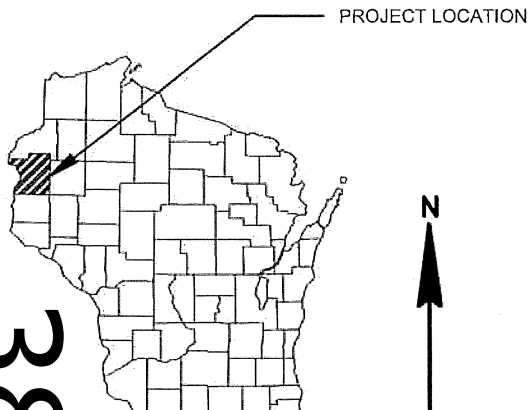


ORDER OF SHEETS

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 (Includes Erosion Control)
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 = 36



DESIGN DESIGNATION

A.A.D.T.	2017	=	6000
A.A.D.T.	2037	=	7000
D.H.V.		=	532
D.D.		=	63/37
T.		=	9.6%
DESIGN SPEED		=	50 MPH
ESALS		=	1,600,000

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	////
PROPERTY LINE	---
LOT LINE	---
LIMITED HIGHWAY EASEMENT	---
EXISTING RIGHT OF WAY	---
PROPOSED OR NEW R/W LINE	---
SLOPE INTERCEPT	---
REFERENCE LINE	---
EXISTING CULVERT	---
PROPOSED CULVERT (Box or Pipe)	---
COMBUSTIBLE FLUIDS	CAUTION
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	---
92.36	---
FO	---
G	---
SAN	---
SS	---
T	---
W	---
---	---
---	---
---	---

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CLEAR LAKE — CUMBERLAND

TRIBUTARY LAKE MAGNOR C-48-0019

USH 63

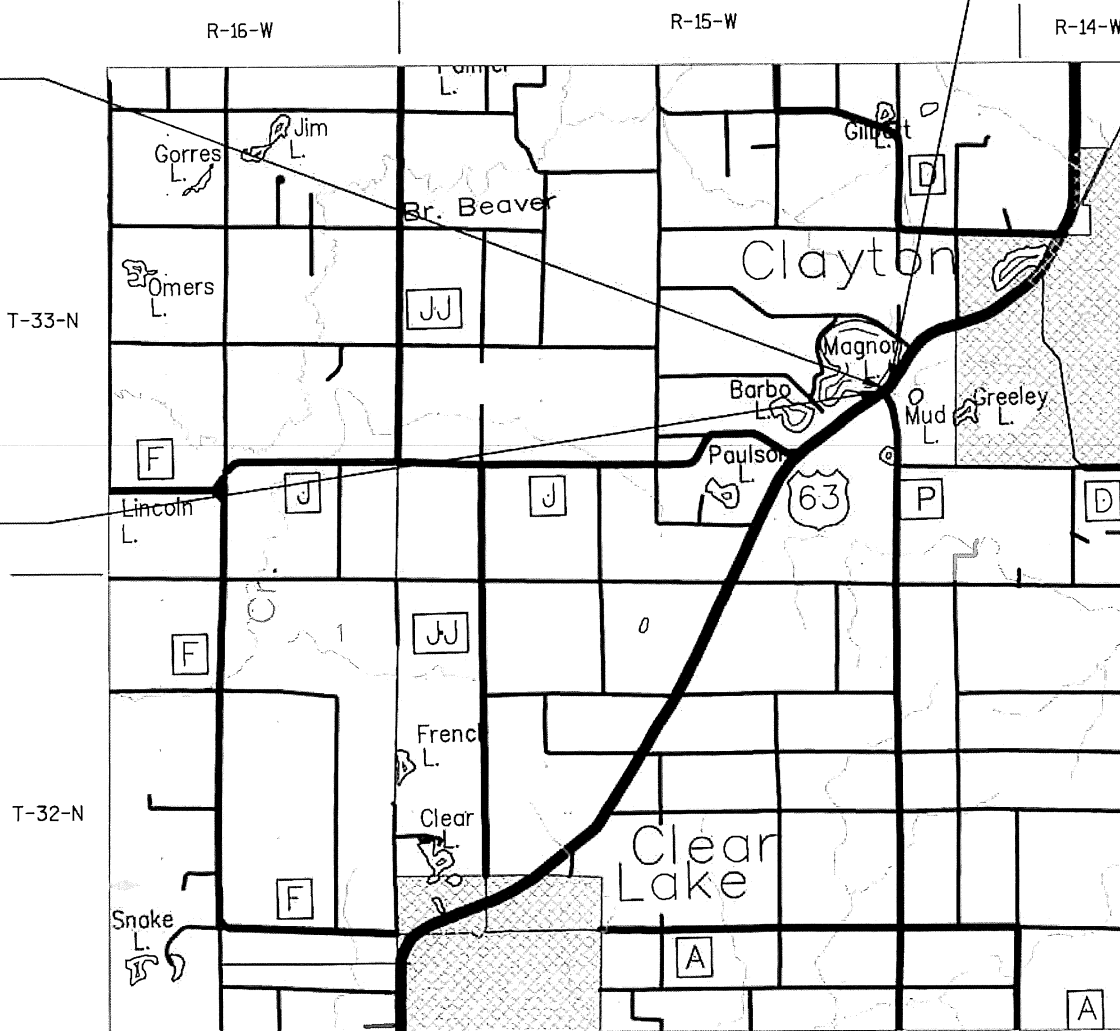
POLK COUNTY

STATE PROJECT NUMBER  
1550-04-61

END PROJECT  
1550-04-61  
STA. 240+10

STRUCTURE  
C-48-0019

BEGIN PROJECT  
1550-04-61  
STA. 238+85  
X=576388.72  
Y=240098.33



SCALE 0 2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.024 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, POLK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ORIGINAL PLANS PREPARED BY

**MSA**  
TRANSPORTATION • MUNICIPAL  
DEVELOPMENT • ENVIRONMENTAL  
1835 N. Silas St. Rhinelander, WI 54501  
715-362-3244 1-800-844-7854 Fax: 715-362-4116  
Web Address: www.msa-ps.com  
© MSA Professional Services, Inc.



09/14/16  
(Date) (Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY  
Surveyor MSA PROFESSIONAL SERVICES, INC.  
Designer MSA PROFESSIONAL SERVICES, INC.  
Project Manager BRENDAN DIRKES  
Regional Examiner DAN OJEWAY  
Regional Supervisor ANDREW STENSLAND

APPROVED FOR THE DEPARTMENT  
DATE: 9/15/16 Brendan Dirkes  
(Signature)

E

STANDARD ABBREVIATIONS

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

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER. OVERSOW PERMANENT SEEDING AREAS WITH TEMPORARY SEED AT 1.5 LBS. PER 1000 SQUARE FEET.

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

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO "RICHARDSON 255", A NGS SURVEY MONUMENT, ELEV. 1194.23, NAVD 88 DATUM.

THE 6.75" ASPHALTIC SURFACE SHALL CONSIST OF A 1 3/4" UPPER LAYER, 2 1/4" MIDDLE LAYER AND A 2 3/4" LOWER LAYER.

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO BRIDGE REMOVAL.

WHEN THE QUANTITY OF THE ITEM OF BASE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTURAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.  
ATTN.: ALEX PASSOW  
1835 N. STEVENS STREET  
RHINELANDER, WI 54501-2163  
PHONE: 715-362-3244  
apassow@msa-ps.com

UTILITIES

GAS LINE:  
WE ENERGIES  
ATTN.: LEWIS KNAPP  
104 W SOUTH STREET  
RICE LAKE, WI 54868  
PHONE: 715-234-9605  
lewis.knapp@we-energies.com

ELECTRIC - TRANSMISSION:  
XCEL ENERGY  
ATTN.: PAM TAYLOR  
1414 W HAMILTON AVE  
P.O. BOX 8  
EAU CLAIRE, WI 54702-0008  
PHONE: 715-737-1306  
pamela.l.taylor@xcelenergy.com

COMMUNICATION LINE:  
ATTN.: GREG CARDINAL  
NORTHWEST COMMUNICATIONS  
116 HARRIMAN AVE N  
AMERY, WI 54001  
PHONE: 715-268-7101

POLK COUNTY HIGHWAY DEPARTMENT

COUNTY HIGHWAY COMMISSIONER  
ATTN.: EMIL (MOE) NORBY  
518 MAIN ST  
BALSAM LAKE, WI 54810  
PHONE: 715-485-8723  
emil.norby@co.polk.wi.us

\* - NOT A MEMBER  
OF DIGGERS HOTLINE.

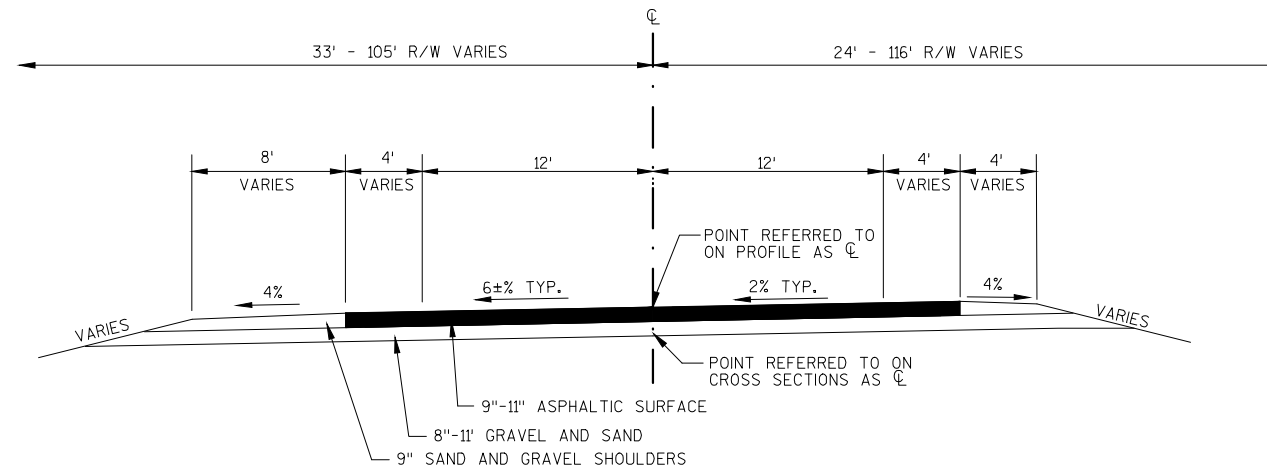


Dial 811 or (800)242-8511

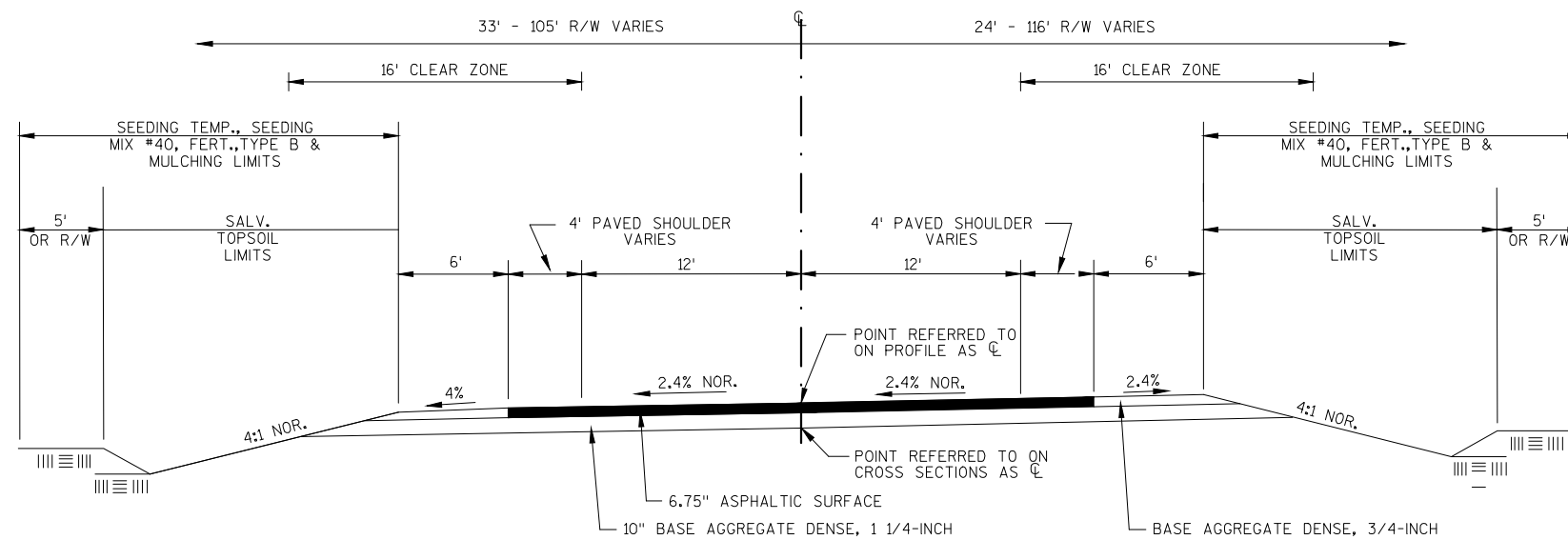
www.DiggersHotline.com

RUNOFF COEFFICIENT TABLE				
	HYDROLOGIC SOIL TABLE			
	A	B	C	D
	SLOPE RANGE %	SLOPE RANGE %	SLOPE RANGE %	SLOPE RANGE %
LAND USE:	6 & OVER	6 & OVER	6 & OVER	6 & OVER
SIDE SLOPE-	.25	.27	.28	.30
TURF	.32	.34	.36	.38
PAVEMENT:				
ASPHALT	.70 - .95			
CONCRETE	.80 - .95			
GRAVEL ROADS, SHOULDERS	.40 - .60			

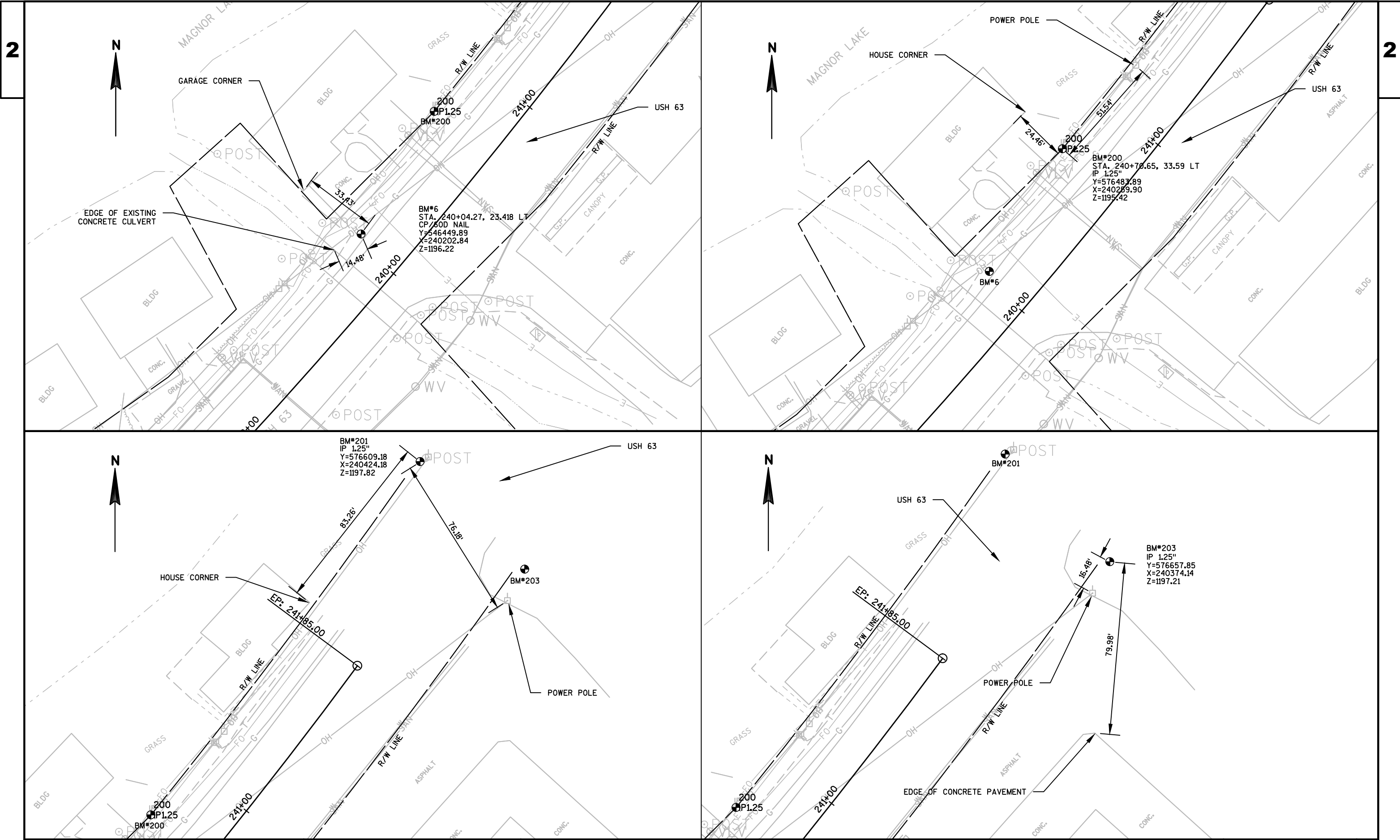
THE RUNOFF COEFFICIENTS OF SURFACE DRAINAGE AT THE PROJECT SITES WILL NOT BE CHANGED FROM BEFORE TO AFTER CONSTRUCTION. THE TOTAL AREA OF THE PROJECT IS 0.40 ACRES. THE TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES IS 0.30 ACRES.

**TYPICAL EXISTING SECTION**

STA. 238+85 TO STA. 240+10

**TYPICAL FINISHED SECTION**

STA. 238+85 TO STA. 240+10



PROJECT NO:1550-04-61

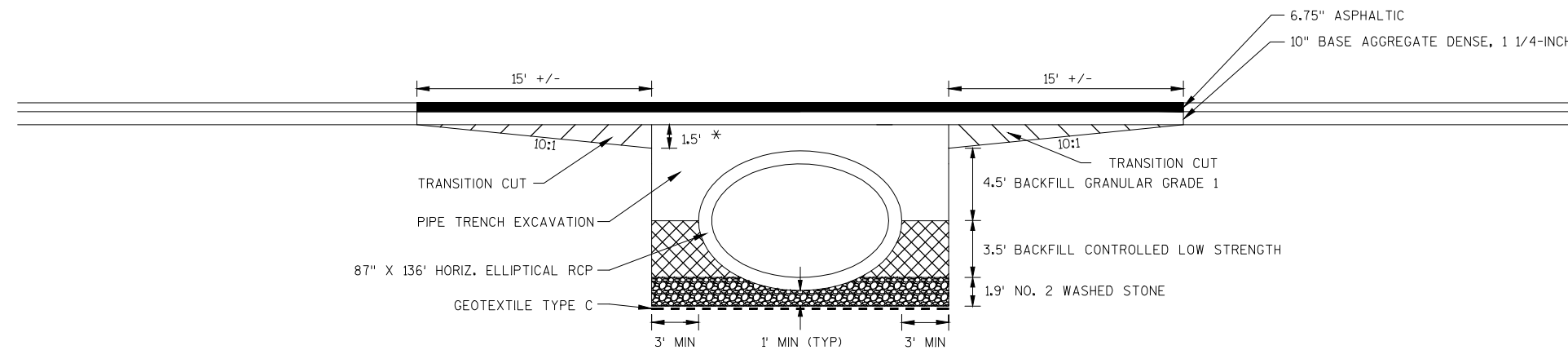
HWY:USH 63

COUNTY:POLK

CONTROL POINT TIES

SHEET

E



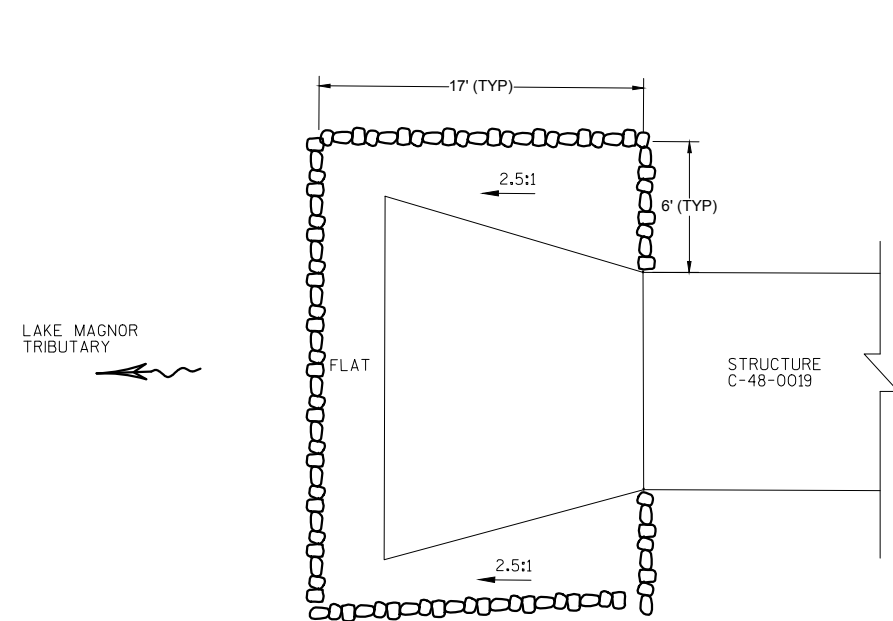
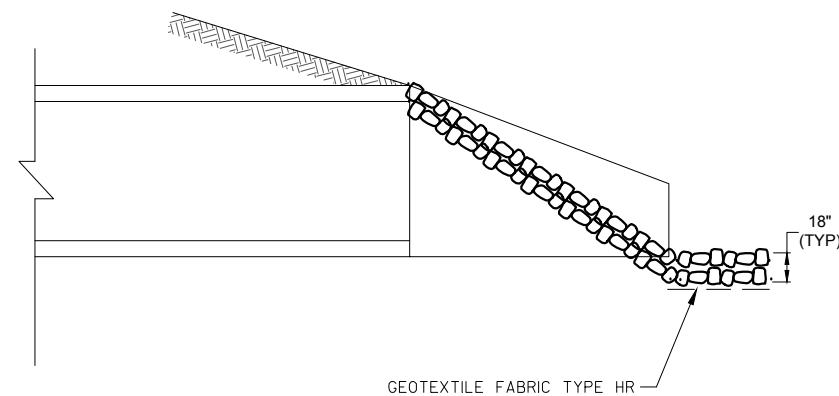
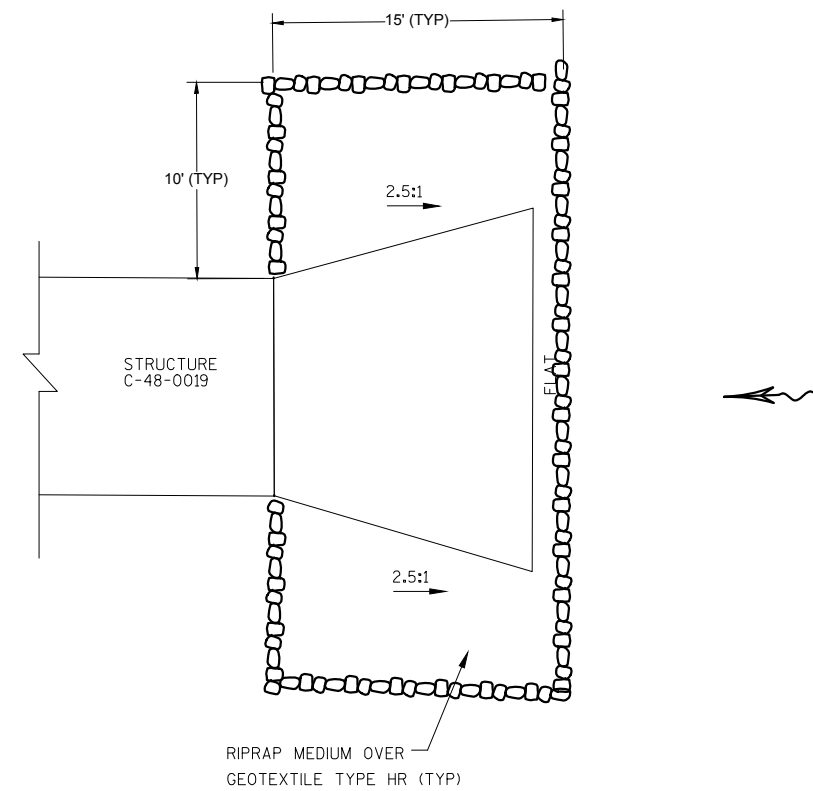
NOTE: MATERIAL REMOVED IN THE TRANSITION CUT AND PIPE TRENCH EXCAVATIONS TO BE REUSED AS BACKFILL UNLESS DETERMINED TO BE UNSTABLE BY THE ENGINEER IN WHICH CASE BACKFILL GRANULAR GRADE 1 WILL BE USED.

