RHI

MAY 2022

PROJECT ID: 1600-14-70

WITH: 1600-14-71

COUNTY: ONEIDA

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.~~	~~8~~	~~Computer Earthwork Data~~
Section No.	9	Cross Sections

TOTAL SHEETS = 60

45

N

DESIGN DESIGNATION 1600-14-70

A.A.D.T.	2020	=	3,000
A.A.D.T.	2040	=	3,300
D.H.V.		=	540
D.D.		=	61/39
T.		=	13.1
DESIGN SPEED		=	55
ESALS		=	1,100,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (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

PLAN OF PROPOSED IMPROVEMENT

ANTIGO-MONICO

LCL TO CTH B & CTH Q TO USH 8 SOUTH

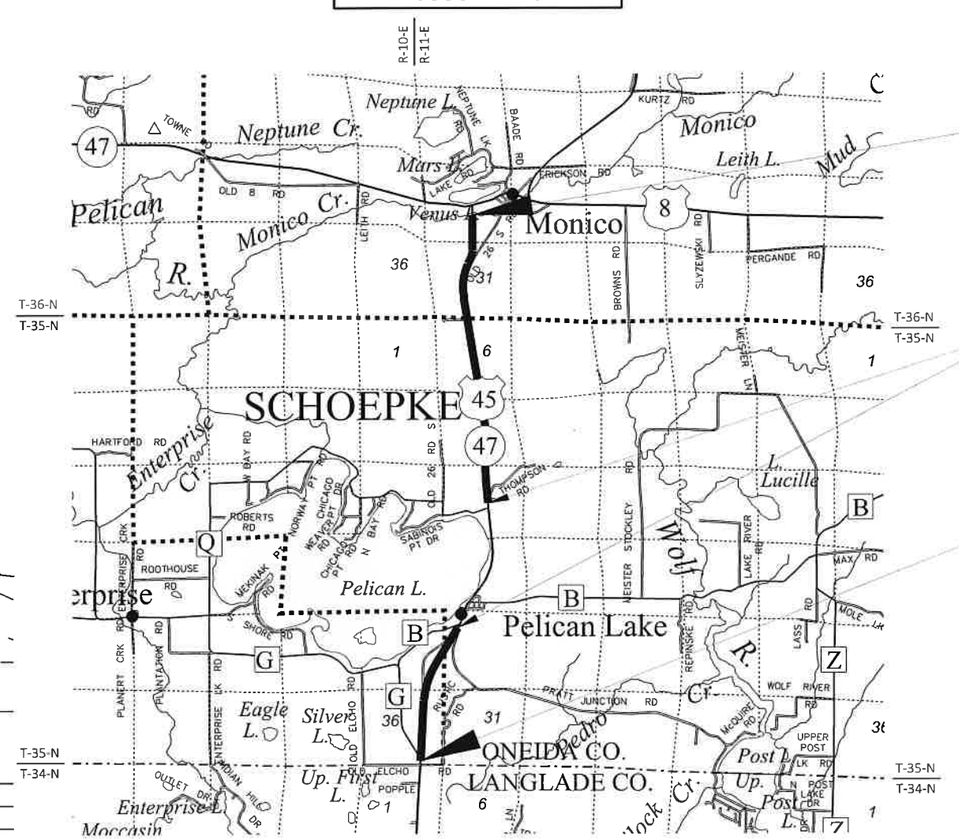
USH 45

ONEIDA

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1600-14-70	WISC 2022414	1
1600-14-71	WISC 2022415	1

STATE PROJECT NUMBER

1600-14-70



END PROJECT
STA 410+00.00

NET EXCEPTION TO CL LENGTH
STA 115+85.58 - STA 208+70.90

BEGIN PROJECT
STA 16+90.92
Y = 103,387.466
X = 323,504.632

LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 5.686

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ONEIDA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

JT ENGINEERING, INC
Consulting Services

WISCONSIN

BRIAN C. CHLOPEK
39370-6
PULASKI, WI

PROFESSIONAL ENGINEER

DATE: 03/02/22 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	JT ENGINEERING, INC.
Project Manager	STACY HAGENBUCHER, P.E.
Regional Examiner	CHERYL SIMON, P.E.
Regional Supervisor	KAI KILEN, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 3/10/22 (Signature)

E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_010101_TI.DWG

PLOT DATE : 3/2/2022 8:21 AM PLOT BY : ANDY BLOCK PLOT NAME :

UTILITY CONTACTS

ATC MANAGEMENT, INC.
ELECTRICITY – TRANSMISSION
MR. DOUG VOSBERG
2489 RINDEN ROAD
COTTAGE GROVE, WI 53527
TEL: (608) 877-7650
EMAIL: DVOSBERG@ATCLLC.COM

ASTREA BROADBAND
COMMUNICATION LINE
MR. ANDY HEIGL
105 KENT STREET
IRON MOUNTAIN, MI 49801
TEL: (906) 776-2609
MOBILE: (906) 221-7536
EMAIL: ANDY.HEIGL@ASTREACONNECT.COM

CHARTER COMMUNICATIONS
COMMUNICATION LINE
MR. STEVE BROWN
821 LINCOLN STREET
RHINELANDER, WI 54501
TEL: (715) 519-0042
EMAIL: STEVE.BROWN@CHARTER.COM

FRONTIER COMMUNICATIONS OF WI LLC
COMMUNICATION LINE
MR. RUSS RYAN
315 OAK STREET
OAKFIELD, WI 53065
TEL: (920) 583-3275
MOBILE: (920) 737-9662
EMAIL: RUSSELL.W.RYAN@FTR.COM

WISCONSIN PUBLIC SERVICE CORPORATION
ELECTRICITY
MR. DON LUTZOW
P.O. BOX 1166
WAUSAU, WI 54402
TEL: (715) 848-7487
MOBILE: (715) 493-7802
EMAIL: DONALD.LUTZOW@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE CORPORATION
GAS/PETROLEUM
MR. CHRIS GILMAN
2027 NAVAJO STREET, P.O. BOX 160
RHINELANDER, WI 54501
TEL: (715) 369-7133
MOBILE: (715) 490-4153
EMAIL: CHRIS.GILMAN@WISCONSINPUBLICSERVICE.COM
24-HR CUSTOMER SERVICE: 1-800-450-7260
24-HR EMERGENCY CONTACT: 1-800-450-7280

AGENCY/PROJECT CONTACT

WISCONSIN DNR LIAISON
MS. WENDY HENNIGES
NORTHERN REGION
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
TEL: (715) 365-8916
EMAIL: WENDY.HENNIGES@WISCONSIN.GOV

SEQUENCE OF PLANS AND DETAILS IN SECTION 2

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL PLAN
TRAFFIC CONTROL OVERVIEW

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 177.1 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.07 ACRES

1. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. ANY LOCAL OR MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
3. THE PRESENCE OR REMOVAL OF ANY REINFORCEMENT, REBAR OR WIRE MESH FOUND IN ANY EXISITNG CONCRETE PAVEMENT SHALL BE INCIDENTAL TO THE REMOVING PAVEMENT BID ITEM.

2

BEGIN PROJECT
STA. 16+90.92
Y = 103,387.466
X = 323,504.632

ONEIDA COUNTY
LANGLADE COUNTY

OLD ELCHO RD

PRATT JUNCTION RD

CTH G

OLD HWY 45 RD

USH 45

CTH B

PELICAN LAKE

MANITOWOC ST

RUSTIC RD

OLD 26 RD

NET EXCEPTION TO CENTERLINE LENGTH
STA. 115+85.58 TO STA. 208+70.90

PELICAN LAKE

CTH Q

THOMPSON RD

MCGINNIS RD

USH 45

OLD 26 RD

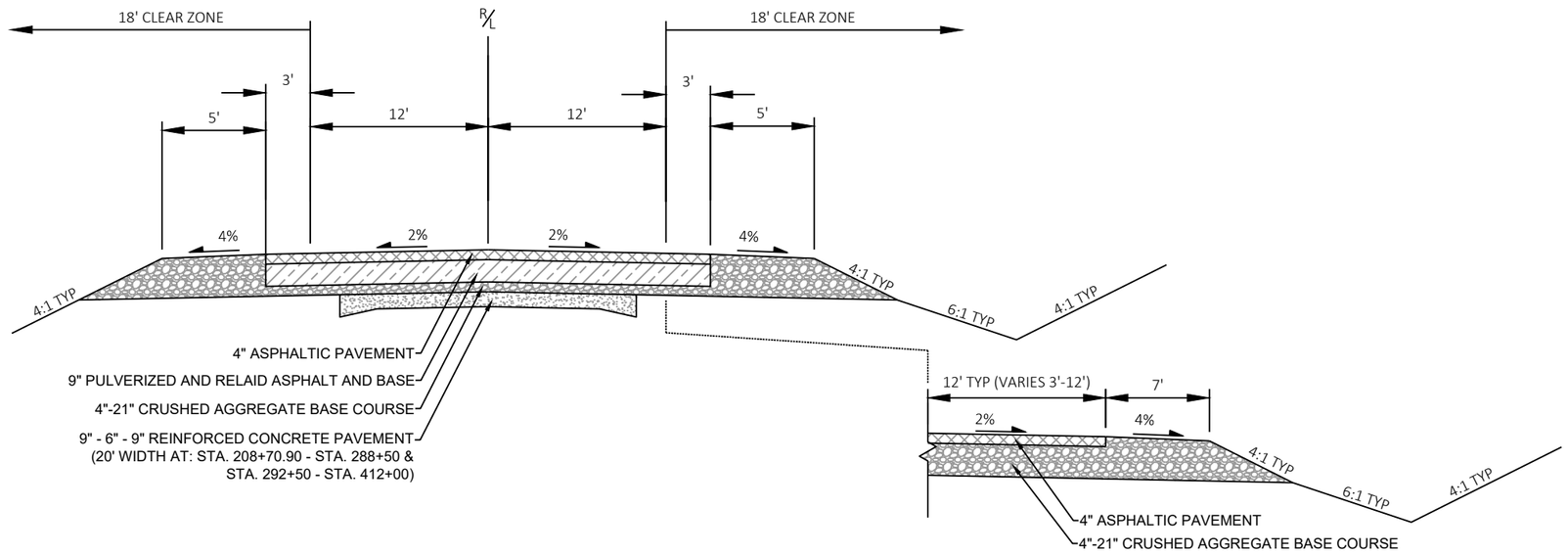
MONICO CREEK

END PROJECT
STA. 410+00.00

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_020201_PO.DWG
LAYOUT NAME - 01
PLOT DATE : 8/13/2020 11:31 AM
PLOT BY : ANDY BLOCK
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 44

2

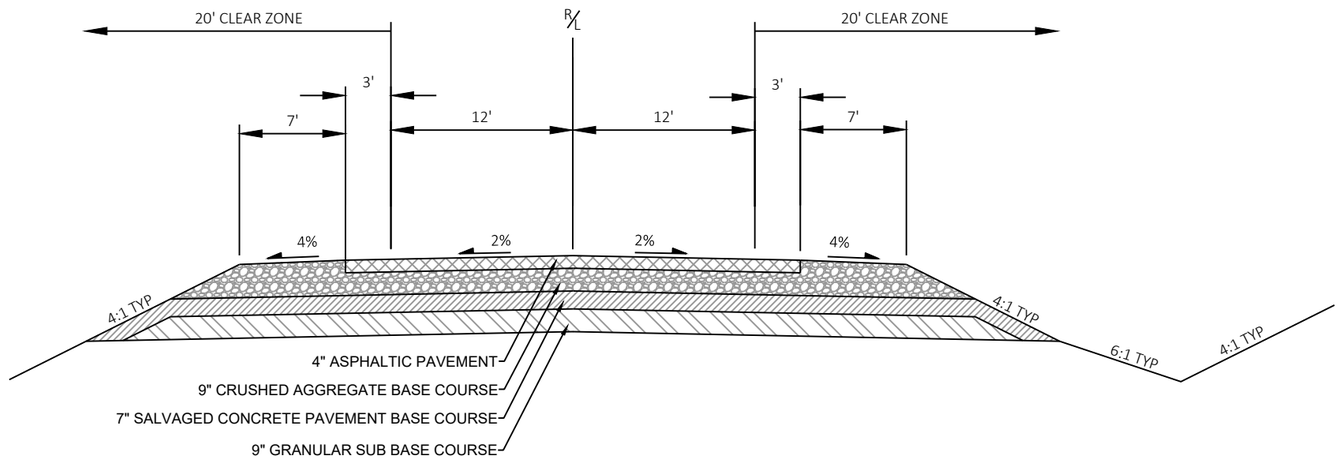


TYPICAL EXISTING SECTION
USH 45

STA 16+90.92 - STA 114+10
STA 208+70.90 - STA. 288+50
STA 292+50 - STA 410+00

USH 45

STA 17+38.38 - STA 22+98.72



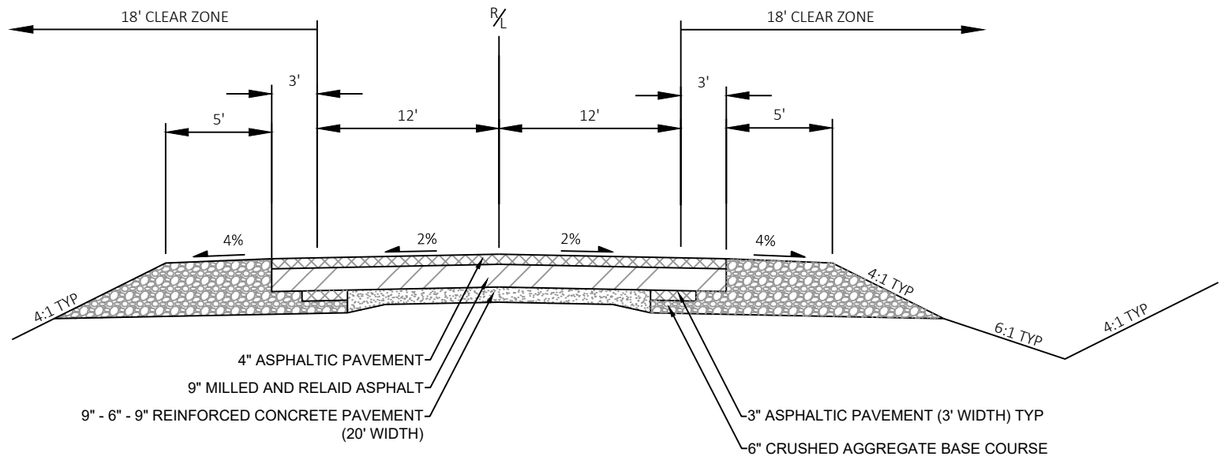
TYPICAL EXISTING SECTION
USH 45

STA. 114+10 - STA 115+85.58

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN: TYPICAL SECTIONS	SHEET 4	E

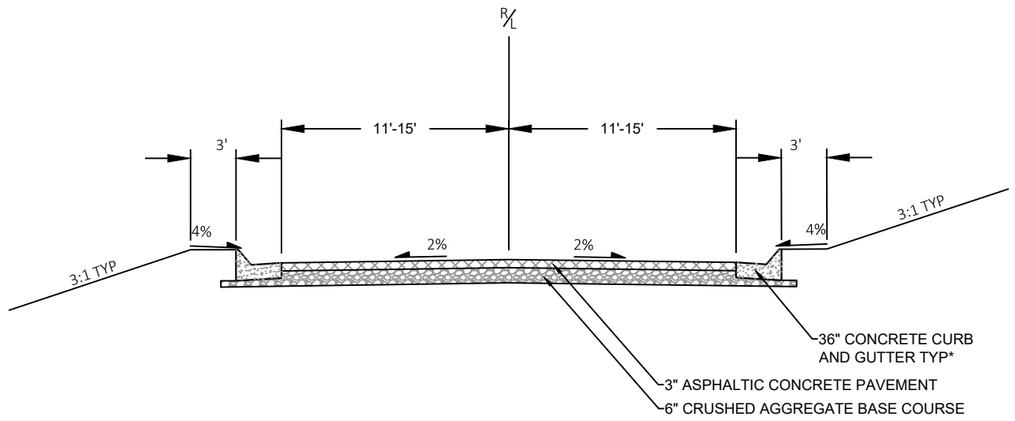
FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_020301_TS.DWG
LAYOUT NAME - EXISTING-01
PLOT DATE : 5/18/2021 10:29 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2



TYPICAL EXISTING SECTION
USH 45

STA 288+50 - STA 292+50



TYPICAL EXISTING SECTION
SIDE ROADS

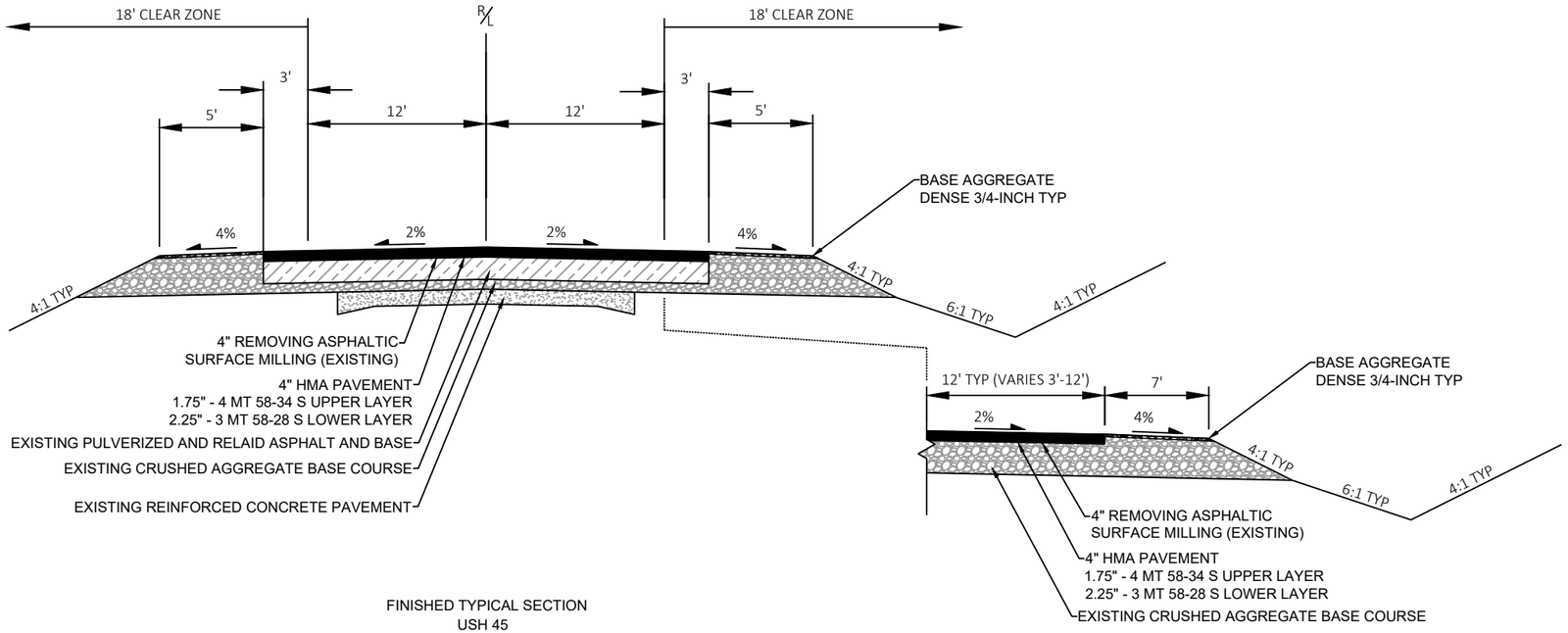
CTH G
OLD HWY 45
PRATT JUNCTION RD
MCGINNIS RD
OLD 26 RD

* CURB & GUTTER AT CTH G INTERSECTION ONLY

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN: TYPICAL SECTIONS	SHEET 5	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_020301_TS.DWG
LAYOUT NAME - EXISTING-02

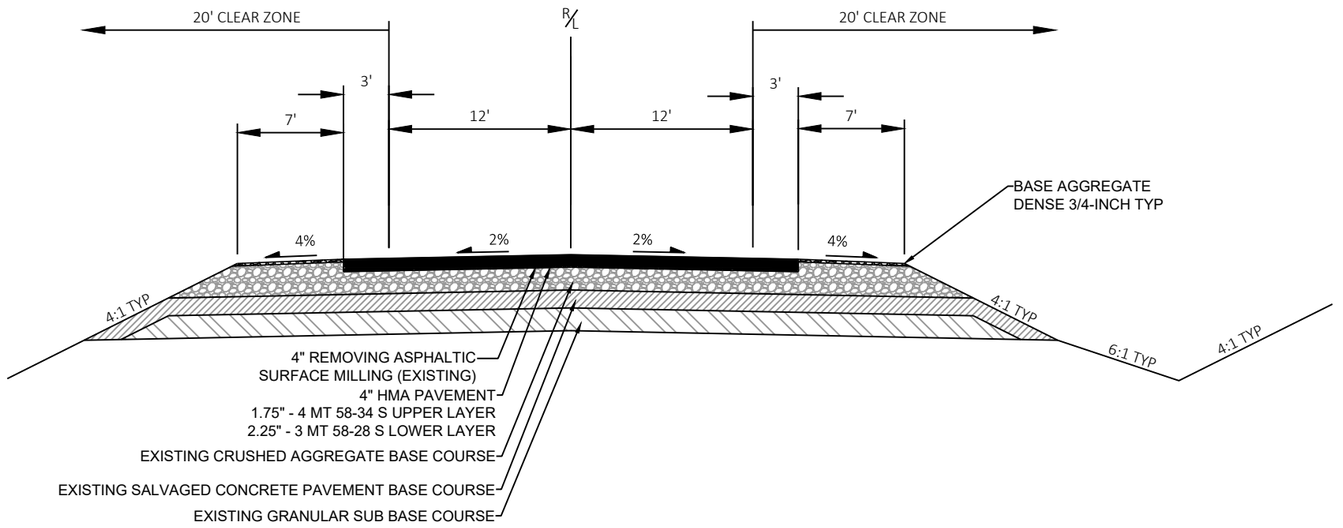
PLOT DATE : 5/18/2021 10:31 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:10 FT



FINISHED TYPICAL SECTION
USH 45

STA 16+90.92 - STA 114+10
STA 208+70.90 - STA. 288+50
STA 292+50 - STA 410+00

USH 45
STA 17+38.38 - STA 22+98.72

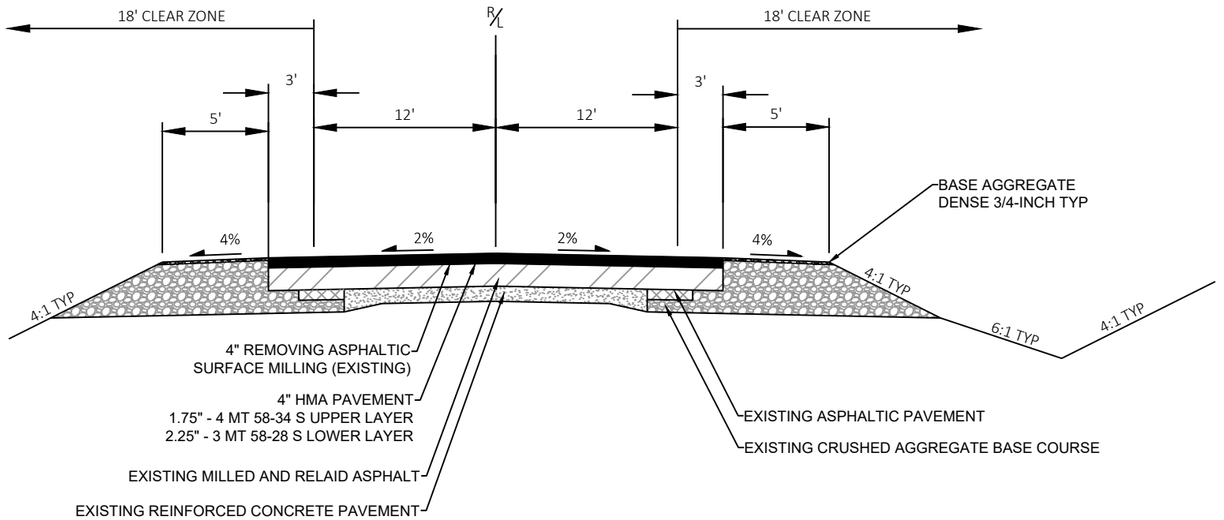


FINISHED TYPICAL SECTION
USH 45

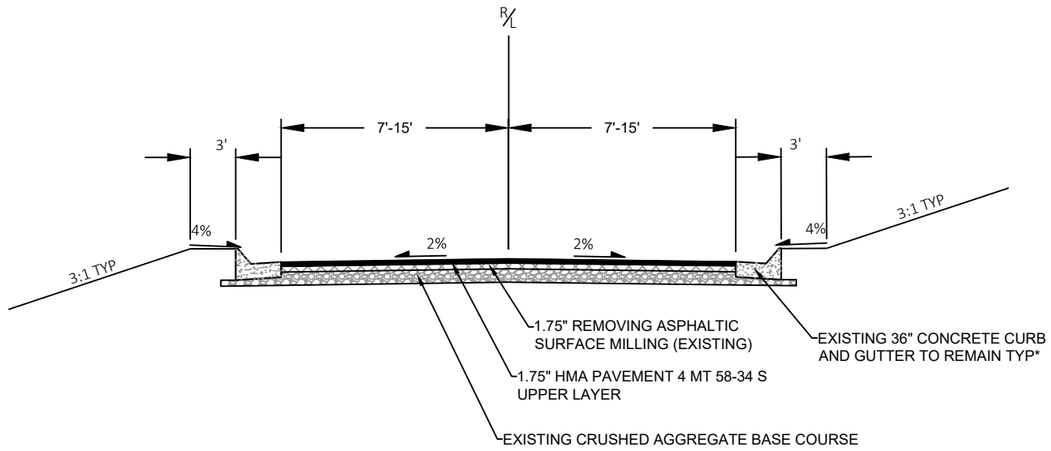
STA. 114+10 - STA 115+85.58

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN: TYPICAL SECTIONS	SHEET 6	E

2



FINISHED TYPICAL SECTION
USH 45
STA 288+50 - STA 292+50



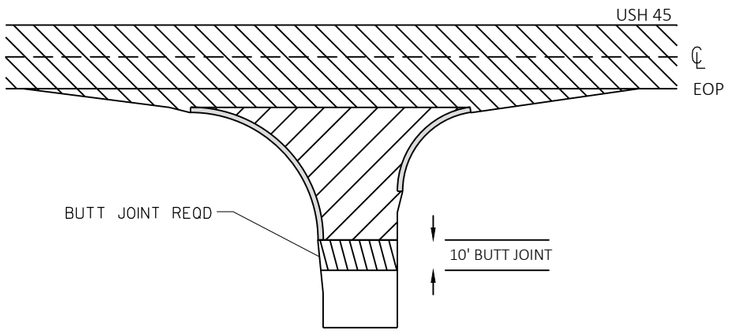
FINISHED TYPICAL SECTION
SIDE ROADS

CTH G
OLD HWY 45
PRATT JUNCTION RD
MCGINNIS RD
OLD 26 RD

* CURB & GUTTER AT CTH G INTERSECTION ONLY

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN: TYPICAL SECTIONS	SHEET 7	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_020301_TS.DWG
LAYOUT NAME - PROPOSED-02
PLOT DATE : 5/18/2021 10:35 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42



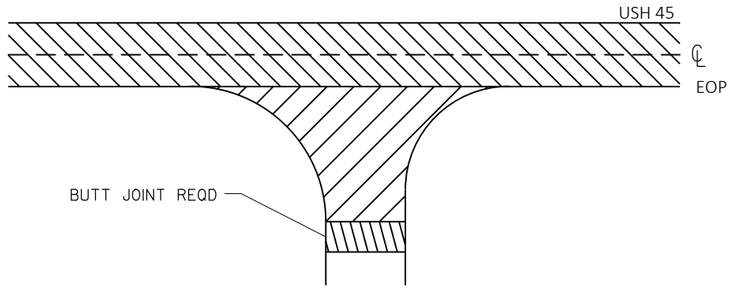
REMOVING ASPHALTIC SURFACE MILLING (1.75" DEPTH)

REMOVING ASPHALTIC SURFACE MILLING (4" DEPTH)

REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

SIDE ROAD CONSTRUCTION LIMITS

WITH CURB AND GUTTER



REMOVING ASPHALTIC SURFACE MILLING (1.75" DEPTH)

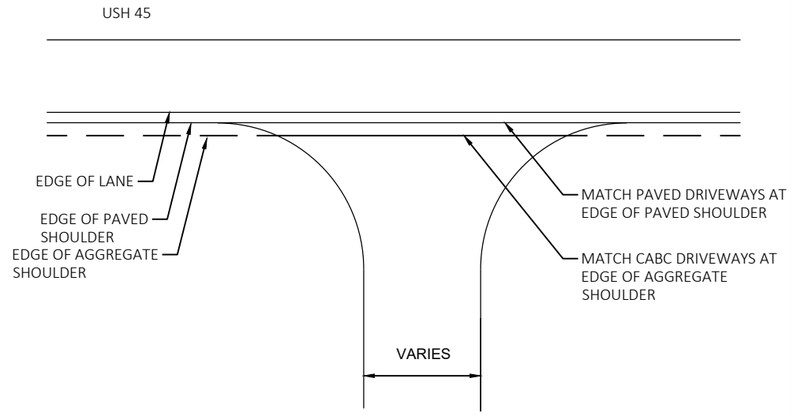
REMOVING ASPHALTIC SURFACE MILLING (4" DEPTH)

REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

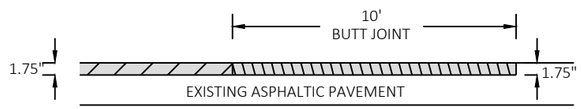
NOTE: MATCH AT EXISTING PAVING LIMITS WHEN SIDE ROAD IS UNPAVED (NO BUTT JOINT REQD).

SIDE ROAD CONSTRUCTION LIMITS

WITHOUT CURB AND GUTTER



DETAIL FOR TYPICAL DRIVEWAY CONSTRUCTION LIMITS



HMA PAVEMENT

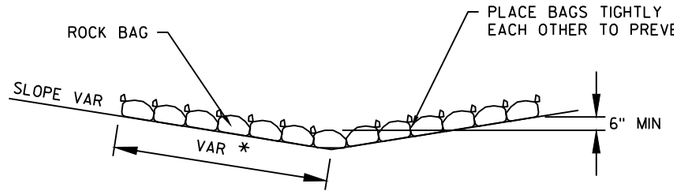
REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

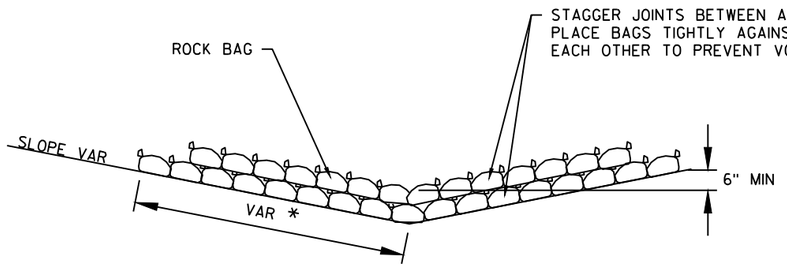
BUTT JOINT

SIDE ROADS

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	CONSTRUCTION DETAILS	SHEET 8	E

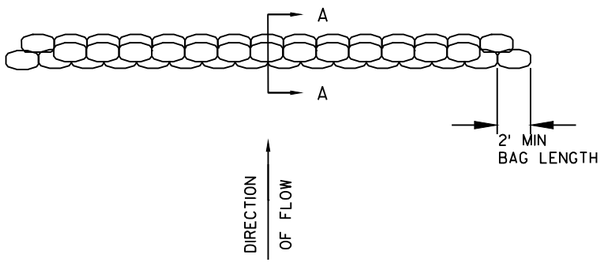


SIDE VIEW (SINGLE LAYER)

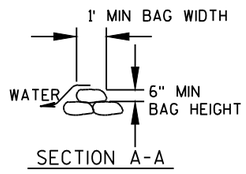


* LENGTH AND NUMBER OF BAGS MAY VARY
DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)



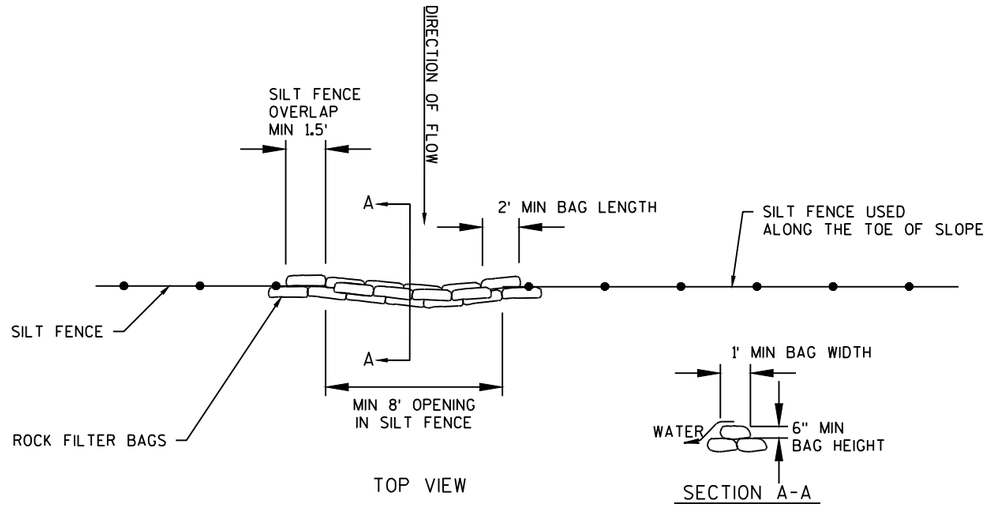
TOP VIEW (MULTIPLE LAYER)



SECTION A-A

ROCK BAGS USED FOR DITCH CHECKS

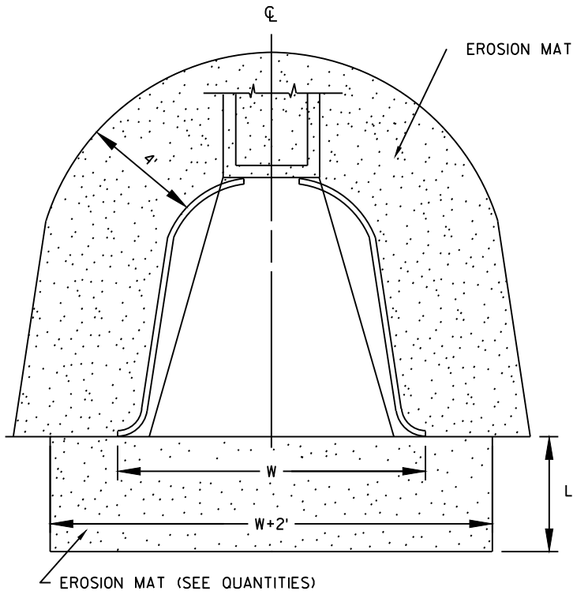
2



TOP VIEW

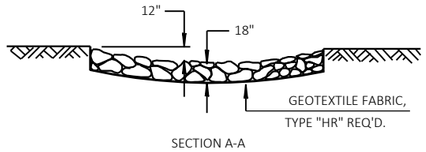
SECTION A-A

ROCK BAGS USED FOR SILT FENCE RELIEF

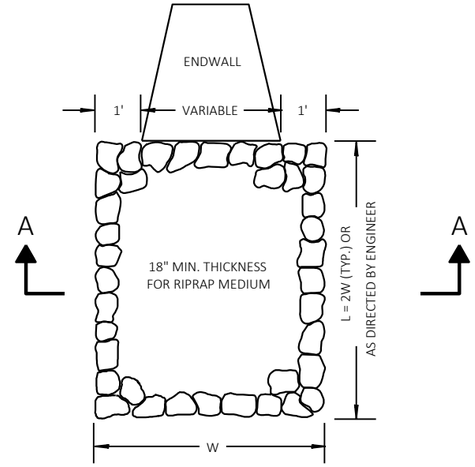


EROSION CONTROL AT PIPE ENDS

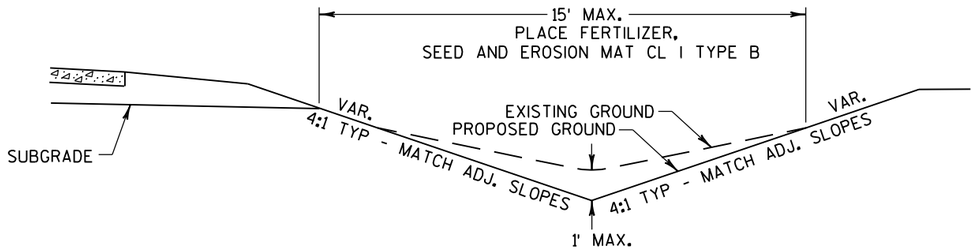
L = 3 TIMES DIAMETER OR 10' MIN.
INCREASE IF WARRANTED



SECTION A-A

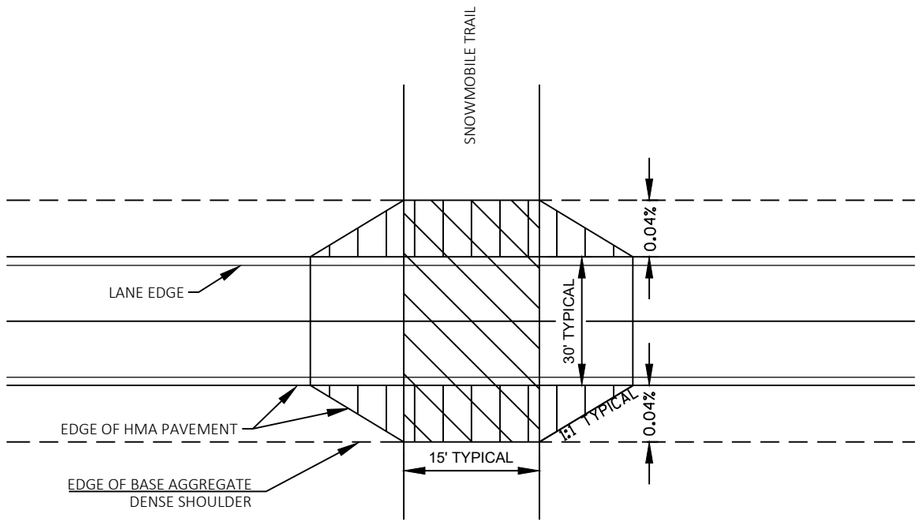


RIPRAP MEDIUM TREATMENT AT CULVERTS



GRADING SHAPING AND FINISHING FOR DITCH CLEANING

2



PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE TRAIL CROSSING

HMA PAVEMENT WIDENING 4-INCHES FOR SNOWMOBILE TRAIL CROSSING

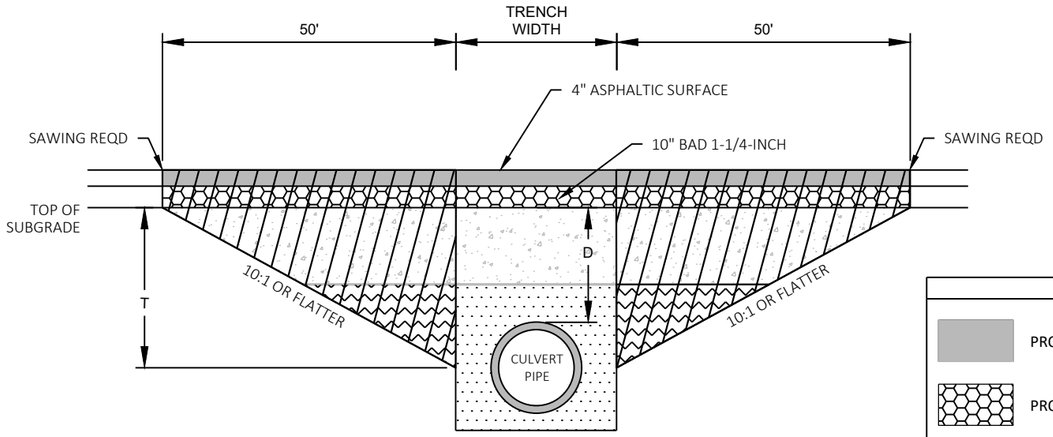
NOTE:PREPARATION FOR PAVEMENT WIDENING FALLS UNDER PREPARE FOUNDATION FOR ASPHALTIC PAVING.

EXACT LOCATIONS TO BE MARKED IN THE FIELD BY THE PROJECT PERSONAL.

SNOWMOBILE TRAIL CROSSING

STA 111+48

2



TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.

DEPTH D < 6 FT

KEY

- PROPOSED SURFACE
- PROPOSED BASE
- TRENCH BACKFILL
- TRENCH OR FOUNDATION BACKFILL
- FOUNDATION BACKFILL
- TRANSITION CUT

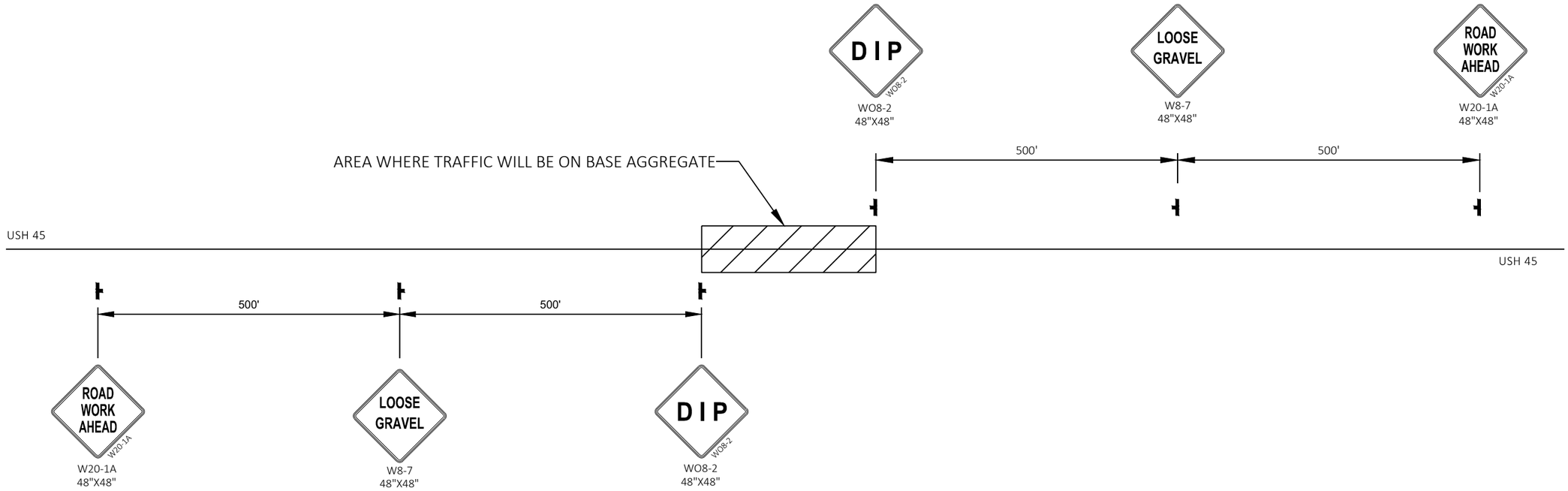
NOTES

TRANSITION CUT IS PAID AS EXCAVATION COMMON.
TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
PERFORM CULVERT PIPE INSTALLATION BEFORE MILLING AND PAVING.
PLACE ASPHALTIC SURFACE AFTER CULVERT PIPE INSTALLATION AND BEFORE MILLING AND PAVING.

CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
USH 45	393+79	0.9	24	CULV: 43045003270

2



LOOSE GRAVEL SIGNING

2

2

N

CULV: 43045003258
STA. 107+12
EXISTING 36" RCCP
TO REMAIN

104 105 106 107 108 109 110 11

USH 45

RIPRAP MEDIUM REQD
SEE CONSTRUCTION DETAIL

ROCK BAGS REQD

WETLAND BOUNDARY

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 14	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_022001_EC.DWG
LAYOUT NAME - Sheet - 01

PLOT DATE : 8/13/2020 1:27 PM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

2

N

WETLAND BOUNDARY
TYP

ROCK BAGS FOR
SILT FENCE RELIEF

SILT FENCE REQD (TYP)

ESTIMATED LIMITS OF DISTURBANCE

390 391 392 393 394 395 396 397

USH 45

CULVERT REPLACEMENT STA 393+79
(CULV: 43045003270)

SILT FENCE REQD (TYP)

CULVERT PIPE
CHECKS REQD

WETLAND BOUNDARY
TYP

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 15	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_022001_EC.DWG
LAYOUT NAME - Sheet - 02

PLOT DATE : 8/18/2020 7:36 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

PLACE SIGN PRIOR TO CONSTRUCTION
NEAR PROJECT LIMITS FOR NORTHBOUND TRAFFIC

HWY 45
ROAD WORK
BEGINS DATE*

G20-57
72"X36"

NOTES:
DATE SHALL BE DICTATED BY PROPOSED WORK SCHEDULE

SIGN SHALL BE INSTALLED FOR 7 DAYS IMMEDIATELY PROCEEDING CONSTRUCTION & REMOVED WHEN CONSTRUCTION BEGINS.

N

PELICAN LAKE

ONEIDA COUNTY
LANGLADE COUNTY

OLD ELCHO RD

CTH G

OLD HWY 45 RD

USH 45

CTH B

PRATT JUNCTION RD

MANITOWOC ST

BEGIN PROJECT

0 500 1000 Feet

RUSTIC RD

NET EXCEPTION TO CENTERLINE LENGTH
STA. 115+85.58 TO STA. 208+70.90
COORDINATE TRAFFIC CONTROL REQUIREMENTS WITH PROJECT ID 1600-14-71,
TO ENSURE SIGNAGE IS NOT CONTRADICTORY OR REPETITIVE

TRAFFIC CONTROL RELATED STANDARD DETAIL DRAWINGS ANTICIPATED FOR USE DURING CONSTRUCTION INCLUDE THE FOLLOWING:
-TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROADWAY OPEN TO TRAFFIC
-TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
-MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
-TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
-TRAFFIC CONTROL, DROP-OFF SIGNING
-TRAFFIC CONTROL SIGNING ON ROADWAYS WITH MILLED SURFACES

N

PELICAN LAKE

OLD 26 RD

CTH Q

THOMPSON RD

MCGINNIS RD

USH 45

PLACE SIGN PRIOR TO CONSTRUCTION
NEAR PROJECT LIMITS FOR SOUTHBOUND TRAFFIC

NOTES:
DATE SHALL BE DICTATED BY PROPOSED WORK SCHEDULE

SIGN SHALL BE INSTALLED FOR 7 DAYS IMMEDIATELY PROCEEDING CONSTRUCTION & REMOVED WHEN CONSTRUCTION BEGINS.

HWY 45
ROAD WORK
BEGINS DATE*

G20-57
72"X36"

MONICO CREEK

OLD 26 RD

END PROJECT

0 750 1500 Feet

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	TRAFFIC CONTROL OVERVIEW	SHEET 16	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_025001_TC.DWG
LAYOUT NAME - 01
PLOT DATE : 3/15/2022 2:32 PM
PLOT BY : ERIC ADAMSKI
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 44

1600-14-70

Line	Item	Item Description	Unit	Total	Qty
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	245.000	245.000
0012	204.0115	Removing Asphaltic Surface Butt Joints	SY	75.000	75.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	102,975.000	102,975.000
0026	205.0100	Excavation Common	CY	445.000	445.000
0028	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1600-14-70	LS	1.000	1.000
0034	213.0100	Finishing Roadway (project) 01. 1600-14-70	EACH	1.000	1.000
0038	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,285.000	2,285.000
0040	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	375.000	375.000
0044	450.4000	HMA Cold Weather Paving	TON	5,700.000	5,700.000
0046	455.0605	Tack Coat	GAL	7,160.000	7,160.000
0048	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0050	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0052	460.2005	Incentive Density PWL HMA Pavement	DOL	17,950.000	17,950.000
0054	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	15,020.000	15,020.000
0056	460.2010	Incentive Air Voids HMA Pavement	DOL	22,790.000	22,790.000
0058	460.6223	HMA Pavement 3 MT 58-28 S	TON	12,740.000	12,740.000
0060	460.6244	HMA Pavement 4 MT 58-34 S	TON	10,050.000	10,050.000
0064	465.0105	Asphaltic Surface	TON	105.000	105.000
0066	465.0110	Asphaltic Surface Patching	TON	100.000	100.000
0072	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	27,625.000	27,625.000
0076	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	54.000	54.000
0078	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	2.000	2.000
0090	606.0200	Riprap Medium	CY	10.000	10.000
0104	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1600-14-70	EACH	1.000	1.000
0108	619.1000	Mobilization	EACH	0.650	0.650
0110	624.0100	Water	MGAL	55.000	55.000
0112	625.0100	Topsoil	SY	140.000	140.000
0114	628.1504	Silt Fence	LF	250.000	250.000
0116	628.1520	Silt Fence Maintenance	LF	250.000	250.000
0118	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0120	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0122	628.2004	Erosion Mat Class I Type B	SY	140.000	140.000
0128	628.7555	Culvert Pipe Checks	EACH	10.000	10.000
0130	628.7570	Rock Bags	EACH	55.000	55.000
0132	629.0210	Fertilizer Type B	CWT	0.150	0.150
0134	630.0130	Seeding Mixture No. 30	LB	3.000	3.000
0138	630.0500	Seed Water	MGAL	4.000	4.000
0140	633.5200	Markers Culvert End	EACH	2.000	2.000
0142	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	5.000	5.000
0146	638.2102	Moving Signs Type II	EACH	10.000	10.000
0148	638.4000	Moving Small Sign Supports	EACH	10.000	10.000
0150	642.5201	Field Office Type C	EACH	0.650	0.650
0152	643.0300	Traffic Control Drums	DAY	1,200.000	1,200.000
0160	643.0900	Traffic Control Signs	DAY	2,702.000	2,702.000
0162	643.5000	Traffic Control	EACH	0.650	0.650
0170	645.0120	Geotextile Type HR	SY	26.000	26.000
0172	646.1020	Marking Line Epoxy 4-Inch	LF	29,105.000	29,105.000
0174	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	60,135.000	60,135.000

1600-14-70

Line	Item	Item Description	Unit	Total	Qty
0176	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	150.000	150.000
0180	646.6120	Marking Stop Line Epoxy 18-Inch	LF	30.000	30.000
0182	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	22,355.000	22,355.000
0184	648.0100	Locating No-Passing Zones	MI	5.680	5.680
0186	649.0105	Temporary Marking Line Paint 4-Inch	LF	24,510.000	24,510.000
0188	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	29,040.000	29,040.000
0194	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0196	650.8000	Construction Staking Resurfacing Reference	LF	30,024.000	30,024.000
0200	650.9910	Construction Staking Supplemental Control (project) 01. 1600-14-70	LS	1.000	1.000
0206	690.0150	Sawing Asphalt	LF	180.000	180.000
0208	690.0250	Sawing Concrete	LF	40.000	40.000
0210	740.0440	Incentive IRI Ride	DOL	22,745.000	22,745.000
0212	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,000.000	2,000.000
0214	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	1,260.000	1,260.000
0216	SPV.0090	Special 01. Grading Shaping and Finishing for Ditch Cleaning	LF	100.000	100.000
0218	SPV.0180	Special 01. Protective Thermoplastic Coating at Snowmobile Trail Crossing	SY	75.000	75.000

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
393+79	USH 45	1	24" CPRC 66 LF
	TOTAL	1	

REMOVING CONCRETE PAVEMENT

STATION	LOCATION	204.0100 SY	REMARKS
393+79	USH 45	245	CULVERT REPLACEMENT
	TOTAL	245	

REMOVING ASPHALTIC SURFACE BUTT JOINTS

LOCATION	204.0115 SY
CTH G	35
OLD HWY 45 ROAD	17
PRATT JUNCTION ROAD	23
TOTAL	75

REMOVING ASPHALTIC SURFACE MILLING

STATION	TO	STATION	LOCATION	204.0120 SY
16+90	-	20+00	USH 45	1,034
20+00	-	25+00	USH 45	1,676
25+00	-	30+00	USH 45	1,666
30+00	-	35+00	USH 45	1,671
35+00	-	40+00	USH 45	1,675
40+00	-	45+00	USH 45	1,667
45+00	-	50+00	USH 45	1,666
50+00	-	55+00	USH 45	1,668
55+00	-	60+00	USH 45	1,677
60+00	-	65+00	USH 45	1,679
65+00	-	70+00	USH 45	1,682
70+00	-	75+00	USH 45	1,697
75+00		80+00	USH 45	1,689
80+00	-	85+00	USH 45	1,694
85+00	-	90+00	USH 45	1,683
90+00	-	95+00	USH 45	1,680
95+00	-	100+00	USH 45	1,677
100+00	-	105+00	USH 45	1,662
105+00	-	110+00	USH 45	1,652
110+00	-	115+85	USH 45	1,960
208+58	-	215+00	USH 45	2,080
215+00	-	220+00	USH 45	1,662
220+00	-	225+00	USH 45	1,670
225+00		230+00	USH 45	1,671
230+00		235+00	USH 45	1,669
235+00	-	240+00	USH 45	1,677
240+00	-	245+00	USH 45	1,676
245+00	-	250+00	USH 45	1,676
250+00	-	255+00	USH 45	1,665
255+00	-	260+00	USH 45	1,667
260+00	-	265+00	USH 45	1,668
265+00	-	270+00	USH 45	1,646
270+00	-	275+00	USH 45	1,643
			SUBTOTAL	55,225

REMOVING ASPHALTIC SURFACE MILLING (CONT)

STATION	TO	STATION	LOCATION	204.0120 SY
275+00		280+00	USH 45	1,654
280+00	-	285+00	USH 45	1,654
285+00	-	290+00	USH 45	1,671
290+00	-	295+00	USH 45	1,676
295+00	-	300+00	USH 45	1,684
300+00	-	305+00	USH 45	1,674
305+00	-	310+00	USH 45	1,673
310+00	-	315+00	USH 45	1,671
315+00	-	320+00	USH 45	1,680
320+00	-	325+00	USH 45	1,678
325+00	-	330+00	USH 45	1,671
330+00	-	335+00	USH 45	1,670
335+00		340+00	USH 45	1,656
340+00	-	345+00	USH 45	1,655
345+00	-	350+00	USH 45	1,656
350+00	-	355+00	USH 45	1,654
355+00	-	360+00	USH 45	1,659
360+00	-	365+00	USH 45	1,669
365+00	-	370+00	USH 45	1,656
370+00	-	375+00	USH 45	1,657
375+00	-	380+00	USH 45	1,654
380+00	-	385+00	USH 45	1,662
385+00	-	390+00	USH 45	1,667
390+00	-	395+00	USH 45	1,670
395+00		400+00	USH 45	1,661
400+00	-	405+00	USH 45	1,665
405+00	-	412+00	USH 45	2,324
			CTH G	695
			BYPASS AT CTH G	414
			OLD HWY 45 RD	167
			PRATT JUNC RD	242
			MCGINNIS RD	423
			OLD 26 WEST	78
			OLD 26 EAST	110
			SUBTOTAL	47,750
			TOTAL	102,975

3

3

EARTHWORK SUMMARY

Category	Division	Location	Location	Common Excavation (item #205.0100)	Unusable Pavement Material
				CY	CY
0010	1	Culvert Replacement Transition 393+79	USH 45	445	174
Totals				445	174

BASE AGGREGATE DENSE & WATER

STATION	TO	STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
16+91	-	115+86	USH 45, LT & RT	770	---	---	
208+71	-	410+00	USH 45, LT & RT	1305	315	---	1-1/4" FOR CULVERT REPLACEMENT (TRENCH BACKFILL AND BASE BELOW PAVEMENT)
		ENTIRE PROJECT		---	---	55	
		UNDISTRIBUTED		210	60	---	
			TOTALS	2,285	375	55	

ASPHALTIC SURFACE

STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	REMARKS
393+79	USH 45	105		CULVERT REPLACEMENT
ENTIRE PROJECT	UNDISTRIBUTED	---	100	
	TOTALS	105	100	

CENTERLINE RUMBLE STRIPS

STATION	TO	STATION	LOCATION	465.0475 LF	REMARKS
16+91	-	70+00	USH 45	4,709	GAP TRAIL PER SDD
70+00	-	115+86	USH 45	3,986	GAP TRAIL PER SDD
208+71	-	260+00	USH 45	4,730	
260+00	-	315+00	USH 45	5,500	
315+00	-	370+00	USH 45	5,100	
370+00	-	410+00	USH 45	3,600	
			TOTALS	27,625	

HMA SUMMARY

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.0105.S HMA PAVEMENT PWL TEST STRIP VOLUMETRICS EACH	460.0110.S HMA PAVEMENT PWL TEST STRIP DENSITY EACH	460.6223 HMA PAVEMENT 3 MT 58 28 S (LOWER) TON	460.6244 HMA PAVEMENT 4 MT 58 34 S (UPPER) TON
16+91	-	70+00	USH 45	1,335	---	---	2,330	1,875
70+00	-	115+86	USH 45	1,085	---	---	1,955	1,540
208+71		260+00	USH 45	1,230			2,160	1,720
260+00	-	315+00	USH 45	1,285	---	---	2,310	1,795
315+00	-	370+00	USH 45	1,295	---	---	2,310	1,815
370+00	-	410+00	USH 45	930	---	---	1,675	1,305
ENTIRE PROJECT				---	2	2	---	---
			TOTALS	7,160	2	2	12,740	10,050

PWL MIXTURE USE TABLE

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12' DRIVING LANE (NB/SB)	16+90.92 - 115+85.58 208+70.90 - 410+00	UPPER LAYER	3 MT 58-28 S	460.6244	7,855	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12' DRIVING LANE (NB/SB)	16+90.92 - 114+10 208+70.90 - 410+00	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.6223	10,035	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12' DRIVING LANE (NB/SB)	114+10 - 115+85.58	LOWER LAYER	EXISTING CRUSHED AGGREGATE	460.6223	60	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
3' SHOULDER (NB/SB)	16+90.92 - 115+85.58	UPPER LAYER	3 MT 58-28 S	460.6244	2,195	1 3/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGLIBLE FOR INCENTIVE
3' SHOULDER (NB/SB)	16+90.92 115+85.58	LOWER LAYER	EXISTING CRUSHED AGGREGATE	460.6223	2,645	2 1/4"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGLIBLE FOR INCENTIVE

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CULVERT PIPES

STATION	LOCATION	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	633.5200 MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	INLET INVERT** STATION	INLET INVERT** OFFSET	INLET INVERT** ELEV.	OUTLET INVERT** STATION	OUTLET INVERT** OFFSET	OUTLET INVERT** ELEV.
393+79	USH 45	54	2	2	1	393+79.7	27.2' LT	1595.87	393+78.7	26.8' LT	1595.34
	TOTALS	54	2	2	1						

**-OFFSET & ELEVATION REFERENCED TO THE END OF PIPE

EROSION CONTROL

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	REMARKS
	107+12		USH 45, RT	---	---	---	---	4	25	DOWNSTREAM OF RIPRAP PLACEMENT
393+30	-	394+30	USH 45, LT & RT	200	200	---	---	3	20	CULVERT REPLACEMENT
	UNDISTRIBUTED		USH 45, LT & RT	50	50	2	1	3	10	
			TOTALS	250	250	2	1	10	55	

RIPRAP & GEOTEXTILE FABRIC

STATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
STA 107+12, RT	10	26
TOTALS	10	26

RESTORATION

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0500 SEED WATER MGAL
393+30	-	394+30	USH 45, LT & RT	115	115	0.10	2	3
	UNDISTRIBUTED		USH 45, LT & RT	25	25	0.05	1	1
			TOTALS	140	140	0.15	3	4

PERMANENT SIGNING SUMMARY

CATEGORY	LOCATION	634.0614 POSTS WOOD 4X6 INCH X 14 FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	USH 45 UNDISTRIBUTED	5	10	10	FOR MOVING OF NO PASSING ZONE SIGNAGE
	TOTALS	5	**10**	**10**	

TRAFFIC CONTROL SUMMARY

LOCATION	APPROX. SERVICE DAY	643.0300 TRAFFIC CONTROL DRUMS NO IN SERVICE	DAY	643.0900 TRAFFIC CONTROL SIGNS NO IN SERVICE	DAY	COMMENTS
PRECONSTRUCTION NOTIFICATION	7			2	14	
ADVANCED WARNING - MAINLINE	100	---	---	7	700	
ADVANCED WARNING - SIDE ROADS	100	---	---	12	1200	
MILLING/PAVING - MAINLINE	30	---	---	10	300	
MILLING/PAVING - SIDE ROADS	30	---	---	6	180	
CULVERT REPLACEMENT	2	---	---	4	8	
UNDISTRIBUTED	60	20	1200	5	300	
TOTALS			**1,200**		**2,702**	

LOCATING NO-PASSING ZONES

STATION	TO	STATION	LOCATION	648.0100 MI
16+91		115+86	USH 45	1.87
208+71	-	410+00	USH 45	3.81
			TOTAL	**5.68**

PAVEMENT MARKING SUMMARY

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.1020 MARKING LINE EPOXY 4-INCH (WHITE)	646.1040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE) LF	646.3040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE)	646.6120 MARKING STOP LINE EPOXY 18-INCH (WHITE) LF	649.0105 TEMPORARY MARKING LINE PAINT 4-INCH (YELLOW) LF	*649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) LF	REMARKS
16+90.92	-	70+00	USH 45	2,090	65	11,070	150	30	1,185	2,090	4" SKIPS AT CTH G BYPASS (WHITE EPOXY 4"), 8" FOR RIGHT TURN LANE AT CTH G, STOP BAR AT CTH G
70+00	-	115+85.58	USH 45	2,435	---	9,085	---	---	1,655	2,435	
208+70.9	-	260+00	USH 45	4,415	---	10,110	---	---	3,540	4,415	
260+00	-	315+00	USH 45	6,875	---	11,000	---	---	5,940	6,875	
315+00	-	370+00	USH 45	6,950	---	10,870	---	---	6,305	6,950	
370+00	-	410+00	USH 45	6,275	---	8,000	---	---	5,885	6,275	
		TOTALS		**29,040**	**65**	**60,135**	**150**	**30**	**24,510**	**29,040**	
				29,105							

*NOTE: CENTER LINE DASHES FOR BID ITEM 649.0120 SHALL BE MARKED IN A MANNER AS DIRECTED FOR PERMANENT MARKINGS ACCORDING TO THE APPROPRIATE STANDARD DETAIL DRAWING (12.5' DASH IN PASSING ZONES)

CONSTRUCTION STAKING

LOCATION	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS
ENTIRE PROJECT	30,024	1
TOTALS	**30,024**	1

NOTE: ADDITIONAL CONSTRUCTION STAKING ITEMS SHOWN ELSEWHERE

SAWING

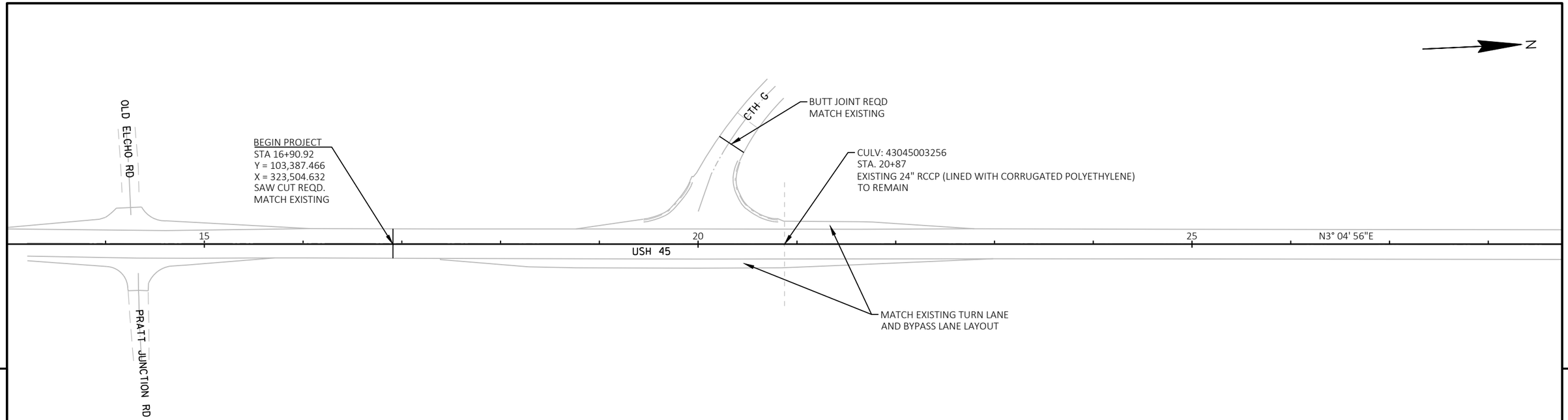
LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF	REMARKS
STA 16+90.92, USH 45	30	---	
STA 115+85.58, USH 45	30	---	
STA 208+70.90, USH 45	30	---	
STA 393+26, USH 45	30	20	
STA 394+32, USH 45	30	20	
STA 410+00, USH 45	30		
TOTALS	**180**	**40**	

GRADING SHAPING AND FINISHING FOR DITCH CLEANING

STATION	TO	STATION	LOCATION	SPV.0090.01 LF
111+10	-	111+60	USH 45, LT	50
111+45	-	111+95	USH 45, RT	50
			TOTALS	**100**

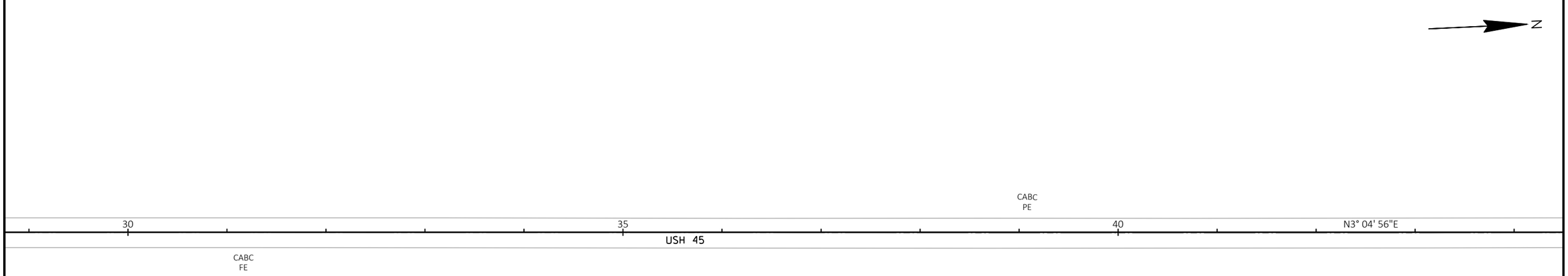
PROTECTIVE THERMOPLASTIC COATING AT SNOWMOBILE CROSSING

STATION	LOCATION	SPV.0180.01 SY	REMARKS
STA 111+48	USH 45	75	SNOWMOBILE CROSSING
	TOTALS	**75**	



STA. 16+90.92 - BEGIN ASPHALTIC CENTER LINE
RUMBLE STRIP 2-LANE RURAL

SEE APPROPRIATE S.D.D. FOR INSTALLATION DETAILS

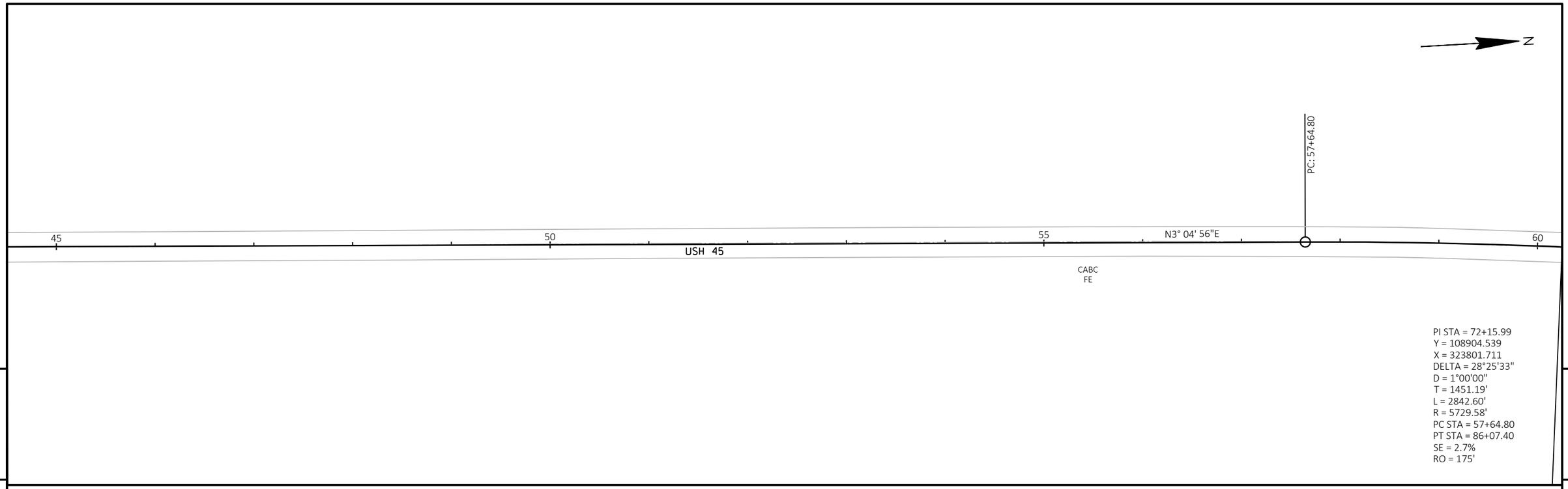


PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 25	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_050201_PN.DWG
LAYOUT NAME - 050201 - (1)

PLOT DATE : 5/18/2021 10:36 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:100 FT

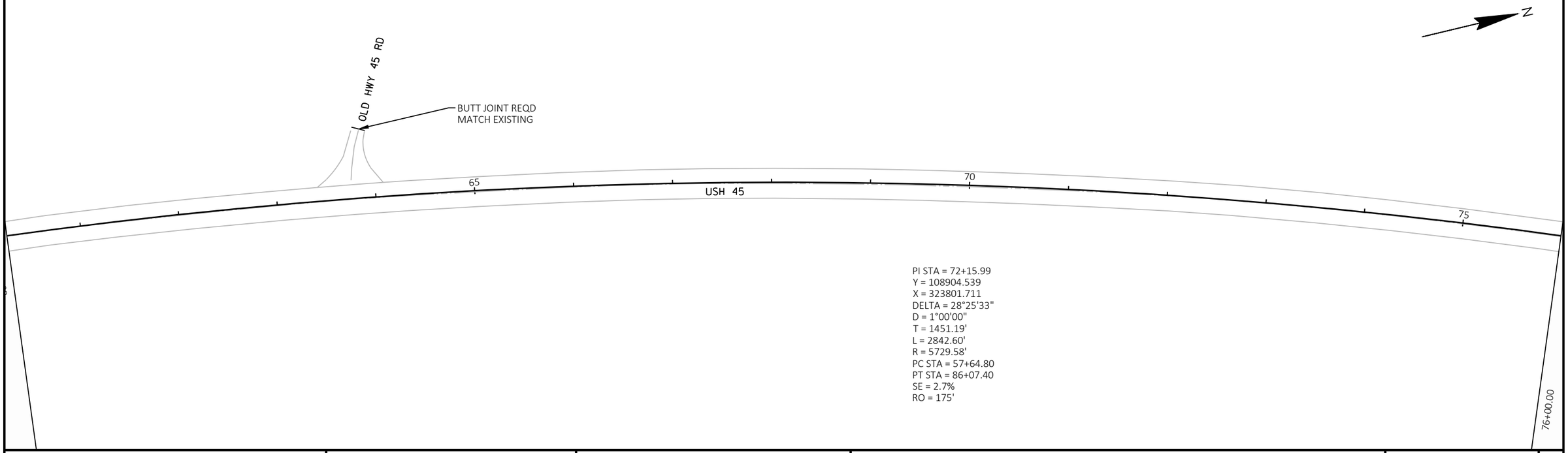
WISDOT/CADDS SHEET 44



PI STA = 72+15.99
Y = 108904.539
X = 323801.711
DELTA = 28°25'33"
D = 1°00'00"
T = 1451.19'
L = 2842.60'
R = 5729.58'
PC STA = 57+64.80
PT STA = 86+07.40
SE = 2.7%
RO = 175'

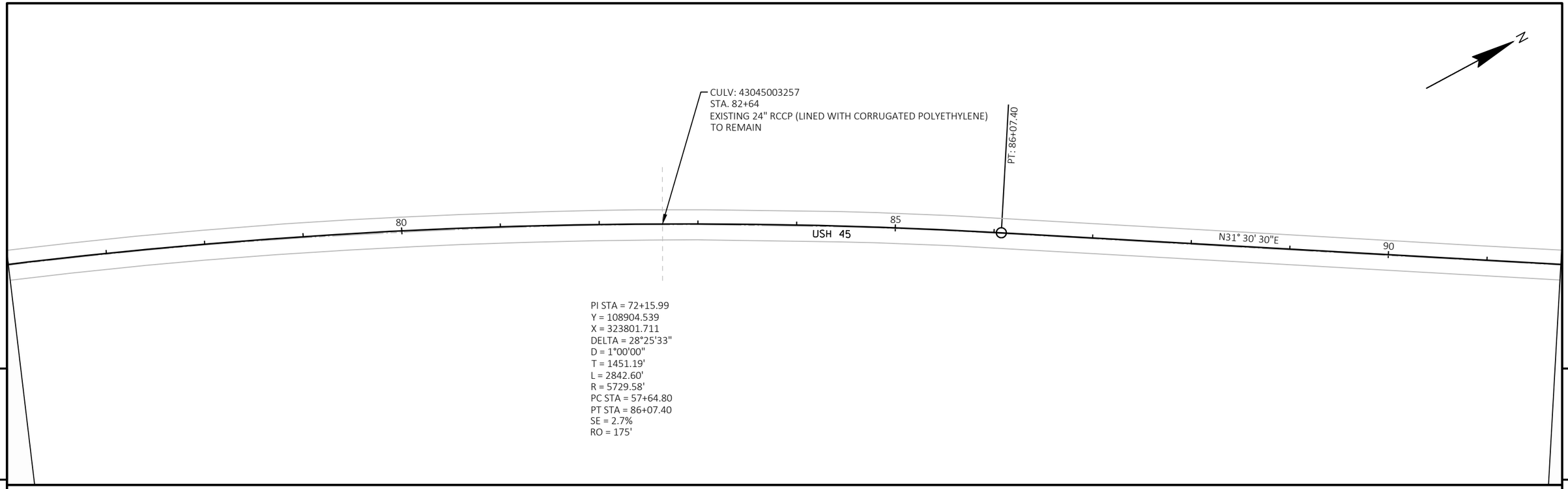
5

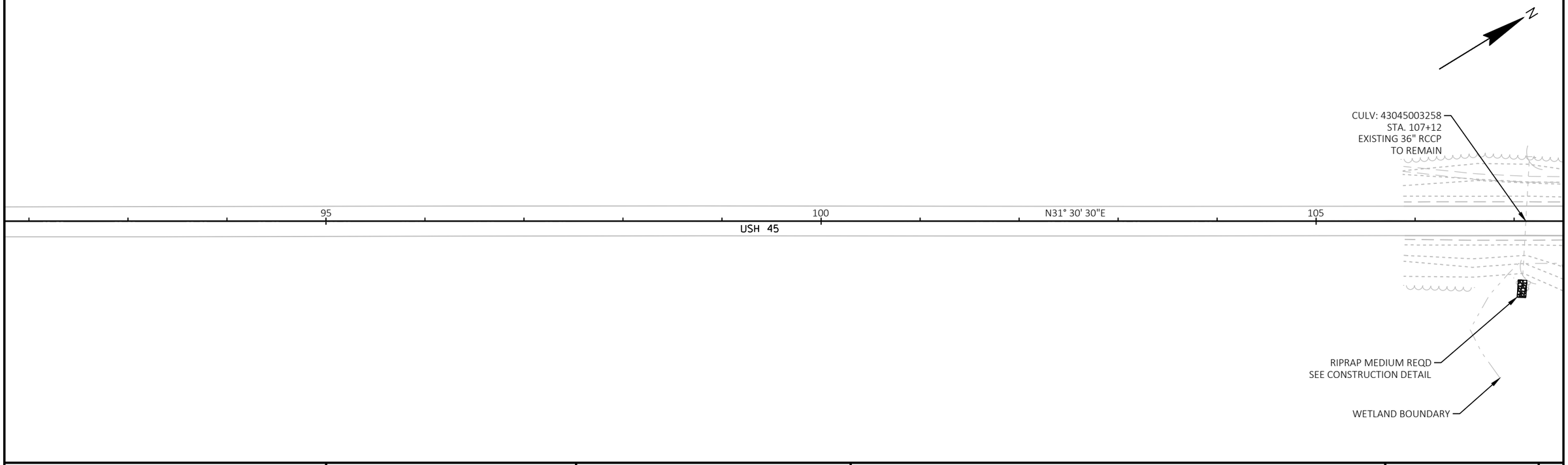
5



PI STA = 72+15.99
Y = 108904.539
X = 323801.711
DELTA = 28°25'33"
D = 1°00'00"
T = 1451.19'
L = 2842.60'
R = 5729.58'
PC STA = 57+64.80
PT STA = 86+07.40
SE = 2.7%
RO = 175'

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 26	E





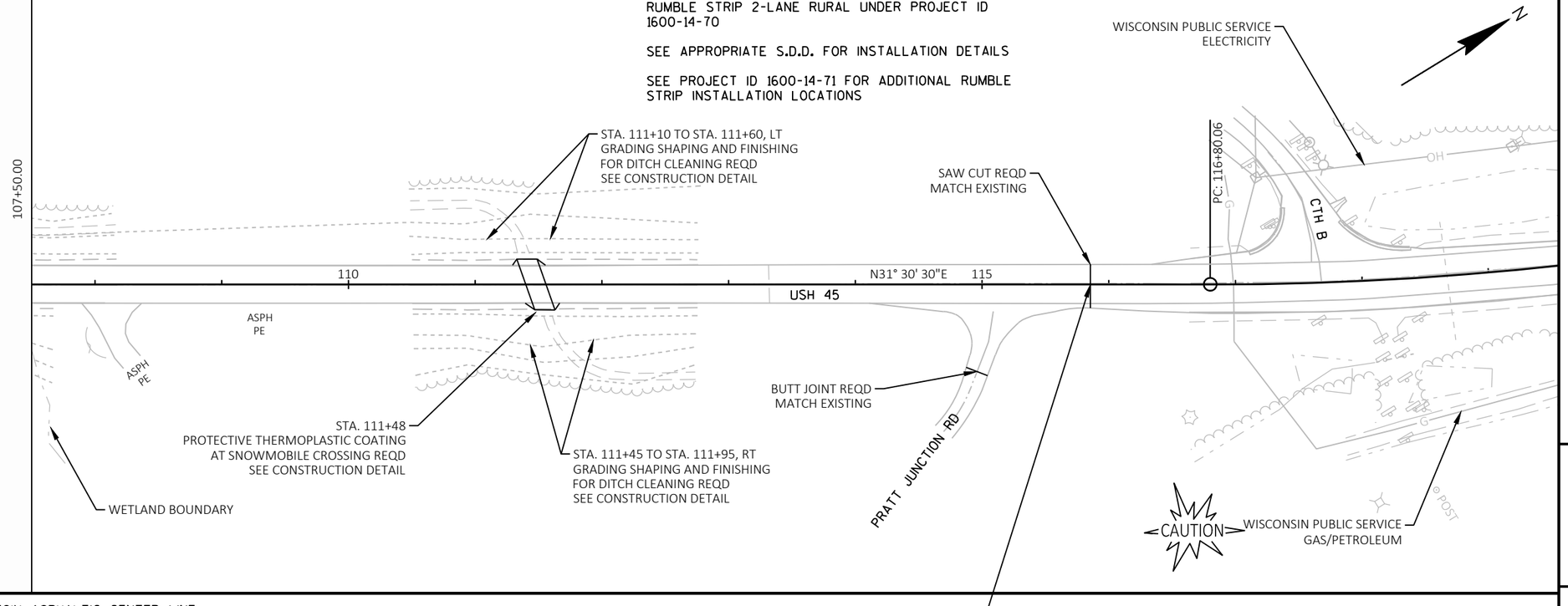
PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 27	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_050201_PN.DWG
LAYOUT NAME - 050201 - (3)
PLOT DATE : 5/18/2021 10:37 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA. 115+85.58 - END ASPHALTIC CENTER LINE
RUMBLE STRIP 2-LANE RURAL UNDER PROJECT ID
1600-14-70

SEE APPROPRIATE S.D.D. FOR INSTALLATION DETAILS

SEE PROJECT ID 1600-14-71 FOR ADDITIONAL RUMBLE
STRIP INSTALLATION LOCATIONS



5

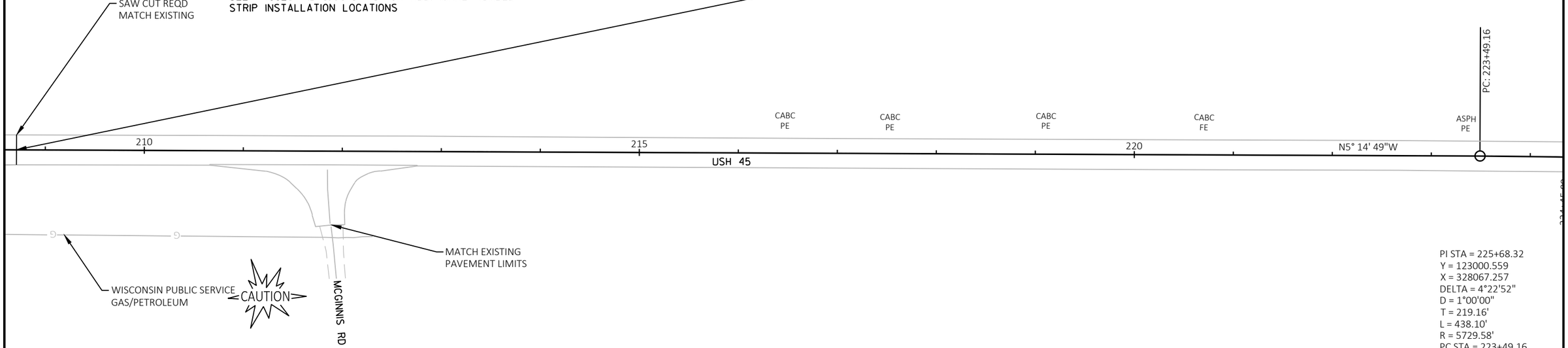
5

STA. 208+70.90 - BEGIN ASPHALTIC CENTER LINE
RUMBLE STRIP 2-LANE RURAL UNDER PROJECT ID
1600-14-70

SEE APPROPRIATE S.D.D. FOR INSTALLATION DETAILS

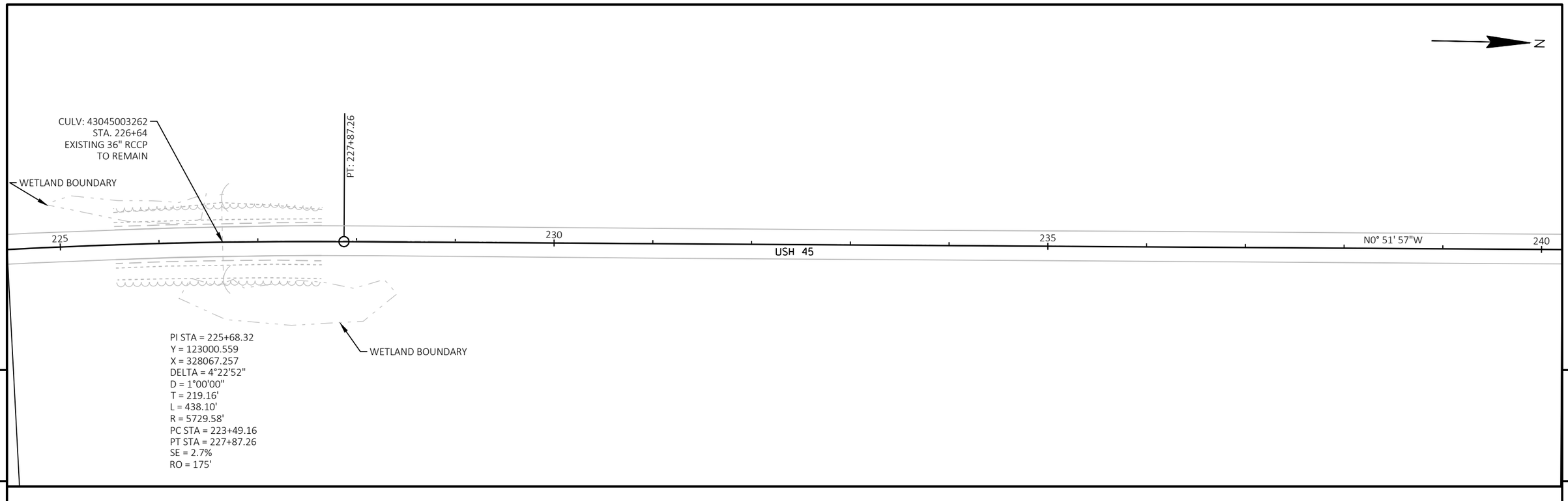
SEE PROJECT ID 1600-14-71 FOR ADDITIONAL RUMBLE
STRIP INSTALLATION LOCATIONS

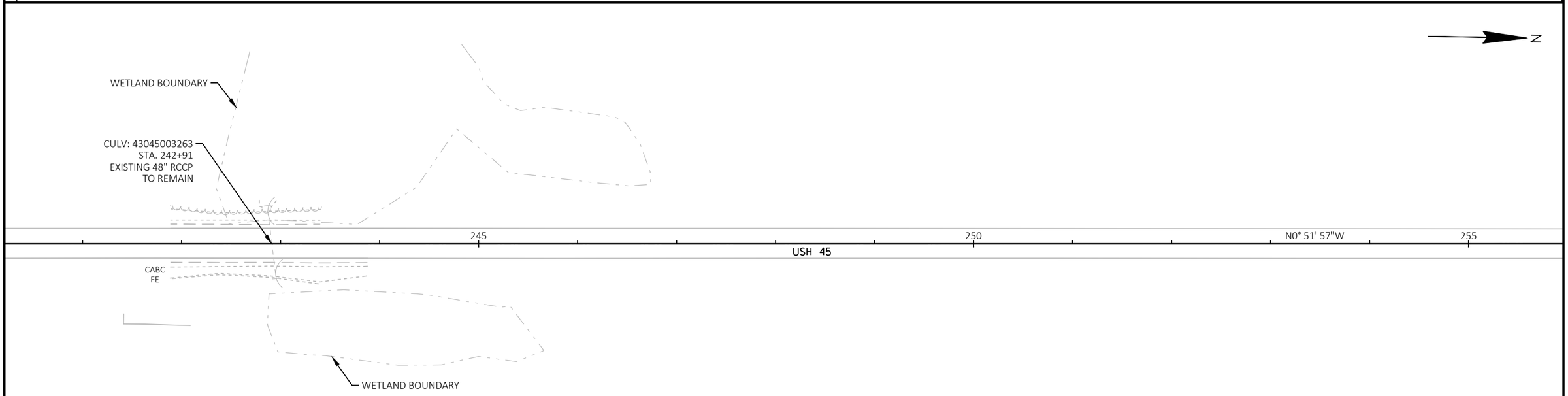
NET EXCEPTION TO CL LENGTH
STA 115+85.58 - STA 208+70.90



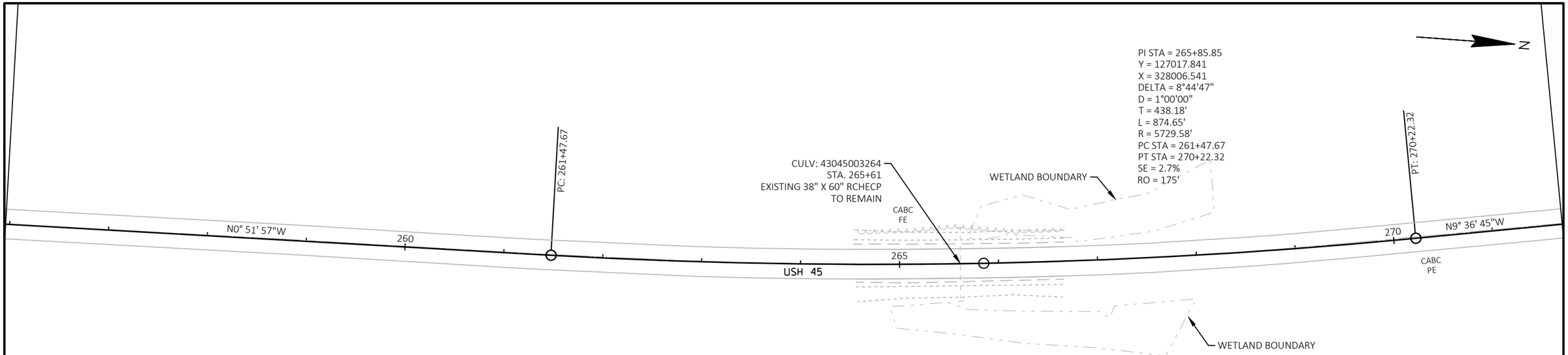
PI STA = 225+68.32
Y = 123000.559
X = 328067.257
DELTA = 4°22'52"
D = 1°00'00"
T = 219.16'
L = 438.10'
R = 5729.58'
PC STA = 223+49.16
PT STA = 227+87.26
SE = 2.7%
RO = 175'

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 28	E



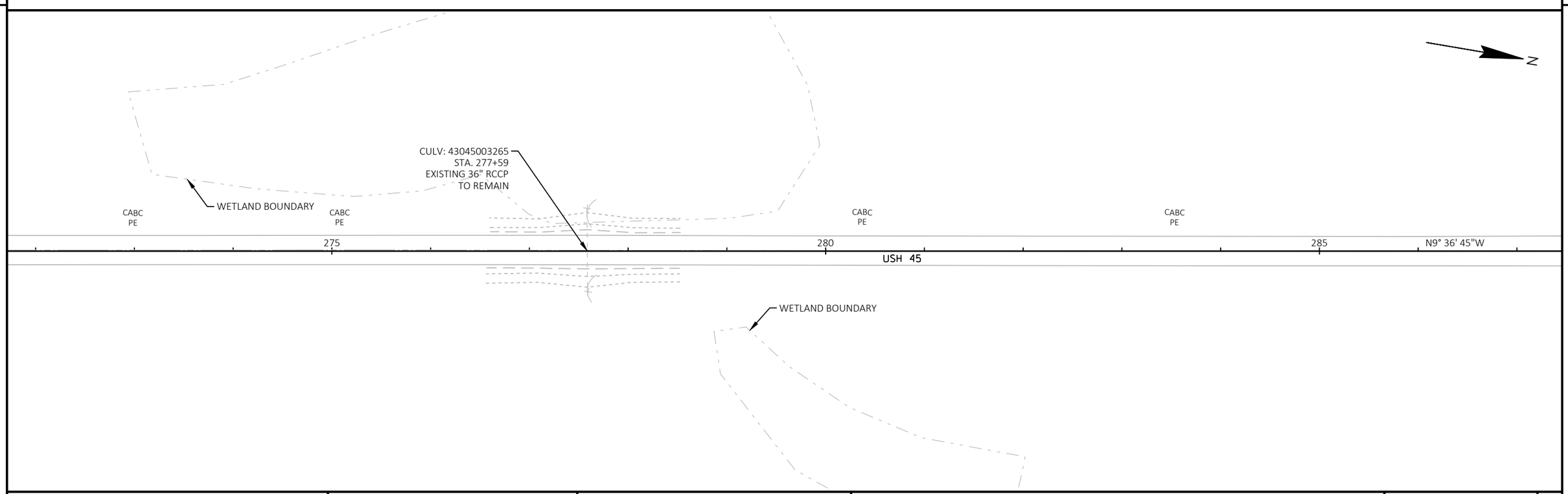


PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 29	E



5

5



PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 30	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_050201_PN.DWG
LAYOUT NAME - 050201 - (6)

PLOT DATE : 5/18/2021 10:39 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

CABC
FE

290

295

300

N9° 36' 45"W

USH 45

CABC
FE

5

5

N

CABC
PE

CABC
PE

CABC
PE

CABC
PE

CABC
PE

305

310

315

N9° 36' 45"W

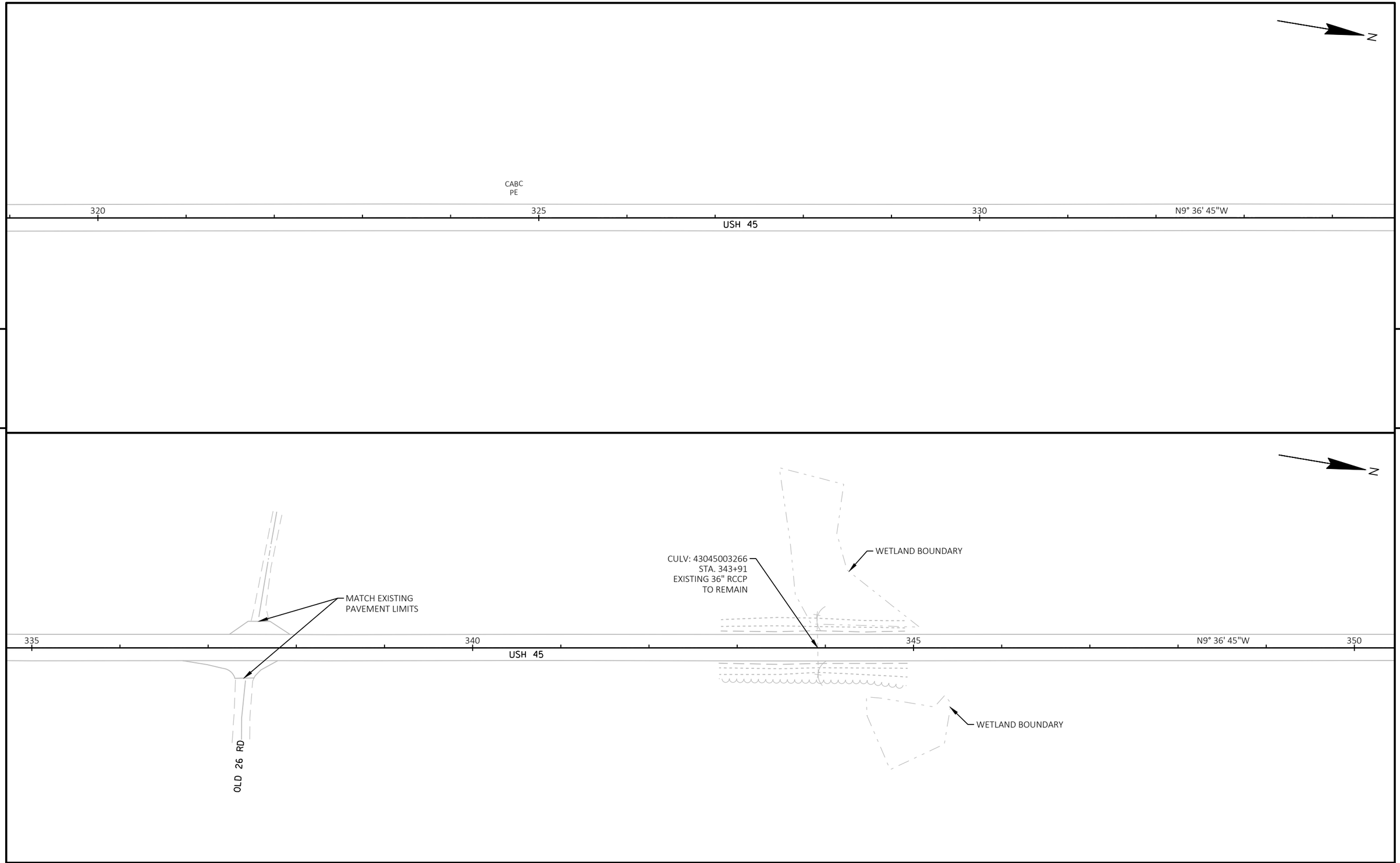
USH 45

CABC
FE

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 31	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_050201_PN.DWG
LAYOUT NAME - 050201 - (7)

PLOT DATE : 5/18/2021 10:40 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 32	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_050201_PN.DWG
LAYOUT NAME - 050201 - (8)

PLOT DATE : 5/18/2021 10:40 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

PC: 353+13.14

CABC
FE

N9° 36' 45"W

355

USH 45

360

WETLAND BOUNDARY

CULV: 43045003267
STA. 362+03
EXISTING 36" RCCP
TO REMAIN

PT: 363+92.59

PC: 365+38.38

N4° 03' 38"E

365

WETLAND BOUNDARY

PI STA = 358+55.44
Y = 136158.967
X = 326458.406
DELTA = 13°40'23"
D = 1°16'00"
T = 542.30'
L = 1079.44'
R = 4523.35'
PC STA = 353+13.14
PT STA = 363+92.59
SE = 3.1%
RO = 175'

PI STA = 371+29.99
Y = 137435.459
X = 326549.024
DELTA = 23°20'11"
D = 2°00'00"
T = 591.61'
L = 1166.82'
R = 2864.79'
PC STA = 365+38.38
PT STA = 377+05.20
SE = 4.4%
RO = 175'

366+20.90

5

5

N

WETLAND BOUNDARY

CABC
PE

370

USH 45

375

PT: 377+05.20

WETLAND BOUNDARY

CABC
PE

N27° 23' 49"E

CABC
CE

380

PC: 380+13.53

CULV: 43045003269
STA. 381+52
EXISTING 30" RCCP
TO REMAIN

366+20.90

CULV: 43045003268
STA. 370+12
EXISTING 30" RCCP
TO REMAIN

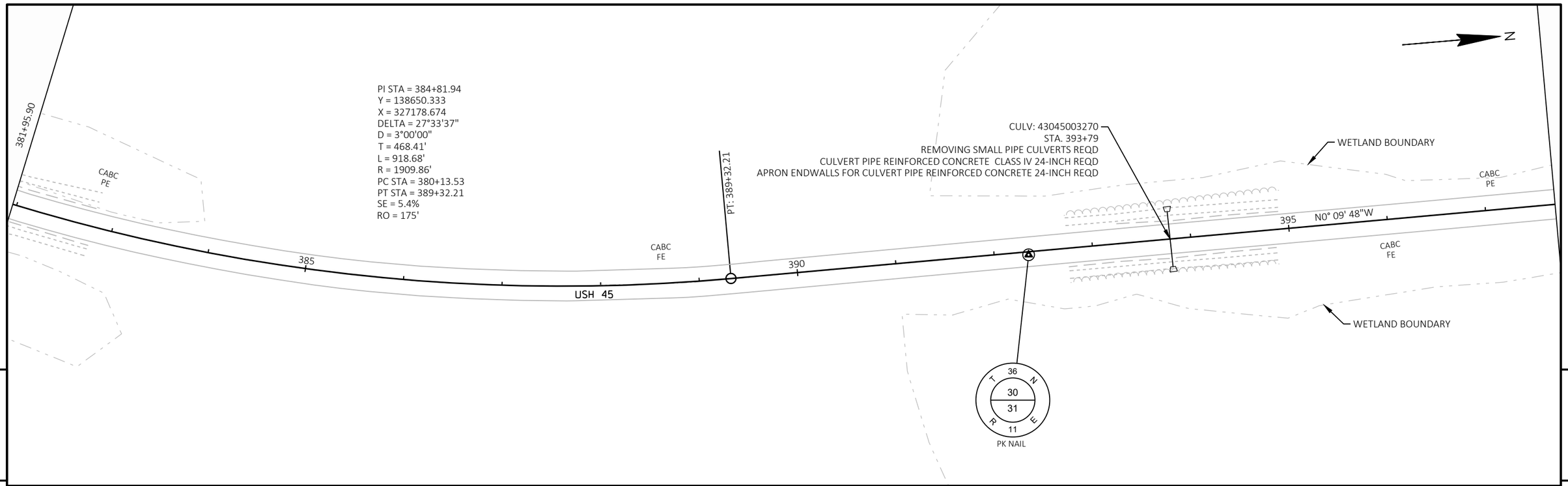
WETLAND BOUNDARY

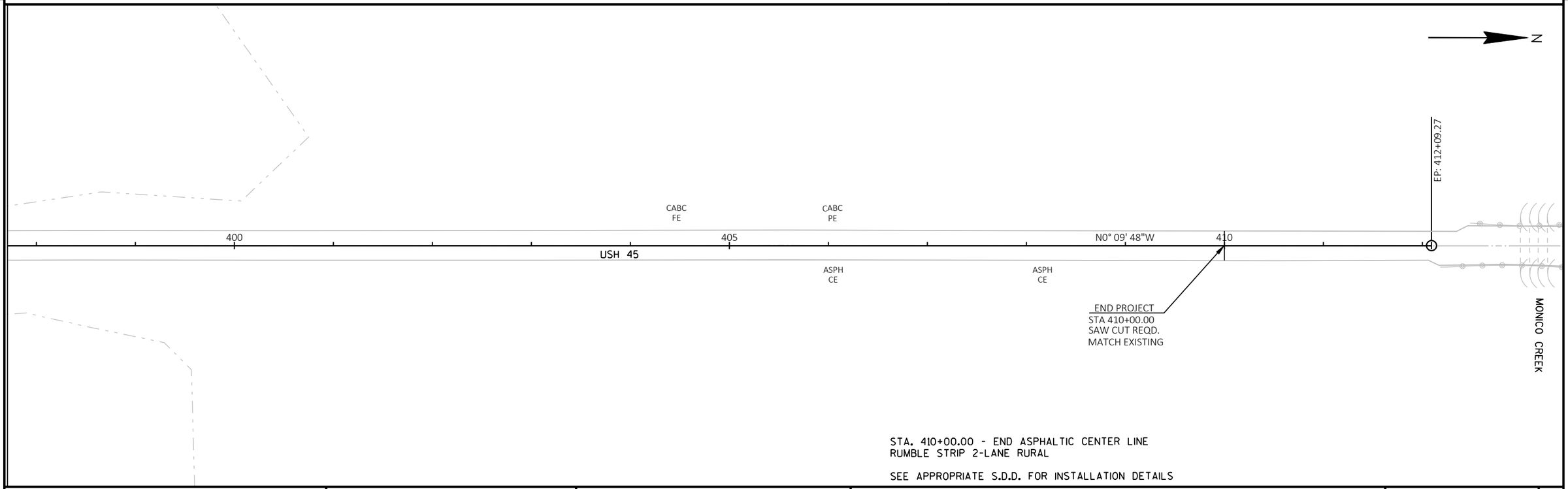
PI STA = 371+29.99
Y = 137435.459
X = 326549.024
DELTA = 23°20'11"
D = 2°00'00"
T = 591.61'
L = 1166.82'
R = 2864.79'
PC STA = 365+38.38
PT STA = 377+05.20
SE = 4.4%
RO = 175'

WETLAND BOUNDARY

PI STA = 384+81.94
Y = 138650.333
X = 327178.674
DELTA = 27°33'37"
D = 3°00'00"
T = 468.41'
L = 918.68'
R = 1909.86'
PC STA = 380+13.53
PT STA = 389+32.21
SE = 5.4%
RO = 175'

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 33	E





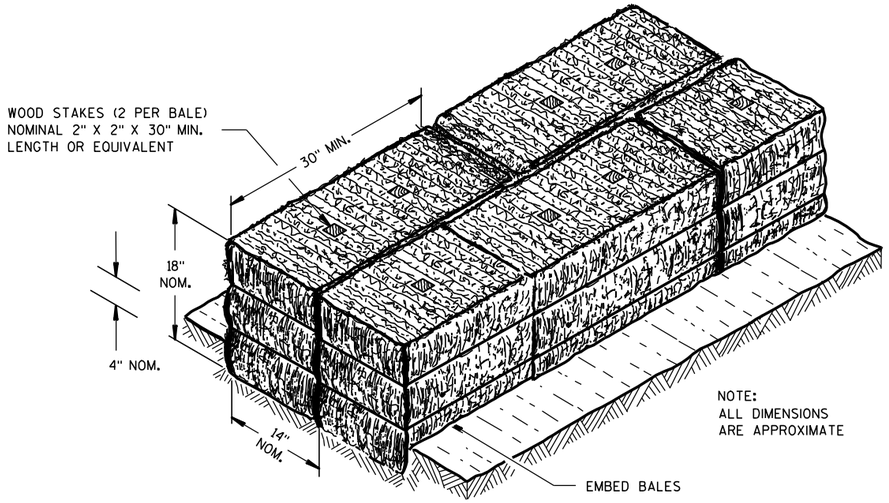
PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONEIDA	PLAN	SHEET 34	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001470_050201_PN.DWG
LAYOUT NAME - 050201 - (10)
PLOT DATE : 5/18/2021 10:40 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

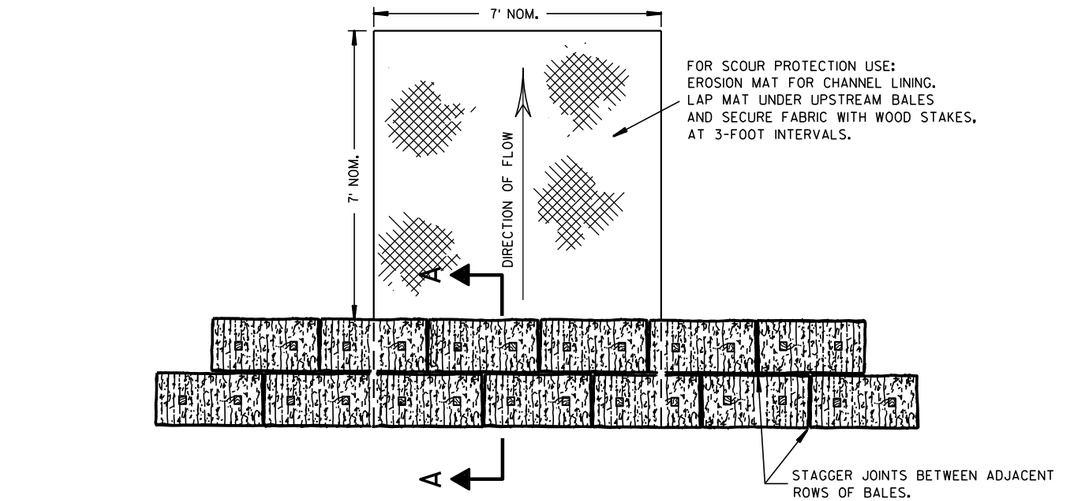
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-08	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D43-02	TRAFFIC CONTROL, SHORT DURATION MOBILE OPERATIONS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

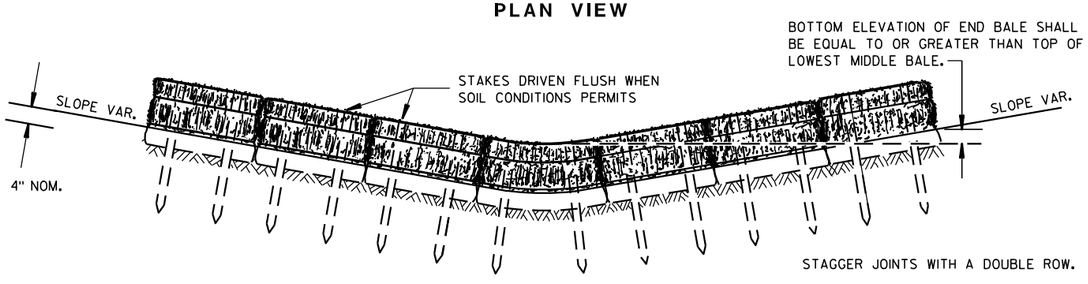
6



SECTION A-A



PLAN VIEW



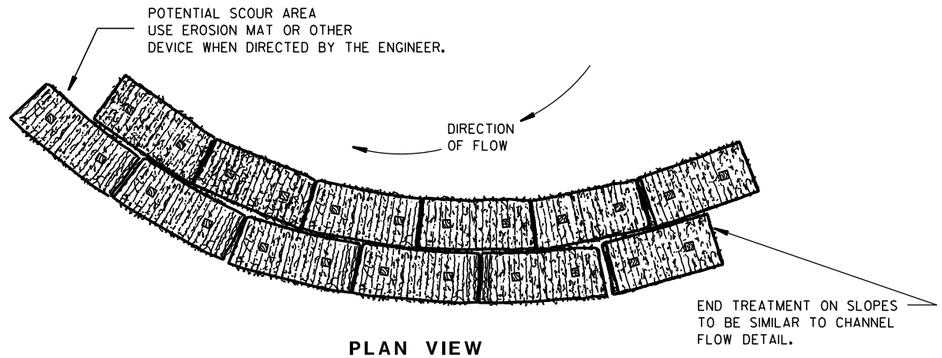
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

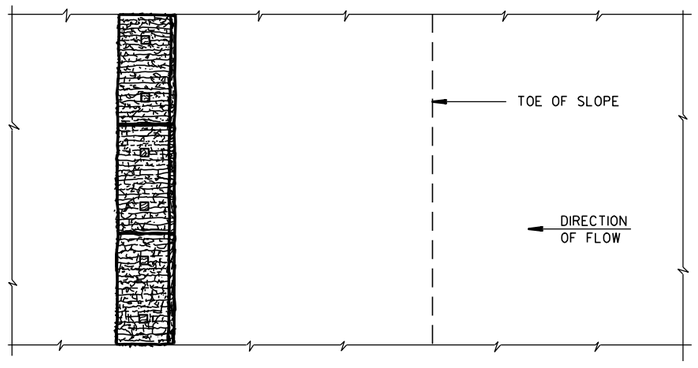
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

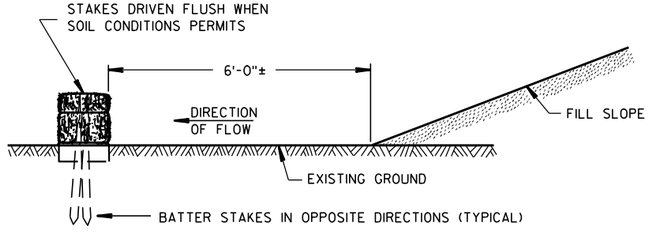


PLAN VIEW

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

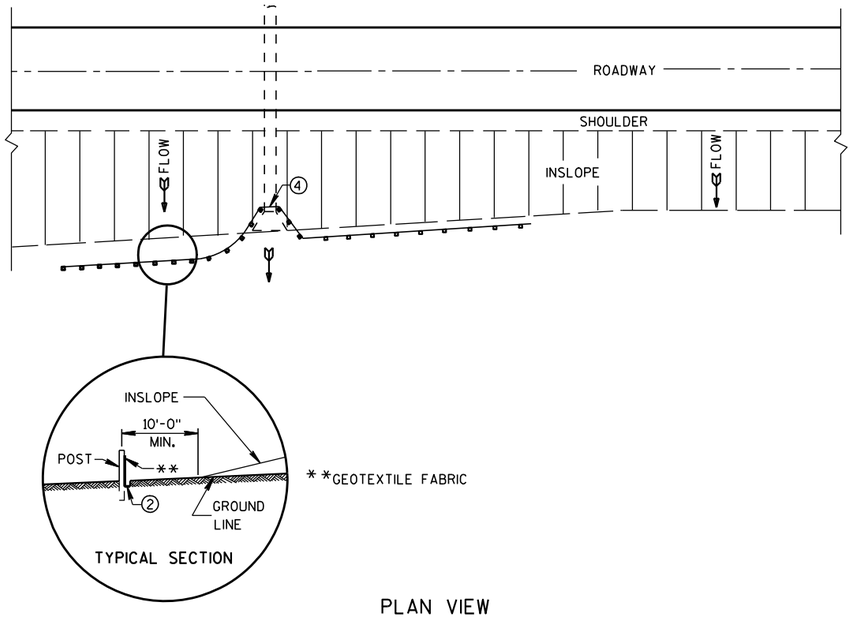
FHWA

6

S.D.D. 8 E 8-3

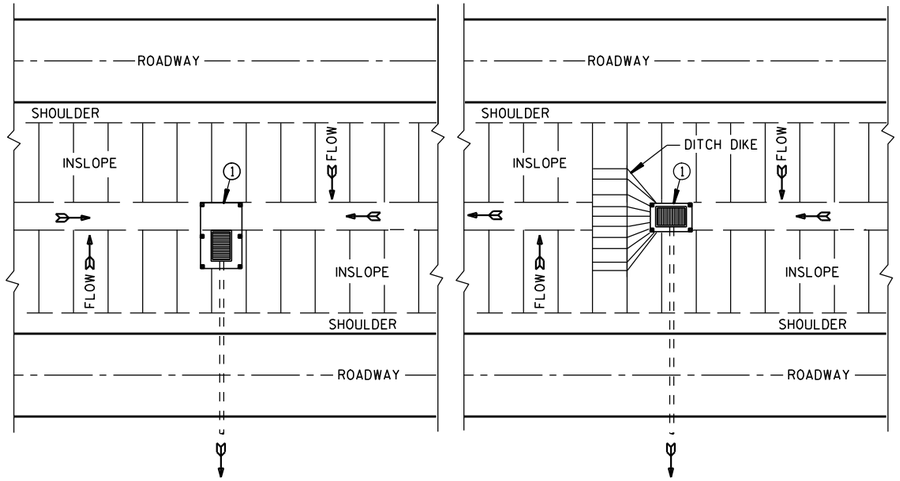
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



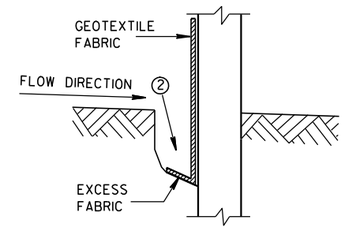
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

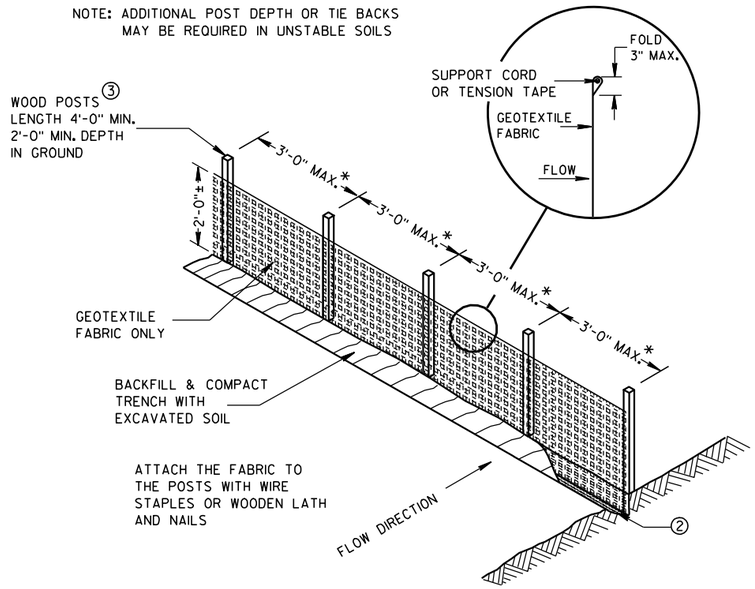
GENERAL NOTES

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

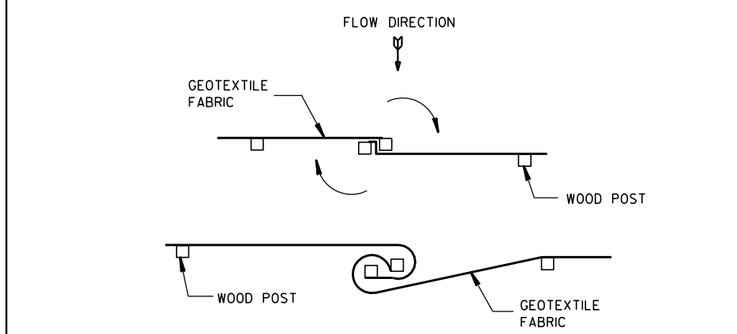
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



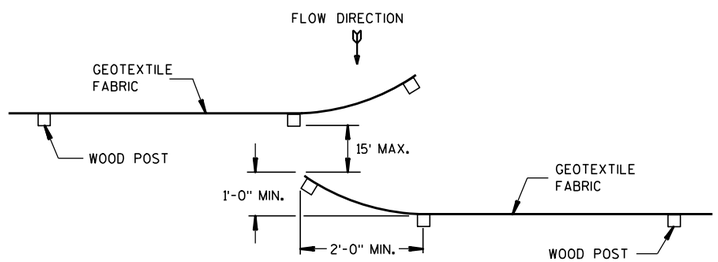
TRENCH DETAIL



SILT FENCE

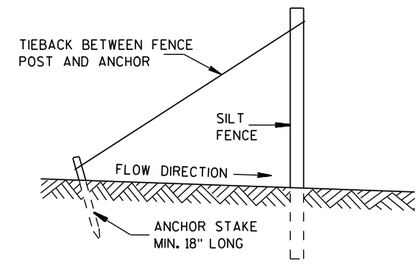


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

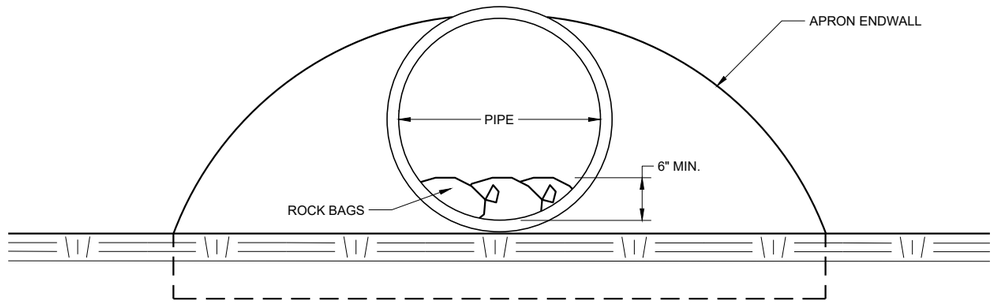
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

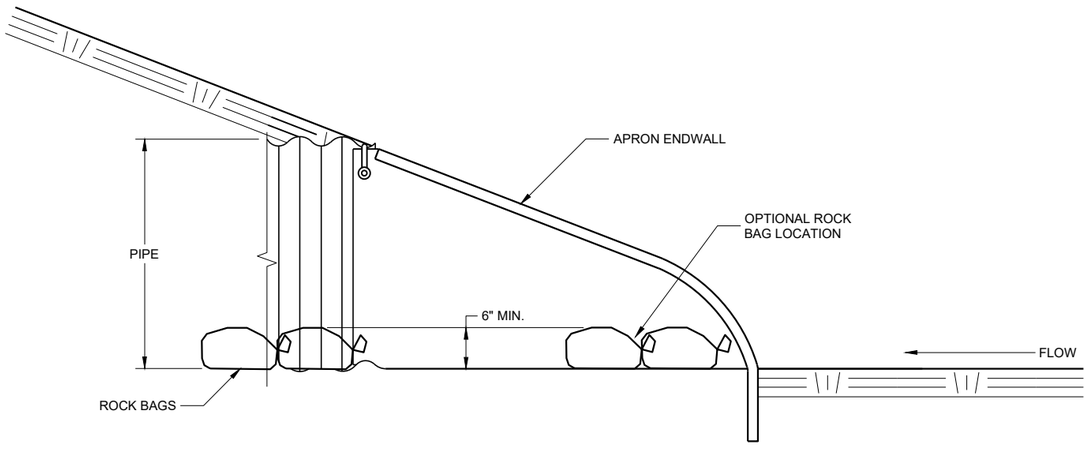
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

6
SDD 08E15 - 01

METAL APRON ENDWALLS

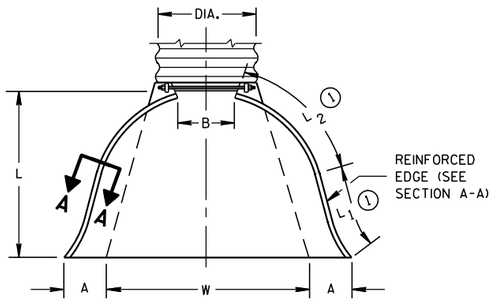
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

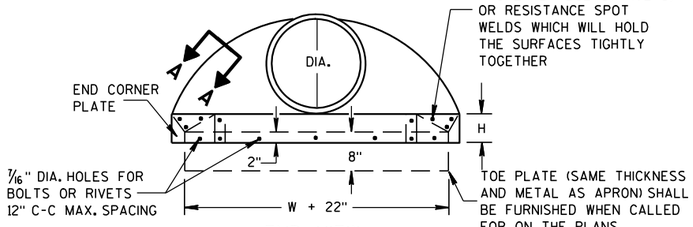
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

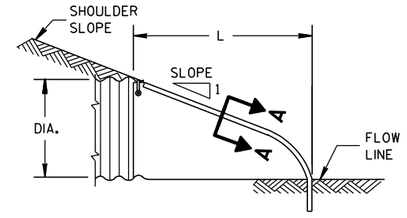
*MINIMUM
**MAXIMUM



PLAN VIEW

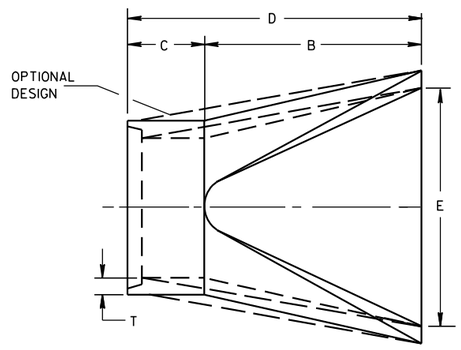


END VIEW

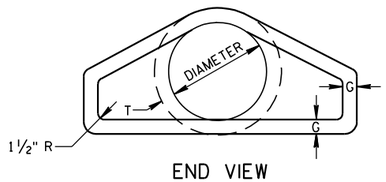


SIDE ELEVATION

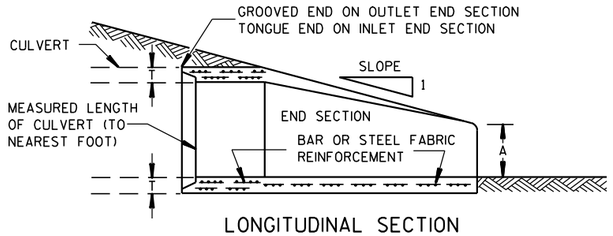
METAL ENDWALLS



PLAN

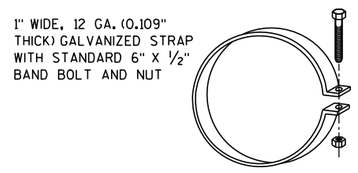


END VIEW



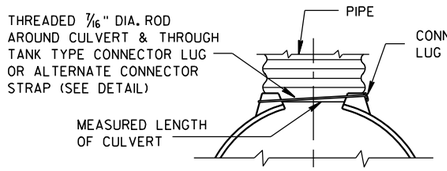
LONGITUDINAL SECTION

CONCRETE ENDWALLS

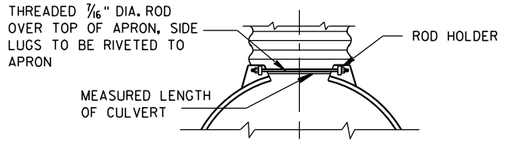


ALTERNATE FOR TYPE 1 CONNECTION

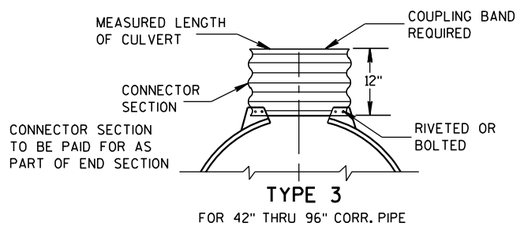
END SECTION CONNECTOR STRAP



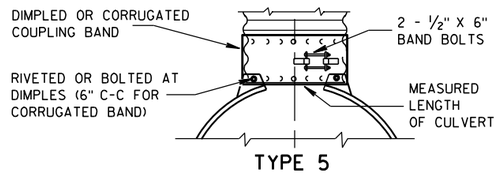
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

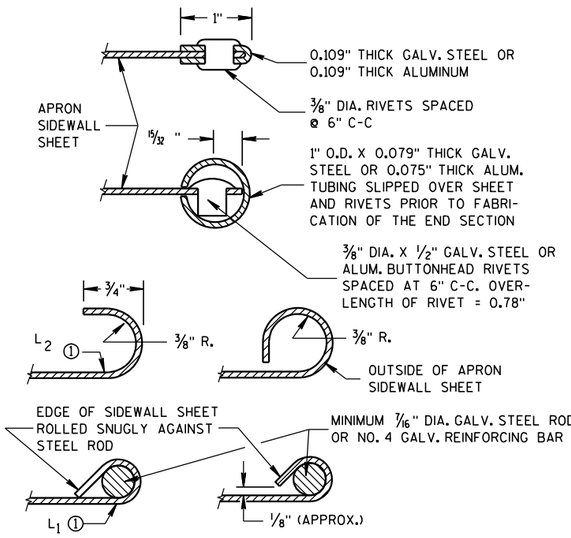
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

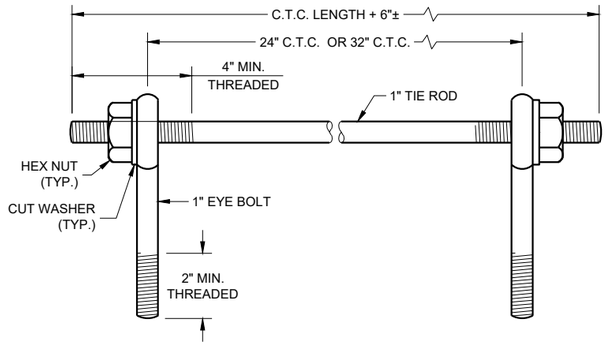
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

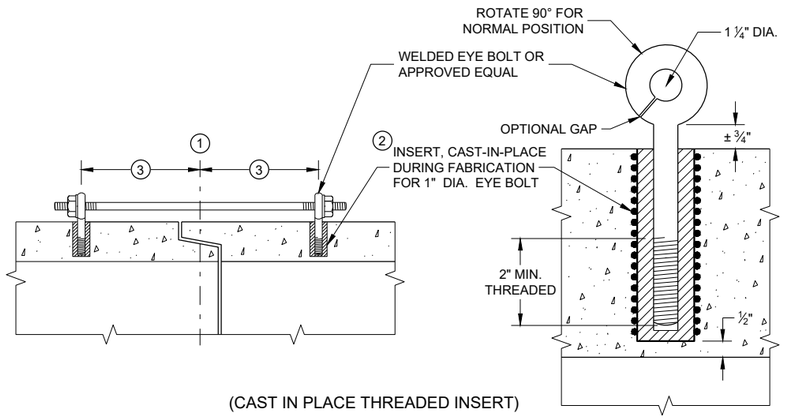
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 1-11



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) CENTER LINE 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.

