

WIS
PROJECT ID: 6140-02-71
WITH: N/A
COUNTY: ADAMS

FEBRUARY 2021

ORDER OF SHEETS

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

TOTAL SHEETS = 90



DESIGN DESIGNATION

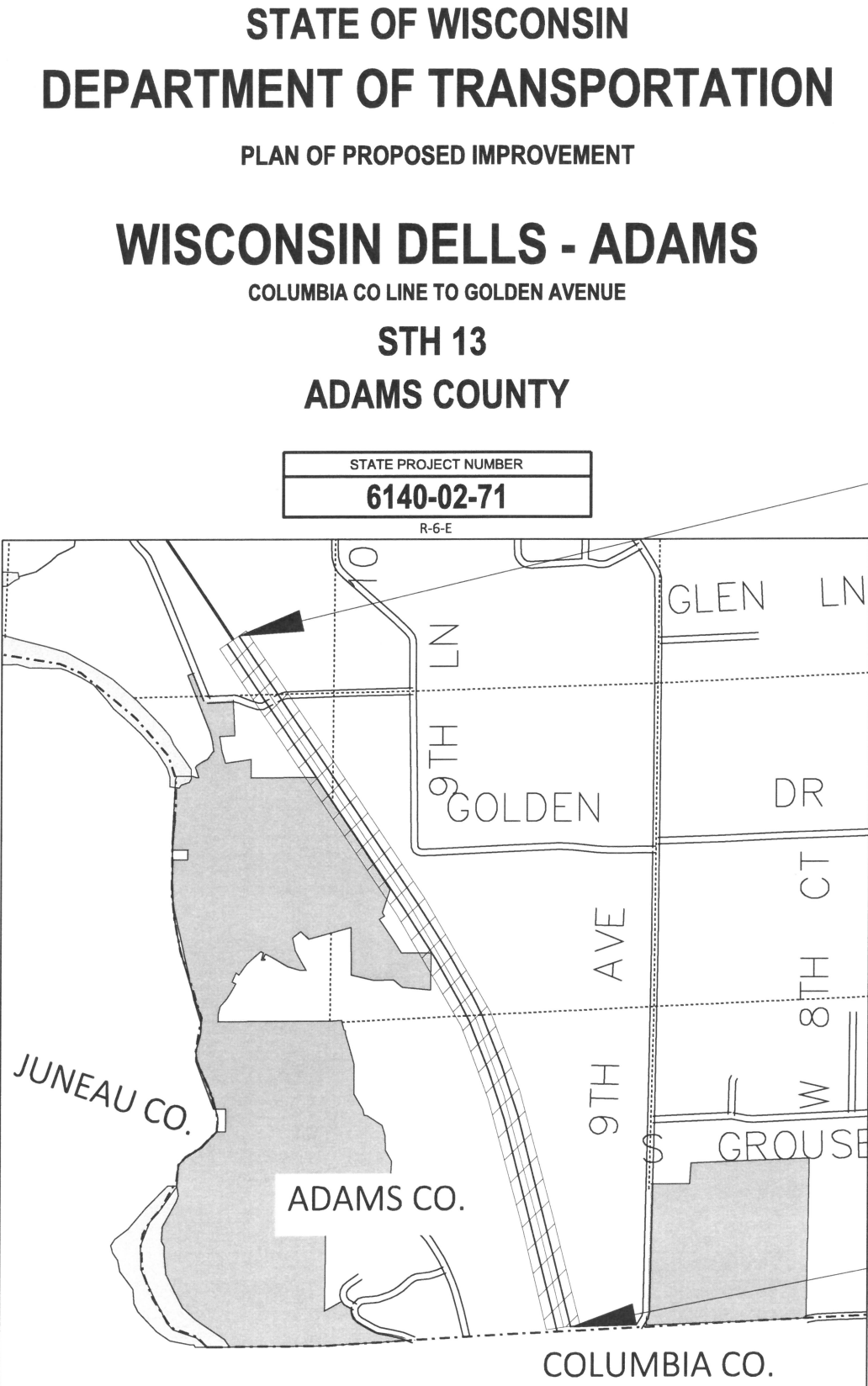
A.A.D.T.	(2021)	=	6,070
A.A.D.T.	(2041)	=	6,890
D.H.V.		=	923
D.D.		=	61/39
T.		=	11.7%
DESIGN SPEED		=	60 MPH
ESALS		=	1,233,700

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	

ROCK	
LABEL	
95.36	
95.36	
E	
FO	
G	
SAN	
SS	
T	
W	
W	
W	



STATE PROJECT NUMBER
6140-02-71

END PROJECT
STA 240+01.00
Y=112030.648
X=539775.387

BEGIN PROJECT
STA 108+64.00
Y=100366.420
X=545487.544

LAYOUT
SCALE 0 0.5 MI
TOTAL NET LENGTH OF CENTERLINE = 2.488 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ADAMS 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	FEDERAL PROJECT	
	PROJECT	CONTRACT
6140-02-71	WISC 2021179	1

ORIGINAL PLANS PREPARED BY
JT ENGINEERING, INC

DATE: 8/26/2020 *Brian E. Smits*
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor JT ENGINEERING, INC
Designer JT ENGINEERING, INC
Project Manager J. STEWART
Regional Examiner C. SIMON
Regional Supervisor M. KRETSCHMER

APPROVED FOR THE DEPARTMENT
DATE: 8/31/2020 *[Signature]*
(Signature)

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RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 20.984 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.404 ACRES

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGER'S HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

MATCH EXISTING SUPERELEVATIONS ALONG HORIZONTAL CURVES. STAKING SUPERELEVATION TRANSITIONS IN THE FIELD SHALL BE INCIDENTAL TO THE PROJECT IF NEEDED.

WHEN THE QUANTITY OF BASE AGGREGATE IS MEASURED BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE ALIGNMENTS ARE BASED ON BEST FITTING THE AERIAL AND AS-BUILT PLANS.

HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYER THICKNESS:

PAVEMENT	UPPER LAYER
THICKNESS (INCH)	(INCH)
2.00	2.00
1.75*	1.75*

*THICKNESS IS SET TO MATCH EXISTING OVERLAY OVER THE EXISTING CONCRETE PAVEMENT.

UTILITY CONTACTS

THORE GREGERSON
CITY OF WISCONSIN DELLS - SEWER
300 LACROSSE STREET
WISCONSIN DELLS, WI, 53965
PHONE# (608) 393-1359
EMAIL: DPWSHOP@DELLSCITYGOV.COM

TONY WIECZOREK
CITY OF WISCONSIN DELLS - ELECTRICITY
300 LACROSSE STREET
WISCONSIN DELLS, WI, 53965
PHONE# (608) 432-1363
EMAIL: TONYW@DELLSUTILITY.COM

SCOTT MCCLYMAN
CITY OF WISCONSIN DELLS - WATER
300 LACROSSE STREET
WISCONSIN DELLS, WI, 53965
PHONE# (608) 844-0085
EMAIL: SMCCLYMAN@DELLSUTILITY.COM

MATT JOHNSON
ALLIANT ENERGY - ELECTRICITY
2777 COLUMBIA DRIVE
PORTAGE, WI, 53901
PHONE# (608) 742-0801
EMAIL: MATTHEWJOHNSON@ALLIANTENERGY.COM

MATT JOHNSON
ALLIANT ENERGY - GAS/PETROLEUM
2777 COLUMBIA DRIVE
PORTAGE, WI, 53901
PHONE# (608) 742-0801
EMAIL: MATTHEWJOHNSON@ALLIANTENERGY.COM

JERRY MOORE
FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATION LINE
2222 WEST WISCONSIN STREET
PORTAGE, WI, 53901
PHONE# (608) 742-9507
EMAIL: JERALD.R.MOORE@FTR.COM

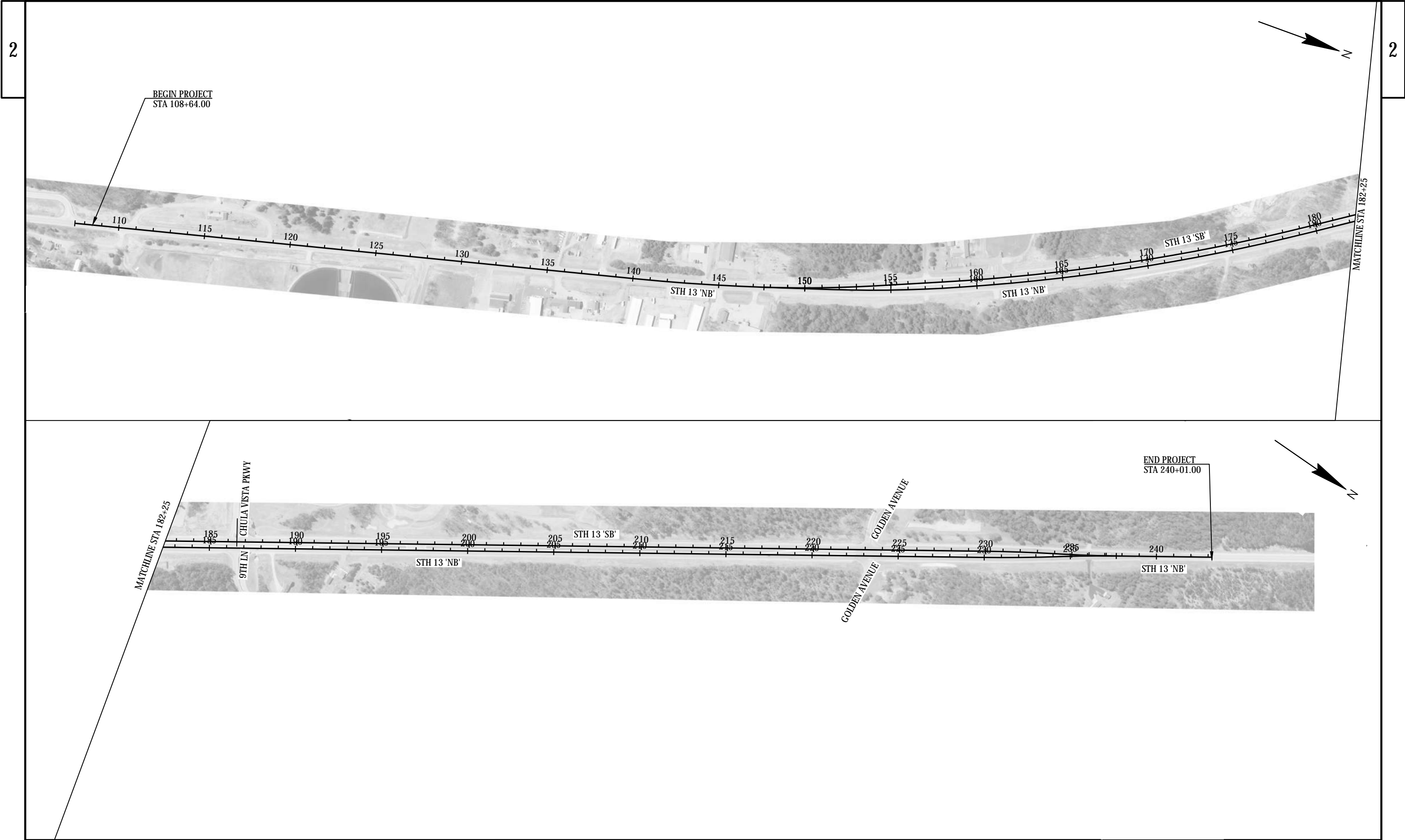
TIM SPATH
MARQUETTE ADAMS TELEPHONE COOP INC - COMMUNICATION LINE
113 NORTH OXFORD STREET
PO BOX 45
OXFORD, WI, 53952
PHONE# (608) 450-0088
EMAIL: TSPATH@MAADTELCO.COM



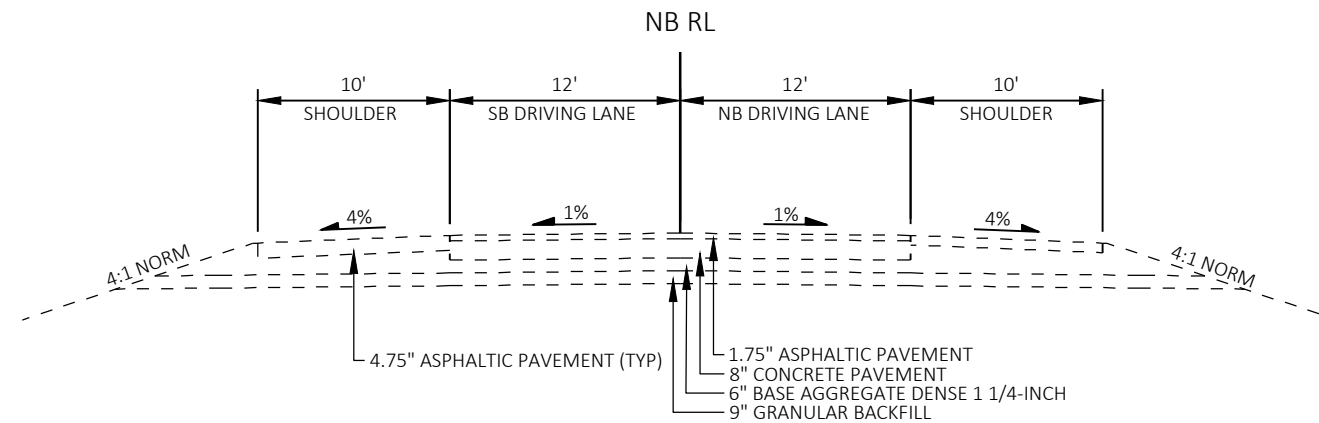
Dial 811 or (800)242-8511
www.DiggersHotline.com

WISCONSIN DNR LIAISON

BRAD BETTHAUSER
DNR WISCONSIN RAPIDS SERVICE CENTER
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
PHONE (MOBILE): 715-213-9064
E-MAIL: BRADLEY.BETTHAUSER@WISCONSIN.GOV

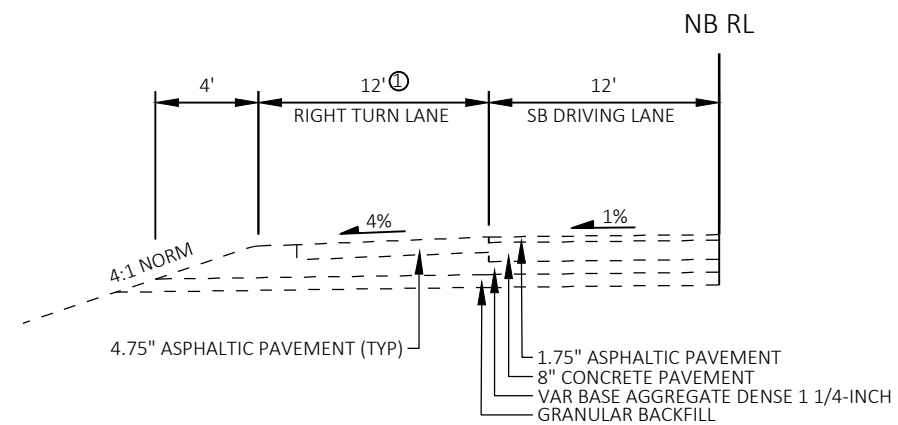


PROJECT NO: 6140-02-71	HWY: STH 13	COUNTY: ADAMS	PROJECT OVERVIEW	SHEET	E
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TYPICAL EXISTING SECTION

STH 13
STA 108+64.0 TO STA 147+62.8



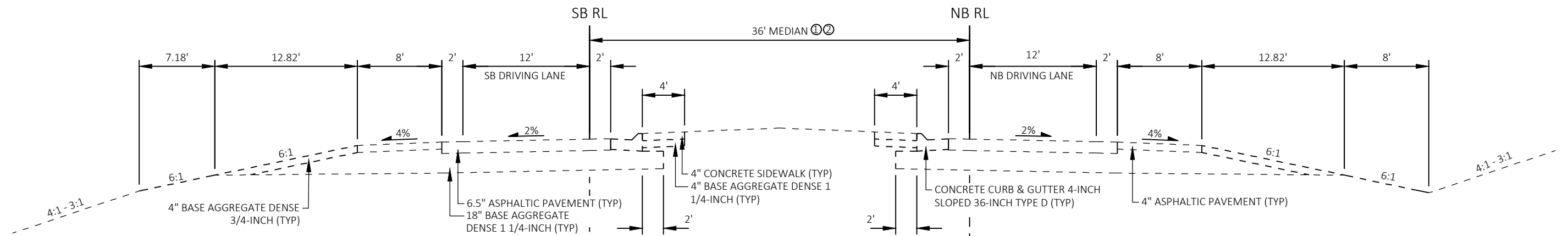
TYPICAL EXISTING SECTION - SB RIGHT TURN LANE

STH 13
STA 108+64.0 TO STA 111+54.0

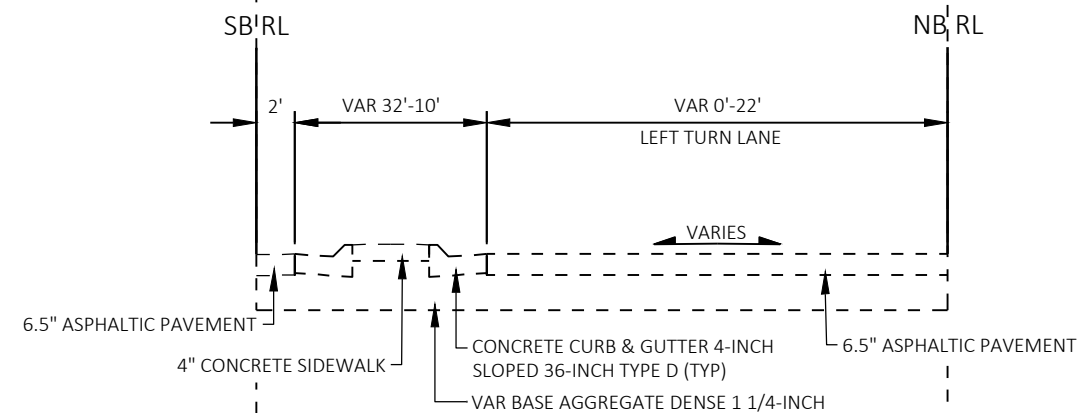
NOTES

ALL STATIONING ARE 'NB' UNLESS OTHERWISE NOTED.

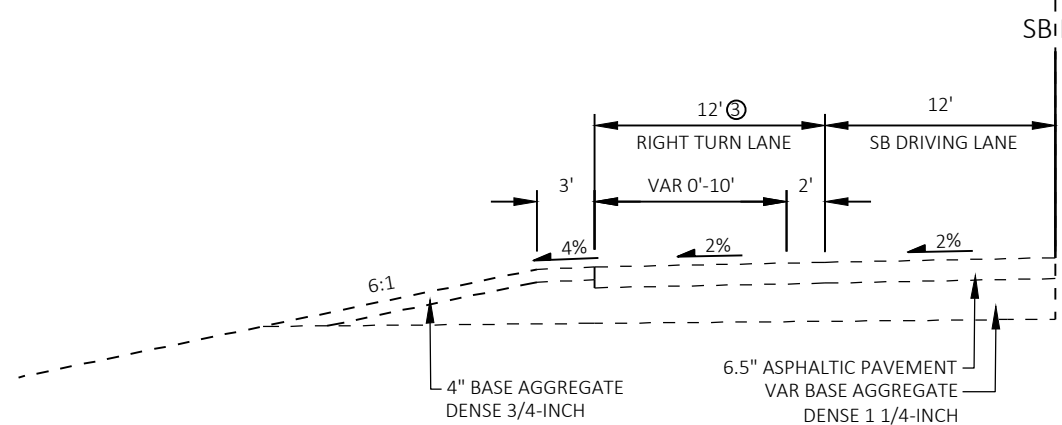
① WIDTH VARIES 10'-12' THROUGH THE TURN LANE TAPER.

**TYPICAL EXISTING SECTION**

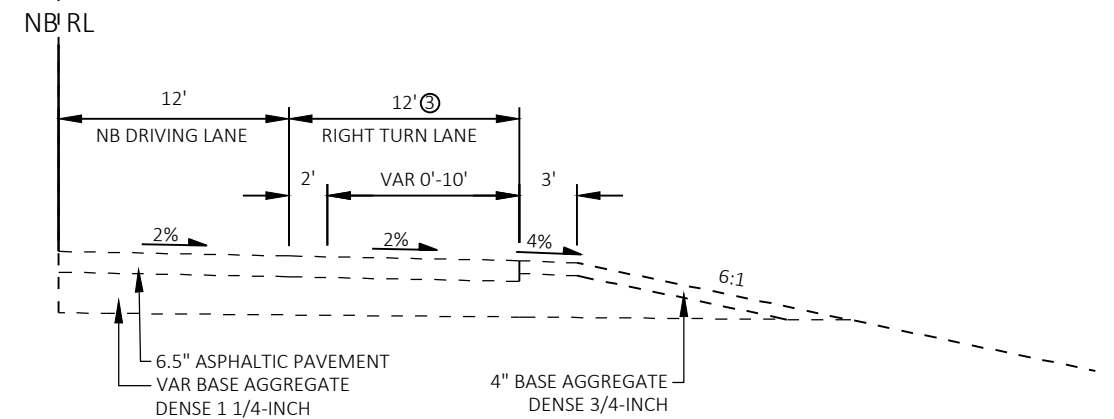
STH 13
STA 147+62.8 TO STA 237+66.8

**TYPICAL EXISTING SECTION - NB LEFT TURN LANE**

STH 13
STA 153+84.3 TO STA 157+45.2
STA 180+38.1 TO STA 183+09.4
STA 216+66.7 TO STA 219+50.0

**TYPICAL EXISTING SECTION - SB RIGHT TURN LANE**

STH 13
STA 162+16.4 SB TO STA 165+03.6 SB
STA 187+61.1 SB TO STA 190+93.5 SB
STA 224+17.5 SB TO STA 227+48.3 SB

**TYPICAL EXISTING SECTION - NB RIGHT TURN LANE**

STH 13
STA 182+44.2 TO STA 185+80.0
STA 218+95.6 TO STA 222+46.0

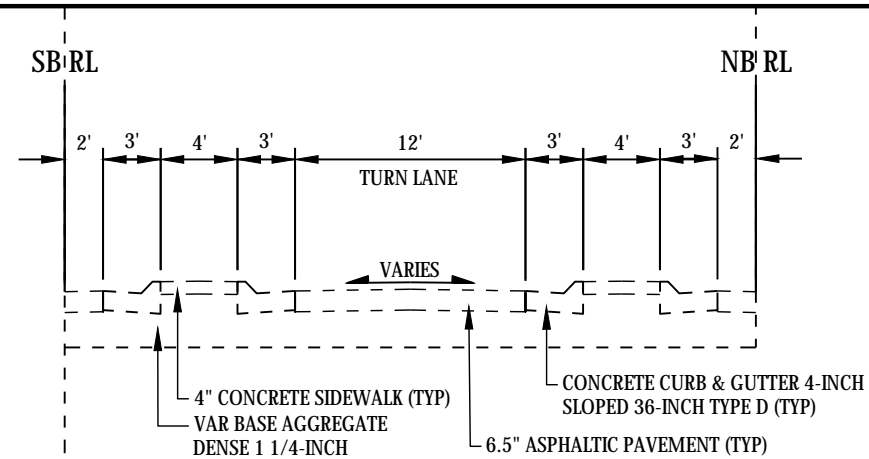
NOTES

ALL STATIONING ARE 'NB' UNLESS OTHERWISE NOTED.

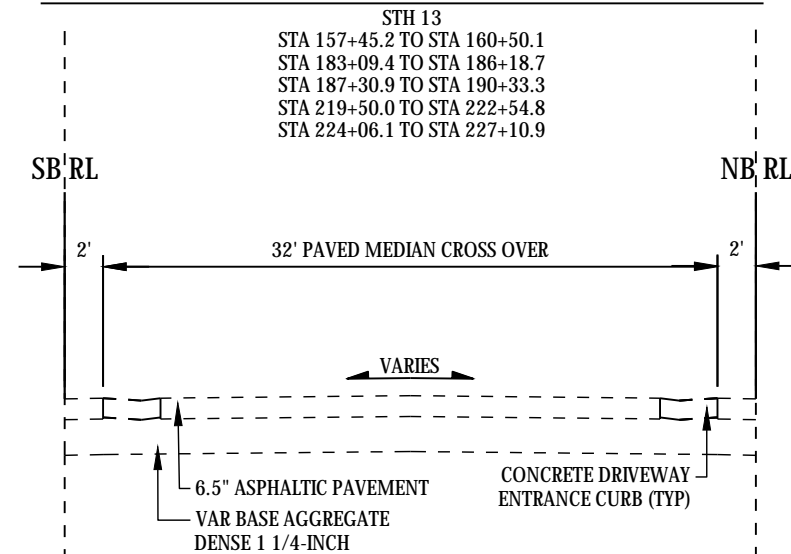
① MEDIAN WIDTH VARIES AT THE FOLLOWING LOCATIONS:
10'-36' STA 152+38.0 TO STA 153+84.3
36'-10' STA 232+62.3 TO STA 234+31.3

② NON-RAISED MEDIAN, WIDTH VARIES 0'-10' WITH 6.5" ASPHALTIC PAVEMENT AND 18" BASE AGGREGATE DENSE 1 1/4-INCH UNDERNEATH AT THE FOLLOWING LOCATIONS:
STA 147+62.8 TO STA 152+38.2
STA 234+30.9 TO STA 237+66.5

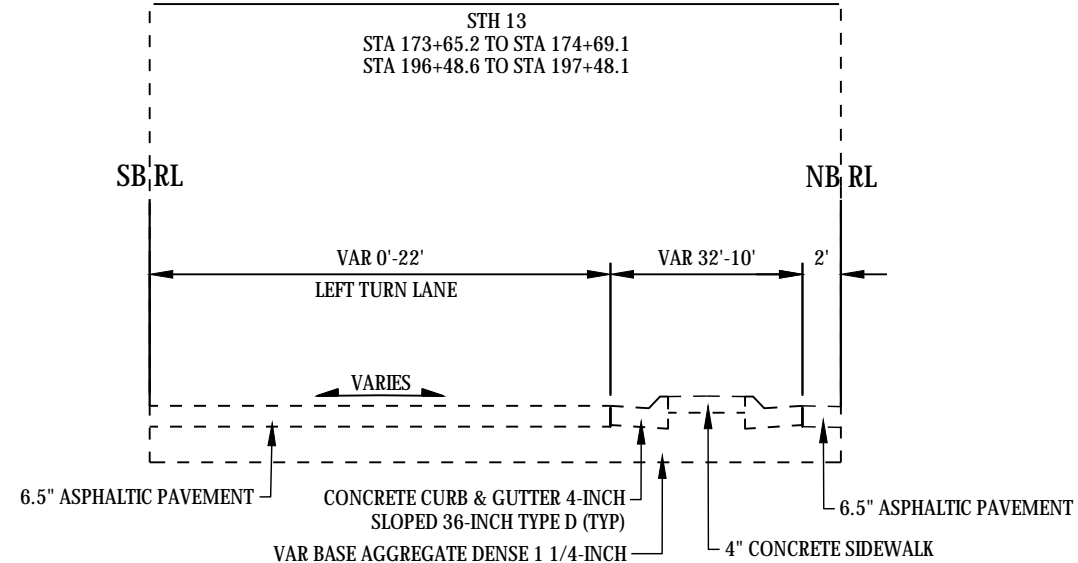
③ WIDTH VARIES 10'-12' THROUGH THE TURN LANE TAPERS.



TYPICAL EXISTING SECTION - NB / SB LEFT TURN LANE



TYPICAL EXISTING SECTION - MEDIAN CROSS OVER

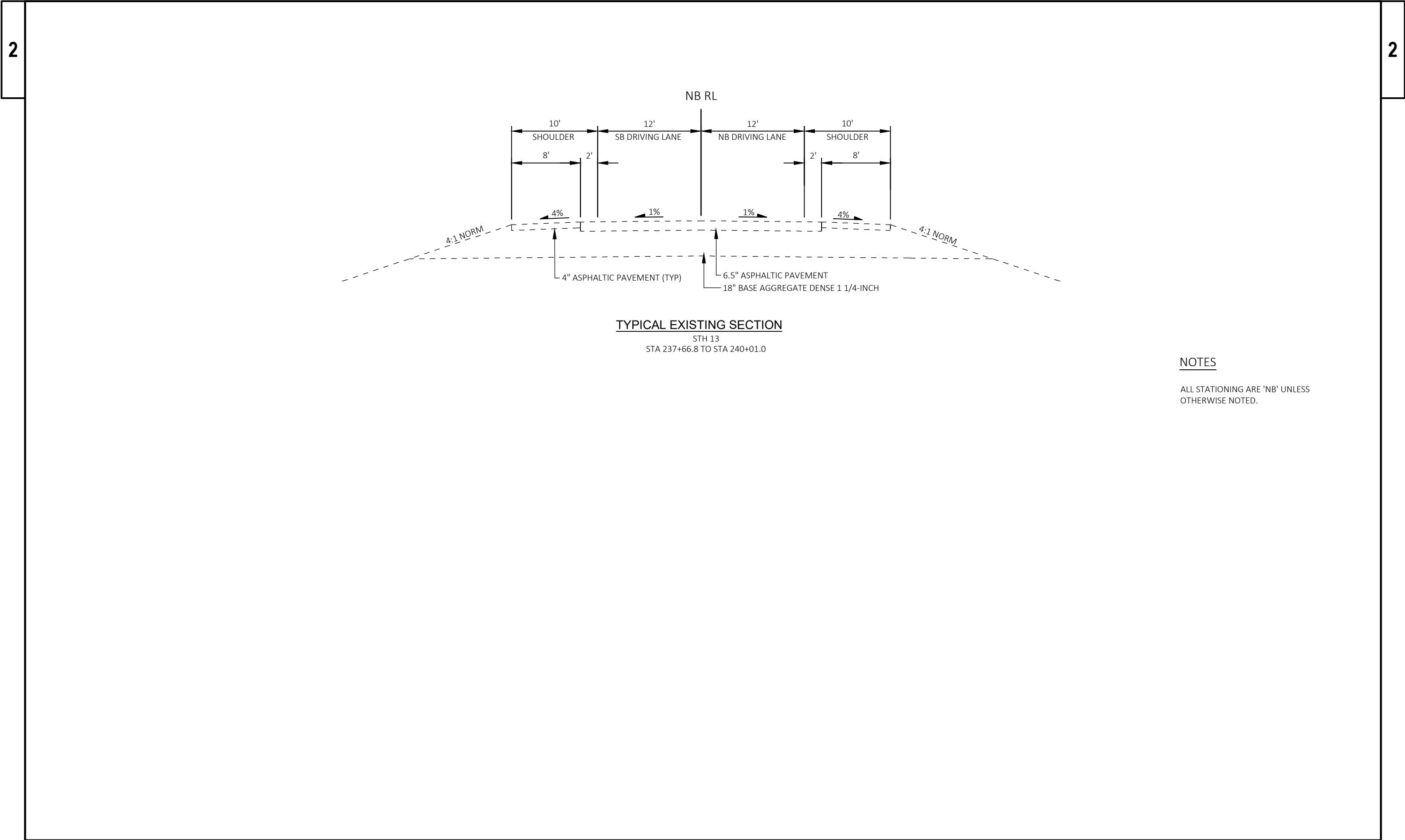


TYPICAL EXISTING SECTION - SB LEFT TURN LANE

STH 13
STA 190+33.3 SB TO STA 192+95.9 SB
STA 227+02.5 SB TO STA 229+72.9 SB

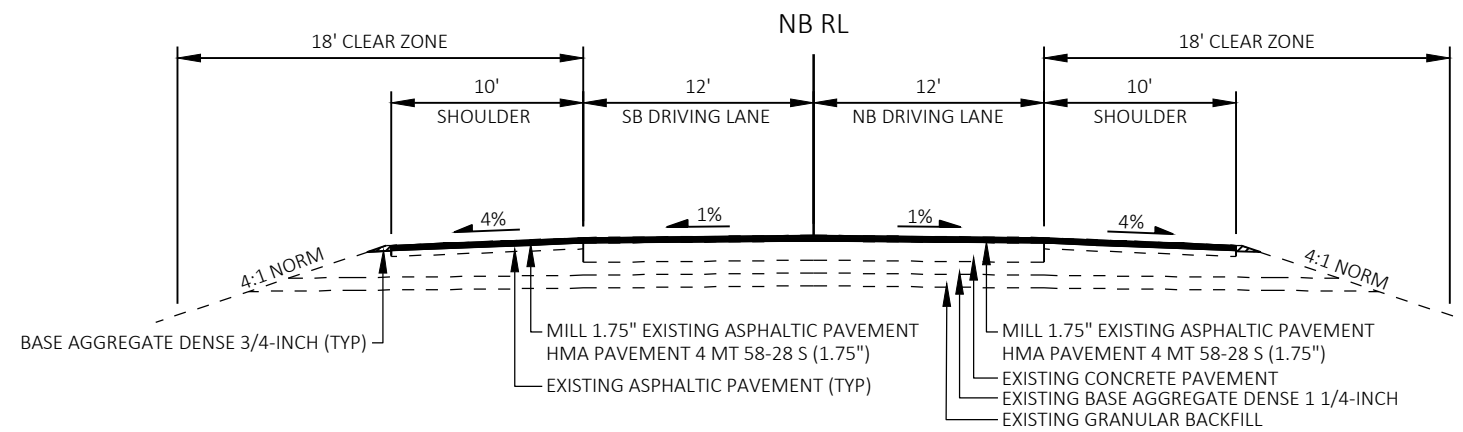
NOTES

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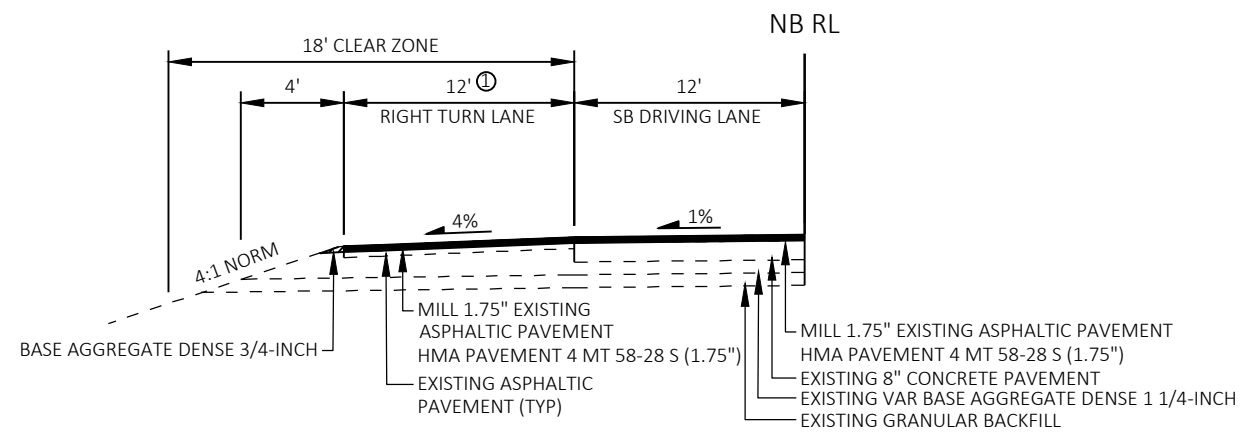
NOTES

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TYPICAL FINISHED SECTION

STH 13
STA 108+64.0 TO STA 147+62.8



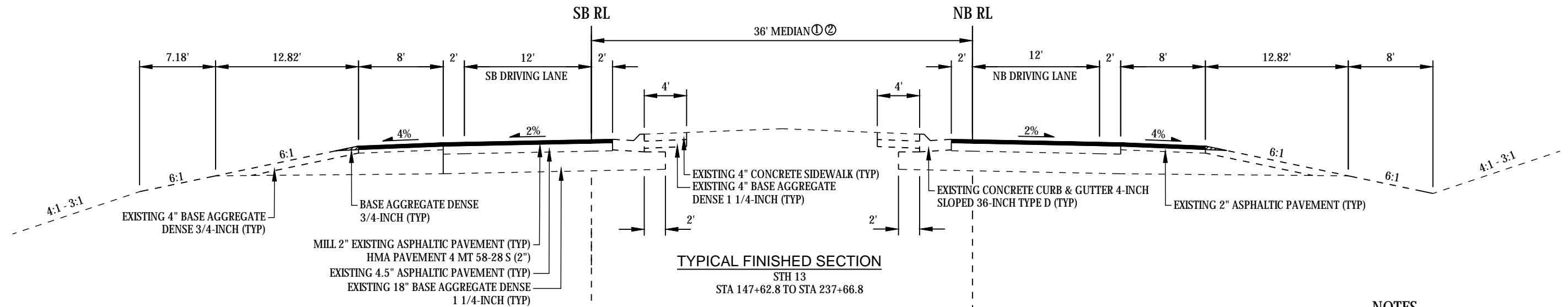
FINISHED TYPICAL SECTION

STH 13
STA 108+64.0 TO STA 111+54.0

NOTES

ALL STATIONING ARE 'NB' UNLESS OTHERWISE NOTED.

① WIDTH VARIES 10'-12' THROUGH THE TURN LANE TAPER.



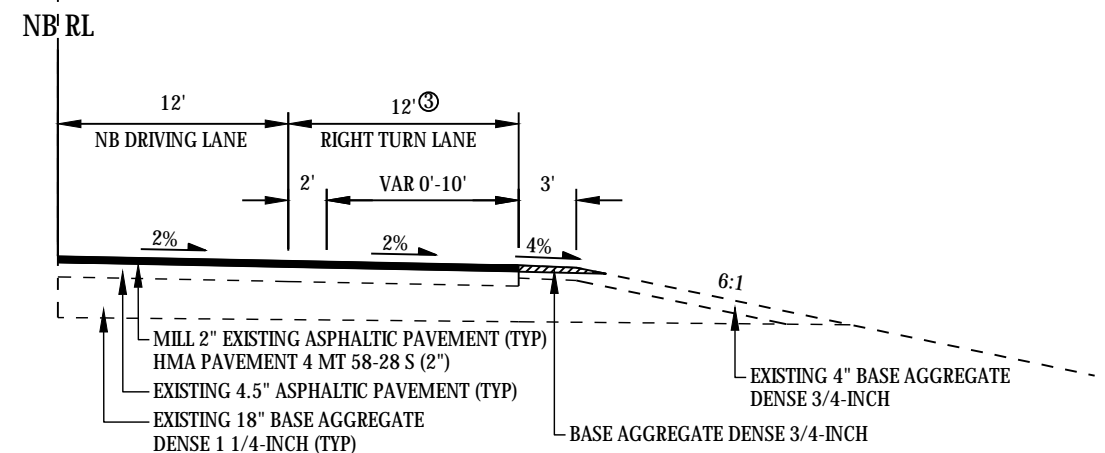
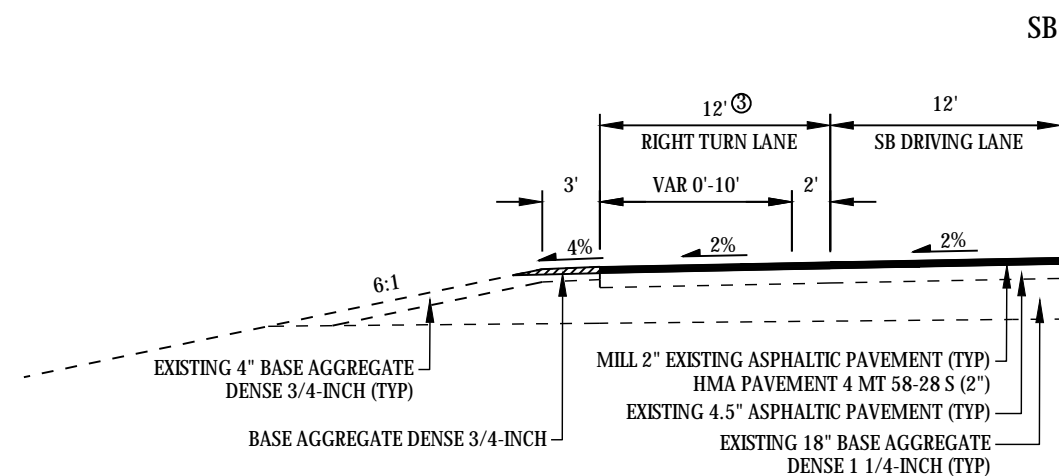
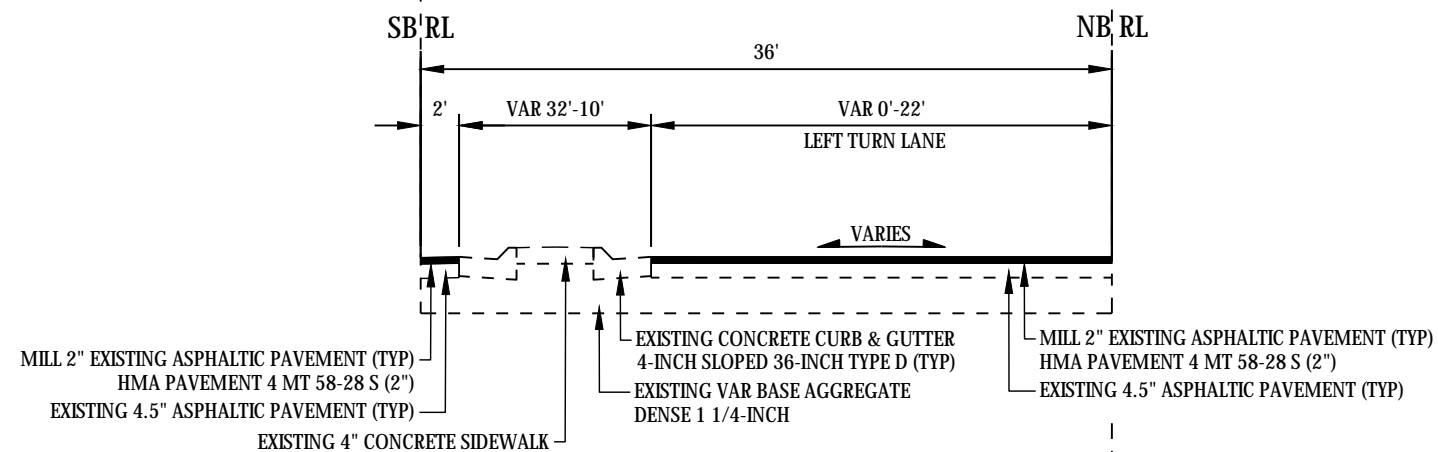
NOTES

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 10'-36' STA 152+38.0 TO STA 153+84.3
 36'-10' STA 232+62.3 TO STA 234+31.3

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 STA 147+62.8 TO STA 152+38.2
 STA 234+30.9 TO STA 237+66.5

③ WIDTH VARIES 10'-12' THROUGH THE TURN LANE TAPERS.



PROJECT NO: 6140-02-71

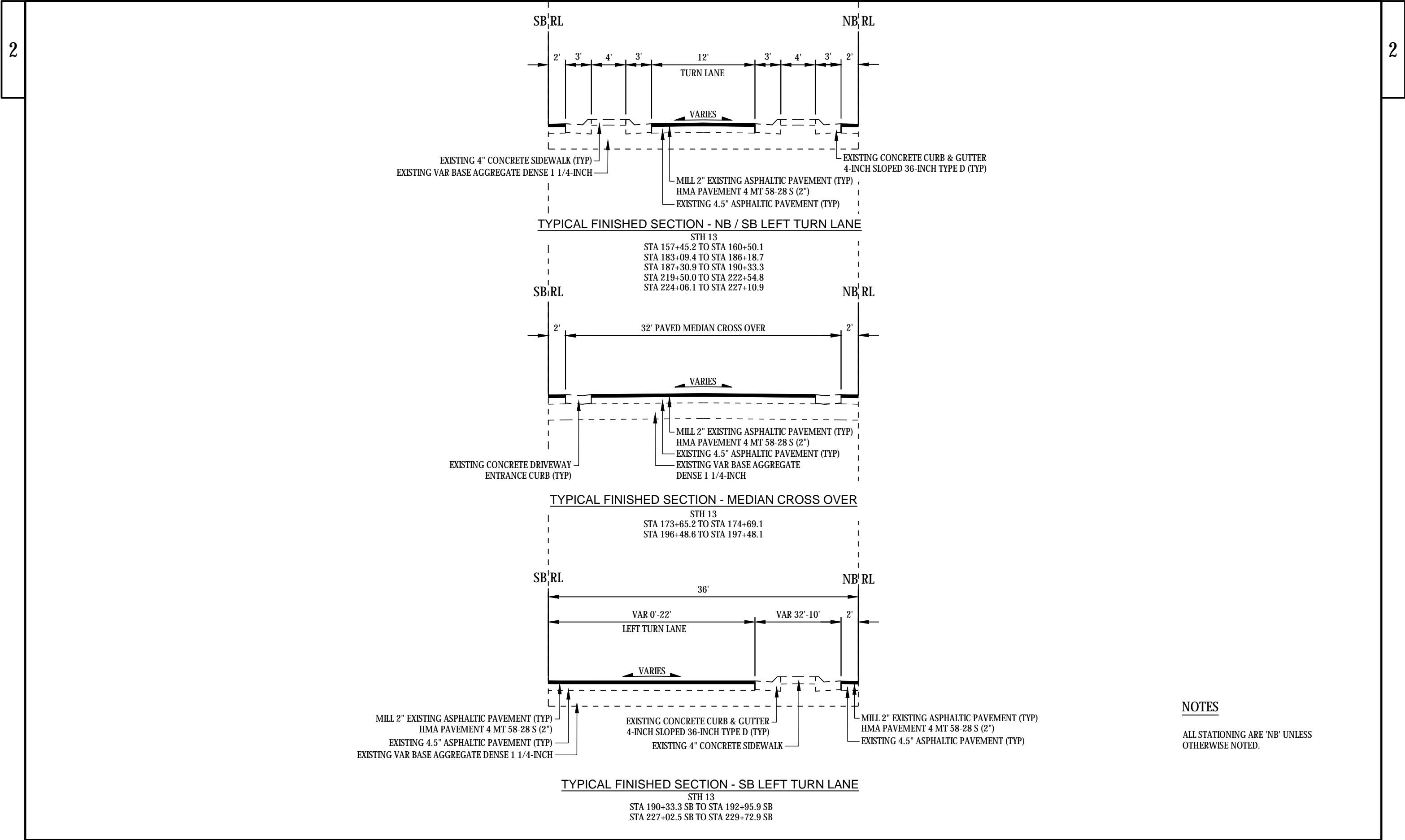
HWY: STH 13

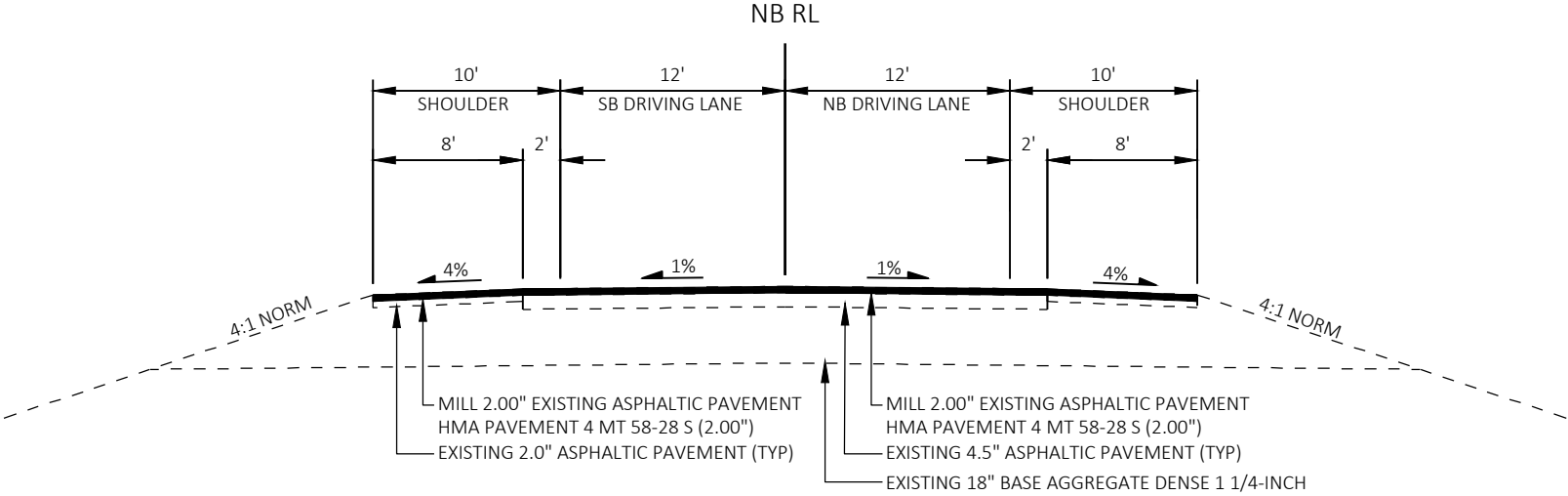
COUNTY: ADAMS

TYPICAL SECTIONS

SHEET

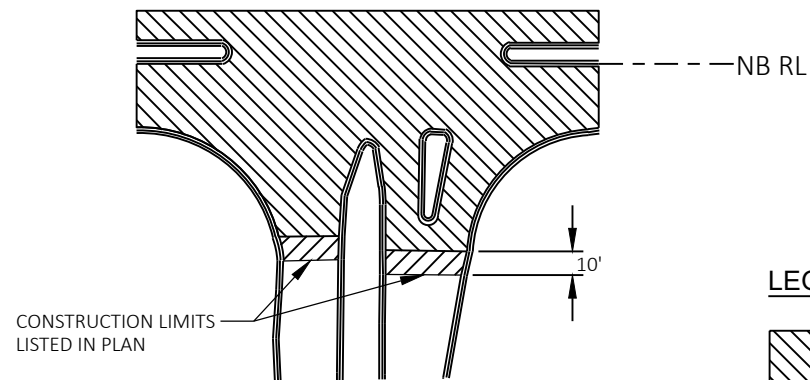
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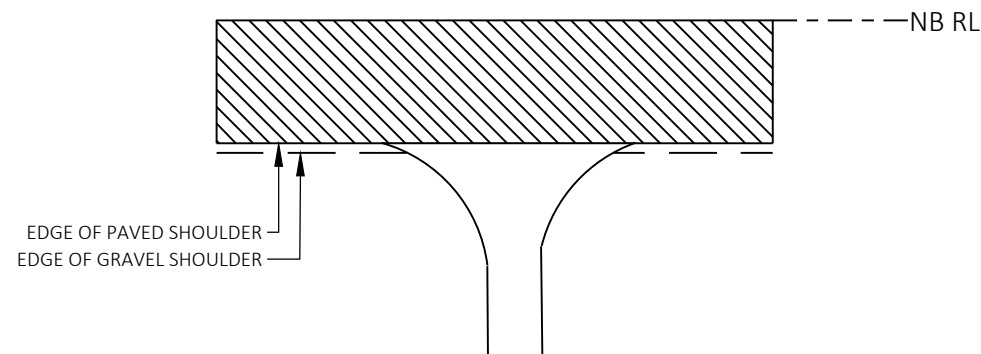
TYPICAL FINISHED SECTION
STH 13
STA 237+66.8 TO STA 240+01.0

NOTES
ALL STATIONING ARE 'NB' UNLESS OTHERWISE NOTED.

