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Jan 11, 2022

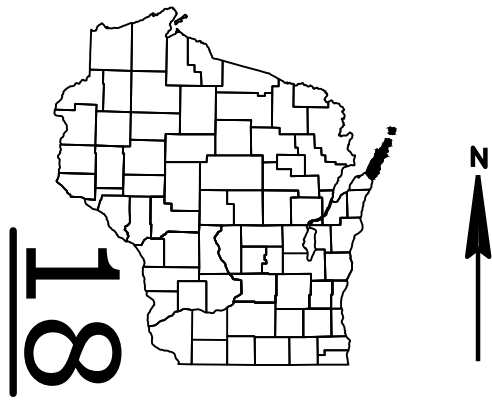
PROJECT ID: 4140-35-72

COUNTY: DOOR

ORDER OF SHEETS

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

TOTAL SHEETS = 36



DESIGN DESIGNATION

A.A.D.T.	2018	=	7000
A.A.D.T.		=	
D.H.V.		=	
D.D.		=	
T.		=	
DESIGN SPEED		=	
ESALS		=	

CONVENTIONAL SYMBOLS

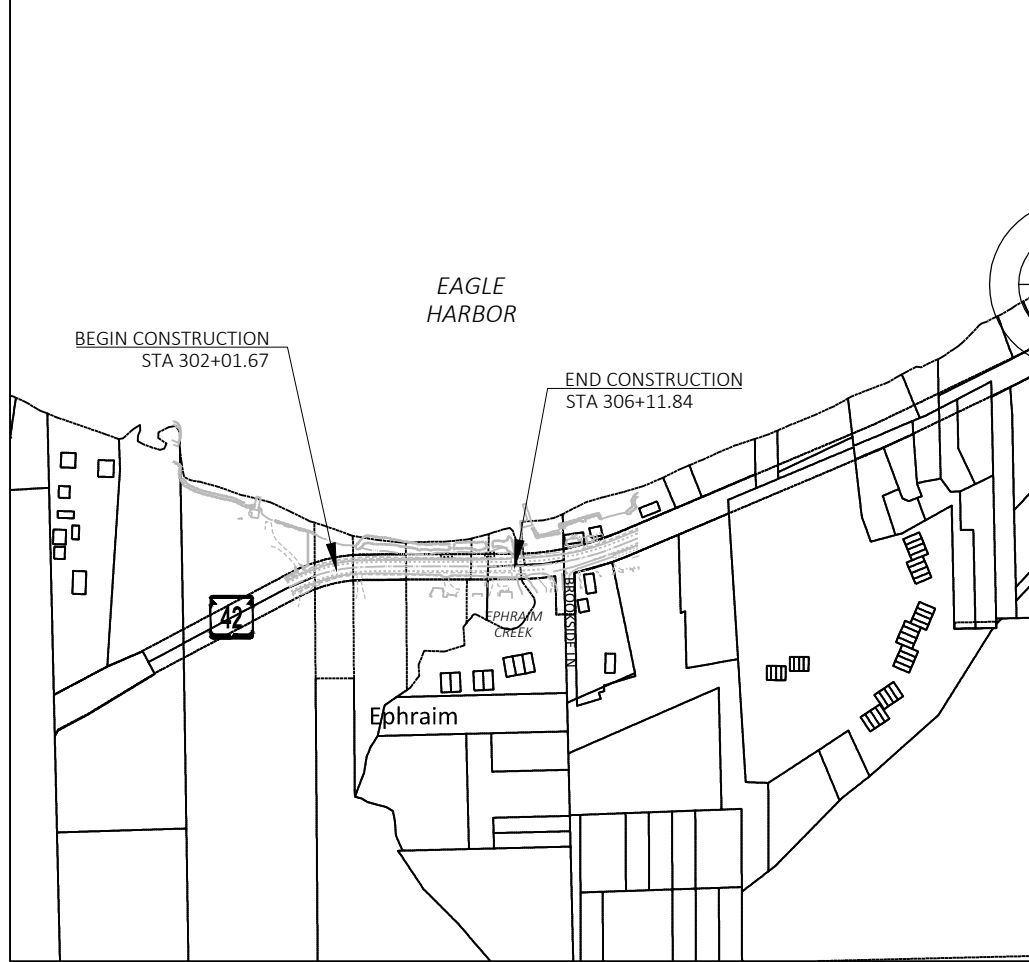
PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

VILLAGE OF EPHRAIM
CTH A - STH 57
STH 42
DOOR COUNTY

STATE PROJECT NUMBER
4140-35-72



TOTAL NET LENGTH OF CENTERLINE = 0.078 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DOOR COUNTY, NAD83 (2011), IN U.S. SURVEY FEET.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4140-35-72		

ORIGINAL PLANS PREPARED BY
JACOBS ENGINEERING

DATE: _____
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GRAEF
Designer	JACOBS
Project Manager	PAUL BRAUER, PE
Regional Examiner	
Regional Supervisor	TAMMY RABE, PE

APPROVED FOR THE DEPARTMENT

DATE: 09/28/2021

(Signature)

E

GENERAL NOTES

DO NOT REMOVE ANY TREES OR SHRUBS WITHOUT APPROVAL OF THE ENGINEER.

RESHAPE, RESTORE, AND FINISH ALL PREVIOUSLY GRASSED AREAS DISTURBED BY OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT NO EXPENSE TO THE DEPARTMENT.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

SOIL BORING INFORMATION IS AVAILABLE BY REQUEST FROM WISCONSIN DEPARTMENT OF TRANSPORTATION.

WISCONSIN DEPARTMENT OF TRANSPORTATION DIRECTED ALL DESIGN DETAILS FOR PROPOSED PERMANENT SOLUTION FOR SHORELINE STABILIZATION.

JACOBS ENGINEERING DRAFTED AND ASSEMBLED THE PLANS, SPECIFICATIONS AND MISCELLANEOUS QUANTITIES.

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
AH	AHEAD
ASP	ASPHALTIC
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
BT	BEGIN TRANSITION
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C&G	CURB AND GUTTER
C/L OR ☿	CENTER CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CEPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVATURE
Δ	DELTA
DISCH	DISCHARGE
ET	END TRANSITION
FE	FIELD ENTRANCE
FS	FULL SUPERELEVATION
HMA	HOT MIXED ASPHALT
HP	HIGH POINT
HT	HEIGHT
INV	INVERT
L	LENGTH
LHF	LEFT HAND FORWARD
LP	LOW POINT
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
ML	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NORM	NORMAL
O/S	OFFSET
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
POB	POINT OF BEGINNING
PT	POINT OF TANGENT
PUU	PIPE UNDERDRAIN UNPERFORATED
PVC	POLYVINYL CHLORIDE
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RAB	ROUNDBOUT
RC	REVERSE CROWN
RCAEW	APRON END WALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
SVD	SLOTTED VANE DRAIN
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPRC	POINT OF VERTICAL REVERSE CURVE
VPT	POINT OF VERTICAL TANGENT

UTILITY CONTACTS

COMMUNICATIONS

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Green Bay, WI 54307-9001
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OTHER CONTACTS

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WISCONSIN DEPT OF TRANSPORATION

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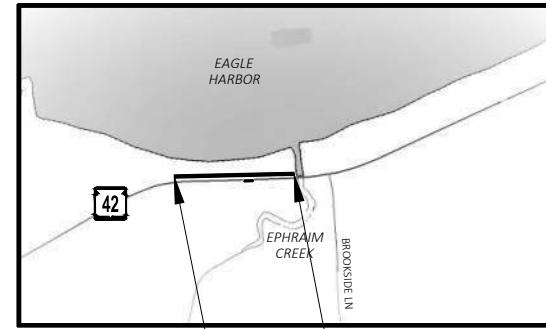
WISCONSIN DEPT OF NATURAL RESOURCES

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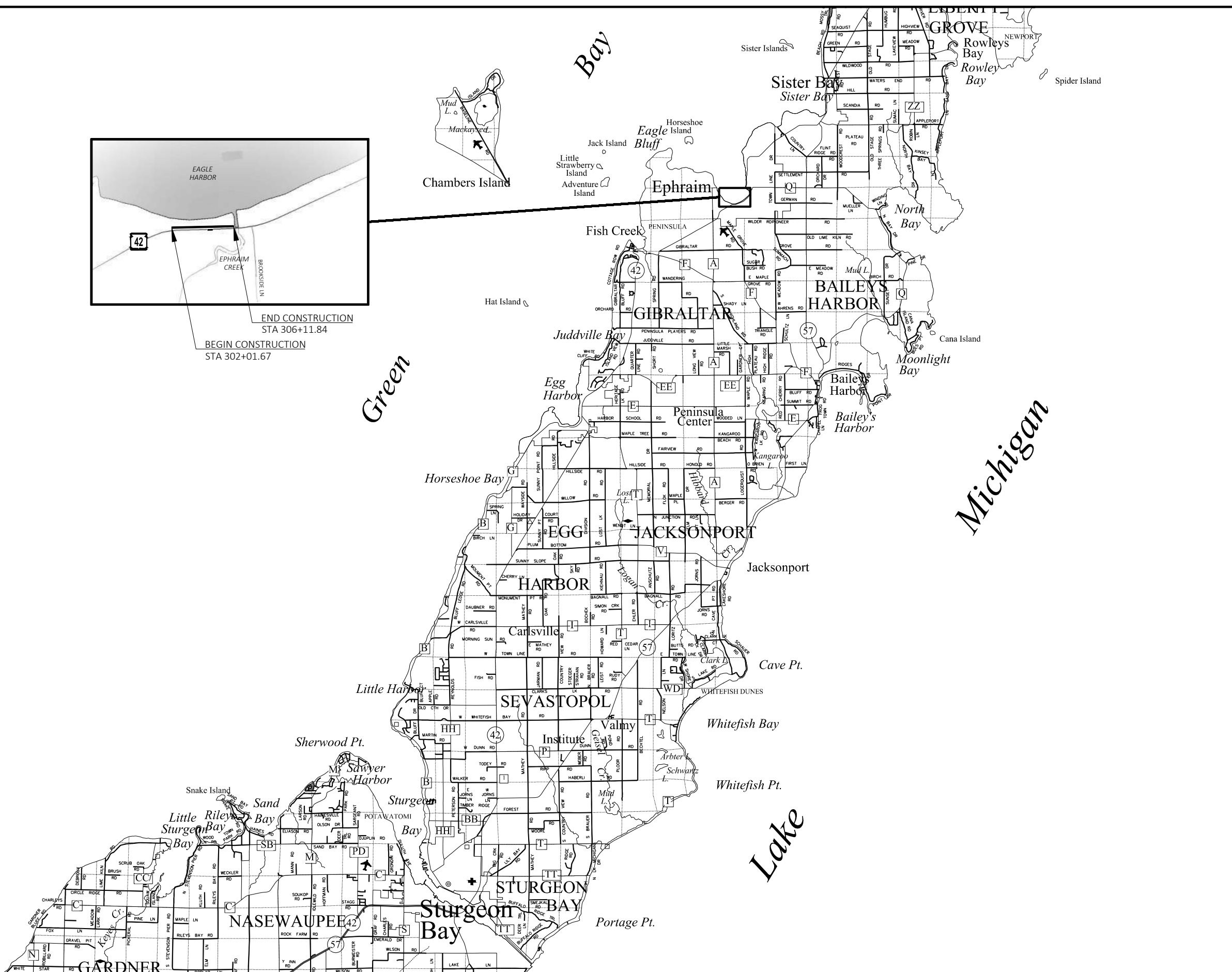


Dial 811 or (800)242-8511

www.DiggersHotline.com



END CONSTRUCTION
STA 306+11.84
BEGIN CONSTRUCTION
STA 302+01.67



PROJECT NO: 4140-35-72

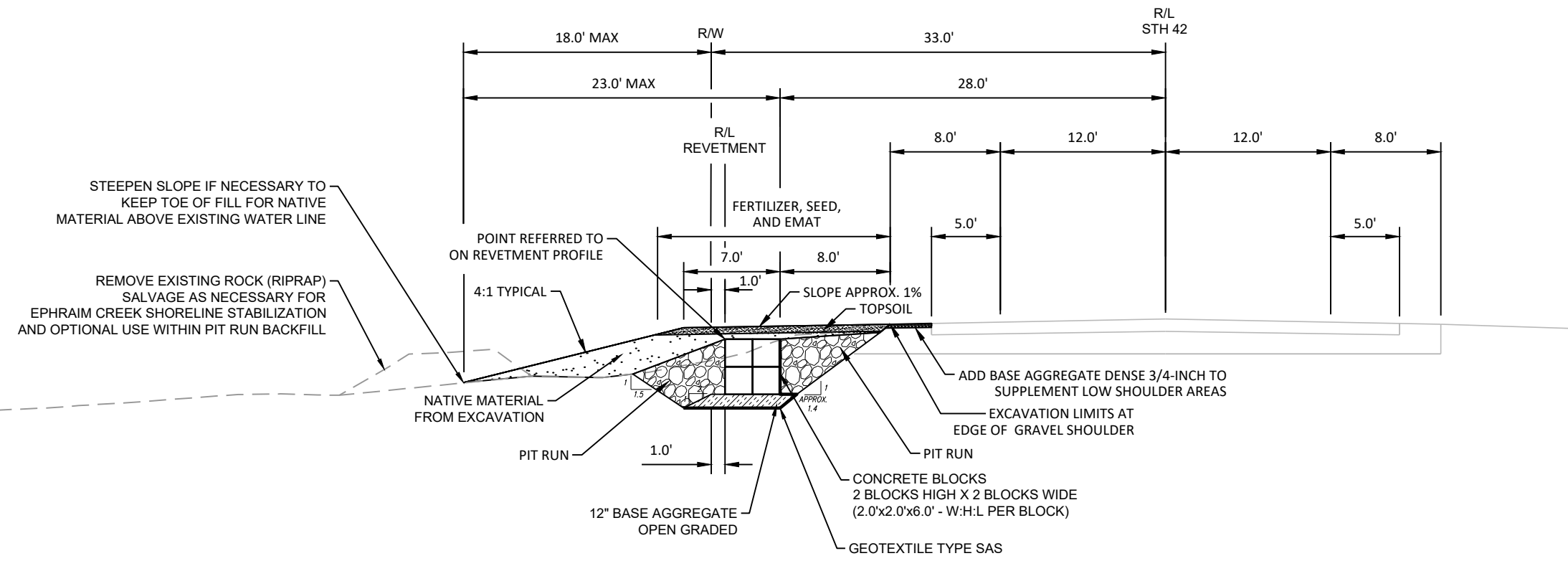
HWY: STH 42

COUNTY: DOOR

PROJECT OVERVIEW

SHEET

E

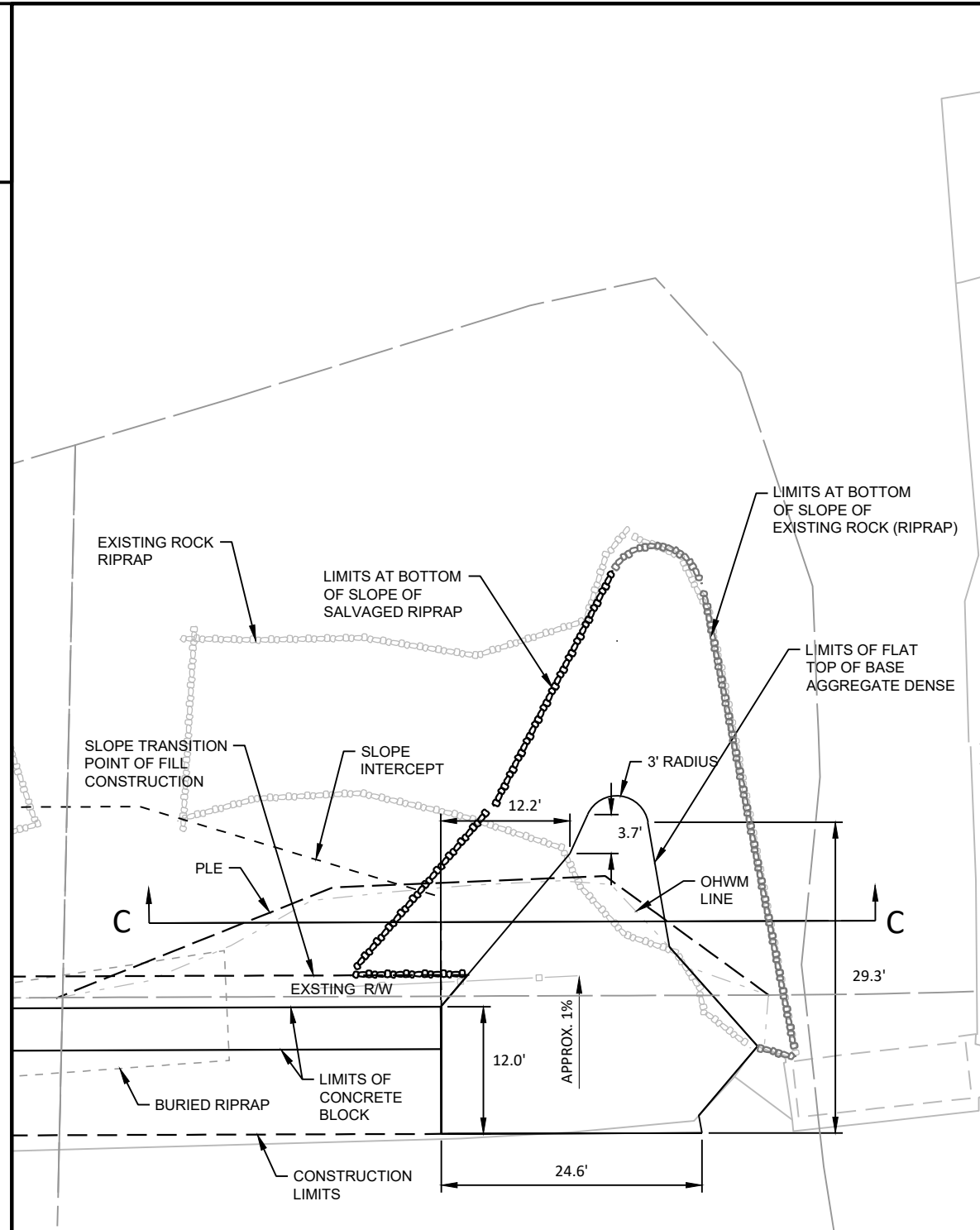


STEEPEN SLOPE IF NECESSARY TO KEEP TOE OF FILL FOR NATIVE MATERIAL ABOVE EXISTING WATER LINE

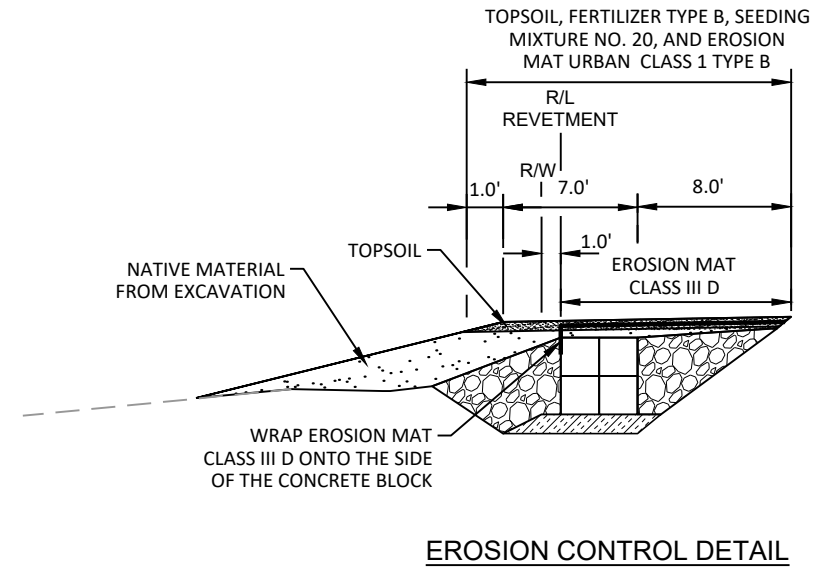
REMOVE EXISTING ROCK (RIPRAP) SALVAGE AS NECESSARY FOR EPHRAIM CREEK SHORELINE STABILIZATION AND OPTIONAL USE WITHIN PIT RUN BACKFILL