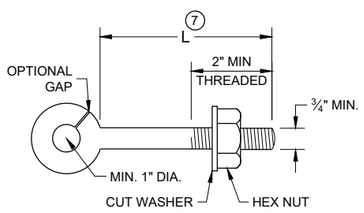
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

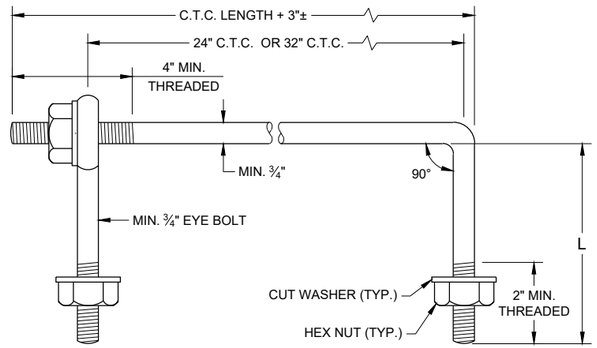
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

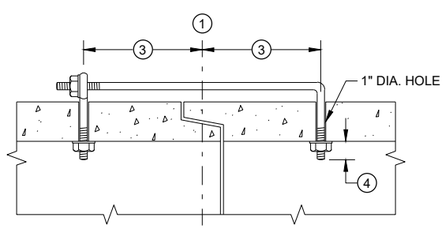


EYE BOLT (7)

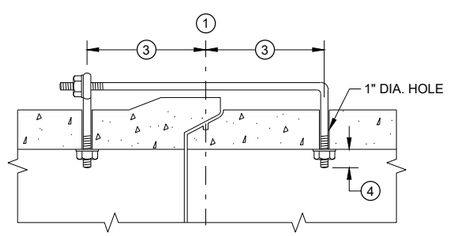
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

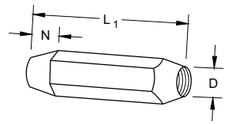
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



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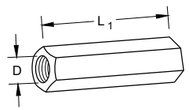
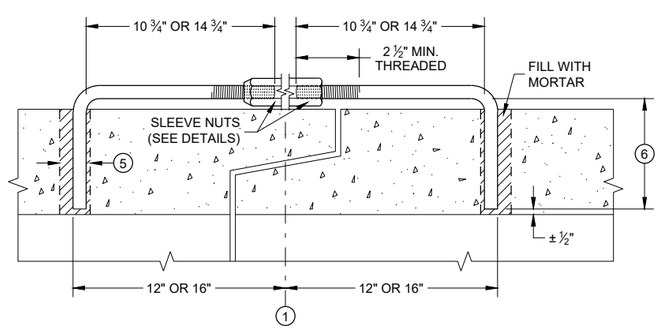


PLAIN

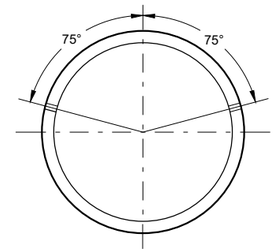
RIGHT AND LEFT THREADS

SLEEVE NUTS



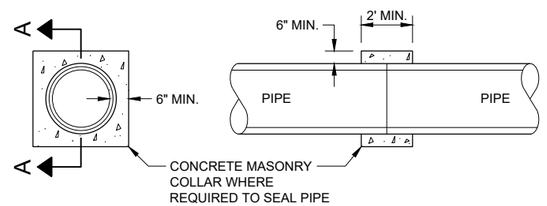
LONGITUDINAL SECTION

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 FO CONCRETE PIPE AND CONCRETE COLLAR DETAIL

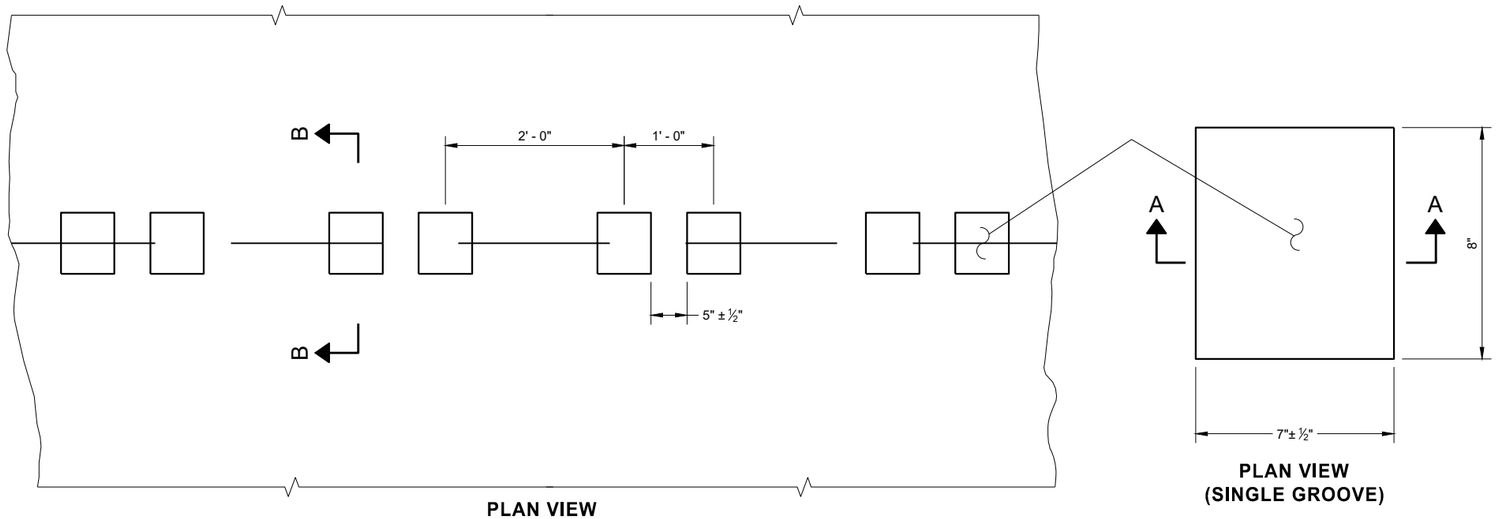
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 08F04 - 08

SDD 08F04 - 08



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

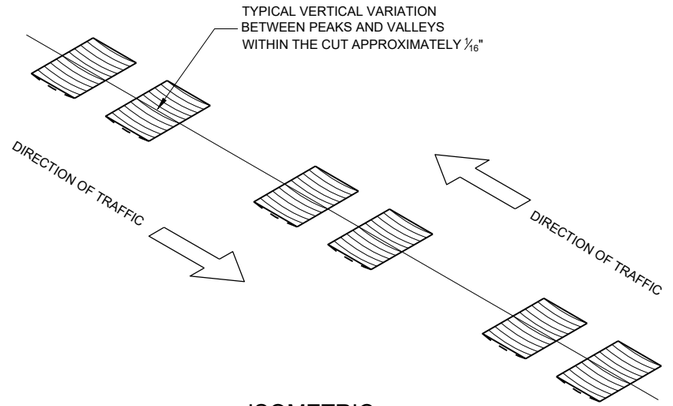
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

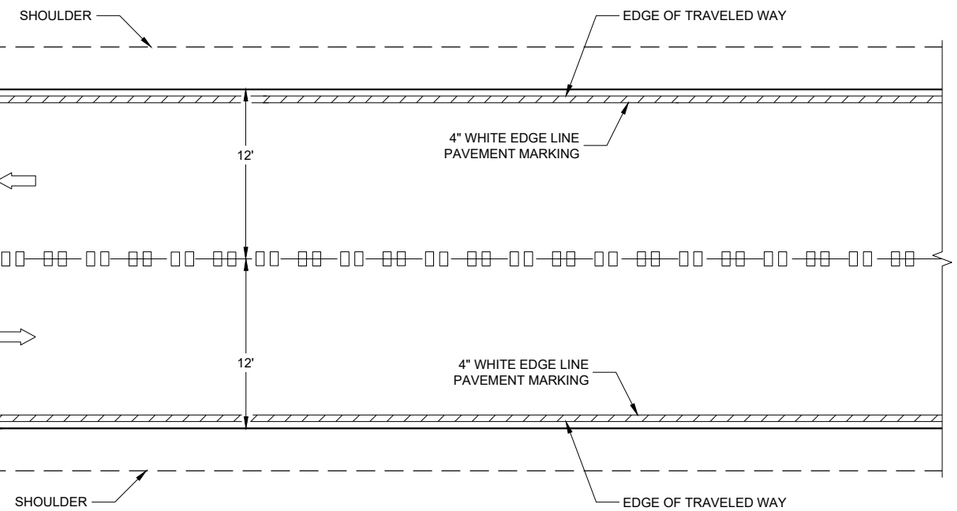
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

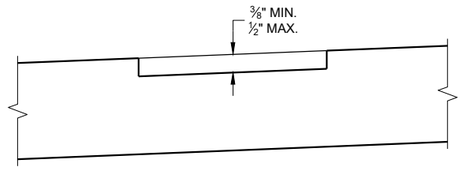
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



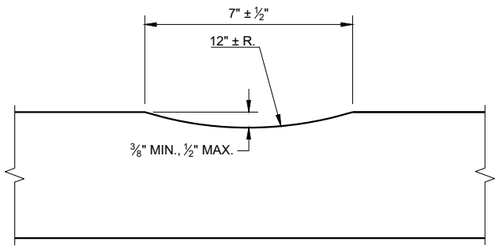
ISOMETRIC



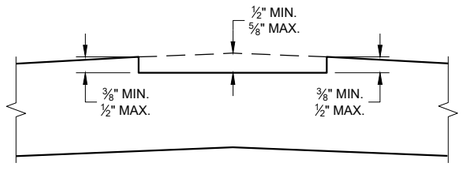
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION A - A



SECTION B - B
CROWNED ROADWAY

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

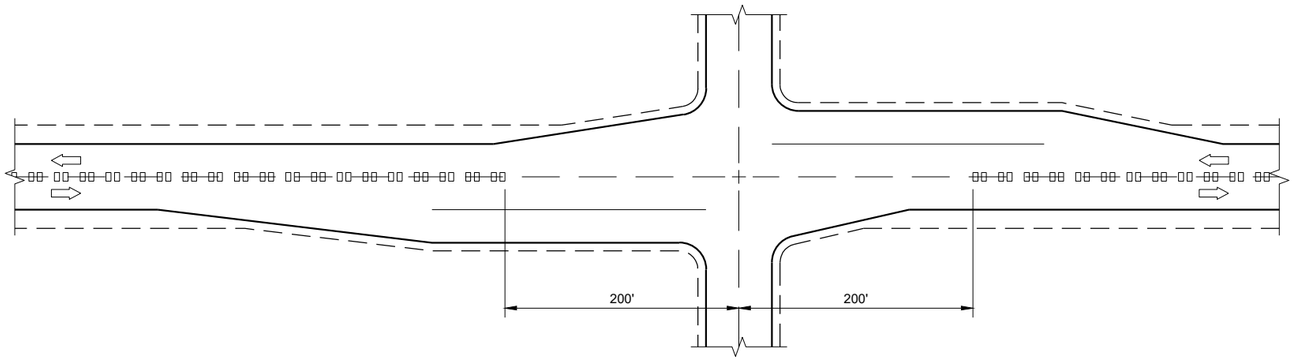
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

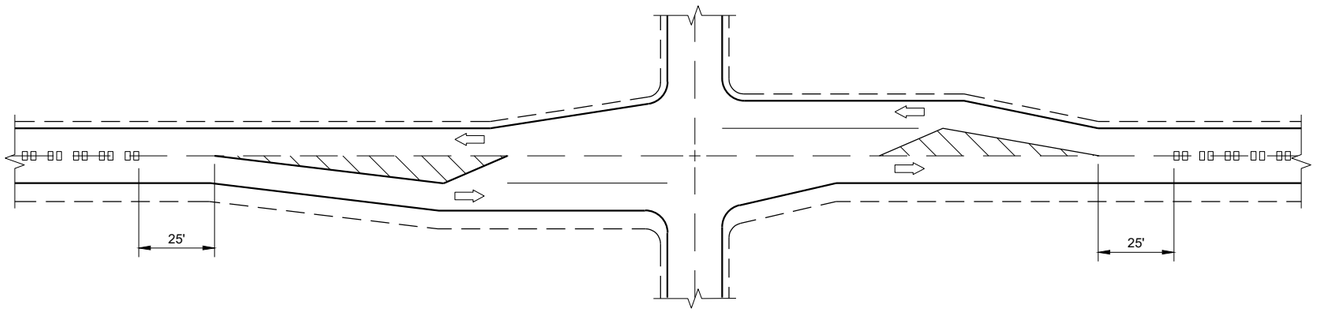
SDD 13A11 - 03a

6

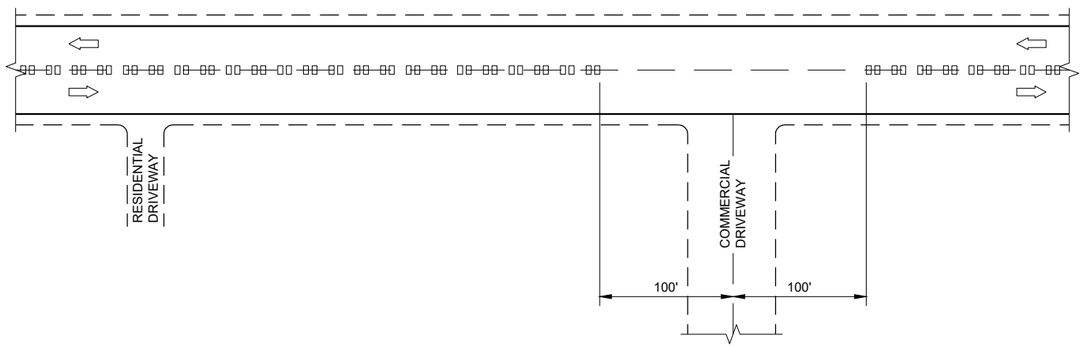
SDD 13A11 - 03a



CENTERLINE GROOVES AT INTERSECTIONS



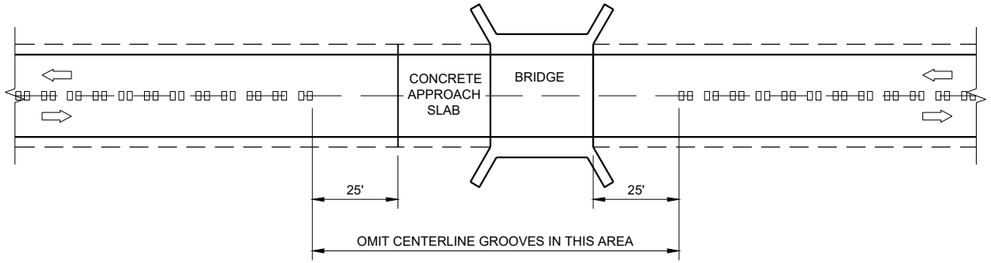
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



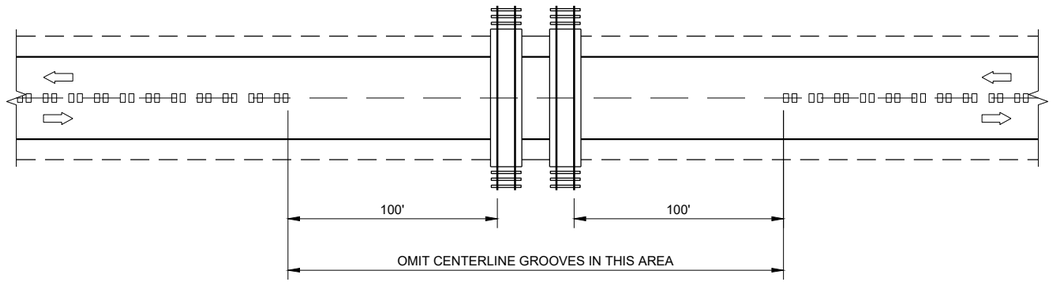
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

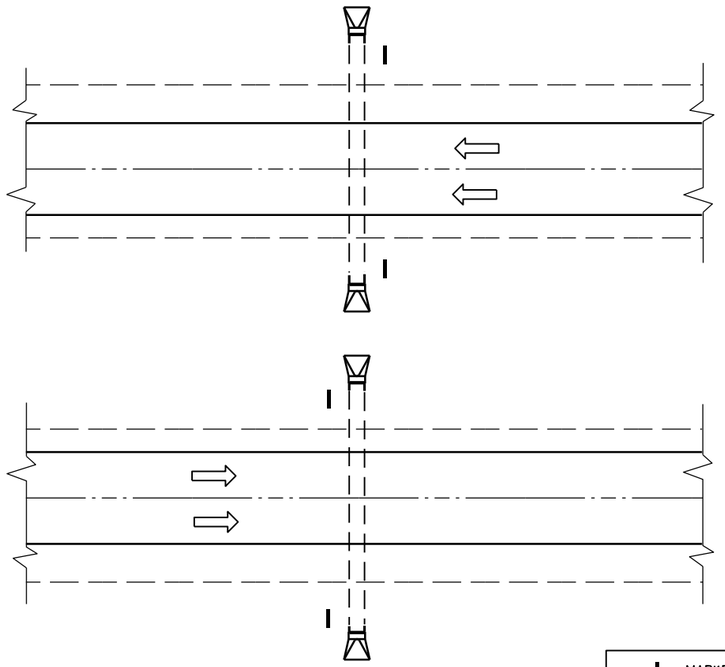
2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

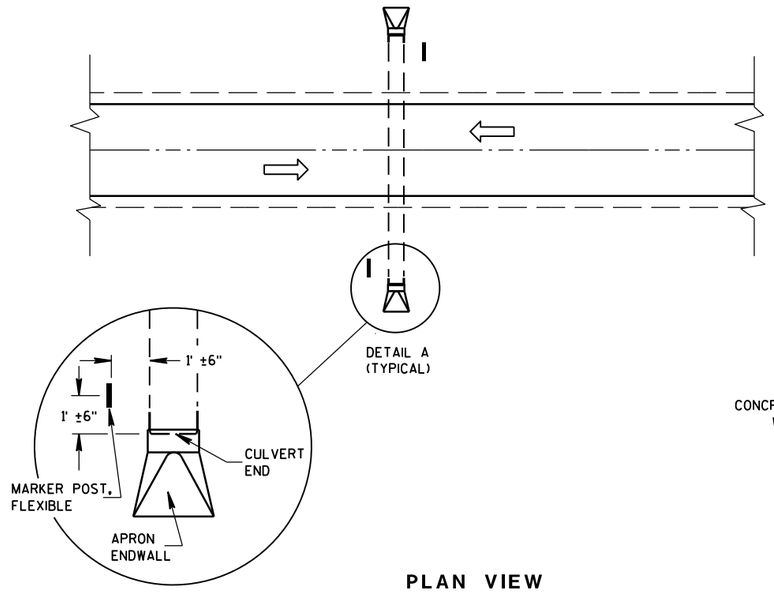
FHWA

6
SDD 13A11 - 03b



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

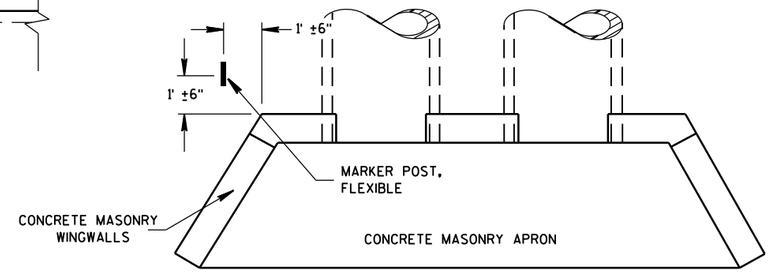
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

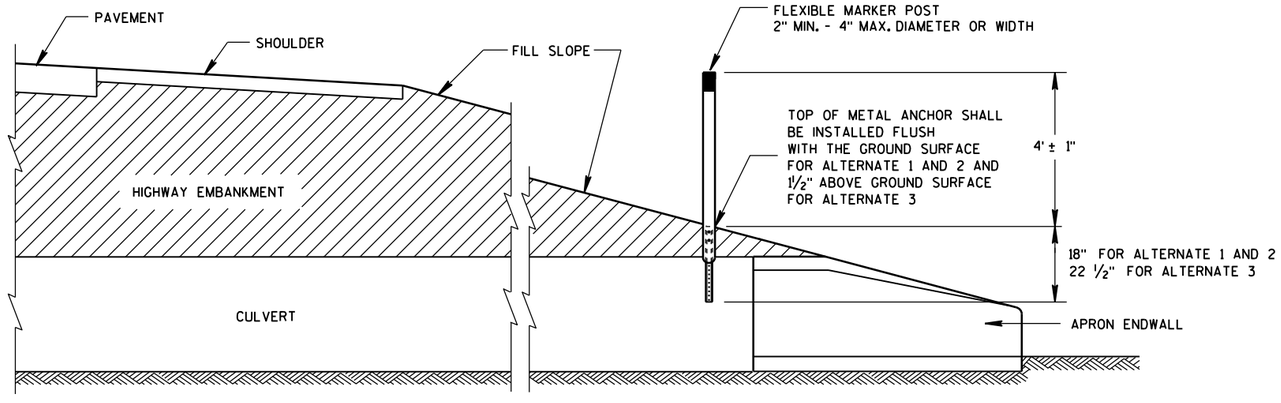
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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 TRANSPOI

6

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

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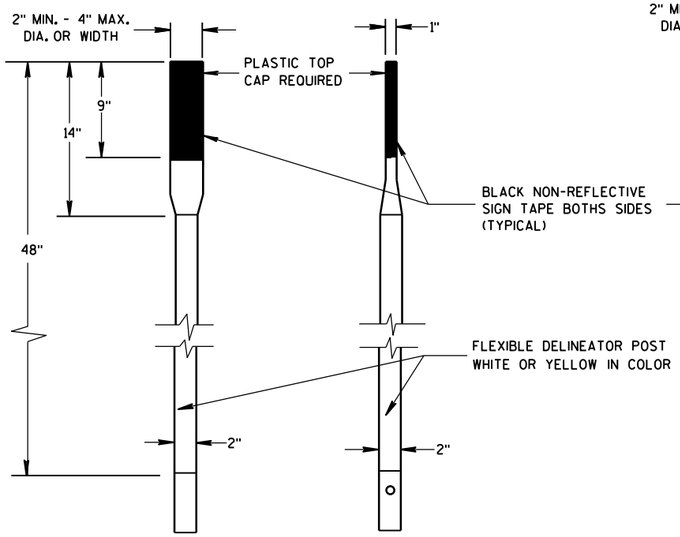
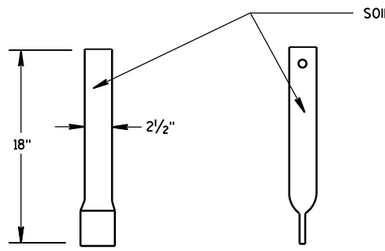
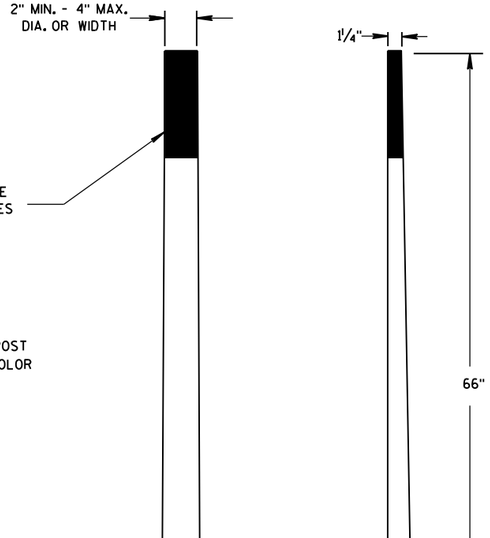
S.D.D. 15 A 3-2a





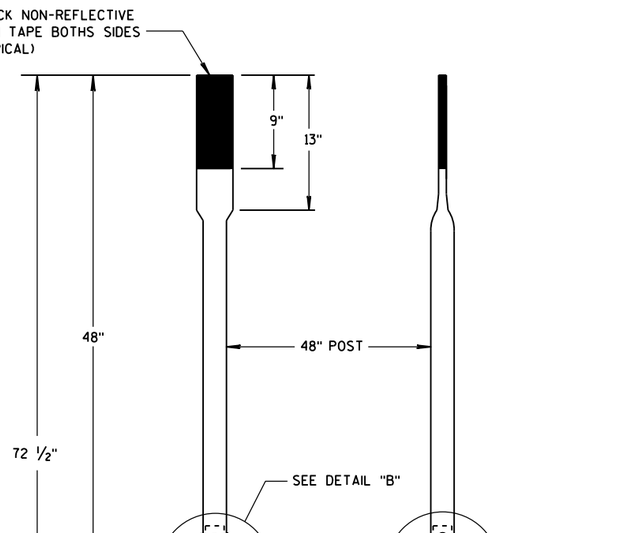
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

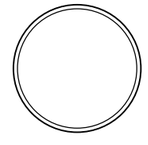
ALTERNATE 2



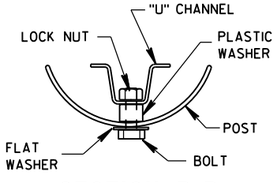
FRONT VIEW SIDE VIEW

ALTERNATE 3

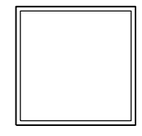
FLEXIBLE MARKER POSTS



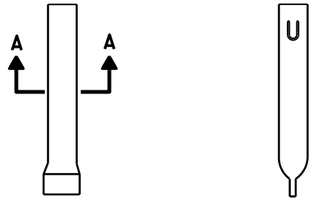
SECTION A-A



SECTION B-B

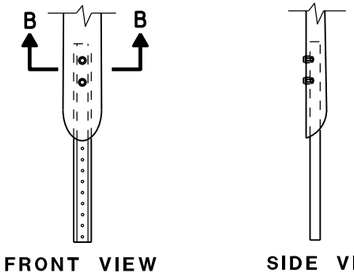


SECTION C-C



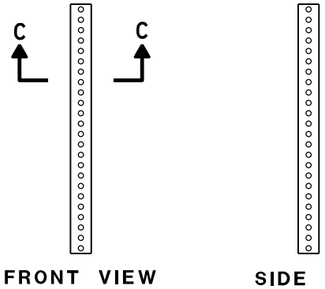
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

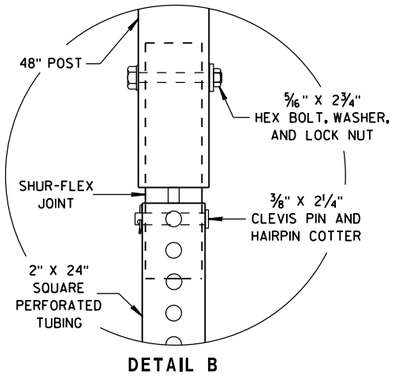
ALTERNATE 2



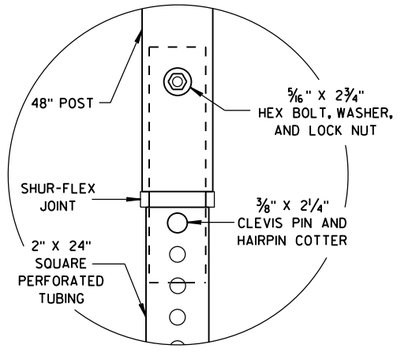
FRONT VIEW SIDE VIEW

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

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

GENERAL NOTES

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

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

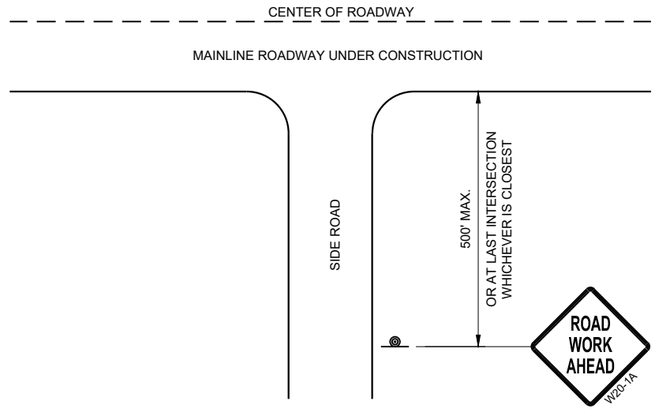
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



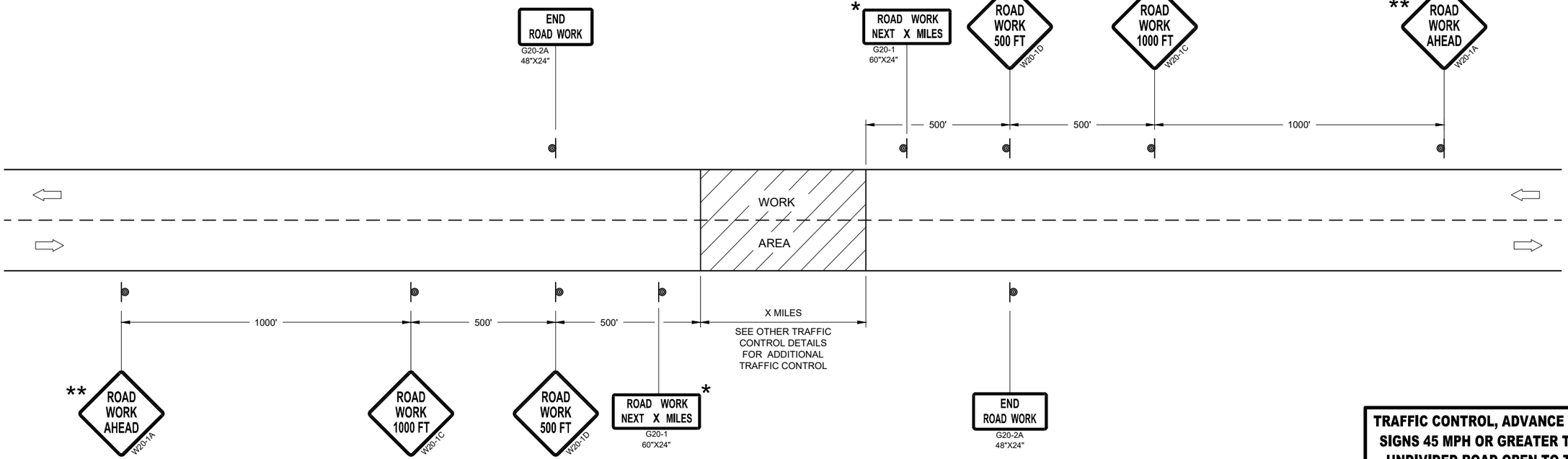
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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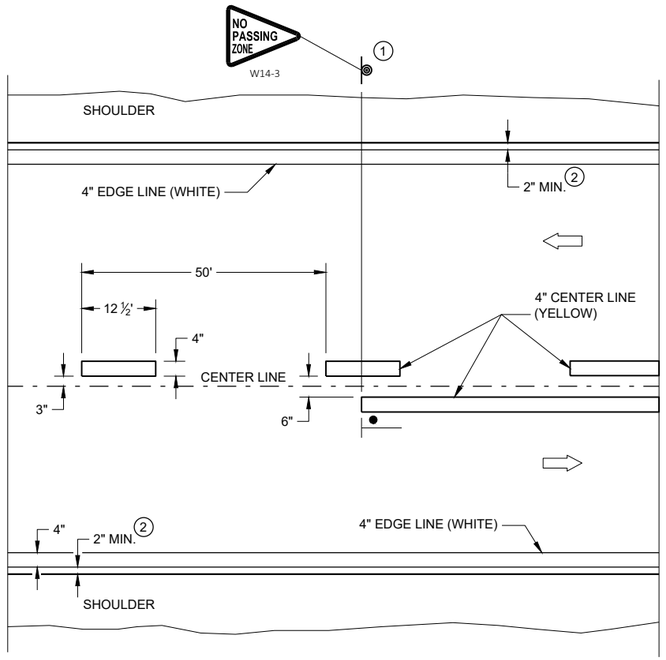
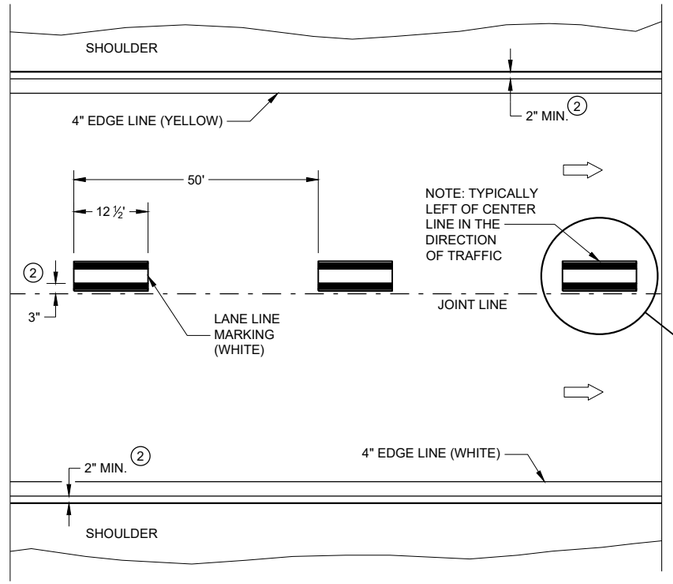
SDD 15C04 - 05



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

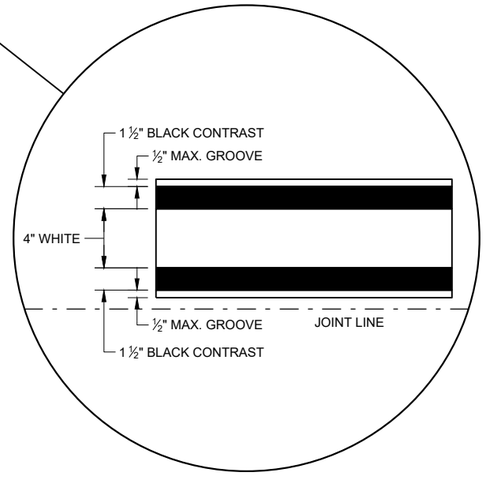
GENERAL NOTES

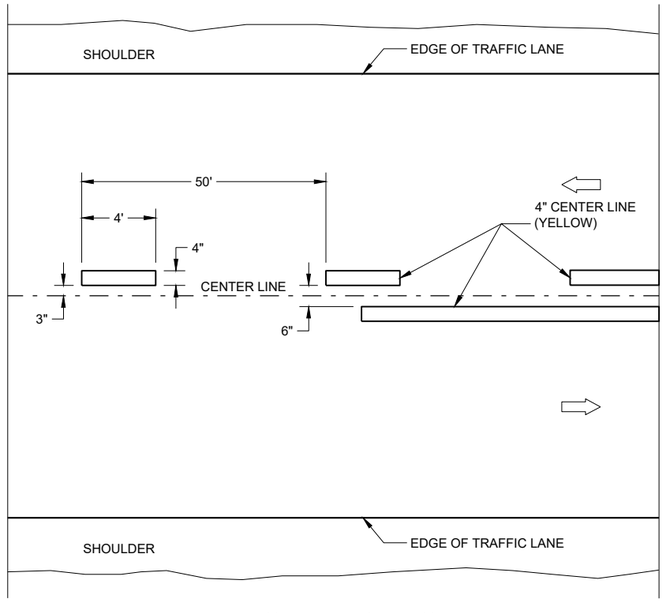
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

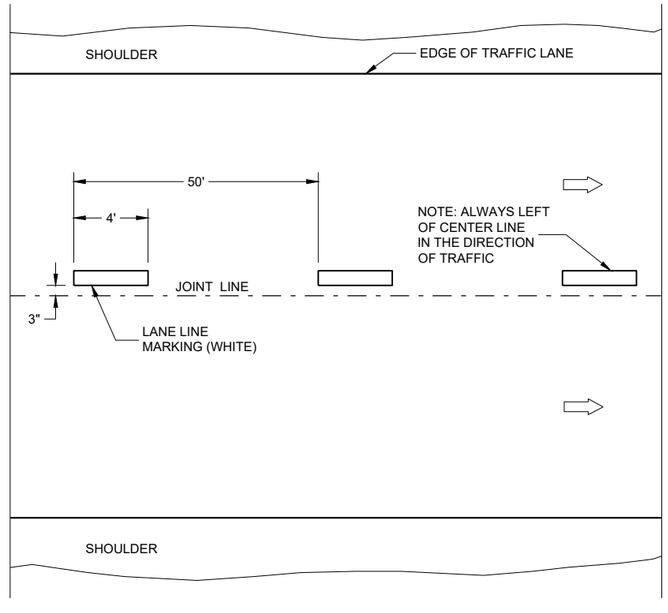
LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC





TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Matthew Rauch — STATEWIDE SIGNING AND M ENGINEER

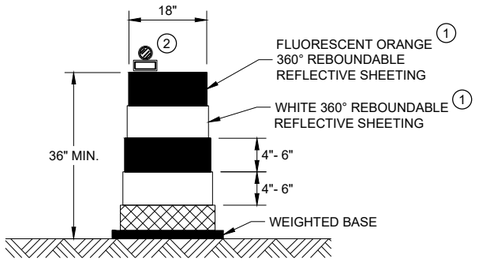
FHWA

SDD 15C08 - 20a

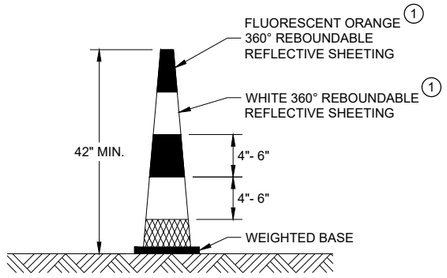
SDD 15C08 - 20a

GENERAL NOTES

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

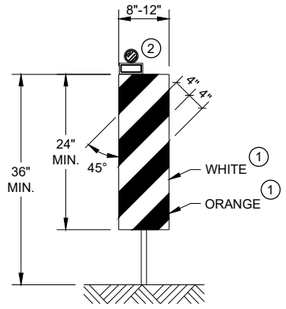


DRUM



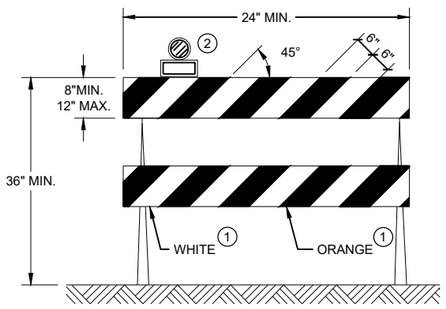
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



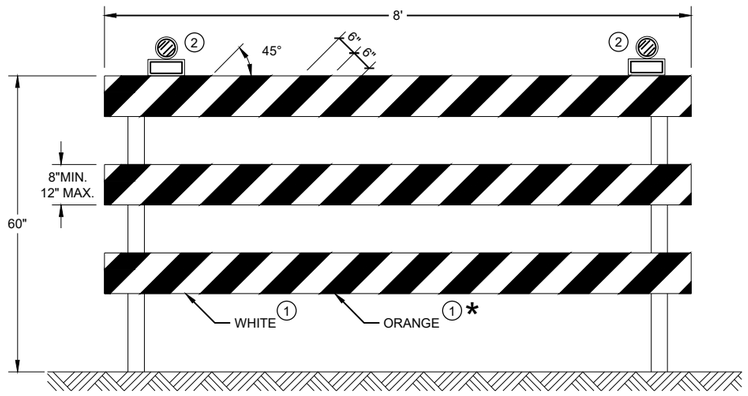
VERTICAL PANEL

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



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 09b

6

SDD 15C11 - 09b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

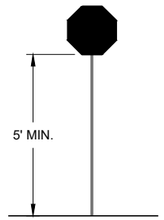
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



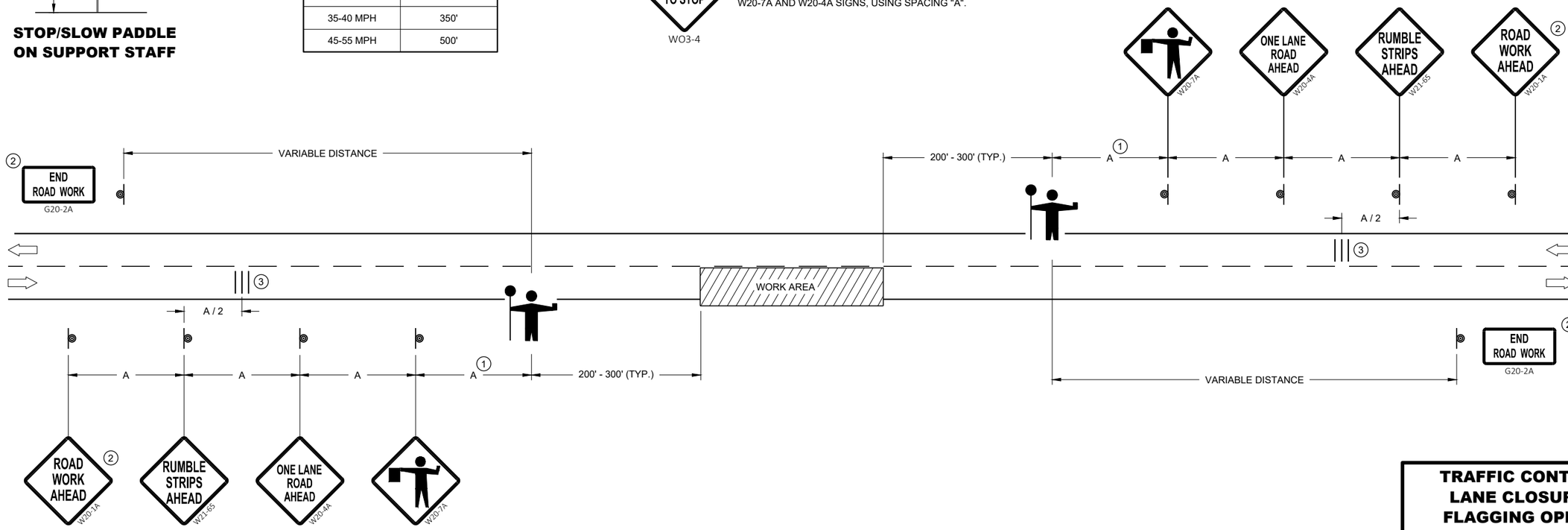
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C12 - 08

6

SDD 15C12 - 08

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

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

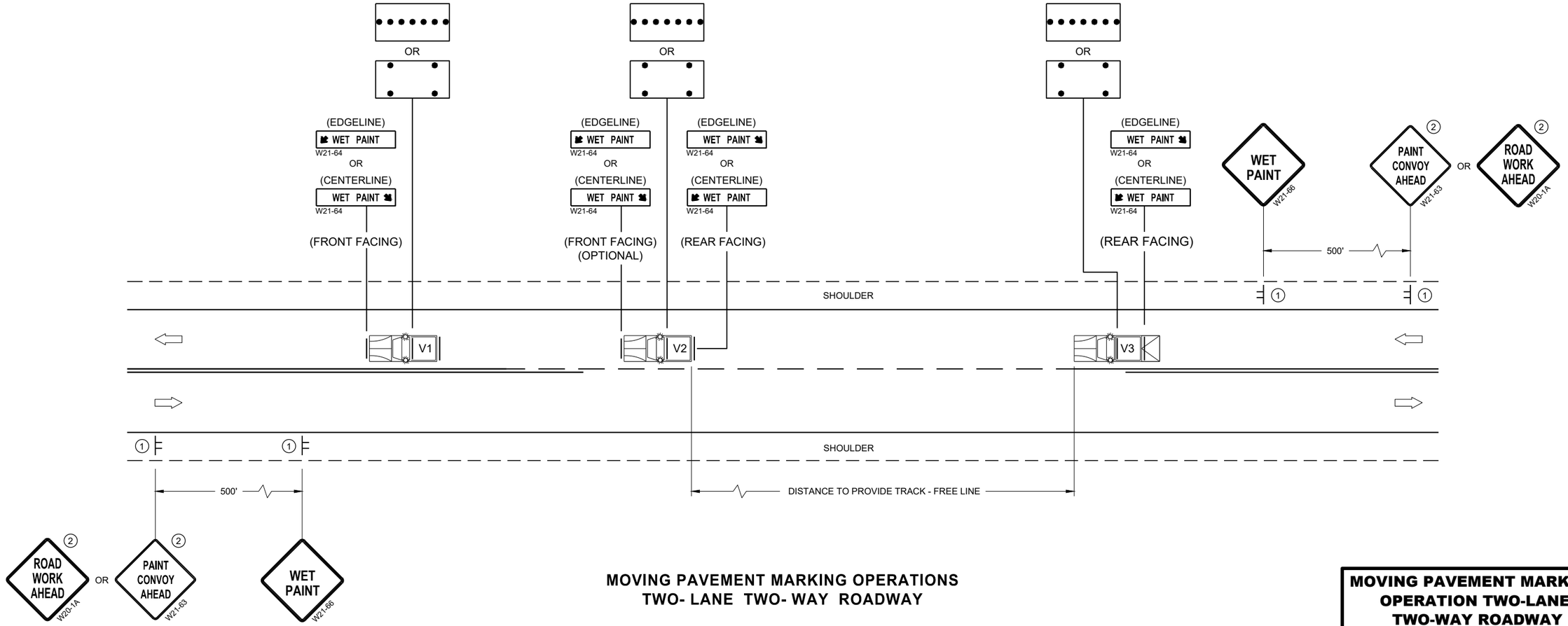
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

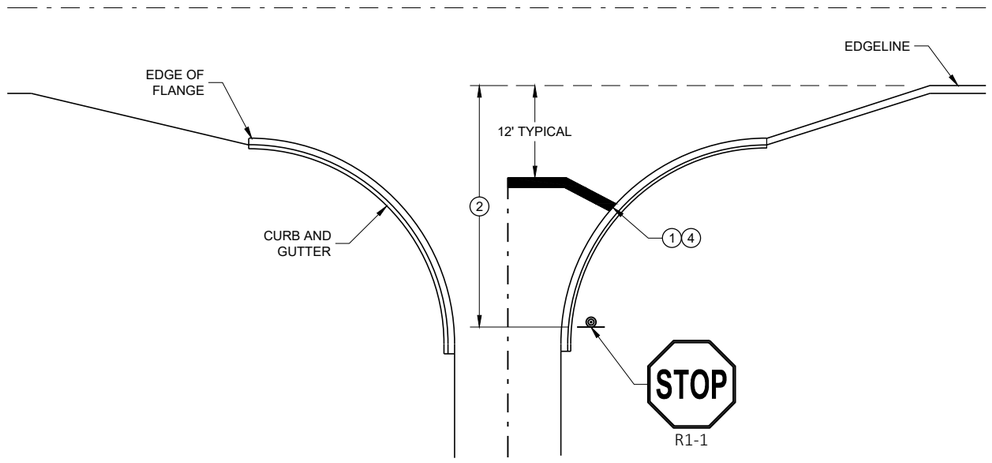
SDD 15C19 - 06a

SDD 15C19 - 06a

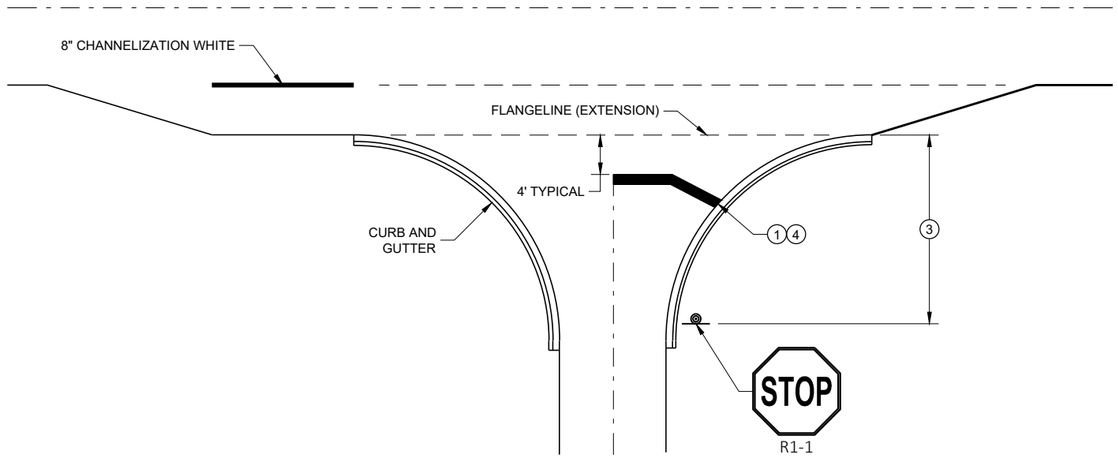
GENERAL NOTES

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

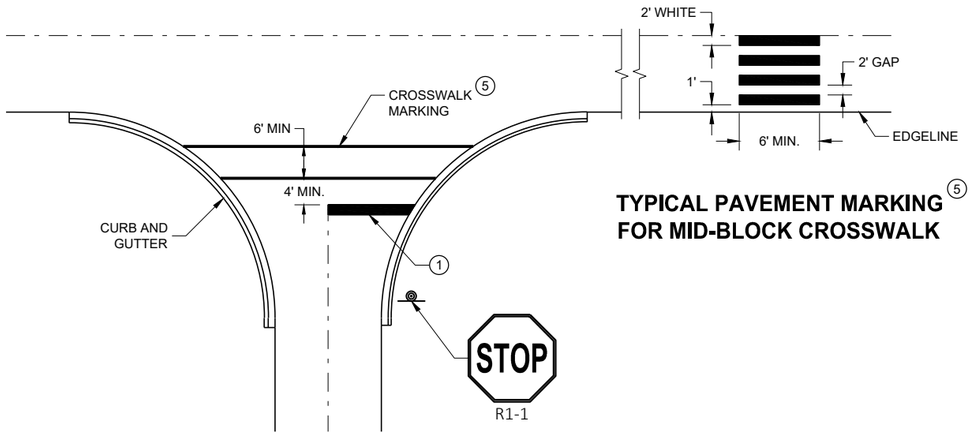
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

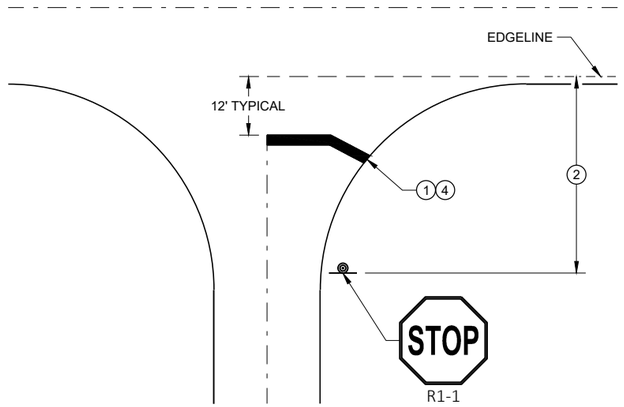


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

6

SDD 15C33 - 04

6

SDD 15C33 - 04

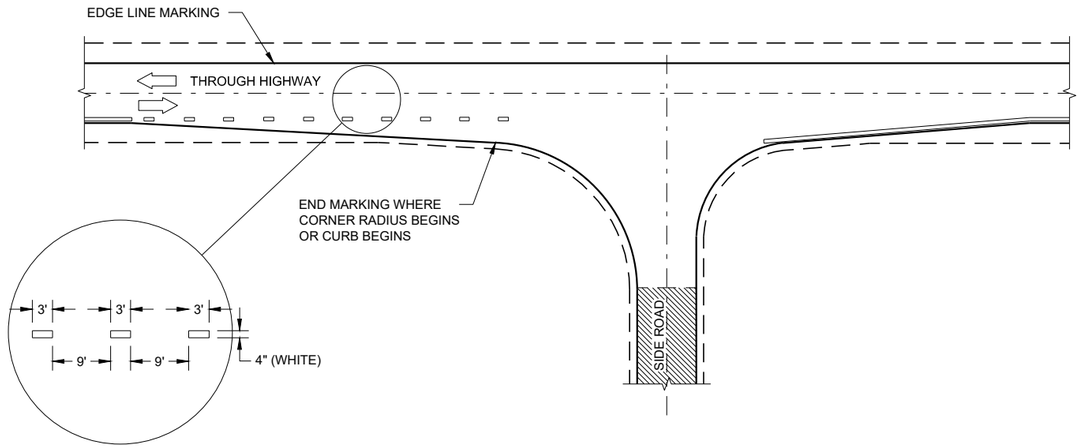
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

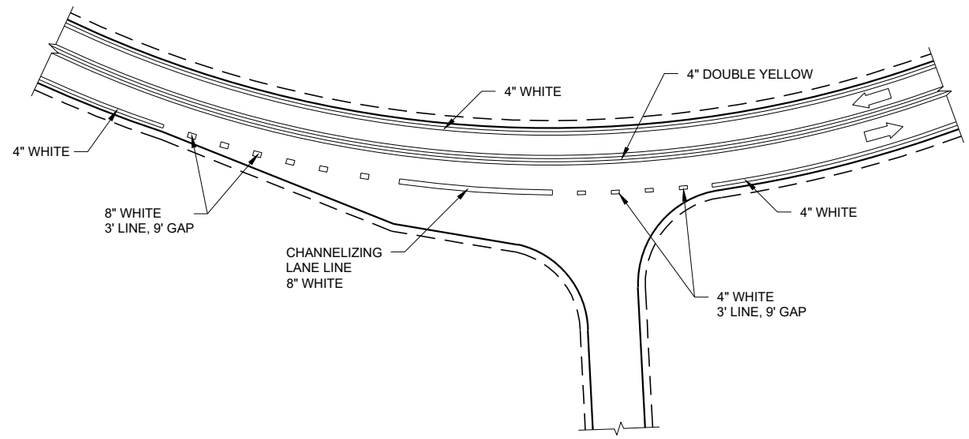
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

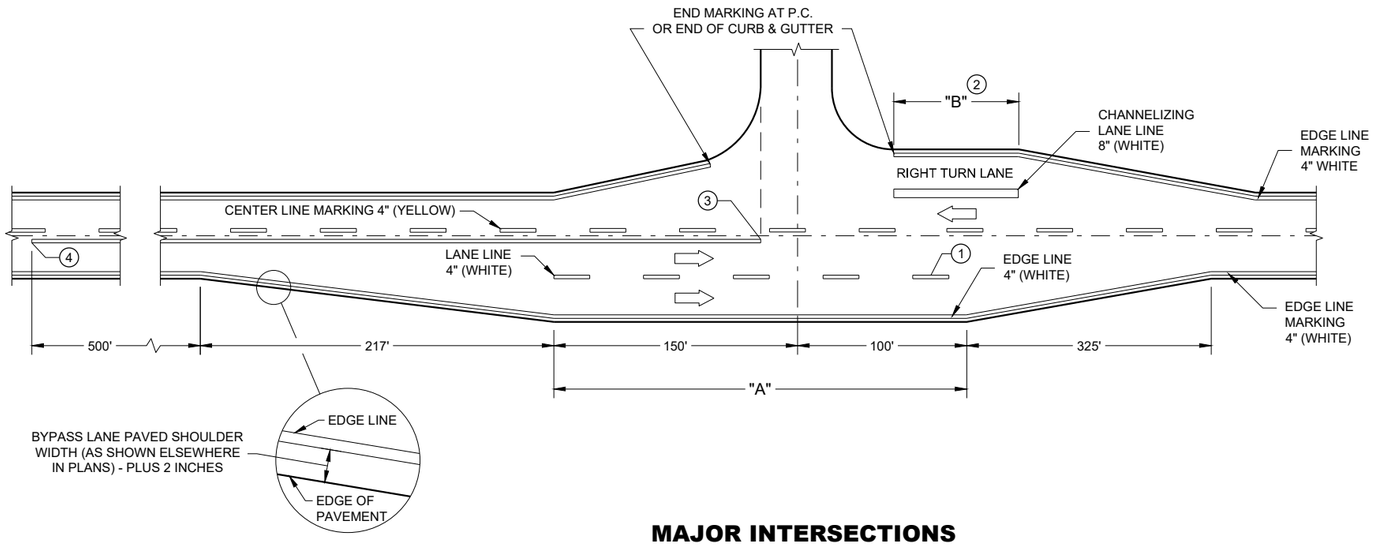
DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15C35 - 04a

6

SDD 15C35 - 04a

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

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

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

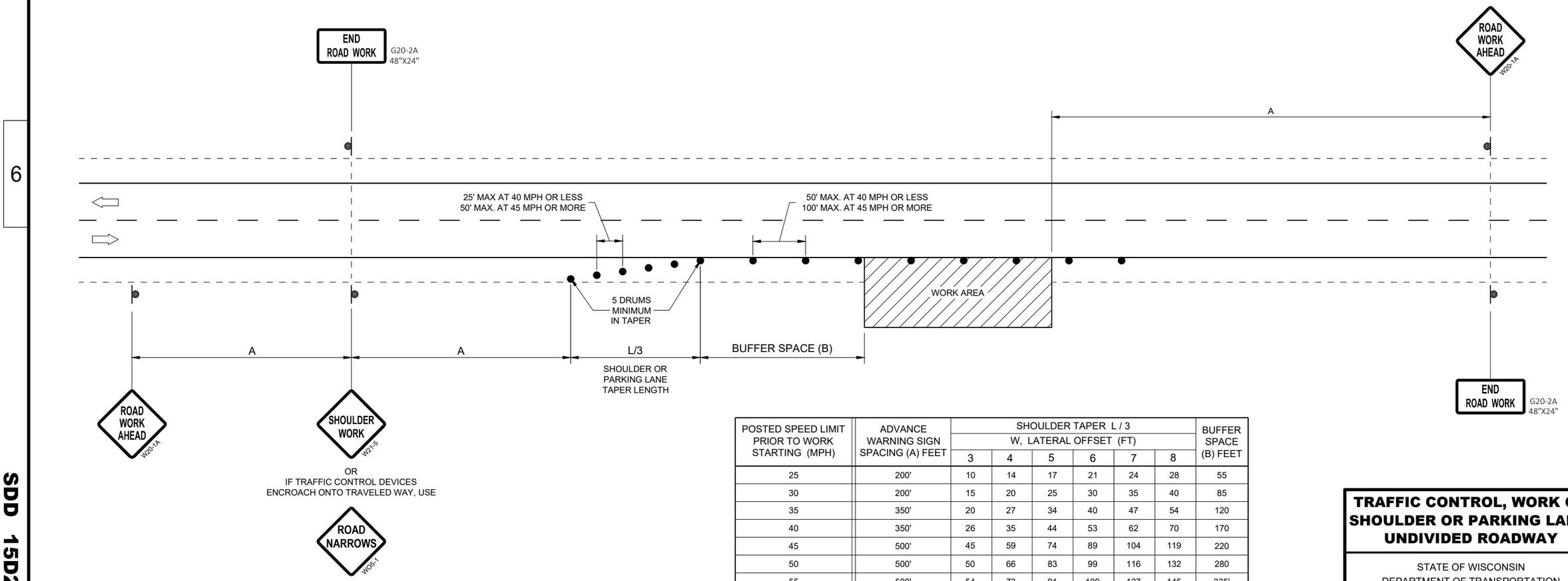
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

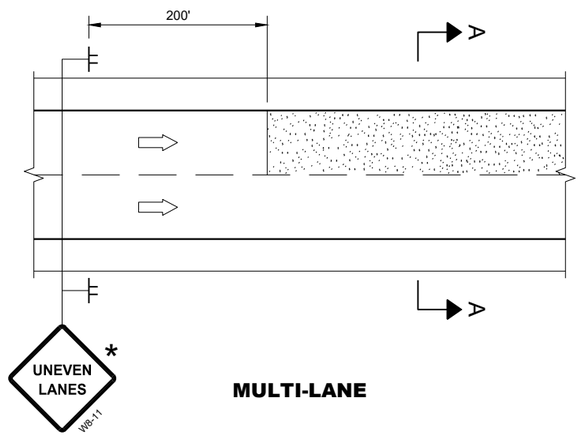
APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

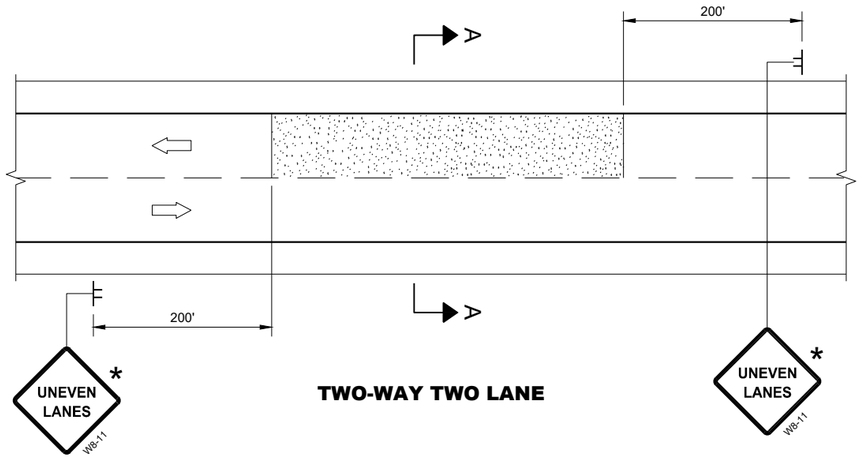
FHWA

SDD 15D28 - 04

SDD 15D28 - 04



MULTI-LANE



TWO-WAY TWO LANE

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

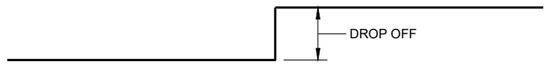
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

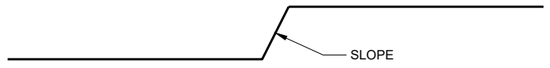
LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

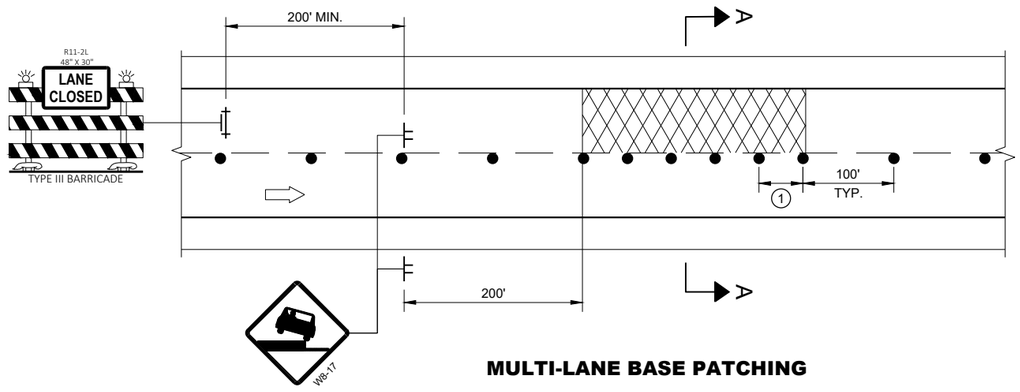


SECTION A - A

OR

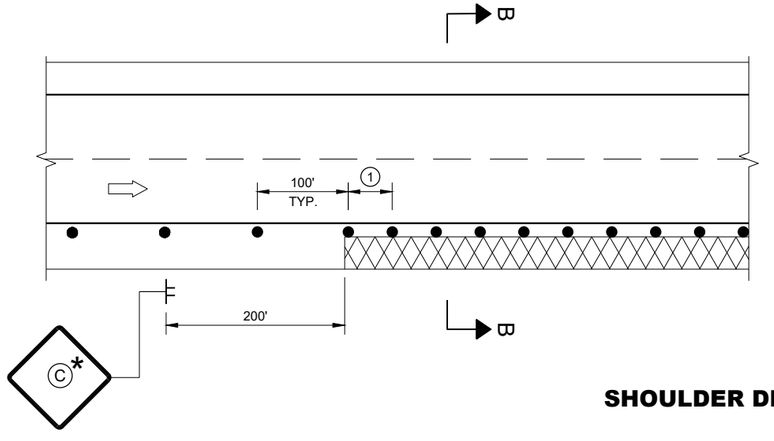


SECTION A - A

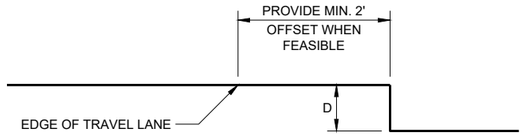


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

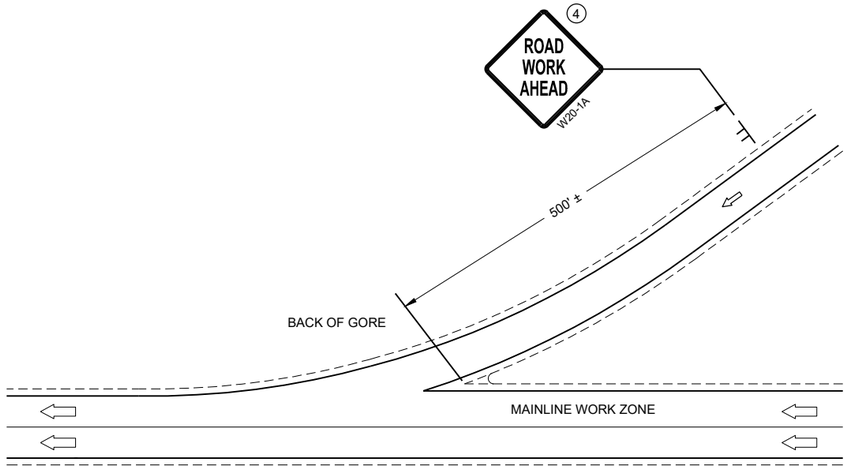
FHWA

6

SDD 15D39 - 02

LEGEND

- V1 SHADOW VEHICLE 1
- V2 SHADOW VEHICLE 2
- V3 ADVANCE WARNING TRUCK
- ● TRAFFIC CONTROL DRUM
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- WORK AREA



GENERAL NOTES

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

WHEN WORK ACTIVITY BLOCKS THE RIGHT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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

(1) DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) DRUMS ARE TO BE USED FOR BRIDGE DECK SEALING AND OTHER PROJECTS THAT REQUIRE DELINEATION.

(3) WITHIN 5 MILES, RELOCATE SIGNS AS WORK PROGRESSES AND NECESSARY OR AS DIRECTED BY THE ENGINEER.

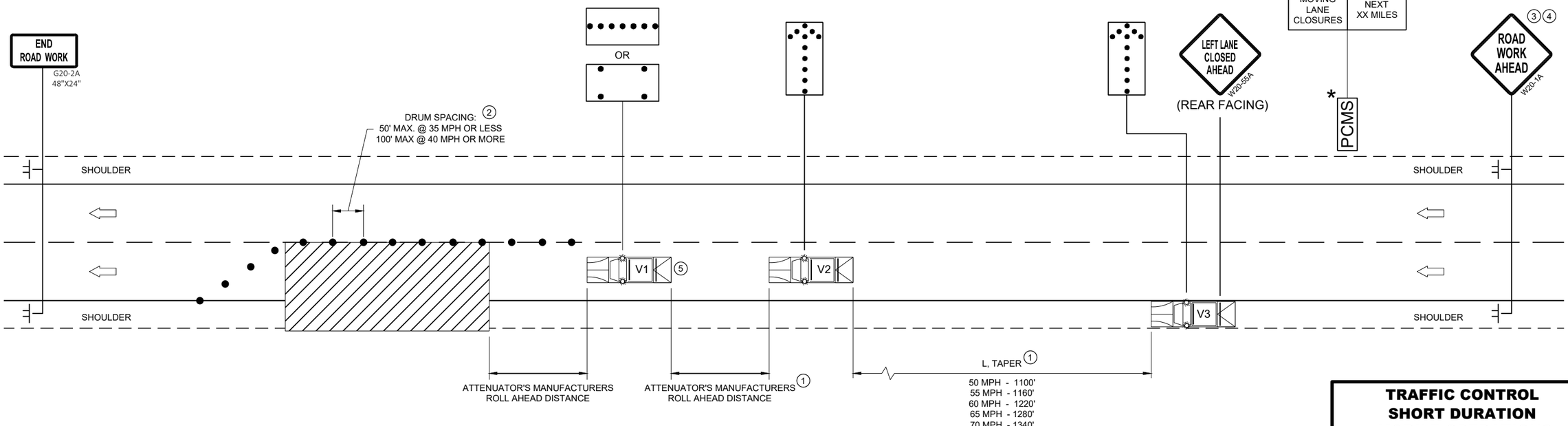
(4) SIGN NOT REQUIRED IF MOVING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(5) SHADOW VEHICLE 1 (V1) IS OPTIONAL

* PCMS OPTIONAL

PCMS MESSAGING

FRAME 1	FRAME 2
MOVING LANE CLOSURES	NEXT XX MILES



TRAFFIC CONTROL SHORT DURATION MOBILE OPERATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D43 - 02

6

SDD 15D43 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

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

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

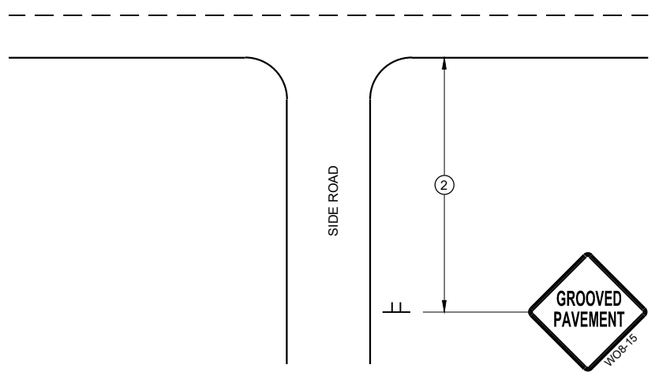
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

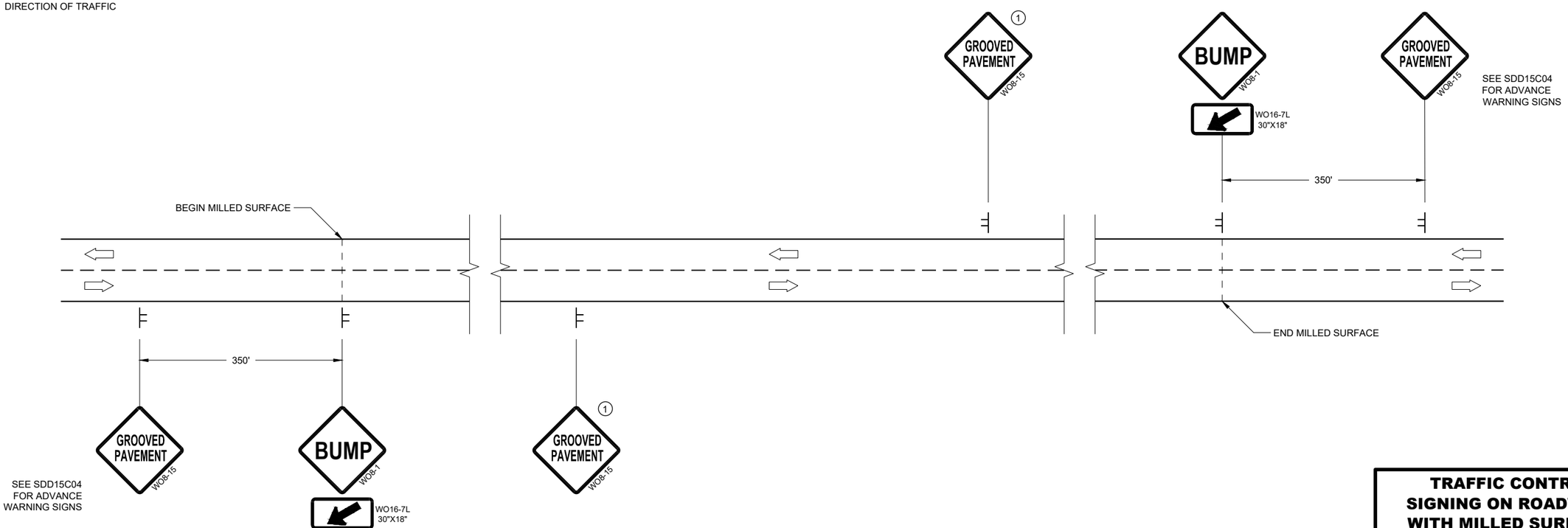
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D44 - 02

SDD 15D44 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

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

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

(1) PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

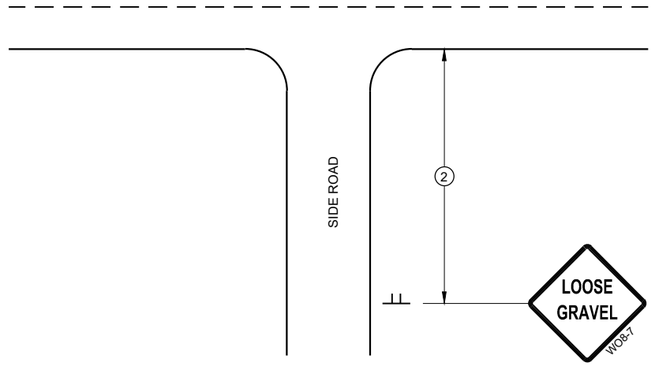
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

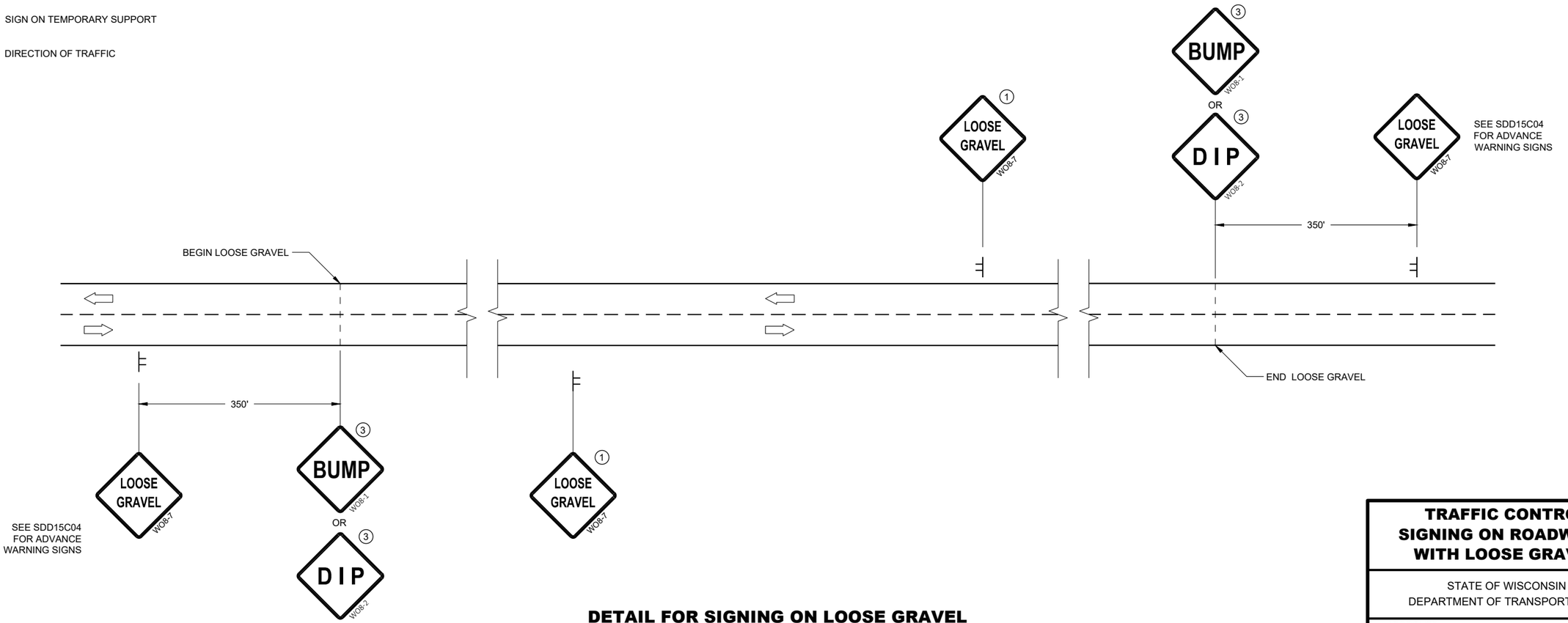
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D45 - 03

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

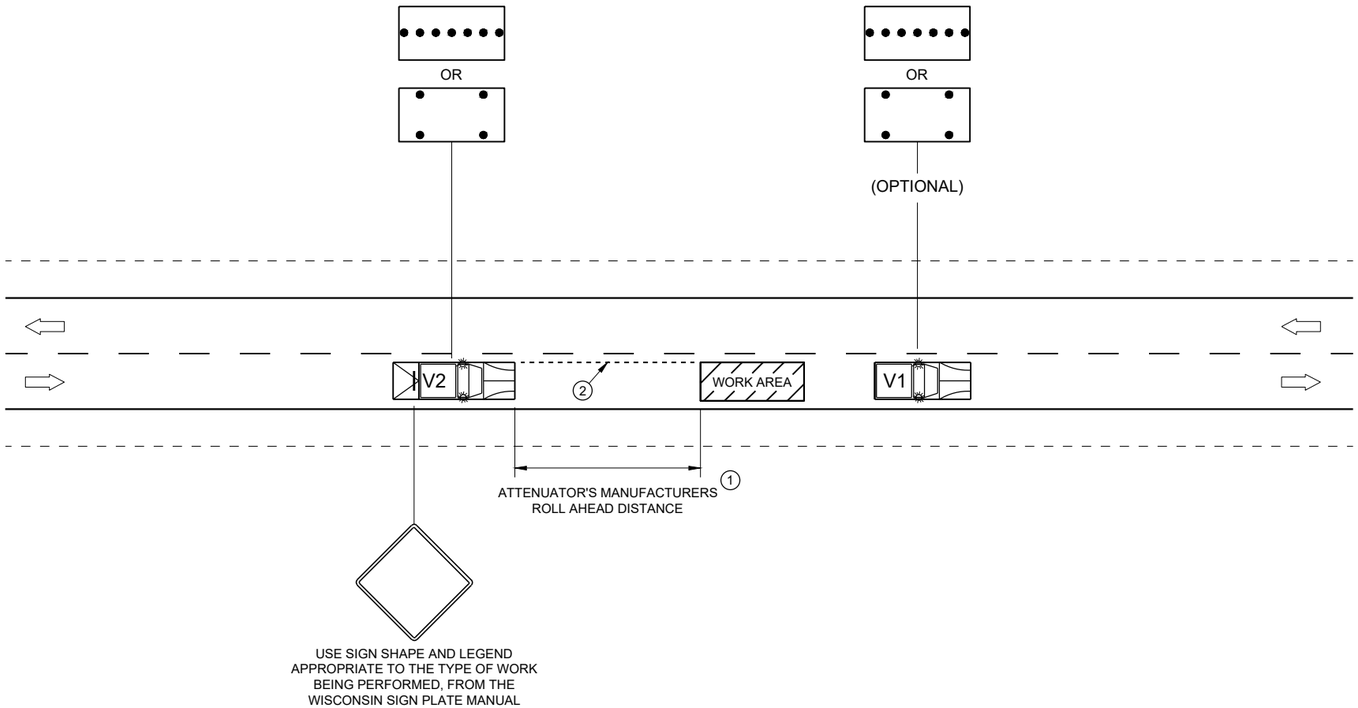
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



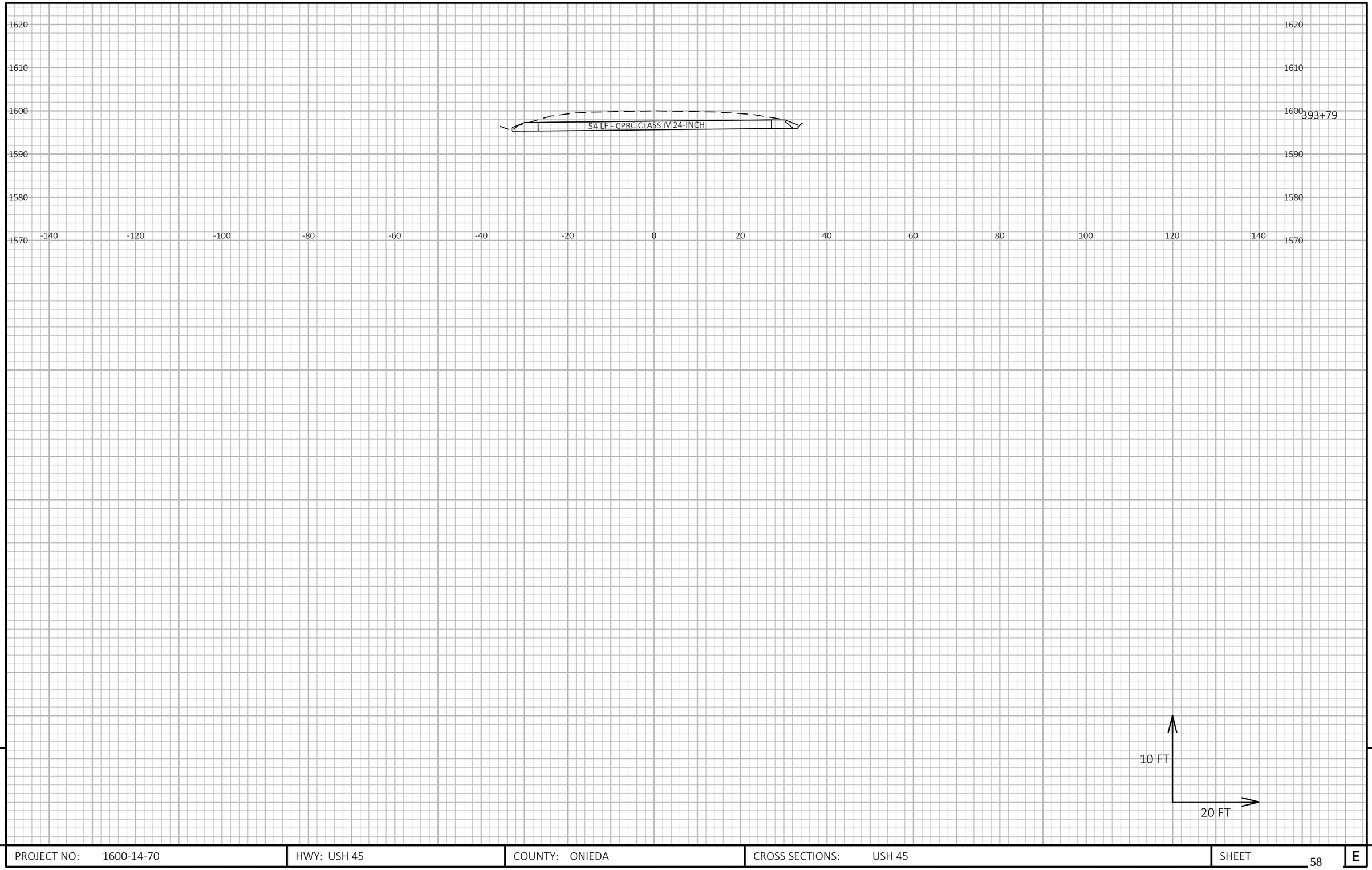
TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER
FHWA

6

SDD 15D51 - 01



9

9

PROJECT NO: 1600-14-70	HWY: USH 45	COUNTY: ONIEDA	CROSS SECTIONS: USH 45	SHEET 58	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - 1

PLOT DATE : 5/20/2021 7:53 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

RHI MAY 2022

PROJECT ID: WITH: 1600-14-70 **1600-14-71**

COUNTY: **ONEIDA**

ORDER OF SHEETS

TOTAL SHEETS = 196

45

N

DESIGN DESIGNATION 1600-14-71

A.A.D.T.	2020	=	3,500
A.A.D.T.	2040	=	4,300
D.H.V.		=	600
D.D.		=	61/39
T.		=	14.4
DESIGN SPEED		=	35
ESALS		=	1,100,000

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ANTIGO-MONICO

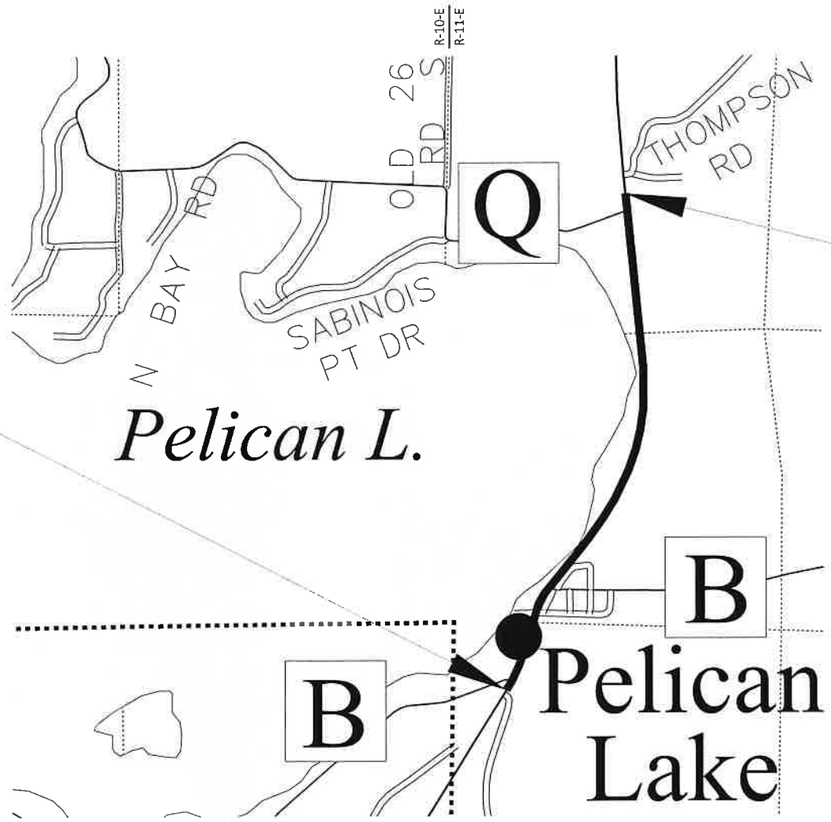
CTH B TO CTH Q

USH 45

ONEIDA

STATE PROJECT NUMBER
1600-14-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1600-14-71	WISC 2022415	1
1600-14-70	WISC 2022414	1



BEGIN PROJECT
STA 115+85.58
Y = 112,680.868
X = 326,116.593

END PROJECT
STA 208+70.90

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	300'FB'	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
WOODED OR SHRUB AREA		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

LAYOUT
SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 1.759

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), ONEIDA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

JT ENGINEERING, INC
Consultant Services

WISCONSIN
BRIAN C. CHLOPEK
39370-6
PULASKI, WI
PROFESSIONAL ENGINEER

DATE: 03/02/22 (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	JT ENGINEERING, INC.
Project Manager	STACY HAGENBUCHER, P.E.
Regional Examiner	CHERYL SIMON, P.E.
Regional Supervisor	KAI KILEN, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 3/10/22 (Signature)

E

DIGGERS HOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com

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COMMUNICATION LINE
MR. ANDY HEIGL
105 KENT STREET
IRON MOUNTAIN, MI 49801
TEL: (906) 776-2609
MOBILE: (906) 221-7536
EMAIL: ANDY.HEIGL@ASTREACONNECT.COM

FRONTIER COMMUNICATIONS OF WI LLC
COMMUNICATION LINE
MR. RUSS RYAN
315 OAK STREET
OAKFIELD, WI 53065
TEL: (920) 583-3275
MOBILE: (920) 737-9662
EMAIL: RUSSELL.W.RYAN@FTR.COM

WISCONSIN PUBLIC SERVICE CORPORATION
ELECTRICITY
MR. DON LUTZOW
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WAUSAU, WI 54402
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MOBILE: (715) 4936-7802
EMAIL: DONALD.LUTZOW@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE CORPORATION
GAS/PETROLEUM
CHRIS GILMAN
2027 NAVAJO STREET, P.O. BOX 160
RHINELANDER, WI 54501
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MOBILE: (715) 490-4153
EMAIL: CHRIS.GILMAN@WISCONSINPUBLICSERVICE.COM
24-HR CUSTOMER SERVICE: 1-800-450-7260
24-HR EMERGENCY CONTACT: 1-800-450-7280

AGENCY/PROJECT CONTACT

WISCONSIN DNR LIAISON
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NORTHERN REGION
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
TEL: (715) 365-8916
EMAIL: WENDY.HENNIGES@WISCONSIN.GOV

SEQUENCE OF PLANS AND DETAILS IN SECTION 2

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
CURB RAMP DETAILS
EROSION CONTROL PLAN
STORM SEWER PLAN
TRAFFIC CONTROL OVERVIEW
PAVEMENT MARKING & PERMANENT SIGNING PLAN

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 37.61 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.90 ACRES

1. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
2. ANY LOCAL OR MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
3. A THIN MAINTENANCE ASPHALT OVERLAY WAS ADDED TO USH 45 IN FALL 2019 AND SUMMER 2020 AFTER THE FIELD SURVEY FOR THE PROJECT WAS COMPLETE. THEREFORE THIS IS NOT REFLECTED IN THE EXISTING SURFACE DTM. SEE TYPICAL SECTIONS FOR ADDITIONAL DETAIL.
4. ALL CURB & GUTTER DIMENSIONS AND ELEVATIONS ARE PROVIDED TO THE FLAG LINE UNLESS NOTED OTHERWISE.
5. THE PRESENCE AND REMOVAL OF ANY REINFORCEMENT, REBAR OR WIRE MESH FOUND IN ANY EXISTING CONCRETE PAVEMENT SHALL BE INCIDENTAL TO THE REMOVING PAVEMENT BID ITEM.
6. BUTT JOINTS SHALL NOT BE PLACED WITHIN RECREATIONAL VEHCLE CROSSING LOCATIONS.

2

PELICAN LAKE

N

CTH Q

WEITH RD

USH 45

CATO ST

CTH B/MILWAUKEE ST

MANITOWOC ST

SHEBOYGAN ST

APPLETON ST

CTH B

WELL

115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205

END PROJECT
STA. 208+70.90

BEGIN PROJECT
STA. 115+85.58
Y = 112,680.868
X = 326,116.593

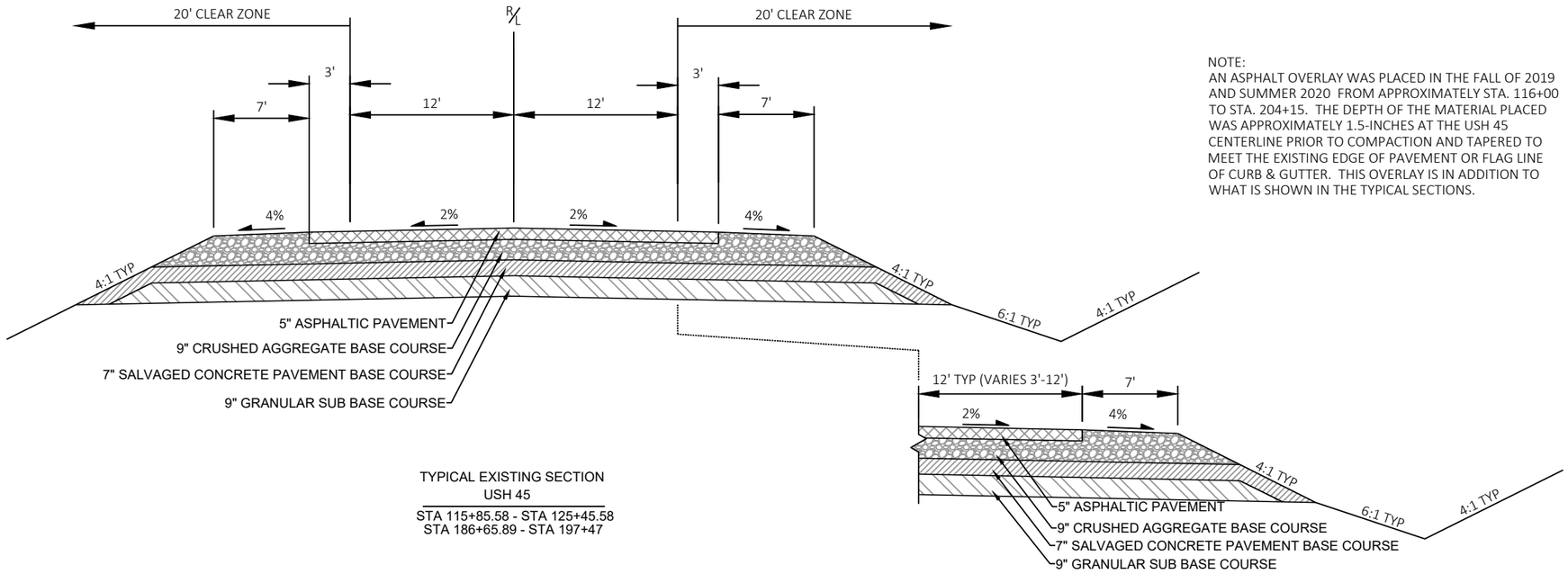
0 500 1000 Feet

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_020201_PO.DWG
LAYOUT NAME - 01

PLOT DATE : 8/17/2020 9:28 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:500 FT

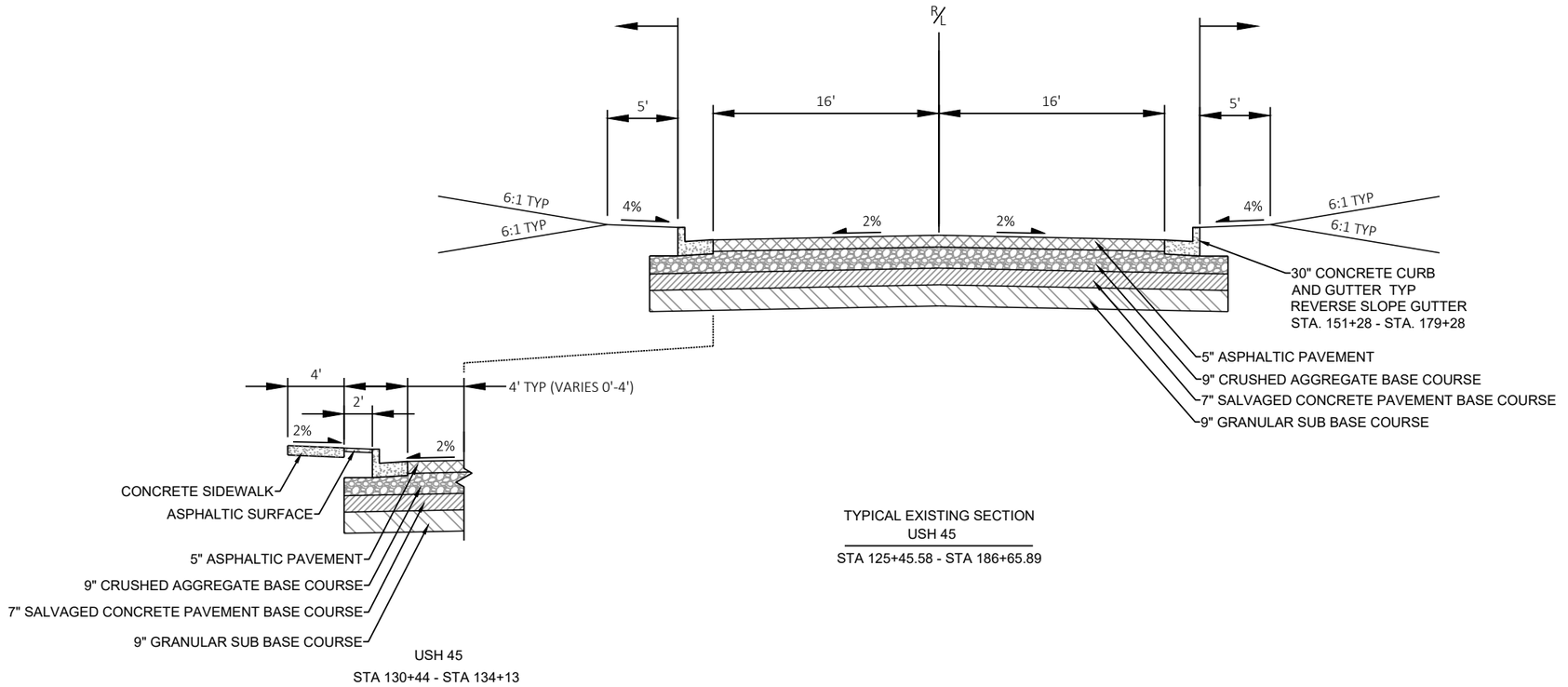
WISDOT/CADDS SHEET 44



TYPICAL EXISTING SECTION
USH 45
STA 115+85.58 - STA 125+45.58
STA 186+65.89 - STA 197+47

USH 45
STA 115+85.58 - STA 121+52.25, RT

NOTE:
AN ASPHALT OVERLAY WAS PLACED IN THE FALL OF 2019 AND SUMMER 2020 FROM APPROXIMATELY STA. 116+00 TO STA. 204+15. THE DEPTH OF THE MATERIAL PLACED WAS APPROXIMATELY 1.5-INCHES AT THE USH 45 CENTERLINE PRIOR TO COMPACTION AND TAPERED TO MEET THE EXISTING EDGE OF PAVEMENT OR FLAG LINE OF CURB & GUTTER. THIS OVERLAY IS IN ADDITION TO WHAT IS SHOWN IN THE TYPICAL SECTIONS.

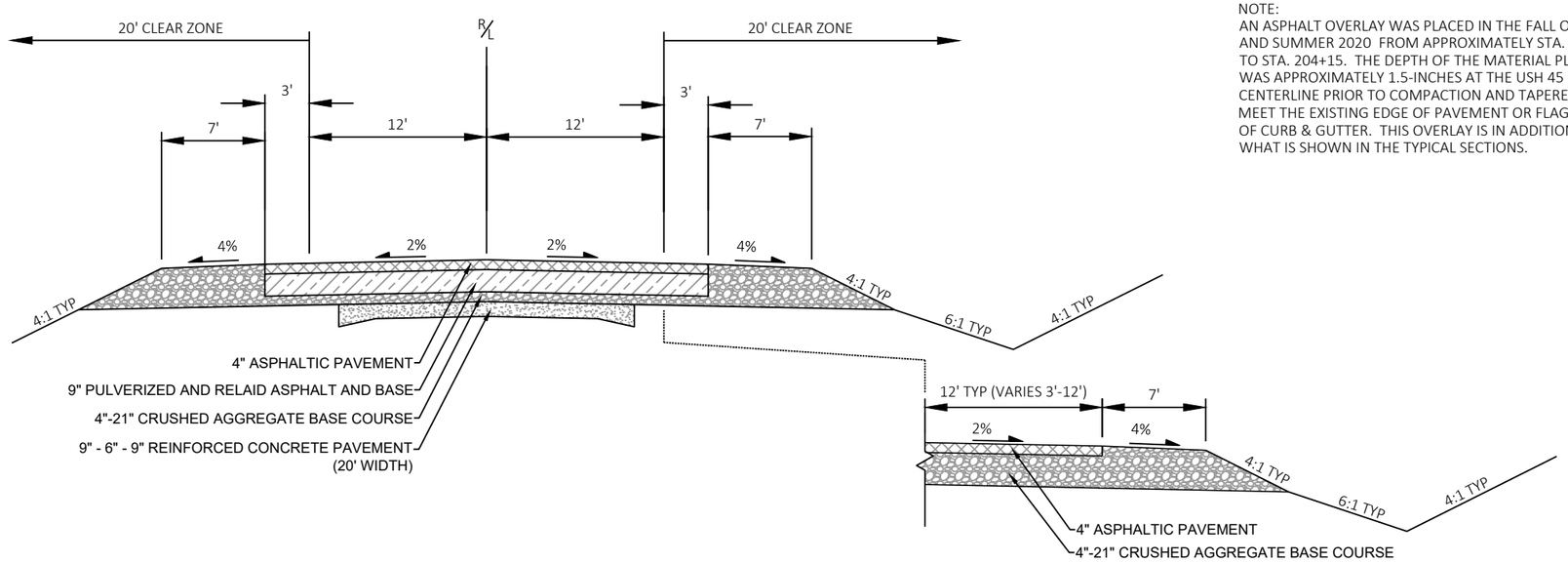


TYPICAL EXISTING SECTION
USH 45
STA 125+45.58 - STA 186+65.89

USH 45
STA 130+44 - STA 134+13

NOTE:
AN ASPHALT OVERLAY WAS PLACED IN THE FALL OF 2019 AND SUMMER 2020FROM APPROXIMATELY STA. 116+00 TO STA. 204+15. THE DEPTH OF THE MATERIAL PLACED WAS APPROXIMATELY 1.5-INCHES AT THE USH 45 CENTERLINE PRIOR TO COMPACTION AND TAPERED TO MEET THE EXISTING EDGE OF PAVEMENT OR FLAG LINE OF CURB & GUTTER. THIS OVERLAY IS IN ADDITION TO WHAT IS SHOWN IN THE TYPICAL SECTIONS.