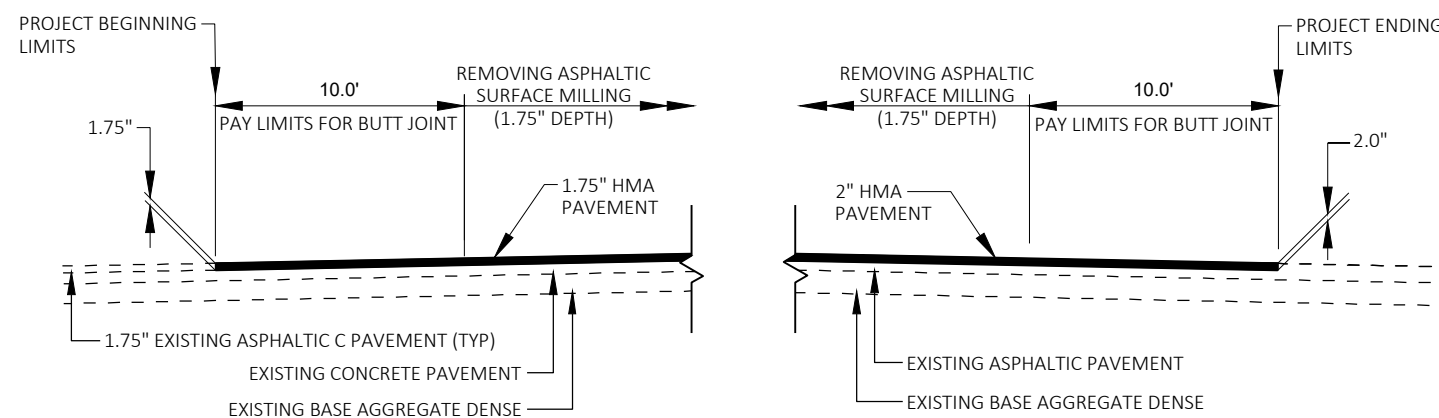


LIMITS FOR PUBLIC SIDE STREETS

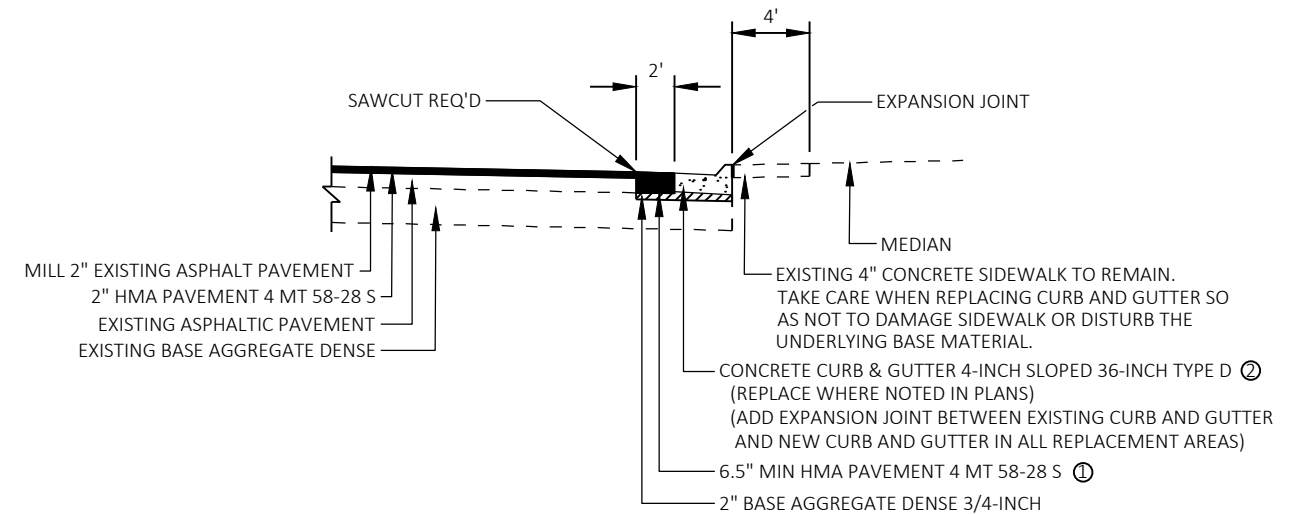
LEGEND



LIMITS FOR RESIDENTIAL DRIVEWAYS

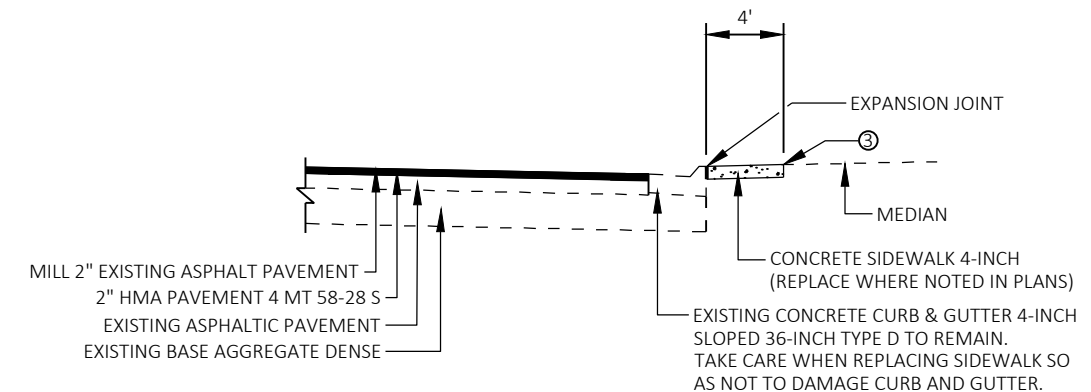


STH 13 BUTT JOINTS



CURB & GUTTER REPLACEMENT

STH 13
STA 167+16.7 'SB' TO STA 167+26.7 'SB'
STA 173+01.7 'NB' TO STA 173+16.7 'NB'
STA 210+97.0 'SB' TO STA 211+07.0 'SB'
STA 213+02.9 'NB' TO STA 213+12.9 'NB'
STA 229+72.9 'SB' TO STA 229+92.9 'SB'

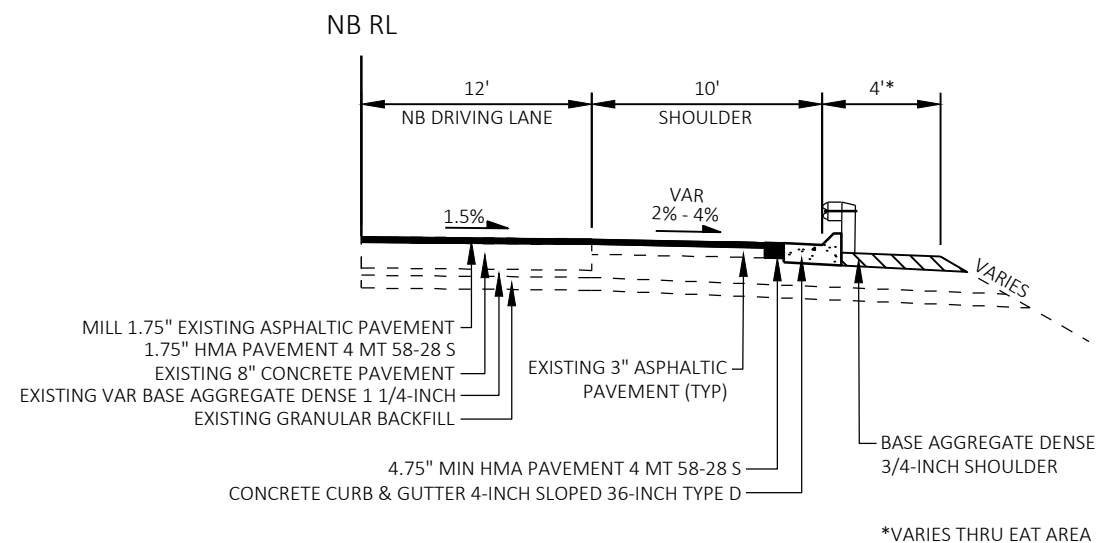


SIDEWALK REPLACEMENT

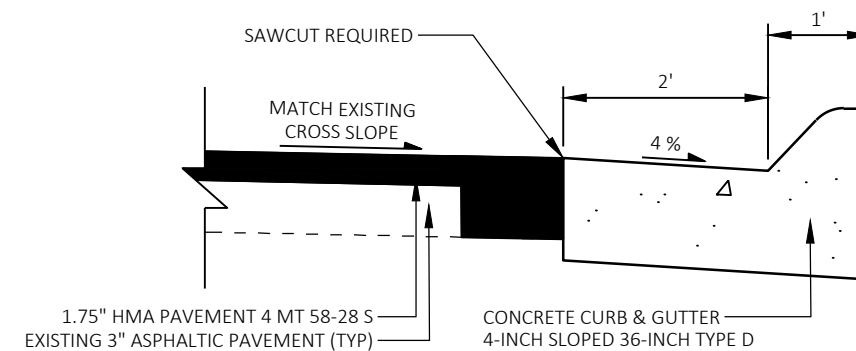
STH 13
STA 169+05.2 'NB' TO STA 169+15.2 'NB'
STA 205+71.6 'SB' TO STA 205+81.6 'SB'
STA 230+73.2 'NB' TO STA 230+78.2 'NB'

NOTES

- ① MATCH EXISTING THICKNESS IF OVER 6.5".
- ② INSTALL EXPANSION JOINT AT ALL LOCATIONS WHERE THE NEW CURB AND GUTTER MATCHES UP AGAINST EXISTING CURB AND GUTTER.
- ③ PLACE SALVAGED TOPSOIL, SEED, FERTILIZER AND EROSION MAT ON ANY AREAS DISTURBED FROM THE SIDEWALK REPLACEMENT.



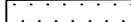



SECTION A-A

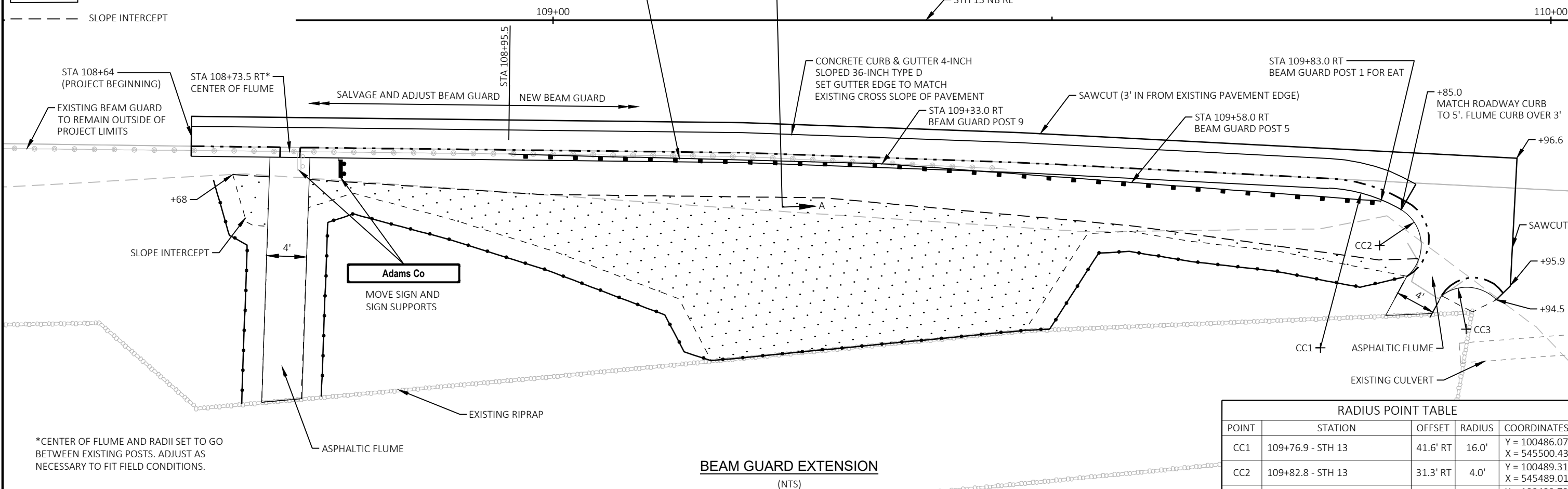


CONCRETE CURB & GUTTER

LEGEND

-  SIGN ON TWO WOOD POSTS/EXISTING POSTS
-  SILT FENCE
-  EROSION MAT CLASS II TYPE C
-  SLOPE INTERCEPT

- STA 108+64 TO STA 109+83, RT
- BARRIER SYSTEM GRADING SHAPING FINISHING
- REMOVING GUARDRAIL
- ADJUSTING STEEL PLATE BEAM GUARD
- STEEL PLATE BEAM GUARD CLASS A
- STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL



RADIUS POINT TABLE

POINT	STATION	OFFSET	RADIUS	COORDINATES
CC1	109+76.9 - STH 13	41.6' RT	16.0'	Y = 100486.07 X = 545500.43
CC2	109+82.8 - STH 13	31.3' RT	4.0'	Y = 100489.31 X = 545489.01
CC3	109+91.5 - STH 13	39.8' RT	4.0'	Y = 100499.79 X = 545495.07

PROJECT NO: 6140-02-71

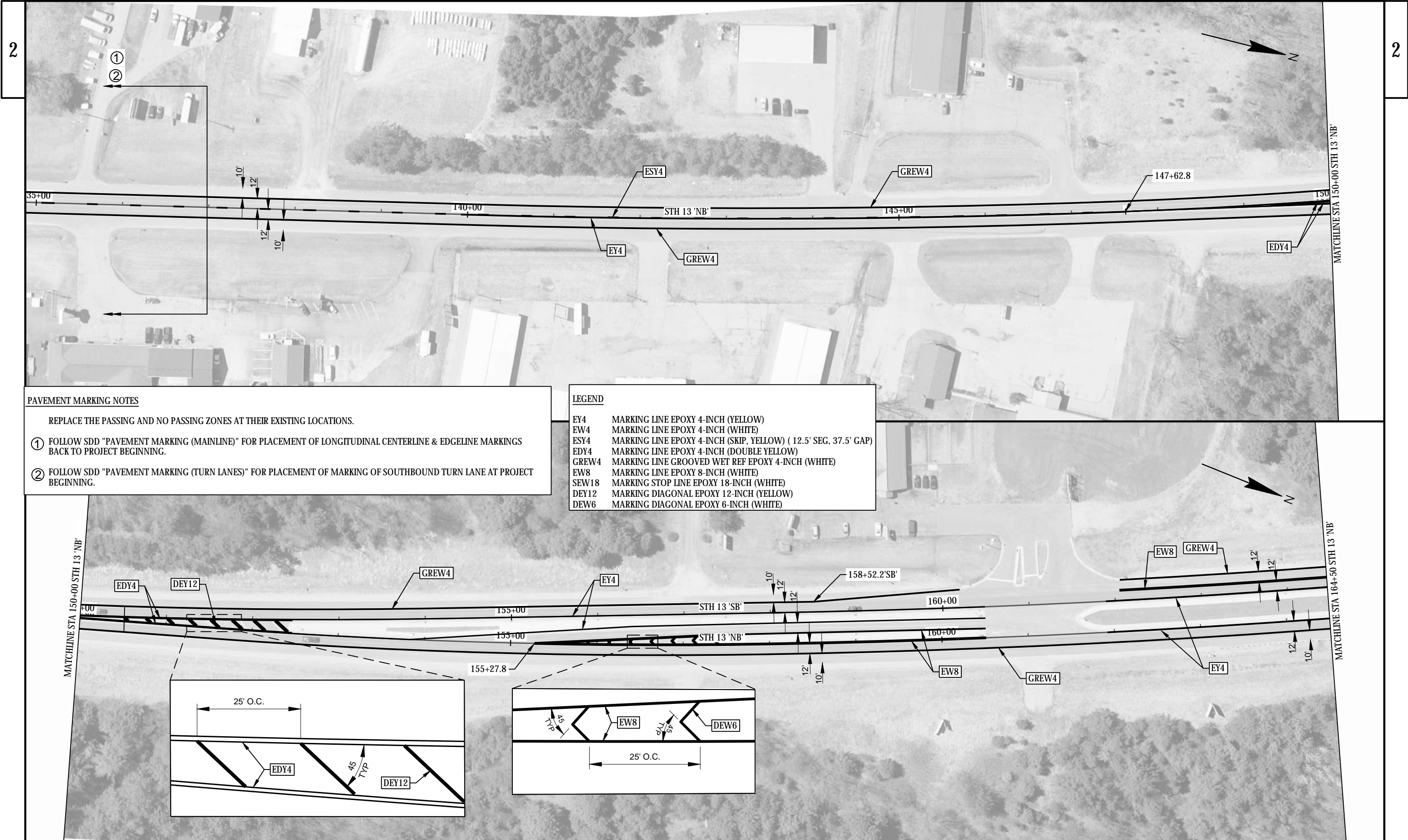
HWY: STH 13

COUNTY: ADAMS

CONSTRUCTION DETAILS - BEAM GUARD

SHEET

E



PAVEMENT MARKING NOTES

REPLACE THE PASSING AND NO PASSING ZONES AT THEIR EXISTING LOCATIONS.

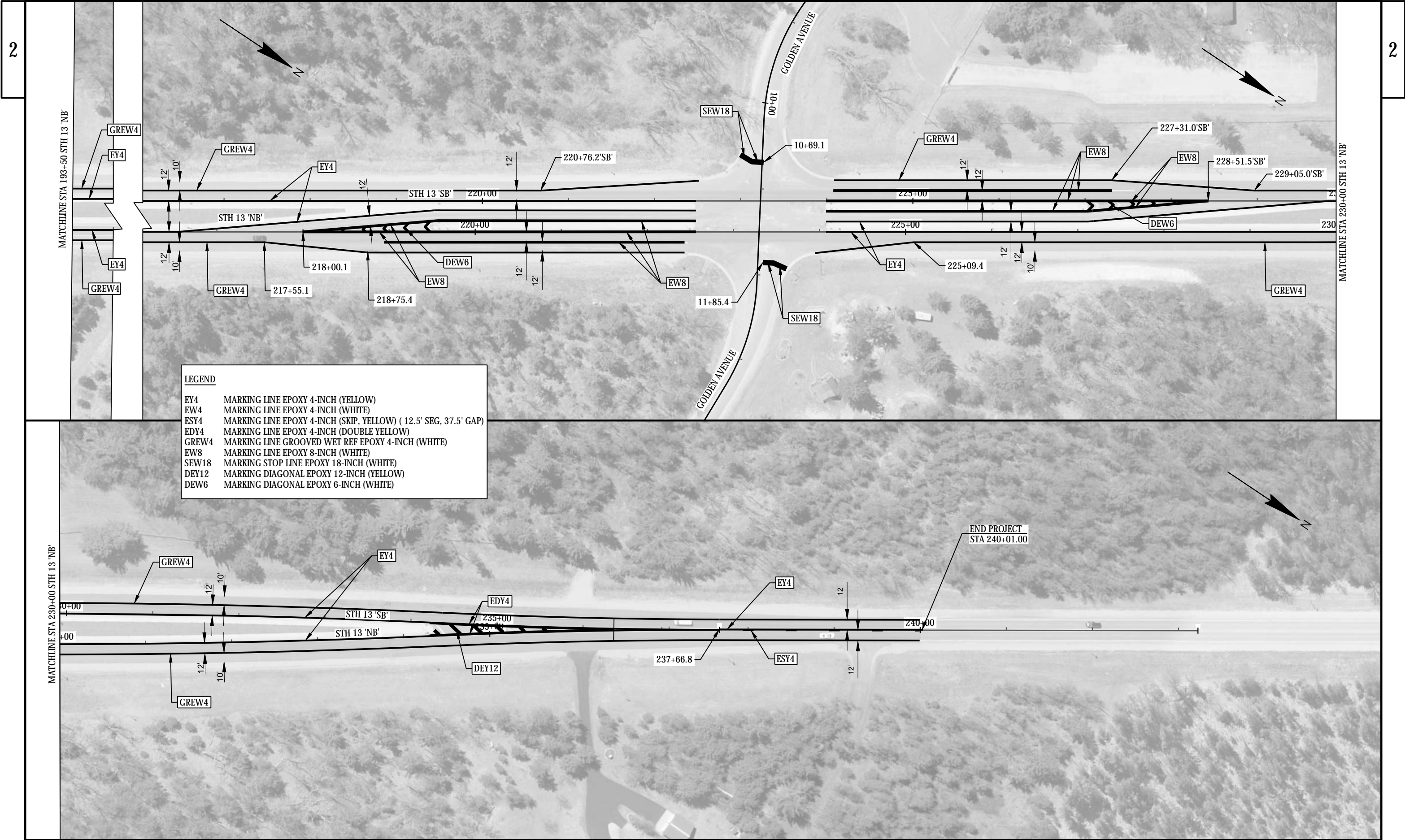
① FOLLOW SDD "PAVEMENT MARKING (MAINLINE)" FOR PLACEMENT OF LONGITUDINAL CENTERLINE & EDGETLINE MARKINGS BACK TO PROJECT BEGINNING.

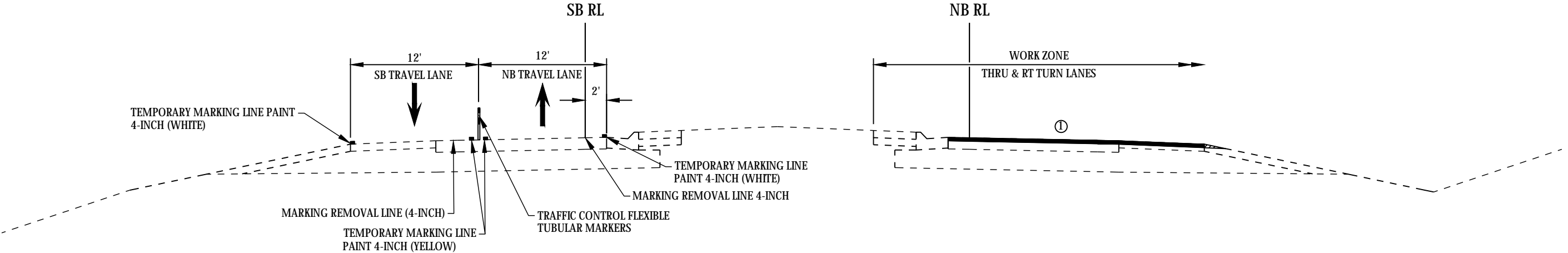
② FOLLOW SDD "PAVEMENT MARKING (TURN LANES)" FOR PLACEMENT OF MARKING OF SOUTHBOUND TURN LANE AT PROJECT BEGINNING.

LEGEND	
EY4	MARKING LINE EPOXY 4-INCH (YELLOW)
EW4	MARKING LINE EPOXY 4-INCH (WHITE)
ESY4	MARKING LINE EPOXY 4-INCH (SKIP, YELLOW) (12.5' SEG, 37.5' GAP)
EDY4	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
GREW4	MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
EW8	MARKING LINE EPOXY 8-INCH (WHITE)
SEW18	MARKING STOP LINE EPOXY 18-INCH (WHITE)
DEY12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
DEW6	MARKING DIAGONAL EPOXY 6-INCH (WHITE)

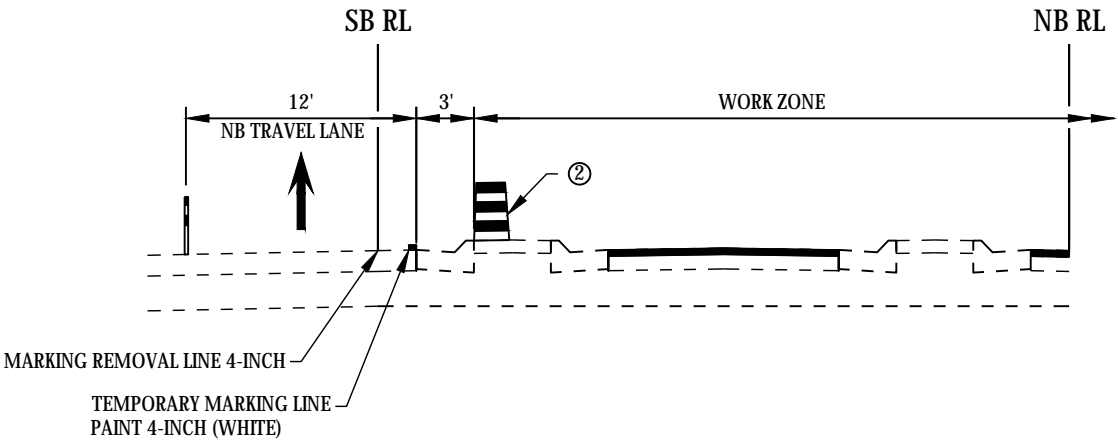


LEGEND	
EY4	MARKING LINE EPOXY 4-INCH (YELLOW)
EW4	MARKING LINE EPOXY 4-INCH (WHITE)
ESY4	MARKING LINE EPOXY 4-INCH (SKIP, YELLOW) (12.5' SEG, 37.5' GAP)
EDY4	MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)
GREW4	MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE)
EW8	MARKING LINE EPOXY 8-INCH (WHITE)
SEW18	MARKING STOP LINE EPOXY 18-INCH (WHITE)
DEY12	MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
DEW6	MARKING DIAGONAL EPOXY 6-INCH (WHITE)





STAGE 1 TYPICAL SECTION
STH 13
STA 150+40 NB TO STA 236+35 NB



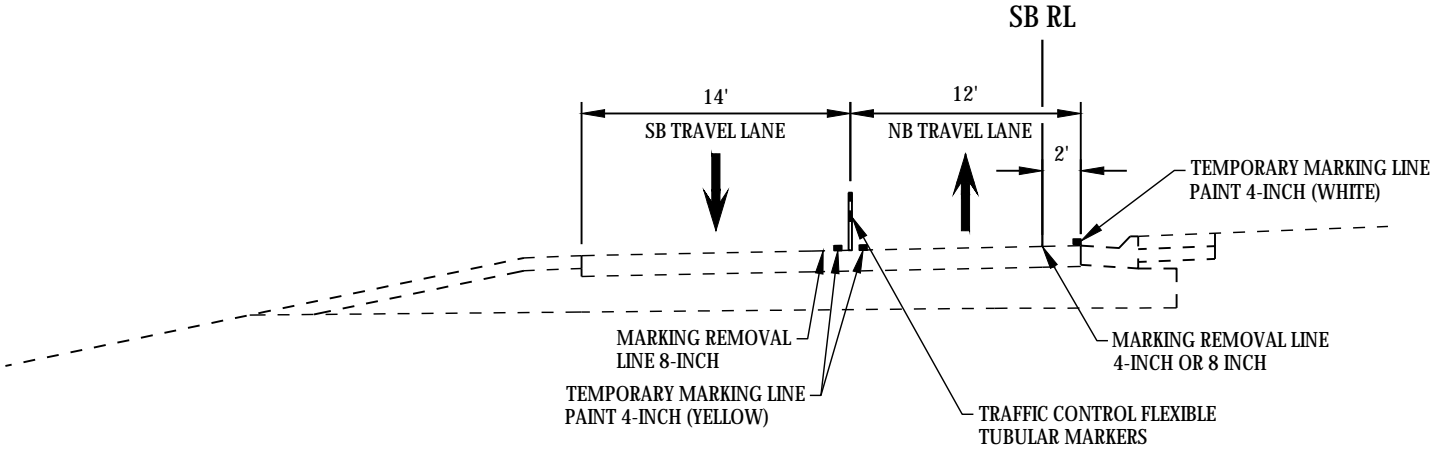
STAGE 1 TYPICAL SECTION - NB LEFT TURN LANES
STH 13

LEGEND

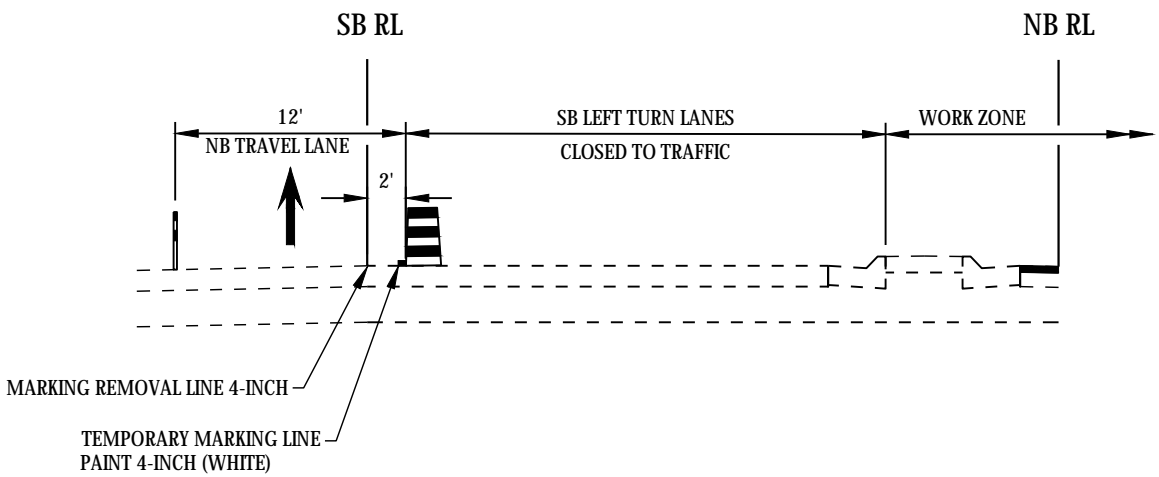
- TRAFFIC CONTROL DRUM
- DIRECTION OF THRU TRAFFIC

NOTES

- ① BEGIN NB MILLING AND PAVING FOR STAGE 1 AT APPROXIMATELY STA 150+40.0.
END NB MILLING AND PAVING FOR STAGE 1 AT APPROXIMATELY STA 236+35.0.
- ② PLACE DRUMS WHERE CONCRETE MEDIAN IS PAVED FULL WIDTH.





STAGE 1 TYPICAL SECTION (THROUGH SB RIGHT TURN LANES)
STH 13

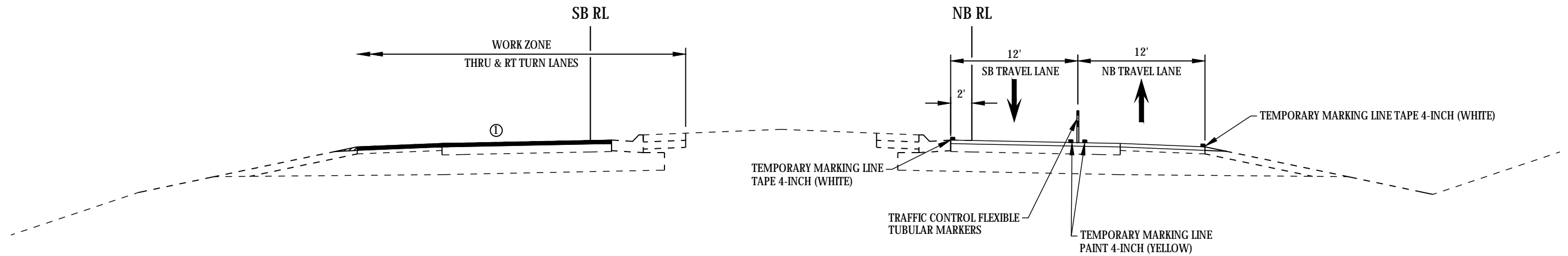


STAGE 1 TYPICAL SECTION - SB LEFT TURN LANES
STH 13

LEGEND

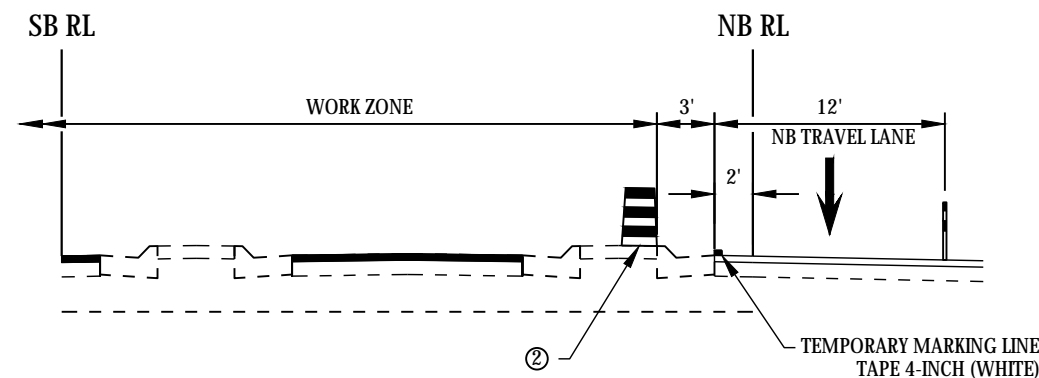
 TRAFFIC CONTROL DRUM

 DIRECTION OF THRU TRAFFIC



STAGE 2 TYPICAL SECTION

STH 13
STA 150+40 NB TO STA 236+35 NB



STAGE 2 TYPICAL SECTION - SB LEFT TURN LANES

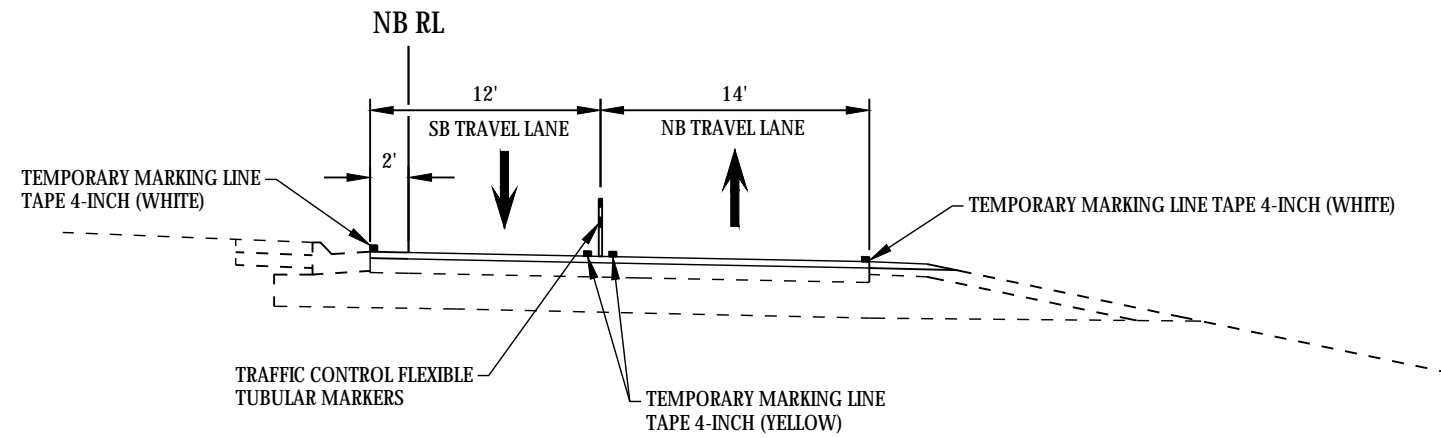
STH 13

LEGEND

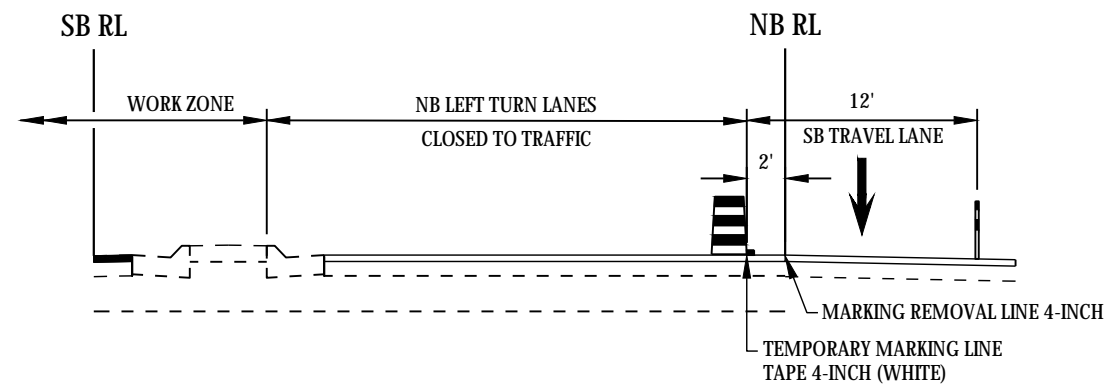
- TRAFFIC CONTROL DRUM
- DIRECTION OF THRU TRAFFIC

NOTES

- ① BEGIN NB MILLING AND PAVING FOR STAGE 1 AT APPROXIMATELY STA 150+40.0.
END NB MILLING AND PAVING FOR STAGE 1 AT APPROXIMATELY STA 236+35.0.
- ② PLACE DRUMS WHERE CONCRETE MEDIAN IS PAVED FULL WIDTH.



STAGE 2 TYPICAL SECTION (THROUGH NB RIGHT TURN LANES)
STH 13



STAGE 2 TYPICAL SECTION - NB LEFT TURN LANES
STH 13

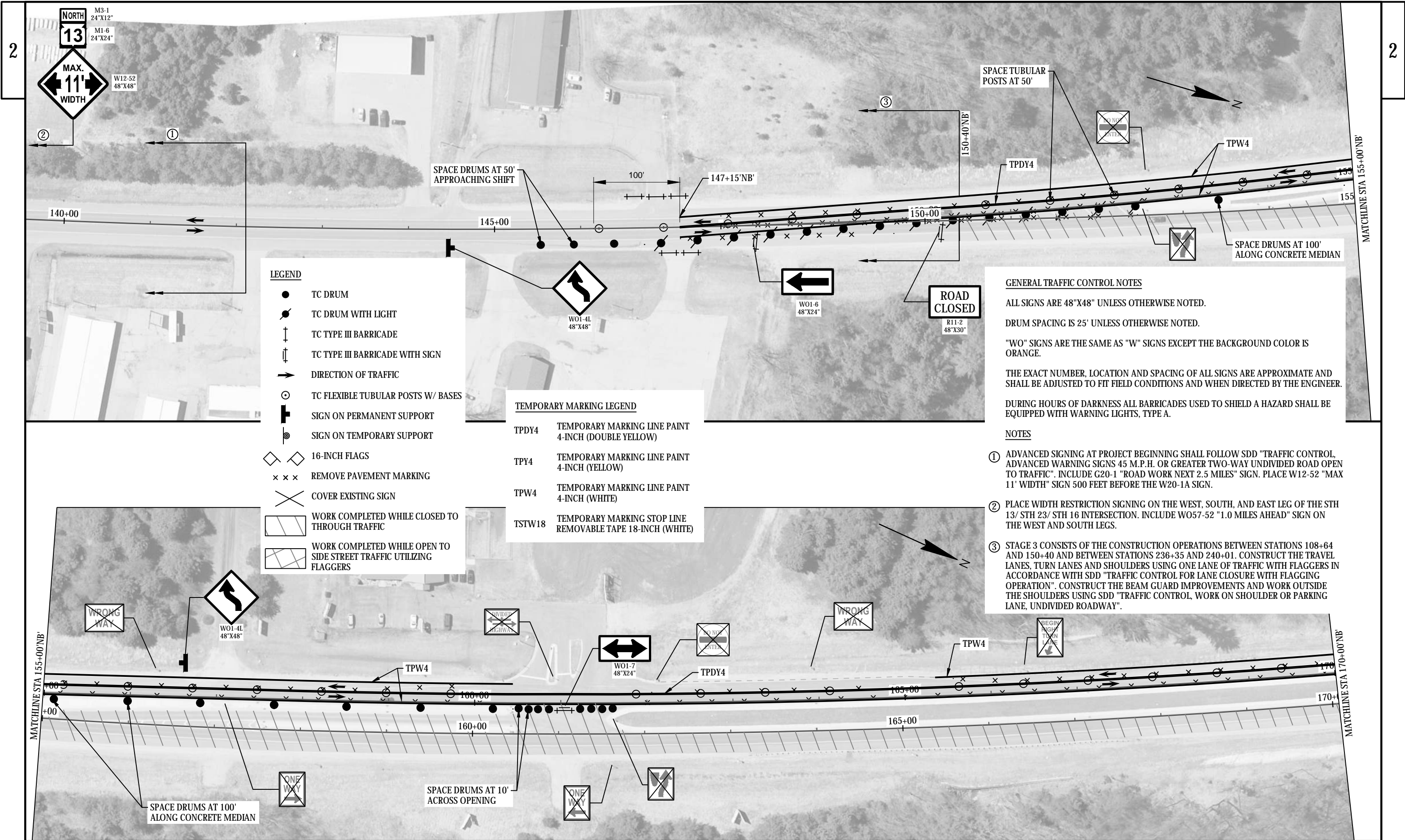
LEGEND



TRAFFIC CONTROL DRUM



DIRECTION OF THRU TRAFFIC



PROJECT NO: 6140-02-71

HWY: STH 13

COUNTY: ADAMS

TRAFFIC CONTROL - STAGE 1

SHEET

E

FILE NAME: X:\PROJECTS\ADAMS\6140-02-01_STH 13_CTY LINE-GOLDEN AVE\DESIGN\C3D\SHEETS\PLAN\TRAFFIC CONTROL - STAGE 1.DWG
LAYOUT NAME: STH 13 - (1)

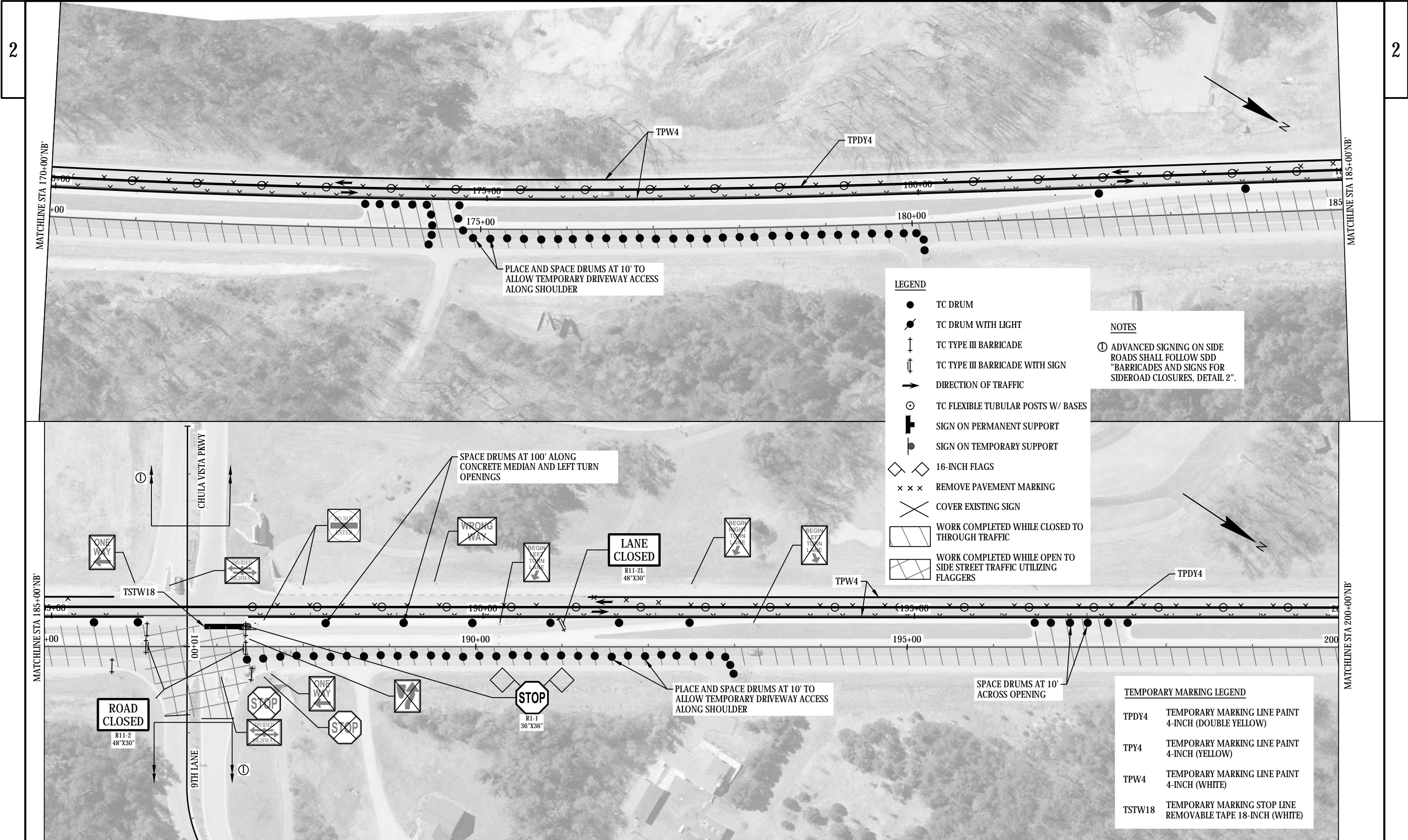
PLOT DATE: 8/31/2020 4:42 PM

PLOT BY: STEVE LIPPERT

PLOT NAME:

PLOT SCALE: 1 IN:100 FT

WISDOT/CADDs SHEET 44



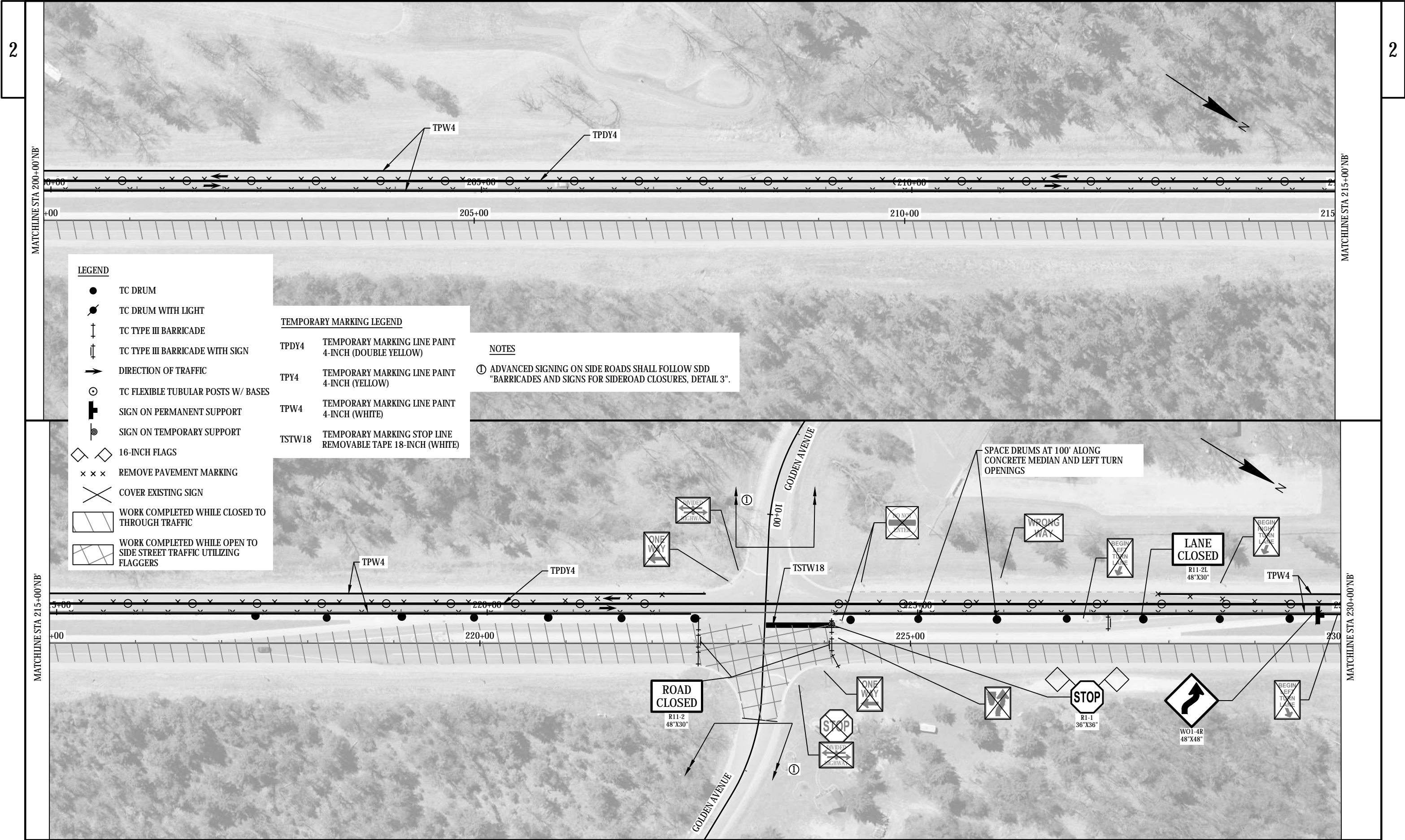
LEGEND

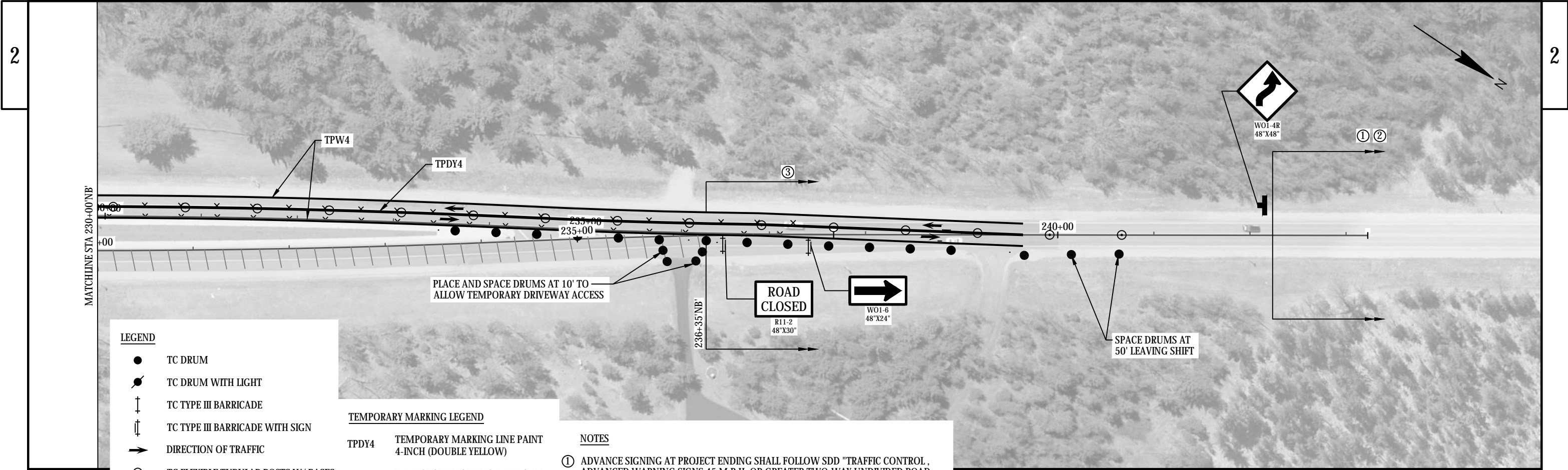
- TC DRUM
- TC DRUM WITH LIGHT
- † TC TYPE III BARRICADE
- † TC TYPE III BARRICADE WITH SIGN
- ➔ DIRECTION OF TRAFFIC
- TC FLEXIBLE TUBULAR POSTS W/ BASES
- SIGN ON PERMANENT SUPPORT
- ⦿ SIGN ON TEMPORARY SUPPORT
- ◇ 16-INCH FLAGS
- × × × REMOVE PAVEMENT MARKING
- ✕ COVER EXISTING SIGN
- ▨ WORK COMPLETED WHILE CLOSED TO THROUGH TRAFFIC
- ▩ WORK COMPLETED WHILE OPEN TO SIDE STREET TRAFFIC UTILIZING FLAGGERS

NOTES

① ADVANCED SIGNING ON SIDE ROADS SHALL FOLLOW SDD "BARRICADES AND SIGNS FOR SIDEROAD CLOSURES, DETAIL 2".