PROPOSED TYPICAL SECTION
STH 42

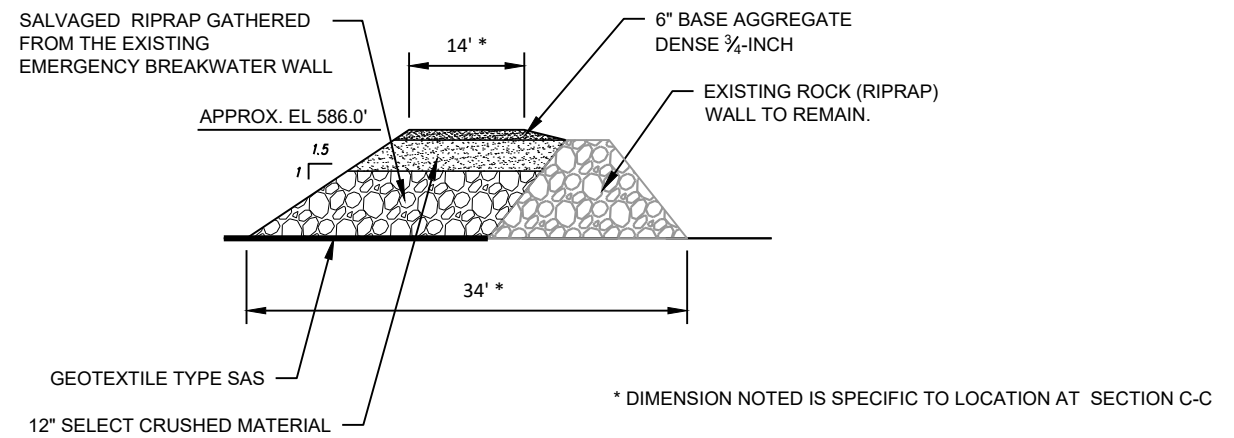
NOTE: 6" MINIMUM COVER (TOPSOIL) ON TOP OF CONCRETE BLOCKS REQUIRED. MINIMUM THICKNESS OF TOPSOIL SHALL BE 6". SECTIONS WITH COVER GREATER THAN 6" ABOVE CONCRETE BLOCKS WILL REQUIRE A LAYER OF NATIVE MATERIAL BELOW TOPSOIL.



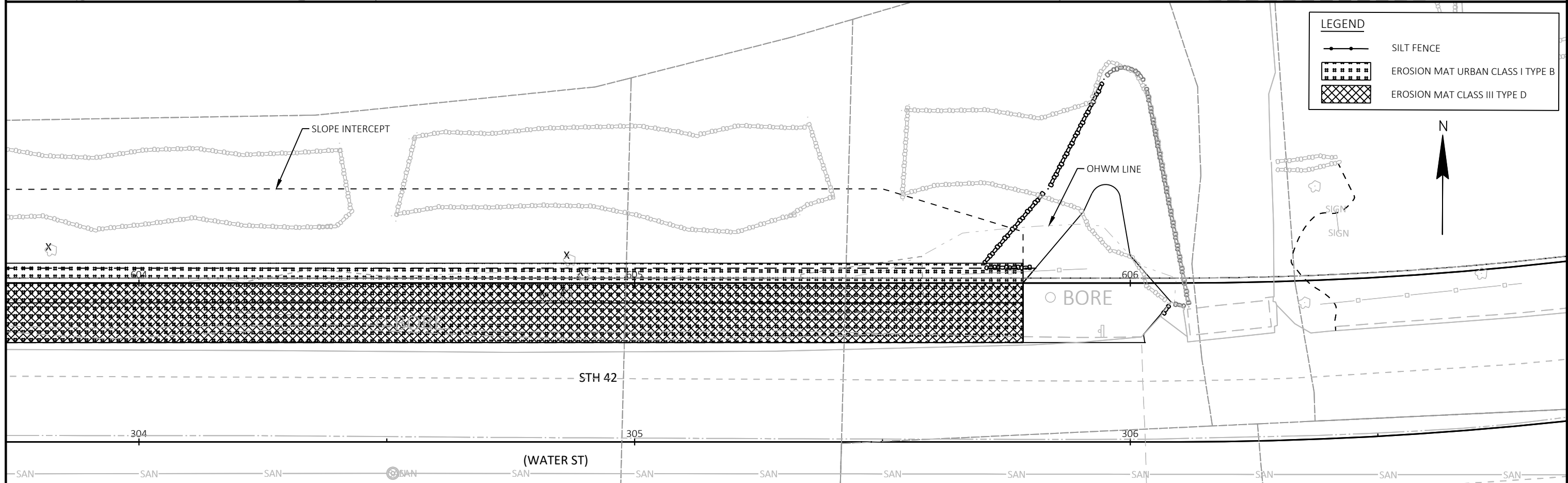
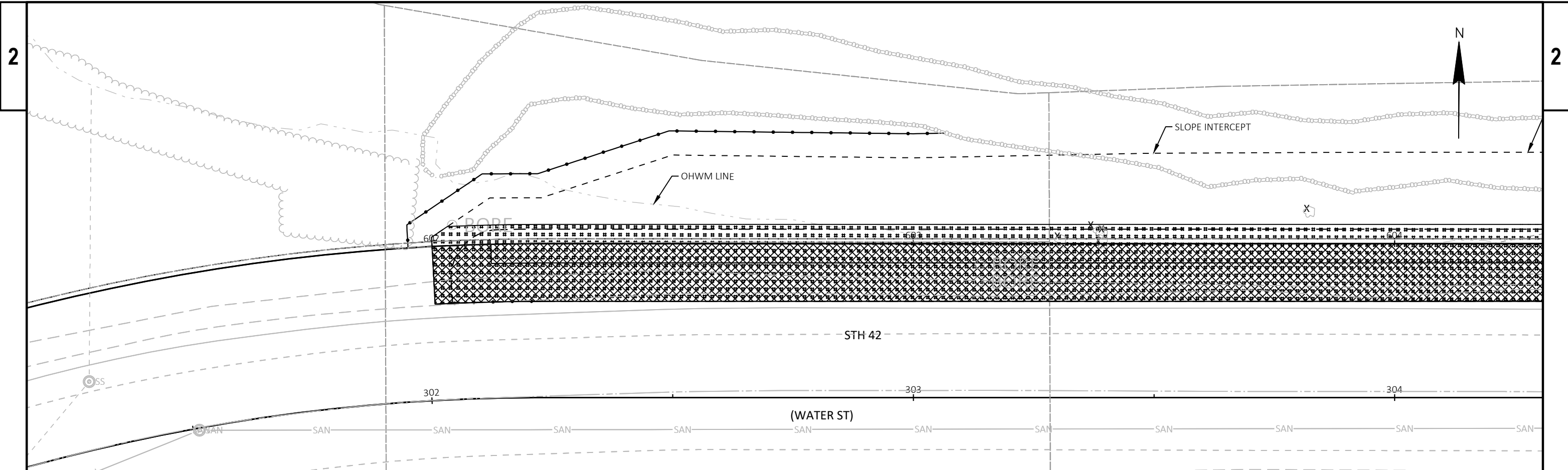
EPHRAIM CREEK SHORELINE STABILIZATION DETAIL



EROSION CONTROL DETAIL



EPHRAIM CREEK SHORELINE STABILIZATION SECTION C-C



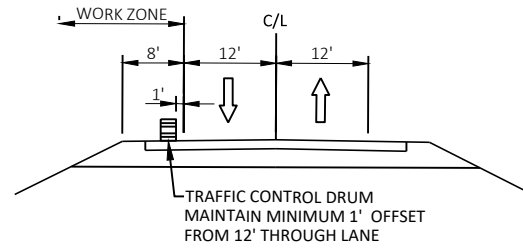
PROJECT NO: 4140-35-72	HWY: STH 42	COUNTY: DOOR	EROSION CONTROL	SHEET	E
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CONSTRUCTION
PERFORM ALL WORK TO CONSTRUCT BURIED REVETMENT, CREEK STABILIZATION, RIPRAP REMOVAL, AND RESTORATION.

TRAFFIC
SOUTHBOUND SHOULDER ON STH 42 MAY BE CLOSED. SEE SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".

MAINTAIN TWO LANES OF TRAFFIC ON STH 42 EXCEPT FOR WHEN A LANE CLOSURE IS NECESSARY FOR CONSTRUCTION OPERATIONS. A SINGLE LANE MAY BE CLOSED USING FLAGGING OPERATIONS. SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION".

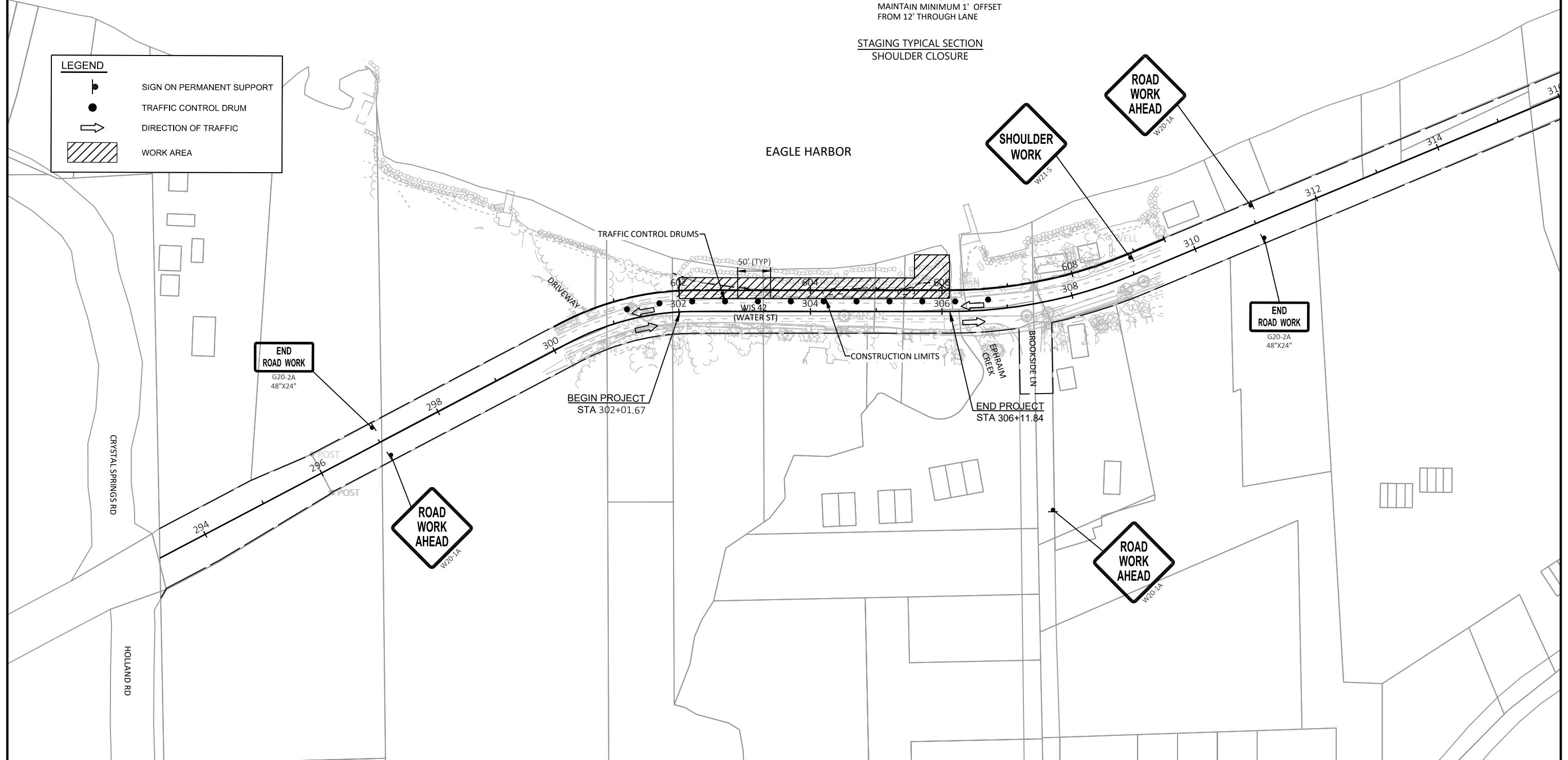
NOTE: UTILIZE A PORTABLE CHANGEABLE MESSAGE SIGN IN EACH DIRECTION ONE WEEK IN ADVANCE OF THE START OF CONSTRUCTION TO ALERT THE ROAD USERS.



STAGING TYPICAL SECTION
SHOULDER CLOSURE

LEGEND

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



Estimate Of Quantities

4140-35-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	3.000	3.000
0006	204.0170	Removing Fence	LF	25.000	25.000
0008	205.0100	Excavation Common	CY	791.000	791.000
0010	205.0300	Excavation Stone Piles and Stone Fences	CY	387.000	387.000
0012	213.0100	Finishing Roadway (project) 01. 4140-35-72	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	30.000	30.000
0016	310.0110	Base Aggregate Open-Graded	TON	165.000	165.000
0018	312.0110	Select Crushed Material	TON	25.000	25.000
0020	313.0110	Pit Run	TON	890.000	890.000
0022	619.1000	Mobilization	EACH	1.000	1.000
0024	624.0100	Water	MGAL	5.000	5.000
0026	625.0100	Topsoil	SY	840.000	840.000
0028	628.1504	Silt Fence	LF	156.000	156.000
0030	628.1520	Silt Fence Maintenance	LF	156.000	156.000
0032	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0034	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0036	628.2008	Erosion Mat Urban Class I Type B	SY	840.000	840.000
0038	628.2039	Erosion Mat Class III Type D	SY	683.000	683.000
0040	629.0210	Fertilizer Type B	CWT	0.600	0.600
0042	630.0120	Seeding Mixture No. 20	LB	24.000	24.000
0044	630.0200	Seeding Temporary	LB	24.000	24.000
0046	630.0400	Seeding Nurse Crop	LB	6.000	6.000
0048	630.0500	Seed Water	MGAL	10.000	10.000
0050	638.2102	Moving Signs Type II	EACH	1.000	1.000
0052	642.5001	Field Office Type B	EACH	1.000	1.000
0054	643.0300	Traffic Control Drums	DAY	420.000	420.000
0056	643.0900	Traffic Control Signs	DAY	210.000	210.000
0058	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0060	643.5000	Traffic Control	EACH	1.000	1.000
0062	645.0140	Geotextile Type SAS	SY	745.000	745.000
0064	SPV.0035	Special 01. Install Salvaged Riprap	CY	54.000	54.000
0066	SPV.0060	Special 01. Construction Staking Survey Project 4140-35-72	EACH	1.000	1.000
0068	SPV.0090	Special 01. Buried Concrete Block Wall	LF	366.000	366.000

CLEARING AND GRUBBING ITEMS

STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA	COMMENTS
CAT 0010				
PROJECT NO: 4140-35-72				
STAGE 1				
303+00 - 305+00	LT	2	2	
305+00 - 306+00	LT	--	1	BURIED STUMPS/ROOTS
STAGE 1 SUBTOTAL		2	3	
PROJECT TOTAL		2	3	

ROADWAY REMOVAL ITEMS

STATION - STATION	LOCATION	204.0170 REMOVING FENCE LF
CAT 0010		
PROJECT NO: 4140-35-72		
STAGE 1		
305+66 - 305+91	34' LT	25
STAGE 1 SUBTOTAL		25
PROJECT TOTAL		25

EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1)		UNEXPANDED EILL CY	EXPANDED EILL (2) EACTOR 1.15	MASS ORDINATE +/- (3)	WASTE CY (4)
			CUT CY	EBS EXCAVATION CY				
DIVISION 1	602+00.00 TO 605+78.37	REVTMENT	791	0	286	329	462	462
DIVISION 1 SUBTOTAL			791	0	286	329	462	462
GRAND TOTAL			791	0	286	329	462	462
TOTAL EXCAVATION COMMON			791					

NOTES:

- (1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. NO EBS IS ANTICIPATED. ITEM NUMBER 205.0100
- (2) EXPANDED FILL FACTOR = 1.15
EXPANDED FILL = UNEXPANDED FILL * FILL FACTOR
- (3) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (4) WASTE = EXCAVATION COMMON - EXPANDED FILL

EXCAVATION STONE

STATION - STATION	LOCATION	205.0300 EXCAVATION STONE PILES AND STONE FENCES CY
CAT 0010		
PROJECT NO: 4140-35-72		
STAGE 1		
301+96 - 305+96	LT	387
STAGE 1 SUBTOTAL		387
PROJECT TOTAL		387

NOTES: INCLUDES REMOVING EXISTING GEOTEXTILE FABRIC UNDERNEATH THE STONES.
TWO AREAS OF STONES ARE BURIED AS SHOWN ON THE PLANS.
ESTIMATED VOLUME OF 54 CY OF 205.0300 SHALL BE USED FOR CREEK STABILIZATION.
ADDITIONAL VOLUME OF 205.0300 MAY BE USED WITHIN THE PIT RUN BACKFILL.

AGGREGATE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	310.0110 BASE AGGREGATE OPEN-GRADED TON	312.0110 SELECT CRUSHED MATERIAL TON	313.0110 PIT RUN TON	SPV.0035.01 INSTALL SALVAGED RIPRAP CY
CAT 0010						
PROJECT NO: 4140-35-72						
STAGE 1						
602+27 - 605+79	REVTMENT	--	165	--	890	--
302+01 - 305+76	STH 42, LT SHLD	7	--	--	--	--
305+76 - 306+09	STH 42, LT	23	--	25	--	54
STAGE 1 SUBTOTAL		30	165	25	890	54
PROJECT TOTAL		30	165	25	890	54

NOTE: ROCK (RIPRAP) FROM THE EXISTING EMERGENCY BREAKWATER WALL USED AS PIT RUN WILL BE PAID AS PIT RUN.

