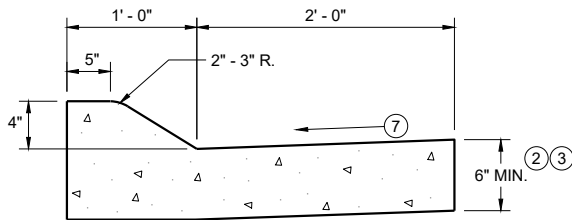


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

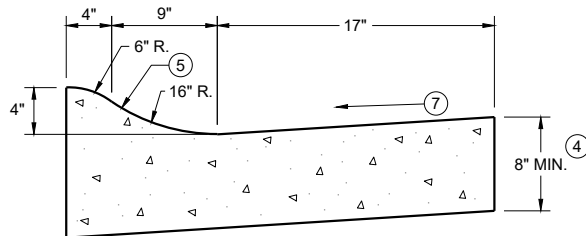


6" SLOPED CURB TYPES A^① & D



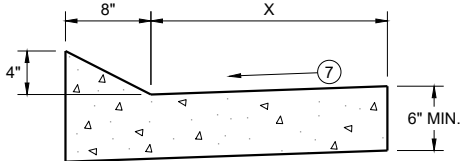
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T
CONCRETE CURB AND GUTTER 30"

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

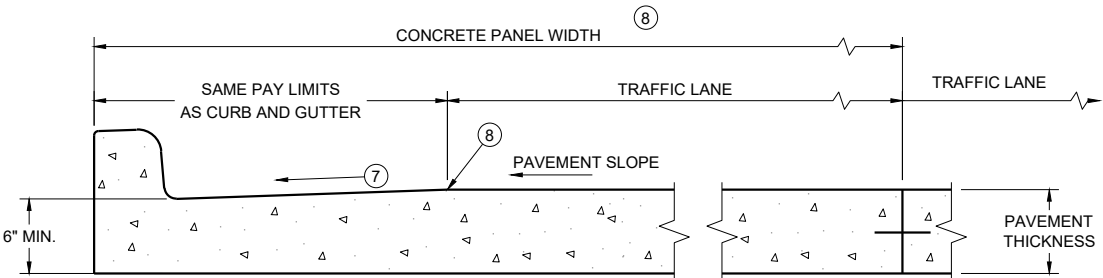


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

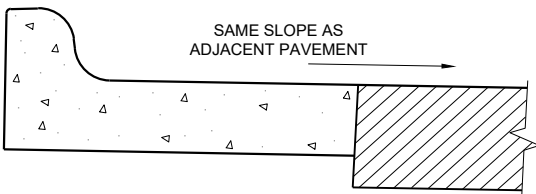
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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

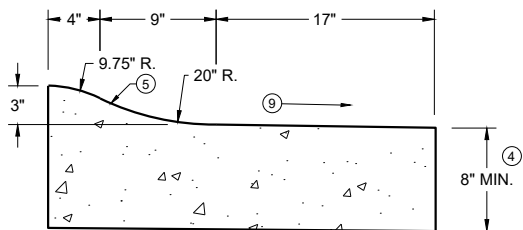


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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



3" SLOPED CURB TYPES R^① & T

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

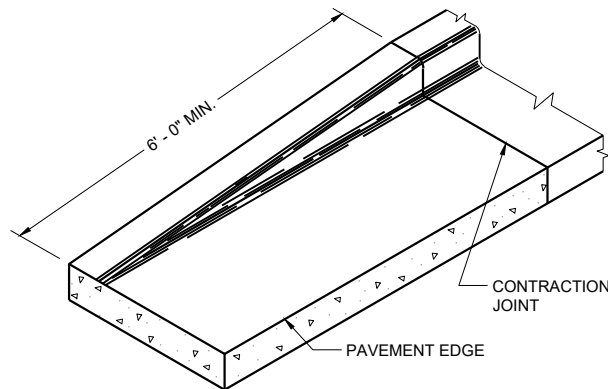
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

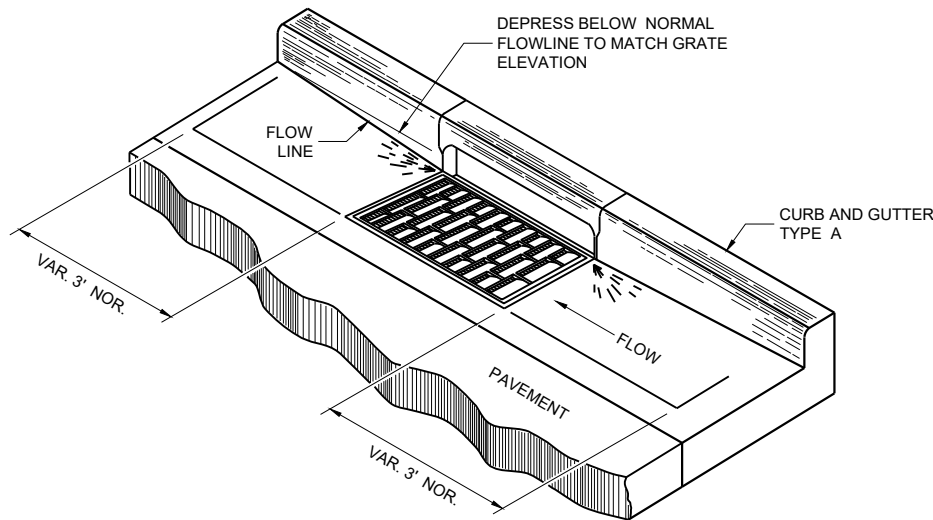
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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 SLOPE TO BE REVERSE SLOPE MATCHING THE SLOPE OF THE PAVEMENT AND THE CIRCULATORY ROADWAY

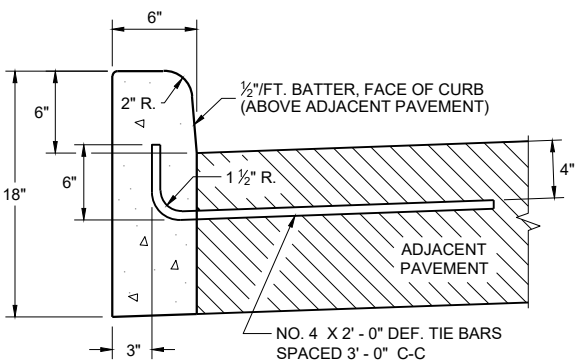


END SECTION CURB AND GUTTER

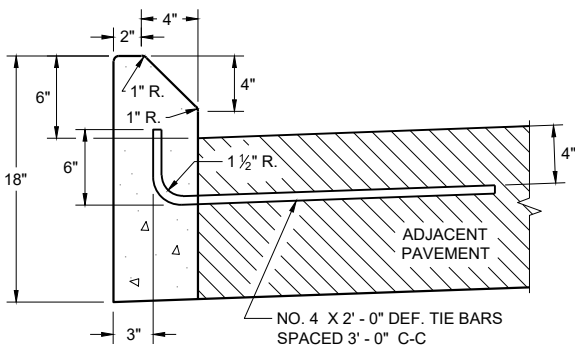


DETAIL OF CURB AND GUTTER AT INLETS

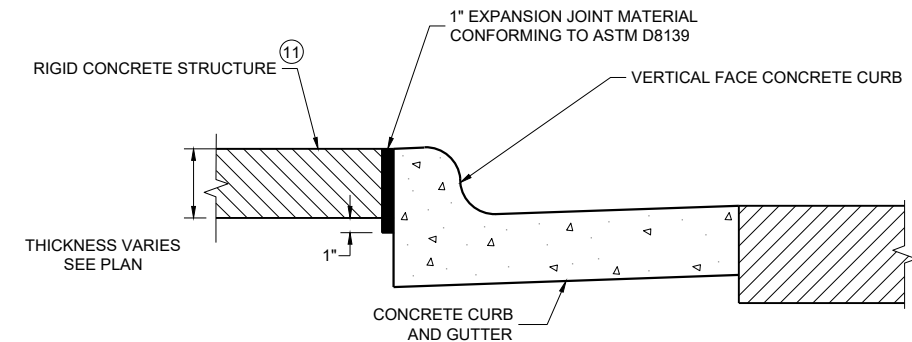
(TYPICAL H INLET COVER SHOWN)



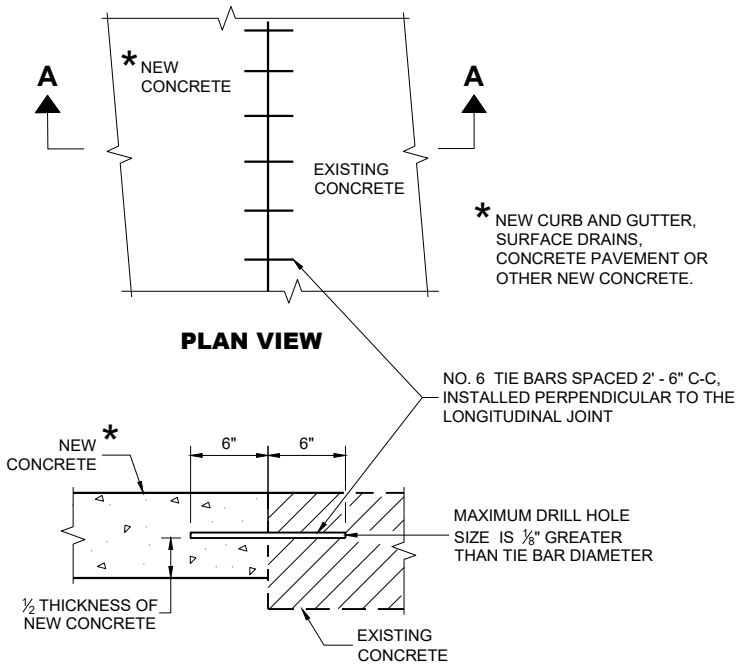
TYPES A^① & D



TYPES G^① & J
CONCRETE CURB



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



SECTION A - A
TIE BARS DRILLED INTO EXISTING PAVEMENT

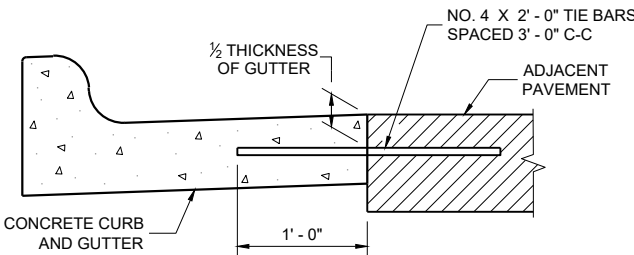
GENERAL NOTES

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

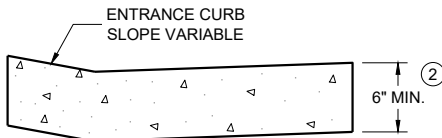
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

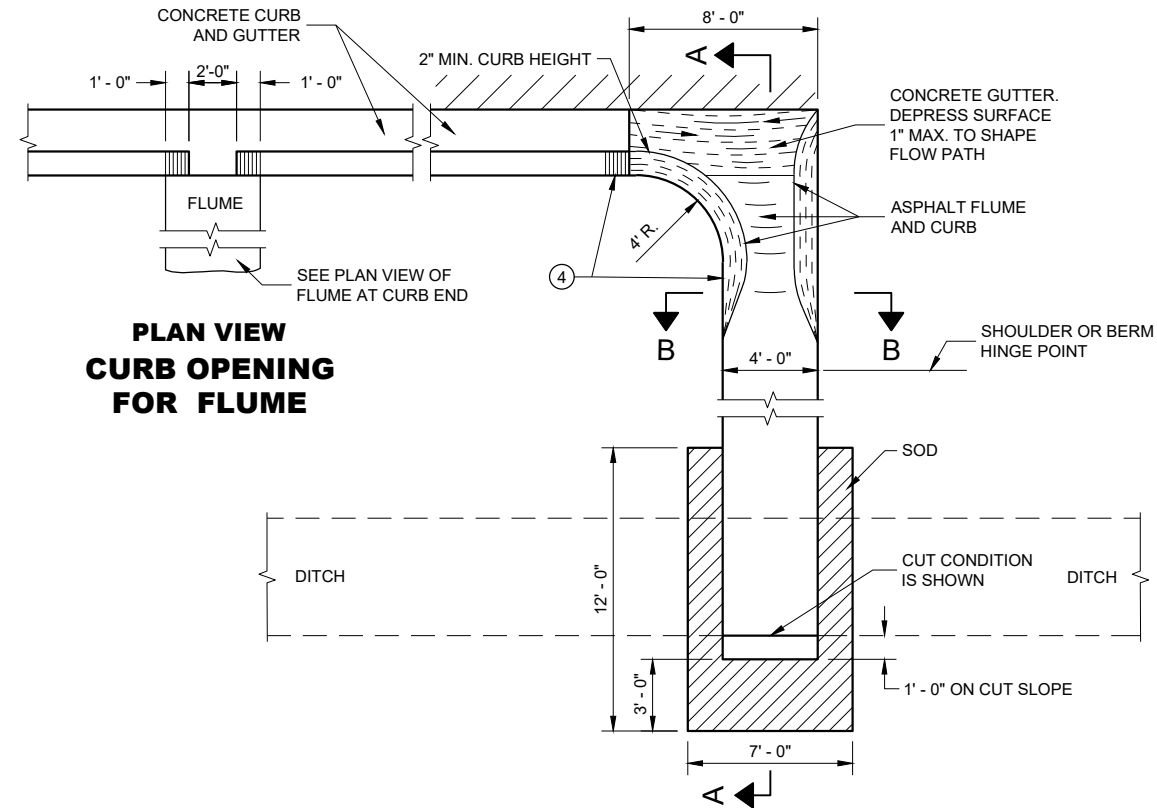
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

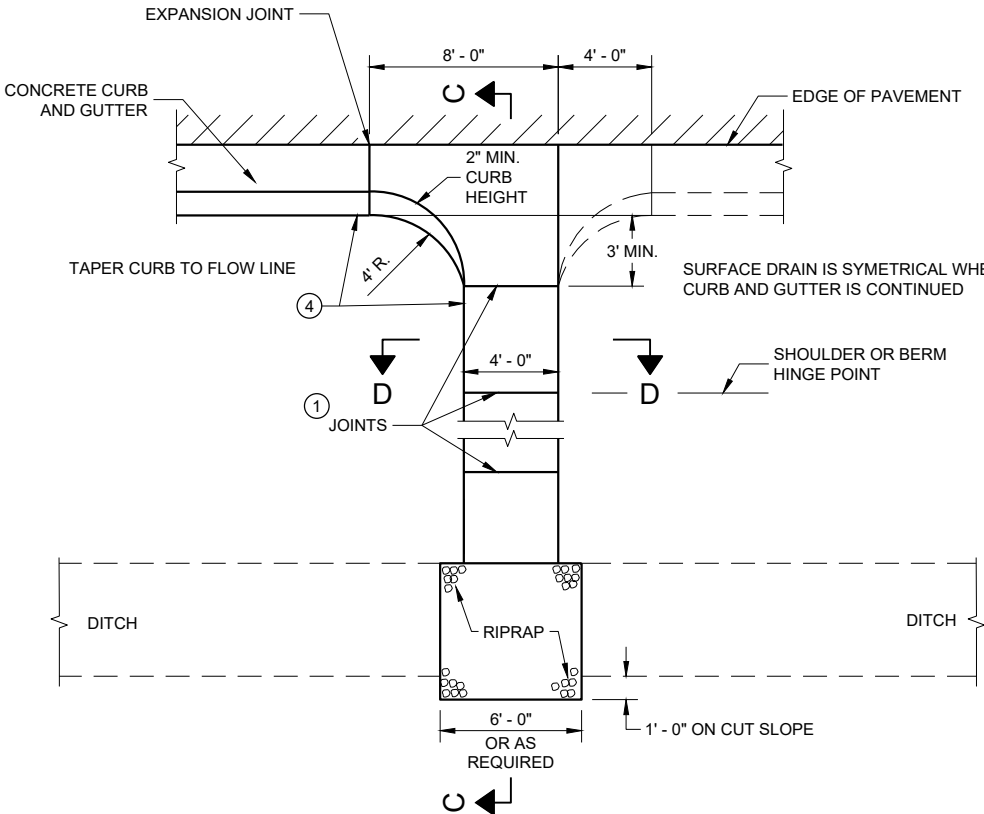
NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



PLAN VIEW
CURB OPENING
FOR FLUME

PLAN VIEW
FLUME AT CURB END



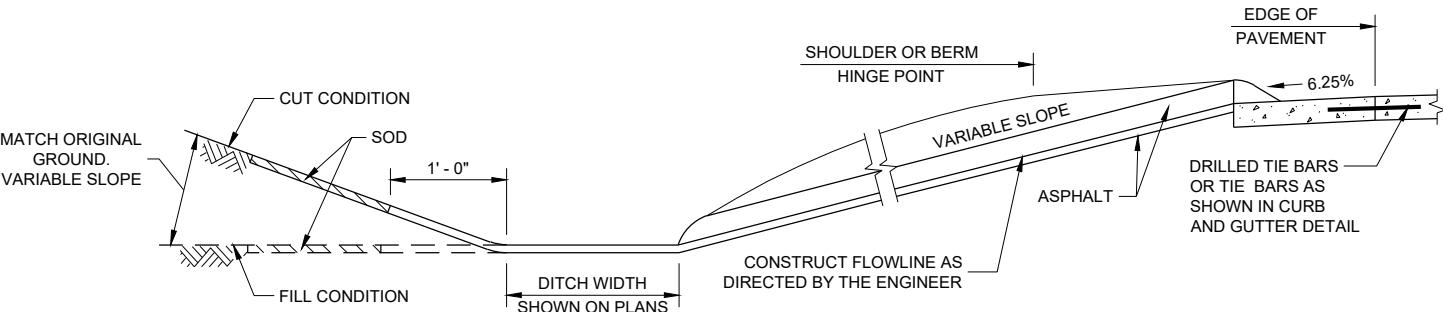
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

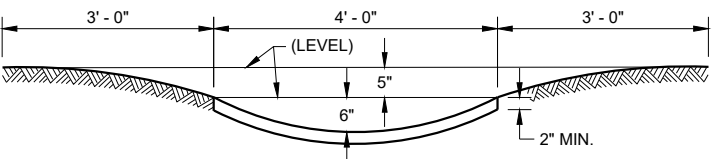
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

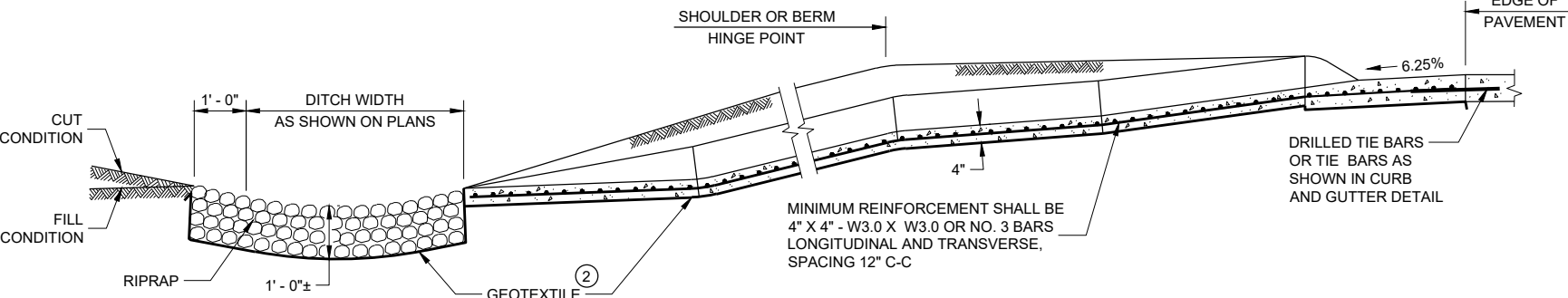
- JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- 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.



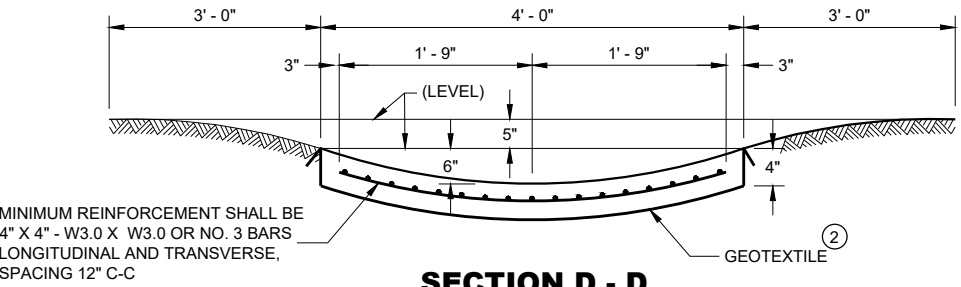
SECTION A - A



SECTION B - B



SECTION C - C

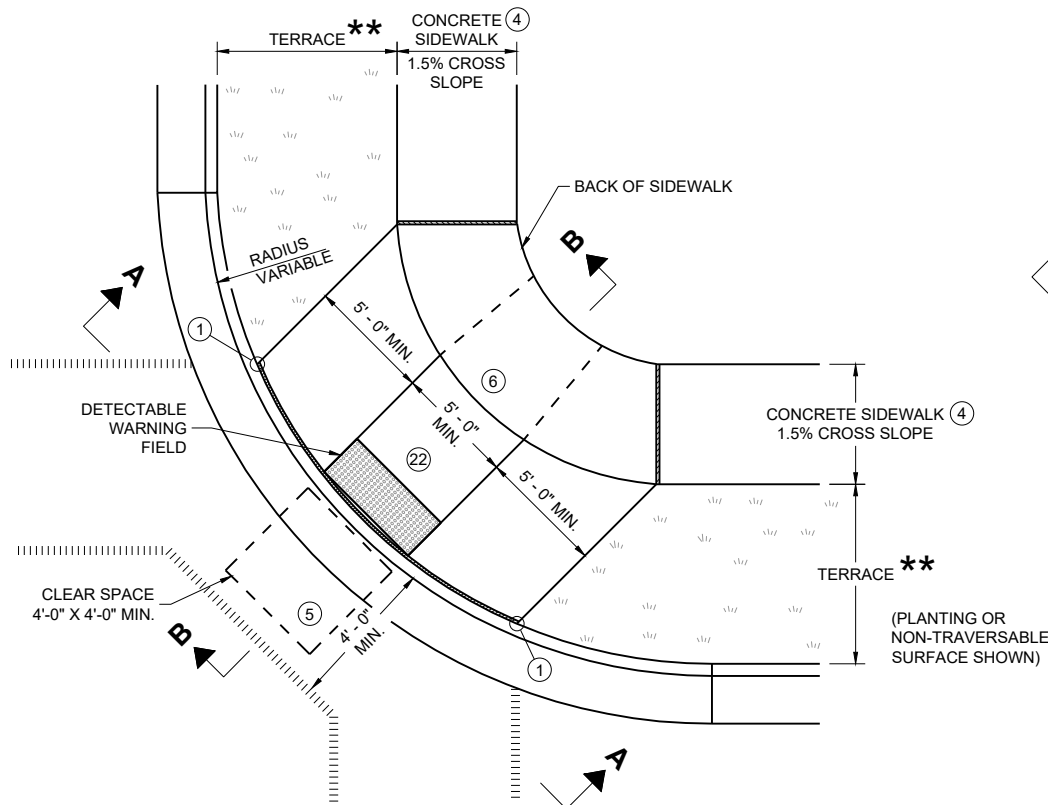


SECTION D - D

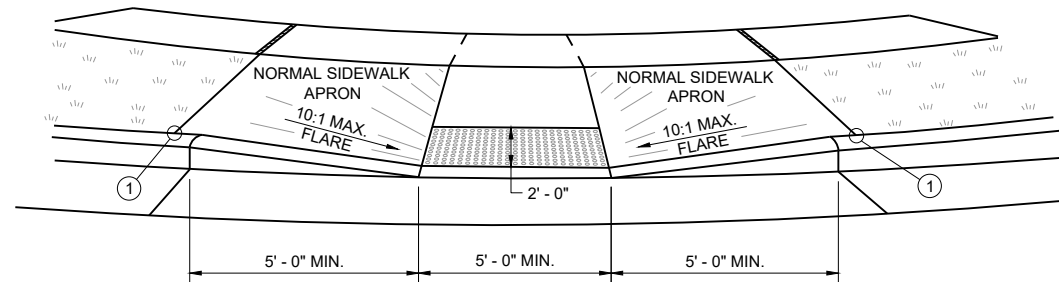
CONCRETE SURFACE
DRAINS AND
ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

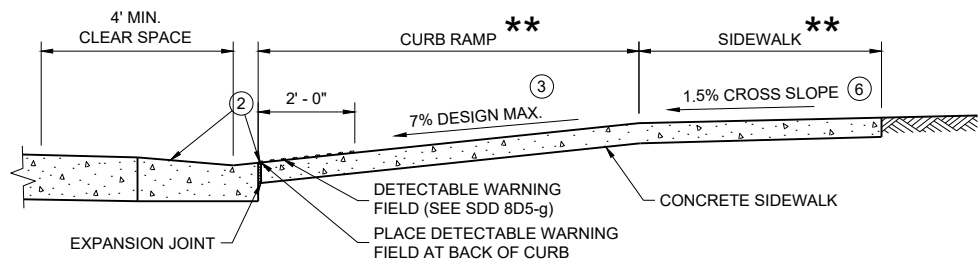
APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA 140



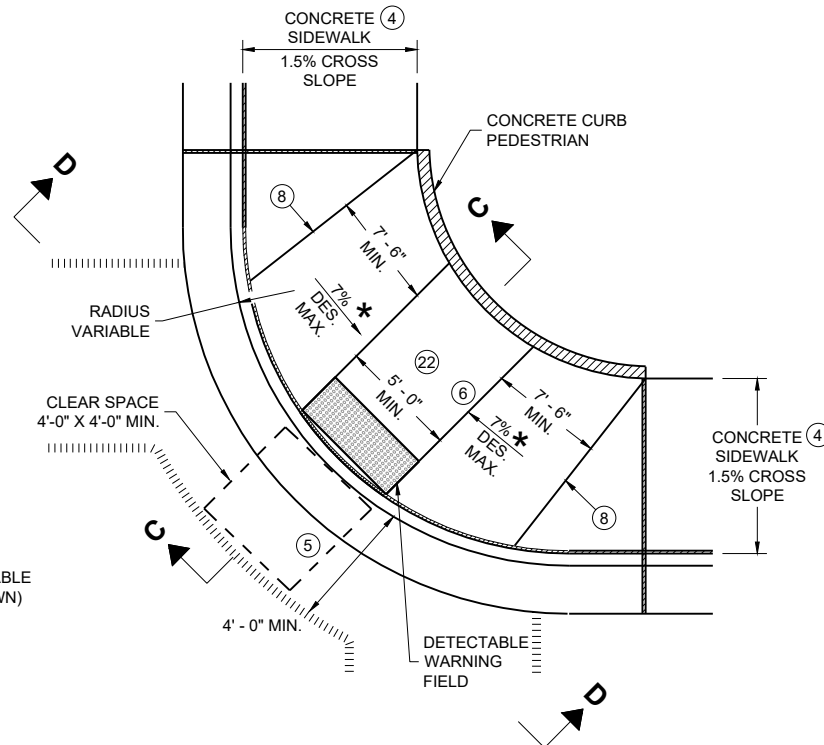
PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)



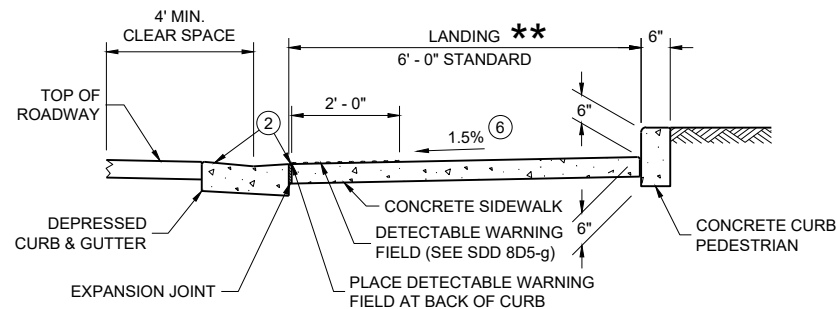
VIEW A - A FOR TYPE 1



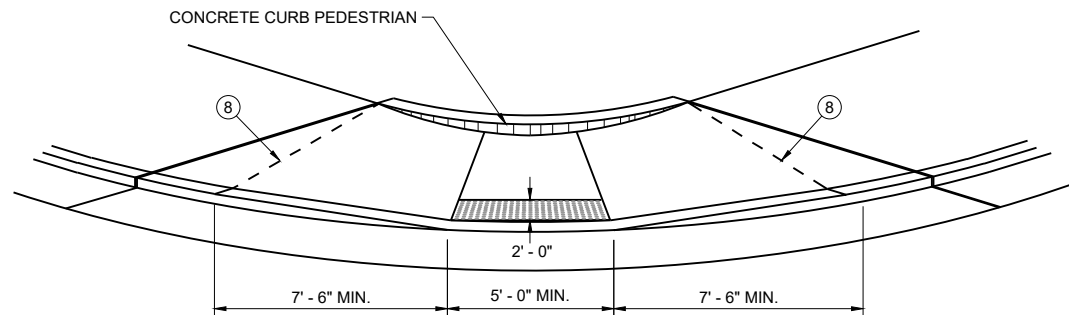
SECTION B - B FOR TYPE 1



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 CURB 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 CURB RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF CURB 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 CURB RAMP.

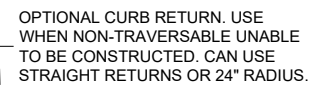
- THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A CLEAR SPACE IN THE STREET AND GUTTER AREA. WHEN THE GUTTER CROSS SLOPE EXCEEDS 2.1%, CONSTRUCT THE CLEAR SPACE IN THE STREET AREA AND THE 4 FOOT WIDTH IS MEASURED FROM THE FLANGE LINE. FOR RECONSTRUCTION AND MODERNIZATION PROJECTS THE CLEAR SPACE SLOPE PARALLEL TO THE CURBLINE SHOULD BE 2.1% MAX FOR CROSSINGS THAT ARE STOP AND YIELD CONTROLLED, AND 5% MAX FOR THOSE THAT ARE SIGNAL CONTROLLED. FOR PERPETUATION AND REHABILITATION PROJECTS THE SLOPE OF THE CLEAR SPACE PARALLEL TO THE CURBLINE WILL MATCH THE ROADWAY LONGITUDINAL SLOPE. THE SLOPE OF THE CLEAR SPACE PERPENDICULAR TO THE CURBLINE WILL MATCH THE ROADWAY CROSS SLOPE BUT SHOULD NOT EXCEED 5% UNLESS THE ROADWAY IS SUPERELEVATED (WHEN SUPERELEVATED THE ROADWAY CROSS SLOPE SHOULD MATCH THE SUPERELEVATION).
- PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- MAXIMUM 8.3%
- WIDTH SHOWN ELSEWHERE IN THE PLANS

CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

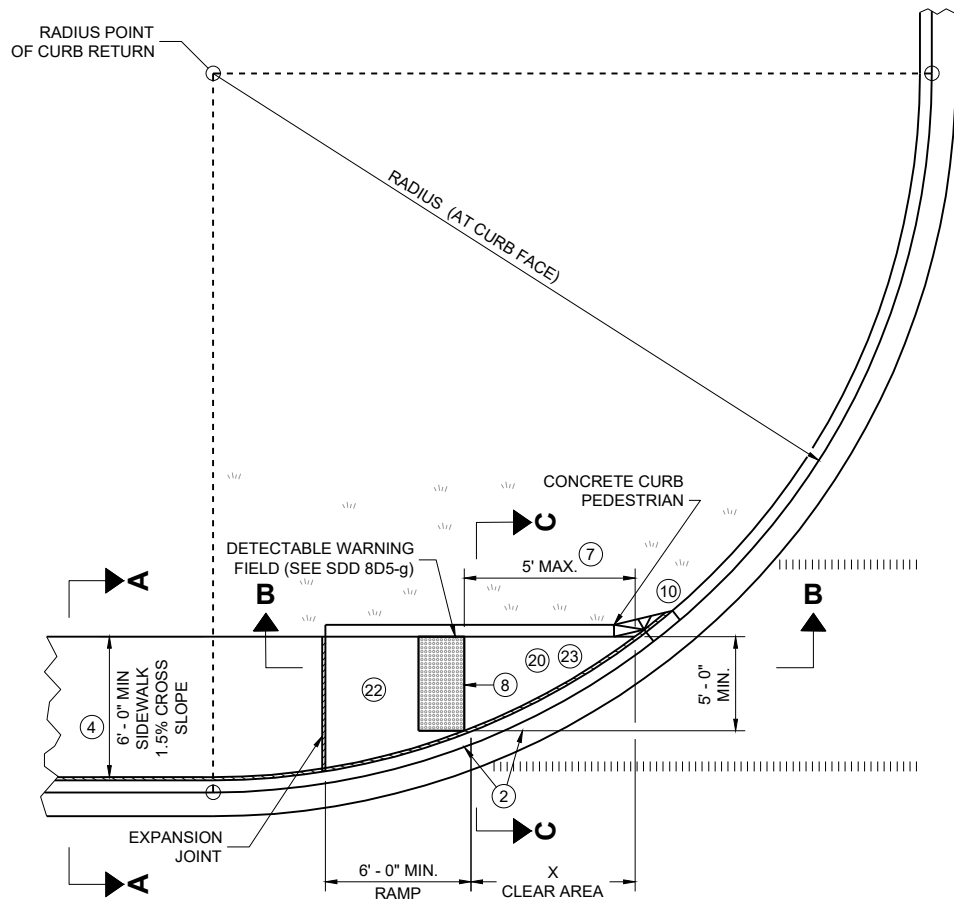


	1/2" EXPANSION JOINT SIDEWALK
	CONTRACTION JOINT SIDEWALK
	PAVEMENT MARKING CROSSWALK (WHITE)
	MAXIMUM 2.1% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
	WIDTH SHOWN ELSEWHERE IN THE PLANS
	CONSTRUCT 6" WEDGE TO AVOID CONCRETE BRAKEAGE

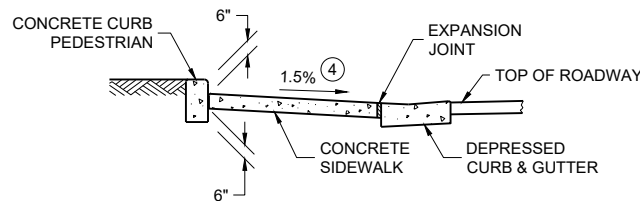
CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

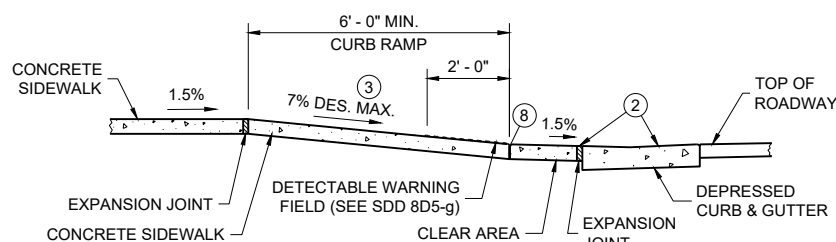
- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 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% DESIGN MAXIMUM SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% DESIGN MAXIMUM SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.
- ⑰ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑲ WHERE A LANDING SERVES TWO CURB RAMPS, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- ⑳ PROVIDE A LANDING WITH A SLOPE PARALLEL TO ROADWAY THAT MATCHES SLOPE AT THE BOTTOM OF THE ADJACENT RAMP. SLOPE PERPENDICULAR TO ROADWAY SHALL BE 2.1% MAXIMUM. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- ㉒ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ㉓ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



PLAN VIEW
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A



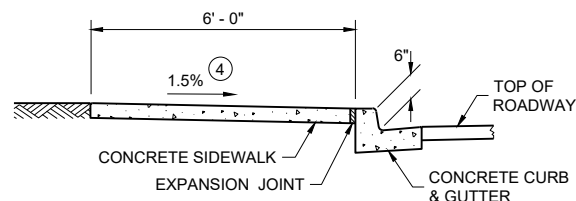
SECTION B - B FOR
TYPE 4A AND TYPE 4A1

LEGEND

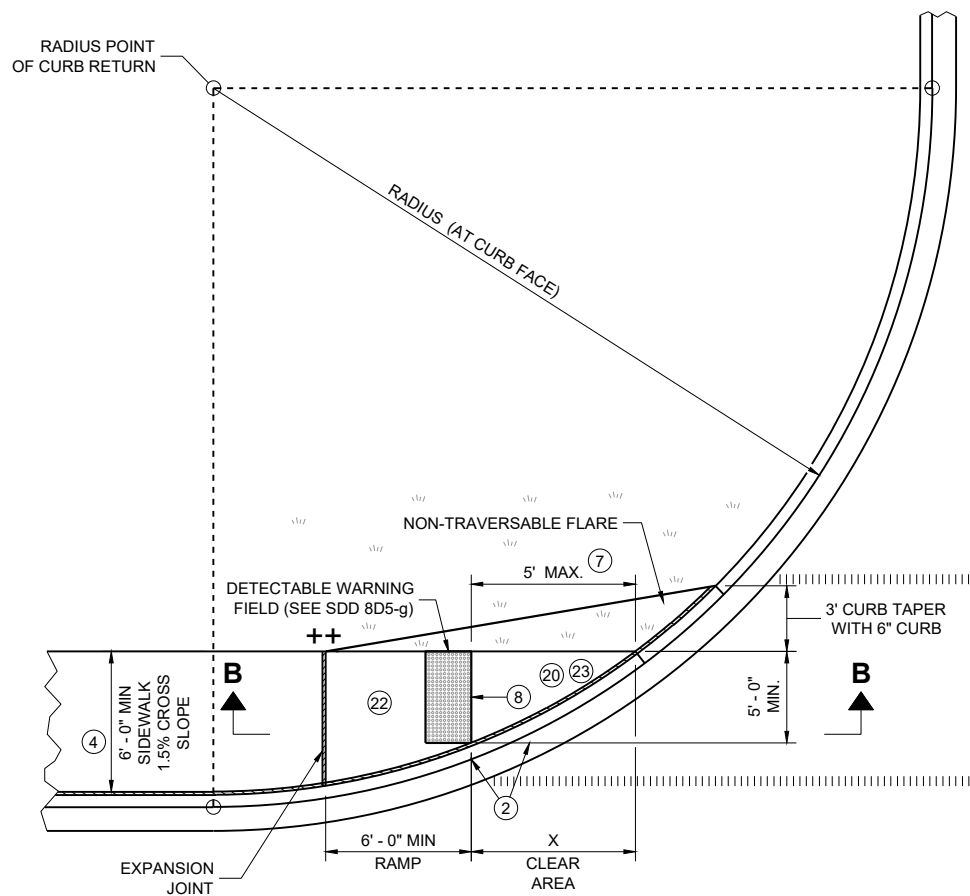
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

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

INTERMEDIATE RADII CAN BE INTERPOLATED



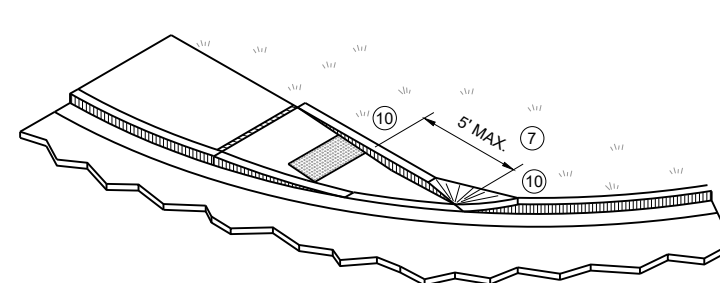
SECTION A - A FOR TYPE 4A



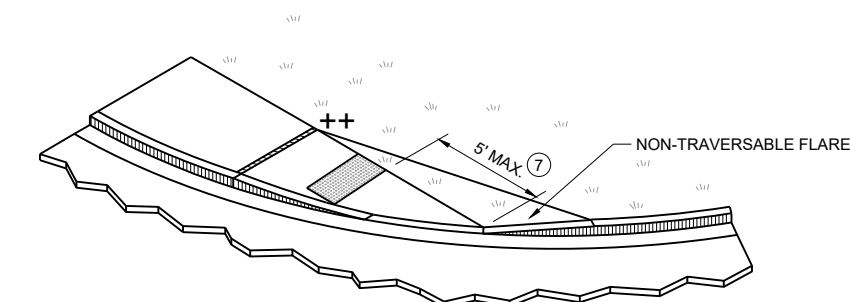
PLAN VIEW
CURB RAMP TYPE 4A1

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB 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.
- GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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



LEGEND

- | | |
|---|--|
|  | 1/2" EXPANSION JOINT SIDEWALK |
|  | CONTRACTION JOINT SIDEWALK |
|  | PAVEMENT MARKING
CROSSWALK (WHITE) |
|  | MAXIMUM 2.1% SLOPE IN ALL
DIRECTIONS IF FRONT OF GRADE
BREAK |
|  | CONSTRUCT 6" WEDGE TO AVOID
CONCRETE BREAKAGE |

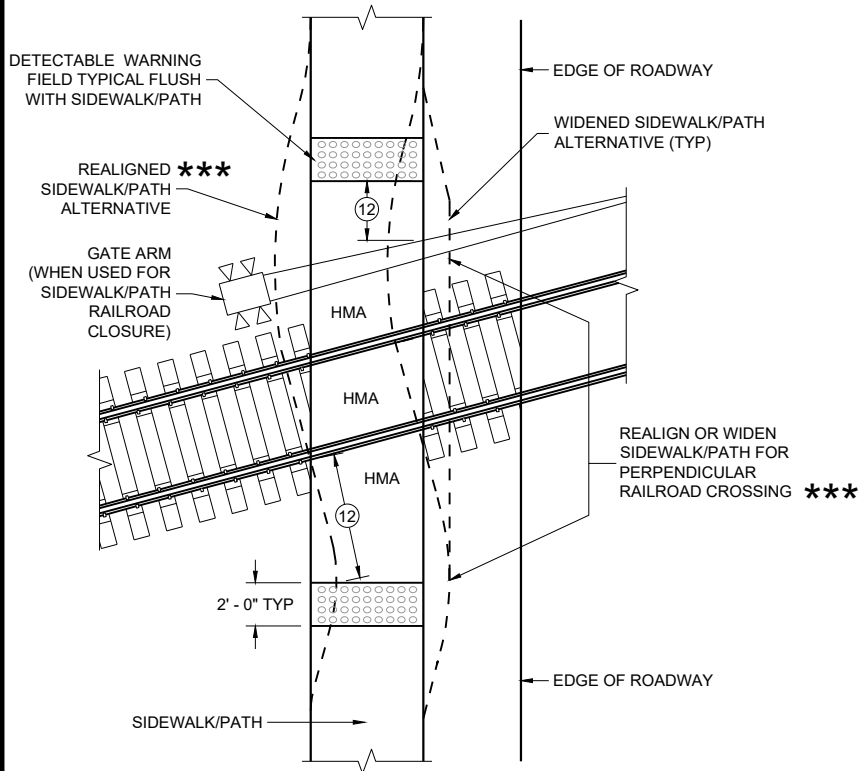
GENERAL NOTES

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

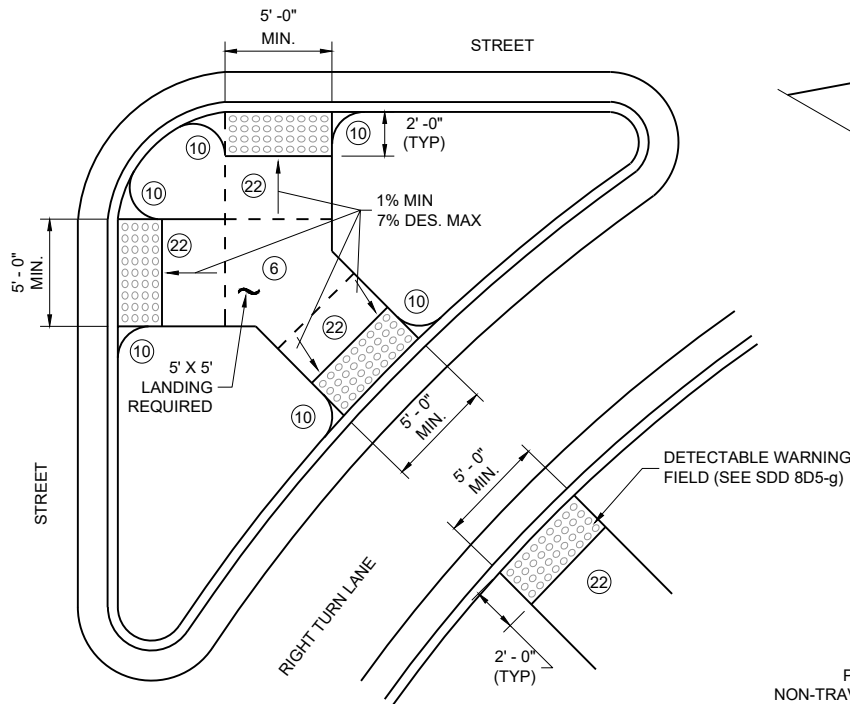
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 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.
- ⑪ A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑫ MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- ⑫ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ⑫ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

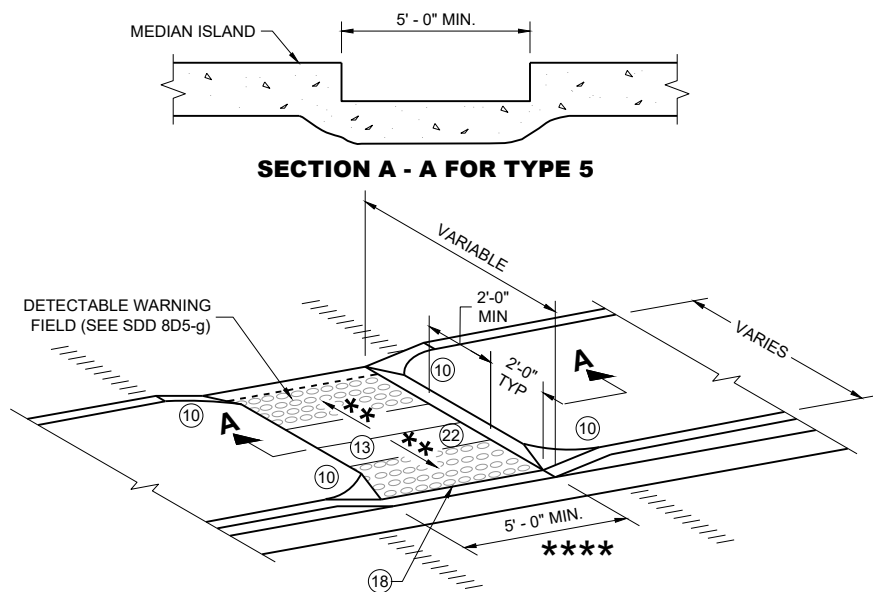


CURB RAMP TYPE 8
DETECTABLE WARNINGS
FOR SIDEWALKS OR SHARED USE PATHS
AT RAILROAD CROSSINGS

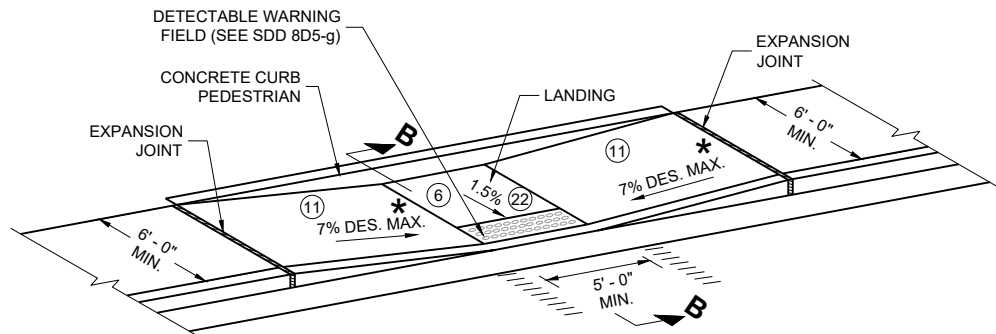


CURB RAMP TYPE 6
DETECTABLE WARNING AT ISLANDS

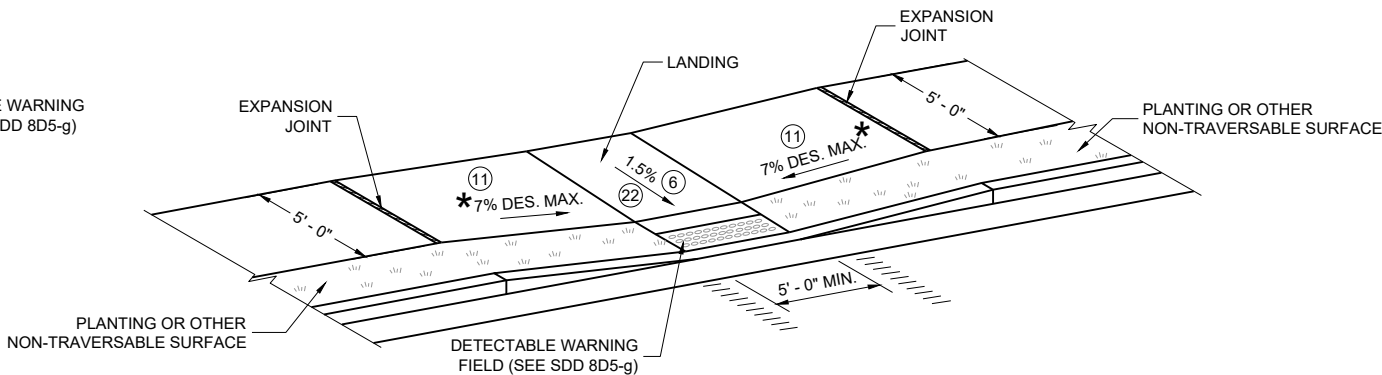
REFER TO GENERAL NOTES (2) AND (3)
FOR ALL ISLAND CURB RAMPS



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 CURB 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.

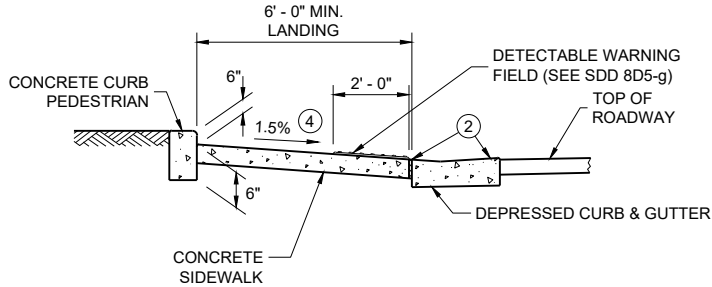
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.

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

- (2) GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- (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 ±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 STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.
- (17) A MAXIMUM 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- (18) WHEN THE DISTANCE BETWEEN THE BACK OF CURBS IS LESS THAN 6 FEET BUT THE FACE OF CURB TO FACE OF CURB DISTANCE IS 6 FEET OR GREATER THEN THE DETECTABLE WARNING FIELDS MAY BE MOVED SO THAT THE EDGE OF THE WARNING FIELD IS PLACED AT THE GUTTER FLOWLINE. MAINTAIN A MINIMUM OF TWO FEET BETWEEN DETECTABLE WARNING FIELD PANELS.
- (22) THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- MAXIMUM 8.3%
- 1% MINIMUM (PROVIDE DRAINAGE)
- DETAILS TO BE DETERMINED BY ENGINEER
- FOR SHARED USE PATHS, WIDTH MUST BE AS WIDE AS THE CROSSWALK

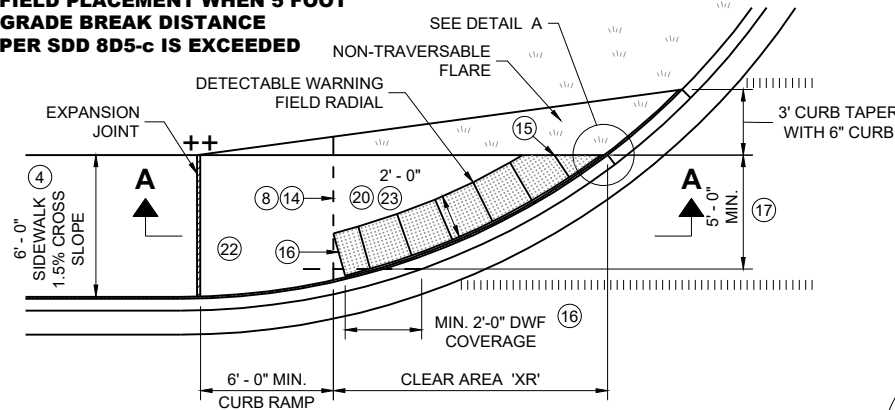


SECTION B - B FOR TYPE 7A

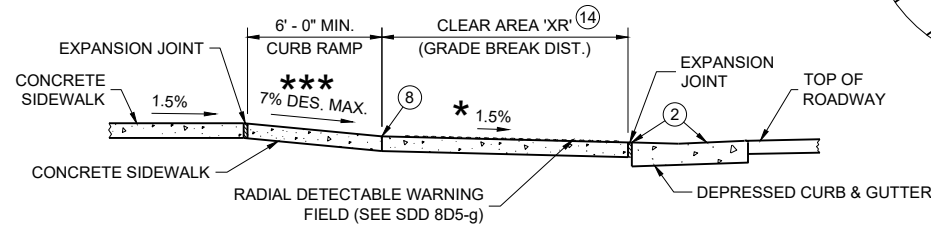
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

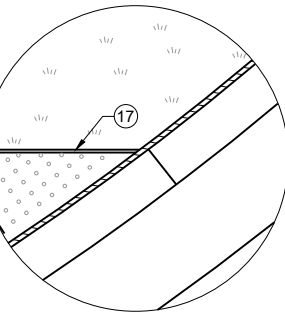
**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-c IS EXCEEDED**



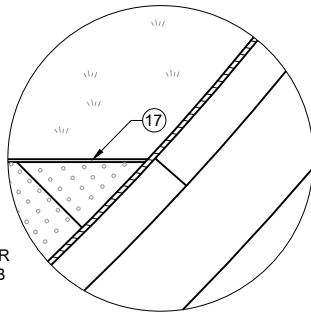
**PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



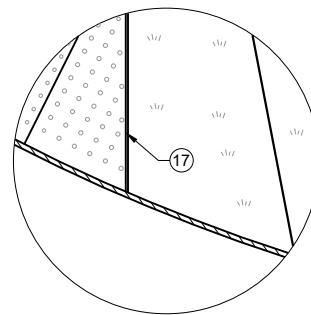
SECTION A - A FOR TYPE 4A1



DETAIL A

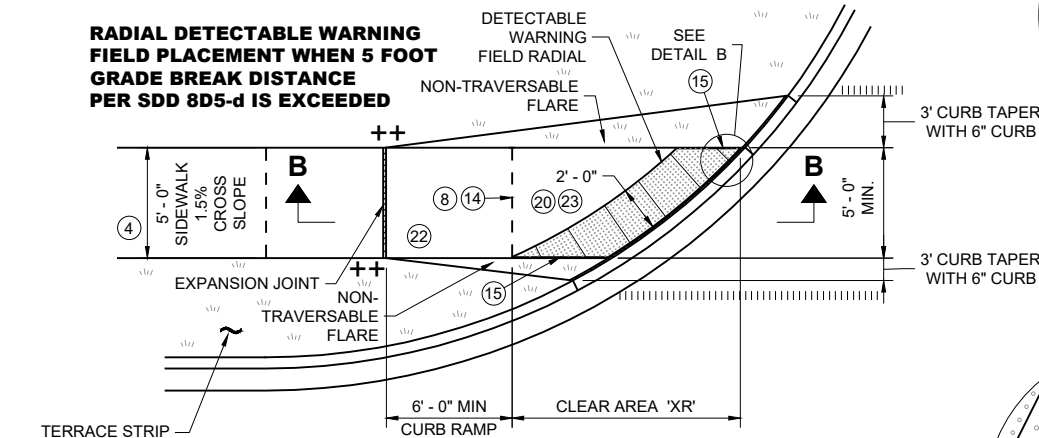


DETAIL B

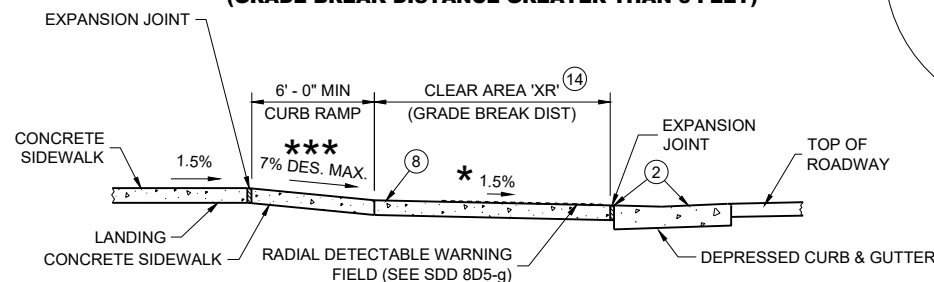


DETAIL C

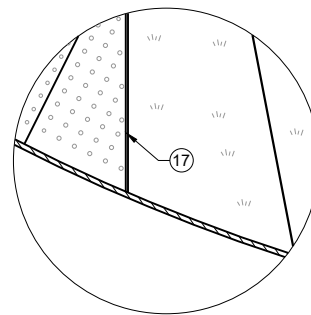
**RADIAL DETECTABLE WARNING
FIELD PLACEMENT WHEN 5 FOOT
GRADE BREAK DISTANCE
PER SDD 8D5-d IS EXCEEDED**



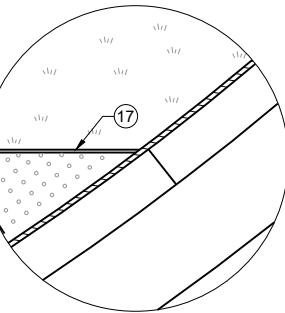
**PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



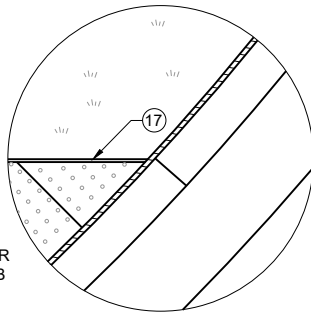
SECTION B - B FOR TYPE 4B1



DETAIL C



DETAIL A



DETAIL B

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF CURB 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 RAMP AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMP. TYPE 4A AND 4B CURB RAMP ARE NOT SHOWN.

