LAX

MARCH 2019

PROJECT ID: 5496-00-74

COUNTY: CRAWFORD

ORDER OF SHEETS

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

TOTAL SHEETS = 264

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STH 35 - STH 27

(STH 35 - TETER LANE)

CTH N

CRAWFORD COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5496-00-74	WISC FLAP051	1

STATE PROJECT NUMBER

5496-00-74

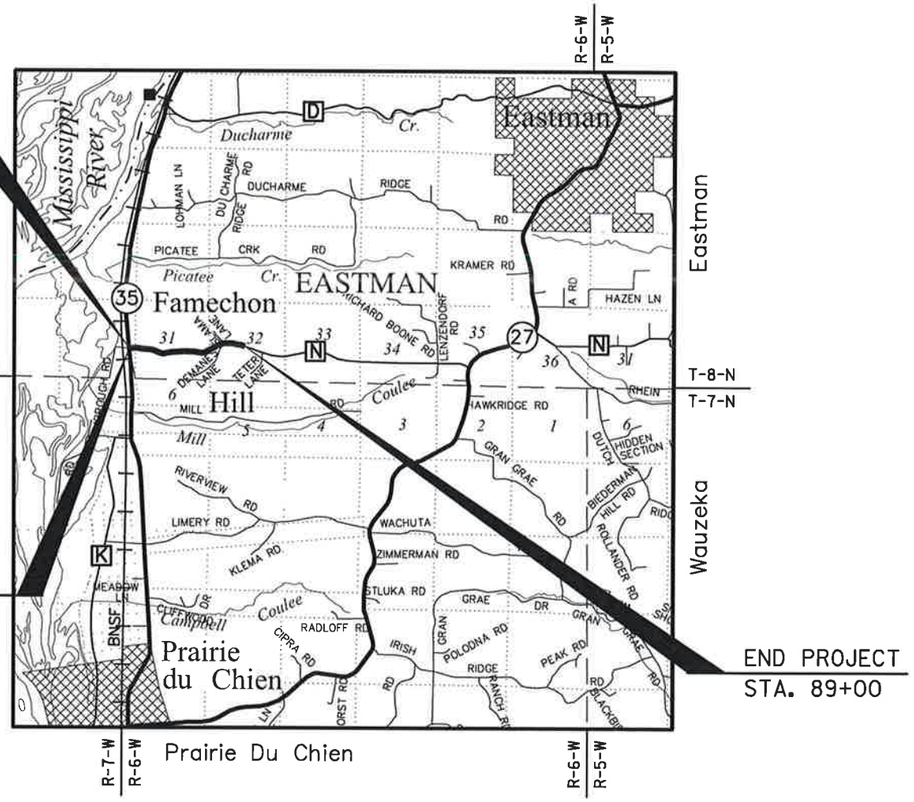




DESIGN DESIGNATION - PROJECT I.D. 5496-00-04

A.A.D.T.	2019	=	225
A.A.D.T.	2039	=	265
D.H.V.	2039	=	52
D.D.		=	60/40
T.		=	13.1%
DESIGN SPEED		=	40 M.P.H.
ESALS		=	44,000

STRUCTURE C-12-062/
STRUCTURE R-12-051



BEGIN PROJECT
STA. 10+47.01
Y=148,365.92
X=318,767.14

END PROJECT
STA. 89+00

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.487 MI.

"COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CRAWFORD COUNTY."

"ELEVATIONS SHOWN ON THE PLAN ARE REFFRENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)."

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
WOODED OR SHRUB AREA		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

ACCEPTED FOR

COUNTY of CRAWFORD

29 Oct 2018 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors

WISCONSIN ELLERY A. SCHAFFER E-41742-6 SPRING GREEN, WI PROFESSIONAL ENGINEER

10/23/2018 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor JEWELL ASSOCIATES ENGINEERS, INC.

Designer JEWELL ASSOCIATES ENGINEERS, INC.