3

3

MOBILIZATION

LOCATION	619.1000 MOBILIZATION EACH
CAT 0010	
PROJECT NO: 4140-35-72	1
PROJECT TOTAL	1

MOBILIZATION EROSION CONTROL ITEMS

LOCATION	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
CAT 0010		
PROJECT NO: 4140-35-72		
STAGE 1	4	2
PROJECT TOTAL	4	2

WATER

STATION - STATION	LOCATION	624.0100 WATER MGAL
CAT 0010		
PROJECT NO: 4140-35-72		
STAGE 1		
602+27 - 605+79	REVTMENT	4
305+76 - 306+09	STH 42, LT	1
STAGE 1 SUBTOTAL		5
PROJECT TOTAL		5

LANDSCAPING ITEMS

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0400 SEEDING NURSE CROP LB	630.0500 SEED WATER MGAL
CAT 0010							
PROJECT NO: 4140-35-72							
STAGE 1							
302+01 - 305+78	LT	672	0.5	19	19	5	8
STAGE 1 SUBTOTAL		672	0.5	19	19	5	8
UNDISTRIBUTED		168	0.1	5	5	1	2
PROJECT TOTAL		840	0.6	24	24	6	10

EROSION CONTROL

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS TYPE B SY	628.2039 EROSION MAT CLASS III TYPE D SY
CAT 0010					
PROJECT NO: 4140-35-72					
STAGE 1					
302+01 - 305+78	LT	125	125	672	546
STAGE 1 SUBTOTAL		125	125	672	546
UNDISTRIBUTED		31	31	168	137
PROJECT TOTAL		156	156	840	683

SIGNING

STATION LOCATION		638.2102 MOVING SIGNS TYPE II EACH	COMMENTS
CAT 0010			
PROJECT NO: 4140-35-72			
STAGE 1			
305+94	22' LT	1	REMOVE AND REINSTALL 25 MPH SPEED LIMIT SIGN
STAGE 1 SUBTOTAL		1	
PROJECT TOTAL		1	

TRAFFIC CONTROL ITEMS

STAGE	LOCATION	DURATION DAYS	643.0300	643.0900	643.1050		
			TRAFFIC CONTROL DRUMS EACH	TRAFFIC CONTROL SIGNS EACH	TRAFFIC CONTROL SIGNS PCMS EACH DAYS		
CAT 0010							
PROJECT NO: 4140-35-72							
STAGE 1							
	STH 42	33	12	396	6	198	2 14
				396		198	14
UNDISTRIBUTED				24		12	
PROJECT TOTAL				420		210	14

FIELD OFFICE

642.5001 FIELD OFFICE TYPE B EACH	
CAT 0010	
PROJECT NO: 4140-35-72	
PROJECT TOTAL	
	1

TRAFFIC CONTROL

643.5000 TRAFFIC CONTROL EACH	
CAT 0010	
PROJECT NO: 4140-35-72	
PROJECT TOTAL	
	1

GEOTEXTILE FABRIC

STATION - STATION LOCATION		645.0140 GEOTEXTILE TYPE SAS SY	COMMENTS
CAT 0010			
PROJECT NO: 4140-35-72			
STAGE 1			
302+01 -	305+78	LT 667	REVTMENT
305+68 -	306+08	LT 78	UNDER TEMP. RIPRAP
STAGE 1 SUBTOTAL		745	
PROJECT TOTAL		745	

CONSTRUCTION STAKING

STATION - STATION LOCATION		SPV.0060.01 CONSTRUCTION STAKING SURVEY PROJECT 4140-35-72 LS
CAT 0010		
PROJECT NO: 4140-35-72		
302+01 -	306+12	STH 42 1
PROJECT TOTAL		1

BURIED CONCRETE BLOCK WALL

STATION - STATION LOCATION		SPV.0090.01 BURIED CONCRETE BLOCK WALL LF
CAT 0010		
PROJECT NO: 4140-35-72		
STAGE 1		
602+12 -	605+78	REVTMENT 366
STAGE 1 SUBTOTAL		366
PROJECT TOTAL		366

CONVENTIONAL SYMBOLS

SECTION LINE	PARCEL NUMBER (25)	UTILITY NUMBER (100)
QUARTER LINE	SECTION CORNER	R/W MONUMENT
SIXTEENTH LINE	NOTATION FOR COMBUSTIBLE FLUIDS	NON-MONUMENTED R/W POINT
NEW REFERENCE LINE	NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES	FOUND IRON PIN
NEW R/W LINE		VALVE (GAS, WATER, ETC.)
EXISTING R/W LINE		SIGN
PROPERTY LINE		OFF-PREMISE SIGN
LOT, TIE, AND OTHER MINOR LINES		
SLOPE INTERCEPT		
CORPORATE LIMITS		
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)		
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)		
TEMP. LIMITED EASEMENT AREA		
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)		
TRANSMISSION STRUCTURES		
BUILDING		
BUILDING (TO BE REMOVED)		
BRIDGE		

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.		
EASEMENT	EASE.		
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC.		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	PL		
RECORDED AS	(100')		
REFERENCE LINE	R/L		

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—
GAS	—G—
TELEPHONE	—T—
OVERHEAD	—OH—
TRANSMISSION LINES	—E—
ELECTRIC	—E—
CABLE TELEVISION	—TV—
FIBER OPTIC	—FO—
SANITARY SEWER	—SAN—
STORM SEWER	—SS—
NON-COMPENSABLE	—NC—
COMPENSABLE	—C—
POWER POLE	⊕
TELEPHONE POLE	⊕
TELEPHONE PEDESTAL	⊕
ELECTRIC TOWER	⊕

NOTES:

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

RIGHT OF WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 1" X 24" IRON PIPE) AND WILL BE PLACED PRIOR TO COMPLETION OF PROJECT.

AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

COORDINATES AS SHOWN ARE NOT INTENDED TO BE USED FOR RETRACEMENT PURPOSES AND MUST BE VERIFIED WITH THE COUNTY SURVEY DEPARTMENT.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, DOOR COUNTY, NAD 83 (93) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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 AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING RIGHT OF WAY WAS ACQUIRED FROM PROJECT(S): 4140-21-00-426

EXISTING ACCESS CONTROL WAS ACQUIRED UNDER PROJECT(S)/DOC.#:

RIGHT OF WAY REFERENCE LINE MAY NOT BE THE SAME AS THE CONSTRUCTION REFERENCE LINE.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND 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 NECESSARY OR DESIRABLE TO PREVENT EROSION OF THE SOIL. ALL TLES ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

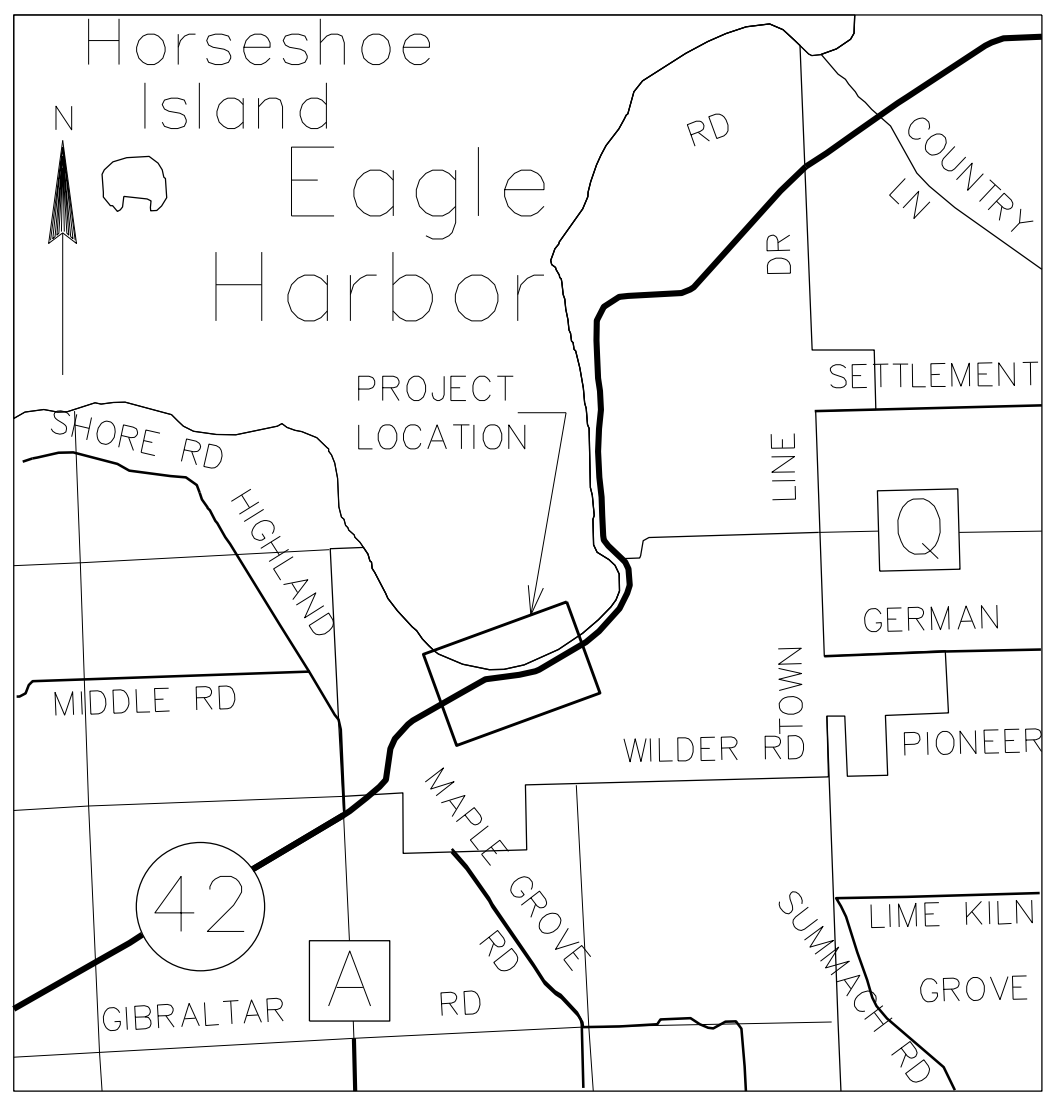
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO DEPARTMENT OF TRANSPORTATION.

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.

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE DEPARTMENT OF TRANSPORTATION REGION OFFICE IN GREEN BAY.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITIONS.

TOWN 31N – RANGE 27E
VILLAGE OF EPHRAIM



LAYOUT SCALE
0 1.0 MI.
TOTAL NET LENGTH OF CENTERLINE = 1.00 MI.

R/W PROJECT NUMBER	4140-35-21	SHEET NUMBER	4.01	TOTAL SHEETS	2
FEDERAL PROJECT NUMBER	PLAT OF RIGHT OF WAY REQUIRED FOR VILLAGE OF EPHRAIM, SHORELINE STABILIZATION CTH "A" - STH 57				
STH 42	DOOR COUNTY				

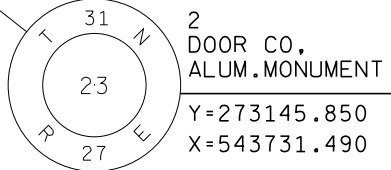
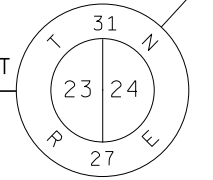
STH 42 ALI COURSE COORDINATES

STATION	Y	X	BEARING	DISTANCE
293+22.08	272561.53	543744.96	N62°02'55"E	705.88'
300+27.96	272892.39	544368.50		
301+27.28	272537.21	544556.96		
302+22.71	272939.29	544555.56		
306+09.29	272940.64	544942.14		
307+57.86	273679.94	544939.55		
309+02.53	272999.03	545227.54		
316+23.36	273279.83	545891.43		

REVISION DATE	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED: <i>Curt Van Erem</i>	APPROVED: <i>Curt Van Erem</i>
DATE: 8-26-2021	DATE: 8-26-2021
	CURT VAN EREM

N87° 51' 15"E 2675.91' S/L

3
DOOR CO.
ALUM. MONUMENT
Y=273246.040
X=546405.520



2
DOOR CO.
ALUM. MONUMENT
Y=273145.850
X=543731.490

POINT	STATION	OFFSET	COORDINATES
1	Out of range	Out of range	Y=270552.710 X=543791.270
2	295+84.07	-522.47'	Y=273145.850 X=543731.490
3	Out of range	Out of range	Y=273246.040 X=546405.520
4	294+79.77	-314.48'	Y=272913.235 X=543736.852
5	301+92.67	-32.95'	Y=272970.912 X=544522.971
6	301+94.32	-59.64'	Y=272997.660 X=544522.776
7	302+27.41	-44.91'	Y=272984.215 X=544560.105
8	302+84.87	-36.96'	Y=272976.471 X=544617.592
9	303+03.13	-35.32'	Y=272974.889 X=544635.855
10	303+09.52	-32.95'	Y=272972.539 X=544642.254
11	304+45.63	-32.95'	Y=272973.015 X=544778.359
12	304+86.48	-36.17'	Y=272976.379 X=544819.202
13	305+17.39	-32.95'	Y=272973.266 X=544850.117
14	305+41.99	-32.95'	Y=272973.352 X=544874.716
15	305+68.16	-43.32'	Y=272983.813 X=544900.852
16	305+93.87	-44.31'	Y=272984.892 X=544926.565
17	306+09.39	-32.95'	Y=272973.588 X=544942.113
18	302+22.71	0.00'	Y=272939.289 X=544555.555
19	302+22.67	-32.95'	Y=272972.235 X=544555.397
20	304+45.64	0.00'	Y=272940.068 X=544778.489
21	305+42.00	0.00'	Y=272940.405 X=544874.851

Out of Range: The Point is not adjacent to alignment.

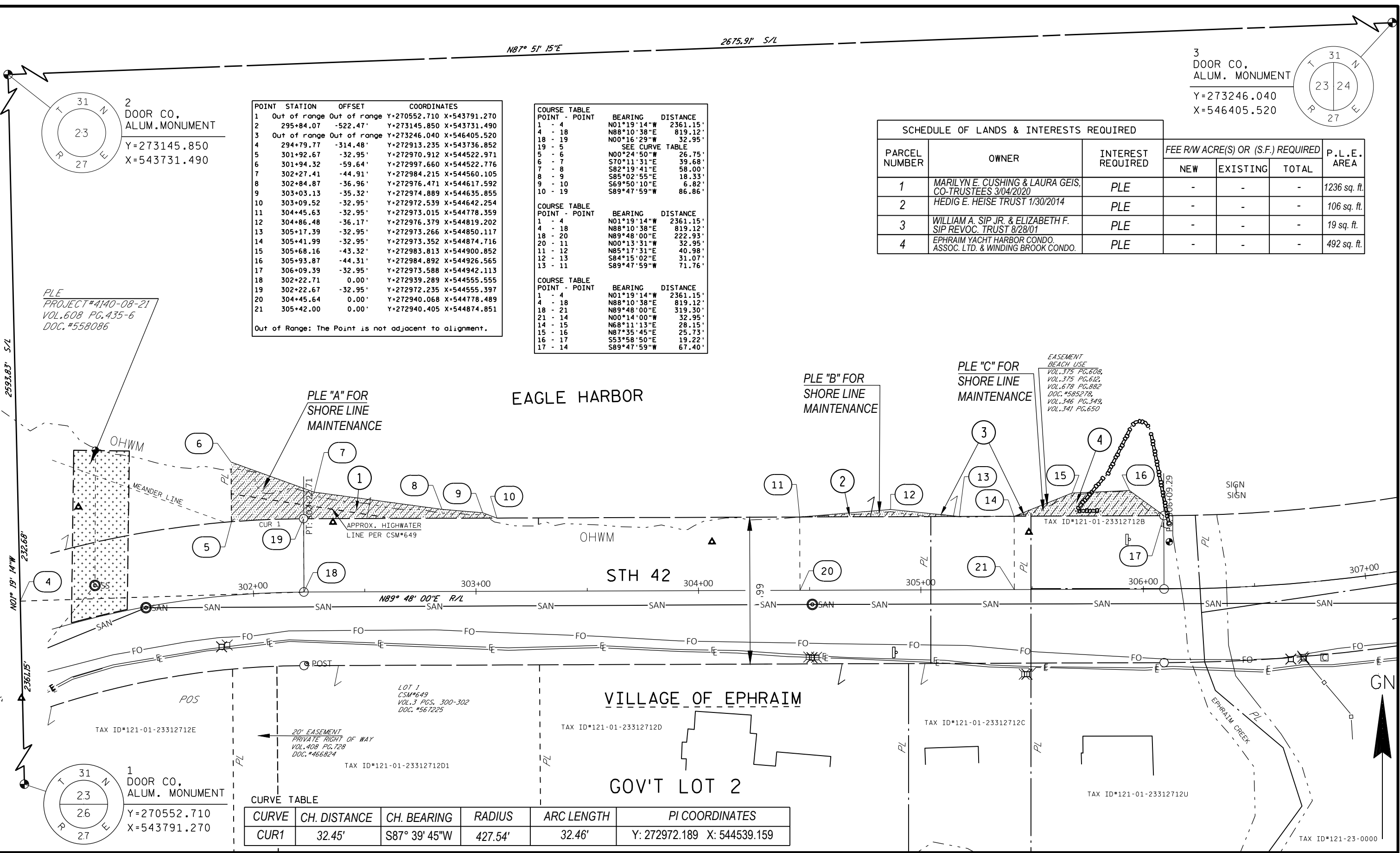
COURSE TABLE		
POINT - POINT	BEARING	DISTANCE
1 - 4	N01°19'14"W	2361.15'
4 - 18	N88°10'38"E	819.12'
18 - 19	N00°16'29"W	32.95'
19 - 5	SEE CURVE TABLE	
5 - 6	N00°24'50"W	26.75'
6 - 7	S70°11'31"E	39.68'
7 - 8	S82°19'41"E	58.00'
8 - 9	S85°02'55"E	18.33'
9 - 10	S69°50'10"E	6.82'
10 - 19	S89°47'59"W	86.86'

COURSE TABLE		
POINT - POINT	BEARING	DISTANCE
1 - 4	N01°19'14"W	2361.15'
4 - 18	N88°10'38"E	819.12'
18 - 20	N89°48'00"E	222.93'
20 - 11	N00°13'31"W	32.95'
11 - 12	N85°17'31"E	40.98'
12 - 13	S84°15'02"E	31.07'
13 - 11	S89°47'59"W	71.76'

COURSE TABLE		
POINT - POINT	BEARING	DISTANCE
1 - 4	N01°19'14"W	2361.15'
4 - 18	N88°10'38"E	819.12'
18 - 21	N89°48'00"E	319.30'
21 - 14	N00°14'00"W	32.95'
14 - 15	N68°11'13"E	28.15'
15 - 16	N87°35'45"E	25.73'
16 - 17	S53°58'50"E	19.22'
17 - 14	S89°47'59"W	67.40'

SCHEDULE OF LANDS & INTERESTS REQUIRED						
PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE RW ACRE(S) OR (S.F.) REQUIRED			P.L.E. AREA
			NEW	EXISTING	TOTAL	
1	MARILYN E. CUSHING & LAURA GEIS, CO-TRUSTEES 3/04/2020	PLE	-	-	-	1236 sq. ft.
2	HEDIG E. HEISE TRUST 1/30/2014	PLE	-	-	-	106 sq. ft.
3	WILLIAM A. SIP JR. & ELIZABETH F. SIP REVOC. TRUST 8/28/01	PLE	-	-	-	19 sq. ft.
4	EPHRAIM YACHT HARBOR CONDO. ASSOC. LTD. & WINDING BROOK CONDO.	PLE	-	-	-	492 sq. ft.

