

ABUT. ABUTMENT
AGG. AGGREGATE
AH. AHEAD
APPROX. APPROXIMATE
A.E.W. APRON ENDWALL
ASPH. ASPHALTIC
A.D.T. AVERAGE DAILY TRAFFIC
AZ. AZIMUTH
BK. BACK
BEG. BEGIN
B.M. BENCH MARK

BK. BACK
BEG. BEGIN
B.M. BENCH MARK
C/L CENTER LINE
CONC. CONCRETE
CONST. CONSTRUCTION
CO. COUNTY
CO.T.H. COUNTY TRUNK HIGHWAY

C.T.H. COUNTY TRUNK HIGHW
X-SEC. CROSS SECTION
CR. CRUSHED
CFS CUBIC FEET/SECOND
CULV. CULVERT

C.P. CULVERT PIPE
D.O.T. DEPARTMENT OF TRANSPORTATION
D.H.V. DESIGN HOUR VOLUME

DIA. DIAMETER
D. DIRECTIONAL DISTRIBUTION

DISCH. OR DIS.

EA.
EACH
ELECT.
EL. OR ELEV.
EMBANKMENT

E.B.S. EXCAVATION BELOW SUBGRADE EXIST. EXISTING

EXIST. EXISTING
FERT. FERTILIZE
F.E. FIELD ENTRANCE
FIN. FINISHED
FT. FOOT
F.L. FLOW LINE
GA. GAUGE
HORIZ. HORIZONTAL
CWT. HUNDREDWEIGHT

LT. LEFT
L.H.F. LEFT-HAND FORWARD

LIN. LINEAR
LIN. FT. LINEAR FOOT
L.S. LUMP SUM
MAX. MAXIMUM
MI. MILE
MISC. MISCELLANEOUS
N.E. NORTH EAST
N.W. NORTH WEST
PAV'T PAVEMENT

PAV'T
PAVEMENT
P.C.
POINT OF CURVATURE
P.I.
POINT OF INTERSECTION
P.T.
POINT OF TANGENCY
P.O.T.
POINT ON TANGENT
LB.
POUND
P.E.
PRIVATE ENTRANCE
PROJ.
R.
RANGE
REO'D
REQUIRED

R. RANGE
REQ'D REQUIRED
RT. RIGHT
R.H.F. RIGHT-HAND FORWARD
R/W RIGHT OF WAY

 R/W
 RIGHT OF WAY

 RD.
 ROAD

 SHR.
 SHRINKAGE

 SL.
 SLOPE

 STD.
 STANDARD

S.D.D. STANDARD DETAIL DRAWINGS
S.T.H. STATE TRUNK HIGHWAY
STA. STATION
S.P.P.A. STRUCTURAL PLATE PIPE ARCH

STRUCT. STRUCTURE
SURF. SURFACE
TEL. TELEPHONE
TN. TOWN

T. TRUCKS (PERCENT OF)
UNCL. UNCLASSIFIED
U.G. UNDERGROUND

V. VELOCITY OR DESIGN SPEED V.C. VERTICAL CURVE

GENERAL NOTES

WHEN THE QUANTITY OF THE ITEMS OF SUBBASE OR SURFACE COURSE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE SALVAGED TOPSOILED. SEEDED. AND MULCHED AS DIRECTED BY THE ENGINEER.

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

THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES UNDISTRIBUTED AMOUNTS. THE DISTRUBUTION AND LOCATION OF THESE MATERIALS ARE TO BE DETERMINED BY THE ENGINEER.

THE LOCATION OF EXISTING UTILITY LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE SOME OTHER UTILITY INSTALLATIONS WITHIN THE AREA THAT ARE NOT SHOWN. IT IS THE CONCRACTOR'S RESPONSIBILITY TO CALL DIGGERS HOTLINE PRIOR TO BEGINNING WORK OPERATIONS. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

ALL TEMPORARY STOCK PILES MUST BE IN AN UPLAND LOCATION AND PROTECTED WITH EROSION CONTROL MEASURES. DO NOT STOCKPILE MATERIALS IN WETLANDS, WATERWAYS, OR FLOODPLAIN'S.



DNR WEST CENTRAL REGION 1300 W CLAIRMONT AVENUE EAU CLAIRE, WI 54701 TELEPHONE: 715-934-9014 ATTN: LEAH NICOL LEAH.NICOL@WISCONSIN.GOV

UTILITIES

ASTREA F/K/A PACKERLAND BROADBAND ANDY HEIGL 105 KENT ST PO BOX 190 IRON MOUNTAIN, MI 49801-0190 906-774-6621 (OFFICE) 906-221-7536 (MOBILE) andy.heigl@astreaconnect.com

CHARTER SPECTRUM
JESSE GRUNY
SUITE 103
508 N CENTRAL AVE
MARSHFIELD, WI 54449
715-370-4171 (OFFICE)
715-651-5605 (MOBILE)
jesse.gruny@charter.com

FRONTIER COMMUNICATIONS RUSS RYAN 521 N 4TH ST WAUSAU, WI 54403 920-583-3275 (OFFICE) 920-737-9662 (MOBILE) russell.w.ryan@ftr.com

DESIGN CONTACT WISDOT NATHAN ULNESS 715-563-4631 (MOBILE) Nathan.Ulness@dot.wi.gov

PROJECT NO: 7040-00-70 HWY: STH 98 COUNTY: CLARK GENERAL NOTES SHEET **E** 

ILE NAME : N:\PD\$\C3D\70400000\\$HEET\$PLAN\020000-TYPICAL SECTIONS AND DETAIL\$\020101\_GENERAL NOTE\$\020101\_GN.DWG

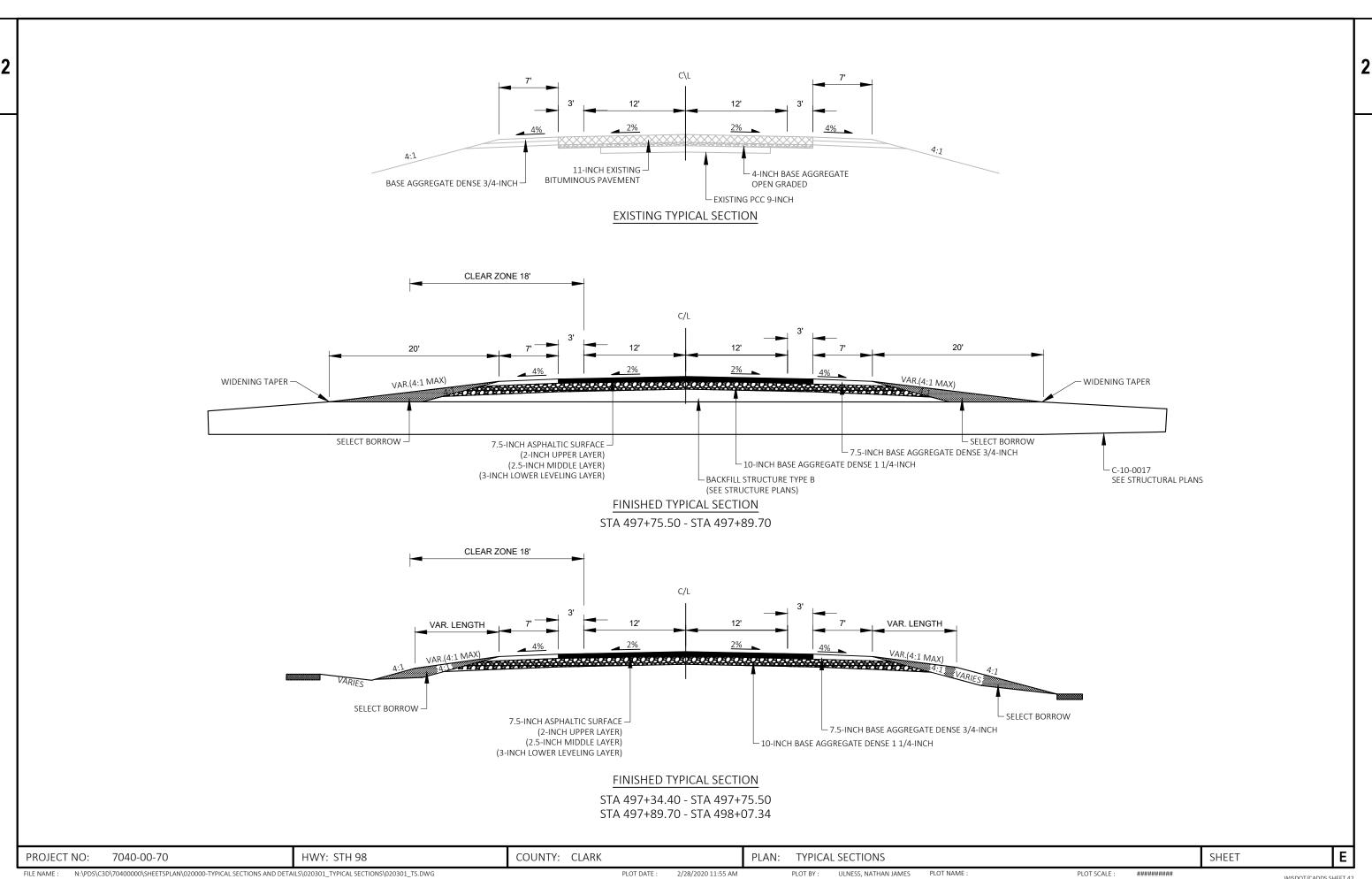
PLOT DATE :

2/28/2020 11:55 AM

: ULNESS, NATHAN JAMES

PLOT NAME

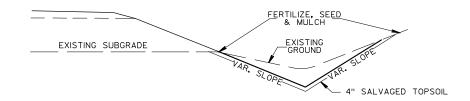
PLOT SCALE :



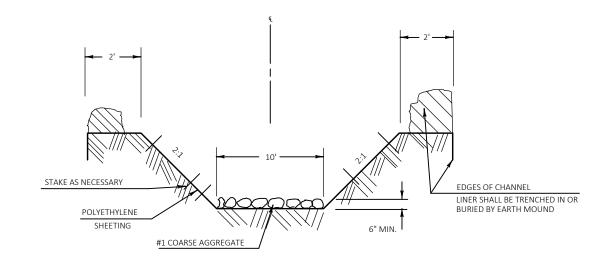
# RUNOFF COEFFICIENT TABLE

		HYDROLOGIC SOIL GROUP										
		А			В			C	;		D	
	SLOPE	RANGE	(PERCENT)	SLOPE RANGE (PERCENT)		SLOPE	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 .30	.22 .38	.12	.20 .34	.27 .44	.15	.24 .37	.33 .50	.19	.28	.38 .56
MEDIAN STRIP- TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE- TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:										1	l	
ASPHALT						.7095						
CONCRETE						.8095						
BRICK						.7080						
DRIVES, WALKS						.7585						
ROOFS						.7595						
GRAVEL ROADS,	SHOULDE	ERS				.4060						

TOTAL PROJECT AREA = \_\_\_\_\_ ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = \_\_\_\_\_ACRES