Management Consultant KL ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT

DATE: 10/31/18

MANAGEMENT CONSULTANT SIGNATURE

E

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment
ADT	Average Daily Traffic
AADT	Average Annual Daily Traffic
BAD	Base Aggregate Dense
BK	Back
BF	Back Face
BM	Bench Mark
C	Chord Length
C/L	Center Line
CC	Center to Center
CTH	County Trunk Highway
CY	Cubic Yard
CP	Culvert Pipe
C & G	Curb and Gutter
△	Delta
DA	Degree of Arc
DD	Directional Distribution
DHV	Design Hourly Volume
DIA	Diameter
E	East
X	East Grid Coordinate
EL or ELEV	Elevation
ESALS	Equivalent Single Axle Loads
EBS	Excavation Below Subgrade
FF	Face to Face
FE	Field Entrance
FG	Finished Grade
FT	Foot
GN	Grid North
CWT	Hundredweight
HYD	Hydrant
INL	Inlet
ID	Inside Diameter
INV	Invert
IP	Iron Pipe or Pin
IRS	Iron Rod Set
JCT	Junction
LHF	Left-Hand Forward
L	Length of Curve
LF	Linear Foot
MH	Manhole
MB	Mailbox
ML or M/L	Match Line
N	North
Y	North Grid Coordinate
PLE	Permanent Limited Easement
PT	Point
PC	Point of Curvature
PI	Point of Intersection
PRC	Point of Reverse Curvature
PT	Point of Tangency
POC	Point On Curve
POT	Point on Tangent
PVC	Polyvinyl Chloride
PCC	Portland Cement Concrete
LB	Pound
PSI	Pounds Per Square Inch
PE	Private Entrance
R	Radius
RR	Railroad
R	Range
R/L	Reference Line
RP	Reference Point
RCCP	Reinforced Concrete Culvert Pipe
REQD	Required
RES	Residence or Residential
RT	Right
RHF	Right-Hand Forward
R/W	Right-of-Way
RD	Road
SAN S	Salvaged Sanitary Sewer
SEC	Section
SHLDR	Shoulder
SW	Sidewalk
S	South
SF or SQ FT	Square Feet
SY or SQ YD	Square Yard
STD	Standard
SDD	Standard Detail Drawings
STH	State Trunk Highways
STA	Station
SS	Storm Sewer
SG	Subgrade
SE	Superelevation
TEL	Telephone
TEMP	Temporary
TI	Temporary Interest
TLE	Temporary Limited Easement
T	Tangent Length
T or TN	Town
TRANS	Transition
TL or T/L	Transit Line
T	Trucks (percent of)
TYP	Typical
UG	Underground Cable
USH	United States Highway
VAR	Variable
V	Velocity or Design Speed
VERT	Vertical
VC	Vertical Curve
WM	Water Main
WV	Water Valve
W	West
WB	Westbound

ORDER OF SECTION 2 SHEETS:

- WRITTEN MATERIAL
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- INTERSECTION DETAILS
- EROSION CONTROL PLAN
- STORM SEWER PLAN
- PERMANENT SIGNING/PAVEMENT MARKING
- TRAFFIC CONTROL
- SUBSURFACE EXPLORATION
- ALIGNMENT DETAILS

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE, AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER.

DISTURBED AREAS SHOWN WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20 OR SEED MIX NO. 70) AND EROSION MATTED/MULCHED AS DIRECTED BY THE ENGINEER.

WHEN THE QUANTITY OF THE ITEM OF BREAKER RUN, BASE AGGREGATE DENSE, OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE, TEMPORARY DITCH CHECKS, CULVERT PIPE CHECKS, STONE GABION WIER, STONE GABION CHECKS, AND ARTICULATED CONCRETE FLUME BID ITEMS SHALL BE PLACED AS SHOWN IN THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

THE EXACT LOCATION OF PRIVATE, FIELD, AND COMMERCIAL ENTRANCES TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

REMOVAL OF ASPHALTIC OR CONCRETE SURFACES WHERE AN ABUTTING ASPHALTIC OR CONCRETE SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

ACCURACY OF INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

CURB AND GUTTER ELEVATIONS ARE GIVEN ON THE FLANGE LINE, UNLESS OTHERWISE NOTED.

ALL RADII DIMENSIONS ON THE PLAN FOR CURB AND GUTTER ARE TO THE FLANGE OF THE CURB AND GUTTER.

EXISTING DRIVEWAYS SHALL BE RESTORED IN KIND (UNLESS OTHERWISE NOTED) AND THEIR LOCATION VERIFIED BY THE ENGINEER IN THE FIELD.