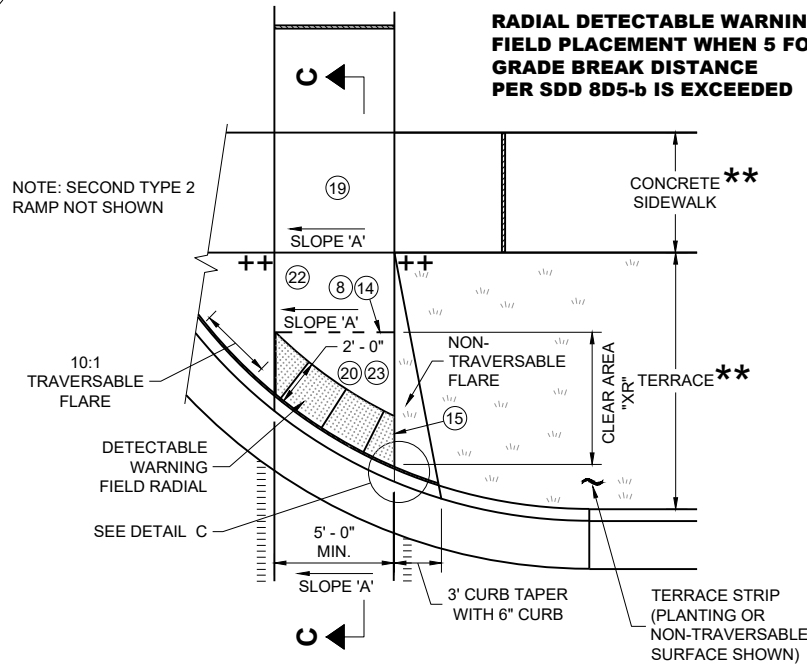
REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

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

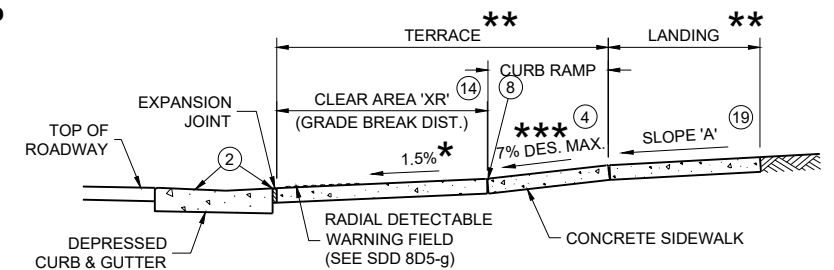
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- ② GRADE CHANGE BETWEEN GUTTER COUNTER SLOPE AND THE CURB RAMP SLOPE IS DESIRABLY 11% OR LESS AND SHALL NOT EXCEED 13.3%. TYPICAL GUTTER COUNTER SLOPE IS 4% BUT MAY BE MODIFIED TO FIT FIELD CONDITIONS. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5%, DESIRABLY 7% OR LESS, AND SHALL NOT EXCEED A MAXIMUM OF 8.3%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ MAXIMUM 8.3% CURB RAMP SLOPE IS ALLOWABLE WITH GUTTER COUNTER SLOPE OF 5% MAXIMUM AND A 13.3% MAXIMUM GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A 5 FOOT BY 5 FOOT LANDING. SLOPE PERPENDICULAR TO CURB SHALL BE 2.1% MAXIMUM. SLOPE PARALLEL TO CURB SHALL MATCH THE CURB AND GUTTER LONGITUDINAL SLOPE.
- 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 1/8" 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 2-INCH CONCRETE BORDER IS PERMITTED ALONG ALL SIDES OF THE DETECTABLE WARNING FIELD SURFACE.
- ⑲ WHERE A LANDING SERVES TWO CURB RAMP, THE LANDING SLOPE SHALL NOT EXCEED THE CROSS SLOPE AT THE BOTTOM OF THE RAMP OR WITHIN THE CROSSWALK PARALLEL TO THE DIRECTION OF TRAVEL.
- ⑳ MAXIMUM 1.5% DESIGN MAXIMUM AND 2.1% PROWAG MAXIMUM RUNNING SLOPE ON CLEAR AREA. CROSS SLOPE OF CLEAR AREA SHALL MATCH THE CROSS SLOPE OF THE ADJACENT CROSSWALK.
- ㉒ THE ENTIRE RAMP SHALL BE A PLANAR SURFACE. DO NOT WARP THE RUNNING SLOPE OR CROSS SLOPE OF THE RAMP. WARPING OF THE SIDEWALK CROSS SLOPE SHALL TAKE PLACE BETWEEN THE LANDING AND MATCH POINT.
- ㉓ THE CLEAR AREA BETWEEN THE BOTTOM OF RAMP AND BACK OF CURB SHALL BE SLOPED SO THAT WATER DRAINS OUT OF ONE SIDE OR BOTH SIDES OF THE CURB OPENING.

**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)**



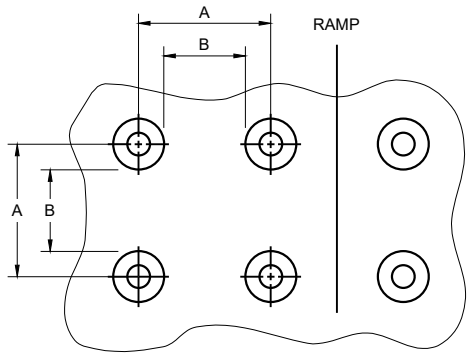
SECTION C - C FOR TYPE 2

**CURB RAMPS
RADIAL DETECTABLE WARNING**

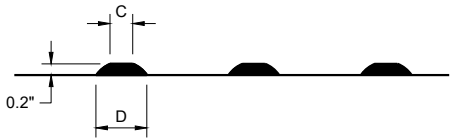
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	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.

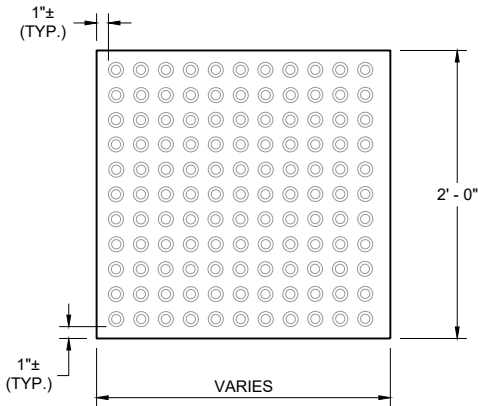


PLAN VIEW

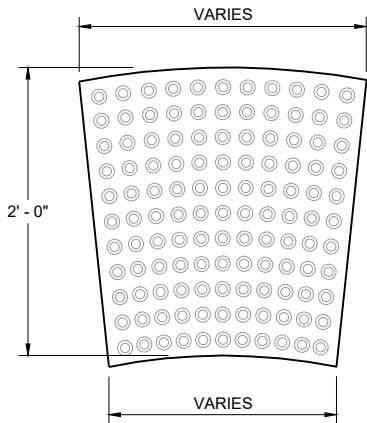


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

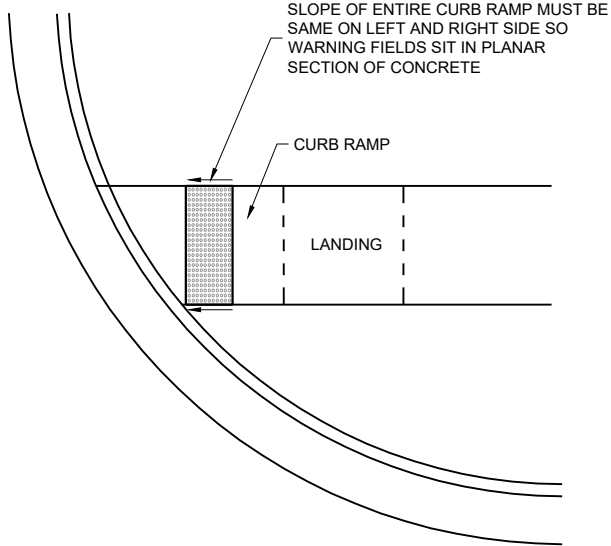


RECTANGULAR
PLATES

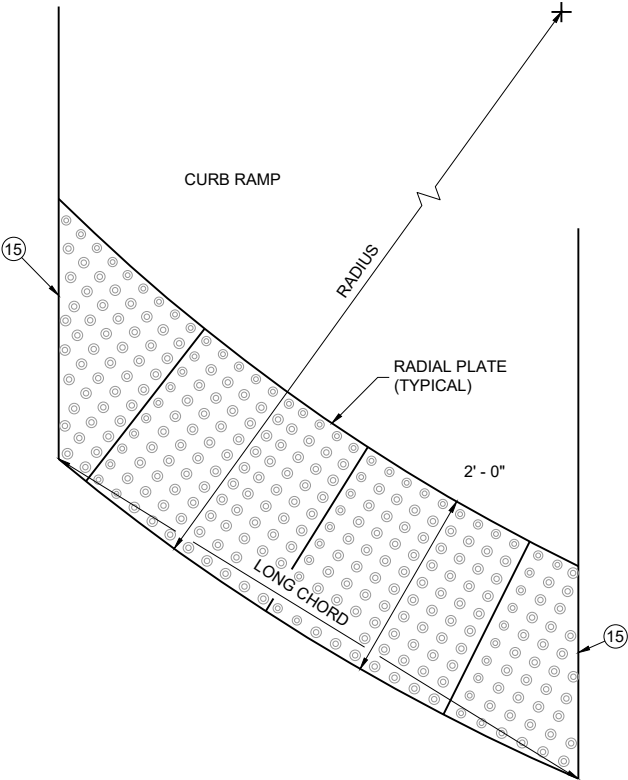


RADIAL
PLATES

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.

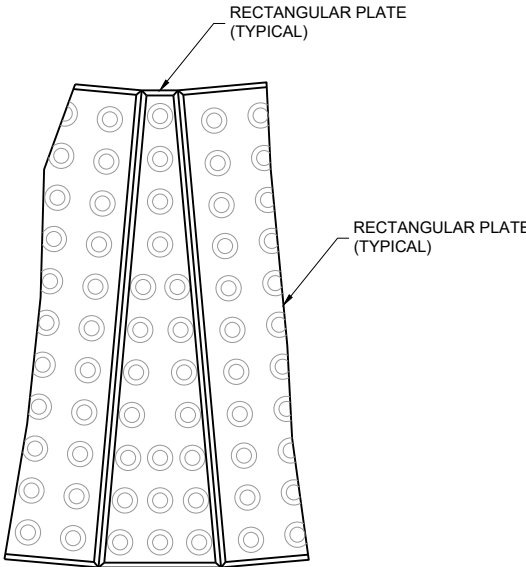
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

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.



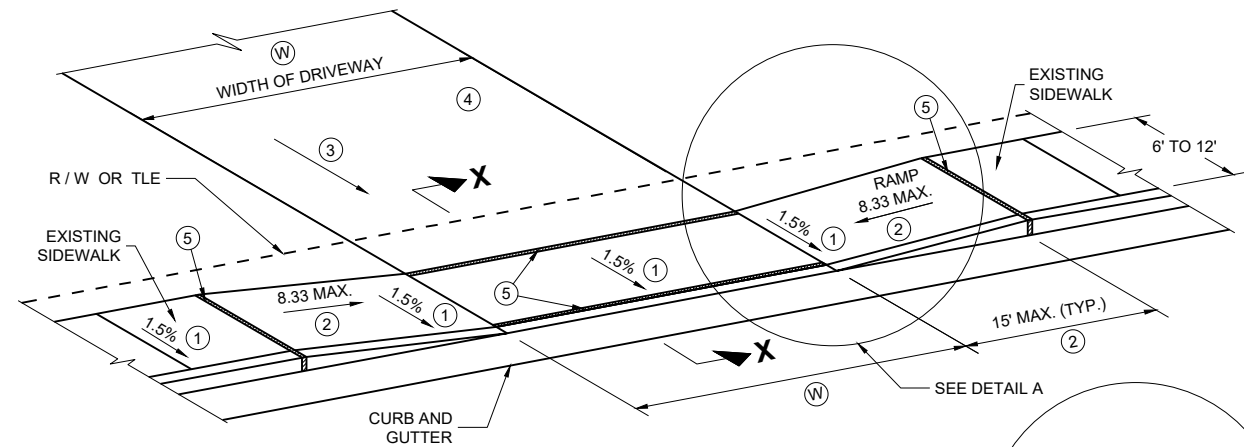
PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

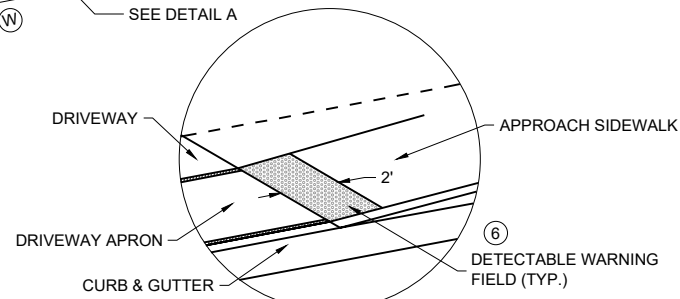
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /S/ Rodney Taylor
DATE <position>

FHWA

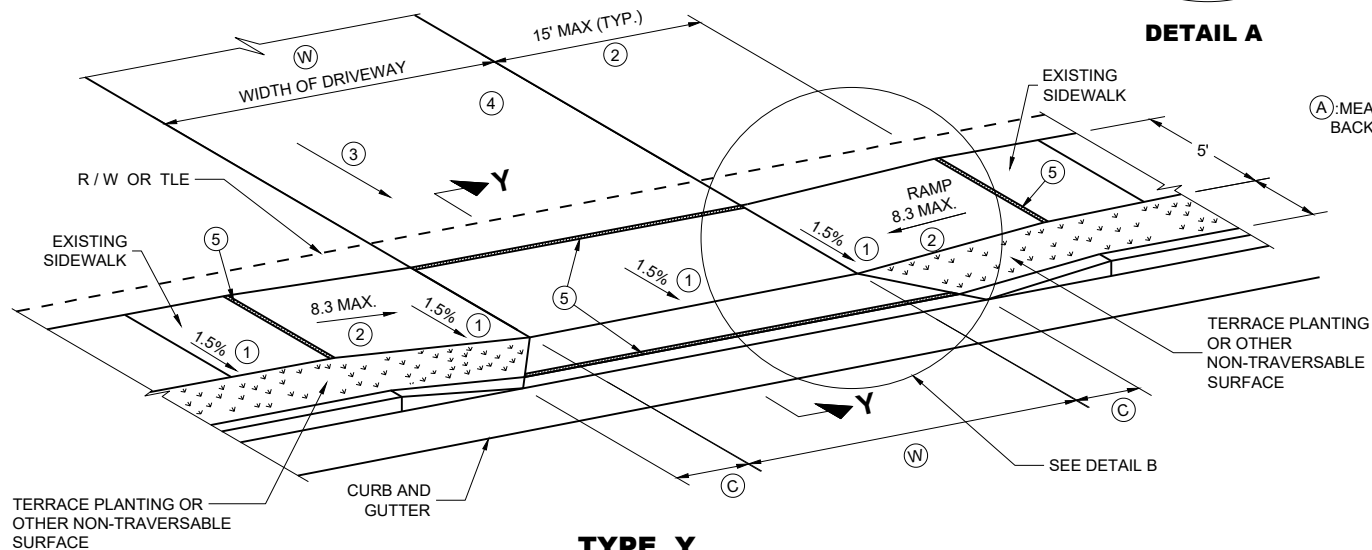


TYPE X
SIDEWALK ABUTS CURB AND GUTTER
TERRACE VARIES 0 TO 3 FEET



DETAIL A

(A): MEASURE FROM
BACK OF CURB



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

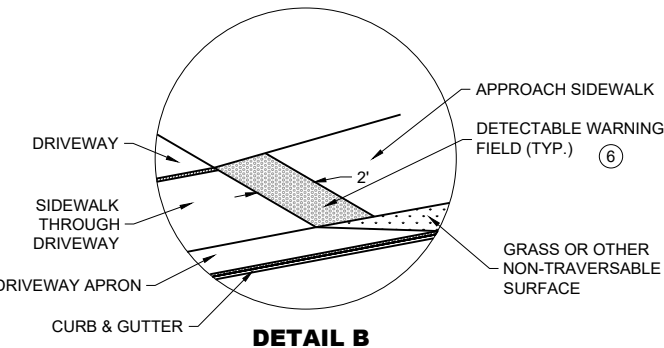
- ① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.
- ② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

- ③ **DRIVEWAY SLOPES: DESIRABLE MAXIMUM**
10.5% UP AWAY FROM SIDEWALK (SAG)
8.5% DOWN AWAY FROM SIDEWALK (CREST)
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

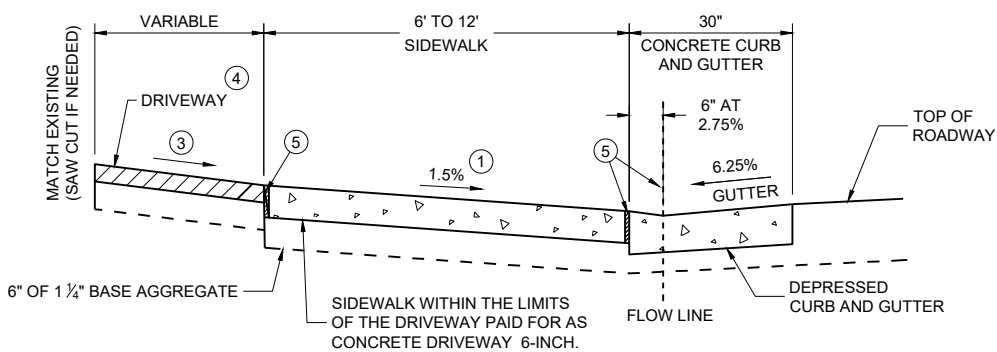
- ④ **DRIVEWAY TYPES**
 - * 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
 - * 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
 - * 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

- ⑤ 1/2" EXPANSION JOINT FILLER

- ⑥ DETECTABLE WARNING FIELDS ARE REQUIRED WHEN A PEDESTRIAN CIRCULATION ROUTE CROSSES A DRIVEWAY THAT IS TRAFFIC SIGNAL, STOP, OR YIELD SIGN CONTROLLED. DETECTABLE WARNING FIELDS TO BE 2 FT DEEP AND EXTEND THE WIDTH OF THE PEDESTRIAN CIRCULATION ROUTE.



DETAIL B

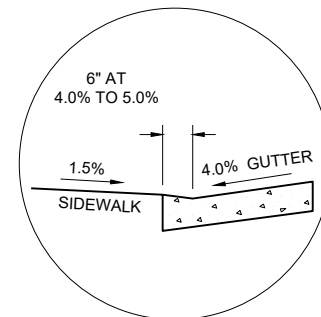


SECTION X - X

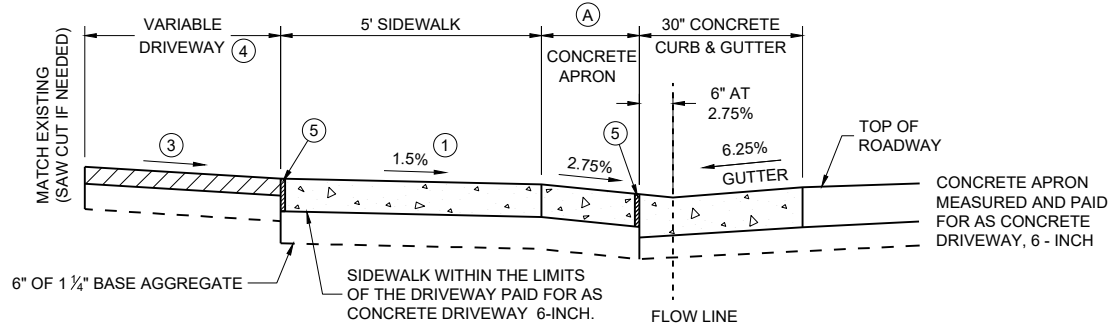
(W): 12' MIN. - 24' MAX. RESIDENTIAL AND
NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

TABLE Y

(A) FEET	(C) FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'

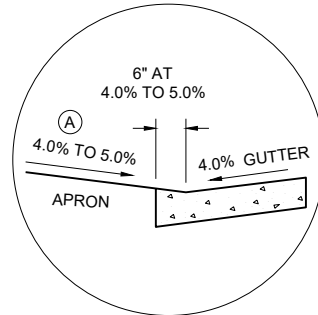


SECTION X - X
4% GUTTER SLOPE



NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS

SECTION Y - Y
DRIVEWAY DETAIL WITH CONCRETE
CURB AND GUTTER
(URBAN AND SUBURBAN)



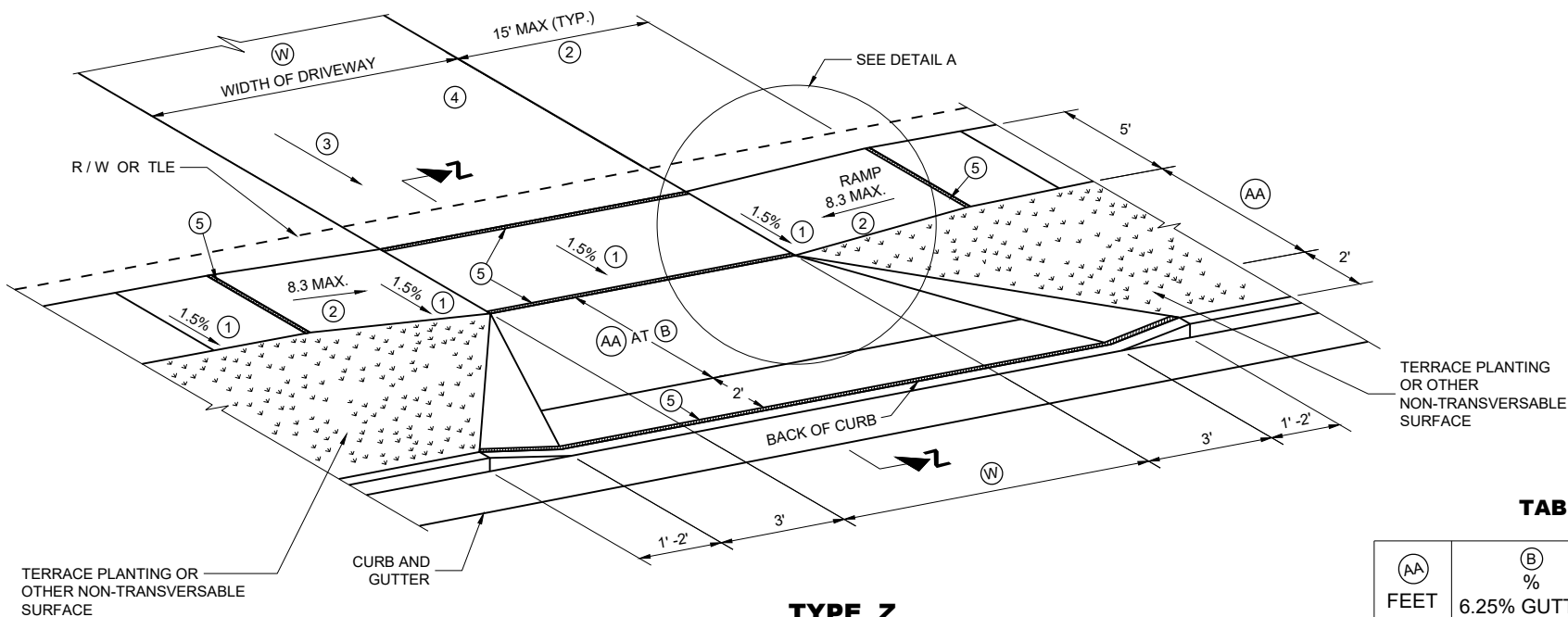
SECTION Y - Y
4% GUTTER SLOPE

DRIVEWAY AND SIDEWALK RAMPS TYPES X AND Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2025 /S/ Rodney Taylor
DATE

FHWA



TYPE Z
SIDEWALK WITH WIDER TERRACE
TERRACE VARIES 7 TO 12 FEET

(AA) FEET	(B) %	(B) %
	6.25% GUTTER	4% GUTTER
4.5'	11.5%	9% TO 11.5%
5.5'	9% TO 11.5%	8% TO 11.5%
6.5'	8% TO 11.5%	6% TO 11.5%
7.5'	7% TO 11.5%	6% TO 11.5%
8.5'	6% TO 11.5%	5% TO 11.5%
9.5'	5% TO 11.5%	4% TO 11.5%

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND
NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)

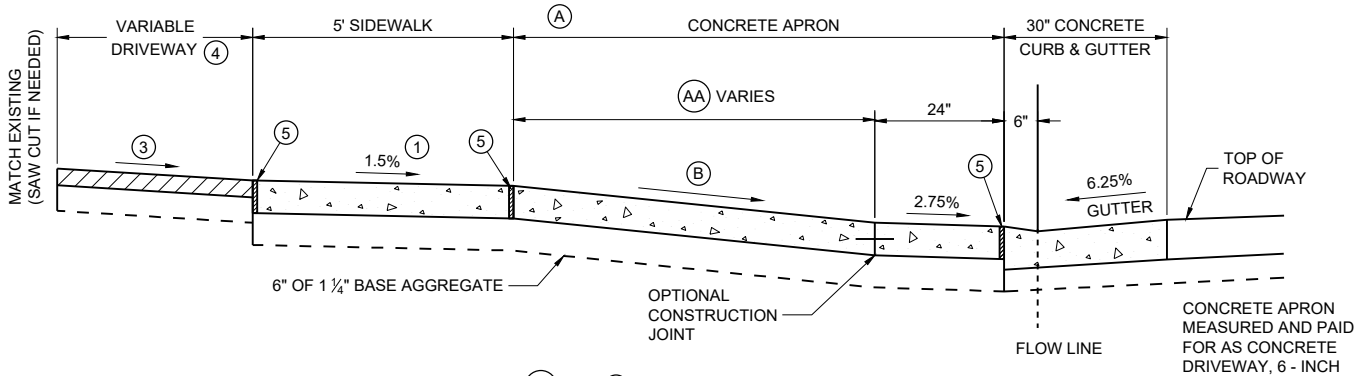
GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

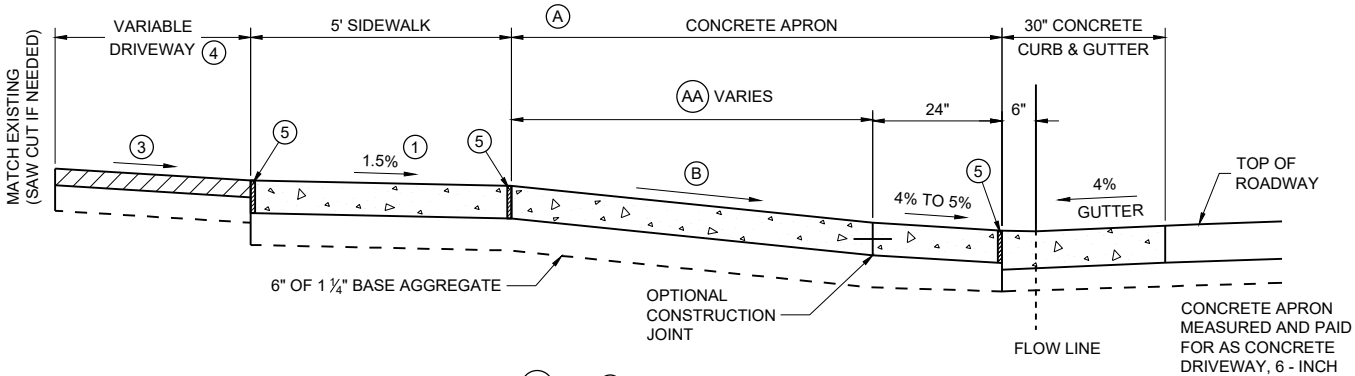
(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

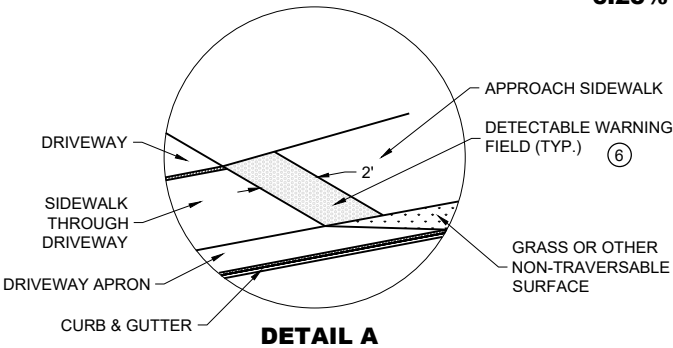
- CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.1%.
- THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.
- DRIVEWAY SLOPES: DESIRABLE MAXIMUM**
10.5% UP AWAY FROM SIDEWALK (SAG)
8.5% DOWN AWAY FROM SIDEWALK (CREST)
ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG
- DRIVEWAY TYPES**
* 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE 2-INCH
* TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE 6-INCH BASE
* AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)
- 1/2" EXPANSION JOINT FILLER.
- DETECTABLE WARNING FIELDS ARE REQUIRED WHEN A PEDESTRIAN CIRCULATION ROUTE CROSSES A DRIVEWAY THAT IS TRAFFIC SIGNAL, STOP, OR YIELD CONTROLLED. DETECTABLE WARNING FIELDS TO BE 2 FT DEEP AND EXTEND THE WIDTH OF THE PEDESTRIAN CIRCULATION ROUTE.



6.25% GUTTER SLOPE



4% GUTTER SLOPE



DETAIL A

NOTE: SIDEWALK MAY BE DEPRESSED IN DRIVEWAY AREAS FOR (B) VALUES NOT SHOWN IN TABLE Z.

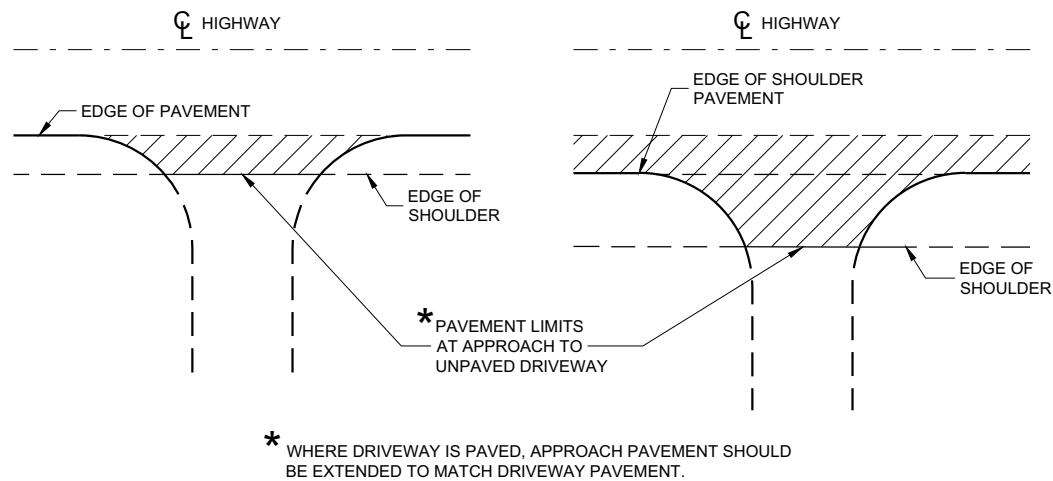
SIDEWALK WITHIN THE LIMITS OF THE DRIVEWAY PAID FOR AS CONCRETE DRIVEWAY 6-INCH.

SECTION Z - Z
DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER
(URBAN AND SUBURBAN)

DRIVEWAY AND
SIDEWALK RAMPS
TYPE Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

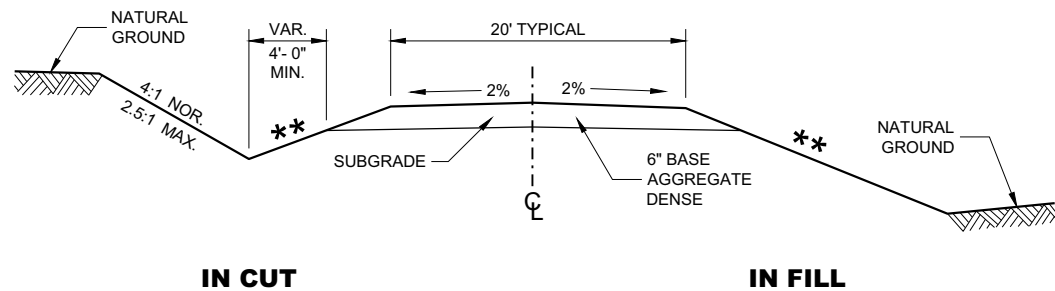
APPROVED
July 2023 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

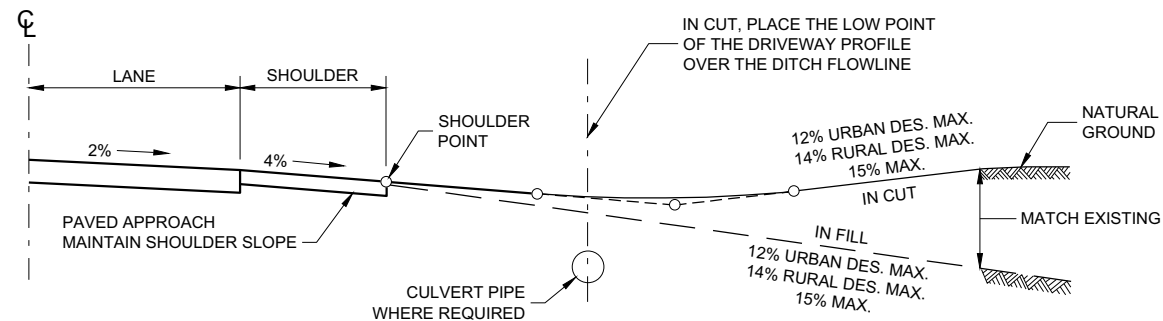
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



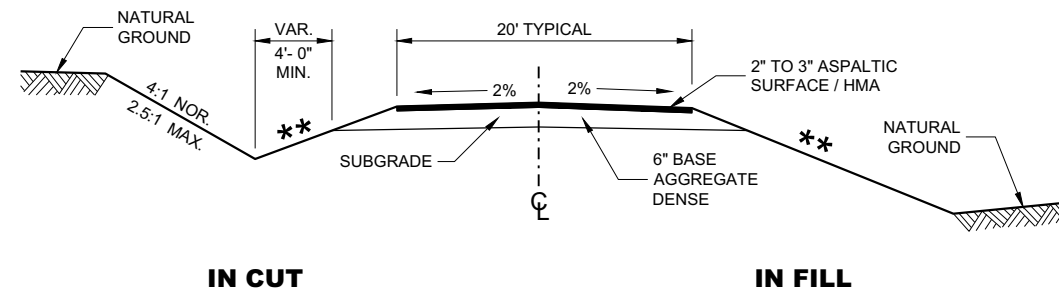
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

****** 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

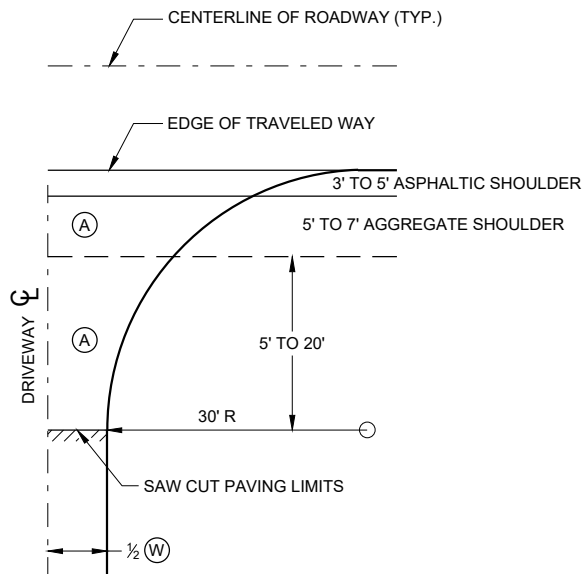


**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

**DRIVEWAYS WITHOUT
CURB AND GUTTER**

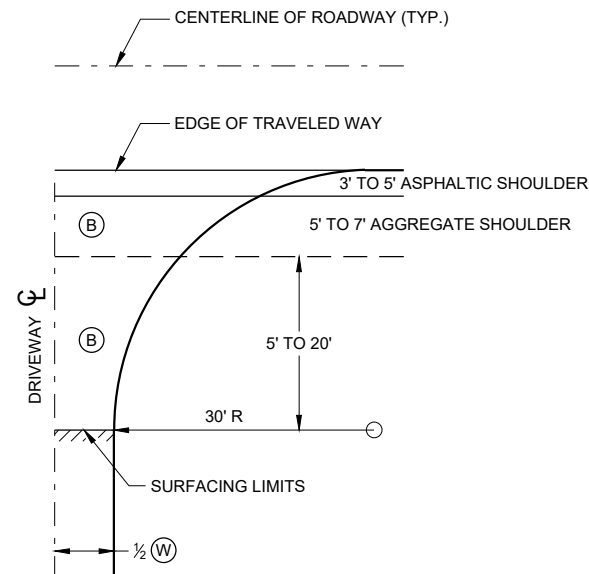
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA 150

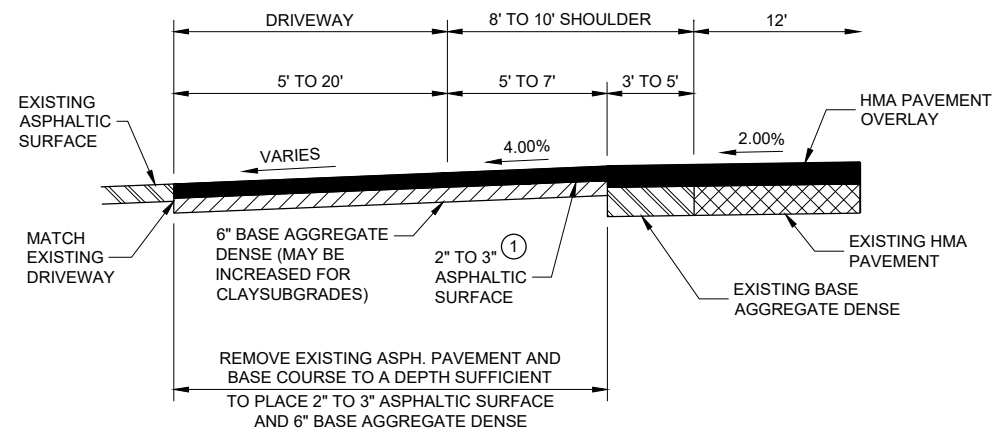


**PLAN VIEW
HALF SECTION**

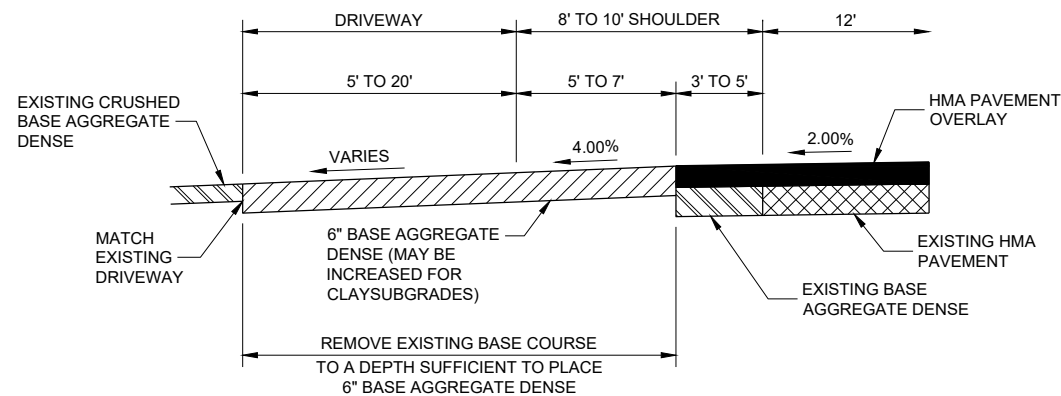
- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES. (TON)
- (B) : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- (W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



**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**

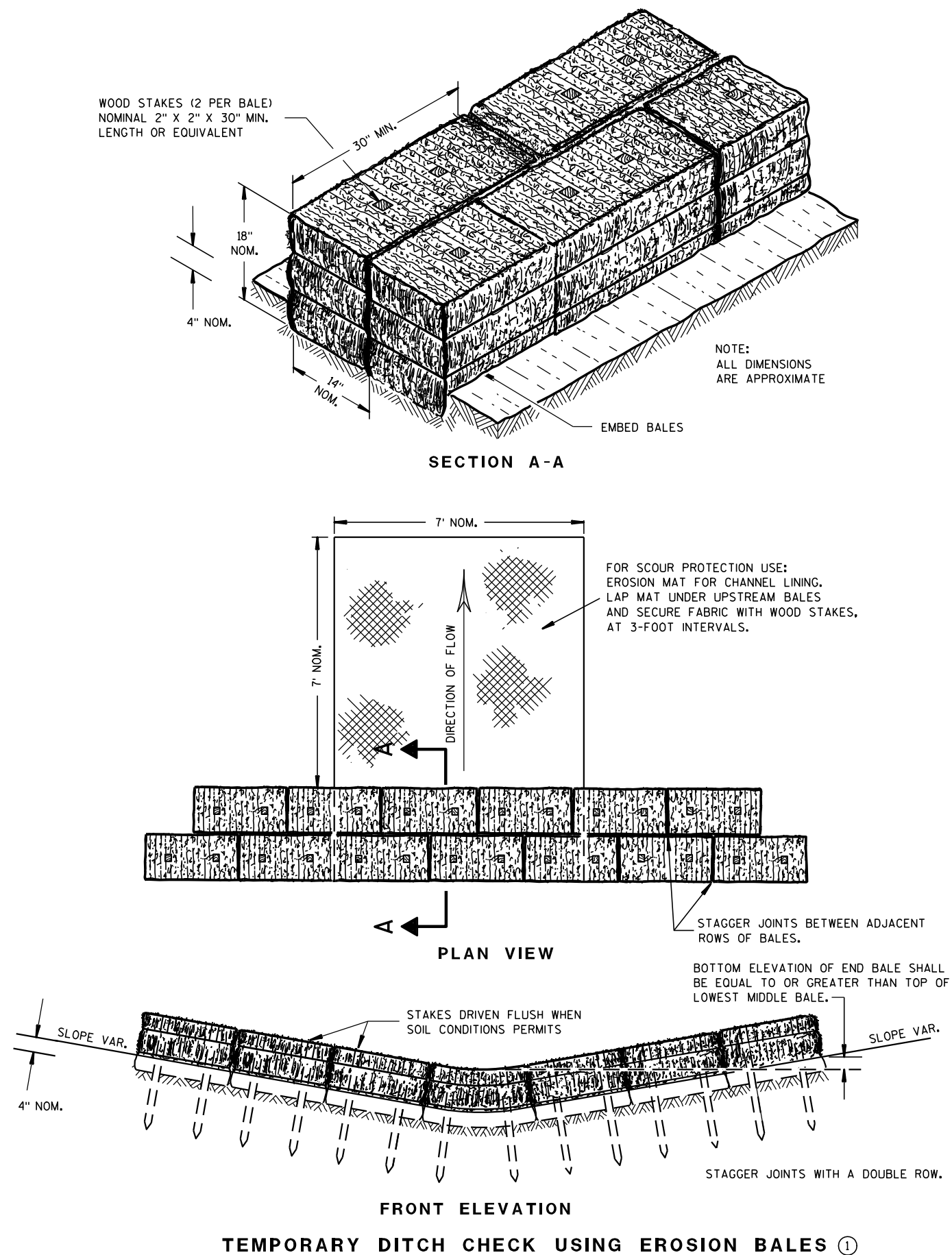
GENERAL NOTES

- 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

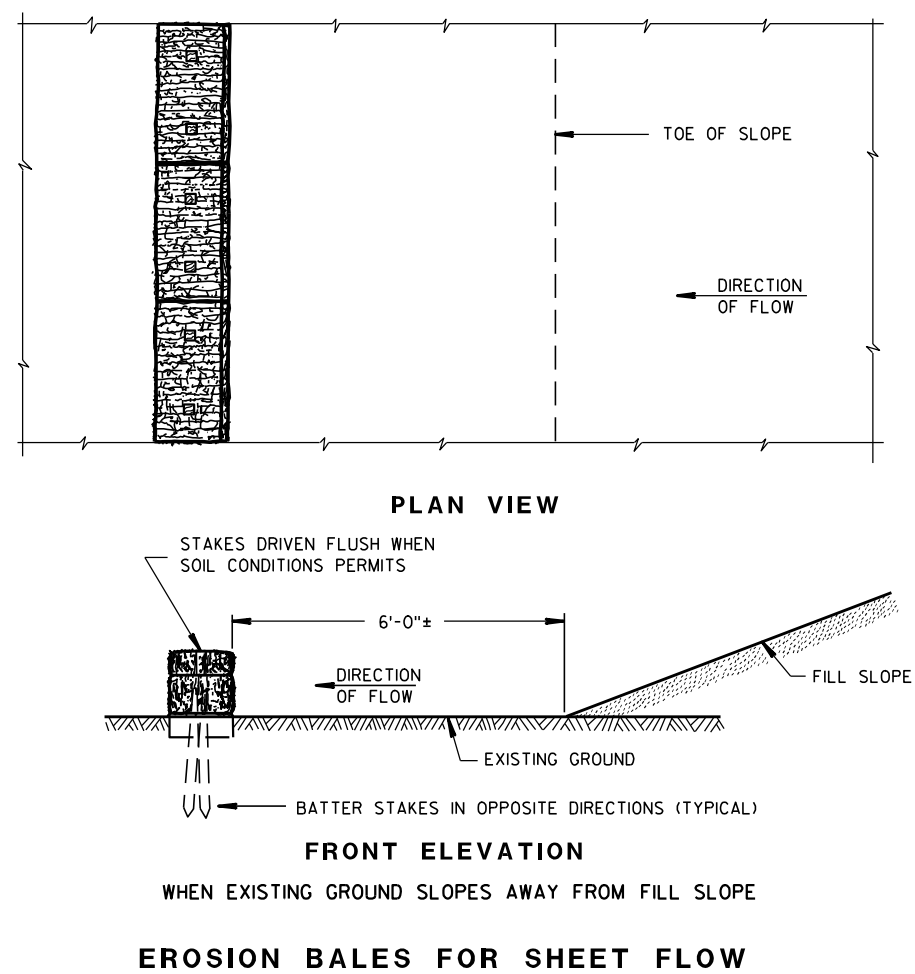
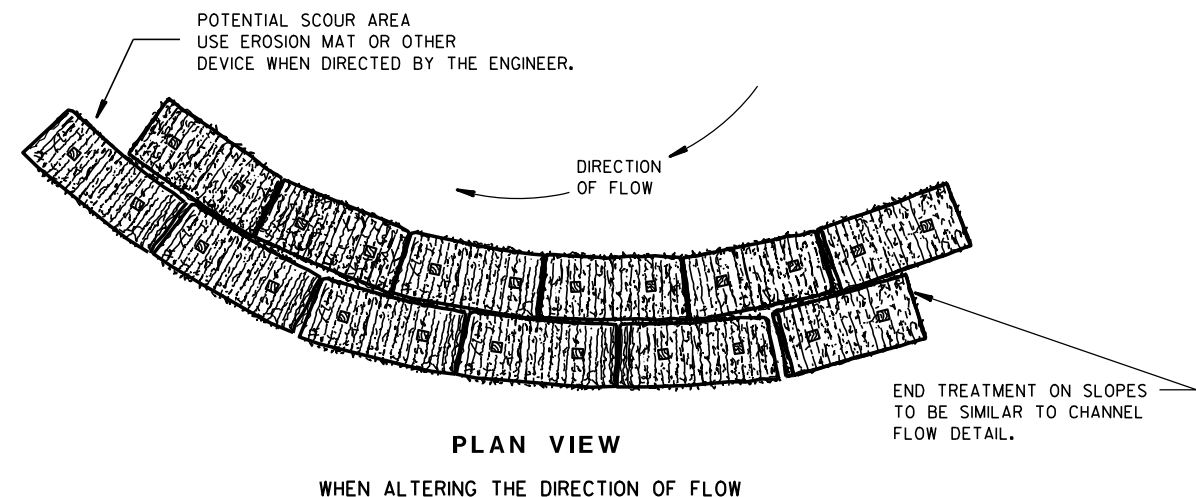
APPROVED
December 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 151
FHWA



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.

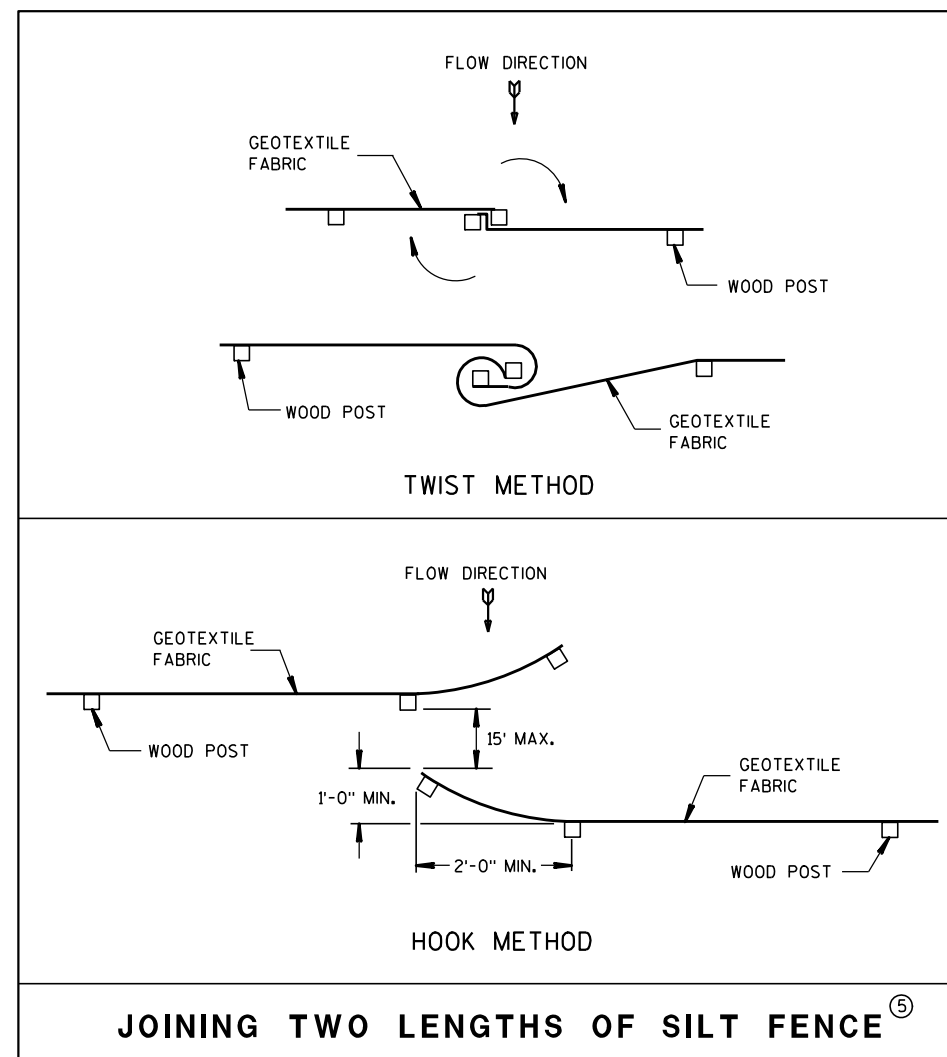
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

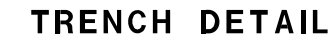
APPROVED

6/04/02
DATE/S/ Beth Conn-----
CHIEF ROADWAY DEVELOP 152 ENGINEER

FHWA



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

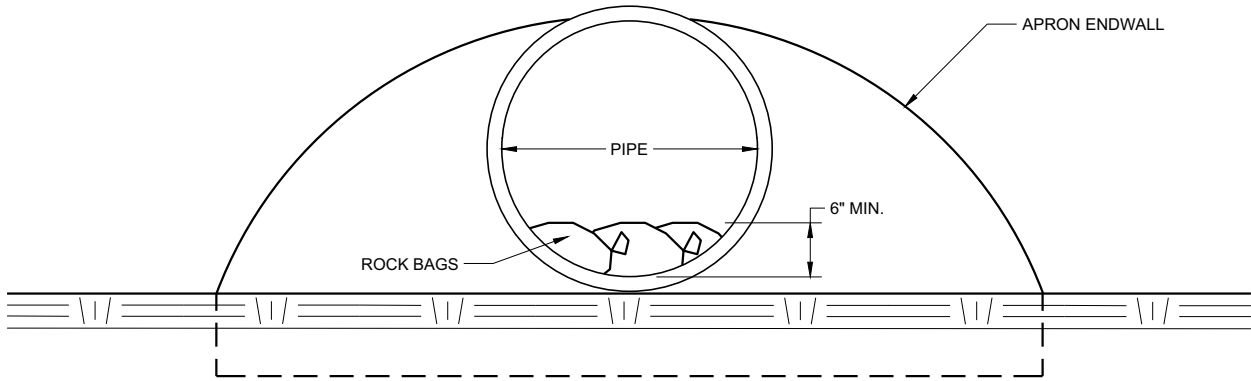


SILT FENCE

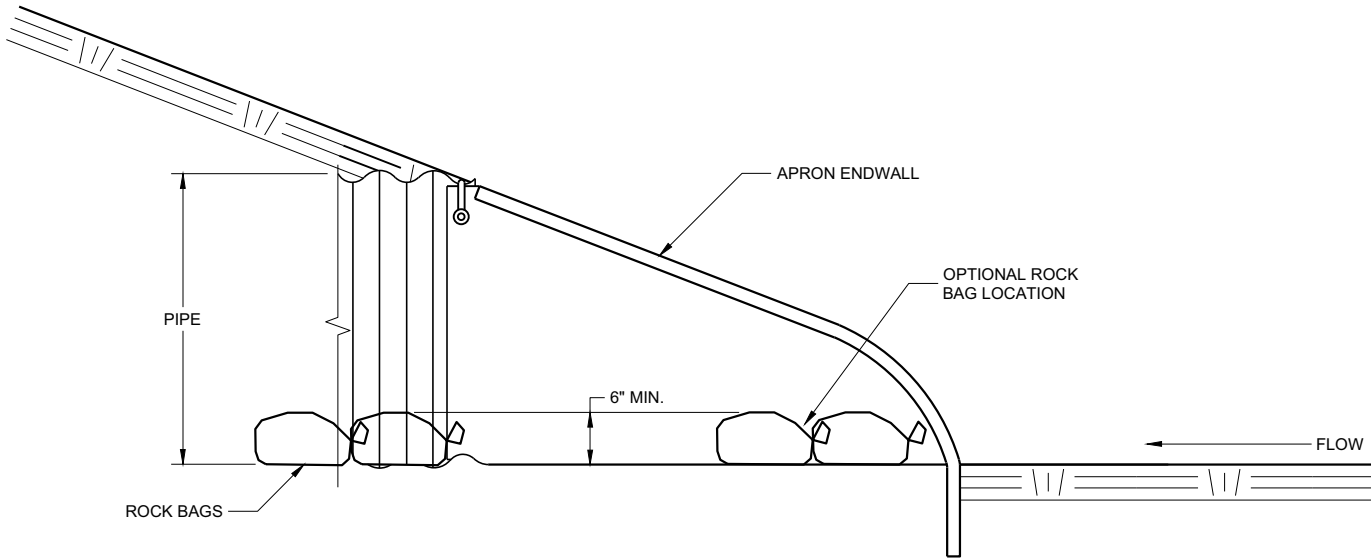
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Connolly
DATE CHIEF ROADWAY DEVELOPMENT 153 JINEER

FHWA



END VIEW



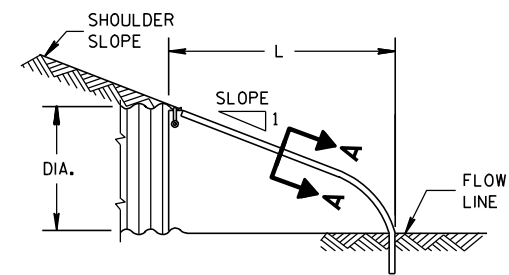
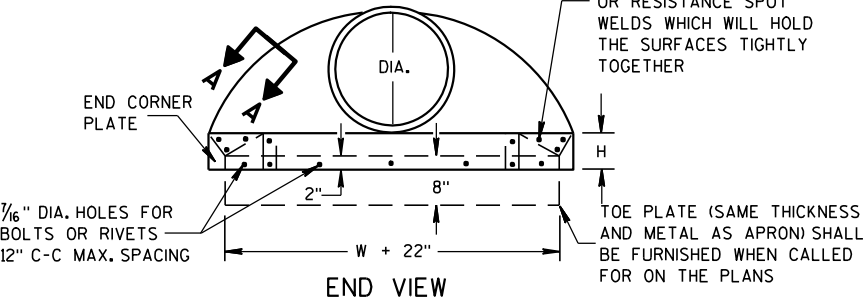
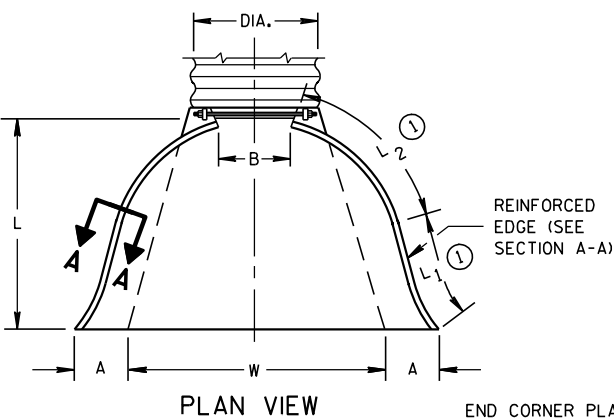
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED May 2019 DATE	/S/ Daniel Schave	-
FHWA	EROSION CONTROL ENGI	155

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")	L ₁ ①	L ₂ ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 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.	