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN: TYPICAL SECTIONS	SHEET 4	E



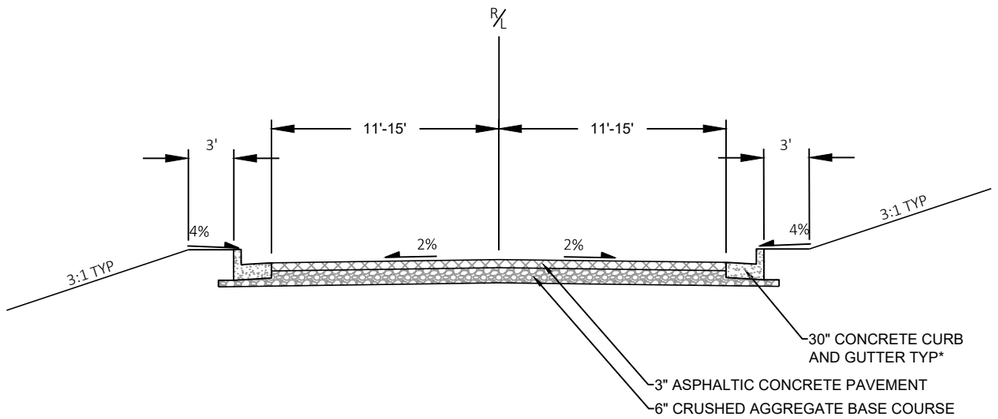
TYPICAL EXISTING SECTION
USH 45

STA 197+47 - STA 208+70.90

USH 45

STA 202+53.45 - STA 208+70.90, RT

NOTE:
AN ASPHALT OVERLAY WAS PLACED IN THE FALL OF 2019 AND SUMMER 2020 FROM APPROXIMATELY STA. 116+00 TO STA. 204+15. THE DEPTH OF THE MATERIAL PLACED WAS APPROXIMATELY 1.5-INCHES AT THE USH 45 CENTERLINE PRIOR TO COMPACTION AND TAPERED TO MEET THE EXISTING EDGE OF PAVEMENT OR FLAG LINE OF CURB & GUTTER. THIS OVERLAY IS IN ADDITION TO WHAT IS SHOWN IN THE TYPICAL SECTIONS.

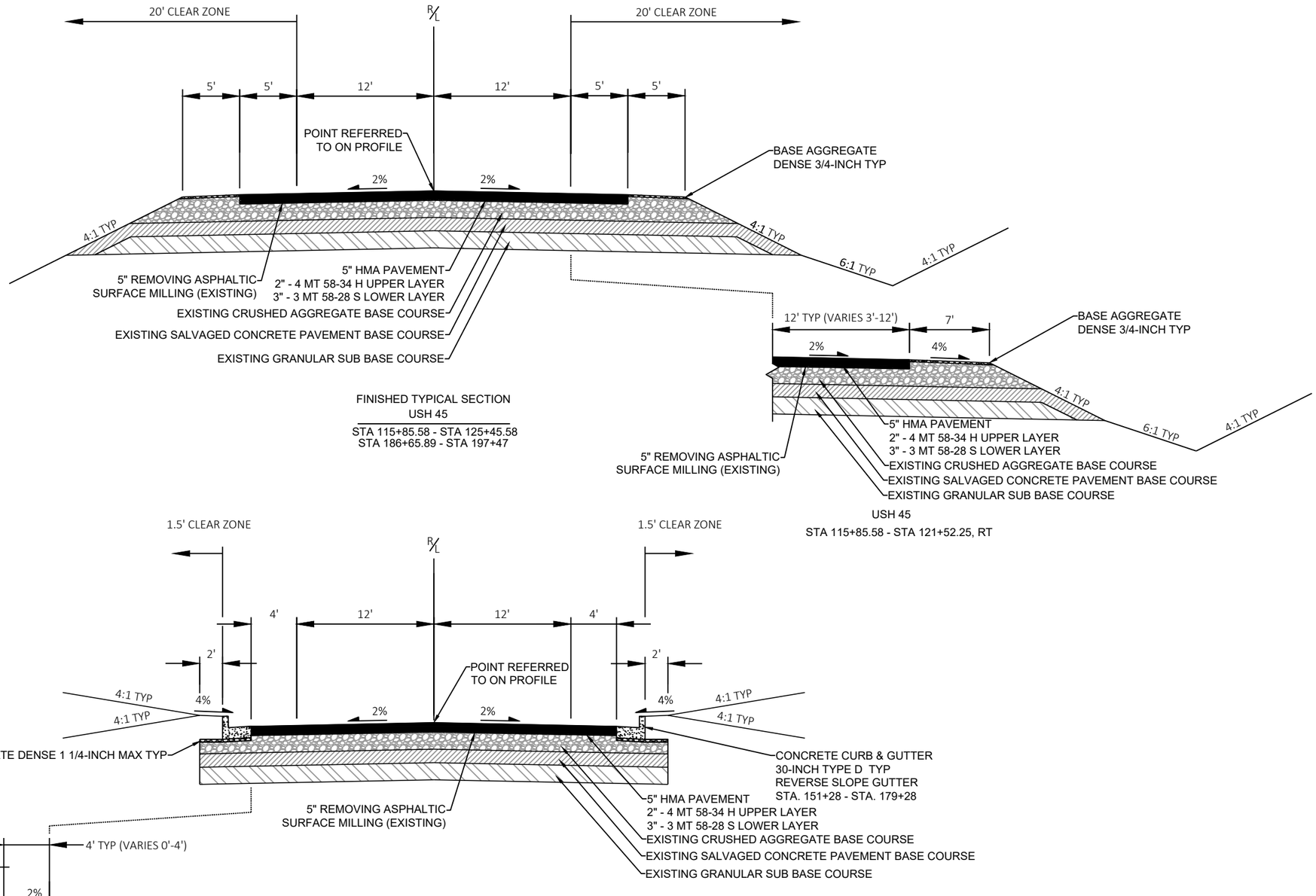


TYPICAL EXISTING SECTION
SIDE ROADS

CTH B (SOUTH)
MANITOWOC ST (CTH B NORTH)
MILWAUKEE ST
WEITH RD
CTH Q

* 36" CONCRETE CURB & GUTTER AT CTH B (SOUTH) AND CTH Q INTERSECTIONS

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN: TYPICAL SECTIONS	SHEET 5	E



NOTE: RETAIN 3' PAVED SHOULDER AND 7' AGGREGATE SHOULDER ALONG USH 45, SOUTH OF CTH B INTERSECTION STA. 115+85.58 - STA. 117+67.69.

FINISHED TYPICAL SECTION
USH 45
STA 115+85.58 - STA 125+45.58
STA 186+65.89 - STA 197+47

USH 45
STA 115+85.58 - STA 121+52.25, RT

USH 45
STA 130+44 - STA 138+77

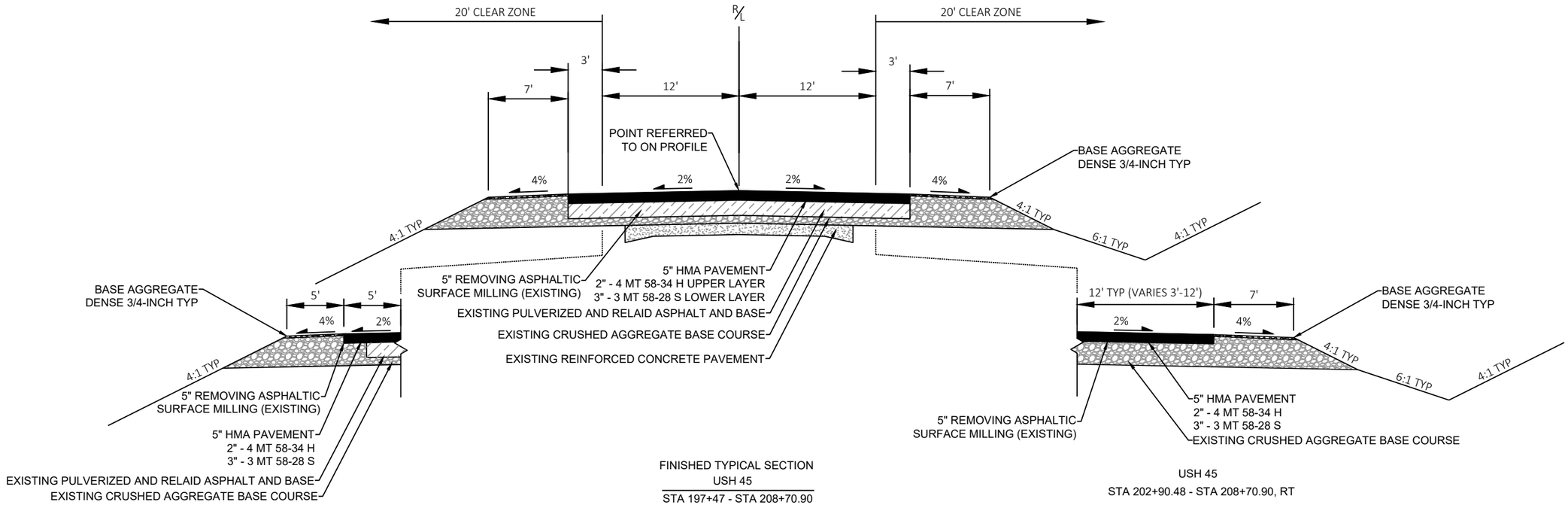
FINISHED TYPICAL SECTION
USH 45
STA 125+45.58 - STA 186+65.89

NOTE: ENSURE POSITIVE DRAINAGE BETWEEN THE BACK OF PROPOSED CURB & GUTTER AND THE INSIDE EDGE OF NEW OR EXISITNG SIDEWALK.

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN: TYPICAL SECTIONS	SHEET 6	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_020301_TS.DWG
LAYOUT NAME - PROPOSED-01
PLOT DATE : 5/20/2021 3:08 PM
PLOT BY : ANDY BLOCK
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

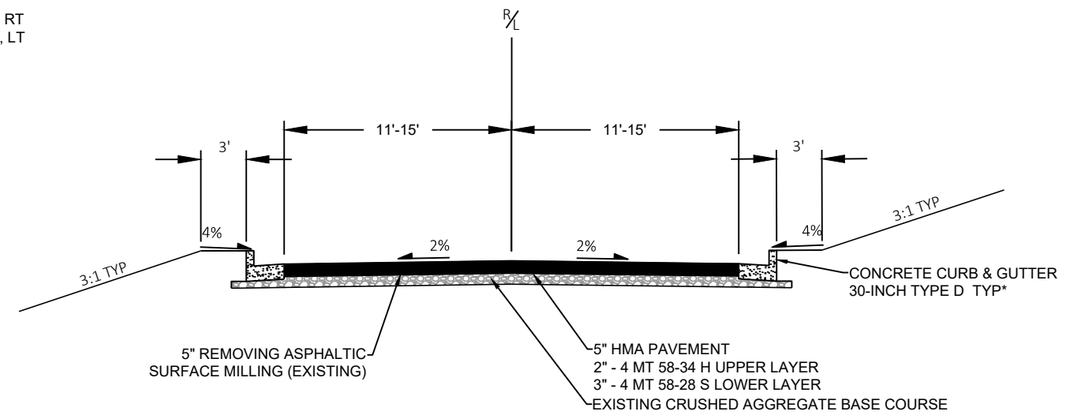
2



FINISHED TYPICAL SECTION
USH 45
STA 197+47 - STA 208+70.90

USH 45
STA 202+90.48 - STA 208+70.90, RT

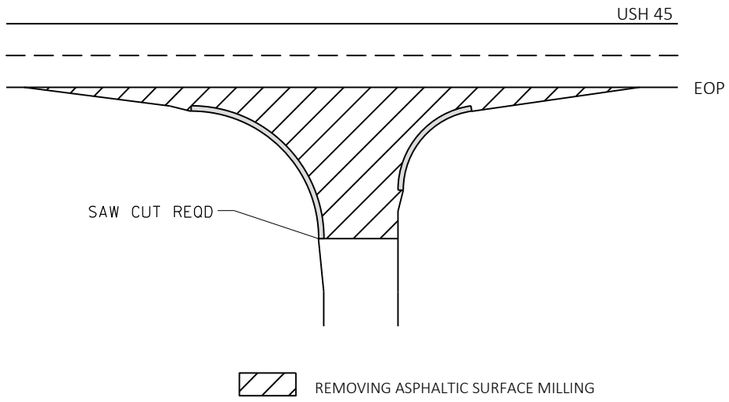
USH 45
STA 197+47 - STA 202+56.58, RT
STA. 197+47 - STA 204+89.20, LT



FINISHED TYPICAL SECTION
SIDE ROADS

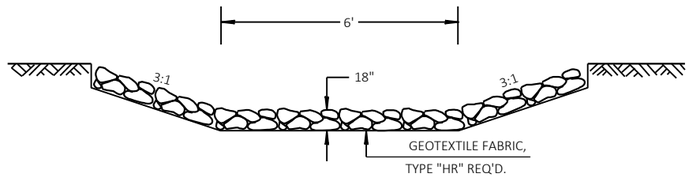
CTH B (SOUTH)
MANITOWOC ST (CTH B NORTH)
MILWAUKEE ST
WEITH RD
CTH Q

* CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D AT CTH B (SOUTH) AND CTH Q INTERSECTIONS

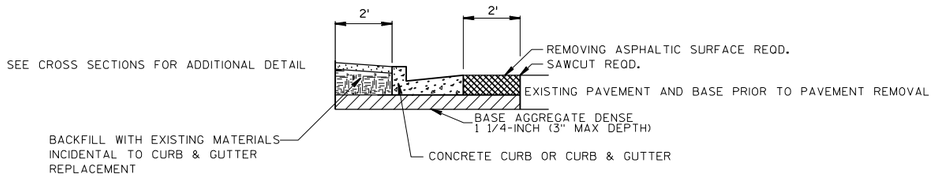


SIDE ROAD CONSTRUCTION LIMITS

WITH CURB AND GUTTER



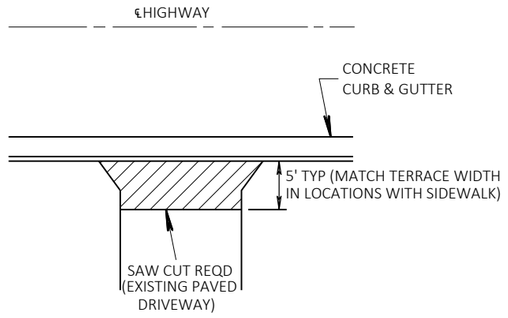
RIPRAP MEDIUM TREATMENT CROSS SECTION AT STORM OUTFALLS



NOTES:

BASE COURSE BELOW PROPOSED CURB OR CURB & GUTTER SHALL BE CONSTRUCTED TO PROVIDE A SUITABLE BASE AS DETERMINED BY THE ENGINEER IN THE FIELD

DETAIL FOR CURB & GUTTER REPLACEMENT

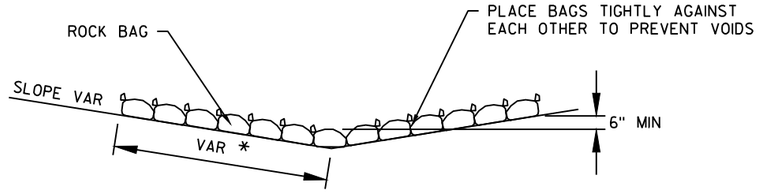


URBAN

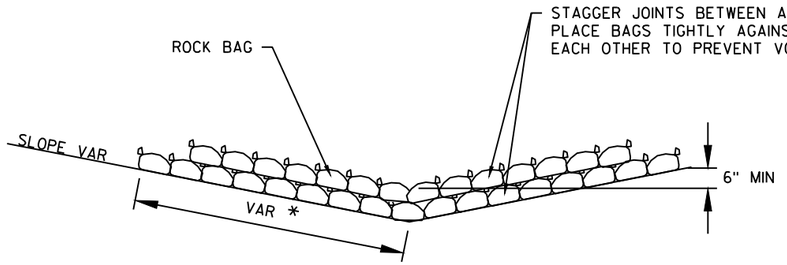
3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES OR CONCRETE DRIVEWAY 6-INCH (AT EXISTING CONCRETE DRIVEWAYS). RESPECTIVE BID ITEM SHALL INCLUDE ANY REMOVAL OR SHAPING NECESSARY TO COMPLETE THIS AREA (UNLESS NOTED BELOW).

NOTES: -DRIVEWAY GEOMETRY SHALL MATCH EXISTING CONDITION OR AS DIRECTED BY THE ENGINEER.
-EXISTING UNPAVED DRIVEWAYS SHALL HAVE PAVED APRONS IN THE PROPOSED CONDITION IN LOCATIONS BEHIND PROPOSED CURB & GUTTER.
-CONCRETE DRIVEWAY APRONS SHALL BE REPLACED IN KIND AND MATCH AT THE INSIDE EDGE OF EXISTING SIDEWALK. REMOVAL OF EXISTING APRONS TO BE PAID AS REMOVING PAVEMENT.

DRIVEWAY PAVING LIMITS DETAIL

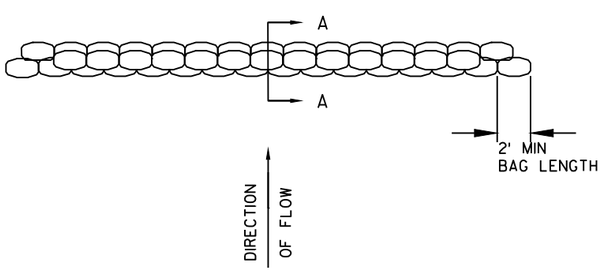


SIDE VIEW (SINGLE LAYER)

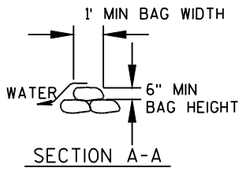


* LENGTH AND NUMBER OF BAGS MAY VARY
DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)

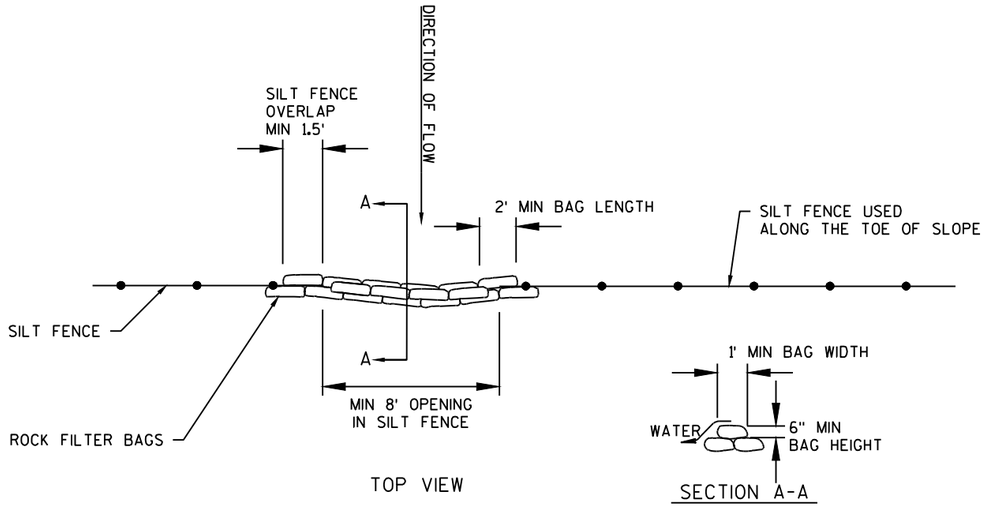


TOP VIEW (MULTIPLE LAYER)



SECTION A-A

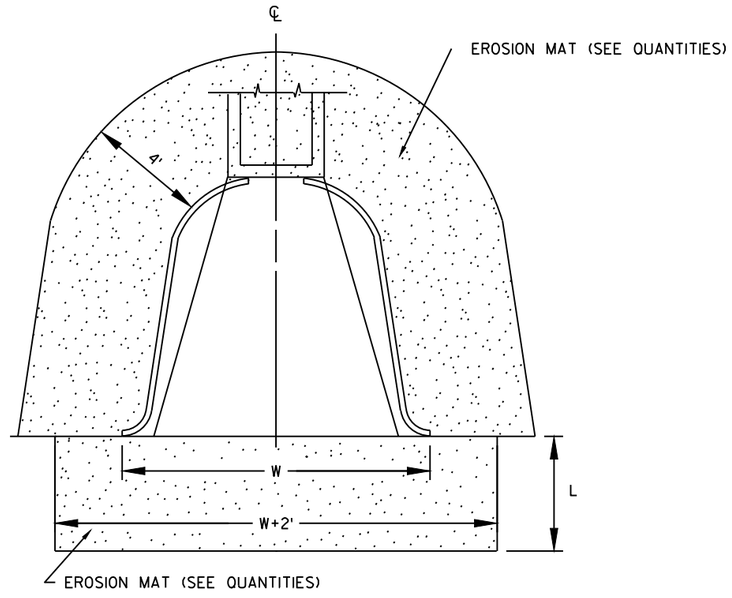
ROCK BAGS USED FOR DITCH CHECKS



TOP VIEW

SECTION A-A

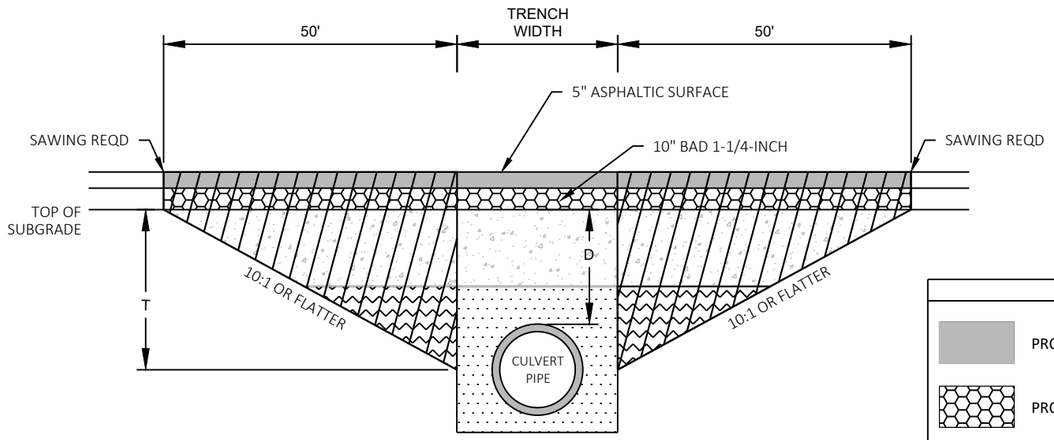
ROCK BAGS USED FOR SILT FENCE RELIEF



EROSION CONTROL AT PIPE ENDS

L = 3 TIMES DIAMETER OR 10' MIN.
INCREASE IF WARRANTED

2



TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.

DEPTH D < 6 FT

KEY

- PROPOSED SURFACE
- PROPOSED BASE
- TRENCH BACKFILL
- TRENCH OR FOUNDATION BACKFILL
- FOUNDATION BACKFILL
- TRANSITION CUT

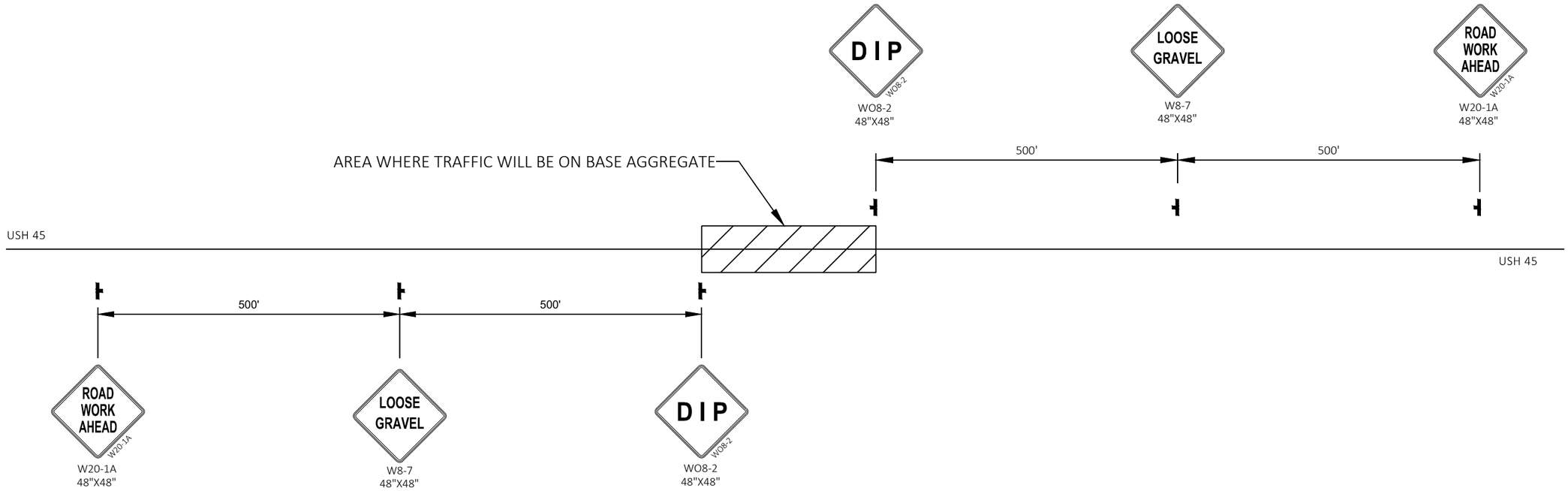
NOTES

TRANSITION CUT IS PAID AS EXCAVATION COMMON.
TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
PERFORM CULVERT PIPE INSTALLATION BEFORE MILLING AND PAVING.
PLACE ASPHALTIC SURFACE AFTER CULVERT PIPE INSTALLATION AND BEFORE MILLING AND PAVING.

CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
USH 45	202+02	1.8	24	CULV: 43045003261

2



LOOSE GRAVEL SIGNING

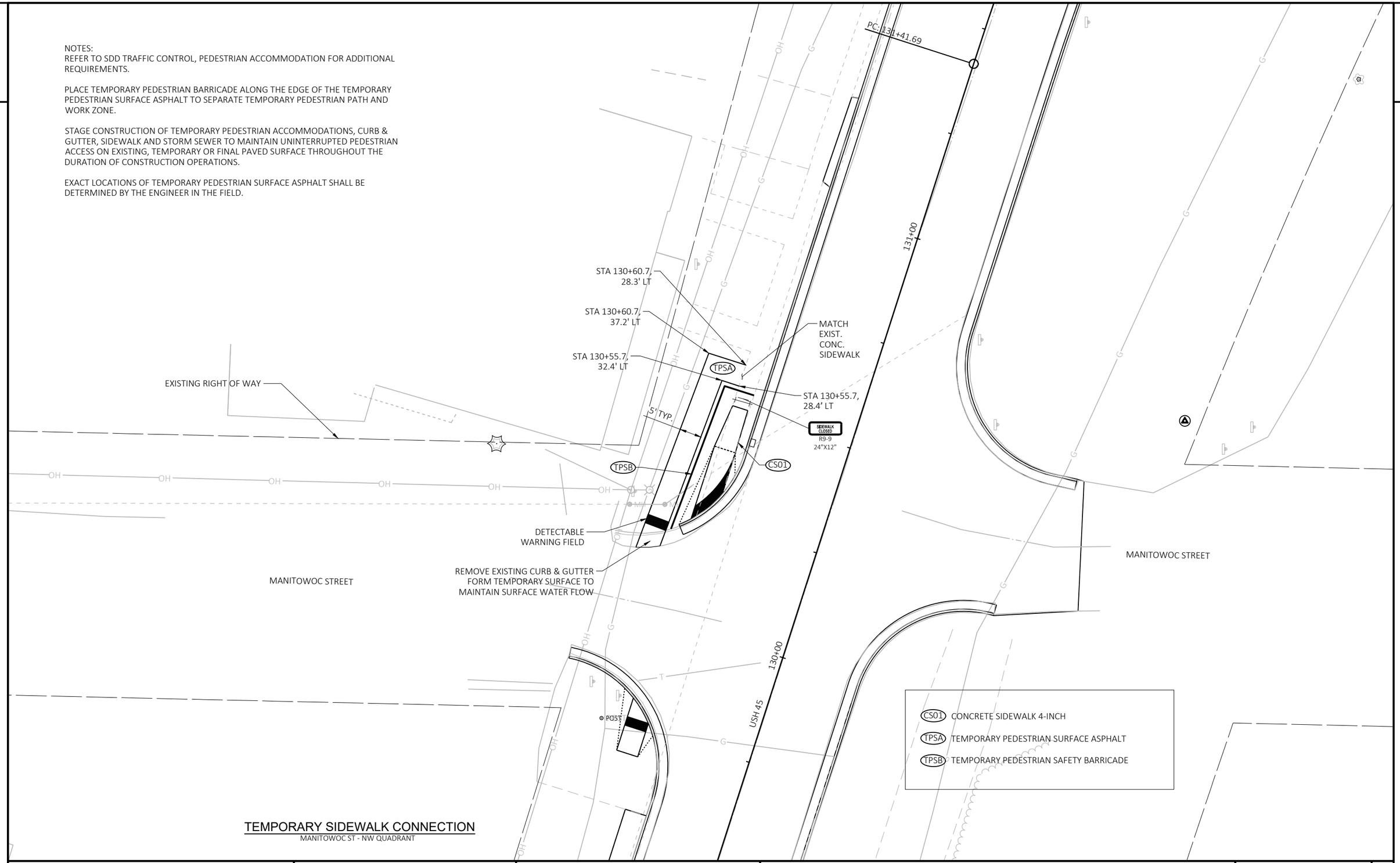
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CONSTRUCTION DETAILS	SHEET 11	E

NOTES:
REFER TO SDD TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION FOR ADDITIONAL REQUIREMENTS.

PLACE TEMPORARY PEDESTRIAN BARRICADE ALONG THE EDGE OF THE TEMPORARY PEDESTRIAN SURFACE ASPHALT TO SEPARATE TEMPORARY PEDESTRIAN PATH AND WORK ZONE.

STAGE CONSTRUCTION OF TEMPORARY PEDESTRIAN ACCOMMODATIONS, CURB & GUTTER, SIDEWALK AND STORM SEWER TO MAINTAIN UNINTERRUPTED PEDESTRIAN ACCESS ON EXISTING, TEMPORARY OR FINAL PAVED SURFACE THROUGHOUT THE DURATION OF CONSTRUCTION OPERATIONS.

EXACT LOCATIONS OF TEMPORARY PEDESTRIAN SURFACE ASPHALT SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.



TEMPORARY SIDEWALK CONNECTION

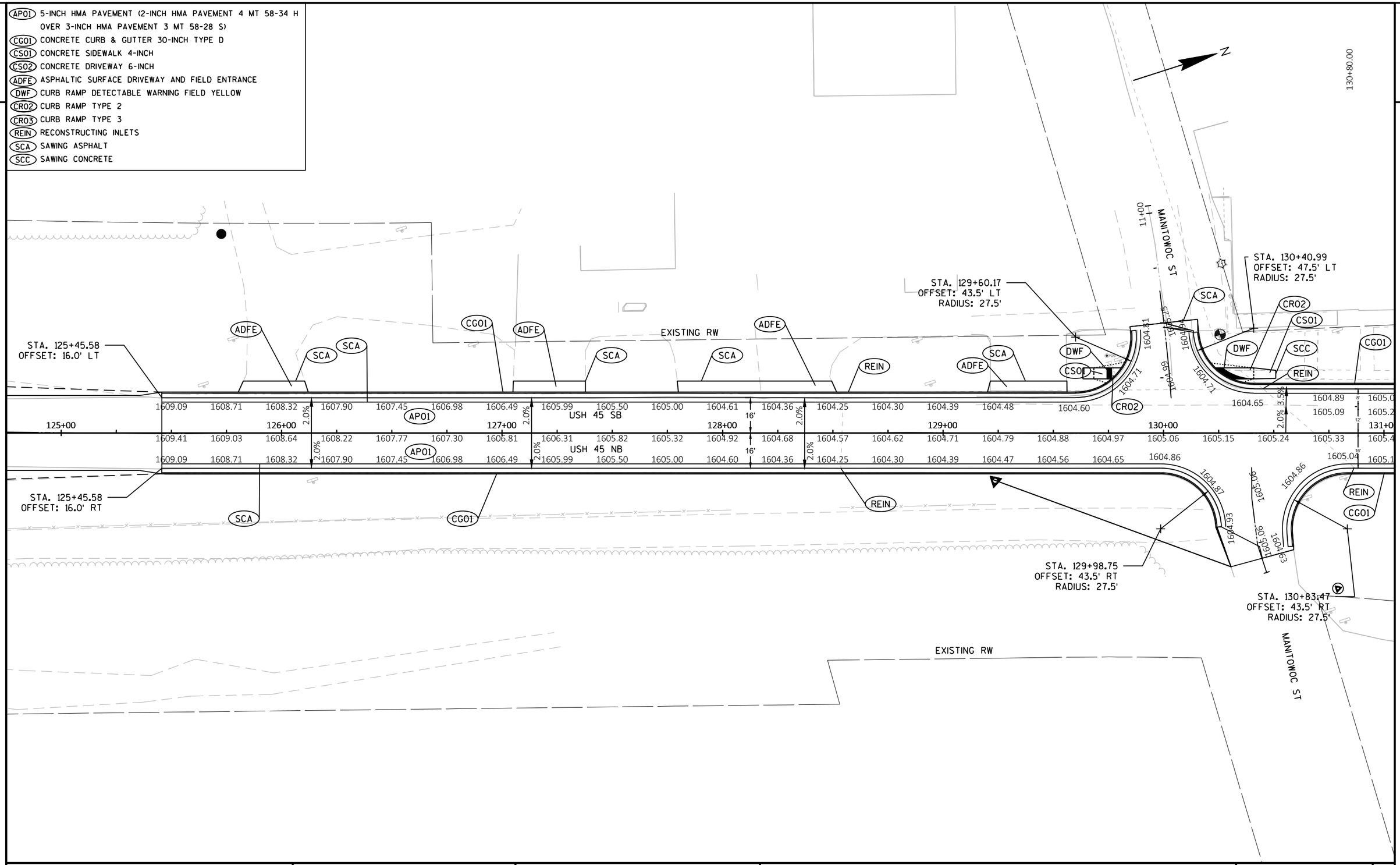
MANITOWOC ST - NW QUADRANT

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CONSTRUCTION DETAILS	SHEET 12	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_021001-CD_TEMP PED SURF.DWG
LAYOUT NAME - Layout
PLOT DATE : 5/19/2021 2:53 PM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

- APO1 5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
- CGO1 CONCRETE CURB & GUTTER 30-INCH TYPE D
- CSO1 CONCRETE SIDEWALK 4-INCH
- CSO2 CONCRETE DRIVEWAY 6-INCH
- ADFE ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
- DWF CURB RAMP DETECTABLE WARNING FIELD YELLOW
- CRO2 CURB RAMP TYPE 2
- CRO3 CURB RAMP TYPE 3
- REIN RECONSTRUCTING INLETS
- SCA SAWING ASPHALT
- SCC SAWING CONCRETE



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 13	E

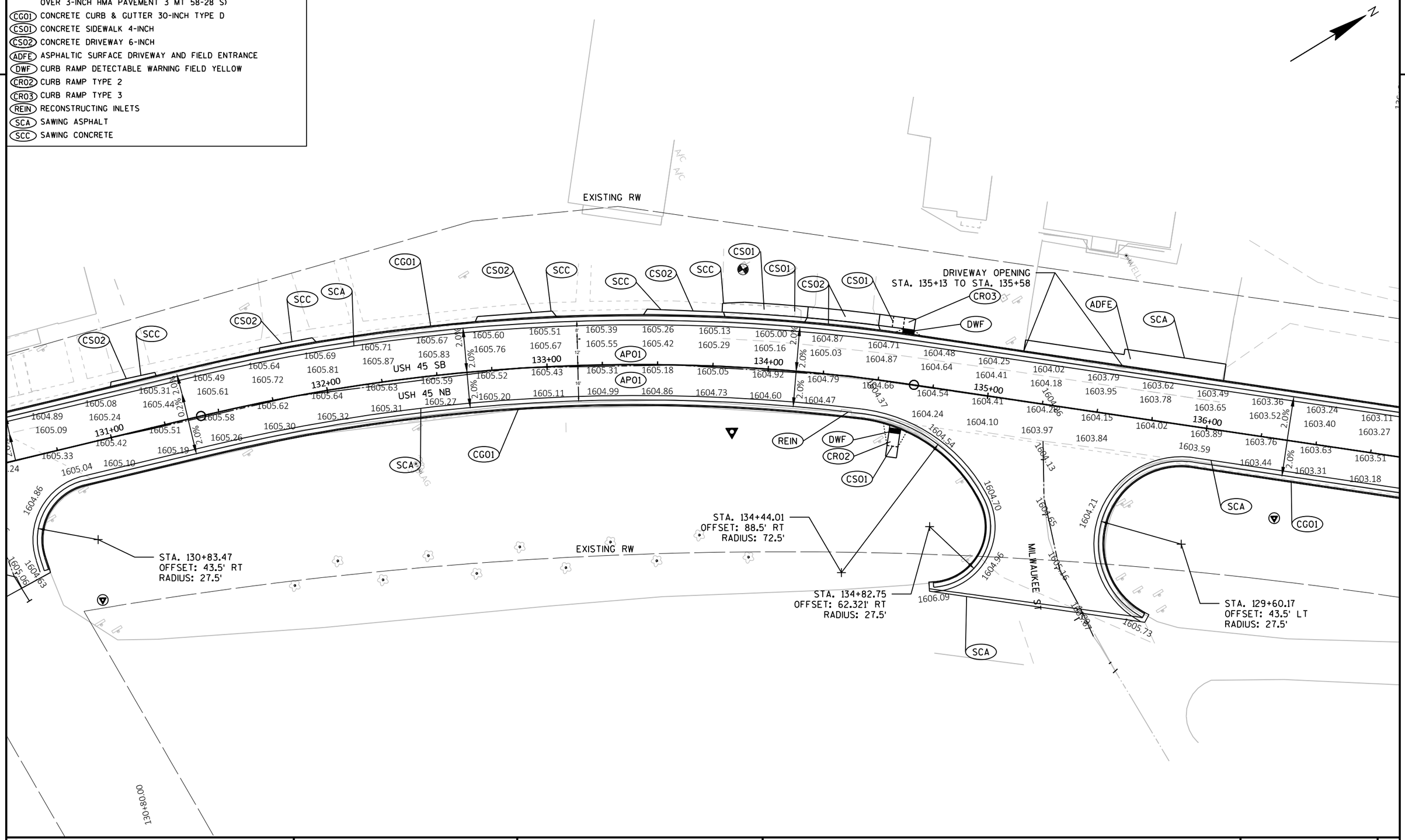
FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_021201_PD.DWG
LAYOUT NAME - Sheet - pn - (01)

PLOT DATE : 9/1/2021 10:32 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

- APO1 5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
- CGO1 CONCRETE CURB & GUTTER 30-INCH TYPE D
- CSO1 CONCRETE SIDEWALK 4-INCH
- CSO2 CONCRETE DRIVEWAY 6-INCH
- ADFE ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
- DWF CURB RAMP DETECTABLE WARNING FIELD YELLOW
- CRO2 CURB RAMP TYPE 2
- CRO3 CURB RAMP TYPE 3
- REIN RECONSTRUCTING INLETS
- SCA SAWING ASPHALT
- SCC SAWING CONCRETE



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 14	E

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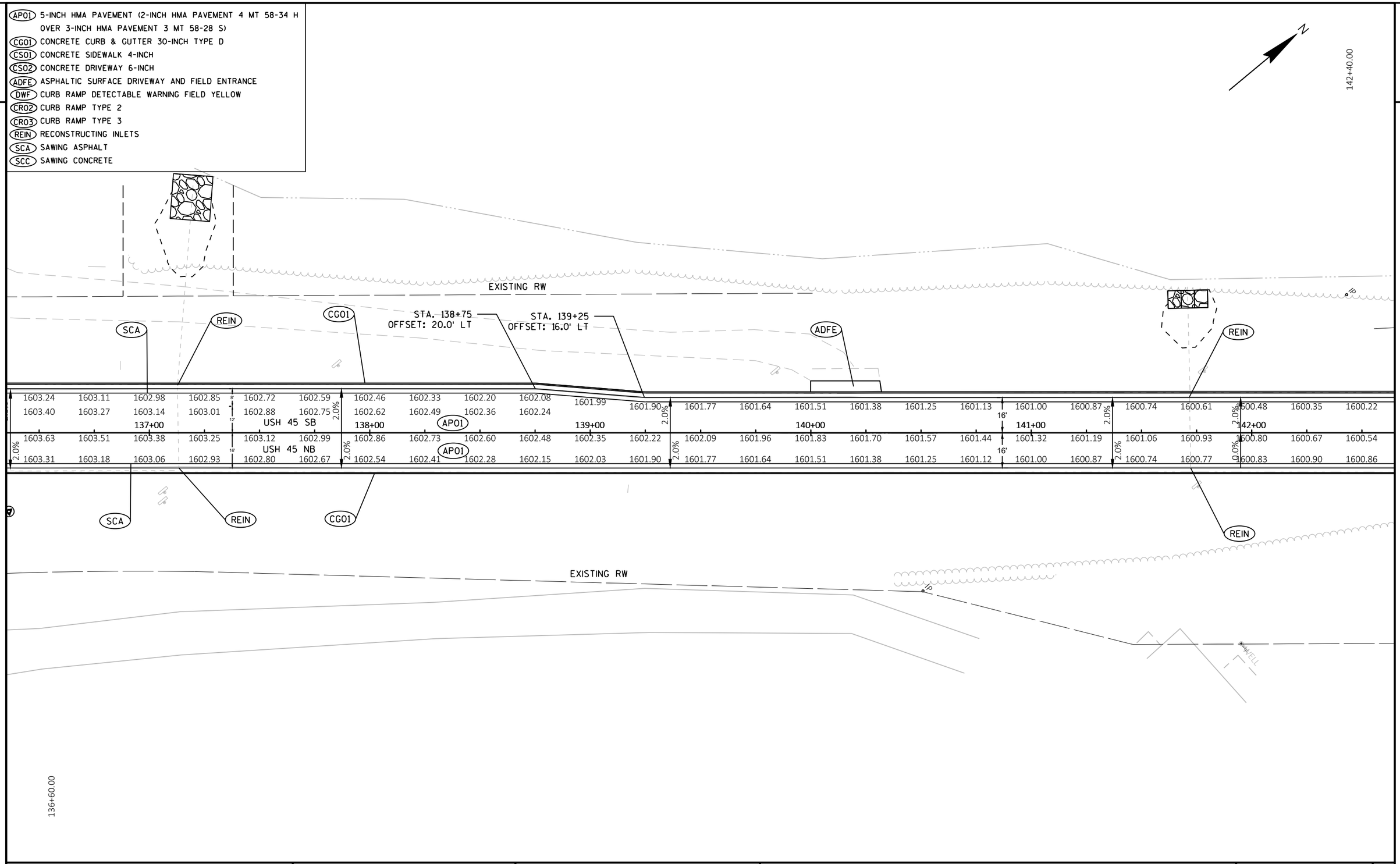
LAYOUT NAME - Sheet - pn - (02)
PLOT DATE : 9/1/2021 10:32 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

APO1	5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
CGO1	CONCRETE CURB & GUTTER 30-INCH TYPE D
CSO1	CONCRETE SIDEWALK 4-INCH
CSO2	CONCRETE DRIVEWAY 6-INCH
ADFE	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
DWF	CURB RAMP DETECTABLE WARNING FIELD YELLOW
CRO2	CURB RAMP TYPE 2
CRO3	CURB RAMP TYPE 3
REIN	RECONSTRUCTING INLETS
SCA	SAWING ASPHALT
SCC	SAWING CONCRETE



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 15 E

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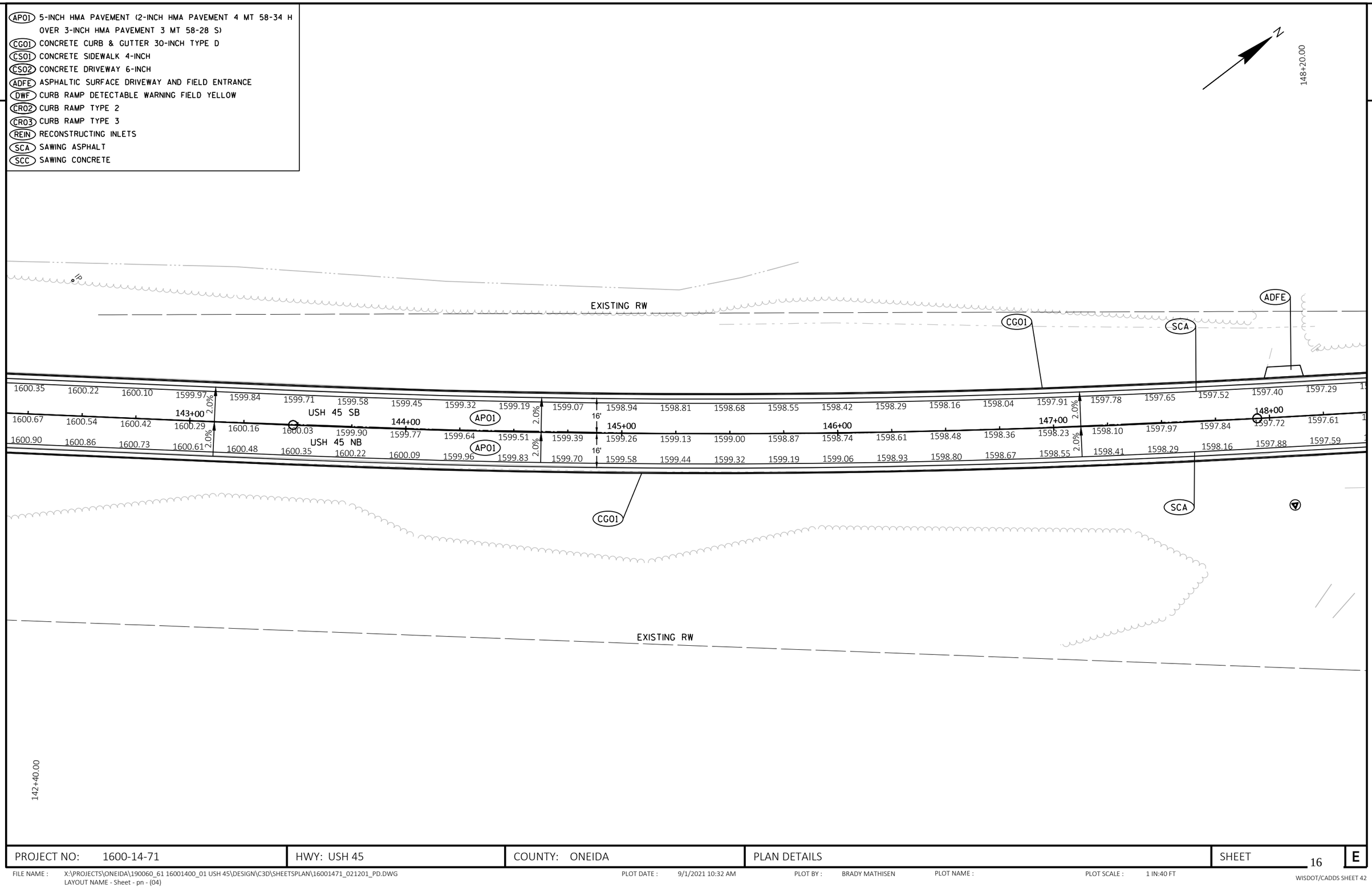
LAYOUT NAME - Sheet - pn - (03)
PLOT DATE : 9/1/2021 10:32 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

APO1	5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
CGO1	CONCRETE CURB & GUTTER 30-INCH TYPE D
CSO1	CONCRETE SIDEWALK 4-INCH
CSO2	CONCRETE DRIVEWAY 6-INCH
ADFE	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
DWF	CURB RAMP DETECTABLE WARNING FIELD YELLOW
CRO2	CURB RAMP TYPE 2
CRO3	CURB RAMP TYPE 3
REIN	RECONSTRUCTING INLETS
SCA	SAWING ASPHALT
SCC	SAWING CONCRETE

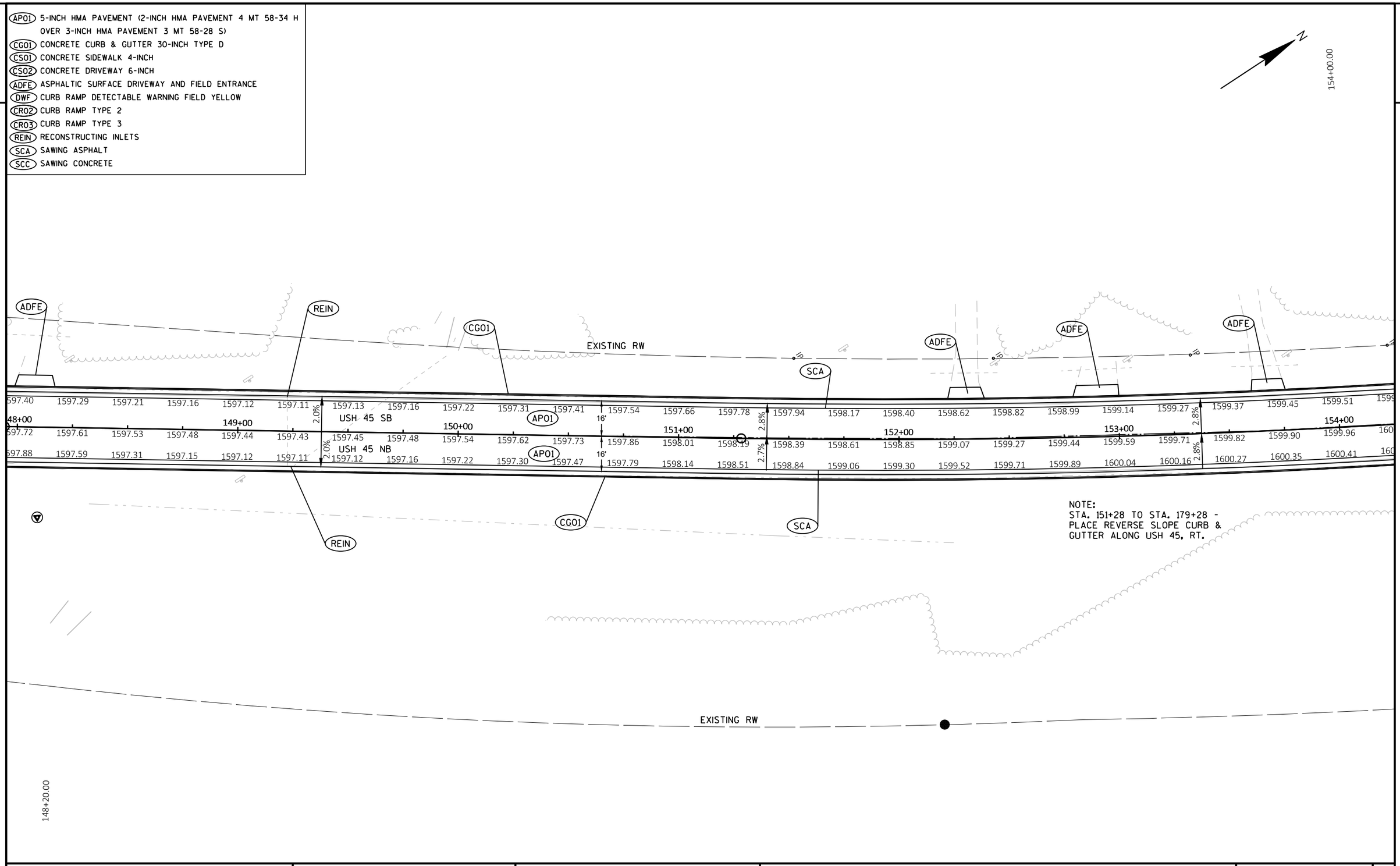


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 16	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_021201_PD.DWG
LAYOUT NAME - Sheet - pn - (04)

PLOT DATE : 9/1/2021 10:32 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

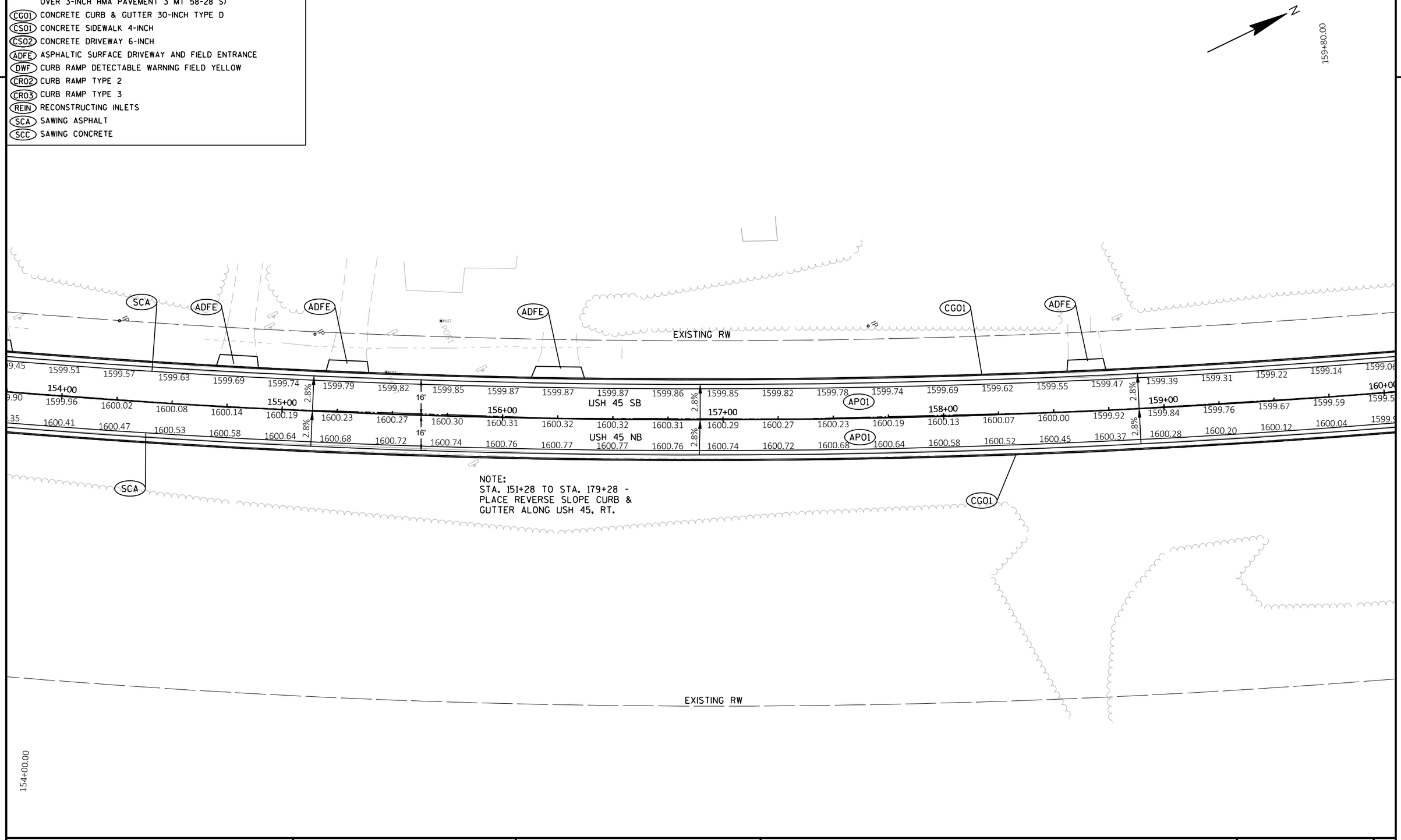
APO1	5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
CGO1	CONCRETE CURB & GUTTER 30-INCH TYPE D
CSO1	CONCRETE SIDEWALK 4-INCH
CSO2	CONCRETE DRIVEWAY 6-INCH
ADFE	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
DWF	CURB RAMP DETECTABLE WARNING FIELD YELLOW
CRO2	CURB RAMP TYPE 2
CRO3	CURB RAMP TYPE 3
REIN	RECONSTRUCTING INLETS
SCA	SAWING ASPHALT
SCC	SAWING CONCRETE



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 17	E

2

APO1	5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
CGO1	CONCRETE CURB & GUTTER 30-INCH TYPE D
CSO1	CONCRETE SIDEWALK 4-INCH
CSO2	CONCRETE DRIVEWAY 6-INCH
ADFE	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
DWF	CURB RAMP DETECTABLE WARNING FIELD YELLOW
CRO2	CURB RAMP TYPE 2
CRO3	CURB RAMP TYPE 3
REIN	RECONSTRUCTING INLETS
SCA	SAWING ASPHALT
SCC	SAWING CONCRETE



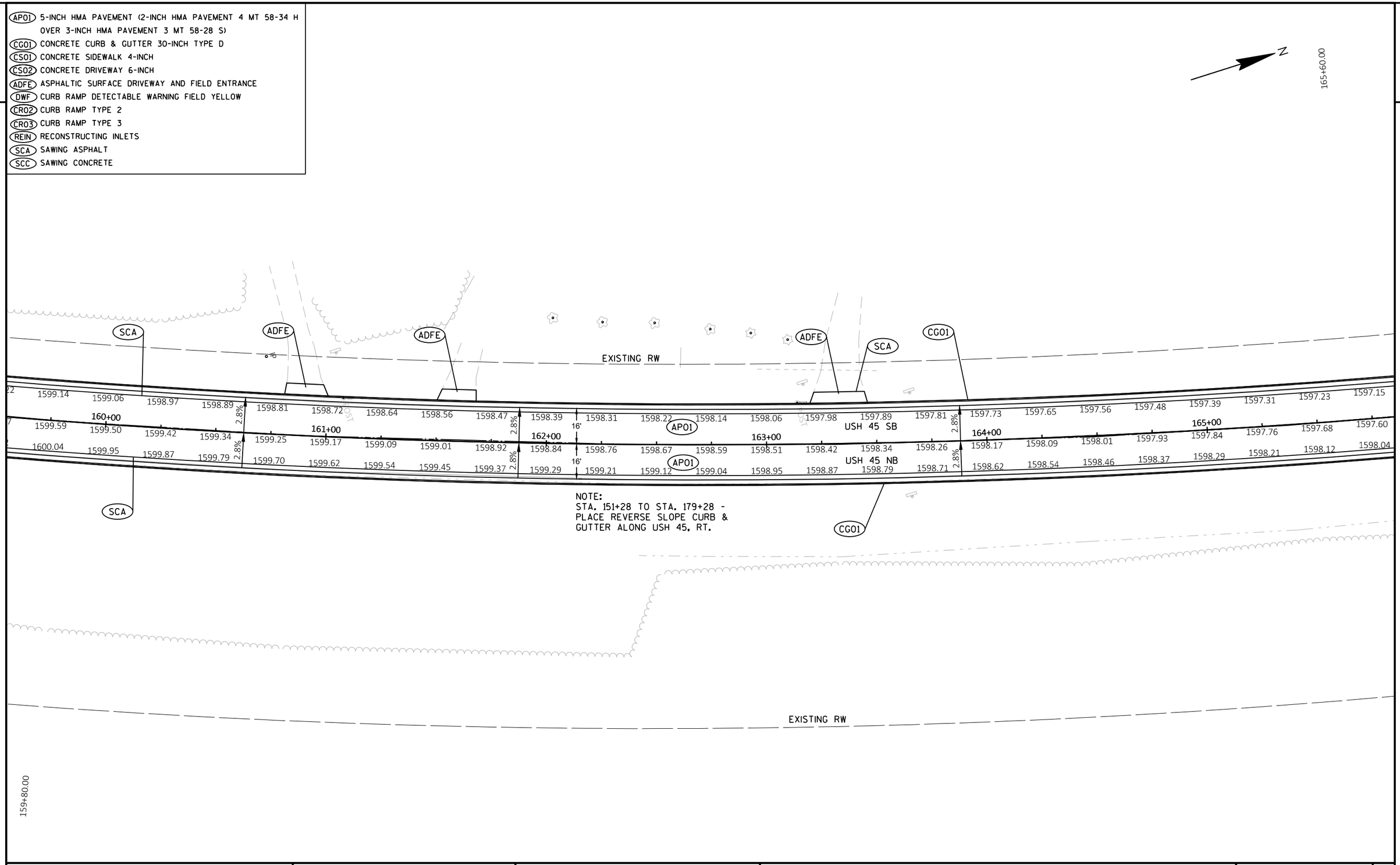
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 18 E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_021201_PD.DWG
LAYOUT NAME - Sheet - pn - (06)

PLOT DATE : 9/1/2021 10:33 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

APO1	5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
CGO1	CONCRETE CURB & GUTTER 30-INCH TYPE D
CSO1	CONCRETE SIDEWALK 4-INCH
CSO2	CONCRETE DRIVEWAY 6-INCH
ADFE	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
DWF	CURB RAMP DETECTABLE WARNING FIELD YELLOW
CRO2	CURB RAMP TYPE 2
CRO3	CURB RAMP TYPE 3
REIN	RECONSTRUCTING INLETS
SCA	SAWING ASPHALT
SCC	SAWING CONCRETE



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 19 E

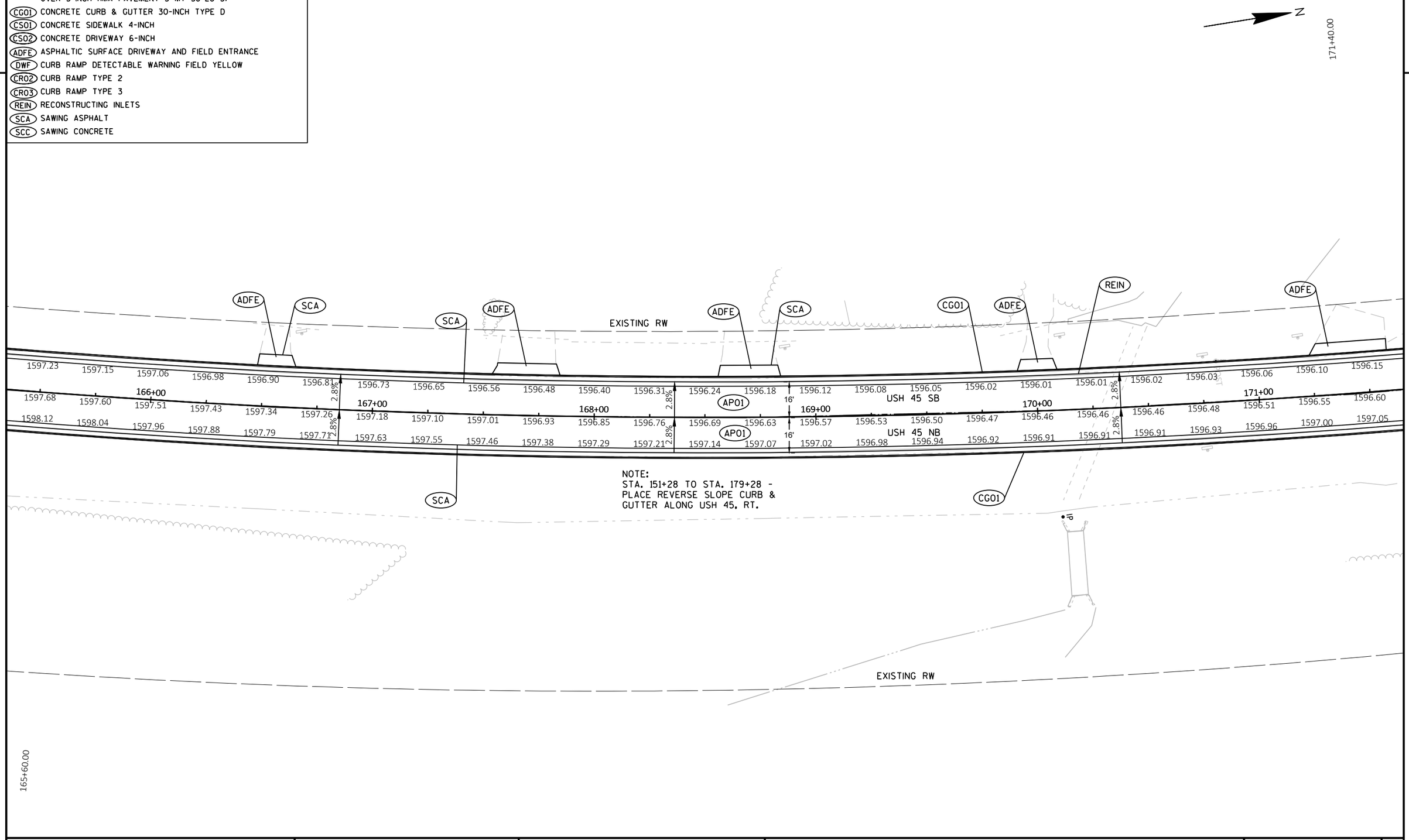
FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_021201_PD.DWG
LAYOUT NAME - Sheet - pn - (07)

PLOT DATE : 9/1/2021 10:33 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

APO1	5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
CGO1	CONCRETE CURB & GUTTER 30-INCH TYPE D
CSO1	CONCRETE SIDEWALK 4-INCH
CSO2	CONCRETE DRIVEWAY 6-INCH
ADFE	ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
DWF	CURB RAMP DETECTABLE WARNING FIELD YELLOW
CRO2	CURB RAMP TYPE 2
CRO3	CURB RAMP TYPE 3
REIN	RECONSTRUCTING INLETS
SCA	SAWING ASPHALT
SCC	SAWING CONCRETE



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 20 E

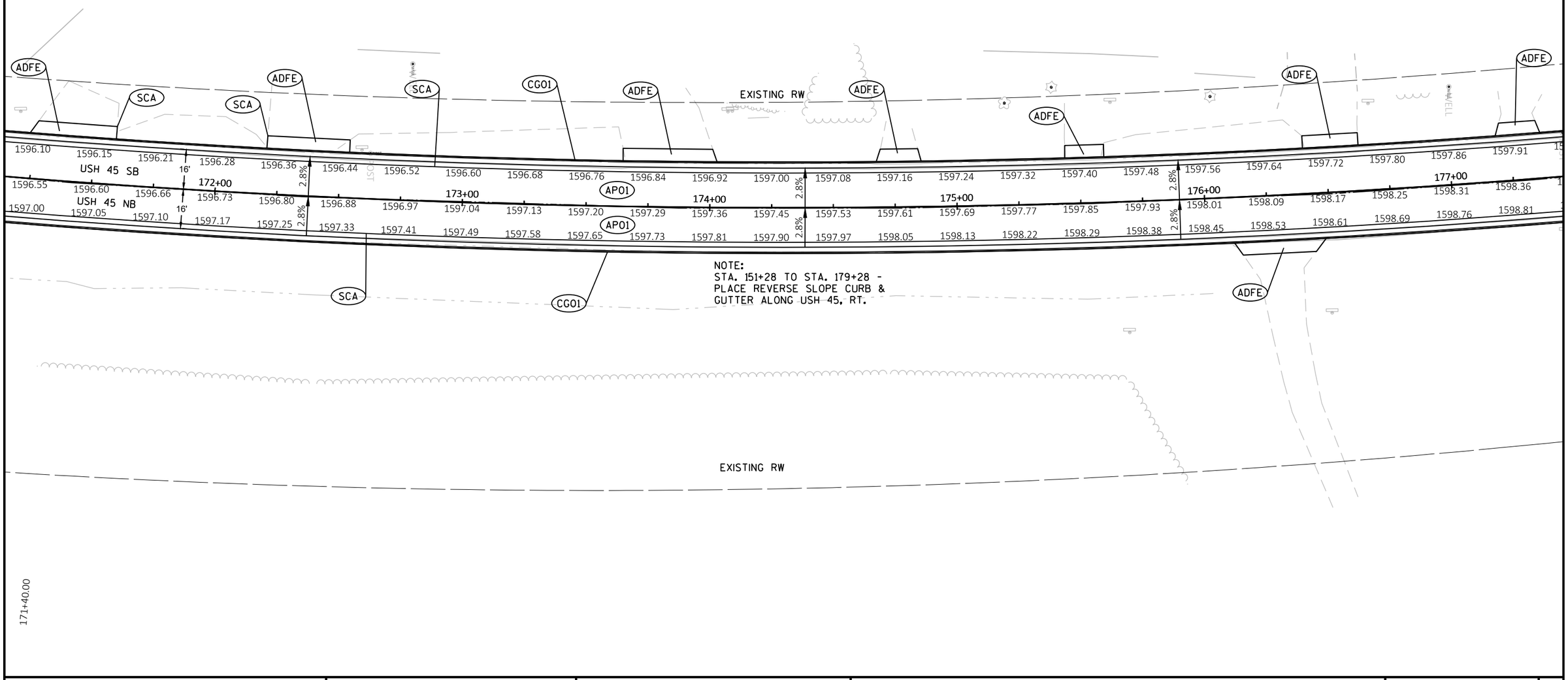
FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_021201_PD.DWG
LAYOUT NAME - Sheet - pn - (08)

PLOT DATE : 9/1/2021 10:33 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

(APO1) 5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
(CGO1) CONCRETE CURB & GUTTER 30-INCH TYPE D
(CSO1) CONCRETE SIDEWALK 4-INCH
(CSO2) CONCRETE DRIVEWAY 6-INCH
(ADFE) ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
(DWF) CURB RAMP DETECTABLE WARNING FIELD YELLOW
(CRO2) CURB RAMP TYPE 2
(CRO3) CURB RAMP TYPE 3
(REIN) RECONSTRUCTING INLETS
(SCA) SAWING ASPHALT
(SCC) SAWING CONCRETE

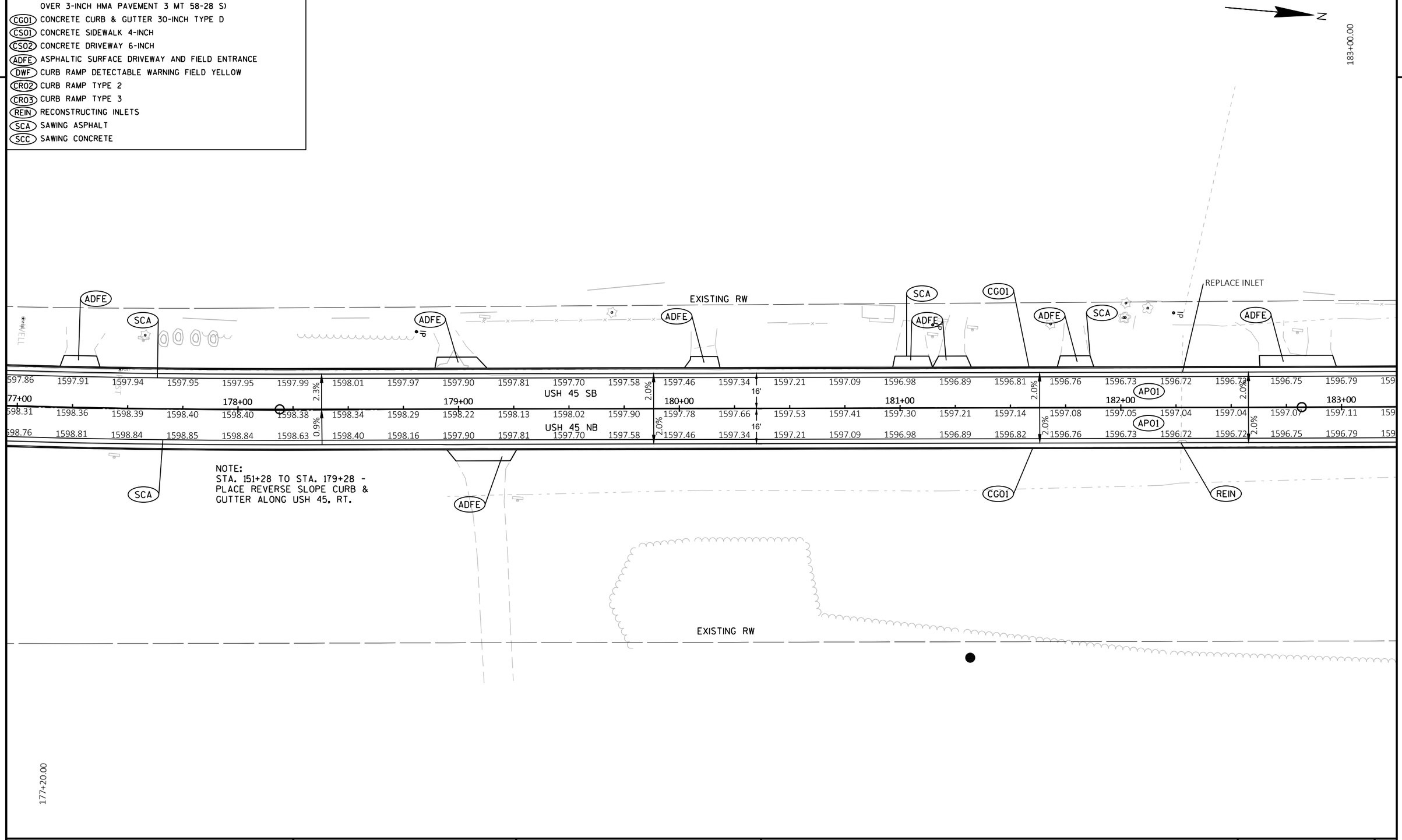


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 21	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_021201_PD.DWG
LAYOUT NAME - Sheet - pn - (09)
PLOT DATE : 9/1/2021 10:33 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

- APO1 5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
- CGO1 CONCRETE CURB & GUTTER 30-INCH TYPE D
- CSO1 CONCRETE SIDEWALK 4-INCH
- CSO2 CONCRETE DRIVEWAY 6-INCH
- ADFE ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
- DWF CURB RAMP DETECTABLE WARNING FIELD YELLOW
- CRO2 CURB RAMP TYPE 2
- CRO3 CURB RAMP TYPE 3
- REIN RECONSTRUCTING INLETS
- SCA SAWING ASPHALT
- SCC SAWING CONCRETE



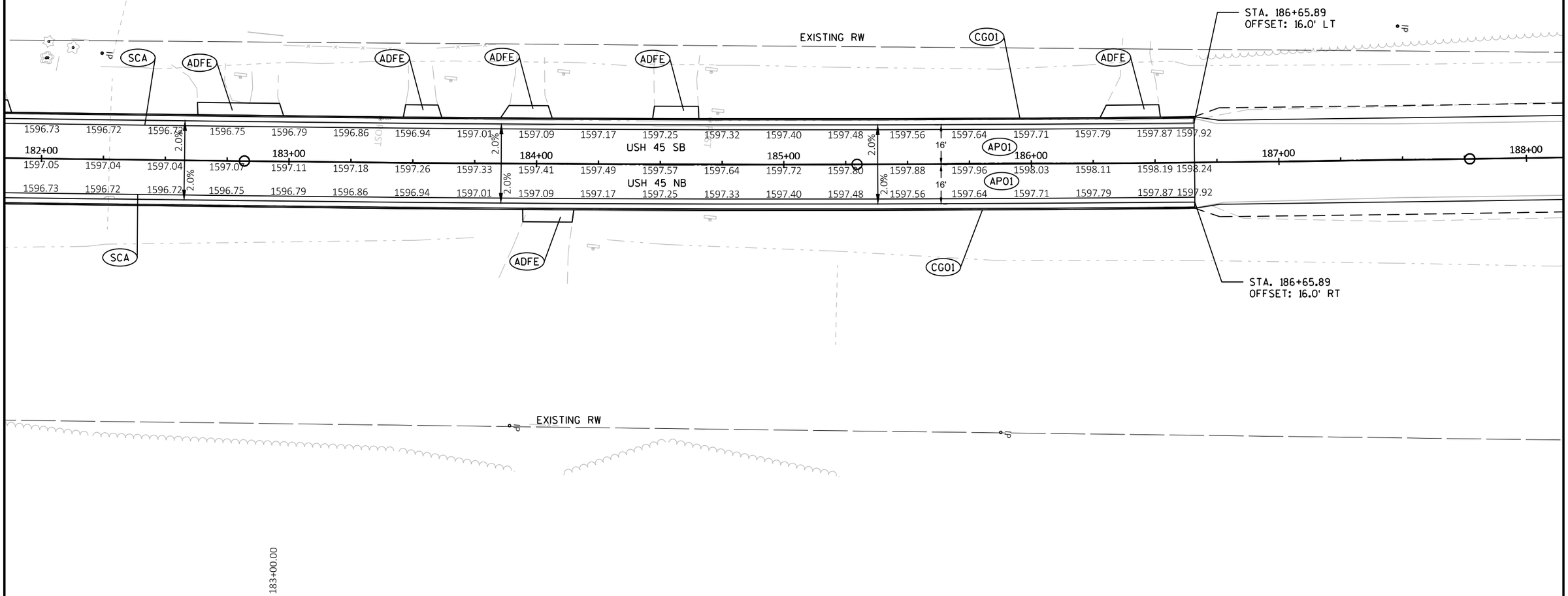
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 22	E

2

- APO1 5-INCH HMA PAVEMENT (2-INCH HMA PAVEMENT 4 MT 58-34 H OVER 3-INCH HMA PAVEMENT 3 MT 58-28 S)
- CGO1 CONCRETE CURB & GUTTER 30-INCH TYPE D
- CSO1 CONCRETE SIDEWALK 4-INCH
- CSO2 CONCRETE DRIVEWAY 6-INCH
- ADFE ASPHALTIC SURFACE DRIVEWAY AND FIELD ENTRANCE
- DWF CURB RAMP DETECTABLE WARNING FIELD YELLOW
- CRO2 CURB RAMP TYPE 2
- CRO3 CURB RAMP TYPE 3
- REIN RECONSTRUCTING INLETS
- SCA SAWING ASPHALT
- SCC SAWING CONCRETE

N

2



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN DETAILS	SHEET 23	E

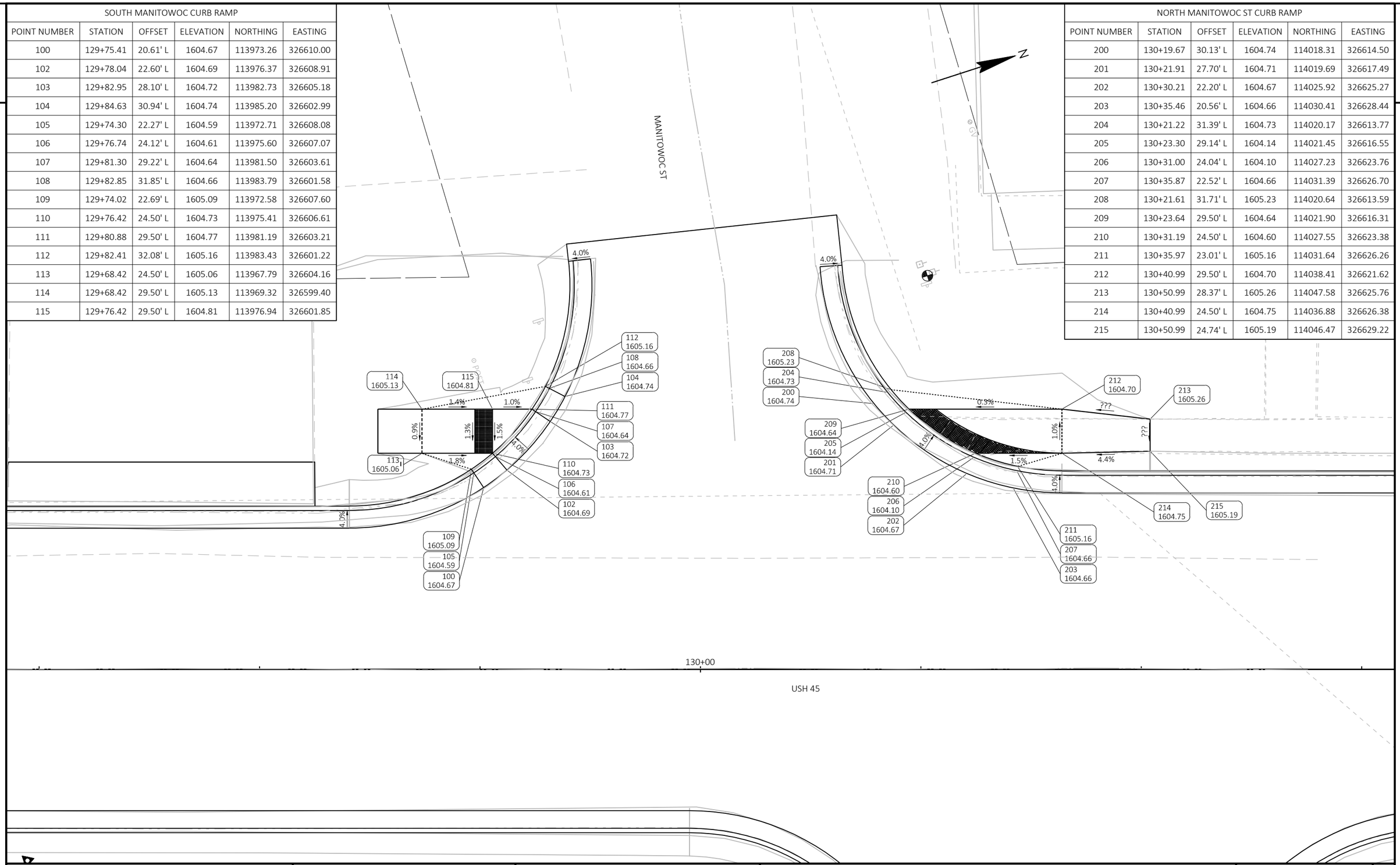
FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_021201_PD.DWG
LAYOUT NAME - Sheet - pn - (11)

PLOT DATE : 9/1/2021 10:33 AM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

SOUTH MANITOWOC CURB RAMP					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
100	129+75.41	20.61' L	1604.67	113973.26	326610.00
102	129+78.04	22.60' L	1604.69	113976.37	326608.91
103	129+82.95	28.10' L	1604.72	113982.73	326605.18
104	129+84.63	30.94' L	1604.74	113985.20	326602.99
105	129+74.30	22.27' L	1604.59	113972.71	326608.08
106	129+76.74	24.12' L	1604.61	113975.60	326607.07
107	129+81.30	29.22' L	1604.64	113981.50	326603.61
108	129+82.85	31.85' L	1604.66	113983.79	326601.58
109	129+74.02	22.69' L	1605.09	113972.58	326607.60
110	129+76.42	24.50' L	1604.73	113975.41	326606.61
111	129+80.88	29.50' L	1604.77	113981.19	326603.21
112	129+82.41	32.08' L	1605.16	113983.43	326601.22
113	129+68.42	24.50' L	1605.06	113967.79	326604.16
114	129+68.42	29.50' L	1605.13	113969.32	326599.40
115	129+76.42	29.50' L	1604.81	113976.94	326601.85

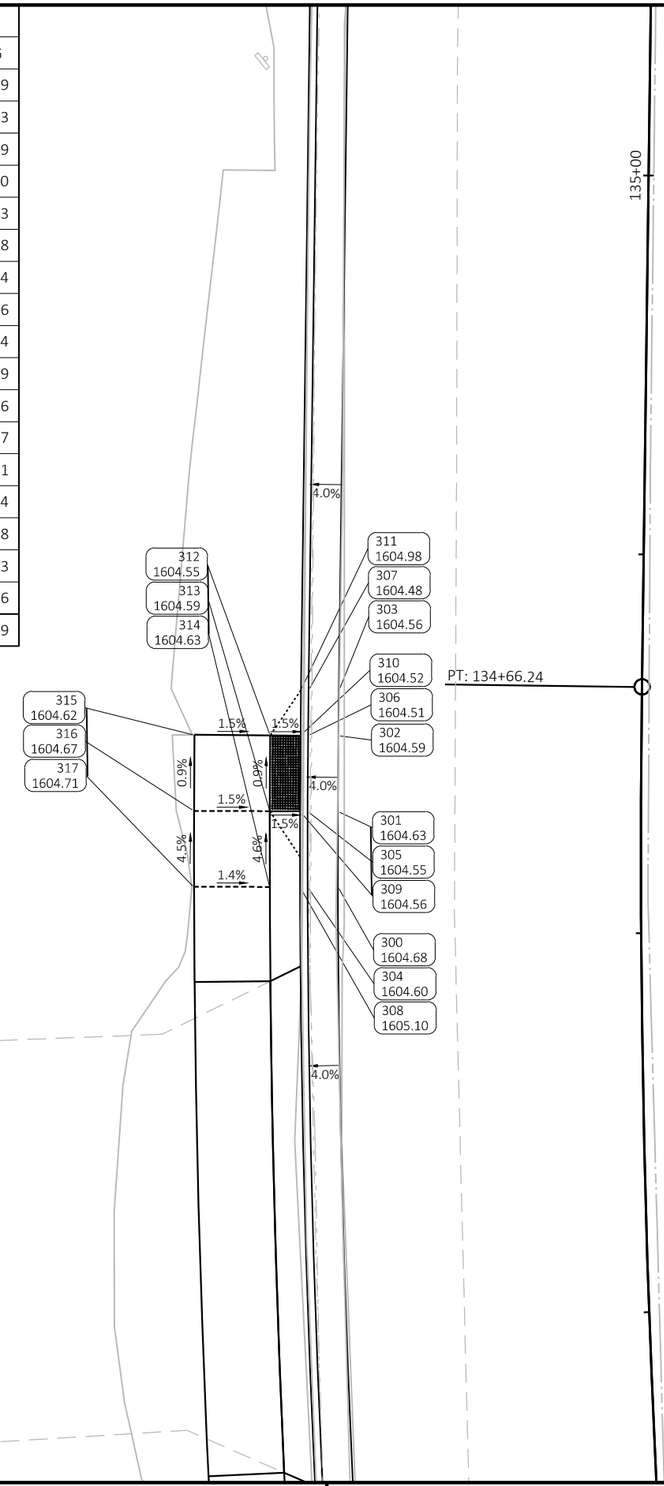
NORTH MANITOWOC ST CURB RAMP					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
200	130+19.67	30.13' L	1604.74	114018.31	326614.50
201	130+21.91	27.70' L	1604.71	114019.69	326617.49
202	130+30.21	22.20' L	1604.67	114025.92	326625.27
203	130+35.46	20.56' L	1604.66	114030.41	326628.44
204	130+21.22	31.39' L	1604.73	114020.17	326613.77
205	130+23.30	29.14' L	1604.14	114021.45	326616.55
206	130+31.00	24.04' L	1604.10	114027.23	326623.76
207	130+35.87	22.52' L	1604.66	114031.39	326626.70
208	130+21.61	31.71' L	1605.23	114020.64	326613.59
209	130+23.64	29.50' L	1604.64	114021.90	326616.31
210	130+31.19	24.50' L	1604.60	114027.55	326623.38
211	130+35.97	23.01' L	1605.16	114031.64	326626.26
212	130+40.99	29.50' L	1604.70	114038.41	326621.62
213	130+50.99	28.37' L	1605.26	114047.58	326625.76
214	130+40.99	24.50' L	1604.75	114036.88	326626.38
215	130+50.99	24.74' L	1605.19	114046.47	326629.22

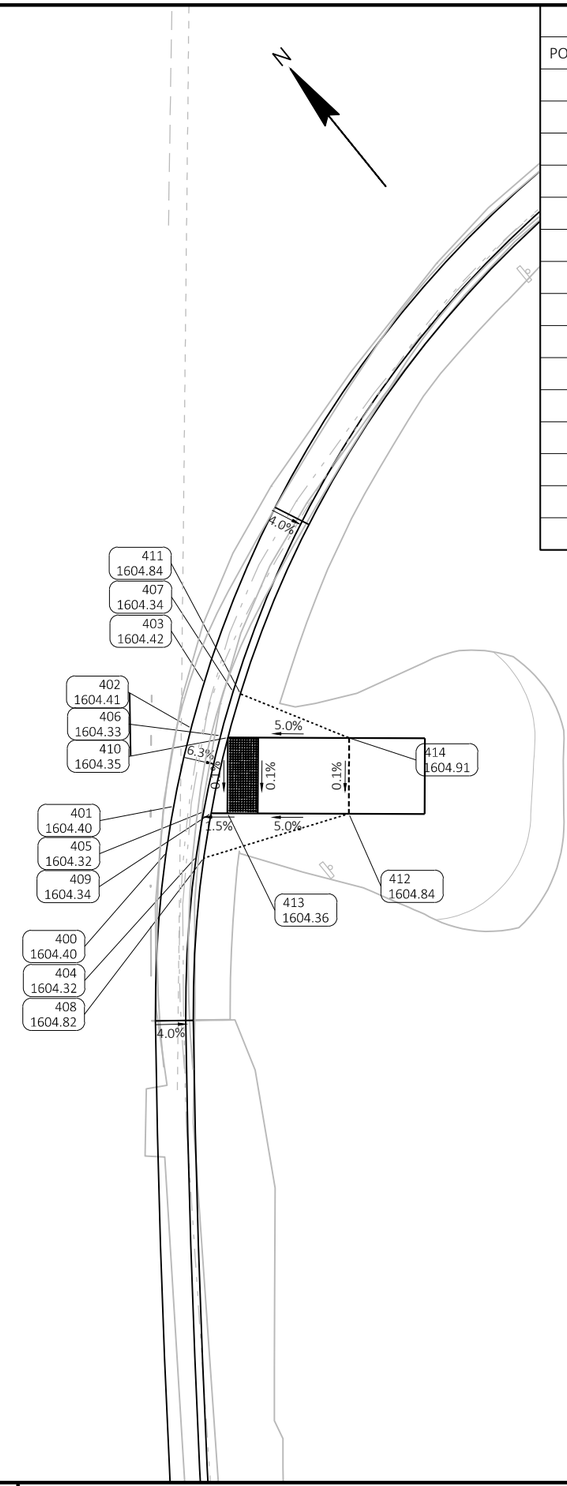


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CURB RAMP DETAILS	SHEET 24	E

2

WEST MILWAUKEE ST CURB RAMP					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
300	134+53.11	20.00' L	1604.68	114410.34	326811.99
301	134+57.98	20.00' L	1604.63	114414.21	326815.13
302	134+62.85	20.00' L	1604.59	114418.06	326818.29
303	134+65.77	20.00' L	1604.56	114420.37	326820.20
304	134+53.11	22.00' L	1604.60	114411.59	326810.43
305	134+57.98	22.00' L	1604.55	114415.47	326813.58
306	134+62.85	22.00' L	1604.51	114419.34	326816.74
307	134+65.77	22.00' L	1604.48	114421.65	326818.66
308	134+53.11	22.50' L	1605.10	114411.90	326810.04
309	134+57.98	22.50' L	1604.56	114415.79	326813.19
310	134+62.85	22.50' L	1604.52	114419.65	326816.36
311	134+65.77	22.50' L	1604.98	114421.97	326818.27
312	134+62.84	24.50' L	1604.55	114420.92	326814.81
313	134+57.99	24.50' L	1604.59	114417.06	326811.64
314	134+53.11	24.50' L	1604.63	114413.16	326808.48
315	134+62.81	29.50' L	1604.62	114424.08	326810.93
316	134+57.98	29.50' L	1604.67	114420.21	326807.76
317	134+53.11	29.50' L	1604.71	114416.29	326804.59





EAST MILWAUKEE ST CURB RAMP					
POINT NUMBER	STATION	OFFSET	ELEVATION	NORTHING	EASTING
400	134+55.31	16.78' R	1604.40	114388.94	326841.98
401	134+58.44	17.27' R	1604.40	114391.01	326844.30
402	134+63.73	18.39' R	1604.41	114394.30	326848.45
403	134+66.78	19.20' R	1604.42	114396.09	326850.99
404	134+55.02	18.76' R	1604.32	114387.48	326843.34
405	134+58.07	19.24' R	1604.32	114389.49	326845.60
406	134+63.23	20.33' R	1604.33	114392.69	326849.64
407	134+66.22	21.12' R	1604.34	114394.43	326852.11
408	134+54.95	19.25' R	1604.82	114387.11	326843.69
409	134+57.98	19.73' R	1604.34	114389.11	326845.92
410	134+63.11	20.81' R	1604.35	114392.29	326849.93
411	134+66.07	21.60' R	1604.84	114394.01	326852.39
412	134+57.98	28.83' R	1604.84	114383.36	326852.98
413	134+57.98	20.82' R	1604.36	114388.42	326846.77
414	134+63.16	28.81' R	1604.91	114387.24	326856.13

2

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CURB RAMP DETAILS	SHEET 25	E

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

130+80.00

MANITOWOC ST

EXISTING RW

D

C

125+00 126+00 127+00 128+00 129+00 130+00 131+0

USH 45

D

C

EXISTING RW

MANITOWOC ST

2

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 26	E

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

EXISTING RW

131+00

132+00

133+00

134+00

135+00

136+00

USH 45

C

MILWAUKEE ST

EXISTING RW

130+80.00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 27	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (02)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

142+40.00

ROCK BAGS REQD

ROCK BAGS REQD

EXISTING RW

C

C

137+00 138+00 139+00 140+00 141+00 142+00

USH 45

C

C

EXISTING RW

TP

TREE FELL

136+60.00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 28	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (03)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

148+20.00

2

EXISTING RW

143+00

144+00

145+00

146+00

147+00

148+00

USH 45

EXISTING RW

142+40.00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 29	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (04)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

154+00.00

EXISTING RW

D

148+00

149+00

150+00

151+00

152+00

153+00

154+00

D

USH 45

EXISTING RW

148+20.00

2

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 30	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (05)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

159+80.00

EXISTING RW

154+00

155+00

156+00

157+00

158+00

159+00

160+00

USH 45

EXISTING RW

154+00.00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 31	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (06)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

165+60.00

EXISTING RW

160+00

161+00

162+00

163+00

164+00

165+00

USH 45

EXISTING RW

159+80.00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLANS	SHEET 32	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (07)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

171+40.00

EXISTING RW

166+00

167+00

168+00

169+00

170+00

171+00

D

POST

USH 45

EXISTING RW

165+60.00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 33	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (08)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

177+20.00

EXISTING RW

172+00

173+00

174+00

175+00

176+00

177+00

USH 45

EXISTING RW

171+40.00

2

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 34	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (09)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N

183+00.00

EXISTING RW

D

D

177+00

178+00

179+00

180+00

181+00

182+00

183+00

USH 45

EXISTING RW

177+20.00

2

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 35	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (10)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

EROSION MAT CLASS I, TYPE B

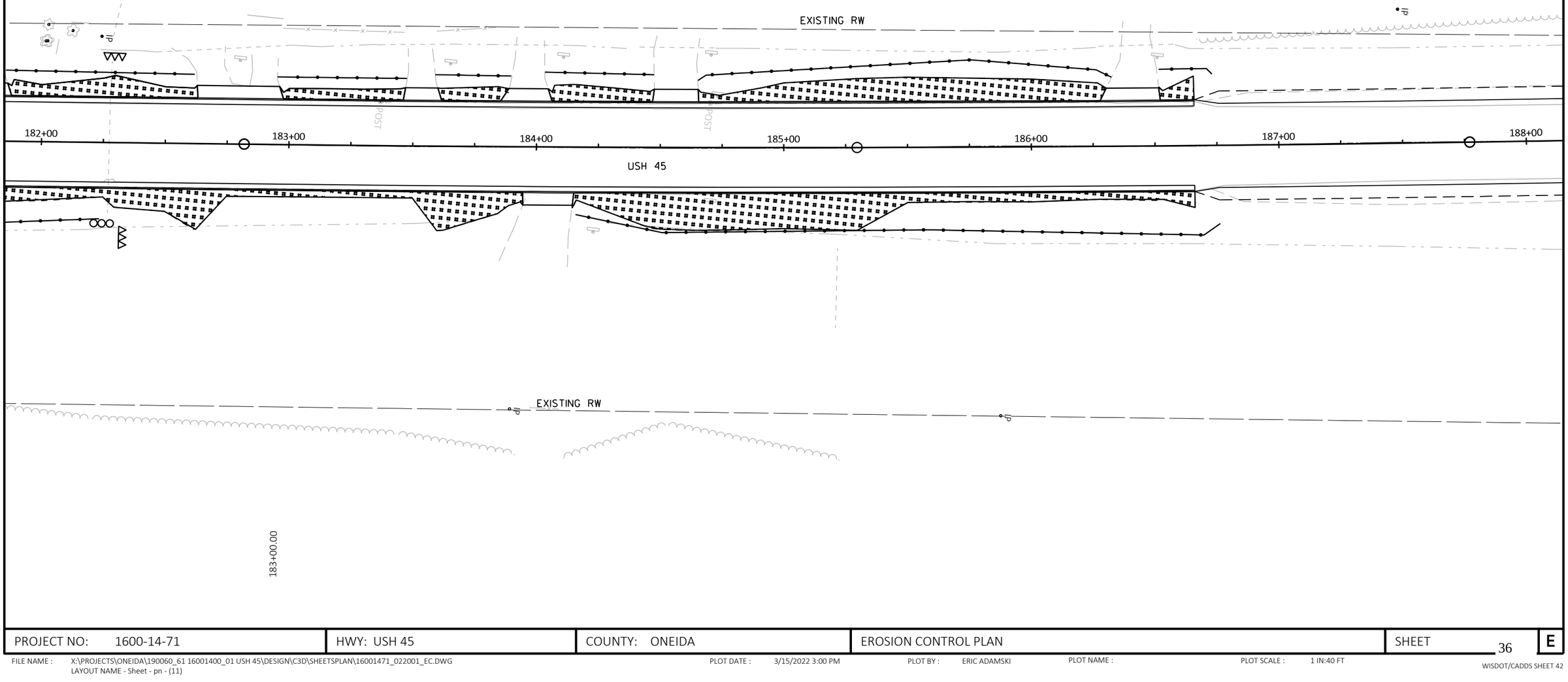
RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

N



2

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL PLAN	SHEET 36	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (11)

PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

LEGEND

EROSION MAT CLASS I, TYPE B

RIPRAP MEDIUM

INLET PROTECTION

CULVERT PIPE CHECK

SILT FENCE

5

5

CULVERT PIPE CHECKS REQD

WETLAND BOUNDARY TYP

SILT FENCE REQD

201+00

202+00

203+00

ESTIMATED LIMITS OF DISTURBANCE

CULVERT REPLACEMENT STA. 202+02

USH 45

SILT FENCE REQD

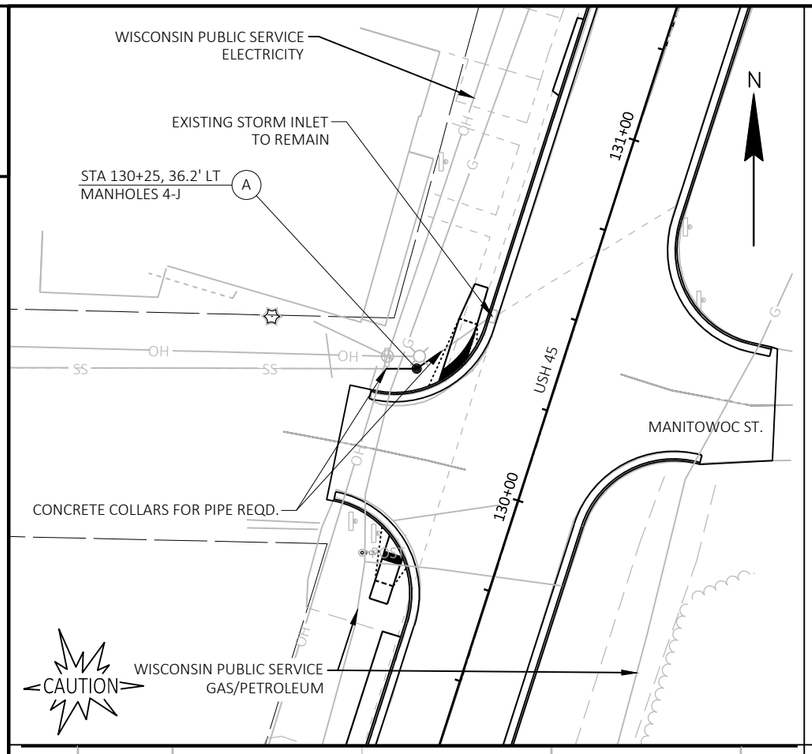
ROCK BAGS FOR SILT FENCE RELIEF REQD

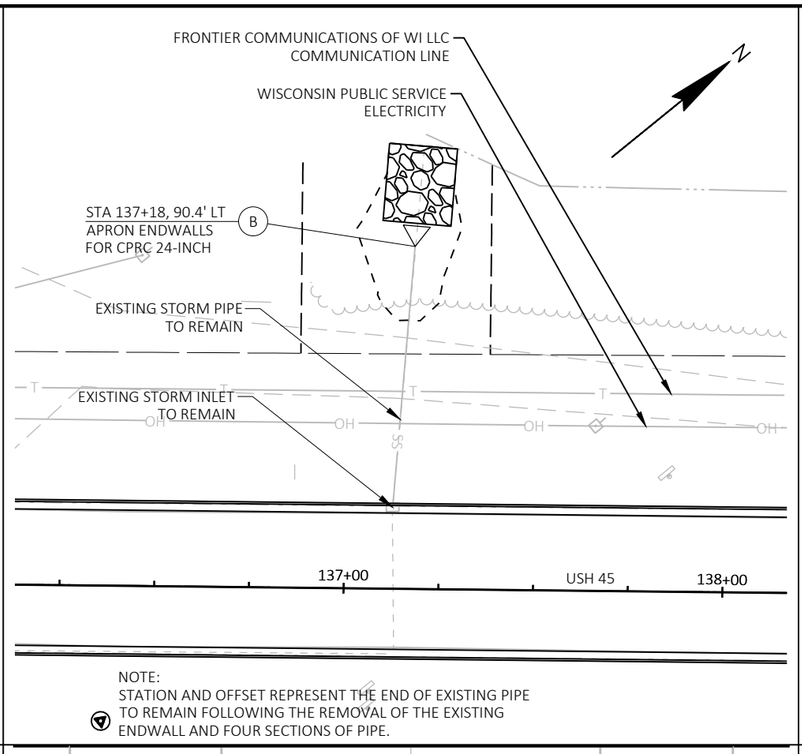
WETLAND BOUNDARY TYP

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	EROSION CONTROL	SHEET 37	E

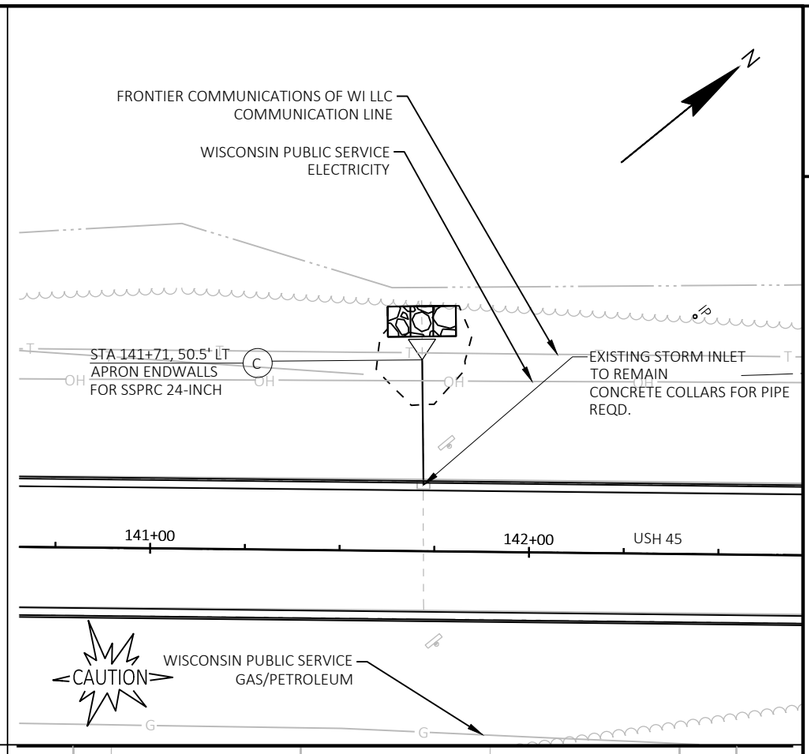
FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022001_EC.DWG
LAYOUT NAME - Sheet - pn - (13)

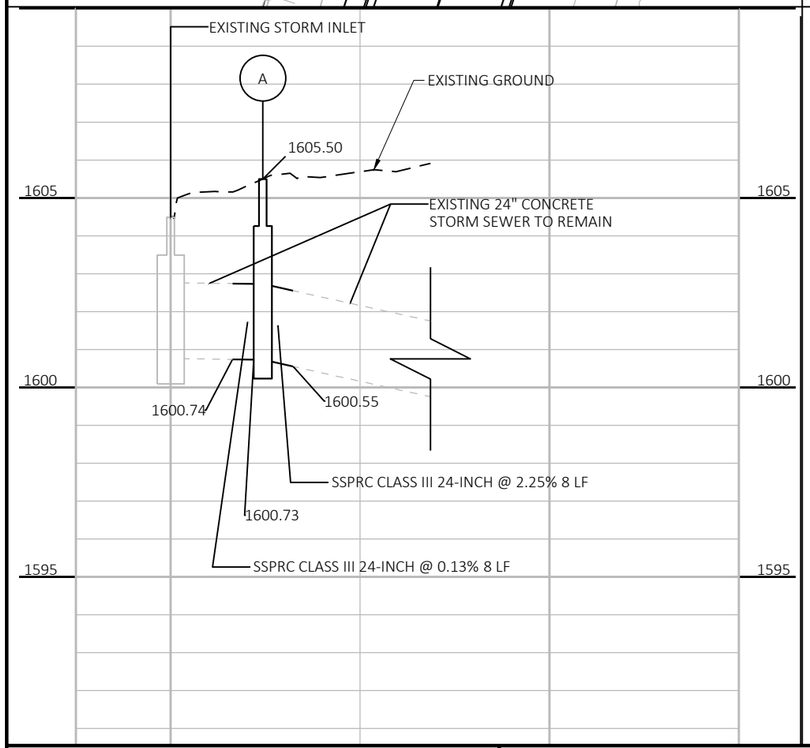
PLOT DATE : 3/15/2022 3:00 PM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:20 FT

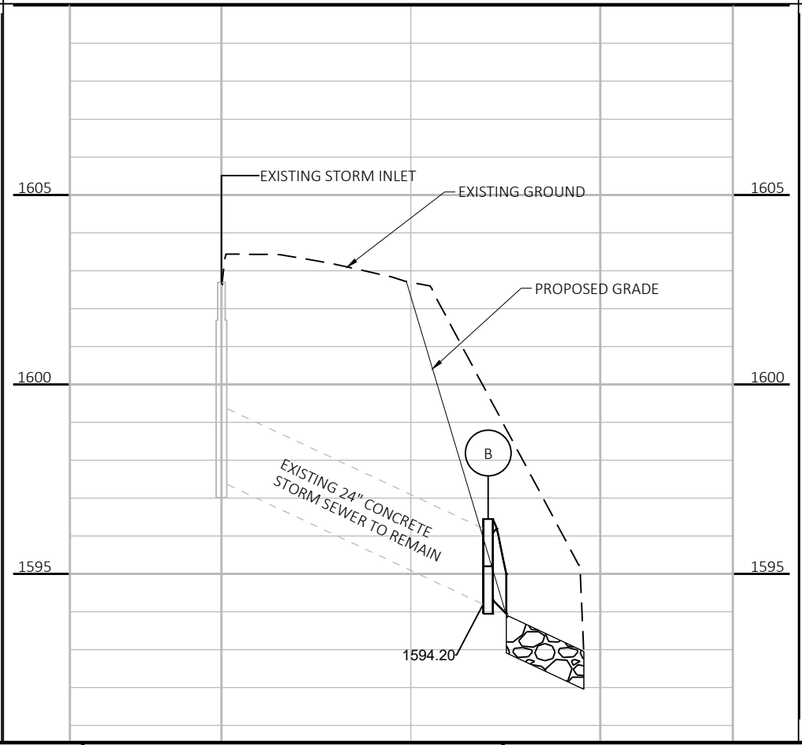


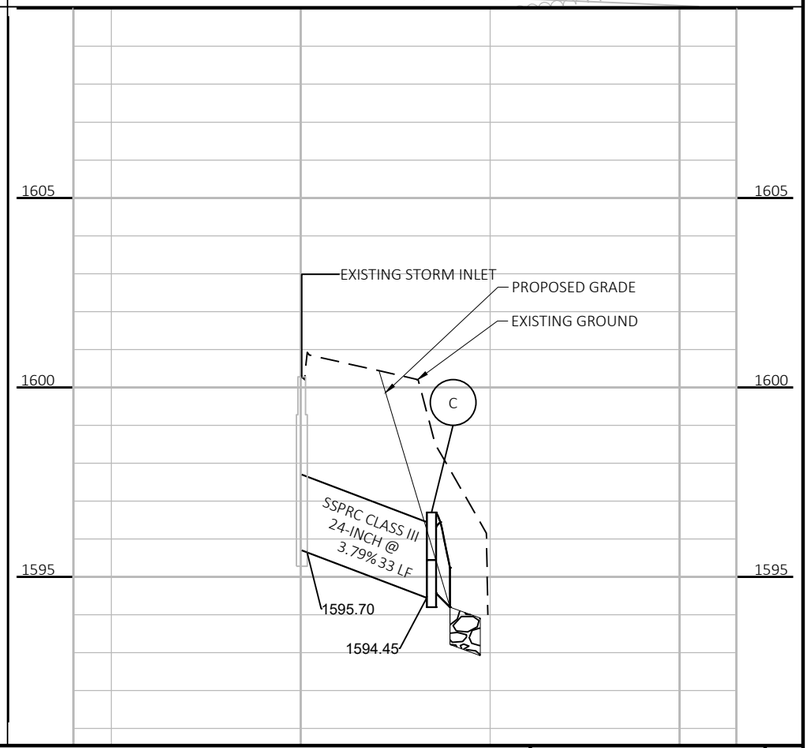


NOTE:
STATION AND OFFSET REPRESENT THE END OF EXISTING PIPE TO REMAIN FOLLOWING THE REMOVAL OF THE EXISTING ENDWALL AND FOUR SECTIONS OF PIPE.







