LAX JANUARY 2014

PROJECT ID: 5783-03-71

COUNTY: CRAWFORD COUNTY

ORDER OF SHEETS

TOTAL SHEETS = 158

N

DESIGN DESIGNATION

A.A.D.T. 2014	=	1500
A.A.D.T. 2034	=	1800
D.H.V.	=	6.3
D.D.	=	62/38
T.	=	5.0
DESIGN SPEED	=	55 MPH
ESALS	=	233,600

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5783-03-71	———	—

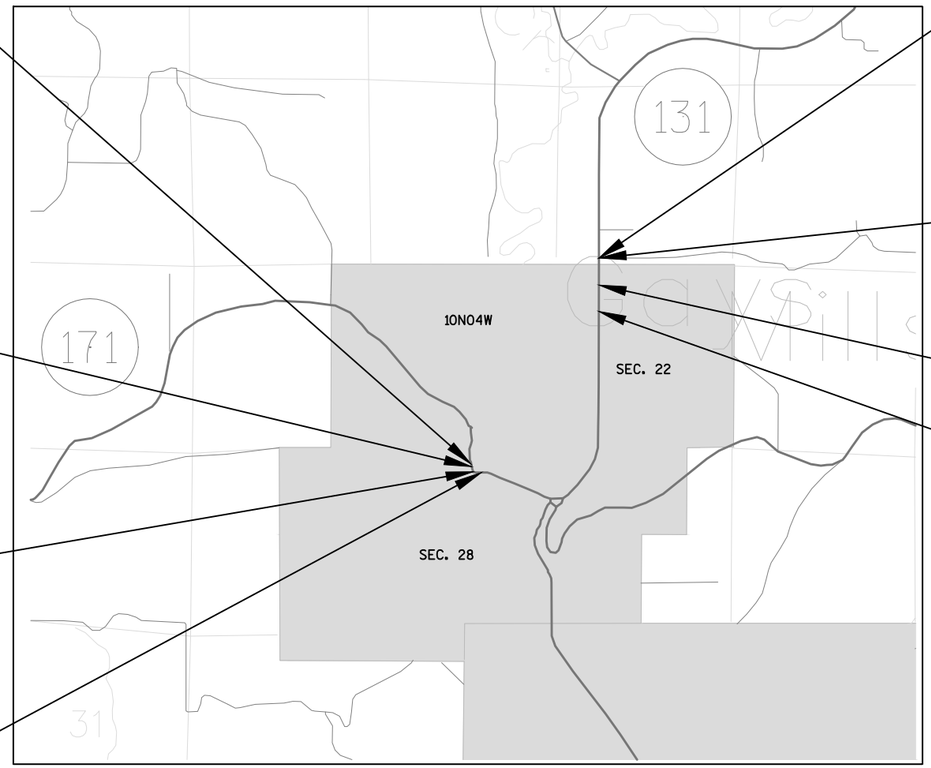
WAUZEKA - SOLDIERS GROVE

DELLAMATER HOLLOW CREEK B-12-0079

STH 131

CRAWFORD COUNTY

STATE PROJECT NUMBER
5783-03-71



BEGIN PROJECT STA 8+62.21
X=396120.891
Y=219752.621

START CONSTRUCTION
STA 8+62.21

STRUCTURE B-12-137
STA 8+93.86 - 11+06.06

END CONSTRUCTION
STA 11+33.44

END PROJECT
STA. 128+00

END CONSTRUCTION
STA 156+40

STRUCTURE B-12-0079
STA 120+05 - 120+46.36

START CONSTRUCTION STA 115+00
X=399765.646
Y=224451.154

LAYOUT
SCALE 0 1 MI.

B-12-137 LENGTH OF STH 171 CENTERLINE = 0.051 MI.
B-12-079 LENGTH OF STH 131 CENTERLINE = 0.246 MI.
TOTAL NET PROJECT CENTERLINE LENGTH = 0.297 MI.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	THOMAS OLDENBURG
Project Manager	REINY YAHNKE
Regional Examiner	
Regional Supervisor	STEPHEN FLOTTMEYER
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 07/31/13 Stephen A. Flottmeyer (Signature)

E

GENERAL NOTES

- CURVE DATA IS BASED ON ARC DEFINITION.
- LOCATION OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- CROSS SLOPES AS SHOWN ON THE TYPICAL SECTION WILL VARY AT THE INTERSECTIONS. SEE DETAIL SHEETS AND CROSS SECTIONS FOR SLOPES AND GRADES.
- ALL RADII ARE MEASURED TO EDGE OF PAVEMENT OR FLAG OF CURB UNLESS OTHERWISE SHOWN OR NOTED ON THE PLAN.
- EXPANSION JOINTS TO BE CONSTRUCTED AT ALL RADIUS POINTS IN CURB AND GUTTER OR AT LOCATIONS SHOWN ON THE PLAN.
- NO TREES OR SHRUBS SHALL BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE BEEN DESIGNATED FOR REMOVAL BY THE ENGINEER.
- WHEN PORTIONS OF EXISTING ASPHALTIC SURFACES ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT JOINT THROUGH THE ASPHALTIC SURFACE SO THAT REMOVAL OF THE ASPHALT SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO REMAINING PORTIONS. THE LOCATION OF SAW JOINTS AND THE AMOUNT REMOVED AT SIDE ROADS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- REMOVE EXISTING OLD CULVERTS AS SHOWN ON THE PLANS.
- PAVEMENT REMOVAL WILL BE TO THE NEAREST JOINT OR A SAWED EDGE WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.
- ALL NEW CONCRETE STORM SEWER PIPE JOINTS REQUIRE ANNULAR RUBBER GASKETS.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED, FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.
- TOPSOIL OR SALVAGED TOPSOIL WHERE REQUIRED, IS TO BE PLACED ON ALL CUT AND FILL SLOPES TO AN APPROXIMATE DEPTH OF 4 INCHES AT THE TIME OF PLACING.
- IN THE PERFORMANCE OF THE WORK UNDER THE ITEM "MULCHING", ALL AREAS SEEDED AND FERTILIZED SHALL BE MULCHED AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PIPE LAYING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAY SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER PIPE IN DRIVEWAY AREA IS INSTALLED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.
- THE CONTRACOR'S PAVING OPERATIONS SHALL BE CONISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.
- THE EXACT LOCATION OF ACCESS POINTS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER, EXCEPT FOR THE CONTROLLED LOCATIONS SHOWN ON THE PLAT.
- THE EXACT LOCATION OF PRIVATE ENTRANCES IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER, EXCEPT FOR THE CONTROLLED LOCATIONS SHOWN ON THE PLAT.
- EASEMENTS FOR P.E. AND F.E. CONSTRUCTION HAVE BEEN OBTAINED.
- WHEN THE QUANTITIES OF ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THICKNESS OF THE MATERIAL THAT IS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.
- THE RATE OF APPLICATION FOR TACK COAT IS COMPUTED AT 0.025 GAL/SY.
- ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN
- 4" HMA PAVEMENT SHALL BE PLACED IN TWO LAYERS. THE 12.5mm GRADATION MAY BE USED FOR BOTH LAYERS.
- MATCH NEW CONCRETE PAVEMENT CONTRACTION JOINTS WITH EXISTING JOINTS
- THE COST OF CONNECTING CULVERT PIPE OR STORM SEWER TO EXISTING DRAINAGE STRUCTURES SHALL BE INCIDENTAL TO THE COST OF THE INSTALLING THE CULVERT OR STORM SEWER.
- COORDINATES AND BEARINGS REFERENCED IN THE PLAN ARE IN A WISCONSIN COUNTY COORDINATE SYSTEM, CRAWFORD COUNTY.
- PLAN ELEVATIONS: NORTH AMERICAN VERTICAL DATUM 1988 (1991) ADJUSTMENT
- THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS AHD SHALL BE RESPONSIBLE FOR REMONUMENTATION IF NECESSARY.
- THE CONTRACTOR SHALL MAINTIAN ACCESS TO ALL FIRE HYDRANTS, WATER AND GAS VALVES AND ALL SEWER, WATER AND UTILITY MANHOLES.
- THE ENGINEER SHALL CONFIRM THE LOCATION OF EROSION CONTROL ITEMS. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURES ARE NO LONGER NECESSARY. AT THAT TIME, THE CONTRACTOR SHALL REMOVE THE TEMPORARY EROSION CONTROL ITEM(S).
- NO EQUIPMENT OR MATERIALS SHALL BE STORED OR IMPACT ANY WETLANDS OR WATERWAYS.
- TEMPORARY BRIDGE, FOR A PROJECT WITH A TEMPORARY BRIDGE, DESIGN THE TEMPORARY BRIDGE WITH A 25:1 RATIO OF SPAN LENGTH TO TOTAL DEPTH OF SUPERSTRUCTURE (DECK PLUS STEEL BEAM). *THE SUPERSTRUCTURE CAN ALSO BE DETERMINED BY THE FOLLOWING FORMULA.*
  D = 1.0 + 0.04(S-25)*
  WHERE: D IS THE REQUIRED TOTAL SUPERSTRUCTURE DEPTH IN FEET (DECK + STEEL BEAM)

STANDARD ABBREVIATIONS

AC.	ACRE	MAX.	MAXIMUM
AGG.	AGGREGATE	MGAL	1000 GALLONS
AH	AHEAD	MIN.	MINIMUM
<	ANGLE	N.C.	NORMAL CROWN OR NO CHANGE
AE, AEW	APRON ENDWALL	N	NORTH
ASPH.	ASPHALTIC	NO.	NUMBER
A.D.T.	AVERAGE DAILY TRAFFIC	PAV'T	PAVEMENT
B.F.	BACK FACE	P.L.E.	PERMANENT LIMITED EASEMENT
BK.	BACK	P.C.	POINT OF CURVATURE
BEG.	BEGIN	P.I.	POINT OF INTERSECTION
B.M.	BENCH MARK	P.T.	POINT OF TANGENCY
C/L	CENTER LINE	V.P.C.	VERTICAL POINT OF CURVATURE
D	CENTRAL ANGLE OR DELTA		VERTICAL POINT OF
C.M.C.P.	CORRUGATED METAL CULVERT PIPE	V.P.I.	INTERSECTION
C.M.P.	CORRUGATED METAL PIPE	V.P.T.	VERTICAL POINT OF TANGENCY
CO.	COUNTY	PCC	PORTLAND CEMENT CONCRETE
CTH	COUNTY TRUNK HIGHWAY	P.E.	PRIVATE ENTRANCE
CR.	CREEK	P.L.	PROPERTY LINE
C.A.B.C.	CRUSHED AGGREGATE BASE COURSE	R	RADIUS OR RANGE
		R/L	REFERENCE LINE
		R.C.C.P	REINFORCED CONCRETE CULVERT
C.Y.	CUBIC YARD	.	PIPE
C.P.	CULVERT PIPE	RT	RIGHT
C. & G.	CURB AND GUTTER	REQ'D	REQUIRED
D	DEGREE OF CURVE	R.H.F.	RIGHT HAND FORWARD
D.H.V.	DESIGN HOUR VOLUME	R/W	RIGHT OF WAY
DIA.	DIAMETER	R.	RIVER
DISCH.	DISCHARGE	RD.	ROAD
EA	EACH	SHLD.	SHOULDER(S)
E	EAST	SHR.	SHRINKAGE
ELEC.	ELECTRIC(AL), ELEC. CABLE	S	SOUTH
EL.,			
ELEV.	ELEVATION	S.F.	SQUARE FOOT (FEET)
EXC.	EXCAVATION	SDD	STANDARD DETAIL DRAWING(S)
F.F.	FACE TO FACE	STH	STATE TRUNK HIGHWAY
FERT.	FERTILIZER	STA.	STATION
F.E.	FIELD ENTRANCE	S.E.	SUPERELEVATION
F/L, F.L.	FLOW LINE	S/L	SURVEY LINE
CWT.	HUNDRED WEIGHT	T	TANGENT
INL	INLET	TEL.	TELEPHONE
INTER.	INTERSECTION	TEMP.	TEMPORARY
JT.	JOINT	T.L.E.	TEMPORARY LIMITED EASEMENT
LT	LEFT	T.O.C.	TOP OF CURB
L.H.F.	LEFT HAND FORWARD	T.	(TRUCKS) PERCENT OF
L.	LENGTH OF CURVE	TYP.	TYPICAL
L.F.	LINEAR FOOT(FEET)	UNCL.	UNCLASSIFIED
LC.	LONG CHORD	U.G.	UNDERGROUND (CABLE)
LS	LUMP SUM	V.C.	VERTICAL CURVE
M.P.	MARKER POST	W	WEST

UTILITY COMPANIES & PERSONNEL

Alliant Energy
Suite 1000
4902 N. Biltmore Lane
Madison, WI 53718
ATTN: Jason Hogan
PHONE: (608) 458-4871
jasonhogan@alliantenergy.com

Gays Mills Water & Sewer Utility - Water
212 Main St
P.O. Box 325
Gays Mills, WI 54631-0325
ATTN: Wade Hutchison
PHONE: (608) 735-4412

Madison Gas & Electric Company - Gas/Petroleum
P.O. Box 1231
Madison, WI 53701-1231
ATTN: Tim Statz
PHONE: (608) 252-4727
tstatz@mge.com

Mediacom LLC Wisconsin - Communication Line
3033 Asbury Rd.
Dubuque, WI 52001
ATTN: Tim Orcutt
PHONE: (608) 326-0478
torcutt@mediacomllc.com

Wis. Dept. of Transportation
Southwest Region - La Crosse Office
3550 Mormon Coulee Rd.
La Crosse, WI 54601
ATTN: Gary Jackson (Utilities Coordinator)
PHONE: (608) 785-9082
gary.jackson@dot.wi.gov

Madison Gas & Electric Company - Electricity
P.O. Box 1231
Madison, WI 53701-1231
ATTN: Tim Statz
PHONE: (608) 252-4727
tstatz@mge.com

Richland Grant Telephone Cooperative - Communication Line
202 N East St
P.O. Box 67
Blue River, WI 53518
ATTN: John Bartz
PHONE: (608) 537-2461
jbartz@mwt.net

SOILS ENGINEER CONTACT

Wisconsin Department of Transportation
Soutwest Region - La Crosse Office
Soils Engineer
ATTN: Russ Frank
3550 Mormon Coulee Rd.
La Crosse, WI 54601
(608) 785-9047
russell.frank@dot.state.wi.us

PAVEMENT DESIGN ENGINEER CONTACT

Wisconsin Department of Transportation
Soutwest Region - Madison Office
Pavement Engineer
ATTN: Tim McCarthy
2101 Wright St.
Madison, WI 53704-2583
(608) 246-5623
timothy.mccarthy@dot.state.wi.us

DNR CONTACT

Wisconsin Department of Natural Resources
La Crosse Office
ATTN: Karen Kalvelage
3550 Mormon Coulee Rd
La Crosse, WI 54601
(608) 785-9115
kalvek@dnr.state.wi.us

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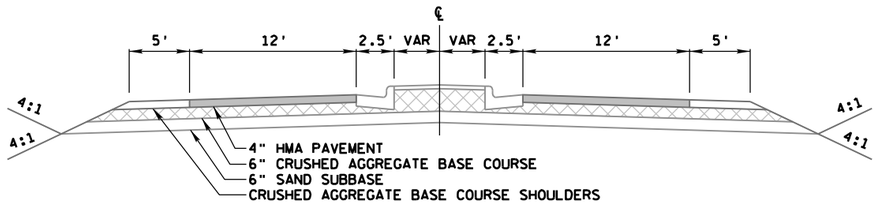
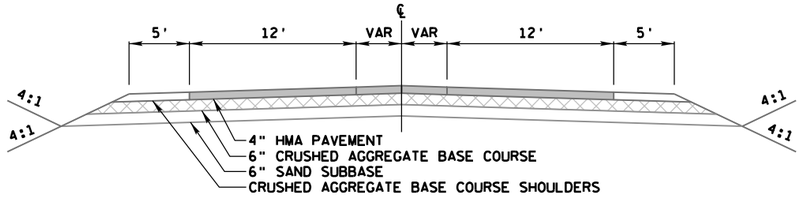
DIGGERS HOTLINE
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com



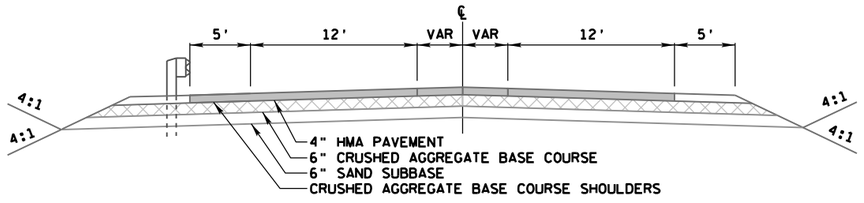
EXISTING TYPICAL SECTION - STH 131

STATION 114+92.83 - 116+25.00



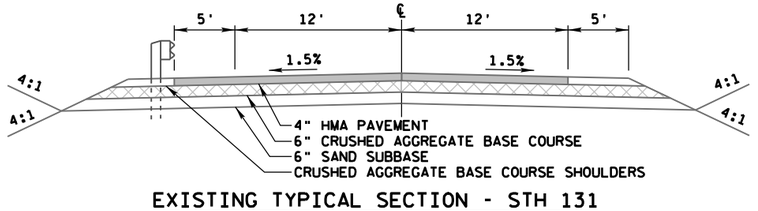
EXISTING TYPICAL SECTION - STH 131

STATION 116+25.00 - 117+34.00



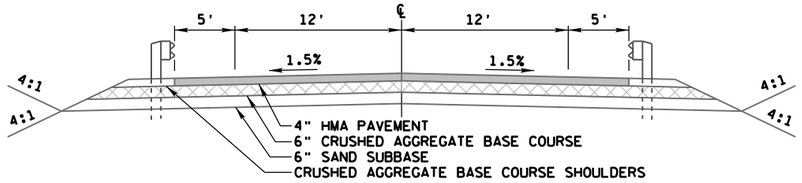
EXISTING TYPICAL SECTION - STH 131

STATION 117+34.00 - 118+19.15



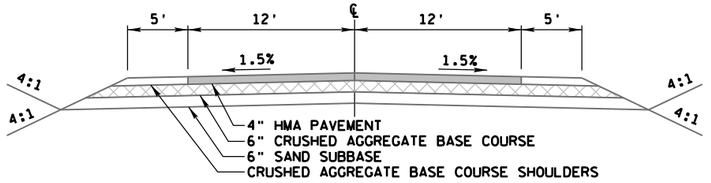
EXISTING TYPICAL SECTION - STH 131

STATION 118+19.15 - 118+50



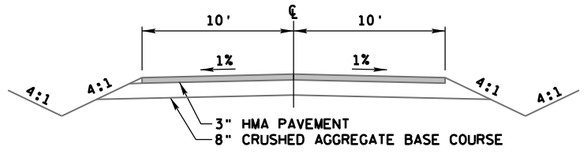
EXISTING TYPICAL SECTION - STH 131

STATION 118+50 - 118+62.8 STATION 118+86.8 - 120+30

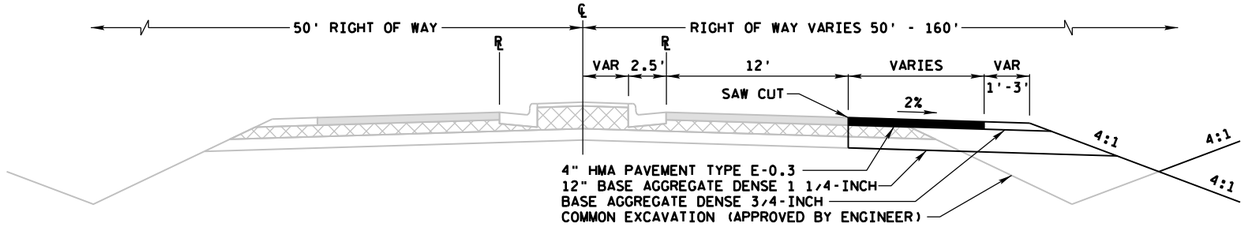


EXISTING TYPICAL SECTION - STH 131

STATION 120+30 - 128+00

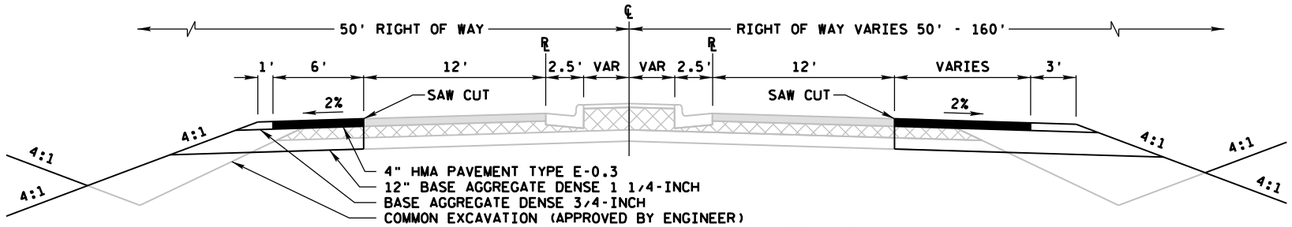


EXISTING TYPICAL SECTION - BROCKWAY DR



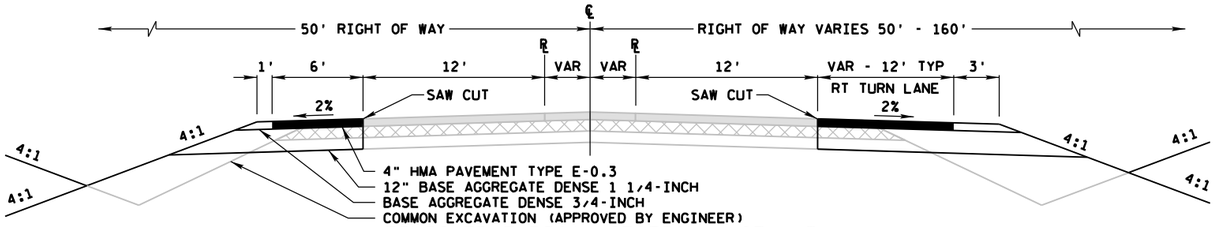
FINISHED TYPICAL SECTION - STH 131

STATION 114+92.83 - 116+10.11



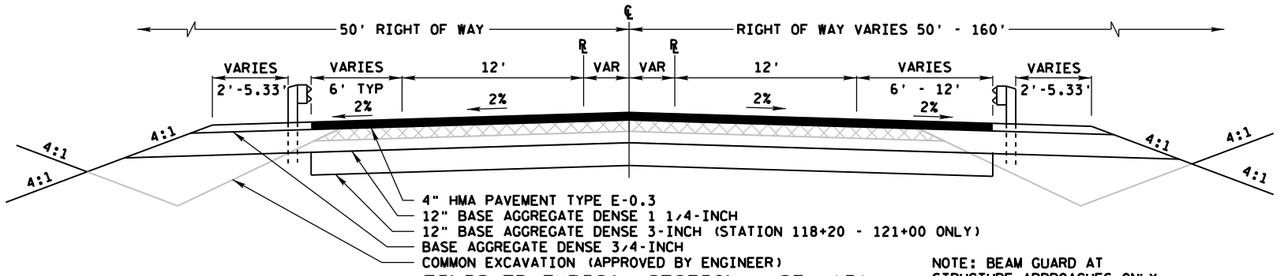
FINISHED TYPICAL SECTION - STH 131

STATION 116+10.11 - 116+25.00



FINISHED TYPICAL SECTION - STH 131

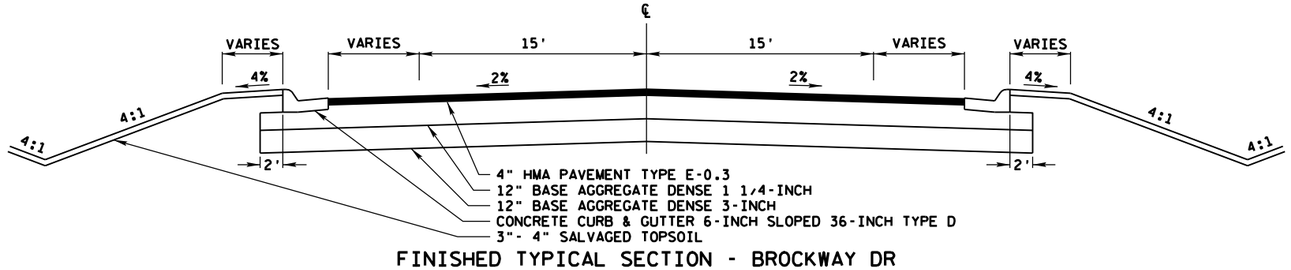
STATION 116+25.00 - 117+50.00



NOTE: BEAM GUARD AT STRUCTURE APPROACHES ONLY.

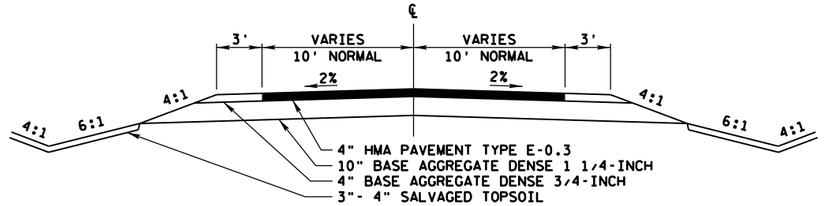
FINISHED TYPICAL SECTION - STH 131

STATION 117+50.00 - 128+00.00



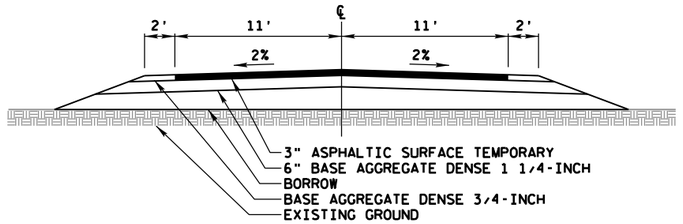
FINISHED TYPICAL SECTION - BROCKWAY DR

STATION 8'B'+50 - 9'B'+05



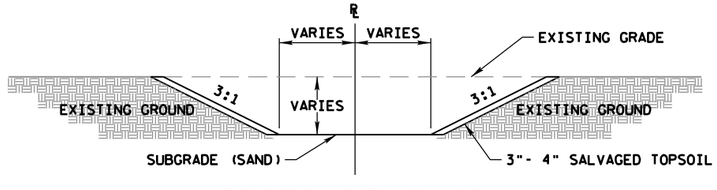
FINISHED TYPICAL SECTION - BROCKWAY DR

STATION 9'B'+05 - 10'B'+08



FINISHED TYPICAL SECTION - TEMPORARY BYPASS

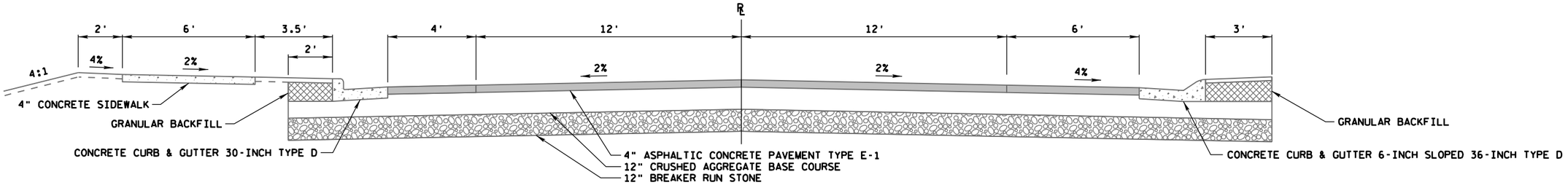
STATION 17'BP'+00 - 25'BP'+75



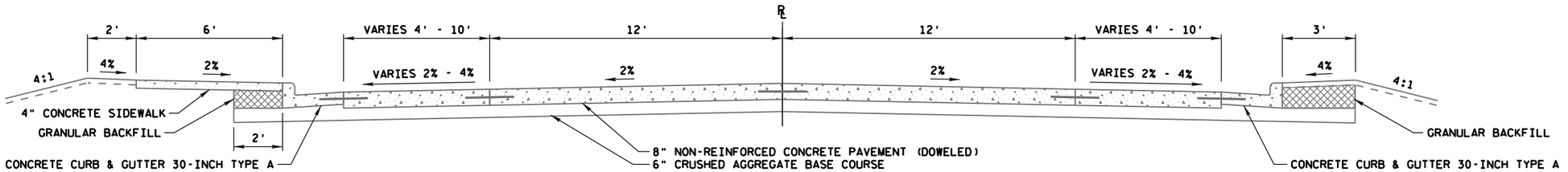
PROPOSED CREEK CHANNEL

STATION 10'DC'+35 - 14'DC'+60

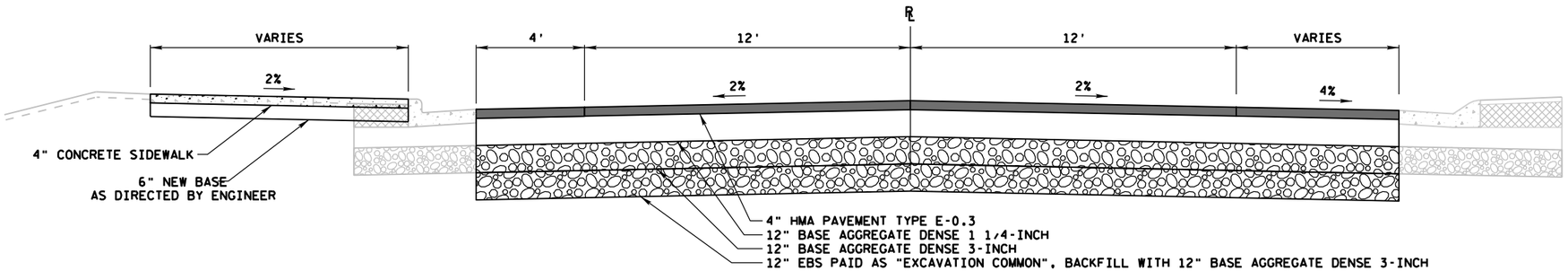
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	TYPICAL SECTIONS	SHEET 5	E



EXISTING URBAN TYPICAL SECTION - STH 171 WEST OF BRIDGE

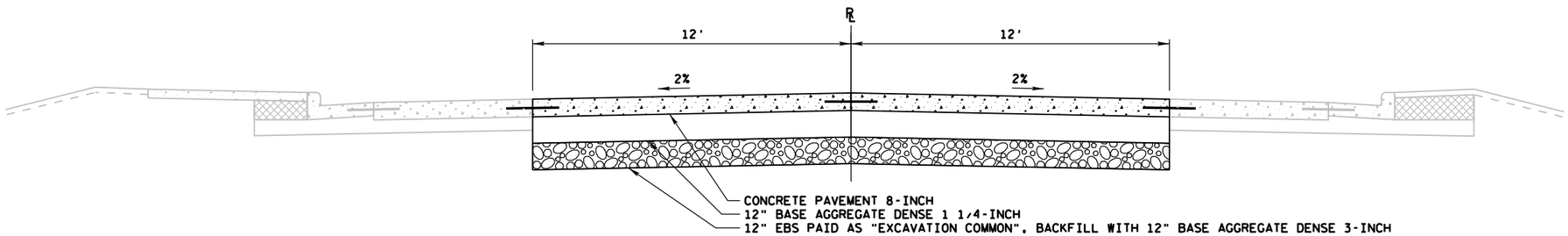


EXISTING URBAN TYPICAL SECTION - STH 171 EAST OF BRIDGE



FINISHED URBAN TYPICAL SECTION - STH 171 WEST OF BRIDGE

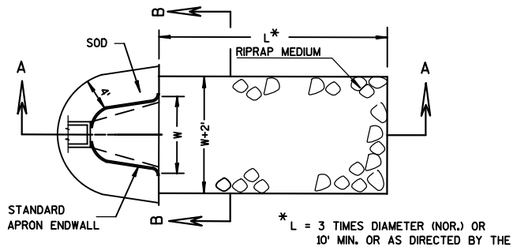
STATION 8+69.00 TO STATION 8+93.86

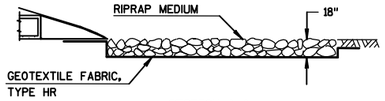


FINISHED URBAN TYPICAL SECTION - STH 171 EAST OF BRIDGE

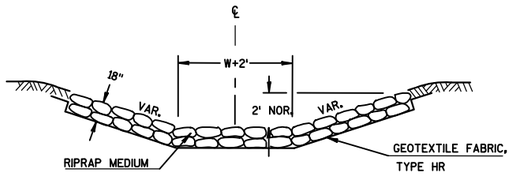
STATION 11+21.44 TO STATION 11+33.44

PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	TYPICAL SECTIONS - STH 171	SHEET 6	E



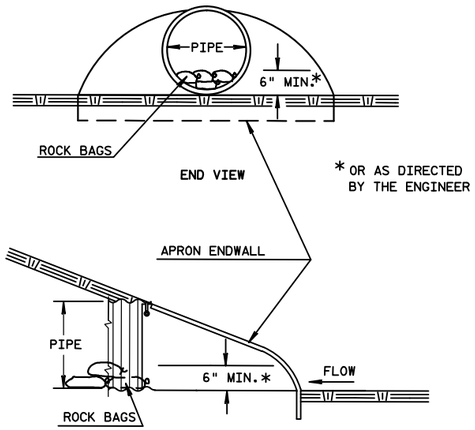


SECTION A-A



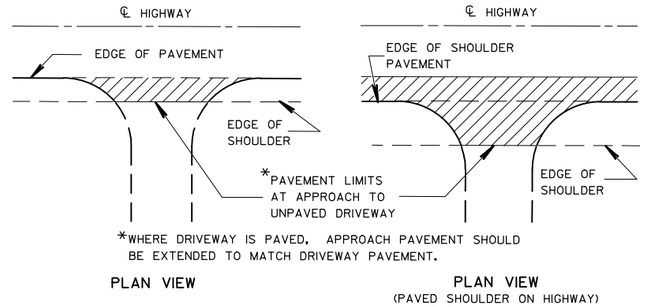
SECTION B-B

RIPRAP MEDIUM AND GEOTEXTILE FABRIC DETAIL
AT APRON ENDWALL

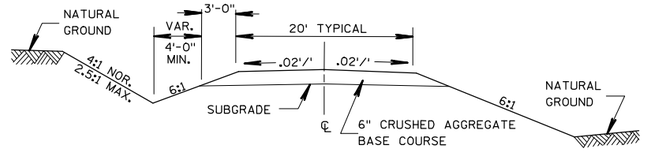


SIDE VIEW

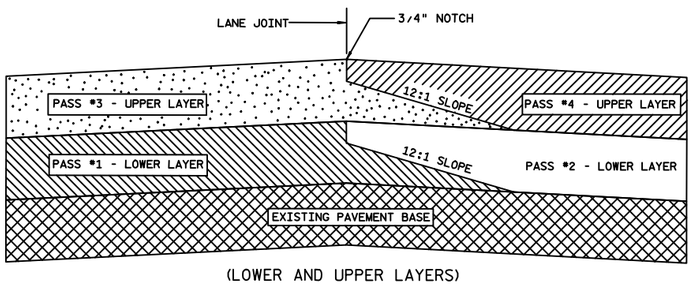
CULVERT PIPE DITCH CHECK



RURAL DRIVEWAY INTERSECTION DETAIL

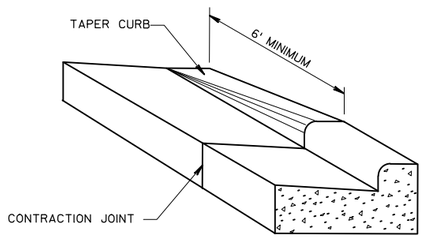


TYPICAL CROSS SECTION FOR PRIVATE
DRIVE OR FIELD ENTRANCE

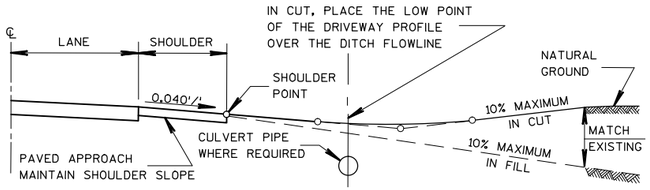


(LOWER AND UPPER LAYERS)

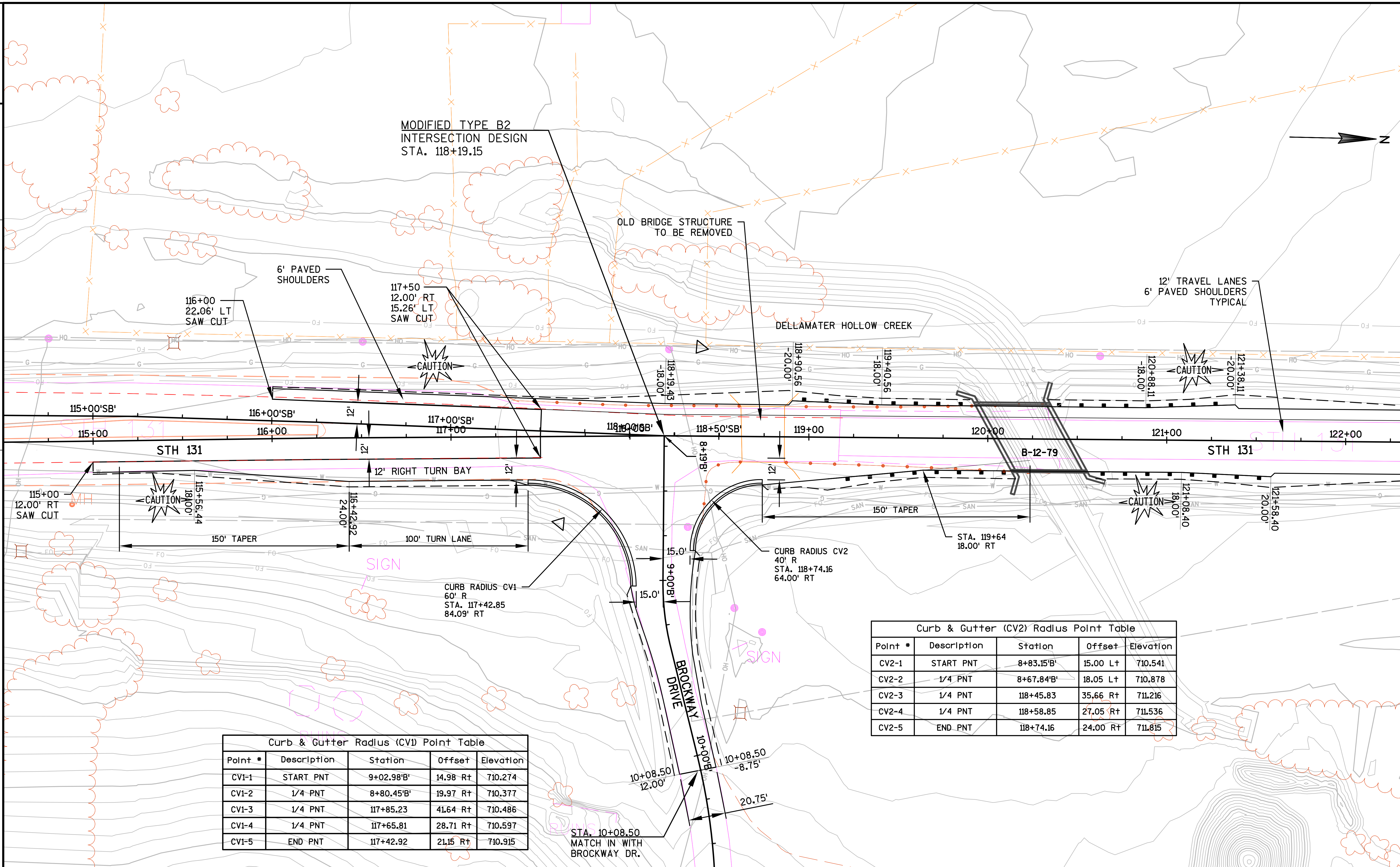
TYPICAL PAVEMENT CROSS SECTIONS OF
TAPERED AND NOTCHED LONGITUDINAL JOINTS



DETAIL OF CURB & GUTTER TERMINI



TYPICAL DRIVEWAY PROFILES



2
2
MODIFIED TYPE B2
INTERSECTION DESIGN
STA. 118+19.15
OLD BRIDGE STRUCTURE
TO BE REMOVED
6' PAVED
SHOULDERS
116+00
22.06' LT
SAW CUT
117+50
12.00' RT
15.26' LT
SAW CUT
DELLAMATER HOLLOW CREEK
12' TRAVEL LANES
6' PAVED SHOULDERS
TYPICAL
N
CAUTION
118+19.43
-18.00'
118+90.56
-20.00'
119+40.56
-18.00'
120+88.11
-18.00'
121+38.11
-20.00'
115+00'SB'
116+00'SB'
117+00'SB'
118+00'SB'
118+50'SB'
115+00
116+00
117+00
119+00
120+00
121+00
122+00
STH 131
STH 131
B-12-79
12'
12' RIGHT TURN BAY
115+00
12.00' RT
SAW CUT
115+56.44
18.00'
116+42.92
24.00'
150' TAPER
100' TURN LANE
8+19'B'
150' TAPER
STA. 119+64
18.00' RT
121+08.40
18.00'
121+58.40
20.00'
SIGN
CURB RADIUS CV1
60' R
STA. 117+42.85
84.09' RT
15.0'
9+00'B'
15.0'
CURB RADIUS CV2
40' R
STA. 118+74.16
64.00' RT
SIGN
BROCKWAY DRIVE
10+08.50
12.00'
10+00'B'
10+08.50
-8.75'
20.75'
STA. 10+08.50
MATCH IN WITH
BROCKWAY DR.

Curb & Gutter (CV2) Radius Point Table

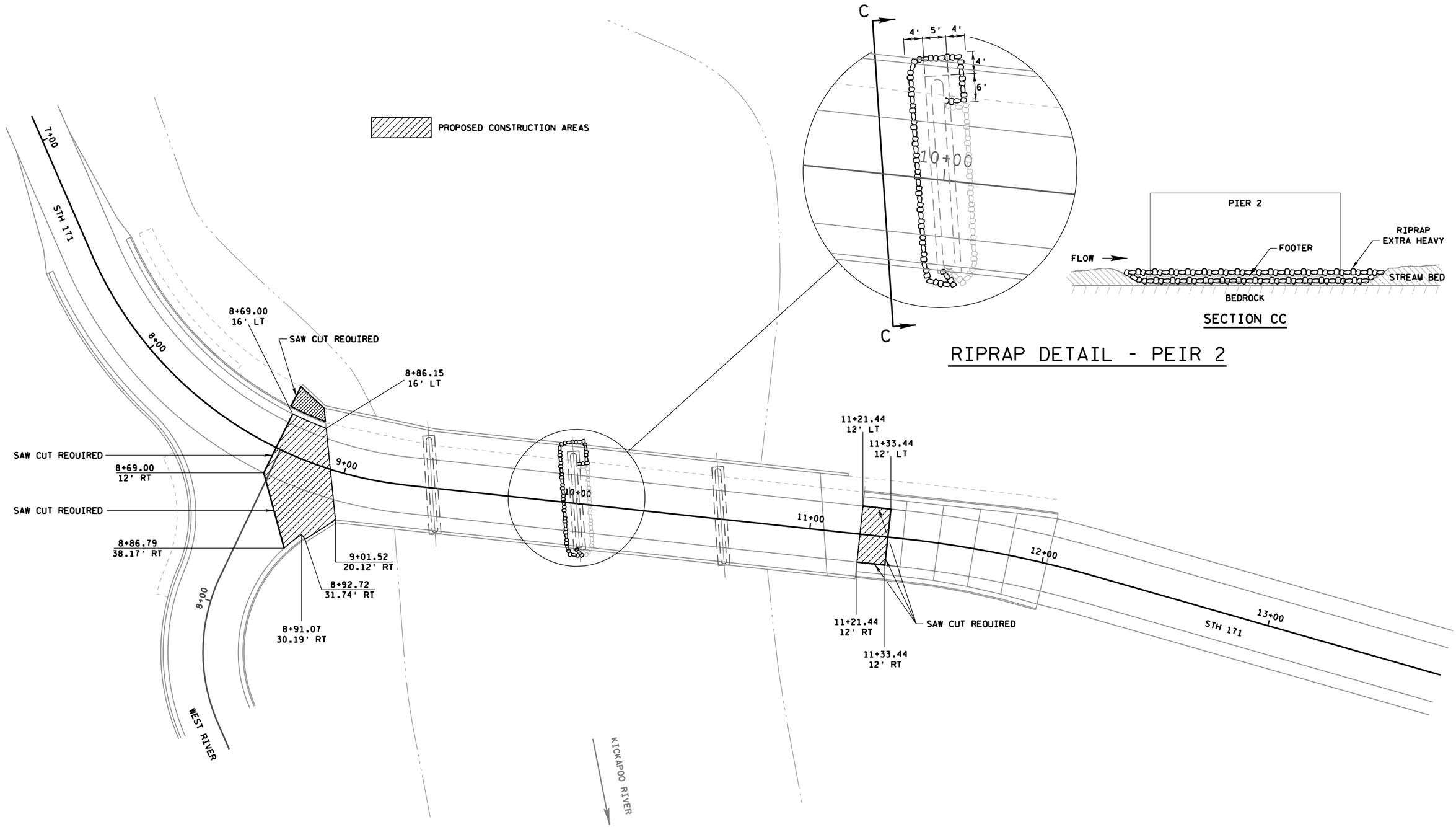
Point #	Description	Station	Offset	Elevation
CV2-1	START PNT	8+83.15'B'	15.00 Lt	710.541
CV2-2	1/4 PNT	8+67.84'B'	18.05 Lt	710.878
CV2-3	1/4 PNT	118+45.83	35.66 Rt	711.216
CV2-4	1/4 PNT	118+58.85	27.05 Rt	711.536
CV2-5	END PNT	118+74.16	24.00 Rt	711.815

Curb & Gutter Radius (CV1) Point Table

Point #	Description	Station	Offset	Elevation
CV1-1	START PNT	9+02.98'B'	14.98 Rt	710.274
CV1-2	1/4 PNT	8+80.45'B'	19.97 Rt	710.377
CV1-3	1/4 PNT	117+85.23	41.64 Rt	710.486
CV1-4	1/4 PNT	117+65.81	28.71 Rt	710.597
CV1-5	END PNT	117+42.92	21.15 Rt	710.915

PROJECT NO:5783-03-71 | HWY:STH 131 | COUNTY:CRAWFORD | STH 131 & BROCKWAY DRIVE INTERSECTION DETAIL | SHEET 8 | E

2



SECTION CC

RIPRAP DETAIL - PEIR 2

PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	STH 171 - BRIDGE REPAIRS	SHEET 9	E

FILE NAME : P:\State\s131\57830300\Cad\eplans\021201_pd.dgn PLOT DATE : 24-OCT-2013 17:20 PLOT BY : dotwow PLOT NAME : PLOT SCALE : 40.000000:1.000000 WISDOT/CADDS SHEET 42

2

2

N

STH 131

STH 131 M/L CROSS SECTION
MATCH LINE - 90'

BROCKWAY DRIVE

118+00
118+50
119+00
120+00
121+00
122+00
123+00
124+00

PT: 118+19.45
EP: 118+50.00

8+00
9+00
10+00
11+00

118+74.92
112.34'
709.85

119+00.35
106.13'
709.26

119+25.00
126.11'
709.00

119+50.00
139.25
709.00

119+75.00
145.46'
709.14

120+00.00
152.94'
709.82

120+25.00
158.16'
709.88

120+50.00
165.71'
710.08

120+75.01
171.75'
710.47

121+00.00
170.76
710.79'

121+15.76
167.80'
710.48

119+61.62
104.11'
708.00

119+75.00
115.21'
708.33

120+00.00
126.51'
709.00

120+25.00
133.21'
708.97

120+50.00
139.19'
709.35

120+75.04
141.50'
709.55

121+00.00
149.38'
709.50

119+75.00
98.37'
708.26

120+00.00
98.48'
708.57

120+25.00
98.61'
708.93

120+50.00
99.02'
709.05

120+60.00
102.53'
709.13

121+00.00
104.01'
709.40

121+15.76
99.46'
709.42

PROJECT NO: 5780-03-71	HWY: STH 131	COUNTY: CRAWFORD	PLAN: EXTENDED GRADING PLAN FROM CROSS SECTIONS	SHEET 10	E

FILE NAME : N:\PDS\C3D\57830300\SHEETSPLAN\PRELIMINARY PLANS\021701_XM.DWG PLOT DATE : 6/12/2013 11:11 AM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:50 FT

2

2

N

STAGE 1 E.C. - CONSTRUCT NEW CREEK CHANNEL TO SLOPE OF EXISTING HIGHWAY.

STH 131

STH 131 BY-PASS

TEMPORARY STRUCTURE

STAGE 1 E.C. - DO NOT DIVERT WATER FLOW INTO NEW CREEK CHANNEL UNTIL NEW STREAM BANKS ARE WELL ESTABLISHED WITH VEGETATION OR AS THE FIELD ENGINEERS DIRECTS.

15+00BP
17+00BP
18+00BP
19+00BP
20+00BP
117+00
118+00
119+00
120+00
121+00

SIGN
SIGN
RUINS
RUINS
MH

EROSION CONTROL LEGEND

DITCH CHECKS	ΔΔΔ
CULVERT PIPE CHECKS	OOO
SILT FENCE	
EMAT - CLASS I, TYPE B	####
EMAT - CLASS II, TYPE B	
RIPRAP	
SEEDING LIMITS**	

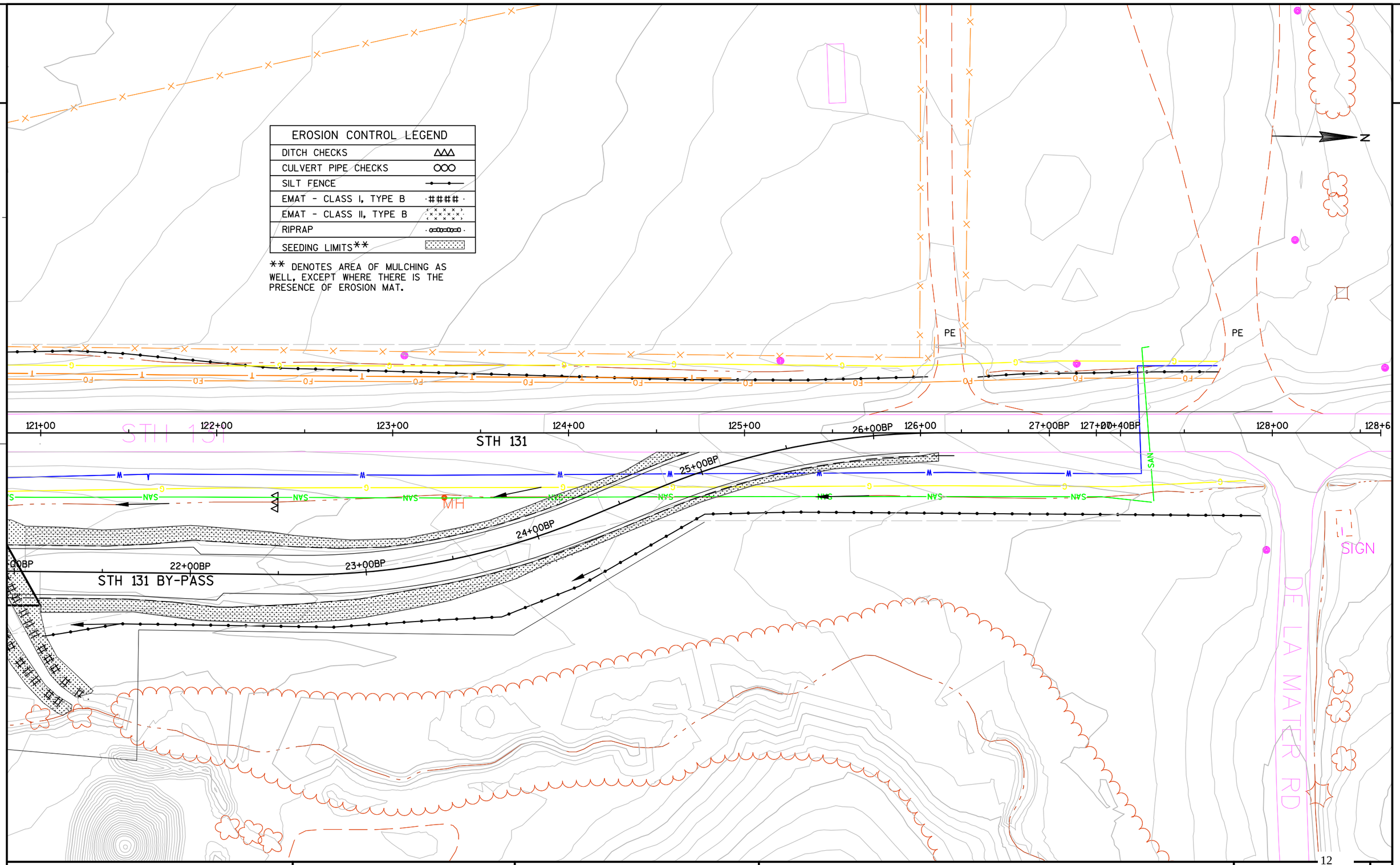
** DENOTES AREA OF MULCHING AS WELL, EXCEPT WHERE THERE IS THE PRESENCE OF EROSION MAT.

PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	EROSION CONTROL PLAN - STAGE 1	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\SHEETSPLAN\022001_EC.DWG PLOT DATE : 7/12/2013 8:30 AM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

EROSION CONTROL LEGEND	
DITCH CHECKS	ΔΔΔ
CULVERT PIPE CHECKS	OOO
SILT FENCE	
EMAT - CLASS I, TYPE B	####
EMAT - CLASS II, TYPE B	
RIPRAP	
SEEDING LIMITS**	

** DENOTES AREA OF MULCHING AS WELL, EXCEPT WHERE THERE IS THE PRESENCE OF EROSION MAT.



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	EROSION CONTROL PLAN - STAGE 1	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\SHEETSPLAN\022001_EC.DWG PLOT DATE : 7/12/2013 8:32 AM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2

2

EMAT ENTIRE BERM

NEW CREEK CHANNEL

DITCH CHECK TO BE PUT IN PLACE AFTER CREEK CHANNEL HAS BEEN DIVERTED TO NEW CHANNEL

PROPOSED STRUCTURE

DELLAMATER HOLLOW CREEK (NEW)

N

STH 131

STH 131 - BY PASS

FLOW

15+00BP

16+00BP

17+00BP

18+00BP

19+00BP

20+00BP

115+00

116+00

117+00

118+00

119+00

120+00

121+00

SIGN

SIGN

RUINS

RUINS

MH

STAGE I EC MEASURES

DELLAMATER HOLLOW CREEK (EXIST)

TEMPORARY STRUCTURE

EROSION CONTROL LEGEND

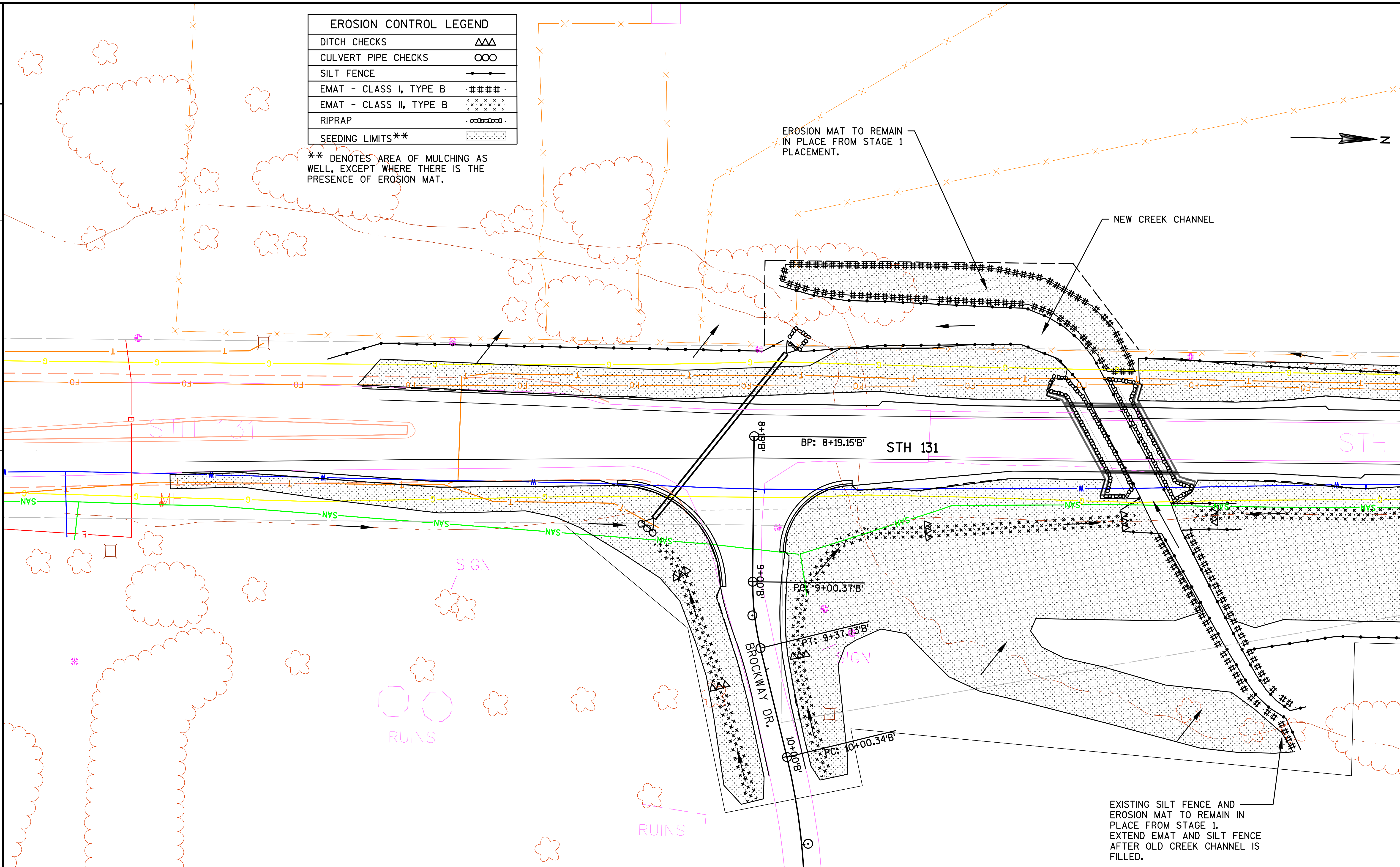
DITCH CHECKS	ΔΔΔ
CULVERT PIPE CHECKS	OOO
SILT FENCE	
EMAT - CLASS I, TYPE B	####
EMAT - CLASS II, TYPE B	
RIPRAP	
SEEDING LIMITS**	

** DENOTES AREA OF MULCHING AS WELL, EXCEPT WHERE THERE IS THE PRESENCE OF EROSION MAT.

PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	EROSION CONTROL PLAN - STAGE 2	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\SHEETSPLAN\022003_EC.DWG PLOT DATE : 7/12/2013 8:39 AM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42


EROSION CONTROL LEGEND
DITCH CHECKS
CULVERT PIPE CHECKS
SILT FENCE
EMAT - CLASS I, TYPE B
EMAT - CLASS II, TYPE B
RIPRAP
SEEDING LIMITS**
** DENOTES AREA OF MULCHING AS WELL, EXCEPT WHERE THERE IS THE PRESENCE OF EROSION MAT.
EROSION MAT TO REMAIN IN PLACE FROM STAGE 1 PLACEMENT.
NEW CREEK CHANNEL
N
STH 131
BP: 8+19.15'B'
8+19'B'
9+00'B'
PC: 9+00.37'B'
PT: 9+37.73'B'
10+00'B'
PC: 10+00.34'B'
BROCKWAY DR.
SIGN
SIGN
RUINS
RUINS
MH
EXISTING SILT FENCE AND EROSION MAT TO REMAIN IN PLACE FROM STAGE 1. EXTEND EMAT AND SILT FENCE AFTER OLD CREEK CHANNEL IS FILLED.

PROJECT NO:5783-03-71 | HWY:STH 131 | COUNTY:CRAWFORD | EROSION CONTROL PLAN - STAGE 3 | SHEET 14 | E

FILE NAME : N:\PDS\C3D\57830300\SHEETSPLAN\022005_EC.DWG PLOT DATE : 7/12/2013 8:45 AM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : PLOT SCALE : 1 IN:50 FT

EROSION CONTROL LEGEND	
DITCH CHECKS	ΔΔΔ
CULVERT PIPE CHECKS	OOO
SILT FENCE	—•—•—
EMAT - CLASS I, TYPE B	·#####·
EMAT - CLASS II, TYPE B	·×××××·
RIPRAP	·□□□□□□·
SEEDING LIMITS**	·:::::·

** DENOTES AREA OF MULCHING AS WELL, EXCEPT WHERE THERE IS THE PRESENCE OF EROSION MAT.

N

PE

STH 131

STH 131

MH

SIGN

DELAWARE HOLLOW ROAD

PROJECT NO:5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	EROSION CONTROL PLAN - STAGE 3	SHEET	E

15

2

Soldiers Grove

Trout Cr.

Kickapoo R.

North Clayton

CLAYTON

Gays Mills

61

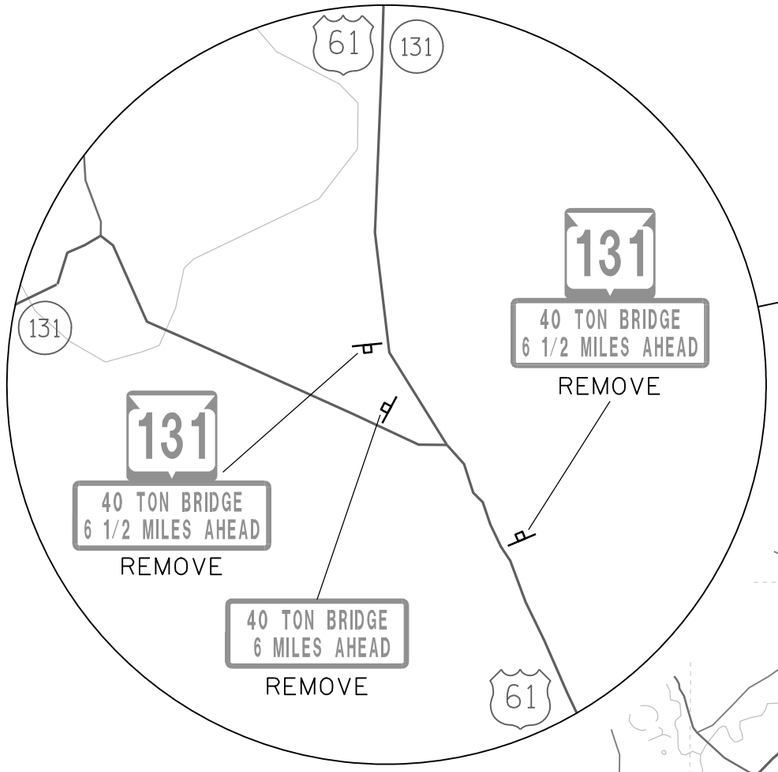
131

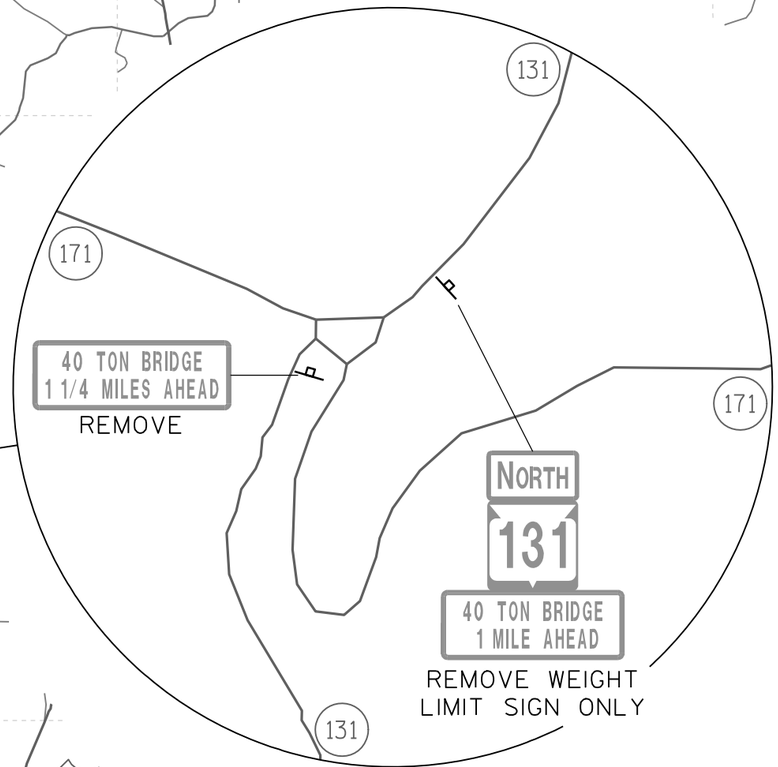
C

H

X

171





PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	PERMANENT SIGNING	SHEET 16	E

FILE NAME : P:\State\s131\57830300\Cad\eplans\023201_ps.dgn PLOT DATE : 20-JUN-2013 16:04 PLOT BY : dotwow PLOT NAME : PLOT SCALE : 4000.000000:1.000000 WISDOT/CADDS SHEET 42

2

2

REMOVE

REMOVE

REMOVE

45 M.P.H.
REMOVE

45 M.P.H.
W13-1
18" X 18"

116'SB'

116

117'SB'

117

118'SB'

118

119

STH 131

120

121

STH 13

WEIGHT LIMIT 40 TONS
REMOVE

REMOVE

REMOVE

STOP
REMOVE

9+00

STOP
R1-1
30" X 30"

SIGN

SIGN

BROCKWAY DRIVE

10+00

RUINS

PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	PERMANENT SIGNING	SHEET 17	E

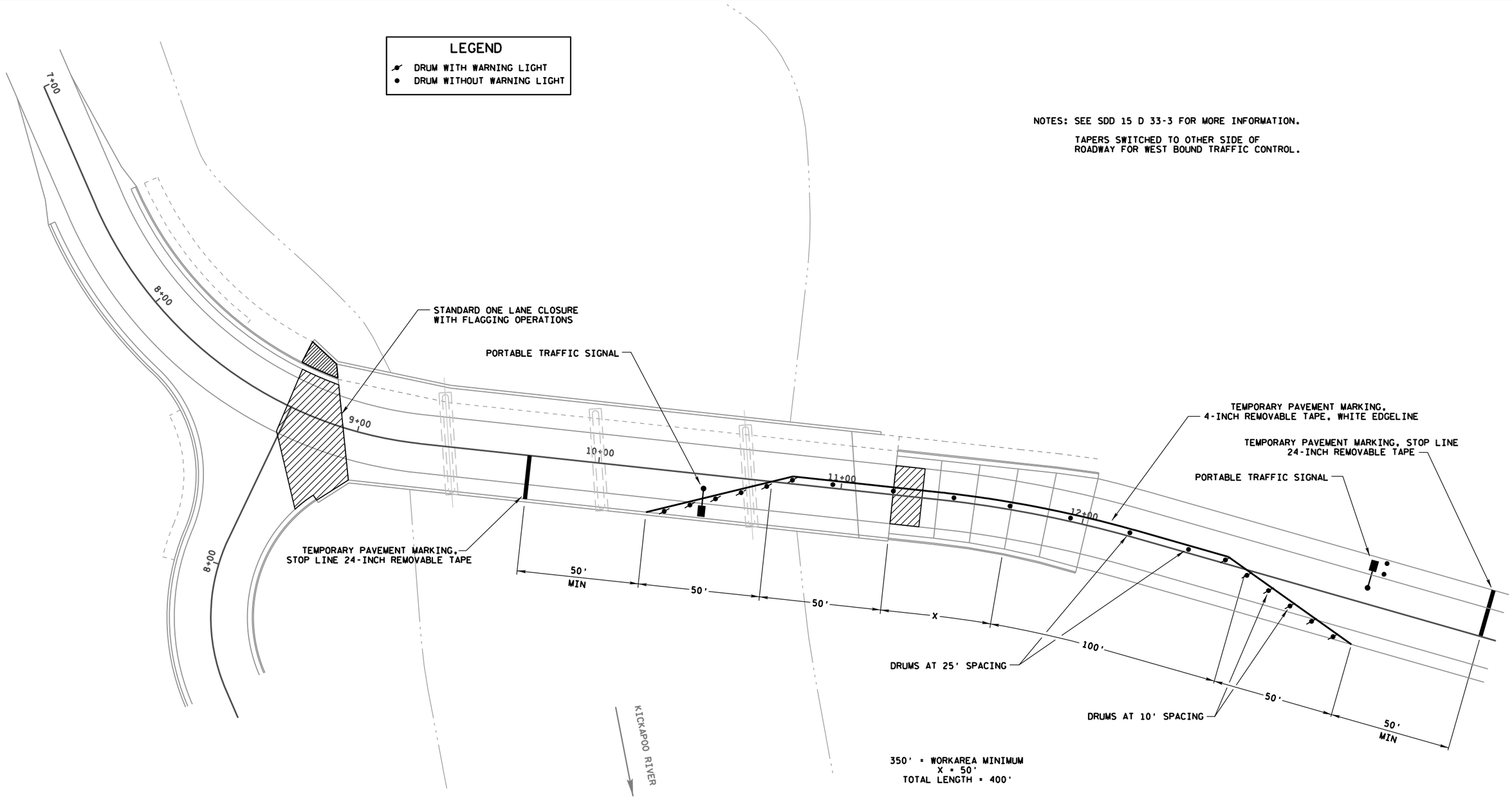
2

LEGEND

- DRUM WITH WARNING LIGHT
- DRUM WITHOUT WARNING LIGHT

NOTES: SEE SDD 15 D 33-3 FOR MORE INFORMATION.

TAPERS SWITCHED TO OTHER SIDE OF ROADWAY FOR WEST BOUND TRAFFIC CONTROL.



EAST BOUND TRAFFIC CONTROL LAYOUT

PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	STH 171 BRIDGE REPAIR - TRAFFIC CONTROL	SHEET 18	E

FILE NAME : P:\State\s131\57830300\Cad\eplans\025001_tc.dgn PLOT DATE : 06-NOV-2013 13:15 PLOT BY : dotwow PLOT NAME : PLOT SCALE : 40.000000:1.000000 WISDOT/CADDS SHEET 42

2

N

REMOVE PAVEMENT MARKINGS

BP: 14+99.77'BP'

15+00'BP'

RAISED MEDIAN

16+00'BP'

17+00'BP'

STANDARD ROAD CLOSURE
SEE SDD 15C 2-4a

18+00'BP'

19+00'BP'

20+00'BP'

21+00'BP'

W01-4R

25
M.P.H.

W013-1
24" X 24"

MH

SIGN

RUINS

BROCKWAY DR.

STOP
R1-1
30" X 30"

UNLESS OTHERWISE NOTED ON THIS PLAN
FOLLOW S.D.D. 15D 31-1 FOR LAYOUT OF
TRAFFIC CONTROL, TEMPORARY BYPASS
ROADWAY

PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	TRAFFIC CONTROL PLAN	SHEET 19	E

2

UNLESS OTHERWISE NOTED ON THIS PLAN FOLLOW S.D.D. 15D 31-1 FOR LAYOUT OF TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STANDARD ROAD CLOSURE
SEE SDD 15C 2-4a

W01-4L
35 M.P.H.
W013-1
24" X 24"

PE

PE

EP: 27+40.47BP'

21+00'BP'
22+00'BP'
23+00'BP'
24+00'BP'
25+00'BP'
26+00'BP'
27+00'BP'
27+40'BP'

REMOVE PAVEMENT MARKINGS

STH 131

MH

DEL LA MATER RD.

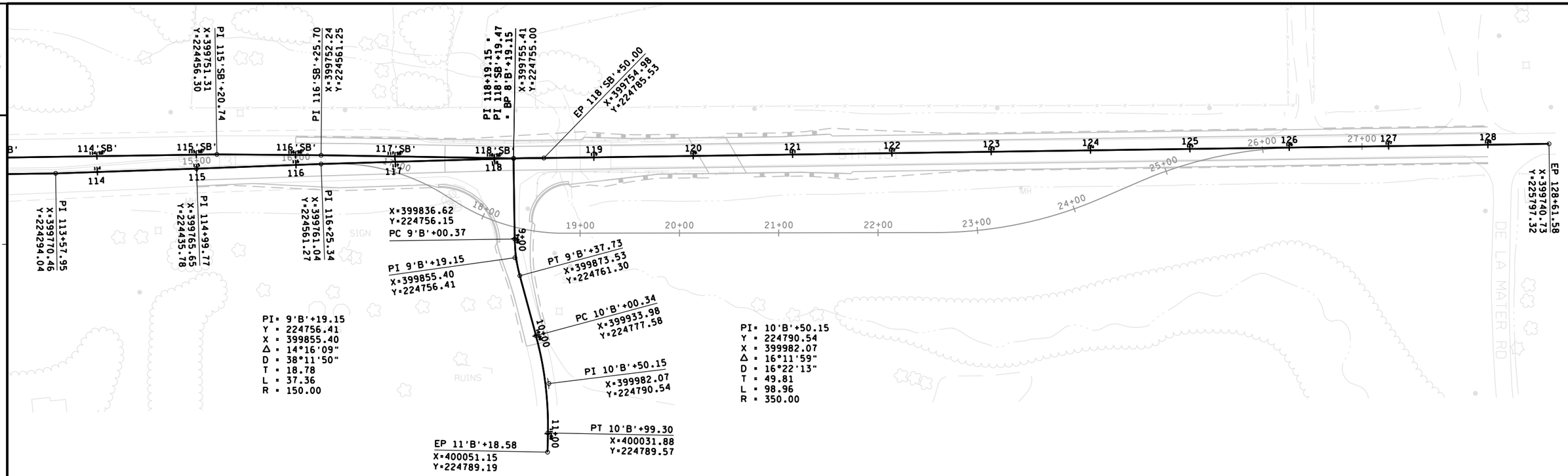
N

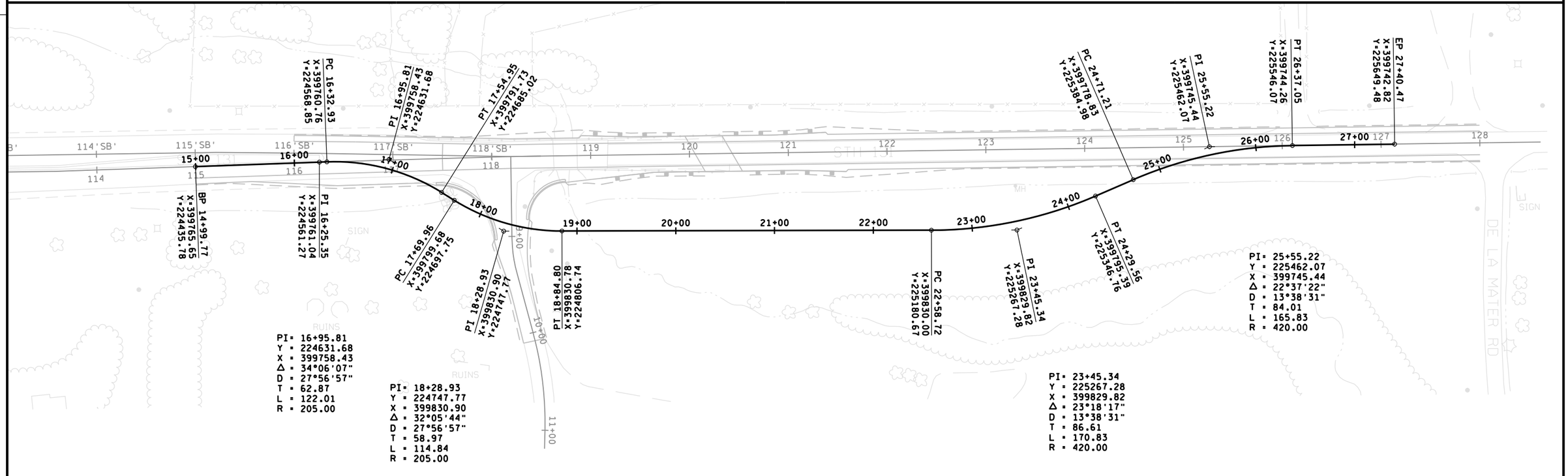
2

PROJECT NO:5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	TRAFFIC CONTROL PLAN	SHEET 20	E

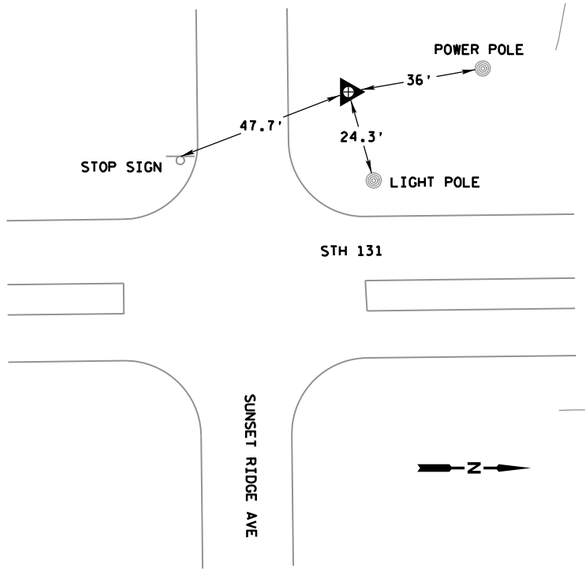
FILE NAME : N:\PDS\C3D\57830300\SHEETSPLAN\PRELIMINARY PLANS\025001_TC.DWG PLOT DATE : 7/2/2013 4:14 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : PLOT SCALE : 1 IN:50 FT

2

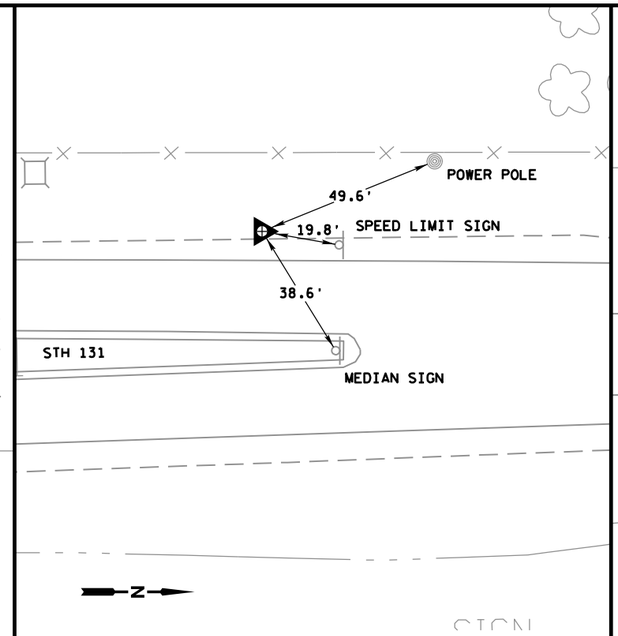




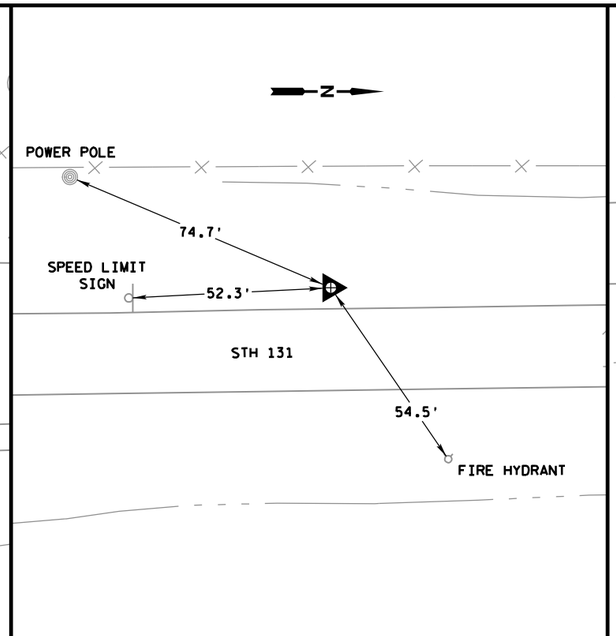
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	ALIGNMENT PLAN	SHEET 21	E



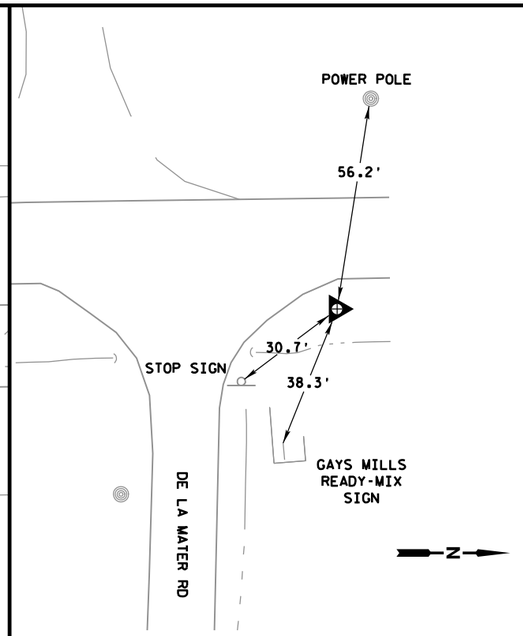
CONTROL POINT 9003
REBAR WITH RED CAP
X=399721.06 Y=223749.96
NORTHEAST QUADRANT OF STH 131 & SUNSET RIDGE AVE INTERSECTION



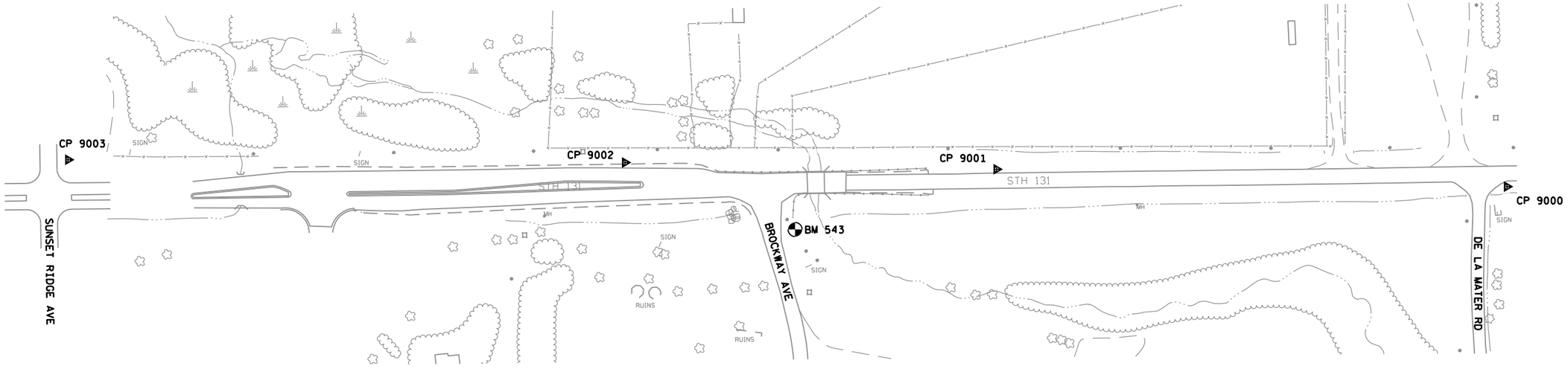
CONTROL POINT 9002
REBAR WITH RED CAP +/- 7.5' WEST OF STH 131 PAVEMENT EDGE
X=399725.15 Y=224539.77
+/- 200' SOUTH OF STH 131 & BROCKWAY AVE INTERSECTION



CONTROL POINT 9001
REBAR WITH RED CAP +/- 16' WEST OF STH 131 CENTERLINE
X=399734.62 Y=225066.44
+/- 0.1 MILES SOUTH OF STH 131 & DEL LA MATER RD INTERSECTION



CONTROL POINT 9000
REBAR WITH RED CAP +/- 16' WEST OF STH 131 CENTERLINE
X=399759.35 Y=225790.28
+/- 0.1 MILES SOUTH OF STH 131 & DEL LA MATER RD INTERSECTION



CONTROL POINT LOCATION MAP

NO.	STATION	BENCHMARK DESCRIPTION	ELEVATION
543	118+43.92	MARK ON MANHOLE RIM X=399820.094 Y=224780.679	710.858

PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	ALIGNMENT TIES	SHEET 22	E

DATE 22NOV13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5783-03-71 QUANTITY
0010	201.0105	CLEARING	STA	1.000	1.000
0020	201.0205	GRUBBING	STA	1.000	1.000
0030	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	1.000	1.000
0040	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 118+75	LS	1.000	1.000
0050	204.0155	REMOVING CONCRETE SIDEWALK	SY	120.000	120.000
0060	204.0165	REMOVING GUARDRAIL	LF	545.000	545.000
0070	205.0100	EXCAVATION COMMON	CY	5,890.000	5,890.000
0080	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-12-0079	LS	1.000	1.000
0090	208.0100	BORROW	CY	1,935.000	1,935.000
0100	210.0100	BACKFILL STRUCTURE	CY	280.000	280.000
0110	213.0100	FINISHING ROADWAY (PROJECT) 01. 5783-03-71	EACH	1.000	1.000
0120	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	150.000	150.000
0130	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	4,950.000	4,950.000
0140	305.0130	BASE AGGREGATE DENSE 3-INCH	TON	660.000	660.000
0150	416.0610	DRILLED TIE BARS	EACH	12.000	12.000
0160	416.0620	DRILLED DOWEL BARS	EACH	32.000	32.000
0170	416.1720	CONCRETE PAVEMENT REPLACEMENT	SY	32.000	32.000
0180	455.0105	ASPHALTIC MATERIAL PG58-28	TON	66.000	66.000
0190	455.0605	TACK COAT	GAL	210.000	210.000
0200	460.1100	HMA PAVEMENT TYPE E-0.3	TON	1,200.000	1,200.000
0210	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	770.000	770.000
0220	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	363.000	363.000
0230	502.0100	CONCRETE MASONRY BRIDGES	CY	185.000	185.000
0240	502.3200	PROTECTIVE SURFACE TREATMENT	SY	200.000	200.000
0250	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	6,090.000	6,090.000
0260	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	27,570.000	27,570.000
0270	513.4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-12-0079	LS	1.000	1.000
0280	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	24.000	24.000
0290	520.4015	CULVERT PIPE TEMPORARY 15-INCH	LF	34.000	34.000
0300	520.4036	CULVERT PIPE TEMPORARY 36-INCH	LF	138.000	138.000
0310	522.0124	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	118.000	118.000
0320	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	2.000	2.000
0330	526.0100	TEMPORARY STRUCTURE (STATION) 01. 20+82 "BP"	LS	1.000	1.000
0340	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	1,035.000	1,035.000
0350	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	160.000	160.000
0360	602.0405	CONCRETE SIDEWALK 4-INCH	SF	120.000	120.000
0370	606.0200	RIPRAP MEDIUM	CY	4.000	4.000
0380	606.0300	RIPRAP HEAVY	CY	50.000	50.000
0390	606.0400	RIPRAP EXTRA-HEAVY	CY	30.000	30.000
0400	611.8120.S	COVER PLATES TEMPORARY	EACH	2.000	2.000
0410	611.9705	SALVAGED MANHOLE COVERS	EACH	2.000	2.000
0420	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	180.000	180.000
0430	614.1000	MGS GUARDRAIL TEMPORARY	LF	264.000	264.000
0440	614.1100	MGS GUARDRAIL TEMPORARY THRIE BEAM TRANSITION	LF	156.000	156.000
0450	614.1200	MGS GUARDRAIL TEMPORARY TRANSITION EAT	EACH	4.000	4.000