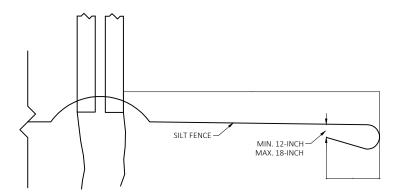


DITCH SHAPING DETAIL

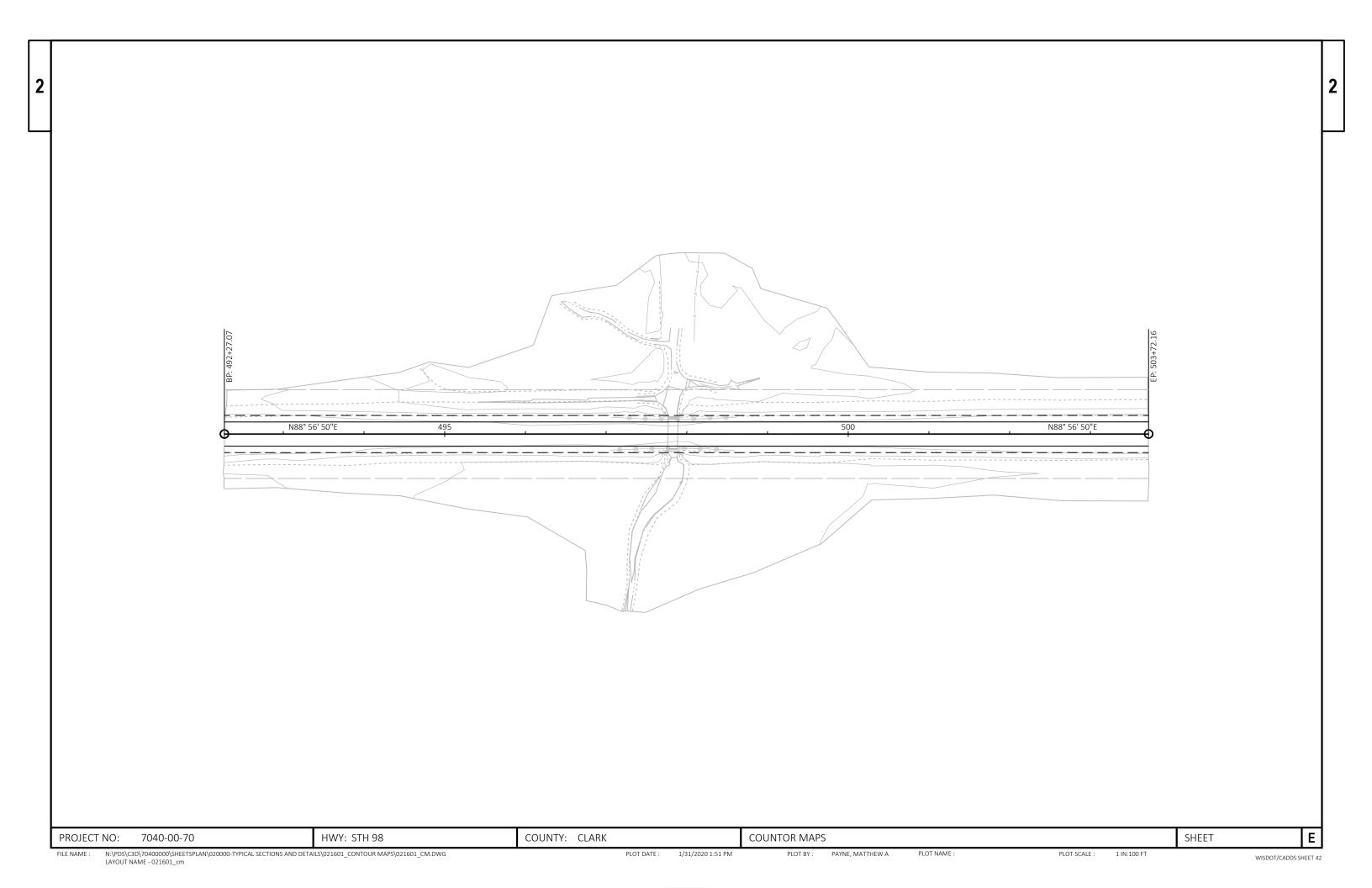


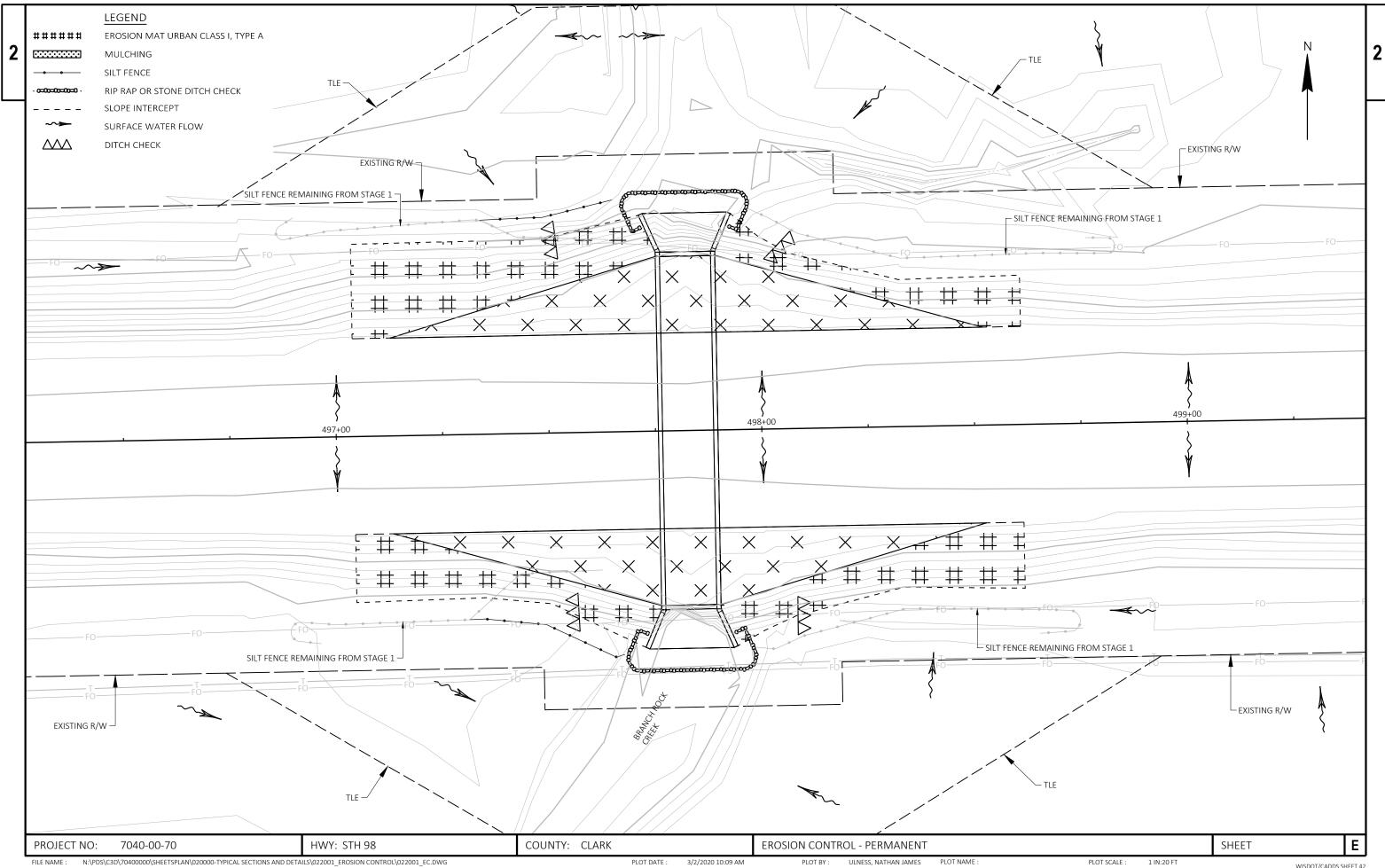
#### TYPICAL SECTION OF TEMPORARY CHANNEL CHANGE

NOTE: AU ITEMS USED TO DIVERT CHANNEL ARE INCIDENTAL TO THE BID ITEM "TEMPORARY WATER DIVERSION, BRANCH ROCK CREEK"



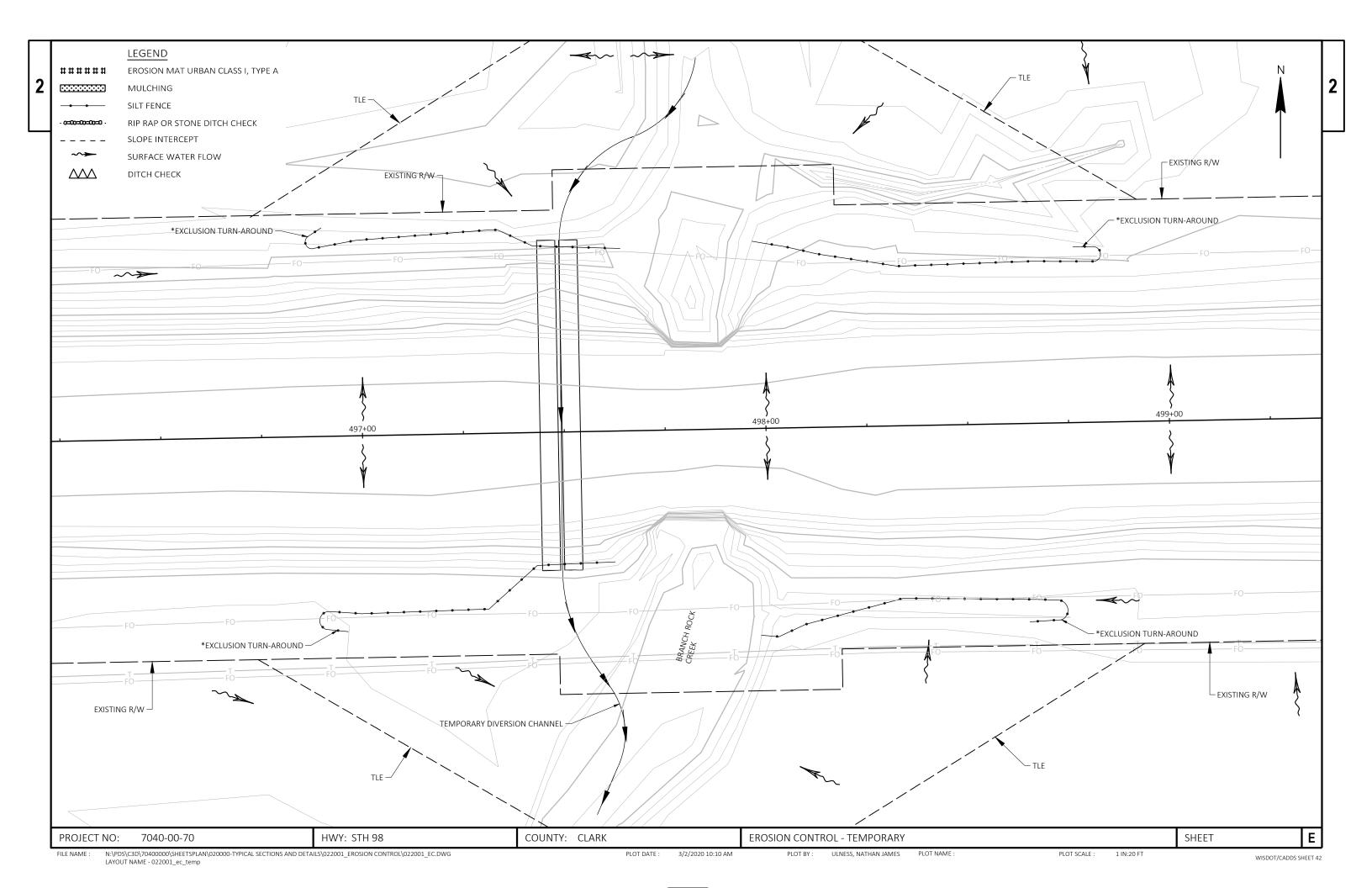
EXCLUSION FENCING TURN-AROUND

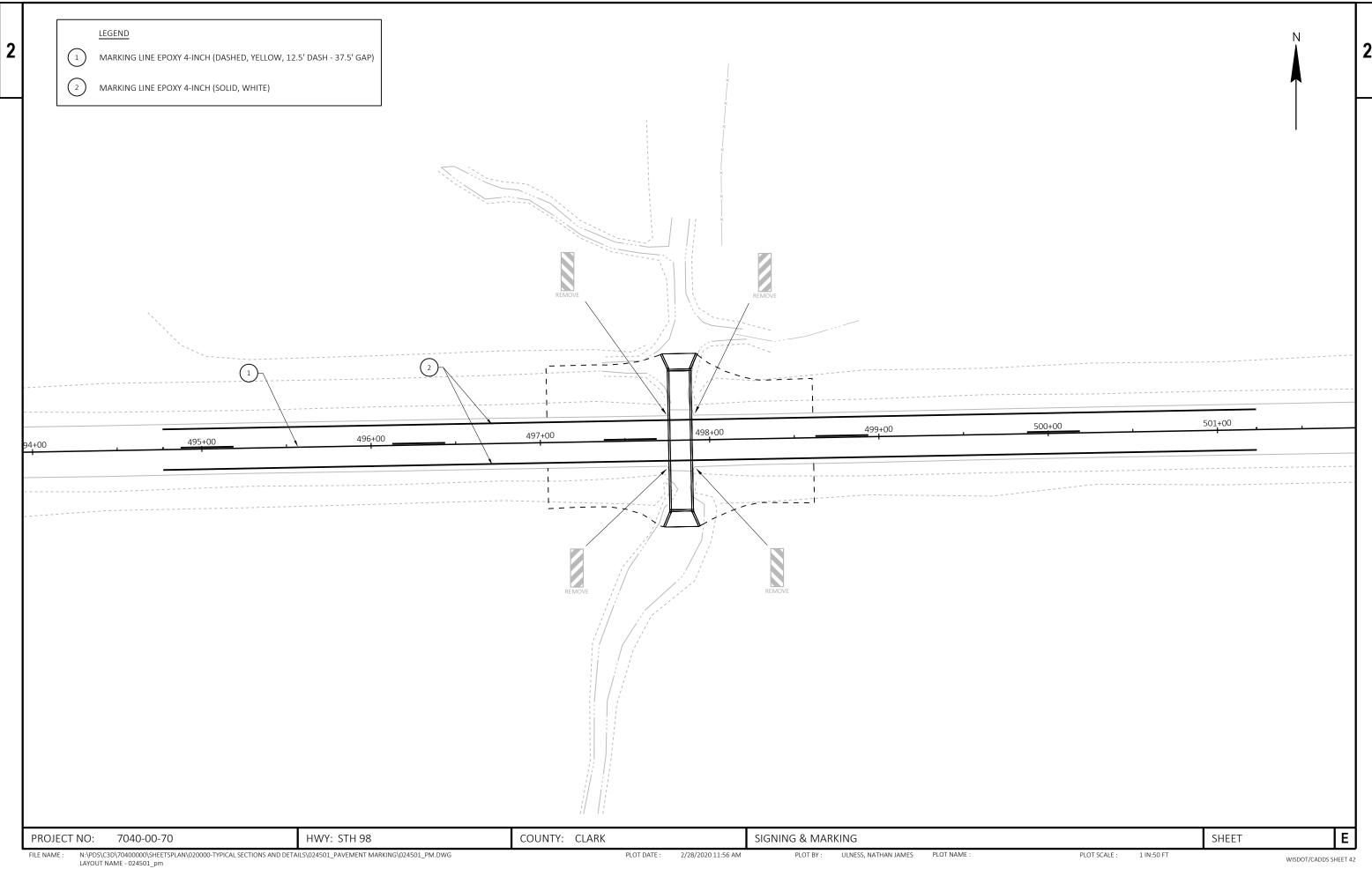




LAYOUT NAME - 022002\_ec\_perm

WISDOT/CADDS SHEET 42





MAX.	
<b>4</b> 12 <b>3</b>	
WIDTH	
W12-52 48"X48"	
3 MILES	
AHEAD	
W057-52 48"X36"	
TO BE PLACED AT THE CTH Y INTERSECTION	

3/2/2020 3:15 PM

			Phase 1 Direction	Phase 2 Direction
Intomial	Phase Time	Cumulative Time	NI	C
Interval	(Seconds)	(Seconds)	N S	
1	12	12	Green	Red
2	4	16	Yellow	Red
3	25	41	Red	Red
4	12	53	Red	Green
5	4	57	Red	Yellow
6	25	82	Red	Red

FILE NAME  $N:\PDS\C3D\T0400000\SHEETSPLAN\020000-TYPICAL\ SECTIONS\ AND\ DETAILS\025001\_TRAFFIC\ CONTROL\025001\_TC\ STAGE\ 1.DWG$ 

W12-52 48"X48" 4 MILES AHEAD

W057-52

CTH K INTERSECTION

48"X36' TO BE PLACED AT THE

9.5MILES

AHEAD

48"X36"

TO BE PLACED AT THE

STH 73 INTERSECTION

7040-00-70

PROJECT NO:

5.5MILES

AHEAD

W057-52

48"X36"

TO BE PLACED AT THE STH 13 INTERSECTION

COUNTY: CLARK

PLOT BY:

TRAFFIC CONTROL C-10-0017 STAGE 1

PLOT NAME

PLOT SCALE: 1 IN:100 FT

SHEET

HWY: STH 98

XR SG

# LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT

SIGN ON TEMPORARY SUPPORT

CONCRETE BARRIER TEMPORARY PRECAST

WORK AREA

DIRECTION OF TRAFFIC

TEMPORARY TRAFFIC SIGNAL WITH BACKPLATE AND 12-INCH LENSES MOUNTED ON TRAILER

#### TRAFFIC CONTROL GENERAL NOTES:

1.) SEE STANDARD DETAIL DRAWING 15 D 33 "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS" AND STANDARD DETAIL DRAWING 9 G 02-C "BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION" FOR TRAFFIC CONTROL DETAILS. NOT SHOWN ON THIS DETAIL DRAWING.

SEE STANDARD DETAIL DRAWING 14 B 7-15 "CONCRETE BARRIER TEMPORARY PRECAST" FOR BARRIER END TREATMENT DETAILS (TYP.)