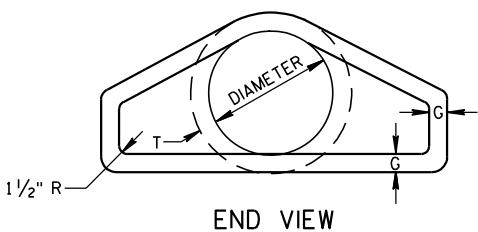
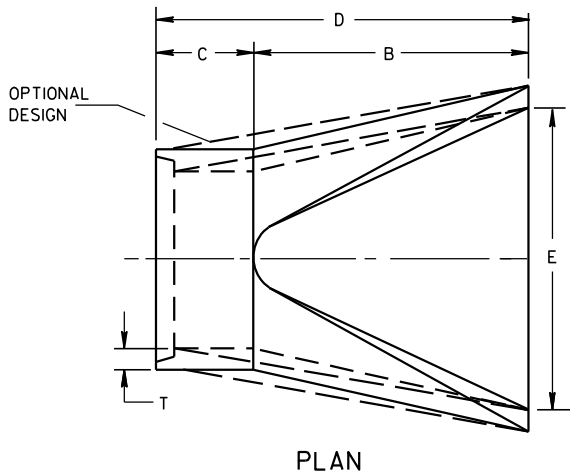
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



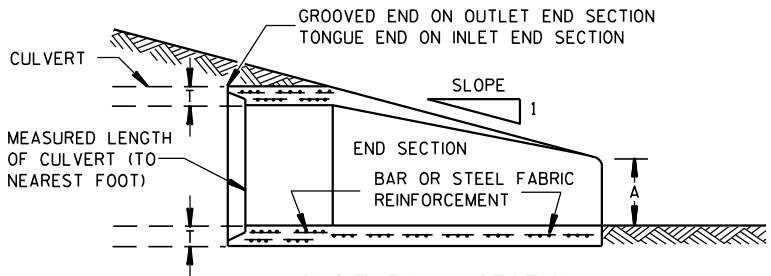
SIDE ELEVATION
METAL ENDWALLS

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 ² / ₂	9	27	46	73	36	2 ² / 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 4- ^{**} / ₃₅	^{**} / ₉₈ 4- ^{**} / ₁₀₀	90	5 ¹ / ₂	2 ⁵ / ₅ 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

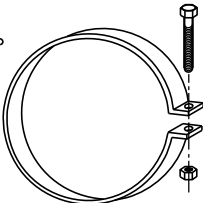
* MINIMUM
** MAXIMUM



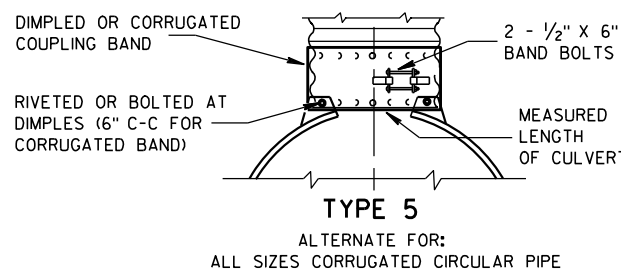
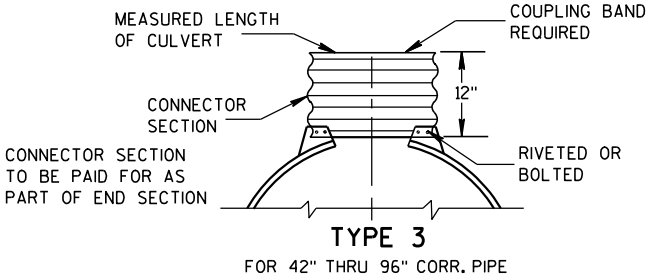
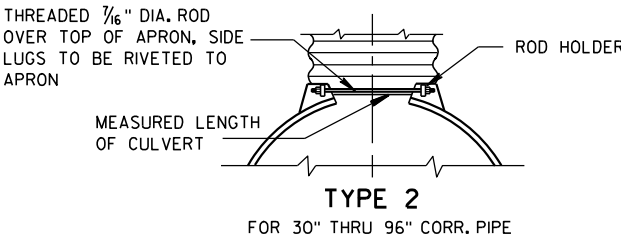
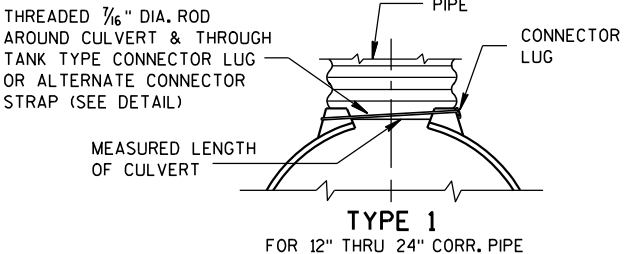
LONGITUDINAL SECTION
CONCRETE ENDWALLS



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



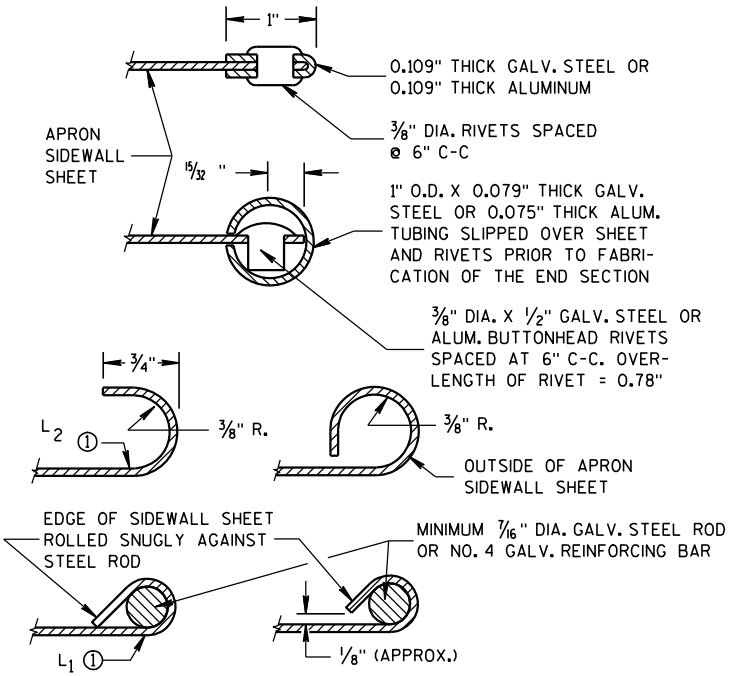
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

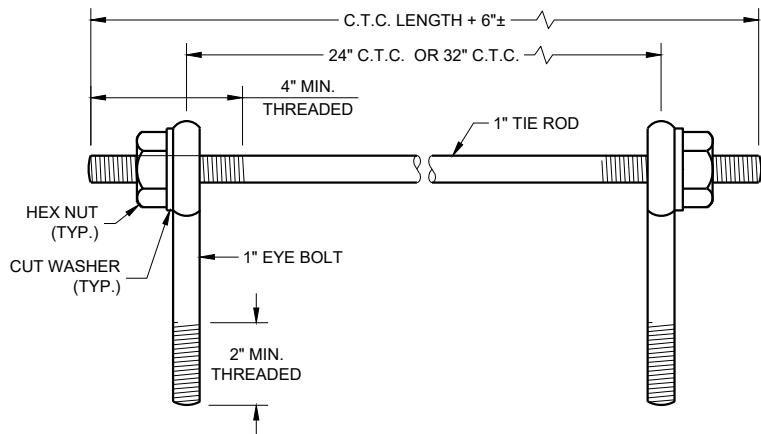
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

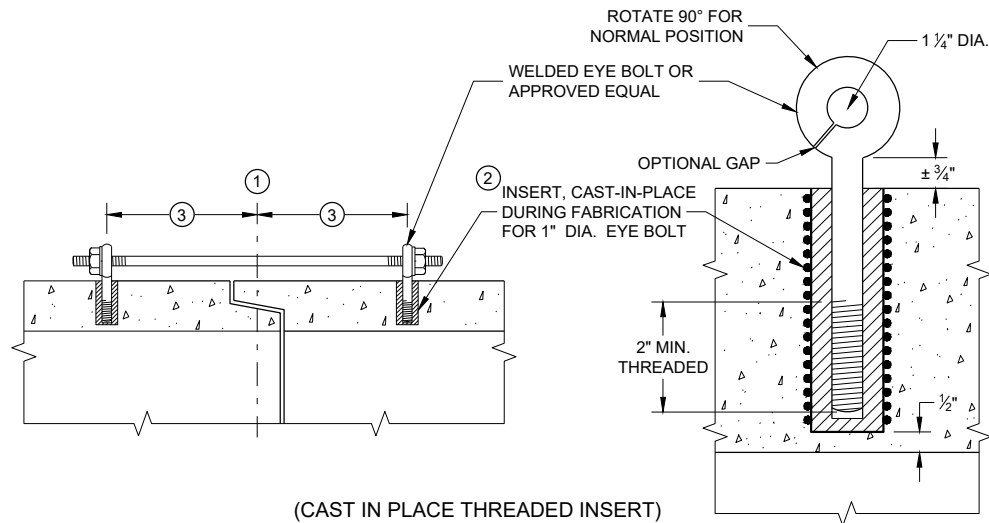
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOP	156	NEER
FHWA			



EYE BOLTS AND TIE ROD

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



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

GENERAL NOTES

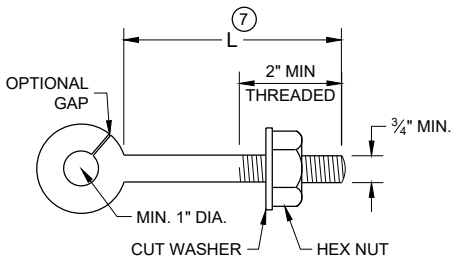
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

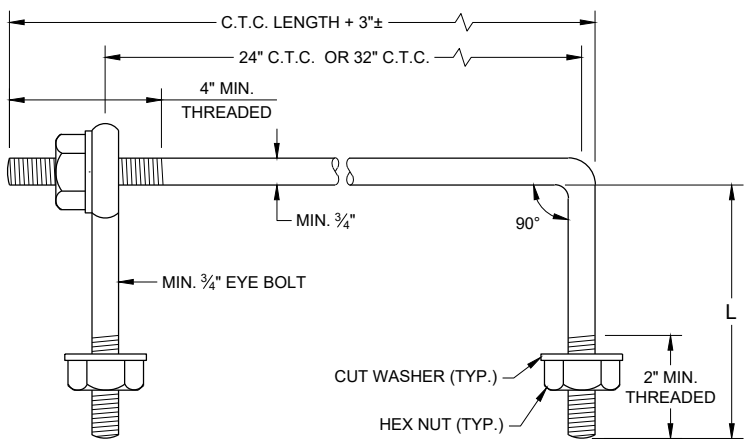
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 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.

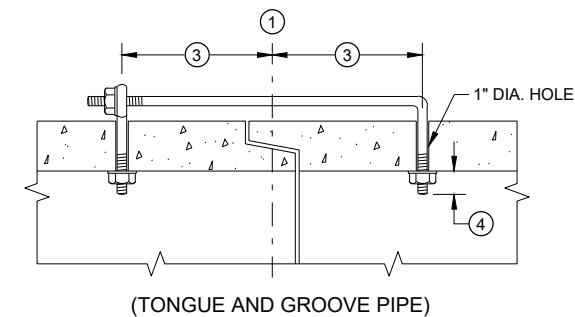


EYE BOLT 7

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

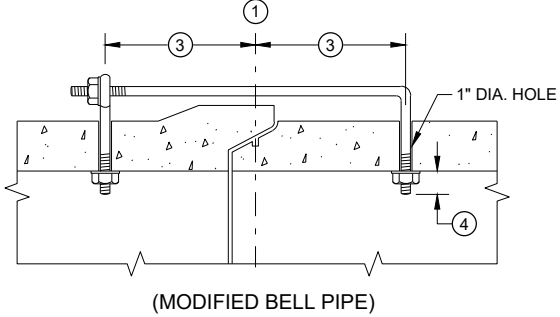


(TONGUE AND GROOVE PIPE)

LONGITUDINAL SECTION

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

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

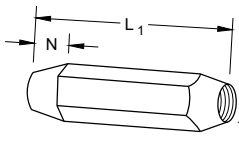


(MODIFIED BELL PIPE)

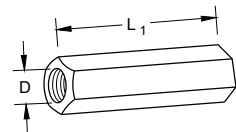
ADJUSTABLE TIE ROD TABLE

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

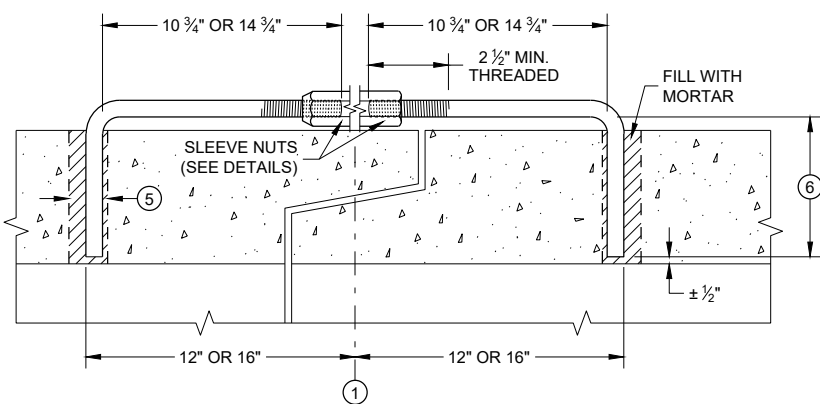


TAPERED



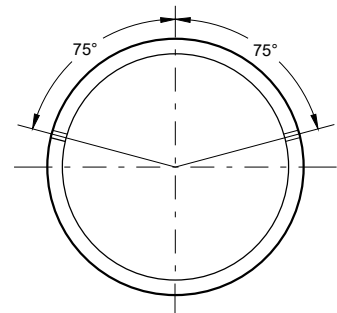
PLAIN

RIGHT AND LEFT THREADS
SLEEVE NUTS



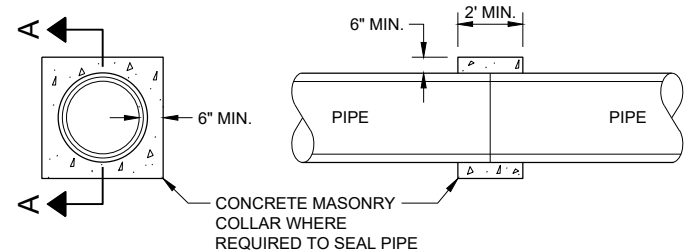
LONGITUDINAL SECTION

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



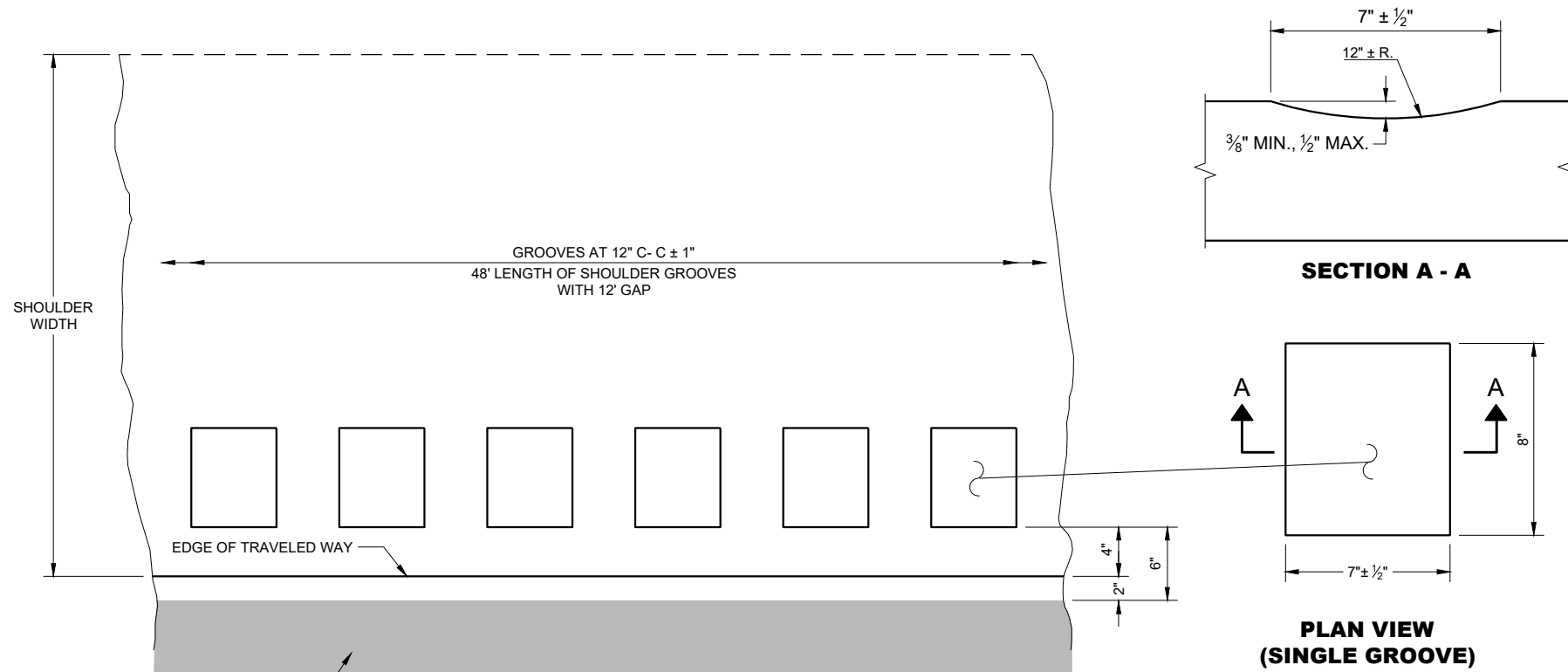
SECTION A - A

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 157
FHWA

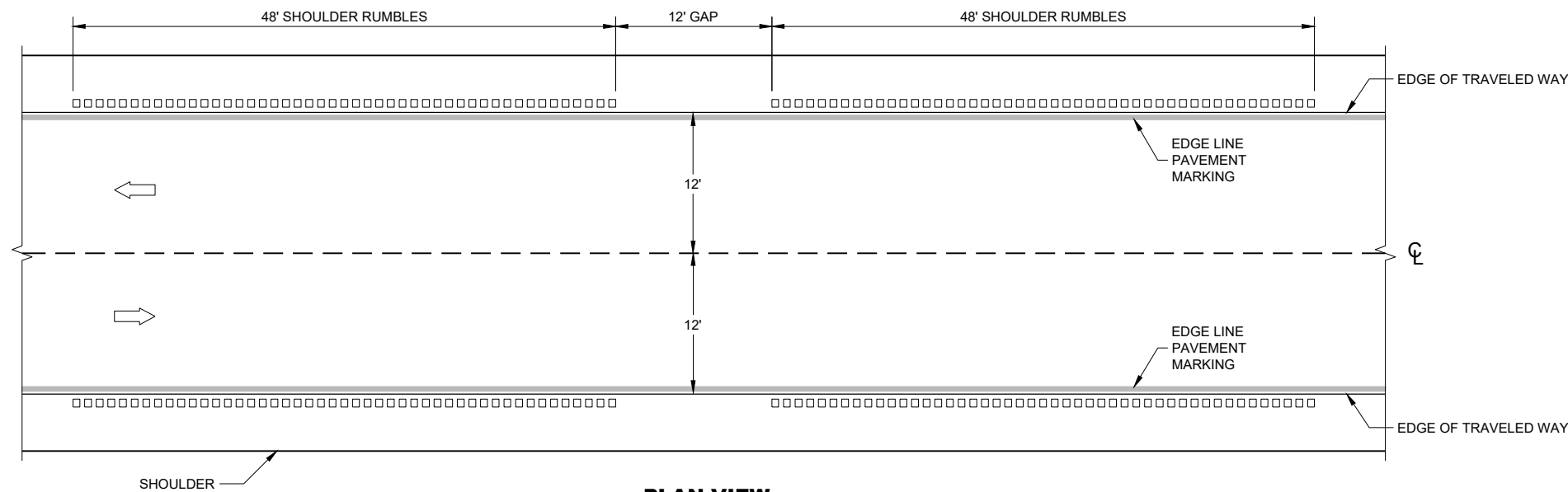
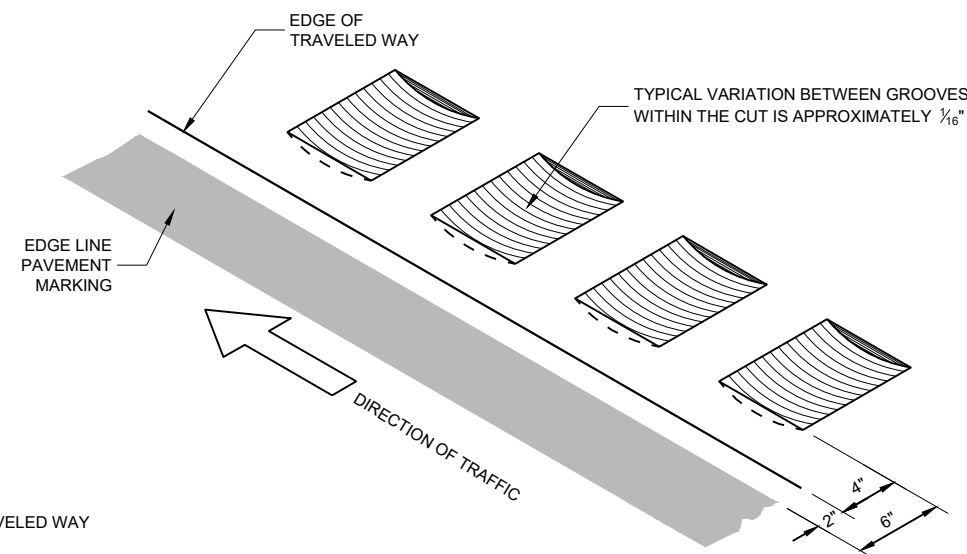


GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.

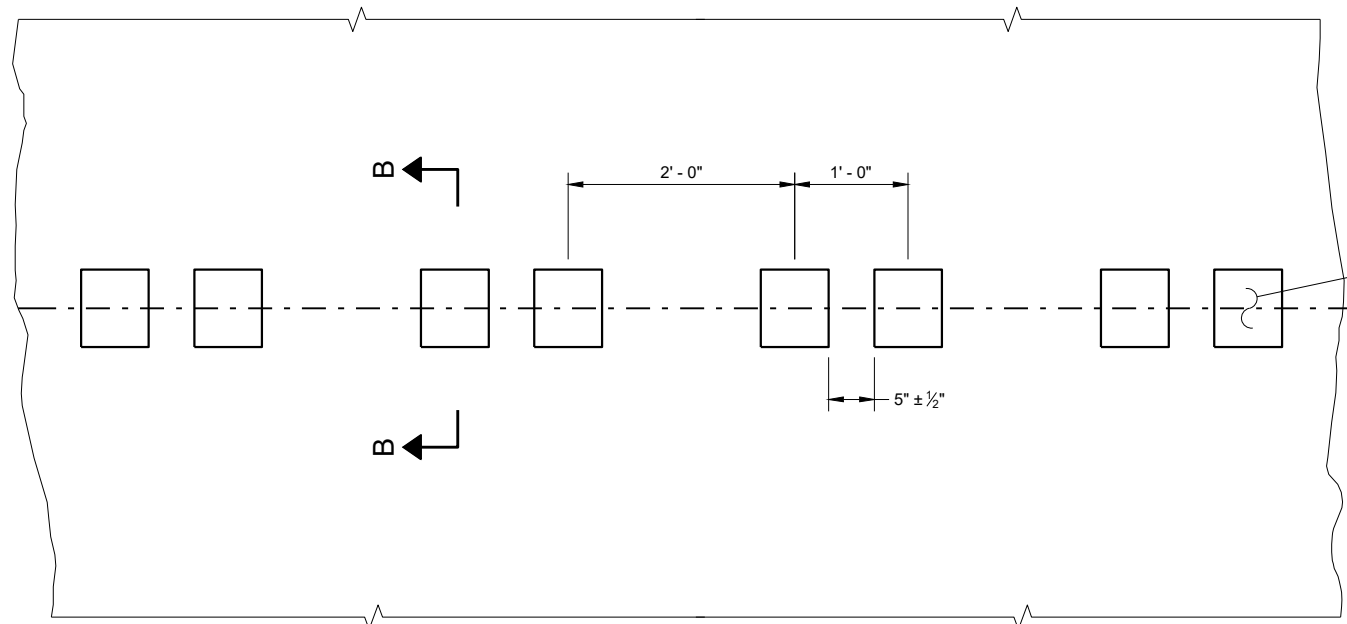
**PLAN DETAIL VIEW
SHOULDER WITH GROOVES**



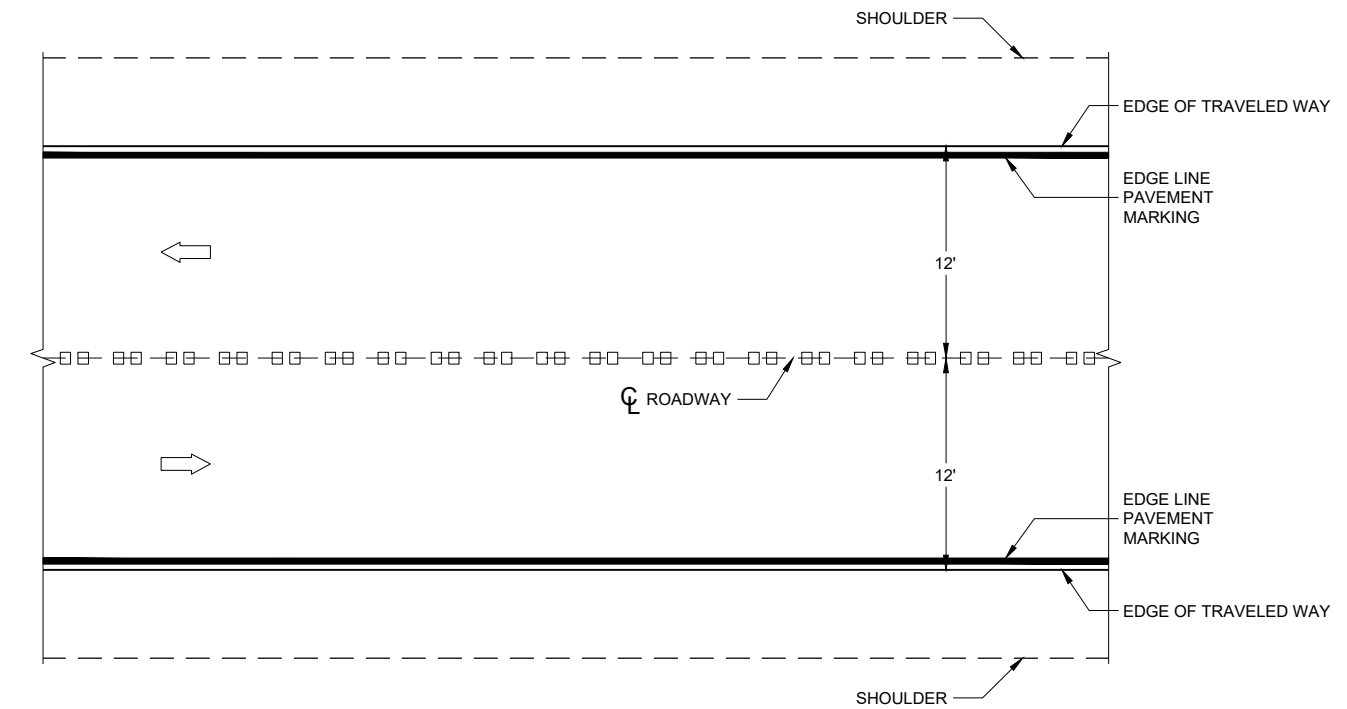
SHOULDER RUMBLE STRIPS - ASPHALT

**SHOULDER RUMBLE
STRIPS ASPHALT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

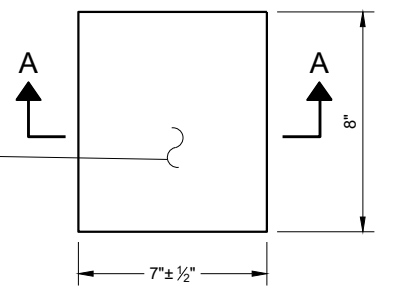


PLAN DETAIL VIEW

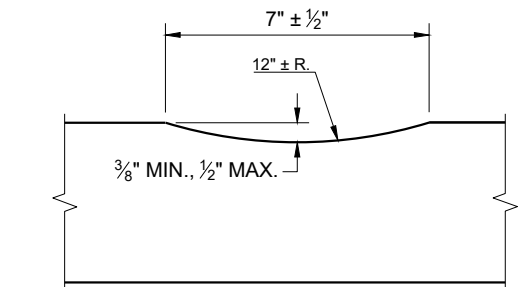


PLAN VIEW

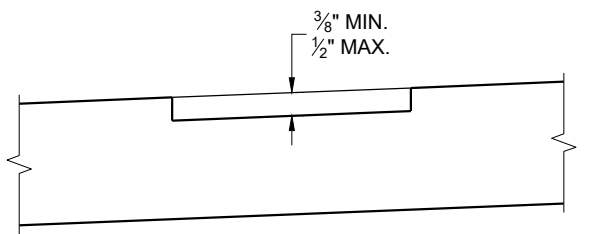
CENTERLINE RUMBLE STRIPS - ASPHALT



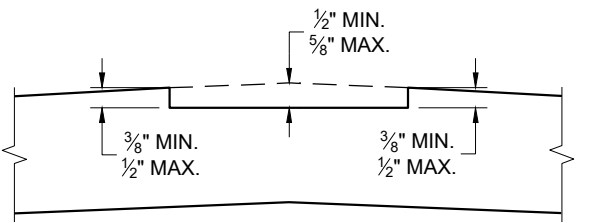
PLAN VIEW
(SINGLE GROOVE)



SECTION A - A



SECTION B - B
SUPERELEVATED ROADWAY

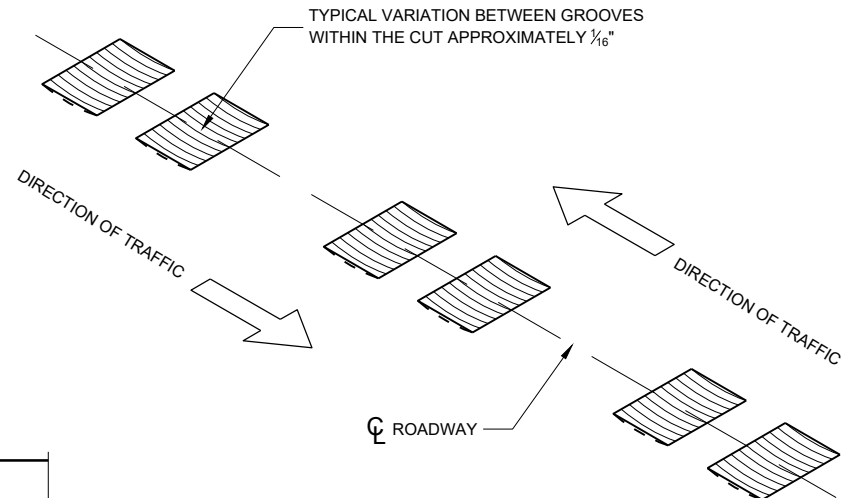


SECTION B - B
CROWNED ROADWAY

GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A11 SHEETS "d" AND "e".

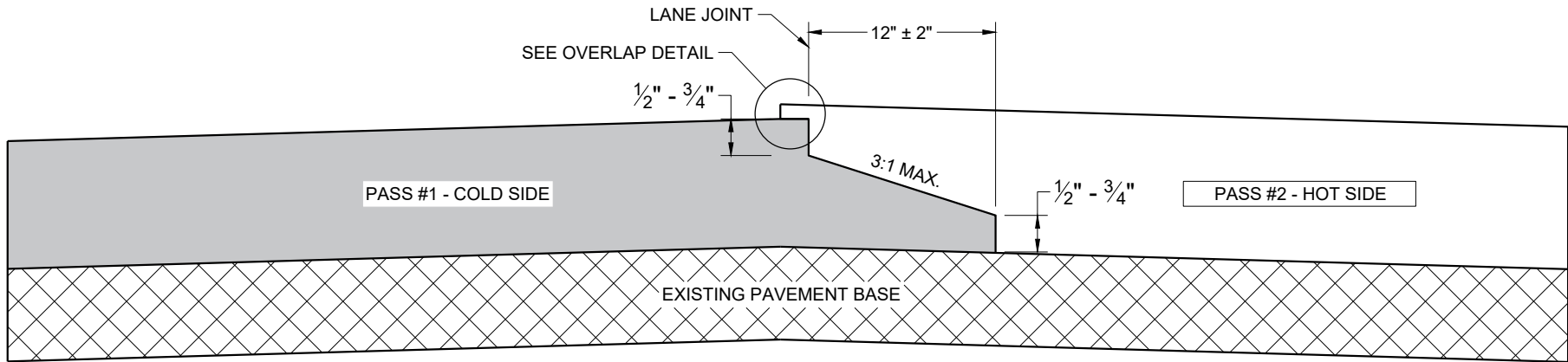
CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



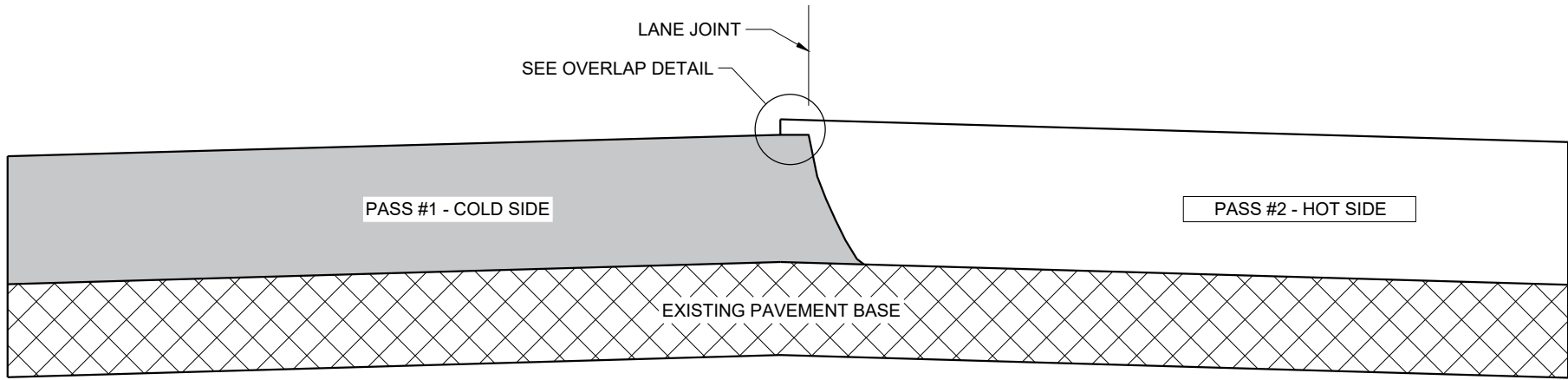
ISOMETRIC

CENTERLINE RUMBLE STRIPS - ASPHALT

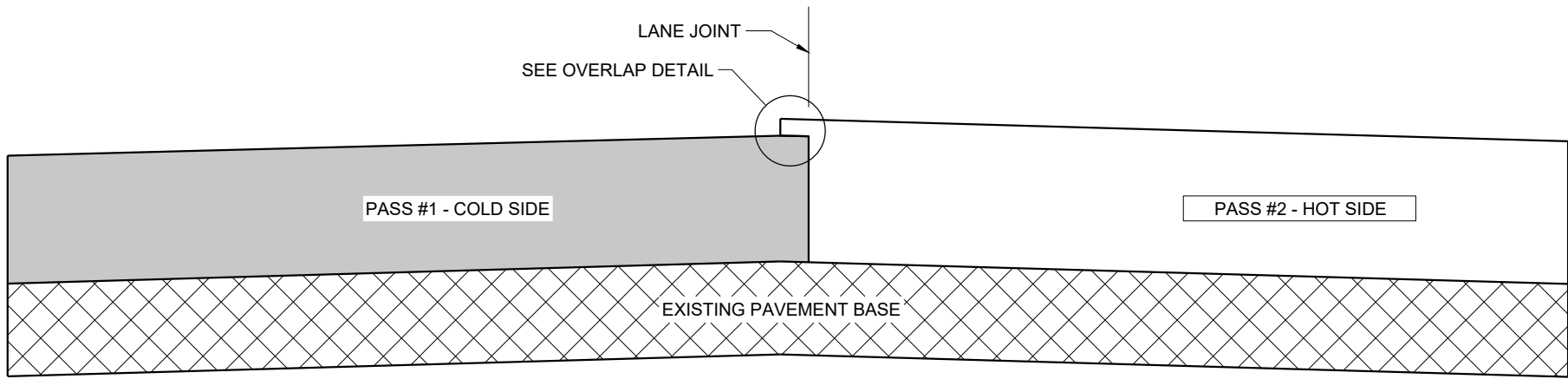
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

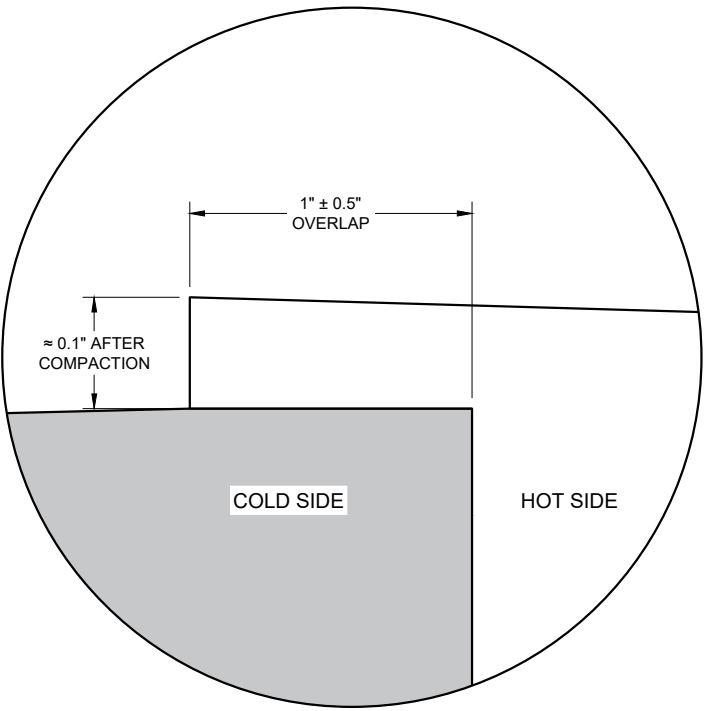
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ 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 160

FHWA

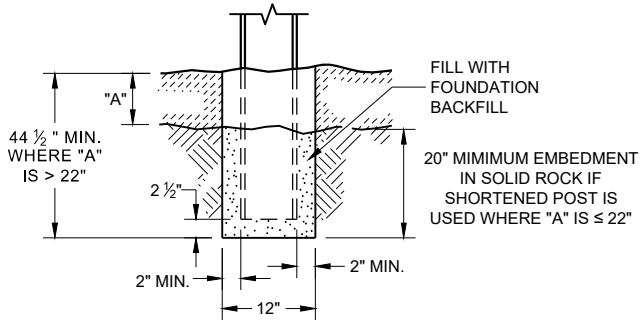
SDD 14B15a Steel Plate Beam Guard, Class "A", Installation and Elements

GENERAL NOTES

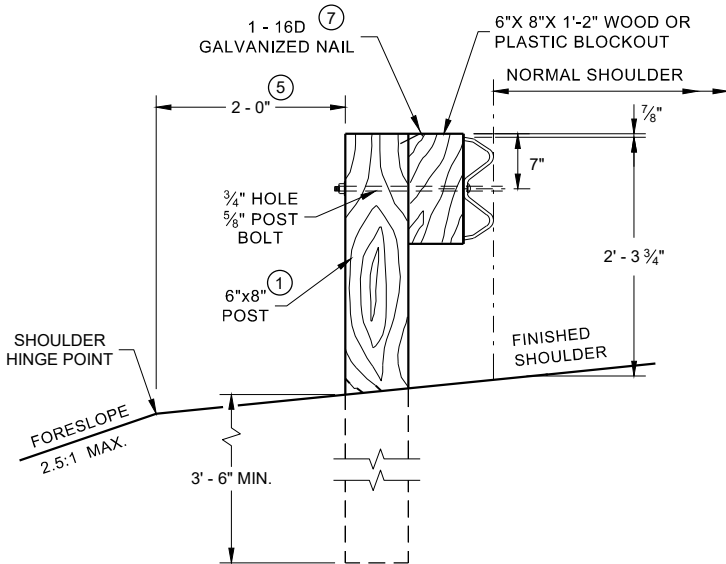
- WOOD OR STEEL POSTS (w6x9 OR w6x8.5) AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6"x8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS. DO NOT MIX STEEL AND WOOD POSTS IN A SINGLE INSTALLATION.
- USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGE SPALTER COATING ON GALVANIZED POSTS.
- INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
- IF THE DISTANCE FROM BACK OF POST TO SHOULDER HIGHE POINT IS LESS THAN 2 FEET, INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
- IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCHES IN DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT ADEQUATELY.
- WHEN USING STEEL POSTS AND WOOD BLOCKOUTS, INSTALL FOUR 16d GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

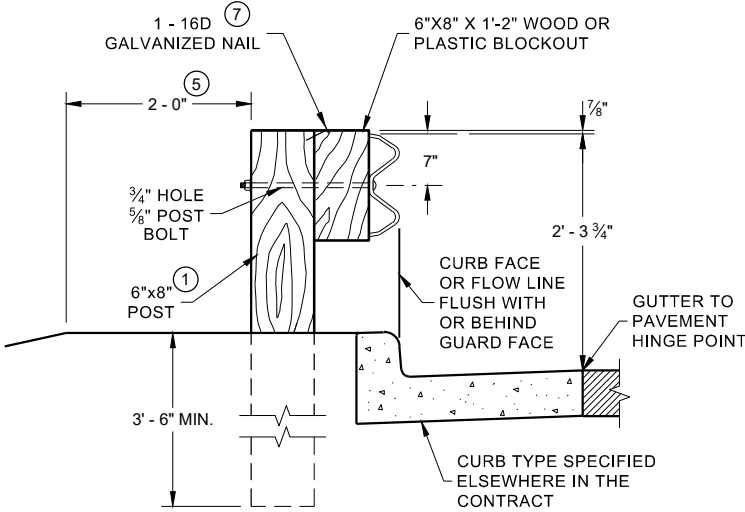
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



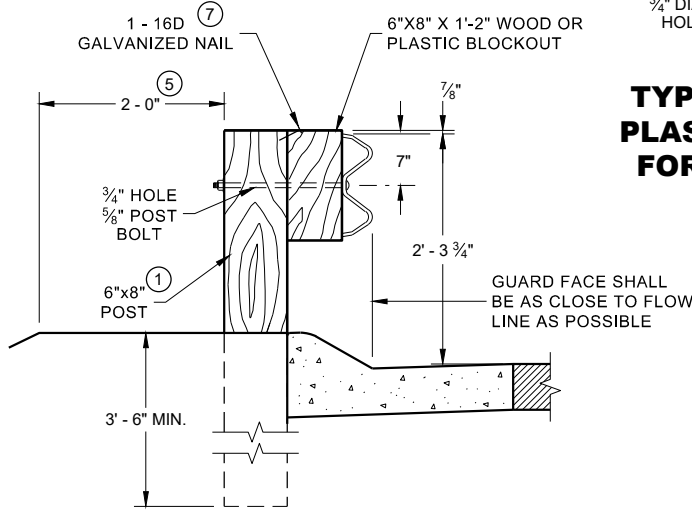
**END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥**



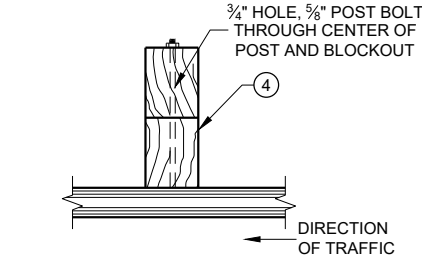
**END VIEW
LOCATED ALONG A ROADWAY
SHOULDER STANDARD INSTALLATION**



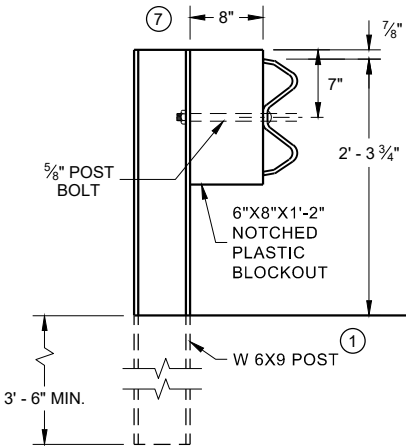
**END VIEW
LOCATED ALONG A CURBED ROADWAY**



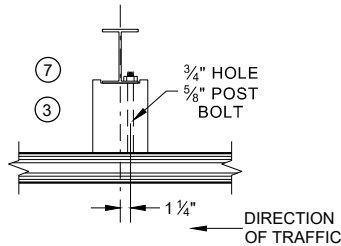
**END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY**



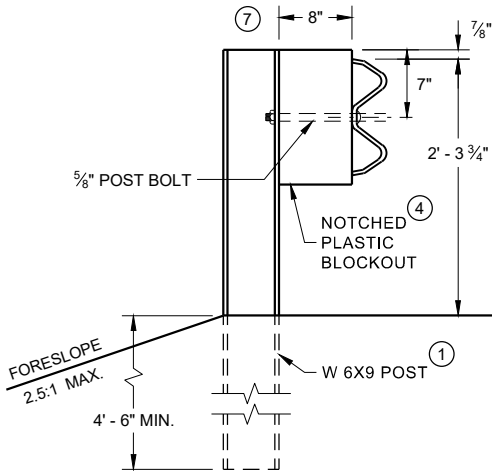
**PLAN VIEW
WOOD POST, BLOCKOUT
AND BEAM**



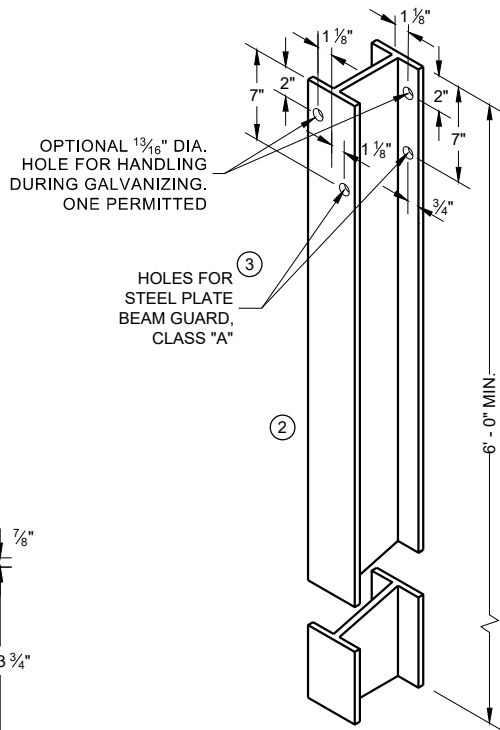
**END VIEW
STEEL POST AND NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION**



**PLAN VIEW
WOOD POST, BLOCKOUT
AND BEAM**

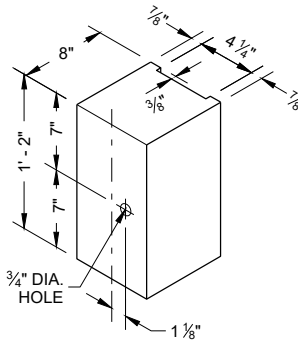


**END VIEW
LONGER POST AT HALF POST
SPACING W BEAM (LHW)**

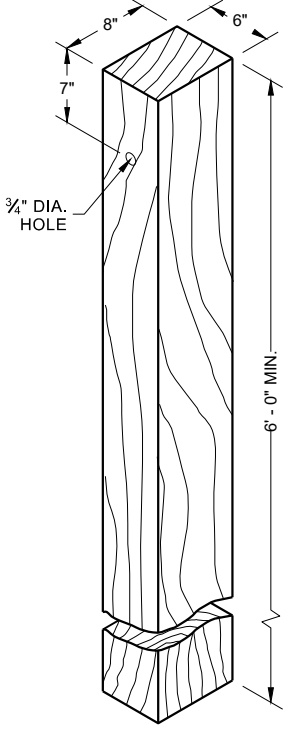


**STEEL POST & HOLE
PUNCHING DETAIL
(W 6 X 9) ①**

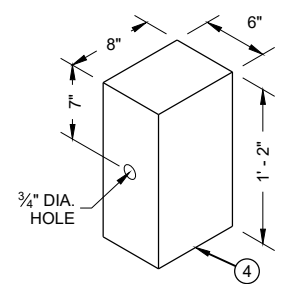
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



**TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS**



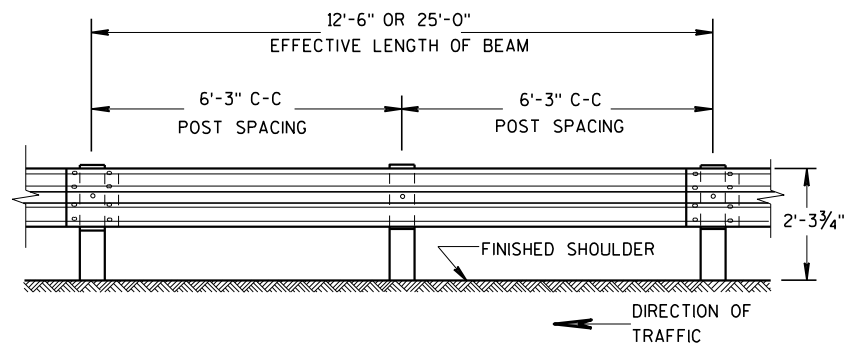
**WOOD POST
(6" X 8") NOMINAL ①**



**WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS**

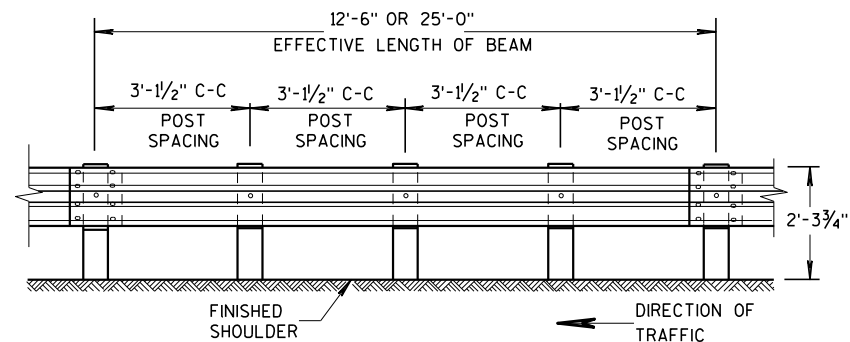
**STEEL PLATE BEAM GUARD,
CLASS "A" INSTALLATION
AND ELEMENTS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 161



