WIS

FEBRUARY 2018

PROJECT ID: 1510-00-70

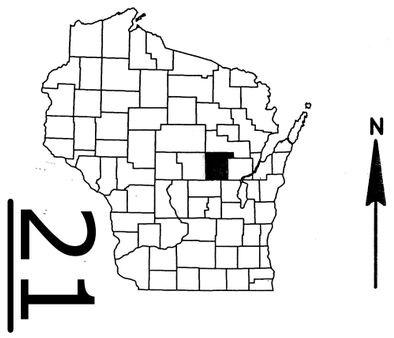
WITH: 1510-00-71

COUNTY: WAUPACA

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 = 158



21

DESIGN DESIGNATION

A.A.D.T.	2012	= 19,800
A.A.D.T.		= N/A
D.H.V.		= N/A
D.D.		= N/A
T.		= N/A
DESIGN SPEED		= N/A
ESALS		= N/A

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY REHABILITATION-MAINTENANCE PROJECT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1510-00-70	WISC 2018096	1

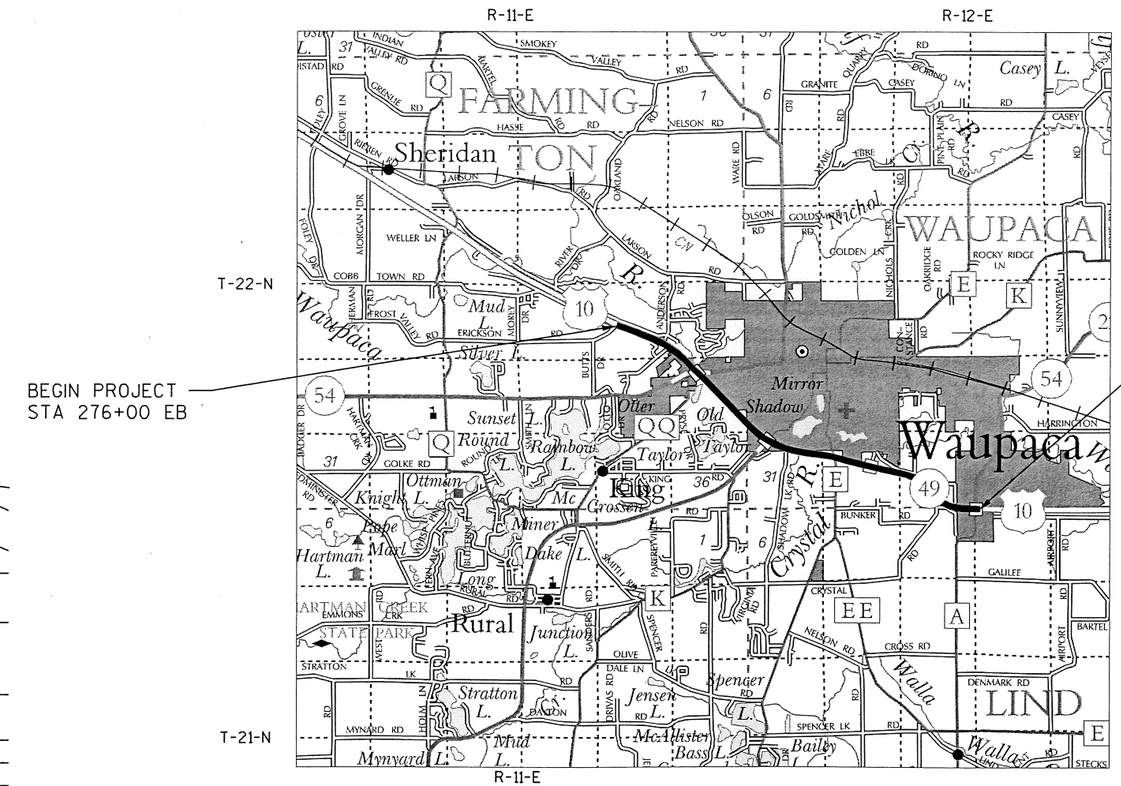
STEVENS POINT - WAUPACA

ERICKSON RD TO STH 22/54 CTH A INT

USH 10

WAUPACA COUNTY

STATE PROJECT NUMBER
1510-00-70



TOTAL NET LENGTH OF CENTERLINE = 0.00

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

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (2012)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	North Central Region
Designer	Andrew Casper
Project Manager	Mark Steidl
Regional Examiner	Cheryl Simon
Regional Supervisor	Michael Kretschmer

APPROVED FOR THE DEPARTMENT

DATE: 12/5/17 (Signature)

E

DNR LIAISON

WISCONSIN DEPT. OF NATURAL RESOURCES
MR. MARC HERSHFIELD
WDNR EA LIASION
473 GRIFFITH DRIVE
WISCONSIN RAPIDS, WI 54494
PHONE: (715) 421-7867
marc.hershfield@wisconsin.gov

UTILITIES

AT&T WISCONSIN - COMMUNICATION LINE
Chuck Bartell
70 E. Division St.
Fond Du Lac, WI 54935
Office Phone: 920.929.1013
Mobile Phone: 920.410.5104

CHARTER COMMUNICATIONS - COMMUNICATION LINE
Rudi Rudiger
5024 Heffron St.
Stevens Point, WI 54481
Office Phone: 715.204.5339
Email: Rudi.rudiger@charter.com

CITY OF WAUPACA - SEWER
Roger Hansen
306 S. Oborn Street
Waupaca, WI 54981
Office Phone: 715.258.4421
Mobile Phone: 715.572.3536
Email: rhansen@cityofwaupaca.org

CITY OF WAUPACA - WATER
Mark Nollenberg
509 Harding Street
Waupaca, WI 54981
Office Phone: 715.258.4423
Mobile Phone: 715.281.9796
Email: mnollenberg@cityofwaupaca.org

WAUPACA CHAIN OF LAKES SANITARY DISTRICT #1 - SEWER
Julie Prahl
P.O. BOX 71
KING, WI 54946
Office Phone: 715.258.9200
Email: wcolsd@gmail.com

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
Don Lutzow
P.O. Box 1166
Wausau, WI 54402
Office Phone: 715.848.7487
Mobile Phone: 715.493.7802
Email: dalutzow@wisconsinpublicservice.com

WE ENERGIES (GAS) - WISCONSIN ELECTRIC POWER COMPANY
Jacob Hulbert
1921 8th St S
Wisconsin Rapids, WI 54494
Office Phone: 715.421.7277
Mobile Phone: 715.213.5189

WE ENERGIES (GAS) - WIS. GAS LLC
Jacob Hulbert
1921 8th St S
Wisconsin Rapids, WI 54494
Office Phone: 715.421.7277
Mobile Phone: 715.213.5189

GENERAL NOTES

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

INLET GRATE ELEVATIONS REFERRED TO ON INLET NOTES ARE GRATE FLOW LINE ELEVATIONS.

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

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.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

AS SHOWN ON PLAN SHEETS BORINGS WERE TAKEN NEAR CABLE BARRIER END TERMINAL TYPE 1. FIELD BORING LOG SHEETS WILL BE MADE AVAILABLE UPON REQUEST.

CONTRACTOR MUST UTILIZE THE SAME PRODUCT AND MANUFACTURER FOR THE ENTIRE QUANTITY OF "CRASH CUSHION PERM LOW MAINTENANCE".

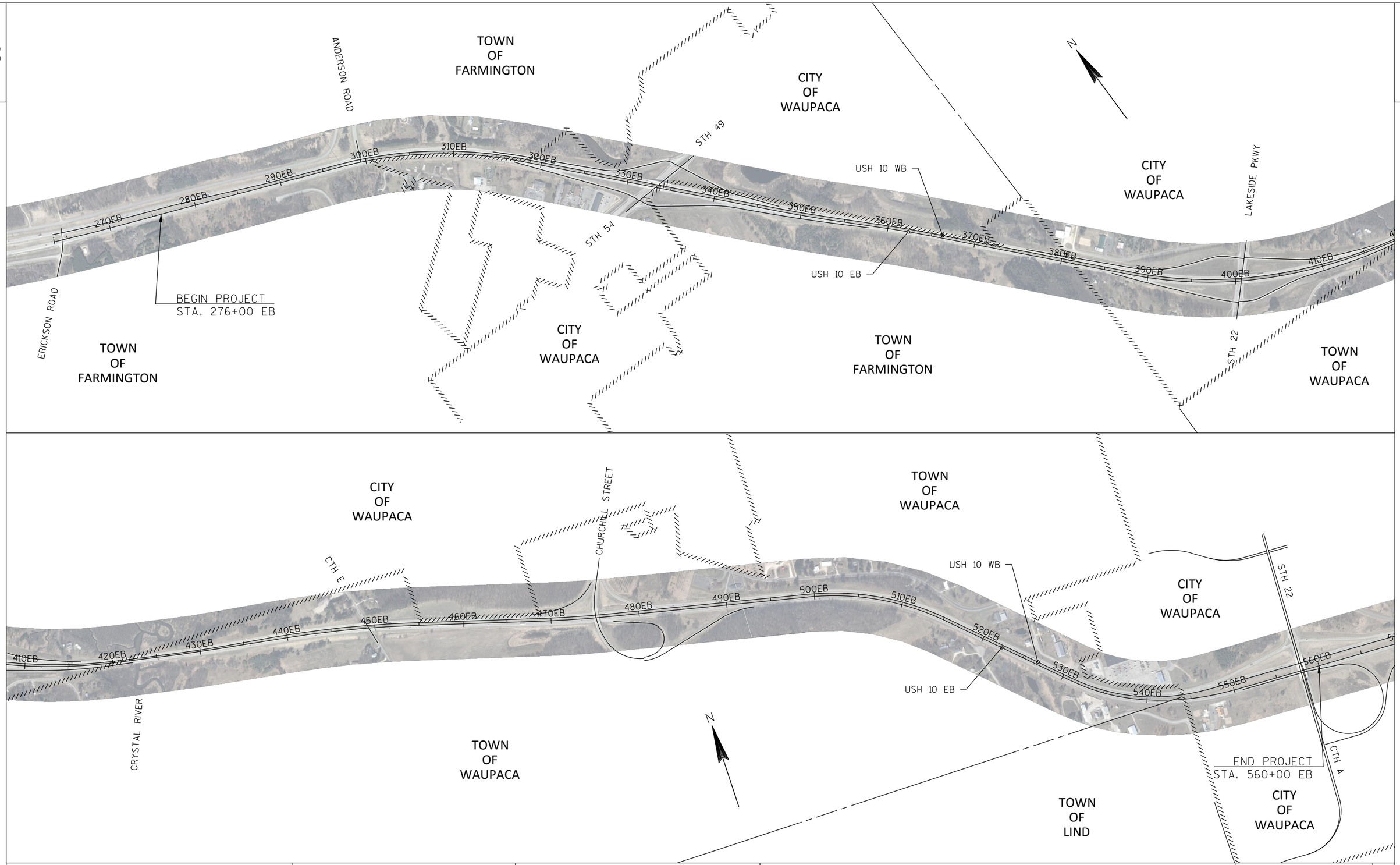
ALL PROPOSED "INLETS MEDIAN 2 GRATE" SHALL BE CONSTRUCTED WITH NO SLOPE. SEE SDD (INLETS MEDIAN 1 & 2 GRATE) FOR MORE INFORMATION.

STANDARD ABBREVIATIONS

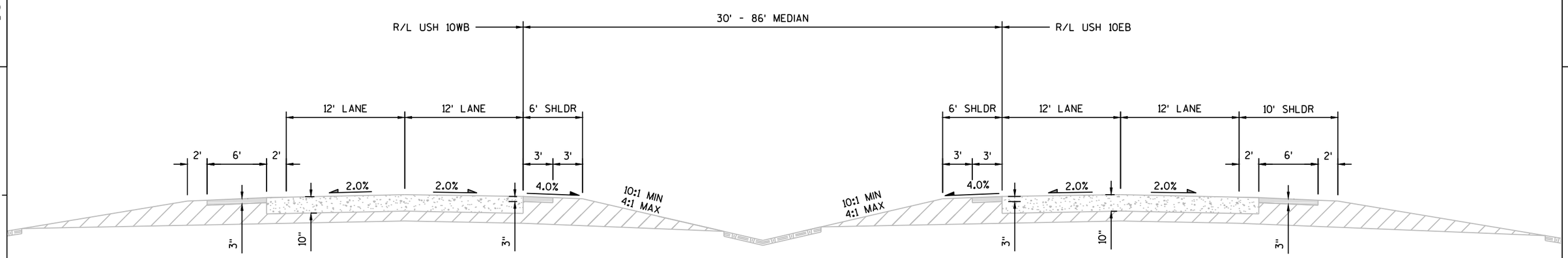
AEW -APRON ENDWALL
OH - OVERHEAD
T - TRUCKS (PERCENT OF)
O BORE (B - #) - BORING ID NUMBER

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

2

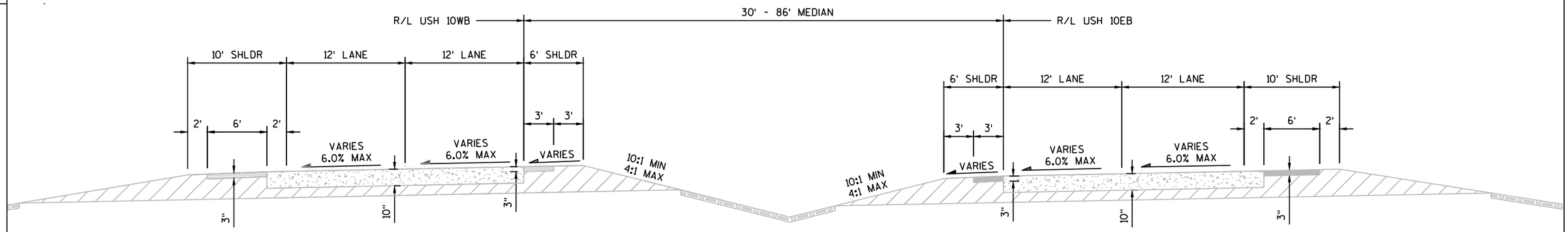


PROJECT NO:1510-00-70	HWY:USH 10	COUNTY:WAUPACA	PLAN: PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION USH 10

STA 276+00 EB TO 296+00 EB
STA 319+00 EB TO 347+00 EB
STA 354+00 EB TO 359+00 EB
STA 366+00 EB TO 387+00 EB
STA 455+00 EB TO 468+50 EB
STA 477+50 EB TO 498+00 EB
STA 517+00 EB TO 530+00 EB
STA 551+00 EB TO 559+07.35 EB



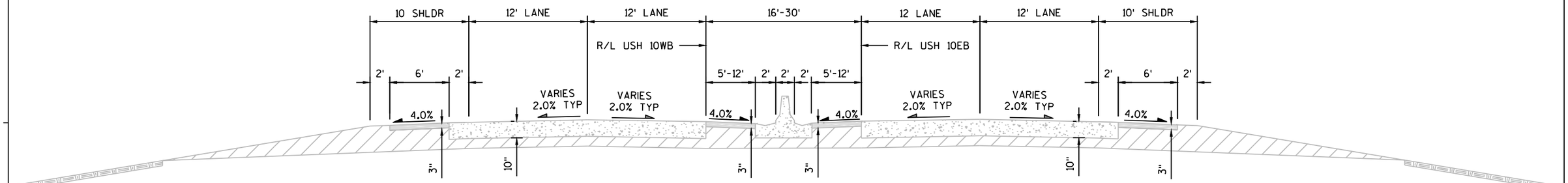
TYPICAL EXISTING SUPERELEVATED SECTION USH 10

STA 296+00 EB TO 319+00 EB
STA 347+00 EB TO 354+00 EB
STA 359+00 EB TO 366+00 EB
STA 387+00 EB TO 399+34 EB
STA 441+11 EB TO 455+00 EB
STA 468+50 EB TO 477+50 EB
STA 498+00 EB TO 517+00 EB
STA 530+00 EB TO 556+00 EB

LEGEND

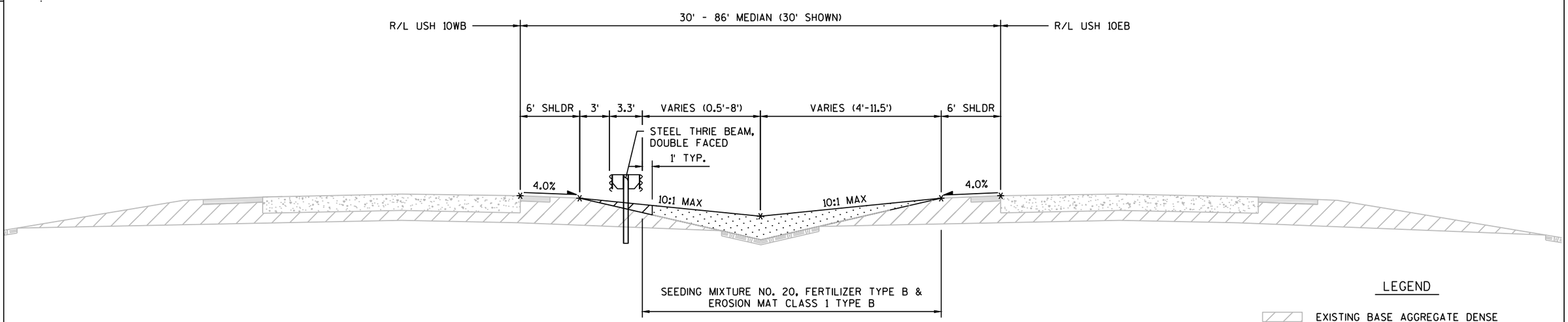
- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING TOPSOIL

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	TYPICAL SECTIONS	SHEET 4	E



TYPICAL EXISTING SECTION USH 10

STA 399+34 EB TO 441+11 EB

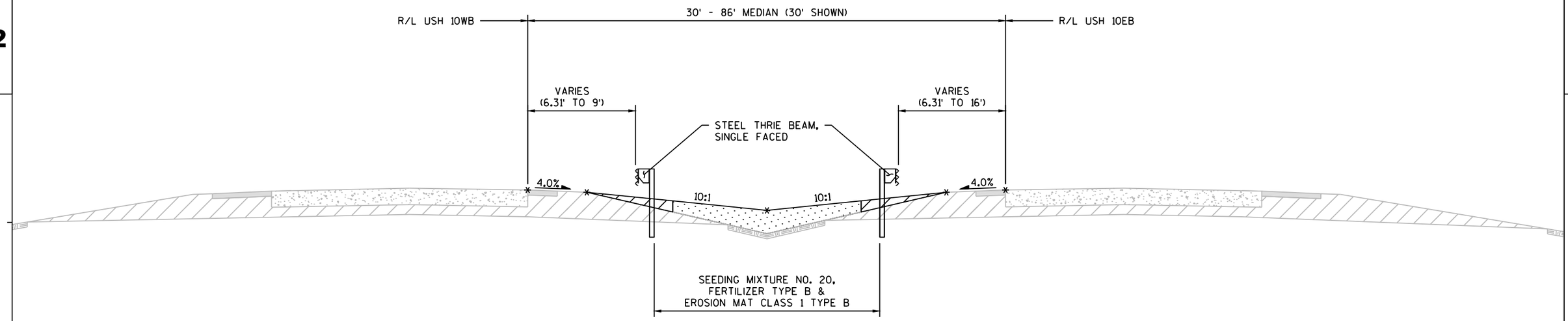


TYPICAL PROPOSED SECTION USH 10 (STEEL THRIE BEAM, DOUBLE FACED)

STA 277+82 EB TO 328+38 EB
STA 337+85 EB TO 396+27 EB
STA 441+11 EB TO 446+57 EB
STA 451+86 EB TO 471+76 EB
STA 478+22 EB TO 546+74 EB

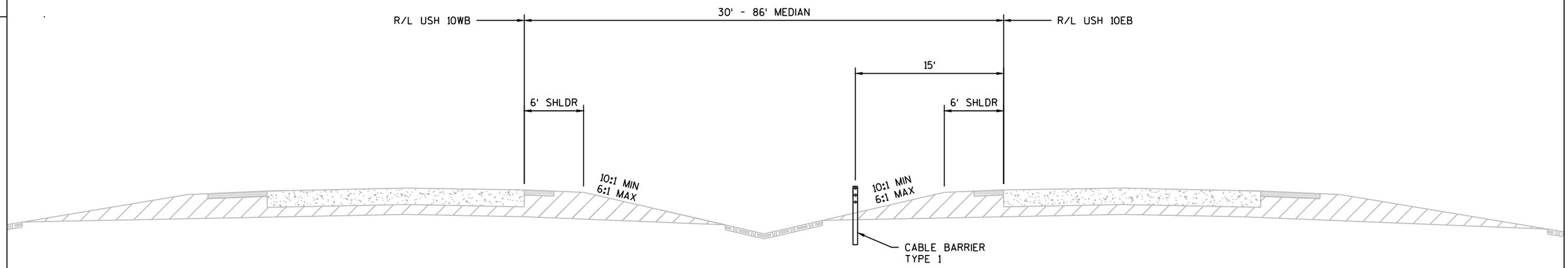
* POINTS REFERRED TO ON CROSS-SECTIONS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN: TYPICAL SECTIONS	SHEET 5	E



TYPICAL PROPOSED SECTION USH 10 (STEEL THRIE BEAM, SINGLE FACED)

STA 328+38 EB TO 337+85 EB
STA 396+27 EB TO 399+68 EB
STA 446+57 EB TO 451+86 EB
STA 471+76 EB TO 478+22 EB



TYPICAL PROPOSED SECTION USH 10 (CABLE BARRIER TYPE 1)

STA 544+90 EB TO 555+63 EB

LEGEND

- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING TOPSOIL
- TOPSOIL
- BASE AGGREGATE DENSE 3/4-INCH

* POINTS REFERRED TO ON CROSS-SECTIONS

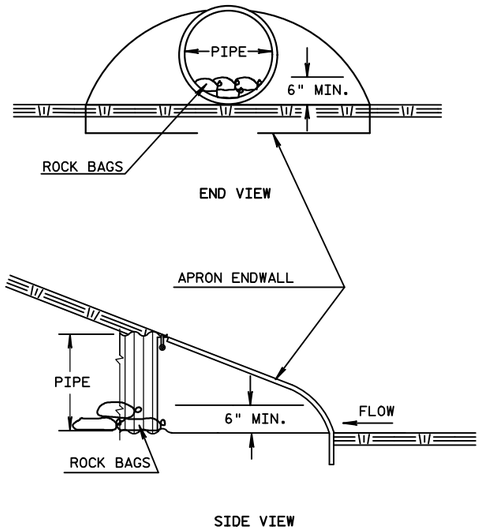
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	TYPICAL SECTIONS	SHEET 6	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - "***"

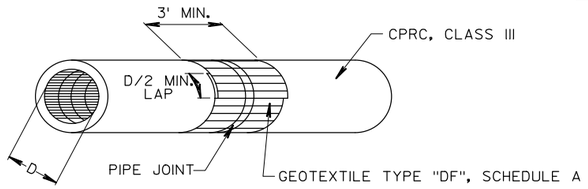
PLOT DATE : 4/11/2017 8:38 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2



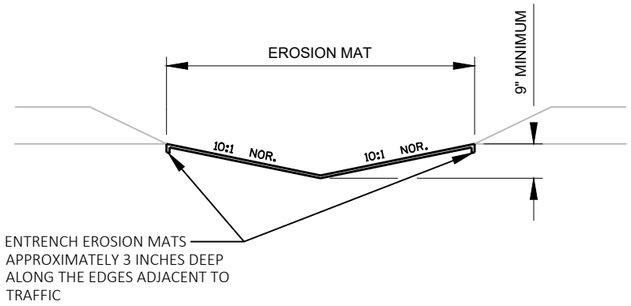
CULVERT PIPE DITCH CHECK



GEOTEXTILE REQUIRED FOR PIPE JOINTS

PIPE DIA. (IN.)	PIPE O.D. (IN.)	FABRIC/JOINT (S.Y.)
18	23	2.3
21	26.5	2.6
24	30	3.0
27	33.5	3.3
30	37	3.6
36	44	4.3
42	51	5.0
48	58	5.7
54	65	6.4
60	72	7.1
66	79	7.8
72	86	8.5

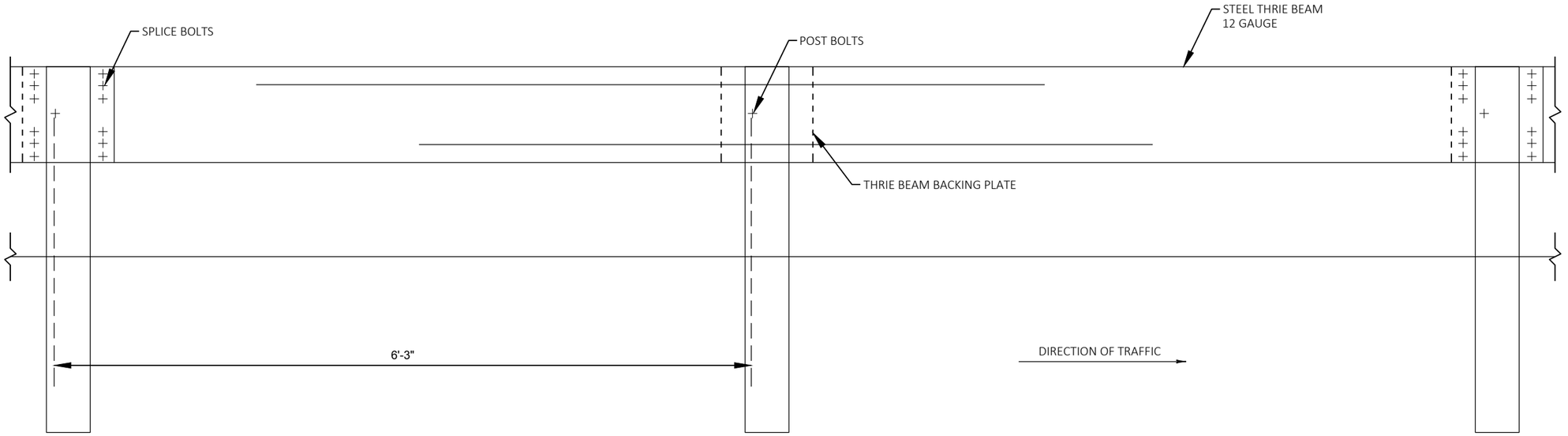
DETAIL OF WRAPPED PIPE JOINT



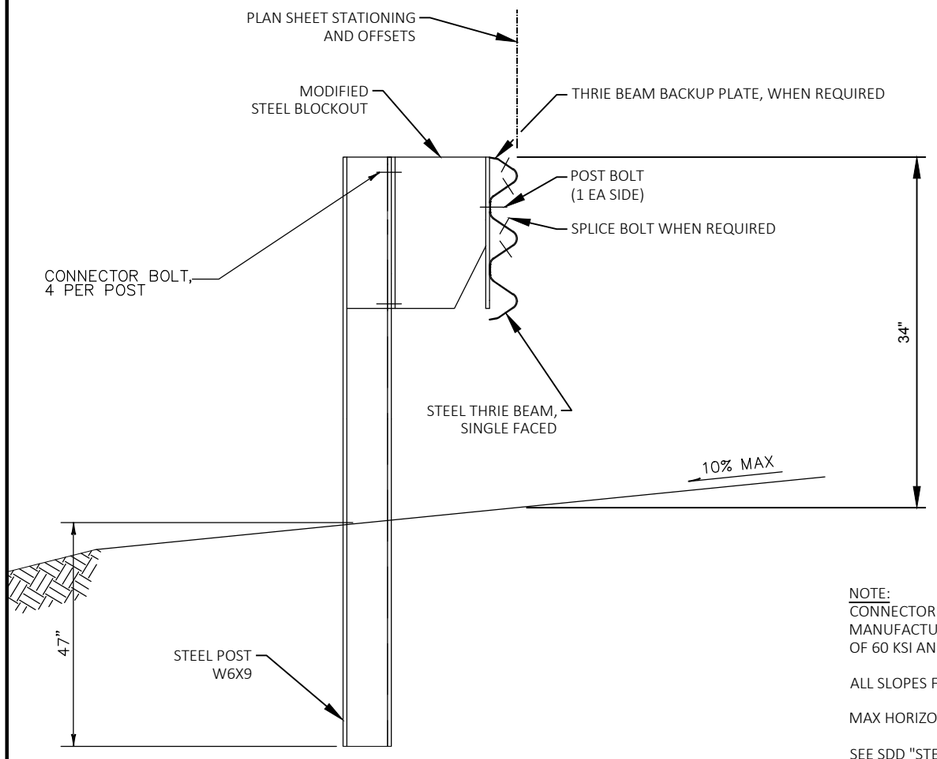
EROSION MAT DETAIL FOR DITCHES

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN: CONSTRUCTION DETAILS	SHEET 7	E

2



ELEVATION - STEEL THRIE BEAM, DOUBLE AND SINGLE FACED



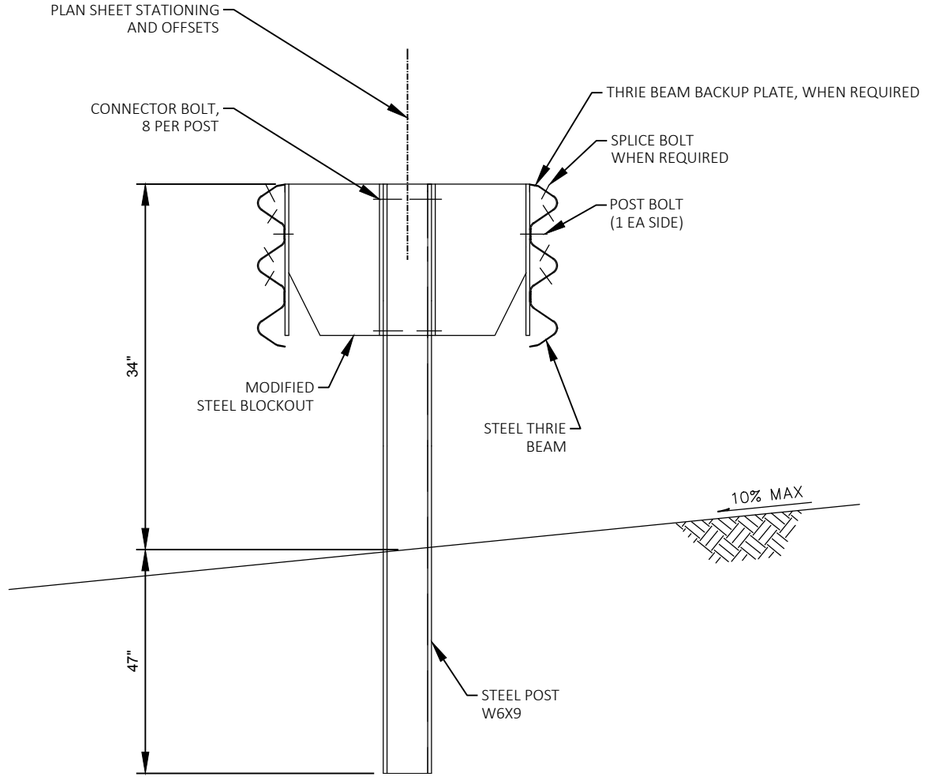
CROSS SECTION (SINGLE FACED)

NOTE:
CONNECTOR BOLT 5/8" DIAMETER BOLT, ASTM A307, NUT ASTM A563, WASHER F844. MANUFACTURE TO REQUIREMENTS OF ANSI B18.2.1 AND HAVE TENSILE STRENGTH OF 60 KSI AND MINIMUM YIELD STRENGTH OF 36 KSI

ALL SLOPES FROM EDGE OF TO FACE OF BARRIER ARE 10:1 OR FLATTER.

MAX HORIZONTAL FLARE IS 30:1.

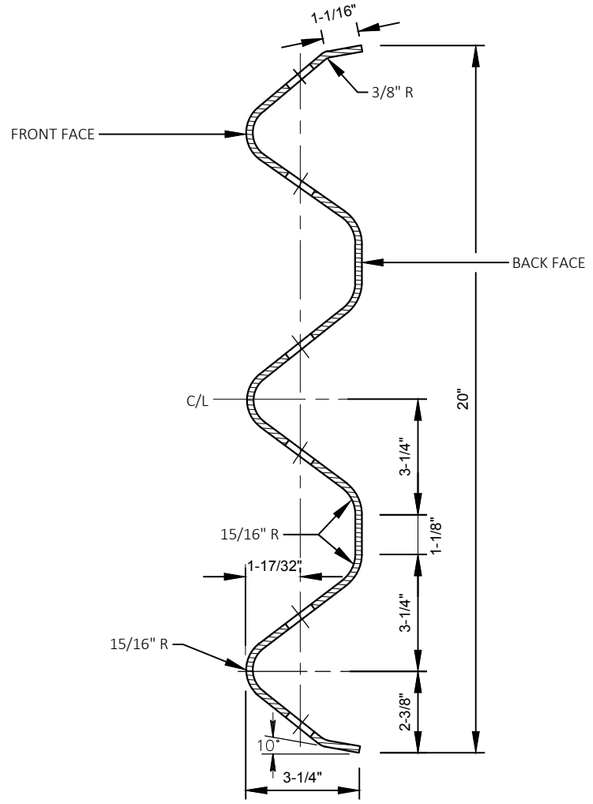
SEE SDD "STEEL PLATE BEAM GUARD, CLASS A", "STEEL THRIE BEAM STRUCTURE APPROACH" AND "STEEL PLATE BEAM GUARD, CLASS A, OVER LOW FILL CULVERTS" FOR MORE INFORMATION



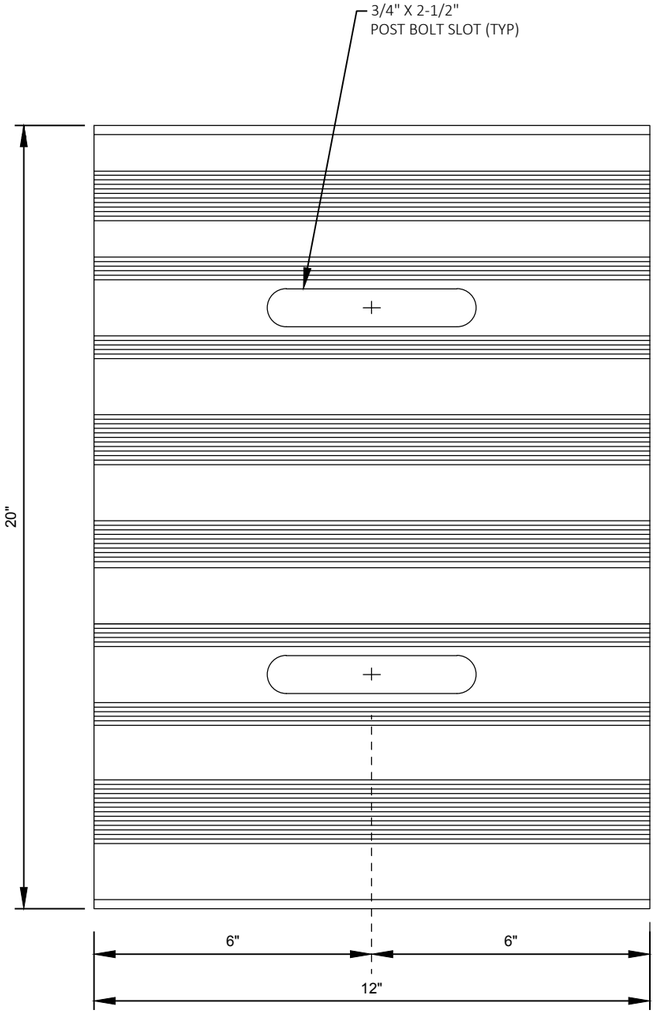
CROSS SECTION (DOUBLE FACED)

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CONSTRUCTION DETAILS (STEEL THRIE BEAM)	SHEET 8	E

2

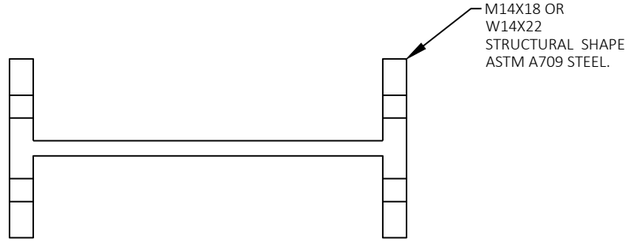


SECTION THRU THRIE BEAM RAIL ELEMENT/BACKING PLATE

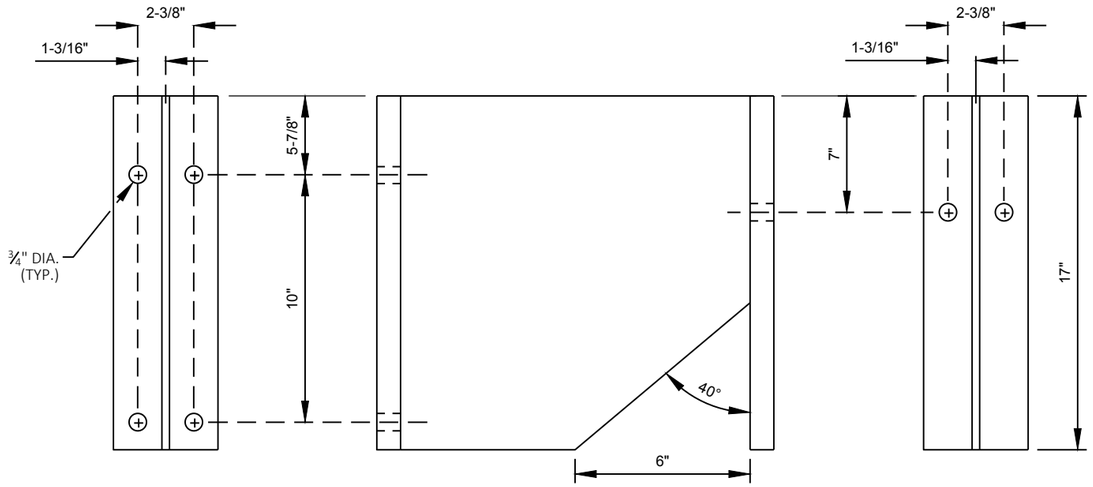


THRIE BEAM BACKING PLATE

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CONSTRUCTION DETAILS (STEEL THRIE BEAM)	SHEET 9	E

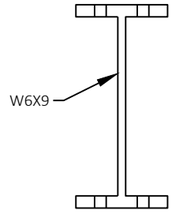


TOP

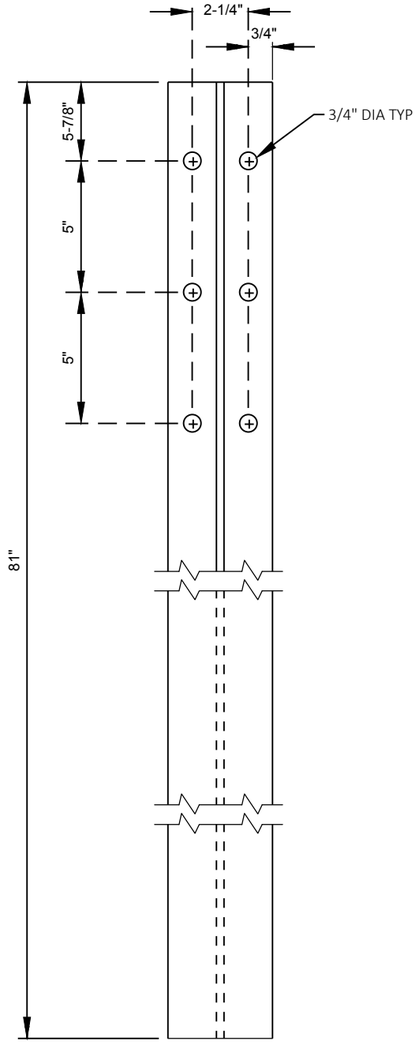


POST FACE **SIDE** **TRAFFIC FACE**

MODIFIED STEEL BLOCKOUT

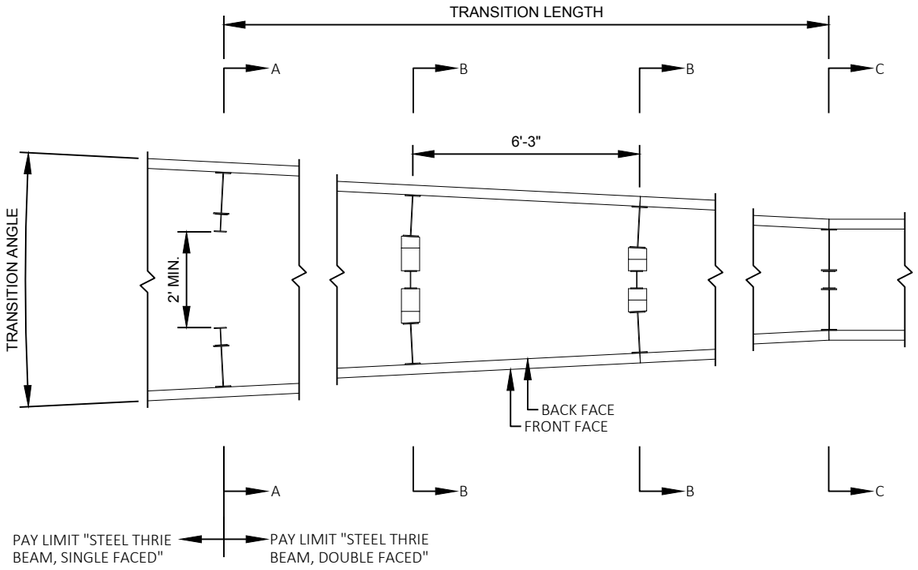


SECTION



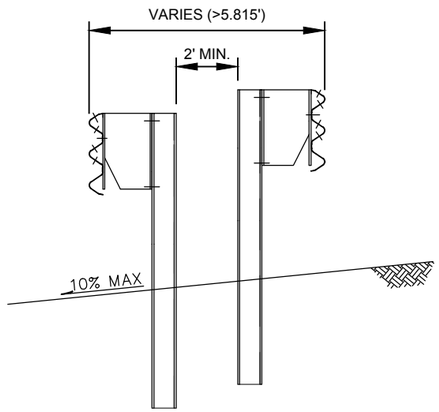
FRONT

STEEL POST

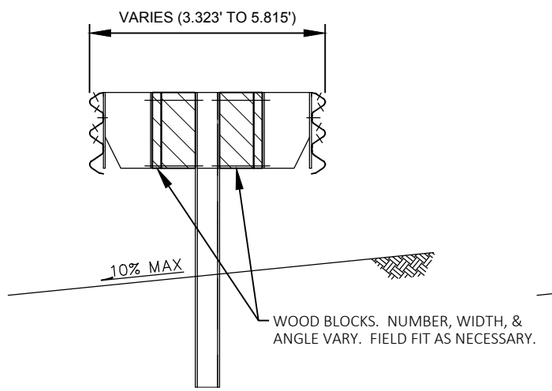


STEEL THRIE BEAM, SINGLE TO DOUBLE FACED TRANSITION

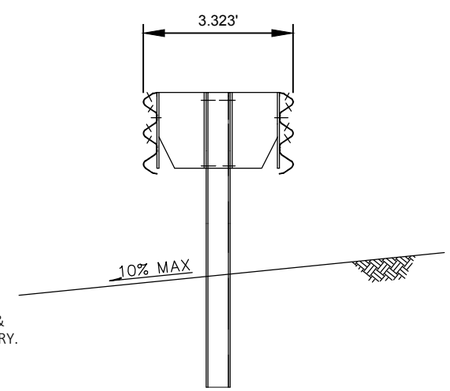
STEEL THRIE BEAM, DOUBLE TO SINGLE FACE TRANSITION DETAILS		
TRANSITION NUMBER SHOWN ON PLAN SHEETS	TRANSITION LENGTH	TRANSITION ANGLE
1	56'-3"	2.706°
2	56'-3"	2.722°
3	68'-9"	2.165°
4	43'-9"	3.358°
5	43'-9"	3.296°
6	81'-3"	1.845°
7	81'-3"	1.823°



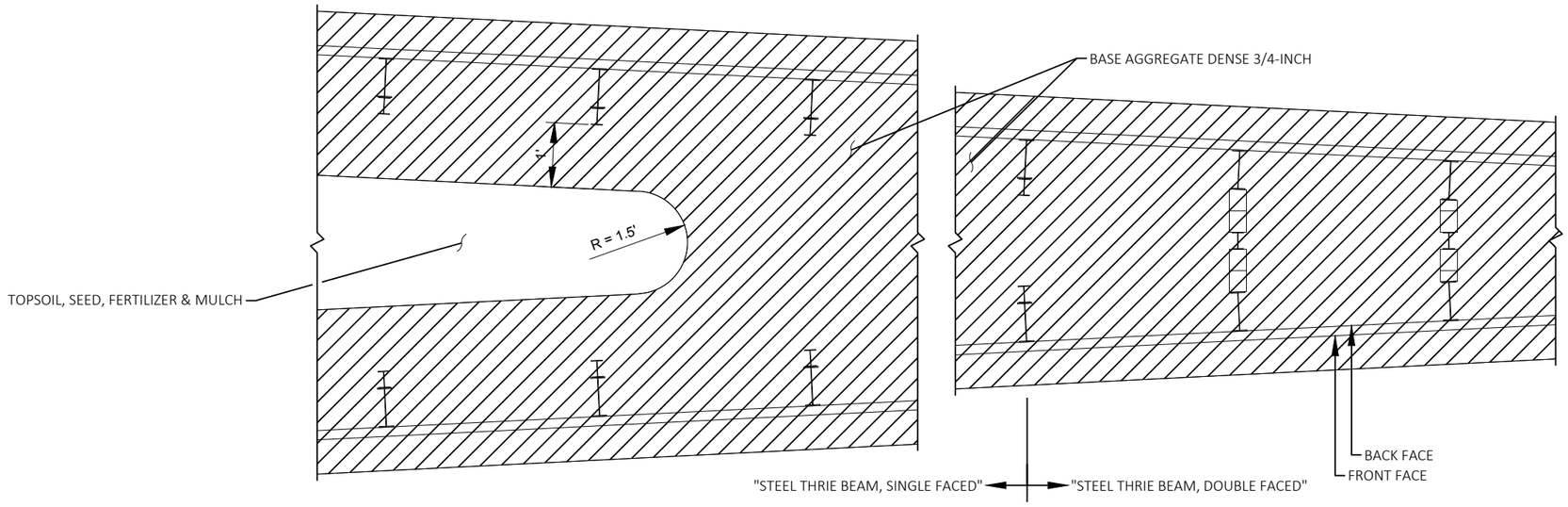
SECTION A-A



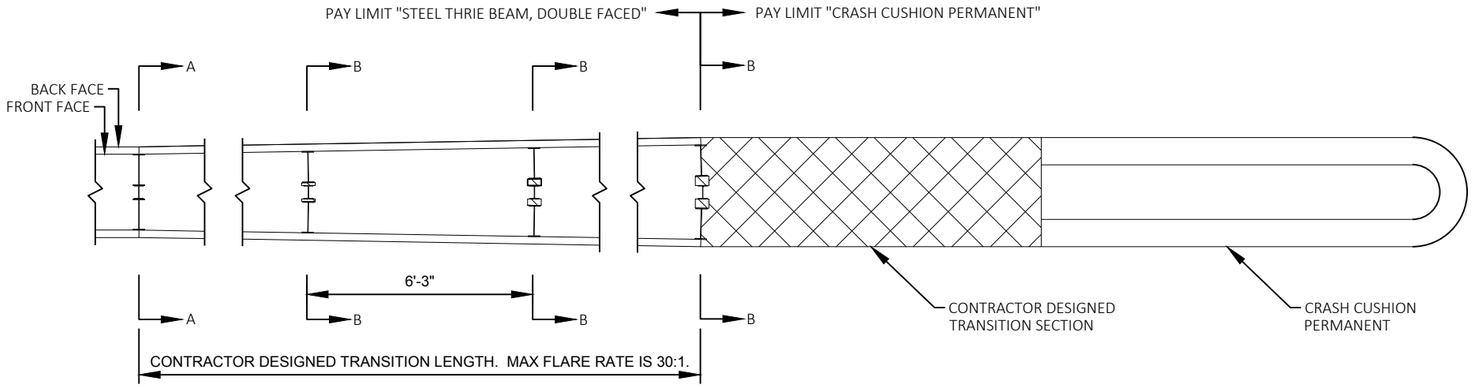
SECTION B-B



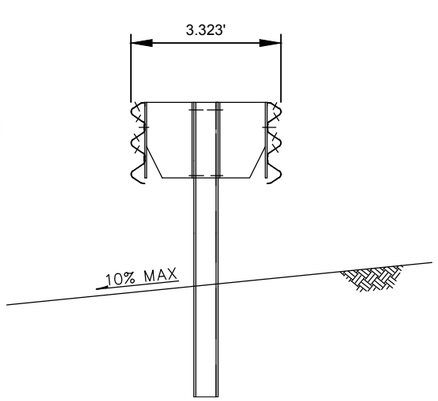
SECTION C-C



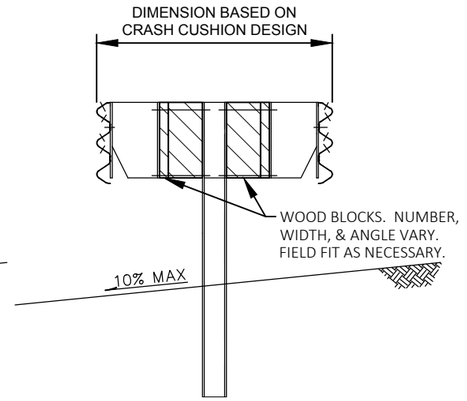
BASE AGGREGATE DENSE 3/4-INCH FOR STEEL THRIE BEAM, SINGLE TO DOUBLE FACED TRANSITION



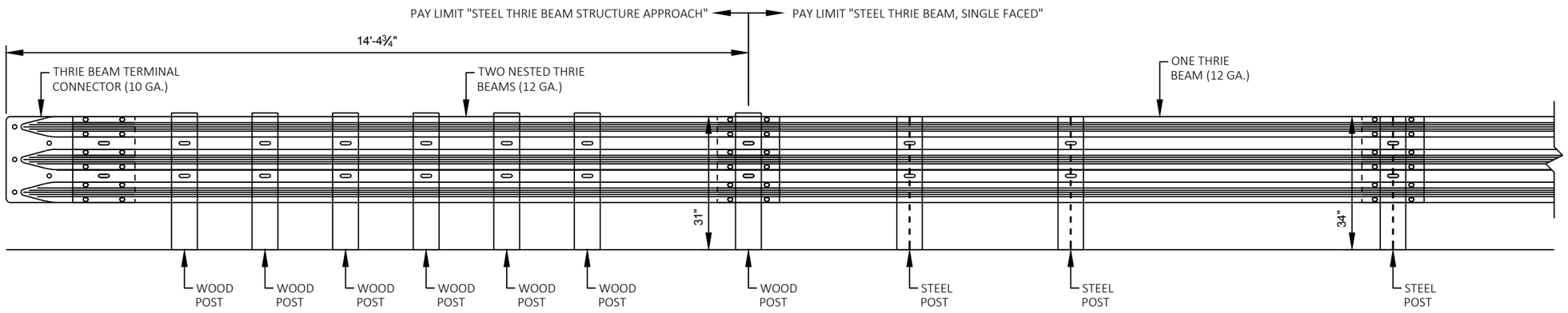
PLAN - STEEL THRIE BEAM, DOUBLE FACED TRANSITION TO CRASH CUSHION PERMANENT



SECTION A-A



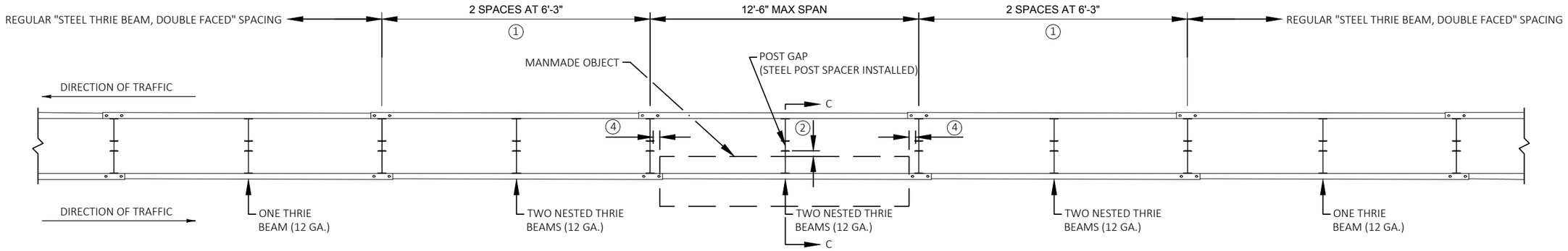
SECTION B-B



ELEVATION - STEEL THRIE BEAM STRUCTURE APPROACH MODIFICATION

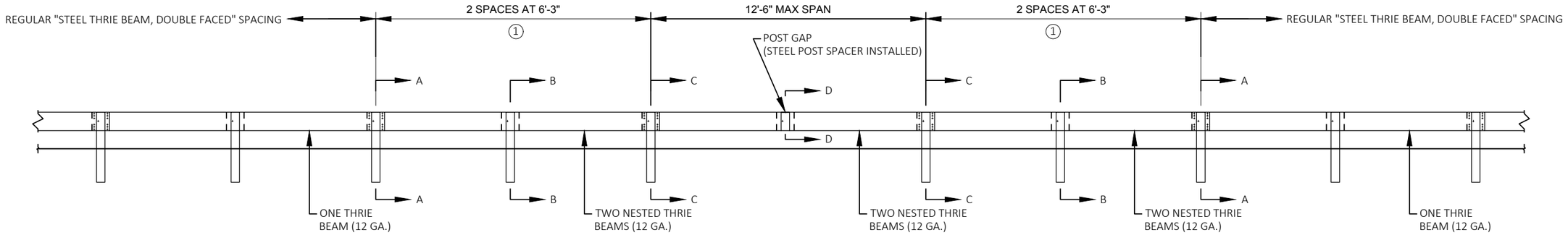
("W" TO THRIE BEAM TRANSITION SECTION OMITTED)

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CONSTRUCTION DETAILS (STEEL THRIE BEAM)	SHEET 12	E



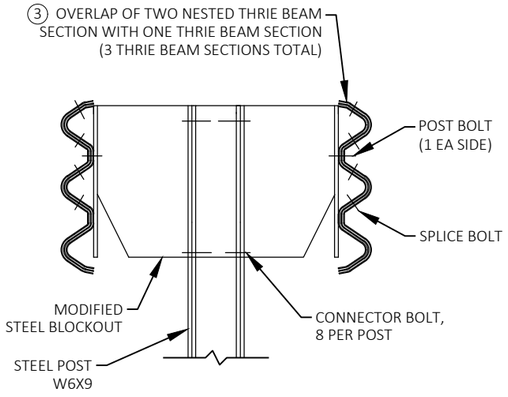
PLAN - STEEL THRIE BEAM, DOUBLE FACED POST GAP

STEEL THRIE BEAM, SINGLE FACED POST GAP SIMILAR
(SINGLE FACED POST GAP DOES NOT REQUIRE STEEL POST SPACER)

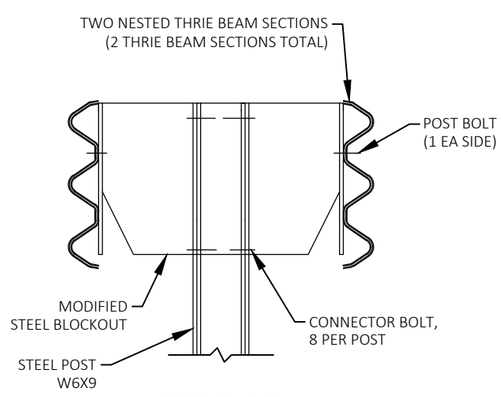


ELEVATION - STEEL THRIE BEAM, DOUBLE FACED POST GAP

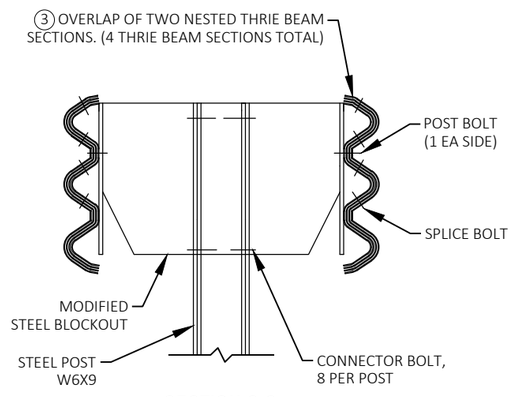
STEEL THRIE BEAM, SINGLE FACED POST GAP SIMILAR
(SINGLE FACED POST GAP DOES NOT REQUIRE STEEL POST SPACER)



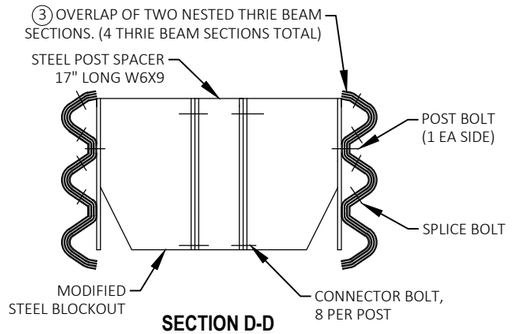
SECTION A-A



SECTION B-B



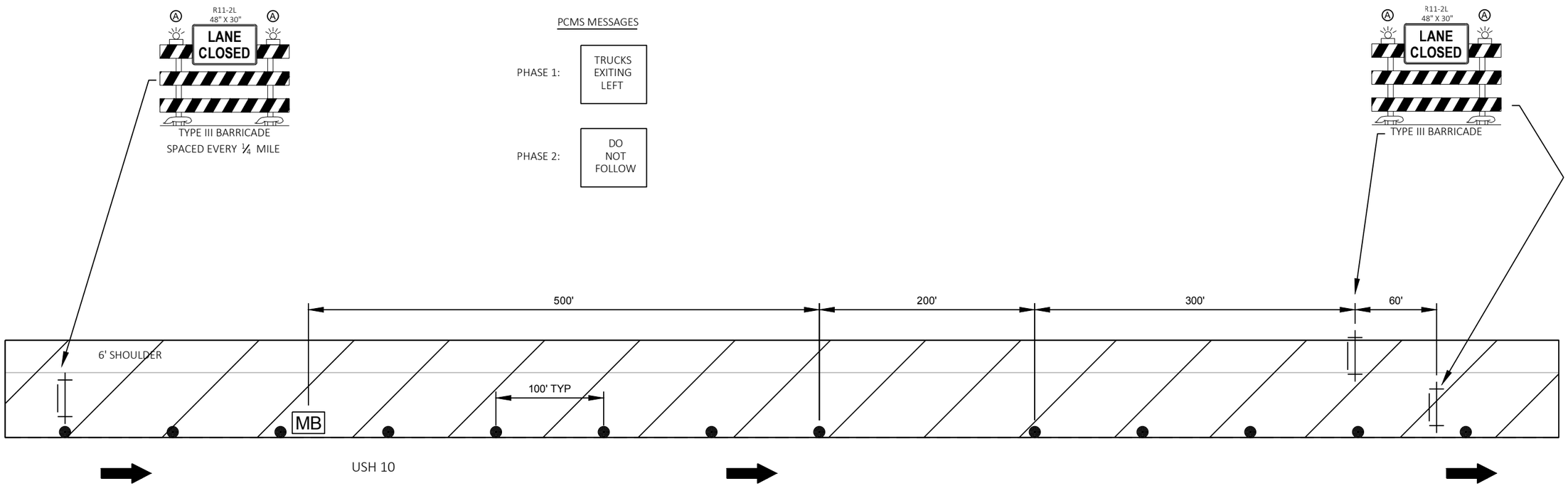
SECTION C-C



SECTION D-D

1. ONE 12'-6" SECTION OF TWO NESTED THRIE BEAM (12 GA.) REQUIRED ON BOTH SIDES OF POST GAP. POST GAP SHALL NOT FALL WITHIN WITHIN THIS 12'-6" SECTION.
2. POST GAP REQUIRED WHEN DISTANCE FROM EDGE OF POST TO MANMADE OBJECT IS LESS THAN 2'-0".
3. MAINTAIN THE NESTING OF EACH NESTED PAIR OF THRIE BEAM SECTIONS THROUGH SPLICES. ORIENTATE NESTED THRIE BEAM SPLICES IN THE DIRECTION OF TRAFFIC AS THE PLAN VIEW SHOWS. SEE SDD "STEEL PLATE BEAM GUARD, CLASS A" FOR FURTHER DETAIL.
4. POST GAP REQUIRED WHEN DISTANCE FROM EDGE OF POST TO MANMADE OBJECT IS LESS THAN 1'-0".

2



WORK ZONE ACCESS (SINGLE LANE CLOSURE)

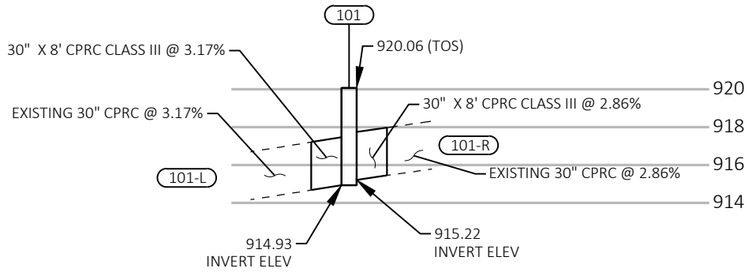
LEGEND

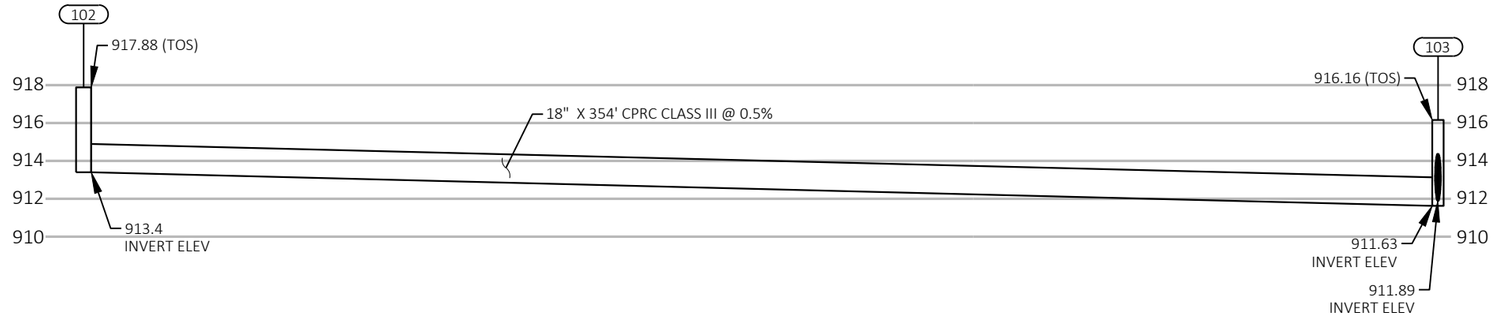
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- Ⓐ TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)

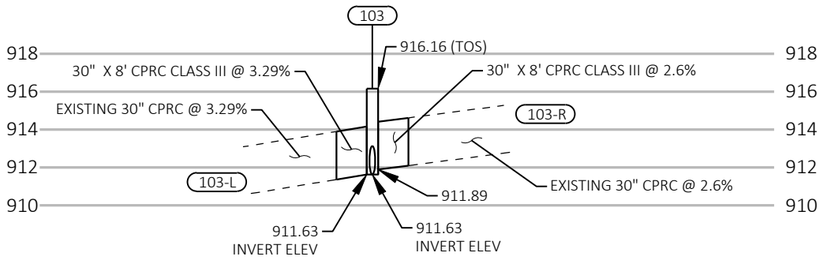
DRAWING NOT TO SCALE

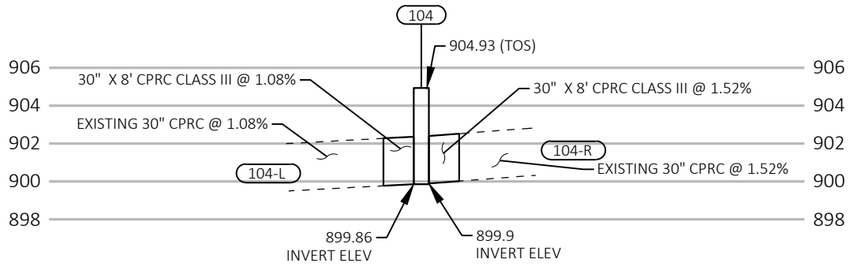
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CONSTRUCTION DETAIL (WORK ZONE ACCESS)	SHEET 14	E

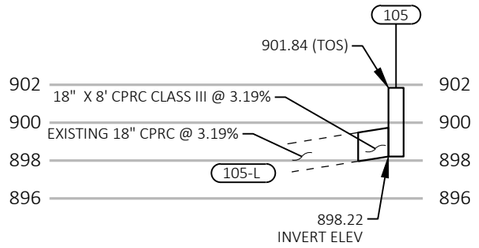
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\021002-CD.DWG
LAYOUT NAME - 02-CD
PLOT DATE : 1/17/2017 4:22 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

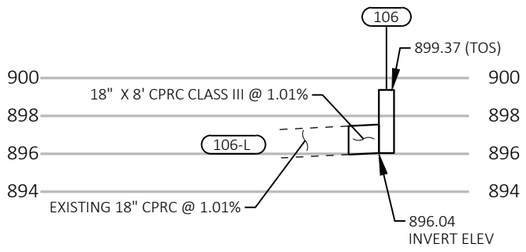


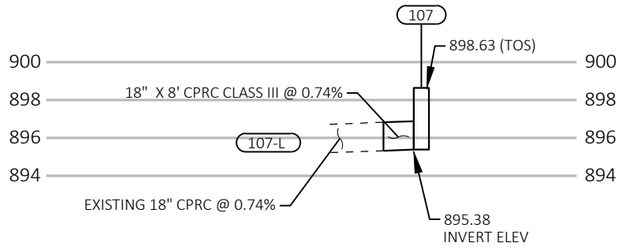


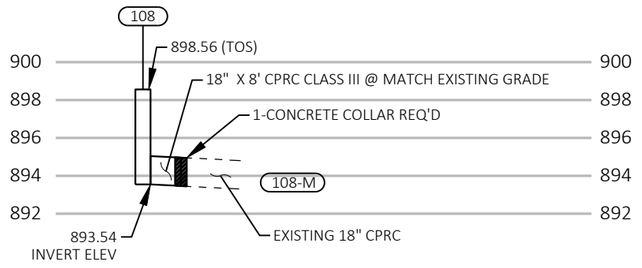




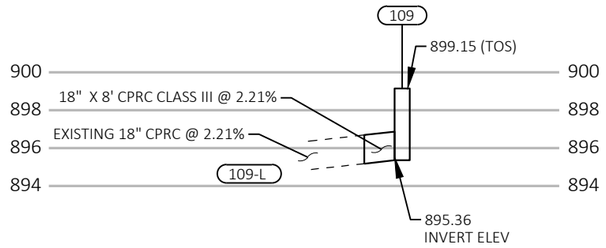


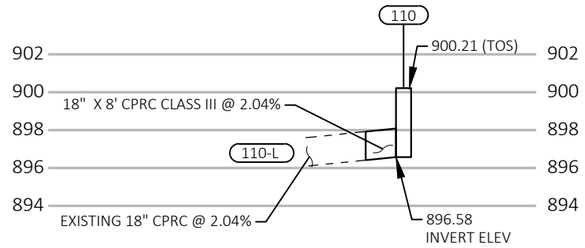


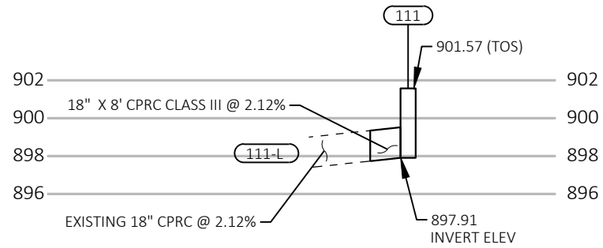


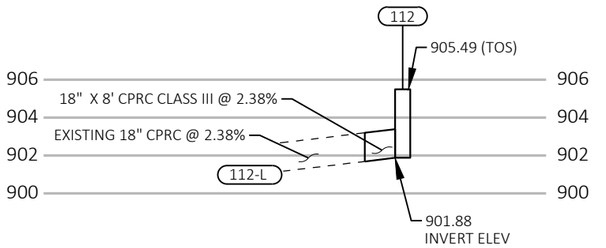


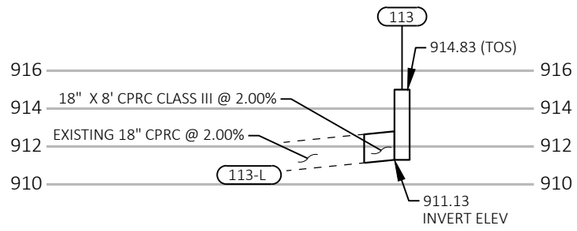
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	STORM SEWER	SHEET 15	E

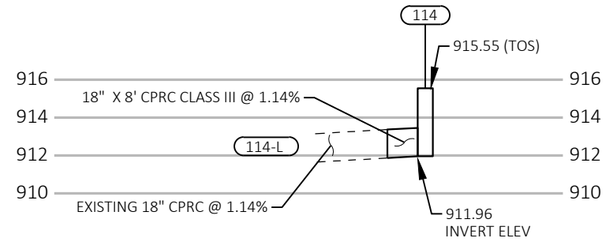

109
899.15 (TOS)
900
898
896
894
18" X 8' CPRC CLASS III @ 2.21%
EXISTING 18" CPRC @ 2.21%
109-L
895.36
INVERT ELEV

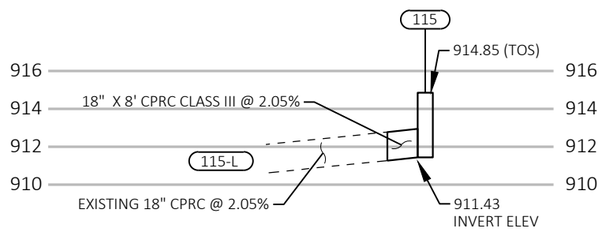

110
900.21 (TOS)
902
900
898
896
894
18" X 8' CPRC CLASS III @ 2.04%
110-L
EXISTING 18" CPRC @ 2.04%
896.58
INVERT ELEV

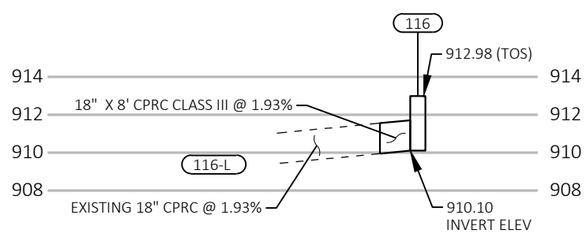

111
901.57 (TOS)
902
900
898
896
18" X 8' CPRC CLASS III @ 2.12%
111-L
EXISTING 18" CPRC @ 2.12%
897.91
INVERT ELEV

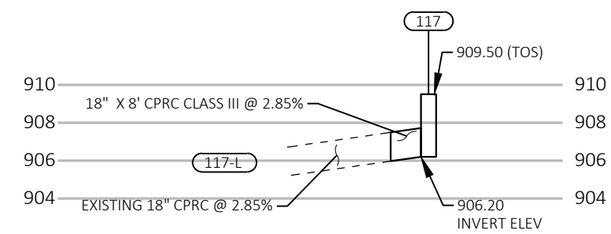

112
905.49 (TOS)
906
904
902
900
18" X 8' CPRC CLASS III @ 2.38%
EXISTING 18" CPRC @ 2.38%
112-L
901.88
INVERT ELEV

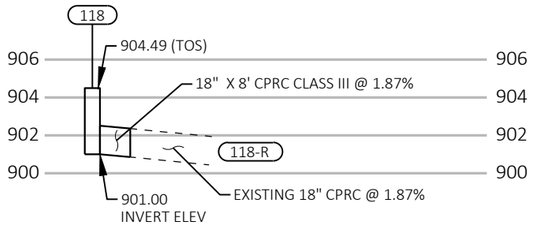

113
914.83 (TOS)
916
914
912
910
18" X 8' CPRC CLASS III @ 2.00%
EXISTING 18" CPRC @ 2.00%
113-L
911.13
INVERT ELEV

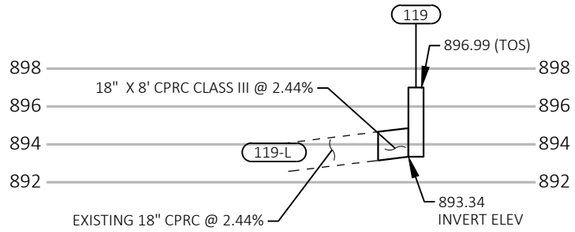

114
915.55 (TOS)
916
914
912
910
18" X 8' CPRC CLASS III @ 1.14%
114-L
EXISTING 18" CPRC @ 1.14%
911.96
INVERT ELEV

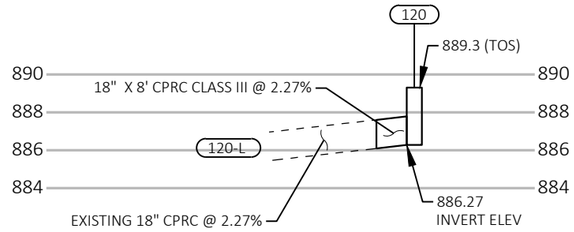

115
914.85 (TOS)
916
914
912
910
18" X 8' CPRC CLASS III @ 2.05%
115-L
EXISTING 18" CPRC @ 2.05%
911.43
INVERT ELEV

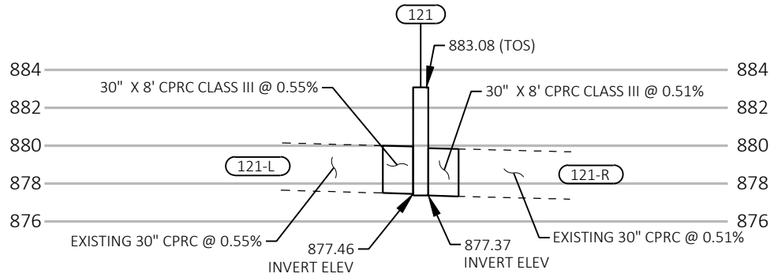

116
912.98 (TOS)
914
912
910
908
18" X 8' CPRC CLASS III @ 1.93%
116-L
EXISTING 18" CPRC @ 1.93%
910.10
INVERT ELEV

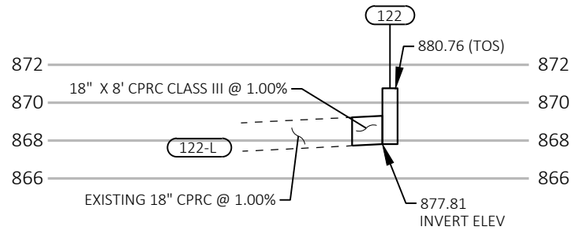

117
909.50 (TOS)
910
908
906
904
18" X 8' CPRC CLASS III @ 2.85%
117-L
EXISTING 18" CPRC @ 2.85%
906.20
INVERT ELEV

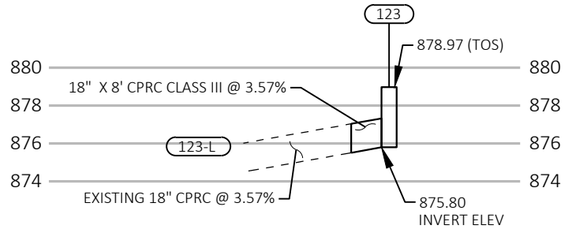


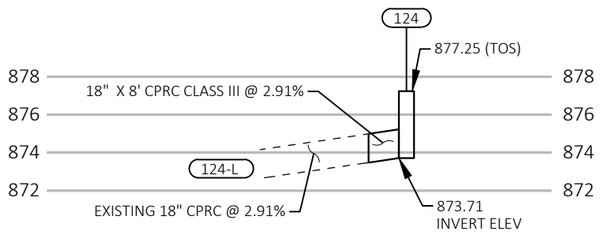


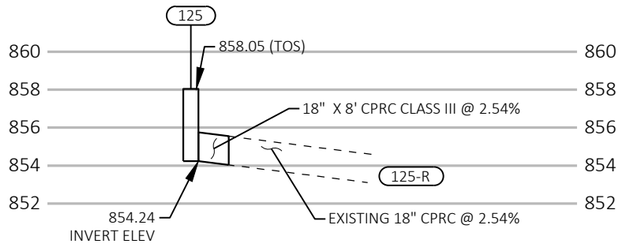


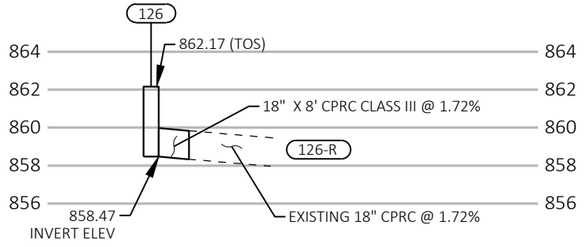




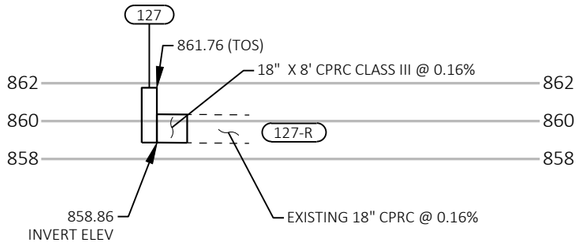


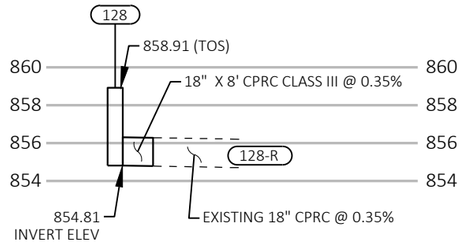


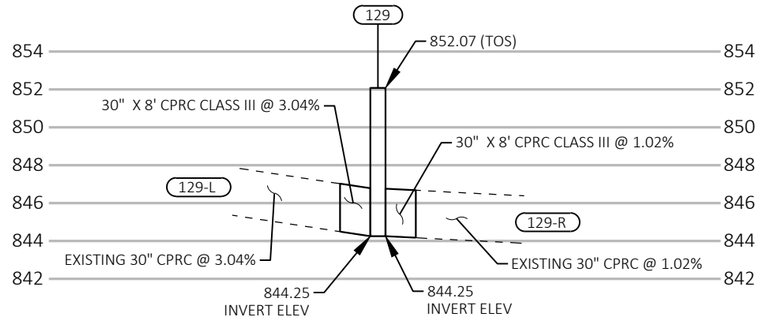


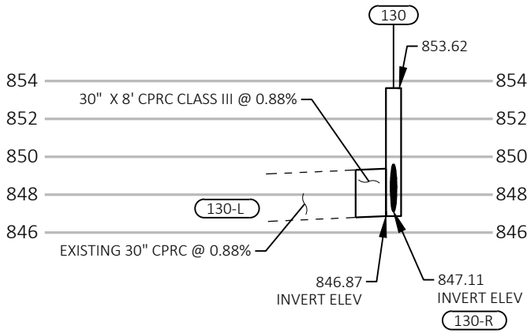


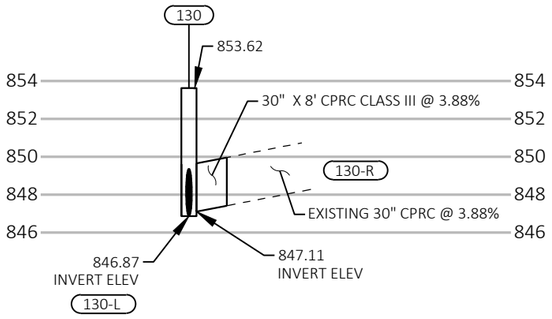
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	STORM SEWER	SHEET 17	E

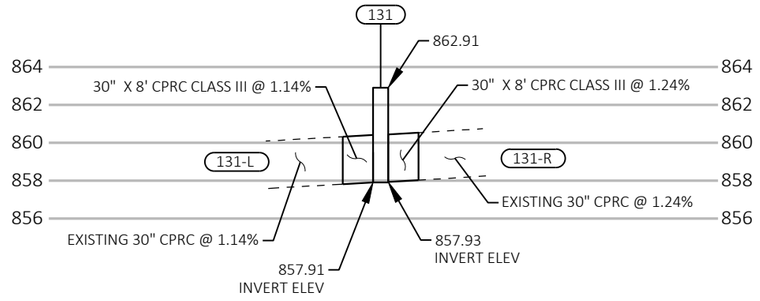


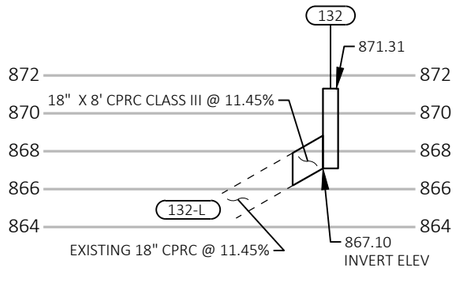


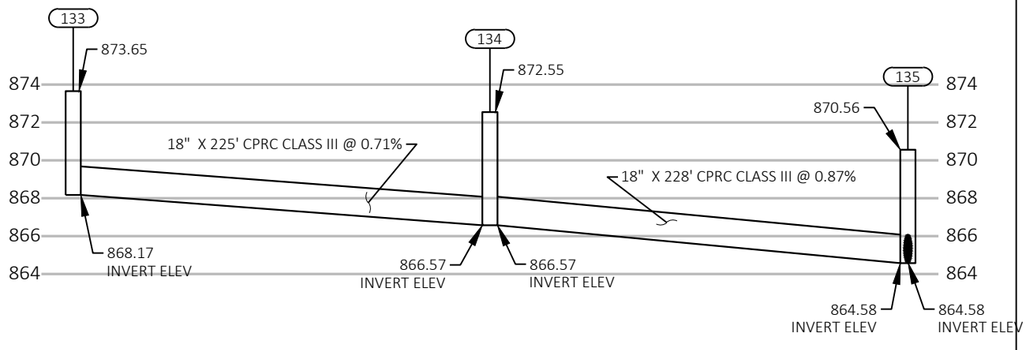


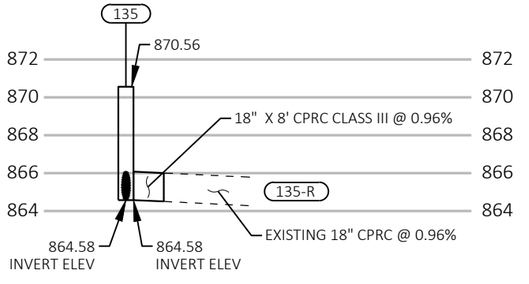




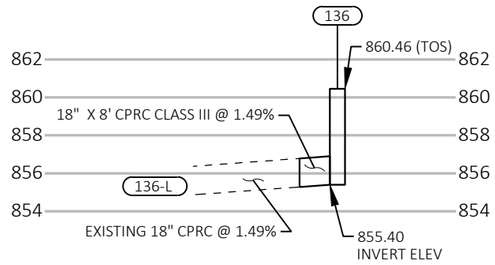


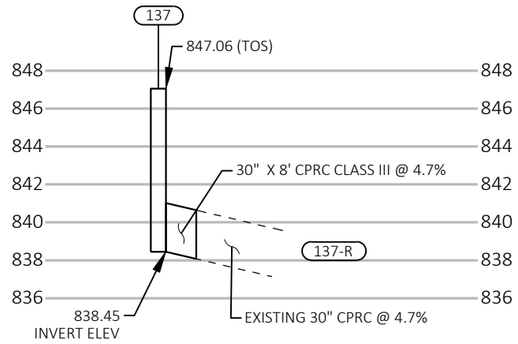


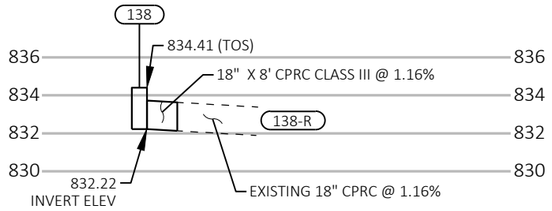




PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	STORM SEWER	SHEET 18	E







2

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	STORM SEWER	SHEET 19	E

2

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

DOUBLE YELLOW DELINEATOR

XX-XX DENOTES SIGN NUMBER

XX" INDICATES SIGN SIZE

N

01-01

CROSS TRAFFIC
NEXT 9 MILES

W6-53
MOVING SIGNS TYPE II

PT: 318+68.42WB

PT: 318+59.36EB

314+00WB 315+00WB 316+00WB 317+00WB 318+00WB 319+00WB

313+00EB 314+00EB 315+00EB 316+00EB 317+00EB 318+00EB

SEE SDD
MAINTENANCE CROSSOVER FOR FREEWAYS

INSTALL DOUBLE YELLOW DELINEATOR.
SEE STANDARD DETAIL DRAWING 15A2

01-05

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

R3-4B
36"X48"

01-04

REMOVE

555+00WB 556+00WB 557+00WB 558+00WB 559+00WB 560+00WB

USH 10 WB

REMOVE

01-02

554+00EB 555+00EB 556+00EB 557+00EB 558+00EB 559+00EB

USH 10 EB

INSTALL DOUBLE YELLOW DELINEATOR.
SEE STANDARD DETAIL DRAWING 15A2

R3-4B
36"X48"

01-03

USH 10 EB

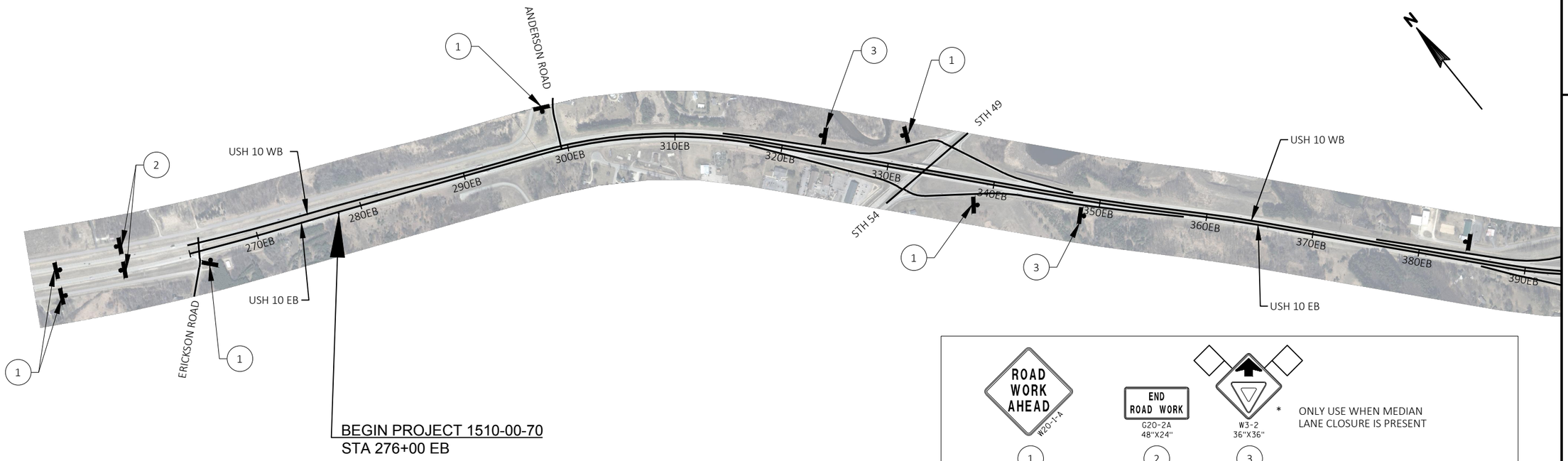
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PERMANENT SIGNING	SHEET 20	E

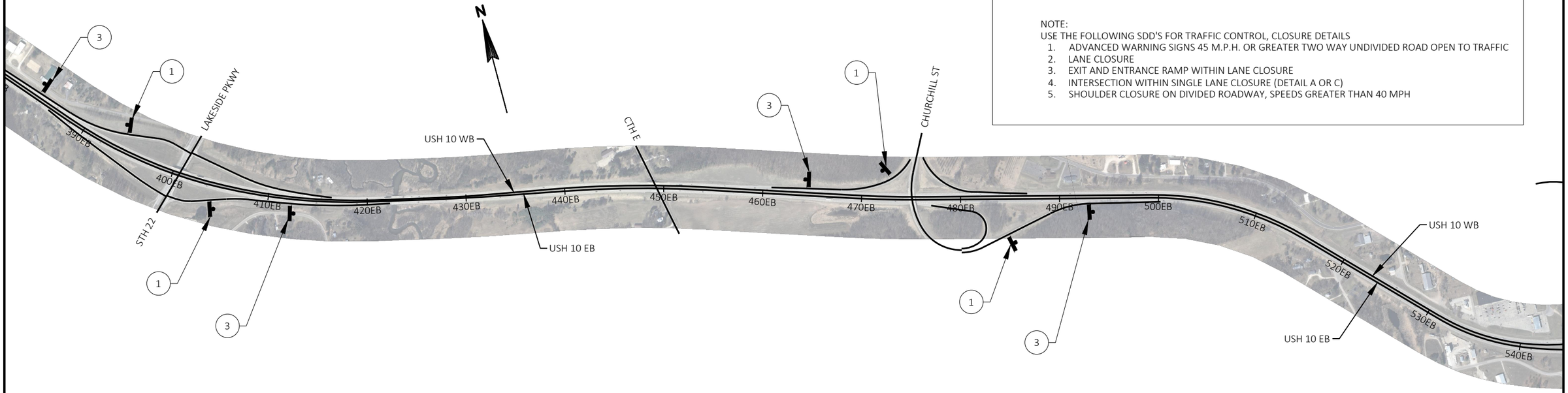
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LAYOUT NAME - 01-PS

PLOT DATE : 2/6/2017 8:27 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2





1

G20-2A
48"X24"

2

W3-2
36"X36"

3

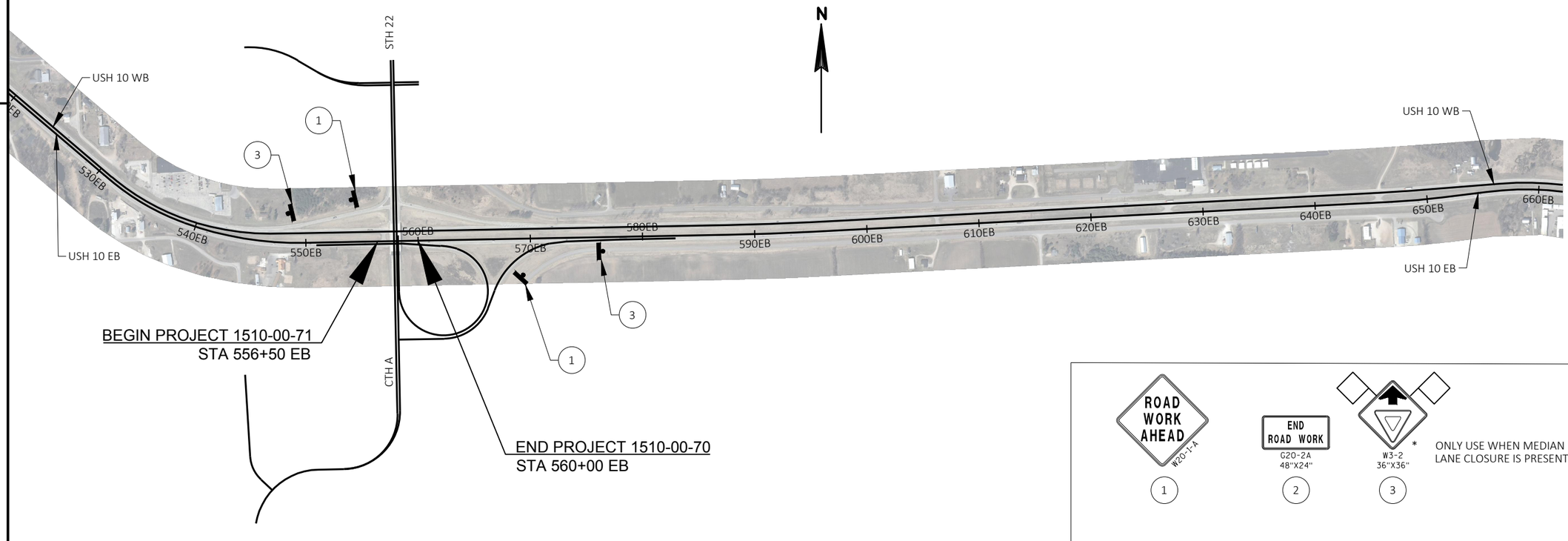
* ONLY USE WHEN MEDIAN LANE CLOSURE IS PRESENT

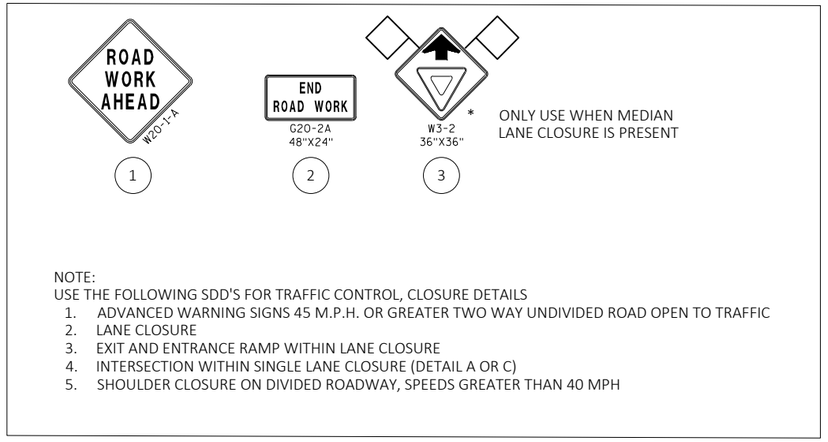
NOTE:
USE THE FOLLOWING SDD'S FOR TRAFFIC CONTROL, CLOSURE DETAILS

1. ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
2. LANE CLOSURE
3. EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
4. INTERSECTION WITHIN SINGLE LANE CLOSURE (DETAIL A OR C)
5. SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL - ADVANCED WARNING	SHEET 21	E

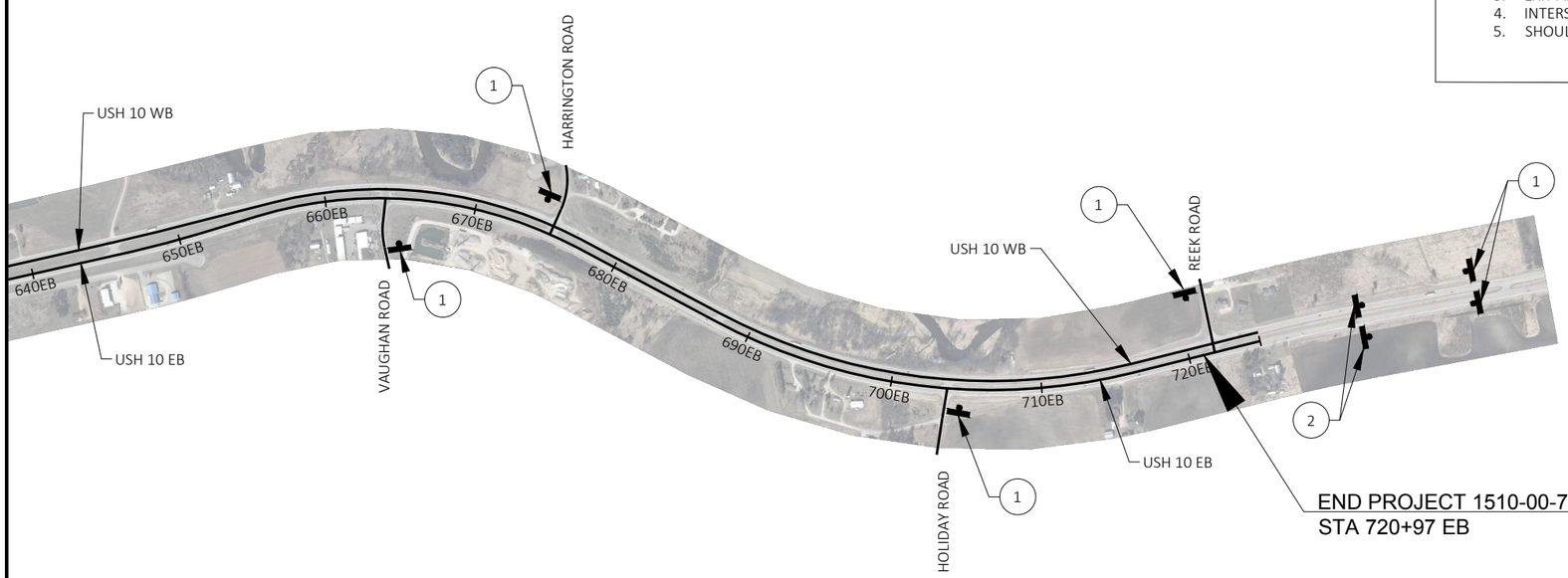
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LAYOUT NAME - 01-AW
PLOT DATE : 4/4/2017 8:00 AM
PLOT BY : SAEGER, GLENN D
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 42





NOTE:
USE THE FOLLOWING SDD'S FOR TRAFFIC CONTROL, CLOSURE DETAILS

1. ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
2. LANE CLOSURE
3. EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
4. INTERSECTION WITHIN SINGLE LANE CLOSURE (DETAIL A OR C)
5. SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



1510-00-70

Line	Item	Item Description	Unit	Total	Qty
0004	204.0165	Removing Guardrail	LF	1,272.000	1,272.000
0006	204.0180	Removing Delineators and Markers	EACH	36.000	36.000
0008	204.0190	Removing Surface Drains	EACH	1.000	1.000
0010	204.0220	Removing Inlets	EACH	35.000	35.000
0012	204.0245	Removing Storm Sewer (size) 01. 18-Inch & 30-Inch	LF	336.000	336.000
0014	205.0100	Excavation Common	CY	514.000	514.000
0016	213.0100	Finishing Roadway (project) 01. 1510-00-70	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,191.000	3,191.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	155.000	155.000
0024	465.0105	Asphaltic Surface	TON	80.000	80.000
0026	465.0315	Asphaltic Flumes	SY	6.000	6.000
0028	520.8000	Concrete Collars for Pipe	EACH	1.000	1.000
0030	521.1618	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 18-Inch 10 to 1	EACH	1.000	1.000
0032	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	1,023.000	1,023.000
0034	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	120.000	120.000
0036	611.0642	Inlet Covers Type MS	EACH	76.000	76.000
0038	611.3902	Inlets Median 2 Grate	EACH	38.000	38.000
0040	613.1100.S	Cable Barrier Type 1	LF	1,125.000	1,125.000
0042	613.1200.S	Cable Barrier End Terminal Type 1	EACH	2.000	2.000
0044	614.0200	Steel Thrie Beam Structure Approach	LF	173.000	173.000
0046	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	2.000	2.000
0048	614.0230	Steel Thrie Beam	LF	240.000	240.000
0050	614.0805	Crash Cushions Permanent Low Maintenance	EACH	5.000	5.000
0052	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1510-00-70	EACH	1.000	1.000
0056	619.1000	Mobilization	EACH	0.750	0.750
0058	624.0100	Water	MGAL	33.000	33.000
0062	625.0105	Topsoil	CY	5,231.000	5,231.000
0064	628.1905	Mobilizations Erosion Control	EACH	9.000	9.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0068	628.2004	Erosion Mat Class I Type B	SY	55,625.000	55,625.000
0070	628.7005	Inlet Protection Type A	EACH	49.000	49.000
0072	628.7504	Temporary Ditch Checks	LF	20.000	20.000
0074	628.7555	Culvert Pipe Checks	EACH	1.000	1.000
0076	629.0210	Fertilizer Type B	CWT	35.000	35.000
0078	630.0120	Seeding Mixture No. 20	LB	1,502.000	1,502.000
0080	633.0100	Delineator Posts Steel	EACH	2.000	2.000
0082	633.0500	Delineator Reflectors	EACH	4.000	4.000

1510-00-70

Line	Item	Item Description	Unit	Total	Qty
0084	633.5200	Markers Culvert End	EACH	39.000	39.000
0086	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	5.000	5.000
0088	637.2210	Signs Type II Reflective H	SF	24.000	24.000
0090	638.2102	Moving Signs Type II	EACH	1.000	1.000
0092	638.2602	Removing Signs Type II	EACH	2.000	2.000
0094	638.3000	Removing Small Sign Supports	EACH	2.000	2.000
0096	642.5201	Field Office Type C	EACH	0.750	0.750
0098	643.0300	Traffic Control Drums	DAY	12,572.000	12,572.000
0100	643.0420	Traffic Control Barricades Type III	DAY	429.000	429.000
0102	643.0705	Traffic Control Warning Lights Type A	DAY	858.000	858.000
0104	643.0715	Traffic Control Warning Lights Type C	DAY	384.000	384.000
0106	643.0800	Traffic Control Arrow Boards	DAY	88.000	88.000
0108	643.0900	Traffic Control Signs	DAY	1,791.000	1,791.000
0110	643.1050	Traffic Control Signs PCMS	DAY	40.000	40.000
0112	643.5000	Traffic Control	EACH	0.750	0.750
0114	645.0111	Geotextile Type DF Schedule A	SY	344.000	344.000
0116	650.4000	Construction Staking Storm Sewer	EACH	39.000	39.000
0118	650.4500	Construction Staking Subgrade	LF	22,750.000	22,750.000
0120	650.9910	Construction Staking Supplemental Control (project) 01. 1510-00-70	LS	1.000	1.000
0124	650.9920	Construction Staking Slope Stakes	LF	28,400.000	28,400.000
0126	690.0150	Sawing Asphalt	LF	12.000	12.000
0128	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0130	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,260.000	1,260.000
0132	SPV.0090	Special 01. Steel Thrie Beam, Single Faced	LF	3,905.000	3,905.000
0134	SPV.0090	Special 02. Steel Thrie Beam, Double Faced	LF	19,630.000	19,630.000

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 LF	REMARKS
330+88 EB - 331+70 EB	LT	82	B-68-73
334+37 EB - 335+59 EB	LT	122	B-68-73
331+95 WB - 332+98 WB	RT	103	B-68-19
335+57 WB - 336+65 WB	RT	108	B-68-19
398+17 EB - 399+32 EB	LT	115	B-68-74
399+17 WB - 400+31 WB	RT	114	B-68-77
447+83 EB - 448+54 EB	LT	71	B-68-22
449+91 EB - 450+54 EB	LT	63	B-68-22
448+75 WB - 449+39 WB	RT	64	B-68-76
450+77 WB - 451+47 WB	RT	70	B-68-76
474+11 EB - 475+91 EB	LT	180	MEDIAN
475+03 WB - 476+83 WB	RT	180	MEDIAN
	TOTAL	1272	

REMOVING SURFACE DRAIN

STATION	LOCATION	204.0190 EACH	REMARKS
331+62.93 EB	LT	1	MEDIAN
	TOTAL	1	

REMOVING INLETS

STATION	LOCATION	204.0220 EACH	REMARKS
276+82.03 EB	LT	1	MEDIAN
286+95.69 EB	LT	1	MEDIAN
302+97.82 EB	LT	1	MEDIAN
306+89.28 EB	LT	1	MEDIAN
310+36.82 EB	LT	1	MEDIAN
312+44.08 EB	LT	1	MEDIAN
314+33.87 EB	LT	1	MEDIAN
316+10.5 EB	LT	1	MEDIAN
317+90.96 EB	LT	1	MEDIAN
320+19.48 EB	LT	1	MEDIAN
325+89.05 EB	LT	1	MEDIAN
340+65.13 EB	LT	1	MEDIAN
347+89.61 EB	LT	1	MEDIAN
350+89.19 EB	LT	1	MEDIAN
354+87.22 EB	LT	1	MEDIAN
359+86.48 EB	LT	1	MEDIAN
364+99.82 EB	LT	1	MEDIAN
372+39.32 EB	LT	1	MEDIAN
379+64.40 EB	LT	1	MEDIAN
386+91.27 EB	LT	1	MEDIAN
390+89.09 EB	LT	1	MEDIAN
393+89.65 EB	LT	1	MEDIAN
396+89.61 EB	LT	1	MEDIAN
444+40.17 EB	LT	1	MEDIAN
452+39.37 EB	LT	1	MEDIAN
457+34.63 EB	LT	1	MEDIAN
462+86.94 EB	LT	1	MEDIAN
469+85.94 EB	LT	1	MEDIAN
480+89.04 EB	LT	1	MEDIAN
489+85.43 EB	LT	1	MEDIAN
497+82.56 EB	LT	1	MEDIAN
510+34.26 EB	LT	1	MEDIAN
516+90.94 EB	LT	1	MEDIAN
524+91.48 EB	LT	1	MEDIAN
540+85.96 EB	LT	1	MEDIAN
	TOTAL	35	

BASE AGGREGATE DENSE & WATER

STATION - STATION	LOCATION	305.0110 3/4 INCH TON	305.0120 1 1/4 INCH TON	624.0100 WATER MGAL	REMARKS
277+82.22 EB - 293+90.52 EB	LT	211	0	2.11	MEDIAN
300+45.25 EB - 327+81.97 EB	LT	359	0	3.59	MEDIAN
327+81.97 EB - 331+72.83 EB	LT	51	0	0.51	MEDIAN USH 10 EB
327+81.97 EB - 331+93.74 EB	LT	54	0	0.54	MEDIAN USH 10 WB
334+34.59 EB - 338+41.03 EB	LT	53	0	0.53	MEDIAN USH 10 EB
334+47.89 EB - 338+41.03 EB	LT	52	0	0.52	MEDIAN USH 10 WB
338+41.03 EB -395+58.11 EB	LT	750	0	7.50	MEDIAN
395+58.11 EB - 399+65.29 EB	LT	53	0	0.53	MEDIAN USH 10 EB
395+58.11 EB - 399+68.36 EB	LT	54	0	0.54	MEDIAN USH 10 WB
441+11.14 EB - 446+13.35 EB	LT	66	0	0.66	MEDIAN
446+13.35 EB - 448+49.51 EB	LT	31	0	0.31	MEDIAN USH 10 WB
446+13.35 EB - 448+56.78 EB	LT	32	0	0.32	MEDIAN USH 10 EB
449+89.16 EB - 452+29.61 EB	LT	32	0	0.32	MEDIAN USH 10 EB
449+82.25 EB - 452+29.61 EB	LT	33	0	0.33	MEDIAN USH 10 WB
452+29.61 EB - 470+94.75 EB	LT	245	0	2.45	MEDIAN
470+94.75 EB - 474+71.03 EB	LT	49	0	0.49	MEDIAN USH 10 EB
470+94.75 EB - 479+03.45 EB	LT	106	0	1.06	MEDIAN USH 10 WB
475+34.03 EB - 479+03.45 EB	LT	49	0	0.49	MEDIAN USH 10 EB
479+03.45 EB - 546+73.58 EB	LT	889	0	8.89	MEDIAN
556+64.39 EB	LT	0	155	1.55	MAINTENANCE CROSS OVER
556+64.39 EB	LT	23	0	0.23	MAINTENANCE CROSS OVER
	TOTALS	3191	155	33	

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	625.0105 Topsoil	Comment:
			Cut (2)	EBS Excavation (3)				Factor 1.00				
USH 10EB Median	270+00/559+50		514	0	131	383	5,614	5,614	-5,231	0	5,231	
Subtotal			514	0	131	383	5,614	5,614	-5,231	0	5,231	SEE NOTE 15
Grand Total			514	0	131	383	5,614	5,614	-5,231	0	5,231	
Total Common Exc			514									

Notes:

(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

(2) Salvaged/Unsuable Pavement Material is included in Cut.