STAGE 1 AND STAGE 2 DESIGNATIONS FOR CONSTRUCTION ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT INDICATIVE OF THE ORDER IN WHICH WORK WILL BE PERFORMED.

THE CONTRACTOR SHALL REVIEW SIGNALS AFTER PROGRAMMING TO ASSURE THERE ARE NO CONFLICTING MOVEMENTS. ONCE THE TEMPORARY SIGNAL HAS BEEN ACTIVATED, THE CONTRACTOR SHALL REVIEW THE TIMINGS DURING THE PEAK HOURS AND NOTIFY THE DEPARTMENT OF ANY RECOMMENDED TIMING CHANGES TO OPTIMIZE THE TRAFFIC SIGNAL, IF NEEDED.

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.

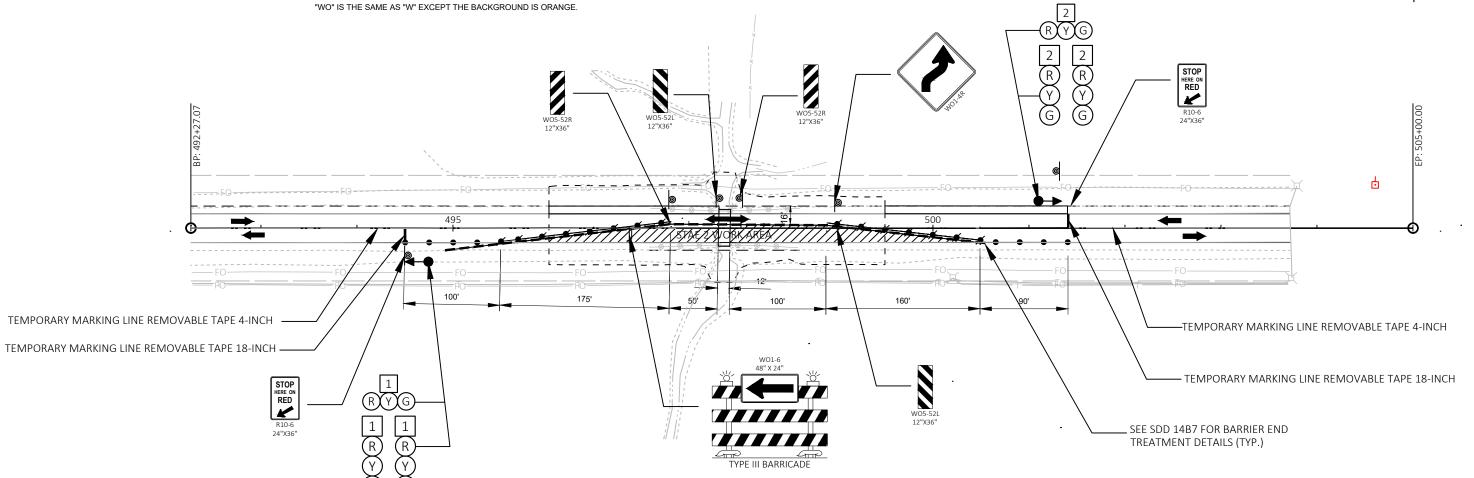
ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

#### CONTINUED:

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

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE, AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

STOPLINE TO STOPLINE DISTANCE 687'



			Phase 1 Direction	Phase 2 Direction		
Intomial	Phase Time	Cumulative Time	N	,		
Interval	(Seconds)	(Seconds)	N	5	\$	
1	12	12	Green	Red		
2	4	16	Yellow	Red		
3	25	41	Red	Red		
4	12	53	Red	Green		
5	4	57	Red	Yellow		
6	25	82	Red	Red		

PROJECT NO: 7040-00-70 HWY: STH 98 COUNTY: CLARK TRAFFIC CONTROL C-10-0017 STAGE 2 SHEET

Ε

Alignment: Alignment -STH 98

Description:

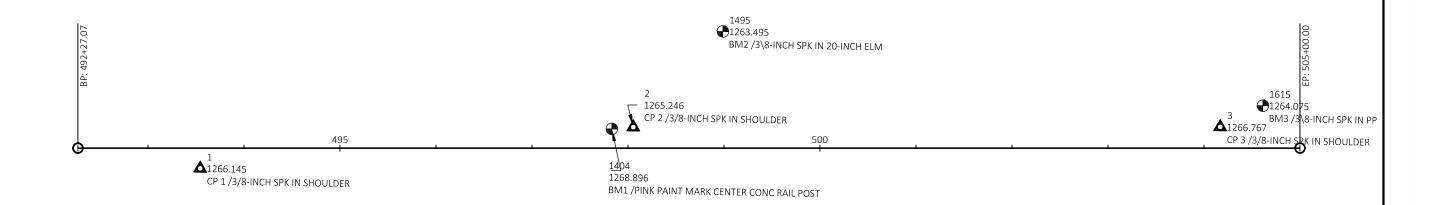
Layer: P\_ALI\_Alignment -STH 98

Tangent N 416364.372 E 731551.218 Z Station 492+27.07

Distance 1322.930' Bearing N 88° 56' 49.66 E"

End N 416388.681 E 732873.925 Z Station 505+50

Alignment Length = 1322.93'



					CONTROL POIN	NTS
POINTS	STATION	OFFSET	COORDINATE X	COORDINATE Y	ELEVATION	DESCRIPTION
CP1	493+54.43	21.16'	731678.94	416345.55	1266.14	3/8-INCH SPK 6' SOUTH OFSOUTH EOB STH 98 IN SHOULDER
CP2	498+05.57	-21.18'	732129.79	416396.79	1265.25	3/8-INCH SPK IN NORTH SHOULDER OF STH 98 AT NE CORNER BRIDGE
CP3	504+16.94	-22.00'	732740.48	416408.23	1266.76	3/8-INCH SPK IN GRAVEL SHOULDER NORTH SIDE STH 98 6' NORTH EOB

		BENCHMA	RKS
POINTS	STATION	OFFSET	ELEVATION
BM1	497+83.18	-20.05'	1268.89
BM2	498+98.87	-121.42'	1263.49
ВМЗ	504+61.36	-44.18'	1264.07

PROJECT NO: 7040-00-70 HWY: STH 98 COUNTY: CLARK PLAN DETAILS: ALIGNEMENT SHEET **E** 

					7040-00-70	
Line	Item	Item Description	Unit	Total	Qty	
0002	203.0200	Removing Old Structure (station) 01. 497+82.7	LS	1.000	1.000	
0004	204.0100	Removing Pavement	SY	146.000	146.000	
0006	204.0165	Removing Guardrail	LF	312.000	312.000	
8000	206.2000	Excavation for Structures Culverts (structure) 01. C-10-17	LS	1.000	1.000	
0010	208.1100	Select Borrow	CY	243.000	243.000	
0012	210.2500	Backfill Structure Type B	TON	790.000	790.000	
0014	213.0100	Finishing Roadway (project) 01. 7040-00-70	EACH	1.000	1.000	
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	58.000	58.000	
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	238.000	238.000	
0020	311.0115	Breaker Run	CY	80.000	80.000	
0022	455.0605	Tack Coat	GAL	52.000	52.000	
0024	465.0105	Asphaltic Surface	TON	106.000	106.000	
0026	465.0125	Asphaltic Surface Temporary	TON	12.000	12.000	
0028	504.0100	Concrete Masonry Culverts	CY	148.000	148.000	
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	25,560.000	25,560.000	
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	640.000	640.000	
0034	511.1200	Temporary Shoring (structure) 01. C-10-0017	SF	70.000	70.000	
0036	516.0500	Rubberized Membrane Waterproofing	SY	24.000	24.000	
0038	520.2054	Culvert Pipe Temporary 54-Inch	LF	164.000	164.000	
0040	603.8000	Concrete Barrier Temporary Precast Delivered	LF	552.000	552.000	
0042	603.8125	Concrete Barrier Temporary Precast Installed	LF	1,104.000	1,104.000	
0044	606.0300	Riprap Heavy	CY	39.000	39.000	
0046	614.0360	Steel Plate Beam Guard Temporary	LF	60.000	60.000	
0048	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7040-00-70	EACH	1.000	1.000	
0050	619.1000	Mobilization	EACH	1.000	1.000	
0052	624.0100	Water	MGAL	4.600	4.600	
0054	625.0500	Salvaged Topsoil	SY	308.000	308.000	
0056	627.0200	Mulching	SY	308.000	308.000	
0058	628.1504	Silt Fence	LF	446.000	446.000	
0060	628.1520	Silt Fence Maintenance	LF	446.000	446.000	
0062	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000	
0064	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000	
0066	628.2006	Erosion Mat Urban Class I Type A	SY	348.000	348.000	
0068	628.7504	Temporary Ditch Checks	LF	40.000	40.000	
0070	629.0210	Fertilizer Type B	CWT	0.200	0.200	
0072	630.0110	Seeding Mixture No. 10	LB	5.000	5.000	
0074	630.0500	Seed Water	MGAL	7.000	7.000	
0076	638.2602	Removing Signs Type II	EACH	4.000	4.000	
	000.2002			1.000	1.000	

Creek

					7040-00-70
Line	Item	Item Description	Unit	Total	Qty
0078	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0800	642.5001	Field Office Type B	EACH	1.000	1.000
0082	643.0300	Traffic Control Drums	DAY	4,408.000	4,408.000
0084	643.0420	Traffic Control Barricades Type III	DAY	232.000	232.000
0086	643.0715	Traffic Control Warning Lights Type C	DAY	3,712.000	3,712.000
8800	643.0900	Traffic Control Signs	DAY	2,668.000	2,668.000
0090	643.5000	Traffic Control	EACH	1.000	1.000
0092	645.0105	Geotextile Type C	SY	253.000	253.000
0094	645.0120	Geotextile Type HR	SY	99.000	99.000
0096	646.1020	Marking Line Epoxy 4-Inch	LF	1,467.000	1,467.000
0098	646.9000	Marking Removal Line 4-Inch	LF	1,467.000	1,467.000
0100	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	1,000.000	1,000.000
0102	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	60.000	60.000
0104	650.4500	Construction Staking Subgrade	LF	73.000	73.000
0106	650.5000	Construction Staking Base	LF	73.000	73.000
0108	650.6500	Construction Staking Structure Layout (structure) 01. C-10-0017	LS	1.000	1.000
0110	650.9910	Construction Staking Supplemental Control (project) 01. 7040-00-70	LS	1.000	1.000
0112	650.9920	Construction Staking Slope Stakes	LF	175.000	175.000
0114	661.0100	Temporary Traffic Signals for Bridges (structure) 01. C-10-0017	LS	1.000	1.000
0116	690.0150	Sawing Asphalt	LF	30.000	30.000
0118	690.0250	Sawing Concrete	LF	114.000	114.000
0120	715.0502	Incentive Strength Concrete Structures	DOL	1,480.000	1,480.000
0122	SPV.0105	Special 01. Temporary Diversion Channel, Branch Rock	LS	1.000	1.000

**Estimate Of Quantities** 

497+34 - 498+07

204. 0100

146

146

REMOVING PAVEMENT STATION TO STATION LOCATI ON SY

STH 98

REMARKS MAINLINE WITH EXISTING PCC

STAGE 2

DEMADES

0. 5

PROJECT TOTALS

SELECT BORROW

208. 1100

SELECT BORROW STATION TO STATION LOCATI ON CY REMARKS STH 98 MAI NLI NE 497+04 - 498+61 243

TOTAL 0010

243

# REMOVING GUARDRAIL

497+34 - 498+07

MOLTATO OT MOLTATO

204. 0165

REMOVING GUARDRAIL

312

STATION TO STATION LOCATI ON REMARKS 497+06 - 498+61 STH 98 156 LT 497+04 - 498+59 STH 98 156 RT

WB SHOULDER

LOCATION

PROJECT TOTAL

# BASE AGGREGATE DENSE 3/4-INCH

305. 0110 624. 0100 BASE AGGREGATE WATER DENSE 3/4 INCH STATION TO STATION LOCATI ON REMARKS 29 497+34 - 498+07 EB SHOULDER 0. 5 STAGE 1

> PROJECT TOTALS 58 1. 0

29

# FINISHING ROADWAY (7040-00-70)

213. 0100 FINISHING ROADWAY

LOCATI ON EACH REMARKS **PROJECT** STH 98

# TACK COAT

145 0105

PROJECT TOTALS

455, 0605 TACK COAT STATION TO STATION LOCATI ON GAL REMARKS 497+34 - 498+07 EB MAINLINE 26 STAGE 1 497+34 - 498+07 26 STAGE 2 WB MAINLINE PROJECT TOTALS 52

# BASE AGGREGATE DENSE 1 1/4-INCH

305. 0120 624. 0100 BASE AGGREGATE WATER DENSE 1 1/4 I NCH

TON

ASPHALTIC SURFACE

# ASPHALTIC SURFACE TEMPORARY

465. 0125 ASPHALTIC SURFACE

STATION TO STATION	LUCATION	TON	MGAL	REWARKS				465. 0105				ASI	PHALITE SURFA	ACE
				<u> </u>			ASP	PHALTIC SURFA	<b>NCE</b>				TEMPORARY	
497+34 - 498+07	EB MAINLINE	68	1. 0	STAGE 1	STATION TO	STATI ON	LOCATI ON	TON	REMARKS	STATION TO	STATI ON	LOCATI ON	TON	REMARKS
497+34 - 498+07	EB SHOULDER	51	0.8	STAGE 1						-				·
497+34 - 498+07	WB MAINLINE	68	1. 0	STAGE 2	497+34 -	498+07	EB MAINLINE	53	STAGE 1	497+34 -	497+57	EB LANE	12	STAGE 1
497+34 - 498+07	WB SHOULDER	51	0.8	STAGE 2	497+34 -	498+07	WB MAINLINE	53	STAGE 2					_
	_			<u>-</u>			_					PROJECT TOTALS	12	
	PROJECT TOTALS	238	3. 6	_			PROJECT TOTALS	106						

Ε HWY: STH 98 COUNTY: CLARK MISCELLANEOUS QUANTITIES SHEET: PROJECT NO: 7040-00-70

PLOT SCALE: 1:1 FILE NAME: N:\PDS\...\030200 mq.pptx PLOT DATE: June 14, 1911 PLOT BY: NJU PLOT NAME:

#### CULVERT PIPE TEMPORARY 54-INCH FIELD OFFICE TYPE B TRAFFIC CONTROL (7040-00-70) 520. 2054 642. 5001 643. 5000 CULVERT PIPE FIELD OFFICE TRAFFIC CONTROL TYPE B TEMPORARY 54-INCH LOCATI ON EACH LOCATI ON EACH LOCATI ON LF REMARKS STH 98 PROJECT STH 85 1 STH 98 164 STAGE 1 PROJECT TOTALS PROJECT TOTALS PROJECT TOTALS 164 CONCRETE BARRIER TEMPORARY PRECAST MAINTENANCE AND REPAIR OF HAUL ROADS 603.8000 603. 8125 618. 0100 DELI VERED INSTALLED LOCATI ON EACH STATION TO STATION LOCATI ON LF LF REMARKS PROJECT STH 85 1 495+66 - 500+49 WB 552 552 STAGE 1 495+66 - 500+49 EΒ 552 STAGE 2 PROJECT TOTALS PROJECT TOTALS 552 1104