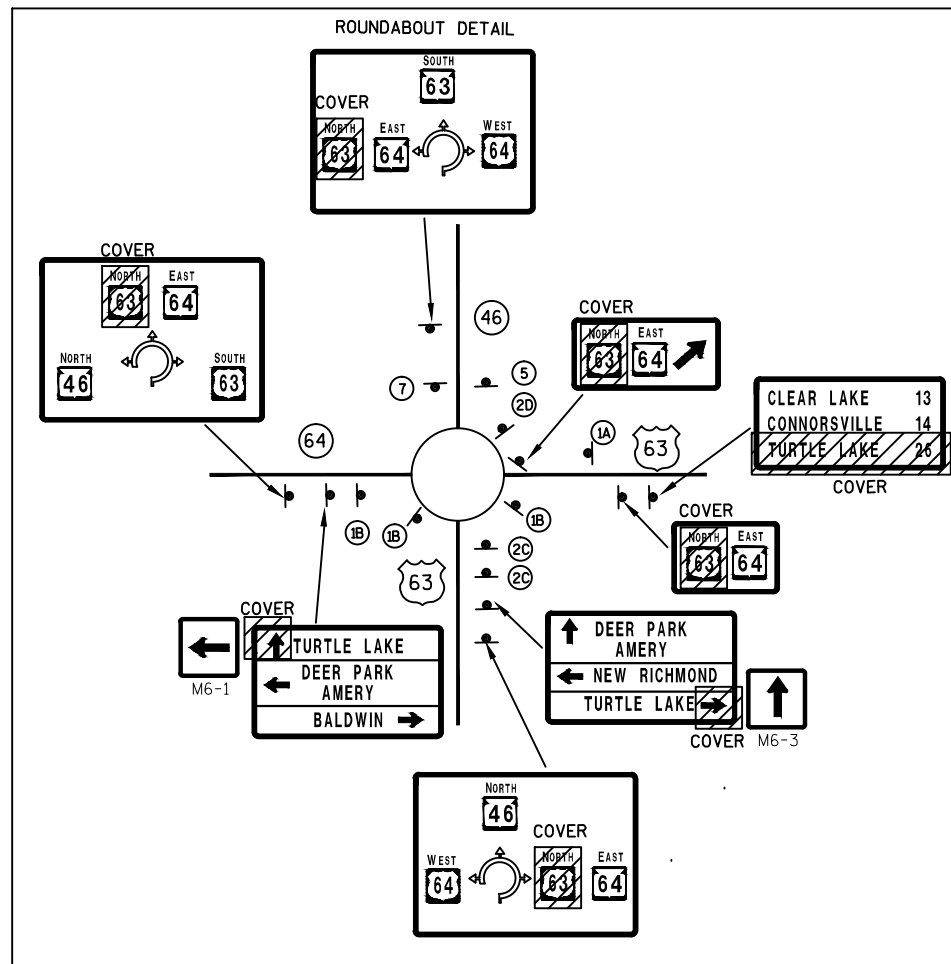
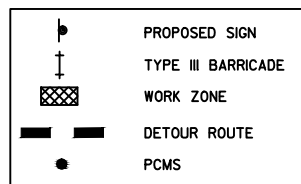
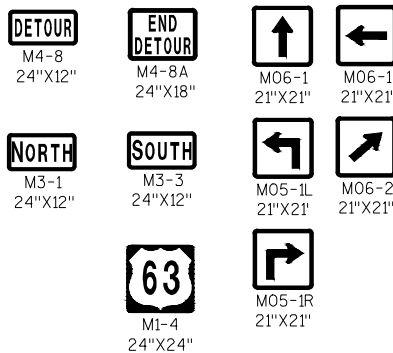
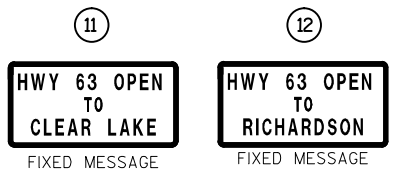
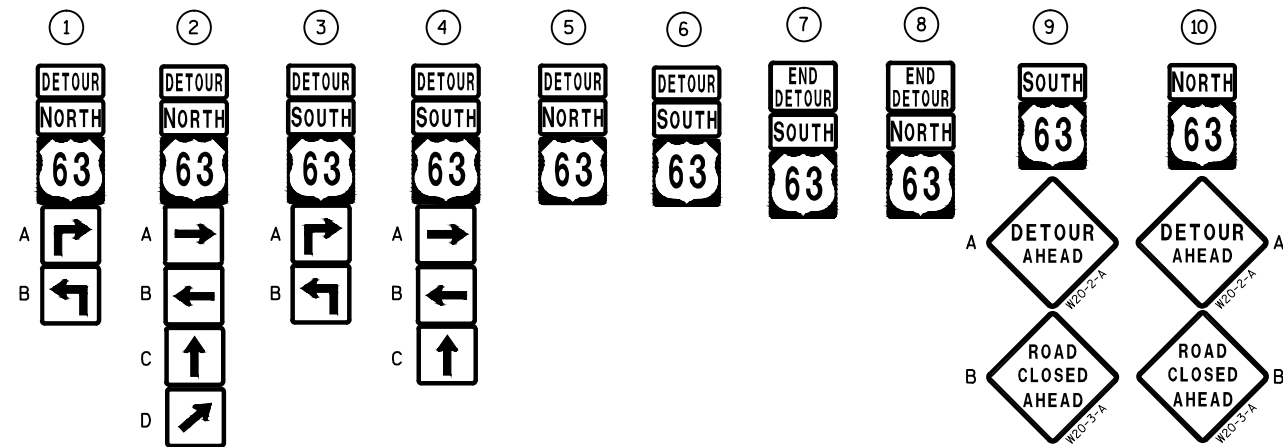
PAYMENT FOR PIPE TRENCH EXCAVATION, GEOTEXTILE TYPE C, NO. 2 WASHED STONE, BACKFILL GRANULAR GRADE 1, AND TRANSITION CUT IS INCLUDED IN ITEM SPV.0090.01.

TRANSITION CUT WILL BE 36' WIDE, 2' OUTSIDE EDGE OF THE PROPOSED ASPHALT ON EACH SIDE OF THE CENTERLINE.

\* DEPTH WILL VARY DUE TO PIPE TRENCH BEING LOCATED ON A SUPERELEVATED SECTION.

### CULVERT PIPE TRANSITION

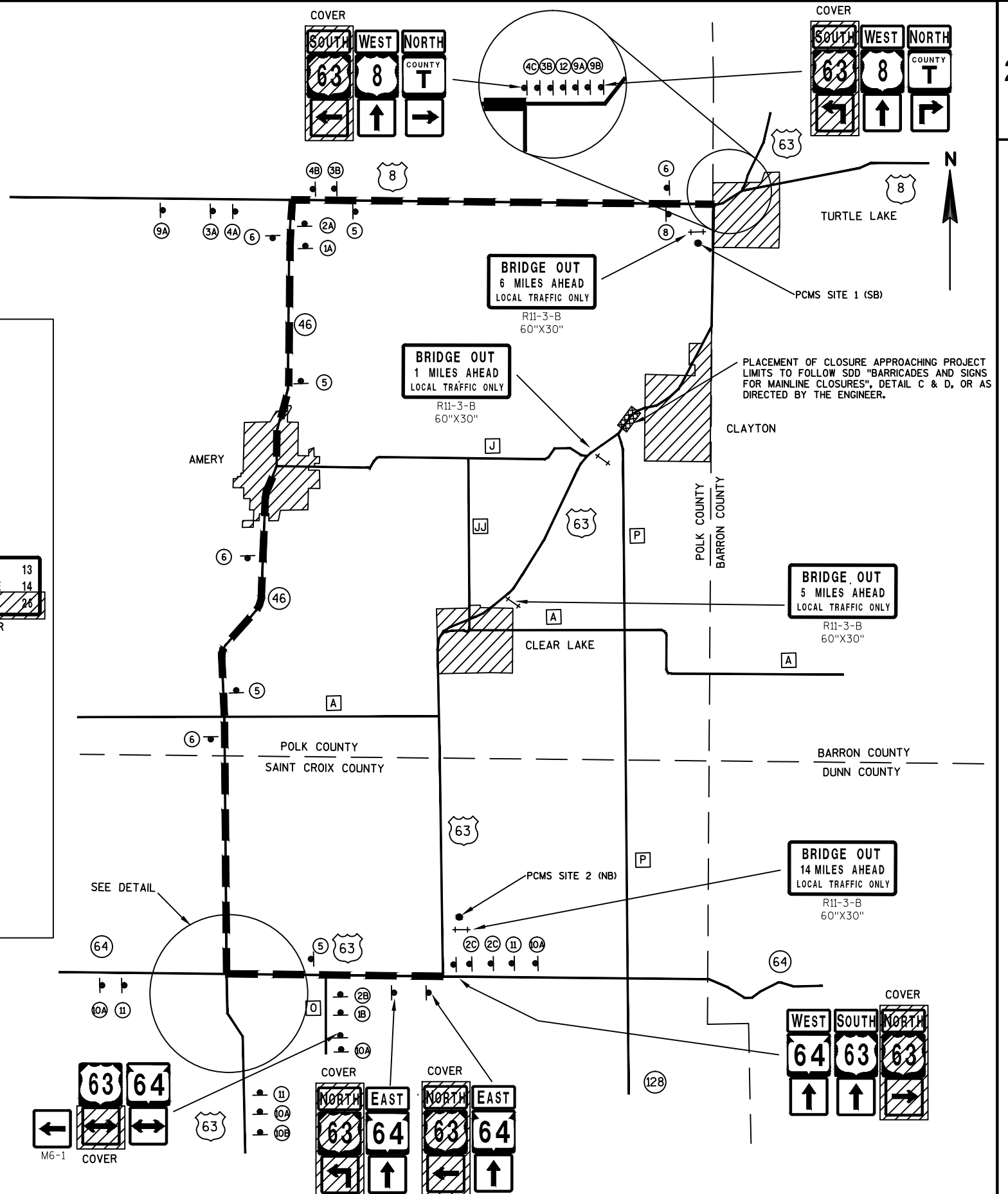
PLANELEVATIONRIPRAP LAYOUT



## GENERAL NOTES

- DRAWING IS NOT TO SCALE.
- TRAFFIC CONTROL DEVICES AND THEIR LOCATION SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS, CONTRACT AND APPLICABLE STANDARD DETAIL DRAWINGS.
- EXACT LOCATIONS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER IN THE FIELD.
- ALL SIGNS ARE 36"X36" UNLESS OTHERWISE NOTED.
- "WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.
- ALL SIGNS INAPPROPRIATE TO THE WORK ZONE, INCLUDING PRE-EXISTING SIGNING, SHALL BE COVERED, REMOVED, OR ALTERED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

PCMS MESSAGE OVERVIEW			
SIGN OWNER	PCMS SITE NO. (DIR.)	7 DAYS PRIOR TO CONSTRUCTION	
		FRAME 1 (2 SEC)	FRAME 2 (2 SEC)
CONTRACTOR	1 (SB)	USH 63 TO BE CLOSED	MONTH_DATE
CONTRACTOR	2 (NB)	USH 63 TO BE CLOSED	MONTH_DATE



Estimate Of Quantities

1550-04-61

Line	Item	Item Description	Unit	Total	Qty
0010	201.0105	Clearing	STA	1.000	1.000
0020	201.0205	Grubbing	STA	1.000	1.000
0030	203.0200	Removing Old Structure (station) 01. Station 239+85	LS	1.000	1.000
0040	205.0100	Excavation Common	CY	240.000	240.000
0050	206.5000	Cofferdams (structure) 01. C-48-0019	LS	1.000	1.000
0060	208.0100	Borrow	CY	182.000	182.000
0070	209.0200.S	Backfill Controlled Low Strength	CY	75.000	75.000
0080	209.1500	Backfill Granular Grade 1	TON	60.000	60.000
0090	210.2100	Backfill Structure Type B	CY	120.000	120.000
0100	213.0100	Finishing Roadway (project) 01. 1550-04-61	EACH	1.000	1.000
0110	305.0110	Base Aggregate Dense 3/4-Inch	TON	55.000	55.000
0120	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	400.000	400.000
0130	455.0605	Tack Coat	GAL	46.000	46.000
0140	465.0105	Asphaltic Surface	TON	165.000	165.000
0150	504.0900	Concrete Masonry Endwalls	CY	31.000	31.000
0160	606.0200	Riprap Medium	CY	34.000	34.000
0170	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1550-04-61	EACH	1.000	1.000
0180	619.1000	Mobilization	EACH	1.000	1.000
0190	624.0100	Water	MGAL	22.000	22.000
0200	625.0500	Salvaged Topsoil	SY	473.000	473.000
0210	627.0200	Mulching	SY	653.000	653.000
0220	628.1504	Silt Fence	LF	240.000	240.000
0230	628.1520	Silt Fence Maintenance	LF	240.000	240.000
0240	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0250	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0260	628.7570	Rock Bags	EACH	20.000	20.000
0270	629.0210	Fertilizer Type B	CWT	0.400	0.400
0280	630.0140	Seeding Mixture No. 40	LB	14.000	14.000
0290	630.0200	Seeding Temporary	LB	11.000	11.000
0300	633.5100	Markers Row	EACH	2.000	2.000
0310	633.5200	Markers Culvert End	EACH	4.000	4.000
0320	642.5001	Field Office Type B	EACH	1.000	1.000
0330	643.0100	Traffic Control (project) 01. 1550-04-61	EACH	1.000	1.000
0340	643.0300	Traffic Control Drums	DAY	240.000	240.000
0350	643.0420	Traffic Control Barricades Type III	DAY	660.000	660.000
0360	643.0705	Traffic Control Warning Lights Type A	DAY	1,080.000	1,080.000
0370	643.0715	Traffic Control Warning Lights Type C	DAY	45.000	45.000
0380	643.0900	Traffic Control Signs	DAY	765.000	765.000
0390	643.0920	Traffic Control Covering Signs Type II	EACH	14.000	14.000



Estimate Of Quantities

1550-04-61					
Line	Item	Item Description	Unit	Total	Qty
0400	643.1000	Traffic Control Signs Fixed Message	SF	66.000	66.000
0410	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0420	643.2000	Traffic Control Detour (project) 01. 1550-04-61	EACH	1.000	1.000
0430	643.3000	Traffic Control Detour Signs	DAY	3,660.000	3,660.000
0440	645.0120	Geotextile Type HR	SY	100.000	100.000
0450	646.0106	Pavement Marking Epoxy 4-Inch	LF	410.000	410.000
0460	650.4500	Construction Staking Subgrade	LF	125.000	125.000
0470	650.5000	Construction Staking Base	LF	125.000	125.000
0480	650.6500	Construction Staking Structure Layout (structure) 01. C-48-0019	LS	1.000	1.000
0490	650.9910	Construction Staking Supplemental Control (project) 01. 1550-04-61	LS	1.000	1.000
0500	650.9920	Construction Staking Slope Stakes	LF	125.000	125.000
0510	690.0150	Sawing Asphalt	LF	74.000	74.000
0520	999.1500.S	Crack and Damage Survey	LS	1.000	1.000
0530	SPV.0090	Special 01. Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-V87x136-Inch	LF	68.000	68.000
0540	SPV.0105	Special 01. Research and Locate Existing Property Monuments	LS	1.000	1.000
0550	SPV.0105	Special 02. Verify and Replace Existing Property Monuments	LS	1.000	1.000

CLEARING AND GRUBBING

			201.0105 CLEARING STA	201.0205 GRUBBING STA
CATEGORY	STATION	LOCATION		
0010	239+00 - 240+00	RT & LT	1	1
TOTAL			1	1

REMOVING OLD STRUCTURE

		203.0200 REMOVING OLD STRUCTURE STATION 239+85	
CATEGORY	STATION	LS	REMARKS
0010	239+85	1	10' x 6' CONC. BOX CULVERT
TOTAL		1	

EXCAVATION

		205.0100 EXCAVATION COMMON CY	FILL (1) CY	EXPANDED FILL (1)(2) CY	208.0100 BORROW (2) CY
CATEGORY	STATION				
0010	238+85 - 240+10	240	140	182	182
TOTAL		240	140	182	182

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.  
(2) - FILL EXPANSION = 30%

COFFERDAMS

		206.5000 COFFERDAMS C-48-0019 LS
CATEGORY	STATION	
0010	239+85	1
TOTAL		1

BACKFILL ITEMS

		209.1500 BACKFILL GRANULAR GRADE 1 TON	209.0200.S BACKFILL CONTROLLED LOW STRENGTH CY	210.2100 BACKFILL STRUCTURE TYPE B CY
CATEGORY	STATION			
0010	239+85	--	75	120
0010	TRANSITION CUT	60	--	--
TOTAL		60	75	120

NOTE: BACKFILL GRANULAR GRADE 1 WAS CALCULATED USING 2.0 TONS/CY.  
USE BACKFILL STRUCTURE TYPE B ADJACENT TO CONCRETE MASONRY ENDWALLS.