(4) Salvaged/Unsuable Pavement Material

5) Available Material = Cut - Salvaged/Unsuable Pavement Material

(13) Expanded Fill Factor = 1

Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced EBS) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced Marsh) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor) * Fill Factor

(14) 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.

HMA PAVEMENT

STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0315 ASPHALTIC FLUMES SY	REMARKS
331+59.81 EB	LT	0	6	MEDIAN
556+64.39 EB	LT	80	0	MAINTENANCE CROSSOVER
	TOTALS	**80**	**6**	

CROSS DRAINS

STRUCTURE TO STRUCTURE	204.0245 REMOVING STORM SEWER 18-INCH LF	204.0245 REMOVING STORM SEWER 30-INCH LF	520.8000 CONCRETE COLLARS FOR PIPE EACH	STORM SEWER PIPE REINFORCED CLASS III 608.0318 18-INCH LF	STORM SEWER PIPE REINFORCED CLASS III 608.0330 30-INCH LF	645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY	REMARKS
101-L TO 101	--	8	--	--	8	3.6	--
101 TO 101-R	--	8	--	--	8	3.6	--
102 TO 103	--	--	--	354	--	101.8	--
103-L TO 103	--	8	--	--	8	3.6	--
103 TO 103-R	--	8	--	--	8	3.6	--
104-L TO 104	--	8	--	--	8	3.6	--
104 TO 104-R	--	8	--	--	8	3.6	--
105-L TO 105	8	--	--	8	--	2.3	--
106-L TO 106	8	--	--	8	--	2.3	--
107-L TO 107	8	--	--	8	--	2.3	--
108 TO 108-M	8	--	1	8	--	--	--
109-L TO 109	8	--	--	8	--	2.3	--
110-L TO 110	8	--	--	8	--	2.3	--
111-L TO 111	8	--	--	8	--	2.3	--
112-L TO 112	8	--	--	8	--	2.3	--
113-L TO 113	8	--	--	8	--	2.3	--
114-L TO 114	8	--	--	8	--	2.3	--
115-L TO 115	8	--	--	8	--	2.3	--
116-L TO 116	8	--	--	8	--	2.3	--
117-L TO 117	8	--	--	8	--	2.3	--
118 TO 118-R	8	--	--	8	--	2.3	--
119-L TO 119	8	--	--	8	--	2.3	--
120-L TO 120	8	--	--	8	--	2.3	--
121-L TO 121	--	8	--	--	8	3.6	--
121 TO 121-R	--	8	--	--	8	3.6	--
122-L TO 122	8	--	--	8	--	2.3	--
123-L TO 123	8	--	--	8	--	2.3	--
124-L TO 124	8	--	--	8	--	2.3	--
125 TO 125-R	8	--	--	8	--	2.3	--
126 TO 126-R	8	--	--	8	--	2.3	--
127 TO 127-R	8	--	--	8	--	2.3	--
128 TO 128-R	8	--	--	8	--	2.3	--
129-L TO 129	--	8	--	--	8	3.6	--
129 TO 129-R	--	8	--	--	8	3.6	--
130-L TO 130	--	8	--	--	8	3.6	--
130 TO 130-R	--	8	--	--	8	3.6	--
131-L TO 131	--	8	--	--	8	3.6	--
131 TO 131-R	--	8	--	--	8	3.6	--
132-L TO 132	8	--	--	8	--	2.3	--
133 TO 134	--	--	--	225	--	64.4	--
134 TO 135	--	--	--	228	--	64.4	--
135 TO 135-R	8	--	--	8	--	2.3	--
136-L TO 136	8	--	--	8	--	2.3	--
137 TO 137-R	--	8	--	--	8	3.6	--
138TO 138-R	8	--	--	8	--	2.3	--
SUB TOTALS	**216**	**120**					
TOTALS		**336**	**1**	**1023**	**120**	**344**	

STORM SEWER STRUCTURES

STATION	LOCATION	STRUCTURE NUMBER	204.0180 REMOVING DELINEATORS AND MARKERS EACH	521.1618 APRON END WALLS FOR CULVERT PIPES SLOPED SIDE DRAINS STEEL 18-IN, 10 TO 1 EACH	611.0642 INLET COVERS TYPE MS EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	628.7005 INLET PROTECTION TYPE A EACH	628.7555 CULVERT PIPE CHECKS EACH	633.5200 MARKERS CULVERT END EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
271+51.68 WB	RT	EXISTING	-	-	-	-	1	-	-	-
276+82.03 EB	LT	101	1	-	2	1	1	-	1	1
283+42.47 EB	LT	102	-	-	2	1	1	-	1	1
286+95.69 EB	LT	103	1	-	2	1	1	-	1	1
295+81.5 WB	RT	EXISTING	-	-	-	-	1	-	-	-
299+57 WB	RT	EXISTING	-	-	-	-	1	-	-	-
302+97.82 EB	LT	104	1	-	2	1	1	-	1	1
306+89.28 EB	LT	105	1	-	2	1	1	-	1	1
310+36.82 EB	LT	106	1	-	2	1	1	-	1	1
312+44.08 EB	LT	107	1	-	2	1	1	-	1	1
314+33.87 EB	LT	108	1	-	2	1	1	-	1	1
316+10.50 EB	LT	109	1	-	2	1	1	-	1	1
317+90.96 EB	LT	110	1	-	2	1	1	-	1	1
320+19.48 EB	LT	111	1	-	2	1	1	-	1	1
325+89.05 EB	LT	112	1	-	2	1	1	-	1	1
336+45.40 WB	RT	EXISTING	-	-	-	-	1	-	-	-
340+66.13 EB	LT	113	1	-	2	1	1	-	1	1
347+89.61 EB	LT	114	1	-	2	1	1	-	1	1
350+89.19 EB	LT	115	1	-	2	1	1	-	1	1
354+87.22 EB	LT	116	1	-	2	1	1	-	1	1
359+86.48 EB	LT	117	1	-	2	1	1	-	1	1
364+99.82 EB	LT	118	1	-	2	1	1	-	1	1
372+39.32 EB	LT	119	1	-	2	1	1	-	1	1
379+64.40 EB	LT	120	1	-	2	1	1	-	1	1
386+91.27 EB	LT	121	1	-	2	1	1	-	1	1
390+89.09 EB	LT	122	1	-	2	1	1	-	1	1
393+89.65 EB	LT	123	1	-	2	1	1	-	1	1
396+89.61 EB	LT	124	1	-	2	1	1	-	1	1
399+65 WB	RT	EXISTING	-	-	-	-	1	-	-	-
441+28.92 WB	RT	EXISTING	-	-	-	-	1	-	-	-
444+40.17 EB	LT	125	1	-	2	1	1	-	1	1
450+20 EB	LT	EXISTING	-	-	-	-	1	-	-	-
452+39.37 EB	LT	126	1	-	2	1	1	-	1	1
457+34.63 EB	LT	127	1	-	2	1	1	-	1	1
462+86.94 EB	LT	128	1	-	2	1	1	-	1	1
469+85.94 EB	LT	129	1	-	2	1	1	-	1	1
474+72.06 WB	LT	EXISTING	-	-	-	-	1	-	-	-
477+15.81 WB	LT	EXISTING	-	-	-	-	1	-	-	-
480+89.04 EB	LT	130	1	-	2	1	1	-	1	1
489+85.43 EB	LT	131	1	-	2	1	1	-	1	1

CONTINUED ON NEXT PAGE

497+82.56 EB	LT	132	1	-	2	1	1	-	1	1	
505+82.86 EB	LT	133	-	-	2	1	1	-	1	1	
508+06.91 EB	LT	134	-	-	2	1	1	-	1	1	
510+34.26 EB	LT	135	1	-	2	1	1	-	1	1	
516+90.94 EB	LT	136	1	-	2	1	1	-	1	1	
524+91.48 EB	LT	137	1	-	2	1	1	-	1	1	
530+50.18 EB	LT	EXISTING	-	-	-	-	1	-	-	-	
540+85.96 EB	LT	138	1	-	2	1	1	-	1	1	
549+87.96 EB	LT	EXISTING	-	-	-	-	1	-	-	-	
556+37.96 EB	LT	139-M	1	1	-	-	-	1	1	1	CONTINUED FROM LAST PAGE
	TOTALS		**36**	**1**	**76**	**38**	**49**	**1**	**39**	**39**	

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CABLE BARRIER

STATION - STATION	LOCATION	613.1100.S TYPE 1 LF	613.1200.S END TERMINAL TYPE 1 EACH	REMARKS
544+90 EB	15', LT	---	1	MEDIAN USH 10 EB
544+90 EB - 556+15 EB	15', LT	1125	---	MEDIAN USH 10 EB
556+15 EB	15', LT	---	1	MEDIAN USH 10 EB
	TOTALS	**1125**	**2**	

STEEL THRIE BEAM

STATION - STATION	LOCATION	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	REMARKS
556+80.25 EB - 557+33.58 EB	LT	1	---	MEDIAN
557+33.58 EB - 558+54.02 EB	LT	---	120	MEDIAN USH 10 EB
557+33.58 EB - 558+54.02 EB	LT	---	120	MEDIAN USH 10 WB
558+54.02 EB - 559+07.35 EB	LT	1	---	MEDIAN
	TOTALS	**2**	**240**	

STEEL THRIE BEAM

STATION - STATION	LOCATION	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH LF	SPV.0090.01 STEEL THRIE BEAM SINGLE FACED LF	SPV.0090.02 STEEL THRIE BEAM DOUBLE FACED LF	614.0805 CRASH CUSHIONS PERMANENT LOW MAINTANANCE EACH	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	REMARKS
277+82.22 EB	LT	---	---	---	1	3.3	OM-3C (W5-58M)	TL-3	Bidirectional	Lt and Rt	STEEL THRIE BEAM DOUBLE FACED	MEDIAN
277+82.22 EB - 293+90.52 EB	LT	---	---	1608	---	---	---	---	---	---	---	MEDIAN
293+90.52 EB	LT	---	---	---	1	3.3	OM-3C (W5-58M)	TL-3	Bidirectional	Lt and Rt	STEEL THRIE BEAM DOUBLE FACED	MEDIAN
300+45.25 EB	LT	---	---	---	1	3.3	OM-3C (W5-58M)	TL-3	Bidirectional	Lt and Rt	STEEL THRIE BEAM DOUBLE FACED	MEDIAN
300+45.25 EB - 327+81.97 EB	LT	---	---	2737	---	---	---	---	---	---	---	MEDIAN
327+81.97 EB - 328+38.24 EB	LT	---	---	56	---	---	---	---	---	---	---	TRANSITION #1
328+38.24 EB - 331+58.44 EB	LT	---	320	---	---	---	---	---	---	---	---	MEDIAN USH 10 EB
331+58.44 EB - 331+72.83 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-73 USH 10 EB
328+38.22 EB - 331+79.35 EB	LT	---	341	---	---	---	---	---	---	---	---	MEDIAN USH 10 WB
331+79.35 EB - 331+93.74 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-19 USH 10 WB
334+47.89 EB - 334+62.28 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-69-19 USH 10 WB
334+62.28 EB - 337+84.78 EB	LT	---	323	---	---	---	---	---	---	---	---	MEDIAN USH 10 WB
334+34.59 EB - 334+48.98 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-73 USH 10 EB
334+48.98 EB - 337+84.78 EB	LT	---	336	---	---	---	---	---	---	---	---	MEDIAN USH 10 EB
337+84.78 EB - 338+41.03 EB	LT	---	---	56	---	---	---	---	---	---	---	TRANSITION #2
338+41.03 EB - 395+58.11 EB	LT	---	---	5717	---	---	---	---	---	---	---	MEDIAN
395+58.11 EB - 396+27.14 EB	LT	---	---	69	---	---	---	---	---	---	---	TRANSITION #3
396+27.09 EB - 399+50.9 EB	LT	---	324	---	---	---	---	---	---	---	---	MEDIAN USH 10 EB
399+50.9 EB - 399+65.29 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-74 USH 10 EB
396+27.19 EB - 399+53.97 EB	LT	---	327	---	---	---	---	---	---	---	---	MEDIAN USH 10 WB
399+53.97 EB - 399+68.36 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-77 USH 10 WB
441+11.14 EB	LT	---	---	---	1	3.3	OM-3C (W5-58M)	TL-3	Bidirectional	Lt and Rt	STEEL THRIE BEAM DOUBLE FACED	MEDIAN
441+11.14 EB - 446+13.35 EB	LT	---	---	502	---	---	---	---	---	---	---	MEDIAN
446+13.35 EB - 446+57.02 EB	LT	---	---	44	---	---	---	---	---	---	---	TRANSITION #4
446+57.02 EB - 448+35.12 EB	LT	---	178	---	---	---	---	---	---	---	---	MEDIAN USH 10 WB
448+35.12 EB - 448+49.51 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-76 USH 10 WB
446+57.03 EB - 448+42.39 EB	LT	---	185	---	---	---	---	---	---	---	---	MEDIAN USH 10 EB
448+42.39 EB - 448+56.78 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-22 USH 10 EB
449+89.16 EB - 450+03.55 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-22 USH 10 EB
450+03.55 EB - 451+85.92 EB	LT	---	182	---	---	---	---	---	---	---	---	MEDIAN USH 10 EB
449+82.25 EB - 449+96.64 EB	LT	14.4	---	---	---	---	---	---	---	---	---	B-68-76 USH 10 WB
449+96.64 EB - 451+85.86 EB	LT	---	189	---	---	---	---	---	---	---	---	MEDIAN USH 10 WB
451+85.86 EB - 452+29.61 EB	LT	---	---	44	---	---	---	---	---	---	---	TRANSITION #5
452+29.61 EB - 470+94.75 EB	LT	---	---	1865	---	---	---	---	---	---	---	MEDIAN
470+94.75 EB - 471+76.15 EB	LT	---	---	81	---	---	---	---	---	---	---	TRANSITION #6
471+76.15 EB - 478+22.2 EB	LT	---	646	---	---	---	---	---	---	---	---	MEDIAN USH 10 WB
471+76.13 EB - 474+56.64 EB	LT	---	280	---	---	---	---	---	---	---	---	MEDIAN USH 10 EB
474+56.64 EB - 474+71.03 EB	LT	14.4	---	---	---	---	---	---	---	---	---	STRUCTURE USH 10 EB
475+34.03 EB - 475+48.42 EB	LT	14.4	---	---	---	---	---	---	---	---	---	STRUCTURE USH 10 EB
475+48.42 EB - 478+22.21 EB	LT	---	274	---	---	---	---	---	---	---	---	MEDIAN USH 10 EB
478+22.2 EB - 479+03.45 EB	LT	---	---	81	---	---	---	---	---	---	---	TRANSITION #7
479+03.45 EB - 546+73.58 EB	LT	---	---	6770	---	---	---	---	---	---	---	MEDIAN
546+73.58 EB	LT	---	---	---	1	3.3	OM-3C (W5-58M)	TL-3	Bidirectional	Lt and Rt	STEEL THRIE BEAM DOUBLE FACED	MEDIAN USH 10 WB
	TOTALS	**173**	**3,905**	**19,630**	**5**							

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EROSION MAT, TEMPORARY DITCH CHECKS, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	628.2004 EROSION MAT CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	REMARKS
270+00 EB - 559+50 EB	MEDIAN	---	---	---	---	
270+62 EB - 289+22 EB	MEDIAN	7646	---	4.8	206	AREA #1
299+92 EB - 331+76 EB	MEDIAN	3891	---	2.5	105	AREA #2
335+41 EB - 398+60 EB	MEDIAN	7723	---	4.9	209	AREA #3
440+15 EB - 448+47 EB	MEDIAN	1017	---	0.6	27	AREA #4
450+22 EB - 473+77 EB	MEDIAN	2878	---	1.8	78	AREA #5
476+25 EB - 556+50 EB	MEDIAN	20508	---	12.9	554	AREA #6
556+80 EB - 558+55 EB	MEDIAN	837	---	0.5	23	MAINTENANCE CROSS OVER
513+75 EB	MEDIAN	---	10	---	---	
521+25 EB	MEDIAN	---	10	---	---	
UNDISTRIBUTED	---	11125	---	7.0	300	
	TOTALS	**55,625**	**20**	**35.0**	**1,502**	

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	REMARKS
STAGE 1	3	1	
STAGE 2	3	1	
STAGE 3	3	1	
TOTALS	**9**	**3**	

DELINEATORS AND DELINEATOR POSTS

LOCATION	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS YELLOW EACH	REMARKS
USH 10 EB MEDIAN	1	2	MAINTENANCE CROSSOVER
USH 10 WB MEDIAN	1	2	MAINTENANCE CROSSOVER
TOTALS	**2**	**4**	

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SIGN LISTING

SIGN NO.	SIGN CODE	MESSAGE	SIZE	634.0616 POSTS WOOD 4" X 6" 16-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	638.2102 MOVING SIGNS TYPE II EA	638.3000 REMOVING SMALL SIGN SUPPORTS EA	638.2602 REMOVING SIGNS TYPE II EA	REMARKS
1-01	W6-53	CROSS TRAFFIC NEXT	144"X48"	3	---	1	---	---	ADJUST OFFSET AS NECESSARY
1-02	R3-4B	NO U-TURNS SYMBOL	36"X48"	---	---	---	1	1	USH 10 EB MAINTENANCE CROSSOVER
1-03	R3-4B	NO U-TURNS SYMBOL	36"X48"	1	12	---	---	---	USH 10 EB MAINTENANCE CROSSOVER
1-04	R3-4B	NO U-TURNS SYMBOL	36"X48"	---	---	---	1	1	USH 10 WB MAINTENANCE CROSSOVER
1-05	R3-4B	NO U-TURNS SYMBOL	36"X48"	1	12	---	---	---	USH 10 WB MAINTENANCE CROSSOVER
			TOTALS	**5**	**24.00**	**1.00**	**2.00**	**2.00**	

TRAFFIC CONTROL

LOCATION	STAGE DAYS	QTY	643.0300 DRUMS DAYS	QTY	643.0420 BARRICADE TYPE III DAYS	QTY	643.0705 WARNING LIGHTS TYPE A DAYS	QTY	643.0715 WARNING LIGHTS TYPE C DAYS	QTY	643.0800 ARROW BOARD DAYS	643.1050 SIGNS PCMS DAY	REMARKS
STAGE 1													
STA 442+00 WB- STA 560+00 WB	16	119	1904	9	144	18	288	0	0	0	0	16	WB PASSING LANE CLOSURE
STA 441+00 EB-STA 560+00 EB	16	129	2064	0	0	0	0	0	0	1	16	0	EB MEDIAN SHOULDER CLOSURE
UNDISTRIBUTED	16	10	160	0	0	0	0	0	0	0	0	0	
STAGE 2													
STA 278+00 WB-STA 401+00 WB	19	163	3097	10	190	20	380	16	304	2	38	19	WB PASSING LANE CLOSURE
STA 278+00 EB-STA 400+00 EB	19	133	2527	0	0	0	0	0	0	1	19	0	EB MEDIAN SHOULDER CLOSURE
UNDISTRIBUTED	19	10	190	0	0	0	0	0	0	0	0	0	
STAGE 3													
STA 327+00 EB-STA 560+00 EB	5	273	1365	19	95	38	190	16	80	2	10	5	EB PASSING LANE CLOSURE
STA 329+00 WB-STA 561+00 WB	5	243	1215	0	0	0	0	0	0	1	5	0	WB MEDIAN SHOULDER CLOSURE
UNDISTRIBUTED	5	10	50	0	0	0	0	0	0	0	0	0	
TOTALS			**12572**		**429**		**858**		**384**		**88**	**40**	

TRAFFIC CONTROL SIGNS

MESSAGE	SIGN CODE	WORK DAYS	QTY.	643.0900 USH 10 EB DAYS	QTY.	643.0900 USH 10 WB DAYS	QTY.	643.0900 ON RAMPS DAYS	QTY.	643.0900 LOCAL ROADS DAYS	REMARKS
ADVANCED WARNING											
ROAD WORK AHEAD	W20-1	45	2	**90**	0	**0**	7	**315**	2	**90**	
END ROAD WORK	G20-2A	45	0	**0**	2	**90**	0	**0**	0	**0**	
ROAD WORK NEXT 9 MILES	G20-1	45	2	**90**	0	**0**	0	**0**	0	**0**	
FINES DOUBLE IN WORK ZONE	W21-62	45	2	**90**	0	**0**	0	**0**	0	**0**	
STAGE 1 (STA 442+00 TO STA 560+00) USH 10 WB PASSING LANE CLOSE, 10 EB MEDIAN SHLD CLOSED											
ROAD WORK 1 MILE	W20-1	16	0	**0**	0	**0**	0	**0**	0	**0**	
LEFT LANE CLOSED 1/2 MILE	W20-5	16	0	**0**	0	**0**	0	**0**	0	**0**	
LEFT LANE CLOSED 1500 FT	W20-5	16	0	**0**	0	**0**	0	**0**	0	**0**	
MERGE LEFT	W04-2L	16	0	**0**	0	**0**	0	**0**	0	**0**	
TRAFFICE MERGING IN	WO4-1	16	0	**0**	2	**32**	0	**0**	0	**0**	
LEFT SHOULDER CLOSED AHEAD	W21-5B	16	2	**32**	0	**0**	0	**0**	0	**0**	
LEFT SHOULDER CLOSED	W21-5A	16	2	**32**	0	**0**	0	**0**	0	**0**	
LANE CLOSED	R11-2MOD	16	0	**0**	9	**144**	0	**0**	0	**0**	
YIELD AHEAD	W03-2	16	0	**0**	0	**0**	2	**32**	0	**0**	W/16-IN FLAGS
YIELD	R1-2	16	0	**0**	0	**0**	2	**32**	0	**0**	W/16-IN FLAGS
STAGE 2 (STA 278+00 TO STA 401+00) USH 10 WB PASSING LANE CLOSE, 10 EB MEDIAN SHLD CLOSED											
ROAD WORK 1 MILE	W20-1	19	0	**0**	2	**38**	0	**0**	0	**0**	
LEFT LANE CLOSED 1/2 MILE	W20-5	19	0	**0**	2	**38**	0	**0**	0	**0**	
LEFT LANE CLOSED 1500 FT	W20-5	19	0	**0**	2	**38**	0	**0**	0	**0**	
MERGE LEFT	W04-2L	19	0	**0**	2	**38**	0	**0**	0	**0**	
TRAFFICE MERGING IN	WO4-1	19	0	**0**	2	**38**	0	**0**	0	**0**	
LEFT SHOULDER CLOSED AHEAD	W21-5B	19	2	**38**	0	**0**	0	**0**	0	**0**	
LEFT SHOULDER CLOSED	W21-5A	19	2	**38**	0	**0**	0	**0**	0	**0**	
LANE CLOSED	R11-2MOD	19	0	**0**	10	**190**	0	**0**	0	**0**	
YIELD AHEAD	W03-2	19	0	**0**	0	**0**	2	**38**	0	**0**	W/16-IN FLAGS
YEILD	R1-2	19	0	**0**	0	**0**	2	**38**	0	**0**	W/16-IN FLAGS
STAGE 3 (STA 327+00 TO STA 560) USH 10 EB PASSING LANE CLOSE, 10 WB MEDIAN SHLD CLOSED											
ROAD WORK 1 MILE	W20-1	5	2	**10**	0	**0**	0	**0**	0	**0**	
LEFT LANE CLOSED 1/2 MILE	W20-5	5	2	**10**	0	**0**	0	**0**	0	**0**	
LEFT LANE CLOSED 1500 FT	W20-5	5	2	**10**	0	**0**	0	**0**	0	**0**	
MERGE LEFT	W04-2L	5	2	**10**	0	**0**	0	**0**	0	**0**	
TRAFFICE MERGING IN	WO4-1	5	2	**10**	0	**0**	0	**0**	0	**0**	
LEFT SHOULDER CLOSED AHEAD	W21-5B	5	0	**0**	2	**10**	0	**0**	0	**0**	
LEFT SHOULDER CLOSED	W21-5A	5	0	**0**	2	**10**	0	**0**	0	**0**	
LANE CLOSED	R11-2MOD	5	19	**95**	0	**0**	0	**0**	0	**0**	
YIELD AHEAD	W03-2	5	0	**0**	0	**0**	2	**10**	0	**0**	W/16-IN FLAGS
BEGIN LEFT TURN LANE	R3-20L	5	1	**5**	0	**0**	0	**0**	0	**0**	
YIELD	R1-2	5	0	**0**	0	**0**	2	**10**	0	**0**	W/16-IN FLAGS
SUB-TOTALS				**560**		**666**		**475**		**90**	
GRAND TOTALS				**1791**	**DAYS**						

CONSTRUCTION STAKING

STATION - STATION	*650.4500 STAKING SUBGRADE LF	650.9910 SUPPLEMENTAL CONTROL (PROJ) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
276+00 EB - 560+00EB	22,750	---	28,400	
PROJECT 1510-00-71	---	1	---	
TOTALS	**22,750**	**1**	**28,400**	

*BID ITEM RELATES TO STAKING THE PROPOSED MEDIAN DITCH PROFILE AS DETAILED IN THE PROFILE SHEETS AND CROSS SECTIONS.

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 LF	REMARKS
556+58.71 EB	LT	3	MEDIAN SHLD
557+44.50 EB	LT	3	MEDIAN SHLD
557+34.50 WB	RT	3	MEDIAN SHLD
558+22 WB	RT	3	MEDIAN SHLD
TOTAL		**12**	

3

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

N

5

5

BP: 264+41.15WB

266WB

USH 10 WB

268WB

270WB

272WB

PT: 273+54.97WB

274WB

276WB

278WB

PC: 278+31.94WB

USH 10 WB

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

CRASH CUSHION PERMANENT
STA 277+82.22 EB, 50.08' LT
STA 278+75.00 WB, 10.65' RT

STA 271+51.68 WB
EXISTING
1-RCCP 30-IN X 88 LF

101-L

264EB

266EB

268EB

270EB

272EB

274EB

276EB

278EB

USH 10 EB

BP: 263+48.39EB

STA 264+46.72 EB, 39' LT
EXISTING
1-RCCP 30-IN X 62 LF
2-CONC AEW'S

3
948.502
CP /0.75 IR

ERICKSON ROAD

PCC: 267+99.08EB

PT: 270+84.25EB

BEGIN CONSTRUCTION
STA 270+59 EB

101-R

PC: 277+64.67EB

BEGIN PROJECT
STA 276+00 EB

101
STA 276+82.03 EB, 30.5' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

STA 276+82 EB
EXISTING
1-RCCP 30-IN X 98 LF (WB)
1-RCCP 30-IN X 83 LF (EB)
1-TYPE 9 MS INLET
2-CONC AEW'S

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 35	E

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

N

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USH 10 WB

278EB 280WB 280EB 282WB 282EB 284WB 284EB 286WB 286EB 288WB 288EB 290WB 290EB 292WB 292EB 294WB

USH 10 EB

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

PT: 285+12.34WB

PC: 285+45.72WB

PT: 282+24.98EB

103-L

103-R

STEEL THRIE BEAM, DOUBLE FACED

PT: 292+55.25WB

USH 10 WB

USH 10 EB

5

102
STA 283+42.47 EB, 19.35' LT
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

103
STA 286+95.69 EB, 11.05' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

STA 286+95 EB
EXISTING
1-RCCP 30-IN X 90 LF WB
1-RCCP 30-IN X 83 LF EB
1-TYPE 9 MS INLET
2-CONC AEW'S

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 36	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050102-PN.DWG PLOT DATE : 4/11/2017 1:02 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

STA 295+81.5 WB
EXISTING
1-RCCP 18-IN X 78 LF
1-TYPE 9-MS INLET
1-CONC AEW

STA 299+57 WB
EXISTING
1-RCCP 18-IN X 78 LF
1-TYPE 9-MS INLET
1-CONC AEW

ANDERSON ROAD

STA 302+98 EB
EXISTING
1-RCCP 30-IN X 76 LF (WB)
1-RCCP 30-IN X 66 LF (EB)
1-TYPE MS INLET
2-CONC AEW

STA 307+64 WB
EXISTING
1-RCCP 30-IN X 195 LF
2-CONC AEW'S

STA 307+89.6 WB
EXISTING
1-RCCP 18-IN X 81 LF
1-TYPE 9-MS
1-CONC AEW

CRASH CUSHION PERMANENT
STA 293+90.52 EB, 19.3' LT
STA 294+84.00 WB, 10.65' RT

EXISTING DITCH FLOW LINE

PC: 297+87.92WB

PROPOSED DITCH FLOW LINE

CRASH CUSHION PERMANENT
STA 300+45.25 EB, 19.53' LT
STA 301+41.00 WB, 10.65' RT

STEEL THRIE BEAM,
DOUBLE FACED

104-L

105-L

104-R

294WB 296WB 298WB 300WB 302WB 304WB 306WB 308WB

USH 10 WB

294EB 296EB 298EB 300EB 302EB 304EB 306EB 308EB

USH 10 EB

PC: 297+02.31EB

104
STA 302+97.82 EB, 17.04' LT
REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

105
STA 306+89.28 EB, 16.82' LT
REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATE
2-INLET COVERS TYPE MS

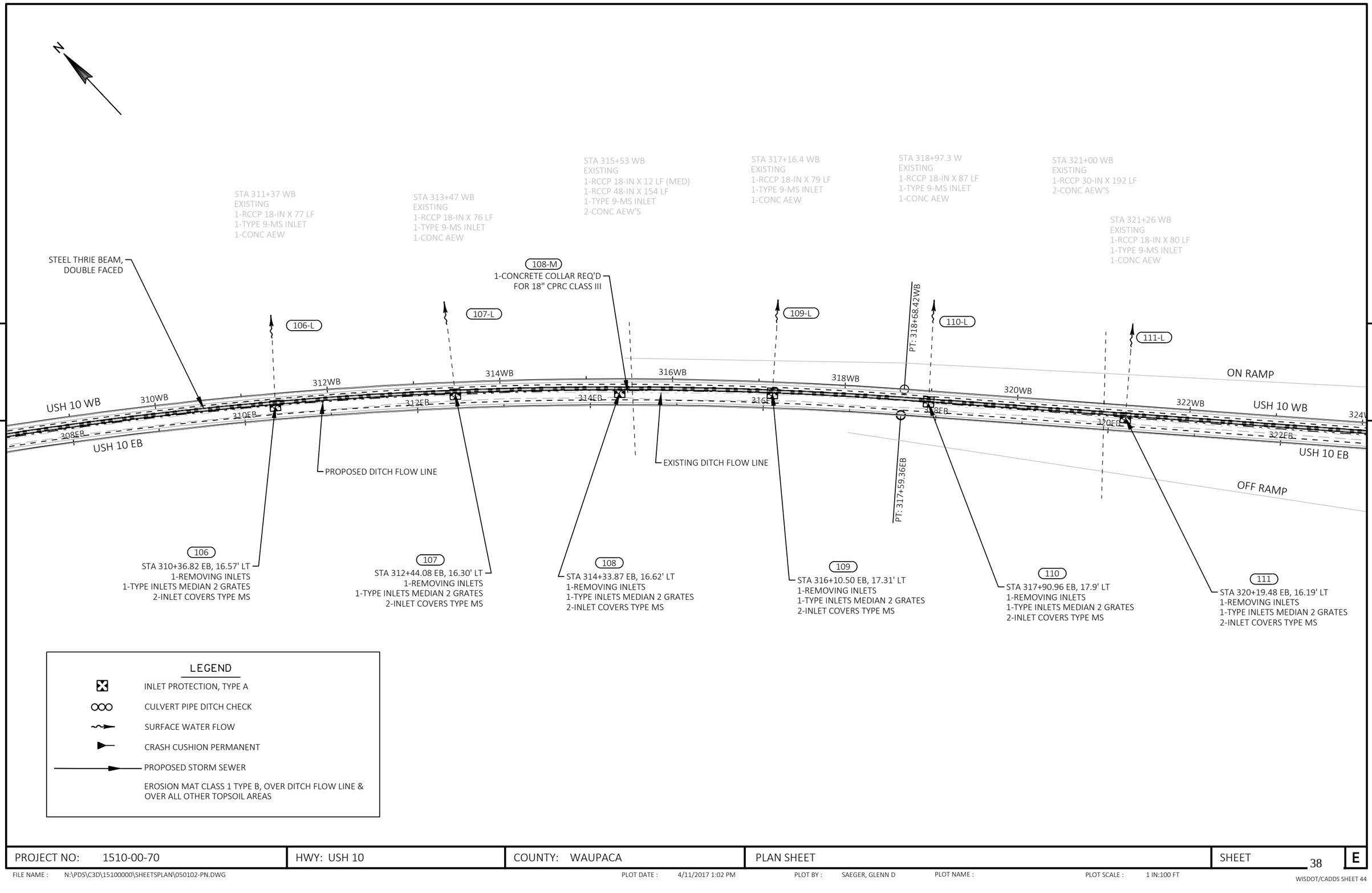
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LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 37	E



5

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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 38	E

N

ENVIRONMENTALLY SENSITIVE AREA. NO CONSTRUCTION ACTIVITIES ARE PERMITTED WITHIN THIS LOCATION.

EXISTING
1-CSCP 48-IN
1-TYPE II INLET

STA 336+45.40 WB
EXISTING
1-RCCP 18-IN X 78 LF
1-TYPE 9-MS INLET
1-CONC AEW

STA 326+95.6 WB
EXISTING
1-RCCP 18-IN X 95 LF
1-TYPE 9-MS INLET
1-CONC AEW

OFF RAMP

STEEL THRIE BEAM, DOUBLE FACED

TRANSITION 1
(SEE CONSTRUCTION DETAIL)

ON RAMP

STA 331+41.86 EB, 26.1' LT
STA 332+48.82 WB, 6.31' RT

STH 49

STA 334+47.89 EB, 26.43' LT
STA 335+54.89 WB, 6.31' RT

STEEL THRIE BEAM STRUCTURE APPROACH

STA 334+99.78 EB, 26.3' LT
STA 336+06.78 WB, 6.31' RT

PROPOSED DITCH FLOW LINE

112-L

PC: 327+67.58WB

PT: 329+91.82WB

PCC: 331+99.11WB

STA 331+93.74 EB, 26.29' LT
STA 333+00.71 WB, 6.31' RT

B-68-19

5

5

324WB | USH 10 WB | 326WB | 328WB | 330WB | 332WB | 334WB | 336WB | USH 10 WB | 338WB

324EB | 326EB | 328EB | 330EB | 332EB | 334EB | 336EB

USH 10 EB

USH 10 EB

STA 327+81.97 EB, 19.44' LT
STA 328+88.90 WB, 10.65' RT

STA 328+38.21 EB, 21.88' LT
STA 329+45.13 WB, 8.53' RT

STA 328+38.22 EB, 18.89' LT
STA 329+45.13 WB, 11.52' RT

STA 328+38.24 EB, 15.9' LT
STA 329+45.12 WB, 14.51' RT

REMOVE EXISTING GUARDRAIL

STA 331+25.94 EB, 6.3' LT
STA 332+32.81 WB, 26.04' RT

STEEL THRIE BEAM, SINGLE FACED

B-68-73

STA 331+72.83 EB, 6.3' LT
STA 332+79.73 WB, 26.22' RT

REMOVING SURFACE DRAIN

ASPHALTIC FLUME

4
910.570
CP 10.75 IR

STEEL THRIE BEAM, SINGLE FACED

REMOVE EXISTING GUARDRAIL

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

OFF RAMP

112

STA 325+89.05 EB EB, 16.43' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

STH 54

STA 334+86.48 EB, 6.3' LT
STA 335+93.55 WB, 26.34' RT

ON RAMP

STA 334+34.59 EB, 6.3' LT
STA 335+41.62 WB, 26.45' RT

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 39	E

ENVIRONMENTALLY SENSITIVE AREA. NO CONSTRUCTION ACTIVITIES ARE PERMITTED WITHIN THIS LOCATION.

N

STA 341+71.48 WB
EXISTING
1-RCCP 18-IN X 68 LF
1-TYPE 9-MS INLET
1-CONC AEW

STA 348+96.16 WB
EXISTING
1-RCCP 18-IN X 67 LF
1-TYPE 9-MS INLET
1-CONC AEW

STA 351+95.05 WB
EXISTING
1-RCCP 18-IN X 72 LF
1-TYPE 9-MS INLET
1-CONC AEW

OFF RAMP

ON RAMP

PRC: 339+46.31WB

PT: 341+24.82WB

PC: 348+63.74WB

PC: 347+72.50EB

TRANSITION 2
(SEE CONSTRUCTION DETAIL)

STEEL THRIE BEAM,
DOUBLE FACED

338WB 340WB 342WB 344WB 346WB 348WB 350WB 352WB

USH 10 WB

338EB 340EB 342EB 344EB 346EB 348EB 350EB 352EB

USH 10 EB

113-L

114-L

115-L

5

5

STA 338+41.03 EB, 19.79' LT
STA 339+48.13 WB, 10.65' RT

STA 337+84.8 EB, 22.3' LT
STA 338+91.87 WB, 8.71' RT

STA 337+84.78 EB, 19.3' LT
STA 338+91.87 WB, 11.70' RT

STA 337+84.75 EB, 16.3' LT
STA 338+91.87 WB, 14.70' RT

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

113
STA 340+65.13 EB, 16.20' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

114
STA 347+89.61 EB, 13.54' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES2
2-INLET COVERS TYPE MS

115
STA 350+89.19 EB, 13.32' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 40	E

ENVIRONMENTALLY SENSITIVE AREA. NO CONSTRUCTION ACTIVITIES ARE PERMITTED WITHIN THIS LOCATION.

N

STA 355+92.83 WB
EXISTING
1-RCCP 18-IN X 72 LF
1-TYPE 9-MS INLET
1-CONC AEW

STA 360+92.19 WB
EXISTING
1-RCCP 18-IN X 79 LF
1-TYPE 9-MS
1-CONC AEW

STA 366+02.52 WB
EXISTING
1-CSCP 30-IN X 185 LF
2-STEEL AEW'S

5

5

USH 10 WB

USH 10 EB

352FB 354FB 356FB 358FB 360FB 362FB 364FB 366FB

354WB 356WB 358WB 360WB 362WB 364WB 366WB 368WB

PT: 354+02.59WB

PT: 353+04.81EB

PC: 360+77.26WB

PC: 359+71.63EB

PT: 365+92.09WB

PT: 364+84.68EB

ON RAMP

116-L

117-L

118-R

STEEL THRIE BEAM, DOUBLE FACED

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

116
STA 354+87.22 EB, 15.26' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

117
STA 359+86.48 EB, 15.01' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

118
STA 364+99.82 EB, 15.02' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

STA 364+79.71 EB
EXISTING
1-RCCP 18-IN X 59 LF
1-TYPE 9-MS INLET
1-CONC AEW

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 41	E

N

STA 372+99.80 WB
EXISTING
1-CSCP 30-IN X 230 LF
2-STEEL AEW'S

STA 373+45 WB
EXISTING
1-RCCP 18-IN X 65 LF
1-TYPE 9-MS INLET
1-CONC AEW

STA 380+71 WB
EXISTING
1-RCCP 18-IN X 78 LF
1-TYPE 9-MS INLET
1-CONC AEW

STEEL THRIE BEAM,
DOUBLE FACED

119-L

120-L

ON RAMP

5

368WB USH 10 WB 370WB 372WB 374WB 376WB 378WB 380WB 382WB USH 10 WB

368EB 370EB 372EB 374EB 376EB 378EB 380EB 38

USH 10 EB

5

USH 10 EB

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

119

STA 372+39.32 EB, 14.74' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

120

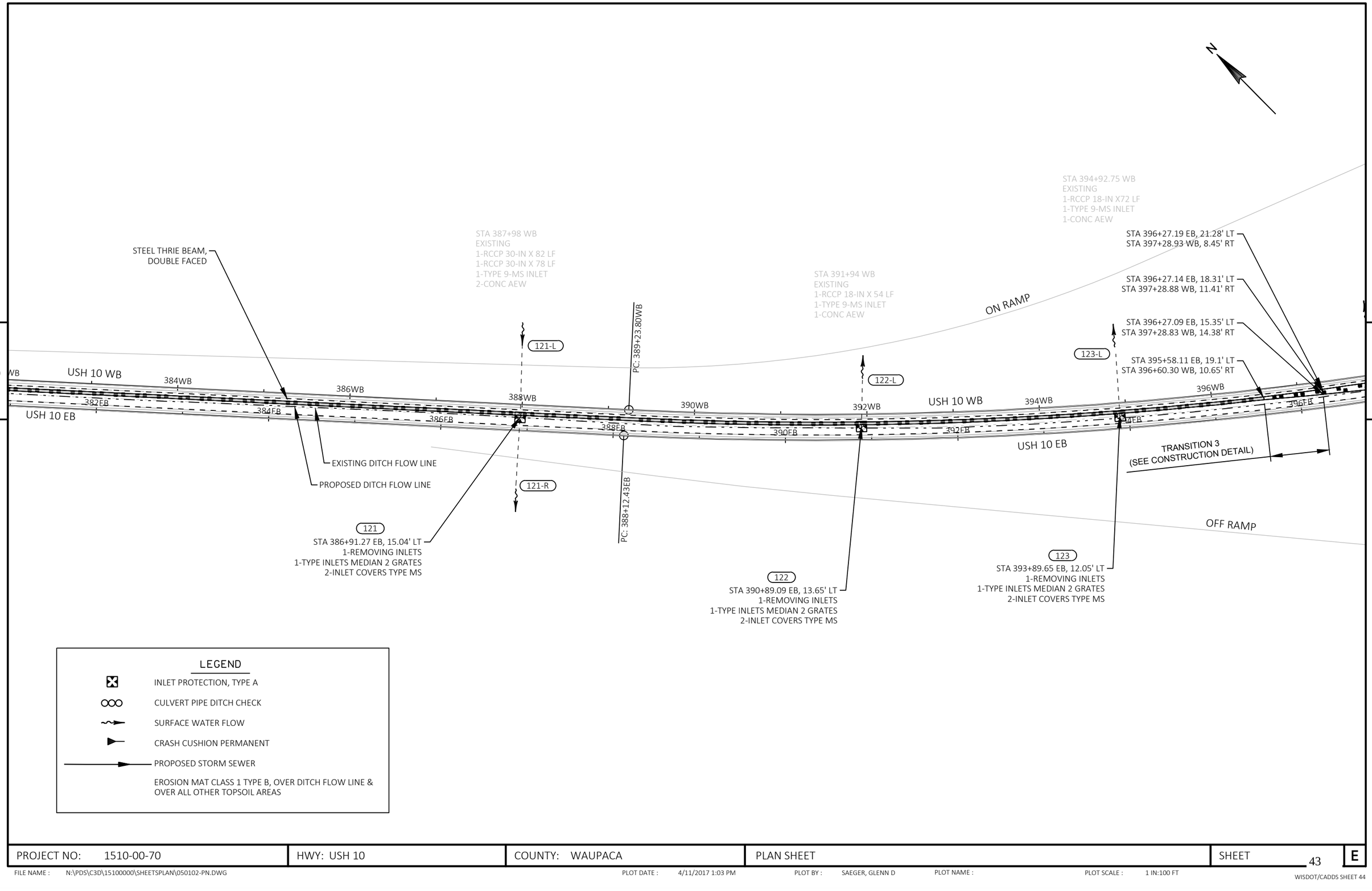
STA 379+64.40 EB, 14.49' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 42	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050102-PN.DWG PLOT DATE : 4/11/2017 1:02 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 43	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050102-PN.DWG PLOT DATE : 4/11/2017 1:03 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 397+91 WB
EXISTING
1-RCCP 18-IN X 73 LF
1-TYPE 9-MS INLET
1-CONC AEW

STA 399+65 WB
EXISTING
1-RCCP 18-IN X 74 LF
1-INLET TYPE 9-MS
1-CONC AEW

STA 405+85.28 WB
EXISTING
1-RCCP 18-IN X 73 LF
1-TYPE 9-MS INLET
1-CONC AEW

STA 408+19.50 WB
EXISTING
1-RCCP 18-IN X 71 LF
1-TYPE 1-B INLET
1-CONC AEW

STA 411+40.20 WB
EXISTING
1-RCCP 18-IN X 60 LF
1-TYPE 39-GM INLET

STA 396+27.19 EB, 21.28' LT
STA 397+28.93 WB, 8.45' RT

ON RAMP

STA 396+27.14 EB, 18.31' LT
STA 397+28.88 WB, 11.41' RT

STA 396+27.09 EB, 15.35' LT
STA 397+28.83 WB, 14.38' RT

STEEL THRIE BEAM, SINGLE FACED

REMOVE EXISTING GUARDRAIL

LAKESIDE PKWY

OFF RAMP

124-L

STA 399+16.13 EB, 23.53' LT
STA 400+15.98 WB, 6.31' RT

STA 399+68.36 EB, 23.53' LT
STA 400+67.88 WB, 6.31' RT

PCC: 404+38.45WB

5

USH 10 WB

398WB

396EB

USH 10 EB

398EB

400WB

B-68-77

402WB

404WB

406WB

408WB

410WB

USH 10 WB

412WB

410EB

USH 10 EB

408EB

406EB

404EB

400EB

402EB

B-68-74

5
879.147
CP /0.75 IR

PCC: 397+04.27

STA 399+65.29 EB, 6.3' LT
STA 400+64.83 WB, 23.53' RT

STEEL THRIE BEAM
STRUCTURE APPROACH

STA 399+13.4 EB, 6.3' LT
STA 400+13.27 WB, 23.52' RT

STH 22

EXISTING GUARDRAIL
TO REMAIN IN PLACE

EXISTING DITCH FLOW LINE

PCC: 405+06.95EB

ON RAMP

OFF RAMP

124

STA 396+89.61 EB, 12.92' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

PROPOSED DITCH FLOW LINE

EXISTING CONCRETE BARRIER
TO REMAIN IN PLACE

5

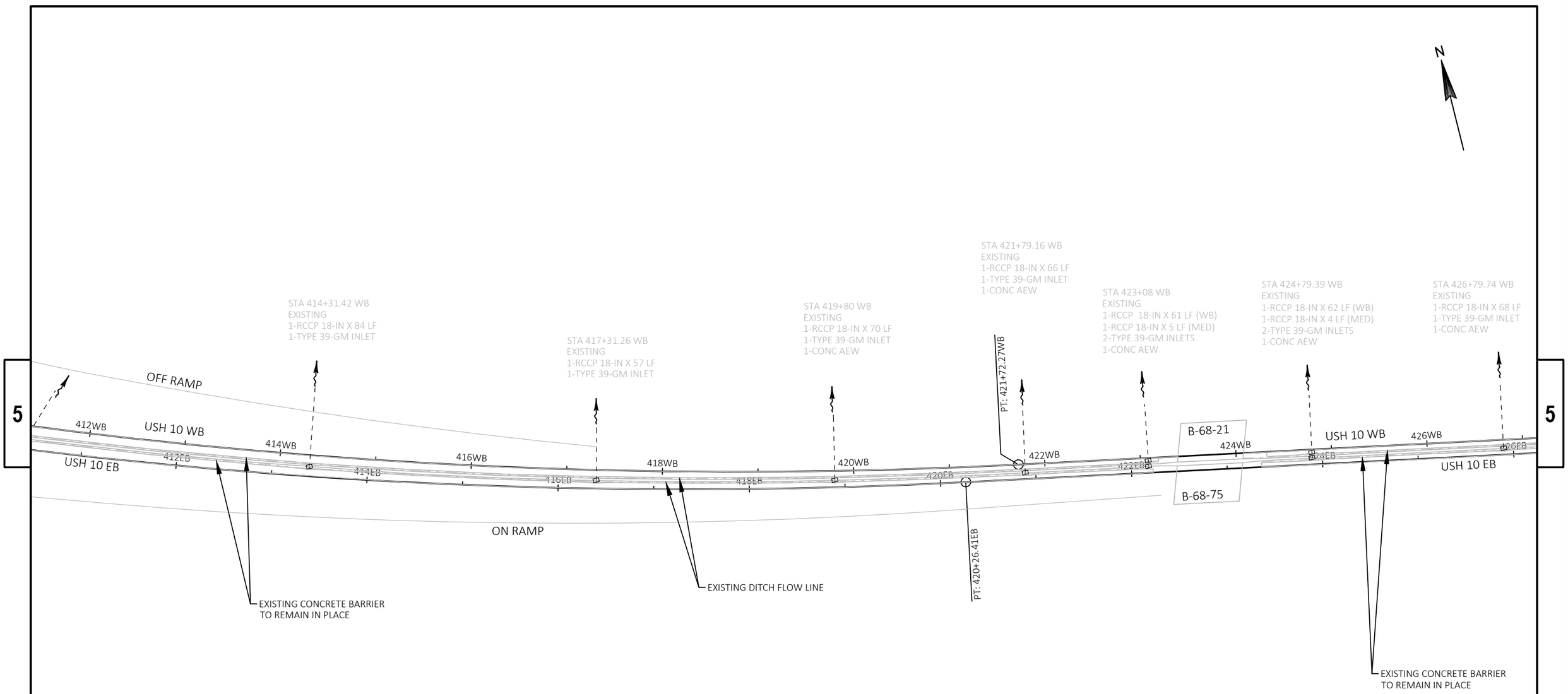
N

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 44	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050102-PN.DWG PLOT DATE : 4/11/2017 1:03 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:100 FT



LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 45	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050102-PN.DWG PLOT DATE : 4/11/2017 1:03 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

STA 428+73.06 WB
EXISTING
1-RCCP 18-IN X 69 LF
1-TYPE 39-GM INLET
1-CONC AEW

STA 431+79.15 WB
EXISTING
1-RCCP 18-IN X 59 LF
1-TYPE 39-GM INLET
1-CONC AEW

STA 435+80.24 WB
EXISTING
1-RCCP 18-IN X4 LF
1-RCCP 18-IN X 66 LF
2-TYPE 39-GM INLETS
1-CONC AEW

EXISTING CRASH CUSHION
TO REMAIN IN PLACE

STA 441+28.92 WB
EXISTING
1-RCCP 18-IN X 73 LF
1-TYPE 9-MS INLET
1-CONC AEW

5

PC: 427+81.34WB

PT: 433+43.96WB

PC: 439+11.19WB

USH 10 WB

428WB 430WB 432WB 434WB 436WB 438WB 440WB

426EB 428EB 430EB 432EB 434EB 436EB 438EB 440EB

USH 10 EB

USH 10 EB

PC: 427+66.99EB

PT: 431+71.46EB

PC: 439+93.23EB

EXISTING DITCH FLOW LINE

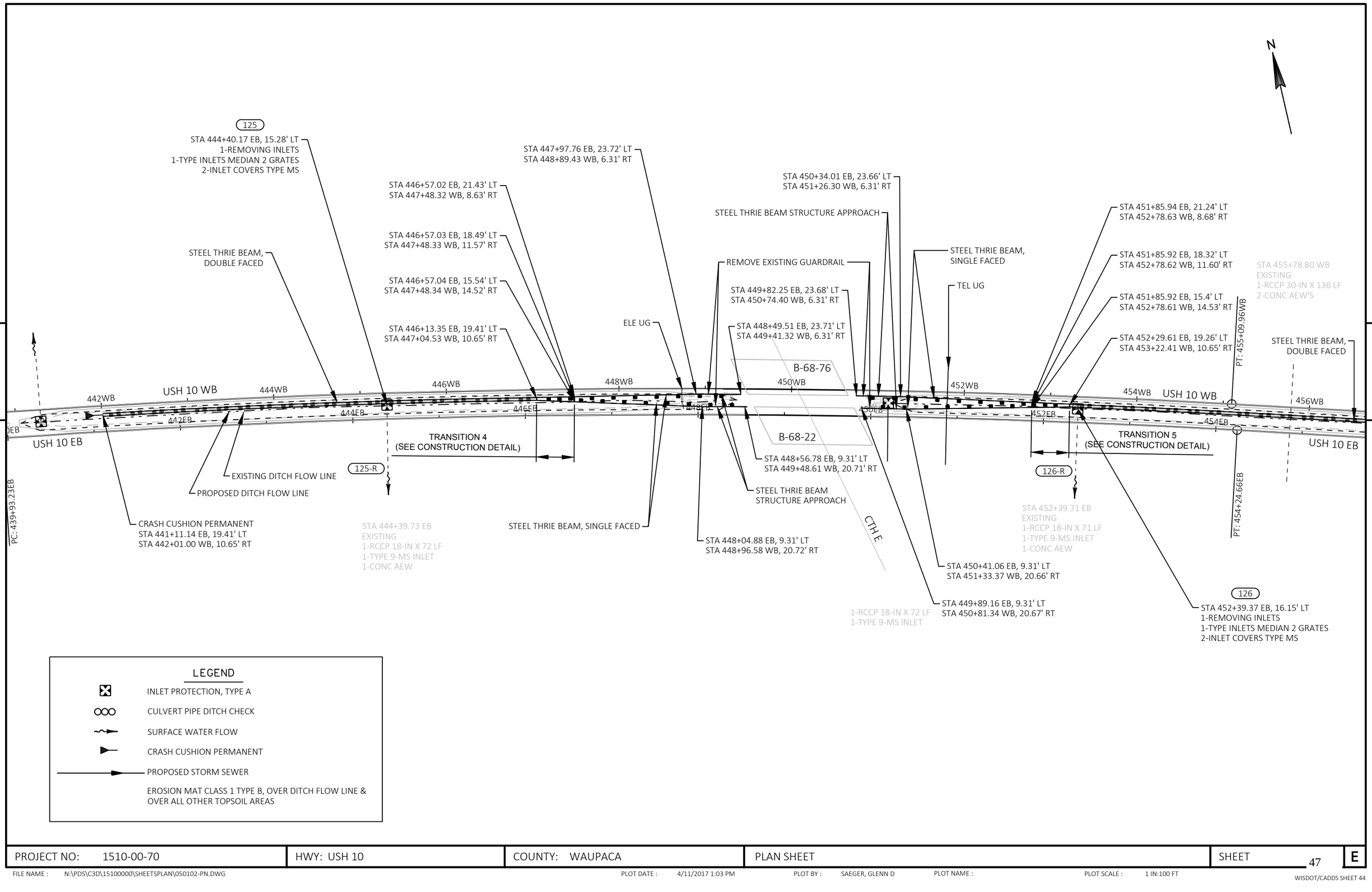
EXISTING CONCRETE BARRIER
TO REMAIN IN PLACE

5

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 46	E



LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 47	E

N

STA 470+78.67 WB
EXISTING
1-RCCP 30-IN X 112 LF (WB)
1-RCCP 30-IN X 99 LF (EB)
1-TYPE 9-MS INLET
2-CONC AEW'S

127
STA 457+34.63 EB, 16.26' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

128
STA 462+86.94 EB, 15.30' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

PC: 470+13.17WB

129-L

ON RAMP

STEEL THRIE BEAM,
DOUBLE FACED

5

456WB USH 10 WB 458WB 460WB 462WB 464WB 466WB 468WB USH 10 WB 470WB

456EB 458EB 460EB 462EB 464EB 466EB 468EB 470EB

USH 10 EB

USH 10 EB

5

127-R

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

128-R

129-R

PC: 469+29.03EB

STA 457+34.40 EB
EXISTING
1-RCCP 18-IN X 65 LF
1-TYPE 9-MS INLET
1-CONC AEW'S

STA 462+87.67 EB
EXISTING
1-RCCP 18-IN X 75 LF
1-TYPE 9-MS INLET

129
STA 469+85.94 EB, 13.54' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 48	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050102-PN.DWG PLOT DATE : 4/11/2017 1:03 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 474+72.06 WB
EXISTING
1-RCCP 30-IN X 74 LF (WB)
1-RCCP 30-IN X 90 LF (EB)
1-TYPE 9-MS INLET
2-CONC AEW'S

CHURCHILL STREET

STA 477+15.81 WB
EXISTING
1-RCCP 30-IN X 80 LF (WB)
1-RCCP 30-IN X 110 LF (EB)
1-TYPE 9-MS INLET
2-CONC AEW'S

STA 481+38.87 WB
EXISTING
1-RCCP 30-IN X 258 LF (WB)
1-RCCP 30-IN X 67 LF (EB)
1-TYPE 9-MS INLET
2-CONC AEW'S

N

STEEL THRIE BEAM, DOUBLE FACED

ON RAMP

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM, SINGLE FACED

PT: 477+52.53WB

130-L

REMOVE EXISTING GUARDRAIL

TRANSITION 6
(SEE CONSTRUCTION DETAIL)

TRANSITION 7
(SEE CONSTRUCTION DETAIL)

STEEL THRIE BEAM, DOUBLE FACED

5

USH 10 WB

472WB 474WB 476WB 478WB 480WB 482WB 484WB 486WB

470EB 472EB 474EB 476EB 478EB 480EB 482EB 484EB

USH 10 EB

5

STA 479+03.45 EB, 19.40' LT
STA 479+94.84 WB, 10.65' RT

STA 478+22.2 EB, 21.06' LT
STA 479+13.59 WB, 8.99' RT

STA 478+22.2 EB, 18.10' LT
STA 479+13.59 WB, 11.94' RT

STA 478+22.21 EB, 15.15' LT
STA 479+13.59 WB, 14.90' RT

130-R

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

130

STA 480+89.04 EB, 15.27' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

STA 470+94.75 EB, 19.62' LT
STA 471+87.61 WB, 10.65' RT

STA 471+76.15 EB, 21.31' LT
STA 472+68.79 WB, 8.99' RT

STA 471+76.11 EB, 15.37' LT
STA 472+68.75 WB, 14.93' RT

STA 471+76.13 EB, 18.34' LT
STA 472+68.77 WB, 11.96' RT

1 Δ850.532 CP /0.75 IR

STEEL THRIE BEAM, SINGLE FACED

STA 473+79.98 EB, 14.65' LT
1-EXISTING INLET

PT: 476+44.77EB

2 Δ852.280 CP /0.75 IR

OFF RAMP

STA 476+24.48 EB, 14.08' LT
EXISTING INLETS

STA 474+19.14 EB, 6.31' LT
STA 475+11.14 WB, 23.94' RT

STA 474+71.03 EB, 6.31' LT
STA 475+62.90 WB, 23.90' RT

STA 475+34.03 EB, 6.31' LT
STA 476+25.73 WB, 23.85' RT

STA 475+85.92 EB, 6.31' LT
STA 476+77.49 WB, 23.80' RT

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

ON RAMP

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 49	E

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

N

STA 490+77 WB
EXISTING
1-RCCP 30-IN X 79 LF (WB)
1-RCCP 30-IN X 59 LF (EB)
1-TYPE 9-MS INLET
2-CONC AEW'S

STA 498+73.70 WB
EXISTING
1-RCCP 18-IN X 117 LF
1-TYPE 9-MS INLET
1-CONC AEW

STEEL THRIE BEAM, DOUBLE FACED

5

486WB USH 10 WB 488WB 490WB 492WB 494WB 496WB 498WB USH 10 WB 500WB

486EB USH 10 EB 488EB 490EB 492EB 494EB 496EB 498EB USH 10 EB 50

131-L

131-R

132-L

PC: 500+20.01WB

PC: 499+27.18EB

PROPOSED DITCH FLOW LINE

EXISTING DITCH FLOW LINE

131
STA 489+85.43 EB, 15.30' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

132
STA 497+82.56 EB, 14.61' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

ON RAMP

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 50	E

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- TEMPORARY DITCH CHECK
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

N

5

5

PC: 500+20.01WB

USH 10 WB

USH 10 EB

PC: 499+27.18EB

500WB

500EB

502WB

502EB

504WB

504EB

506WB

506EB

508WB

508EB

510WB

510EB

512WB

512EB

514WB

514EB

USH 10 WB

USH 10 EB

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

STEEL THRIE BEAM, DOUBLE FACED

133
STA 505+82.86 EB, 13.43' LT
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

134
STA 508+06.91 EB, 12.15' LT
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

135
STA 510+34.26 EB, 12.36' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

135-R

STA 510+35.60 EB
EXISTING
1-RCCP 18-IN X 74 LF
1-TYPE 9-MS INLET
1-CONC AEW

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 51	E

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- TEMPORARY DITCH CHECK
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

N

5

5

USH 10 WB

USH 10 EB

516WB 518WB 520WB 522WB 524WB 526WB 528WB 530WB

514EB 516EB 518EB 520EB 522EB 524EB 526EB 528EB

PT: 516+46.47WB

PT: 515+38.30EB

136-L

GAS UG

TEL UG

STEEL THRIE BEAM, DOUBLE FACED

CAUTION

EXISTING DITCH FLOW LINE

PROPOSED DITCH FLOW LINE

137-R

STA 517+75.22 WB
EXISTING
1-RCCP 48-IN X 227 LF
2-CONC AEW'S

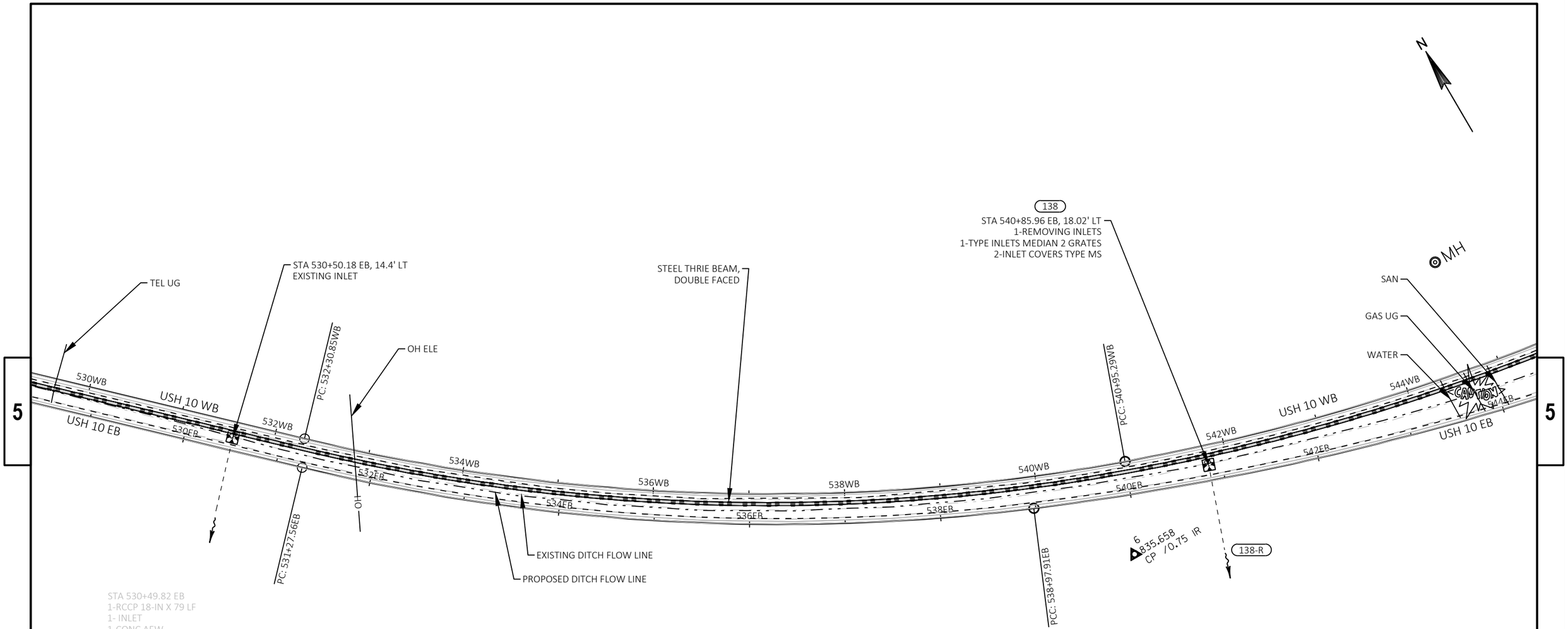
STA 517+98.50 WB
EXISTING
1-RCCP 18-IN X 81 LF
1-TYPE 9-MS INLET
1-CONC AEW

136
STA 516+90.94 EB, 15.97' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

137
STA 524+91.48 EB, 17.15' LT
1-REMOVING INLETS
1-TYPE INLETS MEDIAN 2 GRATES
2-INLET COVERS TYPE MS

STA 524+95.42 EB
EXISTING
1-RCCP 30-IN X 101 LF
1-TYPE 9-MS INLET
1-CONC AEW

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 52	E



5 5

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 53 E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050102-PN.DWG PLOT DATE : 4/11/2017 1:04 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

139-M
STA 556+37.96 EB, 36.14' LT
REMOVING AEW (LT)
1-STEEL AEW 18-IN (10:1)
SLOPED SIDE DRAINS

REMOVE EXISTING
MAINTENANCE CROSSOVER

CONSTRUCT MAINTENANCE
CROSSOVER

STH 22

INSTALLED UNDER (1510-00-71)

STEEL THRIE BEAM,
DOUBLE FACED

CRASH CUSHIONS PERMANENT
STA 546+73.58 EB, 60.7' LT
STA 547+58.28 WB, 10.65' RT

MH

WATER

GAS UG

SAN

PCC: 547+58.28WB

PT: 550+04.76WB

PROPOSED DITCH FLOW LINE

5

5

WB

546WB

USH 10 WB

548WB

550WB

552WB

554WB

556WB

558WB

558EB

556EB

554EB

552EB

550EB

548EB

546EB

544EB

USH 10 EB

USH 10 EB

OFF RAMP

EXISTING DITCH FLOW LINE

PT: 549+94.45EB

CABLE BARRIER TYPE 1

MH

CABLE BARRIER END TERMINAL TYPE 1
STA 544+90 EB, 15' LT
STA 545+76.06 WB, 42.06' RT

STA 549+87.96 EB
EXISTING
1-RCCP 24-IN X 149 LF (WB)
1-RCCP 24-IN X 105 LF (EB)
1-INLET
2-CONC AEW'S

CABLE BARRIER END TERMINAL TYPE 1
STA 556+15 EB, 15' LT
STA 556+92.48 WB, 70.75' RT

STEEL THRIE BEAM BULLNOSE TERMINAL
STEEL THRIE BEAM

STA 556+37.97 EB
EXISTING
1-RCCP 18-IN X 95 LF
1-SLOPED CONC AEW
1-CONC AEW

CTH A

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 54	E

LEGEND

- INLET PROTECTION, TYPE A
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW
- CRASH CUSHION PERMANENT
- PROPOSED STORM SEWER
- EROSION MAT CLASS 1 TYPE B, OVER DITCH FLOW LINE & OVER ALL OTHER TOPSOIL AREAS

N

PROPOSED DITCH FLOW LINE

STEEL THRIE BEAM BULLNOSE TERMINAL
STEEL THRIE BEAM

STH 22

5

560WB USH 10 WB 562WB 564WB 566WB 568WB 570WB 572WB USH 10 WB 574

INSTALLED UNDER PROJECT (1510-00-71)

558EB 560EB USH 10 EB 562EB 564EB 566EB 568EB 570EB USH 10 EB 572EB

END PROJECT
STA 560+00 EB

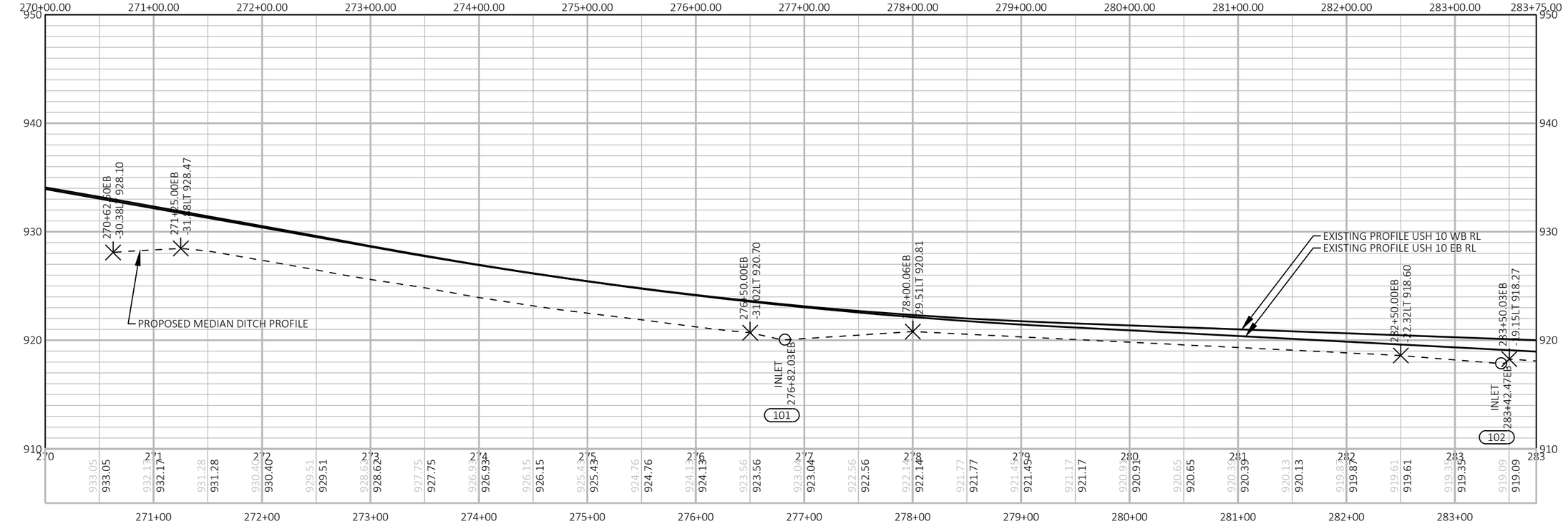
OFF RAMP

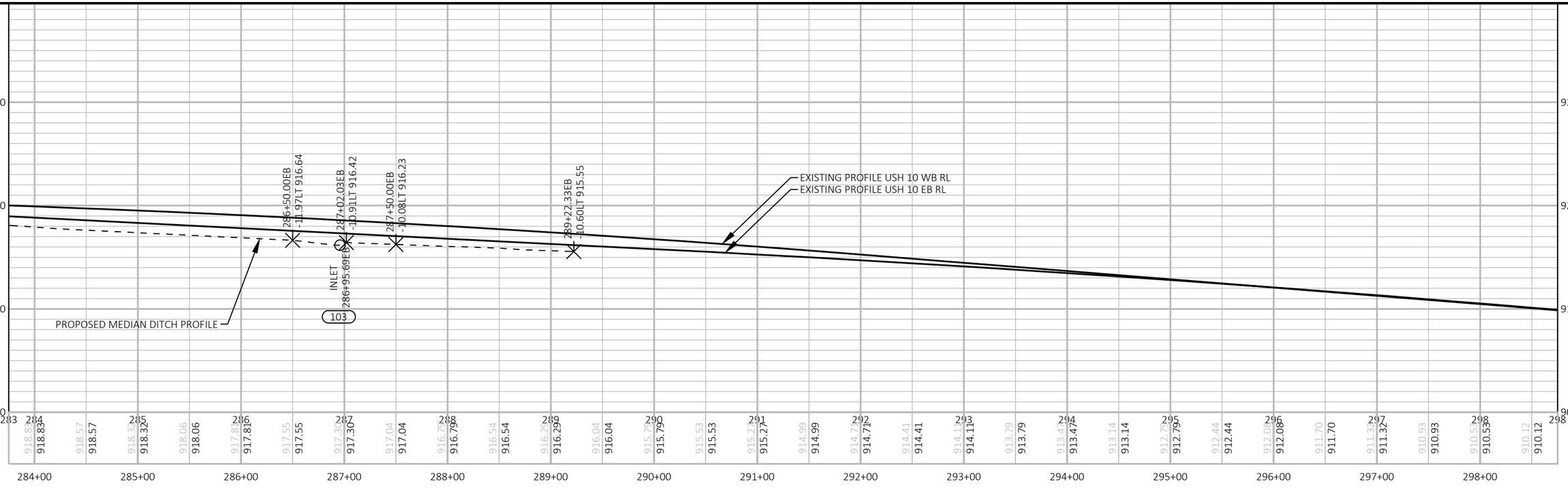
ON RAMP

CTH A

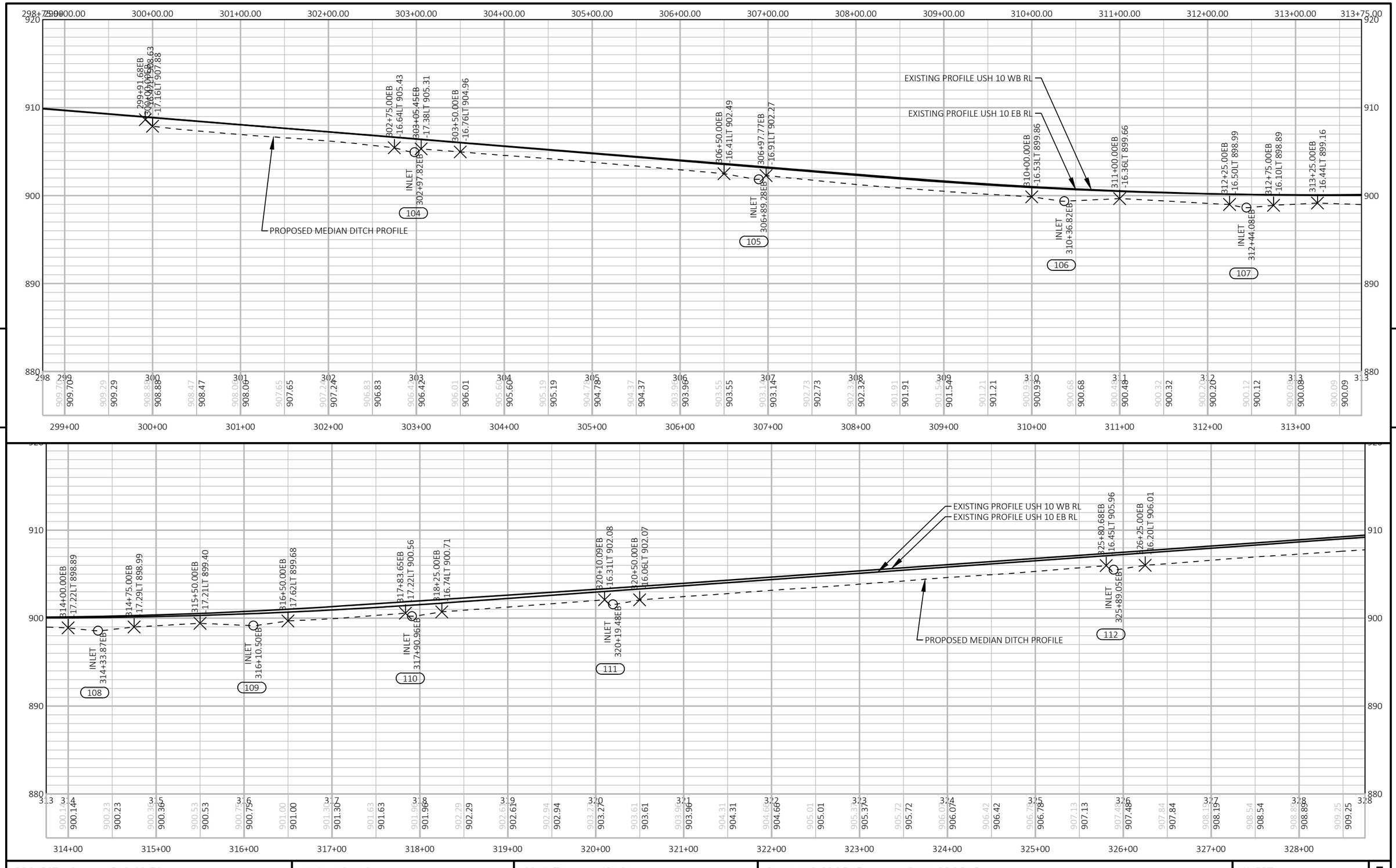
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEET	SHEET 55	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050102-PN.DWG PLOT DATE : 4/11/2017 1:04 PM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:100 FT





PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 56	E

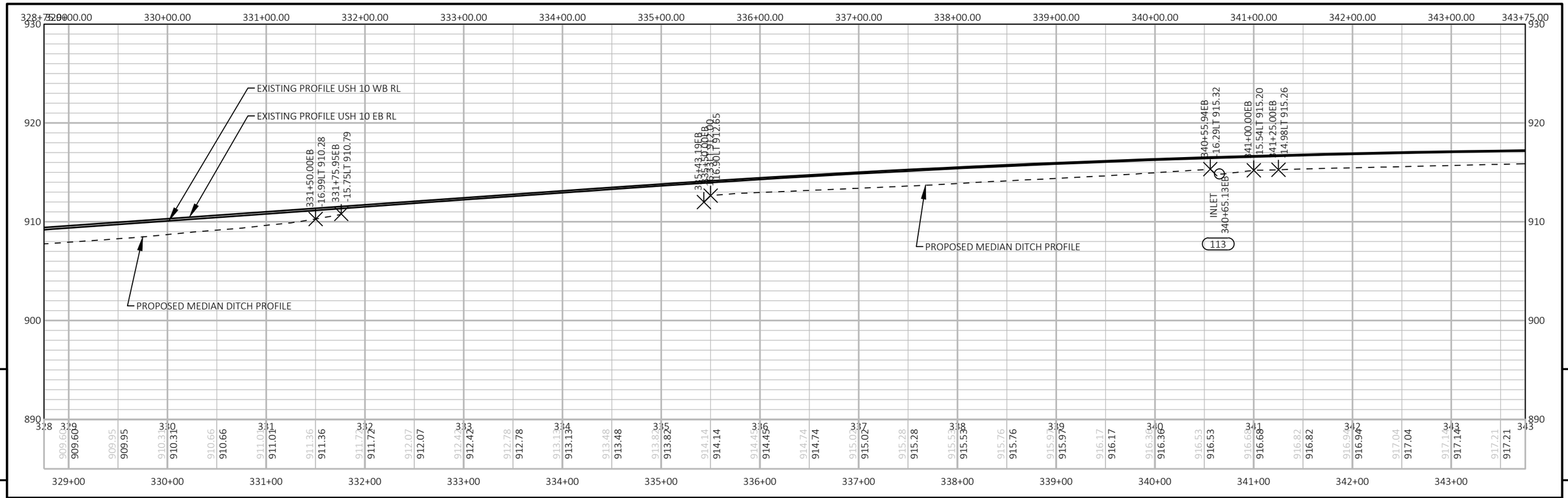


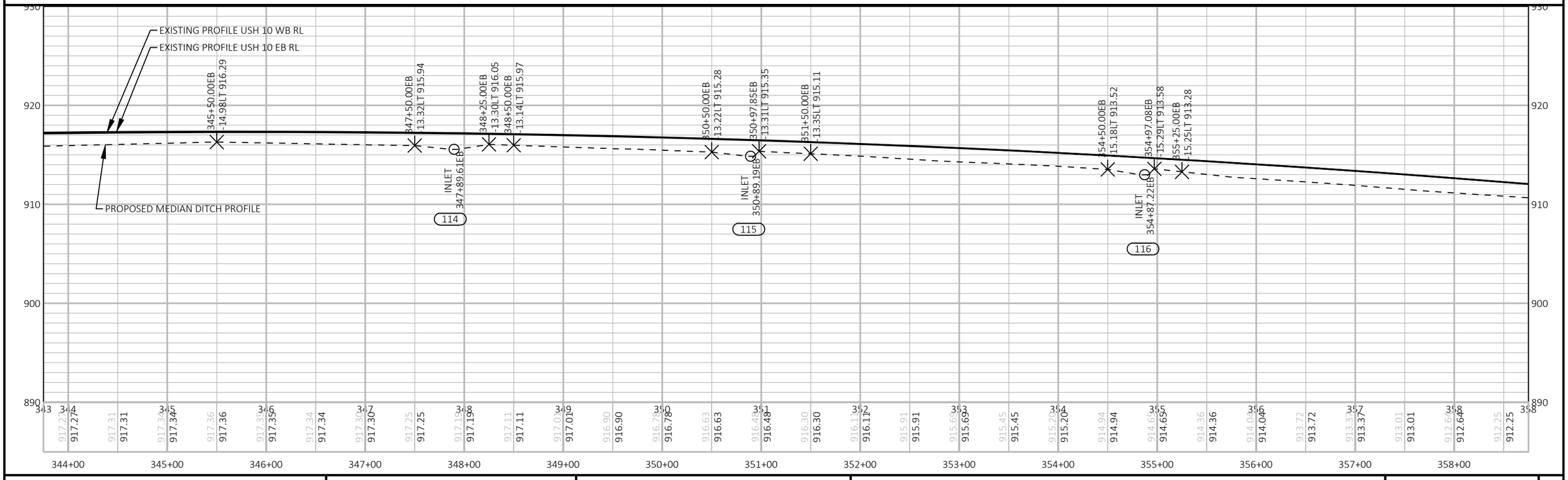
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 57	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050301-PR.DWG
LAYOUT NAME - 02-pr

PLOT DATE : 2/16/2017 10:17 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44



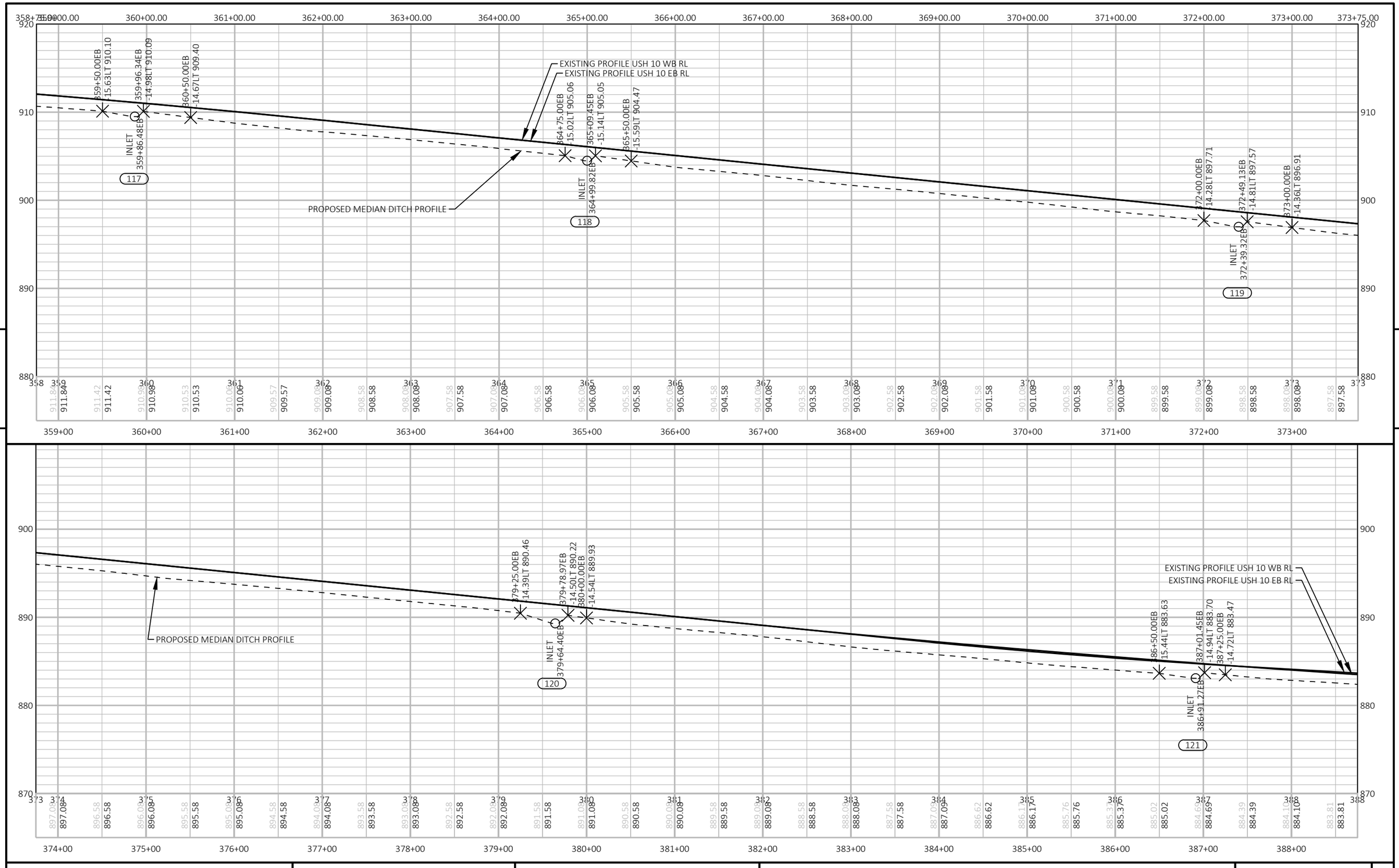


PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: PROFILE	SHEET 58	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050301-PR.DWG
LAYOUT NAME - 03-pr

PLOT DATE : 2/16/2017 10:17 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

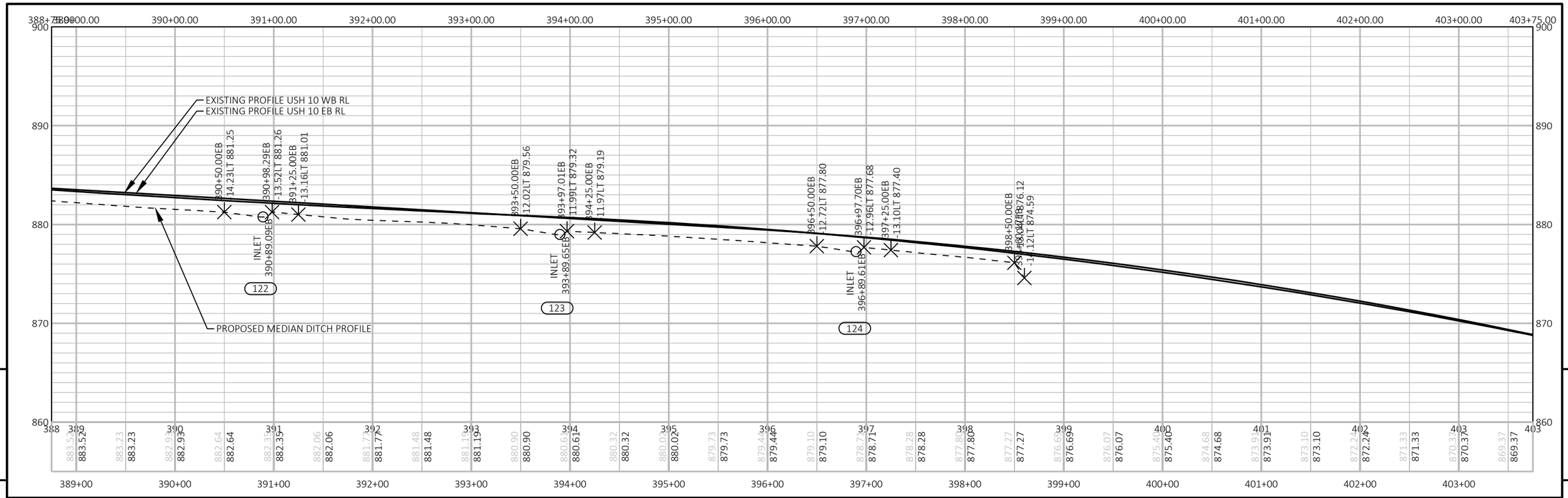


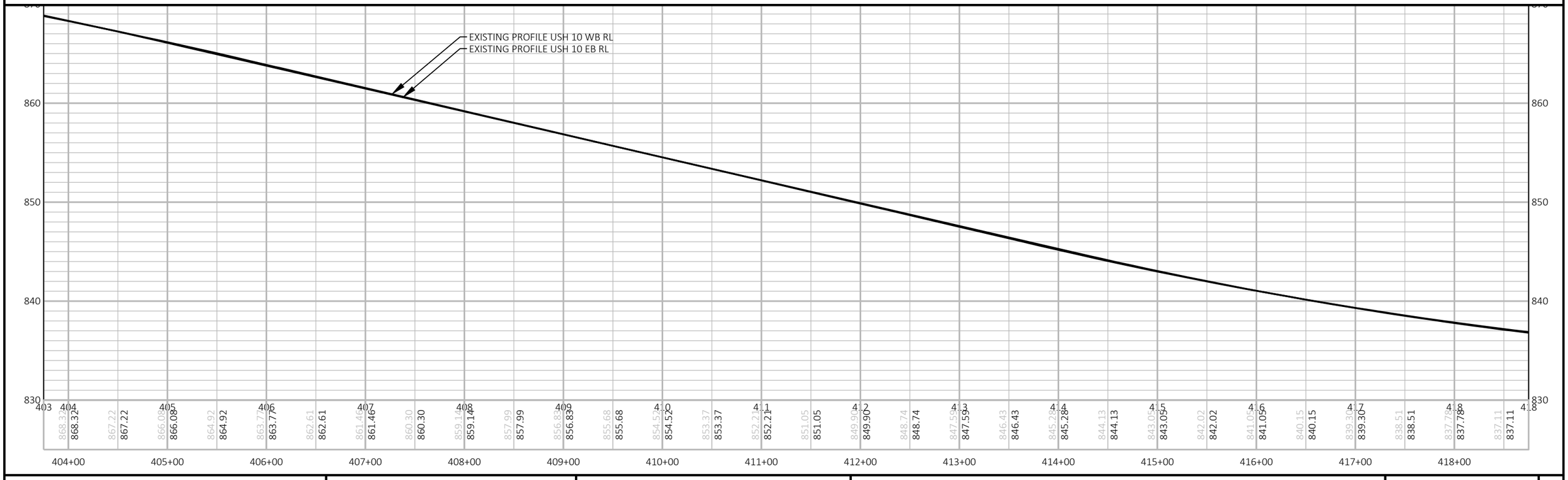
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 59 E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050301-PR.DWG
LAYOUT NAME - 04-pr

PLOT DATE : 2/16/2017 10:17 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : ############

WISDOT/CADDS SHEET 44

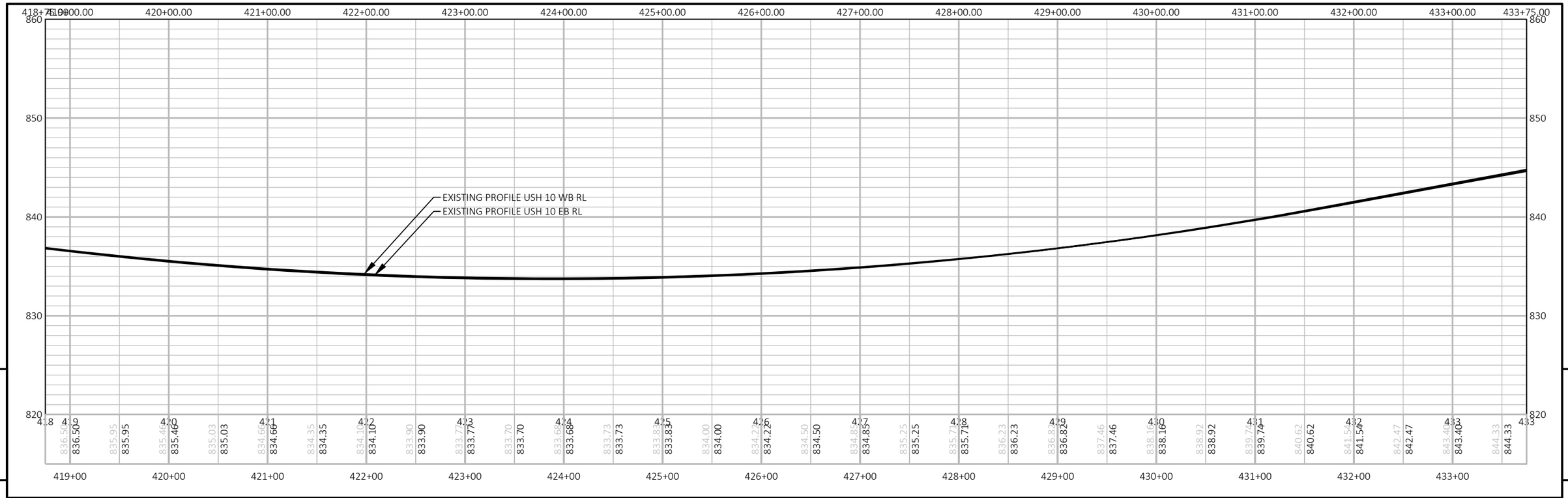


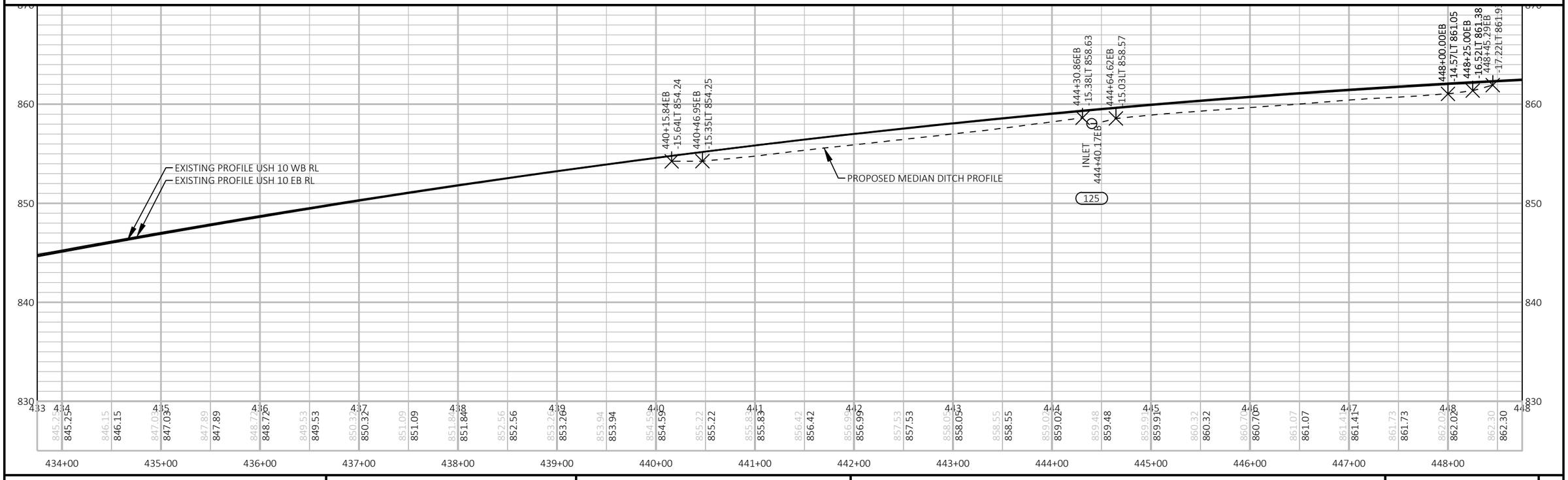


PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 60	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050301-PR.DWG
LAYOUT NAME - 05-pr

PLOT DATE : 2/16/2017 10:17 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : ##########