PLE
PROJECT#4140-08-21
VOL.608 PG.435-6
DOC.#558086



CURVE TABLE					
CURVE	CH. DISTANCE	CH. BEARING	RADIUS	ARC LENGTH	PI COORDINATES
CUR1	32.45'	S87° 39' 45"W	427.54'	32.46'	Y: 272972.189 X: 544539.159

REVISION DATE	DATE: 8-26-2021	0 20 40 GRAPHIC SCALE, FEET	HWY: STH 42 COUNTY: DOOR	STATE R/W PROJECT NUMBER 4140-35-21 CONSTRUCTION PROJECT NUMBER	PLAT SHEET NO: 4.02 PS&E SHEET NO: E
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CURVE - REVETMENT 01
 PI STA = 601+19.69
 Y = 272970.914
 X = 544448.217
 DELTA = 27°45'04"
 D = 13°11'58"
 T = 107.23'
 L = 210.25'
 R = 434.08'
 PC STA = 600+12.46
 Y = 272920.654
 X = 544353.498
 PT STA = 602+22.71
 Y = 272971.289
 X = 544555.443
 BK = N62°02'55.0"E
 AH = N89°47'59.0"E

CURVE - EXISTING 01
 PI STA = 301+27.28
 Y = 272938.942
 X = 544456.233
 DELTA = 27°45'04"
 D = 14°14'59"
 T = 99.32'
 L = 194.75'
 R = 402.08'
 PC STA = 300+27.96
 Y = 272892.387
 X = 544368.497
 PT STA = 302+22.71
 Y = 272939.289
 X = 544555.555
 BK = N62°02'55.0"E
 AH = N89°47'59.0"E

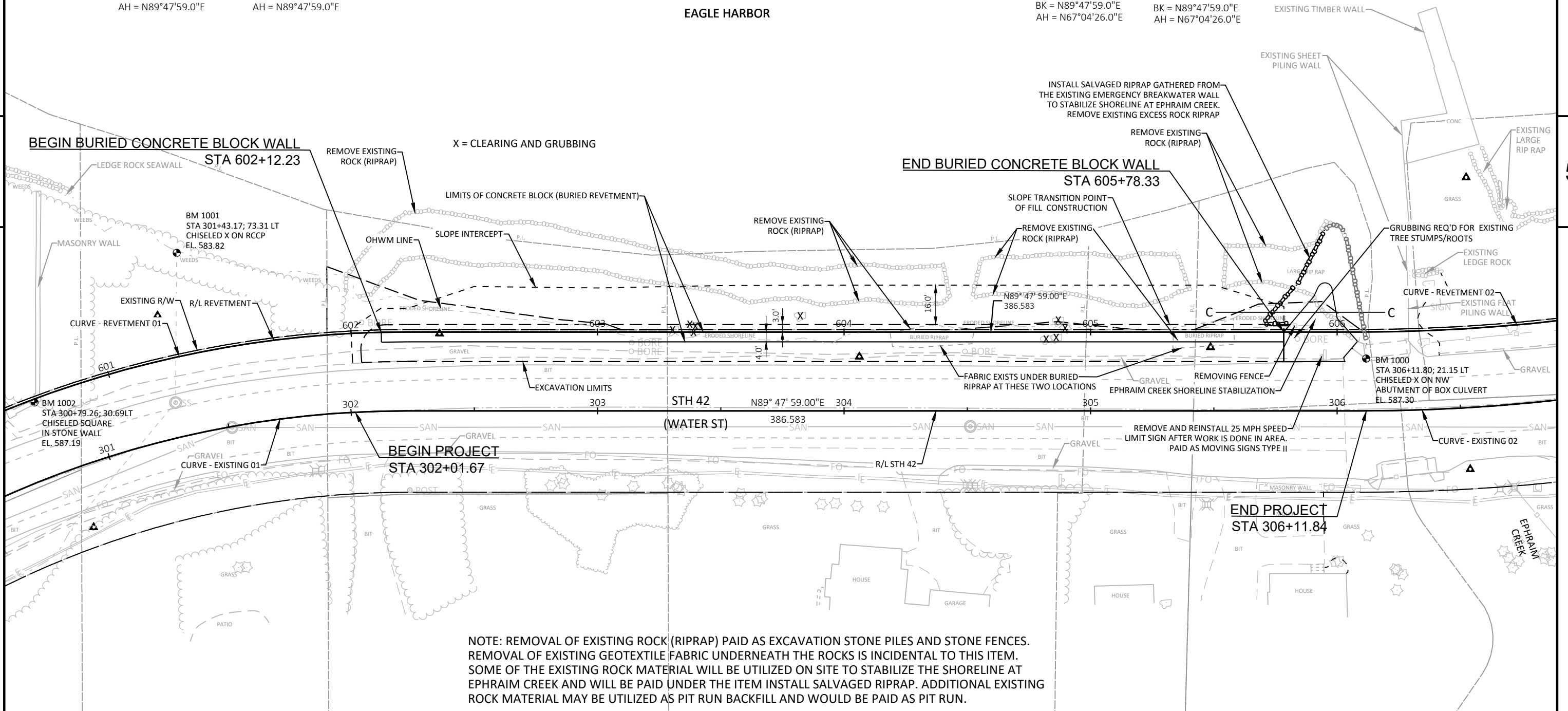
CURVE - EXISTING 02
 PI STA = 307+57.86
 Y = 272941.160
 X = 545090.707
 DELTA = 22°43'33"
 D = 7°45'00"
 T = 148.57'
 L = 293.24'
 R = 739.30'
 PC STA = 306+09.29
 Y = 272940.640
 X = 544942.136
 PT STA = 309+02.53
 Y = 272999.035
 X = 545227.542
 BK = N89°47'59.0"E
 AH = N67°04'26.0"E

CURVE - REVETMENT 02
 PI STA = 607+51.43
 Y = 272973.137
 X = 545084.164
 DELTA = 22°43'33"
 D = 8°06'02"
 T = 142.14'
 L = 280.54'
 R = 707.30'
 PC STA = 606+09.29
 Y = 272972.640
 X = 544942.025
 PT STA = 608+89.84
 Y = 273028.507
 X = 545215.076
 BK = N89°47'59.0"E
 AH = N67°04'26.0"E

EAGLE HARBOR

5

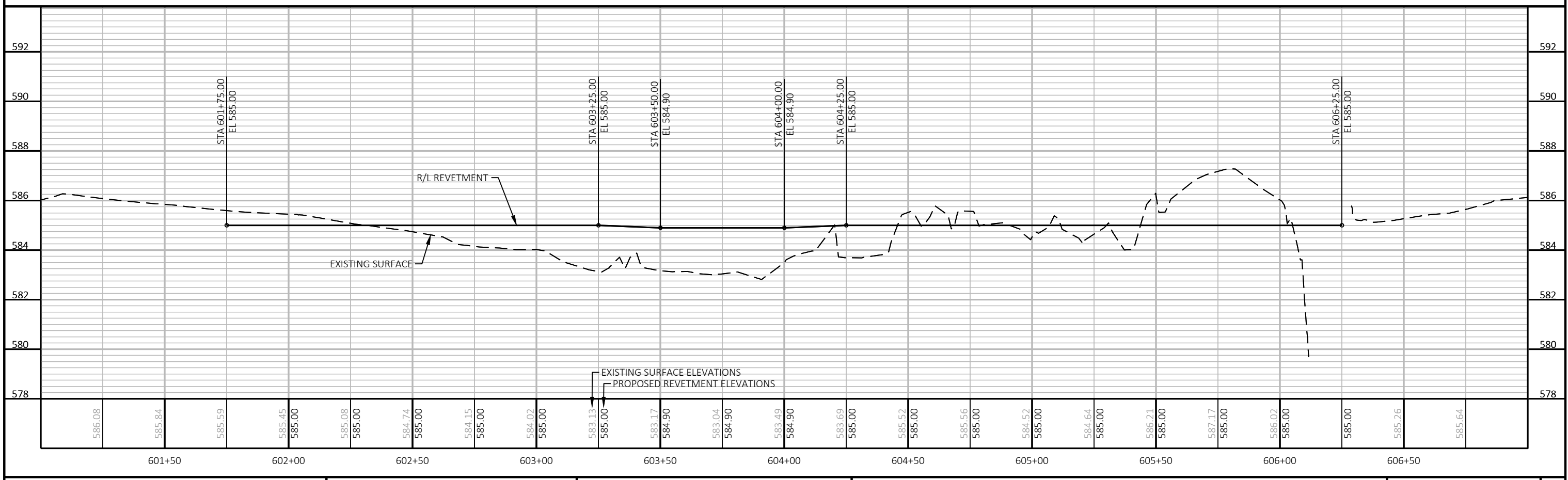
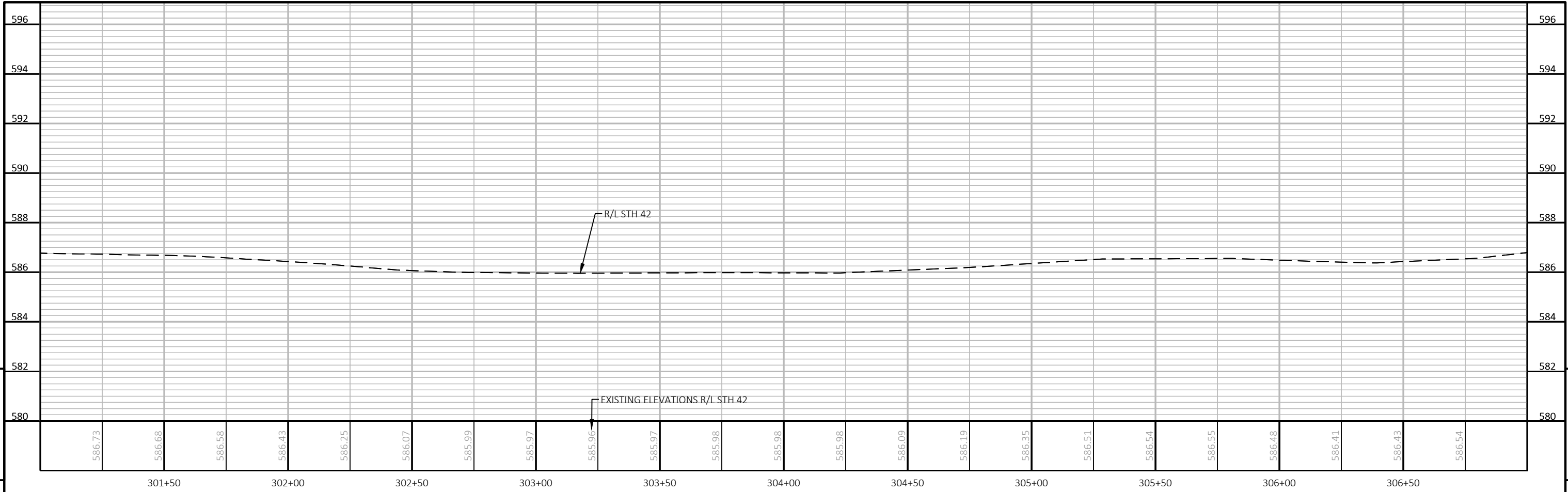
5



NOTE: REMOVAL OF EXISTING ROCK (RIPRAP) PAID AS EXCAVATION STONE PILES AND STONE FENCES. REMOVAL OF EXISTING GEOTEXTILE FABRIC UNDERNEATH THE ROCKS IS INCIDENTAL TO THIS ITEM. SOME OF THE EXISTING ROCK MATERIAL WILL BE UTILIZED ON SITE TO STABILIZE THE SHORELINE AT EPHRAIM CREEK AND WILL BE PAID UNDER THE ITEM INSTALL SALVAGED RIPRAP. ADDITIONAL EXISTING ROCK MATERIAL MAY BE UTILIZED AS PIT RUN BACKFILL AND WOULD BE PAID AS PIT RUN.

PROJECT NO: 4140-35-72	HWY: STH 42	COUNTY: DOOR	PLAN	SHEET	E
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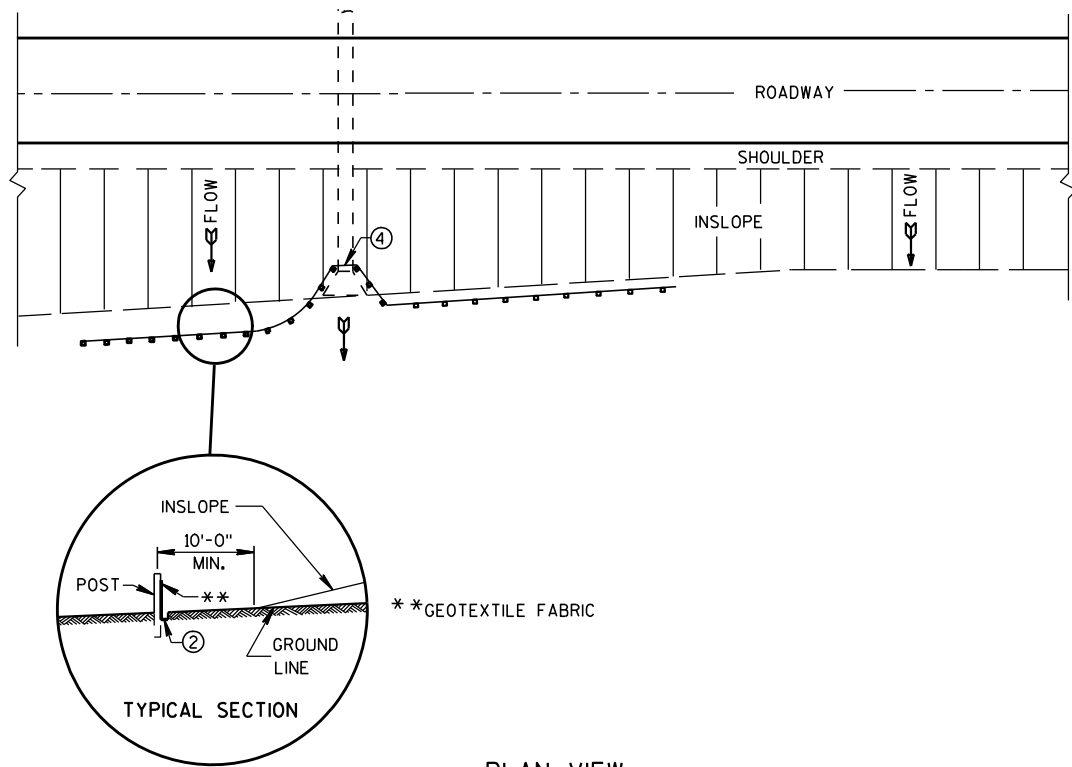
FILE NAME : C:\PW_WORKDIR\DEN003\CH2MHILL_MM093804\0901241\1\PREFERRED ALTERNATIVE 1-CONCRETE BLOCK_06042021.DWG PLOT DATE : 9/30/2021 3:01 PM PLOT BY : MORGAN, MARC/MKE PLOT NAME : PLOT SCALE : 1" = 40' WISDOT/CADD SHEET 44



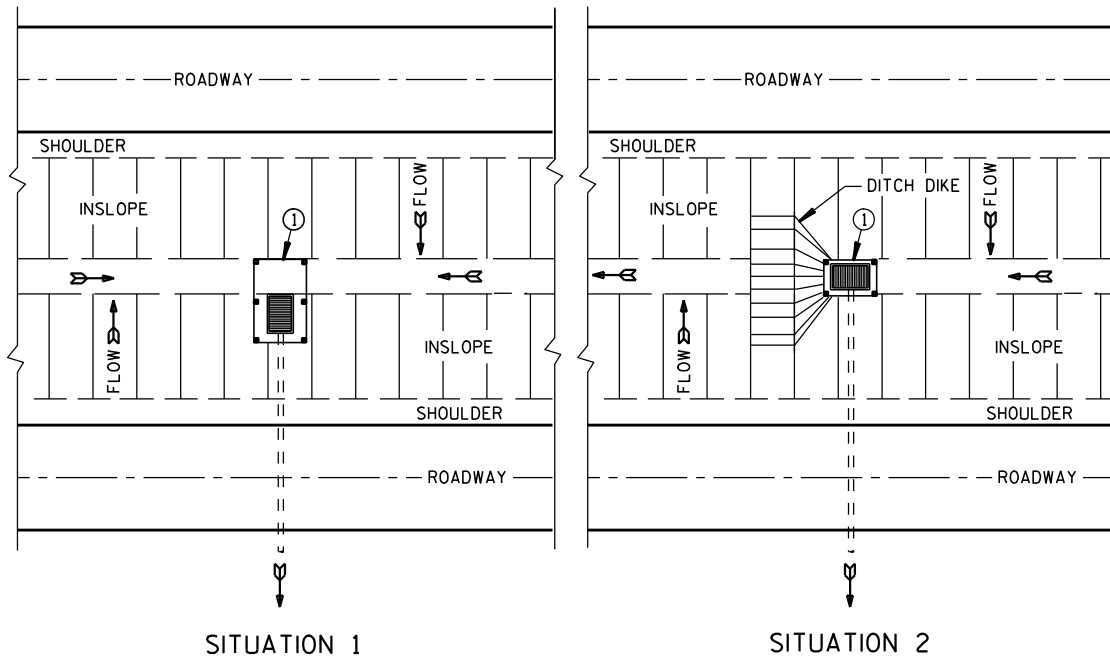
PROJECT NO: 4140-35-72 HWY: STH 42 COUNTY: DOOR PROFILE: ALIGNMENT PROFILES SHEET: E

Standard Detail Drawing List

08E09-06	SILT FENCE
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

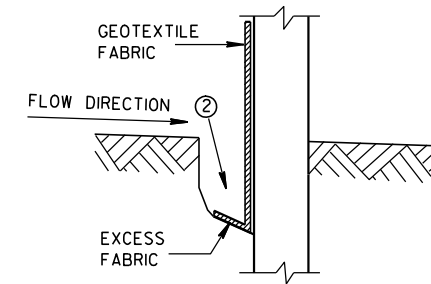


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

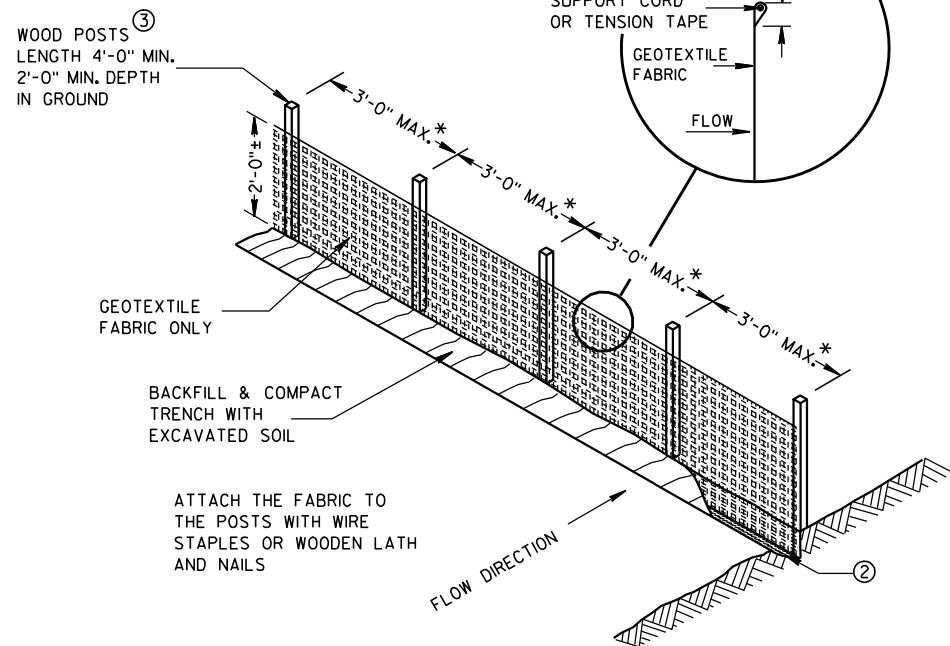
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