BASE AGGREGATE ITEMS

		305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	** 624.0100 WATER MGAL
CATEGORY	STATION			
0010	238+85 - 240+10	55	400	7
TOTAL		55	400	7

NOTE: BASE AGGREGATE DENSE (3/4-INCH & 1 1/4-INCH) WERE CALCULATED USING 2.0 TONS/CY.  
\*\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

ASPHALT PAVEMENT ITEMS

		455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
CATEGORY	STATION	THICKNESS	
0010	238+85 - 240+10	6.75	165
TOTAL		46	165

NOTE: TACK COAT CALCULATED AT 0.05 GALLONS PER SQUARE YARD

CULVERT PIPE

			504.0900 CONCRETE MASONRY ENDWALLS CY	SPV.0090.01 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-V 87x136-INCH LF	633.5200 MARKERS CULVERT END EA
CATEGORY	STATION	LOCATION			
0010	239+85	LT	15	32	2
	239+85	RT	16	36	2
TOTAL			31	68	4

RIPRAP ITEMS

			606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
CATEGORY	STATION	LOCATION		
0010	239+85	LT	16	44
	239+85	RT	18	56
TOTAL			34	100

MOBILIZATION

		619.1000 MOBILIZATION EACH
CATEGORY	PROJECT	
0010	1550-04-61	1
TOTAL		1

RESTORATION ITEMS

			** 624.0100 WATER MGAL	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0140 SEEDING MIXTURE #40 LB	630.0200 SEEDING TEMPORARY LB
CATEGORY	STATION	LOCATION						
0010	238+85 - 240+10	LT	5.2	157	231	0.1	5	4
	238+85 - 240+10	RT	7.0	237	313	0.2	6	5
	UNDISTRIBUTED		2.8	79	109	0.1	3	2
TOTAL			15	473	653	0.4	14	11

\*\*ADDITIONAL QUANTITIES LISTED ELSEWHERE

3

EROSION CONTROL ITEMS

			628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.7570 ROCK BAGS
CATEGORY	STATION	LOCATION	LF	LF	EACH
0010	238+85 - 240+10	LT	100	100	---
	238+85 - 240+10	RT	90	90	---
	UNDISTRIBUTED		50	50	20
TOTAL			240	240	20

NOTE: USE ROCK BAGS FOR SILT FENCE WEEPS AS DIRECTED BY THE ENGINEER

MOBILIZATION EROSION CONTROL

			628.1905 MOBILIZATION EROSION CONTROL	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL
CATEGORY	LOCATION	EACH	EACH	EACH
0010	1550-04-61	3	2	
TOTAL		3	2	

MARKERS ROW

			633.5100 MARKERS ROW
CATEGORY	LOCATION	EACH	
0010	RT	2	
TOTAL		2	

FIELD OFFICE

			642.5001 FIELD OFFICE TYPE B
CATEGORY	PROJECT	EACH	
0010	1550-04-61	1	
TOTAL		1	

TRAFFIC CONTROL

			643.0100 TRAFFIC CONTROL (PROJECT)	643.2000 TRAFFIC CONTROL DETOUR (PROJECT)
CATEGORY	LOCATION	EACH	EACH	EACH
0010	1550-04-61	1	1	
TOTAL		1	1	

TRAFFIC CONTROL ITEMS

			TRAFFIC CONTROL DRUMS	643.0300 TRAFFIC CONROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS
CATEGORY	PROJECT	DAYS	EACH	DAYS	EACH	DAYS				
0010	1550-04-61	30	5	150	22	660	36	1080	---	---
0010	1550-04-61	9	10	90	---	---	---	---	5	45
TOTALS				240		660		1,080		45

TRAFFIC CONTROL SIGNS

			TRAFFIC CONTROL SIGNS	643.0900 TRAFFIC CONTROL SIGNS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	TRAFFIC CONTROL SIGNS FIXED MESSAGE	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE	TRAFFIC CONTROL SIGNS PCMS	643.1050 TRAFFIC CONTROL SIGNS PCMS	TRAFFIC CONTROL DETOUR SIGNS	643.3000 TRAFFIC CONTROL DETOUR SIGNS
CATEGORY	PROJECT	DAYS	EACH	DAYS	EACH	EACH	SF	EACH	DAYS	EACH	DAYS
0010	1550-04-61	30	24	720	14	4	66	2	14	122	3660
10	1550-04-61	9	5	45	---	---	---	---	---	---	---
TOTALS				765	14		66		14		3,660

CONSTRUCTION STAKING

			650.4500 CONSTRUCTION STAKING SUBGRADE	650.5000 CONSTRUCTION STAKING BASE	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL	650.9920 CONSTRUCTION STAKING SLOPE STAKES
CATEGORY	STATION	LOCATION	LF	LF	LS	LS	LF
0010	238+85 - 240+10	LT & RT	125	125	1	1	125
TOTAL			125	125	1	1	125

PAVEMENT MARKING

			646.0106 PAVEMENT MARKING EPOXY 4-INCH	
CATEGORY	STATION	LOCATION	YELLOW	WHITE
			LF	LF
0010	238+85 - 240+10	LT FOG LINE	---	125
	238+85 - 240+10	CENTERLINE	160	---
	238+85 - 240+10	RT FOG LINE	---	125
TOTALS			160	250

SAWING PAVEMENT ITEMS

			690.0150 SAWING ASPHALT
CATEGORY	STATION	LOCATION	LF
0010	238+85	RT & LT	32
	240+10	RT & LT	42
TOTAL			74

CRACK AND DAMAGE SURVEY

			999.1500.S CRACK AND DAMAGE
CATEGORY	STATION	LOCATION	LS
0010	238+75 - 240+00	LT	-
	240+25 - 241+00	RT	-
TOTAL			1

EXISTING PROPERTY MONUMENTS

			SPV.0105.01 RESEARCH AND LOCATE EXISTING PROPERTY MONUMENTS	SPV.0105.02 VERIFY AND REPLACE EXISTING PROPERTY MONUMENTS
CATEGORY	LOCATION	LS	LS	LS
0010	1550-04-61	1	1	
TOTAL		1	1	



# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION TRANSPORTATION PROJECT PLAT TITLE SHEET

## 1550-04-20

### TRIBUTARY LAKE MAGNOR C-48-0019

CLEAR LAKE - CUMBERLAND

## USH 63 POLK COUNTY

#### CONVENTIONAL SYMBOLS

SECTION LINE	-----	SECTION		R/W MONUMENT	●
QUARTER LINE	-----	CORNER		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	-----	NOTATION FOR COMBUSTIBLE FLUIDS		FOUND IRON PIN	IP
NEW REFERENCE LINE	-----	NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES		VALVE (GAS, WATER, ETC.)	⊙ (TYPE)
NEW R/W LINE	-----			SIGN	⊞ SIGN
EXISTING R/W LINE	-----			OFF-PREMISE SIGN	⊞-25 SIGN
PROPERTY LINE	-----				
LOT, TIE & OTHER MINOR LINES	-----				
CORPORATE LIMITS	////				
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)	W (TYPE)	ELECTRIC POLE		COMPENSABLE	
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)		TELEPHONE POLE		NON-COMPENSABLE	
TEMPORARY LIMITED EASEMENT AREA		PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)			
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)		ACCESS CONTROLLED BY ACQUISITION			
TRANSMISSION STRUCTURES		NO ACCESS (BY STATUTORY AUTHORITY)			
BUILDING		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)			
NATIONAL GEODETIC SURVEY MONUMENT					
SIXTEENTH CORNER MONUMENT					

#### CONVENTIONAL ABBREVIATIONS

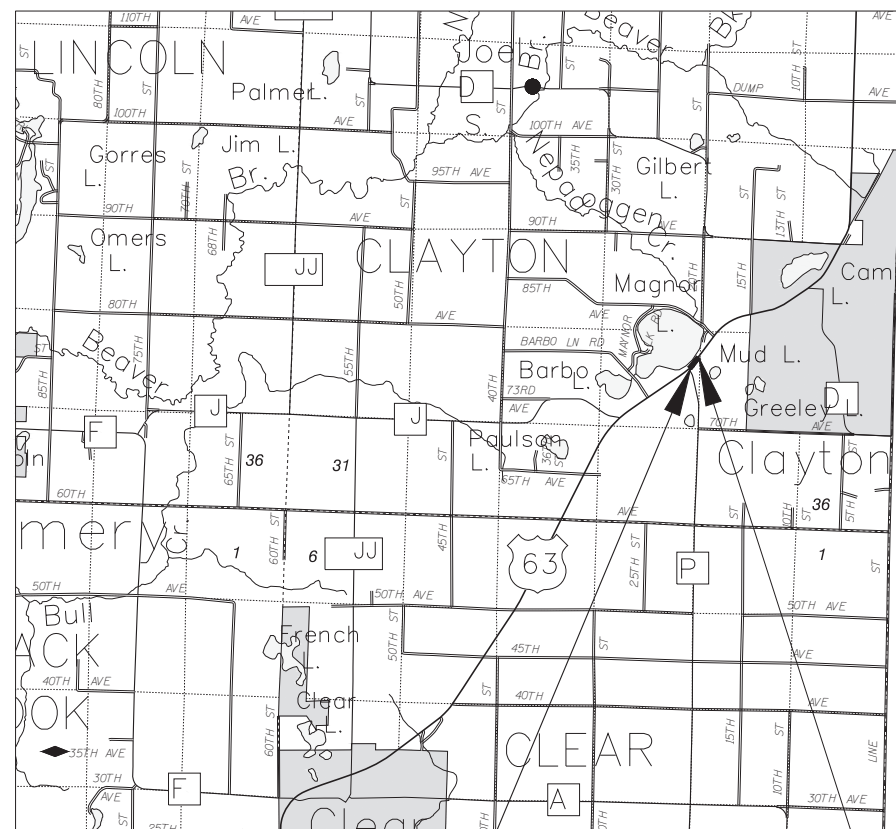
ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS	(100')
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RIGHT	RT
CENTERLINE	C/L	RIGHT OF WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC
CONCRETE	CONC	SEPTIC VENT	SEPV
COUNTY	CO	SQUARE FEET	SF
COUNTY TRUNK HIGHWAY	CTH	STATE TRUNK HIGHWAY	STH
DISTANCE	DIST	STATION	STA
CORNER	COR	SUBDIVISION	SUBD
DOCUMENT NUMBER	DOC	TANGENT	TAN
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED EASEMENT	TLE
GAS VALVE	GV		
GRID NORTH	GN	TRANSPORTATION PROJECT	TPP
HIGHWAY EASEMENT	HE	PLAT	
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
LAND CONTRACT	LC	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		

#### CURVE DATA

LONG CHORD	LC
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	Δ
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

#### CONVENTIONAL UTILITY SYMBOLS

WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD	—OH—
TRANSMISSION LINES	—
ELECTRIC	—E—
CABLE TELEVISION	—TV—
FIBER OPTIC	—FO—
SANITARY SEWER	—SAN—
STORM SEWER	—SS—



PROJECT LOCATION

THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 1550-04-20

#### NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, POLK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLES) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE NORTHWEST REGIONAL OFFICE

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

EXISTING ACCESS CONTROL ALONG USH 63 HAS BEEN ESTABLISHED FROM PREVIOUS PROJECT 8071-01-29 (2003) AND 8071-02-29

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: FAP NO. 758-A(1) 1938 AND DJ8635 1938  
WISCONSIN STATE HIGHWAY COMMISSION PROJECT F 011-1 (34)  
WISCONSIN STATE HIGHWAY COMMISSION PROJECT NO. 758-A-(1)  
MAGNOR LAKE ASSESSOR'S PLAT

RESERVED FOR REGISTER OF DEEDS  
PROJECT NUMBER 1550-04-31 - 4.01  
SHEET 2 OF 2  
AMENDMENT NO:



TRANSPORTATION PROJECT PLAT NO: 1550-04-20 - 4.01

PART OF LOT 87 AND PART OF LOT 91 OF THE MAGNOR LAKE ASSESSOR'S PLAT, LOCATED IN PART OF GOVERNMENT LOT 1, SECTION 27, TOWN 33 NORTH, RANGE 15 WEST, TOWN OF CLAYTON, POLK COUNTY, WISCONSIN.

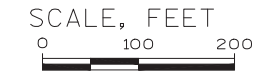
RELOCATION ORDER USH 63 CLEAR LAKE - CUMBERLAND (TRIBUTARY LAKE MANGOR C-48-0019) POLK COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:  
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.  
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

Curve Table					
Curve #	Arc Length	Radius	Delta	LCB	LC
C1	112.82'	2832.00'	002°16'57"	N37° 51' 00"E	112.82'
C2	115.63'	2898.00'	002°17'10"	N37° 50' 54"E	115.62'

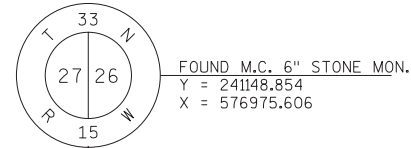
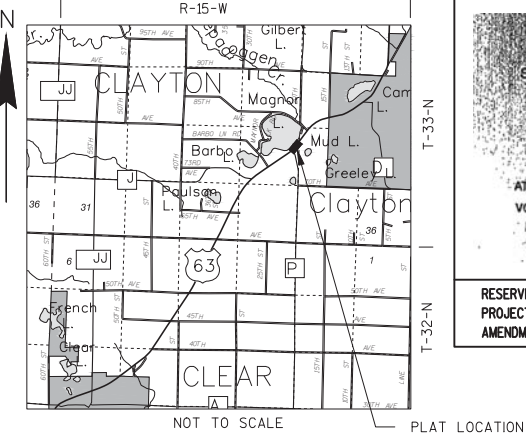
R/W Course Table		
Course	Length	Direction
100-101	67.81	N45° 13' 22"W
101-102	108.54	N54° 52' 44"E
102-103	44.78	N45° 01' 09"E
103-104	64.93	N28° 26' 45"W
104-105	44.00	N48° 03' 23"E
105-106	60.00	S41° 56' 37"E
105-TLE1	43.20	S41° 56' 37"E
TLE1-106	16.80	S41° 56' 37"E
TLE2-TLE1	4.43	S44° 23' 40"W
TLE3-TLE2	16.83	N44° 21' 46"W
106-TLE3	5.13	N45° 01' 09"E
106-107	70.99	N45° 01' 09"E
TLE3-107	65.86	N45° 01' 09"E
108-109	33.34	S53° 27' 00"E
109-110	32.68	S53° 27' 00"E
111-113	81.41	S45° 01' 09"W
111-TLE4	51.09	S45° 01' 09"W
TLE4-112	15.00	S45° 01' 09"W
112-113	15.32	S45° 01' 09"W
113-114	32.53	S41° 56' 37"E
114-116	59.39	S41° 56' 37"E
113-116	91.92	S41° 56' 37"E
114-115	17.11	N40° 01' 16"E
115-TLE4	34.43	N19° 09' 28"W
115-112	31.00	N44° 58' 44"W
116-117	204.15	S53° 42' 40"W
117-100	77.36	N45° 21' 33"W



UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	OWNER(S)	INTEREST REQUIRED
100	VILLAGE OF CLAYTON	RELEASE OF RIGHTS
101	NORTHERN STATES POWER COMPANY D/B/A XCEL ENERGY	RELEASE OF RIGHTS
PARCEL AFFECTED	UTILITY EASEMENT INFORMATION UTILITY NAME	RECORD DATA
1	VILLAGE OF CLAYTON	V 606 P 135 DOC 507891
1	WISCONSIN HYDRO ELECTRIC COMPANY D/B/A NORTHERN STATES POWER	V 175 P 195 DOC 259275

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTEREST TO DEPARTMENT OF TRANSPORTATION.

SCHEDULE OF LANDS & INTERESTS REQUIRED								
PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W NEW SF	R/W EXISTING ACRES	WATERWAY SF	NON-WATERWAY SF	R/W TOTAL SF	TLE SF
1	LAKE MAGNOR PROPERTIES, LLC	FEE/TLE	512.90	0.00	148.62	364.28	512.90	232.45
2	JAMES T. HOLDEN AND PENNY L. HOLDEN	TLE	0.00	0.00	0.00	0.00	0.00	80.30



R/W Point	Station	Offset	NORTH (Y)	EAST (X)
100	237+85.00	0.00'	240026.10	576319.56
101	237+85.00	67.81' RT	240073.87	576271.43
102	238+93.70	46.70' LT	240136.31	576360.21
103	239+39.17	44.40' LT	240167.96	576391.88
104	239+62.19	105.35' LT	240225.06	576360.95
105	240+07.49	99.69' LT	240254.47	576393.68
106	239+99.17	40.24' LT	240209.84	576433.78
107	240+70.80	33.58' LT	240260.02	576484.00
108	241+85.00	33.34' LT	240349.10	576553.22
109	241+85.00	0.00'	240329.25	576580.00
110	241+85.00	32.68' RT	240309.79	576606.25
111	240+70.71	32.43' RT	240218.49	576535.31
112	240+05.60	26.16' RT	240171.77	576488.56
113	239+90.47	24.92' RT	240160.94	576477.73
114	239+86.31	57.18' RT	240136.75	576499.47
115	240+03.07	57.05' RT	240149.85	576510.47
116	239+78.95	116.08' RT	240092.57	576539.17
117	237+85.19	77.36' RT	239971.75	576374.61
TLE1	240+01.47	56.89' LT	240222.33	576422.55
TLE2	240+05.97	56.53' LT	240225.46	576425.68
TLE3	240+04.37	39.82' LT	240213.47	576437.42
TLE4	240+20.40	27.44' RT	240182.38	576499.17

EXISTING MONUMENTS			
Point	DESCRIPTION	NORTH (Y)	EAST (X)
10	AXLE SHAFT	240818.31	576972.61
200	1 1/4" IRON PIPE	240259.90	576483.89
204	1" IRON PIPE	240073.81	576555.96
205	1 1/4" IRON PIPE	240092.48	576539.16

**MSA**  
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL  
18-5  
715-566-1116  
1-800-877-7855  
www.msa.com

**STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION**

I, JEFFREY L. DEMUTH PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: *Jeffrey L. Demuth* DATE: 03/03/16  
PRINT NAME: JEFFREY L. DEMUTH P.L.S.  
REGISTRATION NUMBER: S-2656

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION NORTHWEST REGION - SUPERIOR

SIGNATURE: *Michael Piller* DATE: 03/03/16  
PRINT NAME: MICHAEL PILLER



Standard Detail Drawing List

08E09-06	SILT FENCE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F10-01	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
12A03-10	NAME PLATE (STRUCTURES)
14B29-01	SAFETY EDGE
15A01-12A	MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-01A	TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS
15D38-01B	ATTACHMENT OF SIGNS TO POSTS

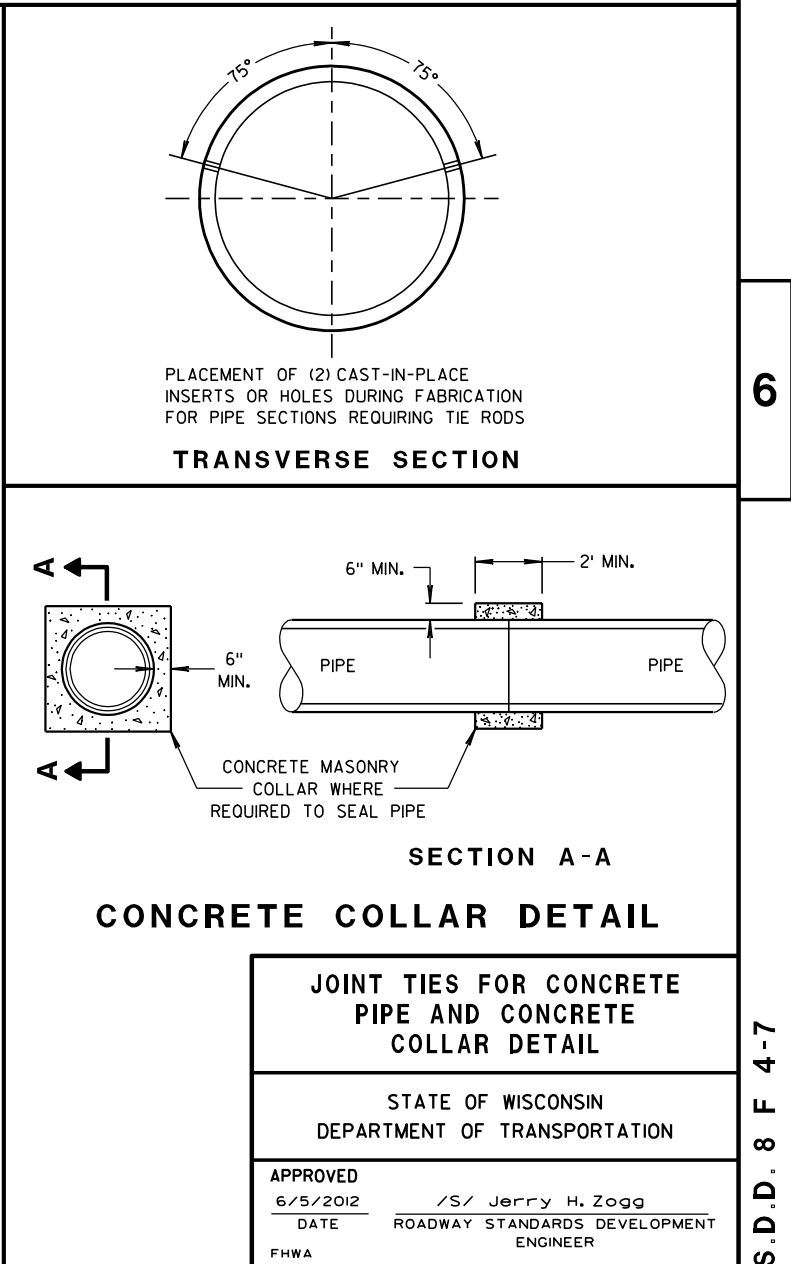
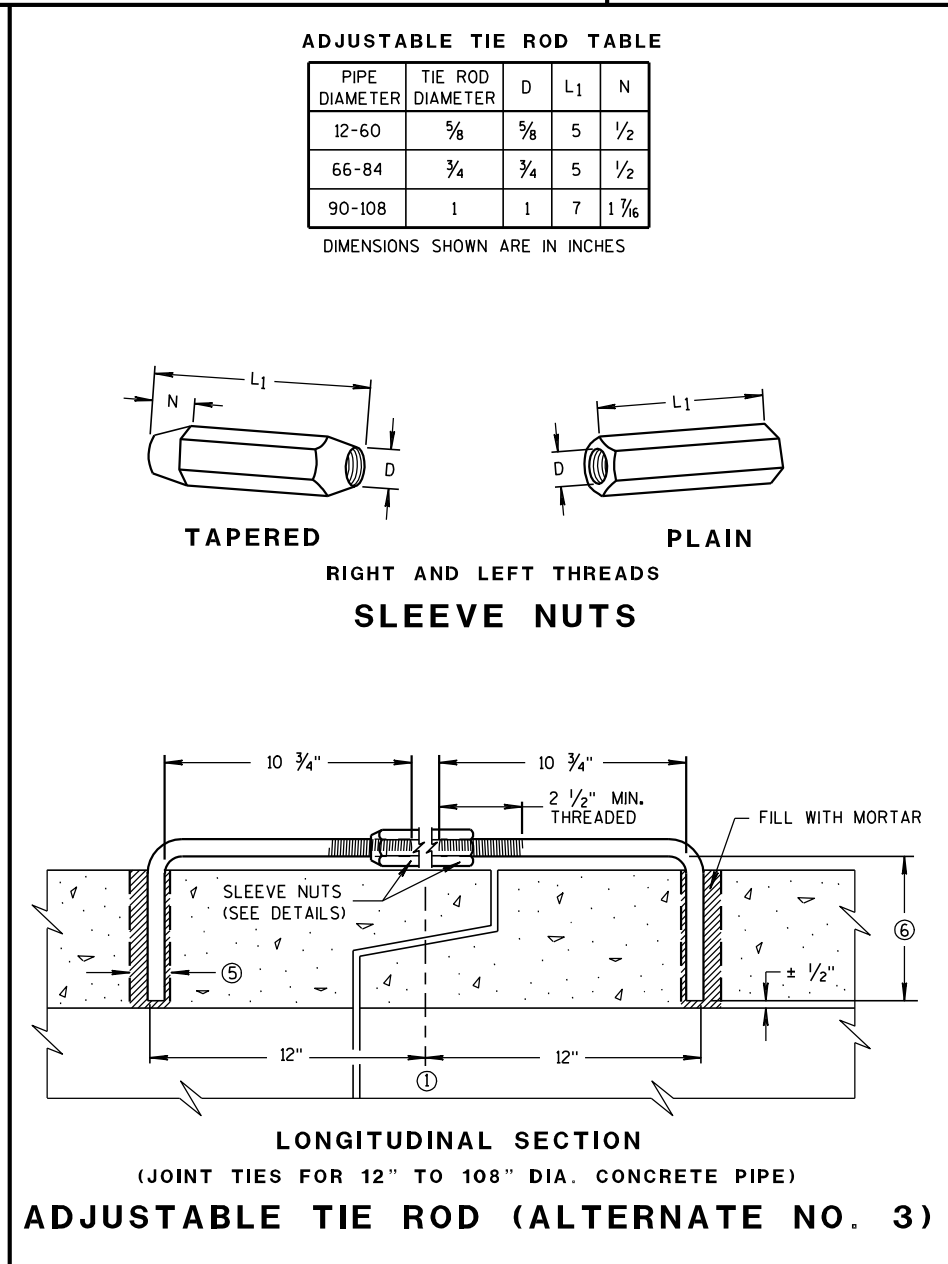
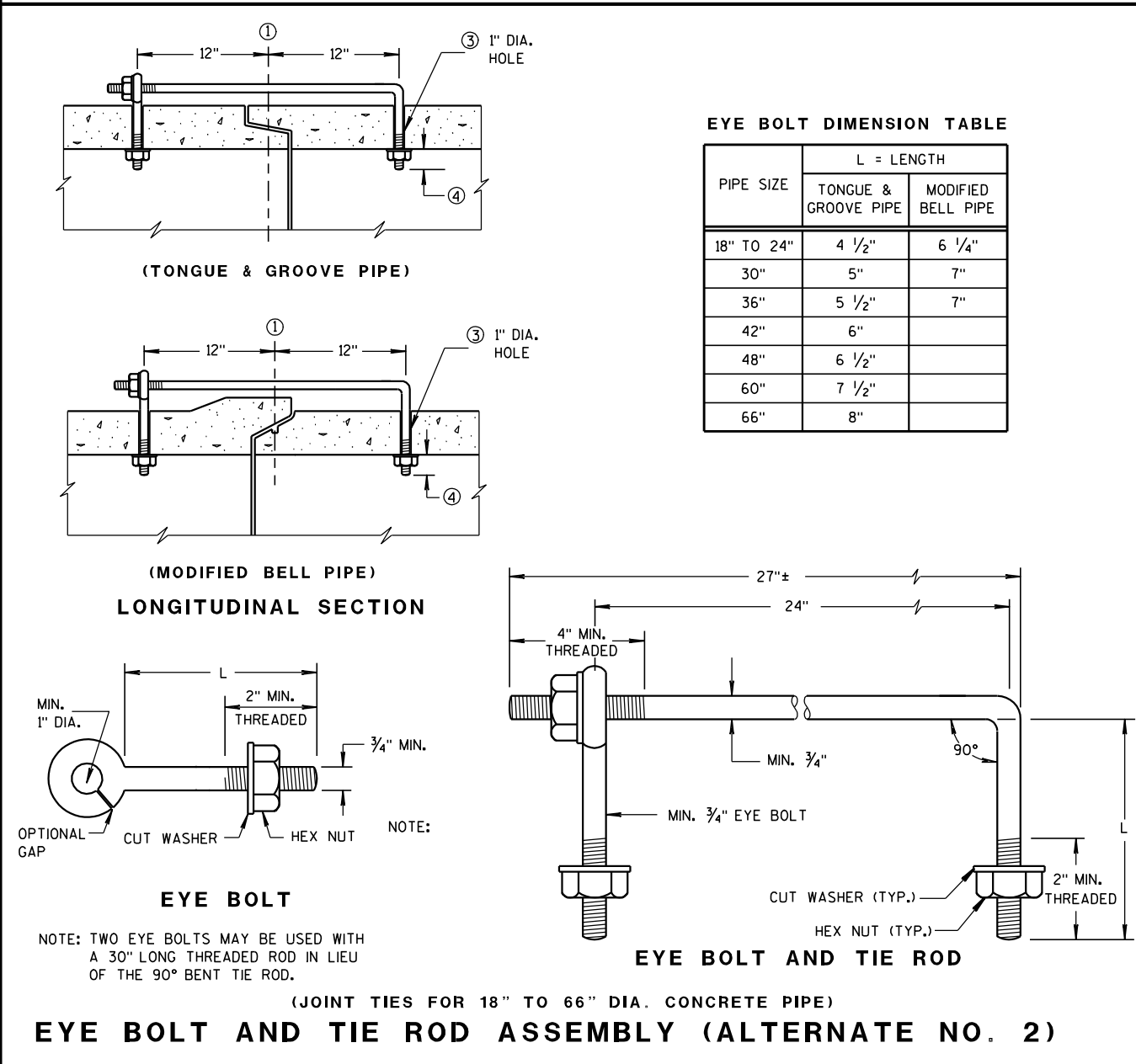
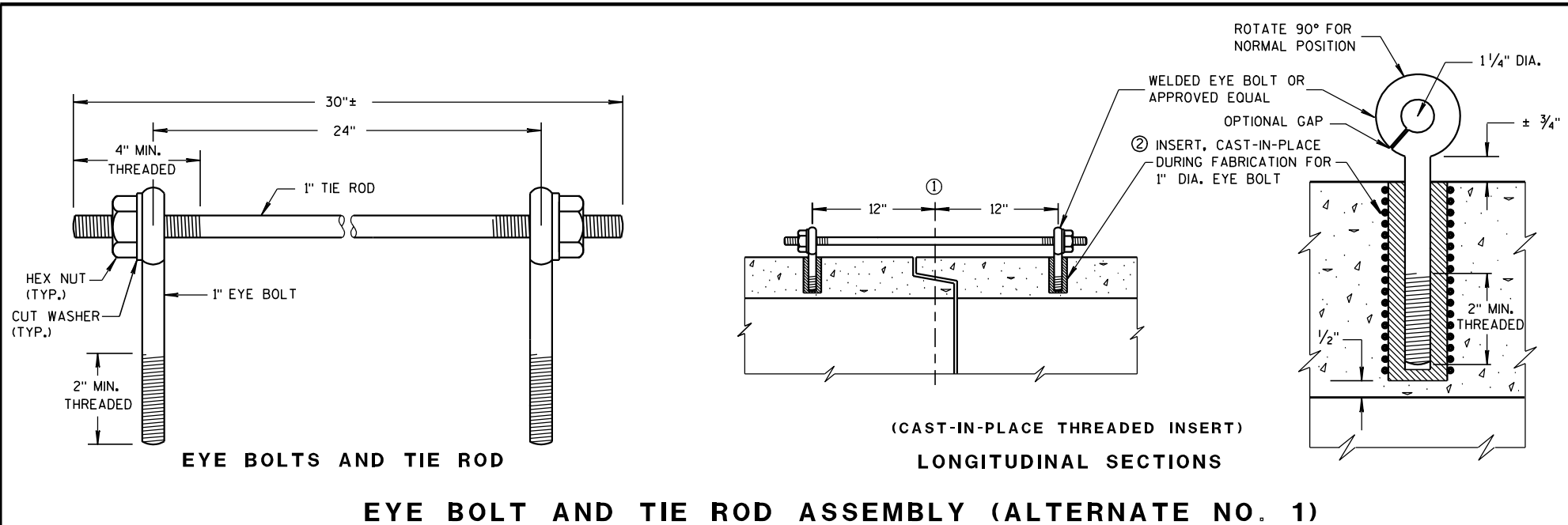