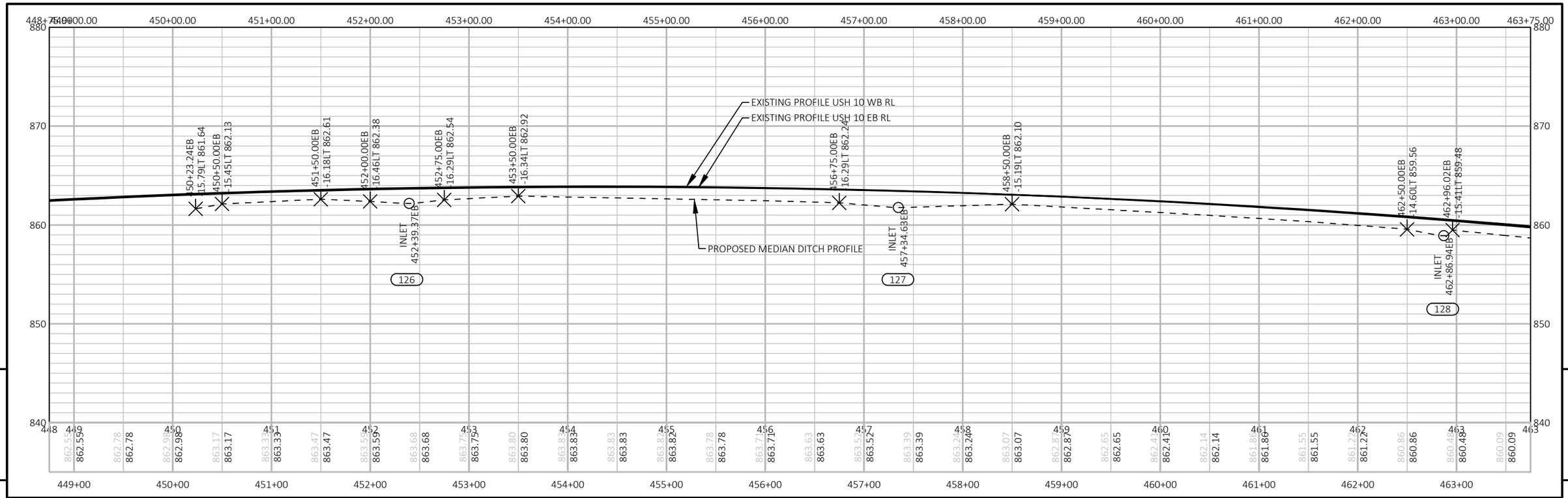


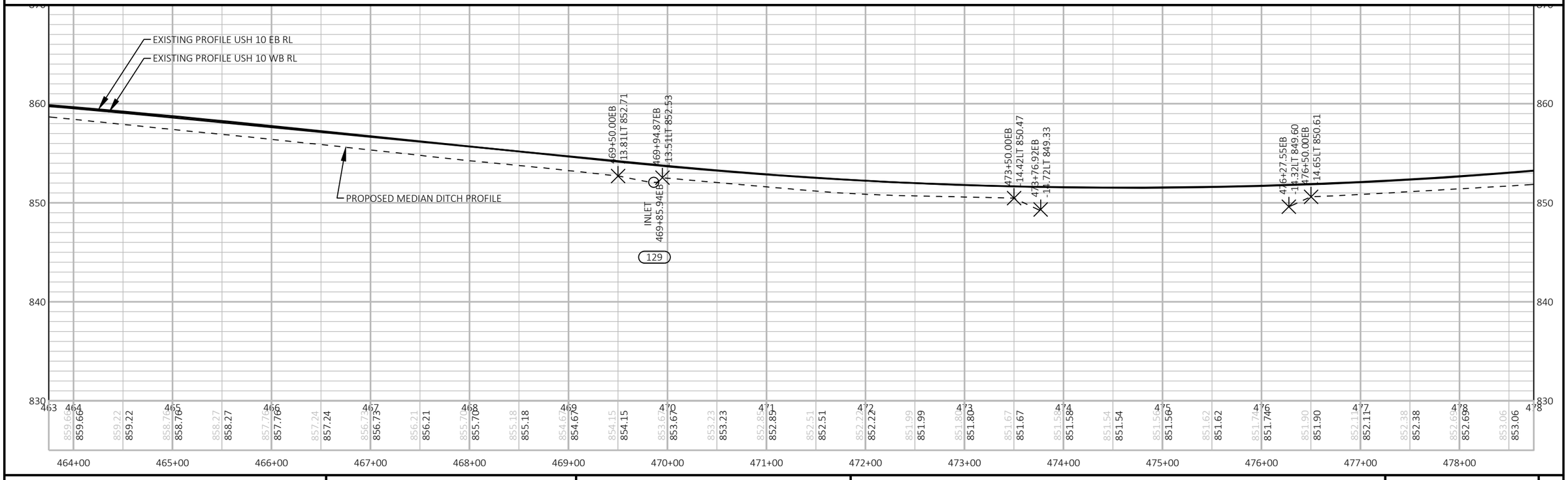


5

5

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 61 E



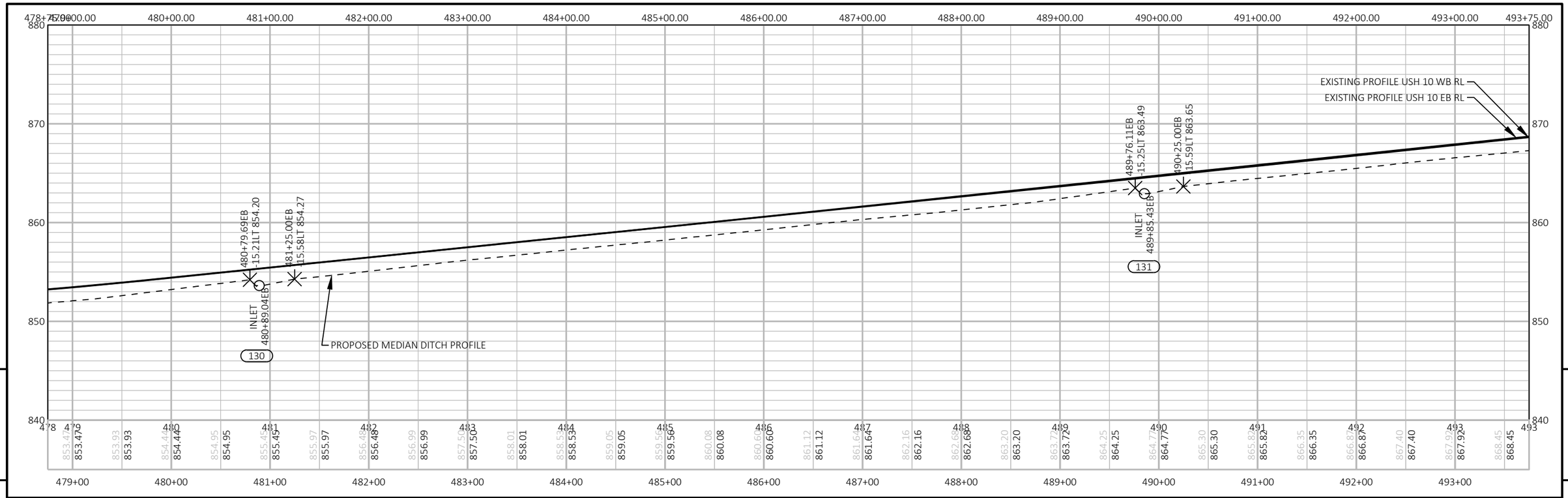


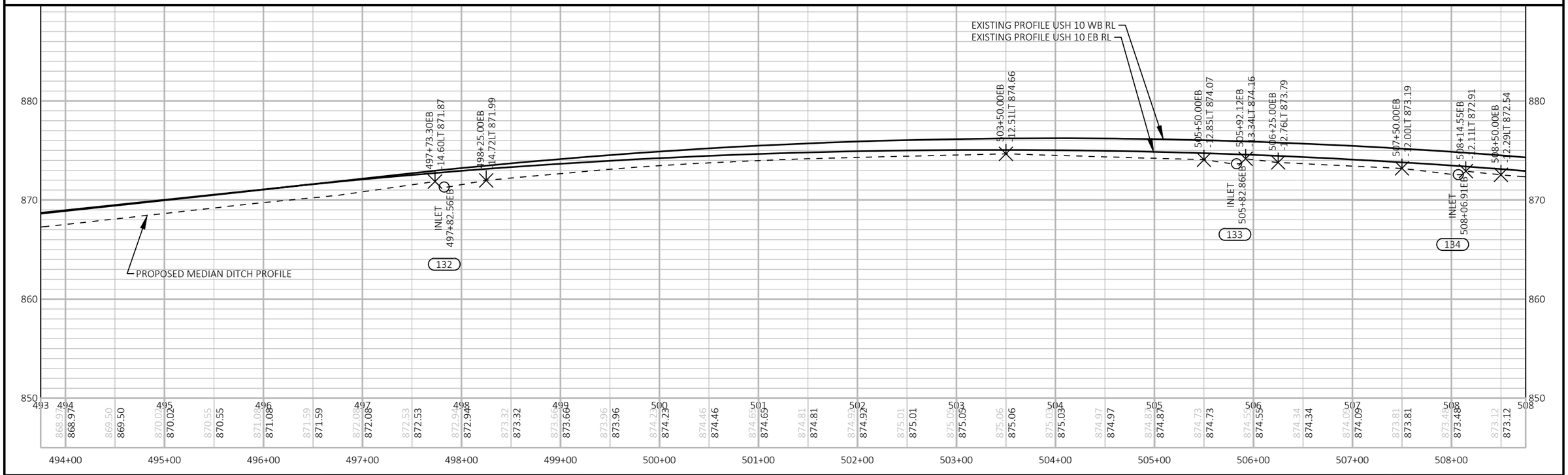
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 62	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050301-PR.DWG
LAYOUT NAME - 07-pr

PLOT DATE : 2/16/2017 10:17 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44



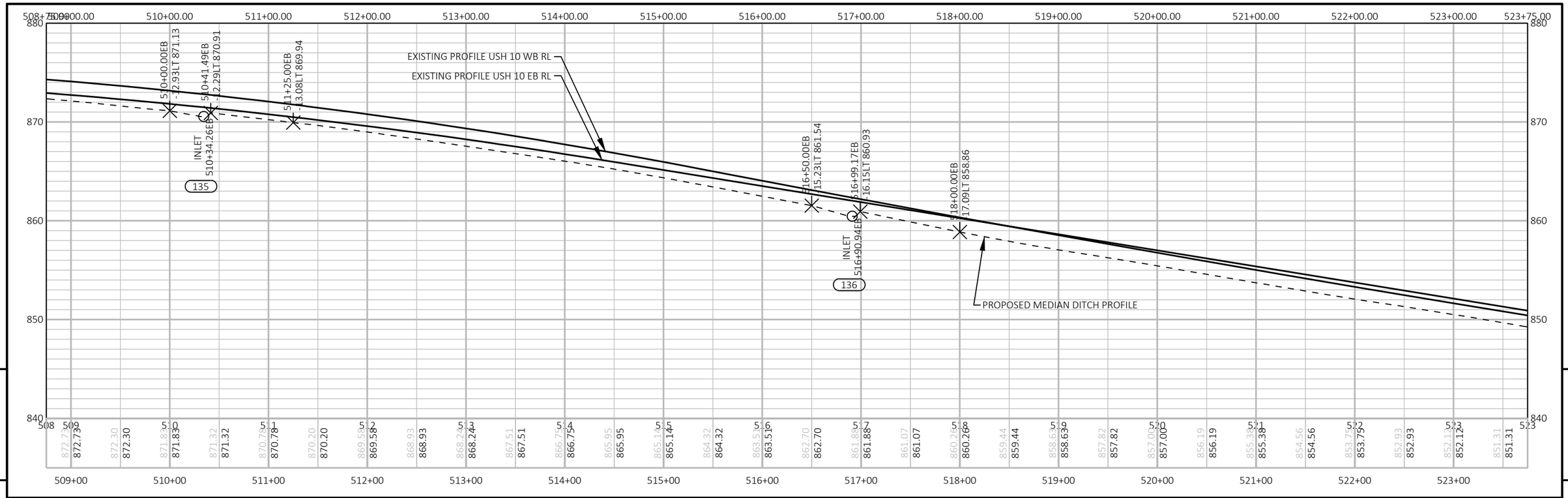


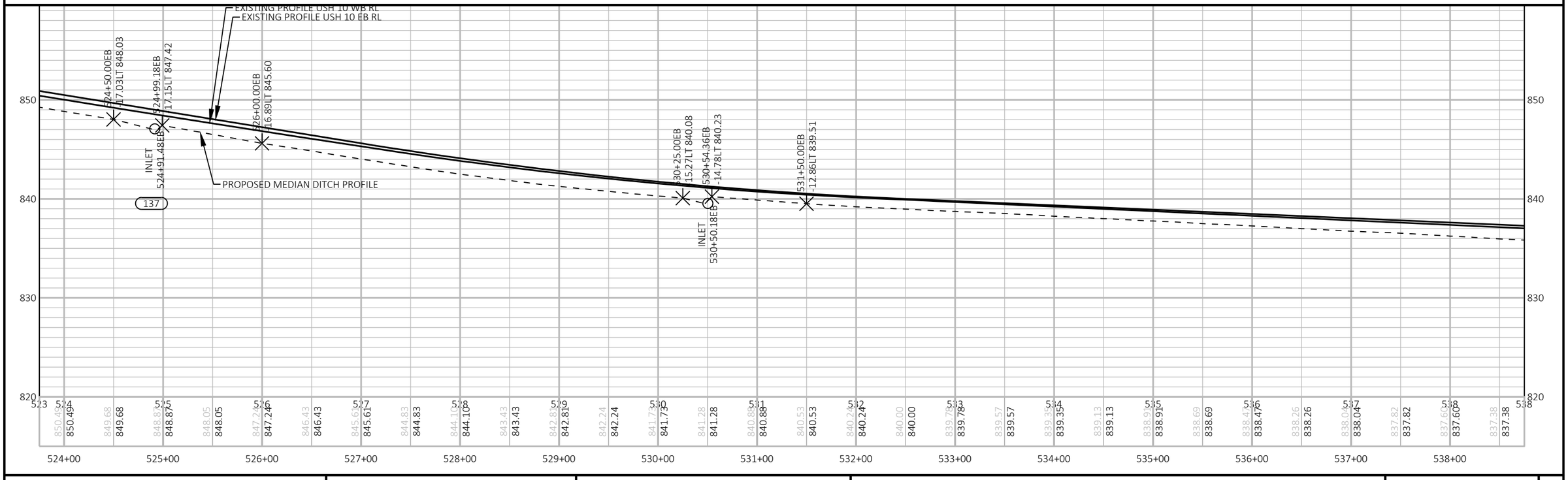
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 63	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\050301-PR.DWG
LAYOUT NAME - 08-pr

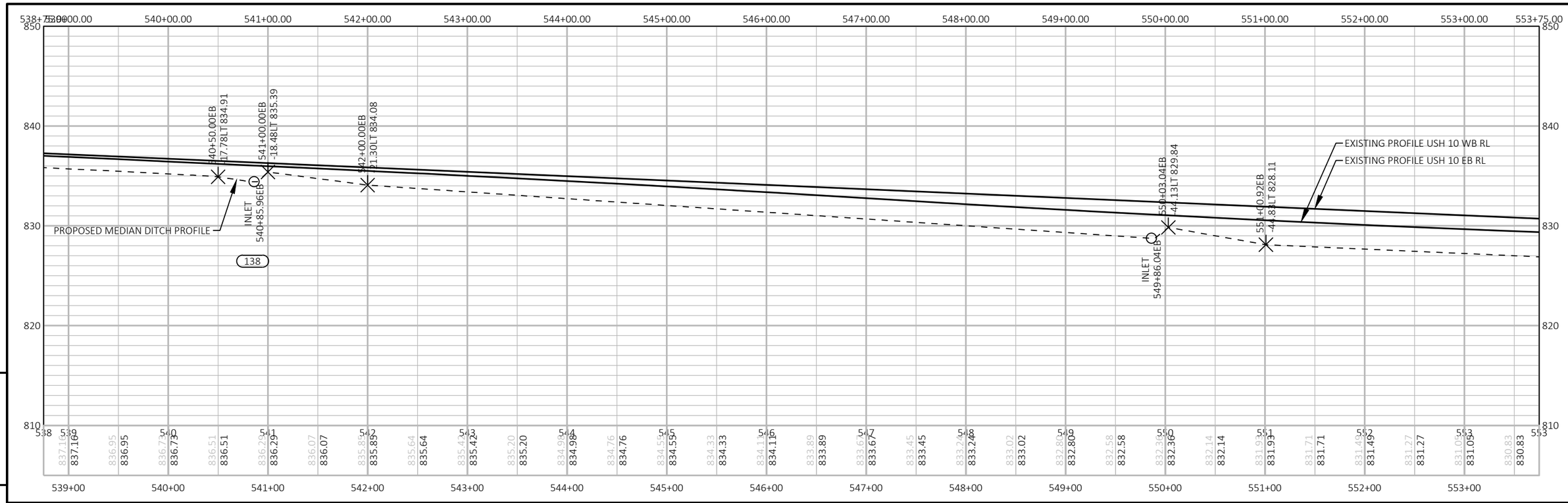
PLOT DATE : 2/16/2017 10:17 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : ############

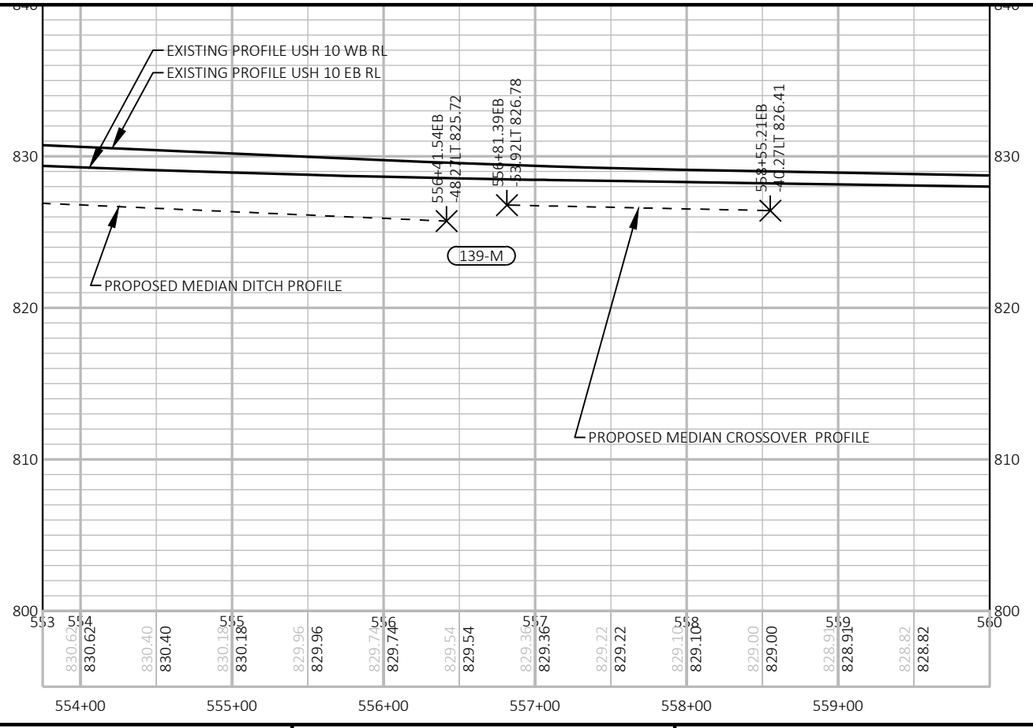
WISDOT/CADDS SHEET 44





PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 64	E

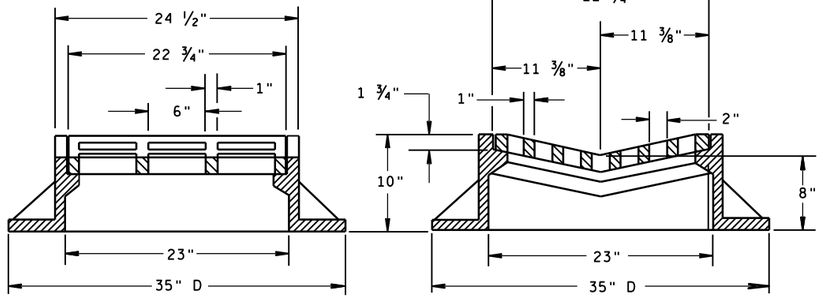


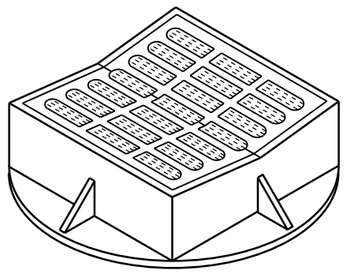


PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	PLAN AND PROFILE: DUAL PROFILE	SHEET 65	E

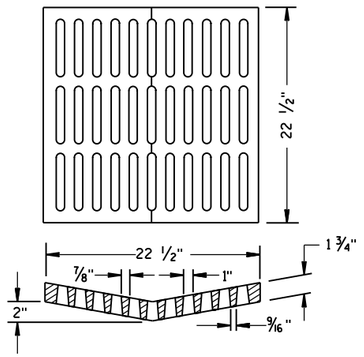
Standard Detail Drawing List

08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE FRAINS
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
14B15-10A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-10B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-10C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11C	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS
14B20-11D	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS
14B20-11G	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
14B26-03A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D15-04D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



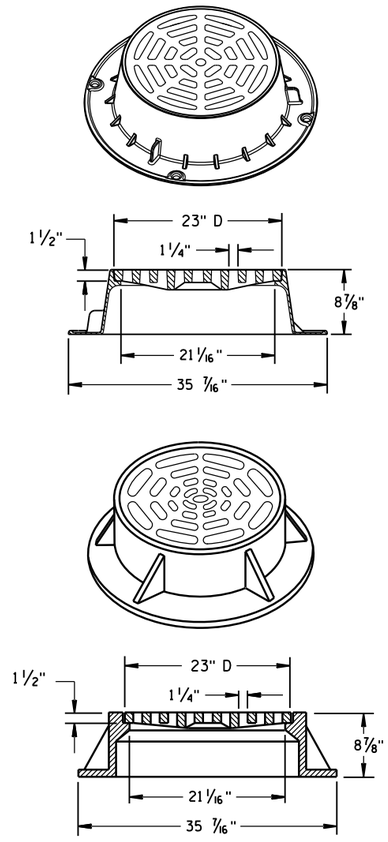


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

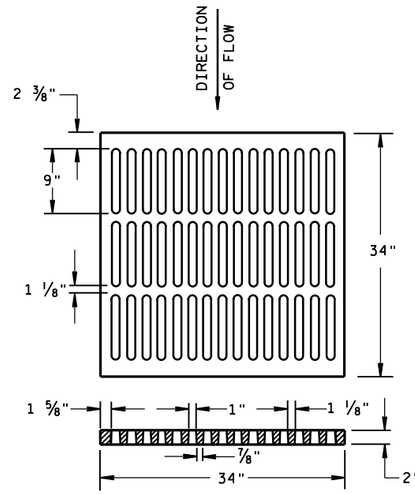
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

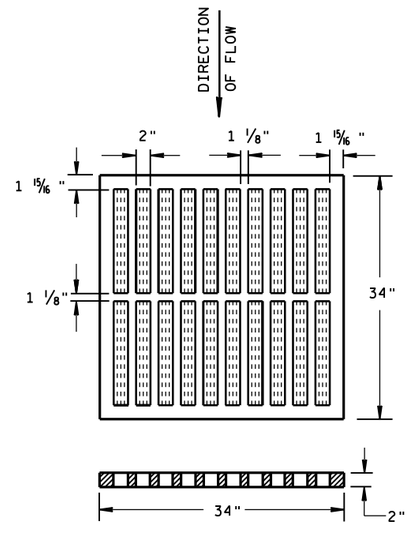
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



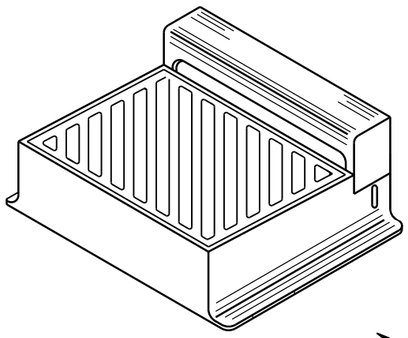
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

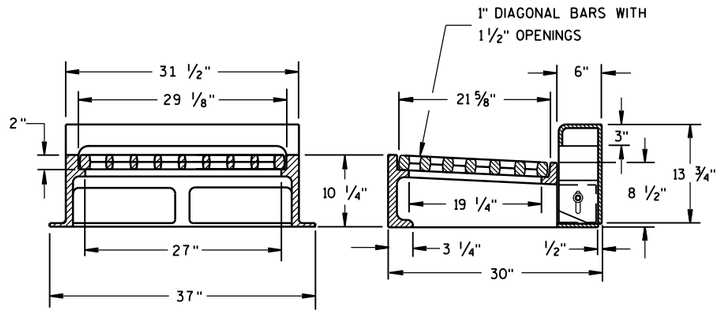


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

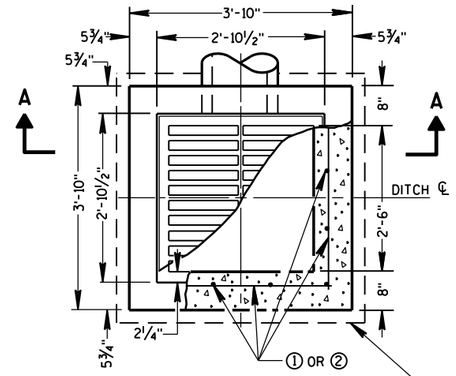
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

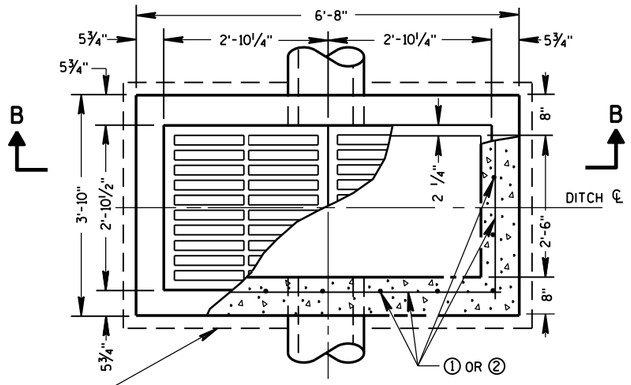
APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 A 5-19b

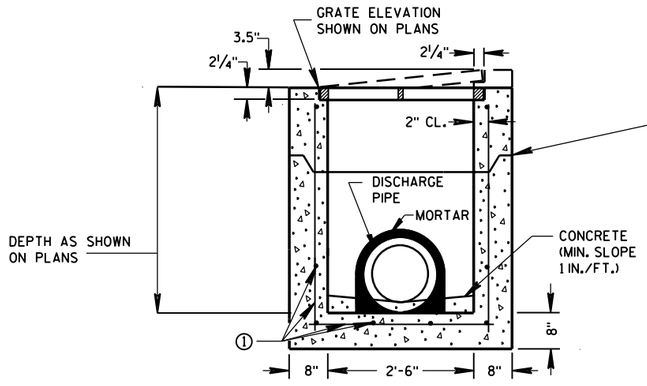


PLAN VIEW

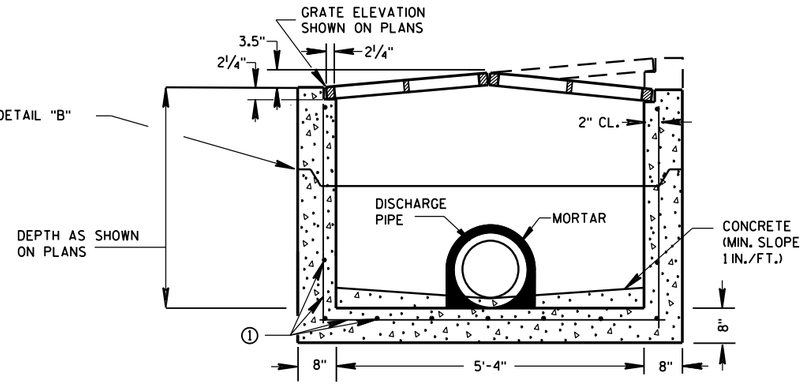


PLAN VIEW

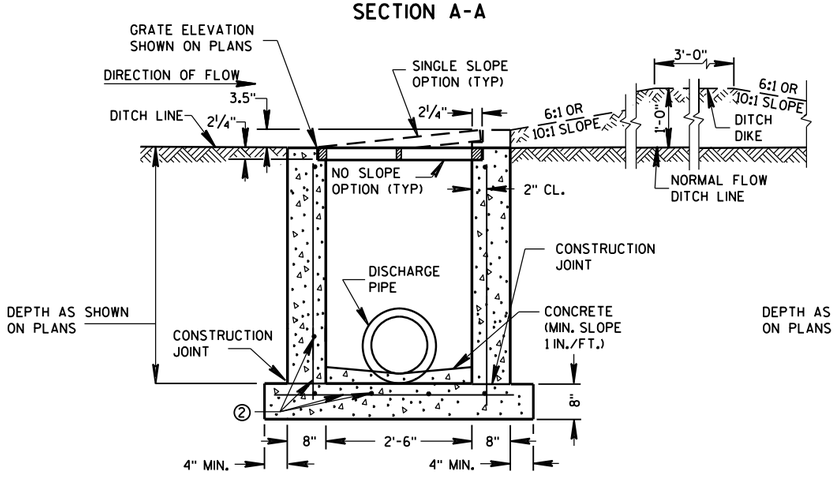
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

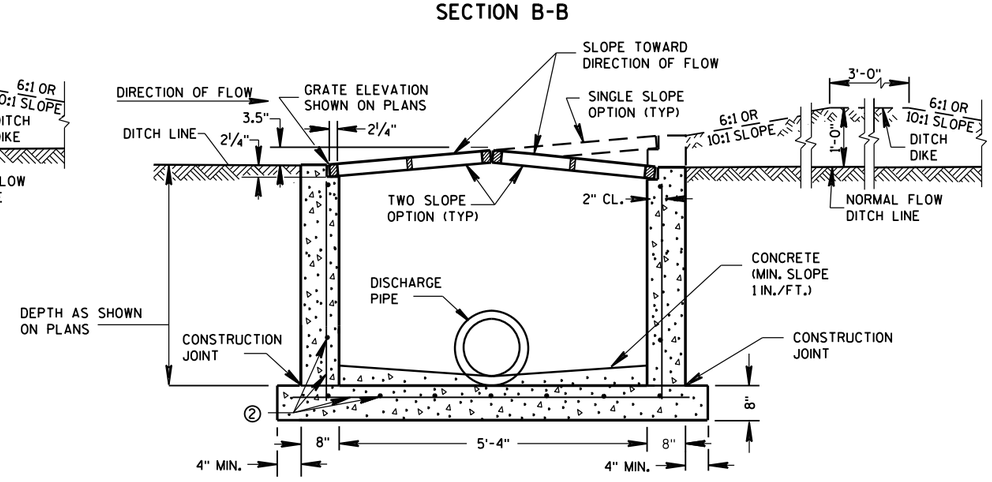


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

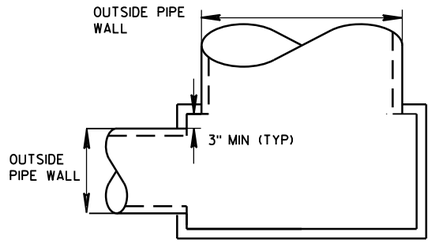
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

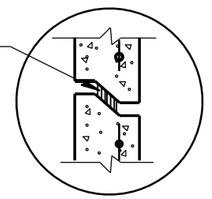
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

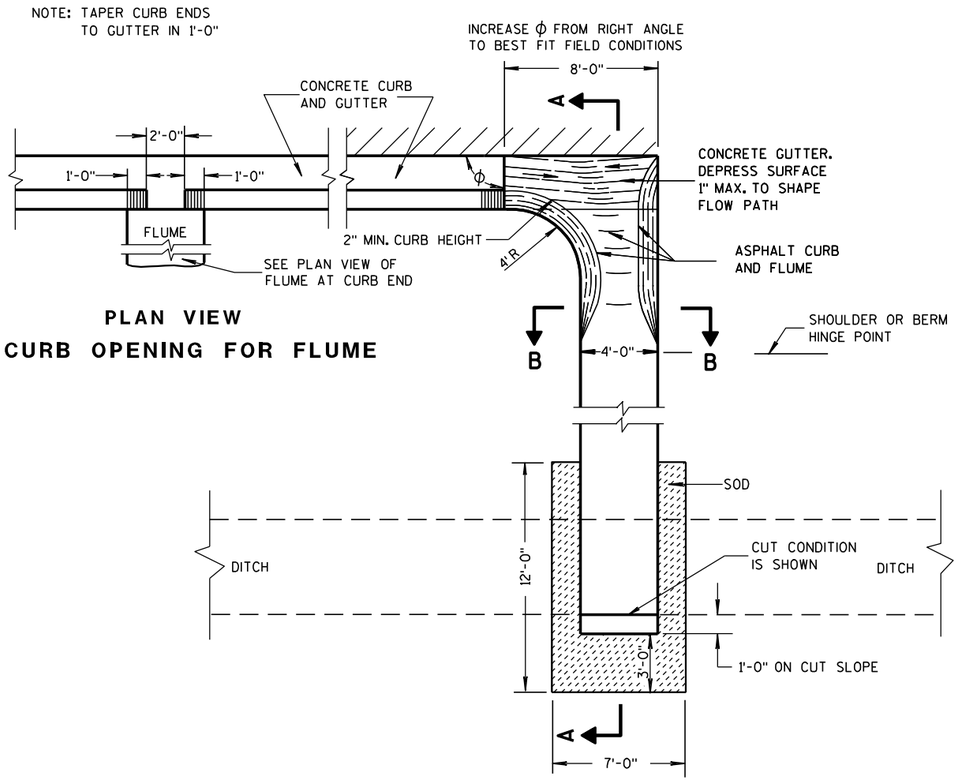
INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVI ENT
FHWA

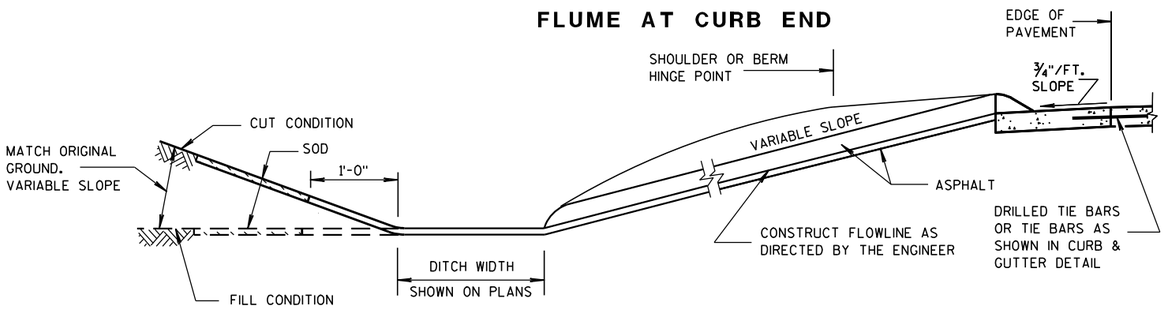
6
S.D.D. 8 C 8-2

ASPHALTIC FLUME

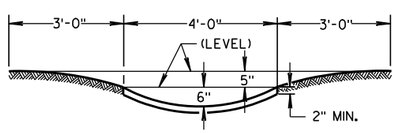


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

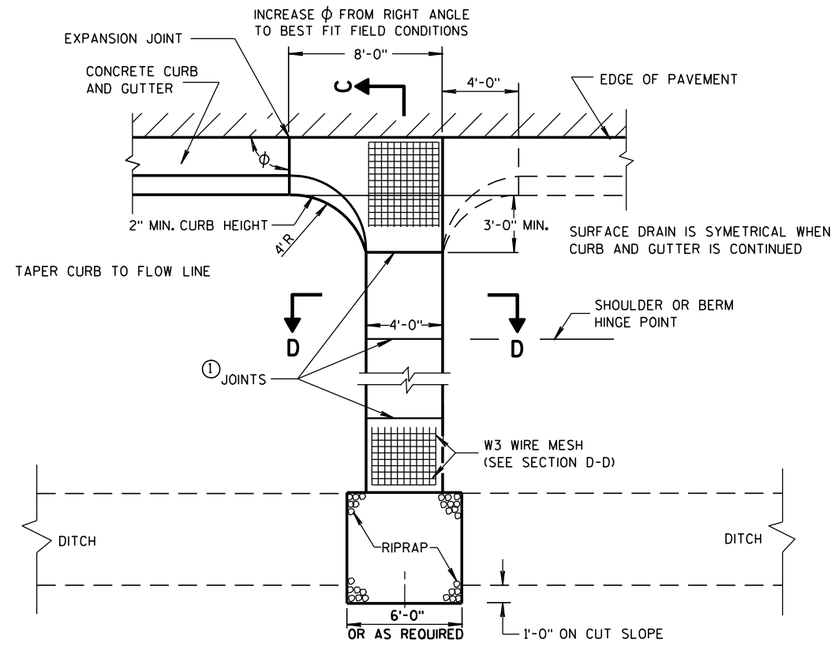
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

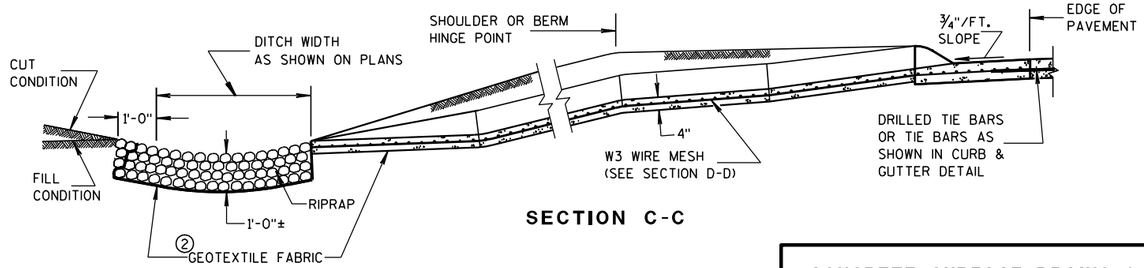
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

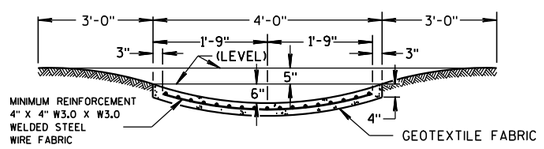
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT

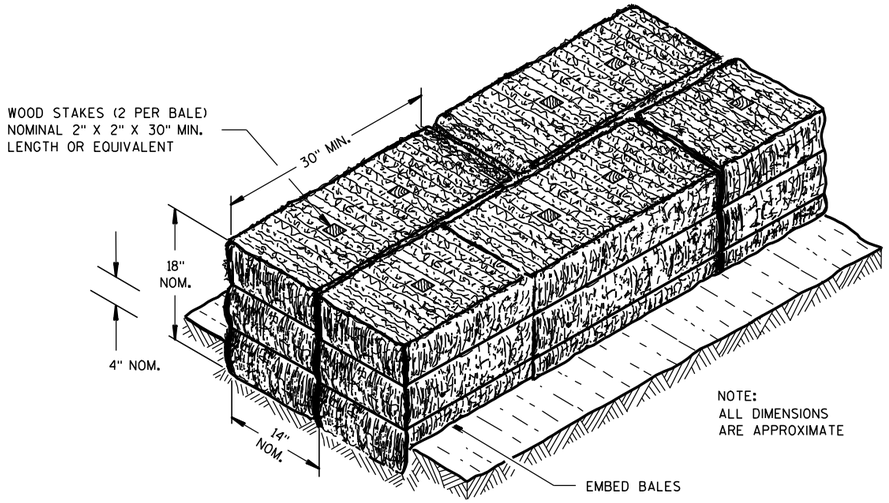
FHWA

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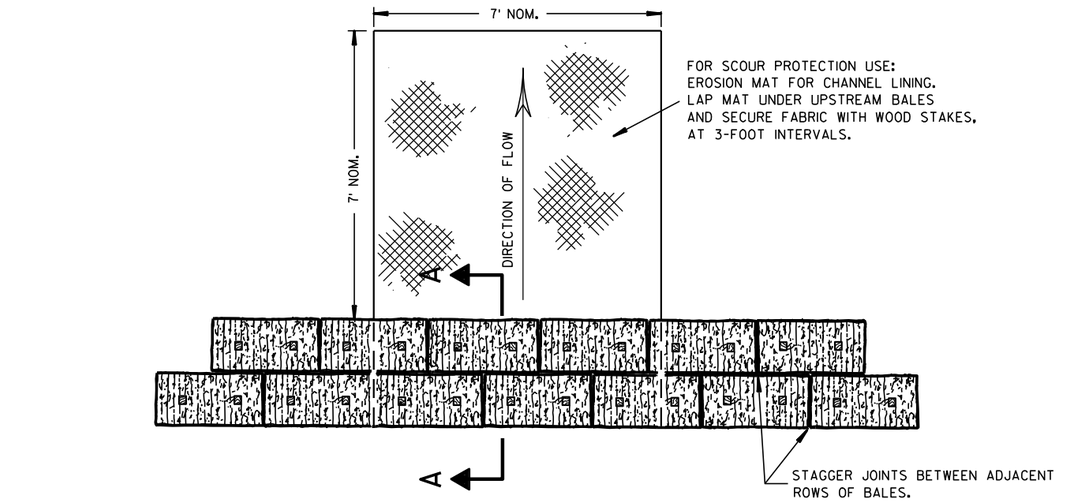
S.D.D. 8 D 4-5

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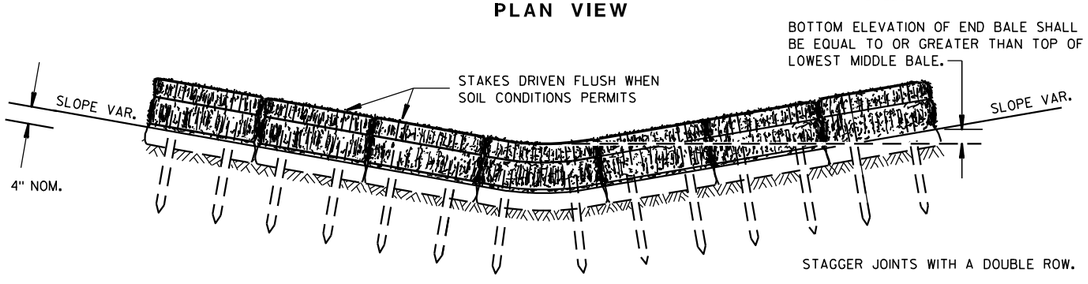
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



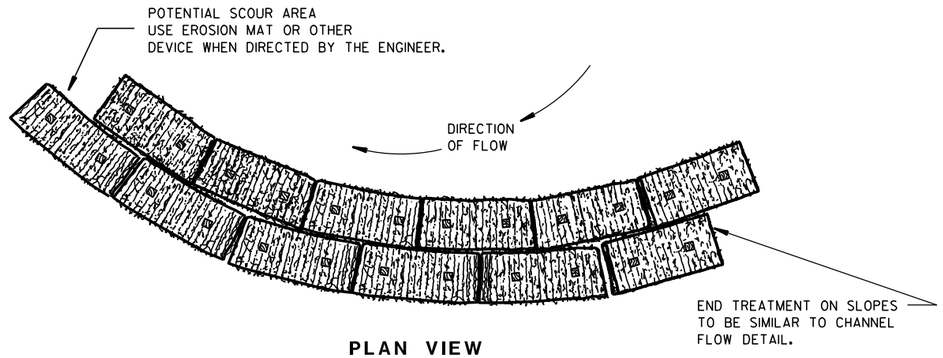
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

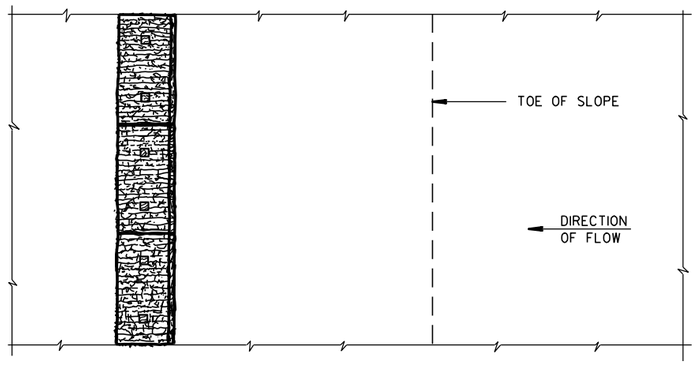
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

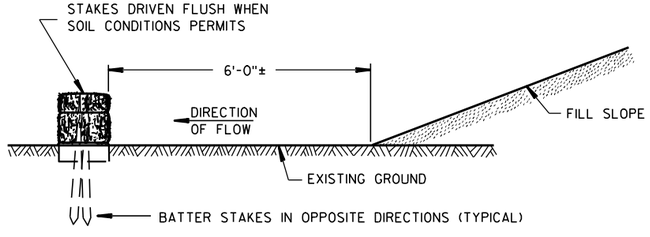


PLAN VIEW

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

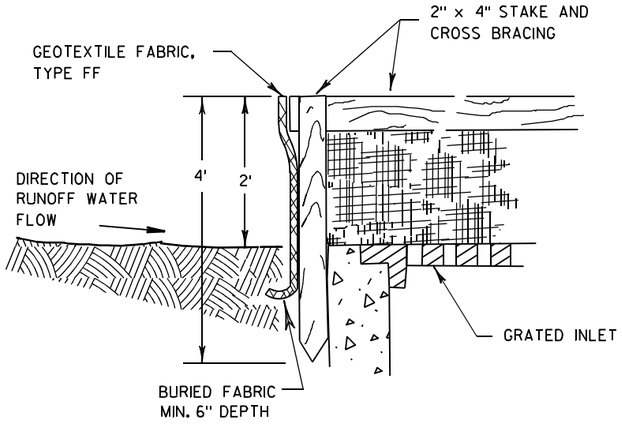
APPROVED

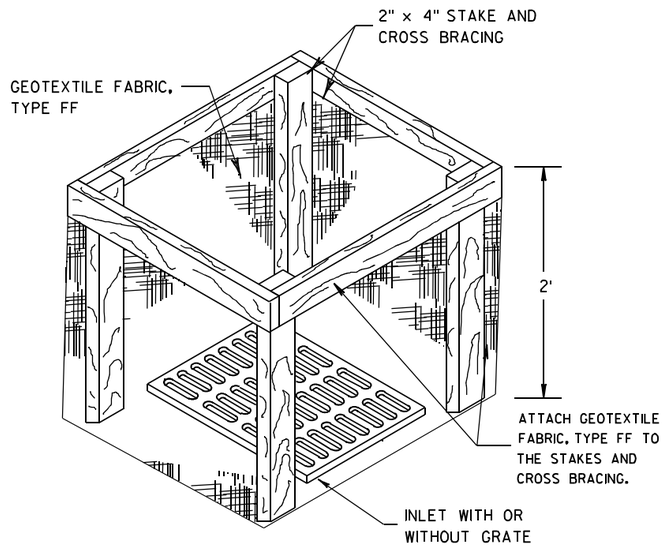
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

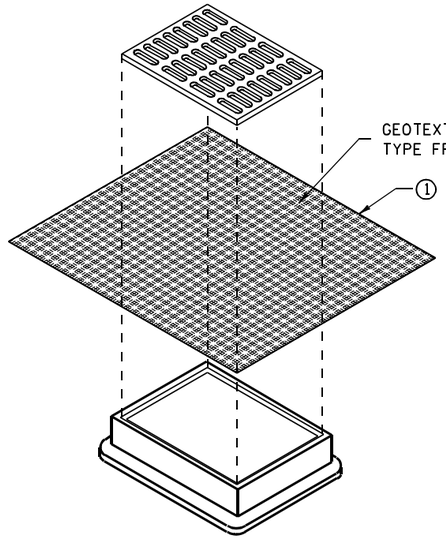
FHWA

6
S.D.D. 8 E 8-3



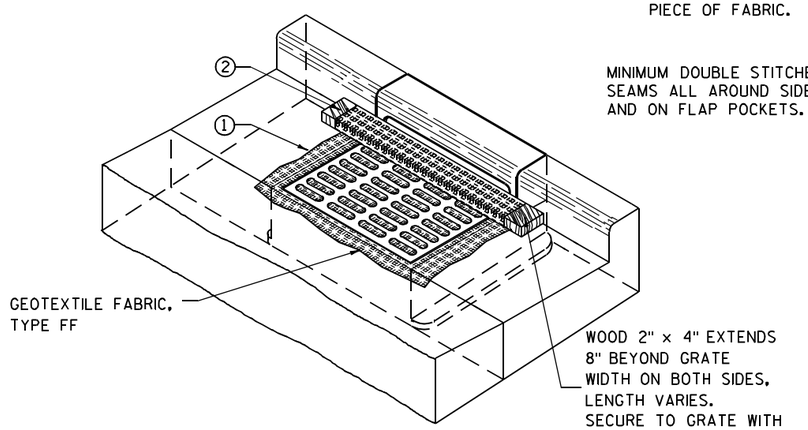


INLET PROTECTION, TYPE A

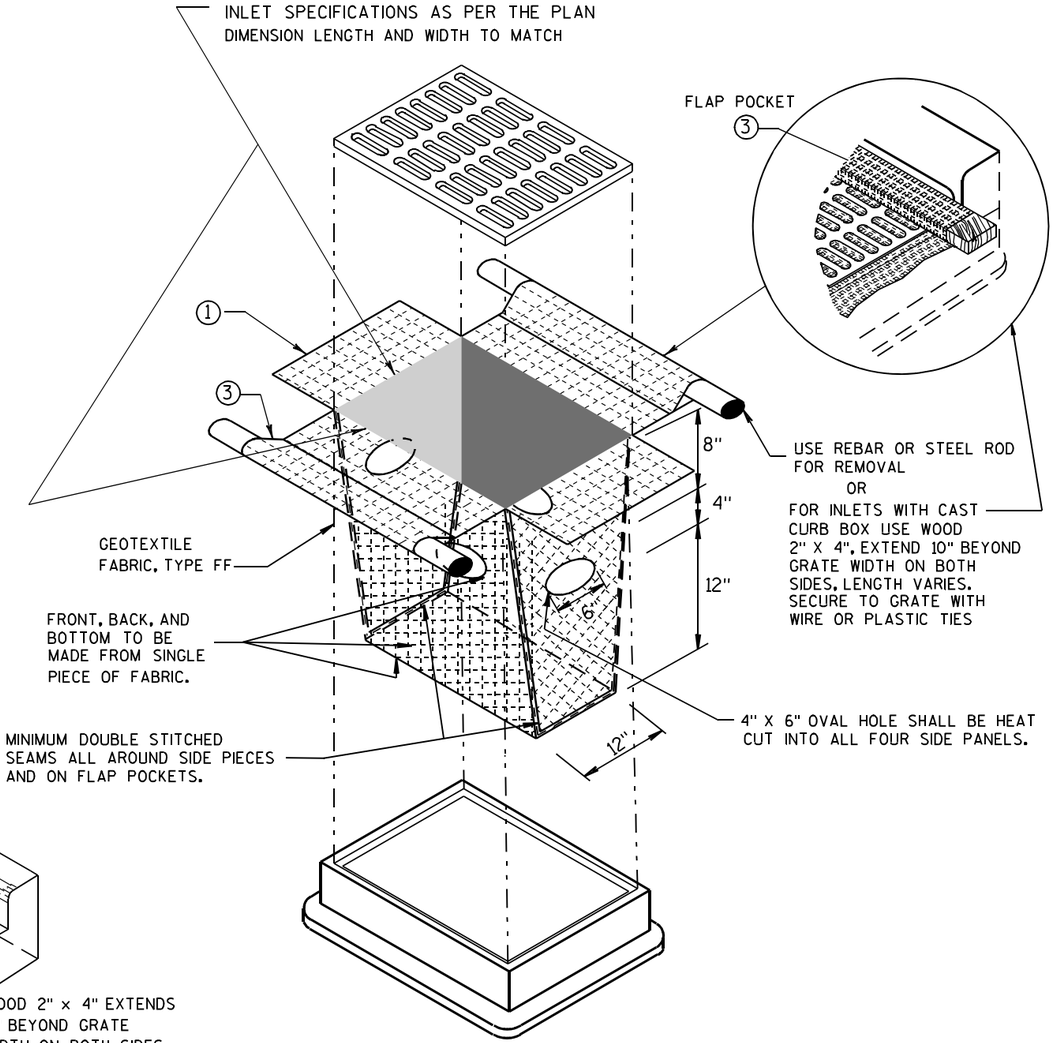


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

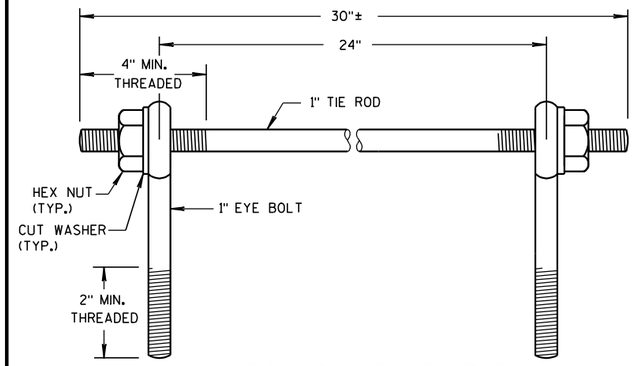
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

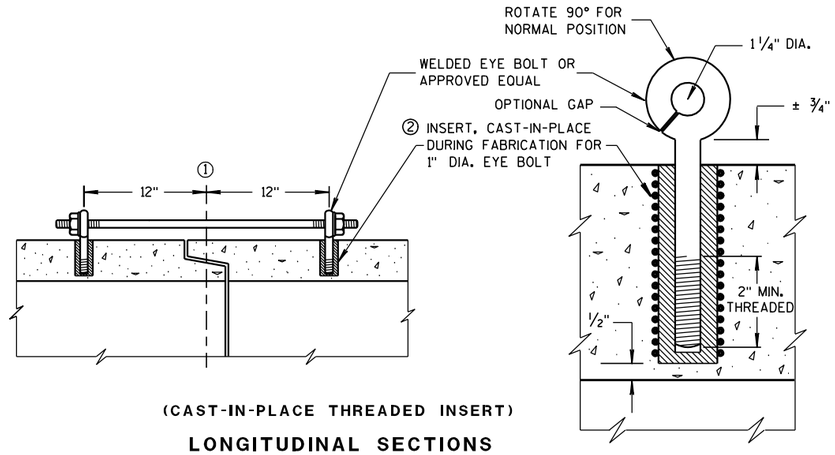
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

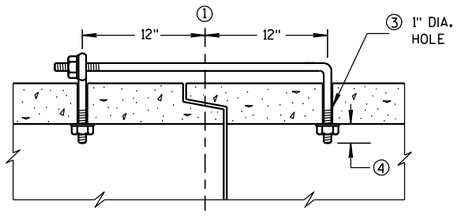
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

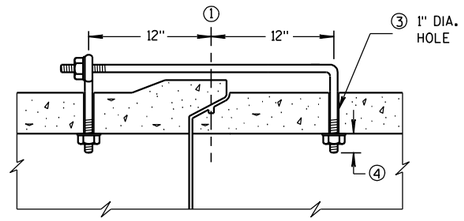
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

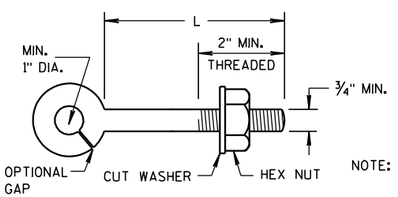


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

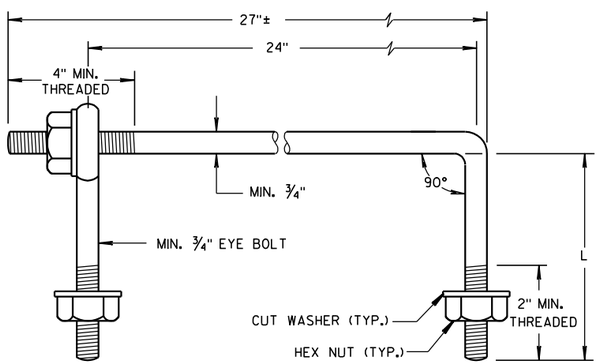
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

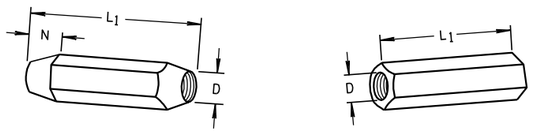
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

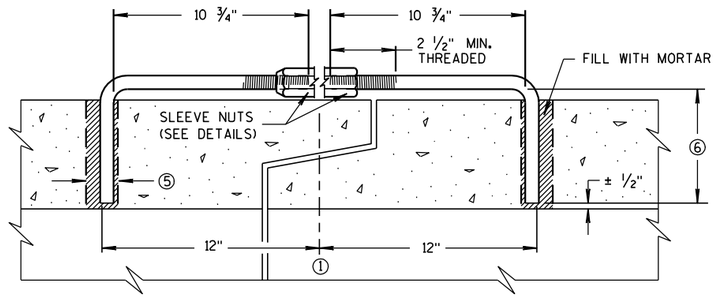
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

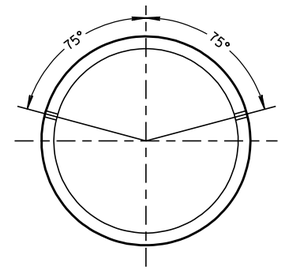
SLEEVE NUTS



LONGITUDINAL SECTION

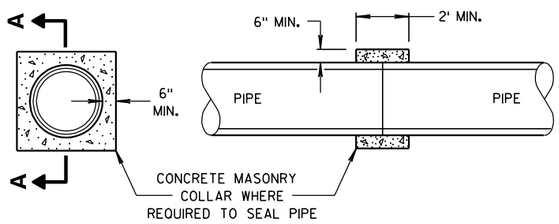
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

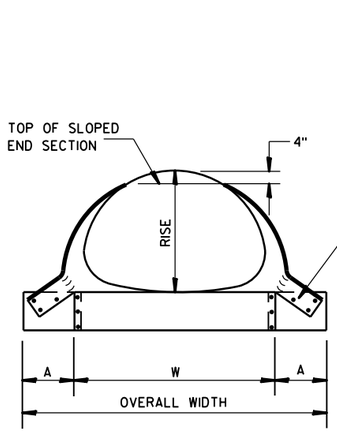
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

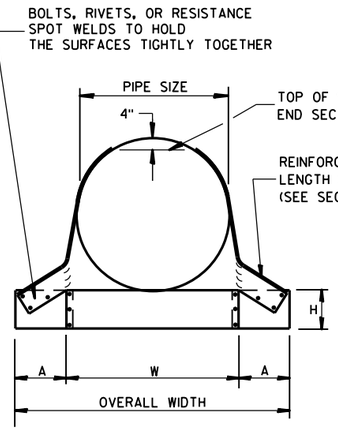
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
72
FHWA

6

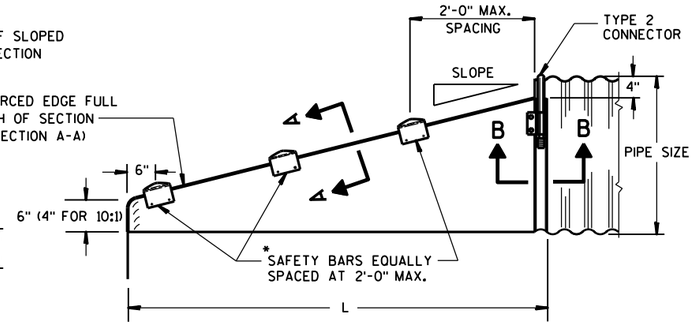
S.D.D. 8 F 4-7



FRONT VIEW



FRONT VIEW



SIDE VIEW

GENERAL NOTES

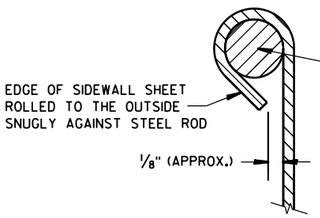
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE
SLOPED SIDE DRAINS

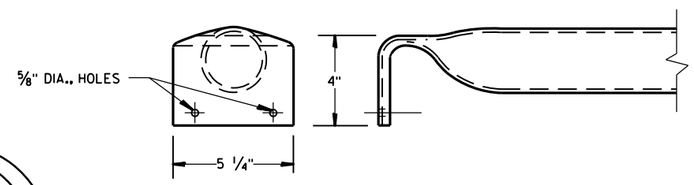
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	——	——
48	.109	16	12	54	86	4:1	152	6:1	228	——	——
54	.109	16	12	60	92	4:1	176	6:1	264	——	——
60	.109	16	12	66	98	4:1	200	6:1	300	——	——



SECTION A-A

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.

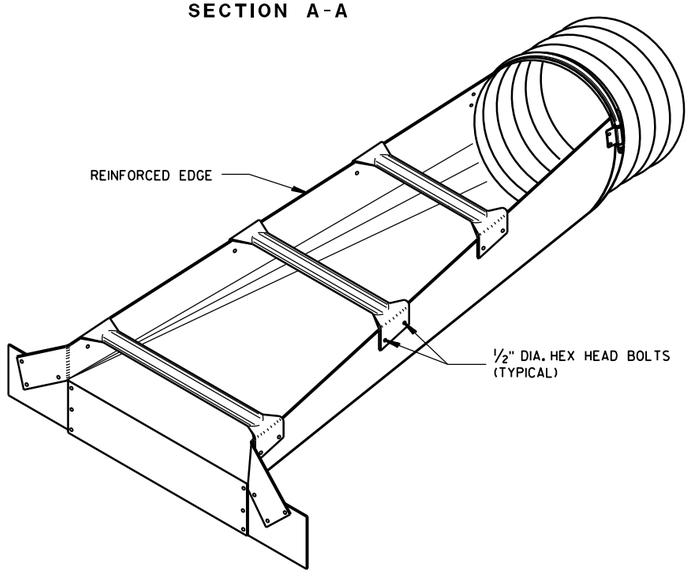


DETAIL OF SAFETY BAR

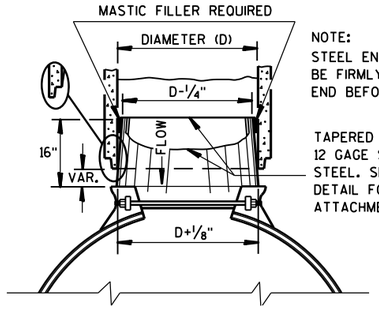
STEEL APRON ENDWALLS FOR PIPE ARCH
SLOPED SIDE DRAINS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) ①	DIMENSIONS (Inches) A	H	W	OVERALL WIDTH	L DIMENSIONS SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	——	——
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	——	——
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	——	——

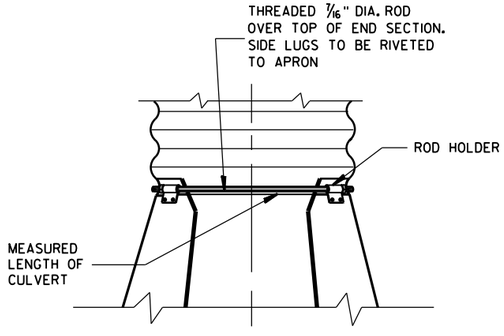
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.



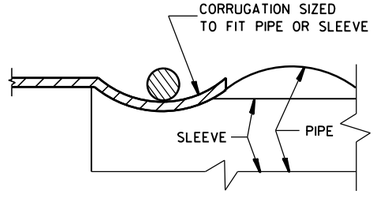
ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2
CONNECTION DETAIL



SECTION B-B

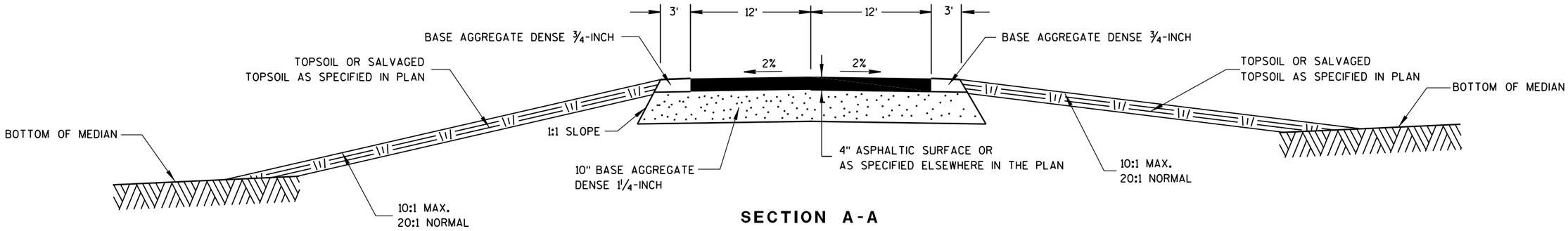
STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

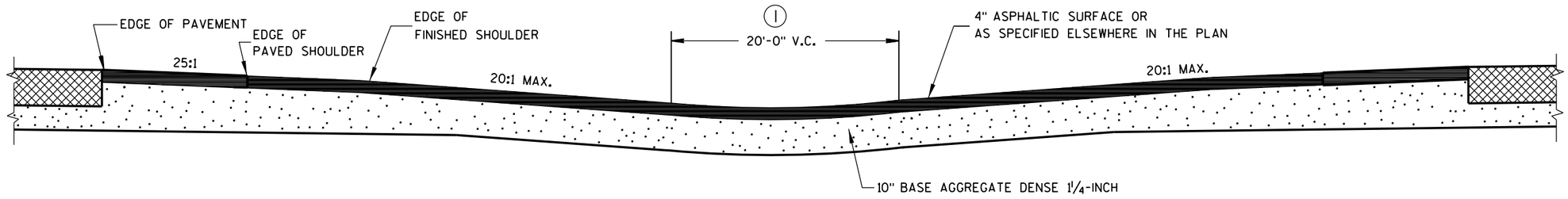
APPROVED
9/14/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

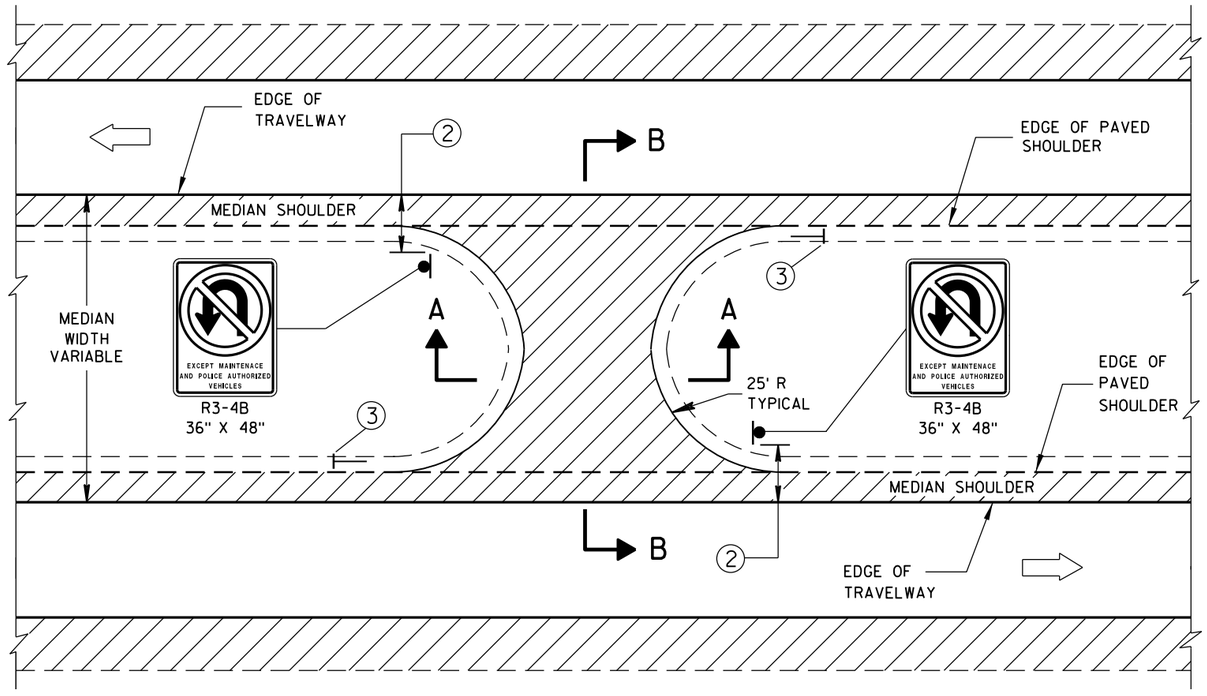
S.D.D. 8 F 7-5



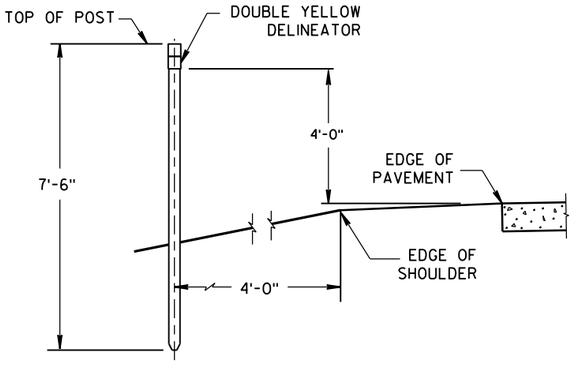
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

GENERAL NOTES

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

(1) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013	/S/ Jerry H. Zogg	
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER	NT

FHWA

6

S.D.D. 11 A 1-5

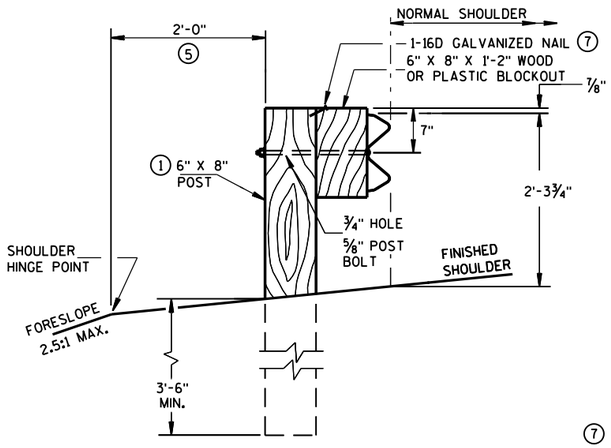
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S.D.D. 11 A 1-5

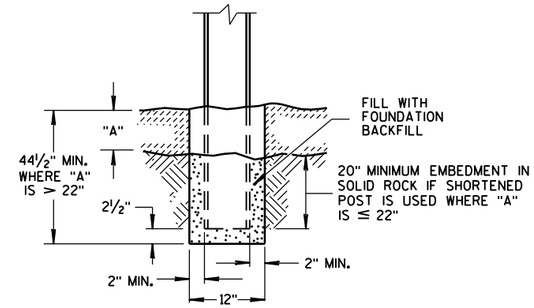
GENERAL NOTES

1. W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
   DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
2. USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
3. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
4. USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
5. IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
6. IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.
7. WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

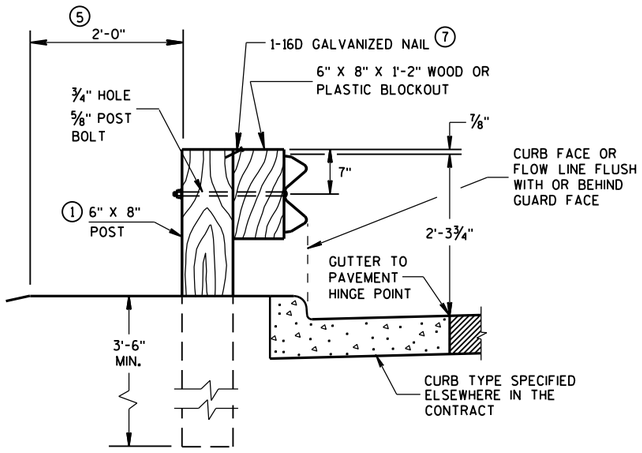
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



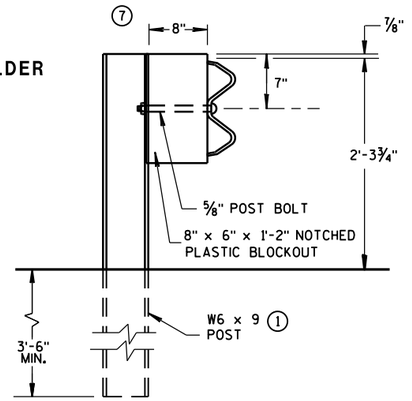
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



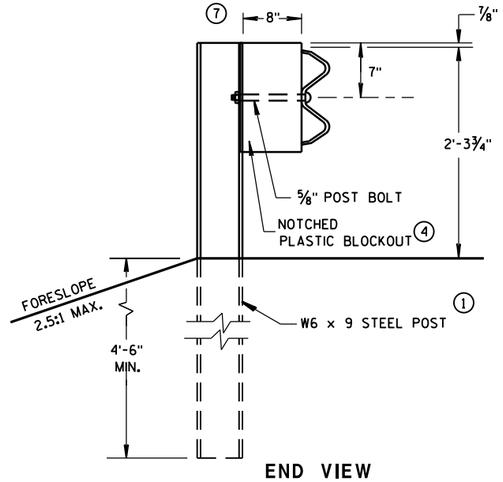
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



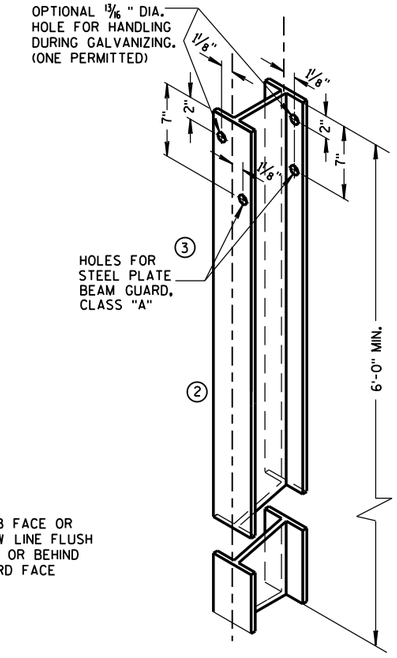
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION

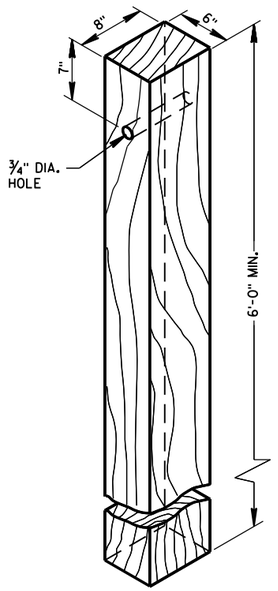


END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

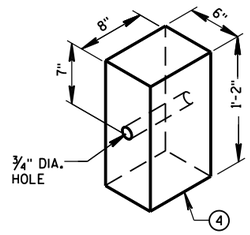


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①

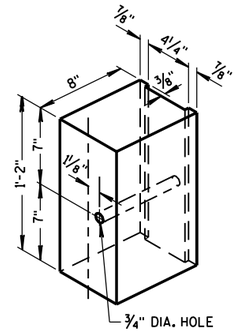
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



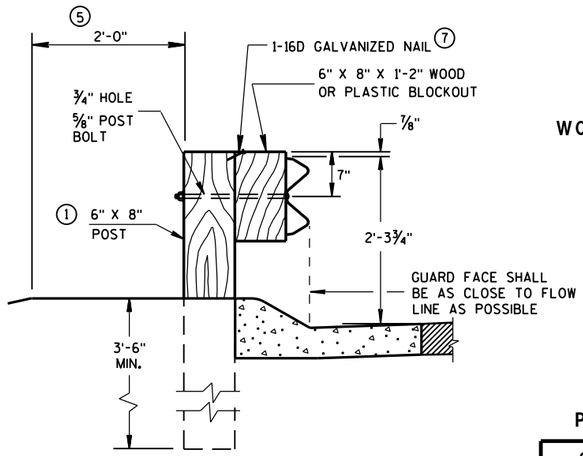
WOOD POST
(6"X8") NOMINAL



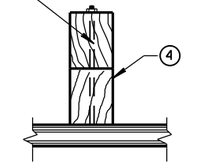
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



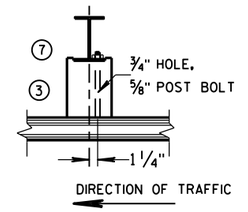
TYPICAL NOTCHED ①
PLASTIC BLOCKOUT
FOR STEEL POSTS



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



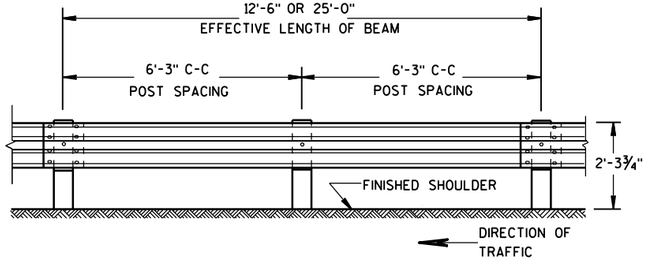
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 75

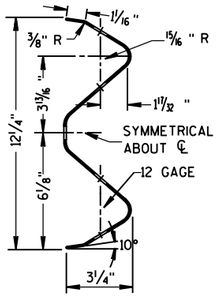
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

6
S.D.D. 14 B 15-10a

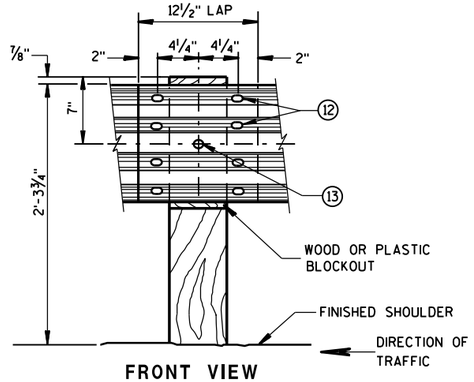


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

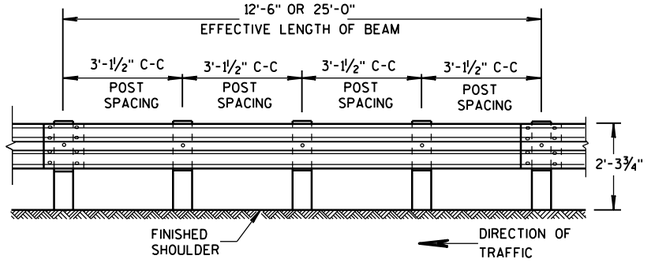
BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

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

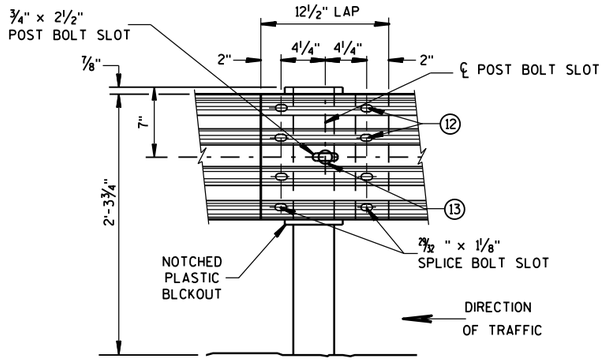
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

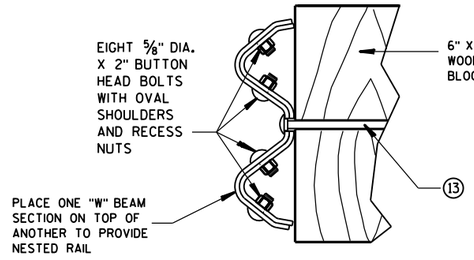
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

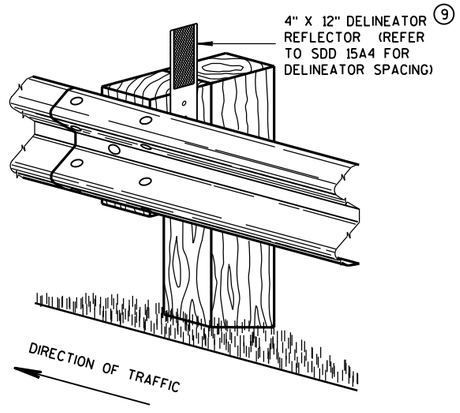
BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



NESTED W BEAM (NW)

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



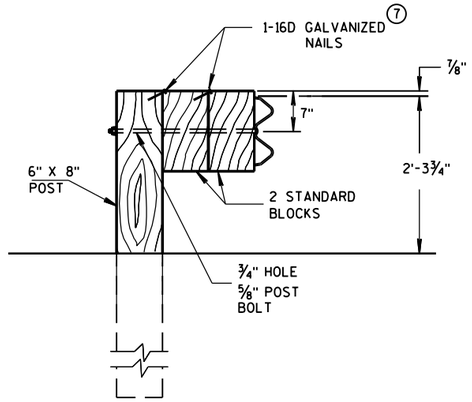
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

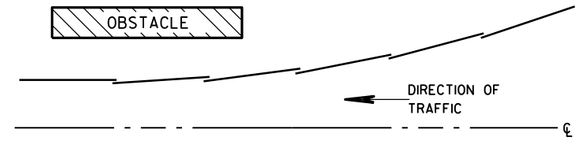
6

S.D.D. 14 B 15-10b

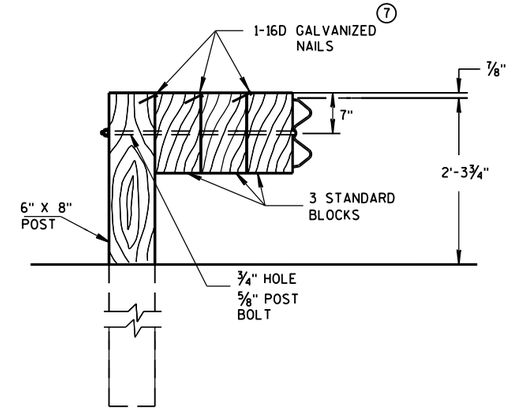


DETAIL FOR DOUBLE BLOCKS

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

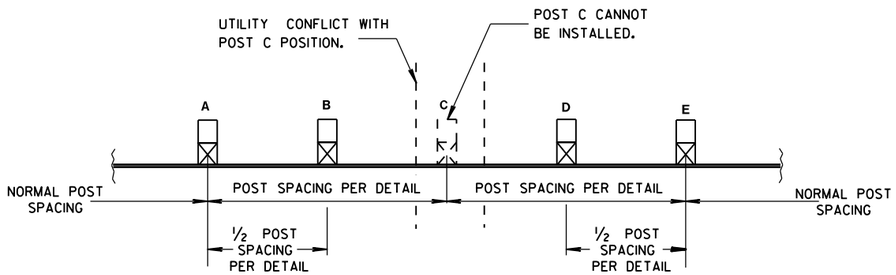


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

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



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

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

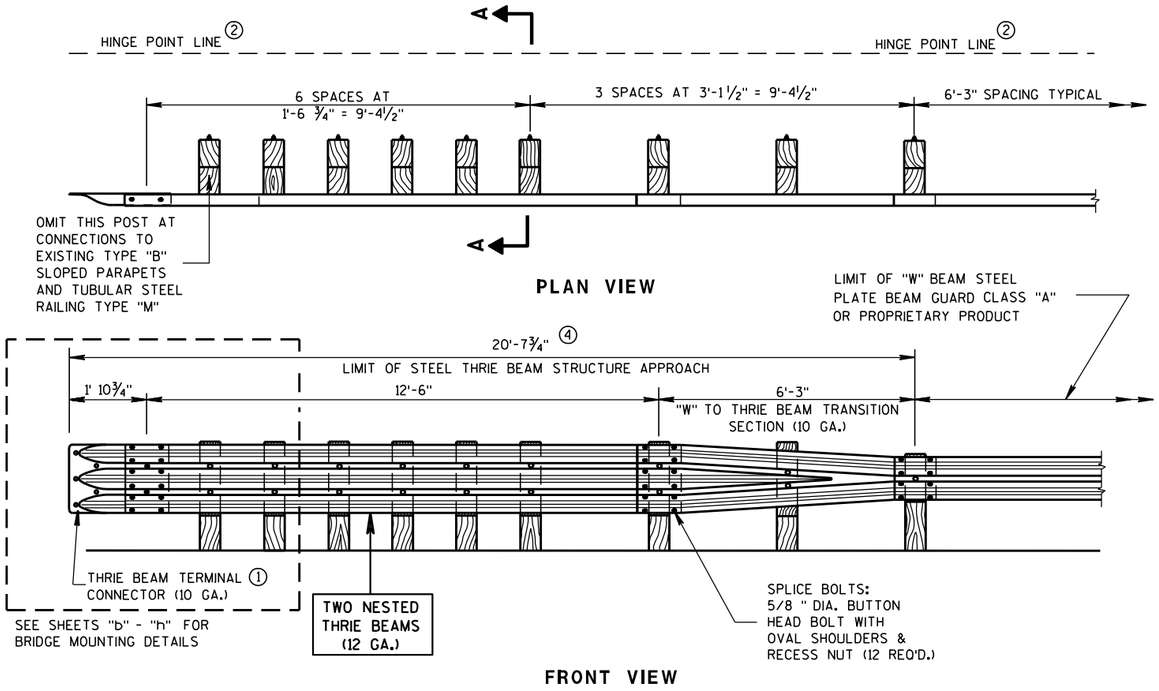
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
FHWA

6

S.D.D. 14 B 15-10c



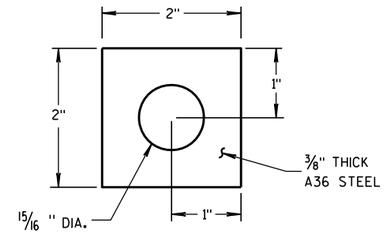


PLATE WASHER DETAIL

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

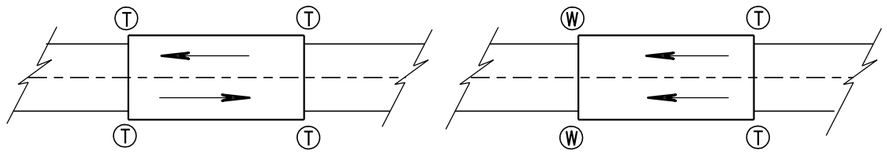
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2" , AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.

③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.

④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



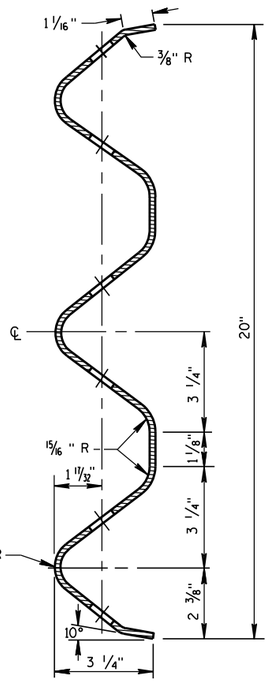
TWO WAY TRAFFIC

ONE WAY TRAFFIC

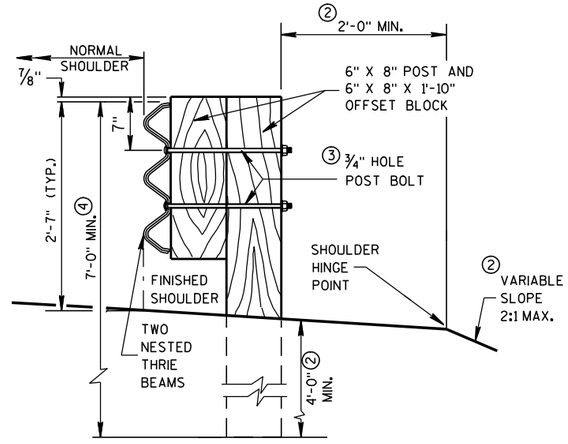
(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

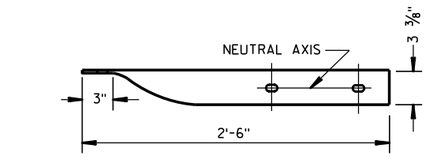
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

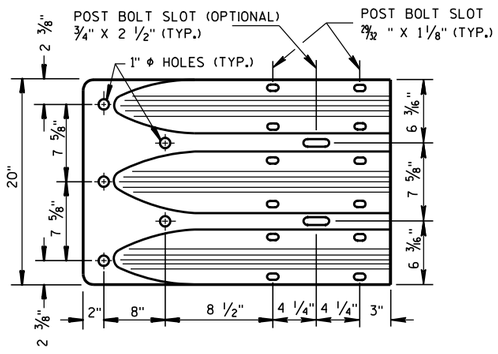


SECTION THRU THRIE BEAM RAIL ELEMENT

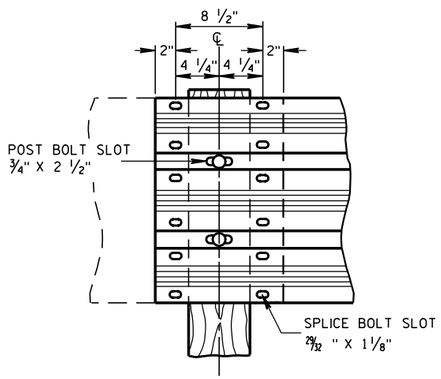


SECTION A-A





THRIE BEAM TERMINAL CONNECTOR



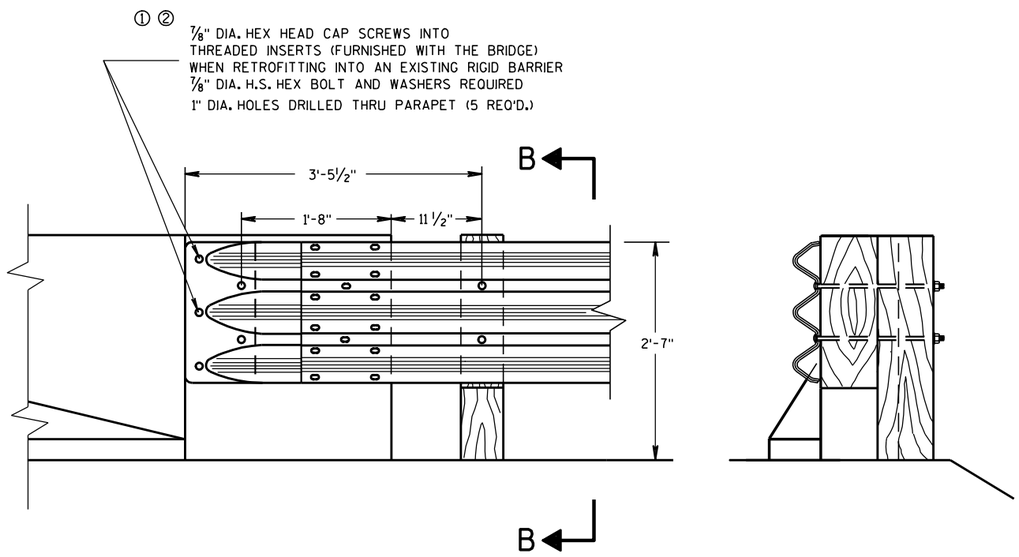
THRIE BEAM SPLICE

STEEL THRIE BEAM STRUCTURE APPROACH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

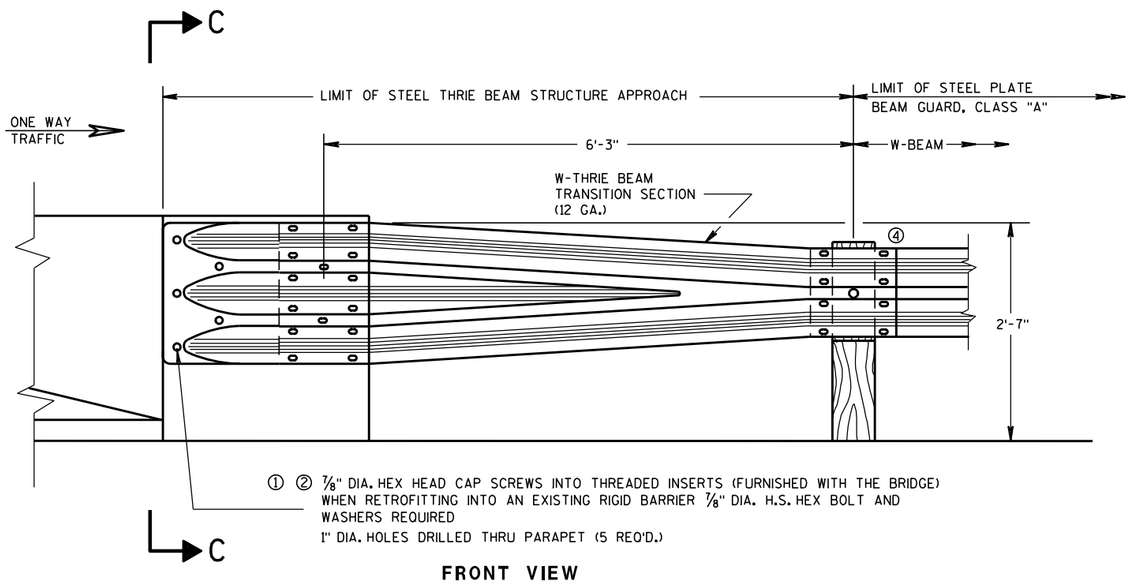
FHWA



FRONT VIEW

SECTION B-B

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



① ② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.)

FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

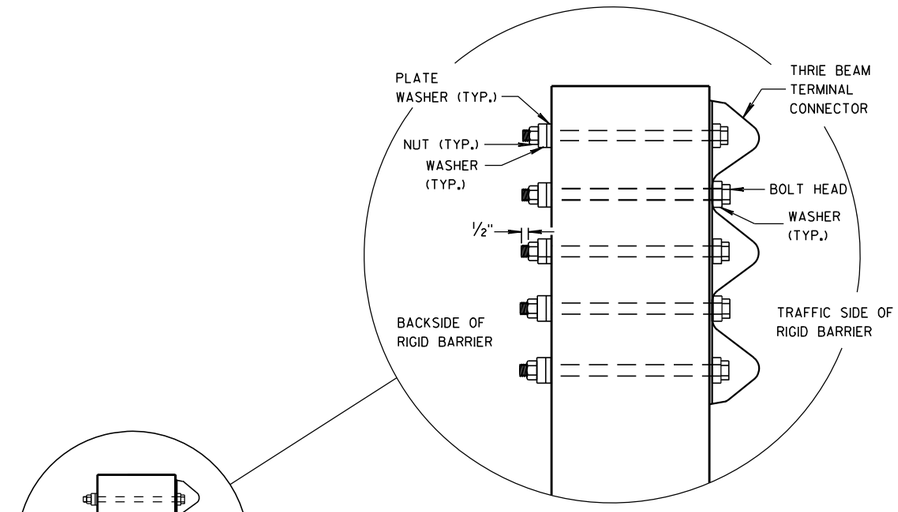
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

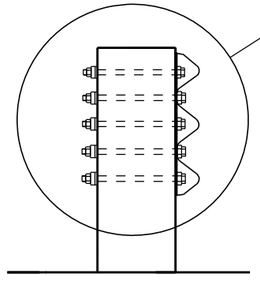
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.





SECTION C-C

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zaa
ROADWAY STANDARDS 179
ENGINEER

FHWA

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S.D.D. 14 B 20-11b

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S.D.D. 14 B 20-11b

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

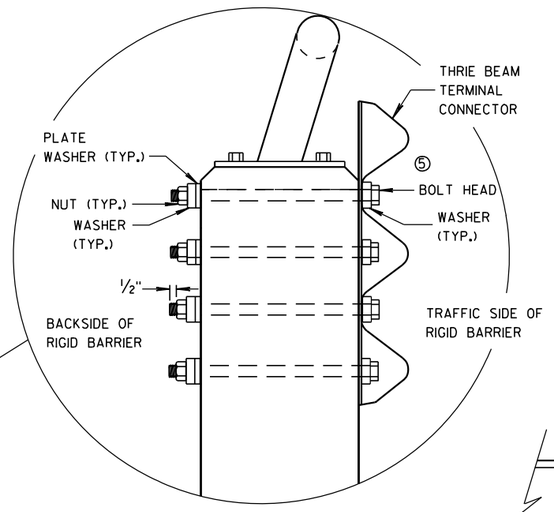
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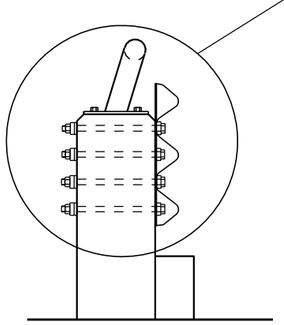
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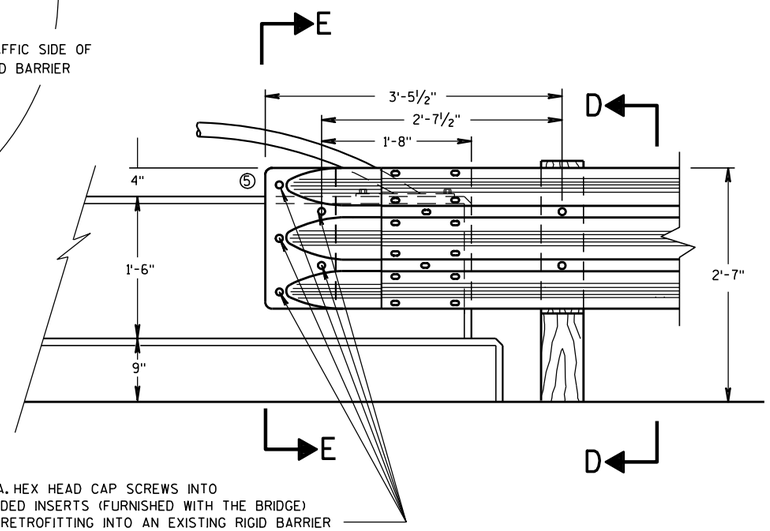
⑤ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.