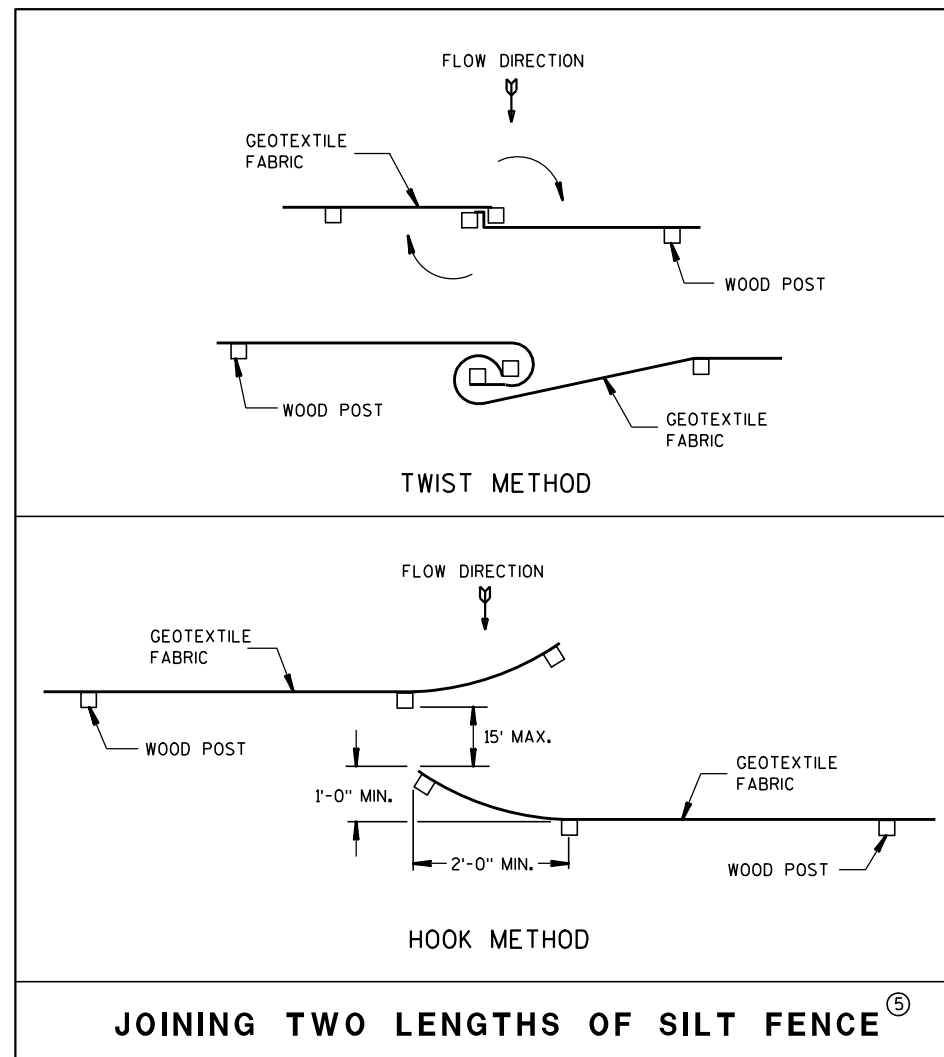
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

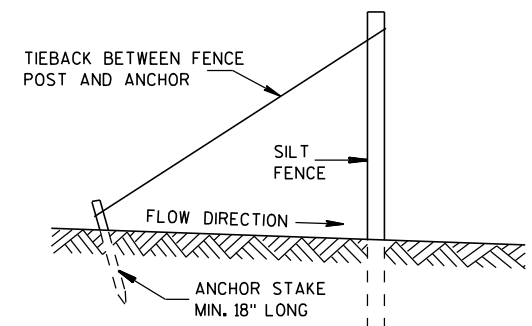


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

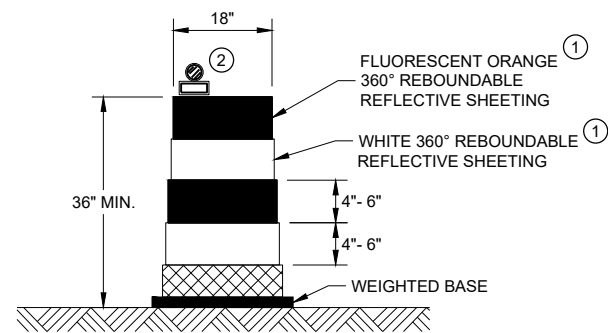


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

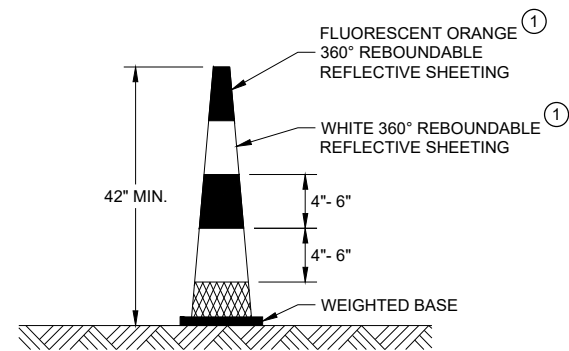
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

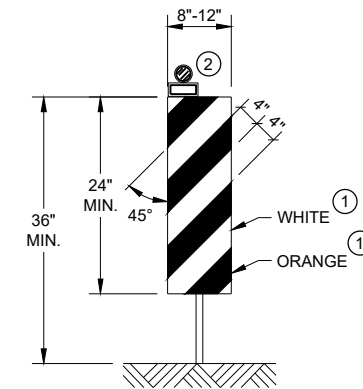


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

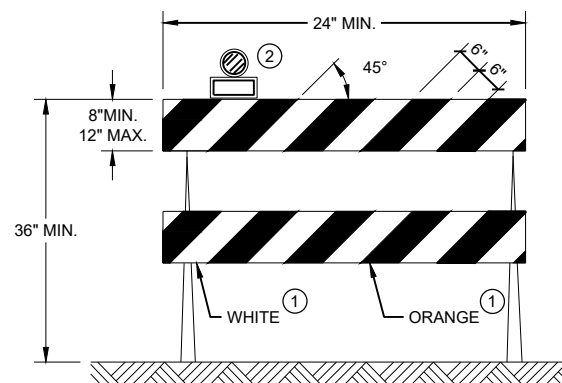


VERTICAL PANEL

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

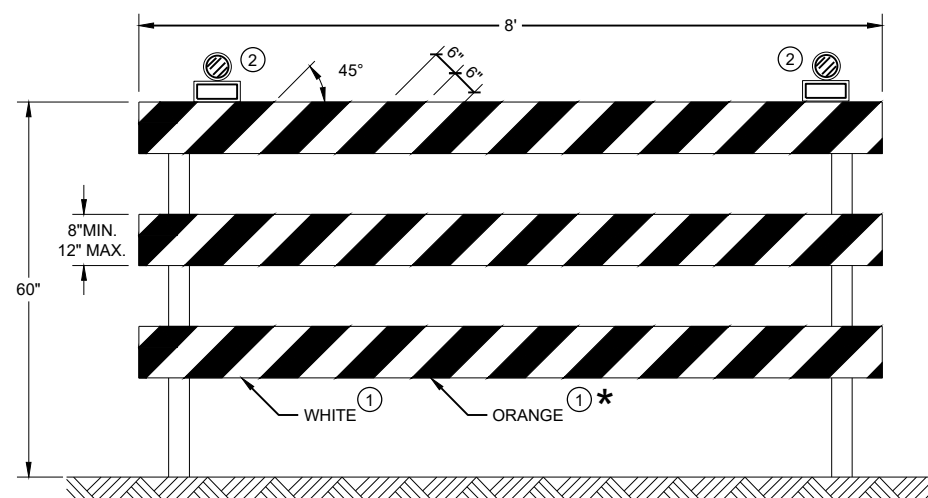
GENERAL NOTES

- 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.



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	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

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

GENERAL NOTES

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

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

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

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

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

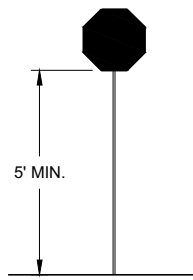
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

- FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
 - ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

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



STOP/SLOW PADDLE ON SUPPORT STAFF

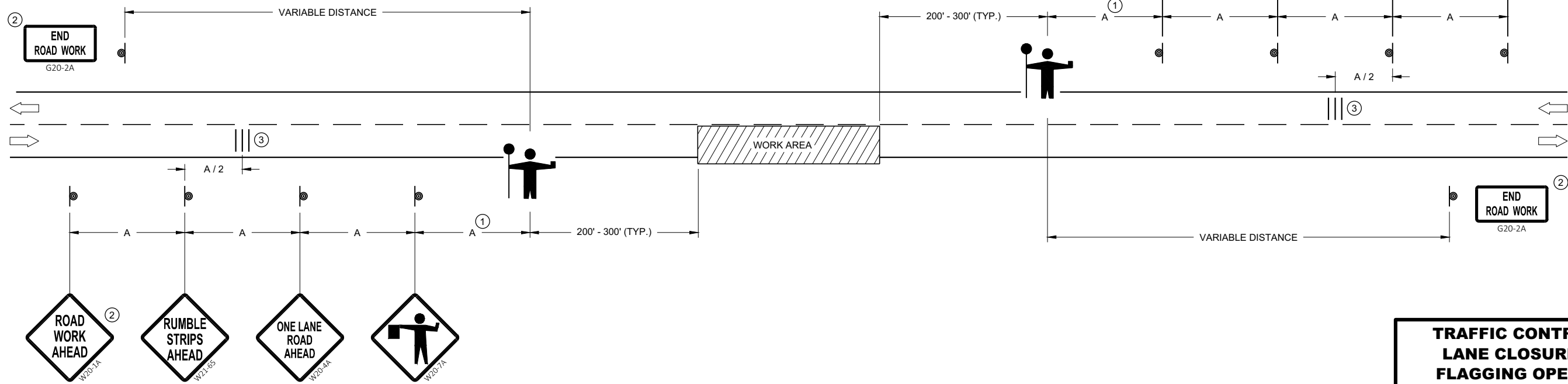
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



W03-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION





TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2019 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

LEGEND

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

GENERAL NOTES

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

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

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

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

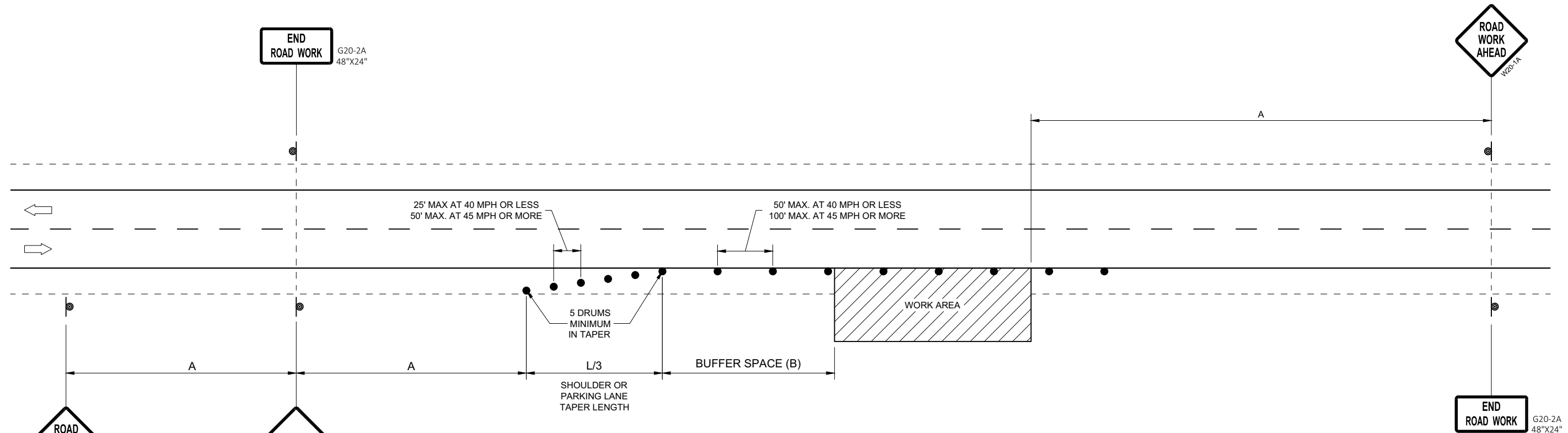
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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

6

6



OR
IF TRAFFIC CONTROL DEVICES
ENCROACH ONTO TRAVELED WAY, USE

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

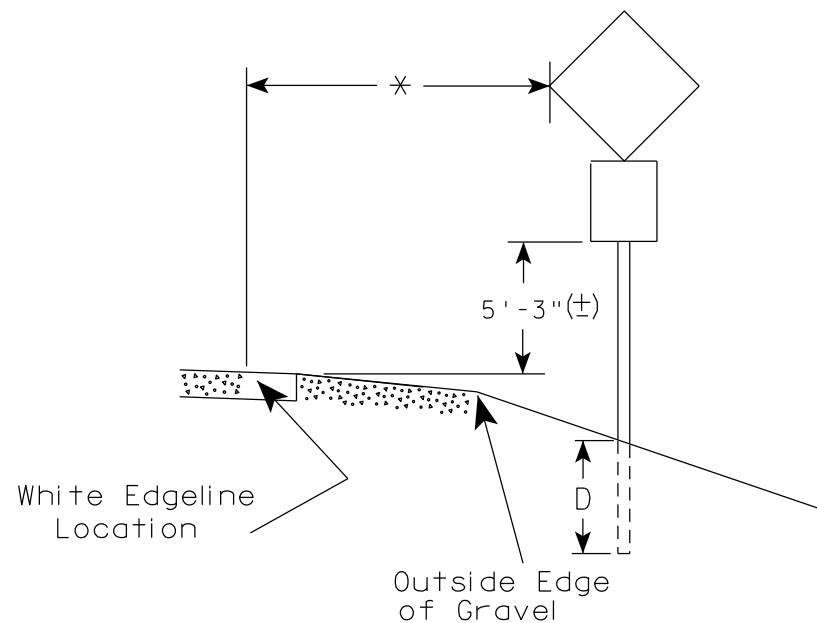
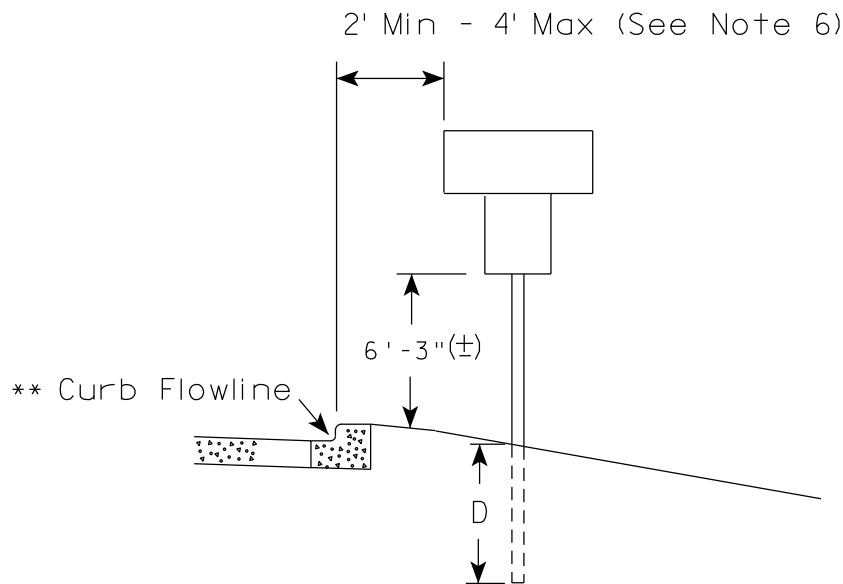
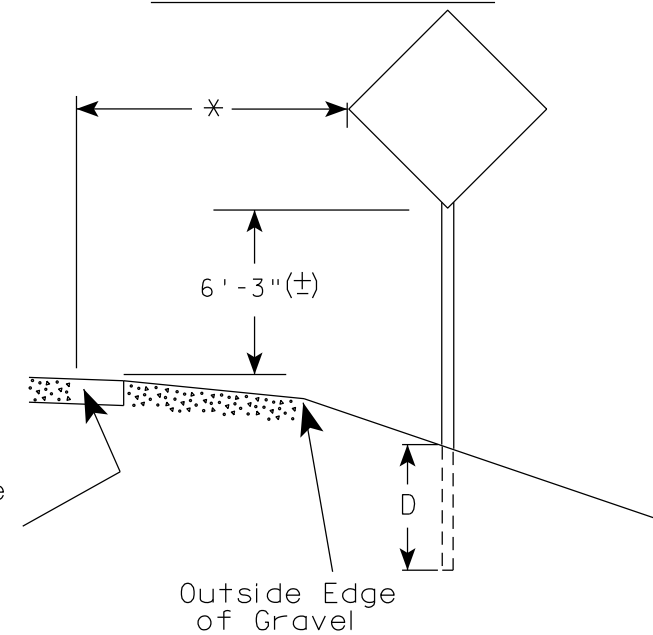
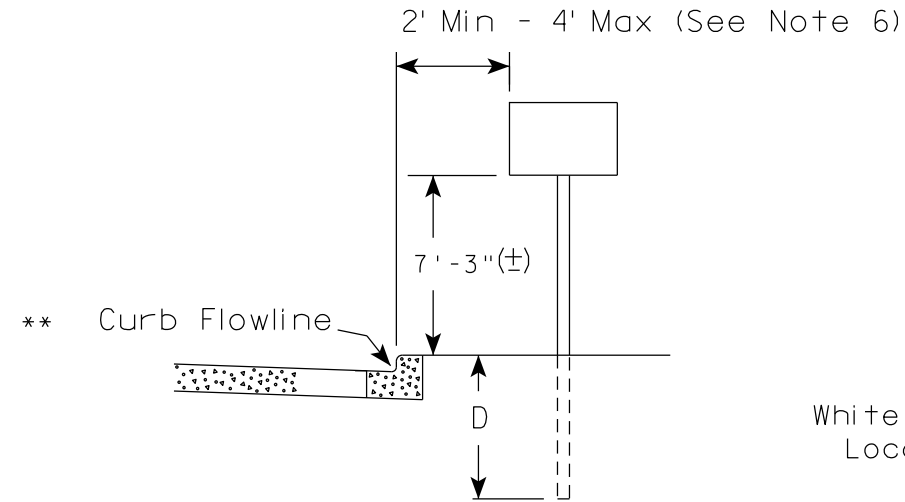
FHWA