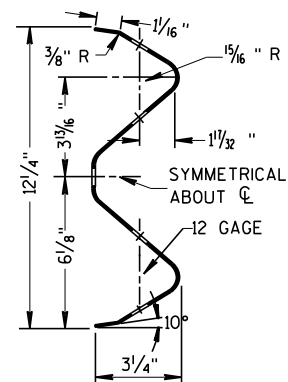
FRONT VIEW

POST SPACING STANDARD INSTALLATION

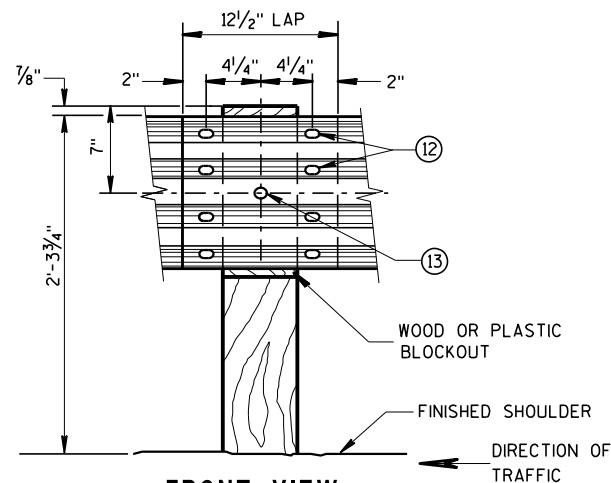


FRONT VIEW

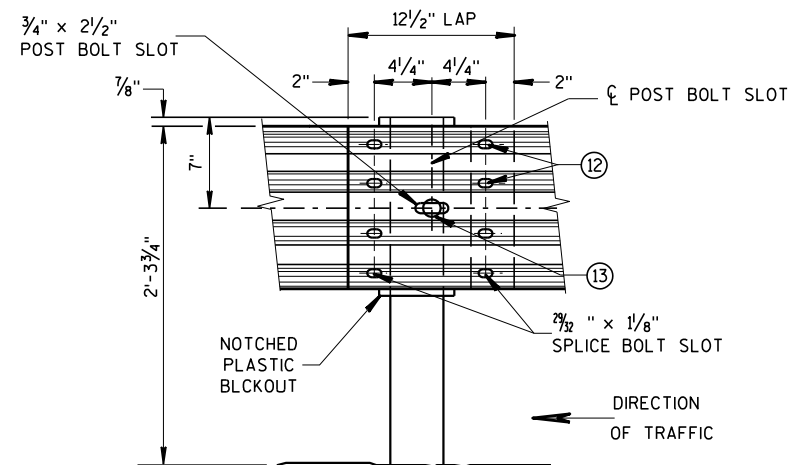
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)



SECTION THRU W BEAM



FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL

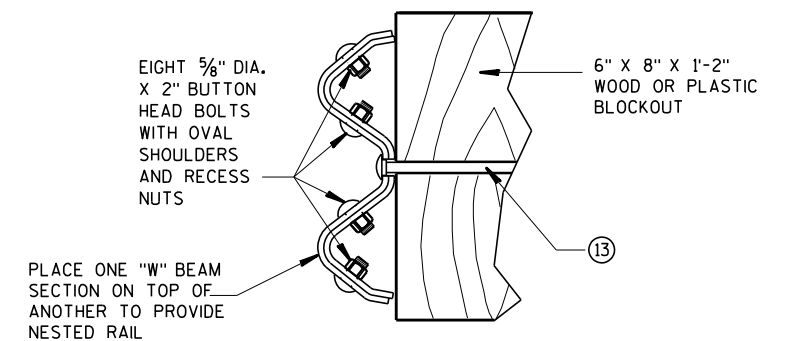


FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPlicing DETAILS
OF STEEL PLATE BEAM GUARD

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

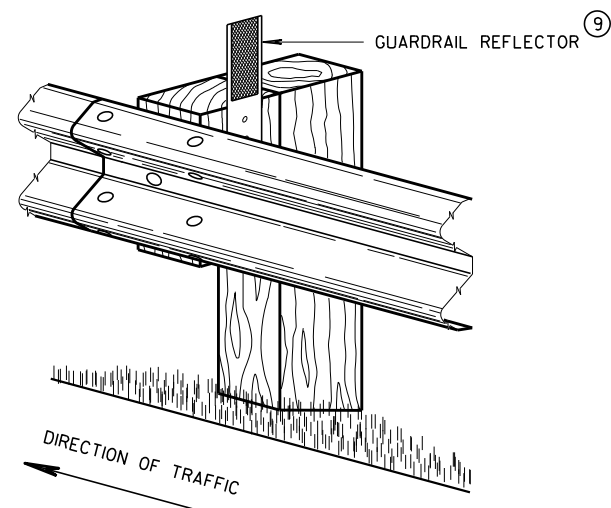
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



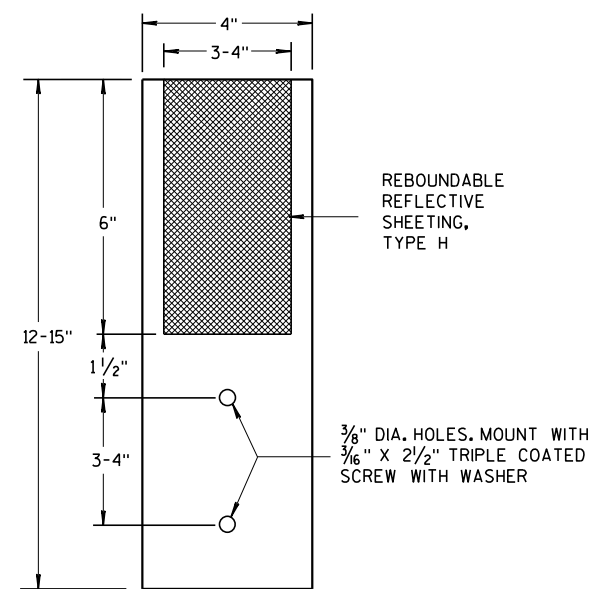
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



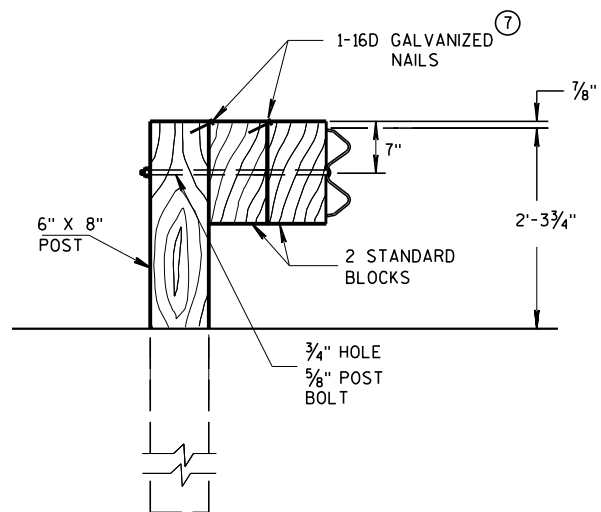
4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

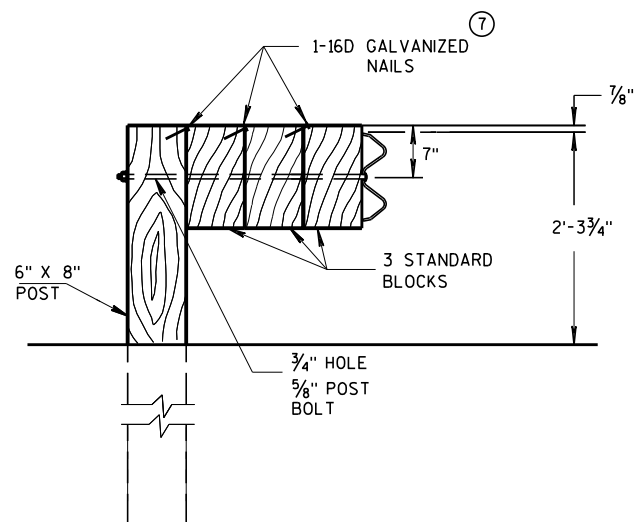
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS
WITHIN A BARRIER RUN IS UNLIMITED

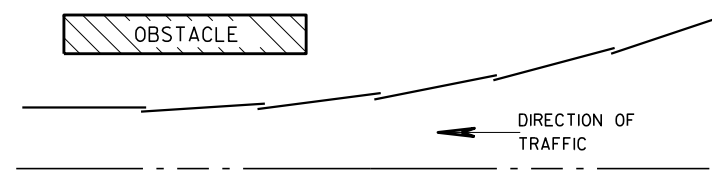


DETAIL FOR TRIPLE BLOCKS

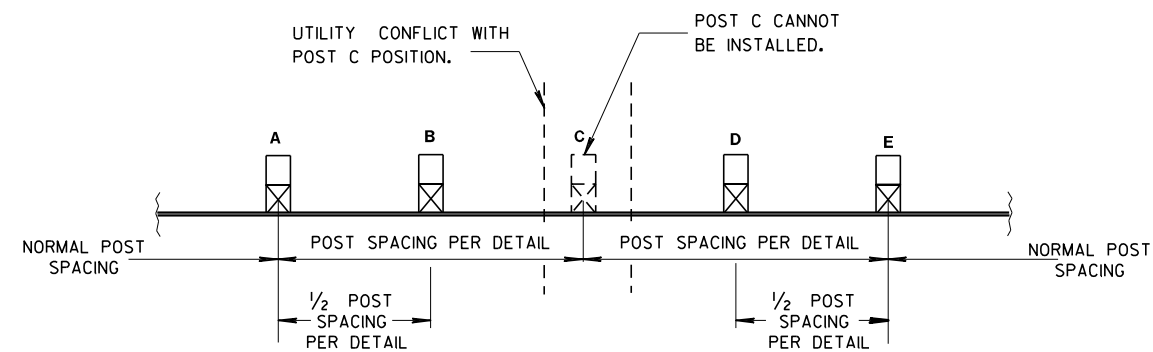
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES
PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND
SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION
DISTANCE OF THE BARRIER.



PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS 163 UNIT SUPERVISOR
FHWA

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

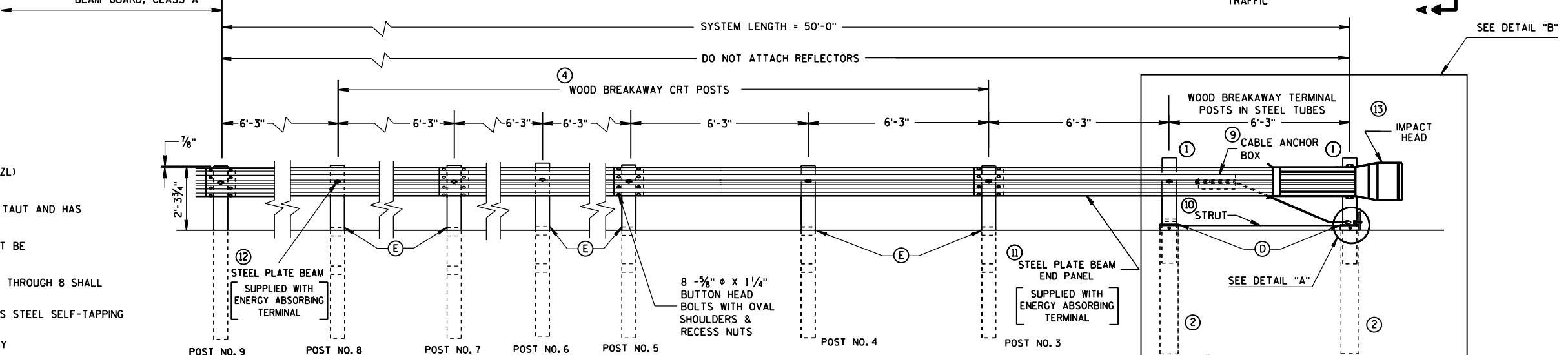
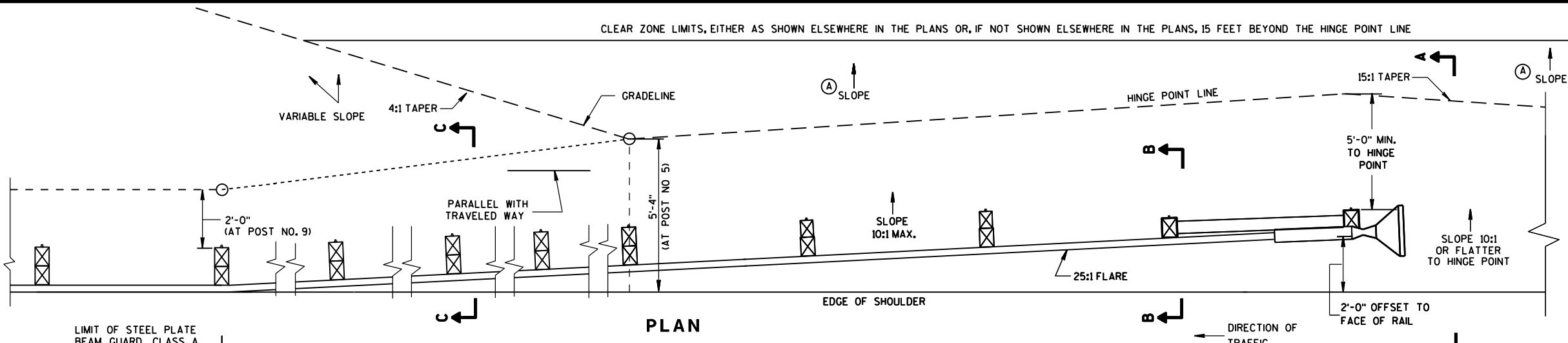
FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.
- (F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.

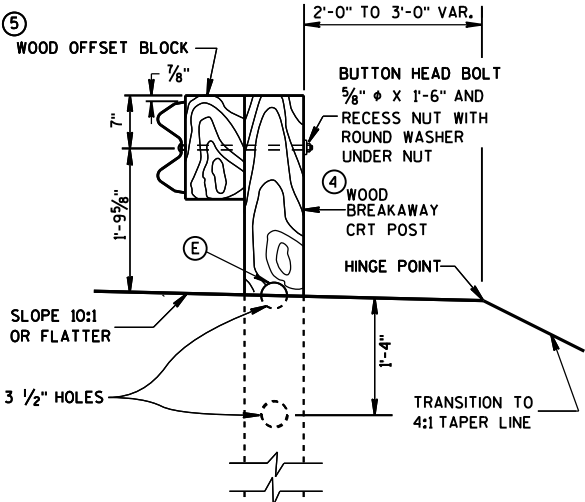
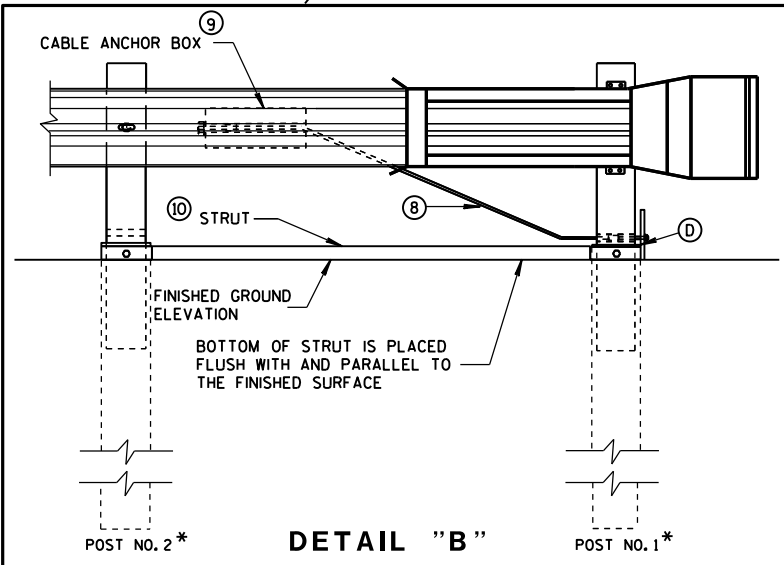
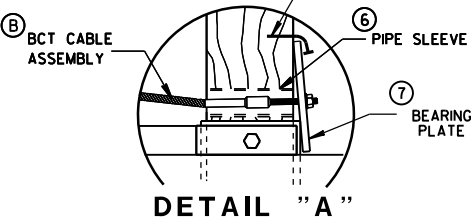
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

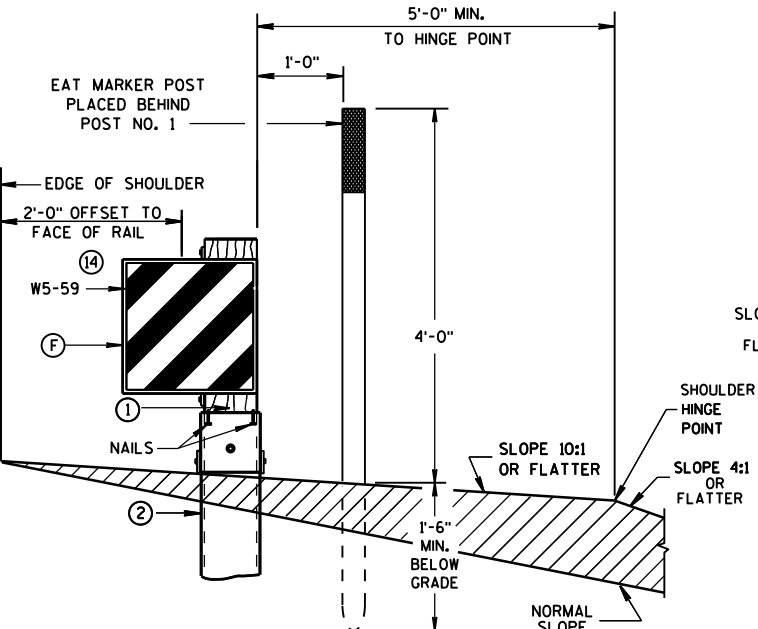
*DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



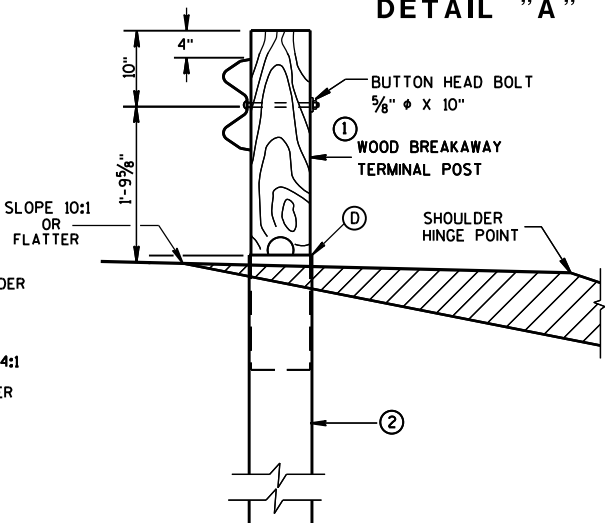
ELEVATION



SECTION C-C
TYPICAL AT POST NOS. 6, 8



SECTION A-A
TYPICAL AT POST NO. 1*

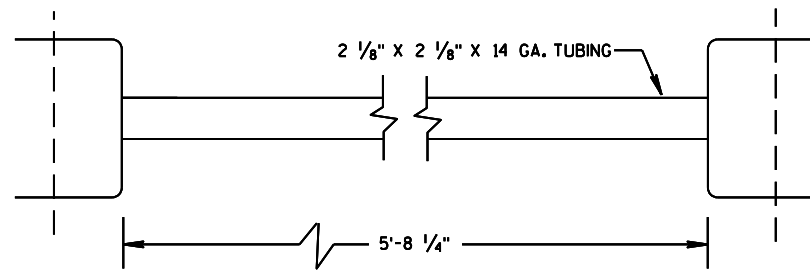


SECTION B-B
TYPICAL AT POST NO. 2*

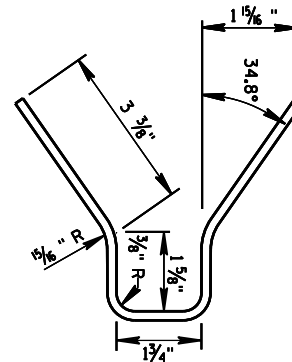
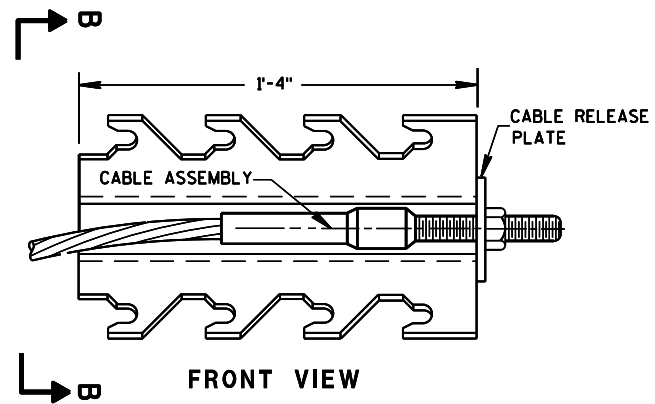
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

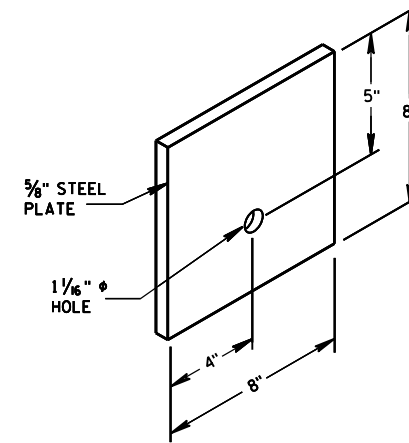
164



⑩ STRUT DETAIL



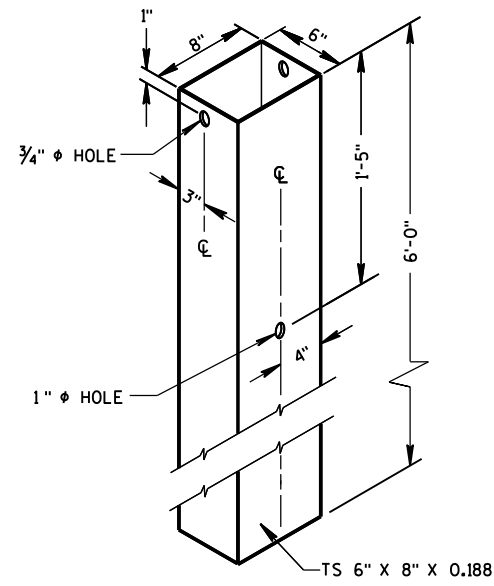
⑨ CABLE ANCHOR BOX



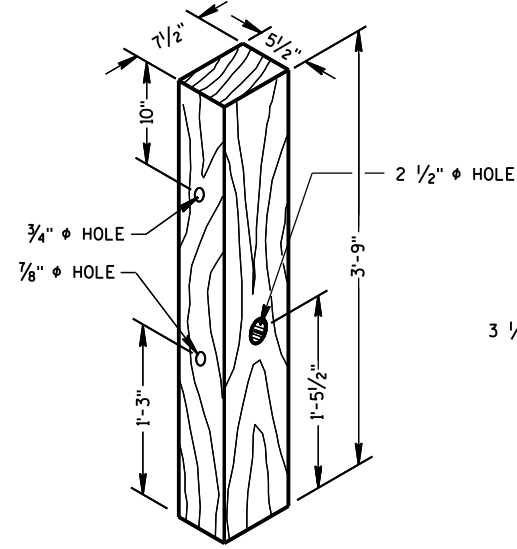
⑦ STEEL BEARING PLATE

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

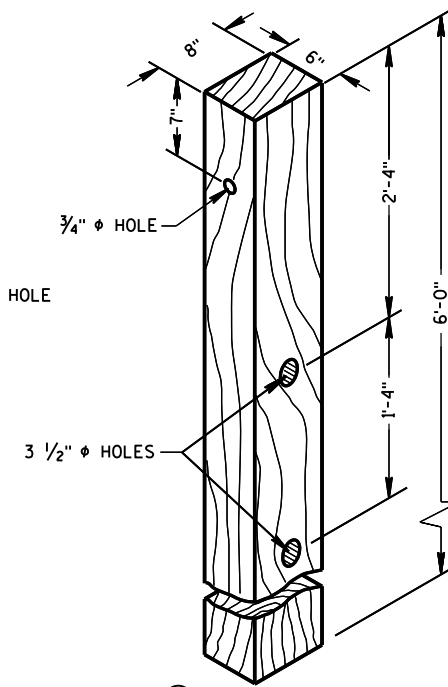
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 165



② **72" STEEL TUBE**
(POSTS NO. 1-2)



① **TERMINAL POST**

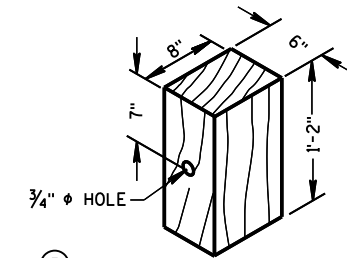


④ **CRT POST**
(POSTS NO'S 5-8)

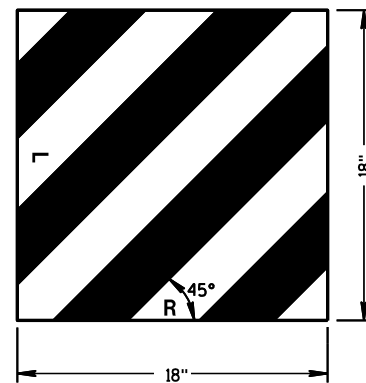
WOOD BREAKAWAY POSTS

GENERAL NOTES

WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



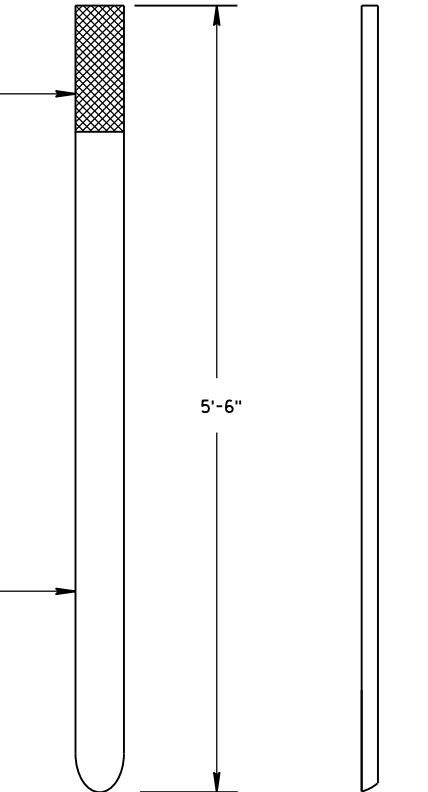
⑤ **WOOD OFFSET BLOCK**
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ **REFLECTIVE SHEETING DETAILS**

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

E.A.T. MARKER
POST (YELLOW)
SEE APPROVED
PRODUCTS LIST



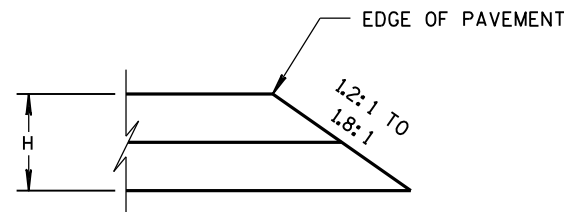
FRONT VIEW SIDE VIEW

E.A.T. MARKER POST

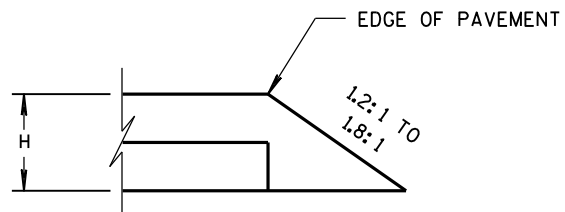
**STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

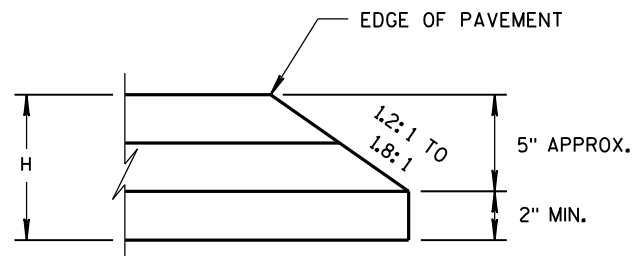
APPROVED
June 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS 166 ENT
FHWA UNIT SUPERVISOR



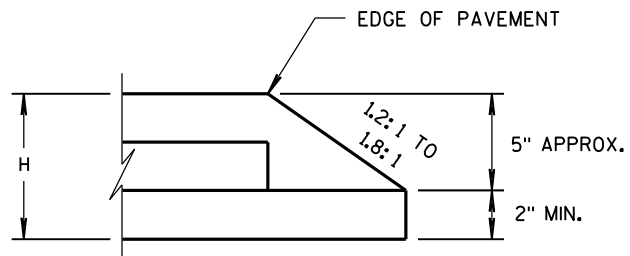
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

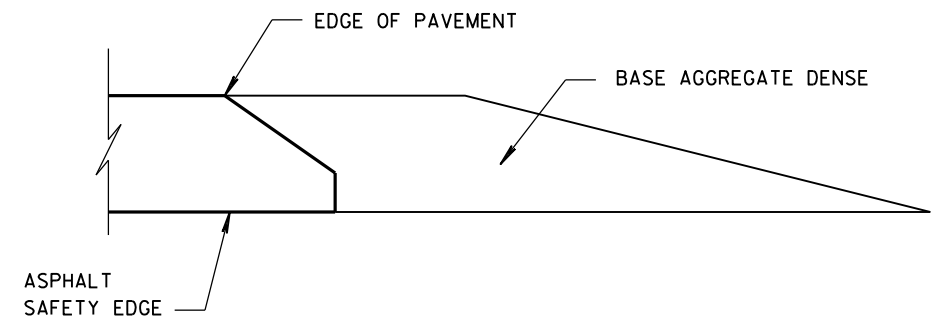


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



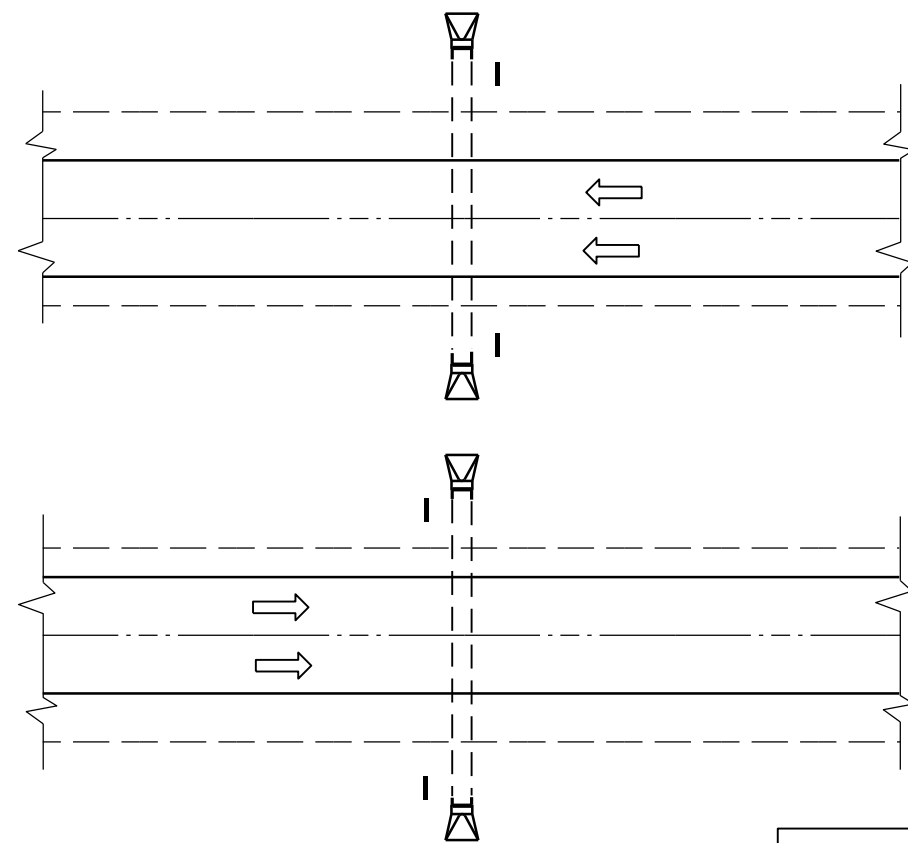
CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS

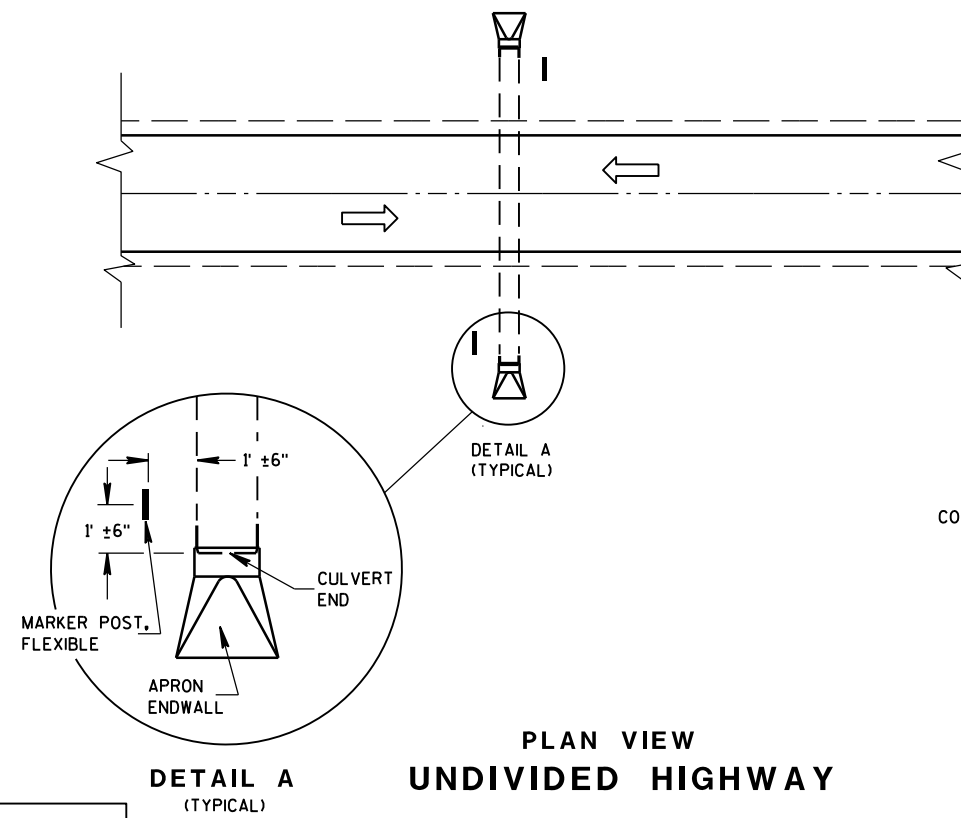
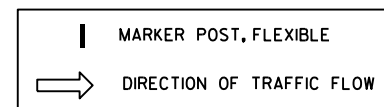


FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE _{SM}		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED DATE 11/30/2012	/S/ Jerry H. Zoaga ROADWAY STANDARDS ENGINEER	167 INT
FHWA		



PLAN VIEW
DIVIDED HIGHWAY

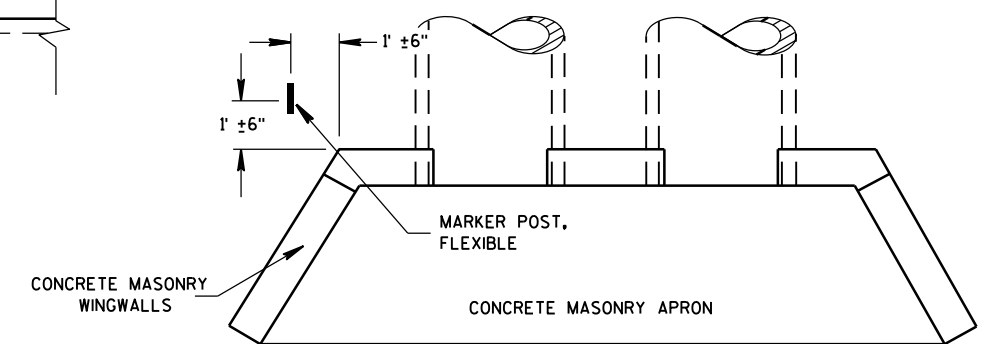


PLAN VIEW
UNDIVIDED HIGHWAY

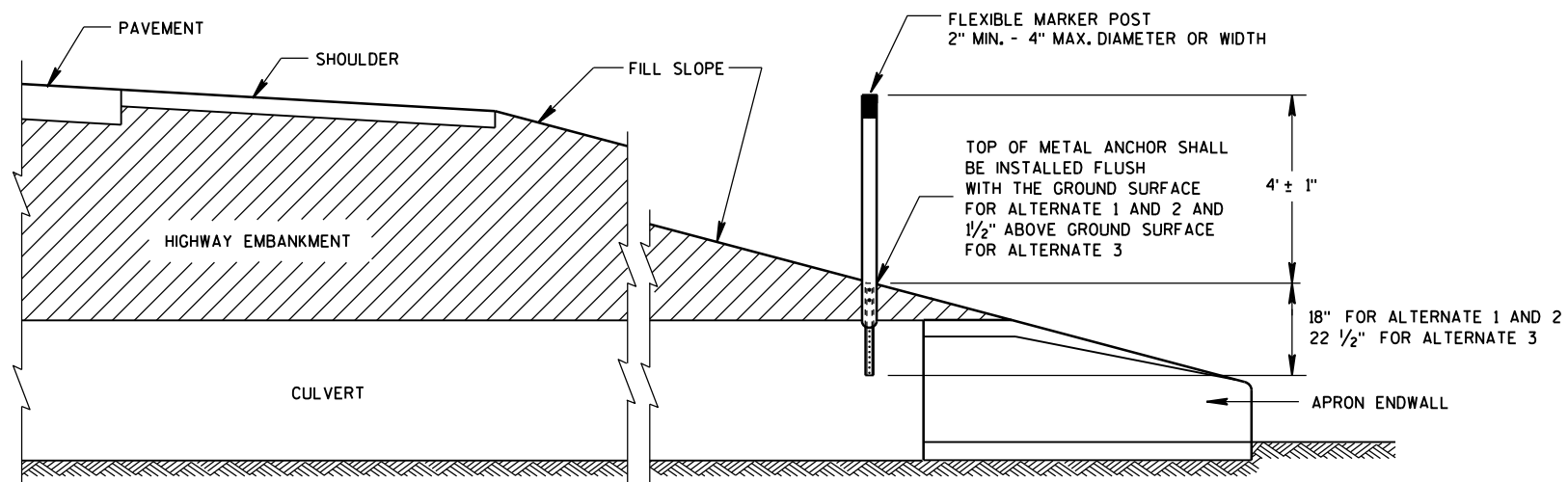
FLEXIBLE MARKER POST LOCATION

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.



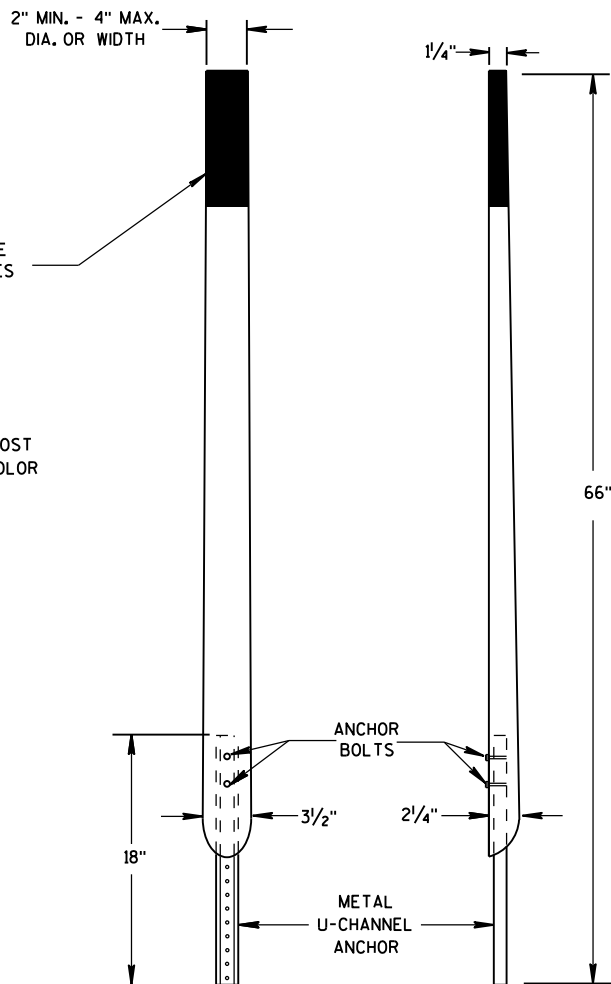
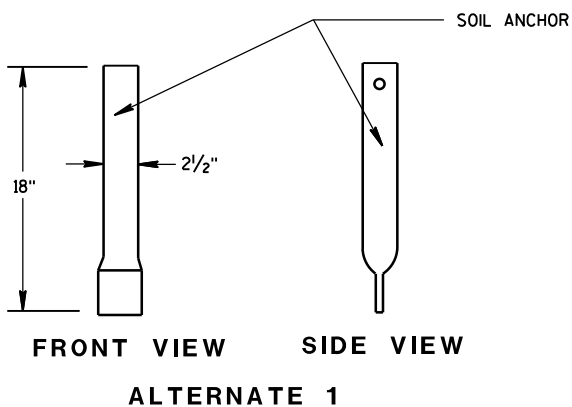
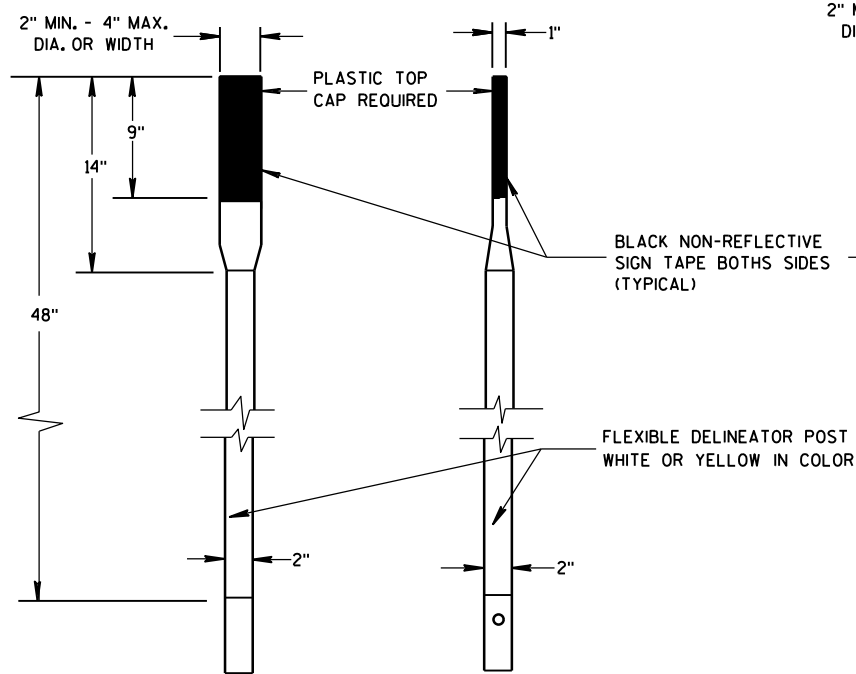
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



CROSS SECTION
FLEXIBLE MARKER POST

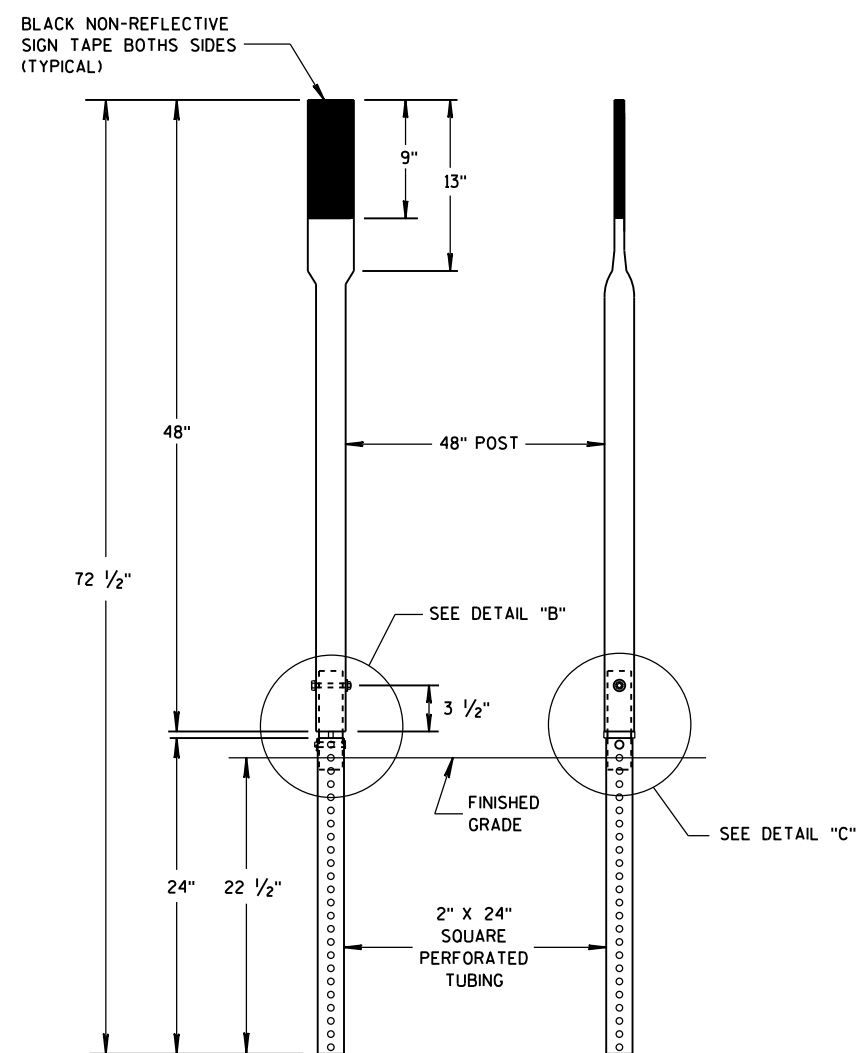
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 168

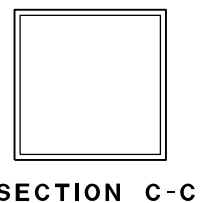


FRONT VIEW SIDE VIEW
ALTERNATE 2

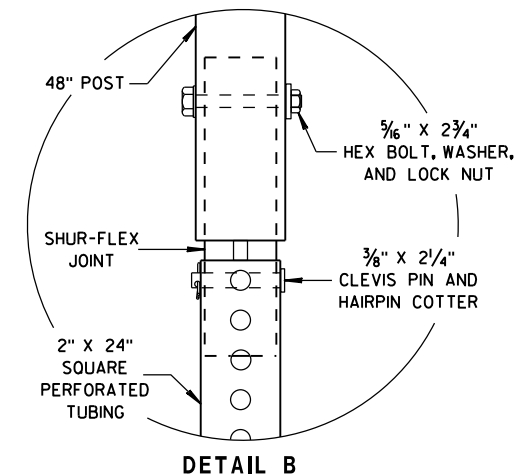
FLEXIBLE MARKER POSTS



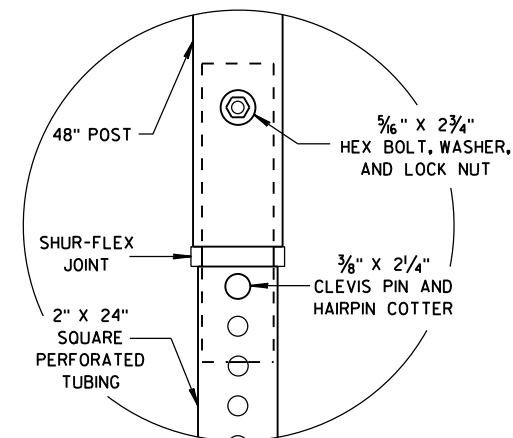
FRONT VIEW SIDE VIEW
ALTERNATE 3



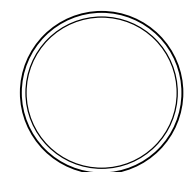
SECTION C-C



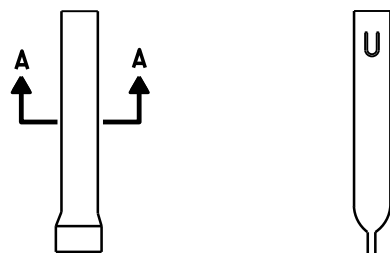
DETAIL B



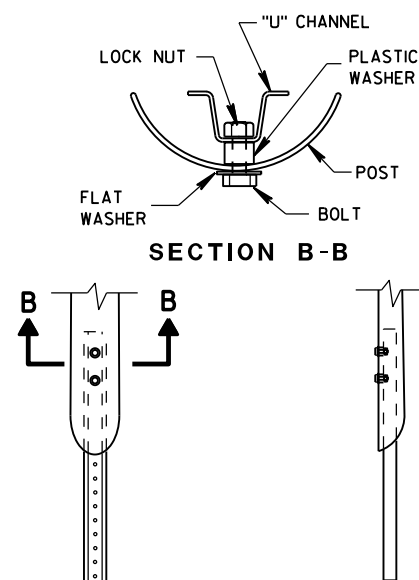
DETAIL C



SECTION A-A

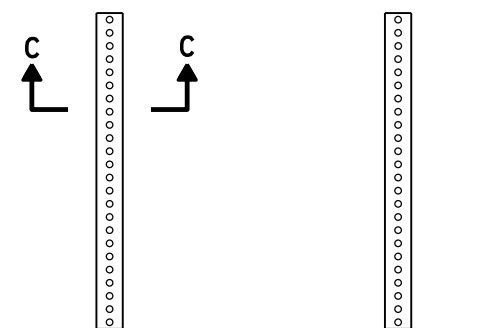


FRONT VIEW SIDE VIEW
ALTERNATE 1



FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE MARKER POST ANCHORS

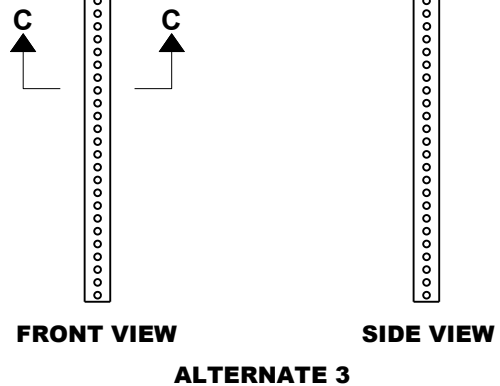
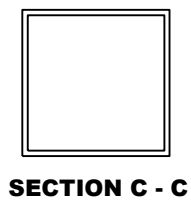
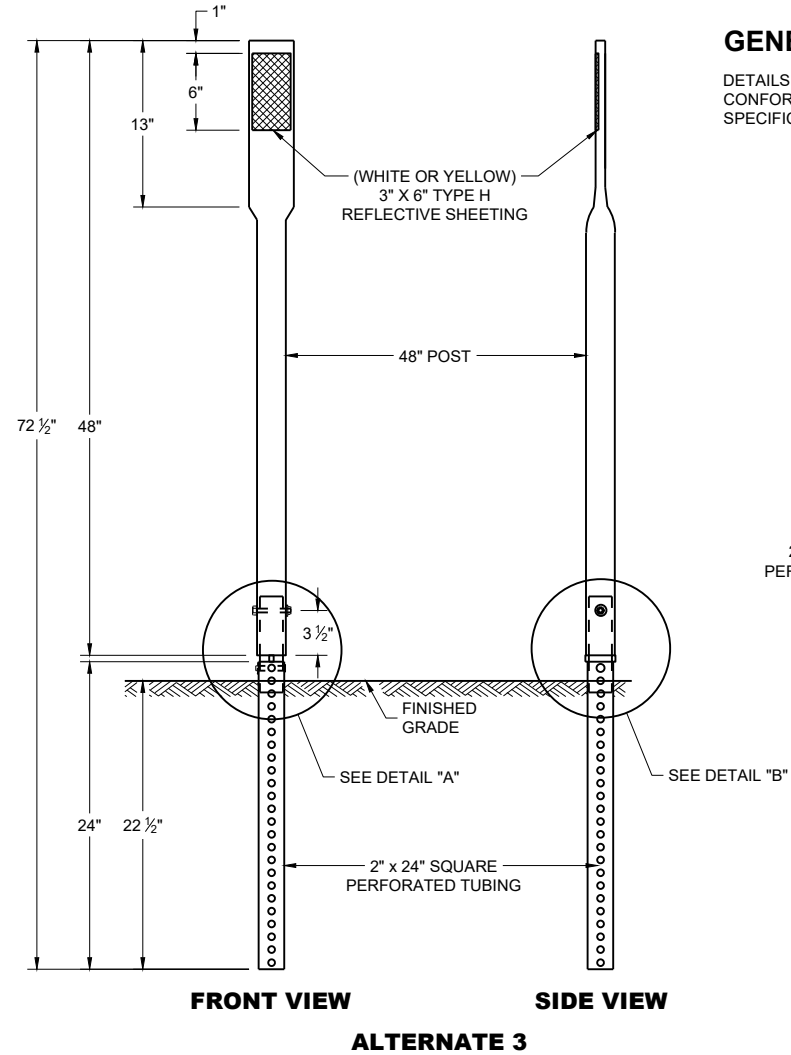
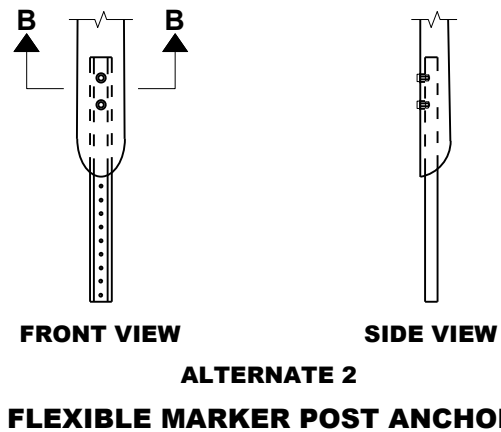
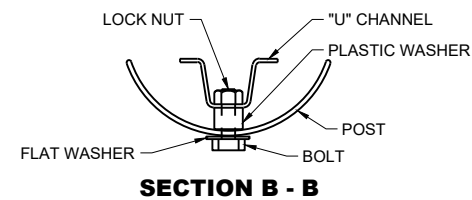
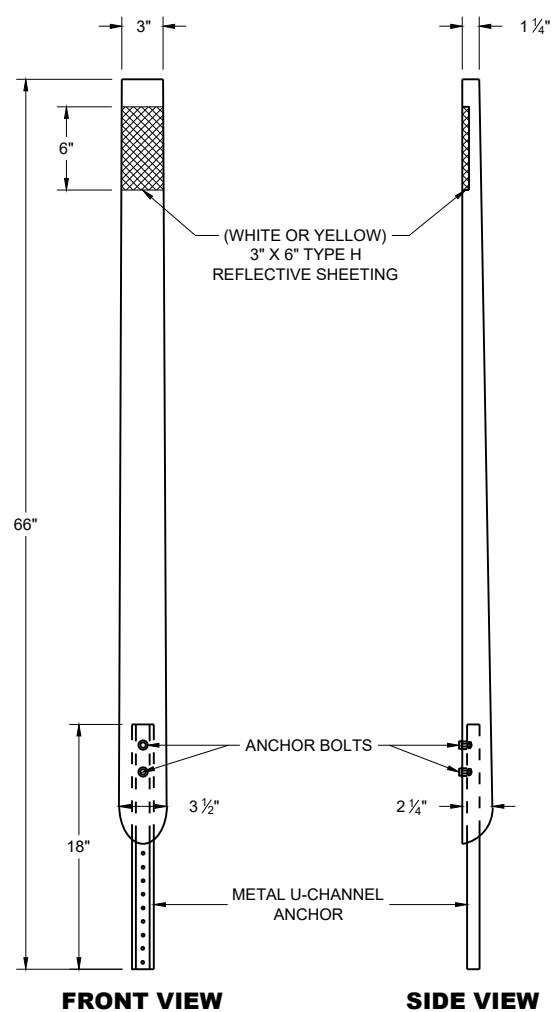
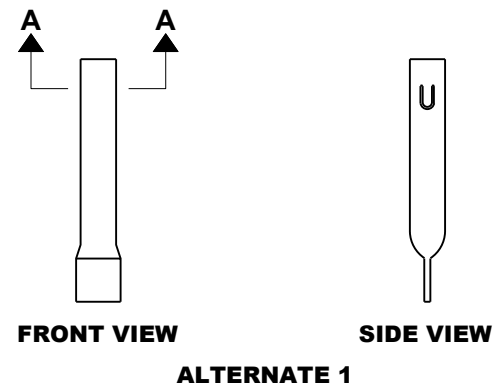
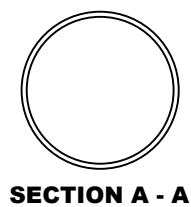
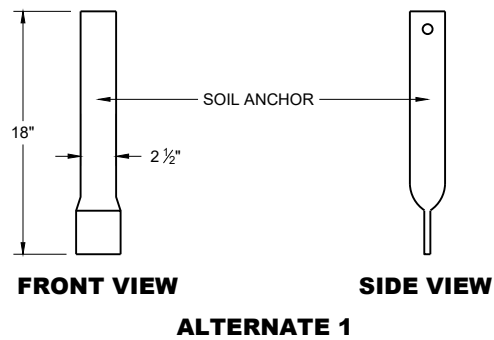
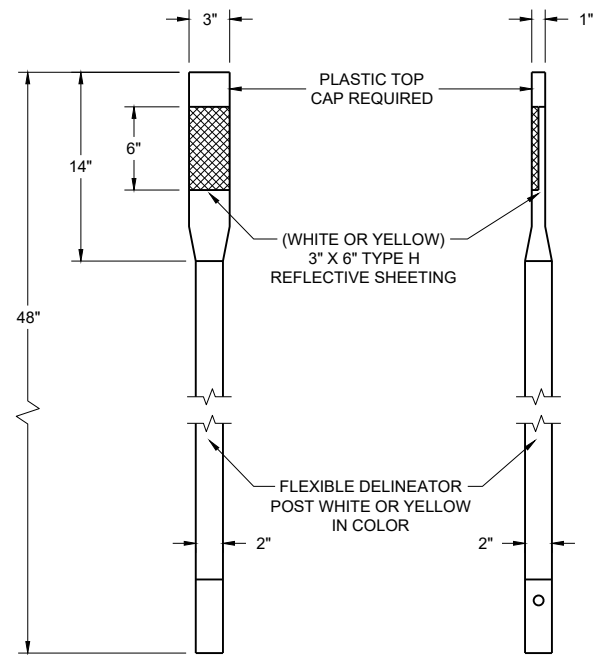


FRONT VIEW SIDE VIEW
ALTERNATE 3

FLEXIBLE MARKER POST
FOR CULVERT END

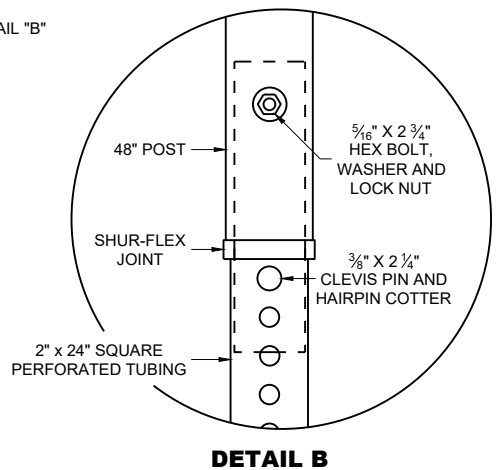
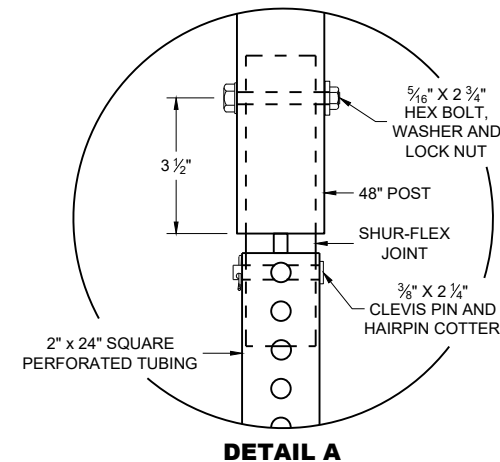
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER 169 IGN
FHWA



GENERAL NOTES

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



REFLECTOR SPACING TABLE

REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER

FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 /S/ Jeannie Silver
DATE
Statewide Pavement Marking Engineer
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.