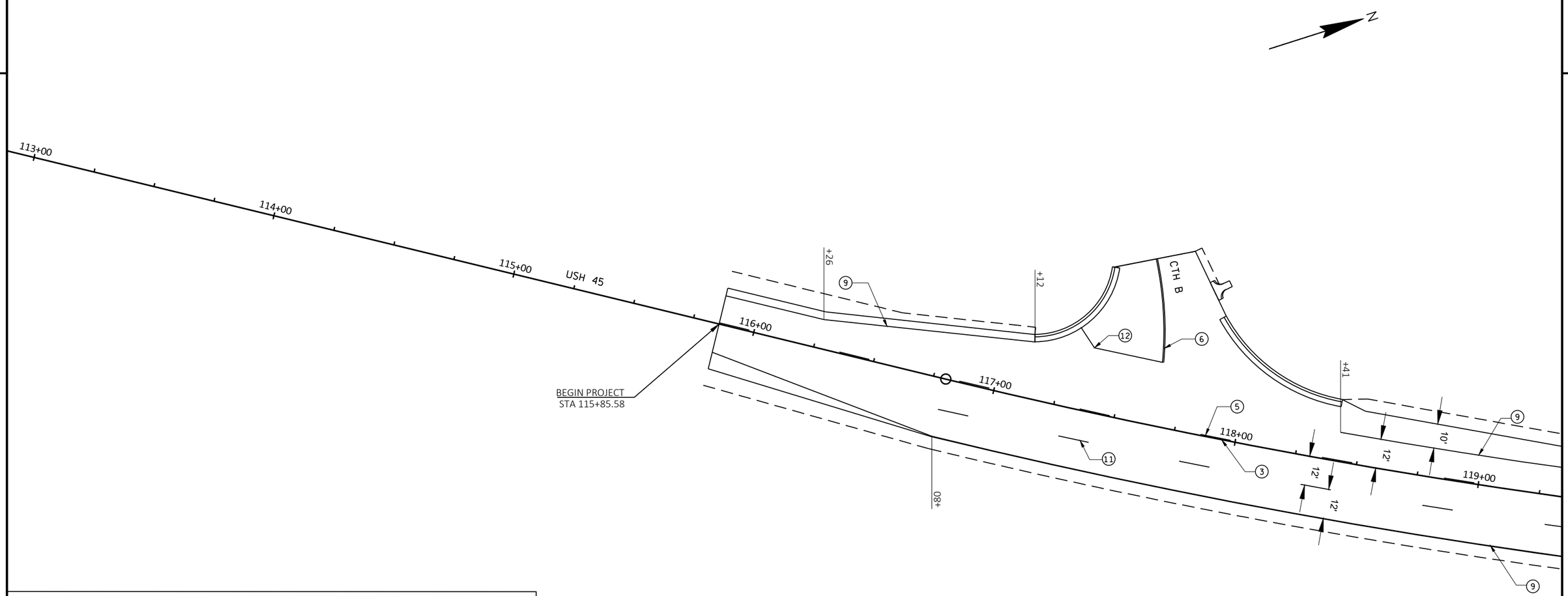


2

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	STORM SEWER	SHEET 38	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_022301_SS.DWG
LAYOUT NAME - SS 1 IN 40 FT
PLOT DATE : 5/20/2021 8:36 AM
PLOT BY : ANDY BLOCK
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 41

2

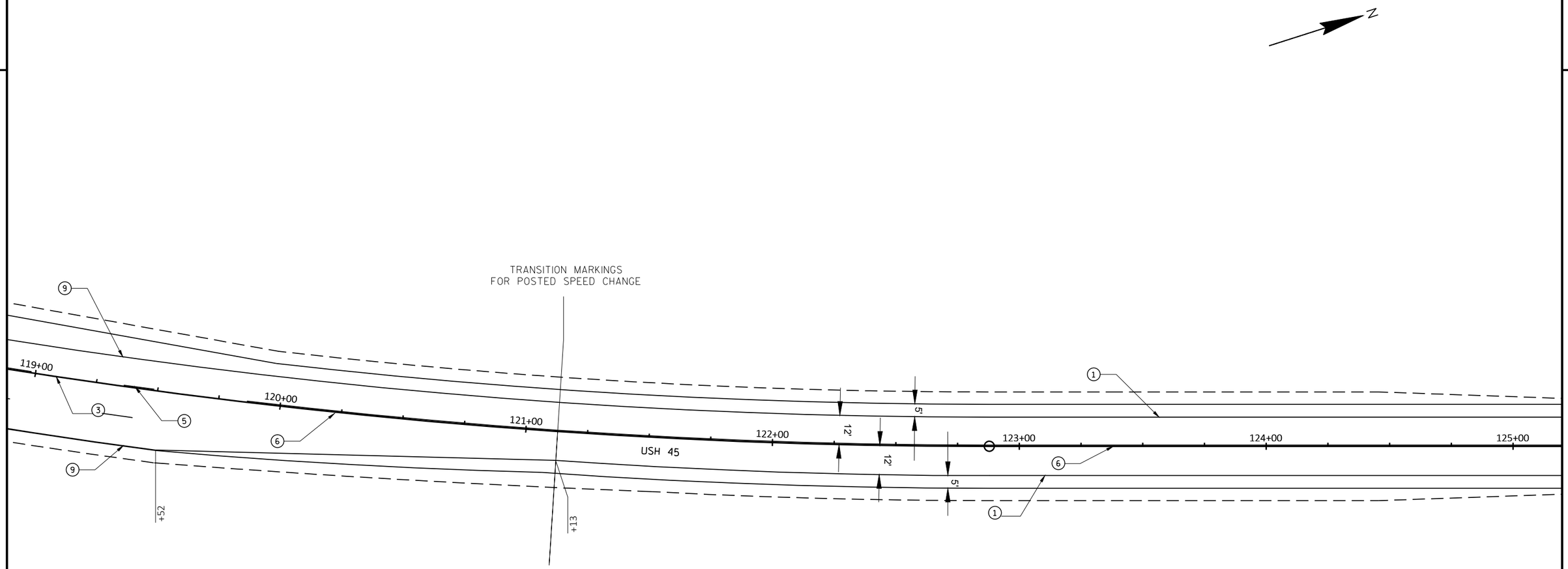


PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
3. MARKING LINE EPOXY 4-INCH (YELLOW)*
4. MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
5. MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)*
6. MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)*
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2

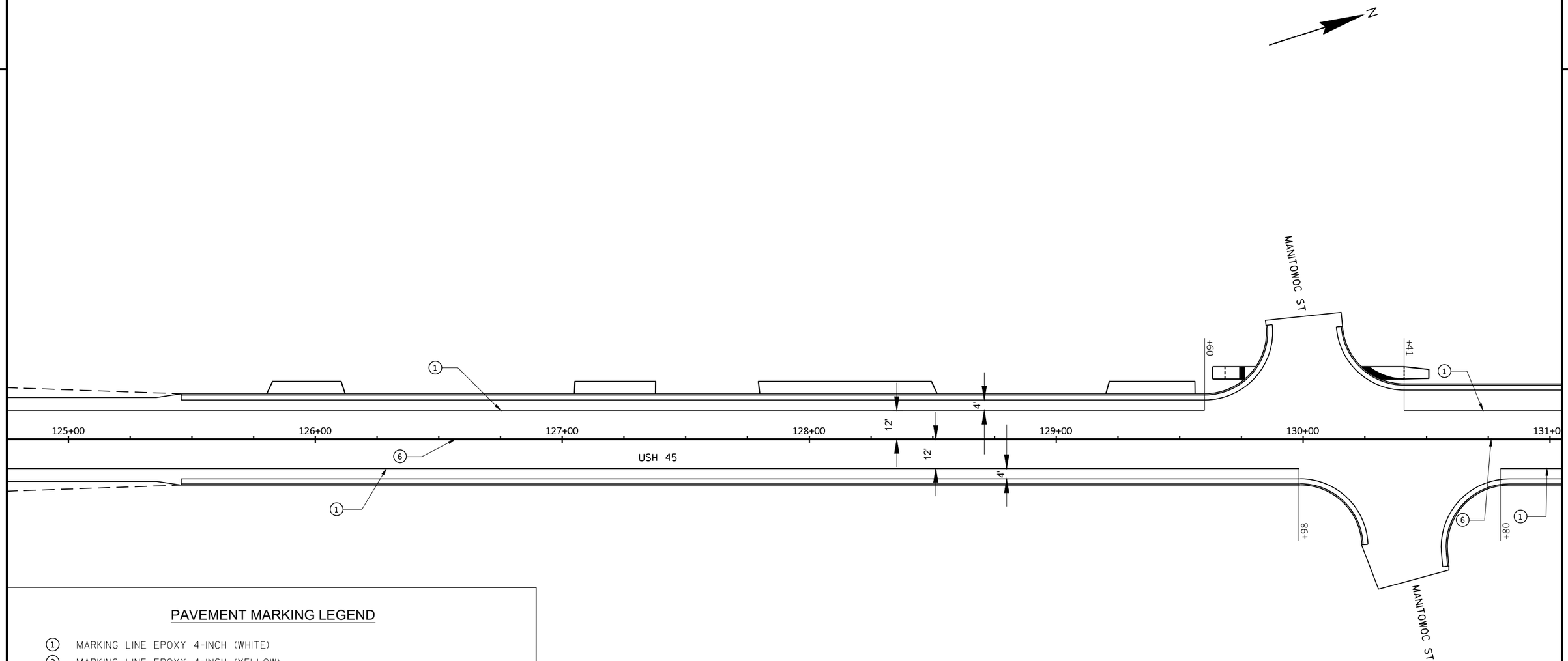


PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
3. MARKING LINE EPOXY 4-INCH (YELLOW)*
4. MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
5. MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)*
6. MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)*
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2



PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
3. MARKING LINE EPOXY 4-INCH (YELLOW)*
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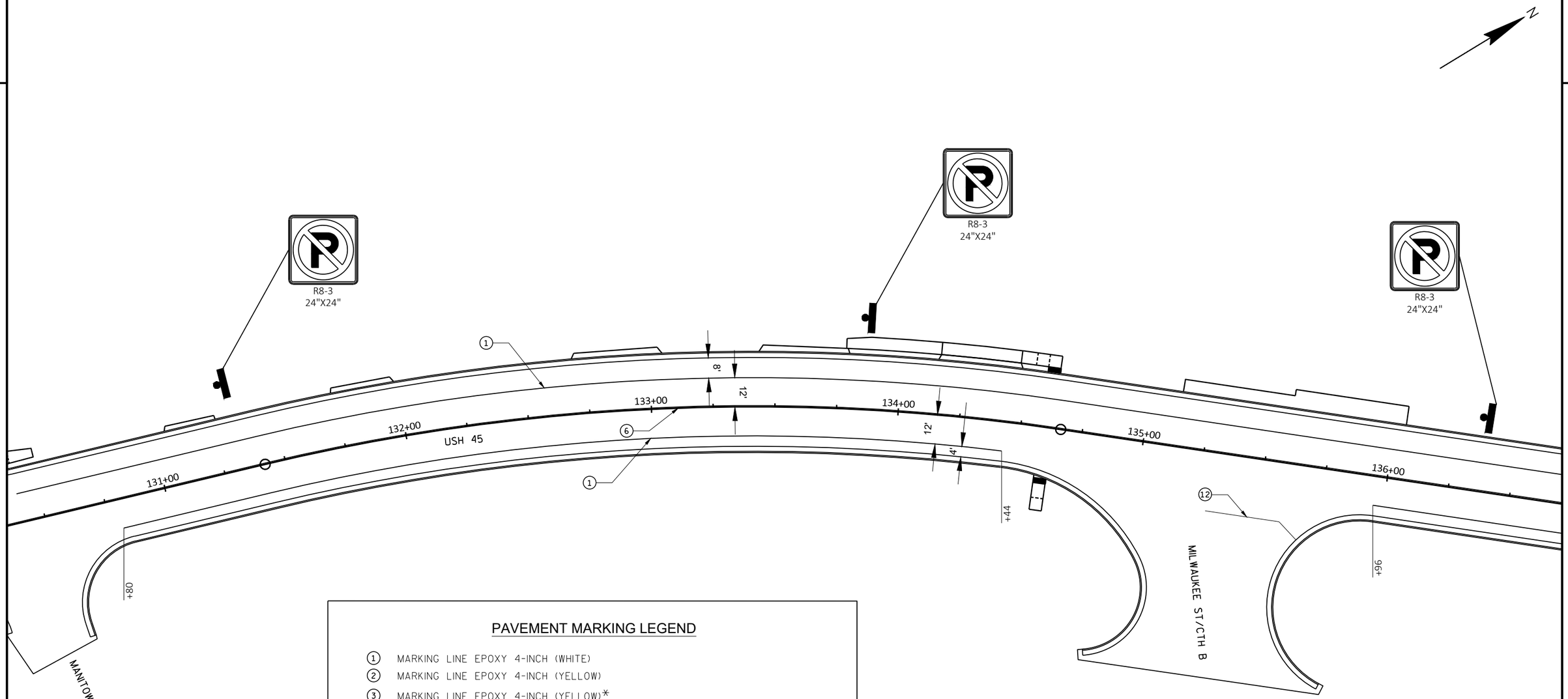
6. MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)*
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2



PAVEMENT MARKING LEGEND

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3. MARKING LINE EPOXY 4-INCH (YELLOW)*
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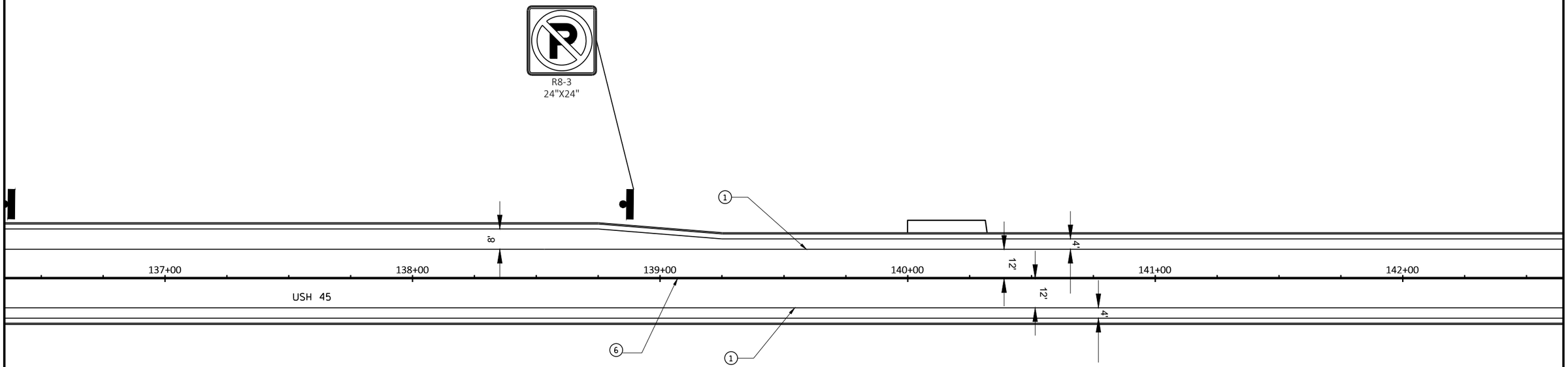
6. MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)*
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PAVEMENT MARKING & PERMANENT SIGNING PLANS	SHEET 42	E

2



PAVEMENT MARKING LEGEND

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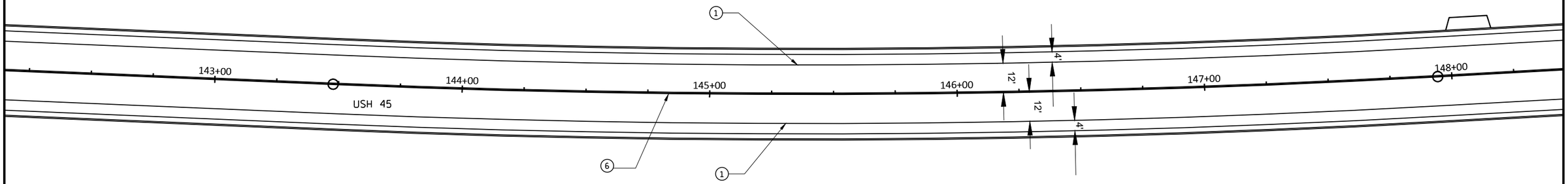
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2



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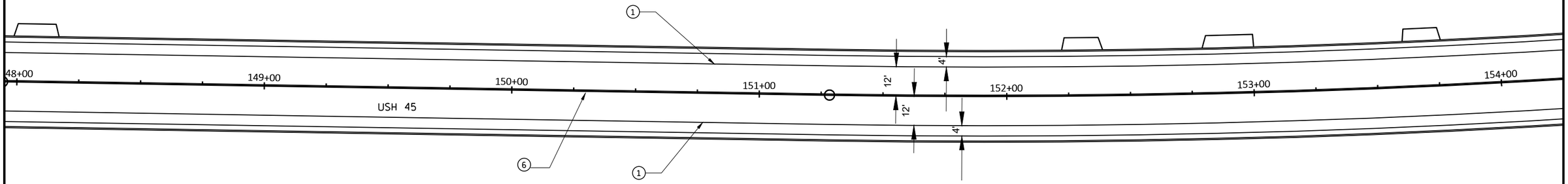
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2



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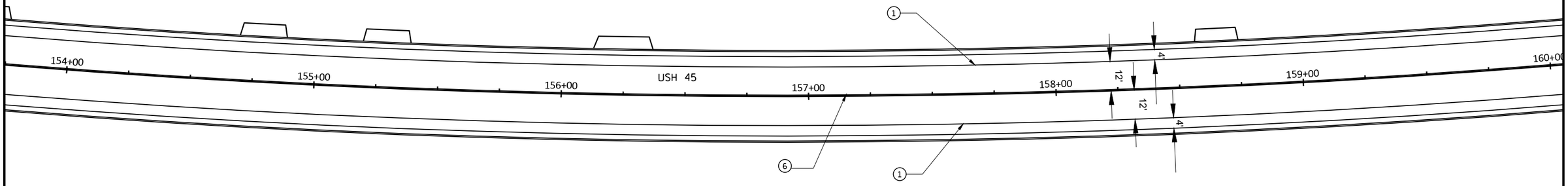
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2



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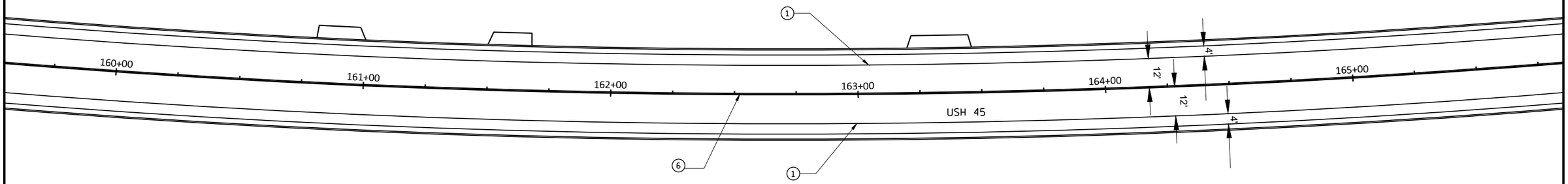
6. MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)*
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2



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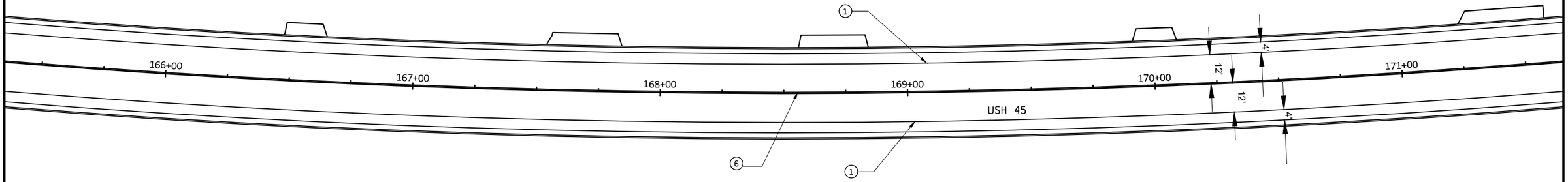
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2



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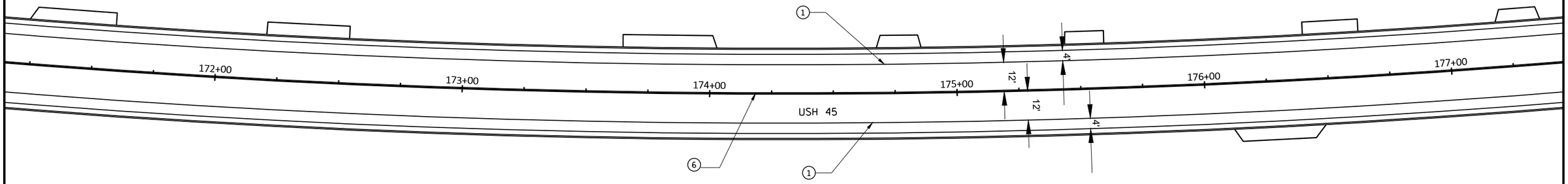
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2

N



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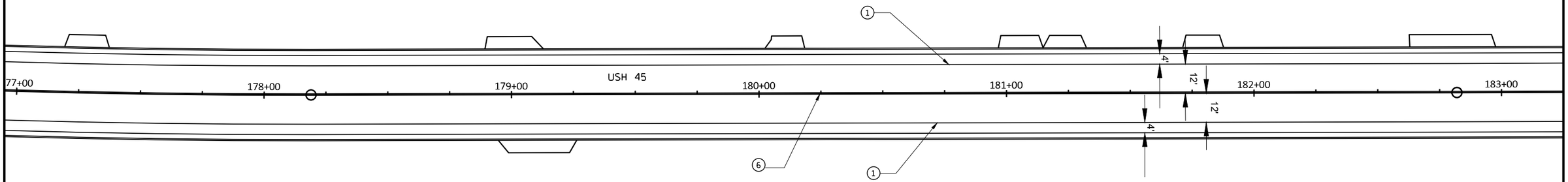
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2

N



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7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
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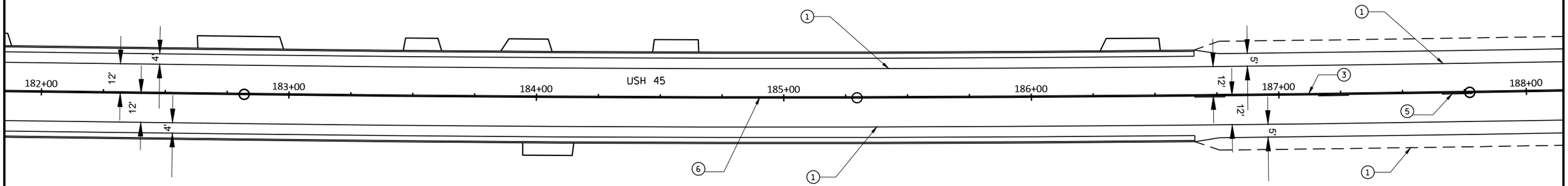
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2

N



PAVEMENT MARKING LEGEND

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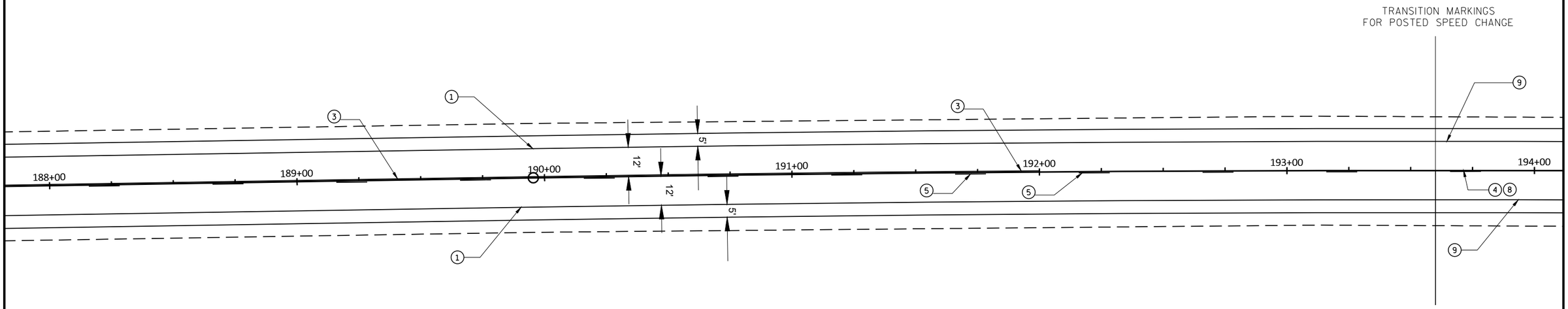
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

2

N



PAVEMENT MARKING LEGEND

1. MARKING LINE EPOXY 4-INCH (WHITE)
2. MARKING LINE EPOXY 4-INCH (YELLOW)
3. MARKING LINE EPOXY 4-INCH (YELLOW)*
4. MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
5. MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)*
6. MARKING LINE EPOXY 4-INCH (DOUBLE YELLOW)*
7. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW)
8. TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) (12.5 FT LINE, 37.5 FT SKIP)
9. MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE)
10. MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) (CHANNELIZING)
11. MARKING LINE EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

NOTE:
ASPHALTIC CENTERLINE RUMBLE STRIP
STA 193+60 - STA 196+40

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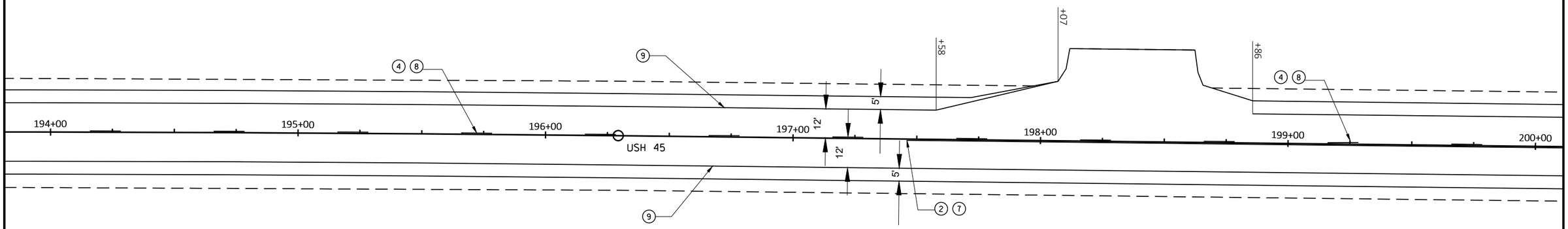

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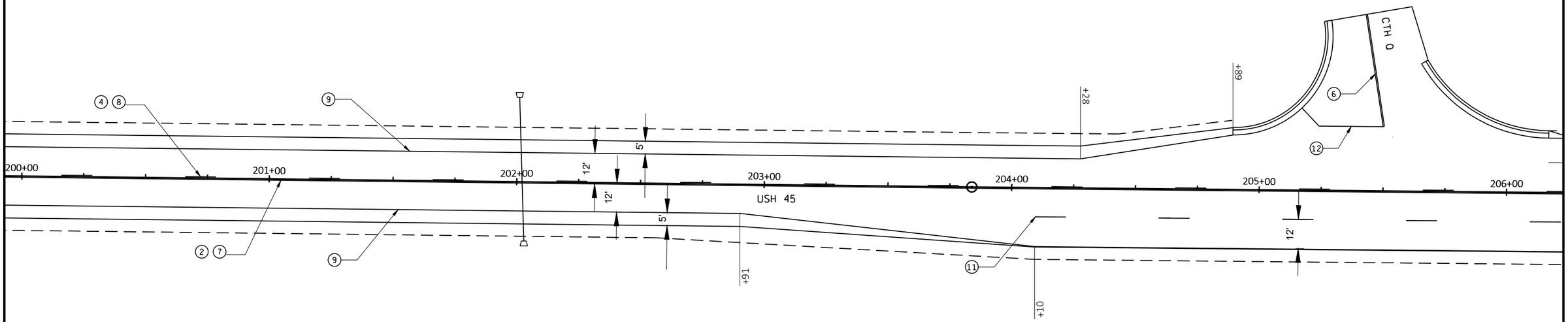

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11. PAVEMENT MARKING EPOXY 4-INCH (WHITE) (12.5 FT LINE, 37.5 FT SKIP)
12. MARKING STOP LINE EPOXY 18-INCH

*DENOTES SAME DAY MARKINGS

NOTE:
ASPHALTIC CENTERLINE RUMBLE STRIP
STA 200+40 - STA 203+50

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PAVEMENT MARKING & PERMANENT SIGNING PLANS	SHEET 54	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_024501_PM.DWG
LAYOUT NAME - Sheet - pn - (16)
PLOT DATE : 3/16/2022 7:28 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

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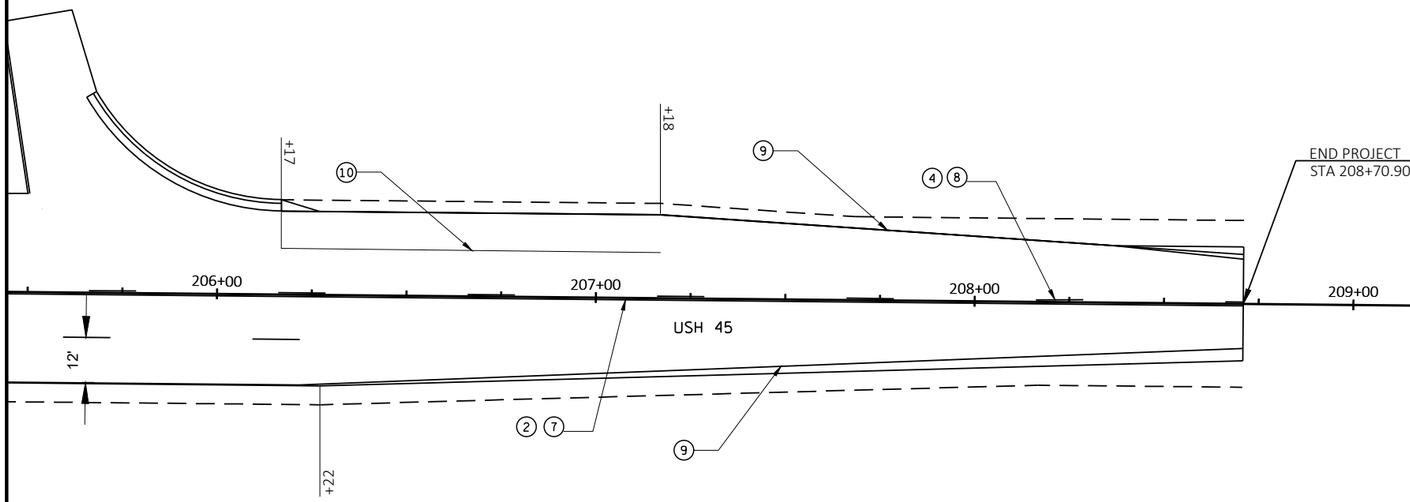

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*DENOTES SAME DAY MARKINGS

NOTE:
ASPHALTIC CENTERLINE RUMBLE STRIP
STA 207+50 - STA 208+70.90

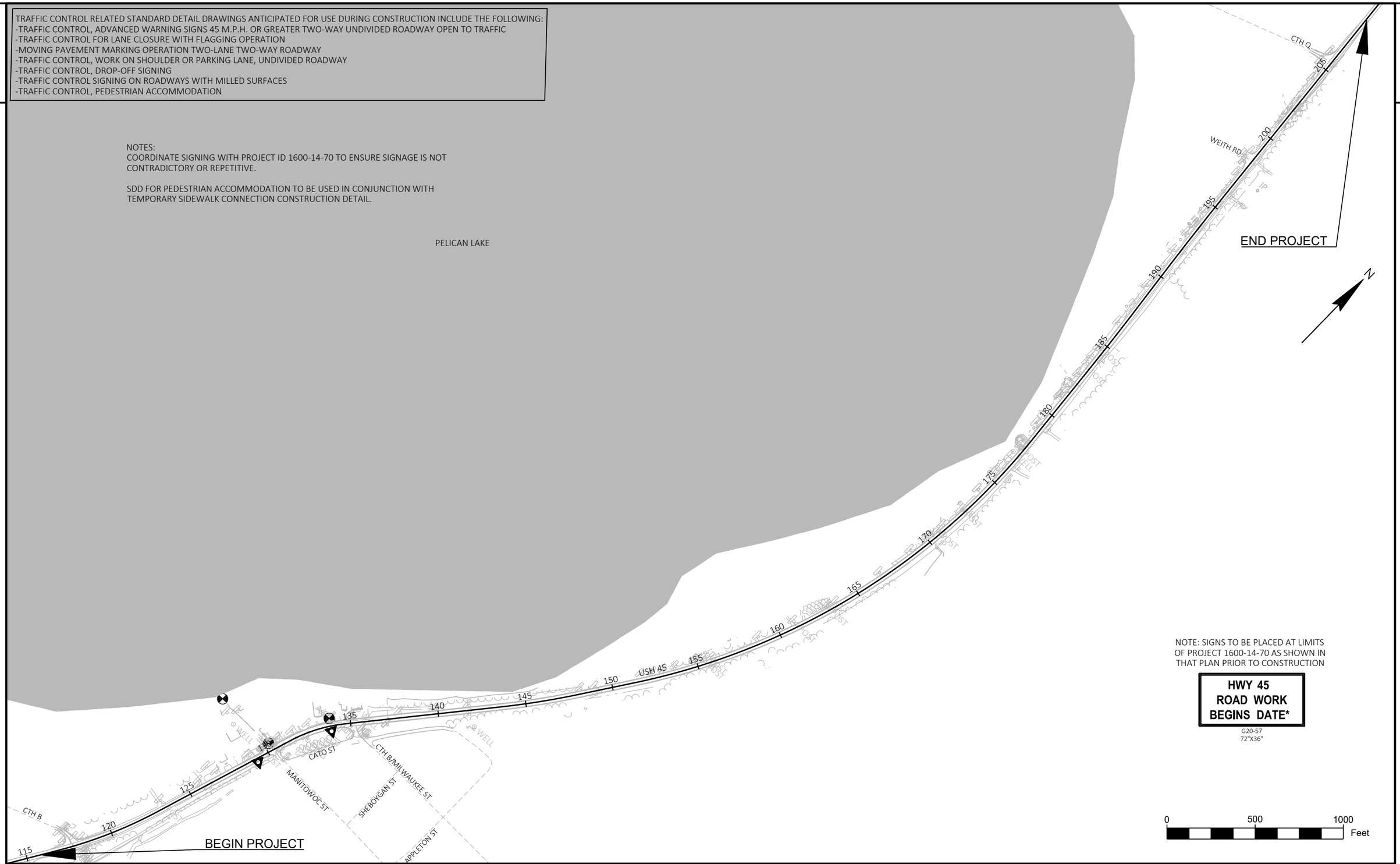
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PAVEMENT MARKING & PERMANENT SIGNING PLANS	SHEET 55	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_024501_PM.DWG
LAYOUT NAME - Sheet - pn - (17)
PLOT DATE : 3/16/2022 7:28 AM PLOT BY : ERIC ADAMSKI PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

TRAFFIC CONTROL RELATED STANDARD DETAIL DRAWINGS ANTICIPATED FOR USE DURING CONSTRUCTION INCLUDE THE FOLLOWING:
-TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROADWAY OPEN TO TRAFFIC
-TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
-MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
-TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
-TRAFFIC CONTROL, DROP-OFF SIGNING
-TRAFFIC CONTROL SIGNING ON ROADWAYS WITH MILLED SURFACES
-TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

NOTES:
COORDINATE SIGNING WITH PROJECT ID 1600-14-70 TO ENSURE SIGNAGE IS NOT CONTRADICTORY OR REPETITIVE.

SDD FOR PEDESTRIAN ACCOMMODATION TO BE USED IN CONJUNCTION WITH TEMPORARY SIDEWALK CONNECTION CONSTRUCTION DETAIL.



NOTE: SIGNS TO BE PLACED AT LIMITS OF PROJECT 1600-14-70 AS SHOWN IN THAT PLAN PRIOR TO CONSTRUCTION

HWY 45
ROAD WORK
BEGINS DATE*

G20-57
72"X36"

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	TRAFFIC CONTROL OVERVIEW	SHEET 56	E

1600-14-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	204.0100	Removing Concrete Pavement	SY	275.000	275.000
0010	204.0110	Removing Asphaltic Surface	SY	2,795.000	2,795.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	36,215.000	36,215.000
0016	204.0150	Removing Curb & Gutter	LF	12,570.000	12,570.000
0018	204.0155	Removing Concrete Sidewalk	SY	25.000	25.000
0020	204.0210	Removing Manholes	EACH	1.000	1.000
0022	204.0220	Removing Inlets	EACH	1.000	1.000
0024	204.0245	Removing Storm Sewer (size) 01. 24-Inch	LF	105.000	105.000
0026	205.0100	Excavation Common	CY	1,465.000	1,465.000
0030	211.0100	Prepare Foundation for Asphaltic Paving (project) 02. 1600-14-71	LS	1.000	1.000
0032	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	67.000	67.000
0036	213.0100	Finishing Roadway (project) 02. 1600-14-71	EACH	1.000	1.000
0038	305.0110	Base Aggregate Dense 3/4-Inch	TON	235.000	235.000
0040	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,025.000	2,025.000
0042	416.0160	Concrete Driveway 6-Inch	SY	55.000	55.000
0044	450.4000	HMA Cold Weather Paving	TON	2,570.000	2,570.000
0046	455.0605	Tack Coat	GAL	2,570.000	2,570.000
0048	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	2.000	2.000
0050	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	2.000	2.000
0052	460.2005	Incentive Density PWL HMA Pavement	DOL	6,945.000	6,945.000
0054	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	4,650.000	4,650.000
0056	460.2010	Incentive Air Voids HMA Pavement	DOL	10,270.000	10,270.000
0058	460.6223	HMA Pavement 3 MT 58-28 S	TON	6,160.000	6,160.000
0062	460.6444	HMA Pavement 4 MT 58-34 H	TON	4,110.000	4,110.000
0064	465.0105	Asphaltic Surface	TON	120.000	120.000
0066	465.0110	Asphaltic Surface Patching	TON	40.000	40.000
0068	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	105.000	105.000
0070	465.0315	Asphaltic Flumes	SY	10.000	10.000
0072	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	710.000	710.000
0074	520.8000	Concrete Collars for Pipe	EACH	6.000	6.000
0076	522.0424	Culvert Pipe Reinforced Concrete Class IV 24-Inch	LF	58.000	58.000
0078	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	4.000	4.000
0080	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	12,335.000	12,335.000
0082	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	235.000	235.000
0084	602.0405	Concrete Sidewalk 4-Inch	SF	550.000	550.000
0086	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	30.000	30.000
0088	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	22.000	22.000
0090	606.0200	Riprap Medium	CY	30.000	30.000
0092	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	57.000	57.000
0094	611.0430	Reconstructing Inlets	EACH	13.000	13.000
0096	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0098	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0100	611.3230	Inlets 2x3-FT	EACH	1.000	1.000
0102	611.9710	Salvaged Inlet Covers	EACH	1.000	1.000
0106	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1600-14-71	EACH	1.000	1.000
0108	619.1000	Mobilization	EACH	0.350	0.350

1600-14-71

Line	Item	Item Description	Unit	Total	Qty
0110	624.0100	Water	MGAL	45.000	45.000
0112	625.0100	Topsoil	SY	4,350.000	4,350.000
0114	628.1504	Silt Fence	LF	4,770.000	4,770.000
0116	628.1520	Silt Fence Maintenance	LF	4,770.000	4,770.000
0118	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0120	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0122	628.2004	Erosion Mat Class I Type B	SY	4,350.000	4,350.000
0124	628.7015	Inlet Protection Type C	EACH	7.000	7.000
0126	628.7020	Inlet Protection Type D	EACH	7.000	7.000
0128	628.7555	Culvert Pipe Checks	EACH	25.000	25.000
0130	628.7570	Rock Bags	EACH	225.000	225.000
0132	629.0210	Fertilizer Type B	CWT	2.500	2.500
0134	630.0130	Seeding Mixture No. 30	LB	25.000	25.000
0136	630.0140	Seeding Mixture No. 40	LB	60.000	60.000
0138	630.0500	Seed Water	MGAL	75.000	75.000
0140	633.5200	Markers Culvert End	EACH	4.000	4.000
0142	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	14.000	14.000
0144	637.2210	Signs Type II Reflective H	SF	16.000	16.000
0146	638.2102	Moving Signs Type II	EACH	10.000	10.000
0148	638.4000	Moving Small Sign Supports	EACH	10.000	10.000
0150	642.5201	Field Office Type C	EACH	0.350	0.350
0152	643.0300	Traffic Control Drums	DAY	25,250.000	25,250.000
0154	643.0410	Traffic Control Barricades Type II	DAY	160.000	160.000
0156	643.0420	Traffic Control Barricades Type III	DAY	170.000	170.000
0158	643.0705	Traffic Control Warning Lights Type A	DAY	180.000	180.000
0160	643.0900	Traffic Control Signs	DAY	1,698.000	1,698.000
0162	643.5000	Traffic Control	EACH	0.350	0.350
0164	644.1410	Temporary Pedestrian Surface Asphalt	SF	255.000	255.000
0166	644.1601	Temporary Pedestrian Curb Ramp	DAY	10.000	10.000
0168	644.1810	Temporary Pedestrian Barricade	LF	125.000	125.000
0170	645.0120	Geotextile Type HR	SY	80.000	80.000
0172	646.1020	Marking Line Epoxy 4-Inch	LF	16,680.000	16,680.000
0174	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	3,760.000	3,760.000
0176	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	100.000	100.000
0178	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	14,110.000	14,110.000
0180	646.6120	Marking Stop Line Epoxy 18-Inch	LF	120.000	120.000
0182	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	8,695.000	8,695.000
0184	648.0100	Locating No-Passing Zones	MI	1.760	1.760
0186	649.0105	Temporary Marking Line Paint 4-Inch	LF	15,630.000	15,630.000
0188	649.0120	Temporary Marking Line Epoxy 4-Inch	LF	2,180.000	2,180.000
0190	650.4000	Construction Staking Storm Sewer	EACH	4.000	4.000
0192	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	12,570.000	12,570.000
0194	650.6000	Construction Staking Pipe Culverts	EACH	1.000	1.000
0196	650.8000	Construction Staking Resurfacing Reference	LF	3,166.000	3,166.000
0198	650.9000	Construction Staking Curb Ramps	EACH	4.000	4.000
0202	650.9910	Construction Staking Supplemental Control (project) 02. 1600-14-71	LS	1.000	1.000
0204	650.9920	Construction Staking Slope Stakes	LF	6,119.000	6,119.000
0206	690.0150	Sawing Asphalt	LF	13,040.000	13,040.000
0208	690.0250	Sawing Concrete	LF	125.000	125.000

1600-14-71

Line	Item	Item Description	Unit	Total	Qty
0210	740.0440	Incentive IRI Ride	DOL	7,035.000	7,035.000
0212	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0214	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000

3

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
137+00	-	138+00	USH 45, LT	1	1
141+00	-	142+00	USH 45, LT	1	1
			TOTALS	2	2

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	203.0100 EACH	REMARKS
202+02	USH 45	1	24" CPRC - 70 LF
	TOTAL	1	

REMOVING CONCRETE PAVEMENT

STATION	LOCATION	204.0100 SY	REMARKS
131+16	USH 45, LT	5	DRIVEWAY APRON
131+86	USH 45, LT	7	DRIVEWAY APRON
132+87	USH 45, LT	9	DRIVEWAY APRON
133+62	USH 45, LT	9	DRIVEWAY APRON
202+02	USH 45	245	CULVERT REPLACEMENT
	TOTAL	275	

REMOVING ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	204.0110 SY	REMARKS
115+86	-	118+50	USH 45, LT	25	CTH B RADII
125+46	-	130+25	USH 45, LT	102	INCLUDES MANITOWOC STREET SOUTH RADIUS
130+25	-	135+00	USH 45, LT	113	INCLUDES MANITOWOC STREET NORTH RADIUS
135+00	-	140+00	USH 45, LT	111	
140+00	-	186+65	USH 45, LT	1037	
204+89	-	206+17	USH 45, LT	30	CTH Q RADII
125+46	-	130+25	USH 45, RT	110	INLCLUDES MANITOWOC STREET SOUTH RADIUS
130+25		135+00	USH 45, RT	118	INCLUDES MANITOWOC STREET NORTH AND MILWAUKEE STREET (CTH B) SOUTH RADIUS
135+00	-	140+00	USH 45, RT	112	INCLUDES MILWAUKEE STREET (CTH B) NORTH RADIUS
140+00	-	186+66	USH 45, RT	1037	
			TOTAL	2,795	

REMOVING ASPHALTIC SURFACE MILLING

STATION	TO	STATION	LOCATION	204.0120 SY	REMARKS
115+86	-	125+46	USH 45	4,129	INCLUDES CTH B
125+46	-	139+25	USH 45	6,363	INCLUDES MANITOWOC ST AND MILWAUKEE ST (CTH B)
139+25	-	186+76	USH 45	16,893	
186+76	-	208+71	USH 45	8,830	INCLUDES WIETH RD AND CTH Q
			TOTAL	36,215	

REMOVING CURB & GUTTER

STATION	TO	STATION	LOCATION	204.0150 LF	REMARKS
115+86	-	118+50	USH 45, LT	115	CTH B RADII
125+46		130+25	USH 45, LT	460	INCLUDES MANITOWOC ST SOUTH RADIUS
130+25	-	135+00	USH 45, LT	510	INCLUDES MANITOWOC ST NORTH RADIUS
135+00	-	140+00	USH 45, LT	500	
140+00	-	186+65	USH 45, LT	4,667	
204+89	-	206+17	USH 45, LT	120	INCLUDES CTH Q RADII
125+46	-	130+25	USH 45, RT	496	INCLUDES MANITOWOC ST SOUTH RADIUS
130+25		135+00	USH 45, RT	531	INCLUDES MANITOWOC ST NORTH RADIUS AND MILWAUKEE ST (CTH B) SOUTH RADIUS
135+00	-	140+00	USH 45, RT	504	INCLUDES MILWAUKEE ST (CTH B) NORTH RADIUS
140+00	-	186+66	USH 45, RT	4,667	
			TOTAL	12,570	

REMOVING STORM SEWER STRUCTURES

STATION	LOCATION	204.0210 REMOVING MANHOLES EACH	204.0220 REMOVING INLETS EACH
130+23	USH 45, LT	1	---
182+28	USH 45, LT	---	1
	TOTAL	1	1

REMOVING STORM SEWER 24-INCH

STATION	LOCATION	204.0245.01 LF
130+23	USH 45, LT	16
137+20	USH 45, LT	38
141+71	USH 45, LT	51
	TOTAL	105

REMOVING CONCRETE SIDEWALK

STATION	TO	STATION	LOCATION	204.0155 SY
130+24	-	130+51	USH 45, LT	10
133+79	-	134+10	USH 45, LT	15
			TOTAL	25

EARTHWORK SUMMARY

CATEGORY	STATION TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (2) CY	205.0100 EXCAVATION COMMON (1) EBS EXCAV. CY	SALVAGED/UNUSABLE PAVEMENT MATERIAL (2) CY	AVAILABLE MATERIAL (3) CY	UNEXPANDED FILL CY	EXPANDED FILL (4) FACTOR 1.25 CY	MASS ORDINATE +/- (5) CY	WASTE CY	BORROW CY	REMARKS
0010	125+46 - 130+00	USH 45	70	0	0	70	4	5	64	64	0	
0010	130+00 - 140+00	USH 45	192	0	0	192	11	14	177	177	0	STORM OUTFALL STA. 137+20, 30 CY
0010	140+00 - 150+00	USH 45	190	0	0	190	17	21	169	169	0	STORM OUTFALL STA. 141+71, 25 CY
0010	150+00 - 160+00	USH 45	150	0	0	150	31	39	110	110	0	
0010	160+00 - 170+00	USH 45	151	0	0	151	28	35	116	116	0	
0010	170+00 - 180+00	USH 45	157	0	0	157	31	38	119	119	0	
0010	180+00 - 186+66	USH 45	105	0	0	105	53	66	38	38	0	
0010	202+02 - 202+02	USH 45	445	0	174	271	0	0	271	271	0	CULVERT TRANSITION STA. 202+02, 445 CY
0010	MANITOWOC ST (EAST)		1	0	0	1	1	1	0	0	0	
0010	MANITOWOC ST (WEST)		3	0	0	1	2	3	-2	0	0	
0010	MILWAUKEE ST		1	0	0	1	5	7	-6	0	0	
	SUBTOTAL		1,465	0	174	1,288	184	230	1,058	1,065	0	

1) Unusable Pavement is included in Cut
2) Unusable Pavement Material = Existing Concrete Pavement
3) Available Material = Cut - Unusable Pavement Material
4) Expanded Fill Factor = 1.25 Expanded Fill = Unexpanded Fill * Fill Factor
5) 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.

FOUNDATION PREPARATION

STATION	TO	STATION	LOCATION	211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING LS	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
115+85.58	-	125+45.58	USH 45		22
125+45.58	-	186+65.89	USH 45	1	---
186+65.89	-	208+70.90	USH 45		45
			TOTAL	1	67

BASE AGGREGATE DENSE AND WATER

STATION	TO	STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL
115+86	-	125+46	USH 45	57	16	---
125+46	-	130+25	USH 45	---	116	---
130+25	-	135+00	USH 45	---	126	---
135+00	-	140+00	USH 45	---	122	---
140+00	-	186+66	USH 45	---	1234	---
186+66	-	208+71	USH 45	134	230	---
	TEMPORARY PEDESTRIAN SURFACE			---	7	---
	PERMANENT SIDEWALK AREAS			20	---	---
	UNDISTRIBUTED			24	174	45
			TOTAL	235	2,025	45

CONCRETE DRIVEWAY & SIDEWALK

STATION	TO	STATION	LOCATION	416.0160 CONCRETE DRIVEWAY 6-INCH SY	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	602.0605 CURB RAMP DETECTABLE WARNING FIELD RAIDAL YELLOW SF
129+68	-	129+81	USH 45, LT	---	78	10	---
130+24	-	130+51	USH 45, LT	---	122	---	22
131+05	-	131+26	USH 45, LT	5	---	---	---
131+73	-	131+99	USH 45, LT	6	---	---	---
132+69	-	133+05	USH 45, LT	10	---	---	---
133+44	-	133+79	USH 45, LT	9	---	---	---
134+15	-	134+48	USH 45, LT	25	281	10	---
134+58	-	134+63	USH 45, RT	---	69	10	---
			TOTALS	55	550	30	22

HMA PAVEMENT

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	460.0105.S HMA PAVEMENT PWL TEST STRIP VOLUMETRICS EACH	460.0110.S HMA PAVEMENT PWL TEST STRIP DENSITY EACH	460.6223 HMA PAVEMENT 3 MT 58-28 S (LOWER) TON	460.6444 HMA PAVEMENT 4 MT 58-34 H (UPPER) TON
115+86	-	125+46	USH 45	310	---	---	740	495
125+46	-	130+25	USH 45	140	---	---	335	225
130+25	-	135+00	USH 45	155	---	---	365	245
135+00	-	140+00	USH 45	160	---	---	385	260
140+00	-	186+66	USH 45	1,160	---	---	2,785	1,855
186+66	-	208+71	USH 45	645	---	---	1,550	1,030
		ENTIRE PROJECT		---	2	2	---	---
			TOTALS	2,570	2	2	6,160	4,110

PWL MIXTURE USE TABLE

LOCATION	STATION	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12' DRIVING LANE (NB/SB)	115+85.58 - 208+70.90	UPPER LAYER	3 MT 58-28 S	460.6444	2,780	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12' DRIVING LANE (NB/SB)	115+85.58 - 197+47	LOWER LAYER	EXISTING CRUSHED AGGREGATE	460.6223	2,040	3'	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12' DRIVING LANE (NB/SB)	197+47 - 208+70.90	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.6223	2,125	3'	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
VARIABLE SHOULDER (NB/SB)	115+85.58 208+70.90	UPPER LAYER	3 MT 58-28 S	460.6444	1,330	2"	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGLIBLE FOR INCENTIVE
VARIABLE SHOULDER (NB/SB)	115+85.58 - 197+47	LOWER LAYER	EXISTING CRUSHED AGGREGATE	460.6223	980	3'	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGLIBLE FOR INCENTIVE
VARIABLE SHOULDER (NB/SB)	197+47 - 208+70.90	LOWER LAYER	MILLED EXISTING HMA SURFACE	460.6223	1,015	3'	PWL INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGLIBLE FOR INCENTIVE

ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES TON	465.0315 ASPHALTIC FLUMES SY	REMARKS
	117+80		USH 45, LT	---	---	---	10	NORTH SIDE OF CTH B
125+80	-	126+12	USH 45, LT	---	---	3	---	
127+05	-	127+38	USH 45, LT	---	---	3	---	
127+80	-	128+52	USH 45, LT	---	---	7	---	
129+20	-	129+56	USH 45, LT	---	---	3	---	
130+15	-	130+23	USH 45, LT	---	---	5	---	CONNECTION TO TEMP PED SURFACE
130+24	-	130+51	USH 45, LT	2	---	---	---	TERRACE
133+79		134+16	USH 45, LT	3				TERRACE
135+13	-	136+04	USH 45, LT	---	---	9	---	
140+00	-	140+32	USH 45, LT	---	---	3	---	
147+99	-	148+17	USH 45, LT	---	---	2	---	
152+22	-	152+39	USH 45, LT	---	---	1	---	
152+79		153+00	USH 45, LT			2		
153+61	-	153+76	USH 45, LT	---	---	1	---	
154+69	-	154+88	USH 45, LT	---	---	2	---	
155+19	-	155+39	USH 45, LT	---	---	2	---	
156+13	-	156+37	USH 45, LT	---	---	2	---	
158+57	-	158+74	USH 45, LT	---	---	2	---	
160+80	-	161+00	USH 45, LT	---	---	2	---	
161+50	-	161+68	USH 45, LT	---	---	2	---	
163+20	-	163+46	USH 45, LT	---	---	2	---	
166+47	-	166+65	USH 45, LT	---	---	1	---	
167+54		167+84	USH 45, LT			3		
			SUBTOTALS	5	0	57	10	

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ASPHALTIC SURFACE CONT

STATION	TO	STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES TON	465.0315 ASPHALTIC FLUMES SY	REMARKS
168+56	-	168+84	USH 45, LT	---	---	3	---	
169+91	-	170+09	USH 45, LT	---	---	2	---	
171+24	-	171+59	USH 45, LT	---	---	3	---	
172+20	-	172+54	USH 45, LT	---	---	3	---	
173+65	-	174+03	USH 45, LT	---	---	3	---	
174+67	-	174+86	USH 45, LT	---	---	2	---	
175+44	-	175+60	USH 45, LT	---	---	1	---	
176+41		176+63	USH 45, LT			2		
177+19		177+37	USH 45, LT			2		
178+89		179+13	USH 45, LT			2		
180+02		180+18	USH 45, LT			1		
180+97	-	181+15	USH 45, LT	---	---	2	---	
181+15	-	181+32	USH 45, LT	---	---	1	---	
181+71	-	181+88	USH 45, LT	---	---	1	---	
182+63	-	182+98	USH 45, LT	---	---	3	---	
183+46	-	183+62	USH 45, LT	---	---	2	---	
183+85	-	184+06	USH 45, LT	---	---	2	---	
184+47	-	184+66	USH 45, LT	---	---	2	---	
186+28	-	186+52	USH 45, LT	---	---	2	---	
176+11	-	176+48	USH 45, RT	---	---	4	---	
178+95	-	179+26	USH 45, RT	---	---	3	---	
183+95	-	184+15	USH 45, RT	---	---	2	---	
202+02			USH 45	115				CULVERT REPLACEMENT
ENTIRE PROJECT			UNDISTRIBUTED		40			POTHOLE REPAIR DURING CONSTRUCTION
			SUBTOTALS	115	40	48	0	
			TOTALS	120	40	105	10	

CENTERLINE RUMBLE STRIPS

STATION	TO	STATION	LOCATION	465.0475 LF
193+60	-	196+40	USH 45	280
200+40	-	203+50	USH 45	310
207+50	-	208+70.9	USH 45	120
			TOTALS	710

CULVERT PIPES

STATION	LOCATION	522.0424 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH LF	522.1024*** APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	633.5200*** MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH	STAKING INFORMATION INLET** STA/OFFSET	ELEV.	OUTLET** STA/OFFSET	ELEV.
202+02	USH 45	58	2	2	1	202+03.1, 24.2' RT	1597.75	202+00.8, 31.8' LT	1597.62
	TOTALS	58	2	2	1				

**-OFFSET & ELEVATION REFERENCED TO THE END OF PIPE

***-ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER PIPE REINFORCED CONCRETE CLASS III

PIPES FROM	TO	LOCATION	608.0324 24-INCH LF
EXIST	A	STA 130+22.5, 43.8' LT	8
A	EXIST	STA 130+31.3, 31.3' LT	8
EXIST INLET	C	STA 141+71, 50.5' LT	33
INLET STA 182+28	EXIST	STA 182+28, 17.5' LT	8
	TOTALS		57

3

STORM SEWER STRUCTURES & COVERS

STR NO.	STATION	522.1024*** APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	611.0430 RECONSTRUCTING INLETS EACH	611.0530 MANHOLE COVERS TYPE J EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	611.9710 SALVAGED INLET COVERS EACH	633.5200*** MARKERS CULVERT END EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
---	STA 128+55, LT & RT	---	---	2	---	---	---	---	---	---
---	STA 130+23, 43.8' LT	---	1	---	---	---	---	---	---	---
A	STA 130+25, 36.2' LT, RIM: 1605.50, FL: 1600.73	---	---	---	1	1	---	---	---	1
---	STA 130+31, 31.3' LT	---	1	---	---	---	---	---	---	---
---	STA 130+45.2, LT	---	---	1	---	---	---	---	---	---
---	STA 130+86.6, RT	---	---	1	---	---	---	---	---	---
---	STA 134+38.2, RT	---	---	1	---	---	---	---	---	---
---	STA 137+13, LT & RT	---	---	2	---	---	---	---	---	---
B	STA 137+18, 90.4' LT, ELEV: 1594.20	1	1	---	---	---	---	---	1	1
C	STA 141+71, 50.5' LT, ELEV: 1594.45	1	1	---	---	---	---	---	1	1
---	STA 141+72, LT & RT	---	---	2	---	---	---	---	---	---
---	STA 149+23, LT	---	---	2	---	---	---	---	---	---
---	STA 170+22, LT	---	---	1	---	---	---	---	---	---
---	STA 182+28, RT	---	---	1	---	---	---	---	--	--
---	STA 182+28, LT, RIM: 1596.72, FL: 1592.30	---	2	---	---	---	1	1	---	1
	TOTALS	2	6	13	1	1	1	1	2	4

***-ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE CURB & GUTTER

STATION	TO	STATION	LOCATION	601.0411 30-INCH TYPE D LF	601.0557 6 INCH SLOPED 36-INCH TYPE D LF	REMARKS
117+12		118+40	USH 45, LT		115	CTH B RADII
125+46	-	130+25	USH 45, LT	460	---	
130+25	-	135+00	USH 45, LT	510	---	
135+00	-	140+00	USH 45, LT	500	---	
140+00		186+65	USH 45, LT	4,667		
204+89	-	206+17	USH 45, LT	---	120	CTH Q RADII
125+46	-	130+25	USH 45, RT	496	---	
130+25	-	135+00	USH 45, RT	531	---	
135+00		140+00	USH 45, RT	504		
140+00	-	186+66	USH 45, RT	4,667	---	
			TOTALS	12,335	235	

RIPRAP & GEOTEXTILE FABRIC

STATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
STA 137+18, LT	21	54
STA 141+71, LT	9	26
TOTALS	30	80

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RESTORATION

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.2004 EROSION MAT CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0500 SEED WATER MGAL
125+46	-	140+00	USH 45, LT & RT	540	540	0.34	---	10	9
140+00	-	155+00	USH 45, LT & RT	1,280	1,280	0.80	---	23	21
155+00	-	170+00	USH 45, LT & RT	1,075	1,075	0.68	10	10	18
170+00	-	186+66	USH 45, LT & RT	945	945	0.60	9	9	16
201+65	-	202+40	USH 45, LT & RT	110	110	0.07	2	---	2
UNDISTRIBUTED			USH 45, LT & RT	400	400	0.03	4	8	9
			TOTALS	4,350	4,350	2.5	25	60	75

EROSION CONTROL

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7015 INLET PROTECTION TYPE C EACH	628.7020 INLET PROTECTION TYPE D EACH	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH
125+00		140+00	USH 45, LT & RT					3	3	6	60
140+00	-	155+00	USH 45, LT & RT	696	696	---	---	2	2	6	65
155+00	-	170+00	USH 45, LT & RT	433	433	---	---	---	---	---	10
170+00	-	186+66	USH 45, LT & RT	2,509	2,509	---	---	2	2	---	30
201+65	-	202+40	USH 45, LT & RT	100	100	---	---	---	---	6	15
UNDISTRIBUTED			USH 45, LT & RT	1,032	1,032	6	3	---	---	7	45
			TOTALS	4,770	4,770	6	3	7	7	25	225

PERMANENT SIGNING

LOCATION	SIGN CODE	SIZE	637.2210 SIGNS TYPE II REFLECTIVE H SF	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	638.2102 MOVING SIGNS TYPE II EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
USH 45	W14-3	EXISTING	---	1	2	2	FOR MOVING OF NO PASSING ZONE SIGNAGE
USH 45 UNDISTRIBUTED	VARIES	EXISTING	---	9	8	8	PERMANENT SIGNING ADJUSTMENT FOR GRADING
131+30, LT	R8-3	24" X 24"	4	1	---	---	
133+85, LT	R8 3	24" X 24"	4	1			
136+35, LT	R8 3	24" X 24"	4	1			
138+85, LT	R8-3	24" X 24"	4	1	---	---	
TOTALS			16	14	10	10	

TEMPORARY PEDESTRIAN ACCOMMODATIONS

LOCATION	644.1410 TEMPORARY PEDESTRIAN SURFACE ASPHALT SF	644.1601 TEMPORARY CURB RAMP DAY	644.1810 TEMPORARY PEDESTRIAN BARRICADE LF	COMMENTS
NW QUADRANT MANITOWOC ST	255	10	125	SEE CONSTRUCTION DETAIL AND SDD'S
TOTALS	255	10	125	

LOCATING NO-PASSING ZONES

STATION	TO	STATION	LOCATION	648.0100 MI
115+86	-	208+71	USH 45	1.76
		TOTALS		1.76

TRAFFIC CONTROL SUMMARY

LOCATION	APPROX. SERVICE DAY	643.0300 TRAFFIC CONTROL DRUMS NO IN SERVICE	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0410 TRAFFIC CONTROL BARRICADES TYPE II NO IN SERVICE	643.0410 TRAFFIC CONTROL BARRICADES TYPE II DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO IN SERVICE	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO IN SERVICE	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS NO IN SERVICE	643.0900 TRAFFIC CONTROL SIGNS DAY
ADVANCED WARNING - SIDE ROADS	100	---	---	---	---	---	---	---	---	12	1200
MILLING - MAINLINE	20	---	---	---	---	---	---	---	---	10	200
MILLING - SIDE ROADS	20	---	---	---	---	---	---	---	---	6	120
ENTIRE PROJECT	45	510	22,950	---	---	---	---	---	---	---	---
CULVERT REPLACEMENT	2	---	---	---	---	---	---	---	---	4	8
SIDEWALK CLOSURE	10	5	50	1	10	2	20	3	30	2	20
UNDISTRIBUTED	30	75	2,250	5	150	5	150	5	150	5	150
TOTALS			25,250		160		170		180		1,698

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PAVEMENT MARKING SUMMARY

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.1020 MARKING LINE EPOXY 4-INCH (WHITE)	646.1040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 4-INCH (WHITE) LF	646.3040 MARKING LINE GROOVED WET REFLECTIVE EPOXY 8-INCH (WHITE) LF	646.4520 MARKING LINE SAME DAY EPOXY 4-INCH (YELLOW) LF	646.6120 MARKING STOP LINE EPOXY 18-INCH (WHITE) LF	649.0105 TEMPORARY MARKING LINE PAINT (YELLOW) LF	*649.0120 TEMPORARY MARKING LINE EPOXY 4-INCH (YELLOW) LF
115+86	-	121+13	USH 45	659	75	930	---	0	---	570	659
121+13	-	125+46	USH 45	---	866	---	---	866	---	866	---
125+46		130+25	USH 45		868			958		958	
130+25	-	135+00	USH 45	---	823	---	---	950	---	950	---
135+00	-	140+00	USH 45	---	904	---	---	1,000	---	1,000	---
140+00	-	186+65	USH 45	---	9,330	---	---	9,330	---	9,330	---
186+65	-	191+90	USH 45	---	1,250	---	---	785	---	676	---
191+90	-	193+55	USH 45	---	331	---	---	44	---	15	---
193+55	-	197+30	USH 45	95	---	750	---	---	---	30	95
197+30	-	208+71	USH 45	1,426	53	2,080	100	---	---	1,235	1,426
---	-	---	CTH B (WEST)	---	---	---	---	85	39	---	---
---	-	---	CTH B (EAST)	---	---	---	---	---	41	---	---
			CTH Q				0	92	40		
		TOTALS		**2,180**	**14,500**	**3,760**	**100**	**14,110**	**120**	**15,630**	**2,180**
					16,680						

*NOTE: CENTERLINE DASHES FOR BID ITEM 649.0120 SHALL BE MARKED IN A MANNER AS DIRECTED FOR

CONSTRUCTION STAKING

LOCATION	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9000 CONSTRUCTION STAKING CURB RAMPS EACH	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
ENTIRE PROJECT	12,570	3,166	4	1	6,119
TOTALS	**12,570**	**3,166**	4	**1**	**6,119**

NOTE: ADDITIONAL CONSTRUCTION STAKING ITEMS SHOWN ELSEWHERE

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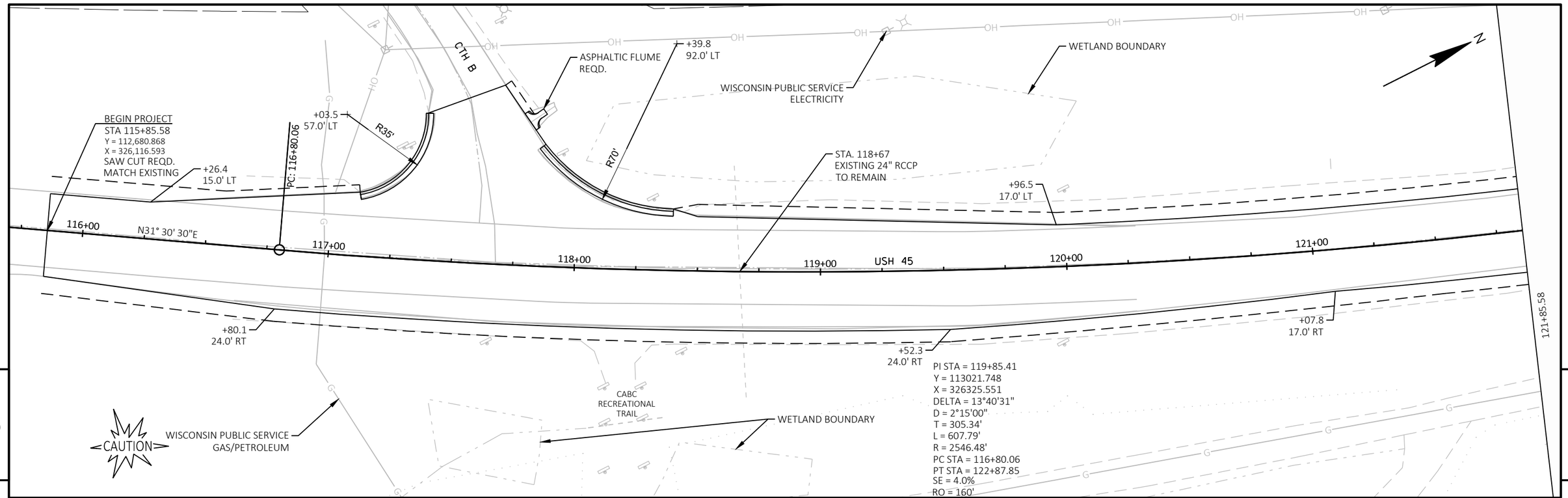
SAWING

STATION	LOCATION	690.0150 ASPHALT LF	690.0250 CONCRETE LF	REMARKS
117+00 - 186+66	USH 45, LT	6,247	---	CURB & GUTTER REMOVAL
117+00 - 186+66	USH 45, RT	6,196	---	CURB & GUTTER REMOVAL
125+97	USH 45, LT	28	---	DRIVEWAY
127+21	USH 45, LT	33	---	DRIVEWAY
128+14	USH 45, LT	70	---	DRIVEWAY
129+39	USH 45, LT	35	---	DRIVEWAY
130+15	USH 45, LT	8	---	DRIVEWAY CONNECTION TO TEMP PED SURFACE
131+16	USH 45, LT	---	21	DRIVEWAY
131+86	USH 45, LT	---	25	DRIVEWAY
132+87	USH 45, LT	---	35	DRIVEWAY
133+62	USH 45, LT	---	36	DRIVEWAY
158+65	USH 45, LT	16	---	DRIVEWAY
160+90	USH 45, LT	17	---	DRIVEWAY
167+90	USH 45, LT	26	---	DRIVEWAY
168+70	USH 45, LT	26	---	DRIVEWAY
171+43	USH 45, LT	32	---	DRIVEWAY
172+37	USH 45, LT	33	---	DRIVEWAY
181+05	USH 45, LT	15	---	DRIVEWAY
181+79	USH 45, LT	14	---	DRIVEWAY
130+00	USH 45, LT	31	---	MATCHLINE @ MANITOWOC
130+45	USH 45, RT	30	---	MATCHLINE @ MANITOWOC
135+53	USH 45, RT	98	---	MATCHLINE @ MILWAUKEE
198+37	USH 45, RT	51	---	MATCHLINE @ WEITH
205+43	USH 45, RT	34	---	MATCHLINE @ CTH Q
130+51	USH 45, LT	---	4	SIDEWALK
133+78	USH 45, LT	---	4	SIDEWALK
TOTALS		13,040	125	



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 72	E

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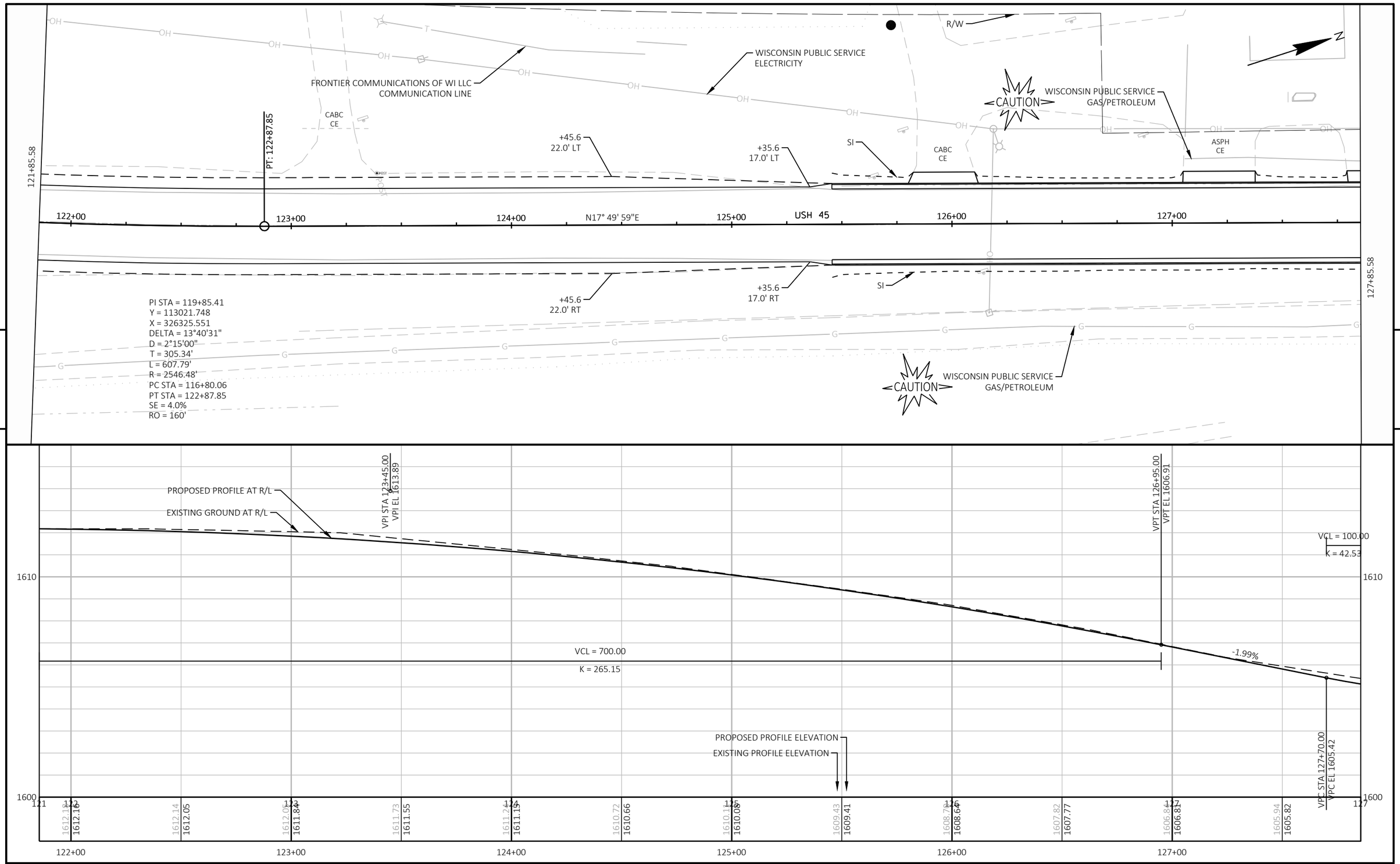
LAYOUT NAME - 050101 (1)

PLOT DATE : 3/3/2022 6:10 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



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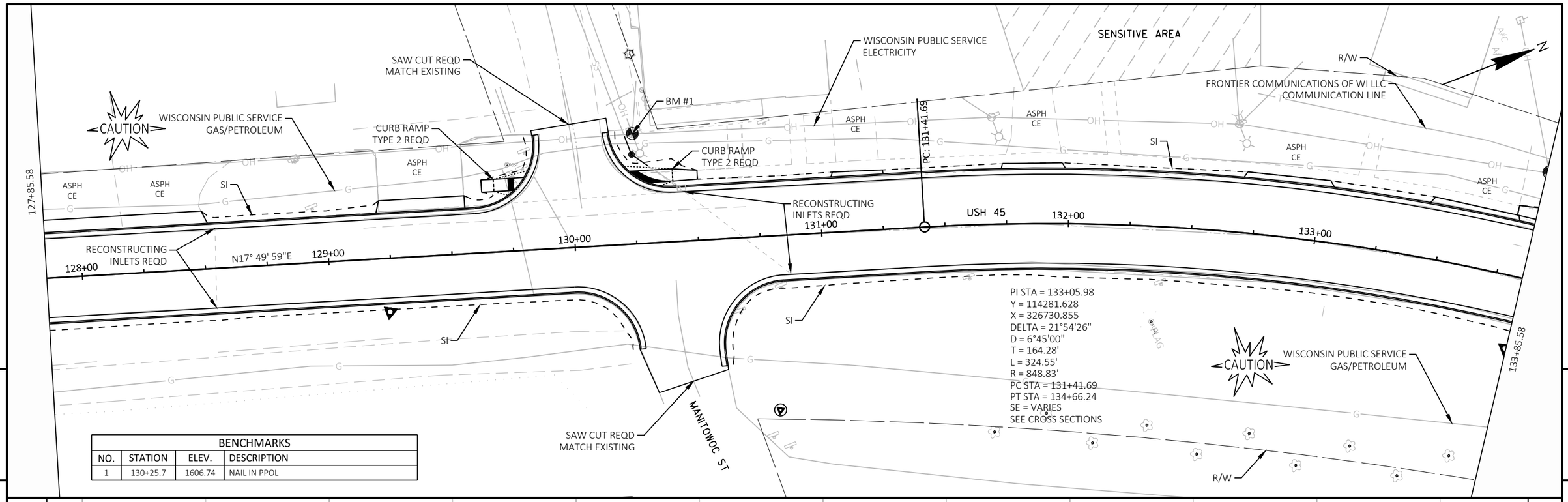
LAYOUT NAME - 050101 (2)
PLOT DATE : 3/3/2022 6:10 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT



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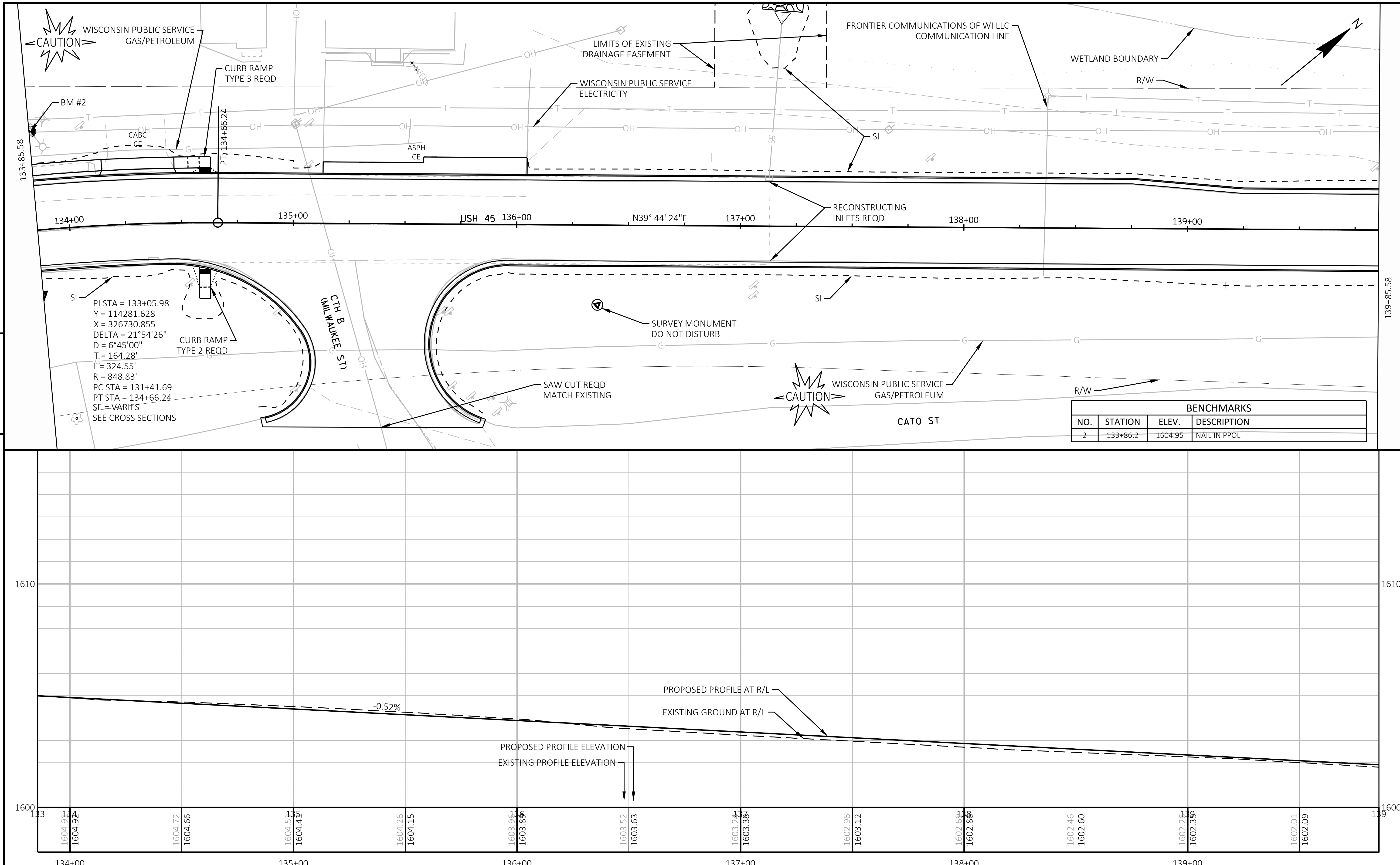
FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (3)
PLOT DATE : 3/3/2022 6:10 PM
PLOT BY : BRADY MATHISEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44



BENCHMARKS

NO.	STATION	ELEV.	DESCRIPTION
2	133+86.2	1604.95	NAIL IN PPOL

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 75	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (4)
PLOT DATE : 3/3/2022 6:10 PM
PLOT BY : BRADY MATHISEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

FRONTIER COMMUNICATIONS OF WI LLC
COMMUNICATION LINE

WETLAND BOUNDARY

WISCONSIN PUBLIC SERVICE
ELECTRICITY

R/W

SI

PC: 143+47.76

139+85.58

ASPH
CE

RECONSTRUCTING
INLETS REQD

140+00 141+00 142+00 N39° 44' 24"E 143+00 USH 45 144+00 145+00

SI

145+85.58

PI STA = 145+71.20
Y = 115257.607
X = 327542.284
DELTA = 5°34'53"
D = 1°15'00"
T = 223.44'
L = 446.52'
R = 4583.66'
PC STA = 143+47.76
PT STA = 147+94.28
SE = NC

R/W

CAUTION

WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

5

5

-0.52%

PROPOSED PROFILE AT R/L

EXISTING GROUND AT R/L

PROPOSED PROFILE ELEVATION

EXISTING PROFILE ELEVATION

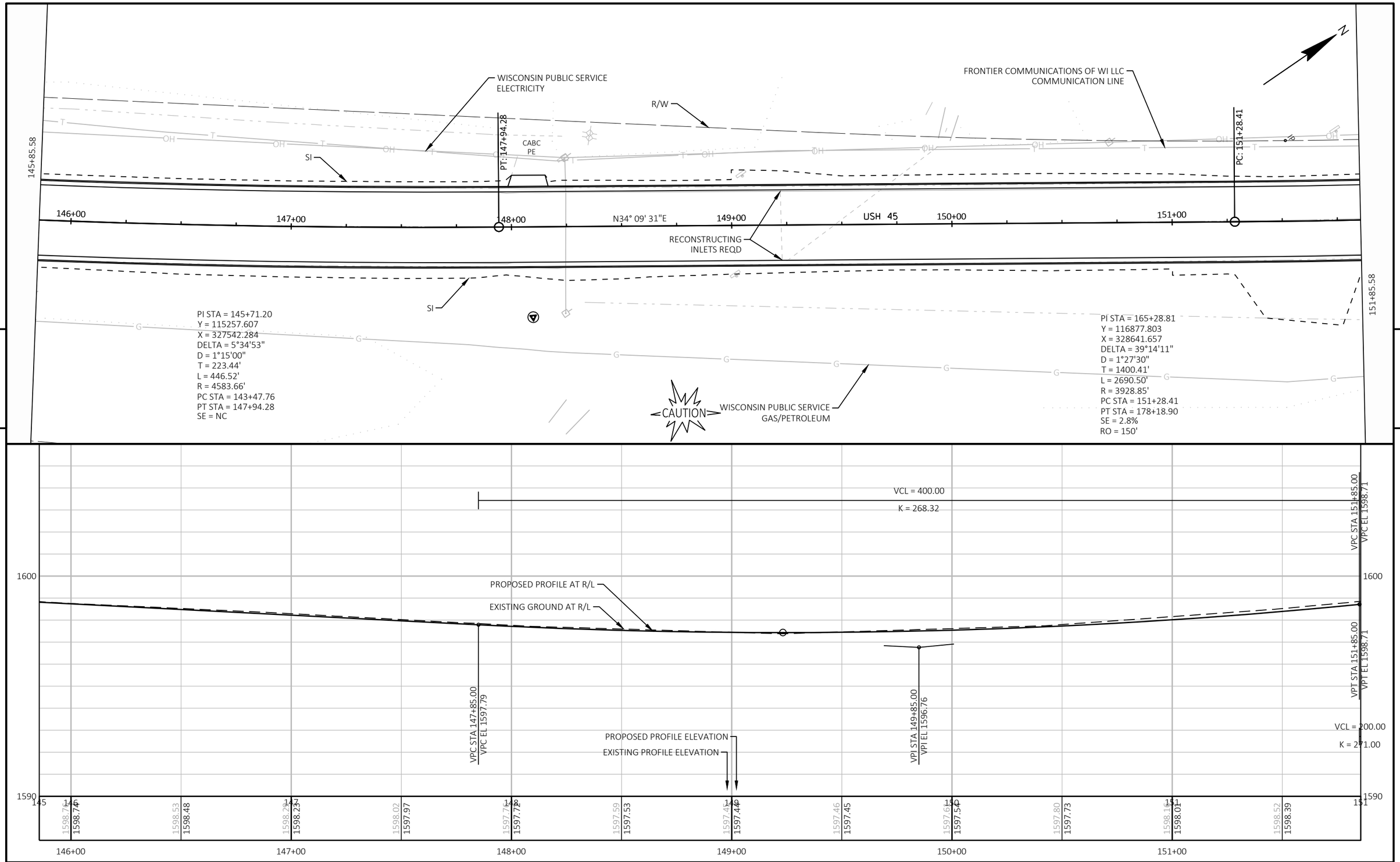
1600

1590

139	140	141	142	143	144	145
	1601.83	1601.57	1601.32	1601.06	1600.80	1600.54	1600.29	1600.03	1599.77	1599.51	1599.26	1599.00

140+00 141+00 142+00 143+00 144+00 145+00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 76	E

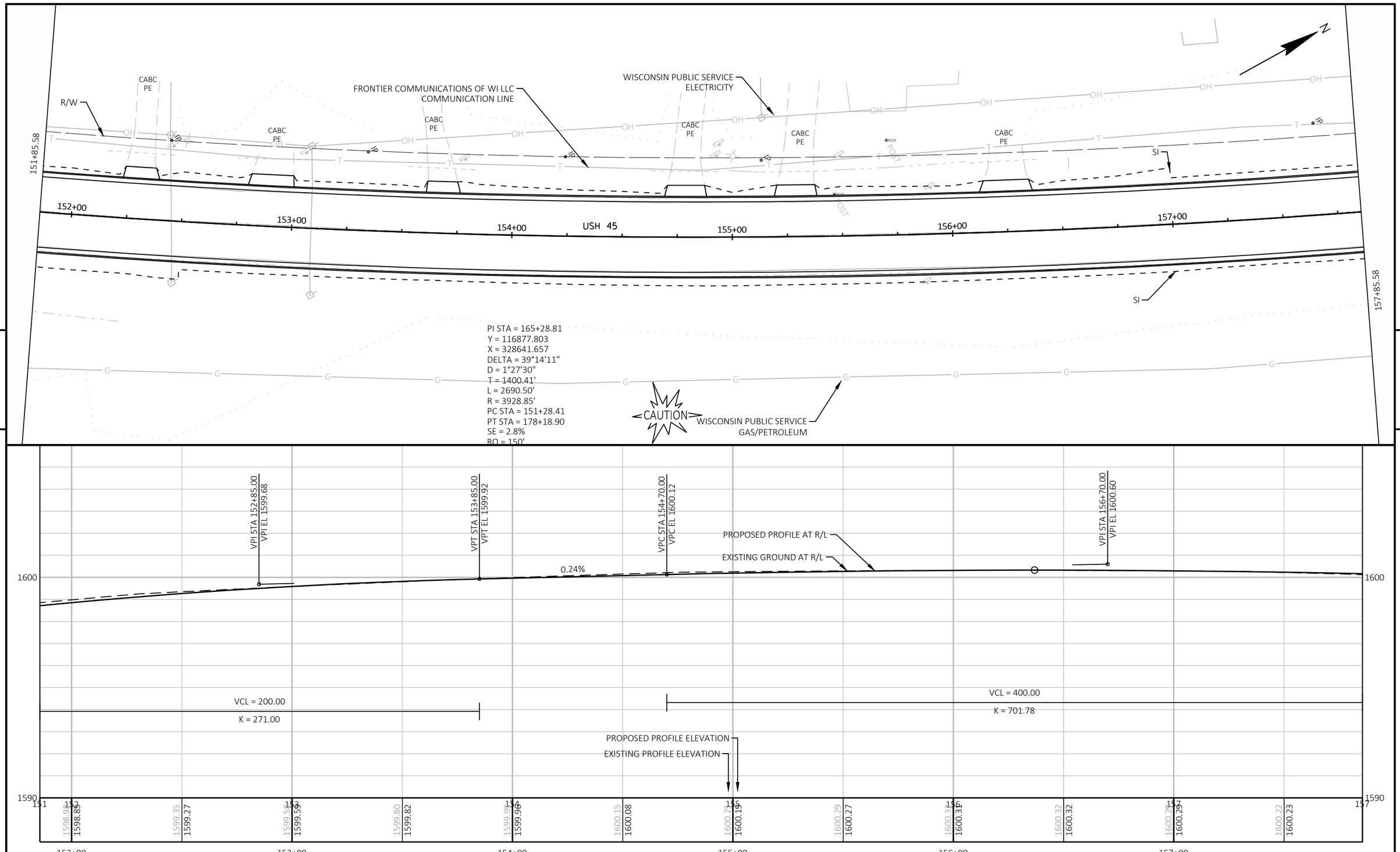


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 77	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (6)

PLOT DATE : 3/3/2022 6:11 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

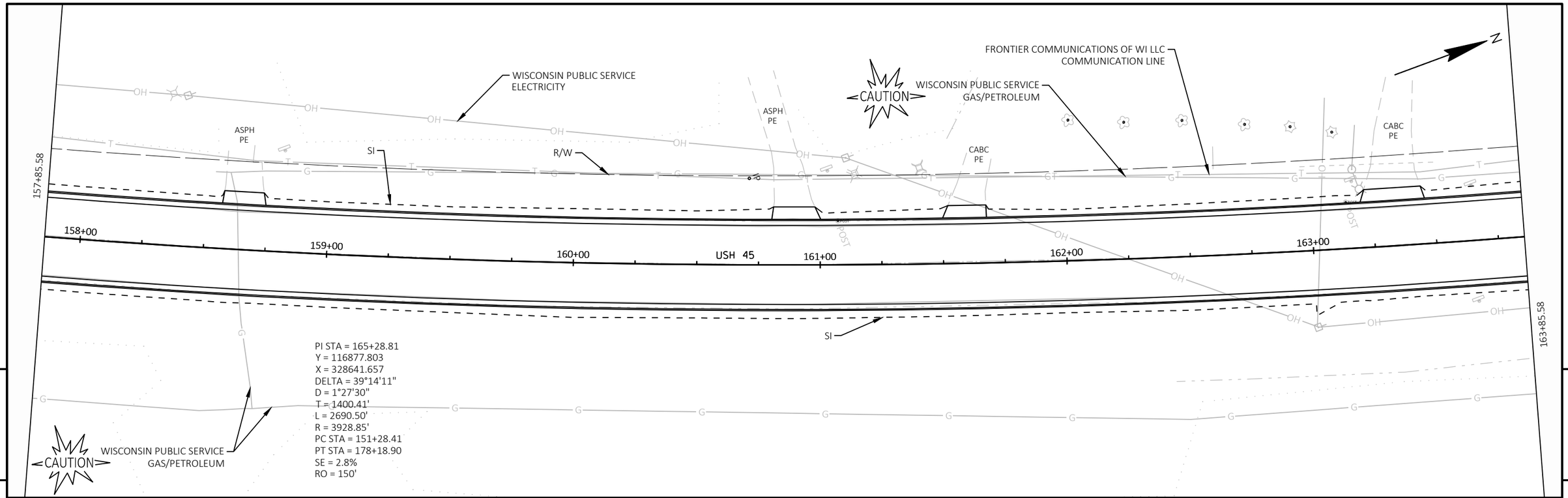
WISDOT/CADDS SHEET 44



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 78	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (7)

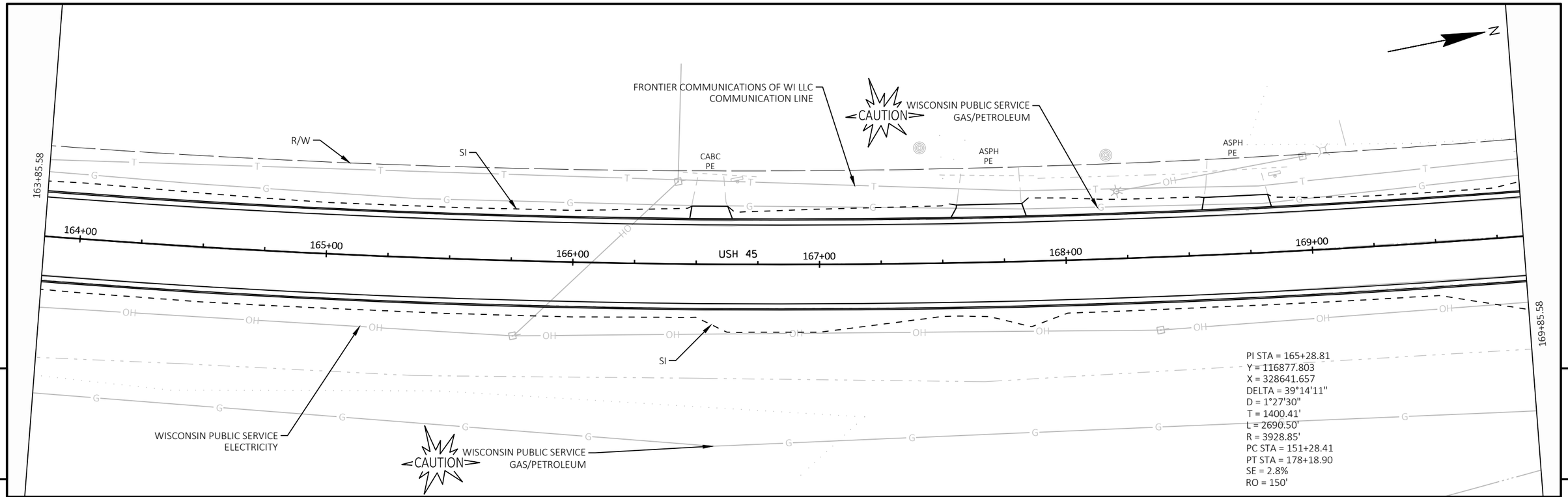
PLOT DATE : 3/3/2022 6:11 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 79	E

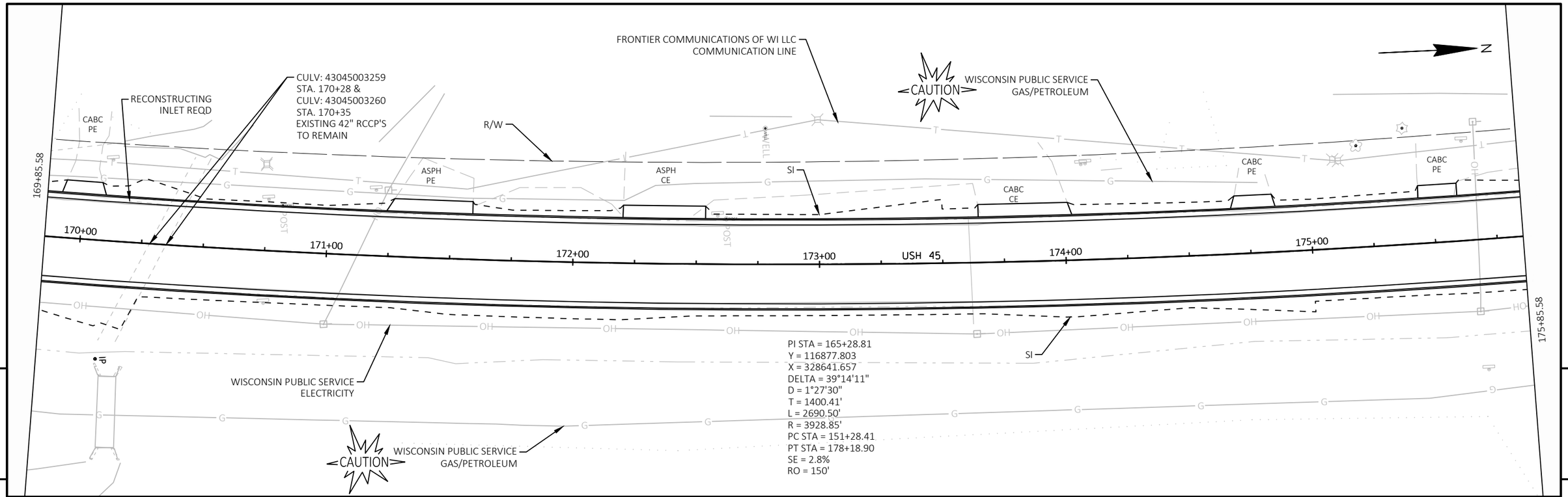
FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (8)

PLOT DATE : 3/3/2022 6:11 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 80	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (9)
PLOT DATE : 3/3/2022 6:11 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

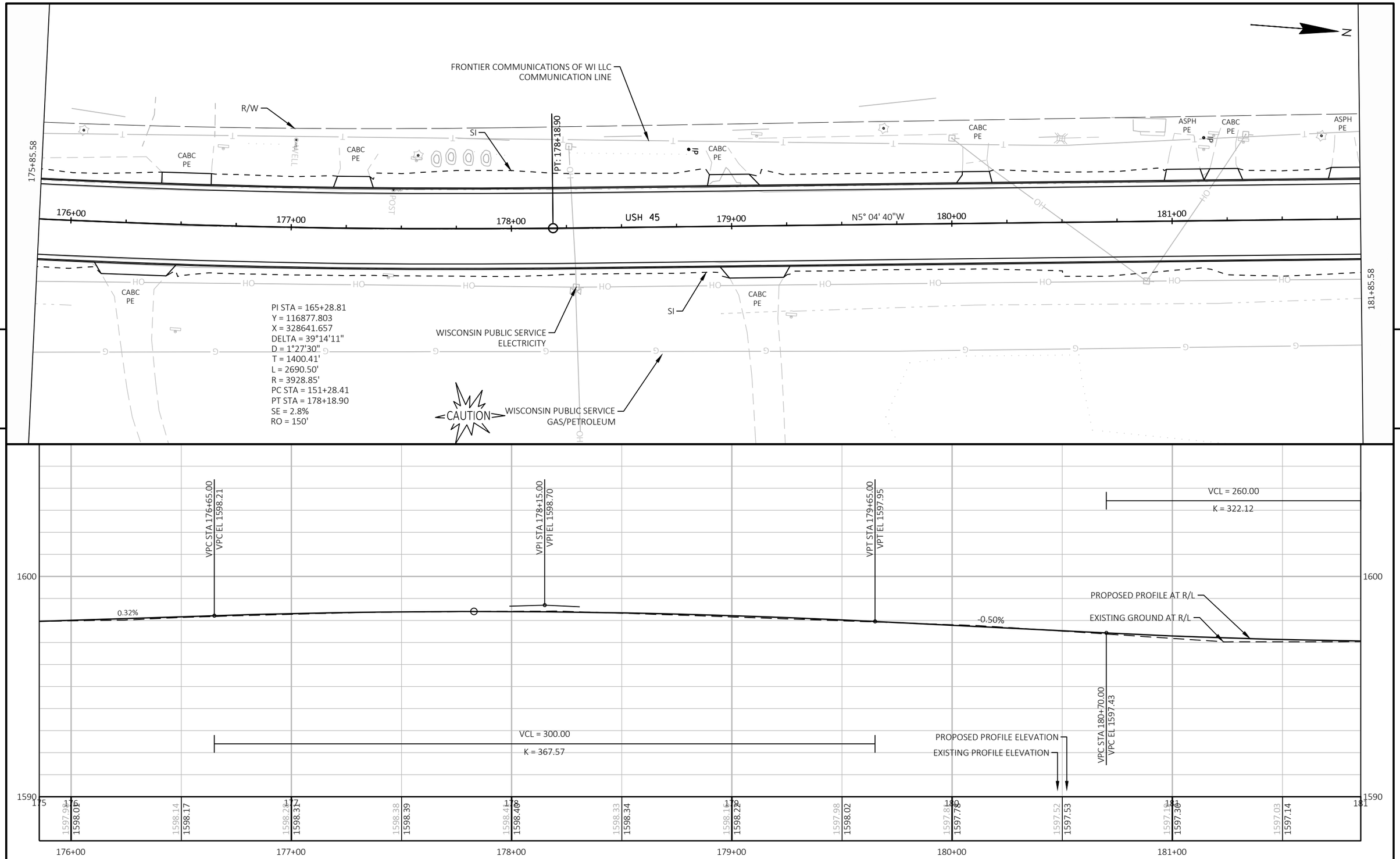


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 81	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (10)

PLOT DATE : 3/3/2022 6:11 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

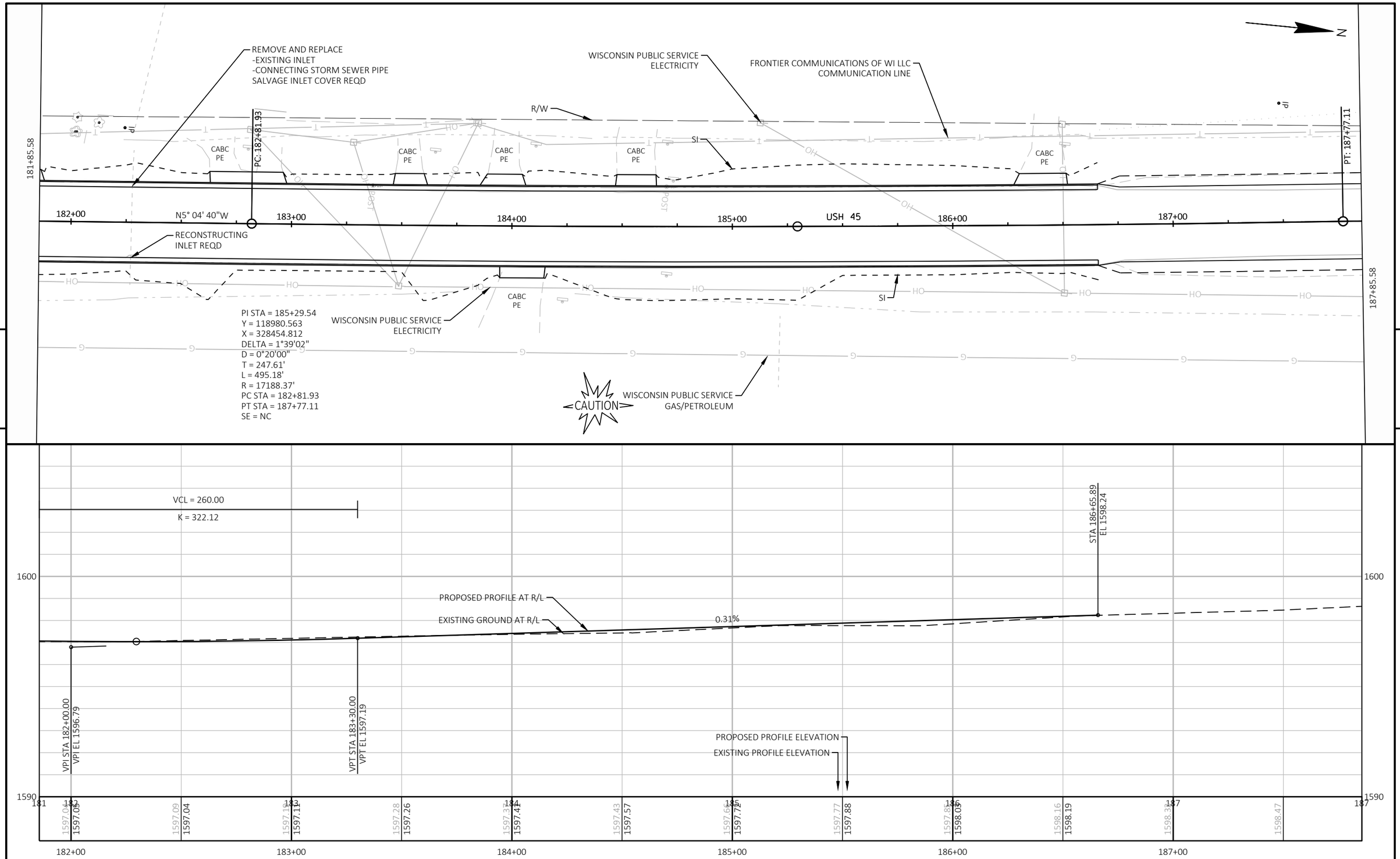


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 82	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (11)

PLOT DATE : 3/3/2022 6:11 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

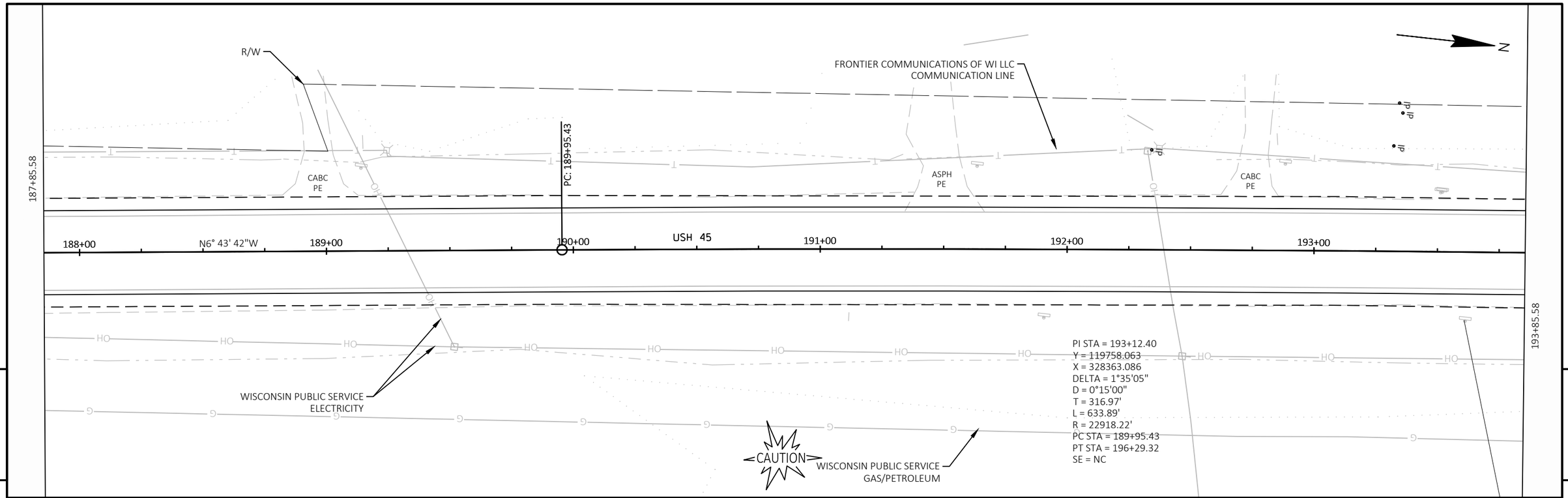


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 83	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (12)

PLOT DATE : 3/3/2022 6:12 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 84	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (13)

PLOT DATE : 3/3/2022 6:12 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

CAUTION
WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM
CABC
PE
R/W
FRONTIER COMMUNICATIONS OF WI LLC
COMMUNICATION LINE
WEITH RD
SAW CUT REQD
MATCH EXISTING
N
193+85.58
PT: 196+29.32
194+00
195+00
196+00
197+00
N5° 08' 37"W
USH 45
198+00
199+00
199+85.58
CABC
PE
CABC
PE
PI STA = 193+12.40
Y = 119758.063
X = 328363.086
DELTA = 1°35'05"
D = 0°15'00"
T = 316.97'
L = 633.89'
R = 22918.22'
PC STA = 189+95.43
PT STA = 196+29.32
SE = NC
WISCONSIN PUBLIC SERVICE
ELECTRICITY
CAUTION
WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM
5
5
1610
1600
EXISTING GROUND AT R/L
PROPOSED SHALL MATCH
EXISTING & PROPOSED PROFILE ELEVATION
193
194
195
196
197
198
199
1600.69
1600.69
1600.79
1600.74
1600.67
1600.93
1601.19
1601.43
1601.69
1601.87
1601.91
1601.97
194+00
195+00
196+00
197+00
198+00
199+00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 85	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (14)
PLOT DATE : 3/3/2022 6:12 PM
PLOT BY : BRADY MATHISEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

CULV: 43045003261
STA. 202+02
REMOVING SMALL PIPE CULVERTS REQD
CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH REQD
APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH REQD

R/W

WETLAND BOUNDARY

FRONTIER COMMUNICATIONS OF WI LLC
COMMUNICATION LINE

SAW CUT REQD
MATCH EXISTING

+89.2
62.0' LT

R40'

CTH O

N

199+85.58

PI: 203+83.87
Y = 120,825.266
X = 328,267.020

+27.7
17.0' LT

200+00 N5° 08' 37"W 201+00 202+00 203+00 USH 45 204+00 N5° 14' 49"W 205+00

205+85.58

+90.5
17.0' RT

+09.5
24.0' RT

WISCONSIN PUBLIC SERVICE
ELECTRICITY

WETLAND BOUNDARY

CAUTION

WISCONSIN PUBLIC SERVICE
GAS/PETROLEUM

5

5

EXISTING GROUND AT R/L
PROPOSED SHALL MATCH

EXISTING & PROPOSED PROFILE ELEVATION

1610

1600

199 200 201 202 203 204 205

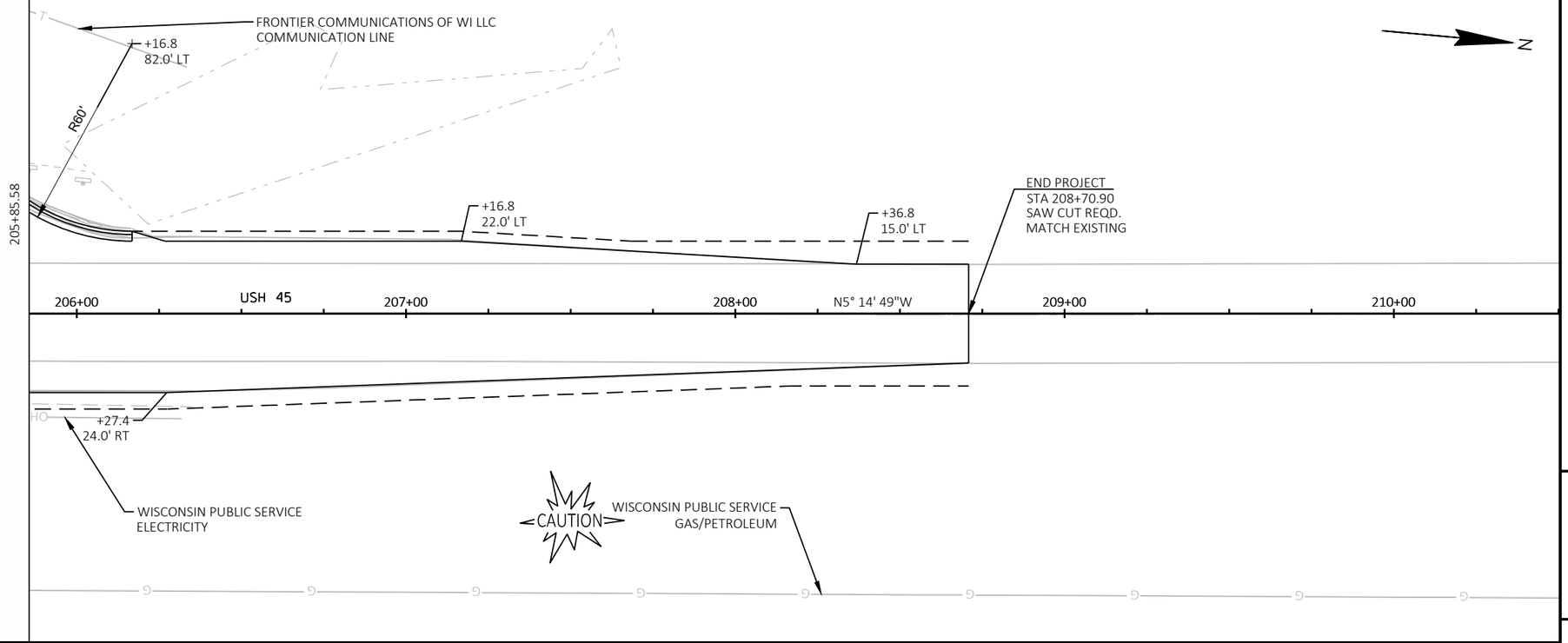
1602.08 1602.36 1602.67 1602.81 1603.08 1603.41 1603.78 1603.99 1604.38 1604.93 1605.33 1605.72

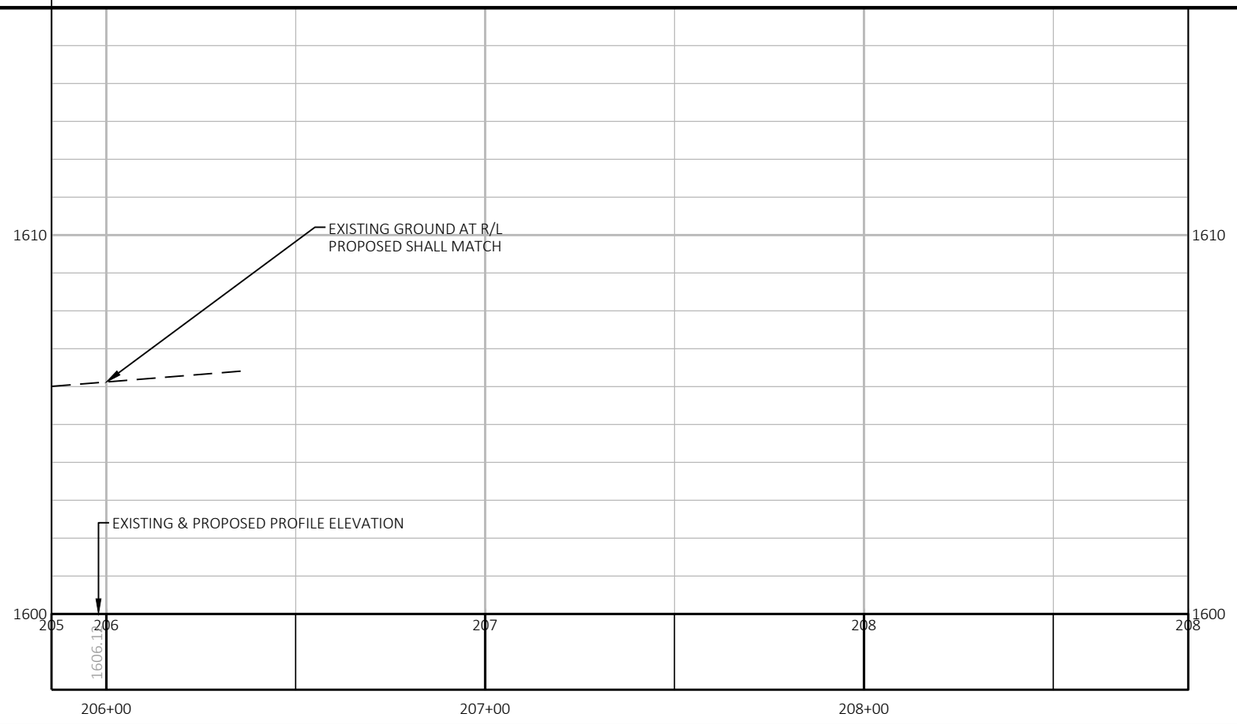
200+00 201+00 202+00 203+00 204+00 205+00

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 86	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (15)

PLOT DATE : 3/3/2022 6:12 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT





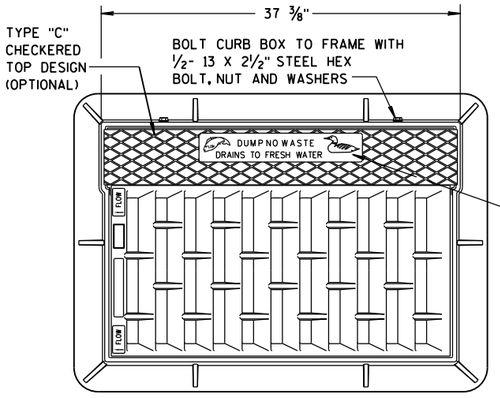
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	PLAN AND PROFILE: PLAN & PROFILE	SHEET 87	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_050101_PP.DWG
LAYOUT NAME - 050101 (16)
PLOT DATE : 3/3/2022 6:10 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

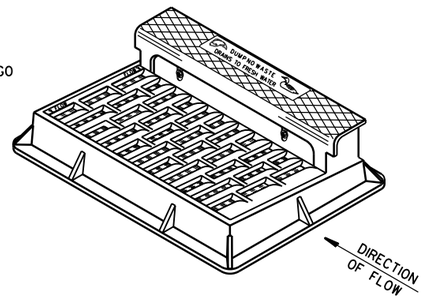
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-22A	CONCRETE CURB & GUTTER
08D01-22B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C08-20B	PAVEMENT MARKING (TURN LANES)
15C08-20C	PAVEMENT MARKING (TURN LANES)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-08	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-06A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-04A	PAVEMENT MARKING (INTERSECTIONS)
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-06	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-06A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-06B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D43-02	TRAFFIC CONTROL, SHORT DURATION MOBILE OPERATIONS
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

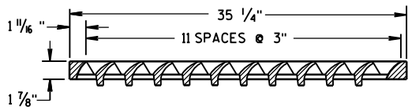
6

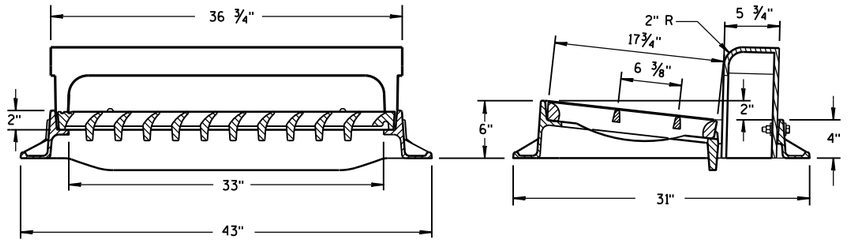


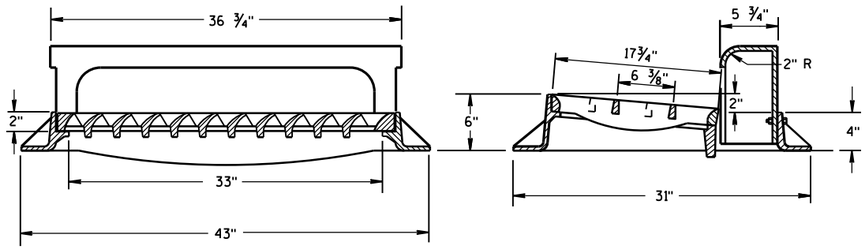
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

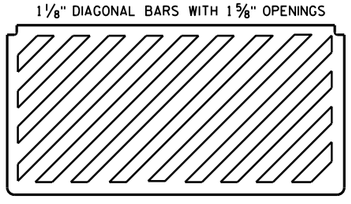






TYPE "H"

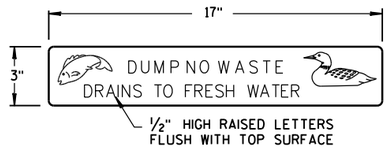
NOTE: EITHER CASTING IS ACCEPTABLE



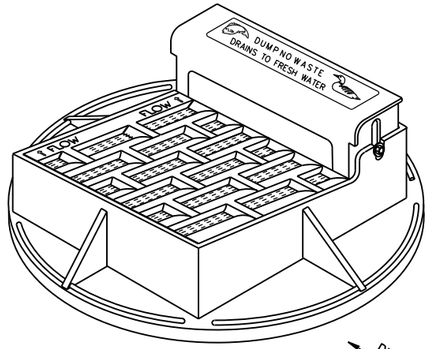
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

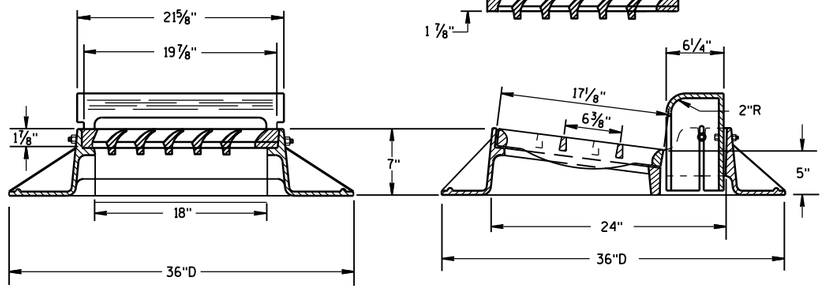


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



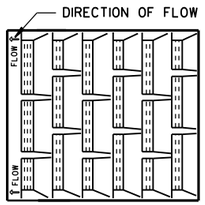
TYPE "A"

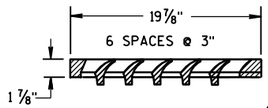
GENERAL NOTES

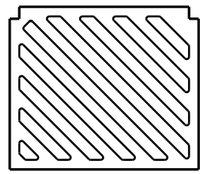
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.