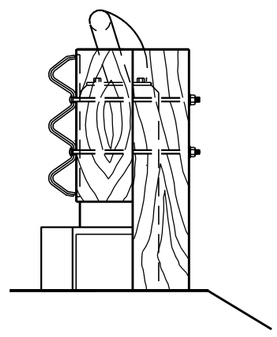
SECTION E-E



①② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED

1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)

FRONT VIEW

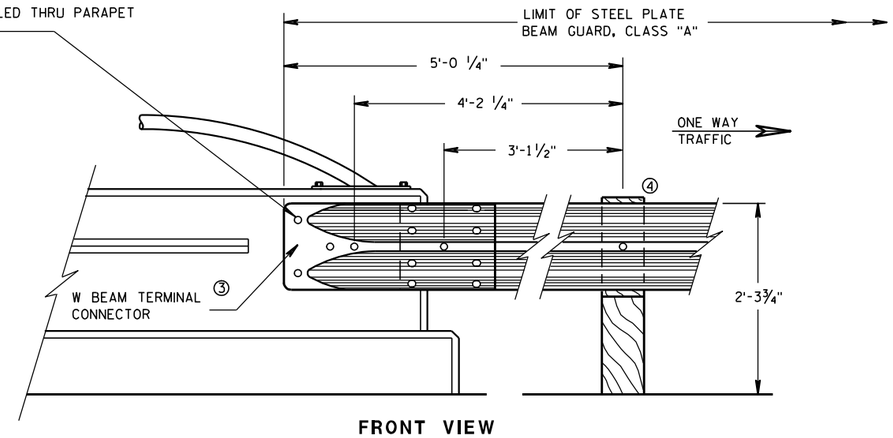


SECTION D-D

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

①② ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER ⅞" DIA. H.S. HEX BOLT AND WASHERS REQUIRED

1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO VERTICAL FACED PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

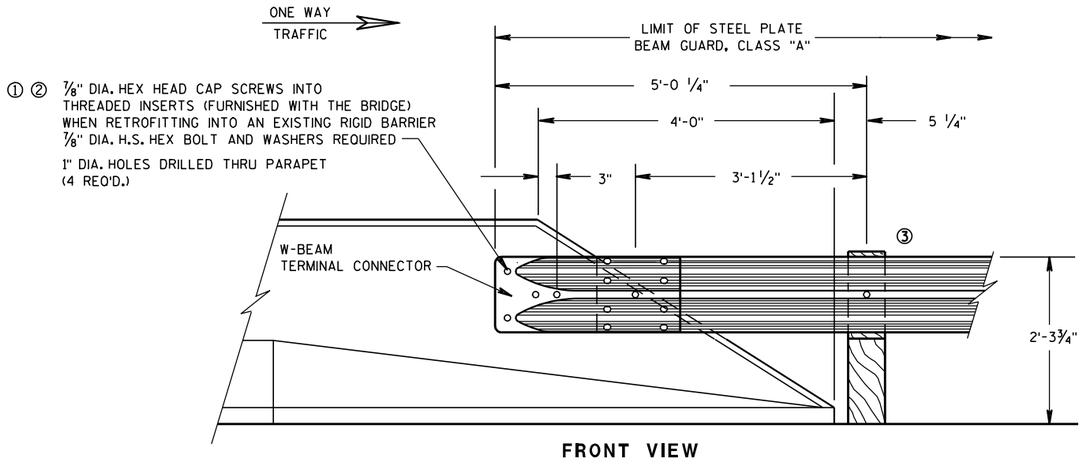
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S.D.D. 14 B 20-11c



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

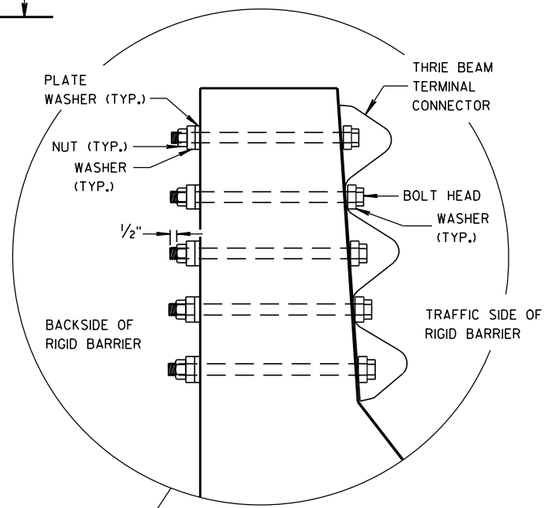
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

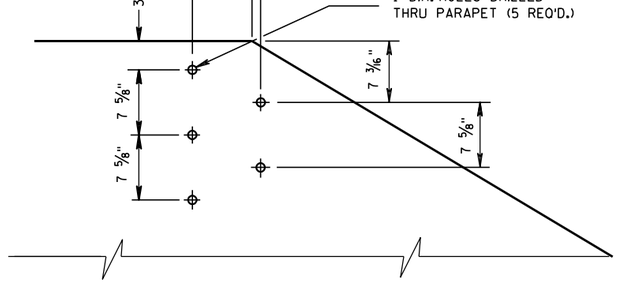
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② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

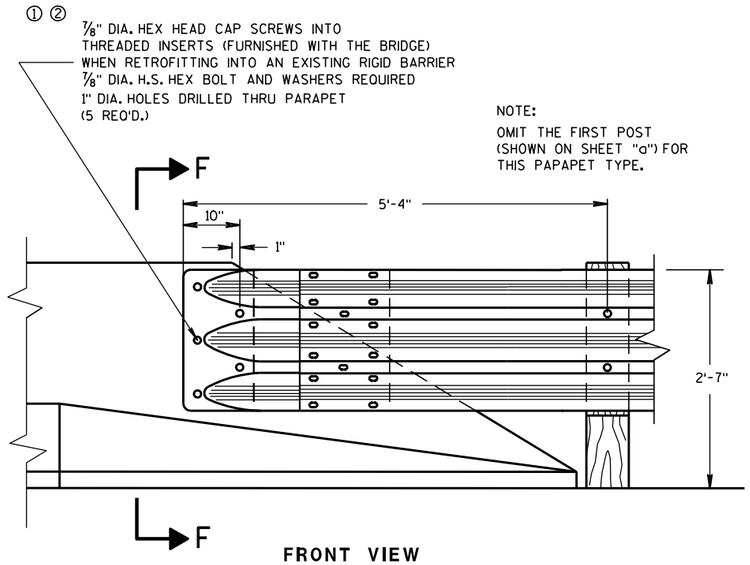
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DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

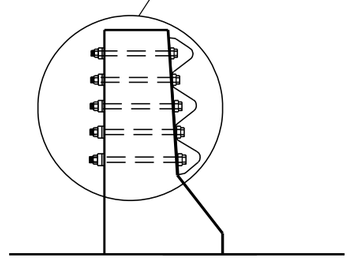




DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION F-F

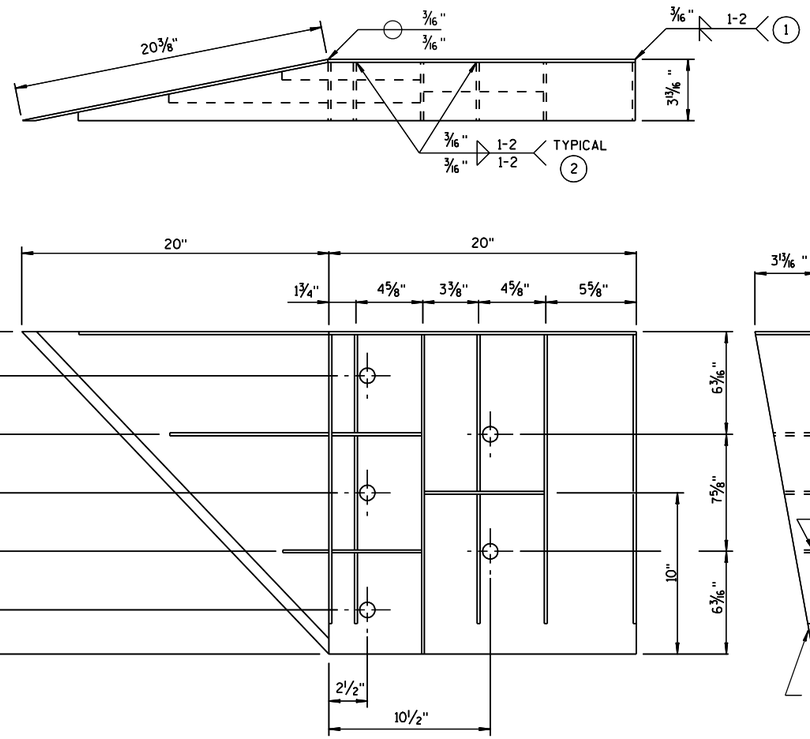
THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

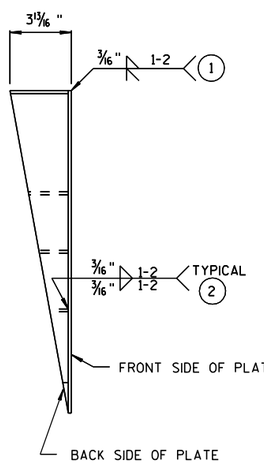
STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SLOPED END PARAPETS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zaa — ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 20-11d





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

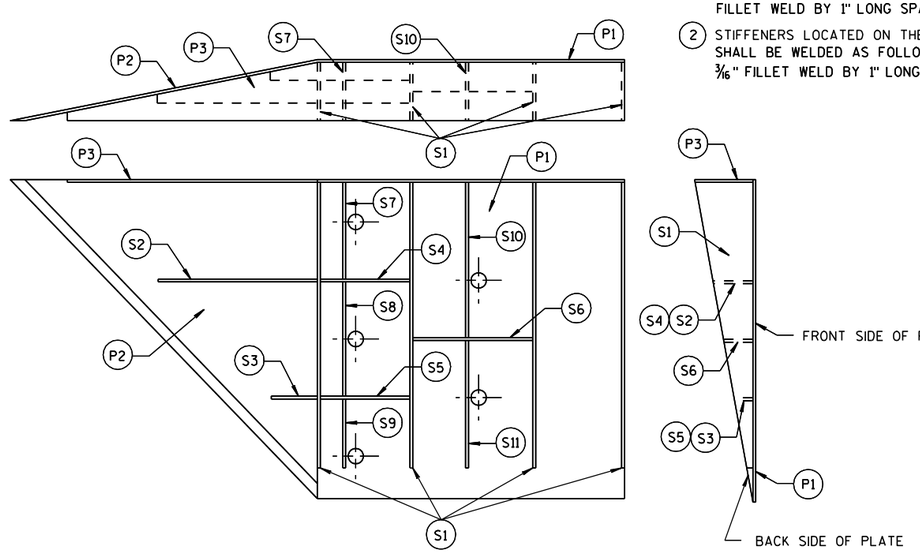


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTOR PLATE DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

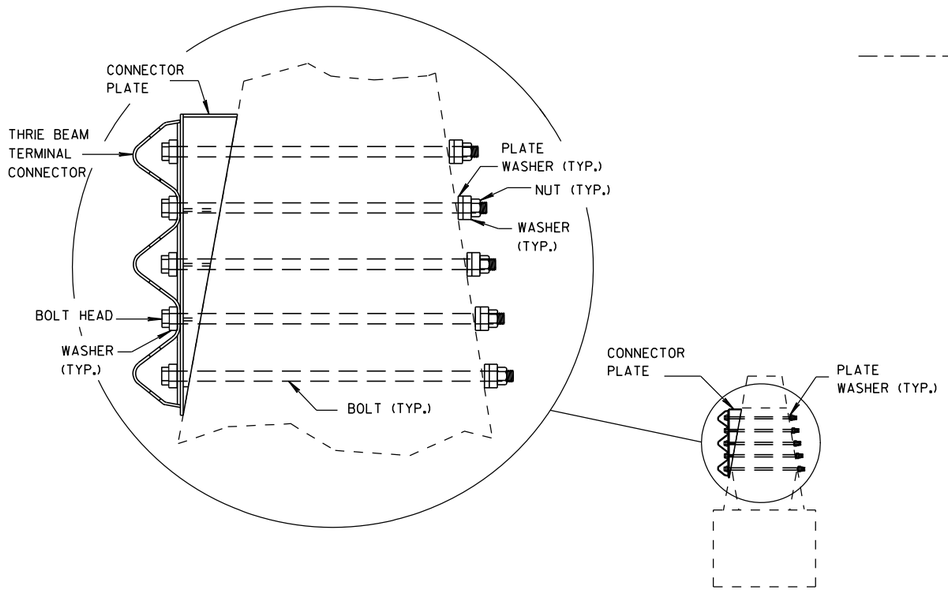
APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
82
FHWA

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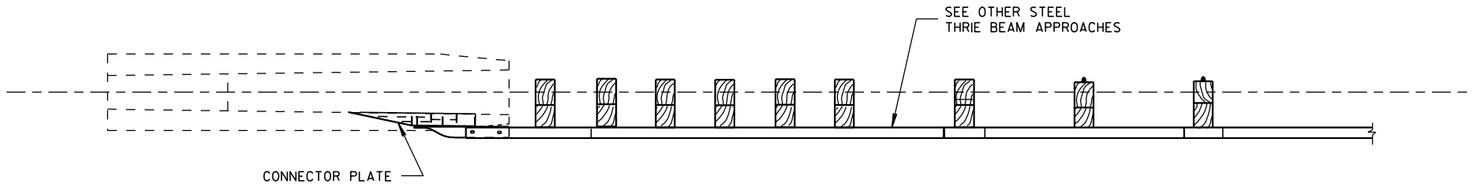
S.D.D. 14 B 20-11g

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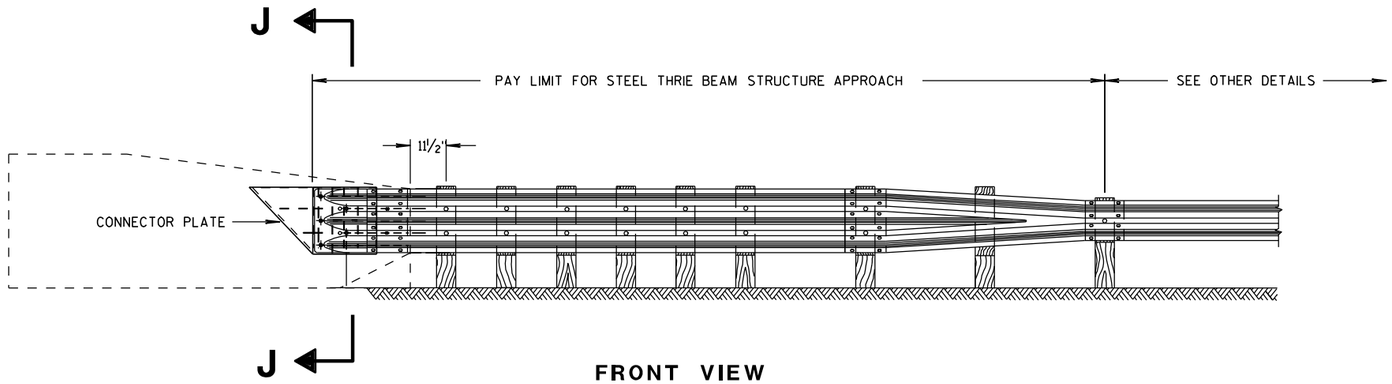
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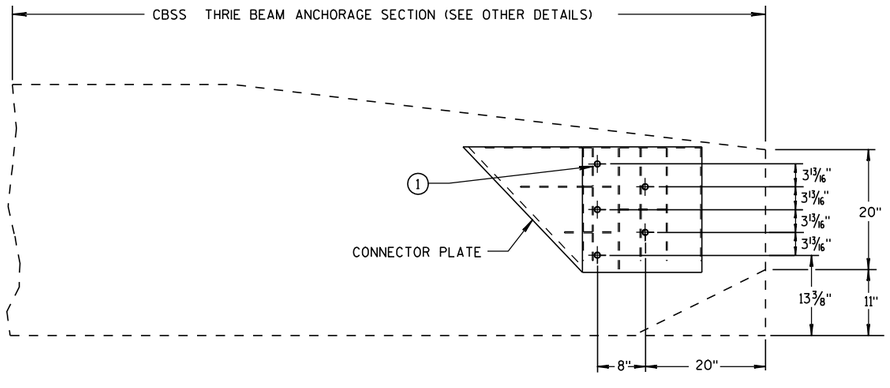
SECTION J-J



PLAN VIEW



FRONT VIEW



CONNECTOR PLATE LOCATION

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

CONNECTOR PLATE, DRILLING HOLES THROUGH PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

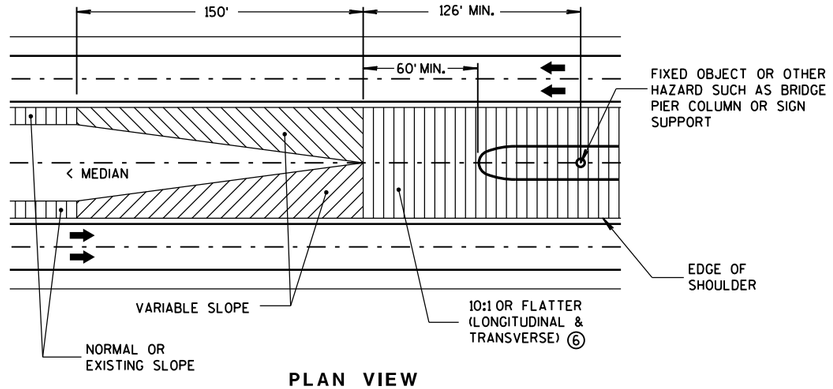
APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

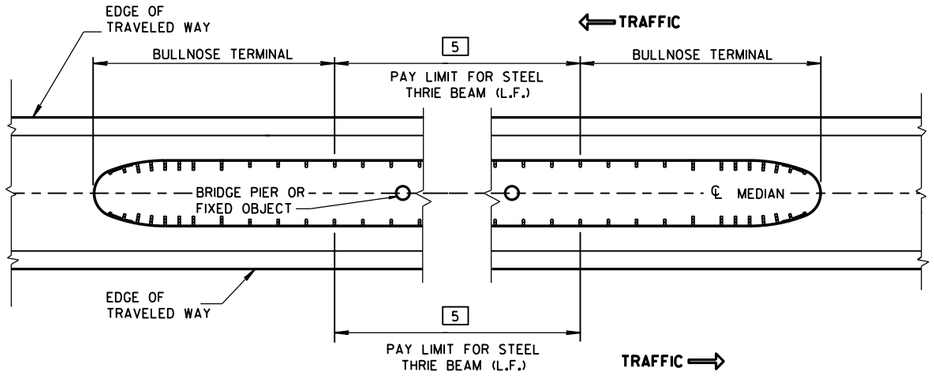
FHWA

6
S.D.D. 14 B 20-11h

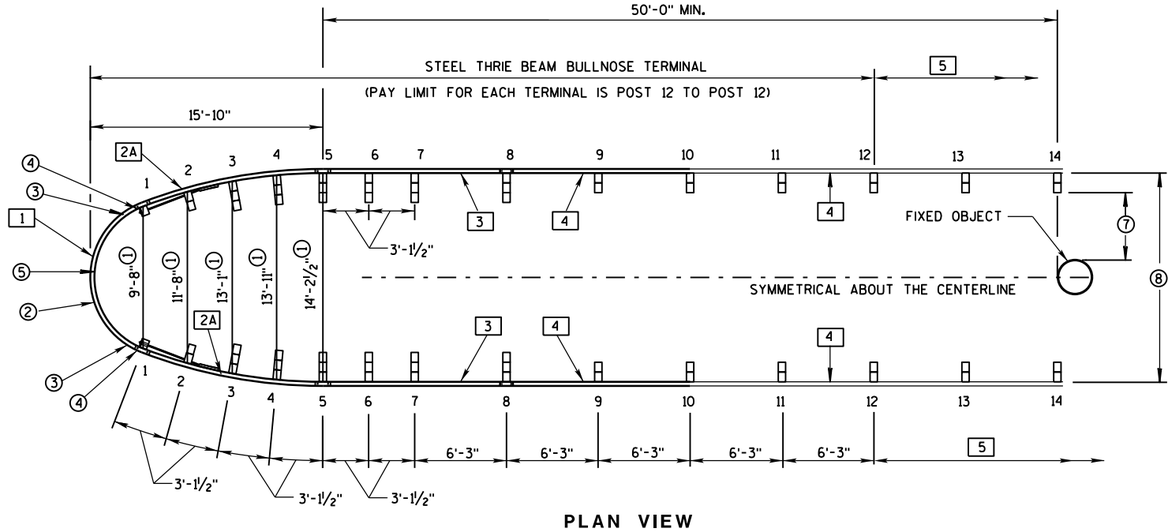


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

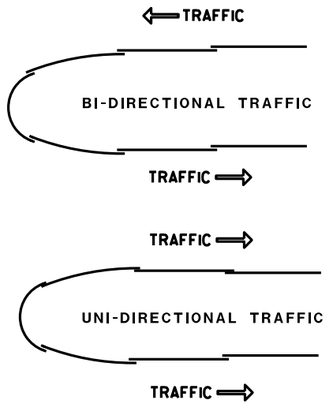


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

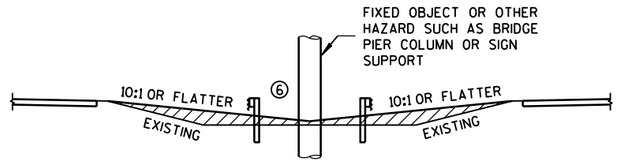
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

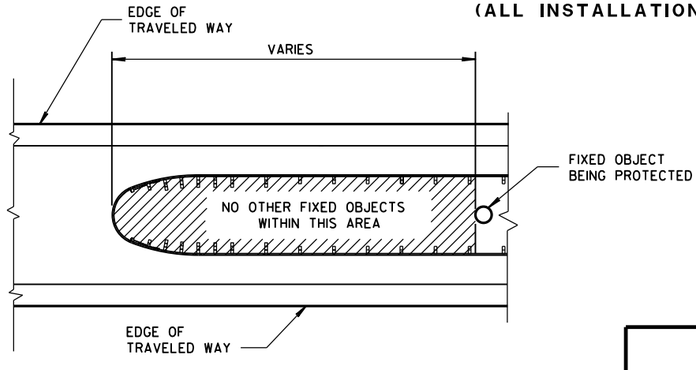
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)

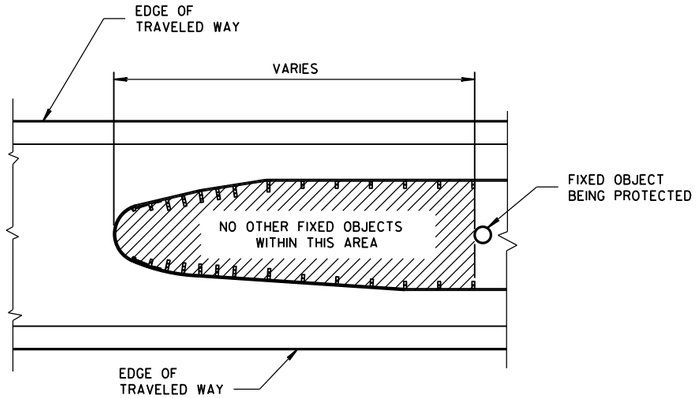


HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 26-3a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

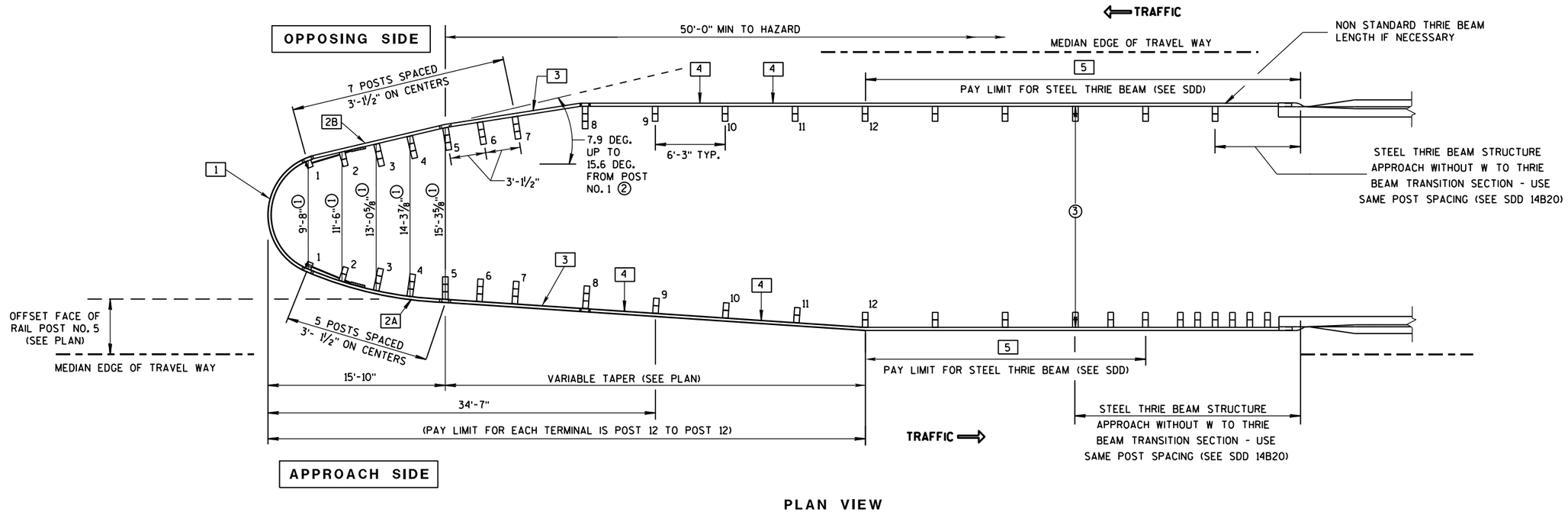
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

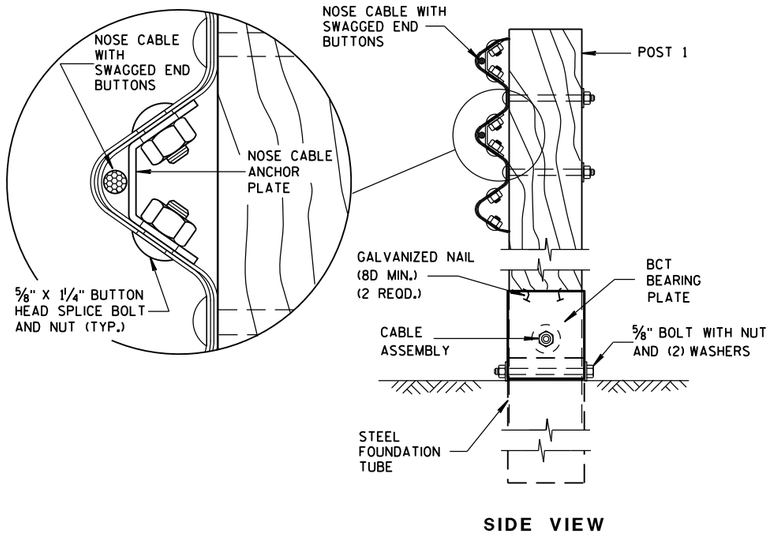
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

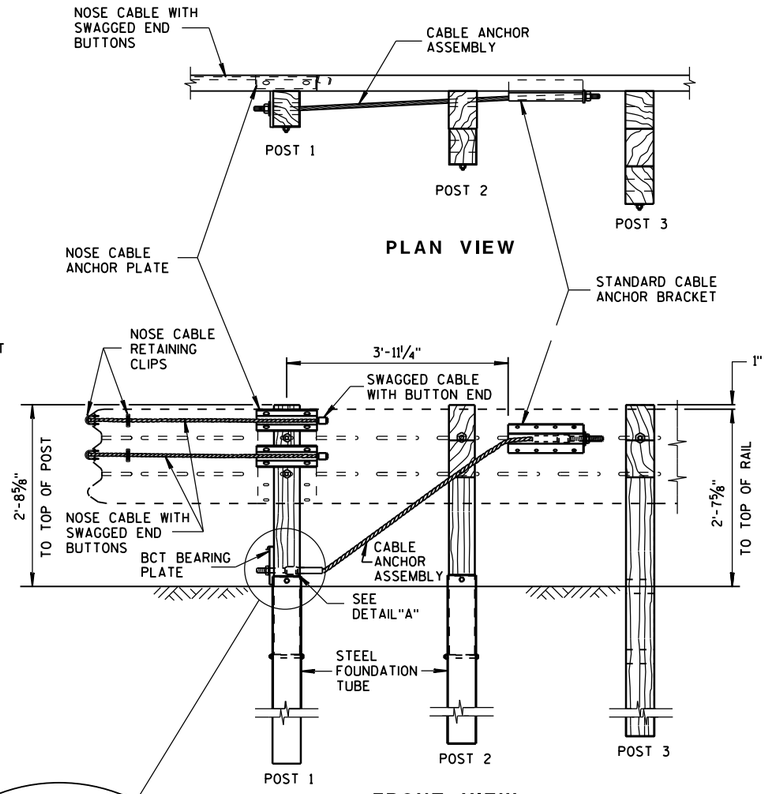
6

S.D.D. 14 B 26-3b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



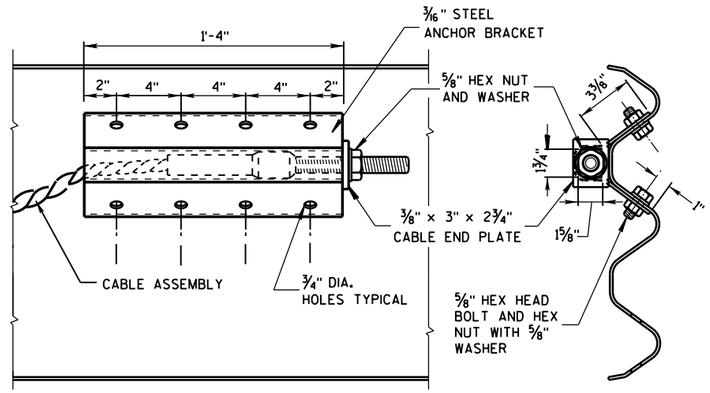
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

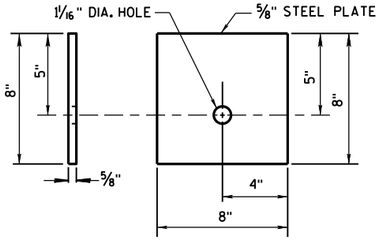
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

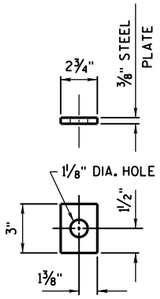


FRONT VIEW END VIEW

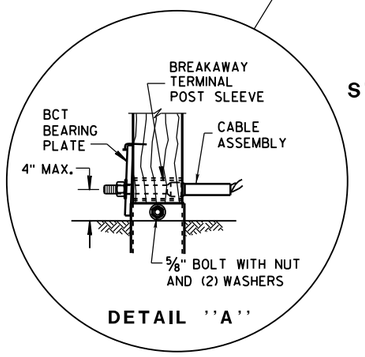
DETAILS OF CABLE ANCHOR BRACKET



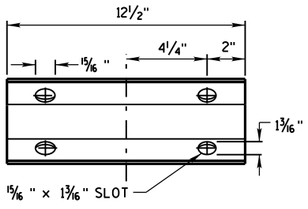
BCT BEARING PLATE



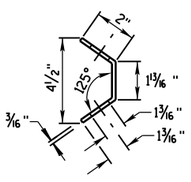
CABLE END PLATE



DETAIL ''A''



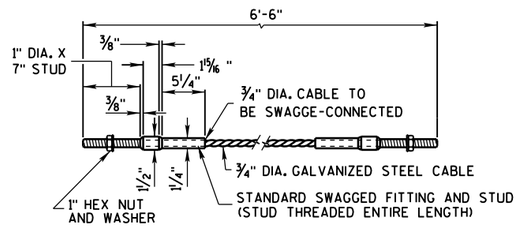
ELEVATION VIEW



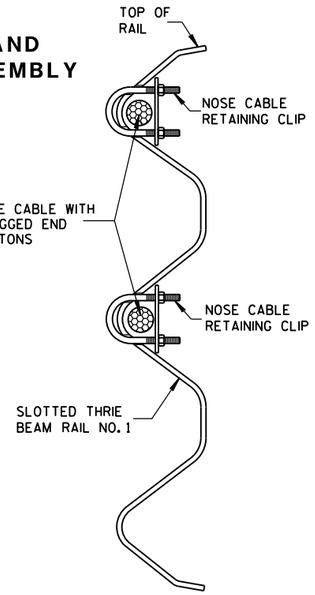
END VIEW

NOSE CABLE ANCHOR PLATE

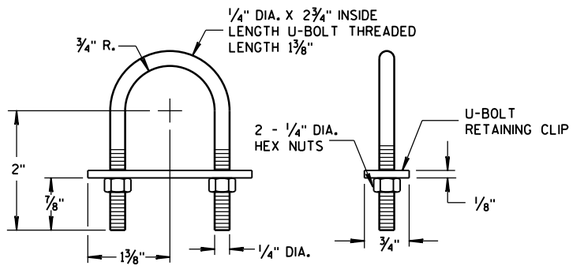
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



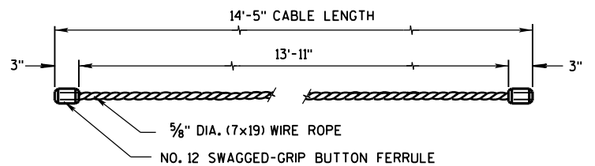
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

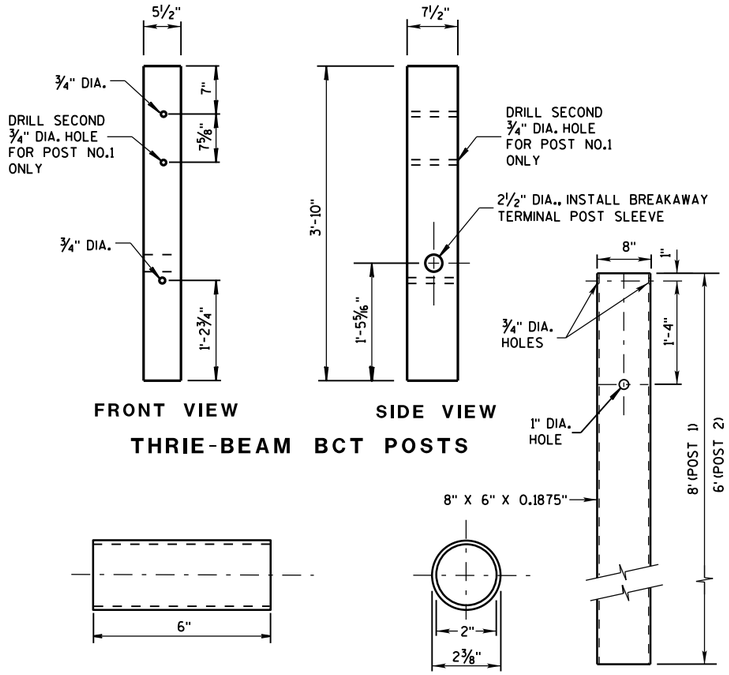
TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

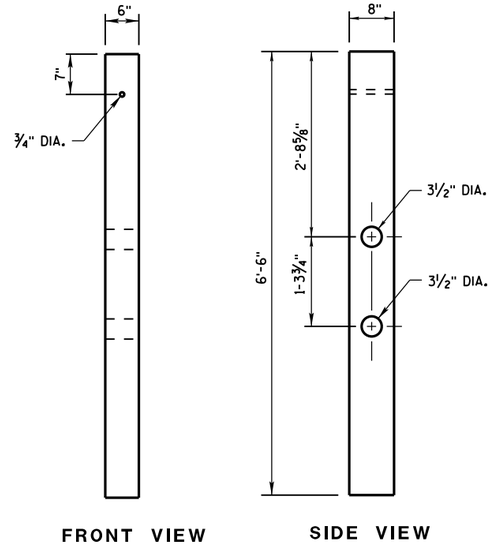
S.D.D. 14 B 26-3c



THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

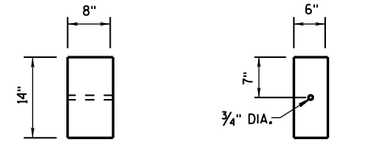
STEEL FOUNDATION TUBE



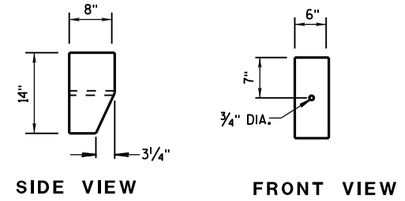
THRIE-BEAM CRT WOOD POSTS

GENERAL NOTES

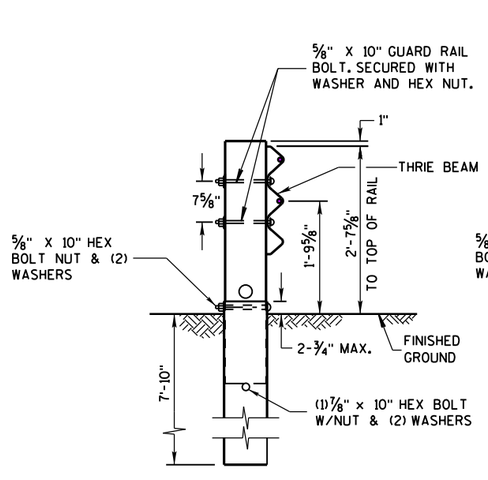
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



STANDARD WOOD BLOCK

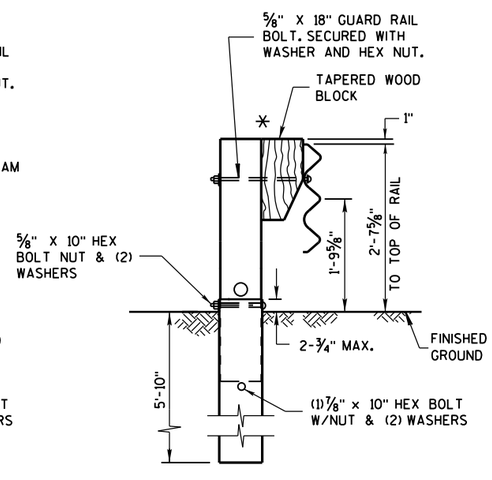


TAPERED WOOD BLOCK



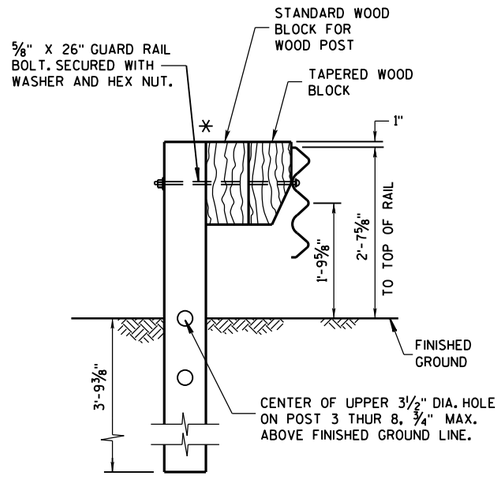
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



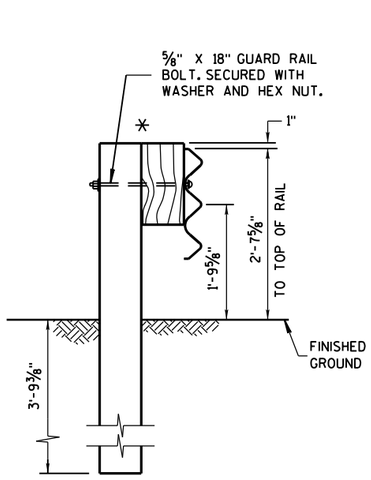
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12

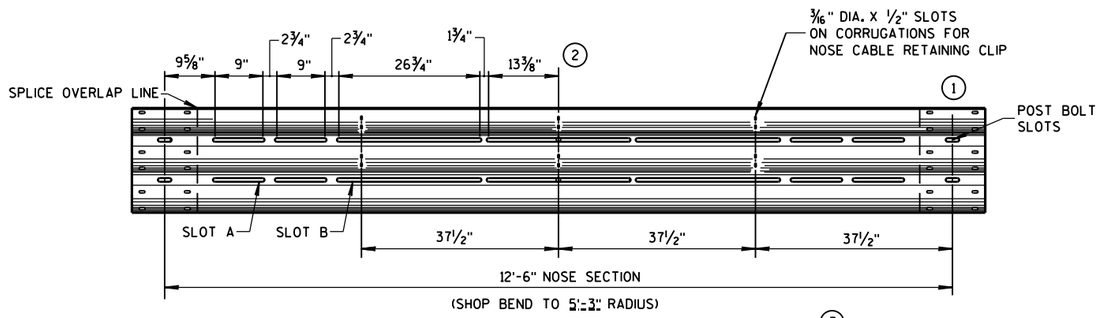
(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

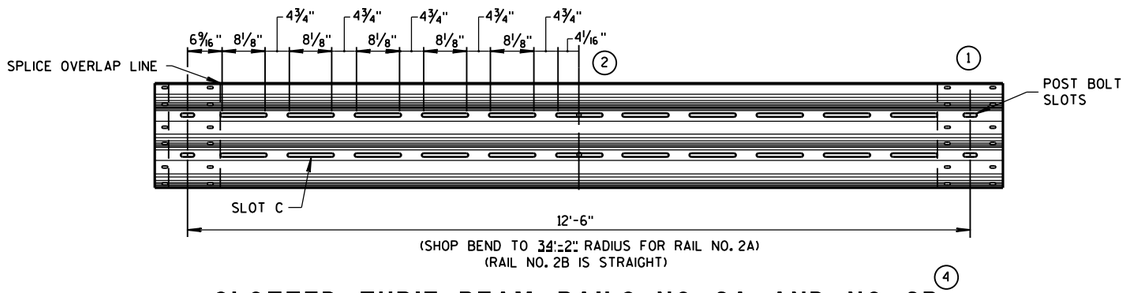
STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

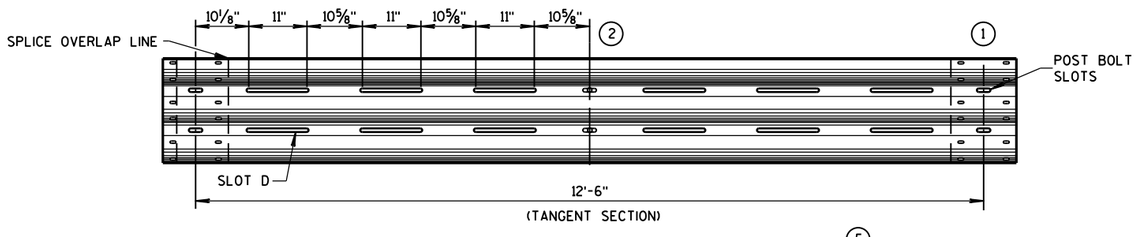
S.D.D. 14 B 26-3d



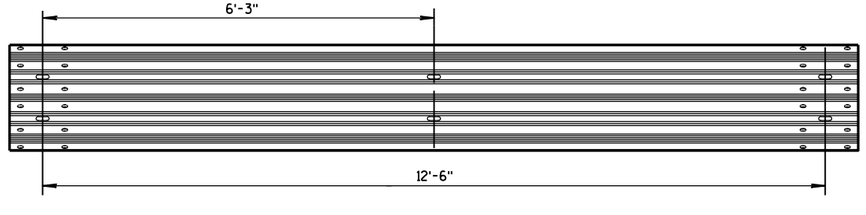
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

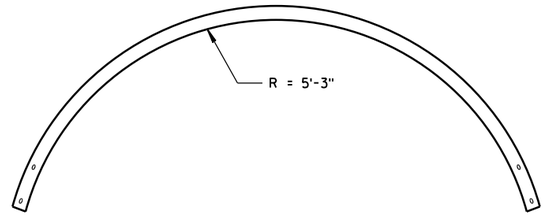
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

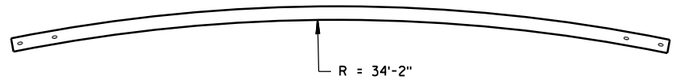
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



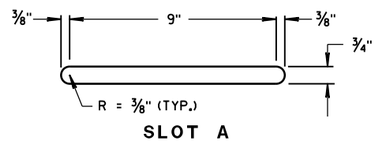
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

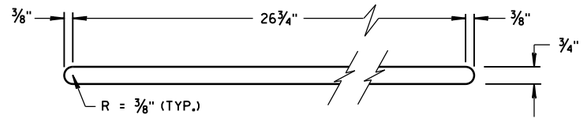


PLAN VIEW

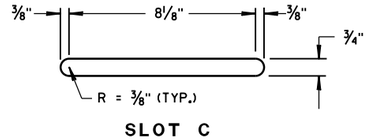
SLOTTED THRIE BEAM RAIL NO. 2A



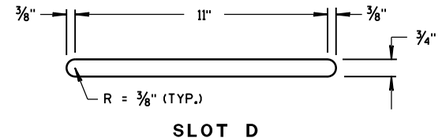
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2014 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

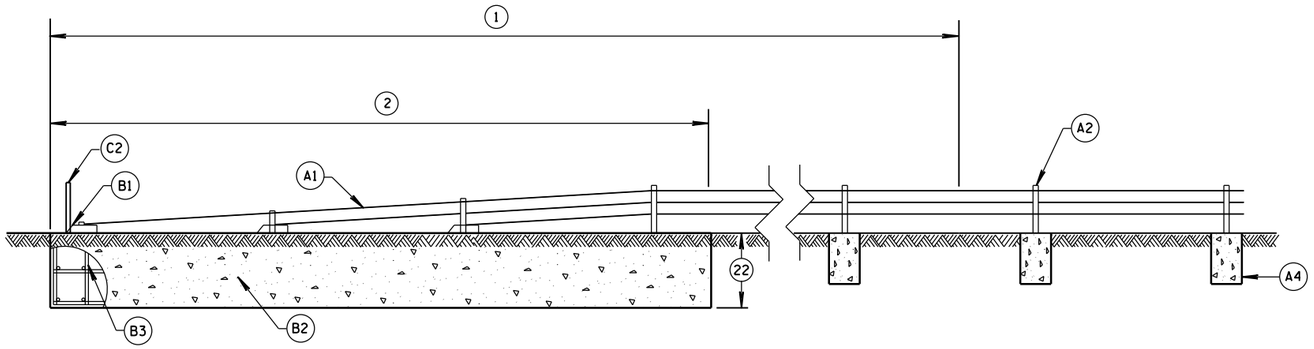
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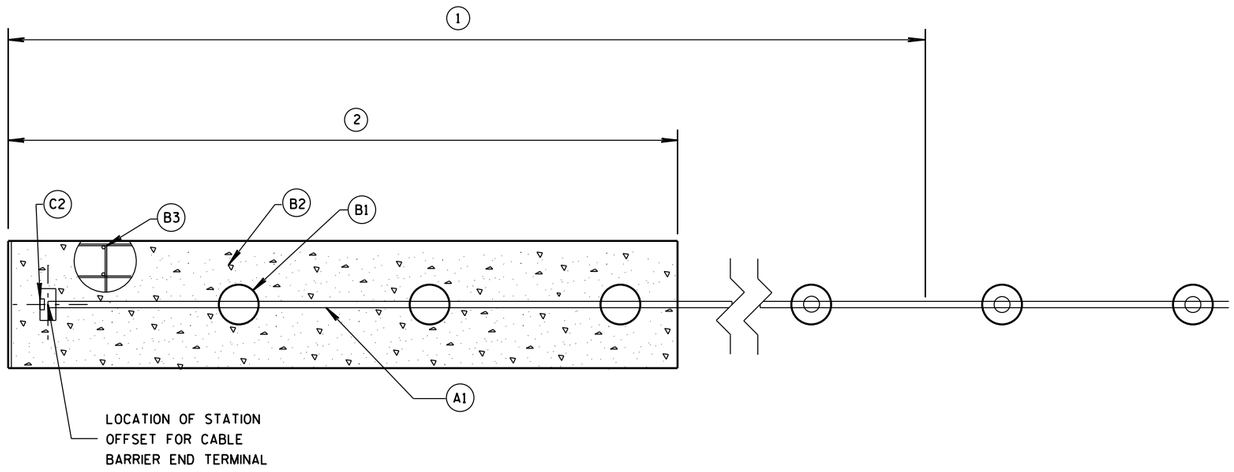
S.D.D. 14 B 26-3e

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S.D.D. 14 B 26-3e

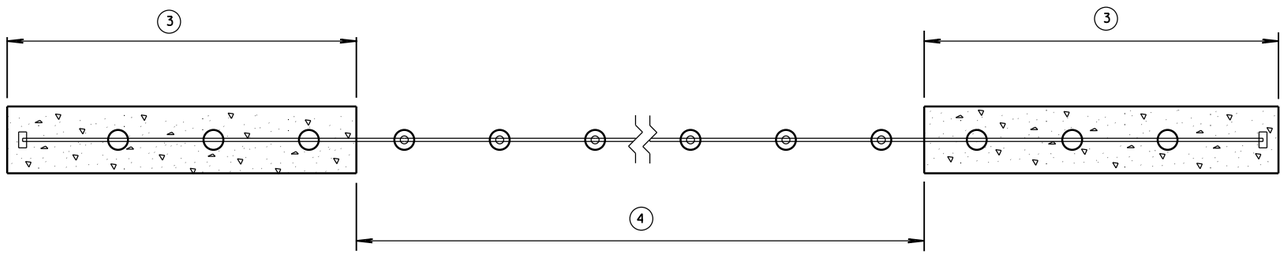


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DEISGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.

DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	3/4" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	ASTM A741 MIN. BREAKING STRENGTH 39,000 LBS.
			AASHTO M30 TYPE 1 CLASS A (GALVANIATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
			SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
			MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE.
			TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

(1) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(2) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(3) CABLE BARRIER END TERMINAL

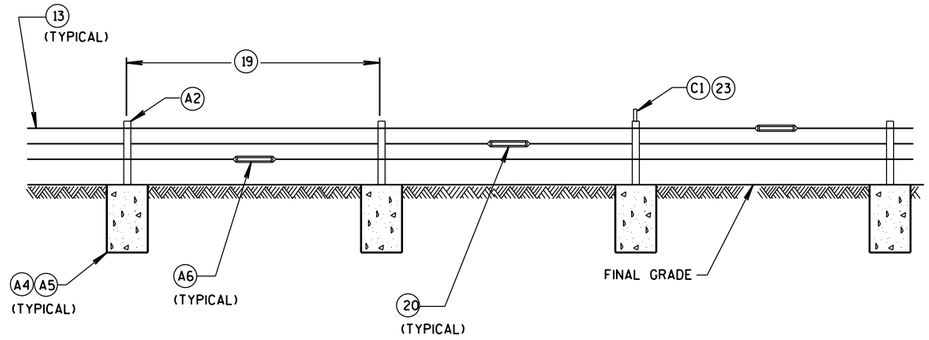
(4) CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

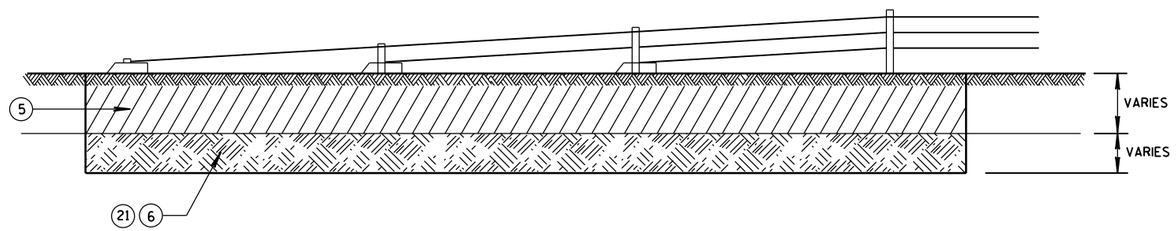
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S.D.D. 14 B 52-1a



PROFILE VIEW

LINE POST INSTALLATION



CABLE BARRIER END TERMINAL ROCK EXCAVATION DETAIL

(5) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(6) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(7) SOIL TO BE EXCAVATED FOR LINE POST (VARIES).

(8) ROCK TO BE EXCAVATED FOR LINE POST (VARIES).

(9) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.

(10) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.

(11) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.

(12) MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

(13) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.

(14) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.

(15) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.

(16) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(17) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(18) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.

(19) MAXIMUM POST SPACING IS 15 FEET.

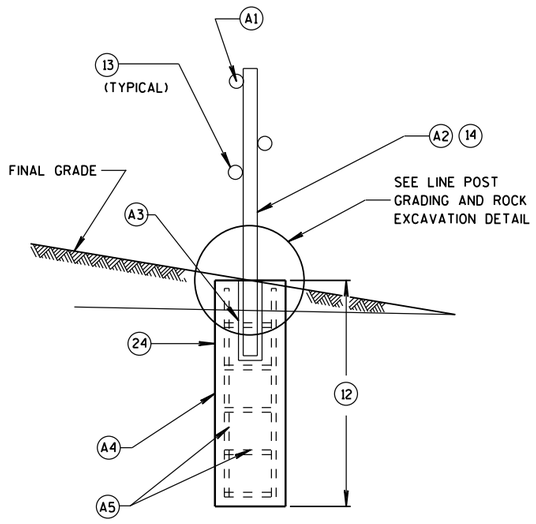
(20) STAGGER TURNBUCKLES (TYPICAL).

(21) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.

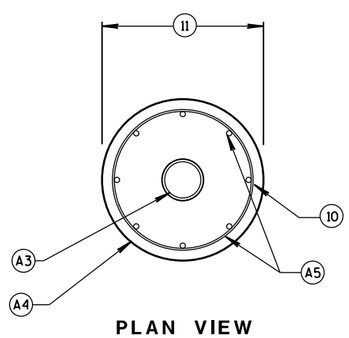
(22) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.

(23) LINE POST DELINEATOR SPACING IS 100 FEET.

(24) LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.

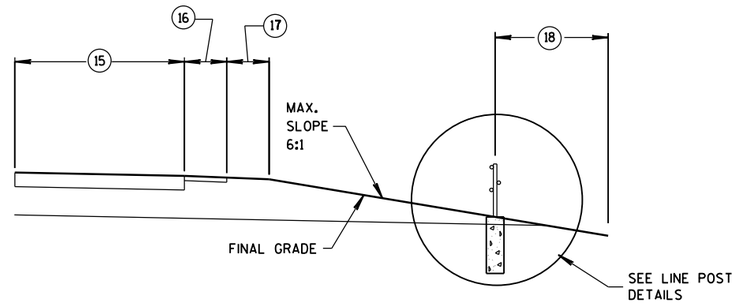


CROSS SECTION

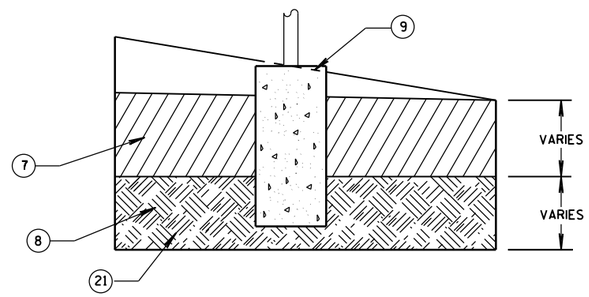


PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

LINE POST DETAILS



CABLE BARRIER OFFSET FROM DITCH LINE



LINE POST GRADING AND ROCK EXCAVATION DETAIL

CABLE BARRIER TYPE 1
LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

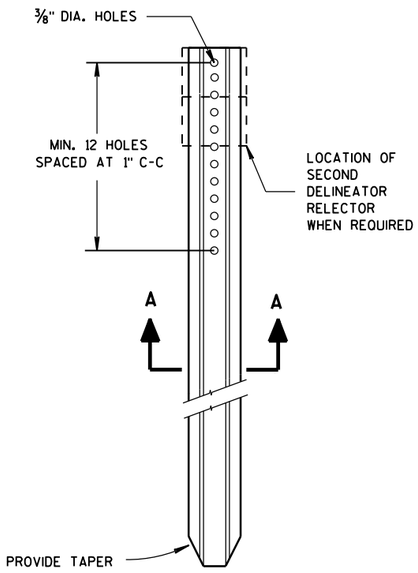
APPROVED
June. 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

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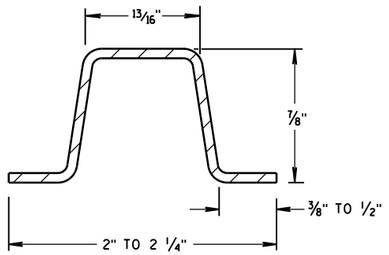
S.D.D. 14 B 52-1b

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S.D.D. 14 B 52-1b

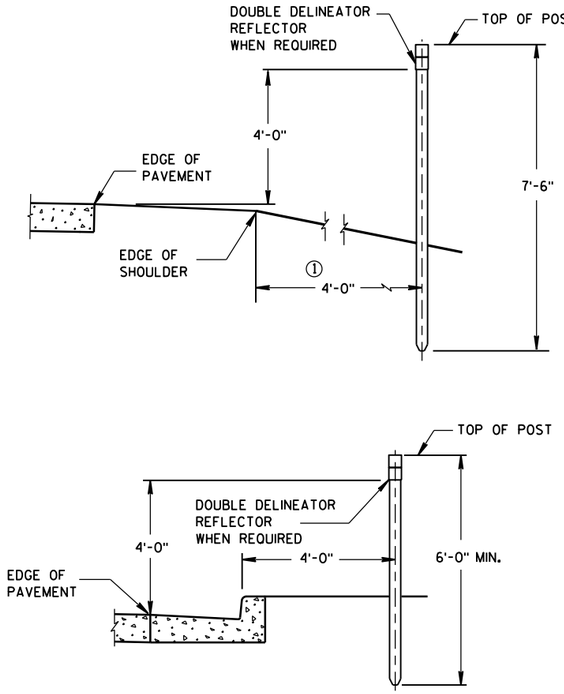


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

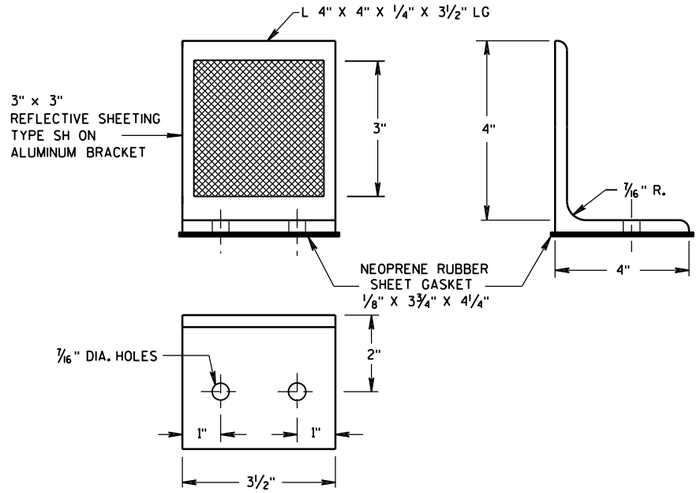


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

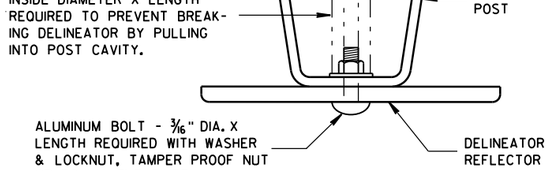
GENERAL NOTES

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

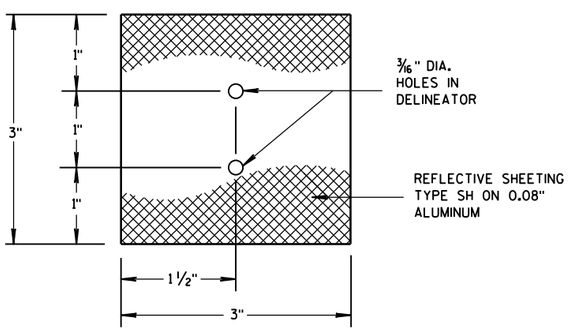
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



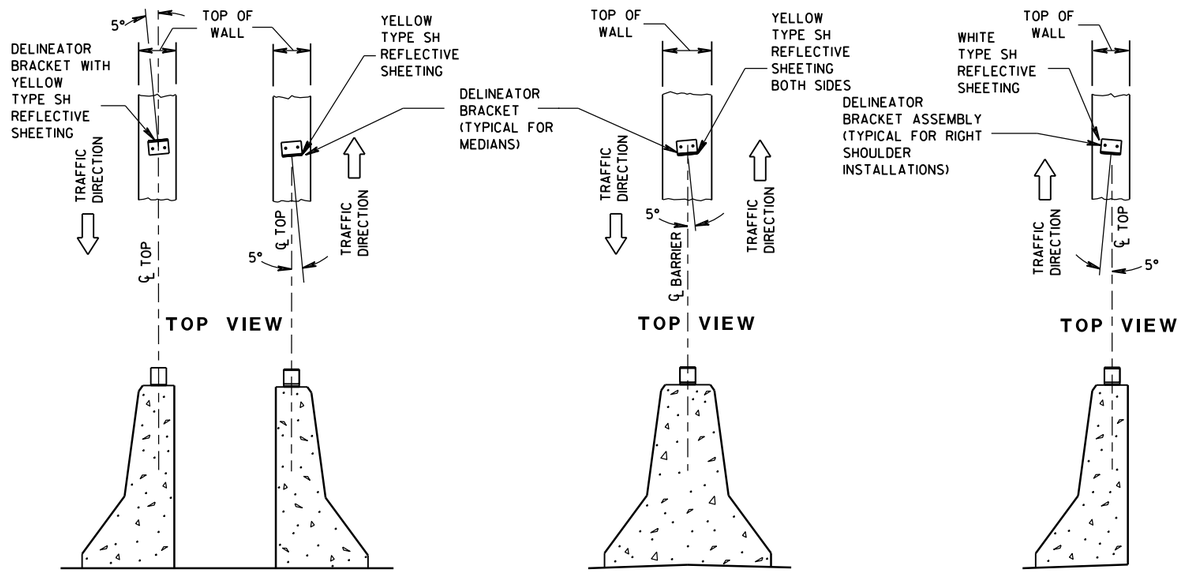
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR REFLECTOR

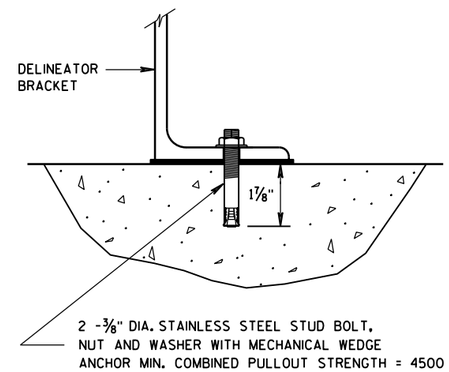


3"x 3" DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN | **MEDIAN BARRIER** | **BARRIER LOCATED TO RT. OF TRAFFIC FLOW**

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

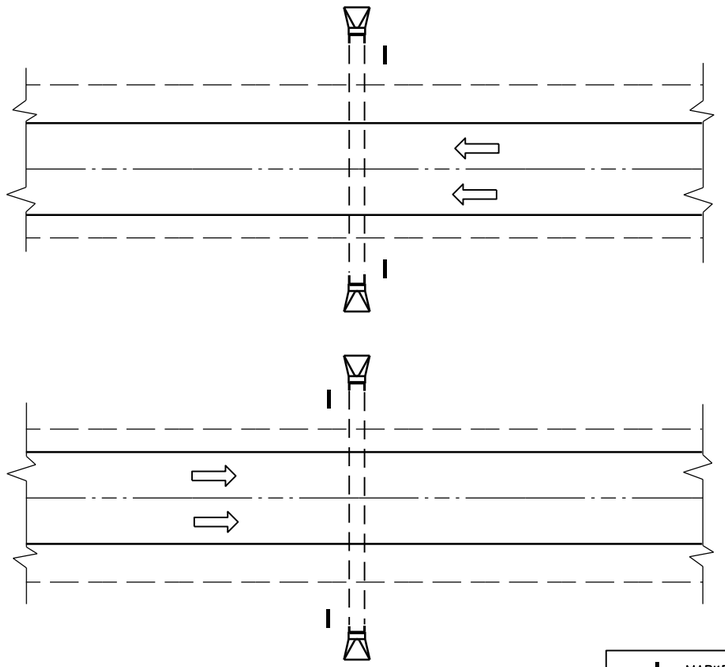
APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] ENGINEER
FHWA

6

S.D.D. 15 A 2-9

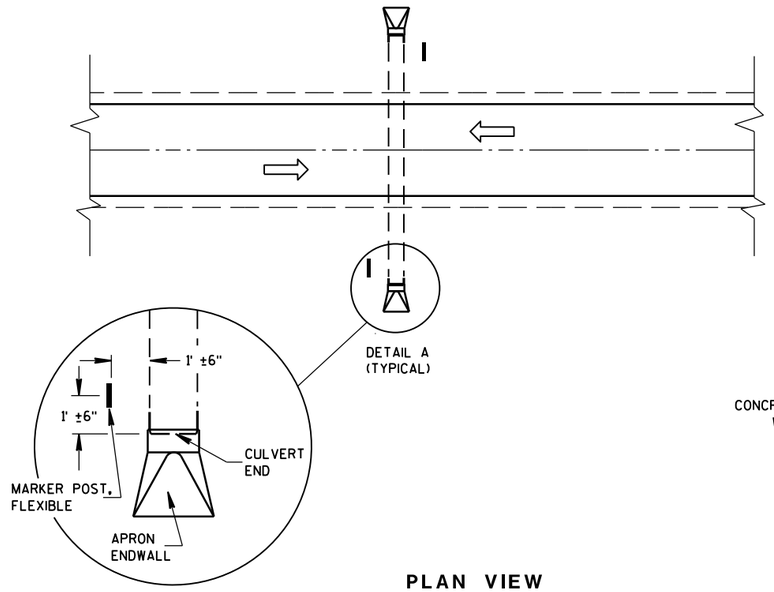
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S.D.D. 15 A 2-9



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

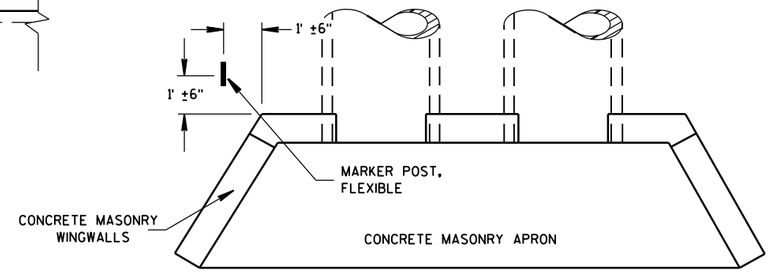
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

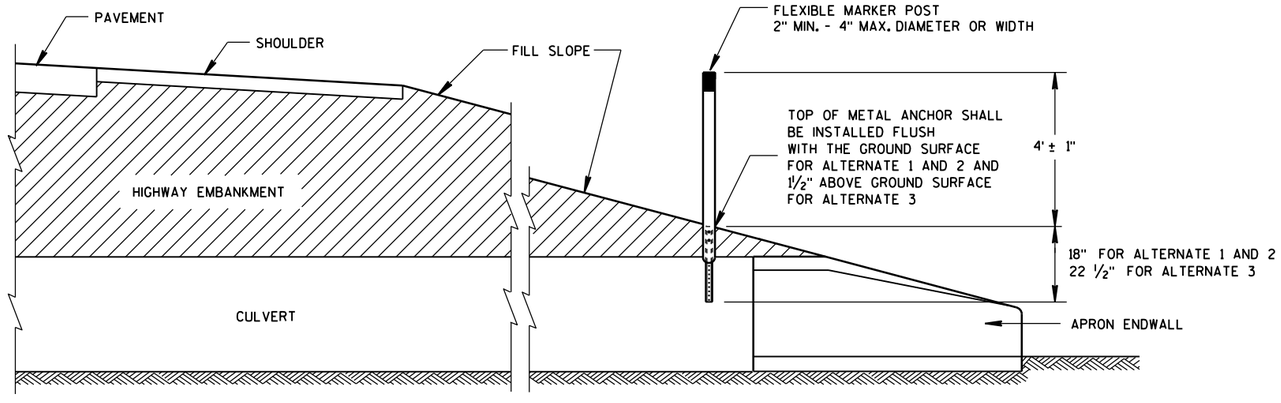
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

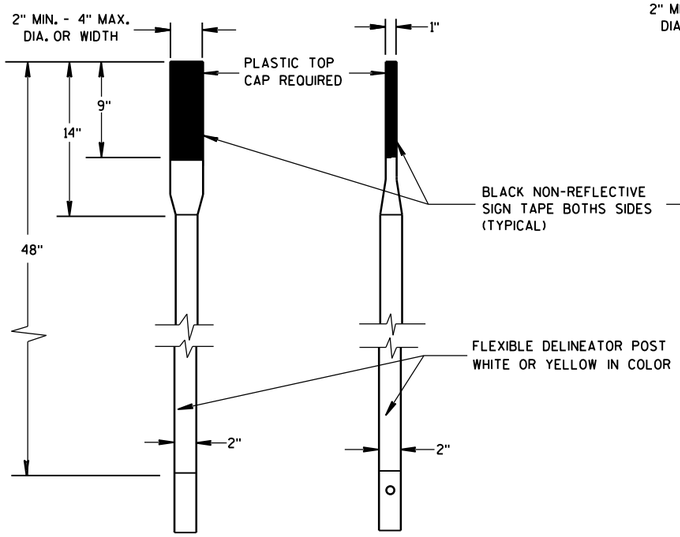
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

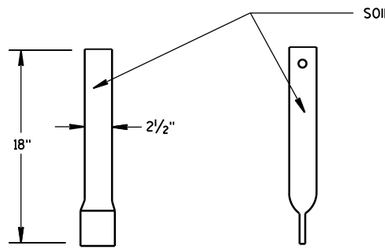
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S.D.D. 15 A 3-2a

6

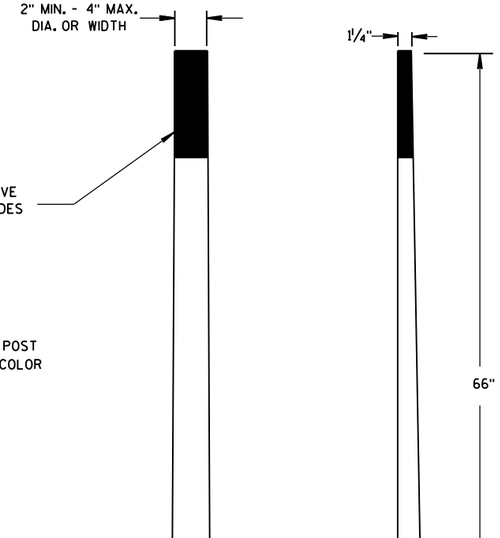
S.D.D. 15 A 3-2a





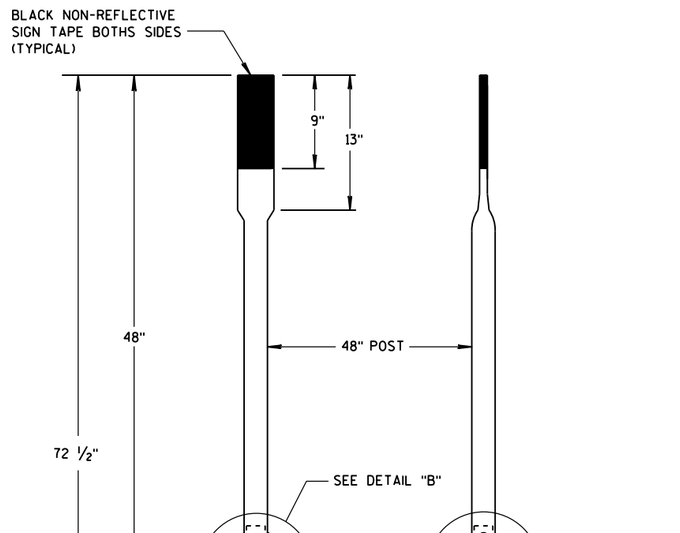
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

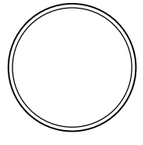
ALTERNATE 2



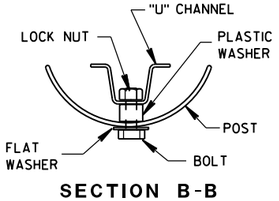
FRONT VIEW SIDE VIEW

ALTERNATE 3

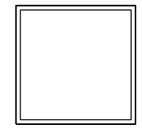
FLEXIBLE MARKER POSTS



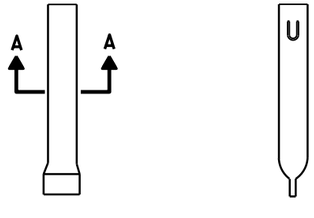
SECTION A-A



SECTION B-B

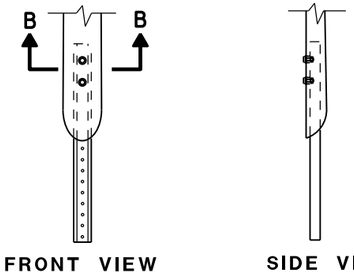


SECTION C-C



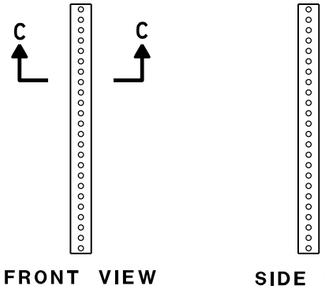
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

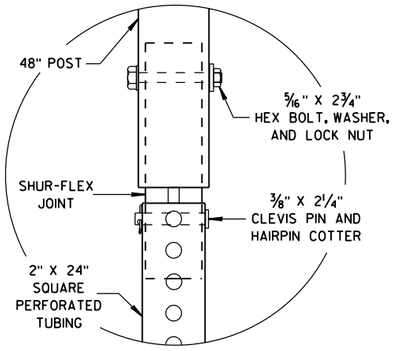
ALTERNATE 2



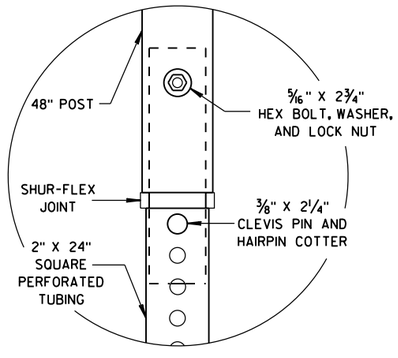
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

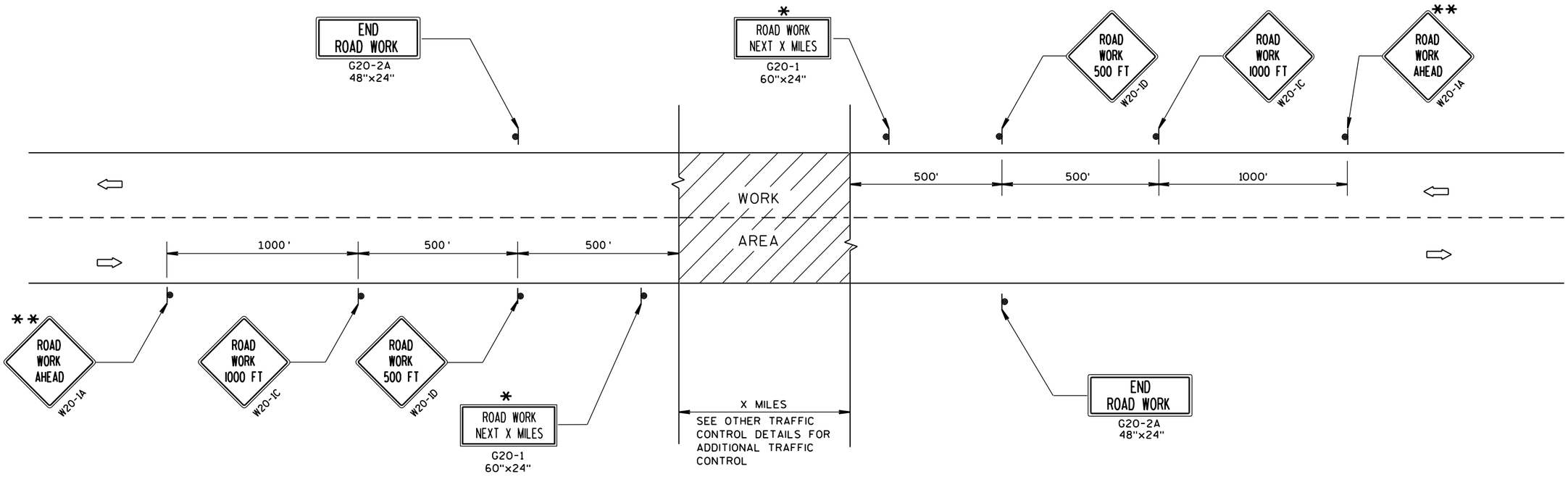
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

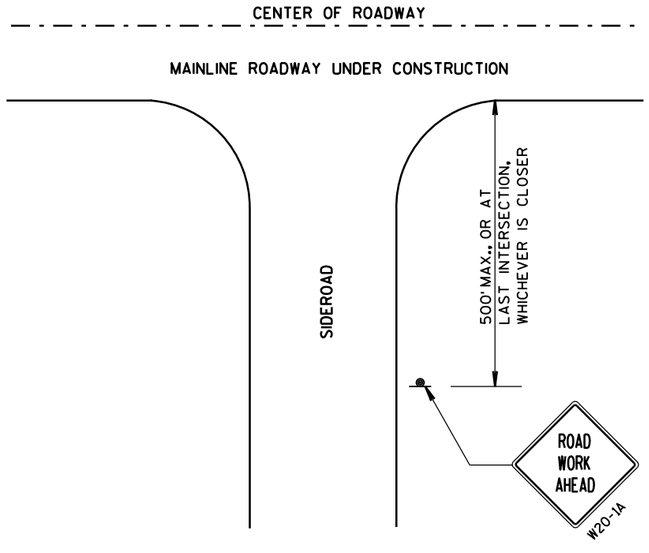
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER

FHWA

6

S.D.D. 15 C 4-3

6

S.D.D. 15 C 4-3

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

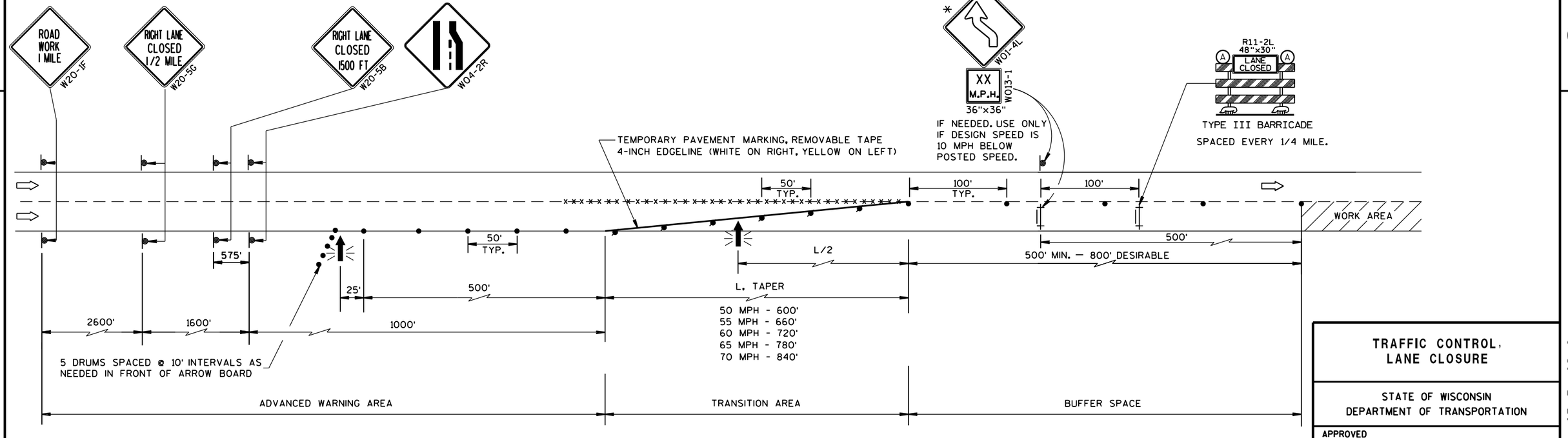
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



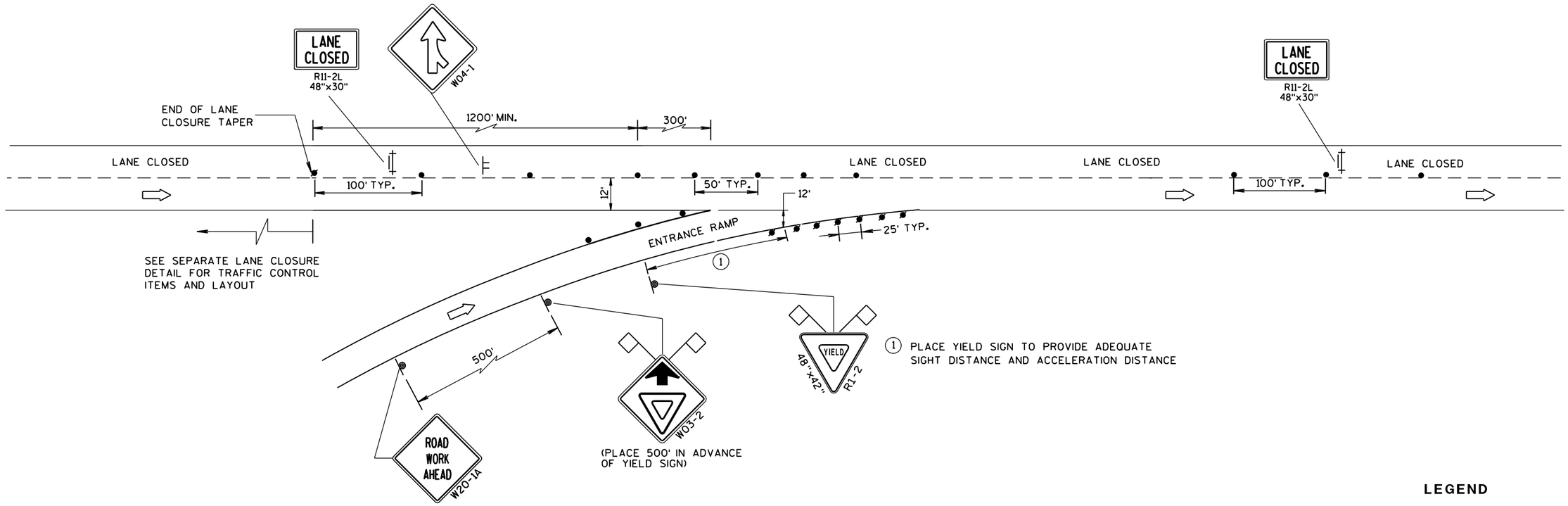
TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a



TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" x 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC

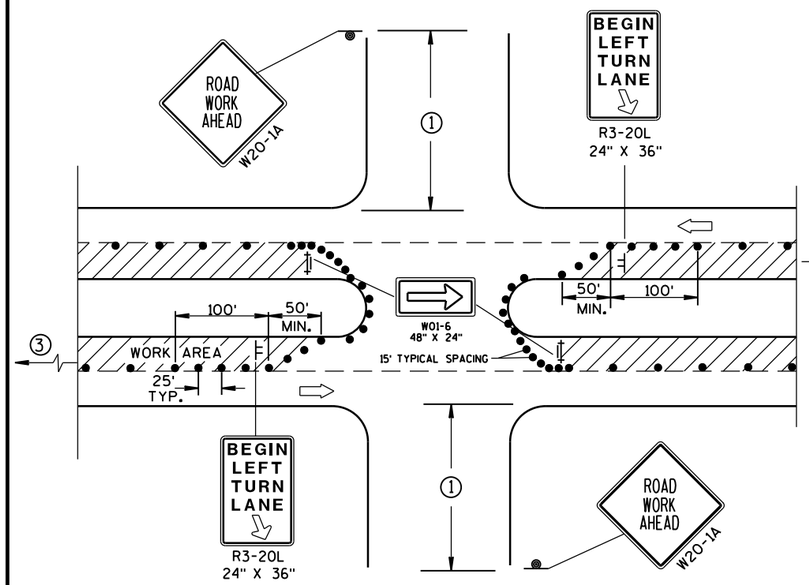
TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE EN
FHWA

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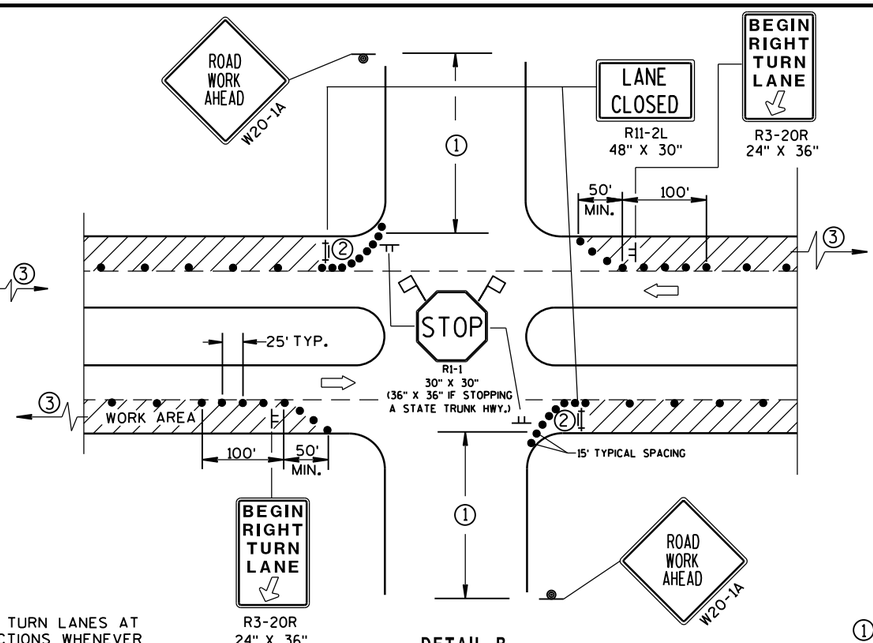
S.D.D. 15 D 15-4d



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

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 DISTRICT TRAFFIC UNIT.

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

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

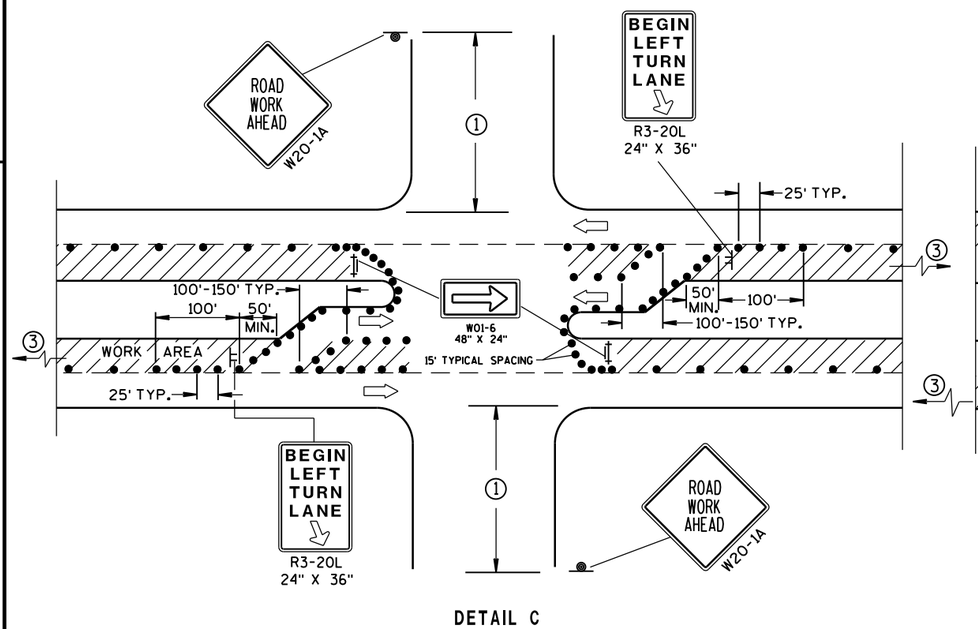
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

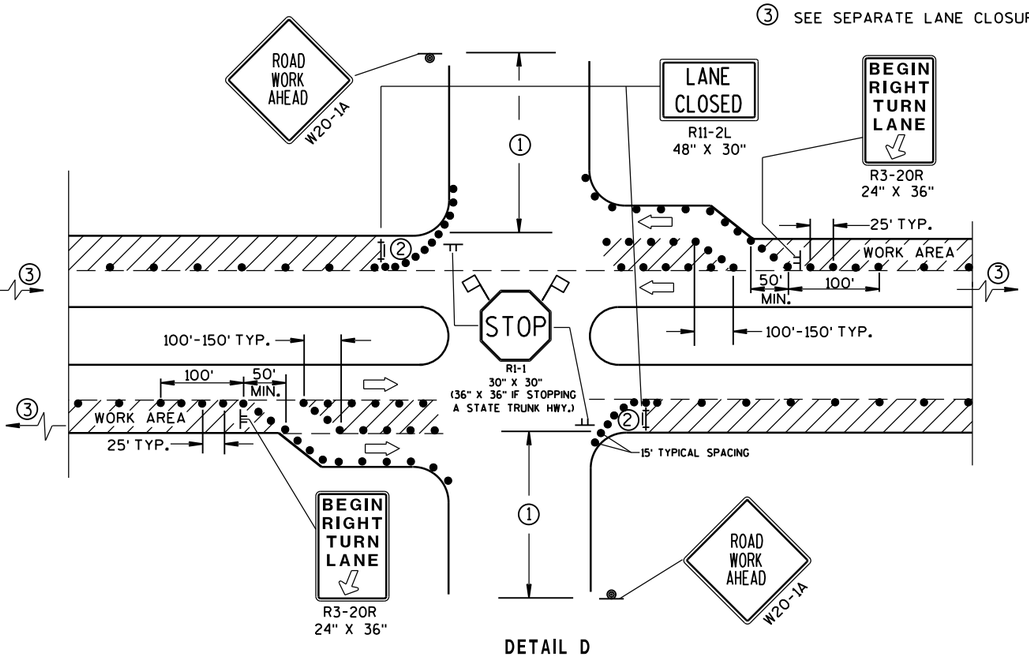
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Anakobe Atepe — STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 21-4

6

S.D.D. 15 D 21-4

LEGEND

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

GENERAL NOTES

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

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

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

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

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

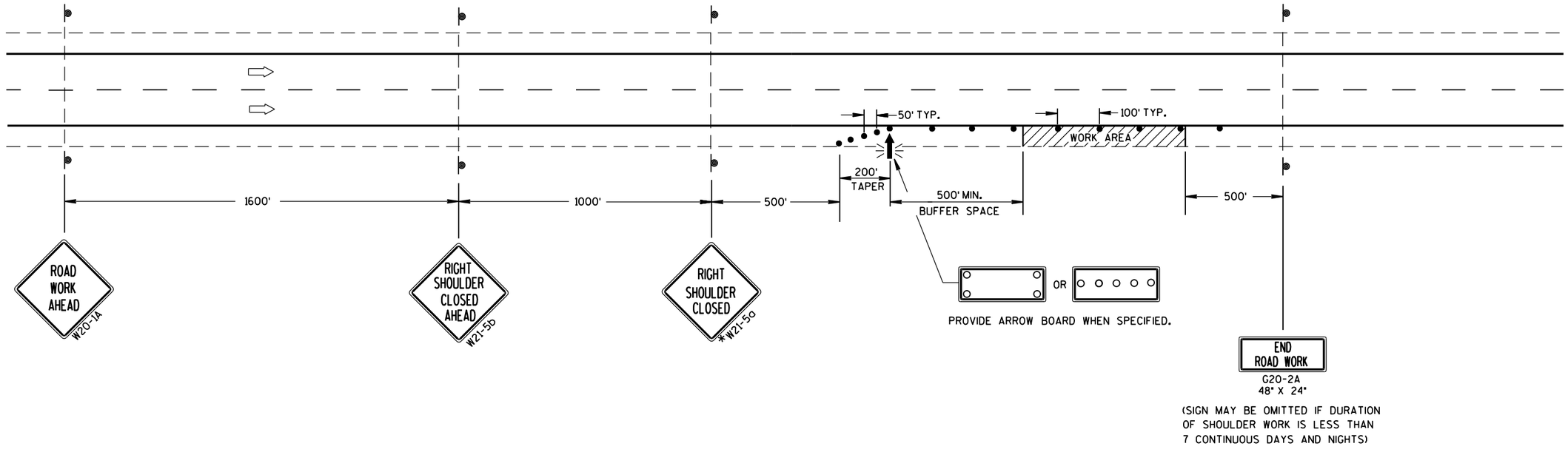
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

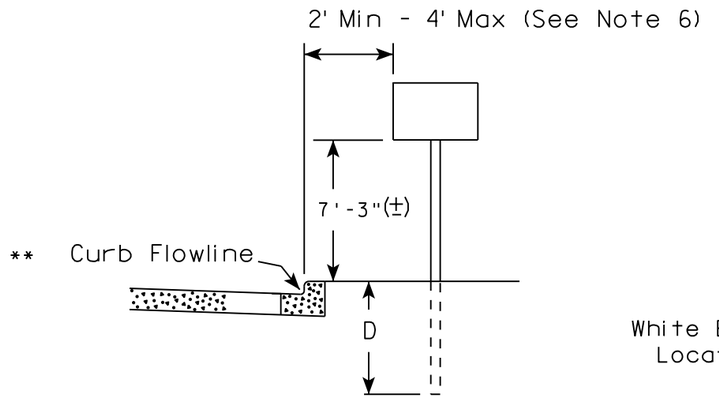
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

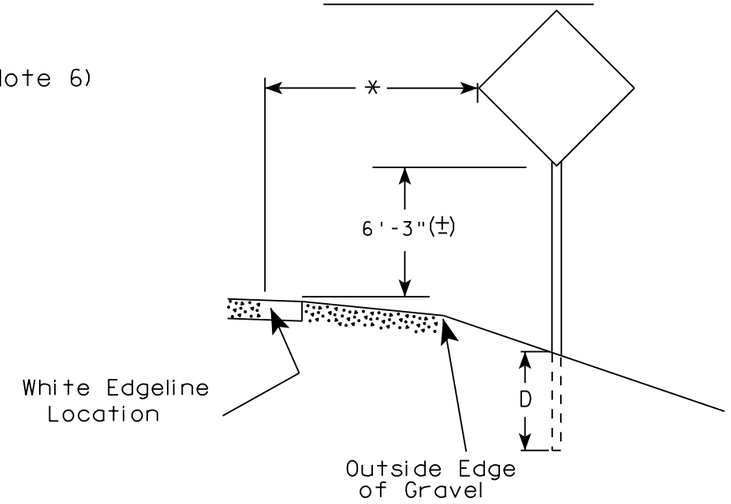
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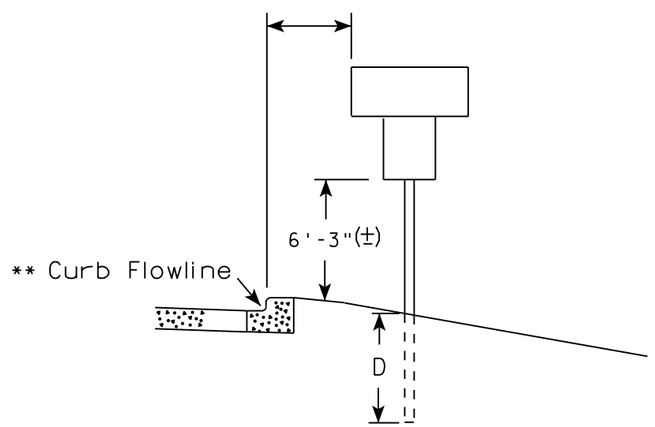
S.D.D. 15 D 27-3

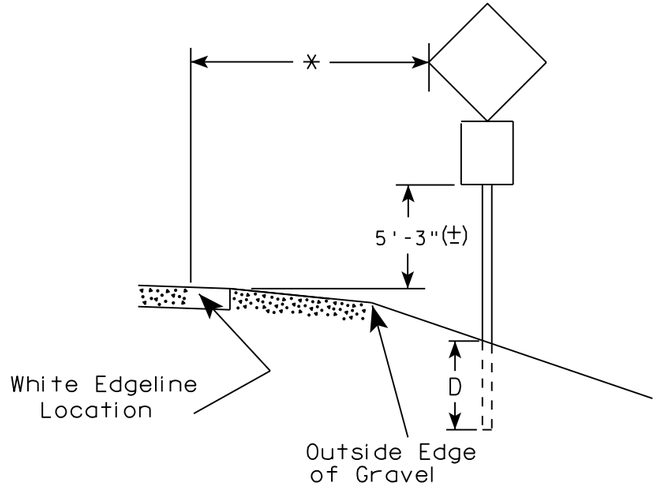
URBAN AREA



RURAL AREA (See Note 2)







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

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 barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. 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), 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" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

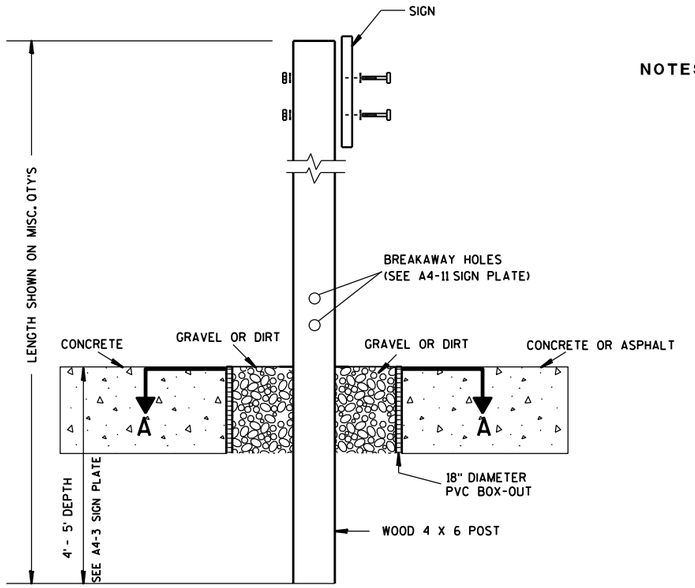
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

7

7

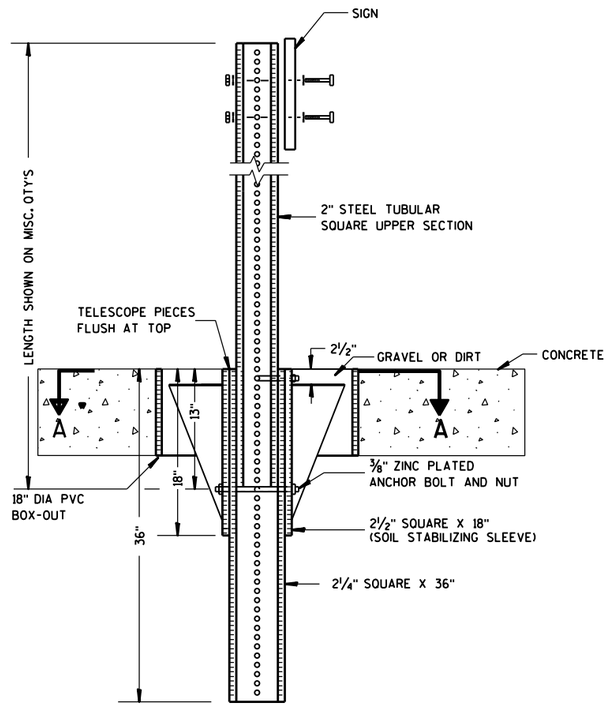
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 99	E



ELEVATION VIEW

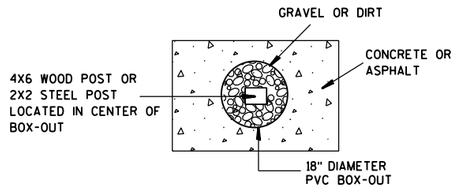
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

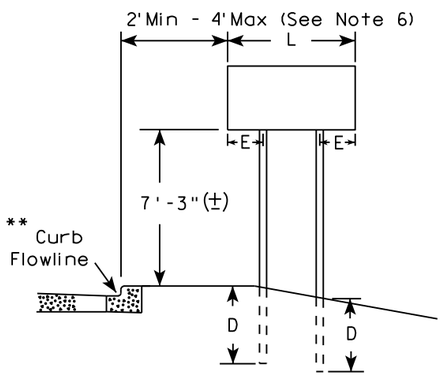
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

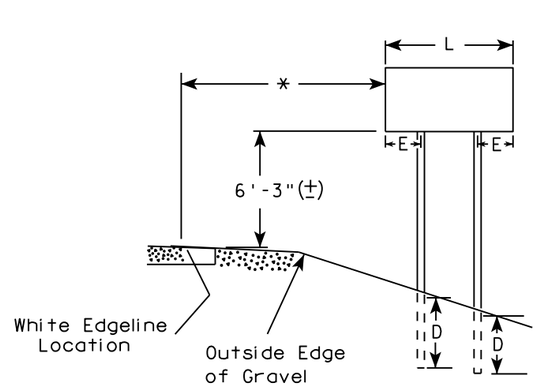
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

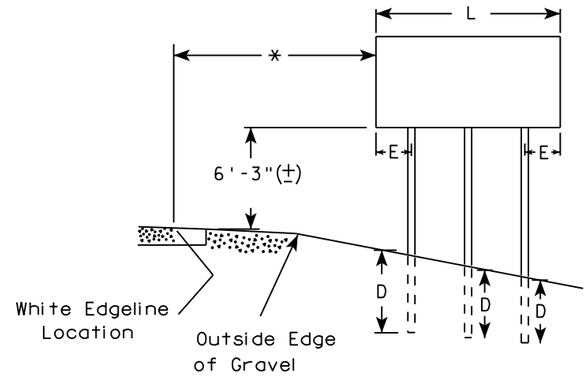
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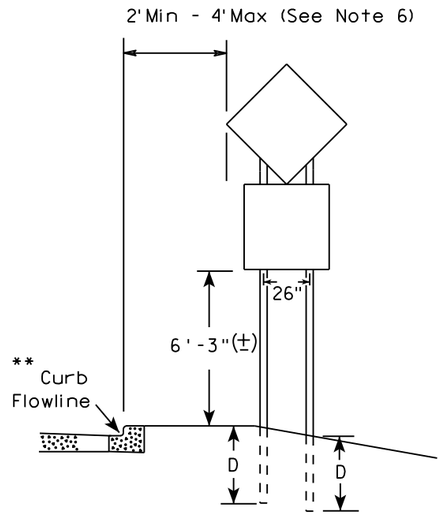
URBAN AREA



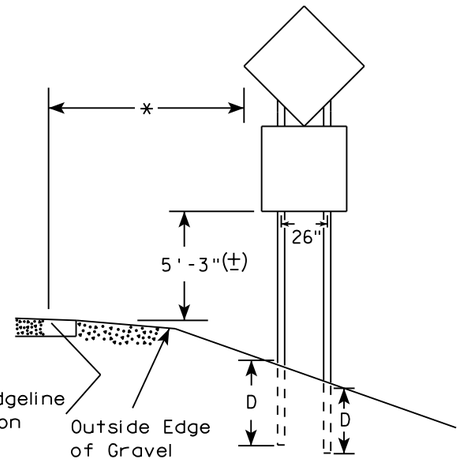
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

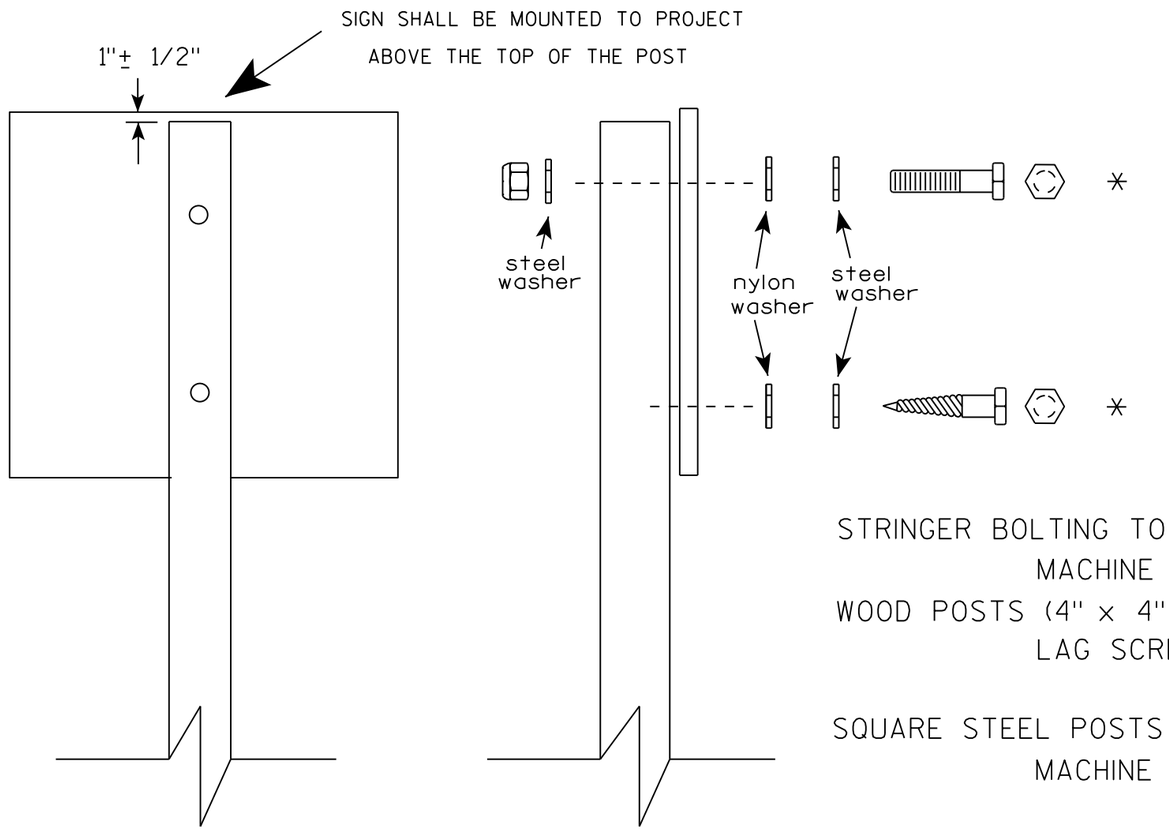
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 101	E



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 4" or 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 8/11/16 PLATE NO. A4-8.8

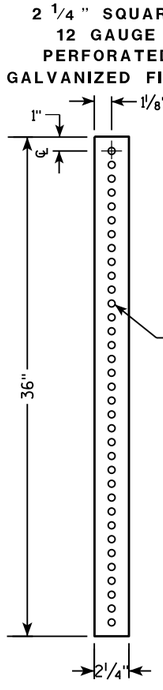
7

PROJECT NO: SHEET NO: E

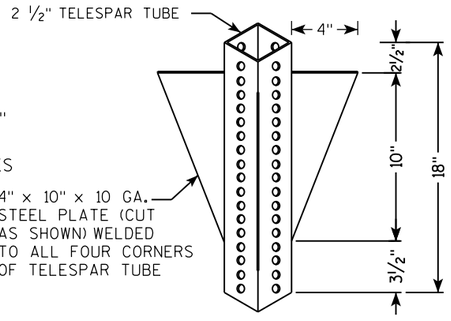
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

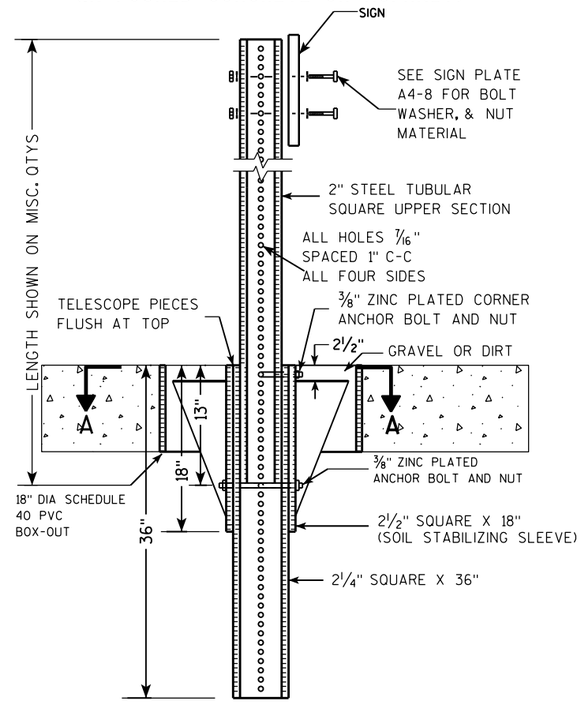
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



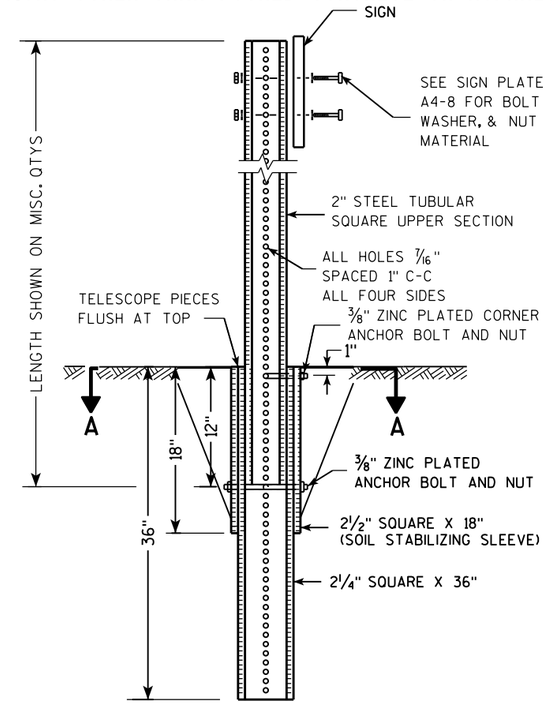
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

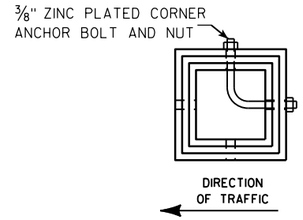


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

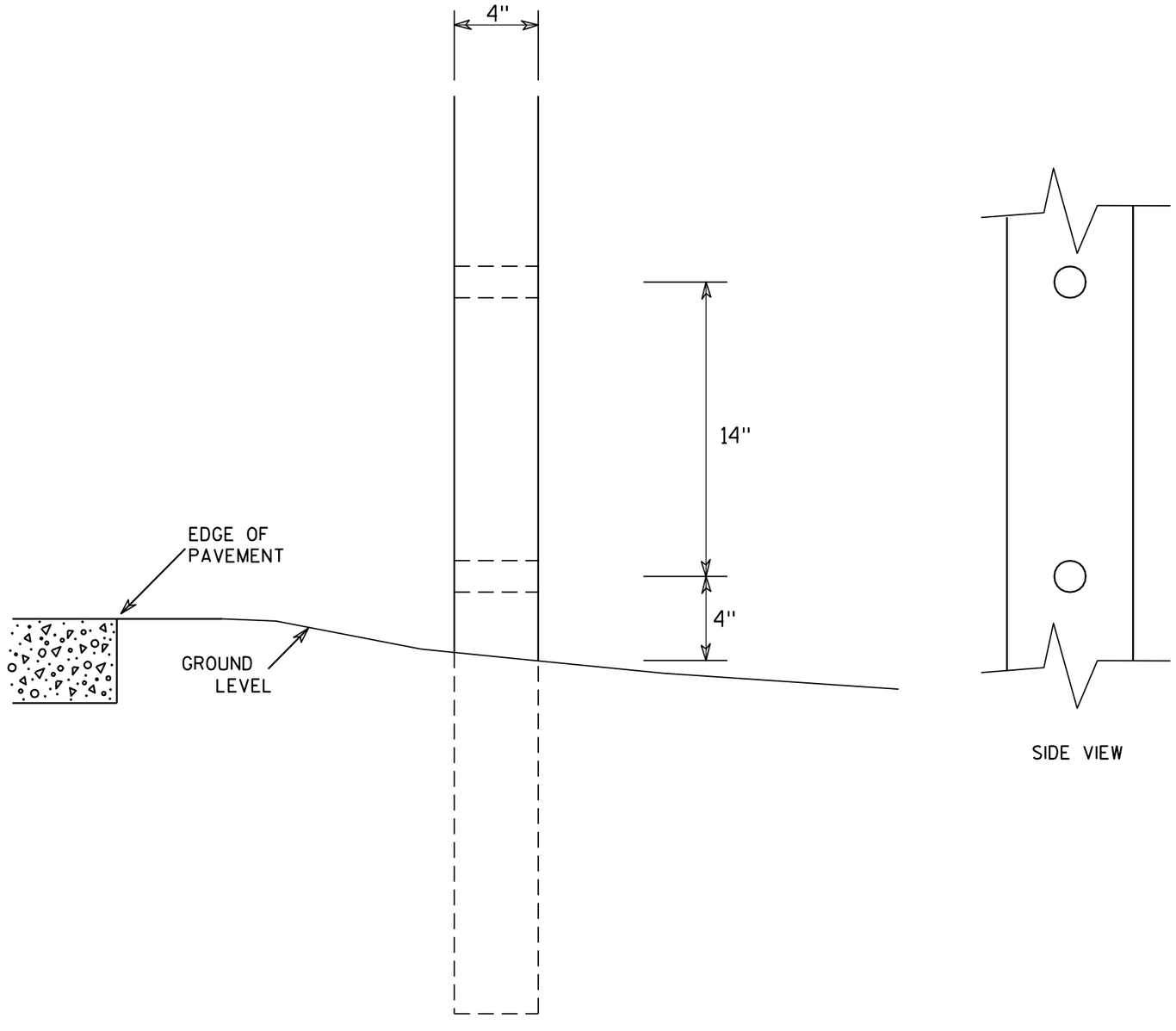
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42



SIDE VIEW

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

WISCONSIN DEPT OF TRANSPORTATION

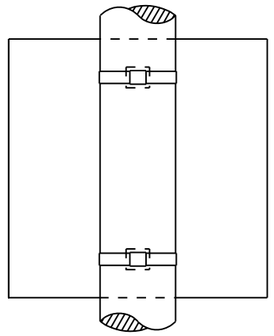
APPROVED Chester J Spang for State Traffic Engineer

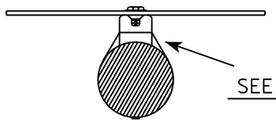
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 104	E

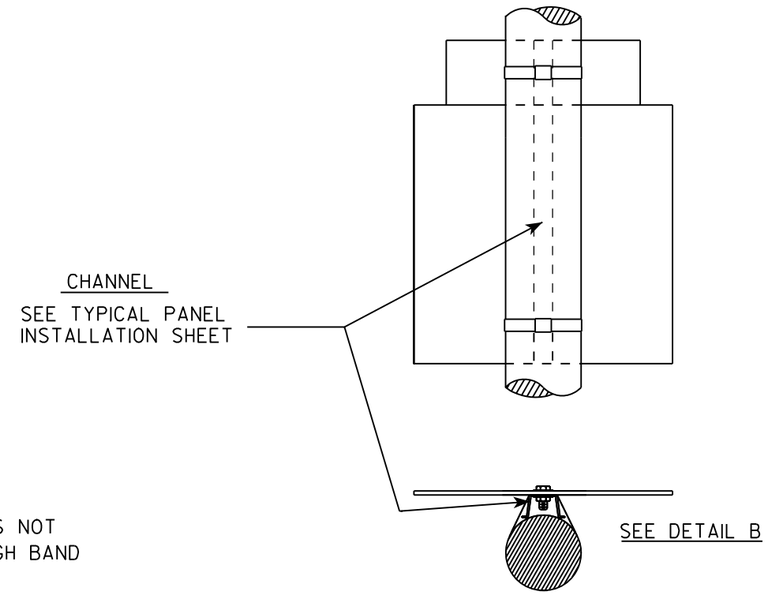
BANDING

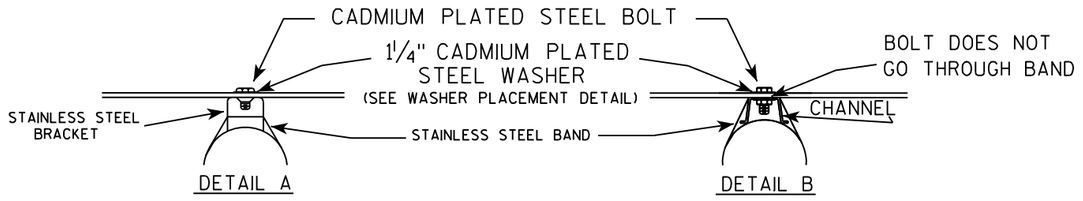
SINGLE SIGN



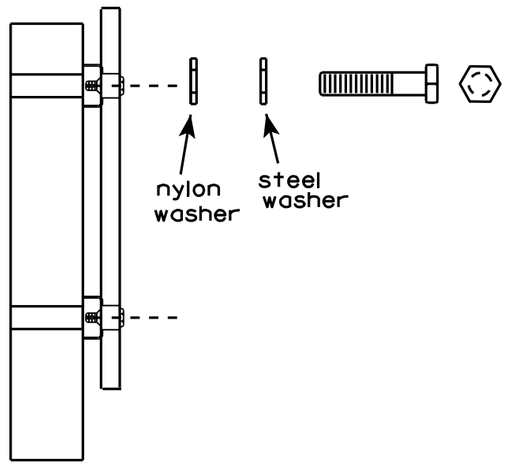


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

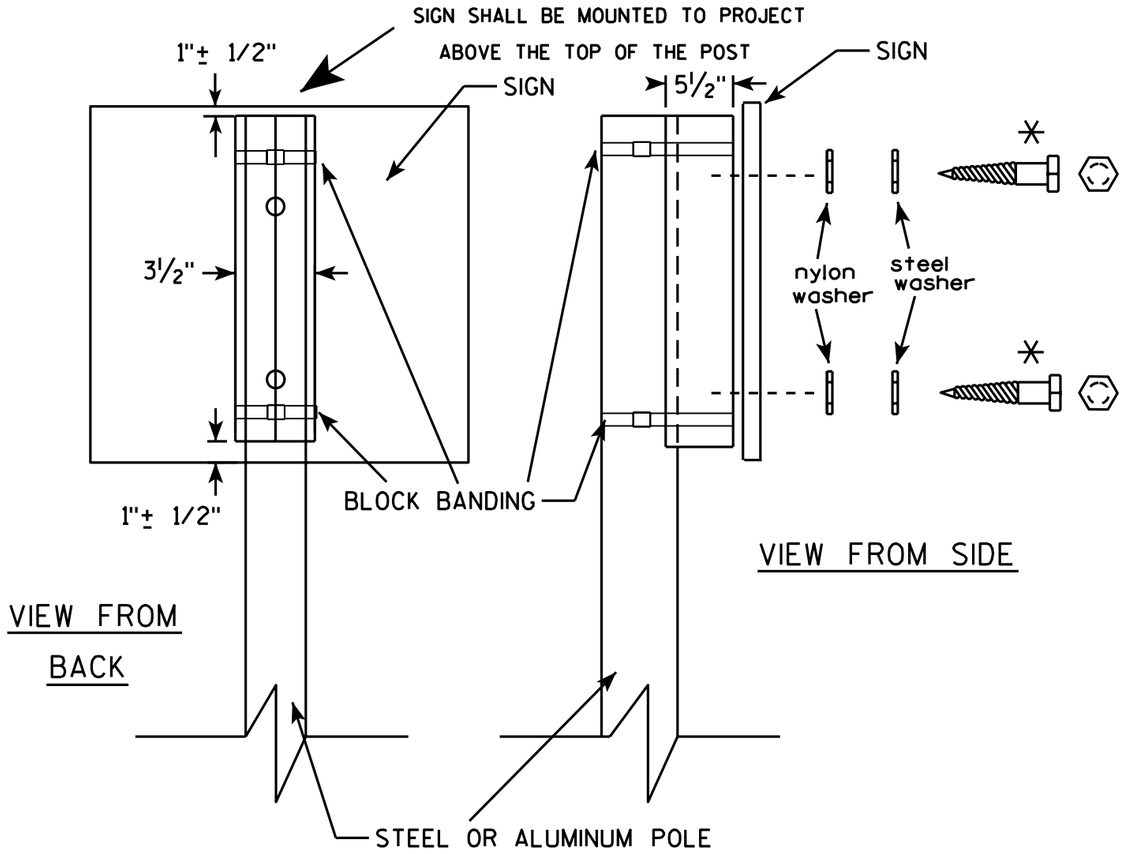
STANDARD SIGN
SIGN BANDING DETAILS

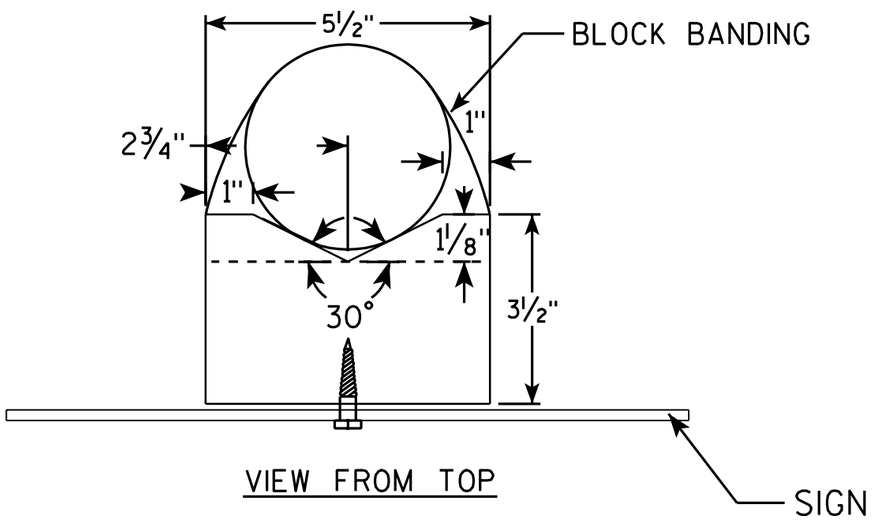
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 105	E





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, ¾" 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 NORNALLY 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, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. 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 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

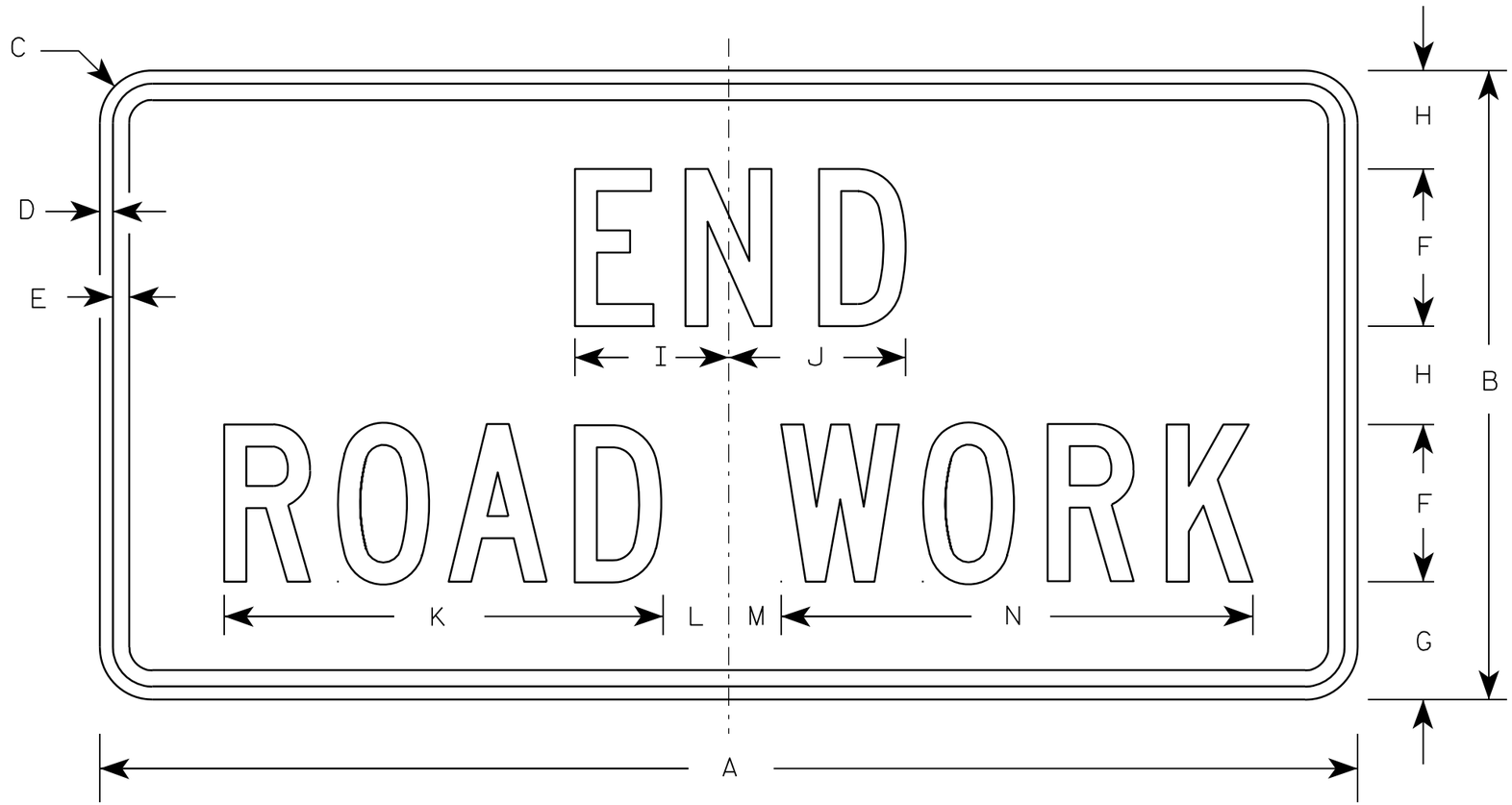
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 106 E



G20-2A

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.