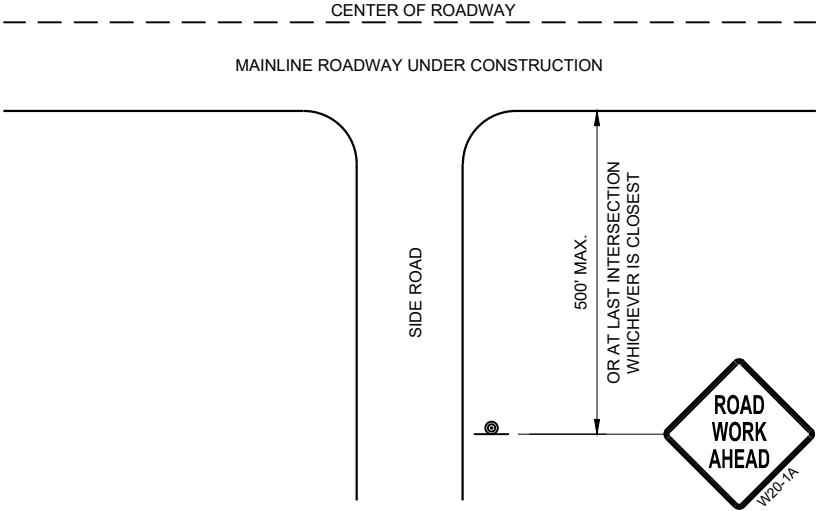
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

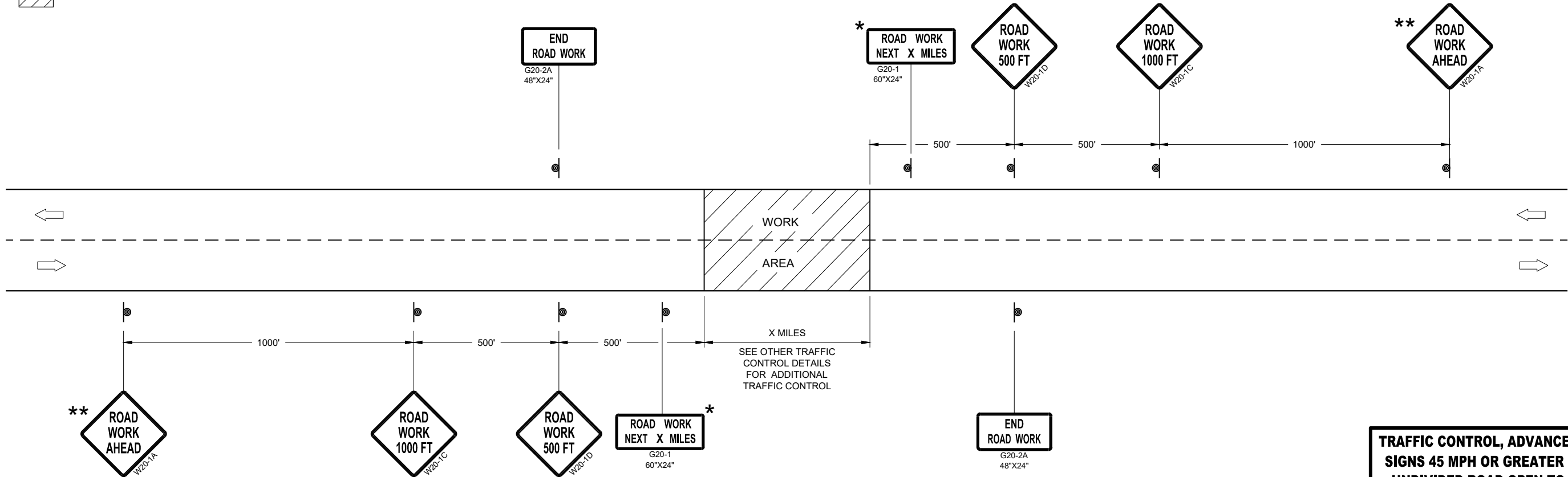
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

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 171
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.

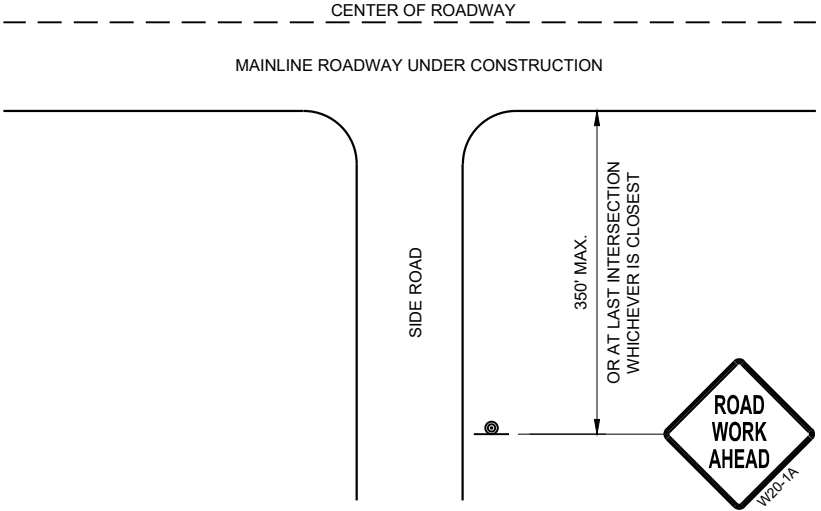
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

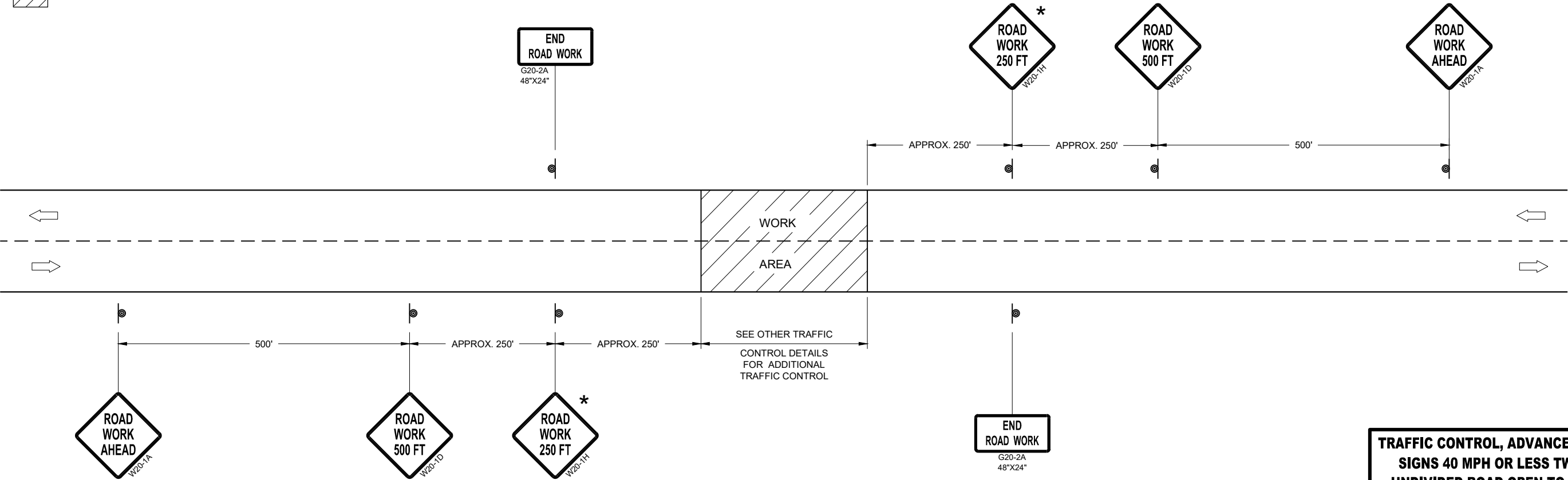
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



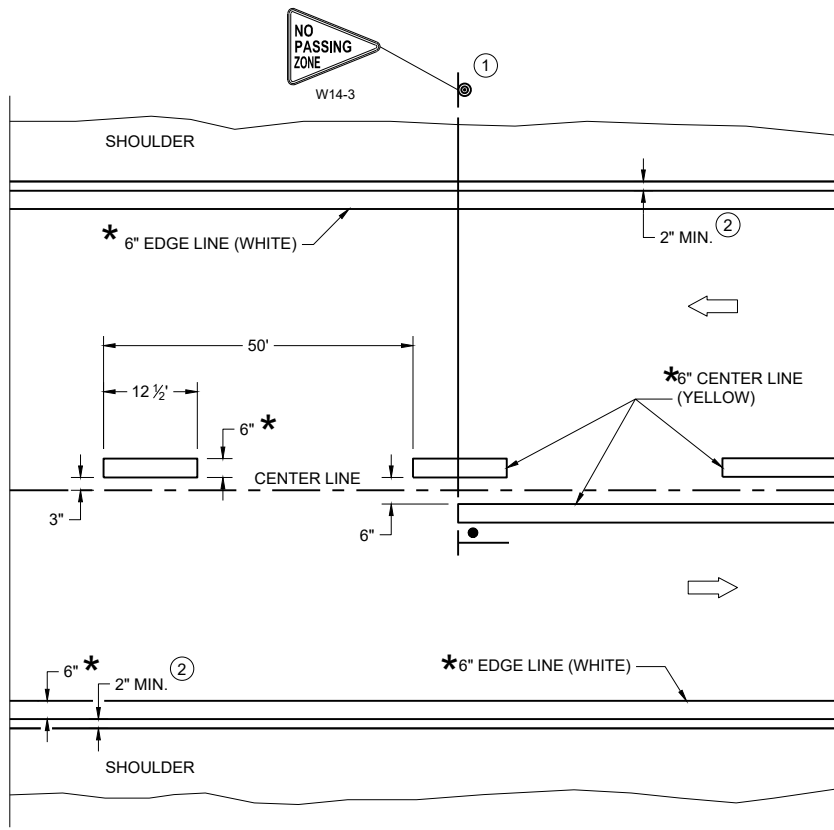
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

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

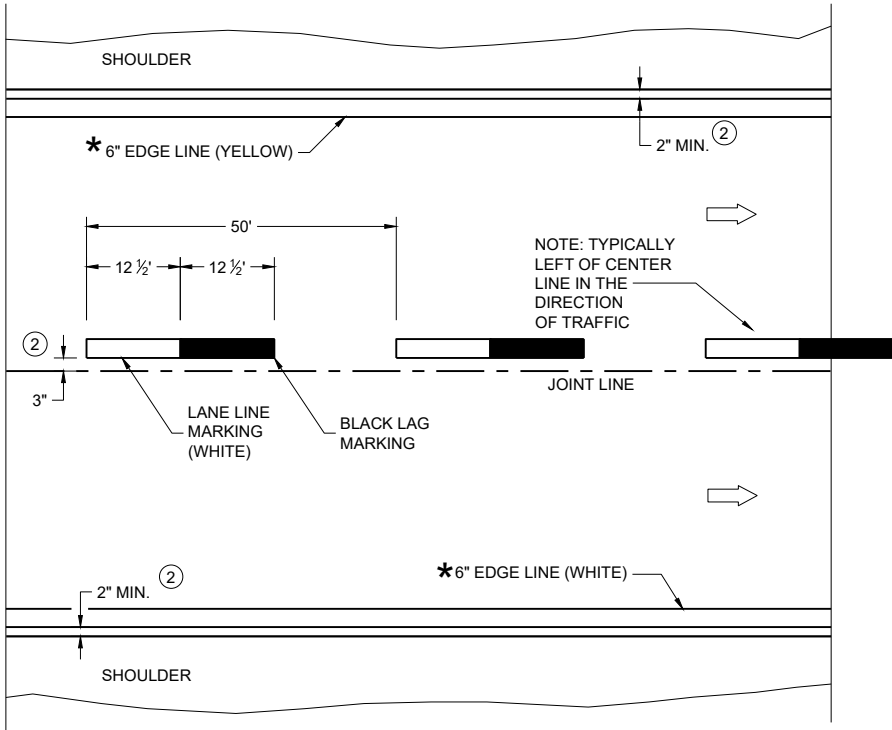
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 172

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

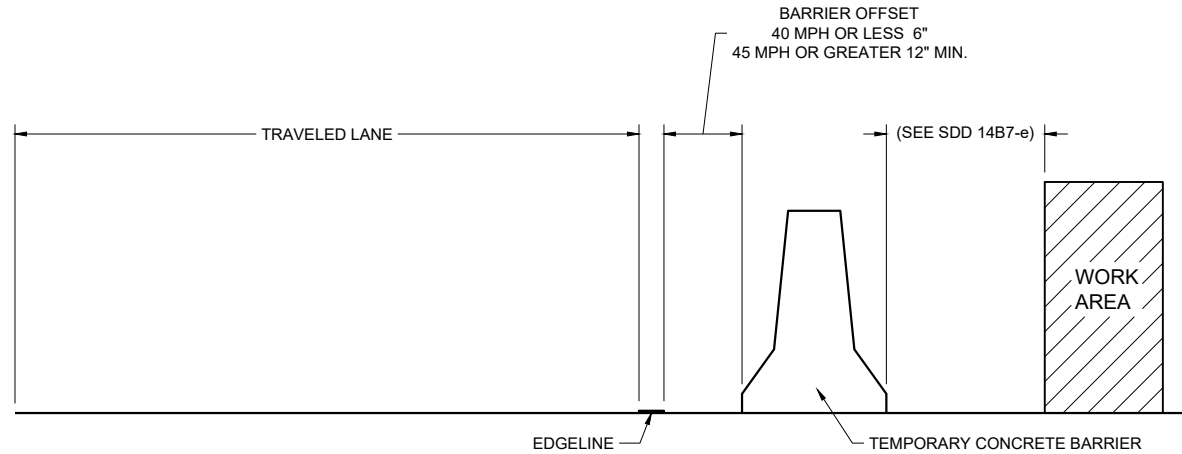
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- 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

PERMANENT LONGITUDINAL PAVEMENT MARKINGS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA 173	



TEMPORARY BARRIER OFFSET FROM EDGE LINE

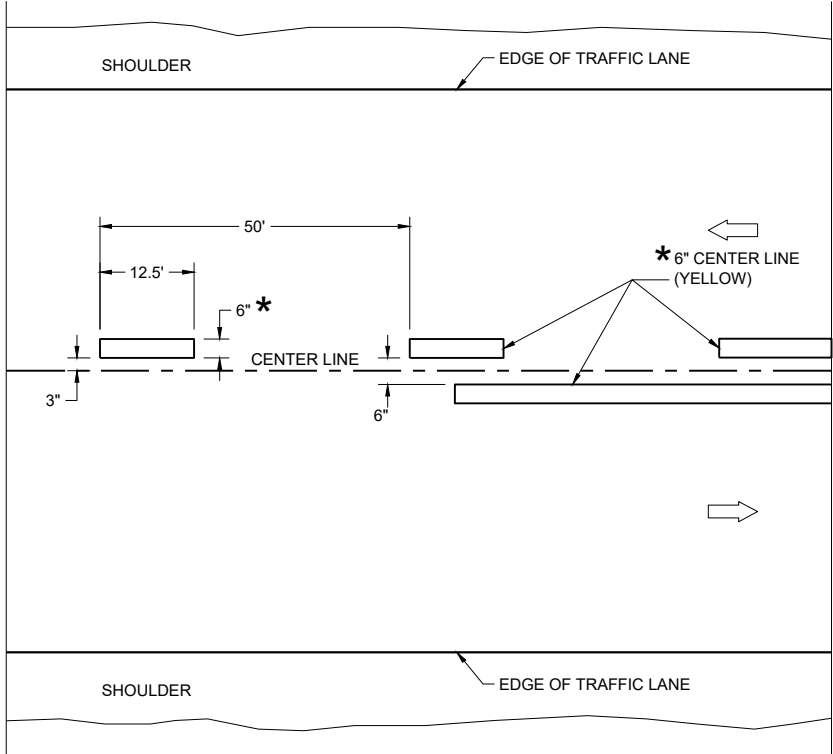
GENERAL NOTES

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

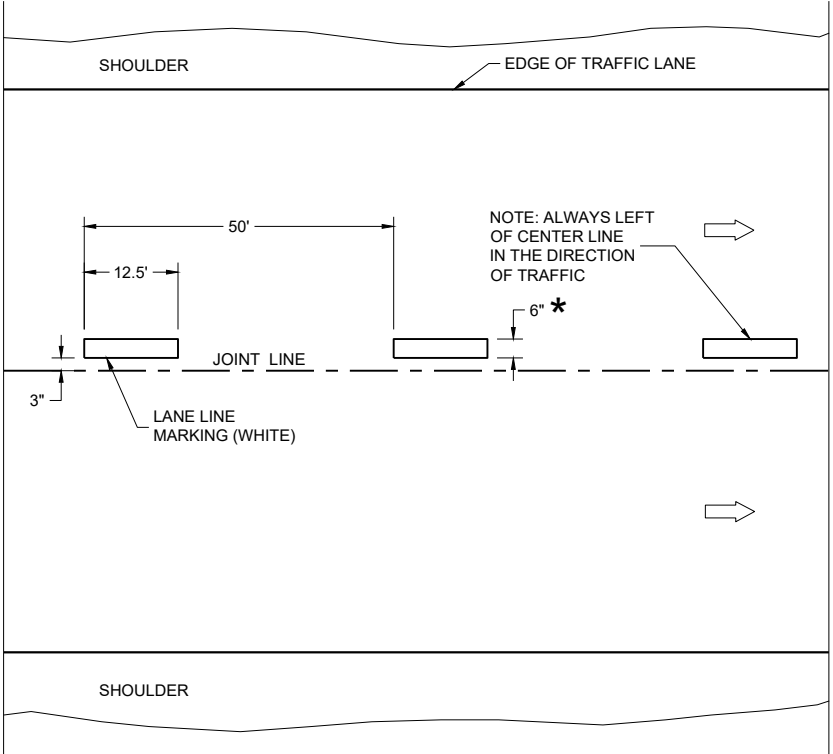
LEGEND

DIRECTION OF TRAFFIC

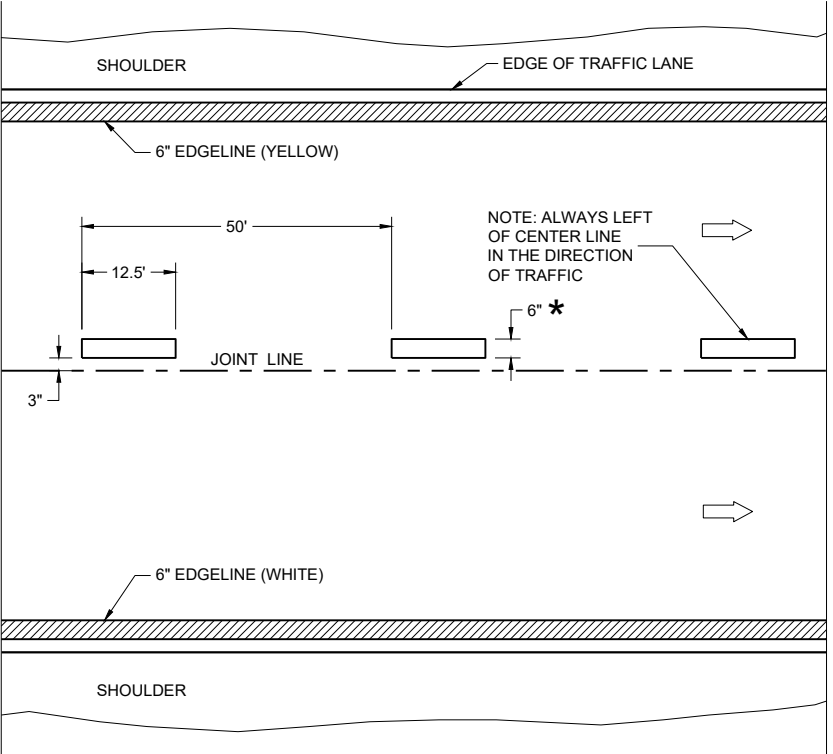
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



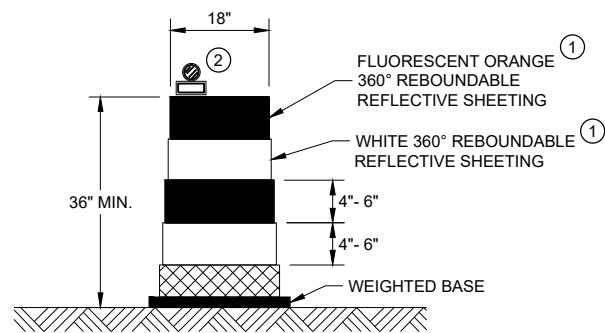
ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

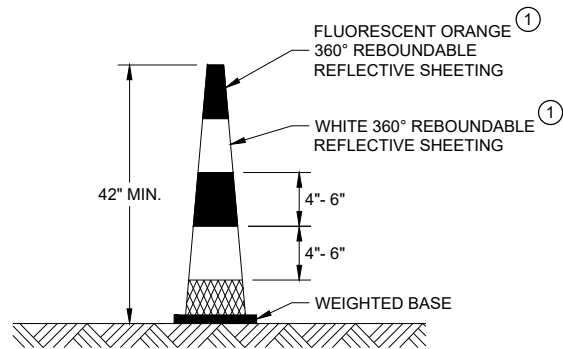
TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December 2024 DATE	/S/ Jeannie Silver Statewide Pavement Marking Engineer
FHWA	174



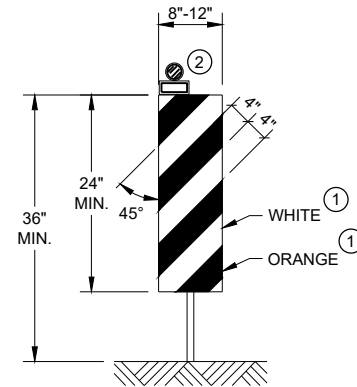
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



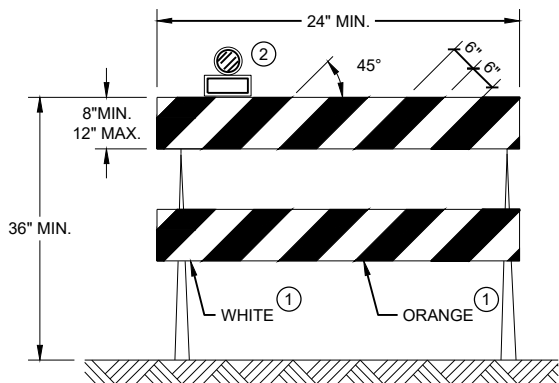
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



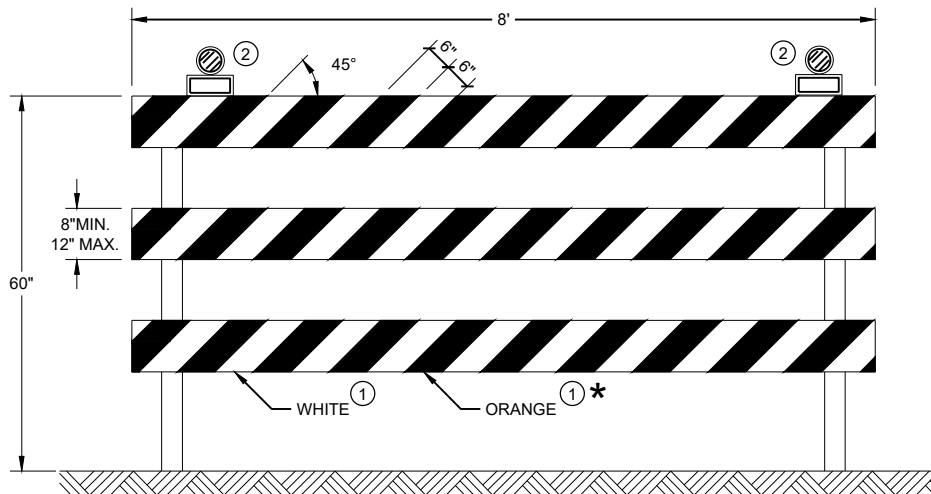
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 175
FHWA

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.

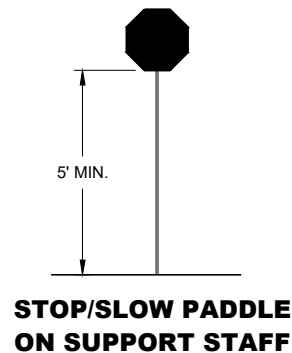
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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.

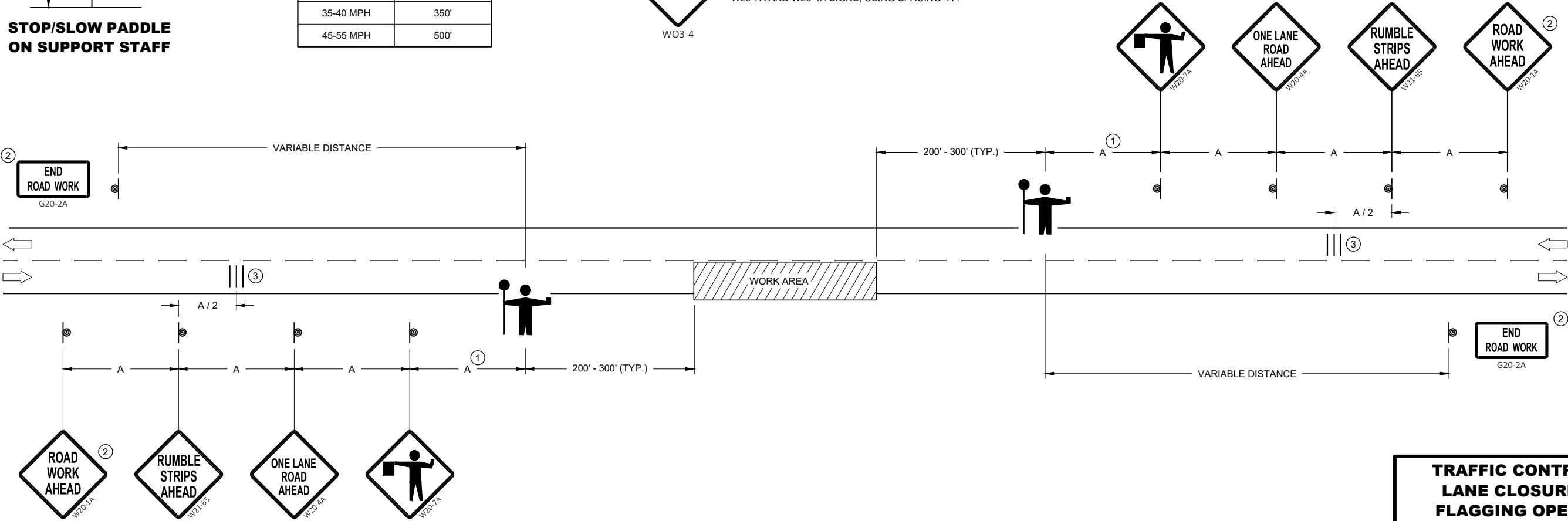


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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 176

FHWA

V1	LEAD VEHICLE
V2	MARKING VEHICLE
V3	SHADOW VEHICLE



➡ DIRECTION OF TRAFFIC

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

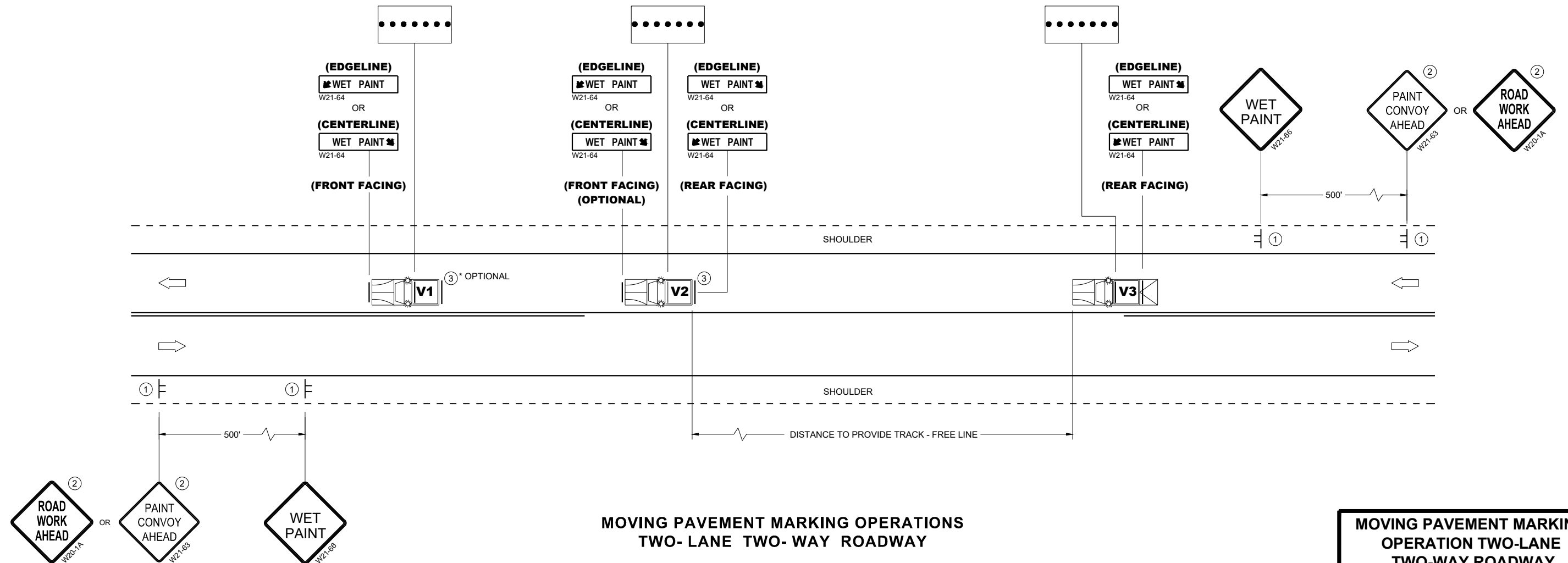
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025
DATE

/S/ Andrew Heidtke
STATE ELECTRICAL ENGINEER

FHWA 177

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

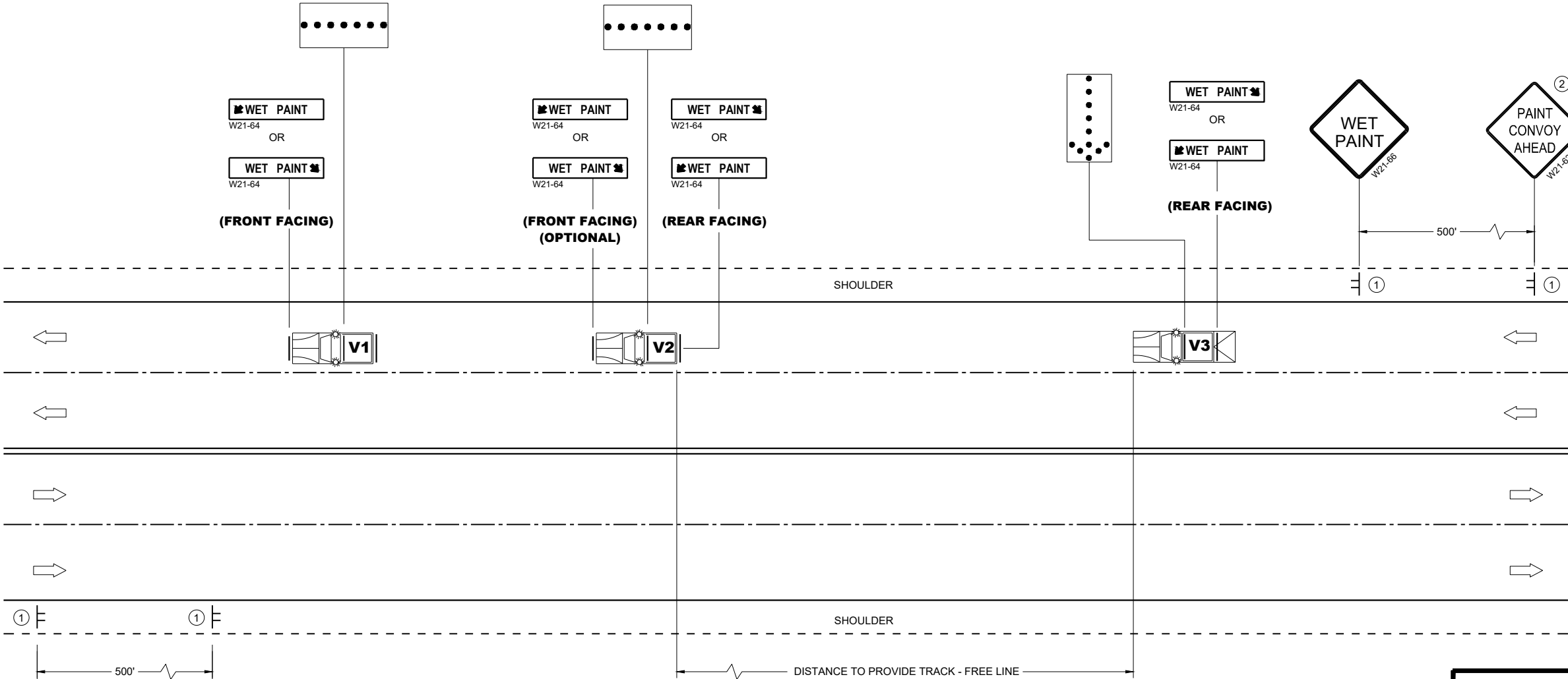
WORKERS SHALL NOT PERFORM WORK FROM ANY SHADOW OR PROTECTION VEHICLES.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLES AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL HAVE A MINIMUM HEIGHT OF 28" FOR WET PAVEMENT MARKINGS.

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

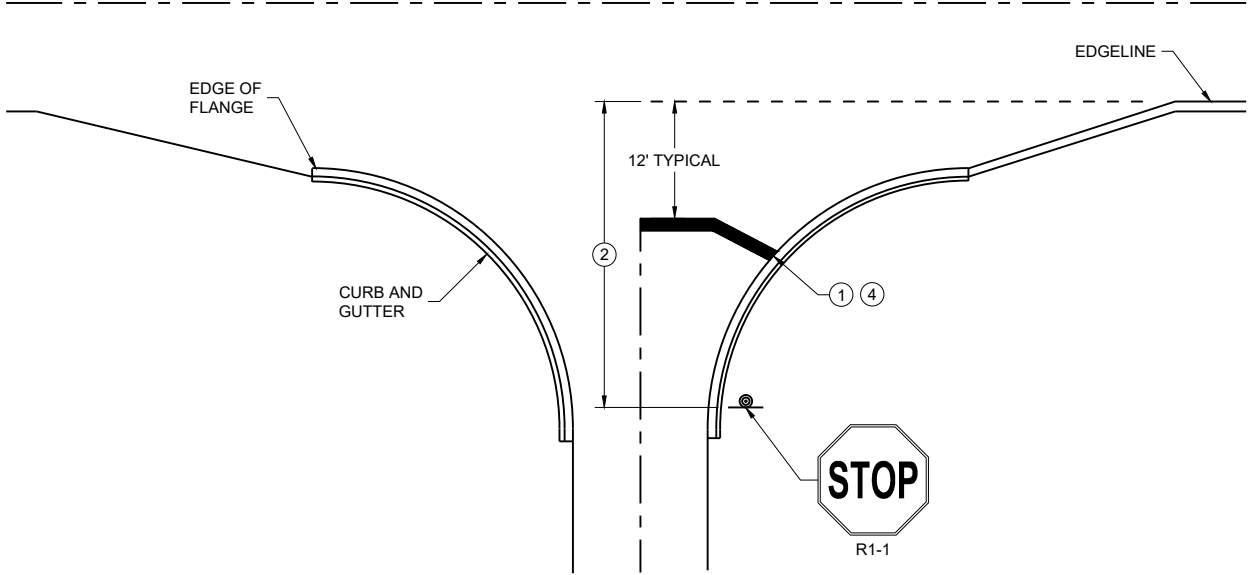


MOVING PAVEMENT MARKING OPERATIONS
MULTILANE UNDIVIDED ROADWAY

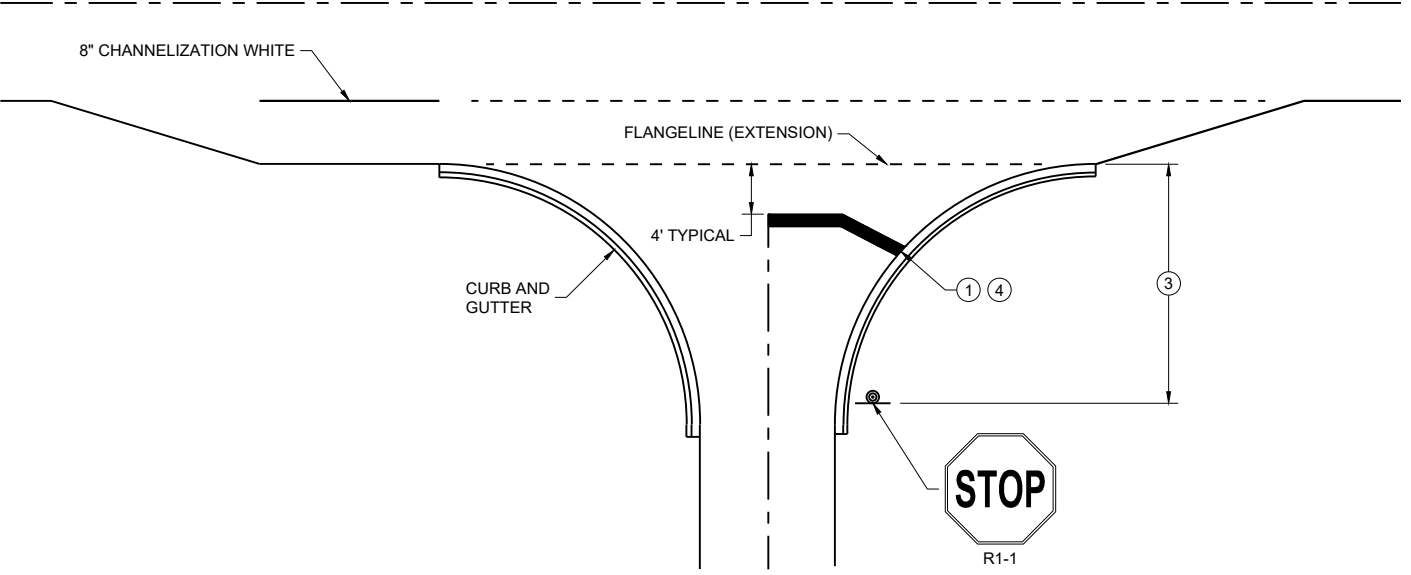
MOVING PAVEMENT MARKING
OPERATION MULTI-LANE
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

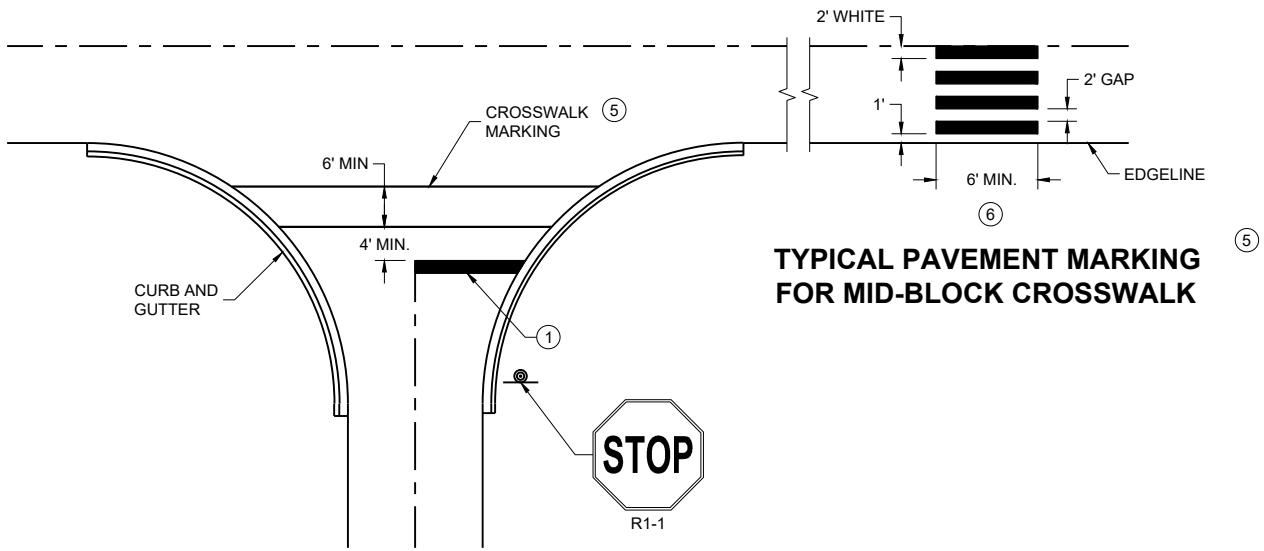
APPROVED
November 2025 /S/ Andrew Heidtke
DATE STATE ELECTRICAL ENGINEER
FHWA



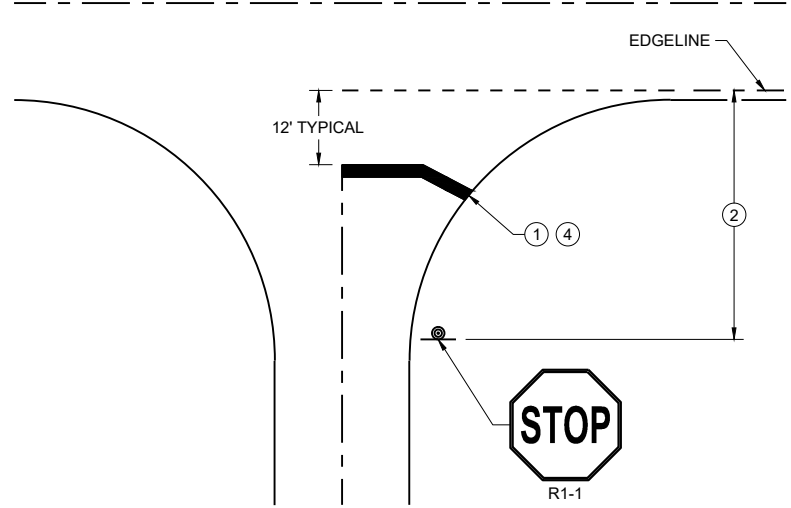
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR
SIDE ROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

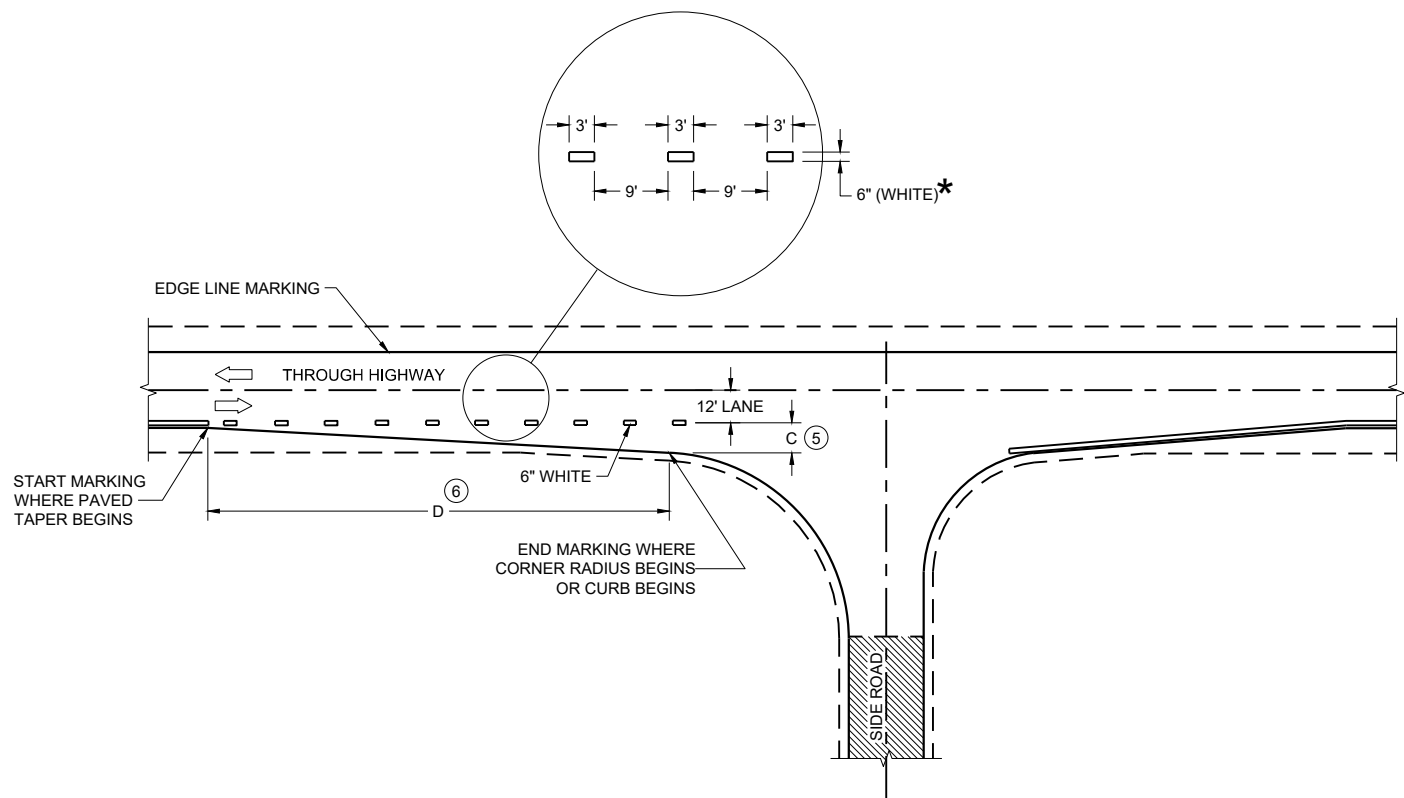
GENERAL NOTES

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

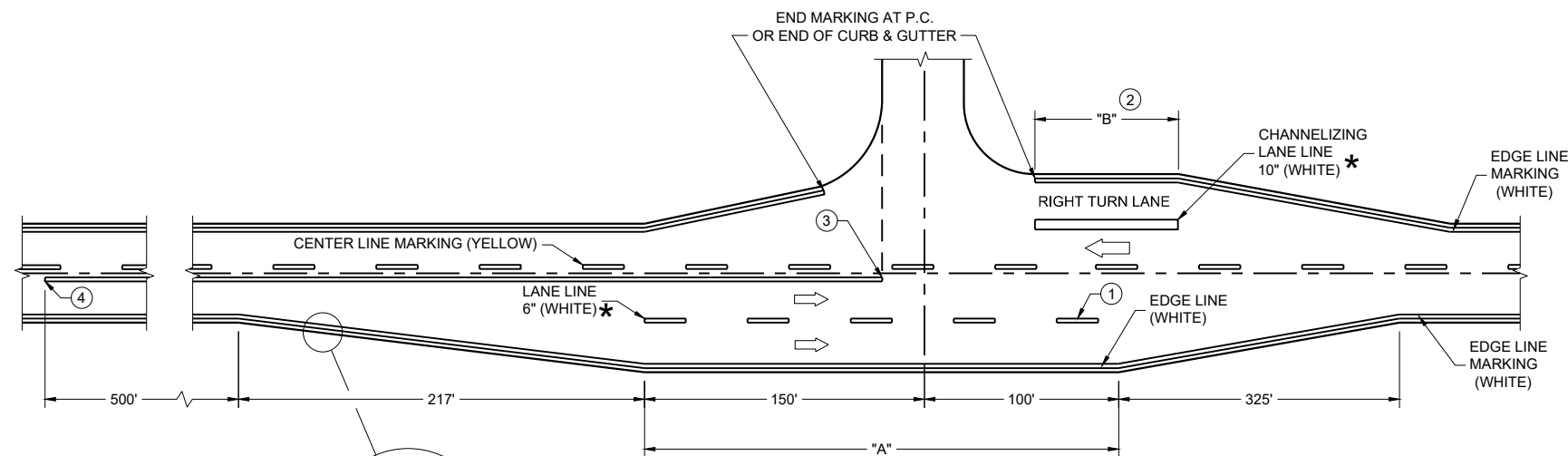
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE 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.
- ⑥ POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

STOP LINE AND CROSSWALK PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2024 DATE	/S/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER

FHWA



MINOR INTERSECTION



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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

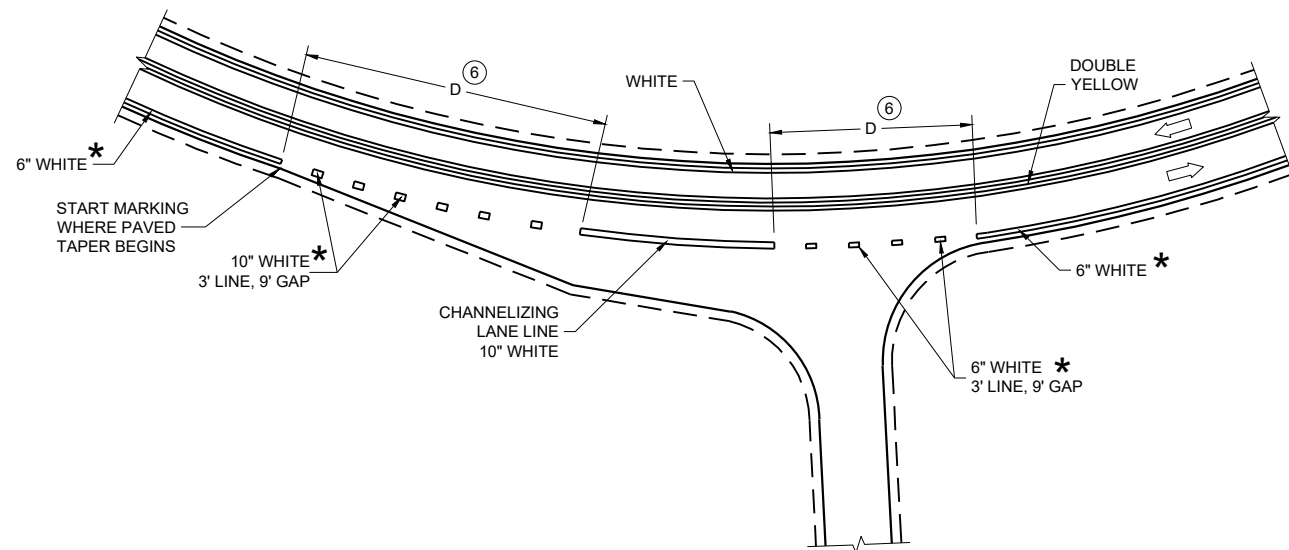
GENERAL NOTES

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

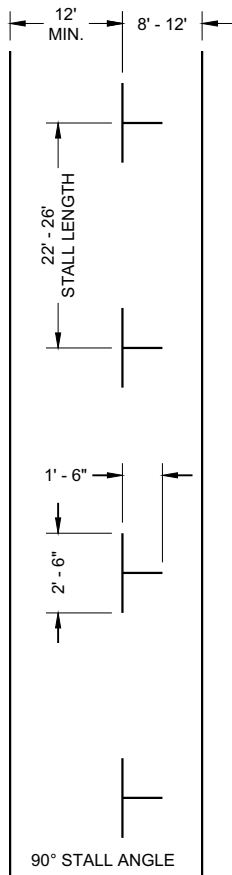
➡ DIRECTION OF TRAVEL



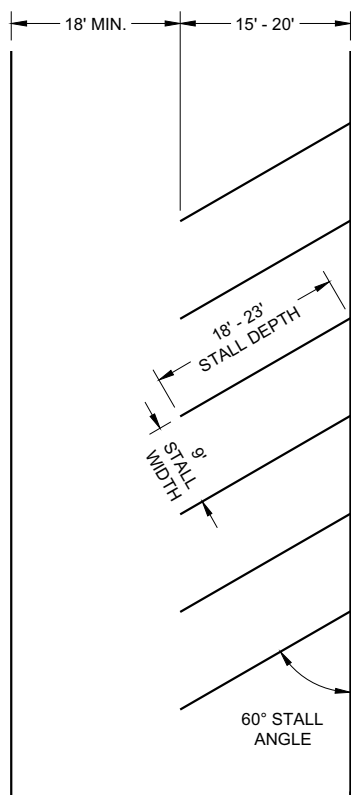
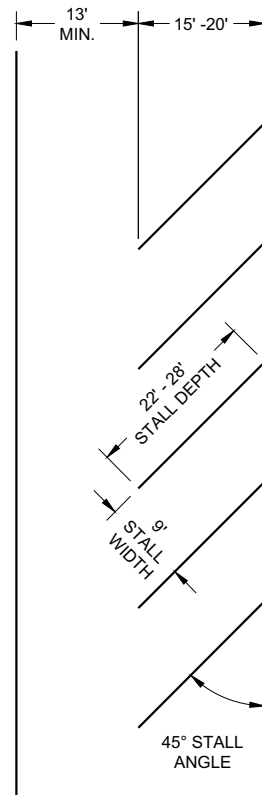
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

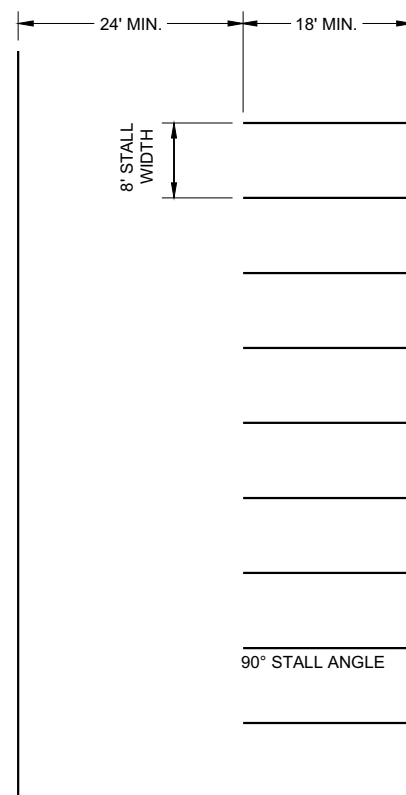


PARALLEL PARKING



ANGLED PARKING

(ANGLED PARKING IS NOT ALLOWED ON STATE HIGHWAYS UNLESS A DESIGN JUSTIFICATION HAS BEEN COMPLETED.)