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DATE 22NOV13 E S T I M A T E O F Q U A N T I T I E S

LINE 5783-03-71

NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0460	614.2300	MGS GUARDRAIL 3	LF	289.000	289.000
0470	614.2500	MGS THRIE BEAM TRANSITION	LF	156.000	156.000
0480	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
0490	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 5783-03-71	EACH	1.000	1.000
0500	619.1000	MOBILIZATION	EACH	1.000	1.000
0510	624.0100	WATER	MGAL	5.000	5.000
0520	625.0500	SALVAGED TOPSOIL	SY	18,400.000	18,400.000
0530	627.0200	MULCHING	SY	19,700.000	19,700.000
0540	628.1104	EROSION BALES	EACH	36.000	36.000
0550	628.1504	SILT FENCE	LF	3,100.000	3,100.000
0560	628.1520	SILT FENCE MAINTENANCE	LF	3,100.000	3,100.000
0570	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	4.000	4.000
0580	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	4.000	4.000
0590	628.2004	EROSION MAT CLASS I TYPE B	SY	650.000	650.000
0600	628.2023	EROSION MAT CLASS II TYPE B	SY	1,000.000	1,000.000
0610	628.7504	TEMPORARY DITCH CHECKS	LF	10.000	10.000
0620	628.7555	CULVERT PIPE CHECKS	EACH	3.000	3.000
0630	629.0210	FERTILIZER TYPE B	CWT	17.000	17.000
0640	630.0120	SEEDING MIXTURE NO. 20	LB	325.000	325.000
0650	630.0200	SEEDING TEMPORARY	LB	325.000	325.000
0660	630.0300	SEEDING BORROW PIT	LB	68.000	68.000
0670	633.5100	MARKERS ROW	EACH	9.000	9.000
0680	633.5200	MARKERS CULVERT END	EACH	2.000	2.000
0690	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	2.000	2.000
0700	637.2230	SIGNS TYPE II REFLECTIVE F	SF	20.500	20.500
0710	638.2602	REMOVING SIGNS TYPE II	EACH	11.000	11.000
0720	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	11.000	11.000
0730	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0740	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5783-03-71	EACH	1.000	1.000
0750	643.0300	TRAFFIC CONTROL DRUMS	DAY	4,200.000	4,200.000
0760	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	120.000	120.000
0770	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	2,360.000	2,360.000
0780	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	800.000	800.000
0790	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	2,600.000	2,600.000
0800	643.0900	TRAFFIC CONTROL SIGNS	DAY	4,900.000	4,900.000
0810	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	125.000	125.000
0820	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	6,690.000	6,690.000
0830	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	100.000	100.000
0840	646.0600	REMOVING PAVEMENT MARKINGS	LF	2,600.000	2,600.000
0850	647.0556	PAVEMENT MARKING STOP LINE EPOXY 12-INCH	LF	21.000	21.000
0860	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	2,900.000	2,900.000
0870	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	2,320.000	2,320.000
0880	649.1400	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	LF	72.000	72.000
0890	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	2,560.000	2,560.000
0900	650.5000	CONSTRUCTION STAKING BASE	LF	2,560.000	2,560.000
0910	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	160.000	160.000
0920	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	4.000	4.000
0930	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-12-0079	LS	1.000	1.000
0940	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5783-03-71	LS	1.000	1.000

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DATE 22NOV13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5783-03-71 QUANTITY
0950	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	2,930.000	2,930.000
0960	661.0100	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 01. B-12-0137	LS	1.000	1.000
0970	690.0150	SAWING ASPHALT	LF	575.000	575.000
0980	690.0250	SAWING CONCRETE	LF	60.000	60.000
0990	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	1,110.000	1,110.000
1000	SPV.0105	SPECIAL 01. UNDERWATER DIVE INSPECTION - RIPRAP REPLACEMENT	LS	1.000	1.000

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	CLEARING 201.0105 STA	GRUBBING 201.0205 STA	REMARKS
0010	118+00	-	119+00	LEFT	1	1	REMOVAL ON OLD CREEK BANK
				TOTAL 0010	1	1	

REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	TO	STATION	LOCATION	203.0100 EACH	REMARKS
0010	11763	-	11850	RIGHT	1	CROSS DRAIN UNDER BROCKWAY - 18" CMCP
				TOTAL 0010	1	

REMOVING CONCRETE SIDEWALK

CATEGORY	STATION	TO	STATION	LOCATION	REMOVING CONCRETE SIDEWALK 204.0155 SY	REMARKS
0030	8+66	-	8+85	LT	120	STH 171 KICKAPOO RIVER BRIDGE
				TOTAL 0030	120	

SPECIAL(UNDERWATER DIVE INSPECTION - RIPRAP PLACEMENT)

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0105(01) LS	REMARKS
0030	10+00			B-12-137	1	PIER NO. 2, STH 137
				TOTAL 0030	1	

SAWING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	SAWING ASPHALT 690.0150 LF	SAWING CONCRETE 690.0250 LF	REMARKS
				STH 131, DELLAMATER HOLLOW CREEK BRIDGE			
0010	115+00	-	115+00	RT	8		TRANSVERSE SAW CUT - BEGIN PROJECT
0010	115+00	-	117+50	RT	250		LONGITUDINAL SAW CUT AT LANE EDGE
0010	116+00	-	116+00	LT	8		TRANSVERSE SAW CUT - BEGIN PROJECT
0010	116+00	-	117+50	LT	150		LONGITUDINAL SAW CUT AT LANE EDGE
0010	117+50	-	117+50	M/L	27		FULL WIDTH SAW CUT ACROSS LANES
0010	128+00	-	128+00	M/L	40		FULL WIDTH SAW CUT ACROSS LANES
0010	10+08	-	10+08	M/L	21		BROCKWAY SAW CUT
				CATEGORY 0010 TOTAL	504	0	
				KICKAPOO RIVER BRIDGE ON STH 171, B-12-0137			
0030	8+69	-	8+87	M/L	71		STH 171, B-12-0137 WEST APPROACH
0030	8+69	-	8+86	LT		10	SIDEWALK - NW QUAD B-12-0137
0030	11+21	-	11+33	M/L		50	STH 171, B-12-0137 EAST APPROACH
				CATEGORY 0030 TOTAL	71	60	
				PROJECT TOTALS	575	60	

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 LF	REMARKS
0010	11733	-	11862	LEFT	130	SW QUAD OF OLD STRUCTURE
0010	11740	-	11862	RIGHT	123	SE QUAD OF OLD STRUCTURE
0010	11886	-	12031	LEFT	145	NW QUAD OF OLD STRUCTURE
0010	11886	-	12033	RIGHT	147	NE QUAD OF OLD STRUCTURE
				TOTAL 0010	545	

TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE)

CATEGORY	STATION	TO	STATION	LOCATION	661.0100 LS	REMARKS
0030	10+50	-	13+25	M/L	1	STH 171, BRIDGE REHAB B-12-137
				TOTAL 0030	1	

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CULVERT PIPES

CATEGORY	STATION	TO	STATION	LOCATION	CULVERT PIPE TEMPORARY 15-INCH 520.4015 LF	CULVERT PIPE TEMPORARY 36-INCH 520.4036 LF	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH 522.0124 LF	APRON ENDWALLS CULVERT PIPE REINFORCED CONCRETE 24-INCH 522.1024 EACH	APRON ENDWALLS CULVERT PIPE REINFORCED CONCRETE 24-INCH 633.5200 EACH	REMARKS
0010	117+63	-	118+37	M/L			118	2	2	CROSS DRAIN ON STH 131
0010	117+28	-	117+58	RT	34					BY-PASS CULVERT EXTENSION
0010	18+93	-	19+35	M/L		69				BY-PASS, TEMPORARY CROSS DRAIN
0010	18+98	-	19+40	M/L		69				BY-PASS, TEMPORARY CROSS DRAIN

CONCRETE CURB AND GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	CONCRETE CURB & GUTTER 6-IN SLOPED 36-INCH TYPE-D 601.0557 LF	REMARKS
0010	117+43	-	9+03	RT	95	SE Quad of Brockway Intersection
0010	8+83	-	118+74	RT	65	NE Quad of Brockway Intersection
				TOTAL 0010	160	

CONCRETE PAVEMENT REPAIRS

CATEGORY	STATION	TO	STATION	LOCATION	DRILLED TIE BARS 416.0610 EACH	DRILLED DOWEL BARS 416.0620 EACH	CONCRETE PAVEMENT REPLACEMENT 416.1720 SY	REMARKS
0030	11+21	-	11+33	C/L	12	32	32	EAST APPROACH TO B-12-0137
				TOTAL 0030	12	32	32	

TEMPORARY STRUCTURE (STATION)

CATEGORY	STATION	TO	STATION	LOCATION	TEMPORARY STRUCTURE (20+83) 526.0100 LS	REMARKS
0010	20+60	-	21+06	M/L	1	STH 131 BY-PASS
				TOTAL 0010	1	

CONCRETE SIDEWALK 4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	CONCRETE SIDEWALK 4-INCH 602.0405 SF	REMARKS
0030	8+44	-	8+85	LT	120	NORTH WEST QUAD OF STRUCTURE
				TOTAL 0030	120	

RIPRAP & GEOTEXTILE FABRIC

CATEGORY	STATION	TO	STATION	LOCATION	RIPRAP MEDIUM 606.0200 CY	RIPRAP EXTRA-HEAVY 606.0400 CY	GEOTEXTILE FABRIC TYPE HR 645.0120 SY	REMARKS
0010	118+36	-	118+40	LT	4		15	CROSS DRAIN OUTFALL
				TOTAL 0010	4	0	15	
STH 171 BRIDGE REPAIR B-12-137								
0030	10+00			C/L		30		B-12-137 PIER 2 - SCOUR HOLE
				TOTAL 0030	0	30	0	

SANITARY SEWER MANHOLES

CATEGORY	STATION	OFFSET	LOCATION	COVER PLATES TEMPORARY 611.8120.S EACH	SALVAGED MANHOLE COVERS 611.9705 EACH	REMARKS
0010	118+46	65.15	RT	1	1	SANITARY MANHOLE - BROCKWAY DRIVE
0010	119+71	30.23	RT	1	1	SANITARY MANHOLE - TEMP STH 131
			TOTAL 0010	2	2	

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EARTH WORK SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	EXCAVATION COMMON 205.0100 CY	BORROW 208.0100 CY	REMARKS
				DELAMATER HOLLOW CREEK - CHANNEL RE-ALIGNMENT			
0010	10+37	-	14+65	BY-PASS	725		NEW CREEK CHANNEL
				SUB TOTAL	725		
				STH 131 BY-PASS ROADWAY CONSTRUCTION - STAGE 1			
0010	16+85	-	18+34	BY-PASS	45	315	CROSS OVER TO TEMPORARY
0010	18+50	-	20+60	BY-PASS		1065	BY-PASS, BROCKWAY TO TEMP STRUCT.
0010	21+06	-	26+37	BY-PASS		555	BY-PASS, TEMP STURCT. TO MATCH IN
				SUB TOTAL	45	1935	
				STH 131 MAINLINE ROADWAY REMOVAL - STAGE 2			
0010	115+00	-	118+63	RT	125		SHOULDER CUTS RIGHT
0010	116+00	-	118+63	LT	110		SHOULDER CUTS LEFT
0010	117+50	-	118+63	M/L	125		M/L CUT SOUTH OF EXIST. BRIDGE
0010	118+86	-	128+00	M/L	1240		M/L CUT NORTH OF EXIST. BRIDGE
0010	8+38	-	9+00	BROCKWAY	115		INTERSECTION BROCKWAY & STH 131
0010	9+00	-	10+25	BROCKWAY	125		BROCKWAY
				SUB TOTAL	1840	0	
				STH 131 BY-PASS ROADWAY REMOVAL AND FORESLOPE WORK - STAGE 3			
0010	115+00	-	118+63	M/L	440		FORESLOPE/DITCH WORK/BYPASS REMOVALL
0010	118+63	-	128+00	M/L	1895		FORESLOPE/DITCH WORK/BYPASS REMOVALL
0010	8+38	-	9+00	BROCKWAY	335		FORESLOPE/DITCH WORK
0010	9+00	-	10+25	BROCKWAY	420		FORESLOPE/DITCH WORK
				SUB TOTAL	3090	0	
				CATEGORY 0010 TOTAL	5700	1935	
				STH 171 BRIDGE REHAB WORK			
0030	8+69	-	8+94	M/L	65		STH 171 BRIDGE - WEST APPROACH
0030	11+21	-	11+33	M/L	30		STH 171 BRIDGE - EAST APPROACH
				CATEGORY 0030 TOTAL	95	0	
				PROJECT TOTALS	5795	1935	

MGS GUARDRAIL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	MGS GUARDRAIL TEMPORARY 614.1000 LF	MGS GUARDRAIL TEMPORARY TRANSITION 614.1100 LF	MGS GUARDRAIL TEMPORARY TRANSITION EAT 614.1200 EACH	MGS GUARDRAIL 3 614.2300 LF	MGS THRIE BEAM TRANSITION 614.2500 LF	MGS GUARDRAIL TREMINAL EAT 614.2610 EACH	REMARKS
0010	19+52	-	20+57	LT	66	39	1				TEMPORARY ROADWAY
0010	19+65	-	20+70	RT	66	39	1				TEMPORARY ROADWAY
0010	20+97	-	22+02	LT	66	39	1				TEMPORARY ROADWAY
0010	21+11	-	22+16	RT	66	39	1				TEMPORARY ROADWAY
0010	118+90	-	119+95	LT				66	39	1	B-12-79
0010	119+11	-	120+16	RT				66	39	1	B-12-79
0010	120+30	-	121+38	LT				66	39	1	B-12-79
0010	120+53	-	121+83	RT				91	39	1	B-12-79
				TOTAL 0010	264	156	4	289	156	4	

AGGREGATE BASE COURSE MATERIALS

CATEGORY	STATION	TO	STATION	LOCATION	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON	BASE AGGREGATE DENSE 3-INCH 305.0130 TON	WATER 624.0100 MGAL	REMARKS
0010	115+00	-	120+11	RT	13	530		0.50	RT TURN BAY - TO BRIDGE
0010	116+00	-	119+94	LT	17	260		0.50	SB SHOULDER TO BRIDGE
0010	117+50	-	120+03	M/L		450		0.50	MAINLINE TO BRIDGE
0010	118+20	-	120+03	M/L			439		MAINLINE TO BRIDGE
	120+46	-	121+00	M/L			126		MAINLINE AFTER BRIDGE
0010	120+46	-	122+76	M/L	33	760		0.50	M/L FROM BRIDGE TO END OF SHOULDER TAPERS
0010	122+76	-	128+00	M/L	32	1470		1.00	MAINLINE NORTH OF SHOULDER TAPERS
0010									
0010	17+00	-	25+75	M/L	27	905		1.00	TEMPORARY BY-PASS ROADWAY
0010									
	8+83	-	10+08	LT	13	232		0.25	BROCKWAY DRIVE
0010	9+04	-	10+08	RT	14	233		0.25	BROCKWAY DRIVE
				CATEGORY 0010 TOTAL	149	4840	565	4.50	
					STH 171 BRIDGE REPAIRS B-12-137				
0030	8+69	-	8+94	M/L		90	78	0.25	WEST APPROACH B-12-137
0030	11+21	-	11+33	M/L		20	17	0.25	EAST APPROACH B-12-137
0030	8+69	-	8+85	LT	1				SIDEWALK BASE - NW QUAD B-12-137
				CATEGORY 0030 TOTAL	1	110	95	0.50	
				PROJECT TOTALS	150	4950	660	5.00	

MARKERS ROW

CATEGORY	STATION	TO	STATION	LOCATION	633.5100 EACH	REMARKS
0010	114+99.61			LT	1	SEE ROW PLATE FOR STA. OFF.
0010	114+99.77			RT	1	SEE ROW PLATE FOR STA. OFF.
0010	117+92.20			RT	1	SEE ROW PLATE FOR STA. OFF.
0010	118+23.85			LT	1	SEE ROW PLATE FOR STA. OFF.
0010	118+72.17			RT	1	SEE ROW PLATE FOR STA. OFF.
0010	120+33.61			LT	1	SEE ROW PLATE FOR STA. OFF.
0010	124+49.89			RT	1	SEE ROW PLATE FOR STA. OFF.
0010	126+00.00			RT	1	SEE ROW PLATE FOR STA. OFF.
0010	126+00.00			LT	1	SEE ROW PLATE FOR STA. OFF.
				TOTAL 0010	9	

MARKERS CULVERT END

CATEGORY	STATION	TO	STATION	LOCATION	633.5200 EACH	REMARKS
0010	117+63			LT	1	CROSS PIPE UNDER STH 131
0010	118+37			RT	1	CROSS PIPE UNDER STH 131
				TOTAL 0010	2	

ASPHALTIC MATERIALS

CATEGORY	STATION	TO	STATION	LOCATION	APHALTIC MATERIAL PG58-28 455.0105 TON	TACK COAT 455.0605 GAL	HMA PAVEMENT TYPE E-0.3 460.1100 TON	ASPHALTIC SURFACE TEMPORARY 465.0125 TON	REMARKS
0010	17+00	-	20+60	TEMP M/L		24		173	STH 131 BY-PASS, SOUTH OF TEMP STRUCTURE
0010	21+06	-	25+75	TEMP M/L		27		190	STH 131 BY-PASS, NORTH OF TEMP STRUCTURE
0010	15+00	-	120+11	RT	7	14	129		STH 131 RIGHT TURN BAY, THRU TO STRUCTURE
0010	116+00	-	117+63	LT	3	7	61		STH 131 SB SHOULDER, SOUTH OF STRUCTURE
0010	117+63	-	120+03	M/L	9	17	154		STH 131 MAINLINE, SOUTH OF STRUCTURE
0010	120+34	-	128+00	LT	7	13	119		STH 131 SB SHOULDER, NORTH OF STRUCTURE
	120+46	-	128+00	RT	6	12	111		STH 131 NB SHOULDER, NORTH OF STRUCTURE
0010	120+54	-	128+00	M/L	25	51	459		STH 131 MAINLINE, NORTH OF STRUCTURE
0010	8+44	-	10+08	M/L	8	15	137		BROCKWAY DRIVE INTERSECTION AND SIDELINE
			CATEGORY 0010 TOTAL		64	180	1170	363	
					STH 171 KICKAPOO RIVER BRIDGE				
0030	8+69	-	8+94	M/L	2	30	30		WEST APPROACH TO B-12-137
			CATEGORY 0030 TOTAL		2	30	30	0	
			PROJECT TOTALS		66	210	1200	363	

RESTORATION ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 20 630.0120 LB	SEEDING TEMPORARY 630.0200 LB	SEEDING BORROW PIT 630.0300 LB	REMARKS
					STAGE I RESTORATION QUANTITIES						
0010	16+80 BP	-	18+20 BP	RT	170	180	0.10	4.6	4.6		TEMP. BY-PASS ROADWAY SLOPE
0010	18+34 BP	-	20+50 BP	LT	220	230	0.14	6.0	6.0		BY-PASS SOUTH OF TEMP BRIDGE
0010	18+43 BP	-	20+72 BP	RT	185	190	0.10	5.0	5.0		BY-PASS SOUTH OF TEMP BRIDGE
0010	20+48 BP	-	21+33 BP	RT & LT	160	170	0.10	4.3	4.3		NEW CREEK CHANNEL - SOUTH BANK
0010	20+72 BP	-	21+44 BP	RT & LT	160	170	0.10	4.3	4.3		NEW CREEK CHANNEL - NORTH BANK
0010	20+90 BP	-	25+00 BP	LT	285	300	0.20	7.8	7.8		BY-PASS NORTH OF TEMP BRIDGE
0010	21+10 BP	-	26+10 BP	RT	370	390	0.24	10.0	10.0		BY-PASS NORTH OF TEMP BRIDGE
			SUBTOTAL STAGE I		1550	1630	1.0	42.0	42.0	0	
					STAGE II RESTORATION QUANTITIES						
0010	118+30	-	120+40	LT	380	0	0.24	10.0	10.0		NEW CREEK CHANNEL - WEST BANK
			SUBTOTAL STAGE II		380	0	0.24	10.0	10.0	0	
					STAGE III RESTORATION QUANTITIES						
0010	118+30	-	10+10 B	RT	905	950.0	0.60	24.0	24.0		FINAL GRADING - SE QUAD BROCKWAY DRIVE
0010	116+00	-	120+00	LT	829	871.0	0.50	22.5	22.5		FINAL GRADING - WEST SLOPES SOUTH OF STRUCTURE
0010	118+30	-	121+10	RT	2761	2900.0	1.74	74.5	74.5		FINAL GRADING - NE QUAD BROCKWAY & OLD CREEK CHANNEL
0010	120+35	-	126+00	LT	1472	1545.0	0.90	40.0	40.0		FINAL GRADING - WEST SLOPE NORTH OF STRUCTURE
0010	120+50	-	128+00	RT	3820	4010.0	2.40	105.0	105.0		FINAL GRADING - EAST SLOPE - AREA OF TEMP BY-PASS
0010	126+35	-	127+75	LT	253	265.0	0.14	7.0	7.0		WEST SLOPE BETWEEN PEs
0010	BORROW PIT/WASTE SITE/UNDISTRIBUTED				7335	7529.0	9.50			68	UNDISTRIBUTED (NOT PAID FOR)
			SUBTOTAL STAGE III		16470	18070	15.78	273.0	273.0	68	
			TOTAL 0010		18400	19700	17.0	325.0	325.0	68	

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	EROSION BALES 628.1104 EACH	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	MOBILIZATION EROSION CONTROL 628.1905 EACH	MOBILIZATION EMERGENCY EROSION CONTROL 628.1910 EACH	EROSION MAT CLASS I TYPE B 628.2004 SY	EROSION MAT CLASS II TYPE B 628.2023 SY	TEMPORARY DITCH CHECKS 628.7504 EACH	CULVERT PIPE CHECKS 628.7555 EACH	REMARKS
STAGE I EROSION CONTROL MEASURES														
0010	17+42 BP			RT									1	TEMPORARY CULVERT PIPE
0010	17+45 BP	-	18+00 BP	RT							49.0			DITCH CHANNEL LINER
0010	18+68 BP	-	18+90 BP	LT							20.0			SLOPE INTERCEPTS TO EXIST CREEK
0010	19+02 BP	-	19+33 BP	RT							28.0			SLOPE INTERCEPTS TO EXIST CREEK
0010	19+00 BP	-	19+50 BP	LT							44.0			SLOPE INTERCEPTS TO EXIST CREEK
0010	19+42 BP	-	19+80 BP	RT							34.0			SLOPE INTERCEPTS TO EXIST CREEK
0010	19+13 BP			LT								1		DITCH CHECK
0010	19+90 BP			LT										DITCH CHECK
0001	20+48 BP	-	21+33 BP	RT & LT						76				NEW CREEK CHANNEL - SOUTH BANK
0010	20+72 BP	-	21+44 BP	RT & LT						64				NEW CREEK CHANNEL - NORTH BANK
0010	20+93 BP			LT								1		DITCH CHECK
0010	21+15 BP	-	127+93	RT		708	708							
0010	22+50 BP			LT								1		DITCH CHECK
0010	120+33	-	126+03	LT		570	570							
0010	126+32	-	127+65	LT		133	133							
0010	16+50 BP	-	26+50 BP	RT/LT	18									UNDISTRIBUTED
0010	16+50 BP	-	26+50 BP	RT/LT				1	1					PROJECT - STAGE 1
0010	BORROW PIT / WASTE SITE / UNDISTRIBUTED					800	800	1	1					UNDISTRIBUTED
			SUBTOTAL STAGE I		18	2211	2211	2	2	140	175	3	1	
STAGE II EROSION CONTROL MEASURES														
0010	115+82	-	119+88	RT & LT		550	550							TOE OF SLOPE
0010	118+30	-	120+32	LT						380				NEW STREAM BANK - WEST BANK
0010	118+70			LT								1		OLD CREEK CHANNEL - PER ENGINEER
0010	120+13	-	120+85	RT & LT		136	136							NORTH ABUTMENT PROTECTION
0010	115+75	-	121+00	RT/LT				1	1					PROJECT - STAGE 2
			SUBTOTAL STAGE II		0	686	686	1	1	380	0	1	0	
STAGE III EROSION CONTROL MEASURES														
0010	117+55			RT									1	STH 131 CROSS DRAIN
0010	8+75 B	-	10+10 B	RT							138			DITCH LINER
0010	10+10 B	-	120+25	LT & RT							263			DITCH LINER
0010	9+00 B			RT								1		DITCH CHECK
0010	9+60 B			RT								1		DITCH CHECK
0010	9+50 B			LT								1		DITCH CHECK
0010	119+15			RT								1		DITCH CHECK
0010	120+15			RT								1		DITCH CHECK
0010	120+15	-	127+95	RT							693			DITCH LINER
0010	122+20			RT								1		DITCH CHECK
0010	124+00			RT								1		DITCH CHECK
0010	126+10			RT								1		DITCH CHECK
0010	115+00	-	128+00	RT & LT	18	203	203	1	1	130	132	3	2	UNDISTRIBUTED TOTALS FOR PROJECT
			SUBTOTAL STAGE III		18	203	203	1	1	130	825	6	2	
			TOTAL 0010		36	3100	3100	4	4	650	1000	10	3	

PAVEMENT MARKING

CATEGORY	STATION	TO	STATION	LOCATION	PAV'T MARKING EPOXY 4-INCH 646.0106 LF	PAV'T MARKING EPOXY 8-INCH 646.0126 LF	REMOVING PAVEMENT MARKINGS 646.0600 LF	PAV'T MARKING STOP LINE EPOXY 12-INCH 647.0556 LF	TEMPORARY PAV'T MARKING 4-INCH 649.0100 LF	TEMPORARY PAV'T MARKING REMOVABLE TAPE 4-INCH 649.0400 LF	TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH 649.1400 LF	REMARKS
0010	15+75 'BP'	-	17+50 'BP'	LT						175		BY-PASS, WHITE EDGE LINE
0010	15+75 'BP'	-	17+50 'BP'	RT						175		BY-PASS, WHITE EDGE LINE
0010	15+75 'BP'	-	17+50 'BP'	CL						350		BY-PASS, DOUBLE YELLOW CENTER LINE
0010	116+15	-	116+90	LT			75					WHITE EDGE LINE
0010	116+15	-	117+45	CL			260					DOUBLE YELLOW CENTER LINE
0010	116+30	-	117+45	RT			120					WHITE EDGE LINE
0010	17+50 'BP'	-	24+75 'BP'	LT					725			BY-PASS, WHITE EDGE LINE
0010	17+50 'BP'	-	24+75 'BP'	RT					725			BY-PASS, WHITE EDGE LINE
0010	17+50 'BP'	-	24+75 'BP'	CL					1450			BY-PASS, DOUBLE YELLOW CENTER LINE
0010	124+65	-	126+10	RT			145					WHITE EDGE LINE
0010	124+75	-	126+25	CL			300					DOUBLE YELLOW CENTER LINE
0010	125+25	-	126+25	LT			100					WHITE EDGE LINE
0010	24+75 'BP'	-	26+75 'BP'	LT						200		BY-PASS, WHITE EDGE LINE
0010	24+75 'BP'	-	26+40 'BP'	RT						170		BY-PASS, WHITE EDGE LINE
0010	24+75 'BP'	-	26+75 'BP'	CL						400		BY-PASS, DOUBLE YELLOW CENTER LINE
0010	115+75	-	128+25	LT	1250							WHITE EDGE LINE
0010	114+75	-	128+25	RT	1350							WHITE EDGE LINE
0010	115+75	-	128+25	CL	2500							DOUBLE YELLOW CENTER LINE
0010	116+43	-	117+43	RT		100						CHANNELIZING RIGHT TURN BAY
0010	18+37 B'	-		RT				21				STOP LINE ON BROCKWAY DRIVE
			CATEGORY 0010 TOTALS		5100	100	1000	21	2900	1470	0	
					STH 171 - BRIDGE REPAIRS - STAGE 1							
0030	9+71			RT							18	STOP LINE AT TEMPORARY LIGHT
0030	13+71			LT							18	STOP LINE AT TEMPORARY LIGHT
0030	9+71	-	13+71	RT						425		WHITE EDGE LINE
0030	9+71	-	13+71	LT			400					REMOVAL WHITE EDGELINE
0030	9+71	-	13+71	C/L			800					REMOVAL OF CENTERLINE
					STH 171 - BRIDGE REPAIRS - STAGE 2							
0030	9+71			LT							18	STOP LINE AT TEMPORARY LIGHT
0030	13+71			RT							18	STOP LINE AT TEMPORARY LIGHT
0030	9+71	-	13+71	LT						425		WHITE EDGE LINE
0030	9+71	-	13+71	RT			400					REMOVAL WHITE EDGELINE
0030	8+50	-	13+80	LT	530							WHITE EDGE LINE - STH 171 BRIDGE
0030	8+50	-	13+80	RT	530							WHITE EDGE LINE - STH 171 BRIDGE
0030	8+50	-	13+80	CL	530							DOUBLE YELLOW CENTER LINE
			CATEGTORY 0030 TOTALS		1590	0	1600	0	0	850	72	
			PROJECT TOTALS		6690	100	2600	21	2900	2320	72	

CONSTRUCTION STAKING

CATEGORY	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUBGRADE 650.4500 LF	CONSTRUCTION STAKING BASE 650.5000 LF	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER 650.5500 LF	CONSTRUCTION STAKING PIPE CULVERTS 650.6000 EACH	CONSTRUCTION STAKING STRUCTURE LAYOUT B-12-79 650.6500 LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 5783-03-71 650.9910 LS	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF	REMARKS
0010	16+75	-	26+50	M/L	980	980					980	STH 131 BY-PASS ROADWAY
0010	10+00	-	14+60	CREEK							460	PROPOSED CREEK CHANNEL
0010	115+00	-	128+00	M/L	1300	1300					1300	STH 131 PROPOSED ROADWAY
0010	8+19	-	10+08	BROCKWAY	200	200					190	BROCKWAY DRIVE
0010	8+69	-	8+85	STH 171	20	20						STH 171 B-12-137 WEST APPROACH
0010	11+21	-	11+33	STH 171	20	20						STH 171 B-12-137 EAST APPROACH
0010	117+43	-	9+03	RT			95					SOUTH EAST QUAD - BROCKWAY/STH 131
0010	8+83	-	118+74	RT			65					NORTH EAST QUAD - BROCKWAY/STH 131
0010	117+63	-	118+37	M/L				1				CROSS DRAIN UNDER STH 131
0010	117+28			RT				1				TEMPORARY CULVERT EXTENSION UNDER BROCKWAY
0010	120+05	-	120+46	BRIDGE					1			B-12-79
0010	18+83	-	19+35	BY-PASS				1				TEMPORARY STREAM CROSS DRAIN - BY PASS
0010	18+98	-	19+40	BY-PASS				1				TEMPORARY STREAM CROSS DRAIN - BY PASS
0010	BRIDGE REPLACEMENT									0.5		BRIDGE REPLACEMENT PROJECT B-12-79
			CATEGORY 0010 TOTALS		2520	2520	160	4	1	0.5	2930	
STH 171 BRIDGE REPAIRS B-12-137												
0030	8+69	-	8+94	M/L	25	25						WEST APPROACH B-12-137
0030	11+21	-	11+33	M/L	15	15						EAST APPROACH B-12-137
0030	BRIDGE REHAB									0.5		BRIDGE REHAB PROJECT B-12-137
			CATEGORY 0030 TOTALS		40	40	0	0	0	0.5	0	
			PROJECT TOTALS		2560	2560	160	4	1	1	2930	

PERMANENT SIGNING

CATEGORY	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	POSTS WOOD 4X6-INCH X 14-FT 634.0614 EACH	SIGNS TYPE II REFLECTIVE F 637.2230 SF	REMOVING SIGNS TYPE II 638.2602 EACH	REMOVING SMALL SIGN SUPPORTS 638.3000 EACH	REMARKS
0010	8+75	LEFT	R1-1	30"x30"	STOP	1	5.18	1	1	BROCKWAY DRIVE
0010	120+80	LEFT	W13-1	18"x18"	SPEED LIMIT 45	1	2.25	1	1	SPEED LIMIT SIGNAGE
0010	118+56	RIGHT	W5-52R		HAZARD PANEL			1	1	SE QUAD OF EXISTING STRUCTURE, B-12-618
0010	118+56	LEFT	W5-52L		HAZARD PANEL			1	1	SW QUAD OF EXISTING STRUCTURE, B-12-618
0010	118+94	RIGHT	W5-52R		HAZARD PANEL			1	1	NE QUAD OF EXISTING STRUCTURE, B-12-618
0010	118+94	LEFT	W5-52L		HAZARD PANEL			1	1	NW QUAD OF EXISTING STRUCTURE, B-12-618
0010	STH 131 - SO.	RIGHT			40 TON BRIDGE, 6 MILES AHEAD			1	1	INTERSECTION OF STH 131/USH 61 - SOLDIERS GROVE
0010	USH 61 - SO.	RIGHT			40 TON BRIDGE, 6 1/2 MILES AHEAD			1	1	USH 61 SOUTH - SOLDIERS GROVE
0010	USH 61 - NO.	RIGHT			40 TON BRIDGE, 6 1/2 MILES AHEAD			1	1	USH 61 NORTH - SOLDIERS GROVE
0010	STH 131 -NO.	RIGHT			40 TON BRIDGE, 1 1/4 MILES AHEAD			1	1	STH 131 NORTH - GAYS MILLS (STH 171/STH 131)
0010	STH 131 - NO.	RIGHT			41 TON BRIDGE, 1 MILE AHEAD			1	1	STH 131 NORTH - GAYS MILLS
				TOTAL 0010		2	7.43	11	11	

TRAFFIC CONTROL SUMMARY

TRAFFIC CONTROL FOR STH 131 BRIDGE REPLACEMENT

CATEGORY	DESCRIPTION	SIGN CODE	SIZE IN X IN	EACH	NUMBER OF DAYS	TRAFFIC CONTROL PROJECT 643.0100 EACH	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE II 643.0410 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TEMPORARY TRAFFIC SIGNALS FOR BRIDGES 661.0100 LS	REMARKS
0010	ROAD WORK AHEAD	W20-1	48 x 48	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	ROAD WORK 1000 FT	W20-1	48 x 48	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	REVERSE TURN	W01-4R	48 x 48	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	SPEED LIMIT 25 MPH	W013-1	24 x 24	2										SEE TRAFFIC CONTROL PLAN
0010	ARROW	W01-6	48 x 24	6										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	STOP	R1-1	30 x 30	1										STOP CONDITION ON BROCKWAY DRIVE
0010	ROAD CLOSED (BARRICADE)	R11-2	48 x 30	1										ROAD CLOSURE ON BROCKWAY
0010	ROAD WORK AHEAD	W20-1	48 x 48	1										BROCKWAY DRIVE
0010	HAZRD	W5-52R	12 x 36	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	HAZRD	W5-52L	12 x 36	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	REVERSE TURN	W01-4L	48 x 48	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	SPEED LIMIT 35 MPH	W013-1	24 x 24	2										SEE TRAFFIC CONTROL PLAN
0010	NO PASSING ZONE	W14-3	48 x 36	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	END ROAD WORK	G20-2A	48 x 24	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	BRIDGE OUT (BARRICADE)	R11-2	48 x 30	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	ROAD CLOSED (BARRICADE)	R11-2	48 x 30	1										SEE S.D.D. 15D 31-1 FOR PLACEMENT
0010	ARROW (BARRICADE)	W01-6	48 x 24	2										SEE S.D.D. 15D 31-1 FOR PLACEMENT
	TOTAL SIGNS			34	100	--	--	--	--	--	--	3400	--	
	TRAFFIC CONTROL DRUMS			24	100	--	2400	--	--	--	--	--	--	
	TRAFFIC CONTROL BARRICADES, TYPE III			23	100	--	--	--	2300	--	--	--	--	
	WARNING LIGHTS, TYPE A			8	100	--	--	--	--	800	--	--	--	
	WARNING LIGHTS, TYPE C			20	100	--	--	--	--	--	2000	--	--	
0010	TRAFFIC CONTROL PROJECT					0.5								
				CATEGORY 0010 TOTALS		0.5	2400	0	2300	800	2000	3400	0	

TRAFFIC CONTROL FOR STH 171 BRIDGE REPAIRS

CATEGORY	DESCRIPTION	SIGN CODE	SIZE IN X IN	EACH	NUMBER OF DAYS									
0030	MAX 14' WIDTH	W12-52	48 x 48	1										(5) MILES AT STH 27/STH 171
0030	XX MILES AHEAD	W057-52	36 x 24	1										MT. STERLING
0030	MAX 14' WIDTH	W12-52	48 x 48	2										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	ROAD WORK AHEAD	W20-1	48 x 48	2										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	ONE LANE ROAD AHEAD	W20-4	48 x 48	2										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	NO PASSING ZONE	W14-3	48 x 36	2										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	TRAFFIC SIGNALS	W03-3	48 x 48	4										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	STOP HERE ON RED	R10-6	24 x 36	2										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	END ROADWORK	G20-2A	48 x 24	2										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	ARROW	W01-6	48 x 24	1										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	REVERSE TURN	W01-4R	48 x 48	1										SEE S.D.D. 15D 33-2 FOR PLACEMENT
0030	ROAD WORK AHEAD	W20-1	48 x 48	1										WEST RIVER ROAD
0030	MAX 14' WIDTH	W12-52	48 x 48	1										(8) MILES AT STH 131/USH 61
0030	XX MILES AHEAD	W057-52	36 x 24	1										SOLIDERS GROVE
0030	MAX 14' WIDTH	W12-52	48 x 48	1										(0.2) MILES AT STH 131/STH 171
0030	XX MILES AHEAD	W057-52	36 x 24	1										GAYS MILLS, WEST BOUND ON STH 171
	TOTAL SIGNS			25	60	--	--	--	--	--	--	1500	--	
	TRAFFIC CONTROL DRUMS			30	60	--	1800	--	--	--	--	--	--	
	TRAFFIC CONTROL BARRICADES, TYPE II			2	60	--	--	120	--	--	--	--	--	
	TRAFFIC CONTROL BARRICADES, TYPE III			1	60	--	--	--	60	--	--	--	--	
	WARNING LIGHTS, TYPE C			10	60	--	--	--	--	--	600	--	--	
	TRAILER MOUNTED TRAFFIC SIGNAL			2	60	--	--	--	--	--	--	--	1	
0030	TRAFFIC CONTROL PROJECT					0.5								
				CATEGORY 0030 TOTALS		0.5	1800	120	60	0	600	1500	1	
				PROJECT TOTALS		1	4200	120	2360	800	2600	4900	1	

TRANSPORTATION PROJECT PLAT NO: 5783-03-21-4.01

PART OF LOT 1 OF THE ASSESSOR'S PLAT OF THE VILLAGE OF GAYS MILLS IN THE NW1/4-NW1/4; ALSO PART OF THE NE1/4-NW1/4, ALL IN SECTION 22 IN THE VILLAGE OF GAYS MILLS, T10N, R4W, IN CRAWFORD COUNTY, WISCONSIN.

RELOCATION ORDER STH 131, WAUZEKA - SOLDIERS GROVE

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

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

THE BASIS FOR THE EXISTING RIGHT OF WAY AS SHOWN ON THIS PLAT IS WISDOT DJ9571, CSM 632 IN V.5 OF MAPS, PG. 30, AND FOUND IRON PINS.

DOCUMENT #320155

ACCEPTED FOR RECORDING IN THE OFFICE OF THE REGISTER OF DEEDS IN CRAWFORD COUNTY, WISCONSIN AT 11:28 A.M. ON MAY 7, 2013 FILED IN 2 PLATS 77

THE ORIGINAL DOCUMENT WAS SIGNED BY MELISSA C NAGEL, REG.

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 5783-03-21-4.01

CONVENTIONAL ABBREVIATIONS

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

R/W POINTS

STATIONING & OFFSETS		
500	114+99.61	56.51'L
501	118+23.85	50.69'L
502	120+33.61	50.34'L
503	126+00.00	50.06'L
504	126+00.00	49.94'R
505	124+49.89	49.87'R
506	118+72.17	155.08'R
507	117+92.20	49.14'R
508	114+99.77	43.65'R

PLE POINTS

STATIONING & OFFSETS		
800	118+23.85	99.00'L
801	119+96.00	99.00'L

TLE POINTS

STATIONING & OFFSETS		
700	118+13.65	201.70'R
701	118+00.81	204.12'R
702	118+75.55	162.68'R
703	121+54.15	185.33'R
704	121+55.20	111.14'R
705	123+68.53	114.15'R
706	124+76.78	49.88'R
707	117+12.33	47.90'R
708	117+81.58	106.83'R

R/W COURSES

500-501	N00°47'53"W	325.31'
501-502	N00°42'37"W	209.76'
502-503	N00°46'41"W	566.39'
503-504	N89°11'32"E	100.00'
504-505	S00°46'43"E	150.11'
505-506	S11°07'39"E	587.22'
506-507	S52°17'44"W	131.97'
507-508	S00°46'39"E	232.12'
508-500	S87°53'46"W	100.16'

PLE COURSES

501-800	S89°11'33"W	48.31'
800-801	N00°48'23"W	172.15'
801-502	N51°29'37"E	61.50'

R/W MONUMENT COORDINATES

500	X=399709.180	Y=224433.705
501	X=399704.650	Y=224758.980
502	X=399702.050	Y=224968.720
503	X=399694.360	Y=225535.060
504	X=399794.350	Y=225536.470
505	X=399796.390	Y=225386.370
506	X=399909.720	Y=224810.190
507	X=399805.310	Y=224729.480
508	X=399809.273	Y=224437.382
800	X=399656.350	Y=224758.299
801	X=399653.927	Y=224930.432

CONVENTIONAL UTILITY SYMBOLS

WATER	W	
GAS	G	
TELEPHONE	T	
ELECTRIC	E	
FIBER OPTIC	FO	
SANITARY SEWER	SAN	
STORM SEWER	SS	
	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LS (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	●(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		SECTION LINE	
		QUARTER LINE	
FEE (HATCH VARIES)		SIXTEENTH LINE	
TEMPORARY LIMITED EASEMENT		EXISTING CENTERLINE	
		PROPOSED REFERENCE LINE	
PERMANENT LIMITED EASEMENT		PARALLEL OFFSET	
R/W BOUNDARY POINT	RWB20	SIGN NUMBER (OFF PREMISE)	21-1
PARCEL NUMBER	102	BUILDING	
UTILITY INTEREST	40		

NOTES:

HORIZONTAL POSITIONS SHOWN ARE WISCONSIN COUNTY COORDINATES, CRAWFORD COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

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

A **PERMANENT LIMITED EASEMENT** (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENT ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

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

SCHEDULE OF LANDS & INTERESTS REQUIRED

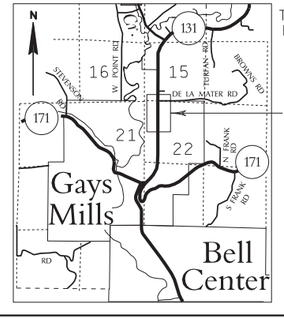
OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

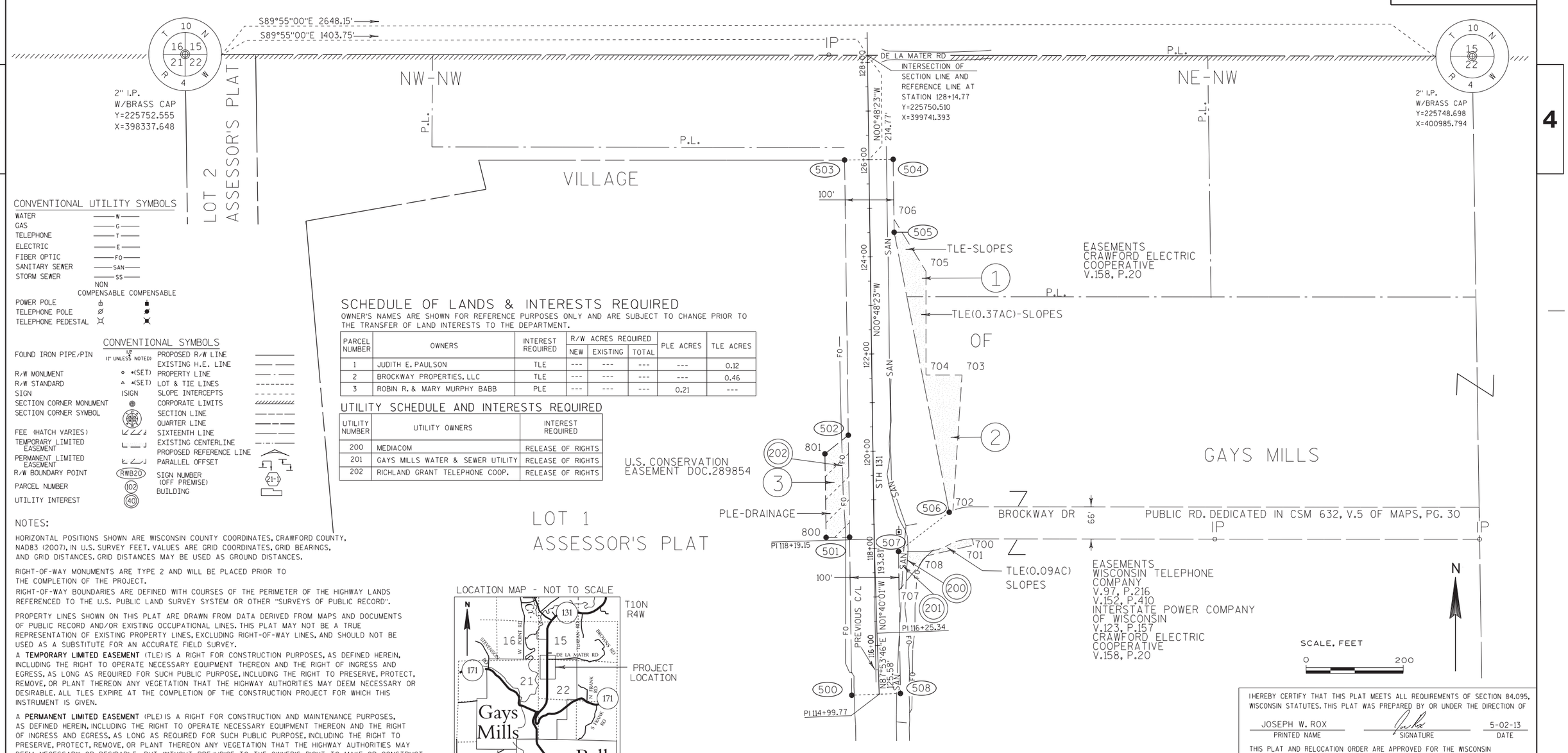
PARCEL NUMBER	OWNERS	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE ACRES	TLE ACRES
			NEW	EXISTING	TOTAL		
1	JUDITH E. PAULSON	TLE	---	---	---	---	0.12
2	BROCKWAY PROPERTIES, LLC	TLE	---	---	---	---	0.46
3	ROBIN R. & MARY MURPHY BABB	PLE	---	---	---	0.21	---

UTILITY SCHEDULE AND INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNERS	INTEREST REQUIRED
200	MEDIACOM	RELEASE OF RIGHTS
201	GAYS MILLS WATER & SEWER UTILITY	RELEASE OF RIGHTS
202	RICHLAND GRANT TELEPHONE COOP.	RELEASE OF RIGHTS

LOCATION MAP - NOT TO SCALE





I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095, WISCONSIN STATUTES. THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

JOSEPH W. ROX — PRINTED NAME | SIGNATURE | 5-02-13 — DATE

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

JAMES R. KUEHN — PRINTED NAME | James R Kuehn — SIGNATURE | May 3, 2013 — DATE

BEGIN PROJECT
STA. 115+00

24" CPRC CROSS DRAIN
STA. 117+62.97, 45.40' RT.
I.E.=706.21
STA. 118+36.59, 46.38' LT
O.E.=704.56
LENGTH=118'
2-AEWS

PLE

OLD STRUCTURE
B-12-0618
TO BE REMOVED

MGS GUARD RAIL
TYPICAL INSTALLATION
FOR BRIDGE STRUCTURE
SEE STD. MGS RAIL DETAILS
TYP. AT ALL 4 QUADS

N

SAW CUT

SLOPE INTERCEPT

CAUTION

PI: 114+99.77

PI: 116+25.34

PI: 118+19.15

115+00SB

116+00SB

117+00SB

118+00SB

115+00

116+00

117+00

118+00

118+50SB
BP: 8+19.15'B'

119+00

120+00

121+00

122+00

PI: 115+20.74

PI: 116+25.70

SAW CUT

SLOPE INTERCEPT

SAW CUT

8+19.15'B'

9+00.18'B'

PC: 9+00.37'B'

TYPE B1 INTERSECTION
SEE INTERSECTION DETAL

PI: 9+19.15

PT: 9+37.73'B'

PROPOSED
STRUCTURE
B-12-0079

SLOPE INTERCEPT

5

5

720.00

710.00

700.00

VCL = 144.66
K = 609.25

VCL = 50.88
K = 56.76

VPC STA 117+78.93
VPC EL 711.58

VPI STA 118+58.93
VPI EL 712.43

VPT STA 119+38.93
VPT EL 712.44

K = 236.03

0.16%

1.06%

0.01%

VPT STA 114+95.31
VPT EL 710.01

VPC STA 116+29.74
VPC EL 710.23

VPI STA 116+55.18
VPI EL 710.27

VPT STA 116+80.62
VPT EL 710.54

VPC STA 121+81.42
VPC EL 712.48

24" CMCP
118' @ 1.4%

VCL = 160.00
K = 153.04

OLD STRUCTURE
B-12-0618
TIMBER ABUTMENTS W/
STEEL GIRDERS
TO BE REMOVED

PROPOSED
STRUCTURE
CONCRETE SLAB SPAN
B-12-0079

114 115 116 117 118 119 120 121 122

710.01	710.14	710.30	710.50	710.29	710.73	711.29	711.73	712.27	712.35	712.23	711.98	712.05	712.19	712.22	712.25
709.95	710.02	710.10	710.18	710.30	710.75	711.28	711.79	712.17	712.39	712.44	712.45	712.46	712.47	712.47	712.49

PROJECT NO: 5783-03-81	HWY: STH 131	COUNTY: CRAWFORD	PLAN AND PROFILE: PROPOSED STH 131 ROADWAY	SHEET 36 E

SLOPE INTERCEPT

EXISTING R/W

MATCH INTO EXISTING PE

12' TRAVEL LANE
6' PAVED SHOULDER

MATCH INTO EXISTING PE

EP: 128+61.58

CAUTION

CAUTION

122+00 123+00 124+00 125+00 126+00 127+00 128+00 128+62

EXISTING R/W

12' TRAVEL LANE
6' PAVED SHOULDER

SAW CUT

END PROJECT
128+00

TLE

SLOPE INTERCEPT

VCL = 250.00
K = 130.85

VCL = 310.25
K = 236.03

3.24%

1.33%

PROPOSED PROFILE

EXISTING PROFILE

720.00

710.00

704.00

VPC STA 121+81.42
VPC EL 712.48

VPI STA 123+36.55
VPI EL 712.50

VPT STA 124+91.68
VPT EL 714.56

VPC STA 125+75.00
VPC EL 715.67

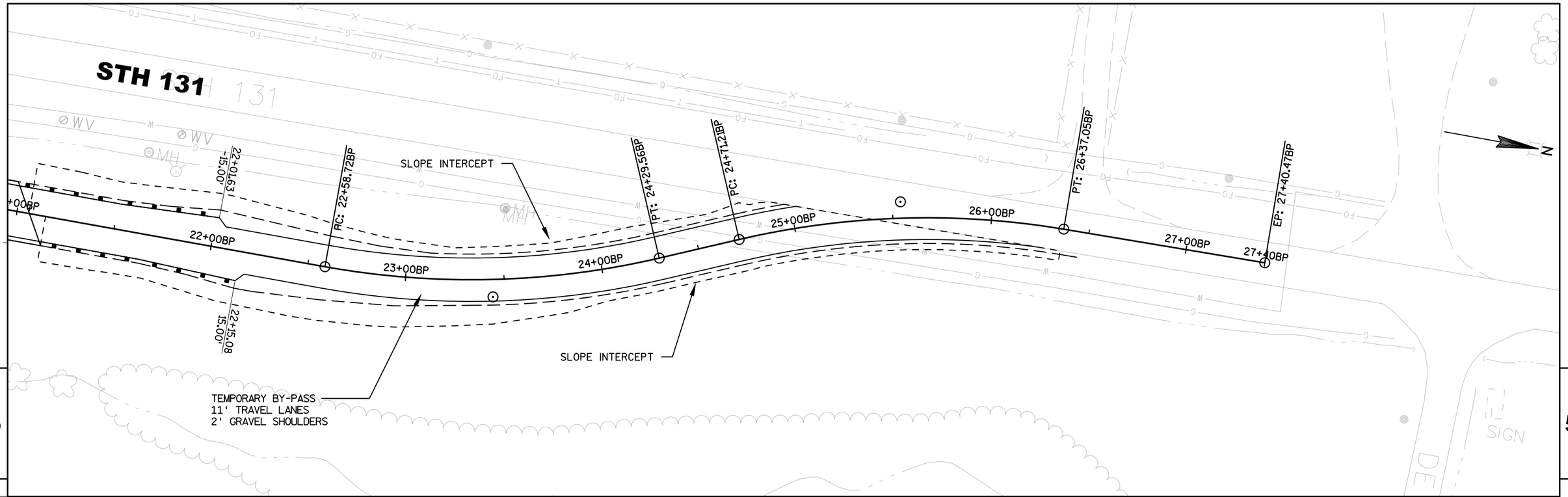
VPI STA 127+00.00
VPI EL 717.33

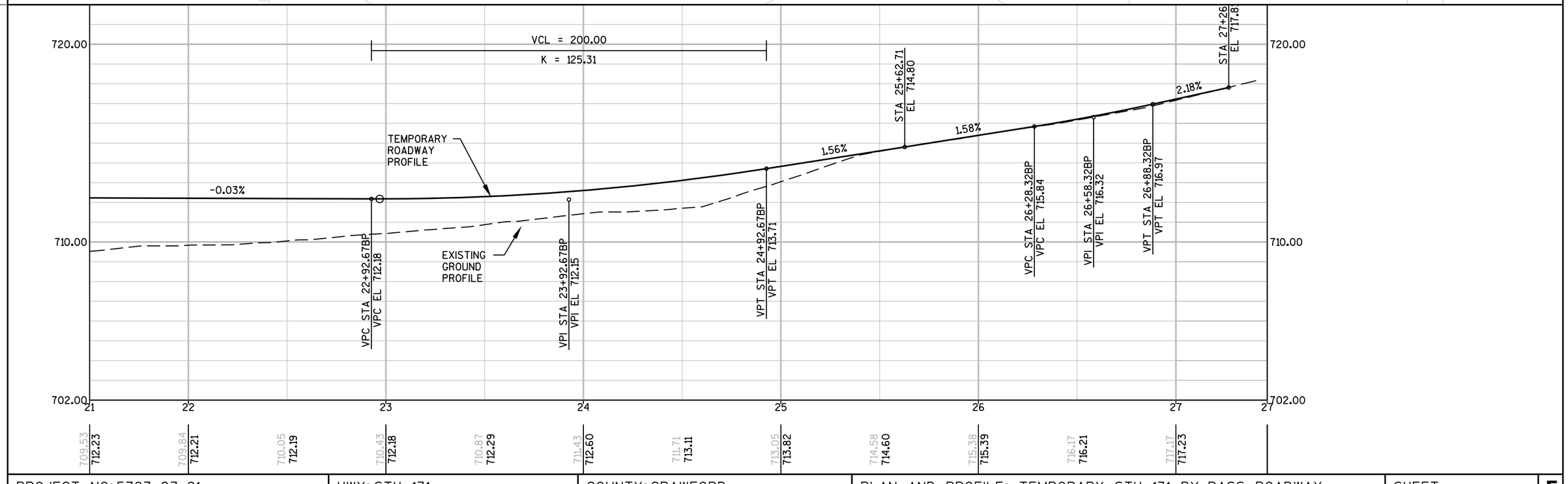
VPT STA 128+25.00
VPT EL 721.38

121 122 123 124 125 126 127 128 128

712.22 712.47 | 712.25 712.49 | 712.25 712.59 | 712.37 712.79 | 712.68 713.10 | 713.13 713.52 | 713.68 714.04 | 714.37 714.67 | 715.10 715.34 | 715.80 716.03 | 716.65 716.88 | 717.82 717.93 | 719.08 719.17 | 720.58 720.59 | 722.19 722.51

PROJECT NO:5783-03-81	HWY: STH 131	COUNTY: CRAWFORD	PLAN AND PROFILE: PROPOSED STH 131 ROADWAY	SHEET 37 - E





PROJECT NO:5783-03-81	HWY: STH 131	COUNTY: CRAWFORD	PLAN AND PROFILE: TEMPORARY STH 131 BY-PASS ROADWAY	SHEET 38 - E

2- 36" TEMP CMCP CROSS DRAINS
PIPE 1 - I.E. = 706.63
STA. 19+35.24BP, 27.25' RT.
O.E. = 705.53
STA. 18+82.55BP, 27.18' LT.
PIPE 2 - I.E. = 706.63
STA. 19+40.35BP, 27.41' RT.
O.E. = 705.53
STA. 18+97.58BP, 27.14' LT.
PIPE SLOPES = 1.60%

STH 131

N

TEMPORARY BY-PASS
11' TRAVEL LANES
2' GRAVEL SHOULDERS

SLOPE INTERCEPT

BP: 14+99.77BP
PI: 16+25.35BP
PC: 16+32.93BP
PT: 17+54.95BP
PC: 17+69.96BP
PT: 18+84.80BP
19+51.99 -15.00'
22+01.93 -15.00'
PC: 22+58.72BP
22+15.08 15.00'
19+64.18 15.00'

15+00BP
16+00BP
17+00BP
18+00BP
19+00BP
20+00BP
21+00BP
22+00BP

SLOPE INTERCEPT

STA. 117+28BP, 50.6' RT
15" TEMPORARY CULVERT PIPE
CONCRETE COLLAR REQUIRED

FEATHER TEMPORARY
ASPHALTIC SURFACE
BACK ONTO BROCKWAY
DRIVE TO MATCH IN.

SANITARY MANHOLE
PROVIDE TEMPORARY COVER PLATE
SALVAGE EXISTING MANHOLE COVER

SLOPE INTERCEPT

TEMPORARY STRUCTURE
STA. 20+82BP
Q(5) = 150 CFS
HW (5) = 707.7 FT
MIN. AREA (BR) = 65 SF

PROPOSED CREEK
CHANNEL

STA 16+44.56
EL 710.25

VPC STA 17+29.11BP
VPC EL 710.99

VPI STA 17+69.11BP
VPI EL 711.34

VPT STA 18+09.11BP
VPT EL 711.15

VPI STA 18+21.35BP
EL 711.09

STA 18+38.49BP
EL 710.75

VCL = 80.00
K = 59.62

TEMPORARY
ROADWAY
PROFILE

VPC STA 20+26.75BP
VPC EL 711.65

VPI STA 20+86.75BP
VPI EL 712.25

VPT STA 21+46.75BP
VPT EL 712.23

0.88%
0.48%
-1.99%
-0.34%
1.00%
-0.03%

15" TEMPORARY
CULVERT PIPE
I.E. 706.47
O.E. 706.13
34 LF @ 1.0%

VCL = 80.00
K = 58.69

VPC STA 18+72.47BP
VPC EL 710.63

VPI STA 19+12.47T
VPI EL 710.50

VPT STA 19+52.47BP
VPT EL 710.90

EXISTING
GROUND
PROFILE

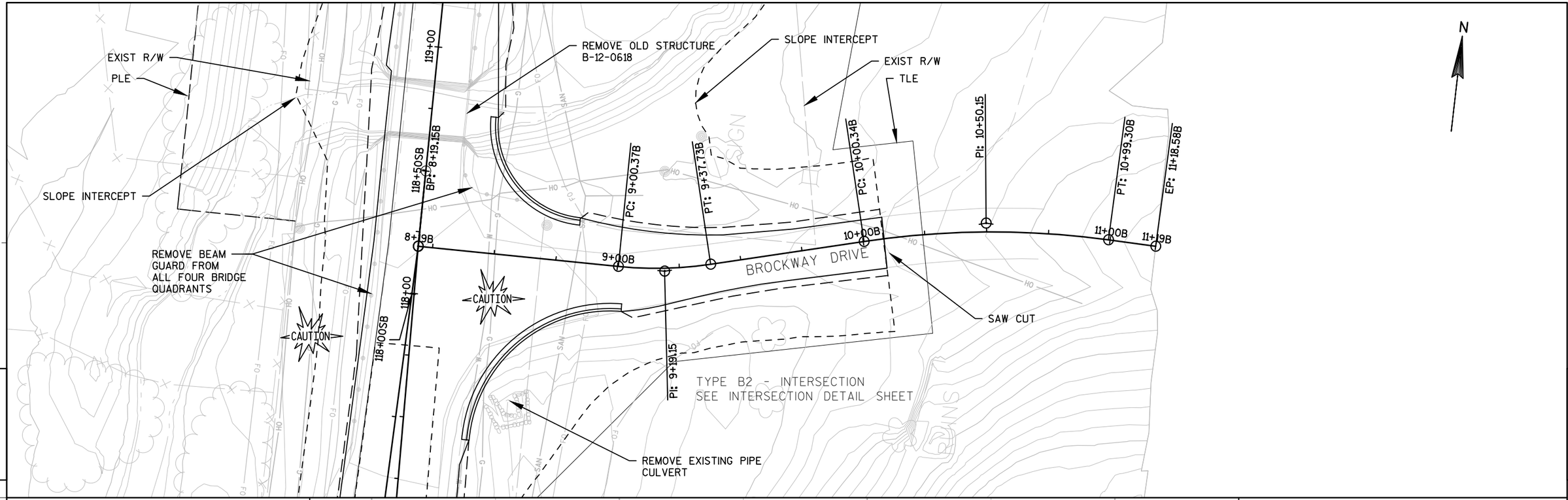
VCL = 120.00
K = 115.75

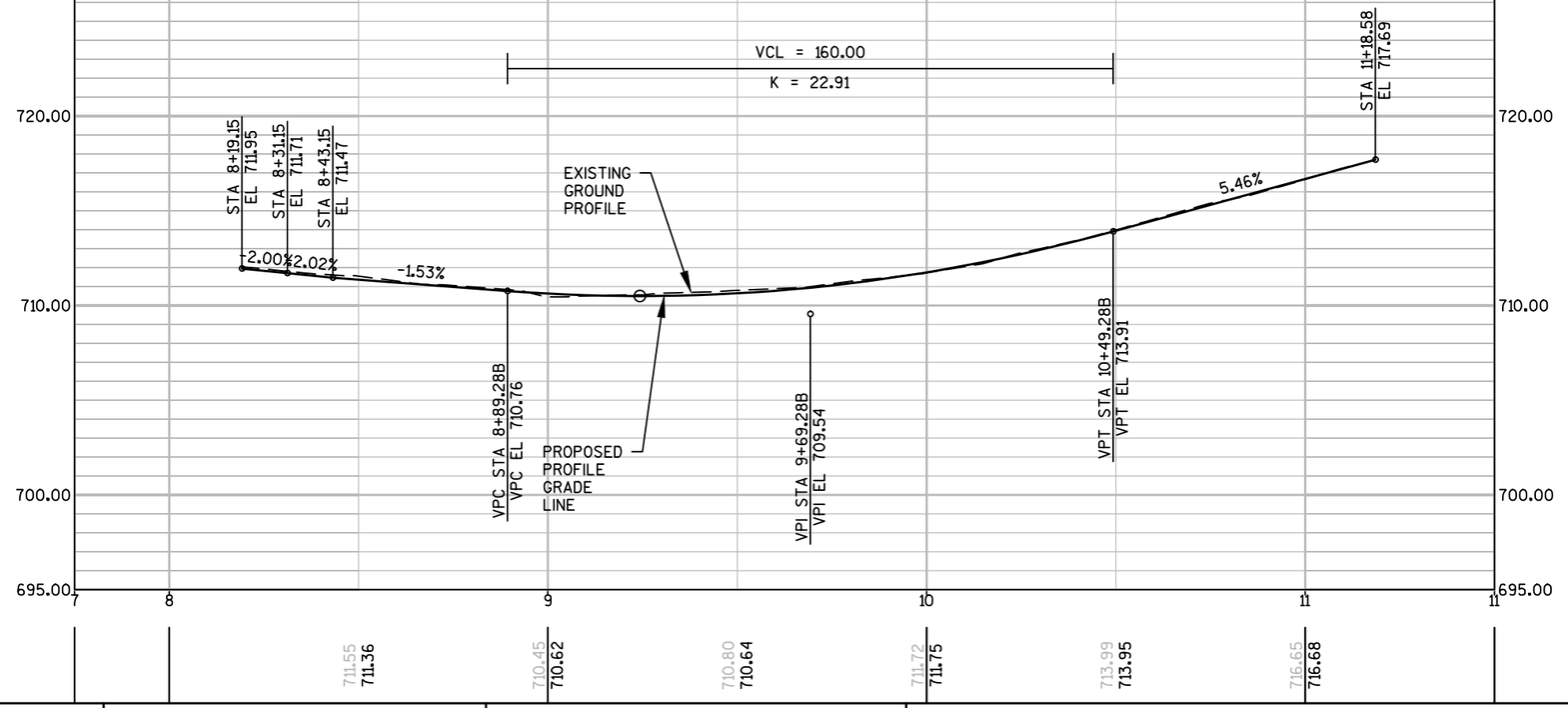
720.00
710.00
700.00

15 16 17 18 19 20 21 22

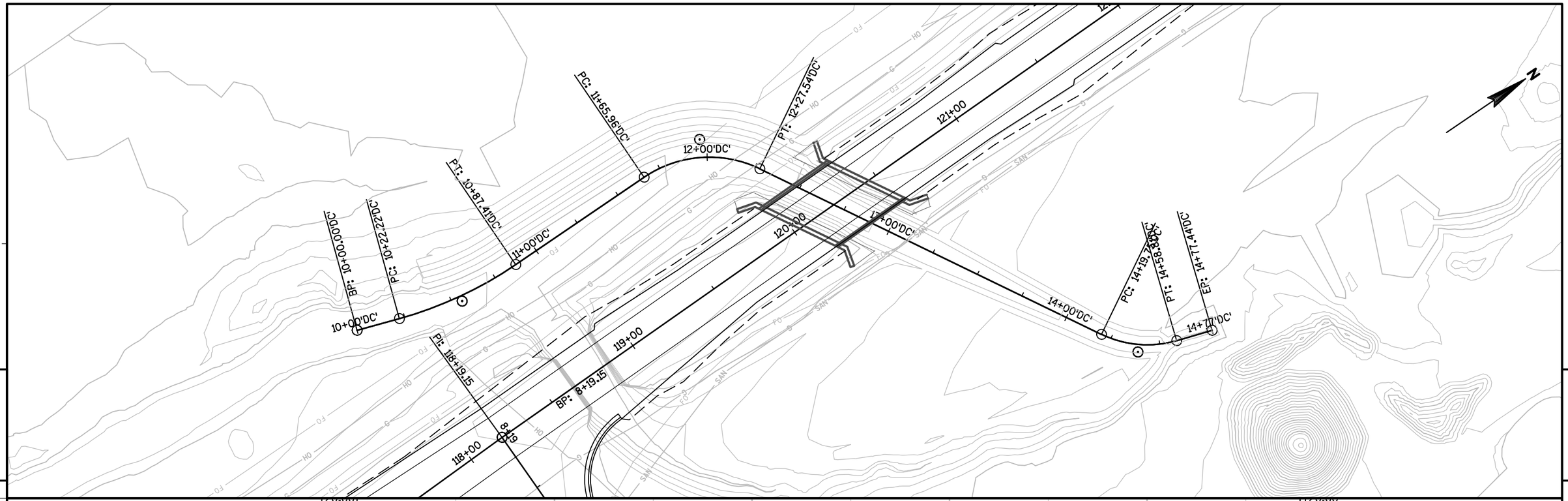
710.14 710.30 710.50 710.30 710.30 710.73 710.74 707.74 711.14 710.23 711.19 709.97 710.71 706.80 710.61 707.57 710.88 708.26 711.38 708.68 711.86 709.03 712.15 709.53 712.23 709.84 712.21 710.04 712.19

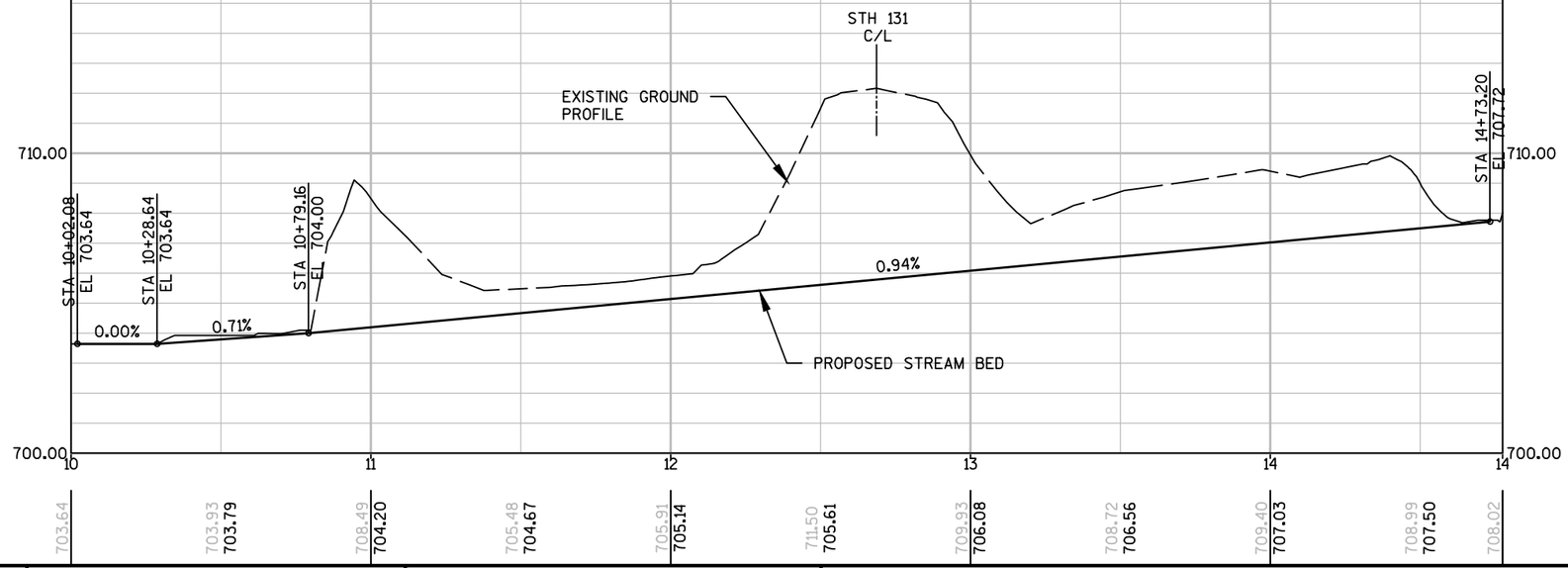
PROJECT NO:5783-03-81	HWY: STH 131	COUNTY: CRAWFORD	PLAN AND PROFILE: TEMPORARY STH 131 BY-PASS ROADWAY	SHEET 39 - E





PROJECT NO: 5783-03-81	HWY: STH 131	COUNTY: CRAWFORD	PLAN AND PROFILE: BROCKWAY DRIVE	SHEET 40 E

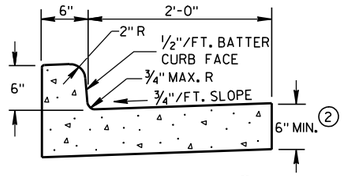




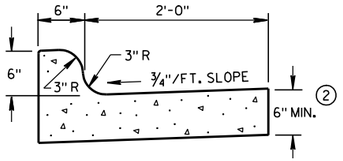
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	PLAN AND PROFILE: PROPOSED STREAM BED	SHEET 41	E

Standard Detail Drawing List

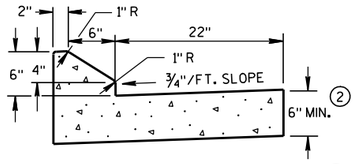
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
12A03-10	NAME PLATE (STRUCTURES)
13C09-10A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-10B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-10C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15A01-11	MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C04-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-02	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D03-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE
15D31-02	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY
15D33-03	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS



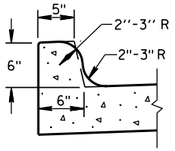
TYPES A & D (1)



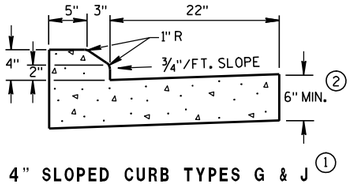
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

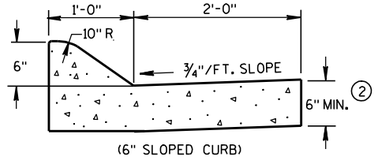


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

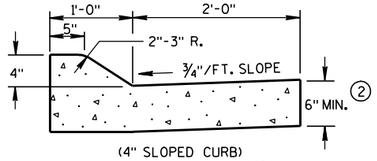


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

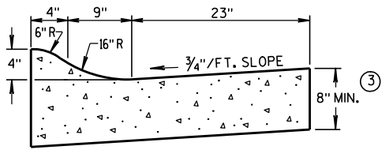


(6" SLOPED CURB)



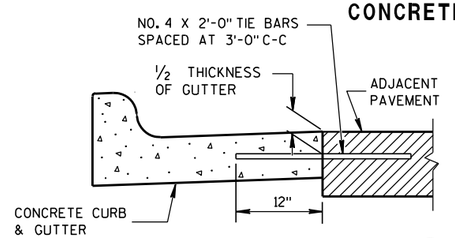
(4" SLOPED CURB)

TYPES A & D (1)

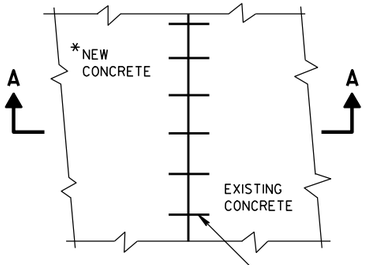


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

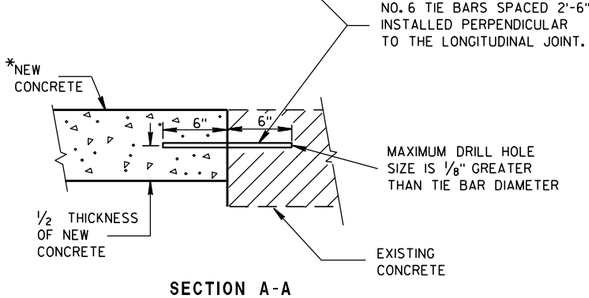


TYPICAL TIE BAR LOCATION (1)



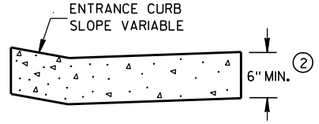
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

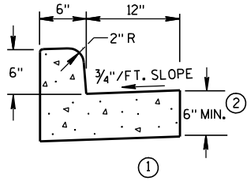


SECTION A-A

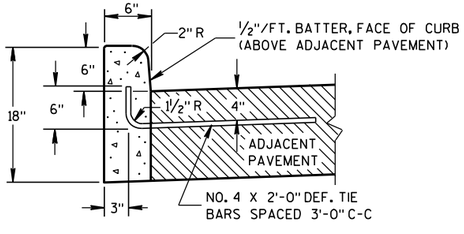
TIE BARS DRILLED INTO EXISTING PAVEMENT



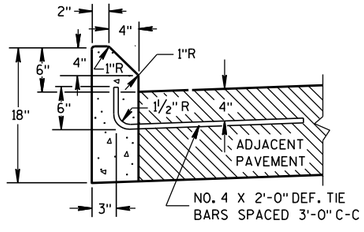
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"



(1)
TYPES A & D



(1)
TYPES G & J

CONCRETE CURB

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

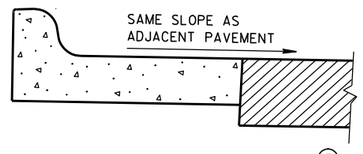
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

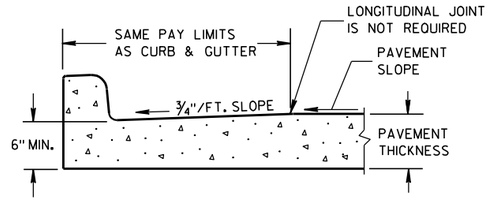
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

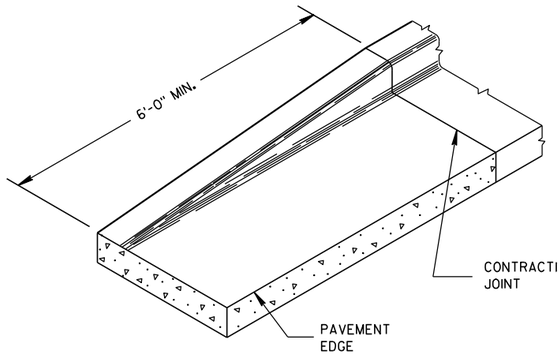
(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

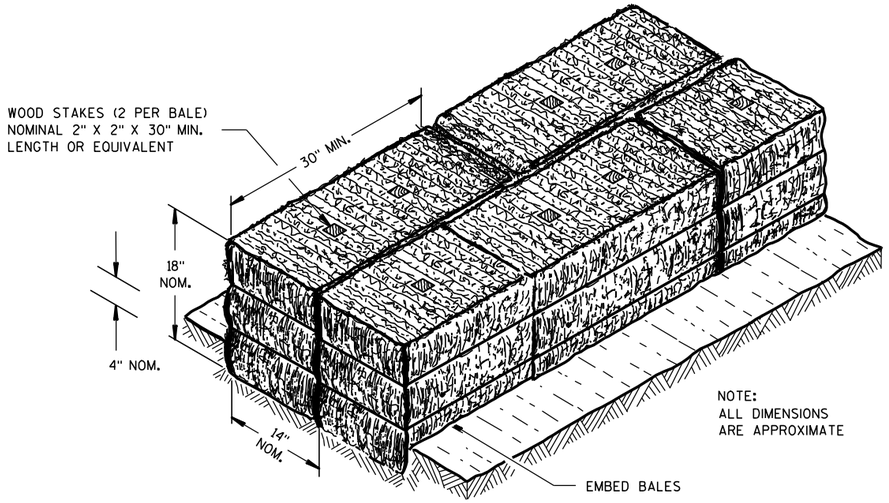
FHWA

6

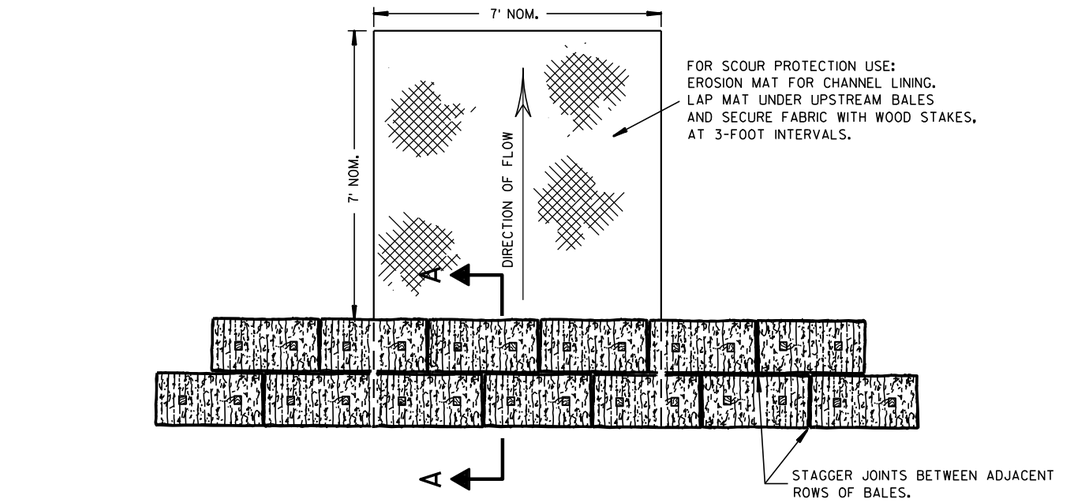
S.D.D. 8 D 1-17

6

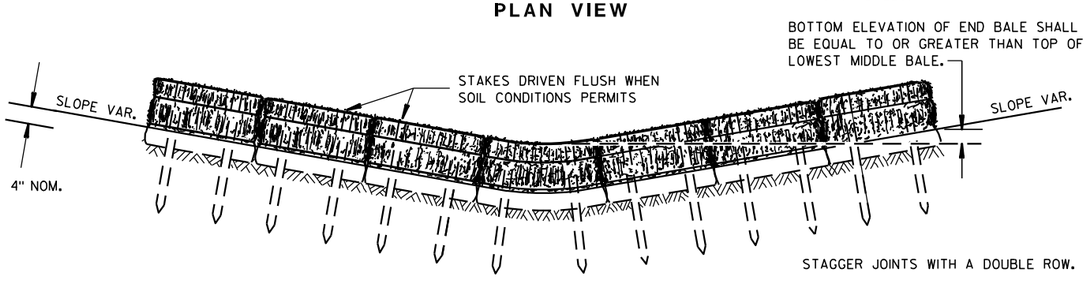
S.D.D. 8 D 1-17



SECTION A-A



PLAN VIEW



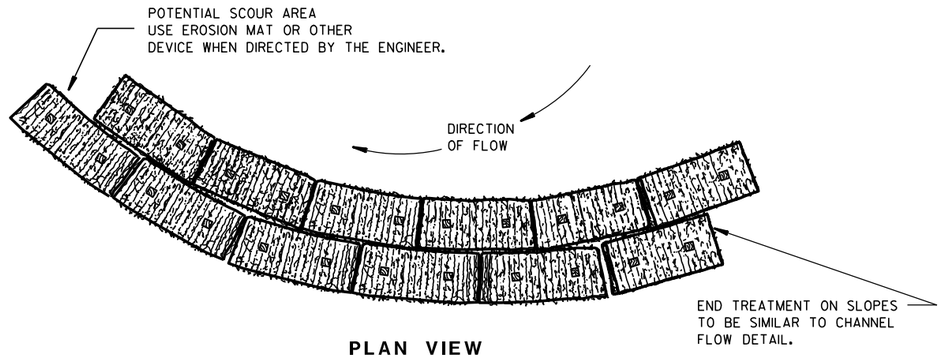
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

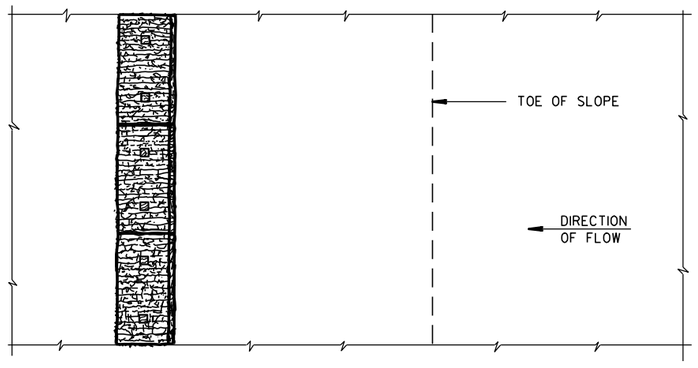
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

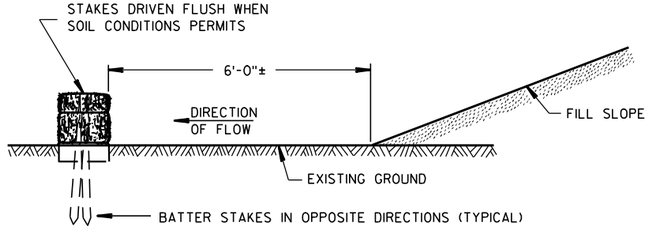


PLAN VIEW

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

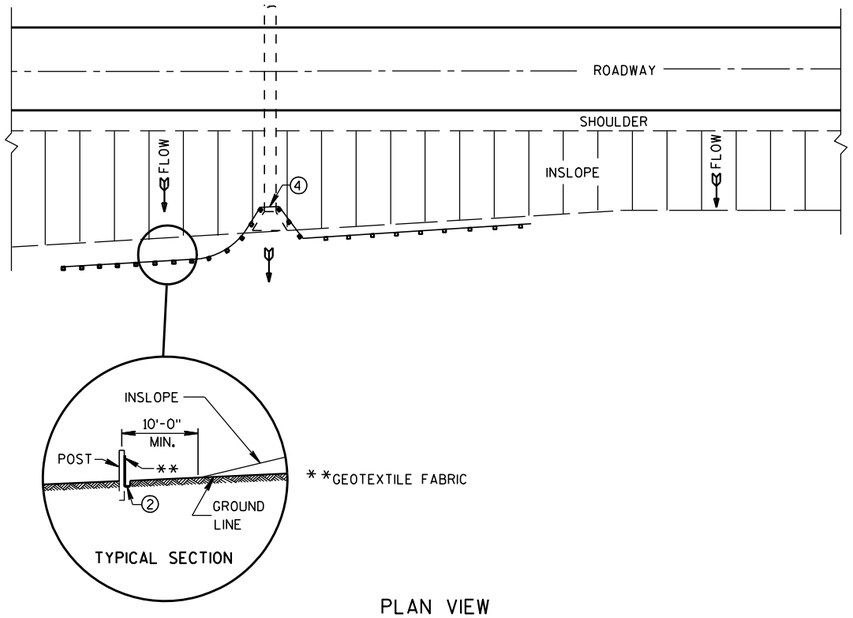
FHWA

6

S.D.D. 8 E 8-3

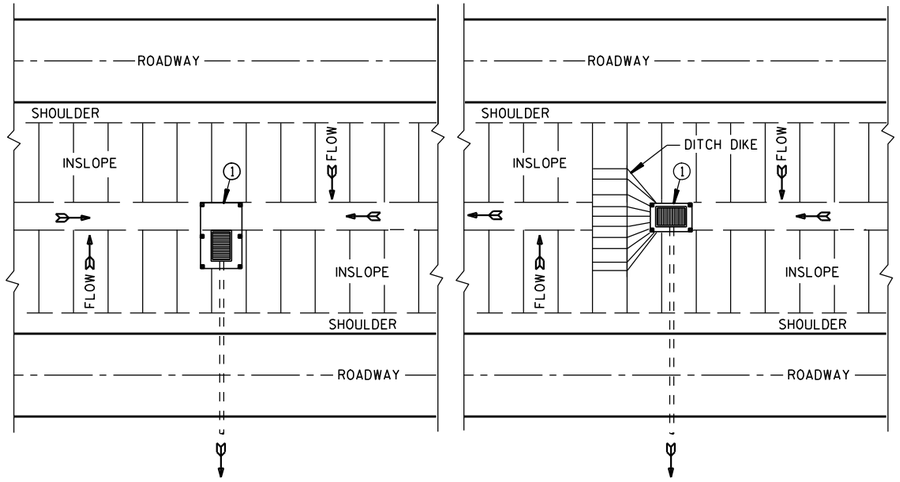
6

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.