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 m2
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

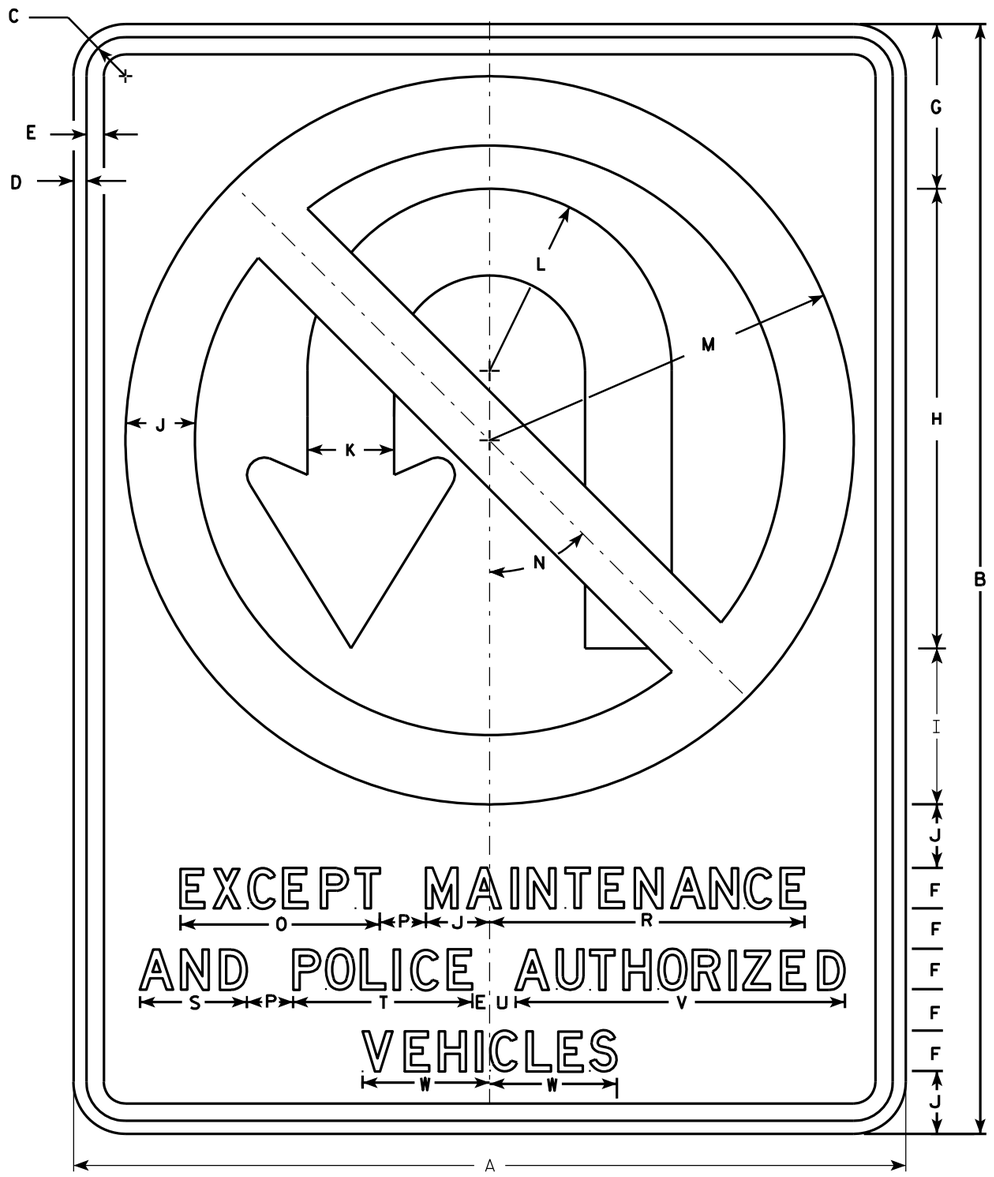
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

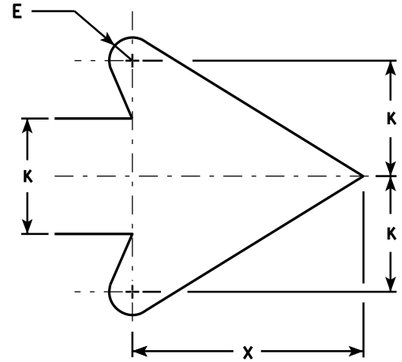
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 107	E



R3-4B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

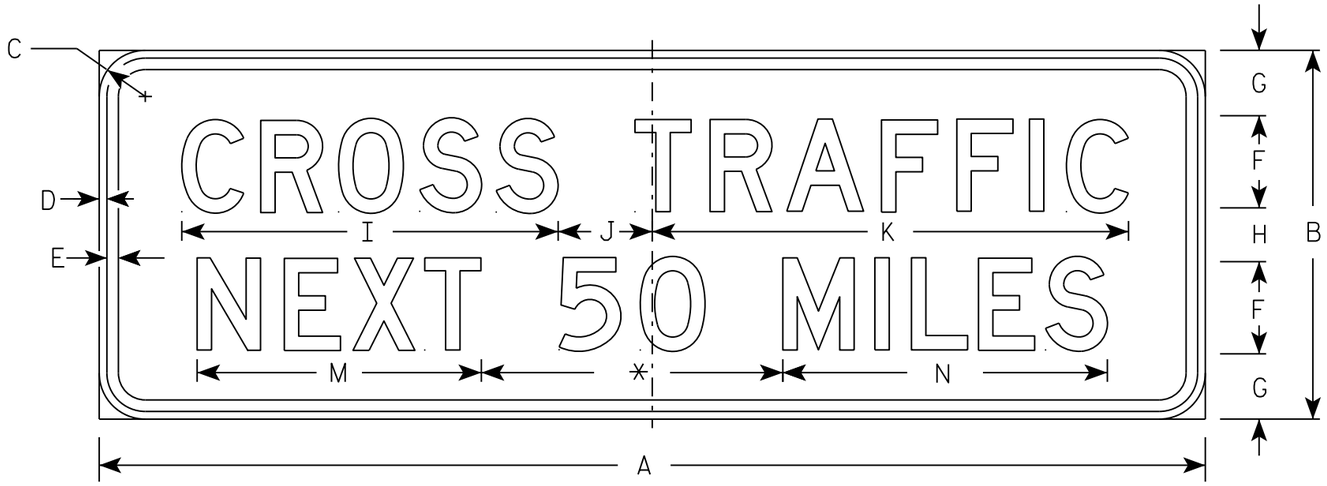
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 108	E



W6-53

* Varies (See Note 5)

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black Non - reflective
3. Message Series - D
4. Corners and borders shall be rounded.
5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	144	48	6	1	1 1/2	12	9	6	49	12 1/4	62		37	42 1/4													48.0
5																											

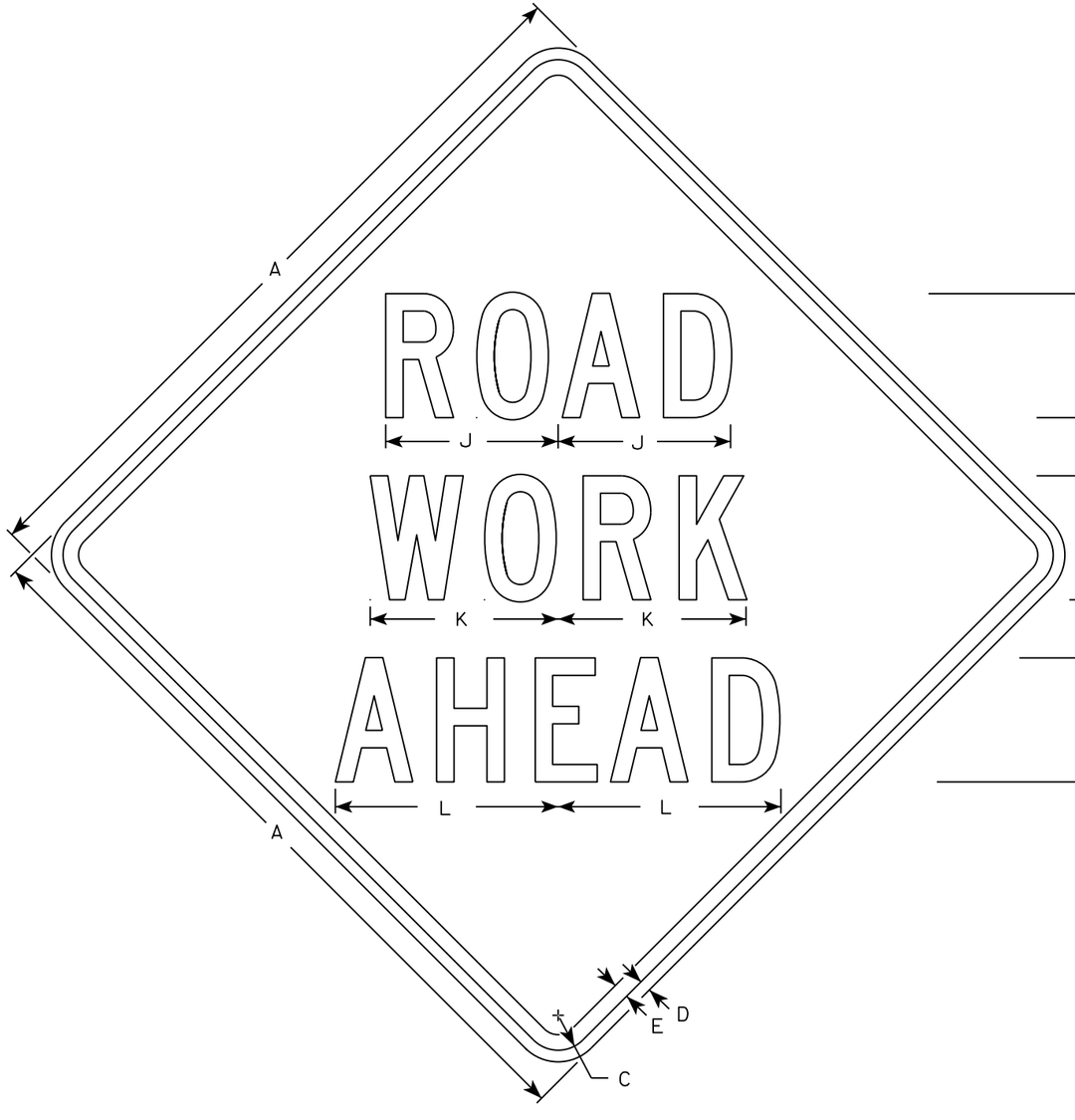
STANDARD SIGN
W6-53

WISCONSIN DEPT OF TRANSPORTATION

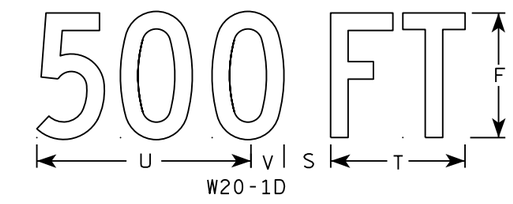
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/14/17 PLATE NO. W6-53.7

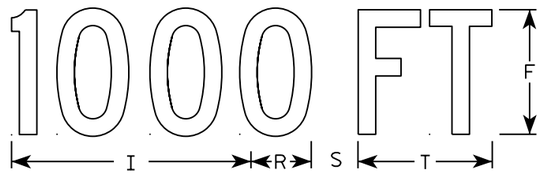
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 109	E



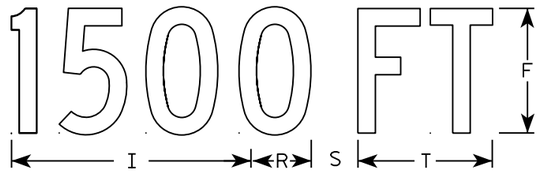
W20-1A



W20-1D



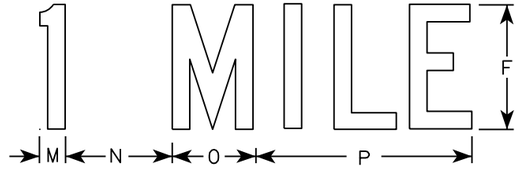
W20-1C



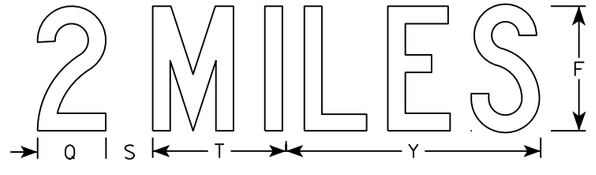
W20-1B



W20-1G



W20-1F



W20-1E

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 3/8	1/2	5/8	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		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, F & G

WISCONSIN DEPT OF TRANSPORTATION

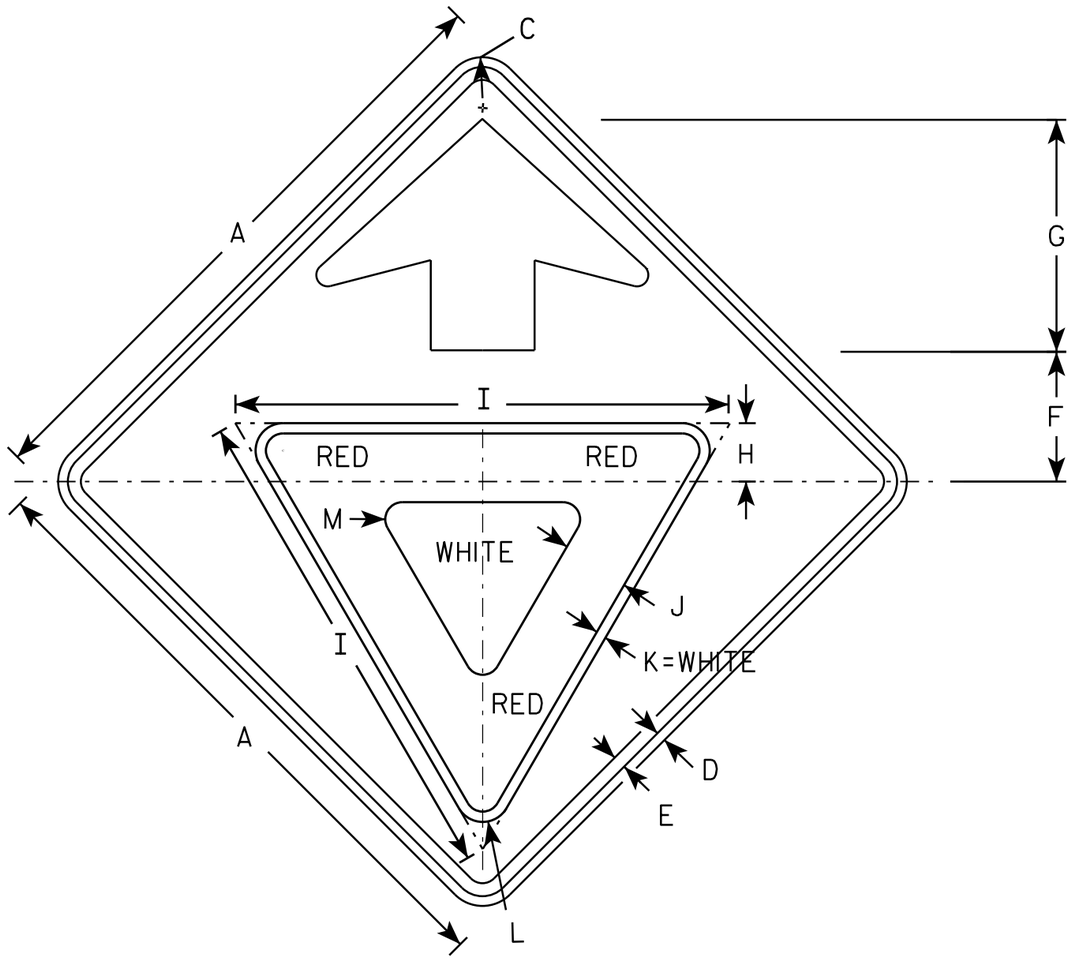
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

SHEET NO: E

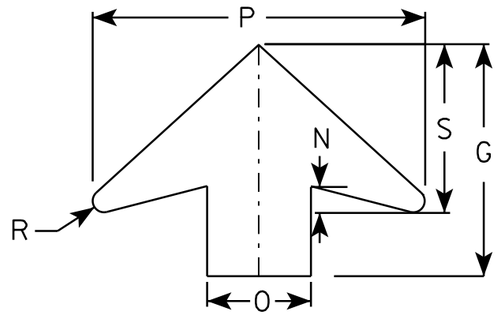
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



W03-2

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Arrow & Border - BLACK
   Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W03-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE W03-2.1

PROJECT NO:

SHEET NO: E

USH 10EB Median

STATION	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut	Salvaged/Unusable Pavement Material	Fill	Cumulative Vol (CY) Expanded Cut 1.00	Fill 1.00	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
270+00	0.00	0.00	0.00	0	0	0	0	0	0
270+50	0.00	0.00	0.00	0	0	0	0	0	0
271+00	0.69	0.00	15.23	1	0	14	1	14	-13
271+50	0.00	0.00	29.51	1	0	41	1	56	-54
272+00	0.00	0.00	26.38	0	0	52	1	107	-106
272+50	0.00	0.00	31.21	0	0	53	1	161	-159
273+00	0.00	0.00	31.96	0	0	58	1	219	-218
273+50	0.02	0.00	39.03	0	0	66	1	285	-284
274+00	0.00	0.00	39.75	0	0	73	1	358	-356
274+50	0.00	0.00	37.08	0	0	71	1	429	-428
275+00	0.00	0.00	37.13	0	0	69	1	498	-496
275+50	0.00	0.00	35.37	0	0	67	1	565	-563
276+00	0.03	0.00	34.30	0	0	65	1	629	-628
276+50	0.02	0.00	48.18	0	0	76	1	706	-704
277+00	0.01	0.00	45.21	0	0	86	1	792	-791
277+50	0.00	0.00	53.66	0	0	92	1	884	-882
278+00	0.00	0.00	63.04	0	0	108	1	992	-990
278+50	0.00	0.00	59.29	0	0	113	1	1,105	-1,104
279+00	0.00	0.00	55.26	0	0	106	1	1,211	-1,210
279+50	0.00	0.00	50.24	0	0	98	1	1,309	-1,307
280+00	0.00	0.00	41.42	0	0	85	1	1,394	-1,392
280+50	0.00	0.00	35.41	0	0	71	1	1,465	-1,463
281+00	0.00	0.00	32.11	0	0	63	1	1,527	-1,526
281+50	0.00	0.00	34.87	0	0	62	1	1,589	-1,588
282+00	0.00	0.00	33.34	0	0	63	1	1,652	-1,651
282+50	0.00	0.00	25.44	0	0	54	1	1,707	-1,705
283+00	0.00	0.00	17.36	0	0	40	1	1,746	-1,745
283+50	0.00	0.00	19.22	0	0	34	1	1,780	-1,779
284+00	0.00	0.00	16.62	0	0	33	1	1,813	-1,812
284+50	0.06	0.00	13.40	0	0	28	2	1,841	-1,840
285+00	0.00	0.00	11.42	0	0	23	2	1,864	-1,863
285+50	1.24	0.00	8.76	1	0	19	3	1,883	-1,880
286+00	1.10	0.00	7.12	2	0	15	5	1,898	-1,893
286+50	0.82	0.00	5.75	2	0	12	7	1,910	-1,903
287+00	0.56	0.00	7.24	1	0	12	8	1,922	-1,914
287+50	0.37	0.00	3.07	1	0	10	9	1,931	-1,922
288+00	0.36	0.00	2.56	1	0	5	9	1,936	-1,927
288+50	0.34	0.00	2.26	1	0	4	10	1,941	-1,931
289+00	0.08	0.00	1.03	0	0	3	11	1,944	-1,933
289+50	0.00	0.00	0.00	0	0	1	11	1,945	-1,934
290+00	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
290+50	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
291+00	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
291+50	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
292+00	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
292+50	0.00	0.00	0.00	0	0	0	11	1,945	-1,934

USH 10EB Median

STATION	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut	Salvaged/Unusable Pavement Material	Fill	Cumulative Vol (CY) Expanded Cut 1.00	Fill 1.00	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
293+00	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
293+50	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
294+00	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
294+50	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
299+00	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
299+50	0.00	0.00	0.00	0	0	0	11	1,945	-1,934
300+00	3.89	0.00	0.00	4	0	0	14	1,945	-1,931
300+50	0.11	0.00	0.43	4	0	0	18	1,945	-1,927
301+00	0.01	0.00	2.11	0	0	2	18	1,948	-1,930
301+50	0.04	0.00	2.68	0	0	4	18	1,952	-1,934
302+00	0.08	0.00	3.02	0	0	5	18	1,957	-1,939
302+50	0.64	0.00	2.64	1	0	5	19	1,963	-1,944
303+00	0.00	0.00	6.86	1	0	9	19	1,971	-1,952
303+50	0.01	0.00	3.57	0	0	10	19	1,981	-1,962
304+00	0.02	0.00	2.68	0	0	6	19	1,987	-1,967
304+50	0.08	0.00	2.62	0	0	5	20	1,992	-1,972
305+00	0.14	0.00	2.36	0	0	5	20	1,996	-1,977
305+50	0.12	0.00	2.03	0	0	4	20	2,000	-1,980
306+00	0.17	0.00	1.85	0	0	4	20	2,004	-1,984
306+50	0.09	0.00	3.71	0	0	5	20	2,009	-1,989
307+00	0.01	0.00	8.02	0	0	11	21	2,020	-1,999
307+50	0.16	0.00	2.81	0	0	10	21	2,030	-2,009
308+00	0.16	0.00	1.42	0	0	4	21	2,034	-2,013
308+50	0.11	0.00	1.00	0	0	2	21	2,036	-2,015
309+00	0.75	0.00	0.38	1	0	1	22	2,037	-2,015
309+50	1.19	0.00	0.09	2	0	0	24	2,038	-2,014
310+00	0.65	0.00	0.37	2	0	0	26	2,038	-2,013
310+50	0.08	0.00	2.54	1	0	3	26	2,041	-2,015
311+00	0.01	0.00	2.76	0	0	5	26	2,046	-2,020
311+50	0.12	0.00	0.45	0	0	3	26	2,049	-2,022
312+00	0.04	0.00	1.43	0	0	2	27	2,051	-2,024
312+50	0.24	0.00	3.31	0	0	4	27	2,055	-2,028
313+00	0.12	0.00	1.07	0	0	4	27	2,059	-2,032
313+50	0.16	0.00	2.28	0	0	3	27	2,062	-2,035
314+00	0.00	0.00	3.70	0	0	6	28	2,068	-2,040
314+50	0.00	0.00	6.60	0	0	10	28	2,077	-2,050
315+00	0.00	0.00	5.50	0	0	11	28	2,088	-2,061
315+50	0.00	0.00	3.75	0	0	9	28	2,097	-2,069
316+00	0.33	0.00	2.15	0	0	5	28	2,102	-2,075
316+50	0.02	0.00	1.59	0	0	3	28	2,106	-2,078
317+00	0.01	0.00	2.51	0	0	4	28	2,110	-2,081
317+50	0.03	0.00	2.20	0	0	4	28	2,114	-2,086
318+00	0.30	0.00	1.43	0	0	3	29	2,117	-2,089
318+50	0.04	0.00	1.44	0	0	3	29	2,120	-2,091
319+00	0.41	0.00	0.67	0	0	2	29	2,122	-2,093
319+50	0.00	0.00	2.89	0	0	3	30	2,125	-2,096

USH 10EB Median																	
	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)				AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
	Salvaged/Unusable			Salvaged/Unusable			Expanded				Salvaged/Unusable			Salvaged/Unusable			Expanded		
STATION	Cut	Pavement Material	Fill	Cut	Pavement Material	Fill	Cut 1.00	Fill 1.00	Mass Ordinate	STATION	Cut	Pavement Material	Fill	Cut	Pavement Material	Fill	Cut 1.00	Fill 1.00	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8					Note 1	Note 2	Note 3	Note 1		Note 8
320+00	0.00	0.00	5.74	0	0	8	30	2,133	-2,104	343+00	0.00	0.00	5.81	0	0	11	36	2,503	-2,468
320+50	0.00	0.00	5.45	0	0	10	30	2,144	-2,114	343+50	0.00	0.00	6.46	0	0	11	36	2,514	-2,479
321+00	0.00	0.00	4.92	0	0	10	30	2,153	-2,124	344+00	0.00	0.00	6.79	0	0	12	36	2,527	-2,491
321+50	0.00	0.00	4.33	0	0	9	30	2,162	-2,132	344+50	0.00	0.00	6.91	0	0	13	36	2,539	-2,504
322+00	0.00	0.00	4.92	0	0	9	30	2,170	-2,141	345+00	0.00	0.00	6.84	0	0	13	36	2,552	-2,517
322+50	0.00	0.00	4.33	0	0	9	30	2,179	-2,149	345+50	0.00	0.00	6.83	0	0	13	36	2,565	-2,529
323+00	0.00	0.00	4.01	0	0	8	30	2,187	-2,157	346+00	0.00	0.00	5.89	0	0	12	36	2,576	-2,541
323+50	0.00	0.00	4.40	0	0	8	30	2,195	-2,165	346+50	0.00	0.00	4.90	0	0	10	36	2,586	-2,551
324+00	0.00	0.00	5.02	0	0	9	30	2,203	-2,174	347+00	0.00	0.00	3.80	0	0	8	36	2,595	-2,559
324+50	0.00	0.00	4.99	0	0	9	30	2,213	-2,183	347+50	0.01	0.00	4.15	0	0	7	36	2,602	-2,566
325+00	0.00	0.00	5.35	0	0	10	30	2,222	-2,192	348+00	0.00	0.00	6.98	0	0	10	36	2,612	-2,577
325+50	0.00	0.00	6.51	0	0	11	30	2,233	-2,203	348+50	0.00	0.00	7.68	0	0	14	36	2,626	-2,590
326+00	0.00	0.00	8.48	0	0	14	30	2,247	-2,217	349+00	0.00	0.00	5.41	0	0	12	36	2,638	-2,602
326+50	0.00	0.00	7.62	0	0	15	30	2,262	-2,232	349+50	0.01	0.00	4.60	0	0	9	36	2,647	-2,612
327+00	0.00	0.00	5.72	0	0	12	30	2,274	-2,245	350+00	0.02	0.00	4.40	0	0	8	36	2,655	-2,620
327+50	0.00	0.00	4.46	0	0	9	30	2,284	-2,254	350+50	0.00	0.00	6.24	0	0	10	36	2,665	-2,630
328+00	0.08	0.00	4.54	0	0	8	30	2,292	-2,262	351+00	0.00	0.00	9.29	0	0	14	36	2,680	-2,644
328+50	0.00	0.00	2.97	0	0	7	30	2,299	-2,269	351+50	0.05	0.00	5.20	0	0	13	36	2,693	-2,657
329+00	0.00	0.00	3.07	0	0	6	30	2,305	-2,275	352+00	0.03	0.00	2.53	0	0	7	36	2,700	-2,665
329+50	0.00	0.00	3.40	0	0	6	30	2,310	-2,281	352+50	0.02	0.00	2.38	0	0	5	36	2,705	-2,669
330+00	0.00	0.00	1.51	0	0	5	30	2,315	-2,285	353+00	0.00	0.00	2.36	0	0	4	36	2,709	-2,673
330+50	0.10	0.00	0.28	0	0	2	30	2,317	-2,287	353+50	0.00	0.00	2.40	0	0	4	36	2,714	-2,678
331+00	0.88	0.00	0.60	1	0	1	31	2,317	-2,287	354+00	0.00	0.00	2.94	0	0	5	36	2,719	-2,683
331+50	1.58	0.00	0.92	2	0	1	33	2,319	-2,286	354+50	0.00	0.00	4.73	0	0	7	36	2,726	-2,690
332+00	0.00	0.00	0.00	1	0	1	35	2,320	-2,285	355+00	0.00	0.00	9.01	0	0	13	36	2,738	-2,703
332+50	0.00	0.00	0.00	0	0	0	35	2,320	-2,285	355+50	0.00	0.00	6.02	0	0	14	36	2,752	-2,716
333+00	0.00	0.00	0.00	0	0	0	35	2,320	-2,285	356+00	0.00	0.00	4.24	0	0	10	36	2,762	-2,726
333+50	0.00	0.00	0.00	0	0	0	35	2,320	-2,285	356+50	0.00	0.00	4.63	0	0	8	36	2,770	-2,734
334+00	0.00	0.00	0.00	0	0	0	35	2,320	-2,285	357+00	0.00	0.00	4.93	0	0	9	36	2,779	-2,743
334+50	0.00	0.00	0.00	0	0	0	35	2,320	-2,285	357+50	0.00	0.00	4.54	0	0	9	36	2,788	-2,752
335+00	0.00	0.00	0.00	0	0	0	35	2,320	-2,285	358+00	0.00	0.00	4.31	0	0	8	36	2,796	-2,760
335+50	0.00	0.00	1.09	0	0	1	35	2,321	-2,286	358+50	0.00	0.00	3.41	0	0	7	36	2,803	-2,767
336+00	0.06	0.00	6.54	0	0	7	35	2,328	-2,293	359+00	0.00	0.00	3.31	0	0	6	36	2,809	-2,773
336+50	0.00	0.00	7.57	0	0	13	35	2,341	-2,306	359+50	0.00	0.00	5.61	0	0	8	36	2,817	-2,782
337+00	0.06	0.00	6.29	0	0	13	35	2,354	-2,319	360+00	0.00	0.00	11.22	0	0	16	36	2,833	-2,797
337+50	0.22	0.00	5.00	0	0	10	35	2,364	-2,329	360+50	0.02	0.00	7.09	0	0	17	36	2,850	-2,814
338+00	0.11	0.00	6.67	0	0	11	35	2,375	-2,340	361+00	0.00	0.00	4.01	0	0	10	36	2,860	-2,824
338+50	0.00	0.00	7.84	0	0	13	35	2,388	-2,353	361+50	0.00	0.00	4.24	0	0	8	36	2,868	-2,832
339+00	0.01	0.00	7.52	0	0	14	35	2,403	-2,367	362+00	0.00	0.00	4.57	0	0	8	36	2,876	-2,840
339+50	0.02	0.00	7.21	0	0	14	35	2,416	-2,381	362+50	0.04	0.00	3.98	0	0	8	36	2,884	-2,848
340+00	0.00	0.00	7.49	0	0	14	35	2,430	-2,394	363+00	0.00	0.00	3.80	0	0	7	36	2,891	-2,855
340+50	0.00	0.00	8.87	0	0	15	36	2,445	-2,410	363+50	0.00	0.00	4.32	0	0	8	36	2,899	-2,863
341+00	0.00	0.00	7.34	0	0	15	36	2,460	-2,425	364+00	0.00	0.00	4.38	0	0	8	36	2,907	-2,871
341+50	0.00	0.00	5.03	0	0	11	36	2,471	-2,436	364+50	0.00	0.00	4.74	0	0	8	36	2,915	-2,879
342+00	0.00	0.00	5.61	0	0	10	36	2,481	-2,446	365+00	0.00	0.00	5.54	0	0	10	36	2,925	-2,889
342+50	0.00	0.00	6.00	0	0	11	36	2,492	-2,457	365+50	0.00	0.00	5.42	0	0	10	36	2,935	-2,899

USH 10EB Median

STATION	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut	Salvaged/Unusable Pavement Material	Fill	Cumulative Vol (CY) Expanded Cut 1.00	Fill 1.00	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
366+00	0.00	0.00	3.81	0	0	9	36	2,943	-2,908
366+50	0.00	0.00	4.38	0	0	8	36	2,951	-2,915
367+00	0.00	0.00	5.01	0	0	9	36	2,960	-2,924
367+50	0.00	0.00	4.59	0	0	9	36	2,969	-2,933
368+00	0.00	0.00	4.17	0	0	8	36	2,977	-2,941
368+50	0.00	0.00	4.46	0	0	8	36	2,985	-2,949
369+00	0.00	0.00	4.34	0	0	8	36	2,993	-2,957
369+50	0.00	0.00	3.86	0	0	8	36	3,000	-2,965
370+00	0.00	0.00	3.90	0	0	7	36	3,008	-2,972
370+50	0.00	0.00	3.69	0	0	7	36	3,015	-2,979
371+00	0.00	0.00	3.50	0	0	7	36	3,021	-2,985
371+50	0.00	0.00	4.10	0	0	7	36	3,028	-2,992
372+00	0.00	0.00	4.78	0	0	8	36	3,037	-3,001
372+50	0.00	0.00	9.32	0	0	13	36	3,050	-3,014
373+00	0.00	0.00	5.01	0	0	13	36	3,063	-3,027
373+50	0.00	0.00	4.72	0	0	9	36	3,072	-3,036
374+00	0.00	0.00	4.44	0	0	8	36	3,080	-3,044
374+50	0.00	0.00	3.79	0	0	8	36	3,088	-3,052
375+00	0.00	0.00	4.04	0	0	7	36	3,095	-3,059
375+50	0.00	0.00	4.17	0	0	8	36	3,103	-3,067
376+00	0.00	0.00	3.84	0	0	7	36	3,110	-3,074
376+50	0.00	0.00	3.41	0	0	7	36	3,117	-3,081
377+00	0.00	0.00	2.85	0	0	6	36	3,123	-3,087
377+50	0.00	0.00	3.45	0	0	6	36	3,129	-3,093
378+00	0.00	0.00	3.80	0	0	7	36	3,135	-3,099
378+50	0.00	0.00	3.64	0	0	7	36	3,142	-3,106
379+00	0.00	0.00	4.29	0	0	7	36	3,150	-3,114
379+50	0.00	0.00	3.14	0	0	7	36	3,156	-3,121
380+00	0.00	0.00	6.75	0	0	9	36	3,166	-3,130
380+50	0.00	0.00	4.74	0	0	11	36	3,176	-3,140
381+00	0.00	0.00	4.24	0	0	8	36	3,185	-3,149
381+50	0.00	0.00	5.07	0	0	9	36	3,193	-3,157
382+00	0.00	0.00	5.92	0	0	10	36	3,203	-3,167
382+50	0.00	0.00	5.44	0	0	11	36	3,214	-3,178
383+00	0.00	0.00	5.10	0	0	10	36	3,224	-3,188
383+50	0.00	0.00	4.74	0	0	9	36	3,233	-3,197
384+00	0.00	0.00	4.07	0	0	8	36	3,241	-3,205
384+50	0.00	0.00	3.92	0	0	7	36	3,248	-3,212
385+00	0.00	0.00	3.55	0	0	7	36	3,255	-3,219
385+50	0.00	0.00	3.84	0	0	7	36	3,262	-3,226
386+00	0.00	0.00	4.49	0	0	8	36	3,270	-3,234
386+50	0.00	0.00	5.40	0	0	9	36	3,279	-3,243
387+00	0.00	0.00	10.76	0	0	15	36	3,294	-3,258
387+50	0.00	0.00	6.09	0	0	16	36	3,309	-3,274
388+00	0.00	0.00	3.48	0	0	9	36	3,318	-3,282
388+50	0.00	0.00	3.20	0	0	6	36	3,325	-3,289

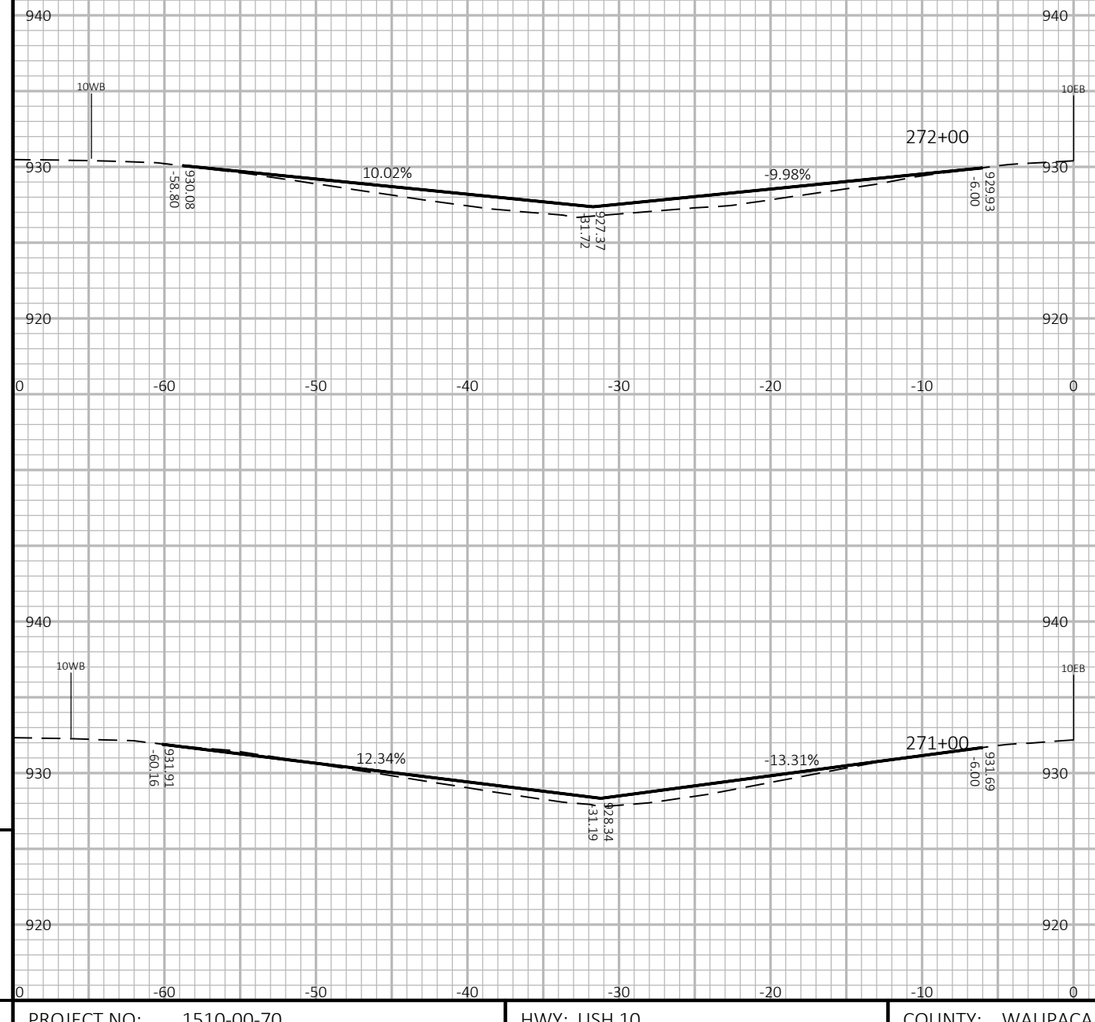
USH 10EB Median

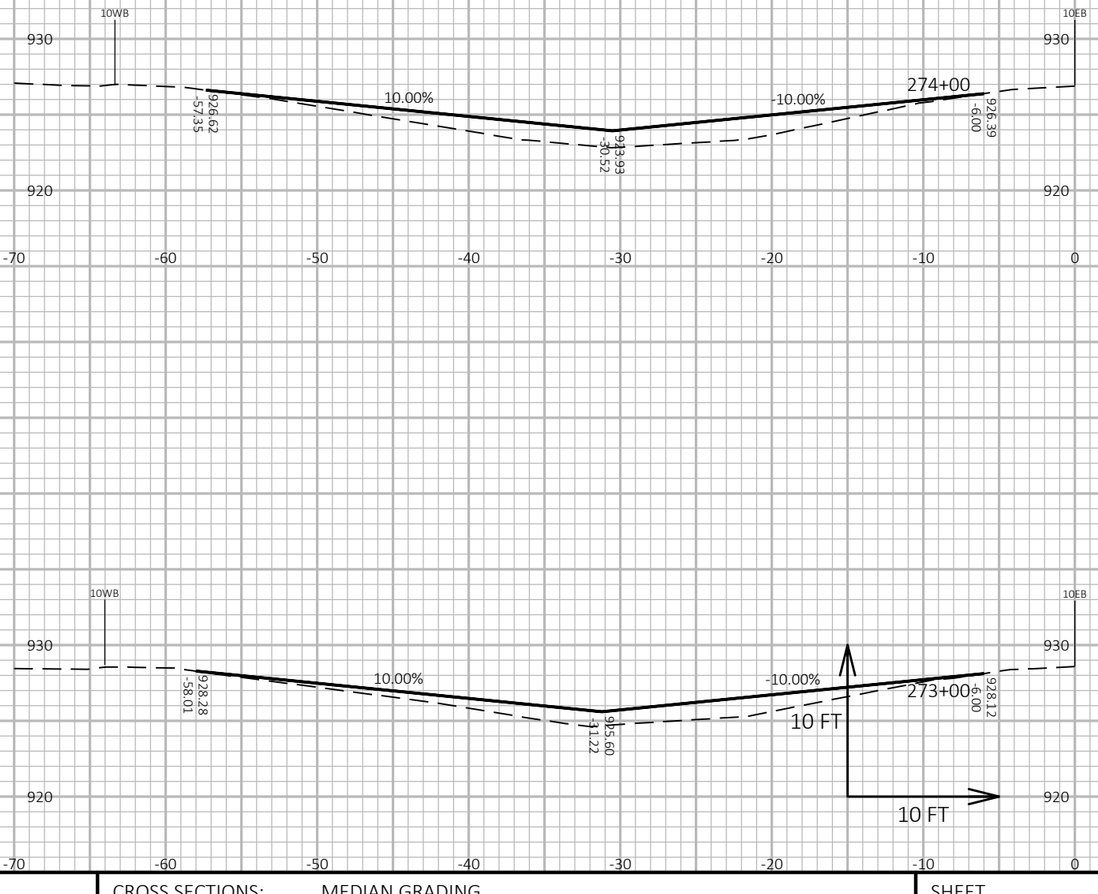
STATION	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	Incremental Vol (CY) (Unadjusted) Cut	Salvaged/Unusable Pavement Material	Fill	Cumulative Vol (CY) Expanded Cut 1.00	Fill 1.00	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
389+00	0.01	0.00	3.09	0	0	6	36	3,330	-3,294
389+50	0.00	0.00	3.76	0	0	6	36	3,337	-3,301
390+00	0.00	0.00	4.20	0	0	7	36	3,344	-3,308
390+50	0.00	0.00	4.46	0	0	8	36	3,352	-3,316
391+00	0.01	0.00	6.77	0	0	10	36	3,362	-3,327
391+50	0.00	0.00	4.24	0	0	10	36	3,373	-3,337
392+00	0.00	0.00	3.35	0	0	7	36	3,380	-3,344
392+50	0.00	0.00	3.77	0	0	7	36	3,386	-3,350
393+00	0.00	0.00	4.24	0	0	7	36	3,394	-3,358
393+50	0.01	0.00	5.28	0	0	9	36	3,403	-3,367
394+00	0.01	0.00	6.57	0	0	11	36	3,414	-3,377
394+50	0.04	0.00	4.64	0	0	10	36	3,424	-3,388
395+00	0.02	0.00	3.10	0	0	7	36	3,431	-3,395
395+50	0.00	0.00	2.78	0	0	5	36	3,436	-3,400
396+00	0.24	0.00	2.28	0	0	5	36	3,441	-3,405
396+50	0.31	0.00	3.09	1	0	5	37	3,446	-3,409
397+00	0.04	0.00	2.81	0	0	5	37	3,452	-3,414
397+50	0.04	0.00	3.80	0	0	6	37	3,458	-3,420
398+00	0.11	0.00	1.34	0	0	5	37	3,463	-3,425
398+50	0.00	0.00	8.28	0	0	9	38	3,471	-3,434
399+00	0.00	0.00	0.00	0	0	8	38	3,479	-3,442
399+50	0.00	0.00	0.00	0	0	0	38	3,479	-3,442
400+00	0.00	0.00	0.00	0	0	0	38	3,479	-3,442
400+50	0.00	0.00	0.00	0	0	0	38	3,479	-3,442
439+50	0.00	0.00	0.00	0	0	0	38	3,479	-3,442
440+00	0.00	0.00	0.00	0	0	0	38	3,479	-3,442
440+50	1.31	0.00	0.01	1	0	0	39	3,479	-3,440
441+00	0.98	0.00	0.26	2	0	0	41	3,479	-3,438
441+50	0.78	0.00	0.20	2	0	0	42	3,480	-3,437
442+00	0.11	0.00	0.86	1	0	1	43	3,481	-3,437
442+50	0.05	0.00	0.99	0	0	2	43	3,482	-3,439
443+00	0.00	0.00	0.75	0	0	2	43	3,484	-3,441
443+50	0.03	0.00	0.56	0	0	1	44	3,485	-3,442
444+00	0.00	0.00	2.78	0	0	3	44	3,488	-3,445
444+50	0.36	0.00	0.23	0	0	3	44	3,491	-3,447
445+00	0.19	0.00	0.46	1	0	1	44	3,492	-3,447
445+50	0.18	0.00	0.48	0	0	1	45	3,493	-3,448
446+00	0.27	0.00	0.63	0	0	1	45	3,494	-3,449
446+50	0.69	0.00	0.19	1	0	1	46	3,494	-3,448
447+00	1.46	0.00	0.00	2	0	0	48	3,495	-3,447
447+50	3.20	0.00	0.02	4	0	0	52	3,495	-3,442
448+00	3.41	0.00	0.02	6	0	0	58	3,495	-3,436
448+50	0.00	0.00	0.00	3	0	0	62	3,495	-3,433
449+00	0.00	0.00	0.00	0	0	0	62	3,495	-3,433
449+50	0.00	0.00	0.00	0	0	0	62	3,495	-3,433
450+00	0.00	0.00	0.00	0	0	0	62	3,495	-3,433

USH 10EB Median																	
	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)				AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
	Salvaged/Unusable			Salvaged/Unusable			Expanded				Salvaged/Unusable			Salvaged/Unusable			Expanded		
STATION	Cut	Pavement Material	Fill	Cut	Pavement Material	Fill	Cut 1.00	Fill 1.00	Mass Ordinate	STATION	Cut	Pavement Material	Fill	Cut	Pavement Material	Fill	Cut 1.00	Fill 1.00	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8					Note 1	Note 2	Note 3	Note 1		Note 8
450+50	0.15	0.00	1.78	0	0	2	62	3,496	-3,435	473+50	0.01	0.00	4.97	0	0	7	104	3,620	-3,515
451+00	0.54	0.00	0.71	1	0	2	62	3,499	-3,436	474+00	0.00	0.00	0.00	0	0	5	104	3,625	-3,520
451+50	0.25	0.00	0.04	1	0	1	63	3,499	-3,436	474+50	0.00	0.00	0.00	0	0	0	104	3,625	-3,520
452+00	0.25	0.00	0.74	0	0	1	64	3,500	-3,436	475+00	0.00	0.00	0.00	0	0	0	104	3,625	-3,520
452+50	0.27	0.00	1.53	0	0	2	64	3,502	-3,438	475+50	0.00	0.00	0.00	0	0	0	104	3,625	-3,520
453+00	0.17	0.00	1.03	0	0	2	64	3,505	-3,440	476+00	0.00	0.00	0.00	0	0	0	104	3,625	-3,520
453+50	0.29	0.00	0.38	0	0	1	65	3,506	-3,441	476+50	0.00	0.00	2.91	0	0	3	104	3,627	-3,523
454+00	0.42	0.00	0.33	1	0	1	66	3,507	-3,441	477+00	0.00	0.00	2.33	0	0	5	104	3,632	-3,528
454+50	0.77	0.00	0.06	1	0	0	67	3,507	-3,440	477+50	0.00	0.00	0.68	0	0	3	104	3,635	-3,530
455+00	1.55	0.00	0.00	2	0	0	69	3,507	-3,438	478+00	0.00	0.00	0.92	0	0	1	104	3,636	-3,532
455+50	1.69	0.00	0.00	3	0	0	72	3,507	-3,435	478+50	0.00	0.00	1.14	0	0	2	104	3,638	-3,534
456+00	1.37	0.00	0.00	3	0	0	75	3,507	-3,432	479+00	0.03	0.00	2.16	0	0	3	105	3,641	-3,537
456+50	0.93	0.00	0.02	2	0	0	77	3,507	-3,430	479+50	0.01	0.00	3.79	0	0	6	105	3,647	-3,542
457+00	0.27	0.00	0.74	1	0	1	78	3,508	-3,430	480+00	0.00	0.00	4.97	0	0	8	105	3,655	-3,550
457+50	0.03	0.00	2.31	0	0	3	78	3,510	-3,432	480+50	0.00	0.00	5.88	0	0	10	105	3,665	-3,560
458+00	0.01	0.00	2.31	0	0	4	78	3,515	-3,437	481+00	0.00	0.00	5.38	0	0	10	105	3,675	-3,571
458+50	0.00	0.00	1.86	0	0	4	78	3,519	-3,440	481+50	0.00	0.00	3.64	0	0	8	105	3,684	-3,579
459+00	0.25	0.00	0.23	0	0	2	78	3,521	-3,442	482+00	0.00	0.00	1.61	0	0	5	105	3,689	-3,584
459+50	1.53	0.00	0.00	2	0	0	80	3,521	-3,441	482+50	0.00	0.00	1.26	0	0	3	105	3,691	-3,587
460+00	2.63	0.00	0.00	4	0	0	84	3,521	-3,437	483+00	0.01	0.00	1.44	0	0	2	105	3,694	-3,589
460+50	3.00	0.00	0.00	5	0	0	89	3,521	-3,432	483+50	0.00	0.00	1.94	0	0	3	105	3,697	-3,592
461+00	2.68	0.00	0.00	5	0	0	94	3,521	-3,426	484+00	0.00	0.00	1.85	0	0	4	105	3,700	-3,596
461+50	1.88	0.00	0.00	4	0	0	99	3,521	-3,422	484+50	0.01	0.00	1.09	0	0	3	105	3,703	-3,599
462+00	1.17	0.00	0.00	3	0	0	101	3,521	-3,419	485+00	0.00	0.00	0.92	0	0	2	105	3,705	-3,600
462+50	0.18	0.00	1.02	1	0	1	103	3,522	-3,419	485+50	0.00	0.00	0.92	0	0	2	105	3,707	-3,602
463+00	0.00	0.00	5.02	0	0	6	103	3,527	-3,424	486+00	0.00	0.00	0.93	0	0	2	105	3,708	-3,604
463+50	0.00	0.00	3.36	0	0	8	103	3,535	-3,432	486+50	0.00	0.00	0.95	0	0	2	105	3,710	-3,606
464+00	0.03	0.00	1.71	0	0	5	103	3,540	-3,437	487+00	0.00	0.00	1.07	0	0	2	105	3,712	-3,607
464+50	0.11	0.00	1.03	0	0	3	103	3,542	-3,439	487+50	0.00	0.00	1.43	0	0	2	105	3,714	-3,610
465+00	0.23	0.00	0.57	0	0	1	103	3,544	-3,440	488+00	0.00	0.00	1.39	0	0	3	105	3,717	-3,612
465+50	0.09	0.00	1.37	0	0	2	104	3,546	-3,442	488+50	0.00	0.00	1.04	0	0	2	105	3,719	-3,615
466+00	0.01	0.00	2.29	0	0	3	104	3,549	-3,445	489+00	0.00	0.00	1.95	0	0	3	105	3,722	-3,617
466+50	0.08	0.00	3.16	0	0	5	104	3,554	-3,450	489+50	0.00	0.00	4.79	0	0	6	105	3,728	-3,624
467+00	0.01	0.00	3.47	0	0	6	104	3,560	-3,456	490+00	0.00	0.00	5.24	0	0	9	105	3,737	-3,633
467+50	0.04	0.00	2.99	0	0	6	104	3,566	-3,462	490+50	0.00	0.00	2.87	0	0	8	105	3,745	-3,640
468+00	0.01	0.00	2.29	0	0	5	104	3,571	-3,467	491+00	0.25	0.00	0.31	0	0	3	105	3,748	-3,643
468+50	0.02	0.00	1.77	0	0	4	104	3,575	-3,471	491+50	0.15	0.00	0.70	0	0	1	105	3,749	-3,644
469+00	0.03	0.00	1.85	0	0	3	104	3,578	-3,474	492+00	0.00	0.00	1.20	0	0	2	105	3,751	-3,645
469+50	0.06	0.00	3.63	0	0	5	104	3,583	-3,479	492+50	0.00	0.00	1.65	0	0	3	105	3,753	-3,648
470+00	0.00	0.00	4.71	0	0	8	104	3,591	-3,487	493+00	0.00	0.00	1.81	0	0	3	105	3,756	-3,651
470+50	0.02	0.00	3.15	0	0	7	104	3,598	-3,494	493+50	0.00	0.00	1.11	0	0	3	105	3,759	-3,654
471+00	0.01	0.00	1.95	0	0	5	104	3,603	-3,499	494+00	0.00	0.00	1.12	0	0	2	105	3,761	-3,656
471+50	0.04	0.00	1.38	0	0	3	104	3,606	-3,502	494+50	0.00	0.00	2.64	0	0	3	105	3,765	-3,659
472+00	0.03	0.00	1.07	0	0	2	104	3,608	-3,504	495+00	0.00	0.00	2.76	0	0	5	105	3,770	-3,664
472+50	0.02	0.00	0.73	0	0	2	104	3,610	-3,505	495+50	0.00	0.00	1.58	0	0	4	105	3,774	-3,668
473+00	0.01	0.00	2.54	0	0	3	104	3,613	-3,508	496+00	0.00	0.00	1.04	0	0	2	105	3,776	-3,671

USH 10EB Median																		
	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)				AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
	Salvaged/Unusable			Salvaged/Unusable			Expanded				Salvaged/Unusable			Salvaged/Unusable			Expanded		
STATION	Cut	Pavement Material	Fill	Cut	Pavement Material	Fill	Cut 1.00	Fill 1.00	Mass Ordinate	STATION	Cut	Pavement Material	Fill	Cut	Pavement Material	Fill	Cut 1.00	Fill 1.00	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8					Note 1	Note 2	Note 3	Note 1		Note 8
496+50	0.00	0.00	1.69	0	0	3	105	3,779	-3,673	519+50	0.00	0.00	2.31	0	0	4	147	3,934	-3,787
497+00	0.00	0.00	2.31	0	0	4	105	3,782	-3,677	520+00	0.00	0.00	2.28	0	0	4	147	3,939	-3,792
497+50	0.00	0.00	3.81	0	0	6	105	3,788	-3,683	520+50	0.00	0.00	2.61	0	0	5	147	3,943	-3,796
498+00	0.20	0.00	5.44	0	0	9	106	3,797	-3,691	521+00	0.00	0.00	2.65	0	0	5	147	3,948	-3,801
498+50	0.03	0.00	3.32	0	0	8	106	3,805	-3,699	521+50	0.00	0.00	2.10	0	0	4	147	3,952	-3,805
499+00	0.12	0.00	1.26	0	0	4	106	3,809	-3,703	522+00	0.00	0.00	1.97	0	0	4	147	3,956	-3,809
499+50	0.06	0.00	1.43	0	0	2	106	3,811	-3,705	522+50	0.00	0.00	3.00	0	0	5	147	3,961	-3,814
500+00	0.19	0.00	1.39	0	0	3	106	3,814	-3,708	523+00	0.00	0.00	3.19	0	0	6	147	3,966	-3,820
500+50	0.53	0.00	1.25	1	0	2	107	3,817	-3,710	523+50	0.00	0.00	2.31	0	0	5	147	3,971	-3,825
501+00	0.87	0.00	1.07	1	0	2	108	3,819	-3,710	524+00	0.00	0.00	2.01	0	0	4	147	3,976	-3,829
501+50	0.69	0.00	1.19	1	0	2	110	3,821	-3,711	524+50	0.00	0.00	4.71	0	0	6	147	3,982	-3,835
502+00	0.79	0.00	1.21	1	0	2	111	3,823	-3,712	525+00	0.00	0.00	5.33	0	0	9	147	3,991	-3,844
502+50	0.66	0.00	1.60	1	0	3	112	3,826	-3,713	525+50	0.00	0.00	3.51	0	0	8	147	3,999	-3,852
503+00	0.46	0.00	1.90	1	0	3	113	3,829	-3,715	526+00	0.00	0.00	1.70	0	0	5	147	4,004	-3,857
503+50	0.24	0.00	2.66	1	0	4	114	3,833	-3,719	526+50	0.00	0.00	3.56	0	0	5	147	4,009	-3,862
504+00	0.78	0.00	1.97	1	0	4	115	3,837	-3,722	527+00	0.00	0.00	3.02	0	0	6	147	4,015	-3,868
504+50	1.13	0.00	1.36	2	0	3	117	3,840	-3,724	527+50	0.00	0.00	2.54	0	0	5	147	4,020	-3,873
505+00	1.07	0.00	0.96	2	0	2	119	3,843	-3,724	528+00	0.00	0.00	2.15	0	0	4	147	4,024	-3,878
505+50	0.37	0.00	1.60	1	0	2	120	3,845	-3,725	528+50	0.00	0.00	1.86	0	0	4	147	4,028	-3,881
506+00	0.03	0.00	2.90	0	0	4	121	3,849	-3,729	529+00	0.00	0.00	1.58	0	0	3	147	4,031	-3,885
506+50	0.41	0.00	1.98	0	0	5	121	3,854	-3,733	529+50	0.01	0.00	1.72	0	0	3	147	4,034	-3,888
507+00	0.63	0.00	1.68	1	0	3	122	3,857	-3,735	530+00	0.00	0.00	2.23	0	0	4	147	4,038	-3,891
507+50	0.76	0.00	2.24	1	0	4	123	3,861	-3,737	530+50	0.00	0.00	1.20	0	0	3	147	4,041	-3,894
508+00	1.96	0.00	1.19	3	0	3	126	3,864	-3,738	531+00	0.00	0.00	1.13	0	0	2	147	4,043	-3,897
508+50	0.45	0.00	2.03	2	0	3	128	3,867	-3,739	531+50	0.23	0.00	1.27	0	0	2	147	4,046	-3,899
509+00	0.22	0.00	1.60	1	0	3	129	3,870	-3,742	532+00	0.06	0.00	1.73	0	0	3	147	4,048	-3,901
509+50	0.20	0.00	2.58	0	0	4	129	3,874	-3,745	532+50	0.00	0.00	4.02	0	0	5	147	4,054	-3,906
510+00	0.20	0.00	3.11	0	0	5	129	3,879	-3,750	533+00	0.01	0.00	4.11	0	0	8	147	4,061	-3,914
510+50	0.24	0.00	2.54	0	0	5	130	3,885	-3,755	533+50	0.04	0.00	4.68	0	0	8	147	4,069	-3,922
511+00	0.56	0.00	0.87	1	0	3	130	3,888	-3,757	534+00	0.00	0.00	4.53	0	0	9	148	4,078	-3,930
511+50	1.20	0.00	0.37	2	0	1	132	3,889	-3,757	534+50	0.00	0.00	5.63	0	0	9	148	4,087	-3,940
512+00	0.94	0.00	0.56	2	0	1	134	3,890	-3,756	535+00	0.03	0.00	5.38	0	0	10	148	4,098	-3,950
512+50	1.01	0.00	0.51	2	0	1	136	3,891	-3,755	535+50	0.00	0.00	5.20	0	0	10	148	4,107	-3,960
513+00	0.84	0.00	0.42	2	0	1	138	3,892	-3,754	536+00	0.06	0.00	5.30	0	0	10	148	4,117	-3,969
513+50	1.02	0.00	0.24	2	0	1	139	3,892	-3,753	536+50	0.14	0.00	5.82	0	0	10	148	4,127	-3,980
514+00	1.21	0.00	0.33	2	0	1	141	3,893	-3,751	537+00	0.02	0.00	6.46	0	0	11	148	4,139	-3,991
514+50	1.09	0.00	0.30	2	0	1	143	3,893	-3,750	537+50	0.12	0.00	7.50	0	0	13	148	4,152	-4,004
515+00	0.46	0.00	0.47	1	0	1	145	3,894	-3,749	538+00	0.23	0.00	6.25	0	0	13	148	4,164	-4,016
515+50	0.45	0.00	0.34	1	0	1	146	3,895	-3,749	538+50	0.03	0.00	5.21	0	0	11	149	4,175	-4,026
516+00	0.32	0.00	0.41	1	0	1	146	3,895	-3,749	539+00	0.00	0.00	5.23	0	0	10	149	4,185	-4,036
516+50	0.04	0.00	1.45	0	0	2	147	3,897	-3,750	539+50	0.00	0.00	6.76	0	0	11	149	4,196	-4,047
517+00	0.00	0.00	6.71	0	0	8	147	3,905	-3,758	540+00	0.01	0.00	7.73	0	0	13	149	4,209	-4,060
517+50	0.00	0.00	4.36	0	0	10	147	3,915	-3,768	540+50	0.00	0.00	9.84	0	0	16	149	4,225	-4,077
518+00	0.02	0.00	2.24	0	0	6	147	3,921	-3,774	541+00	0.00	0.00	10.50	0	0	19	149	4,244	-4,096
518+50	0.00	0.00	2.44	0	0	4	147	3,925	-3,778	541+50	0.08	0.00	10.30	0	0	19	149	4,264	-4,115
519+00	0.00	0.00	2.43	0	0	5	147	3,930	-3,783	542+00	0.00	0.00	6.73	0	0	16	149	4,279	-4,130

USH 10EB Median									
	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)		
		Salvaged/Unusable			Salvaged/Unusable		Expanded		
STATION	Cut	Pavement Material	Fill	Cut	Pavement Material	Fill	Cut 1.00	Fill 1.00	Mass Ordinate
				Note 1	Note 2	Note 3	Note 1		Note 8
542+50	0.00	0.00	6.51	0	0	12	149	4,292	-4,143
543+00	0.13	0.00	5.25	0	0	11	149	4,302	-4,153
543+50	0.17	0.00	4.24	0	0	9	149	4,311	-4,162
544+00	0.36	0.00	5.03	0	0	9	150	4,320	-4,170
544+50	0.13	0.00	8.67	0	0	13	150	4,333	-4,182
545+00	0.00	0.00	12.74	0	0	20	150	4,352	-4,202
545+50	0.00	0.00	16.13	0	0	27	150	4,379	-4,229
546+00	0.01	0.00	18.16	0	0	32	150	4,411	-4,260
546+50	0.00	0.00	17.46	0	0	33	150	4,444	-4,293
547+00	0.04	0.00	23.25	0	0	38	150	4,481	-4,331
547+50	0.02	0.00	31.14	0	0	50	150	4,532	-4,381
548+00	0.01	0.00	26.98	0	0	54	150	4,586	-4,435
548+50	0.01	0.00	23.12	0	0	46	151	4,632	-4,482
549+00	0.04	0.00	16.03	0	0	36	151	4,668	-4,518
549+50	0.94	0.00	9.82	1	0	24	151	4,692	-4,541
550+00	0.40	0.00	20.32	1	0	28	153	4,720	-4,567
550+50	0.00	0.00	61.09	0	0	75	153	4,796	-4,642
551+00	0.01	0.00	42.95	0	0	96	153	4,892	-4,739
551+50	0.01	0.00	47.71	0	0	84	153	4,976	-4,823
552+00	0.02	0.00	51.70	0	0	92	153	5,068	-4,915
552+50	0.02	0.00	49.89	0	0	94	153	5,162	-5,009
553+00	0.06	0.00	47.97	0	0	91	153	5,253	-5,099
553+50	0.16	0.00	44.86	0	0	86	153	5,339	-5,185
554+00	0.29	0.00	40.20	0	0	79	154	5,417	-5,263
554+50	0.99	0.00	31.79	1	0	67	155	5,484	-5,329
555+00	0.92	0.00	23.81	2	0	51	157	5,535	-5,379
555+50	1.27	0.00	15.95	2	0	37	159	5,572	-5,413
556+00	1.26	0.00	8.73	2	0	23	161	5,595	-5,434
556+25	5.12	0.00	5.71	3	0	7	164	5,602	-5,438
556+50	95.65	70.81	0.00	47	33	3	211	5,604	-5,426
556+75	134.96	70.81	0.00	107	66	0	318	5,604	-5,385
557+00	71.28	0.00	0.00	95	33	0	413	5,604	-5,323
557+25	42.75	0.00	0.02	53	0	0	466	5,604	-5,270
557+50	16.11	0.00	1.46	27	0	1	493	5,605	-5,243
558+00	3.40	0.00	3.96	18	0	5	511	5,610	-5,230
558+50	0.00	0.00	0.33	3	0	4	514	5,614	-5,231
559+00	0.00	0.00	0.00	0	0	0	514	5,614	-5,231
559+50	0.00	0.00	0.00	0	0	0	514	5,614	-5,231





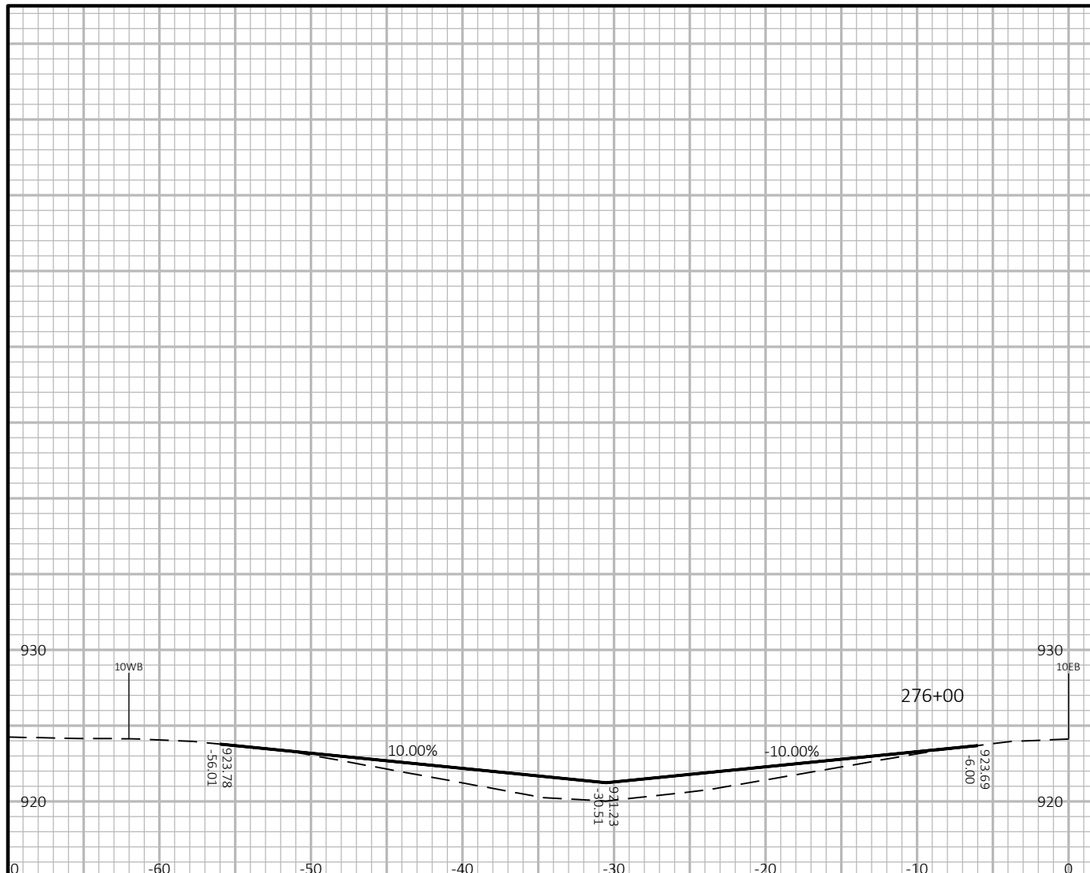
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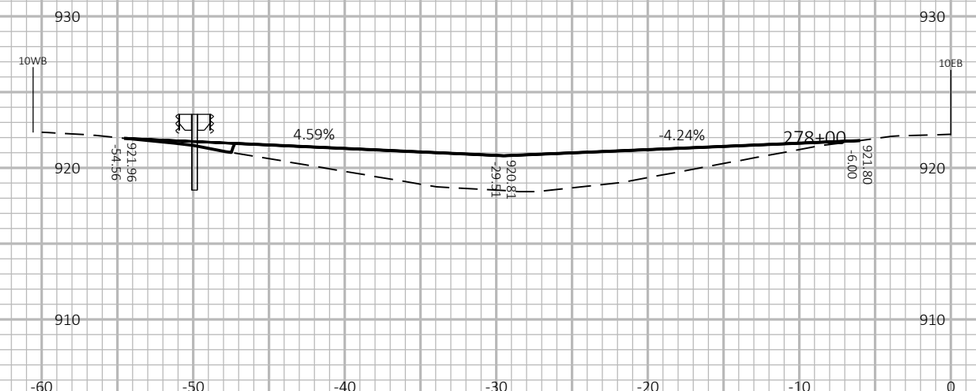
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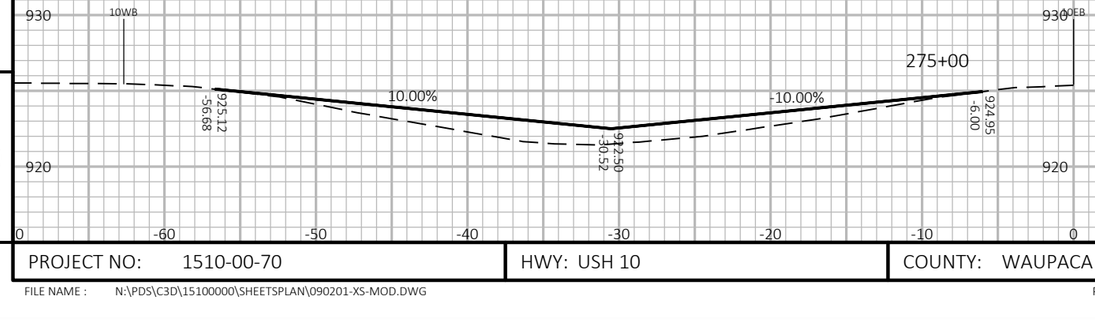
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

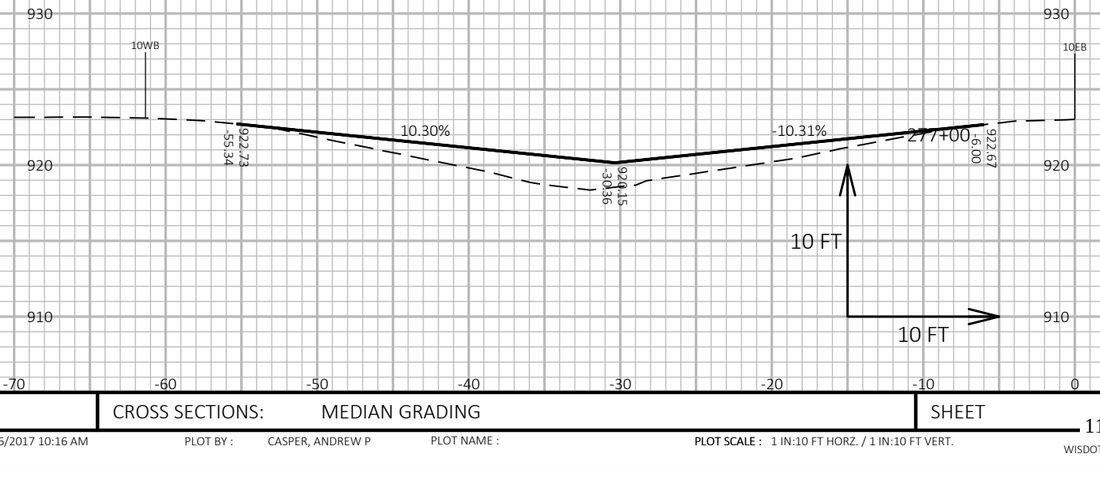
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:15 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









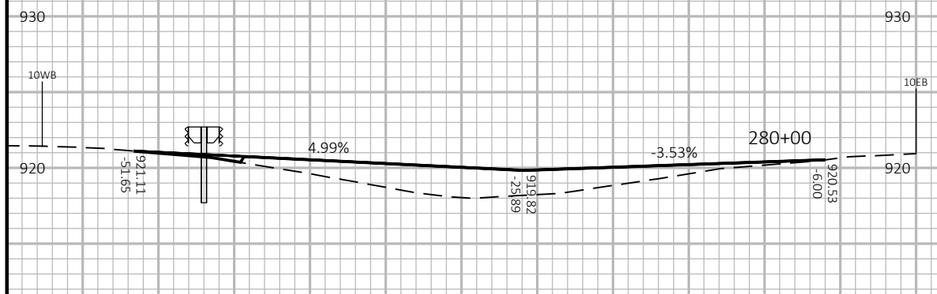
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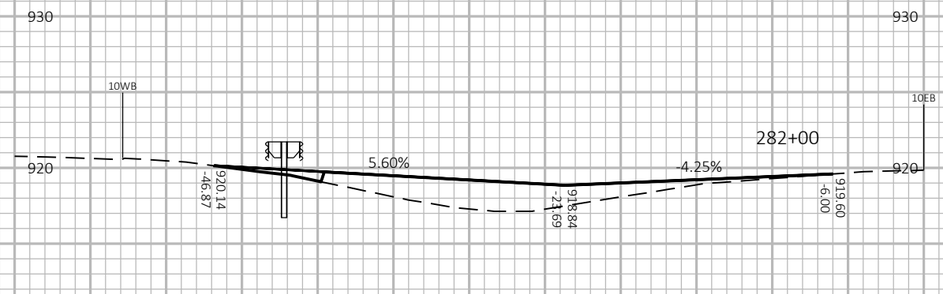
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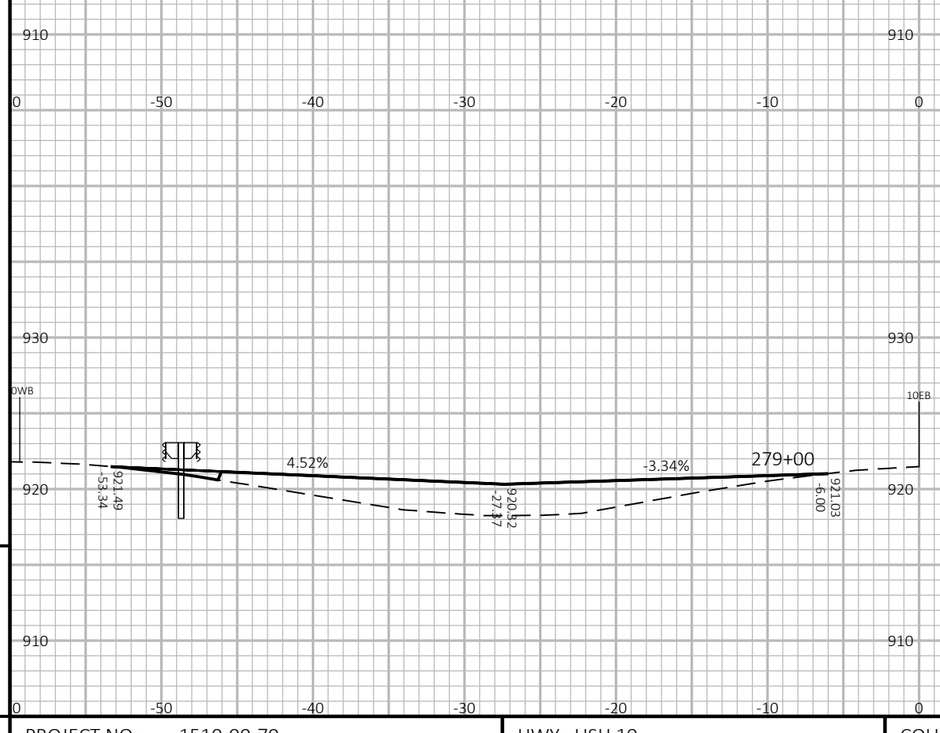
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

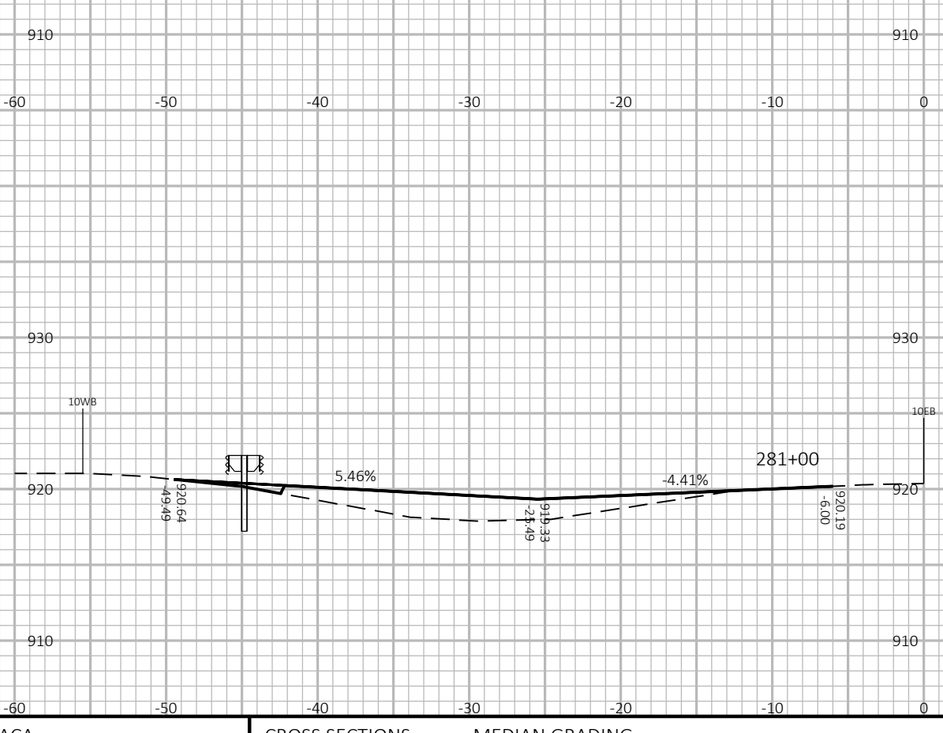
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:16 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

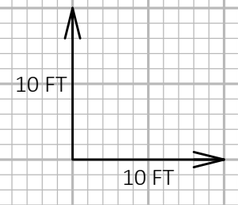
WISDOT/CADDS SHEET 49









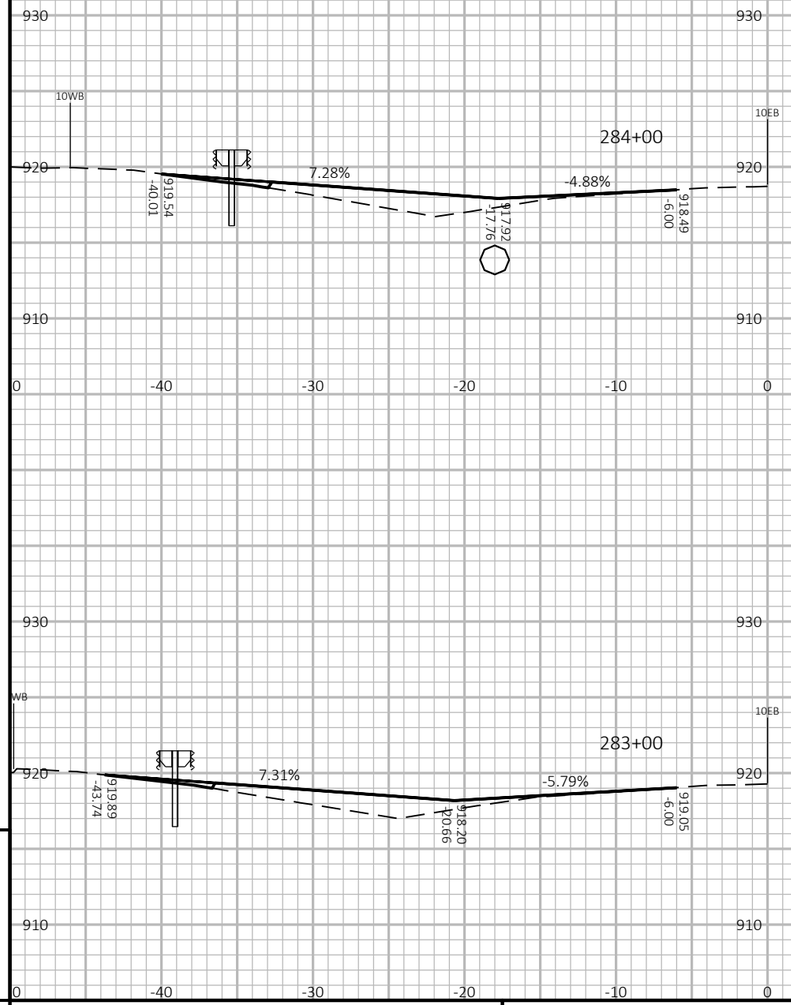


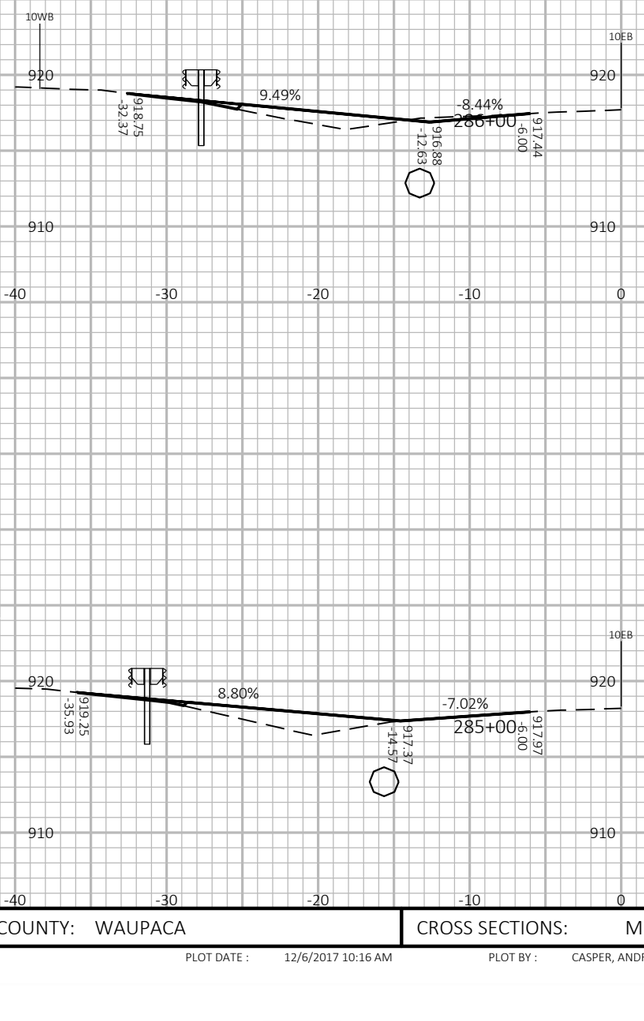
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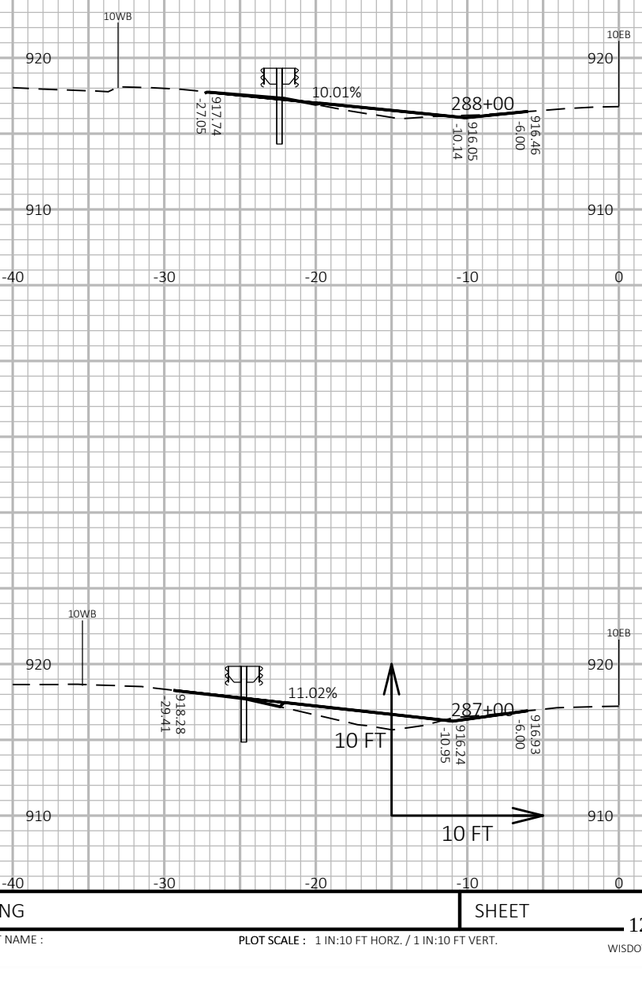
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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 120	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:16 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



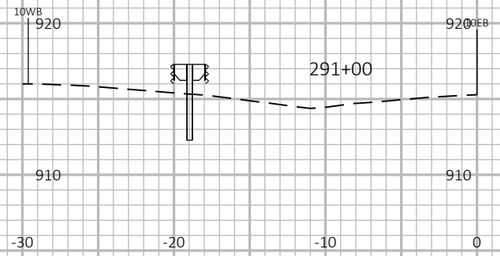


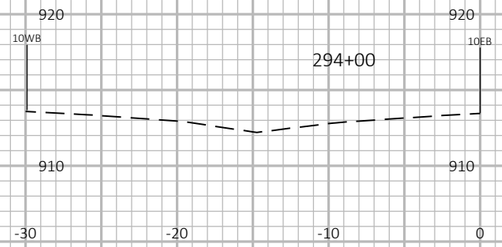


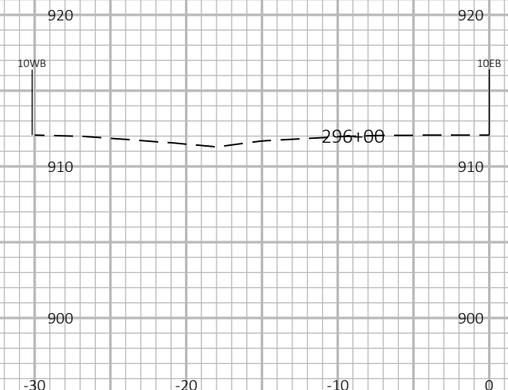
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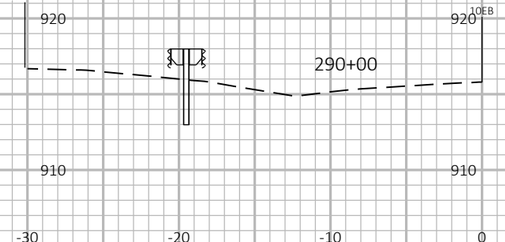
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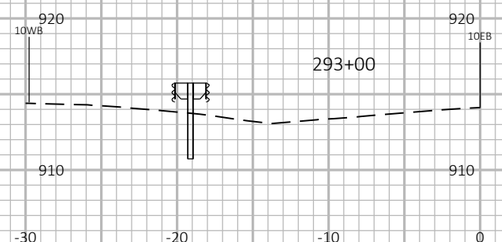
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 121	E



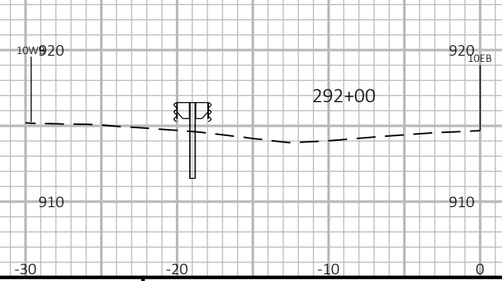




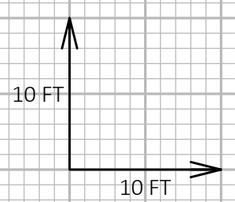








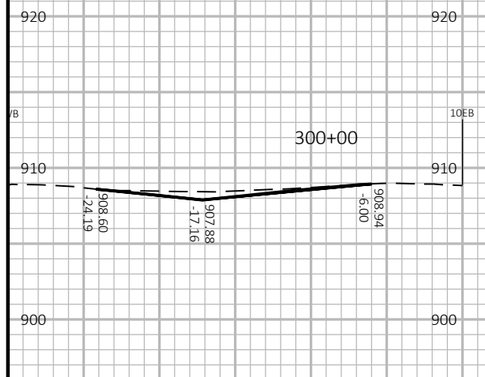


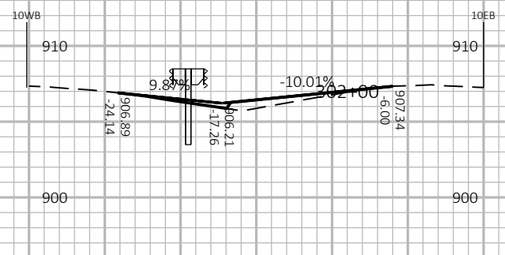


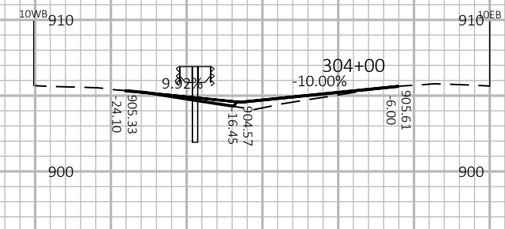
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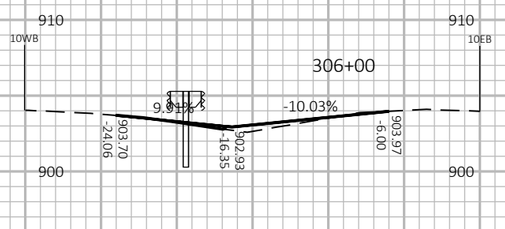
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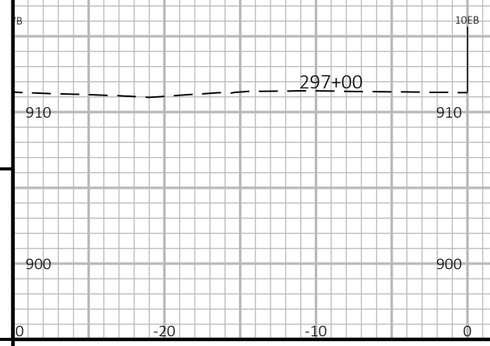
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