HMA PAVEMENT 4LT 58-28S QUANTITIES WERE CALCULATED USING 115 LB/SY/IN. 3 1/2-INCHES OF HMA PAVEMENT 4LT 58-28S SHALL BE CONSTRUCTED WITH A 1 3/4-INCH UPPER LAYER AND A 1 3/4-INCH LOWER LAYER.

EXPANSION JOINTS SHALL BE CONSTRUCTED AT ALL RADII POINTS IN THE CURB & GUTTER.

THE COST OF CONNECTING CULVERT PIPE OR STORM SEWER TO EXISTING DRAINAGE STRUCTURES SHALL BE INCIDENTAL TO THE COST OF INSTALLING THE CULVERT OR STORM SEWER.

STORM SEWER ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS AND CROSS SECTIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORATIONS OF CONCRETE OR ASPHALT DRIVEWAYS, CONCRETE DRIVEWAYS, OR SIDE ROADS/HIGHWAYS SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER IN THE FIELD OR AS SHOWN ON THE PLANS.

CURVE DATA IS BASED ON THE ARC DEFINITION.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

ADJUST DITCH GRADING AS NECESSARY TO FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER IN THE FIELD.

NO WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS.

THE SOILS REPORT MAY BE OBTAINED FROM THE ENGINEER.

CONTACTS

DESIGN CONSULTANT:
JEWELL ASSOCIATES ENGINEERS, INC.
560 SUNRISE DR.
SPRING GREEN, WI 53588
ATTN: ELLERY SCHAFFER, P.E.
PH: (608) 588-7484
CELL: (608) 341-8159
E-MAIL: ellery.schaffer@jewellassoc.com

DNR LIAISON:
STATE OF WISCONSIN
DNR SERVICE CENTER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
ATTN: KAREN KALVELAGE
PH: (608) 785-9115
E-MAIL: karen.kalvelage@wisconsin.gov

CRAWFORD COUNTY HIGHWAY DEPARTMENT
DENNIS PELOCK, COMMISSIONER
21515 STATE HIGHWAY 27
P.O. BOX 39
SENECA, WI 54654
PH: (608) 734-9500
CELL: (608) 306-4036
E-MAIL: dpelock@crawfordcountywi.org

TOWN OF EASTMAN
SAM TESAR, JR, CHAIRMAN
54142 VALENTINE LANE
WAUZEKA, WI 53826
PH: (608) 874-4110
EMAIL: boardmembers@townofeastman.com