#### SILT FENCE STEEL PLATE BEAM GUARD TEMPORARY

ATION TO STATION	LOCATI ON	628. 1504 SLT FENCE LF	628. 1520 MAI NTENANCE LF	REMARKS	614.0360 STEEL PLATE BEAM GUARD TEMPORARY
96+87 - 498+84	NORTH SLOPE	185	185	STAGE 1	STATION TO STATION LOCATION LF REMARKS
96+89 - 498+75	SOUTH SLOPE	191	191	STAGE 1	407.20
97+34 - 497+66	NORTH SLOPE	32	32	STAGE 1	497+30 - 497+60 EB SHOULDER 60 STAGE 1
97+31 - 497+67	SOUTH SLOPE	38	38	STAGE 2	PROJECT TOTALS 60
	PROJECT TOTALS	446	446		

# **LANDSCAPING**

			625. 0500 SALVAGED TOPSOI L	627. 0200 MULCHI NG	628. 2006 EMAT URBAN CLASS I TYPE A	628. 7504 TEMPORARY DI TCH CHECKS	629. 0210 FERTI LI ZER TYPE B	630. 0110 SEEDI NG NO. 10	630.0500 SEED WATER
STATION TO	STATI ON	LOCATI ON	SY	SY	SY	LF	CWT	LB	MGAL
497+13 - 497+13 - 497+04 -	498+53 498+53 498+61	NORTH SLOPE SOUTH SLOPE NORTH SLOPE	154 154	154 154	183	10 10 10	0. 1 0. 1	2. 5 2. 5	3. 5 3. 5
497+04 -	498+61	SOUTH SLOPE			165	10			
		PROJECT TOTALS	308	308	348	7	0. 2	5	7. 0

PROJECT NO: 7040-00-70   HWY: STH 98   COUNTY: CLARK   MISCELLANEOUS QUA	NTITIES SHEET:	
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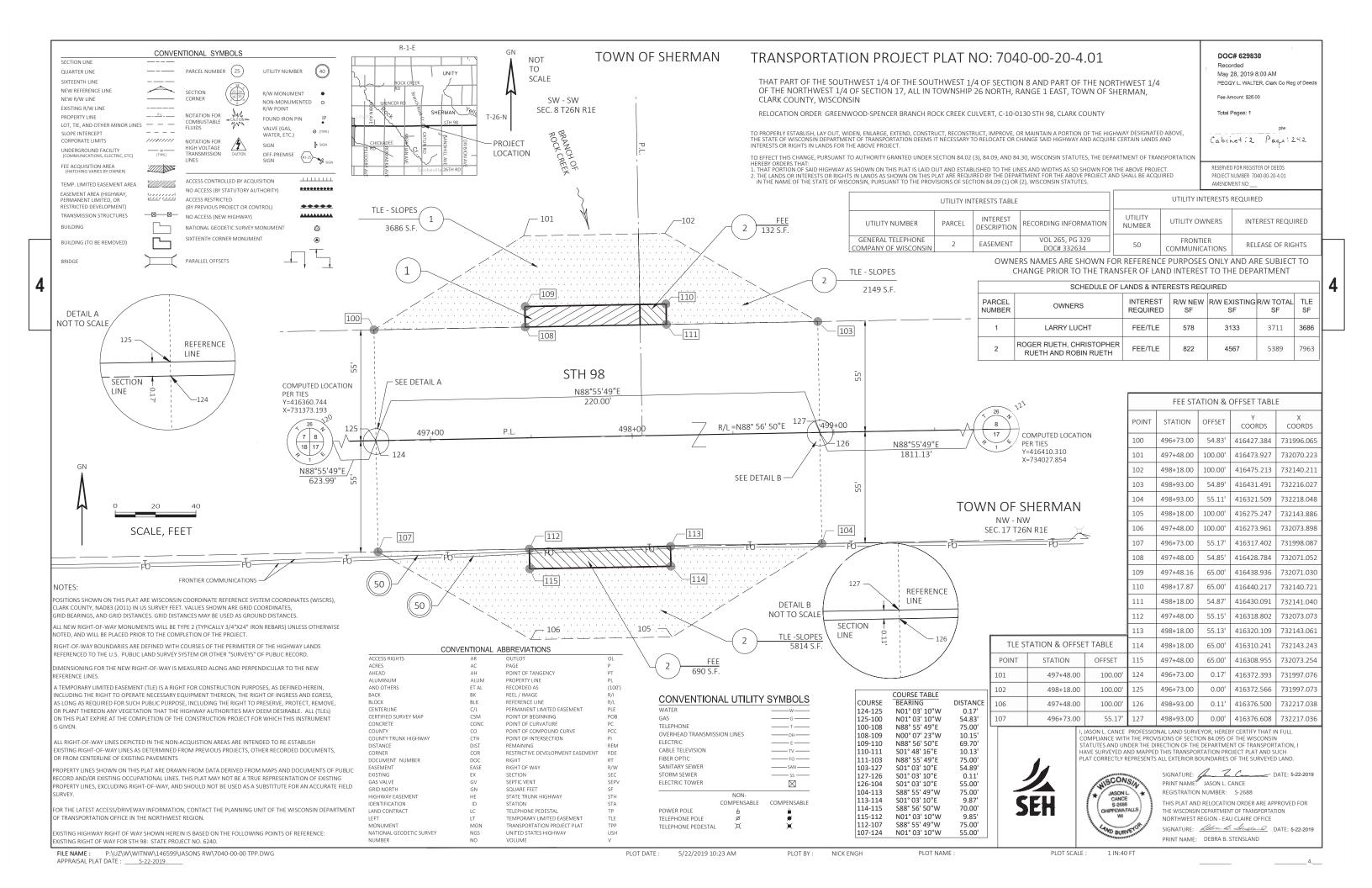
SHEET:

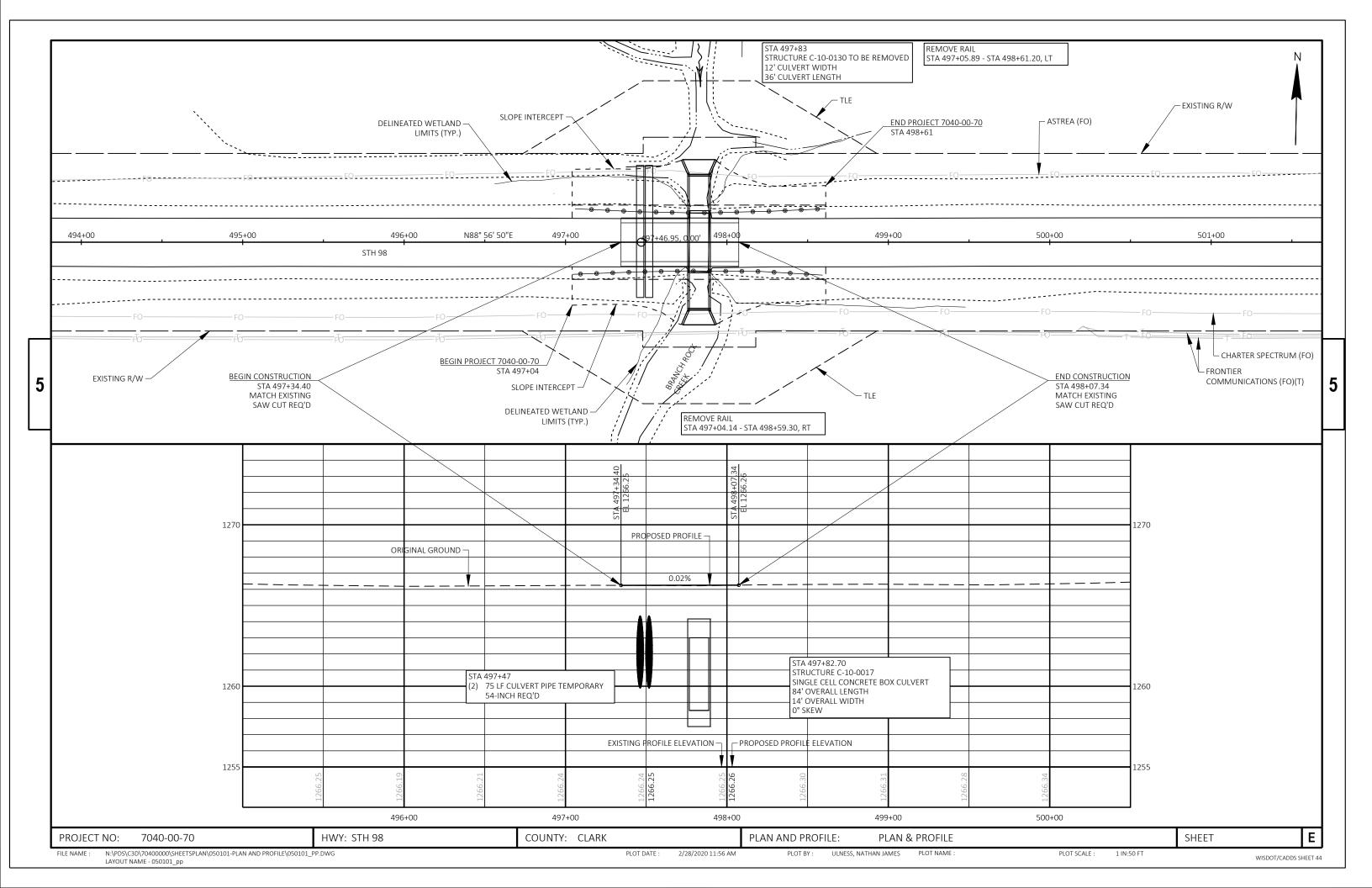
MISCELLANEOUS QUANTITIES

COUNTY: CLARK

HWY: STH 98

PROJECT NO: 7040-00-70





# Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
15C02-07F	ADVANCED WIDTH RESTRICTION SIGNING
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
15D33-06	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

6

#### **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.

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



WHEN ALTERING THE DIRECTION OF FLOW



#### **PLAN VIEW**



#### FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

**EROSION BALES FOR SHEET FLOW** 

#### TYPICAL INSTALLATIONS OF **EROSION BALES / TEMPORARY** DITCH CHECKS

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 /S/ Beth Connestro
CHIEF ROADWAY DEVELOPMENT ENGINEER

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# TYPICAL APPLICATION OF SILT FENCE

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# PLAN VIEW SILT FENCE AT MEDIAN SURFACE DRAINS



## **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 11/8" X 11/8" 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

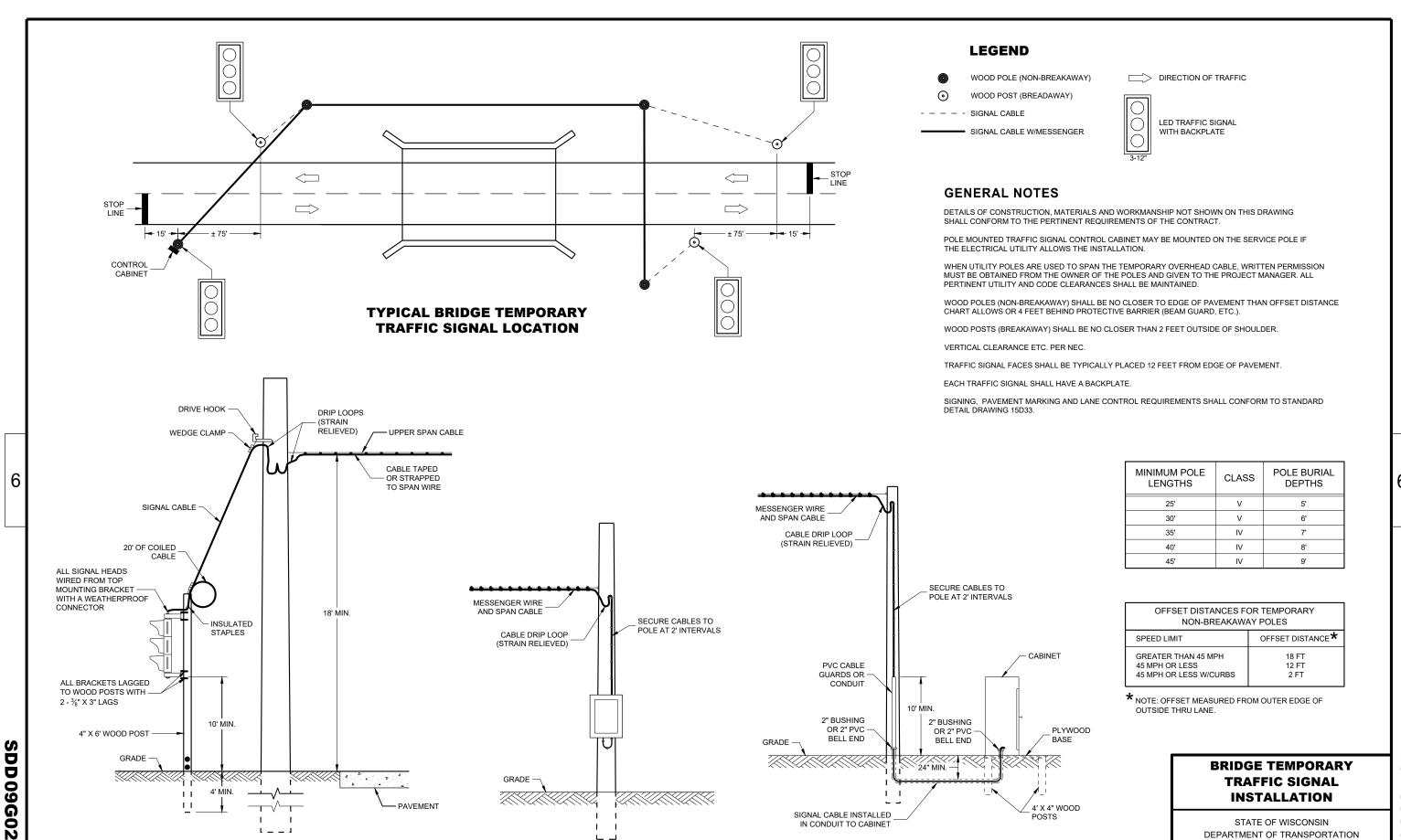
(WHEN REQUIRED BY THE ENGINEER)



SILT FENCE

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**POLE MOUNT** 

**CABINET INSTALLATION** 

GRADE

- PAVEMENT

24" MIN.