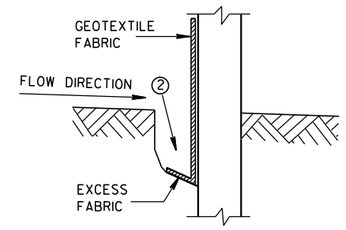
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

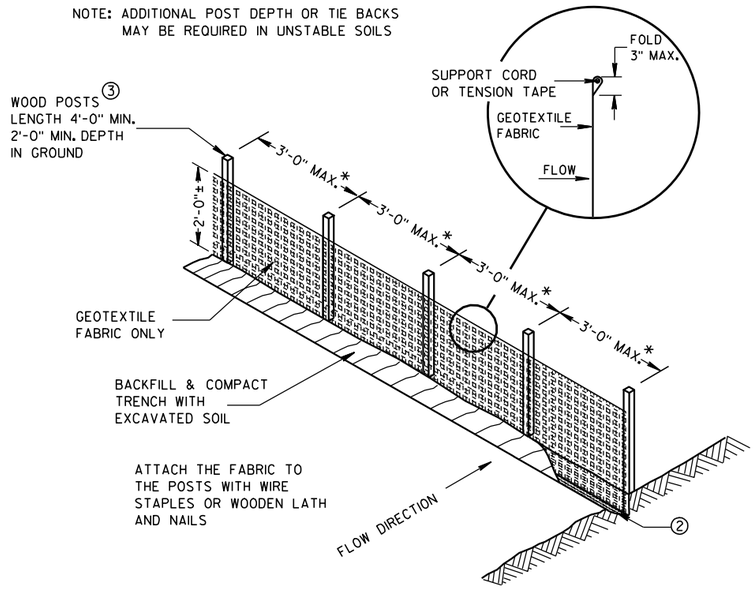
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

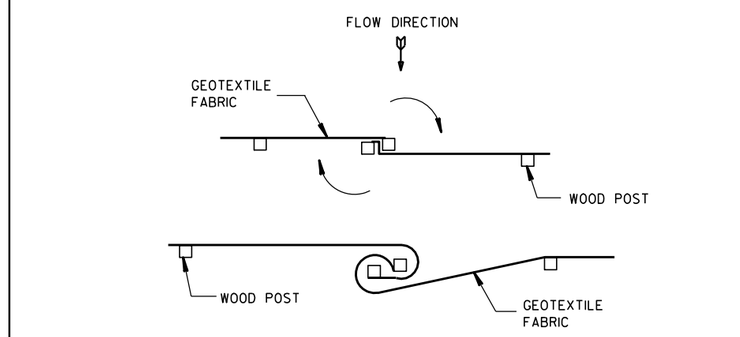


TRENCH DETAIL

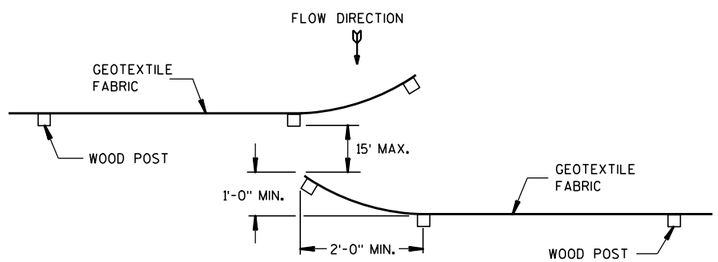


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

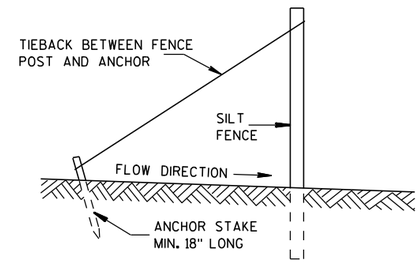


TWIST METHOD



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

METAL APRON ENDWALLS

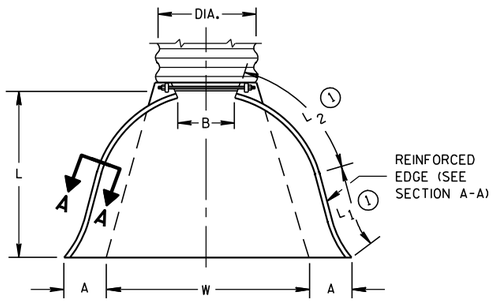
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

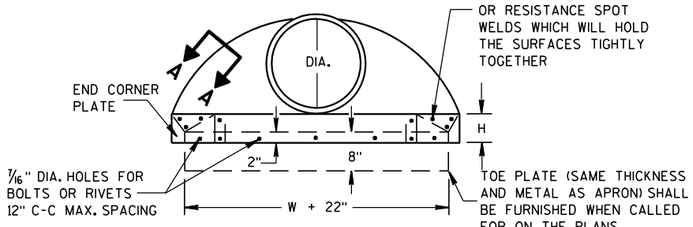
REINFORCED CONCRETE APRON ENDWALLS

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

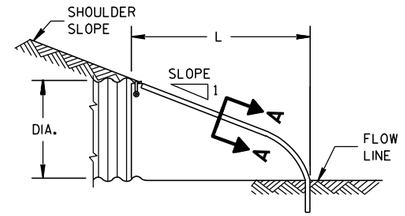
*MINIMUM
**MAXIMUM



PLAN VIEW

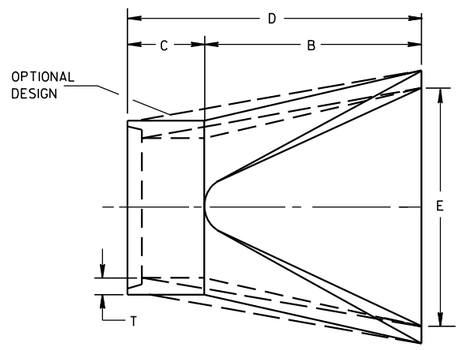


END VIEW

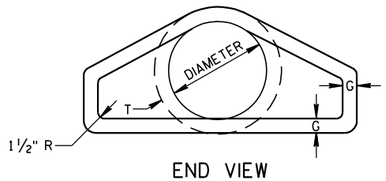


SIDE ELEVATION

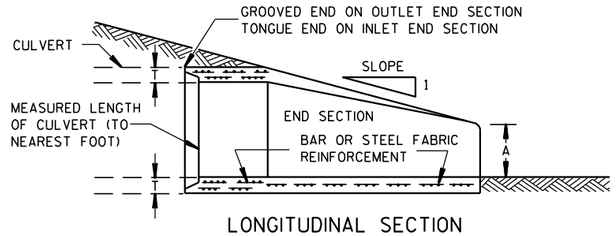
METAL ENDWALLS



PLAN

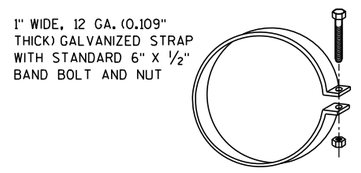


END VIEW



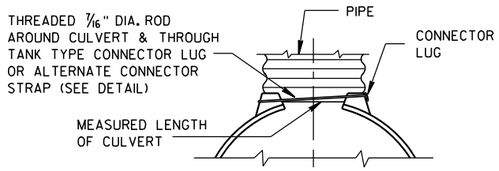
LONGITUDINAL SECTION

CONCRETE ENDWALLS

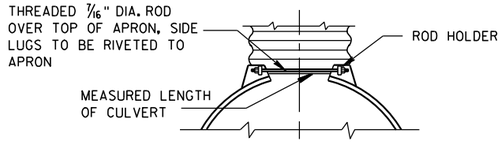


ALTERNATE FOR TYPE 1 CONNECTION

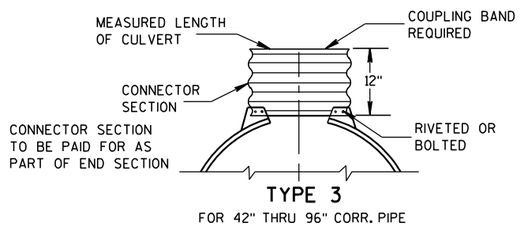
END SECTION CONNECTOR STRAP



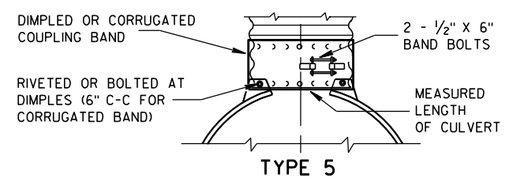
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

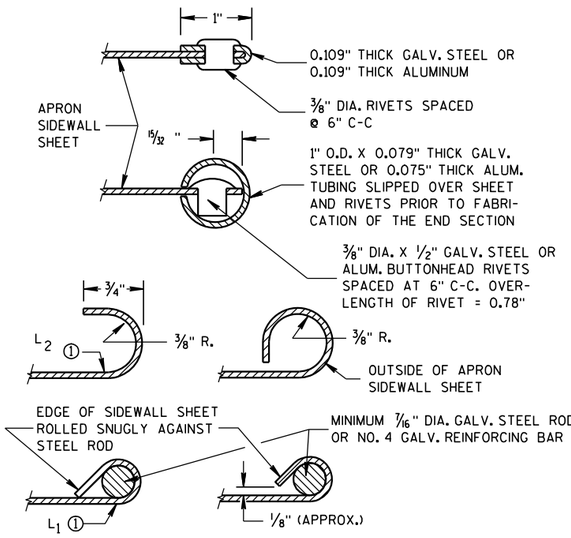
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

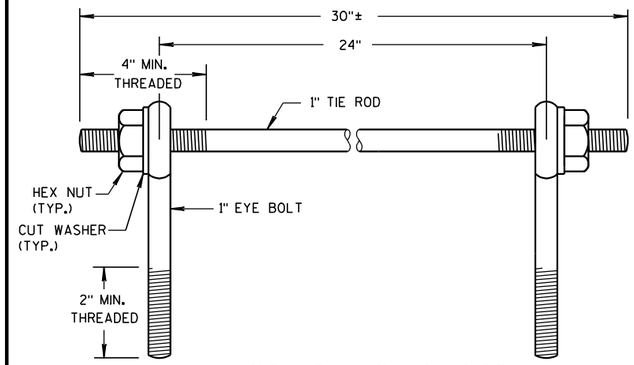
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

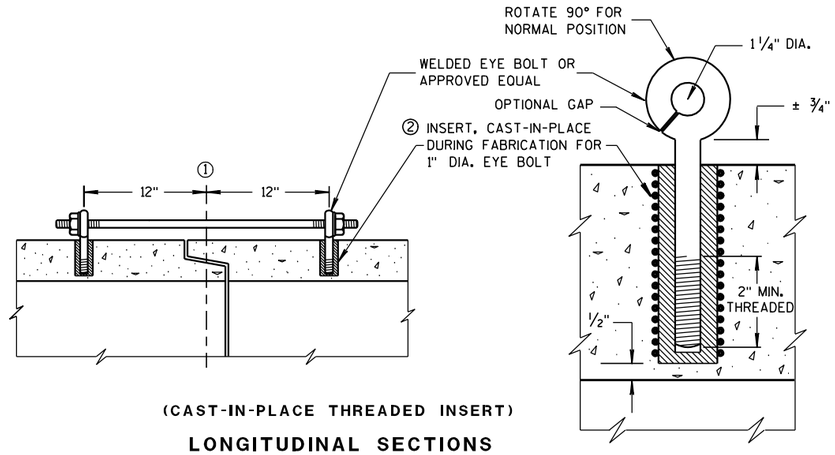
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

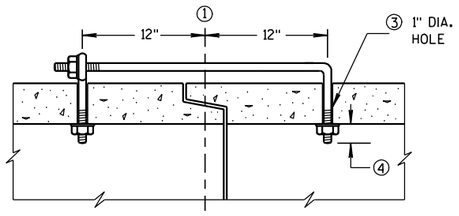
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

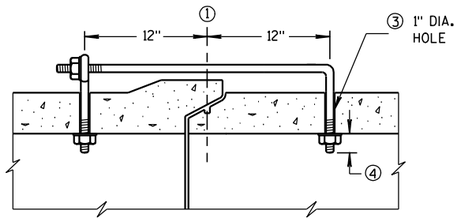
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

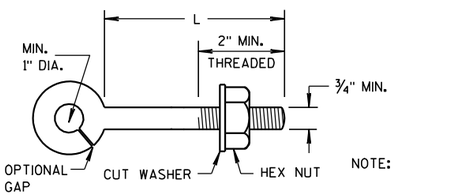


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

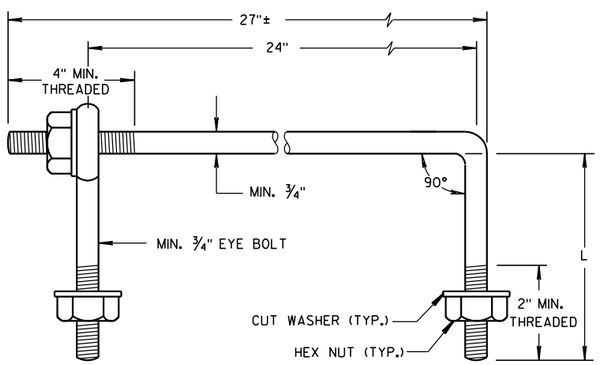
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

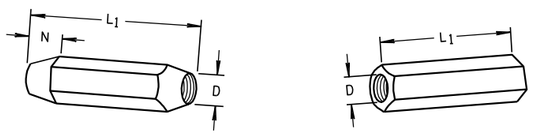
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

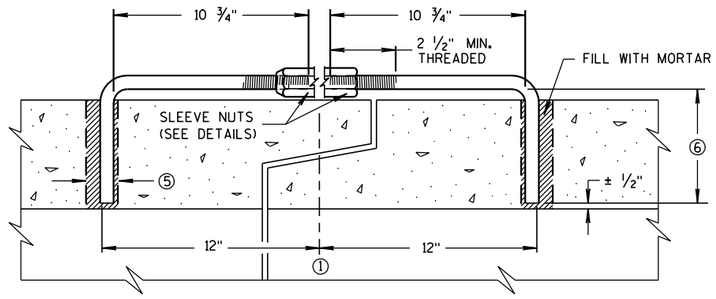
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

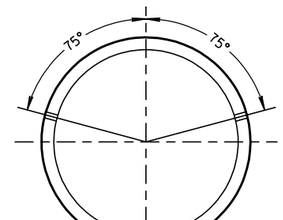
SLEEVE NUTS



LONGITUDINAL SECTION

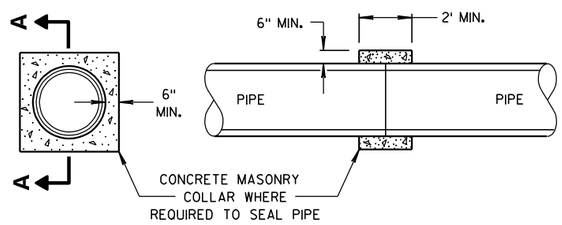
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
47
FHWA

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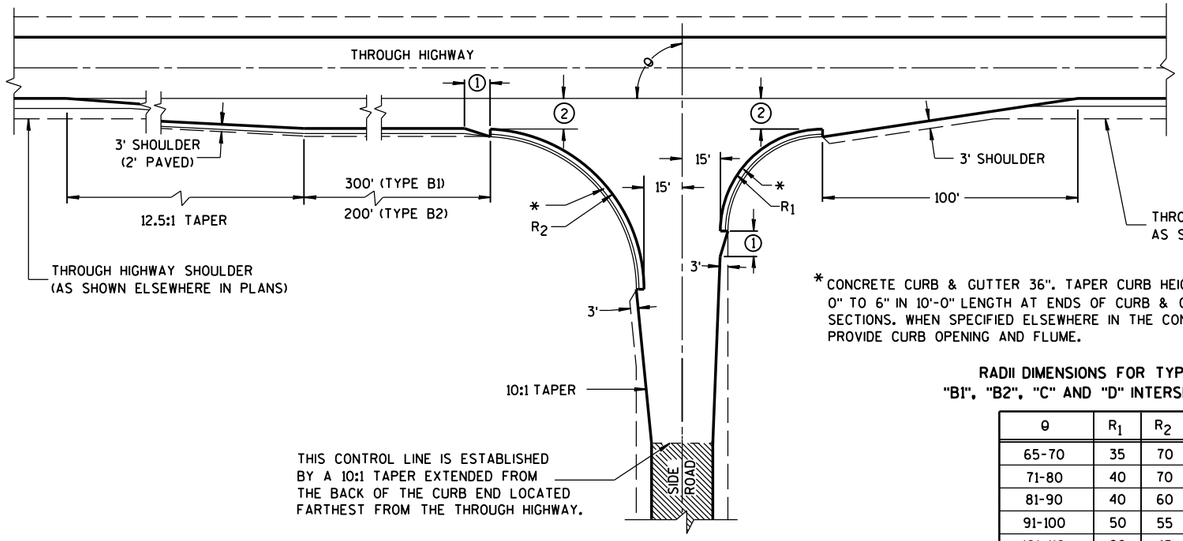
S.D.D. 8 F 4-7

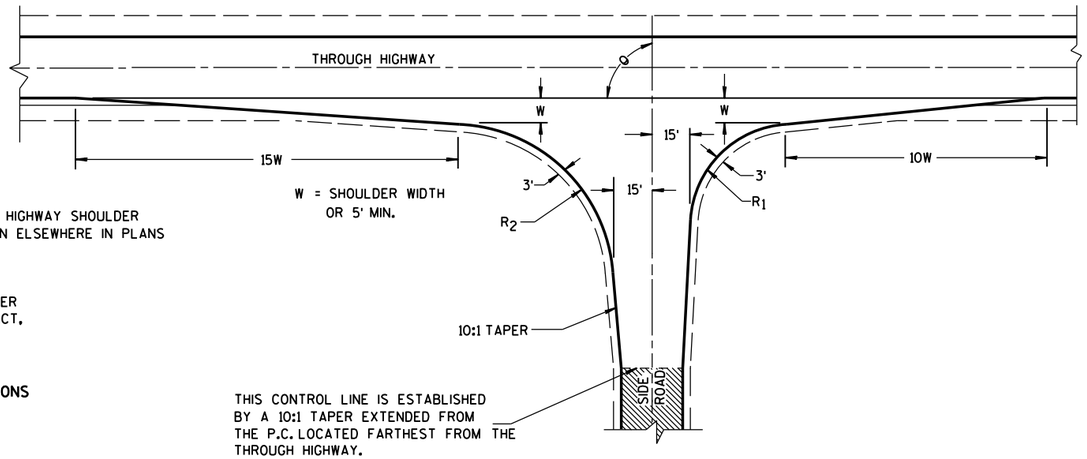


TYPE "B1" AND "B2"

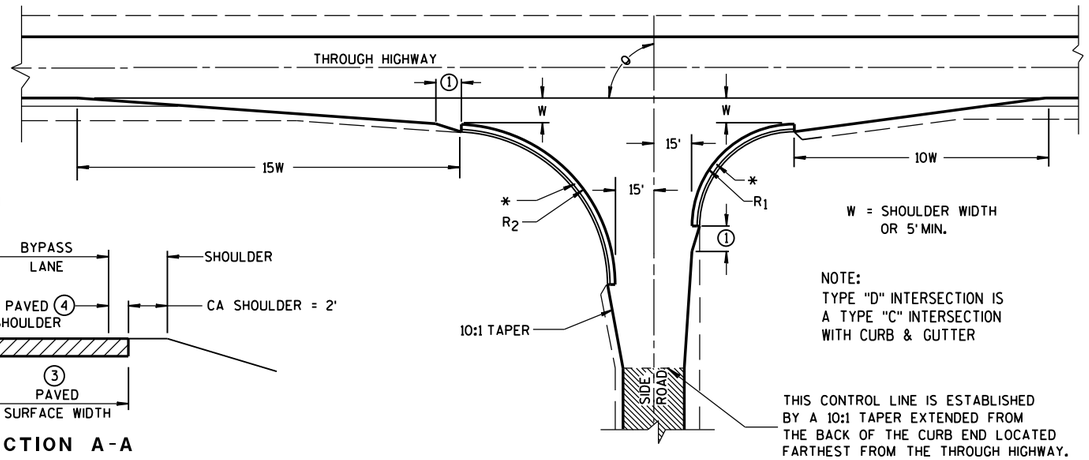
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R_1	R_2
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45



TYPE "C"



TYPE "D"

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

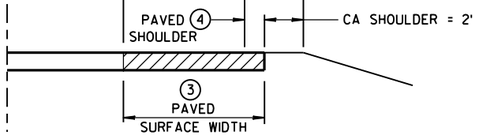
(1) 10-FT TYPICAL.

(2) 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

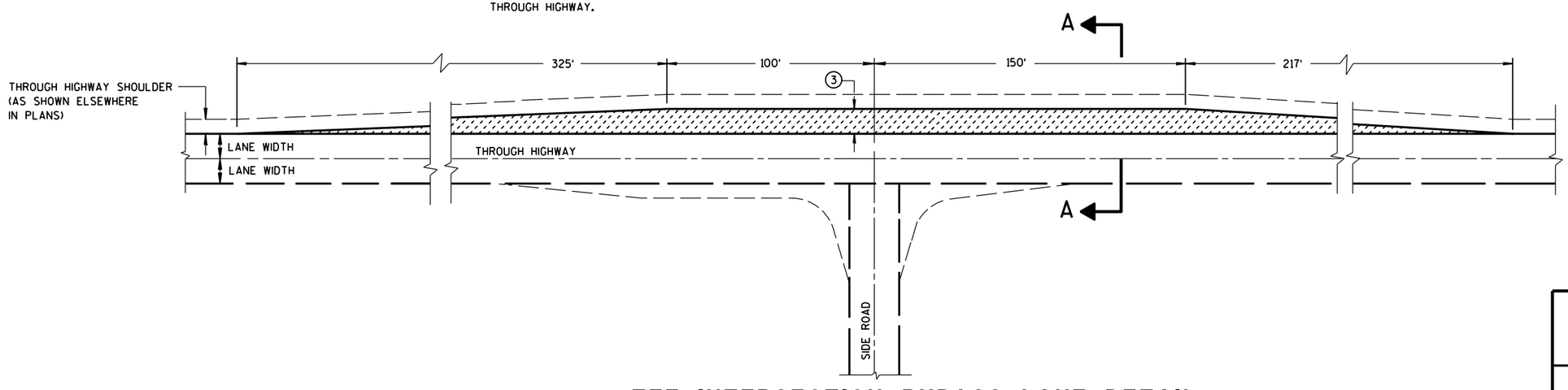
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(3) BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.

(4) BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)

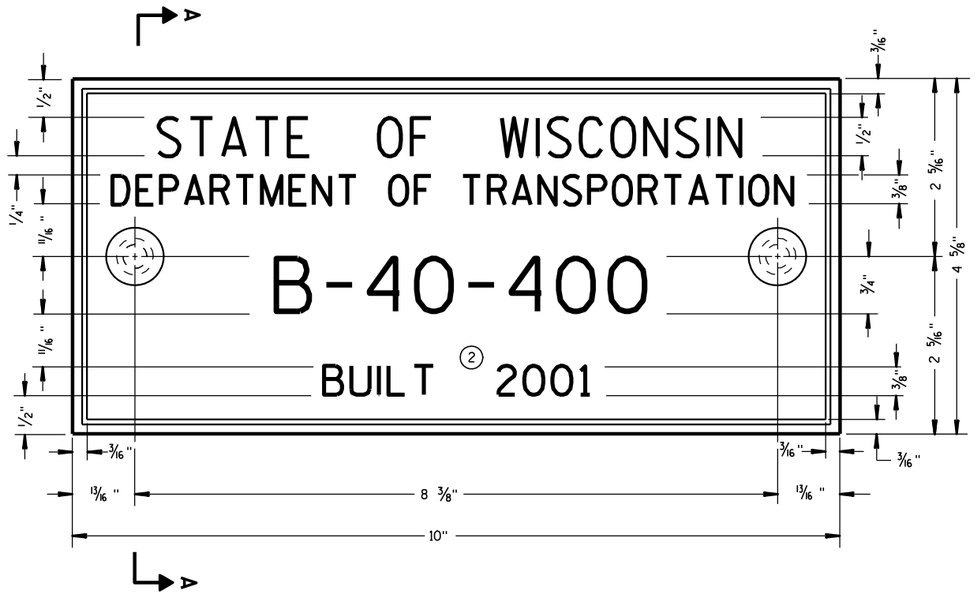


TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 9 A 1-13a



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

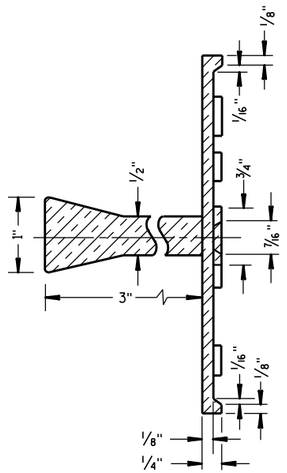
GENERAL NOTES

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

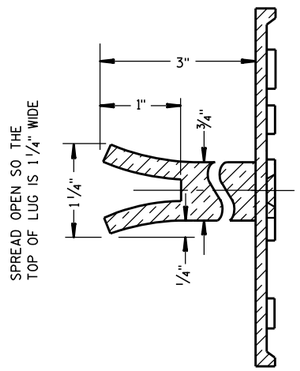
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

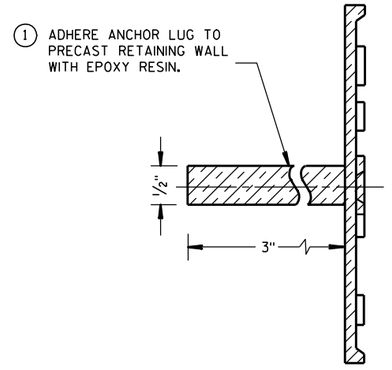
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 12 A 3-10

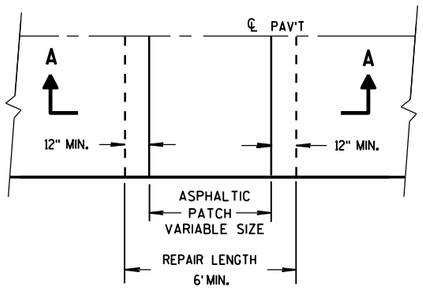
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

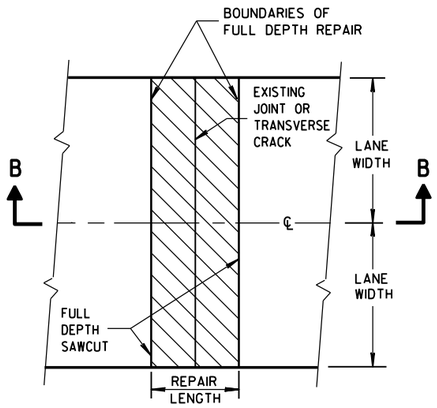
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

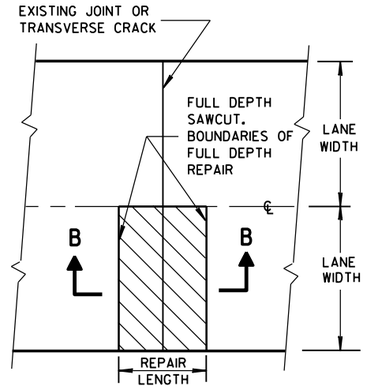
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



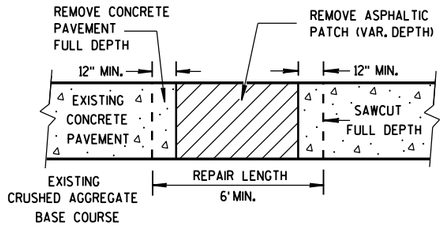
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

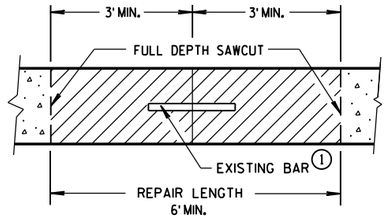
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

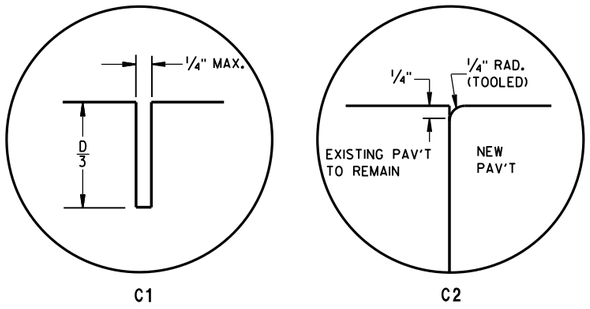
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 13 C 9-10a

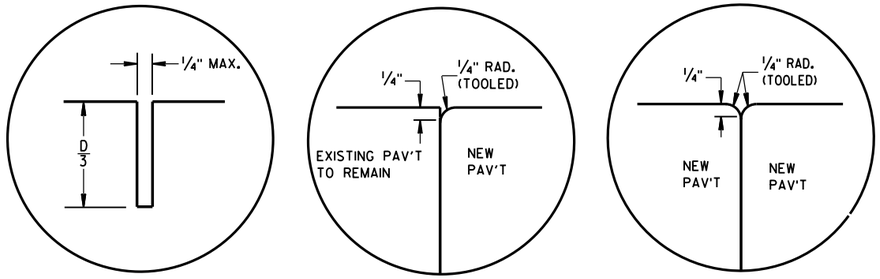


C1 C2

TRANSVERSE JOINTS

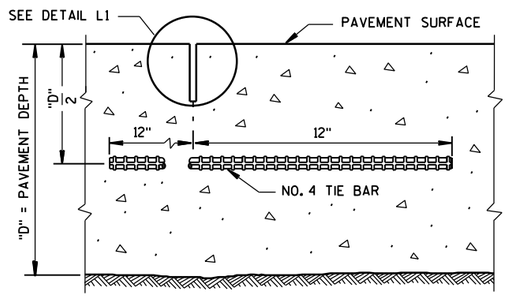
TIE BAR TABLE

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"



L1 L2 L3

LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

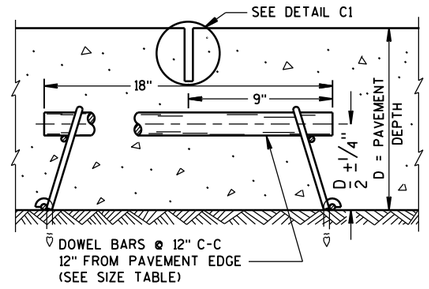
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

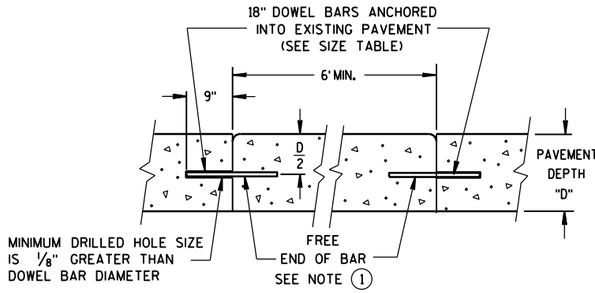
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

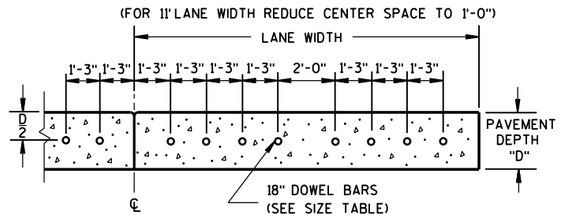


SECTION F-F

CONTRACTION JOINT



SECTION D-D

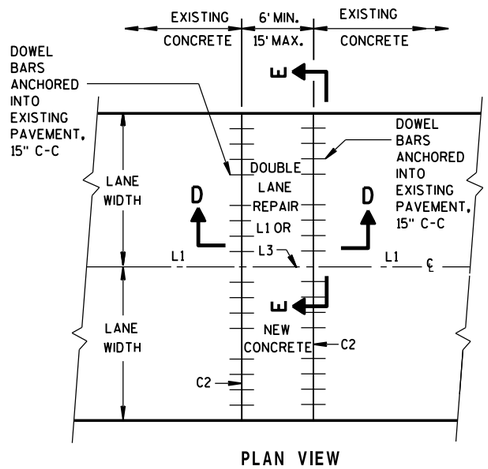


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

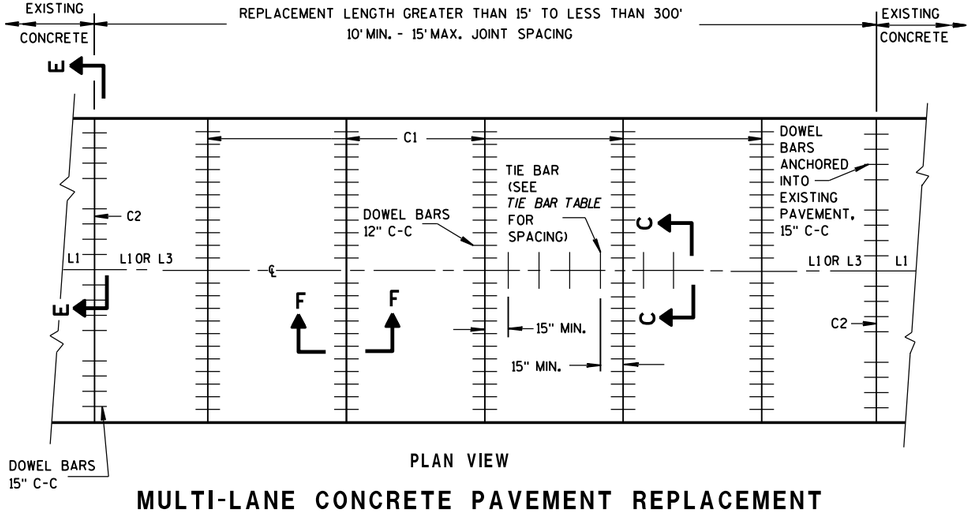
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6",6 1/2"	NONE	12'
7",7 1/2"	1"	14'
8",8 1/2"	1 1/4"	15'
9",9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



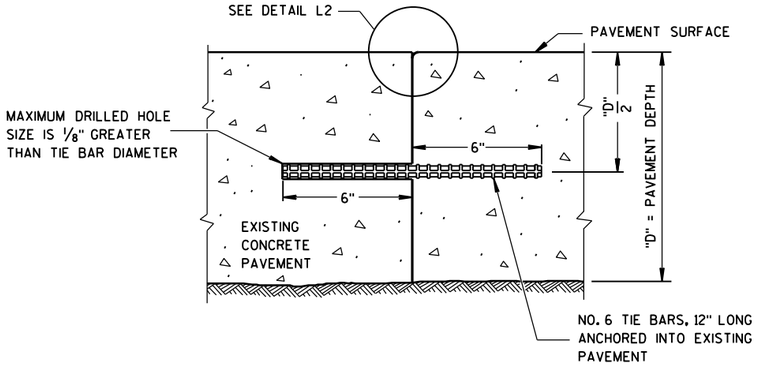
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 13 C 9-10b



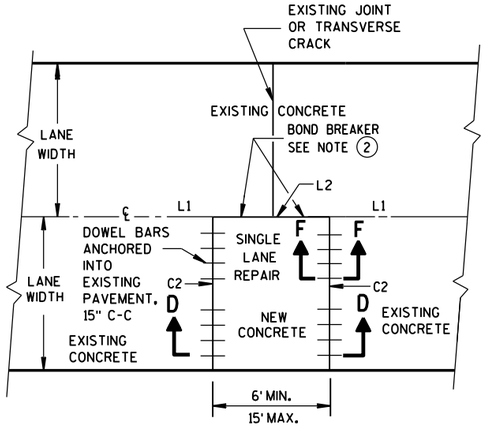
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

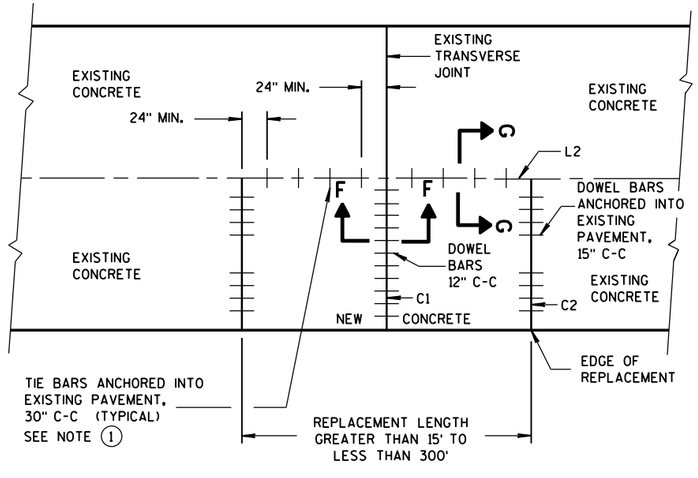
(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

FHWA

IEER

6

S.D.D. 13 C 9-10c

GENERAL NOTES

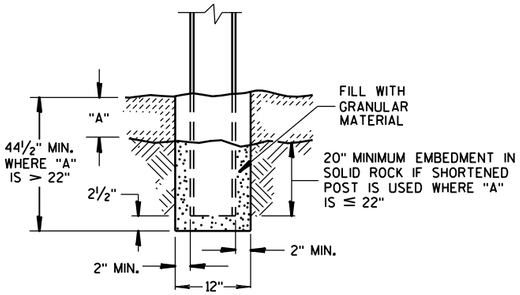
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

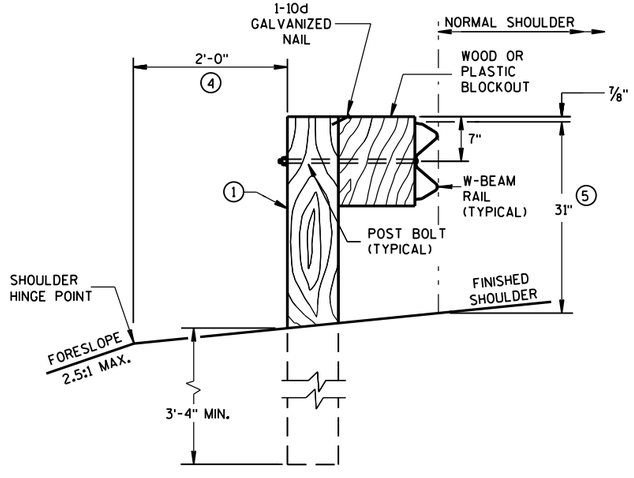
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

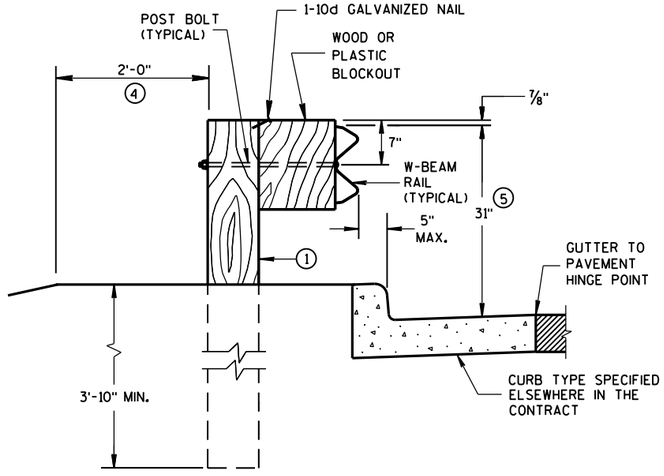
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".



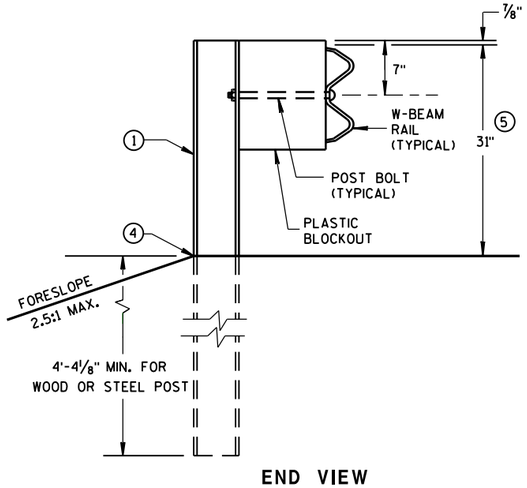
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



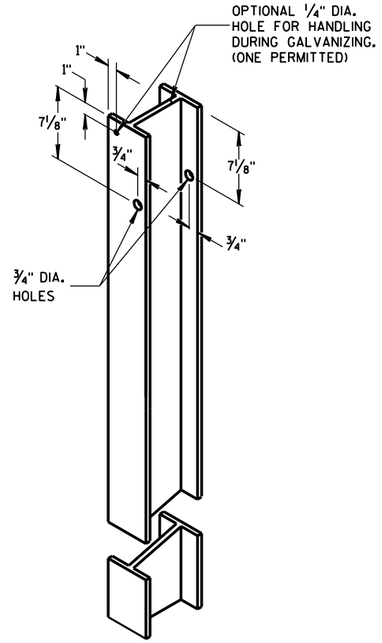
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



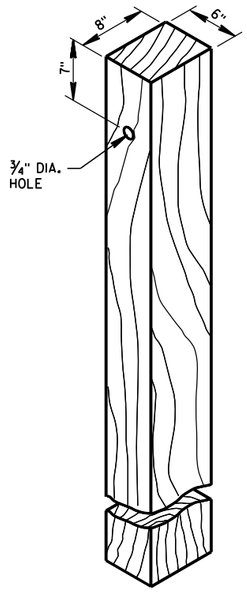
END VIEW
LOCATED ALONG A CURBED ROADWAY



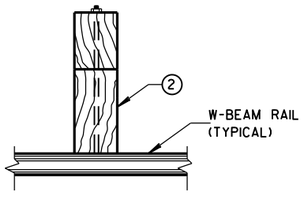
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



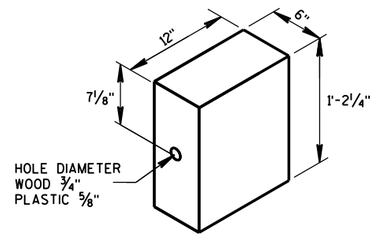
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



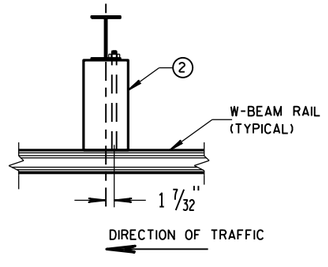
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

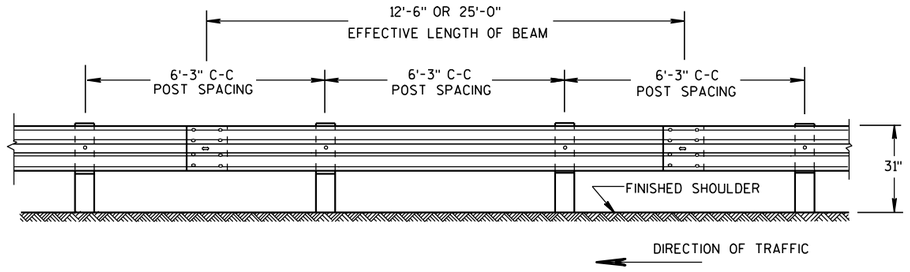


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

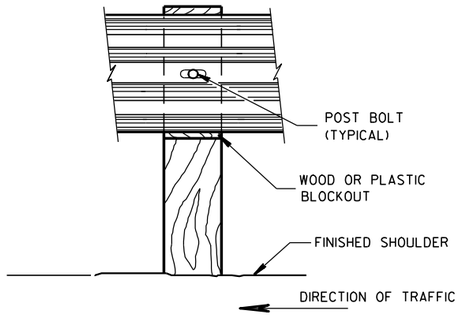
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



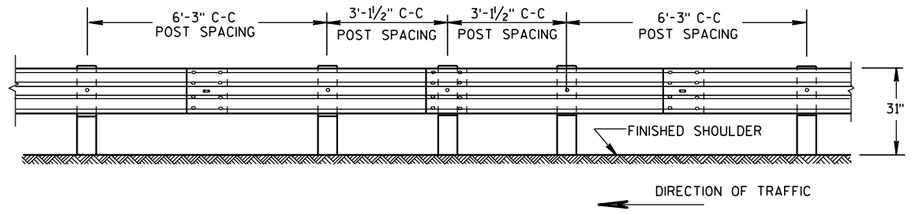
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

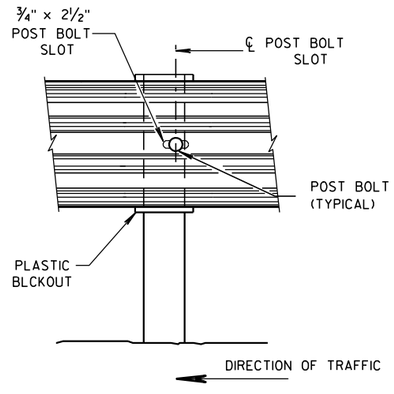
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

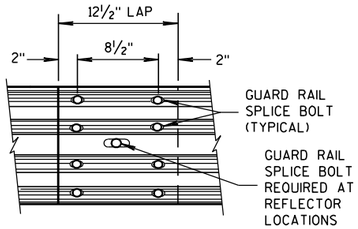


FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

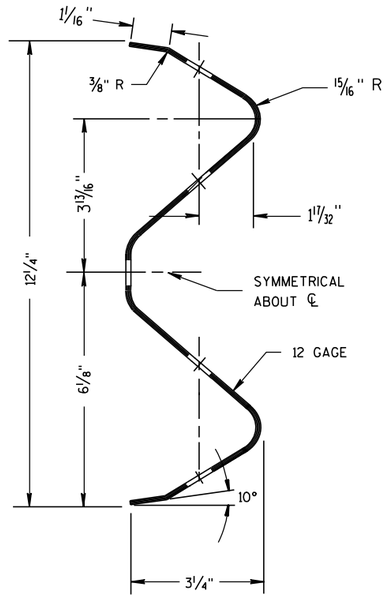


FRONT VIEW AT STEEL POST

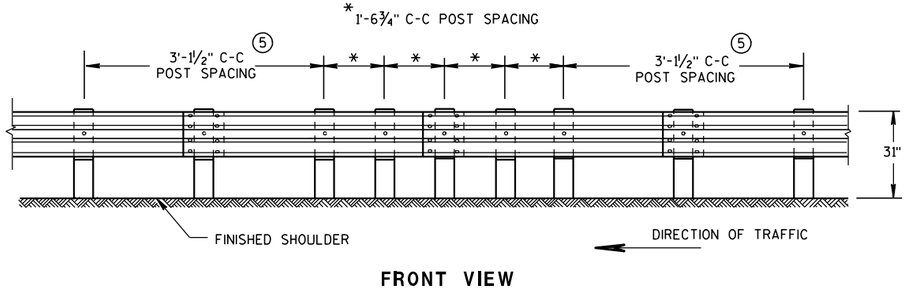


FRONT VIEW

MID-SPAN BEAM SPLICE

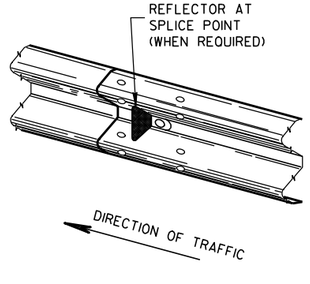


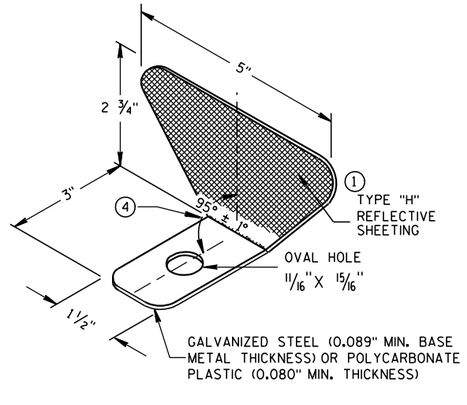
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

REFLECTOR SPACING ②

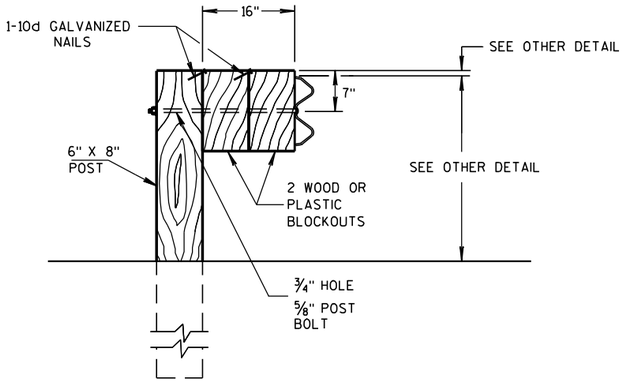
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 1 ③	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ④	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

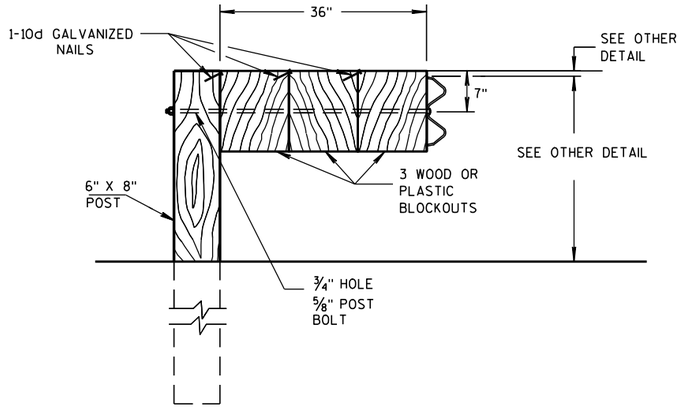
S.D.D. 14 B 42-2b

S.D.D. 14 B 42-2b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

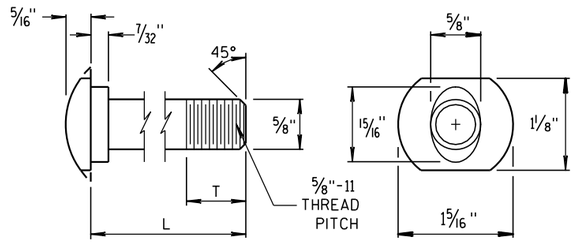


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

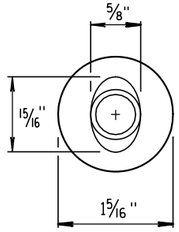
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

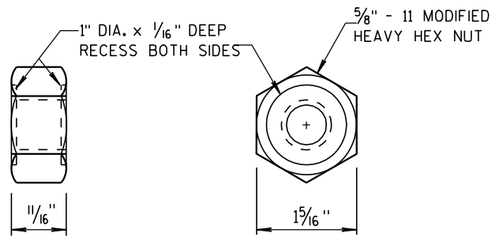


POST BOLT TABLE

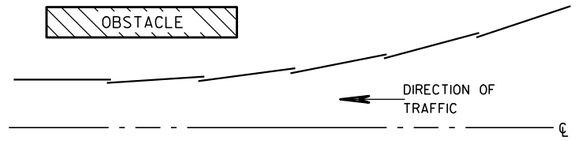
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

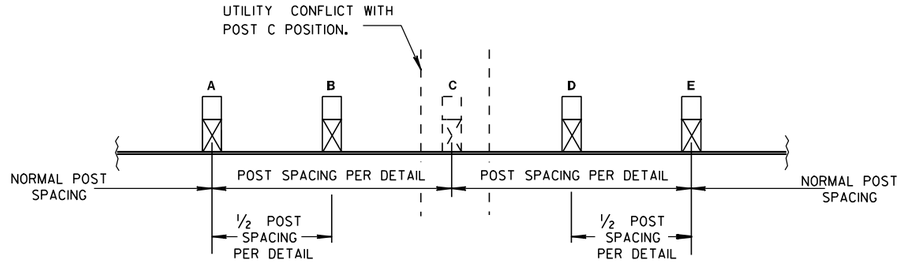


POST BOLT AND RECESS NUT

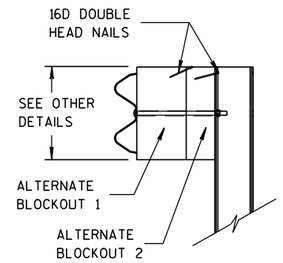


PLAN VIEW

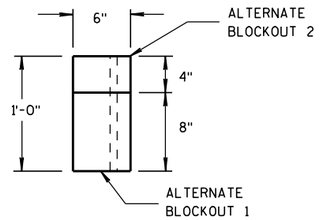
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

55

ENT

6

S.D.D. 14 B 42-2c

6

S.D.D. 14 B 42-2c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

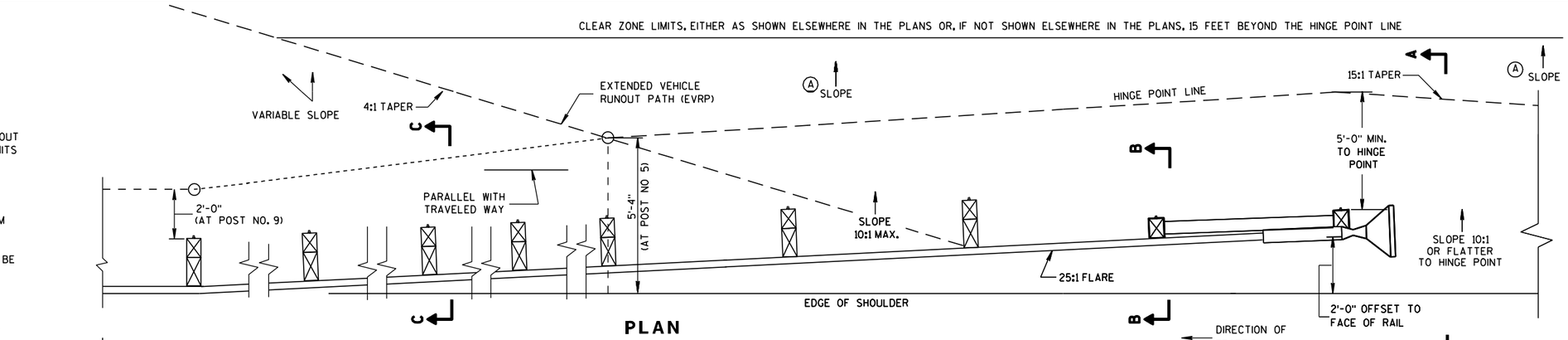
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

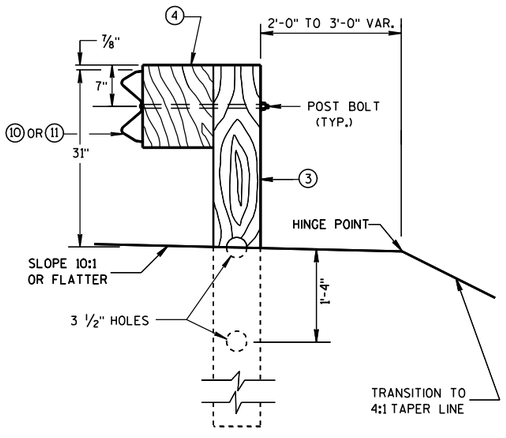
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

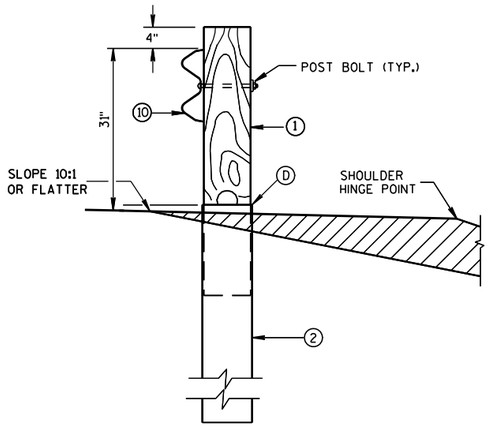
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

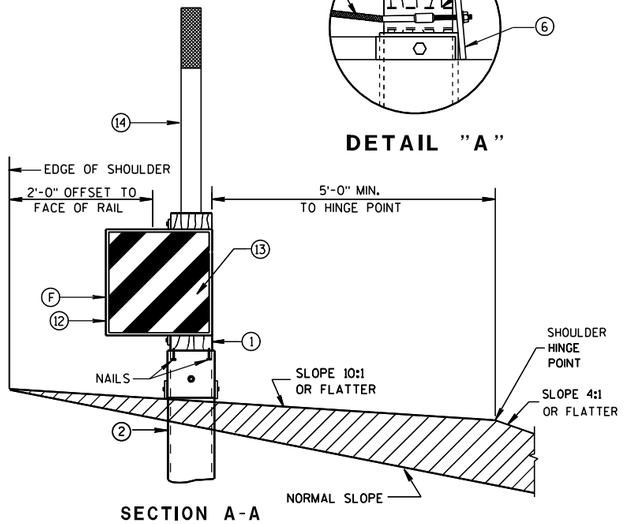




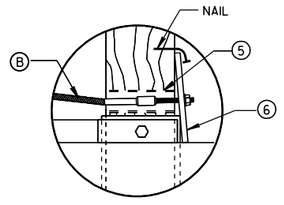
SECTION C-C
TYPICAL AT POST NOS. 3-9



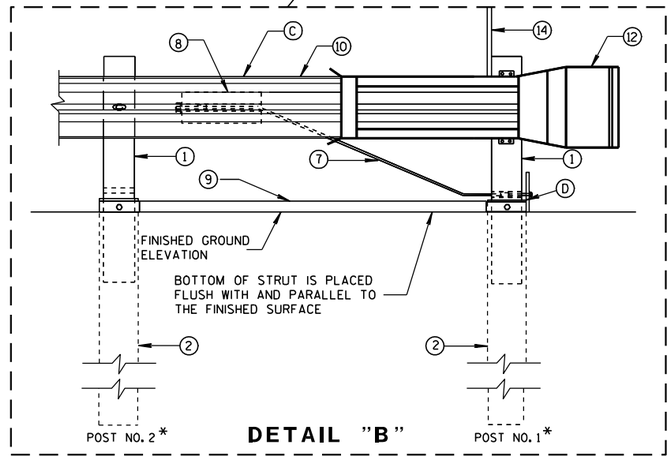
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

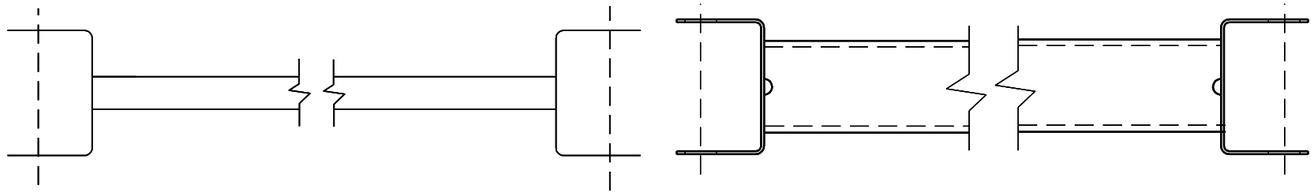


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

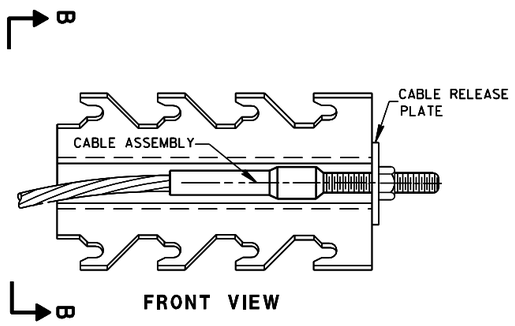
6
S.D.D. 14 B 44-1a



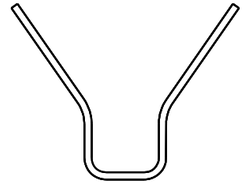
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

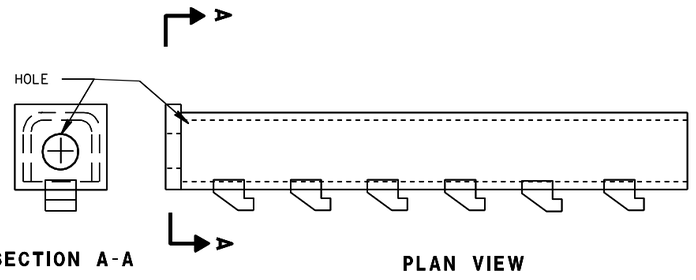
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



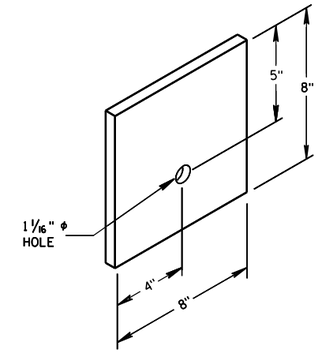
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



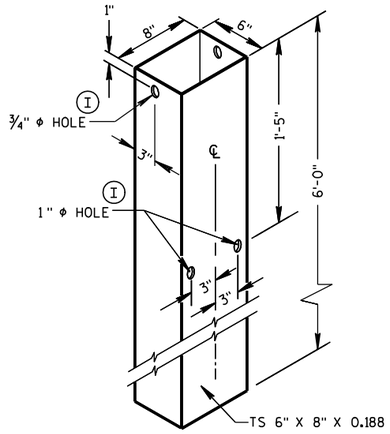
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

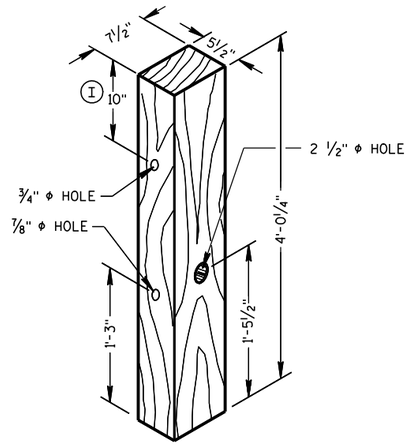
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

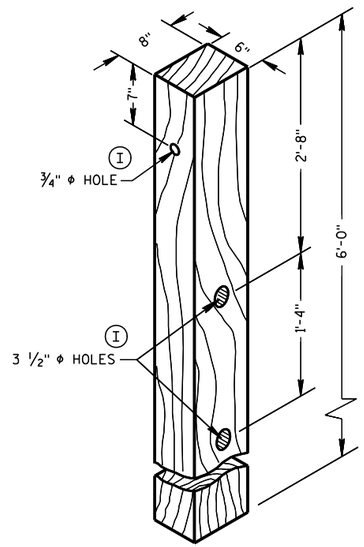


FOUNDATION TUBE (2)



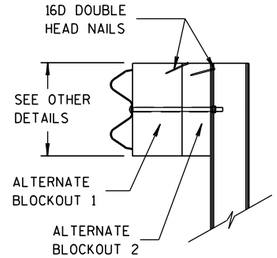
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

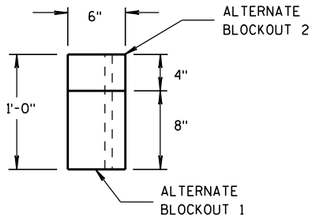


POSTS NUMBER 3-9

WOOD CRT POST (3)

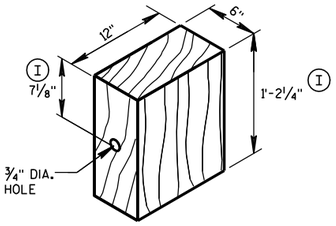


SIDE VIEW



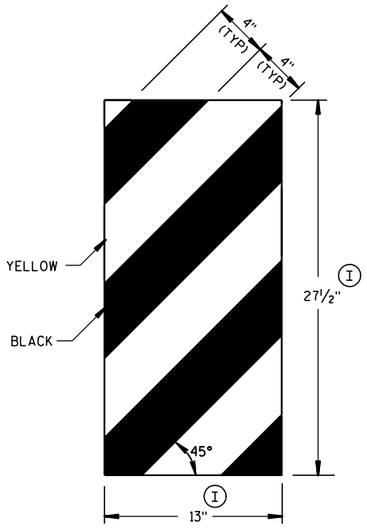
TOP VIEW

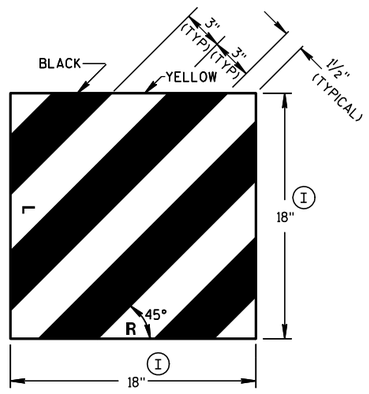
ALTERNATE WOOD BLOCKOUT DETAIL



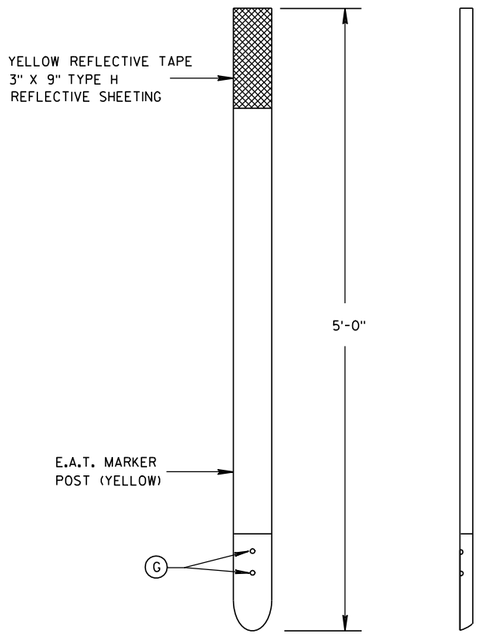
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





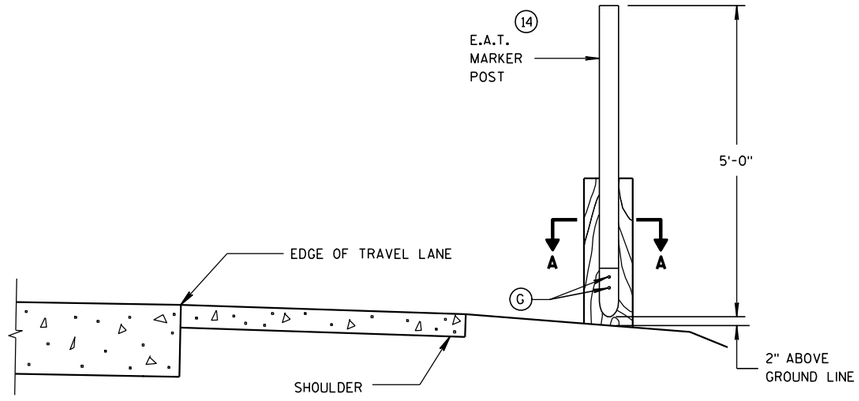
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

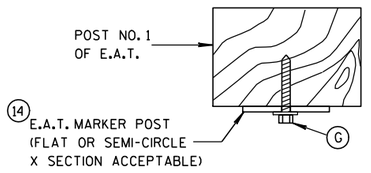
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

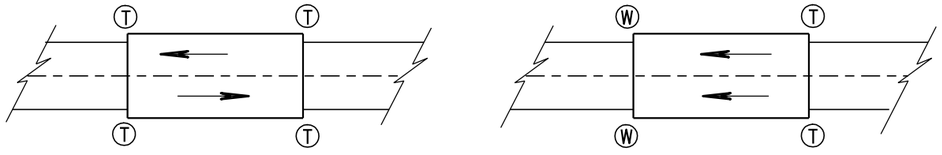
APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
58
[illegible]ENT
FHWA

6

S.D.D. 14 B 44-1c

6

S.D.D. 14 B 44-1c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

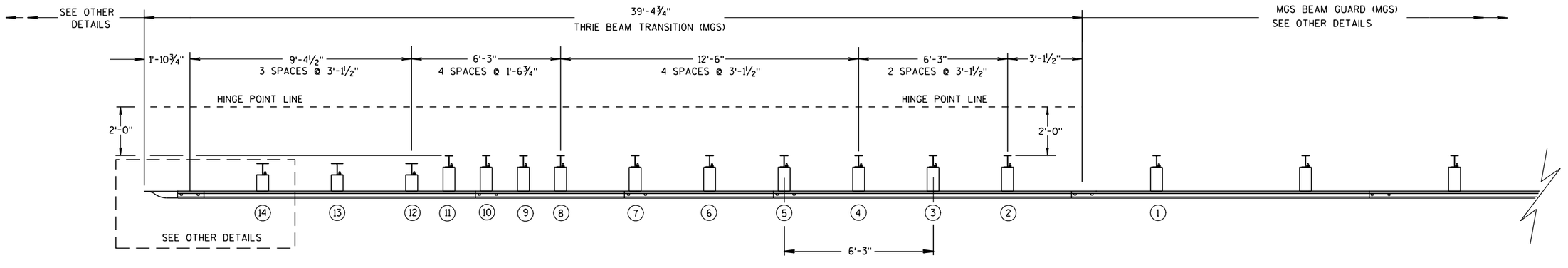
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

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

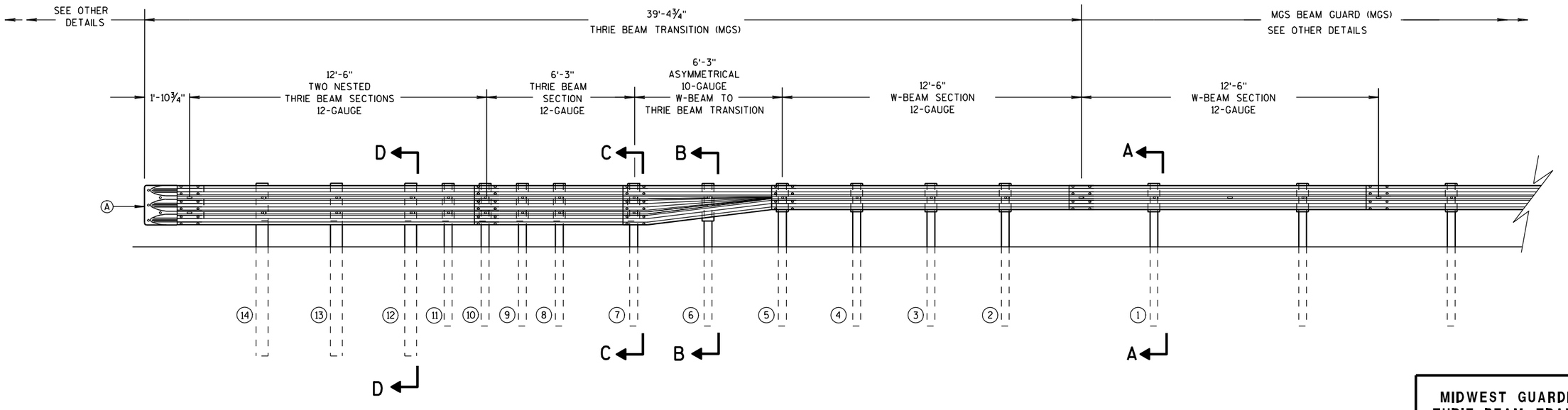
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

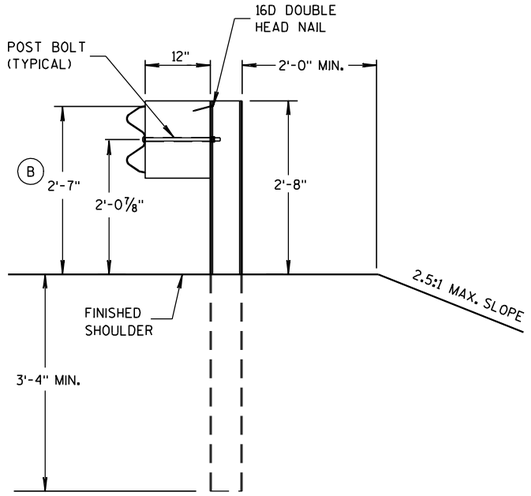
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6
S.D.D. 14 B 45-3a

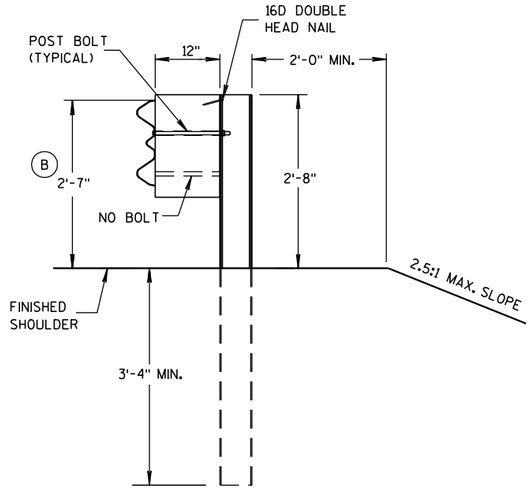
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



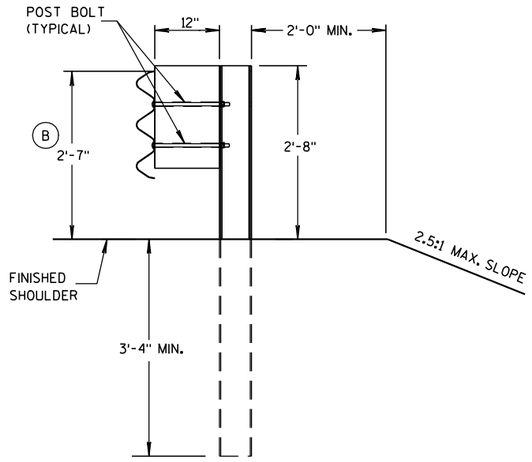
SECTION A-A

POSTS 1-5



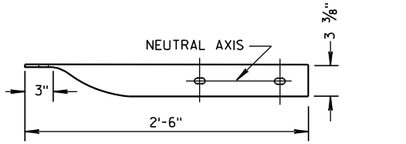
SECTION B-B

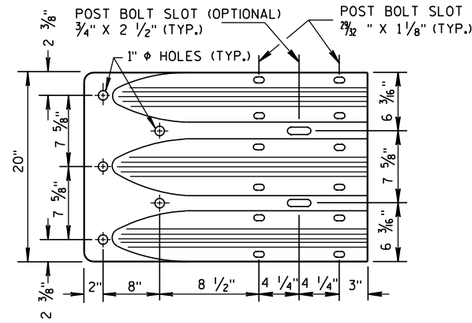
POST 6



SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR

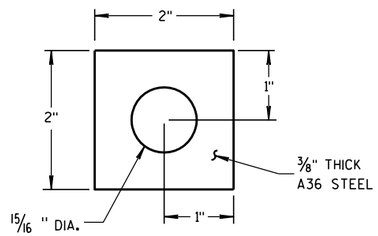
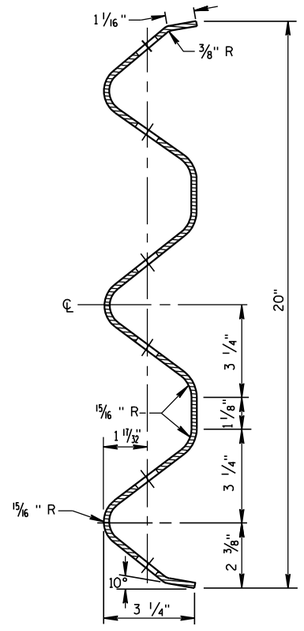
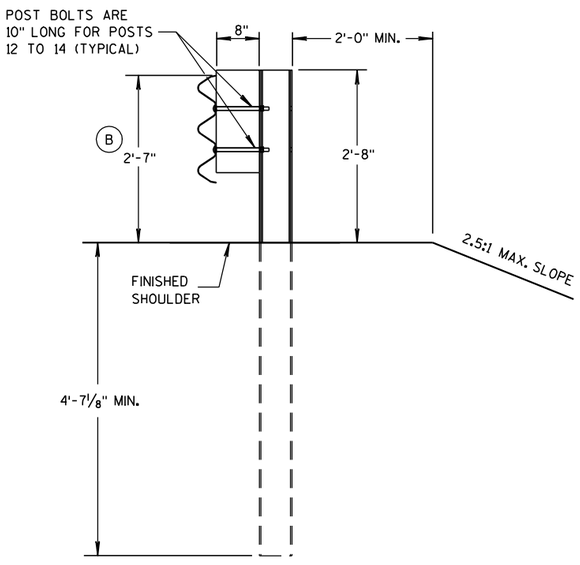


PLATE WASHER DETAIL

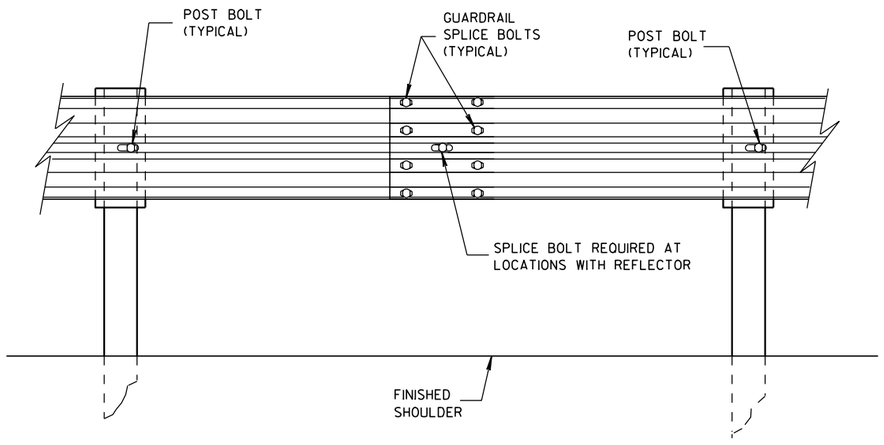


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-14



SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

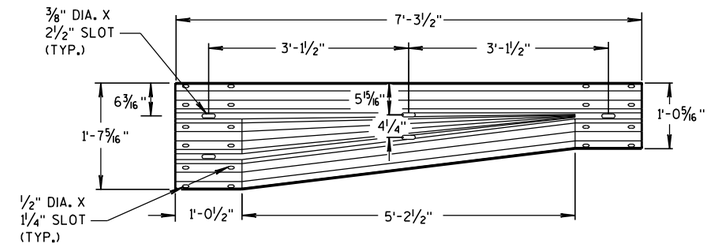
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

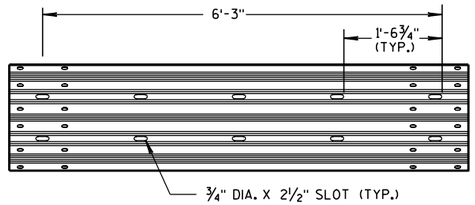
S.D.D. 14 B 45-3b

6

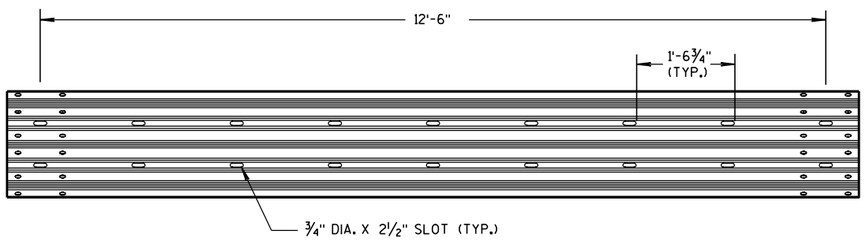
S.D.D. 14 B 45-3b



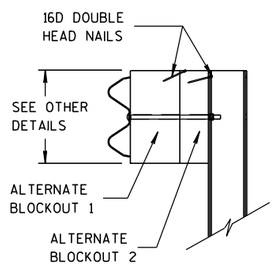
W-BEAM TO THRIE BEAM TRANSITION SECTION



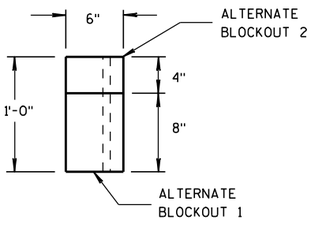
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

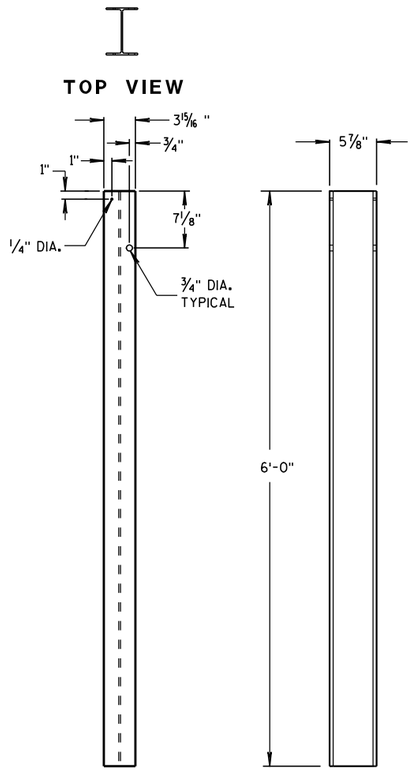


SIDE VIEW

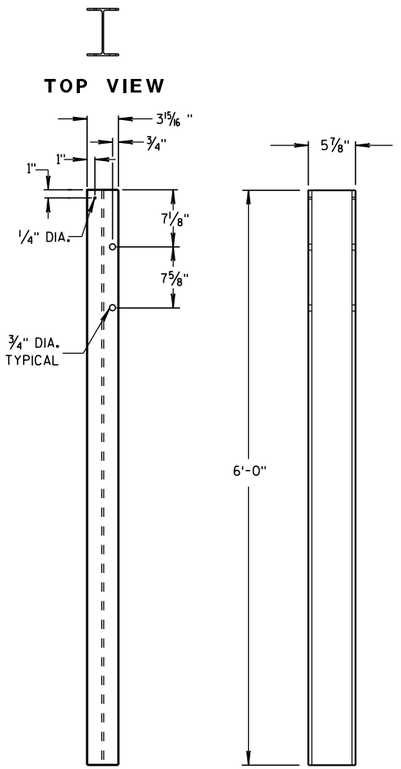


TOP VIEW

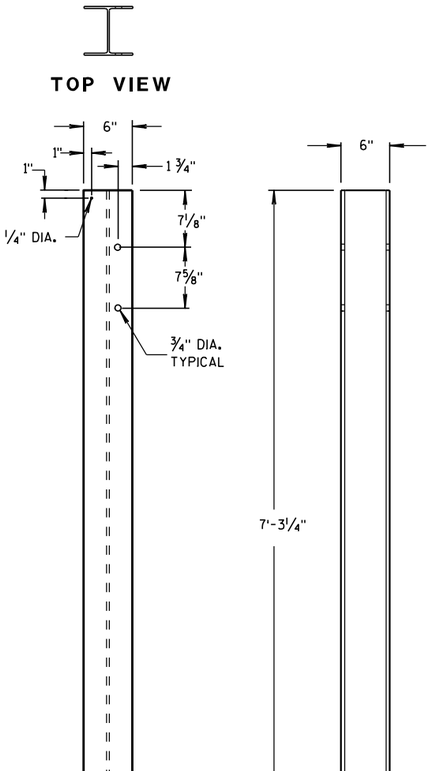
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

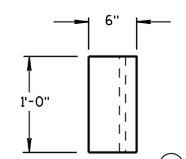


STEEL POSTS 6-11

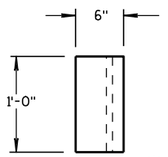


STEEL POSTS 12-14

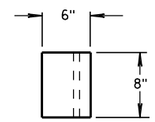
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



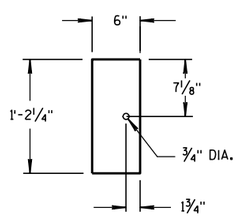
TOP VIEW (1)