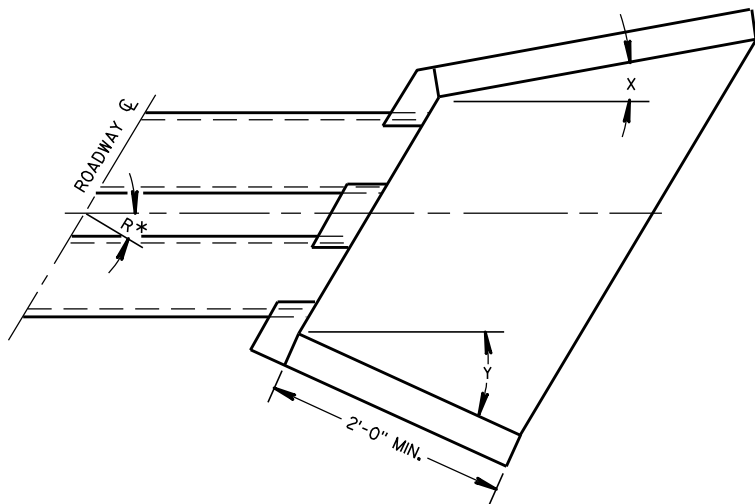
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS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



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



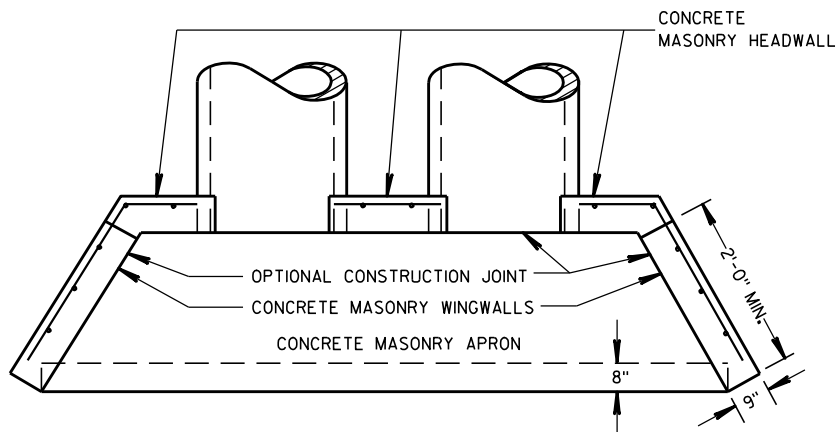




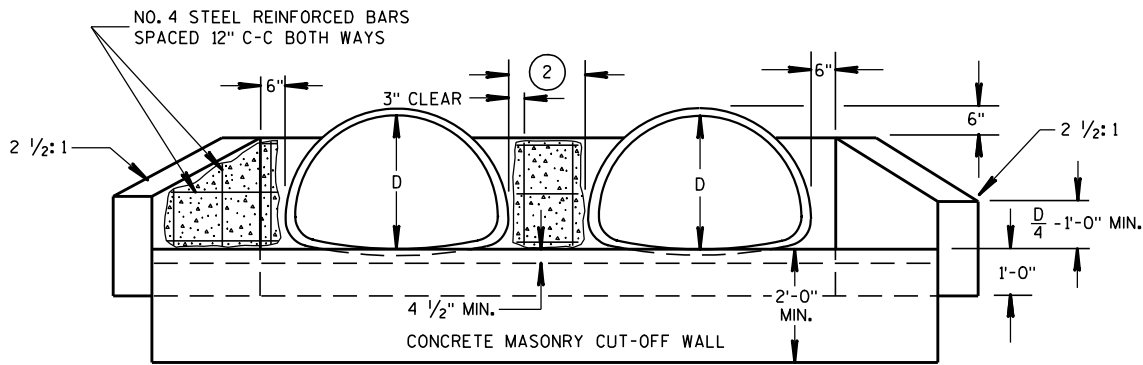
WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

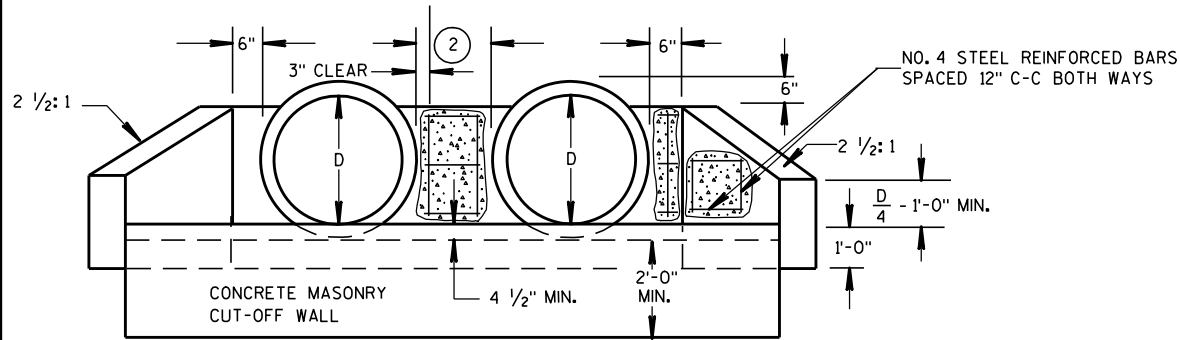
\*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD



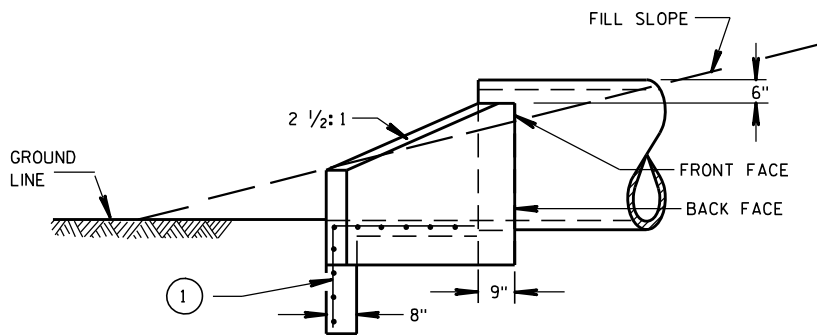
PLAN VIEW  
CULVERT PIPE AND PIPE ARCH



END ELEVATION  
PIPE ARCH



END ELEVATION  
CULVERT PIPE



SIDE ELEVATION  
CULVERT PIPE AND PIPE ARCH

# GENERAL NOTES

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

FILL SLOPES FLATTER THAN 2 1/2:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

① MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.

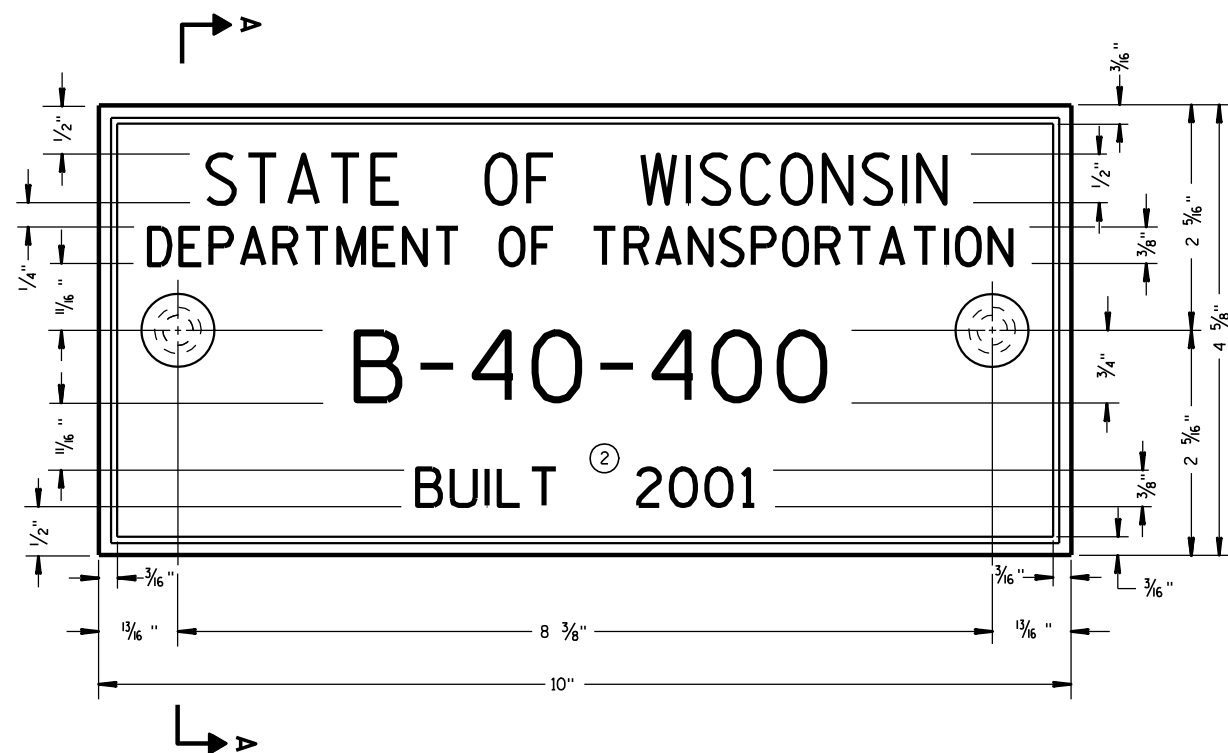
② THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	1/2 DIA. OR SPAN
OVER 72"	3'-0"

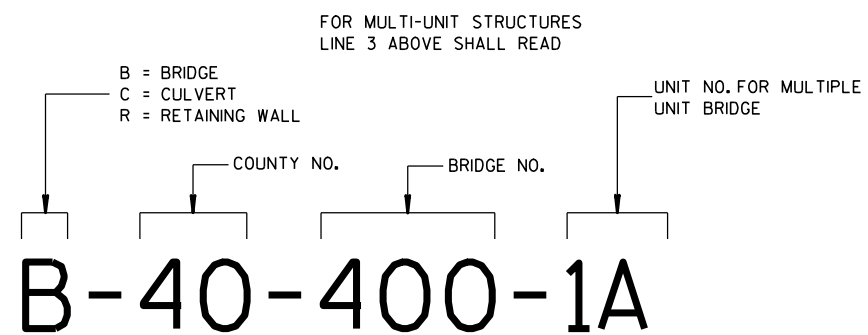
CONCRETE MASONRY ENDWALLS  
FOR CULVERT PIPE AND  
PIPE ARCH

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
9/14/98 /S/ Rory L. Rhinesmith  
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER  
FHWA



**TYPICAL NAME PLATE**  
(BRIDGES, CULVERTS, AND RETAINING WALLS)



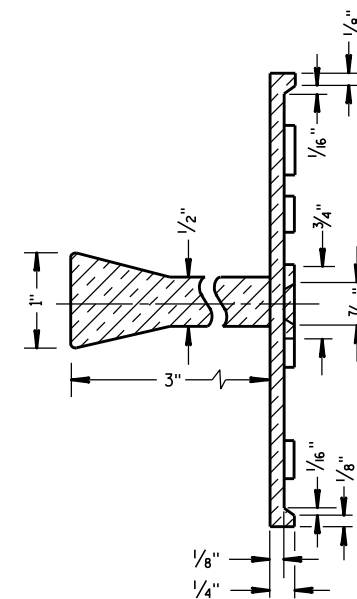
**NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES**

## GENERAL NOTES

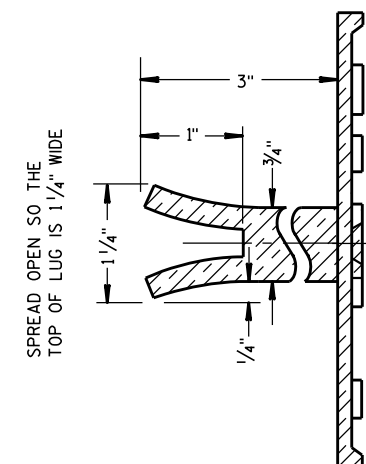
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

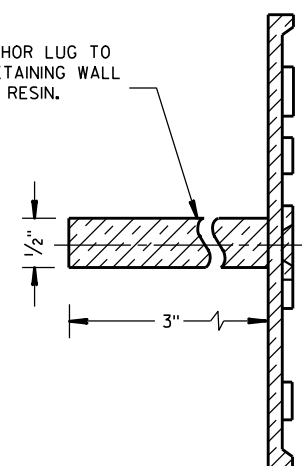


**SECTION A-A**



**ALTERNATE LUG**

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



**ALTERNATE LUG**  
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE  
(STRUCTURES)**

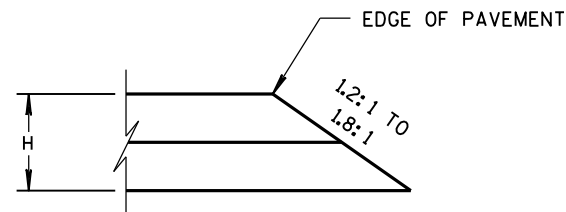
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

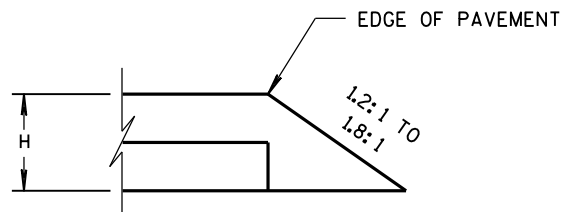
3/26/10  
DATE

FHWA

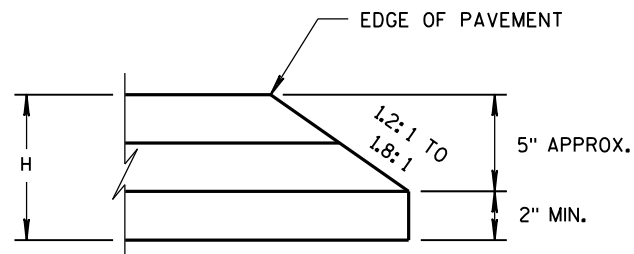
/S/ Scot Becker  
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



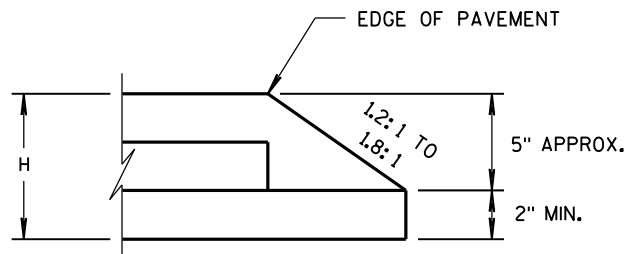
CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER  
FOR H 5" OR LESS

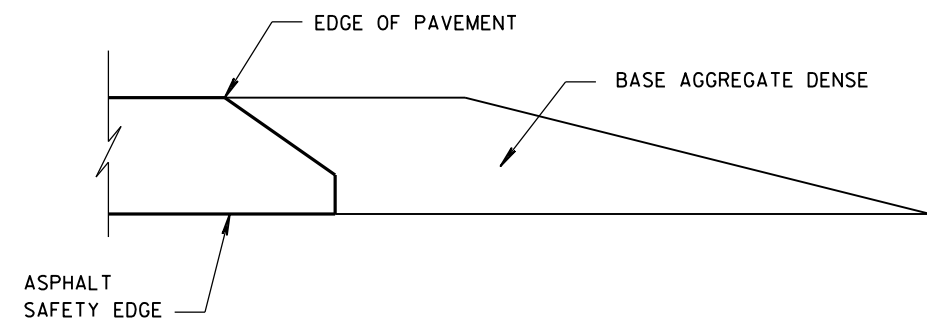


CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER  
FOR H GREATER THAN 5"