SDD 15D28 - 04

SDD 15D28 - 04

URBAN AREA

RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

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

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



ELEVATION VIEW

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

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



ELEVATION VIEW

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



PLAN VIEW

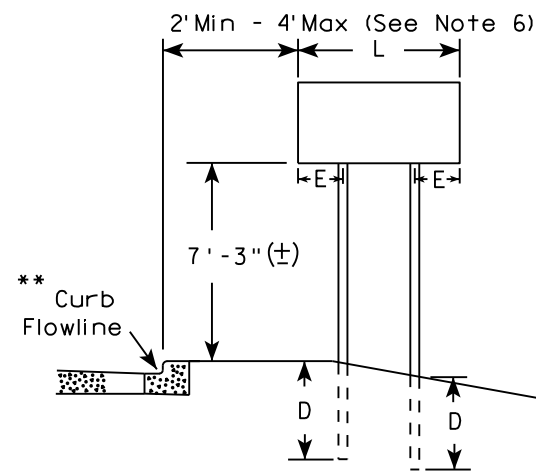
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

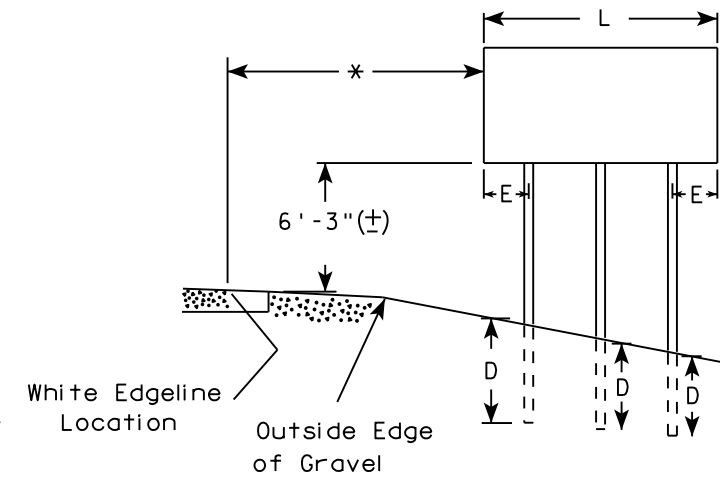
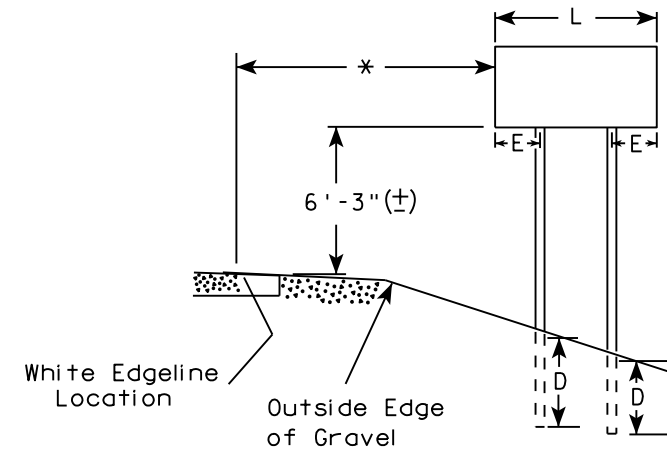
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

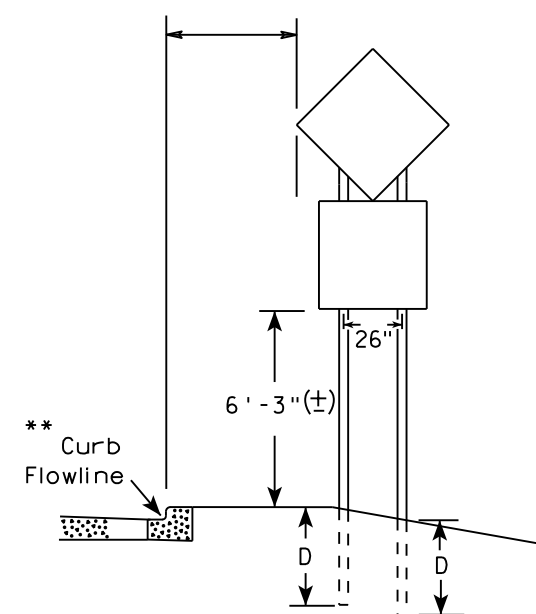
URBAN AREA



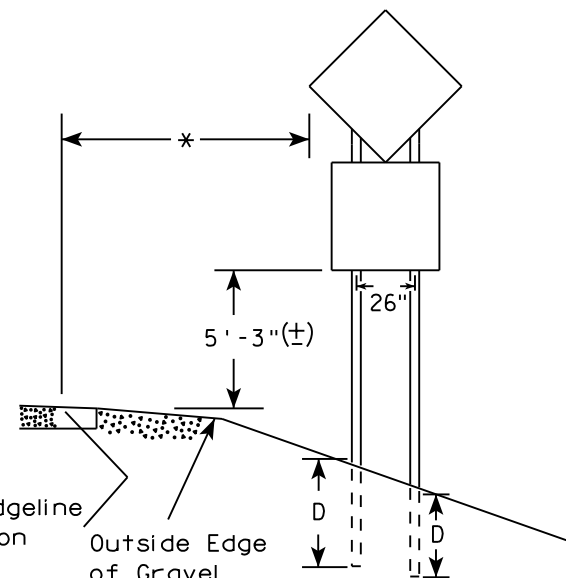
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

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

POST EMBEDMENT DEPTH

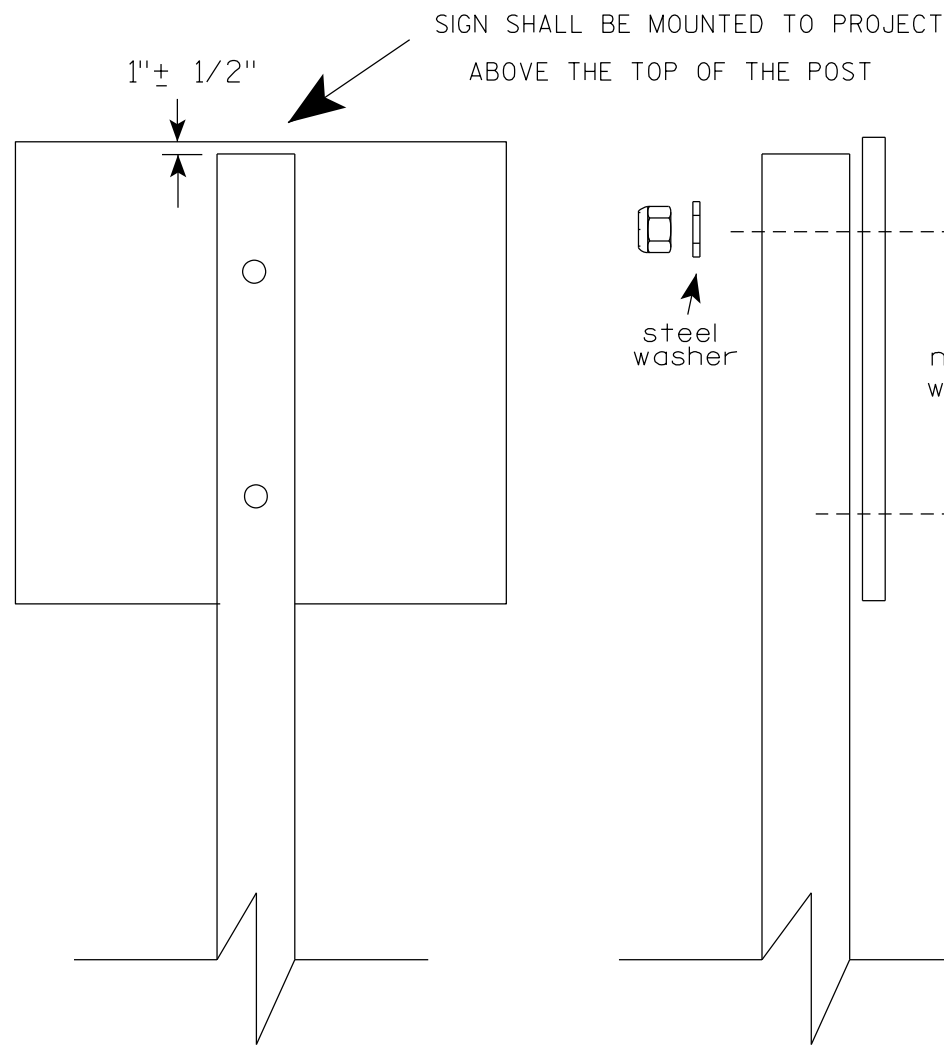
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15



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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

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

ATTACHMENT OF SIGNS
TO POSTS

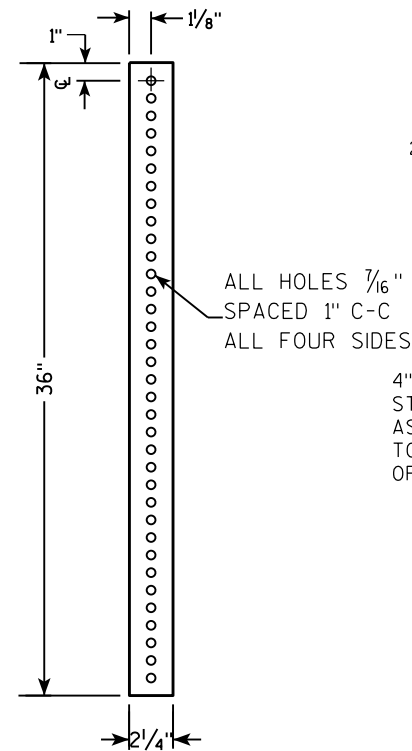
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

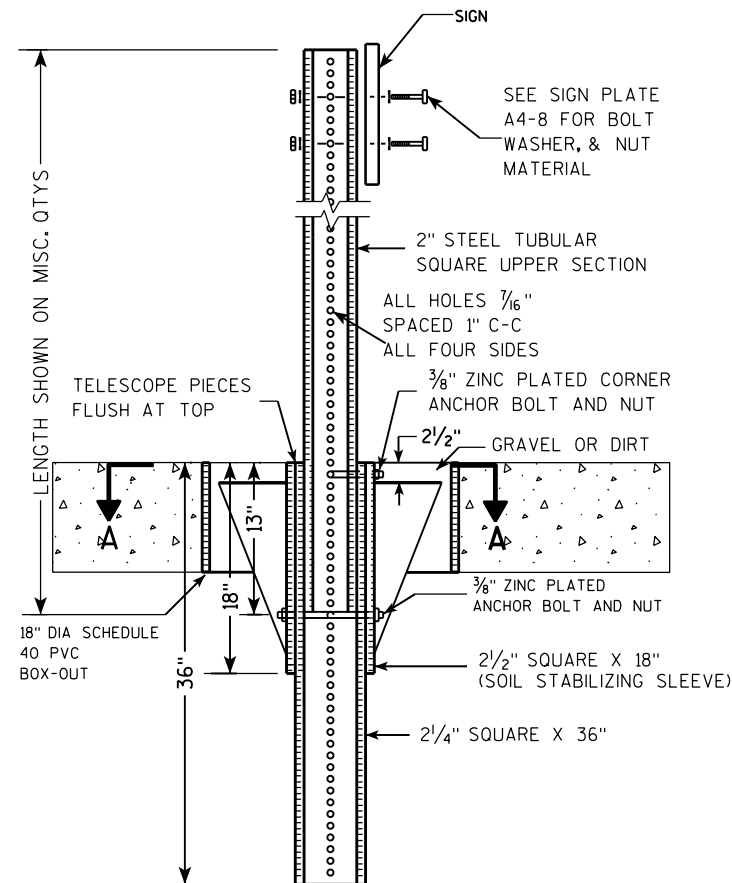
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



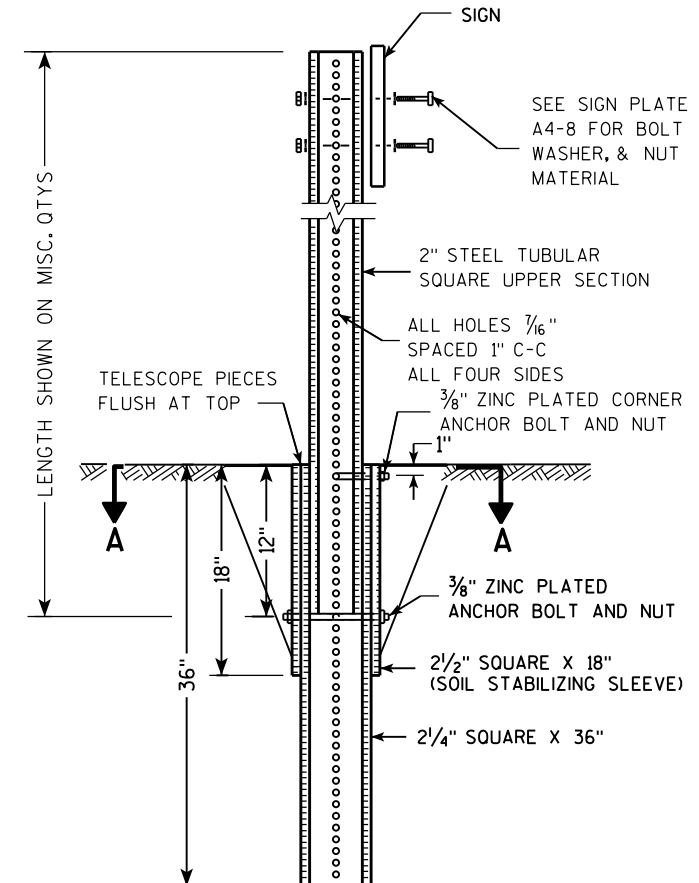
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



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

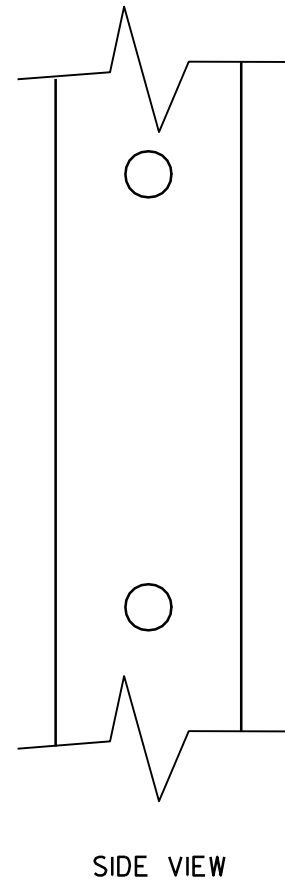
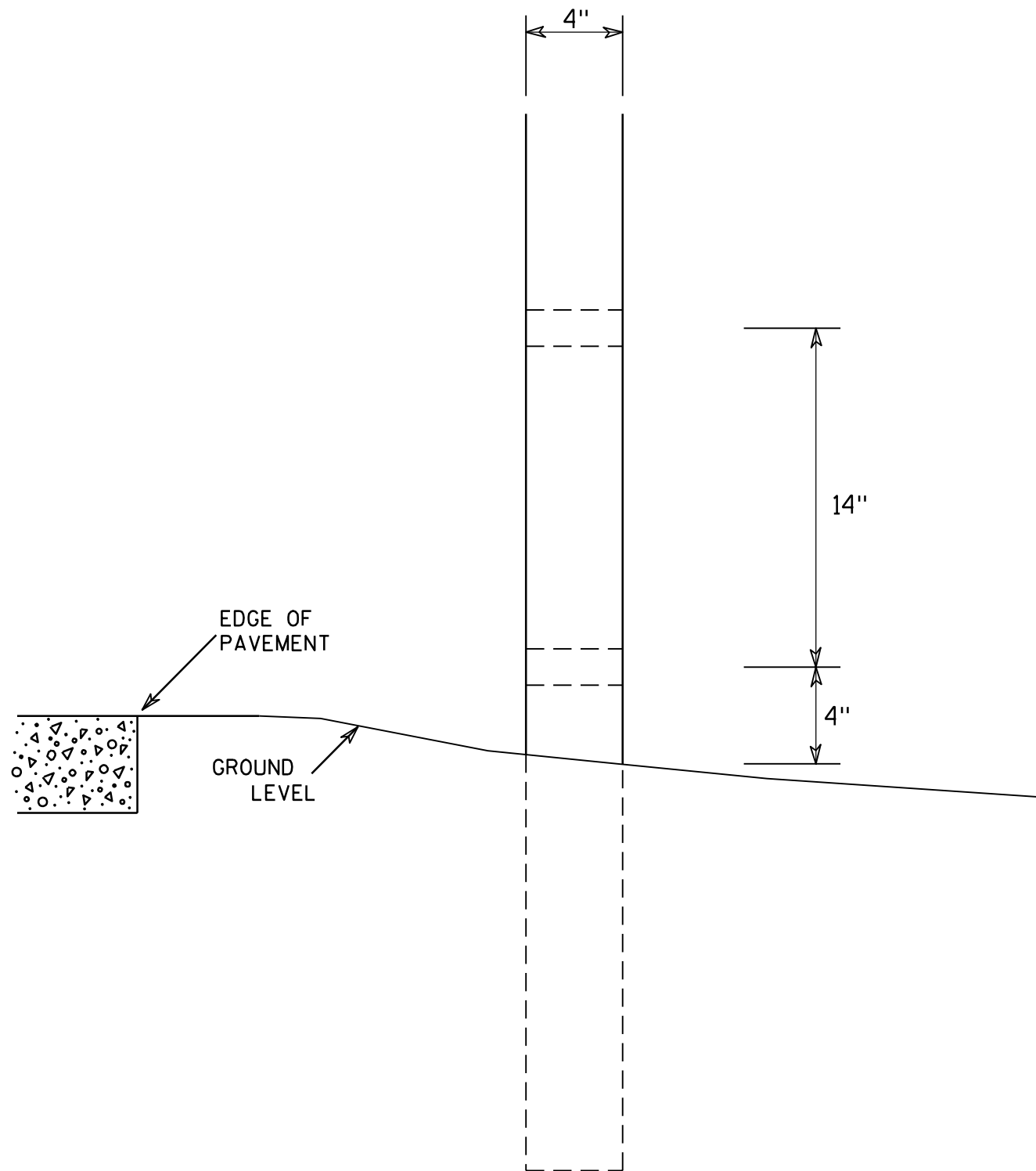
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9



GENERAL NOTES

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

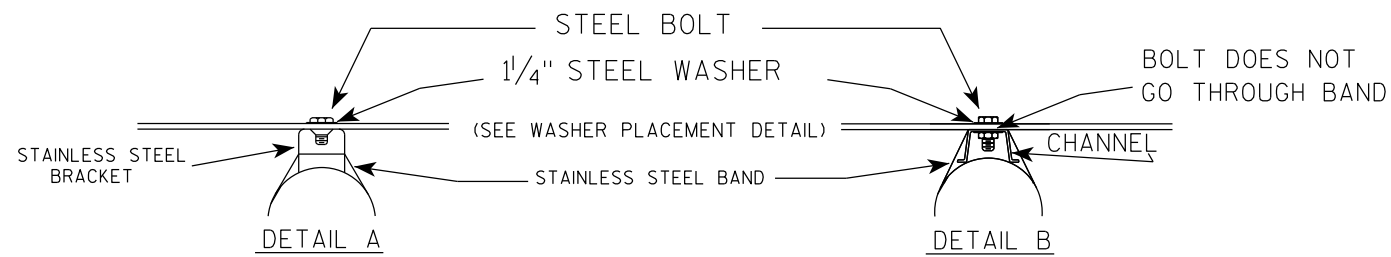
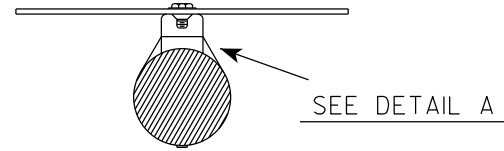
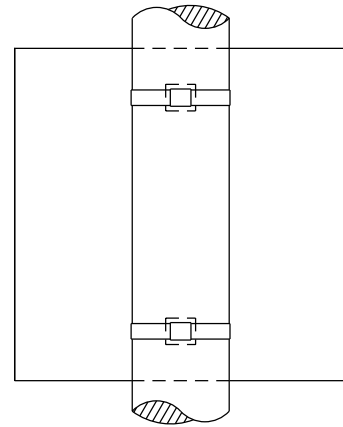
7