TEMPORARY MARKING LEGEND	
TPDY4	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
TPY4	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
TPW4	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
TSTW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)



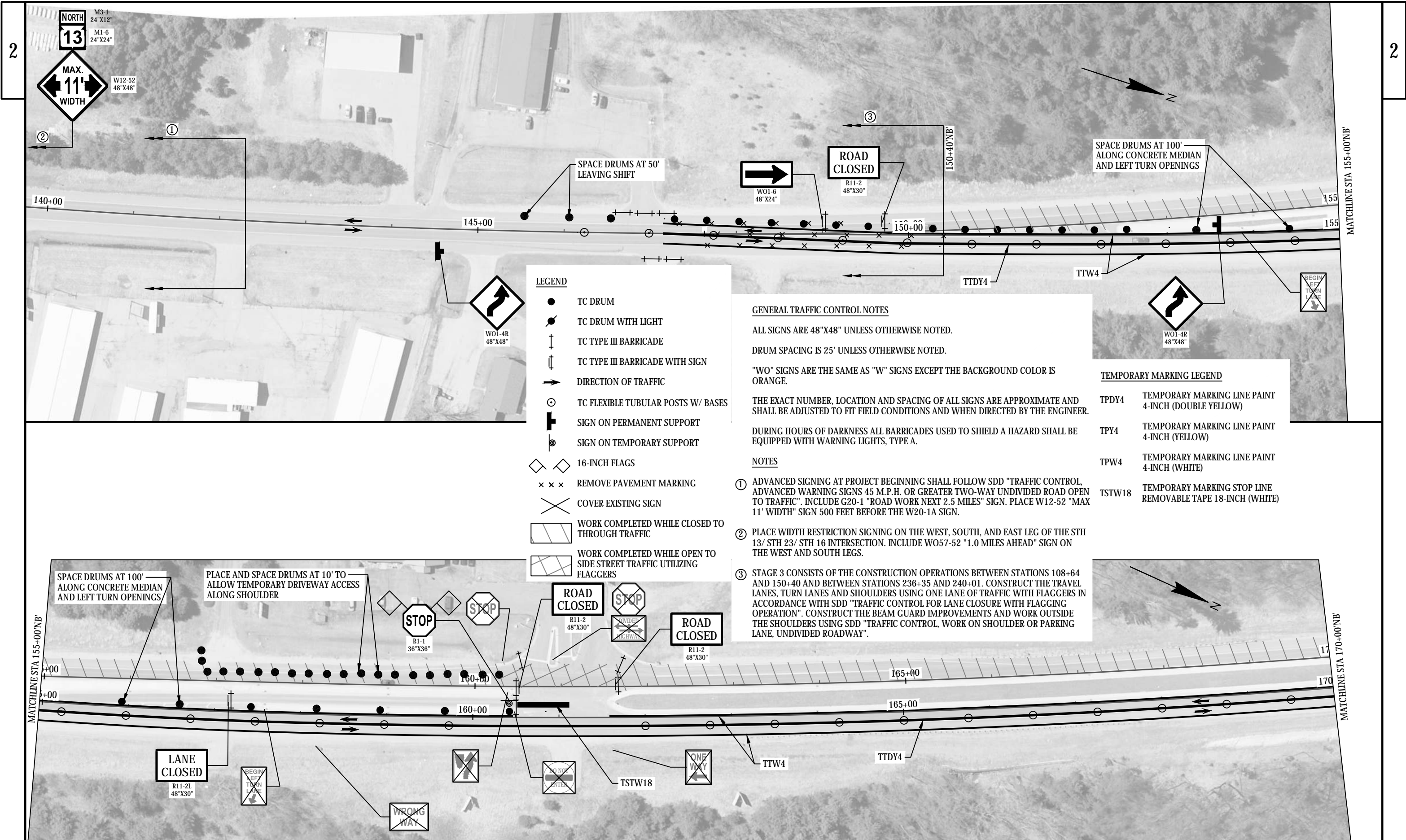


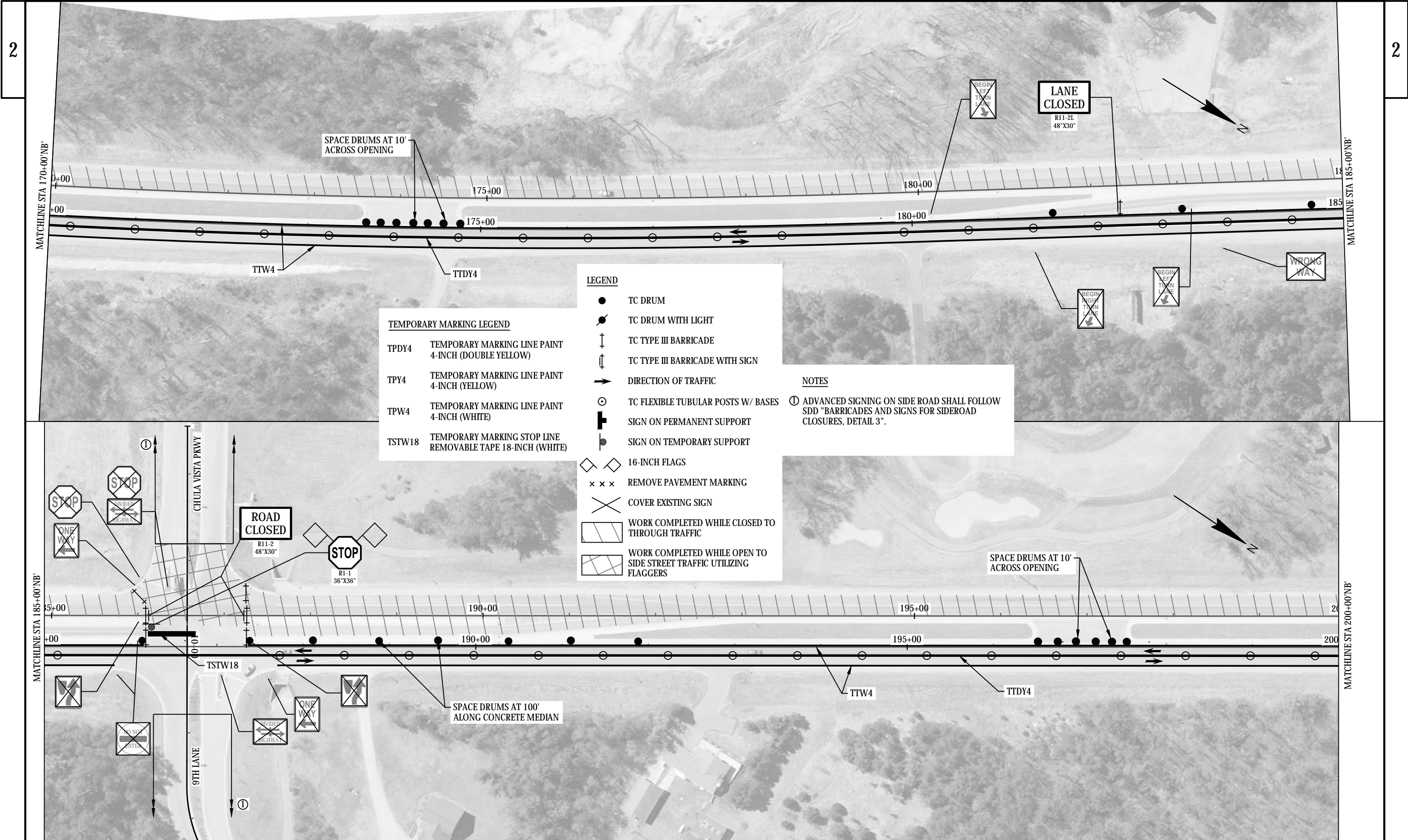
LEGEND

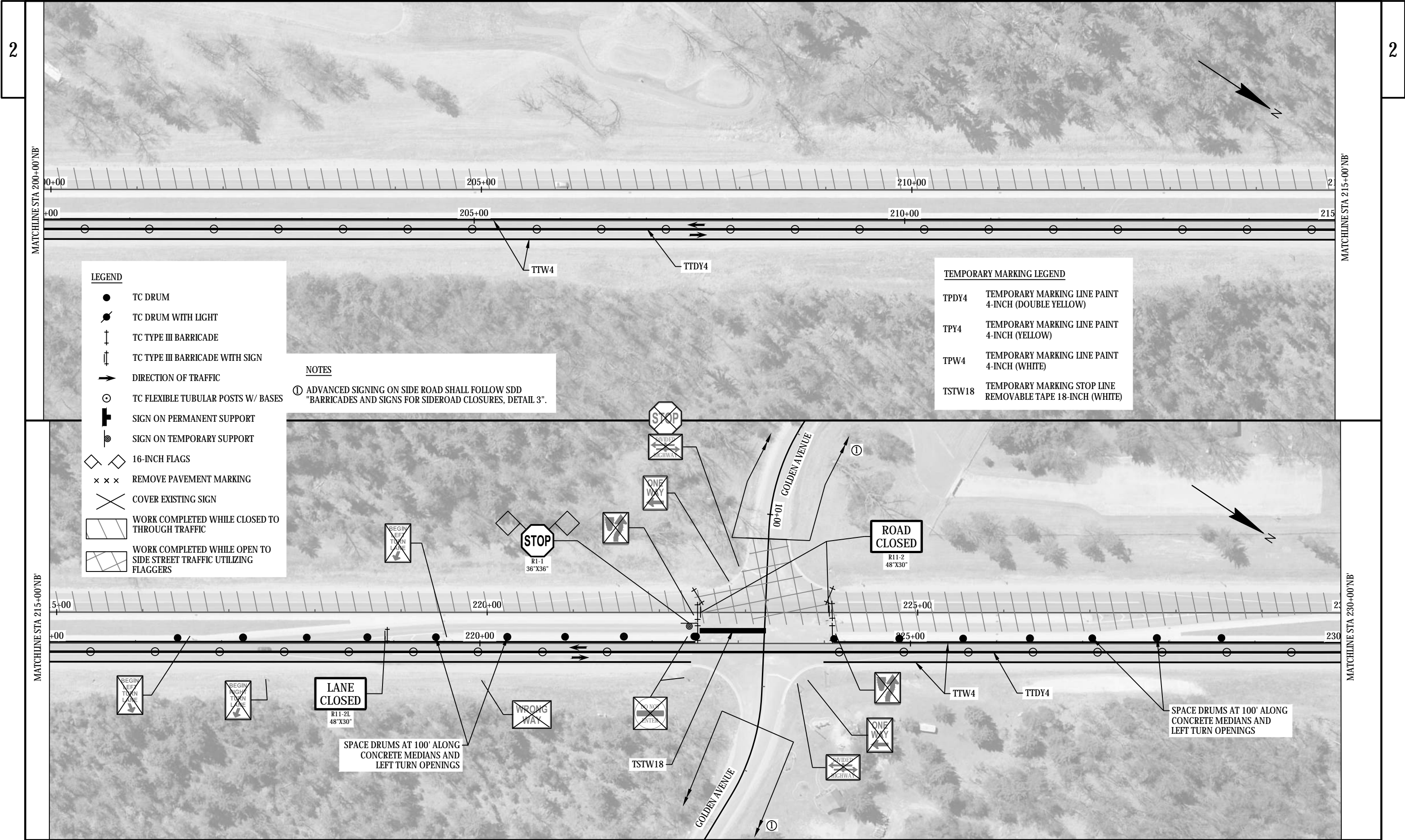
- TC DRUM
- TC DRUM WITH LIGHT
- ↑ TC TYPE III BARRICADE
- ↑ TC TYPE III BARRICADE WITH SIGN
- ➔ DIRECTION OF TRAFFIC
- ⊙ TC FLEXIBLE TUBULAR POSTS W/ BASES
- ⊥ SIGN ON PERMANENT SUPPORT
- ⊙ SIGN ON TEMPORARY SUPPORT
- ◇ 16-INCH FLAGS
- × × × REMOVE PAVEMENT MARKING
- ✕ COVER EXISTING SIGN
- ▨ WORK COMPLETED WHILE CLOSED TO THROUGH TRAFFIC
- ▩ WORK COMPLETED WHILE OPEN TO SIDE STREET TRAFFIC UTILIZING FLAGGERS

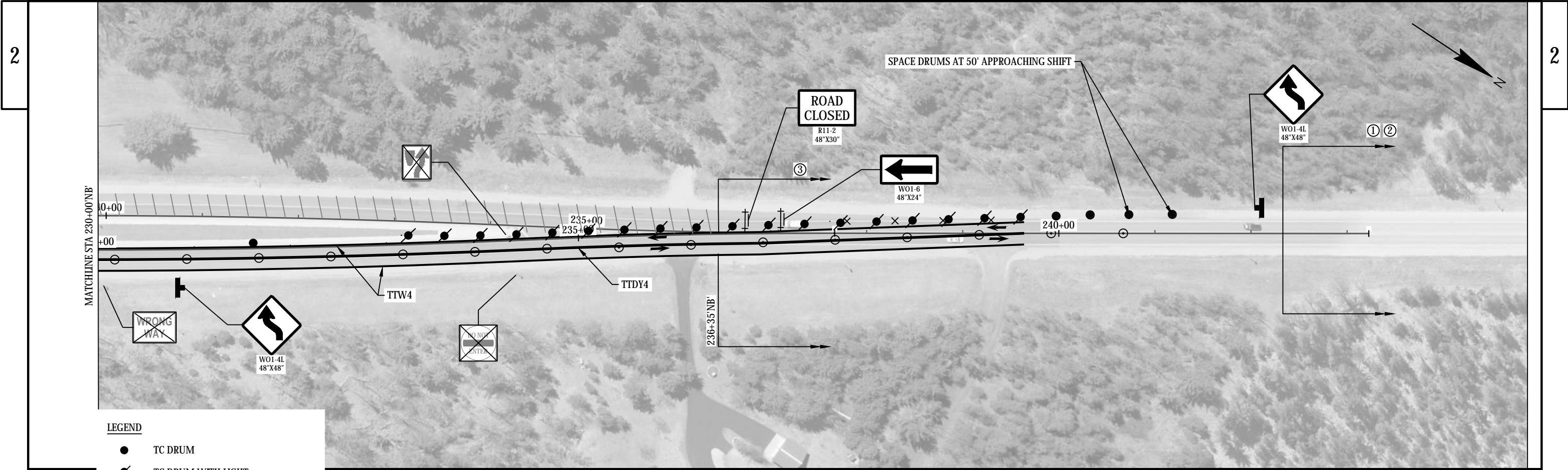
TEMPORARY MARKING LEGEND	
TPDY4	TEMPORARY MARKING LINE PAINT 4-INCH (DOUBLE YELLOW)
TPY4	TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
TPW4	TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
TSTW18	TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

- NOTES**
- ADVANCE SIGNING AT PROJECT ENDING SHALL FOLLOW SDD "TRAFFIC CONTROL , ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC". INCLUDE G20-1 "ROAD WORK NEXT 2.2 MILES" SIGN. PLACE W12-52 "MAX 11' WIDTH" SIGN 500 FEET BEFORE THE W20-1A SIGN.
 - PLACE W12-52 "MAX 11' WIDTH" SIGN ON STH 13 JUST NORTH OF CTH Q. INCLUDE W057-52 "0.8 MILES AHEAD" SIGN. ALSO PLACE W12-52 SIGN WITH M3-3 "SOUTH" SIGN AND M1-6 "13" SIGN ON CTH Q.
 - STAGE 3 CONSISTS OF THE CONSTRUCTION OPERATIONS BETWEEN STATIONS 108+64 AND 150+40 AND BETWEEN STATIONS 236+35 AND 240+01. COMPLETE STAGE 3 USING ONE LANE OF TRAFFIC WITH FLAGGERS IN ACCORDANCE WITH SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION".









LEGEND

- TC DRUM
- TC DRUM WITH LIGHT
- ⊥ TC TYPE III BARRICADE
- ⊥ TC TYPE III BARRICADE WITH SIGN
- ➔ DIRECTION OF TRAFFIC
- ⊙ TC FLEXIBLE TUBULAR POSTS W/ BASES
- ⊥ SIGN ON PERMANENT SUPPORT
- ⊙ SIGN ON TEMPORARY SUPPORT
- ◇ 16-INCH FLAGS
- × × × REMOVE PAVEMENT MARKING
- ✕ COVER EXISTING SIGN
- ▨ WORK COMPLETED WHILE CLOSED TO THROUGH TRAFFIC
- ▩ WORK COMPLETED WHILE OPEN TO SIDE STREET TRAFFIC UTILIZING FLAGGERS

NOTES

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TEMPORARY MARKING LEGEND

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- TPY4 TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW)
- TPW4 TEMPORARY MARKING LINE PAINT 4-INCH (WHITE)
- TSTW18 TEMPORARY MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)

Estimate Of Quantities

6140-02-71

Line	Item	Item Description	Unit	Total	Qty
0002	204.0115	Removing Asphaltic Surface Butt Joints	SY	230.000	230.000
0004	204.0120	Removing Asphaltic Surface Milling	SY	77,200.000	77,200.000
0006	204.0150	Removing Curb & Gutter	LF	65.000	65.000
0008	204.0155	Removing Concrete Sidewalk	SY	13.000	13.000
0010	204.0165	Removing Guardrail	LF	50.000	50.000
0012	213.0100	Finishing Roadway (project) 01. 6140-02-71	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	450.000	450.000
0016	455.0605	Tack Coat	GAL	600.000	600.000
0018	460.2000	Incentive Density HMA Pavement	DOL	5,090.000	5,090.000
0020	460.6224	HMA Pavement 4 MT 58-28 S	TON	8,670.000	8,670.000
0022	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0024	465.0315	Asphaltic Flumes	SY	18.000	18.000
0026	601.0553	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	LF	190.000	190.000
0028	602.0405	Concrete Sidewalk 4-Inch	SF	100.000	100.000
0030	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0032	614.0010	Barrier System Grading Shaping Finishing	EACH	1.000	1.000
0034	614.0305	Steel Plate Beam Guard Class A	LF	38.000	38.000
0036	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	1.000	1.000
0038	614.0400	Adjusting Steel Plate Beam Guard	LF	350.000	350.000
0040	614.0950	Replacing Guardrail Posts and Blocks	EACH	1.000	1.000
0042	614.0951	Replacing Guardrail Rail and Hardware	LF	38.000	38.000
0044	618.0100	Maintenance And Repair of Haul Roads (project) 01. 6140-02-71	EACH	1.000	1.000
0046	619.1000	Mobilization	EACH	1.000	1.000
0048	624.0100	Water	MGAL	6.800	6.800
0050	625.0100	Topsoil	SY	8.000	8.000
0052	628.1504	Silt Fence	LF	175.000	175.000
0054	628.1520	Silt Fence Maintenance	LF	175.000	175.000
0056	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0058	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0060	628.2008	Erosion Mat Urban Class I Type B	SY	8.000	8.000
0062	628.2027	Erosion Mat Class II Type C	SY	1,960.000	1,960.000
0064	629.0210	Fertilizer Type B	CWT	0.030	0.030
0066	630.0130	Seeding Mixture No. 30	LB	0.300	0.300
0068	630.0500	Seed Water	MGAL	0.300	0.300
0070	638.2102	Moving Signs Type II	EACH	1.000	1.000
0072	638.4000	Moving Small Sign Supports	EACH	2.000	2.000
0074	642.5001	Field Office Type B	EACH	1.000	1.000
0076	643.0300	Traffic Control Drums	DAY	6,323.000	6,323.000
0078	643.0420	Traffic Control Barricades Type III	DAY	1,115.000	1,115.000

Estimate Of Quantities

6140-02-71

Line	Item	Item Description	Unit	Total	Qty
0080	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	190.000	190.000
0082	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	190.000	190.000
0084	643.0705	Traffic Control Warning Lights Type A	DAY	1,518.000	1,518.000
0086	643.0715	Traffic Control Warning Lights Type C	DAY	545.000	545.000
0088	643.0900	Traffic Control Signs	DAY	1,870.000	1,870.000
0090	643.0920	Traffic Control Covering Signs Type II	EACH	58.000	58.000
0092	643.5000	Traffic Control	EACH	1.000	1.000
0094	646.1020	Marking Line Epoxy 4-Inch	LF	20,237.000	20,237.000
0096	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	25,393.000	25,393.000
0098	646.3020	Marking Line Epoxy 8-Inch	LF	4,971.000	4,971.000
0100	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	3,080.000	3,080.000
0102	646.4620	Marking Line Same Day Epoxy 8-Inch	LF	75.000	75.000
0104	646.6120	Marking Stop Line Epoxy 18-Inch	LF	143.000	143.000
0106	646.7020	Marking Diagonal Epoxy 6-Inch	LF	243.000	243.000
0108	646.7120	Marking Diagonal Epoxy 12-Inch	LF	453.000	453.000
0110	646.9000	Marking Removal Line 4-Inch	LF	17,551.000	17,551.000
0112	646.9100	Marking Removal Line 8-Inch	LF	1,005.000	1,005.000
0114	649.0105	Temporary Marking Line Paint 4-Inch	LF	69,430.000	69,430.000
0116	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	315.000	315.000
0118	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	190.000	190.000
0120	650.8000	Construction Staking Resurfacing Reference	LF	13,137.000	13,137.000
0122	650.9910	Construction Staking Supplemental Control (project) 01. 6140-02-71	LS	1.000	1.000
0124	690.0150	Sawing Asphalt	LF	220.000	220.000
0126	690.0250	Sawing Concrete	LF	144.000	144.000
0128	740.0440	Incentive IRI Ride	DOL	10,000.000	10,000.000
0130	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0132	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0134	SPV.0090	Special 01. Salvage and Adjust Guardrail	LF	50.000	50.000

3

REMOVING ASPHALTIC SURFACE				
STATION TO STATION		204.0115 BUTT JOINTS SY	204.0120 MILLING SY	
STAGE 1				
150+40 - 236+35		110	26200	
STAGE 1 SUBTOTAL		110	26200	
STAGE 2				
150+40 - 236+35		120	28600	
STAGE 2 SUBTOTAL		120	28600	
STAGE 3				
108+64 - 150+40		-	20700	
236+35 - 240+01		-	1700	
STAGE 3 SUBTOTAL		-	22400	
ITEM TOTAL		230	77,200	

PROJECT COMPLETION AND MAINTENANCE ITEMS				
STATION TO STATION		213.0100.01 FINISHING ROADWAY (6140-02-71) EACH	618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS (6140-02-71) EACH	
108+64 - 240+01		1	1	
ITEM TOTAL		1	1	

BASE AGGREGATE ITEMS				
STATION TO STATION		305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	624.0100 WATER MGAL	
108+64 - 159+50		170	2.6	
159+50 - 211+50		180	2.7	
211+50 - 240+01		100	1.5	
ITEM TOTAL		450	6.8	

3

CONCRETE REMOVAL ITEMS					
STATION TO STATION			204.0150 REMOVING CURB & GUTTER LF	204.0155 REMOVING CONCRETE SIDEWALK SY	
167+17'SB'	-	167+27'SB'	RT	10	-
169+10'NB'	-	169+20'NB'	LT	-	5
173+01'NB'	-	173+16'NB'	LT	15	-
205+71'SB'	-	205+81'SB'	RT	-	5
210+98'SB'	-	211+07'SB'	RT	10	-
213+02'NB'	-	213+12'NB'	LT	10	-
229+72'SB'	-	229+86'SB'	RT	20	-
230+73'NB'	-	230+78'NB'	LT	-	3
ITEM TOTAL			65	13	

ASPHALTIC ITEMS				
STATION TO STATION		455.0605 TACK COAT GAL	460.6224 HMA PAVEMENT 4 MT 58-28 S TON	465.0110 ASPHALTIC SURFACE PATCHING TON
STAGE 1				
150+40 - 236+35		204	2940	-
STAGE 1 SUBTOTAL		204	2940	-
STAGE 2				
150+40 - 236+35		222	3210	-
STAGE 2 SUBTOTAL		222	3210	-
STAGE 3				
108+64 - 150+40		161	2320	-
236+35 - 240+01		13	200	-
UNDISTRIBUTED		-	-	100
STAGE 3 SUBTOTAL		174	2520	100
ITEM TOTAL		600	8,670	100

BEAM GUARD SYSTEM ITEMS										
				204.0165	614.0305	614.0370	614.0400	SPV.0090.01	614.0950	614.0951
					STEEL PLATE BEAM GUARD				REPLACING GUARDRAIL	
				REMOVING GUARDRAIL	CLASS A	ENERGY ABSORBING TERMINAL	ADJUSTING STEEL PLATE BEAM GUARD (0"-3")	SALVAGE AND ADJUST GUARDRAIL	POSTS AND BLOCKS	RAIL AND HARDWARE
STATION TO STATION		LOCATION		LF	LF	EACH	LF	LF	EACH	LF
108+64'NB' - 109+94'NB'		LT		-	-	-	75	-	-	37.5
108+64'NB' - 109+43'N'B		RT		50	37.5	1	-	50	-	-
163+23'NB' - 167+67'NB'		RT		-	-	-	125	-	1	-
165+83'SB' - 169+10'SB'		LT		-	-	-	150	-	-	-
ITEM TOTAL				50	38	1	350	50	1	38

NOTE: ALL STATIONS ARE NORTHBOUND (NB)
UNLESS OTHERWISE NOTED

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET
ARE FOR ENGINEER ESTIMATE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

ASPHALTIC FLUMES		
STATION	LOCATION	SY
108+74	RT	12
109+91	RT	6
ITEM TOTAL		18

CONCRETE ITEMS						
				601.0553 CONCRETE CURB & GUTTER 4- INCH SLOPED 36-INCH TYPE D	602.0405 CONCRETE SIDEWALK 4-INCH	
STATION	TO	STATION	LOCATION	LF	SF	
108+64'NB'	-	109+97'NB'	RT	125	-	
167+17'SB'	-	167+27'SB'	RT	10	-	
169+10'NB'	-	169+20'NB'	LT	-	40	
173+01'NB'	-	173+16'NB'	LT	15	-	
205+71'SB'	-	205+81'SB'	RT	-	40	
210+98'SB'	-	211+07'SB'	RT	10	-	
213+02'NB'	-	213+12'NB'	LT	10	-	
229+72'SB'	-	229+86'SB'	RT	20	-	
230+73'NB'	-	230+78'NB'	LT	-	20	
ITEM TOTAL				190	100	

ADJUSTING INLET COVERS	
STATION	EACH
213+05	1
ITEM TOTAL	1

BARRIER SYSTEM GRADING SHAPING FINISHING									
				614.0010					
STATION	TO	STATION	LOCATION	EACH	TOPSOIL* SY	FERTILIZER TYPE B* CWT	SEEDING MIXTURE NO. 30* LB	SEED WATER* MGAL	FILL* CY
108+64'NB'	-	109+94'NB'	RT	1	1960	0.6	26	22.4	23
ITEM SUBTOTAL				1	1960	0.6	26	22.4	23
UNDISTRIBUTED				-	100	0.1	1.0	0.2	2
ITEM TOTAL				1					

* INCIDENTAL TO BARRIER SYSTEM GRADING SHAPING FINISHING

MOBILIZATION			
STATION	TO	STATION	EACH
108+64	-	240+01	1
ITEM TOTAL			1

TURF ESTABLISHMENT ITEMS							
				625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0500 SEED WATER MGAL
STATION	TO	STATION	LOCATION				
169+10'NB'	-	169+20'NB'	LT	3	0.01	0.1	0.1
205+71'SB'	-	205+81'SB'	RT	3	0.01	0.1	0.1
230+73'NB'	-	230+78'NB'	LT	2	0.01	0.1	0.1
ITEM TOTAL				8	0.03	0.3	0.3

EROSION CONTROL ITEMS									
				628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL FACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL FACH	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY
STATION	TO	STATION	LOCATION						
108+64'NB'	-	109+43'NB'	RT	175	175	2	1	-	1,960
169+10'NB'	-	169+20'NB'	LT	-	-	-	-	3	-
205+71'SB'	-	205+81'SB'	RT	-	-	-	-	3	-
230+73'NB'	-	230+78'NB'	LT	-	-	-	-	2	-
ITEM TOTAL				175	175	2	1	8	1,960

MOVING SIGN AND SUPPORTS ITEMS			
STATION	LOCATION	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH
108+50	RT	1	2
ITEM TOTAL		1	2

FIELD OFFICE TYPE B			
STATION	TO	STATION	EACH
108+64	-	240+01	1
ITEM TOTAL			1

NOTE: ALL STATIONS ARE NORTHBOUND (NB)
UNLESS OTHERWISE NOTED

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET
ARE FOR ENGINEER ESTIMATE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

TRAFFIC CONTROL														
			643.0300	643.0420	643.0500	643.0600	643.0705	643.0715	643.0900			643.0920	643.5000	
			DRUMS	BARRICADES	FLEXIBLE TUBULAR	FLEXIBLE TUBULAR	WARNING	WARNING		NUMBER	NUMBER	COVERING		16-INCH
				TYPE III	MARKER POSTS	MARKER BASES	LIGHTS TYPE A	LIGHTS TYPE C	SIGNS	OF	OF	SIGNS TYPE II		FLAGS*
STATION	TO	STATION	DAY	DAY	EACH	EACH	DAY	DAY	DAY	CYCLES	SIGNS	EACH	EACH	EACH PAIR
STAGE 1														
108+64	-	240+01	3,975	555	190	190	720	195	840	1	33	33	1	2
STAGE 1 SUBTOTAL			3,975	555	190	190	720	195	840	1	33	33	1	2
STAGE 2														
108+64	-	240+01	2,240	560	-	-	798	350	742	1	25	25	-	3
STAGE 2 SUBTOTAL			2,240	560	-	-	798	350	742	1	25	25	-	3
STAGE 3														
108+64	-	240+01	108	-	-	-	-	-	288	-	-	-	-	-
STAGE 3 SUBTOTAL			108	-	-	-	-	-	288	-	-	-	-	-
ITEM TOTAL			6,323	1,115	190	190	1,518	545	1,870			58	1	
* INCIDENTAL TO TRAFFIC CONTROL SIGN														

3

PAVEMENT MARKING ITEMS									
		646.1020	646.1040	646.3020	646.4520	646.4620	646.6120	646.702	646.7120
		EPOXY 4-INCH	GROOVED WET REF	MARKING LINE	SAME DAY EPOXY	SAME DAY EPOXY 8-	STOP LINE	DIAGONAL	DIAGONAL
		(YELLOW)	EPOXY 4-INCH (WHITE)	EPOXY 8-INCH	4-INCH (YELLOW)	INCH (WHITE)	EPOXY 18-INCH	EPOXY 6-INCH	EPOXY 12-INCH
STATION	TO STATION	LF	LF	LF	LF	LF	LF	LF	LF
108+64	- 159+50	4,864	10,161	847	2,540	75	-	74	191
159+50	- 211+50	9,912	9,837	2,915	-	-	84	113	122
211+50	- 240+01	5,461	5,395	1,209	540	-	59	56	140
ITEM TOTAL		20,237	25,393	4,971	3,080	75	143	243	453

TEMPORARY MARKING			
		649.0105	649.0850
		LINE PAINT 4-INCH	STOP LINE REMOVABLE
		LF	TAPE 18-INCH
STATION	TO STATION	LF	LF
STAGE 1			
108+64	- 240+01	34,135	120
STAGE 1 SUBTOTAL		34,135	120
STAGE 2			
108+64	- 240+01	35,295	195
STAGE 2 SUBTOTAL		35,295	195
ITEM TOTAL		69,430	315

MARKING REMOVAL LINE				
		646.9000	646.9100	
		4-INCH	8-INCH	
STATION	TO STATION	LF	LF	
STAGE 1				
108+64	- 240+01	16,500	1,005	
STAGE 1 SUBTOTAL		16,500	1,005	
STAGE 2				
108+64	- 240+01	1,051	0	
STAGE 2 SUBTOTAL		1,051	0	
ITEM TOTAL		17,551	1,005	

CONSTRUCTION STAKING				
		650.5500	650.8000	650.9910.01
		CURB GUTTER AND	RESURFACING	SUPPLEMENTAL
		CURB & GUTTER	REFERENCE	CONTROL (6140-02-71)
STATION	TO STATION	LF	LF	LS
108+64	- 240+01	190	13,137	1
ITEM TOTAL		190	13,137	1

NOTE: ALL STATIONS ARE NORTHBOUND (NB)
UNLESS OTHERWISE NOTED

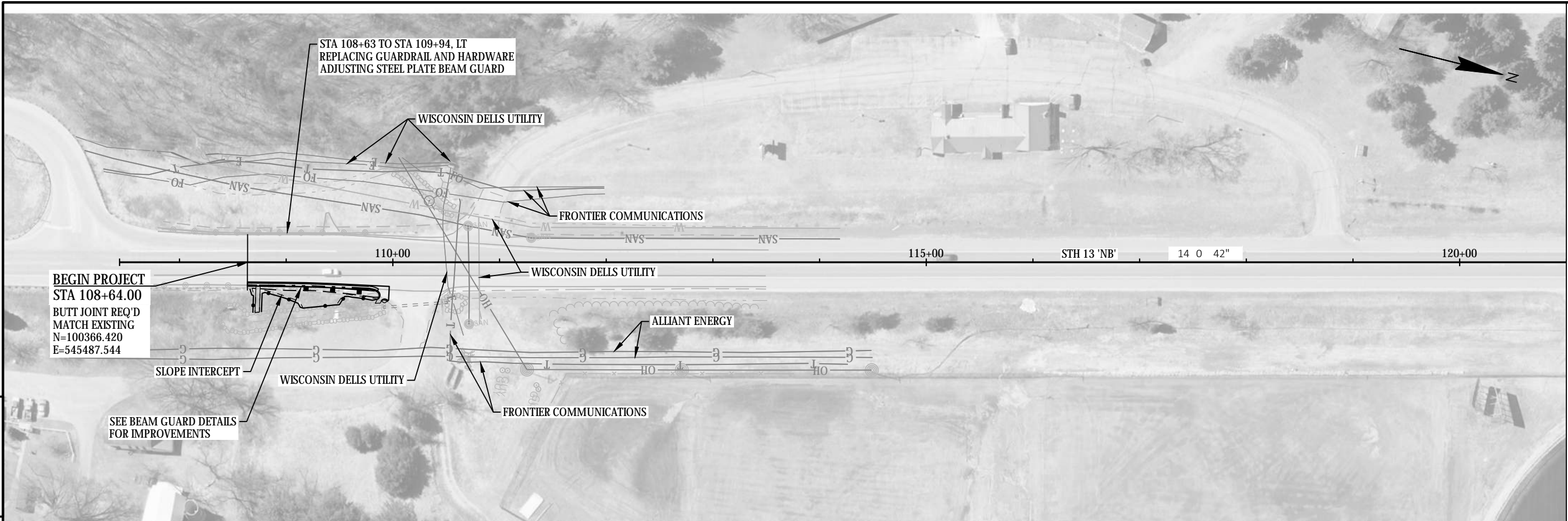
NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET
ARE FOR ENGINEER ESTIMATE CATEGORY 0010
UNLESS OTHERWISE NOTED

SAWING ASPHALT					
690.0150					
STATION	TO	STATION	LOCATION	LF	REMARKS
108+64'NB'	-	109+96'NB'	RT	155	FOR CURB AND GUTTER CONSTRUCTION
167+22'SB'	-	-	RT	10	FOR CURB AND GUTTER REPLACEMENT
173+10'NB'	-	-	LT	15	FOR CURB AND GUTTER REPLACEMENT
211+03'SB'	-	-	RT	10	FOR CURB AND GUTTER REPLACEMENT
213+08'NB'	-	-	LT	10	FOR CURB AND GUTTER REPLACEMENT
229+83'SB'	-	-	RT	20	FOR CURB AND GUTTER REPLACEMENT
ITEM TOTAL				220	

SAWING CONCRETE				
690.0250				
STATION	LOCATION	LF	REMARKS	
167+22'SB'	RT	16	MEDIAN C&G	
169+16'NB'	LT	18	MEDIAN SIDEWALK	
170+10'NB'	LT	21	MEDIAN C&G	
205+77'SB'	RT	18	MEDIAN SIDEWALK	
211+03'SB'	RT	16	MEDIAN C&G	
213+08'NB'	LT	16	MEDIAN C&G	
229+83'SB'	RT	26	MEDIAN C&G	
230+76'NB'	LT	13	MEDIAN SIDEWALK	
ITEM TOTAL		144		

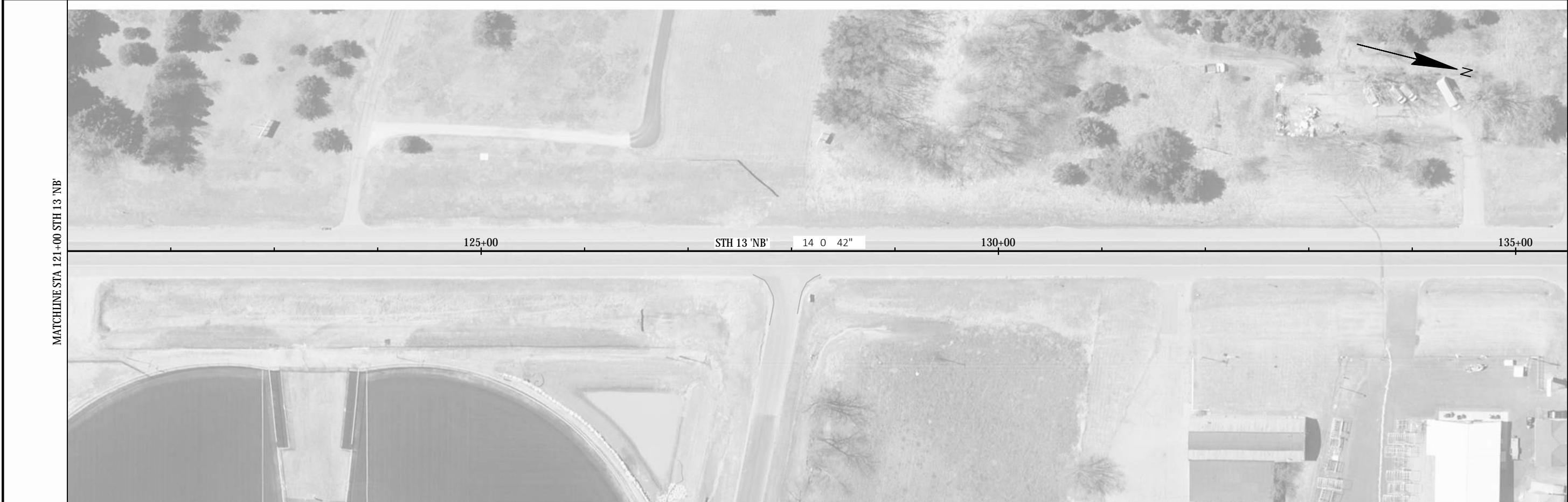
NOTE: ALL STATIONS ARE NORTHBOUND (NB)
UNLESS OTHERWISE NOTED

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET
ARE FOR ENGINEER ESTIMATE CATEGORY 0010
UNLESS OTHERWISE NOTED

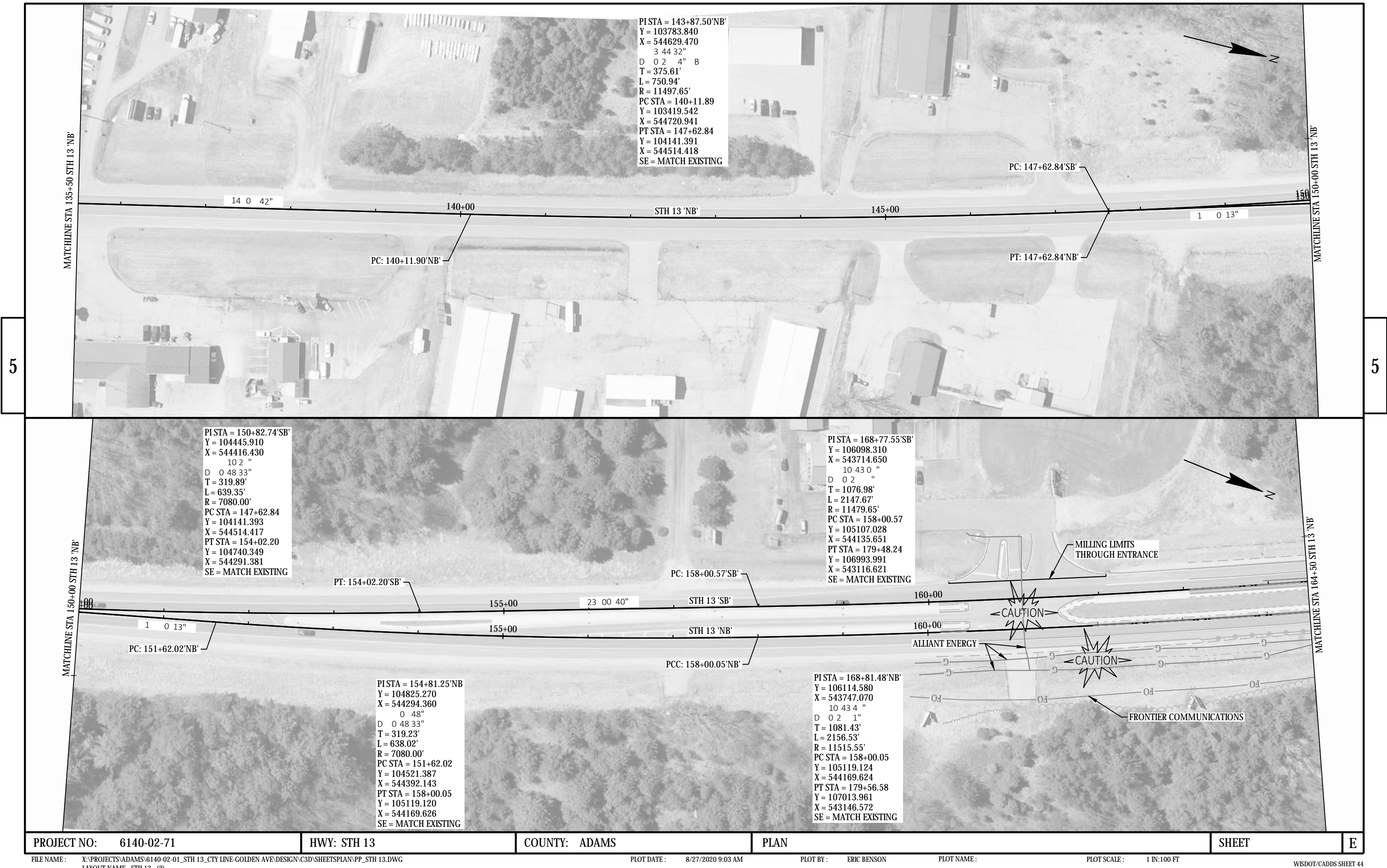


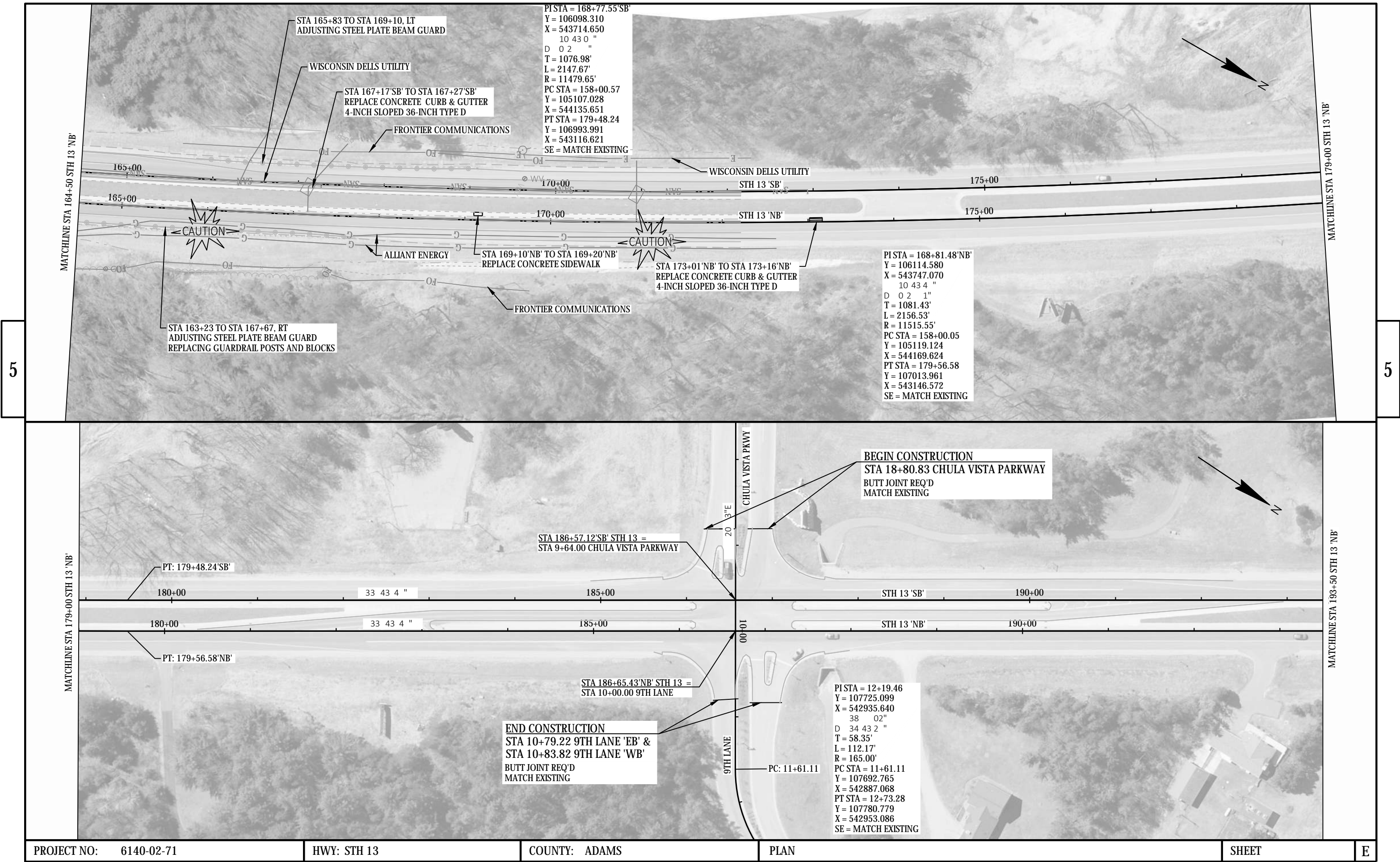
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5