### HMA PAVEMENT AND HMA OVERLAYS



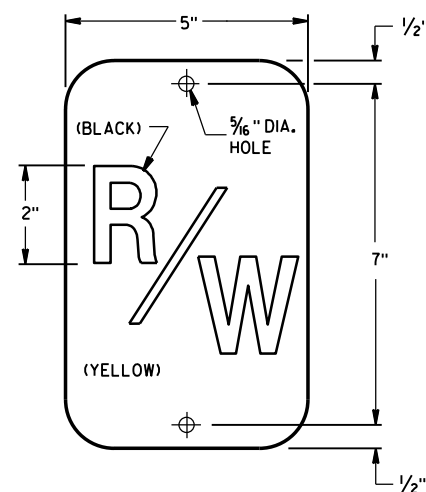
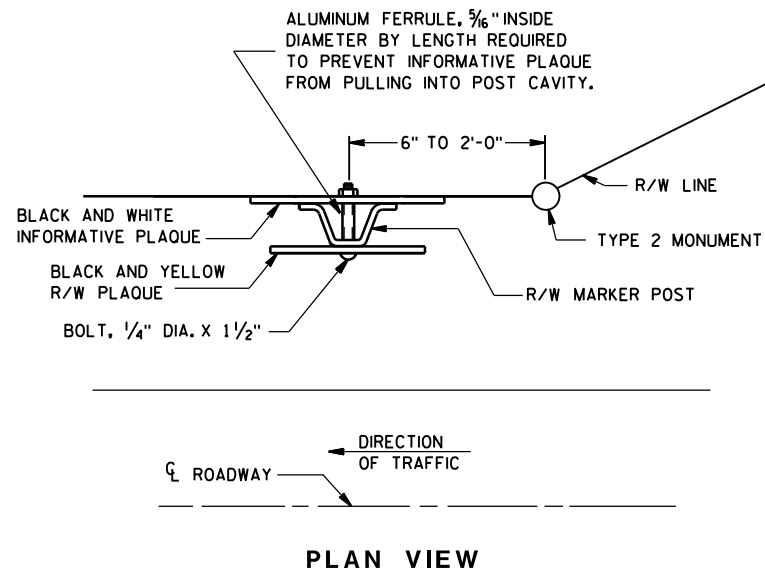
### FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE<sub>SM</sub>

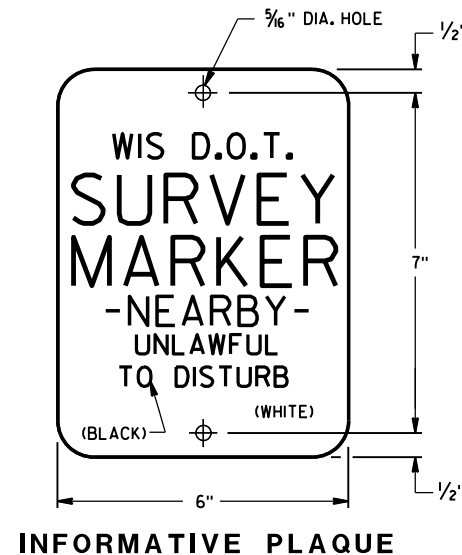
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
11/30/2012  
DATE  
FHWA

/s/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER



THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



## GENERAL NOTES

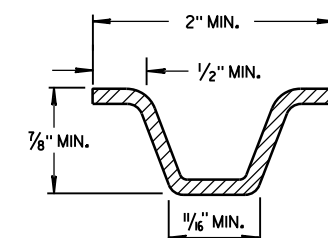
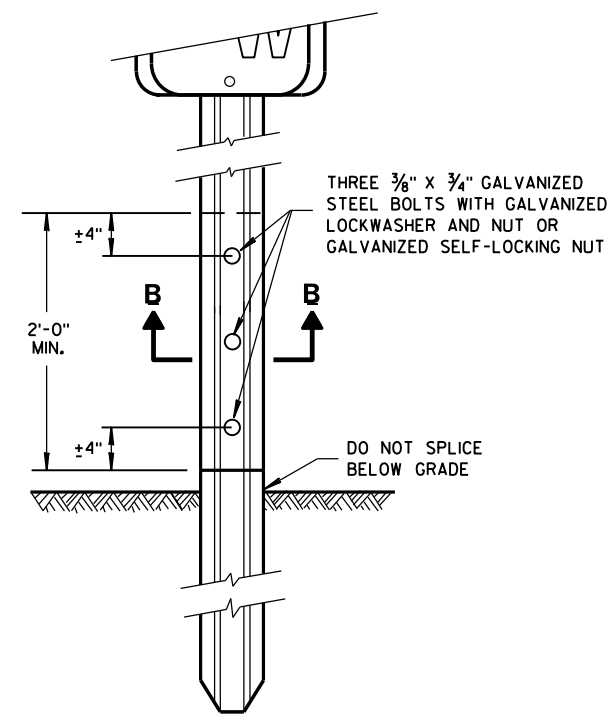
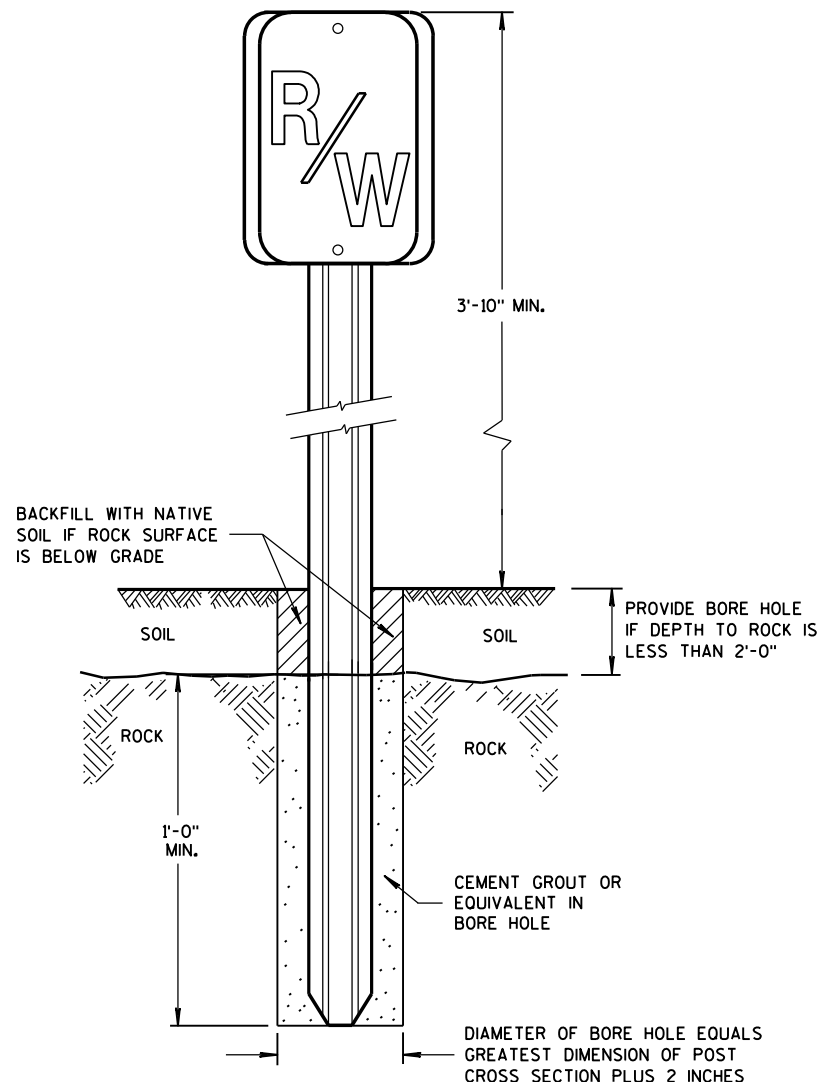
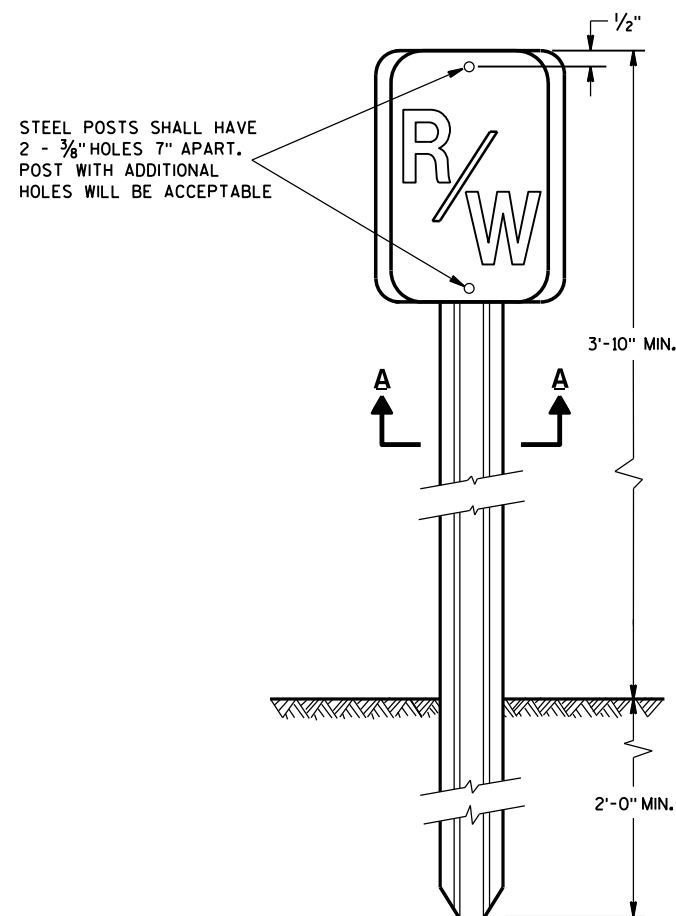
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE 'R/W' PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

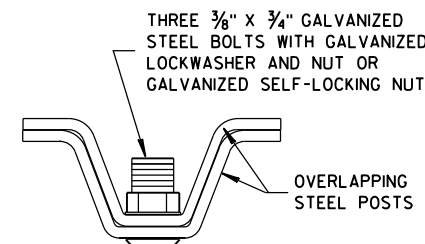
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

- ① IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



MIN. WEIGHT 1.12 LB./FT.

## SECTION A-A



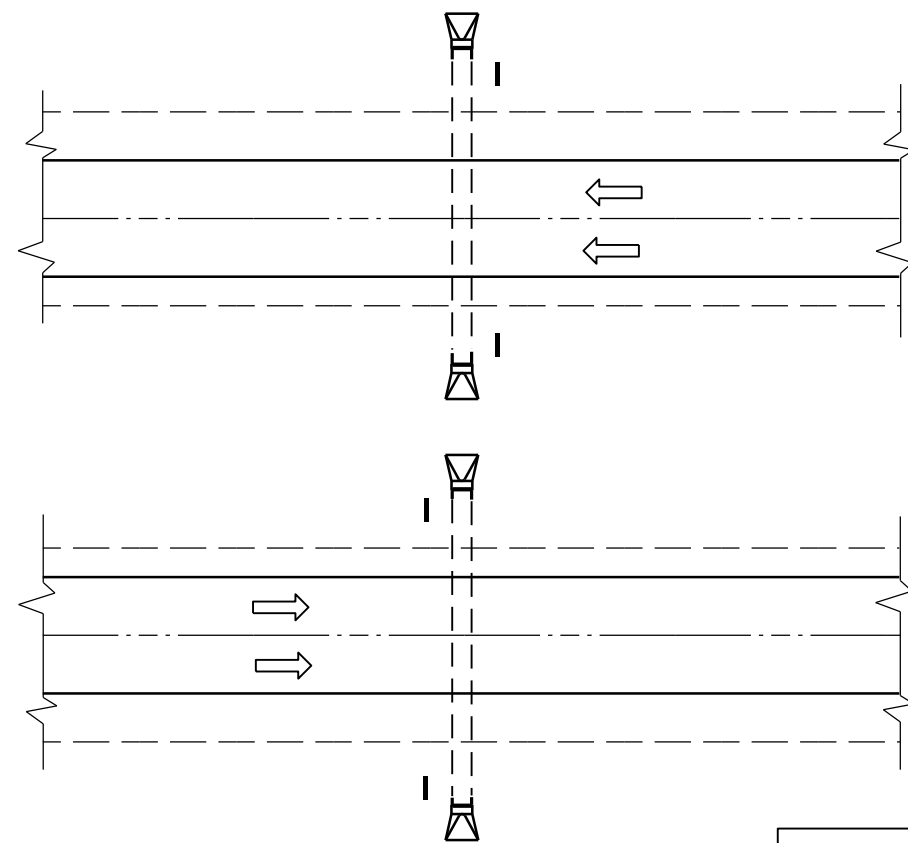
## MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

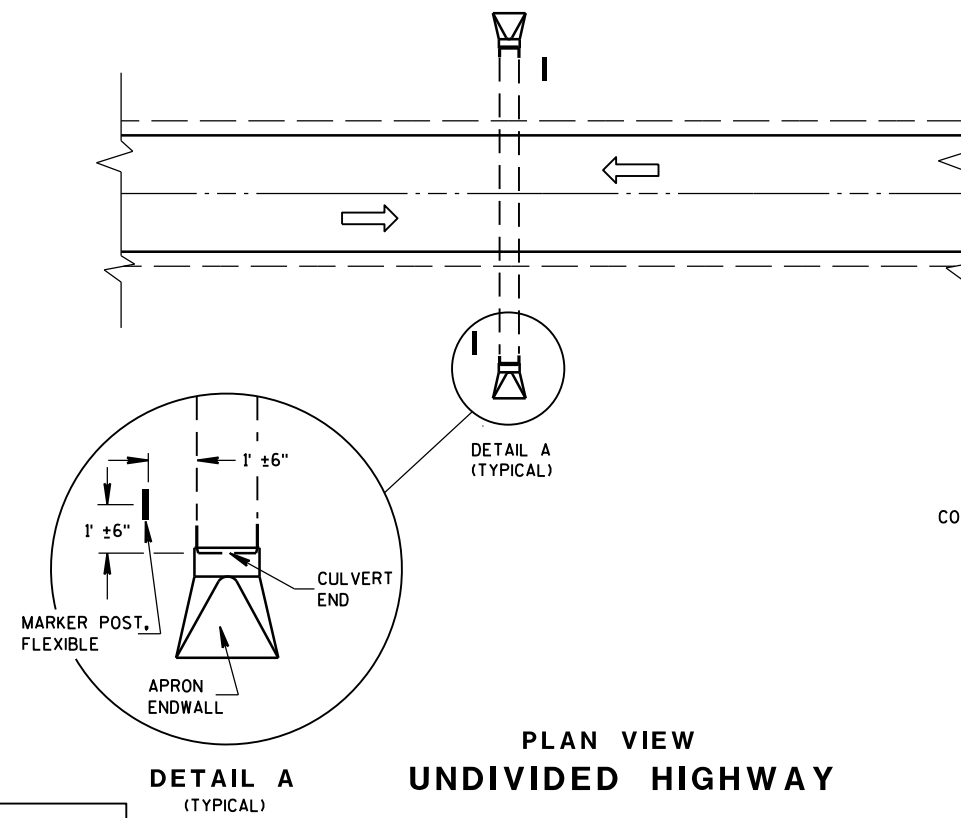
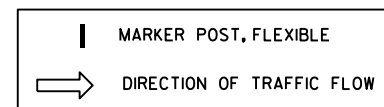
APPROVED