**GROUND MOUNT** 

**CABINET INSTALLATION** 

SIGNAL CABLE INSTALLED IN CONDUIT TO CABINET

4' X 4" WOOD

GRADE

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4' MIN.

**TYPICAL DROP TO** 

TRAFFIC SIGNAL FACE

# **BRIDGE TEMPORARY** TRAFFIC SIGNAL **INSTALLATION** DEPARTMENT OF TRANSPORTATION

STATE OF WISCONSIN

ROADWAY STANDARDS DEVELOPMENT ENGINEER

APPROVED

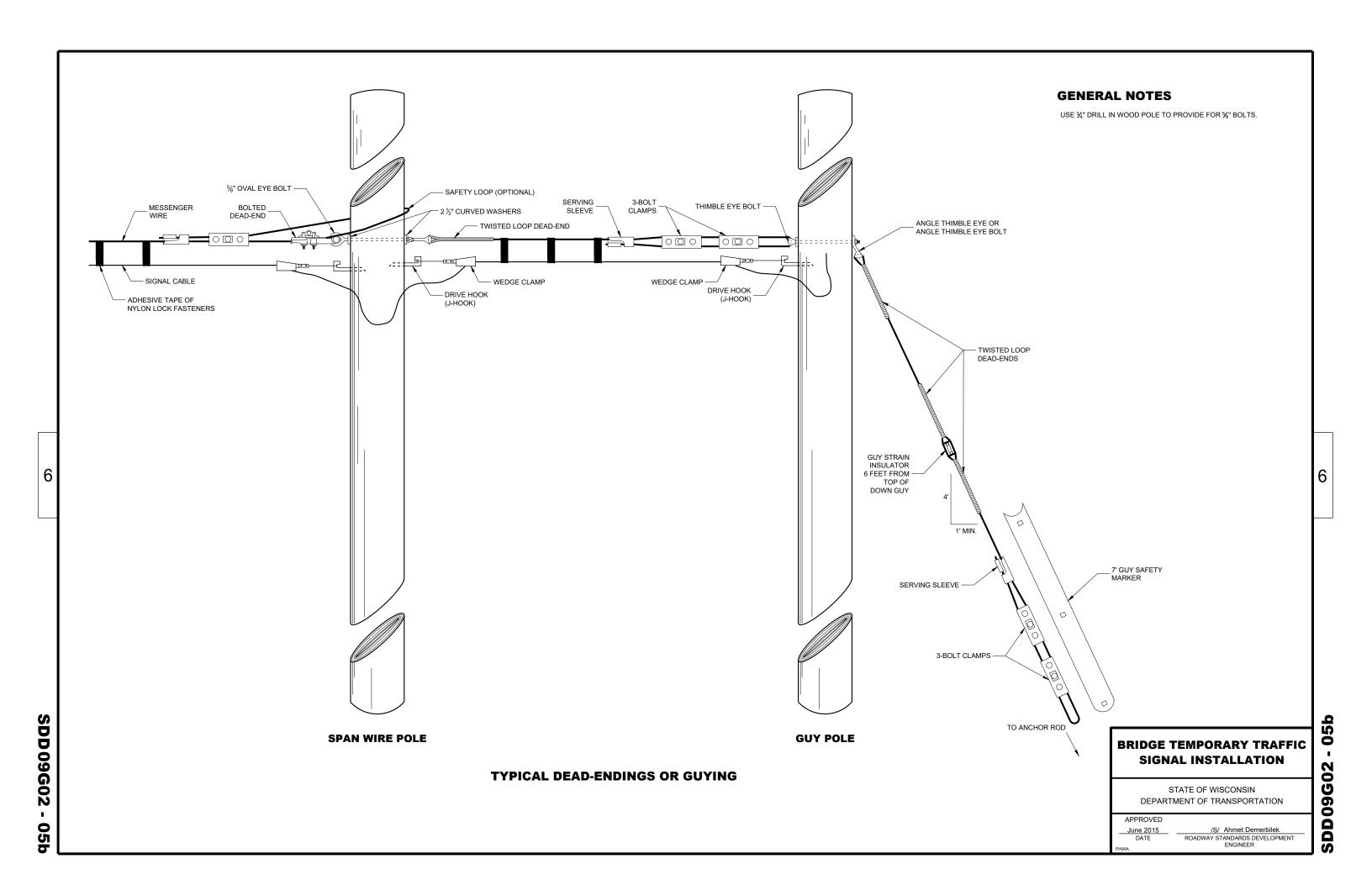
March 2018

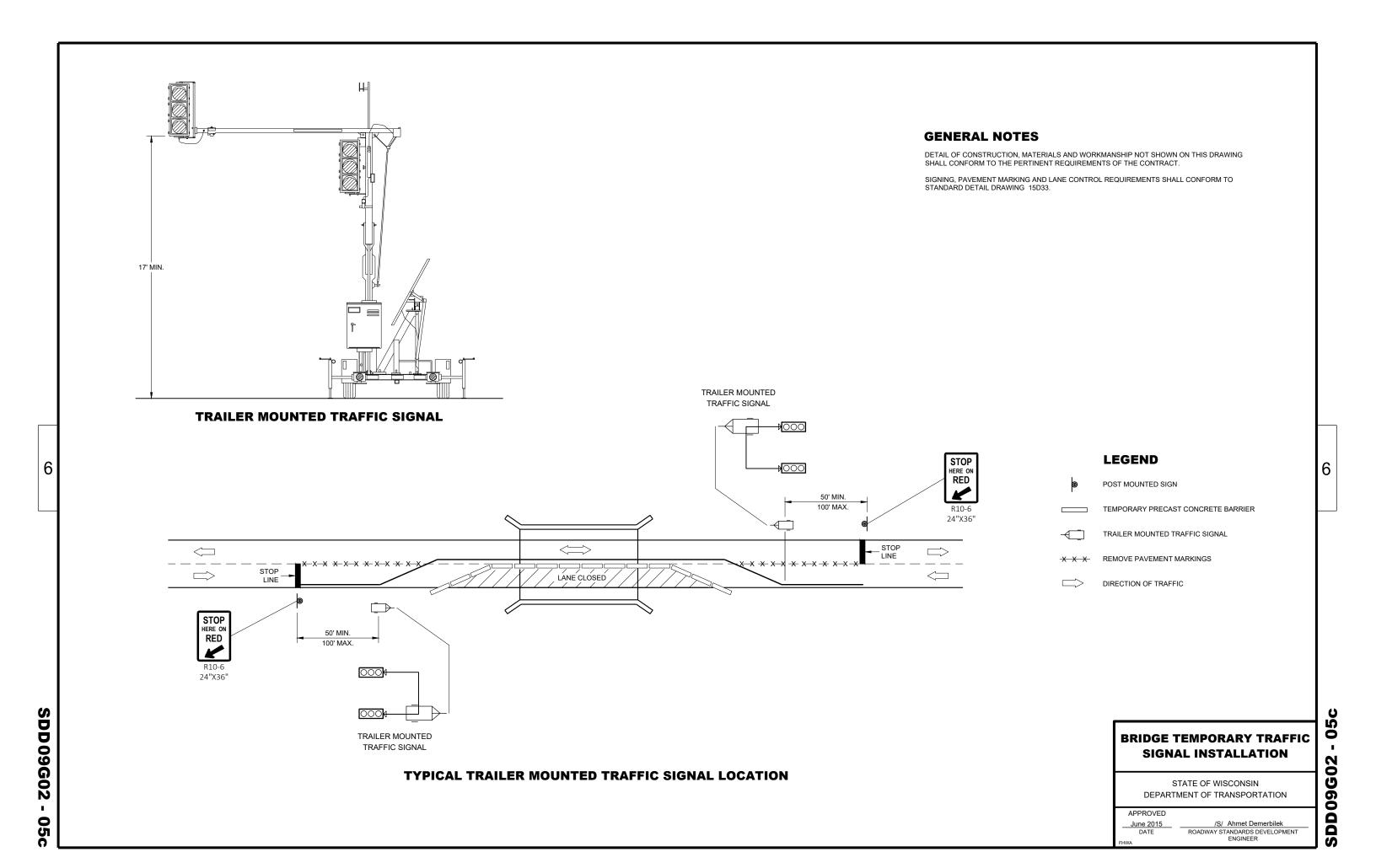
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# TYPICAL NAME PLATE

(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.



SPREAD OPEN SO THE TOP OF LUG IS 11/4" WIDE

SECTION A-A

ALTERNATE LUG



ALTERNATE LUG

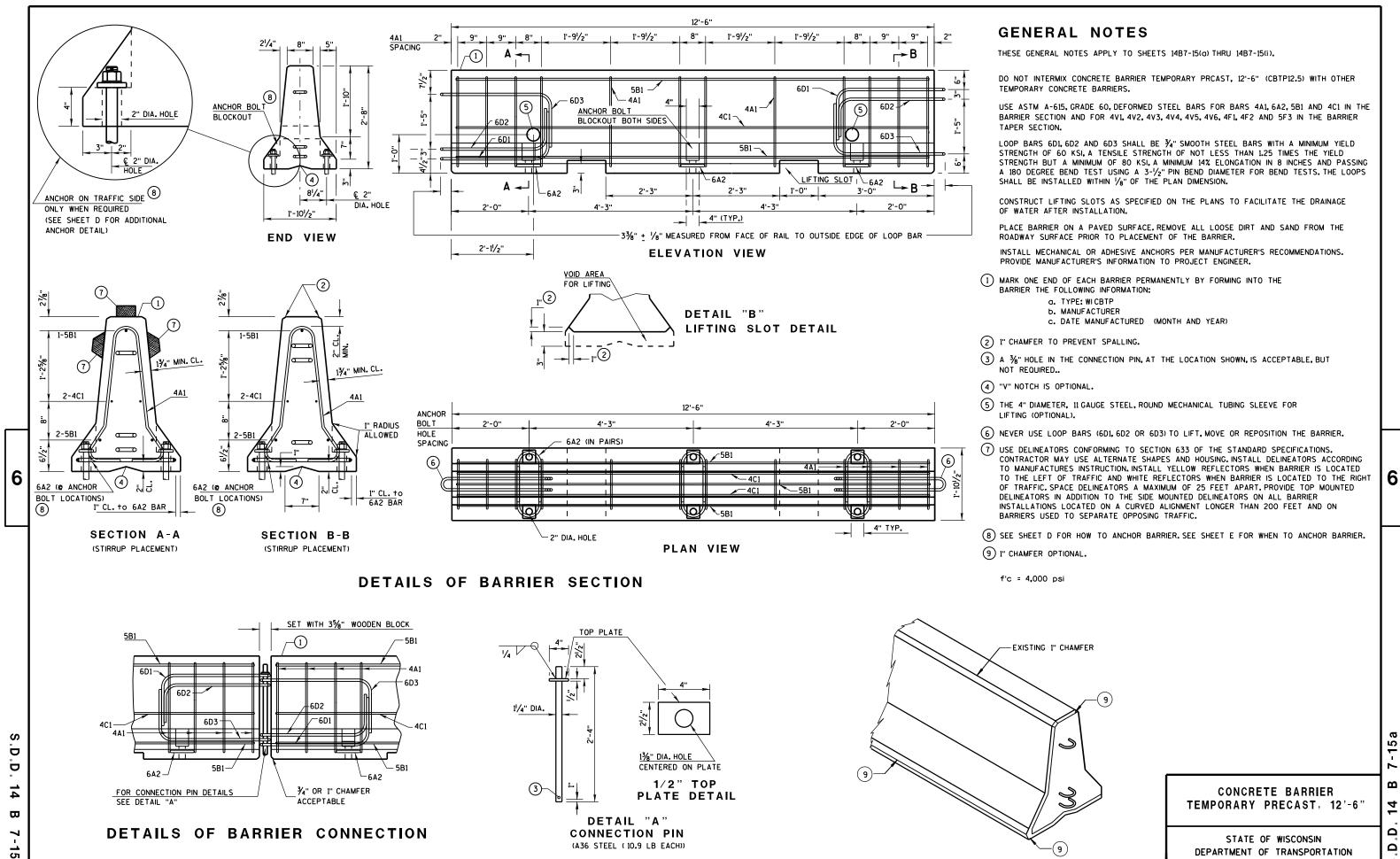
(FOR ATTACHMENT TO PRECAST STRUCTURES)

# NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

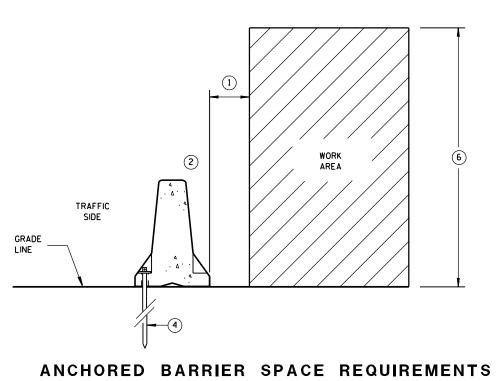
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DEPARTMENT OF TRANSPORTATION



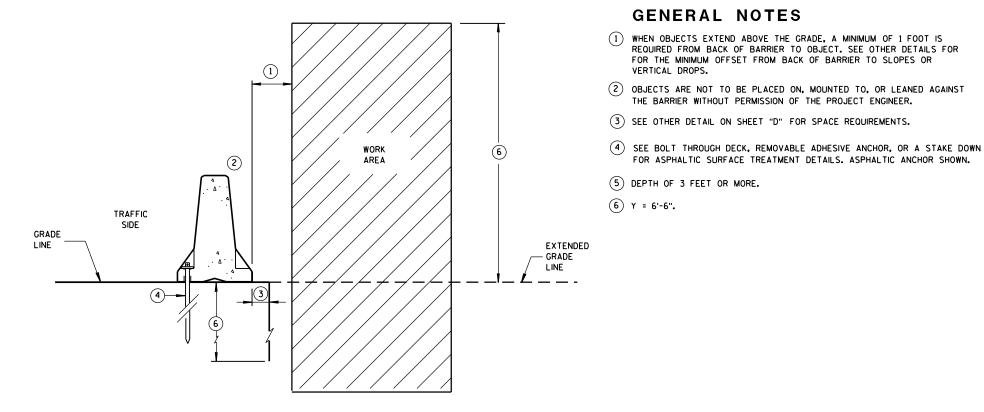
FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