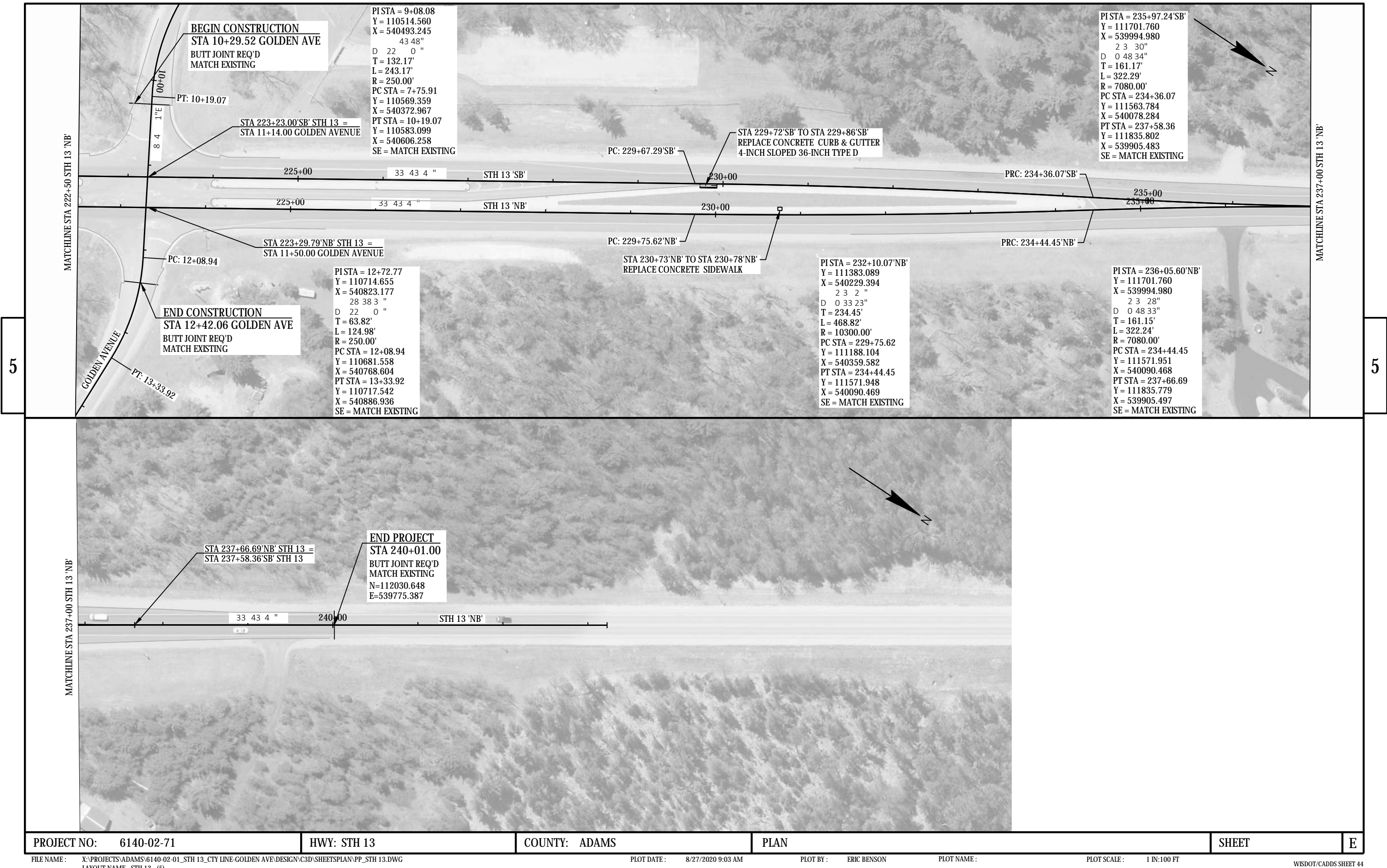
PROJECT NO: 6140-02-71	HWY: STH 13	COUNTY: ADAMS	PLAN	SHEET	E
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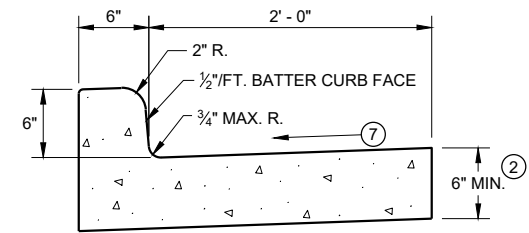


PROJECT NO: 6140-02-71	HWY: STH 13	COUNTY: ADAMS	PLAN	SHEET	E
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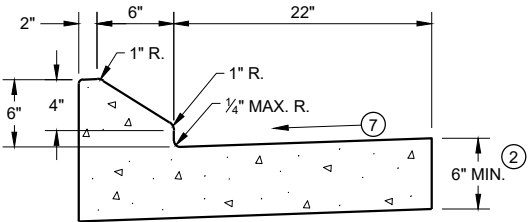


Standard Detail Drawing List

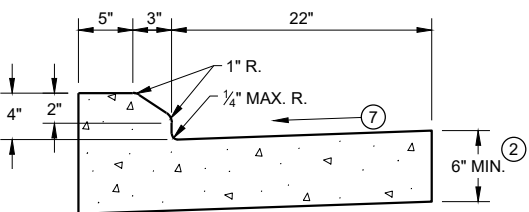
08D01-21A	CONCRETE CURB & GUTTER
08D01-21B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
13C19-02	HMA LONGITUDINAL JOINTS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, 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
15C02-08F	ADVANCED WIDTH RESTRICTION SIGNING
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-06C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C21-10	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES



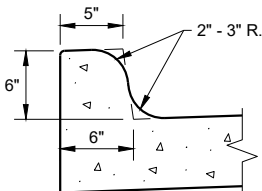
TYPES A^① & D



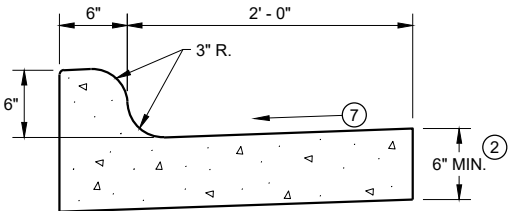
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

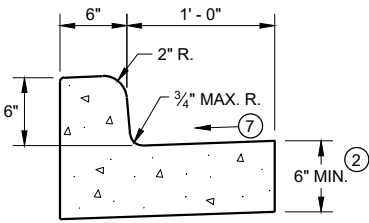


TYPES K^① & L
(OPTIONAL CURB SHAPE)



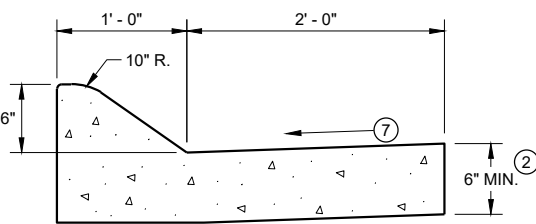
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

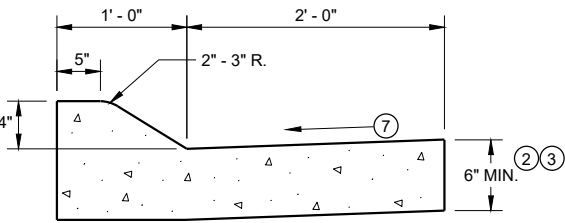


TYPES A^① & D

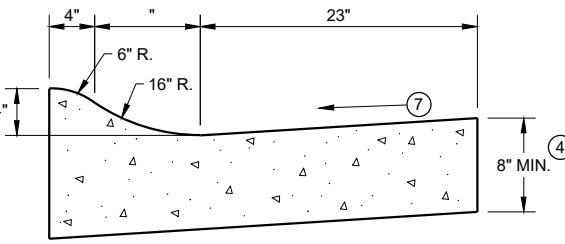
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A^① & D



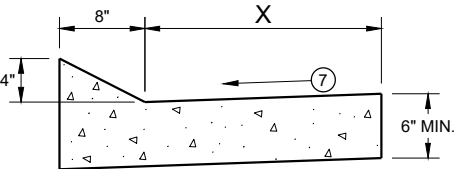
4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

CONCRETE CURB AND GUTTER 36"

TBT	TBTT	X
30"	22"	
36"	28"	

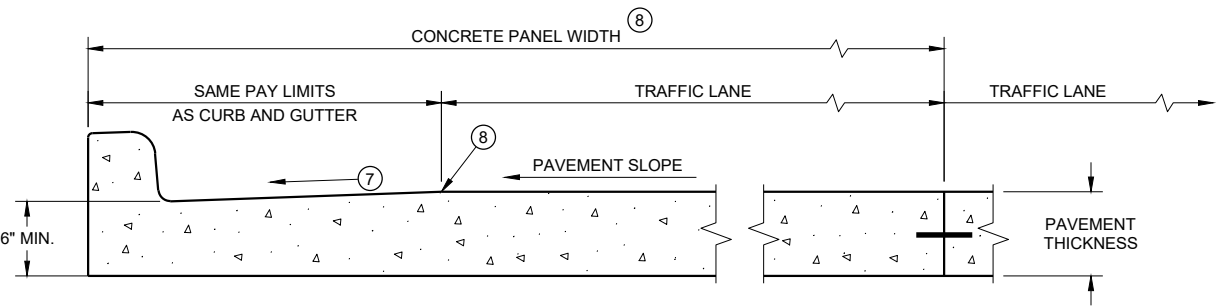


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

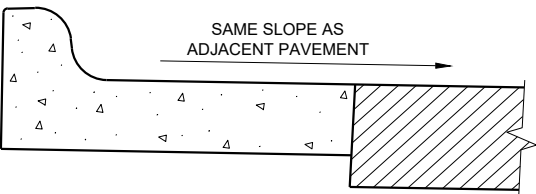
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

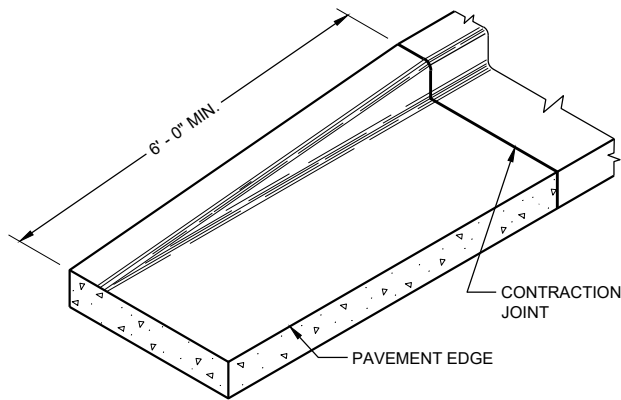
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

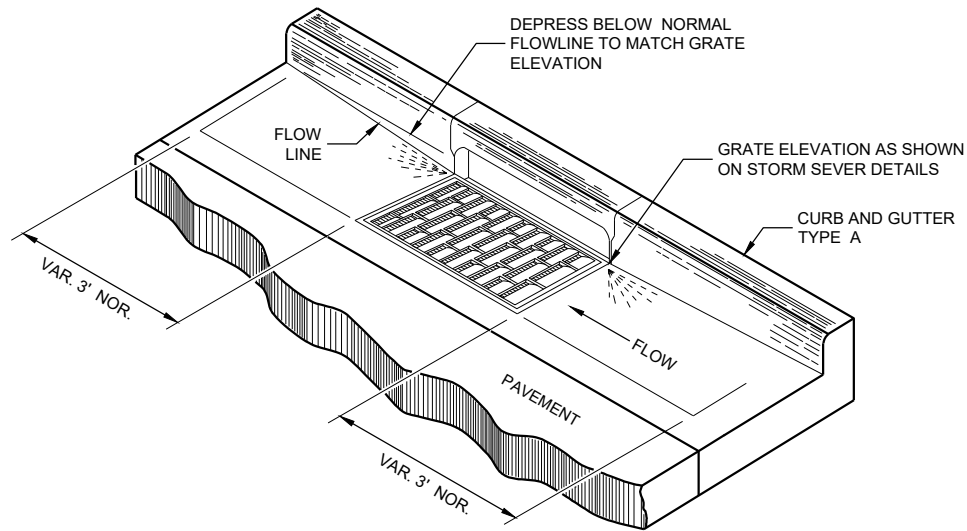
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ 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.

CONCRETE CURB AND GUTTER

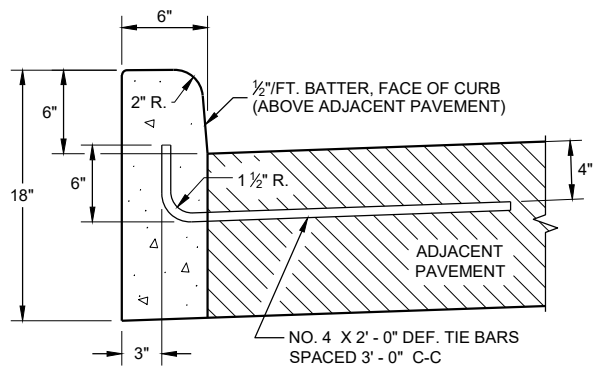
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



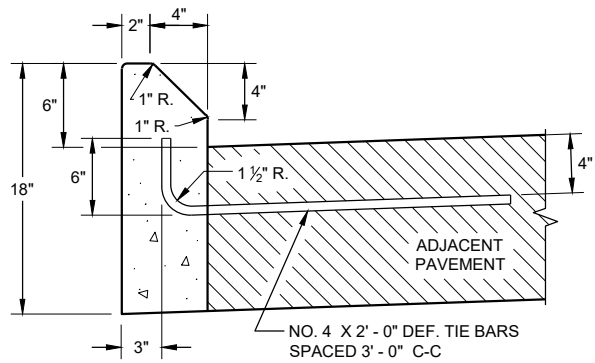
END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS
(TYPICAL H INLET COVER SHOWN)

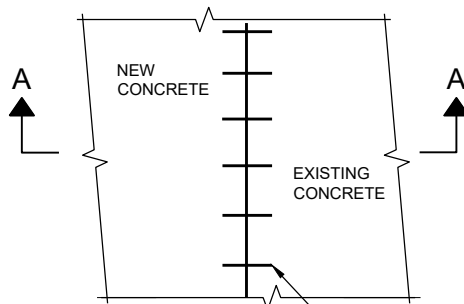


TYPES A^① & D

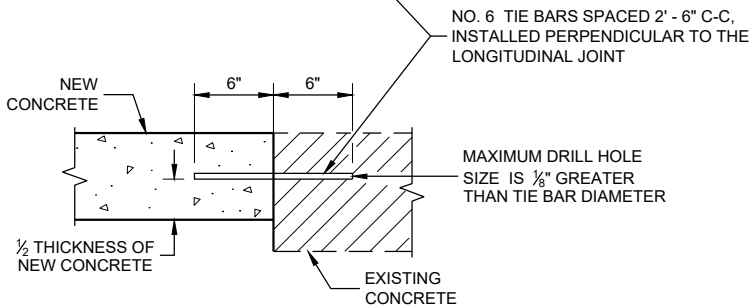


TYPES G^① & J

CONCRETE CURB



PLAN VIEW



SECTION A - A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

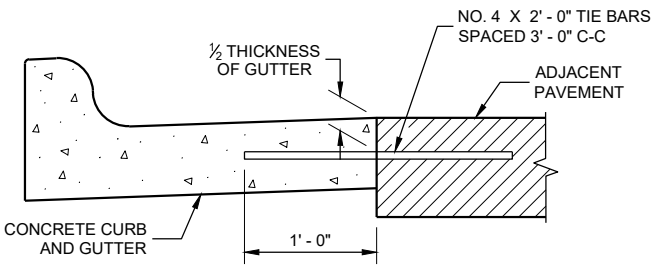
GENERAL NOTES

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

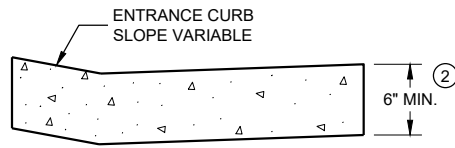
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- REFER TO SDD 08D18 AND 08D1 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB[○]
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES
AND CURB AND GUTTER
APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE /S/ R. dney Tay r
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

6



PLAN VIEW
FLUME AT CURB END

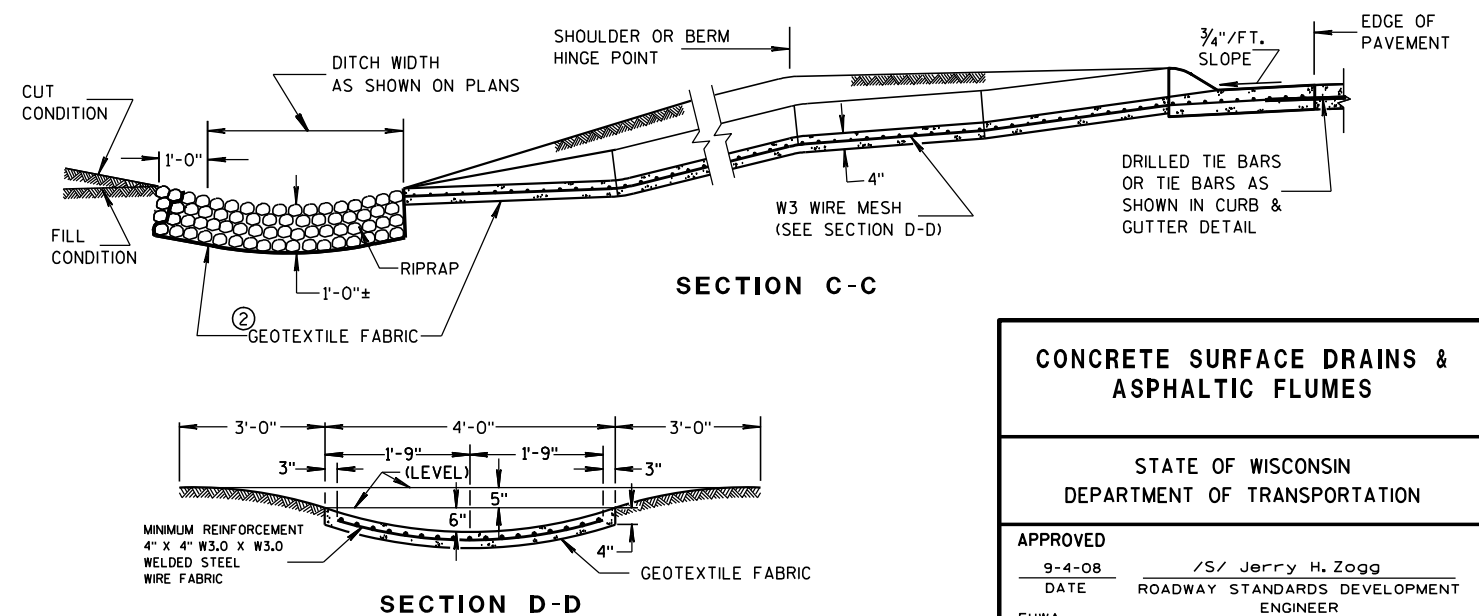


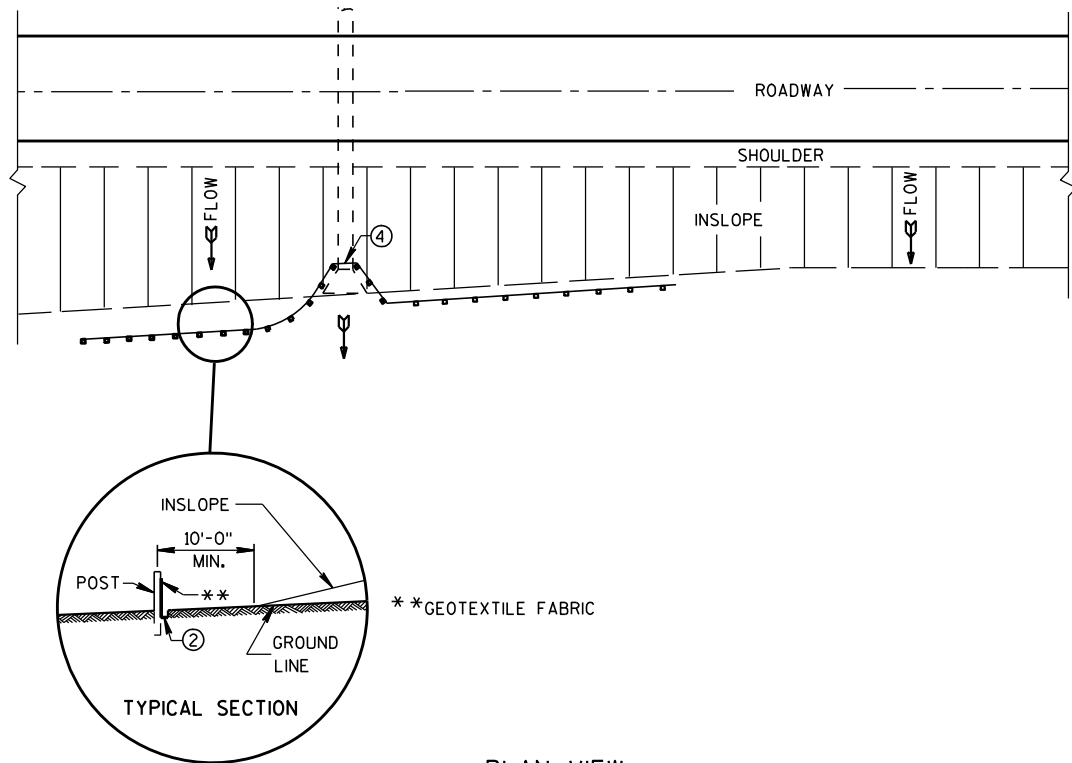
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S.D.D. 8 D 4-5

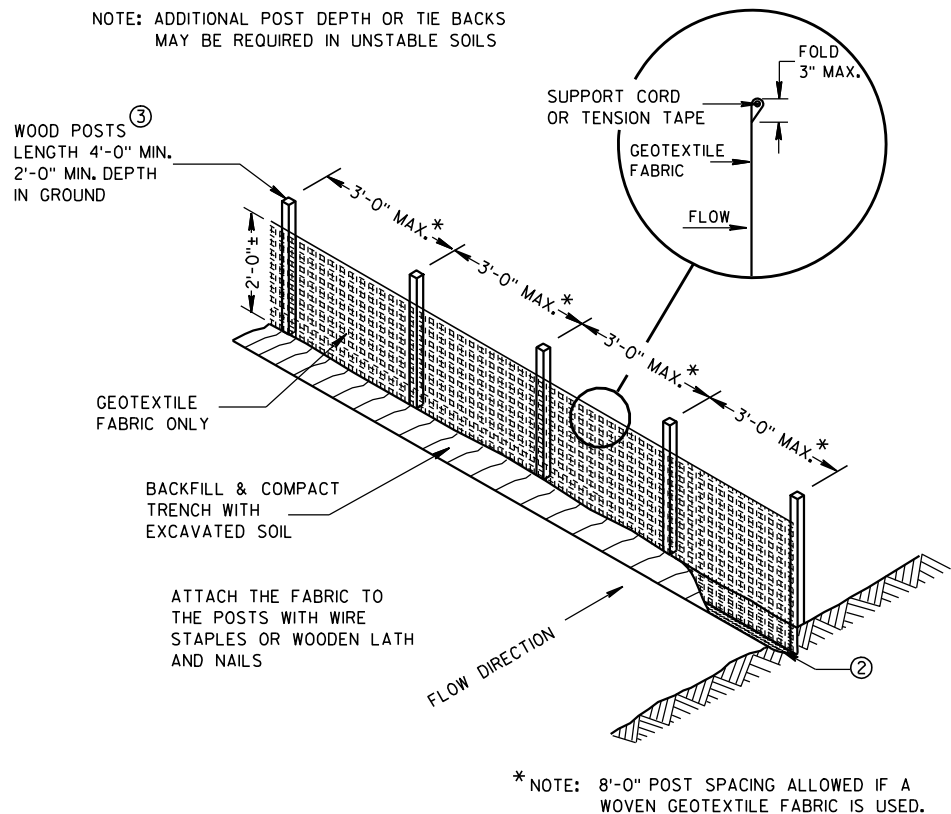
③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

SECTION C-C

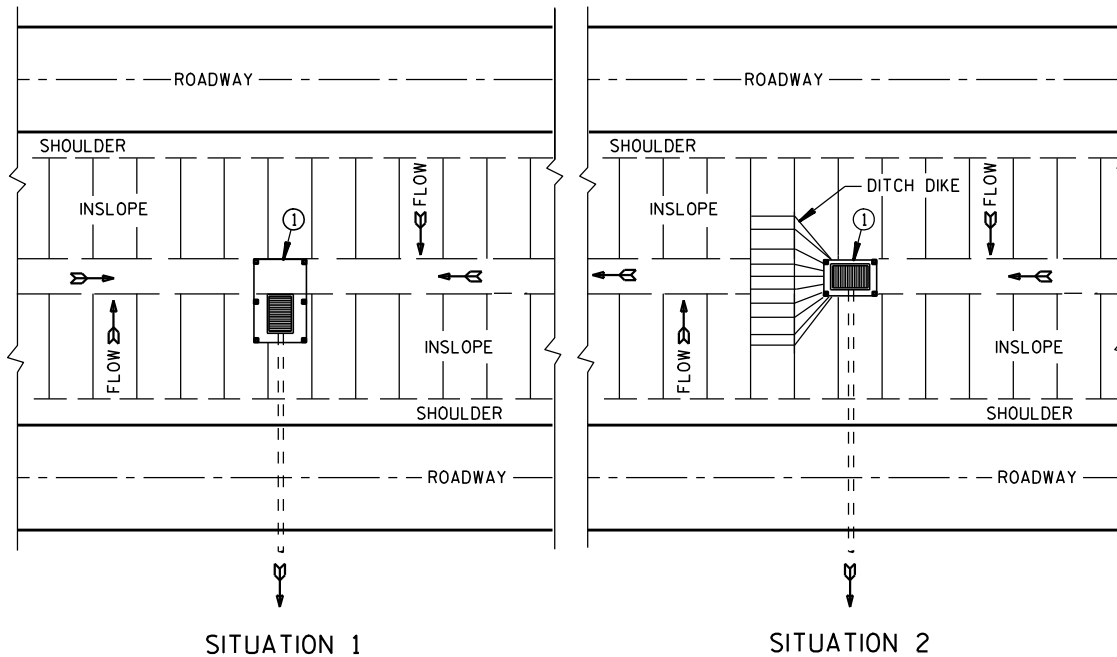




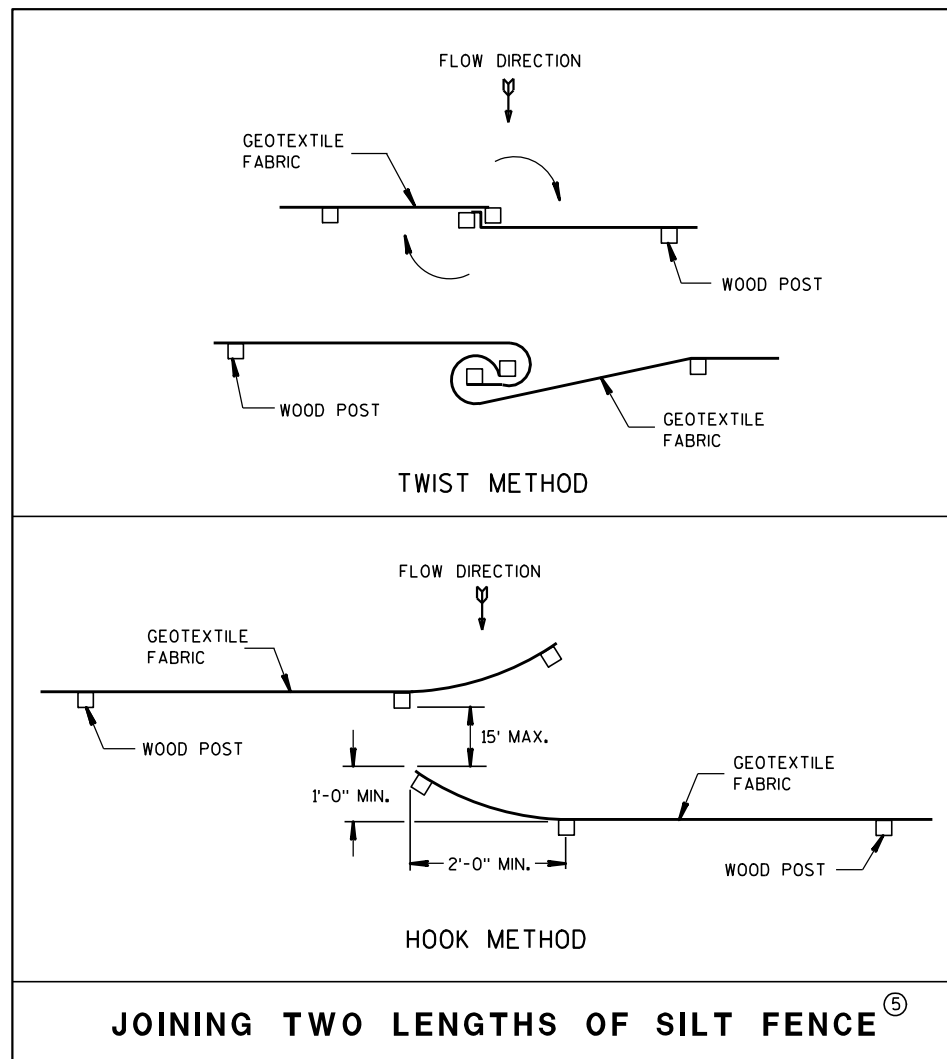
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

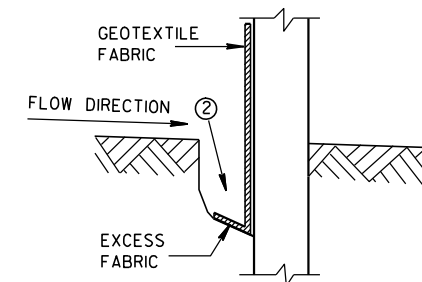


JOINING TWO LENGTHS OF SILT FENCE ⑤

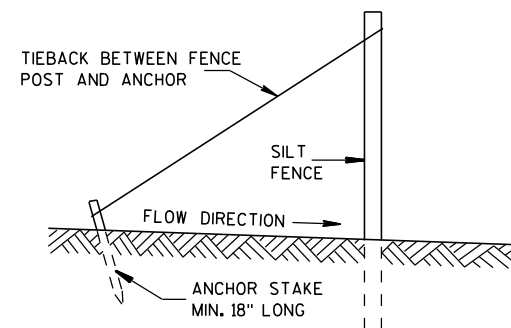
GENERAL NOTES

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

- 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 1 1/8" X 1 1/8" 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.

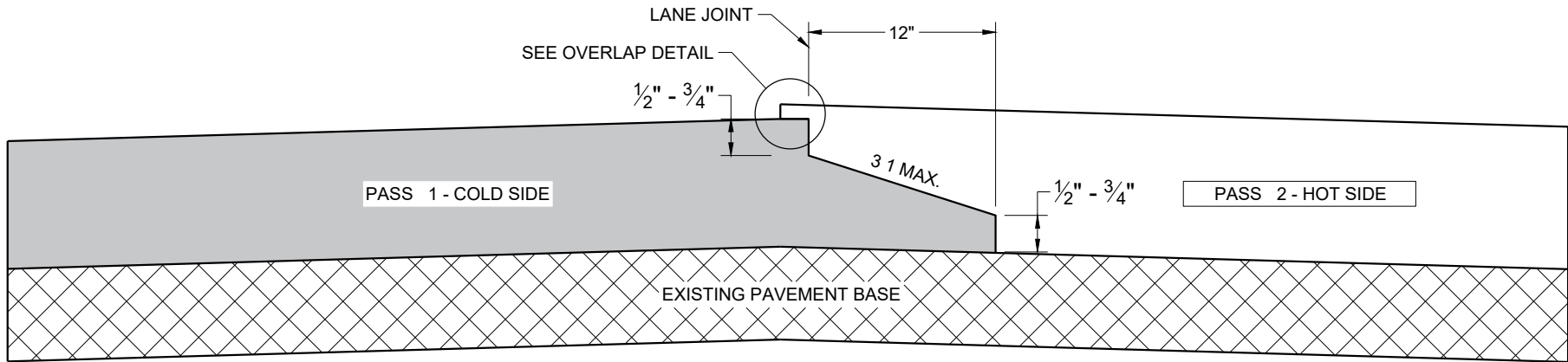


TRENCH DETAIL

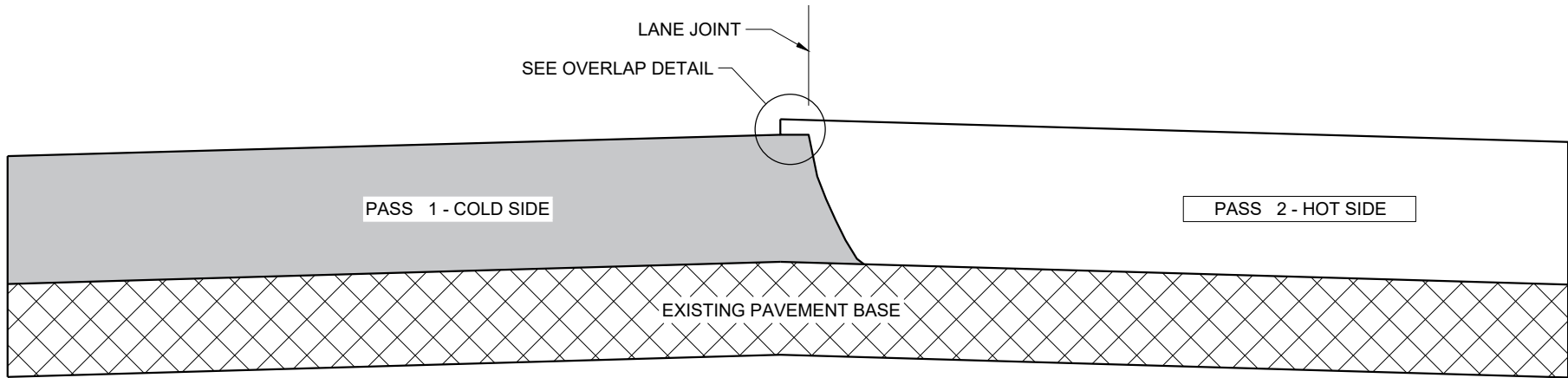


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

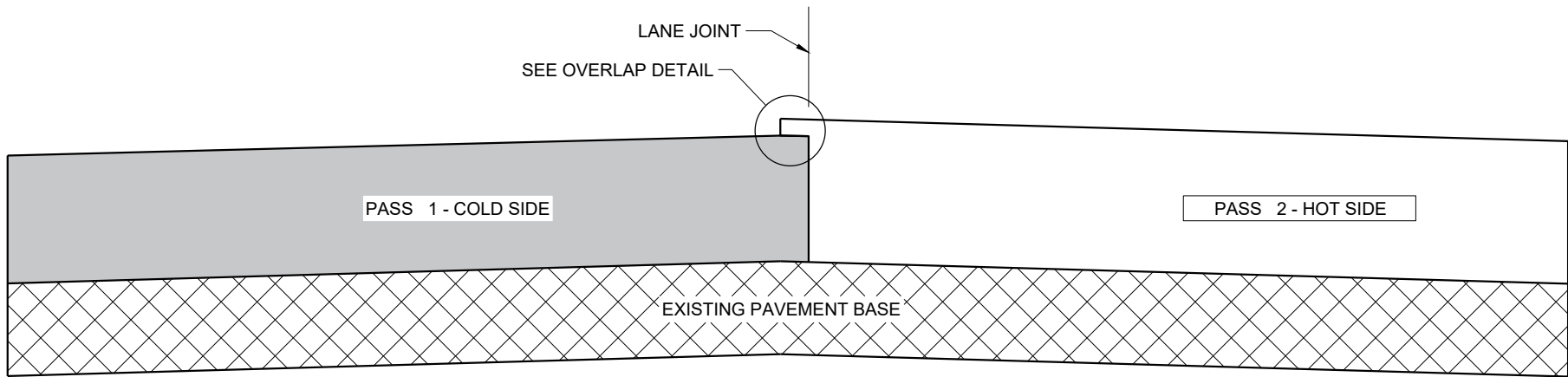
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



TYPICAL PAVEMENT CROSS SECTION
OF NOTCHED WEDGE LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL LONGITUDINAL JOINT



TYPICAL PAVEMENT CROSS SECTION
OF MILLED LONGITUDINAL JOINT

GENERAL NOTES

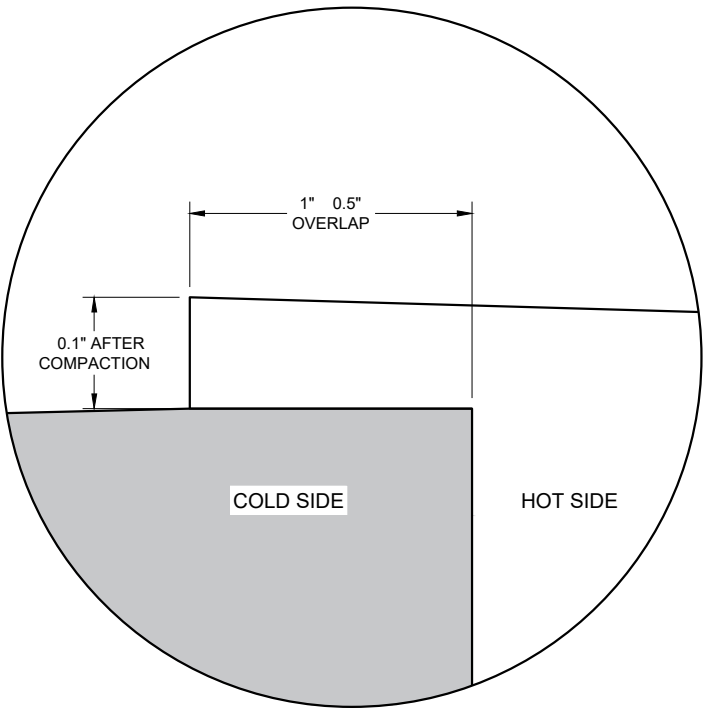
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION.

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

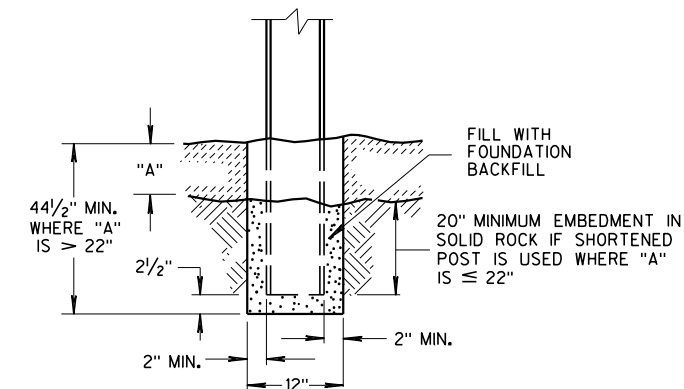
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Stephen Hee
DATE HMA PAVEMENT ENGINEER
FHWA

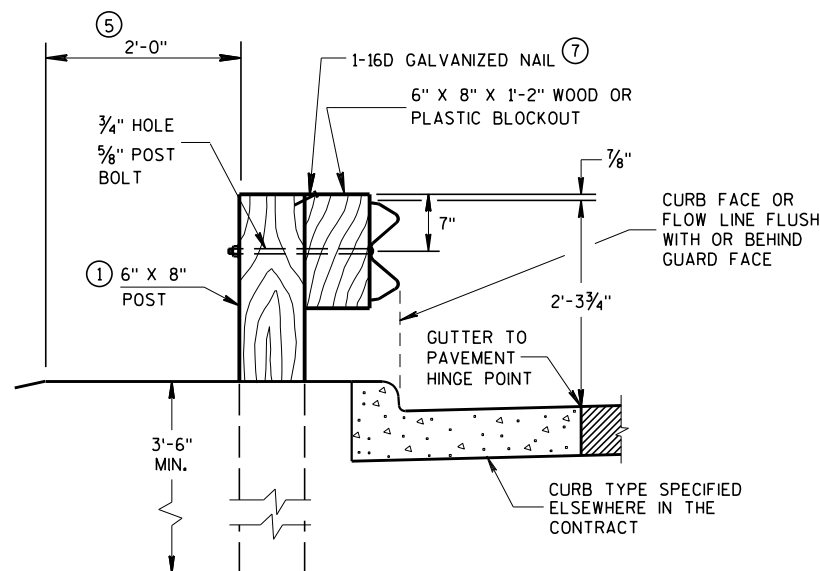
GENERAL NOTES

- W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" 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 POSTS 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 DAMAGED SPELTER 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 HINGE 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 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN THE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE 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.