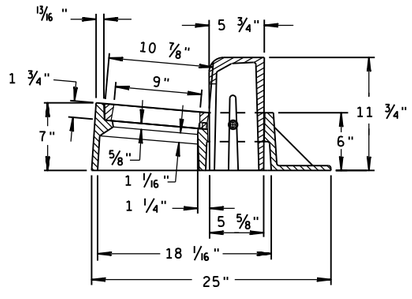


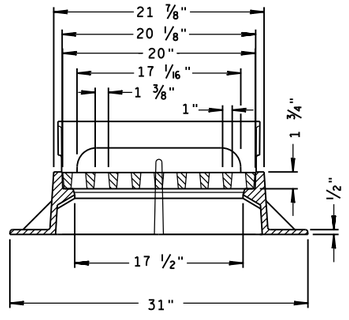


SPECIAL GRATE FOR TYPE "A" COVER

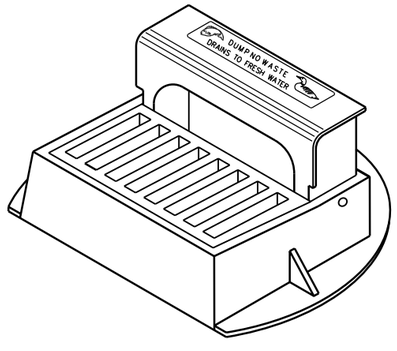
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



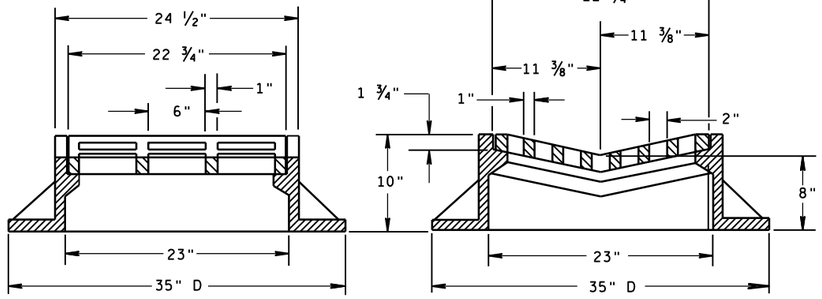
INLET COVERS
TYPE A, H, A-S, H-S & Z

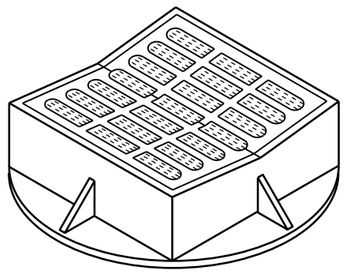
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

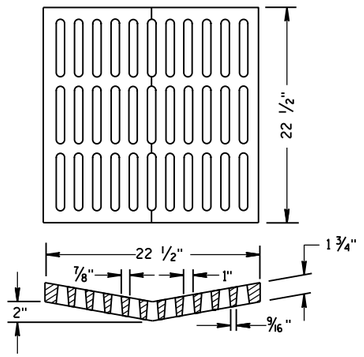
6

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



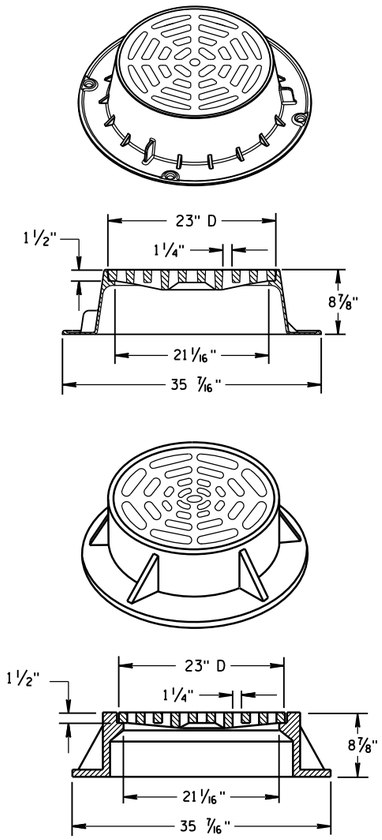


TYPE "B"



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"

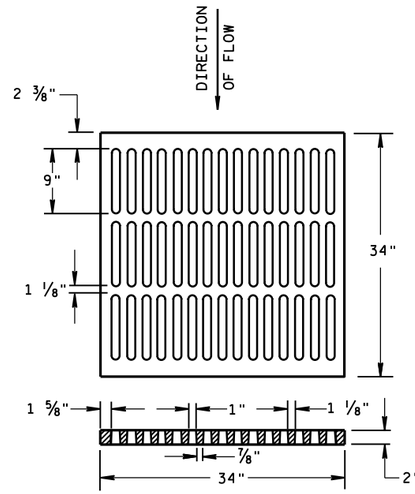
NOTE: EITHER CASTING IS ACCEPTABLE

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.

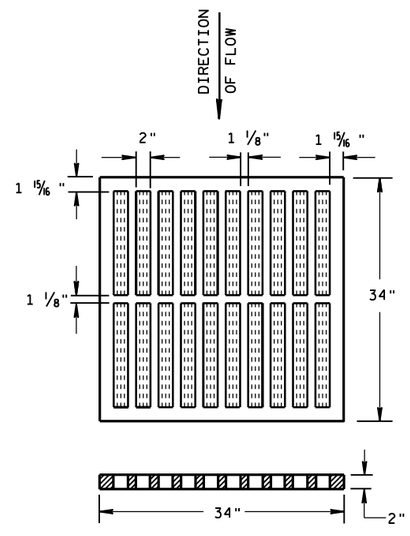
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



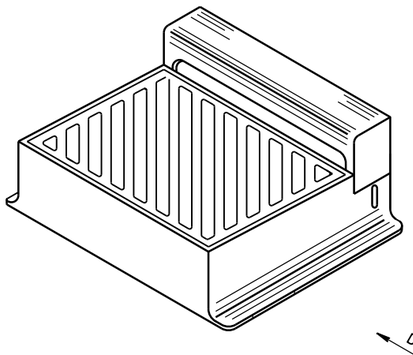
ALTERNATIVE TYPE "MS"

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



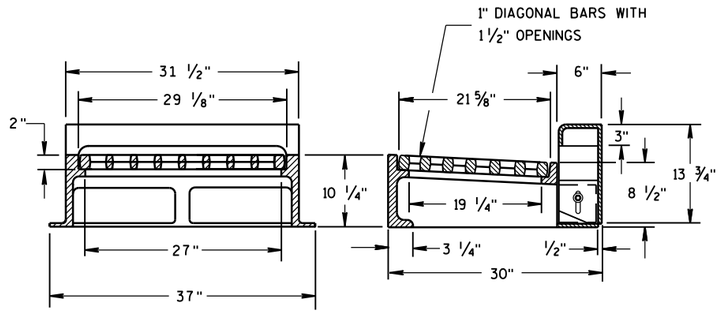
TYPE "MS"

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



DIRECTION OF FLOW

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

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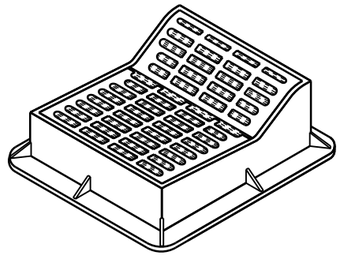
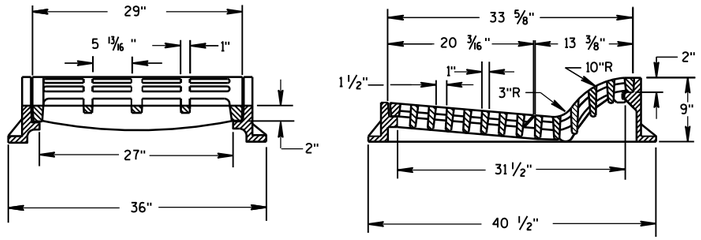
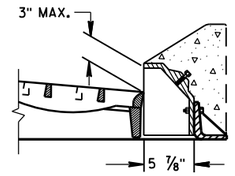
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

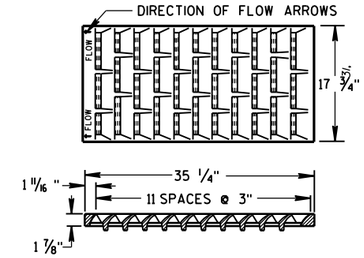
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

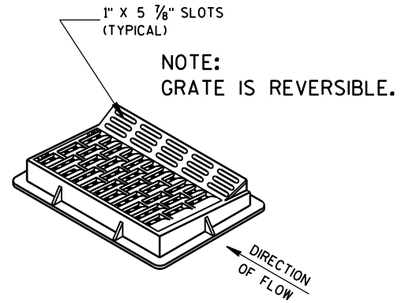
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

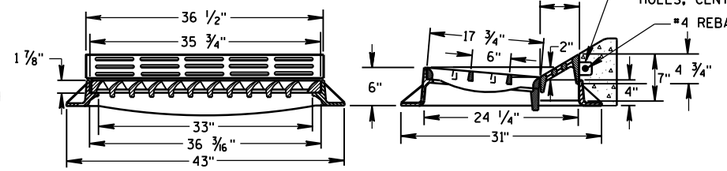
GENERAL NOTES

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 INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



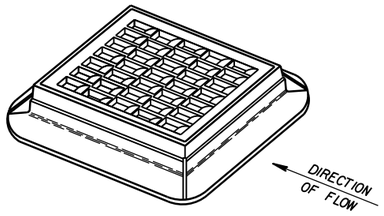


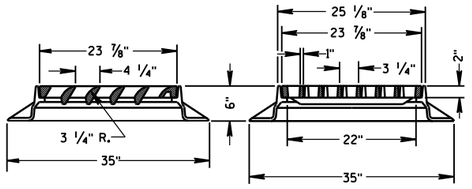


TYPE "HM"

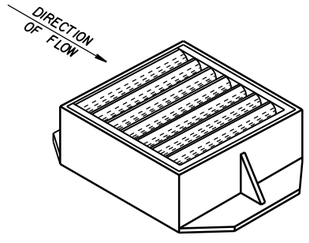
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

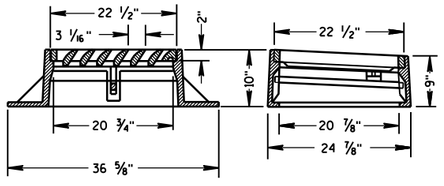
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



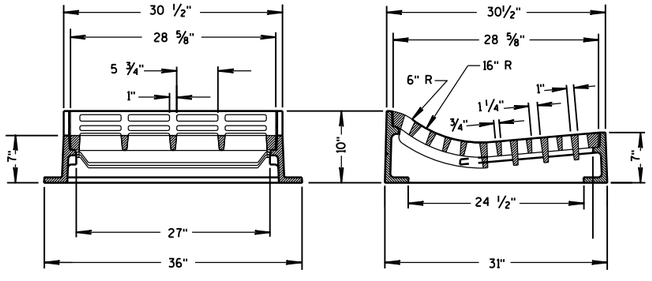


TYPE "S"



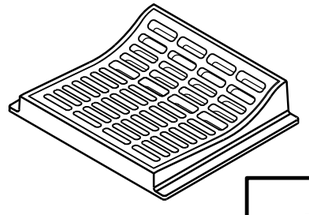


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

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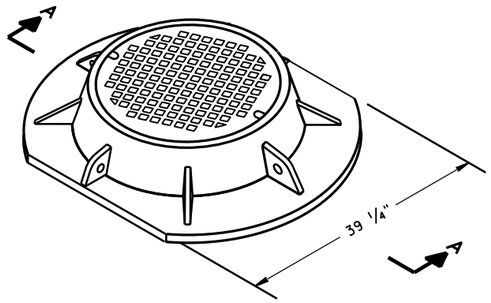
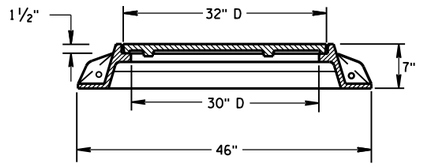
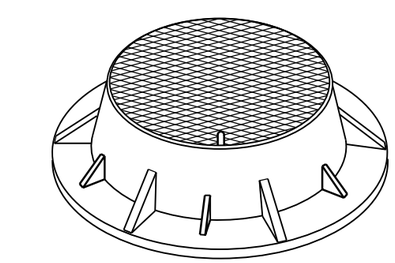
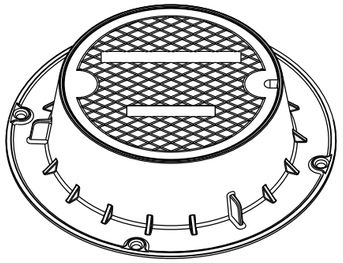
S.D.D. 8 A 5-19c

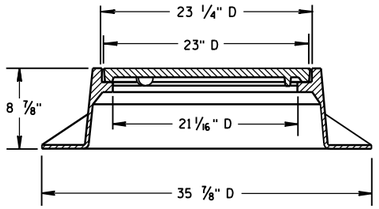


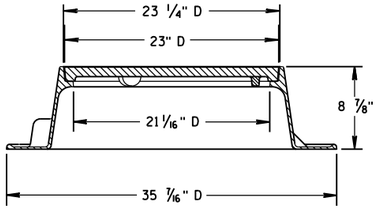


SECTION A-A
TYPE "K"









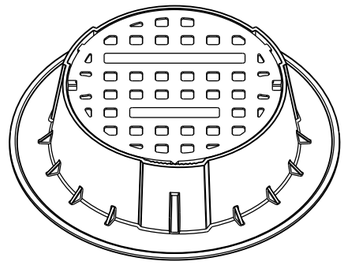
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

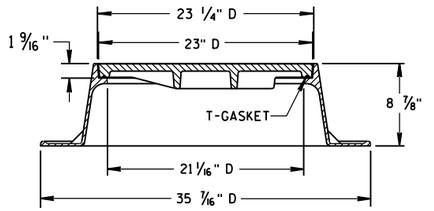
GENERAL NOTES

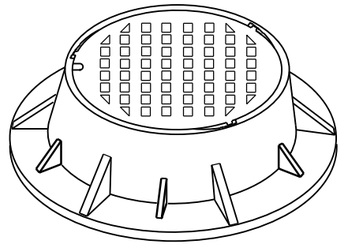
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

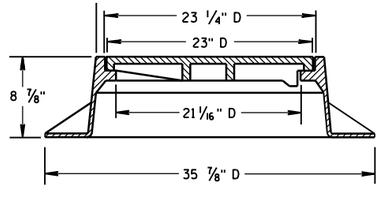
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

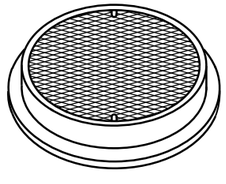


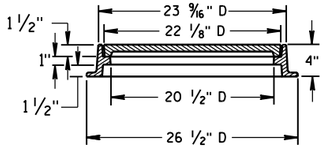




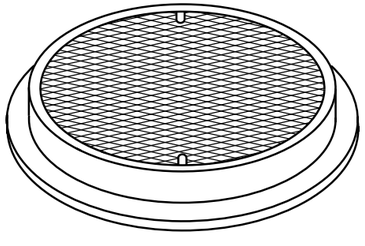


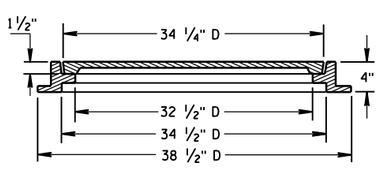
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



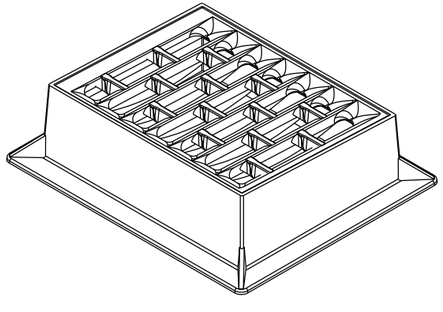


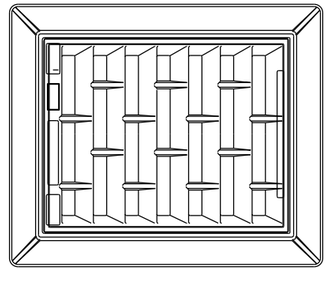
TYPE "L"

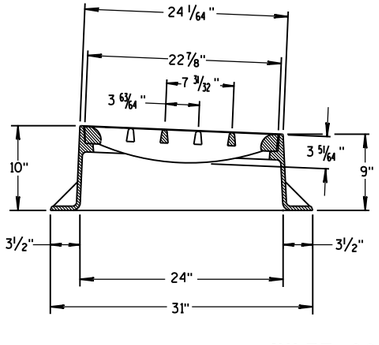


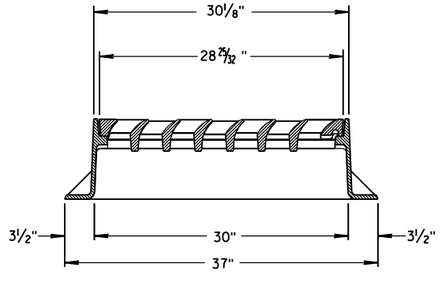


TYPE "M"









INLET COVER TYPE "BW"

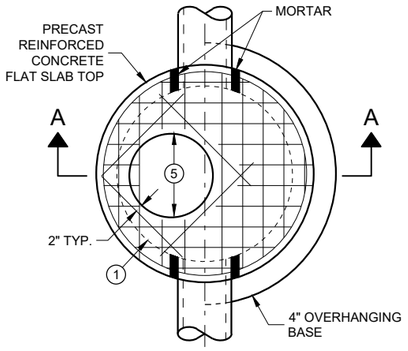
INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

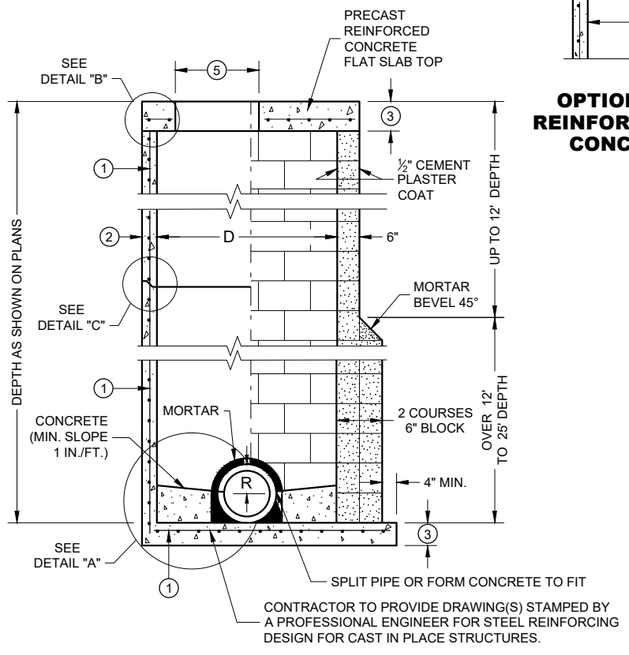
APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

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



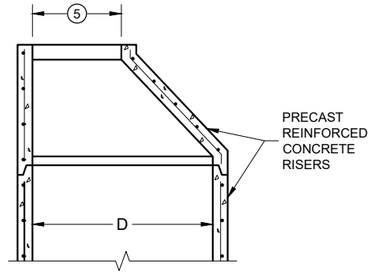
PLAN VIEW
CIRCULAR OPENING



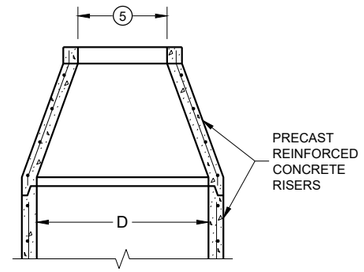
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

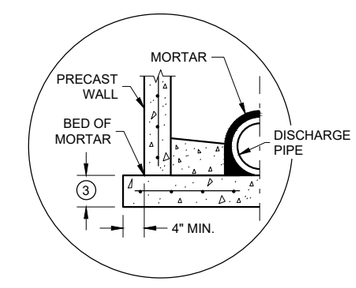
MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

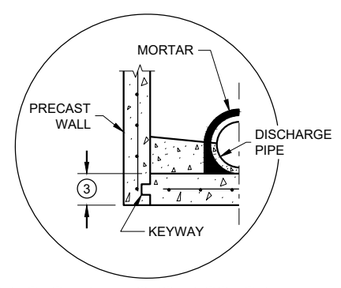
PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES.
SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

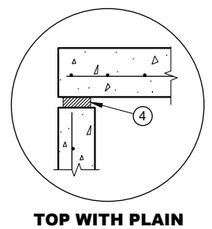


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

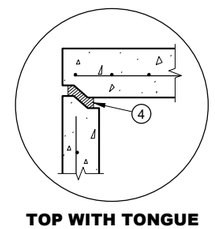


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

DETAIL "A"

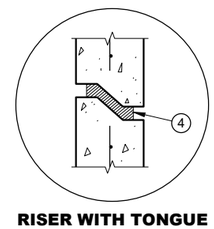


TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT

DETAIL "B"



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "C"

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 MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

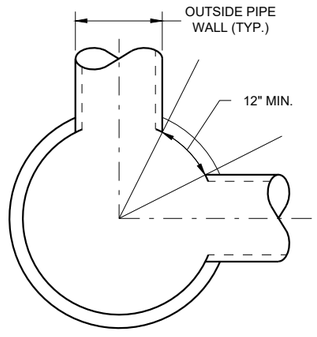
(1) FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

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

(5) SEE MANHOLE COVER OPENING MATRIX.



MINIMUM HORIZONTAL PIPE SEPARATION

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

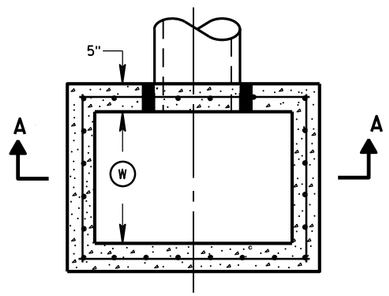
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

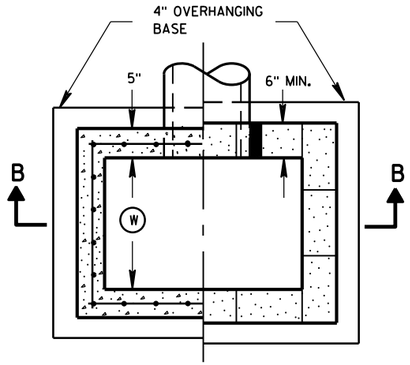
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

6

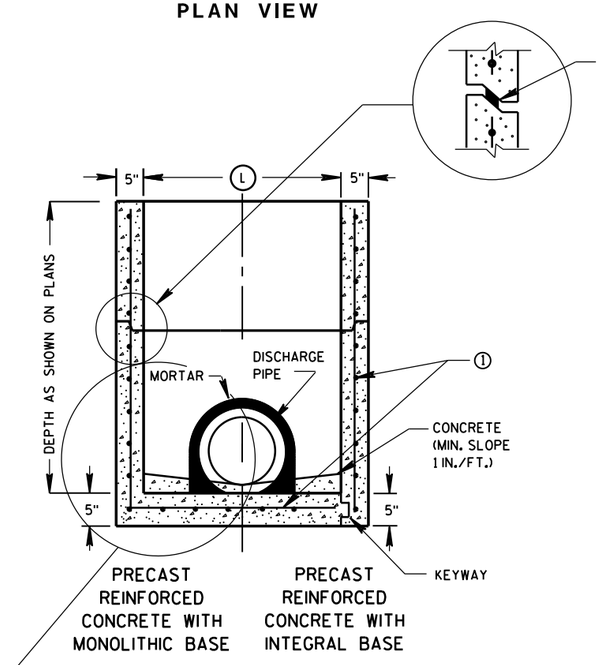
SDD 08B09 - 03



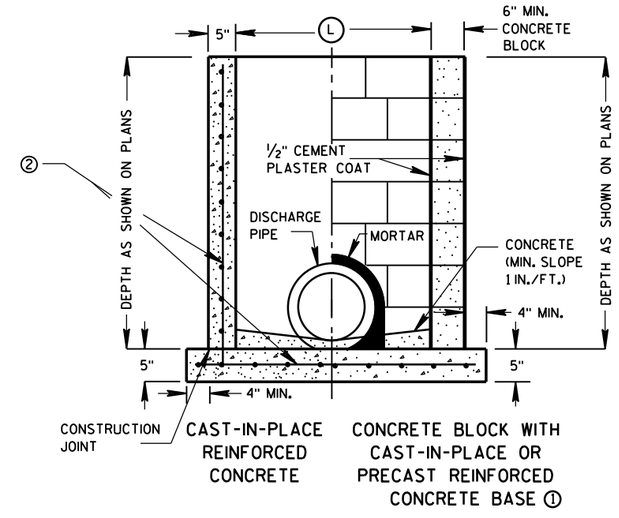
PLAN VIEW



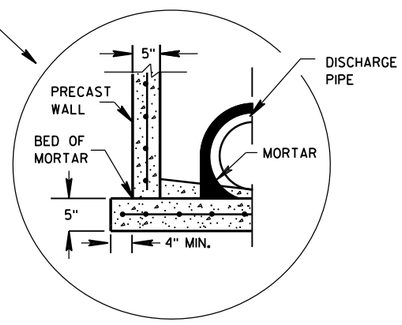
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES 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.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH 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.

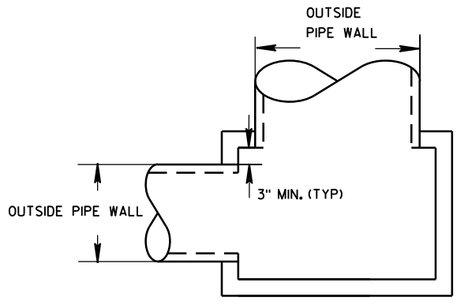
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



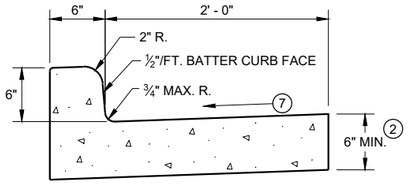
DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

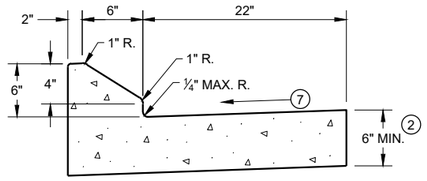
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
FHWA

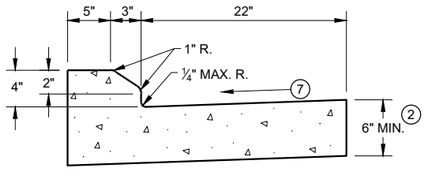
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



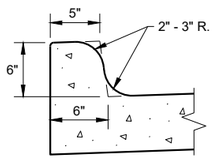
TYPES A[1] & D



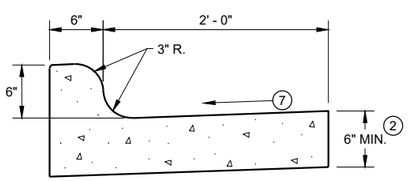
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

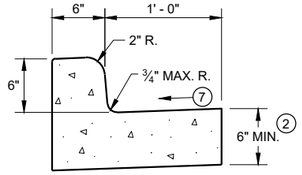


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



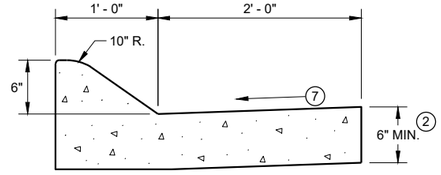
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"

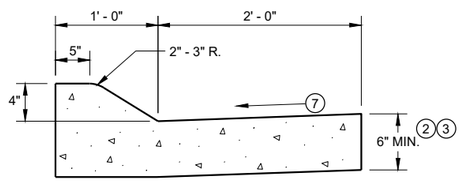


TYPES A[1] & D

CONCRETE CURB AND GUTTER 18"

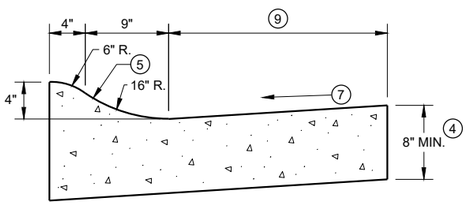


6" SLOPED CURB TYPES A[1] & D



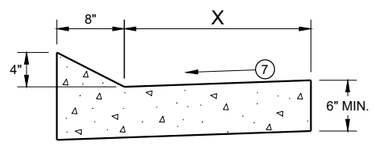
4" SLOPED CURB TYPES A[1] & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R[1] & T

TBT & TBTT	X
30"	22"
36"	28"

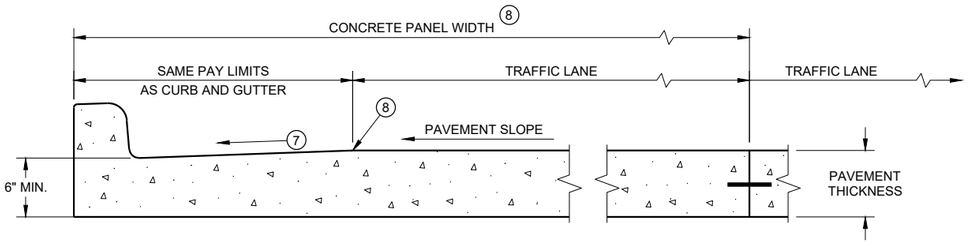


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

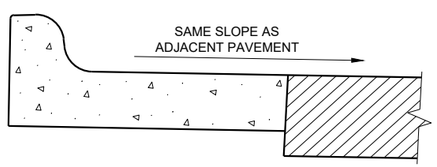
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER[6]
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

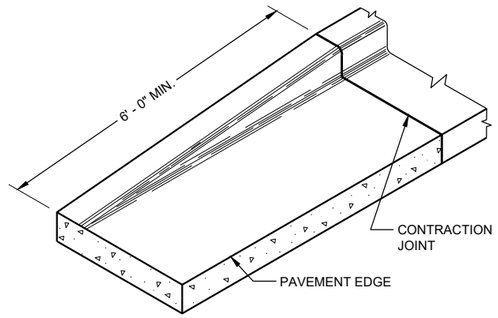
1. TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
4. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
5. UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
6. WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
7. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
8. INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
9. CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
   CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

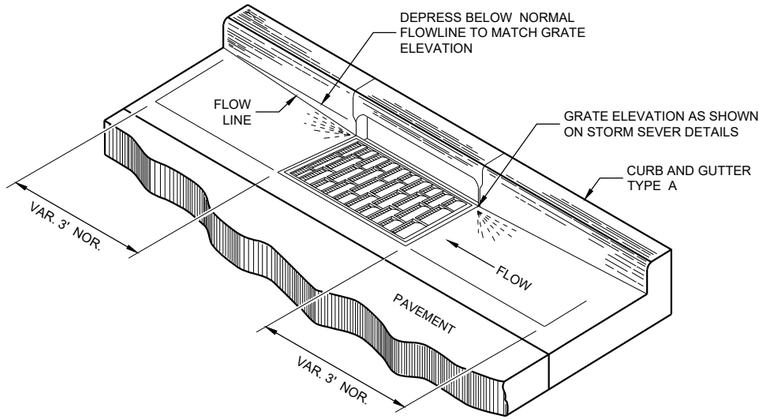
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 22a
SDD 08D01 - 22a



END SECTIONCURB AND GUTTER



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

GENERAL NOTES

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

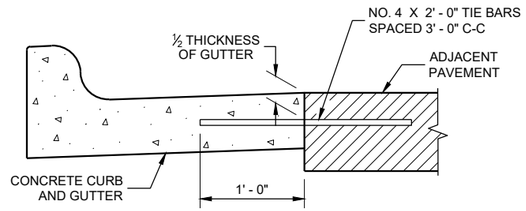
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

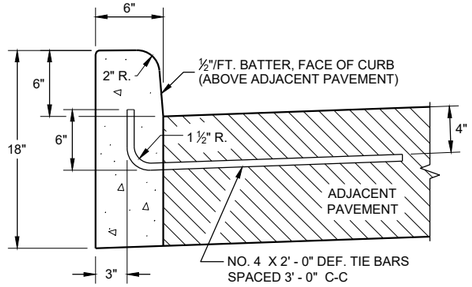
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

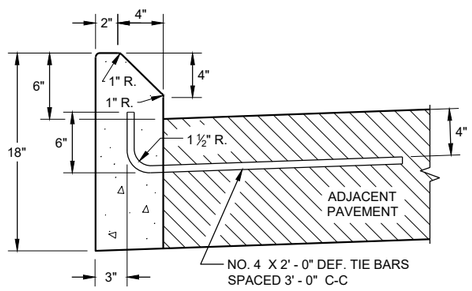
(9) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION (1)

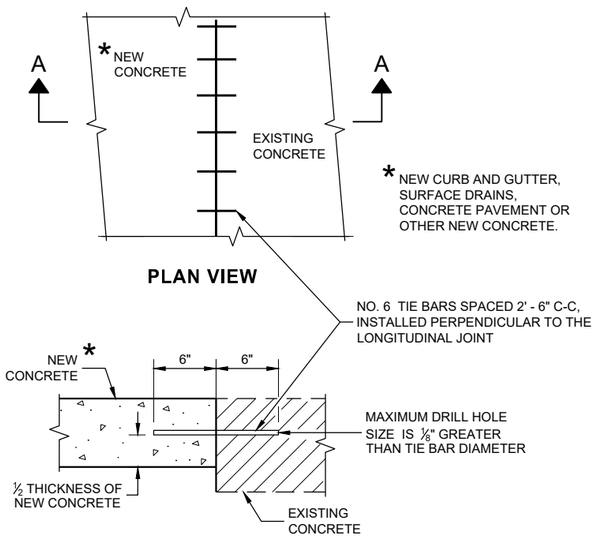


TYPES A (1) & D



TYPES G (1) & J

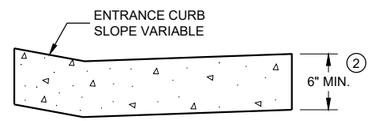
CONCRETE CURB



PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB (9)
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

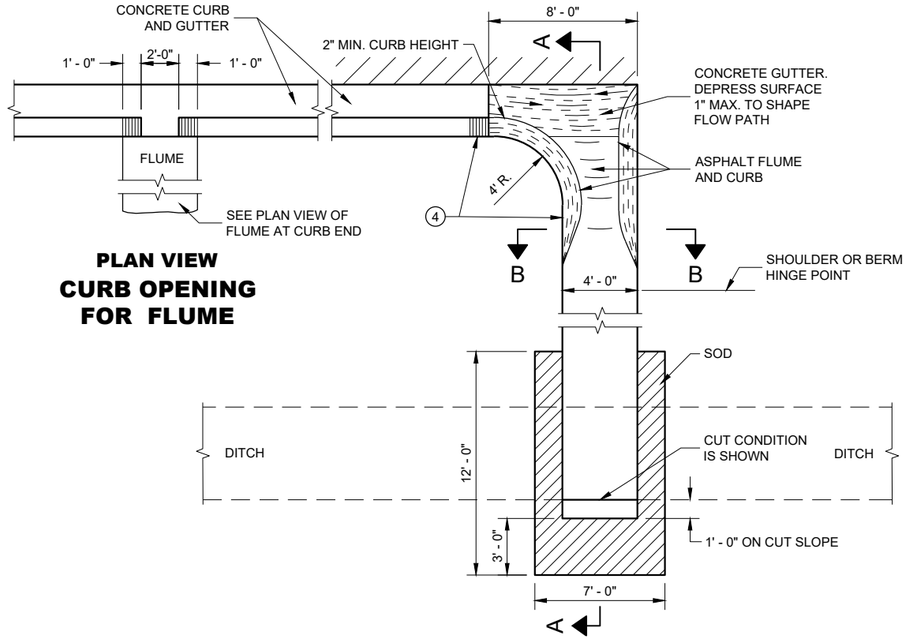
FHWA

6

SDD08D01 - 22b

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME

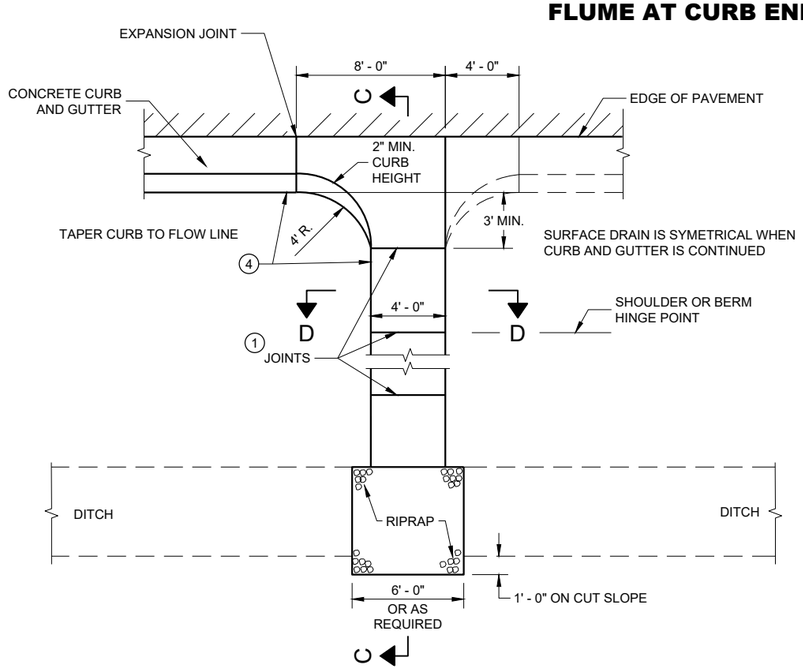


PLAN VIEW

CURB OPENING FOR FLUME

PLAN VIEW

FLUME AT CURB END



PLAN VIEW

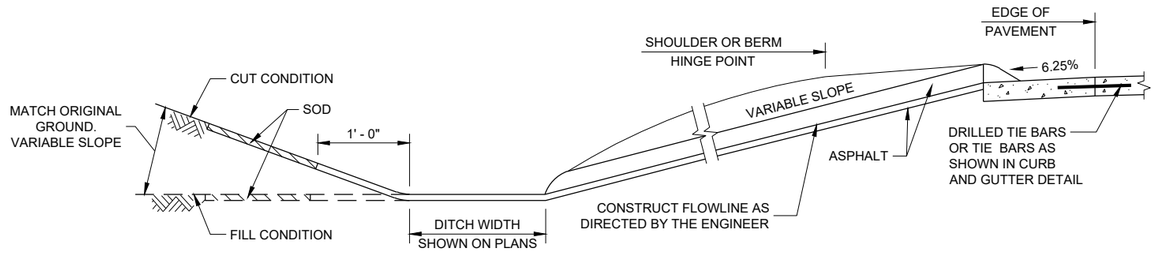
CONCRETE SURFACE DRAIN

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.

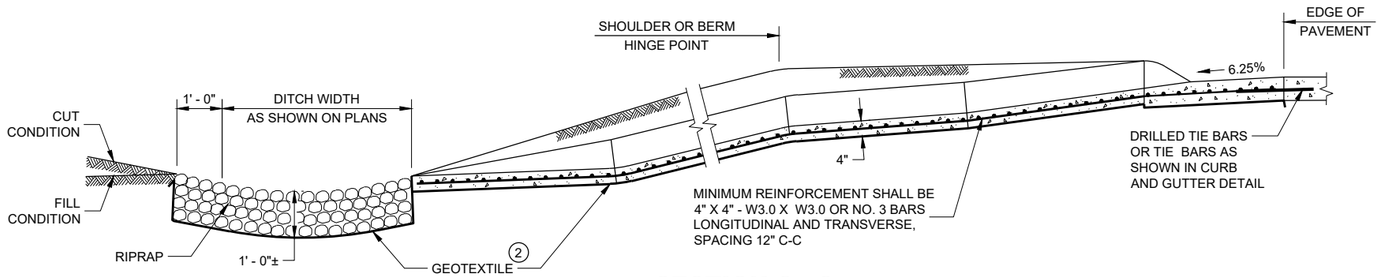
4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

1. JOINTS SHALL BE ⅛" TO ¼" WIDE BY 1½" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
2. GEOTEXTILE 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.
4. ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.

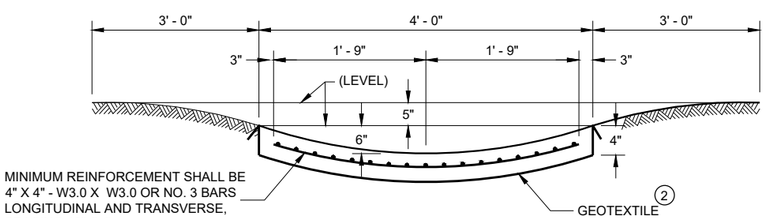


SECTION A - A

SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

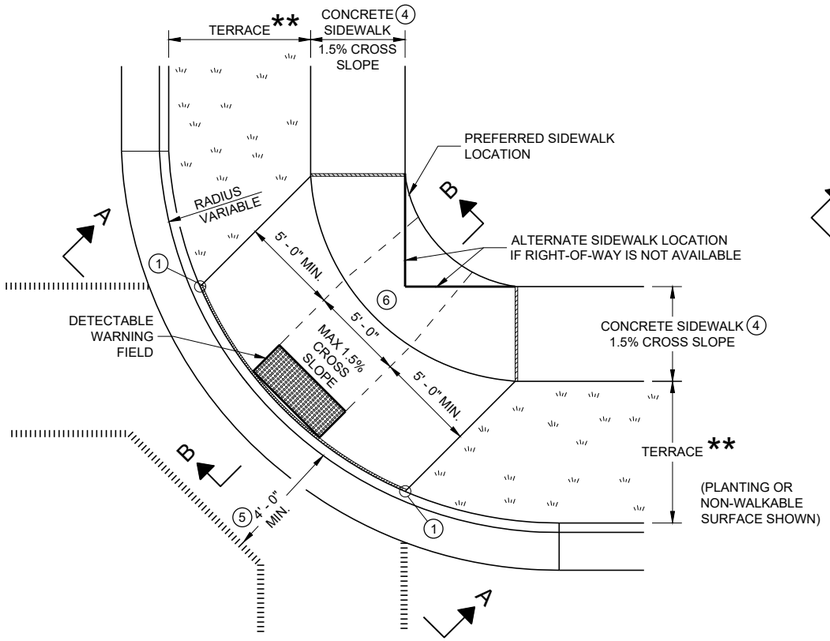
APPROVED
November 2021
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 08D04 - 06

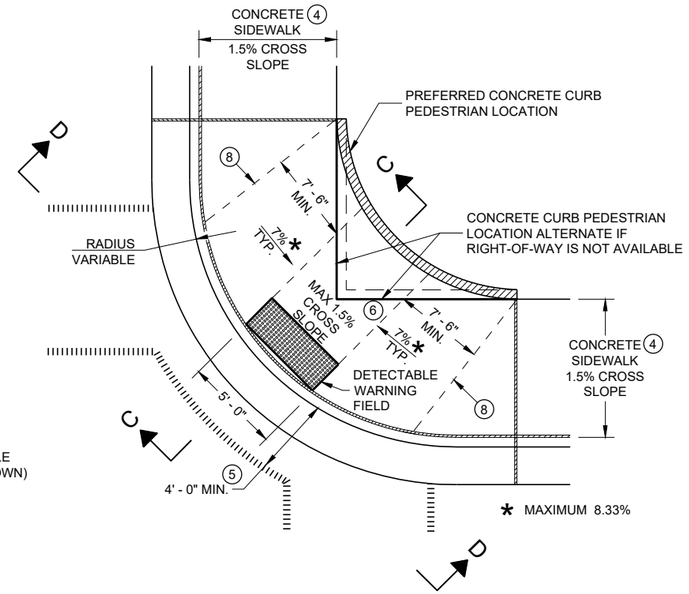
SDD 08D04 - 06



PLAN VIEW

CURB RAMP TYPE 1

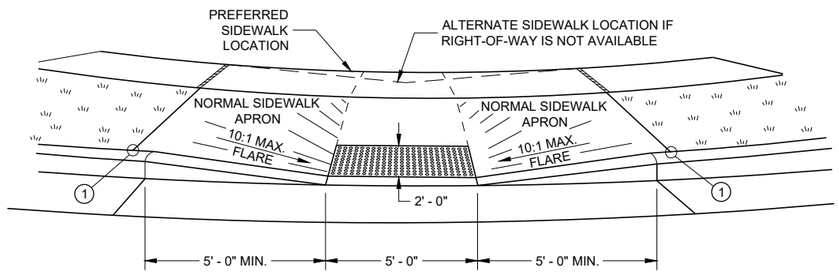
(CENTER OF CORNER RADIUS)



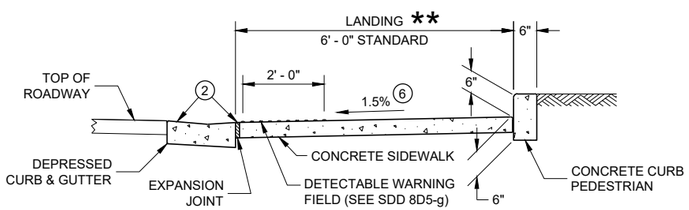
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

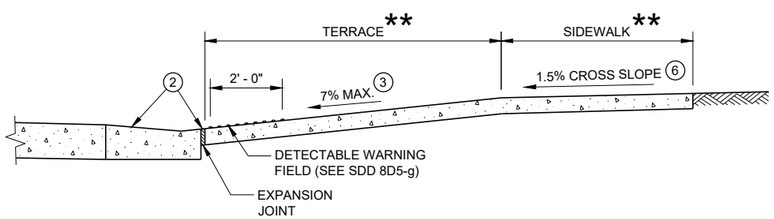


VIEW A - A FOR TYPE 1

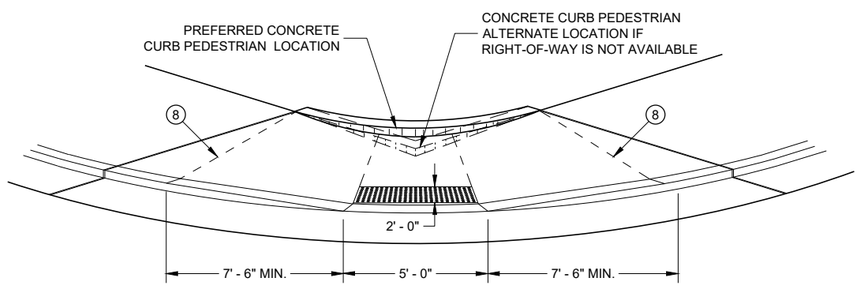


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

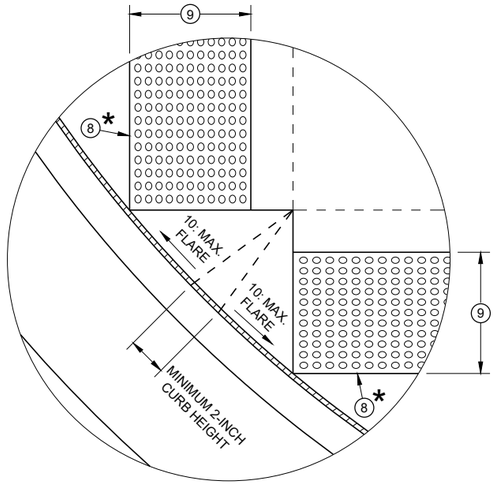
LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

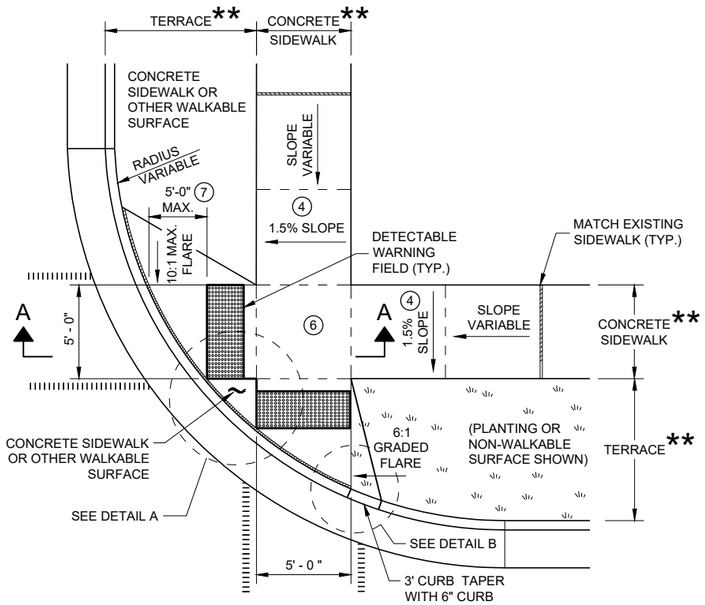
CURB RAMPS
TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D05 - 20a



DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

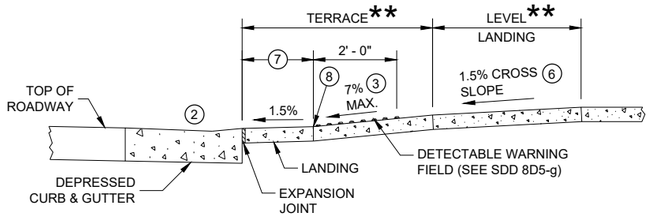
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

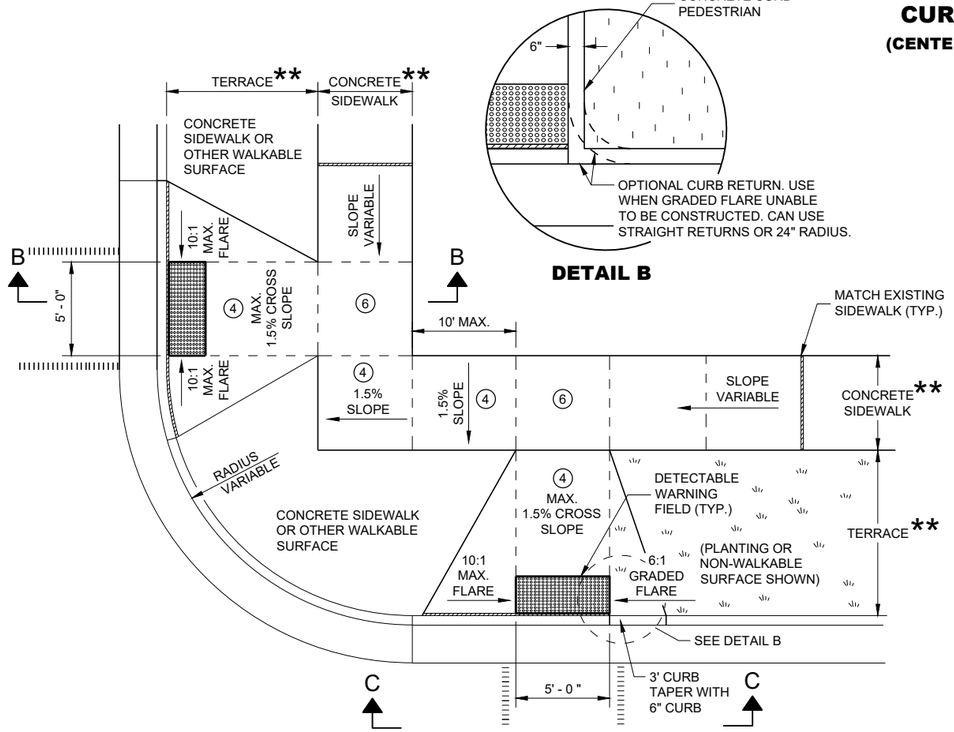
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2

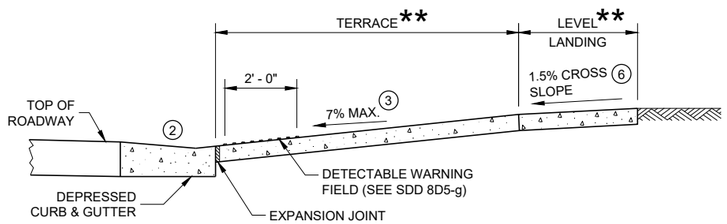
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

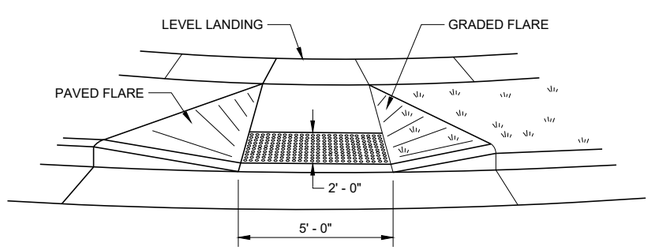


DETAIL B

PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

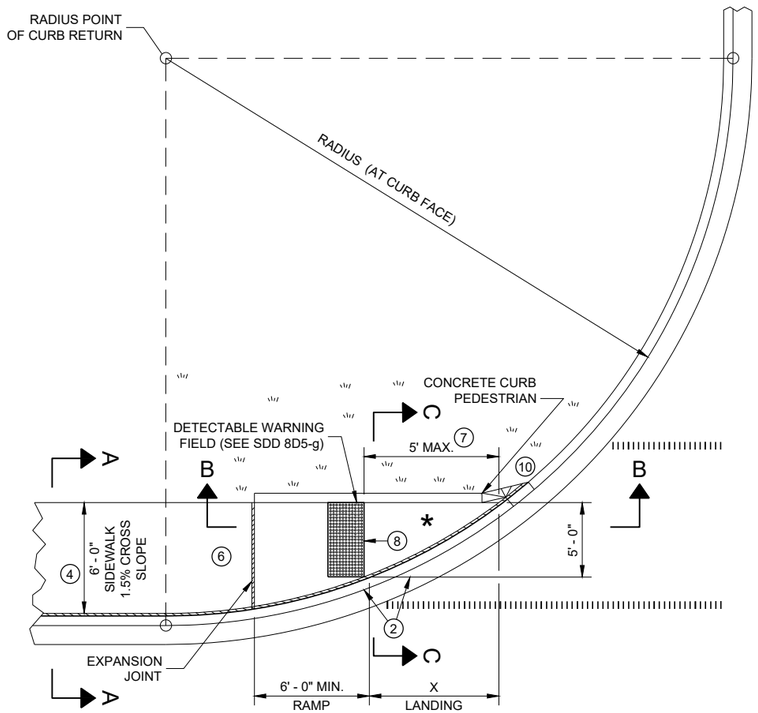
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

6

SDD 08D05 - 20b

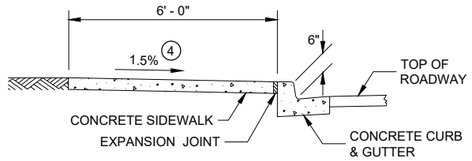


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

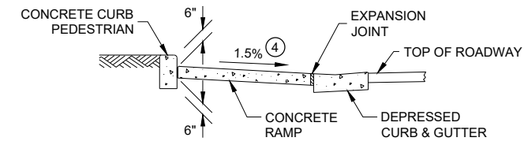
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

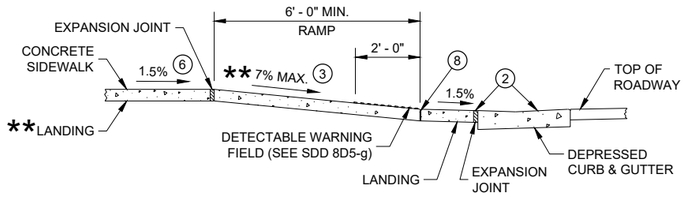
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



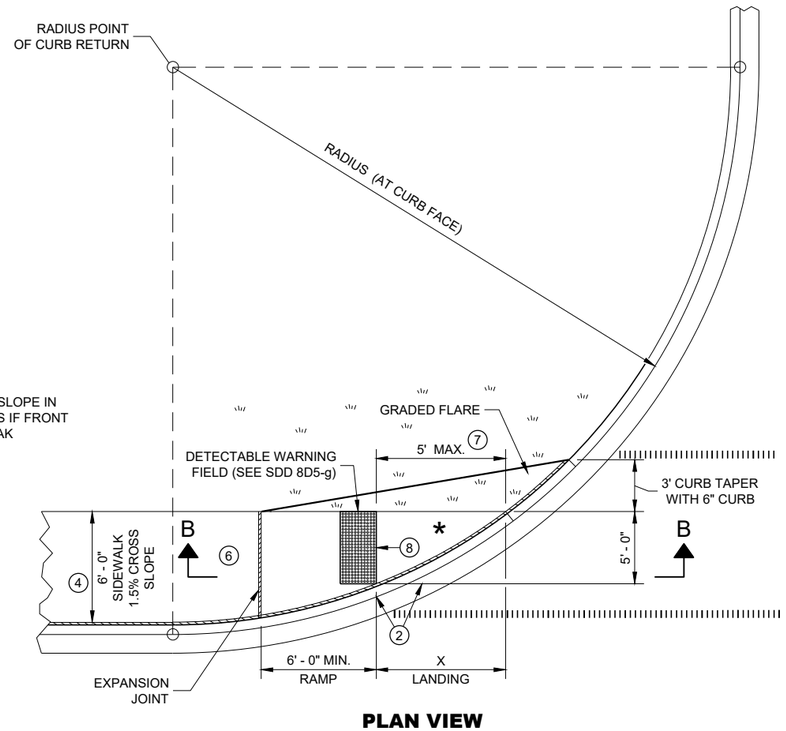
SECTION C - C FOR TYPE 4A



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

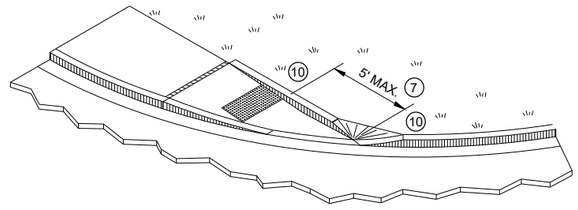
SECTION B - B FOR TYPE 4A AND TYPE 4A1

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

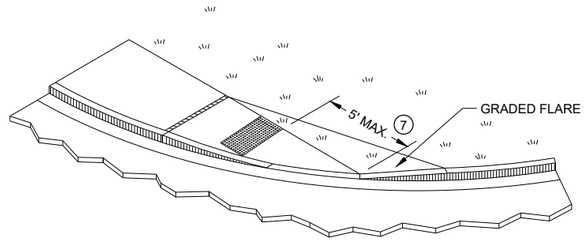


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



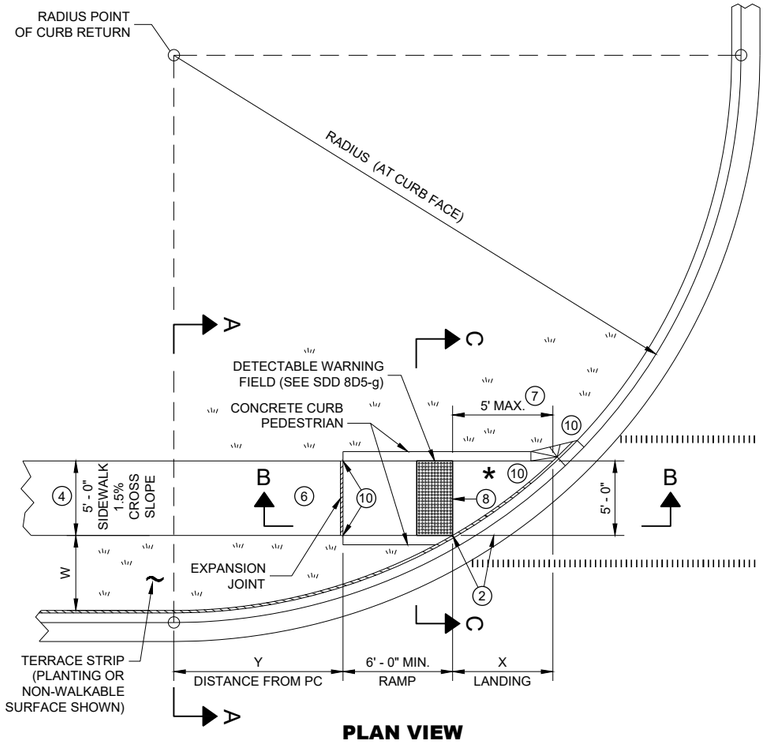
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c



PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

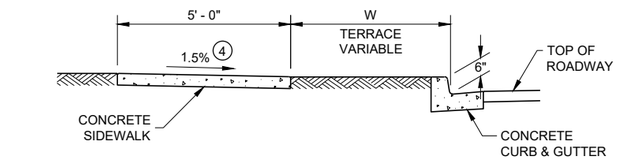
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

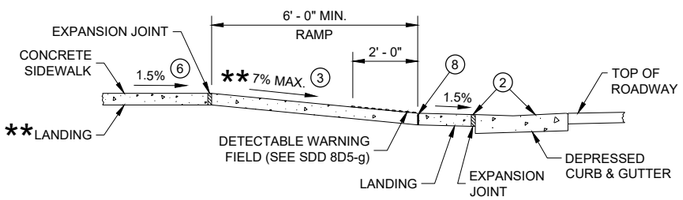
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



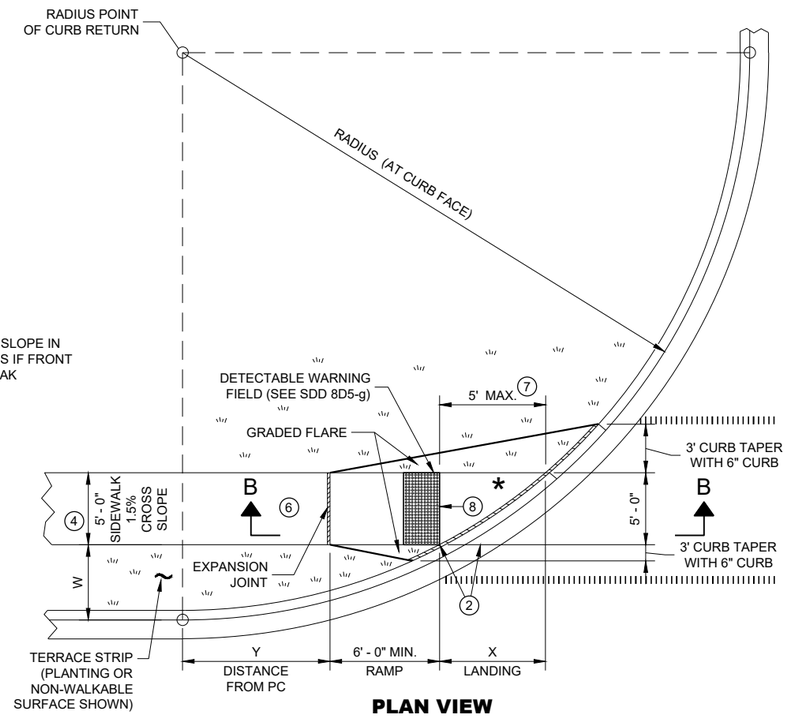
SECTION A - A FOR TYPE 4B



SECTION B - B FOR TYPE 4B AND TYPE 4B1

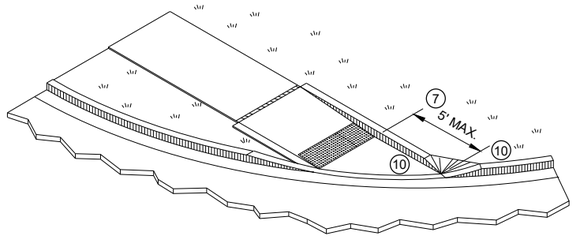
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

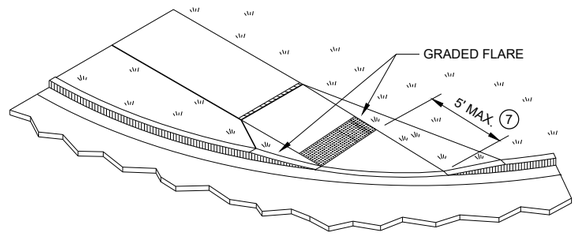


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



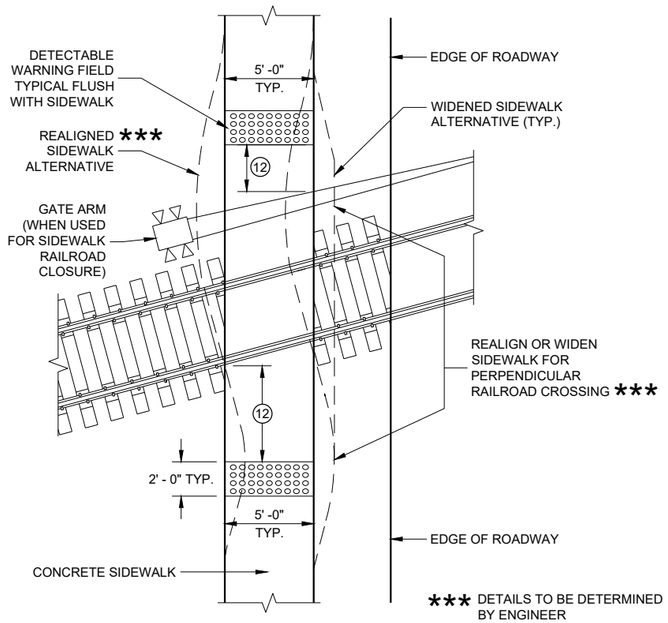
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

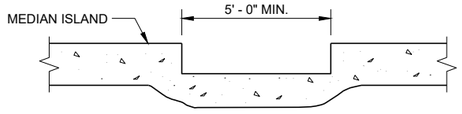
6

SDD 08D05 - 20d

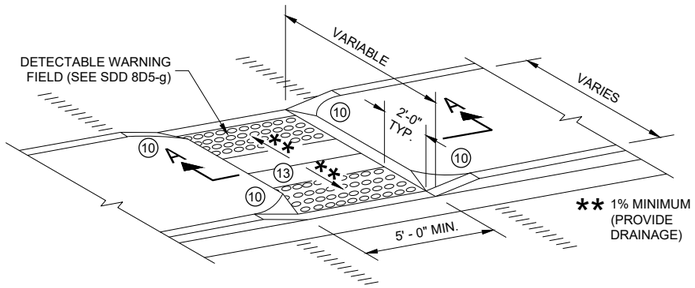


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

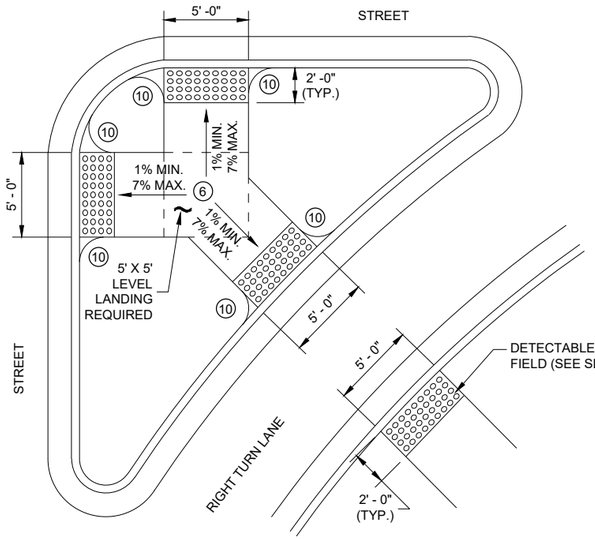
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

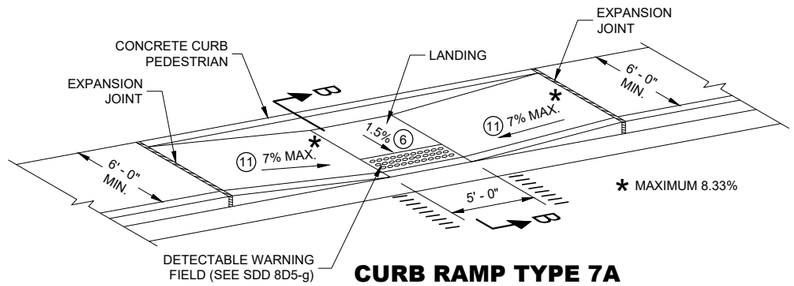
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

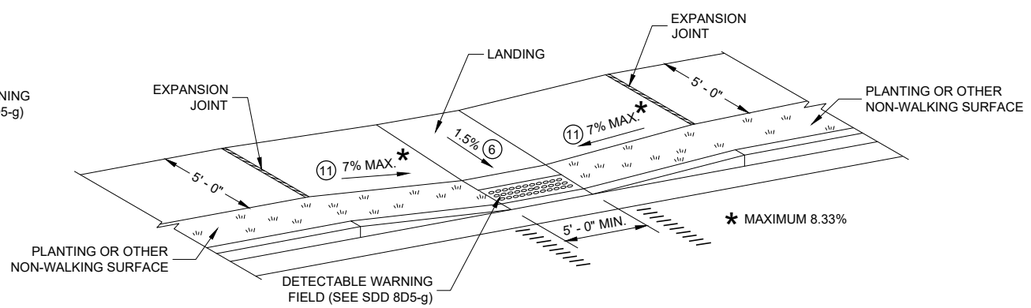
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A

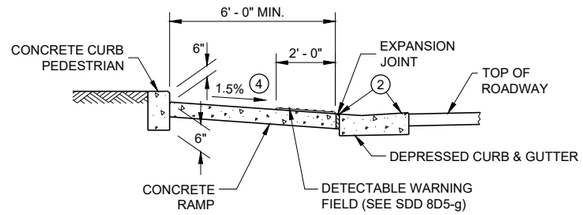
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.



SECTION B - B FOR TYPE 7A

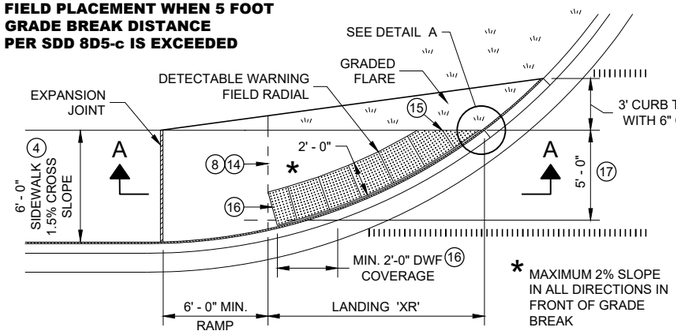
CURB RAMPS
TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20e

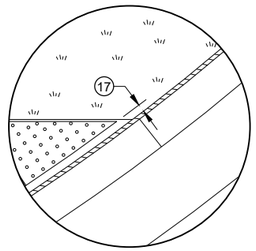
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



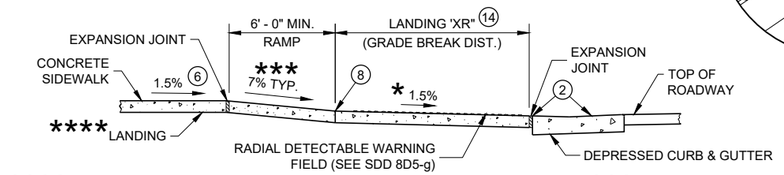
PLAN VIEW

CURB RAMP TYPE 4A1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL A

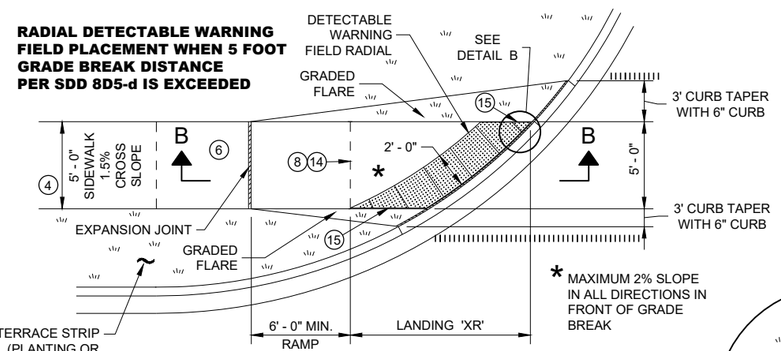


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1

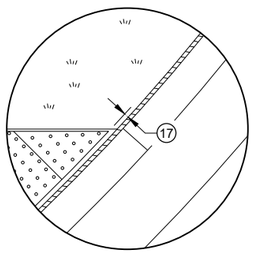
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



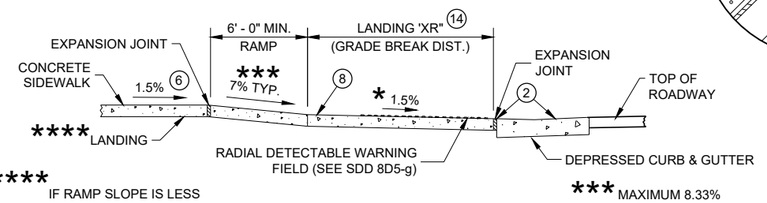
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

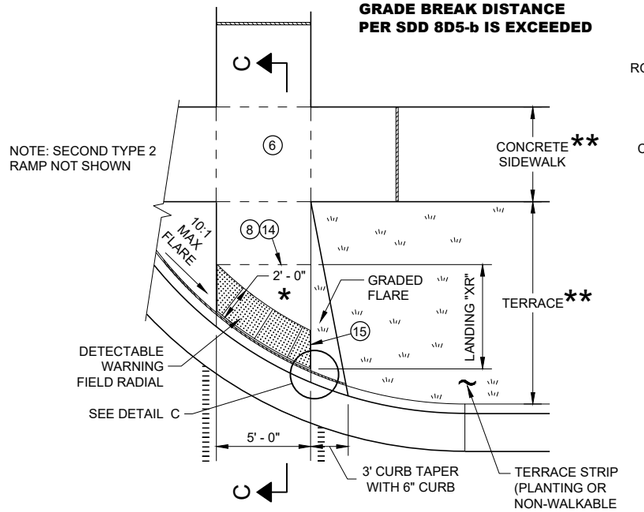
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

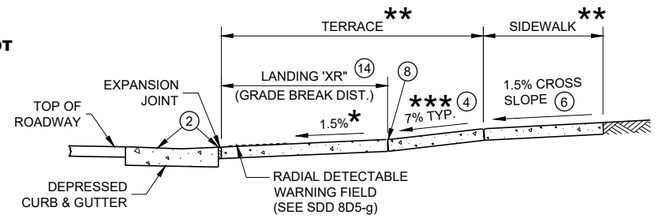


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

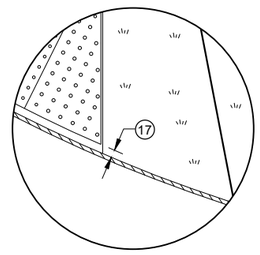


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

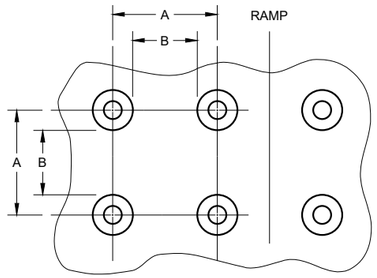
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20f

SDD 08D05 - 20f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

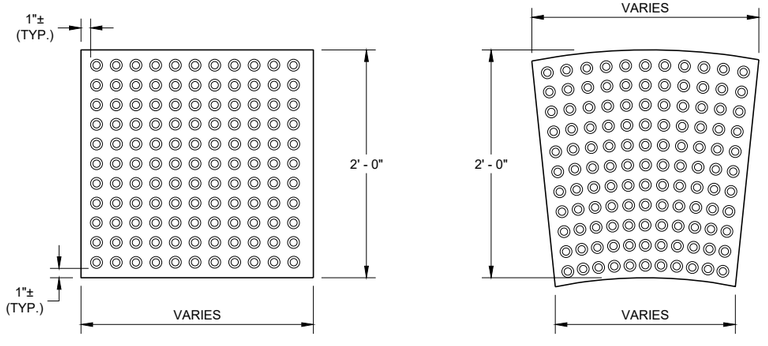
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



PLAN VIEW

ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

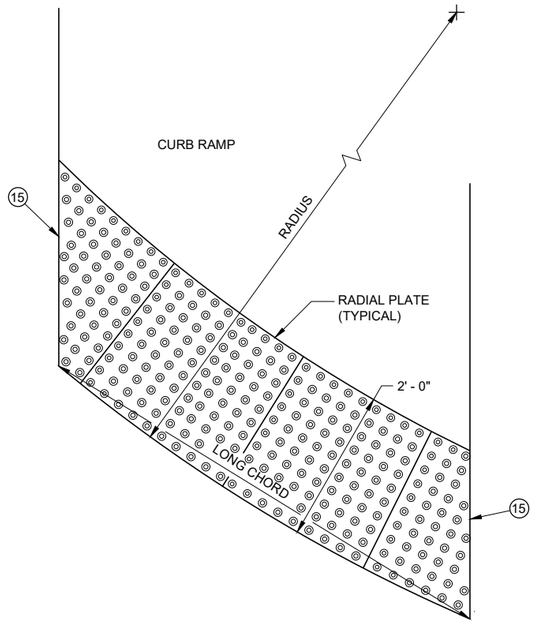
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

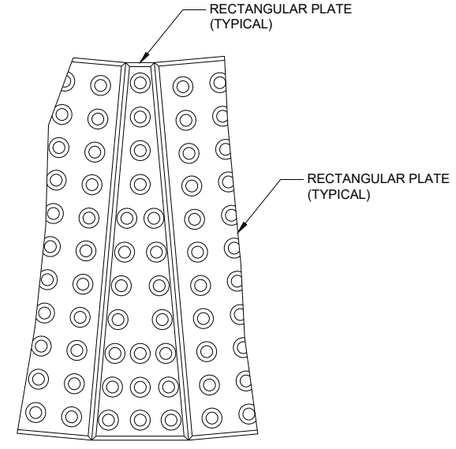
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

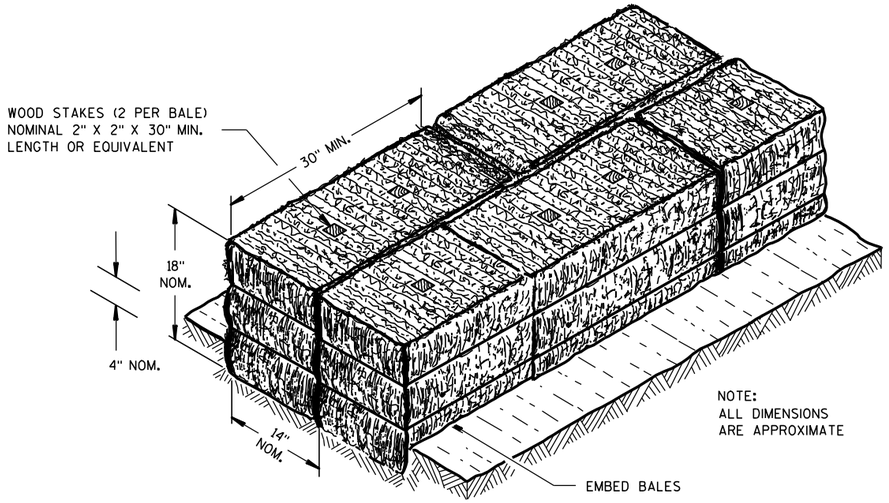
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

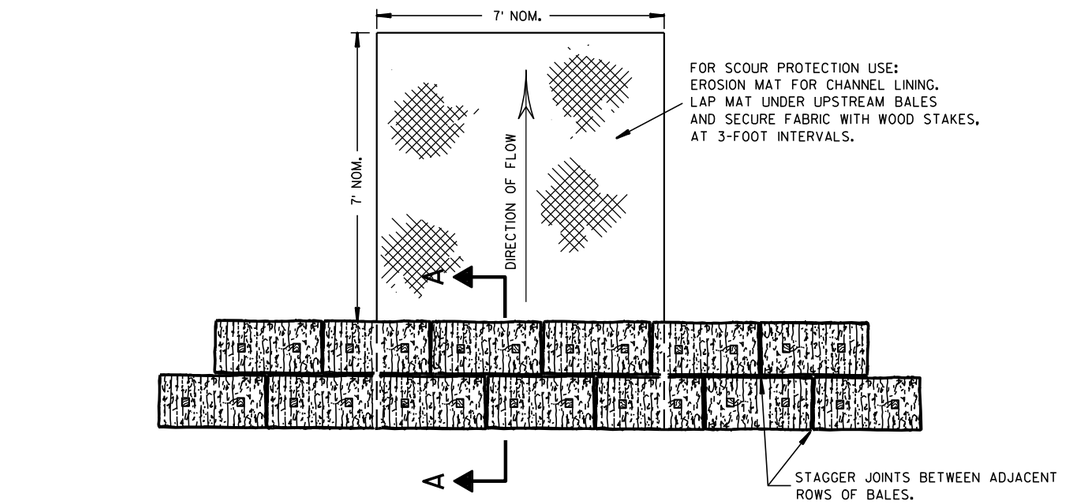
FHWA

6

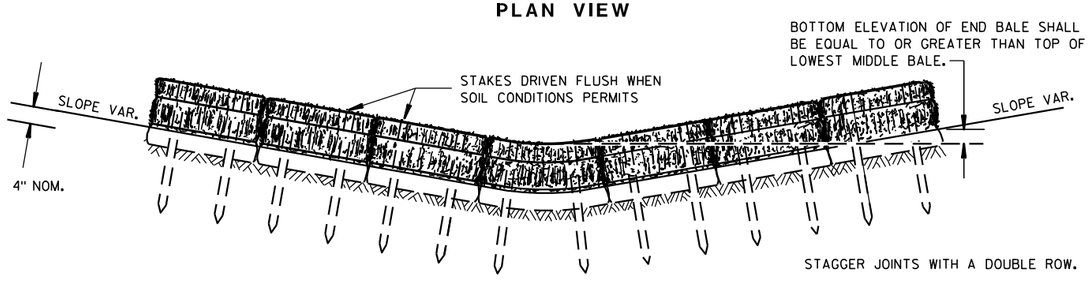
SDD 08D05 - 20g



SECTION A-A



PLAN VIEW



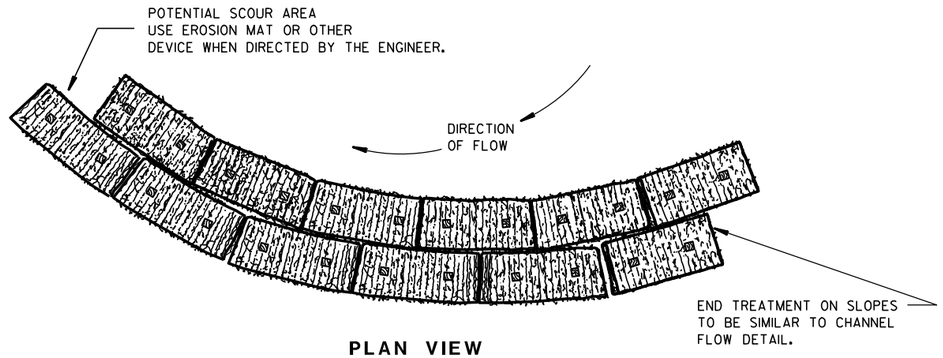
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

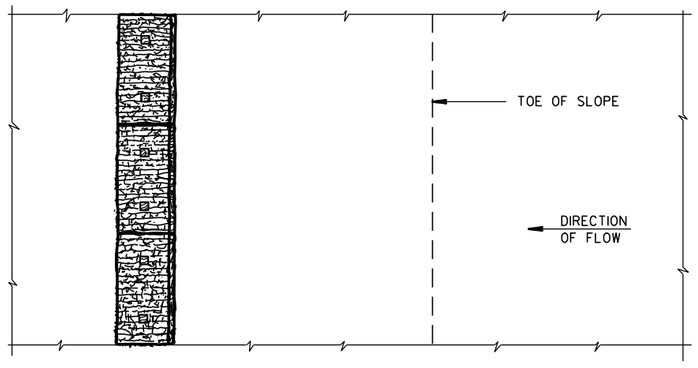
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

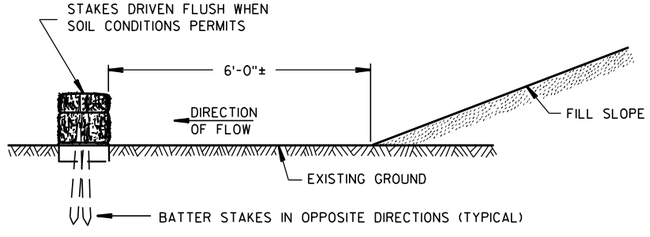


PLAN VIEW

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

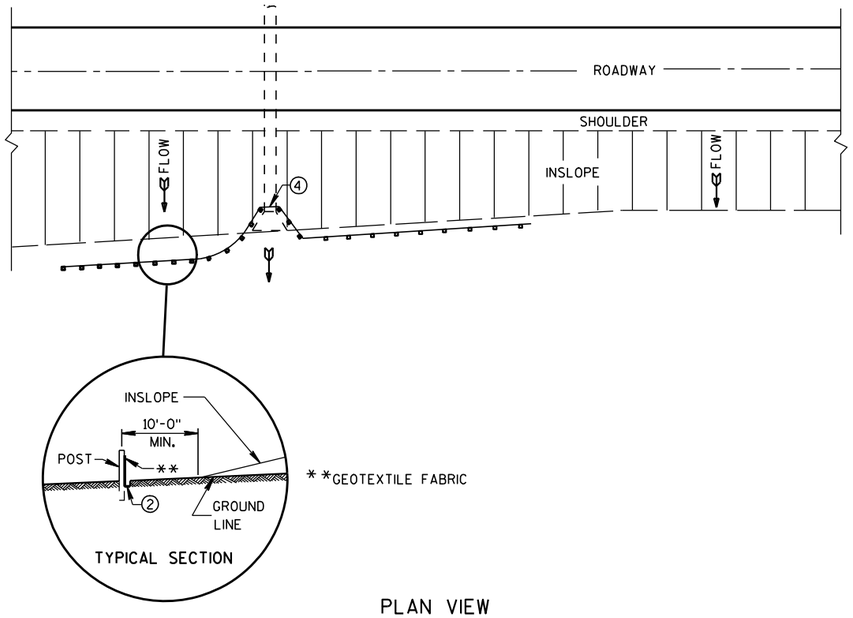
APPROVED
6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

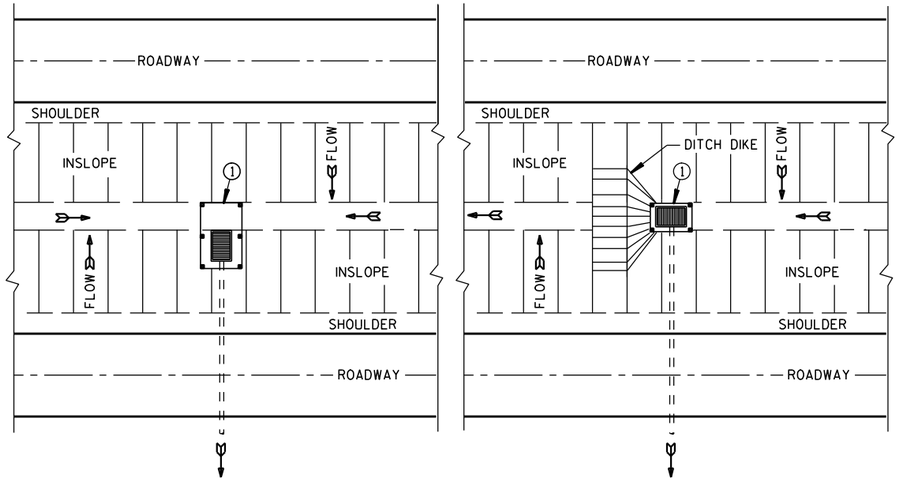
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



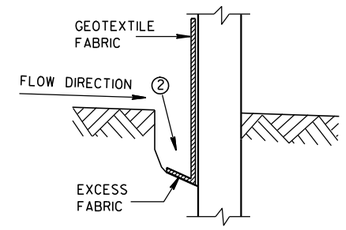
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

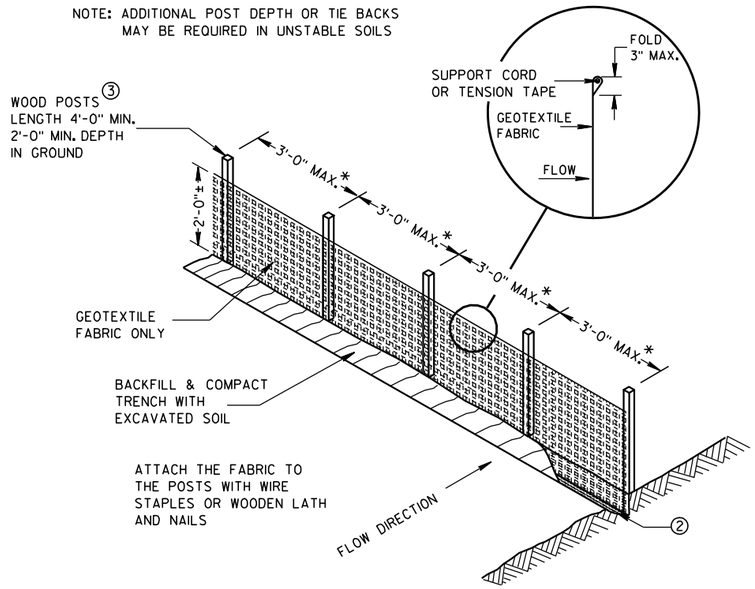
GENERAL NOTES

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

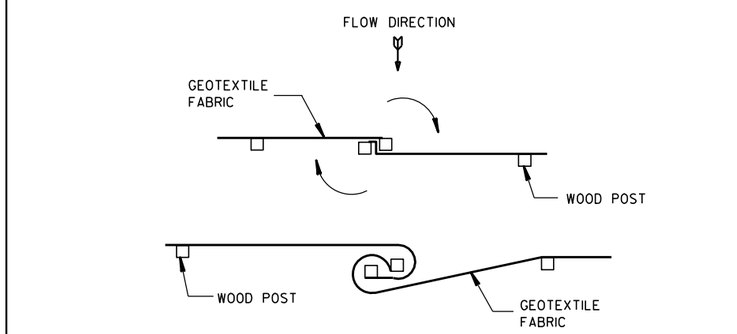
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



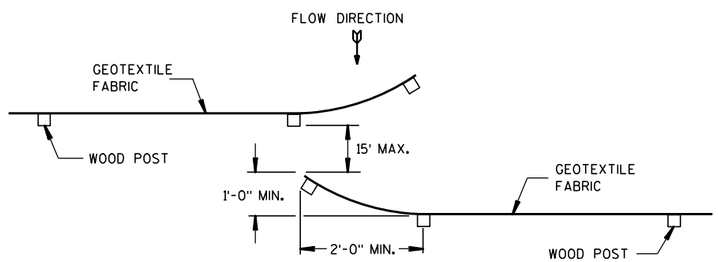
TRENCH DETAIL



SILT FENCE

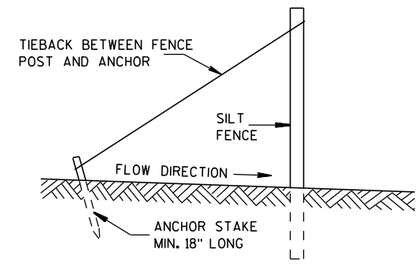


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

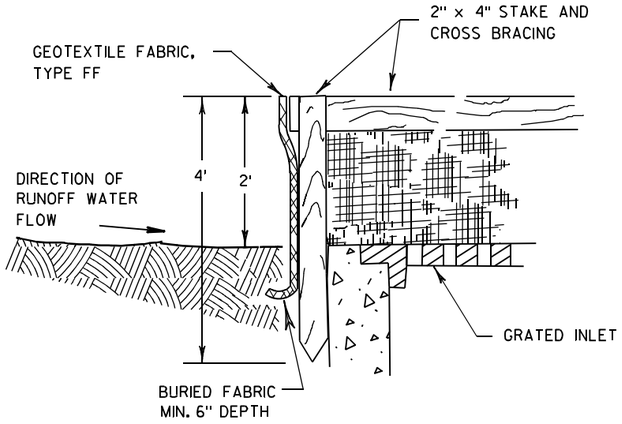
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

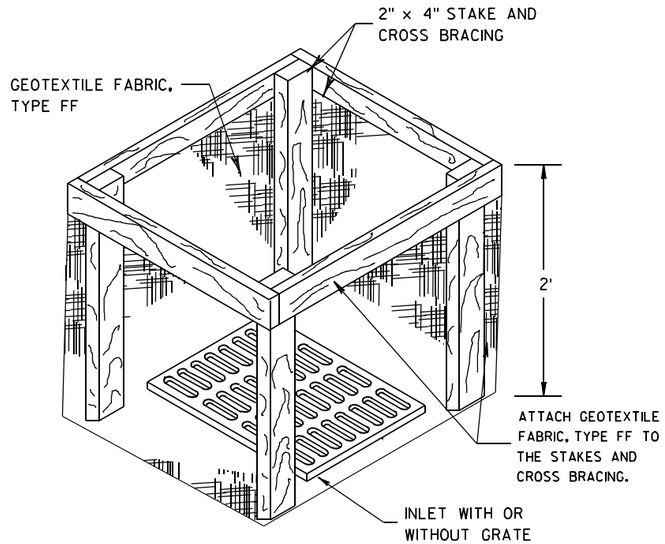
6

S.D.D. 8 E 9-6

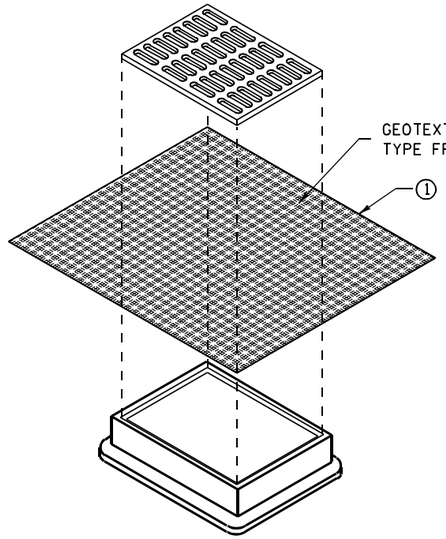
6

S.D.D. 8 E 9-6



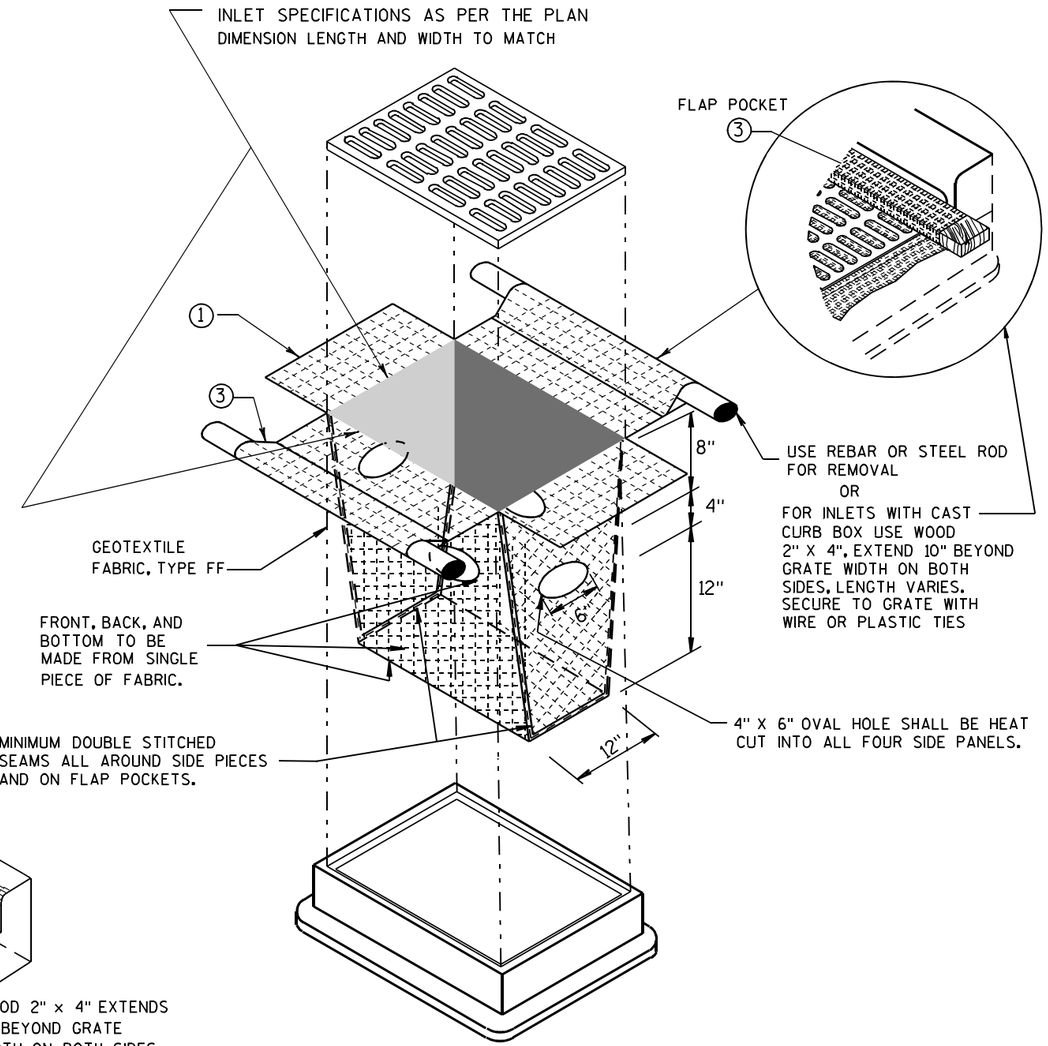


INLET PROTECTION, TYPE A



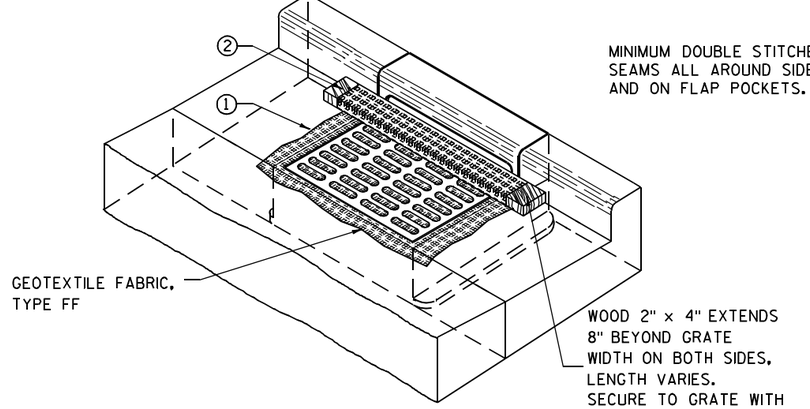
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

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

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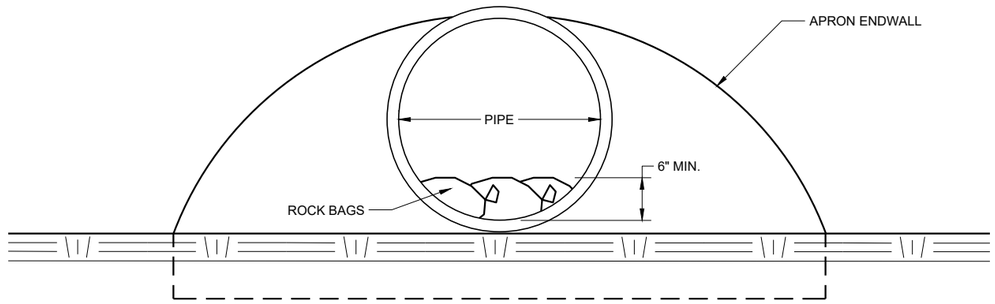
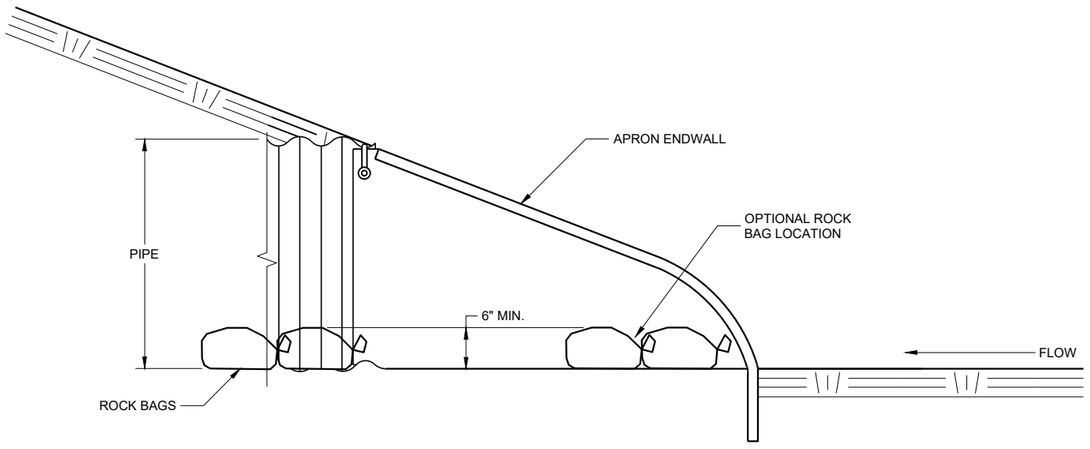
S.D.D. 8 E 10-2



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

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SDD 08E15 - 01

METAL APRON ENDWALLS

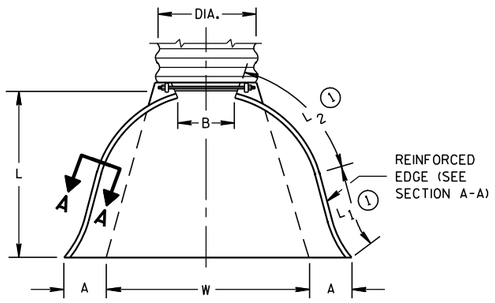
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

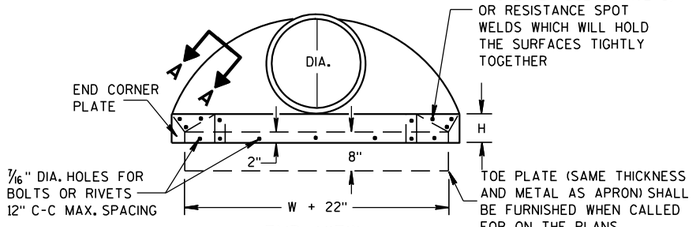
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

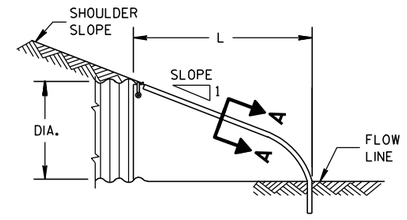
*MINIMUM
**MAXIMUM



PLAN VIEW

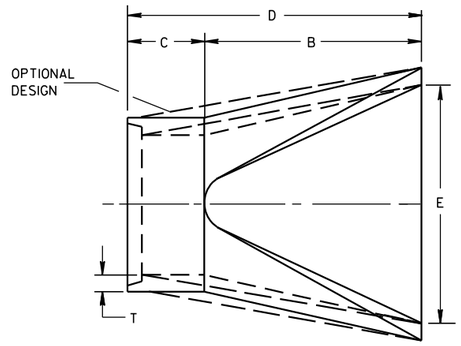


END VIEW

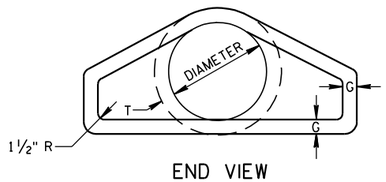


SIDE ELEVATION

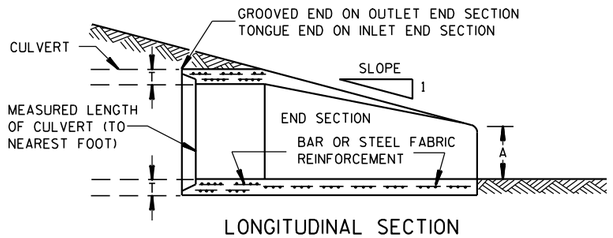
METAL ENDWALLS



PLAN

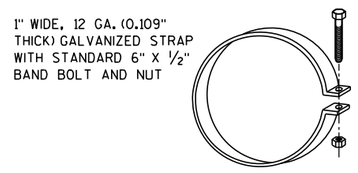


END VIEW



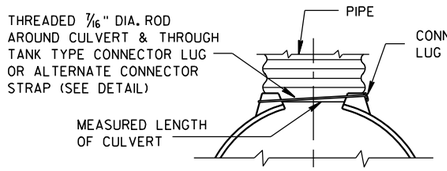
LONGITUDINAL SECTION

CONCRETE ENDWALLS

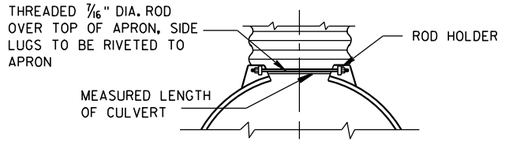


ALTERNATE FOR TYPE 1 CONNECTION

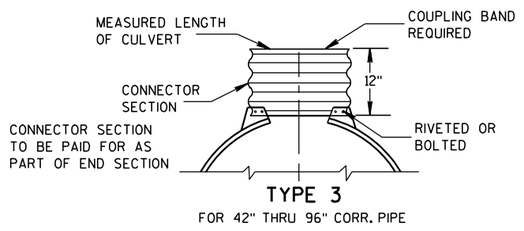
END SECTION CONNECTOR STRAP



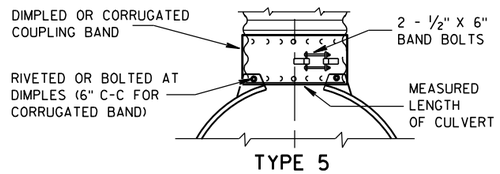
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

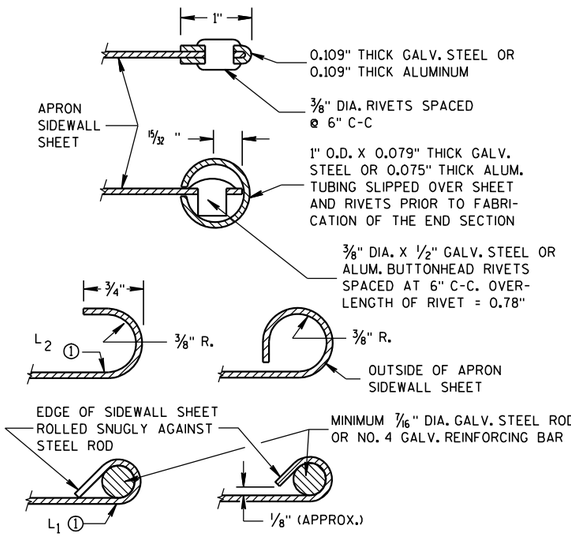
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

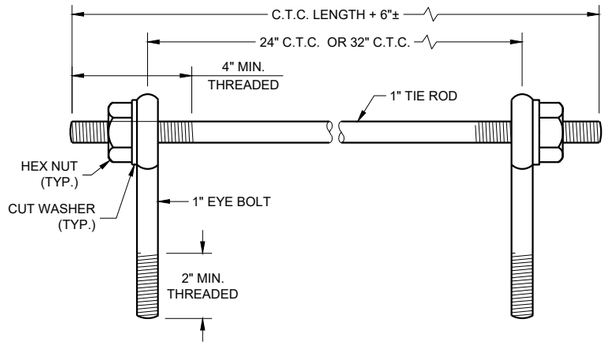
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

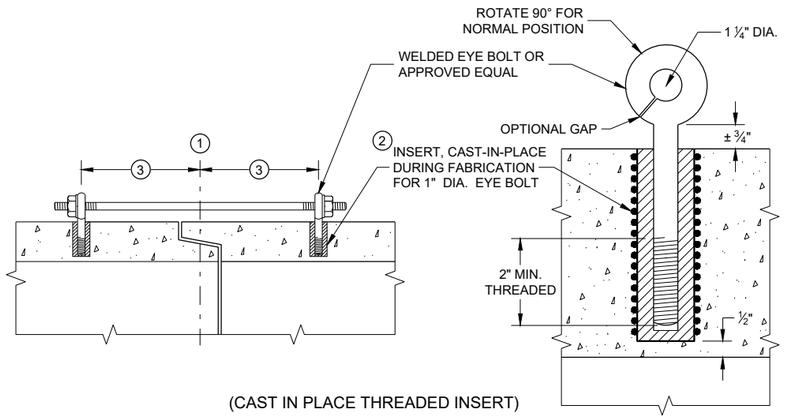
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



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) CENTER LINE 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.