TOP VIEW (1)

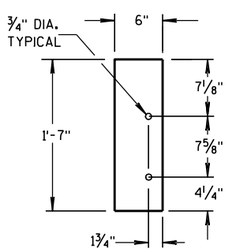


TOP VIEW



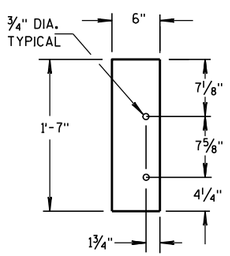
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

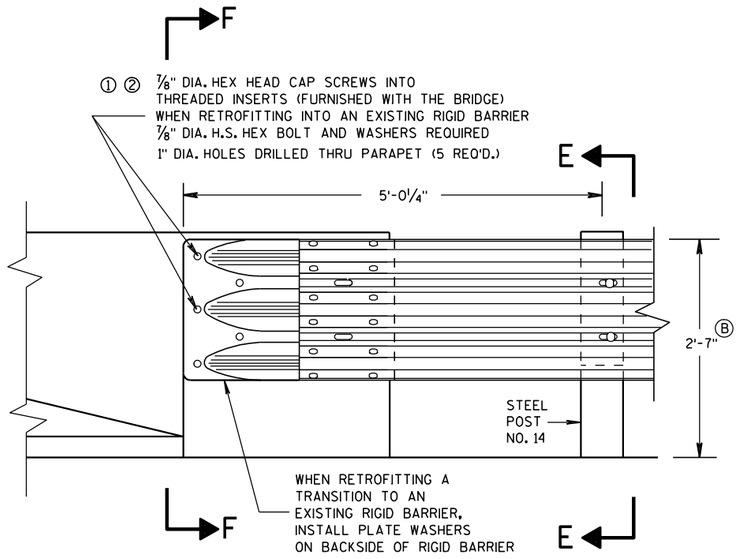
STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

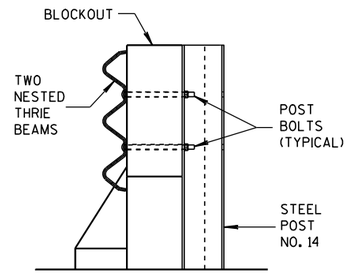
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3c



FRONT VIEW



SECTION E-E

GENERAL NOTES

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

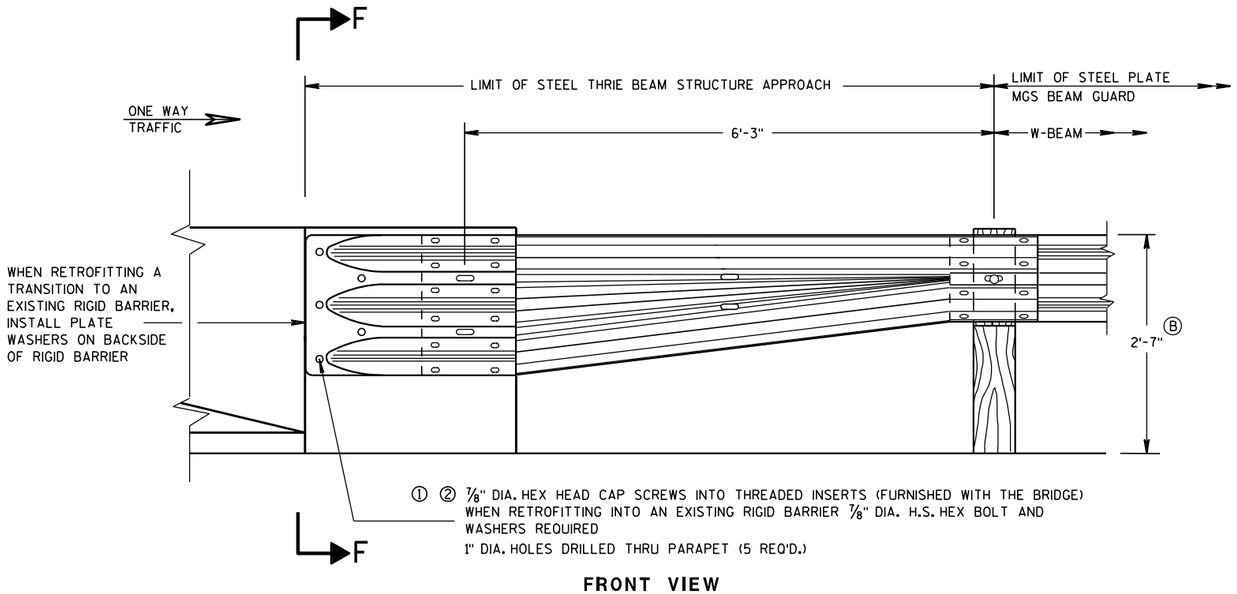
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

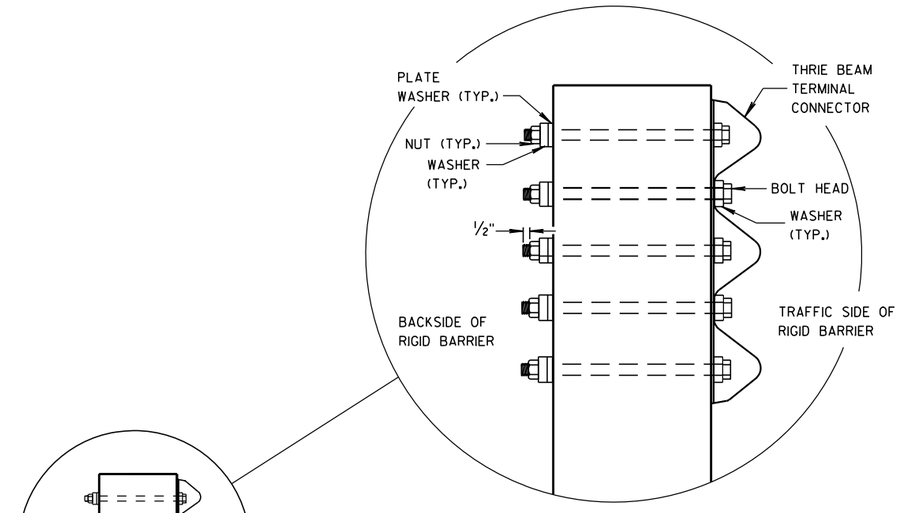
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

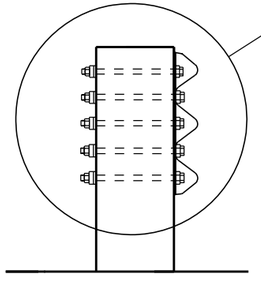
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW





SECTION F-F

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 14 B 45-3d

6

S.D.D. 14 B 45-3d

GENERAL NOTES

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

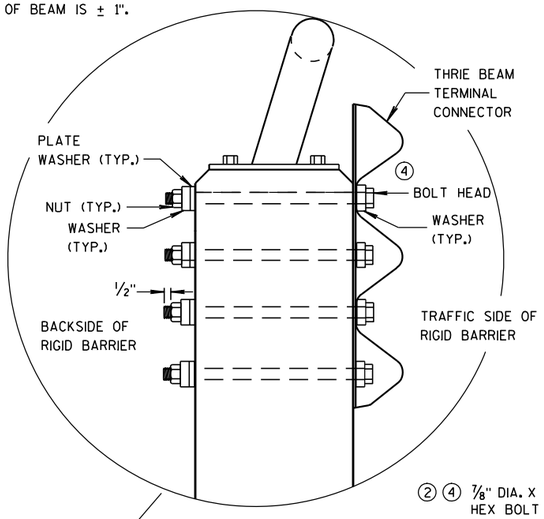
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

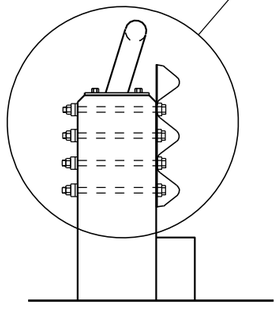
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

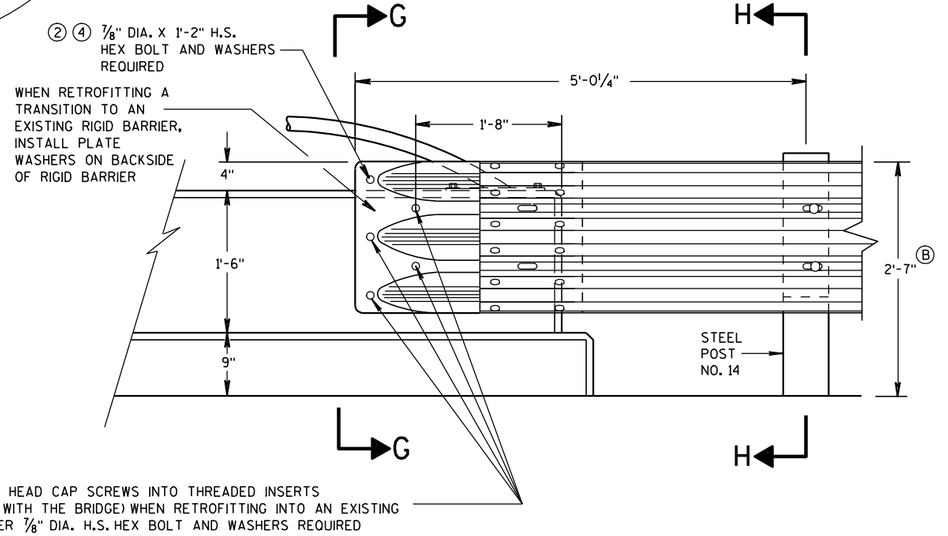
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

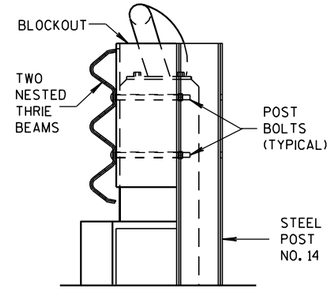




SECTION G-G

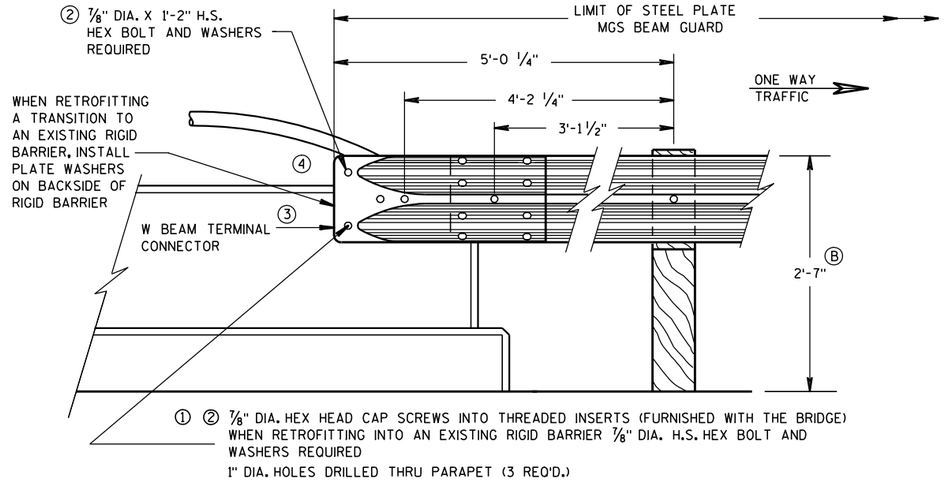


FRONT VIEW



SECTION H-H

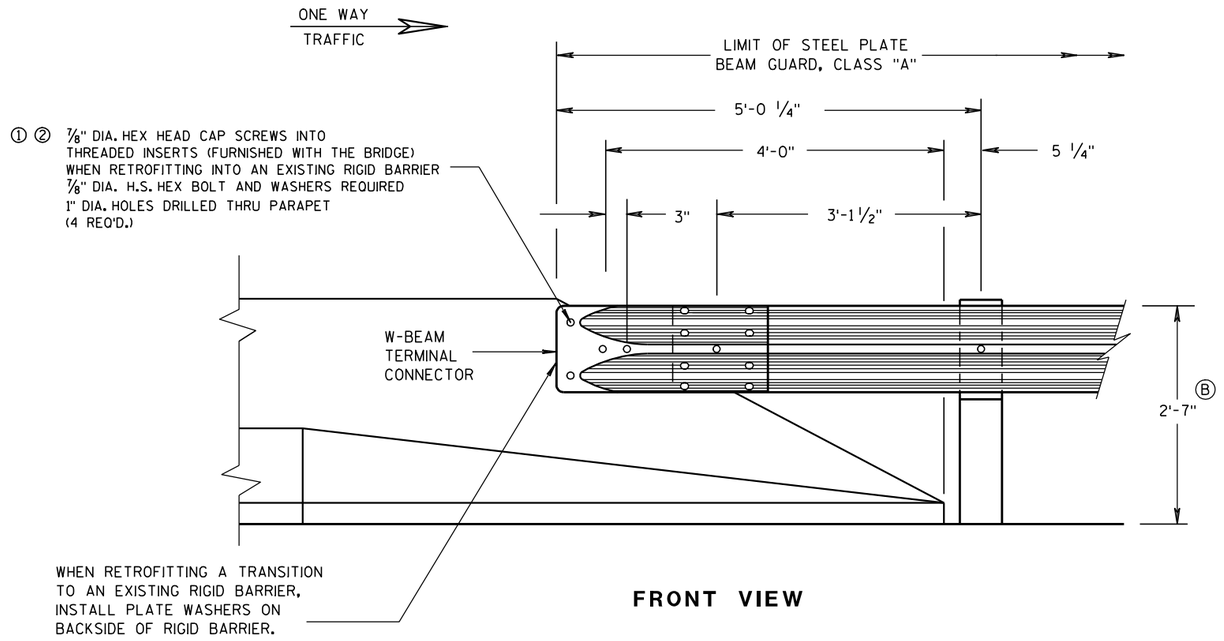
THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8-31-2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

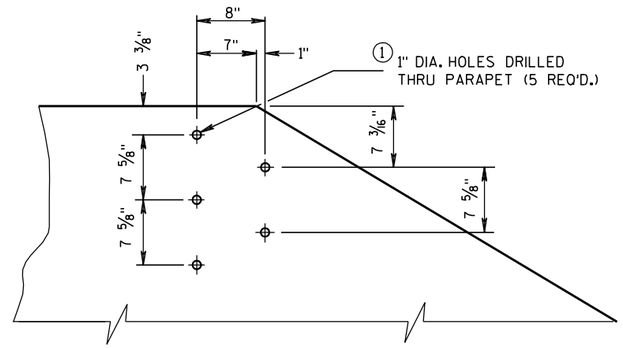
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

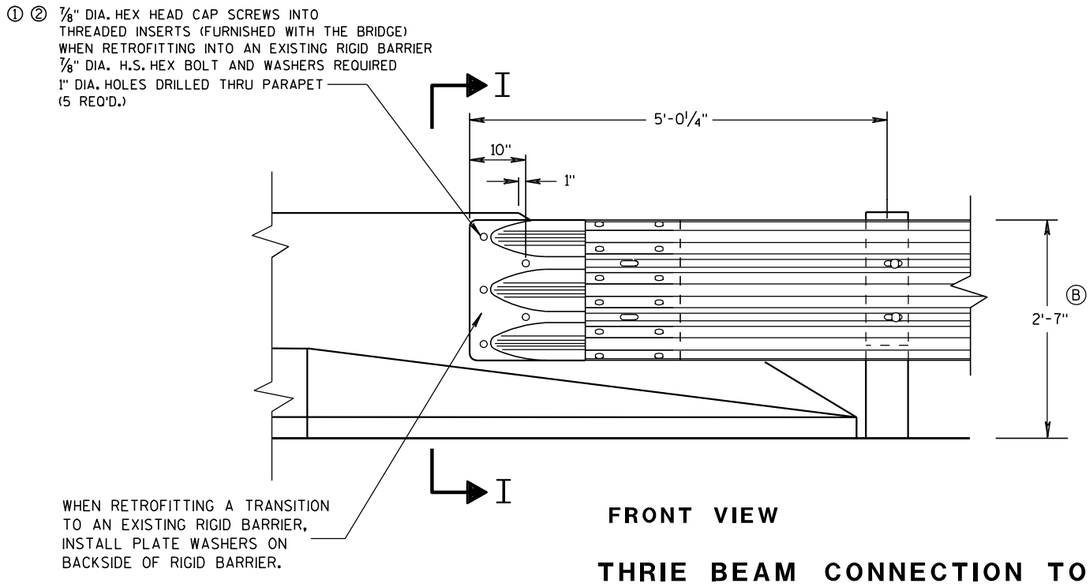
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

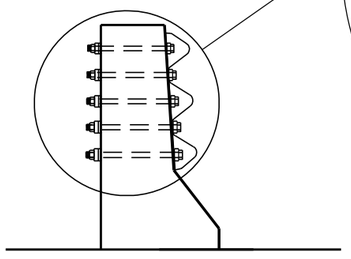
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



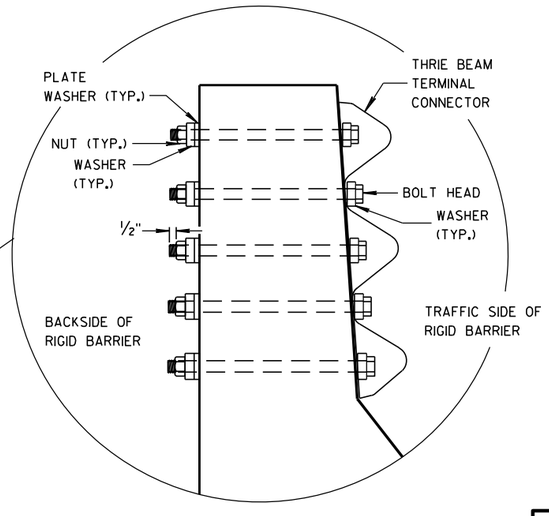
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

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FHWA

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S.D.D. 14 B 45-3f

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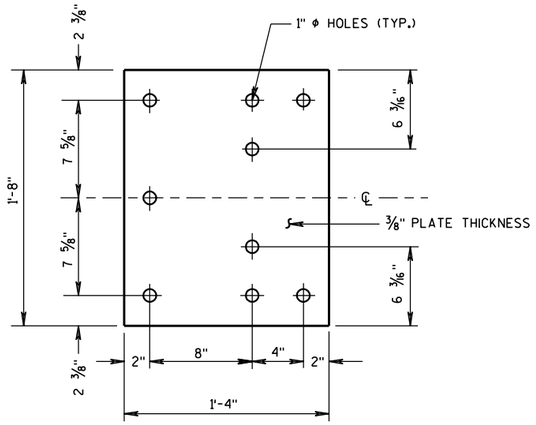
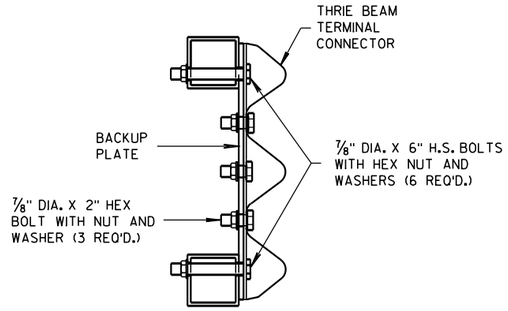
S.D.D. 14 B 45-3f



BACK-UP PLATE DETAIL

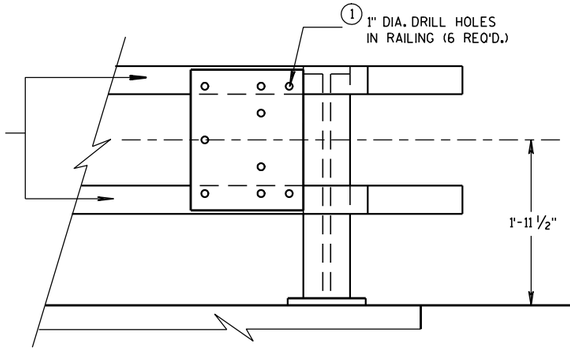


SECTION J-J

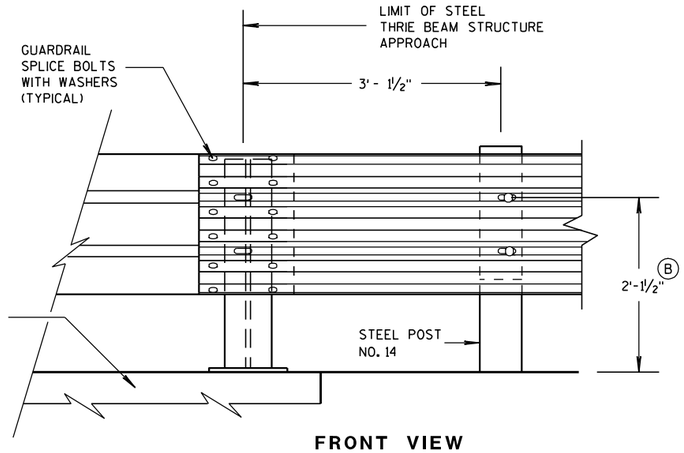
GENERAL NOTES

(1) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(B) TOLERANCE FOR TOP OF BEAM IS ± 1".

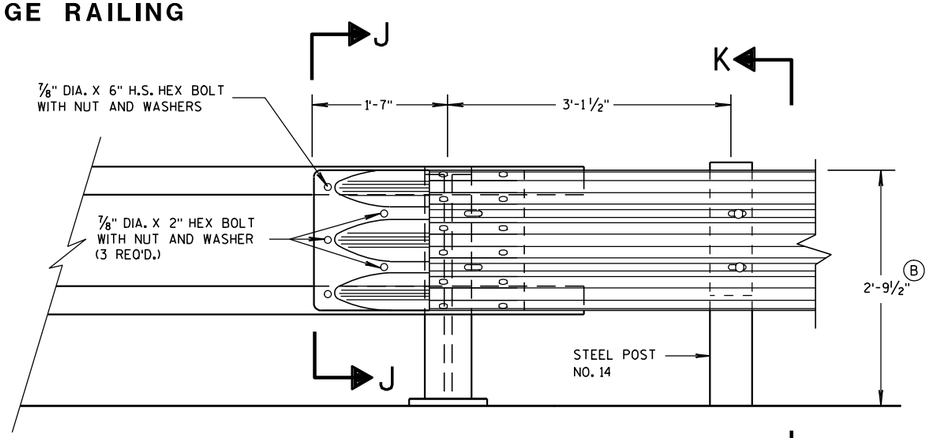


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

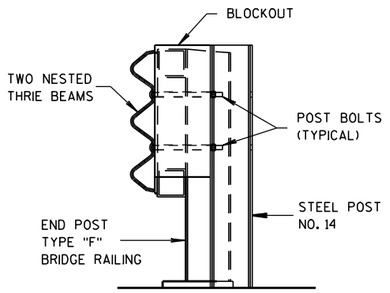


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 8/31/2012 — DATE /S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER FHWA

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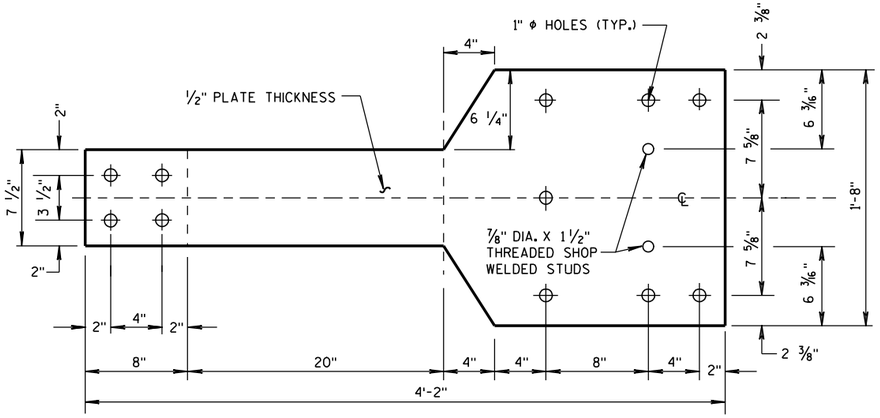
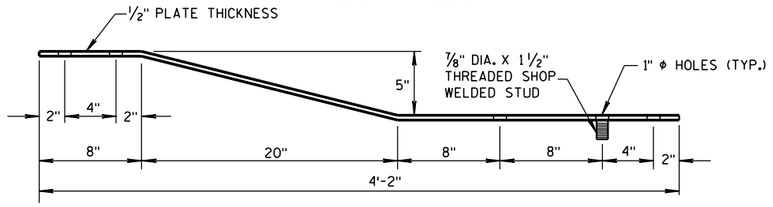
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

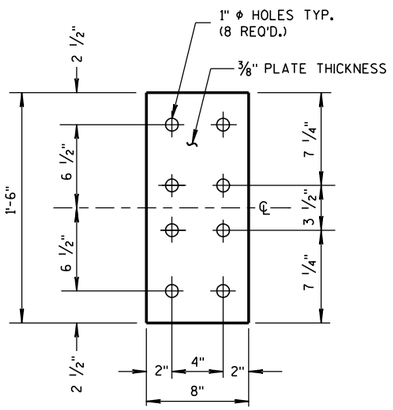


FRONT VIEW



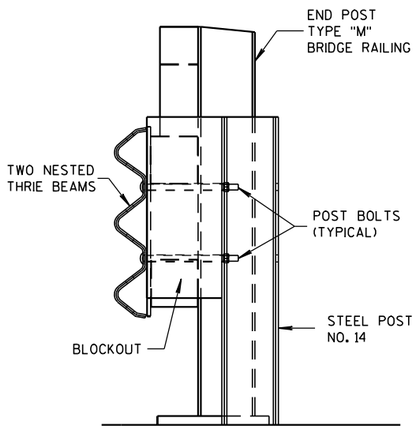
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

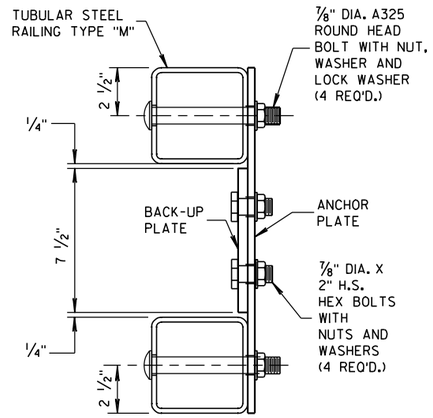


FRONT VIEW

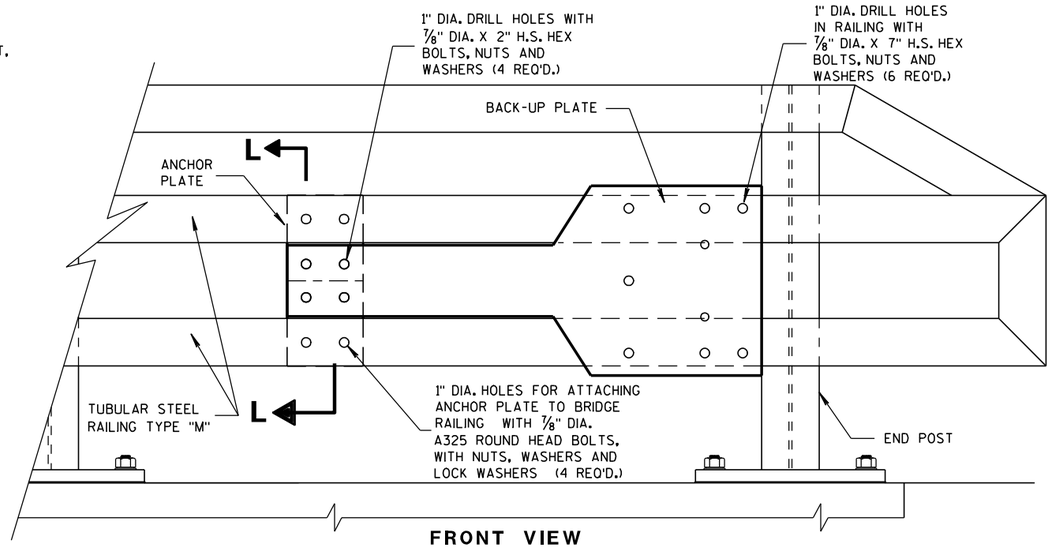
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

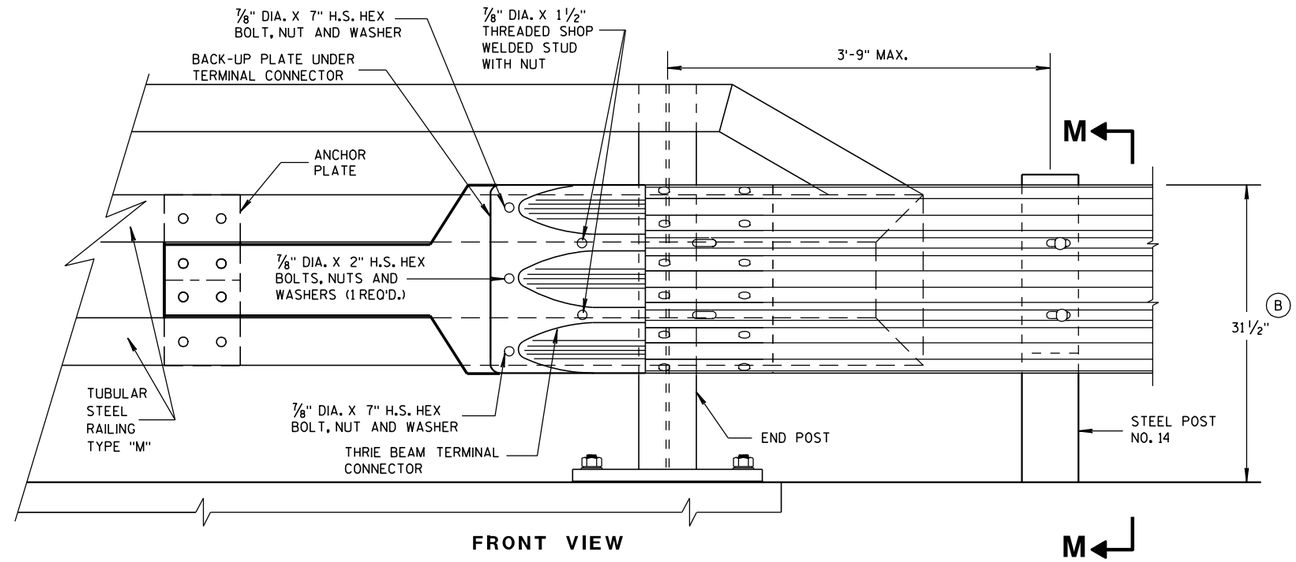


SECTION L-L

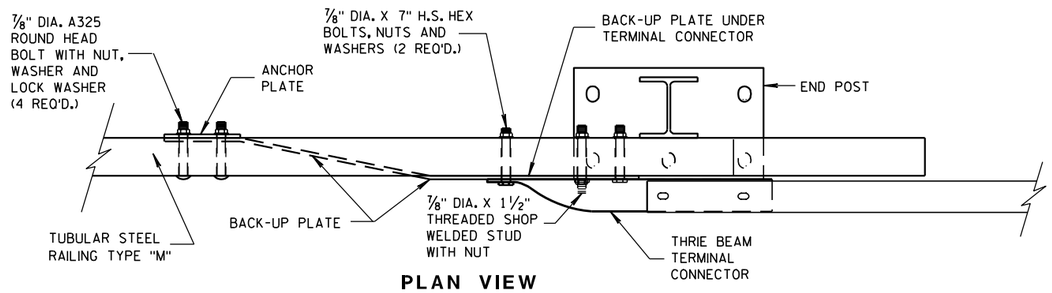


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012 DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

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S.D. 14 B 45-3h

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

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

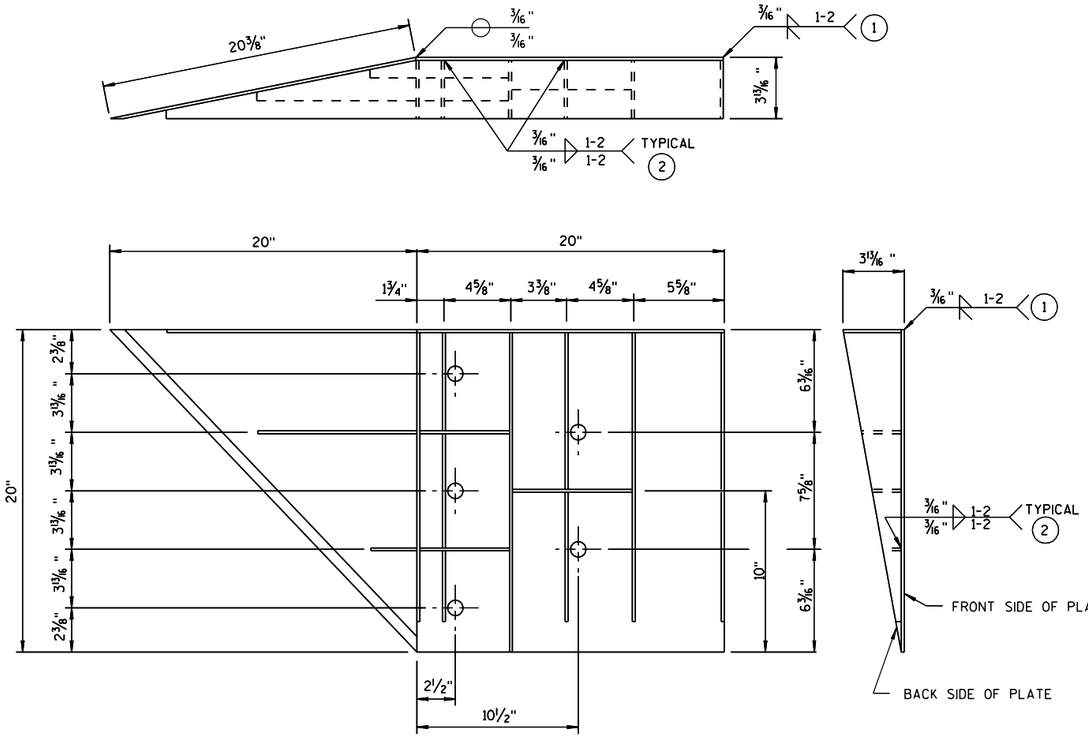
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

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

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



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

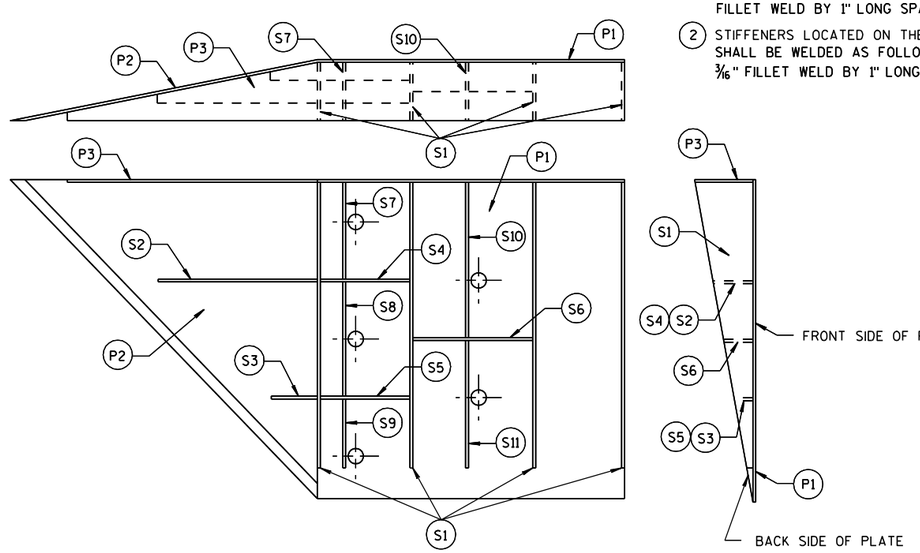


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

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

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 DATE
/S/ Jerry H ---- ROADWAY STANDARDS ENGINEER
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FHWA

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S.D.D. 14 B 45-3i

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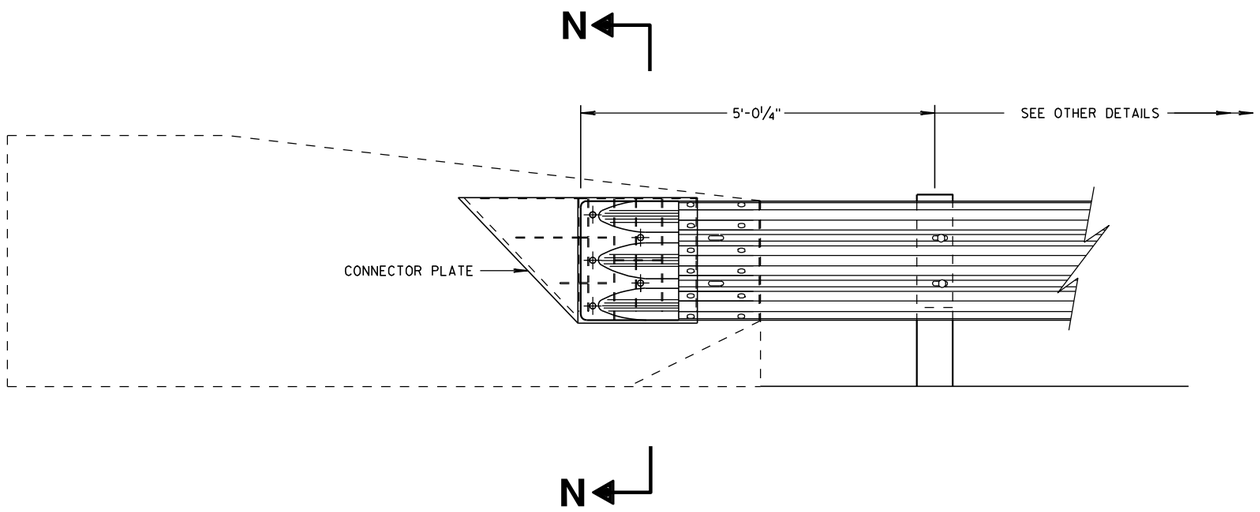
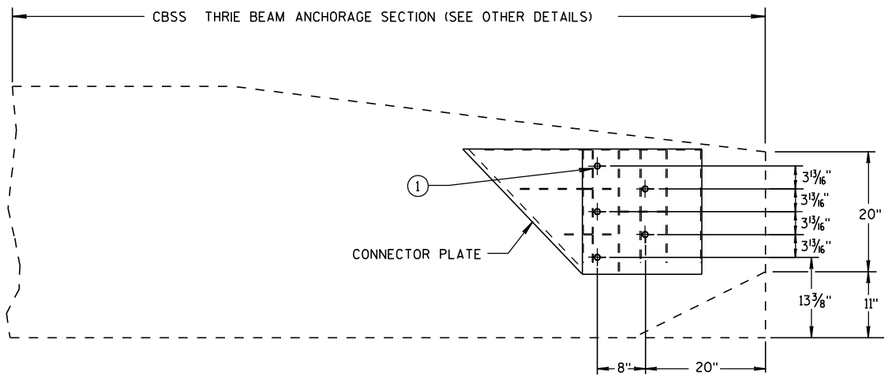


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

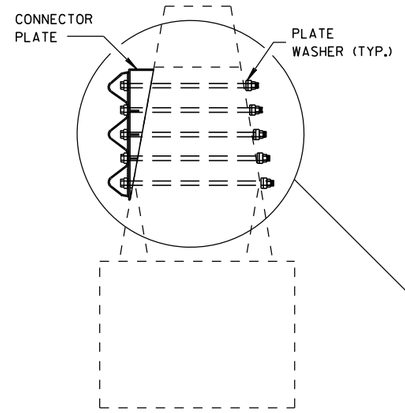


SINGLE SLOPE CONNECTION PLATE PLACEMENT

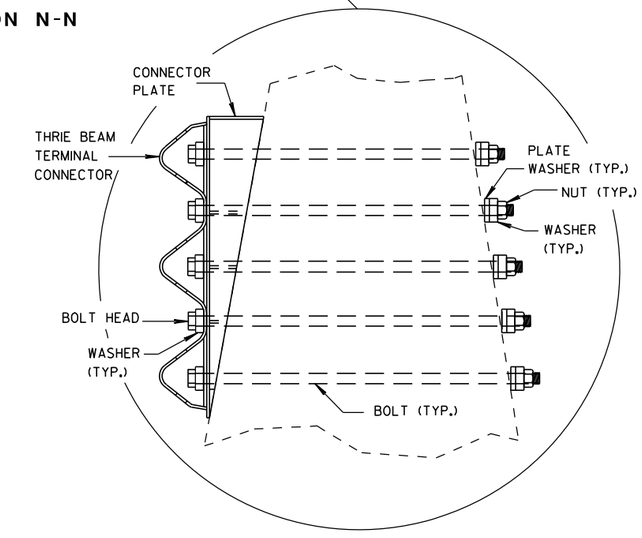
GENERAL NOTES

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

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



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

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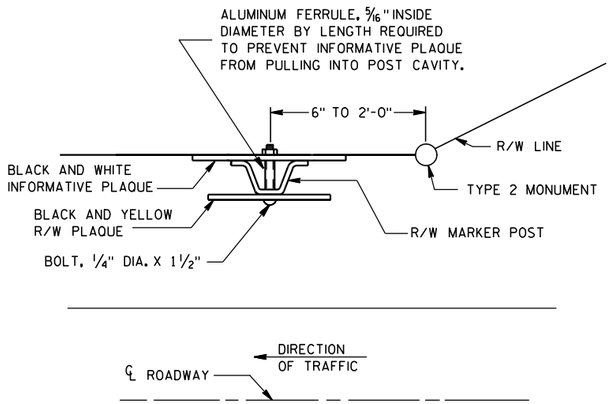
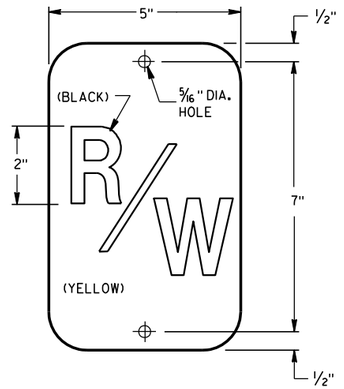
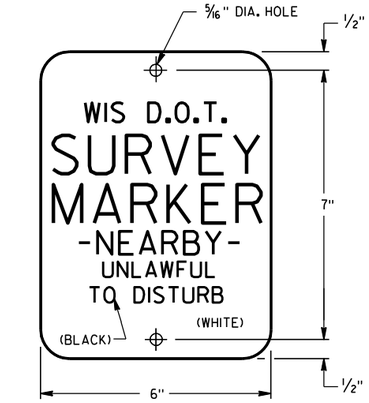


PLAN VIEW



R/W PLAQUE

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



INFORMATIVE PLAQUE

GENERAL NOTES

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

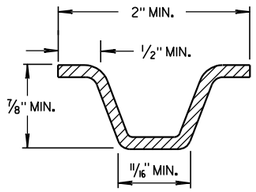
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

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

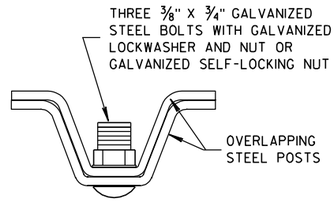
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.

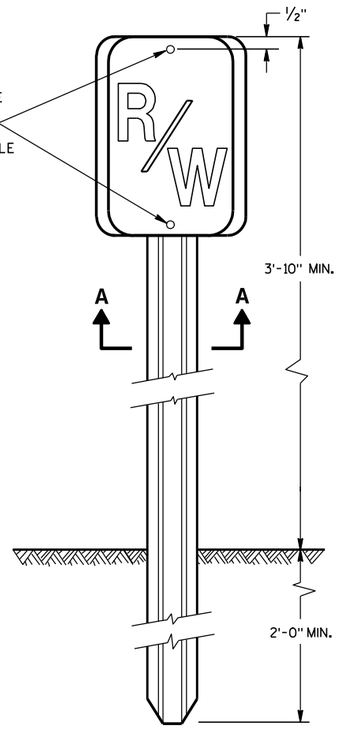


MIN. WEIGHT 1.12 LB./FT.

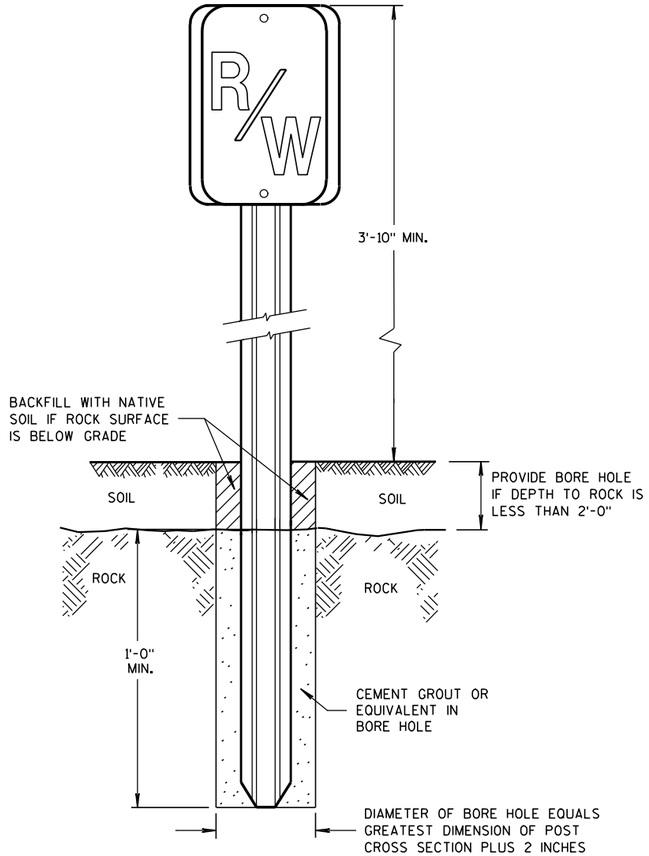
SECTION A-A



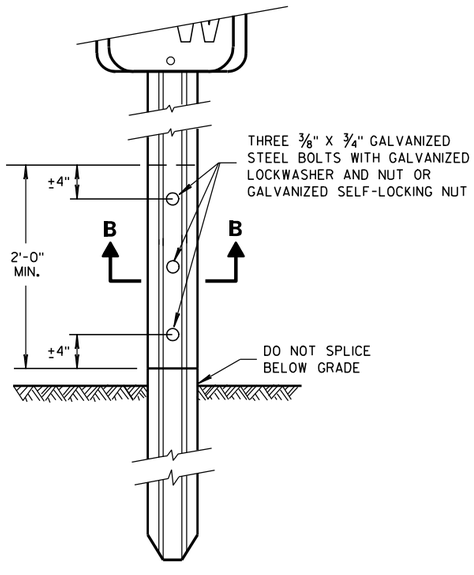
SECTION B-B



FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)



FRONT VIEW
SPLICE DETAIL

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/27/09 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible] — GINEER

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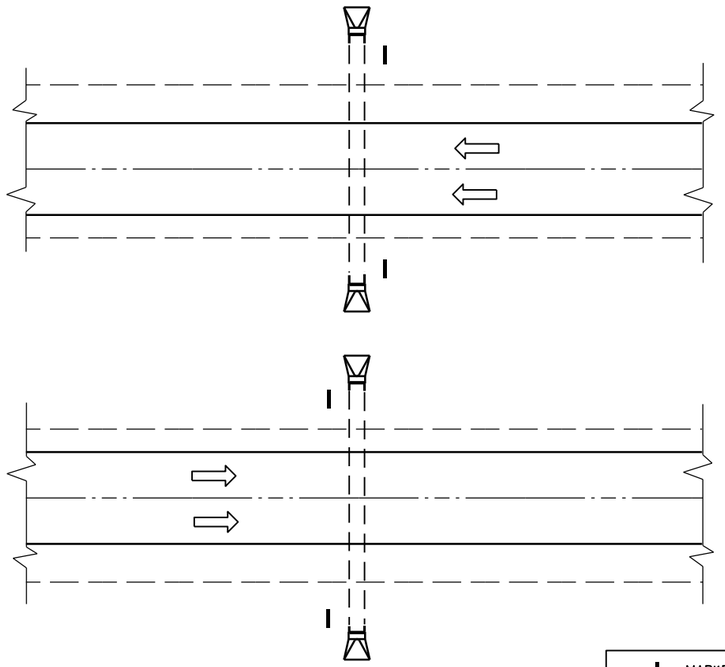
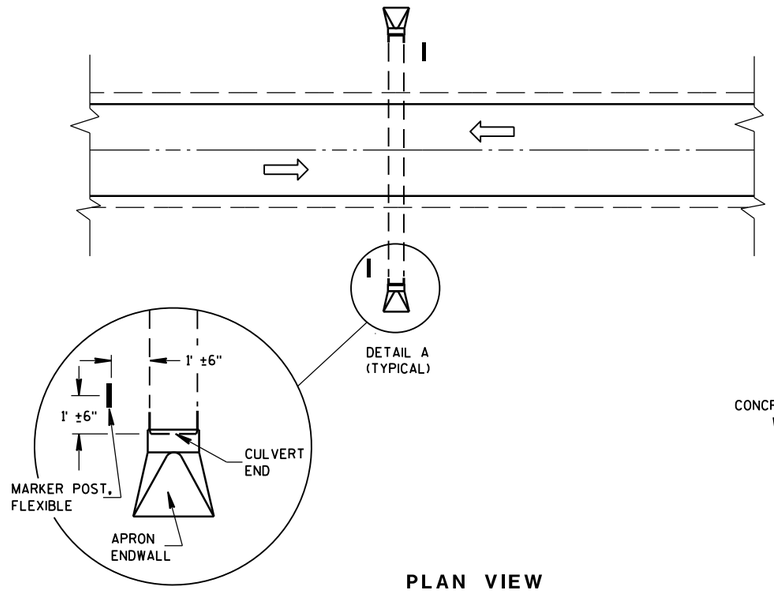


PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

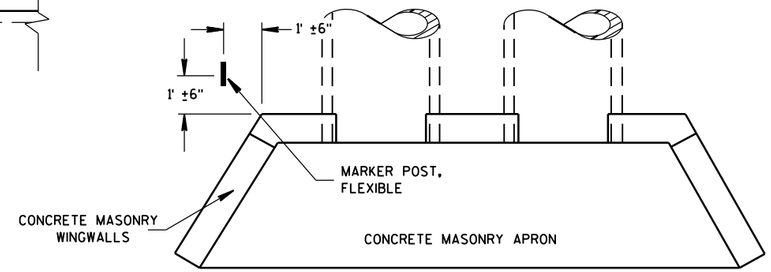
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

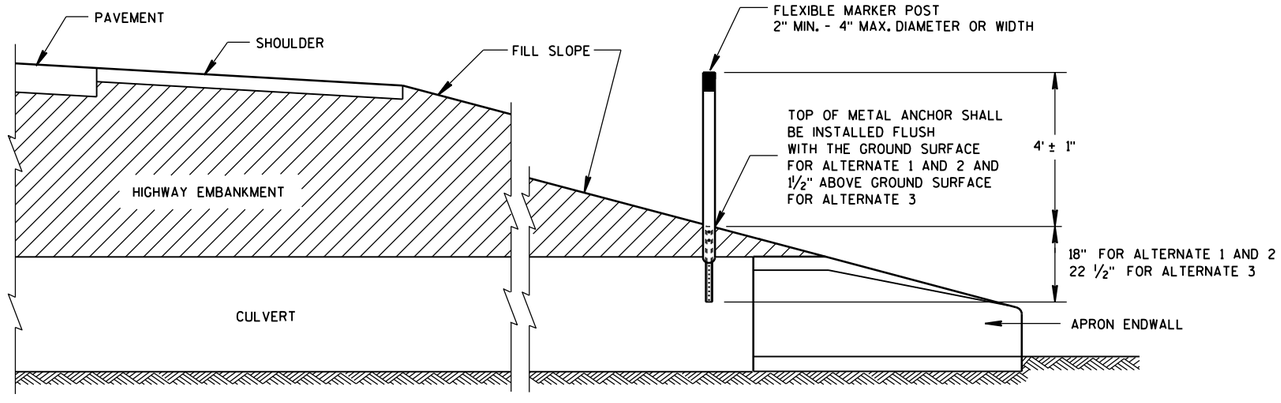
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

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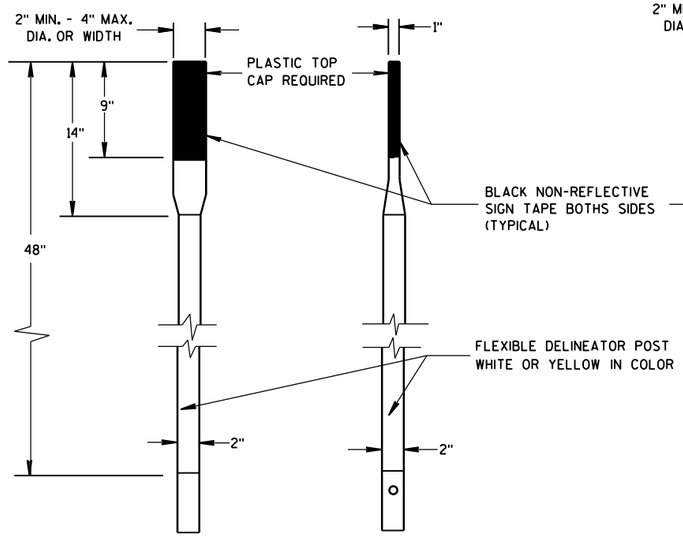
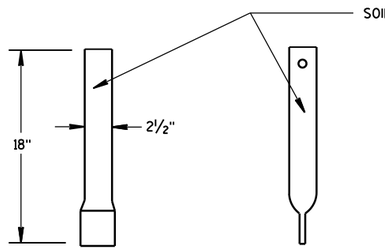
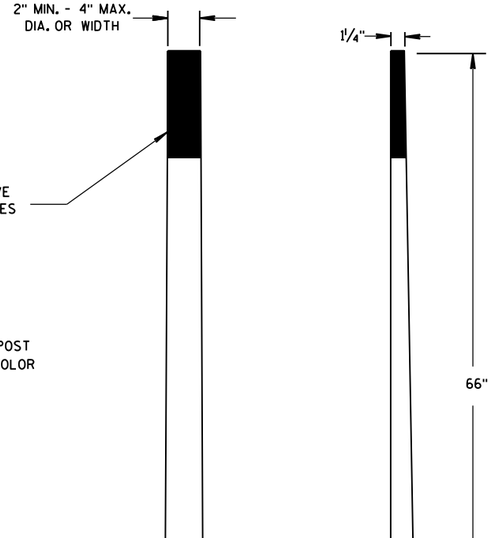




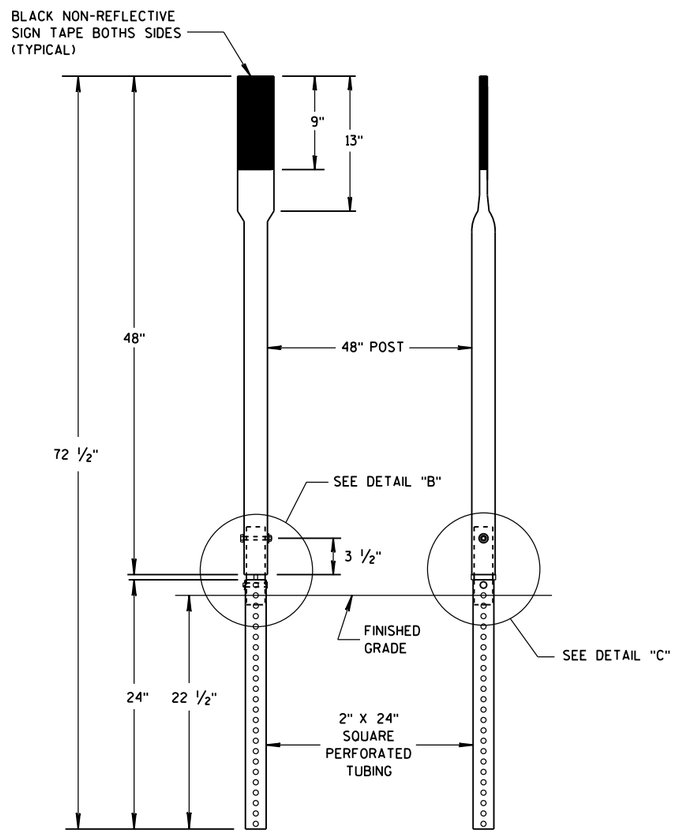
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

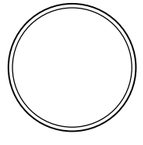
ALTERNATE 2



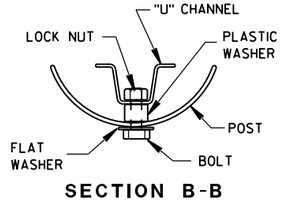
FRONT VIEW SIDE VIEW

ALTERNATE 3

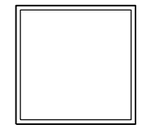
FLEXIBLE MARKER POSTS



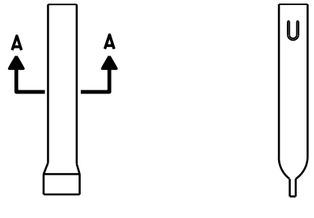
SECTION A-A



SECTION B-B

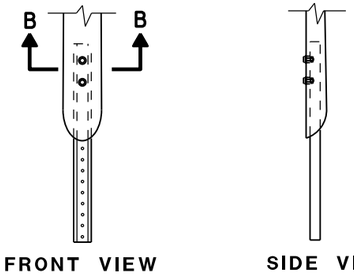


SECTION C-C



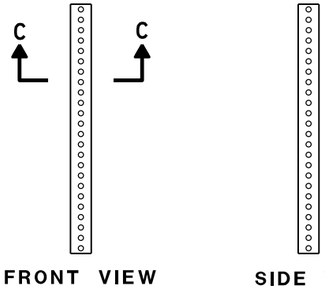
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

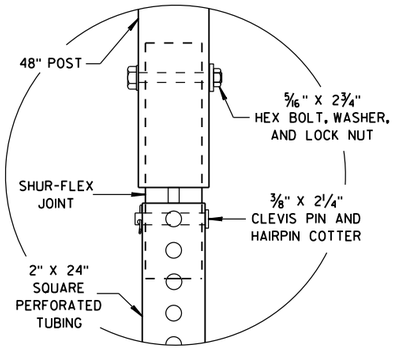
ALTERNATE 2



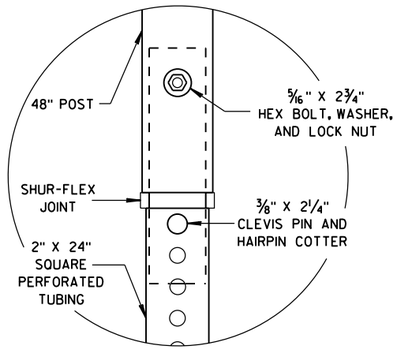
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



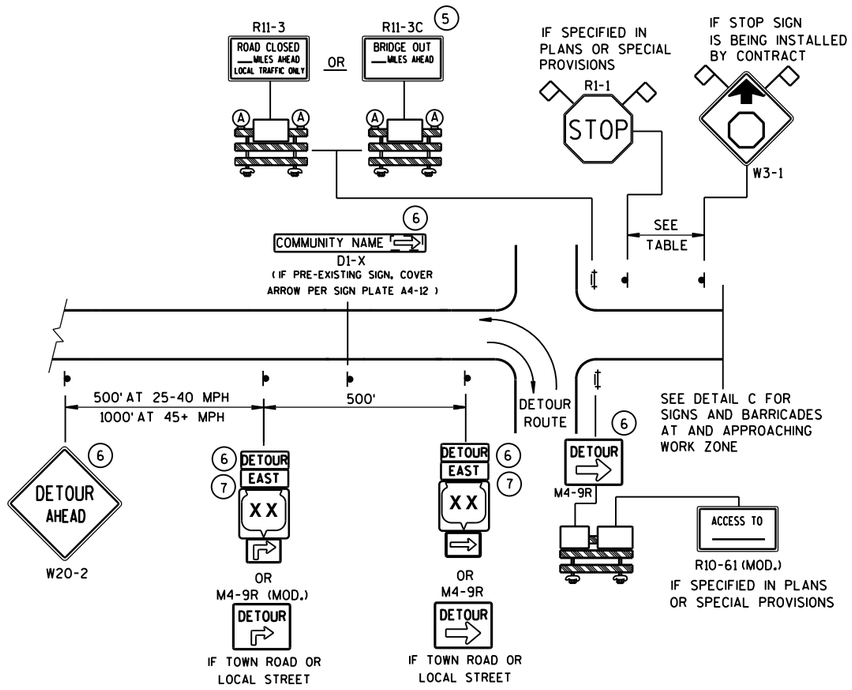
DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

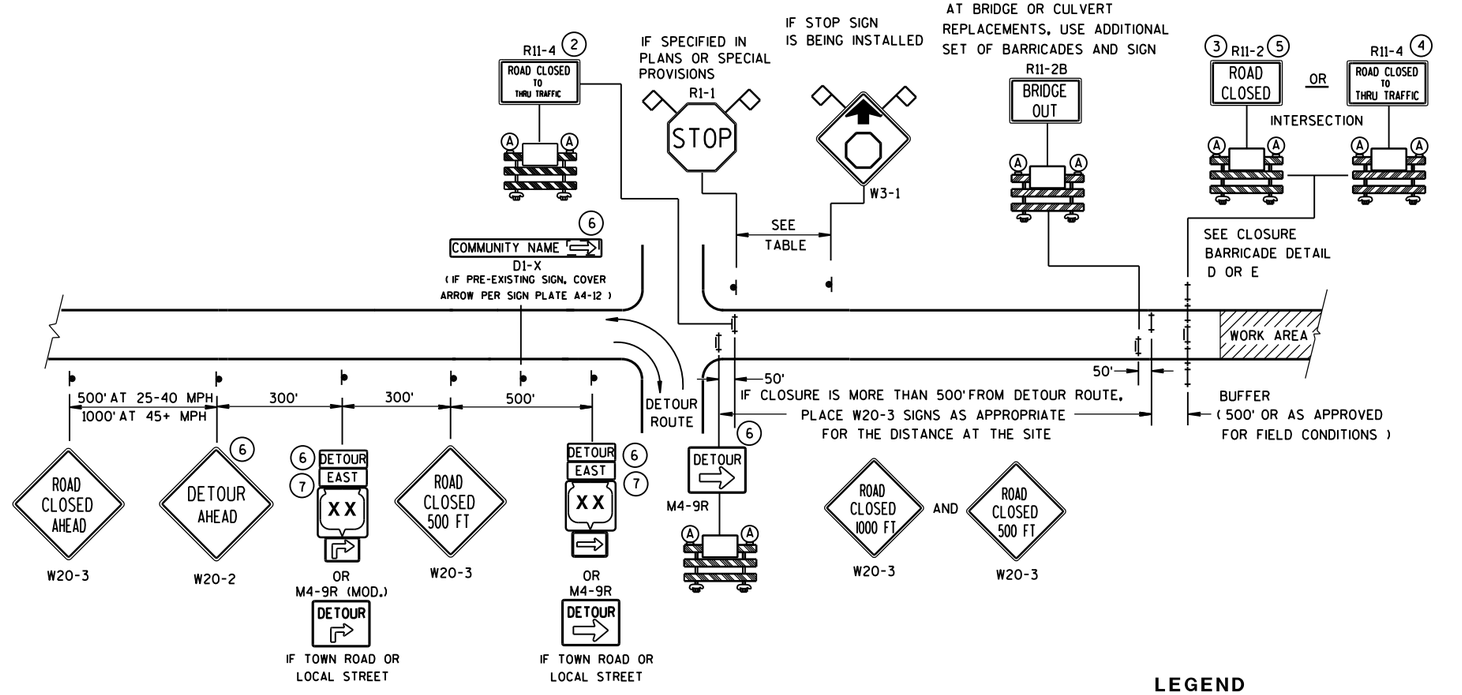
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
IGN
FHWA

6
S.D.D. 15 A 3-2b



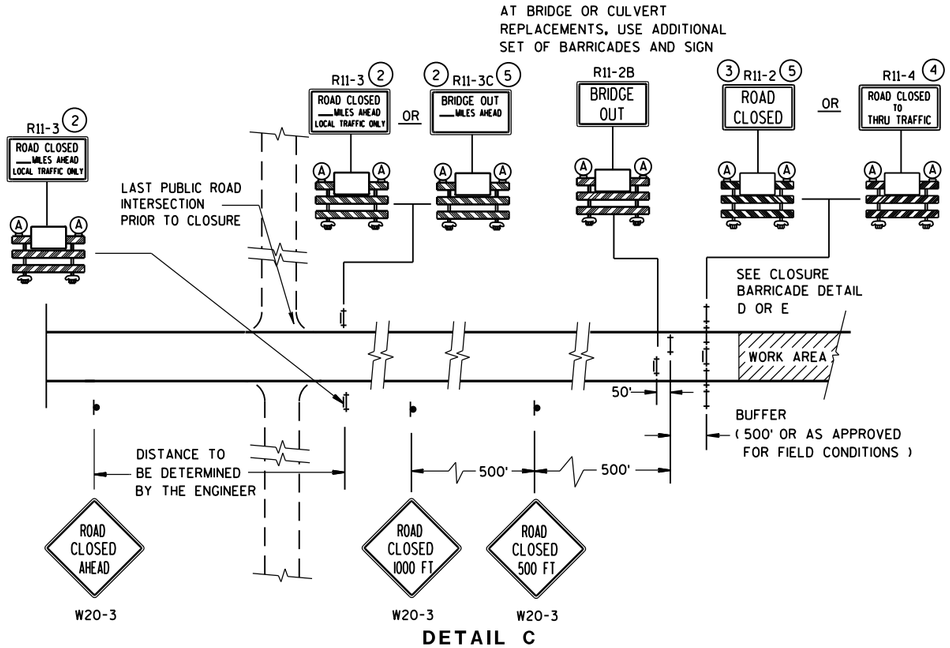
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

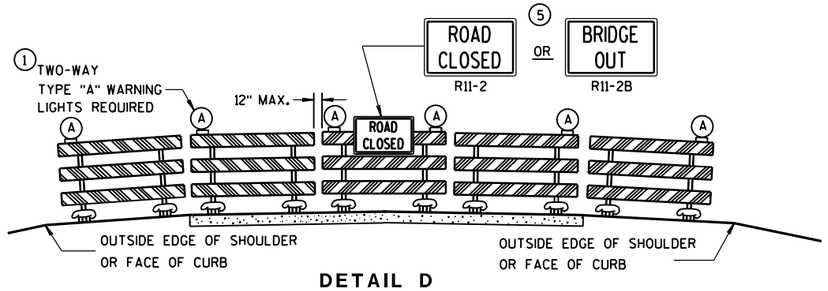
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 DATE — /S/ Travis Feltes STATE TRAFFIC ENGINEER — DESIGN

FHWA

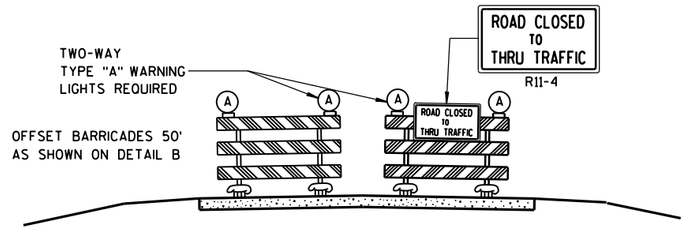
6
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

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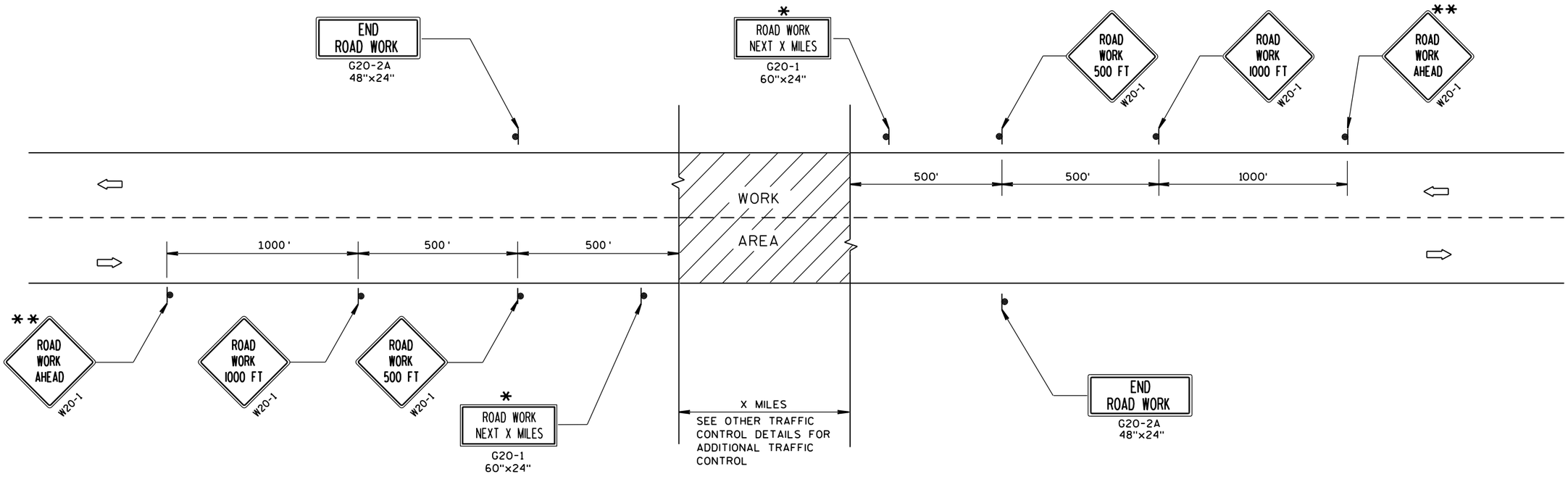
S.D.D. 15 C 2-5b

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

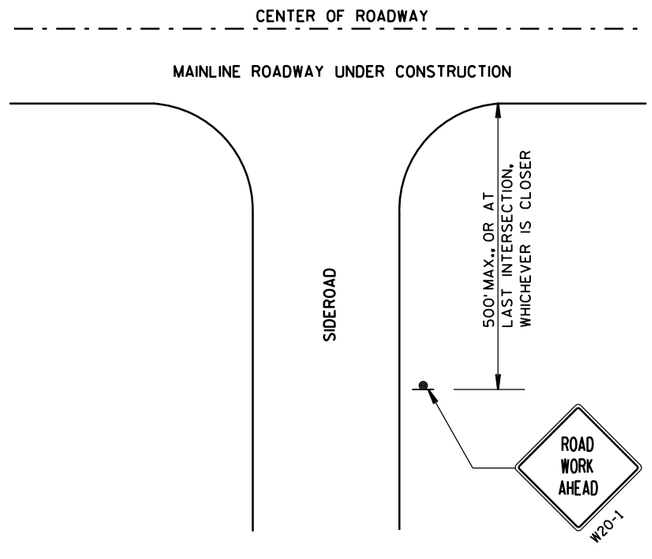
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

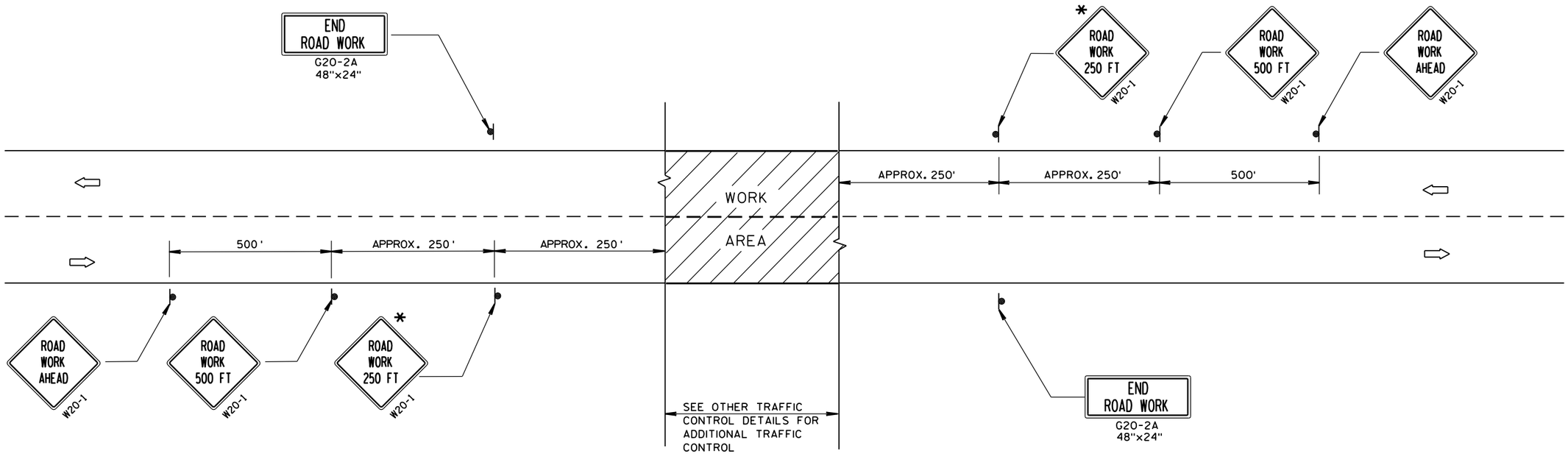
APPROVED

8/2013	/S/ Travis Feltes	SIGN
DATE	STATE TRAFFIC ENGINEER	

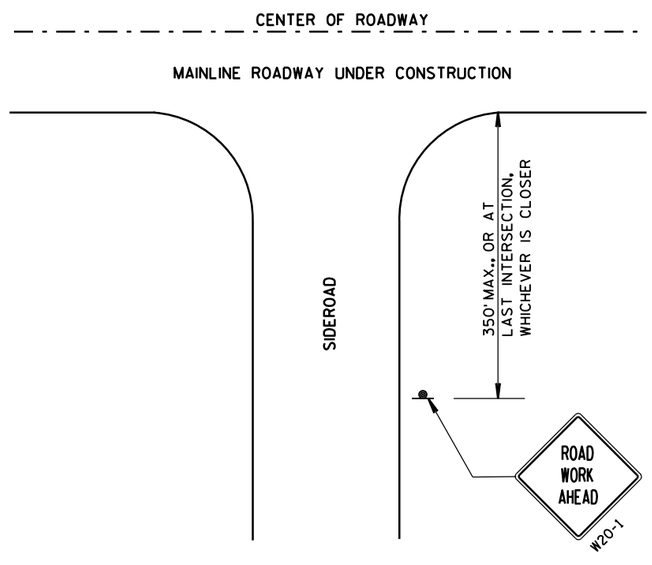
FHWA

6

S.D.D. 15 C 4-2



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

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

LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

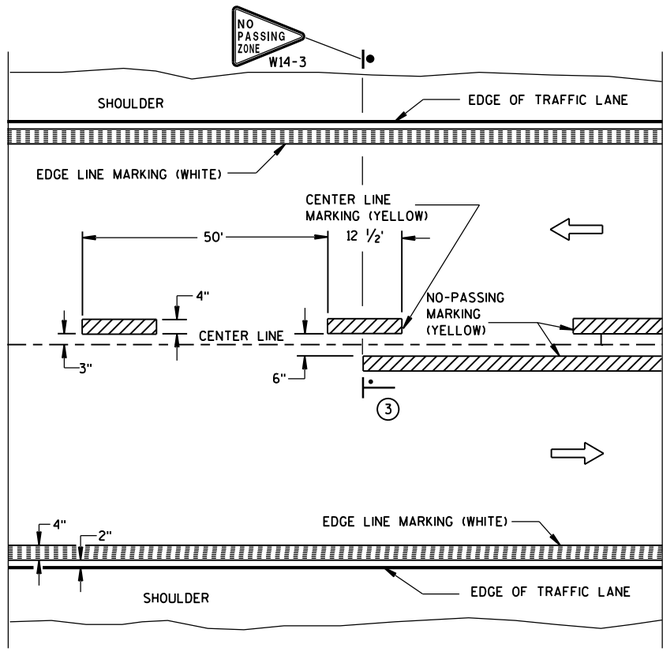
/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

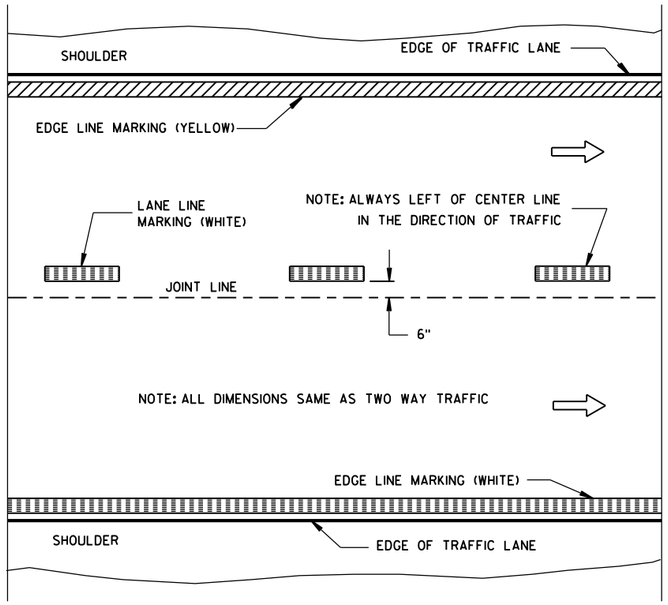
SIGN

6

S.D.D. 15 C 5-2



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

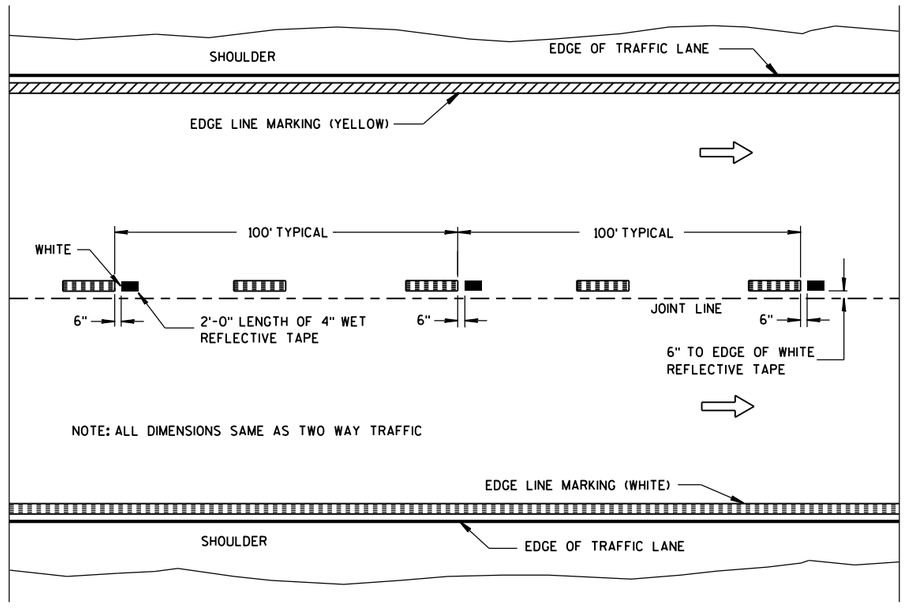
GENERAL NOTES

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

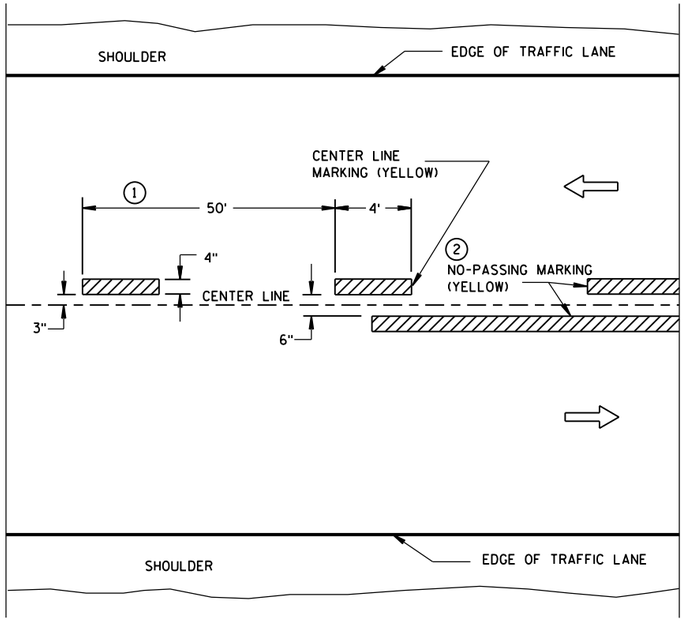
1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING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

NOTE

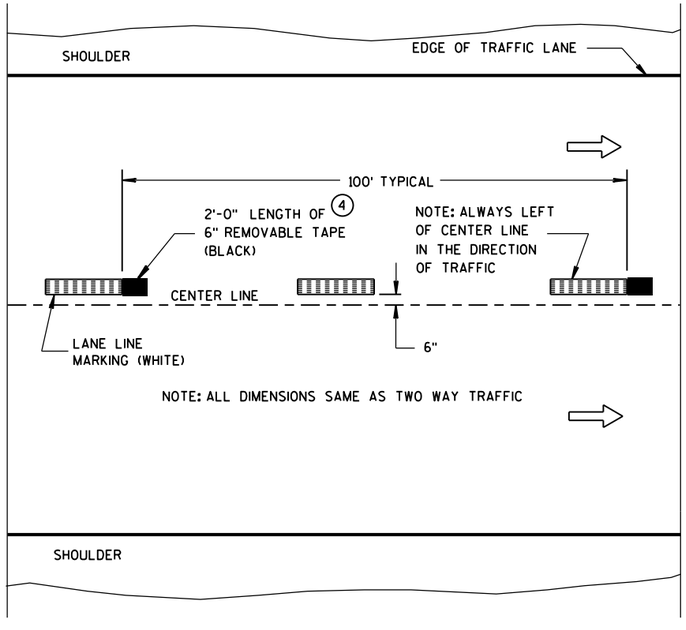
ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

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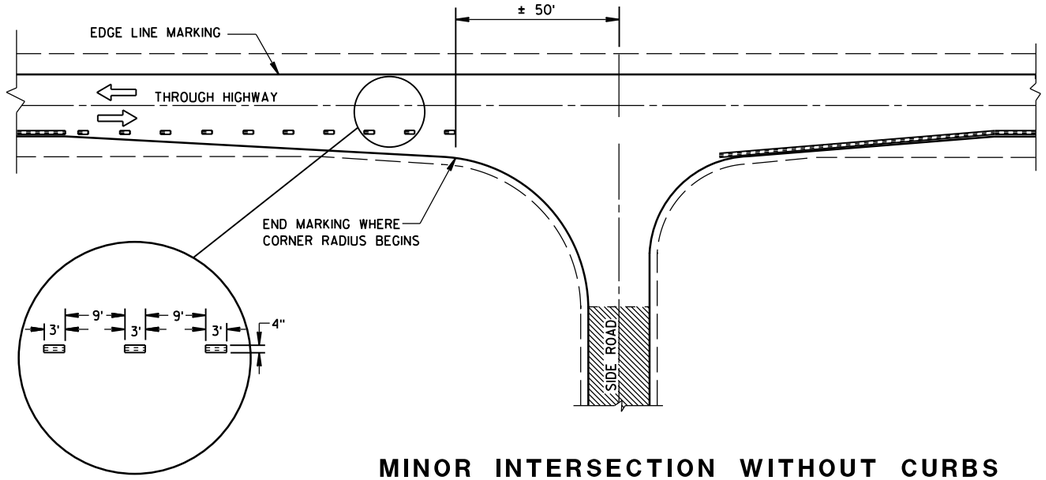
S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED 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) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

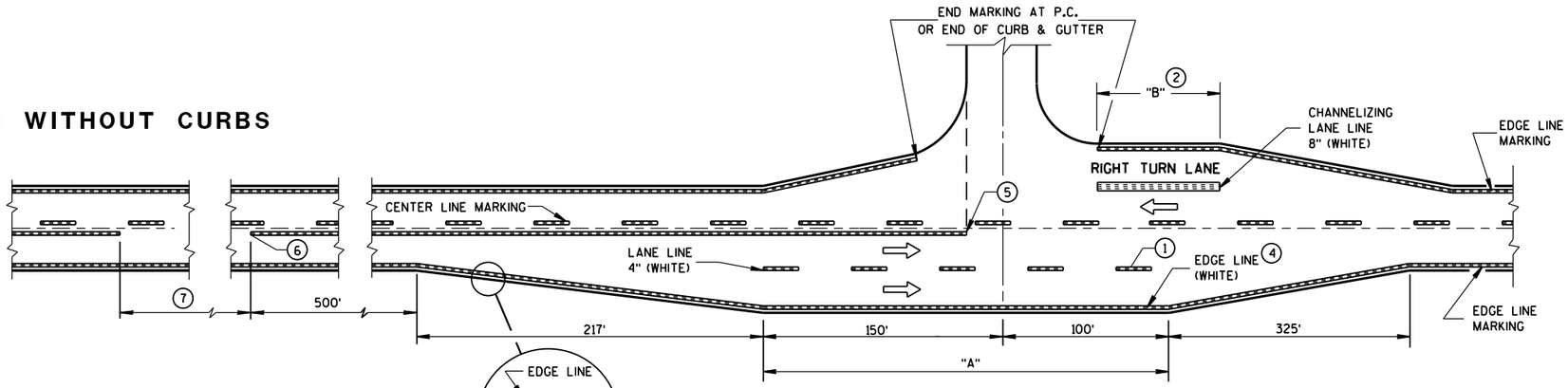
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

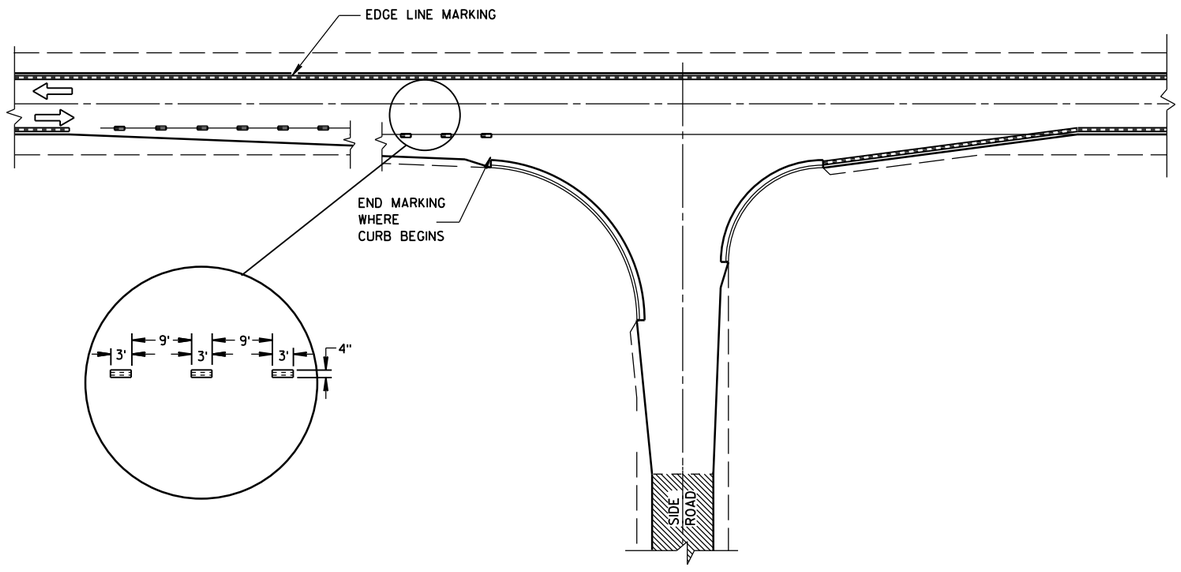
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



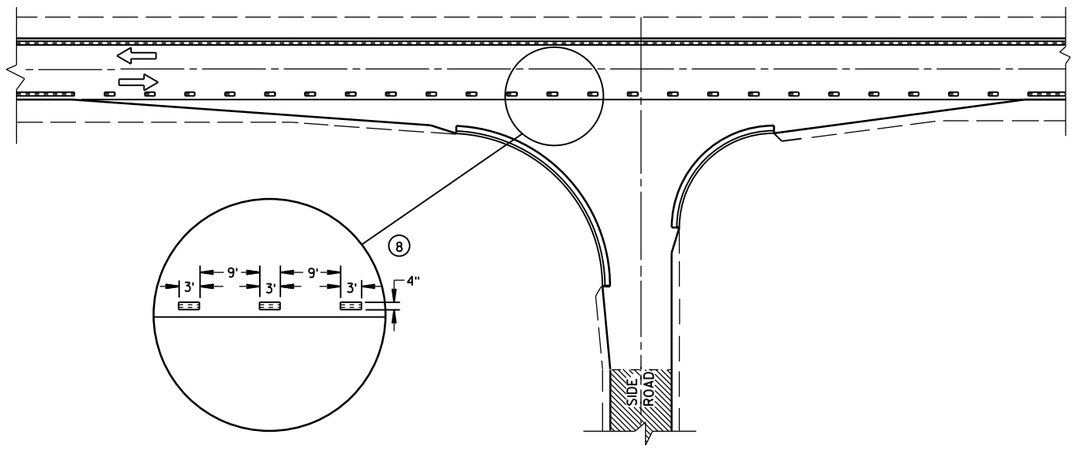
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 77

6

S.D.D. 15 C 8-16b

6

S.D.D. 15 C 8-16b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

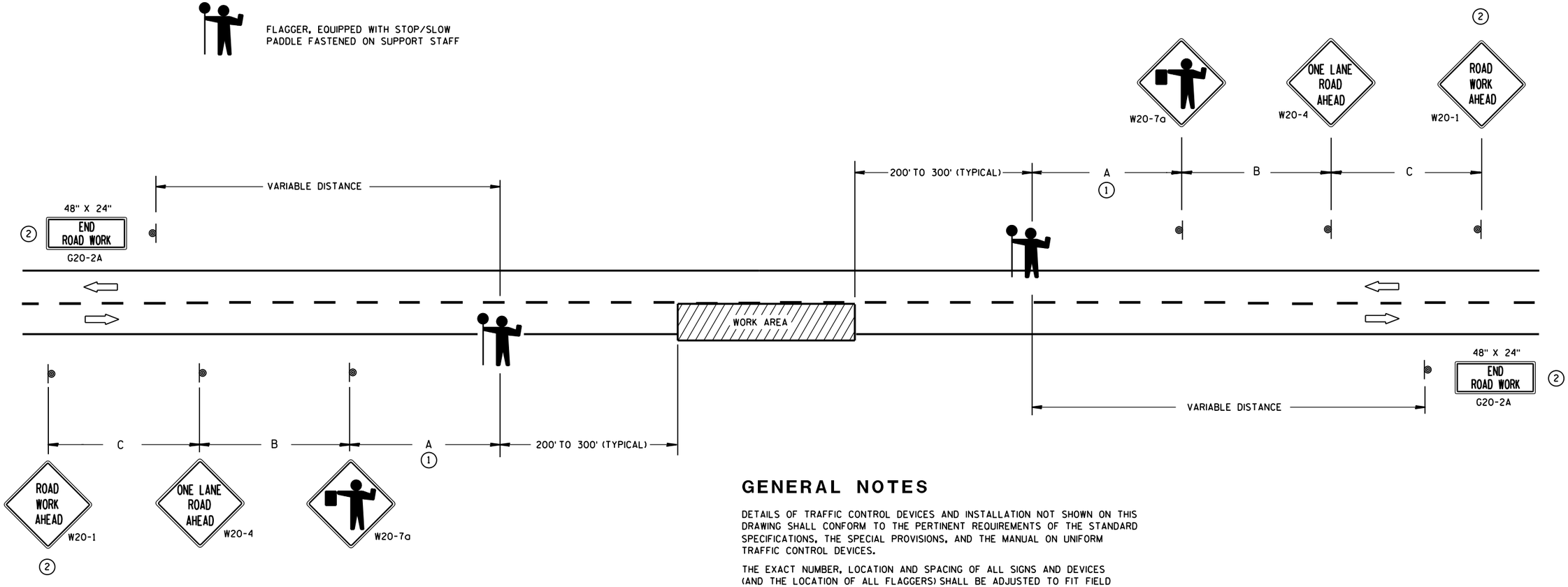
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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

W3-4

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



(1) FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

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

GENERAL NOTES

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

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

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

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 15 C 12-4

6

S.D.D. 15 C 12-4

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- REMOVING PAVEMENT MARKING
- CONCRETE BARRIER TEMPORARY PRECAST
- DIRECTION OF TRAFFIC
- WORK AREA

W057-52
36"x24"

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1 FOOT LESS THAN AVAILABLE WIDTH (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET).

LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.

R2-1
48"x60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.

* INCLUDE RESUME SPEED LIMIT SIGN A MINIMUM OF 200 FEET (500 FEET DESIRABLE) AFTER END ROAD WORK SIGNS.

GENERAL NOTES

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

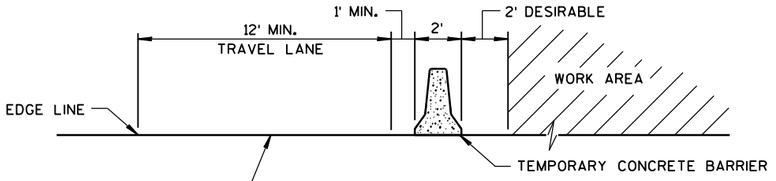
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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

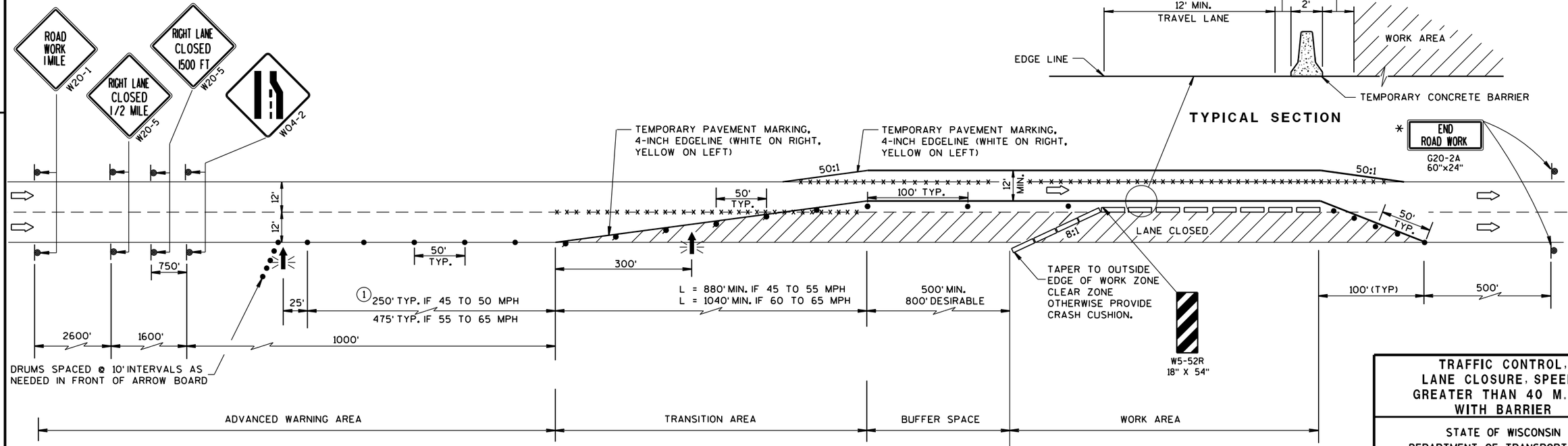
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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



TYPICAL SECTION



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER — SIGN
FHWA

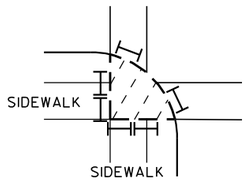
6

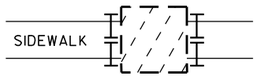
S.D.D. 15 D 3-2

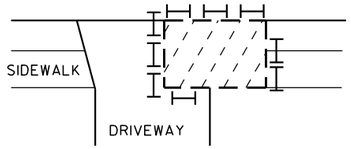
6

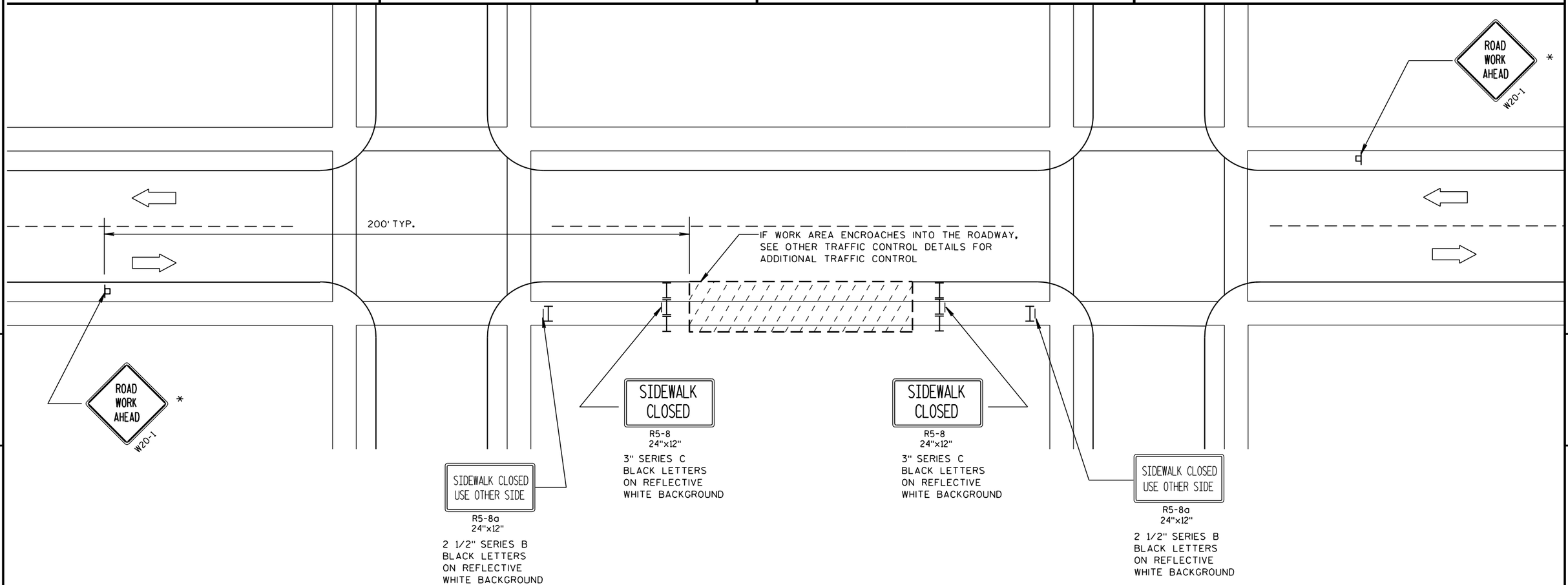
S.D.D. 15 D 3-2

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

* "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.

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

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] [illegible]NEER
FHWA

6

S.D.D. 15 D 30-1

S	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

END ROAD WORK
G20-2A
48"x24"

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

NO PASSING ZONE
W14-3
48"x36"

1000'
500'
400'
500'
200'
50'
50'
25' TYP.

W01-6
48"x24"
✳✳✳

R11-2
48"x30"
ROAD CLOSED

TYPE III BARRICADE

FOR BRIDGE OR CULVERT REPLACEMENTS SUBSTITUTE

BRIDGE OUT
R11-2B
48"x30"

W01-6
48"x24"

TYPE III BARRICADE

W01-6
48"x24"

TYPE III BARRICADE

W01-3L
W013-1
XX M.P.H.
24"x24"

OR

W01-4L
W013-1
XX M.P.H.
24"x24"

ROAD WORK 1000 FT
W20-1

ROAD WORK AHEAD
W20-1

W01-6
48"x24"
✳✳✳

400'

50'
50'

25' TYP.

END TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

ROAD CLOSURE OR BRIDGE/CULVERT REPLACEMENT

BUFFER SPACE (SEE TABLE)

WORK AREA

BUFFER SPACE (SEE TABLE)

W01-6
48"x24"

TYPE III BARRICADE

TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT WHEN INCLUDED IN THE CONTRACT. FOR LAYOUT, SEE DETAILS ELSEWHERE IN THE PLAN.

W5-52L
12"x36"

W5-52R
12"x36"

25' TYP.

W01-6
48"x24"
✳✳✳

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

25' TYP.

ROAD WORK AHEAD
W20-1

ROAD WORK 1000 FT
W20-1

W01-4R
W013-1
XX M.P.H.
24"x24"

OR

W01-3R
W013-1
XX M.P.H.
24"x24"

W01-6
48"x24"

W01-6
48"x24"
✳✳✳

W5-52R
12"x36"

W5-52L
12"x36"

W01-4R
W013-1
XX M.P.H.
24"x24"

OR

W01-3R
W013-1
XX M.P.H.
24"x24"

W01-4L
W013-1
XX M.P.H.
24"x24"

OR

W01-3L
W013-1
XX M.P.H.
24"x24"

25' TYP.

W01-6
48"x24"

END TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES. (USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT)

TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE AND 2-WAY YELLOW RAISED PAVEMENT MARKERS AT 25' SPACING. USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT.

400'

50'
50'

200'
500'
500'
1000'

NO PASSING ZONE
W14-3
48"x36"

END ROAD WORK
G20-2A
48"x24"

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

✳ IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE W01-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE W01-3 SIGN.

✳✳ WHEN THE DISTANCE TO/FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

✳✳✳ OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY-BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR, (WHITE) (SINGLE DELINEATOR)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO-WAY YELLOW)
- XXX REMOVE PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- WORK AREA

TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 15 D 31-2

LEGEND

- SIGN ON PERMANENT SUPPORT
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH ATTACHED SIGN
- CONCRETE BARRIER TEMPORARY PRECAST
- FLAGS, 16" x 16" MIN., (ORANGE)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ASPHALTIC PAVEMENT WIDENING
- DIRECTION OF TRAFFIC
- 4" X 6" WOOD POST
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE

W057-52
36"x24"

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET.)

GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

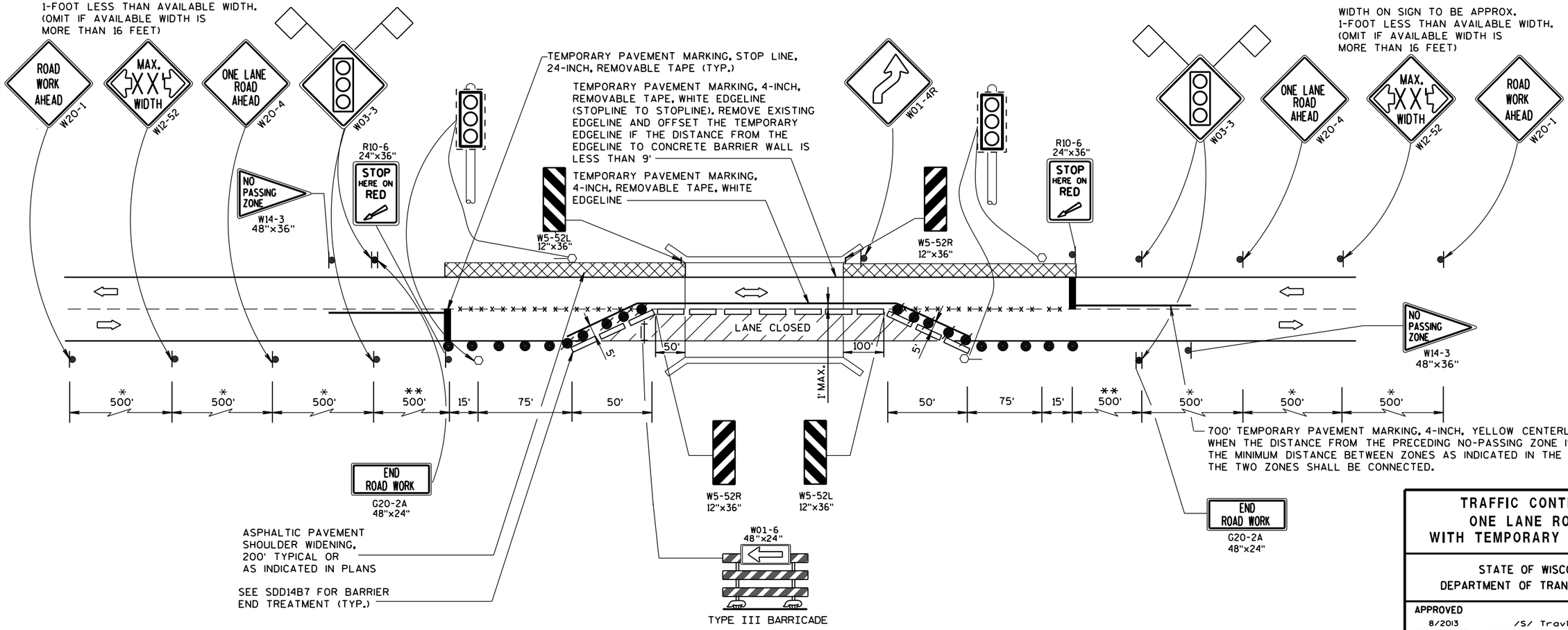
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

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

* 500-FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350-FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200-FOOT TYPICAL SPACING.

** USE 300' SPACING IF PRE-CONSTRUCTION REGULATORY SPEED LIMIT IS 35 MPH OR LESS.

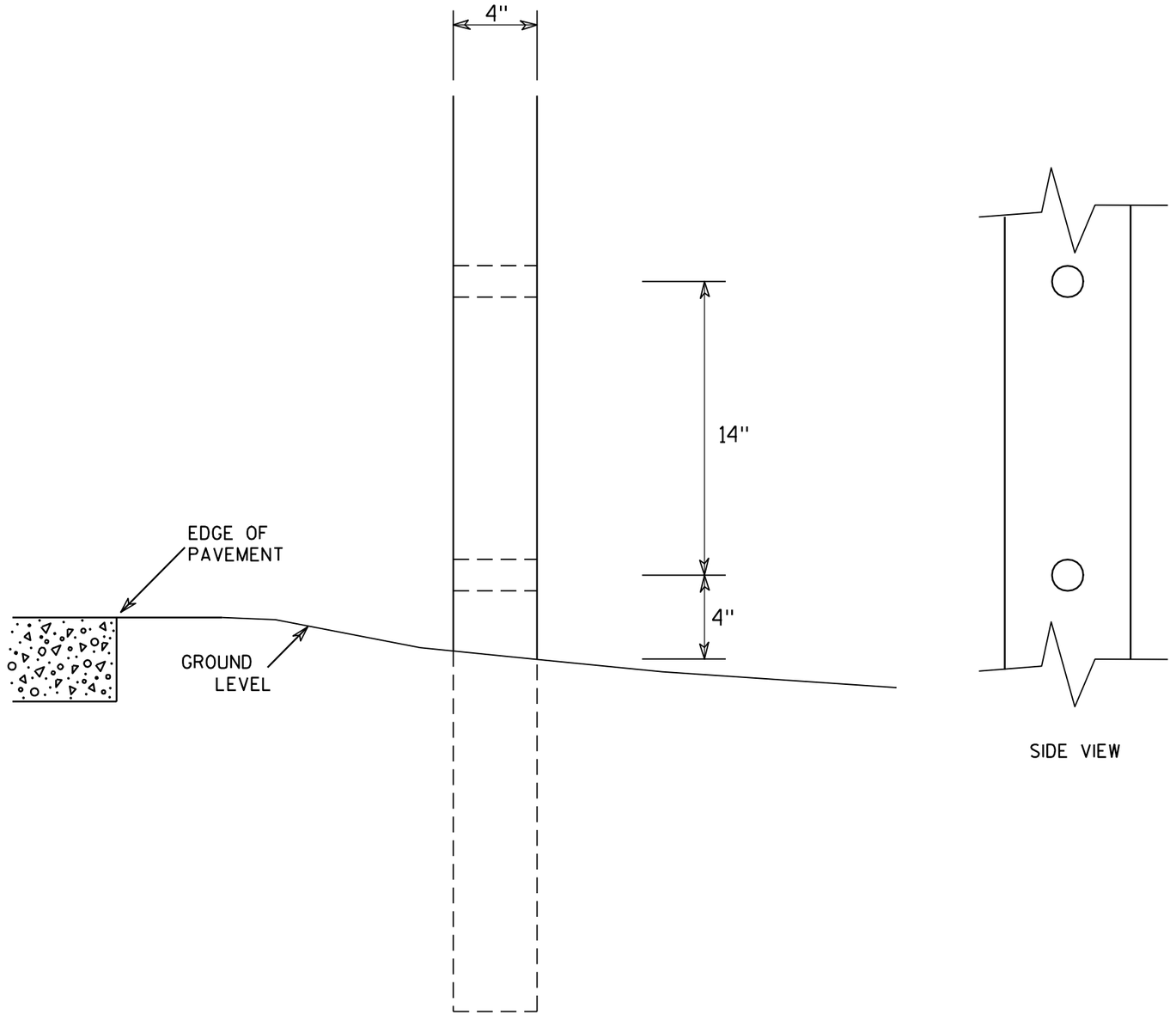


TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 15 D 33-3



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.

4 X 6 WOOD POST MODIFICATIONS

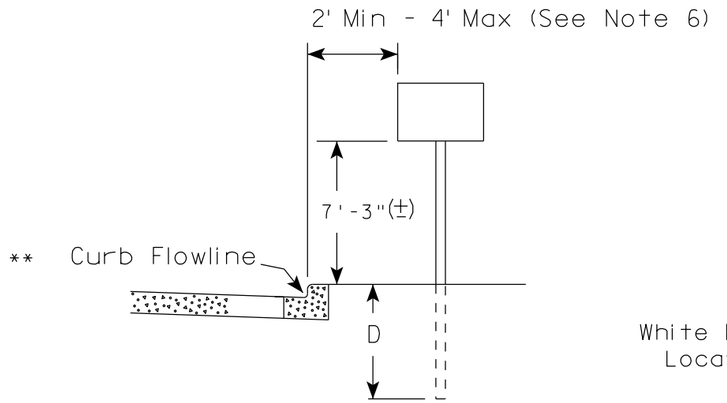
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

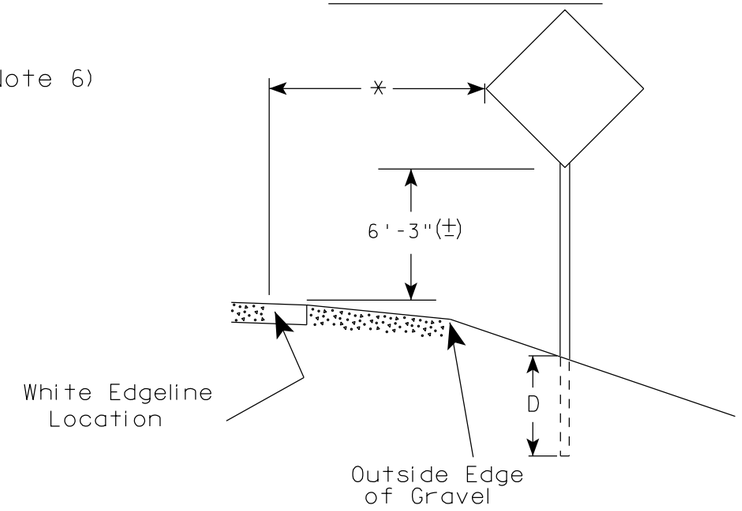
DATE 3/27/97 PLATE NO. A4-11.2

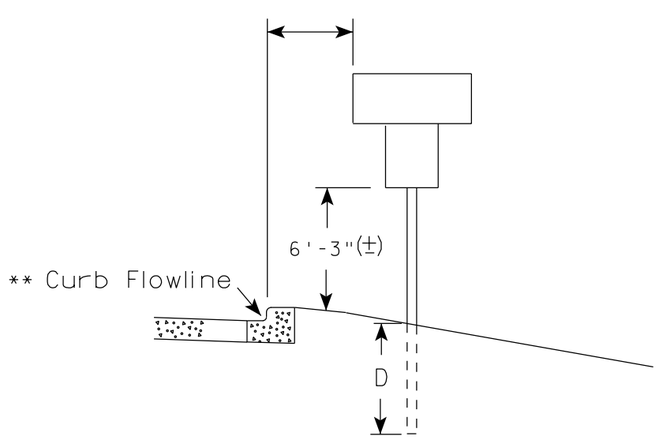
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 83	E

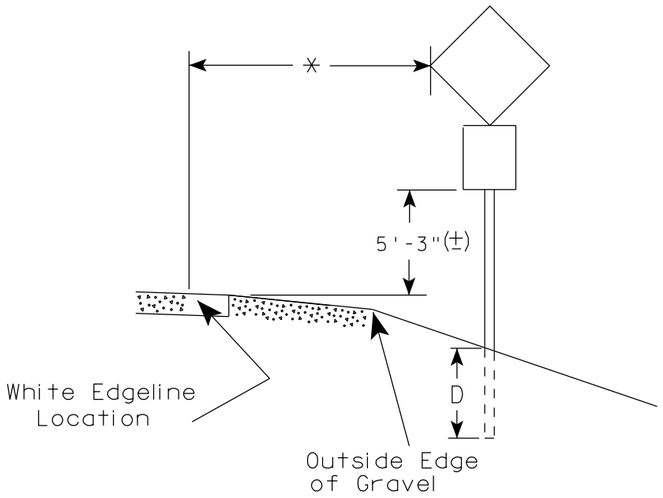
URBAN AREA



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.

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

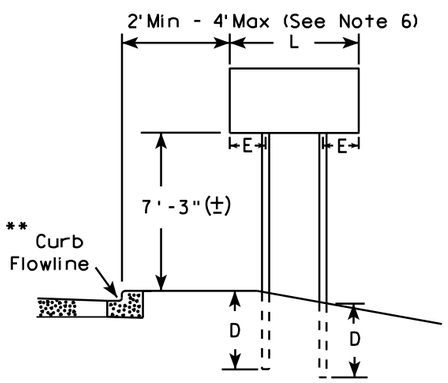
WISCONSIN DEPT OF TRANSPORTATION

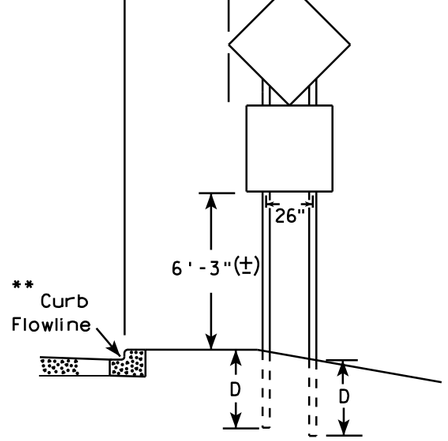
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

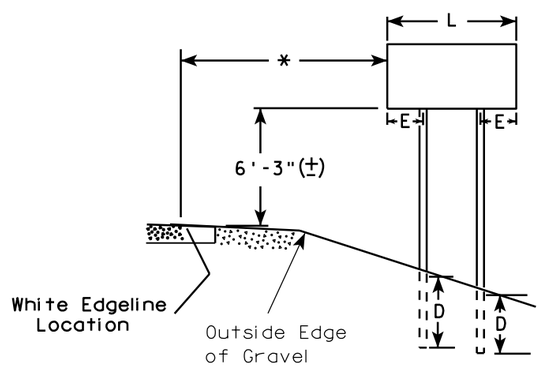
URBAN AREA

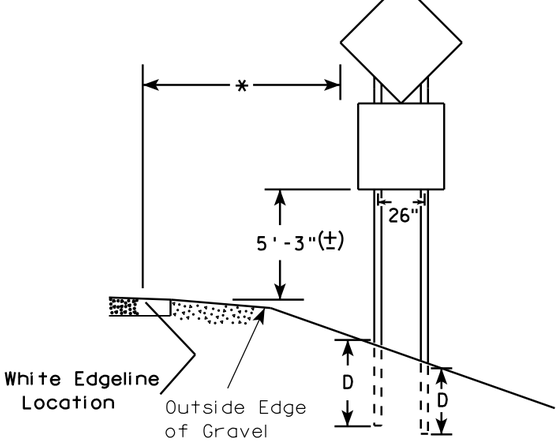




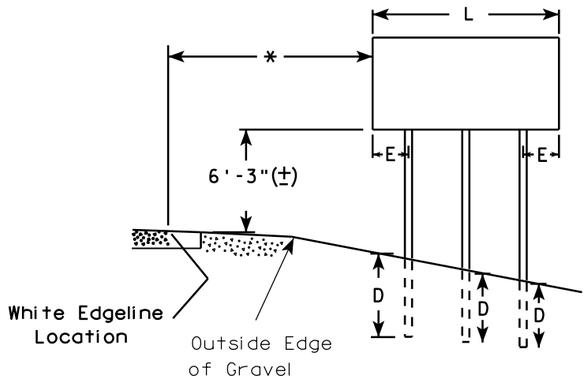
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



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. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) 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) & End of Road Markers (W5-56 & W5-56A) 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 or 20 S.F. or less in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4 12
85

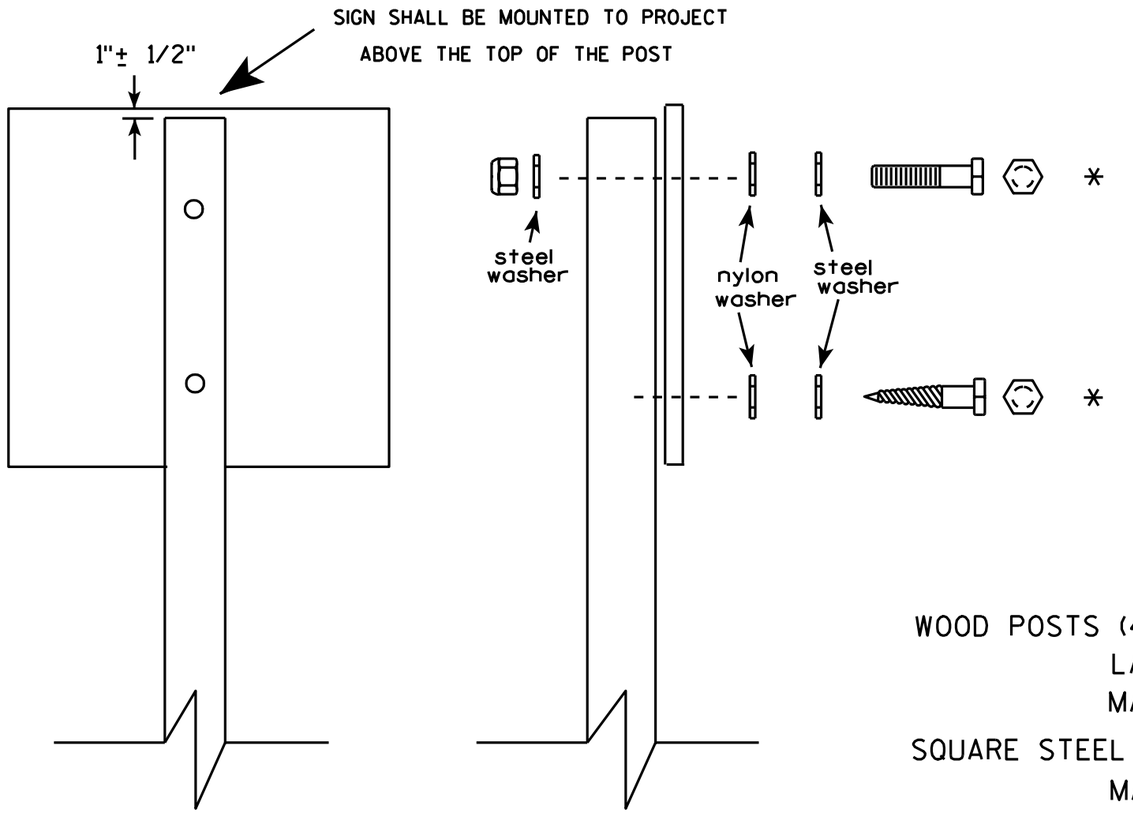
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-SEP-2013 13:27 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42

7

7



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

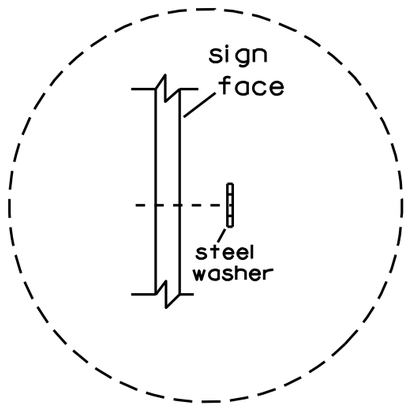
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

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

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* 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

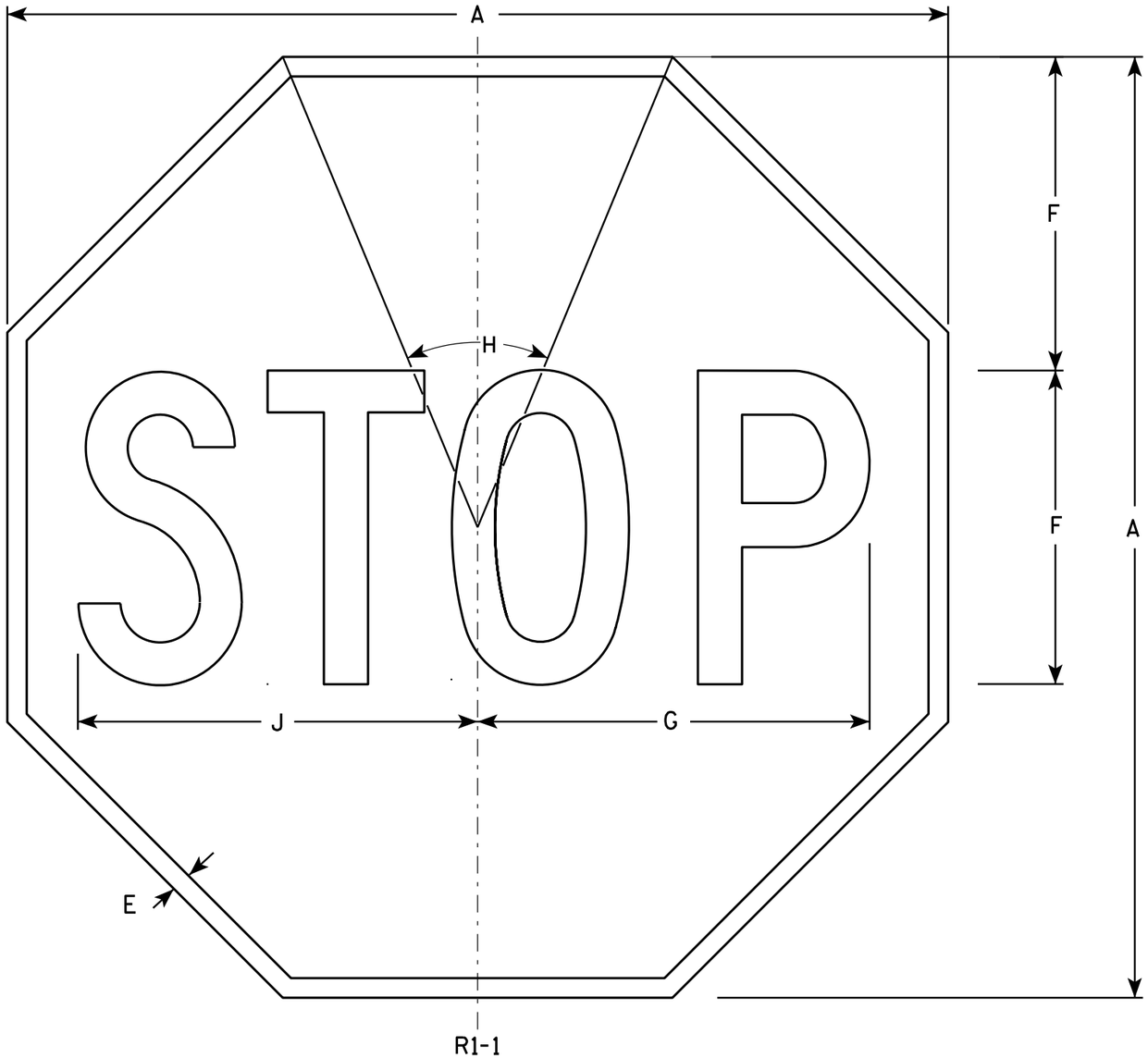
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 86 E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

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	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

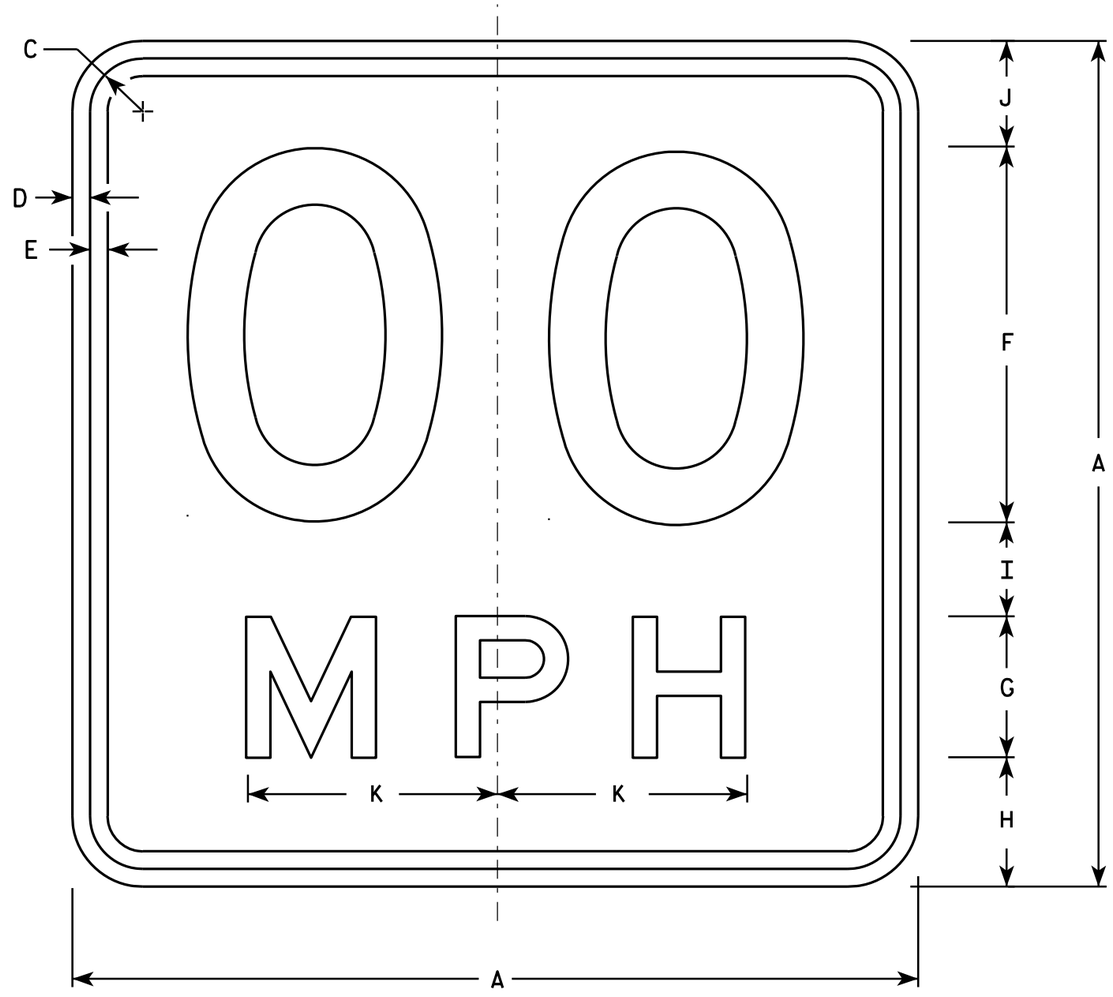
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 87	E



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	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	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

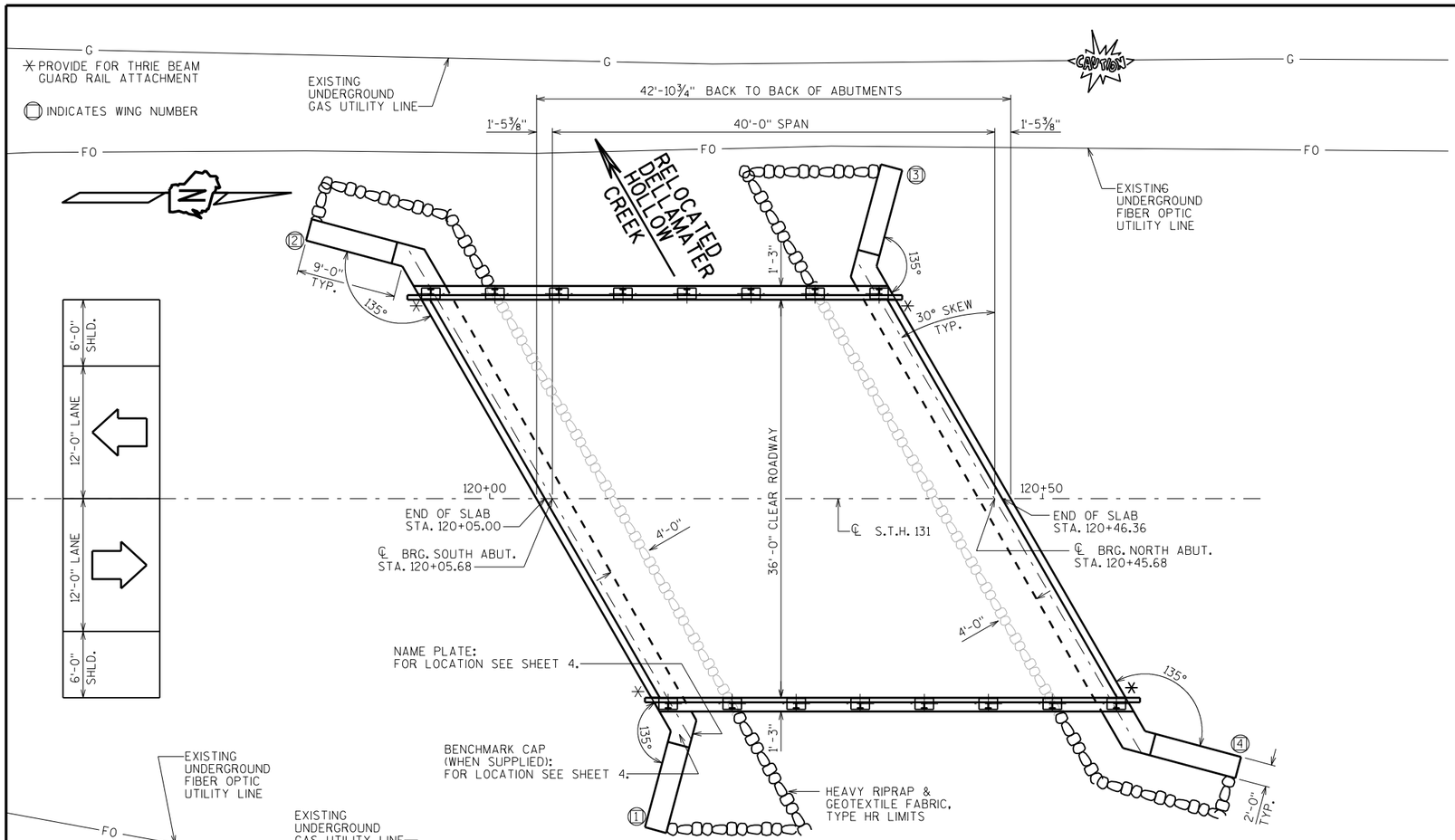
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 88 | E

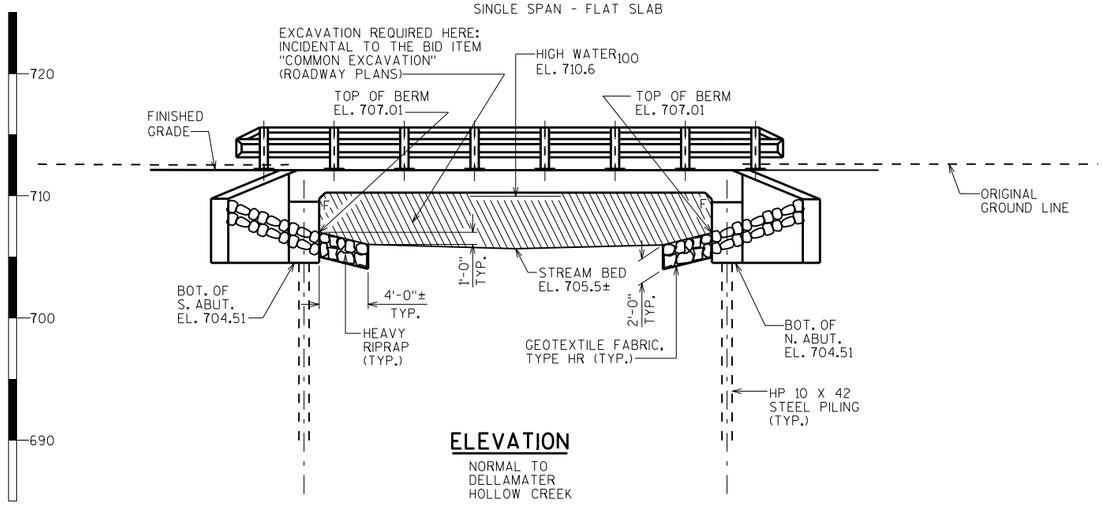
STATE PROJECT NUMBER

5783-03-71



PLAN

SINGLE SPAN - FLAT SLAB



ELEVATION

NORMAL TO DELLAMATER HOLLOW CREEK

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF=1.15
OPERATING RATING FACTOR: RF=1.49
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB — f'c = 4,000 P.S.I. ALL OTHER — f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 155 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 60'-0" LONG AT SOUTH ABUTMENT.
ESTIMATED 55'-0" LONG AT NORTH ABUTMENT.

** THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 800 C.F.S.
VEL. = 9.1 F.P.S.
HW. = EL. 710.6
WATERWAY AREA = 88 SQ. FT.
DRAINAGE AREA = 2.2 SQ. MI.
SCOUR CRITICAL CODE = 8
ROAD OVERTOPPING FREQUENCY = NA

2 YEAR FREQUENCY

Q_2 = 150 C.F.S.
$HW._2$ = EL. 707.3

TEMPORARY STRUCTURE

Q_5 = 250 C.F.S.
$HW._5$ = EL. 707.7
MIN. A_{BR} = 65 SQ. FT.

TRAFFIC VOLUME

S.T.H. 131

A.D.T. = 2400 (2030)
R.D.S. = 60 M.P.H.

LIST OF DRAWINGS

STRUCTURES DESIGN CONTACTS:
MAY LIU (608) 266-5163
DAVID KIEKBUSCH (608) 266-5084

NO.	DATE	REVISION	BY

Plans Prepared By WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher DUR 11/4/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-12-79

S.T.H. 131 OVER DELLAMATER HOLLOW CREEK

COUNTY	VILLAGE
CRAWFORD	GAYS MILLS

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MWL	VT	JPH	DK/MC

GENERAL PLAN

SHEET 1 OF 10

89

I.D. 5783-03-00

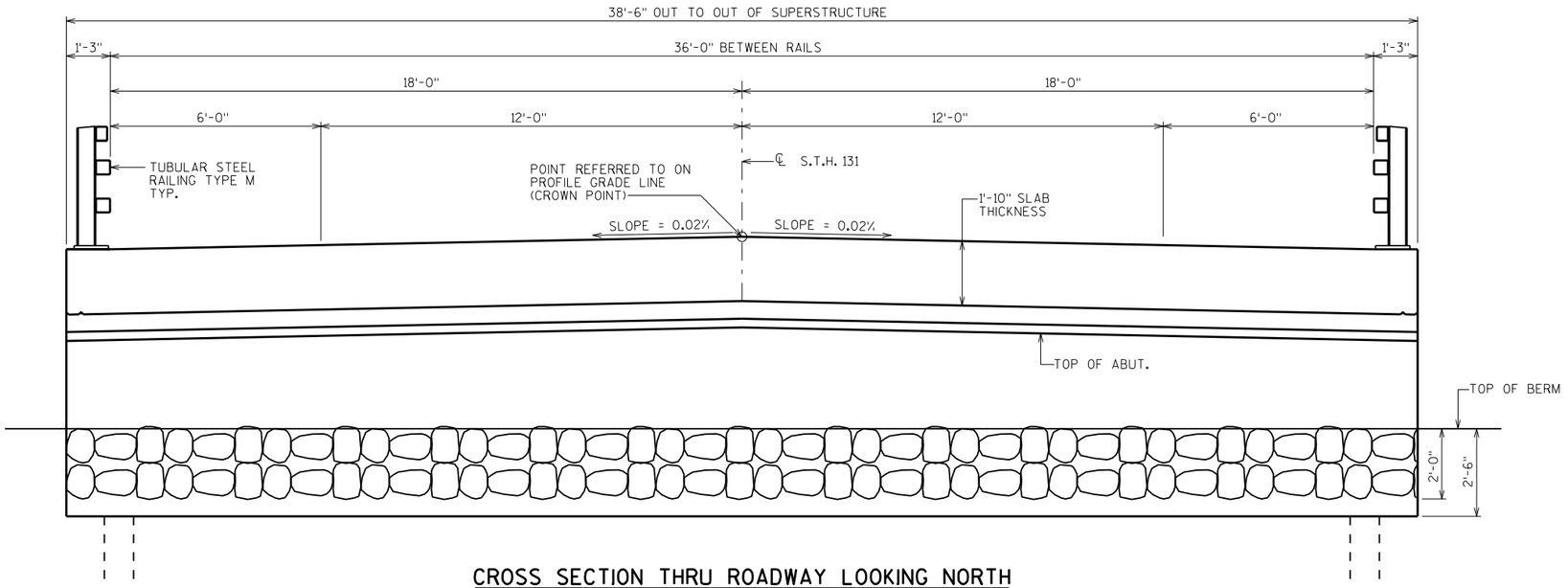
DATE: NOV. 2013

SCALE = 6

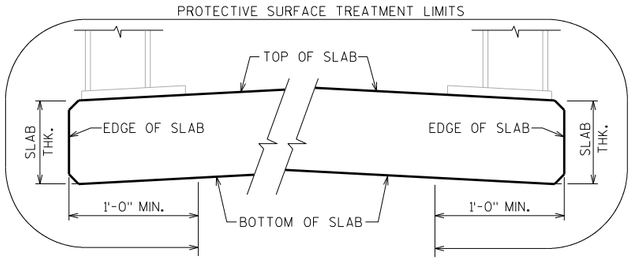
8

8

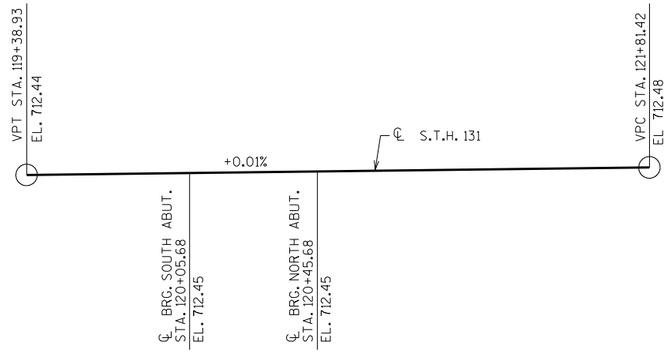
STATE PROJECT NUMBER
5783-03-71



CROSS SECTION THRU ROADWAY LOOKING NORTH



PROTECTIVE SURFACE TREATMENT LIMITS



PROFILE GRADE LINE FOR S.T.H. 131

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 118+75	LS	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-12-79	LS	———	———	———	1
210.0100	BACKFILL STRUCTURE	CY	———	140	140	280
502.0100	CONCRETE MASONRY BRIDGES	CY	117	34	34	185
502.3200	PROTECTIVE SURFACE TREATMENT	SY	200	———	———	200
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	———	3,045	3,045	6,090
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	24,710	1,430	1,430	27,570
513.4060	RAILING TUBULAR TYPE M B-12-79	LS	———	———	———	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	———	12	12	24
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	———	540	495	1,035
606.0300	RIPRAP HEAVY	CY	———	25	25	50
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	———	90	90	180
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	———	55	55	110
NON-BID ITEMS						
	FILLER	SIZE	———	———	———	½" & ¾"

GENERAL NOTES

REMOVE EXISTING BRIDGE (B-12-618), LOCATED 150 FEET SOUTH OF B-12-79. B-12-618, BUILT IN 1939, A SINGLE SPAN BRIDGE WITH CONCRETE DECK/ASPHALTIC OVERLAY ON STEEL GIRDERS WITH METAL RAILING. SUPERSTRUCTURE SUPPORTED BY TIMBER ABUTMENTS.

DRAWINGS SHALL NOT BE SCALED.

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

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

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE GRADATION OF THE STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE FABRIC TYPE 'HR' TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

DRAWN BY JPH | PLANS CK'D. DK/MC

CROSS SECTION & QUANTITIES

SHEET 2

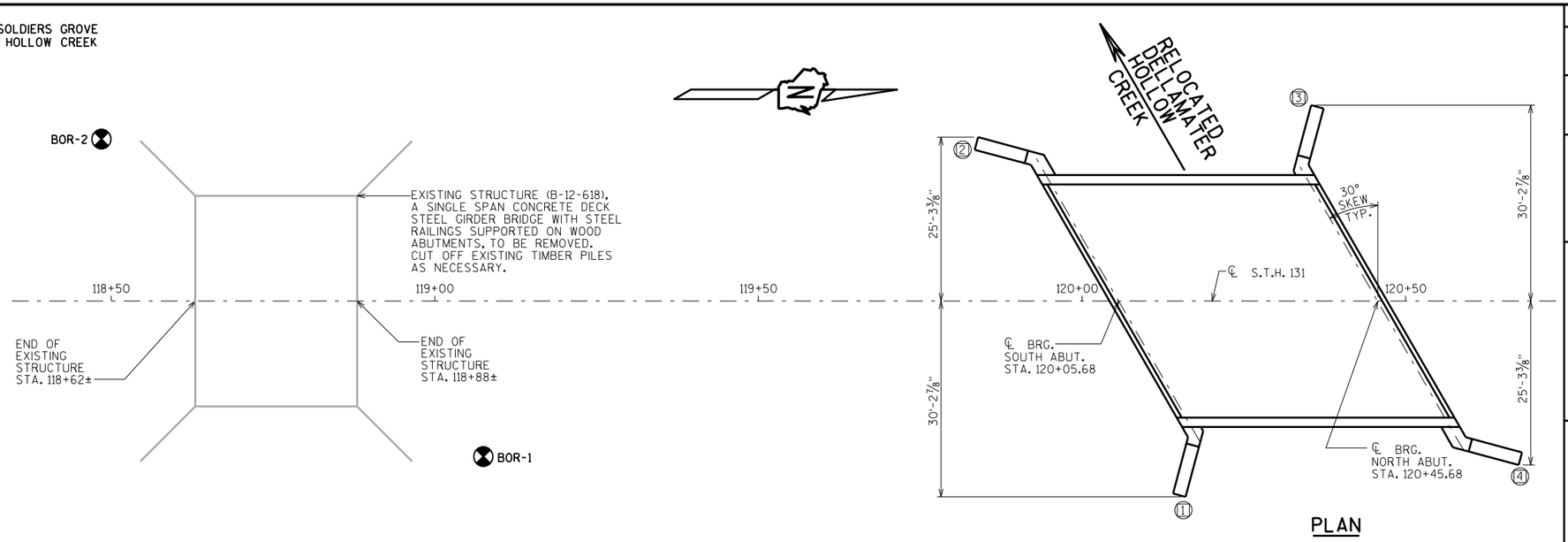
90

SCALE = 2

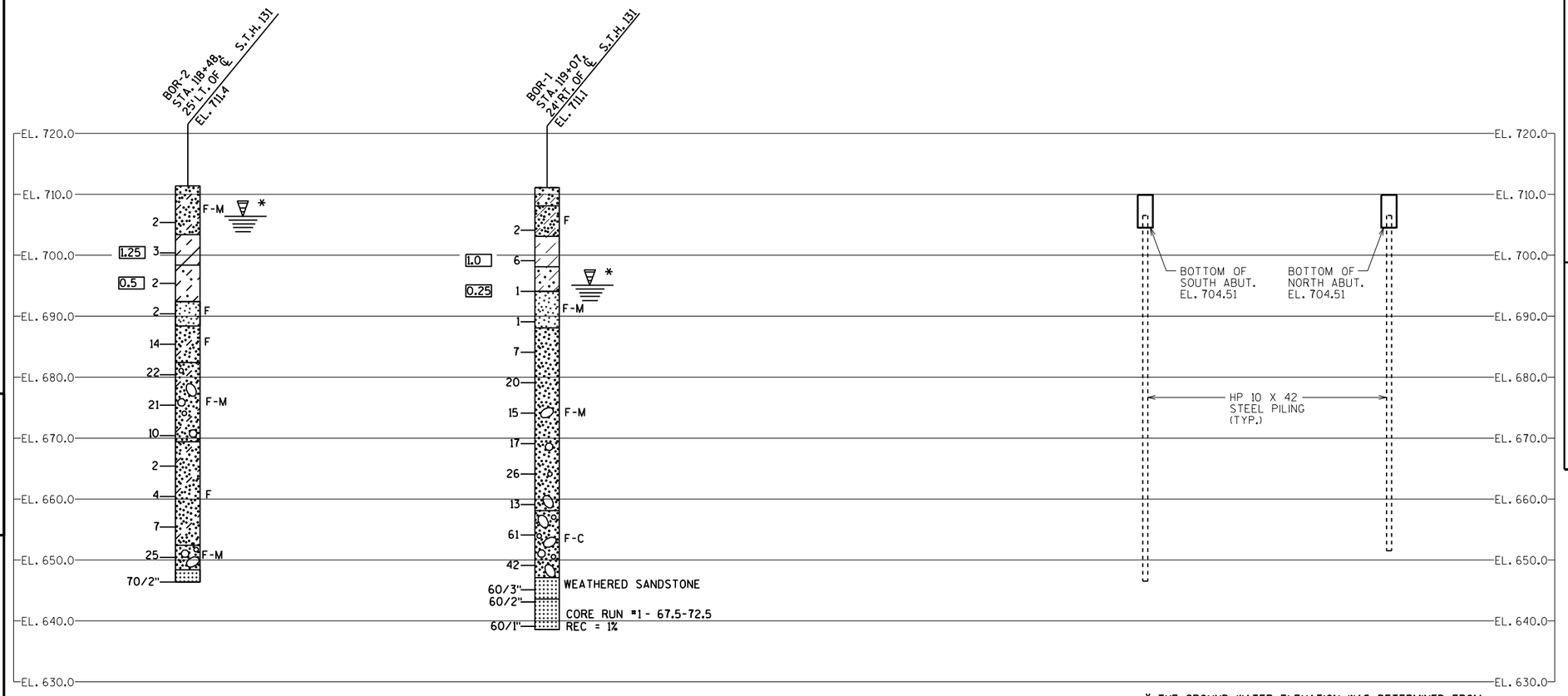
8

8

WAUZEKA - SOLDIERS GROVE
DELLAMATER HOLLOW CREEK



PLAN



* THE GROUND WATER ELEVATION WAS DETERMINED FROM WHERE THE SOIL SAMPLE WAS DESCRIBED AS WET.

STATE PROJECT NUMBER

5783-03-71

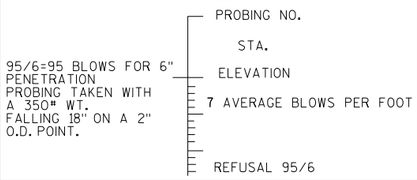
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

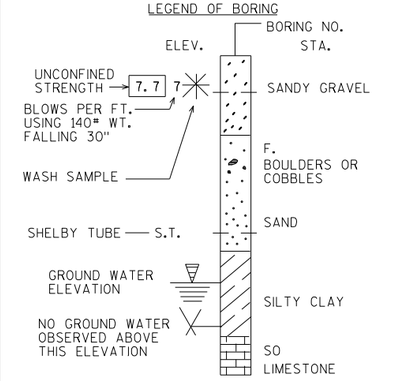
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

DRAWN BY JPH | PLANS CK'D. DJK

SUBSURFACE EXPLORATION

SHEET 3

91

SCALE = 10

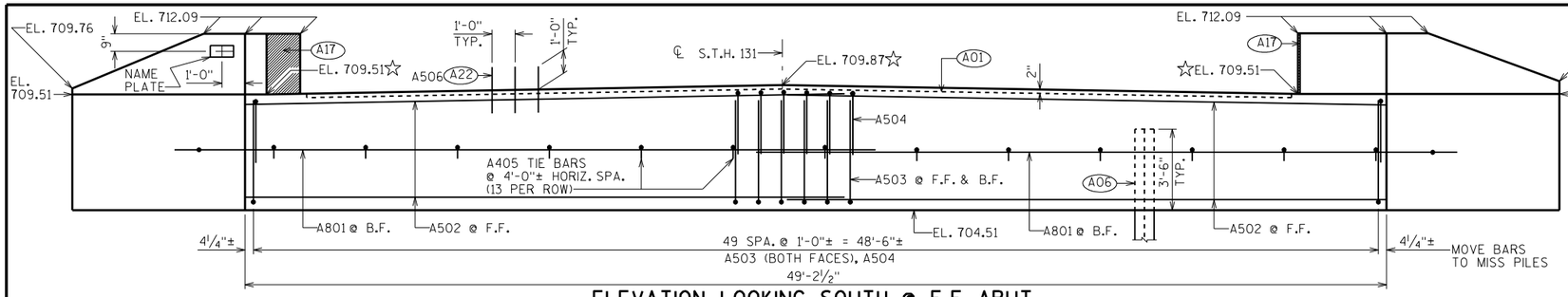
8

8

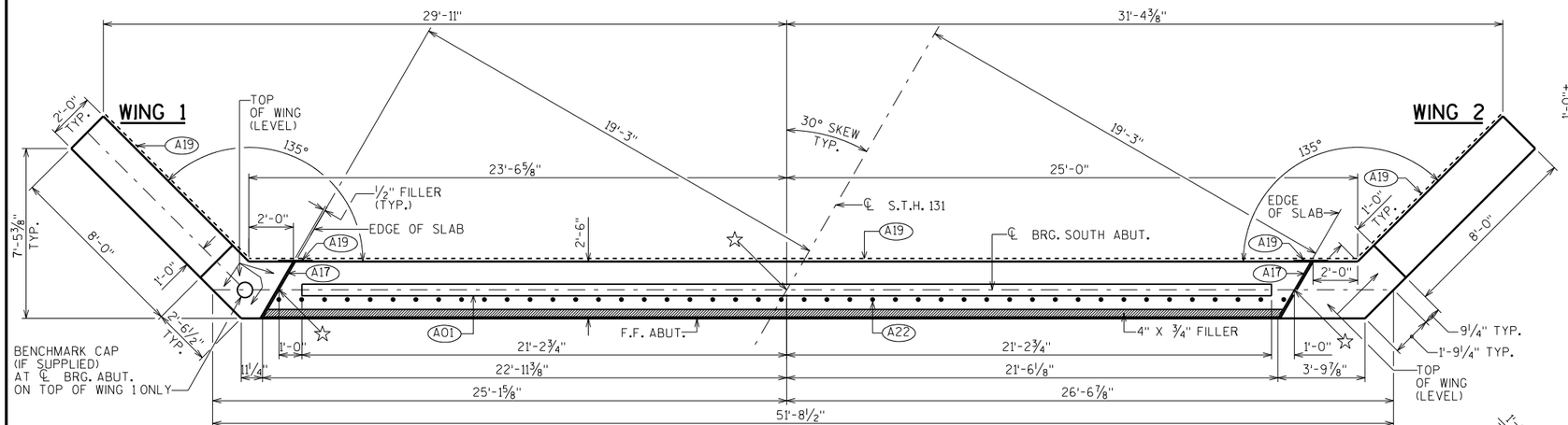
STATE PROJECT NUMBER

5783-03-71

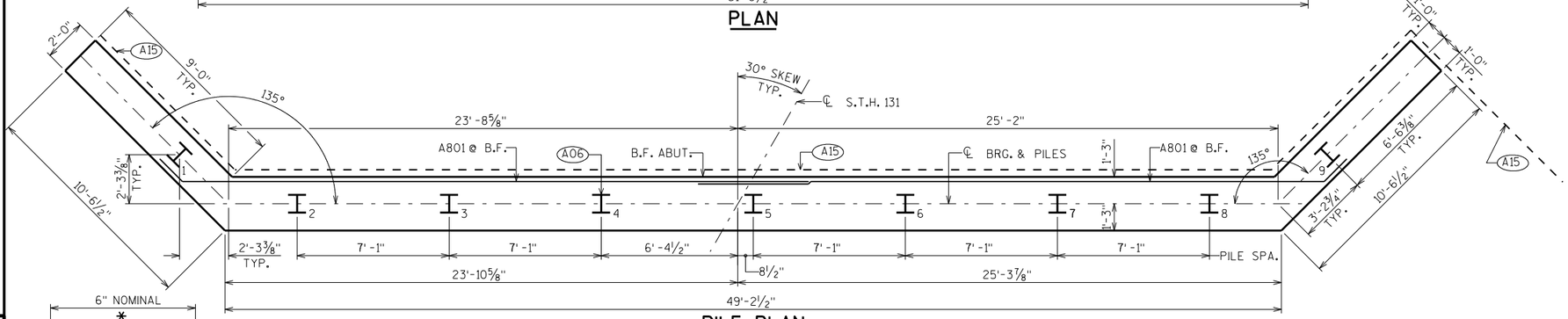
☆ELEVATIONS ARE GIVEN HERE AT THE TOP OF ABUT. ALONG THE ℄ BRG ABUT.



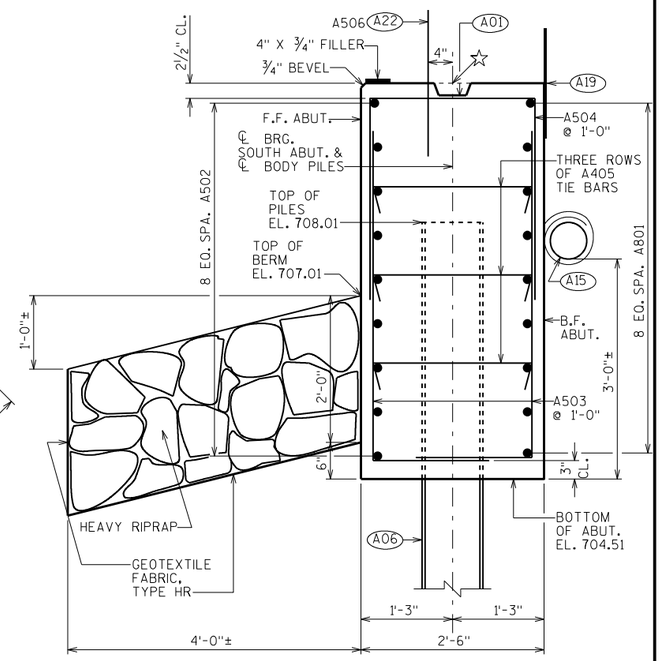
ELEVATION LOOKING SOUTH @ F.F. ABUT.



PLAN

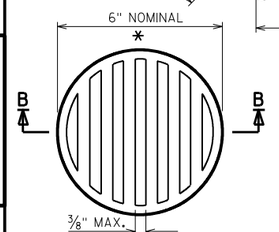


PILE PLAN

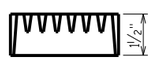


SECTION THRU ABUT. BODY

NOTE:
DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.



RODENT SCREEN DETAIL

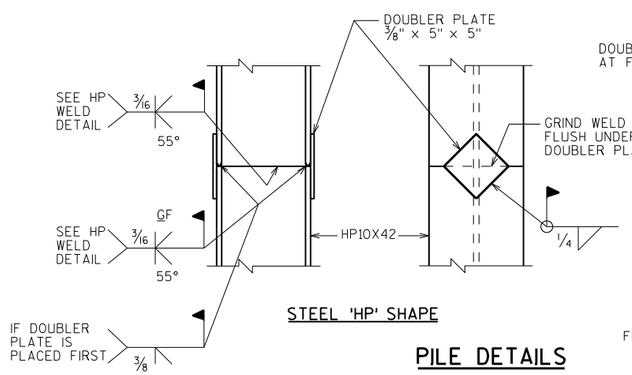


SECTION B-B

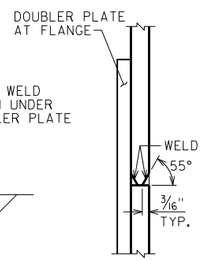
✳DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.



STEEL 'HP' SHAPE



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

(A01) CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" x 6".

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 60 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 155 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) A506 BARS @ 1'-0" CTRS. BETWEEN 'EDGES OF SLAB' MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

DRAWN BY JPH | PLANS CK'D. MSC

SOUTH ABUTMENT

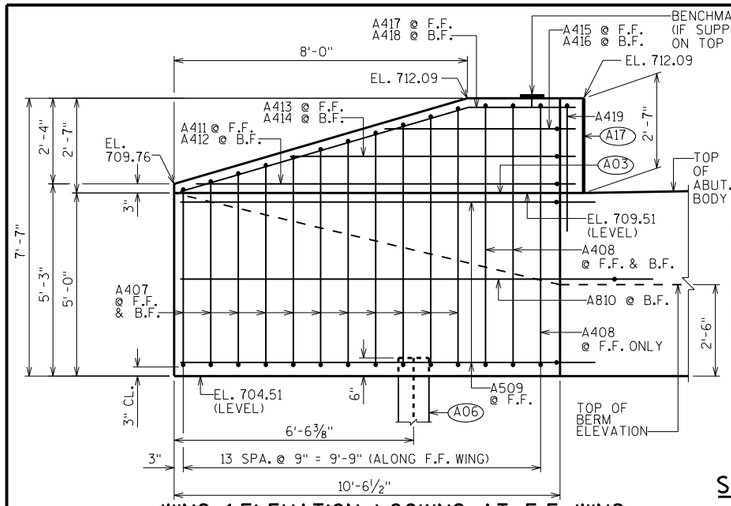
SHEET 4

92

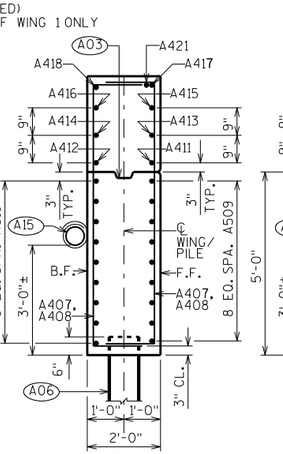
SCALE = 3

8

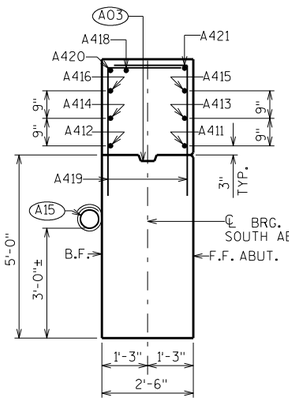
8



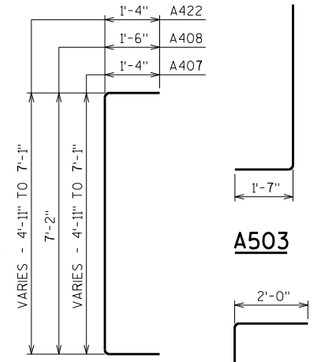
WING 1 ELEVATION LOOKING AT F.F. WING



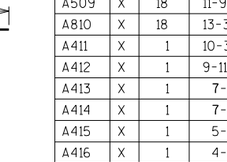
SECTION THRU WING (A-A)

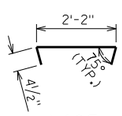


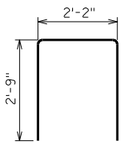
SECTION THRU
WING/BODY (B-B)

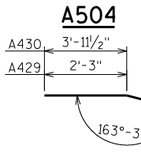


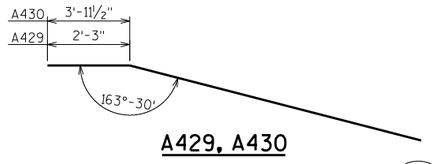
A407, A408, A422



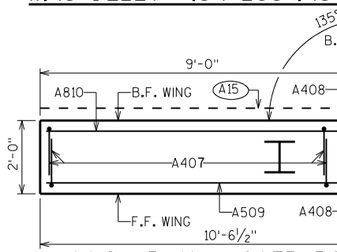




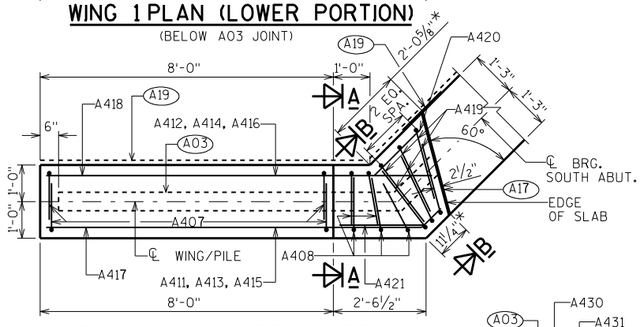




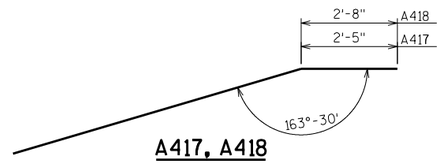
A429, A430



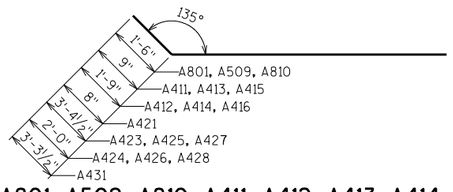
WING 1 PLAN (LOWER PORTION)
(BELOW A03 JOINT)



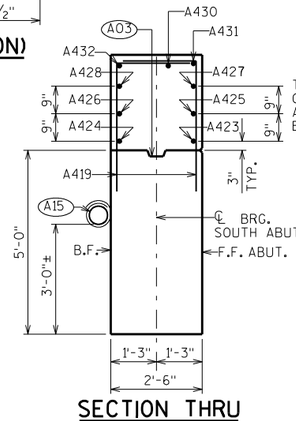
WING 1 PLAN (UPPER PORTION)
(ABOVE A03 JOINT)



A417, A418

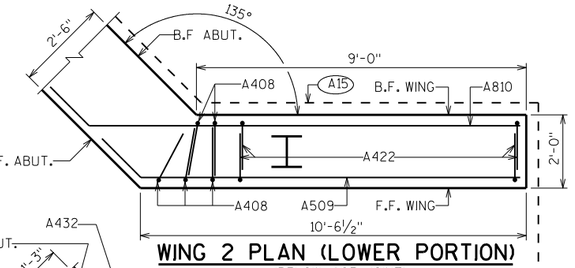


A801, A509, A810, A411, A412, A413 A414, A415. A416
A421, A423, A424, A425, A426, A427, A428, A431

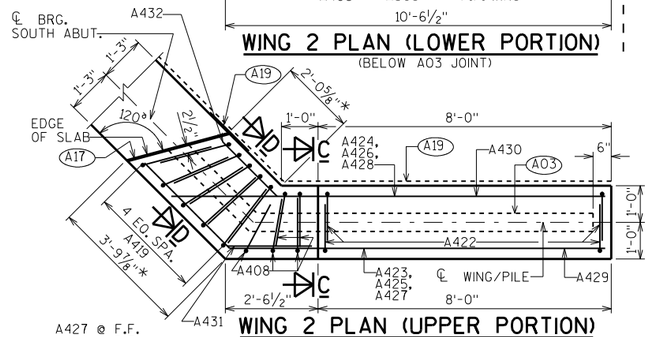


SECTION THRU
WING/BODY (D-D)

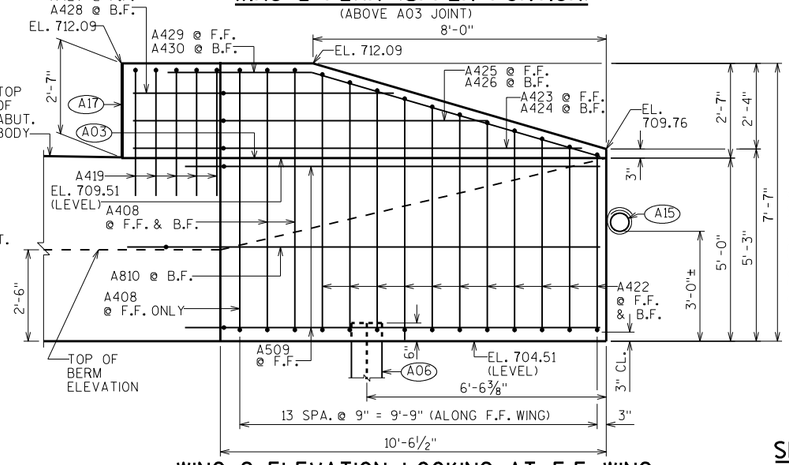
*INCLUDES FILLER
IN THE DIMENSION



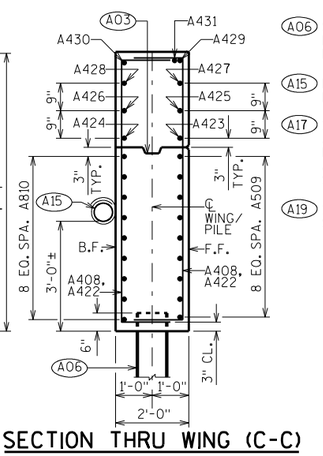
WING 2 PLAN (LOWER PORTION)
(BELOW A03 JOINT)



WING 2 PLAN (UPPER PORTION)
(ABOVE A03 JOINT)



WING 2 ELEVATION LOOKING AT F.F. WING



SECTION THRU WING (C-C)

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

STATE PROJECT NUMBER

5783-03-71

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		18	30-8	X		BODY-HORIZ.-B.F.
A502		18	25-10			BODY-HORIZ.-F.F.
A503		100	6-0	X		BODY-VERT.-F.F. & B.F.
A504		50	7-5	X		BODY-TOP-VERT.
A405		39	2-9	X		BODY-VERT.-TIE BARS
A506	X	45	2-0			BODY-TOP-VERT.-DOWEL BARS
⚠ A407	X	22	8-6	X	X	WING 1-VERT.-F.F. & B.F.-UNDER SLOPED PORTION
A408	X	10	10-0	X		WINGS 1&2-VERT.-F.F. & B.F.-UNDER FLAT PORTION
A509	X	18	11-9	X		WINGS 1&2-HORIZ.-F.F.-LOWER PORTION
A810	X	18	13-3	X		WINGS 1&2-HORIZ.-B.F.-LOWER PORTION
A411	X	1	10-3	X		WING 1-HORIZ.-F.F.-UPPER PORTION
A412	X	1	9-11	X		WING 1-HORIZ.-B.F.-UPPER PORTION
A413	X	1	7-9	X		WING 1-HORIZ.-F.F.-UPPER PORTION
A414	X	1	7-4	X		WING 1-HORIZ.-B.F.-UPPER PORTION
A415	X	1	5-2	X		WING 1-HORIZ.-F.F.-UPPER PORTION
A416	X	1	4-9	X		WING 1-HORIZ.-B.F.-UPPER PORTION
A417	X	1	10-7	X		WING 1-TOP-VERT.-F.F.-UPPER PORTION
A418	X	1	10-10	X		WING 1-TOP-VERT.-B.F.-UPPER PORTION
A419	X	16	5-5	X		WINGS 1&2-TOP-VERT.-F.F.&B.F.-UPPER PORTION
A420	X	1	1-9			WING 1-TOP-HORIZ.-B.F.-UPPER PORTION
A421	X	1	3-0	X		WING 1-TOP-HORIZ.-F.F.-UPPER PORTION
⚠ A422	X	22	8-6	X	X	WING 2-VERT.-F.F. & B.F.-UNDER SLOPED PORTION
A423	X	1	12-11	X		WING 2-HORIZ.-F.F.-UPPER PORTION
A424	X	1	10-2	X		WING 2-HORIZ.-B.F.-UPPER PORTION
A425	X	1	10-4	X		WING 2-HORIZ.-F.F.-UPPER PORTION
A426	X	1	7-7	X		WING 2-HORIZ.-B.F.-UPPER PORTION
A427	X	1	7-9	X		WING 2-HORIZ.-F.F.-UPPER PORTION
A428	X	1	5-0	X		WING 2-HORIZ.-B.F.-UPPER PORTION
A429	X	1	10-5	X		WING 2-TOP-VERT.-F.F.-UPPER PORTION
A430	X	1	12-2	X		WING 2-TOP-VERT.-B.F.-UPPER PORTION
A431	X	1	5-7	X		WING 2-TOP-HORIZ.-F.F.-UPPER PORTION
A432	X	1	2-0			WING 2-TOP-HORIZ.-B.F.-UPPER PORTION

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

BAR SERIES TABLE

MARK	NO. REQD.	TOTAL BAR LENGTH
A407	2 SERIES OF 11 BARS	7'-5" TO 9'-7"
A422	2 SERIES OF 11 BARS	7'-5" TO 9'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" x 6". (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 60 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 155 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

DRAWN BY JPH | PLANS CK'D. MSC

SOUTH ABUTMENT DETAILS

SHEET 5

93

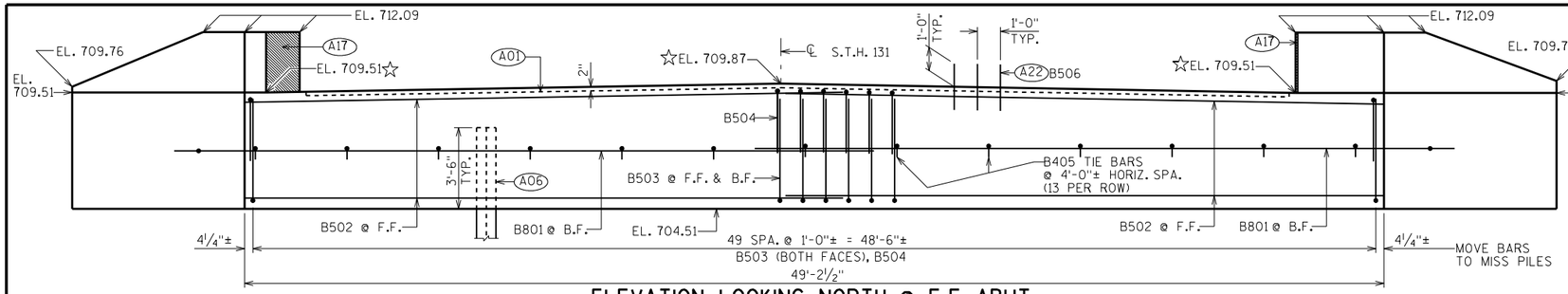
SCALE = 2

8

8

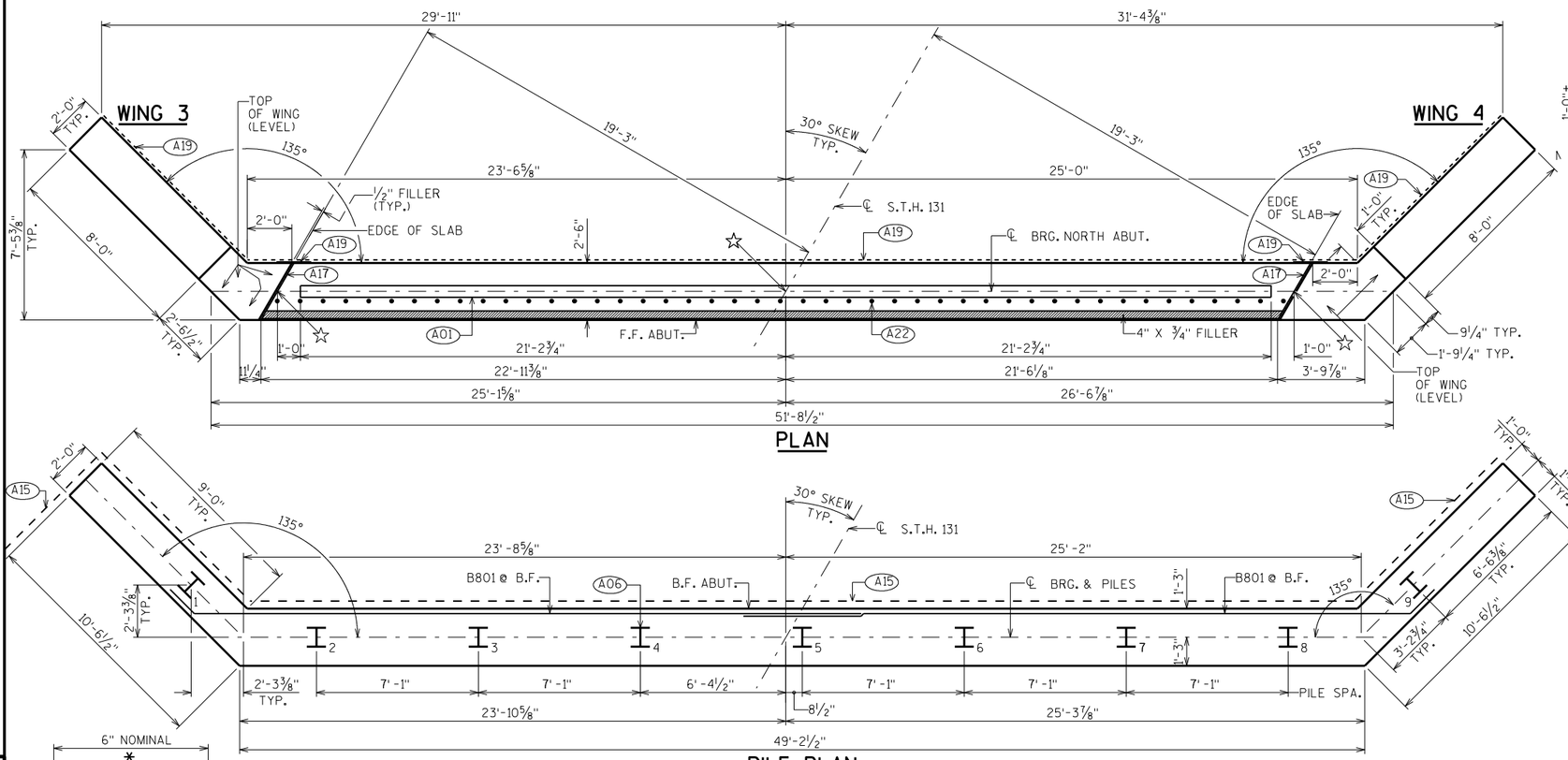
STATE PROJECT NUMBER

5783-03-71

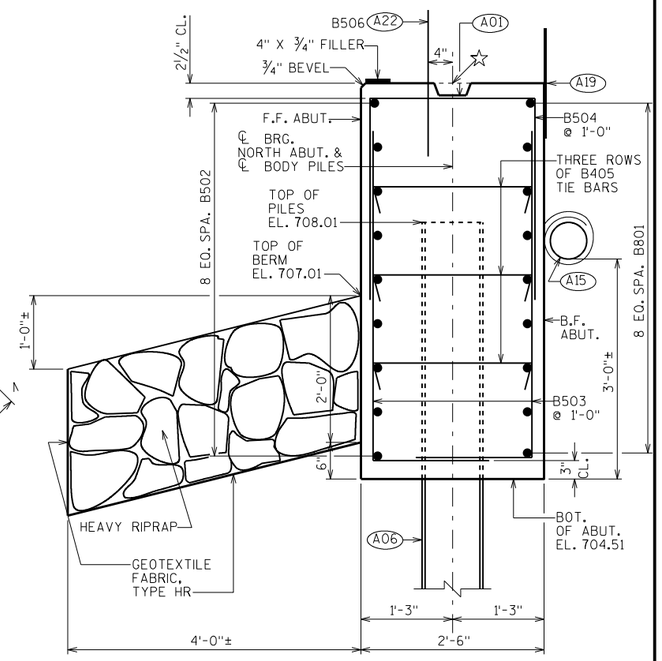


ELEVATION LOOKING NORTH @ F.F. ABUT.