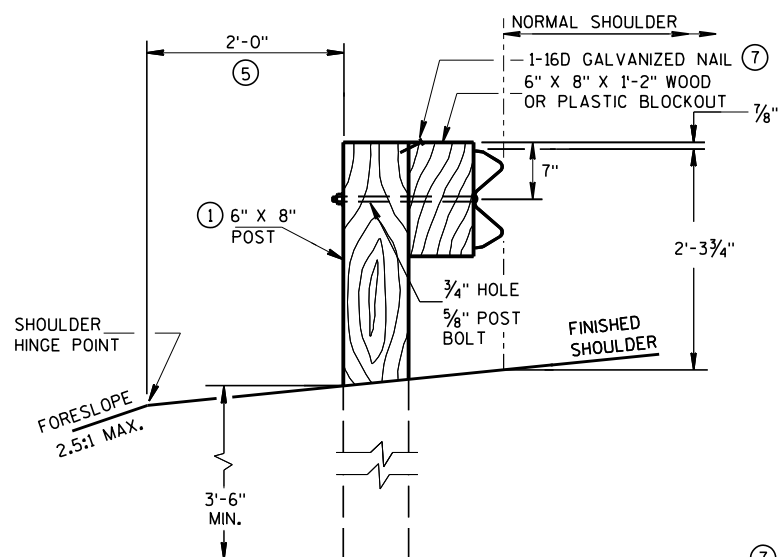
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



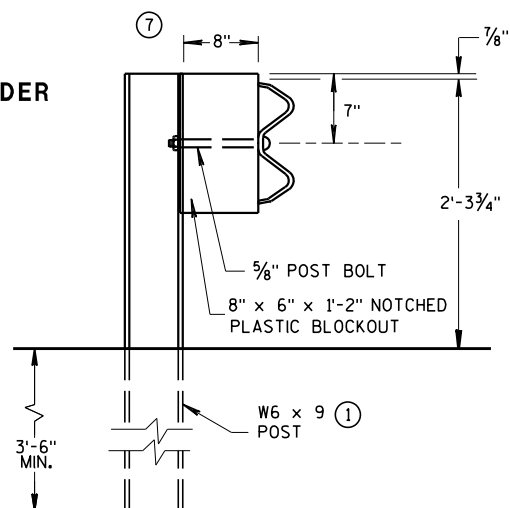
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



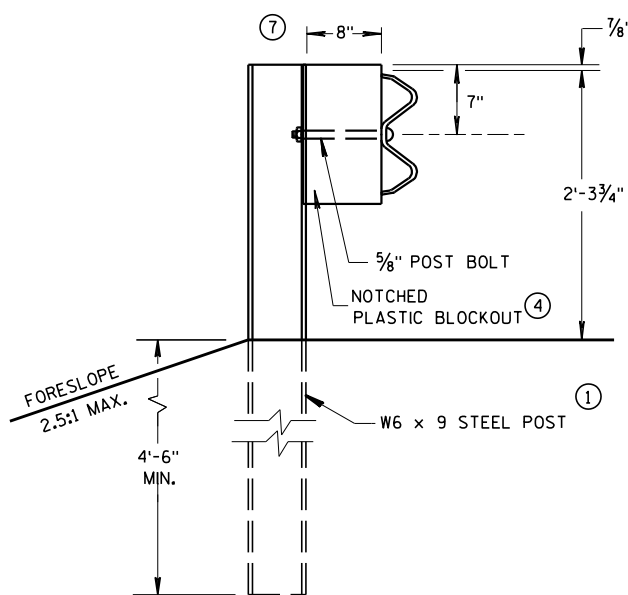
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

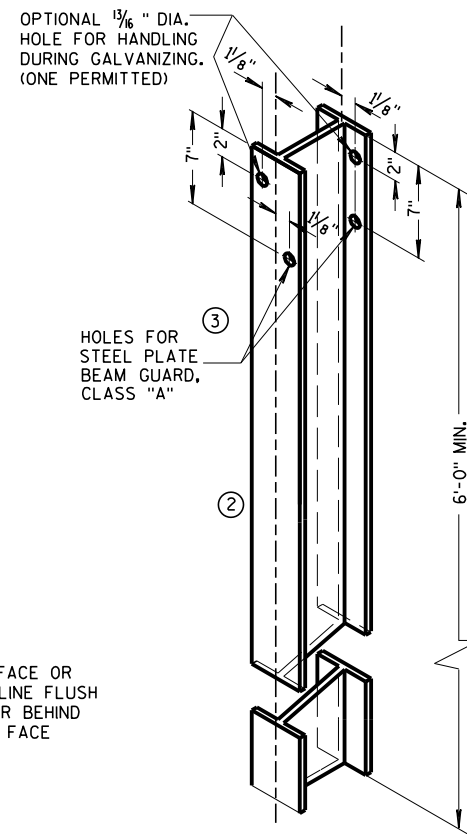


END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



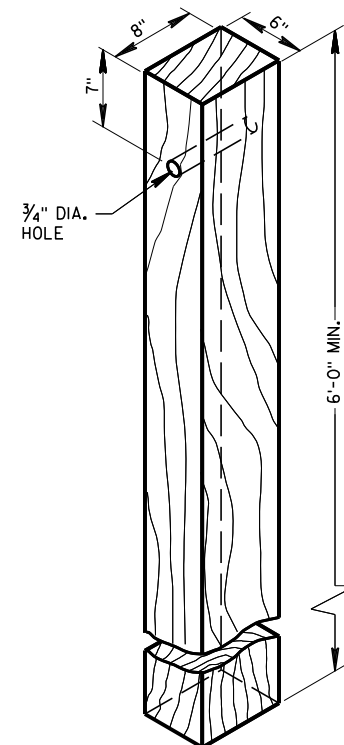
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

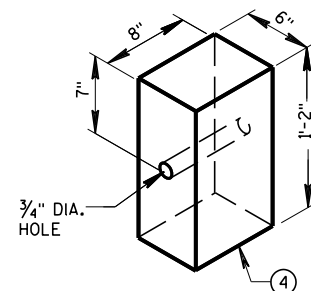


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①

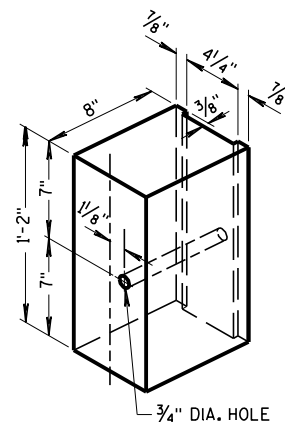
ALL HOLES 1/8" DIAMETER EXCEPT AS NOTED



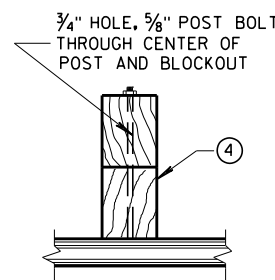
WOOD POST
(6" X 8") NOMINAL



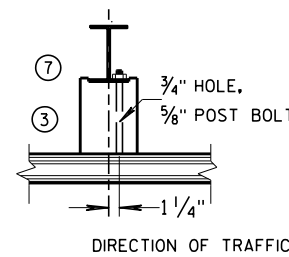
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS ①



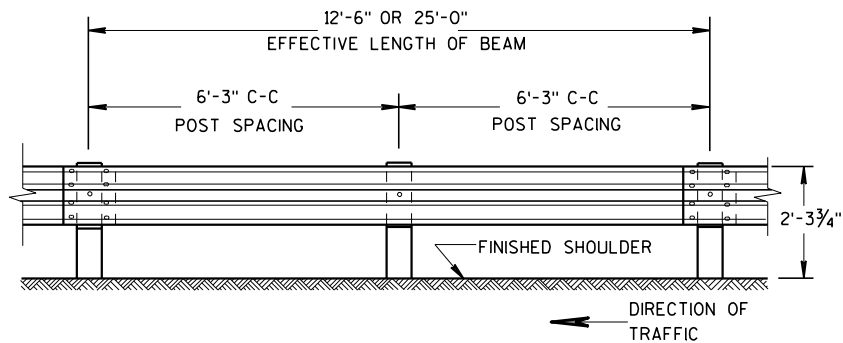
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

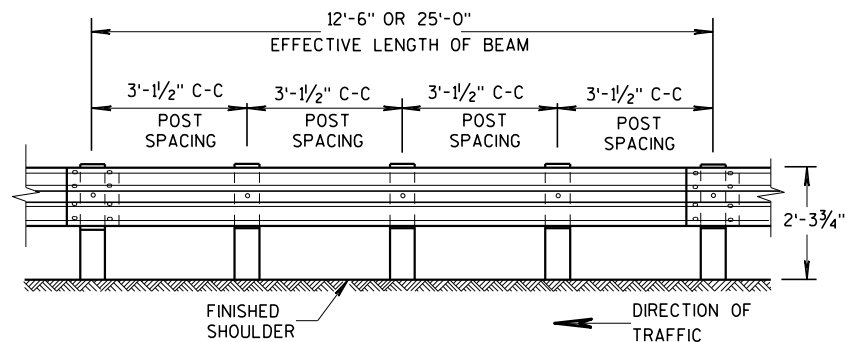
STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



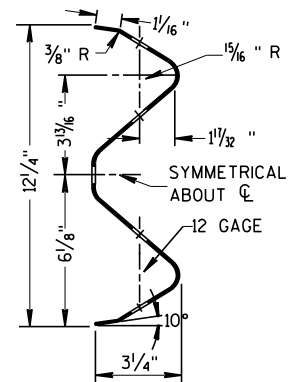
FRONT VIEW

POST SPACING STANDARD INSTALLATION

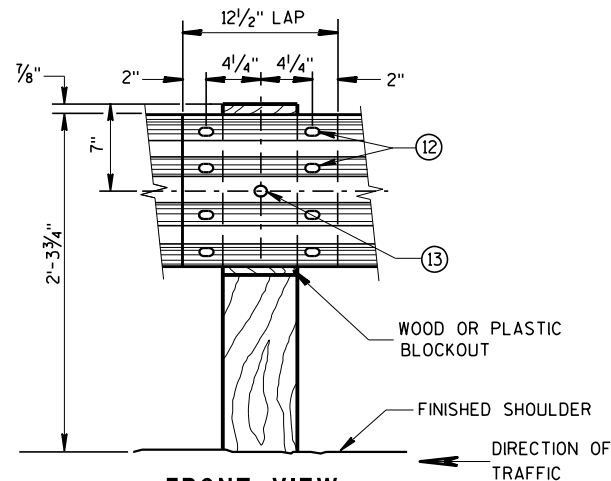


FRONT VIEW

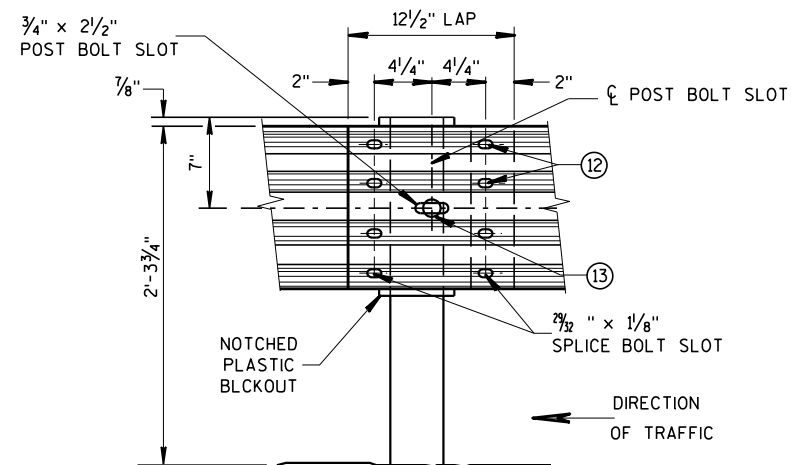
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)



SECTION THRU W BEAM



FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL

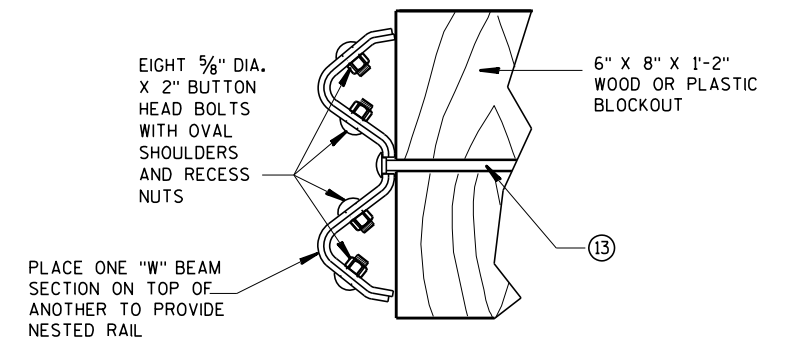


FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPlicing DETAILS
OF STEEL PLATE BEAM GUARD

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

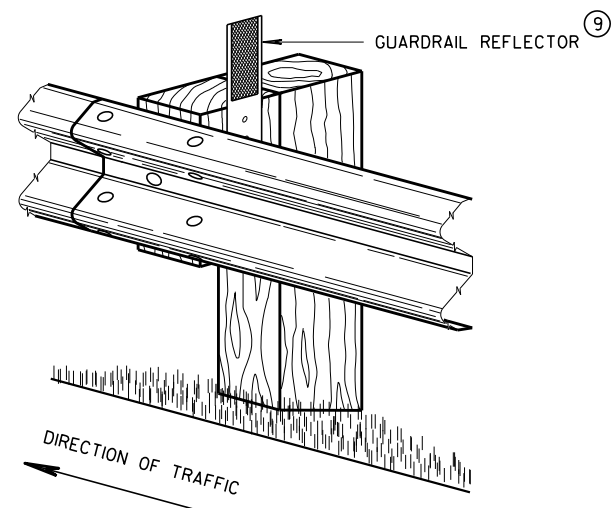
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.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



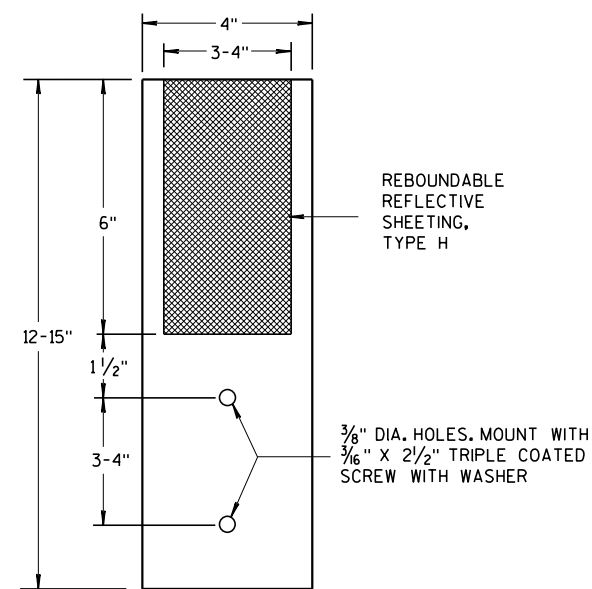
NESTED W BEAM (NW)

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.



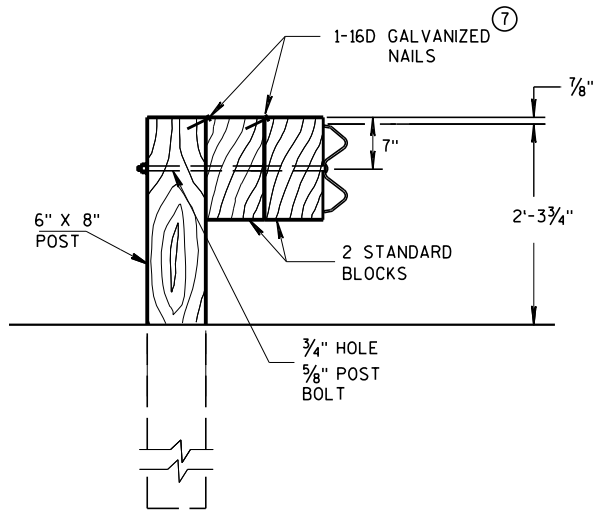
4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

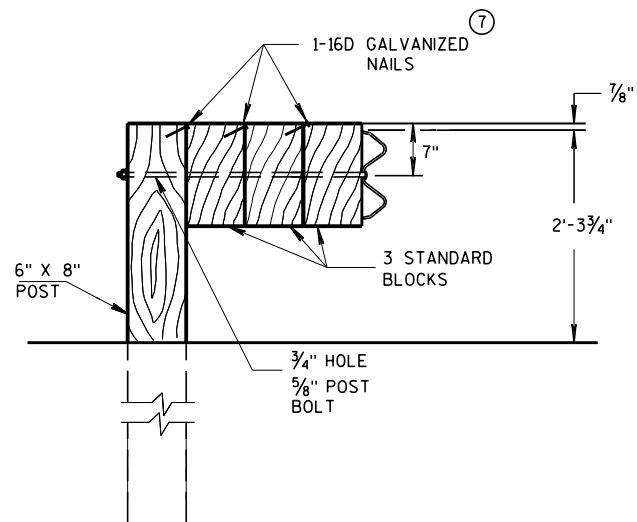
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

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

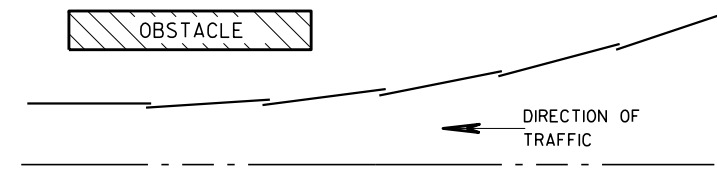


DETAIL FOR TRIPLE BLOCKS

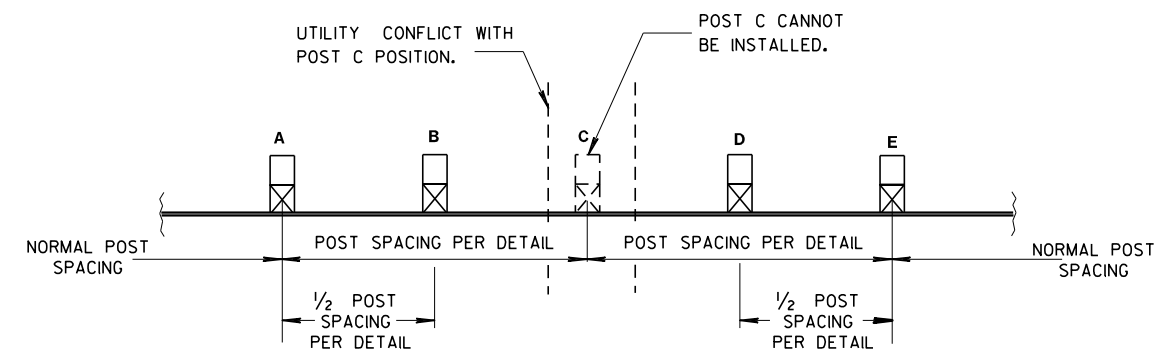
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

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	/S/ Rodney Taylor
June 2017	DATE
	ROADWAY STANDARDS DEVELOPMENT
	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

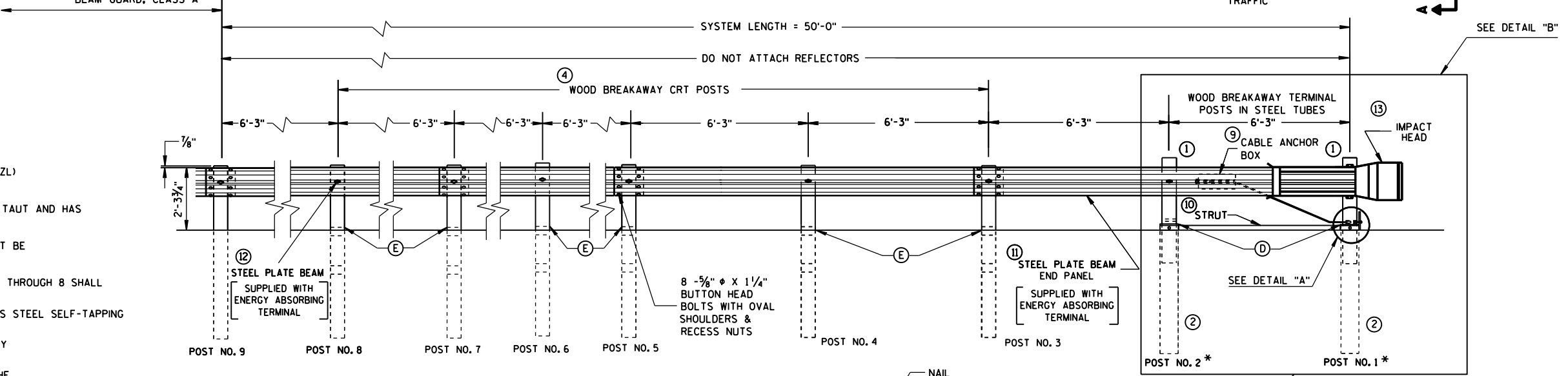
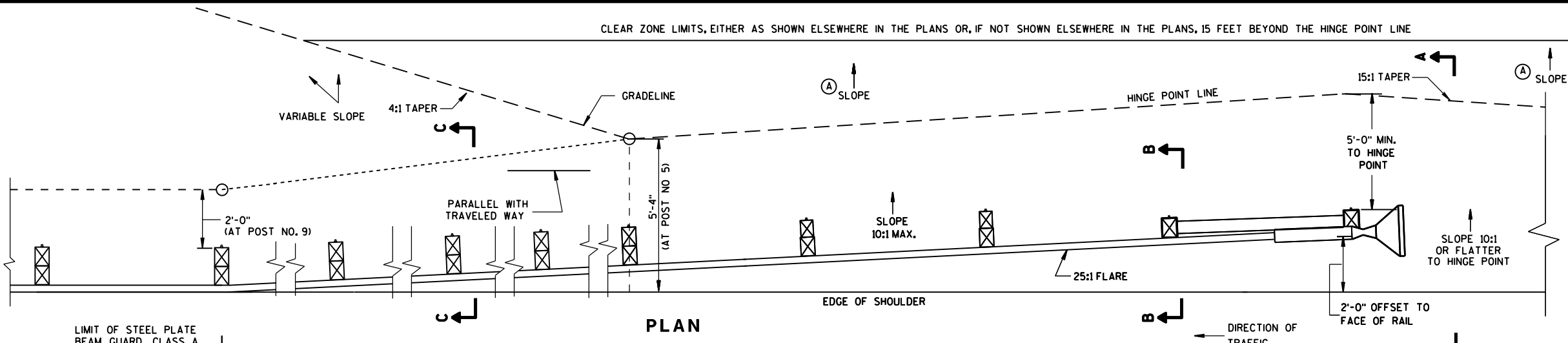
FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

- (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.

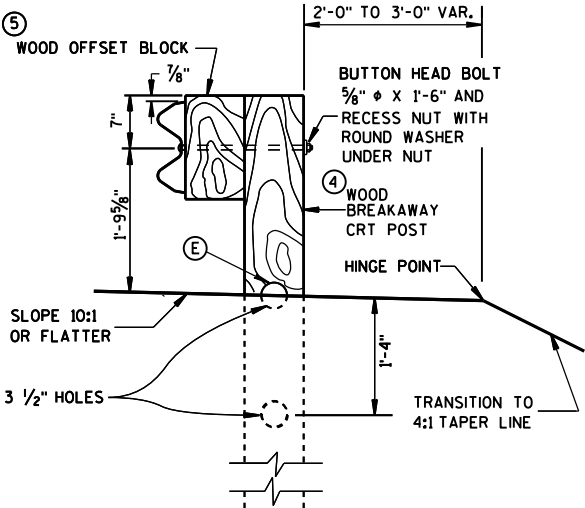
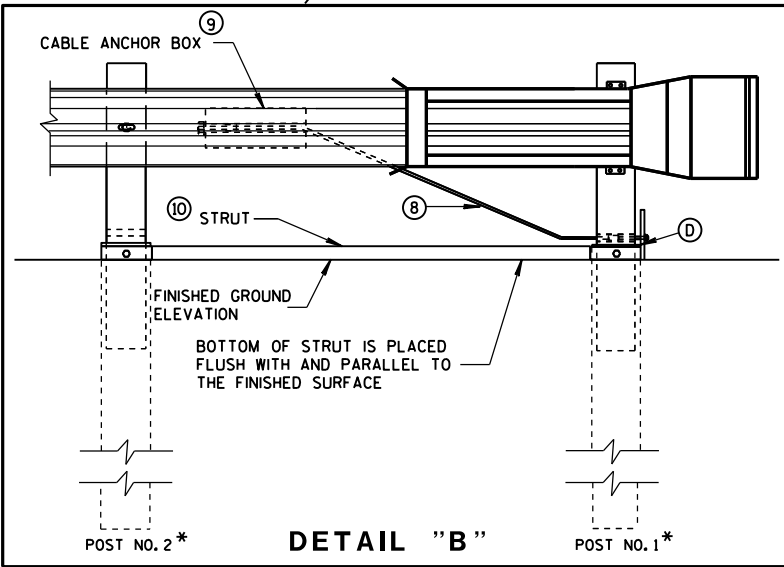
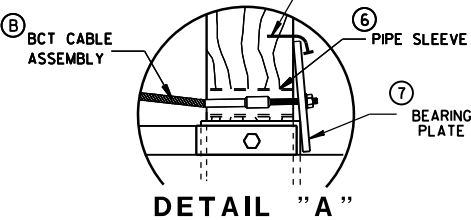
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

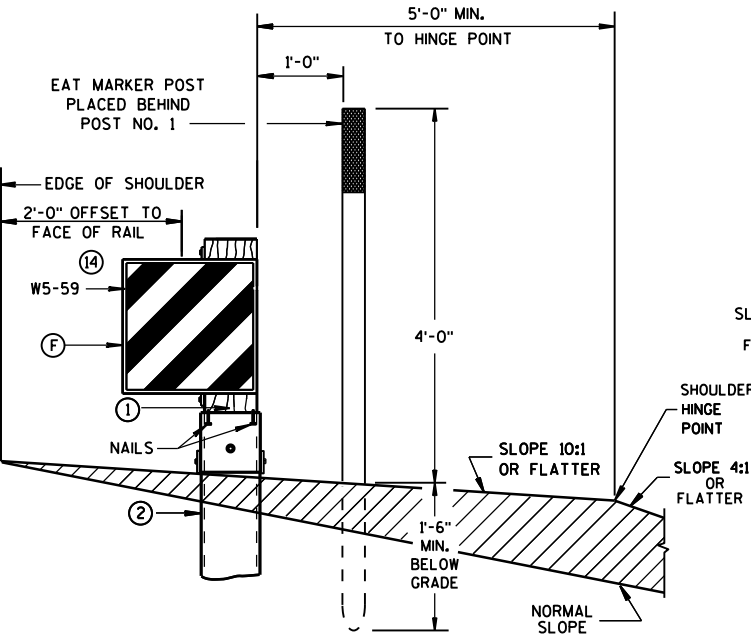
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



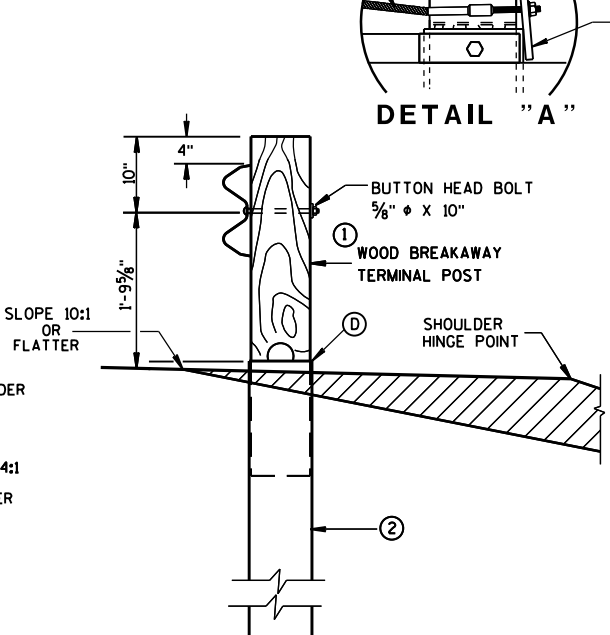
ELEVATION



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



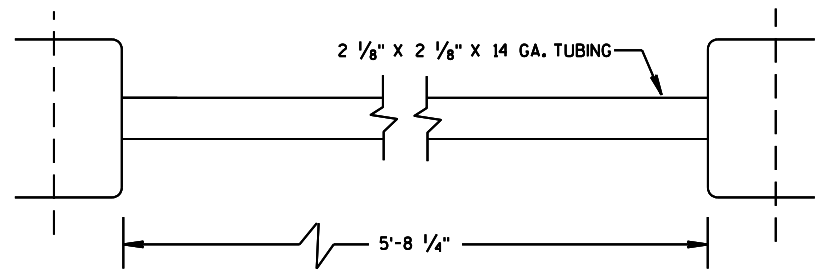
SECTION A-A
TYPICAL AT POST NO. 1*



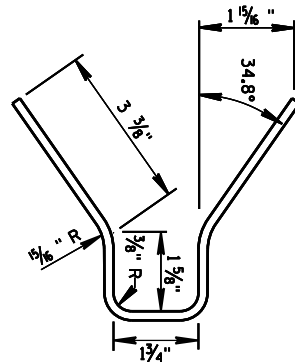
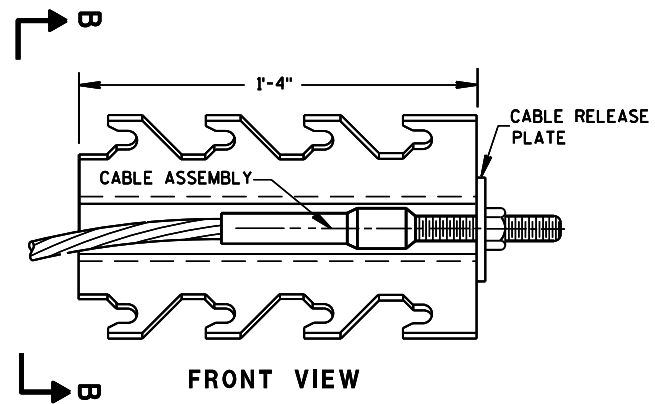
SECTION B-B
TYPICAL AT POST NO. 2*

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

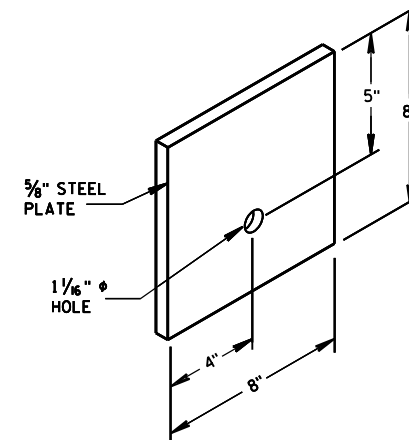
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



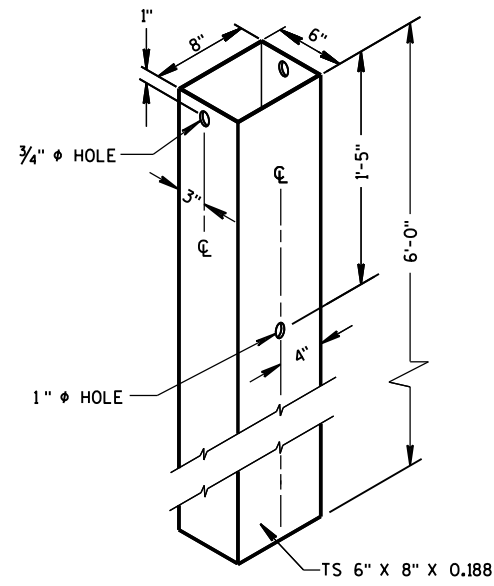
⑩ STRUT DETAIL



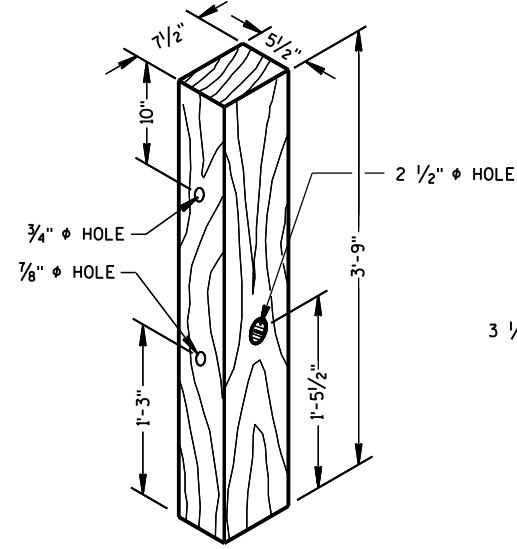
⑨ CABLE ANCHOR BOX



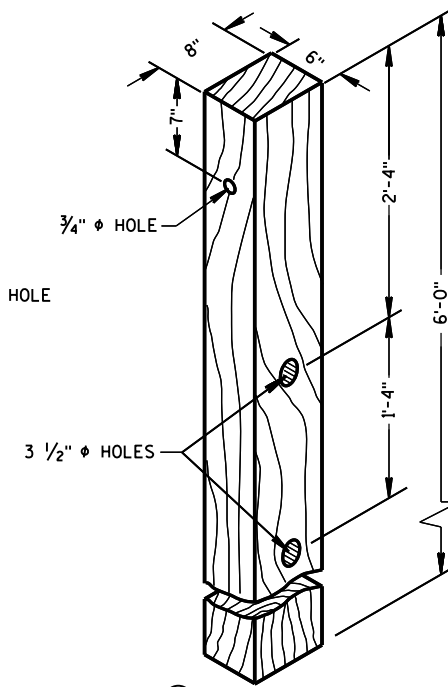
⑦ STEEL BEARING PLATE



② **72" STEEL TUBE**
(POSTS NO. 1-2)

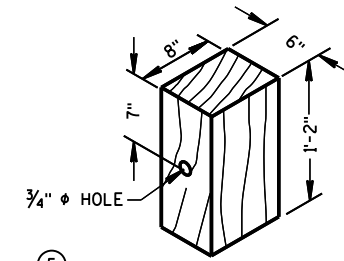


① **TERMINAL POST**



④ **CRT POST**
(POSTS NO'S 5-8)

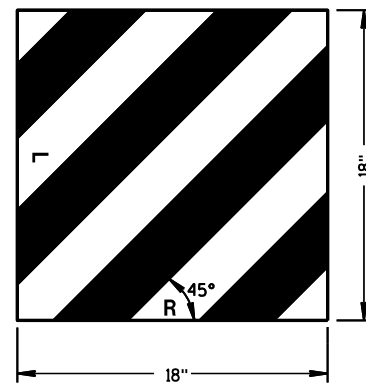
WOOD BREAKAWAY POSTS



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

GENERAL NOTES

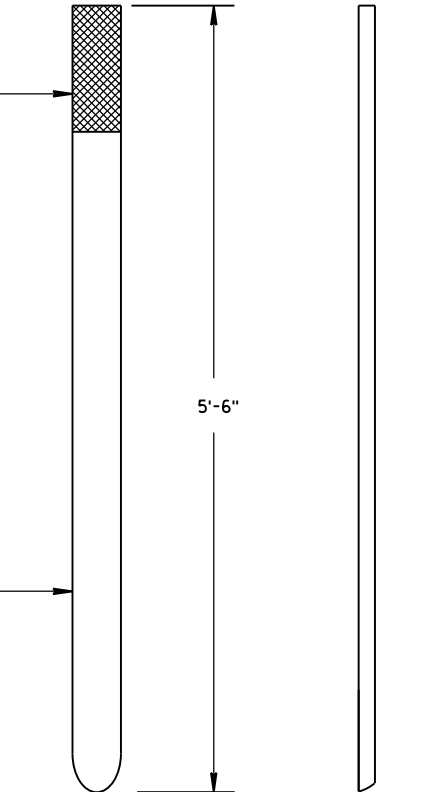
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH,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



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



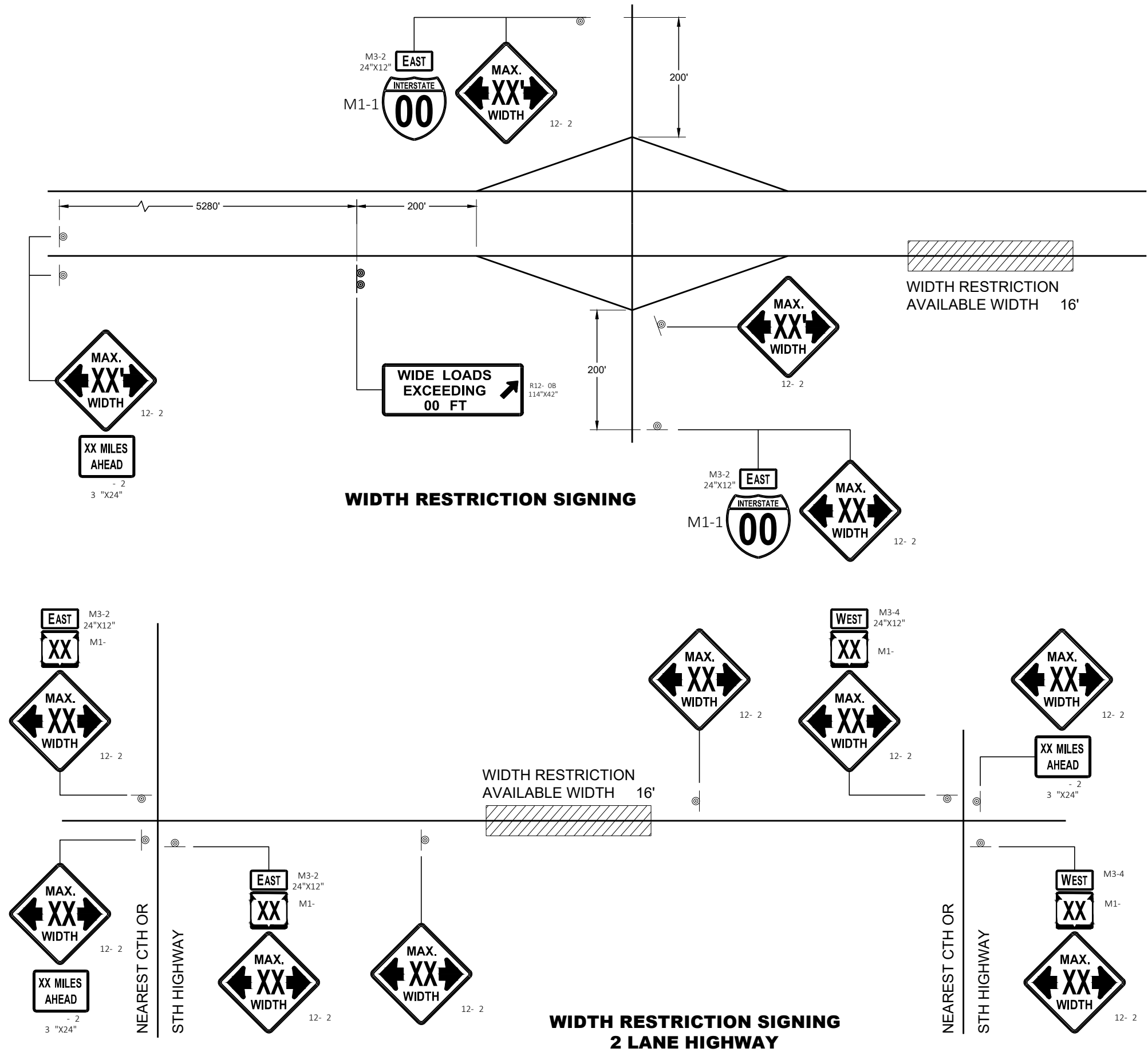
FRONT VIEW SIDE VIEW

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 DEVELOPMENT
FHWA UNIT SUPERVISOR



LEGEND

⊙ SIGN ON PERMANENT SUPPORT

GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

PLACE 500 FEET BEFORE THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

SIGN SHALL BE VISIBLE FROM ROADWAY.

ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

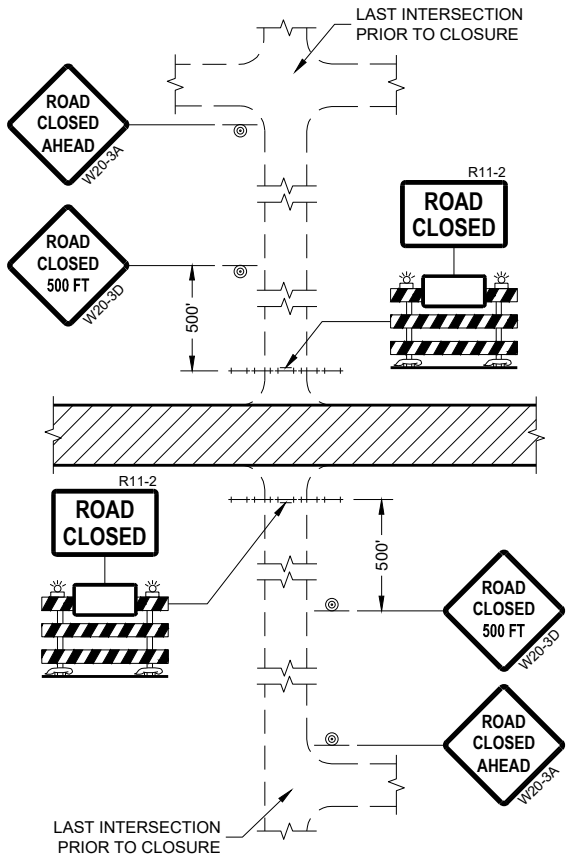


WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

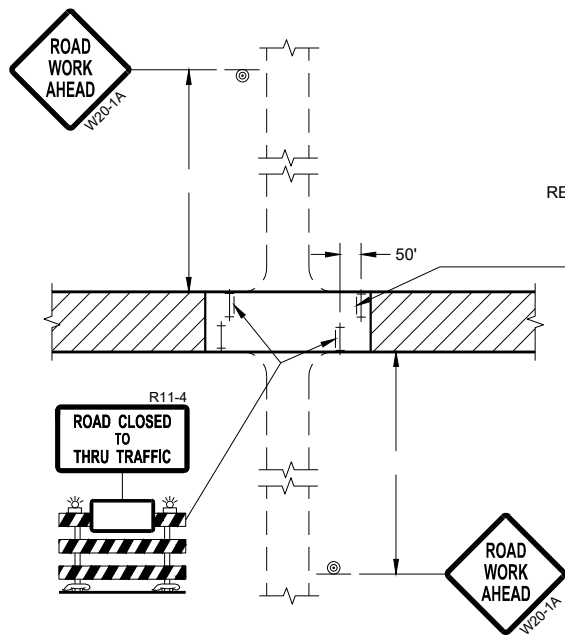
ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

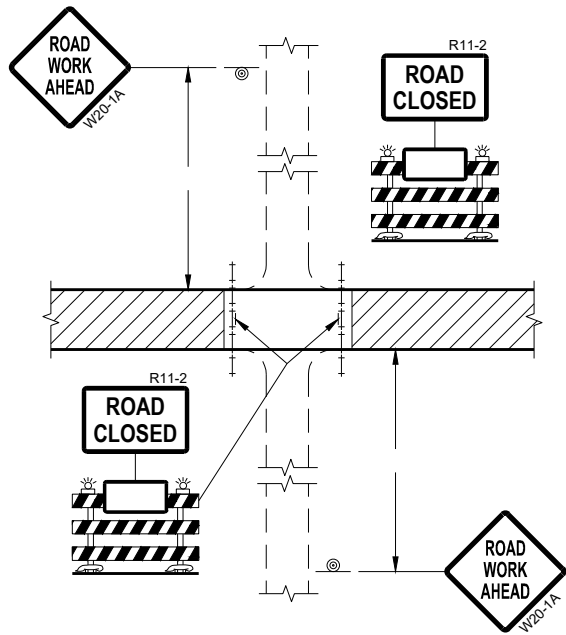
APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



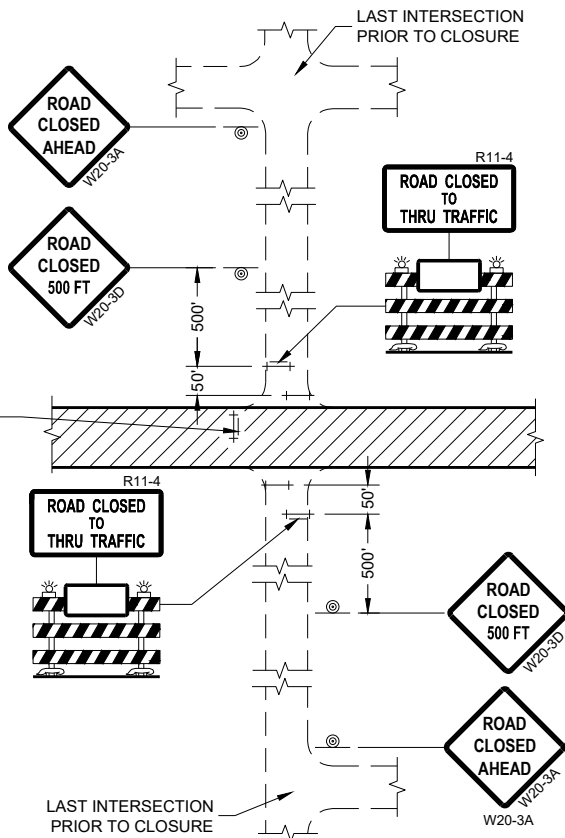
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

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

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Ju y 2018 /S/ Andrew Heidtke
DATE WORK ZONE 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.

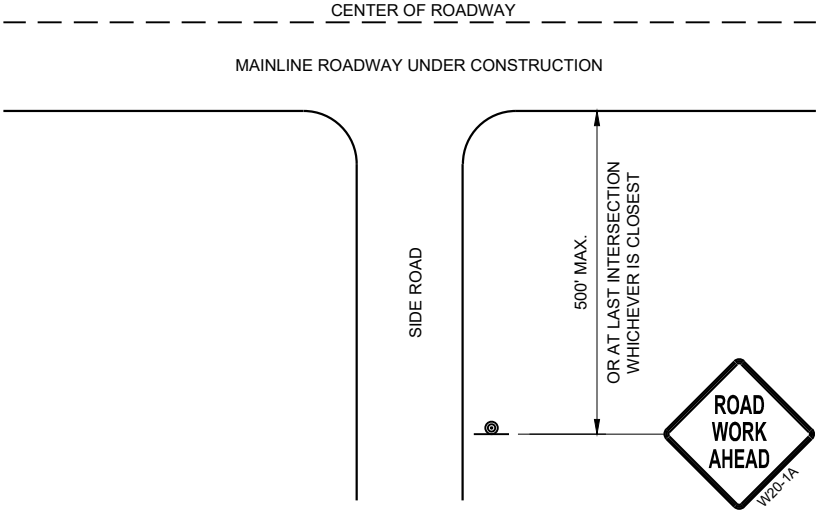
IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

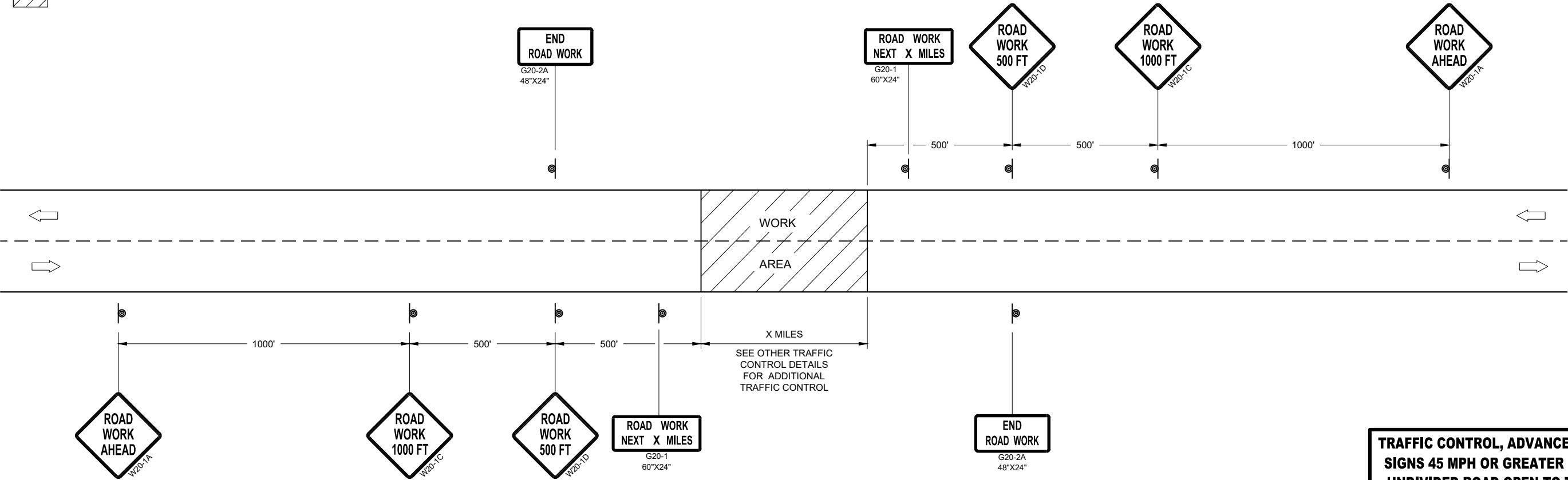
PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

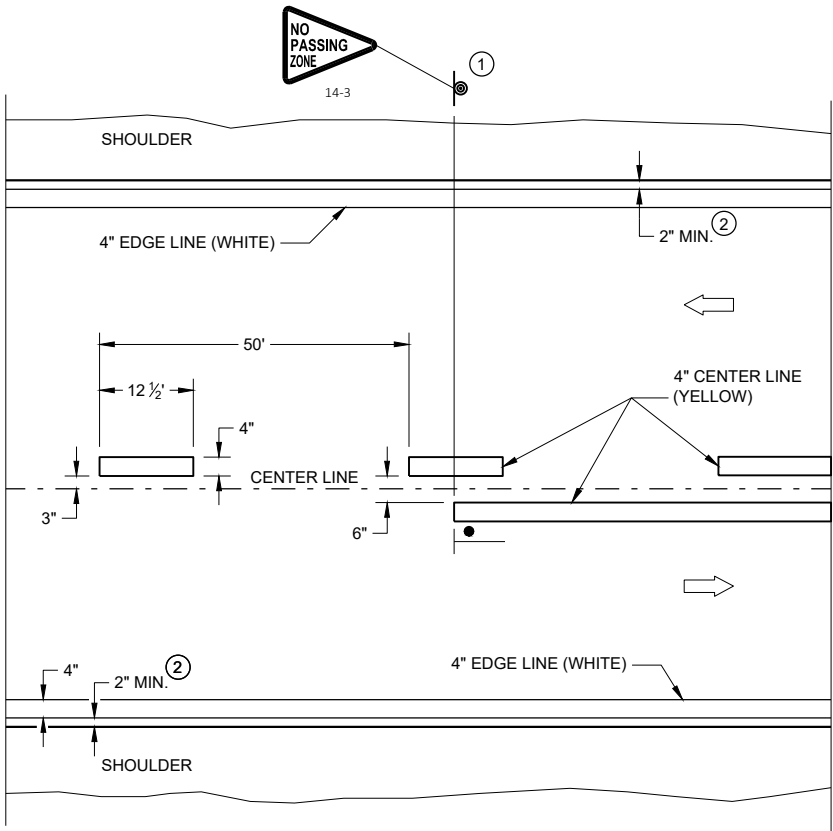


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

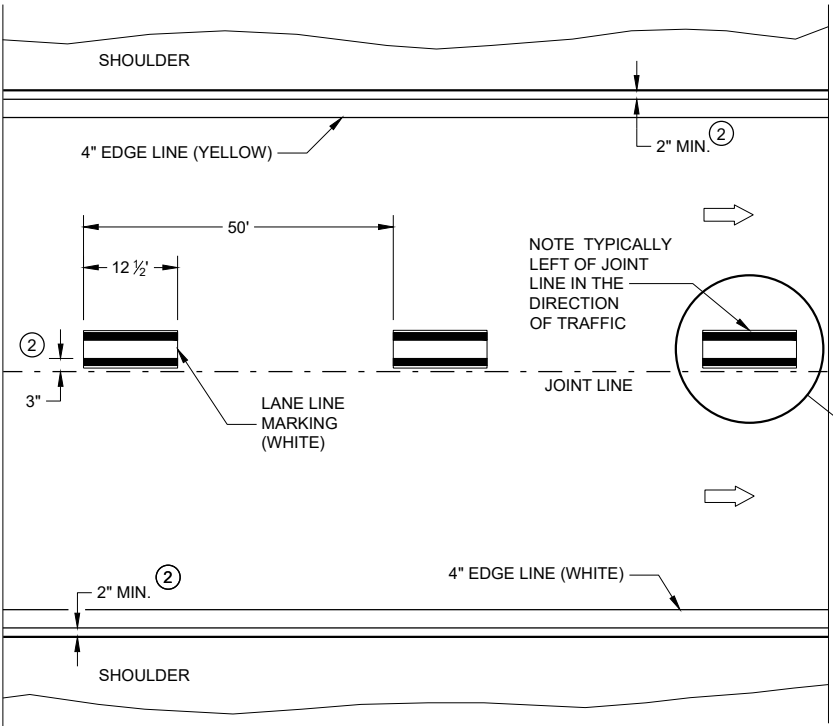
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Ju y 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