PARKING LOTS

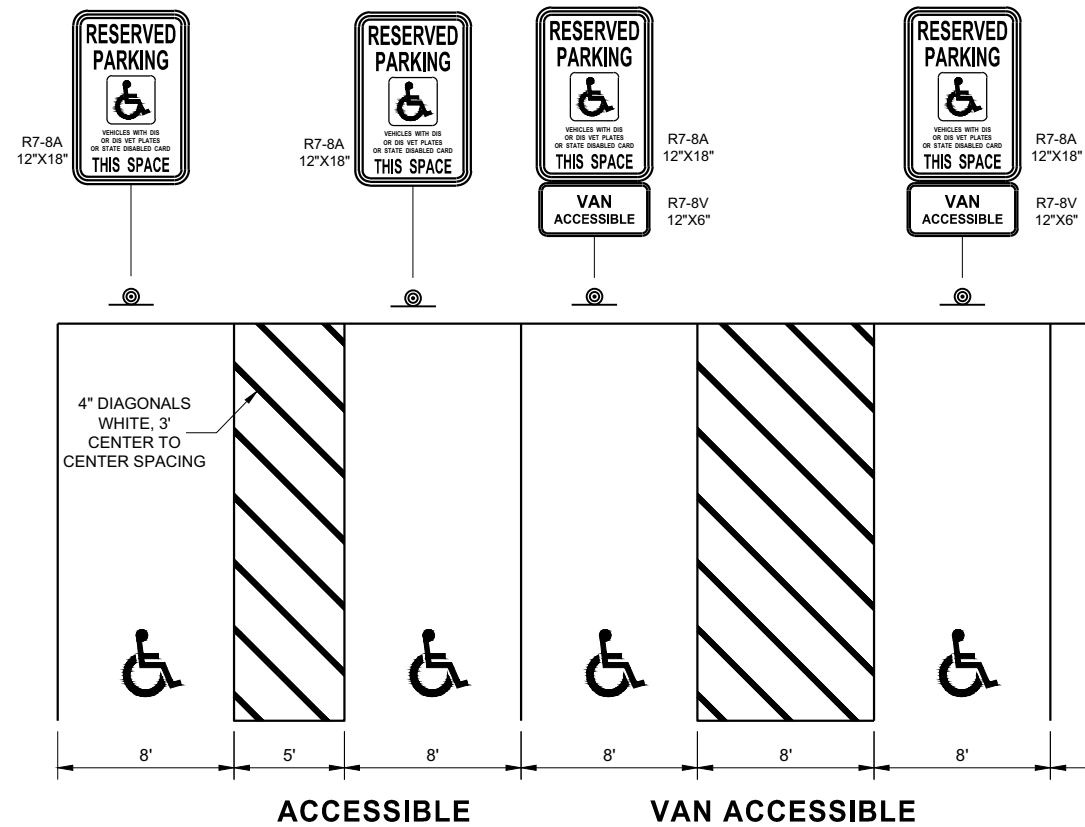
GENERAL NOTES

ALL LINES 4" WHITE (UNLESS OTHERWISE NOTED)

LAST PARKING STALL IS A MINIMUM OF 15' FROM THE CROSSWALK.

LEGEND

⊙ SIGN ON PERMANENT SUPPORT



PARKING STALL MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MAP ENGINEER 181
FHWA

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

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 THE REGIONAL TRAFFIC UNIT.

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

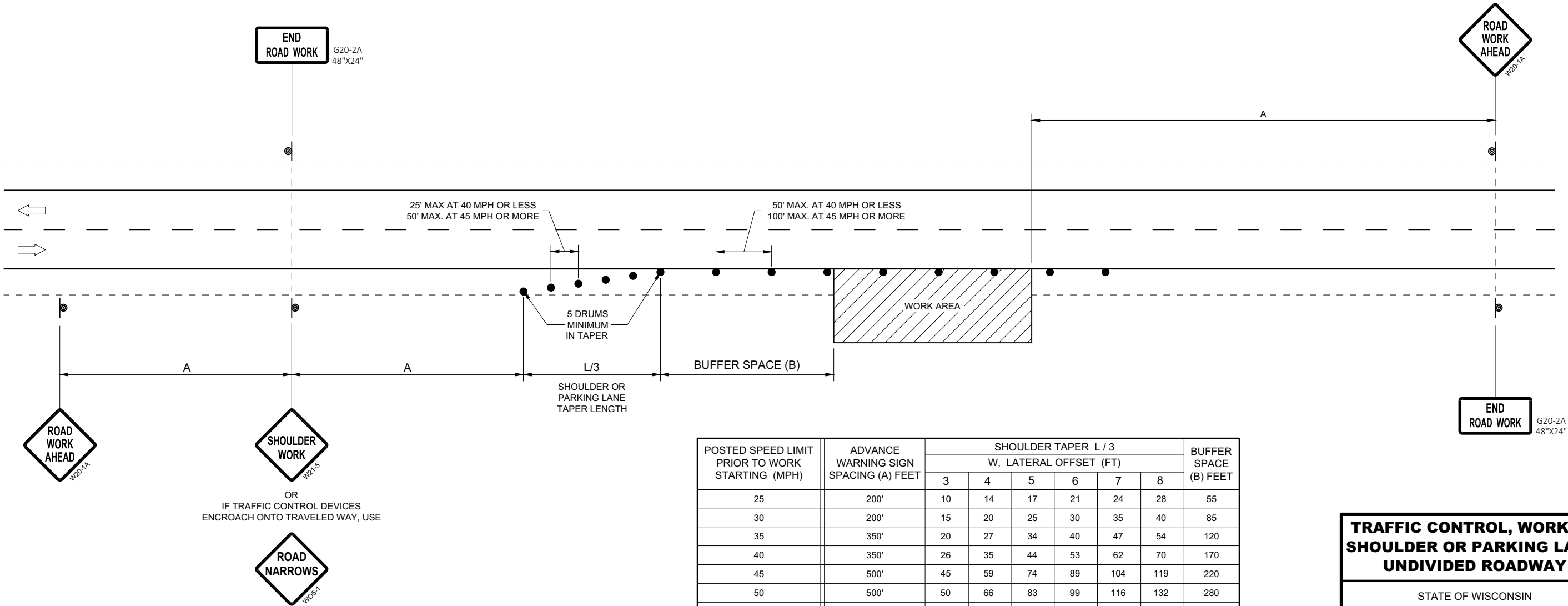
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



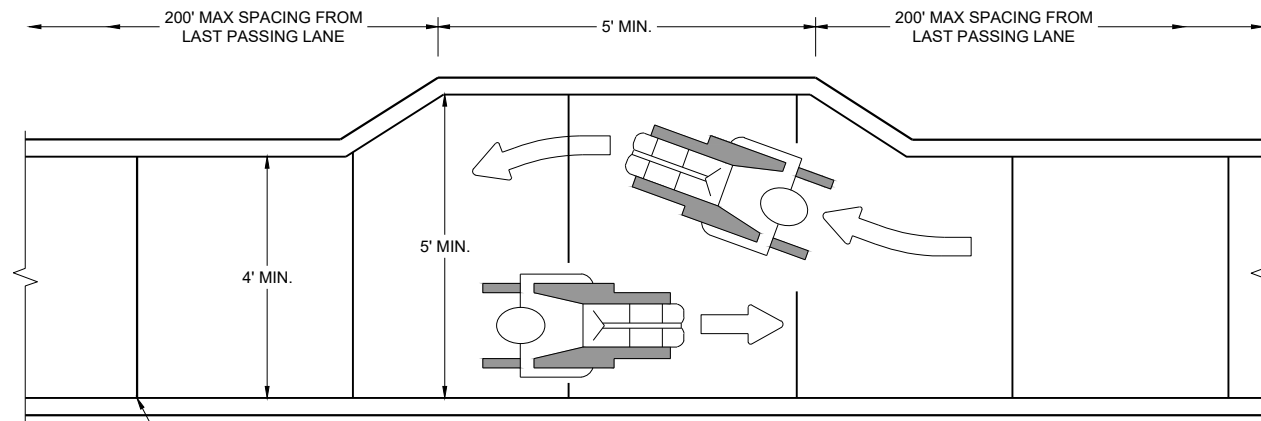
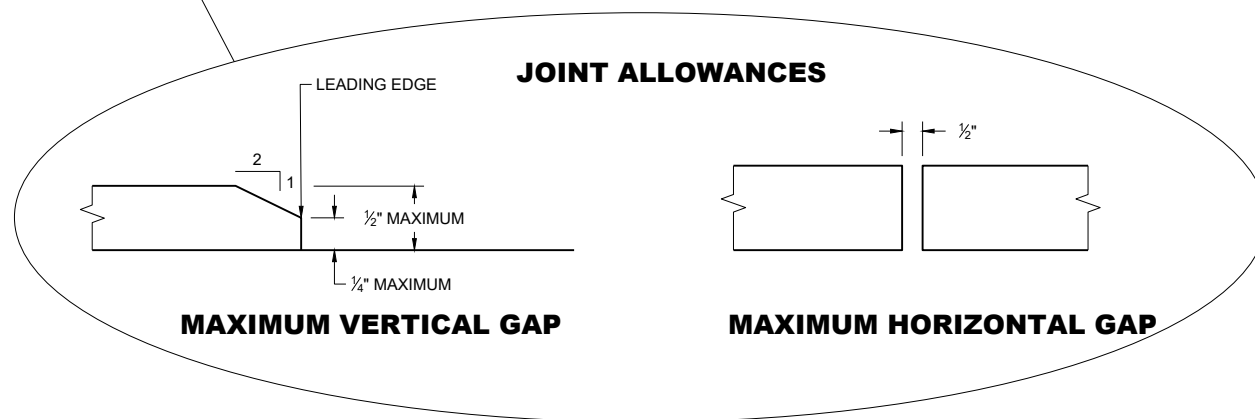
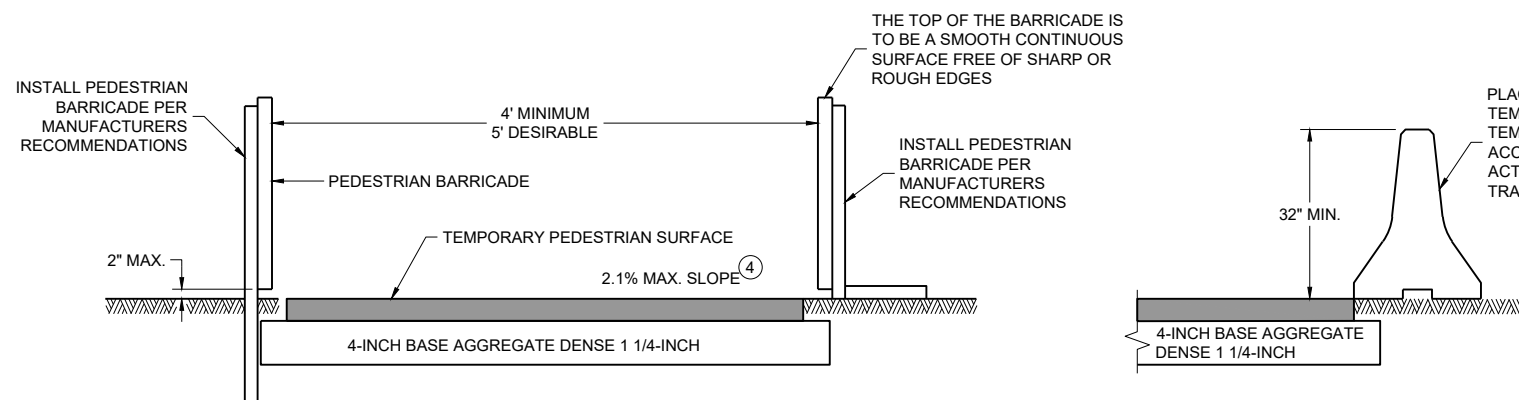
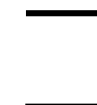
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE T
SAFETY ENGINEER 182

FHWA

**NARROW SIDEWALK PASSING DETAIL****MAXIMUM VERTICAL GAP****MAXIMUM HORIZONTAL GAP****TEMPORARY PEDESTRIAN ACCESS****LEGEND**

TEMPORARY PEDESTRIAN BARRICADE



AUDIBLE MESSAGE DEVICE



TEMPORARY SIGN SUPPORT



WORK AREA

GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

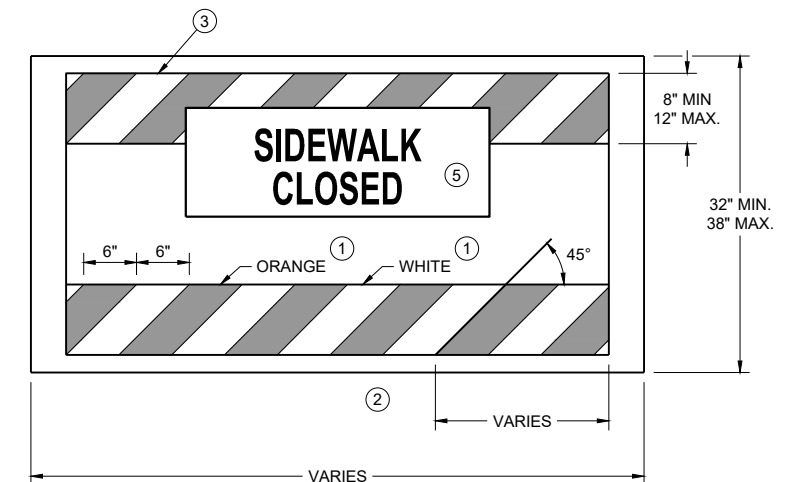
② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.

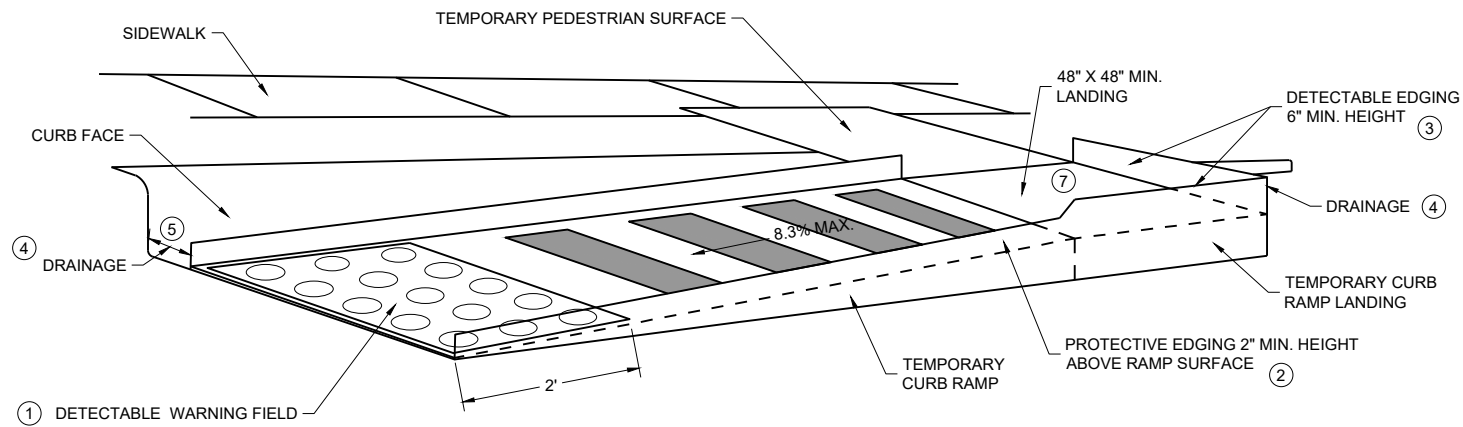
③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

★ USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

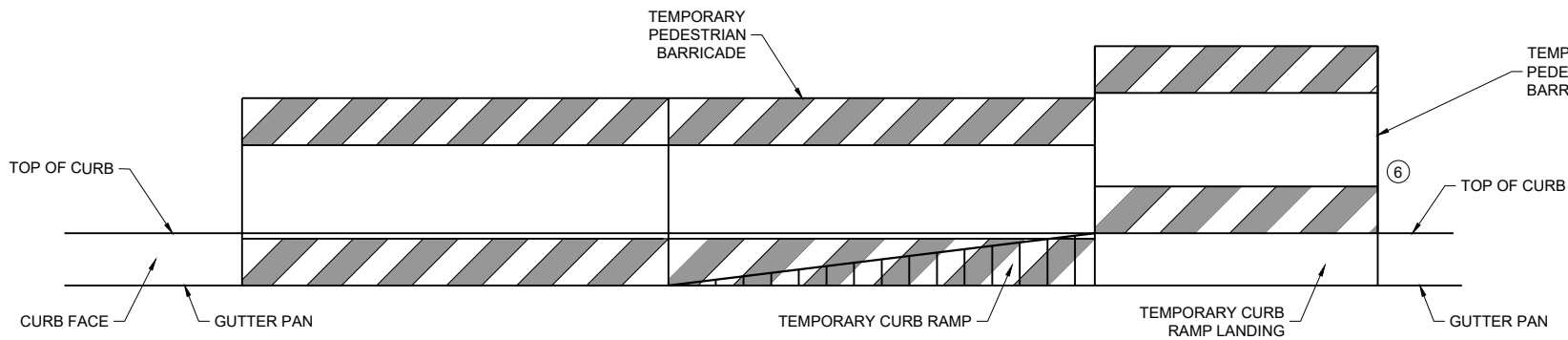
④ WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

⑤ WHERE SIGNS FOR TEMPORARY PEDESTRIAN ACCOMMODATIONS ARE SHOWN BEING PLACED BEHIND TEMPORARY PEDESTRIAN BARRICADE, THE SIGNS MAY BE MOUNTED ON THE TEMPORARY PEDESTRIAN BARRICADE INSTEAD. A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE SHALL BE USED IF MOUNTED ON THE BARRICADE. THE TOP OF THE SIGN SHALL BE MOUNTED BELOW THE TOP OF THE BARRICADE TO ALLOW A CONTINUOUS HAND-TRAILING EDGE.

**TEMPORARY PEDESTRIAN BARRICADE *****TEMPORARY PEDESTRIAN FLAGGING****TRAFFIC CONTROL,
PEDESTRIAN
ACCOMMODATION**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

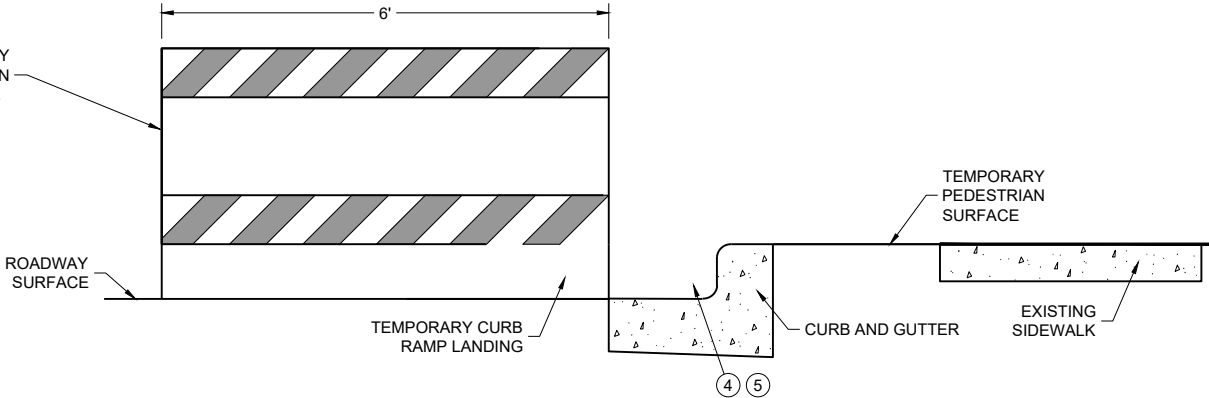


PERSPECTIVE VIEW



FRONT VIEW

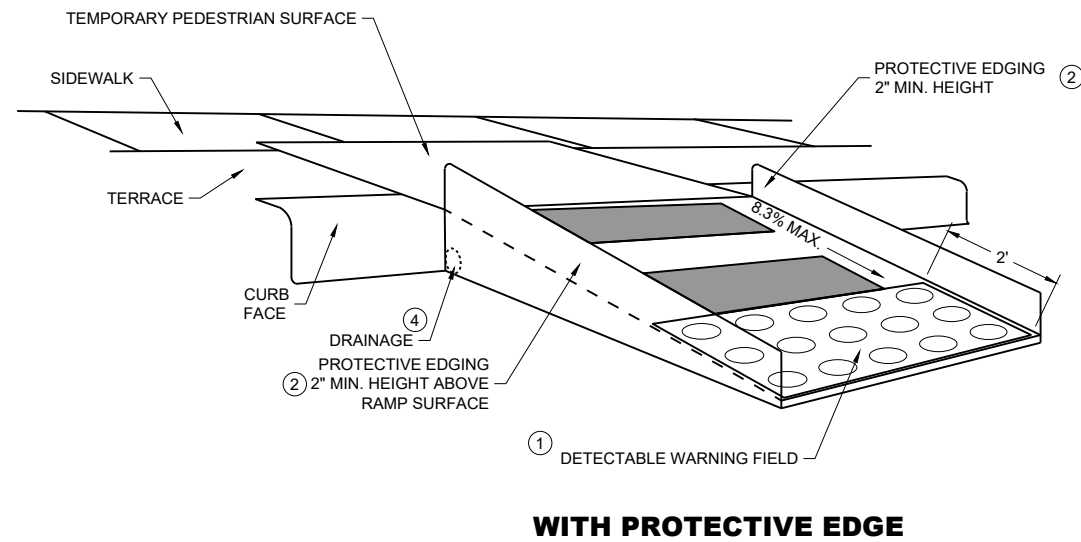
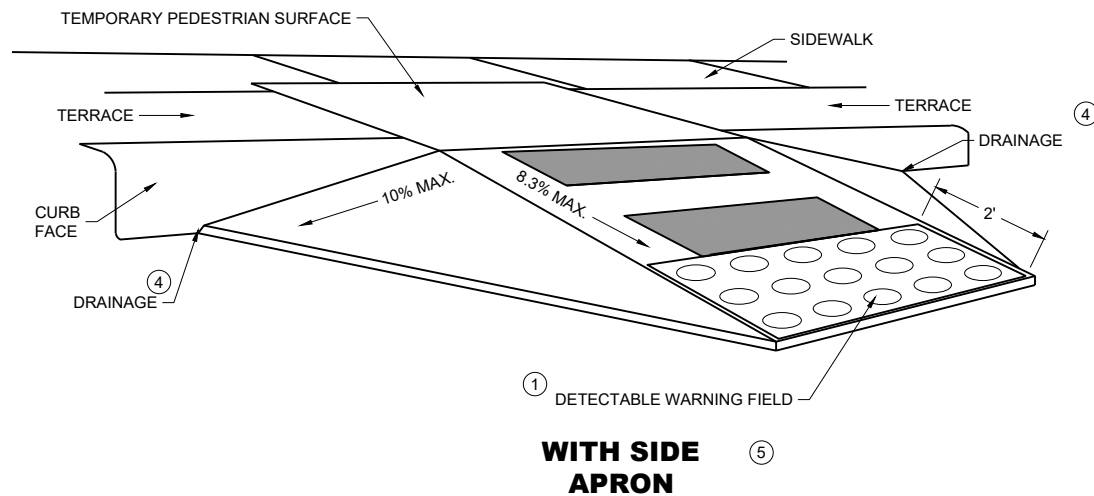
TEMPORARY CURB RAMP PARALLEL TO CURB



SIDE VIEW

GENERAL NOTES

- CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
- CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.
- CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
- ⑥ IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.
- ⑦ LANDING TO BE SLOPED A MAXIMUM OF 2.1% IN ALL DIRECTIONS OF PEDESTRIAN TRAVEL.



TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

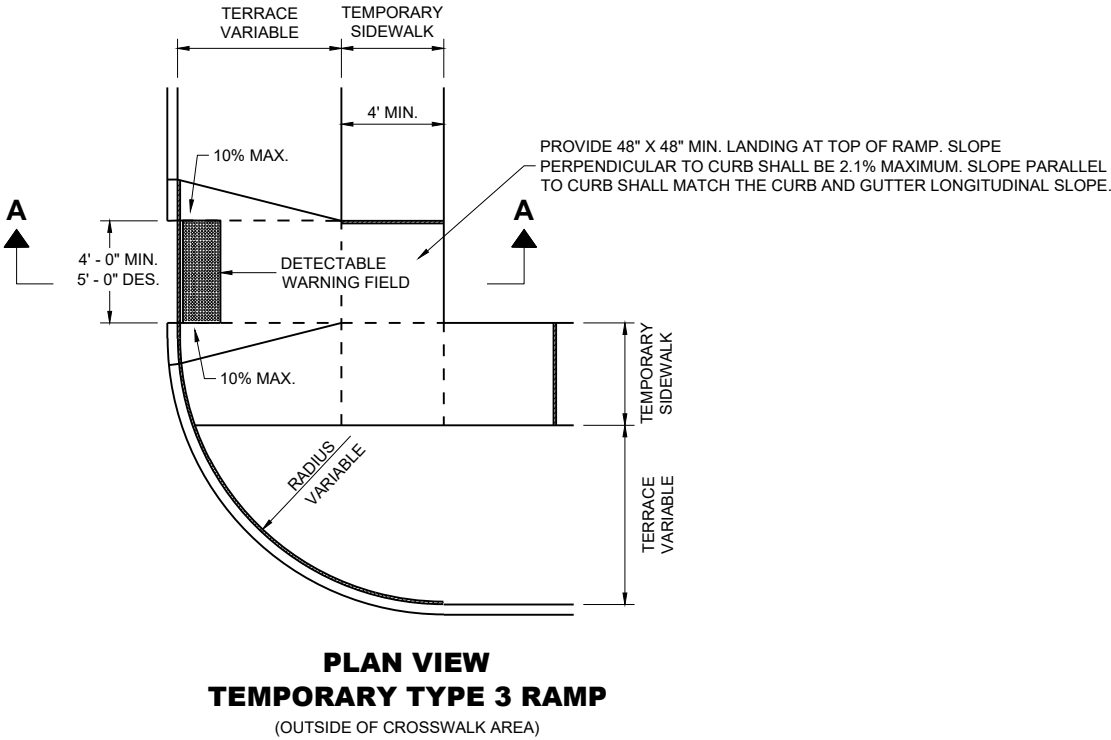
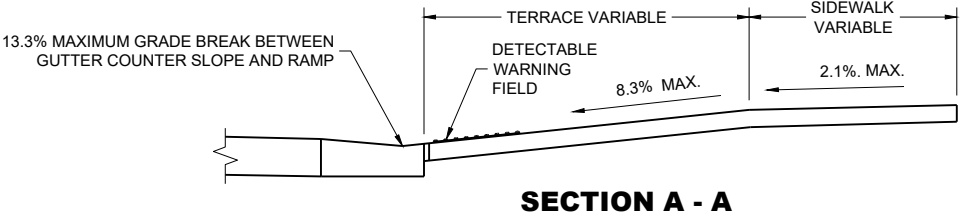
CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

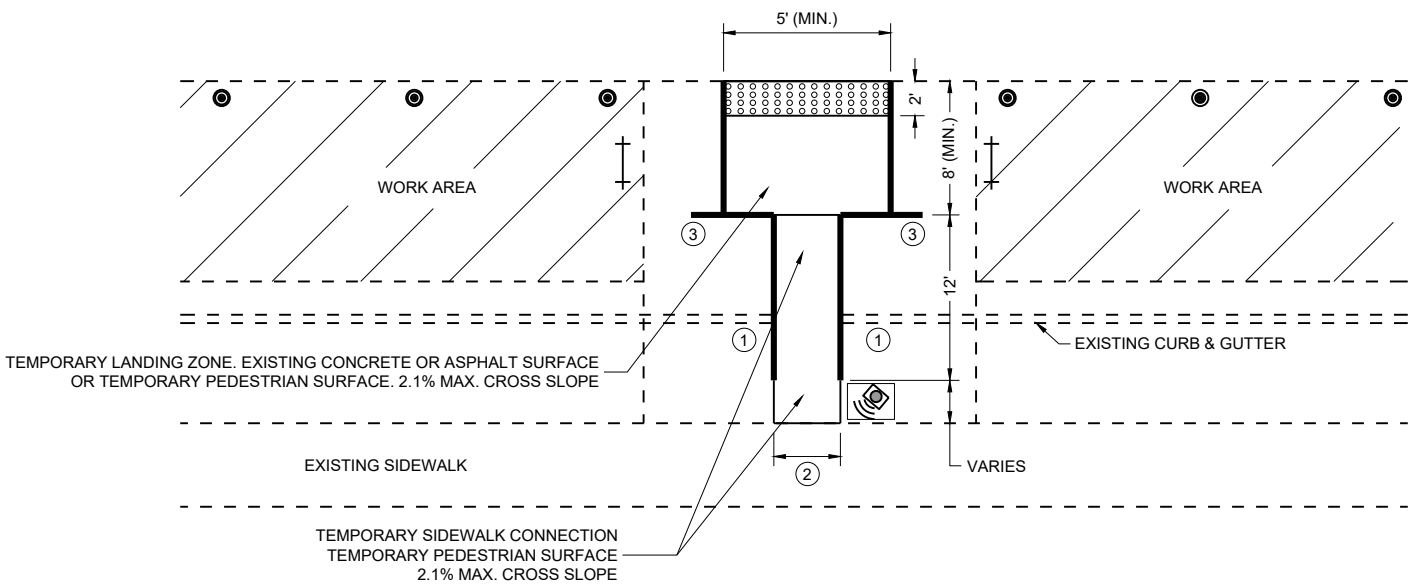
- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

GENERAL NOTES

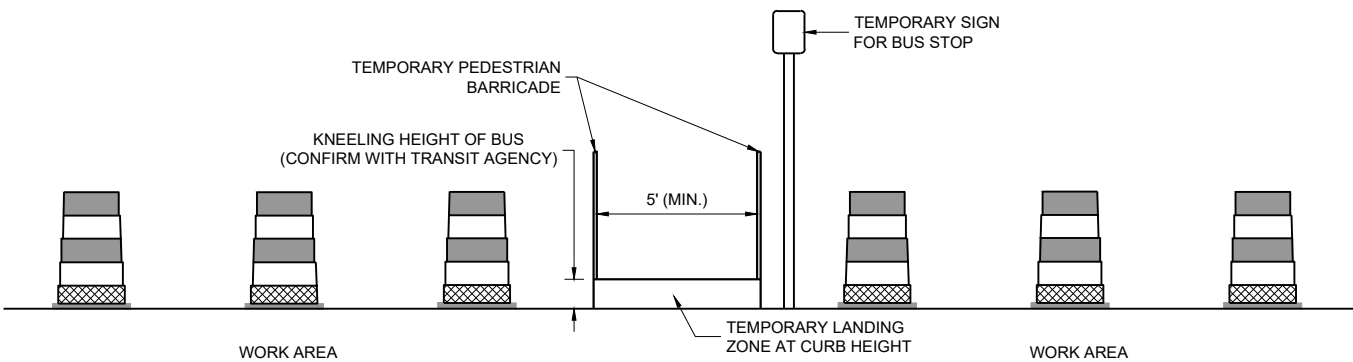


TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW



PROFILE VIEW
TEMPORARY BUS STOP PAD

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

CURB RAMPS AND LANDINGS SHALL HAVE A 1:48 (2.1%) MAX. CROSS-SLOPE.

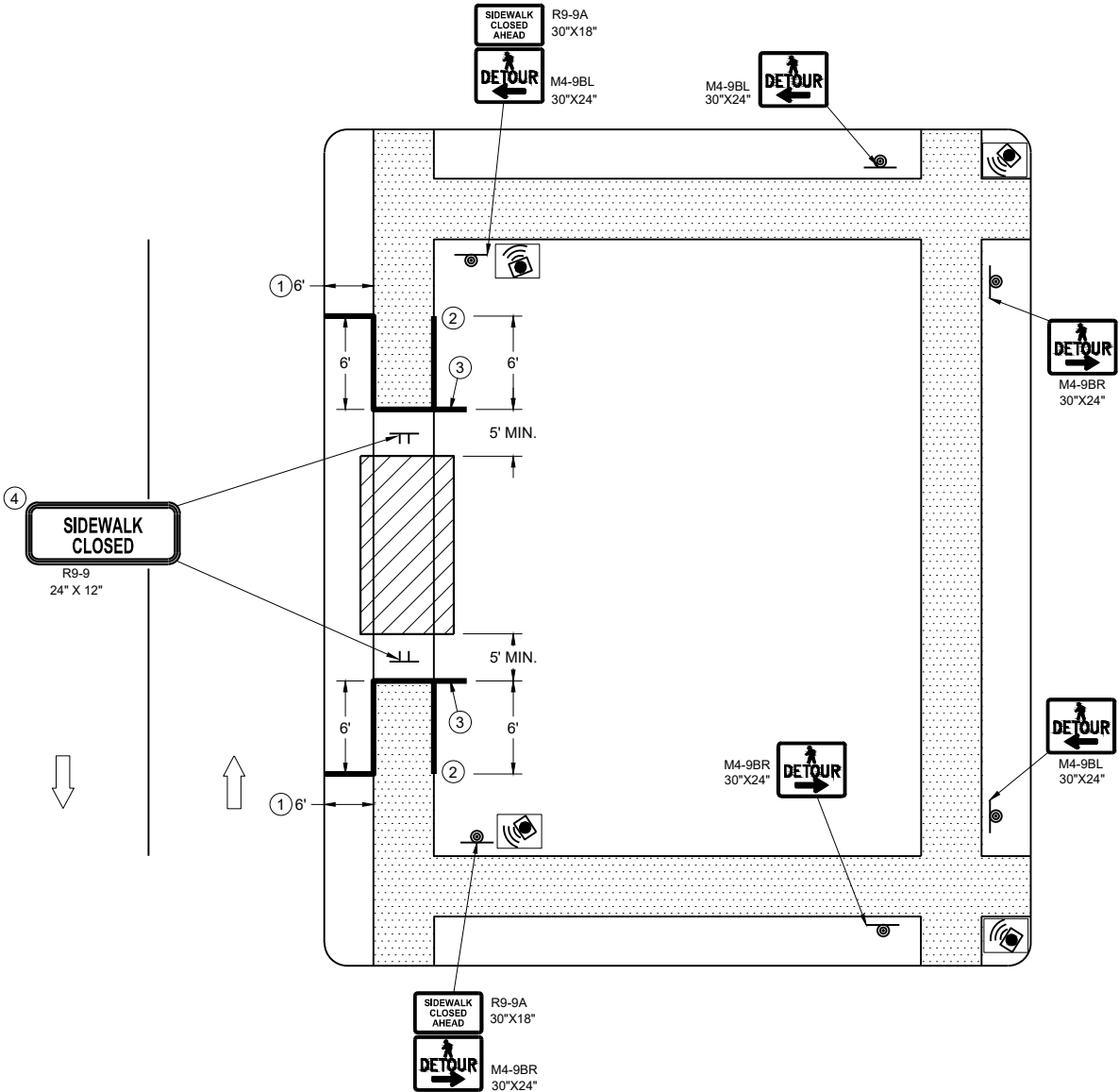
- ① DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ② 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.
- ③ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- ⊥ TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- ⊞ TEMPORARY DETECTABLE WARNING FIELD
- ▨ WORK AREA
- 🔊 TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  SIGN ON TEMPORARY SUPPORT
-  UNDER PEDESTRIAN TRAFFIC
-  WORK AREA
-  TEMPORARY PEDESTRIAN BARRICADE
-  DIRECTION OF TRAFFIC
-  TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

GENERAL NOTES

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

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

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

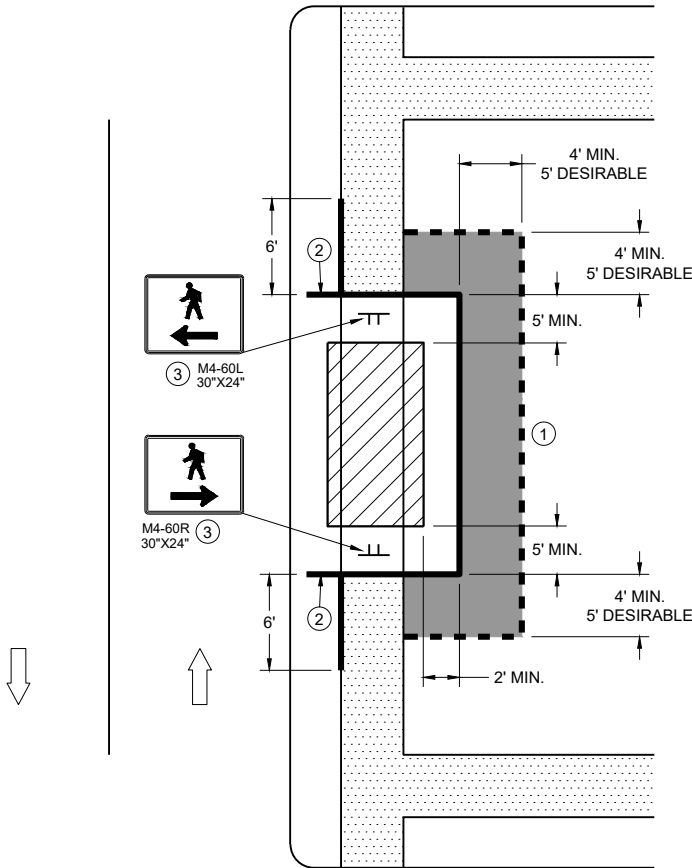
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- 1 USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
 - 2 IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
 - 3 MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



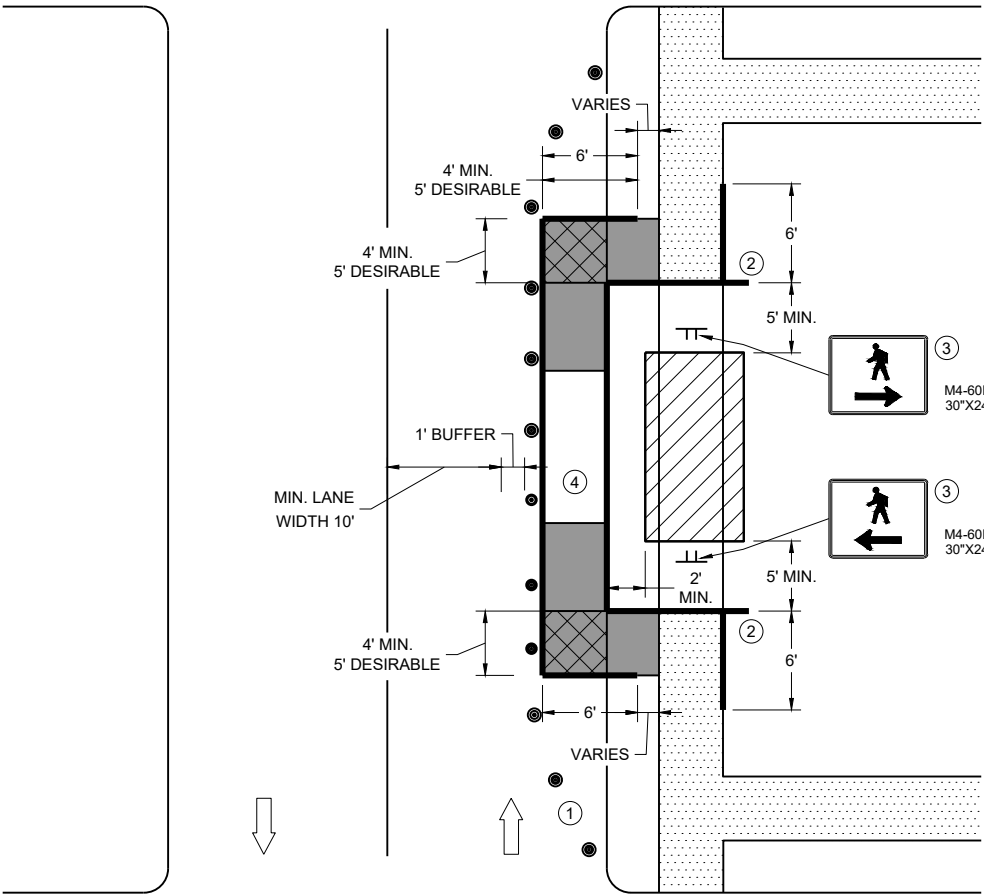
SIDEWALK BYPASS
SINGLE SIDE

LEGEND

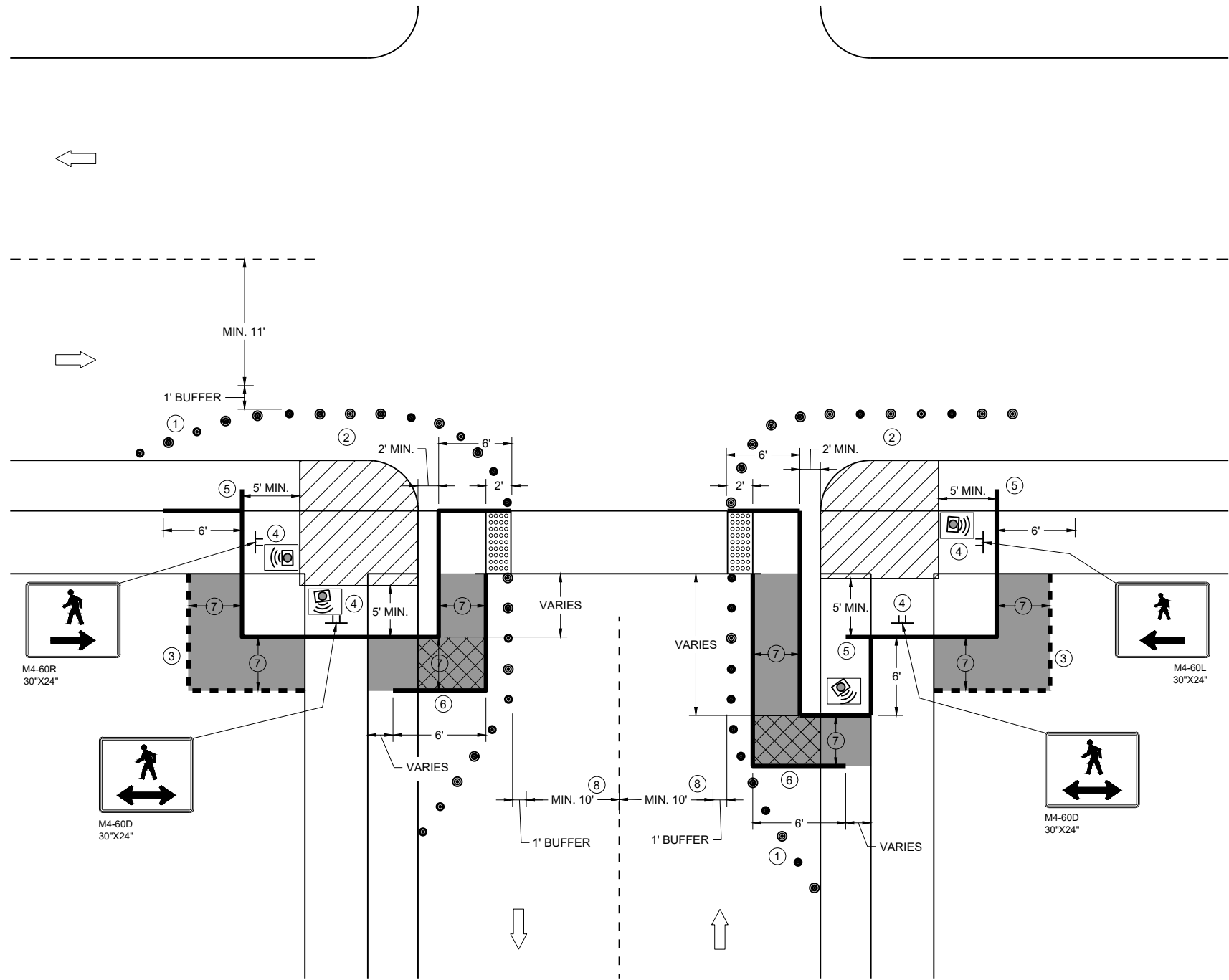
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
 - ② PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
 - ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
 - ④ USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURFACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE. WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.



SIDEWALK BYPASS, SINGLE SIDE



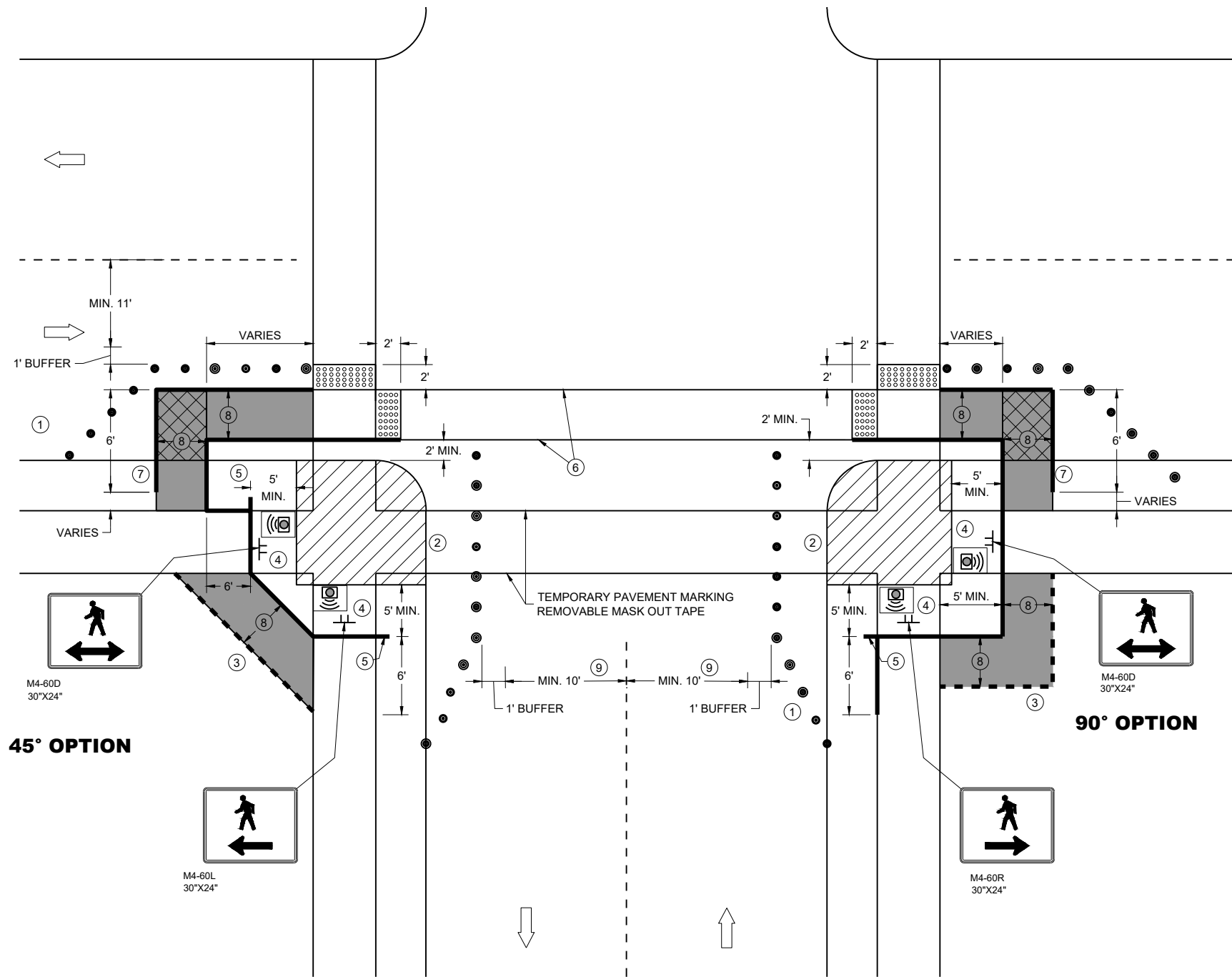
CURB RAMP PEDESTRIAN TRAFFIC CONTROL
SIDEWALK ON SINGLE SIDE

GENERAL NOTES

- IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.
- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG
- WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
 - ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
 - ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
 - ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
 - ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
 - ⑥ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
 - ⑦ 4 FEET MINIMUM, 5 FEET DESIRABLE
 - ⑧ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

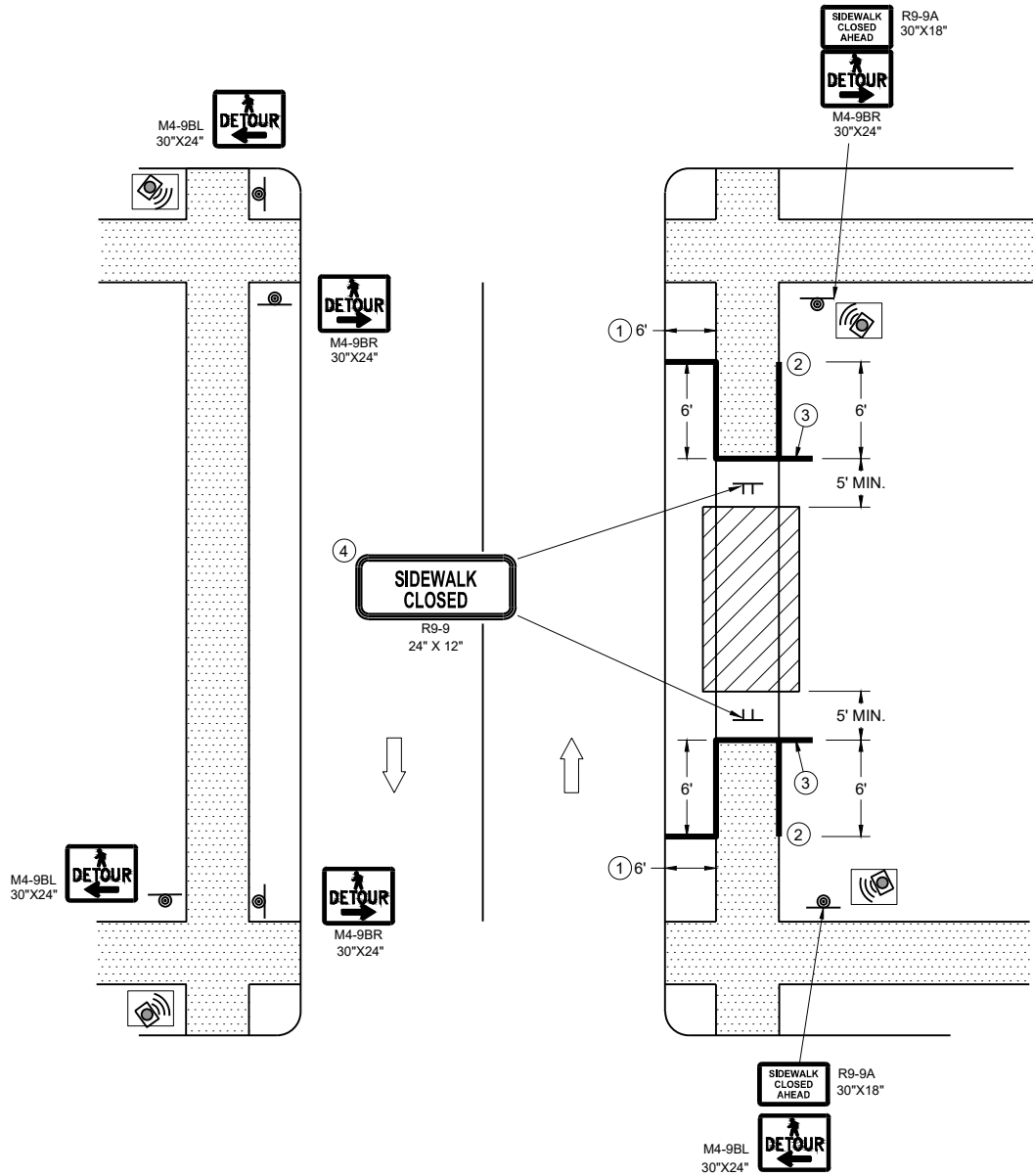
- 1 SHOULDERS OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- 2 PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- 3 USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- 4 MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- 5 PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- 6 WHITE 6" TEMPORARY PAVEMENT MARKING
- 7 IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- 8 4 FEET MINIMUM, 5 FEET DESIRABLE
- 9 IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

LEGEND

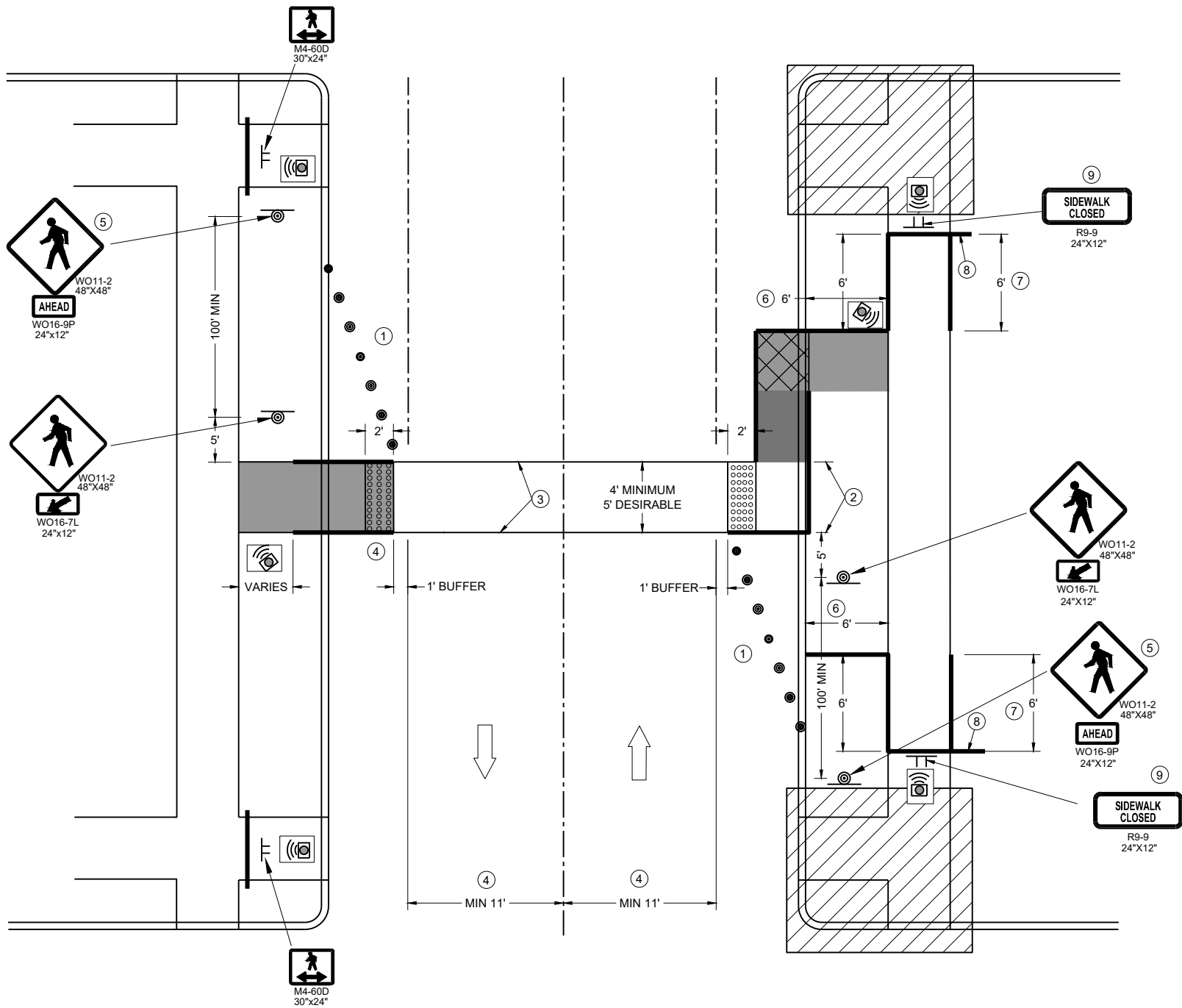
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC
- TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

GENERAL NOTES

- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.
- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
 - ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
 - ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
 - ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

WHEN THE TEMPORARY PEDESTRIAN ACCESS ROUTE RUNS PARALLEL ON THE ROADWAY SURFACE, THE MAXIMUM CROSS SLOPE WILL MATCH THE EXISTING ROADWAY CROSS SLOPE.

- ① SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② 4 FEET MINIMUM, 5 FEET DESIRABLE.
- ③ WHITE 6" TEMPORARY PAVEMENT MARKING.
- ④ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMP MAY NEED TO BE UTILIZED.
- ⑤ IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
- ⑥ IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ⑦ PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ⑧ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ⑨ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

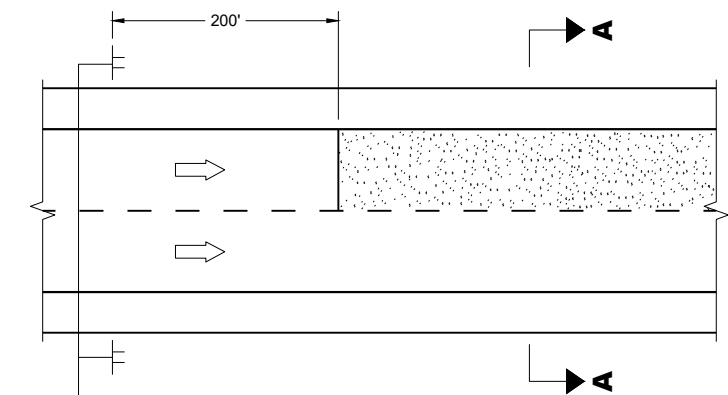
LEGEND

- TRAFFIC CONTROL DRUM
- ⊥ SIGN ON TEMPORARY SUPPORT
- ▬ TEMPORARY CURB RAMP
- ▬ TEMPORARY DETECTABLE WARNING FIELD
- ▬ TEMPORARY PEDESTRIAN SURFACE "A"
- ▬ TEMPORARY PEDESTRIAN SURFACE "B"
- ▬ WORK AREA
- ▬ TEMPORARY PEDESTRIAN BARRICADE
- ➡ DIRECTION OF TRAFFIC
- 🔊 TEMPORARY AUDIBLE MESSAGE DEVICE (EXACT PLACEMENT BASED UPON FIELD CONDITIONS)

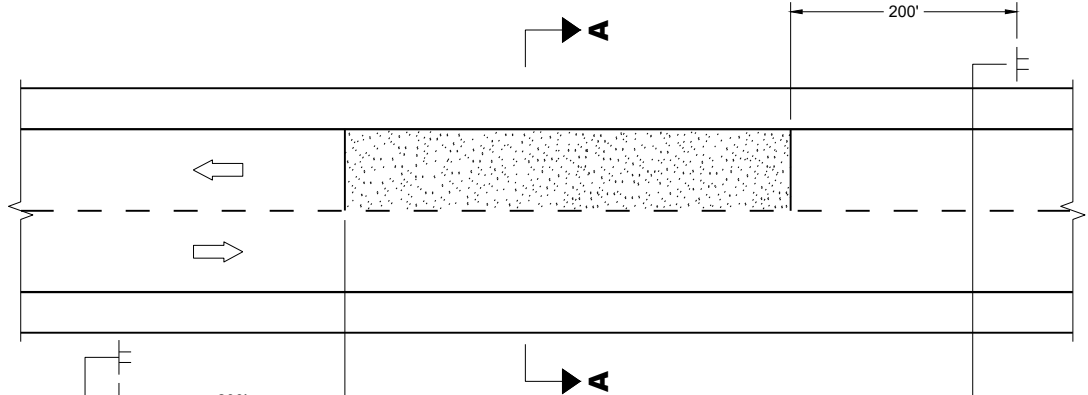
TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER



MULTI-LANE

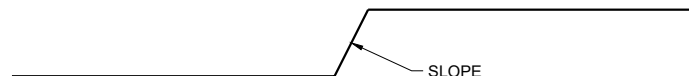


TWO-WAY TWO LANE

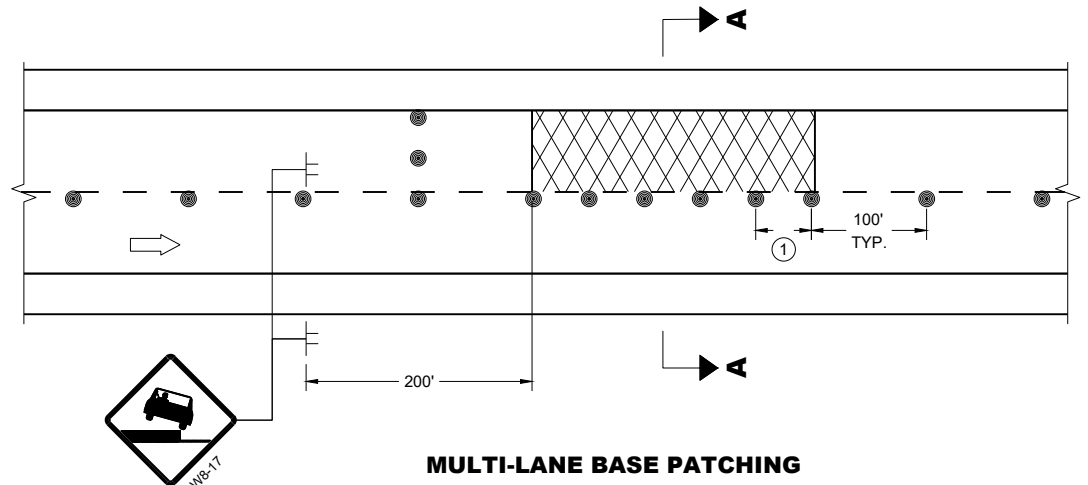


SECTION A - A

OR



SECTION A - A



MULTI-LANE BASE PATCHING

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.

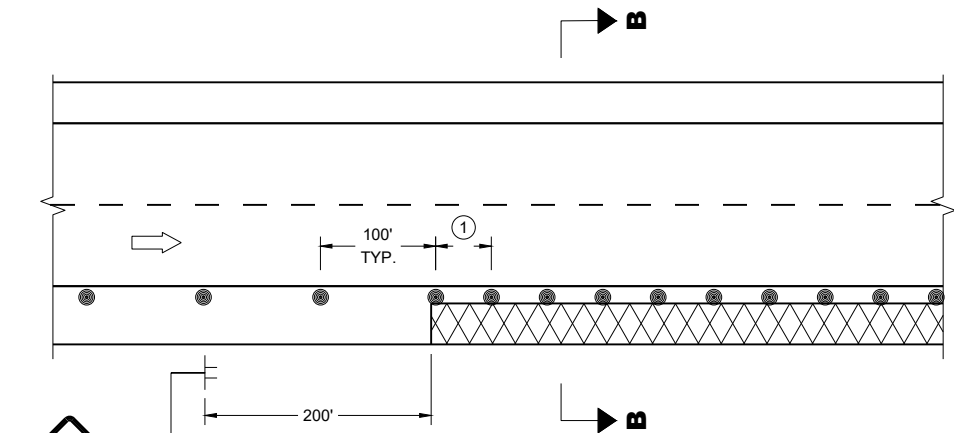
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

★ IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

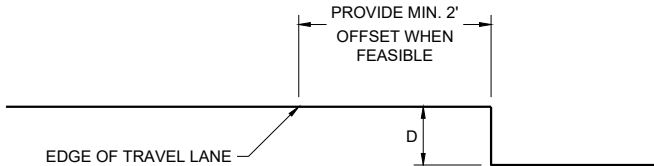
① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

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 ©
< 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
February 2025 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
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.

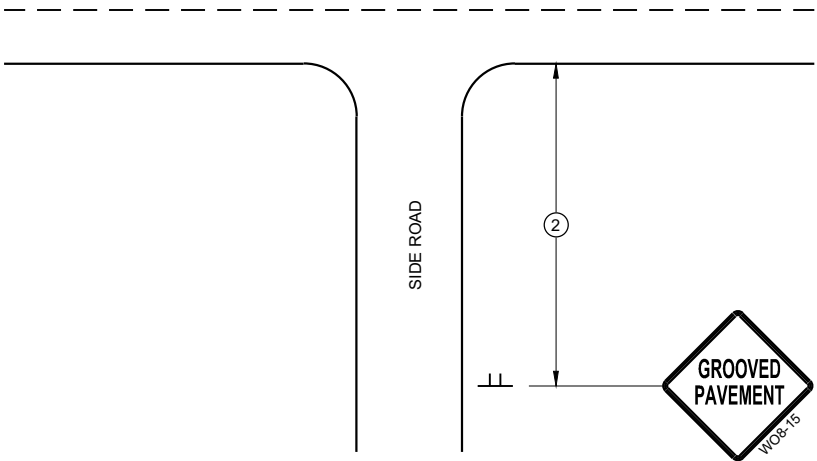
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

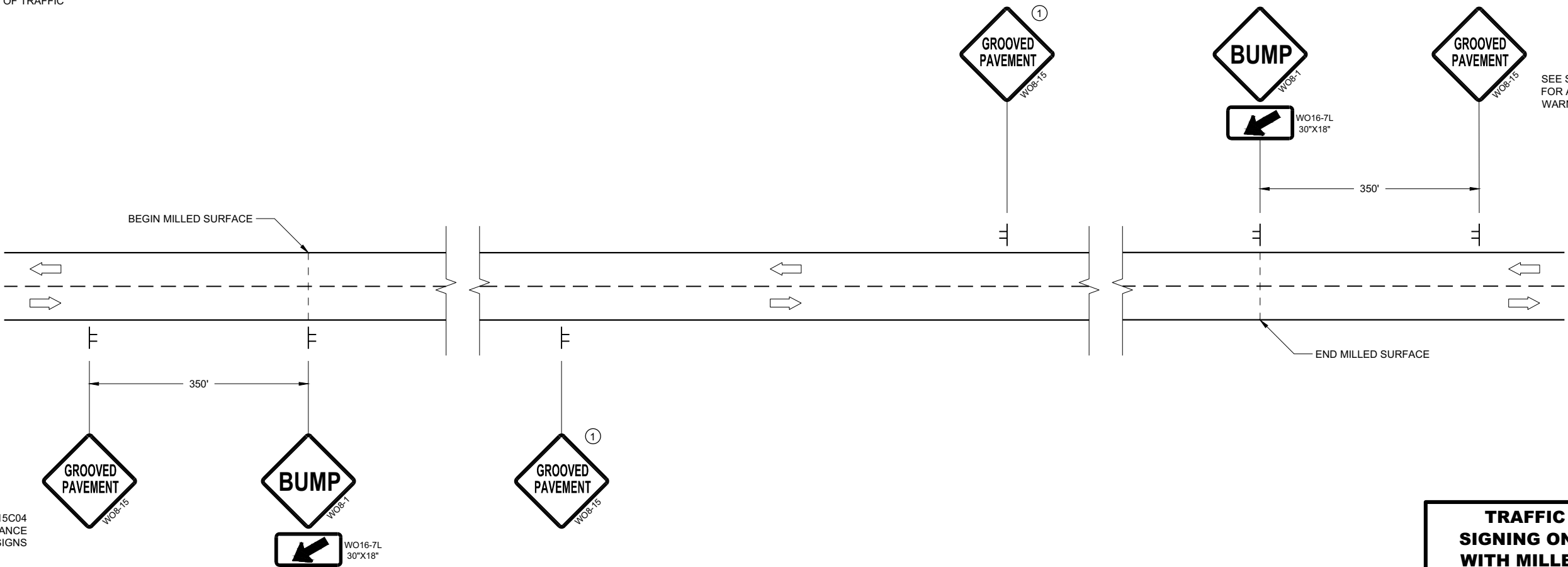
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,
SIGNING ON ROADWAYS
WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 196

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.

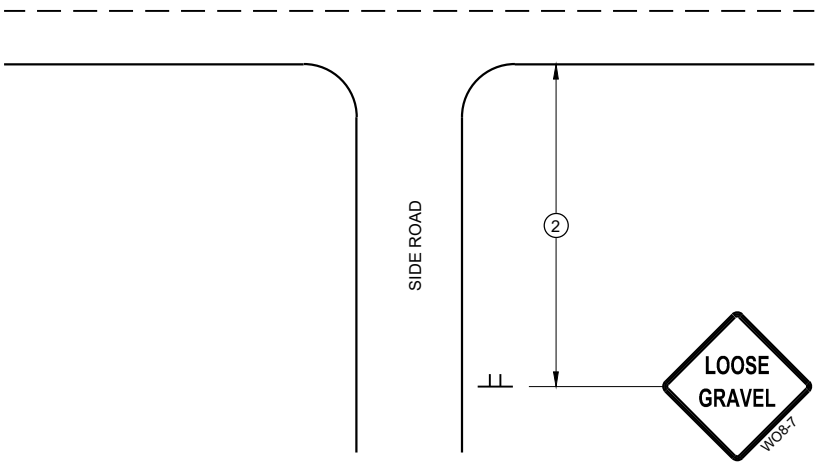
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

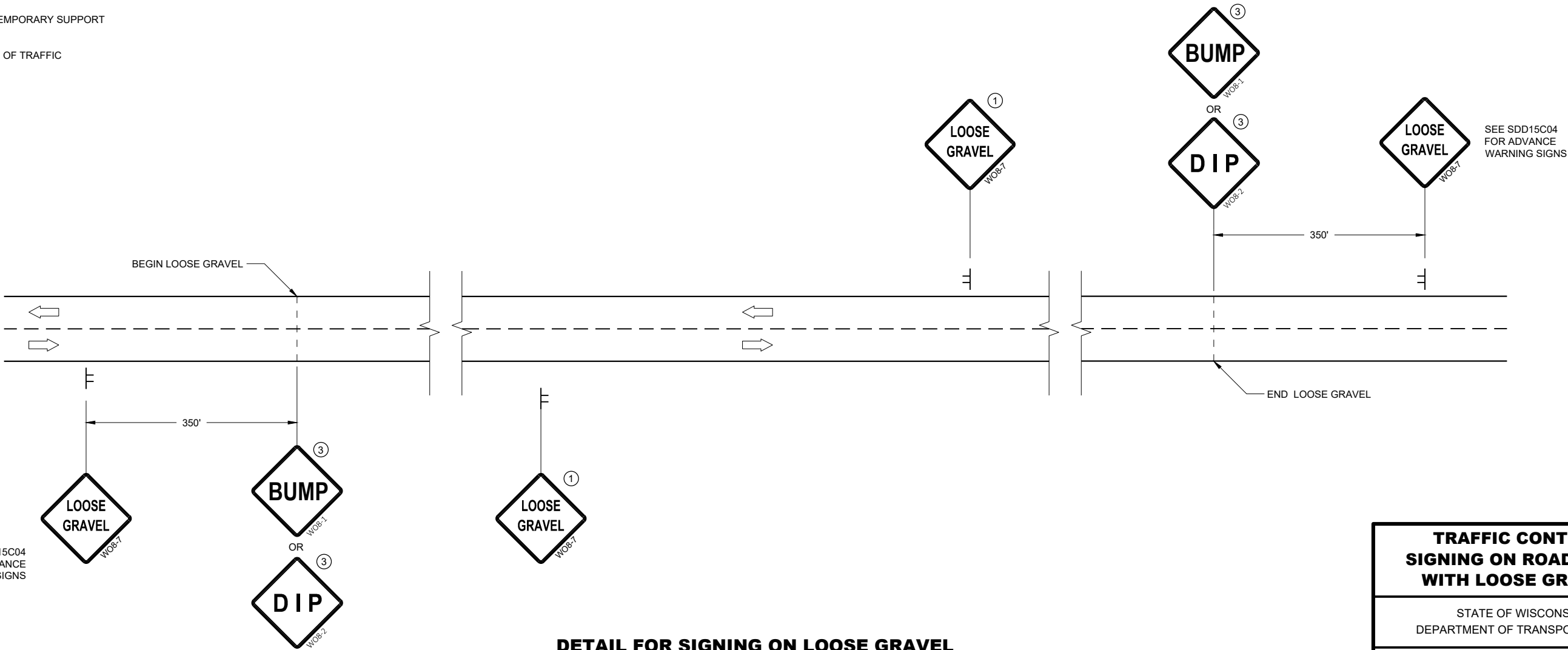
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL
OR CHIP SEALED SURFACES

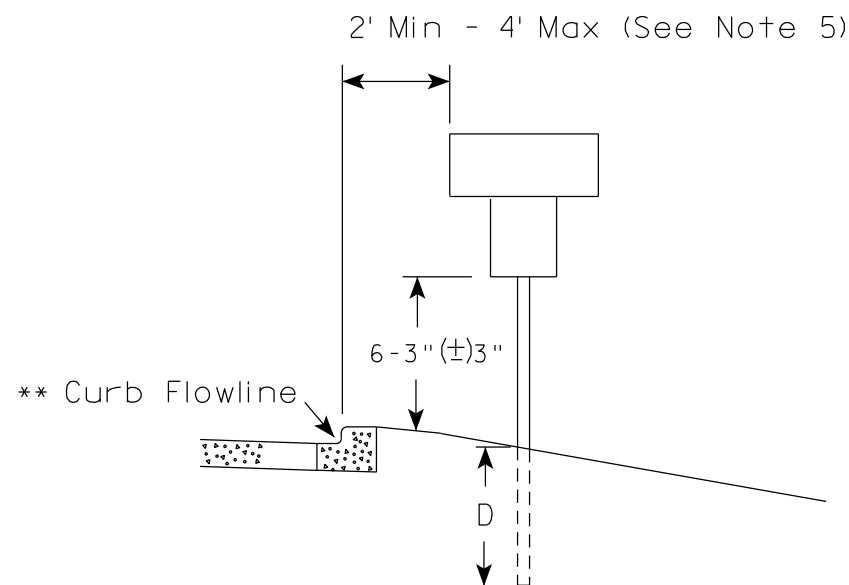
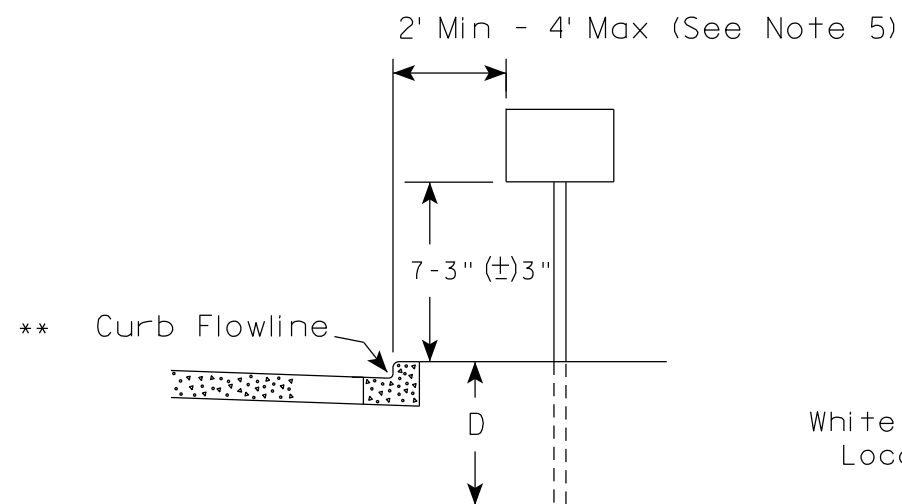
TRAFFIC CONTROL
SIGNING ON ROADWAYS
WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 197

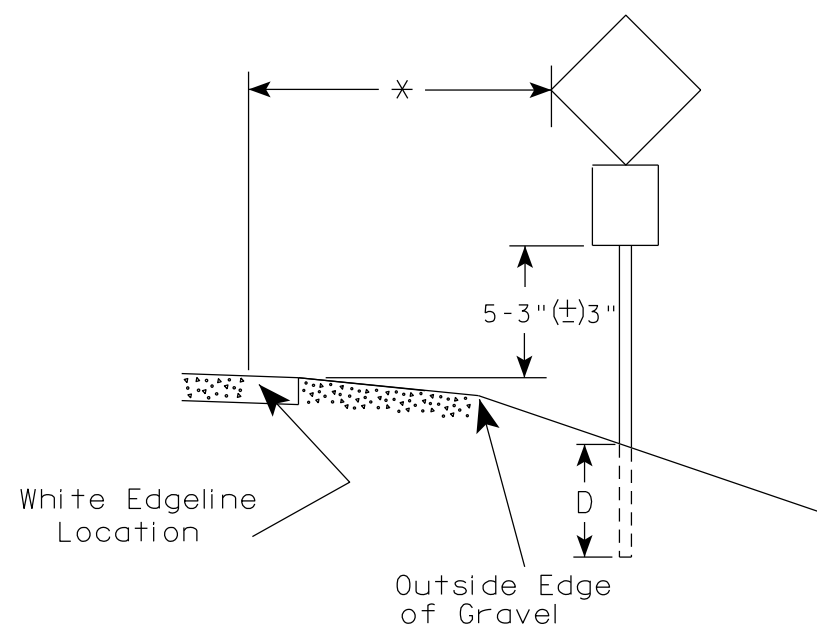
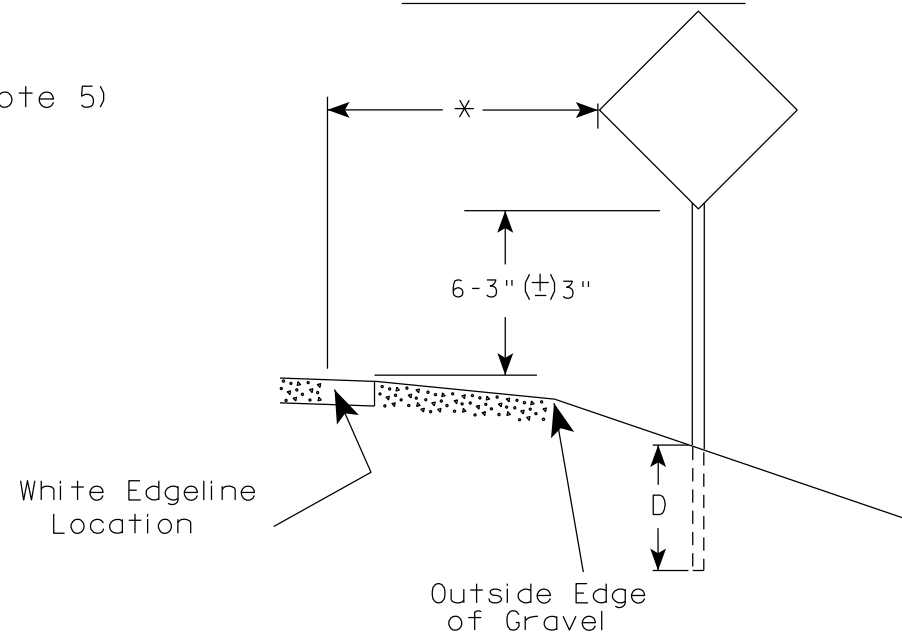
FHWA

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" (±) 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" (±) 3".
- For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 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 12/6/23

PLATE NO. A4-3.23

PROJECT NO:

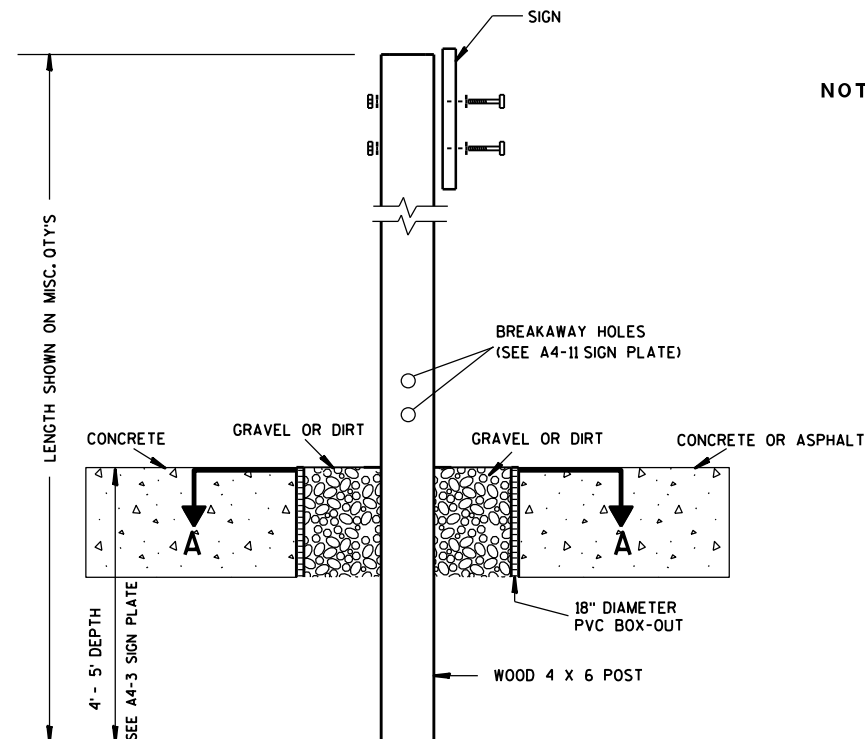
HWY:

COUNTY:

SHEET NO:

198

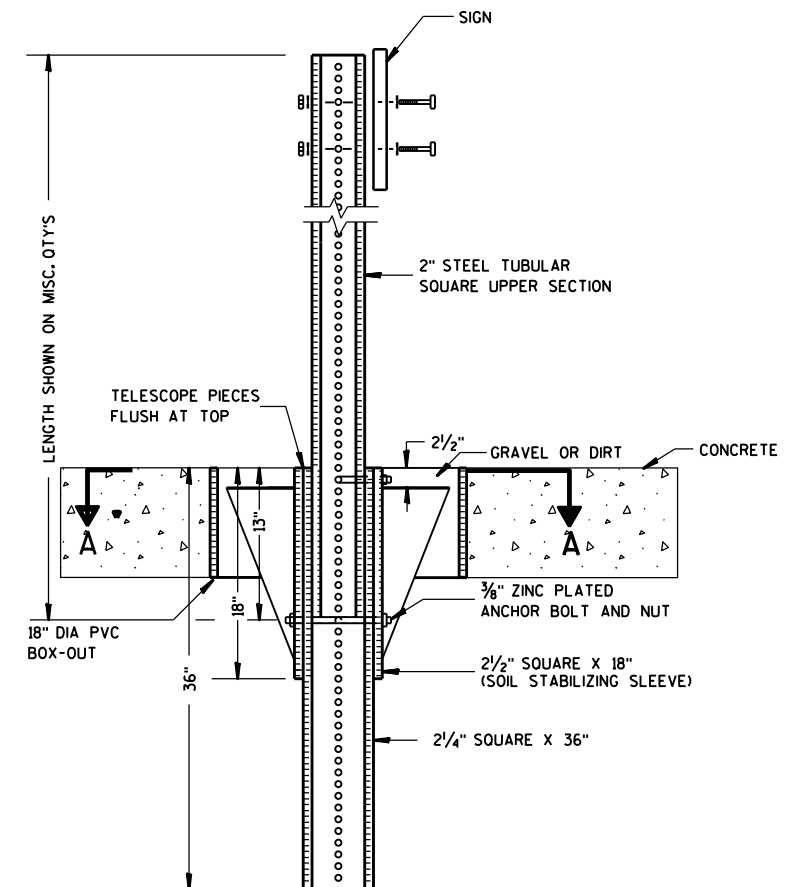
E



ELEVATION VIEW

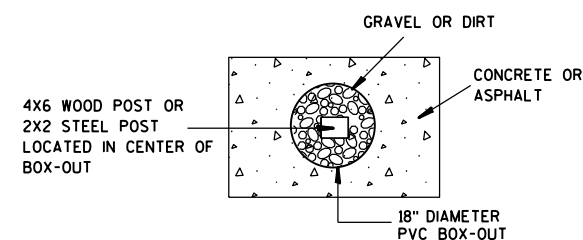
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 199 A4-3B.1

PROJECT NO:

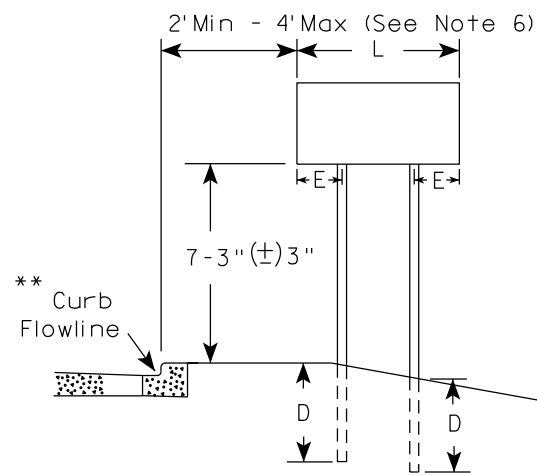
HWY:

COUNTY:

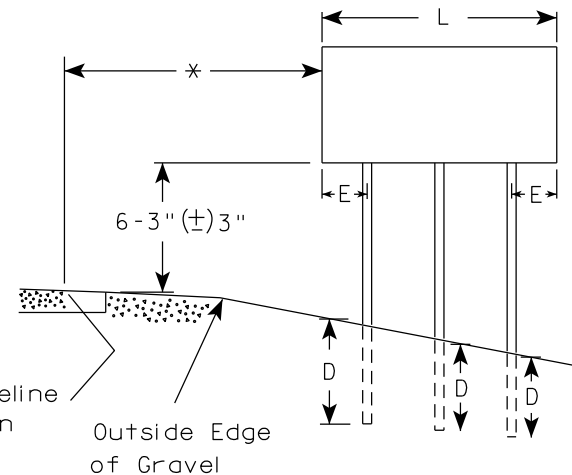
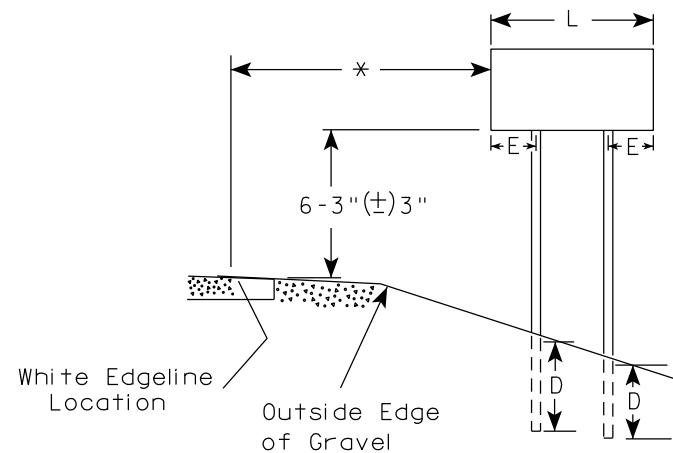
SHEET NO:

E

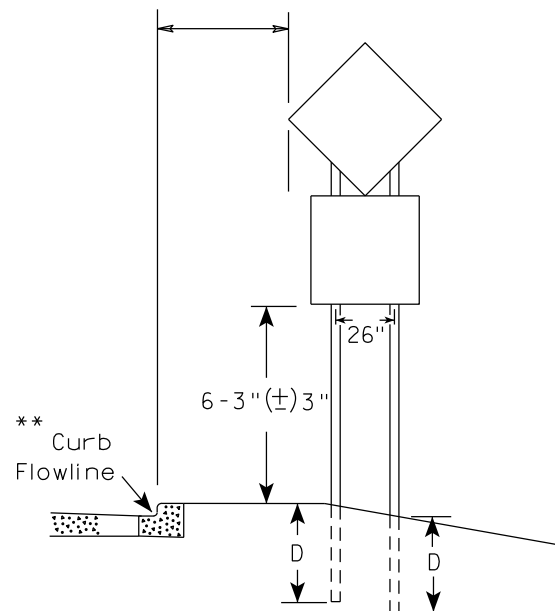
URBAN AREA



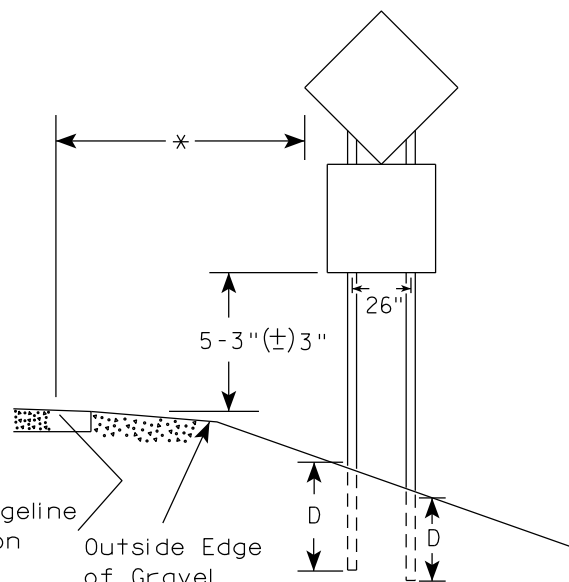
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

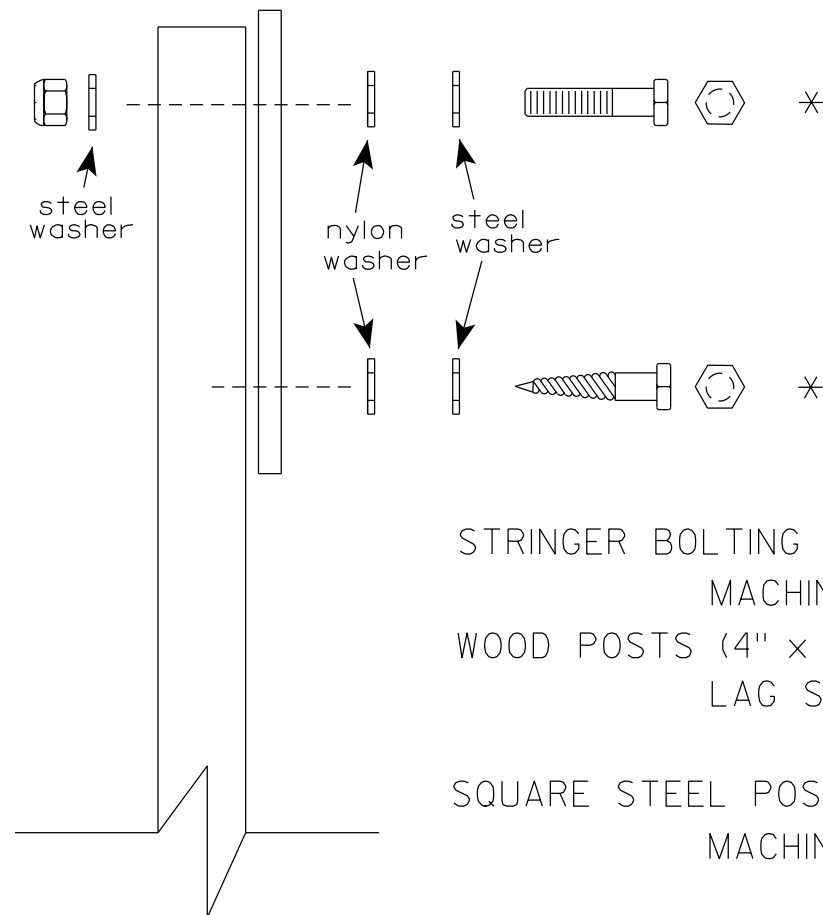
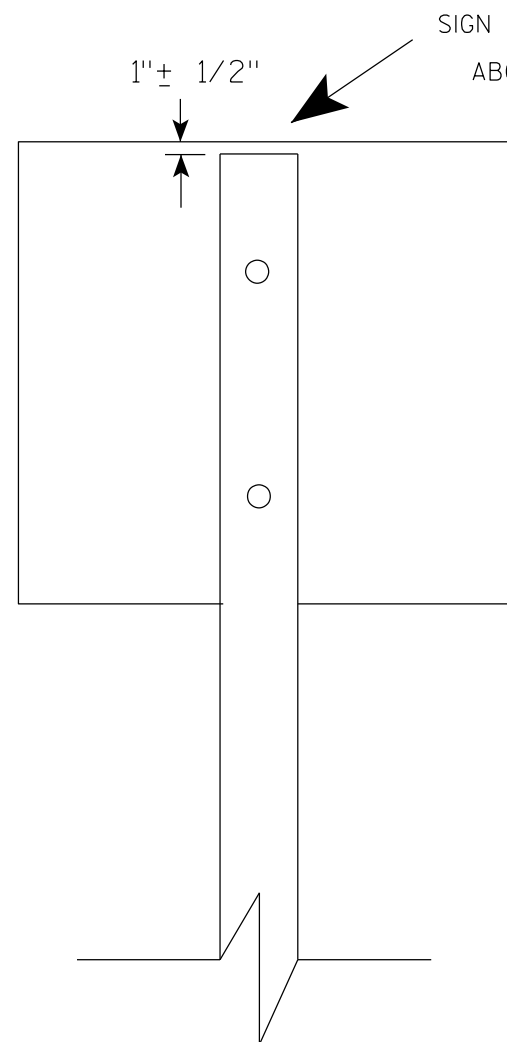
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16



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.

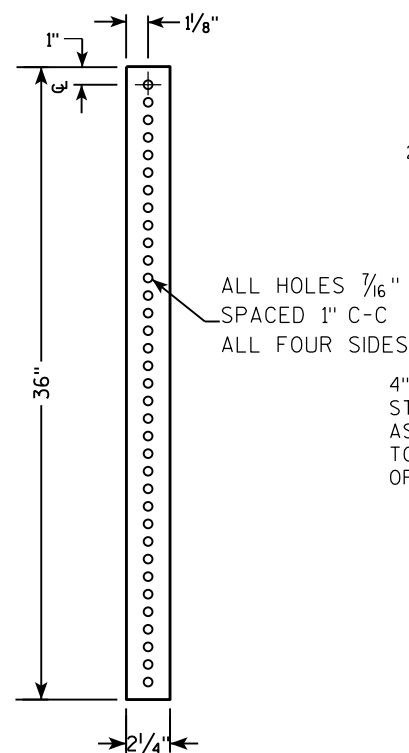
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- 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

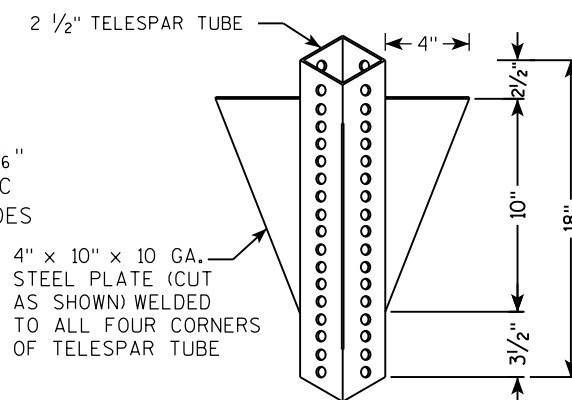
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

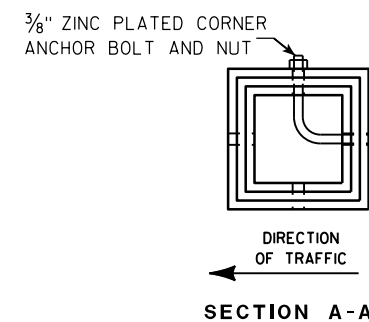


**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**

[illegible]

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- Dimensions:**
 - Overall height: LENGTH SHOWN ON MISC. Q'TYS
 - Section A-A: 36" (total), 18" (upper), 12" (lower)
 - Section B-B: 1"
- Components:**
 - SIGN
 - SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 - 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
 - $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
 - 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 - 2 1/4" SQUARE X 36"
 - TELESCOPE PIECES FLUSH AT TOP



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

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLAT 202 14-9.9

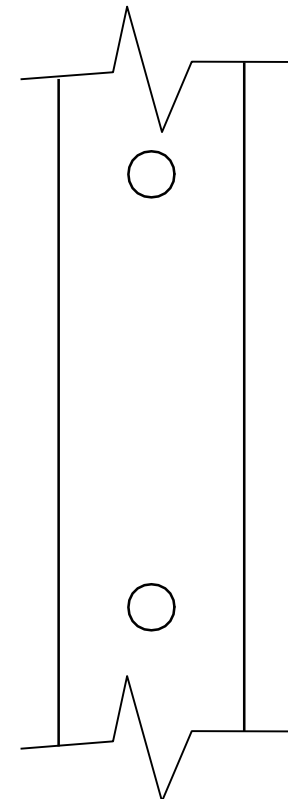
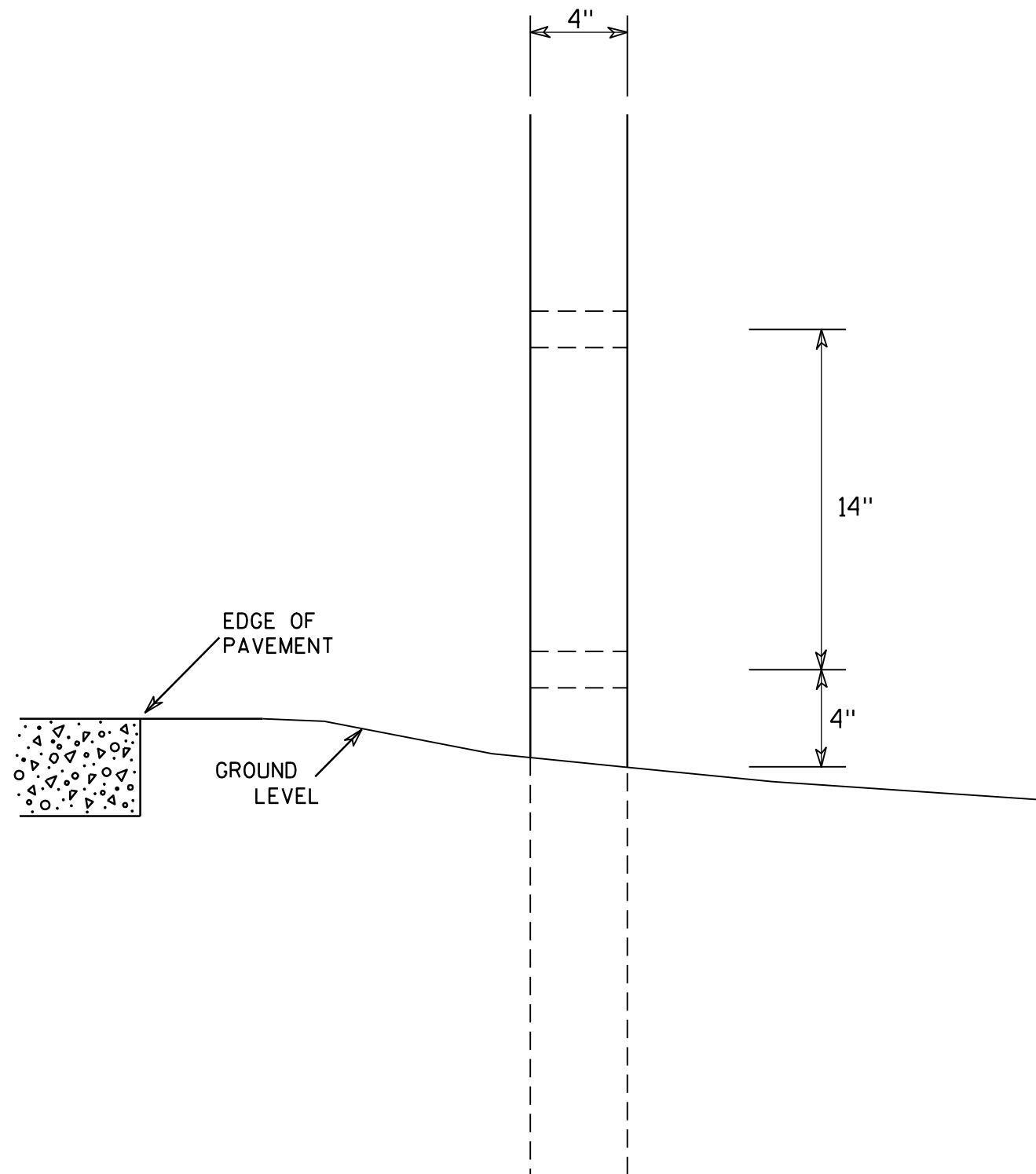
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

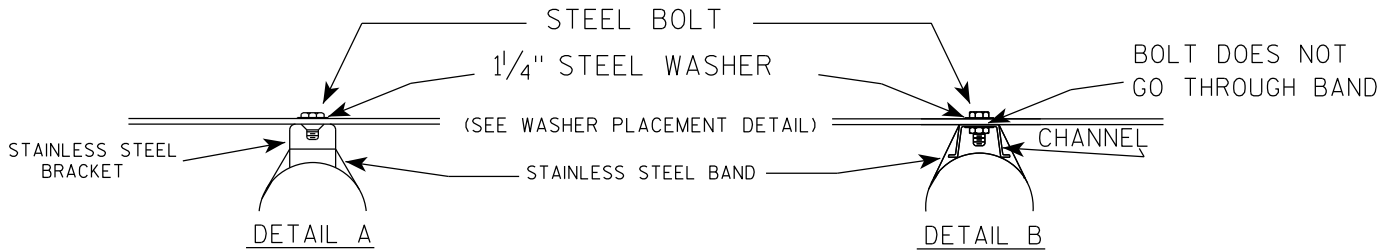
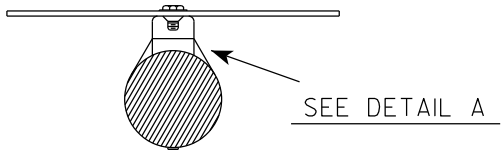
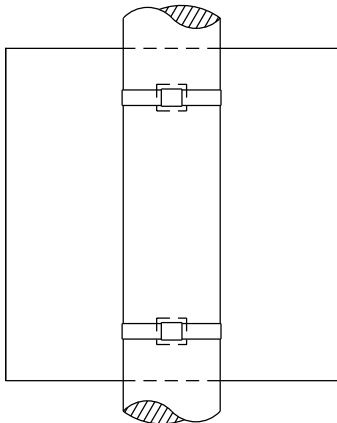
COUNTY:

SHEET NO: 203

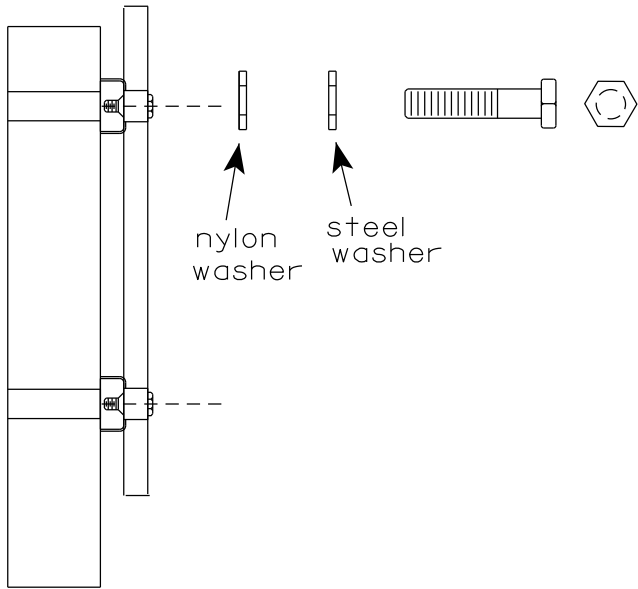
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

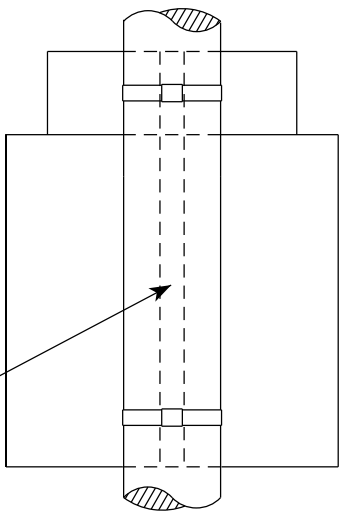


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

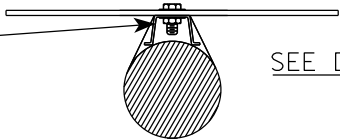
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

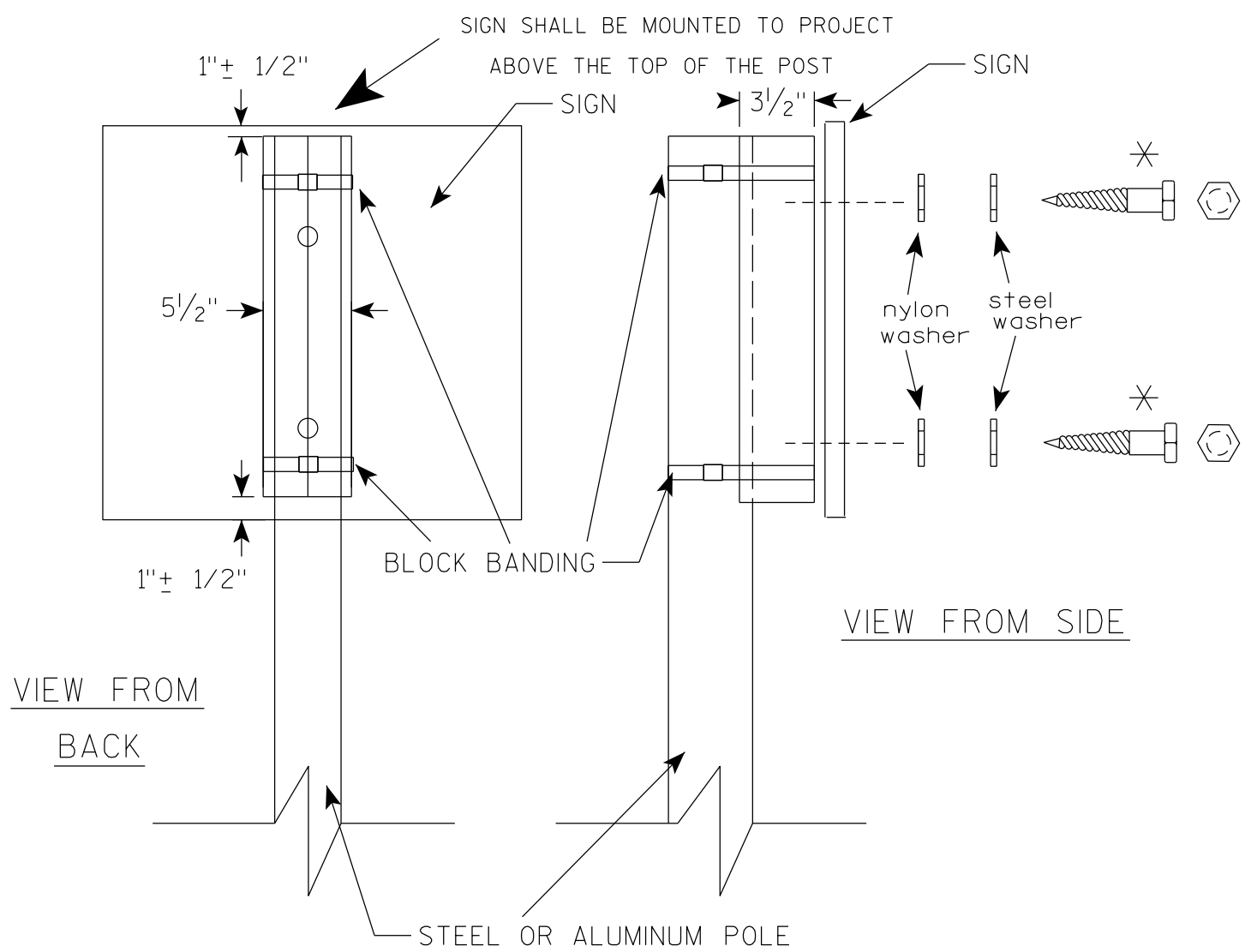


STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

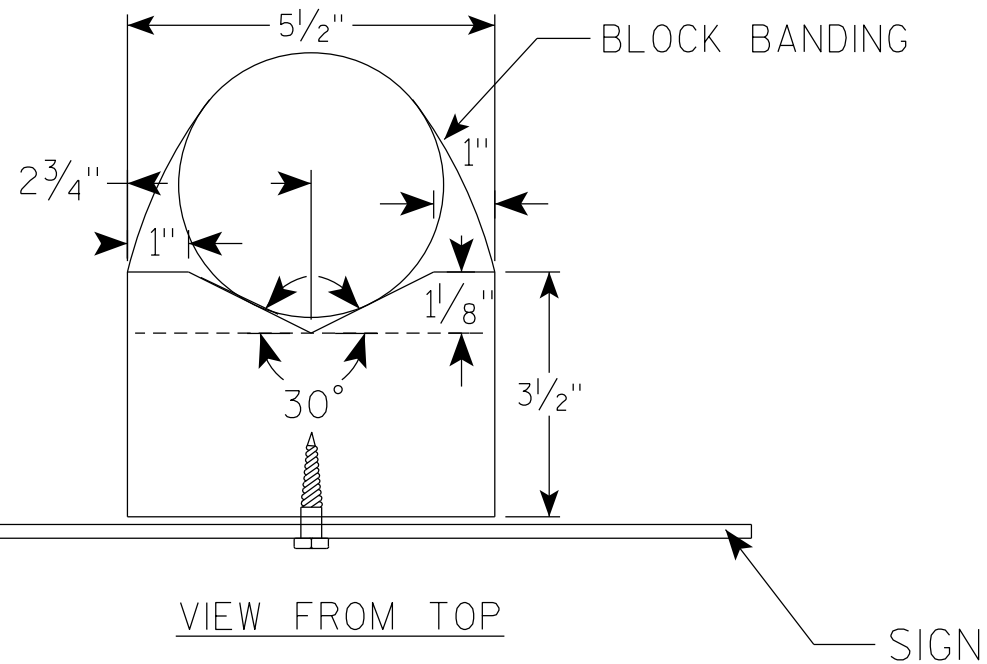
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

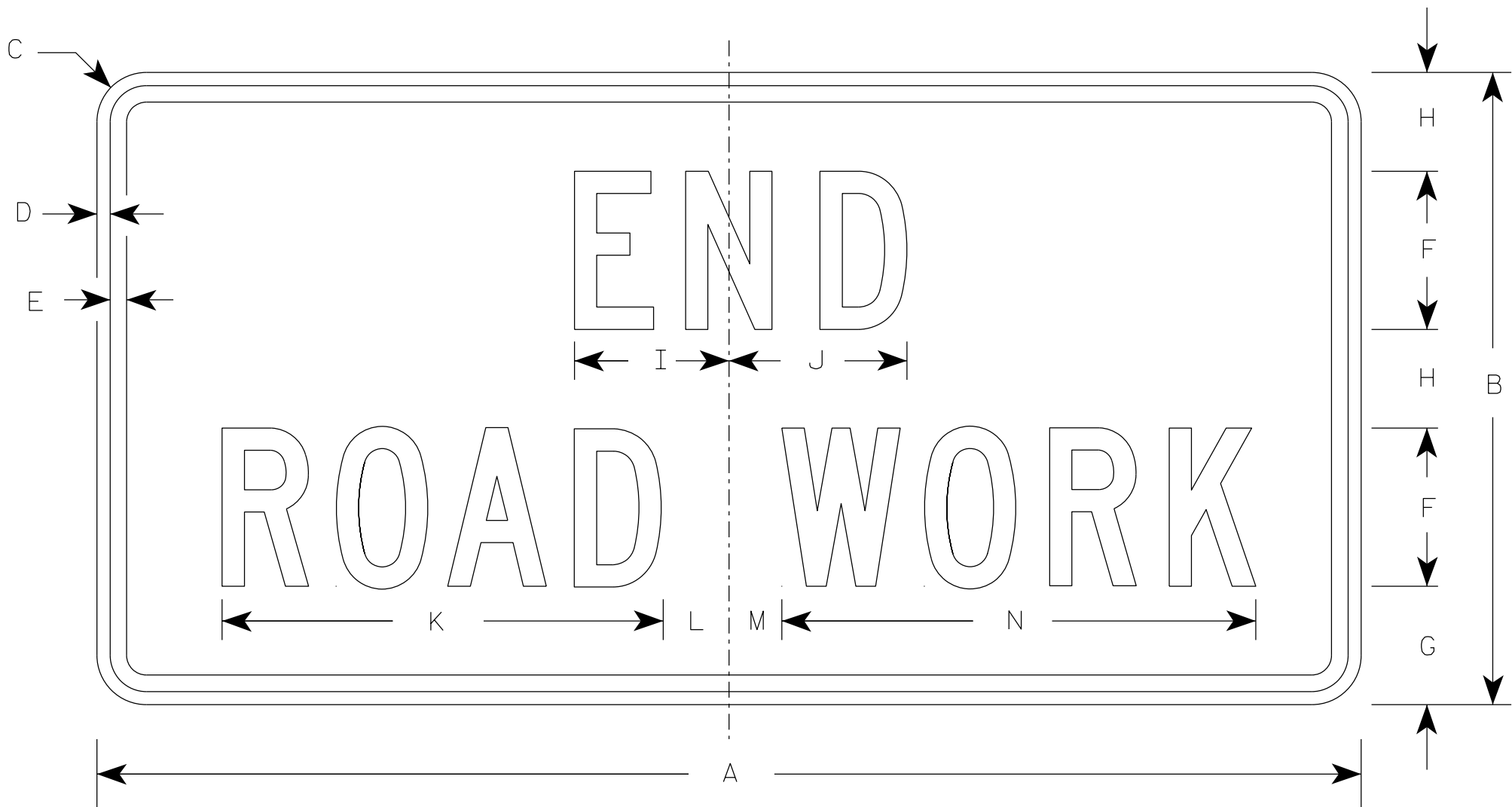
PROJECT NO:

SHEET NO: 205

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - C
- 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.