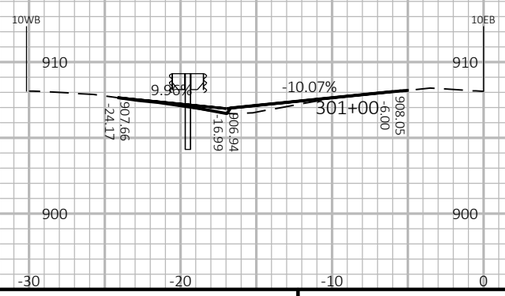


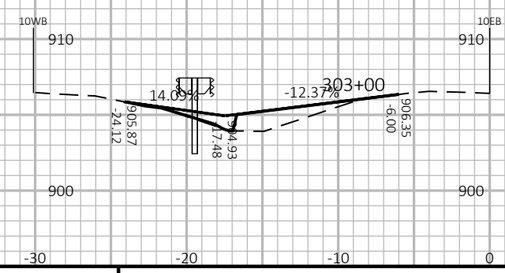


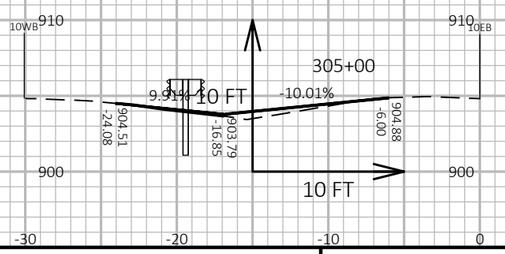








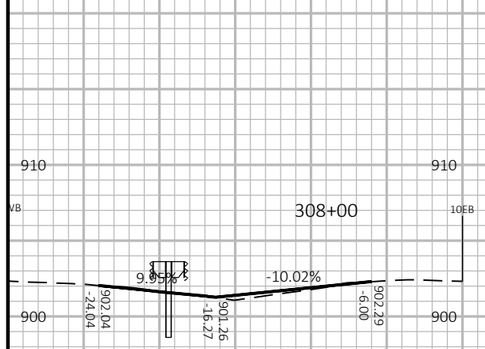


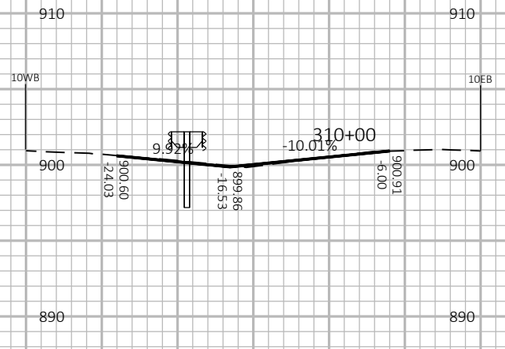


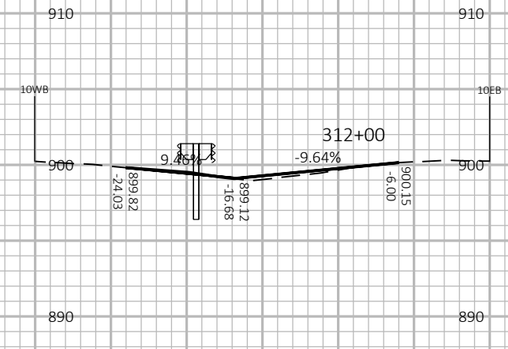
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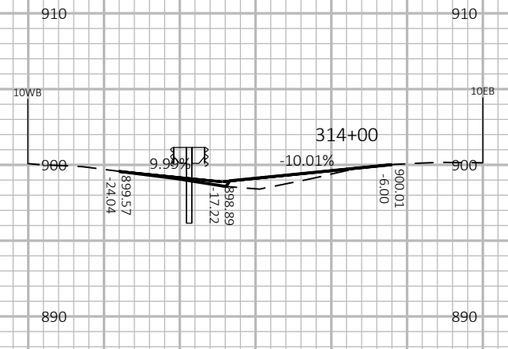
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 123	E

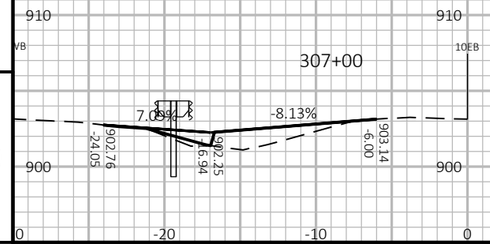
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:17 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

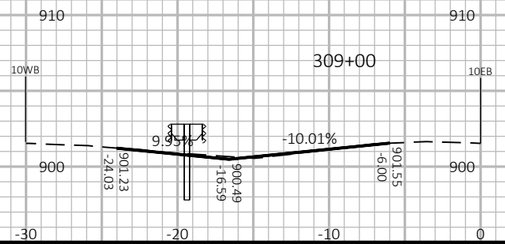


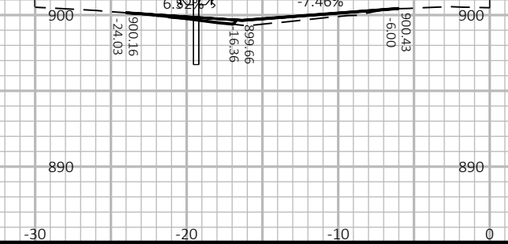


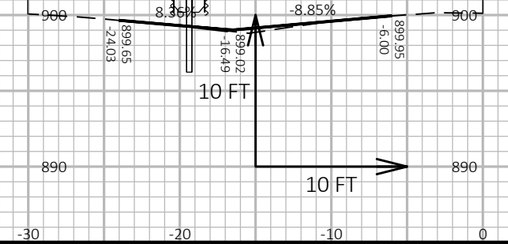












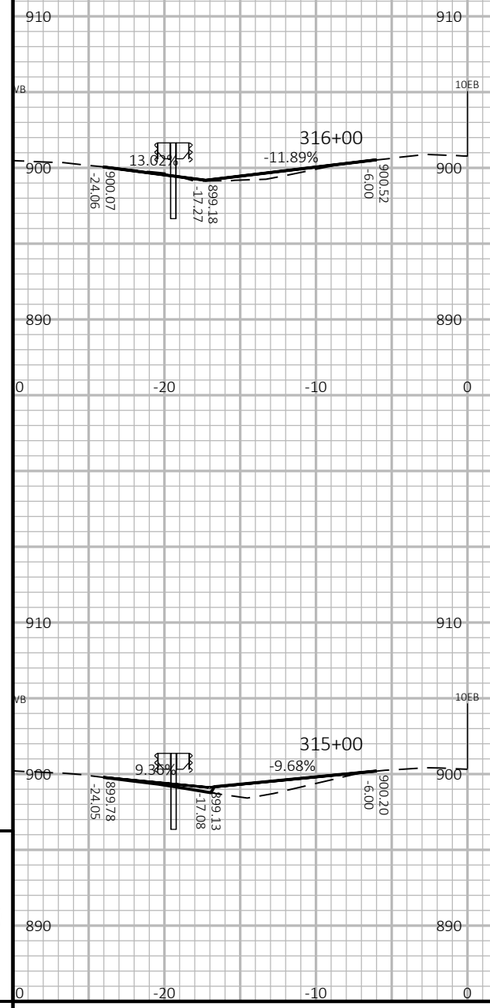
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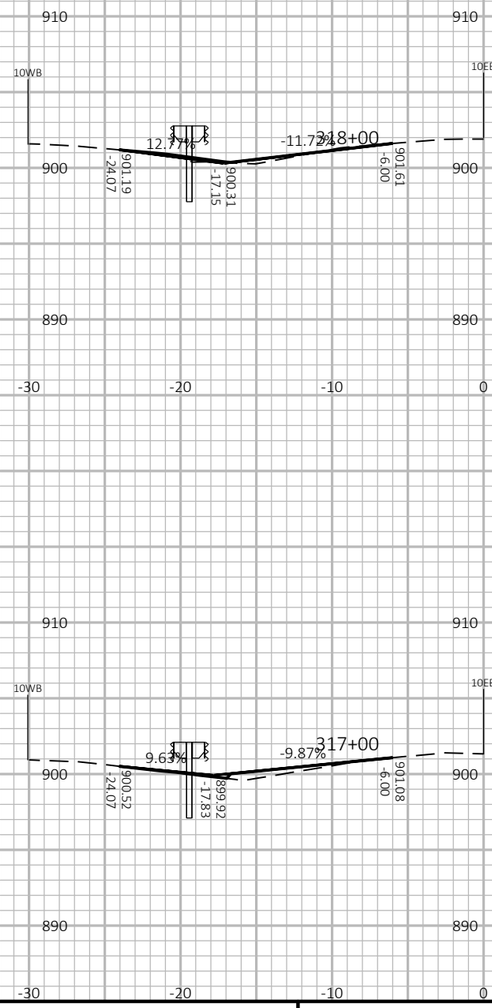
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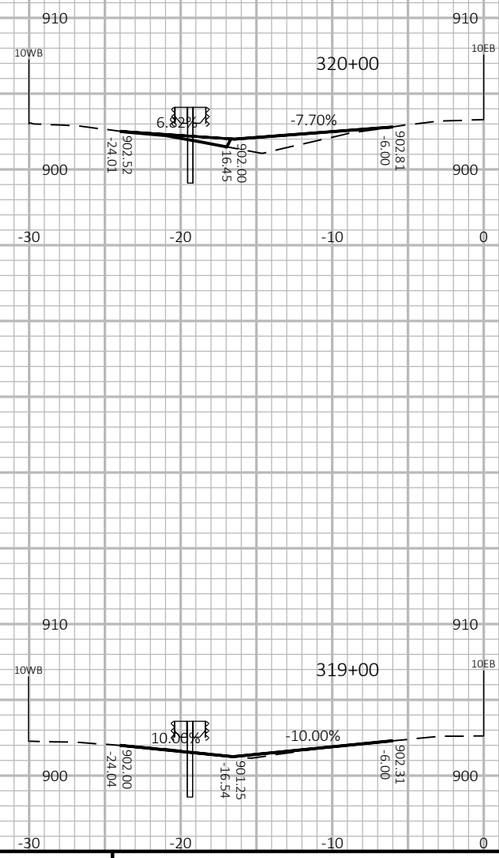
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 124	E

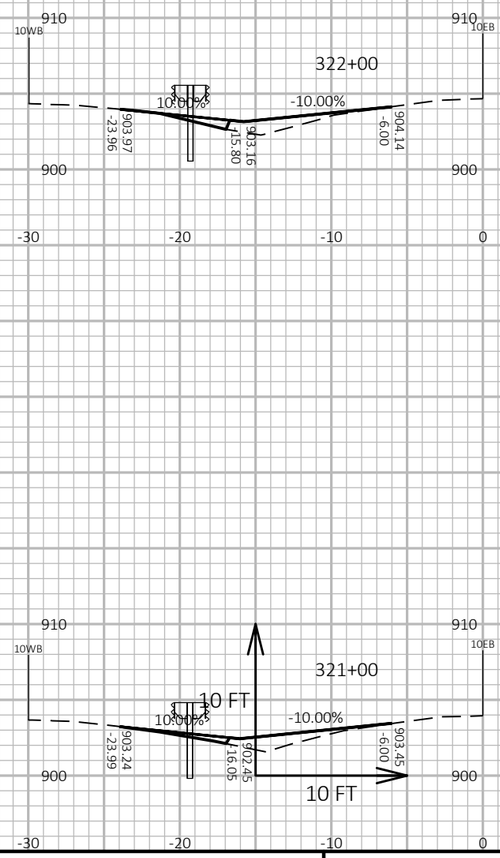
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:17 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





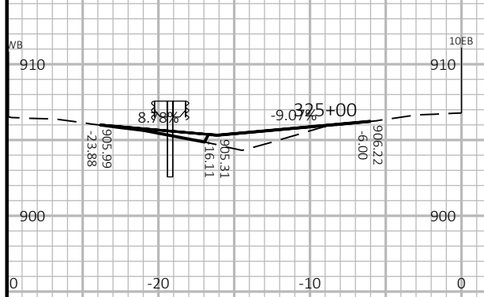


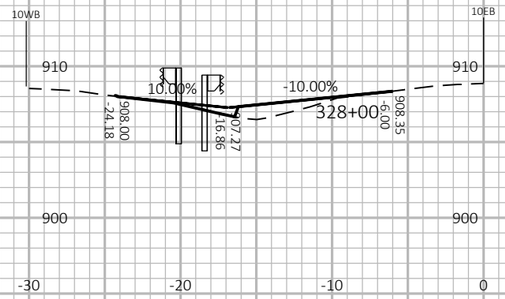


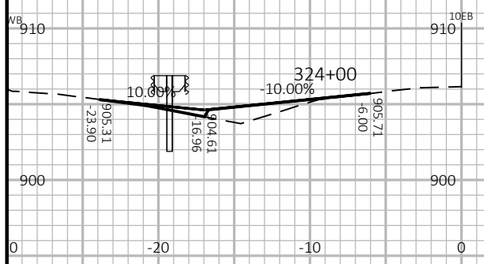
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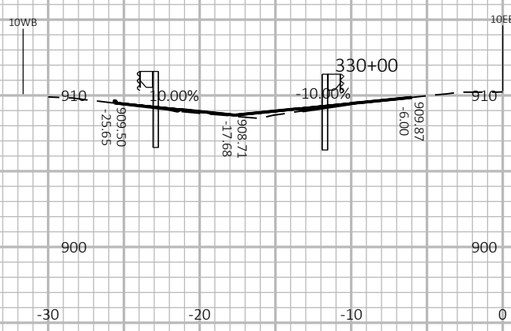
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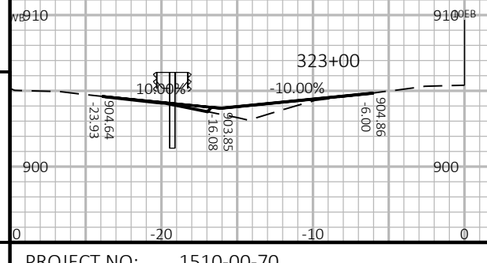


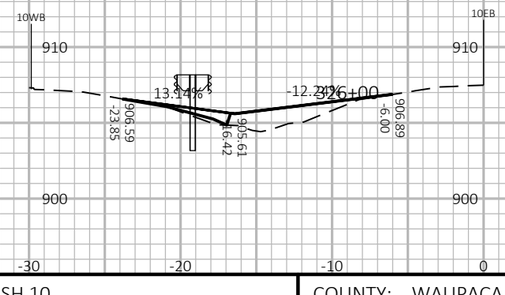


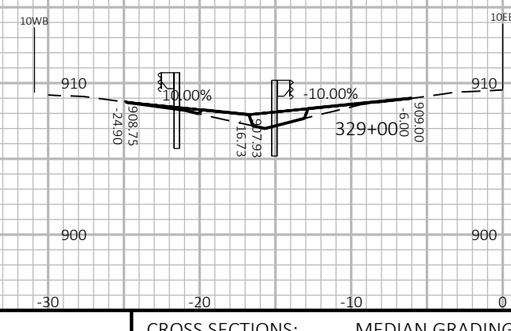


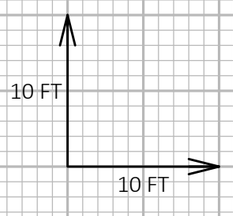












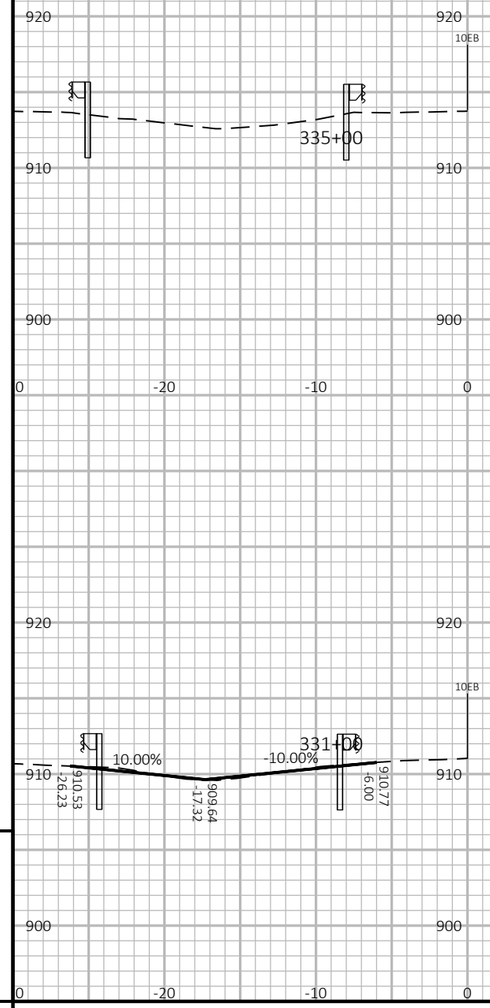
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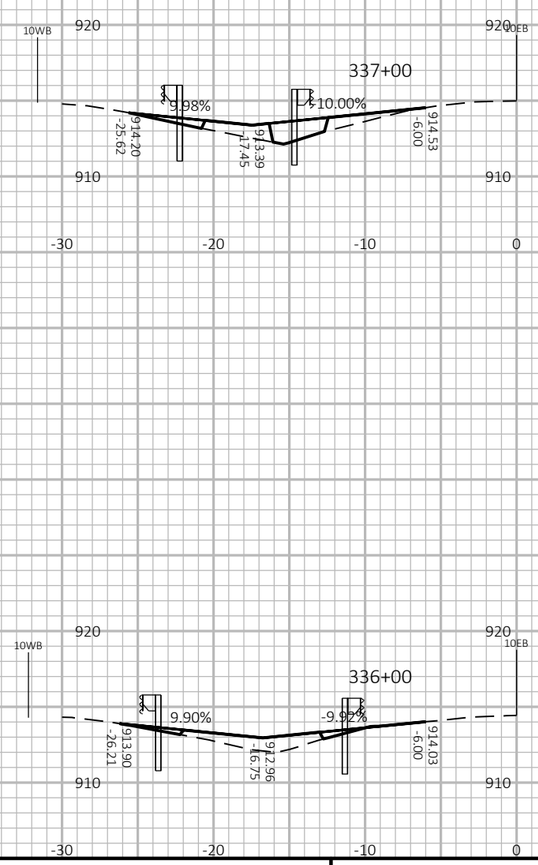
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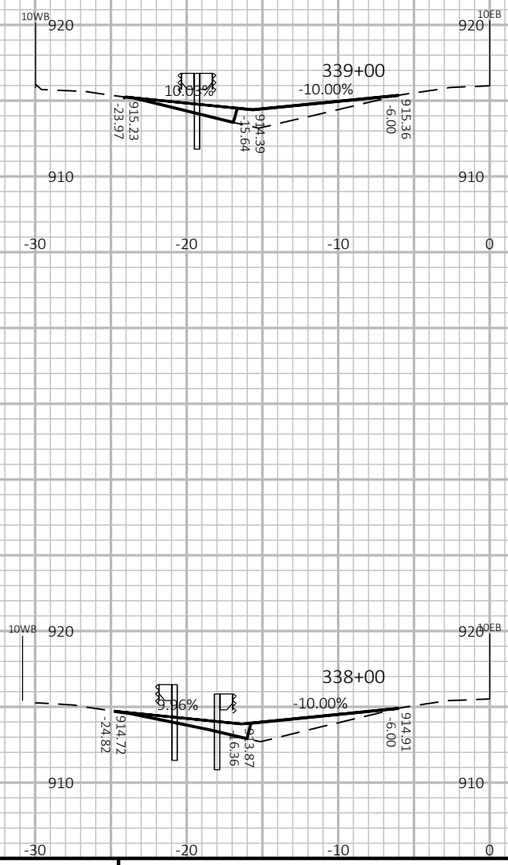
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

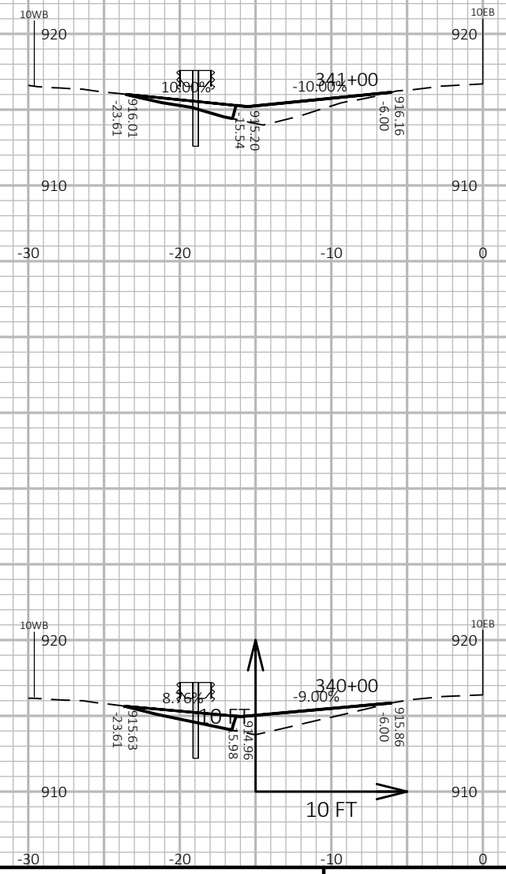
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:18 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







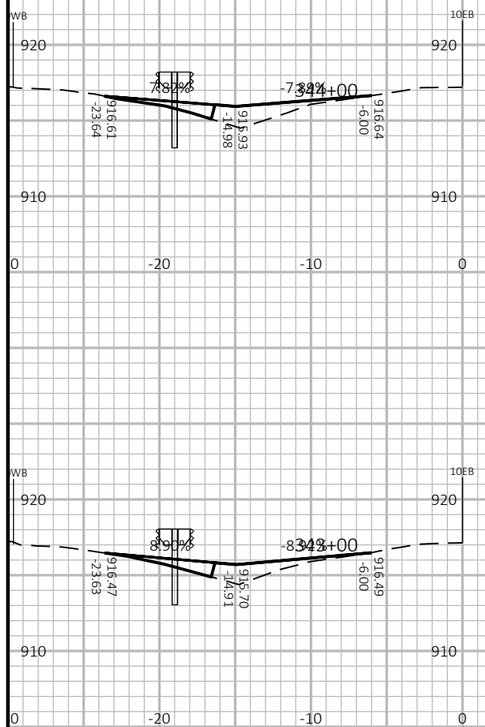


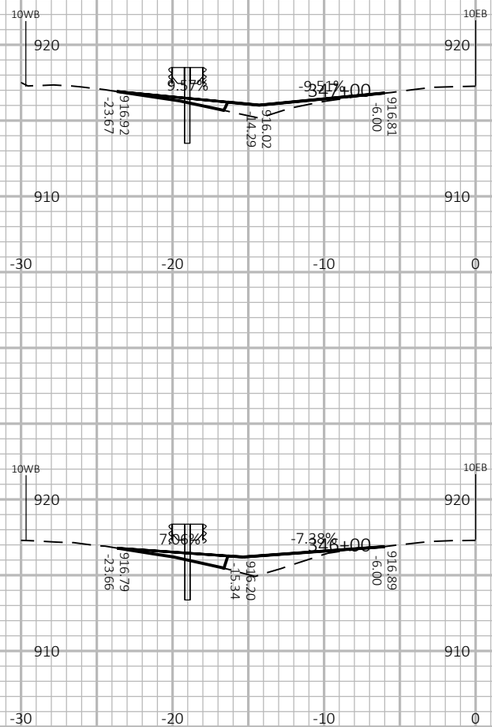
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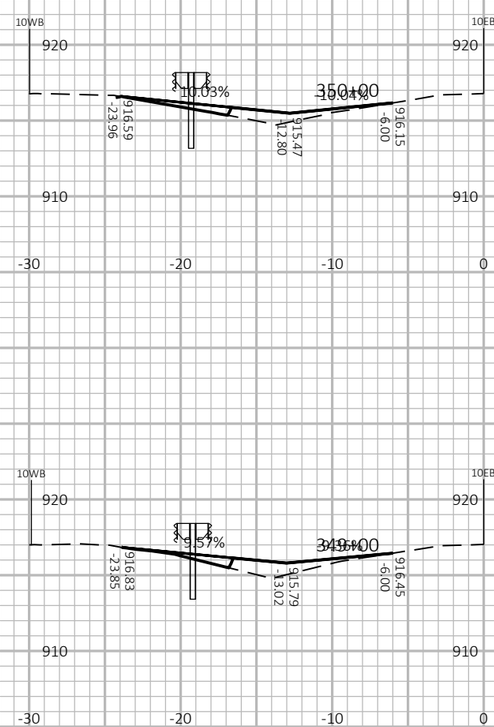
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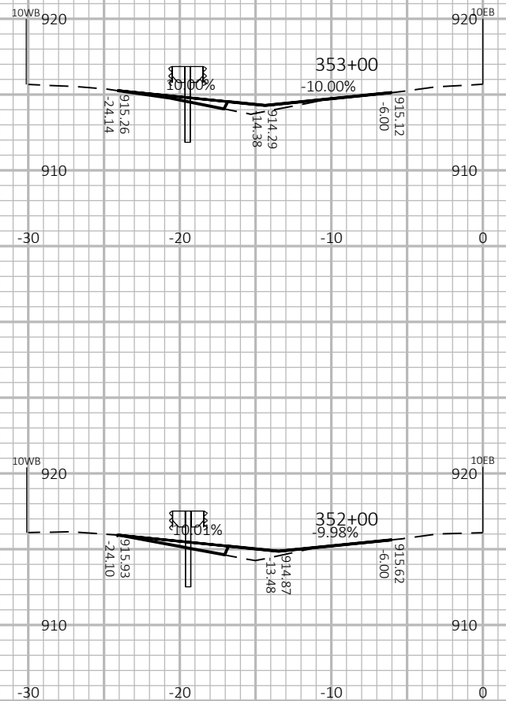
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 127	E

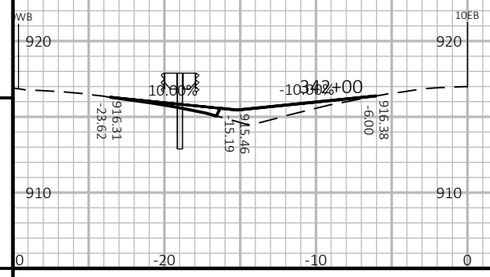
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:18 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



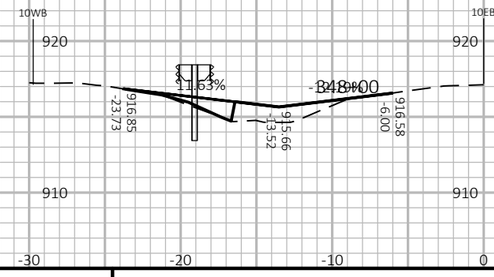


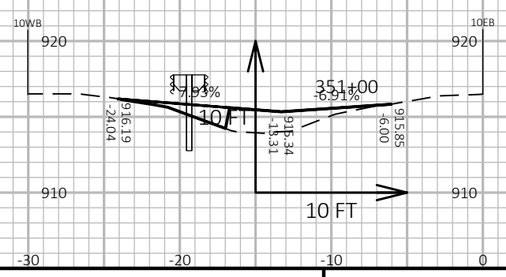












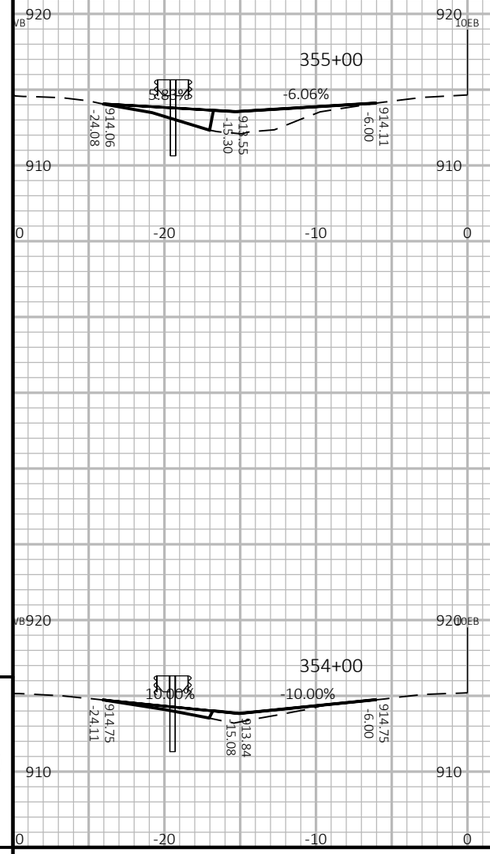
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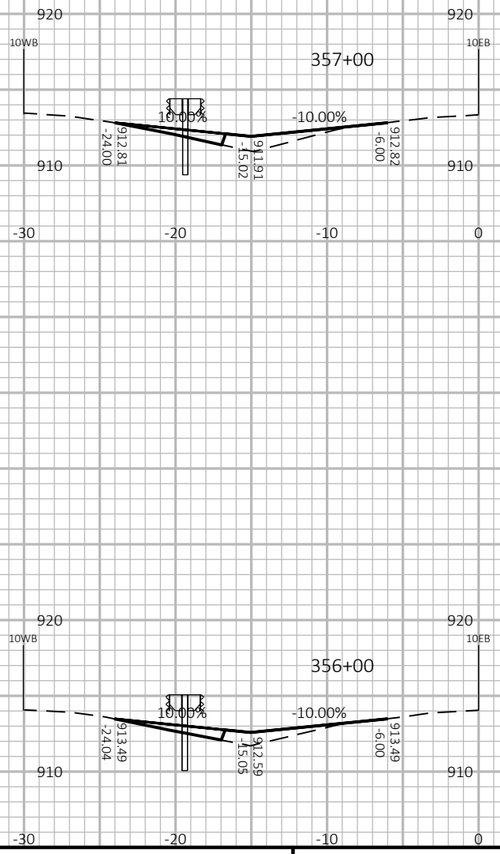
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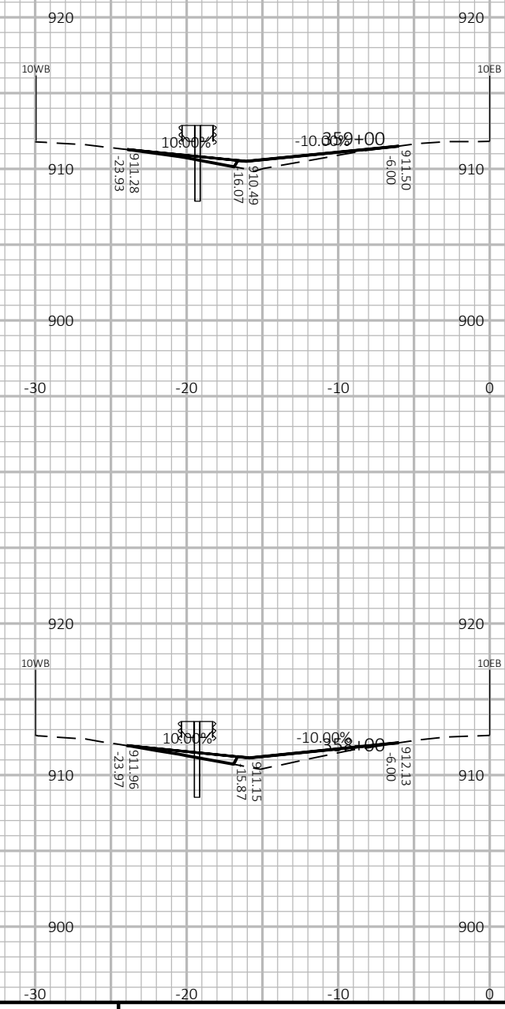
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 128	E

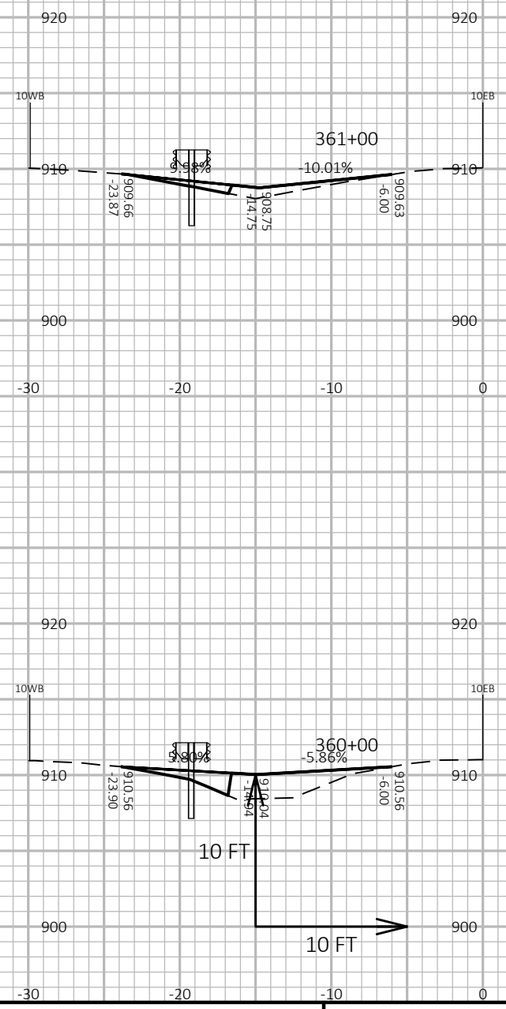
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:18 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







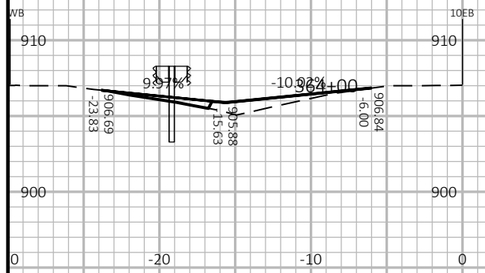


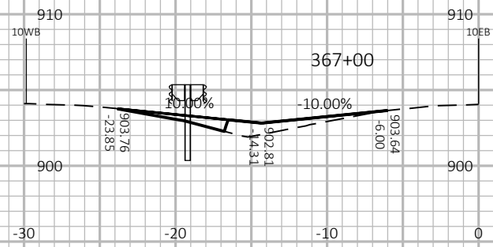
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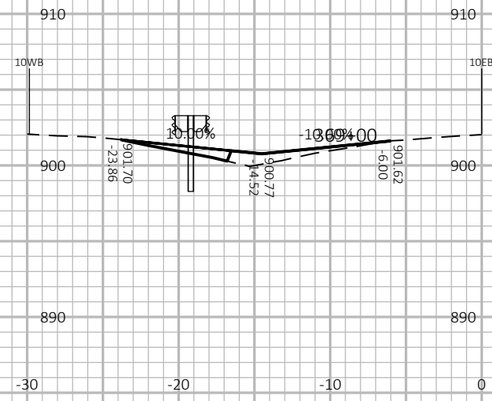
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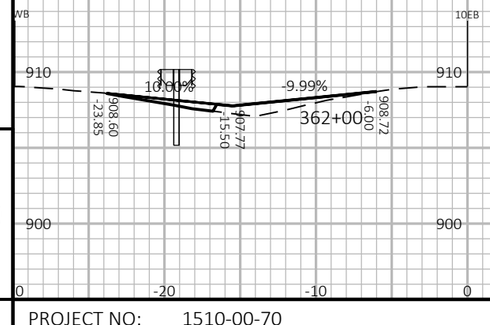
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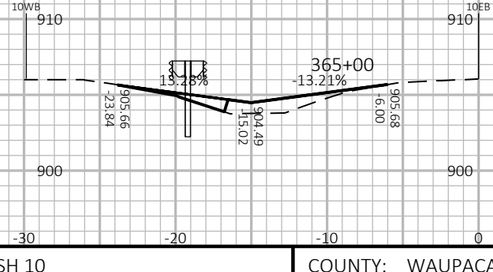
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:19 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

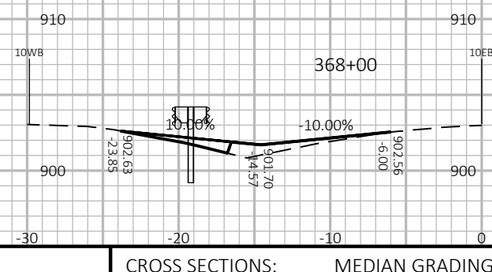


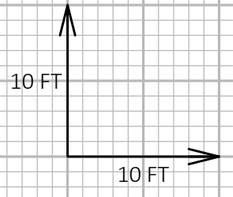












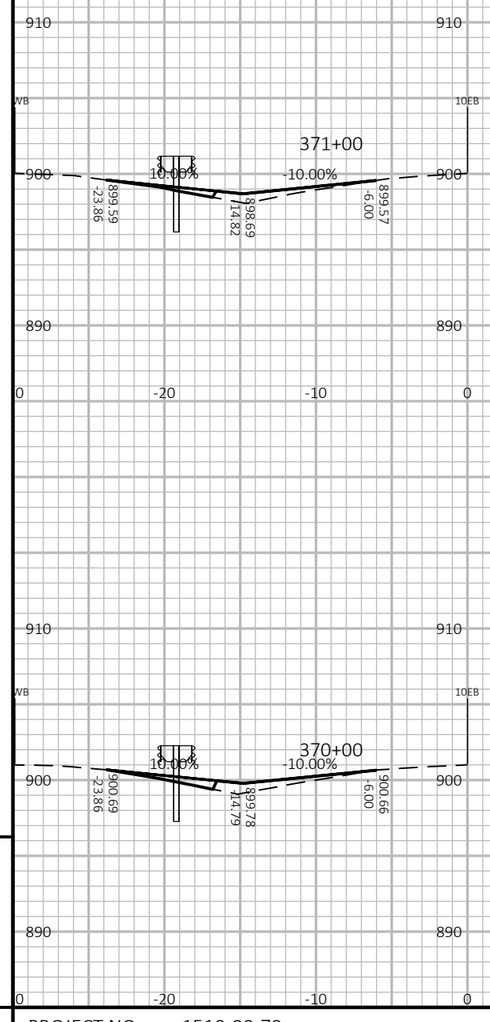
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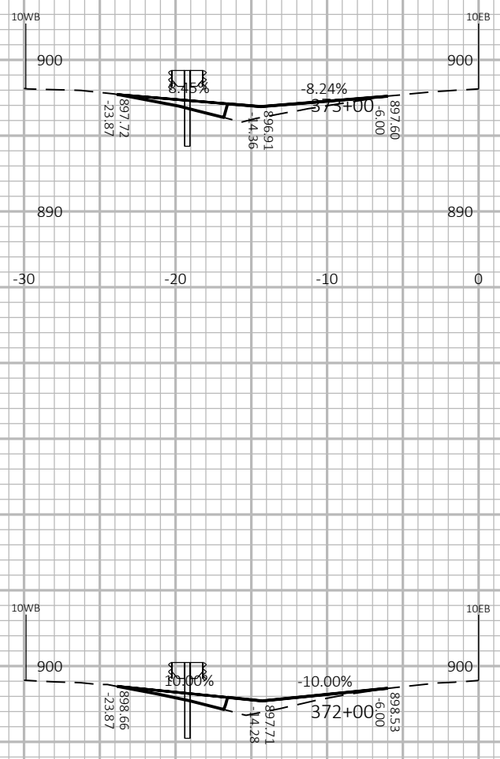
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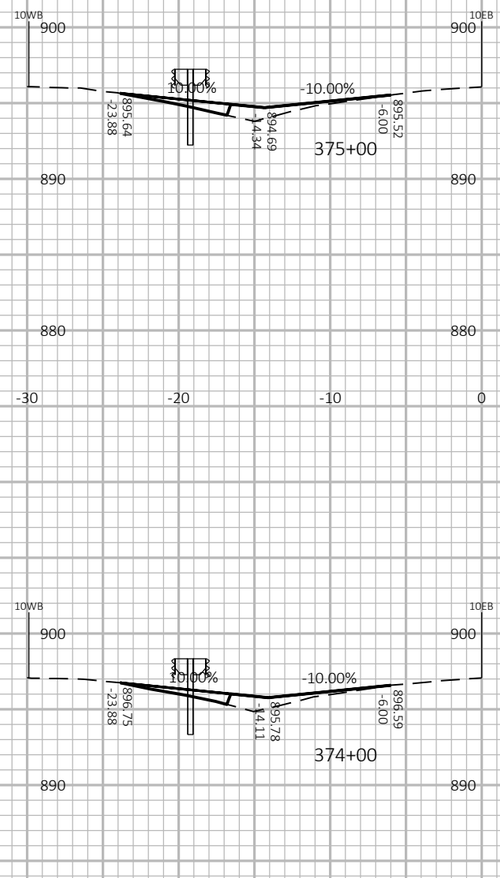
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

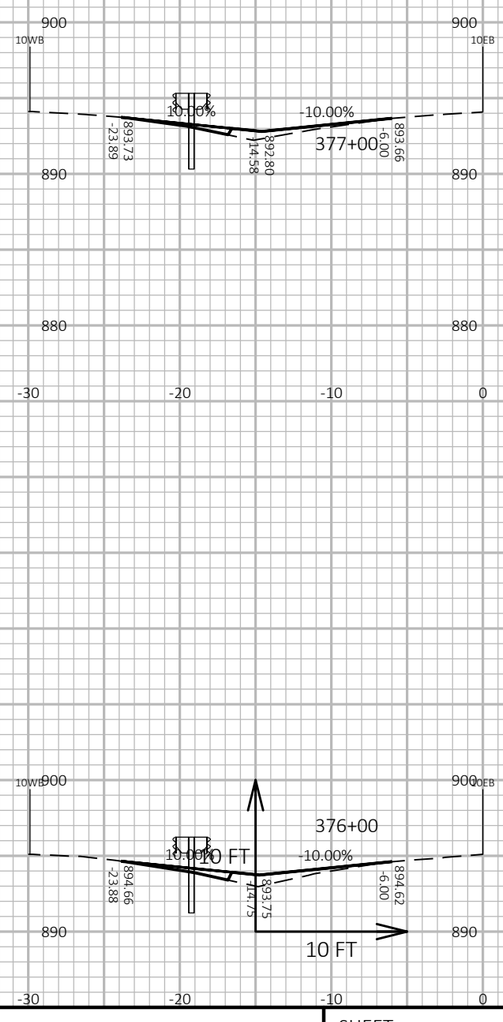
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:19 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





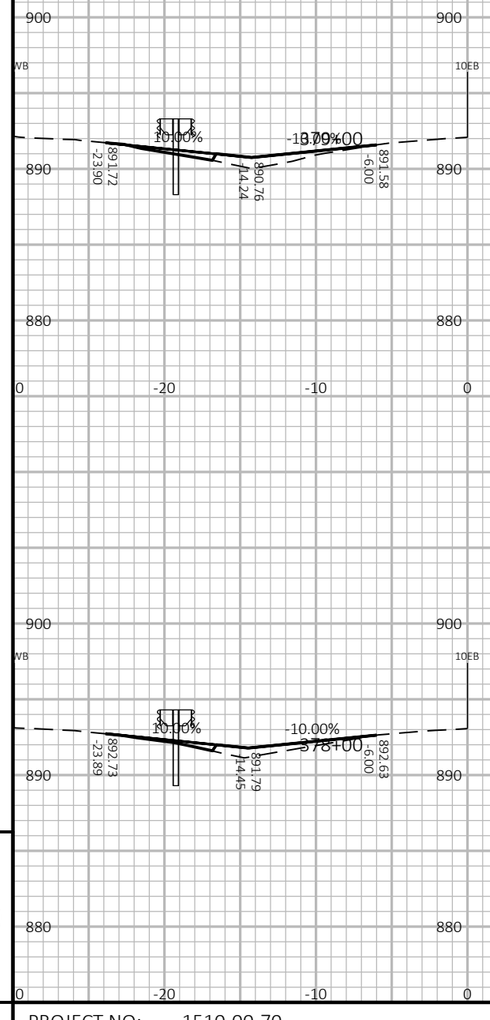


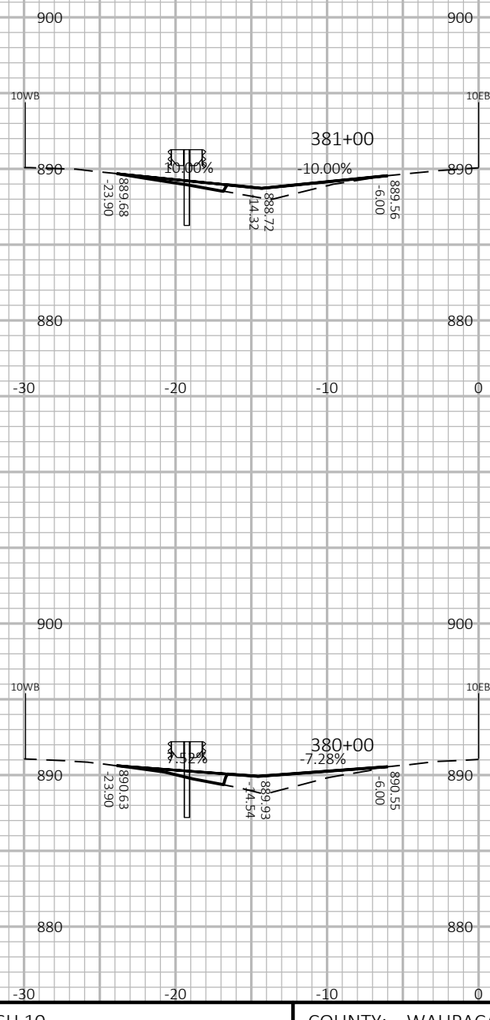


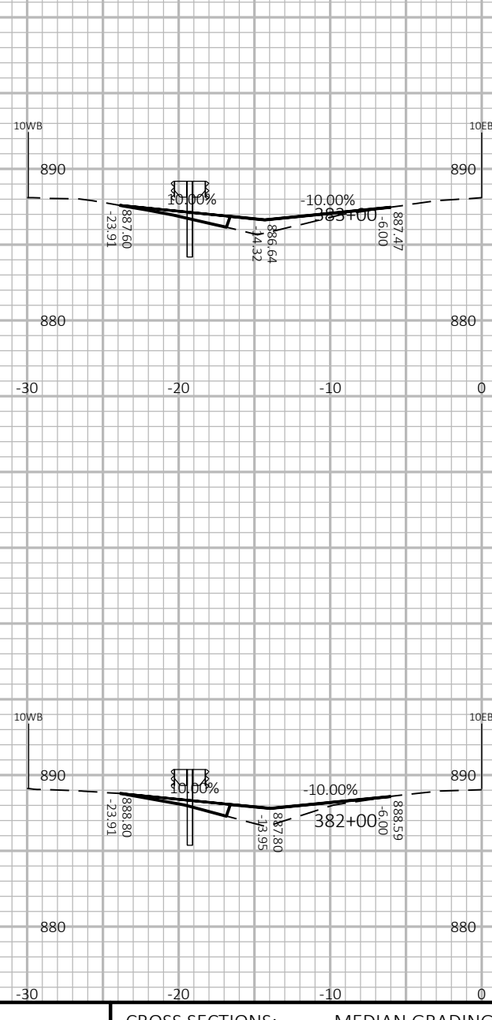
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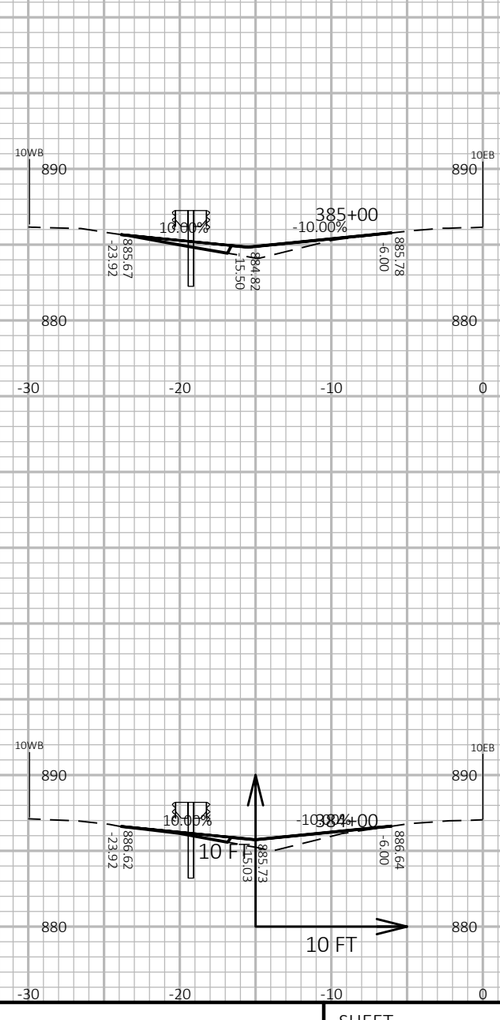
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:19 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









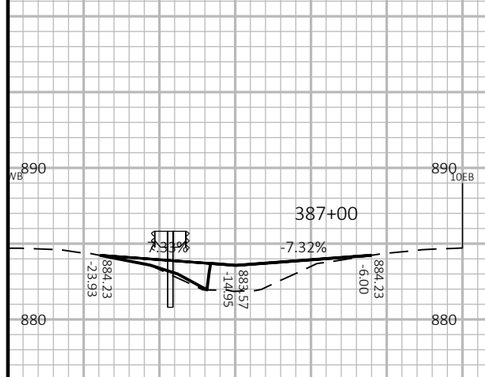
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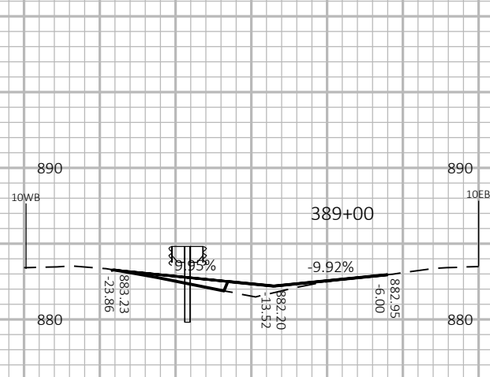
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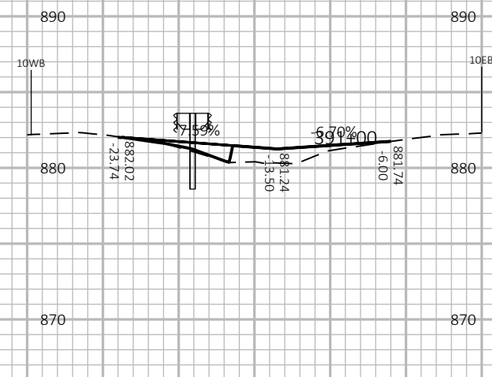
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

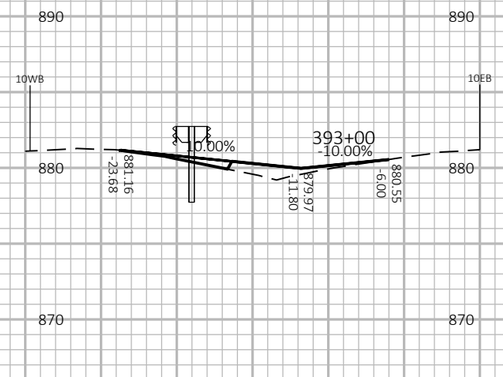
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:19 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

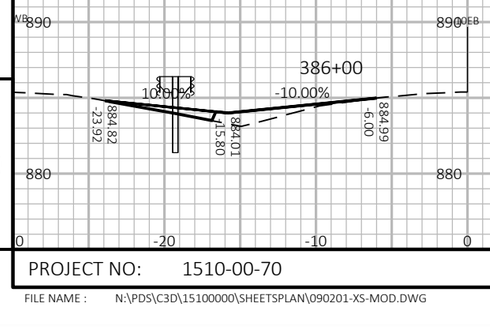
WISDOT/CADDS SHEET 49

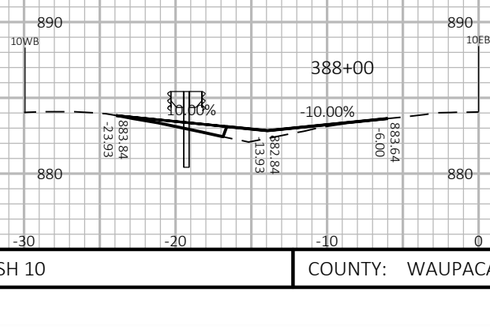


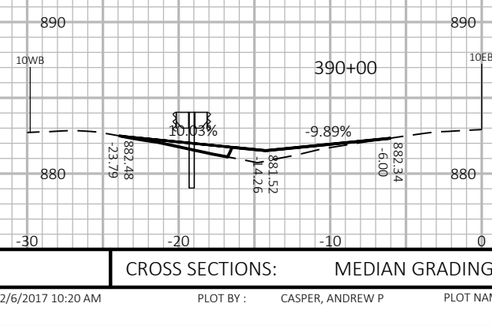


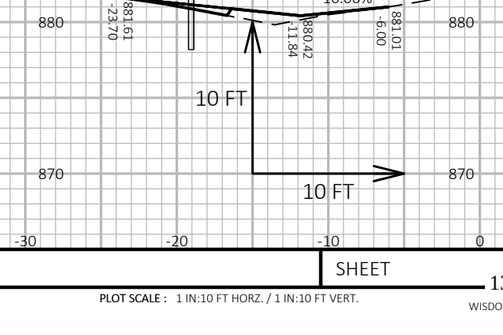












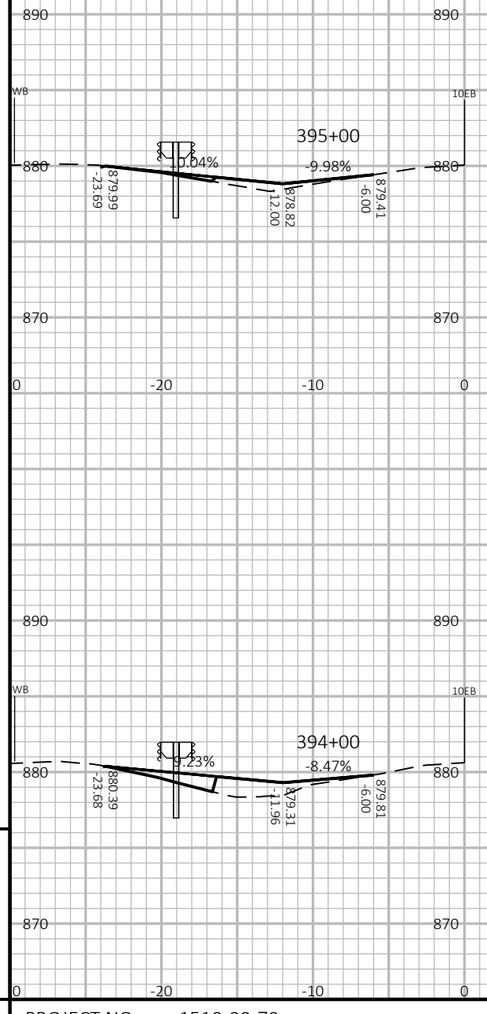
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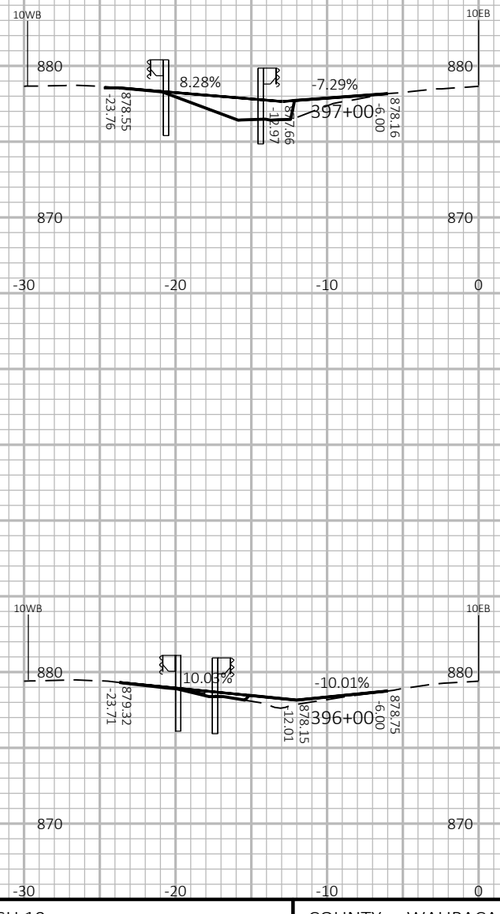
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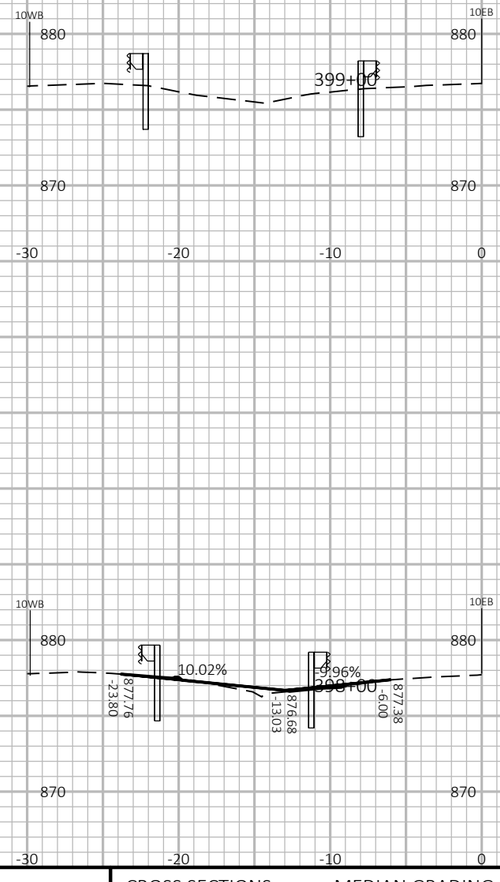
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 133	E

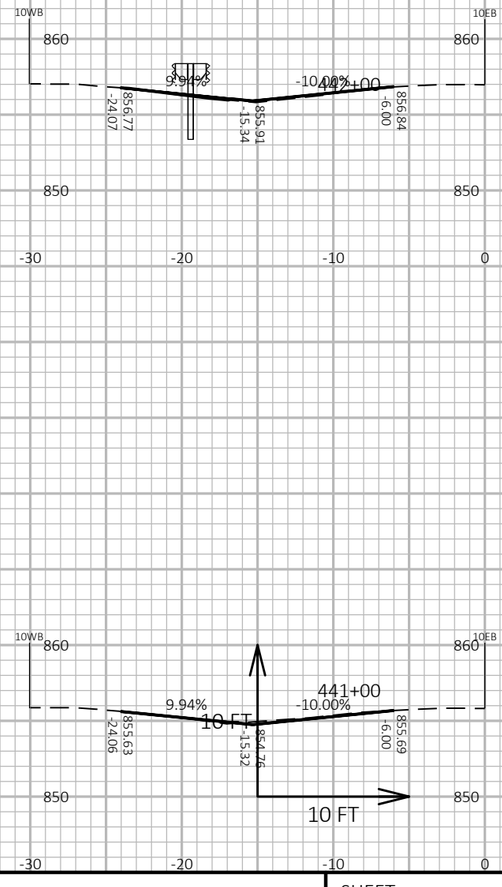
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:20 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









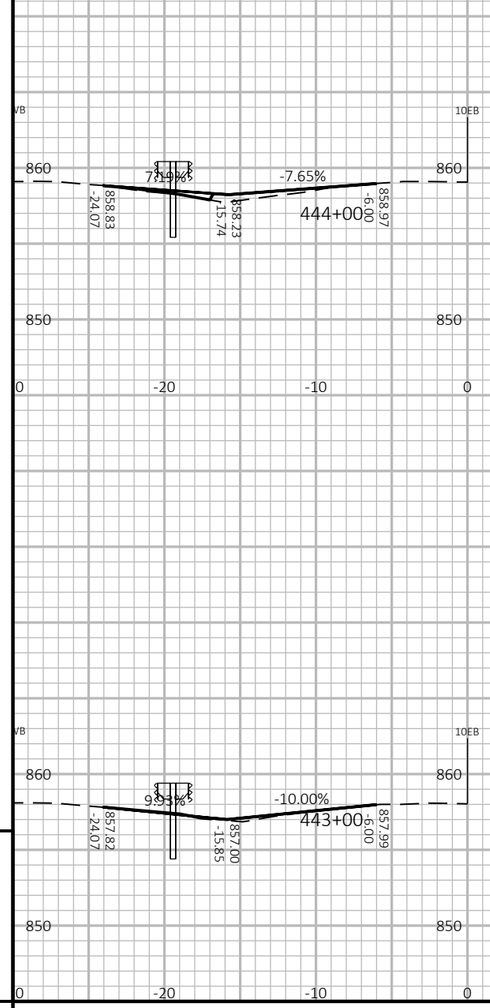
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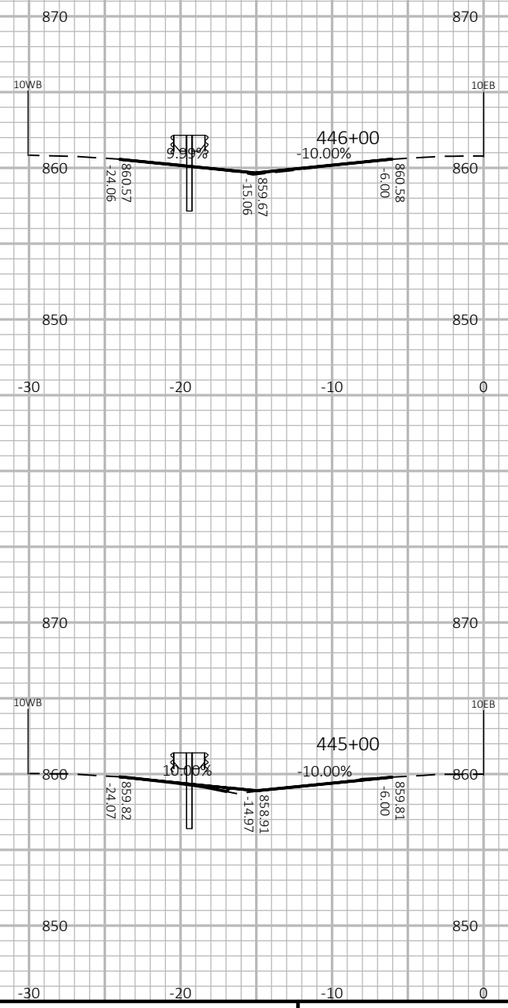
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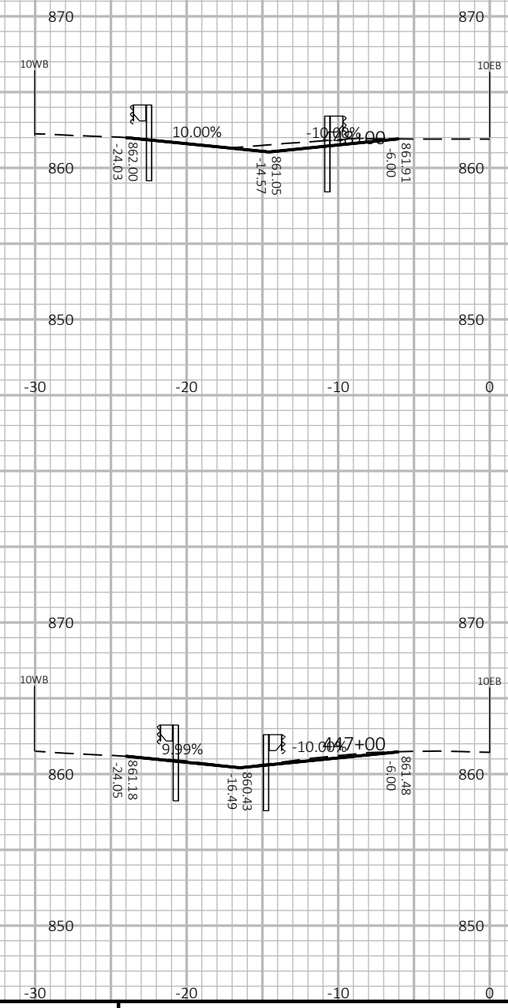
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

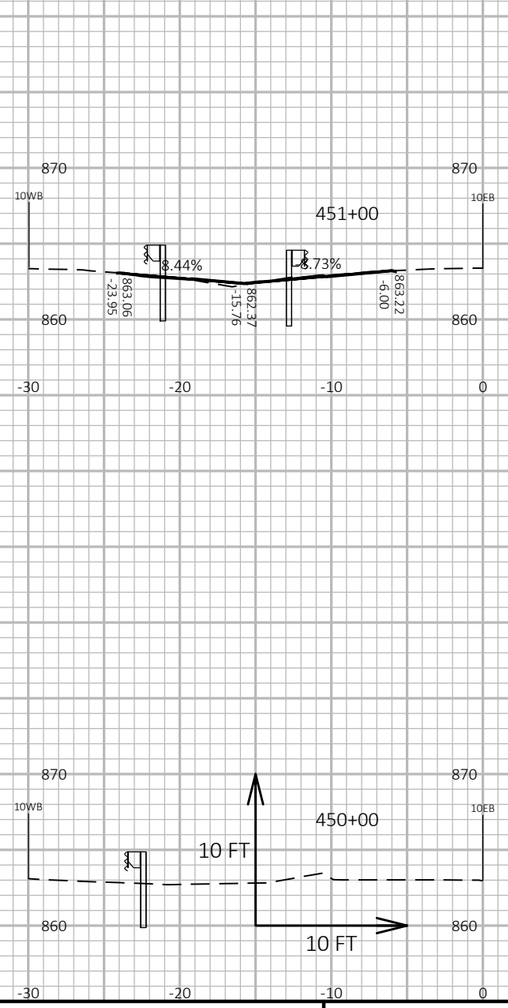
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WISDOT/CADDS SHEET 49







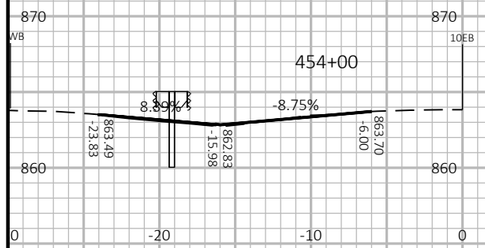


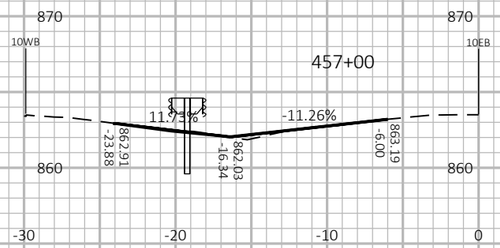
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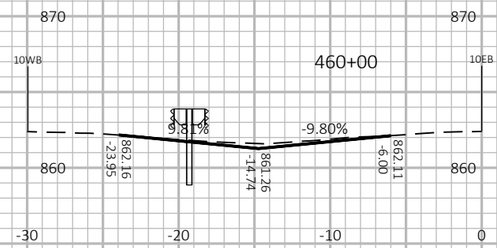
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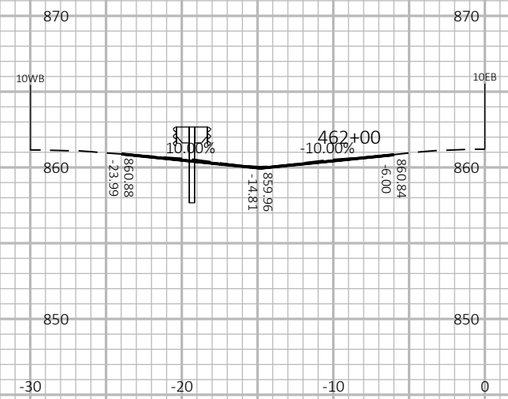
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 135	E

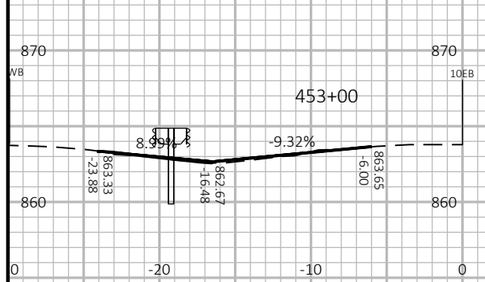
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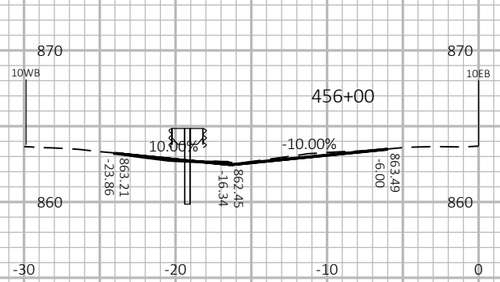


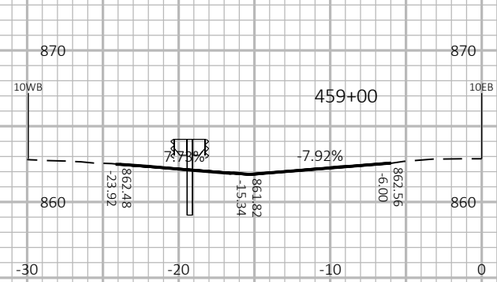


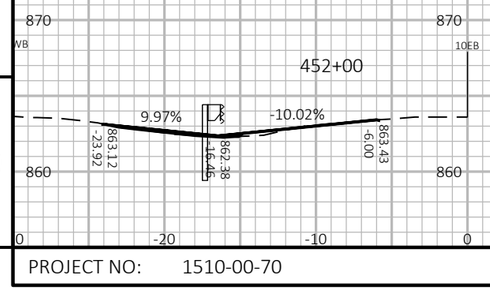


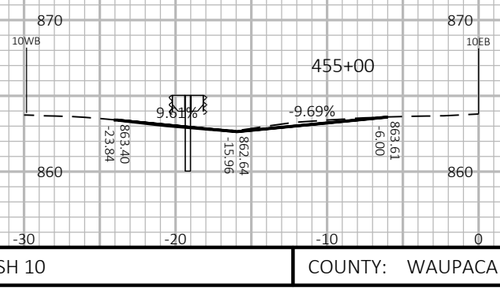


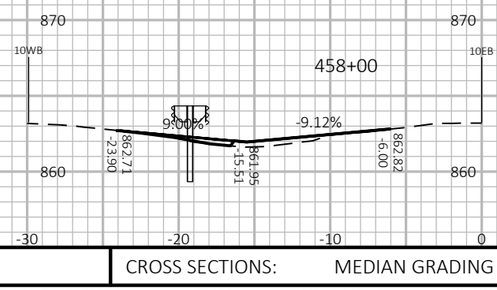


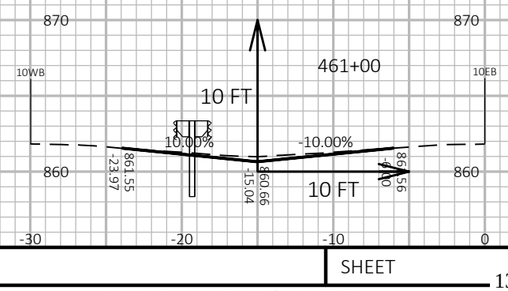








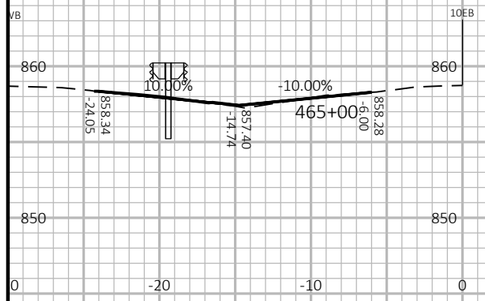


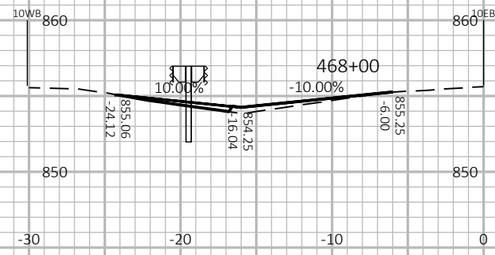


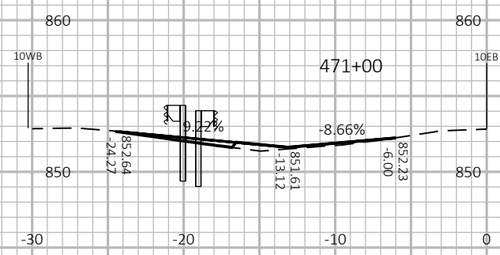
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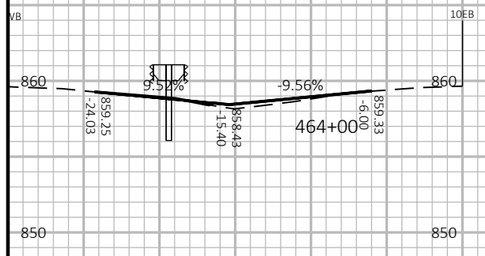
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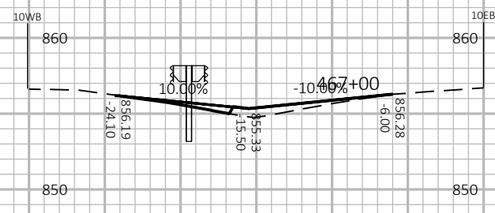
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 136	E

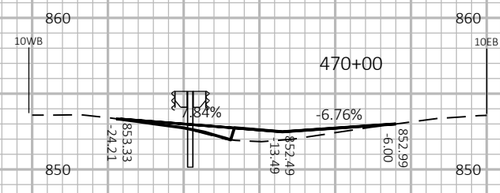


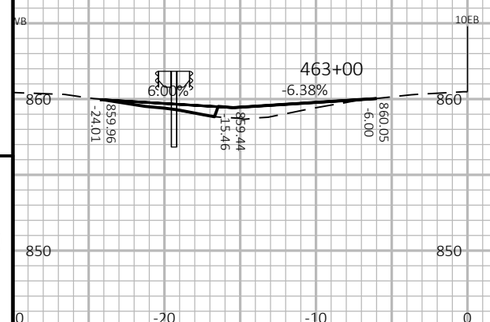


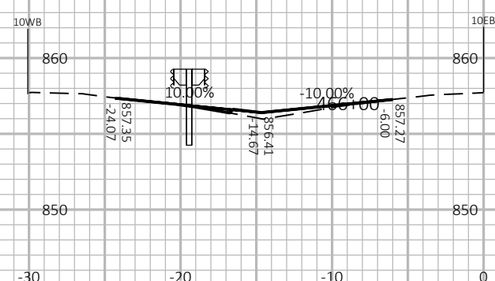


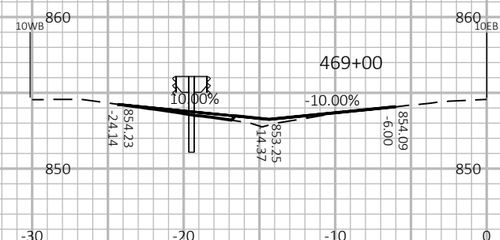


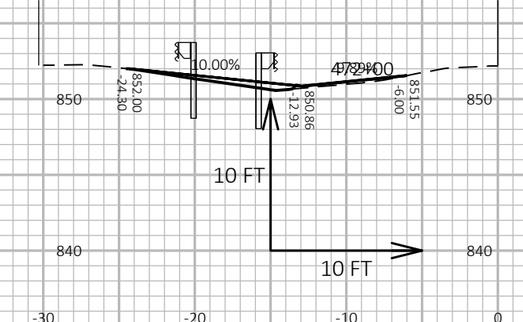












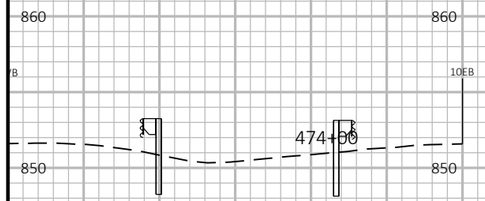
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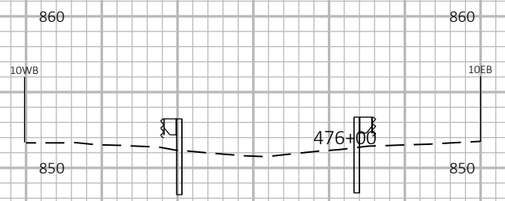
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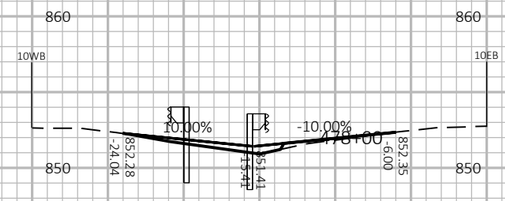
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 137	E

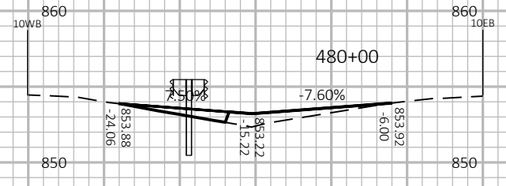
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:21 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

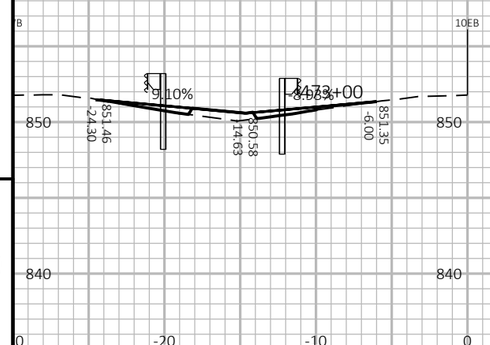
WISDOT/CADDS SHEET 49

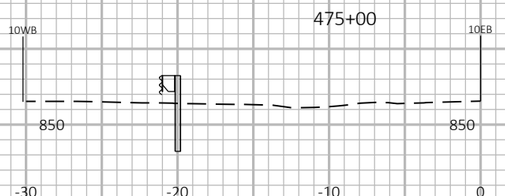


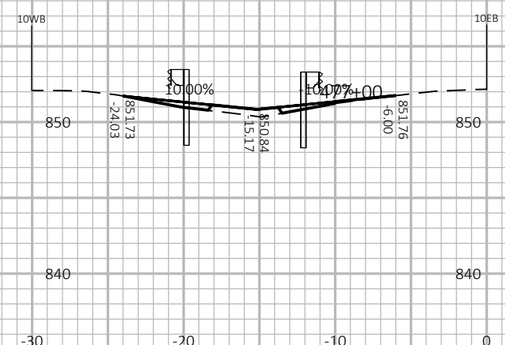


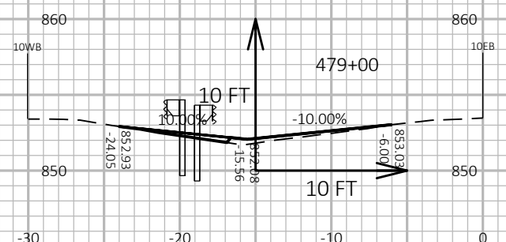










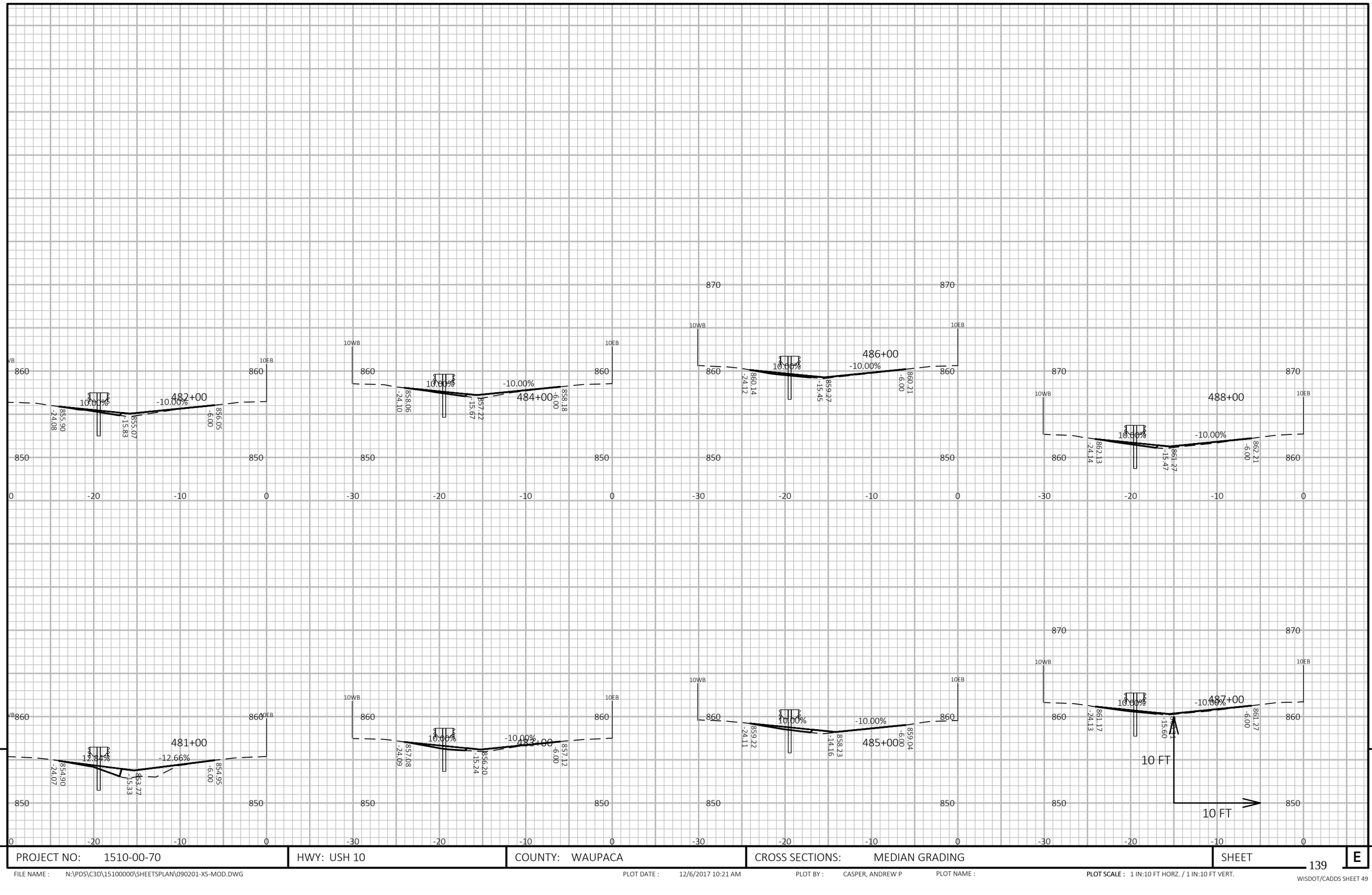


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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 138	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:21 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

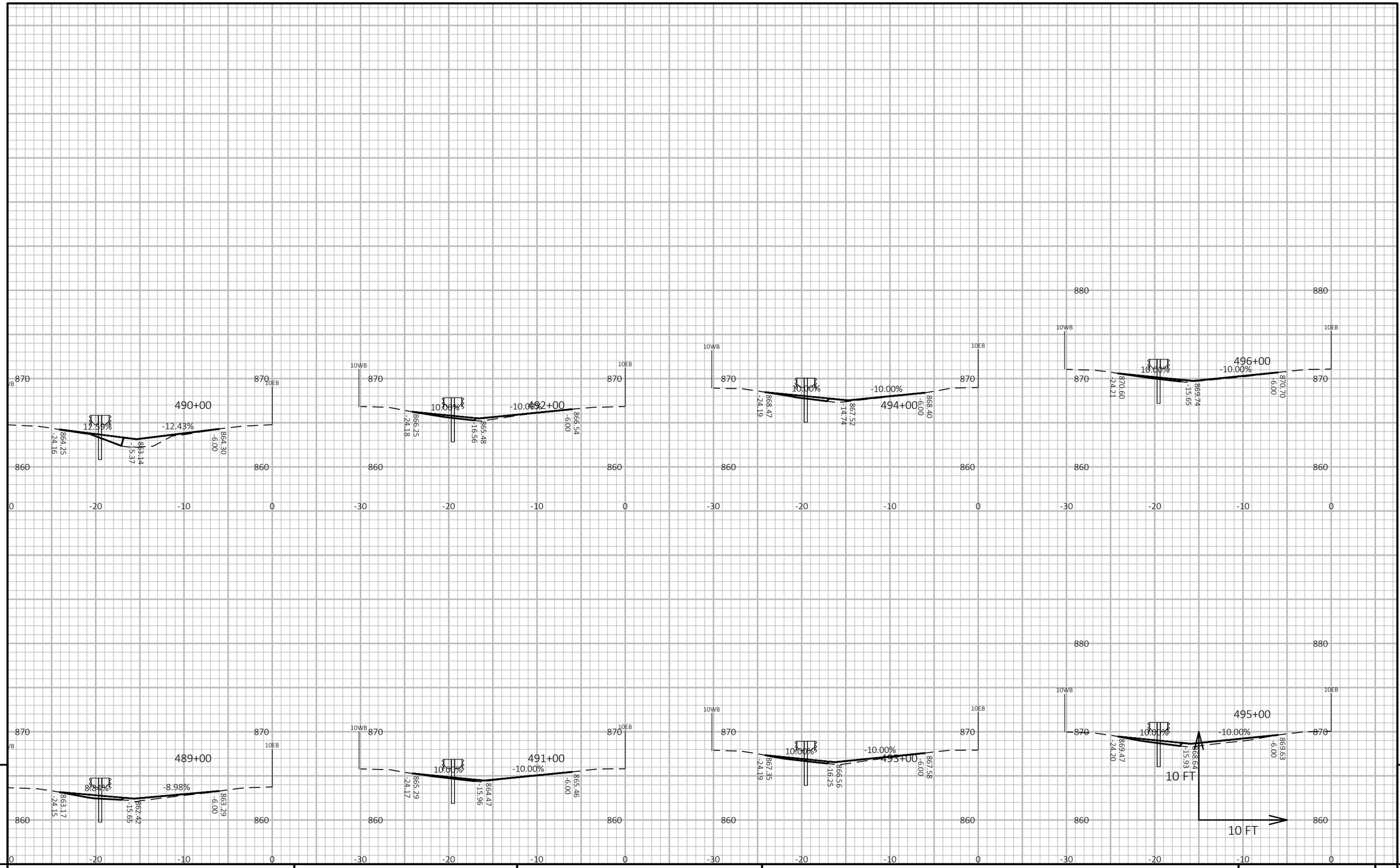


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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:21 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

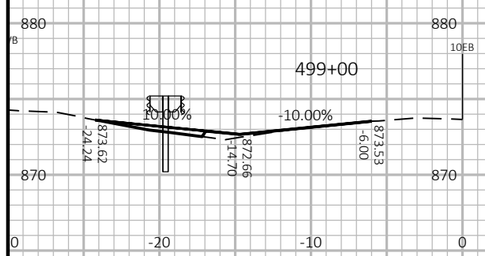


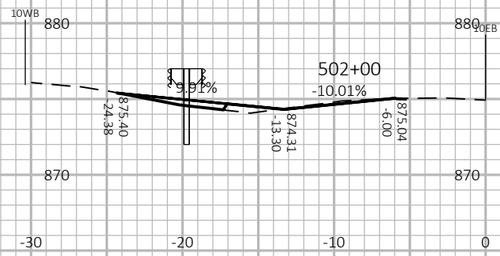
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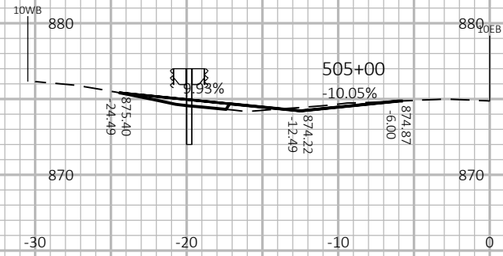
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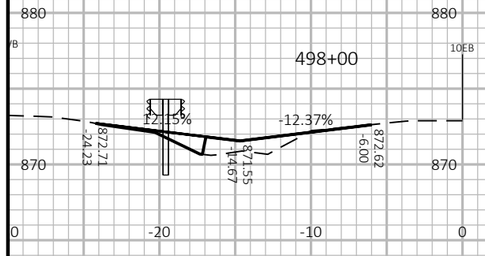
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 140	E

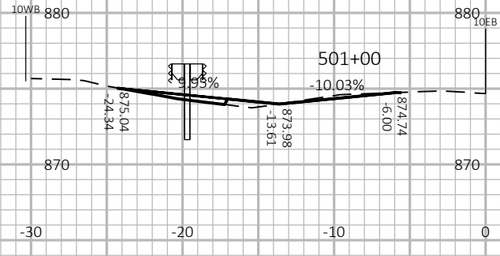
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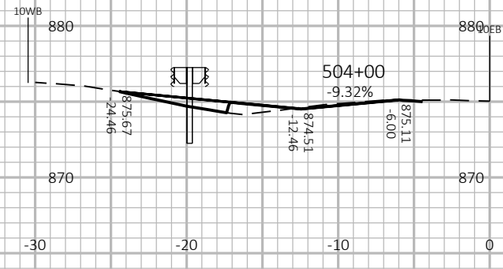




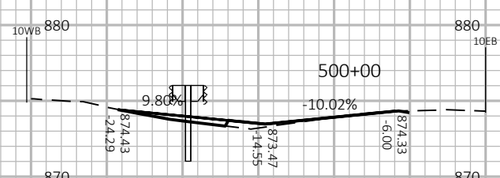


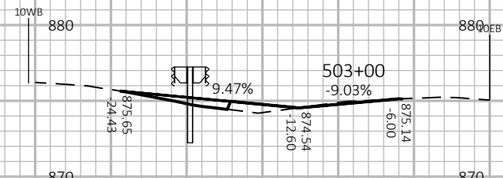


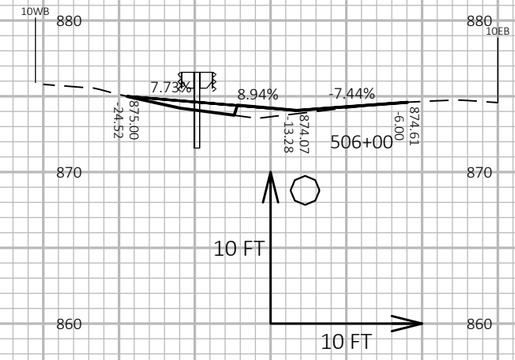












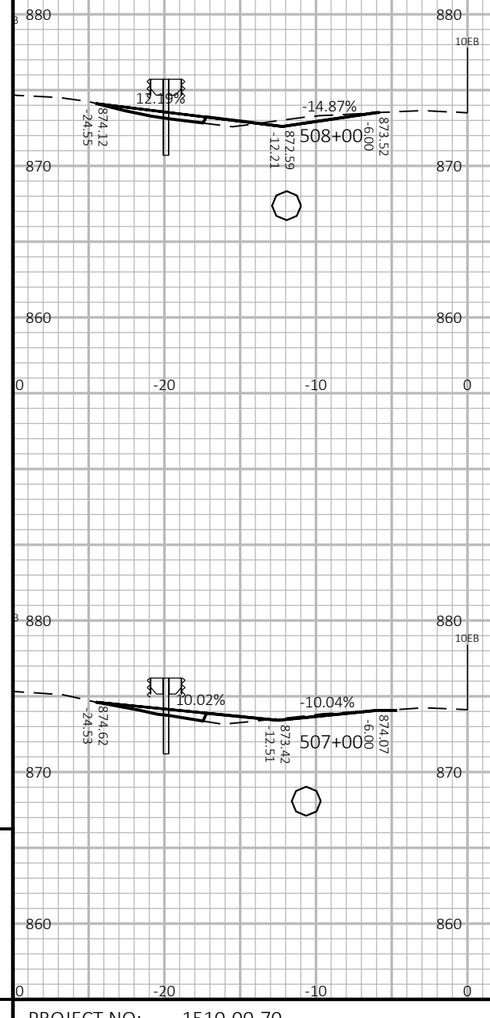
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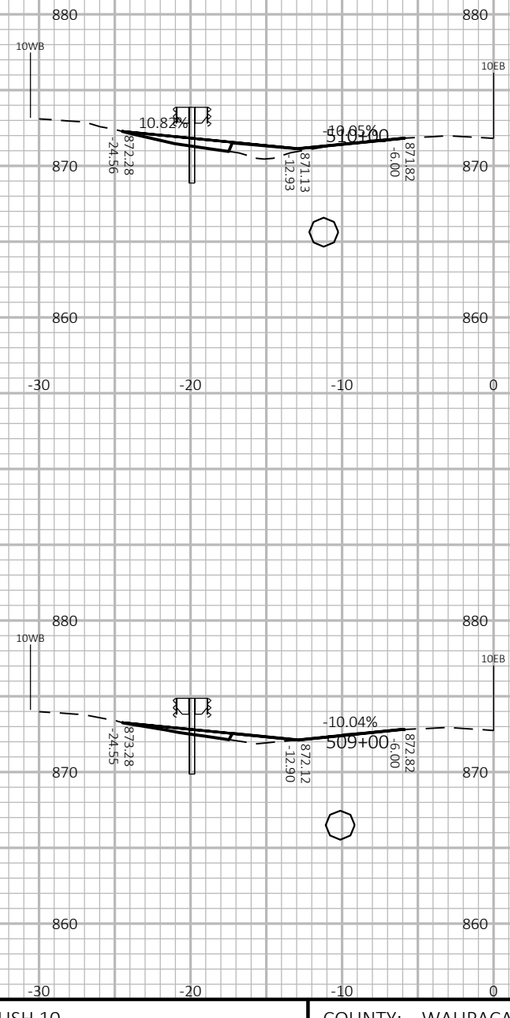
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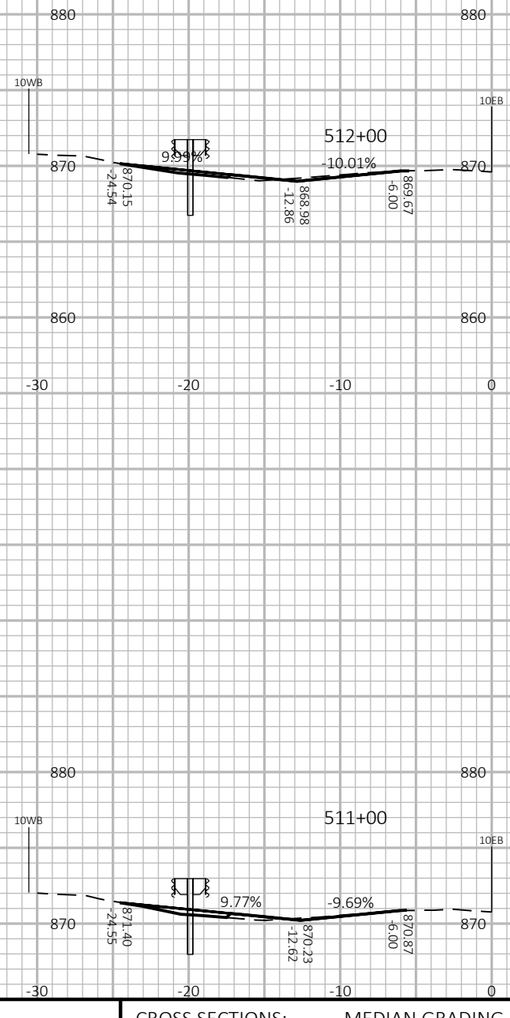
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

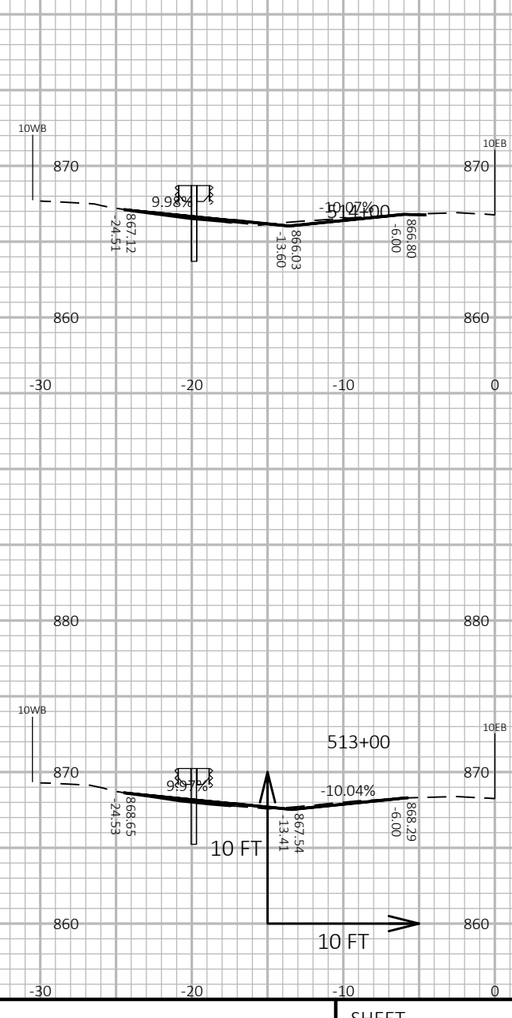
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WISDOT/CADDS SHEET 49





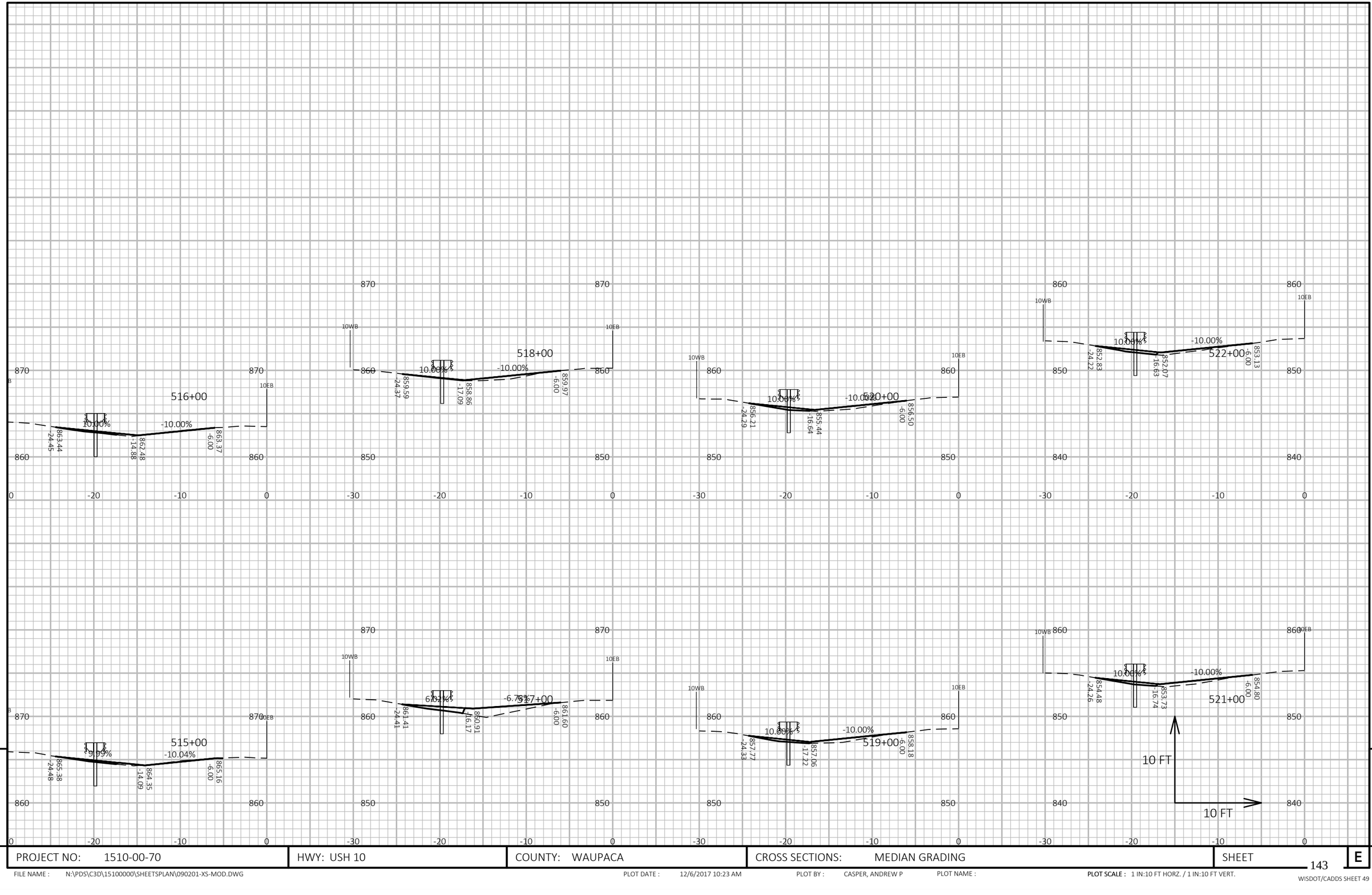




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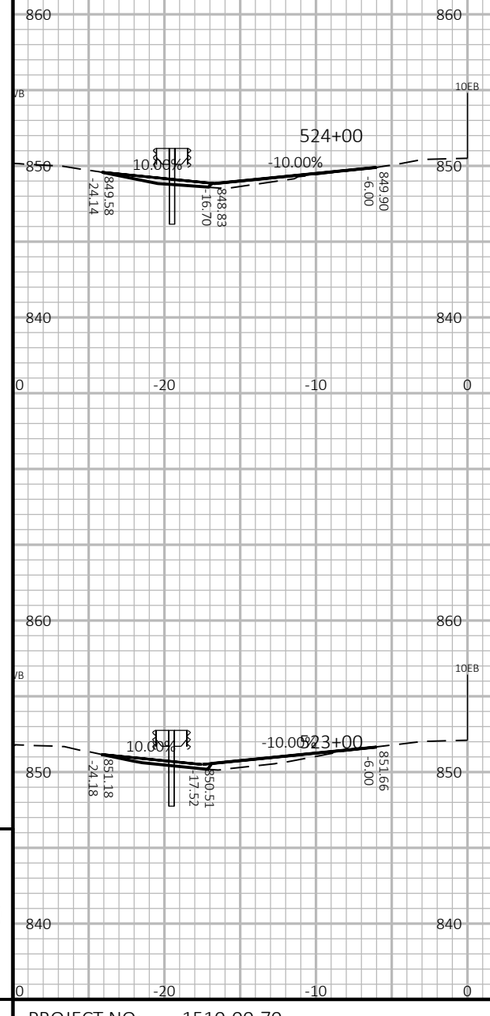
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 142	E