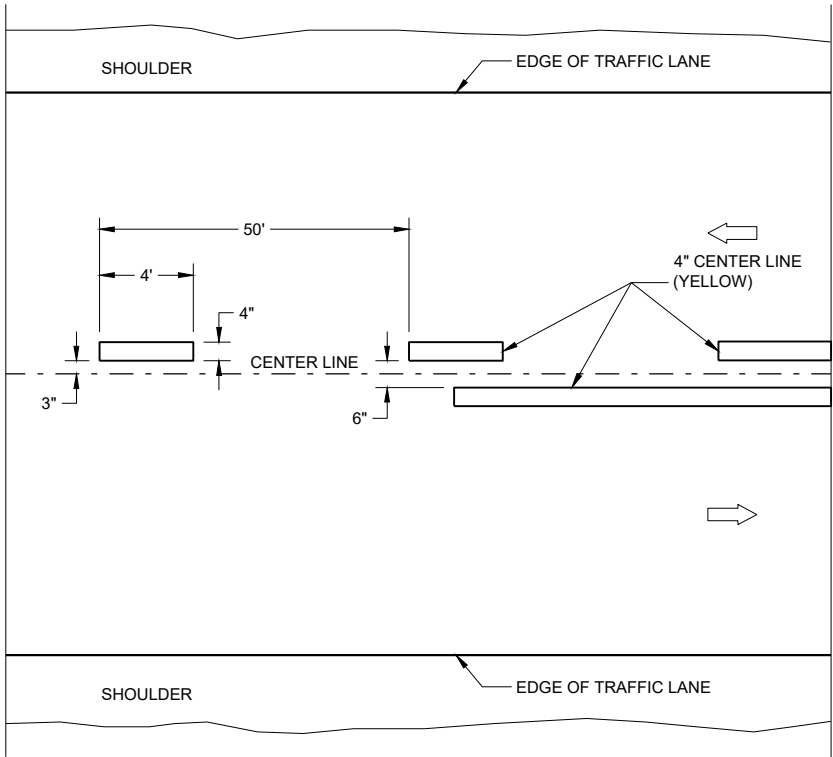


TWO WAY TRAFFIC

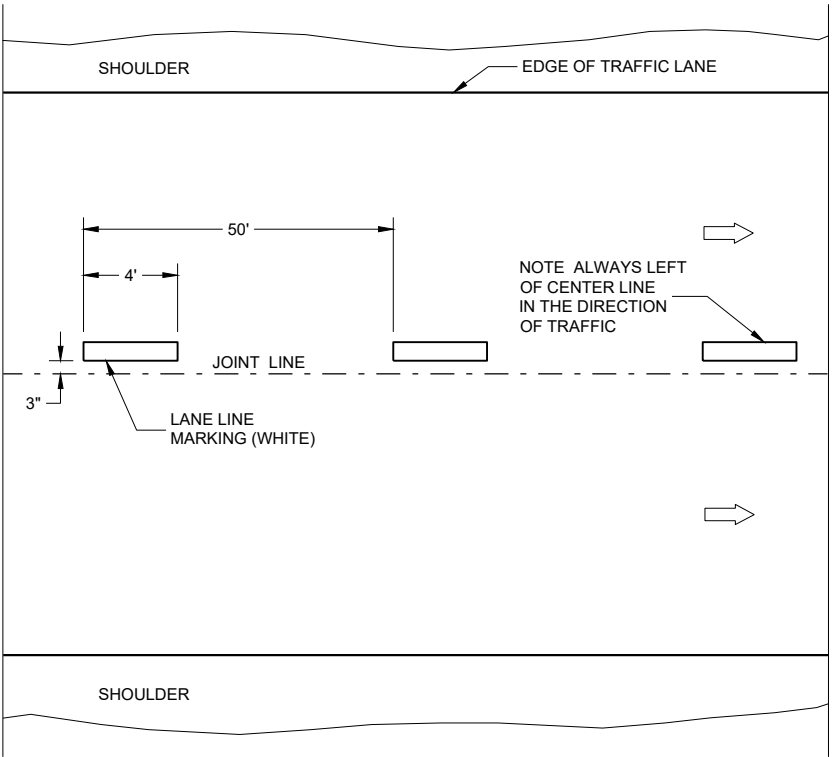


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

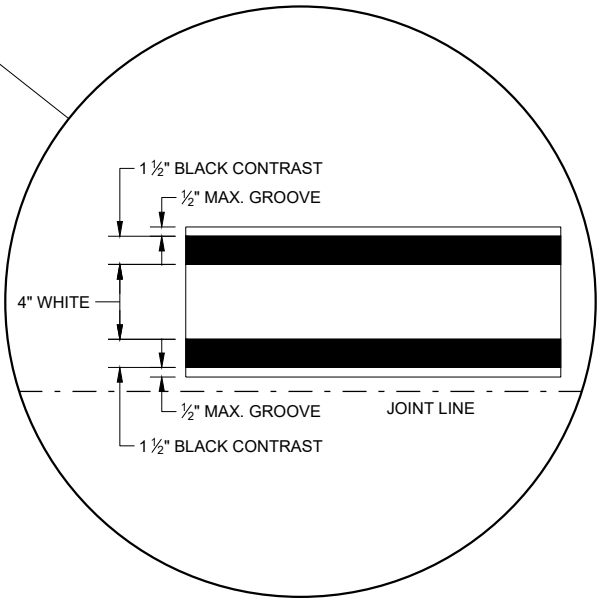
GENERAL NOTES

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

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 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



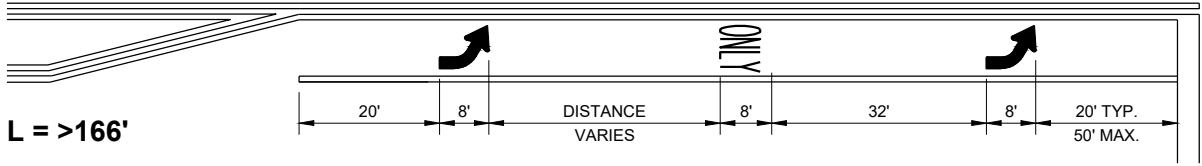
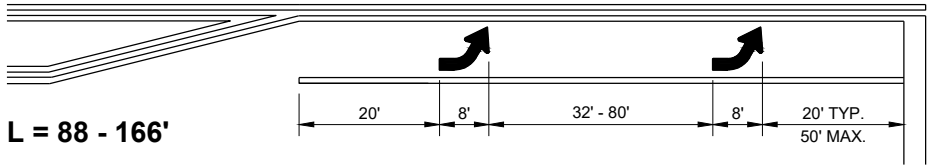
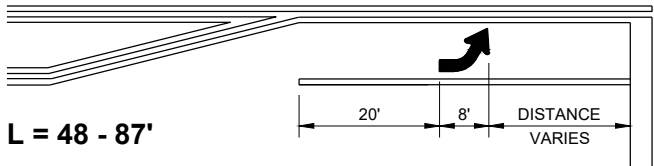
LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rau
STATEWIDE SIGNING AND MARKING
ENGINEER
FHWA

TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

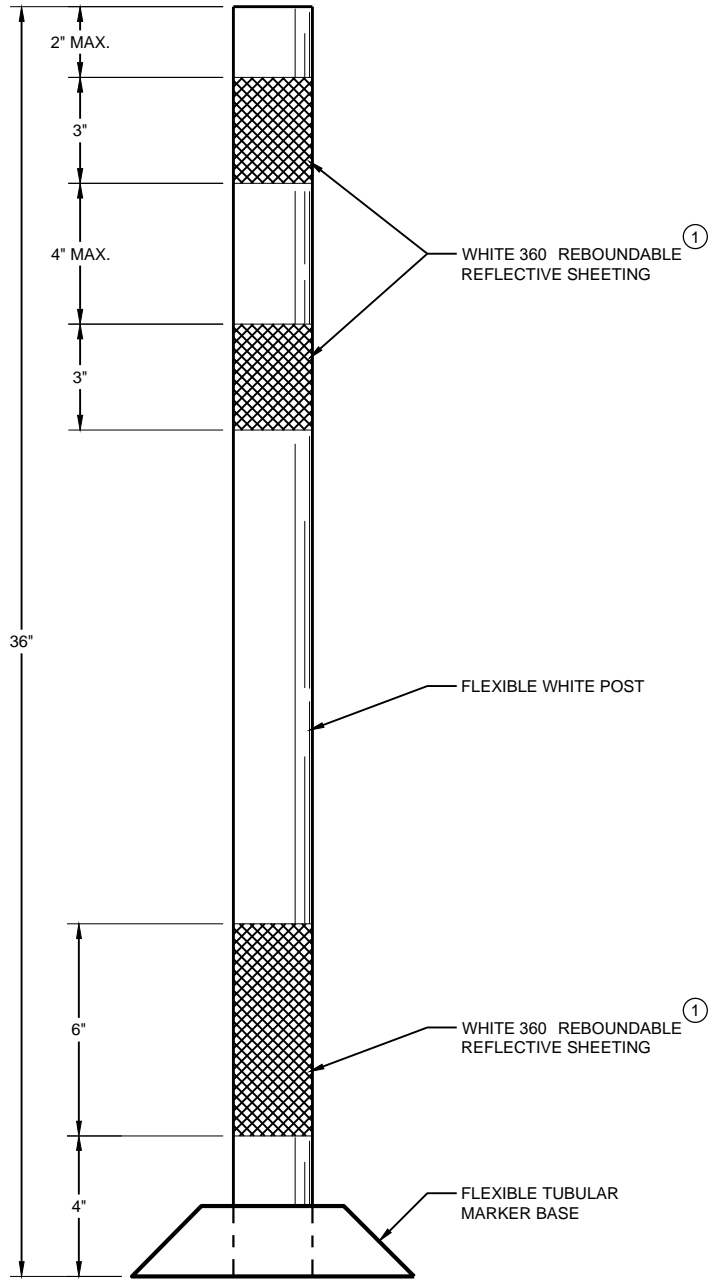
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

→ DIRECTION OF TRAFFIC

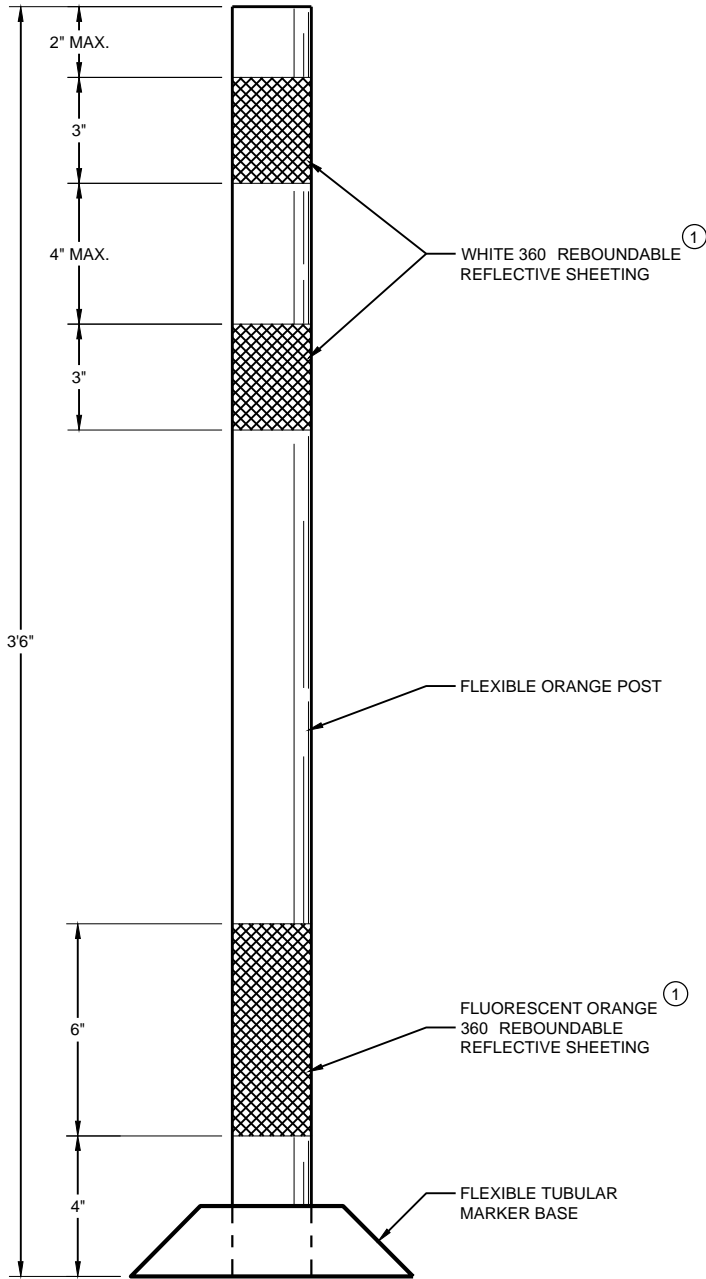
L LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**FLEXIBLE TUBULAR
MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE TUBULAR
MARKER POST
WORK ZONE**

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.

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

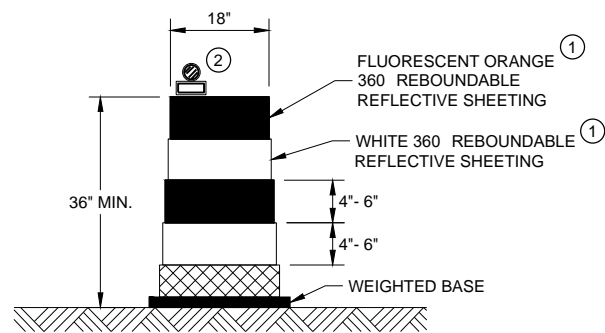
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

**CHANNELIZING DEVICES
FLEXIBLE TUBULAR
MARKER POST**

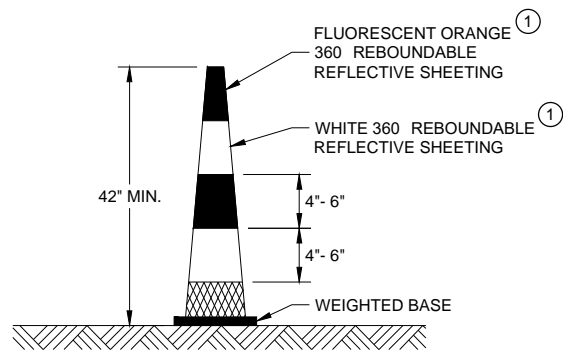
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

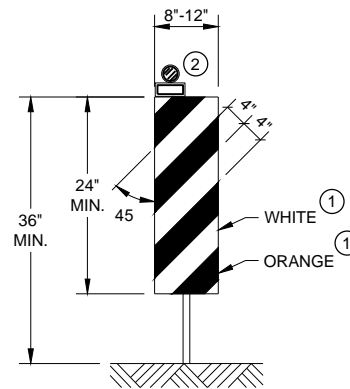


DRUM



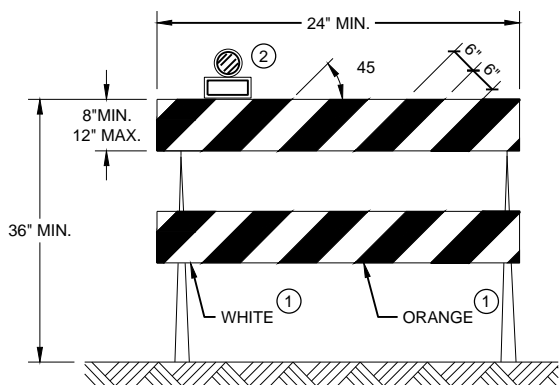
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



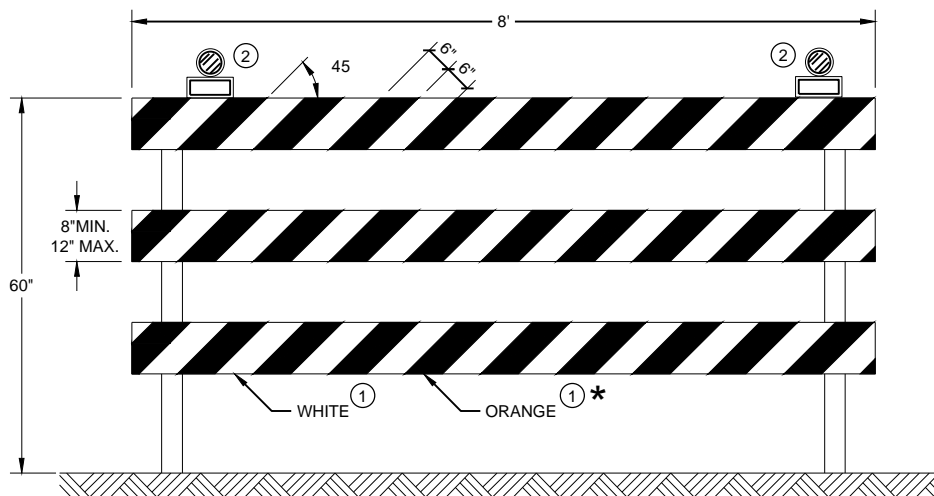
VERTICAL PANEL

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 June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
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

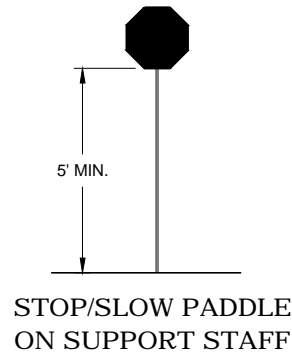
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- 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 SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR 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.

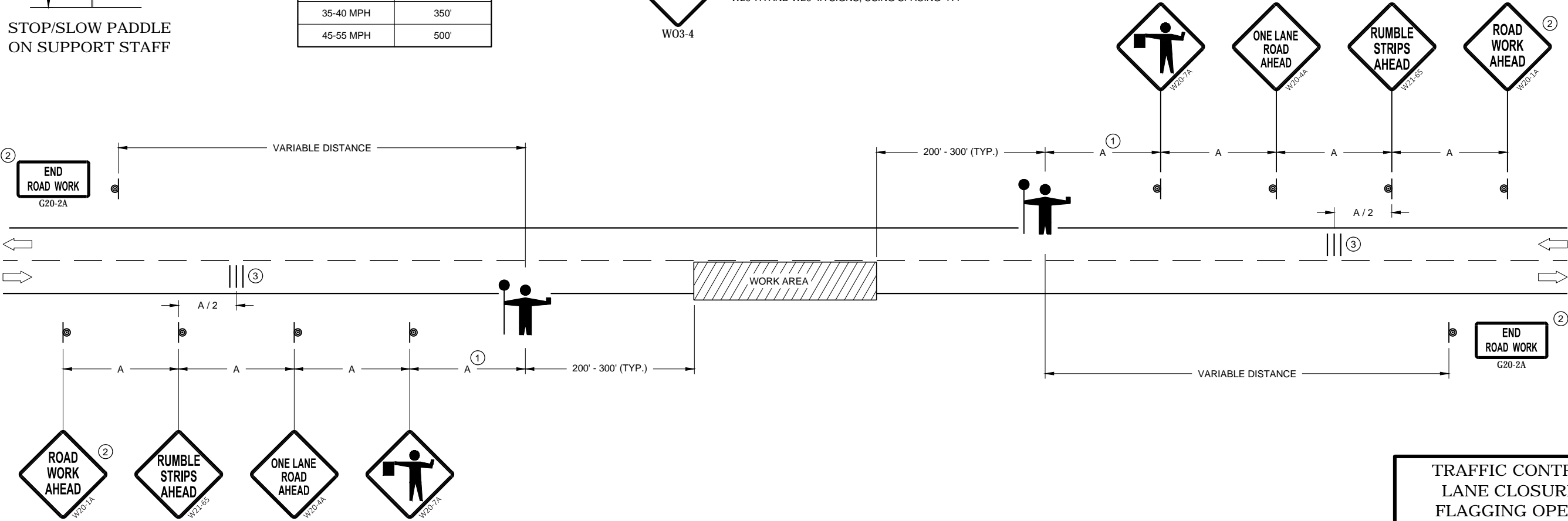


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING 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 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.

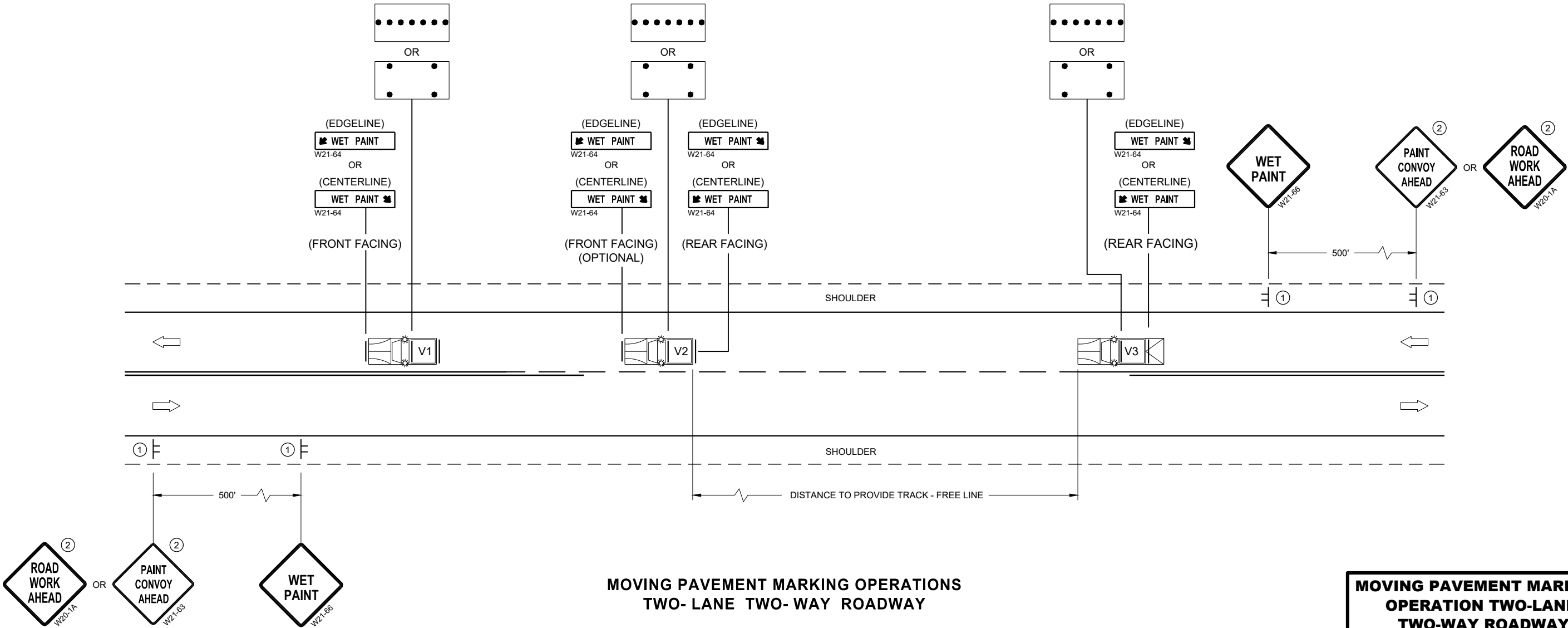
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

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

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 18" FOR WET PAVEMENT MARKING .

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



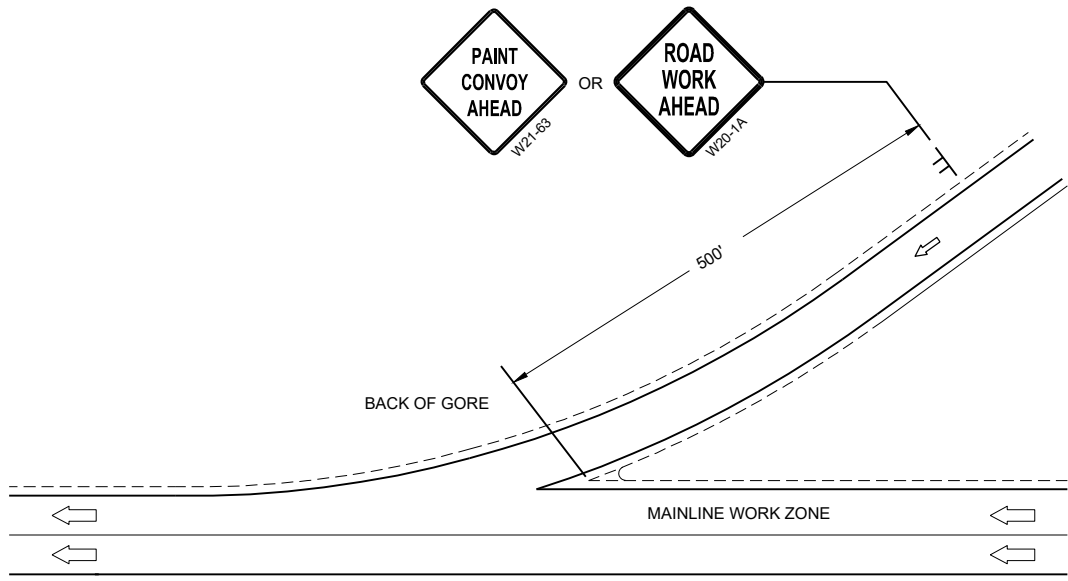
MOVING PAVEMENT MARKING
OPERATION TWO-LANE
TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
N e ber 201 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

LEGEND

- V1 MARKING VEHICLE
- V2 SHADOW VEHICLE
- V3 TRAIL VEHICLE
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING 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.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

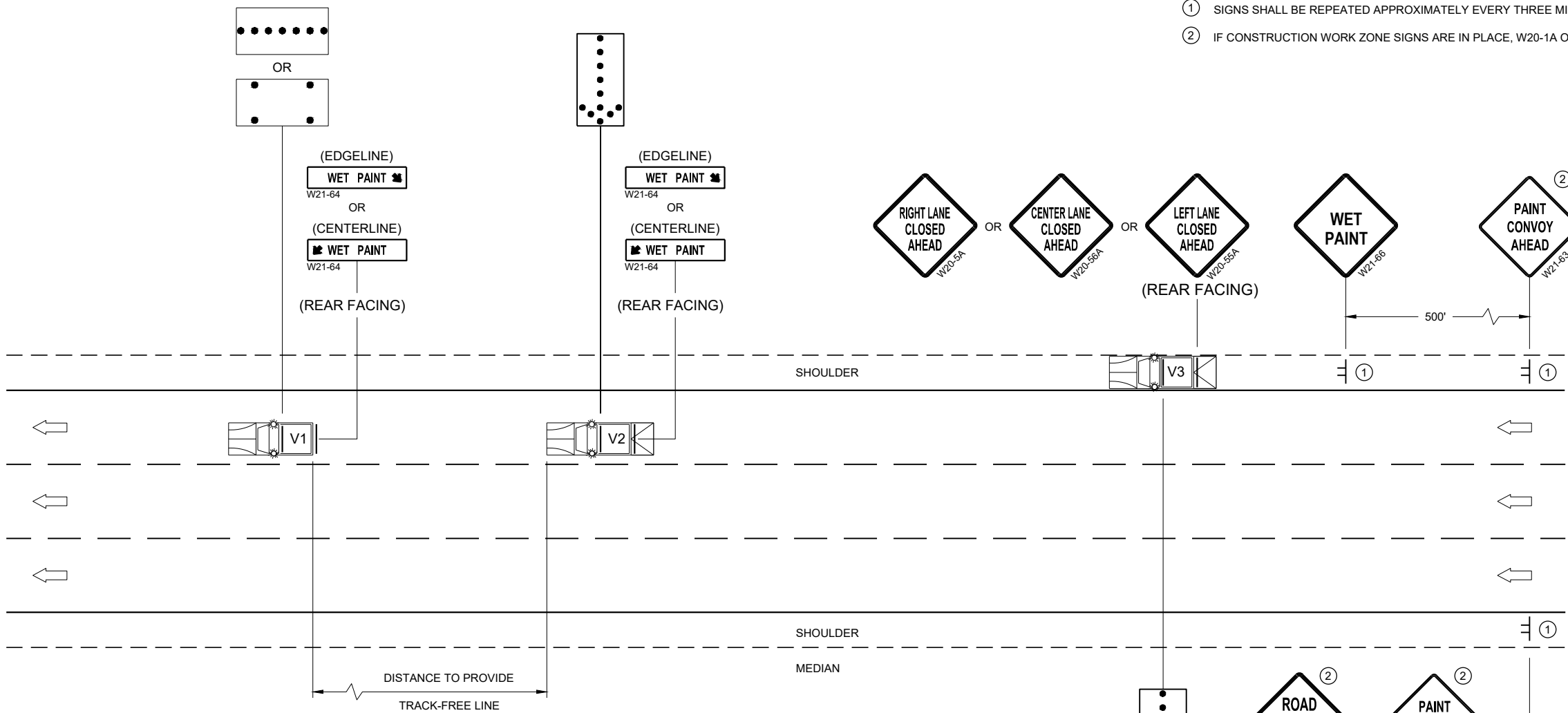
IF THE SHOULDER IS TOO NARROW TO ACCOMMODATE THE LAST TRAILING VEHICLE, THE VEHICLE SHOULD STRADDLE THE EDGE LINE.

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 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 HEIGHT OF 18" FOR WET PAVEMENT MARKINGS

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



MOVING PAVEMENT MARKING OPERATIONS
MULTILANE DIVIDED ROADWAY

MOVING PAVEMENT MARKING
OPERATION MULTI-LANE
DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
N e ber 201 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

① USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT PLACEMENT.

IF POSTED SPEED IS 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN).

LEGEND

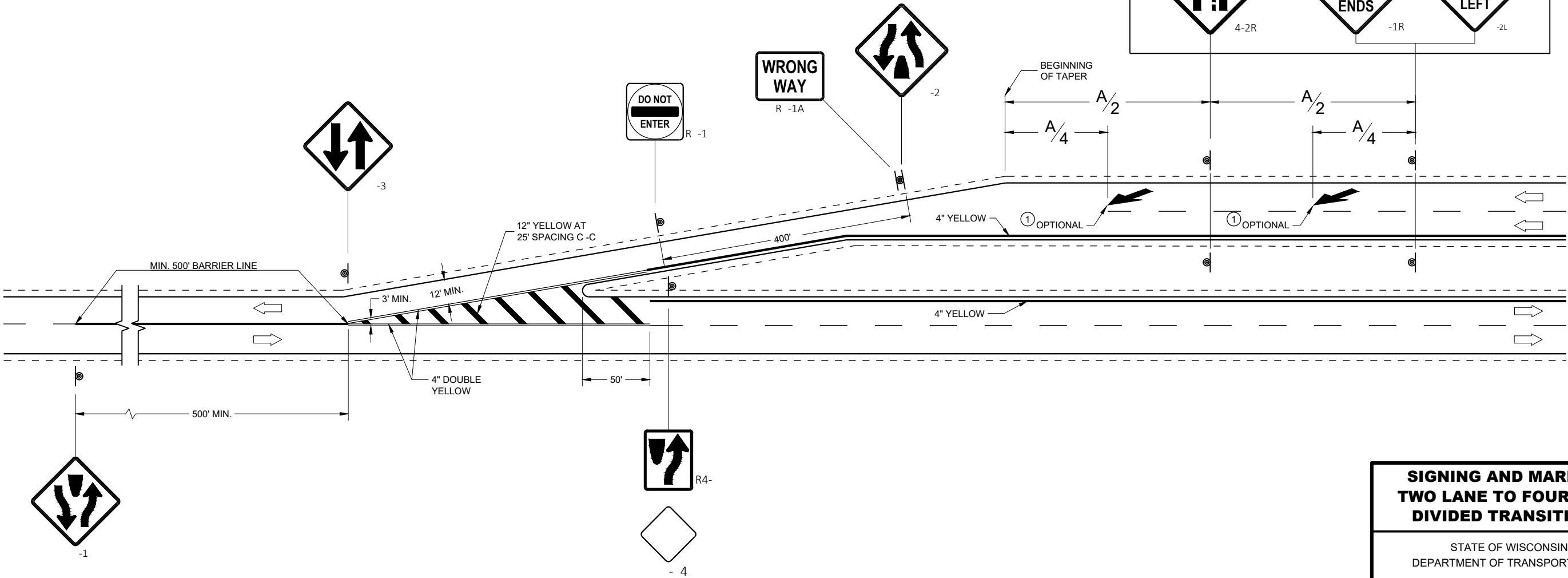
A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

● SIGN MOUNTED ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

DISTANCE TABLE

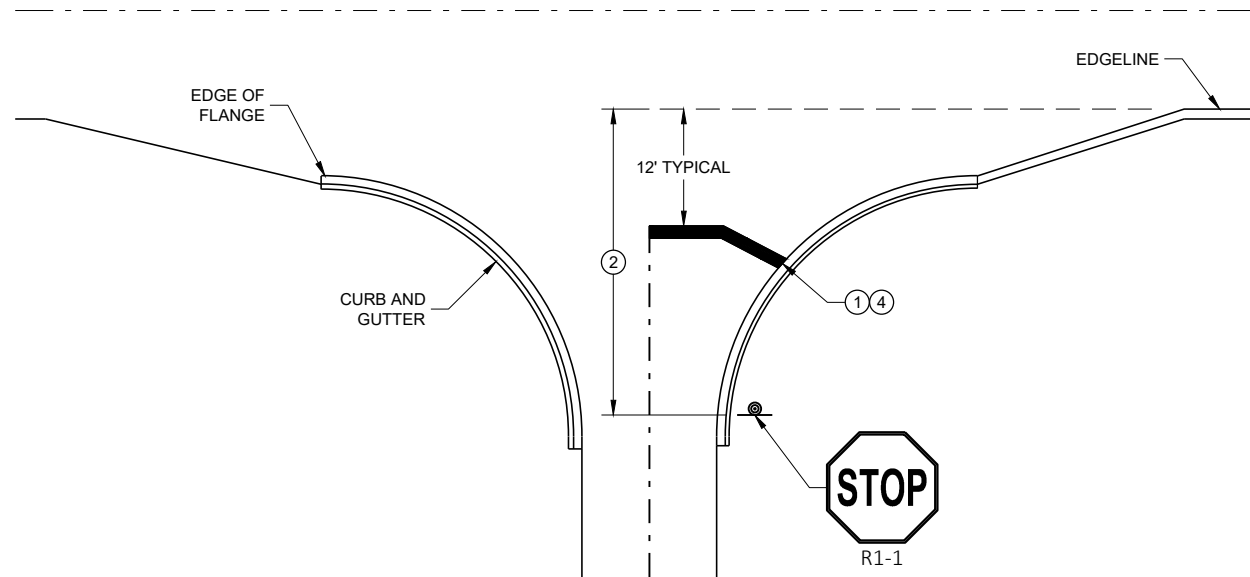
POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	325'
30	460'
35	565'
40	670'
45	775'
50	885'
55	0'
65	1200'
70	1250'



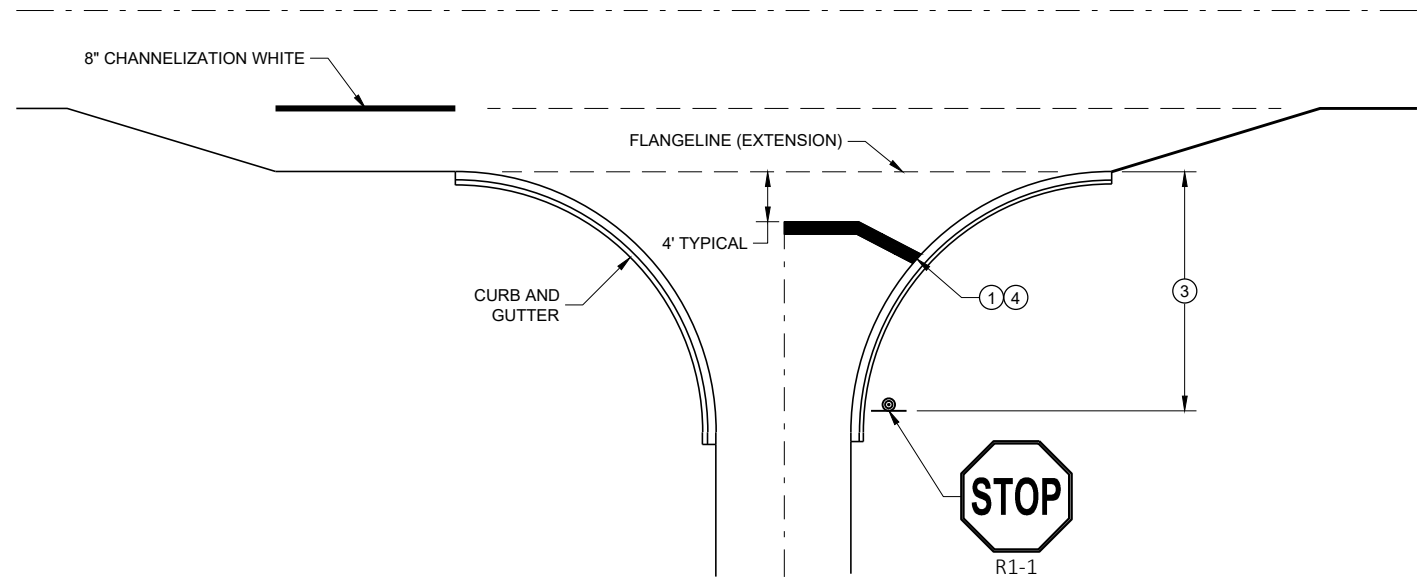
SIGNING AND MARKING
TWO LANE TO FOUR LANE
DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

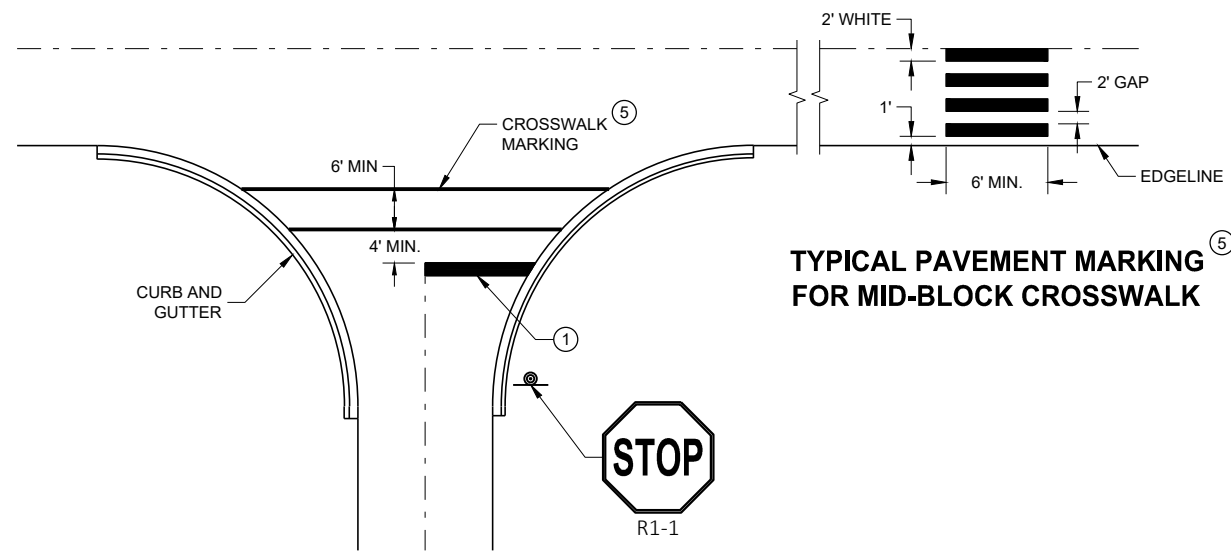
APPROVED
May 2020 /S/ Matt ew Rau
DATE STATE SIGNING AND MARKING
ENGINEER
FHWA



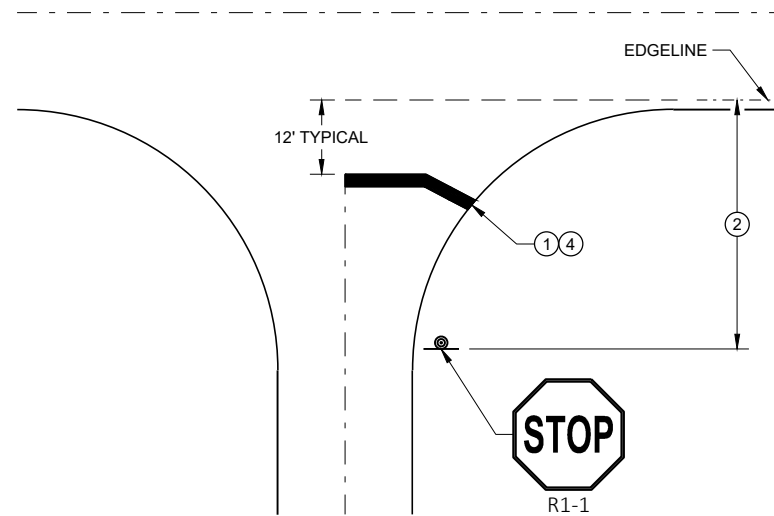
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR
SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

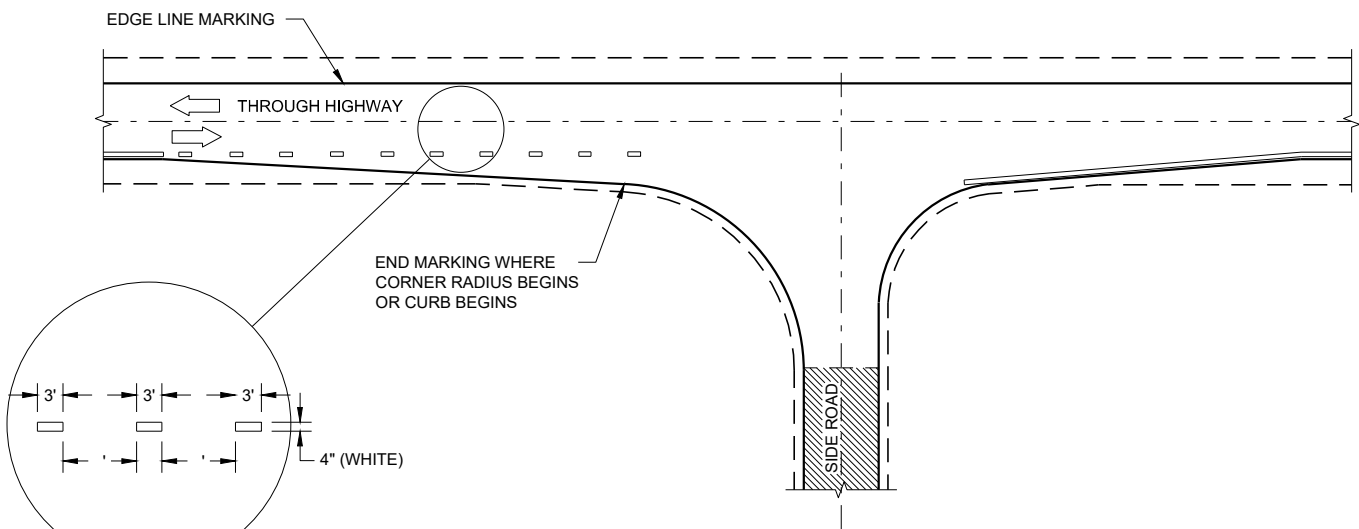
STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

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

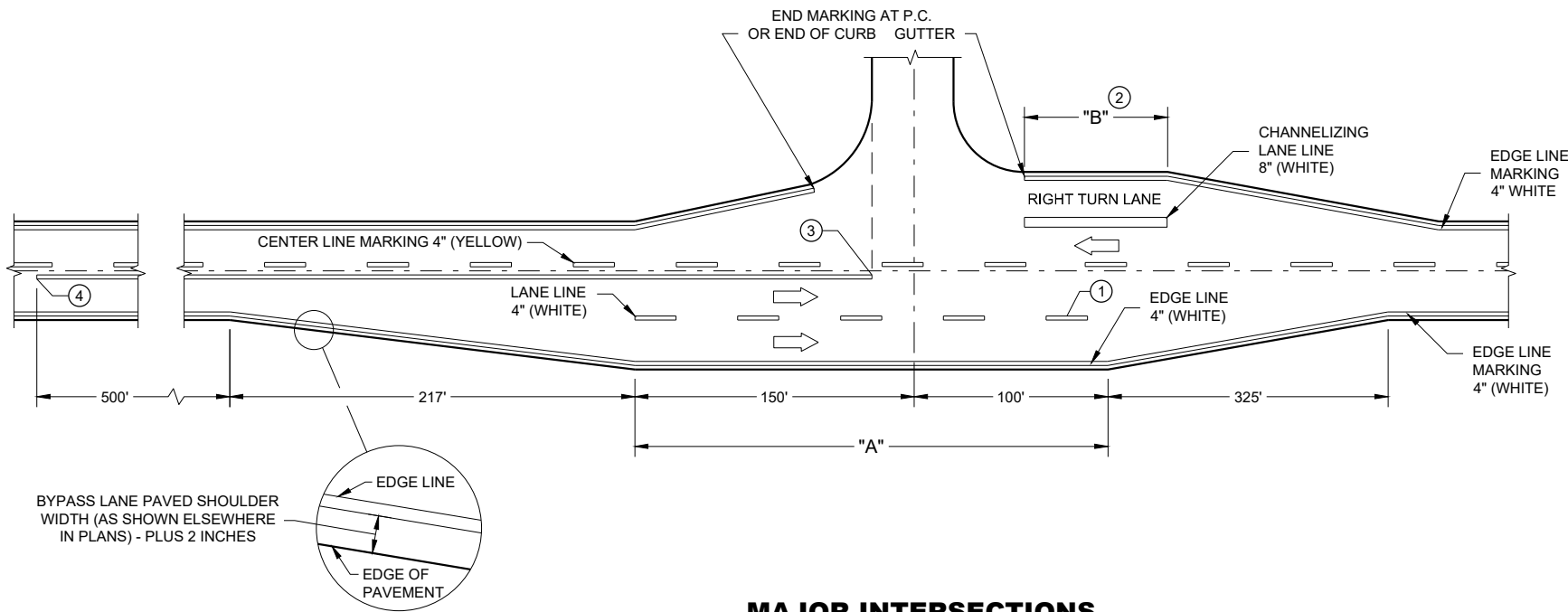
STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
N e ber 201 DATE /S/ Matt ew Rau
STATE SIGNING AND MARKING
ENGINEER
FHWA



MINOR INTERSECTION



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

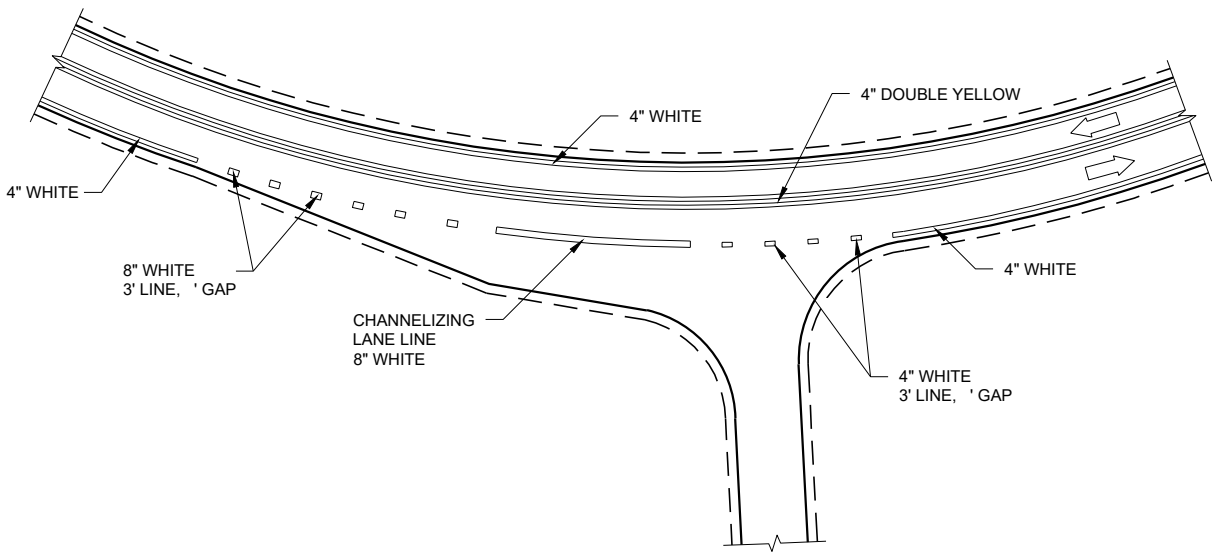
GENERAL NOTES

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.