June, 2015 /S/ Ray Kumapayi  
DATE CHIEF SURVEYING AND MAPPING ENGINEER

FHWA



PLAN VIEW  
DIVIDED HIGHWAY

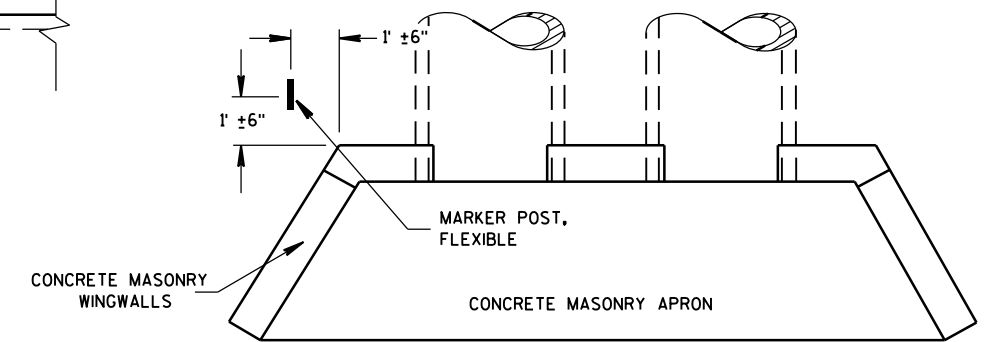


PLAN VIEW  
UNDIVIDED HIGHWAY

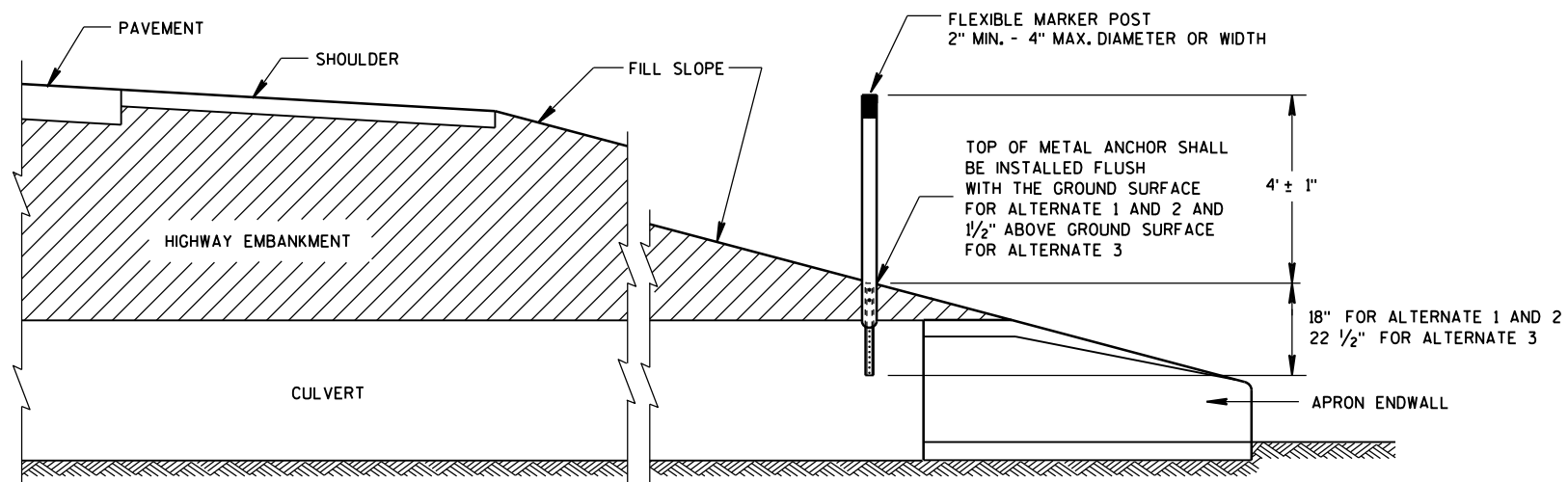
### FLEXIBLE MARKER POST LOCATION

### GENERAL NOTES

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



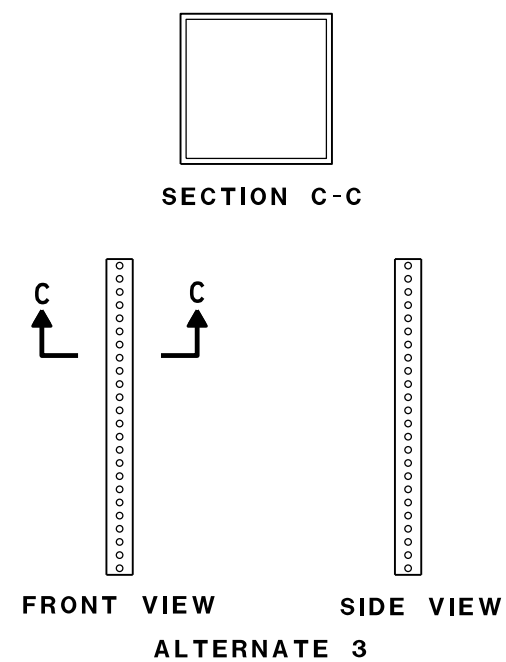
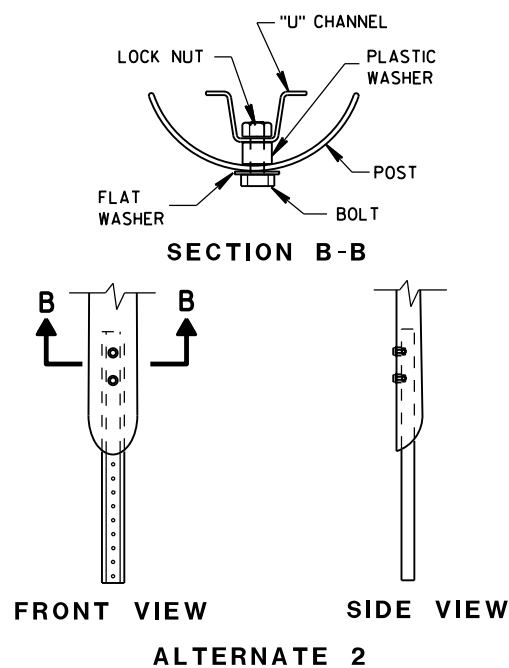
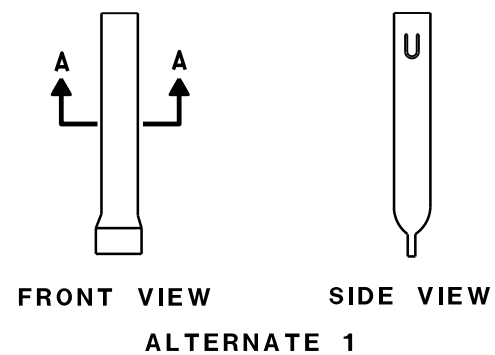
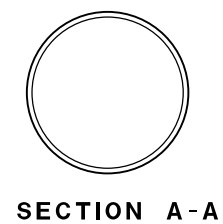
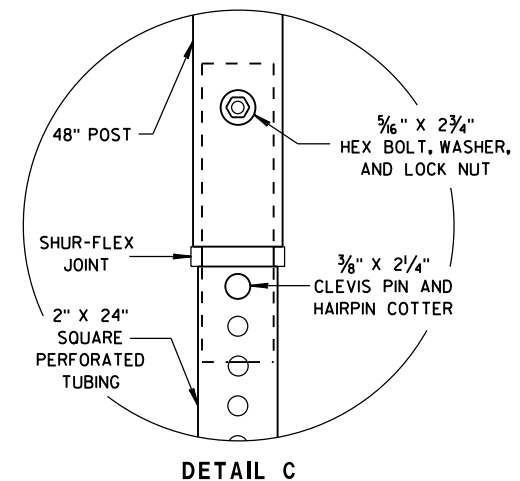
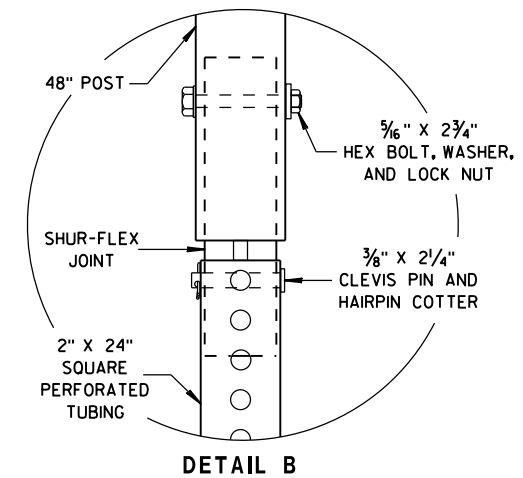
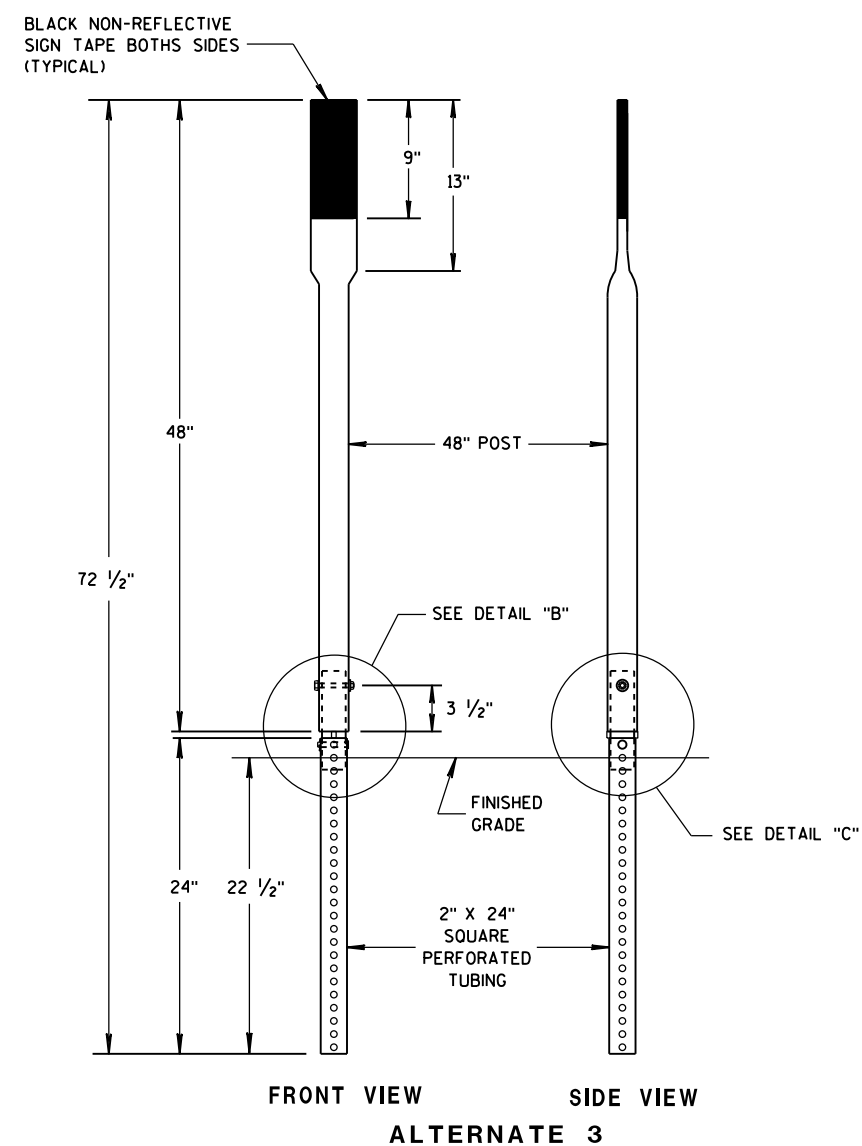
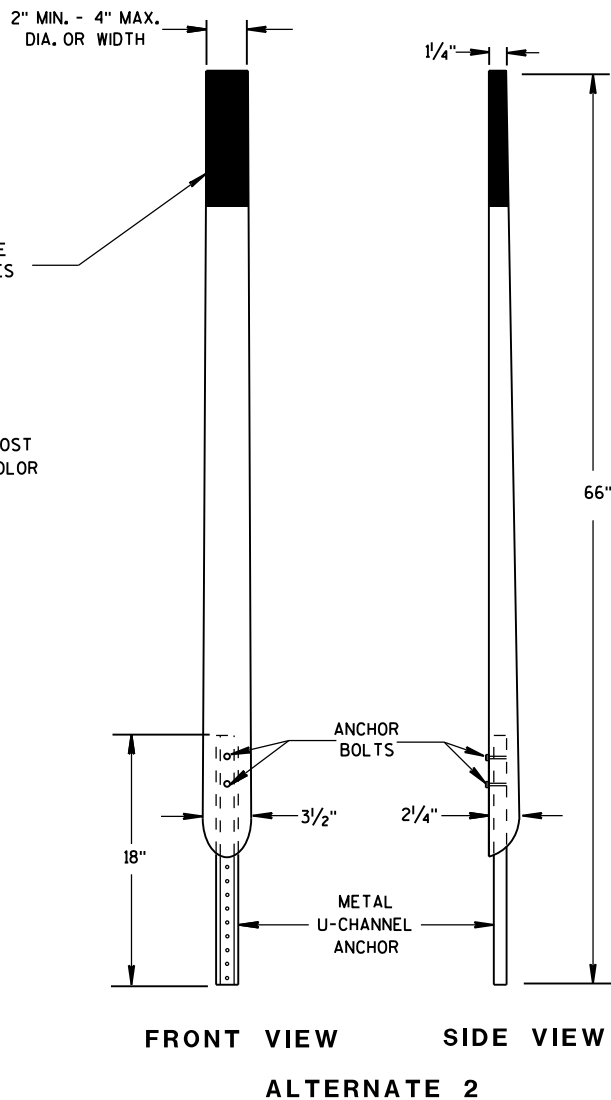
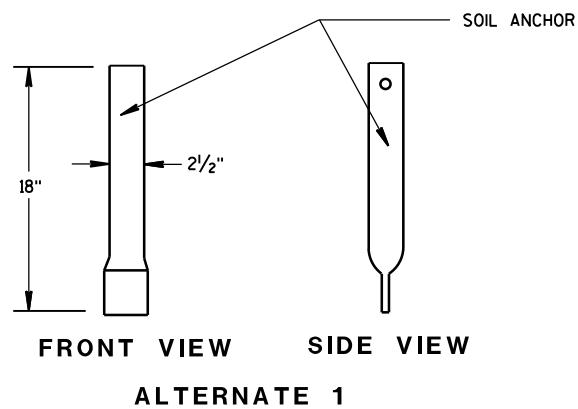
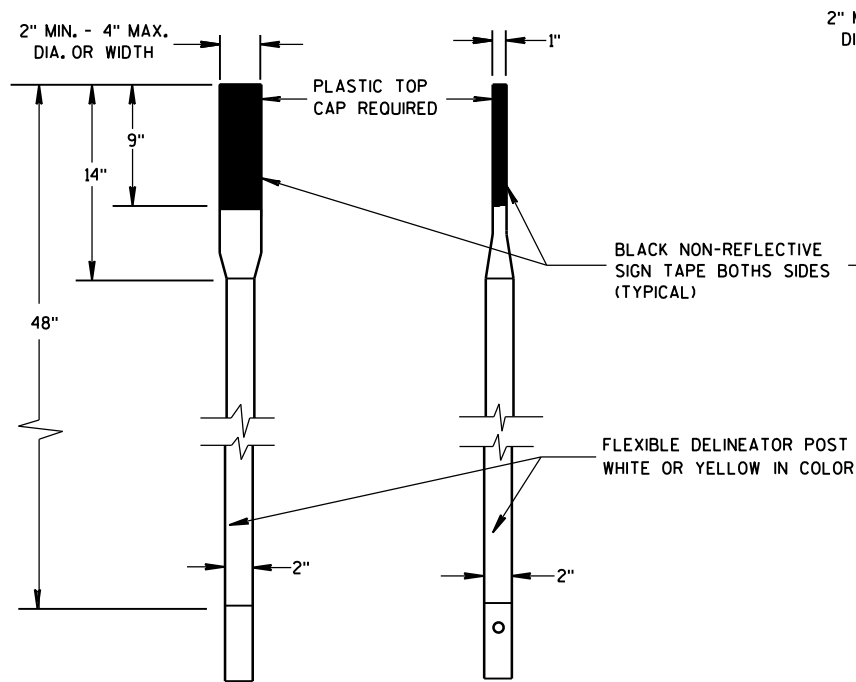
PLAN VIEW  
CONCRETE MASONRY ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH



CROSS SECTION  
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST  
FOR CULVERT END

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

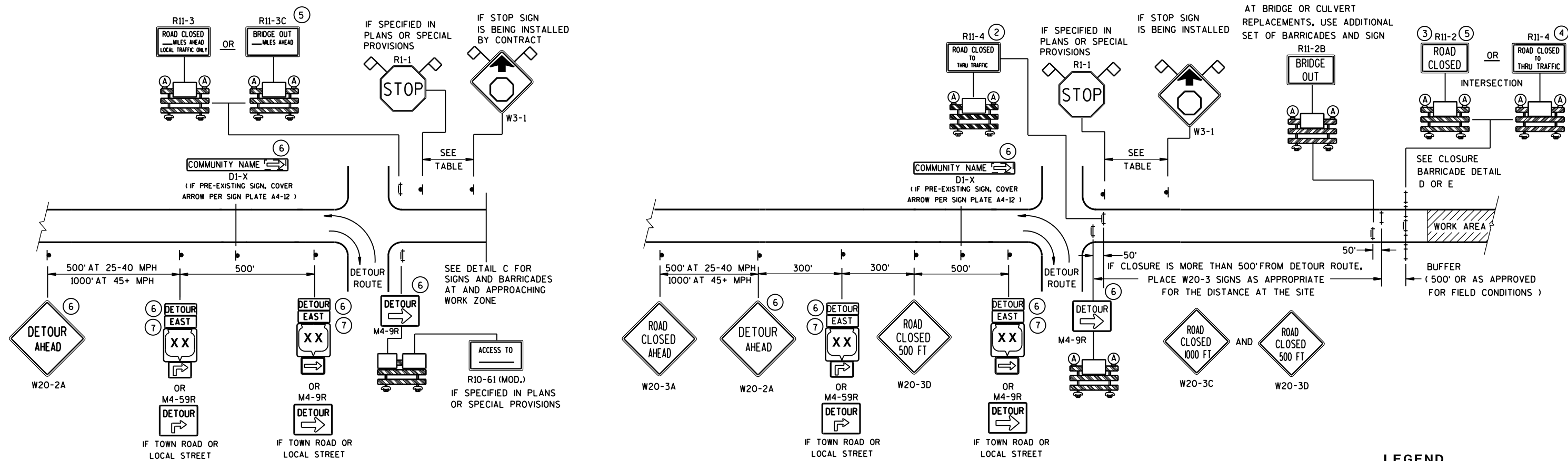


# FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/1/2012  
DATE  
FHWA

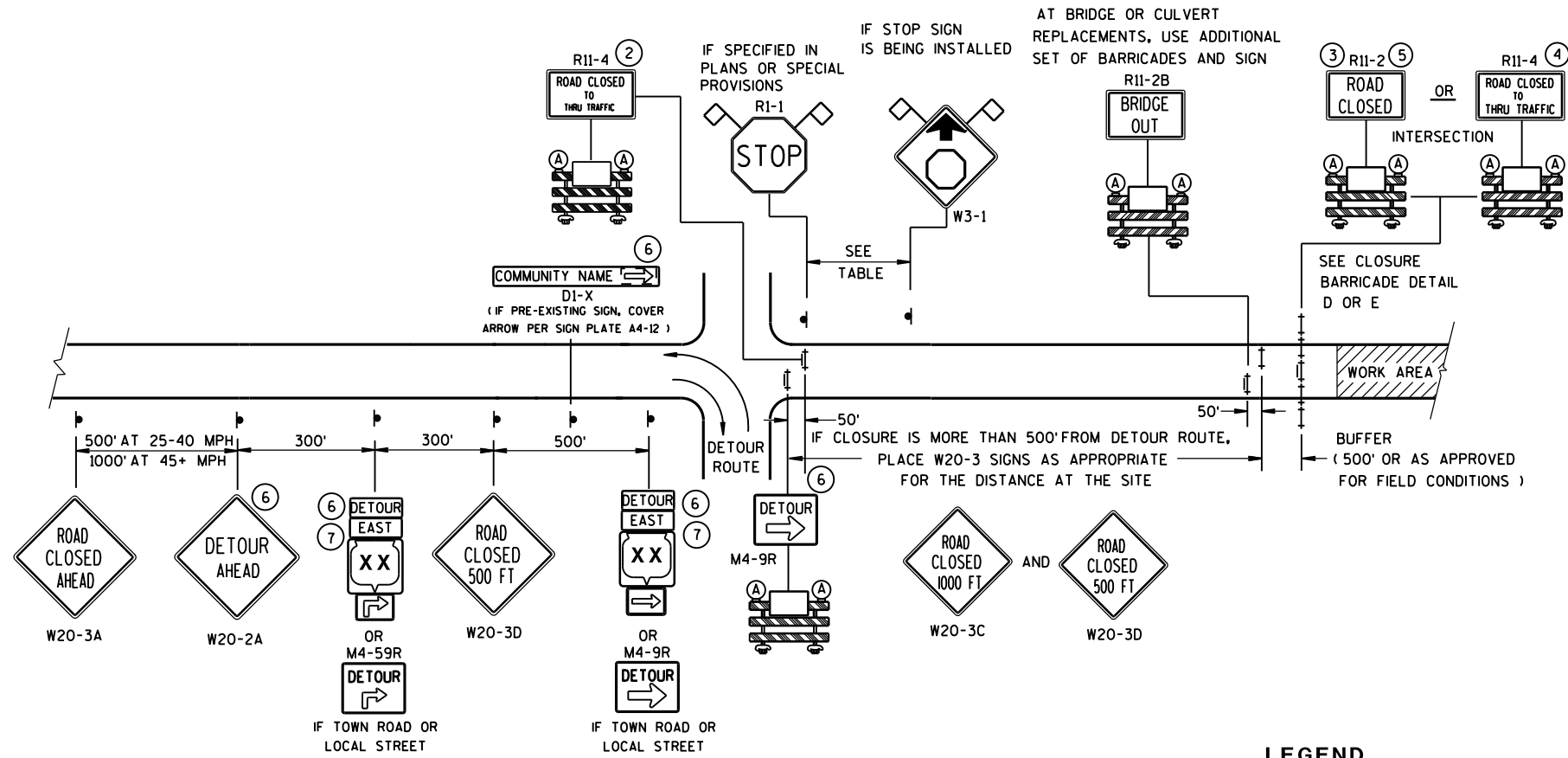
/S/ Travis Feltes  
STATE TRAFFIC ENGINEER OF DESIGN



DETAIL A

**MAINLINE CLOSURE WITH POSTED DETOUR**

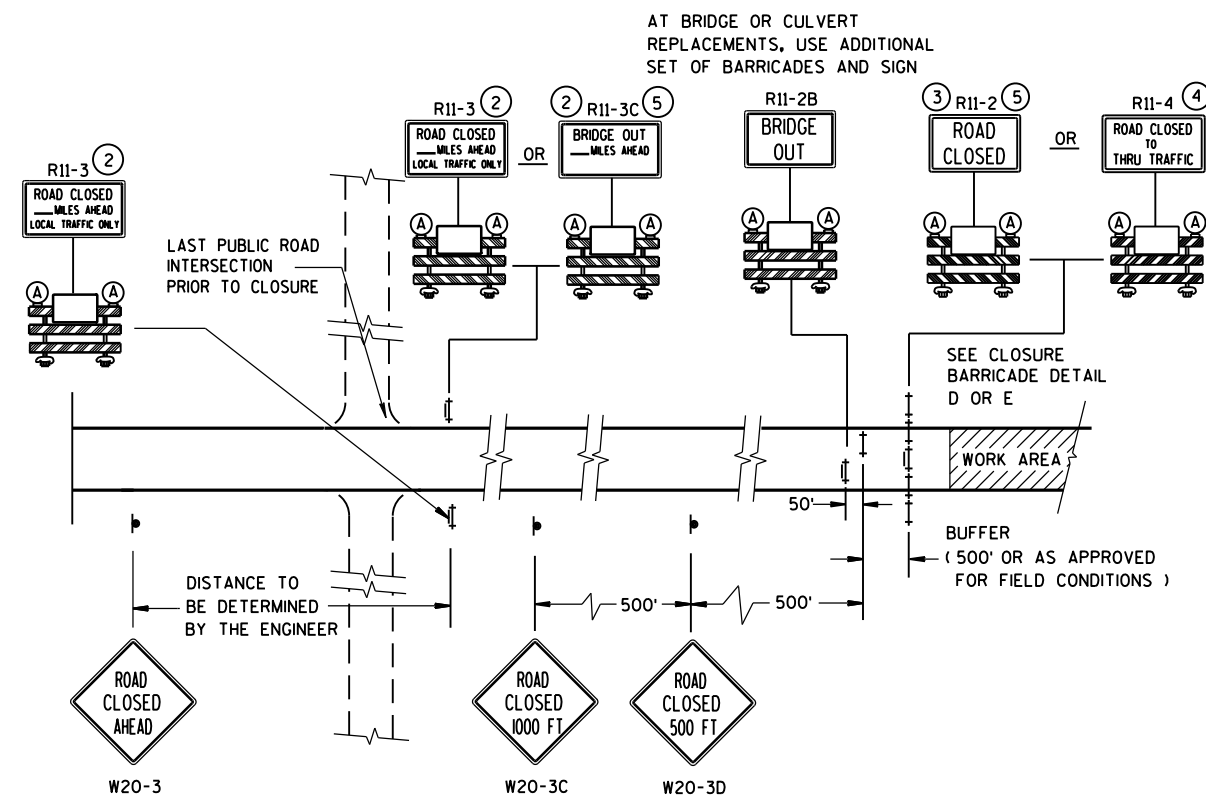
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE ( 1000 FEET IF URBAN )



DETAIL B













**MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE ( 1000 FEET IF URBAN )



**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**

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

- # LEGEND
-  SIGN ON PERMANENT SUPPORT
-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  WORK AREA
-  M4-8  
M3-X
-  OR  OR   
M1-4 M1-5A M1-6
-  OR   
M05-1 M06-1
-  FLAGS, 16" X 16" MIN., (ORANGE)

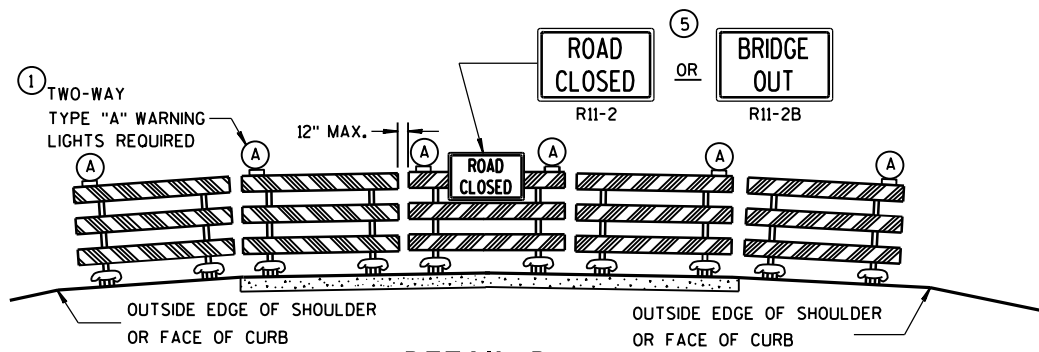
SEE SDD 15C2-SHEET "b"  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

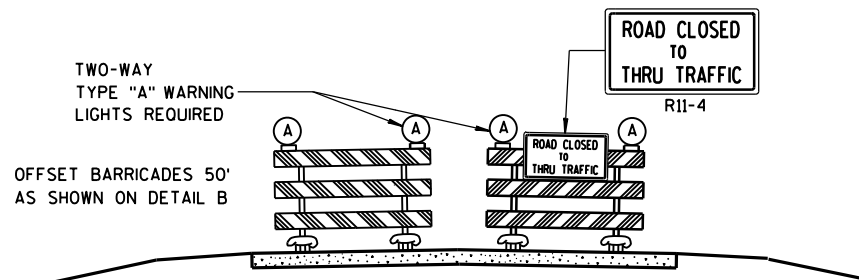
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amakobe Atepe  
DATE STATEWIDE WORK ZONE TRAFFIC  
FHWA SAFETY ENGINEER





DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW



DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

## 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 TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

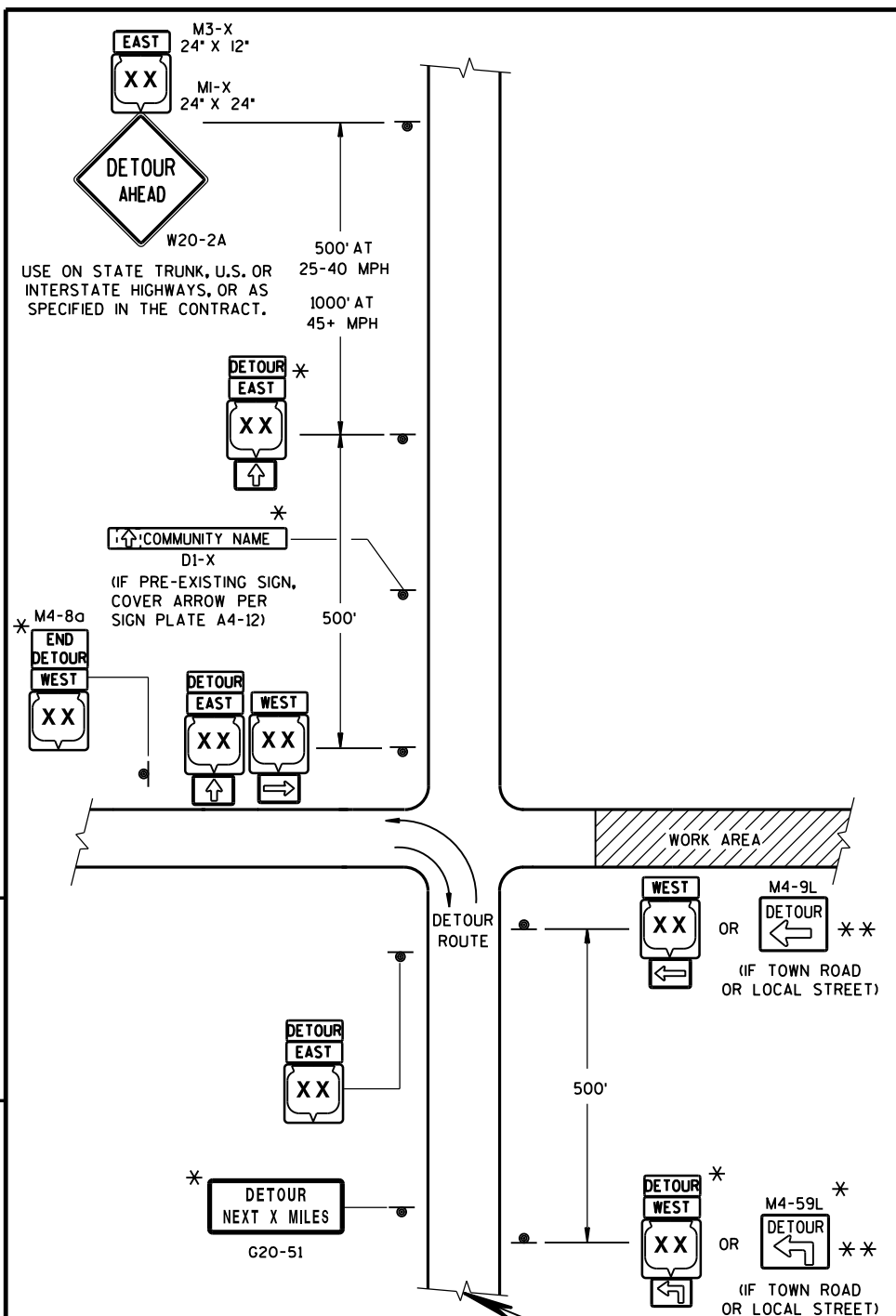
R1-1 SHALL BE 36" X 36".