☆ELEVATIONS ARE GIVEN HERE AT THE TOP OF ABUT. ALONG THE ℄ BRG ABUT.



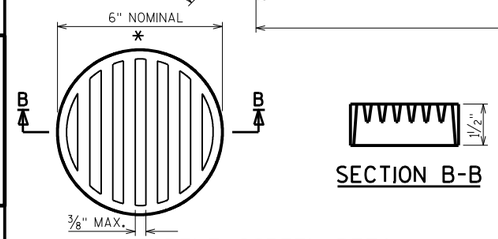
PLAN



SECTION THRU ABUT. BODY

NOTE:
DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

PILE PLAN



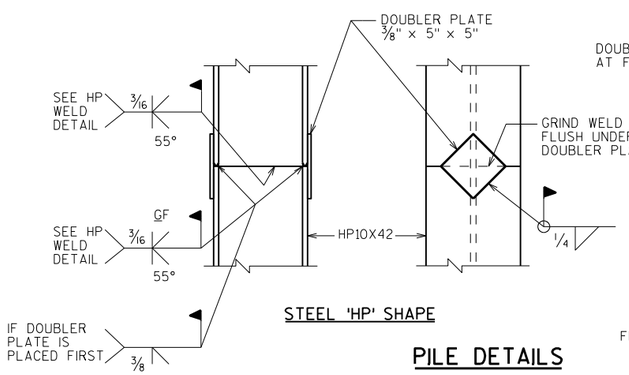
RODENT SCREEN DETAIL

SECTION B-B

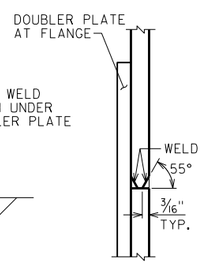
✱DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SCREEN, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SCREEN TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH SHEET METAL SCREWS.



STEEL 'HP' SHAPE



HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS

A01 CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2" x 6".

A06 SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 55 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 155 TONS PER PILE.

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

A22 B506 BARS @ 1'-0" CTRS. BETWEEN 'EDGES OF SLAB' MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

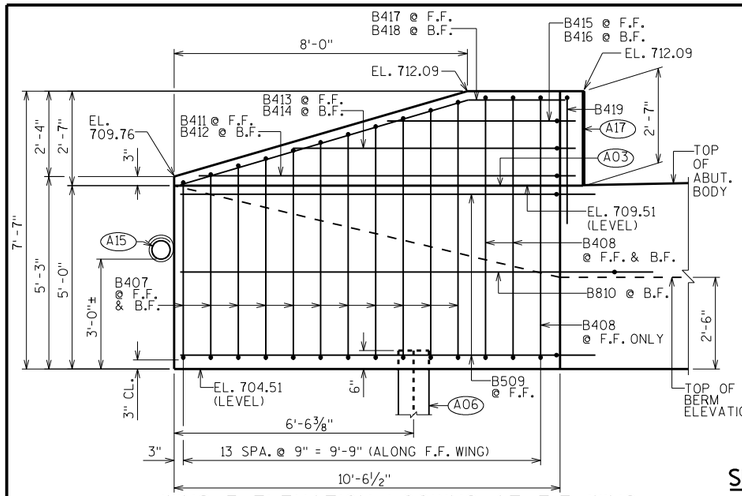
DRAWN BY JPH | PLANS CK'D. MSC

NORTH ABUTMENT | SHEET 6 | 94

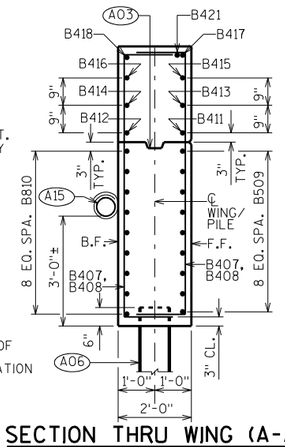
SCALE = 3

8

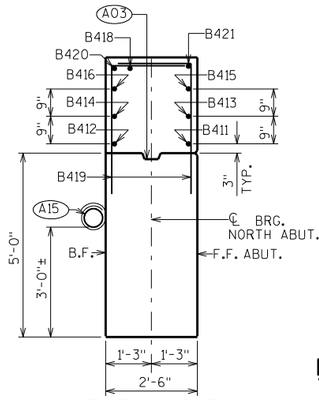
8



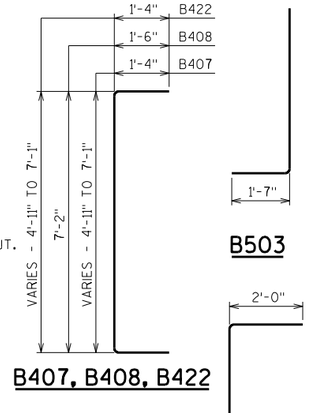
WING 3 ELEVATION LOOKING AT F.F. WING



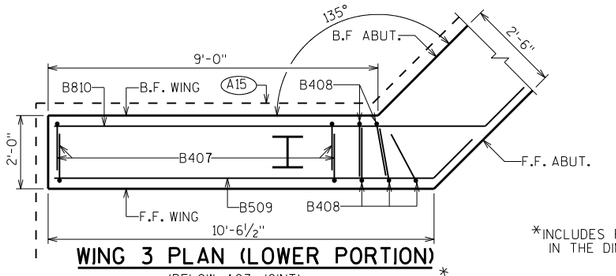
SECTION THRU WING (A-A)



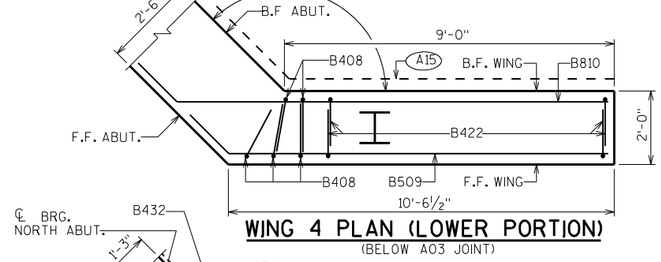
SECTION THRU WING/BODY (B-B)



B407, B408, B422

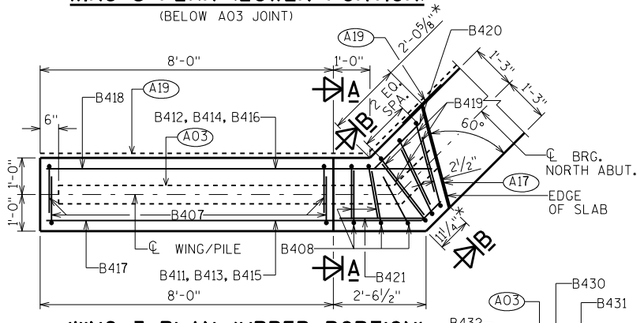


WING 3 PLAN (LOWER PORTION)
(BELOW A03 JOINT)

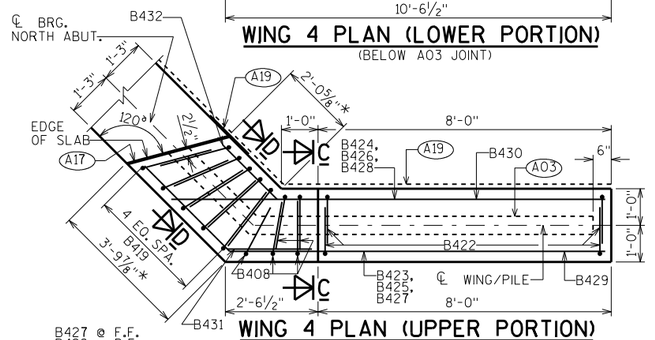


WING 4 PLAN (LOWER PORTION)
(BELOW A03 JOINT)

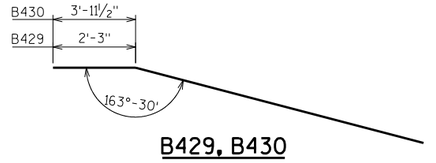
*INCLUDES FILLER IN THE DIMENSION



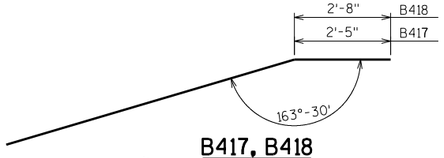
WING 3 PLAN (UPPER PORTION)
(ABOVE A03 JOINT)



WING 4 PLAN (UPPER PORTION)
(ABOVE A03 JOINT)

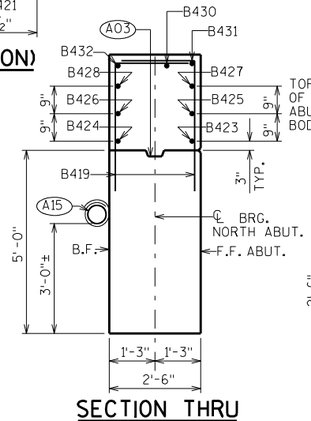


B429, B430

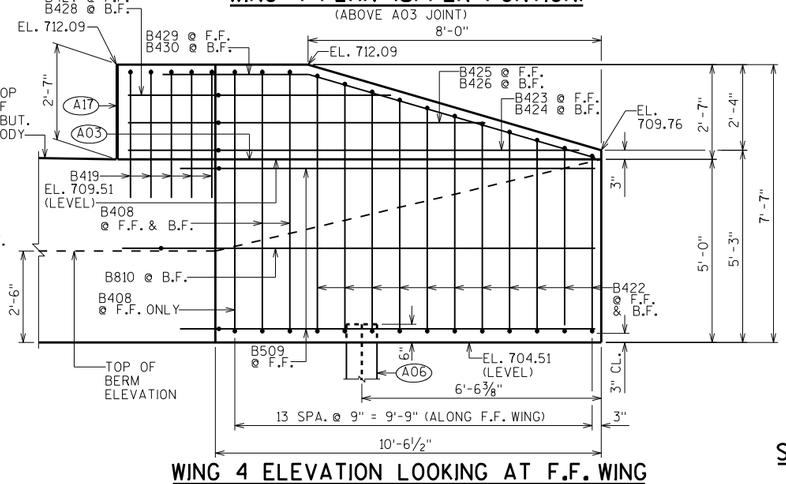


B417, B418

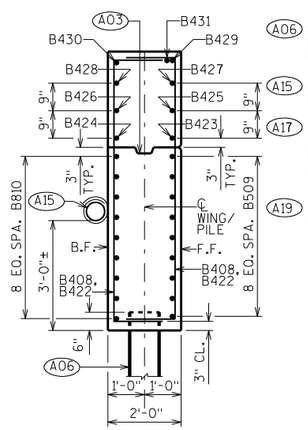
B801, B509, B810, B411, B412, B413 B414, B415. B416
B421, B423, B424, B425, B426, B427, B428, B431



SECTION THRU WING/BODY (D-D)



WING 4 ELEVATION LOOKING AT F.F. WING



SECTION THRU WING (C-C)

STATE PROJECT NUMBER

5783-03-71

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

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B801		18	30-8	X		BODY-HORIZ.-B.F.
B502		18	25-10			BODY-HORIZ.-F.F.
B503		100	6-0	X		BODY-VERT.-F.F. & B.F.
B504		50	7-5	X		BODY-TOP-VERT.
B405		39	2-9	X		BODY-VERT.-TIE BARS
B506	X	45	2-0			BODY-TOP-VERT.-DOWEL BARS
⚠ B407	X	22	8-6	X	X	WING 3-VERT.-F.F. & B.F.-UNDER SLOPED PORTION
B408	X	10	10-0	X		WINGS 3&4-VERT.-F.F. & B.F.-UNDER FLAT PORTION
B509	X	18	11-9	X		WINGS 3&4-HORIZ.-F.F.-LOWER PORTION
B810	X	18	13-3	X		WINGS 3&4-HORIZ.-B.F.-LOWER PORTION
B411	X	1	10-3	X		WING 3-HORIZ.-F.F.-UPPER PORTION
B412	X	1	9-11	X		WING 3-HORIZ.-B.F.-UPPER PORTION
B413	X	1	7-9	X		WING 3-HORIZ.-F.F.-UPPER PORTION
B414	X	1	7-4	X		WING 3-HORIZ.-B.F.-UPPER PORTION
B415	X	1	5-2	X		WING 3-HORIZ.-F.F.-UPPER PORTION
B416	X	1	4-9	X		WING 3-HORIZ.-B.F.-UPPER PORTION
B417	X	1	10-7	X		WING 3-TOP-VERT.-F.F.-UPPER PORTION
B418	X	1	10-10	X		WING 3-TOP-VERT.-B.F.-UPPER PORTION
B419	X	16	5-5	X		WINGS 3&4-TOP-VERT.-F.F.&B.F.-UPPER PORTION
B420	X	1	1-9			WING 3-TOP-HORIZ.-B.F.-UPPER PORTION
B421	X	1	3-0	X		WING 3-TOP-HORIZ.-F.F.-UPPER PORTION
⚠ B422	X	22	8-6	X	X	WING 4-VERT.-F.F. & B.F.-UNDER SLOPED PORTION
B423	X	1	12-11	X		WING 4-HORIZ.-F.F.-UPPER PORTION
B424	X	1	10-2	X		WING 4-HORIZ.-B.F.-UPPER PORTION
B425	X	1	10-4	X		WING 4-HORIZ.-F.F.-UPPER PORTION
B426	X	1	7-7	X		WING 4-HORIZ.-B.F.-UPPER PORTION
B427	X	1	7-9	X		WING 4-HORIZ.-F.F.-UPPER PORTION
B428	X	1	5-0	X		WING 4-HORIZ.-B.F.-UPPER PORTION
B429	X	1	10-5	X		WING 4-TOP-VERT.-F.F.-UPPER PORTION
B430	X	1	12-2	X		WING 4-TOP-VERT.-B.F.-UPPER PORTION
B431	X	1	5-7	X		WING 4-TOP-HORIZ.-F.F.-UPPER PORTION
B432	X	1	2-0			WING 4-TOP-HORIZ.-B.F.-UPPER PORTION

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

BAR SERIES TABLE

MARK	NO. REQD.	TOTAL BAR LENGTH
B407	2 SERIES OF 11 BARS	7'-5" TO 9'-7"
B422	2 SERIES OF 11 BARS	7'-5" TO 9'-7"

BUNDLE AND TAG EACH SERIES SEPARATELY.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2" × 6". (18" R.M.W. @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 10 × 42 STEEL PILING, ESTIMATED 55 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 155 TONS PER PILE.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SCREEN REQUIRED.

(A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

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NORTH ABUTMENT DETAILS

SHEET 7

95

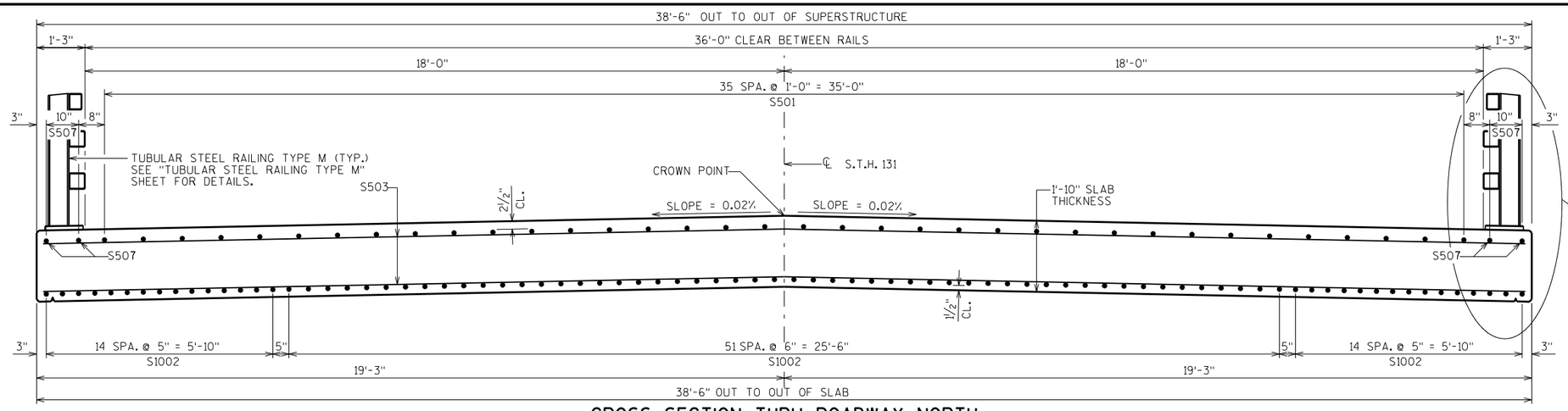
SCALE = 2

8

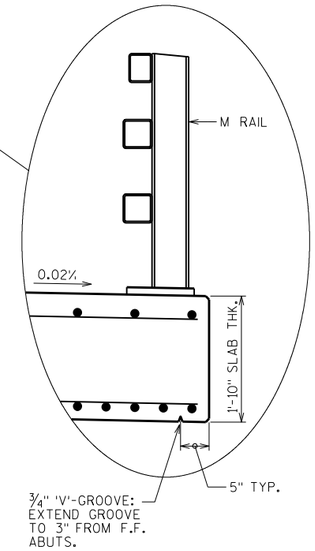
8

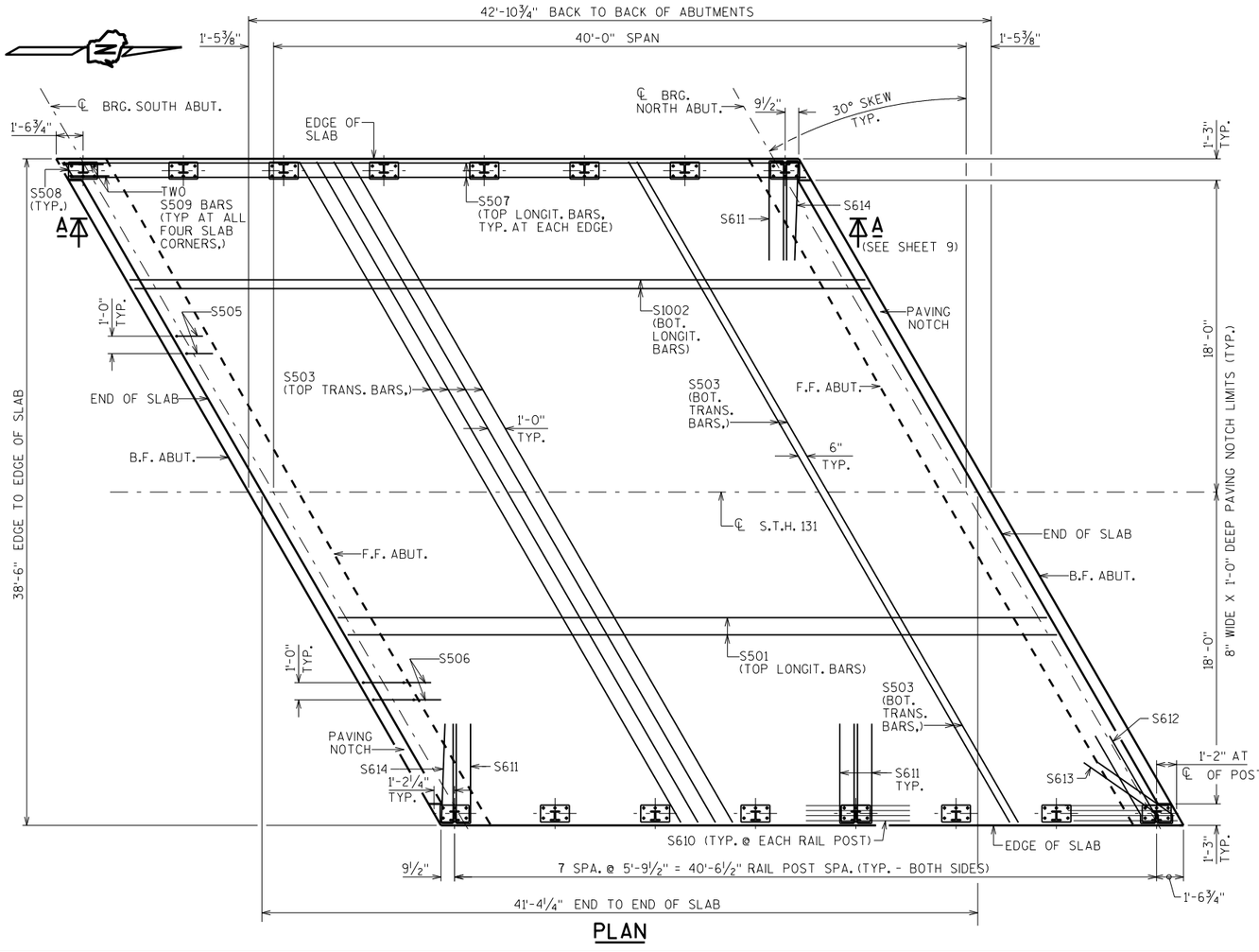
STATE PROJECT NUMBER

5783-03-71

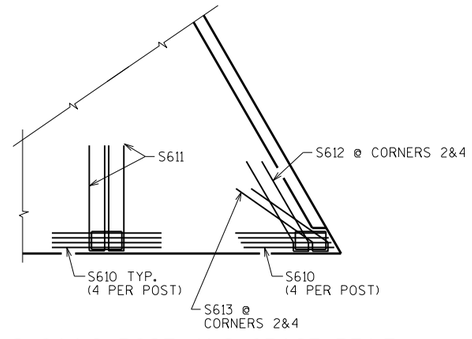


CROSS SECTION THRU ROADWAY NORTH





PLAN



SHOWING POST ANCHORAGE REINF.

(SEE SHEET 10 FOR LAYOUT DETAIL)

GENERAL NOTES

CAMBER SPAN AS SHOWN ON THE "SUPERSTRUCTURE DETAILS" SHEET TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

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SUPERSTRUCTURE

SHEET 8

96

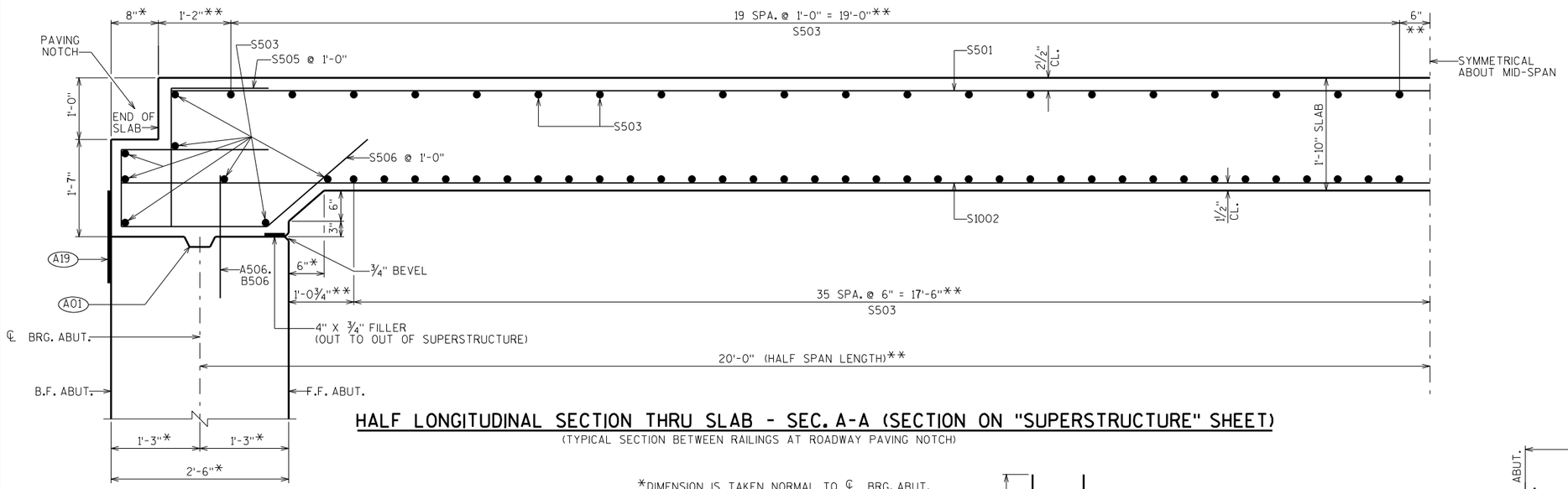
8

8

SCALE = 4

STATE PROJECT NUMBER

5783-03-71



HALF LONGITUDINAL SECTION THRU SLAB - SEC. A-A (SECTION ON "SUPERSTRUCTURE" SHEET)

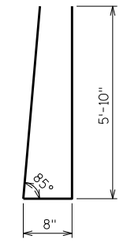
(TYPICAL SECTION BETWEEN RAILINGS AT ROADWAY PAVING NOTCH)

*DIMENSION IS TAKEN NORMAL TO ℄ BRG, ABUT.

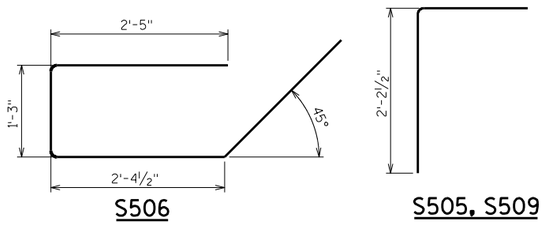
**DIMENSION IS TAKEN PARALLEL TO ℄ S.T.H. 131

A01 CONSTRUCTION JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

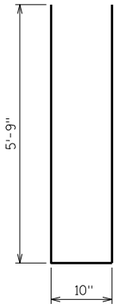


S614



S506

S505, S509



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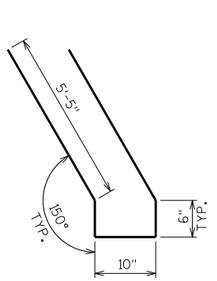

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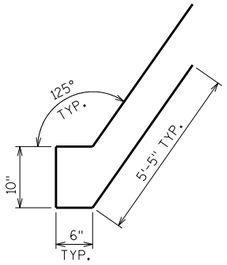

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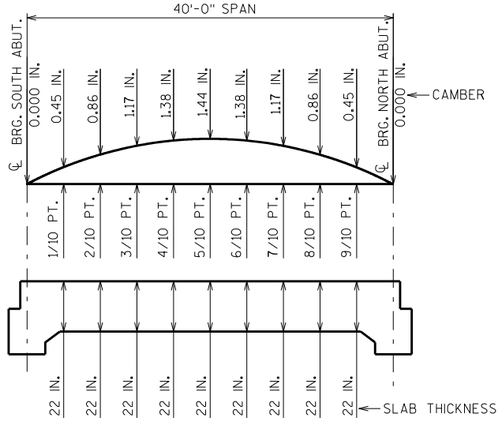
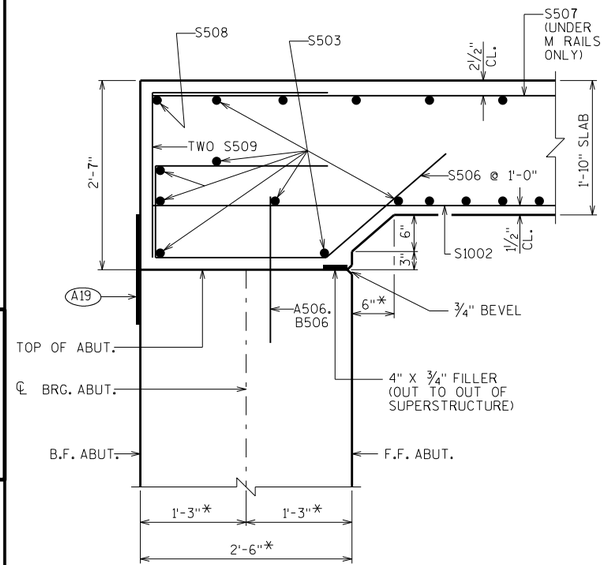


CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.



PART LONGITUDINAL SECTION THRU SLAB

(TYPICAL CORNER SECTION BETWEEN PAVING NOTCH & EDGE OF SLAB)

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	38	40-11			SLAB-TOP-HORIZ.-LONGIT.-BTWN. M-RAILS
S1002	X	82	42-6			SLAB-BOT.-HORIZ.-LONGIT.
S503	X	127	44-0			SLAB-TOP & BOT.-HORIZ.-TRANS.
S504	X	NOT	USED			
S505	X	74	3-8	X		SLAB/HAUNCH-VERT.-BTWN. M-RAILS
S506	X	78	7-11	X		SLAB/HAUNCH - BOT. - VERT.
S507	X	4	42-6			SLAB-TOP-HORIZ.-LONGIT.-UNDER M-RAILS
S508	X	4	1-1			SLAB-TOP-HORIZ.-TRANS.-AT ALL 4 CORNERS
S509	X	8	4-6	X		SLAB/HAUNCH-VERT.-AT ALL 4 CORNERS
S610	X	64	5-8			SLAB - HORIZ. (BELOW RAIL POSTS)
S611	X	26	12-0	X		SLAB - TRANSVERSE (BELOW RAIL POSTS)
S612	X	2	12-0	X		SLAB - TRANSVERSE (BELOW RAIL POSTS @ CORNERS 2&4)
S613	X	2	12-0	X		SLAB - TRANSVERSE (BELOW RAIL POSTS @ CORNERS 2&4)
S614	X	2	12-0	X		SLAB - TRANSVERSE (BELOW RAIL POSTS @ CORNERS 1&3)

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR CENTERLINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄.

TOP OF SLAB ELEVATIONS

SPAN	℄ BRG. S. ABUT.	MID-SPAN	℄ BRG. N. ABUT.
LEFT E.O.S.	712.09	712.09	712.09
℄ S.T.H. 131	712.45	712.45	712.45
RIGHT E.O.S.	712.09	712.09	712.09

E.O.S. = EDGE OF SLAB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

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SUPERSTRUCTURE DETAILS

SHEET 9

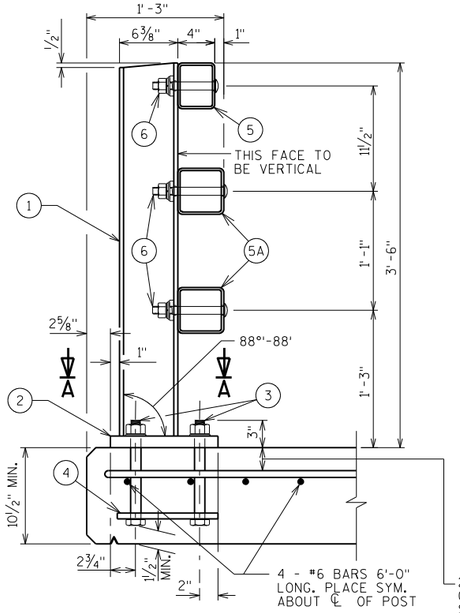
97

SCALE = 1

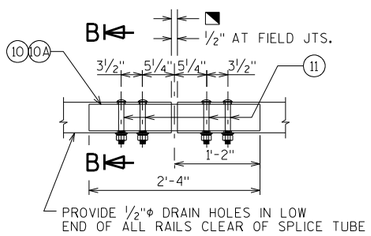
8

STATE PROJECT NUMBER

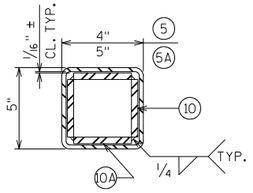
5783-03-71



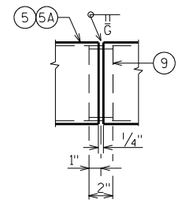
SECTION THRU RAILING ON SLAB



FIELD ERECTION JOINT DETAIL

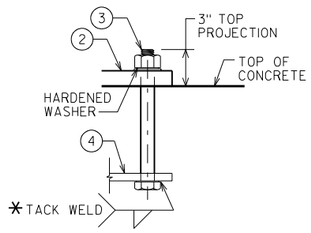


SECTION B-B

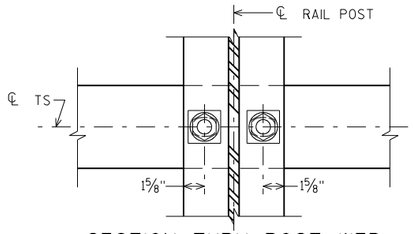


SHOP RAIL SPLICE DETAIL

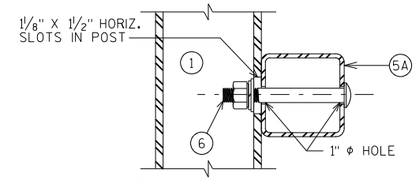
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



ANCHOR BOLTS



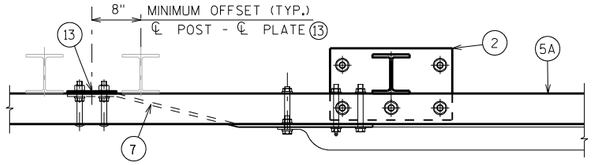
SECTION THRU POST WEB



SECTION THRU RAIL

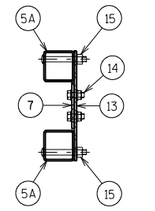
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION C-C

LEGEND

(1) W6 x 25 WITH 1 1/8" X 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1 1/4" x 11 3/4" x 1'-8" WITH 15/16" X 1 5/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

(3) ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10 3/4" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)

(4) 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

(8) 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

(9) SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".

(10) 3/8" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) 3/8" X 2 5/8" X 2'-4" PLATE USED IN NO. 5, 3/8" X 3 5/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

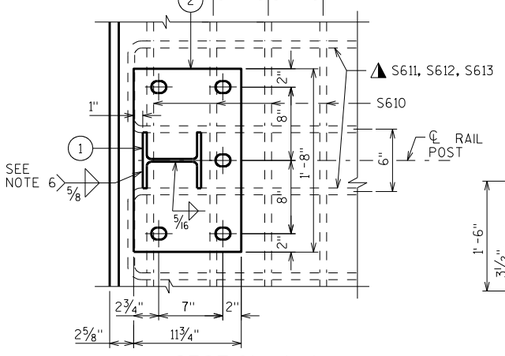
(11) 7/8" ϕ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

(12) 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

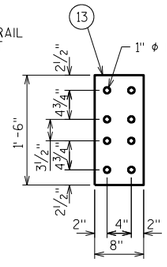
(13) 3/8" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

(14) 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

(15) 1" ϕ HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

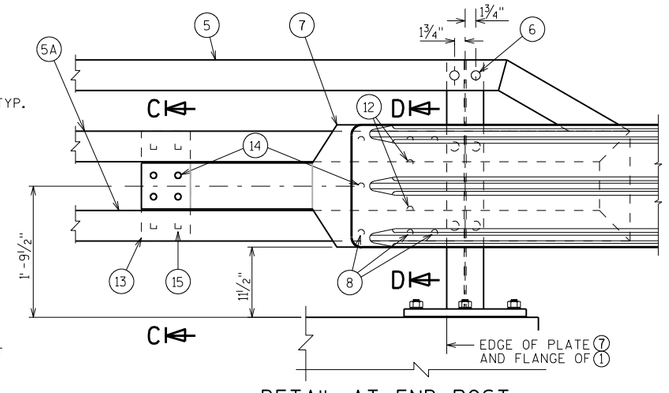


SECTION A-A



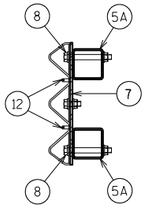
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION D-D

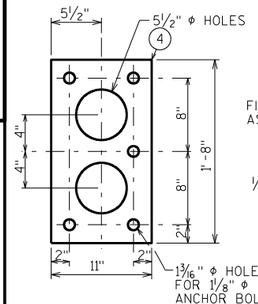
GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-12-79" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
12. PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.

▲ TIE TO TOP MAT OF STEEL.

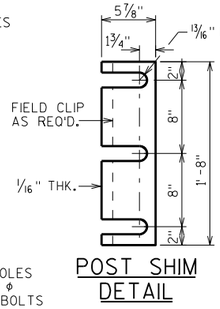
✳ FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

◥ RDWY. OPENING OR 2 1/2" MIN. FOR STRIP SEAL EXP. JOINT & 1/2" OPENING FOR A1 ABUTMENT.

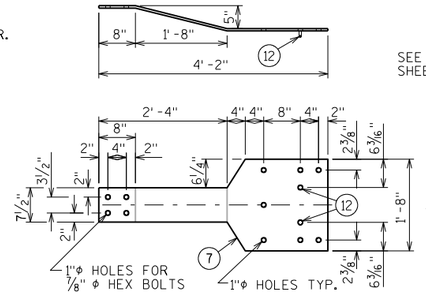


ANCHOR PLATE

AT RAIL TO SLAB CONNECTION

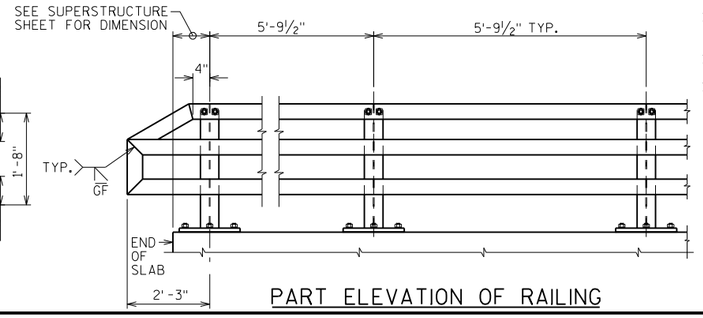


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-12-79

DRAWN BY JPH | PLANS CK'D. DJK

TUBULAR STEEL RAILING TYPE "M"

SHEET 10

98

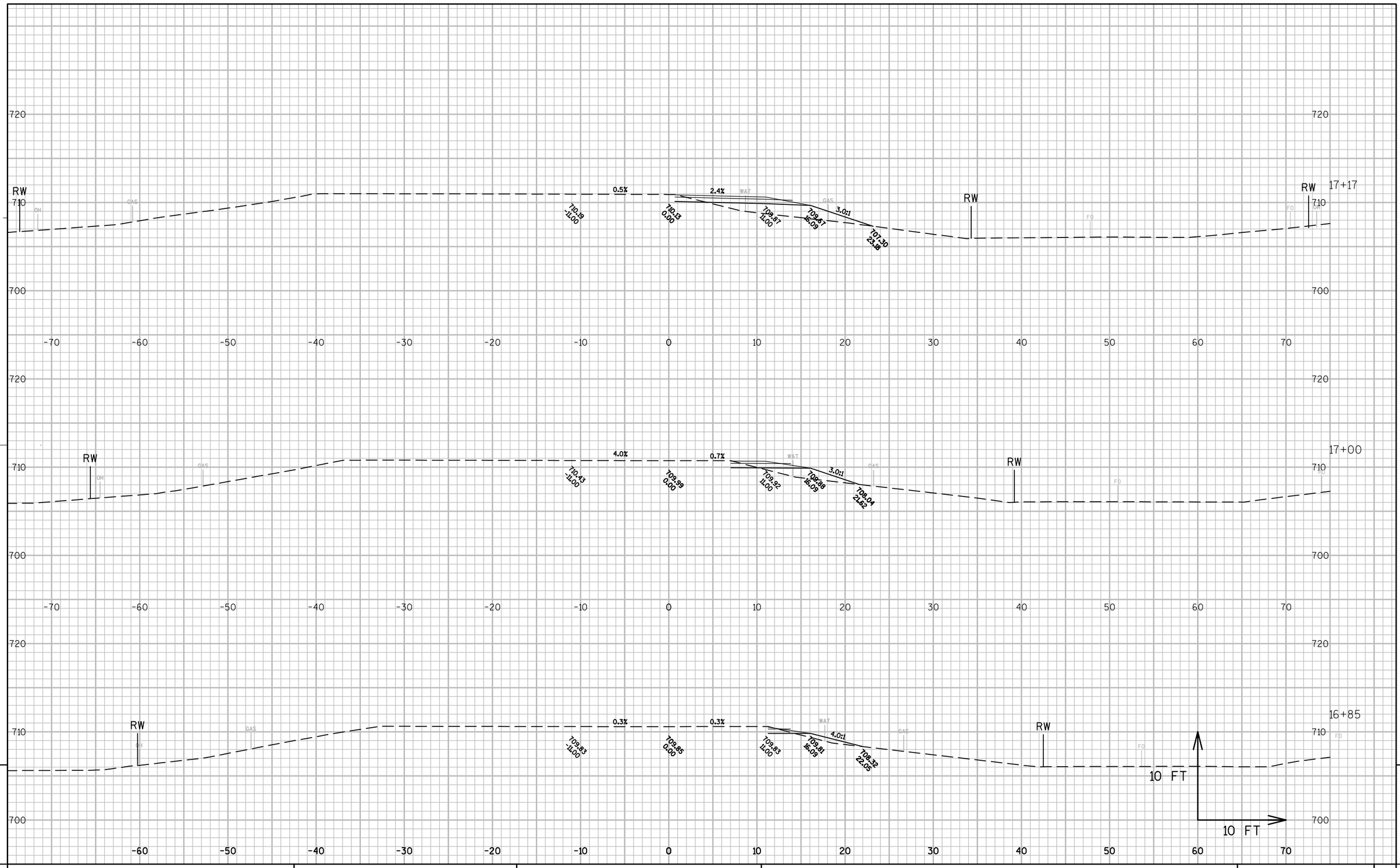
SCALE = 1

8

8

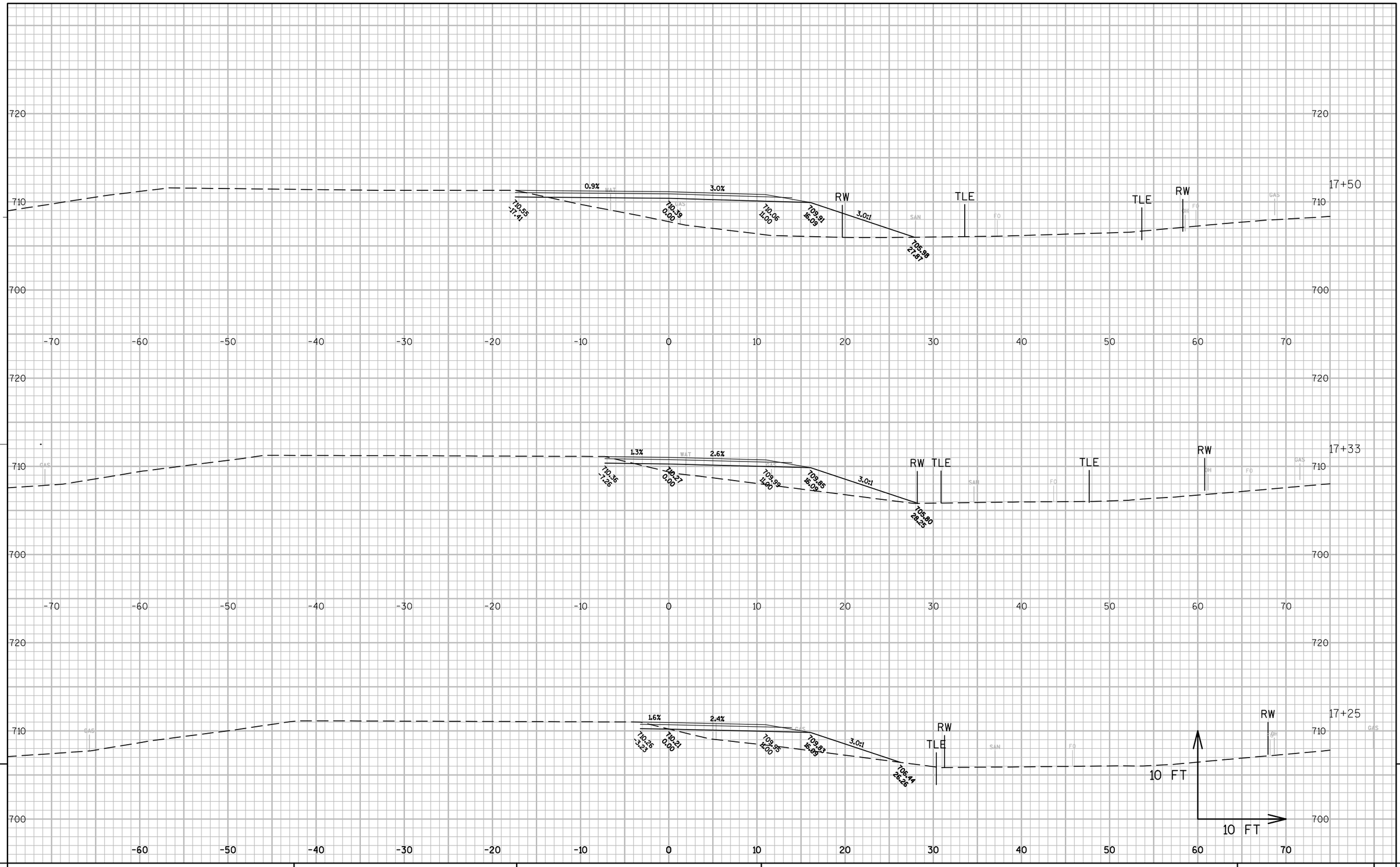
Division	From/To Station	Location	Common Excavation (1)	(item # 205.0100)	Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Borrow	Comment:
			Cut (2)	EBS Excavation (3)				Factor				
Division 1								1.25			(item #208.0100)	
EWKDetail-DelamaterCreek.xml	10+30 'DC' / 14+65'DC'		730	0	0	730	228	285	445	445	0	
EWKDetail-STH131-ByPass.xml	18+85'BP' / 26+37'BP'		50	0	0	50	1,586	1,983	-1,935	0	-1,935	
EWKDetail-STH131-ML.xml	115+00 /128+00		1,875	0	0	1,875	1,294	1,618	257	257	0	
EWKDetail-ByPass-Removal.xml	18+85'BP' / 26+37'BP'		2,320	0	0	2,320	78	97	2,223	2,223	0	
EWKDetail-Brockway.xml	9+05'B'/10+10'B'		725	0	0	725	69	87	638	638	0	
Division 1 Subtotal			5,700	0	0	5,700	3,255	4,069	1,629	3,564	-1,935	
Division 2 Subtotal	Kickapoo River Bridge - STH 171		95	0	0	0	0	0	0	95	0	
Grand Total			5,795	0	0	5,700	3,255	4,069	1,629	3,659	-1,935	
		Total Common Exc		5,795								

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Marsh Excavation - to be backfilled with Select Borrow Material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well. Item number 20505
7) Rock Excavation item number 205.0200
8) Reduced Marsh in Fill - Excavated Marsh material is usuable in Fills outside the 1:1 slope. Marsh in Fill Reduction factor = 0.6
9) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item number 208.1100
11) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.1100
12) Expanded Rock - Factor = 1.1
13) Expanded Fill. Factor = 1.25
Depending on selections: **Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh - Reduced EBS) * Fill Factor**
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced EBS) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor - Reduced Marsh) * Fill Factor
Or Expanded Fill = (Unexpanded Fill - Rock* Rock Factor) * Fill Factor
14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 100	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:52 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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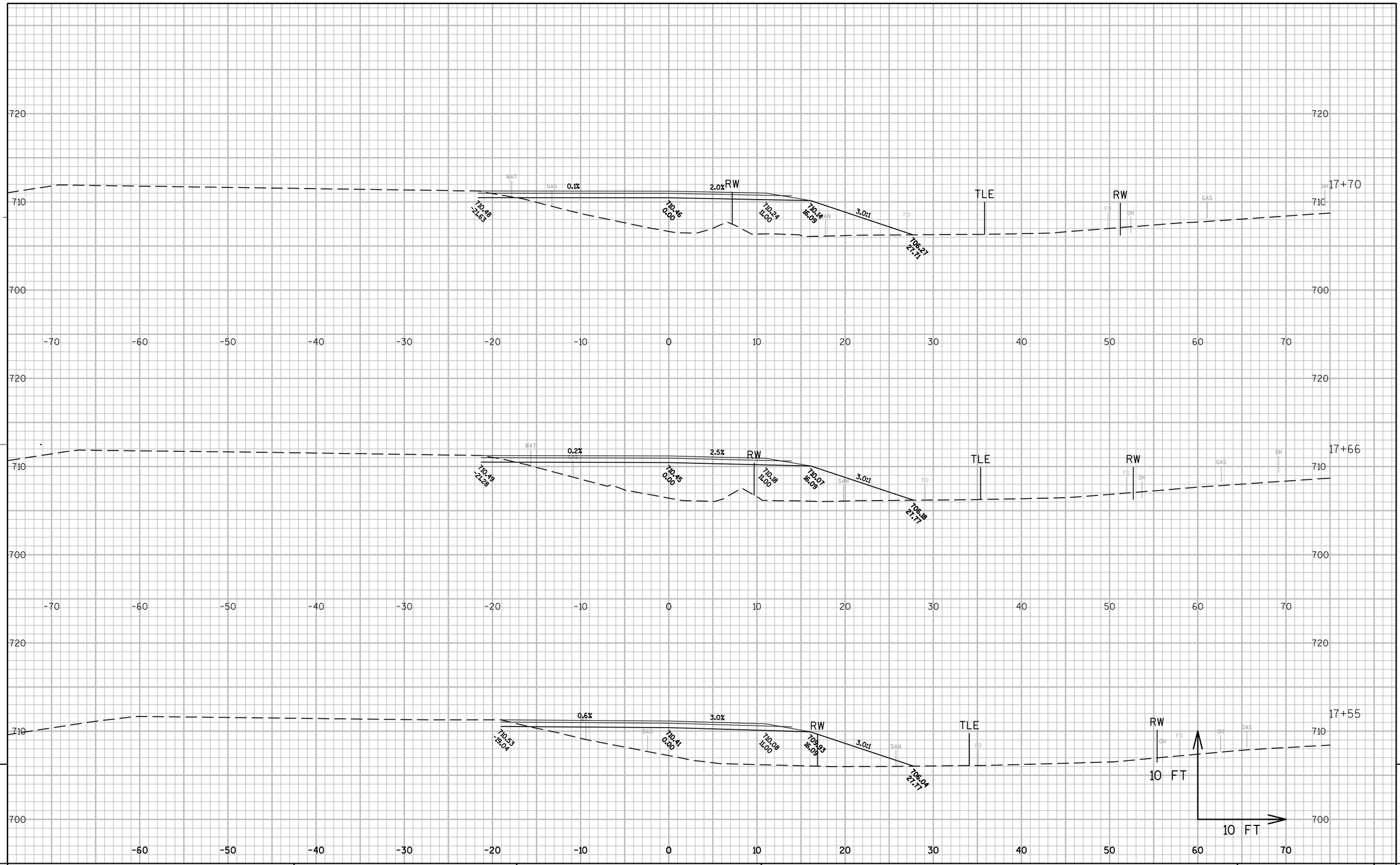
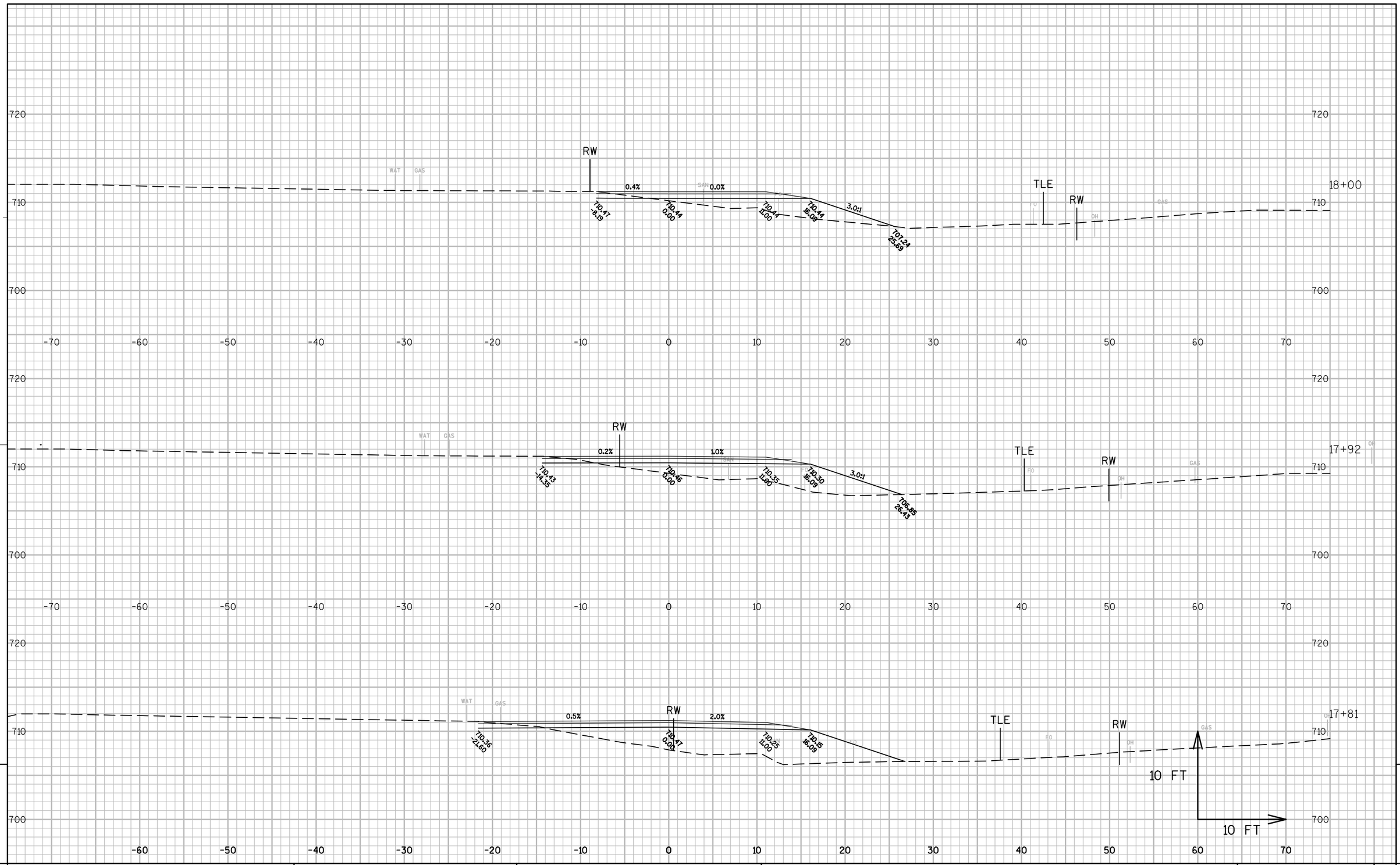
PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 101	E



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:52 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

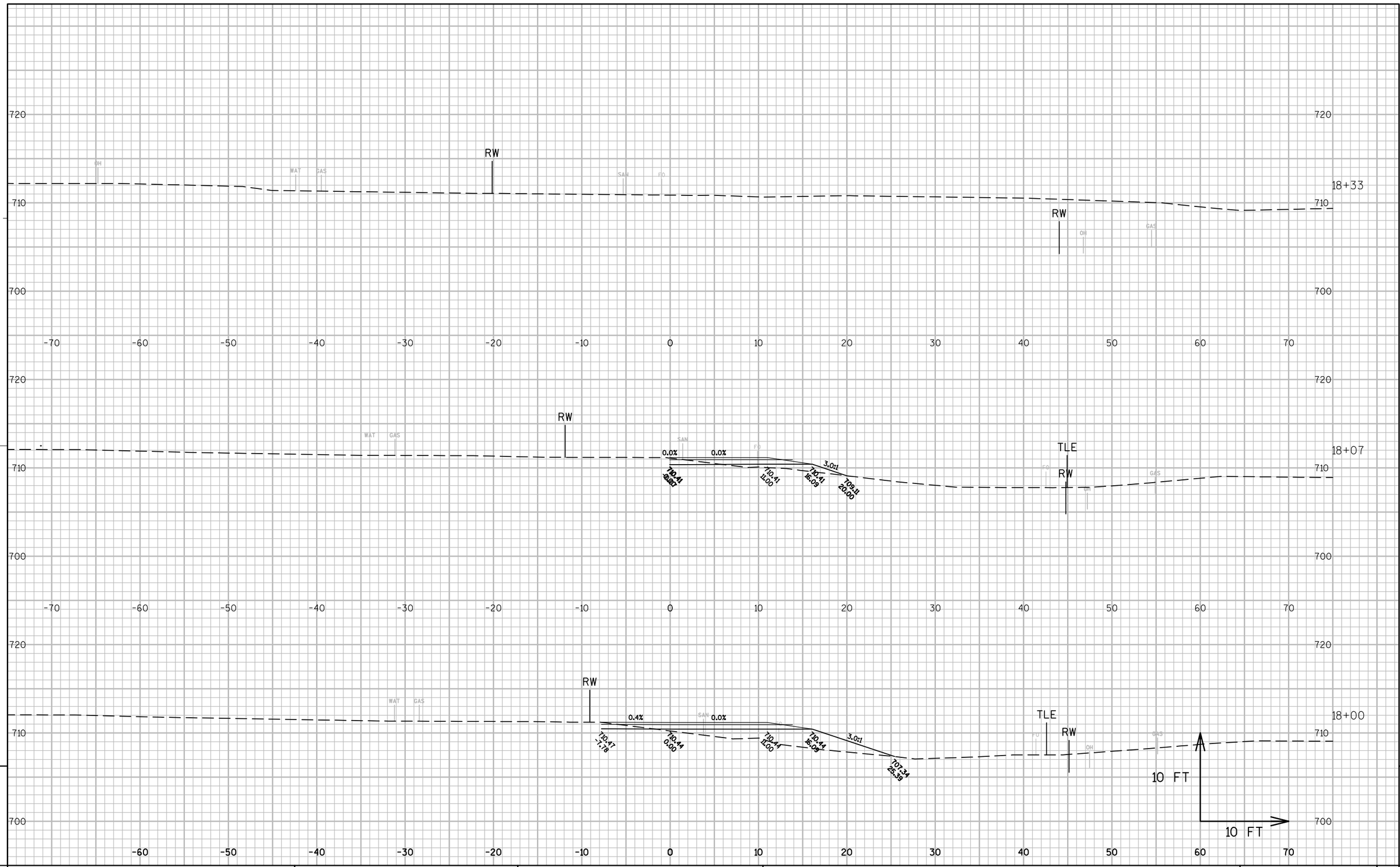
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:52 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

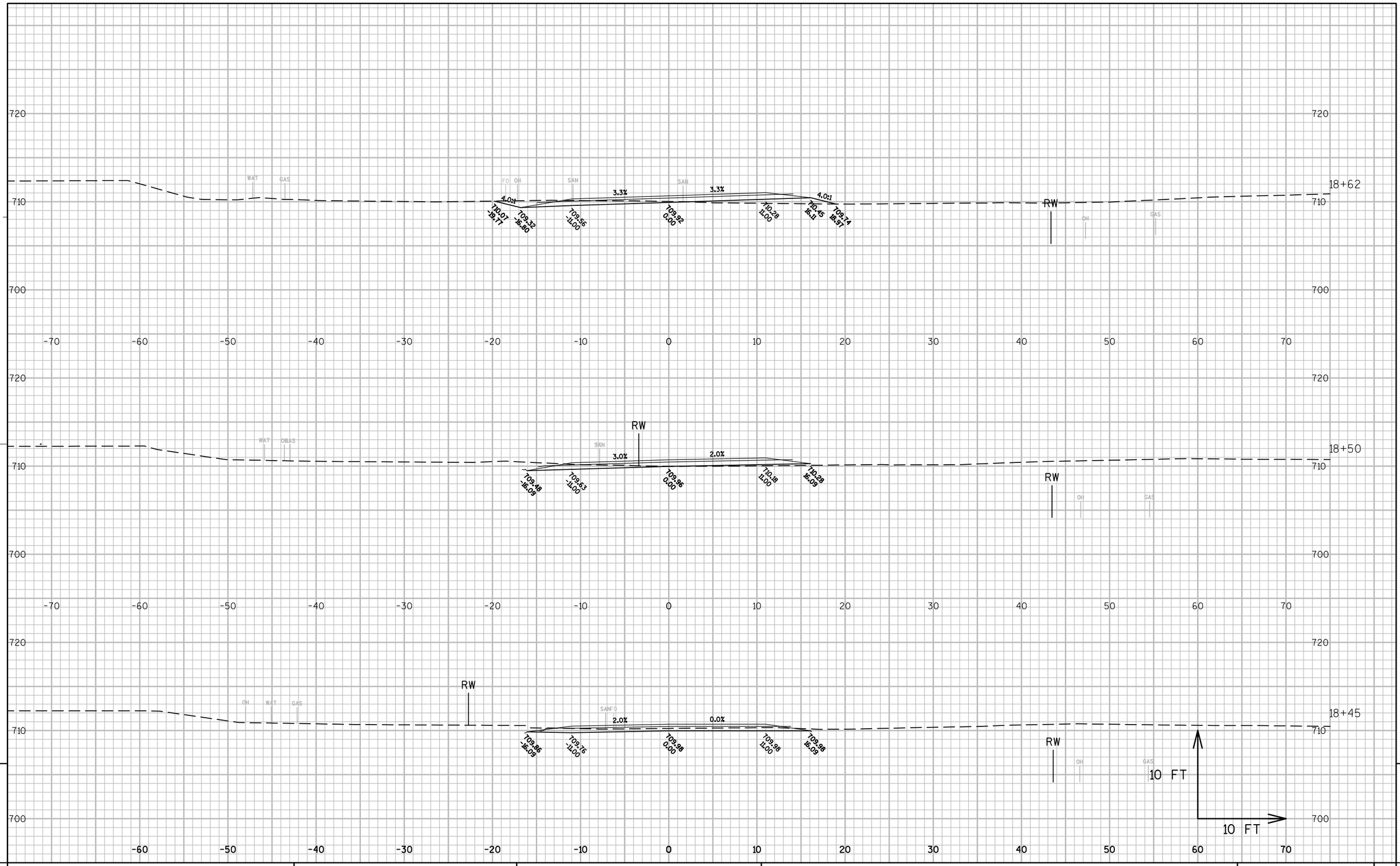
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 104	E

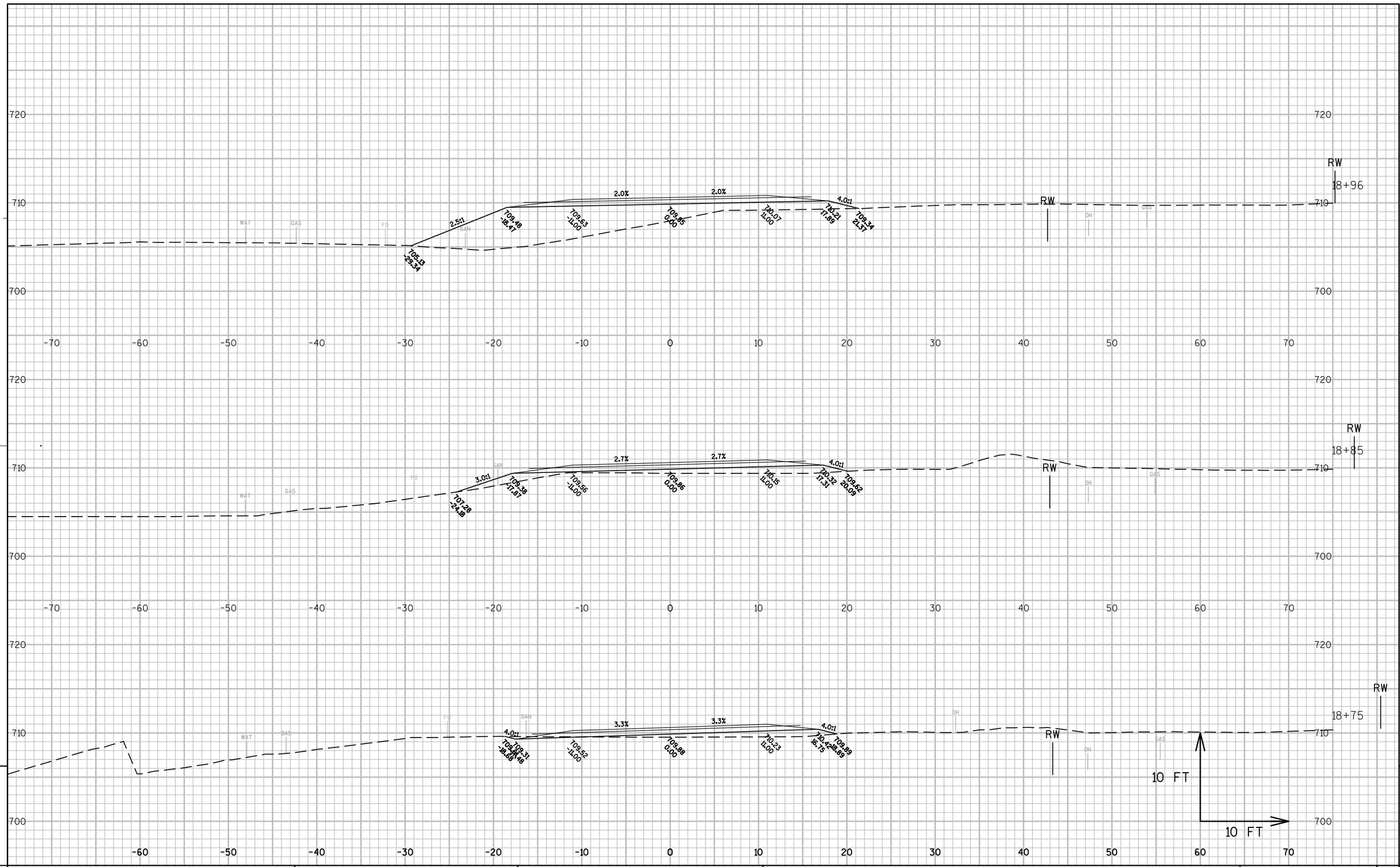
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:52 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 105	E

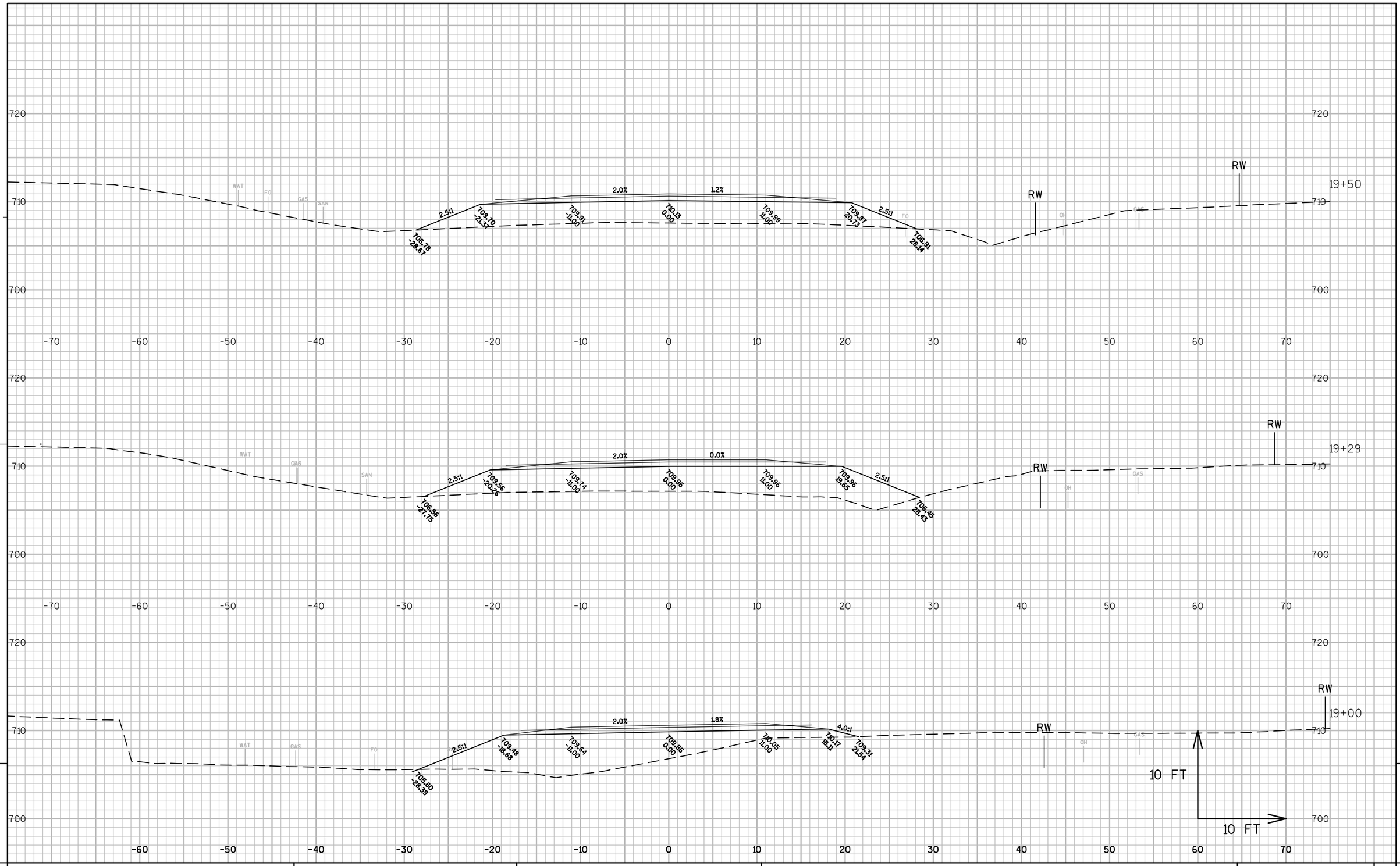
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:52 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



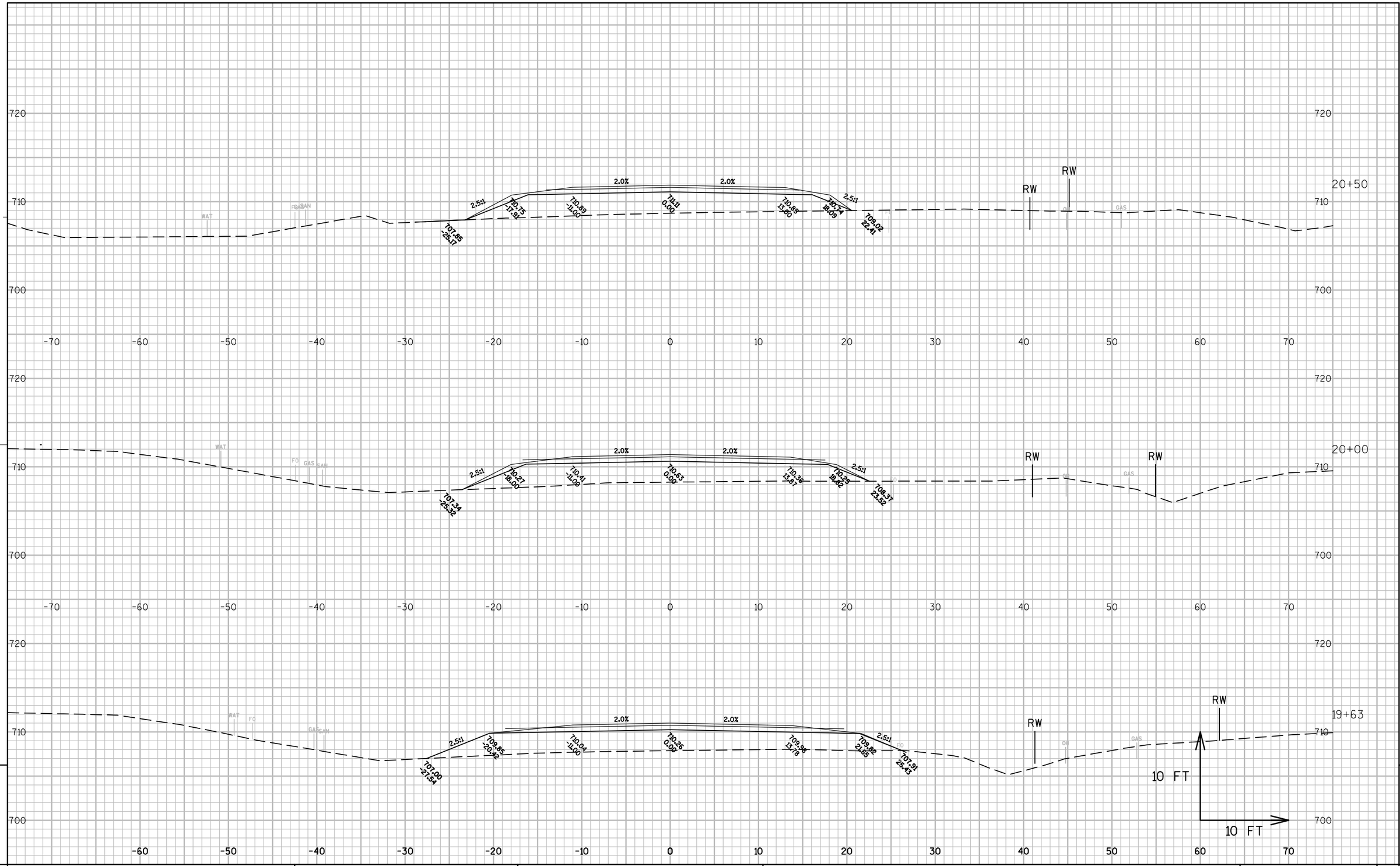
PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:53 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



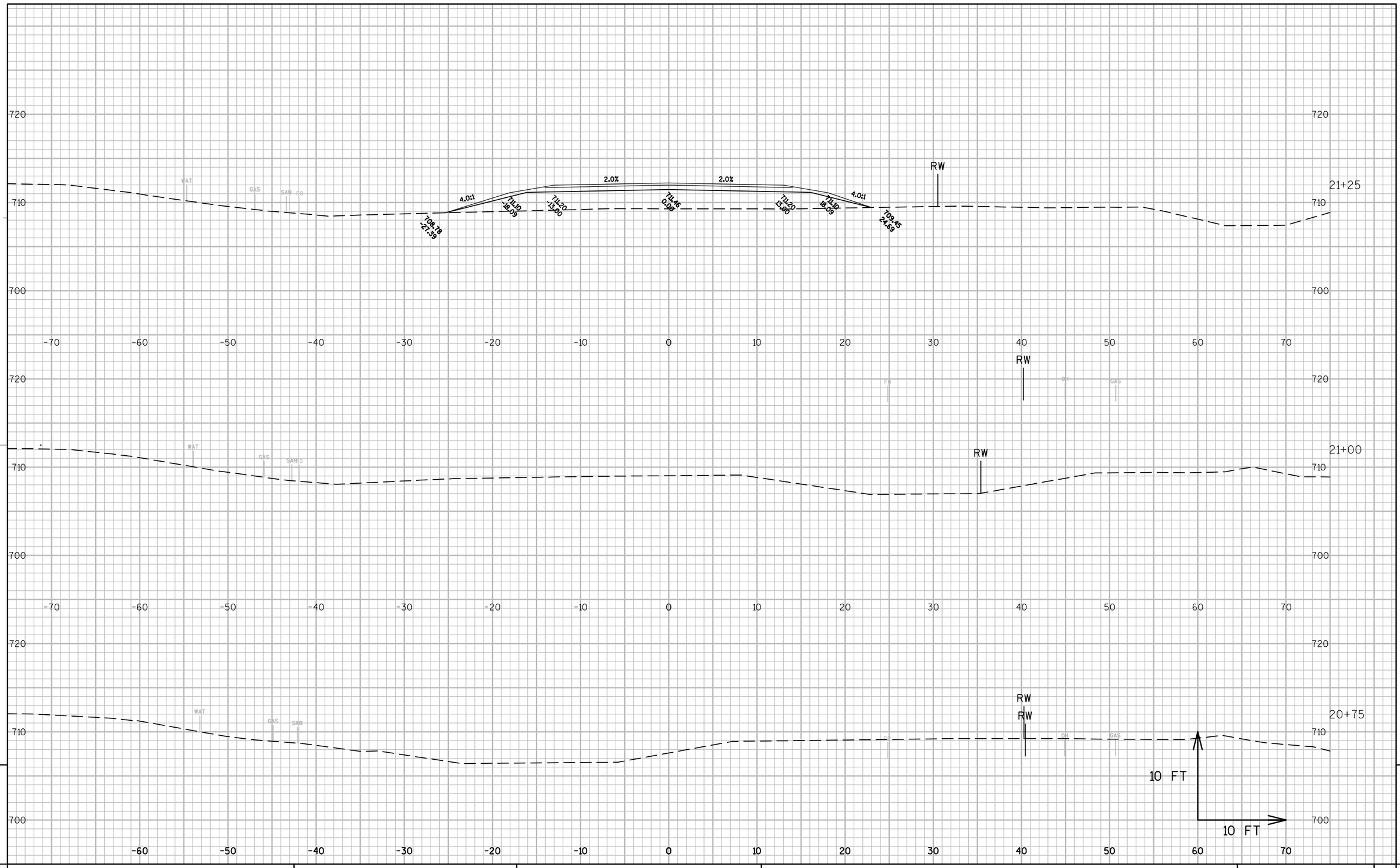
PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:53 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

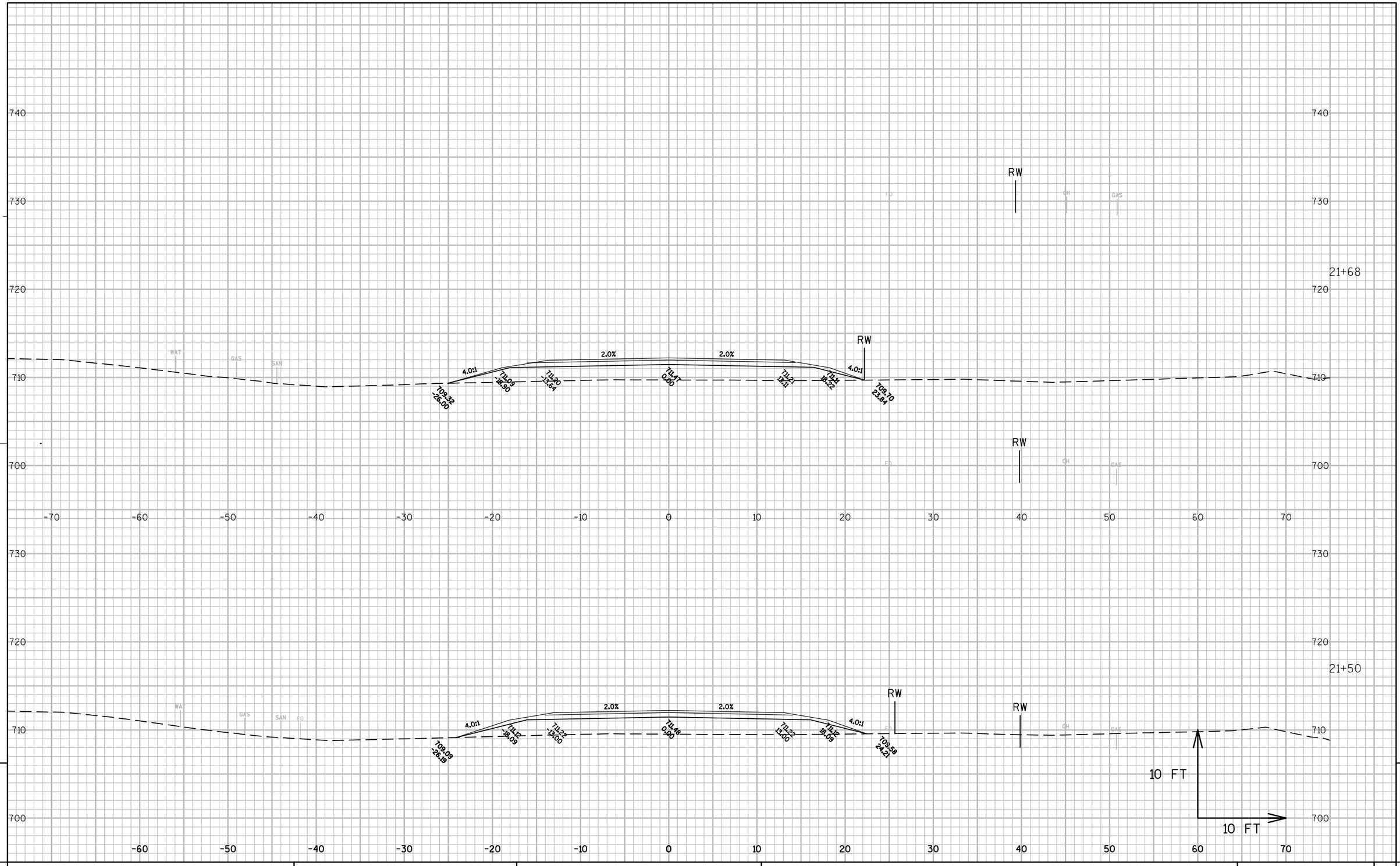
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:53 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 110	E