LEGEND

➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

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

GENERAL NOTES

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

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

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

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

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

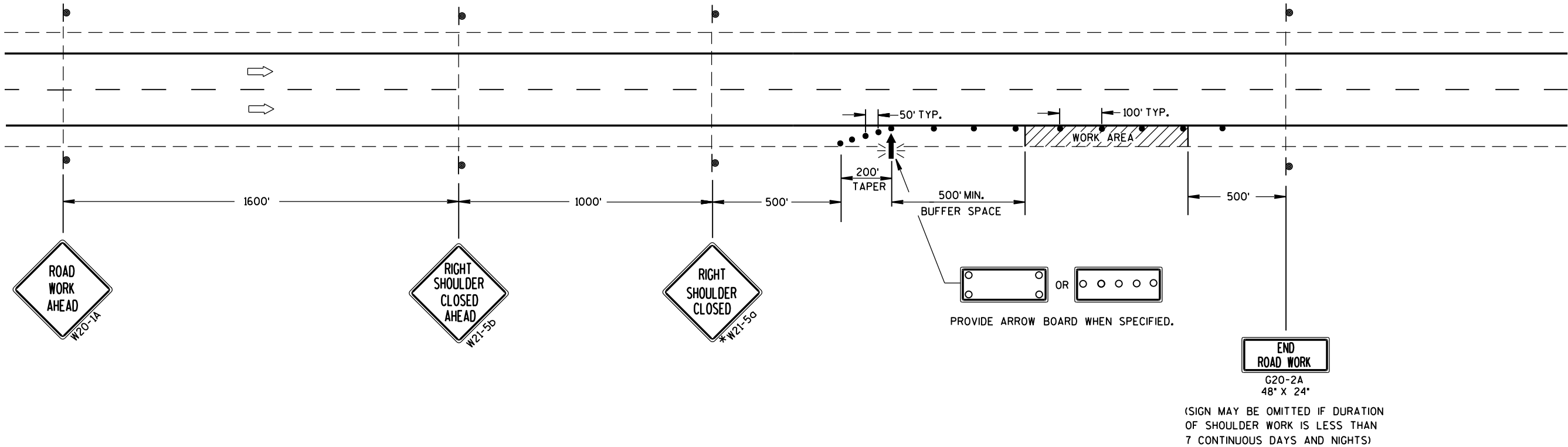
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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





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

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



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

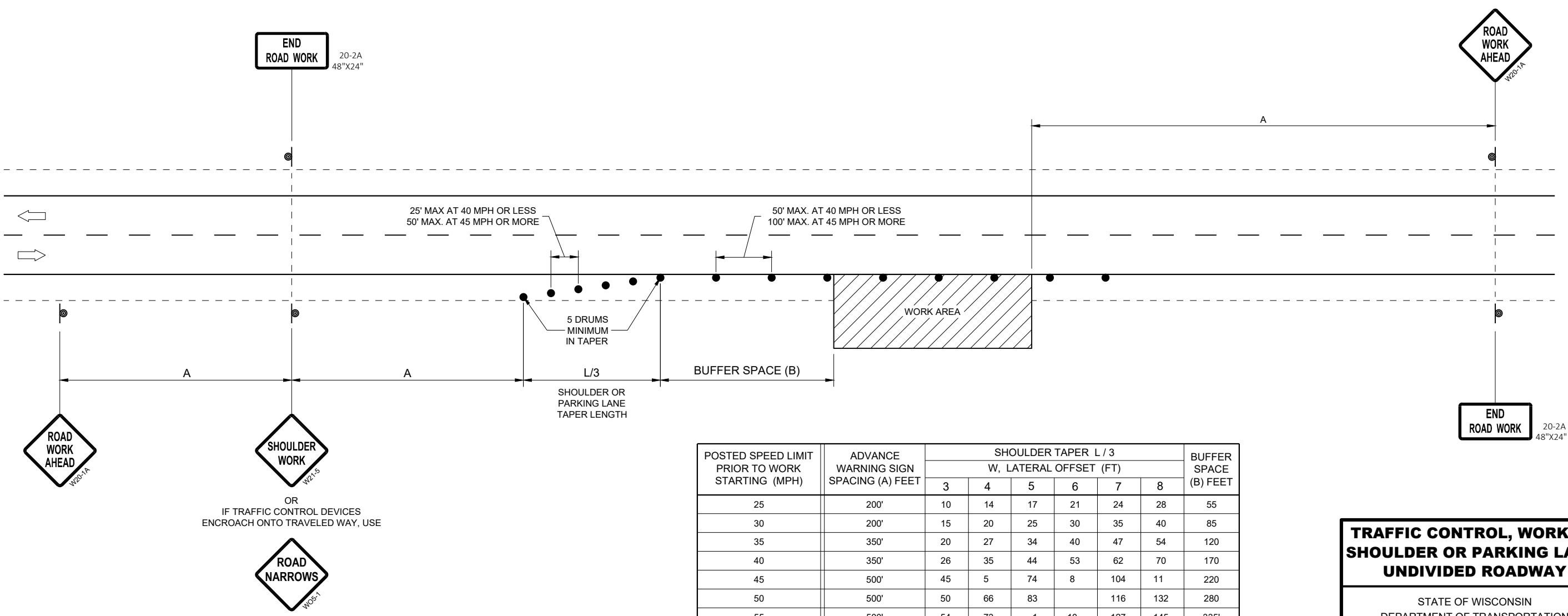
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

6

6



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3						BUFFER SPACE (B) FEET
		W, LATERAL OFFSET (FT)						
		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	5	74	8	104	11	220
50	500'	50	66	83		116	132	280
55	500'	54	73	1	10	127	145	335'

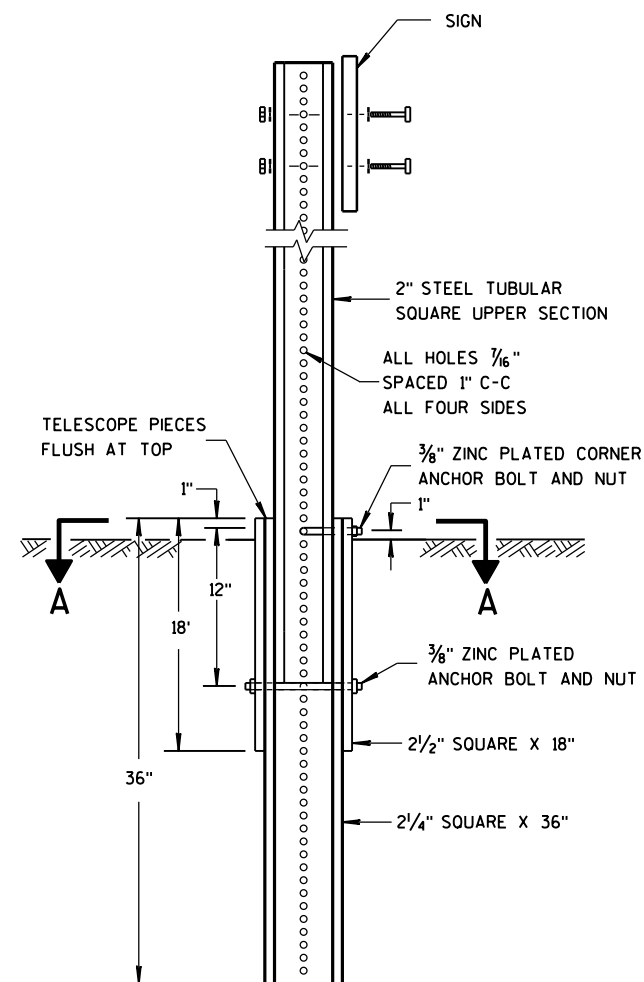
TRAFFIC CONTROL, WORK ON
SHOULDER OR PARKING LANE,
UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

FHWA

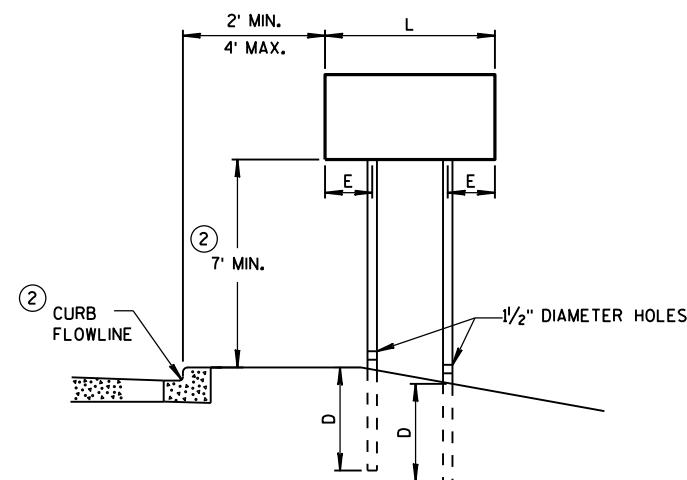
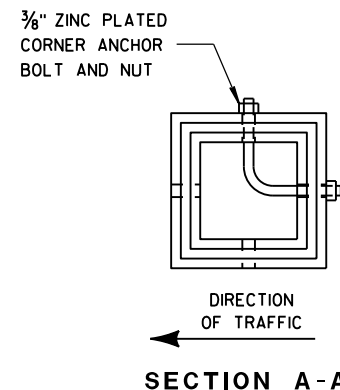


DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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

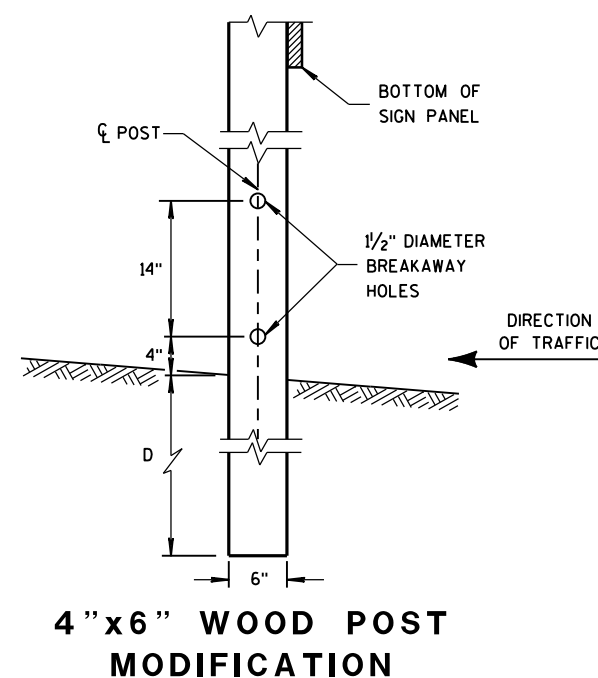
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



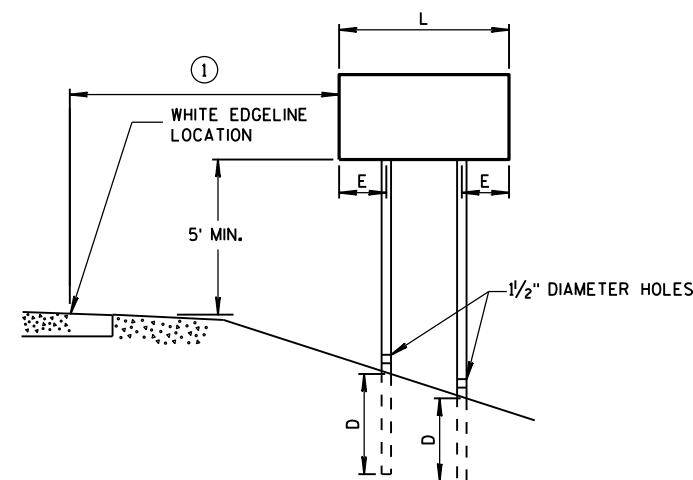
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH	
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4 "x6 " WOOD POST MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

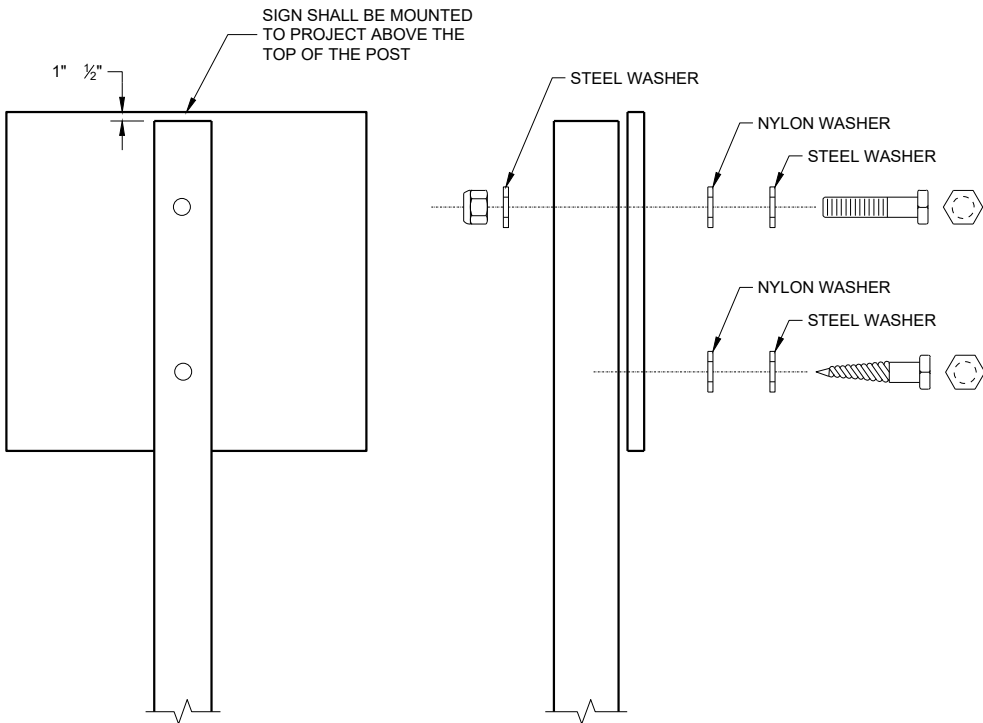
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② 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. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

WOOD POST (4" - 6")
LAG SCREWS - ⅜" 3"
MACHINE BOLTS - ⅝" 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" - 2")
MACHINE BOLTS - ⅜" 3 ¼" LENGTH W/NUTS
RIVETS - ⅜" (6605- -6) BULB-TITE, TRI-FOLD, ALUMINUM
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
GRIP RANGE 0.042 - 0.375 INCH

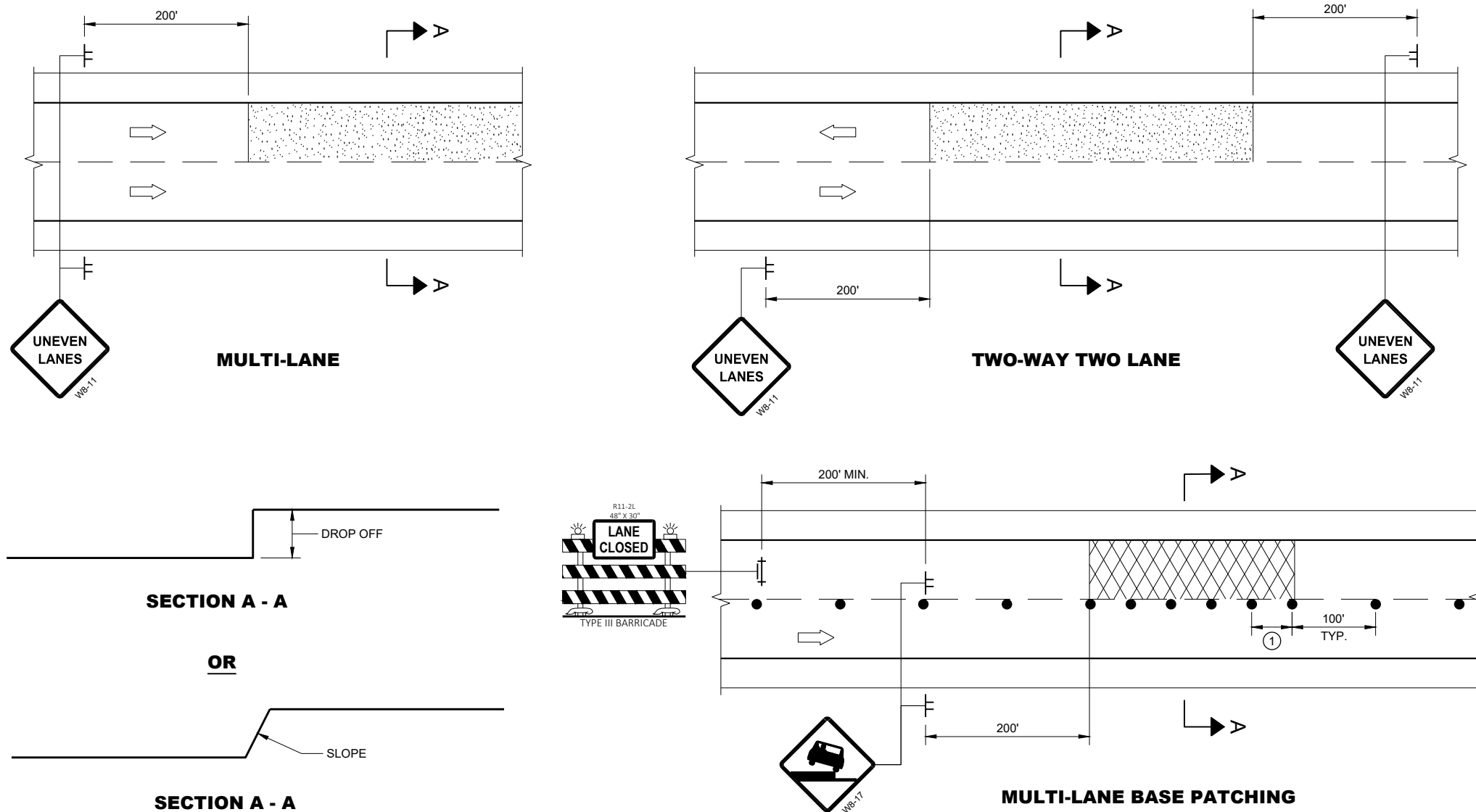
WASHERS (ALL POSTS) -
1 ¼" O.D. ⅜" I.D. ⅛" STEEL
1 ¼" O.D. ⅜" I.D. 0.080 NYLON

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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS
TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

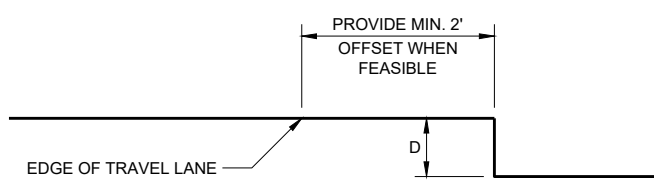
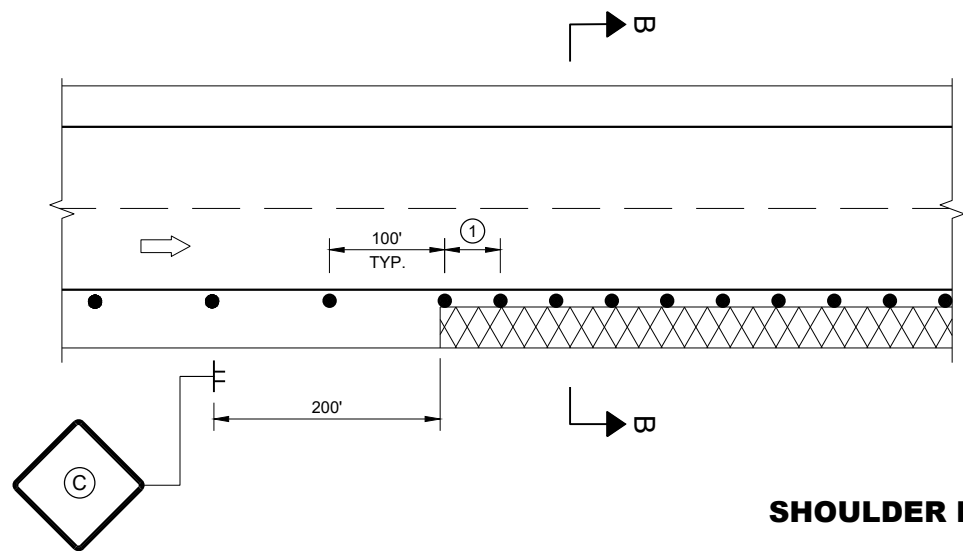
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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



D	SIGN C
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8- A 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 Mar 2018 DATE	/S/ Andrew Heidtke 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.

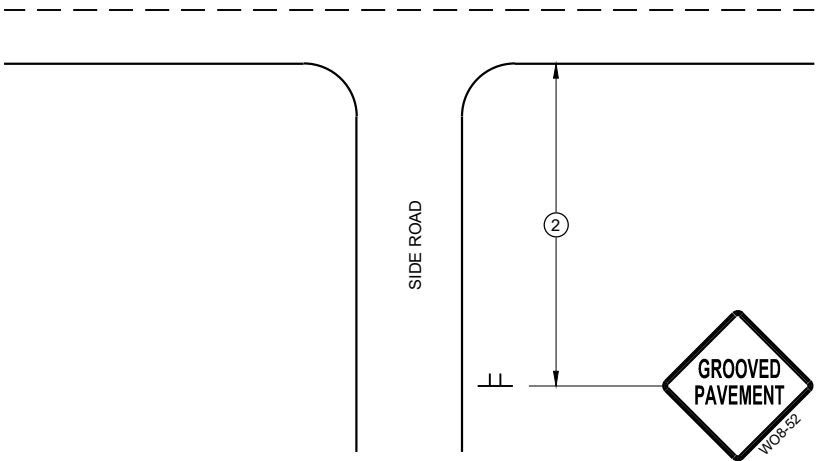
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

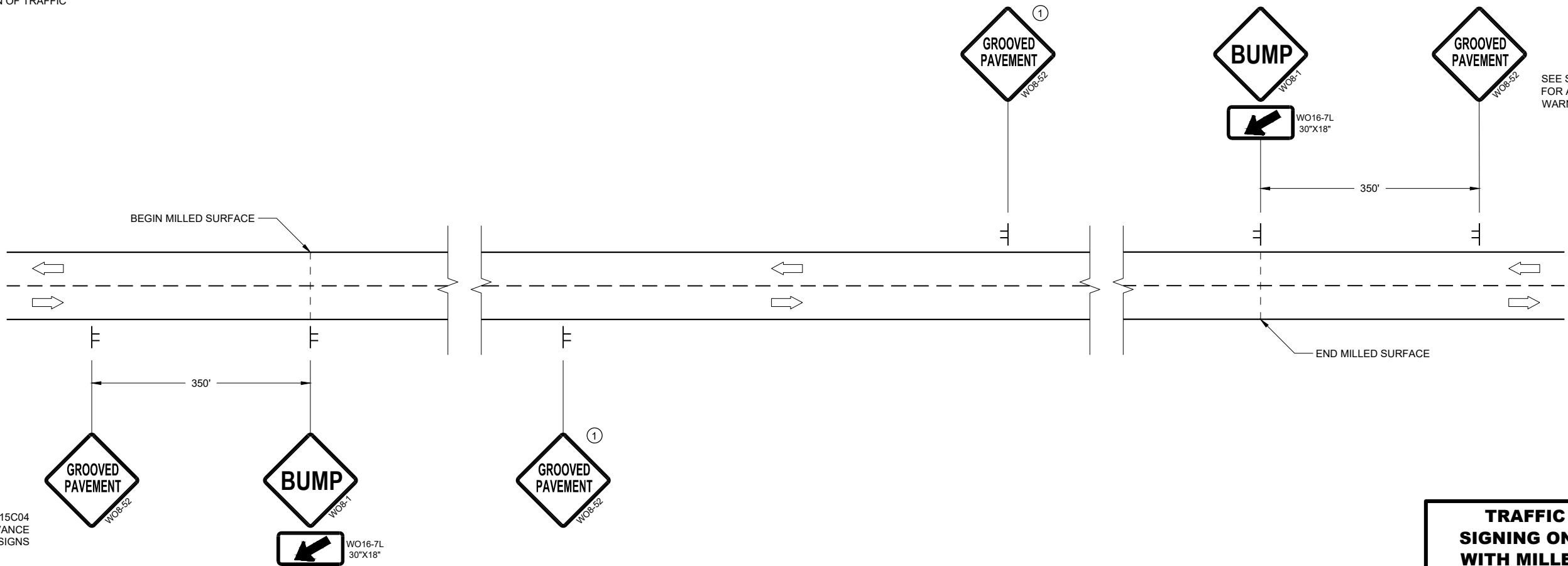
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL



SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

SEE SDD15C04
FOR ADVANCE
WARNING SIGNS

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

FHWA

7



7

7



7

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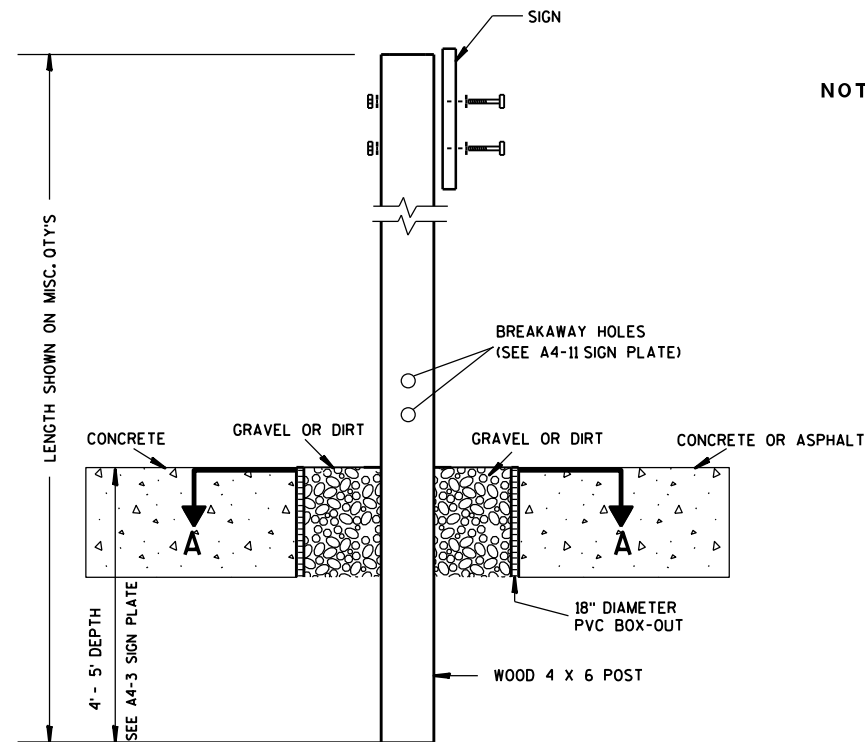
TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

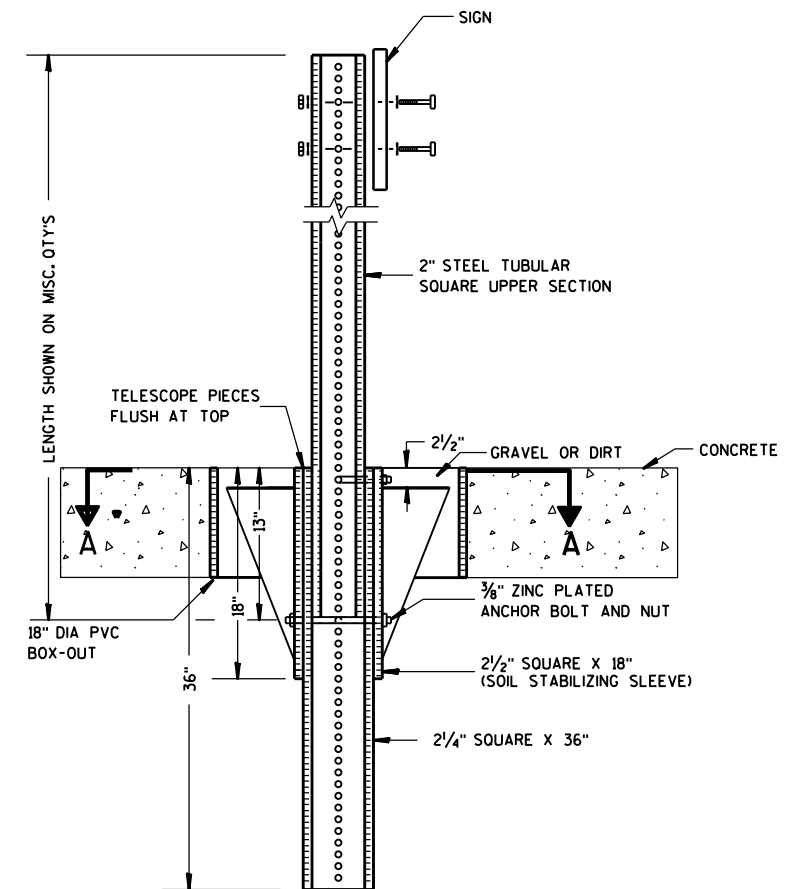
- TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS
-
- WISCONSIN DEPT OF TRANSPORTATION
-
- APPROVED Matthew R Rauch
for State Traffic Engineer
-
- DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

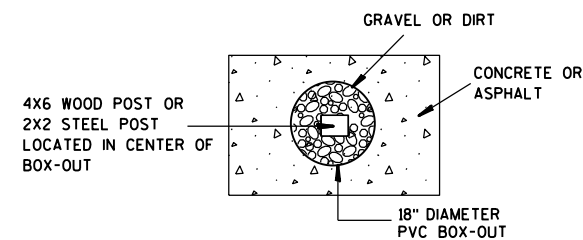
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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 PLATE NO. A4-3B.1

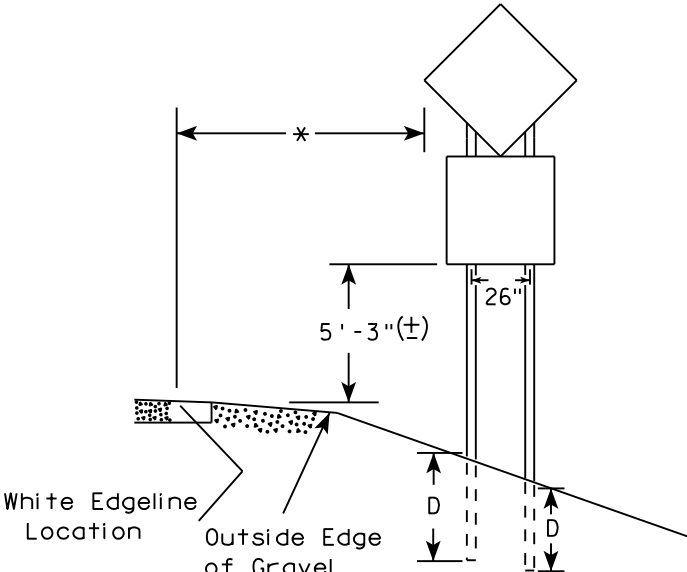
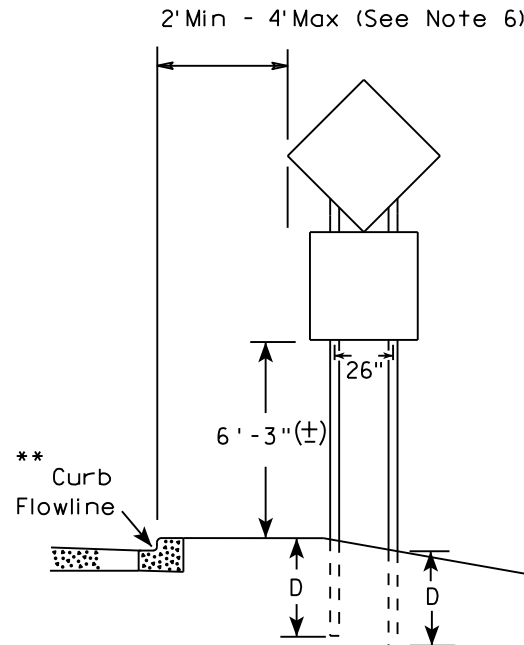
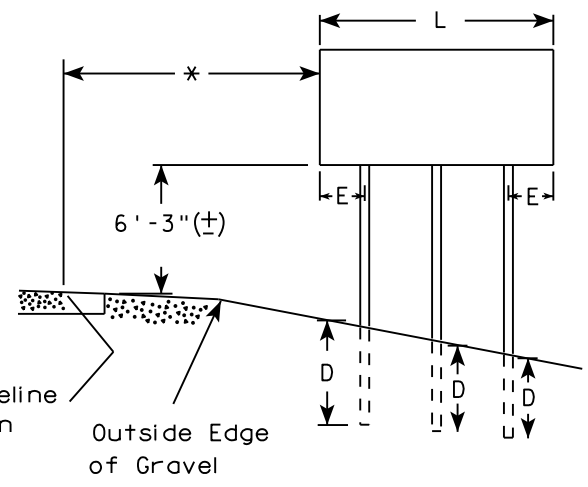
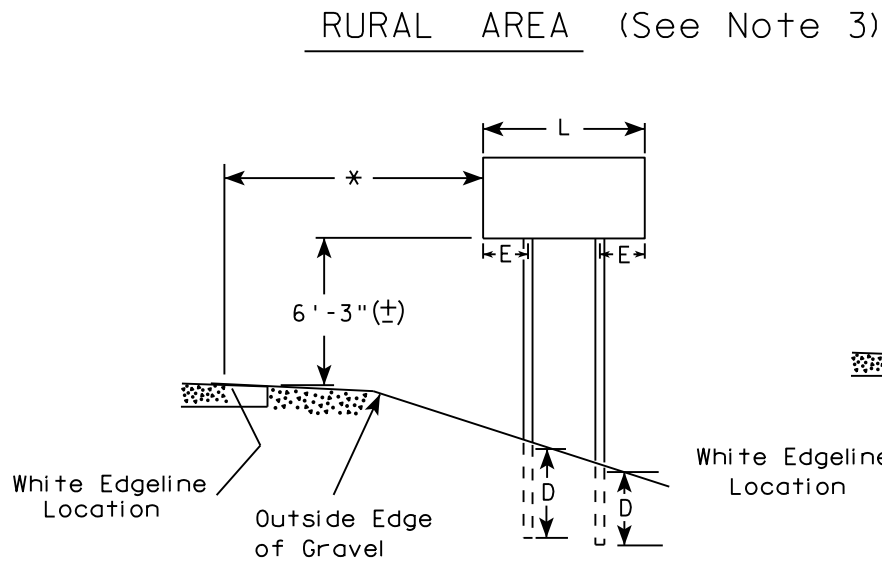
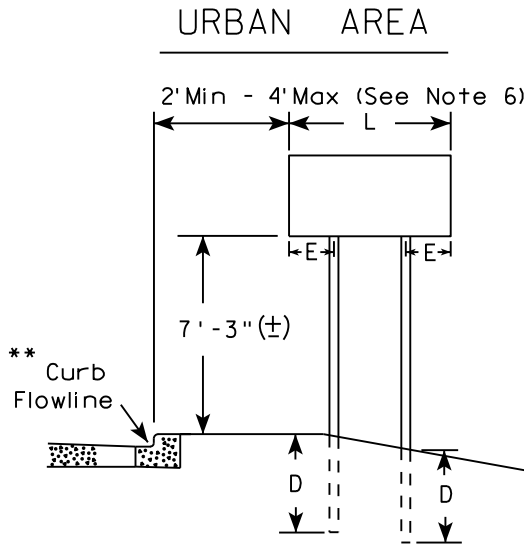
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

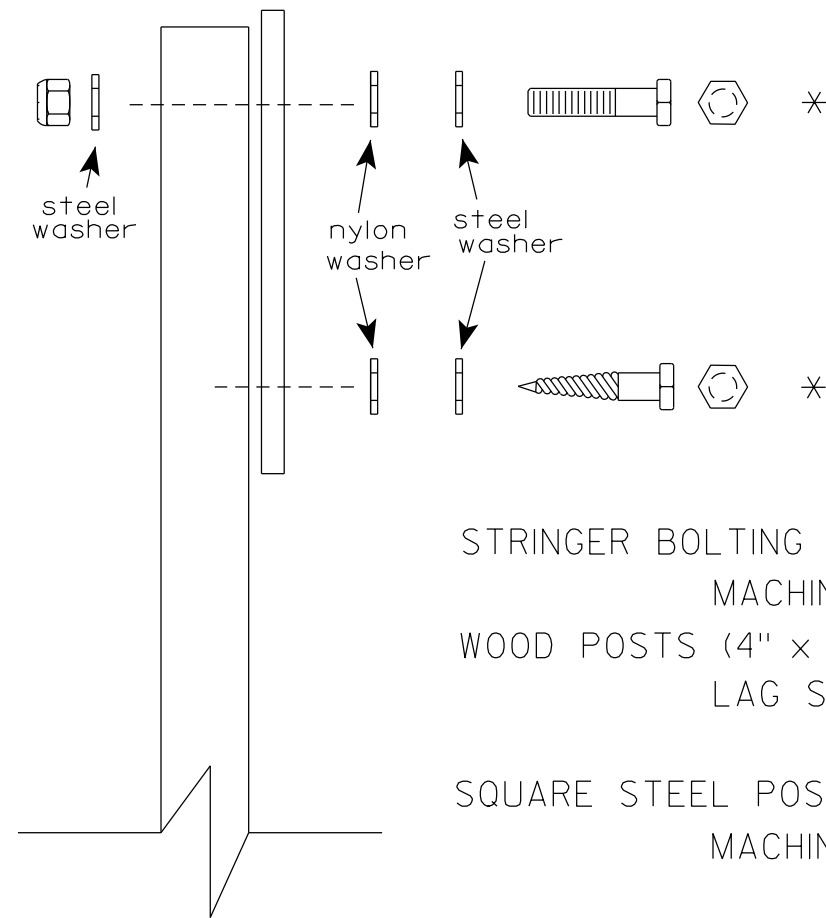
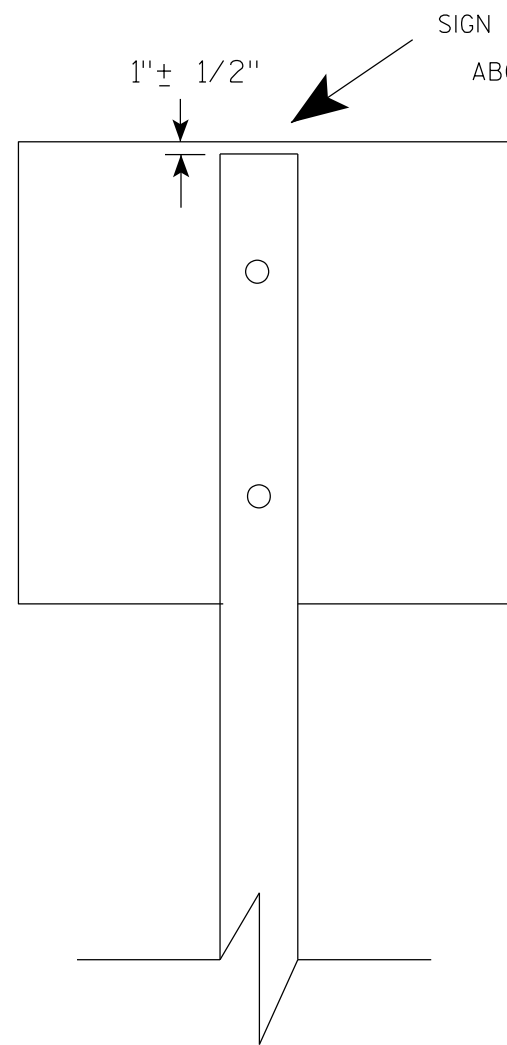
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 8/21/17	PLATE NO. A4-4.15

- GENERAL NOTES
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. J-Assemblies are considered to be one sign for mounting height.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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" (±).

- * 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.
- ** 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.
- *** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.



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**

4" x 10" x 10 GA. —→
STEEL PLATE (CUT
AS SHOWN) WELDED
TO ALL FOUR CORNERS
OF TELESPAR TUBE

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

2 1/2" TELES PAR TUBE

4"

2 1/2"

10"

3 1/2"

16"

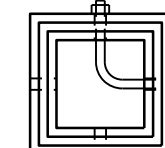
4" x 10" x 10 GA. STEEL PLATE (CUT AS SHOWN) WELDED TO ALL FOUR CORNERS OF TELES PAR TUBE

[illegible]

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- Dimensions:**
 - Overall height: LENGTH SHOWN ON MISC. QTY'S
 - Section 1 (top): 36"
 - Section 2 (middle): 18"
 - Section 3 (bottom): 12"
- Components and Labels:**
 - 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
 - TELESCOPE PIECES FLUSH AT TOP
 - $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
 - 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 - 2 1/4" SQUARE X 36"

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

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 PLATE NO. A4-9.9

PROJECT NO:

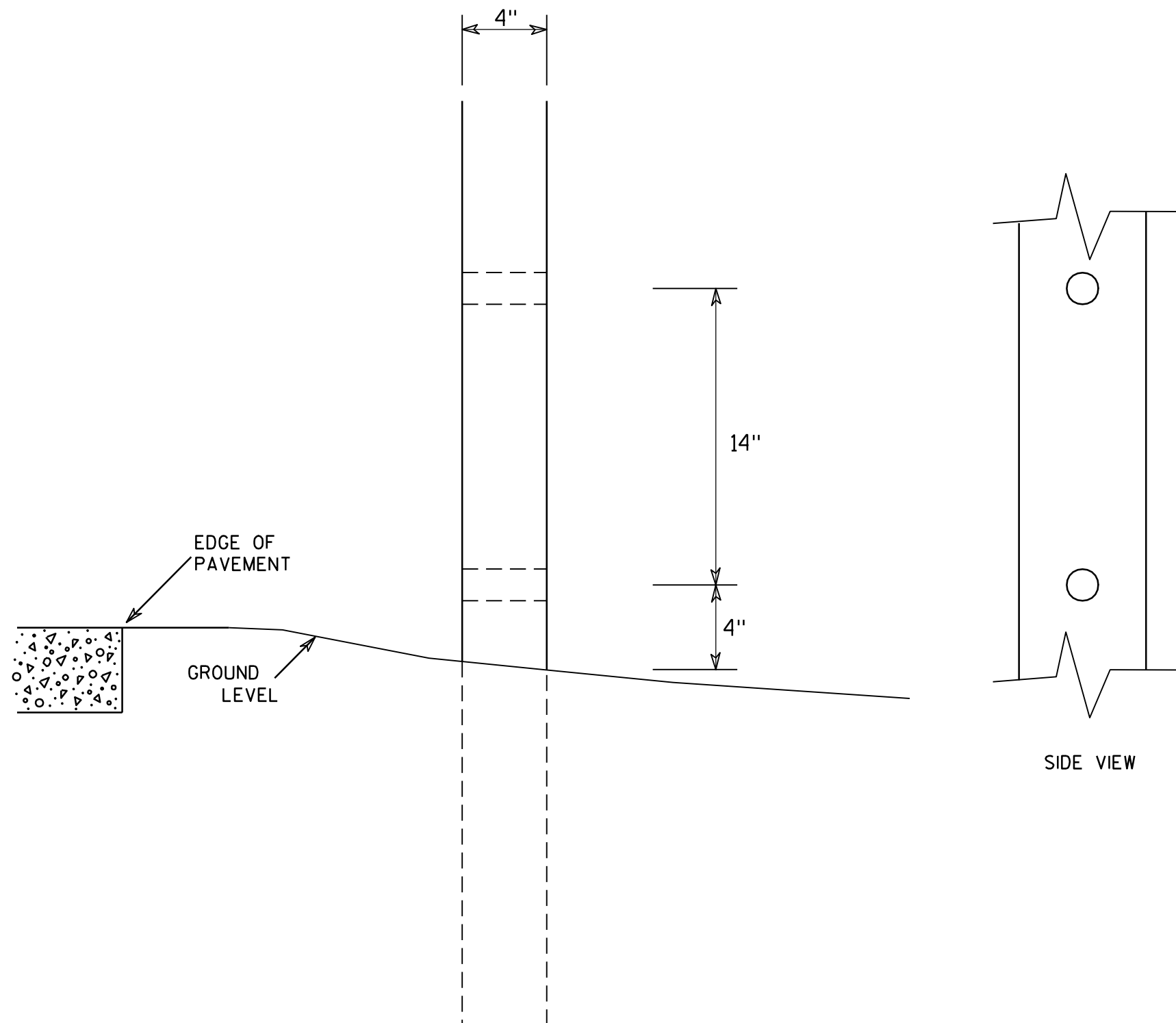
HWY:

COUNTY:

SHEET NO:

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7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

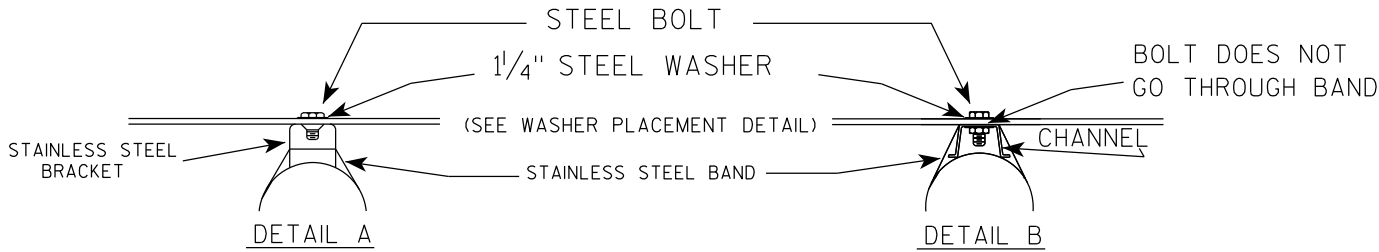
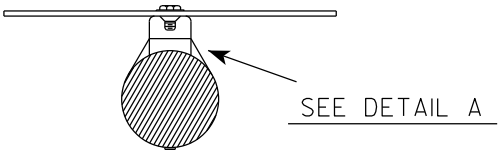
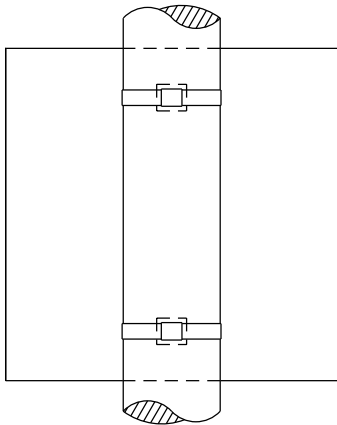
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SHEET NO:

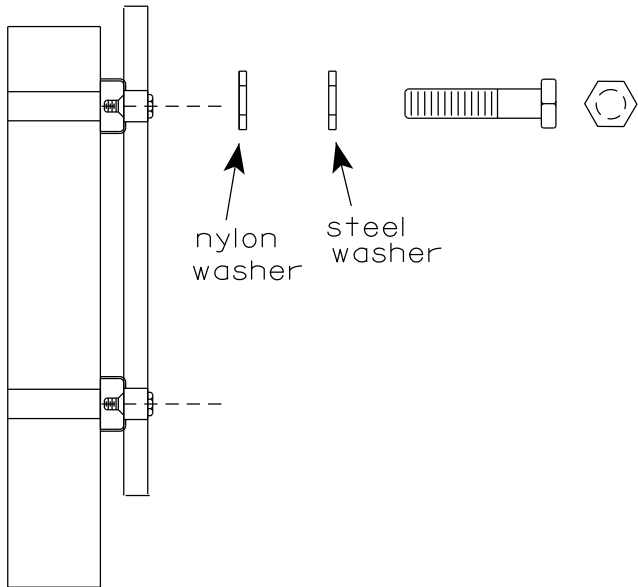
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

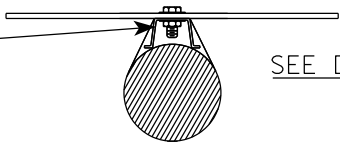
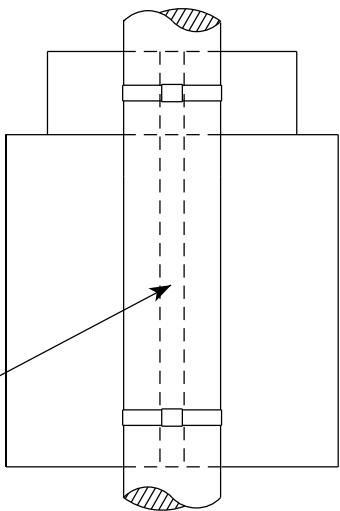


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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