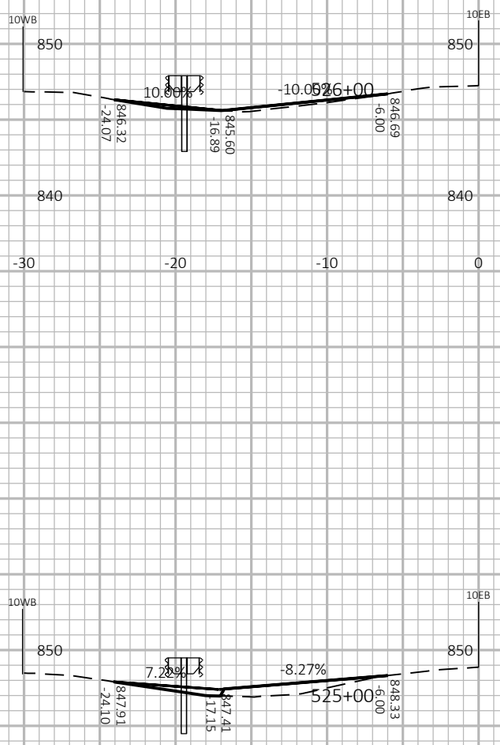


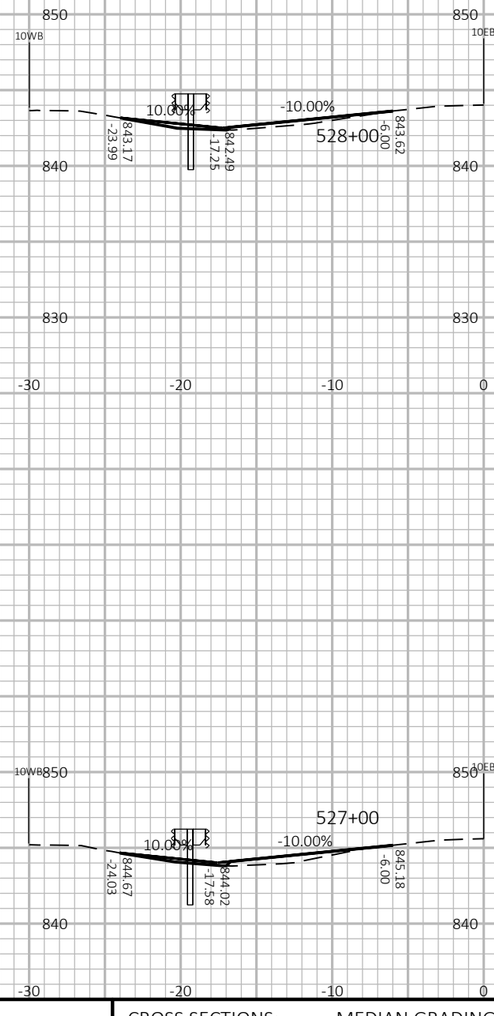
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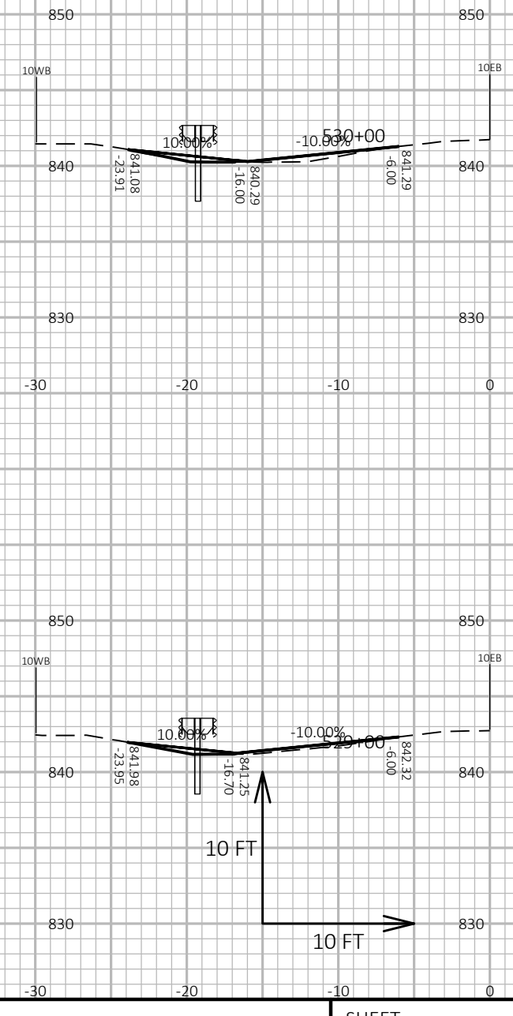
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:23 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









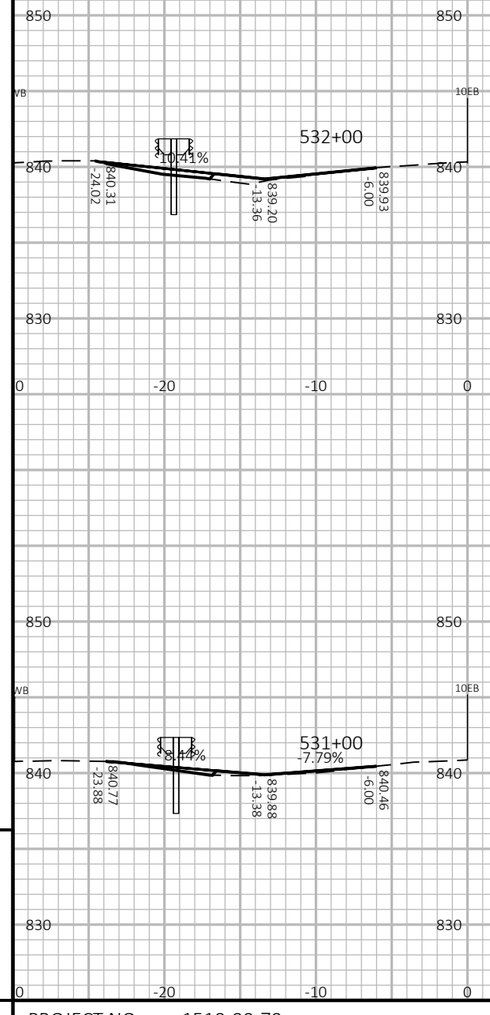
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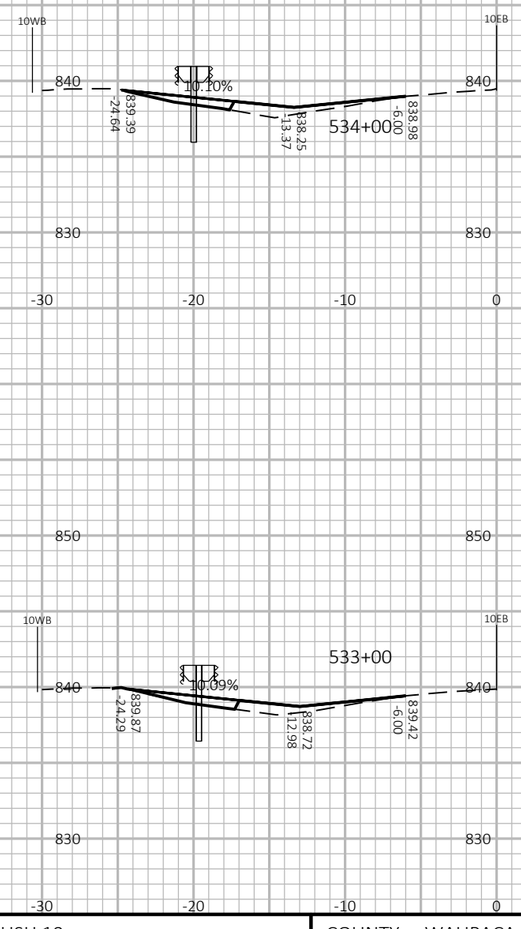
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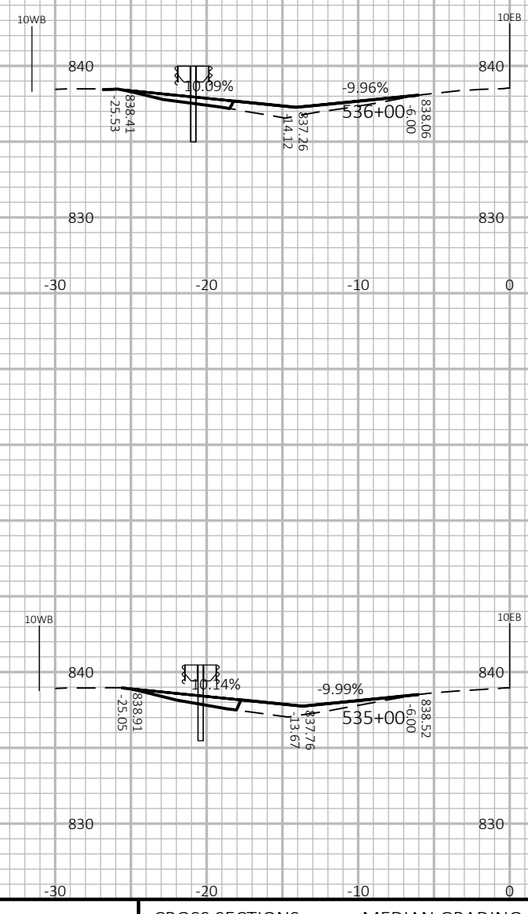
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

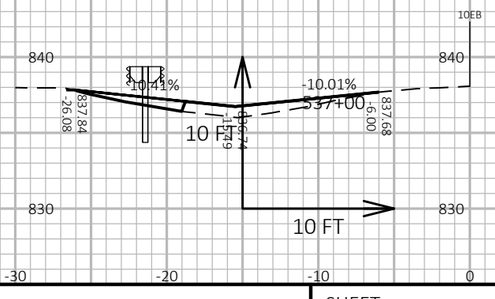
FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:23 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





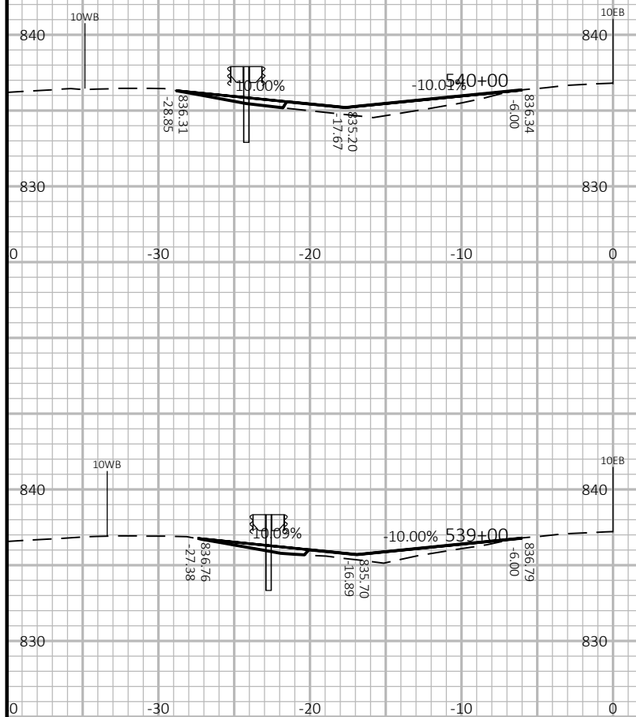


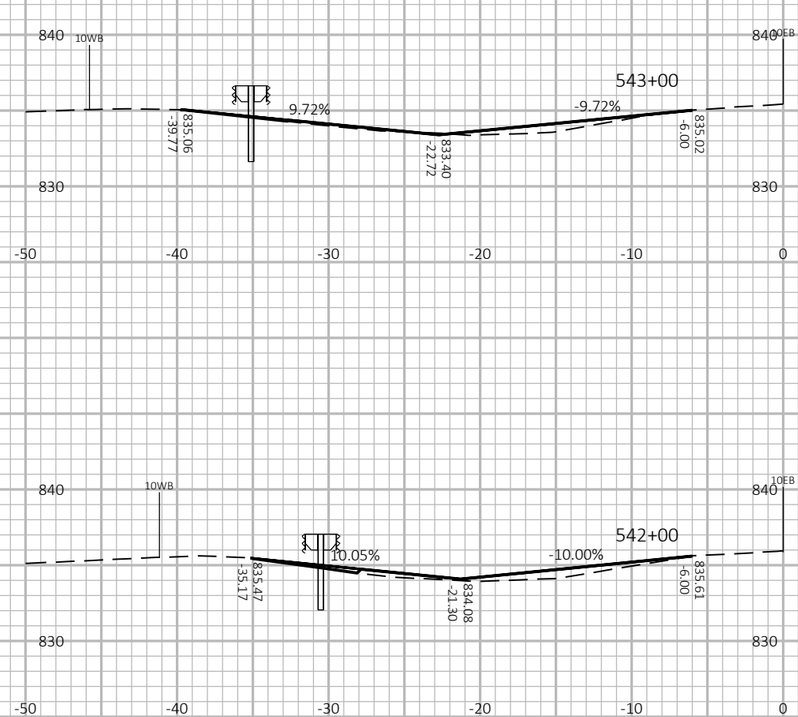


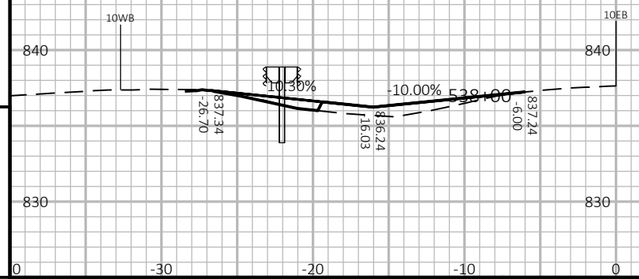
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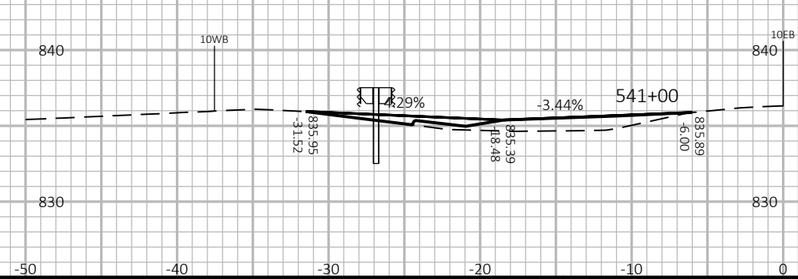
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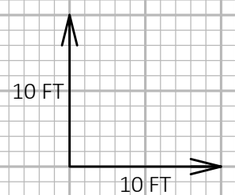
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 145	E











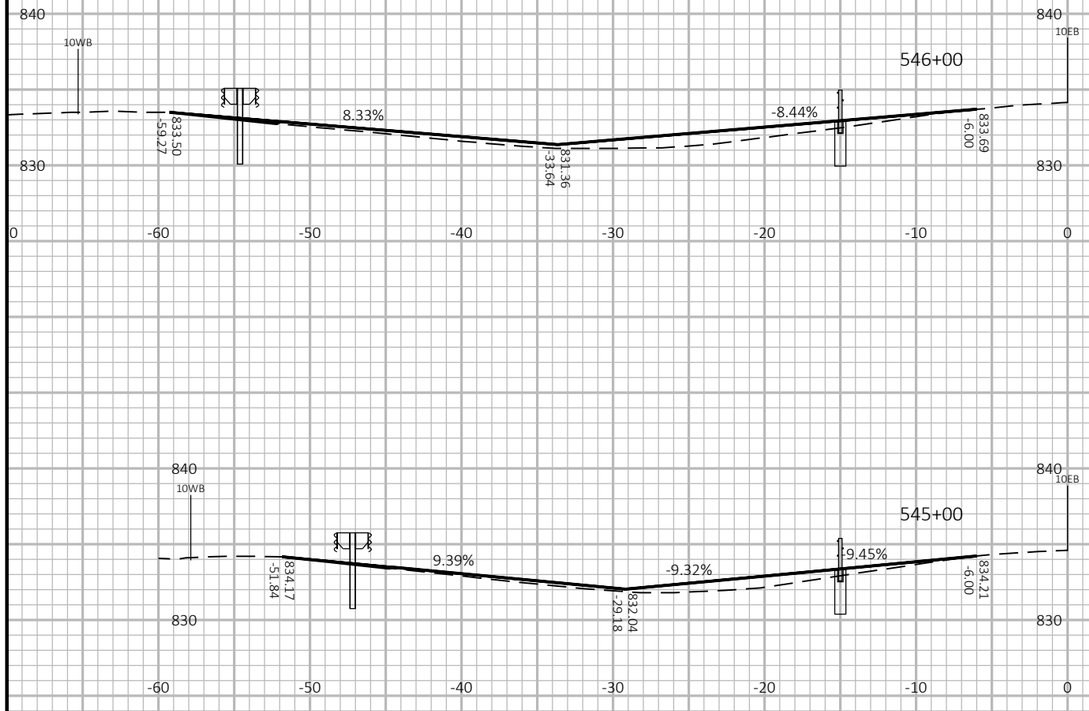
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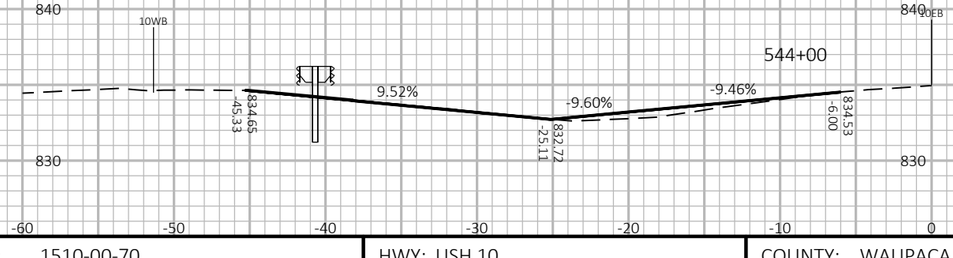
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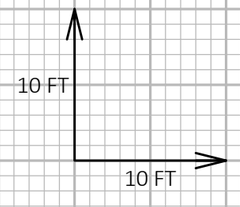
PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:23 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49







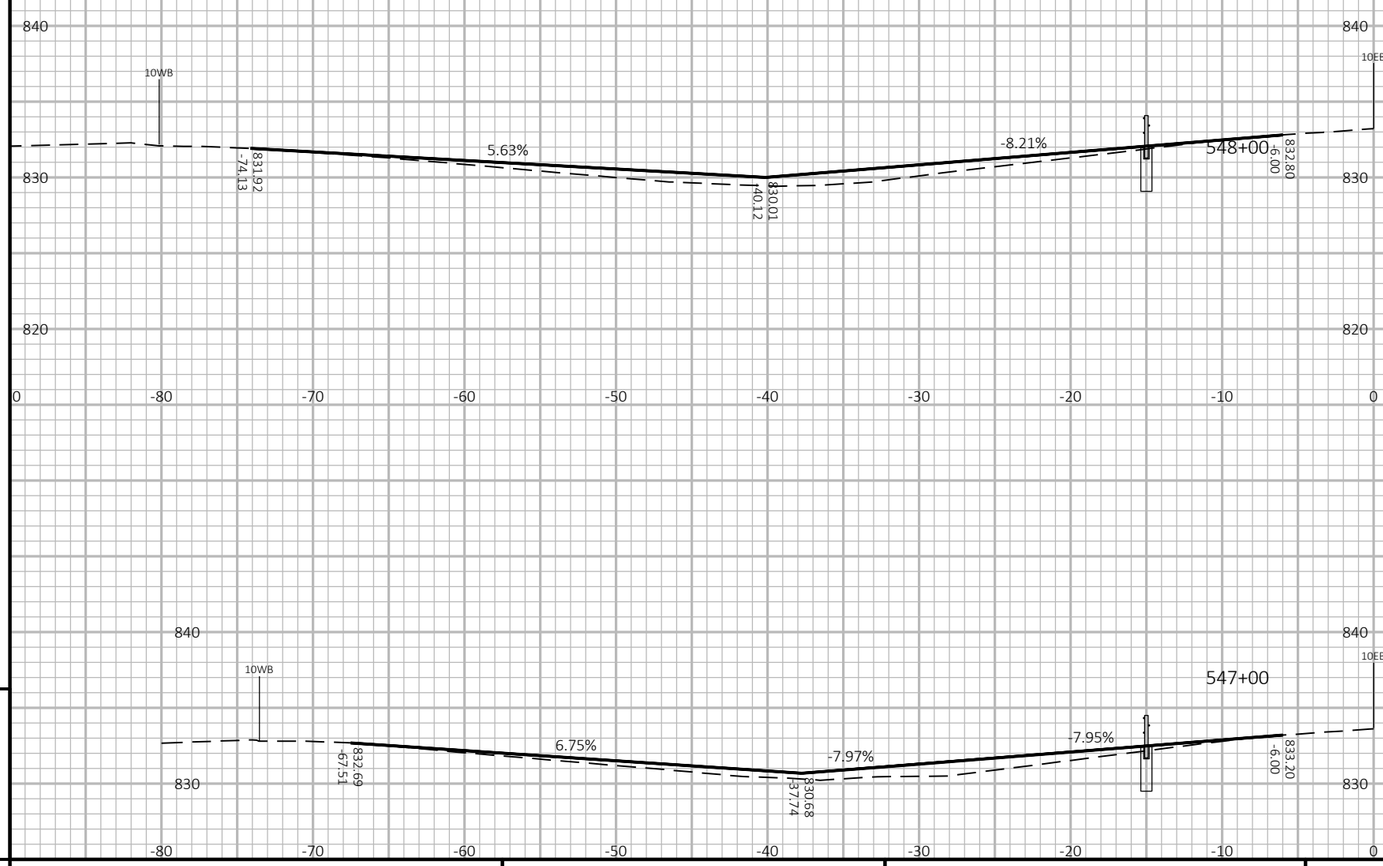
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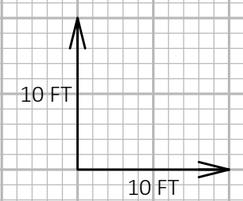
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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 147	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:24 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





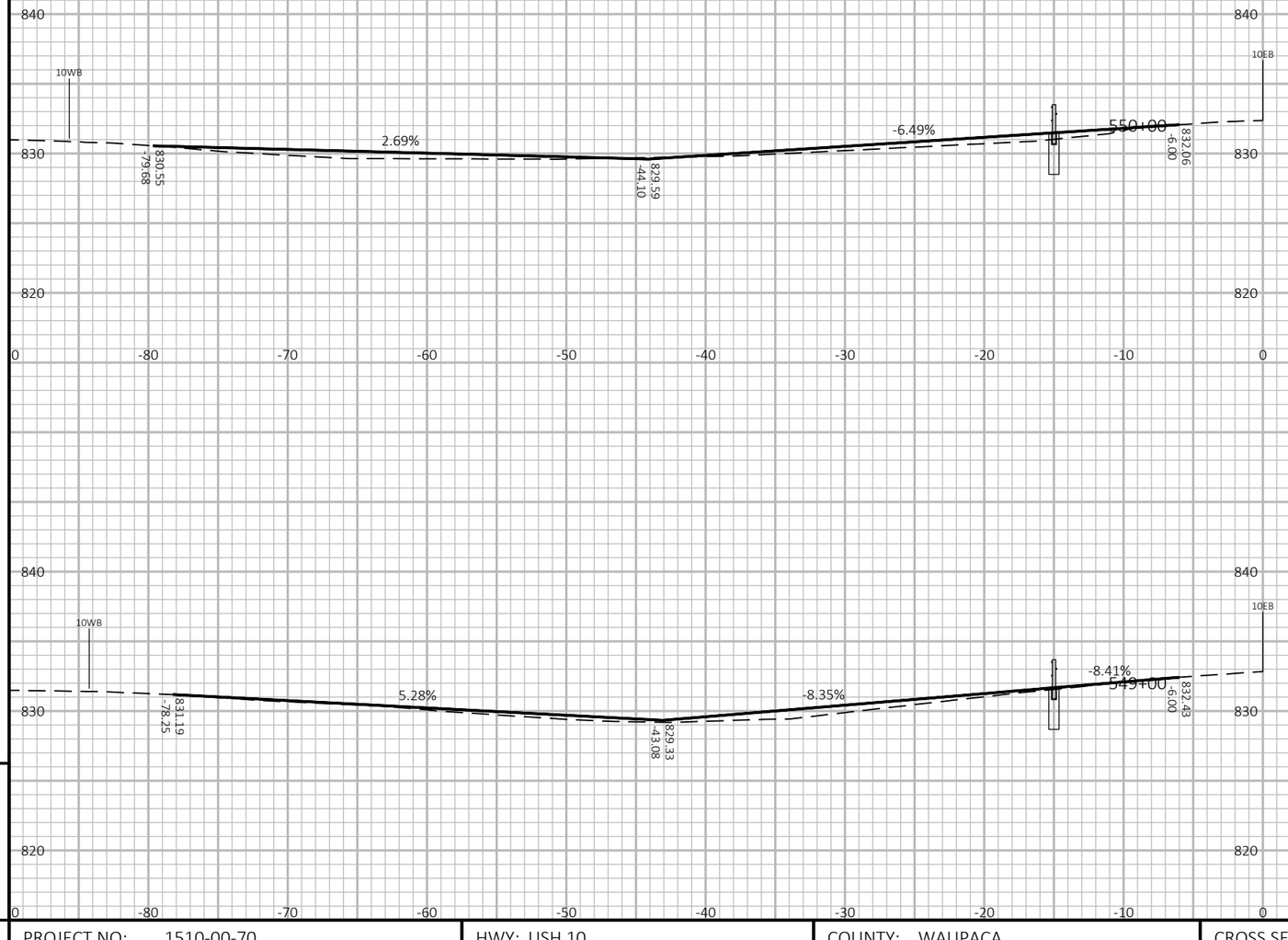
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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

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WISDOT/CADDS SHEET 49

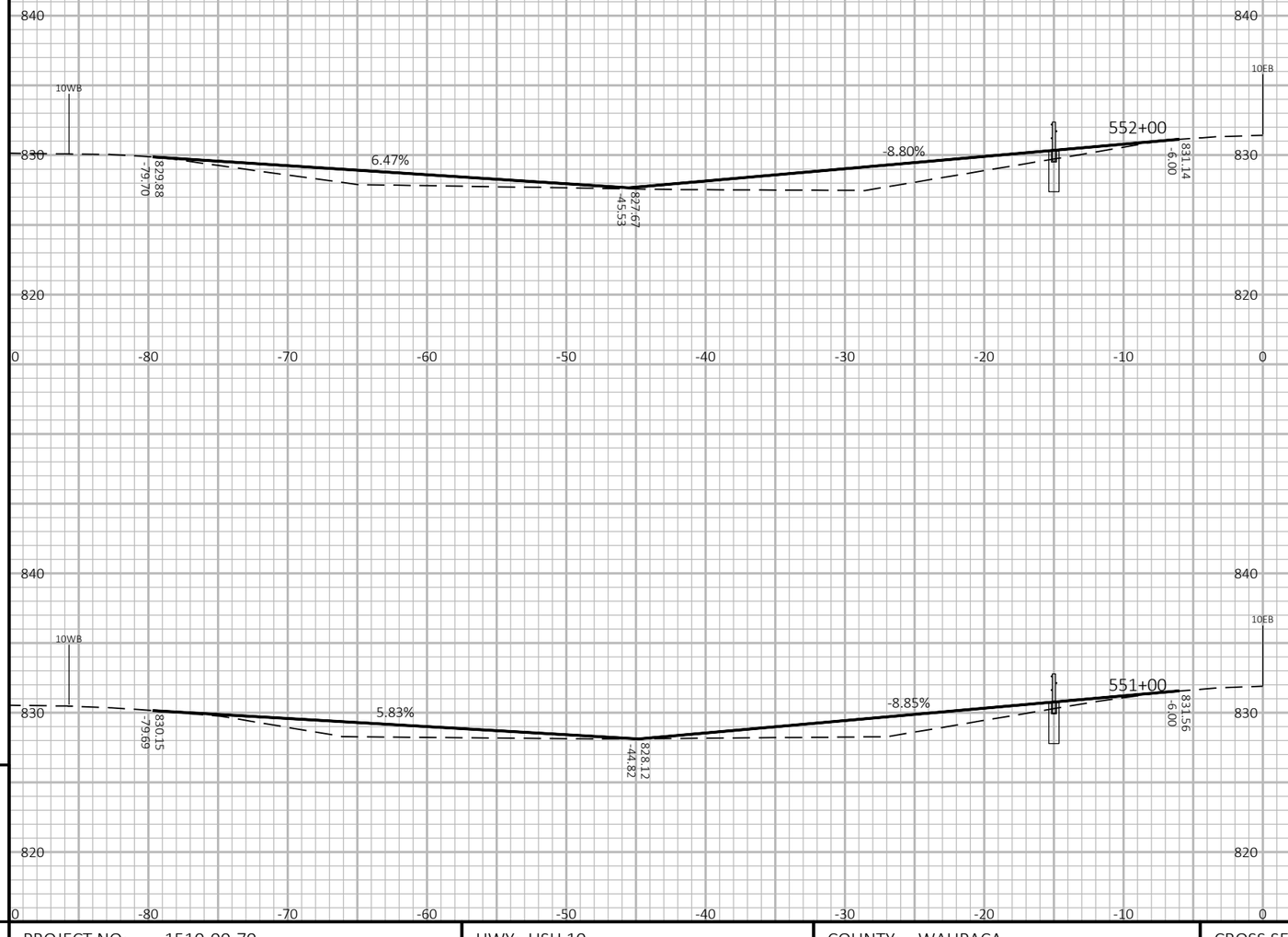


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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 149 E

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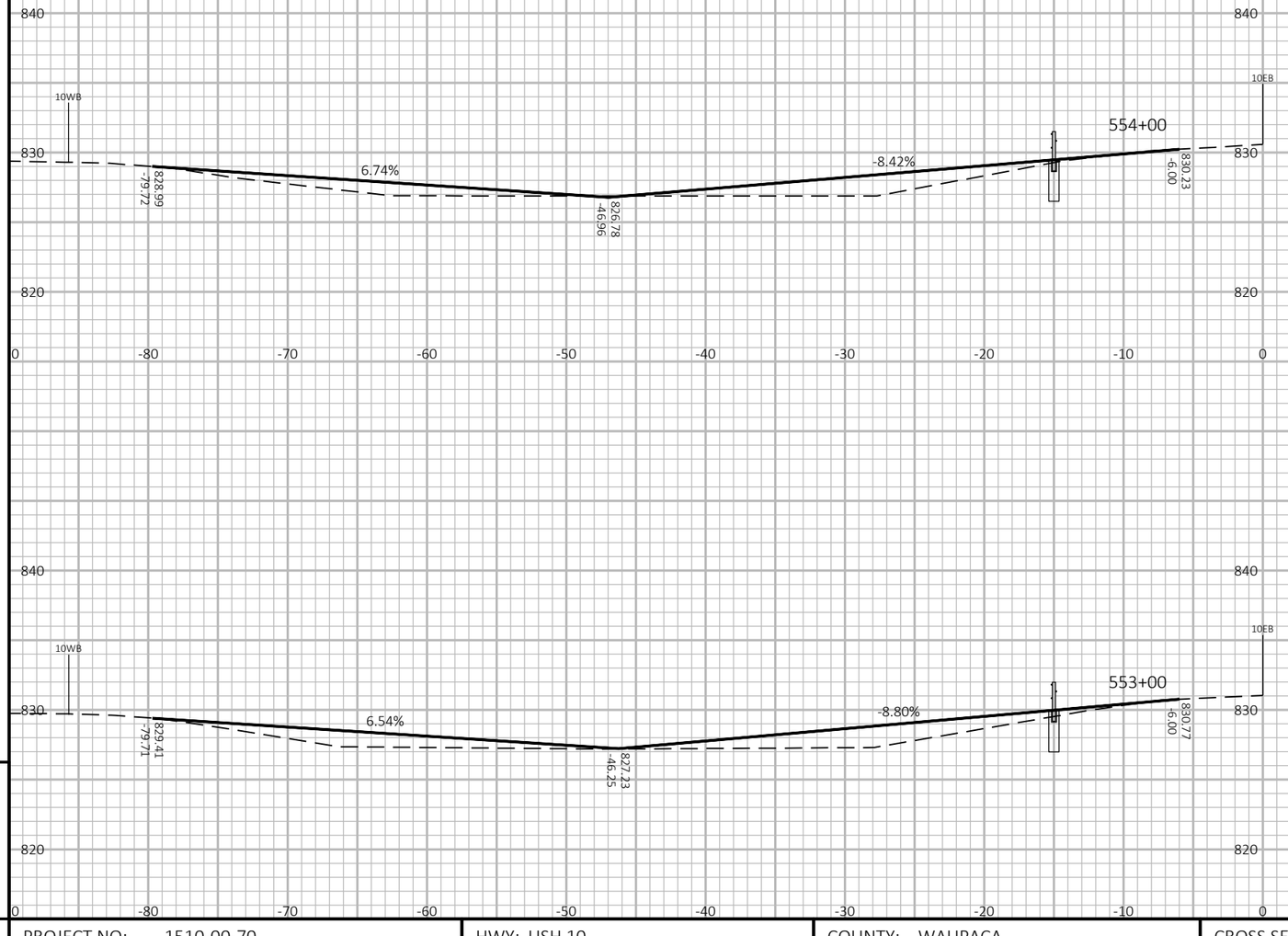
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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 150	E

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WISDOT/CADDS SHEET 49

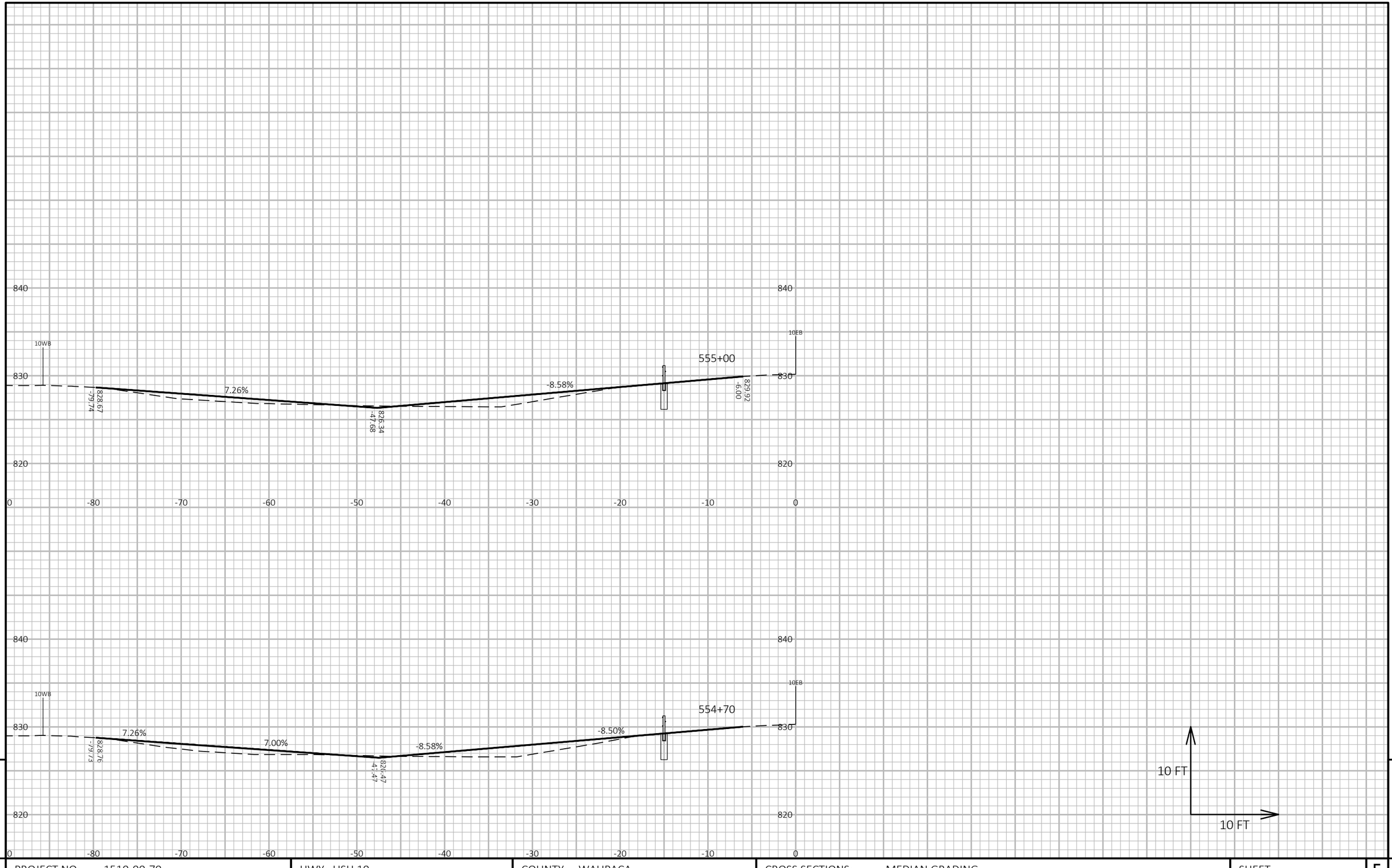


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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:25 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

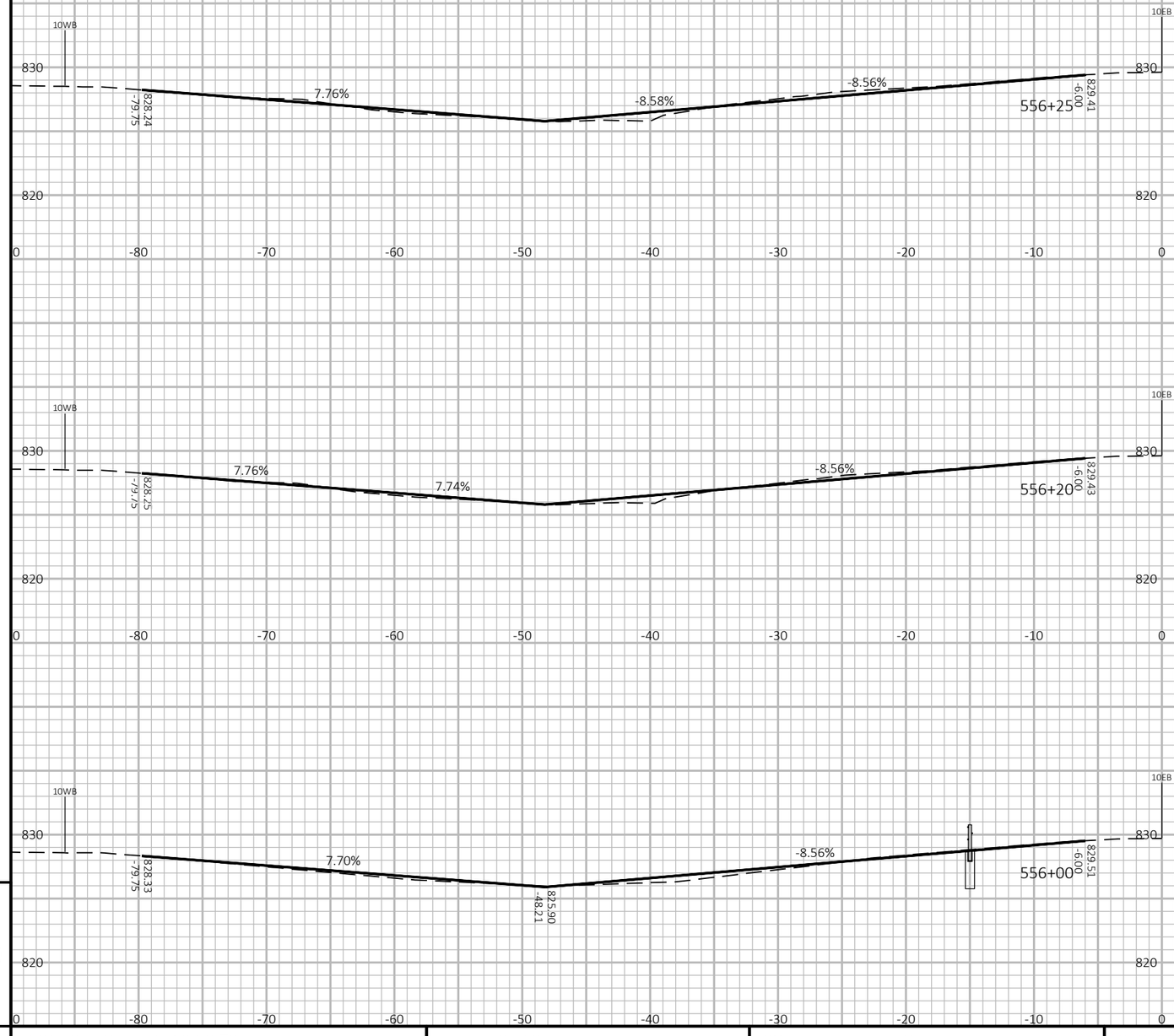


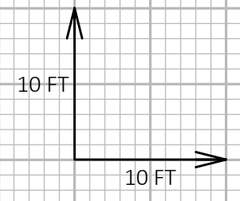
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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

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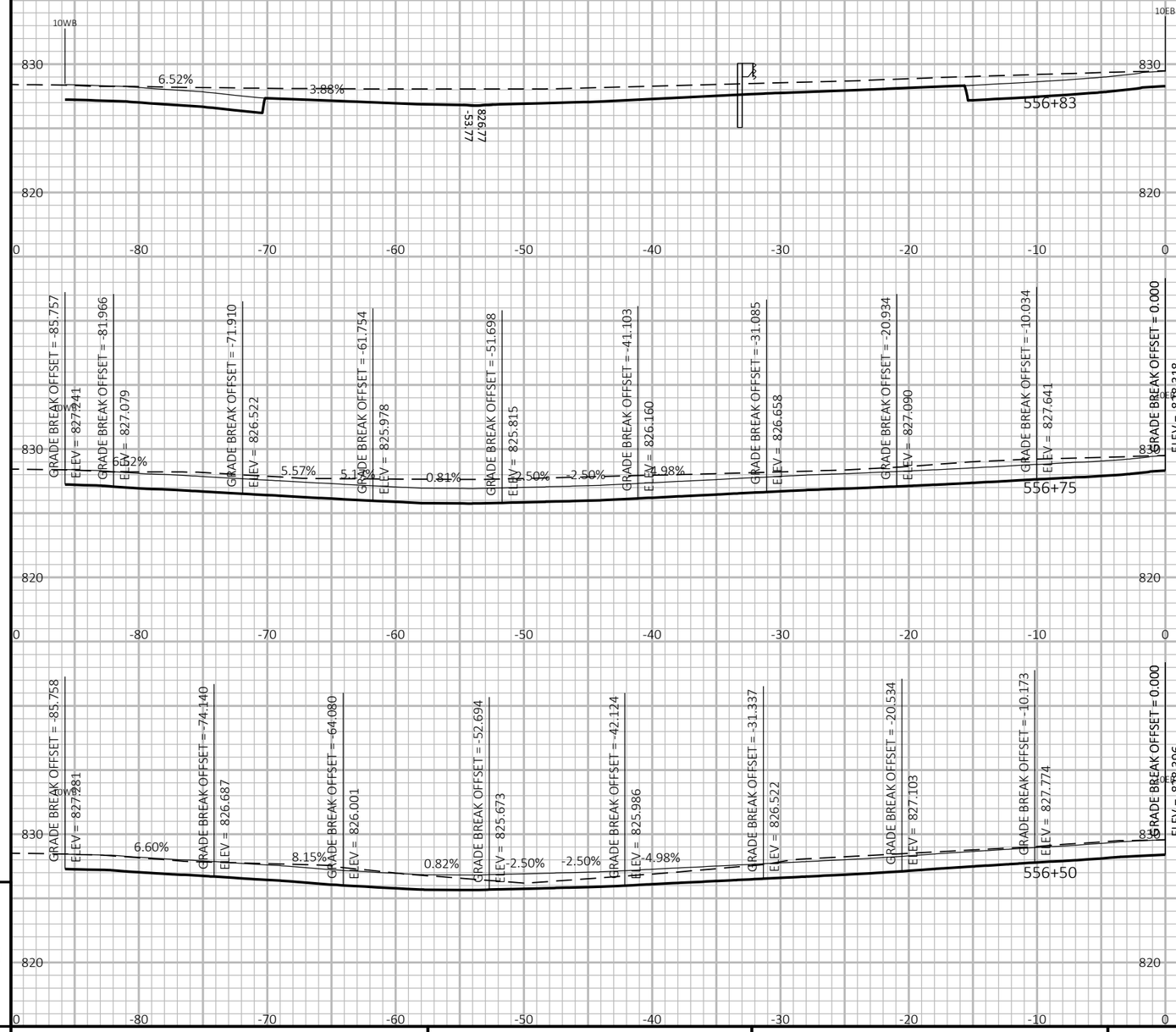




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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 153	E



PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 154	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:26 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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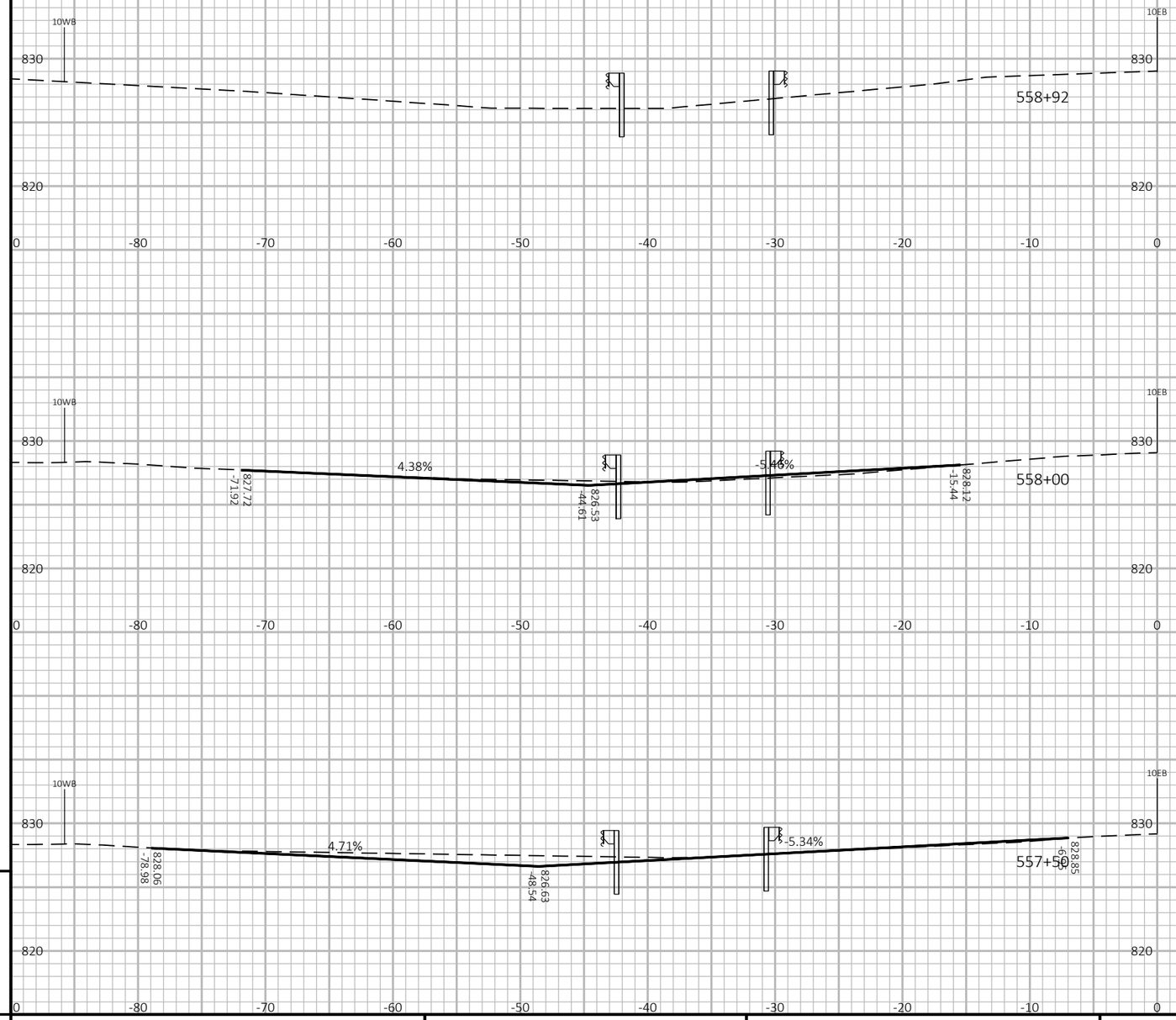
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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

155

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:26 AM PLOT BY : CASPER, ANDREW P PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



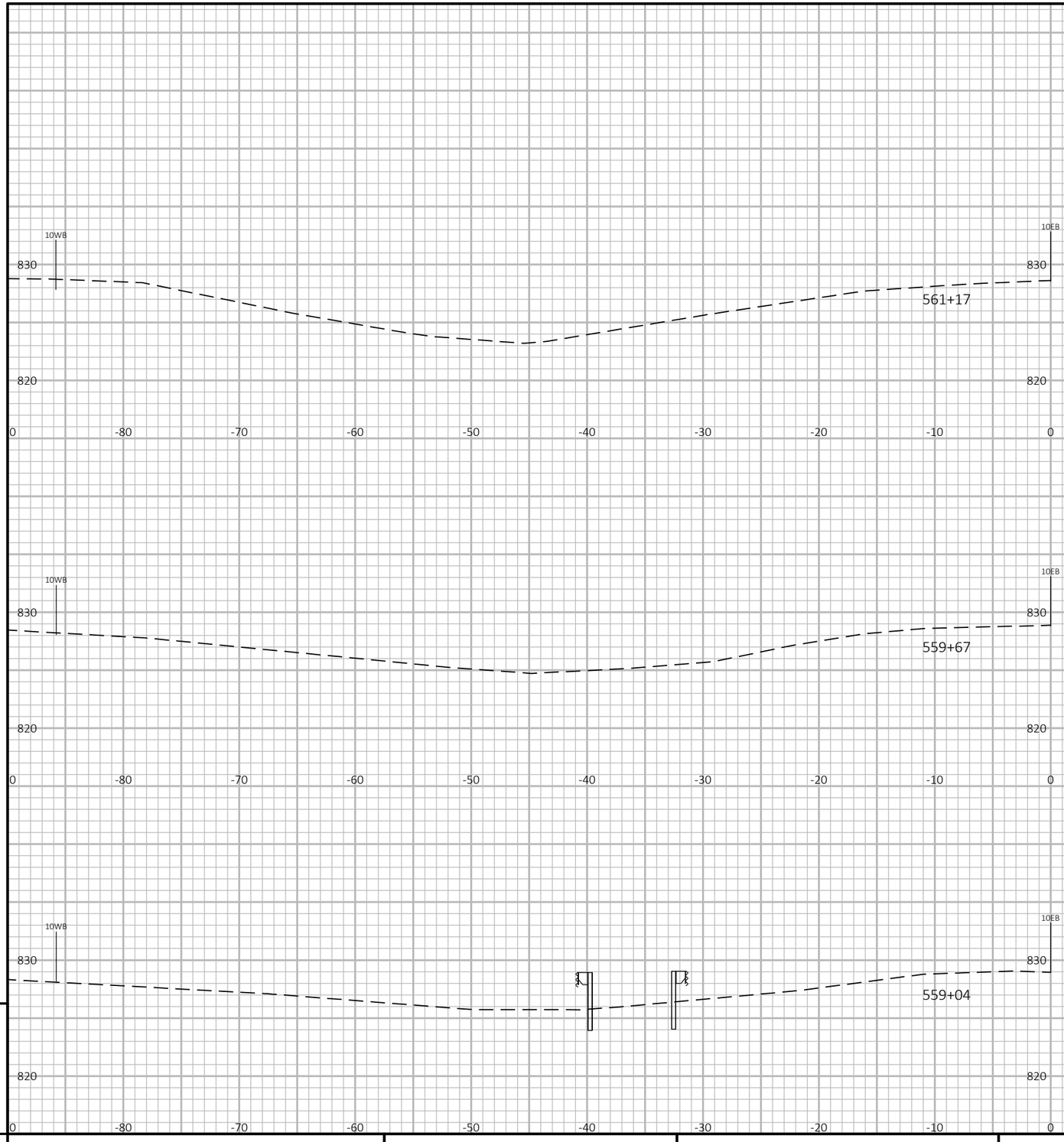
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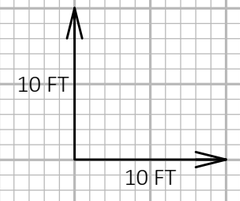
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PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET	E

FILE NAME : N:\PDS\C3D\15100000\SHEETSPLAN\090201-XS-MOD.DWG PLOT DATE : 12/6/2017 10:26 AM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





9

9

PROJECT NO: 1510-00-70	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN GRADING	SHEET 157	E

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

WIS

PROJECT ID: 1510-00-71

WITH: 1510-00-70

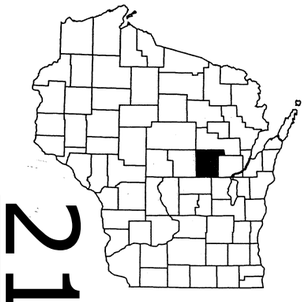
COUNTY: WAUPACA

FEBRUARY 2018

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 = 48



21

N

DESIGN DESIGNATION

A.A.D.T. 2012	=	19,200
A.A.D.T.	=	N/A
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	N/A
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY REHABILITATION-MAINTENANCE PROJECT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1510-00-71	WISC 2018097	1

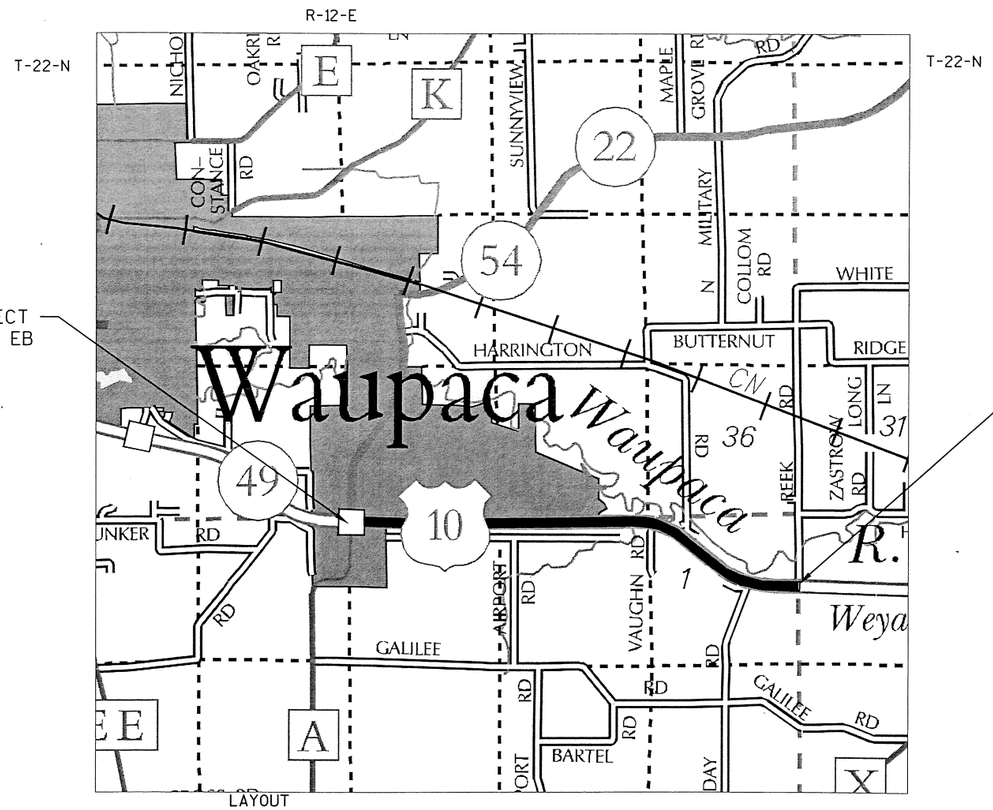
WAUPACA - APPLETON

STH 22/54 INT TO EAST OF REEK ROAD

USH 10

WAUPACA COUNY

STATE PROJECT NUMBER
1510-00-71



TOTAL NET LENGTH OF CENTERLINE = 0.00

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

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (2012)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	North Central Region
Designer	Andrew Casper
Project Manager	Mark Steidl
Regional Examiner	Cheryl Simon
Regional Supervisor	Michael Kretschmer

APPROVED FOR THE DEPARTMENT

DATE: 12/5/17 (Signature)

E

DNR LIAISON

WISCONSIN DEPT. OF NATURAL RESOURCES
MR. MARC HERSHFIELD
WDNR EA LIASION
473 GRIFFITH DRIVE
WISCONSIN RAPIDS, WI 54494
PHONE: (715) 421-7867
marc.hershfield@dnr.wisconsin.gov

UTILITIES

AT&T WISCONSIN - COMMUNICATION LINE
Chuck Bartell
70 E. Division St.
Fond Du Lac, WI 54935
Office Phone: 920.929.1013
Mobile Phone: 920.410.5104

CENTURYLINK - COMMUNICATION LINE
Matt Gunderson
212 Church Ave.
Casco, WI 54205
Office Phone: 920.837.2344
Mobile Phone: 920.896.2867
Email: matt.gunderson@centurylink.com

CHARTER COMMUNICATIONS - COMMUNICATION LINE
Rudi Rudiger
5024 Heffron St.
Stevens Point, WI 54481
Office Phone: 715.204.5339
Email: Rudi.rudiger@charter.com

CITY OF WAUPACA - SEWER
Roger Hansen
306 S. Oborn St.
Waupaca, WI 54981
Office Phone: 715.258.4421
Mobile Phone: 715.572.3536
Emial: rhansen@cityofwaupaca.org

CITY OF WAUPACA - WATER
Mark Nollenberg
509 Harding Street
Waupaca, WI 54981
Office Phone: 715.258.4423
Mobile Phone: 715.281.9796
Email: mnollenberg@cityofwaupaca.org

WE ENERGIES (GAS) - WISCONSIN ELECTRIC POWER COMPANY
Jacob Hulbert
1921 8th St S
Wisconsin Rapids, WI 54494
Office Phone: 715.421.7277
Mobile Phone: 715.213.5189

WE ENERGIES (GAS) - WIS. GAS LLC
Jacob Hulbert
1921 8th St S
Wisconsin Rapids, WI 54494
Office Phone: 715.421.7277
Mobile Phone: 715.213.5189

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRICITY
Don Lutzow
P.O. Box 1166
Wausau, WI 54402
Office Phone: 715.848.7487
Mobile Phone: 715.493.7802
Email: dalutzow@wisconsinpublicservice.com

GENERAL NOTES

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

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.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

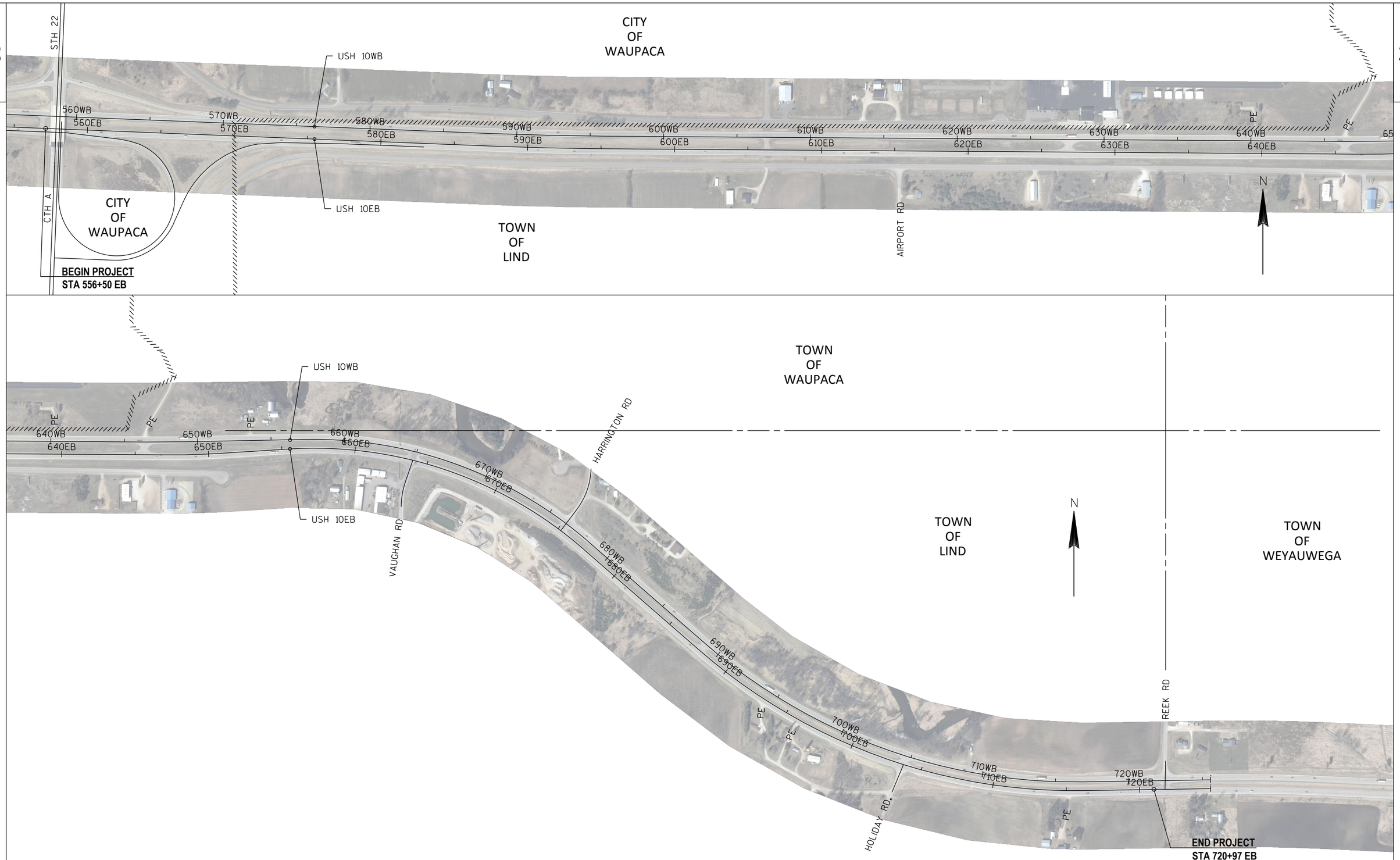
THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

AS SHOWN ON PLAN SHEETS BORINGS WERE TAKEN NEAR CABLE BARRIER END TERMINAL TYPE 1. FIELD BORING LOG SHEETS WILL BE MADE AVAILABLE UPON REQUEST.

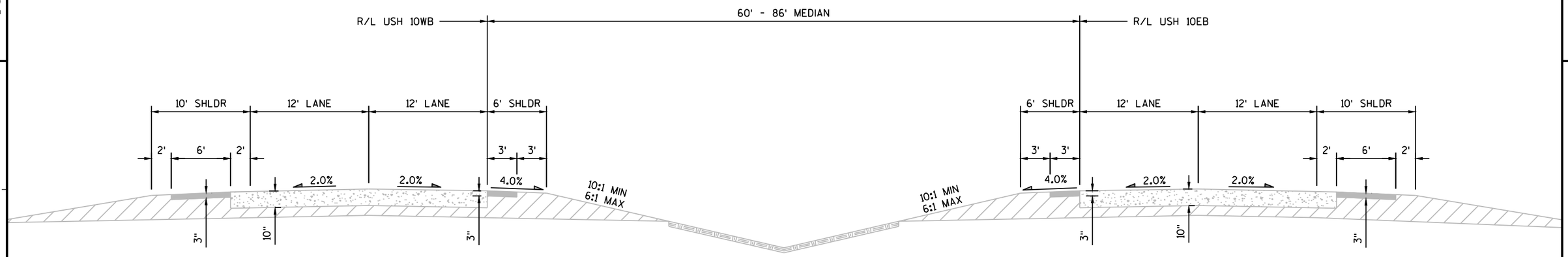
STANDARD ABBREVIATIONS

AADT - ANNUAL AVERAGE DAILY TRAFFIC
DHV - DESIGN HOUR VOLUME
DD - DIRECTIONAL DISTRIBUTION
X - EAST GRID COORDINATE
FE - FIELD ENTRANCE
Y - NORTH GRID COORDINATE
PE - PRIVATE ENTRANCE
T - TRUCKS (PERCENT OF)
O BORE (B - #) - BORING ID NUMBER

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

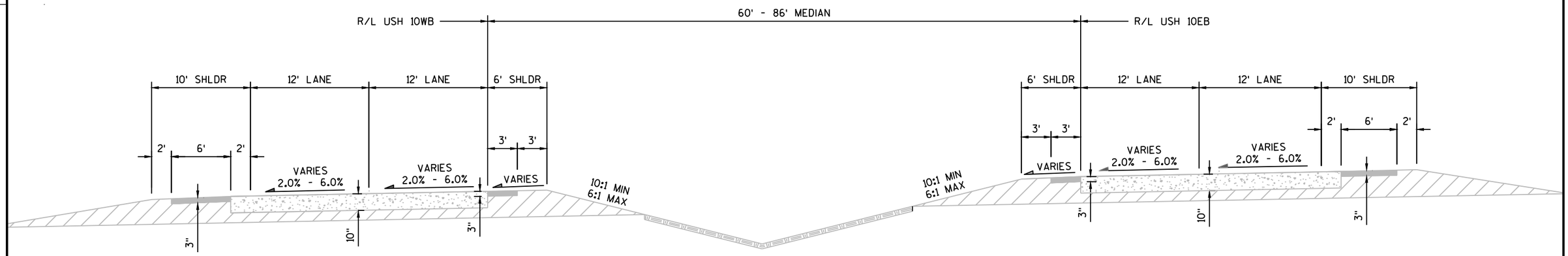


PROJECT NO:1510-00-71	HWY:USH 10	COUNTY:WAUPACA	PROJECT OVERVIEW	SHEET 3	E



TYPICAL EXISTING SECTION USH 10

STA. 556+50 EB TO 587+59 EB
STA. 595+13 EB TO 646+88 EB
STA.651+29 EB TO 655+38 EB
STA. 677+21 EB TO 687+67 EB
STA. 716+14 EB TO 720+97 EB



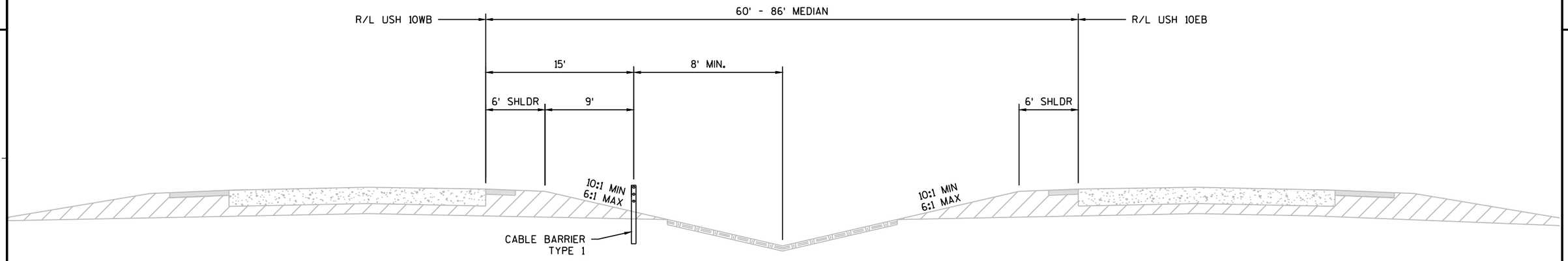
TYPICAL EXISTING SUPERELEVATED SECTION USH 10

STA. 587+59 EB TO 595+13 EB
STA. 646+88 EB TO 651+29 EB
STA. 655+38 EB TO 677+21 EB
STA. 687+67 EB TO 716+14 EB

LEGEND

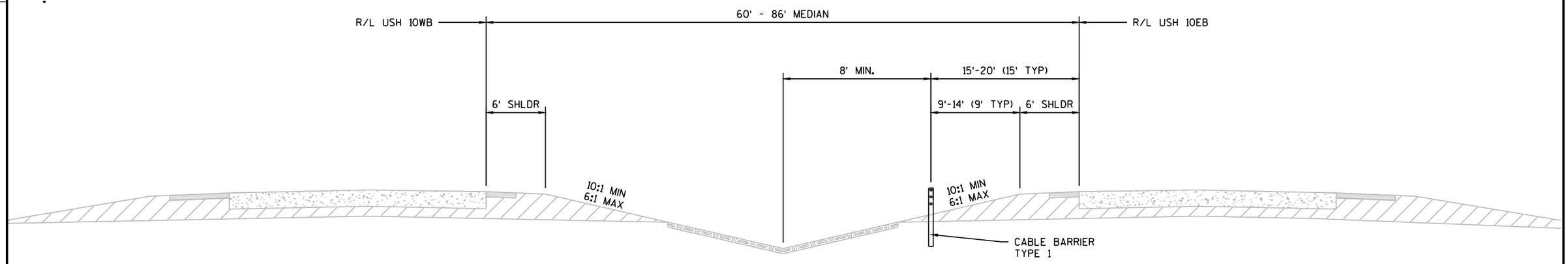
- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING GROUND

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN: TYPICAL SECTIONS	SHEET 4	E



TYPICAL PROPOSED SECTION USH 10

STA. 557+14.42 EB TO 605+70.30 EB
STA. 606+80.30 EB TO 644+55.30 EB
STA. 646+45.48 EB TO 663+25 EB



TYPICAL PROPOSED SECTION USH 10

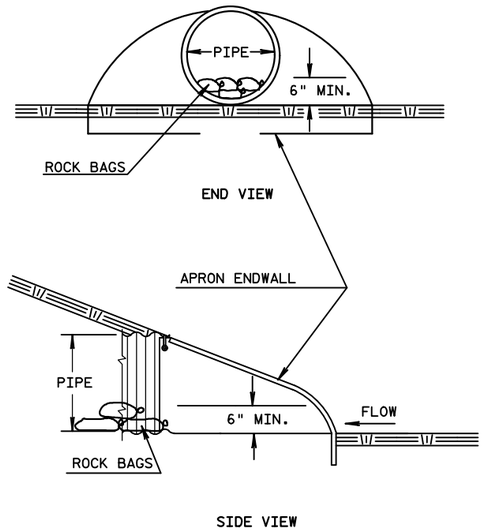
STA. 664+63 EB TO 674+54 EB
STA. 675+94 EB TO 687+10 EB
STA. 688+52 EB TO 703+01 EB
STA. 704+80 EB TO 720+97 EB

LEGEND

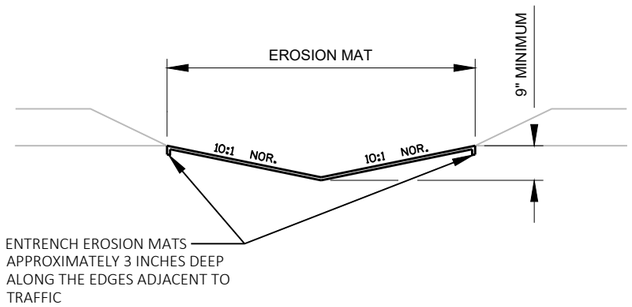
- EXISTING BASE AGGREGATE DENSE
- EXISTING HMA PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING GROUND

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN: TYPICAL SECTIONS	SHEET 5	E

FILE NAME : N:\PDS\C3D\15100001\SHEETSPLAN\020301-TS.DWG PLOT DATE : 2/20/2017 8:52 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:10 FT



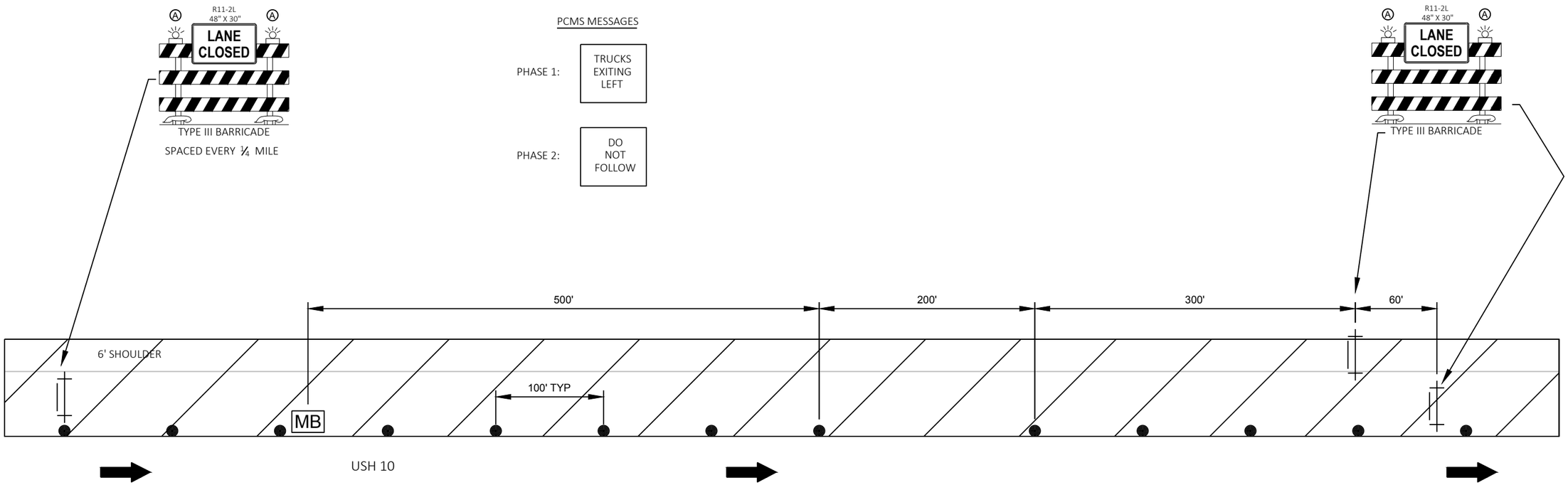
CULVERT PIPE DITCH CHECK



EROSION MAT DETAIL FOR DITCHES

2

2



WORK ZONE ACCESS (SINGLE LANE CLOSURE)

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD (PCMS)

DRAWING NOT TO SCALE

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	CONSTRUCTION DETAIL (WORK ZONE ACCESS)	SHEET 7	E

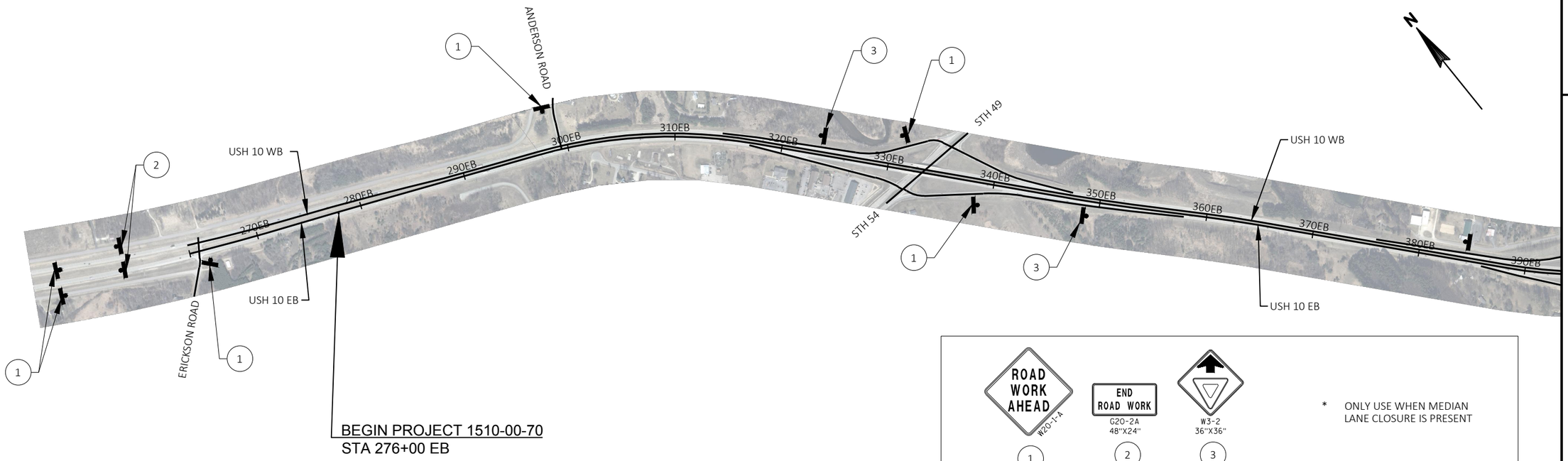


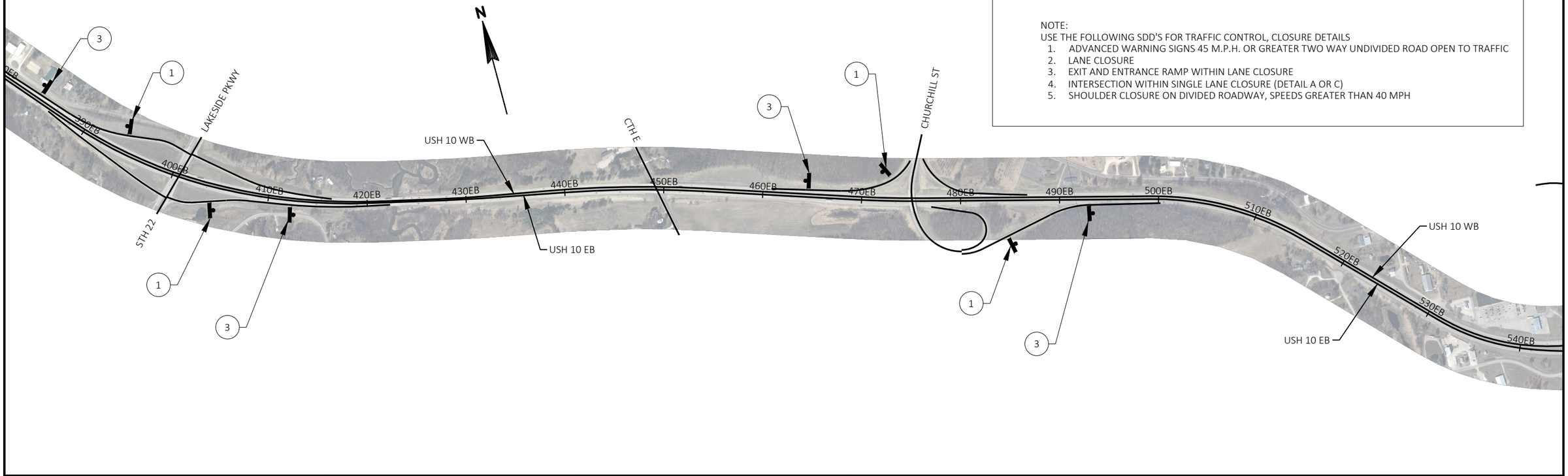
PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PERMANENT SIGNING	SHEET 8	E

FILE NAME : N:\PDS\C3D\15100001\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 01-PS

PLOT DATE : 4/6/2017 8:50 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : ##########

2





1

2

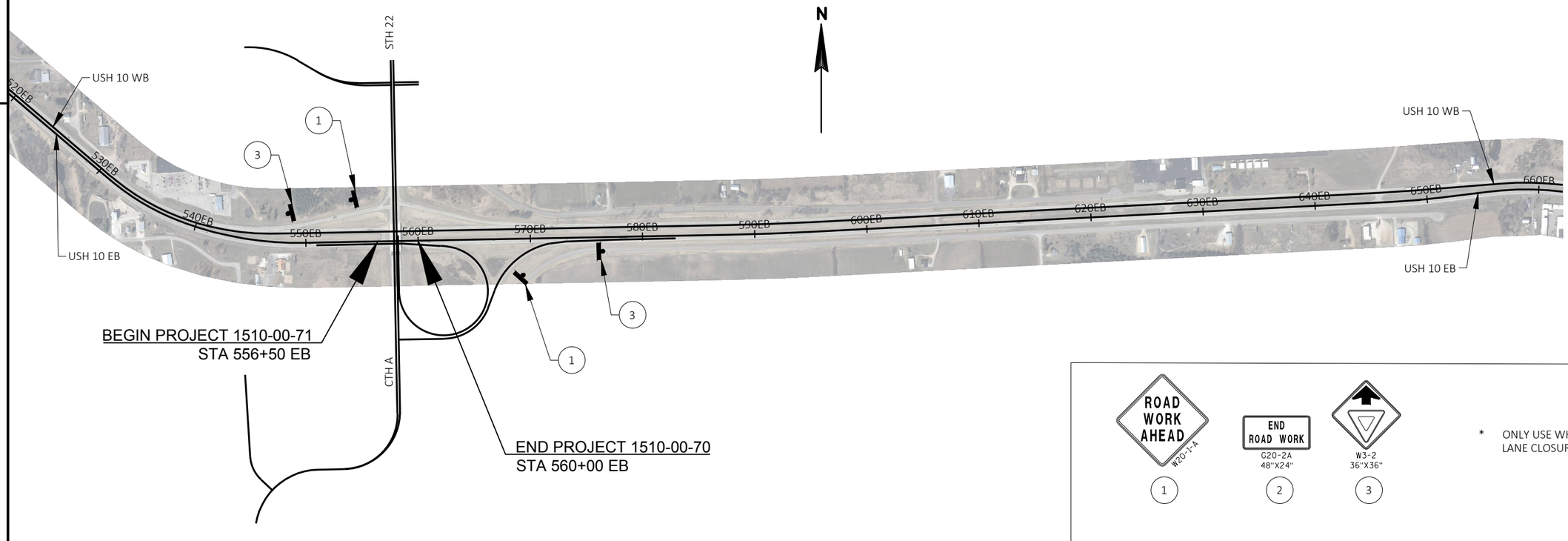
3

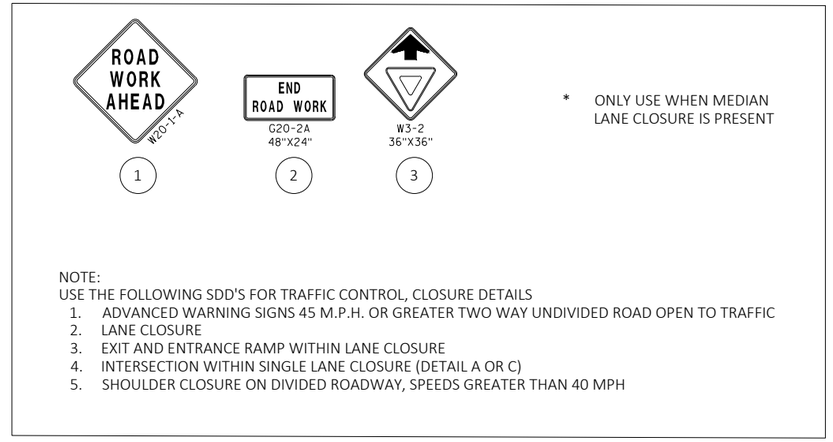
* ONLY USE WHEN MEDIAN LANE CLOSURE IS PRESENT

NOTE:
USE THE FOLLOWING SDD'S FOR TRAFFIC CONTROL, CLOSURE DETAILS

1. ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
2. LANE CLOSURE
3. EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
4. INTERSECTION WITHIN SINGLE LANE CLOSURE (DETAIL A OR C)
5. SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

PROJECT NO: 1510-00-70, 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL - ADVANCED WARNING	SHEET 9	E

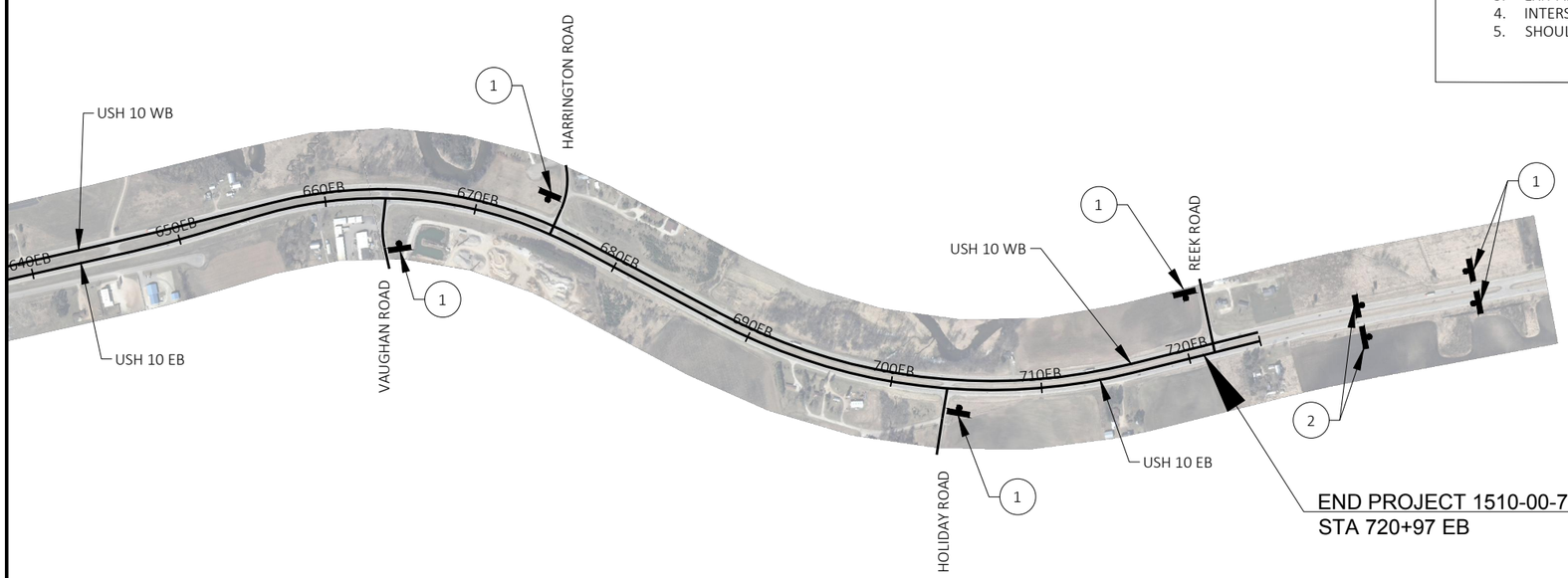




* ONLY USE WHEN MEDIAN LANE CLOSURE IS PRESENT

NOTE:
USE THE FOLLOWING SDD'S FOR TRAFFIC CONTROL, CLOSURE DETAILS

1. ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC
2. LANE CLOSURE
3. EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
4. INTERSECTION WITHIN SINGLE LANE CLOSURE (DETAIL A OR C)
5. SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	TRAFFIC CONTROL - ADVANCED WARNING	SHEET 10	E

1510-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0014	205.0100	Excavation Common	CY	632.000	632.000
0018	213.0100	Finishing Roadway (project) 02. 1510-00-71	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	68.000	68.000
0040	613.1100.S	Cable Barrier Type 1	LF	15,523.000	15,523.000
0042	613.1200.S	Cable Barrier End Terminal Type 1	EACH	14.000	14.000
0054	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1510-00-71	EACH	1.000	1.000
0056	619.1000	Mobilization	EACH	0.250	0.250
0058	624.0100	Water	MGAL	1.000	1.000
0060	625.0100	Topsoil	SY	2,056.000	2,056.000
0064	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0068	628.2004	Erosion Mat Class I Type B	SY	2,569.000	2,569.000
0070	628.7005	Inlet Protection Type A	EACH	1.000	1.000
0074	628.7555	Culvert Pipe Checks	EACH	1.000	1.000
0076	629.0210	Fertilizer Type B	CWT	1.600	1.600
0078	630.0120	Seeding Mixture No. 20	LB	69.000	69.000
0086	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	2.000	2.000
0090	638.2102	Moving Signs Type II	EACH	2.000	2.000
0096	642.5201	Field Office Type C	EACH	0.250	0.250
0098	643.0300	Traffic Control Drums	DAY	7,757.000	7,757.000
0100	643.0420	Traffic Control Barricades Type III	DAY	267.000	267.000
0102	643.0705	Traffic Control Warning Lights Type A	DAY	534.000	534.000
0104	643.0715	Traffic Control Warning Lights Type C	DAY	560.000	560.000
0106	643.0800	Traffic Control Arrow Boards	DAY	82.000	82.000
0108	643.0900	Traffic Control Signs	DAY	967.000	967.000
0110	643.1050	Traffic Control Signs PCMS	DAY	35.000	35.000
0112	643.5000	Traffic Control	EACH	0.250	0.250
0122	650.9910	Construction Staking Supplemental Control (project) 02. 1510-00-71	LS	1.000	1.000
0124	650.9920	Construction Staking Slope Stakes	LF	16,447.000	16,447.000
0126	690.0150	Sawing Asphalt	LF	920.000	920.000

3

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
627+56.19WB	RT	1	MEDIAN CROSSOVER
	TOTALS	1	

Division	From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	208.0100 Borrow	Comment:
			Cut (2)	EBS Excavation (3)			Factor 1.25				
USH 10EB Median	622+50/631+00		632	0	147	485	8	477	477	0	
Division 1 Subtotal			632	0	147	485	8	477	477	0	SEE NOTE 15
Grand Total			632	0	147	485	8	477	477	0	
Total Common Exc			632								

Notes:

(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100

(2) Salvaged/Unsuable Pavement Material is included in Cut.

(4) Salvaged/Unusable Pavement Material

5) Available Material = Cut - Salvaged/Unusuable Pavement Material

(13) Expanded Fill Factor = 1.25

Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced EBS) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor - Reduced Marsh) * Fill Factor

Or Expanded Fill = (Unexpanded Fill - Rock * Rock Factor) * Fill Factor

(14) 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.

(15) Use 477 CY of material from . Borrow Excavation item number 208.0100

FILE NAME : N:\PDS\DESIGN_ID_USH_10_STH_22-54-TO-REEK-RD\\QUANTITIES\ITEMS\030201-MQ-151000071.PPT PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

3

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 3/4 INCH TON	624.0100 WATER MGAL	REMARKS
624+00 EB - 628+00 EB	LT	30	0.3	MEDIAN SHOULDER
626+00 WB - 631+00 WB	RT	38	0.375	MEDIAN SHOULDER
	TOTALS	68	1	

EROSION CONTROL

STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7005 INLET PROTECTION TYPE A EACH
561+56.19 WB	RT	---	---	1
STAGE 1		3	1	---
STAGE 2		3	1	---
	TOTALS	6	2	1

CABLE BARRIER

STATION - STATION	LOCATION	613.1100.S TYPE 1 LF	613.1200.S END TERMINAL TYPE 1 EACH	REMARKS
557+14.42 EB	LT	---	1	MEDIAN USH 10 WB
557+14.42 EB - 605+70.31 EB	LT	4856	---	MEDIAN USH 10 WB
605+70.31 EB	LT	---	1	MEDIAN USH 10 WB
606+80.30 EB	LT	---	1	MEDIAN USH 10 WB
606+80.30 EB - 644+55.30 EB	LT	3775	---	MEDIAN USH 10 WB
644+55.30 EB	LT	---	1	MEDIAN USH 10 WB
647+05.71 EB	LT	---	1	MEDIAN USH 10 WB
647+05.71 EB - 663+25 EB	LT	1619	---	MEDIAN USH 10 WB
663+25 EB	LT	---	1	MEDIAN USH 10 WB
664+63 EB	LT	---	1	MEDIAN USH 10 EB
664+63 EB - 674+54 EB	LT	991	---	MEDIAN USH 10 EB
674+54 EB	LT	---	1	MEDIAN USH 10 EB
674+94 EB	LT	---	1	MEDIAN USH 10 EB
674+94 EB - 687+10 EB	LT	1216	---	MEDIAN USH 10 EB
687+10 EB	LT	---	1	MEDIAN USH 10 EB
688+52 EB	LT	---	1	MEDIAN USH 10 EB
688+52 EB - 703+01 EB	LT	1449	---	MEDIAN USH 10 EB
703+01 EB	LT	---	1	MEDIAN USH 10 EB
704+80 EB	LT	---	1	MEDIAN USH 10 EB
704+80 EB - 720+97 EB	LT	1617	---	MEDIAN USH 10 EB
720+97 EB	LT	---	1	MEDIAN USH 10 EB
	TOTALS	15523	14	

TOPSOIL, EROSION MAT, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	628.2004 EROSION MAT CLASS I TYPE B SY	628.7555 CULVERT PIPE CHECKS EACH	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	REMARKS
629+75 EB	MEDIAN	0	0	1	0	0	
625+50 EB - 628+00 EB	MEDIAN	2056	2055	0	1.3	56	CROSS OVER REMOVAL
UNDISTRIBUTED		0	514	0	0.3	14	
	TOTALS	2,056	2,569	1	1.6	69	

3

SIGN LISTING

SIGN NO.	SIGN CODE	MESSAGE	SIZE	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	638.2102 MOVING SIGNS TYPE II EA	REMARKS
1-01	R6-2R	ONE WAY "RIGHT'	18"X24"	1	1	OFFSET 12-FT RT USH 10 WB LANE EDGE
1-02	R6-2R	ONE WAY "RIGHT"	18"X24"	1	1	OFFSET 12-FT RT USH 10 WB LANE EDGE
			TOTALS	**2.00**	**2.00**	

TRAFFIC CONTROL SIGNS

MESSAGE	SIGN CODE	WORK DAYS	QTY.	643.0900 USH 10 EB DAYS	643.0900 USH 10 EB QTY.	643.0900 USH 10 WB DAYS	REMARKS
ADVANCED WARNING							
ROAD WORK AHEAD	W20-1	45	0	0	2	90	
END ROAD WORK	G20-2A	45	2	90	0	0	
ROAD WORK NEXT 9 MILES	G20-1	45	0	0	2	90	
FINES DOUBLE IN WORK ZONE	W21-62	45	0	0	2	90	
STAGE 1 (STA 560+00 TO STA 664+00) USH 10 WB PASSING LANE CLOSURE, 10 EB MEDIAN SHLD CLOSED							
ROAD WORK 1 MILE	W20-1	23	0	0	2	46	
LEFT LANE CLOSED 1/2 MILE	W20-5	23	0	0	2	46	
LEFT LANE CLOSED 1500 FT	W20-5	23	0	0	2	46	
MERGE LEFT	W04-2L	23	0	0	2	46	
LEFT SHOULDER CLOSED AHEAD	W21-5B	23	0	0	0	0	
LEFT SHOULDER CLOSED	W21-5A	23	0	0	0	0	
LANE CLOSED	R11-2MOD	23	0	0	9	207	
STAGE 2 (STA 665+00 TO STA 721+00) USH 10 EB PASSING LANE CLOSURE, 10 WB MEDIAN SHLD CLOSED							
ROAD WORK 1 MILE	W20-1	12	2	24	0	0	
LEFT LANE CLOSED 1/2 MILE	W20-5	12	2	24	0	0	
LEFT LANE CLOSED 1500 FT	W20-5	12	2	24	0	0	
MERGE LEFT	W04-2L	12	2	24	0	0	
LEFT SHOULDER CLOSED AHEAD	W21-5B	12	0	0	2	24	
LEFT SHOULDER CLOSED	W21-5A	12	0	0	2	24	
LANE CLOSED	R11-2MOD	12	5	60	0	0	
BEGIN LEFT TURN LANE	R3-20L	12	1	12	0	0	
			SUB-TOTALS	**258**		**709**	
			GRAND TOTALS	**967**	**DAYS**		

3

TRAFFIC CONTROL

LOCATION	STAGE DAYS	QTY	643.0300 DRUMS DAYS	QTY	643.0420 BARRICADE TYPE III DAYS	QTY	643.0705 WARNING LIGHTS TYPE A DAYS	QTY	643.0715 WARNING LIGHTS TYPE C DAYS	QTY	643.0800 ARROW BOARD DAYS	643.1050 SIGNS PCMS DAYS	REMARKS
STAGE 1													
STA 560+00 WB- STA664+00 WB	23	133	3059	9	207	18	414	16	368	2	46	23	WB PASSING LANE CLOSURE
STA 560+00 EB-STA 663+00 EB	23	104	2392	0	0	0	0	0	0	0	0	0	EB MEDIAN SHOULDER CLOSURE
UNDISTRIBUTED	23	10	230	0	0	0	0	0	0	0	0	0	
STAGE 2													
STA 665+00 EB-STA 721+00 EB	12	96	1152	5	60	10	120	16	192	2	24	12	EB PASSING LANE CLOSURE
STA 666+00 WB-STA 722+00 WB	12	67	804	0	0	0	0	0	0	1	12	0	WB MEDIAN SHOULDER CLOSURE
UNDISTRIBUTED	12	10	120	0	0	0	0	0	0	0	0	0	
TOTALS			**7757**		**267**		**534**		**560**		**82**	**35**	

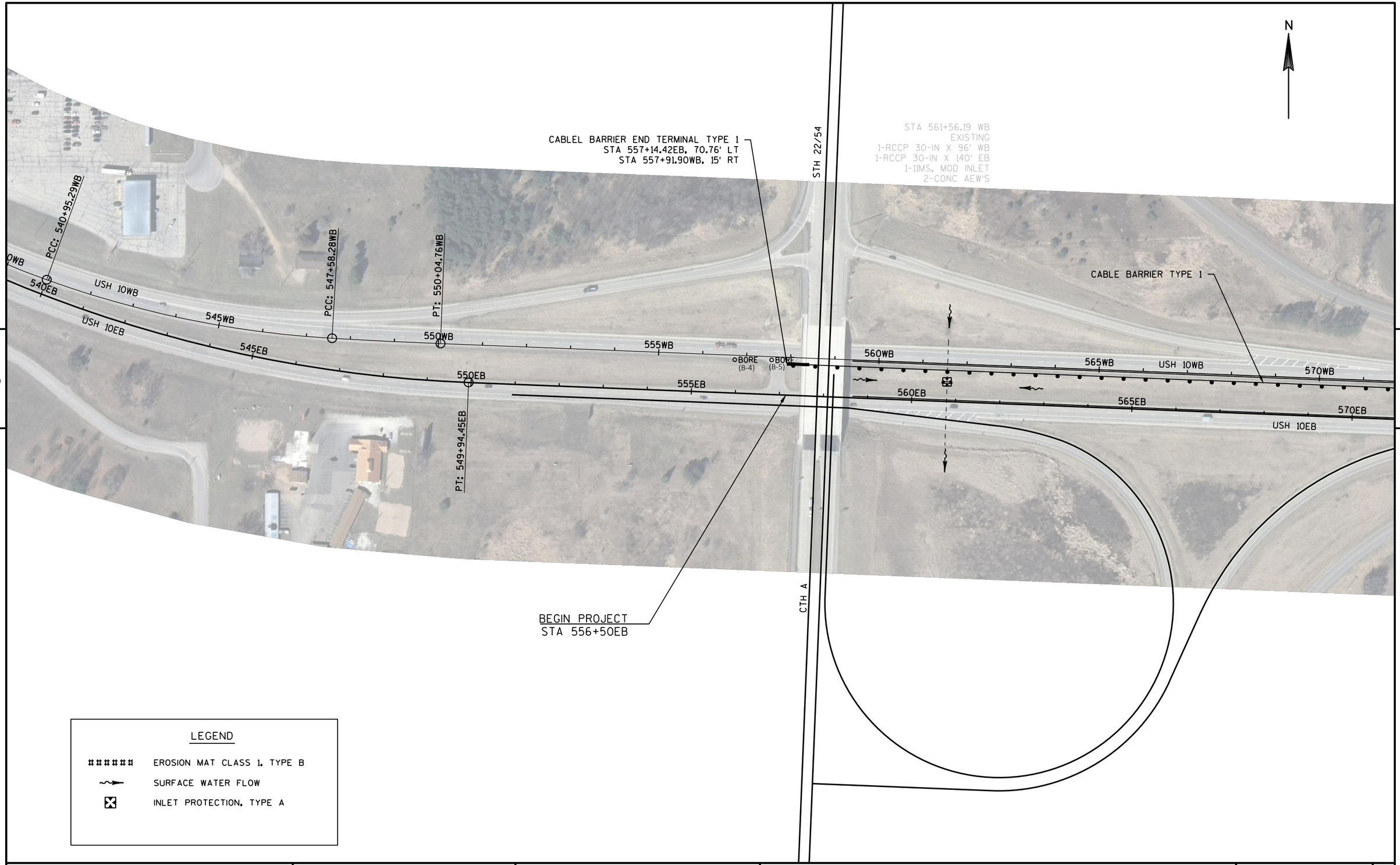
CONSTRUCTION STAKING

STATION - STATION	650.9910 SUPPLEMENTAL CONTROL (PROJ) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
556+50EB - 720+97EB	---	16,447	
PROJECT 1510-00-71	1	---	
TOTALS	**1**	**16,447**	

SAWING ASPHALT

STATION - STATION	LOCATION	690.0150 LF	REMARKS
623+62.51 EB - 628+02.05 EB	LT	440	MEDIAN SHLD
626+11.87 WB - 630+92.43 WB	RT	481	MEDIAN SHLD
	TOTAL	**920**	

3



PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS	SHEET 16 E

FILE NAME : N:\PDS\C3D\15100001\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 01-PN

PLOT DATE : 4/11/2017 8:08 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

LEGEND

EROSION MAT CLASS 1, TYPE B

SURFACE WATER FLOW

INLET PROTECTION, TYPE A

N

STA 590+84.44 WB
EXISTING
1-RCCP 24-IN X 200'
2-CONC AEW'S

CABLE BARRIER TYPE 1

CAUTION

570WB USH 10WB 575WB 580WB 585WB 590WB 595WB USH 10WB 600WB

570EB USH 10EB 575EB 580EB 585EB 590EB 595EB USH 10EB 600EB

W UG

G UG

PC: 588+45.34WB

PT: 595+71.67WB

PC: 587+58.77EB

PT: 595+12.99EB

STA 572+12.68 EB
EXISTING
1-RCCP 24-IN X 110'
1-SLOPED CONC AEW, LT
1-CONC AEW, RT

STA 589+94.64 EB
EXISTING
1-RCCP 24-IN X 83'
1-SLOPED CONC AEW, LT
1-CONC AEW, RT

STA 599+55.44 EB
EXISTING
1-RCCP 18-IN X 72'
1-SLOPED CONC AEW, LT
1-CONC AEW, RT

5

5

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS	SHEET 17	E

N

STA 607+00 WB, 40' RT
EXISTING
1-RCCP 24-IN X 105'
2-CONC SLOPED AEW'S

STA 615+40.50 WB
EXISTING
2-RCCP 30-IN X 281'
2-CONC AEW'S

STA 623+78.18 WB
EXISTING
2-RCCP 24-IN X 185'
2-CONC MASONRY ENDWALLS

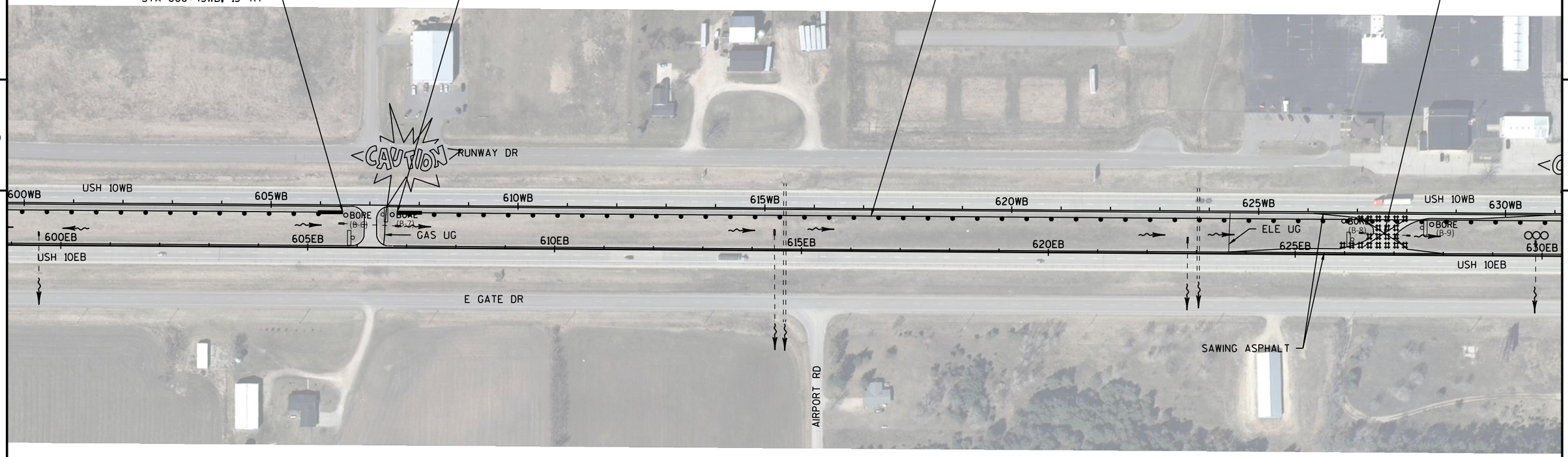
REMOVE SMALL PIPE CULVERT
STA 627+56.19 WB, 44.4' RT
EXISTING
1-RCCP 24-IN X 89'
2-SLOPED CONC AEW'S

CABLE BARRIER END TERMINAL TYPE 1
STA 605+70.31EB, 71.25' LT
STA 606+45WB, 15' RT

CABLE BARRIER END TERMINAL TYPE 1
STA 606+80.30EB, 71.24' LT
STA 607+55WB, 15' RT

CABLE BRRIER TYPE 1

REMOVE MAINTENANCE CROSS OVER



STA 614+45.34 EB
EXISTING
1-RCCP 24-IN X 170'
1-SLOPED CONC AEW, LT
1-CONC AEW, RT

STA 622+81.81 EB
EXISTING
1-RCCP 24-IN X 73'
1-SLOPE CONC AEW, LT
1-CONC AEW, RT

LEGEND

######	EROSION MAT CLASS 1, TYPE B
~~►	SURFACE WATER FLOW
⊠	INLET PROTECTION, TYPE A

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS	SHEET 18	E

FILE NAME : N:\PDS\C3D\15100001\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 03-PN

PLOT DATE : 4/11/2017 8:08 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

LEGEND

EROSION MAT CLASS 1, TYPE B

SURFACE WATER FLOW

INLET PROTECTION, TYPE A

N

STA 646+37.21 WB, 34.73' RT
EXISTING
1-RCCP 24-IN X 85'
2-SLOPED CONC AEW'S

STA 647+67.78 WB
EXISTING
1-RCCP 18-IN X 77'
1-SLOPED CONC AEW, RT
1-CONC AEW, LT

ENVIRONMENTALLY SENSITIVE AREA. NO CONSTRUCTION ACTIVITIES ARE PERMITTED WITHIN THIS LOCATION.