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

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe  
DATE STATEWIDE WORK ZONE TRAFFIC  
FHWA SAFETY ENGINEER



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

MATCH POINT

DETAIL F  
DETOUR SIGNING

GENERAL NOTES

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

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

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

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

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

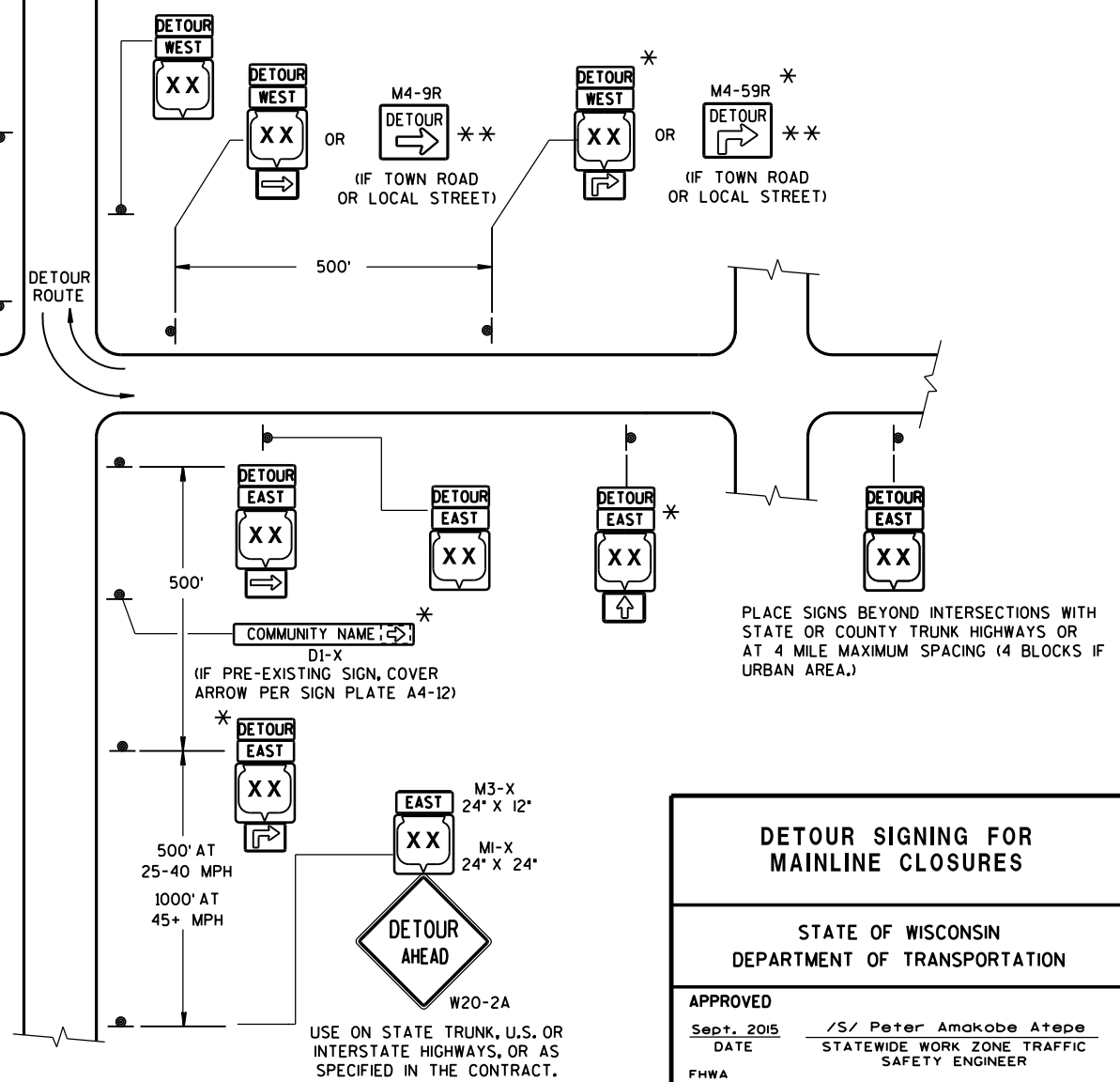
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

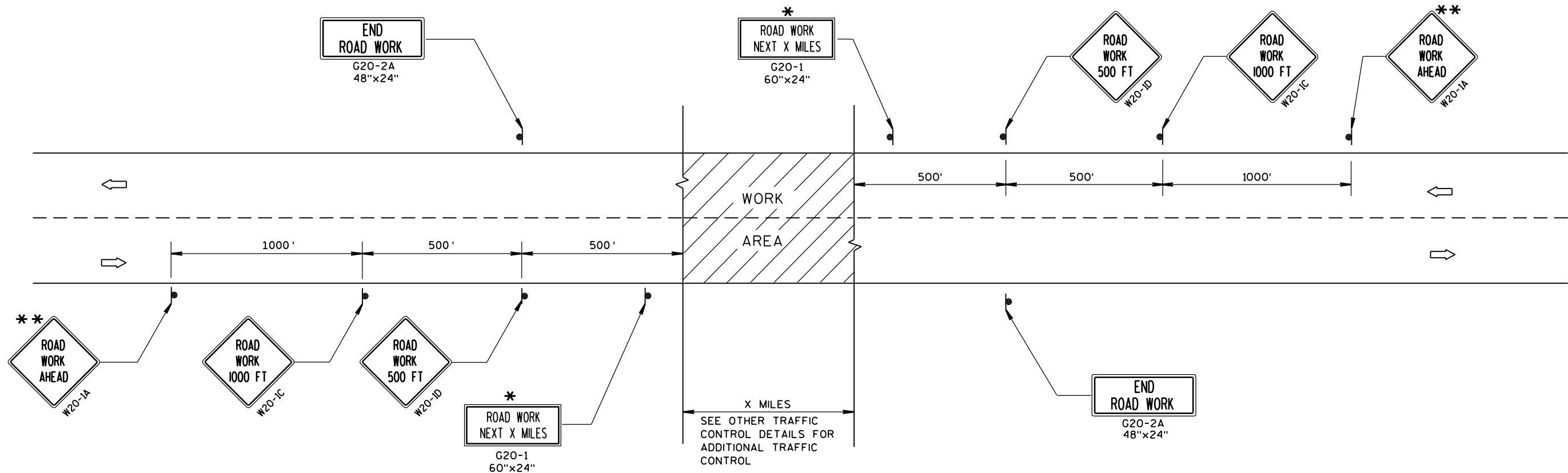
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

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

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



DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FWHA	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

## 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.

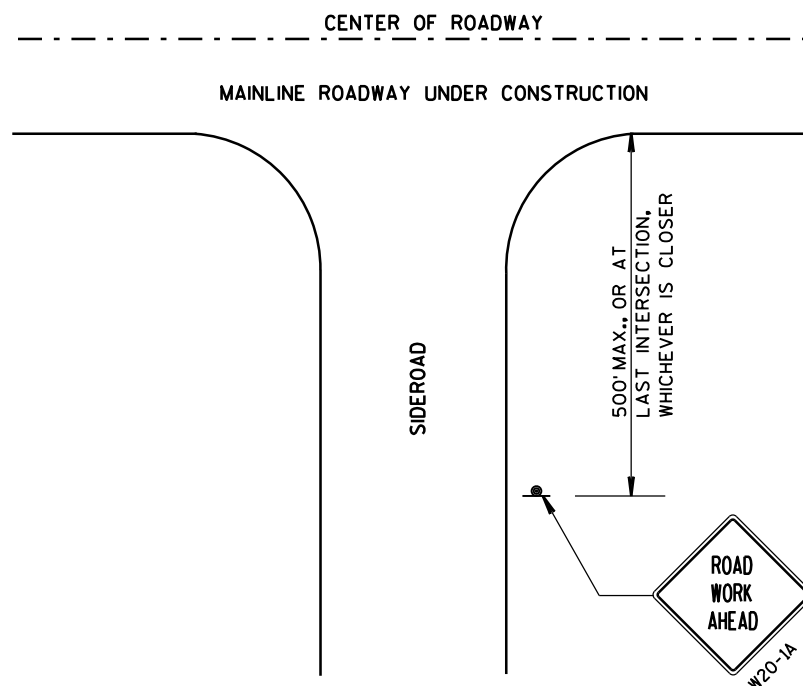
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

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

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



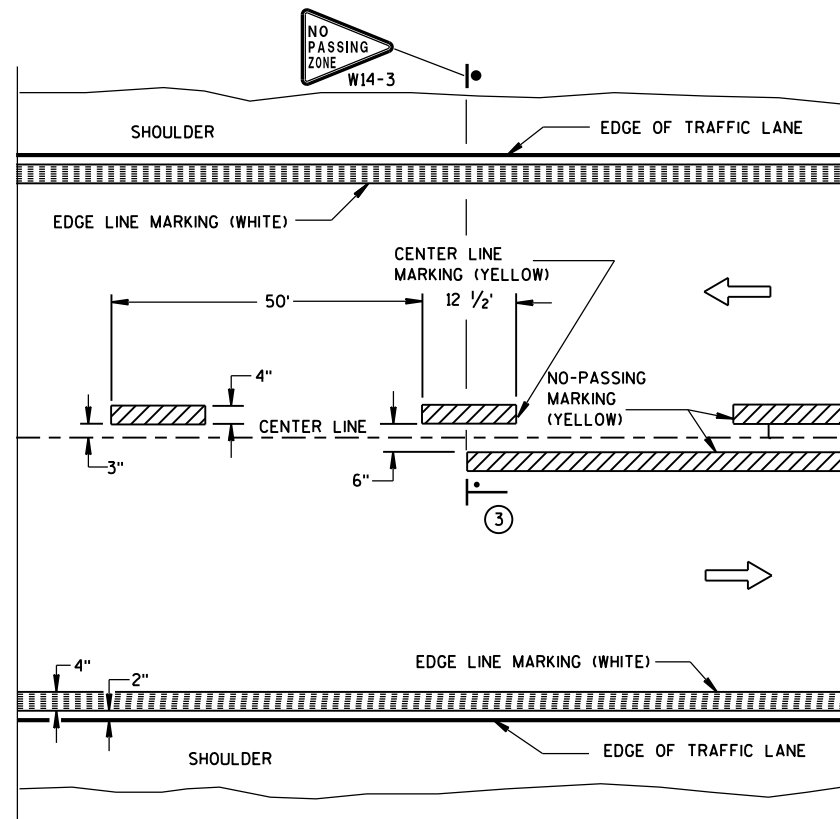
## LEGEND

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

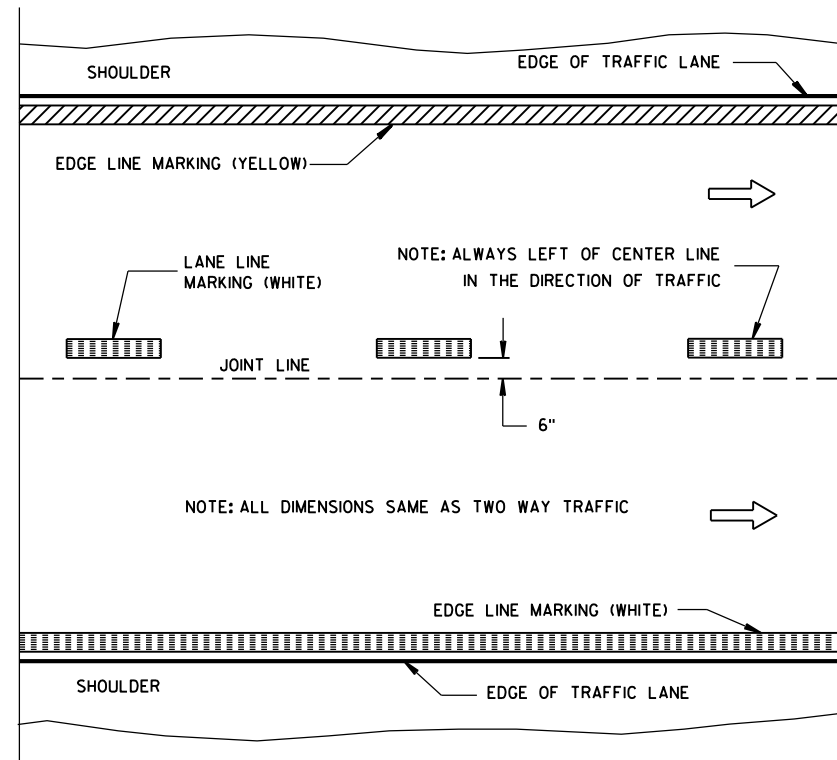
TRAFFIC CONTROL, ADVANCE  
WARNING SIGNS 45 M.P.H.  
OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sept. 2015 /S/ Peter Amokobe Atepe  
DATE STATEWIDE WORK ZONE TRAFFIC  
FHWA SAFETY ENGINEER

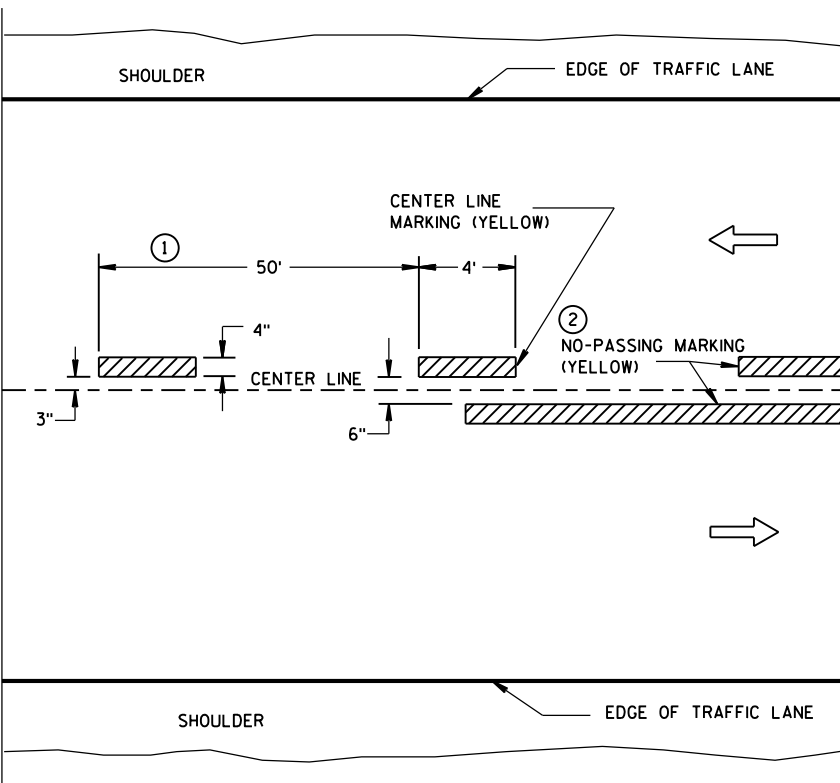


TWO WAY TRAFFIC

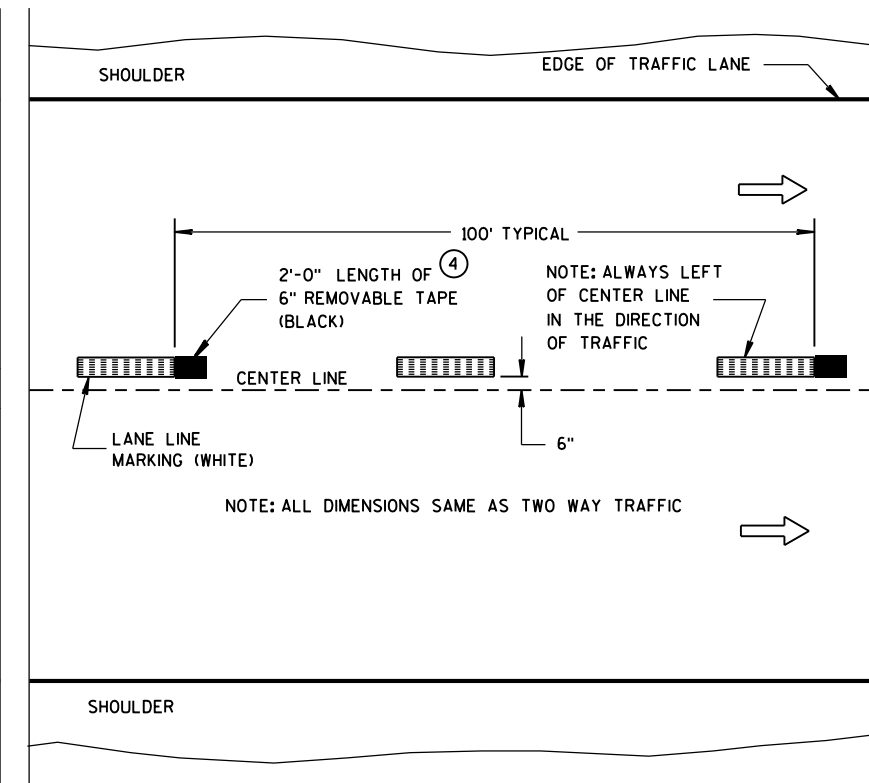


ONE WAY TRAFFIC

## PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING  
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

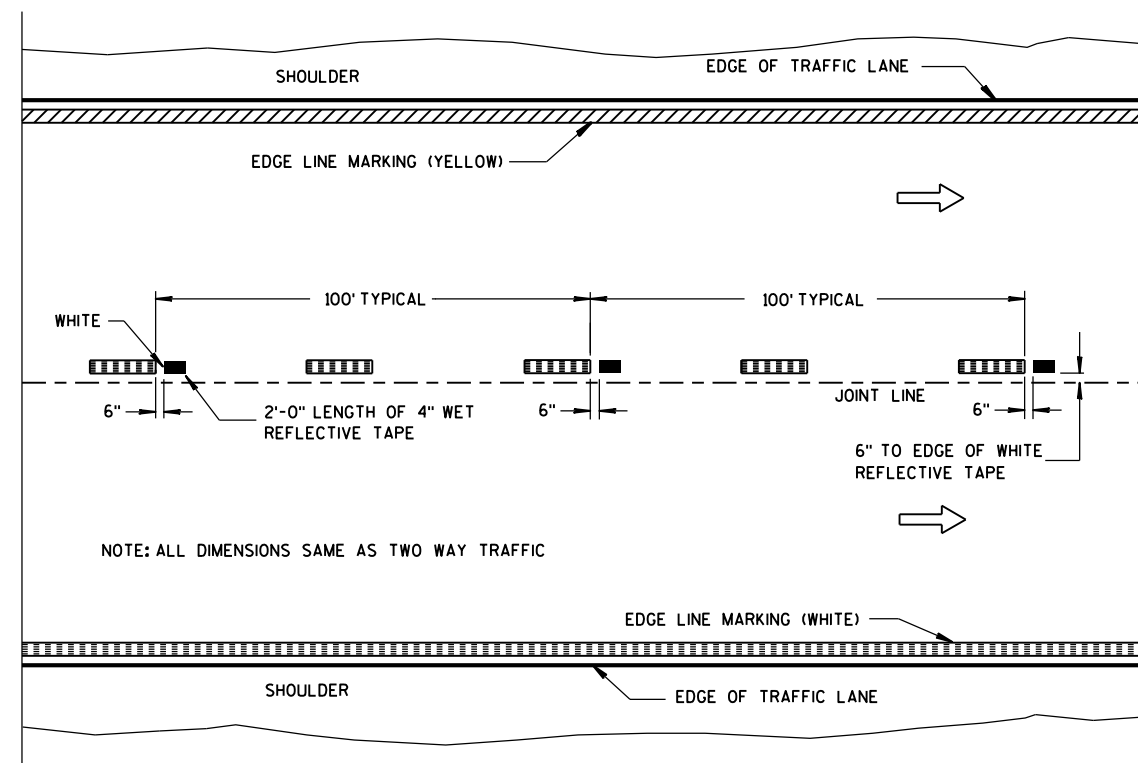
## GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

## NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO  
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

## LEGEND

- "T" MARKING
- POST MOUNTED SIGN





PAVEMENT MARKING  
(MAINLINE)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
5-13-2013  
DATE  
FHWA

/S/ Travis Feltes  
STATE TRAFFIC ENGINEER

LEGEND

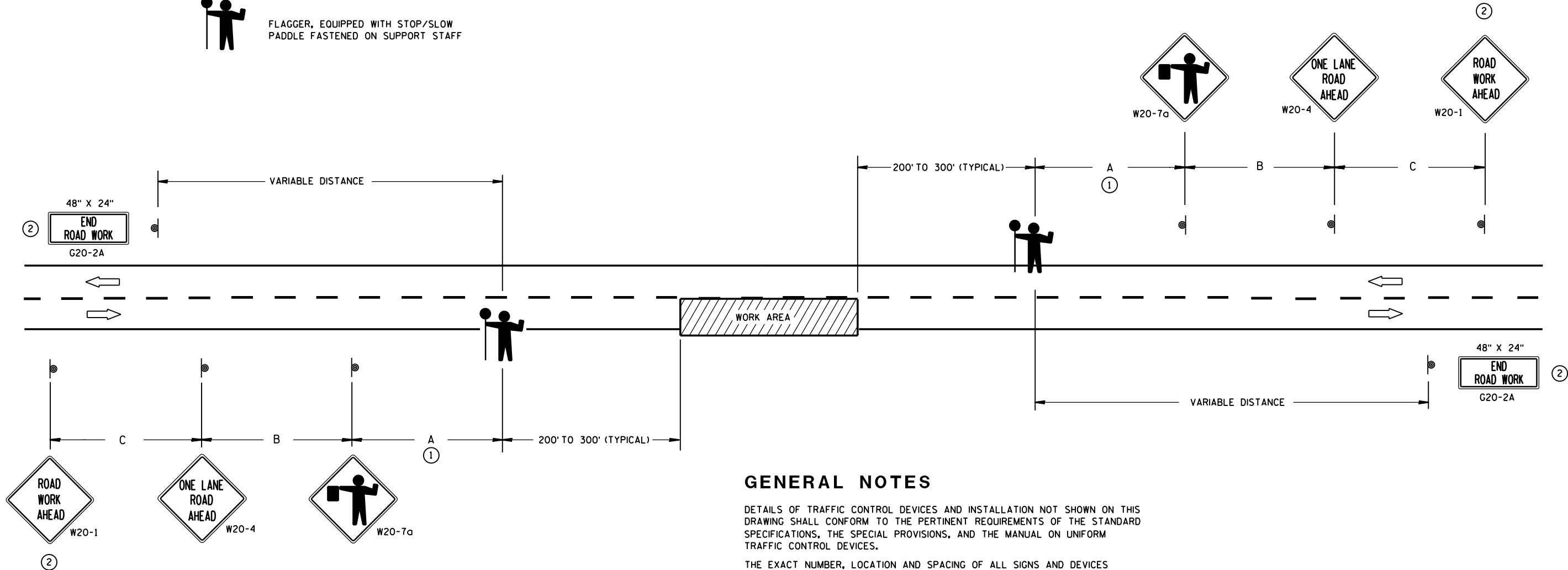
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT 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.