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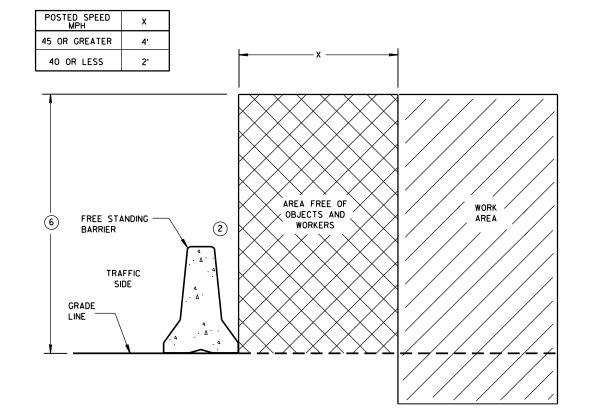
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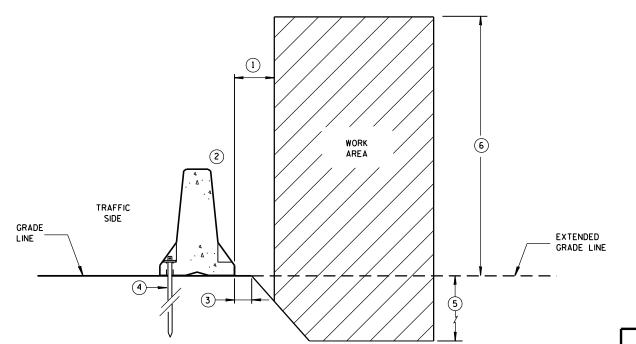
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ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS



FREE STANDING BARRIER SPACE REQUIREMENTS



ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

**CONCRETE BARRIER** TEMPORARY PRECAST, 12'-6"

**GENERAL NOTES** 

FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR

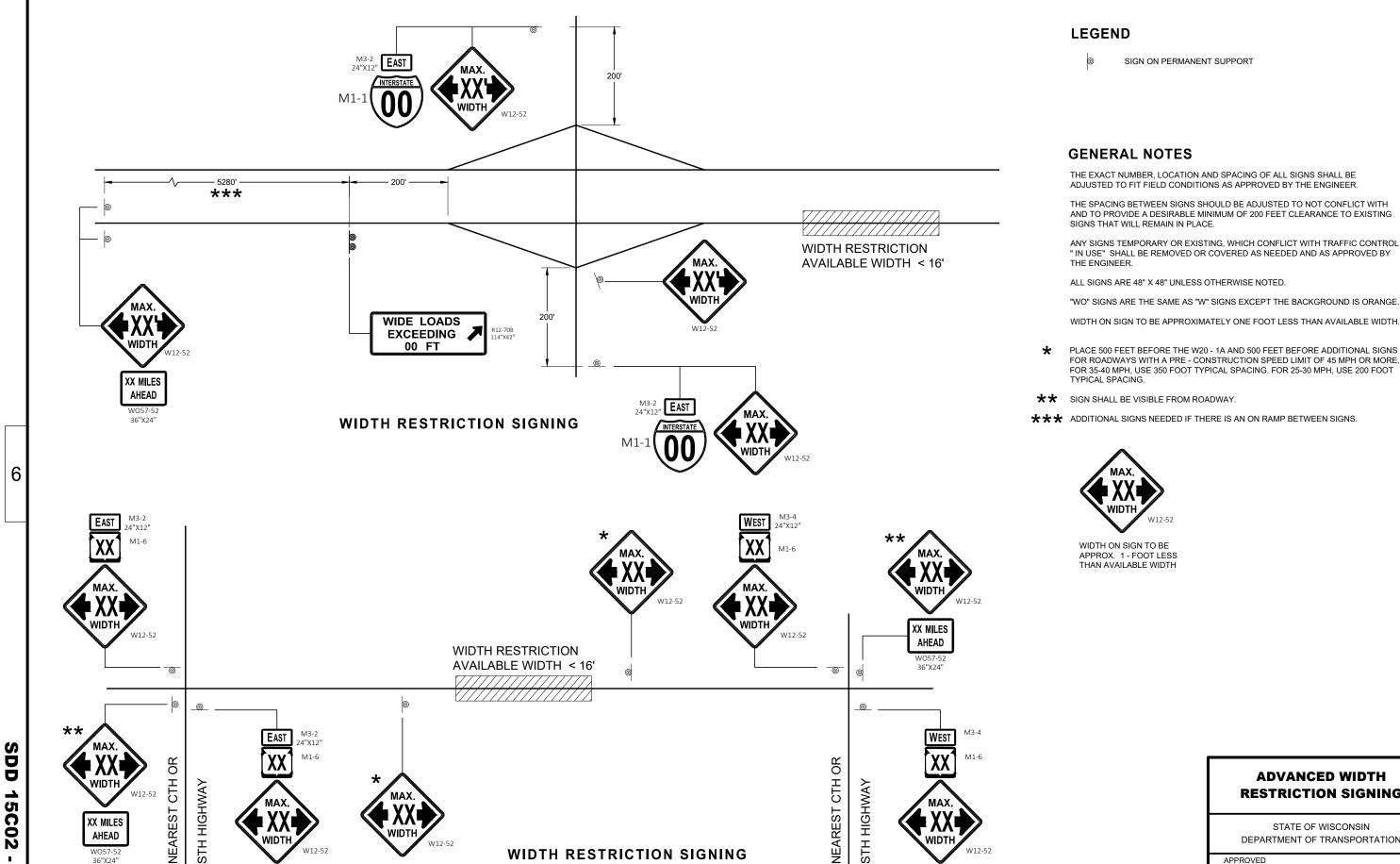
FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.

THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 6

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**2 LANE HIGHWAY** 

07f

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL

"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.

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

# **ADVANCED WIDTH RESTRICTION SIGNING**

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

November 2018 DATE /S/ Andrew Heidtke WORK ZONE ENGINEER

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SDD

**FLEXIBLE TUBULAR** 

**MARKER POST** 

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

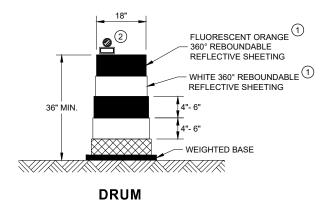
/S/ Andrew Heidtke WORK ZONE ENGINEER

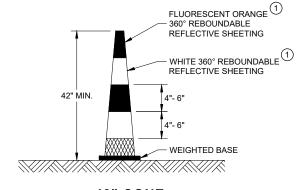
APPROVED

June 2017
DATE

## **GENERAL NOTES**

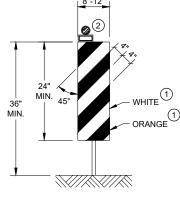
- (1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- (2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.





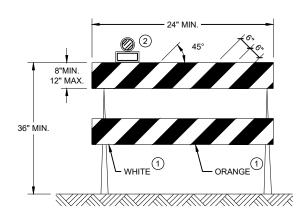
**42" CONE** DO NOT USE IN TAPERS

½ SPACING OF DRUMS



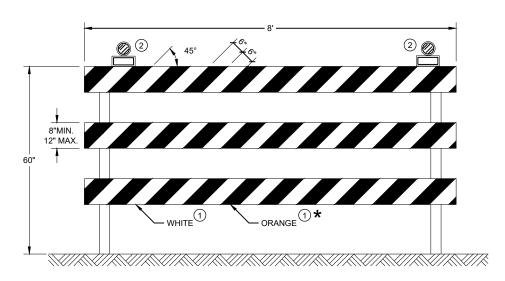
# **VERTICAL PANEL**

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.

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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION 07

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SDD

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

RUMBLE

STRIPS

ROAD

WORK

#### **GENERAL NOTES FLAGGING LEGEND** FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE SIGN ON PORTABLE OR PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PERMANENT SUPPORT PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING. UNIFORM TRAFFIC CONTROL DEVICES. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING TEMPORARY PORTABLE RUMBLE WORK OPERATION OR AS APPROVED BY THE ENGINEER. STRIP ARRAY "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE. SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE DIRECTION OF TRAFFIC ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER. 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. THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP WORK AREA **TEMPORARY PORTABLE RUMBLE STRIPS** WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS. TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER. FLAGGER, EQUIPPED WITH STOP/SLOW EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S PADDLE FASTENED ON SUPPORT STAFF 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 5' MIN BE SPEED LIMIT SPACING "A" USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, PREPARED THIS SIGN SHALL BE LOCATED BETWEEN THE 25-30 MPH TO STOP W20-7A AND W20-4A SIGNS, USING SPACING "A" 35-40 MPH STOP/SLOW PADDLE ŔUMBLĖ 45-55 MPH 500' WO3-4 WORK **ON SUPPORT STAFF** ROAD STRIPS 1 VARIABLE DISTANCE - 200' - 300' (TYP.) END ROAD WORK |||3 WORK AREA A/2 END ROAD WORK 200' - 300' (TYP.) VARIABLE DISTANCE

# TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

**FLAGGING OPERATION** STATE OF WISCONSIN

TRAFFIC CONTROL FOR

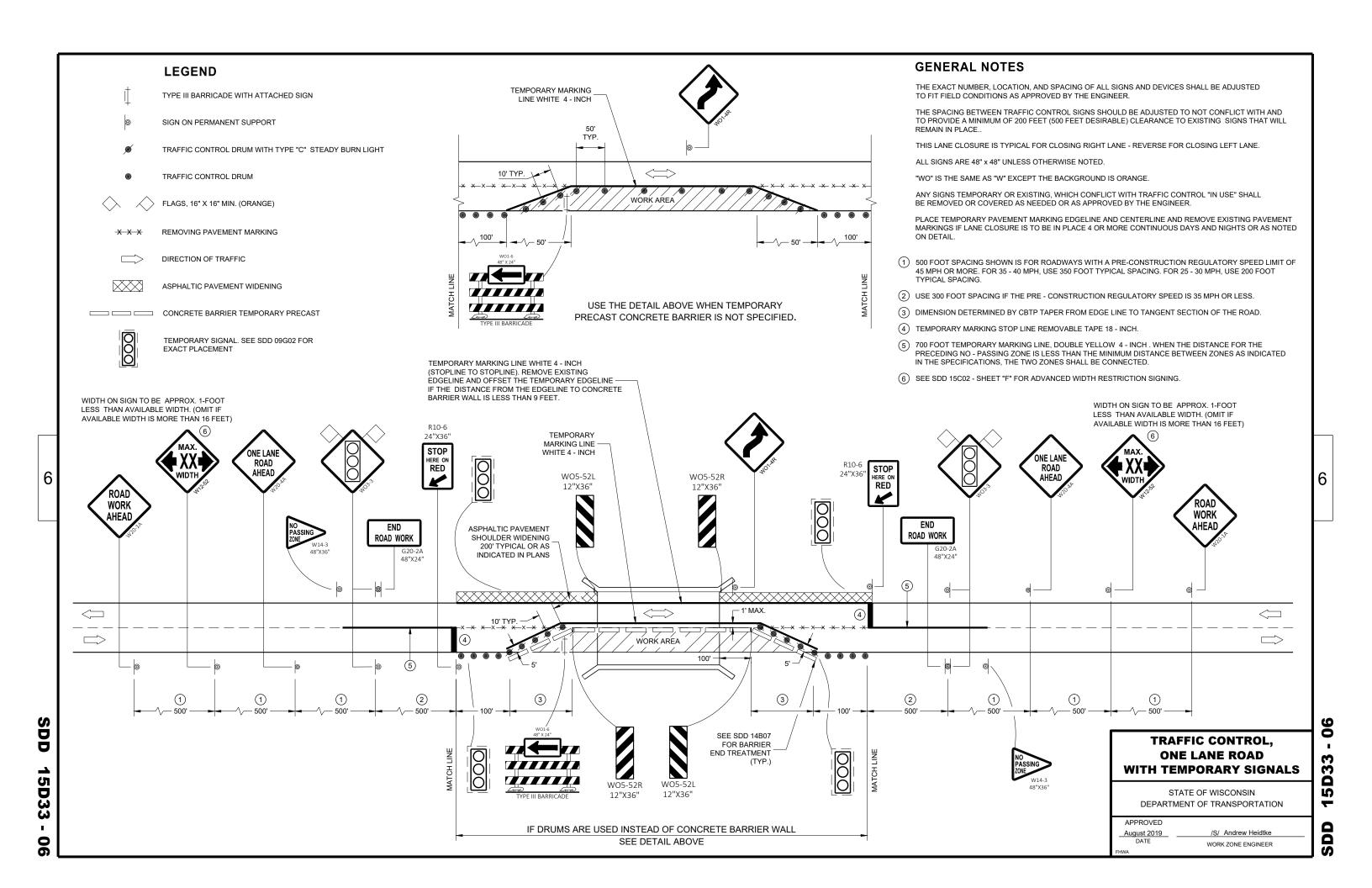
LANE CLOSURE WITH

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DEPARTMENT OF TRANSPORTATION

APPROVED May 2019 DATE WORK ZONE ENGINEER





TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SO. 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 SO.FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE). SIGNS LARGER THAN 27 SO.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

POST SPACING REQUIREM	NUMBER OF		
L	E	WOOD POSTS REQUIRED	
48" OR LESS AND LESS THAN 20 SO.FT.	-	1	
LESS THAN 60"	12"	2	٤
60" TO 120"	L/5	2	
GREATER THAN 120" LESS THAN 168"	12"	3	
168" AND GREATER	12"	4	

SEE NOTE (3)

RURAL AREA

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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- 11/2" DIAMETER HOLES

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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 - 1/6" 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 - 1/32 " (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

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

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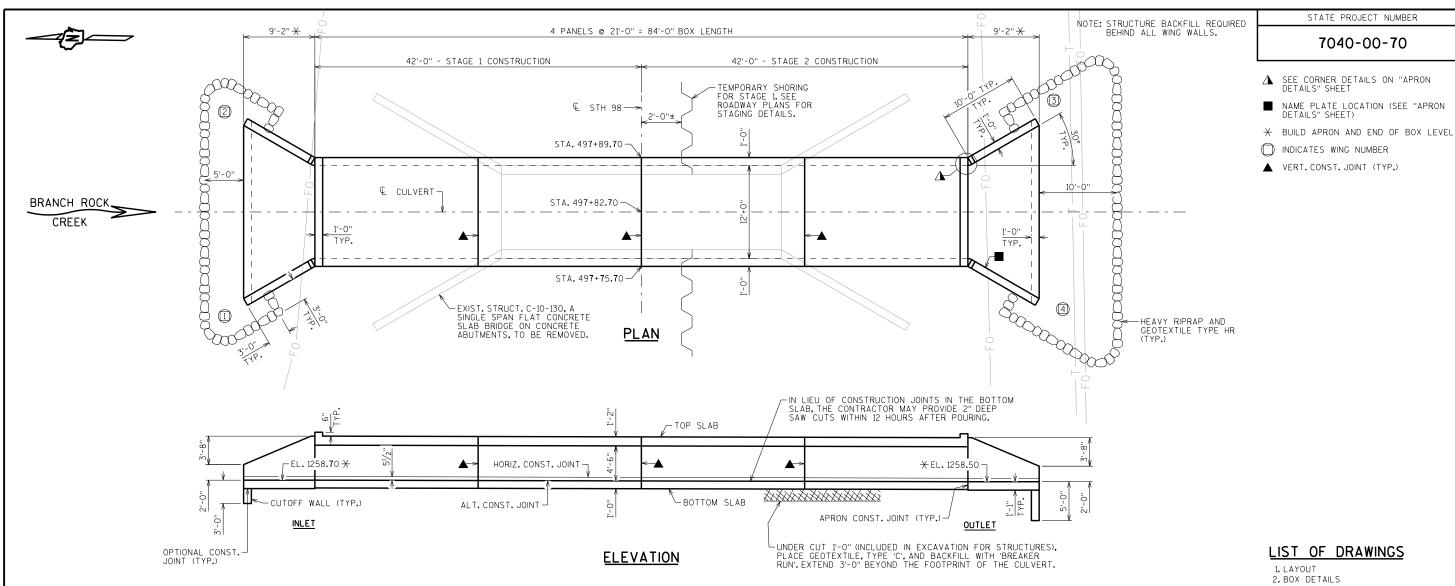
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# DESIGN DATA

#### LIVE LOAD:

DESIGN LOADING: HL-93 INVENTORY RATING FACTOR: RF = 1.05 OPERATING RATING FACTOR: RF = 1.35

WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 255 (KIPS)

#### EARTHLOAD:

8

DESIGNED FOR 1 TO 2.5 FT. OF FILL.