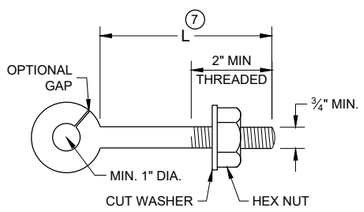
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

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

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

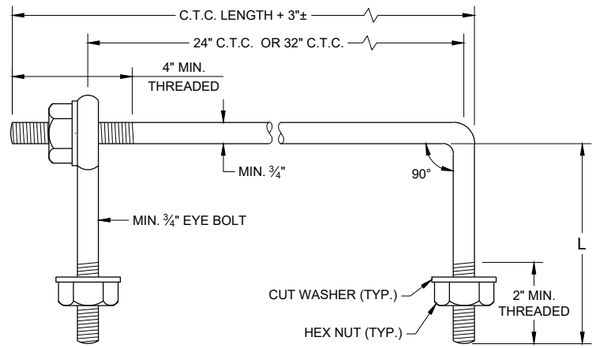
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

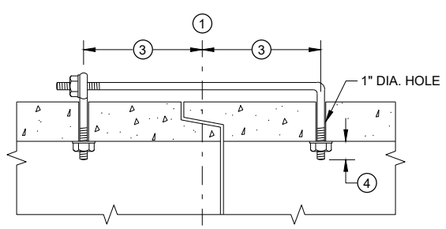


EYE BOLT (7)

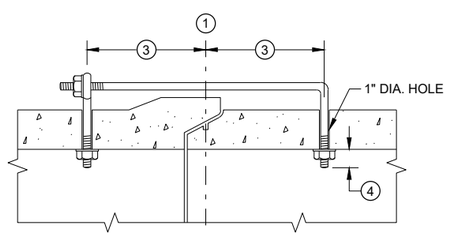
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

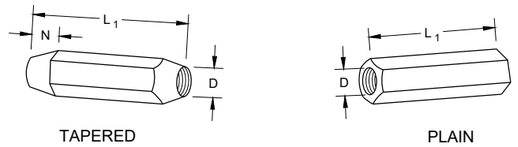
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

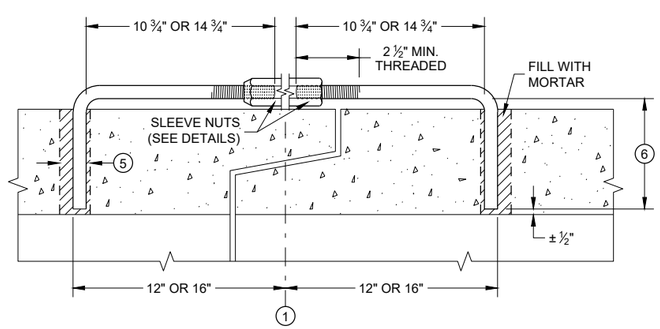
PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



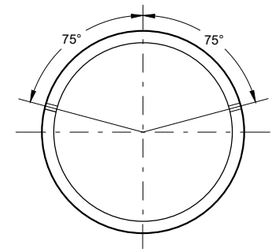
RIGHT AND LEFT THREADS

SLEEVE NUTS



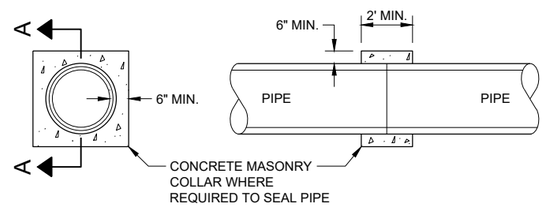
LONGITUDINAL SECTION

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

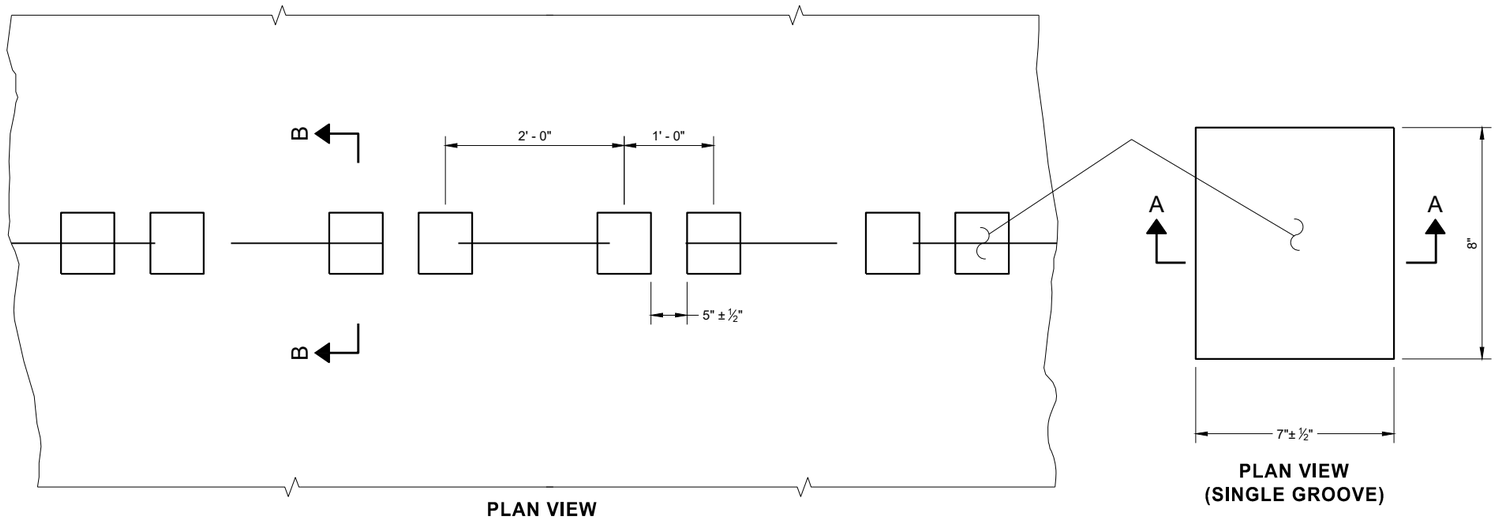
JOINT TIES FO CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 08F04 - 08

SDD 08F04 - 08



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

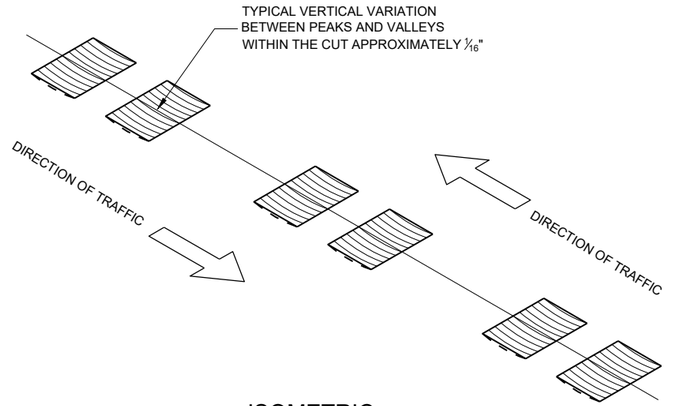
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

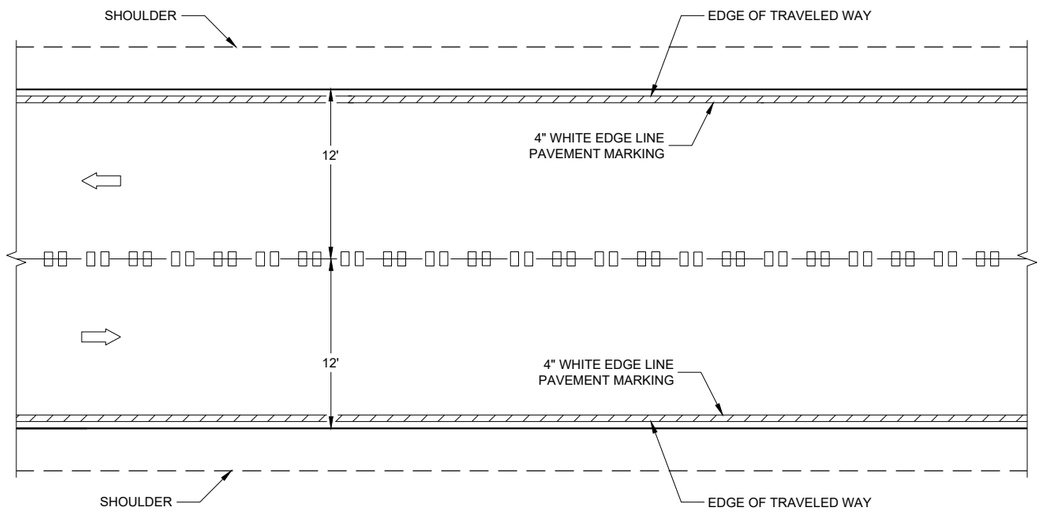
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

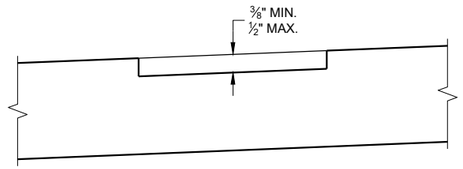
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



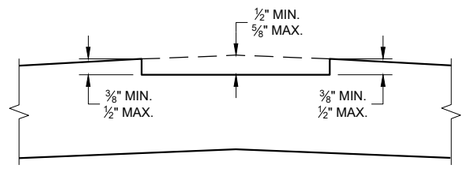
ISOMETRIC



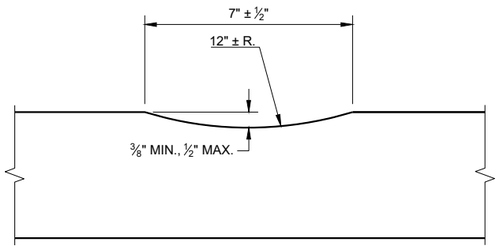
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



SECTION A - A

6

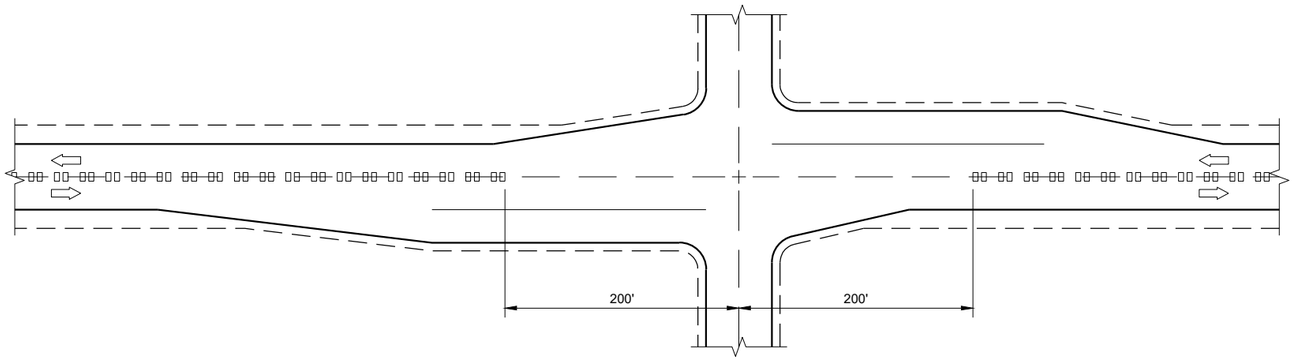
SDD 13A11 - 03a

6

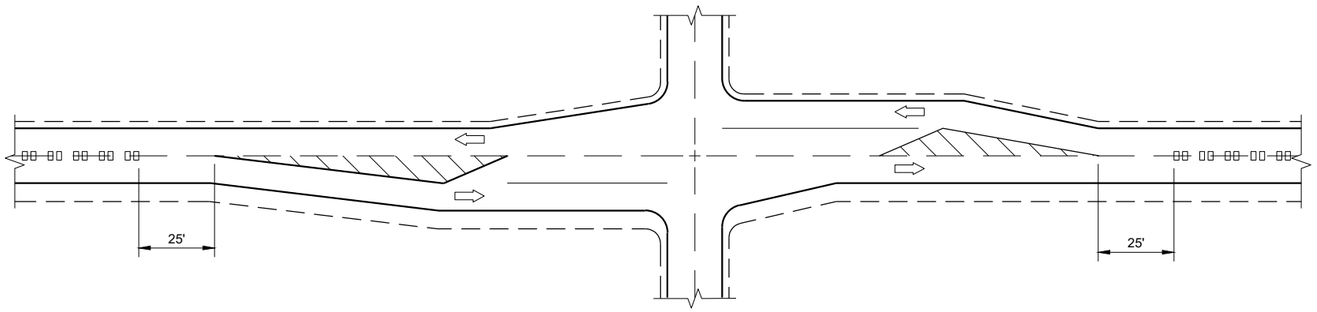
SDD 13A11 - 03a

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

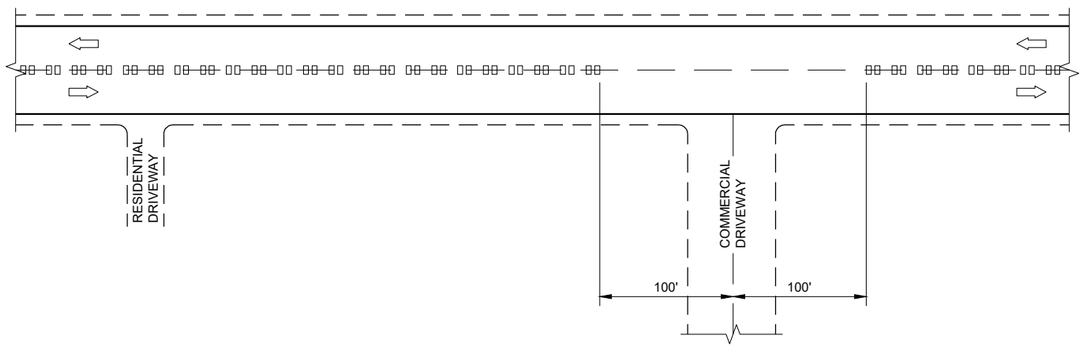
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



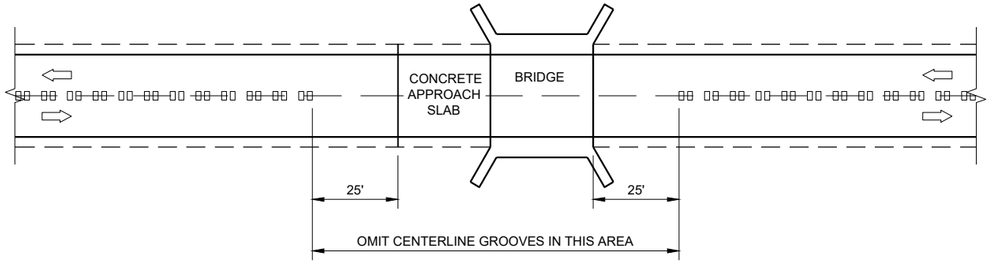
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



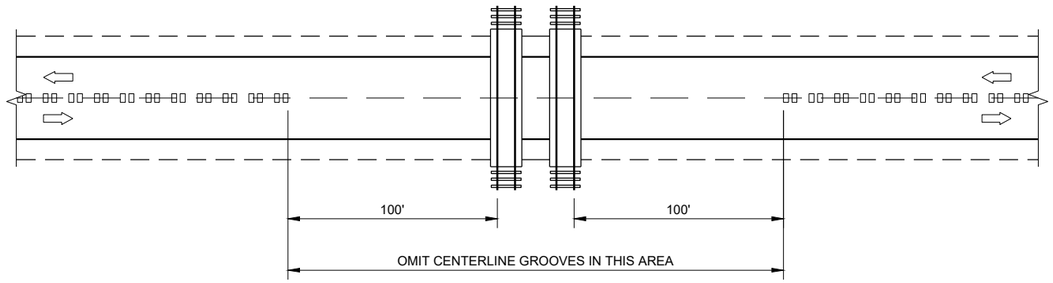
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

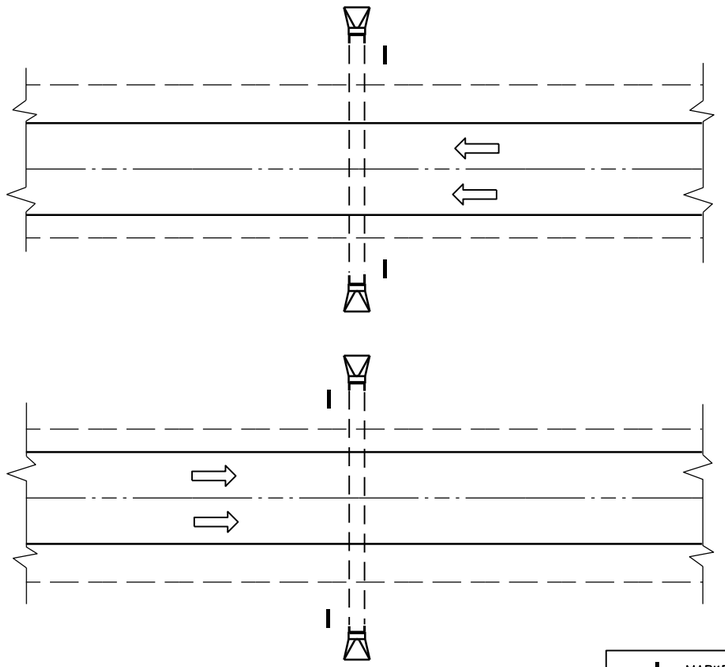
FHWA

6

SDD 13A11 - 03b

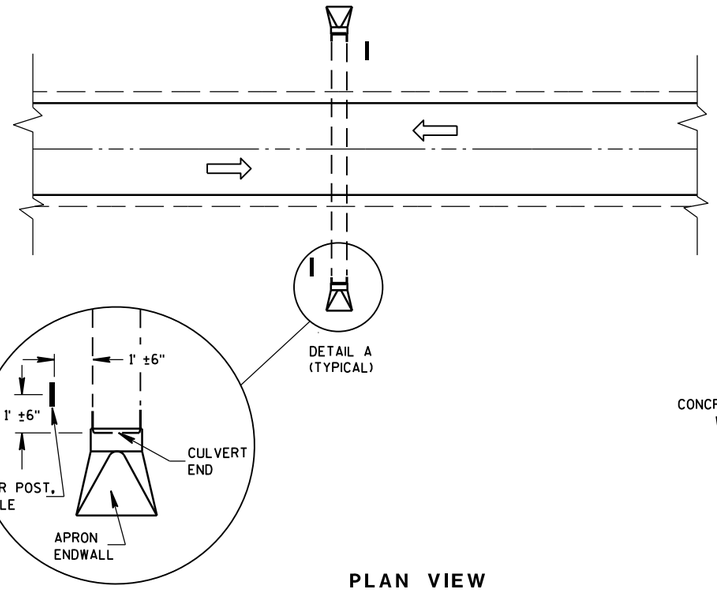
6

SDD 13A11 - 03b



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

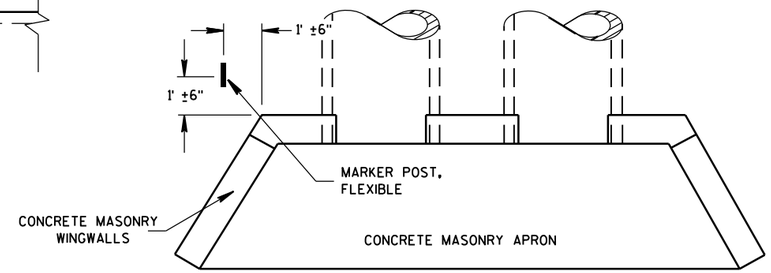
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

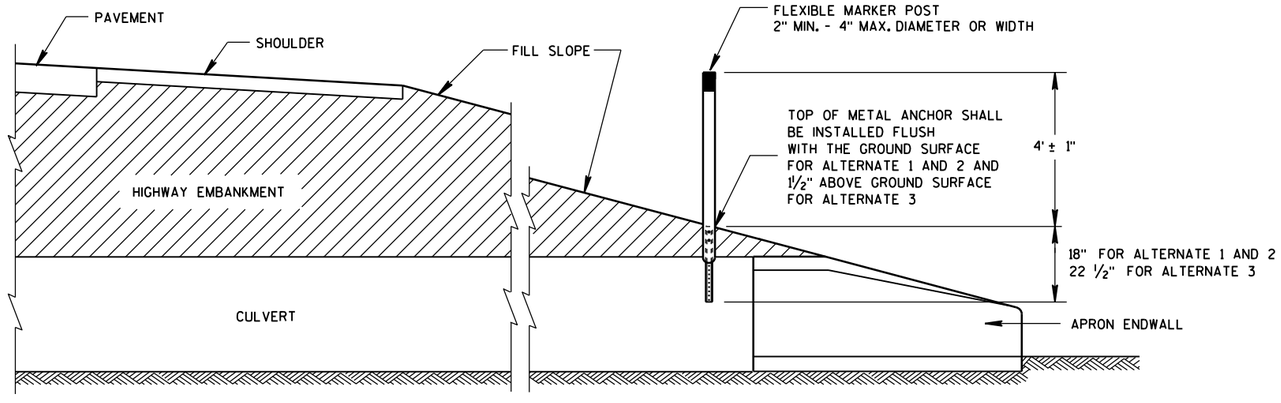
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

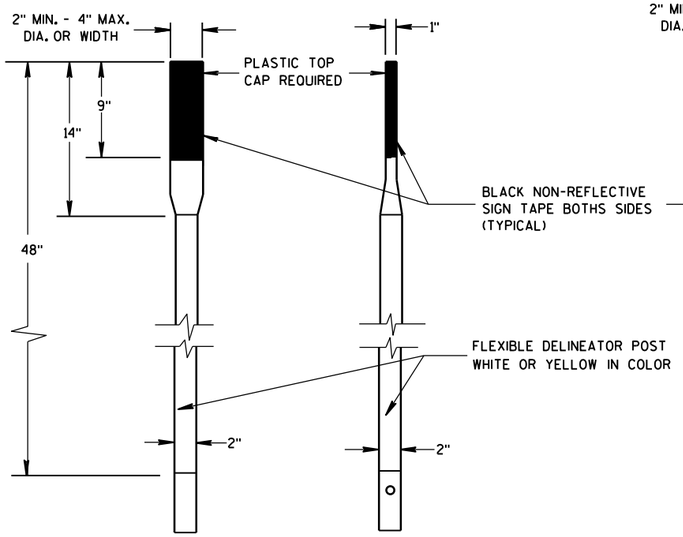
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

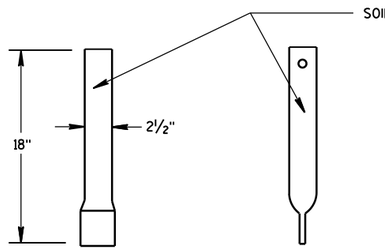
6

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

6

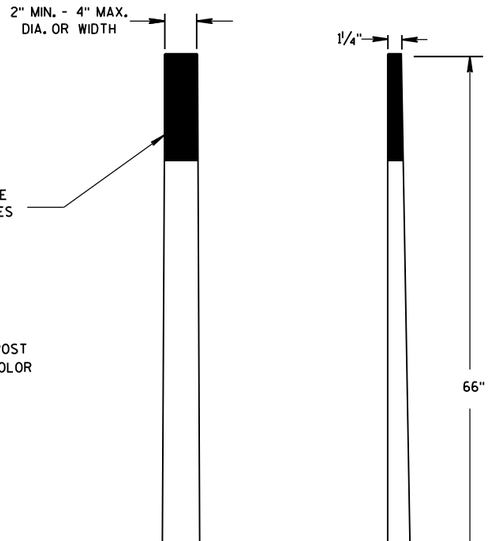
S.D.D. 15 A 3-2a





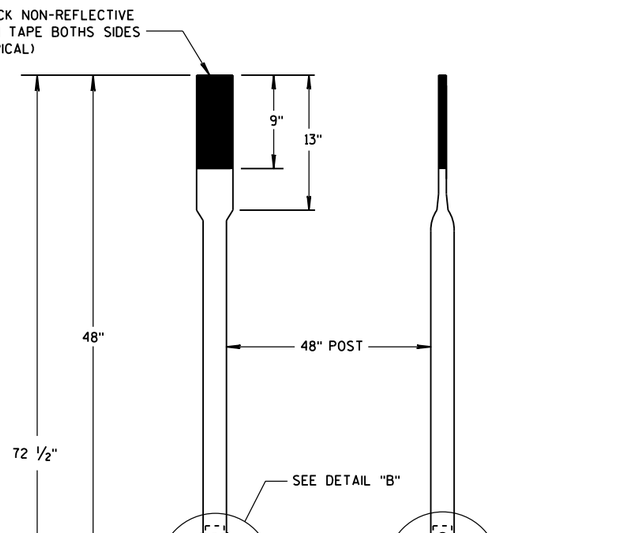
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

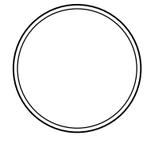
ALTERNATE 2



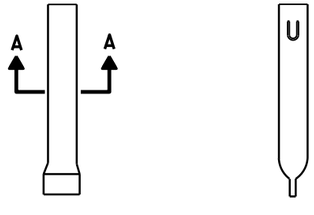
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

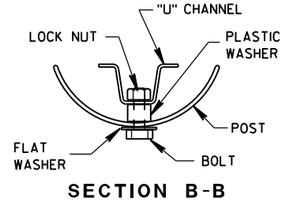


SECTION A-A

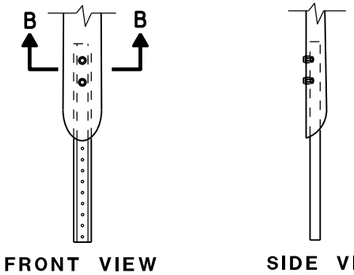


FRONT VIEW SIDE VIEW

ALTERNATE 1

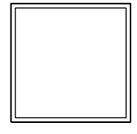


SECTION B-B

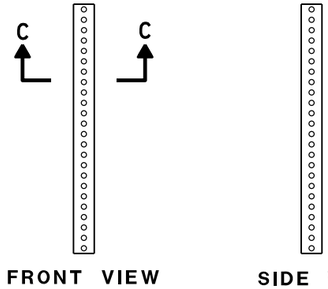


FRONT VIEW SIDE VIEW

ALTERNATE 2



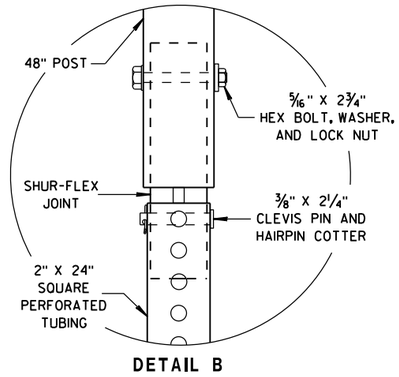
SECTION C-C



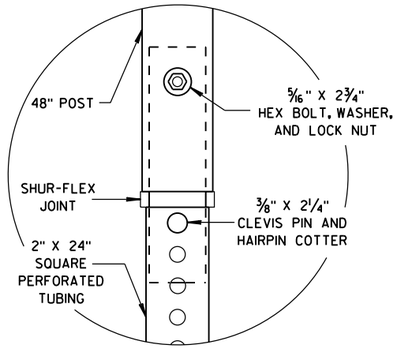
FRONT VIEW SIDE VIEW

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

GENERAL NOTES

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

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

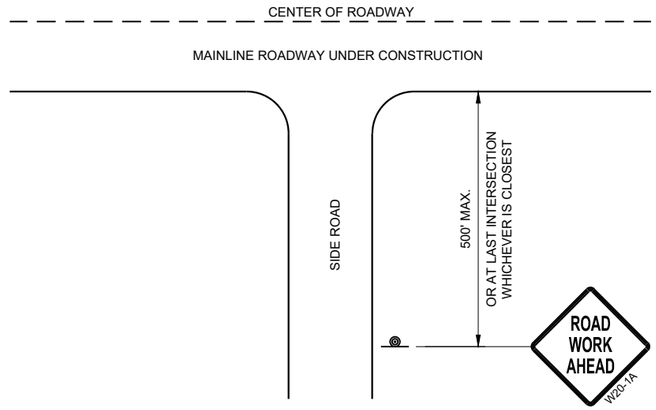
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



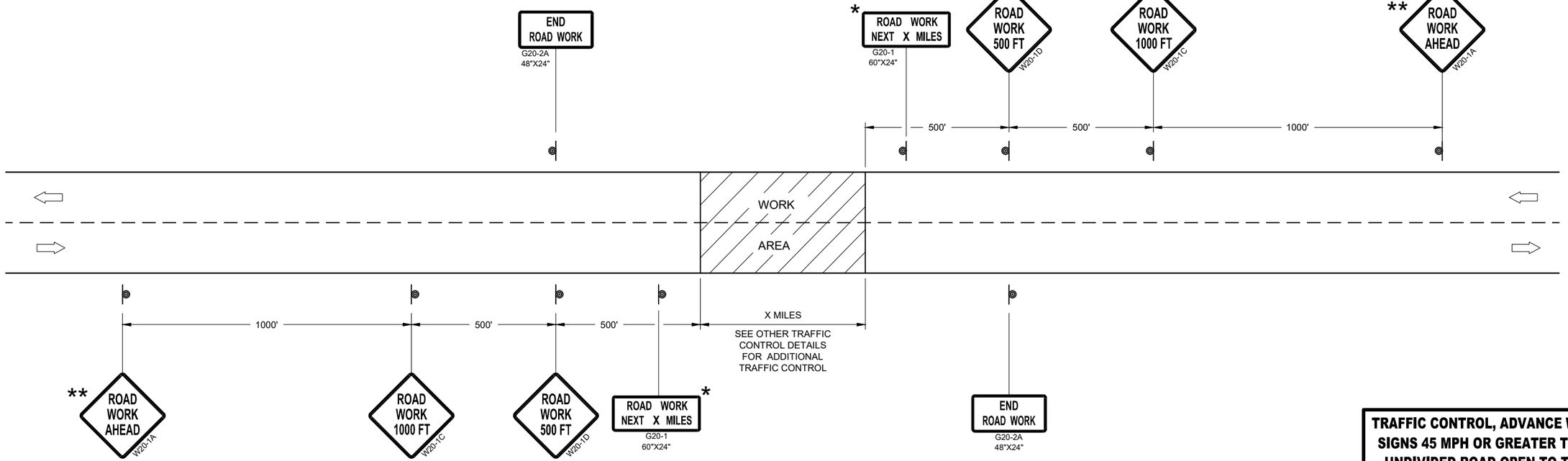
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

GENERAL NOTES

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

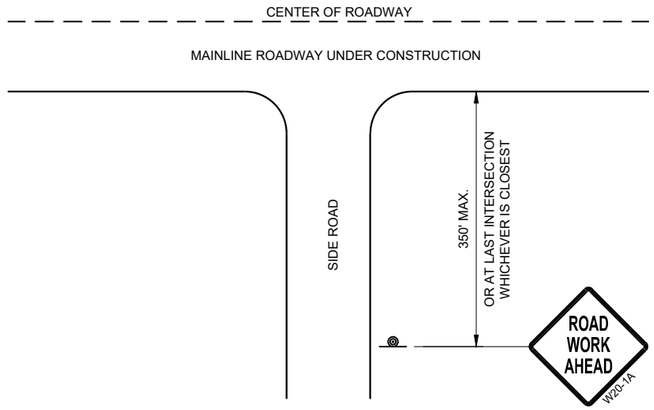
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



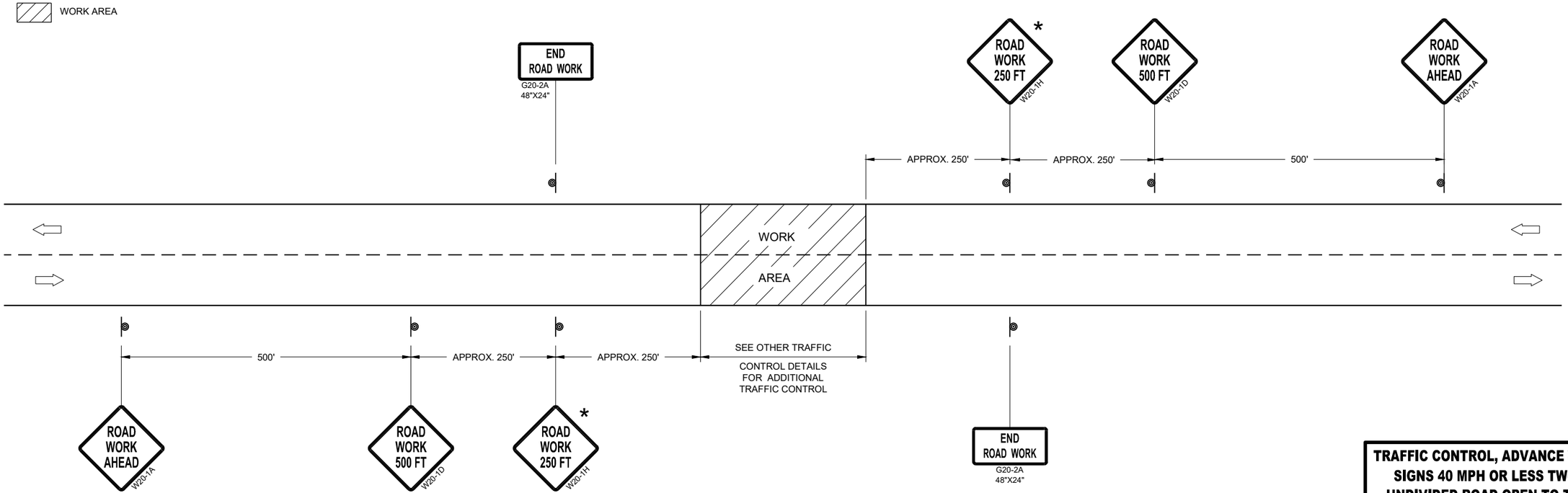
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

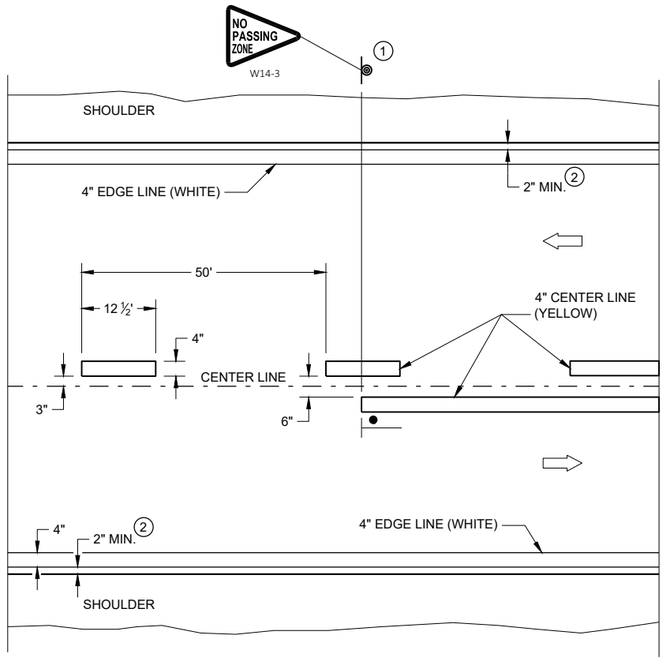
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

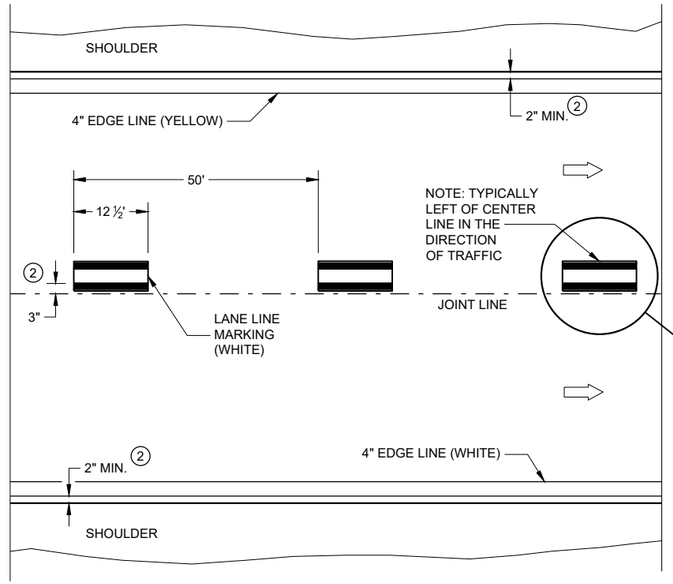
FHWA

6

SDD 15C05 - 05

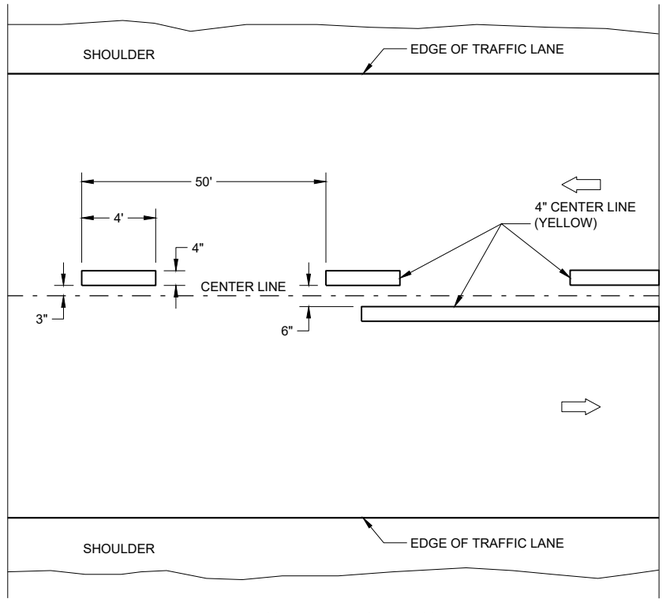


TWO WAY TRAFFIC

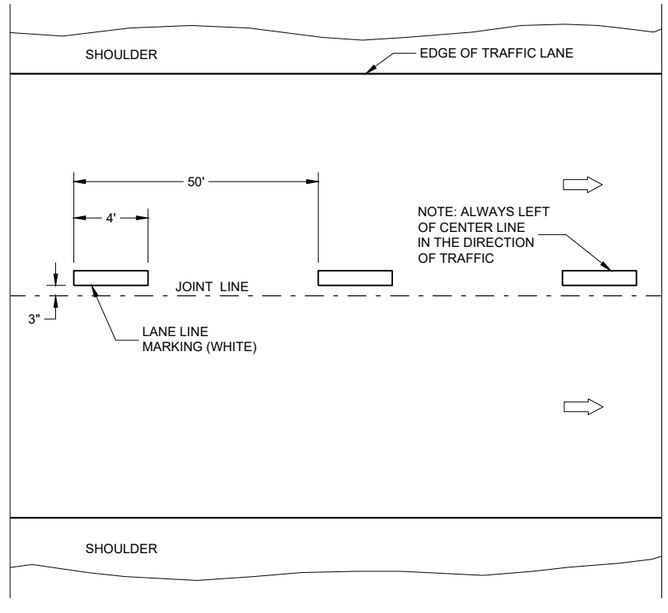


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

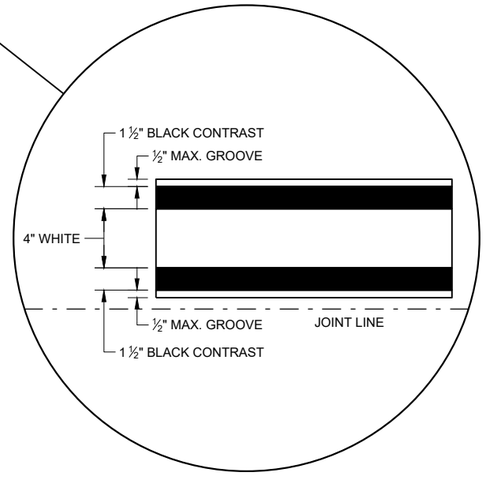
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND M ENGINEER

FHWA

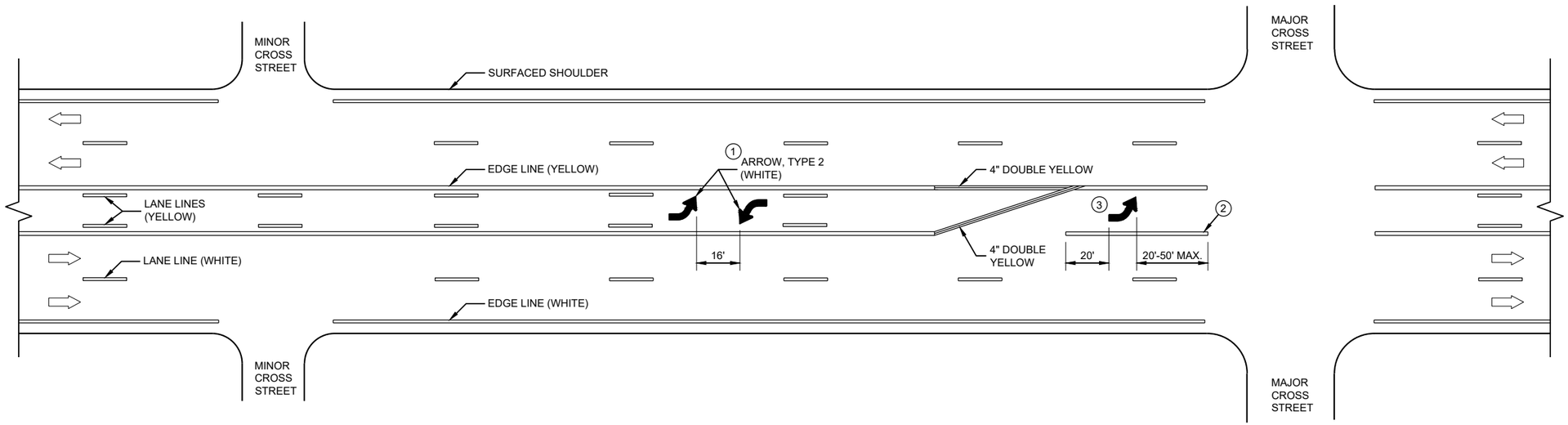
SDD 15C08 - 20a

SDD 15C08 - 20a

GENERAL NOTES

1. A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
2. 8" WHITE
3. TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

6

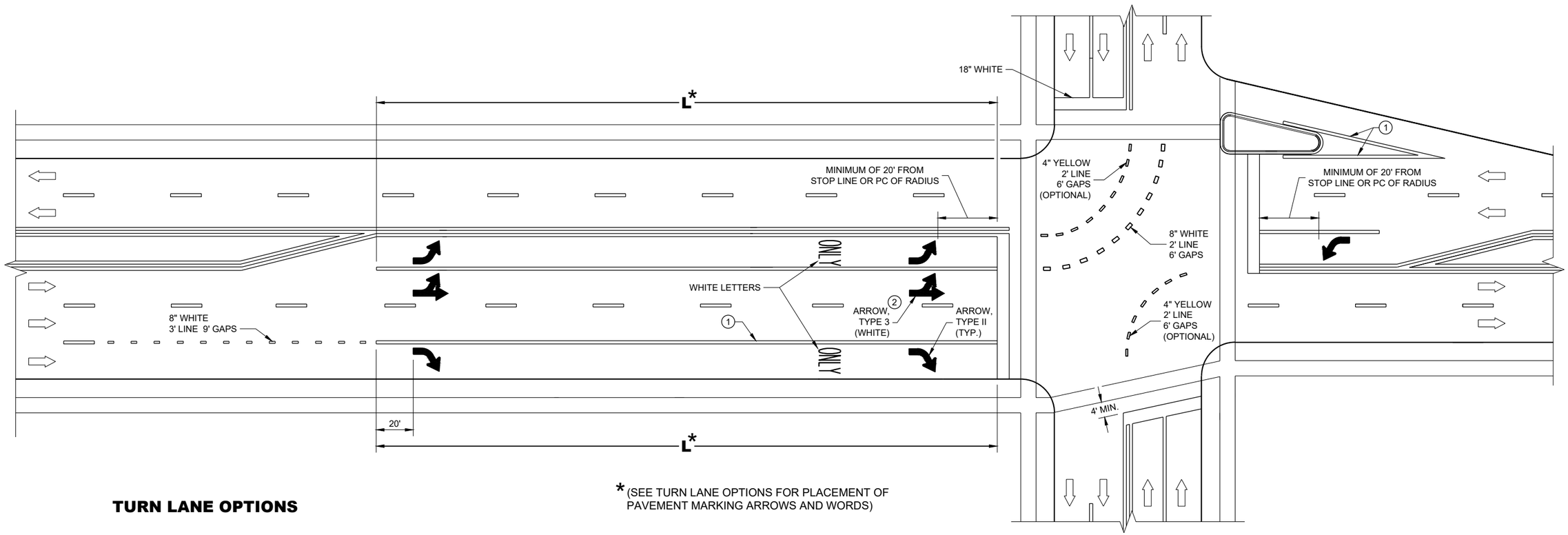
SDD 15C08 - 20b

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

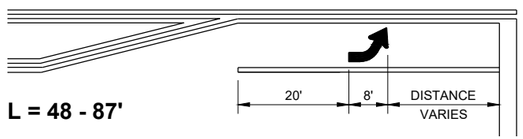
SDD 15C08 - 20b



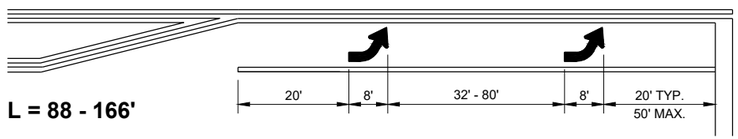
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

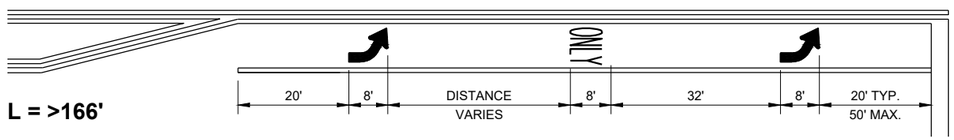
LENGTH OF TURN BAY (**L**) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48 - 87'



L = 88 - 166'



L = >166'

GENERAL NOTES

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

DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

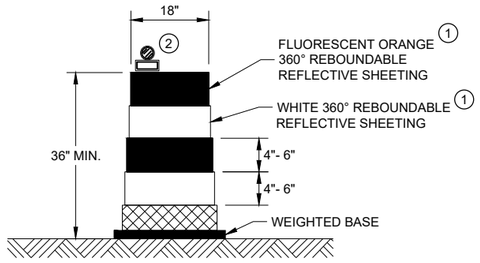
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

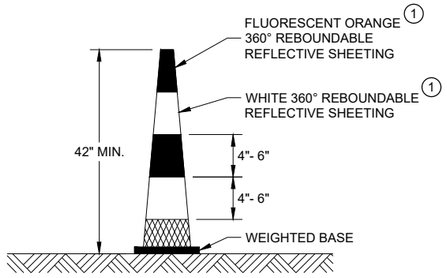
SDD 15C08 - 20c

GENERAL NOTES

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

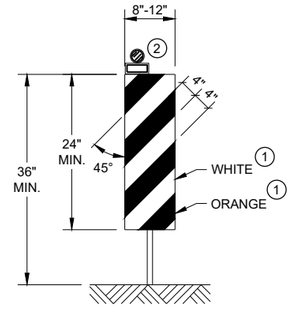


DRUM



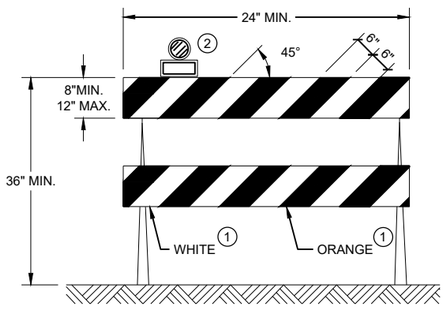
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



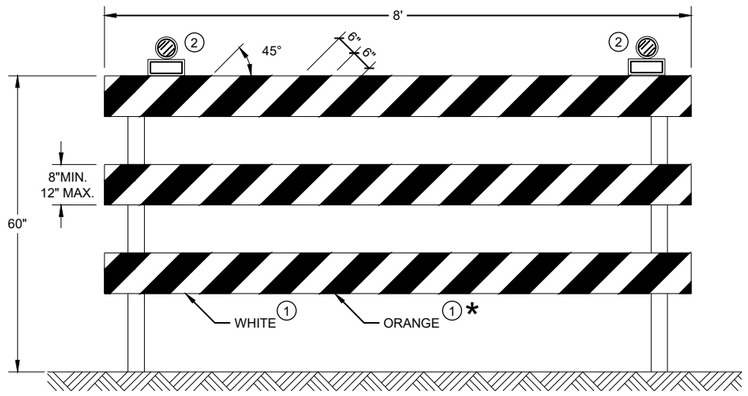
VERTICAL PANEL

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



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 09b

6

SDD 15C11 - 09b

LEGEND

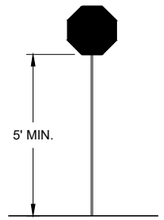
SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



STOP/SLOW PADDLE ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

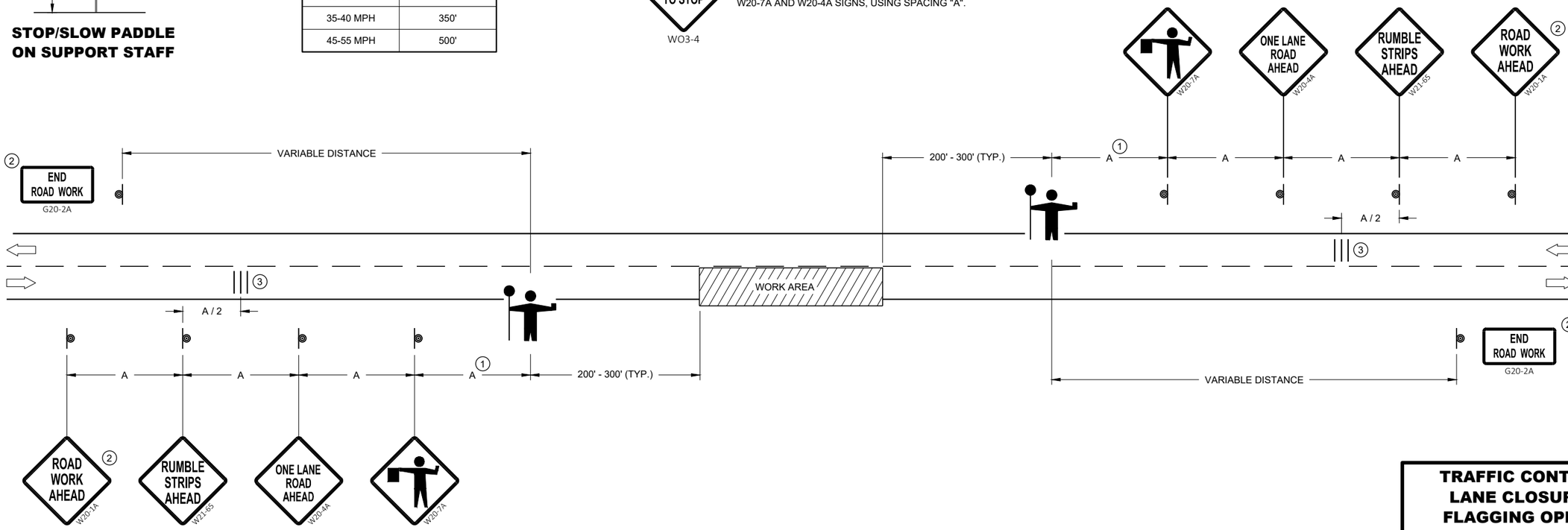
DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

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SDD 15C12 - 08

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SDD 15C12 - 08

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

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

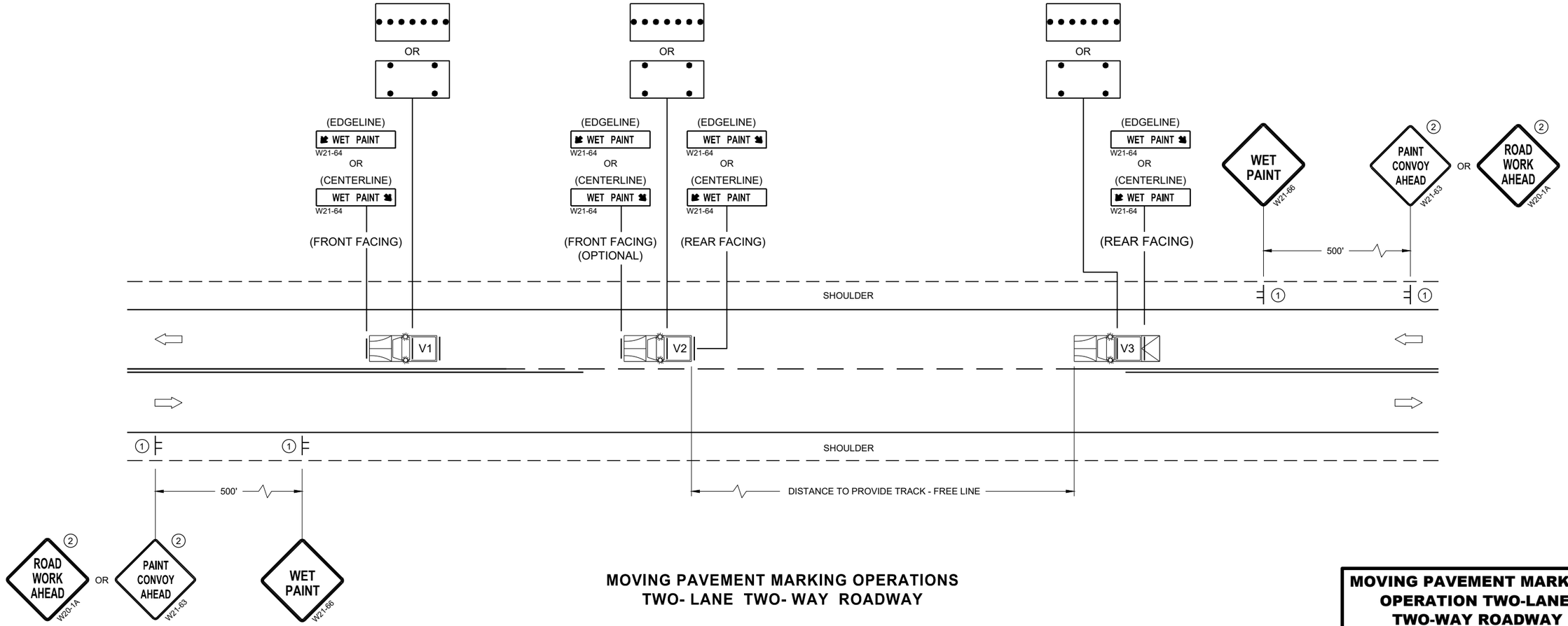
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



MOVING PAVEMENT MARKING OPERATIONS TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

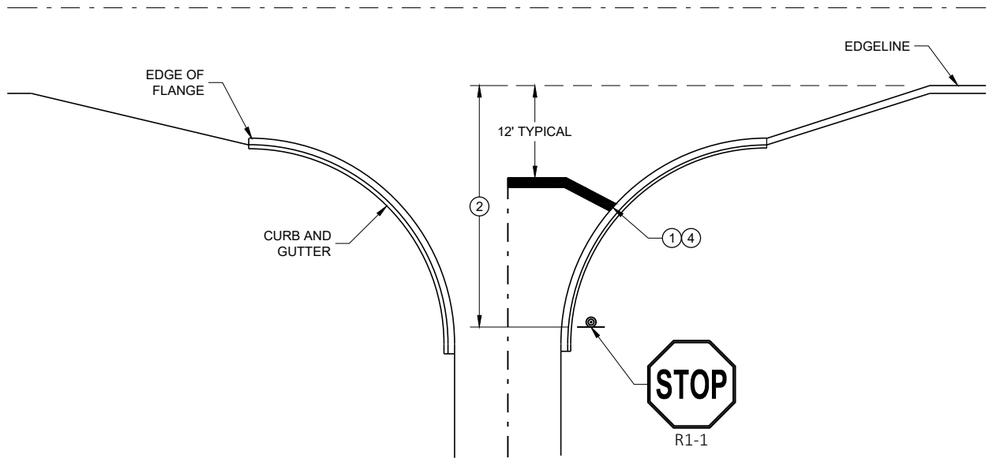
SDD 15C19 - 06a

SDD 15C19 - 06a

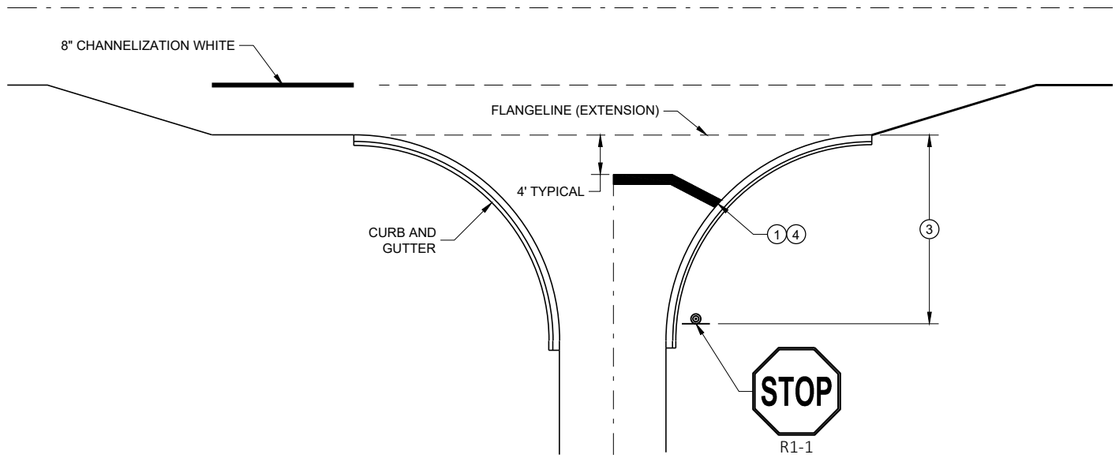
GENERAL NOTES

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

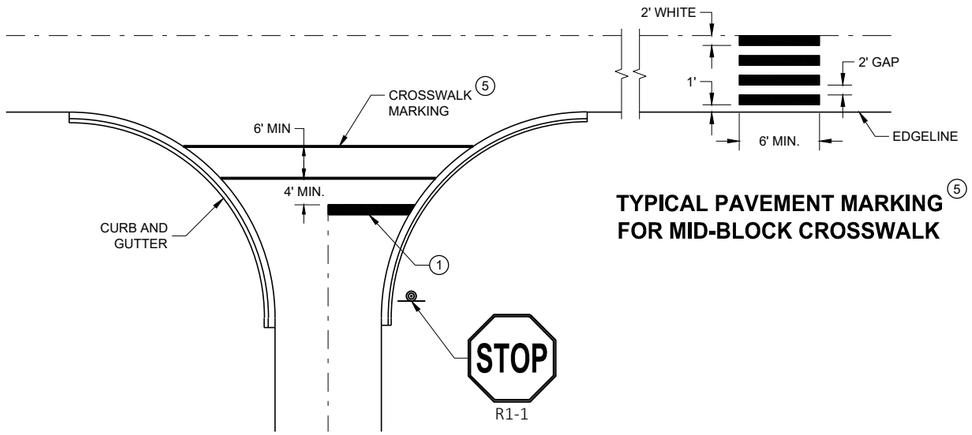
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

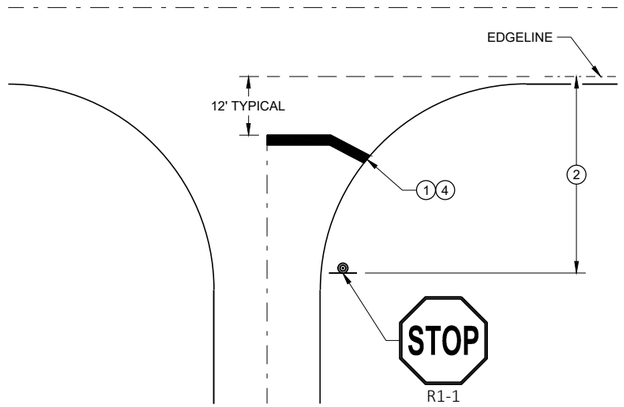


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5

TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER

FHWA

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SDD 15C33 - 04

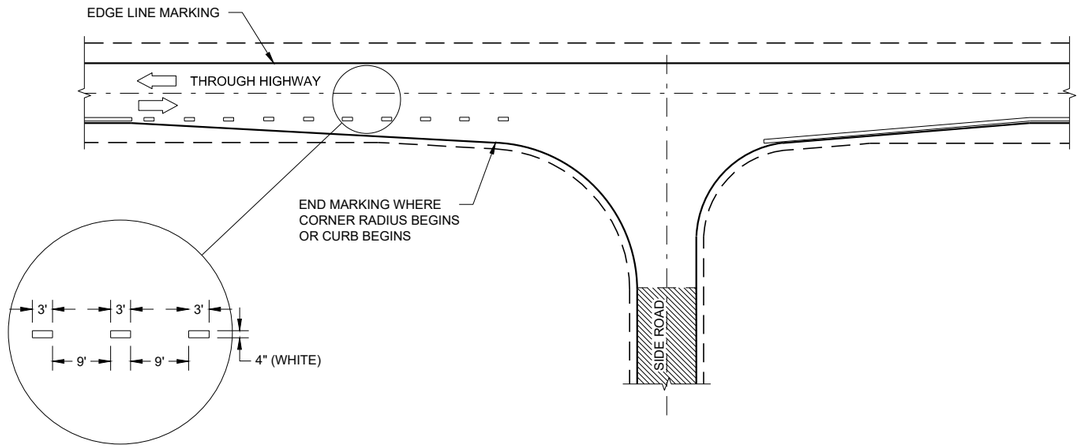
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

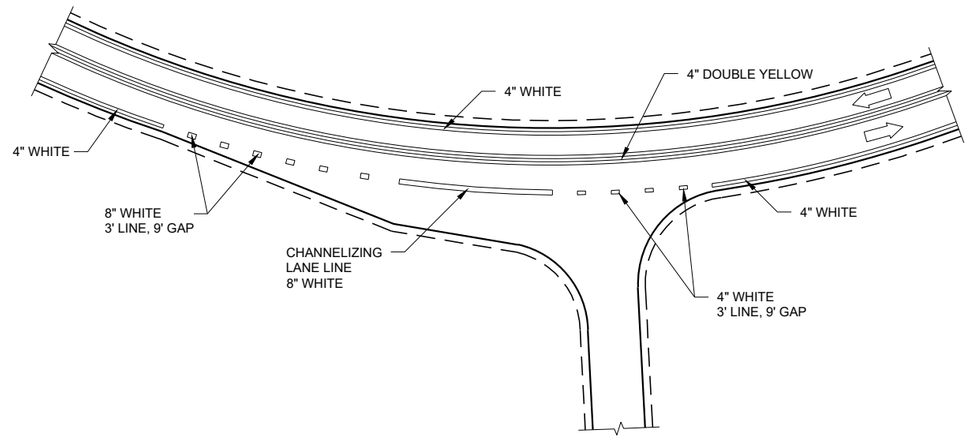
1. WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
2. WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
3. BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
4. BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

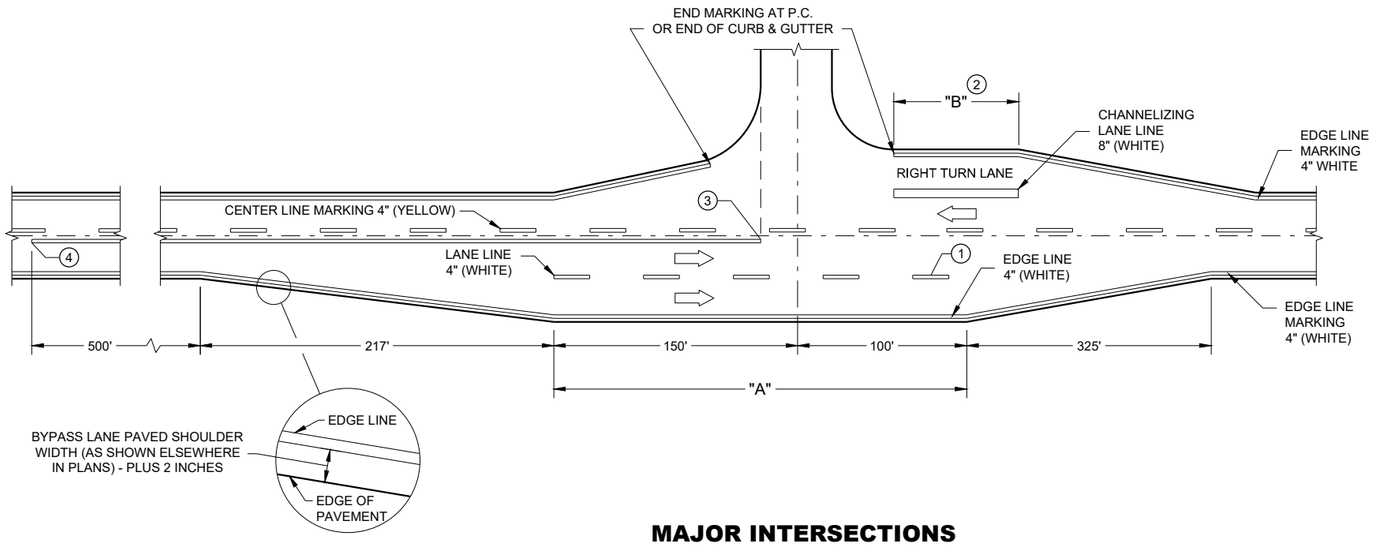
DIRECTION OF TRAVEL



MINOR INTERSECTION



INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING (INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 15C35 - 04a

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SDD 15C35 - 04a

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

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

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

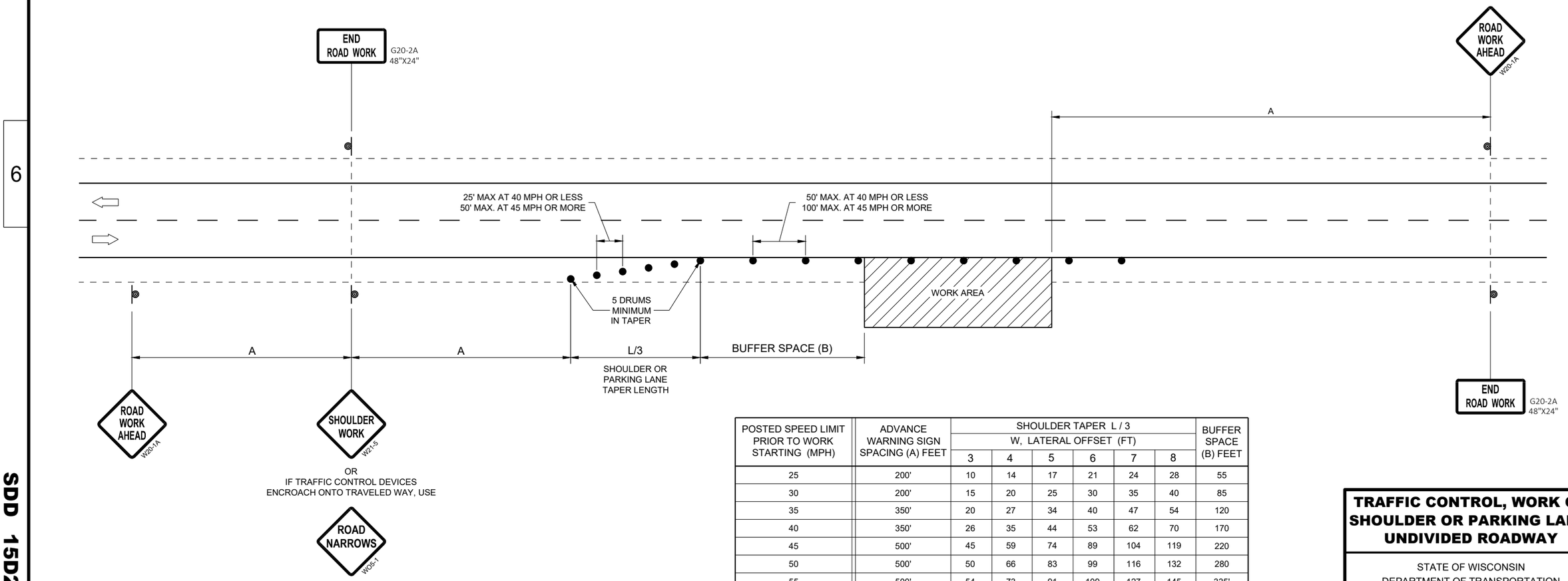
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET
0-30	200'
35-40	350'
45-55	500'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

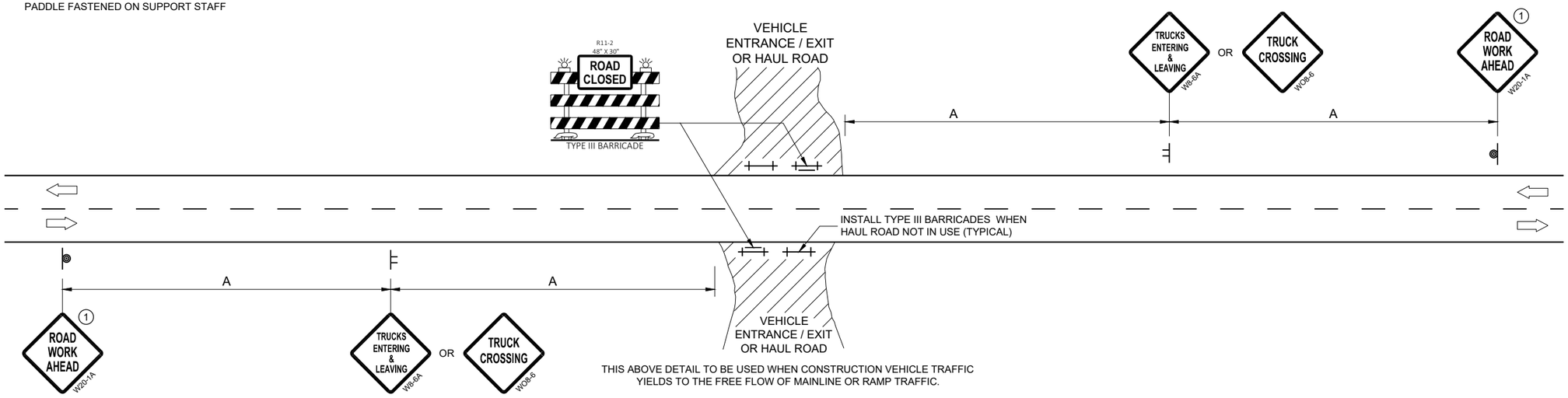
WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

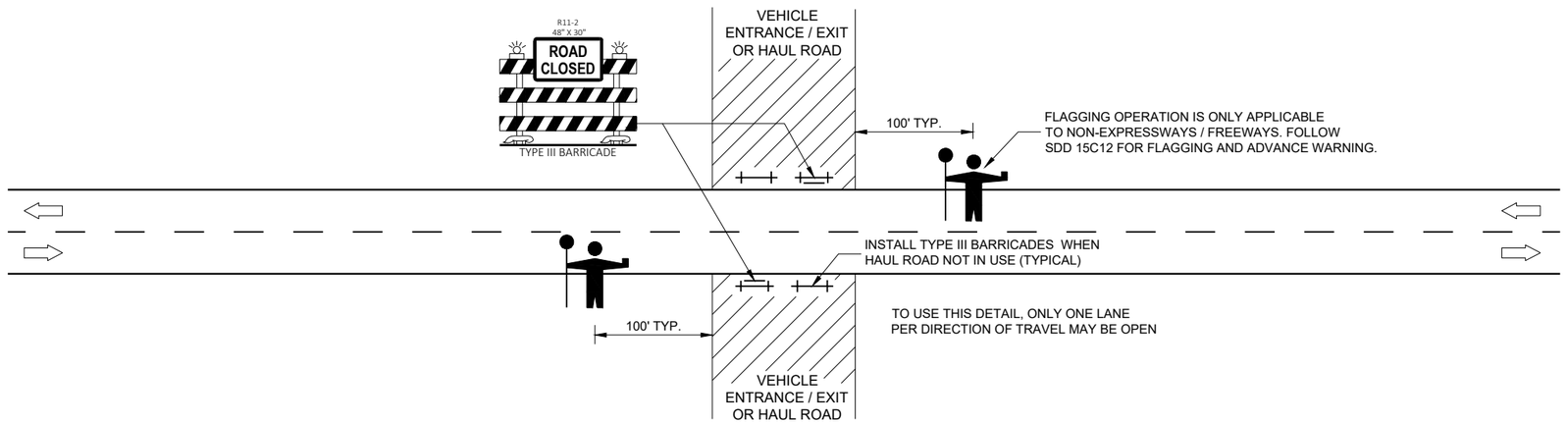
WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

(1) THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.



THIS ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC.



TO USE THIS DETAIL, ONLY ONE LANE PER DIRECTION OF TRAVEL MAY BE OPEN

THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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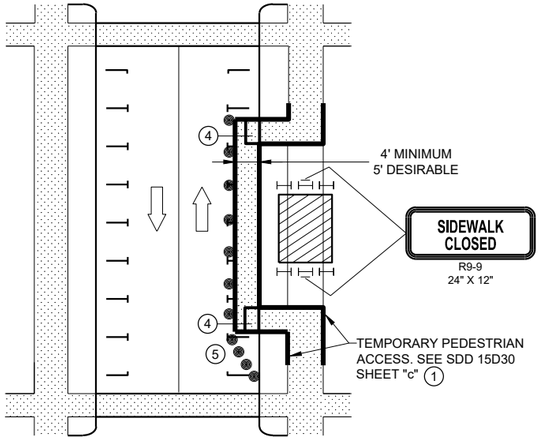
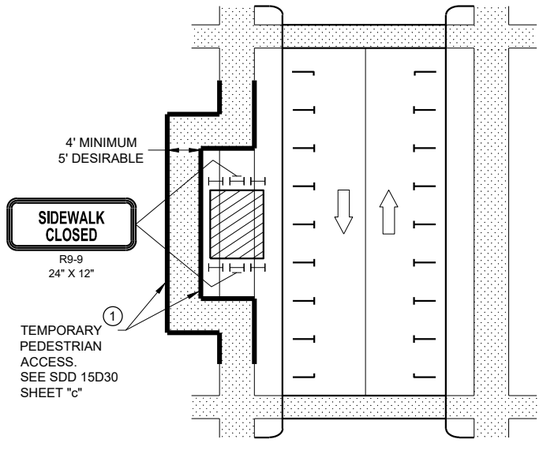
SDD 15D29 - 06

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

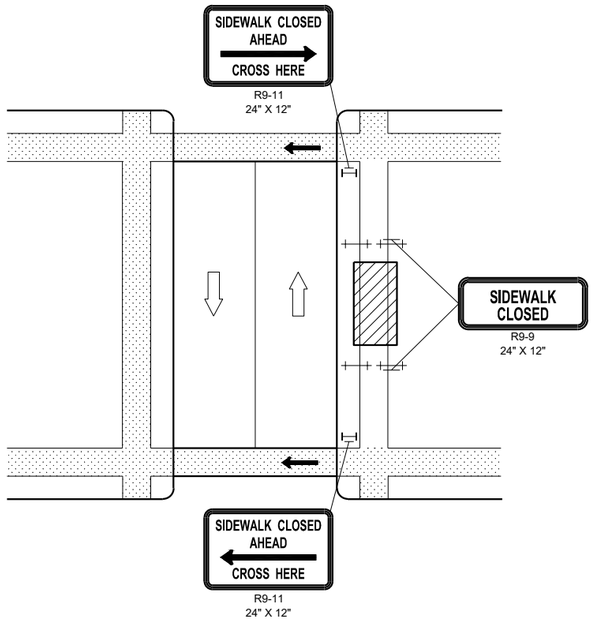


MID-BLOCK SIDEWALK SIDEWALK CLOSURE IN PARKING LANE

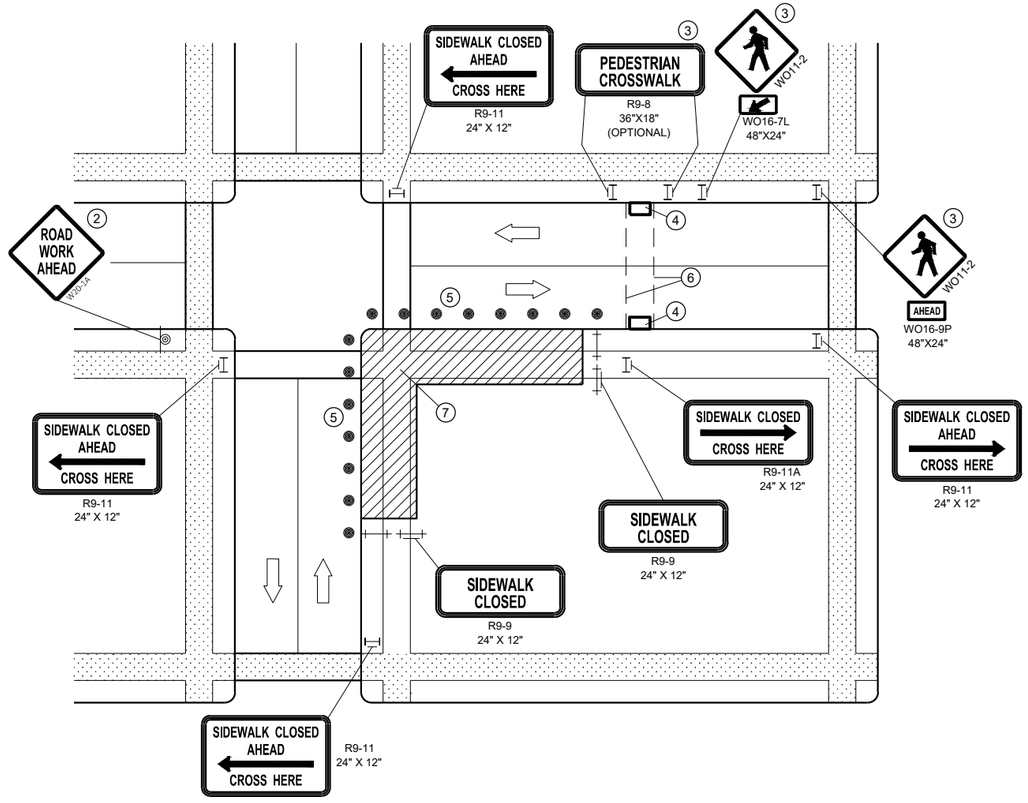
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

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

FOR NIGHTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEK LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

1. IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
2. "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
3. IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
4. TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b'.
5. DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
6. TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
7. LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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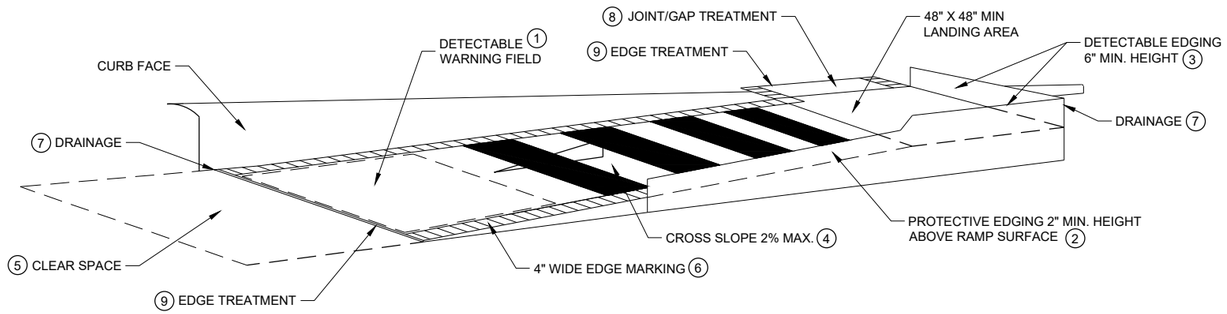
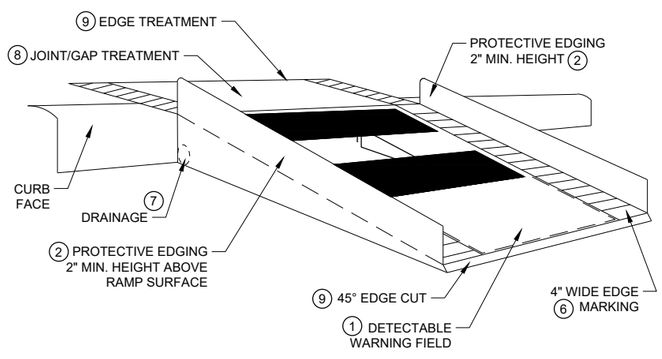
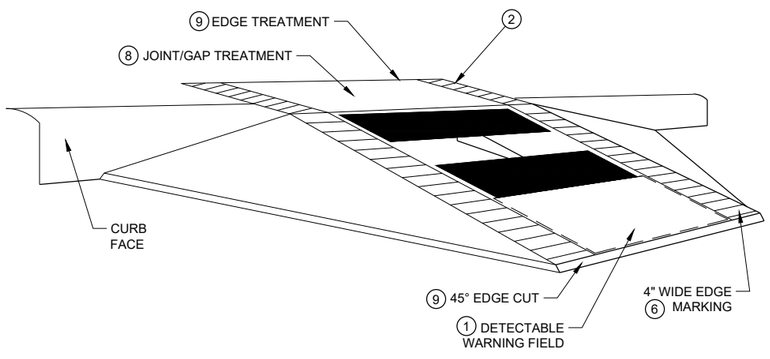
SDD 15D30 - 06a
SDD15D30 - 06a



TEMPORARY CURB RAMP PARALLEL TO CURB



WITH PROTECTIVE EDGE



WITH SIDE APRON

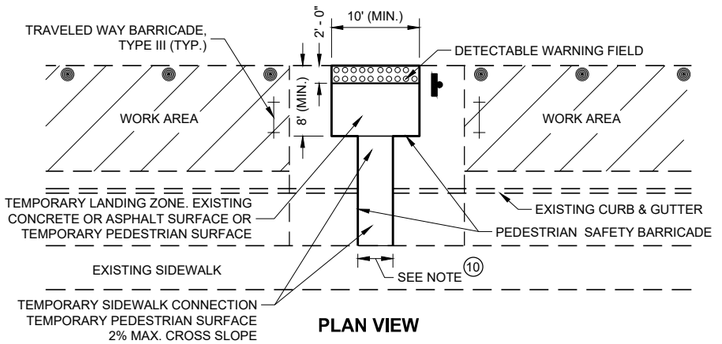
TEMPORARY CURB RAMP PERPENDICULAR TO CURB

GENERAL NOTES

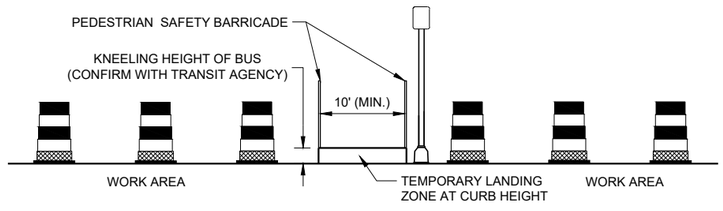
NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

1. CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 08D05, SHEET "e".
2. PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
5. CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
6. THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
7. DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES SHALL BE VERTICAL UP TO ¼" HIGH AND BEVELED AT 1:2 BETWEEN ¼" AND ½".
10. 5" WIDE MIN. WITH PEDESTRIAN SAFETY BARRICADE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY BARRICADE.



PLAN VIEW



PROFILE VIEW

TEMPORARY BUS STOP PAD

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- WORK AREA

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

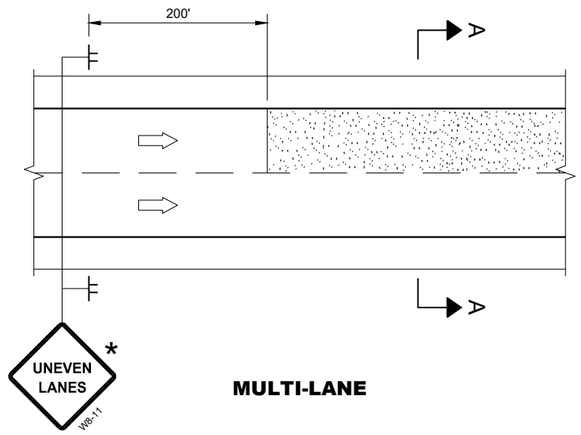
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

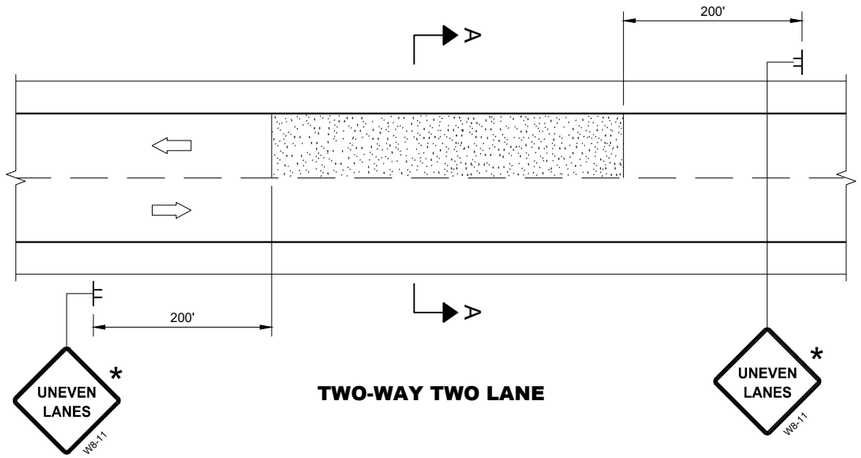
SDD 15D30 - 06b

6

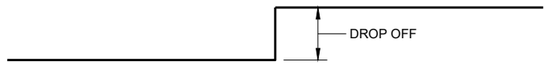
SDD 15D30 - 06b



MULTI-LANE

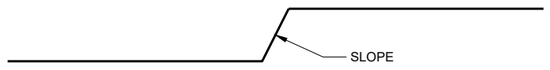


TWO-WAY TWO LANE

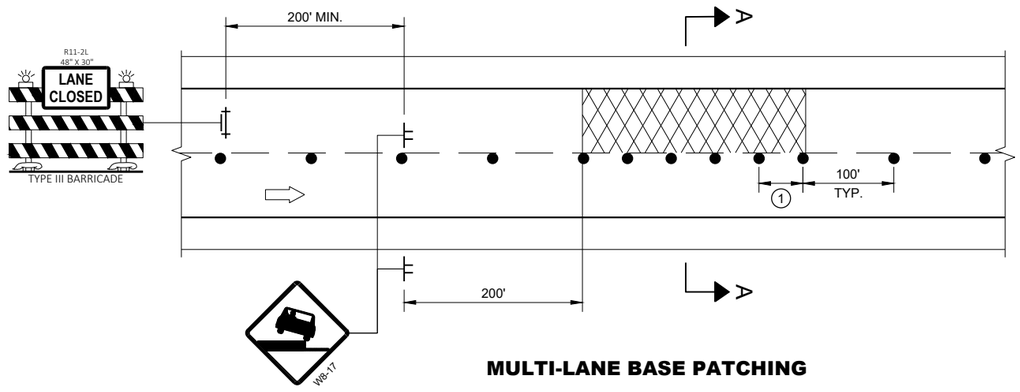


SECTION A - A

OR

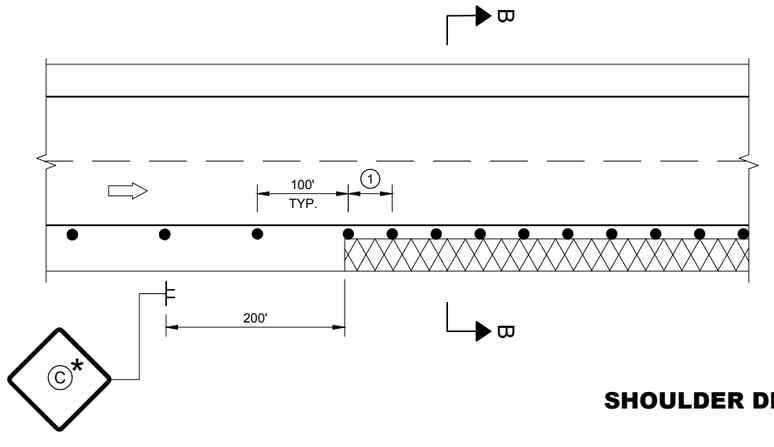


SECTION A - A

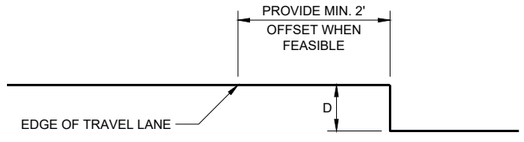


MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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

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

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

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEE

FHWA

6

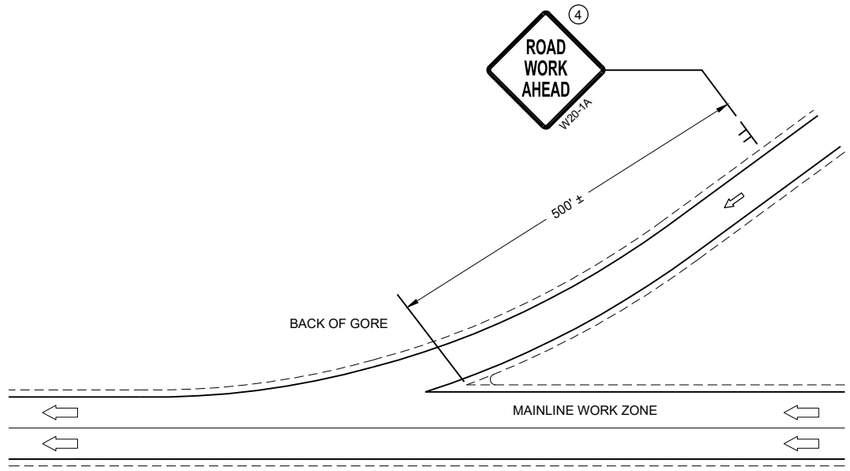
SDD 15D39 - 02

6

SDD 15D39 - 02

LEGEND

- V1 SHADOW VEHICLE 1
- V2 SHADOW VEHICLE 2
- V3 ADVANCE WARNING TRUCK
- ● TRAFFIC CONTROL DRUM
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- WORK AREA



GENERAL NOTES

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

WHEN WORK ACTIVITY BLOCKS THE RIGHT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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

(1) DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) DRUMS ARE TO BE USED FOR BRIDGE DECK SEALING AND OTHER PROJECTS THAT REQUIRE DELINEATION.

(3) WITHIN 5 MILES, RELOCATE SIGNS AS WORK PROGRESSES AND NECESSARY OR AS DIRECTED BY THE ENGINEER.

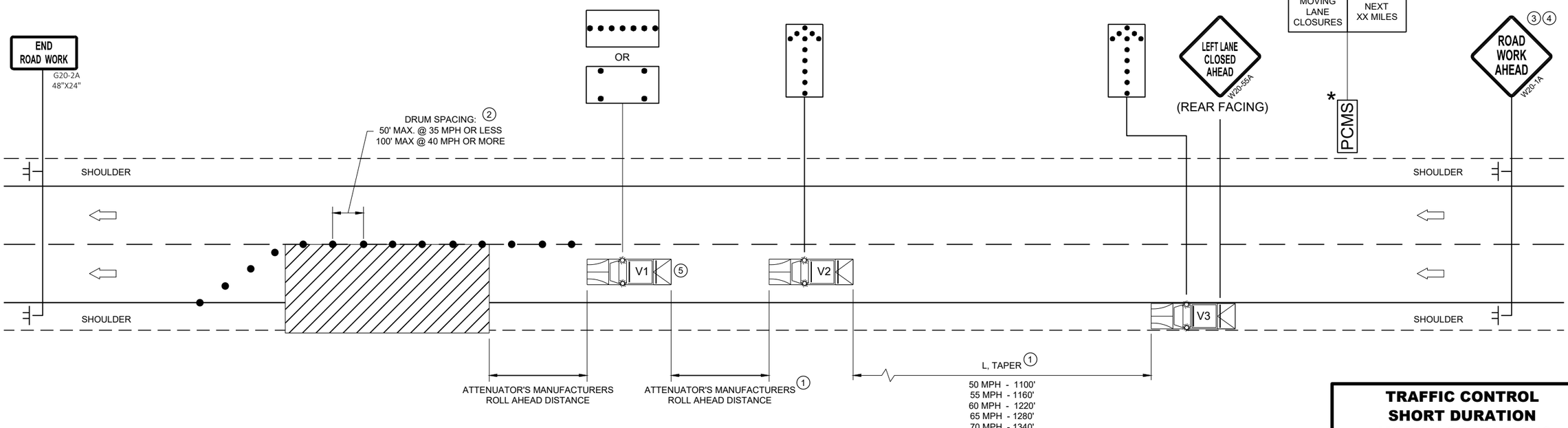
(4) SIGN NOT REQUIRED IF MOVING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(5) SHADOW VEHICLE 1 (V1) IS OPTIONAL

* PCMS OPTIONAL

PCMS MESSAGING

FRAME 1	FRAME 2
MOVING LANE CLOSURES	NEXT XX MILES



TRAFFIC CONTROL SHORT DURATION MOBILE OPERATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D43 - 02

6

SDD 15D43 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

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

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

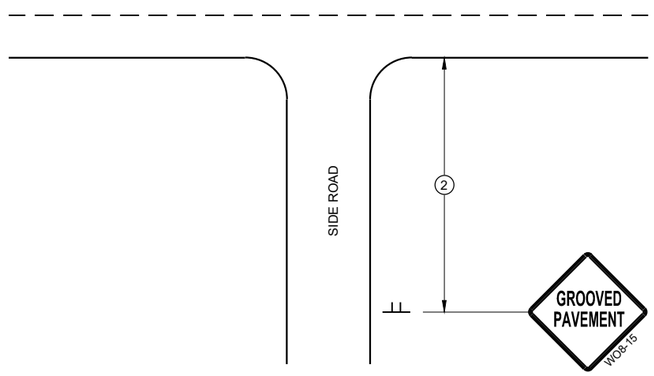
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

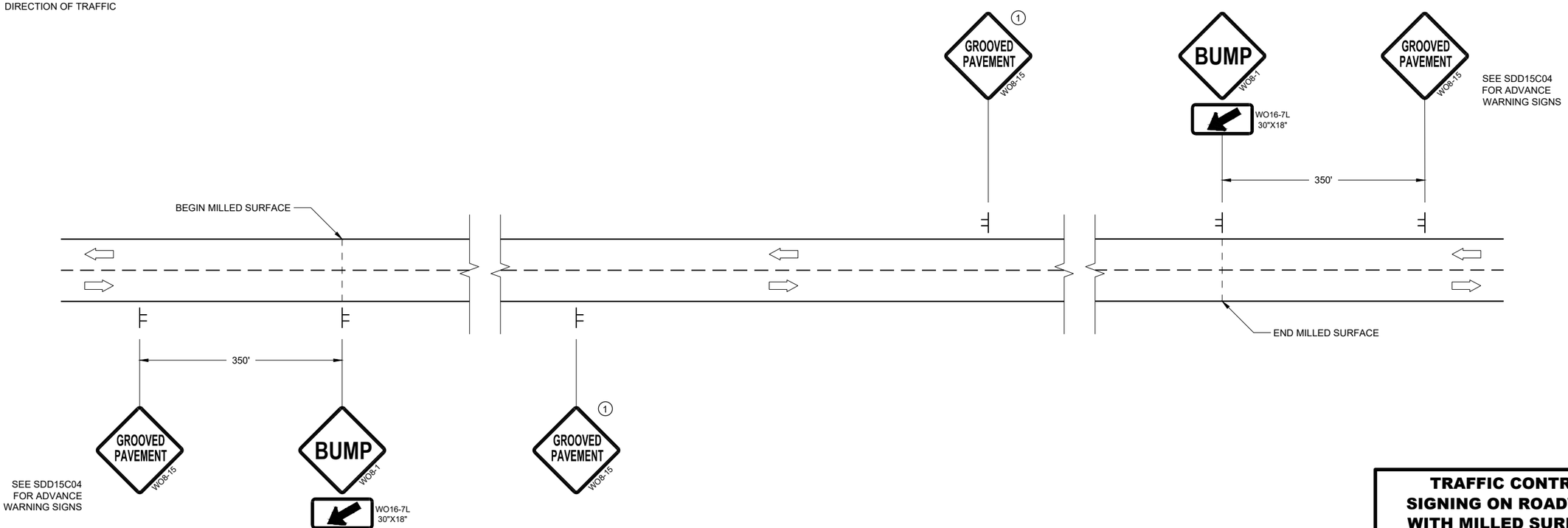
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15D44 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

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

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

(1) PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

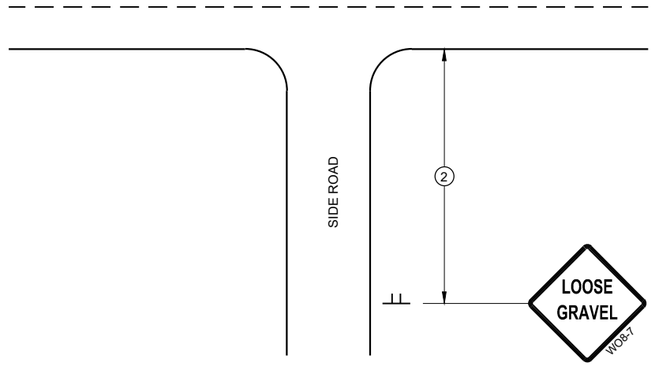
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

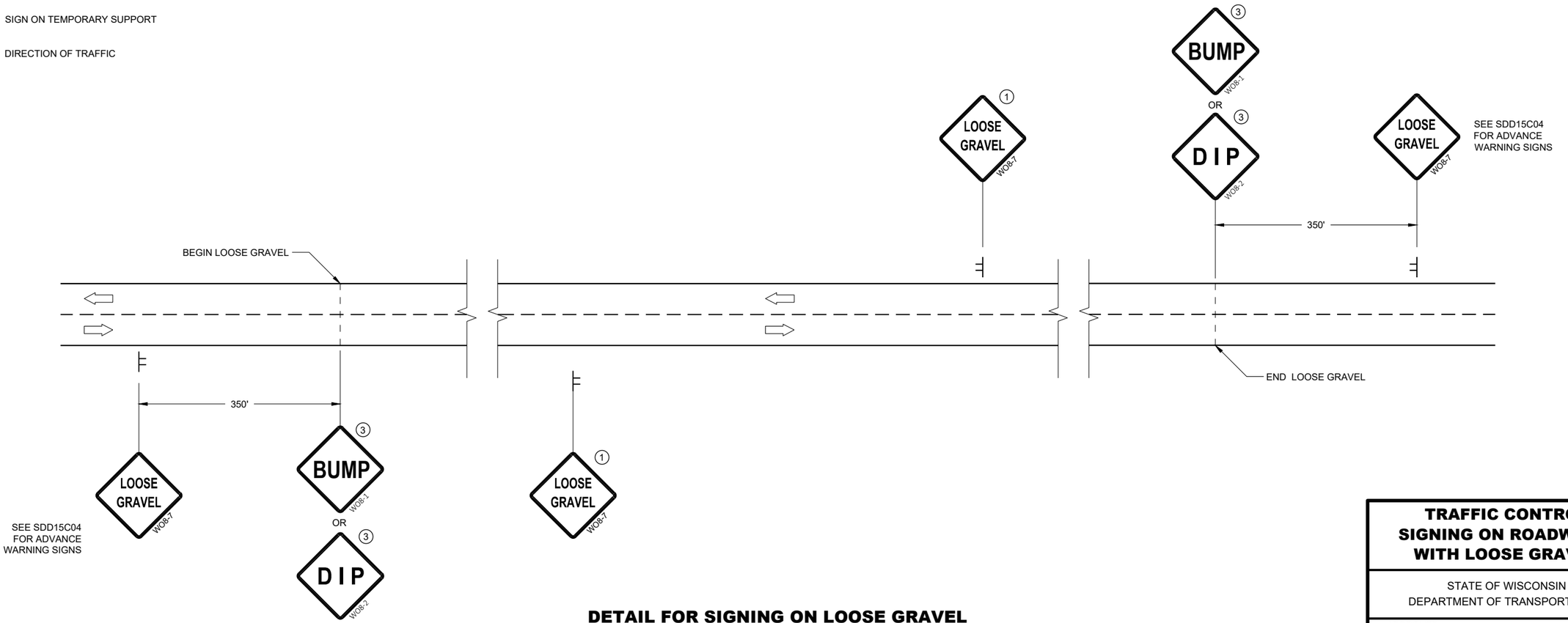
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15D45 - 03

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

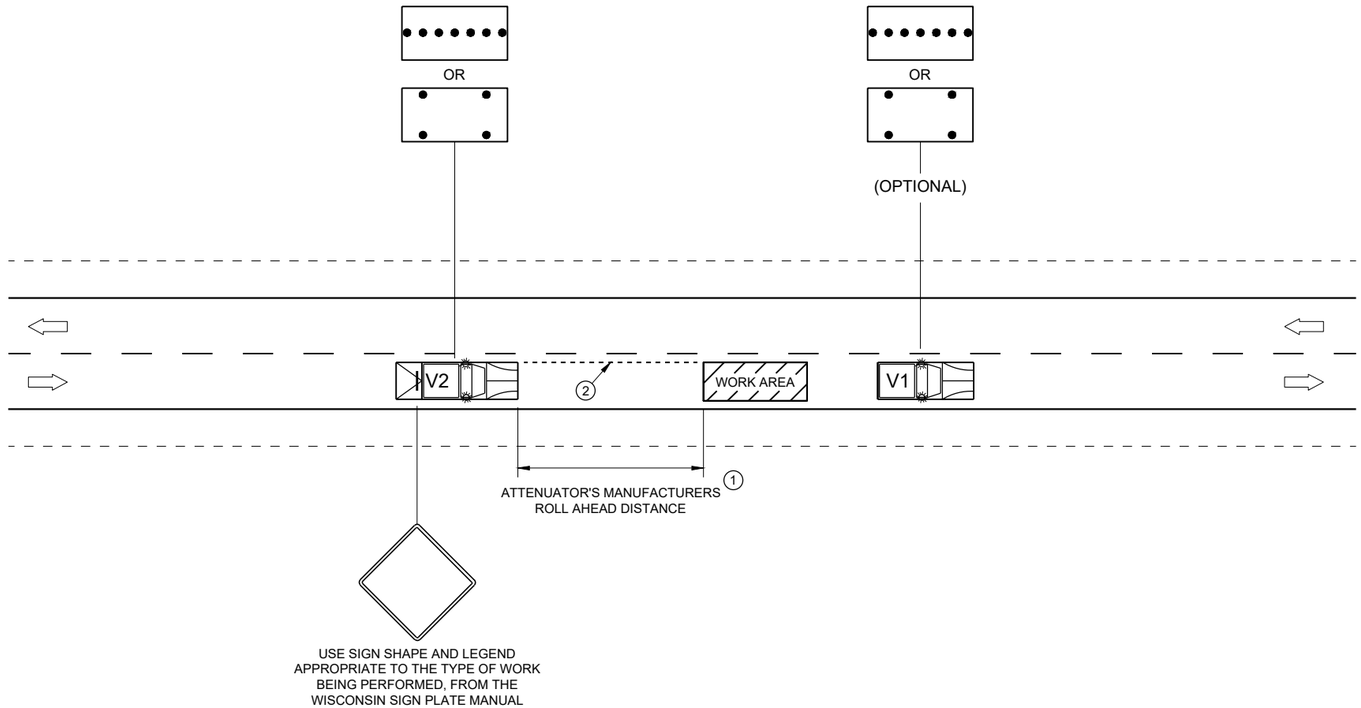
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

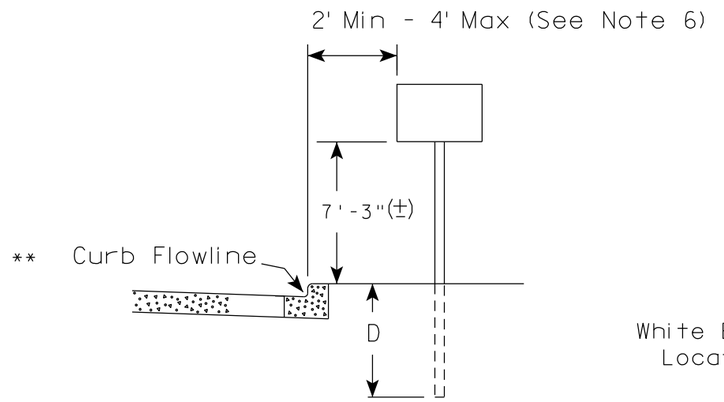
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER
FHWA

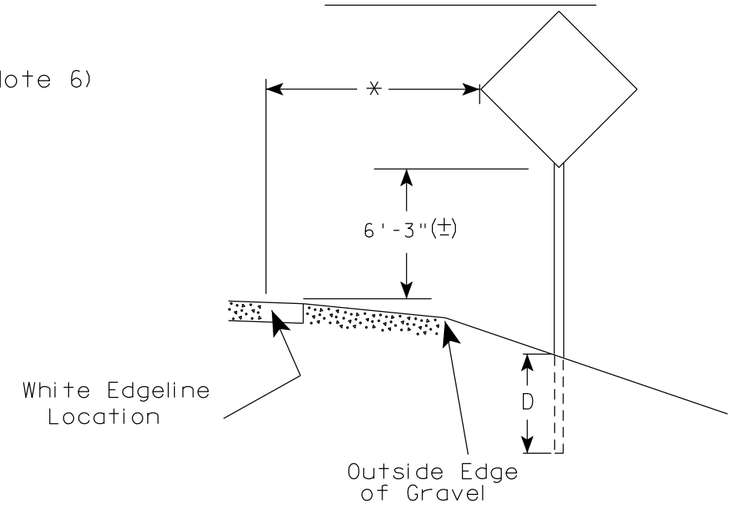
6

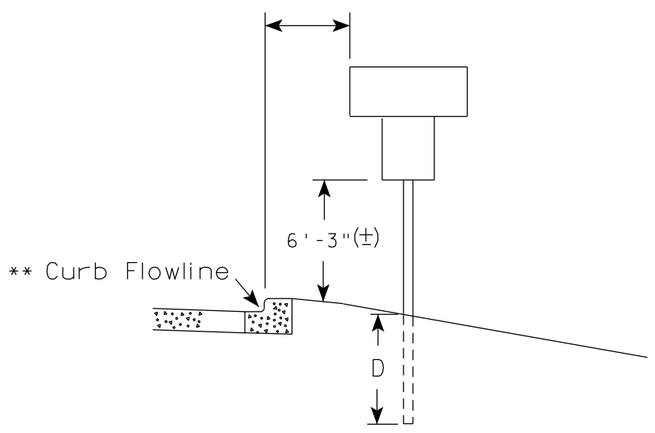
SDD 15D51 - 01

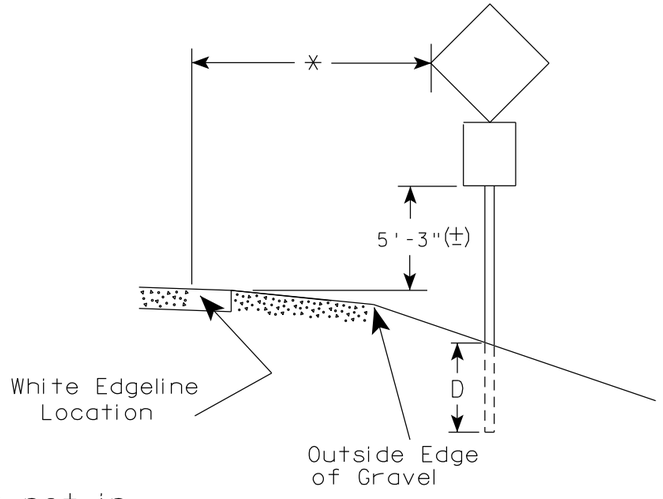
URBAN AREA



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

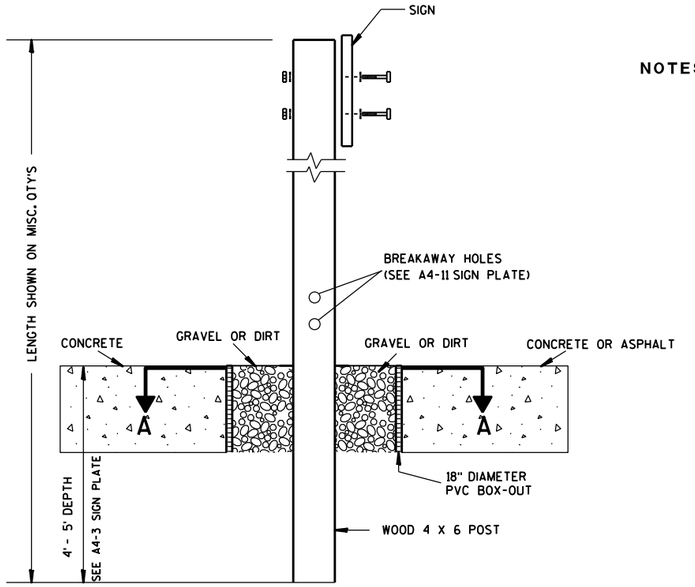
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

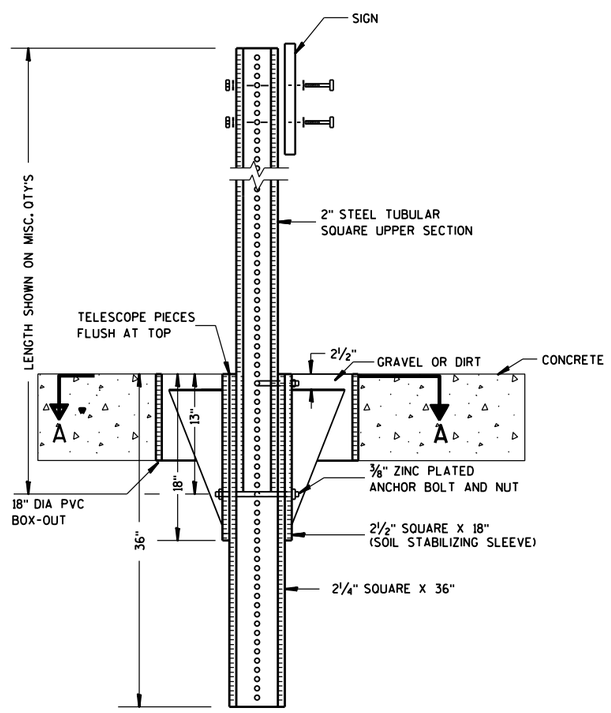
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 134	E



ELEVATION VIEW

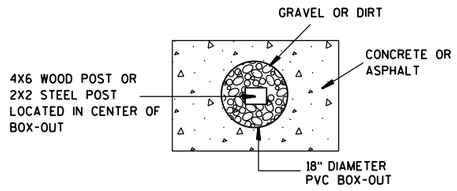
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

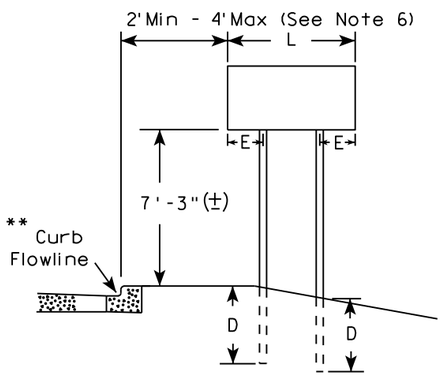
APPROVED Matthew R Rauch
for State Traffic Engineer