G20-2A

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	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

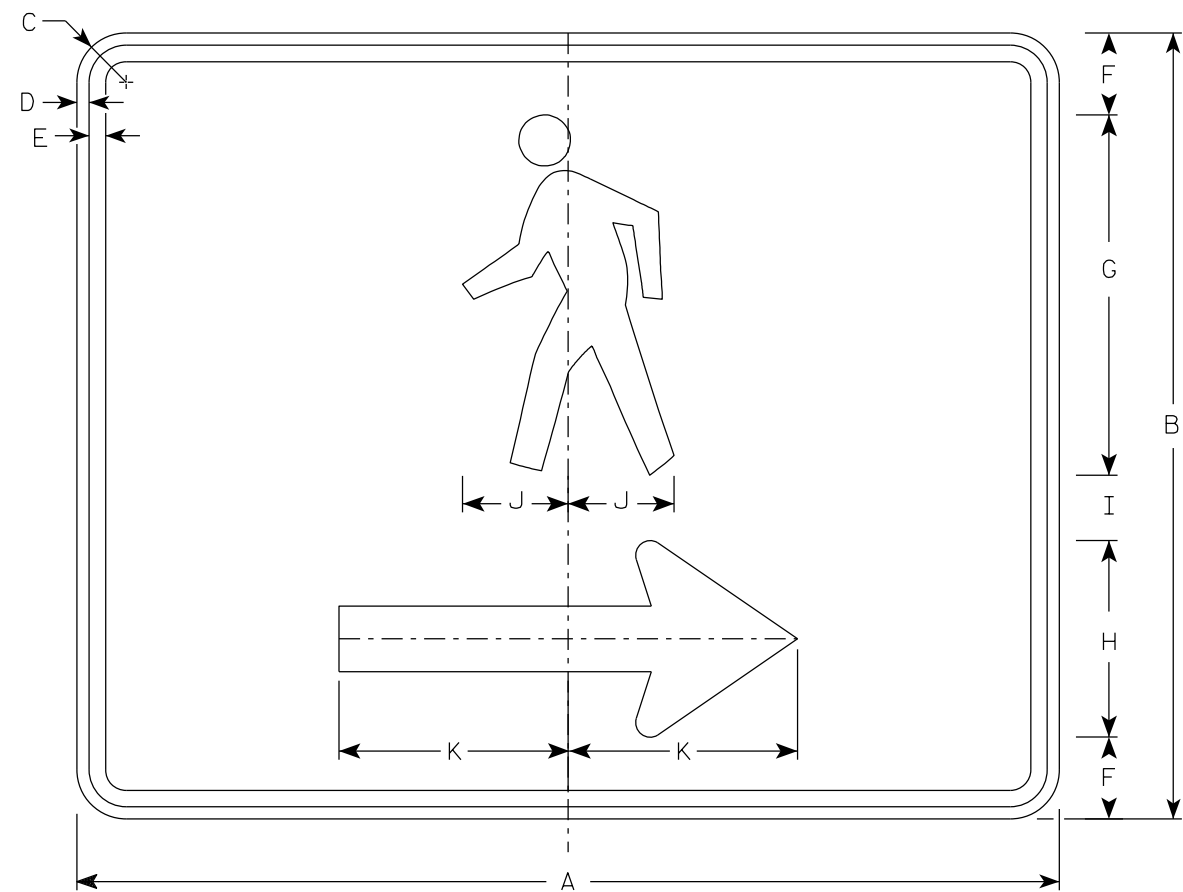
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 206

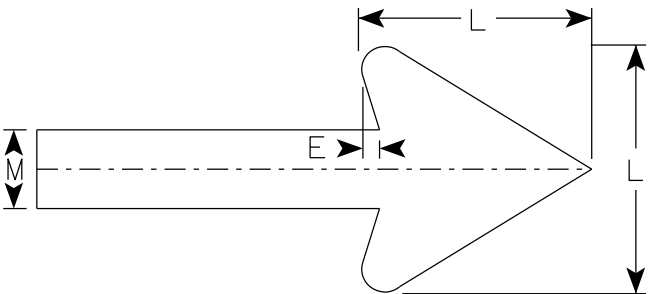
E



M4-60R

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
Background - Orange
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.
4. M4-60L is the same as M4-60R except the arrow is reversed.



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																											
2S	30	24	1 1/2	3/8	1/2	2 1/2	11	6	2	3 1/4	7	6	2														5.00
2M	30	24	1 1/2	3/8	1/2	2 1/2	11	6	2	3 1/4	7	6	2														5.00
3																											
4																											
5																											

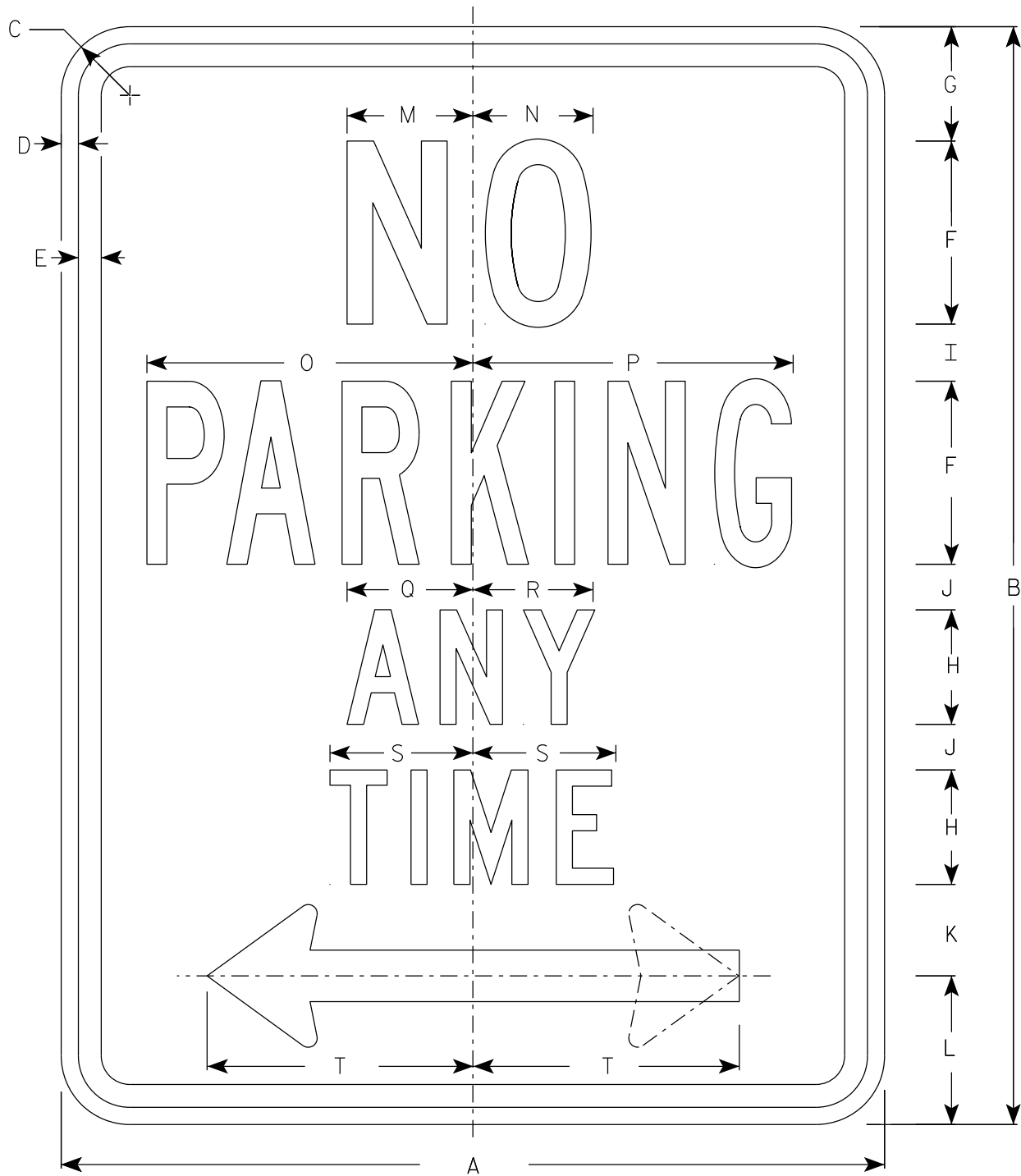
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 207

E

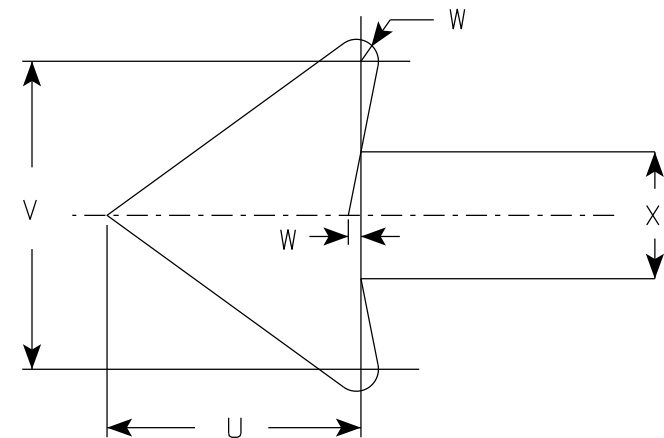


R7-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Red
3. Message Series - See Note 4
4. Lines 1, 3 and 4 are series C, line 2 is series B.
5. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)

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	12	18	1 1/2	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/2	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/2	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/2	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

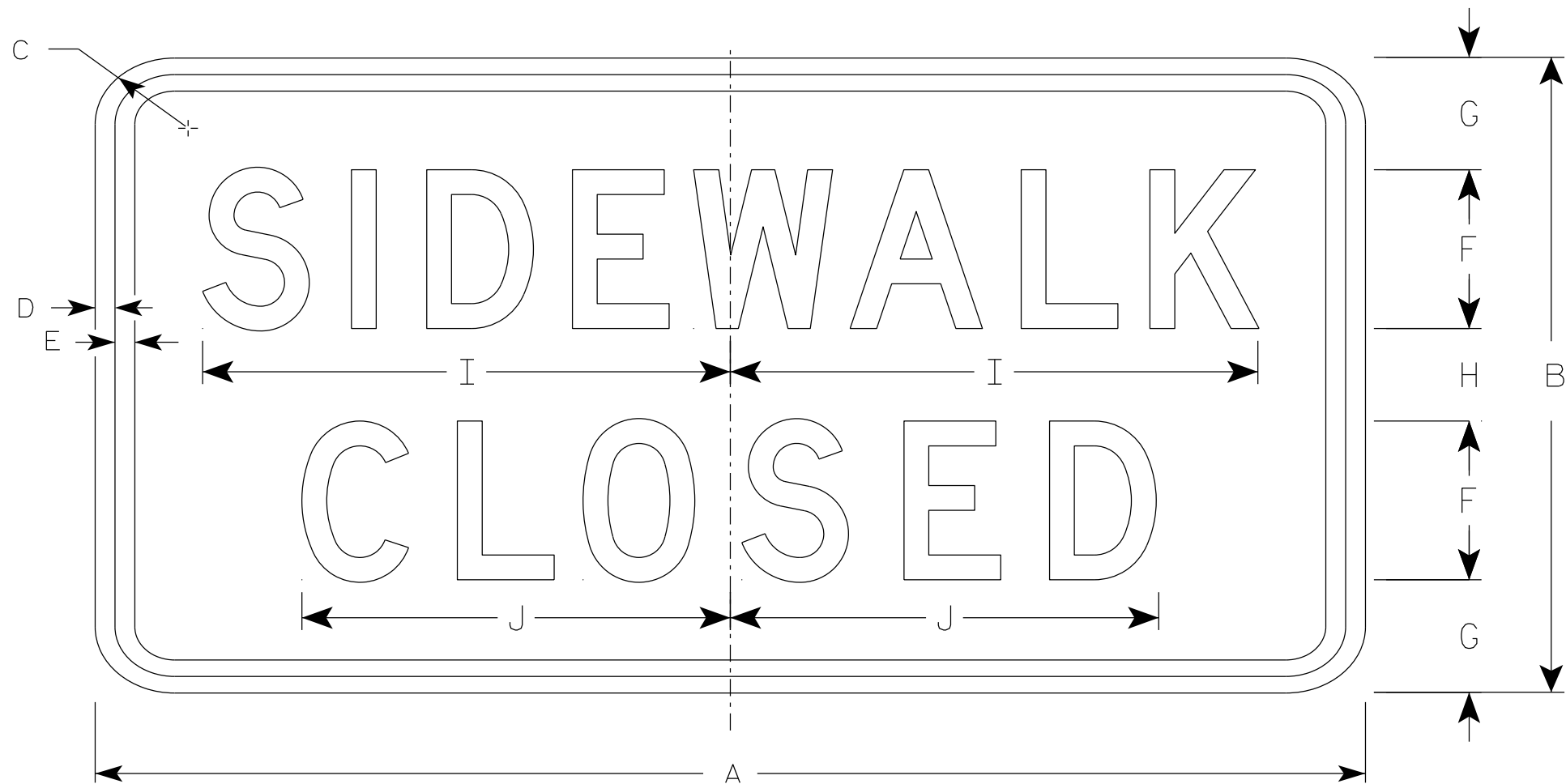
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 10/26/23 PLATE NO. R7-1.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 208	E
-------------	------	---------	---------------	---

7



R9-9

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - C
- 4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

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	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
2M	24	12	1 1/2	1/2	1/2	3	2 1/8	1 3/4	10	8 1/8																	2.0
3	30	18	1 1/2	1/2	1/2	4	3 1/2	3	12 1/2	10 1/4																	3.75
4																											
5																											

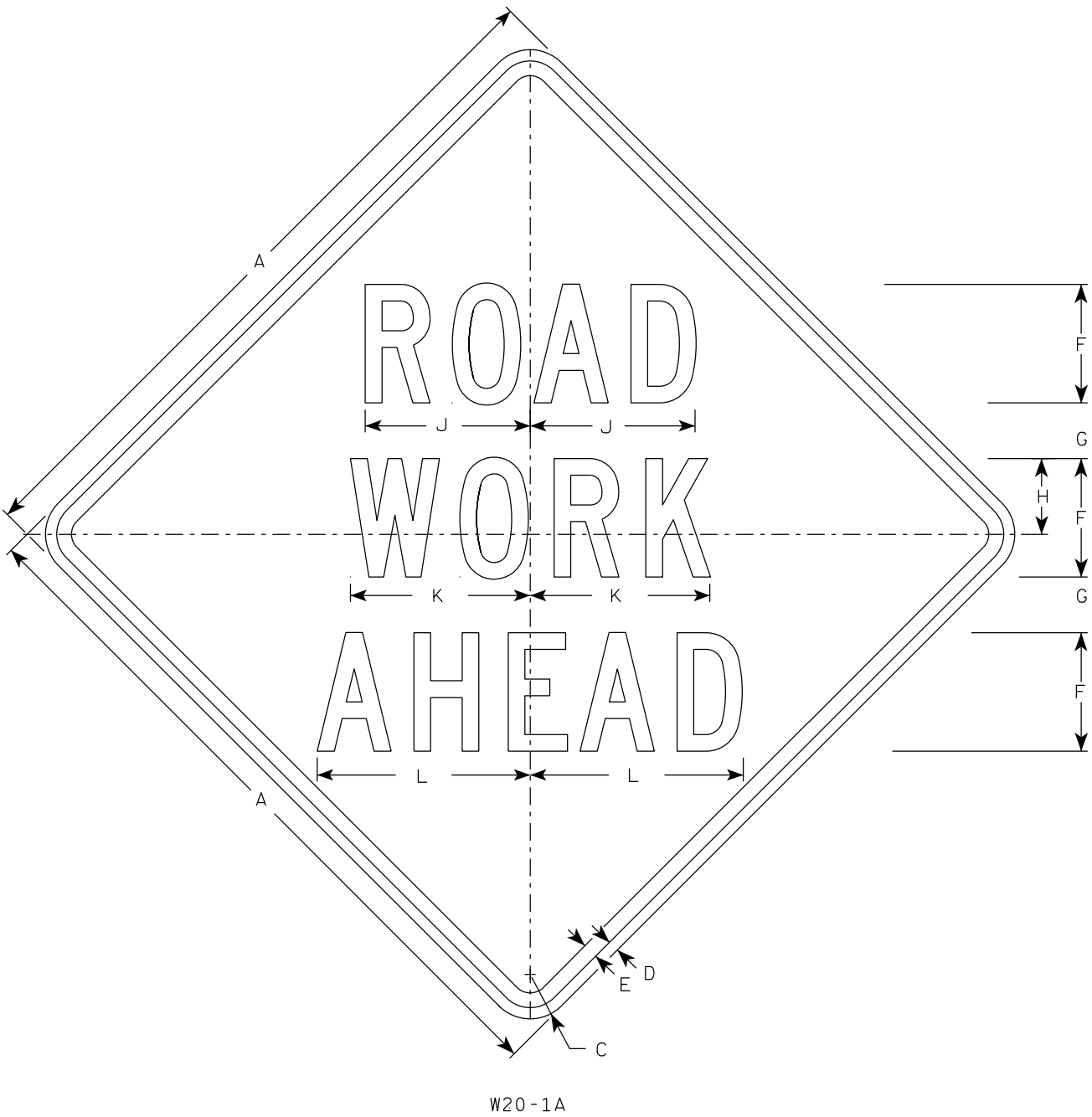
PROJECT NO:

HWY:

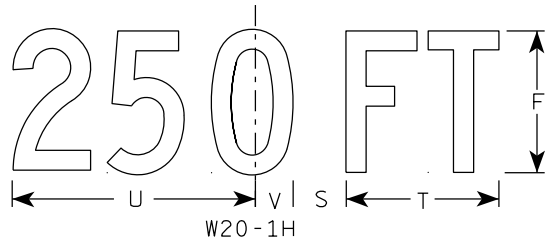
COUNTY:

SHEET NO: 209

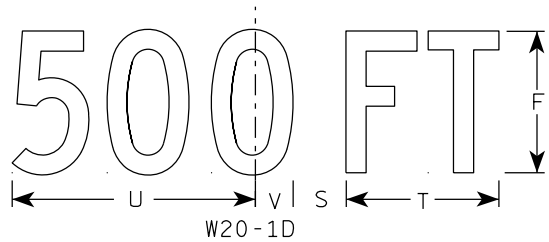
E



W20-1A



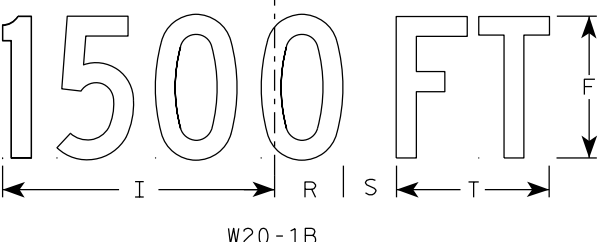
W20-1H



W20-1D

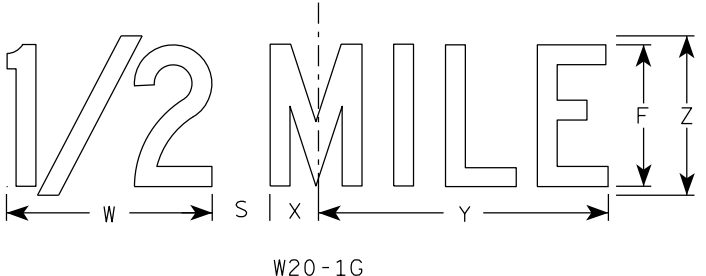


W20-1C

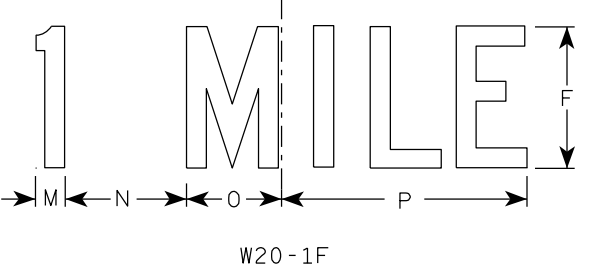


W20-1B

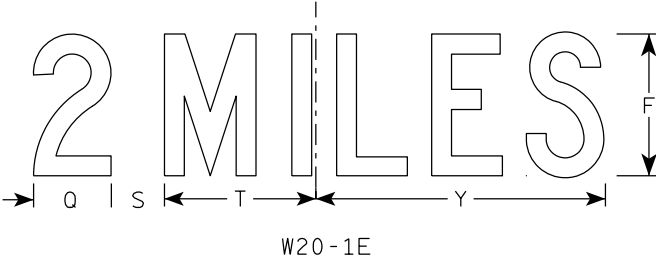
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G

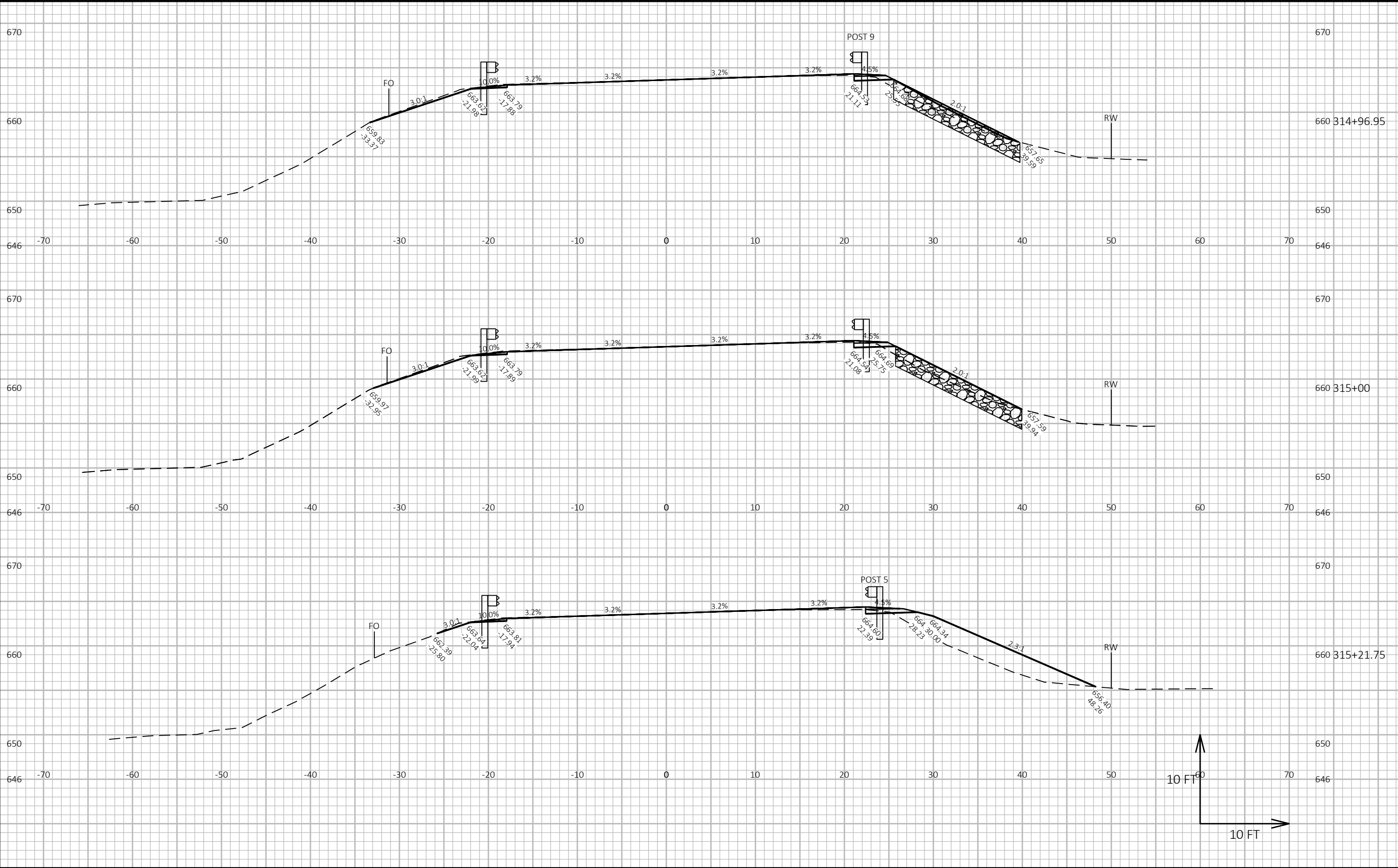


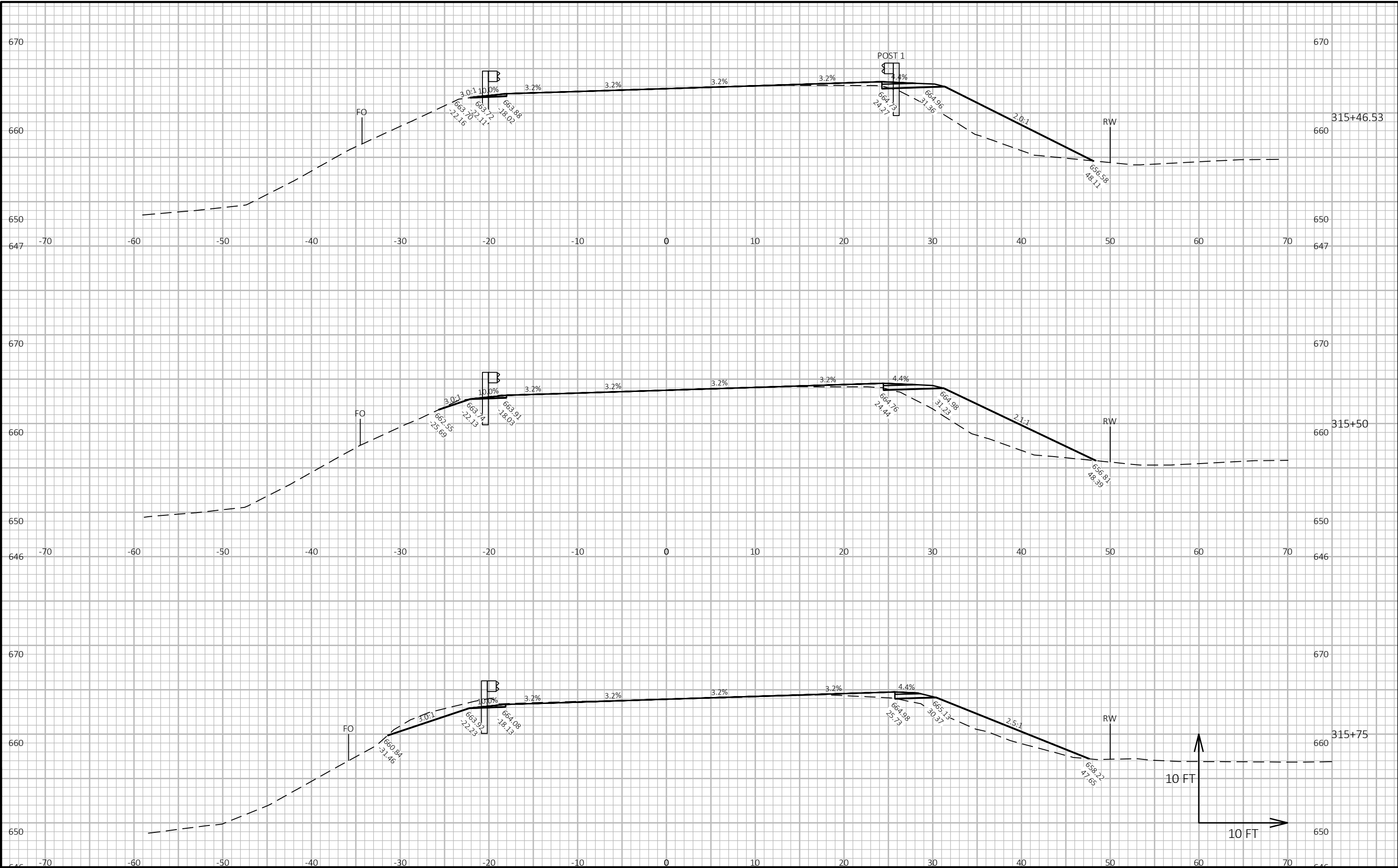
W20-1F



W20-1E

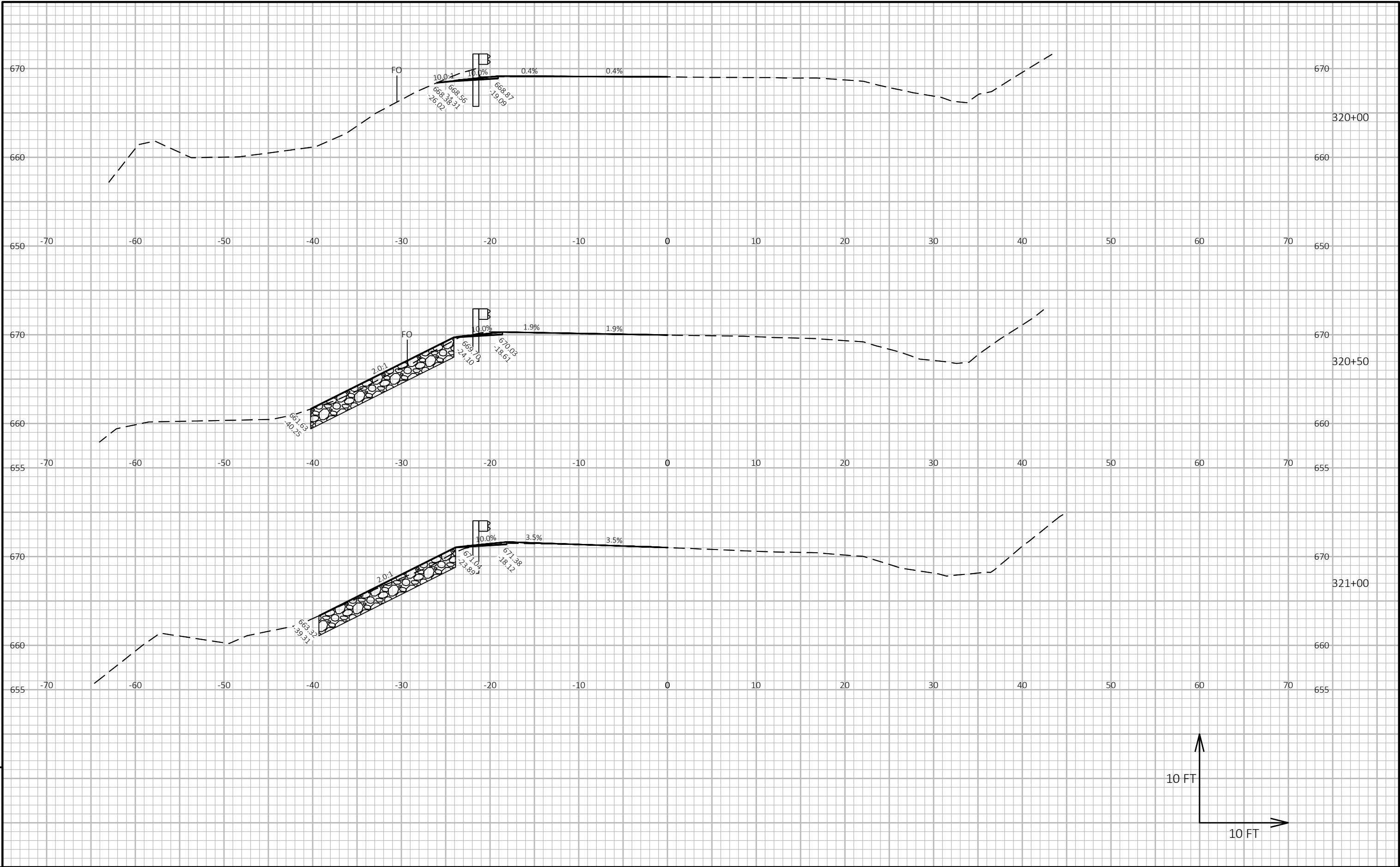
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

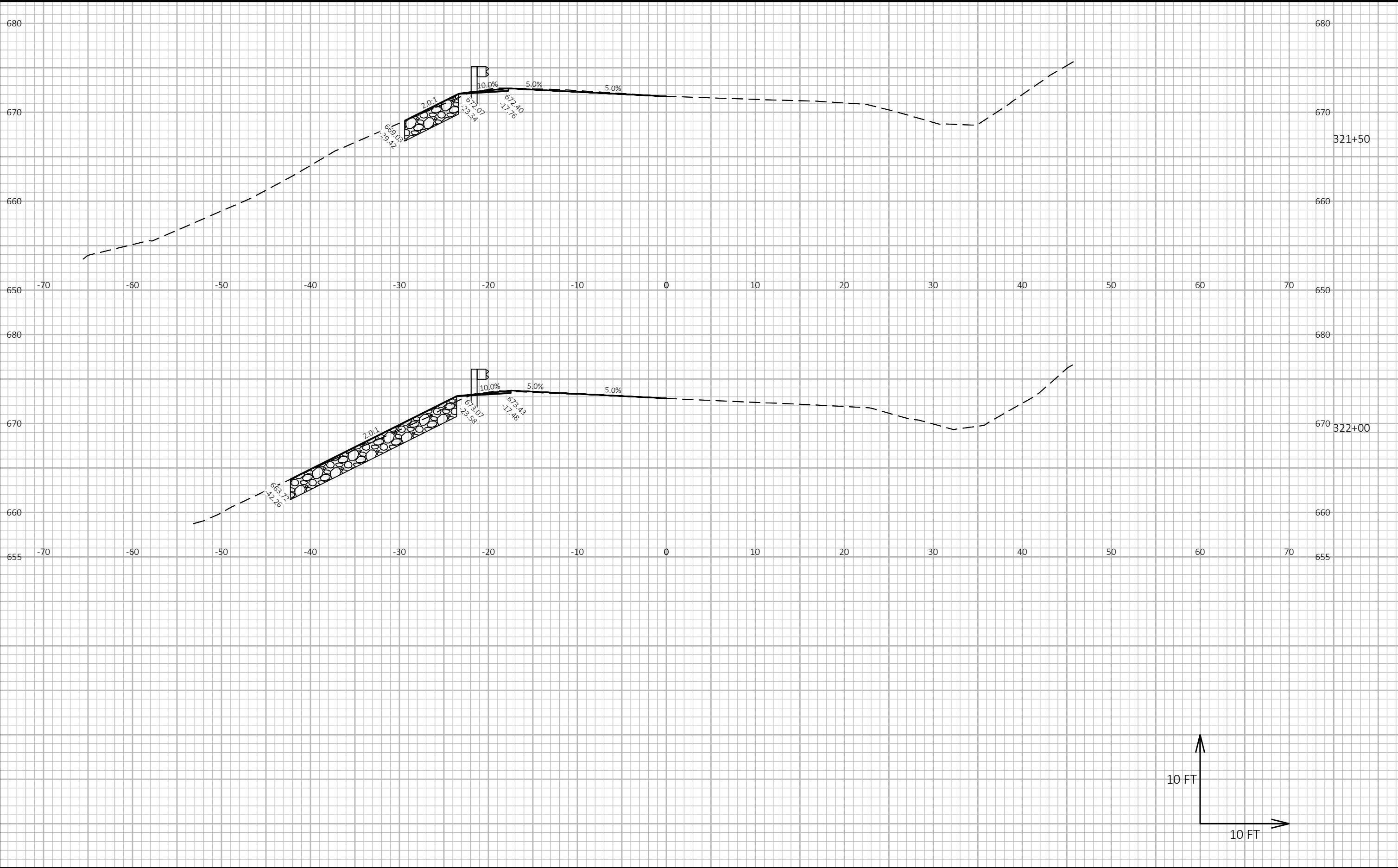




9

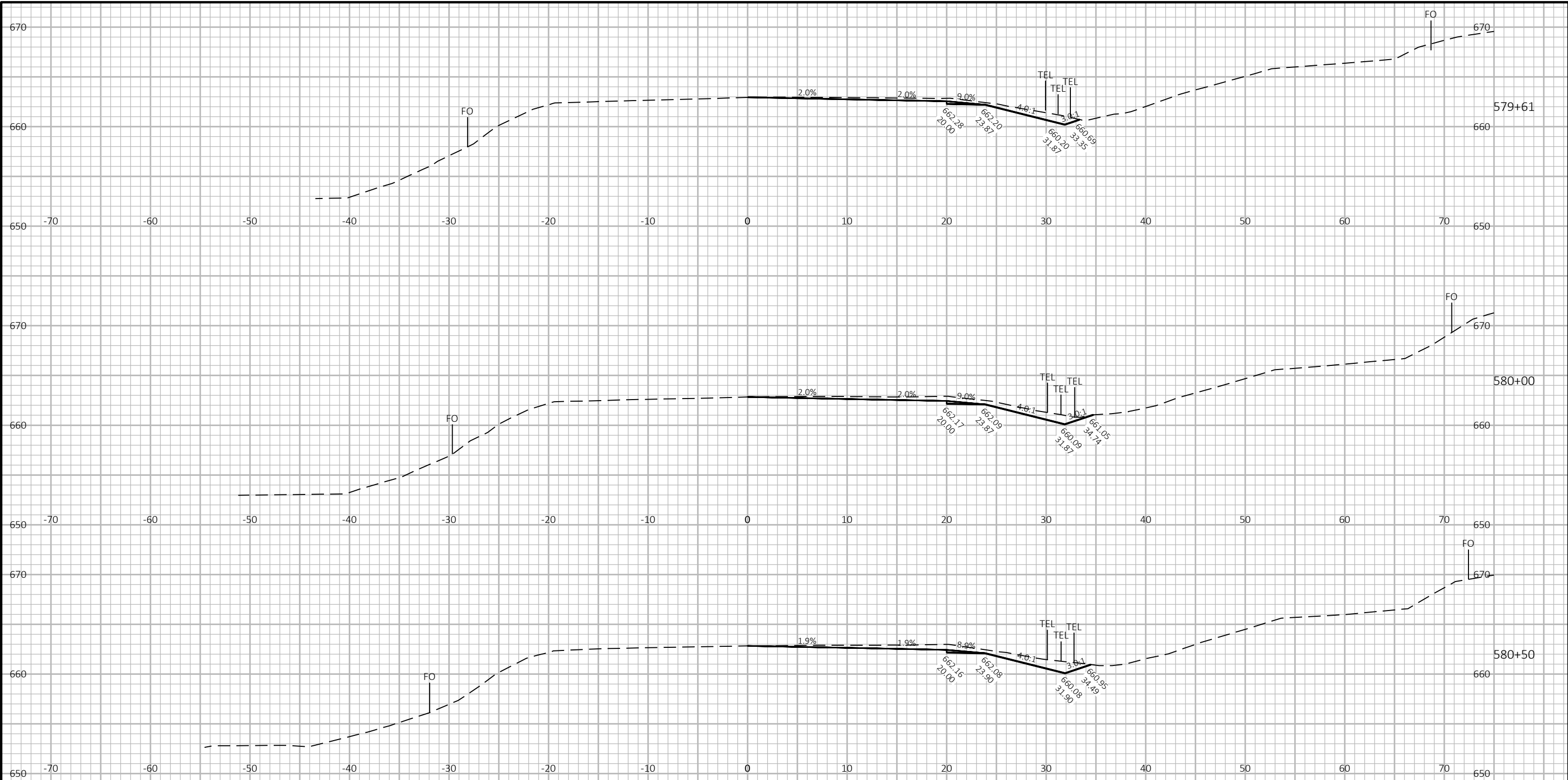
9



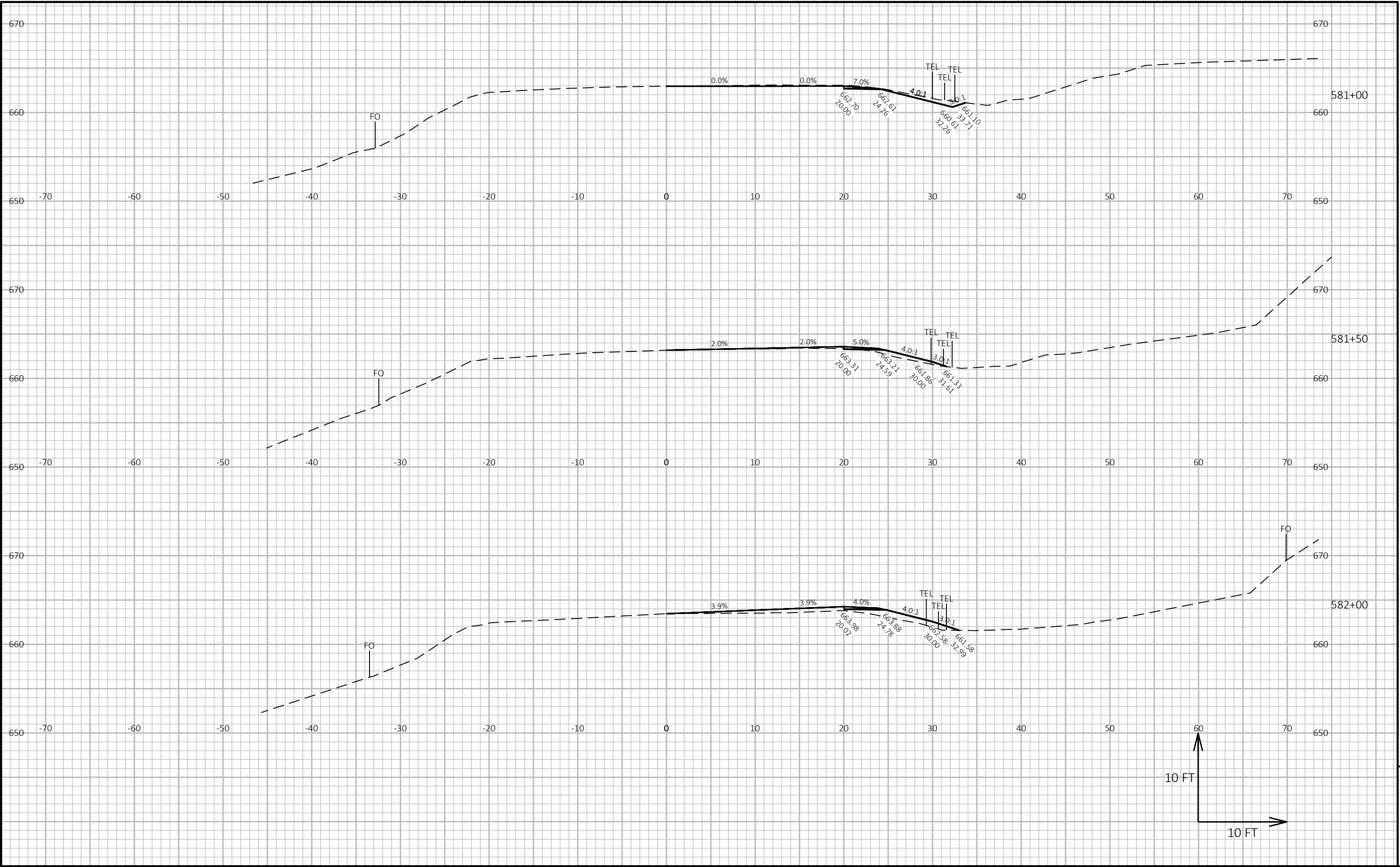


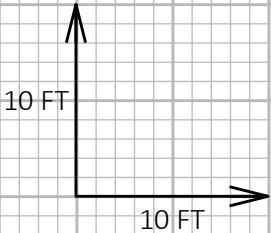
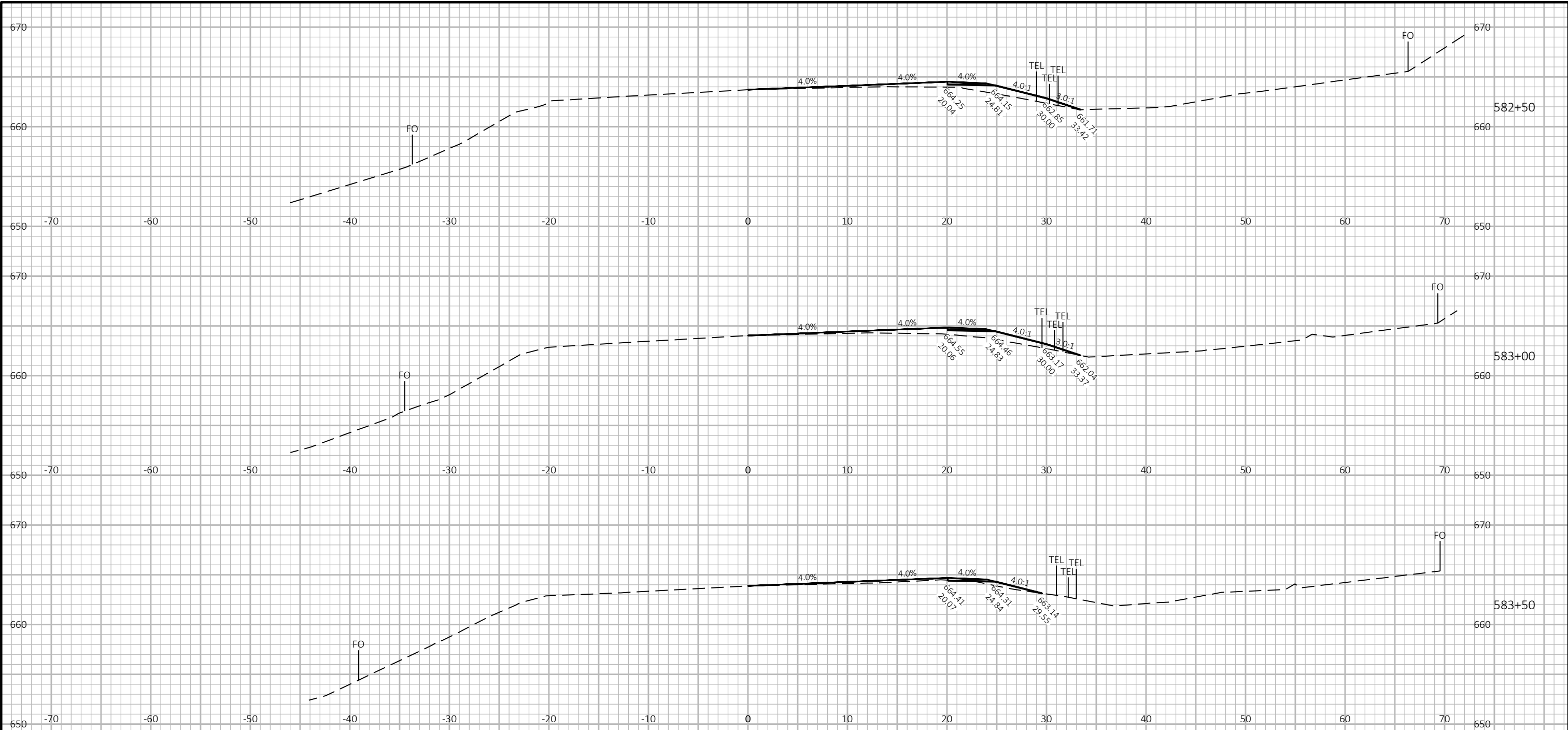
9

9



9

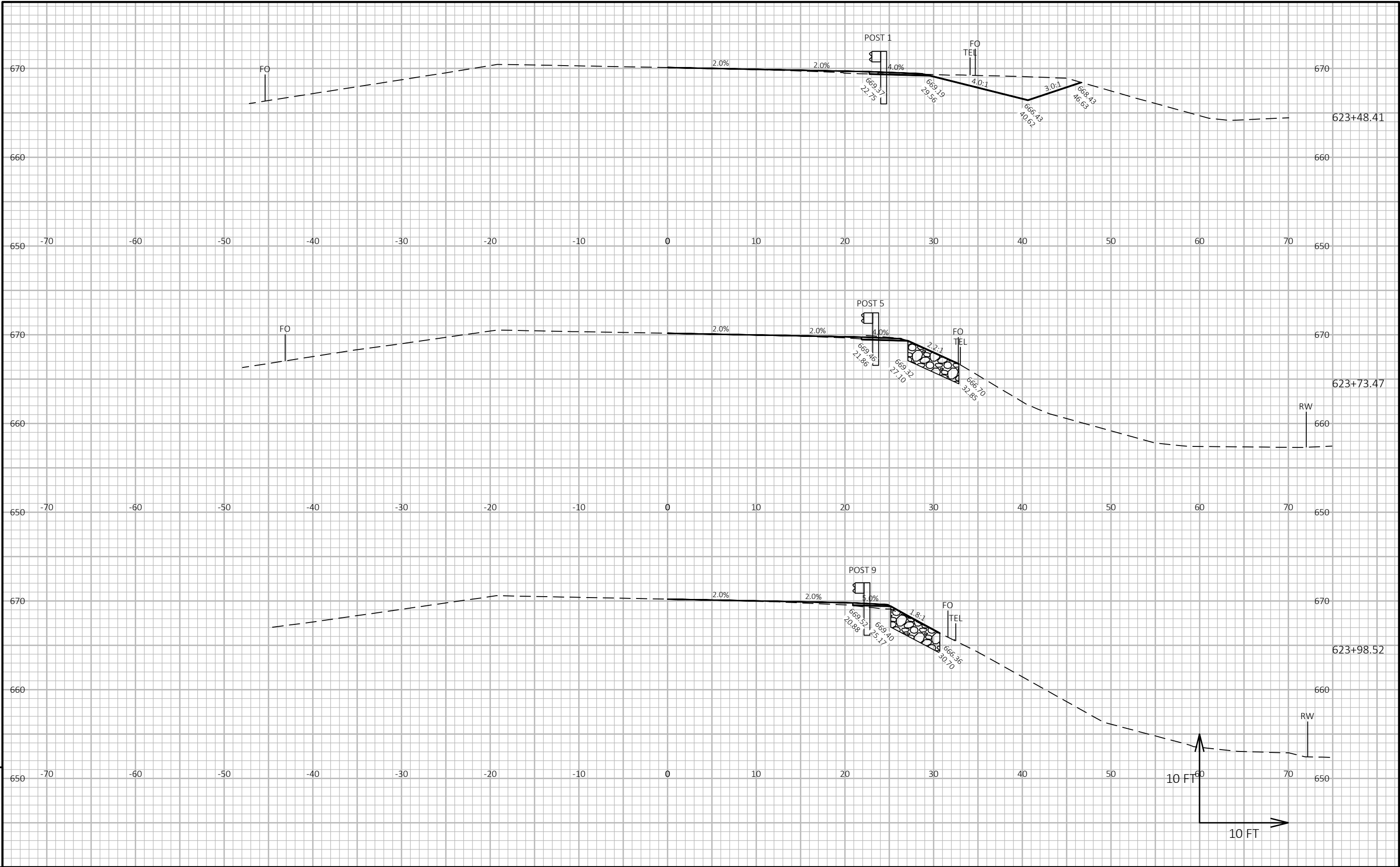


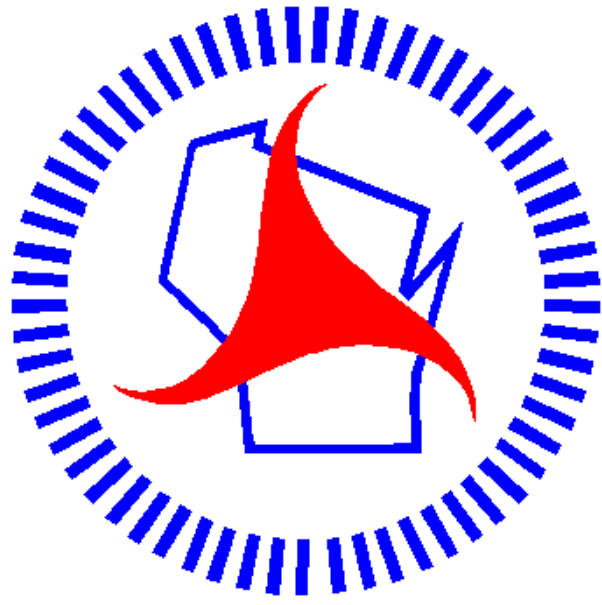


9

9







Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>