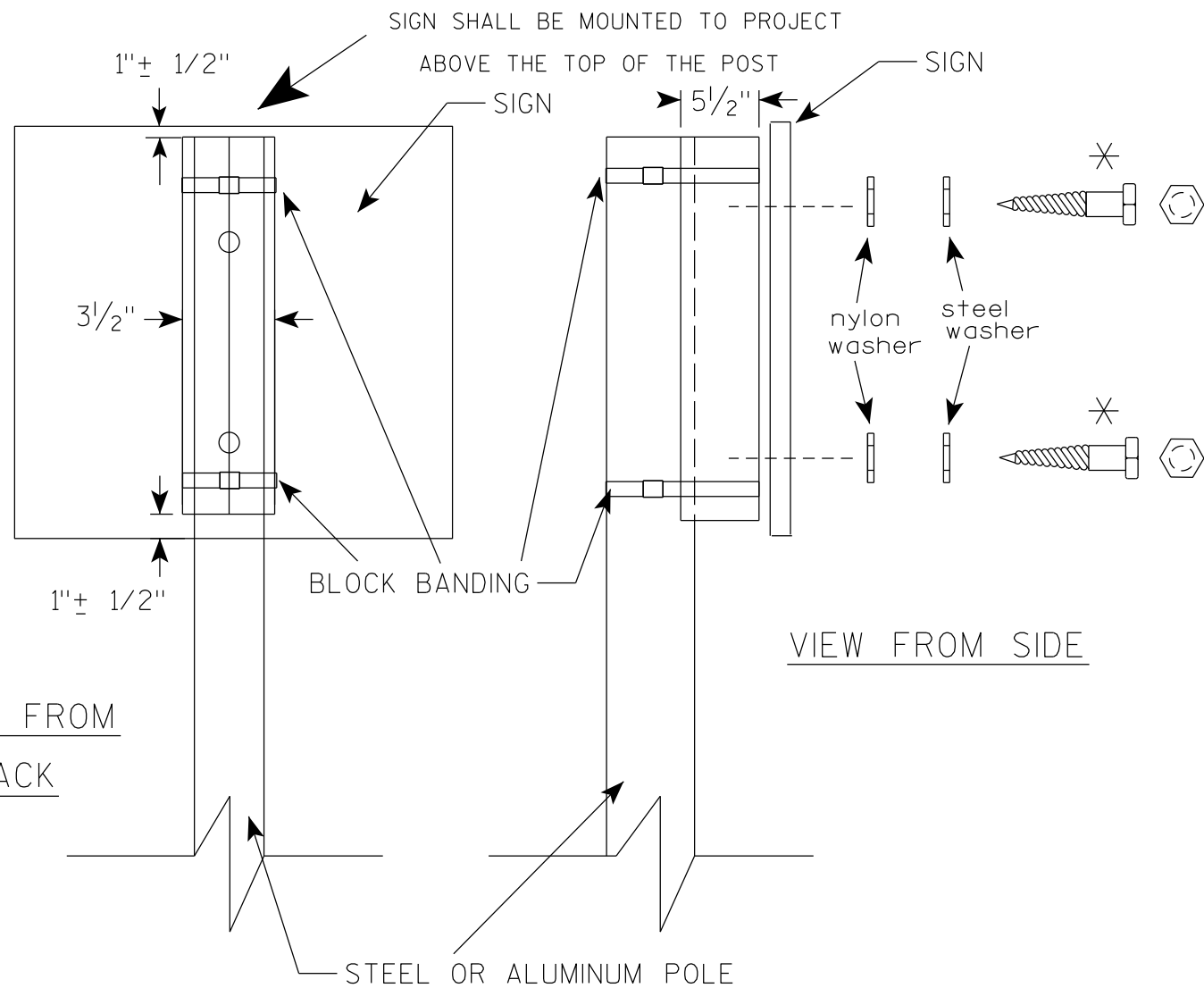


STANDARD SIGN
SIGN BANDING DETAILS

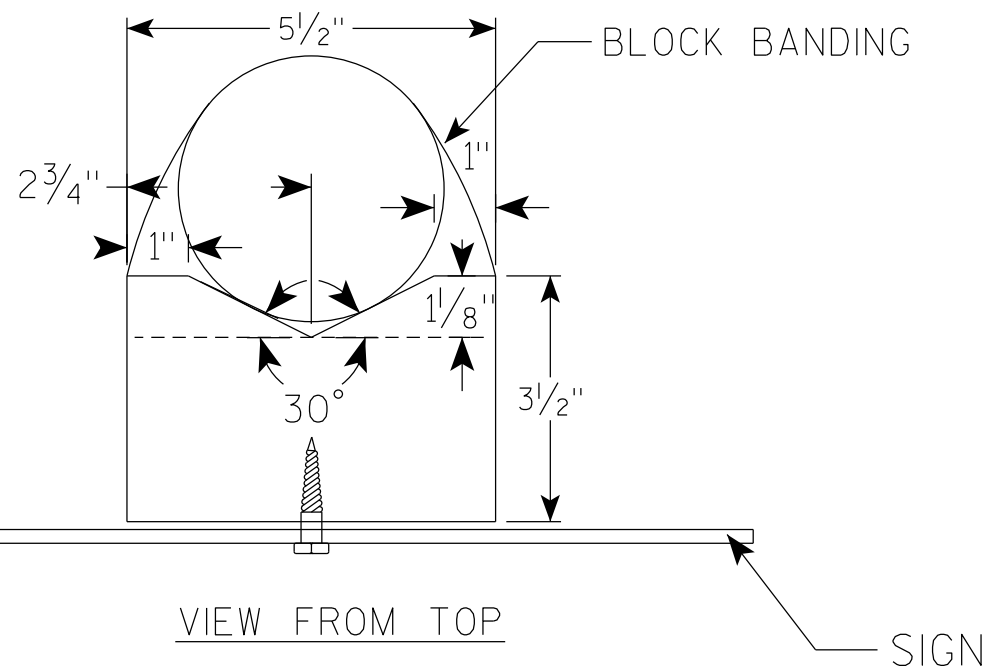
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM
BACK



VIEW FROM SIDE



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 $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $1\frac{1}{4}$ " 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

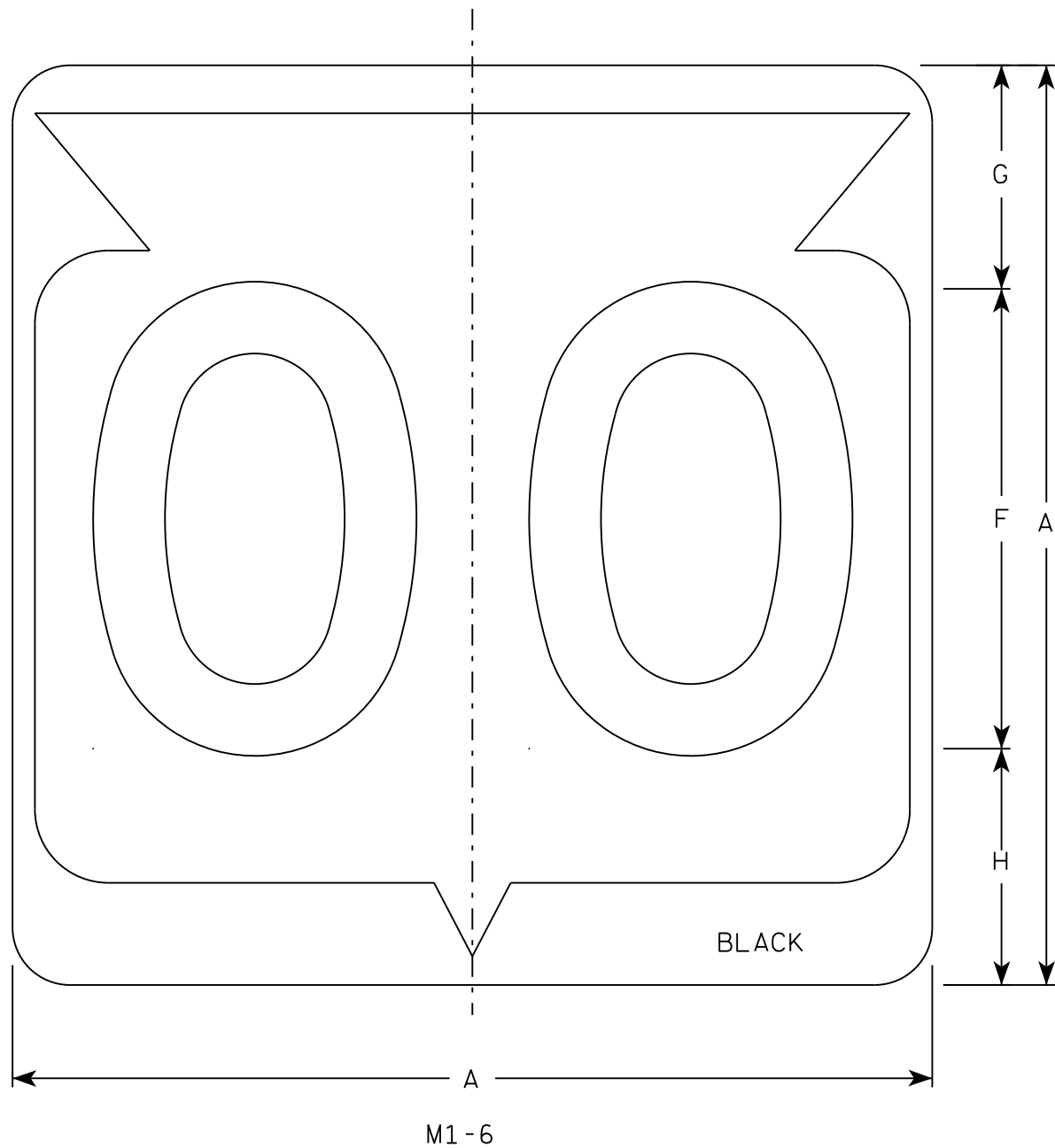
DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:

SHEET NO:

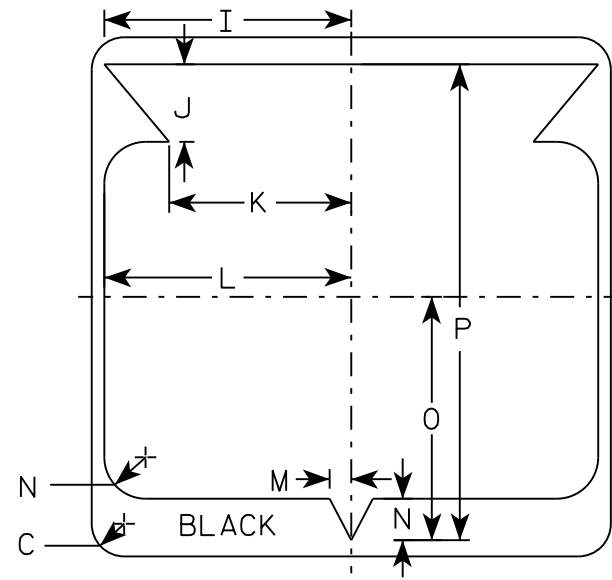
E

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs 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.




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																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED 
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

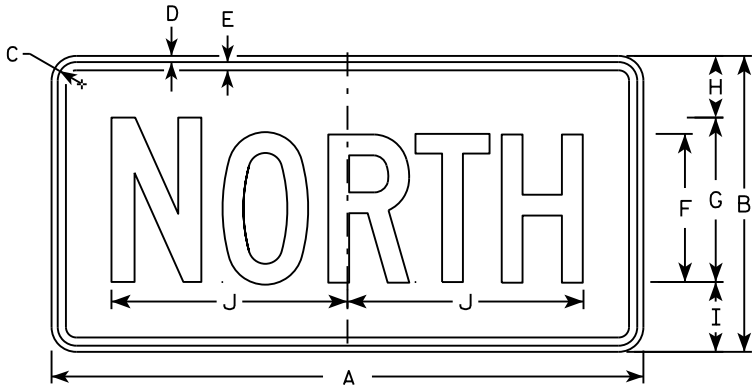
PROJECT NO:

HWY:

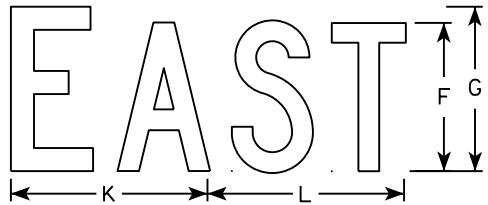
COUNTY:

SHEET NO:

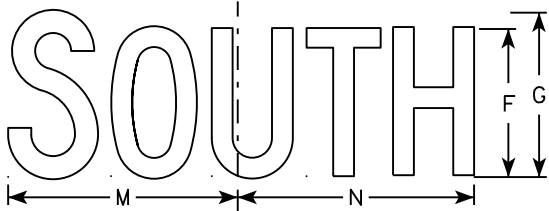
E



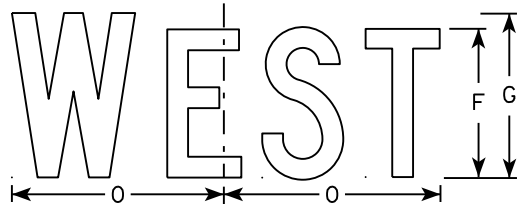
M3-1
MM3-1
MP3-1



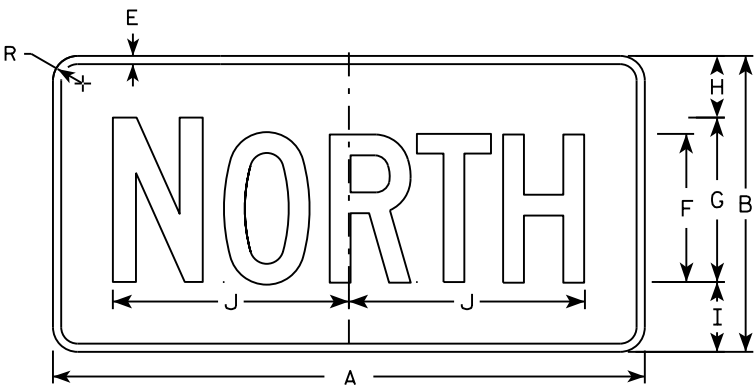
M3-2
MM3-2
MP3-2



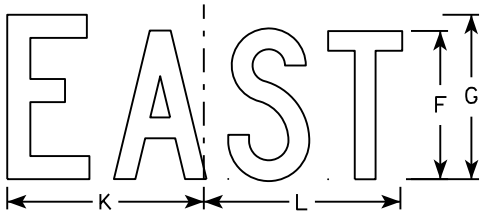
M3-3
MM3-3
MP3-3



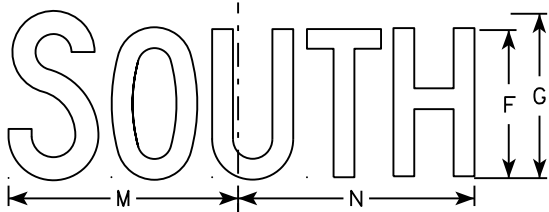
M3-4
MM3-4
MP3-4



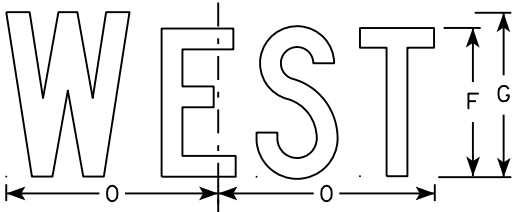
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
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.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

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																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

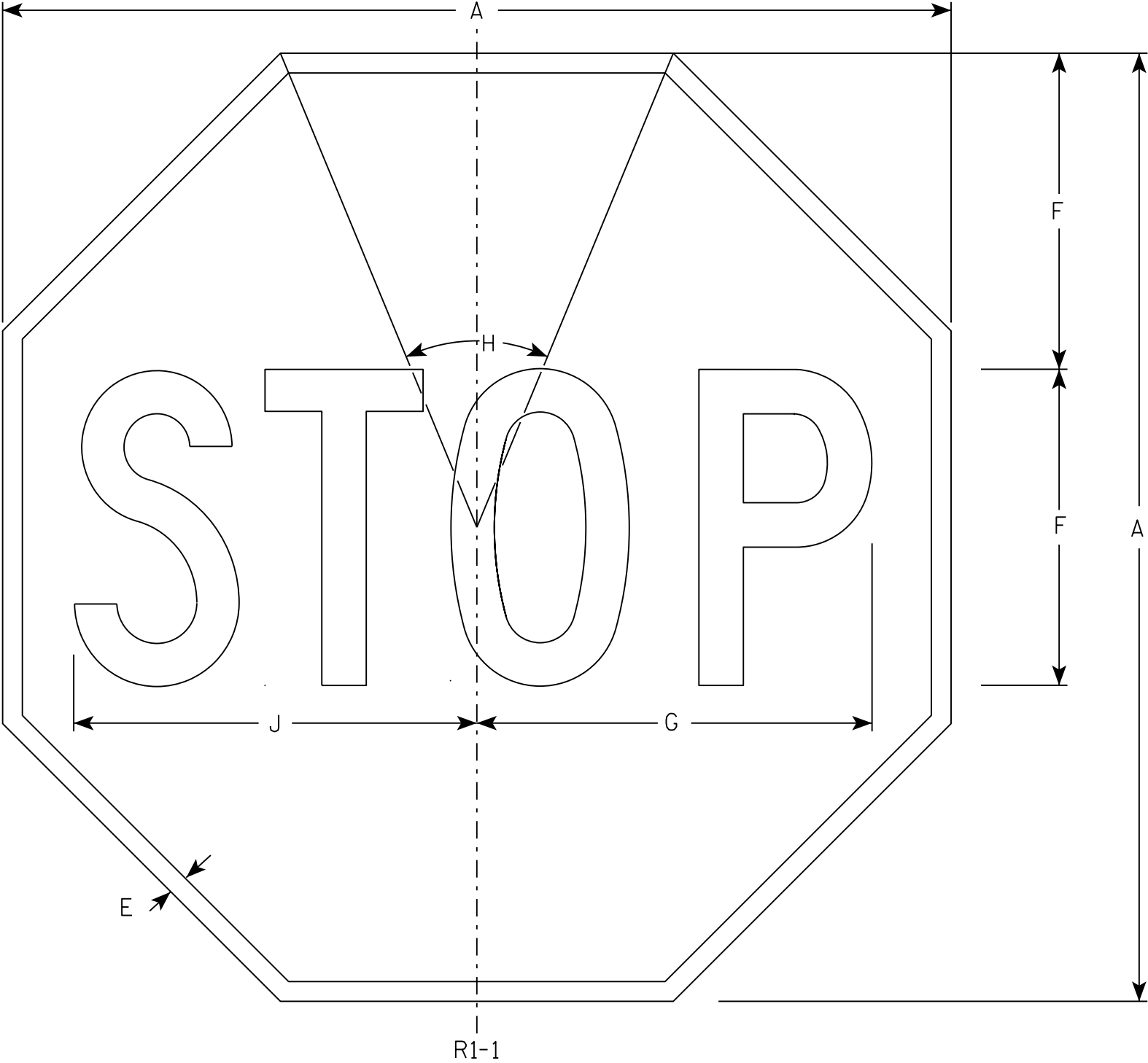
STANDARD SIGNS
M3-1 thru M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

7



NOTES

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

7

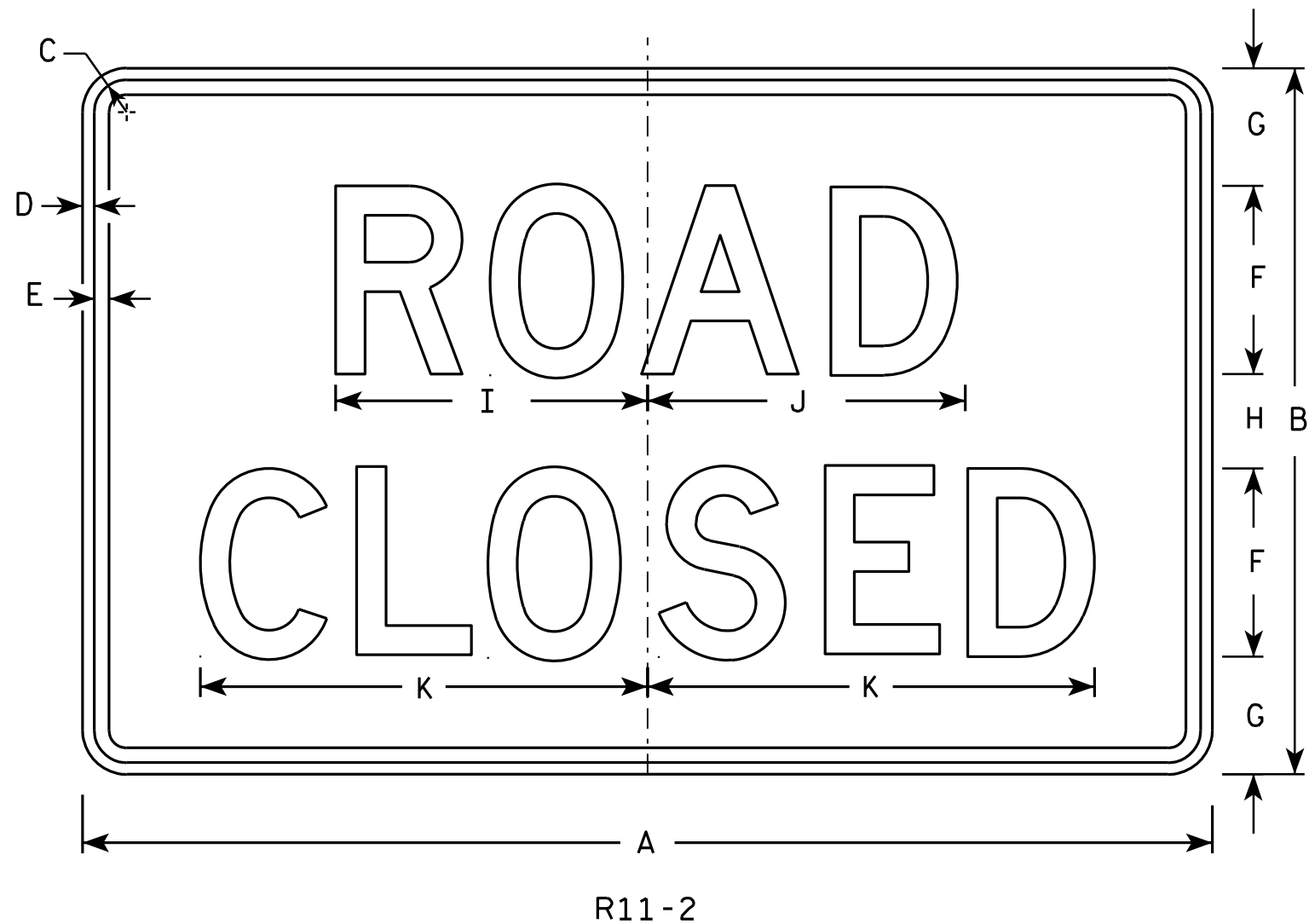
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°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

STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

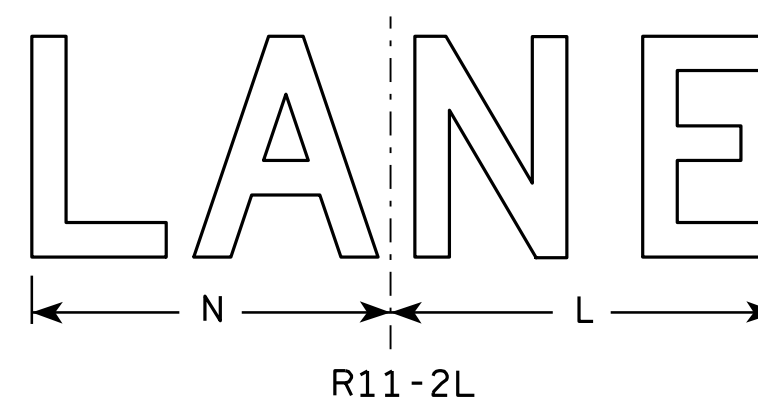
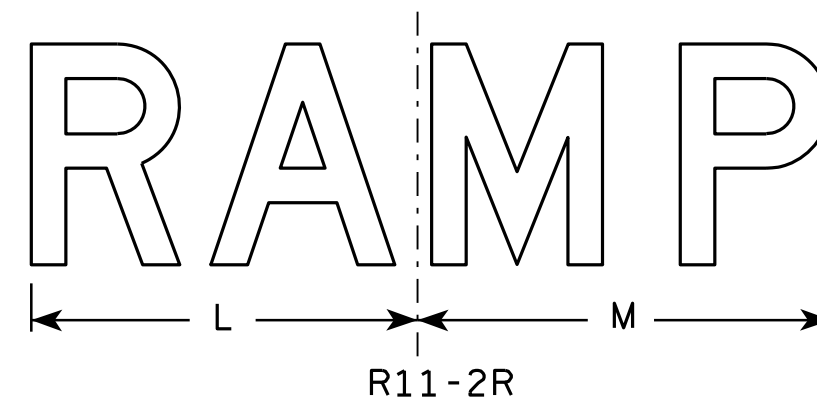
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

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

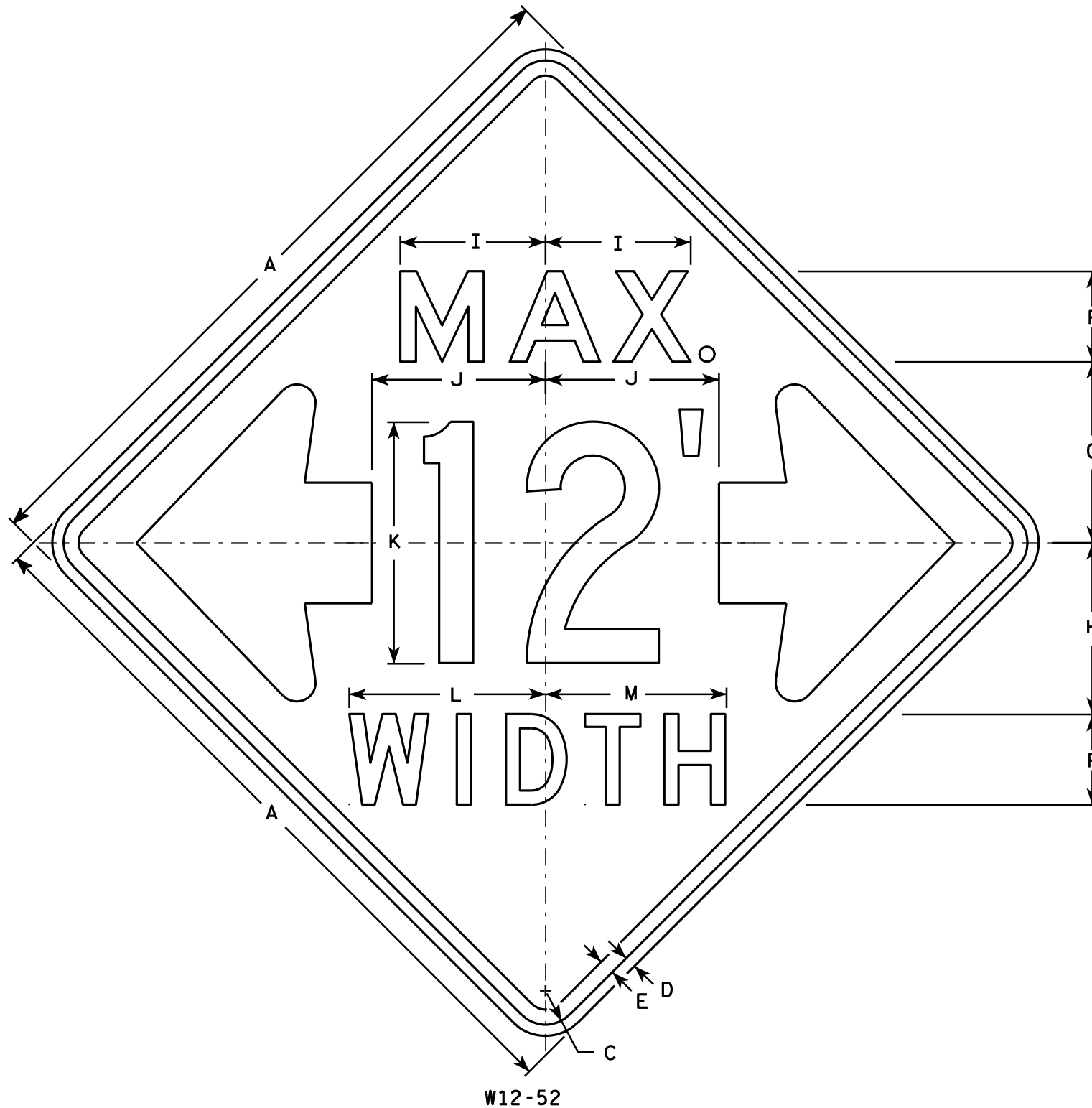


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN R11-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-2.10

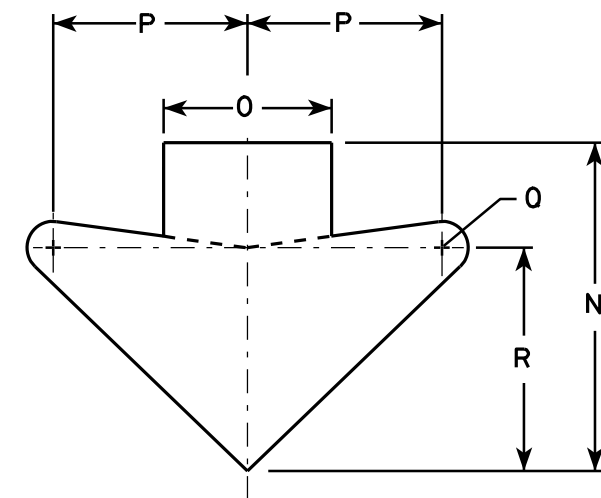
PROJECT NO: HWY: COUNTY: SHEET NO: E



W12-52

NOTES

1. Sign Is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



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	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

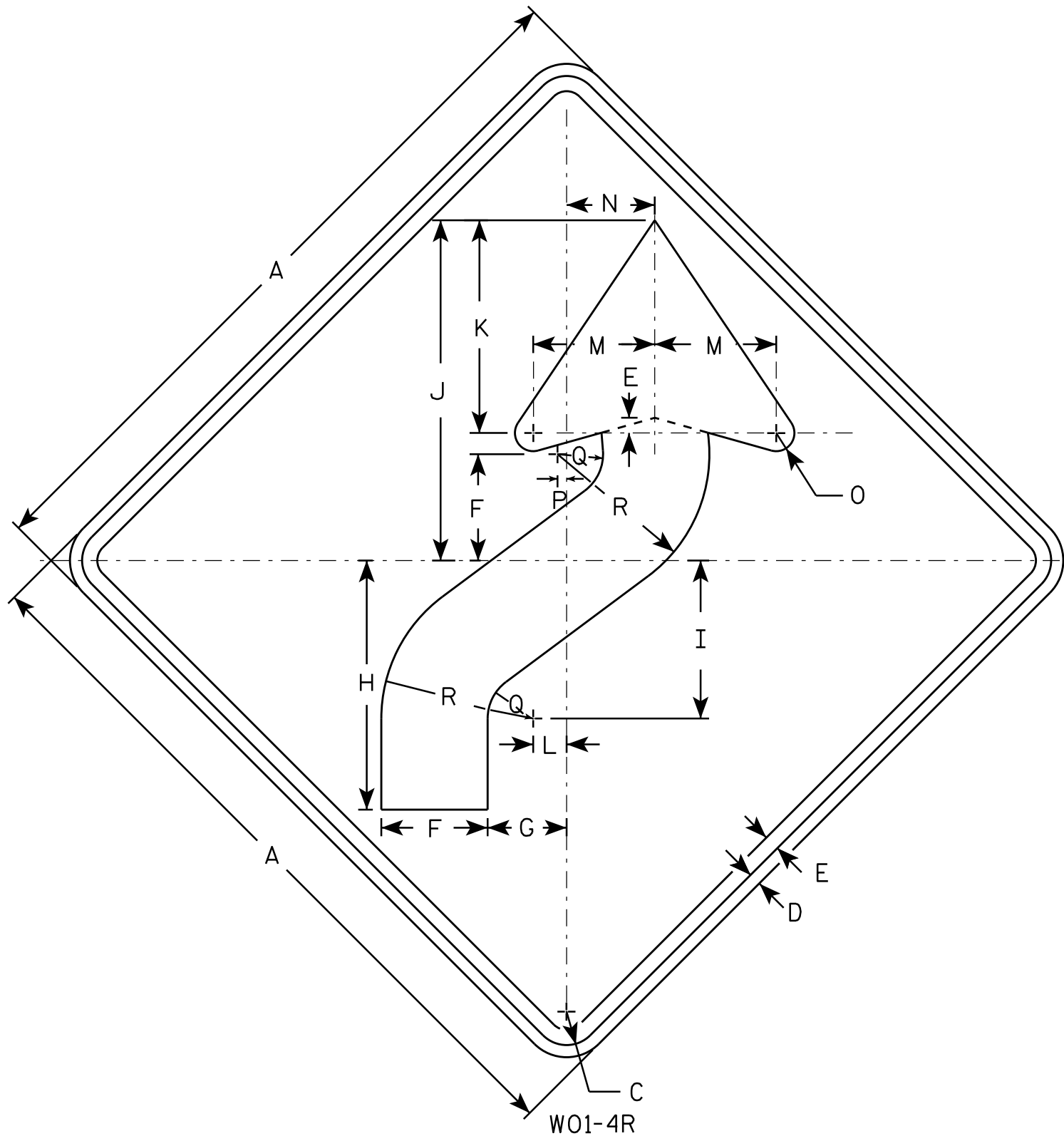
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

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		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN W01-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4.1

PROJECT NO:

HWY:

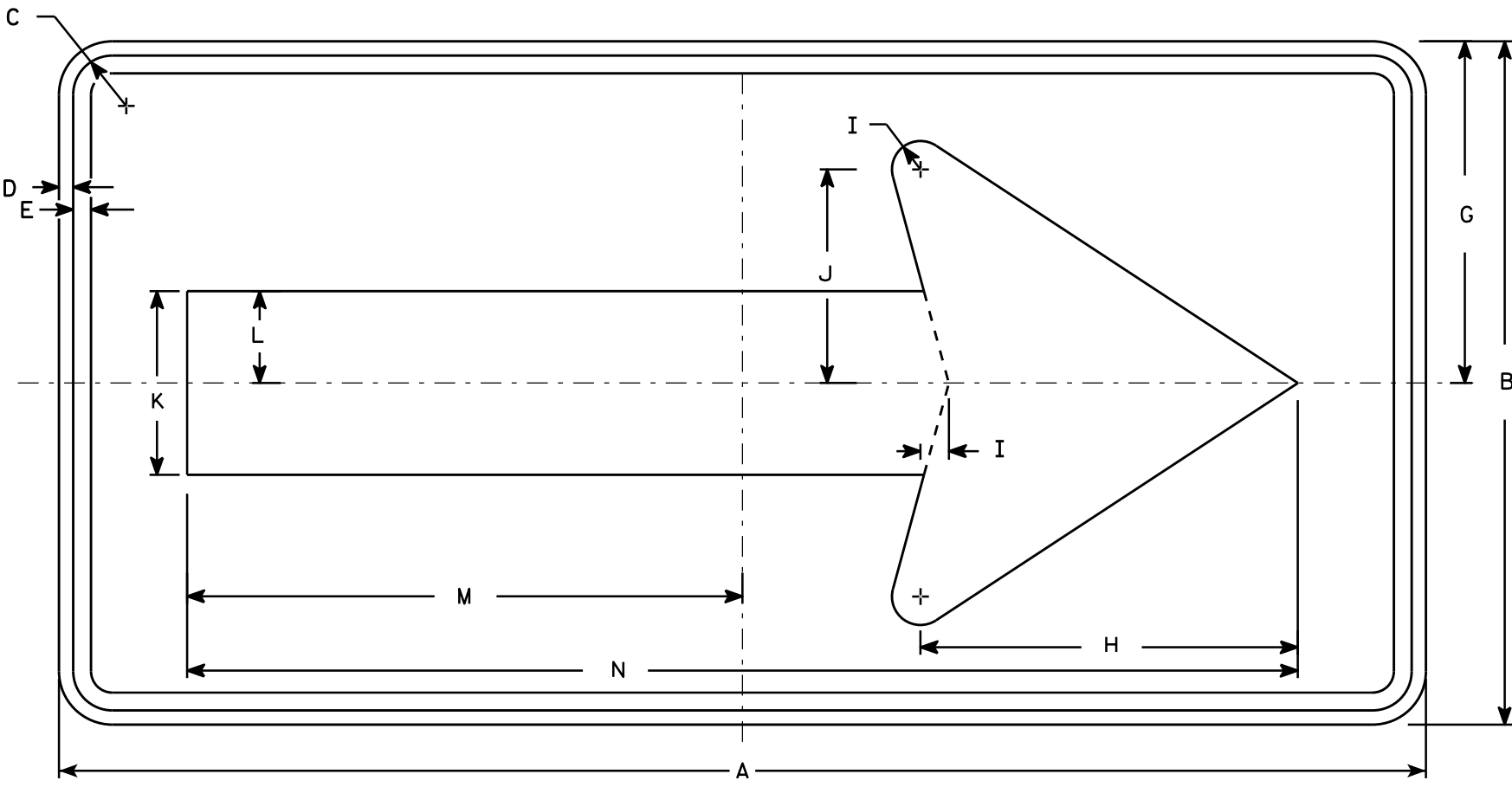
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
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.



W01-6

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	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

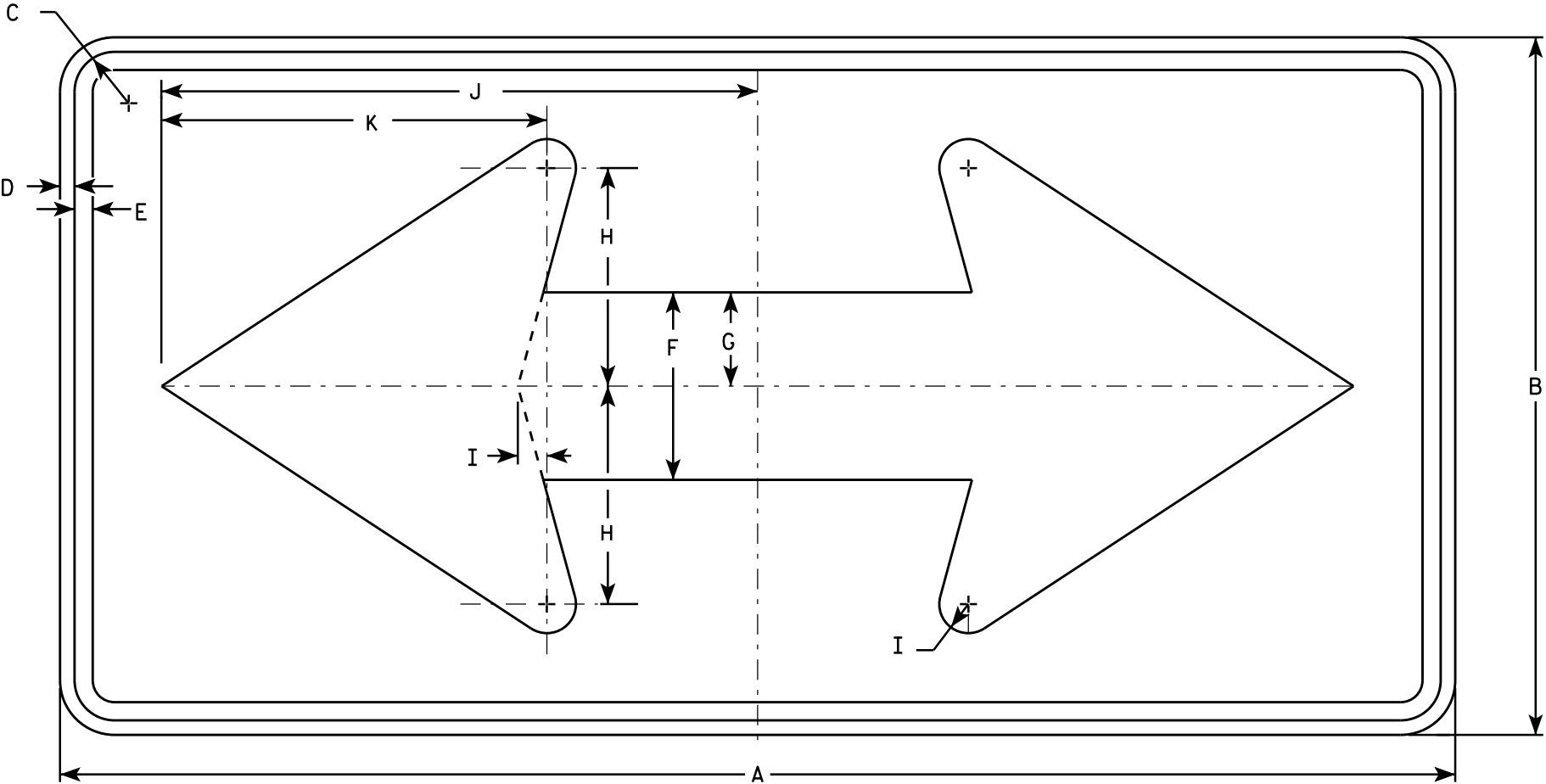
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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.



W01-7

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	48	24	1 3⁄8	1⁄2	5⁄8	6 1⁄2	3 1⁄4	7 1⁄2	1	20 1⁄2	13 1⁄4																8.0
2M	48	24	1 3⁄8	1⁄2	5⁄8	6 1⁄2	3 1⁄4	7 1⁄2	1	20 1⁄2	13 1⁄4																8.0
3	60	30	1 3⁄8	1⁄2	5⁄8	8	4	9 1⁄4	1 1⁄4	25 3⁄8	16 1⁄4																12.5
4	60	30	1 3⁄8	1⁄2	5⁄8	8	4	9 1⁄4	1 1⁄4	25 3⁄8	16 1⁄4																12.5
5	60	30	1 3⁄8	1⁄2	5⁄8	8	4	9 1⁄4	1 1⁄4	25 3⁄8	16 1⁄4																12.5

STANDARD SIGN
W01-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-7.1

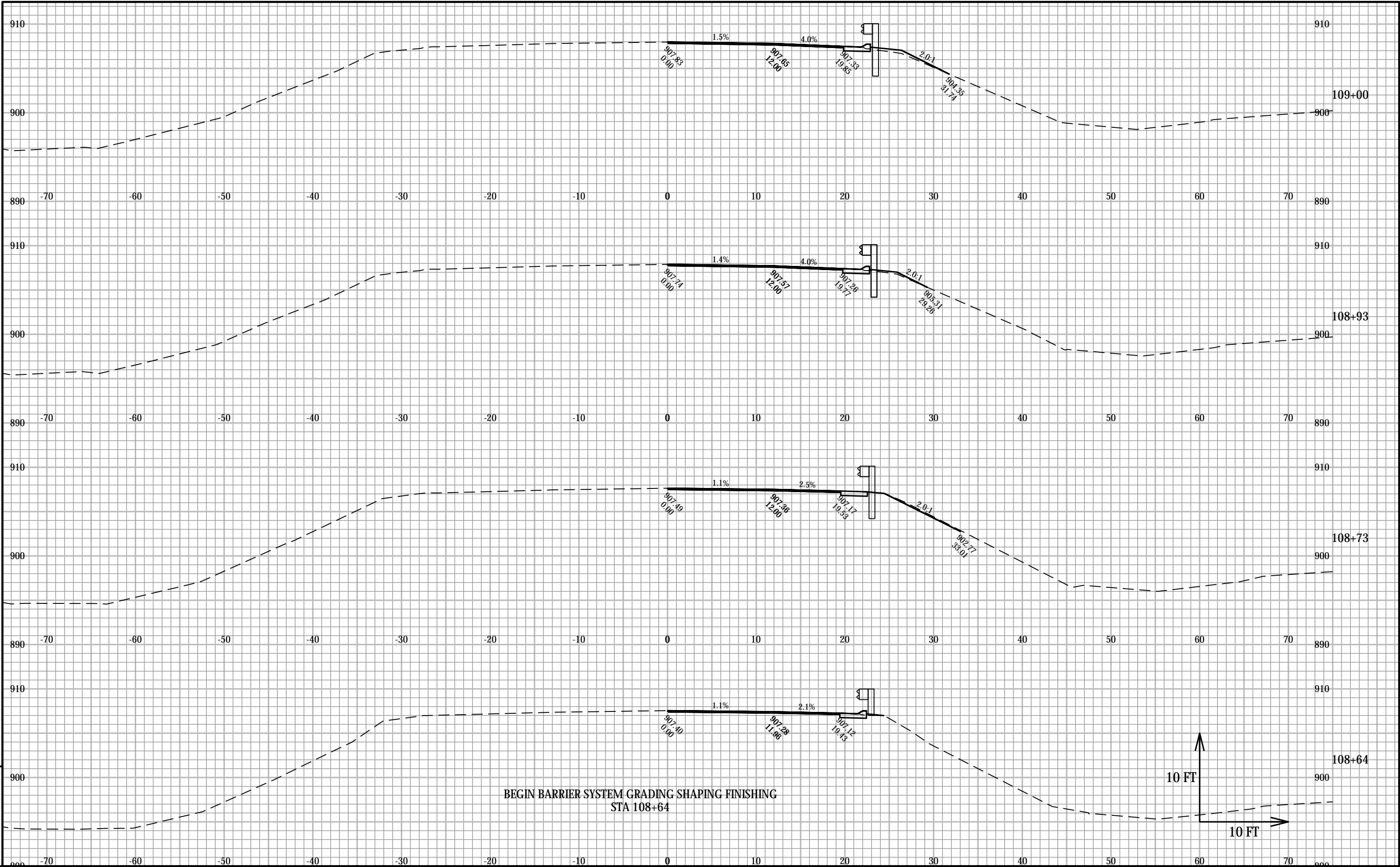
PROJECT NO:

HWY:

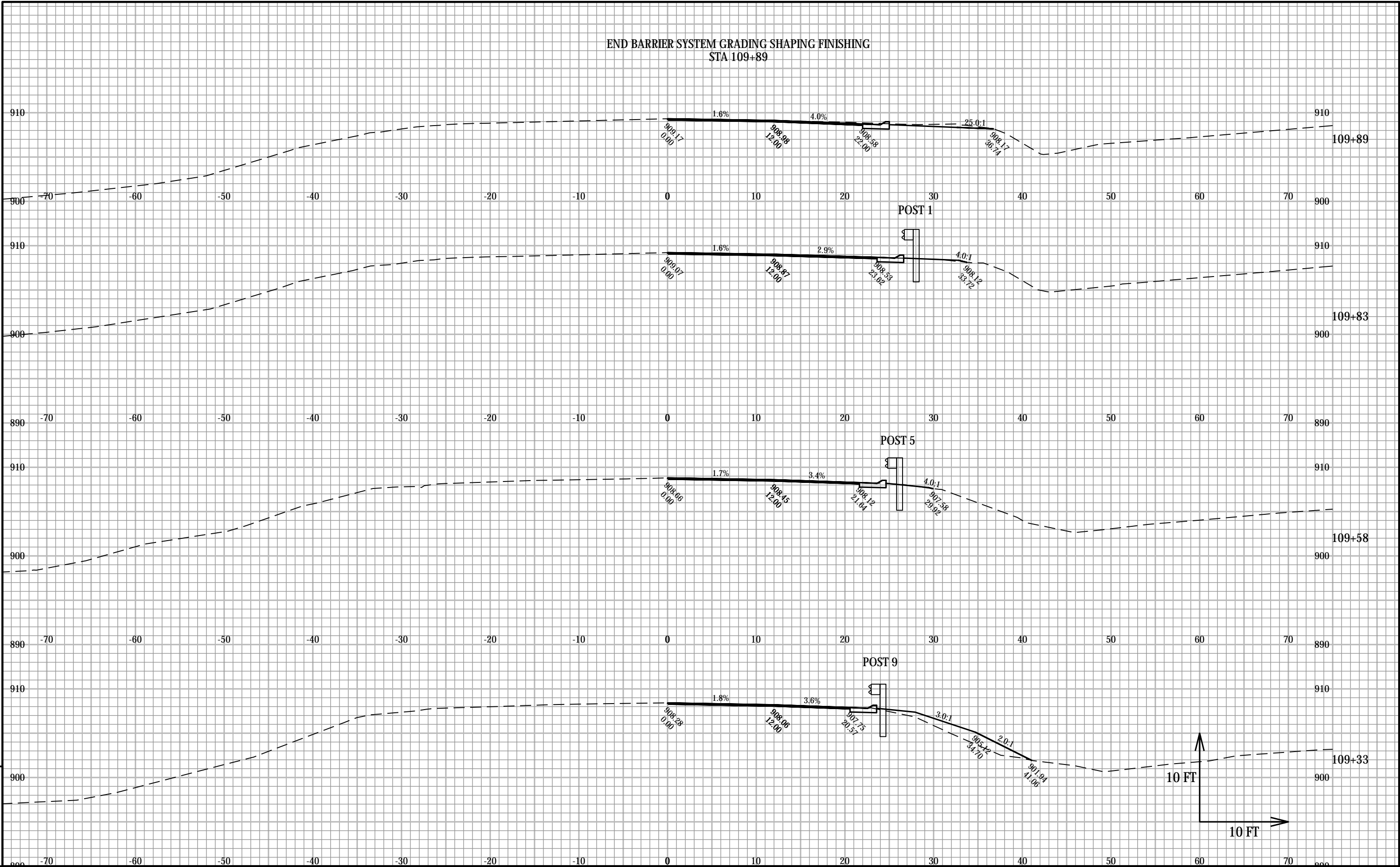
COUNTY:

SHEET NO:

E



PROJECT NO:	6140-02-71	HWY:	STH 13	COUNTY:	ADAMS	CROSS SECTIONS:	STH 13	SHEET	E
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Notes



Wisconsin Department of Transportation

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