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

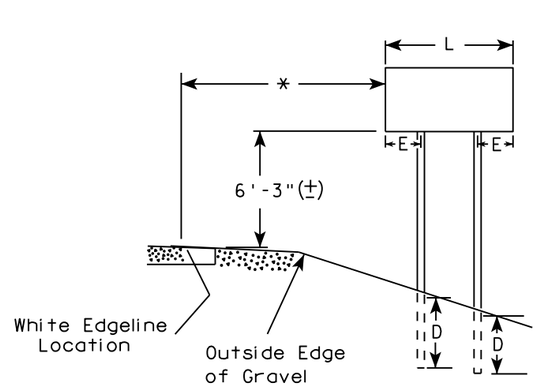
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

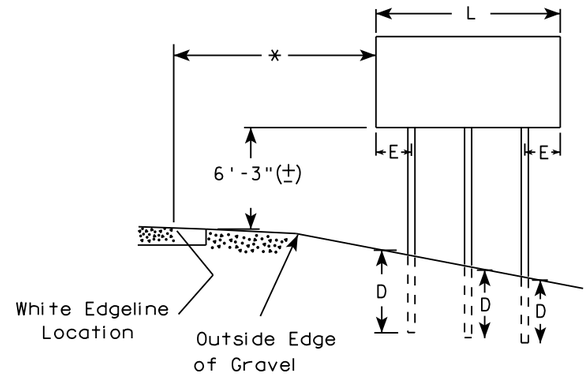
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

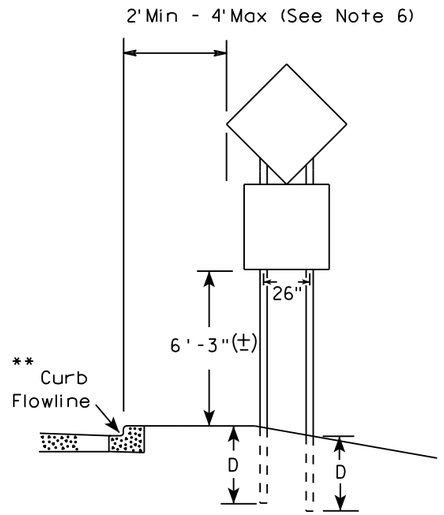
URBAN AREA



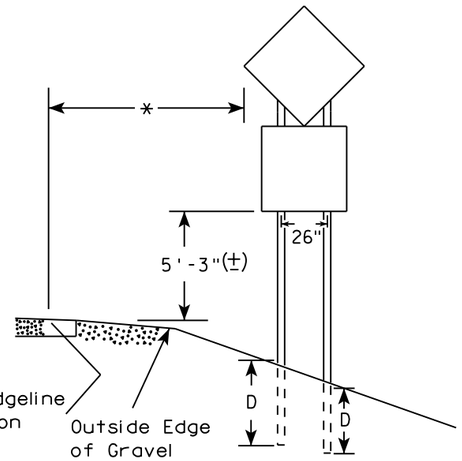
RURAL AREA (See Note 3)







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'

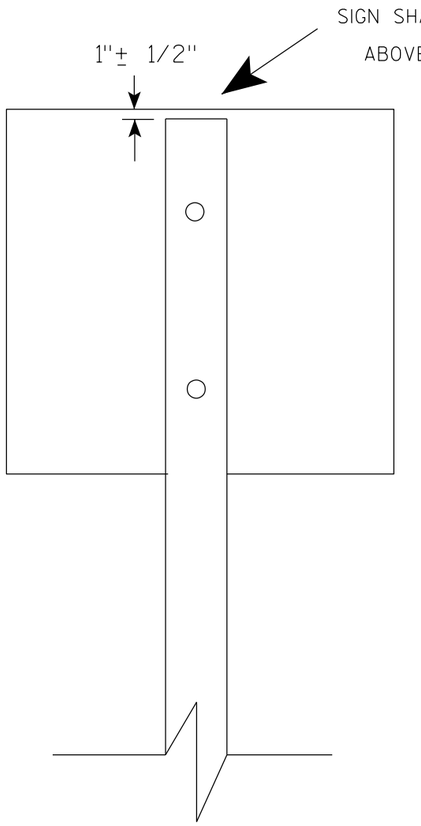
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

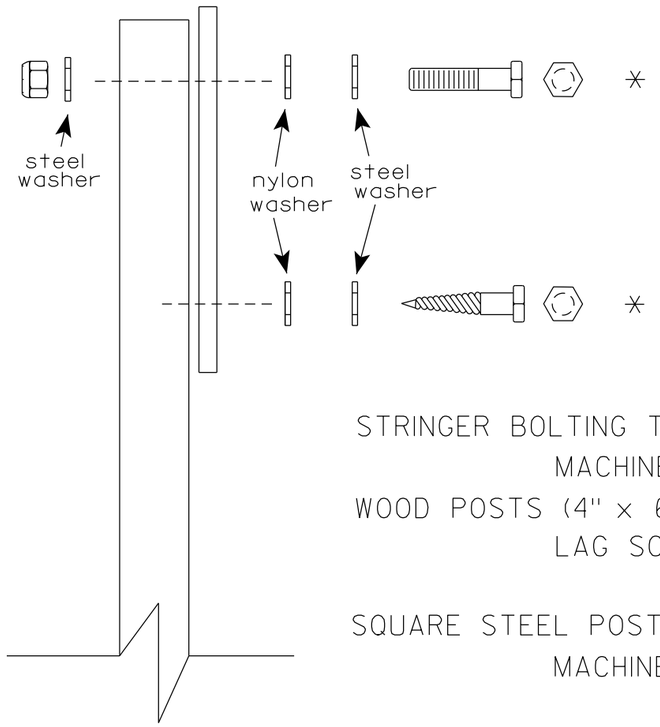
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 136	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 6")

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

SQUARE STEEL POSTS (2" x 2")

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

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

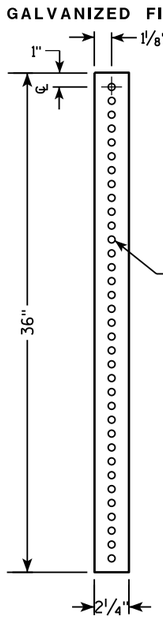
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

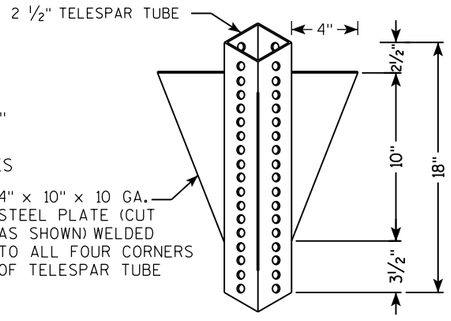
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

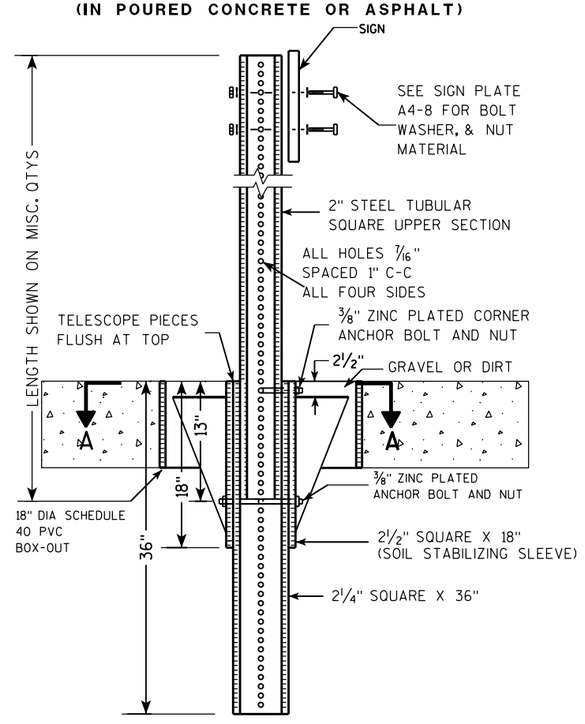
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



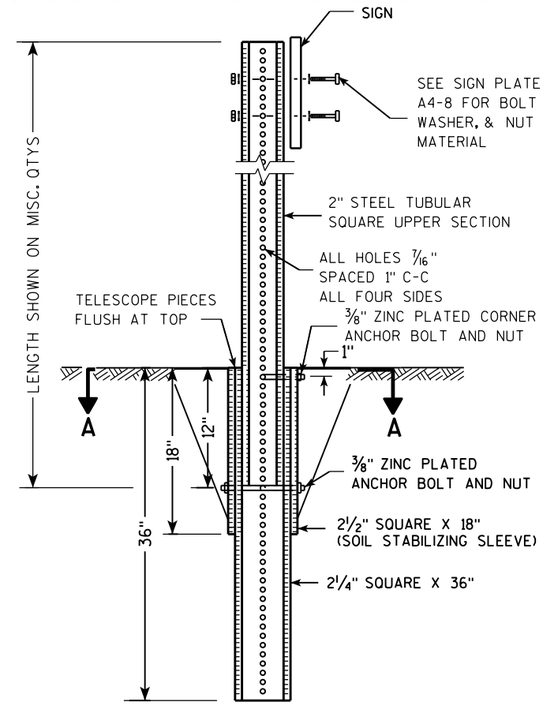
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

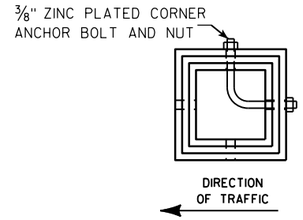


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





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

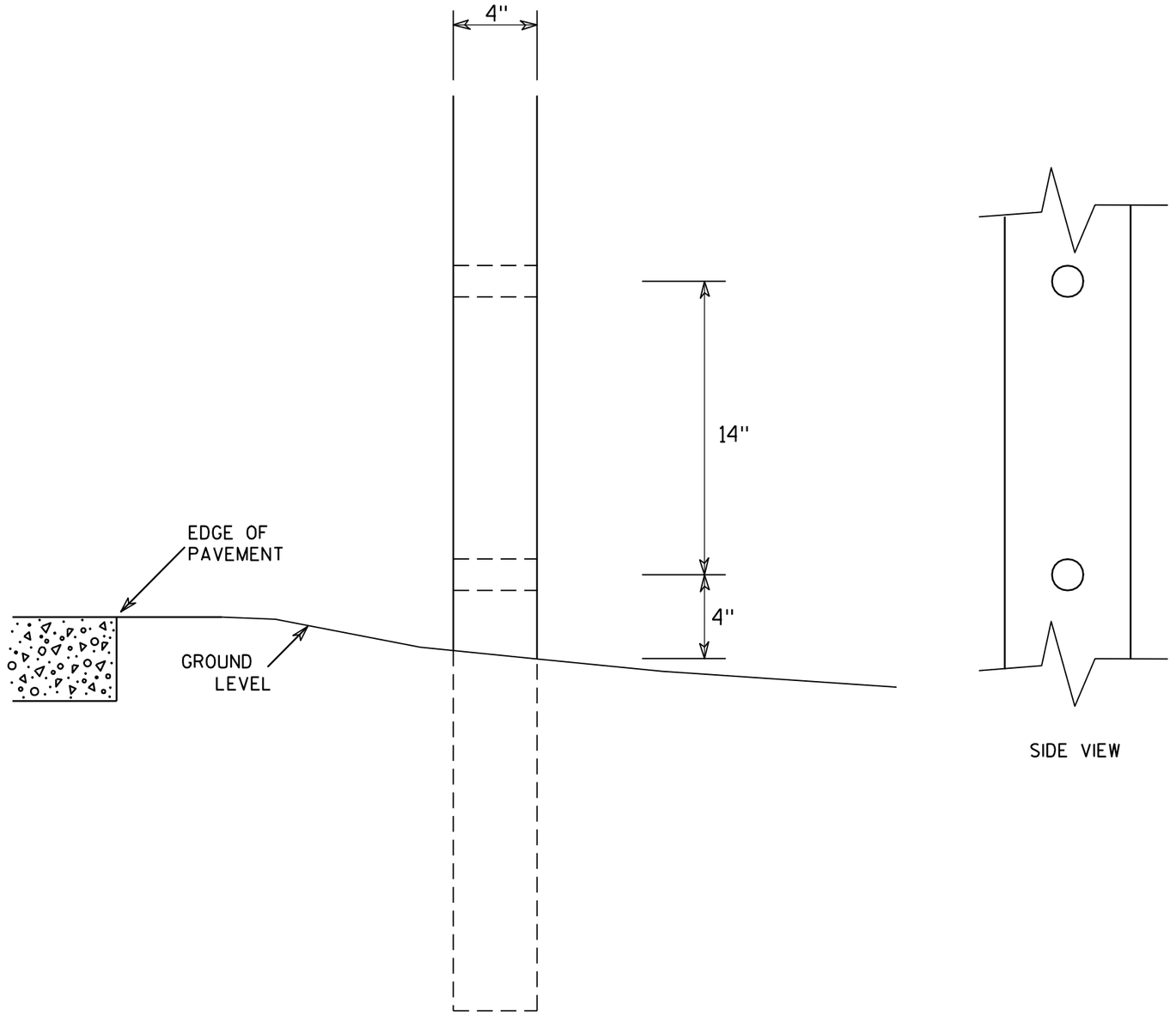
WISCONSIN DEPT OF TRANSPORTATION

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

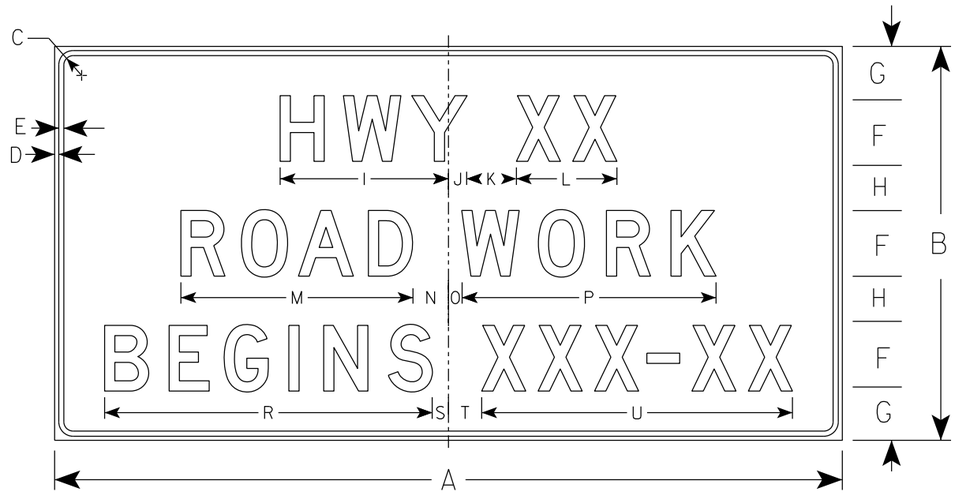
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 139	E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 140 | E

7

7

USH 45 EARTHWORK SUMMARY

STATION	LOCATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) UNADJUSTED				CUMULATIVE VOL (CY)				MASS ORDINATE
			CUT	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.25	
125+46	LT & RT	0	4.2	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125+50	LT & RT	4	4.1	0.0	0.0	1.1	0.7	0.0	0.0	0.2	0.7	0.0	0.0	0.2	0.4
126+00	LT & RT	50	4.1	0.0	0.0	0.2	7.6	0.0	0.0	1.2	8.2	0.0	0.0	1.8	6.5
126+50	LT & RT	50	4.1	0.0	0.0	0.3	7.5	0.0	0.0	0.5	15.8	0.0	0.0	2.3	13.4
127+00	LT & RT	50	4.0	0.0	0.0	0.4	7.5	0.0	0.0	0.6	23.2	0.0	0.0	3.0	20.2
127+50	LT & RT	50	4.1	0.0	0.0	0.2	7.5	0.0	0.0	0.5	30.8	0.0	0.0	3.6	27.2
128+00	LT & RT	50	4.3	0.0	0.0	0.5	7.8	0.0	0.0	0.6	38.6	0.0	0.0	4.4	34.2
128+50	LT & RT	50	4.3	0.0	0.0	0.1	8.0	0.0	0.0	0.5	46.6	0.0	0.0	5.0	41.6
129+00	LT & RT	50	4.0	0.0	0.0	0.1	7.8	0.0	0.0	0.1	54.4	0.0	0.0	5.2	49.2
129+50	LT & RT	50	4.1	0.0	0.0	0.1	7.6	0.0	0.0	0.1	61.9	0.0	0.0	5.4	56.5
130+00	LT & RT	50	4.4	0.0	0.0	0.0	7.9	0.0	0.0	0.1	69.8	0.0	0.0	5.5	64.4
130+50	LT & RT	50	4.2	0.0	0.0	0.0	8.0	0.0	0.0	0.0	77.9	0.0	0.0	5.5	72.4
131+00	LT & RT	50	4.0	0.0	0.0	0.4	7.7	0.0	0.0	0.4	85.5	0.0	0.0	5.9	79.6
131+50	LT & RT	50	4.0	0.0	0.0	0.1	7.5	0.0	0.0	0.4	93.0	0.0	0.0	6.4	86.6
132+00	LT & RT	50	4.1	0.0	0.0	0.1	7.6	0.0	0.0	0.1	100.6	0.0	0.0	6.5	94.0
132+50	LT & RT	50	4.1	0.0	0.0	0.0	7.7	0.0	0.0	0.0	108.2	0.0	0.0	6.6	101.6
133+00	LT & RT	50	4.1	0.0	0.0	0.1	7.6	0.0	0.0	0.1	115.8	0.0	0.0	6.7	109.1
133+50	LT & RT	50	4.1	0.0	0.0	0.1	7.6	0.0	0.0	0.2	123.4	0.0	0.0	6.9	116.5
134+00	LT & RT	50	4.2	0.0	0.0	0.4	7.7	0.0	0.0	0.4	131.1	0.0	0.0	7.4	123.7
134+50	LT & RT	50	4.3	0.0	0.0	3.5	7.8	0.0	0.0	3.6	138.9	0.0	0.0	11.9	127.0
135+00	LT & RT	50	4.0	0.0	0.0	0.8	7.7	0.0	0.0	3.9	146.6	0.0	0.0	16.8	129.8
135+50	LT & RT	50	4.2	0.0	0.0	0.0	7.6	0.0	0.0	0.7	154.2	0.0	0.0	17.7	136.5
136+00	LT & RT	50	4.6	0.0	0.0	0.0	8.2	0.0	0.0	0.0	162.4	0.0	0.0	17.7	144.7
136+50	LT & RT	50	4.5	0.0	0.0	0.4	8.4	0.0	0.0	0.4	170.8	0.0	0.0	18.2	152.6
137+00	LT & RT	50	4.3	0.0	0.0	0.1	8.2	0.0	0.0	0.4	179.0	0.0	0.0	18.7	160.3
137+20	LT						30.0				209.0	0.0	0.0	0.0	209.0
137+50	LT & RT	50	4.4	0.0	0.0	0.0	8.1	0.0	0.0	0.1	217.0	0.0	0.0	18.8	198.3
138+00	LT & RT	50	4.6	0.0	0.0	0.0	8.3	0.0	0.0	0.0	225.4	0.0	0.0	18.8	206.6
138+50	LT & RT	50	4.5	0.0	0.0	0.0	8.4	0.0	0.0	0.0	233.8	0.0	0.0	18.8	215.0
139+00	LT & RT	50	5.1	0.0	0.0	0.1	8.8	0.0	0.0	0.1	242.6	0.0	0.0	19.0	223.6
139+50	LT & RT	50	5.3	0.0	0.0	0.2	9.6	0.0	0.0	0.3	252.2	0.0	0.0	19.3	232.9
140+00	LT & RT	50	4.8	0.0	0.0	0.2	9.4	0.0	0.0	0.4	261.6	0.0	0.0	19.7	241.8
140+50	LT & RT	50	4.7	0.0	0.0	0.2	8.8	0.0	0.0	0.4	270.4	0.0	0.0	20.2	250.2
141+00	LT & RT	50	4.7	0.0	0.0	0.3	8.7	0.0	0.0	0.4	279.0	0.0	0.0	20.7	258.4
141+50	LT & RT	50	4.6	0.0	0.0	0.4	8.6	0.0	0.0	0.6	287.6	0.0	0.0	21.4	266.2
141+71	LT						25.0				312.6		0.0	0.0	312.6
142+00	LT & RT	50	5.1	0.0	0.0	0.5	9.0	0.0	0.0	0.8	321.6	0.0	0.0	22.4	299.2
142+50	LT & RT	50	5.1	0.0	0.0	0.4	9.4	0.0	0.0	0.8	331.1	0.0	0.0	23.4	307.6

USH 45 EARTHWORK SUMMARY CONT.

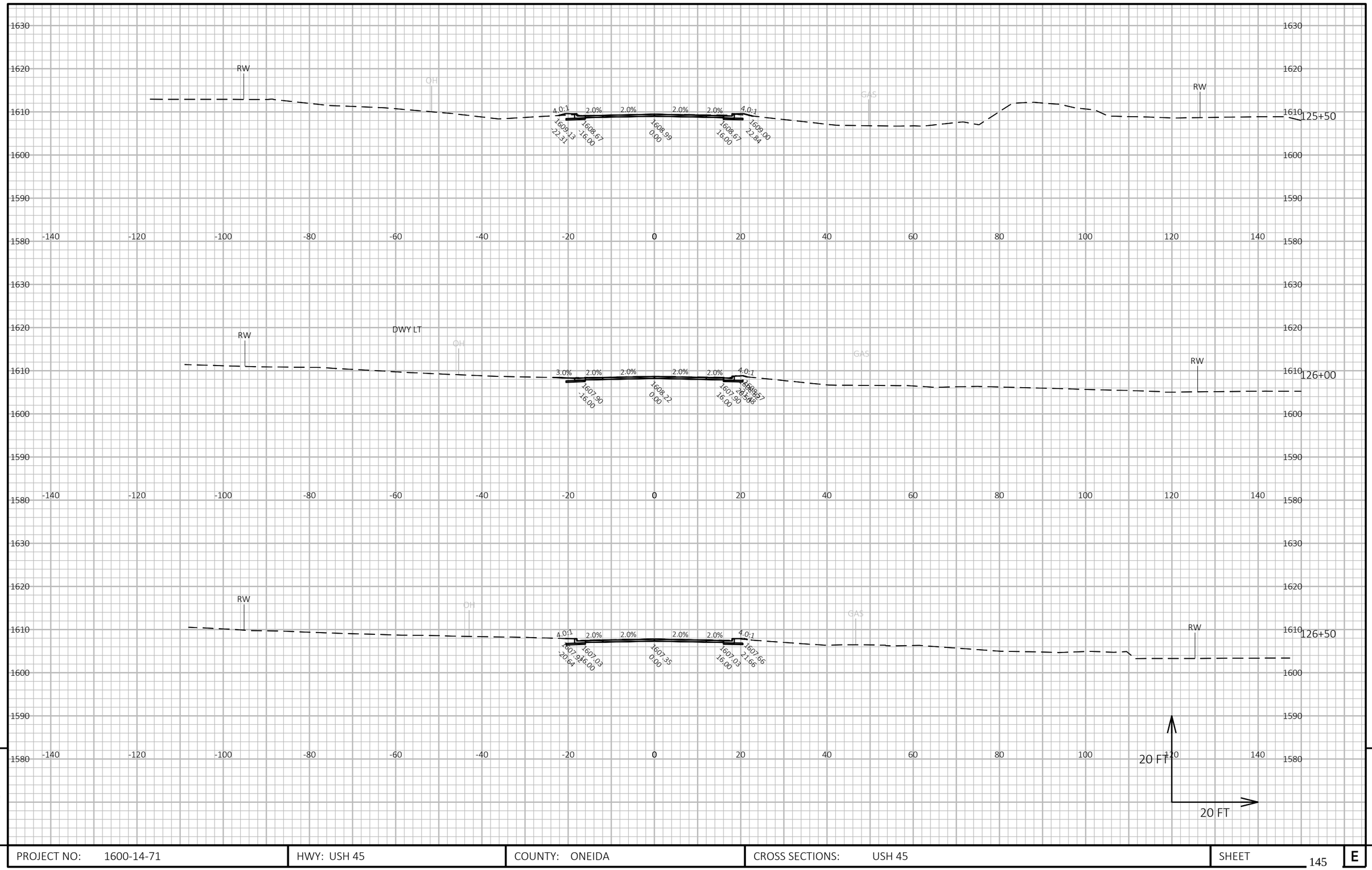
STATION	LOCATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) UNADJUSTED				CUMULATIVE VOL (CY)				MASS ORDINATE
			CUT	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.25	
142+50	LT & RT	50	5.1	0.0	0.0	0.4	9.4	0.0	0.0	0.8	331.1	0.0	0.0	23.4	307.6
143+00	LT & RT	50	4.9	0.0	0.0	0.4	9.2	0.0	0.0	0.8	340.3	0.0	0.0	24.4	315.8
143+50	LT & RT	50	4.6	0.0	0.0	0.4	8.7	0.0	0.0	0.8	349.0	0.0	0.0	25.4	323.6
144+00	LT & RT	50	4.4	0.0	0.0	0.3	8.3	0.0	0.0	0.7	357.3	0.0	0.0	26.2	331.1
144+50	LT & RT	50	4.4	0.0	0.0	0.2	8.1	0.0	0.0	0.5	365.4	0.0	0.0	26.8	338.6
145+00	LT & RT	50	4.4	0.0	0.0	0.1	8.1	0.0	0.0	0.2	373.6	0.0	0.0	27.1	346.5
145+50	LT & RT	50	4.4	0.0	0.0	0.1	8.1	0.0	0.0	0.1	381.7	0.0	0.0	27.3	354.5
146+00	LT & RT	50	4.2	0.0	0.0	0.1	8.0	0.0	0.0	0.1	389.7	0.0	0.0	27.4	362.3
146+50	LT & RT	50	4.3	0.0	0.0	0.2	7.9	0.0	0.0	0.3	397.6	0.0	0.0	27.7	369.9
147+00	LT & RT	50	4.4	0.0	0.0	0.2	8.1	0.0	0.0	0.4	405.7	0.0	0.0	28.2	377.5
147+50	LT & RT	50	4.3	0.0	0.0	0.4	8.1	0.0	0.0	0.5	413.8	0.0	0.0	28.8	384.9
148+00	LT & RT	50	4.3	0.0	0.0	1.3	8.0	0.0	0.0	1.5	421.8	0.0	0.0	30.7	391.1
148+50	LT & RT	50	4.0	0.0	0.0	1.2	7.7	0.0	0.0	2.3	429.5	0.0	0.0	33.6	395.9
149+00	LT & RT	50	4.1	0.0	0.0	1.9	7.5	0.0	0.0	2.9	437.0	0.0	0.0	37.2	399.7
149+50	LT & RT	50	4.1	0.0	0.0	0.4	7.5	0.0	0.0	2.1	444.5	0.0	0.0	39.9	404.6
150+00	LT & RT	50	4.0	0.0	0.0	0.5	7.5	0.0	0.0	0.9	452.0	0.0	0.0	40.9	411.1
150+50	LT & RT	50	4.0	0.0	0.0	0.8	7.5	0.0	0.0	1.2	459.5	0.0	0.0	42.4	417.1
151+00	LT & RT	50	4.0	0.0	0.0	0.9	7.5	0.0	0.0	1.6	467.0	0.0	0.0	44.4	422.6
151+50	LT & RT	50	4.0	0.0	0.0	2.6	7.5	0.0	0.0	3.3	474.4	0.0	0.0	48.5	426.0
152+00	LT & RT	50	4.0	0.0	0.0	1.5	7.5	0.0	0.0	3.8	481.9	0.0	0.0	53.2	428.7
152+50	LT & RT	50	4.0	0.0	0.0	2.4	7.5	0.0	0.0	3.6	489.4	0.0	0.0	57.7	431.7
153+00	LT & RT	50	4.0	0.0	0.0	0.3	7.5	0.0	0.0	2.5	496.8	0.0	0.0	60.8	436.0
153+50	LT & RT	50	4.1	0.0	0.0	0.2	7.5	0.0	0.0	0.5	504.3	0.0	0.0	61.4	442.9
154+00	LT & RT	50	4.1	0.0	0.0	0.4	7.5	0.0	0.0	0.5	511.9	0.0	0.0	62.1	449.8
154+50	LT & RT	50	4.0	0.0	0.0	0.7	7.5	0.0	0.0	1.0	519.4	0.0	0.0	63.3	456.1
155+00	LT & RT	50	4.0	0.0	0.0	0.6	7.5	0.0	0.0	1.2	526.8	0.0	0.0	64.8	462.0
155+50	LT & RT	50	4.1	0.0	0.0	0.8	7.5	0.0	0.0	1.3	534.3	0.0	0.0	66.5	467.9
156+00	LT & RT	50	4.1	0.0	0.0	0.5	7.5	0.0	0.0	1.2	541.9	0.0	0.0	68.0	473.9
156+50	LT & RT	50	4.0	0.0	0.0	0.5	7.5	0.0	0.0	0.9	549.3	0.0	0.0	69.1	480.2
157+00	LT & RT	50	4.0	0.0	0.0	1.6	7.5	0.0	0.0	1.9	556.8	0.0	0.0	71.5	485.3
157+50	LT & RT	50	4.0	0.0	0.0	0.5	7.5	0.0	0.0	1.9	564.3	0.0	0.0	73.8	490.5
158+00	LT & RT	50	4.1	0.0	0.0	0.4	7.5	0.0	0.0	0.8	571.8	0.0	0.0	74.8	497.0
158+50	LT & RT	50	4.0	0.0	0.0	0.7	7.5	0.0	0.0	0.9	579.3	0.0	0.0	76.0	503.3
159+00	LT & RT	50	4.0	0.0	0.0	0.7	7.5	0.0	0.0	1.2	586.7	0.0	0.0	77.5	509.2
159+50	LT & RT	50	4.0	0.0	0.0	0.5	7.5	0.0	0.0	1.1	594.2	0.0	0.0	78.8	515.4
160+00	LT & RT	50	4.0	0.0	0.0	0.8	7.5	0.0	0.0	1.2	601.6	0.0	0.0	80.3	521.4

USH 45 EARTHWORK SUMMARY CONT.

STATION	LOCATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) UNADJUSTED				CUMULATIVE VOL (CY)				MASS ORDINATE
			CUT	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.25	
160+00	LT & RT	50	4.0	0.0	0.0	0.8	7.5	0.0	0.0	1.2	601.6	0.0	0.0	80.3	521.4
160+50	LT & RT	50	4.0	0.0	0.0	0.5	7.5	0.0	0.0	1.2	609.1	0.0	0.0	81.8	527.3
161+00	LT & RT	50	4.2	0.0	0.0	0.5	7.6	0.0	0.0	0.9	616.7	0.0	0.0	83.0	533.7
161+50	LT & RT	50	4.2	0.0	0.0	0.2	7.7	0.0	0.0	0.6	624.4	0.0	0.0	83.7	540.7
162+00	LT & RT	50	4.1	0.0	0.0	0.2	7.6	0.0	0.0	0.3	632.0	0.0	0.0	84.1	547.9
162+50	LT & RT	50	4.2	0.0	0.0	0.3	7.6	0.0	0.0	0.4	639.6	0.0	0.0	84.7	554.9
163+00	LT & RT	50	4.1	0.0	0.0	2.4	7.6	0.0	0.0	2.5	647.2	0.0	0.0	87.8	559.5
163+50	LT & RT	50	4.1	0.0	0.0	0.4	7.5	0.0	0.0	2.6	654.7	0.0	0.0	91.0	563.7
164+00	LT & RT	50	4.1	0.0	0.0	0.8	7.5	0.0	0.0	1.1	662.3	0.0	0.0	92.5	569.8
164+50	LT & RT	50	4.0	0.0	0.0	1.1	7.5	0.0	0.0	1.8	669.7	0.0	0.0	94.6	575.1
165+00	LT & RT	50	4.1	0.0	0.0	0.7	7.5	0.0	0.0	1.7	677.2	0.0	0.0	96.7	580.5
165+50	LT & RT	50	4.1	0.0	0.0	0.8	7.5	0.0	0.0	1.4	684.7	0.0	0.0	98.5	586.3
166+00	LT & RT	50	4.1	0.0	0.0	0.5	7.5	0.0	0.0	1.2	692.2	0.0	0.0	100.0	592.2
166+50	LT & RT	50	4.2	0.0	0.0	0.5	7.6	0.0	0.0	0.9	699.9	0.0	0.0	101.1	598.7
167+00	LT & RT	50	4.1	0.0	0.0	1.0	7.6	0.0	0.0	1.4	707.5	0.0	0.0	102.8	604.7
167+50	LT & RT	50	4.0	0.0	0.0	0.9	7.5	0.0	0.0	1.8	715.0	0.0	0.0	105.1	609.9
168+00	LT & RT	50	4.0	0.0	0.0	0.8	7.5	0.0	0.0	1.6	722.4	0.0	0.0	107.1	615.4
168+50	LT & RT	50	4.1	0.0	0.0	0.7	7.5	0.0	0.0	1.3	729.9	0.0	0.0	108.7	621.2
169+00	LT & RT	50	4.0	0.0	0.0	0.5	7.5	0.0	0.0	1.1	737.4	0.0	0.0	110.0	627.4
169+50	LT & RT	50	4.0	0.0	0.0	0.3	7.5	0.0	0.0	0.8	744.9	0.0	0.0	111.0	633.9
170+00	LT & RT	50	4.2	0.0	0.0	3.2	7.7	0.0	0.0	3.3	752.5	0.0	0.0	115.1	637.4
170+50	LT & RT	50	4.2	0.0	0.0	0.3	7.8	0.0	0.0	3.2	760.3	0.0	0.0	119.1	641.2
171+00	LT & RT	50	4.0	0.0	0.0	0.3	7.6	0.0	0.0	0.5	767.9	0.0	0.0	119.8	648.2
171+50	LT & RT	50	4.1	0.0	0.0	0.5	7.5	0.0	0.0	0.7	775.4	0.0	0.0	120.6	654.8
172+00	LT & RT	50	4.1	0.0	0.0	0.9	7.5	0.0	0.0	1.3	782.9	0.0	0.0	122.2	660.7
172+50	LT & RT	50	4.0	0.0	0.0	0.3	7.5	0.0	0.0	1.1	790.4	0.0	0.0	123.6	666.8
173+00	LT & RT	50	4.1	0.0	0.0	0.2	7.5	0.0	0.0	0.5	797.9	0.0	0.0	124.2	673.7
173+50	LT & RT	50	4.0	0.0	0.0	2.4	7.5	0.0	0.0	2.3	805.4	0.0	0.0	127.1	678.2
174+00	LT & RT	50	4.1	0.0	0.0	0.5	7.5	0.0	0.0	2.7	812.9	0.0	0.0	130.5	682.4
174+50	LT & RT	50	4.1	0.0	0.0	0.4	7.5	0.0	0.0	0.8	820.4	0.0	0.0	131.5	688.9
175+00	LT & RT	50	4.0	0.0	0.0	1.1	7.5	0.0	0.0	1.3	827.9	0.0	0.0	133.1	694.8
175+50	LT & RT	50	4.6	0.0	0.0	0.1	8.0	0.0	0.0	1.1	835.9	0.0	0.0	134.6	701.4
176+00	LT & RT	50	5.1	0.0	0.0	0.3	8.9	0.0	0.0	0.4	844.9	0.0	0.0	135.0	709.8
176+50	LT & RT	50	4.0	0.0	0.0	1.2	8.4	0.0	0.0	1.4	853.3	0.0	0.0	136.7	716.5
177+00	LT & RT	50	4.0	0.0	0.0	1.0	7.5	0.0	0.0	2.0	860.7	0.0	0.0	139.2	721.5
177+50	LT & RT	50	4.1	0.0	0.0	1.4	7.5	0.0	0.0	2.2	868.2	0.0	0.0	142.0	726.2

USH 45 EARTHWORK SUMMARY CONT.

STATION	LOCATION	DISTANCE	AREA (SF)				INCREMENTAL VOL (CY) UNADJUSTED				CUMULATIVE VOL (CY)				MASS ORDINATE
			CUT	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EBS	SLAVAGED/UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL 1.25	
177+50	LT & RT	50	4.1	0.0	0.0	1.4	7.5	0.0	0.0	2.2	868.2	0.0	0.0	142.0	726.2
178+00	LT & RT	50	4.1	0.0	0.0	2.2	7.5	0.0	0.0	3.4	875.7	0.0	0.0	146.2	729.5
178+50	LT & RT	50	4.4	0.0	0.0	1.0	7.9	0.0	0.0	3.0	883.6	0.0	0.0	150.0	733.6
179+00	LT & RT	50	5.4	0.0	0.0	0.0	9.1	0.0	0.0	0.9	892.7	0.0	0.0	151.1	741.5
179+50	LT & RT	50	4.3	0.0	0.0	0.6	8.9	0.0	0.0	0.6	901.6	0.0	0.0	151.8	749.7
180+00	LT & RT	50	4.2	0.0	0.0	0.7	7.8	0.0	0.0	1.2	909.4	0.0	0.0	153.3	756.1
180+50	LT & RT	50	5.4	0.0	0.0	0.7	8.9	0.0	0.0	1.2	918.3	0.0	0.0	154.9	763.4
181+00	LT & RT	50	4.4	0.0	0.0	0.3	9.1	0.0	0.0	0.9	927.4	0.0	0.0	156.0	771.4
181+50	LT & RT	50	4.1	0.0	0.0	2.1	7.9	0.0	0.0	2.2	935.3	0.0	0.0	158.8	776.5
182+00	LT & RT	50	4.1	0.0	0.0	1.8	7.6	0.0	0.0	3.6	942.9	0.0	0.0	163.3	779.6
182+50	LT & RT	50	4.0	0.0	0.0	3.0	7.5	0.0	0.0	4.4	950.4	0.0	0.0	168.8	781.6
183+00	LT & RT	50	4.0	0.0	0.0	0.9	7.5	0.0	0.0	3.6	957.9	0.0	0.0	173.4	784.5
183+50	LT & RT	50	4.0	0.0	0.0	0.1	7.5	0.0	0.0	1.0	965.3	0.0	0.0	174.6	790.8
184+00	LT & RT	50	4.5	0.0	0.0	0.0	7.9	0.0	0.0	0.1	973.2	0.0	0.0	174.7	798.5
184+50	LT & RT	50	4.0	0.0	0.0	7.0	7.9	0.0	0.0	6.5	981.1	0.0	0.0	182.8	798.3
185+00	LT & RT	50	4.1	0.0	0.0	6.9	7.5	0.0	0.0	12.9	988.5	0.0	0.0	198.8	789.7
185+50	LT & RT	50	4.1	0.0	0.0	2.5	7.5	0.0	0.0	8.7	996.1	0.0	0.0	209.8	786.3
186+00	LT & RT	50	4.1	0.0	0.0	2.3	7.5	0.0	0.0	4.5	1003.6	0.0	0.0	215.3	788.3
186+50	LT & RT	50	4.6	0.0	0.0	0.2	8.0	0.0	0.0	2.3	1011.6	0.0	0.0	218.2	793.5
186+66	LT & RT	16	4.2	0.0	0.0	4.3	2.6	0.0	0.0	1.3	1014.2	0.0	0.0	219.8	794.4

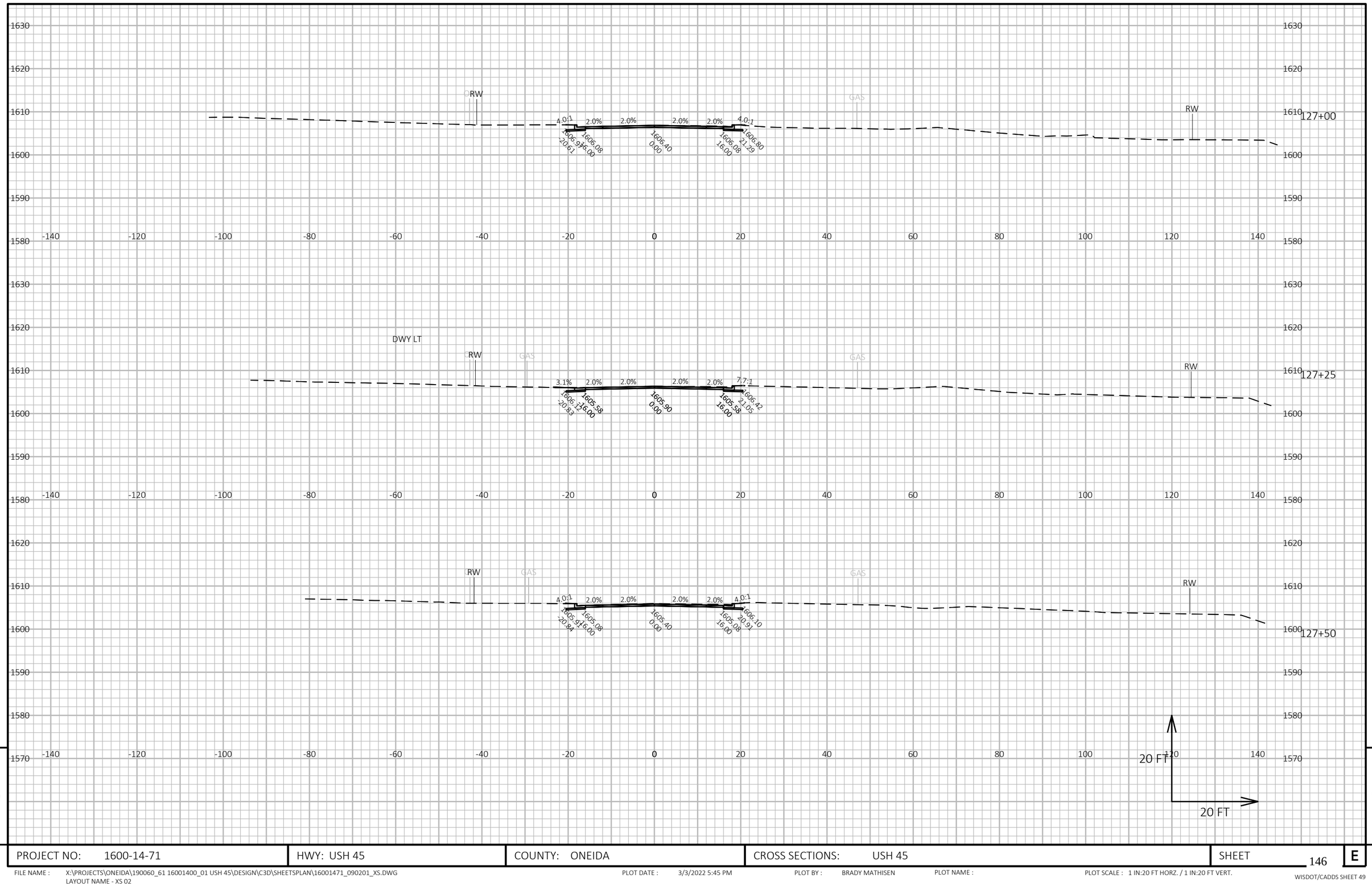


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 145 E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 01

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

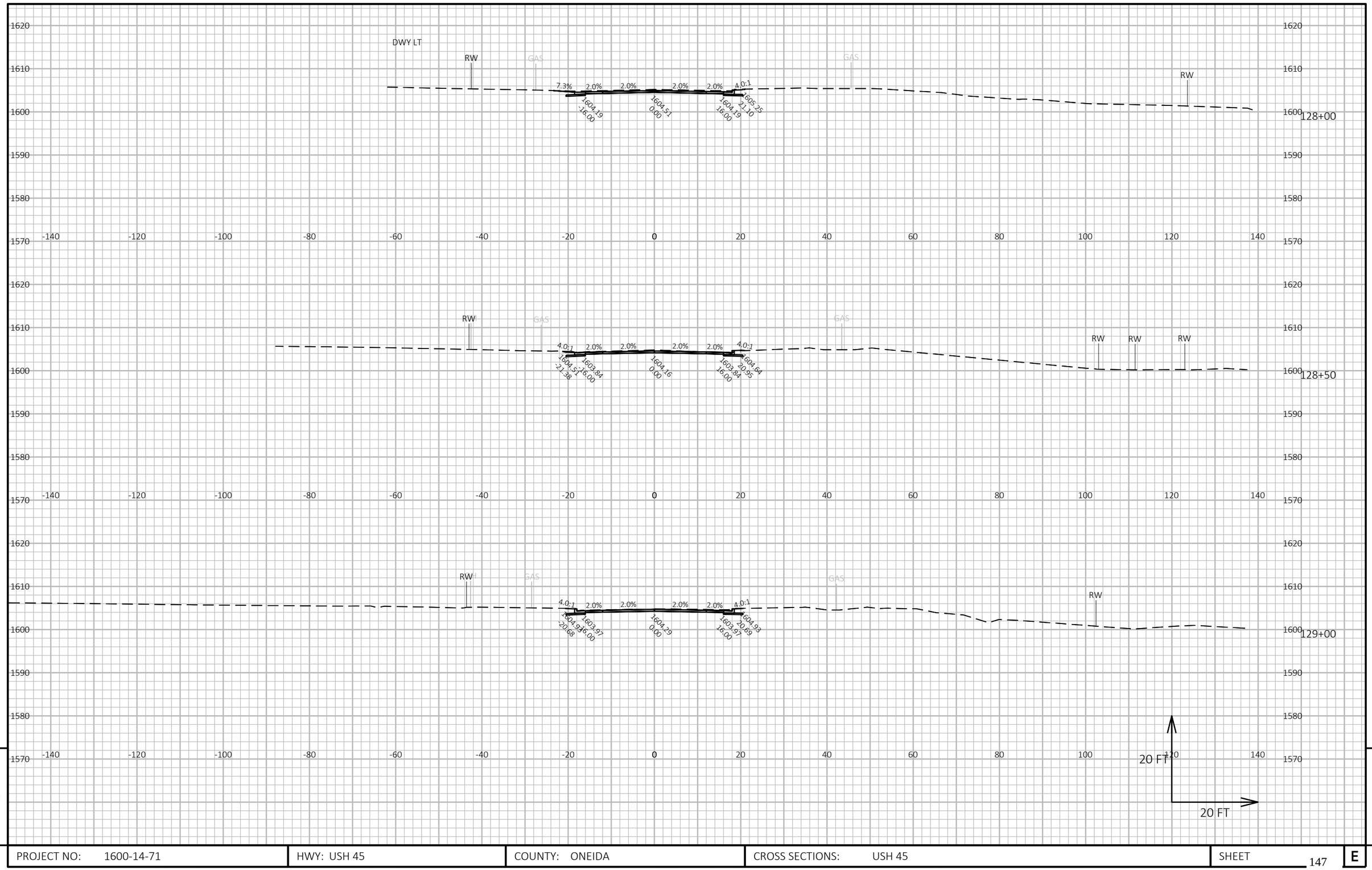


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 146	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 02

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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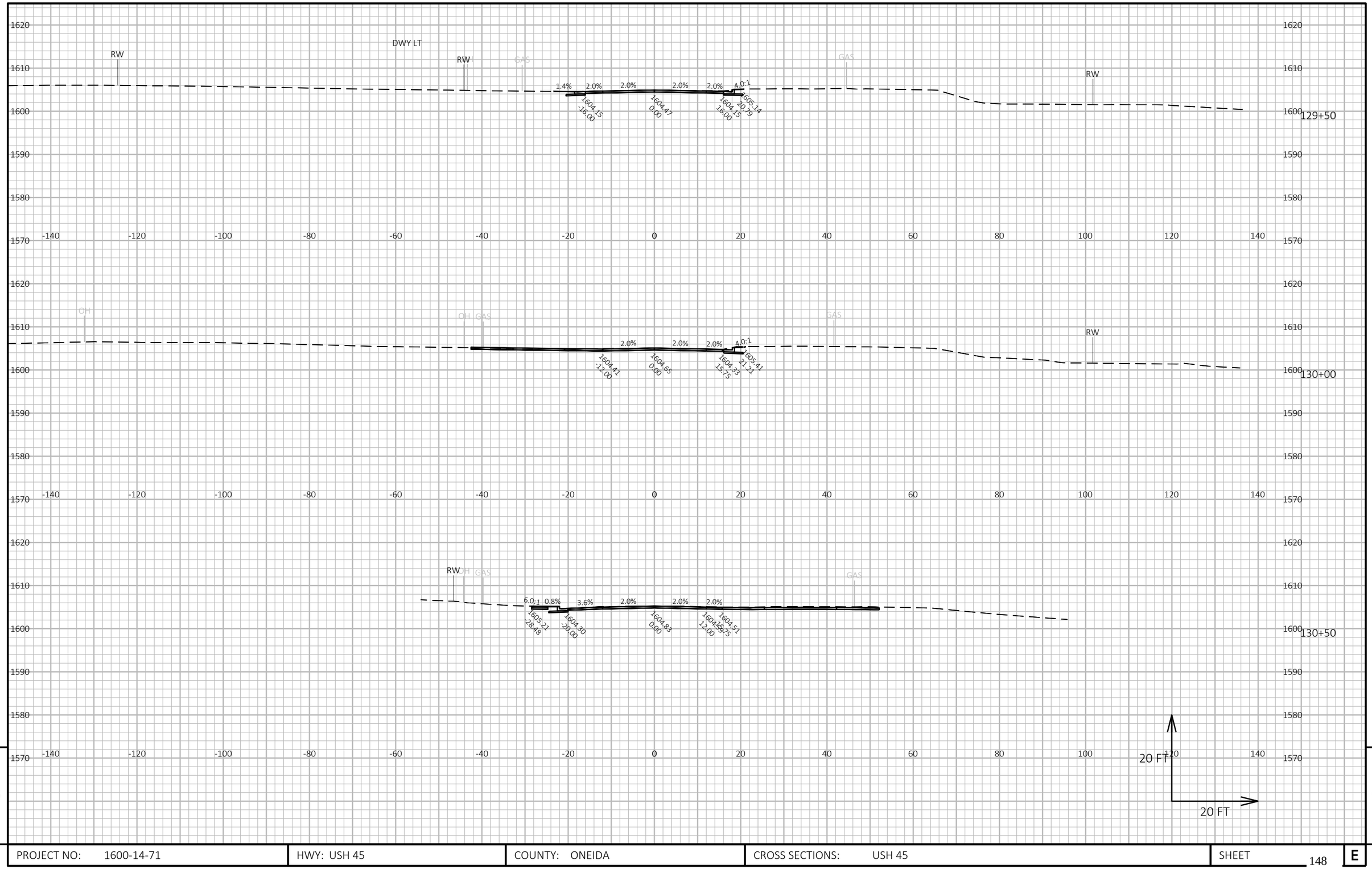
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 147	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 03

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 148	E

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LAYOUT NAME - XS 04

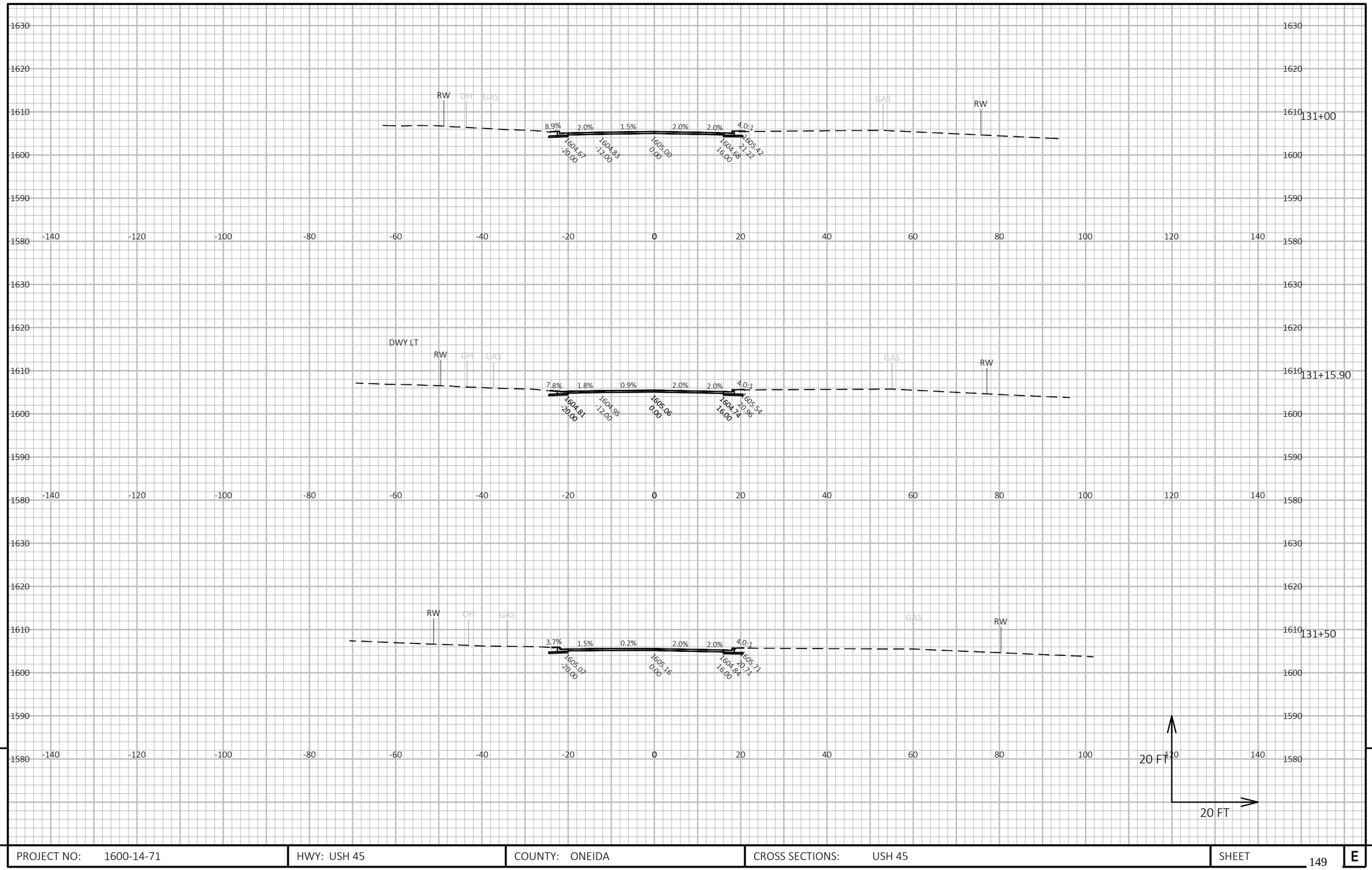
PLOT DATE : 3/3/2022 5:45 PM

PLOT BY : BRADY MATHISEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 149	E

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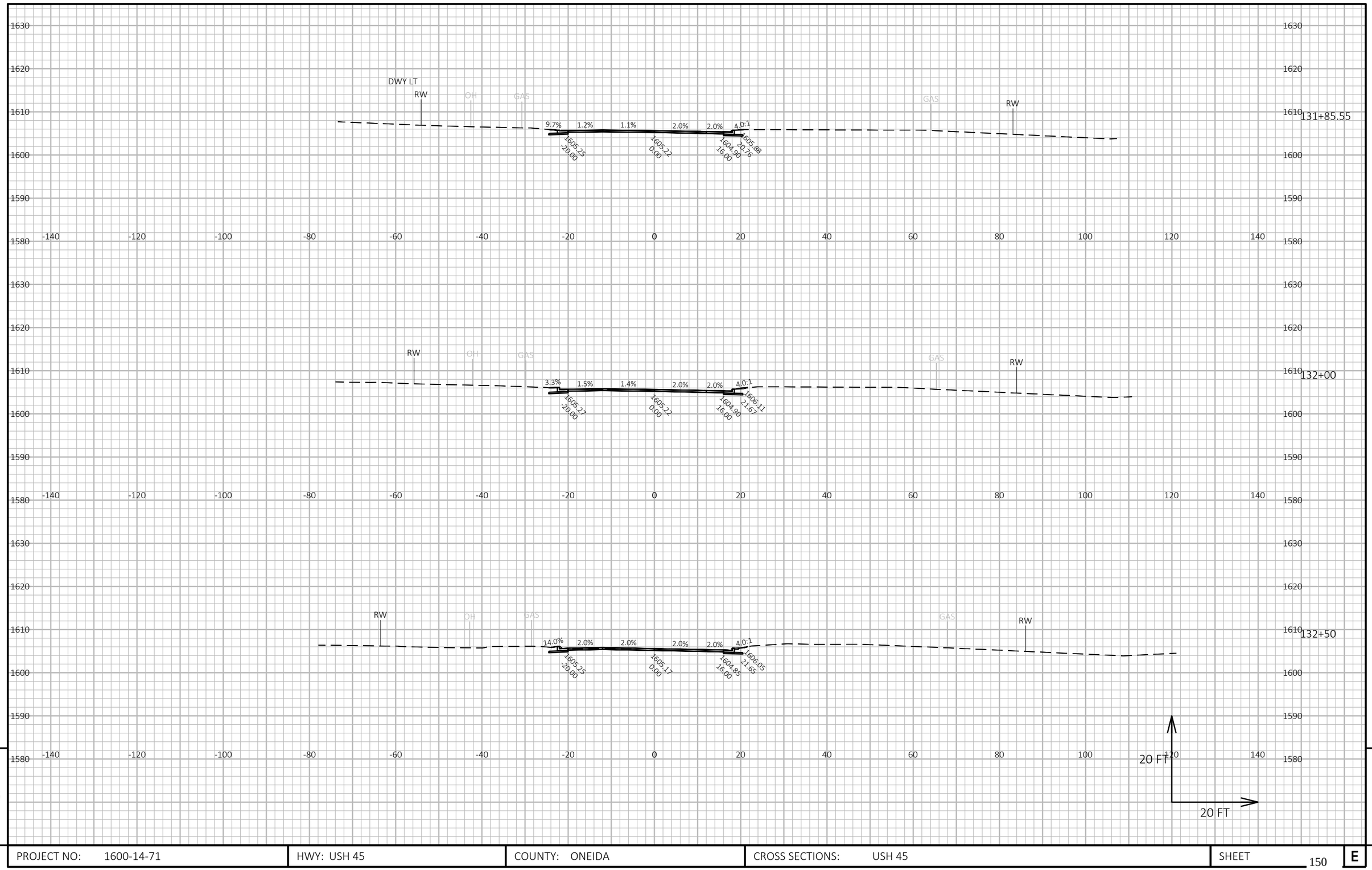
LAYOUT NAME - XS 05

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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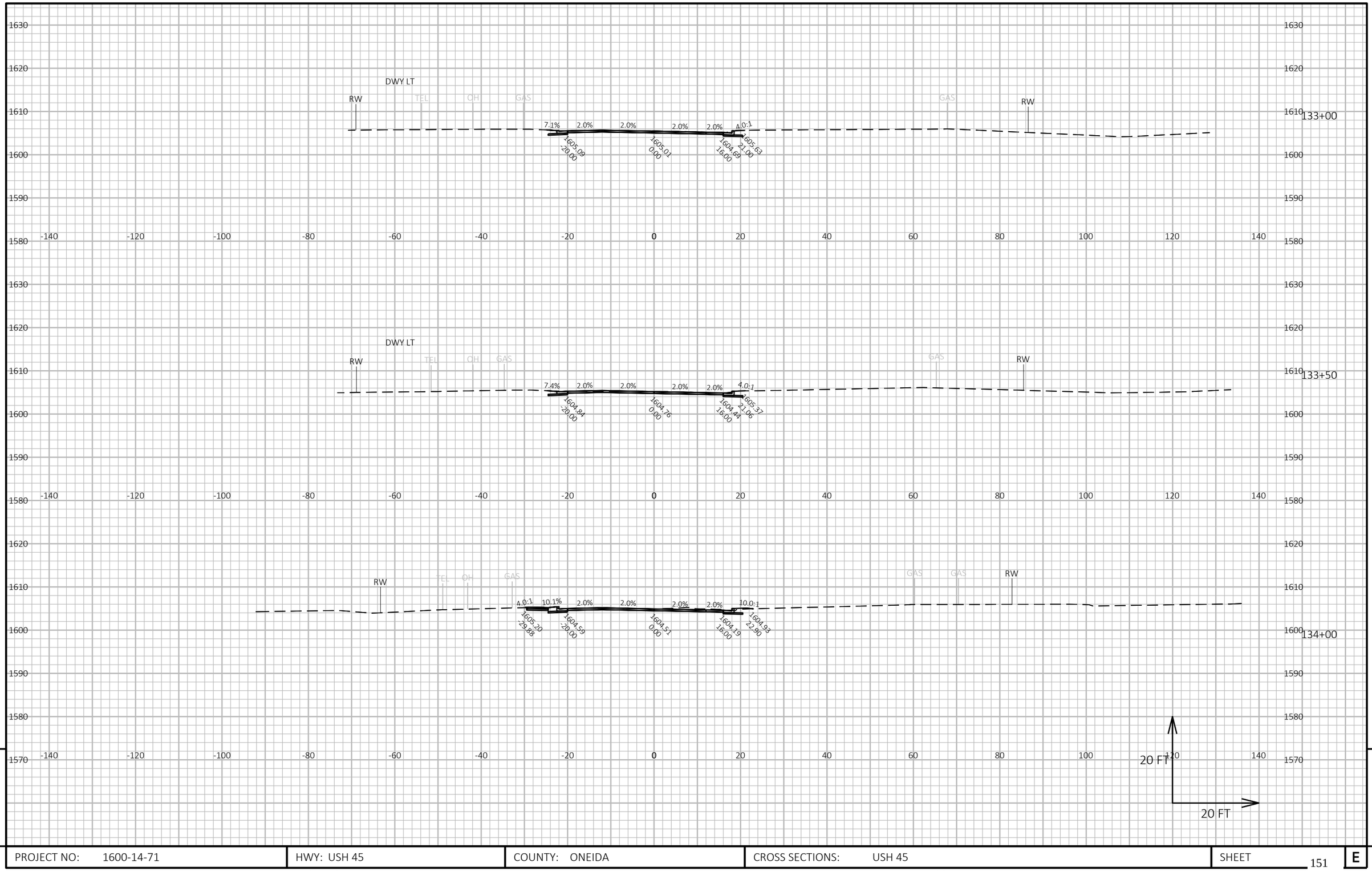
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 150	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 06

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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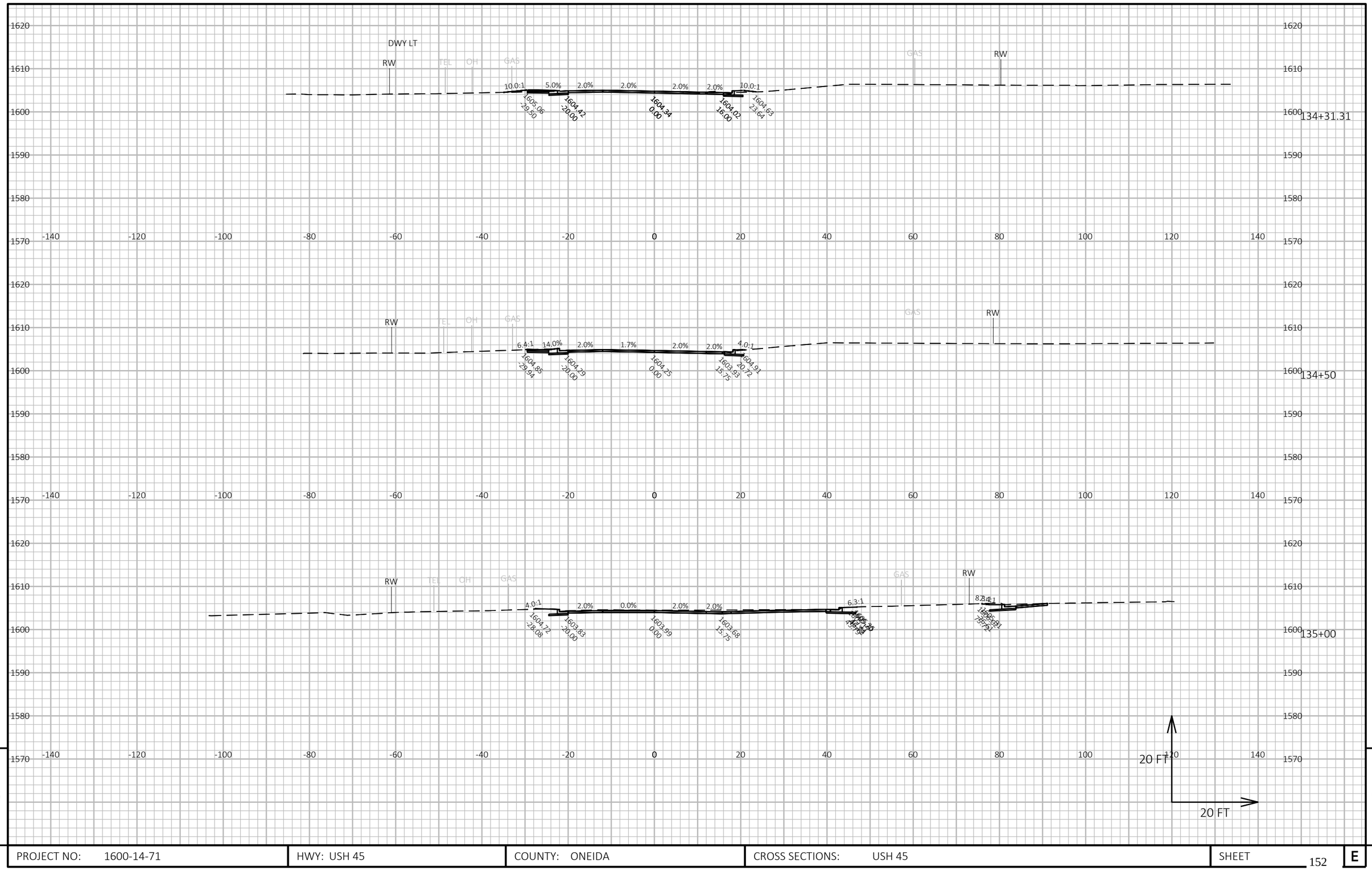
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 151	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 07

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

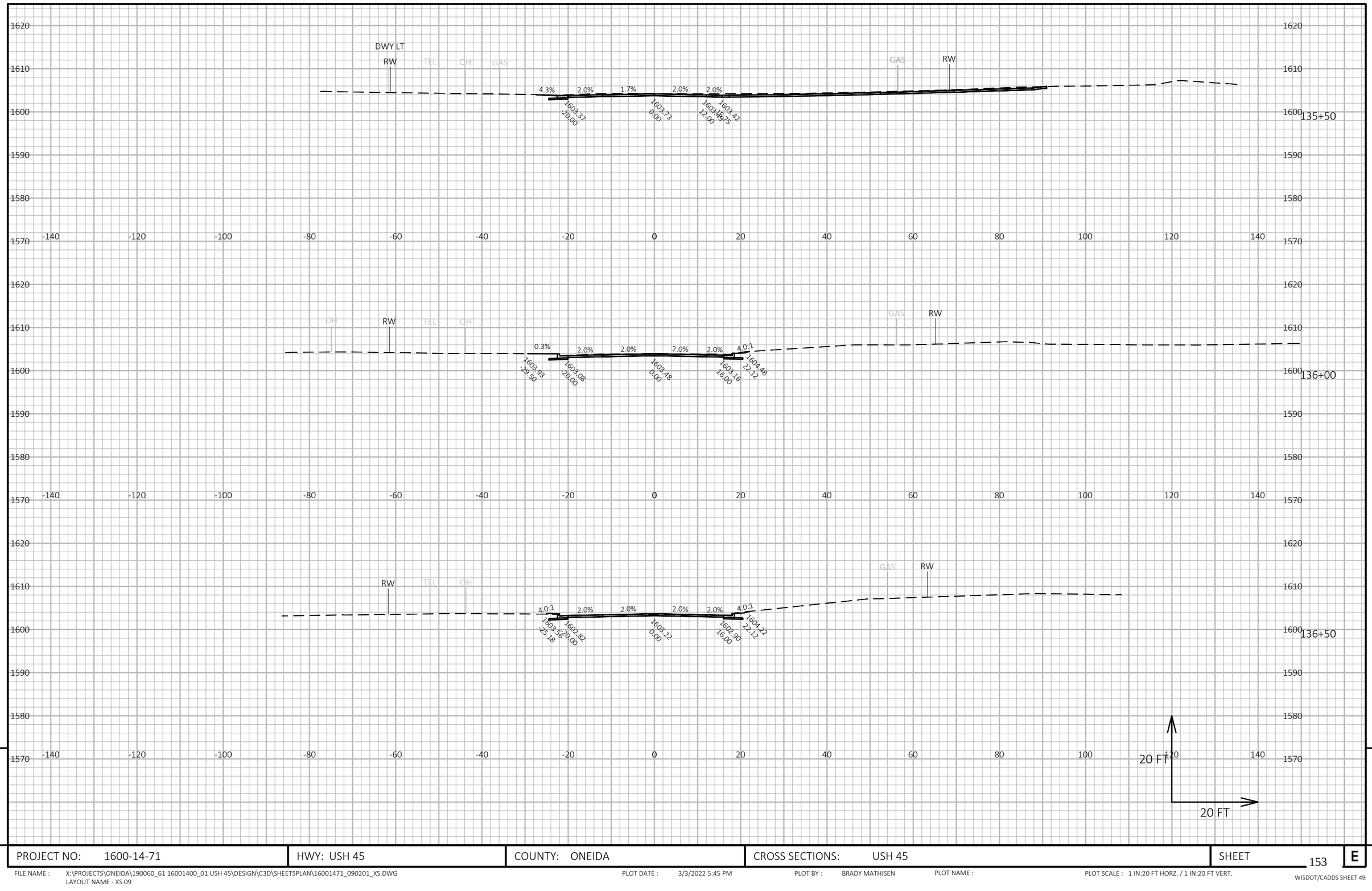


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 152	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 08

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 153	E

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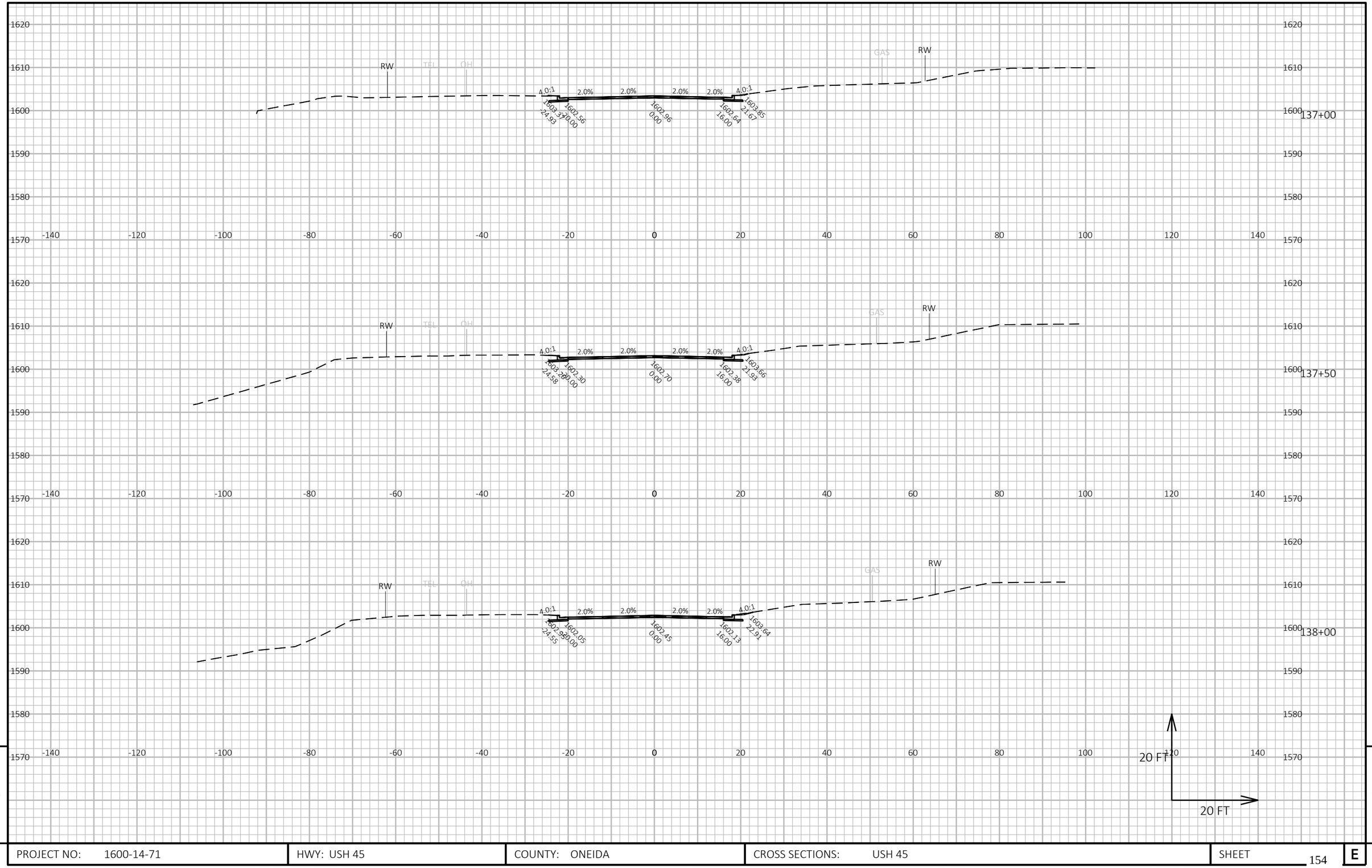
LAYOUT NAME - XS 09

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 154	E

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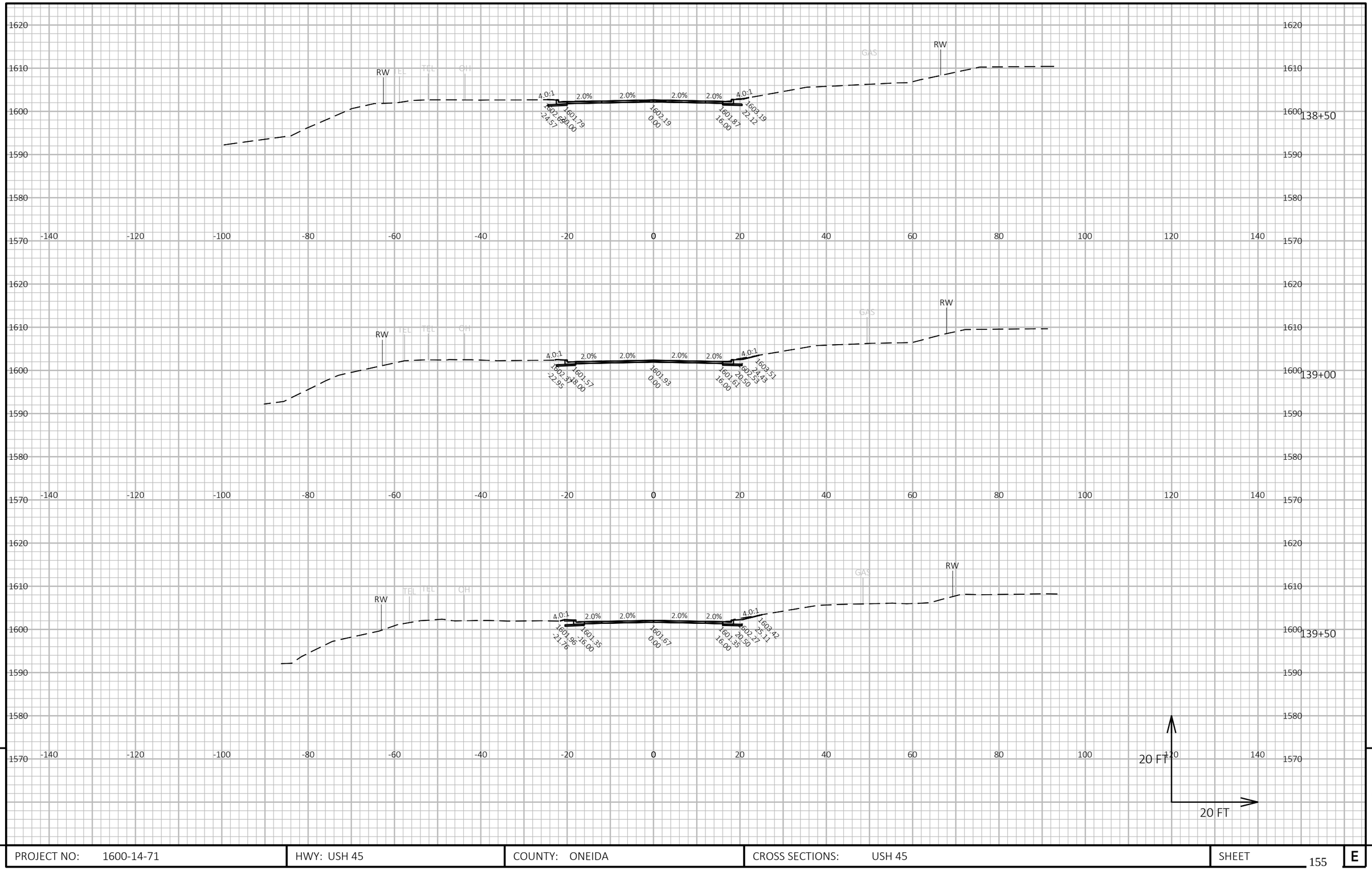
LAYOUT NAME - XS 10

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 155 E

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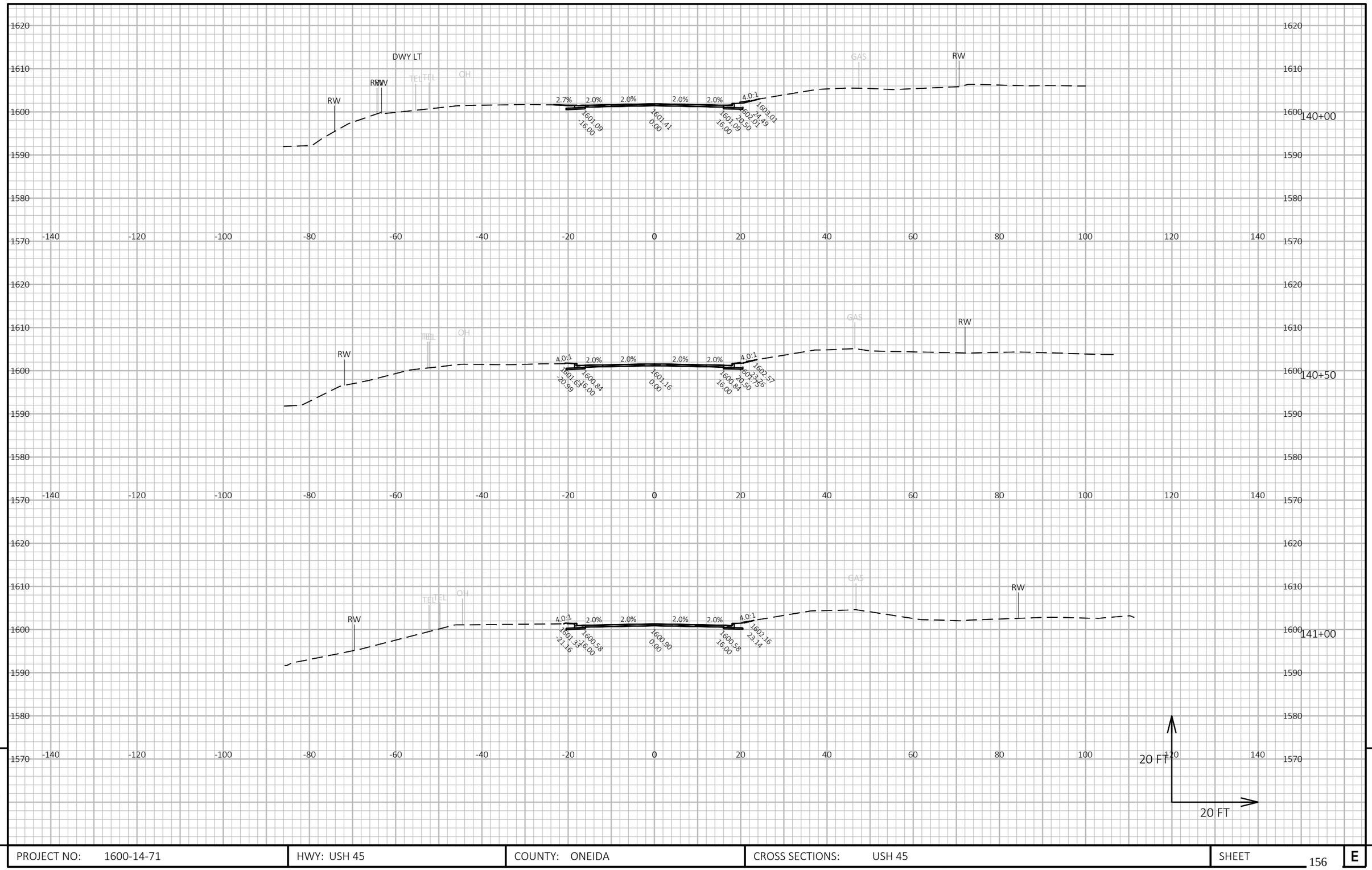
LAYOUT NAME - XS 11

PLOT DATE : 3/3/2022 5:45 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 156	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 12

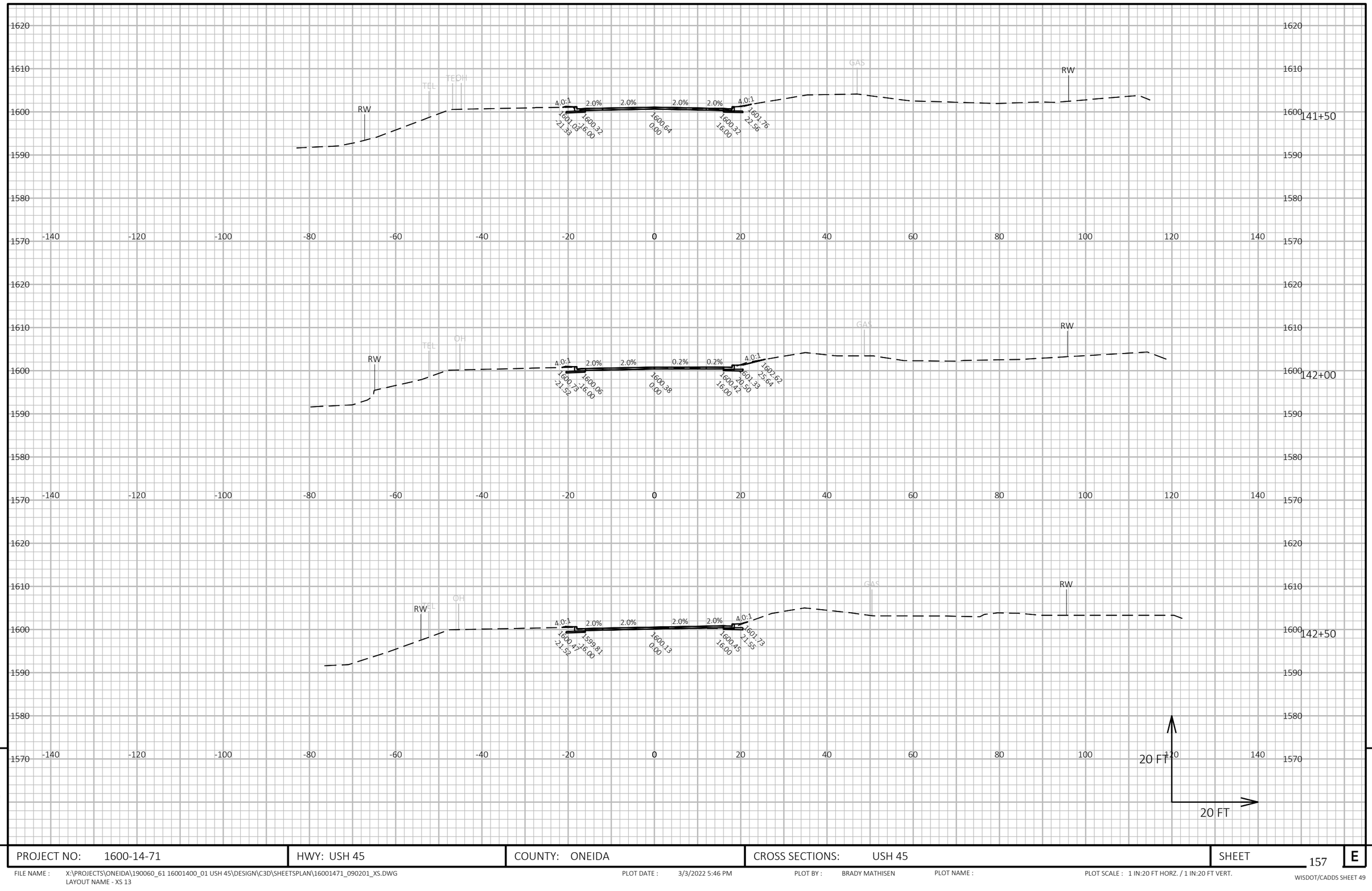
PLOT DATE : 3/3/2022 5:45 PM

PLOT BY : BRADY MATHISEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

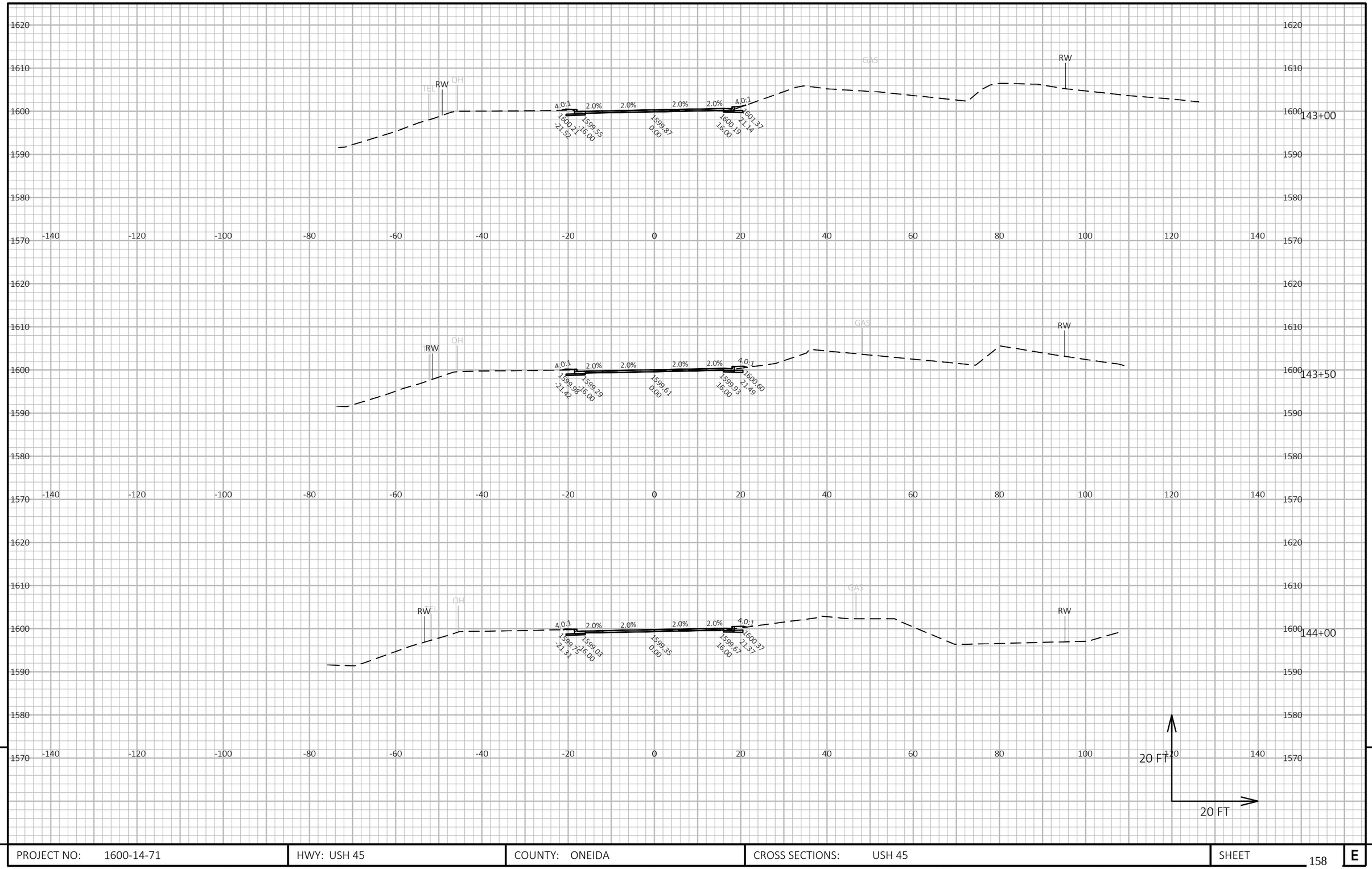


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 157 E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 13

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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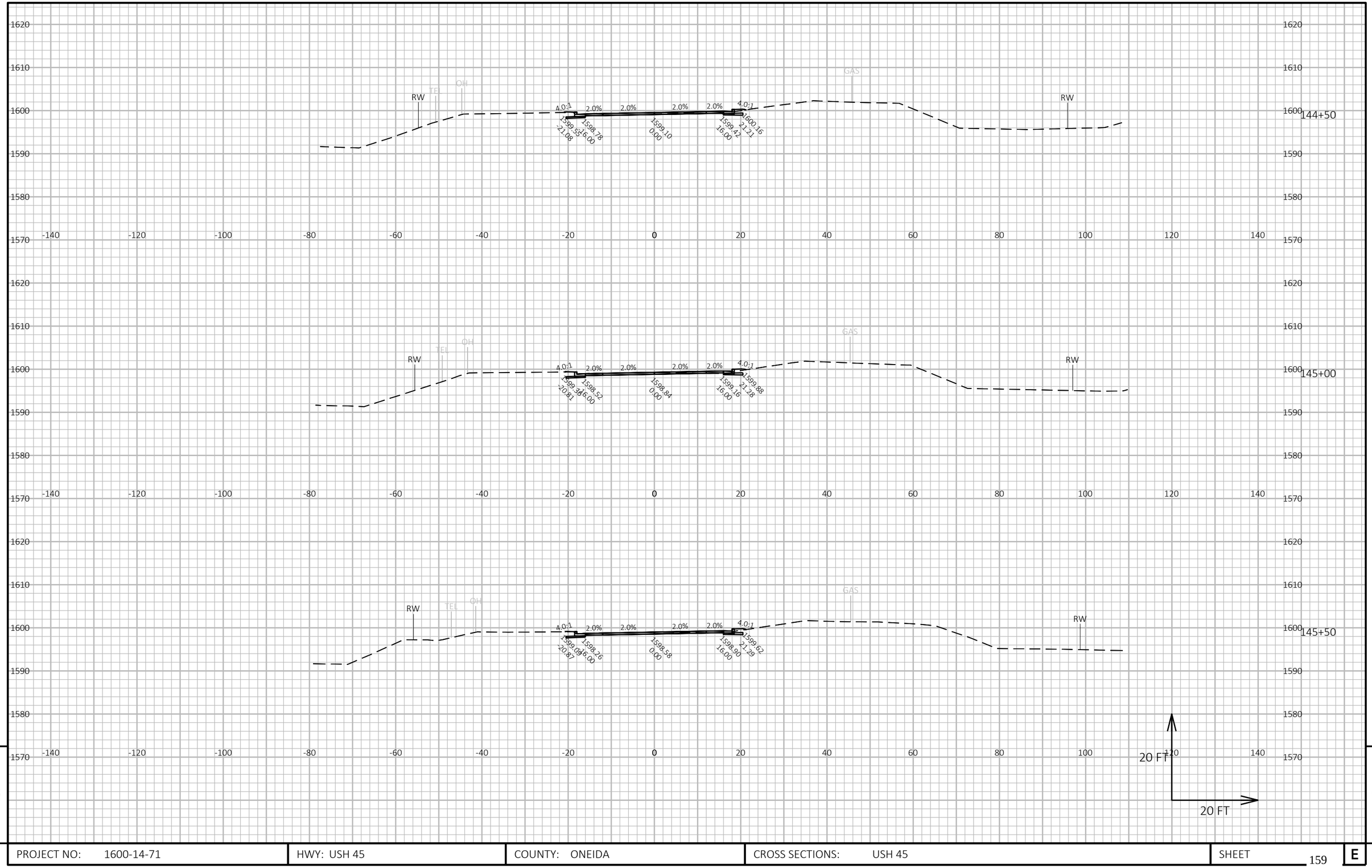
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 158	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 14

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

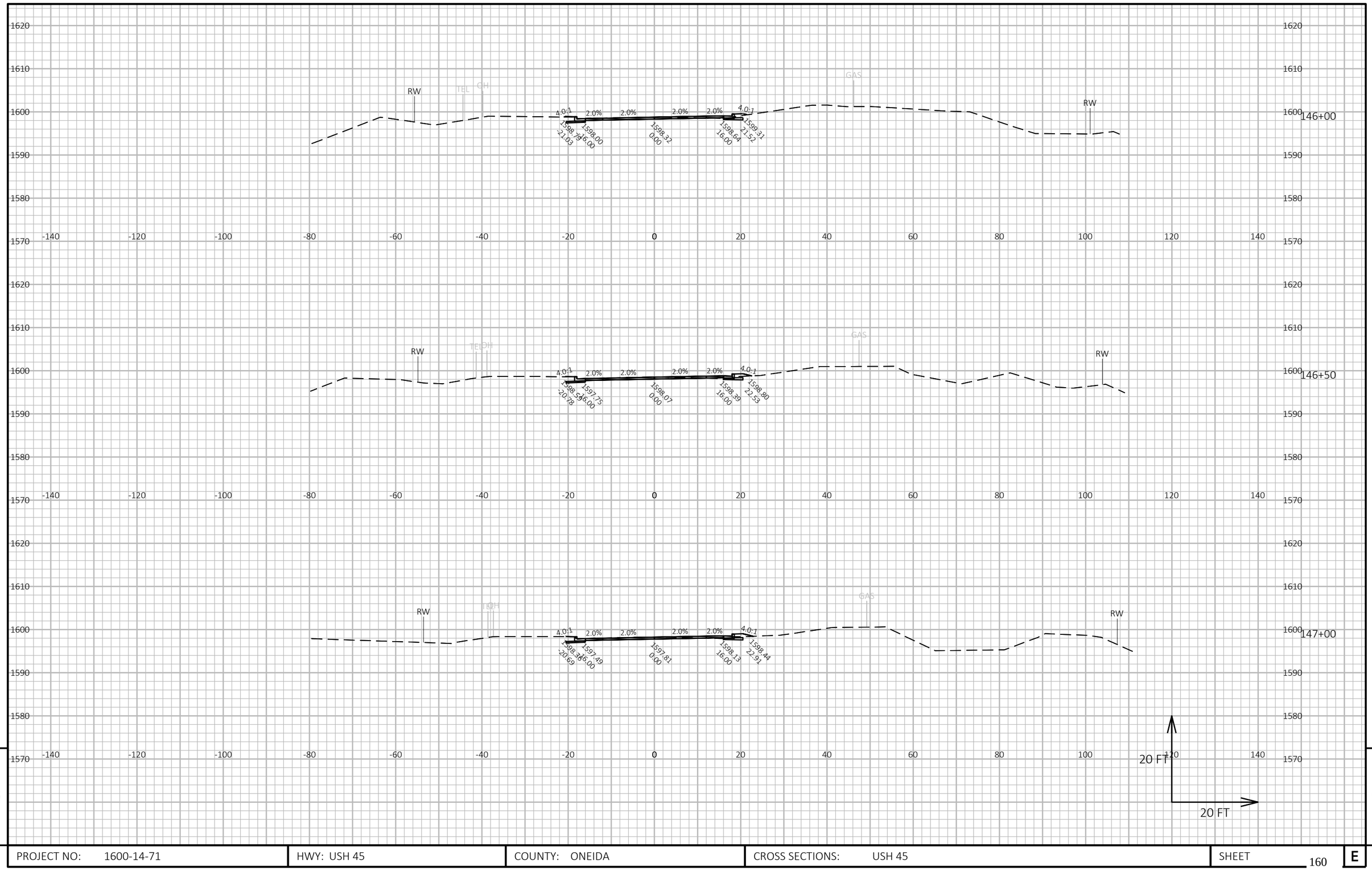


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 159	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 15

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 160	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 16

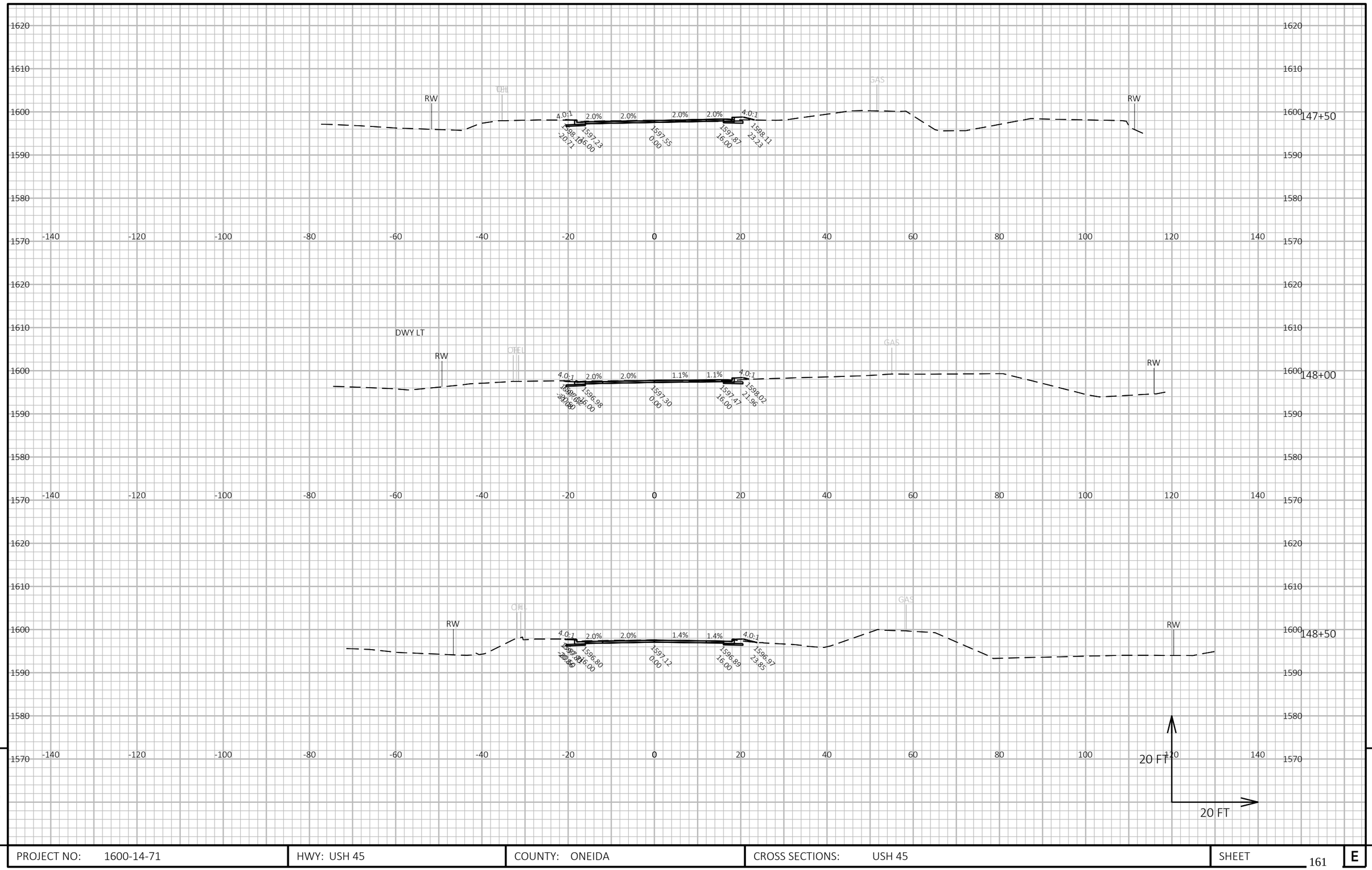
PLOT DATE : 3/3/2022 5:46 PM

PLOT BY : BRADY MATHISEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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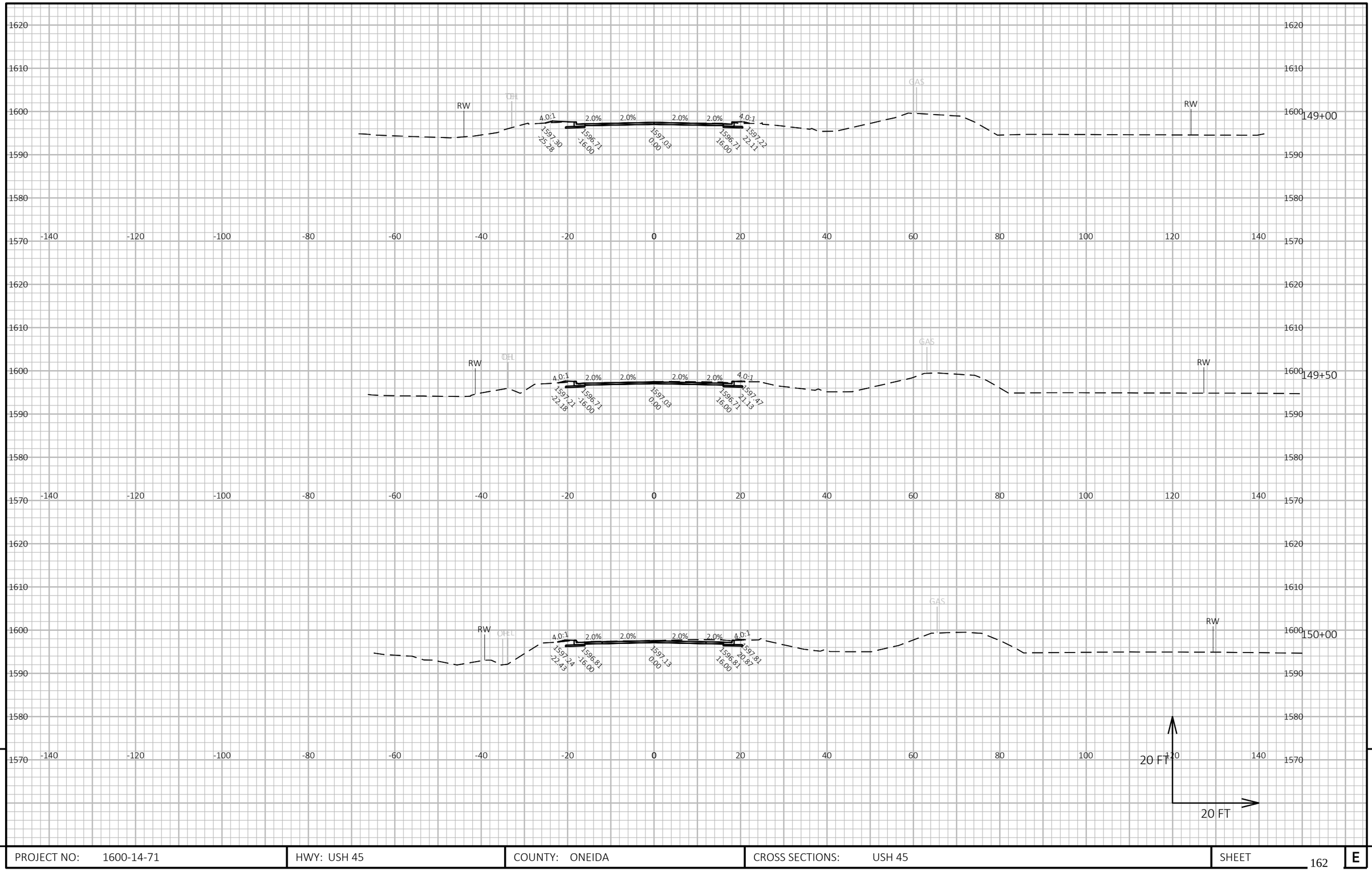
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 161	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 17

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 162	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 18

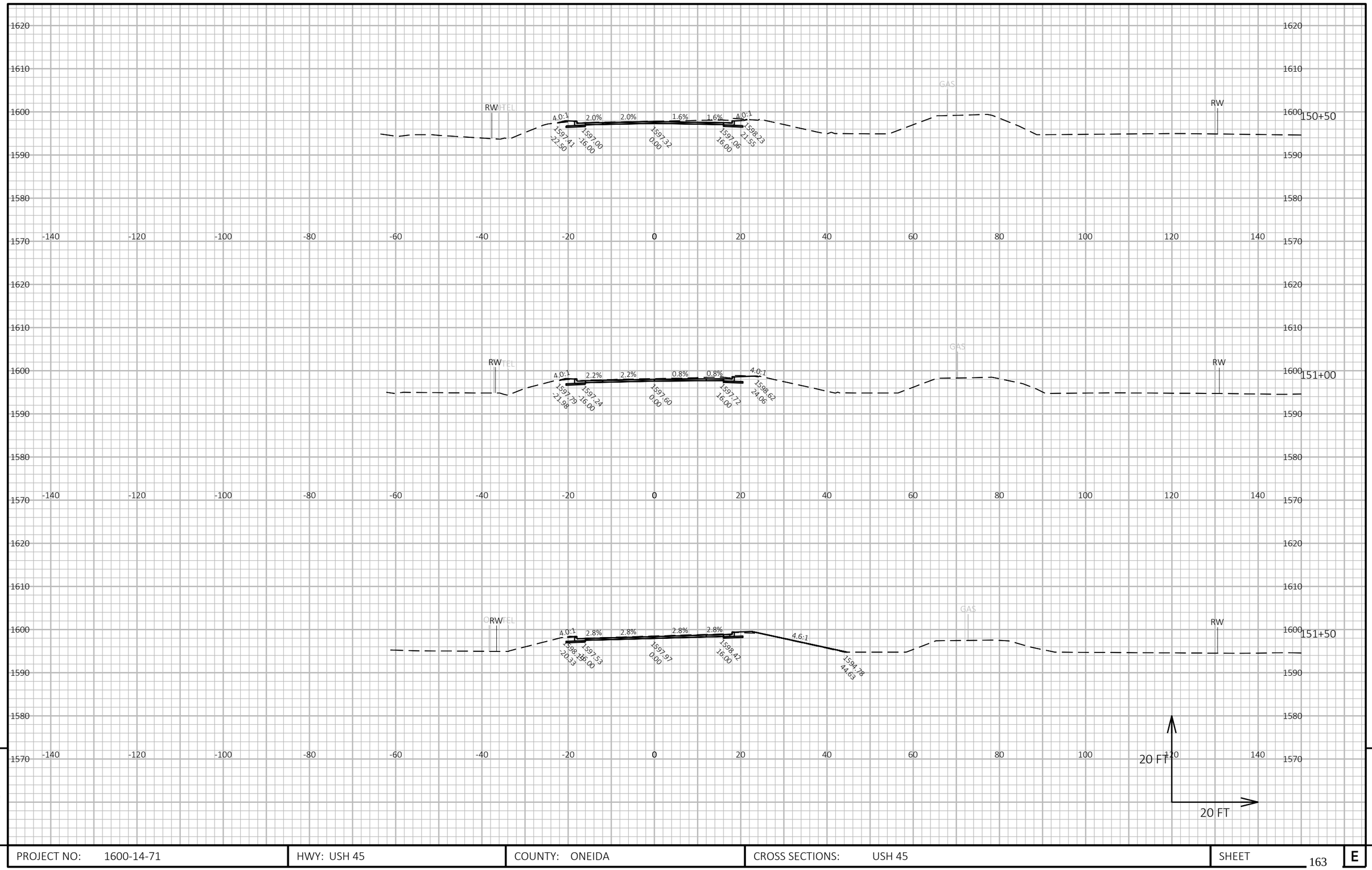
PLOT DATE : 3/3/2022 5:46 PM

PLOT BY : BRADY MATHISEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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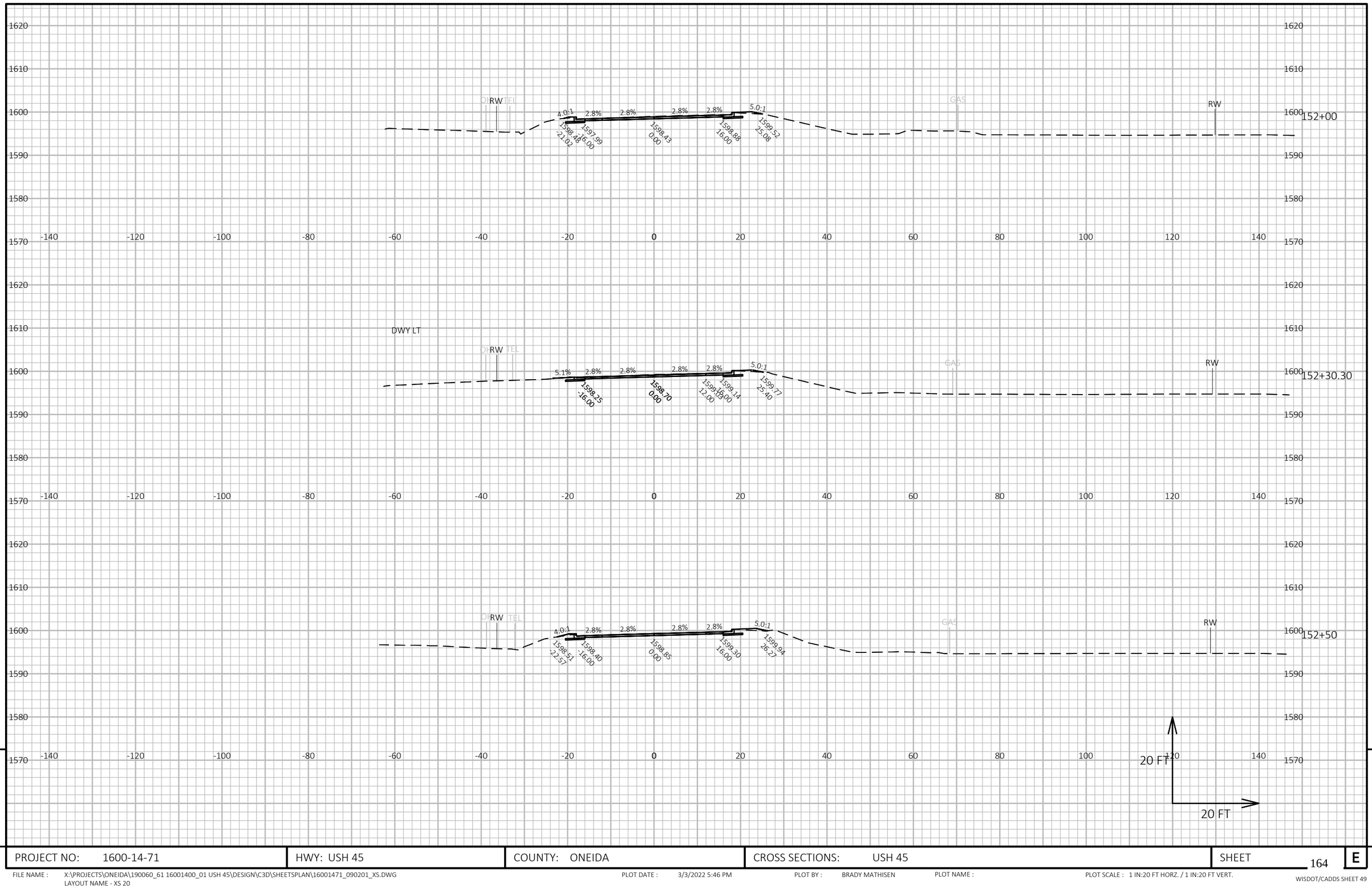
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 163	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 19