#### MATERIAL PROPERTIES:

f'c = 3,500 P.S.I. CONCRETE MASONRY: BAR STEEL REINFORCEMENT: - fy = 60,000 P.S.I.

TRAFFIC VOLUME

ADT = 3,200 (2041)

R.D.S. = 60 M.P.H.

## HYDRAULIC DATA

#### 100 YEAR FREQUENCY

Q<sub>100</sub> = 450 C.F.S. VEL.100 = 13.4 F.P.S. HW.<sub>100</sub> = EL. 1265.82 WATERWAY AREA = 54 SQ. FT. DRAINAGE AREA = 1.9 SQ. MI. ROADWAY OVERTOPPING = N/A SCOUR CRITICAL CODE = 8

#### 2 YEAR FREQUENCY

0<sub>2</sub> = 115 C.F.S. VEL.2 = 3.7 F.P.S. HW.<sub>2</sub> = EL. 1261.56

# TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 497+82.7±	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-10-17	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	<b>7</b> 90
311.0115	BREAKER RUN	CY	80
504.0100	CONCRETE MASONRY CULVERTS	CY	148
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	25,560
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	640
511.1200	TEMPORARY SHORING C-10-17	SF	90
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	24
606.0300	RIPRAP HEAVY	CY	39
645.0105	GEOTEXTILE TYPE C	SY	253
645.0120	GEOTEXTILE TYPE HR	SY	99
	NON-BID ITEMS		
	FILLER	SIZE	3/4"

# GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-10-17" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE B WITHIN THE LENGTH OF THE CULVERT INCLUDING

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND DOWN TO BOTTOM

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION, THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC, DOT BRIDGE MANUAL, PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #10R #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

# LIST OF DRAWINGS

1. LAYOUT 2. BOX DETAILS 3. APRONS 4. APRON DETAILS 5. SUBSURFACE EXPLORATION

#### STRUCTURE DESIGN CONTACTS:

MICAH BROOKS (608) 266-5080 LAURA SHADEWALD (608) 267-9592

STATE PROJECT NUMBER

7040-00-70

INDICATES WING NUMBER



#### CHIEF STRUCTURES DESIGN ENGINEER STRUCTURE C-10-17

STH 98 OVER BRANCH ROCK CREEK CLARK SHERMAN DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS MWB CK'D. PJR BY MWB CK'D. PJR SHEET 1 OF

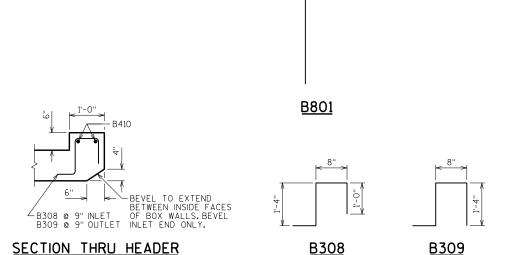
LAYOUT

7040-00-70

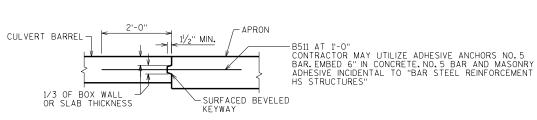
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

	,					
BAR MARK	00	NO. REQ'D.	LENGTH	SEN.	BAR SERIES	LOCATION
B801		6 <b>7</b> 2	<b>7</b> '-9''	Х		CORNERS
B502		168	13'-6"			BOT. SLAB - HORIZ.
B603		168	13'-6"			TOP SLAB - HORIZ.
B404		88	10'-2"			TOP SLAB - HORIZ.
B405		176	2'-5"			EXT. WALLS - DOWELS
B406		1 <b>7</b> 6	4'-10"			EXT. WALLS - VERT.
B40 <b>7</b>		224	20'-6"			TOP & BOT. SLAB & WALLS - LONGIT.
B308		19	3'-3"	Х		INLET HEADER - VERT.
B309		19	3'-7"	Х		OUTLET HEADER - VERT.
B410		4	13'-8''			HEADERS - HORIZ.
B511		124	4'-0"			VERT.& APRON CONST.JOINTS

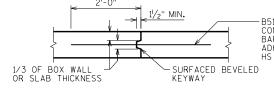


NO. DATE



# APRON CONSTRUCTION JOINT

2" DEEP SAW CUT WITHIN 12 HOURS AFTER POURING MAY BE USED IN LIEU OF CONST. JT. IN BOTTOM SLAB.



-B511 AT 1'-O"
CONTRACTOR MAY UTILIZE ADHESIVE ANCHORS NO. 5
BAR.EMBED 6" IN CONCRETE. NO. 5 BAR AND MASONRY
ADHESIVE INCIDENTAL TO "BAR STEEL REINFORCEMENT
HS STRUCTURES"

# VERTICAL CONSTRUCTION JOINT

2" DEEP SAW CUT WITHIN 12 HOURS AFTER POURING MAY BE USED IN LIEU OF CONST. JT. IN BOTTOM SLAB.

# 8

BY

REVISION

DRAWN BY

STRUCTURE C-10-17

**BOX DETAILS** 

● OMIT\_1" FILLETS IF JOINT IS USED.

ALL LONGITUDINAL BARS NOT LABELED ARE B407 AS SHOWN

B502 -

18" WIDE RUBBERIZED MEMBRANE WIDE AUGUSTANT WIEWBRAND WATERPROOFING, PLACE UP WALLS AND ACROSS TOP SLAB AT VERT. CONST. JOINTS. EXTEND 6" MIN. BELOW TOP OF BOTTOM SLAB. 10 SPA. @ 1'-0" = 10'-0" - B407 ~ B404 -B801 (TYP.) 1" FILLET (TYP. ALL CORNERS) B603 --OPTIONAL CONST. JOINT

21'-0" 41 SPA.@ 6" = 20'-6" - B801 (CORNERS)

41 SPA.@ 6" = 20'-6" - B502 (BOT. SLAB) 41 SPA. @ 6" = 20'-6" - B603 (TOP SLAB) 21 SPA. @ 1'-0" MAX. = 20'-6" - B404 (TOP SLAB)

21 SPA. @ 1'-0" MAX. = 20'-6" - B405, B406 (WALLS)

<u>PL AN</u> SINGLE PANEL SHOWN, OTHER PANELS SIMILAR HEADERS NOT SHOWN FOR CLARITY

12'-0"

14 SPA.@ 91/2" MAX. = 10'-9" - B407

-B40**7** (WALLS)

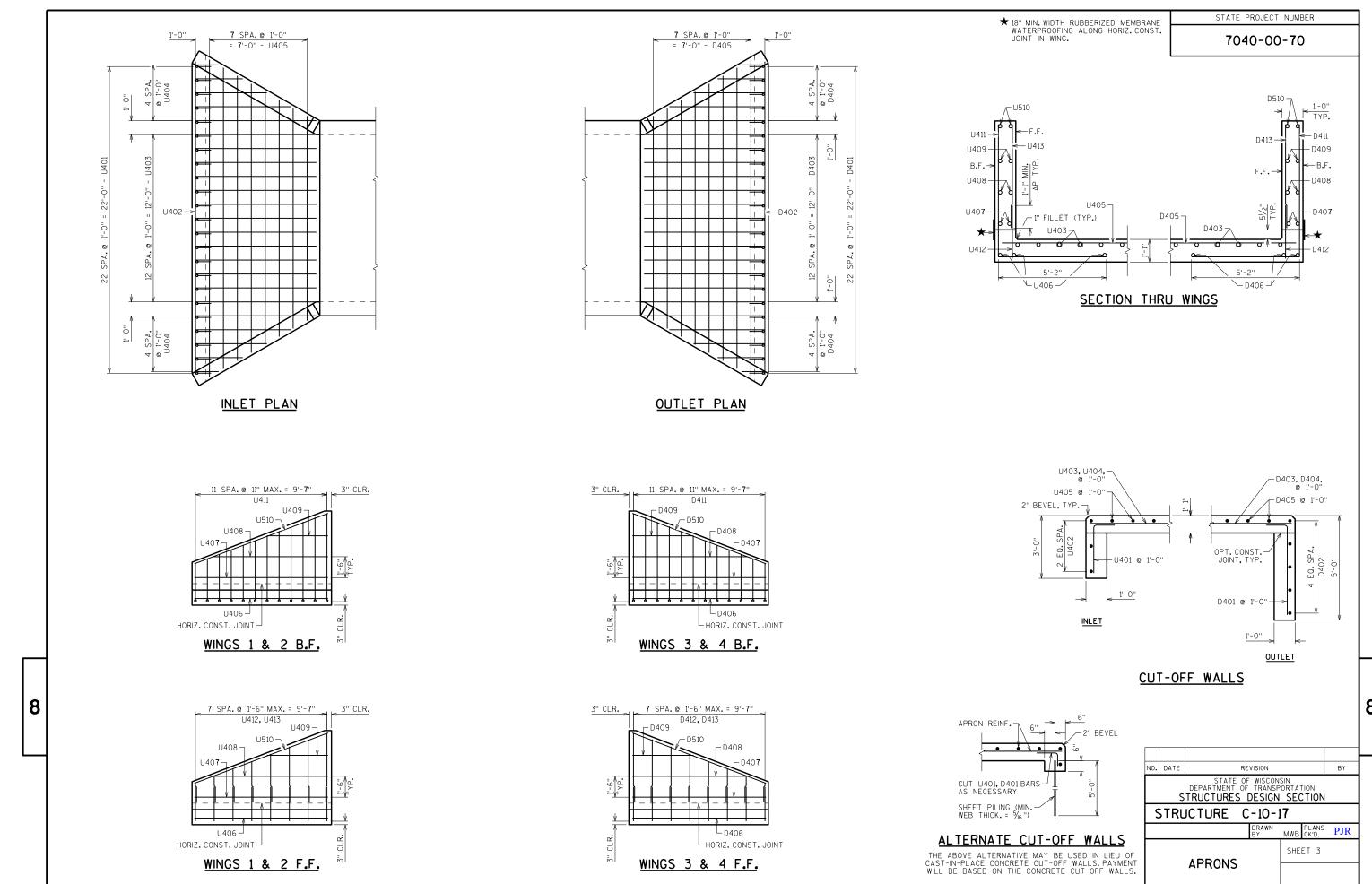
1'-0''

-B407 (WALLS)

-B407 (TOP & BOT.SLABS)

└ALT. CONST. JOINT � 7 SPA.@ 1'-6" MAX. = 9'-61/2" - B407 **SECTION THRU BOX** 

HORIZ. CONST. JOINT



BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

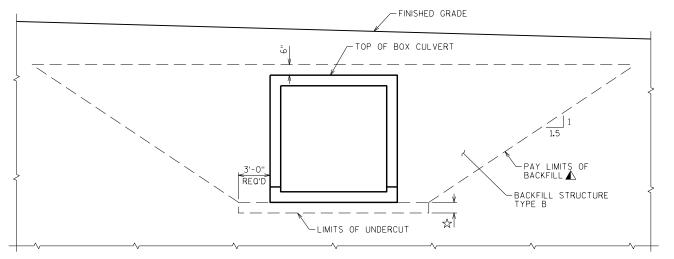
		<u> </u>				BAR MARK SIGNIFIES THE BAR SIZE
BAR MARK	Z800	NO. REQ'D.	LENGTH	BEN	BAR SERIES	LOCATION
U401		23	3'-6"	Х		INLET APRON CUTOFF - VERT.
U402		3	22'-6"			INLET APRON CUTOFF - HORIZ.
U403		13	8'-10"			INLET APRON - LONGIT.
U404		10	5'-3"		lack	INLET APRON - LONGIT.
U405		8	18'-8"		lacksquare	INLET APRON - HORIZ.
U406		6	9'-7"			WINGS 1 & 2 - HORIZ BOT.
U40 <b>7</b>	Х	4	9'-7"			WINGS 1 & 2 - HORIZ.
U408	Х	4	8'-3"			WINGS 1 & 2 - HORIZ.
U409	Х	4	4'-5"			WINGS 1 & 2 - HORIZ.
U510	Х	4	10'-3"			WINGS 1 & 2 - HORIZ TOP
U411	Χ	24	9'-8"	Х	lacktriangle	WINGS 1 & 2 - VERT B.F.
U412	Х	16	2'-5"			WINGS 1 & 2 - DOWELS - F.F.
U413	Х	16	3'-3"		lack	WINGS 1 & 2 - VERT F.F.
D401		23	5'-6"	Х		OUTLET APRON CUTOFF - VERT.
D402		5	22'-6"			OUTLET APRON CUTOFF - HORIZ.
D403		13	8'-10"			OUTLET APRON - LONGIT.
D404		10	5'-3"		lacksquare	OUTLET APRON - LONGIT.
D405		8	18'-8"		lack	OUTLET APRON - HORIZ.
D406		6	9'-7"			WINGS 3 & 4 - HORIZ BOT.
D407	Χ	4	9'-7"			WINGS 3 & 4 - HORIZ.
D408	Х	4	8'-3"			WINGS 3 & 4 - HORIZ.
D409	Χ	4	4'-5"			WINGS 3 & 4 - HORIZ.
D510	Χ	4	10'-3"			WINGS 3 & 4 - HORIZ TOP
D411	Χ	24	9'-8"	Х	lacktriangle	WINGS 3 & 4 - VERT B.F.
D412	Χ	16	2'-5"			WINGS 3 & 4 - DOWELS - F.F.
D413	Χ	16	3'-3"		lacktriangle	WINGS 3 & 4 - VERT F.F.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

# BAR SERIES TABLE

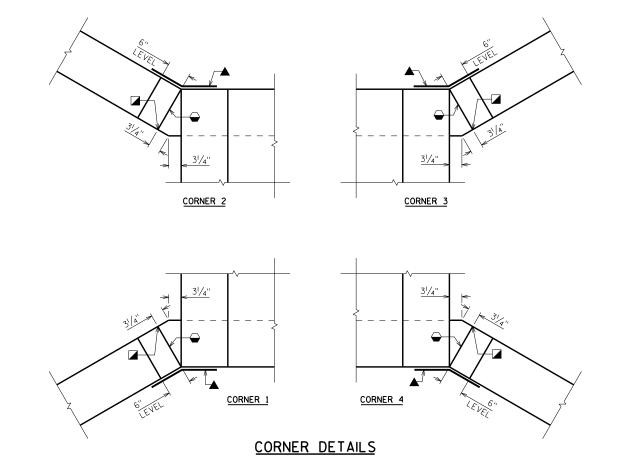
BAR MARK	NO. REQ'D.	LENGTH
U404	2 SERIES OF 5	1'-9'' TO 8'-8''
U405	1 SERIES OF 8	14'-8'' TO 22'-9''
U411	2 SERIES OF 12	<b>7</b> '-10'' TO 11'-5''
U413	2 SERIES OF 8	1'-5'' TO 5'-0''
D404	2 SERIES OF 5	1'-9'' T0 8'-8''
D405	1 SERIES OF 8	14'-8" TO 22'-9"
D411	2 SERIES OF 12	<b>7</b> '-10'' TO 11'-5''
D413	2 SERIES OF 8	1'-5" TO 5'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY.