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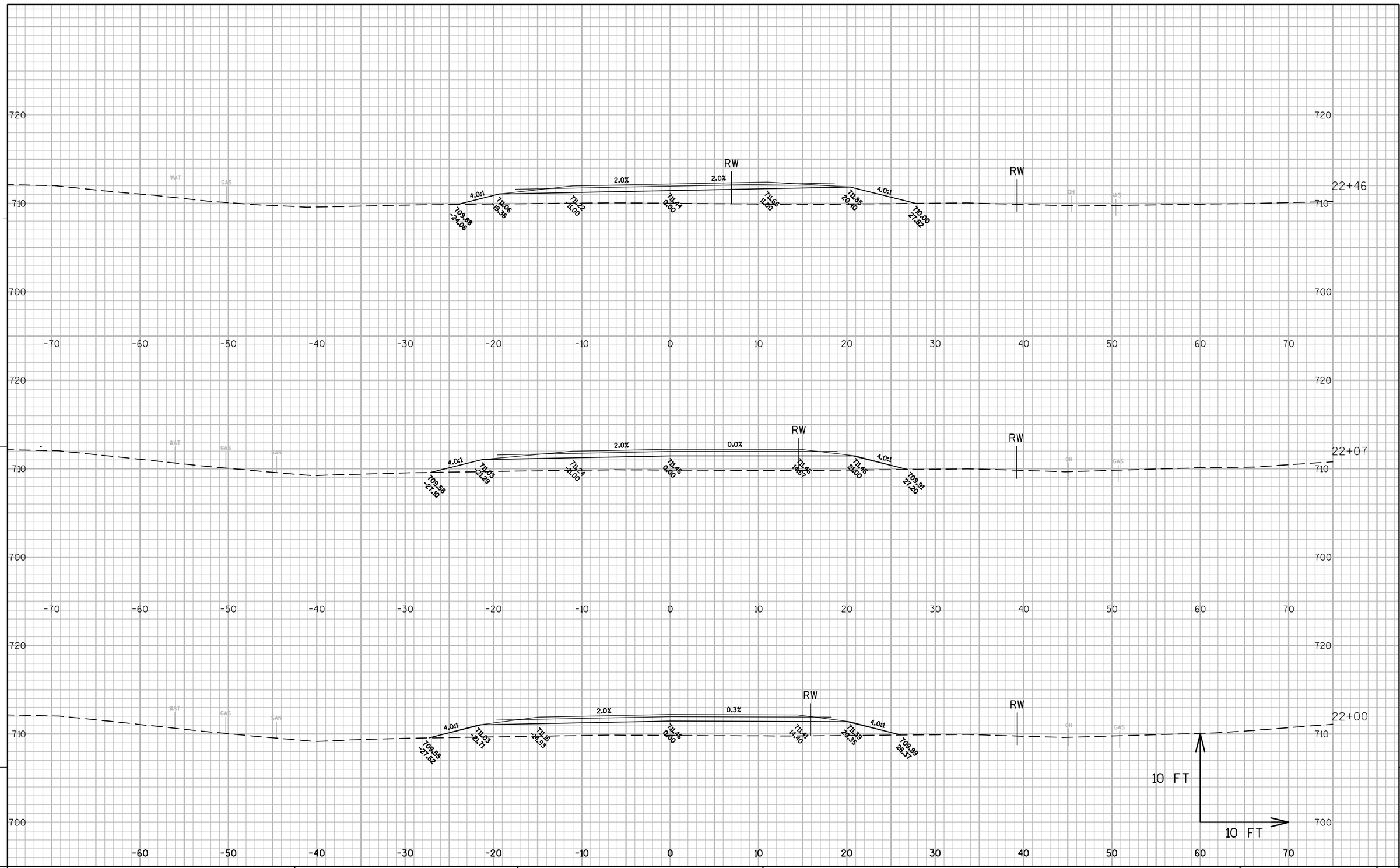
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 111	E

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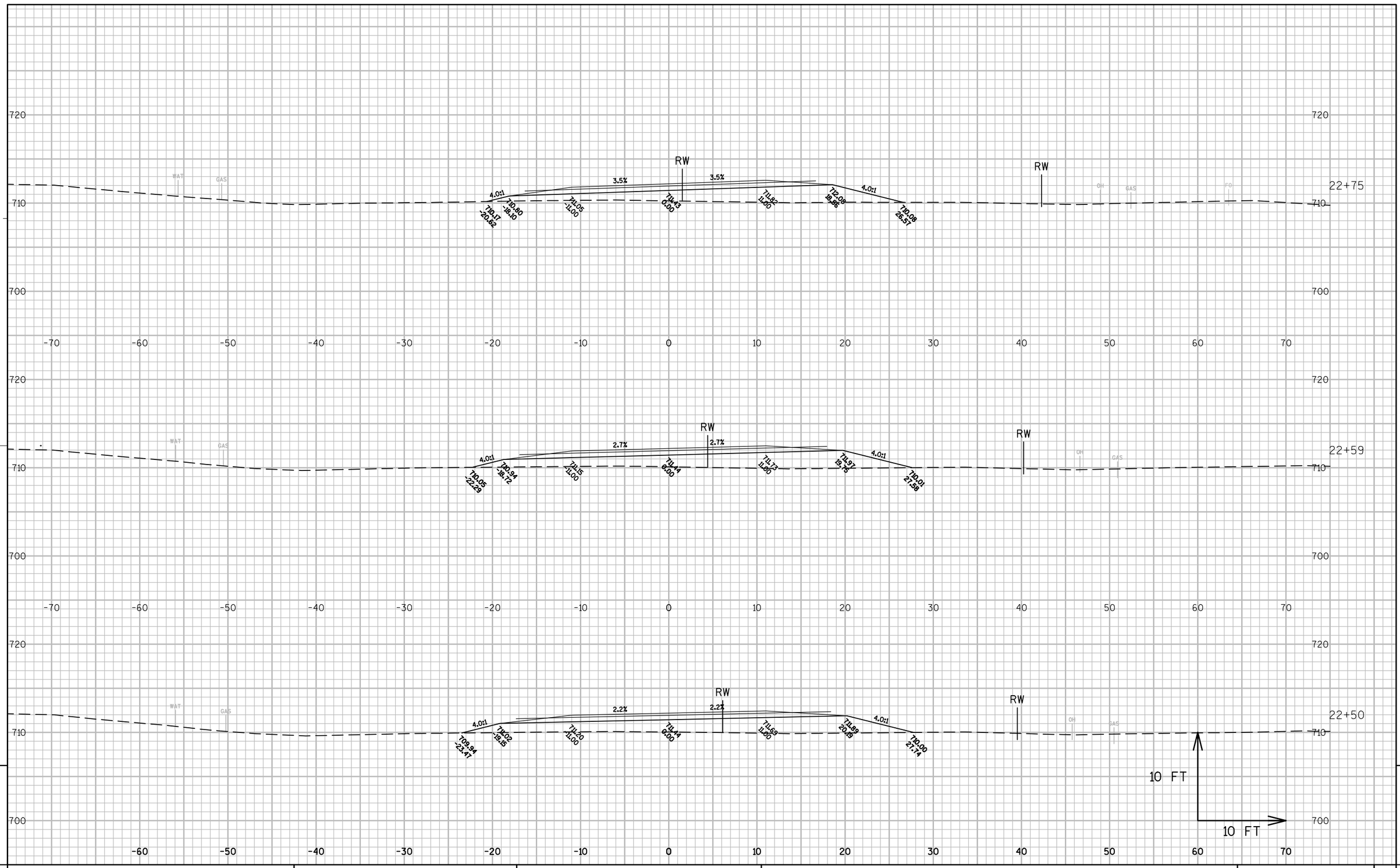
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 112	E

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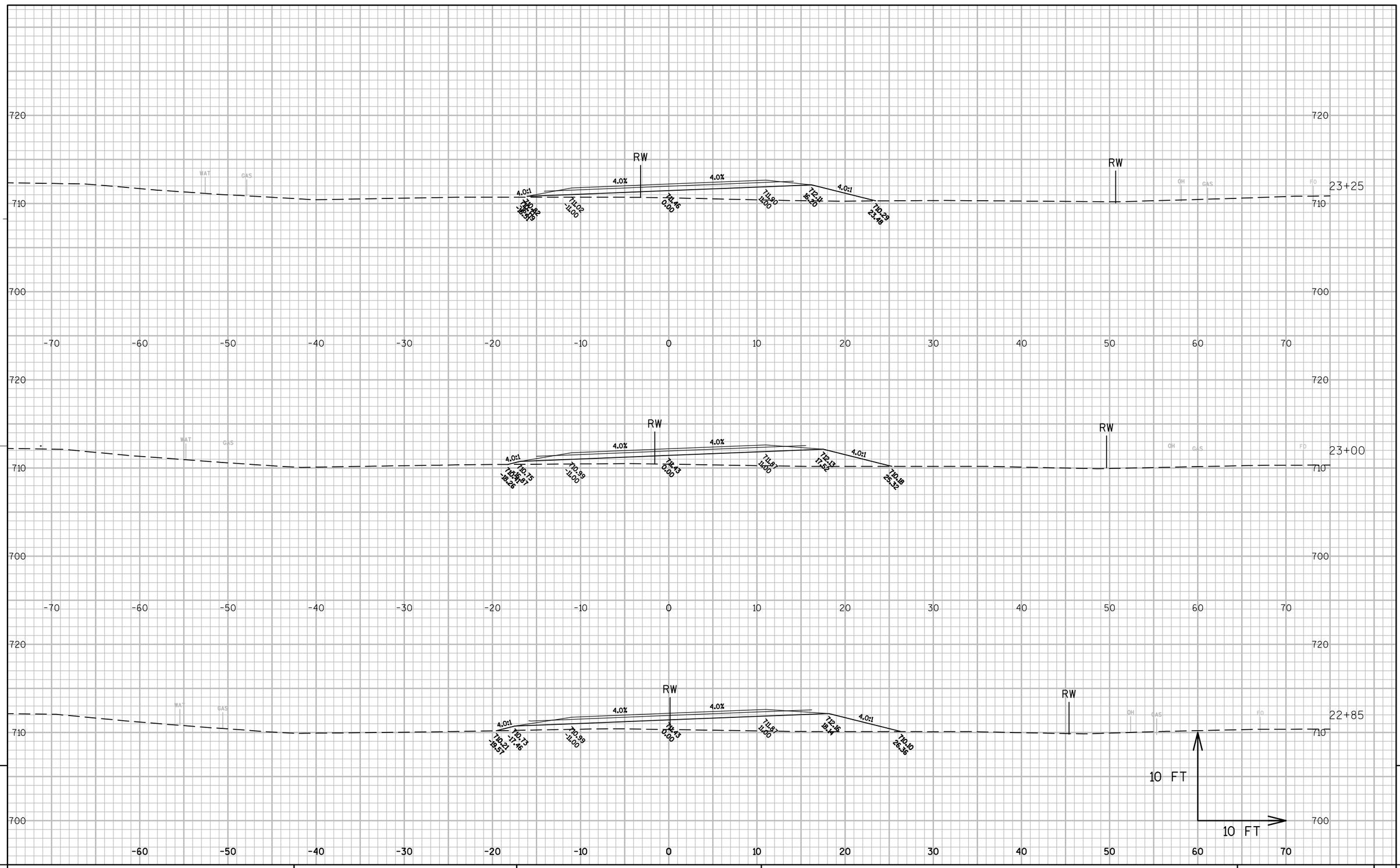

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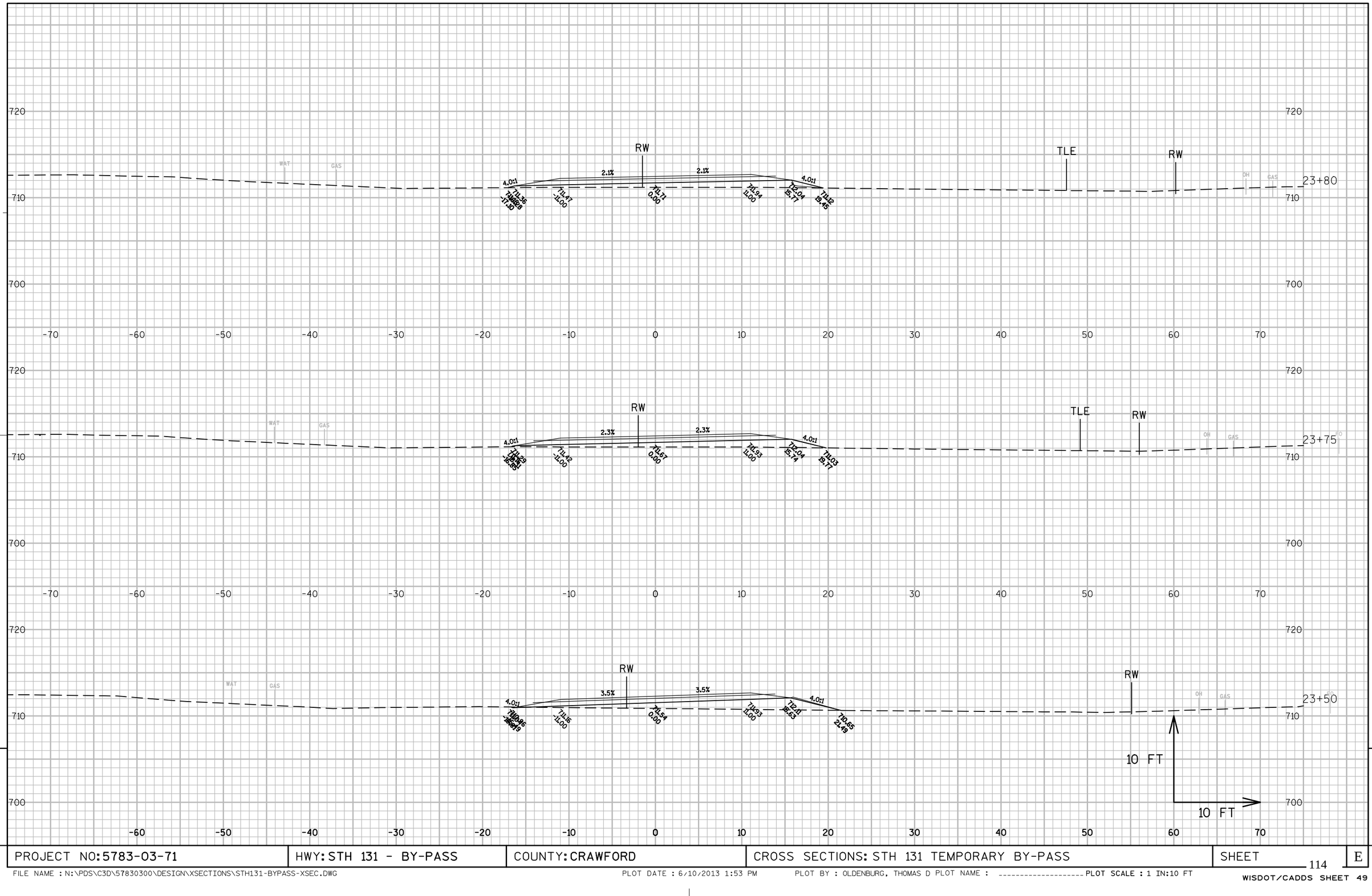
PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:53 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

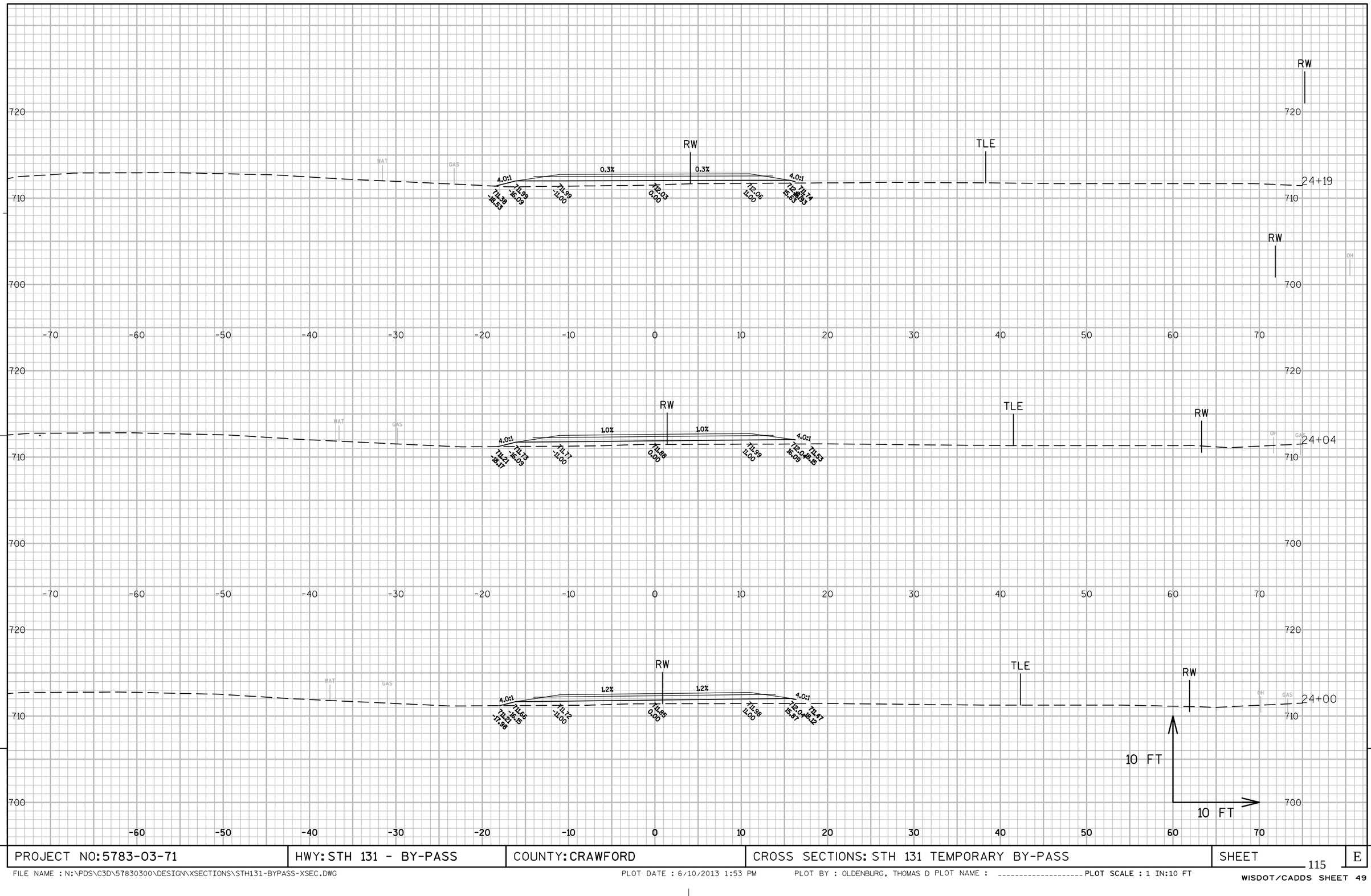
WISDOT/CADDS SHEET 49



PROJECT NO:5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 114	E

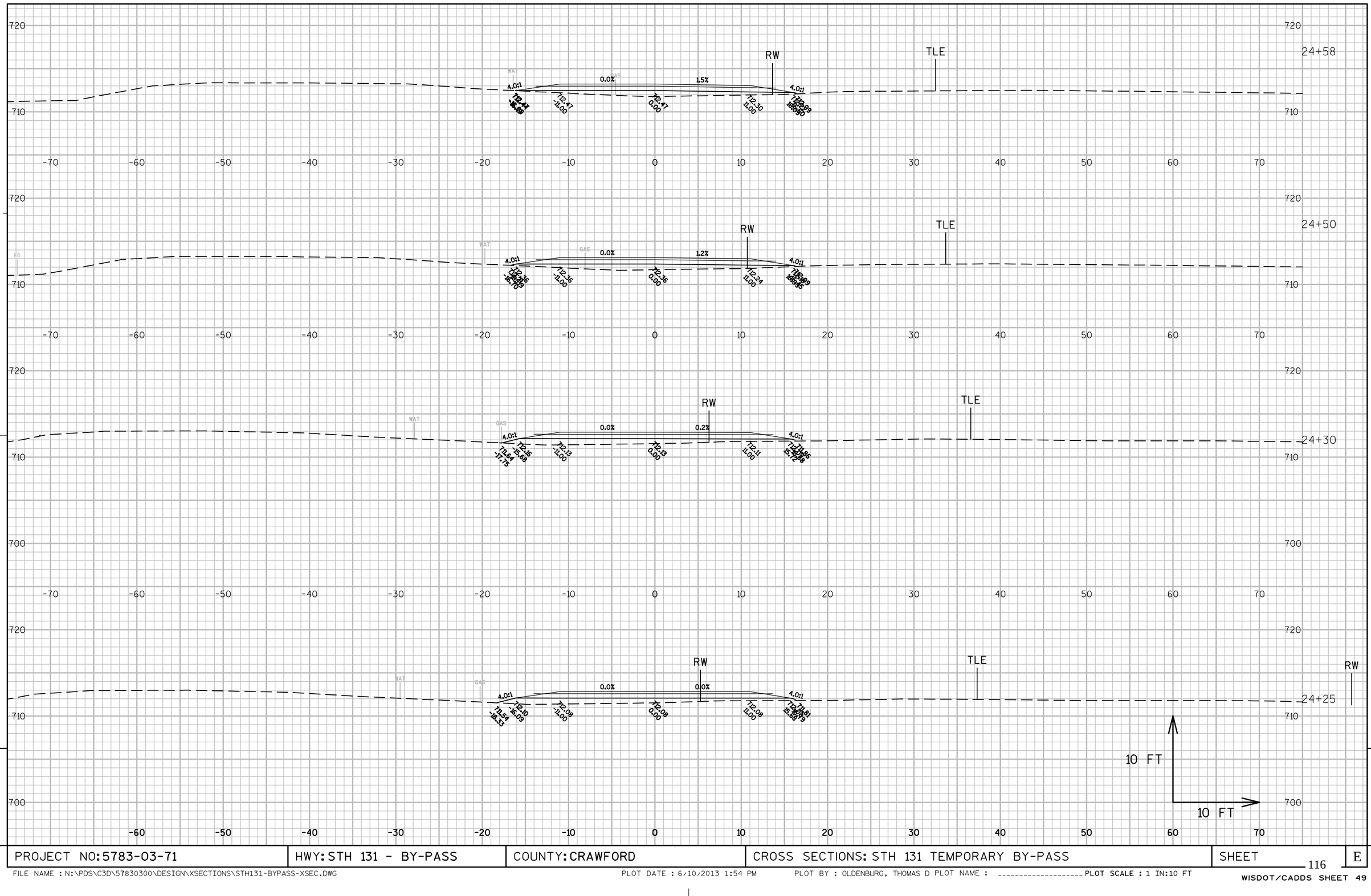
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:53 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

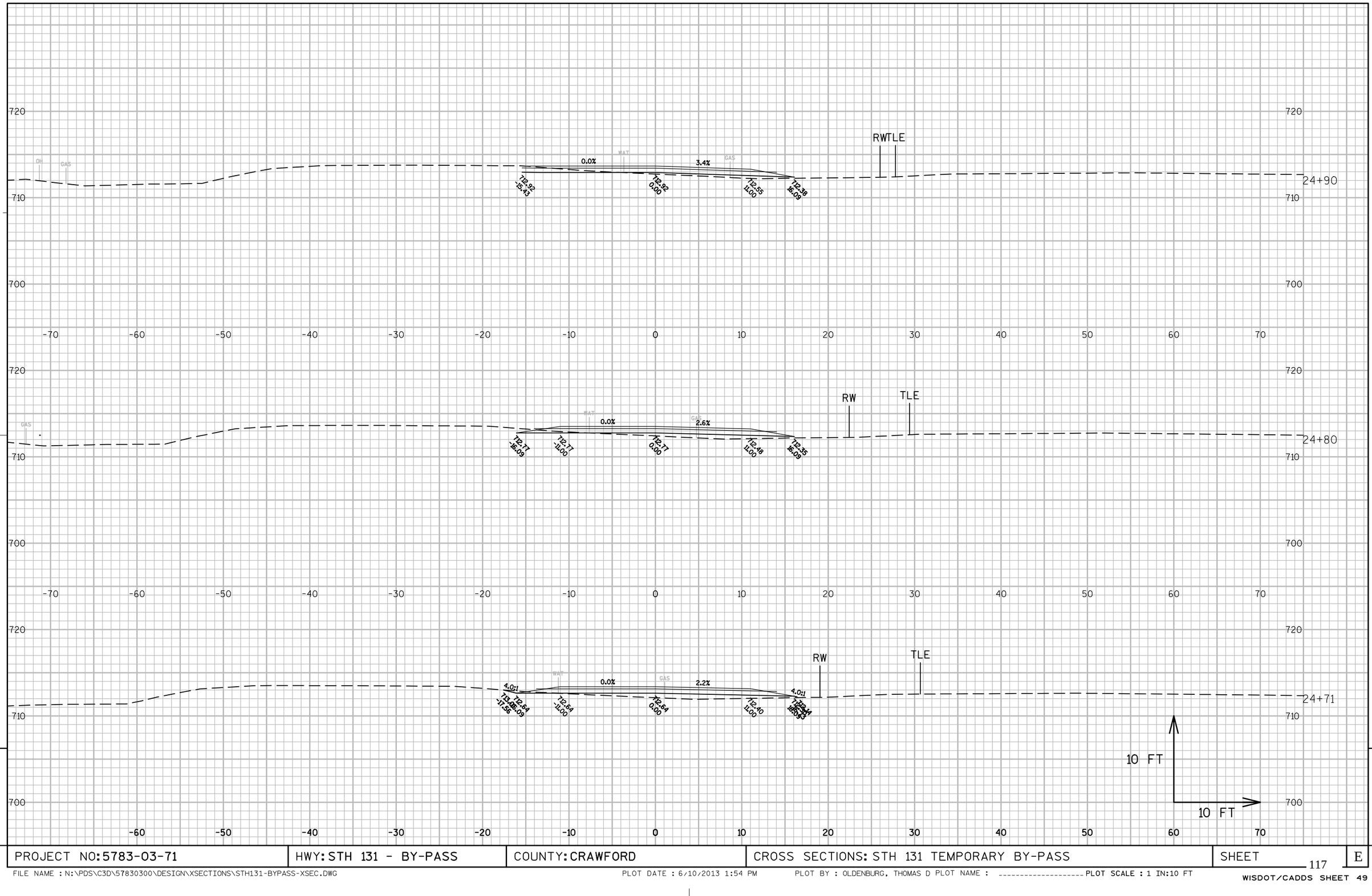
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:53 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO:5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:54 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT

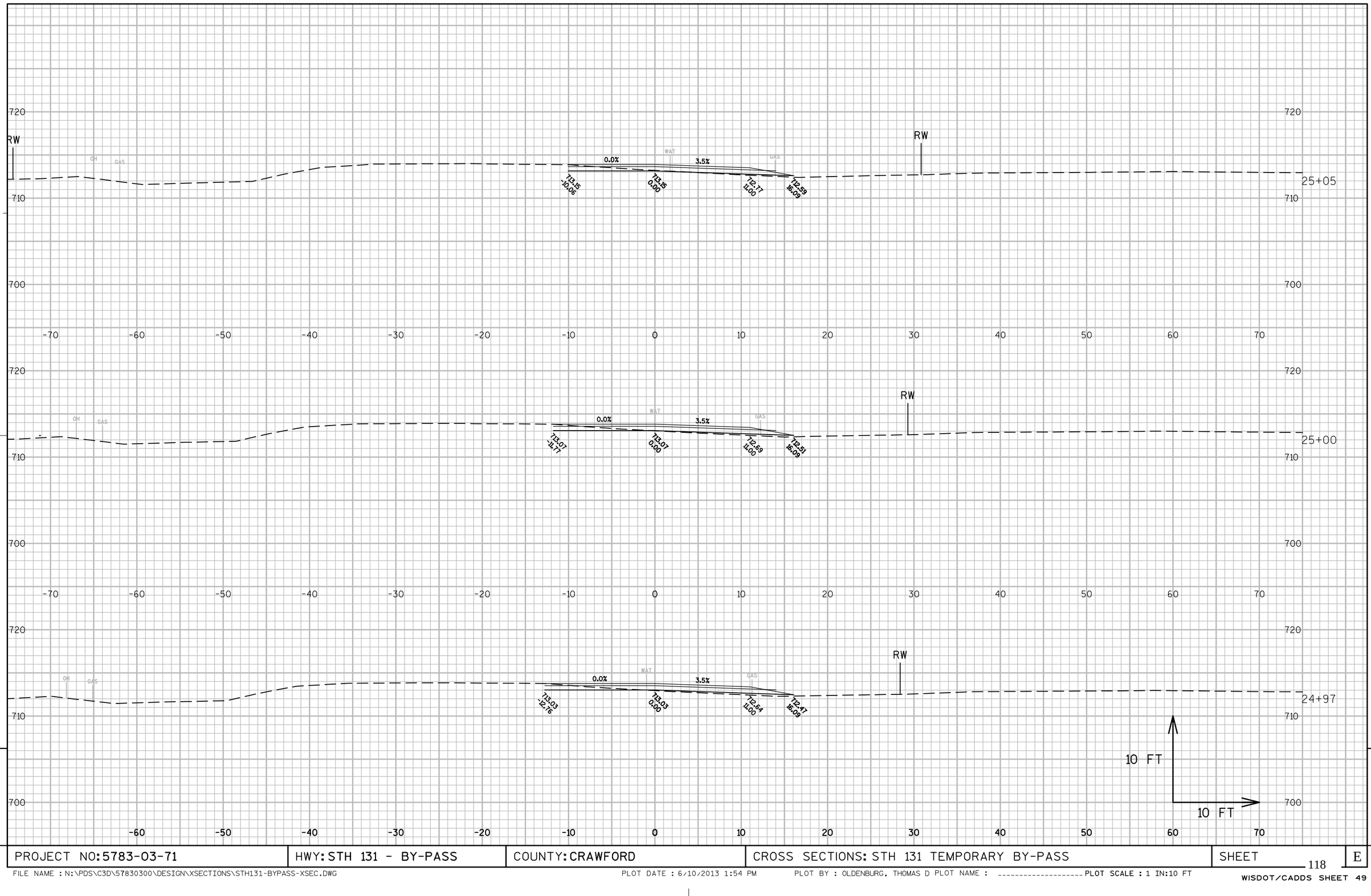
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 117	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:54 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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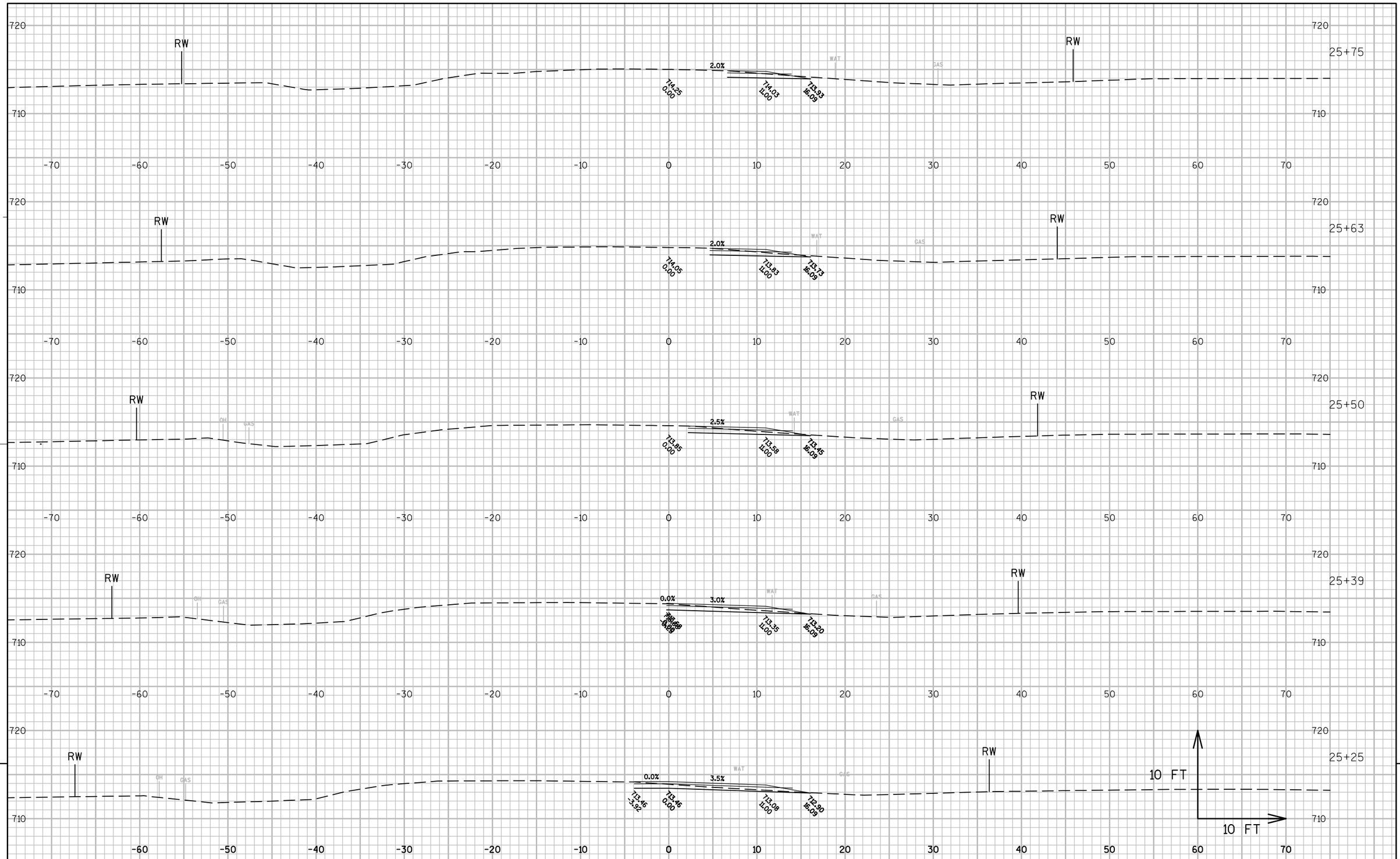
PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:54 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 119	E

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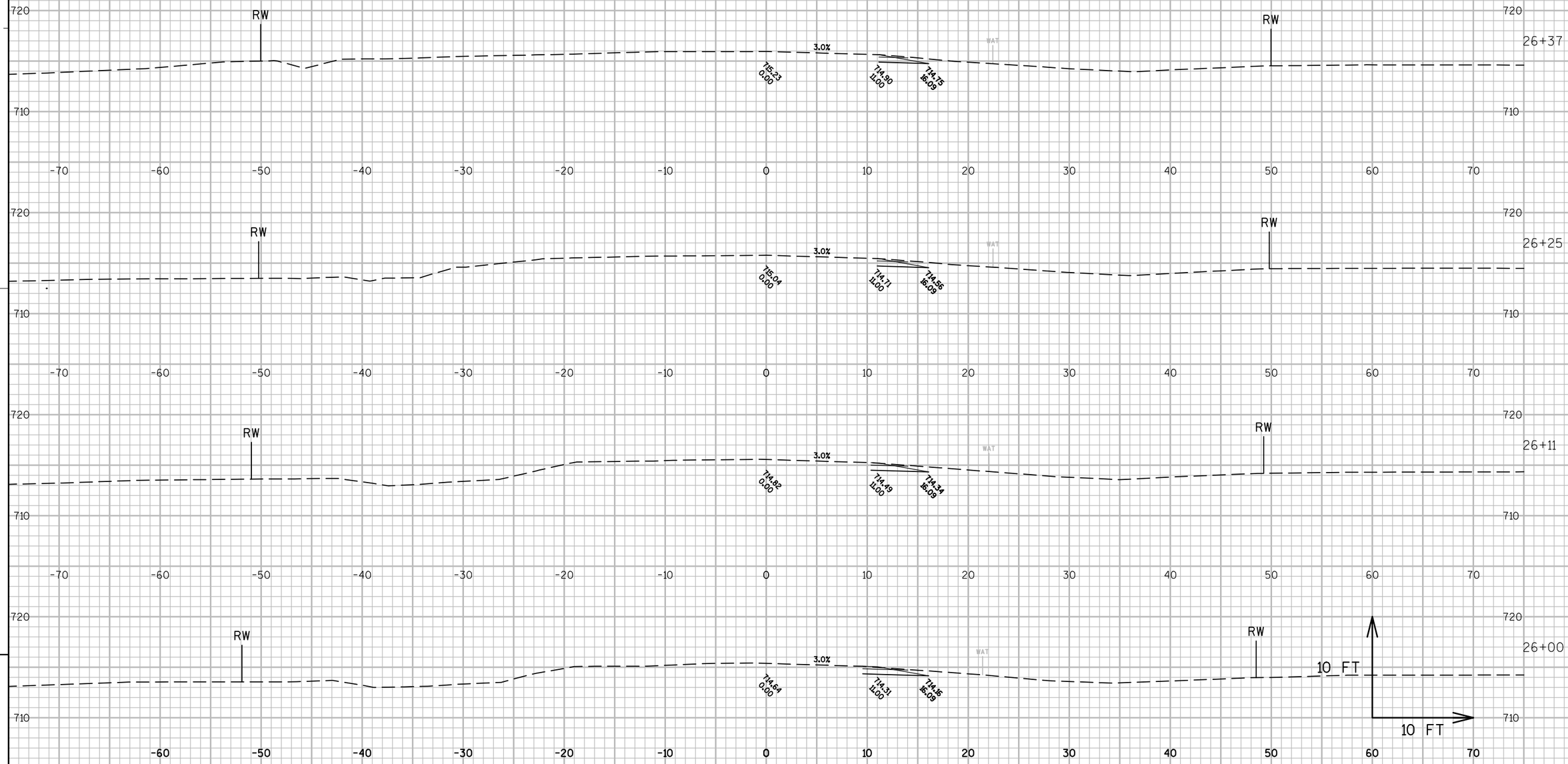
WISDOT/CADDS SHEET 49



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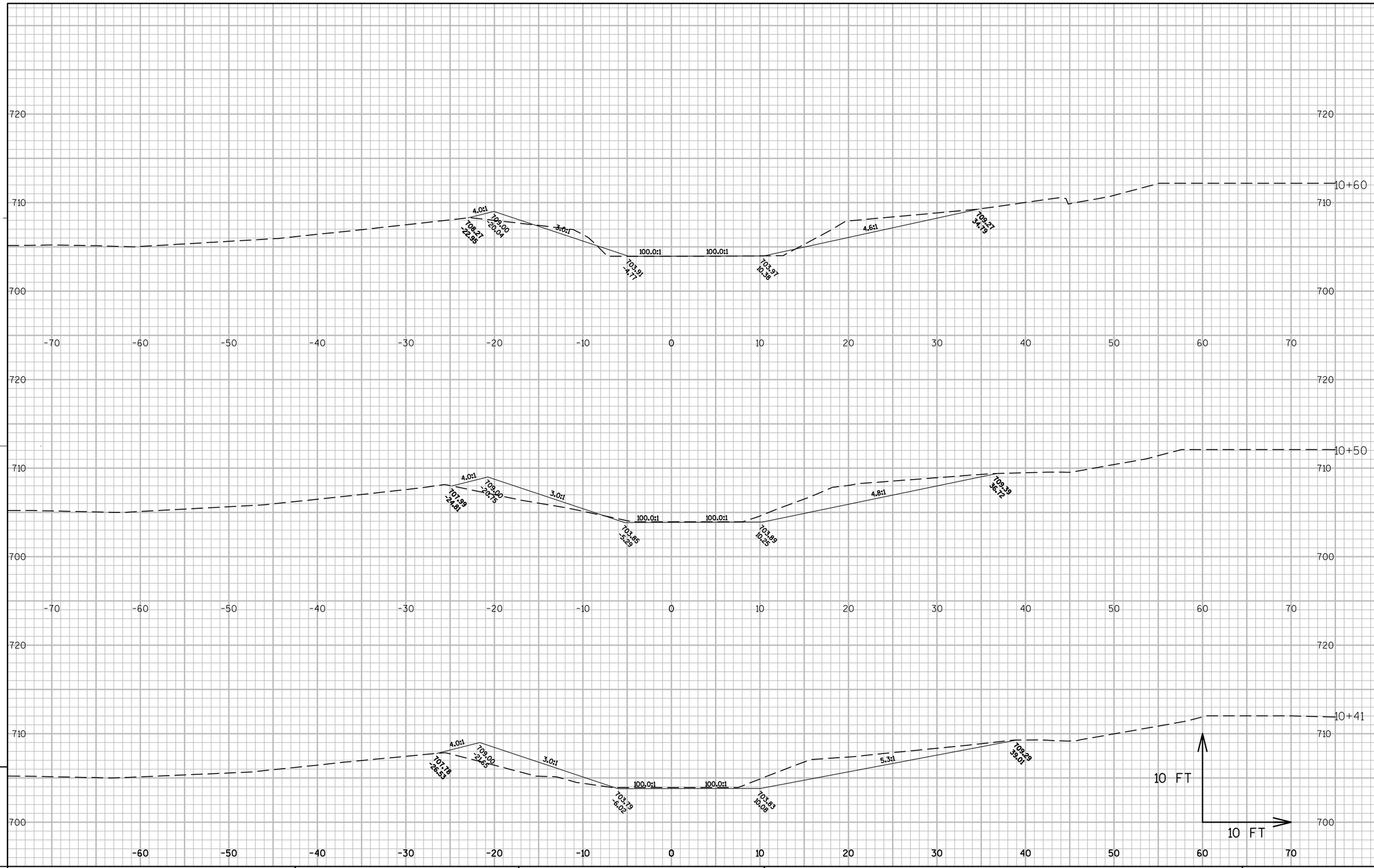
PROJECT NO: 5783-03-71	HWY: STH 131 - BY-PASS	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 TEMPORARY BY-PASS	SHEET 120	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-BYPASS-XSEC.DWG PLOT DATE : 6/10/2013 1:54 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : _____ PLOT SCALE : 1 IN:10 FT



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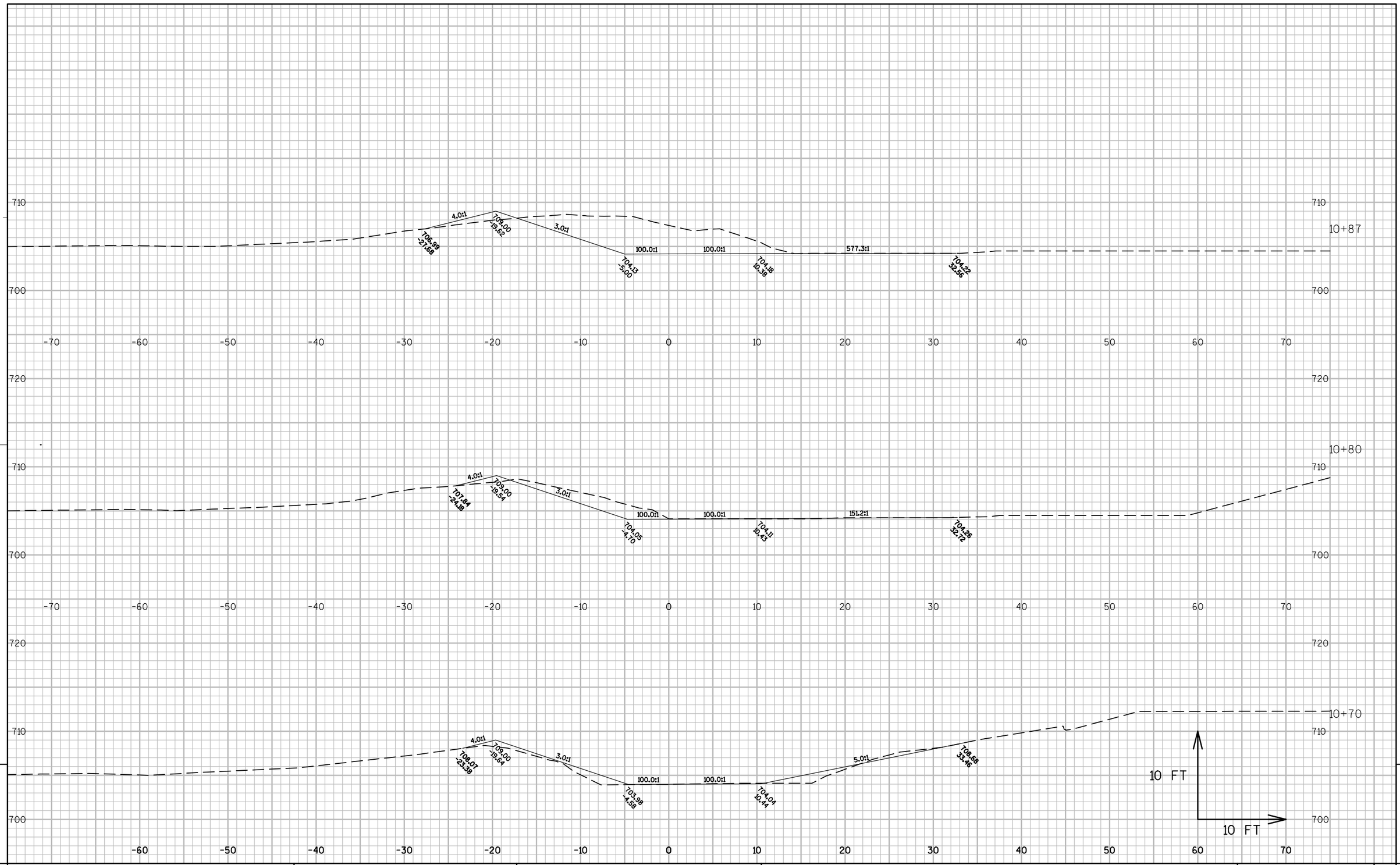
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET	E

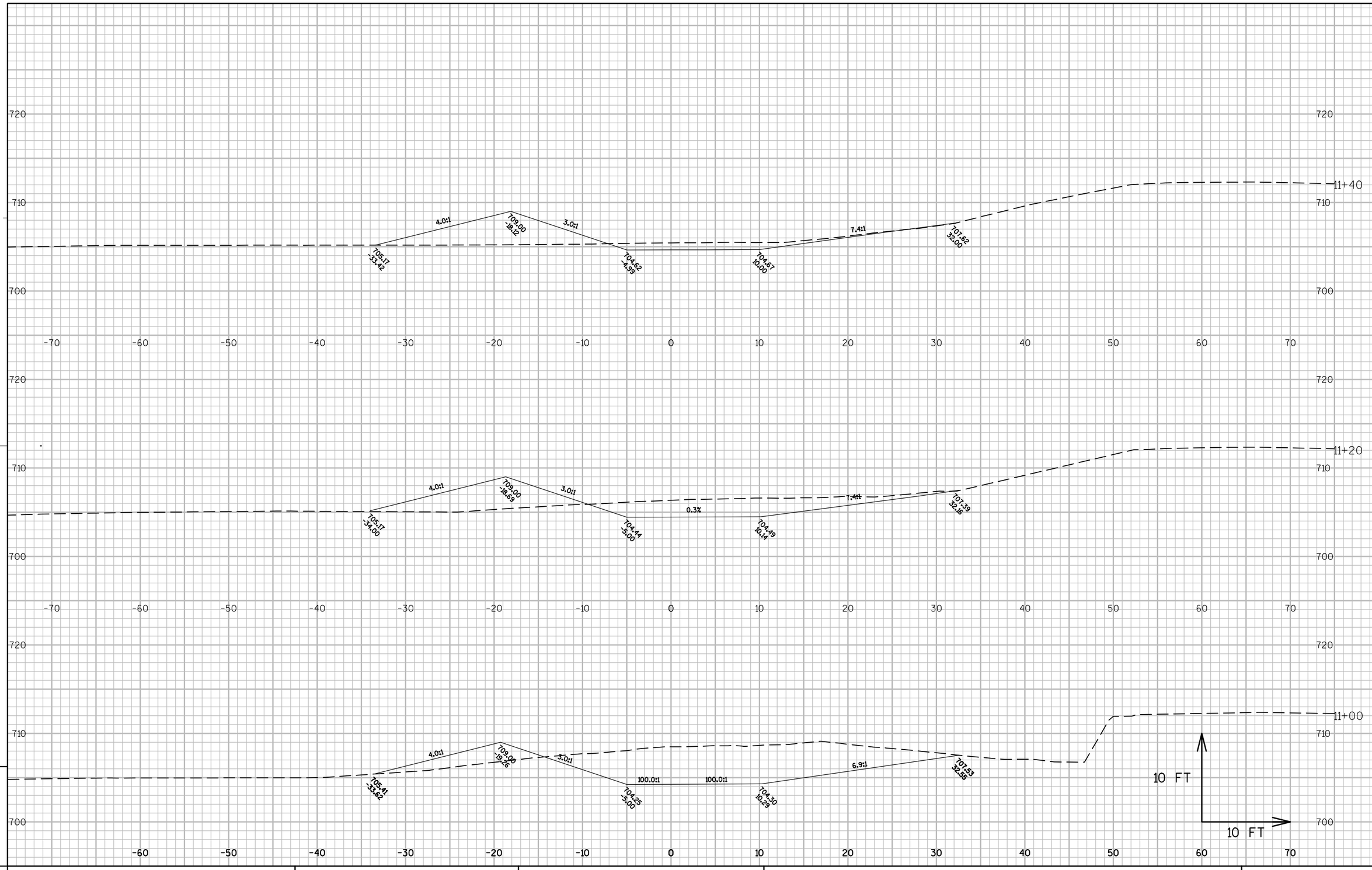
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET	E

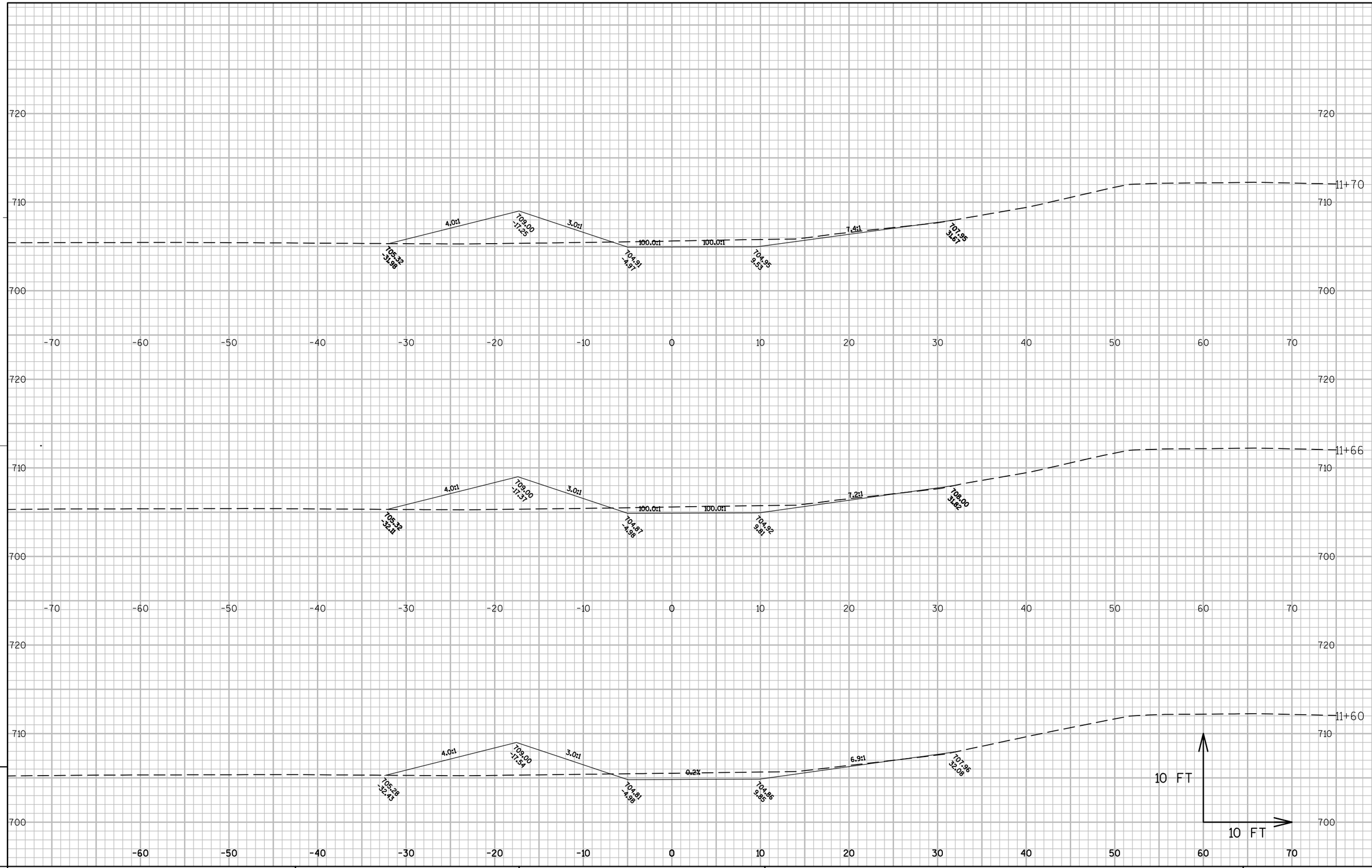
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET	E

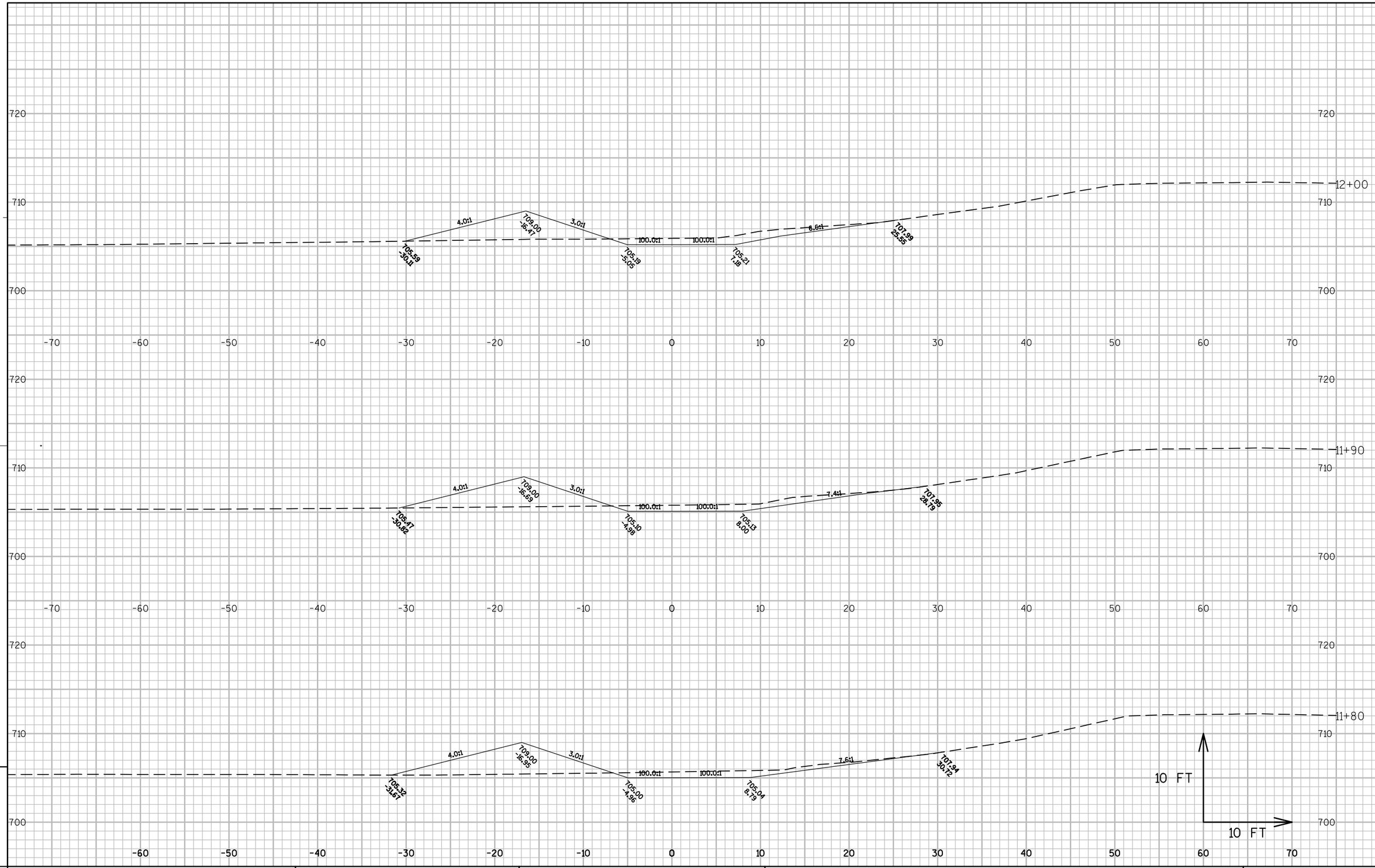
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET	E

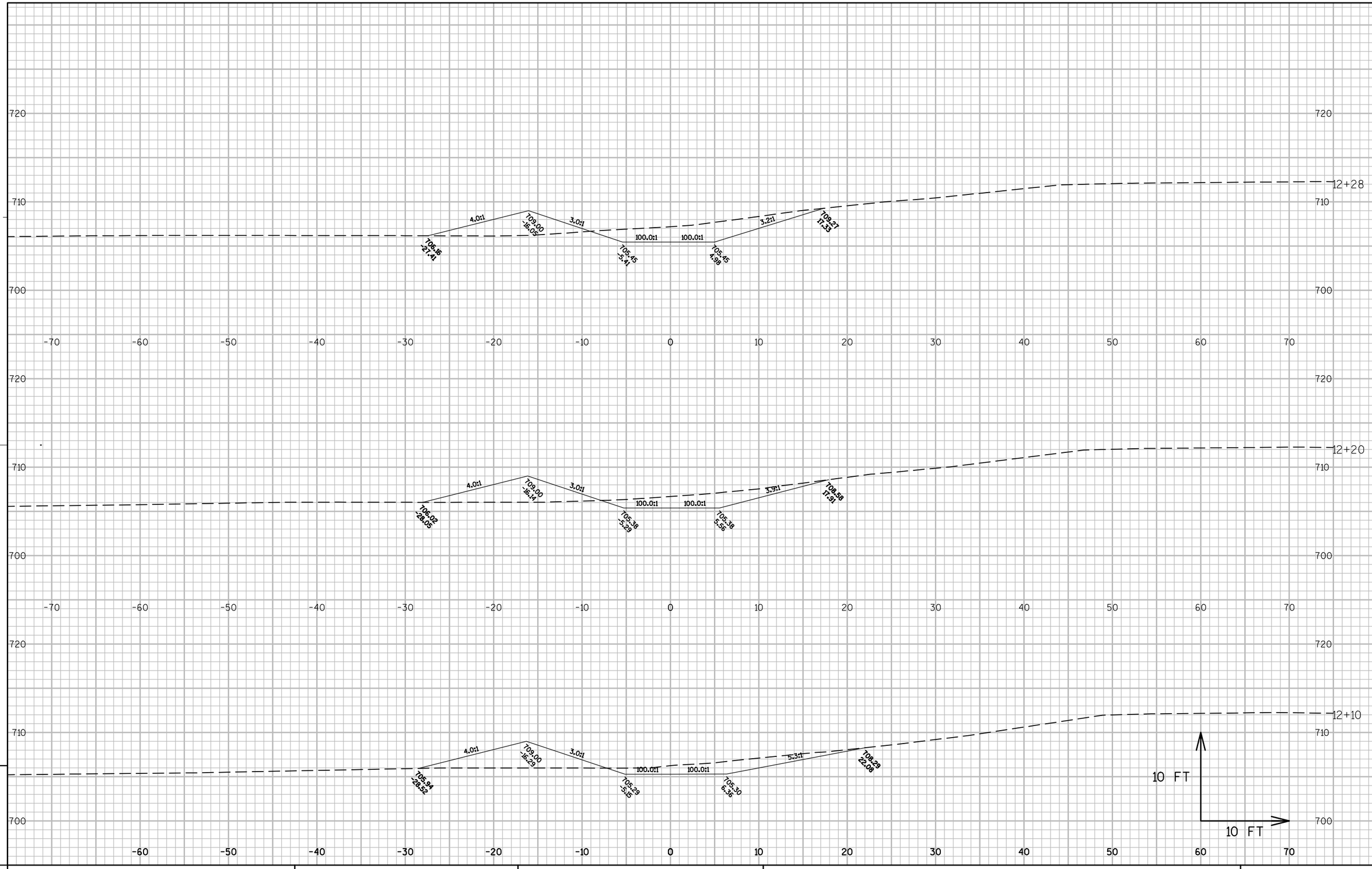
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

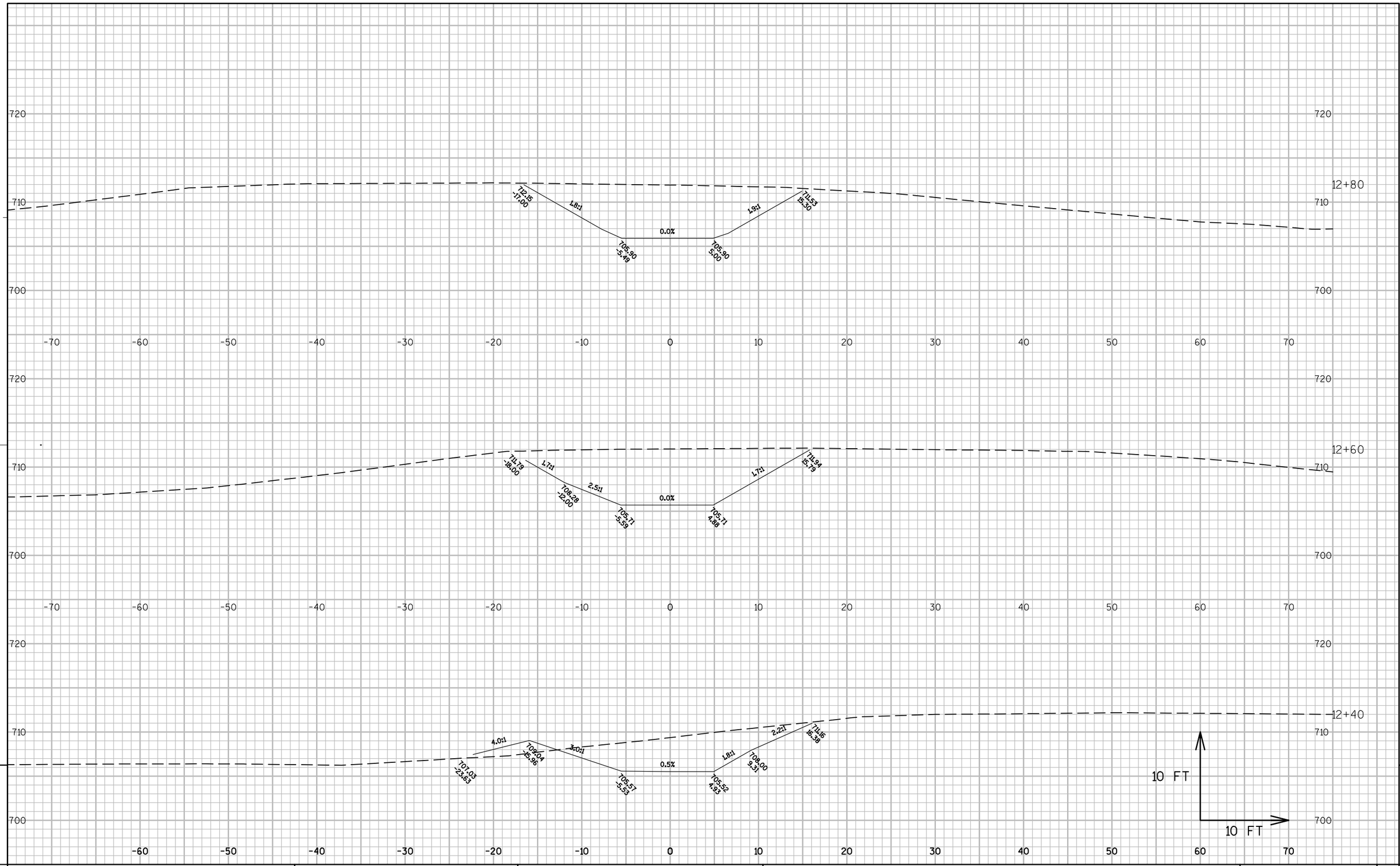
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

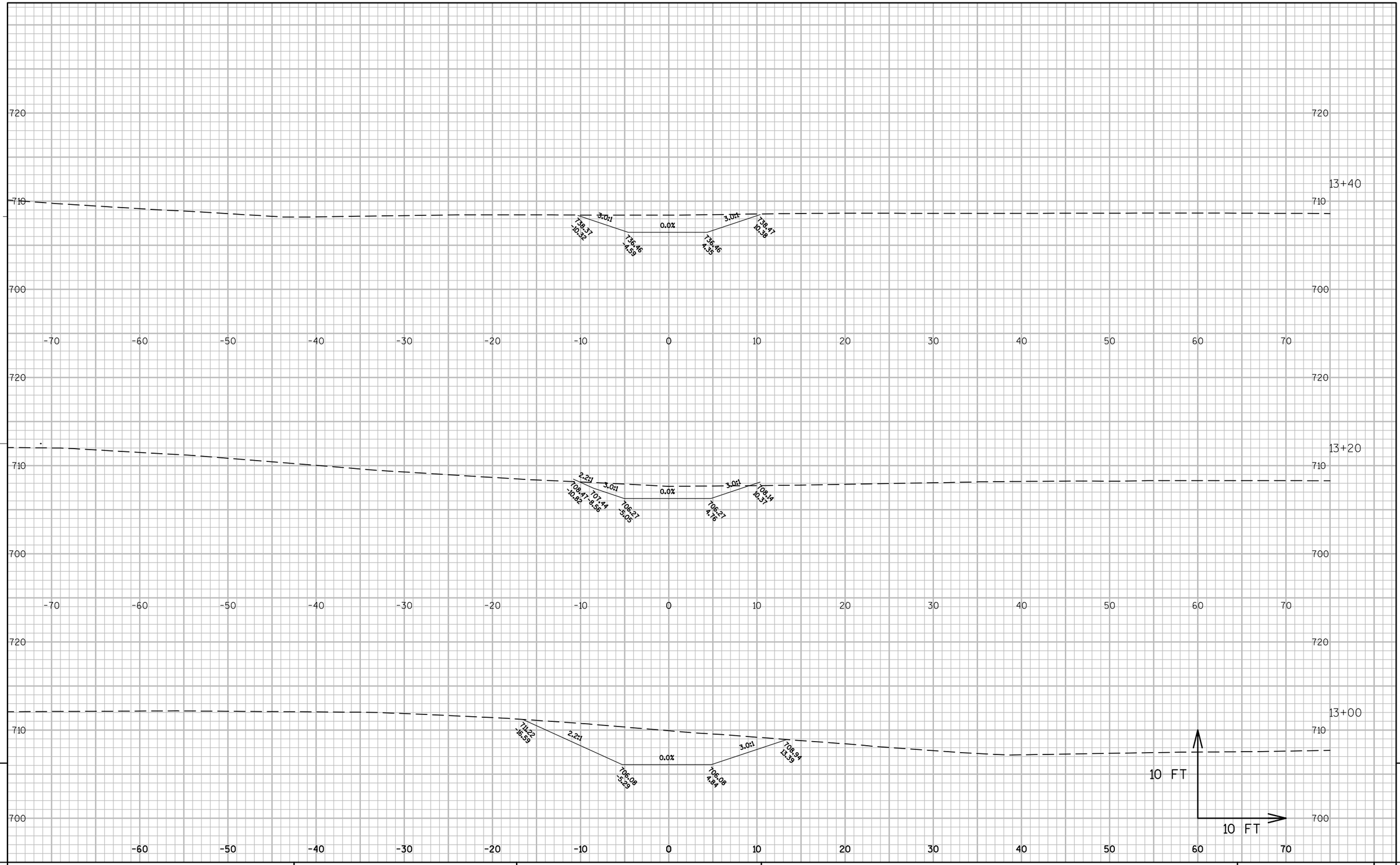
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET 127	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

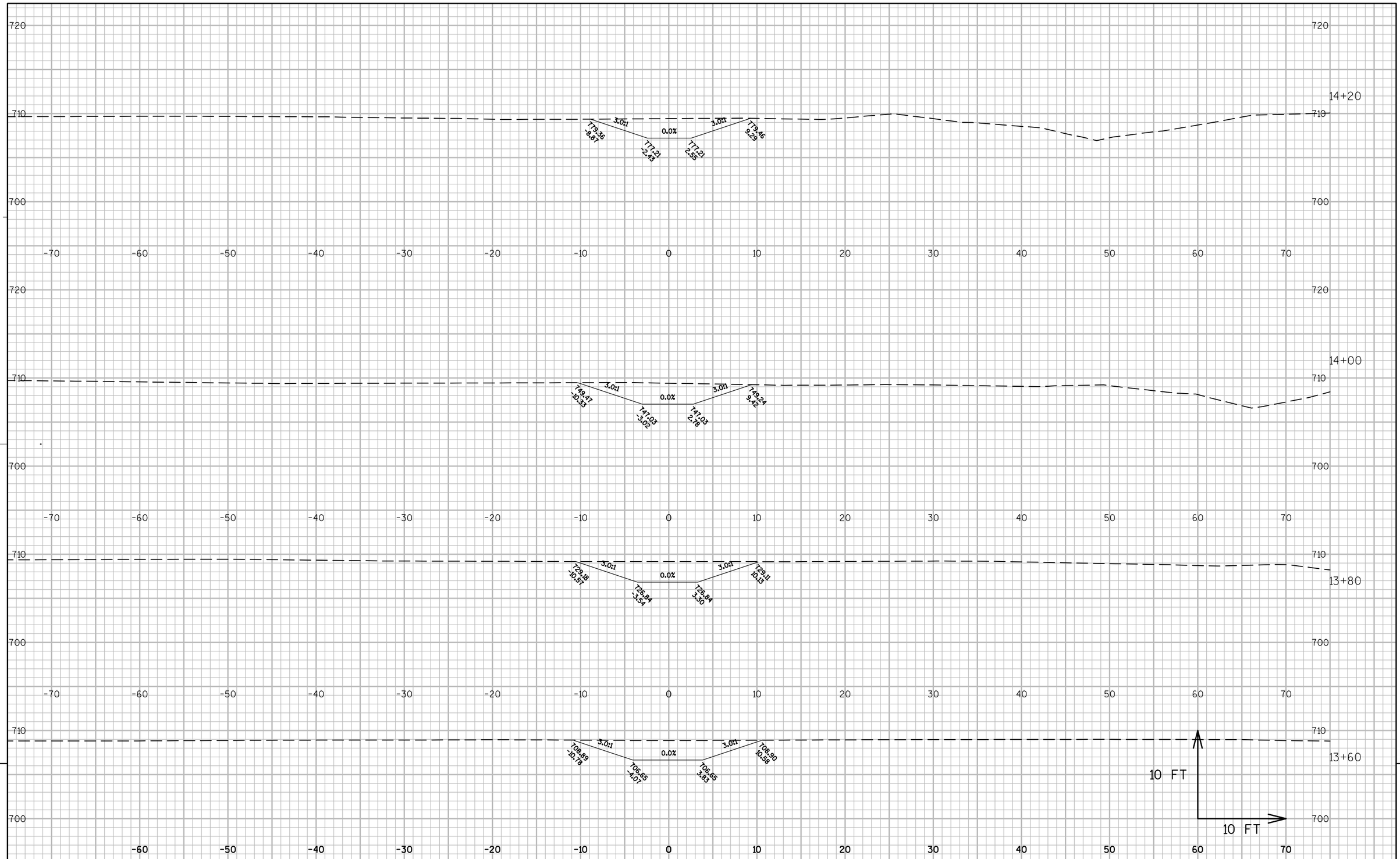
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

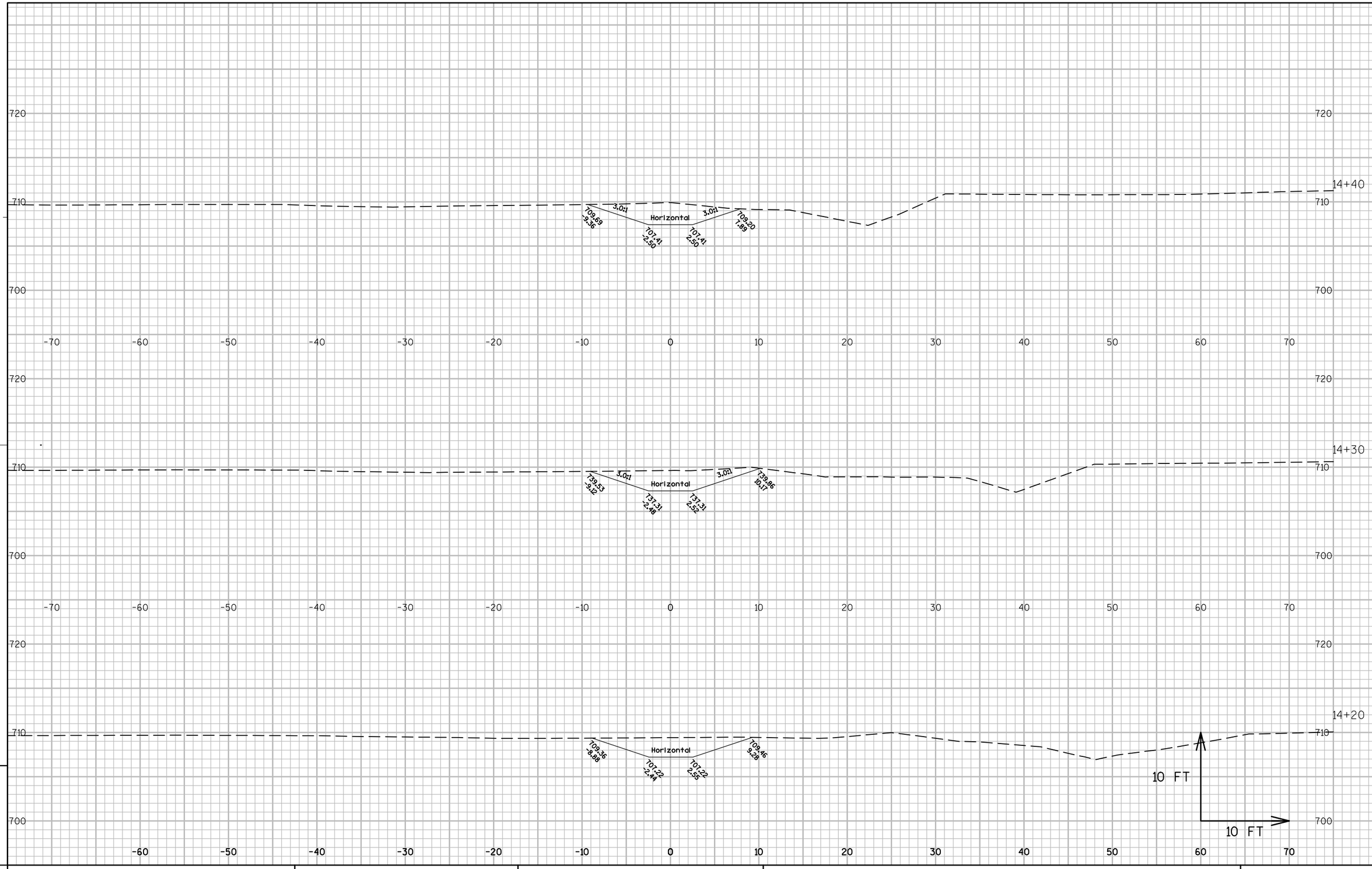
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET 129	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

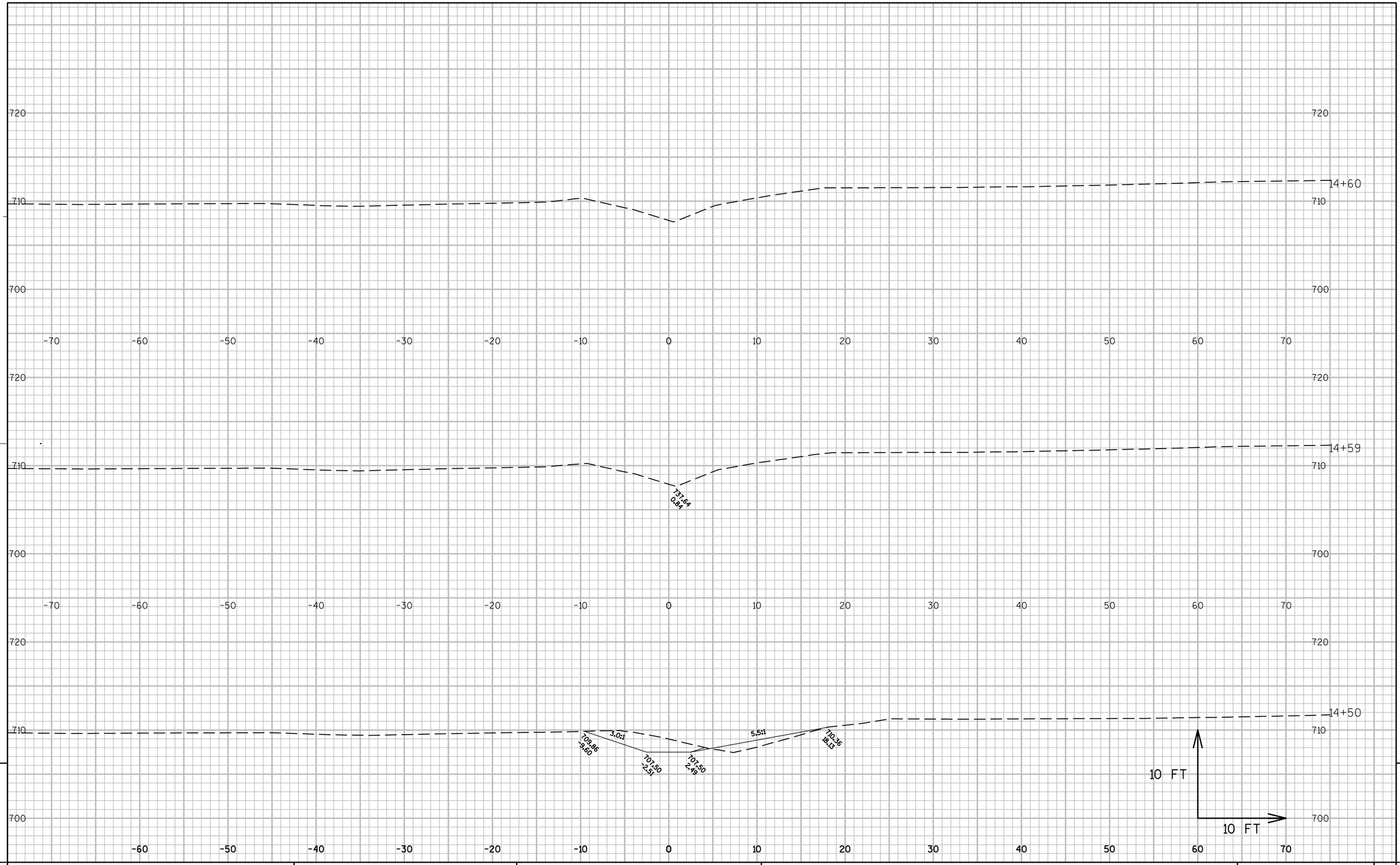
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET 130	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:27 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

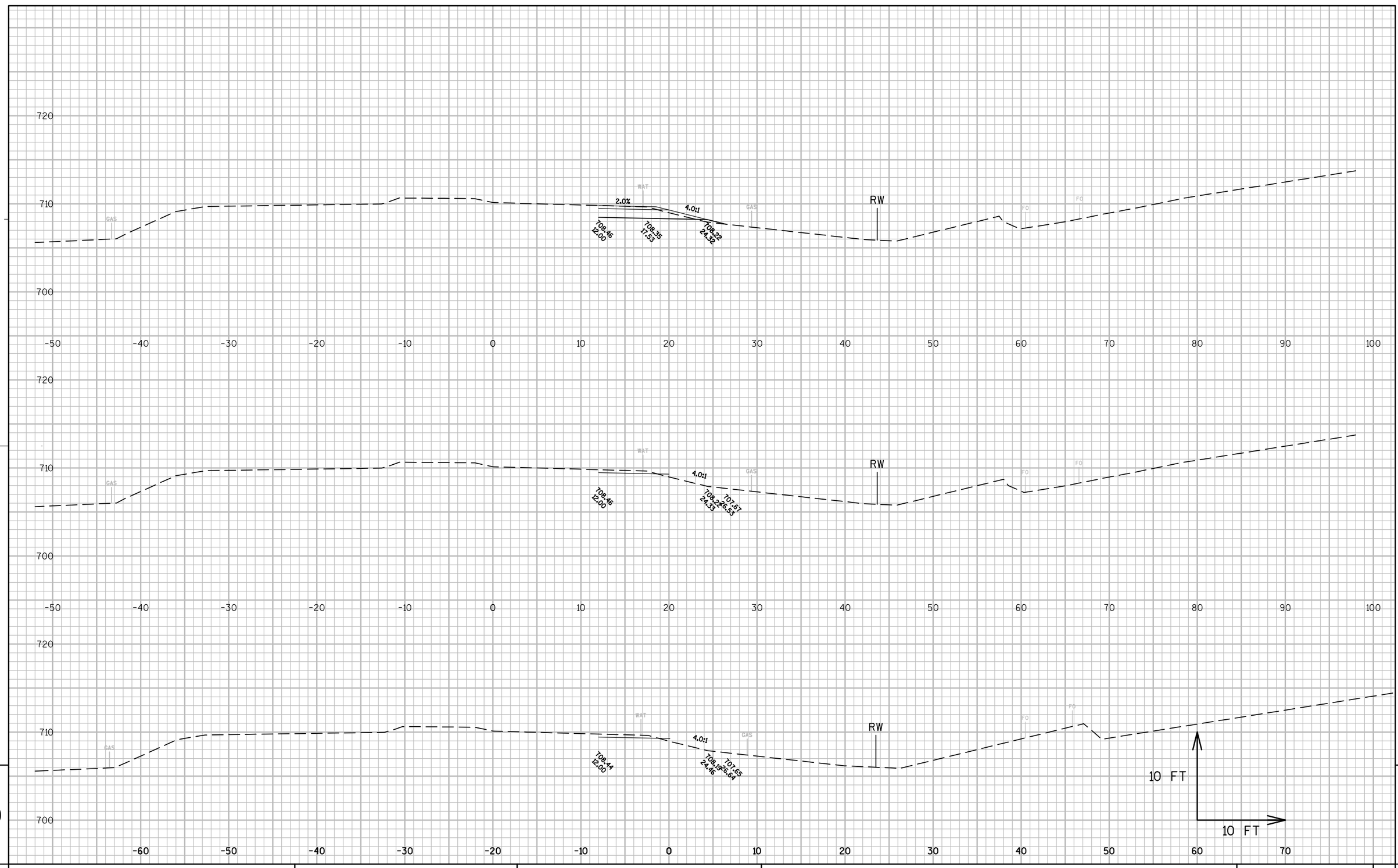
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: PROPOSED CREEK CHANNEL - DELLAMATER	SHEET	E