7

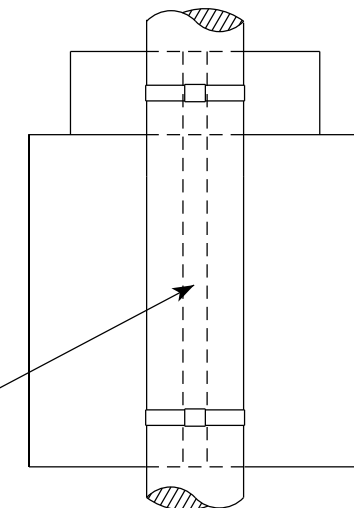
4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

BANDING

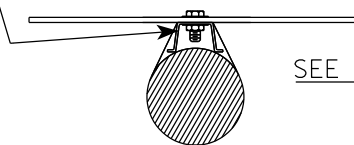
SINGLE SIGN



"J" ASSEMBLY

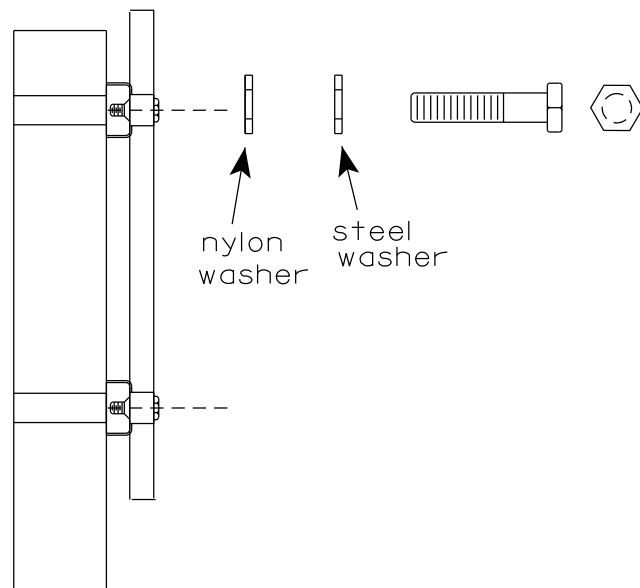


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



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

WASHER PLACEMENT



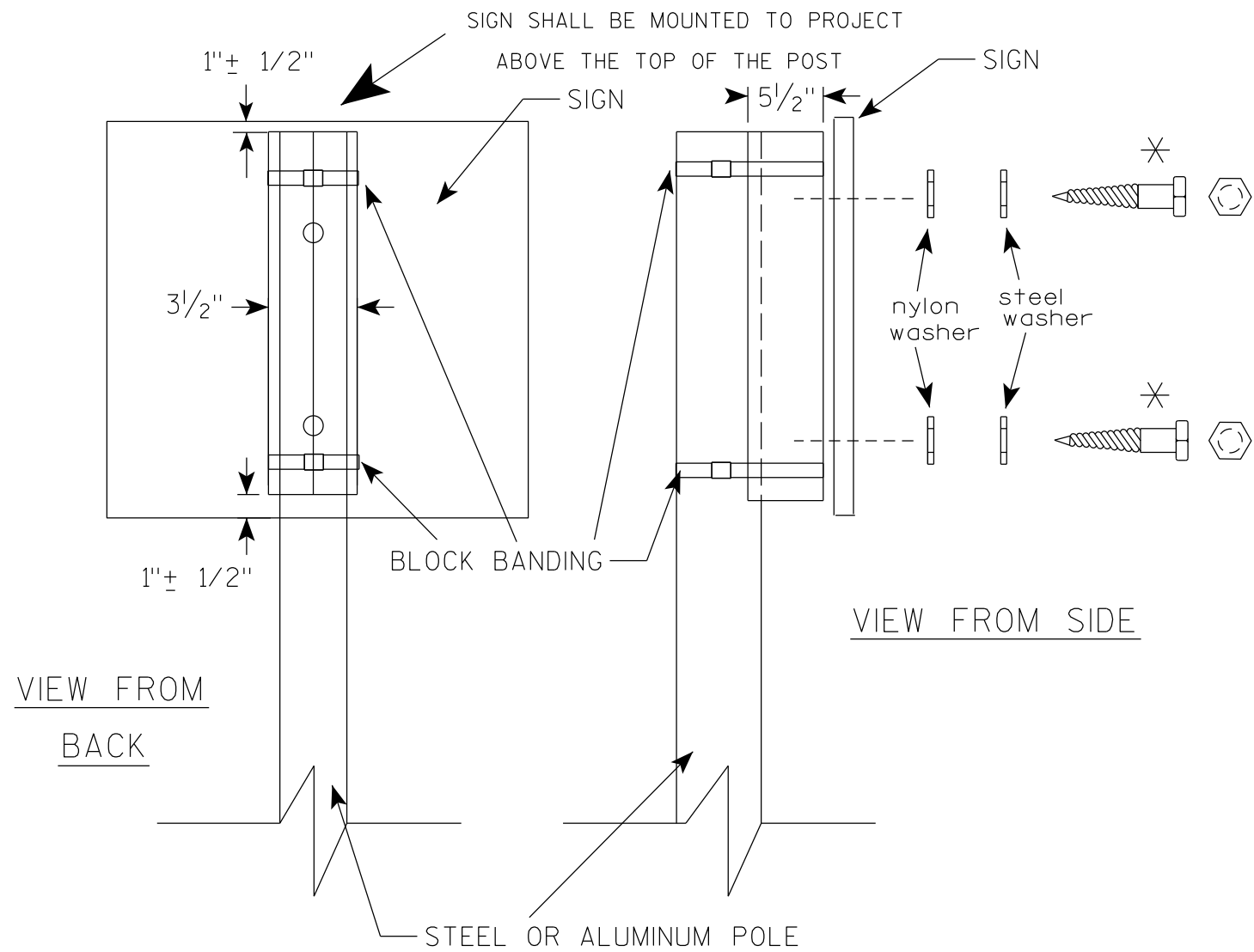
WASHERS (ALL POSTS) -
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON
 FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

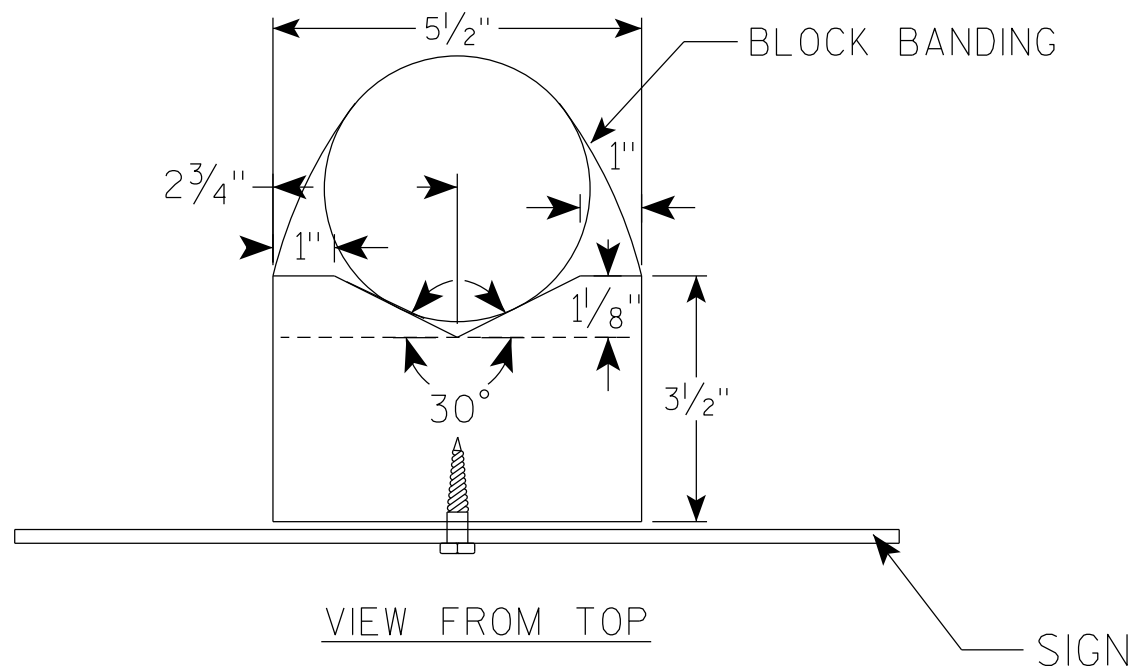
DATE 6/10/19 PLATE NO. A5-9.4



GENERAL NOTES

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

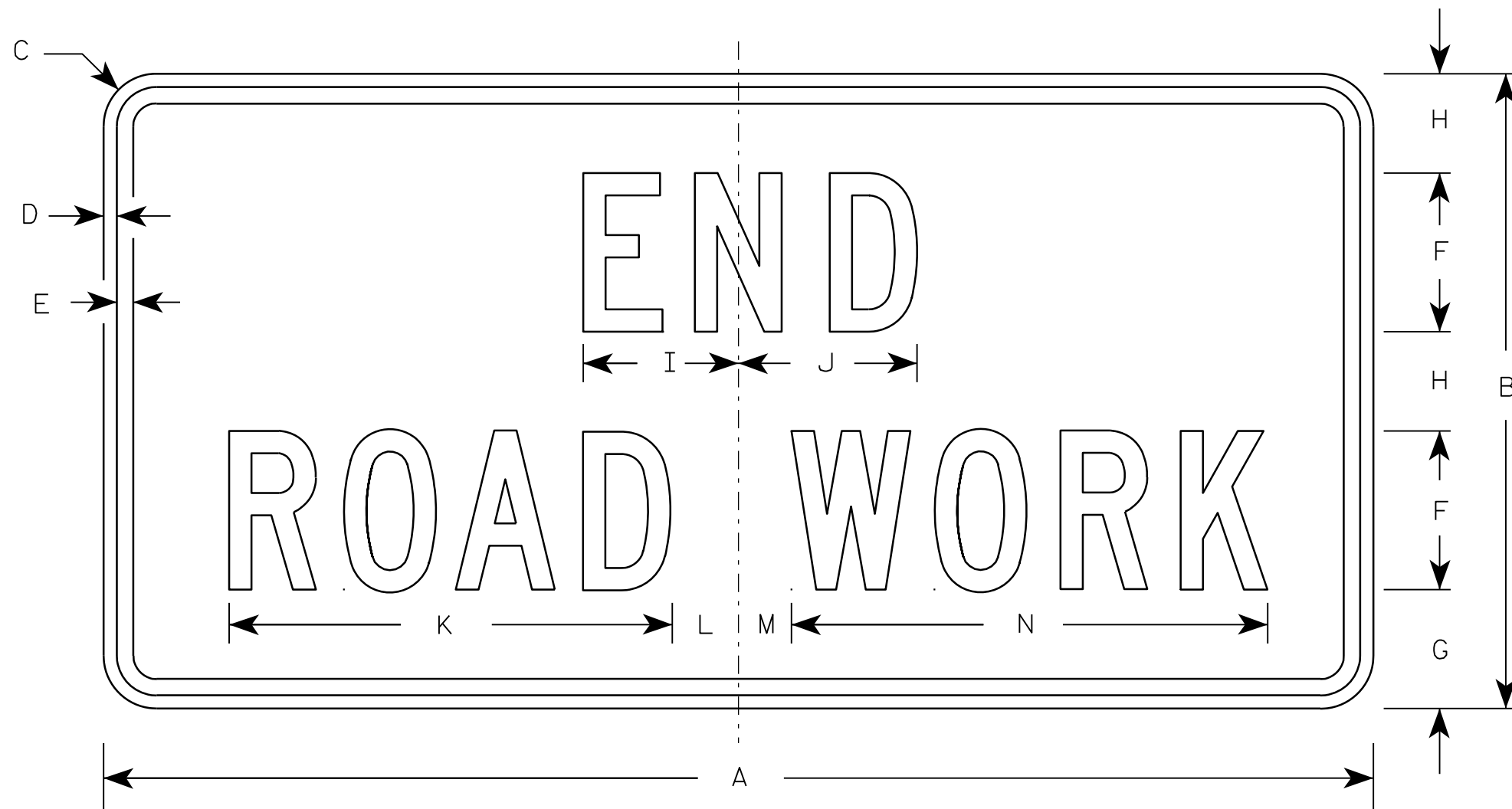
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2

NOTES

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



G20-2A

Metric equivalent
for this sign is:

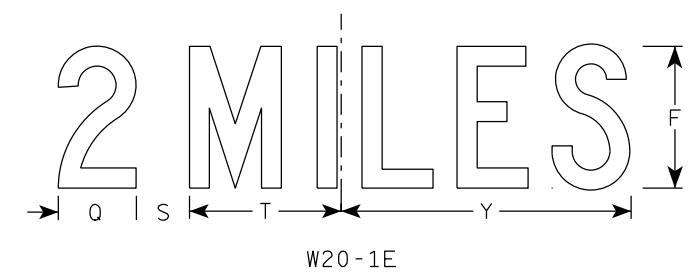
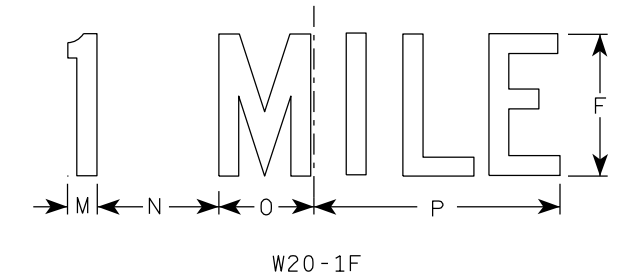
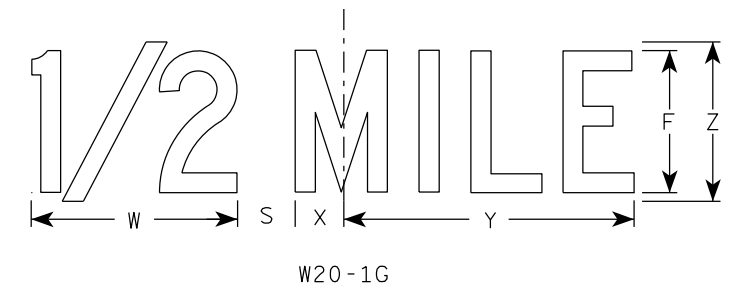
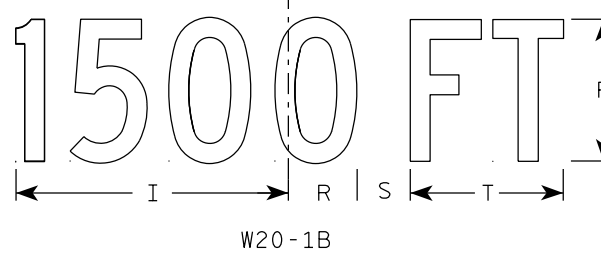
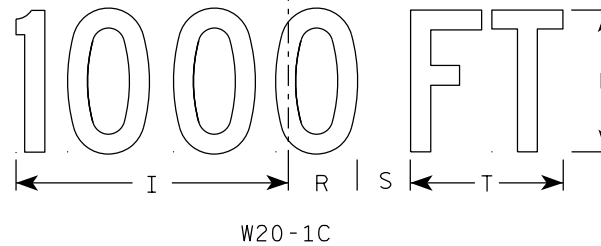
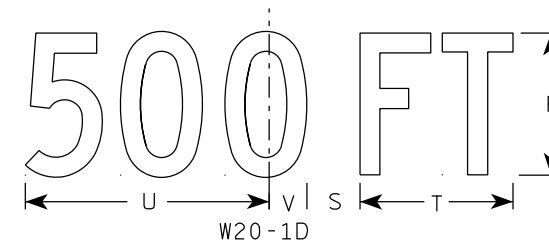
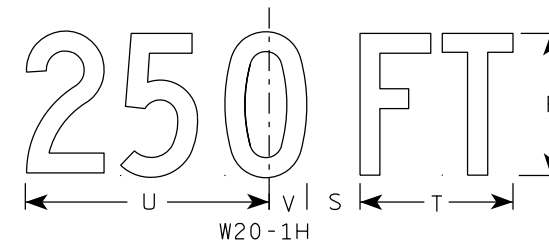
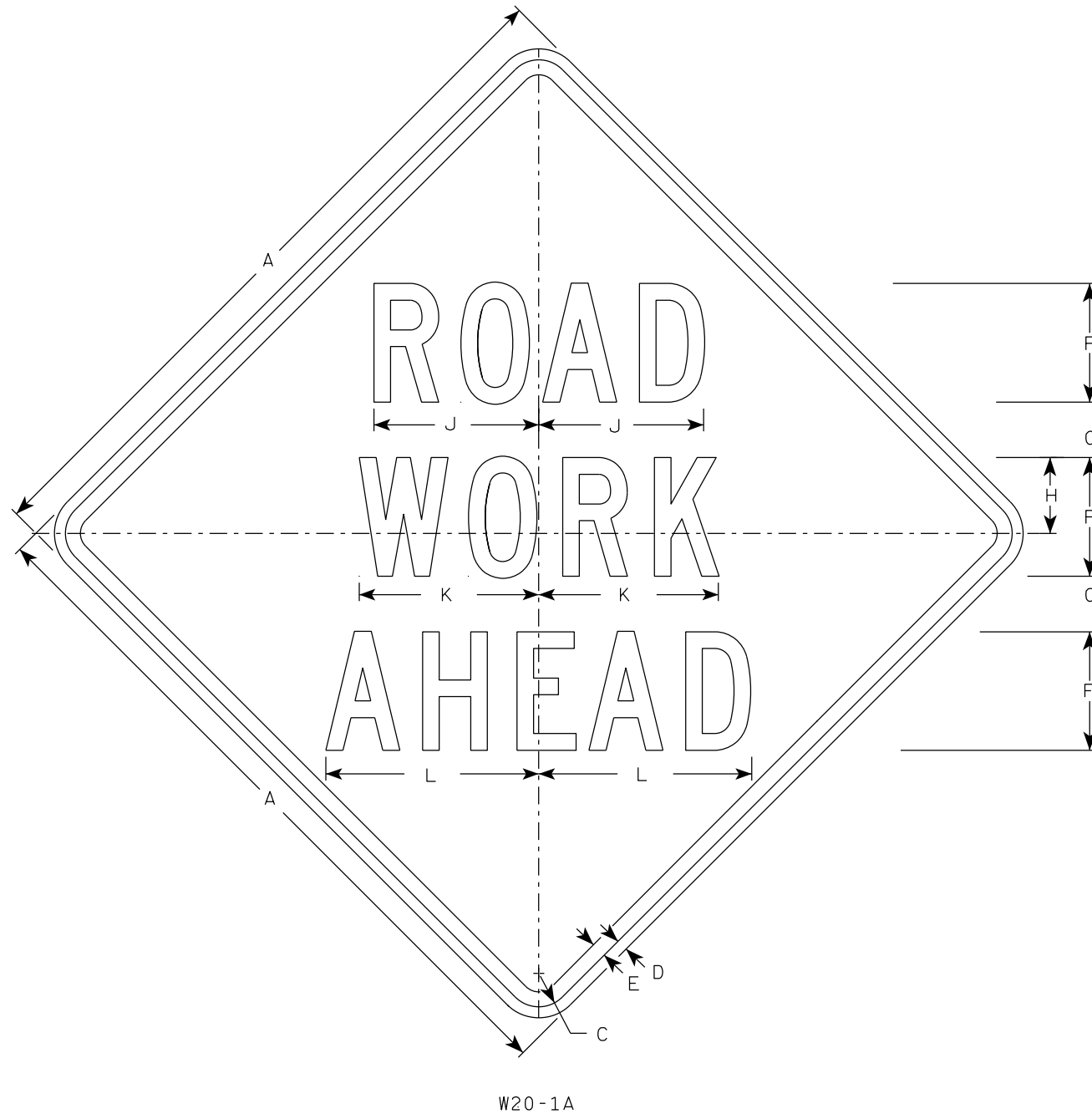
SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