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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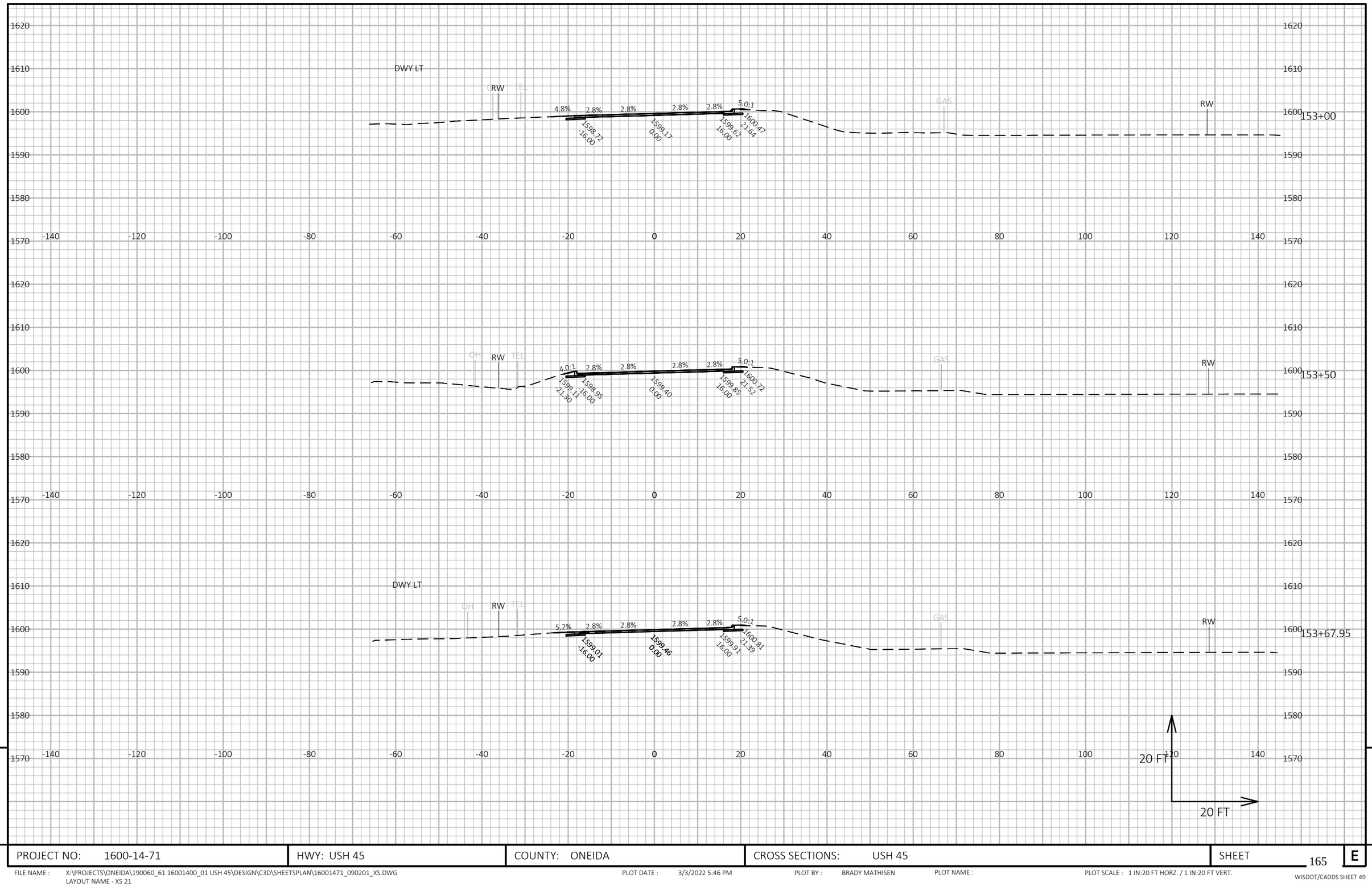
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 164	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 20

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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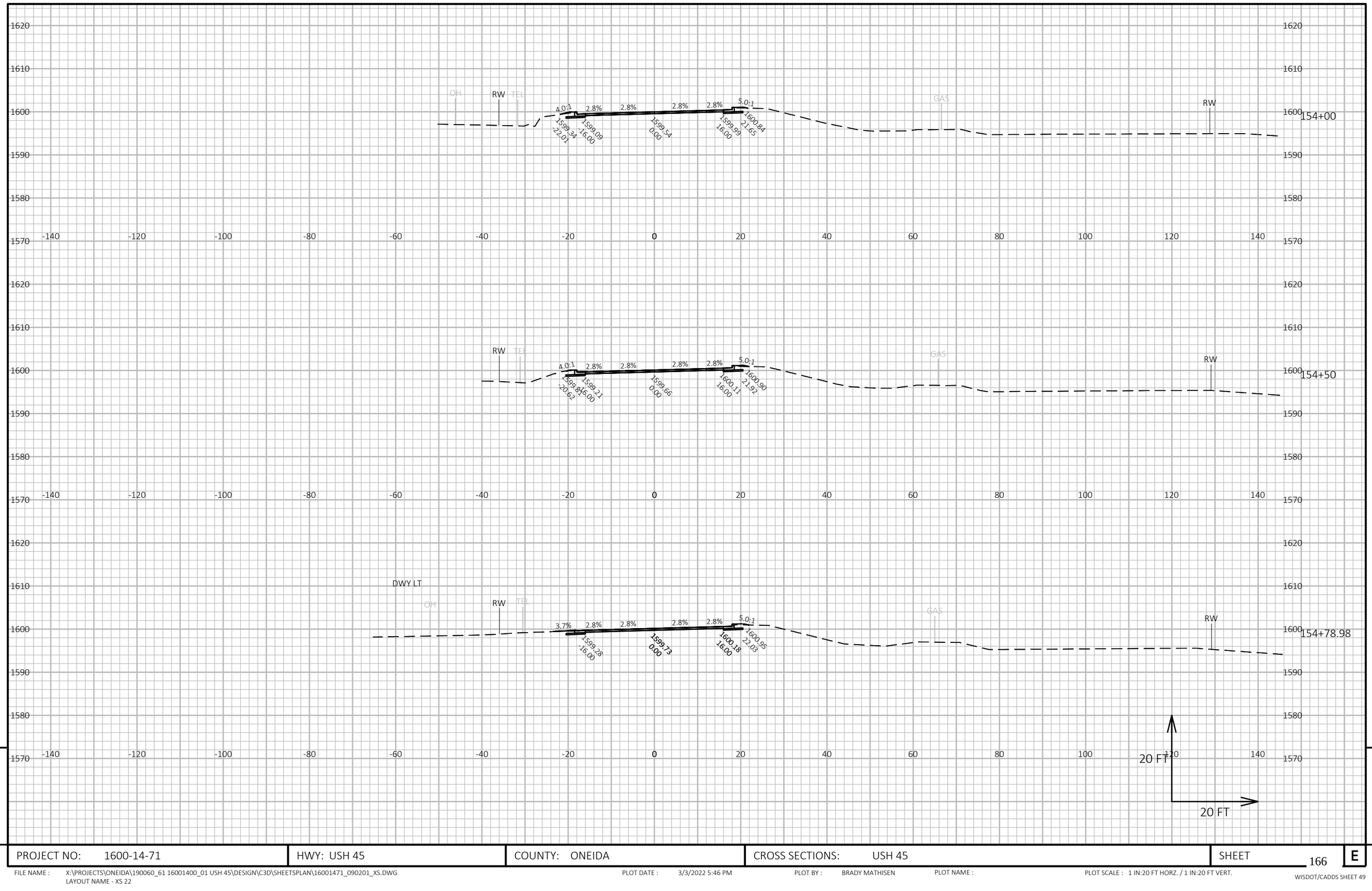
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 165	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 21

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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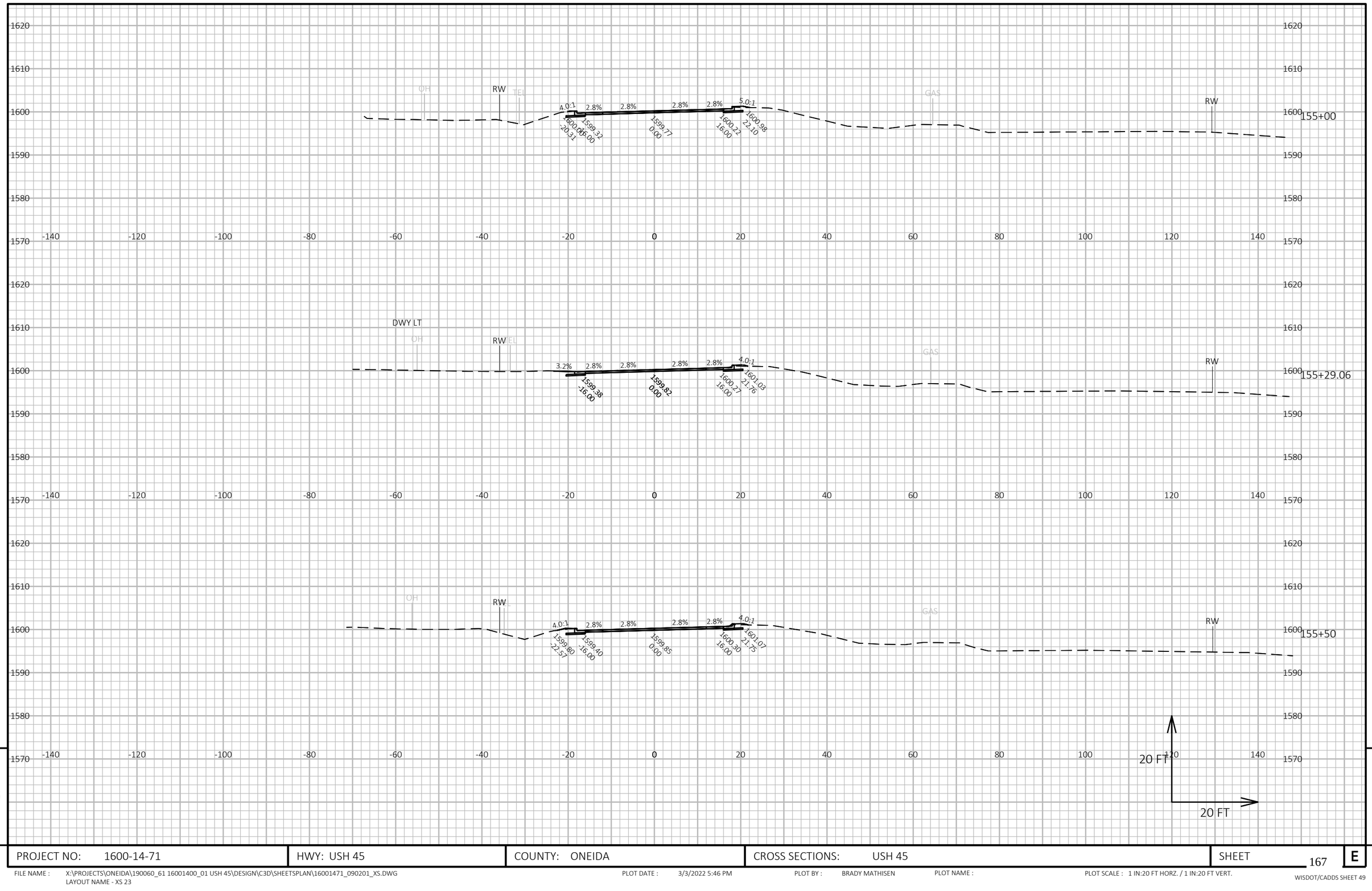
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 166	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 22

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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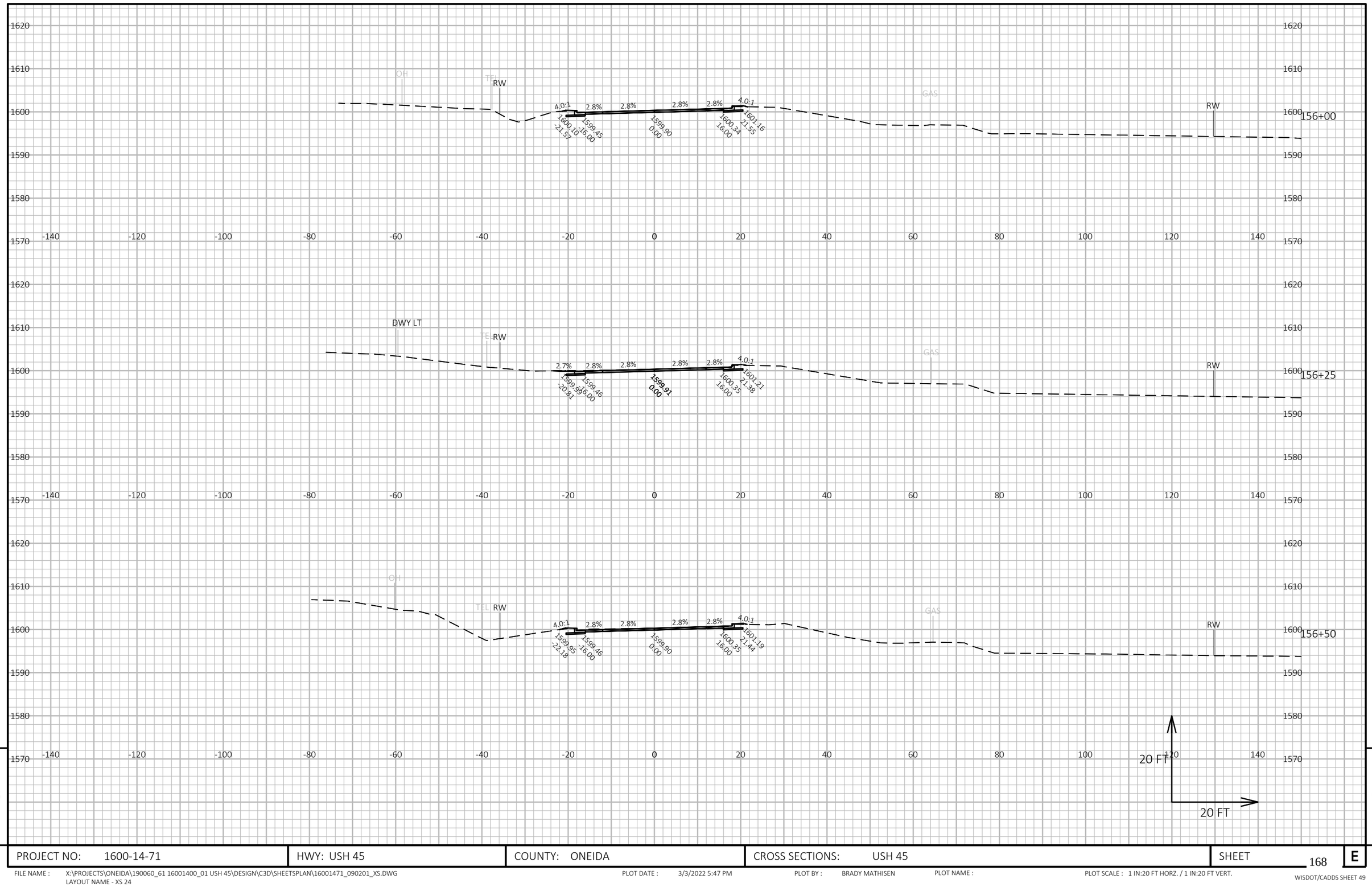
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 167	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 23

PLOT DATE : 3/3/2022 5:46 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

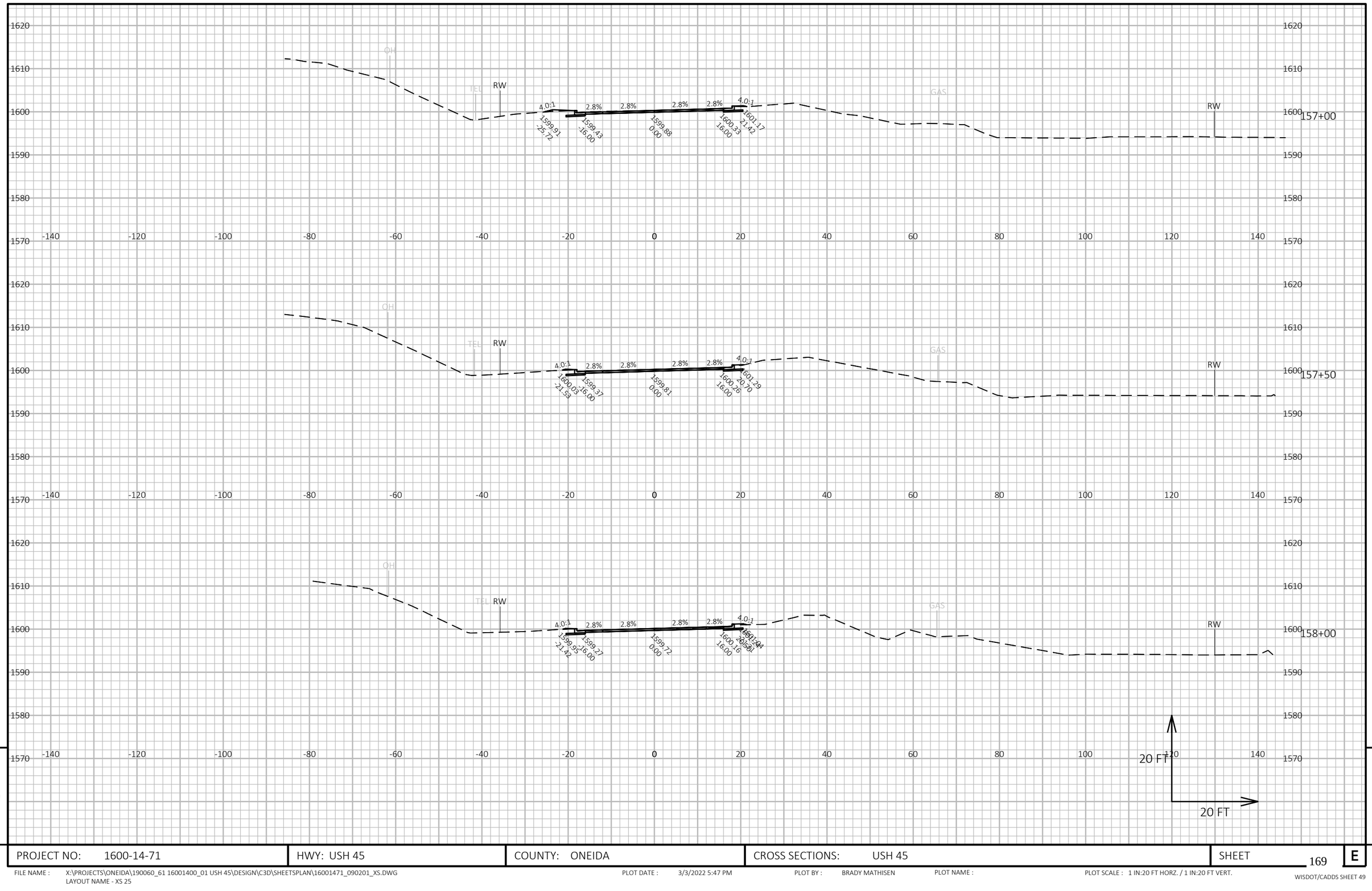


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 168	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 24

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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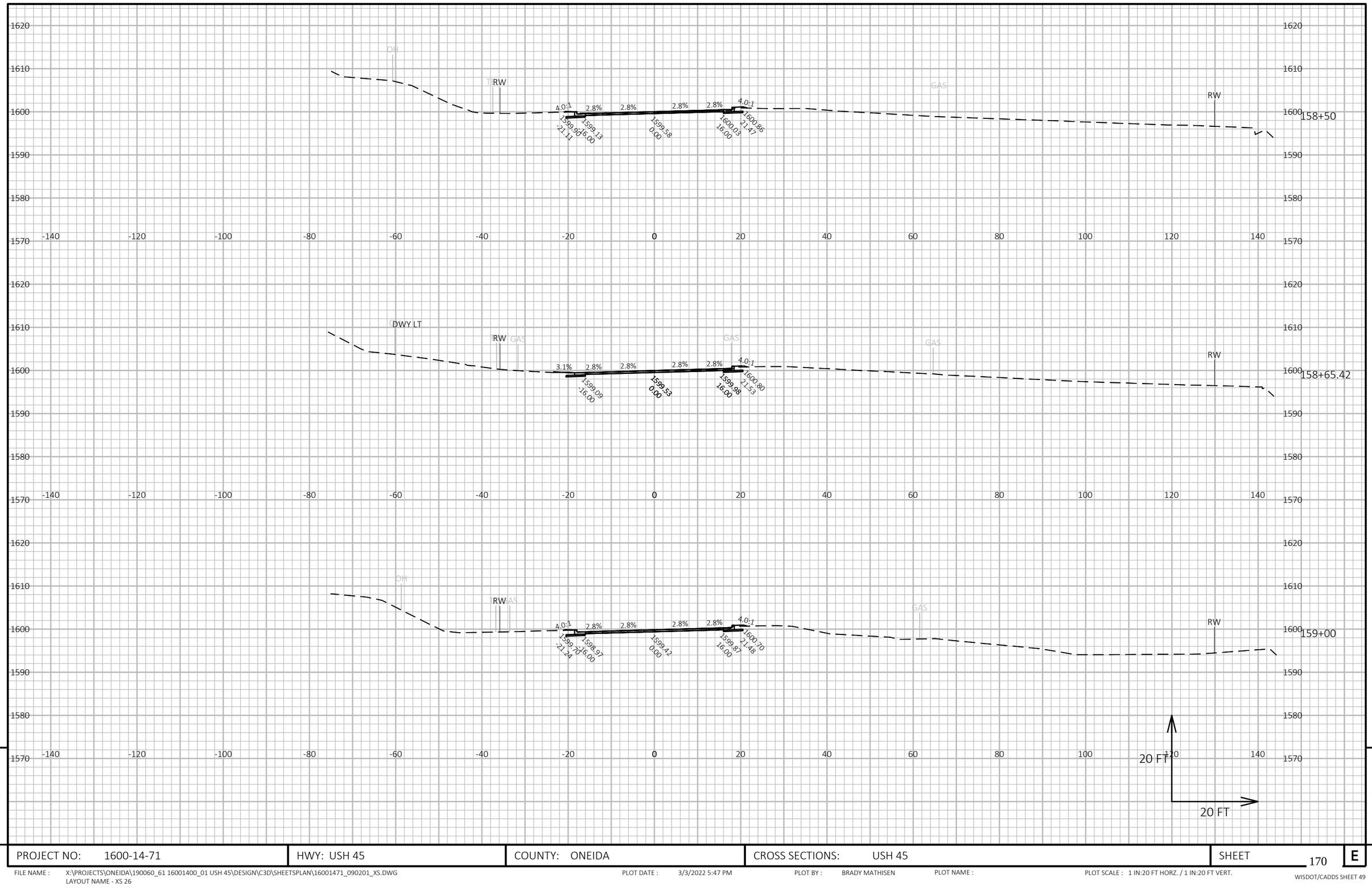
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 169	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 25

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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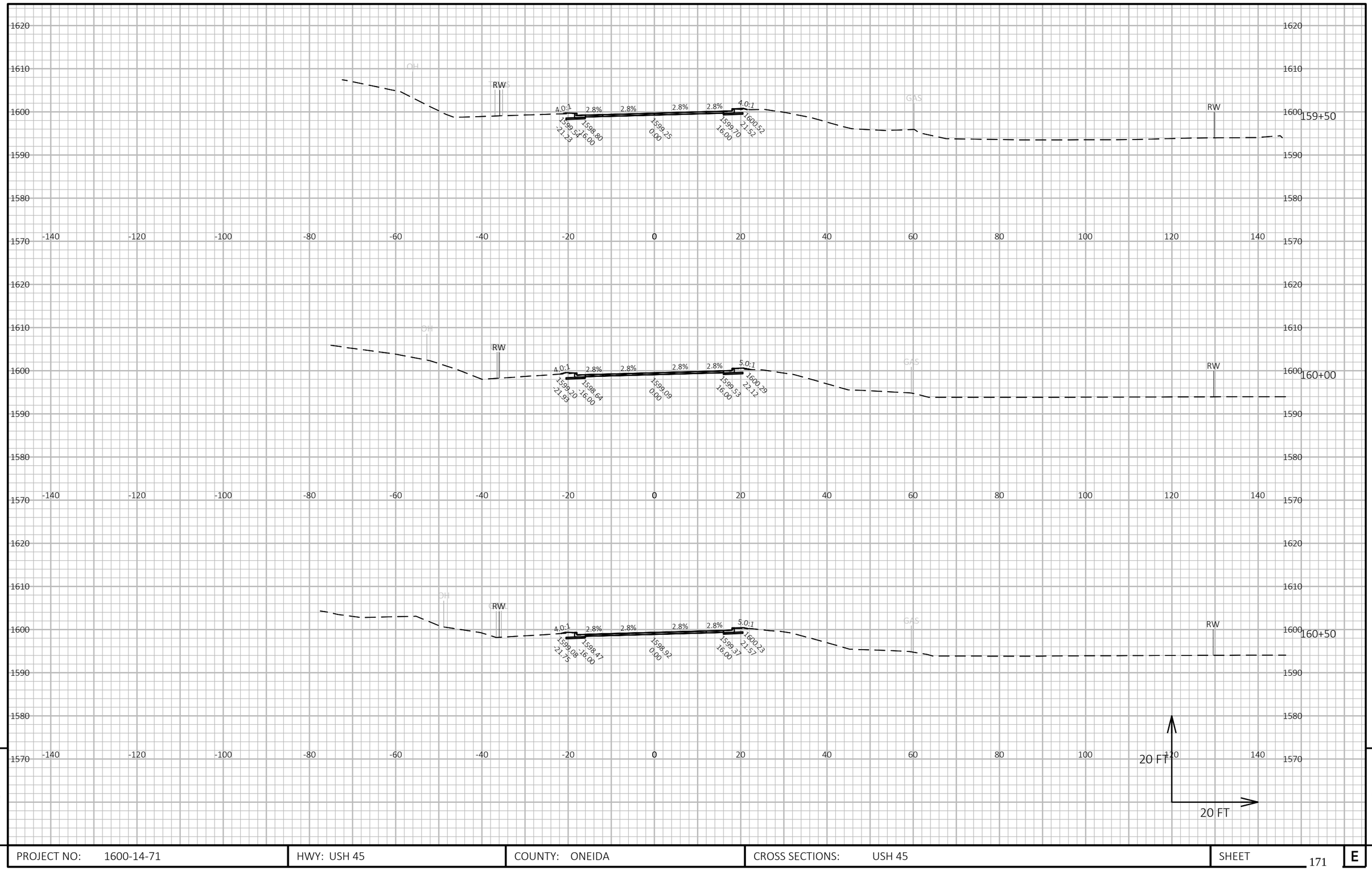
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 170	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 26

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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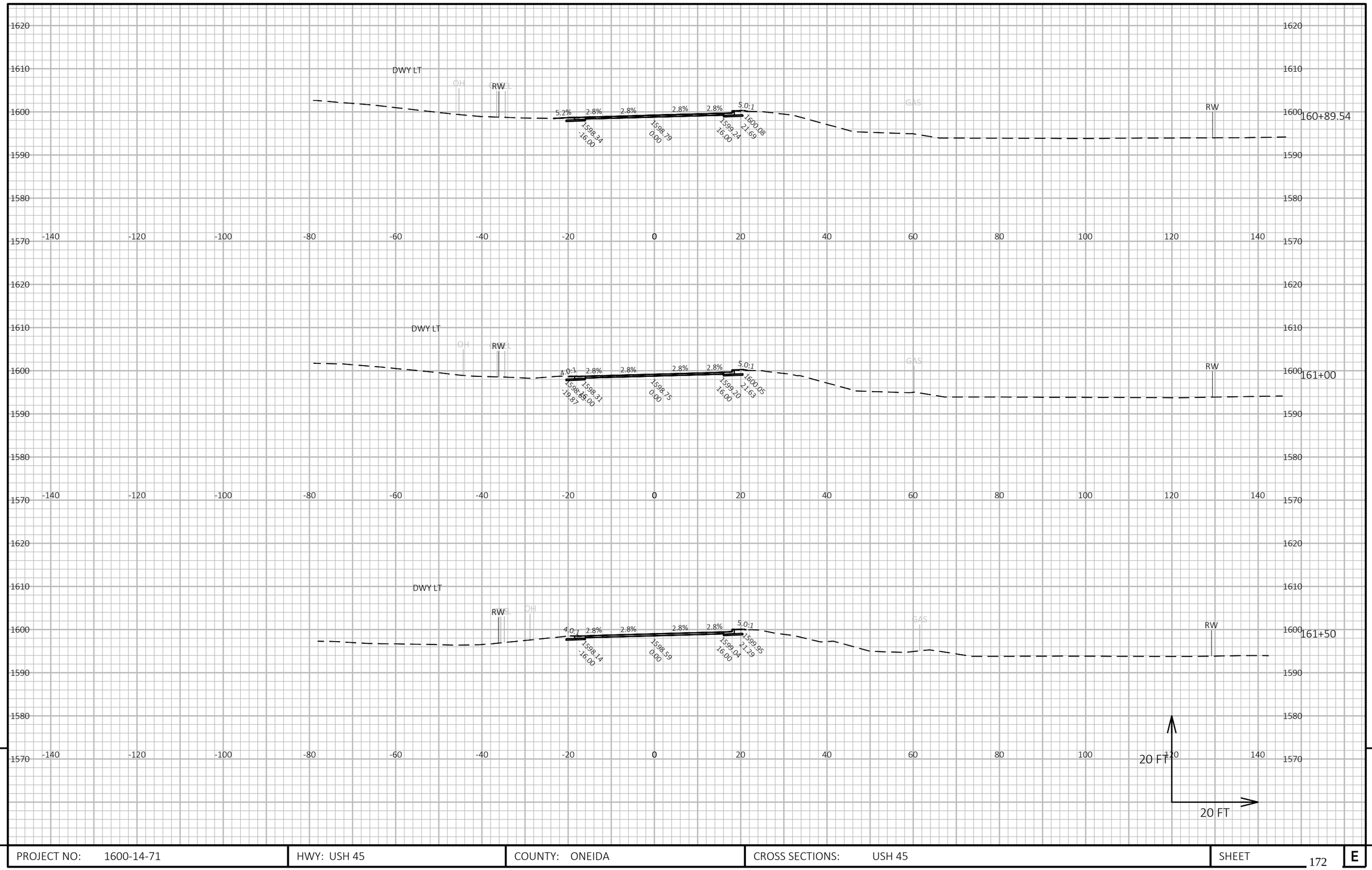
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 171	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 27

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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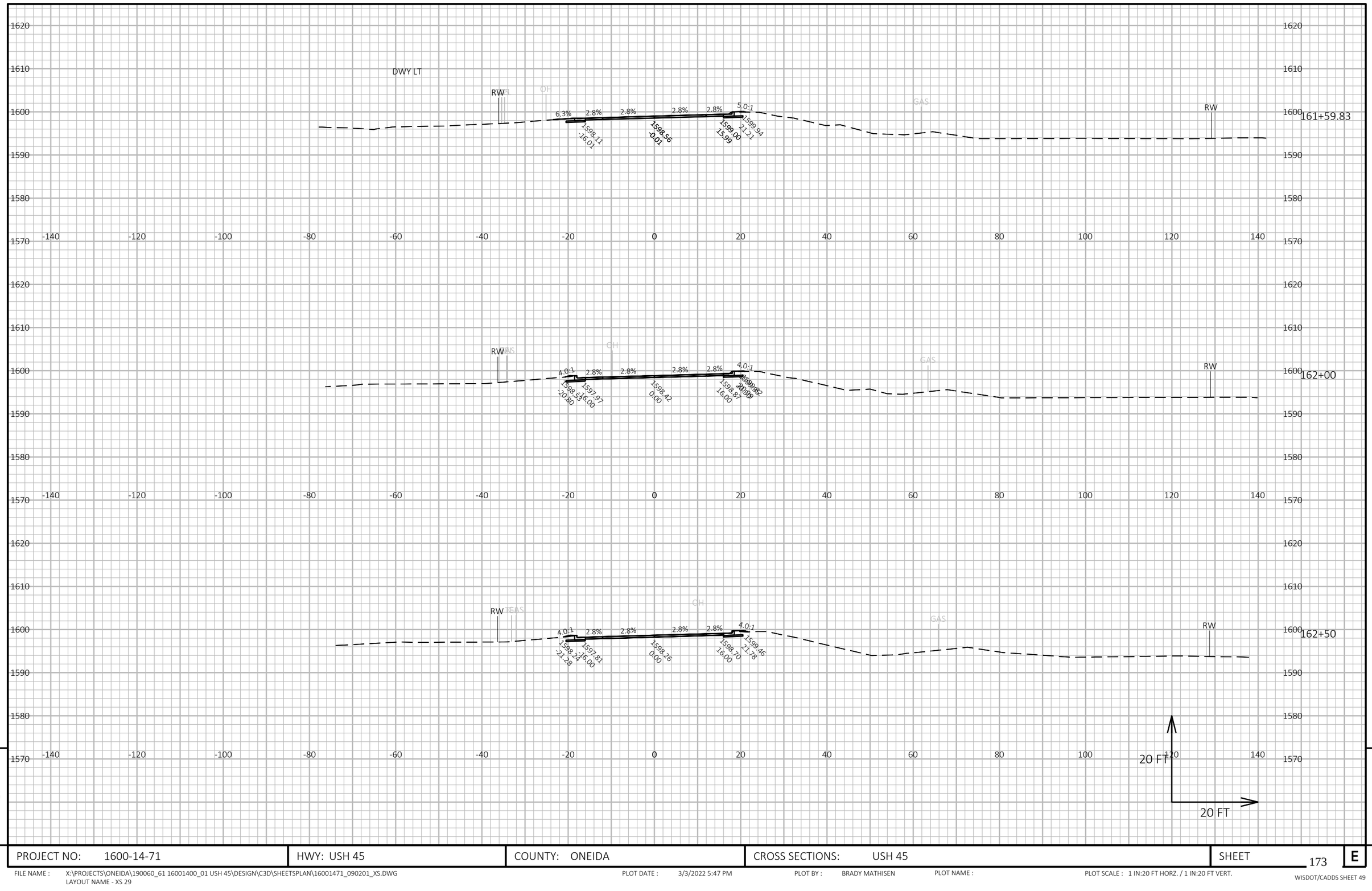
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 172	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 28

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

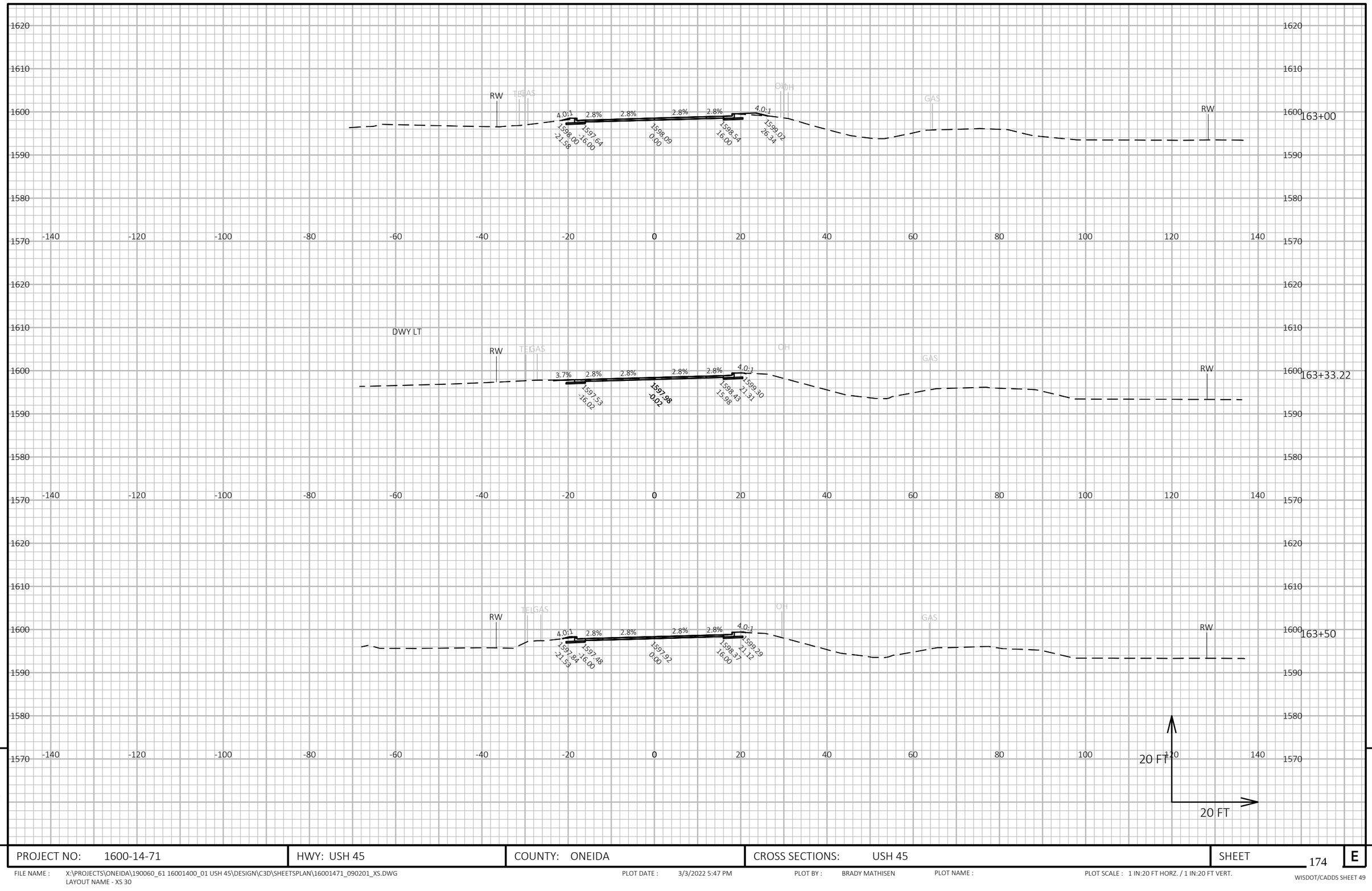


PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 173	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 29

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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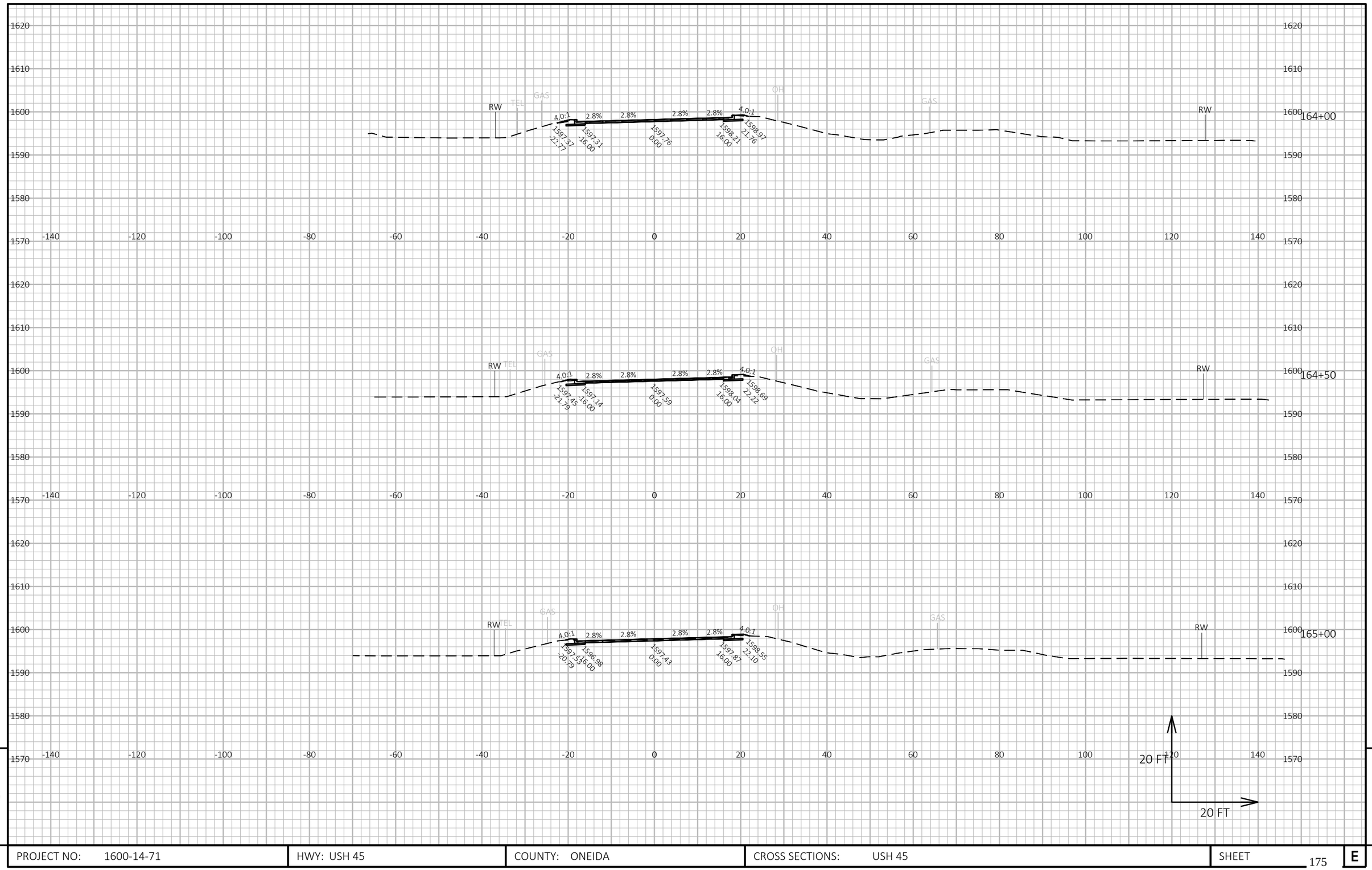
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 174	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 30

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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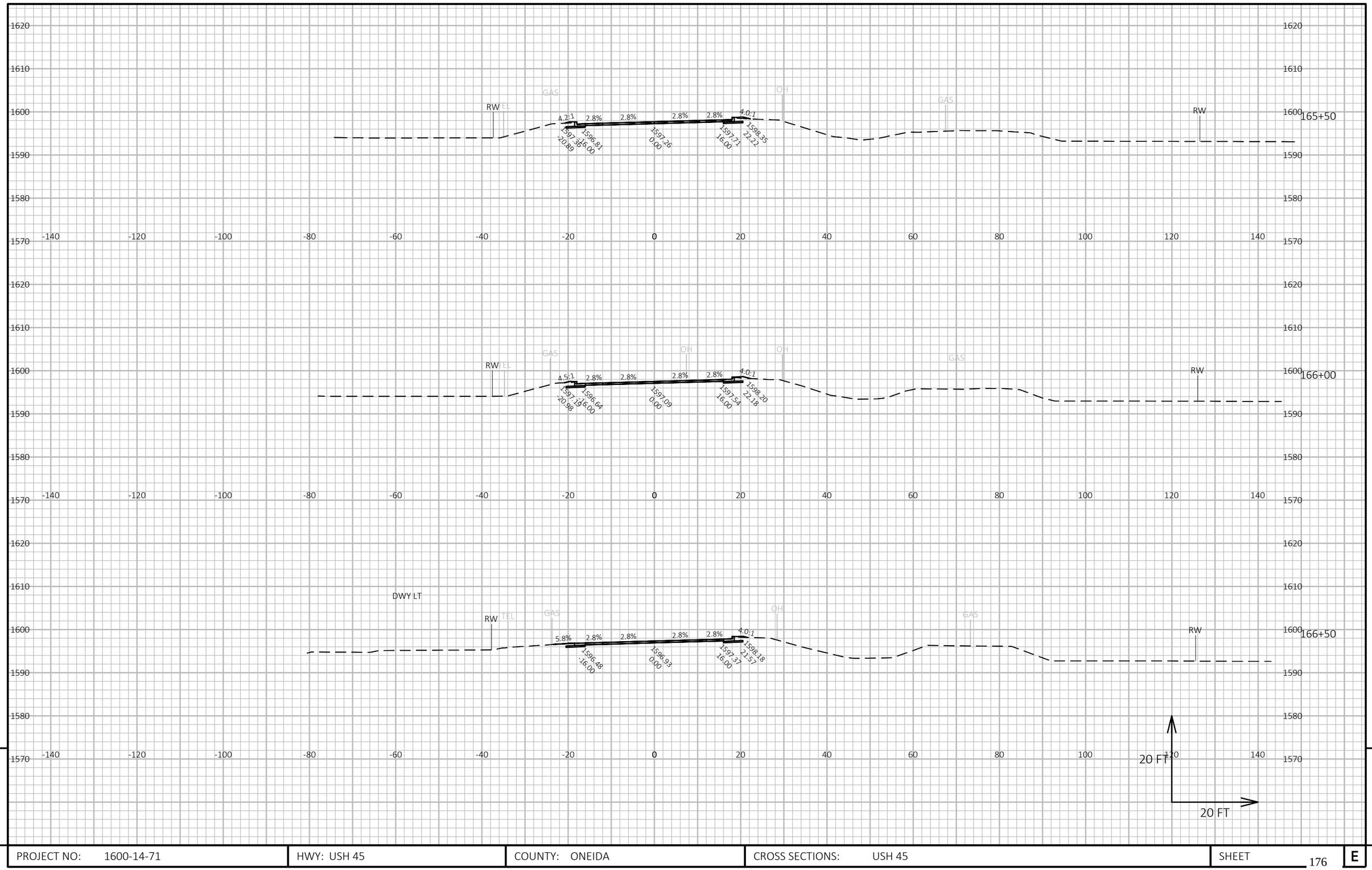
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 175	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 31

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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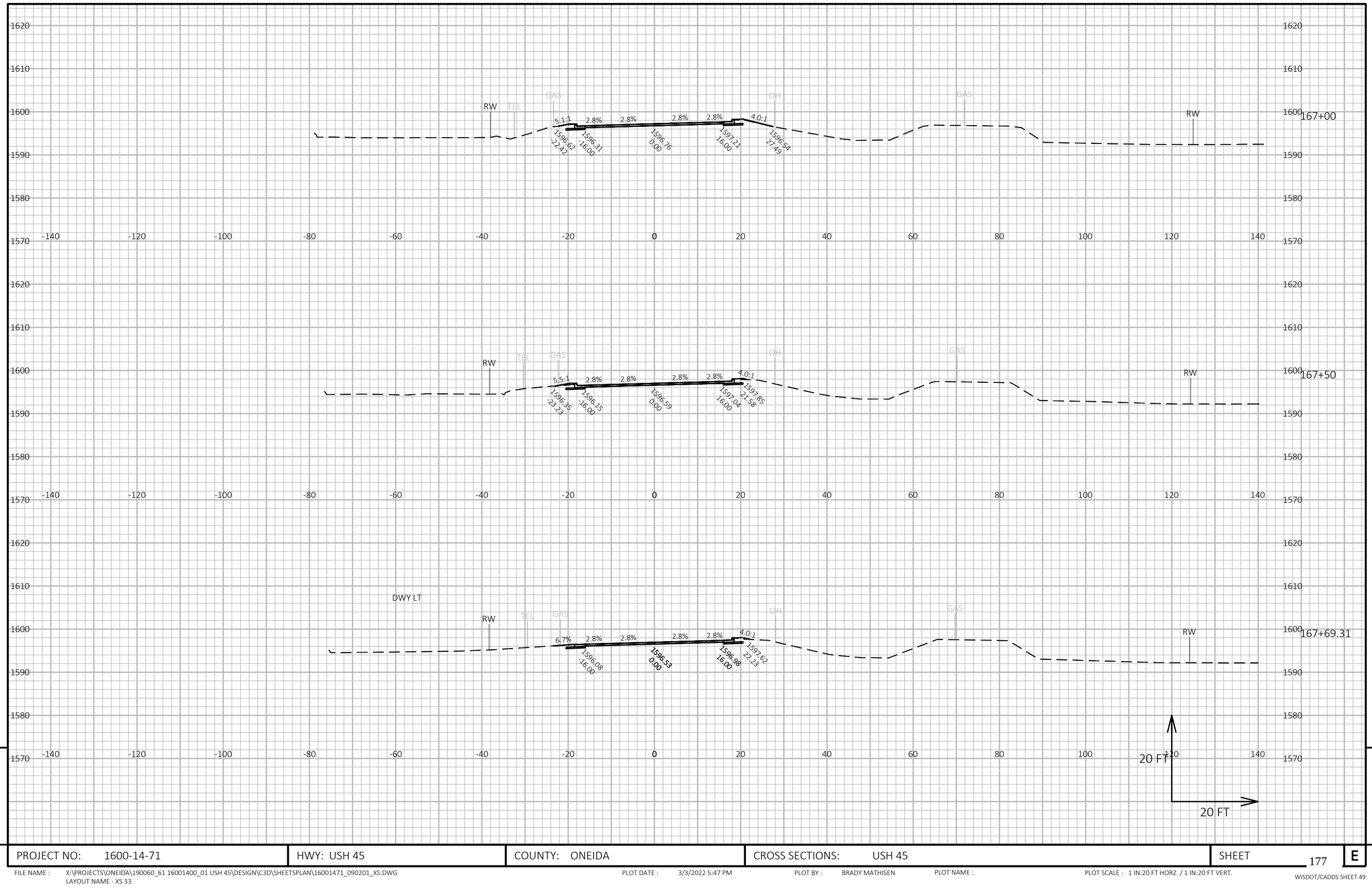
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 176	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 32

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 177	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 33

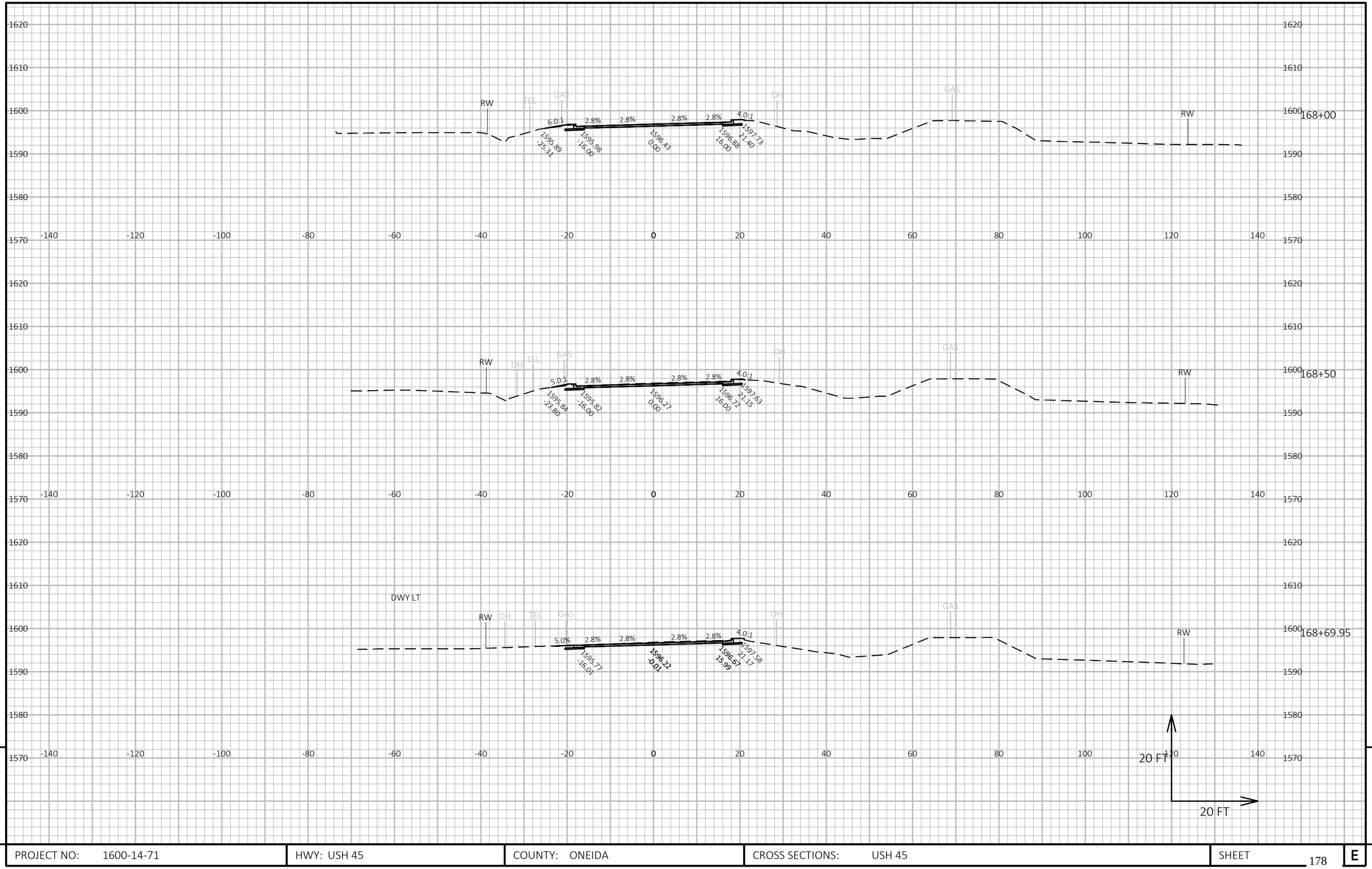
PLOT DATE : 3/3/2022 5:47 PM

PLOT BY : BRADY MATHISEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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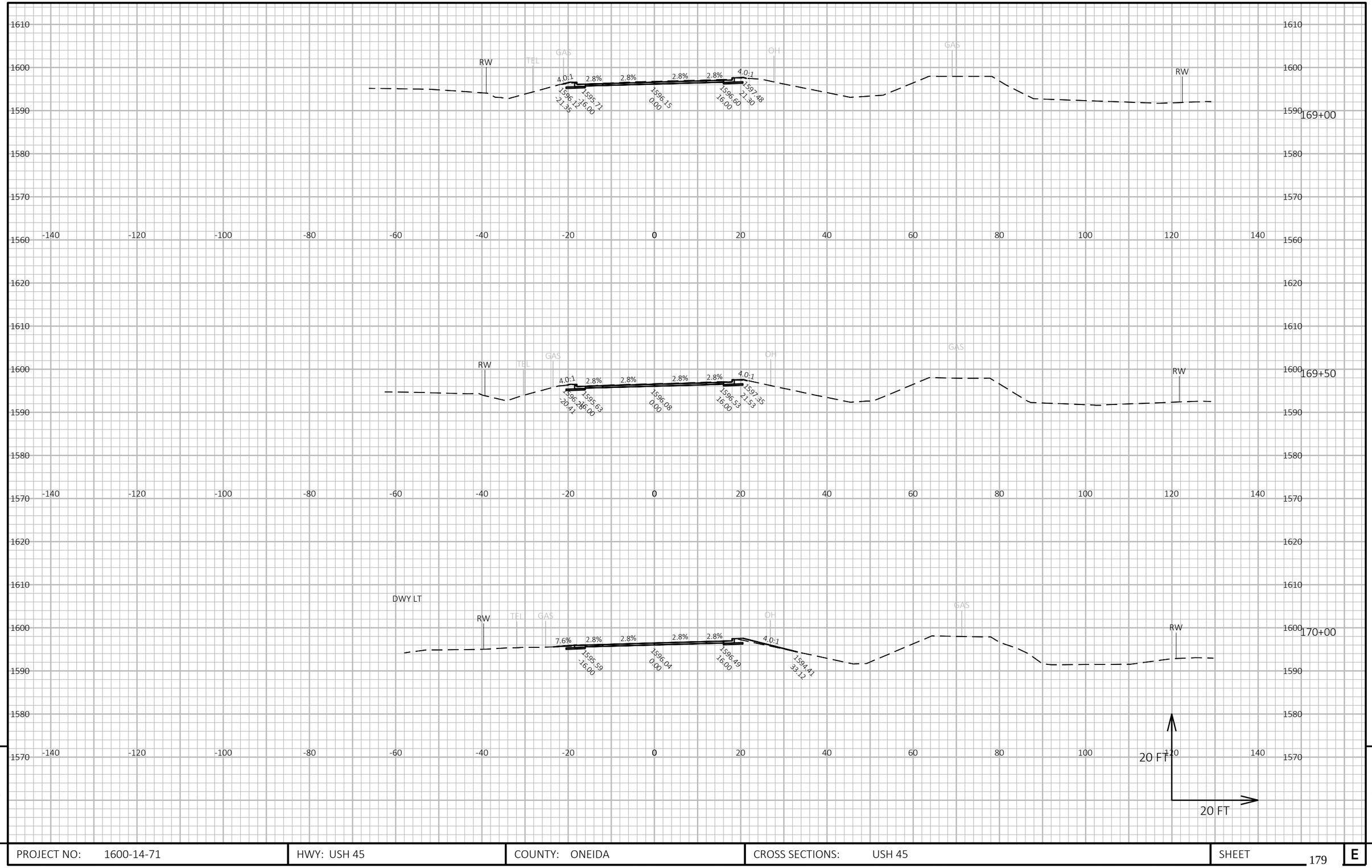
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 178	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 34

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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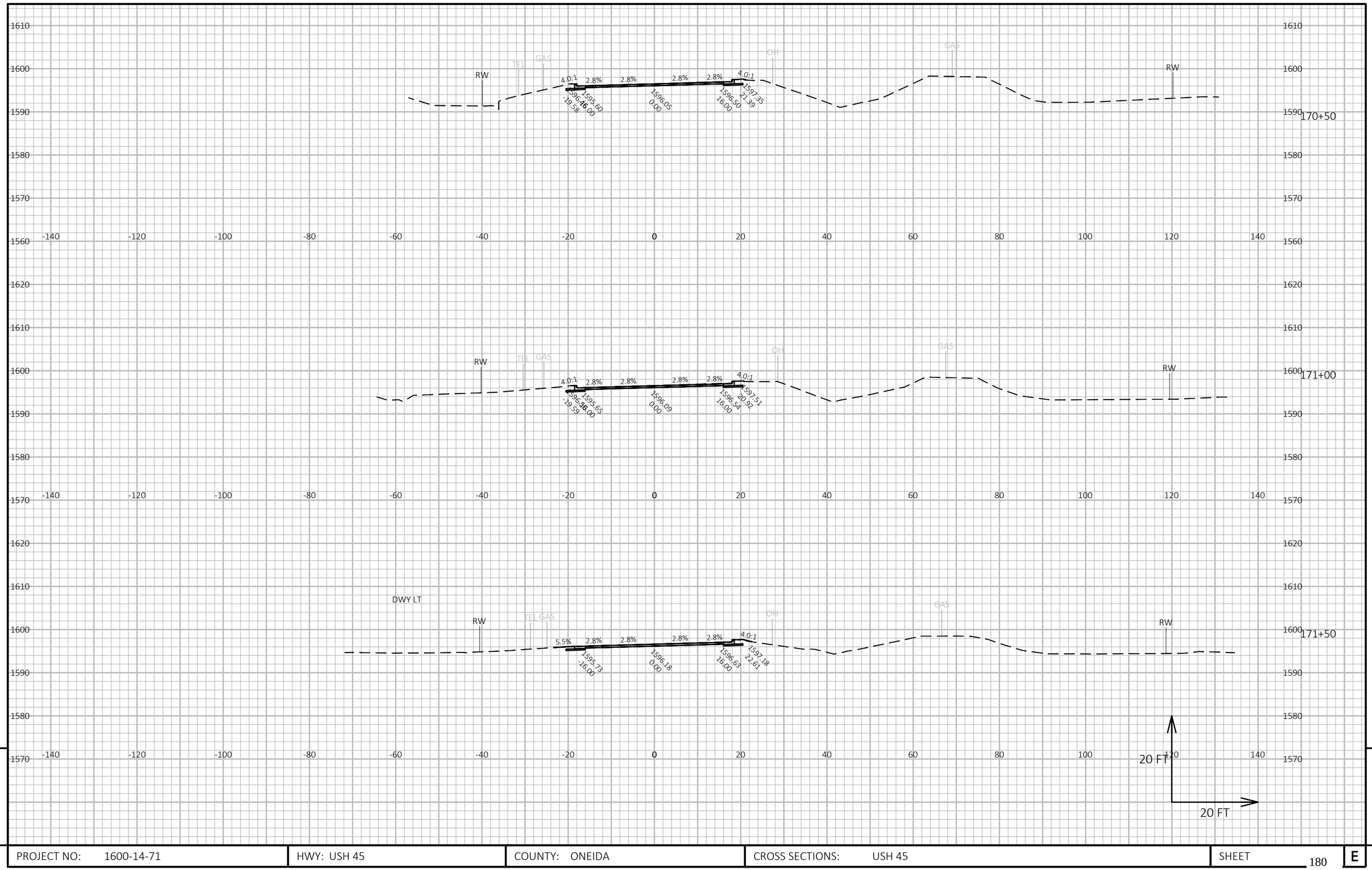
9

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 179	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 35

PLOT DATE : 3/3/2022 5:47 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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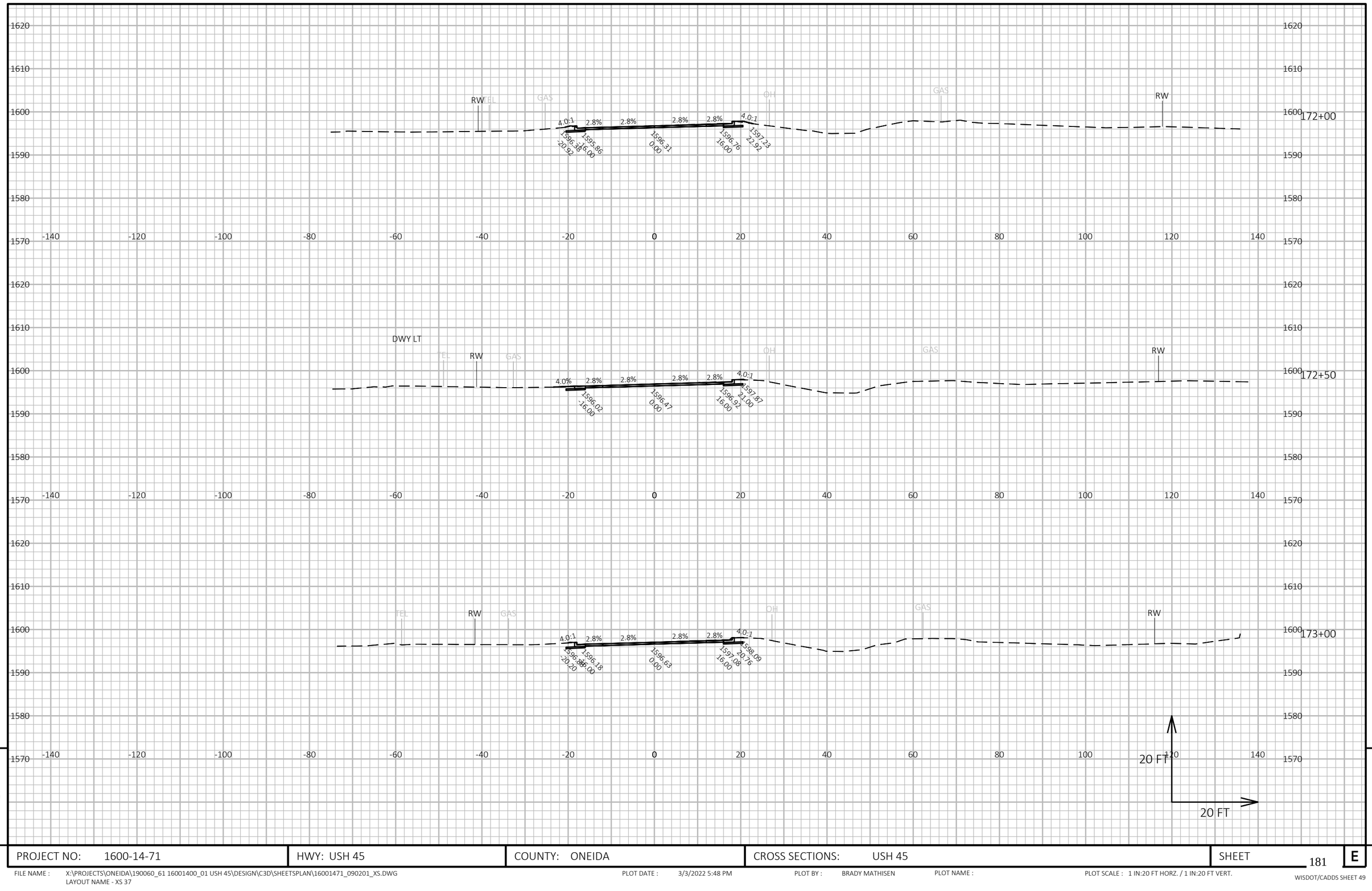
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 180	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 36

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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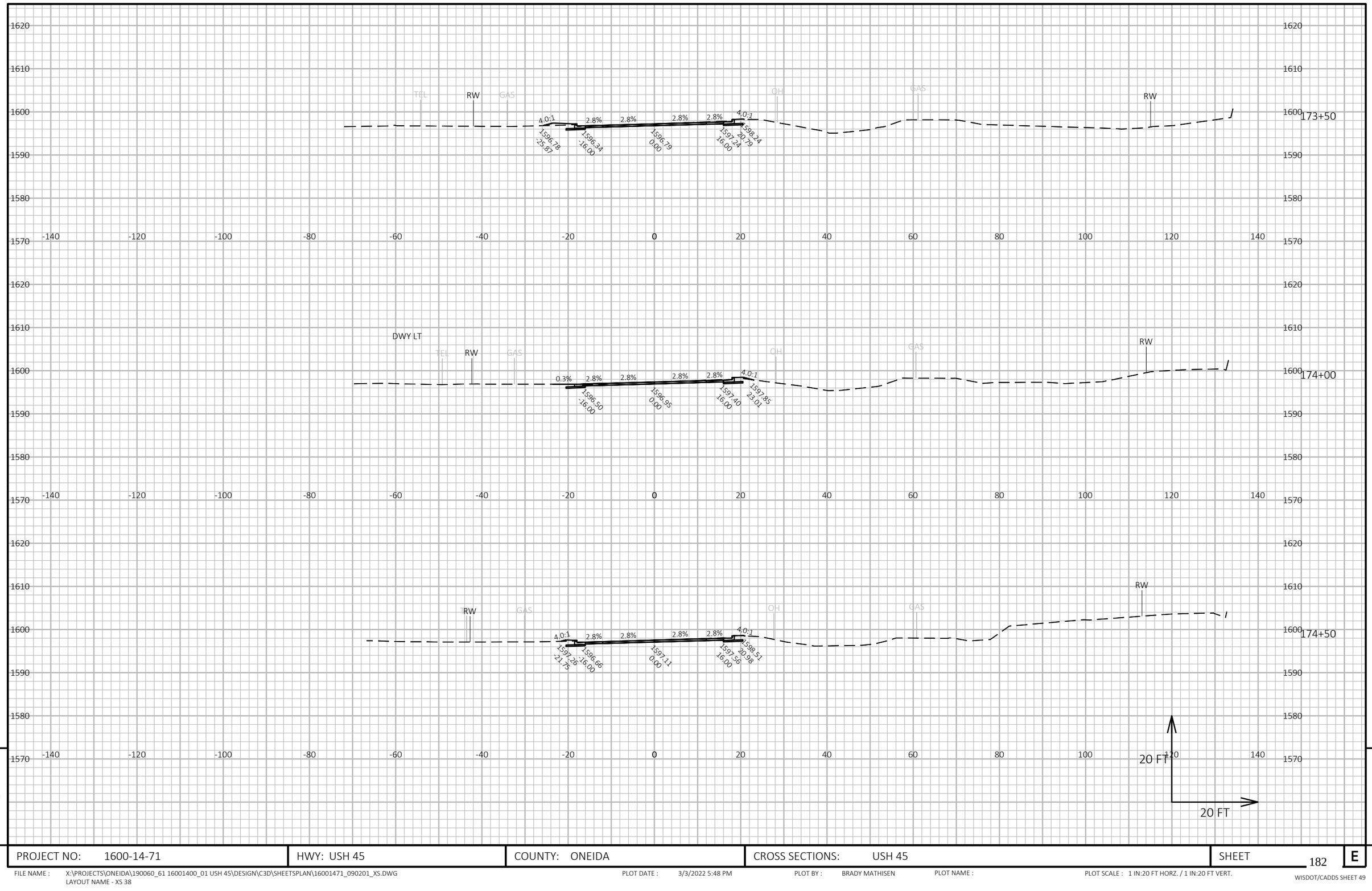
9

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 181	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 37

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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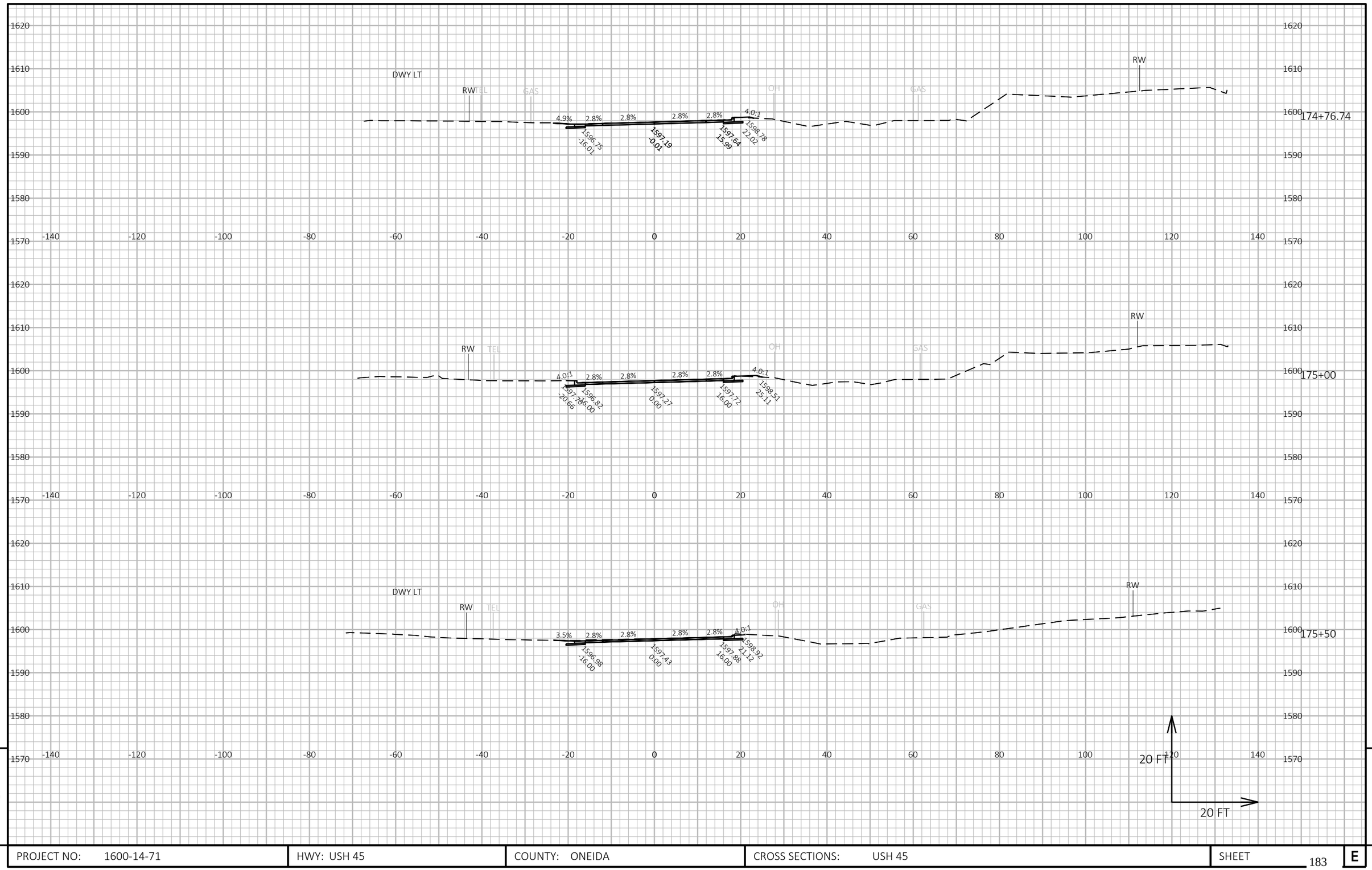
9

PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 182	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 38

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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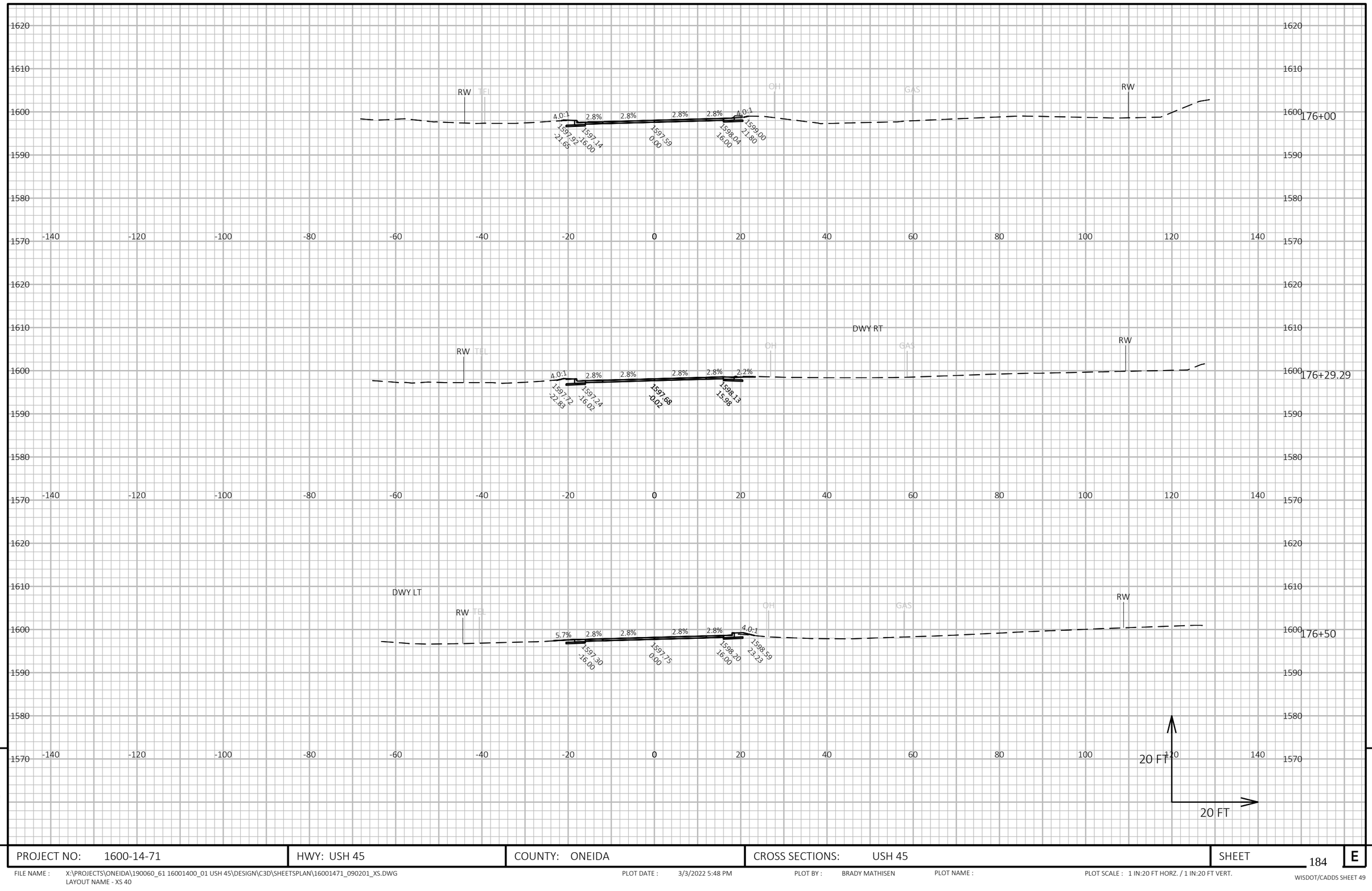
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 183	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 39

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 184	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 40

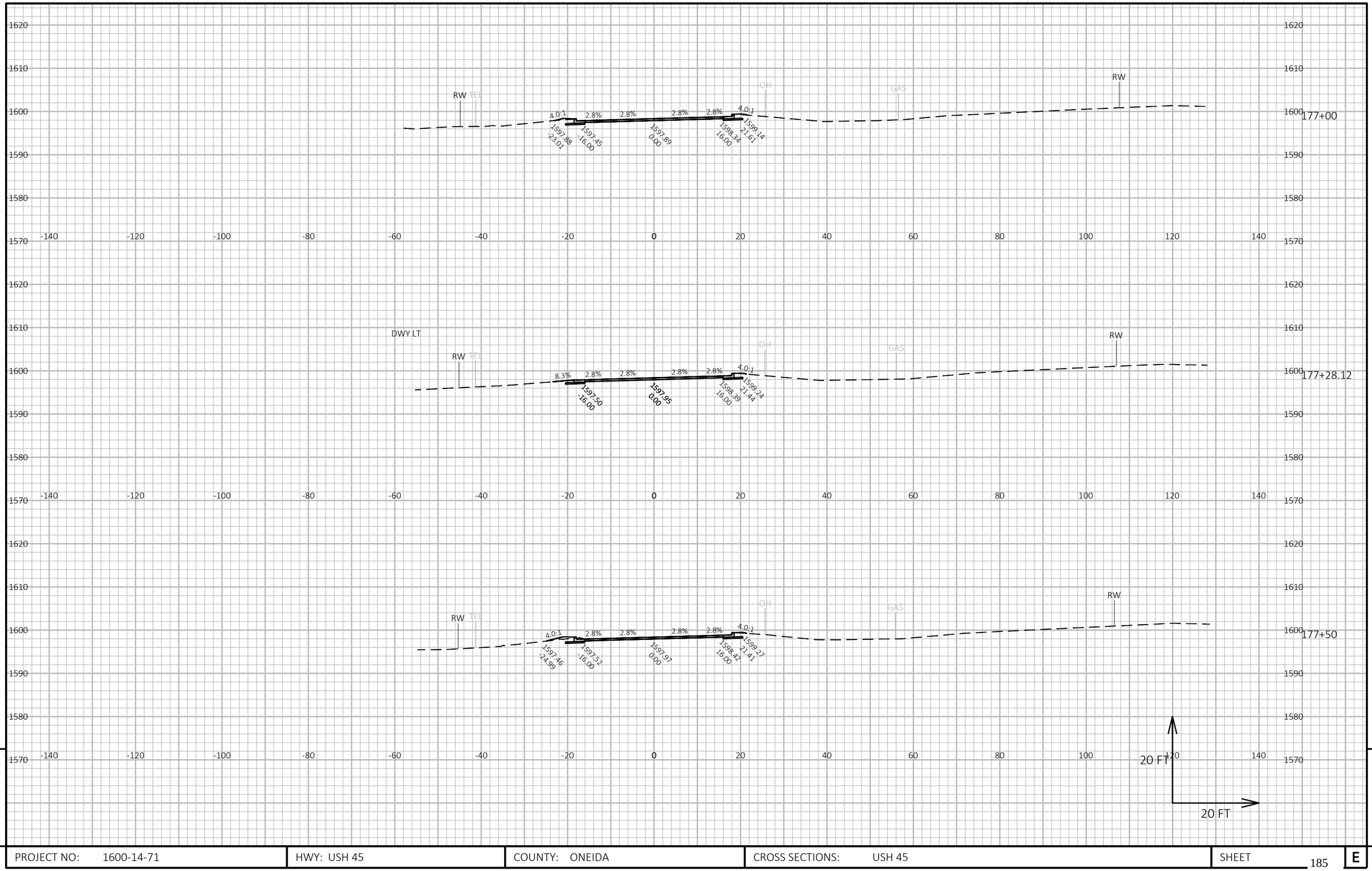
PLOT DATE : 3/3/2022 5:48 PM

PLOT BY : BRADY MATHISEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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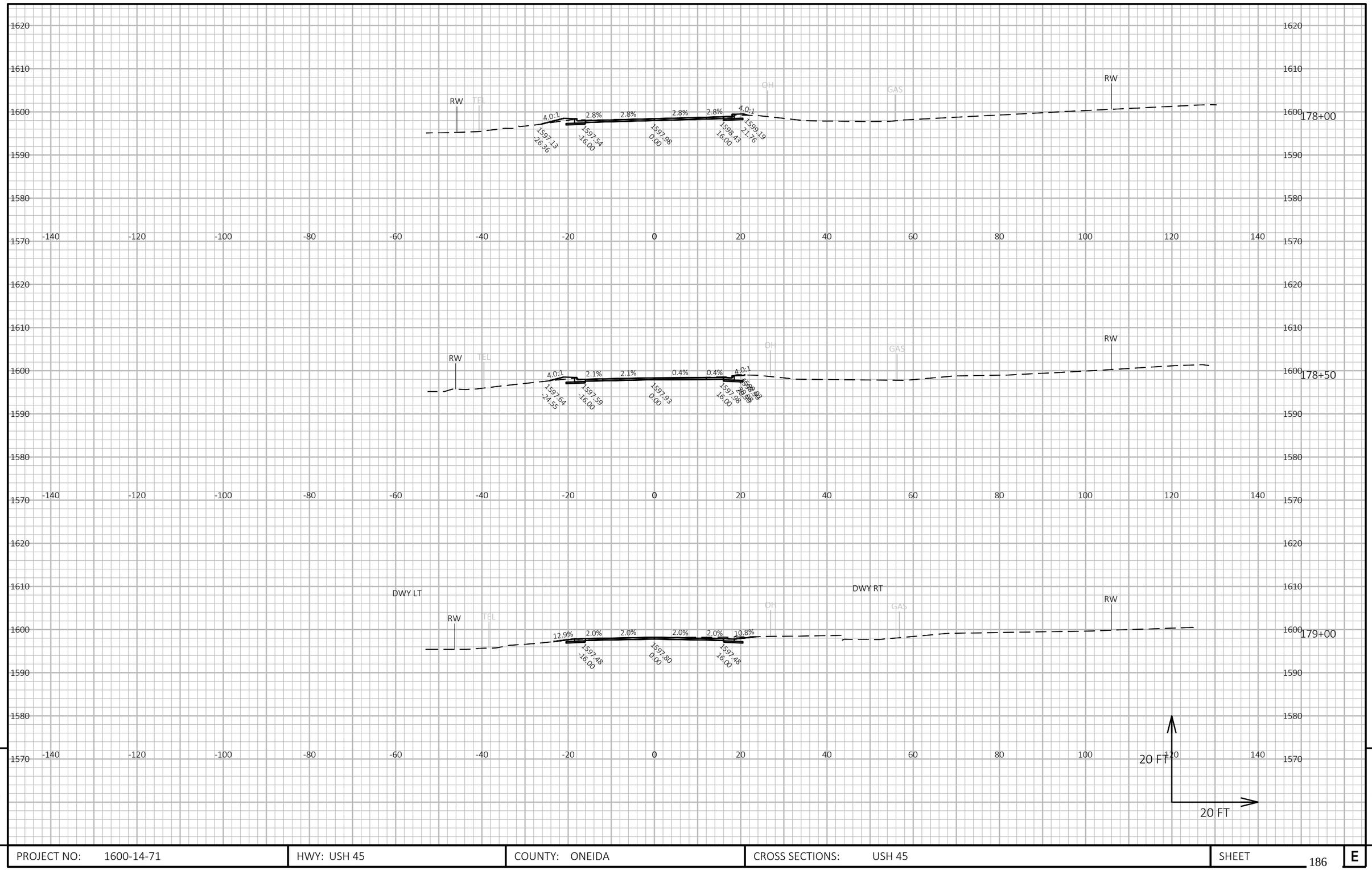
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 185	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 41

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 186	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 42

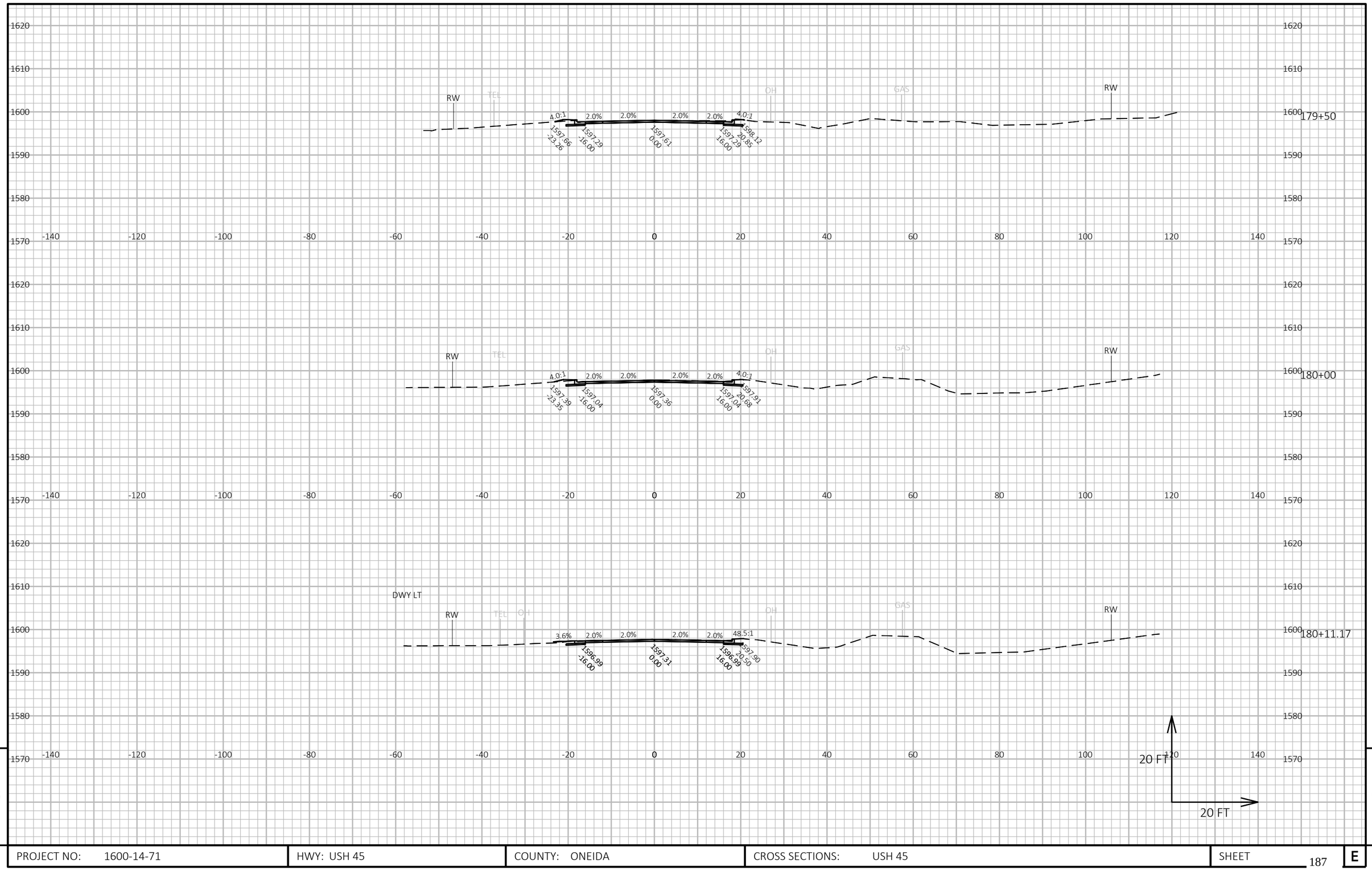
PLOT DATE : 3/3/2022 5:48 PM

PLOT BY : BRADY MATHISEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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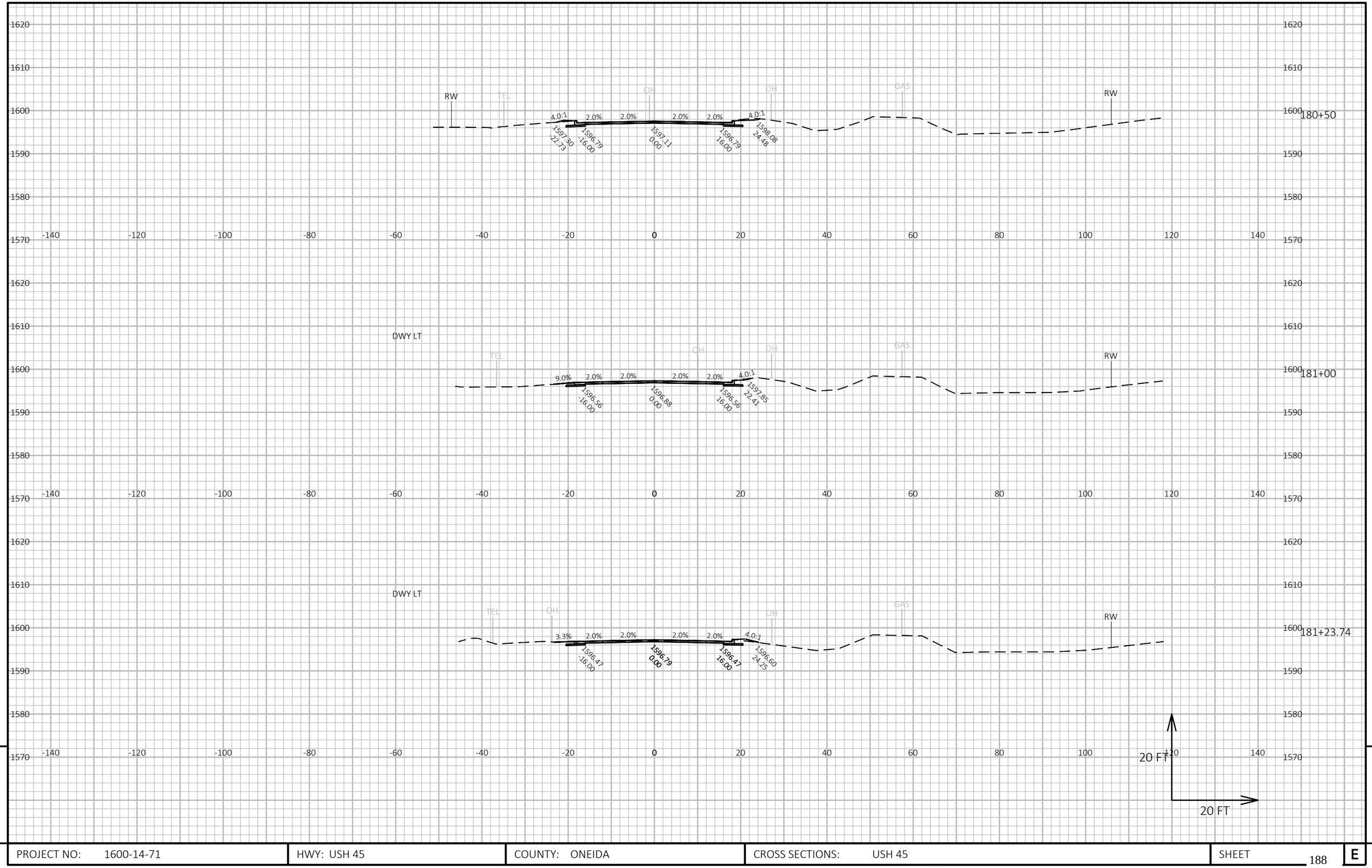
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 187	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 43

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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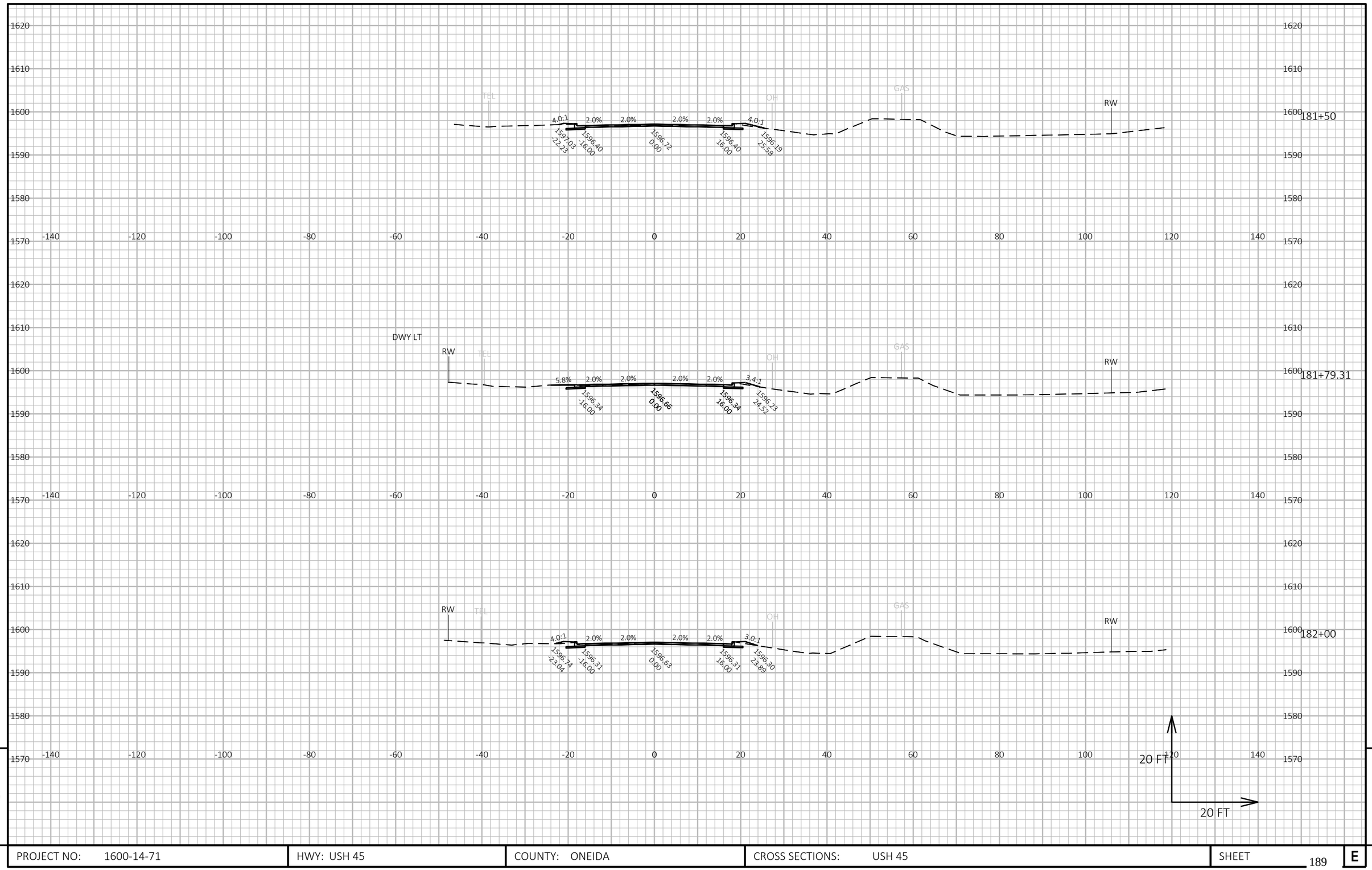
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 188	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 44

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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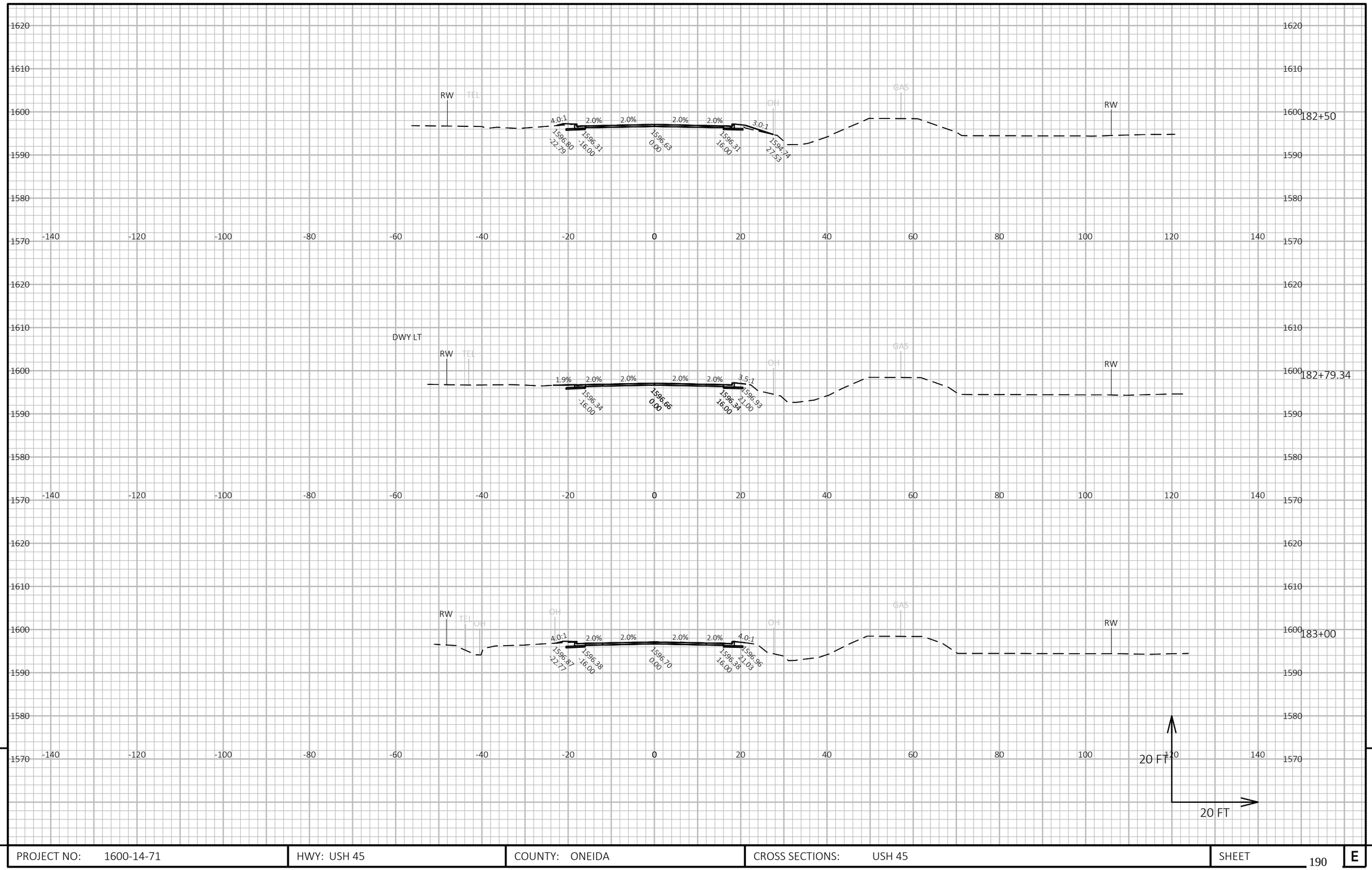
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 189	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 45

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 190	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 46

PLOT DATE : 3/3/2022 5:48 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49

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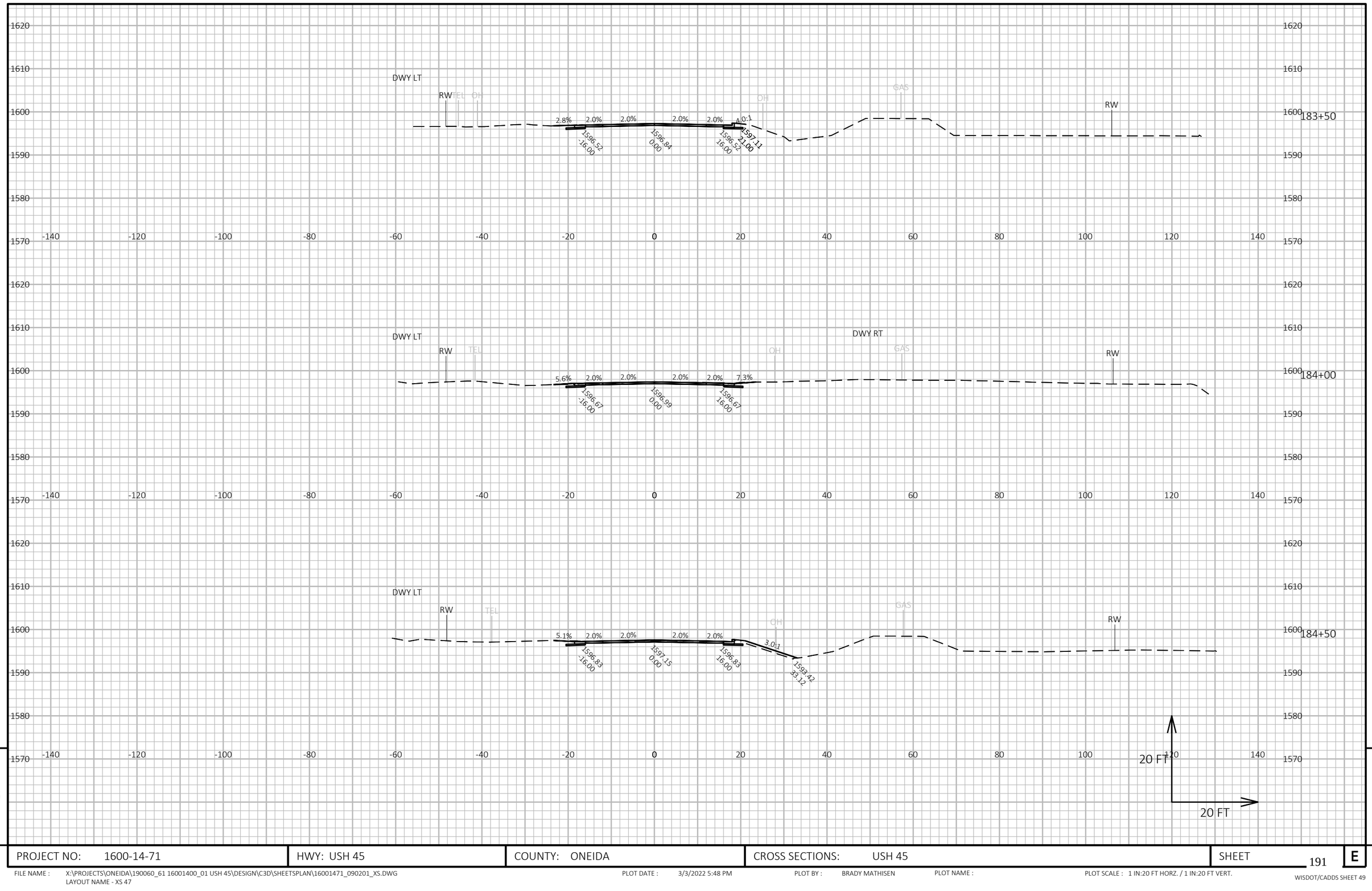

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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 191	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 47

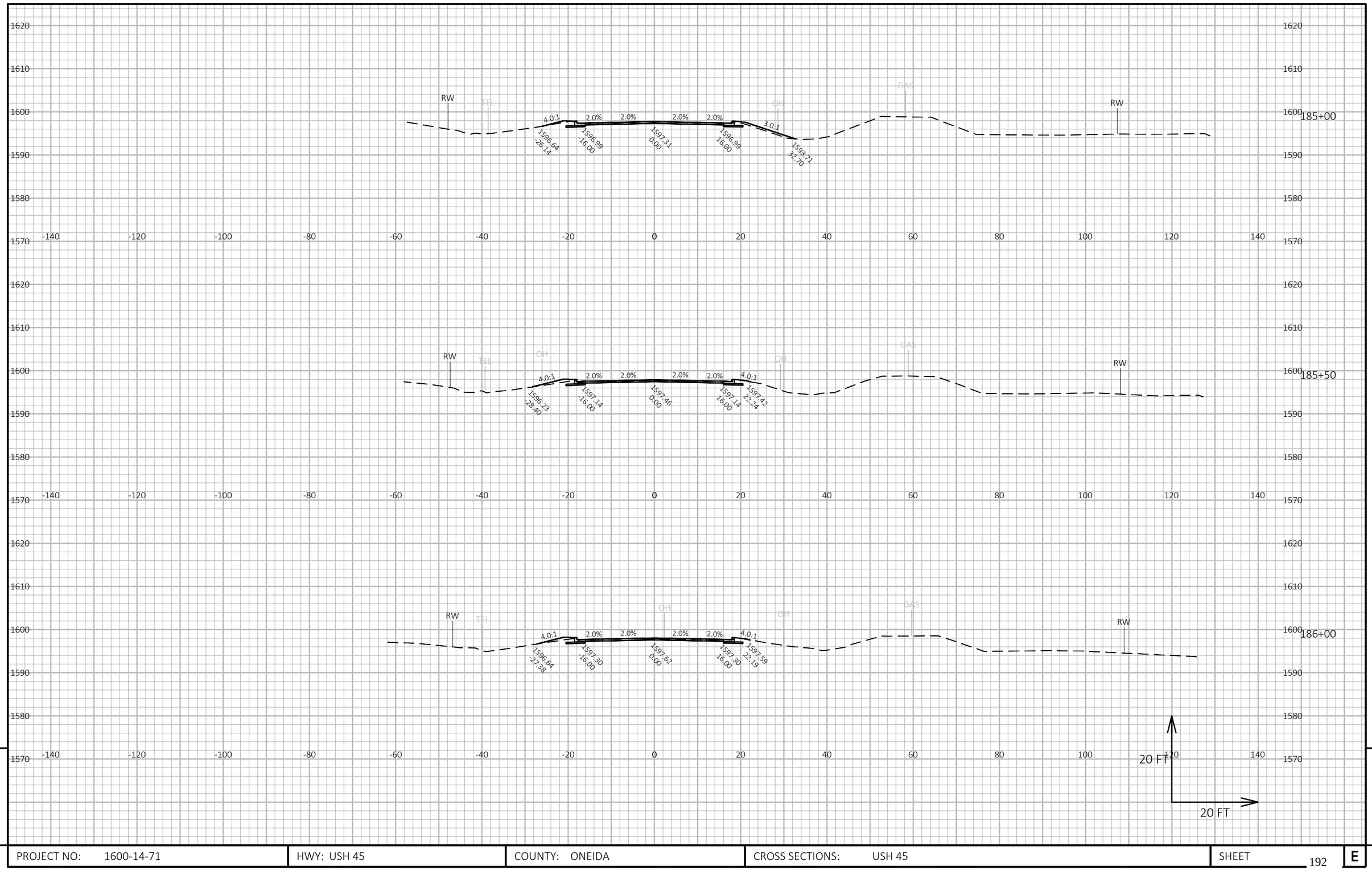
PLOT DATE : 3/3/2022 5:48 PM

PLOT BY : BRADY MATHISEN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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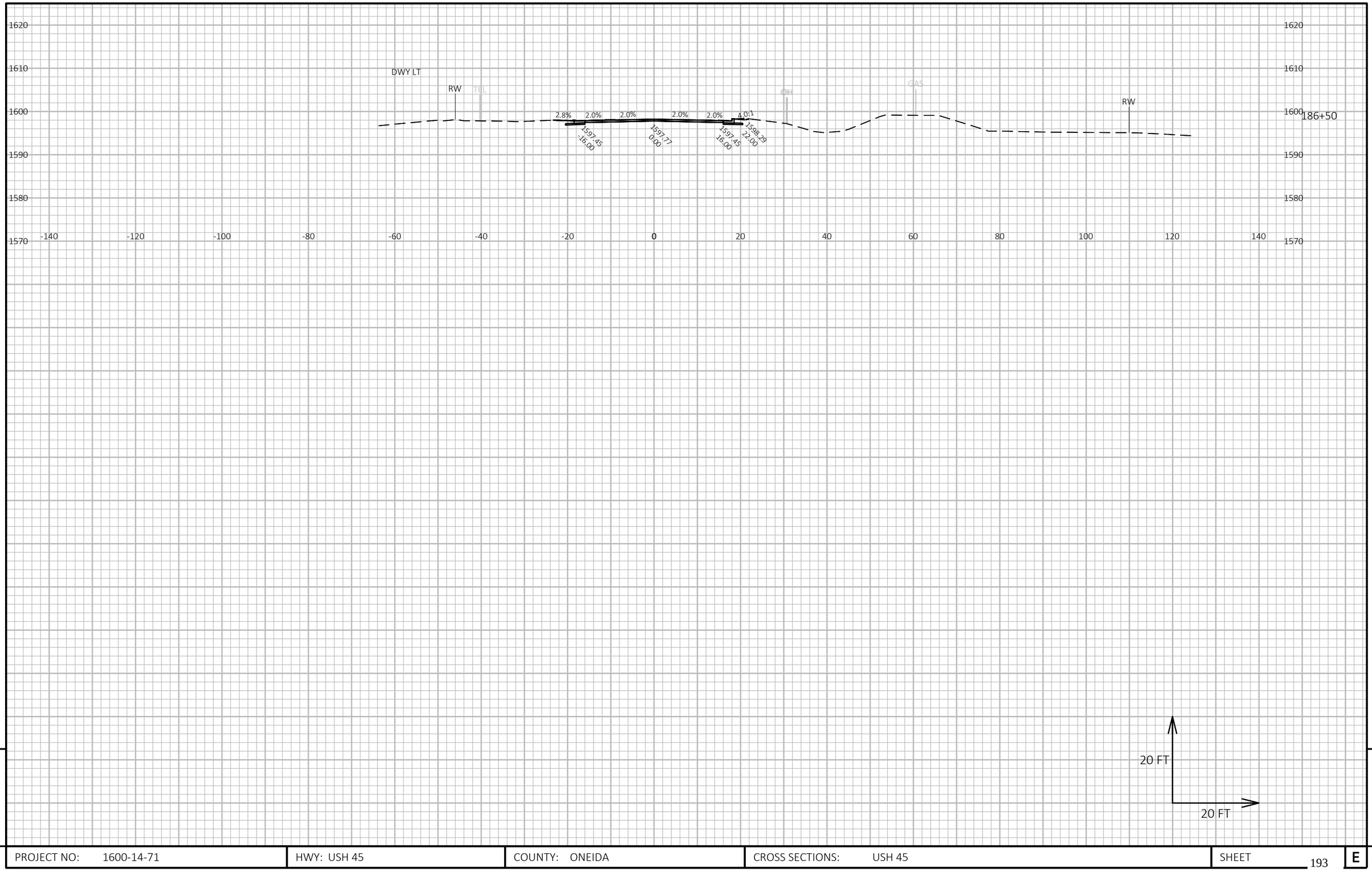
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 192	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 48

PLOT DATE : 3/3/2022 5:49 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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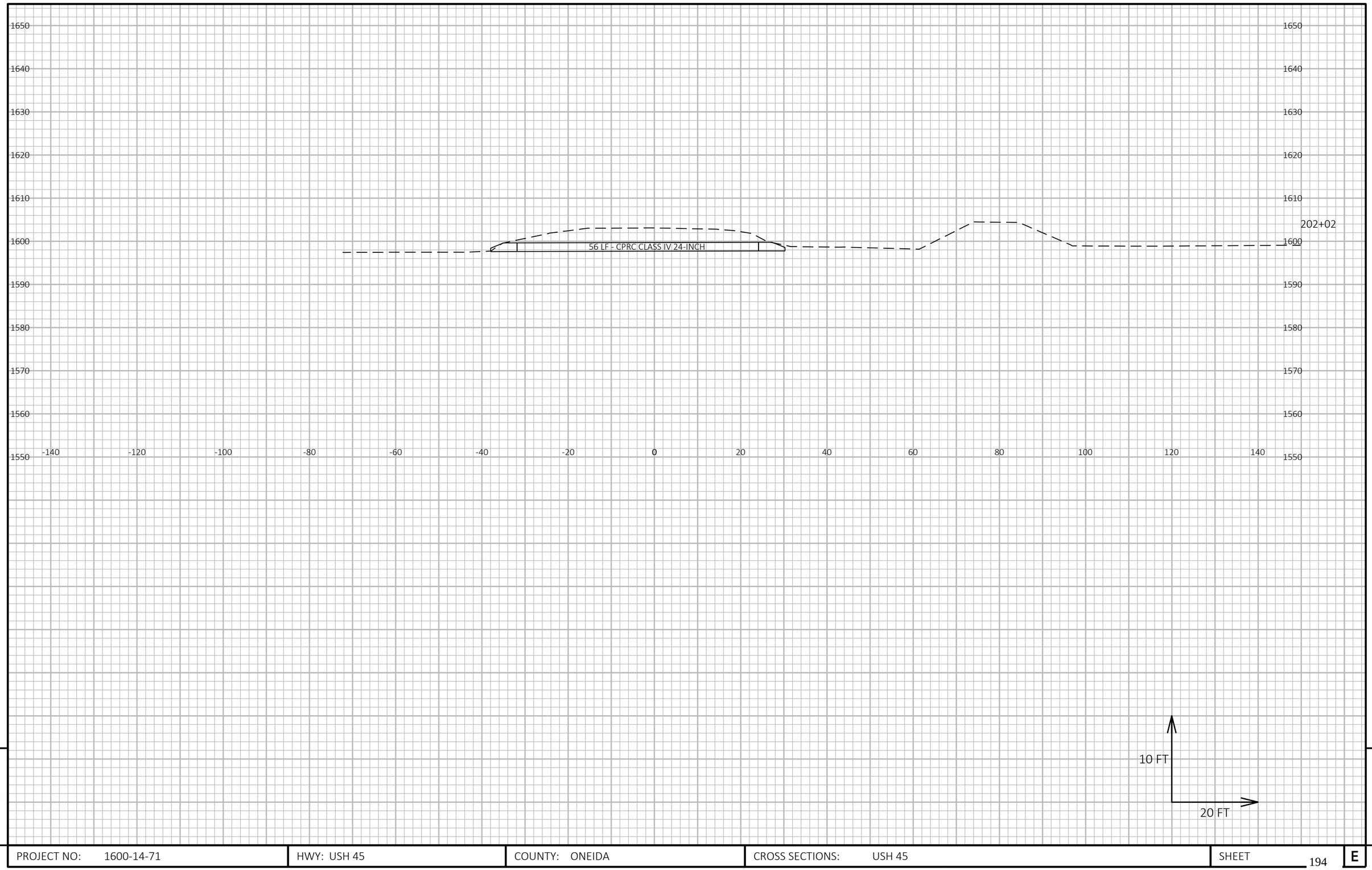
PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 193	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - XS 49

PLOT DATE : 3/3/2022 5:49 PM PLOT BY : BRADY MATHISEN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1600-14-71	HWY: USH 45	COUNTY: ONEIDA	CROSS SECTIONS: USH 45	SHEET 194	E

FILE NAME : X:\PROJECTS\ONEIDA\190060_61 16001400_01 USH 45\DESIGN\C3D\SHEETSPLAN\16001471_090201_XS.DWG
LAYOUT NAME - SS 2

PLOT DATE : 5/19/2021 6:05 AM PLOT BY : ANDY BLOCK PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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