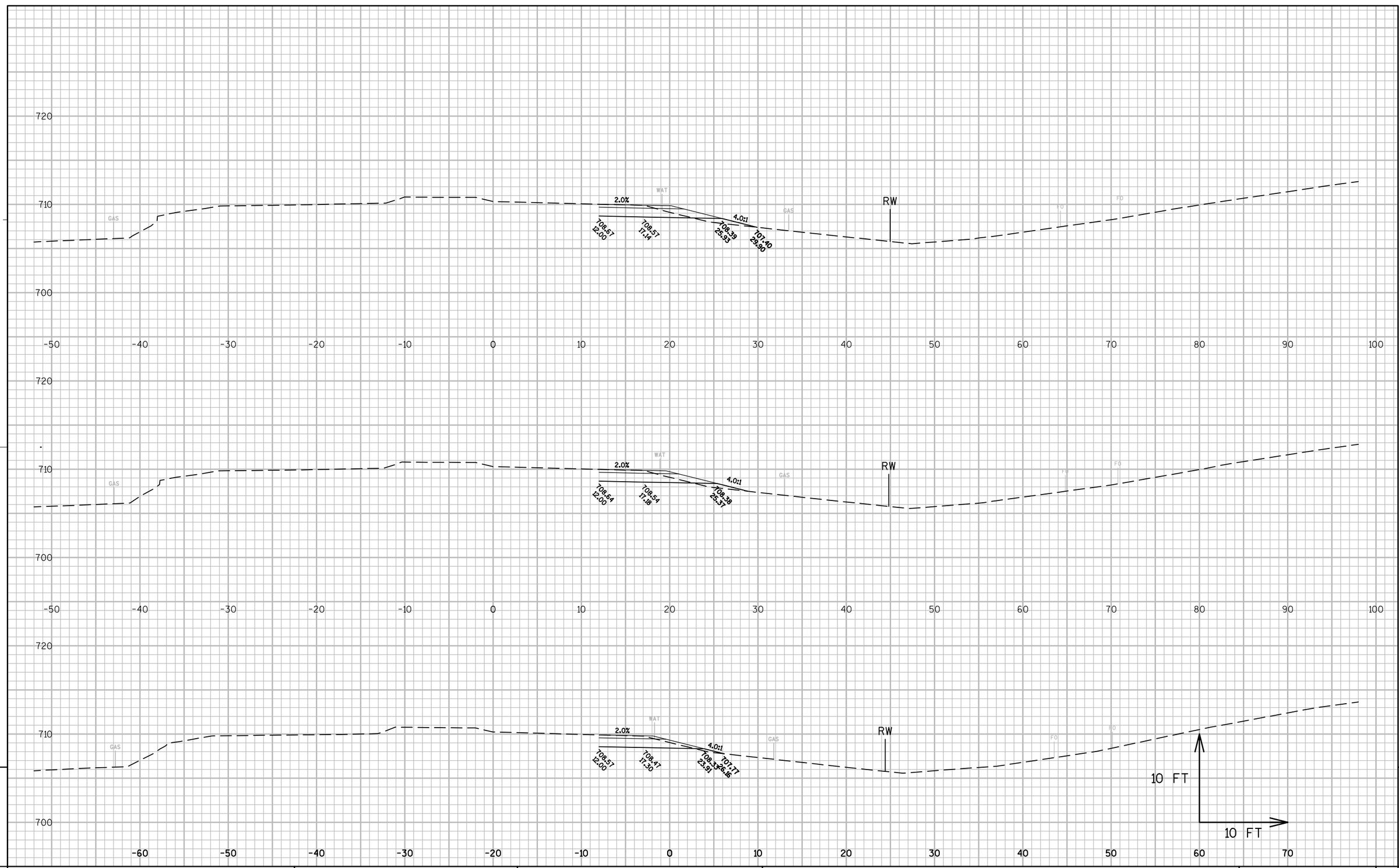
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\DELLAMATERHOLLOWCREEK-XS.DWG PLOT DATE : 7/10/2013 3:28 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:37 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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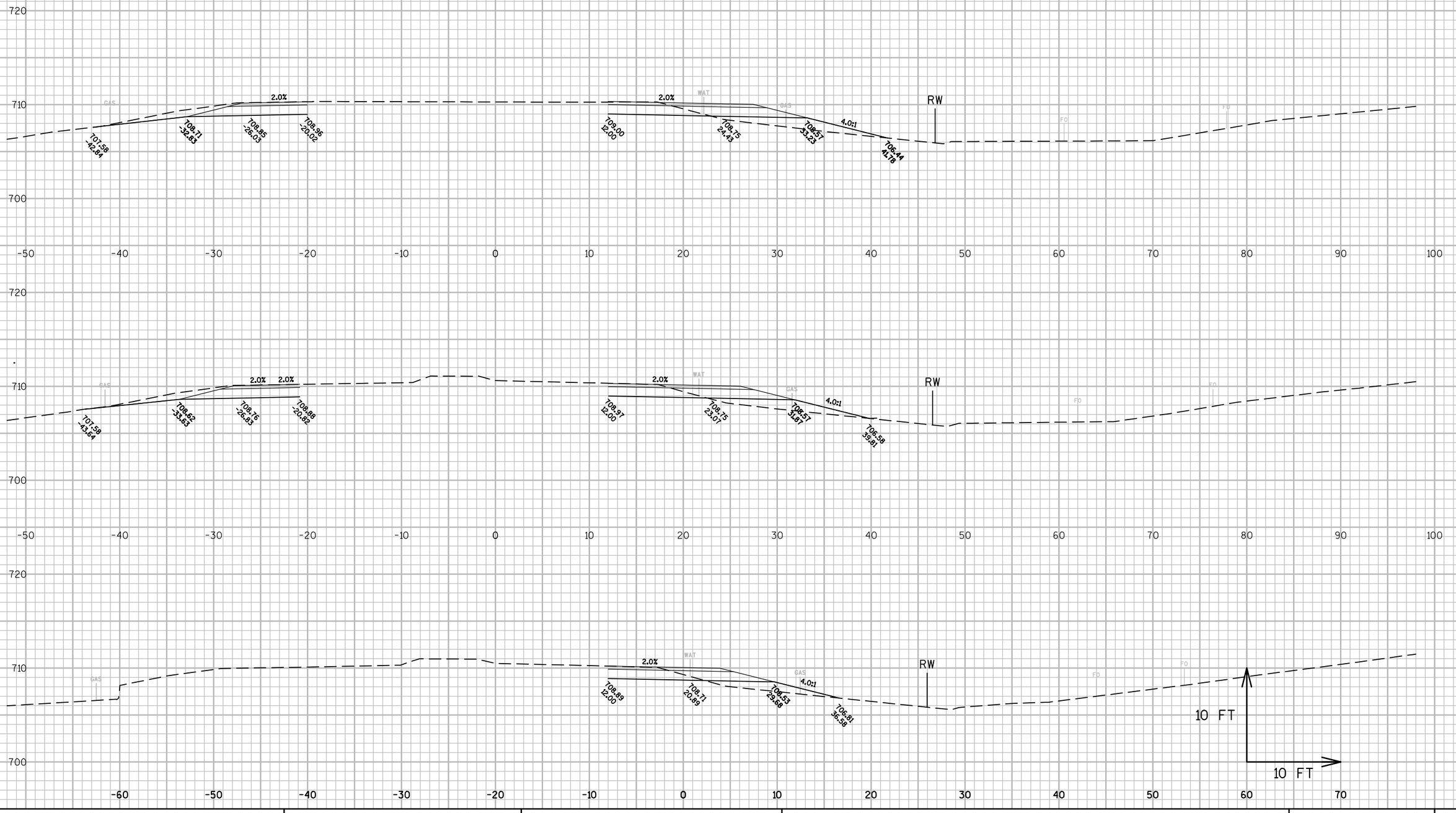
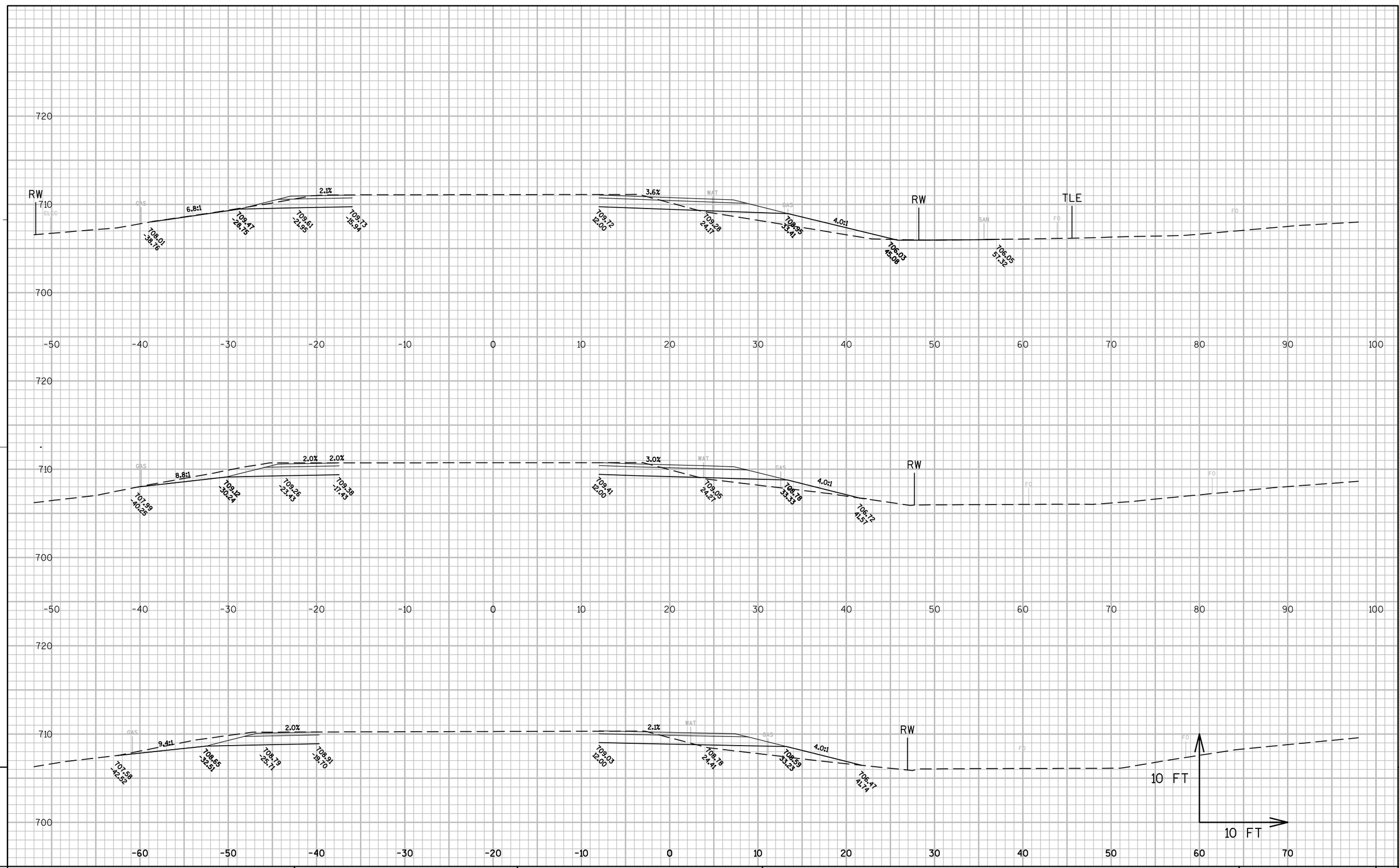
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:37 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

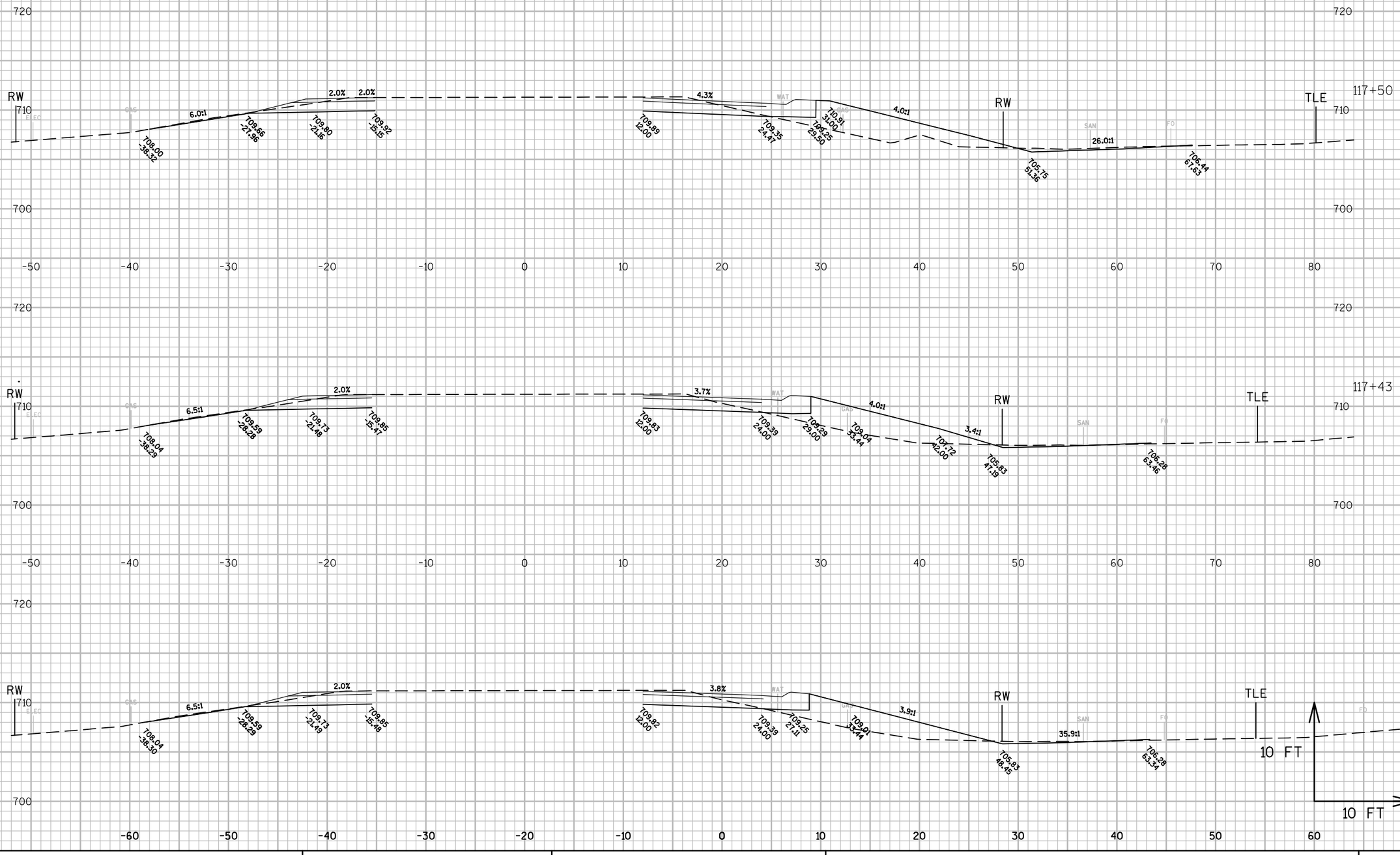
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:37 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

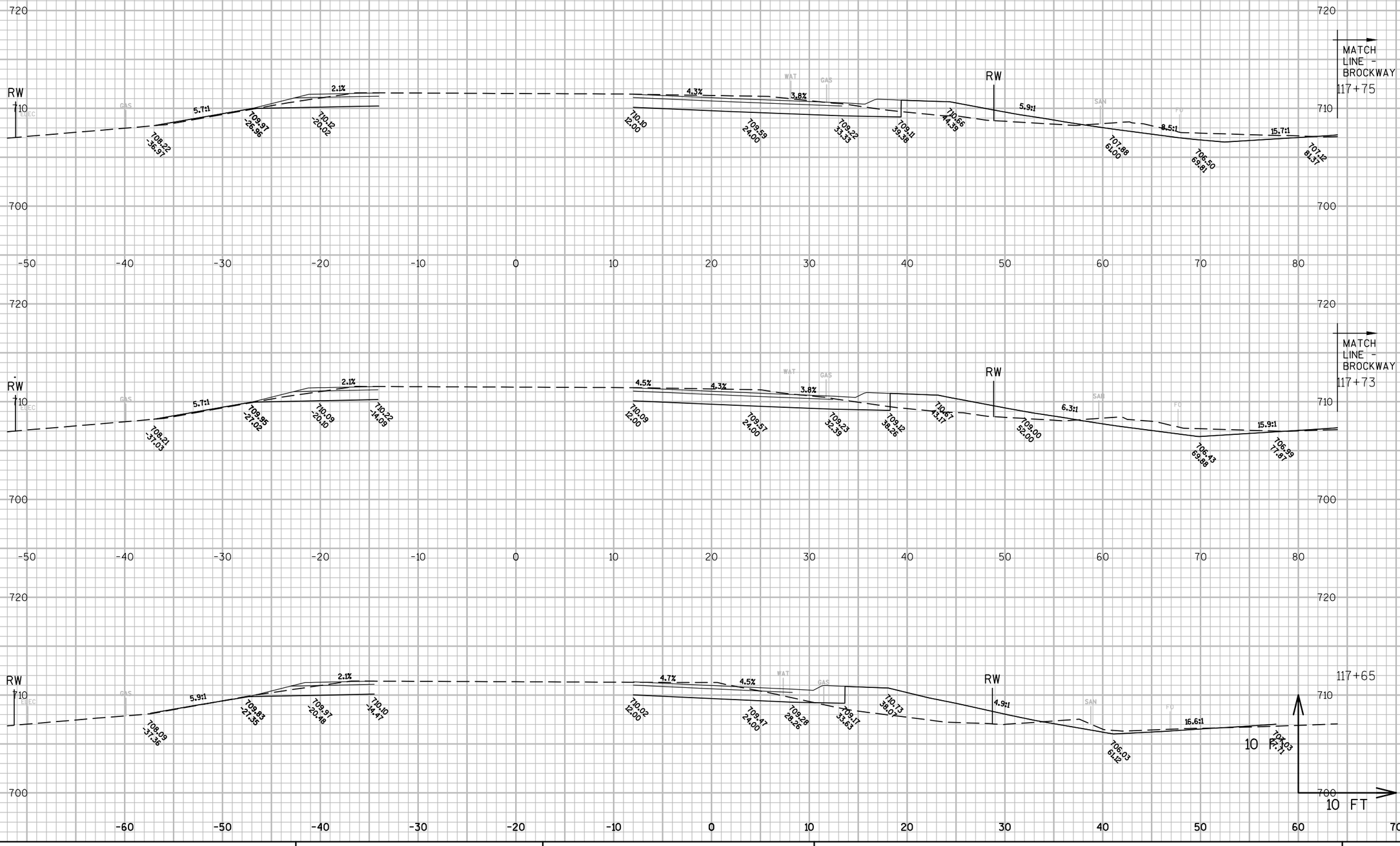
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:37 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



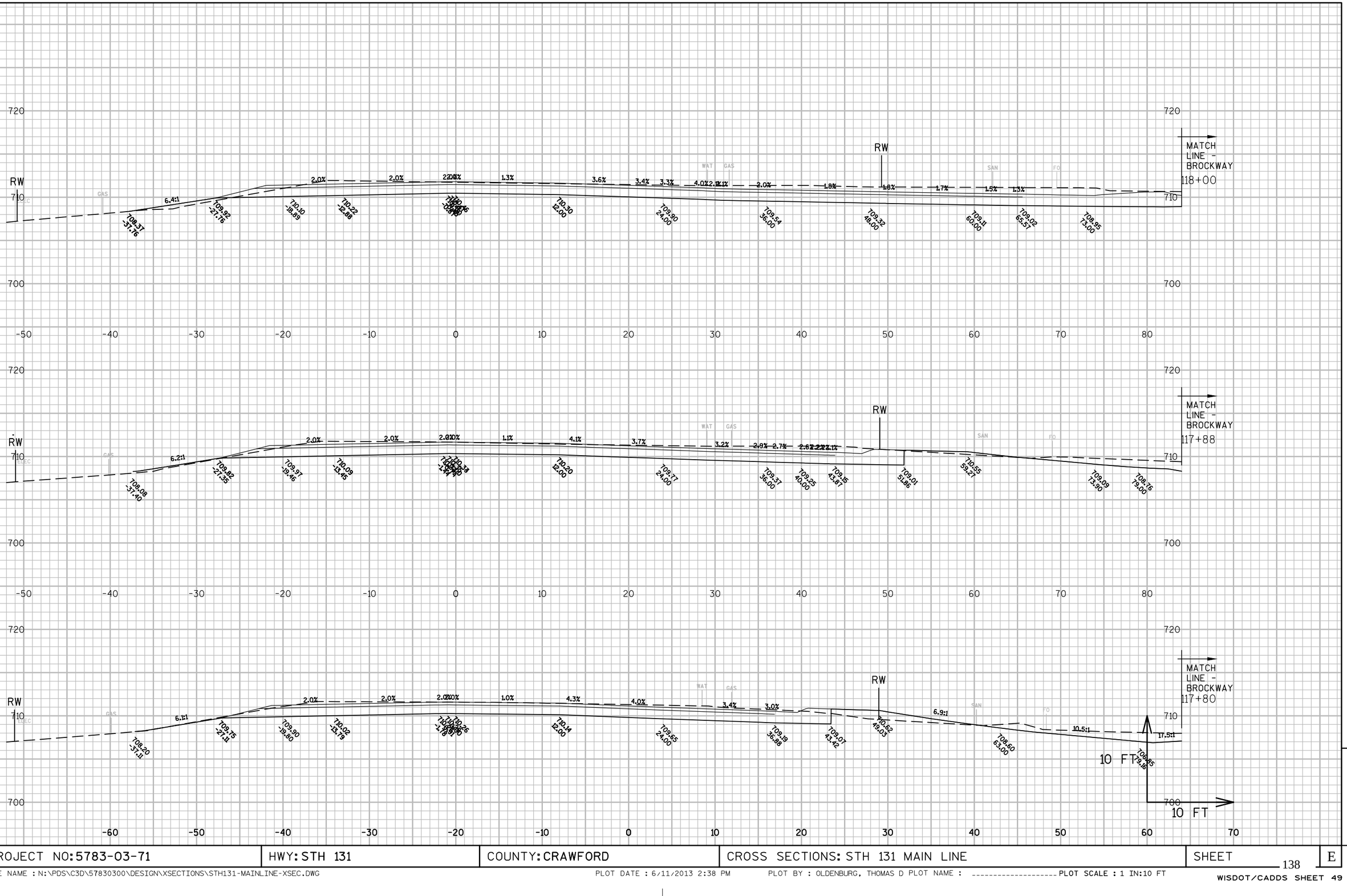
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:37 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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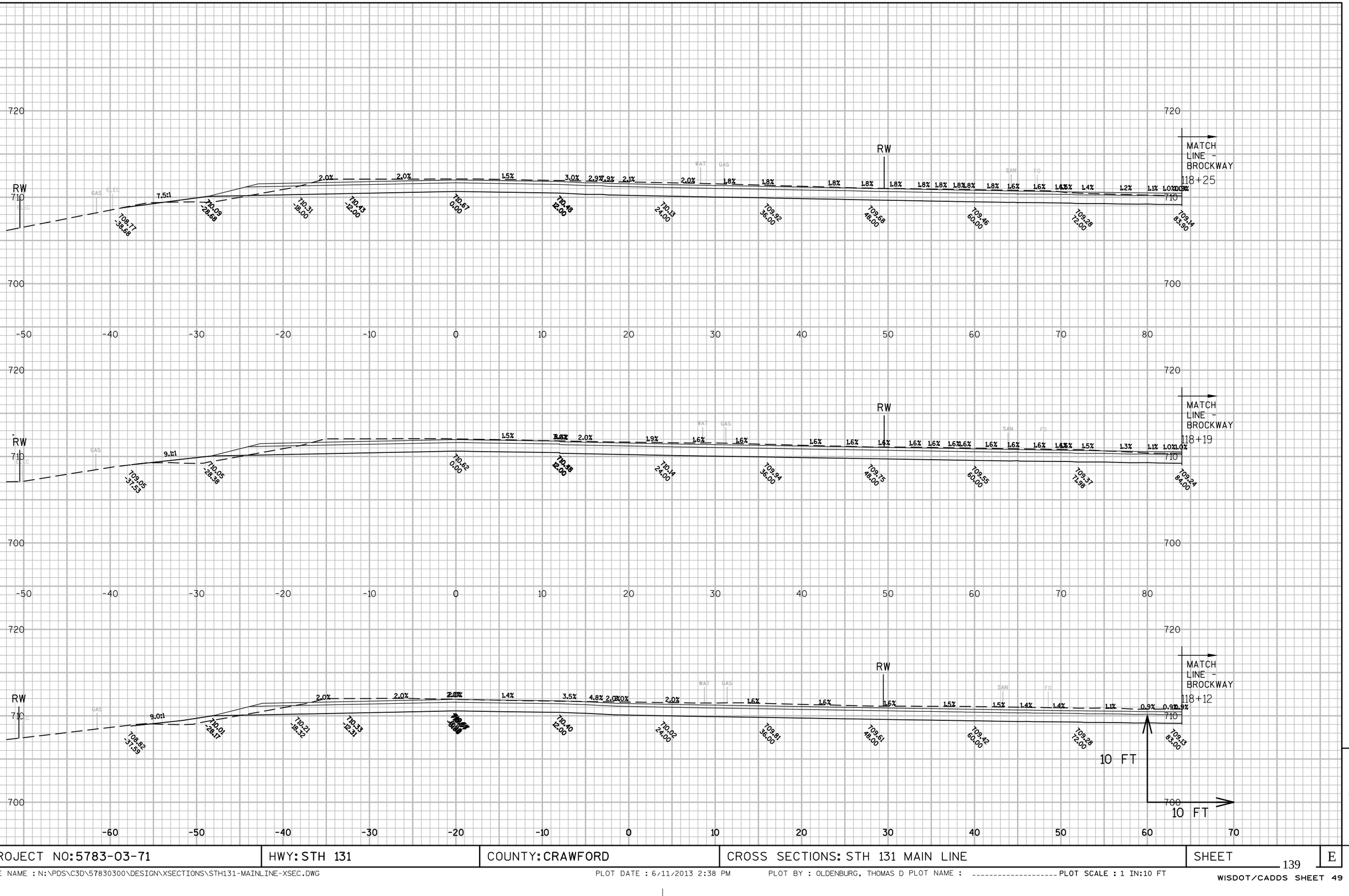
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET 138	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

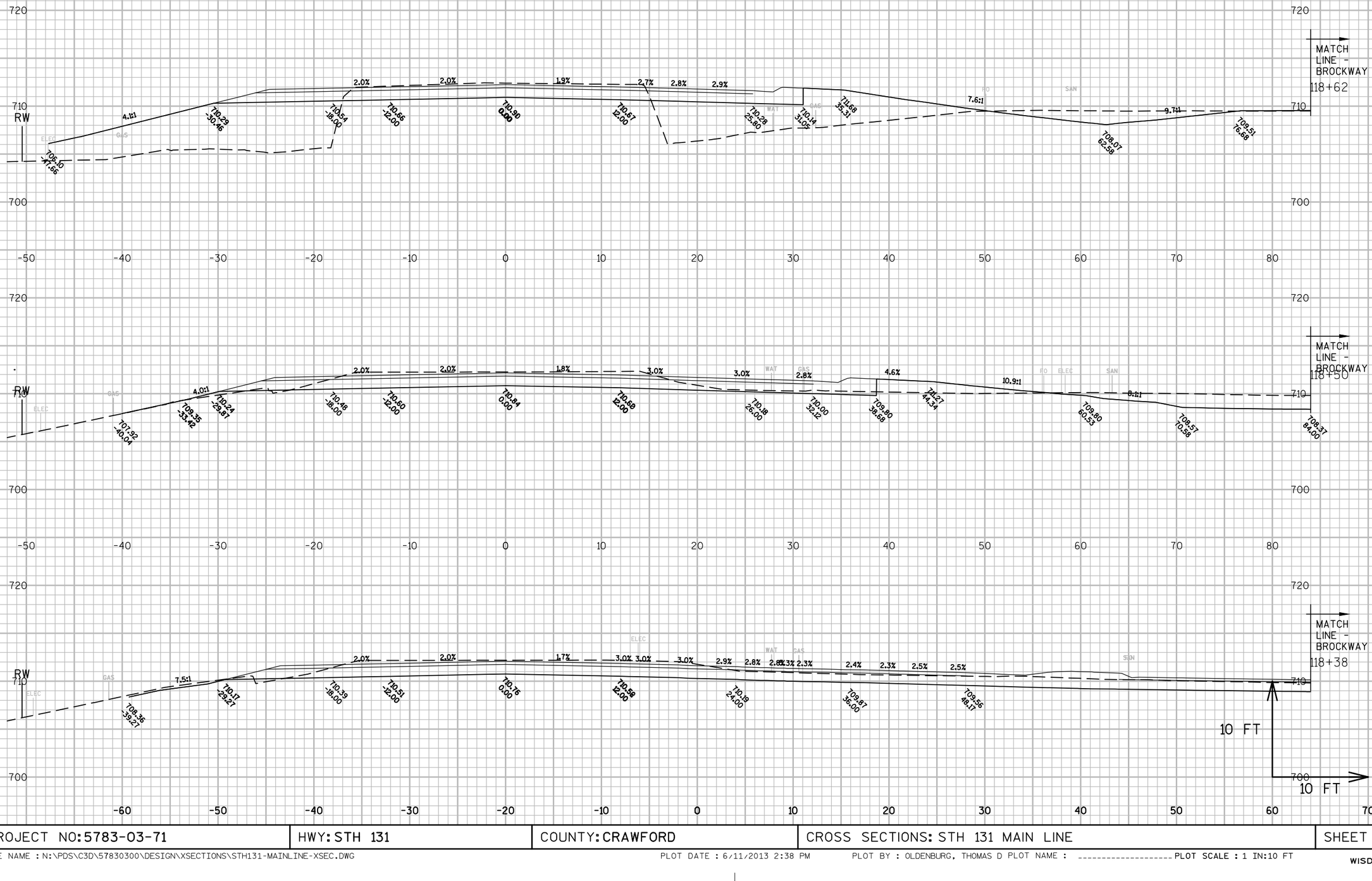
WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET 139	E

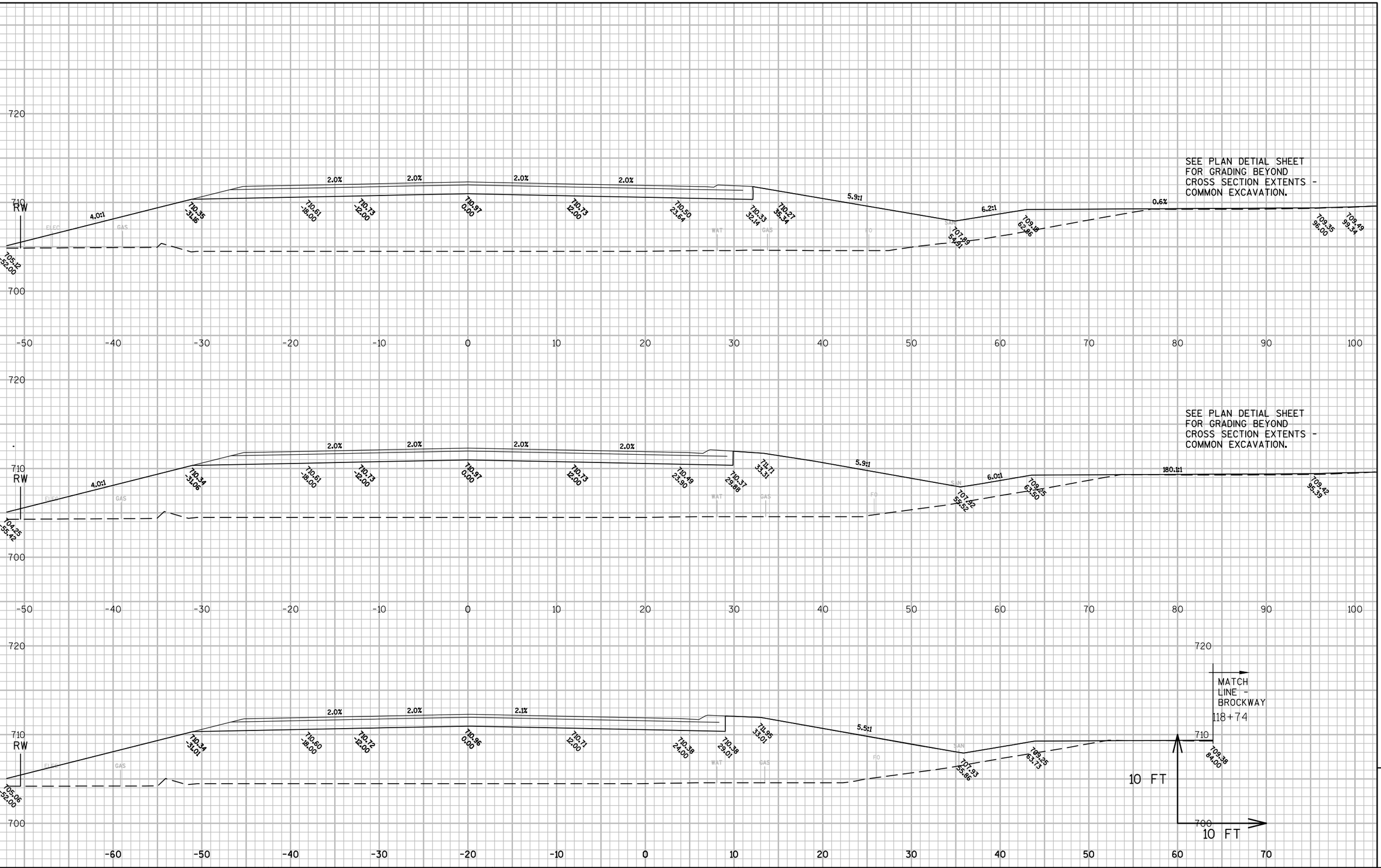
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET 140	E

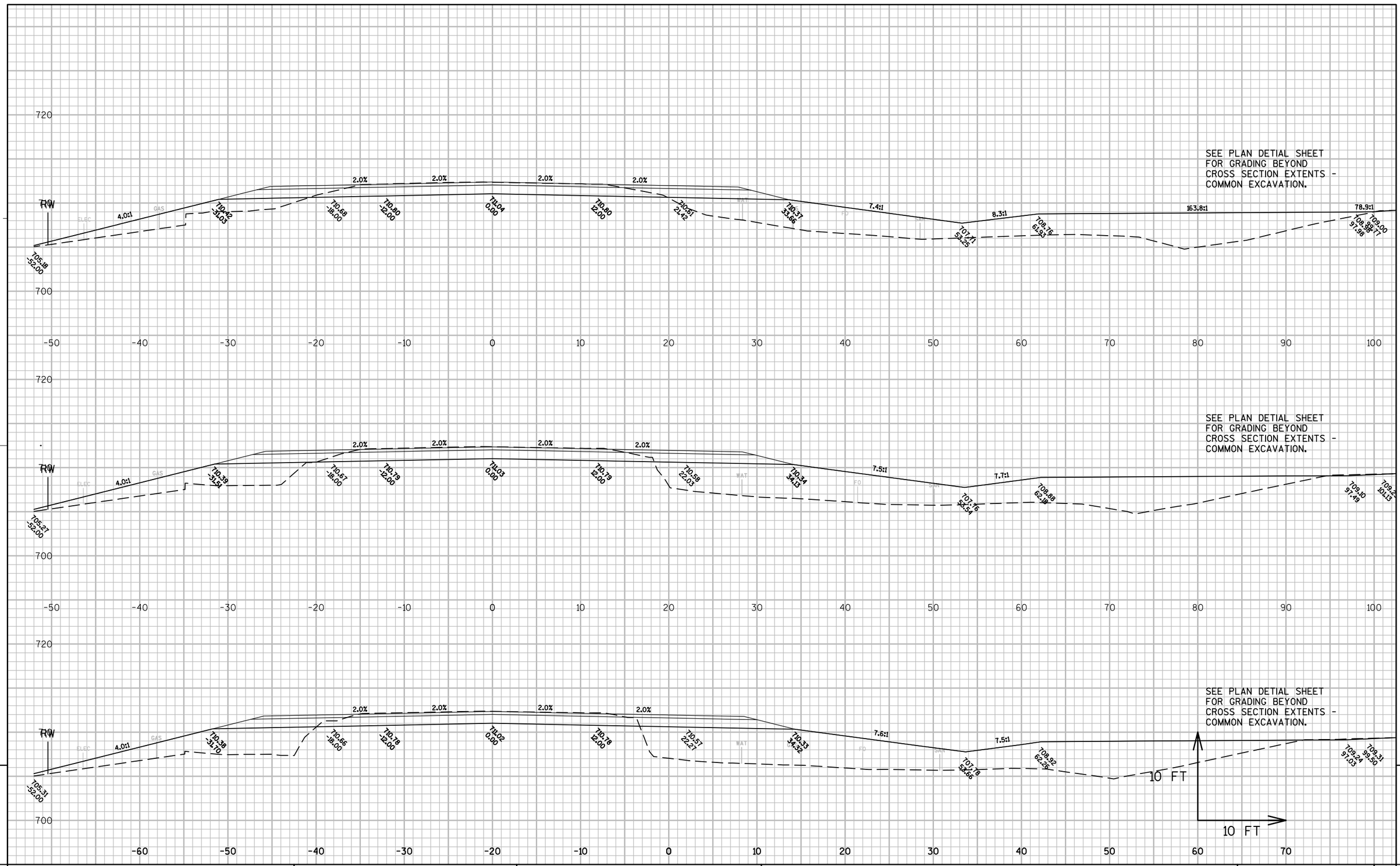
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET 141	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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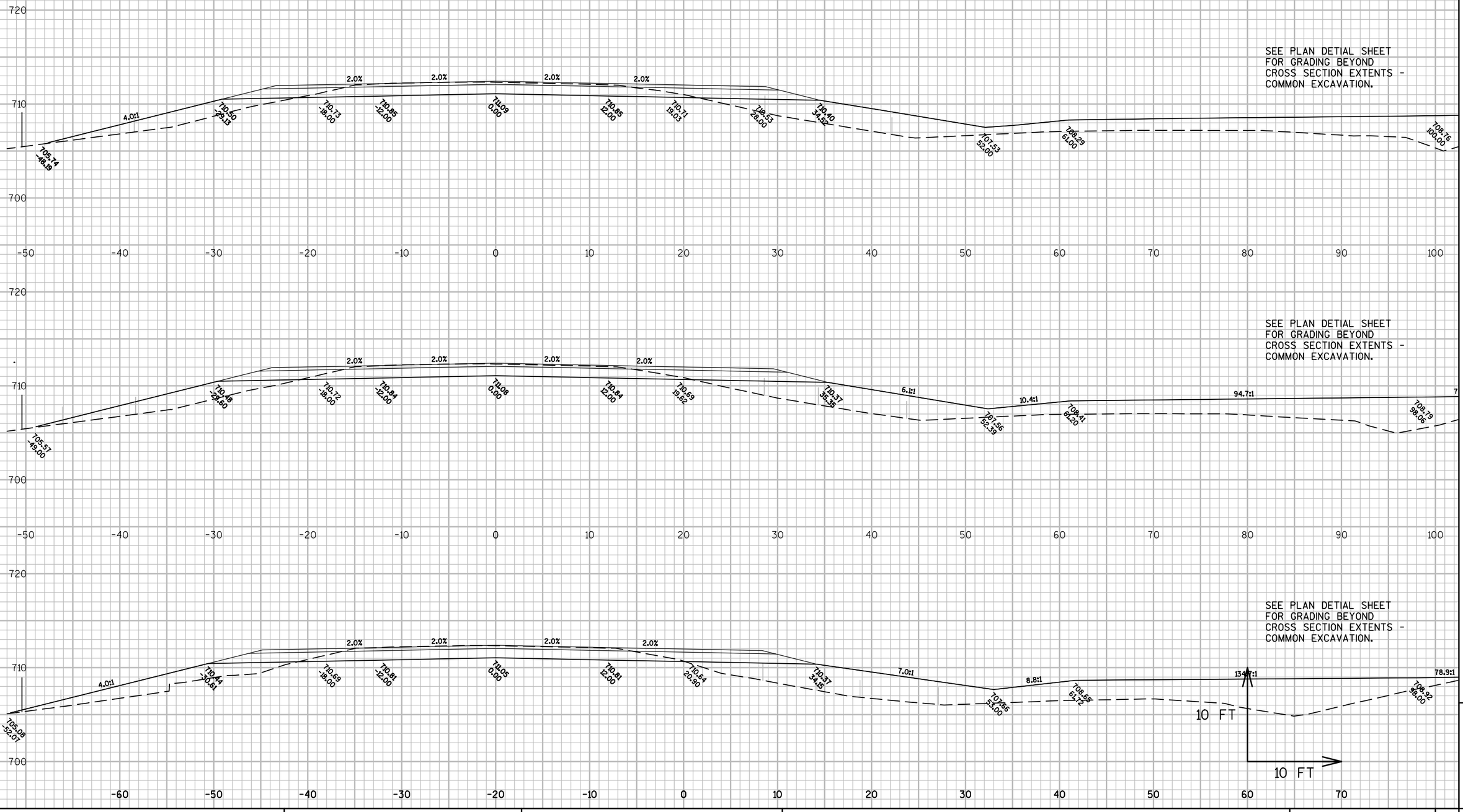
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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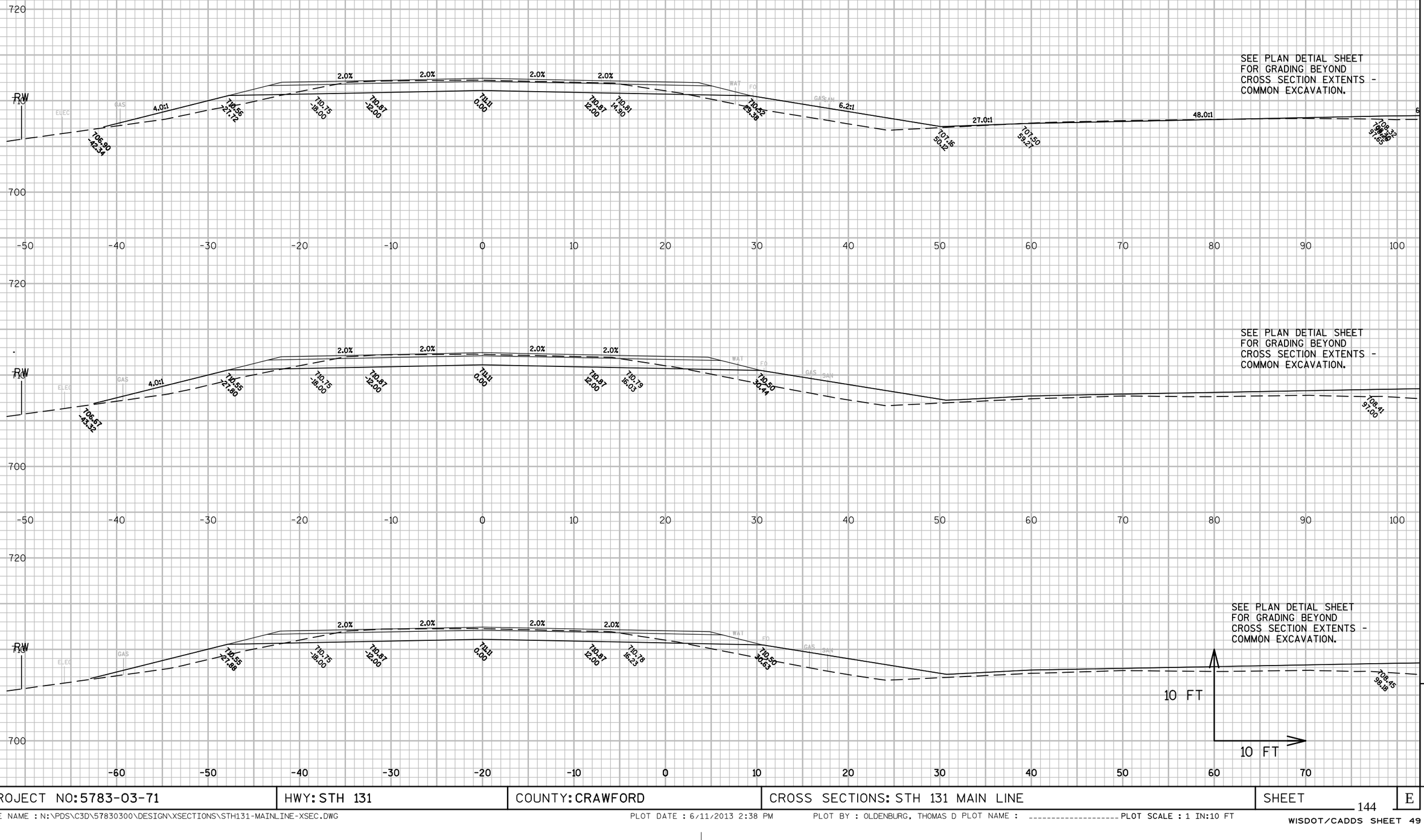
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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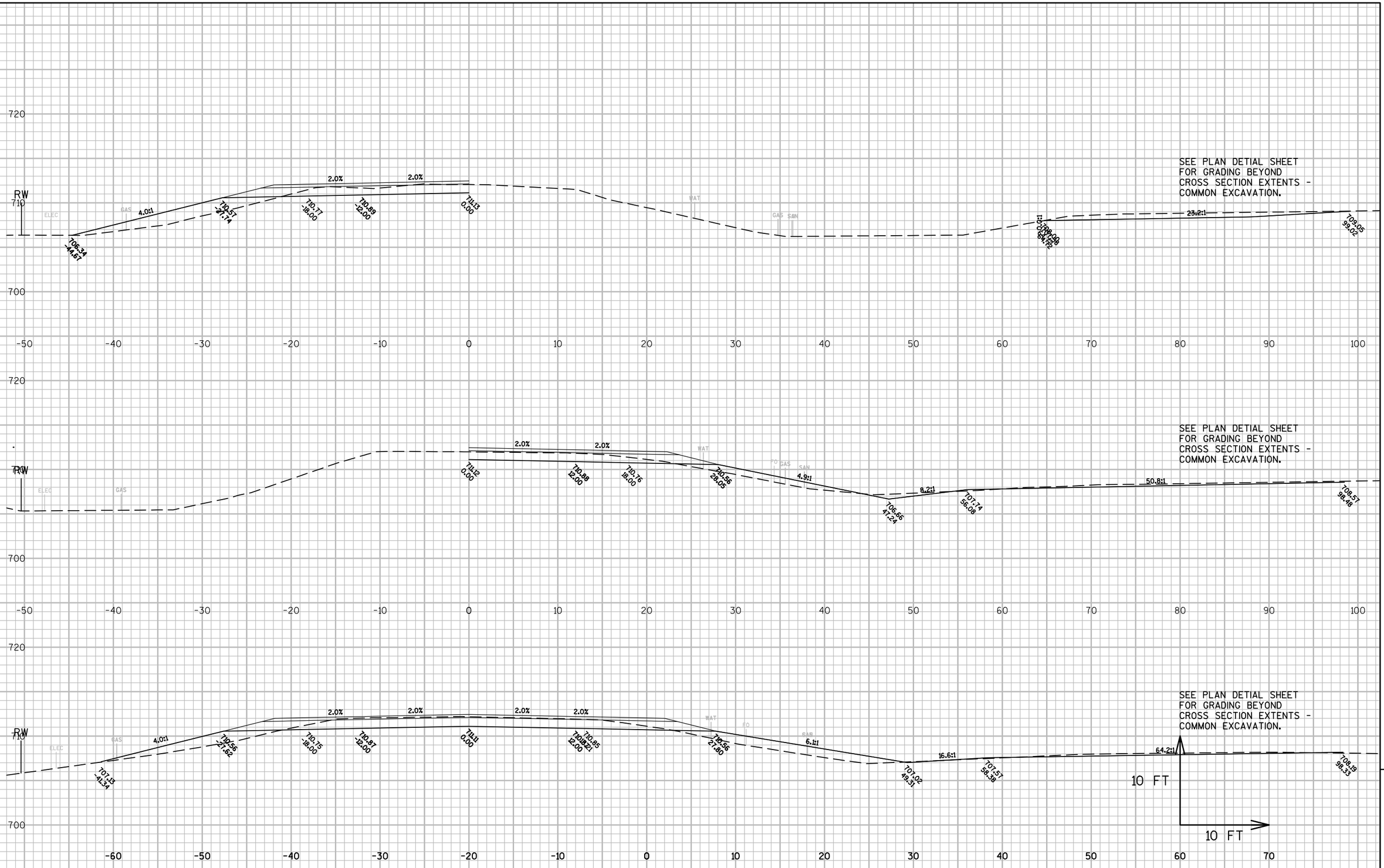
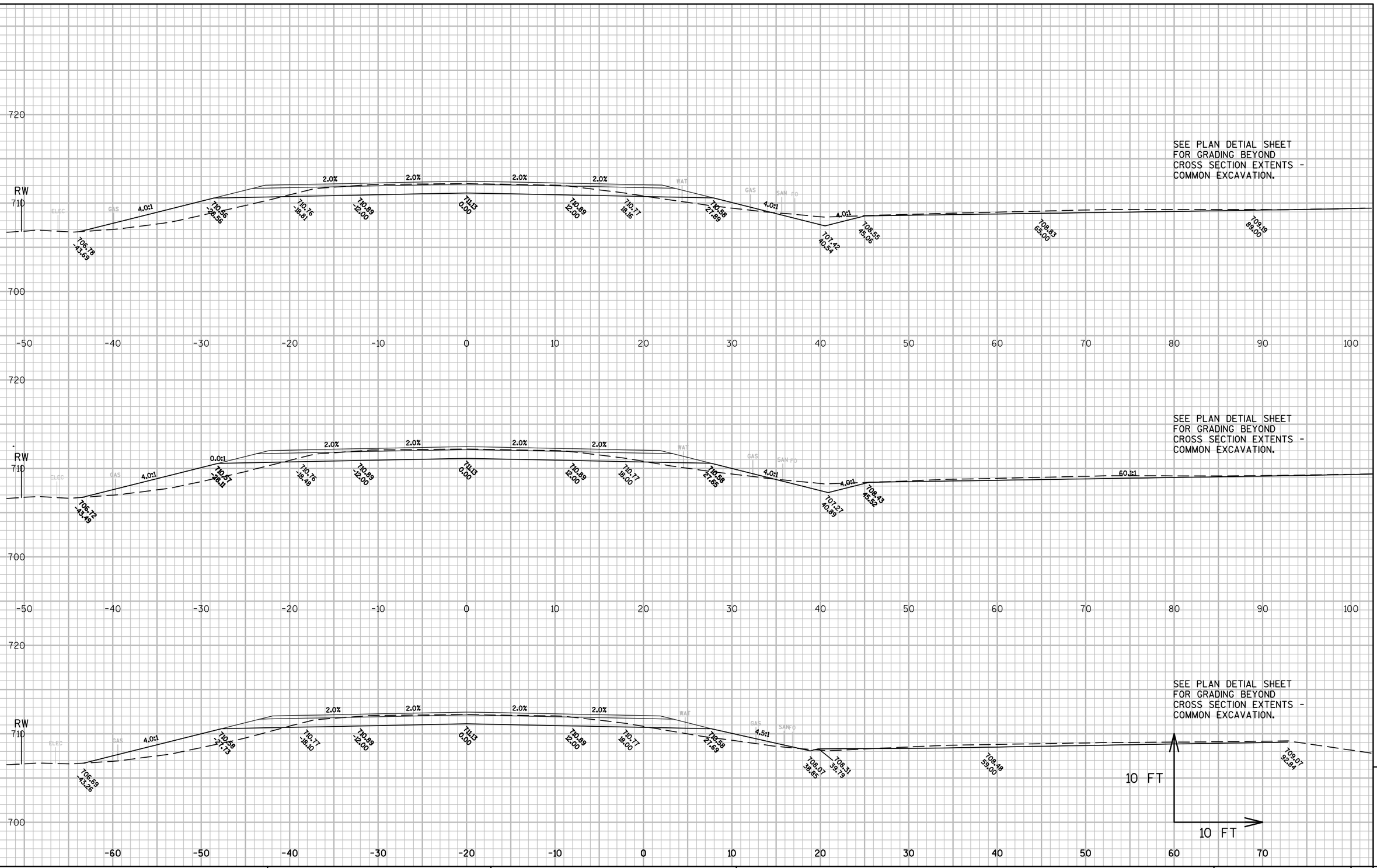
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET 144	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E



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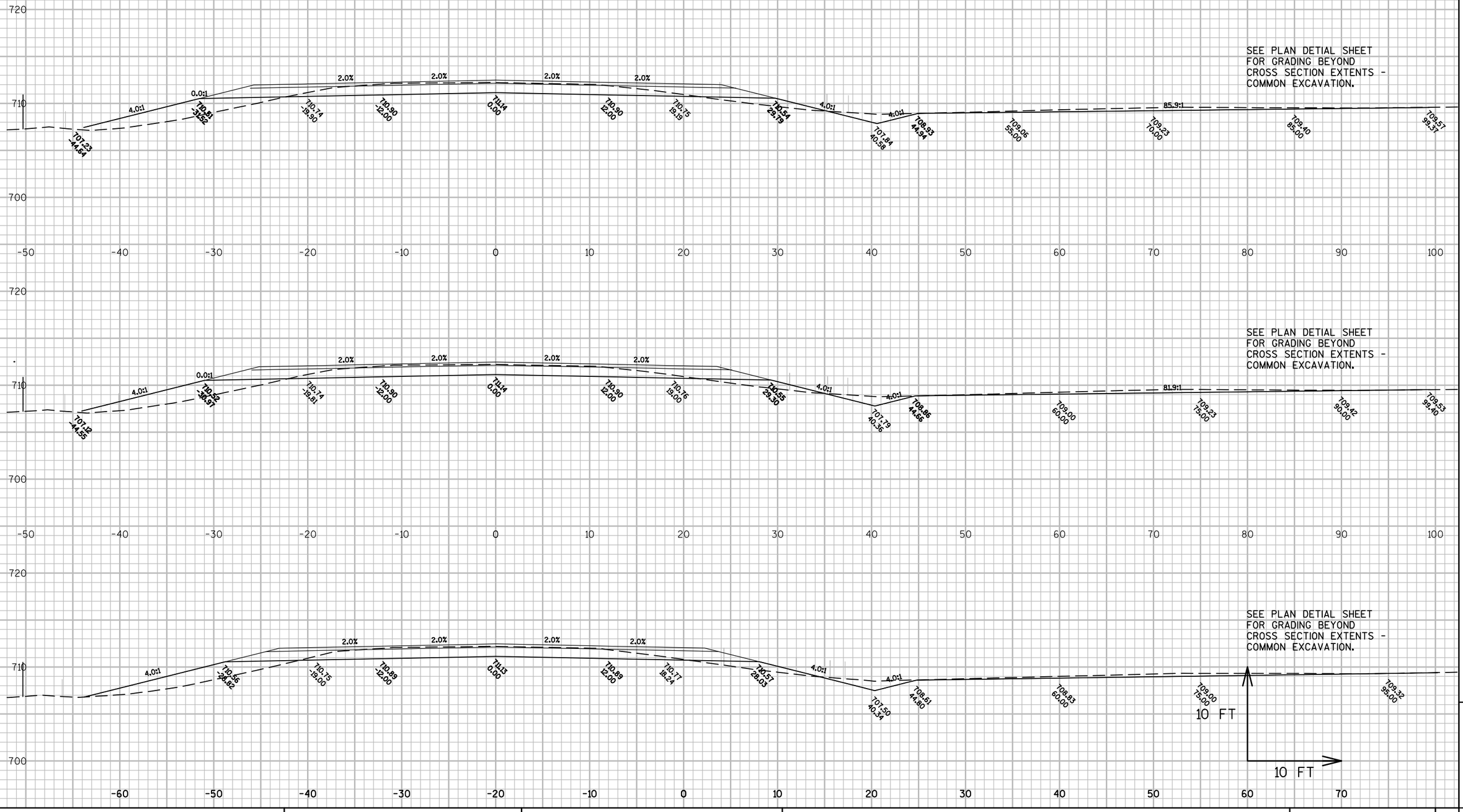
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:38 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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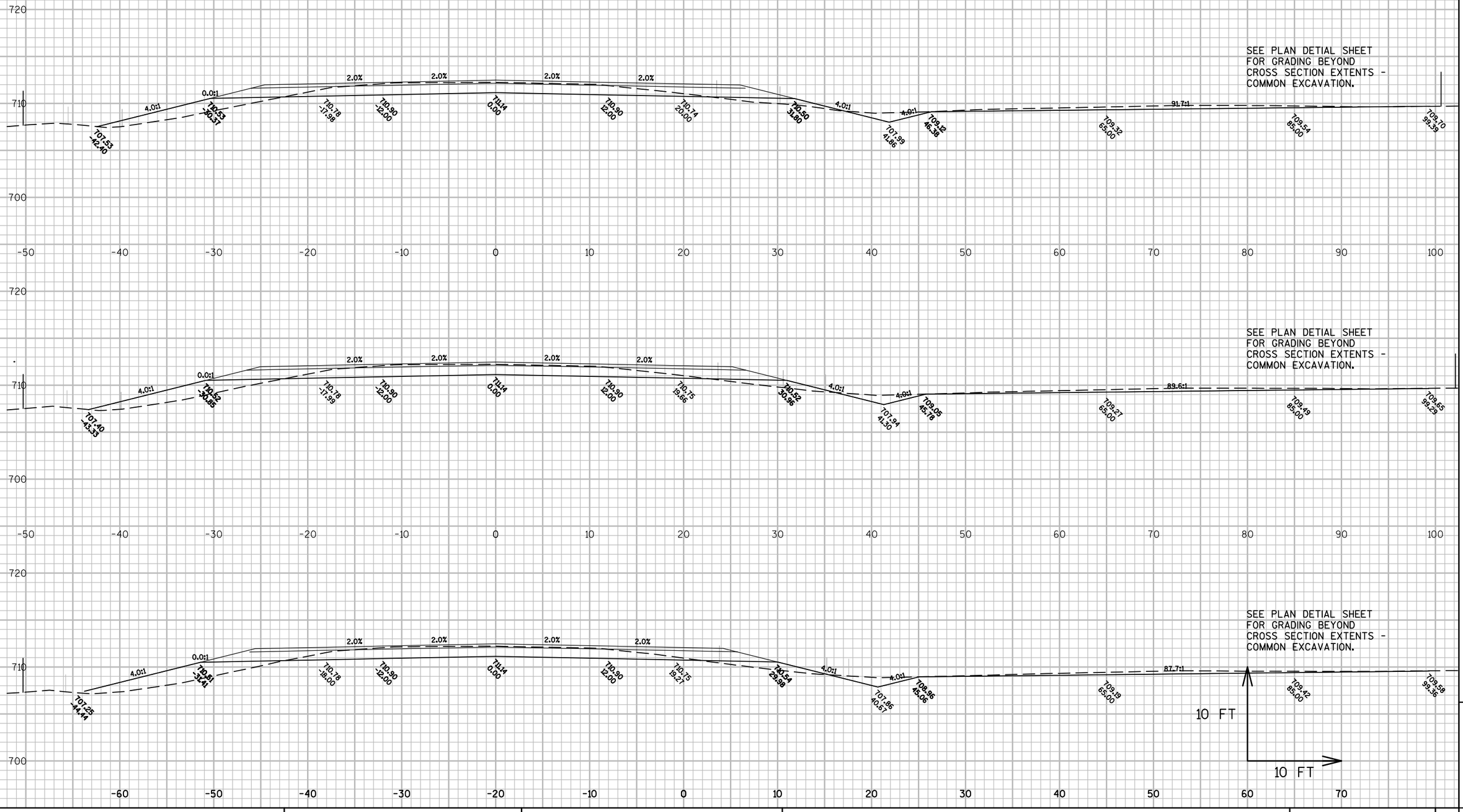
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

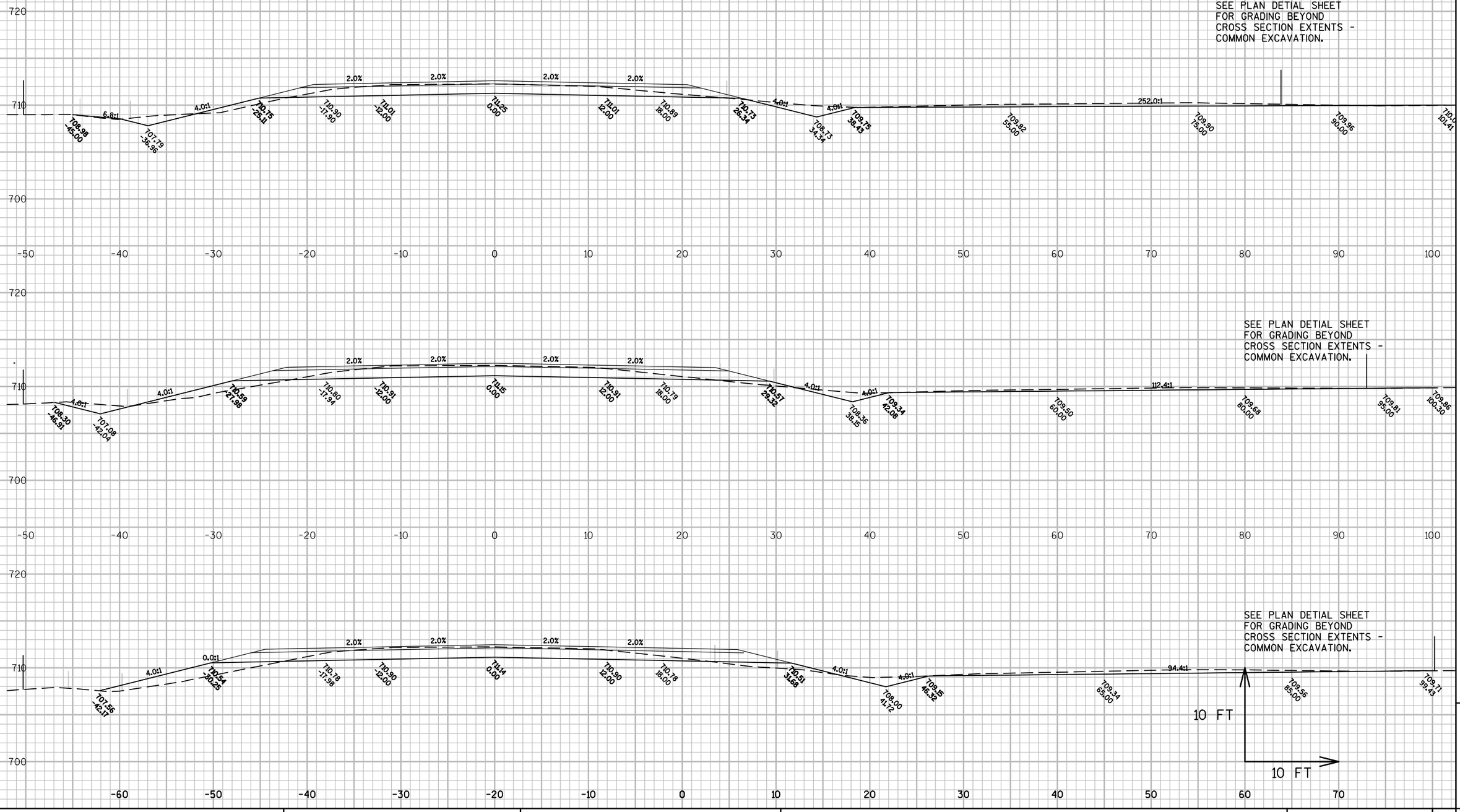
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:39 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:39 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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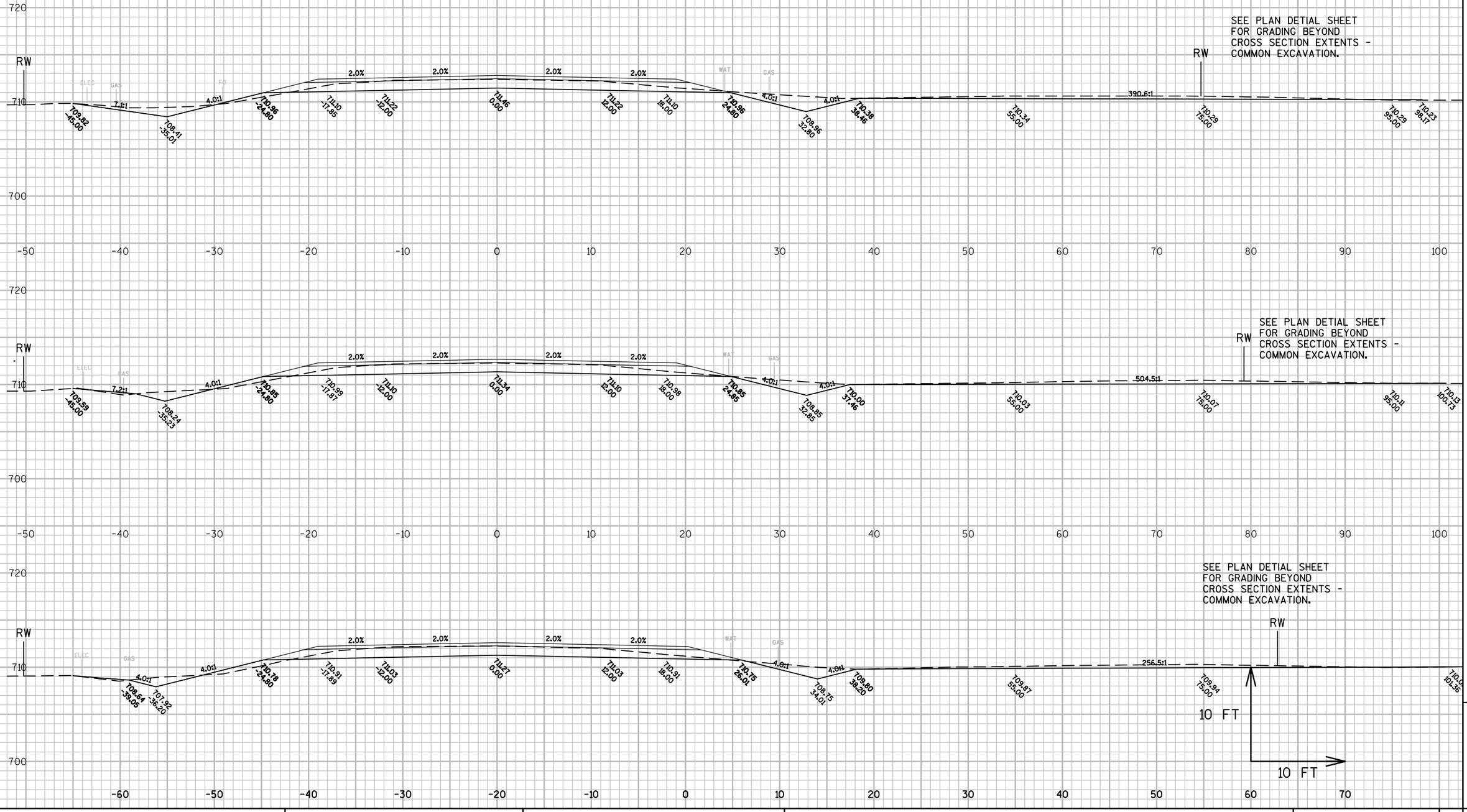
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

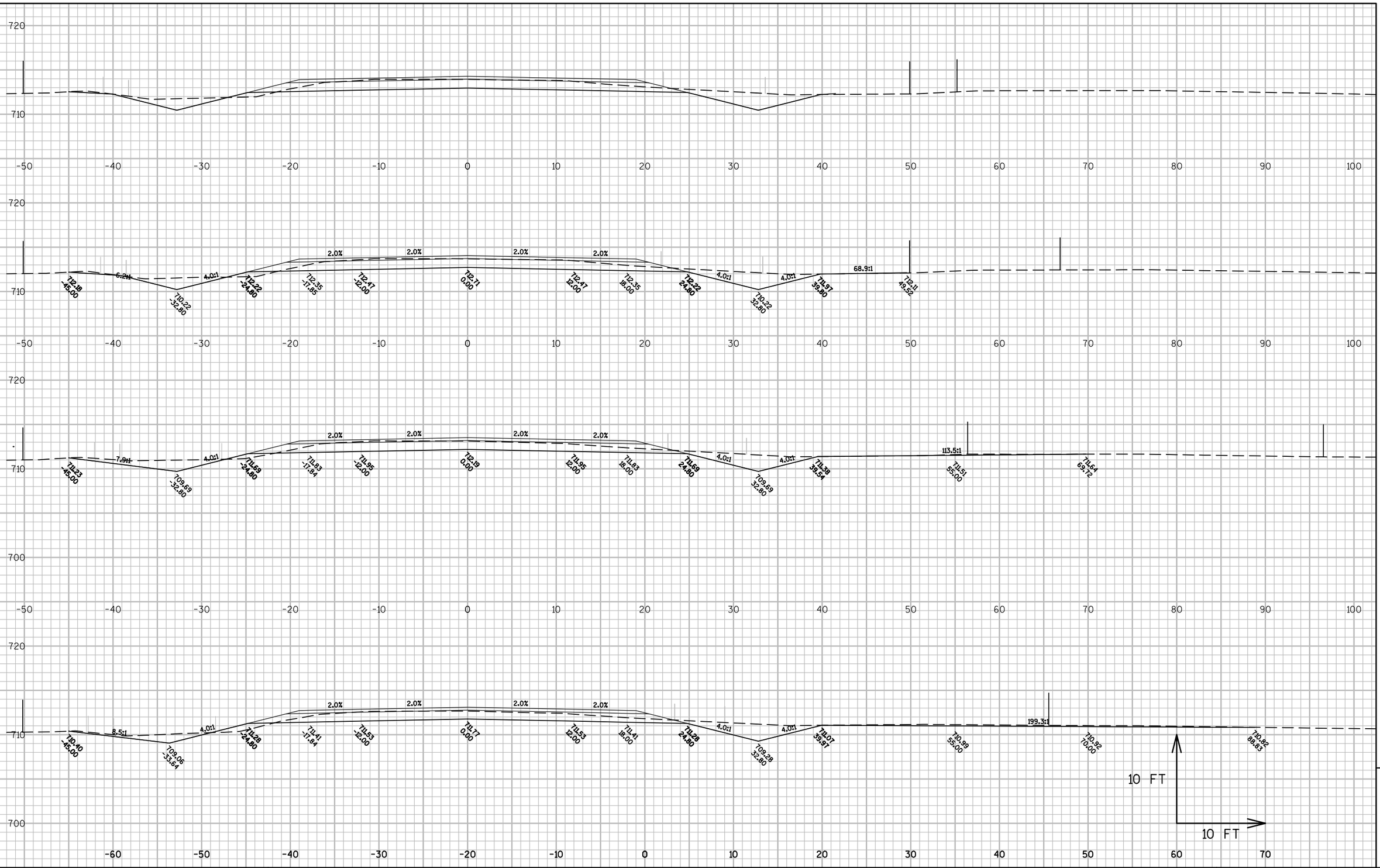
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:39 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET 150	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:39 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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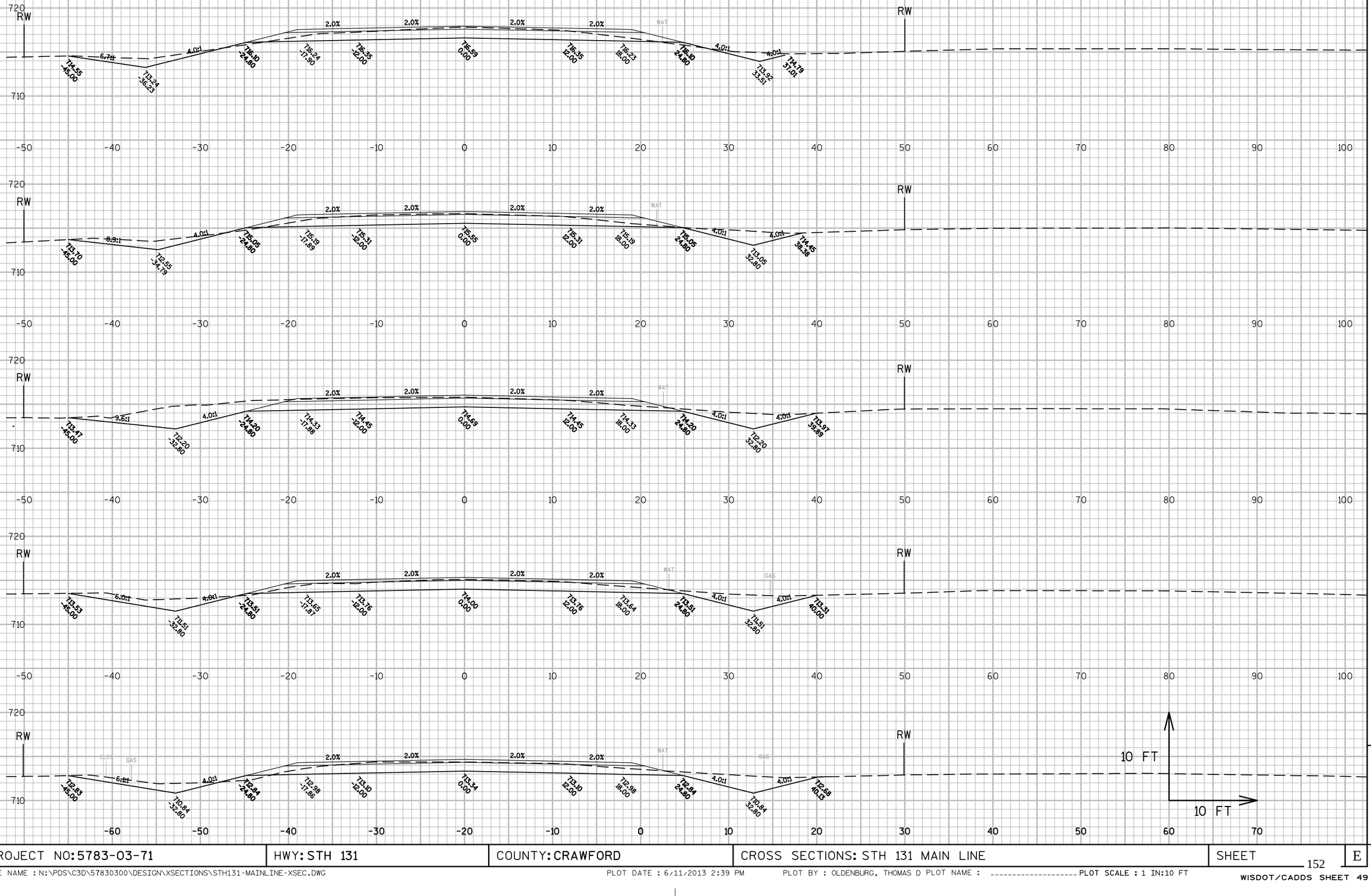
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

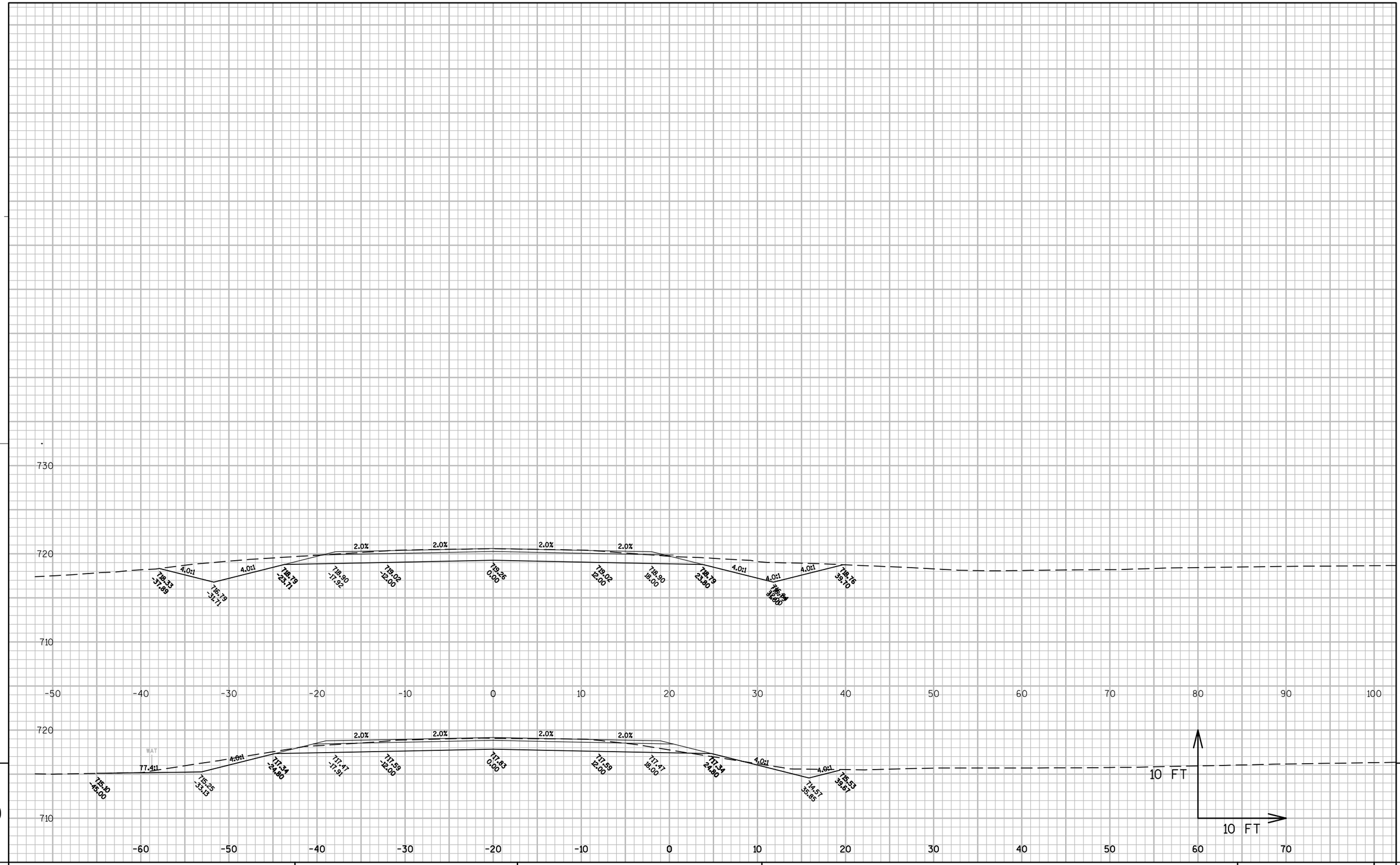
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:39 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET 152	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:39 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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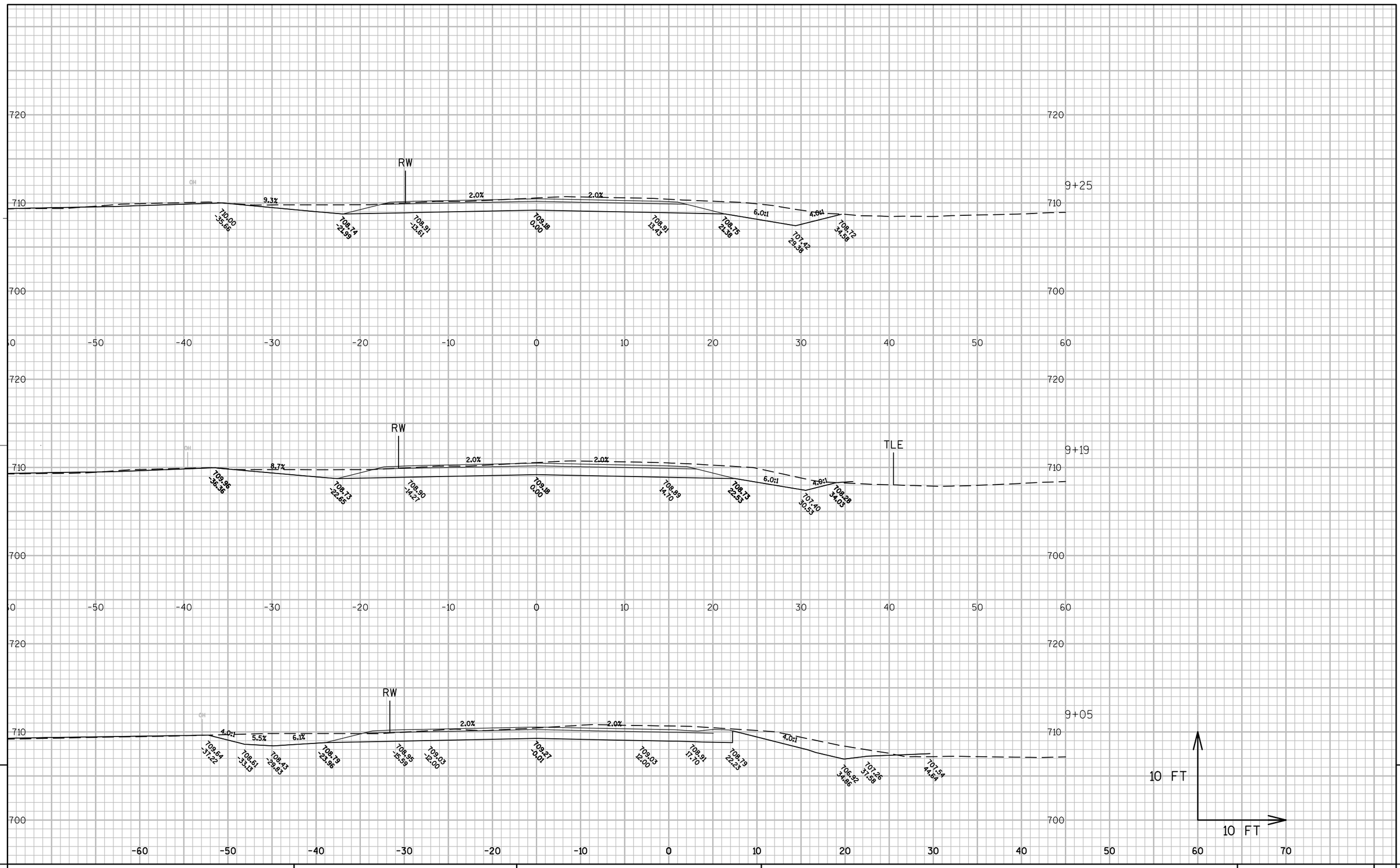
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: STH 131 MAIN LINE	SHEET	E

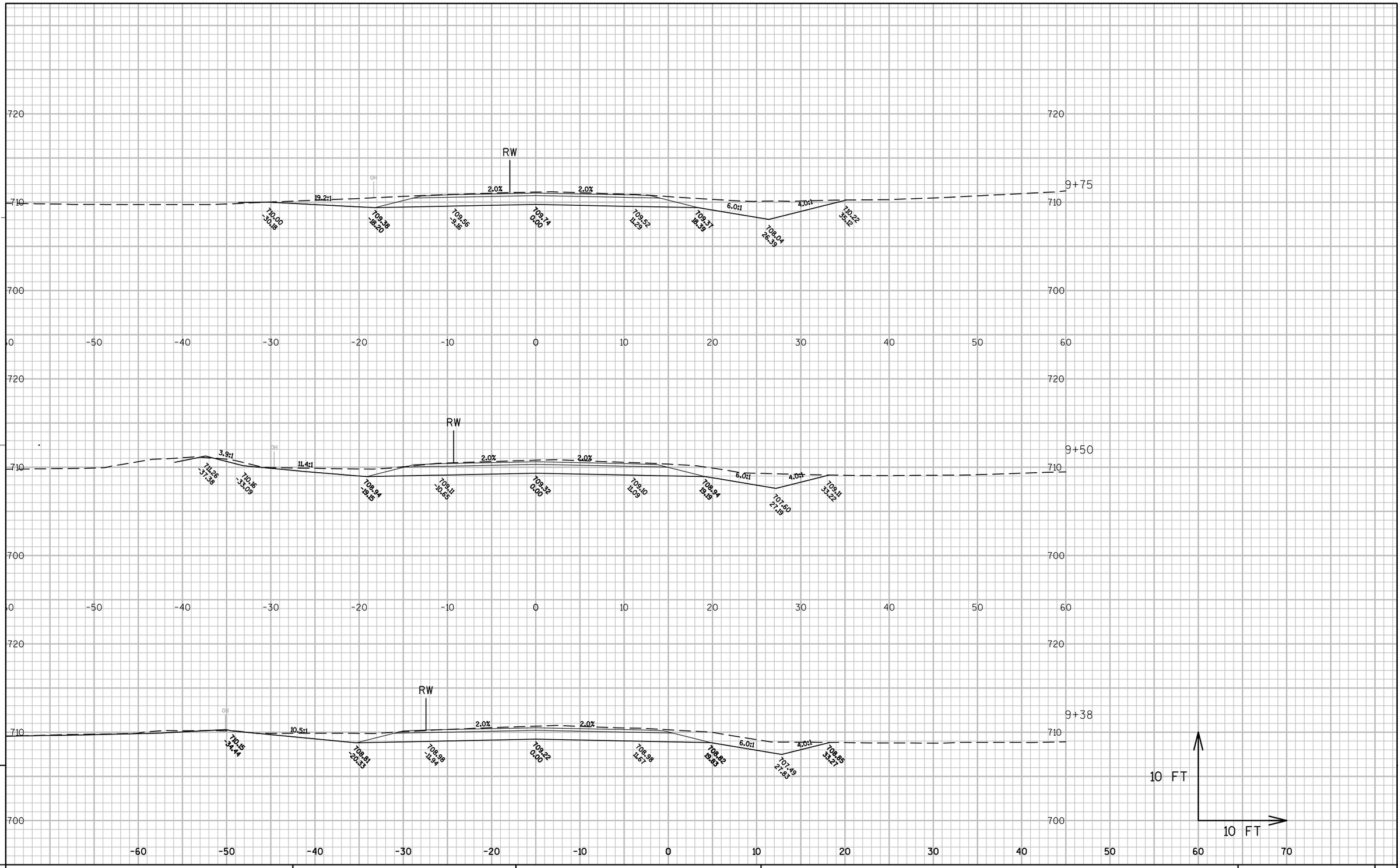
FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/11/2013 2:39 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: BROCKWAY DRIVE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/12/2013 1:10 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT



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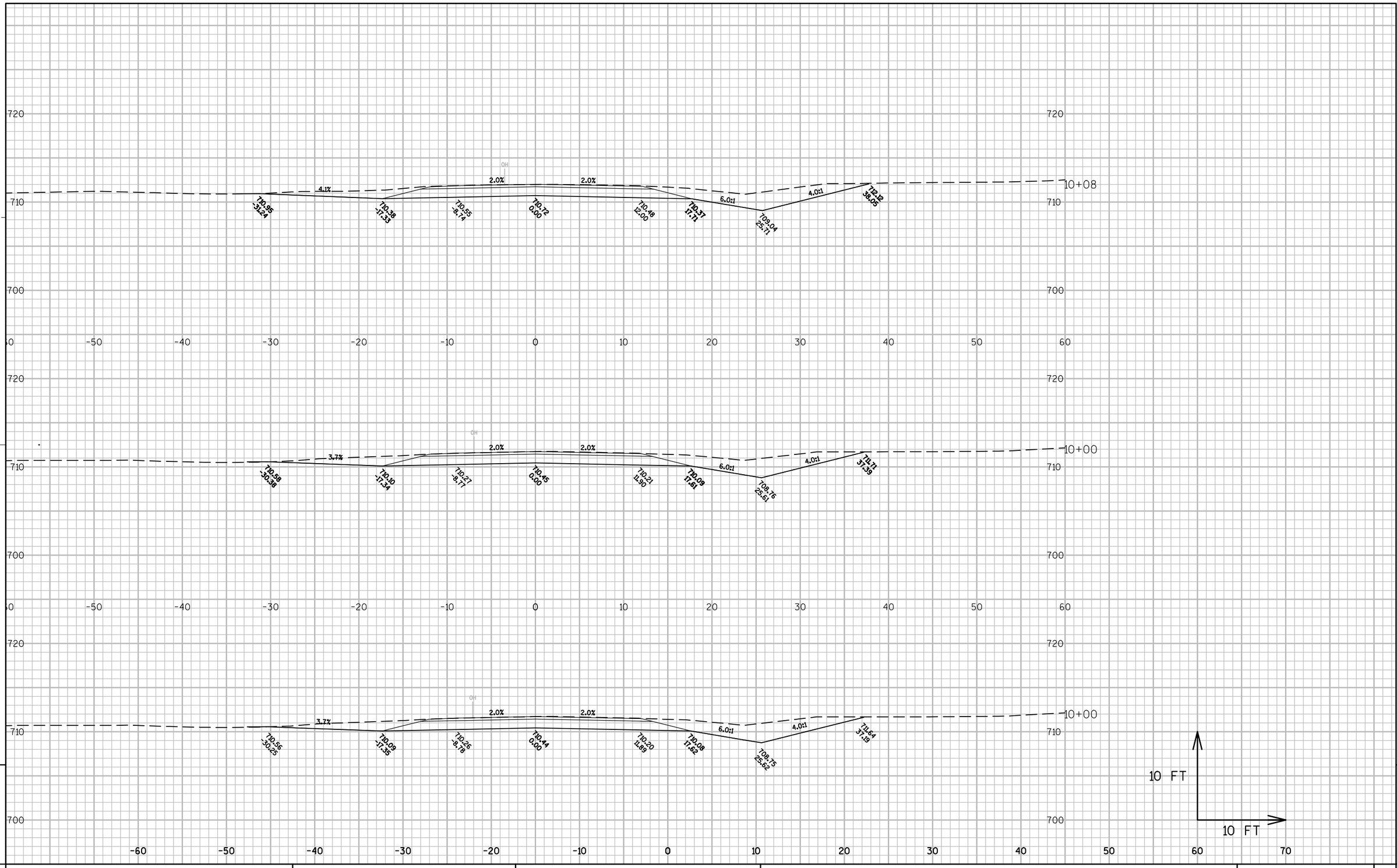
PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: BROCKWAY DRIVE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG PLOT DATE : 6/12/2013 1:10 PM PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



PROJECT NO: 5783-03-71	HWY: STH 131	COUNTY: CRAWFORD	CROSS SECTIONS: BROCKWAY DRIVE	SHEET	E

FILE NAME : N:\PDS\C3D\57830300\DESIGN\XSECTIONS\STH131-MAINLINE-XSEC.DWG
PLOT DATE : 6/12/2013 1:10 PM
PLOT BY : OLDENBURG, THOMAS D PLOT NAME : ---------- PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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