NOTES

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



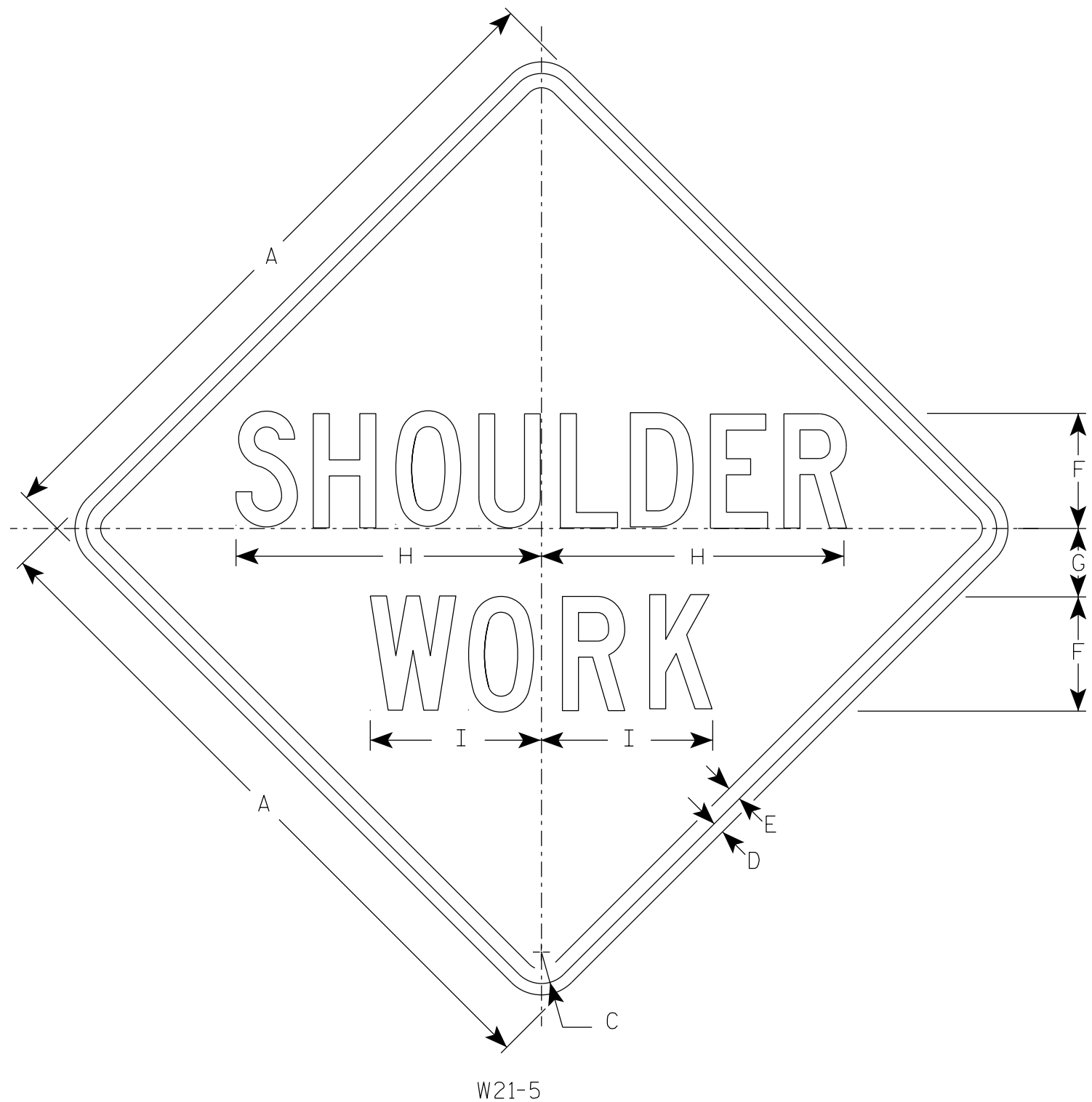
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8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

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



NOTES

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

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	3 1/2	16	9																		9.0
2S	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
2M	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
3	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
4	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0
5	48		2 1/4	3/4	1	8	5	21 3/8	11 1/4																		16.0

STANDARD SIGN
W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

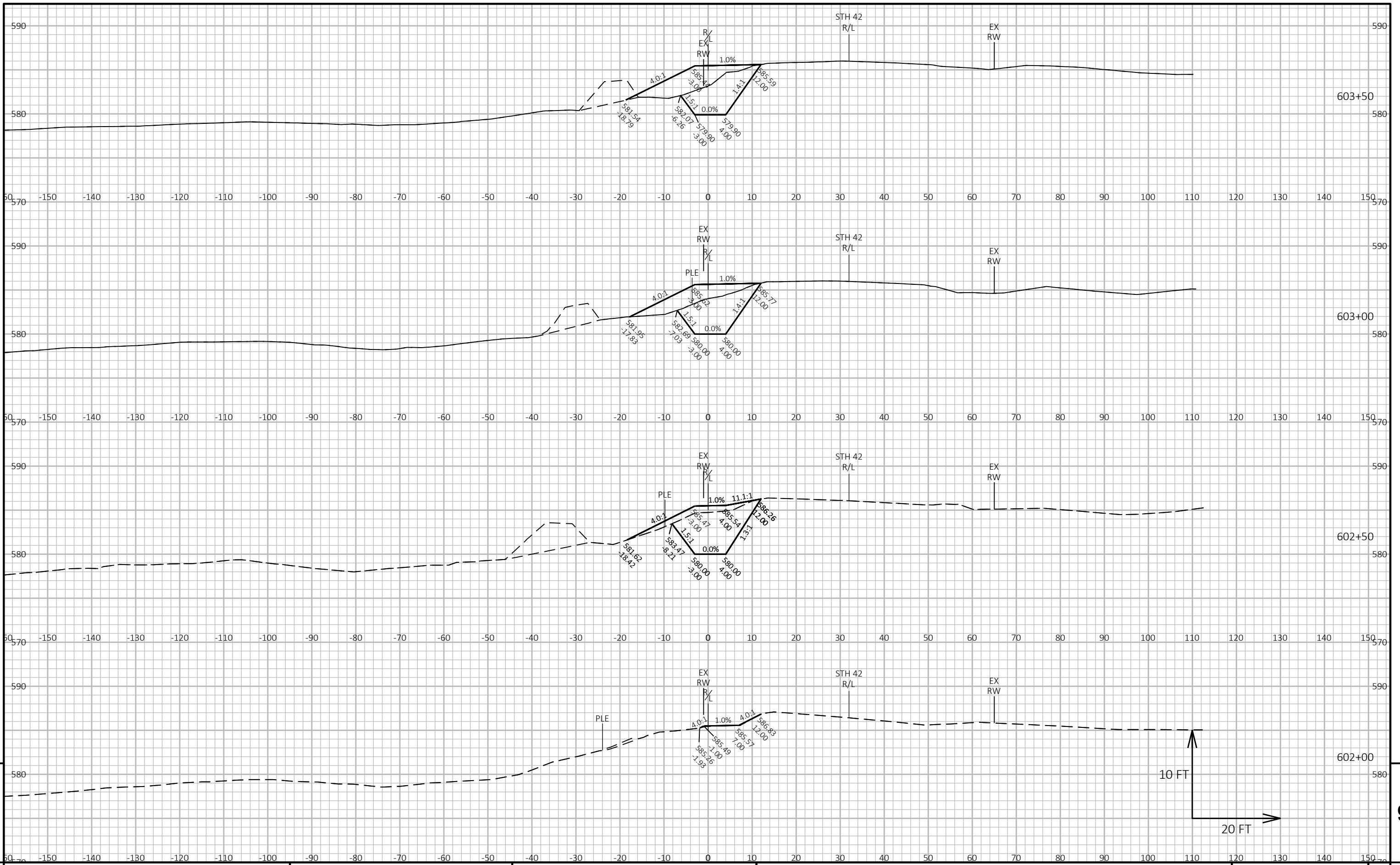
DATE 4/30/2020 PLATE NO. W21-5.6

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

DIVISION 1 - REVETMENT

STATION	AREA (SE)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE NOTE 1
	CUT	EILL	CUT	EILL	CUT	EXPANDED EILL	
					1.00	1.15	
602+00.00	0.00	0.00	0	0	0	0	0
602+50.00	64.98	9.00	60	8	60	9	51
603+00.00	52.94	21.76	109	28	169	41	128
603+50.00	47.84	25.46	93	44	262	92	170
604+00.00	51.28	22.19	92	44	354	143	211
604+50.00	62.61	20.81	105	40	459	189	270
605+00.00	60.45	29.34	114	46	573	242	332
605+50.00	72.39	30.09	123	55	696	305	391
605+78.37	107.60	9.29	95	21	791	329	462
COLUMN TOTALS			791	286			

Notes:	
1 - MASS ORDINATE	[[CUT] - ((FILL) * FILL FACTOR)]



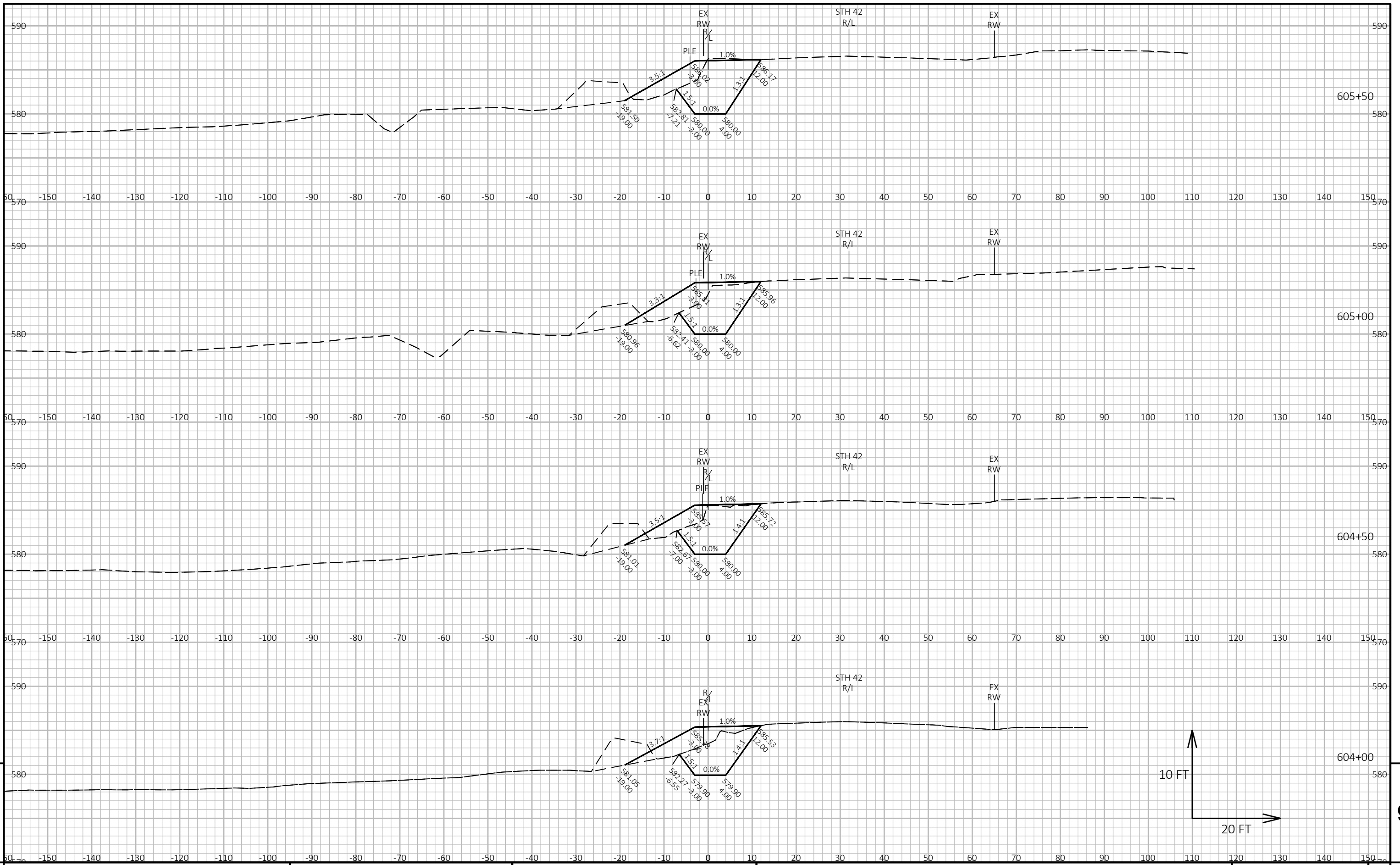
9

9

PROJECT NO: 4140-35-72 HWY: STH 42 COUNTY: DOOR CROSS SECTIONS: REVETMENT SHEET E

FILE NAME : C:\PW_WORKDIR\DEN003\CH2MHILL_MM093804\0901280\41403500-CROSS SECTIONS.DWG PLOT DATE : 9/28/2021 12:16 PM PLOT BY : MORGAN, MARC/MKE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - Ephraim XS-01



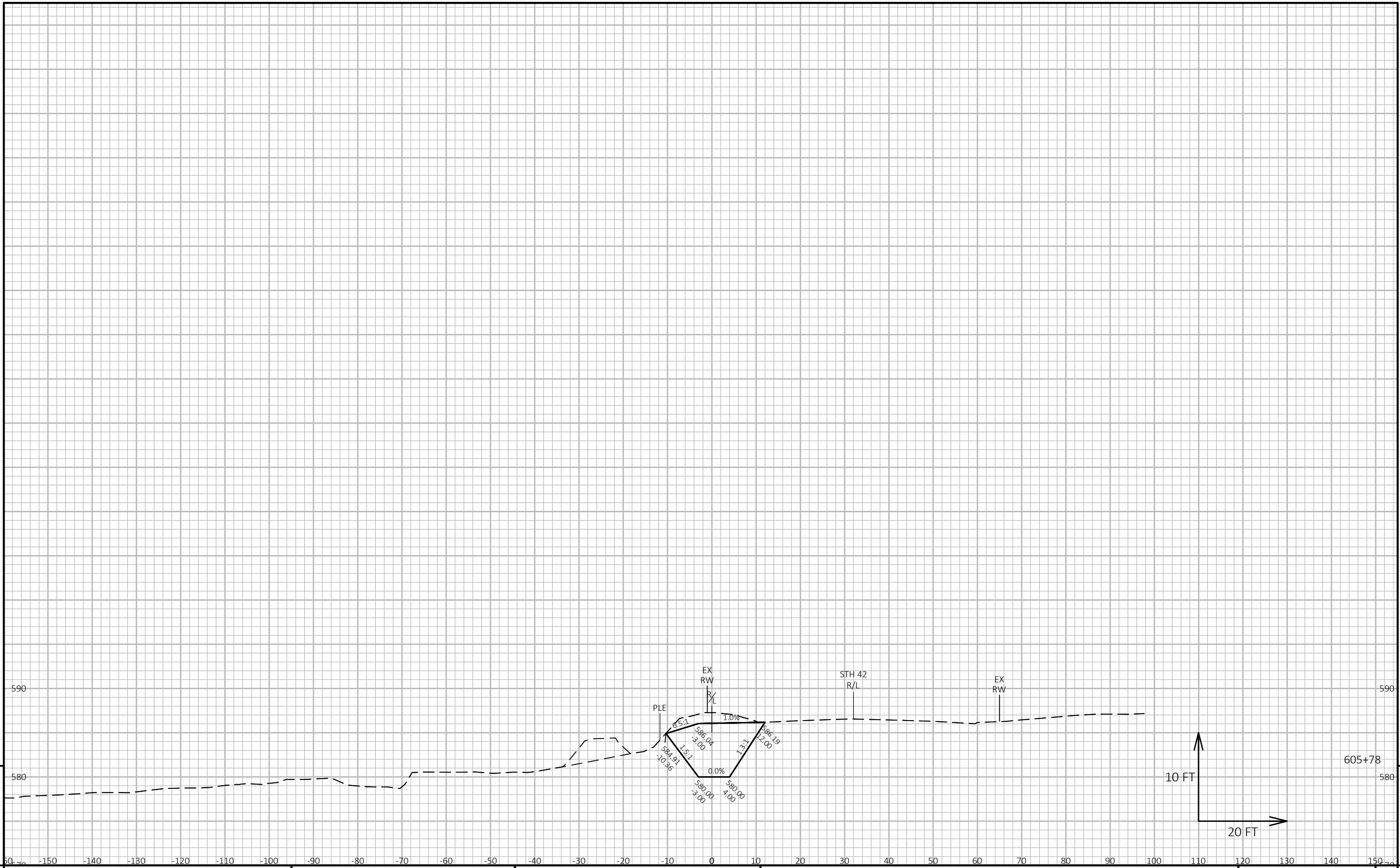
9

9

PROJECT NO: 4140-35-72 HWY: STH 42 COUNTY: DOOR CROSS SECTIONS: REVETMENT SHEET E

FILE NAME : C:\PW_WORKDIR\DEN003\CH2MHILL_MM093804\0901280\41403500-CROSS SECTIONS.DWG PLOT DATE : 9/28/2021 12:16 PM PLOT BY : MORGAN, MARC/MKE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - Ephraim XS-02



9

9

PROJECT NO: 4140-35-72 HWY: STH 42 COUNTY: DOOR CROSS SECTIONS: REVETMENT SHEET E

FILE NAME : C:\PW_WORKDIR\DEN003\CH2MHILL_MM093804\0901280\41403500-CROSS SECTIONS.DWG PLOT DATE : 9/28/2021 12:16 PM PLOT BY : MORGAN, MARC/MKE PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - Ephraim XS-03



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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