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.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE 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.

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, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
8/2013 /S/ Travis Feltes  
DATE STATE TRAFFIC ENGINEER OF DESIGN  
FHWA

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

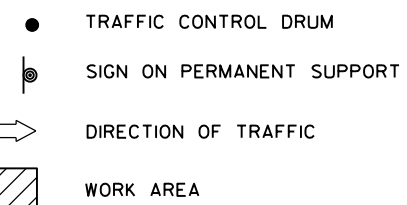
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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.

SHOULDER TAPER LENGTH (FEET)						BUFFER SPACE (FEET)
S \ W	4	6	8	10		
30	20	30	40	50	200	
35	30	45	55	70	250	
40	40	55	75	90	305	
45	60	90	120	150	360	
50	70	100	135	170	425	
55	75	110	150	185	495	

TAPER LENGTH

$$L = \frac{WS^2}{60} \text{ AT } 40 \text{ MPH OR LESS}$$


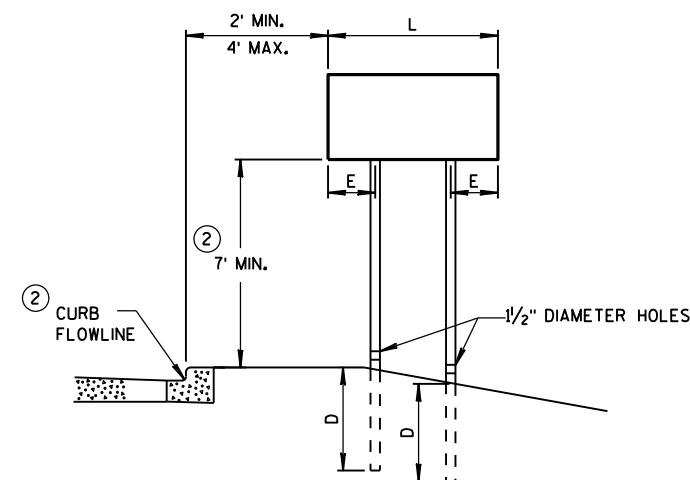
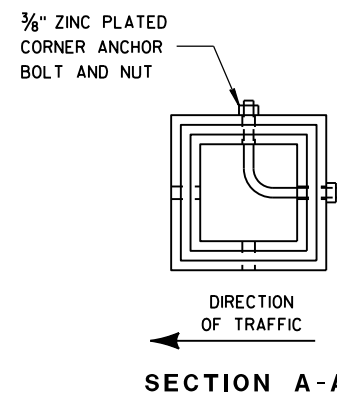
APPROVED  
July 14, 2015 /S/ Peter Amokobe Atepe  
DATE STATEWIDE WORK ZONE TRAFFIC  
SAFETY ENGINEER  
FHWA



## 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 LARGER THAN 27 SQ.FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

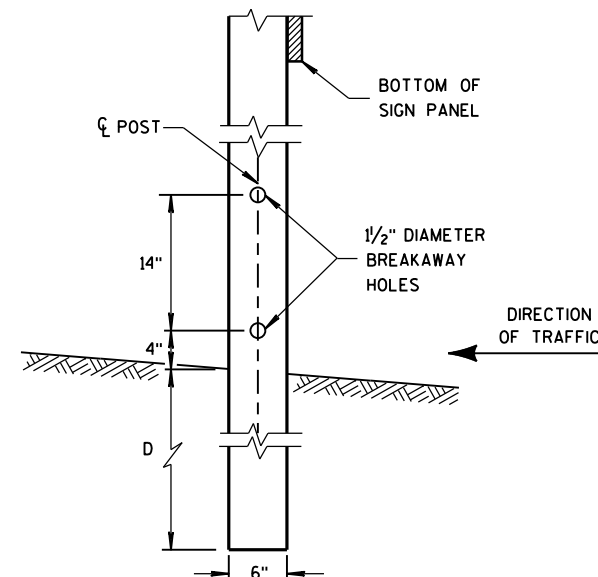


**URBAN AREA**

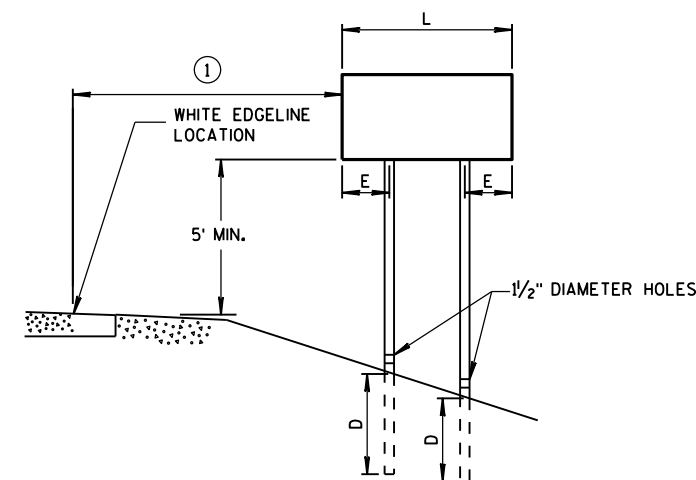
## POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST  
EMBEDMENT DEPTH

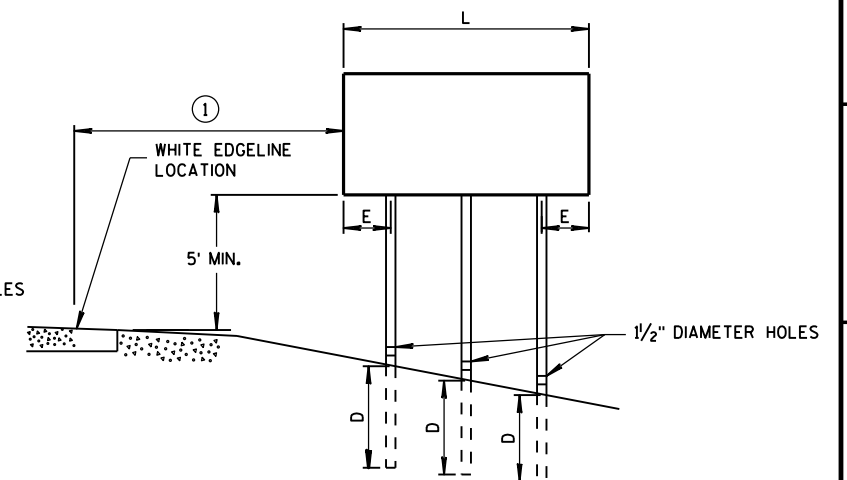
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



## 4" x 6" WOOD POST MODIFICATION



## RURAL AREA



## 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.

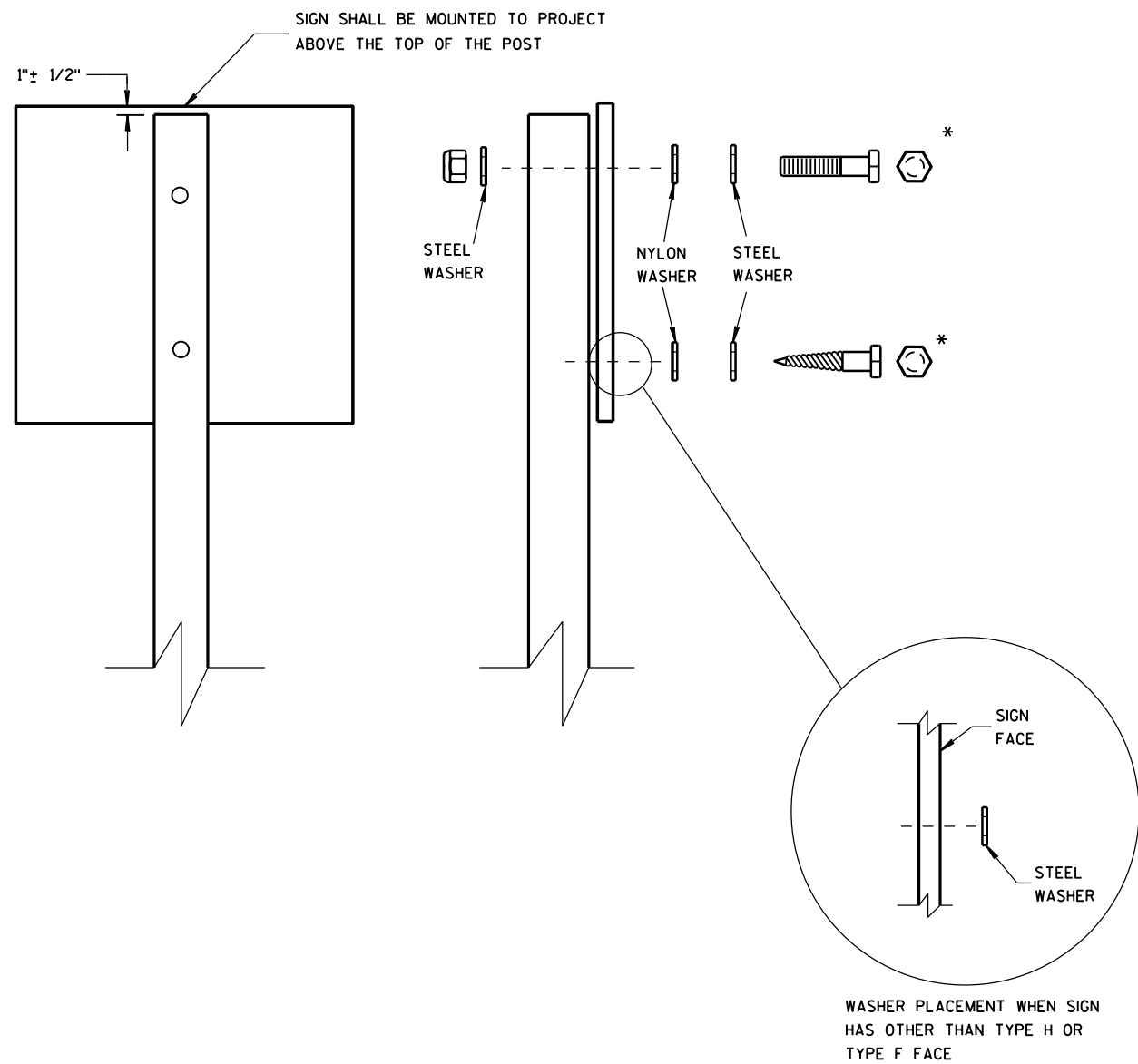
4" X 6" WOOD POST

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)

## TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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 POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
  - MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

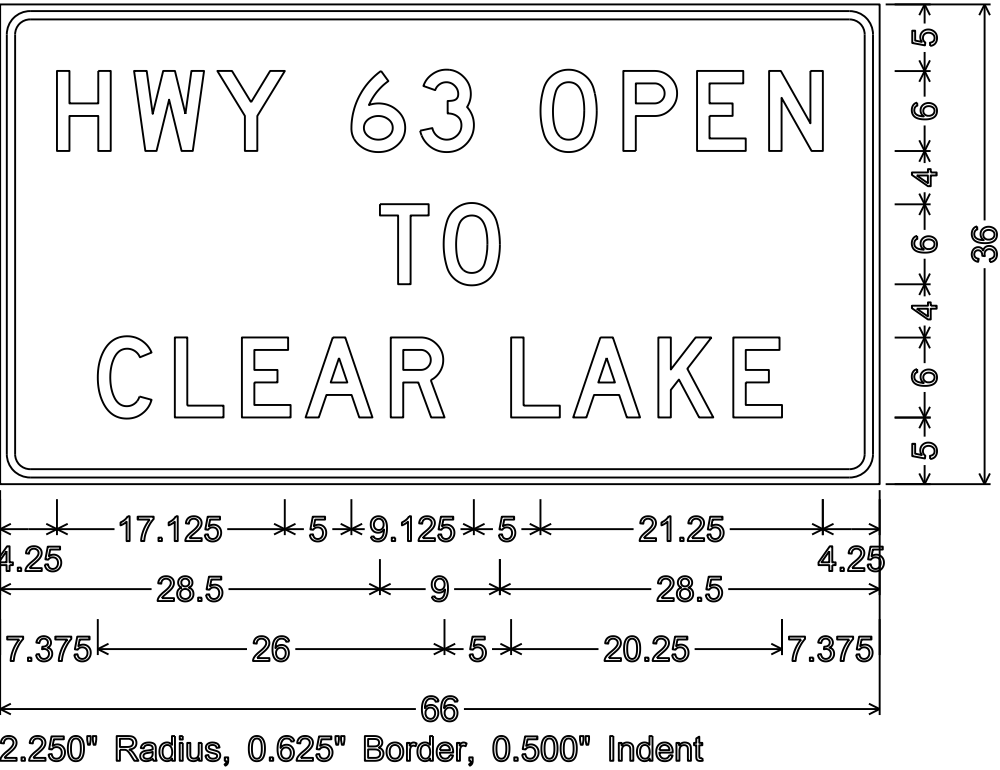
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS
  - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 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

\* 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 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

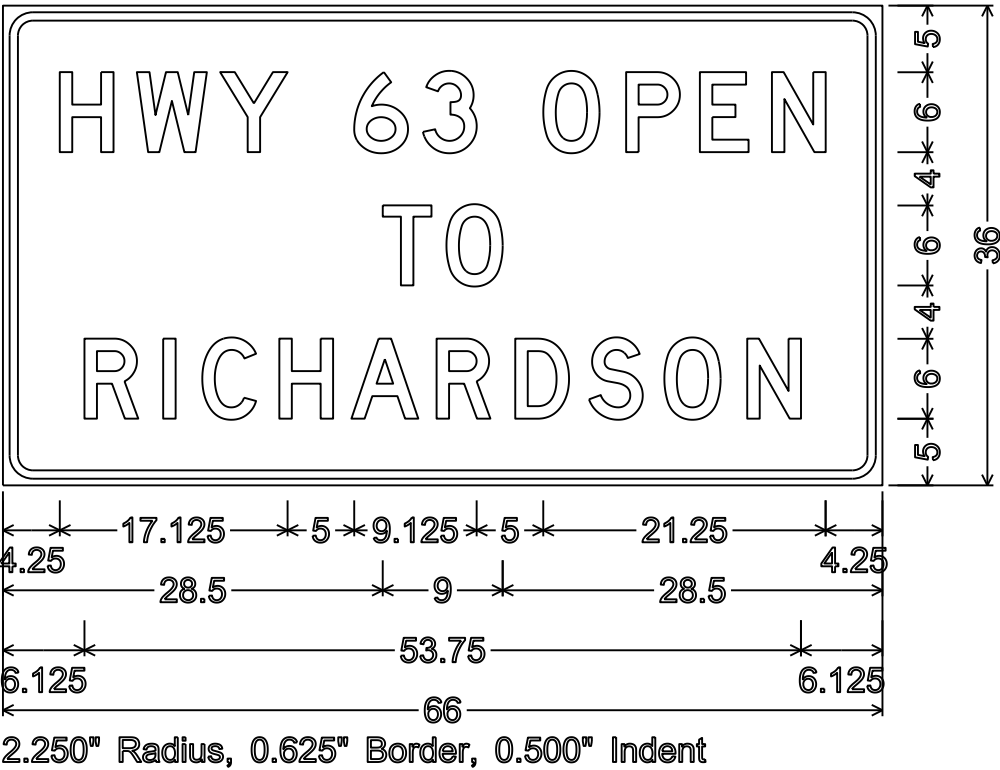
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Feb. 2015 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN
FHWA	

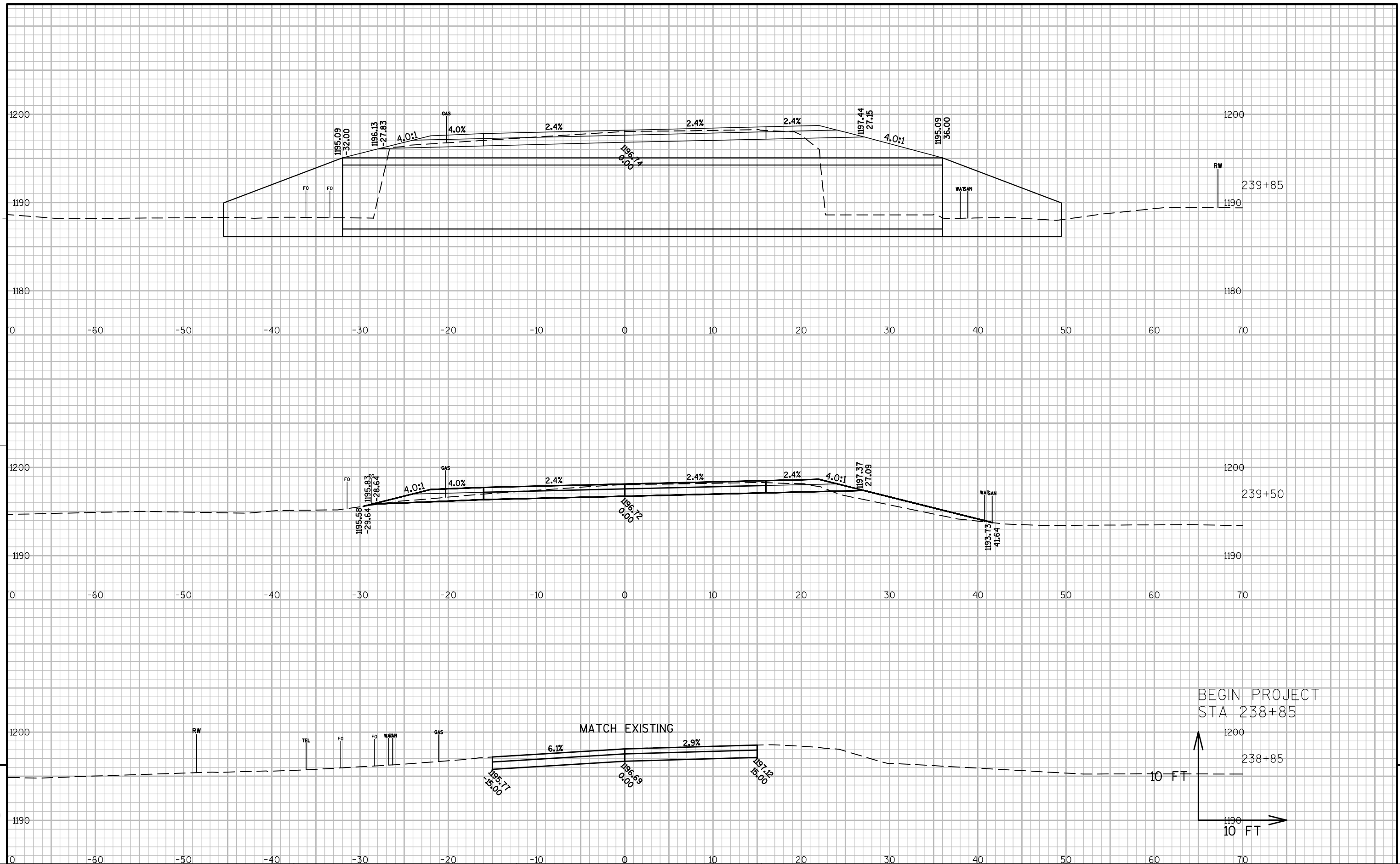




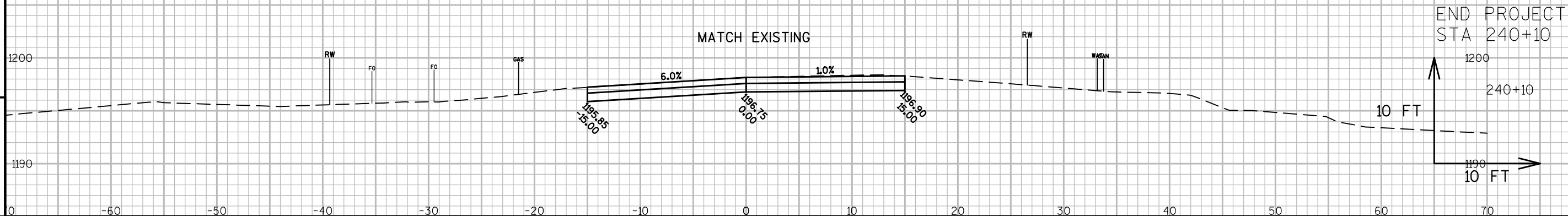
NOTES

- 1. All Signs are Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - D





9



9



## ***Wisconsin Department of Transportation***

Dedicated people creating transportation solutions  
through innovation and exceptional service.

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