EXISTING
C-68-24
STA 659+16.40 WB
TWIN 8'X8' REINF CONC BOX CULVERT

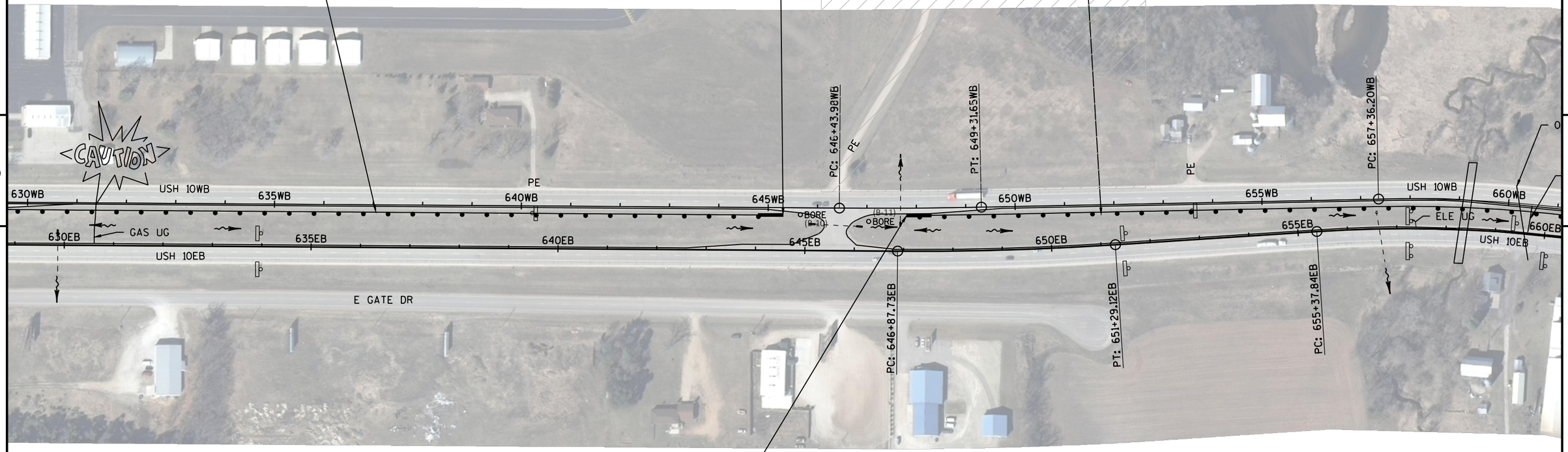
CABLE BARRIER TYPE 1

CABLE BARRIER END TERMINAL TYPE 1
STA 644+55.30EB, 71.11' LT
STA 645+30WB, 15' RT

CABLE BARRIER TYPE 1

5

5



CABLE BARRIER END TERMINAL TYPE 1
STA 647+05.71EB, 71.96' LT
STA 647+80WB, 15' RT

STA 629+86.92 EB
EXISTING
1-RCCP 24-IN X 73'
1-SLOPED CONC AEW, LT
1-CONC AEW, RT

STA 656+64.70 EB
EXISTING
1-RCCP 24-IN X 100'
1-8MS INLET, LT
1-CONC AEW, RT

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS	SHEET 19	E

STA 664+26.50 WB
EXISTING
1-RCCP 24-IN X 85'
1-8MS INLET, RT
1-CONC AEW, LT

STA 680+34.26 WB
EXISTING
1-RCCP 24-IN X 65'
1-SLOPED CONC AEW, RT
1-CONC AEW, LT

N

HARRINGTON RD

CABLE BARRIER END TERMINAL TYPE 1
STA 663+25EB, 45.17' LT
STA 664+11WB, 15' RT

PT: 678+36.56WB

CABLE BARRIER END TERMINAL TYPE 1
STA 687+10EB, 15' LT
STA 688+26.06WB, 44.9' RT

PC: 688+81.91WB

675WB
675EB
670WB
670EB
680WB
USH 10WB
685WB
690WB
680EB
685EB
USH 10EB
665WB
665EB
660WB
660EB
OH E
TEL UG
UG
ELE UG
oBORE (B-3)
oBORE (B-4)
oBORE (B-15)
oBORE (B-16)
oBORE (B-17)
oBORE (B-12)

PT: 677+21.74EB

PC: 687+66.92EB

CABLE BARRIER END TERMINAL TYPE 1
STA 688+52EB, 15' LT
STA 689+66.74WB, 44.92' RT

CABLE BARRIER TYPE 1

CABLE BARRIER END TERMINAL TYPE 1
STA 674+94EB, 15' LT
STA 677+07.34WB, 44.91' RT

CABLE BARRIER END TERMINAL TYPE 1
STA 674+54EB, 20' LT
STA 675+64.33WB, 39.96' RT

CABLE BARRIER TYPE 1

CABLE BARRIER END TERMINAL TYPE 1
STA 664+63EB, 20' LT
STA 665+51.98WB, 40.16' RT

VAUGHAN RD

STA 670+55.10 EB
EXISTING
1-RCCP 24-IN X 87' (EB)
1-RCCP 24-IN X 93' (WB)
1-TYPE 8MS INLET
2-CONC AEW'S

STA 684+33.28 EB
EXISTING
1-RCCP 24-IN X 85'
1-SLOPED CONC AEW, LT
1-CONC AEW, RT

EXISTING
C-68-9000
STA 685+25 EB
2-CP 60-IN
1-TYPE 9MS INLET
2 AEW'S

LEGEND

######	EROSION MAT CLASS 1, TYPE B
~→	SURFACE WATER FLOW
⊠	INLET PROTECTION, TYPE A

5 5

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS	SHEET 20	E

FILE NAME : N:\PDS\C3D\15100001\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 05-PN

PLOT DATE : 4/11/2017 8:09 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS	SHEET 21	E

FILE NAME : N:\PDS\C3D\15100001\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 06-PN

PLOT DATE : 4/11/2017 8:09 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

LEGEND

######	EROSION MAT CLASS 1, TYPE B
~→	SURFACE WATER FLOW
⊠	INLET PROTECTION, TYPE A

N



END PROJECT
STA 720+97EB

5

5

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	PLAN SHEETS	SHEET 22	E

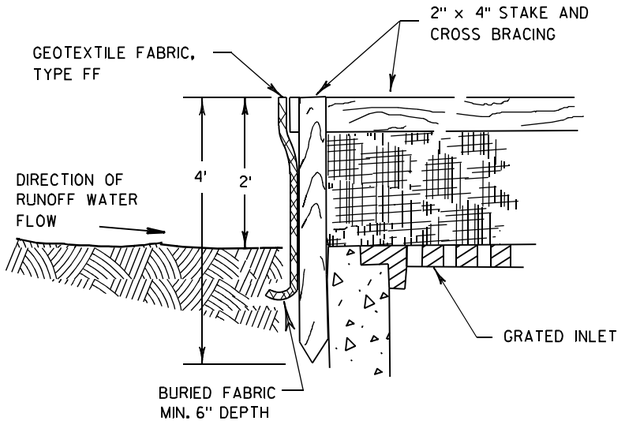
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LAYOUT NAME - 07-PN

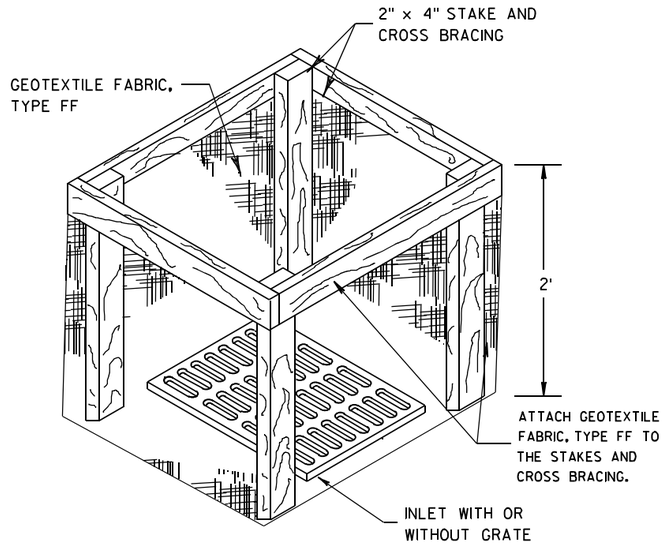
PLOT DATE : 4/11/2017 8:09 AM PLOT BY : SAEGER, GLENN D PLOT NAME : PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 44

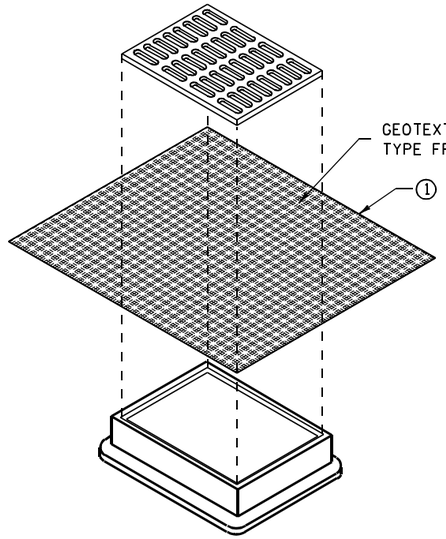
Standard Detail Drawing List

08E10-02	INLET PROTECTION TYPE A, B, C AND D
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D15-04D	TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



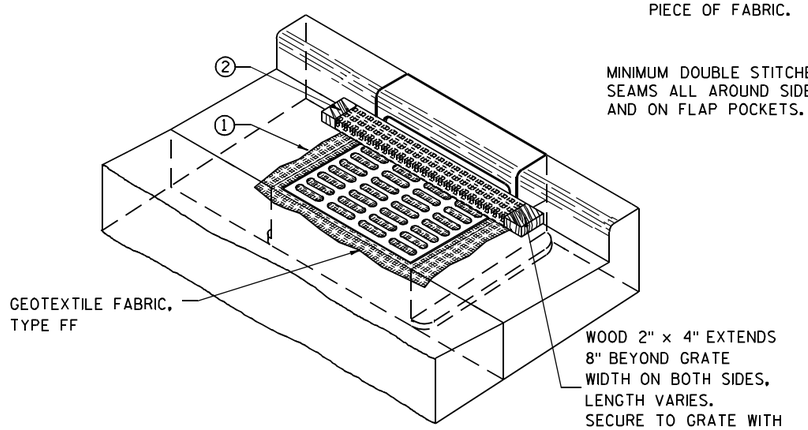


INLET PROTECTION, TYPE A

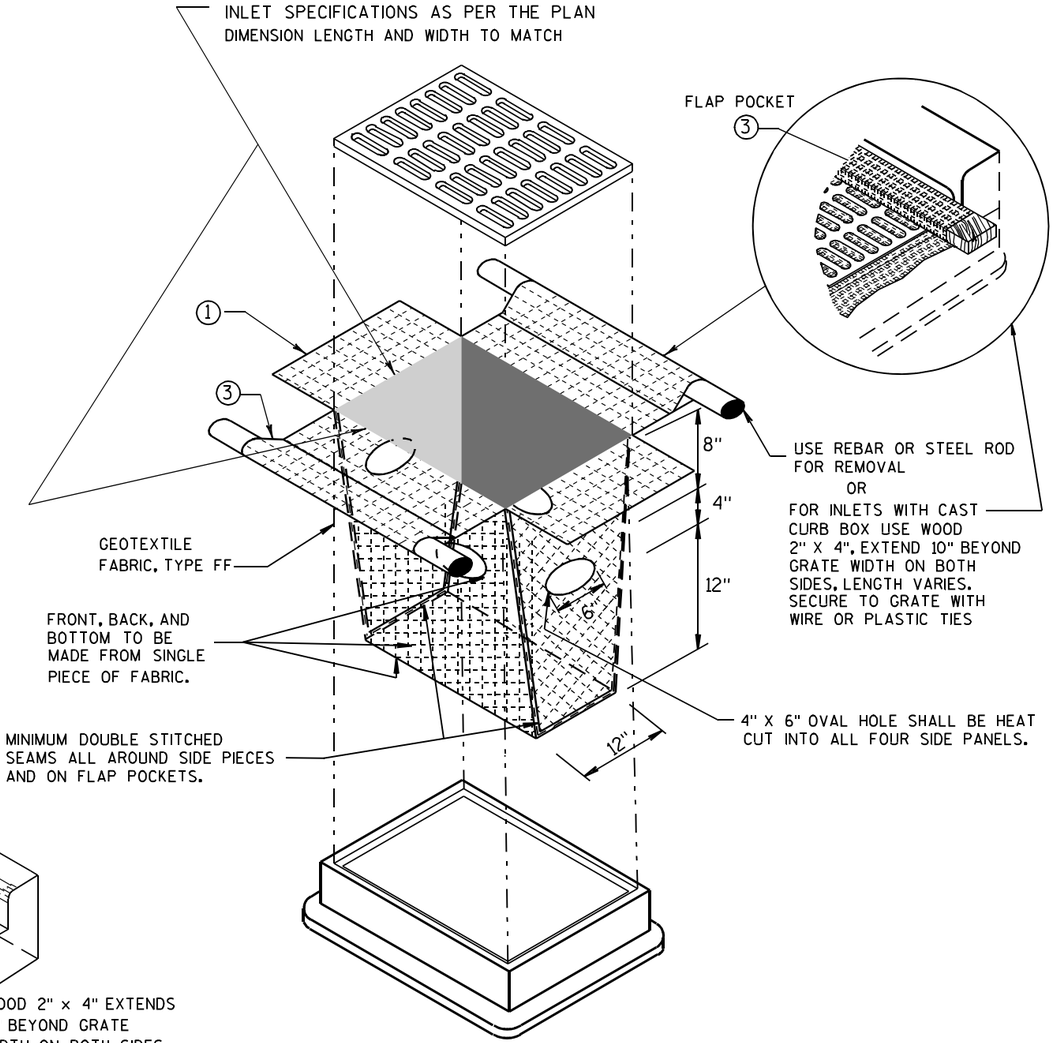


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

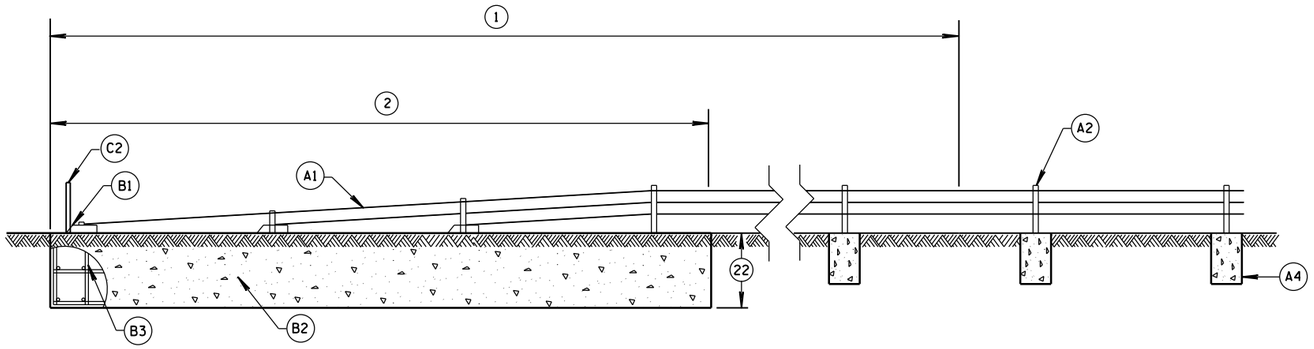
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

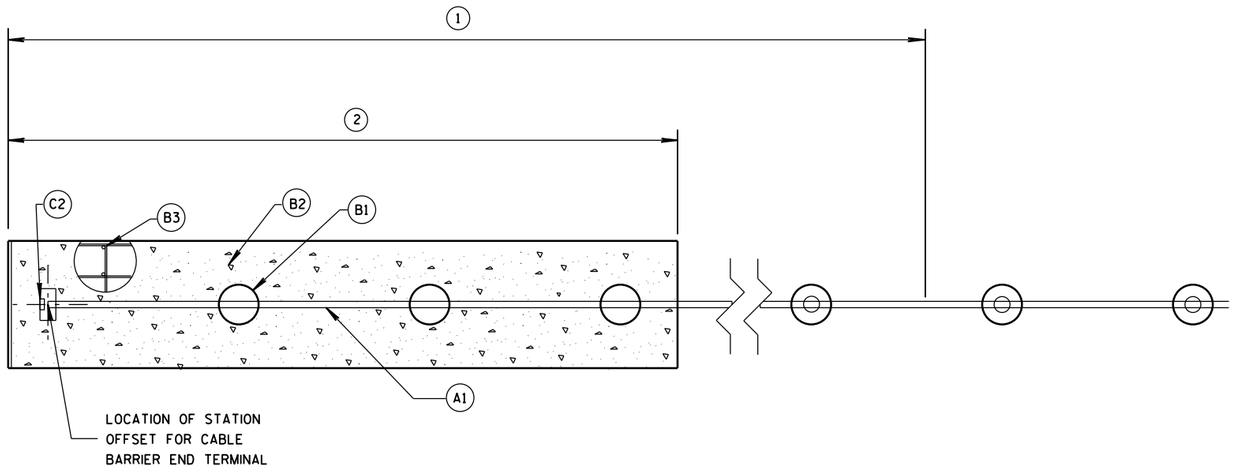
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2

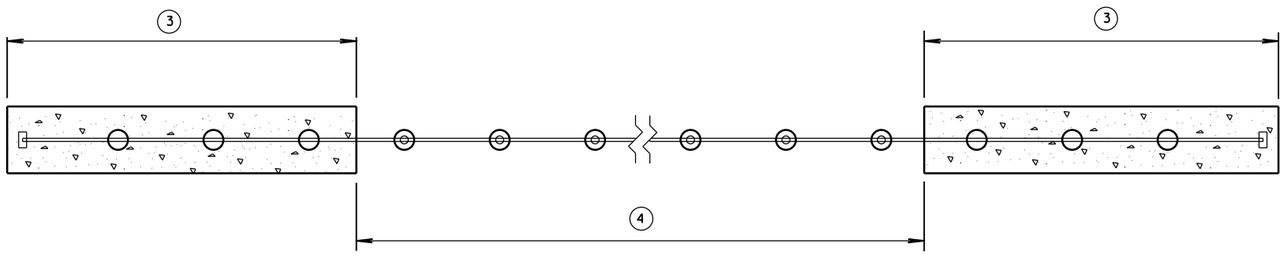


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DEISGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.

DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	3/4" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	ASTM A741 MIN. BREAKING STRENGTH 39,000 LBS.
			AASHTO M30 TYPE 1 CLASS A (GALVANIATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
			SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
			MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE.
			TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

(1) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(2) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(3) CABLE BARRIER END TERMINAL

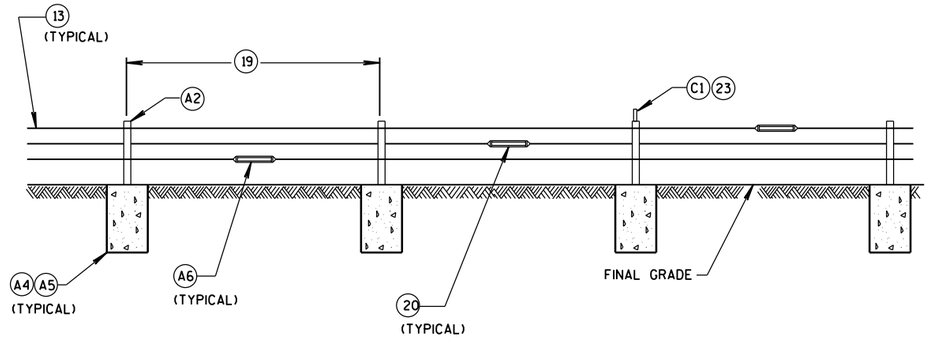
(4) CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

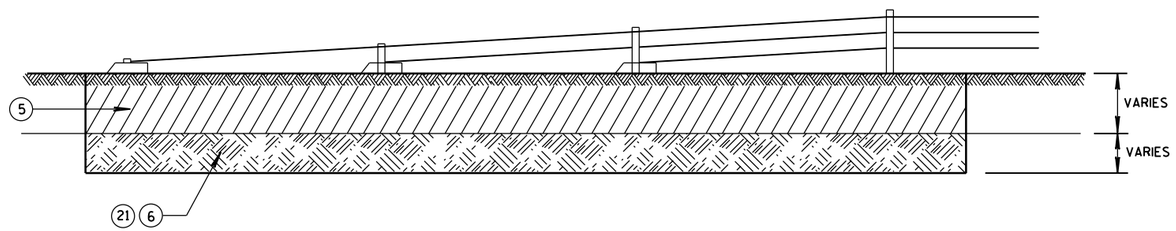
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S.D.D. 14 B 52-1a



PROFILE VIEW

LINE POST INSTALLATION



CABLE BARRIER END TERMINAL ROCK EXCAVATION DETAIL

(5) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(6) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(7) SOIL TO BE EXCAVATED FOR LINE POST (VARIES).

(8) ROCK TO BE EXCAVATED FOR LINE POST (VARIES).

(9) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.

(10) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.

(11) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.

(12) MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

(13) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.

(14) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.

(15) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.

(16) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(17) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(18) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.

(19) MAXIMUM POST SPACING IS 15 FEET.

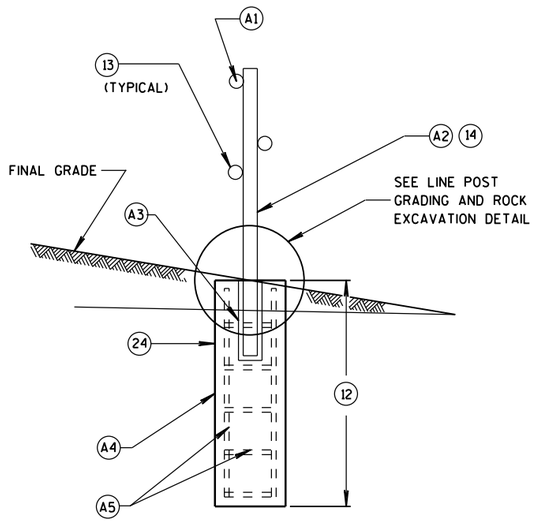
(20) STAGGER TURNBUCKLES (TYPICAL).

(21) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.

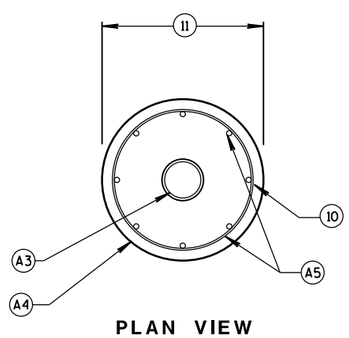
(22) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.

(23) LINE POST DELINEATOR SPACING IS 100 FEET.

(24) LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.

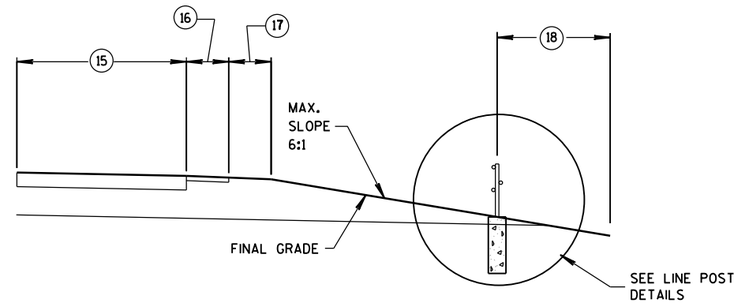


CROSS SECTION

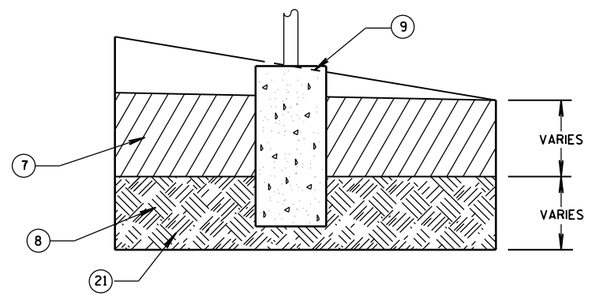


PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

LINE POST DETAILS



CABLE BARRIER OFFSET FROM DITCH LINE



LINE POST GRADING AND ROCK EXCAVATION DETAIL

CABLE BARRIER TYPE 1
LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

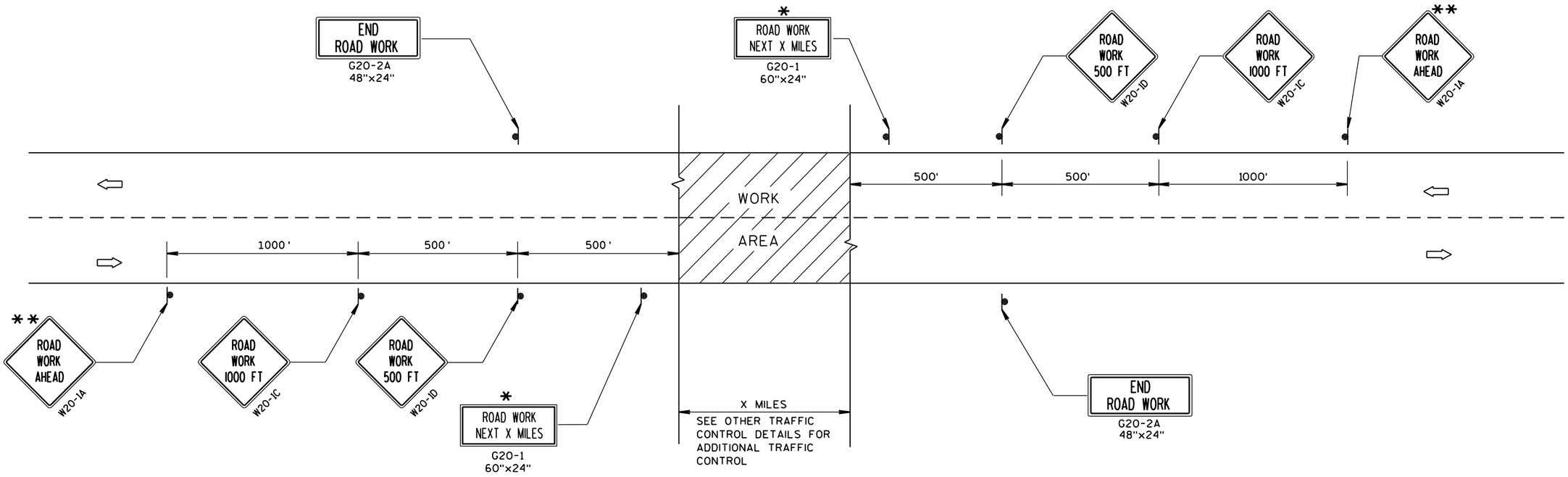
APPROVED
June. 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 52-1b

6

S.D.D. 14 B 52-1b



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

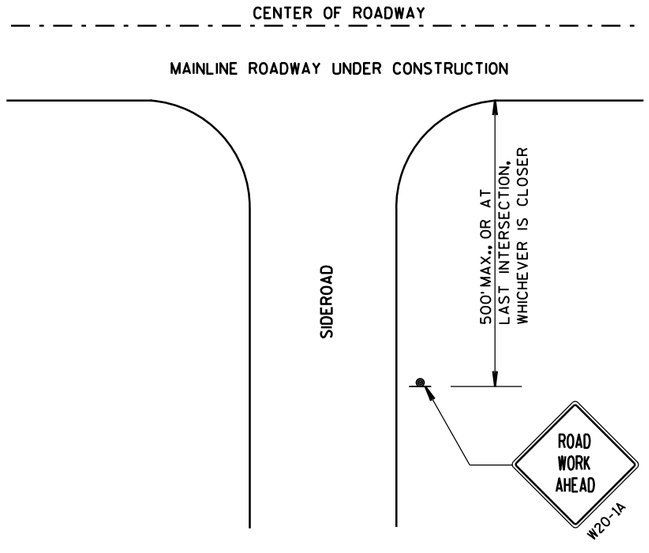
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZONE SAFETY ENGINEER

FHWA

6

S.D.D. 15 C 4-3

6

S.D.D. 15 C 4-3

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

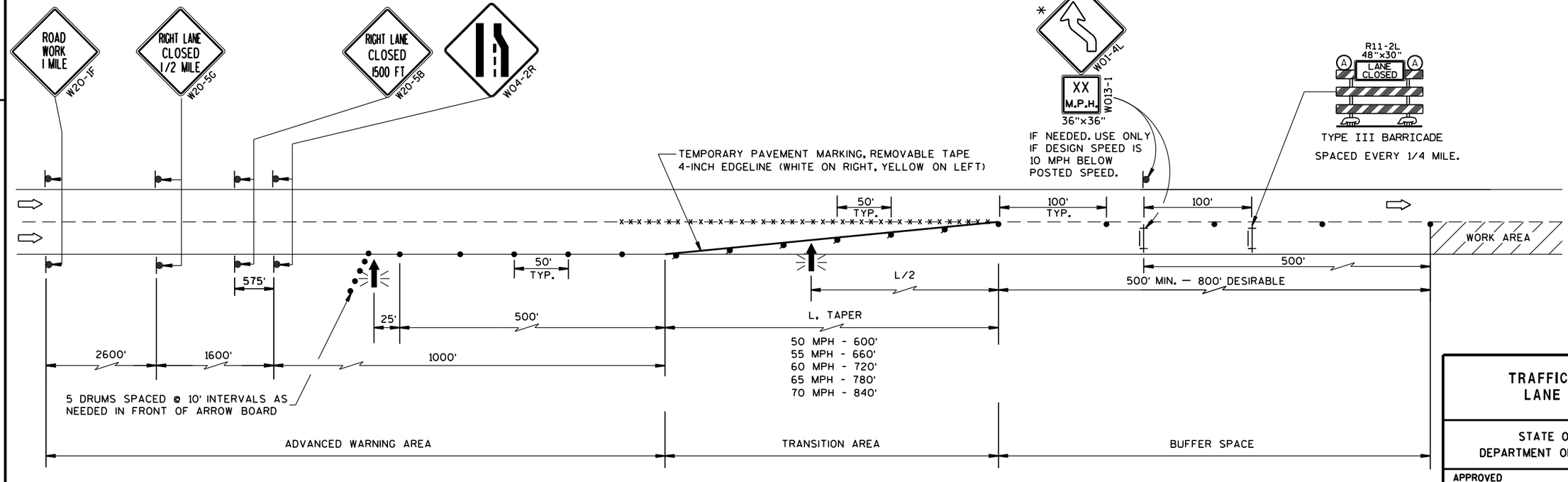
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



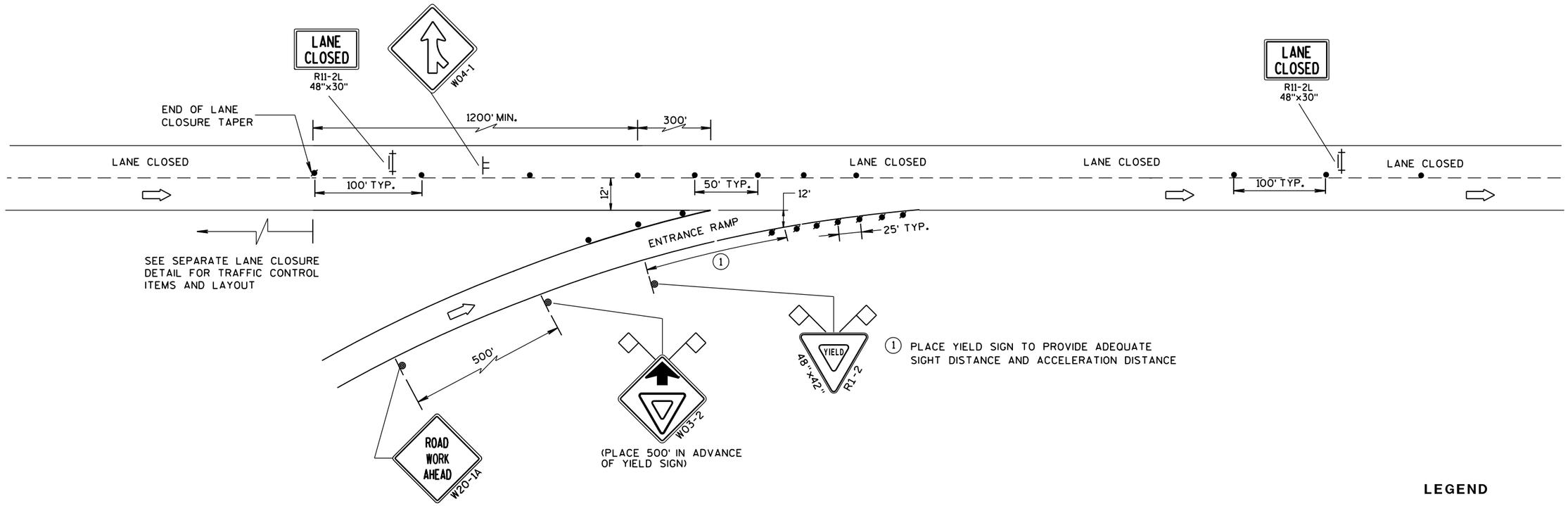
TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a



TAPERED ENTRANCE RAMP WITHIN LEFT LANE CLOSURE

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH 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.

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2L "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE WITH ATTACHED SIGN
- FLAGS, 16" x 16" MIN., (ORANGE)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, TAPERED ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

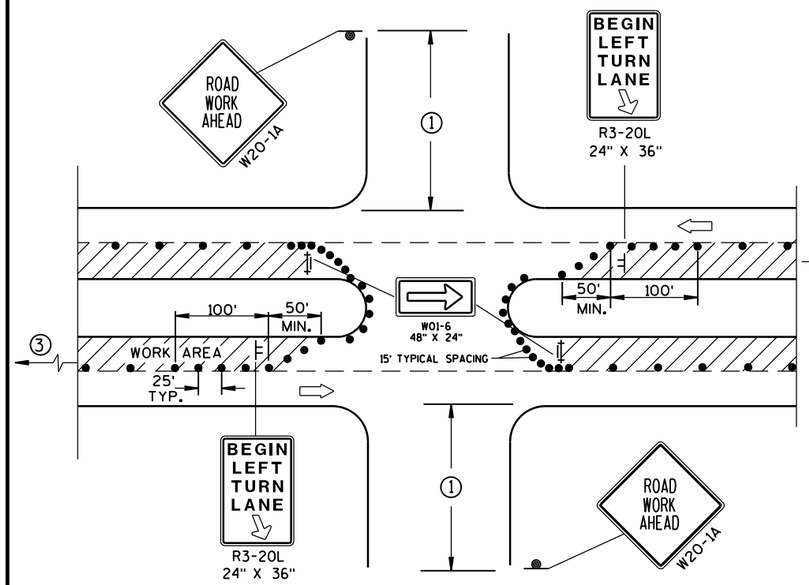
APPROVED
Sept., 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE EN(
FHWA

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S.D.D. 15 D 15-4d

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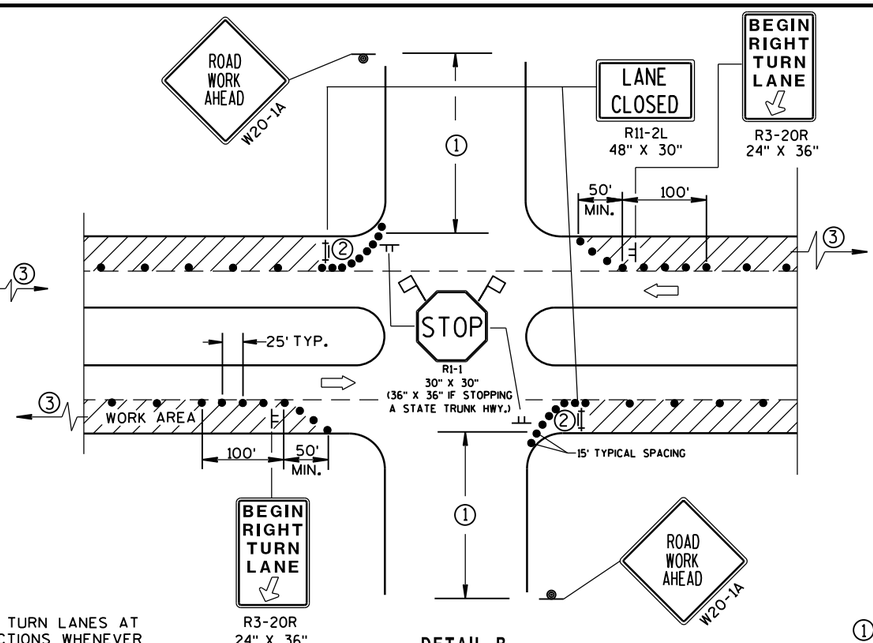
S.D.D. 15 D 15-4d



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

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

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

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 DISTRICT TRAFFIC UNIT.

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

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

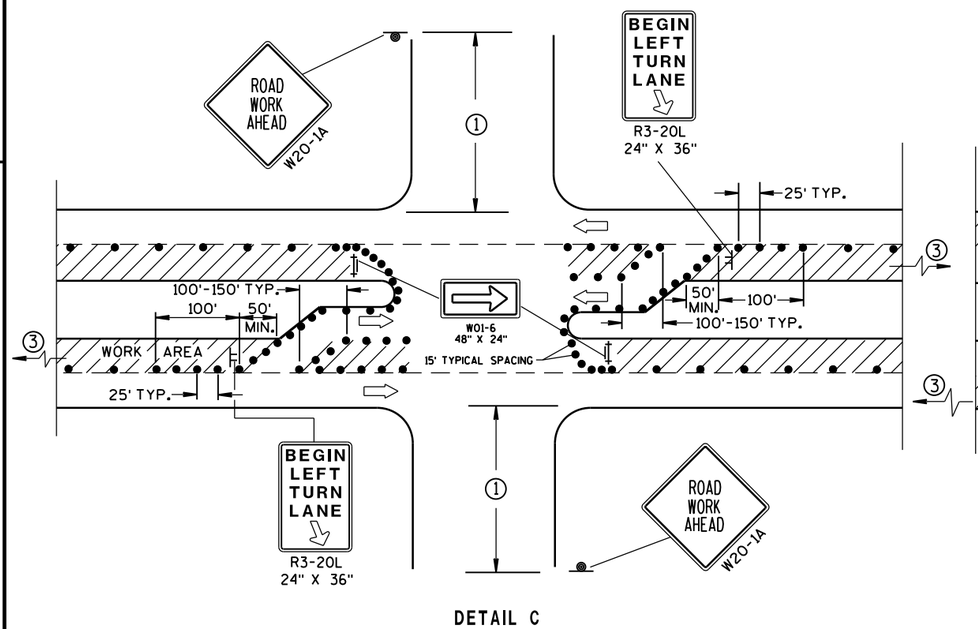
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

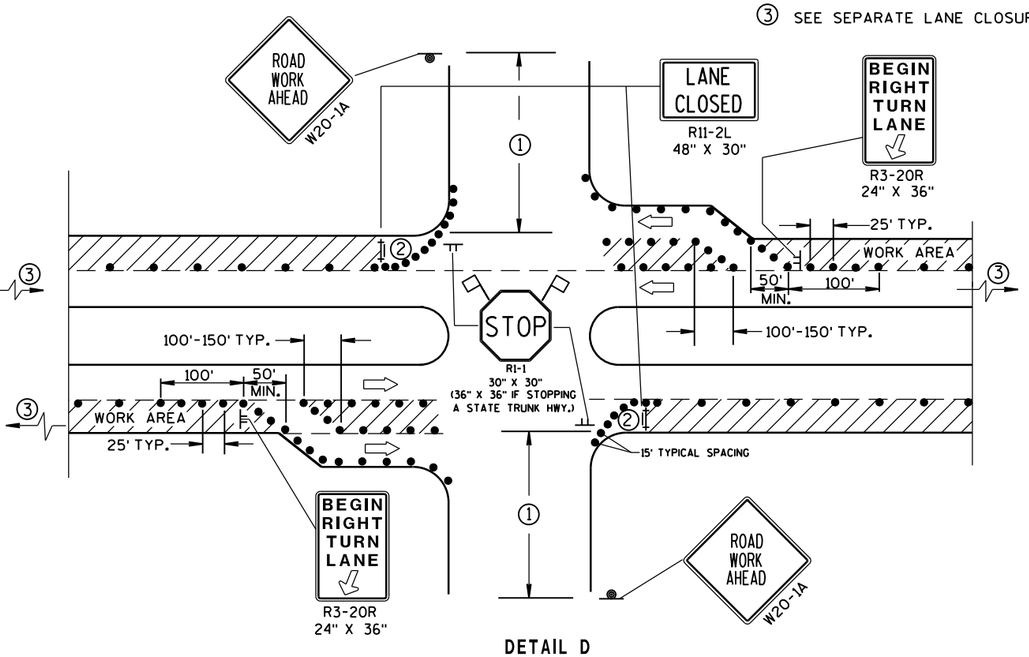
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Peter Anakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

6

S.D.D. 15 D 21-4

LEGEND

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

GENERAL NOTES

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

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

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

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

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

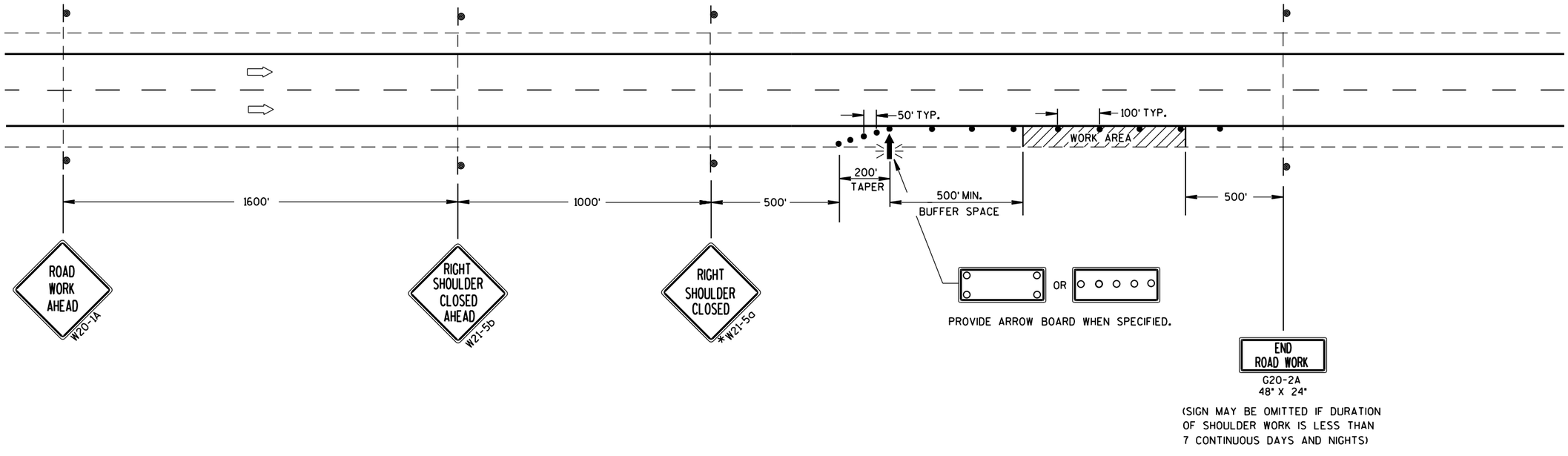
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

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



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

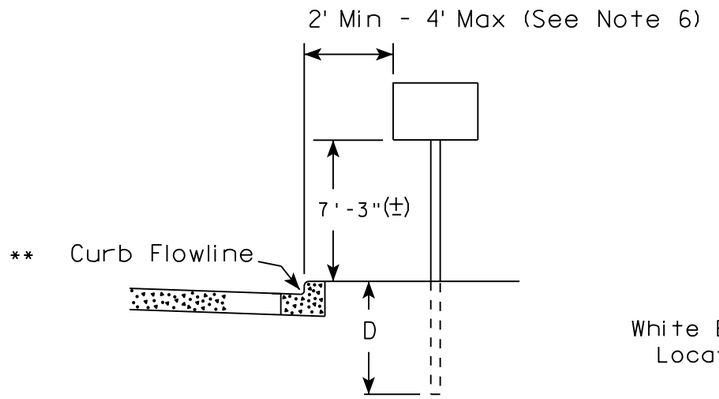
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

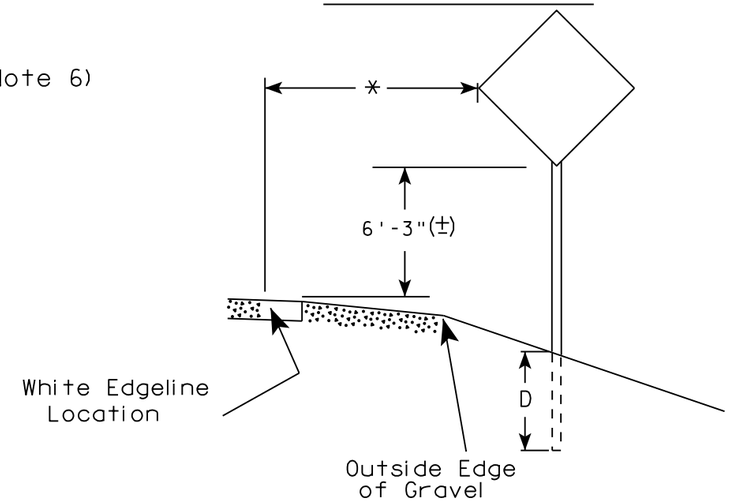
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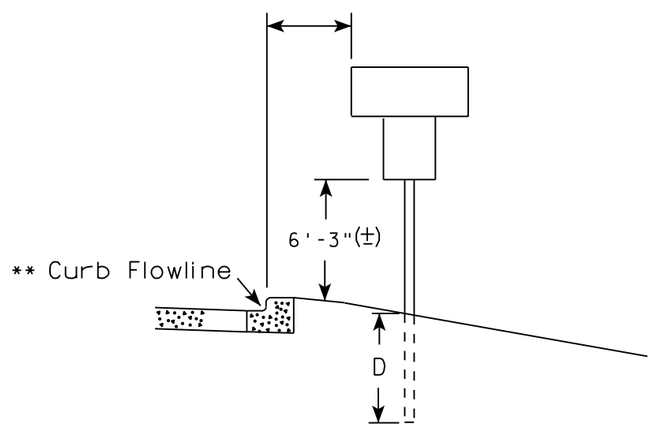
S.D.D. 15 D 27-3

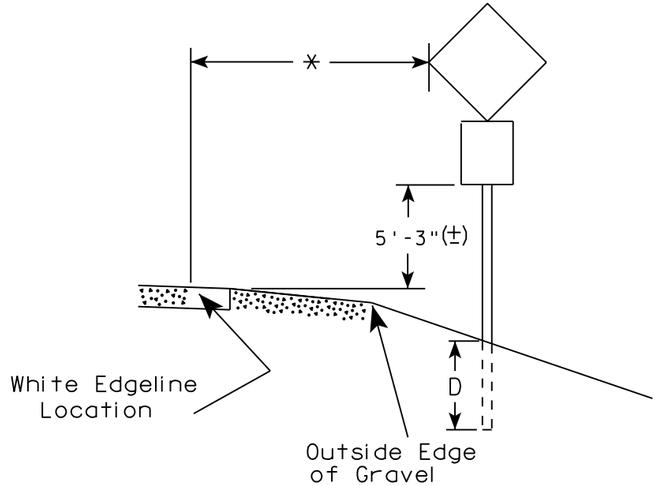
URBAN AREA



RURAL AREA (See Note 2)







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

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 barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. 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), 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" (±).

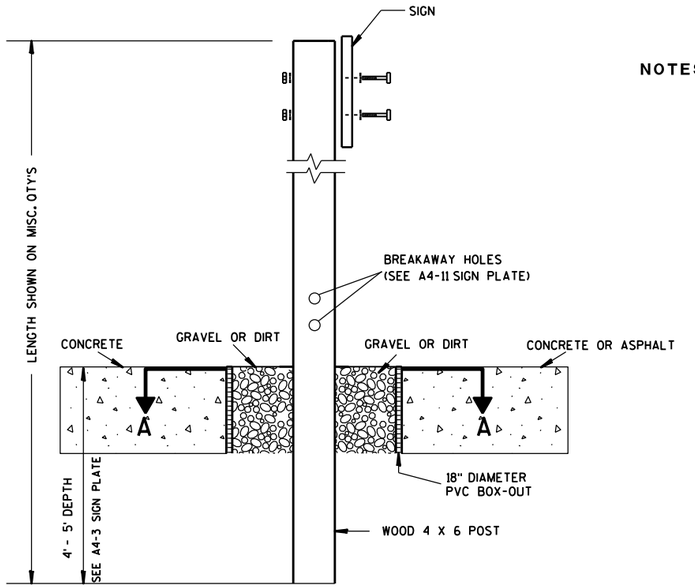
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

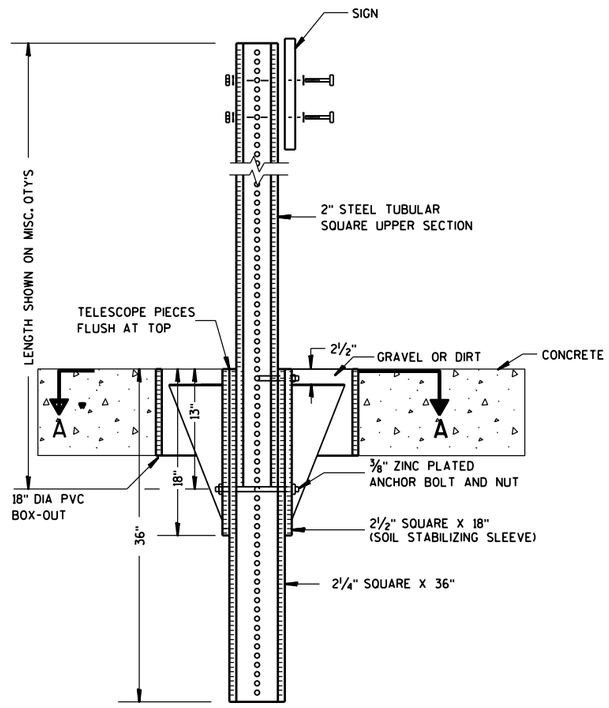
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 32	E



ELEVATION VIEW

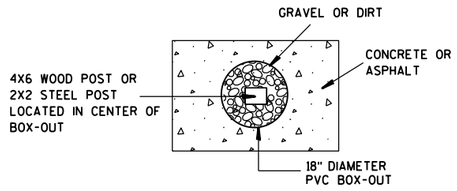
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

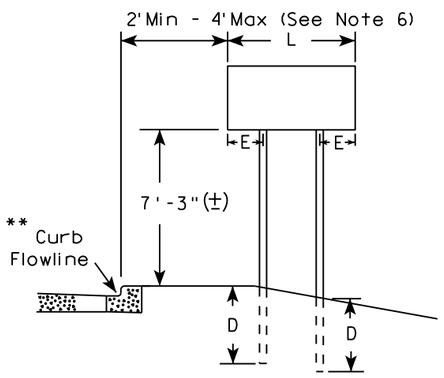
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

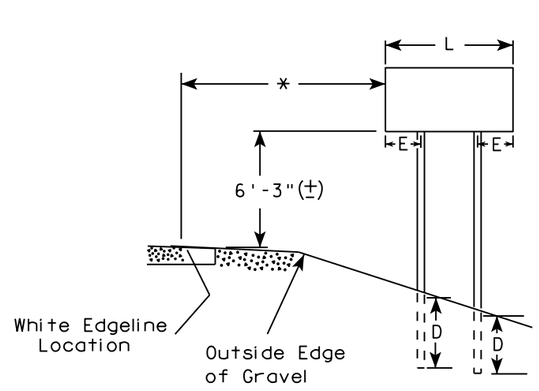
DATE 1/27/14 PLATE NO. A4-3B.1

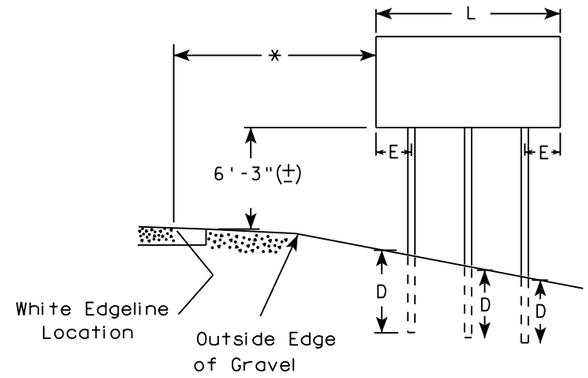
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

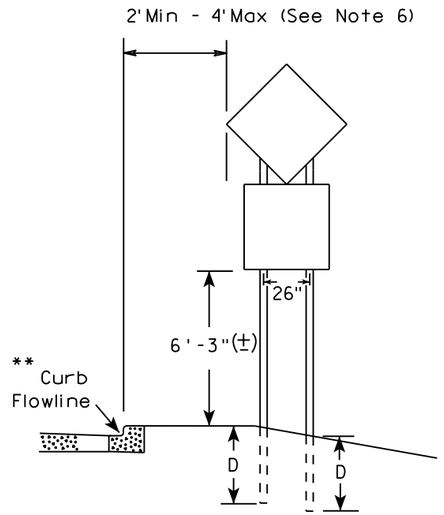
URBAN AREA



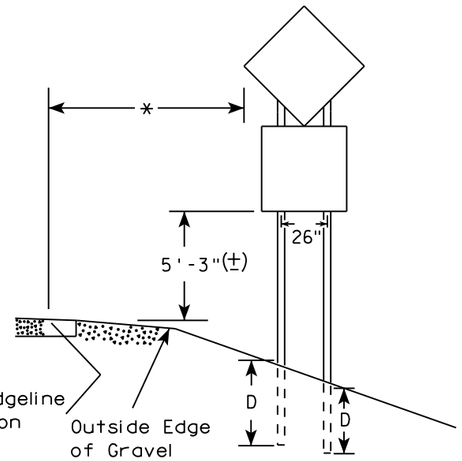
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

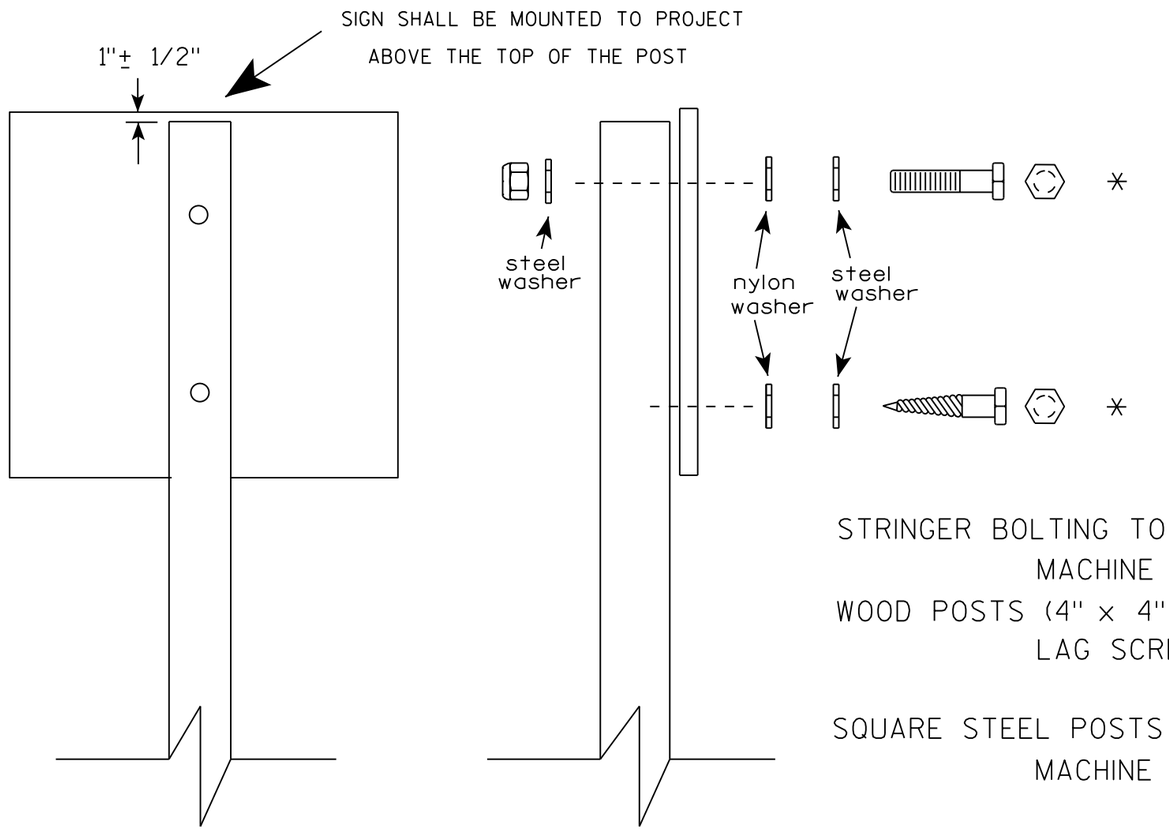
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 34	E



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 4" or 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

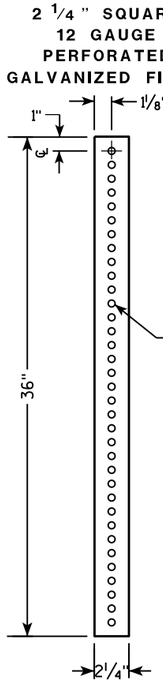
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

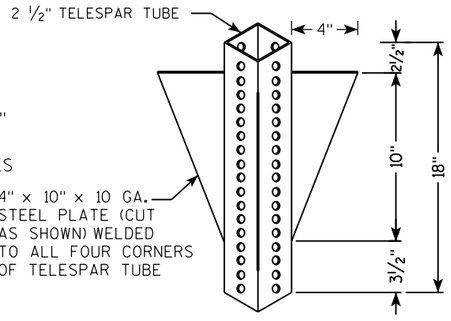
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

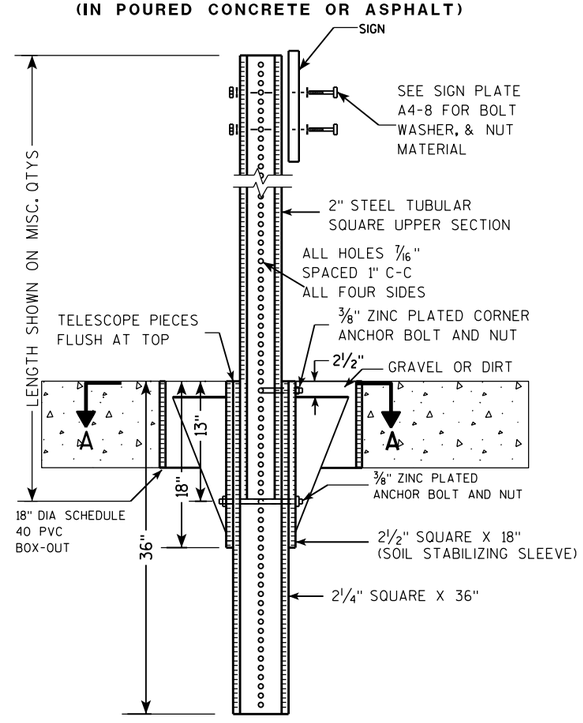
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



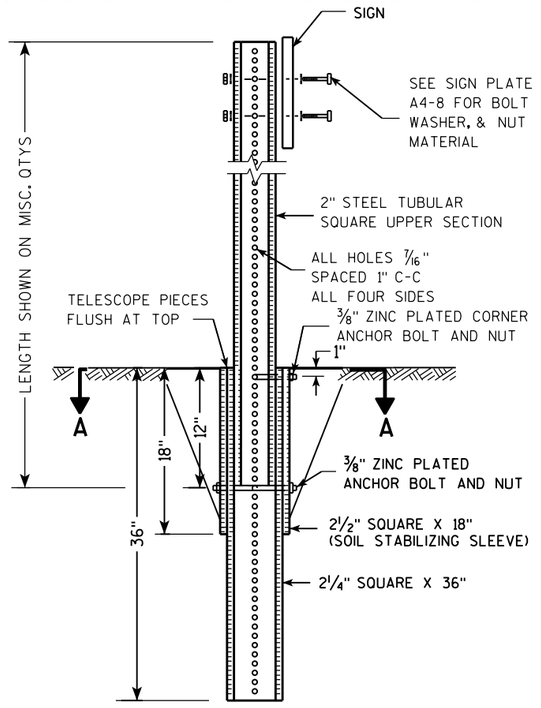
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

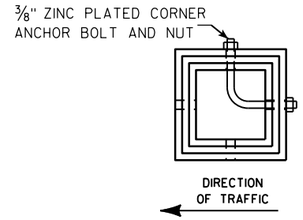


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

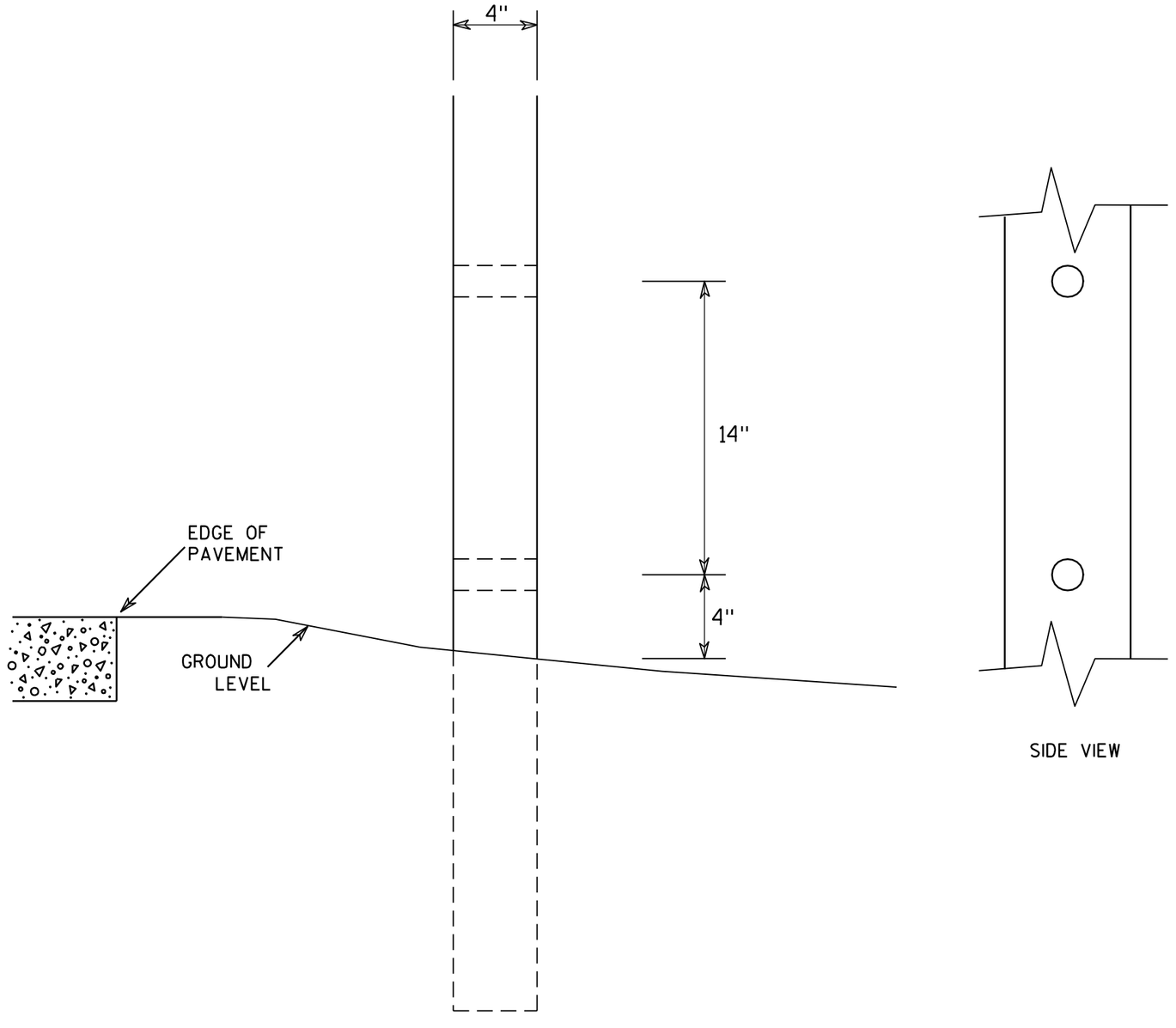
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 36 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

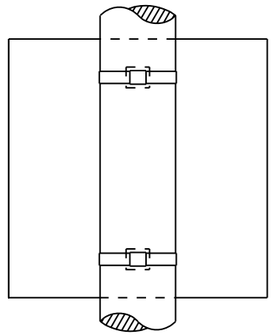
APPROVED Chester J Spang for State Traffic Engineer

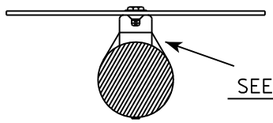
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 37	E

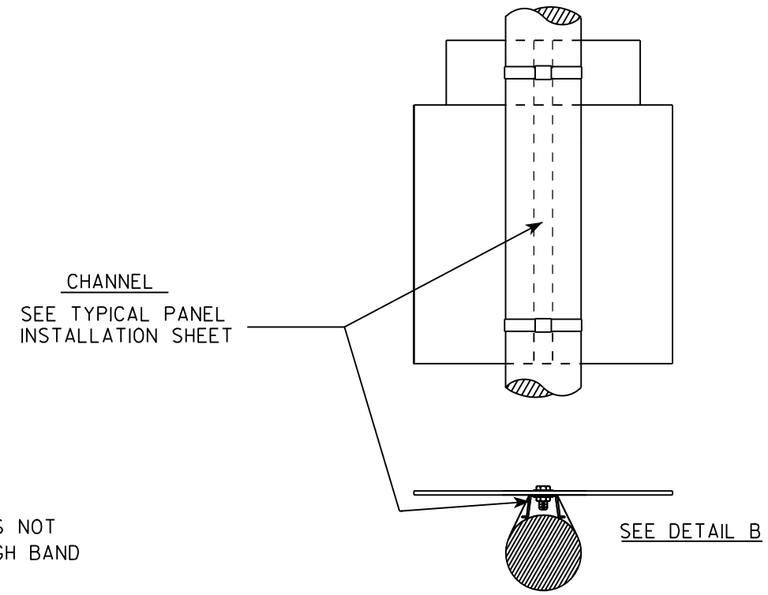
BANDING

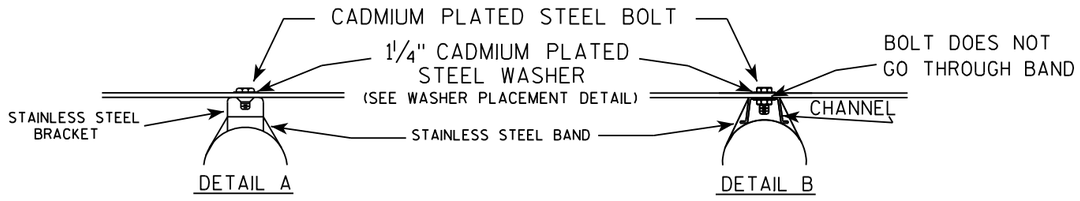
SINGLE SIGN



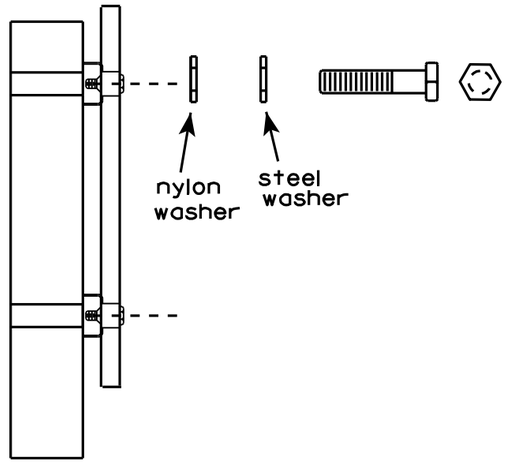


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

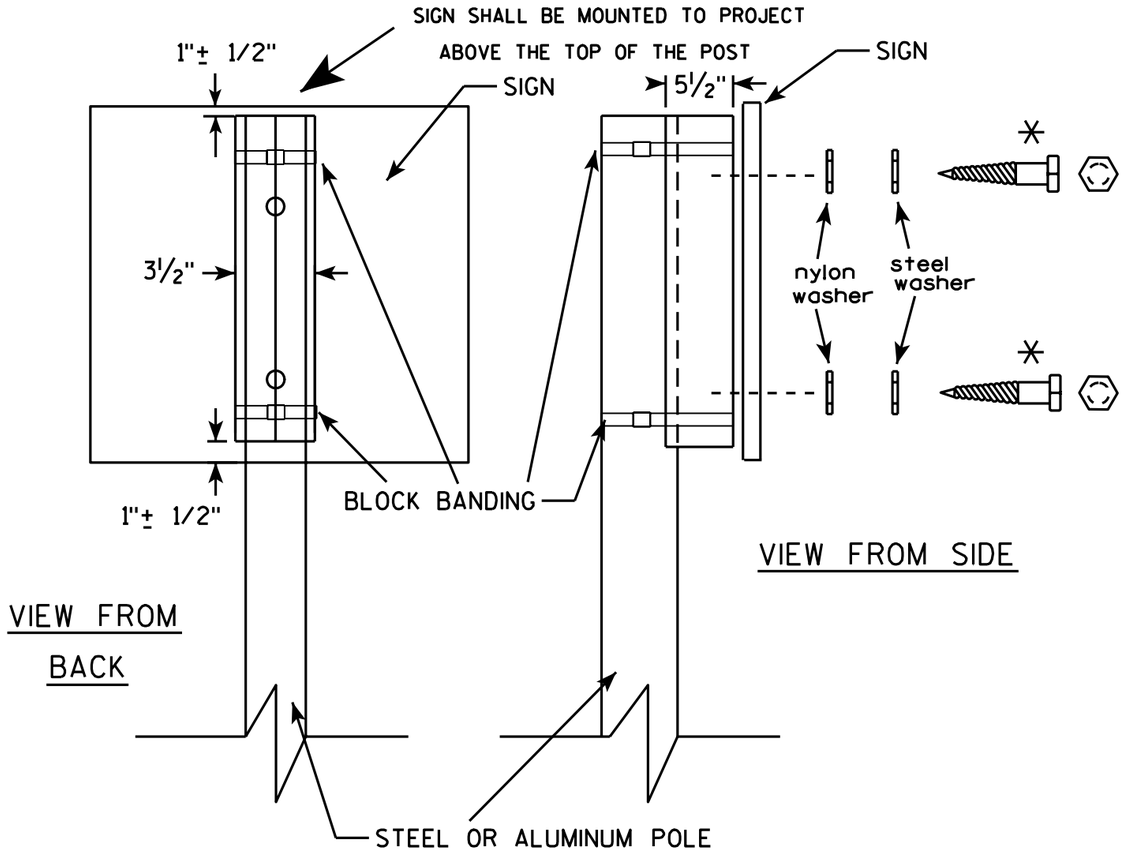
STANDARD SIGN
SIGN BANDING DETAILS

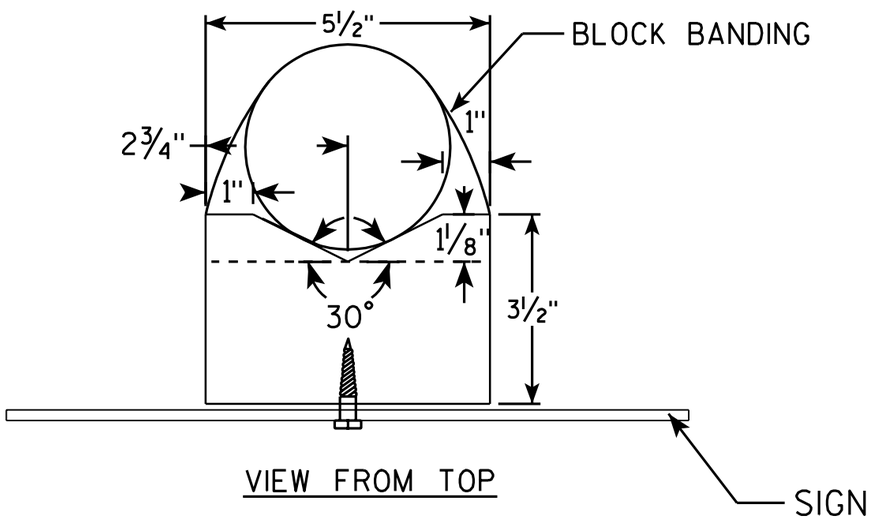
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 38	E





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, ¾" 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 NORNALLY 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, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. 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 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

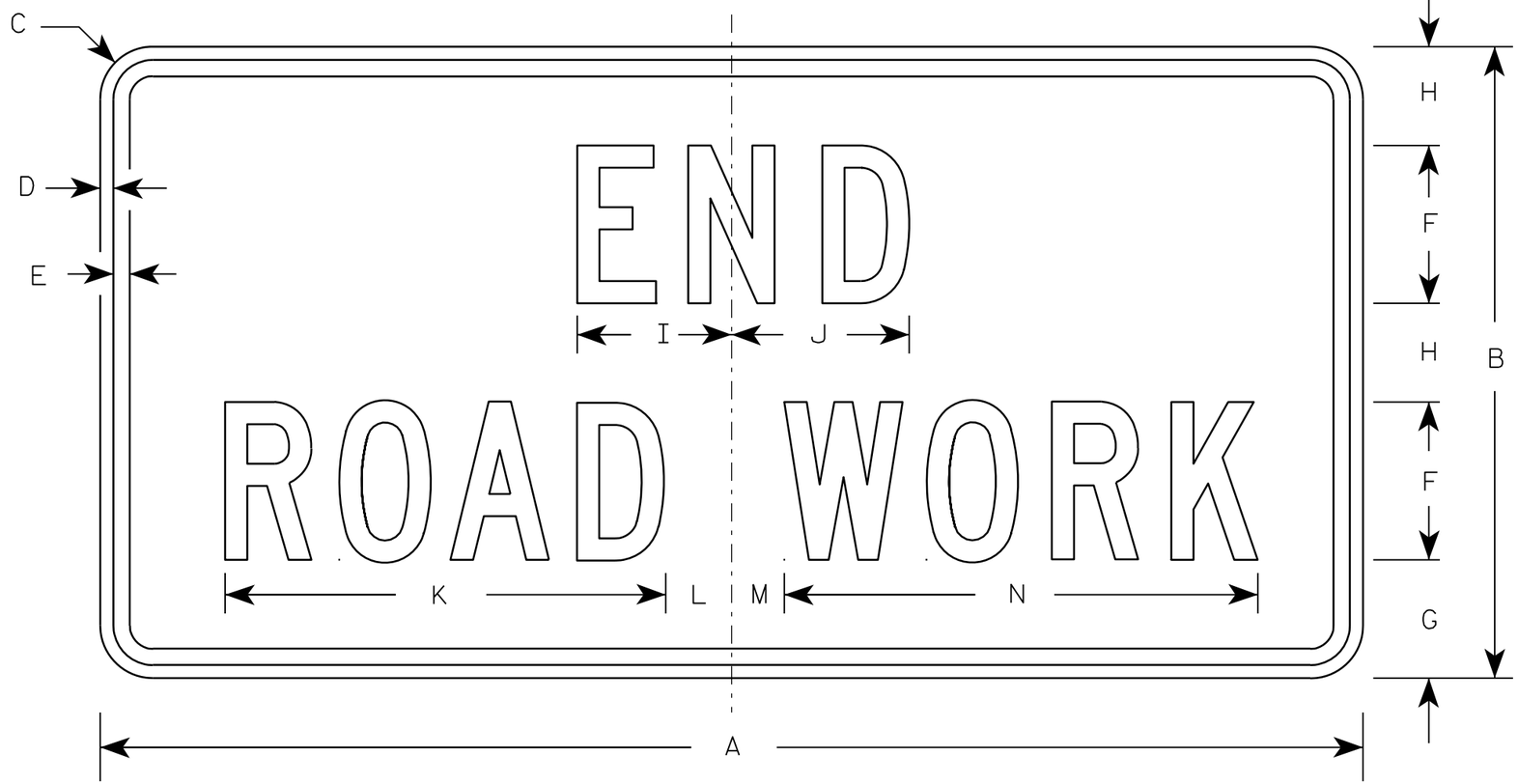
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 39 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

WISDOT/CADDS SHEET 42



G20-2A

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.

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 m2
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

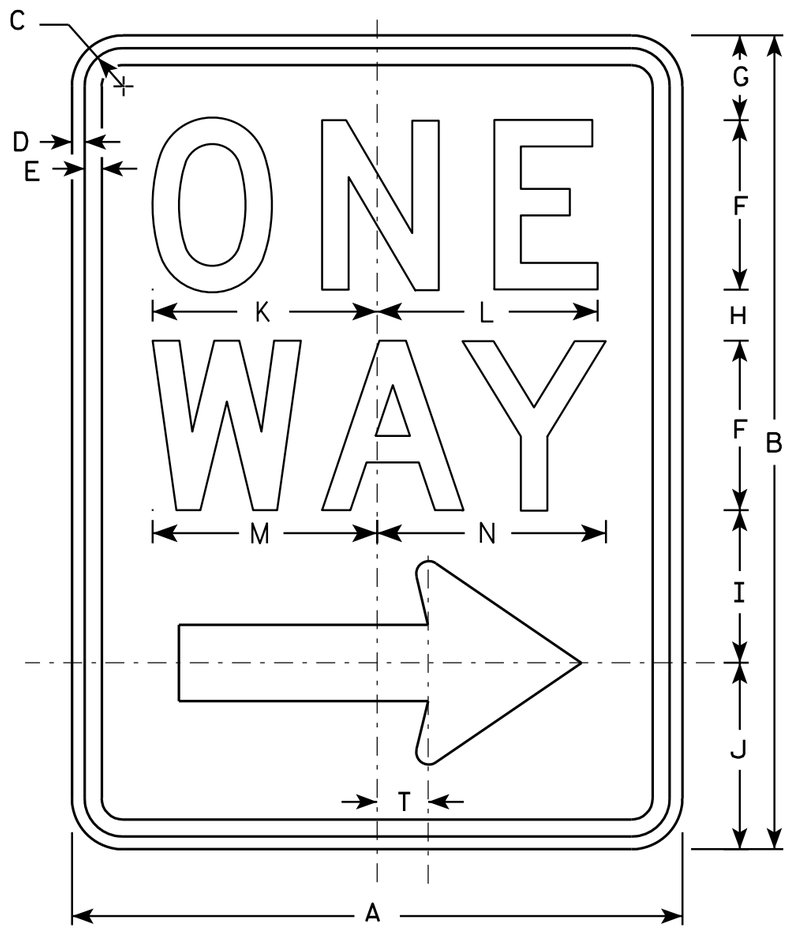
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

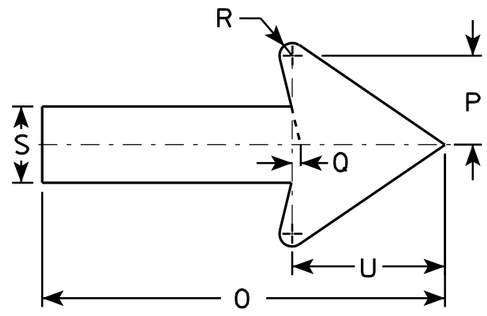
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 40	E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

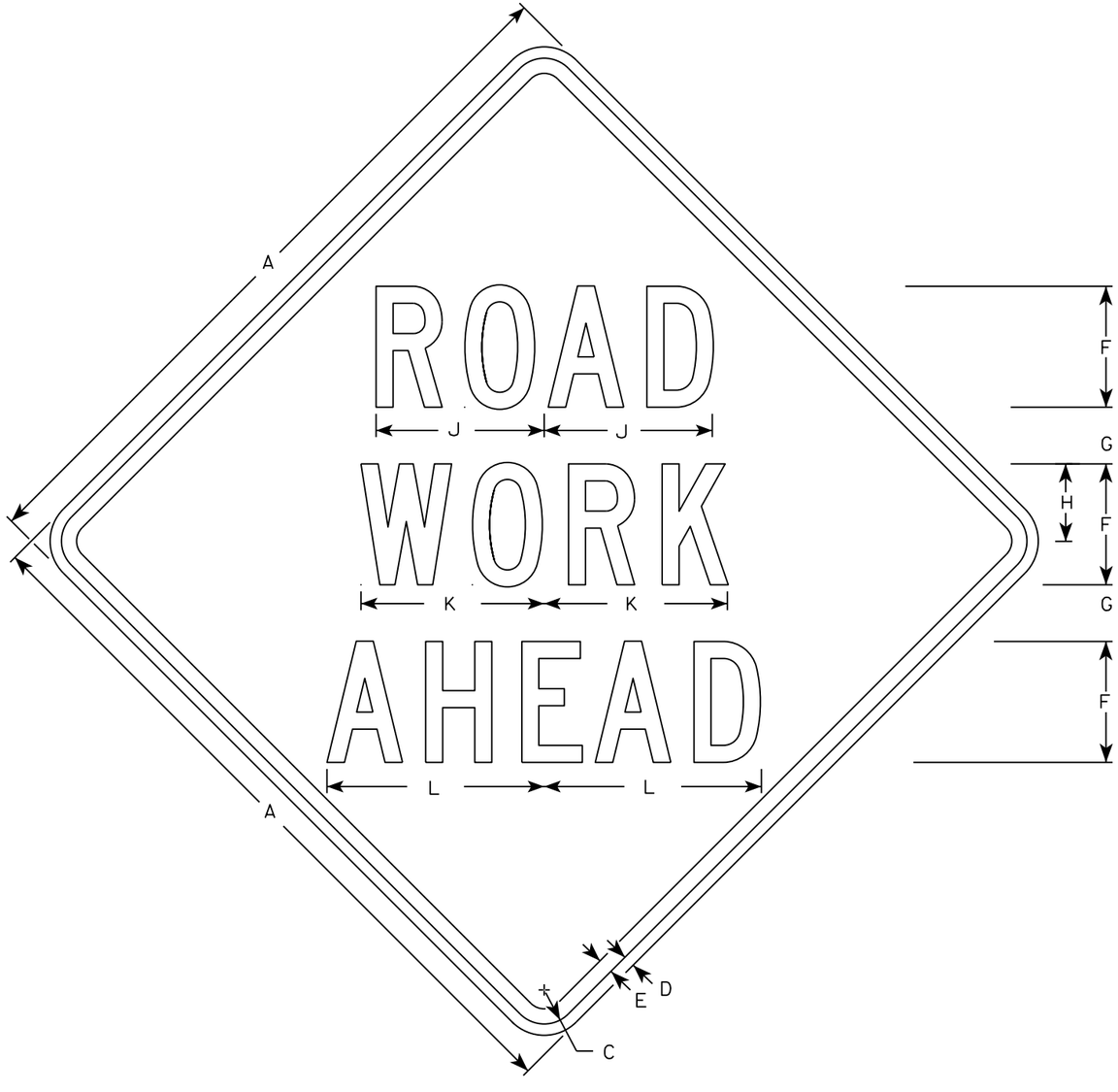
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

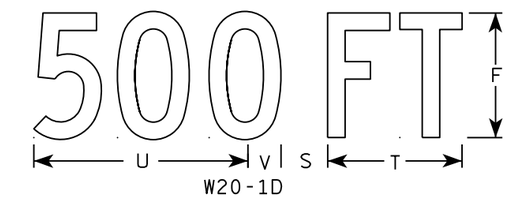
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

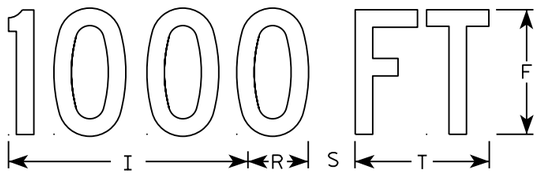
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 41	E



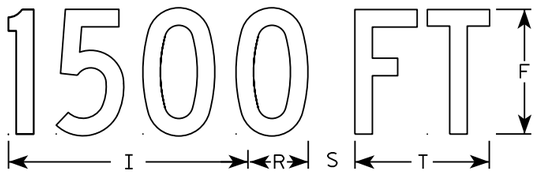
W20-1A



W20-1D



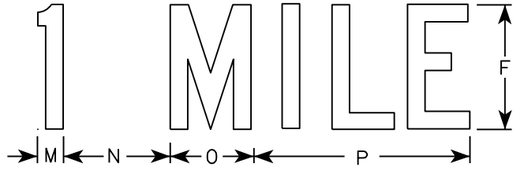
W20-1C



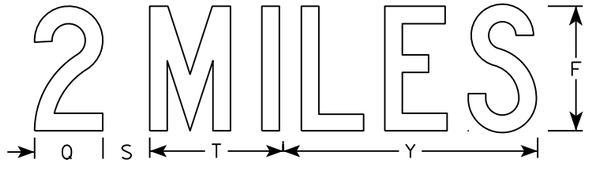
W20-1B



W20-1G



W20-1F



W20-1E

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 3/8	1/2	5/8	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		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, F & G

WISCONSIN DEPT OF TRANSPORTATION

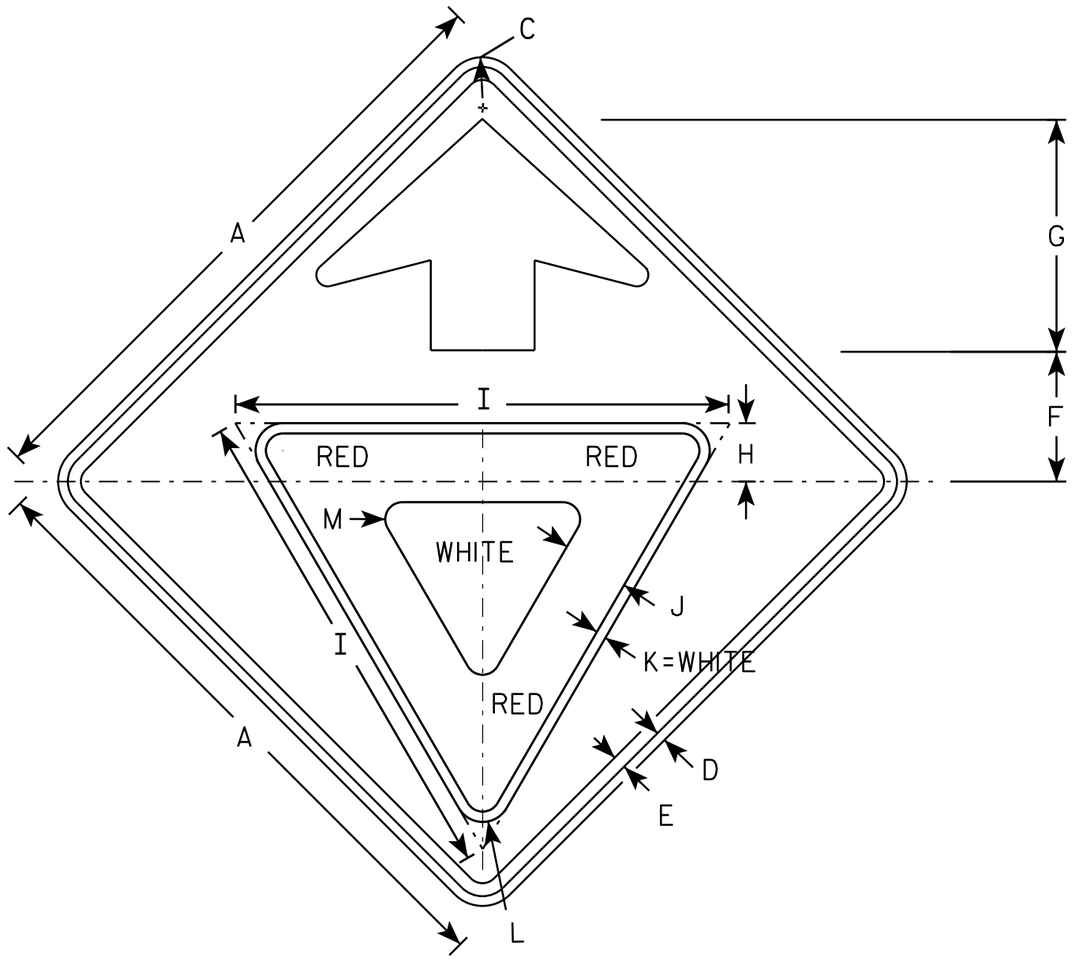
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

SHEET NO: E

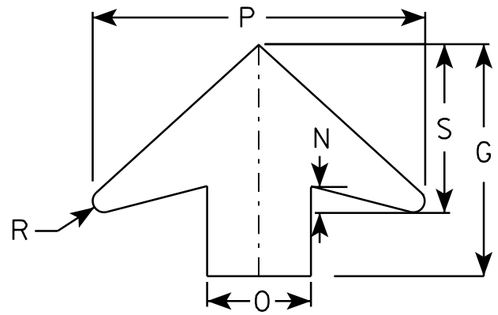
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



W03-2

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Arrow & Border - BLACK
   Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W03-2

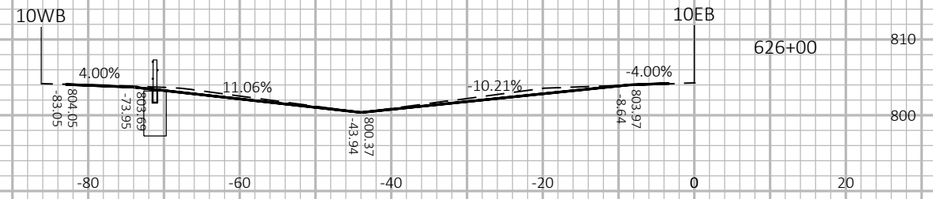
WISCONSIN DEPT OF TRANSPORTATION

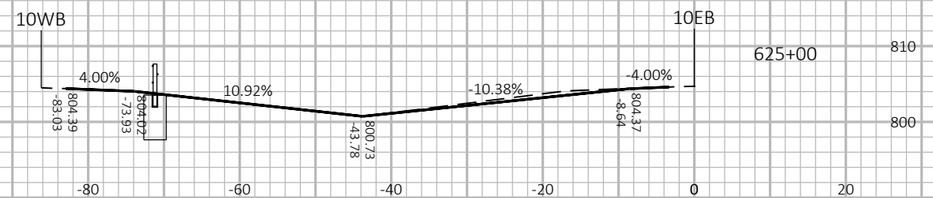
APPROVED Matthew R Rauch
for State Traffic Engineer

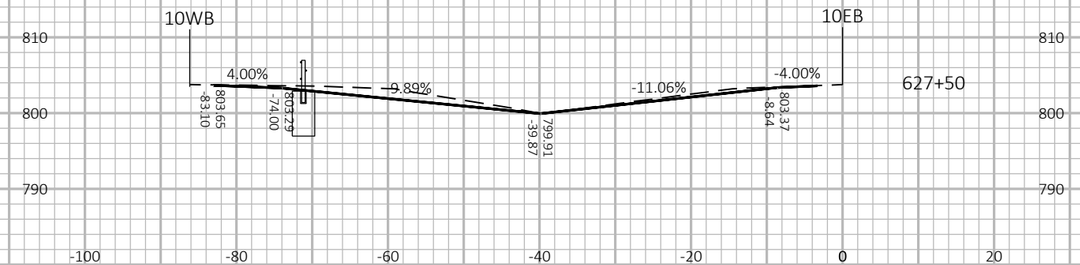
DATE 11/20/13 PLATE W03-2.1

PROJECT NO: SHEET NO: E

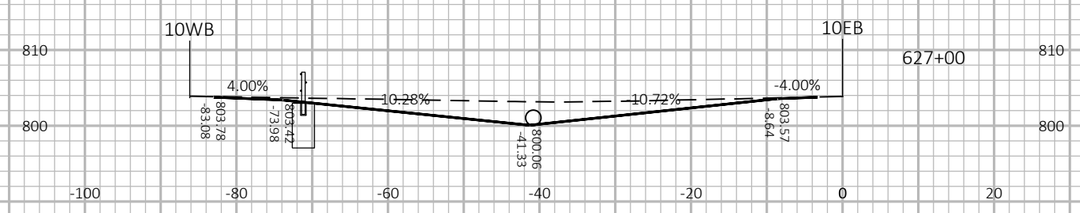
USH 10EB Median										
	AREA (SF)			Incremental Vol (CY) (Unadjusted)			Cumulative Vol (CY)			
		Salvaged/Unusable			Salvaged/Unusable			Expanded		
STATION	Cut	Pavement Material	Fill	Cut	Pavement Material	Fill	Cut	Fill	Mass Ordinate	
							1.00	1.25		
				Note 1	Note 2	Note 3	Note 1		Note 8	
622+50	0.00	0.00	0.00	0	0	0	0	0	0	
623+00	0.00	0.00	0.00	0	0	0	0	0	0	
623+50	0.44	0.00	0.01	0	0	0	0	0	0	
624+00	3.47	0.00	0.01	4	0	0	4	0	4	
624+50	7.42	2.83	0.01	10	3	0	14	0	11	
625+00	10.72	2.83	0.01	17	5	0	31	0	23	
625+50	11.58	2.83	0.07	21	5	0	52	0	38	
626+00	22.34	5.66	0.16	31	8	0	83	0	62	
626+25	41.11	8.99	0.11	29	7	0	112	1	84	
626+50	94.00	17.65	0.02	63	12	0	175	1	134	
626+75	103.91	26.66	0.00	92	21	0	267	1	205	
627+00	107.82	26.66	0.00	98	25	0	365	1	279	
627+25	88.29	17.65	0.00	91	21	0	455	1	349	
627+50	37.36	8.99	0.00	58	12	0	513	1	395	
628+00	15.56	2.83	0.00	49	11	0	562	1	433	
628+50	12.98	2.83	0.00	26	5	0	589	1	454	
629+00	9.76	2.83	0.00	21	5	0	610	1	470	
629+50	5.74	2.83	0.00	14	5	0	624	1	479	
630+00	1.47	0.00	3.34	7	3	3	631	5	479	
630+50	0.00	0.00	0.00	1	0	3	632	8	477	
631+00	0.00	0.00	0.00	0	0	0	632	8	477	

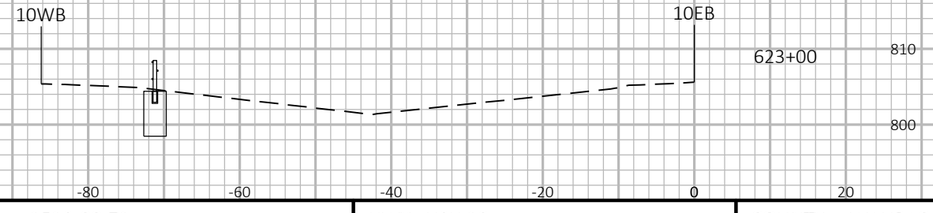


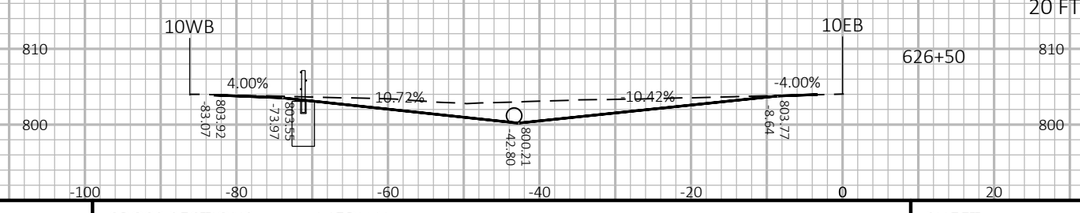


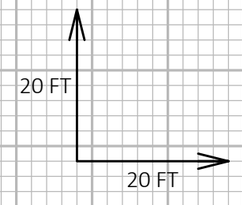












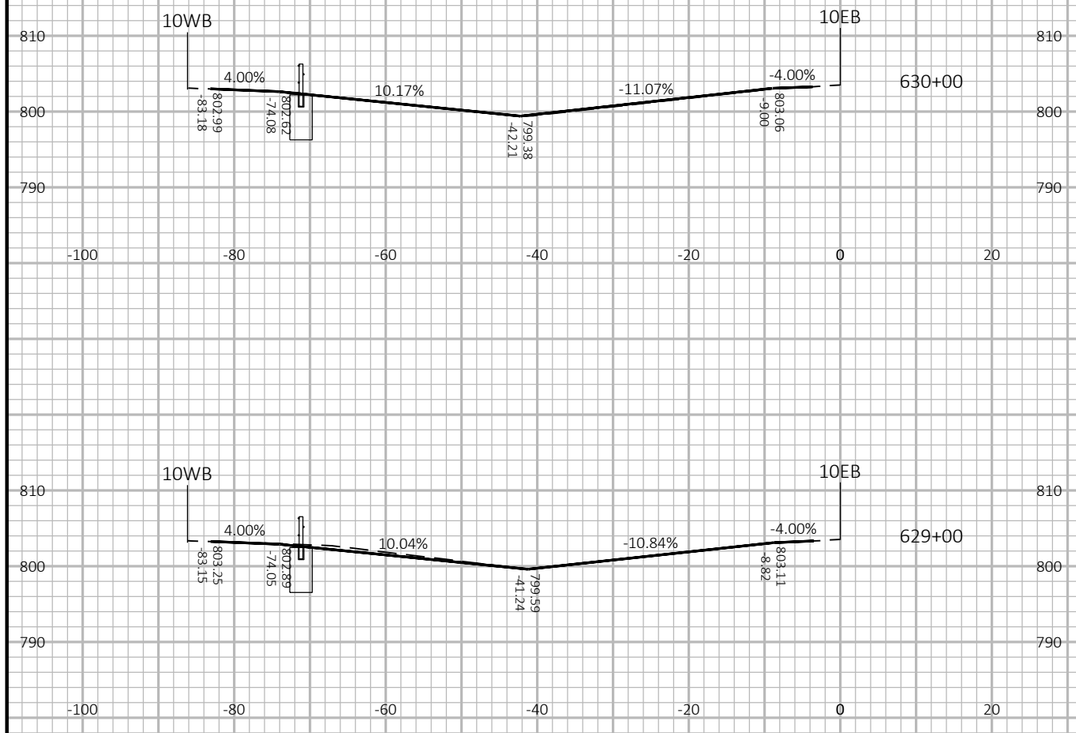
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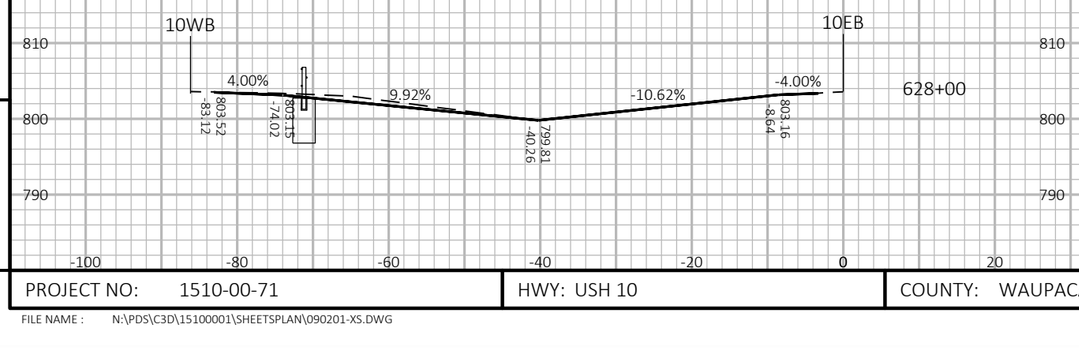
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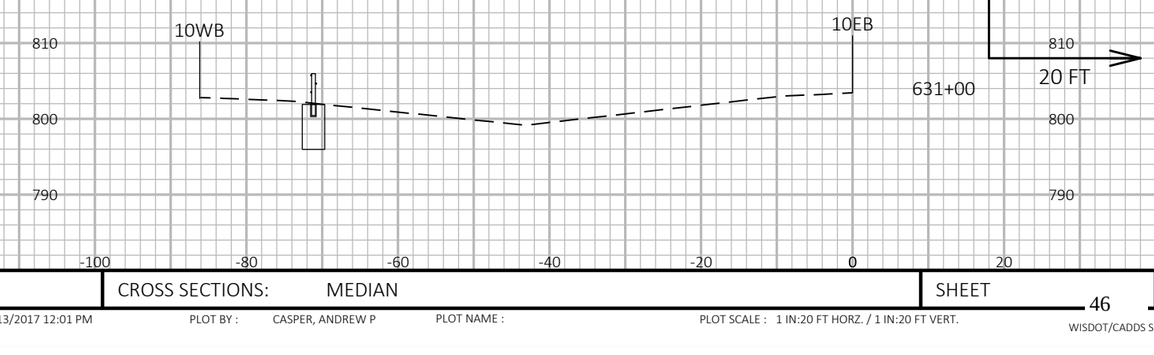
PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN	SHEET 45	E

FILE NAME : N:\PDS\C3D\15100001\SHEETSPLAN\090201-XS.DWG PLOT DATE : 2/13/2017 12:01 PM PLOT BY : CASPER, ANDREW P PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 1510-00-71	HWY: USH 10	COUNTY: WAUPACA	CROSS SECTIONS: MEDIAN	SHEET 46	E

Notes

Wisconsin Department of Transportation

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