# TYPICAL SECTION THRU BOX CULVERT

- ⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES, LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- ☆ UNDER CUT 1'-0".EXCAVATION FOR UNDER CUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES.PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".



→ ¾" FILLER TO EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WING.

STATE PROJECT NUMBER

7040-00-70

NAME PLATE LOCATION

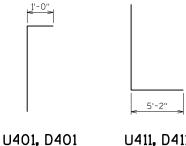
WING 4

☐ 1" BEVEL TYP.

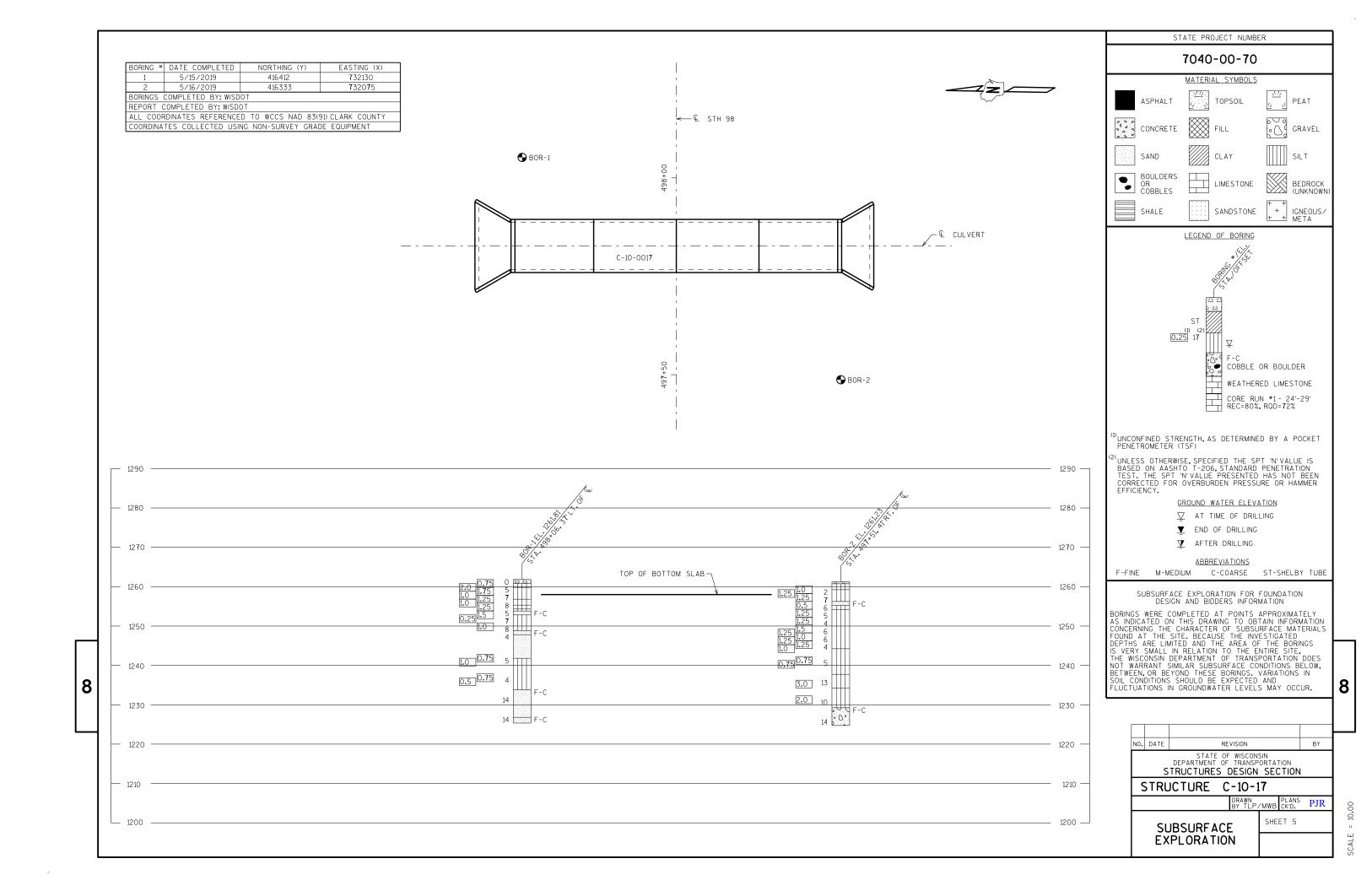
▲ 18" WIDE RUBBERIZE MEMBRANE WATERPROOFING.EXTEND FROM HORIZ.CONST.JOINT TO TOP OF WING.

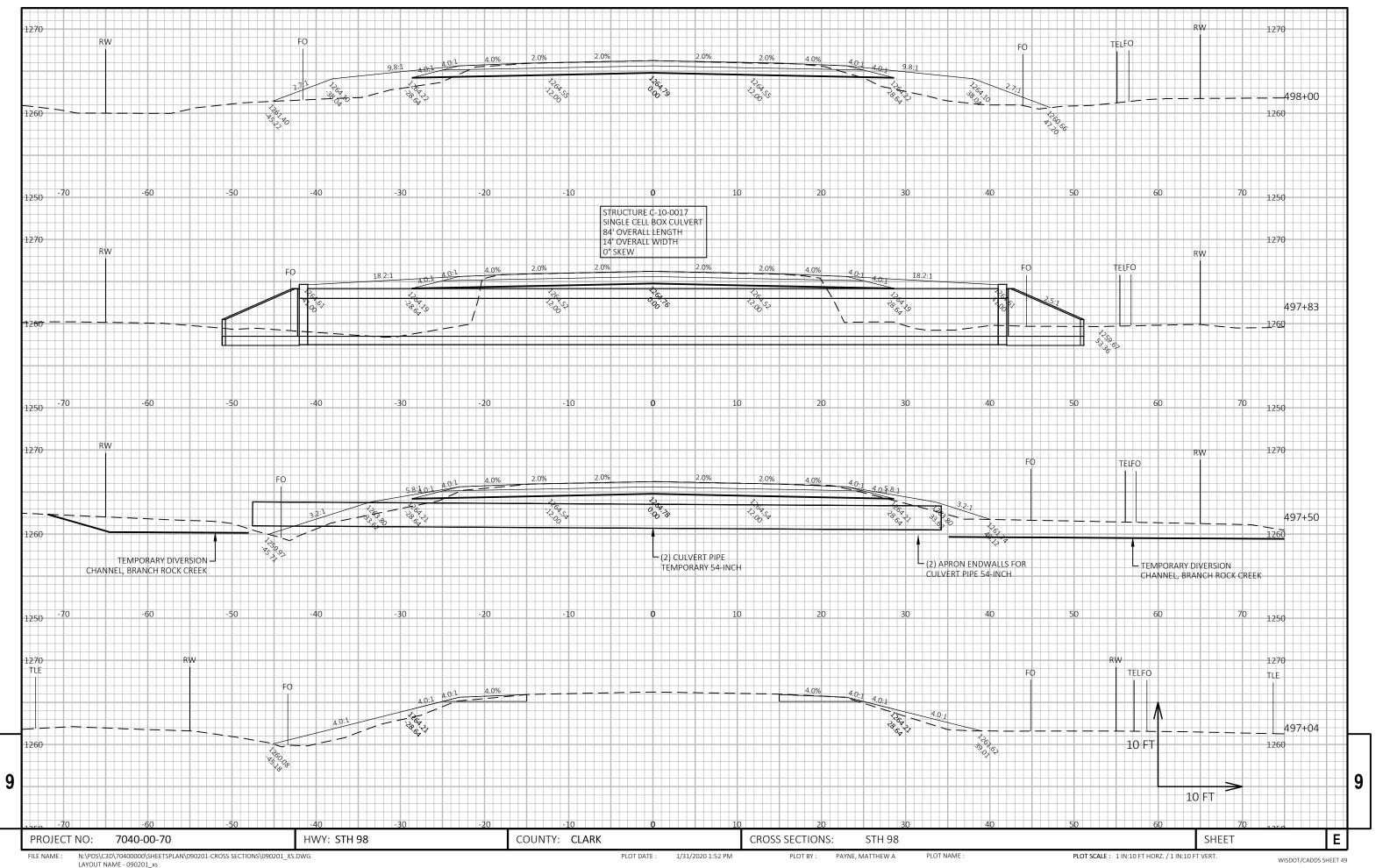
NO.	DATE	REVISION	BY			
STRUCTURE C-10-17						
		PJR				
	* D.C	SHEET 4				
	APR	RON DETAILS				

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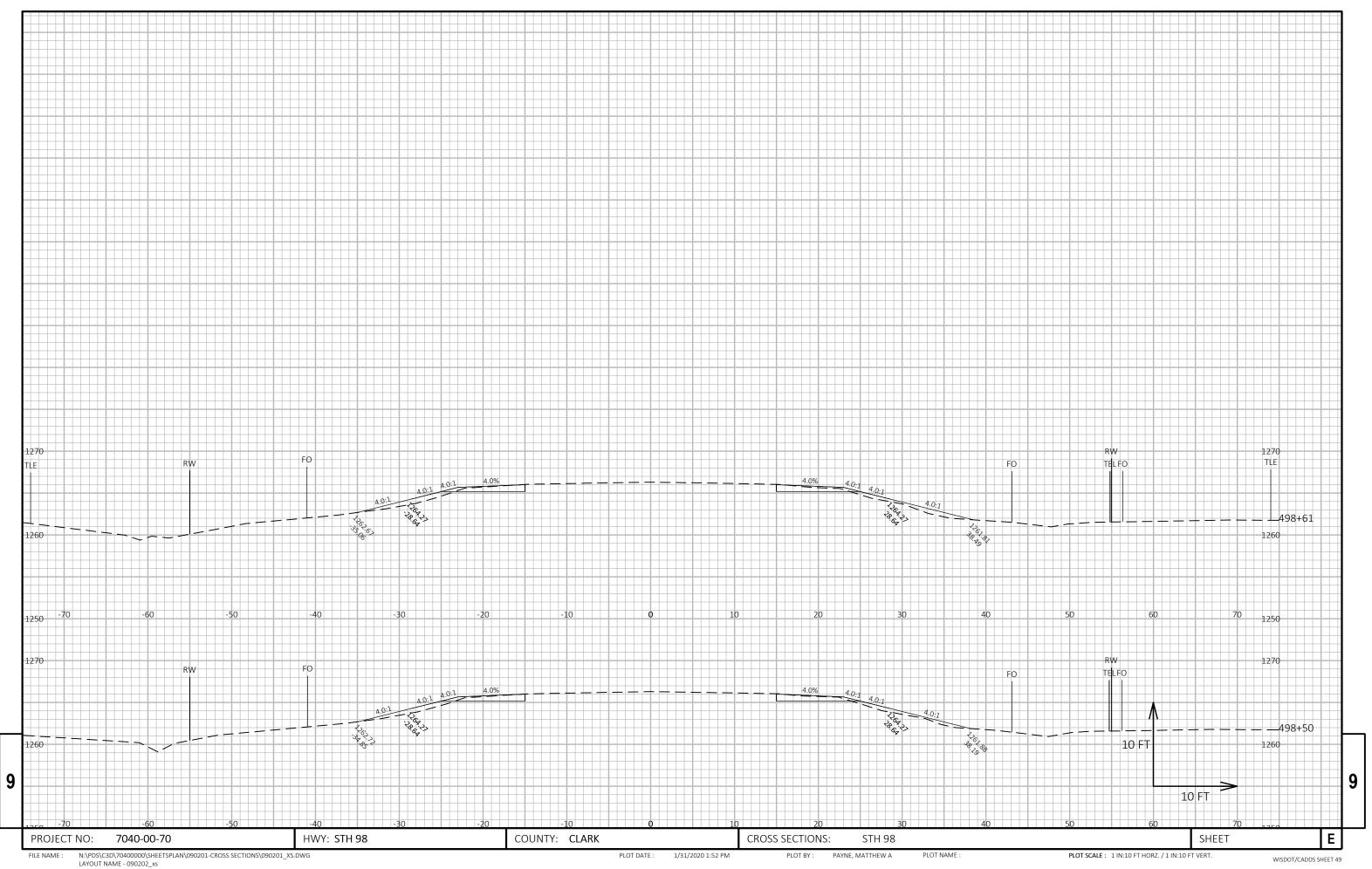


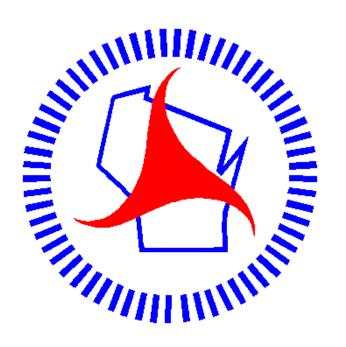
U411, D411





LAYOUT NAME - 090201\_xs





# Wisconsin Department of Transportation

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