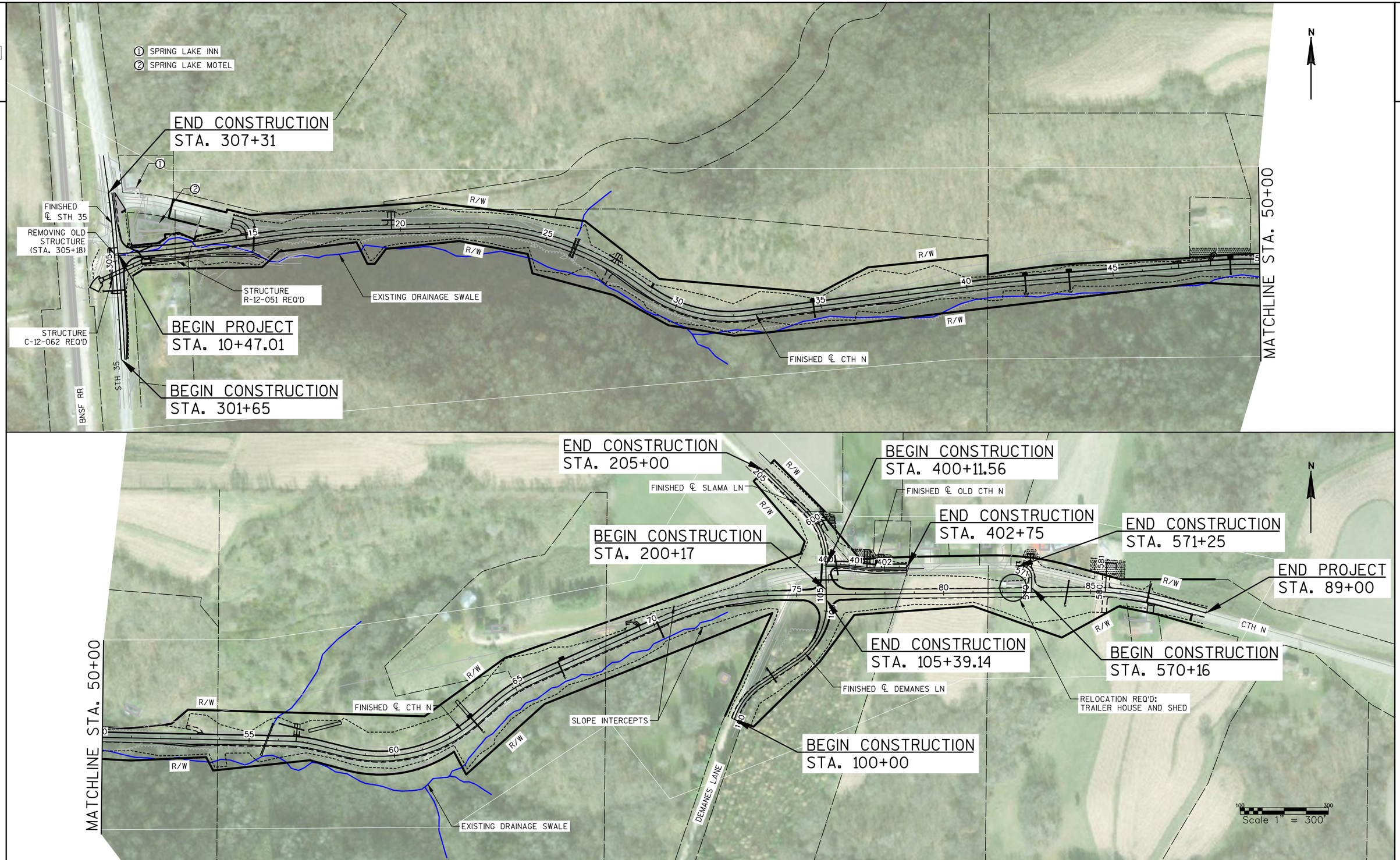
UTILITIES

ELECTRIC
SCENIC RIVERS ENERGY COOPERATIVE
ATTN: PHIL SCHNEIDER
231 NORTH SHERIDAN STREET
LANCASTER, WI 53813
OFFICE: (608) 723-2121, EXT. 505
EMAIL: pschneider@srec.net

TELEPHONE
CENTURYLINK
ATTN: BRET CLARK
333 NORTH FRONT STREET
LA CROSSE, WI 54601
OFFICE: (608) 269-0819
EMAIL: bret.clark@centurylink.com

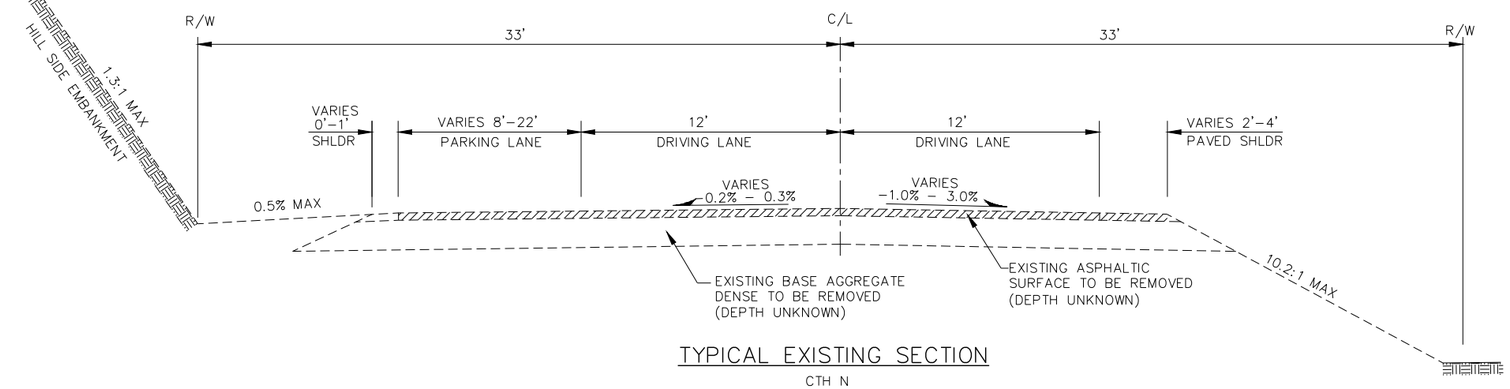
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

X DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE



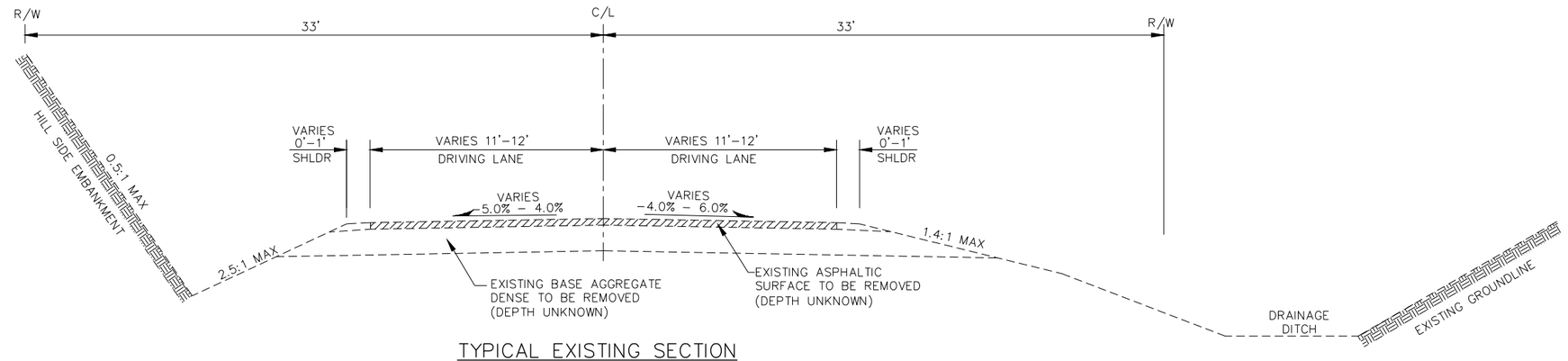
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : S:±PROJECTS±C54320 CRAWFORD CO. CTH N RECONSTRUCT±SHEETSPLAN±C54320_AERIAL PHOTO AND NEPA LIMITS OVERVIEW.DWG
LAYOUT : OVERVIEW
PLOT DATE : 10/25/2018
PLOT TIME : 4:24:02 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1 IN:2 FT_XREF



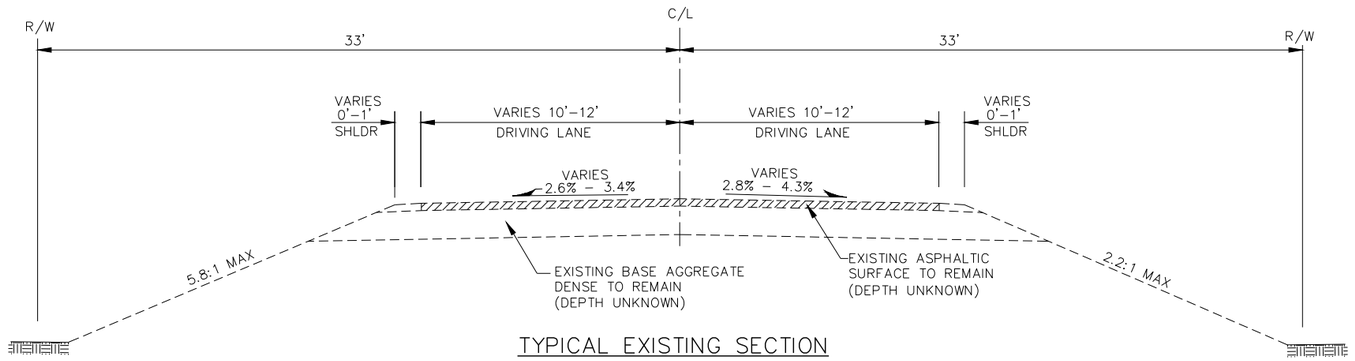
TYPICAL EXISTING SECTION

CTH N
STA. 10+35 - STA. 14+74



TYPICAL EXISTING SECTION

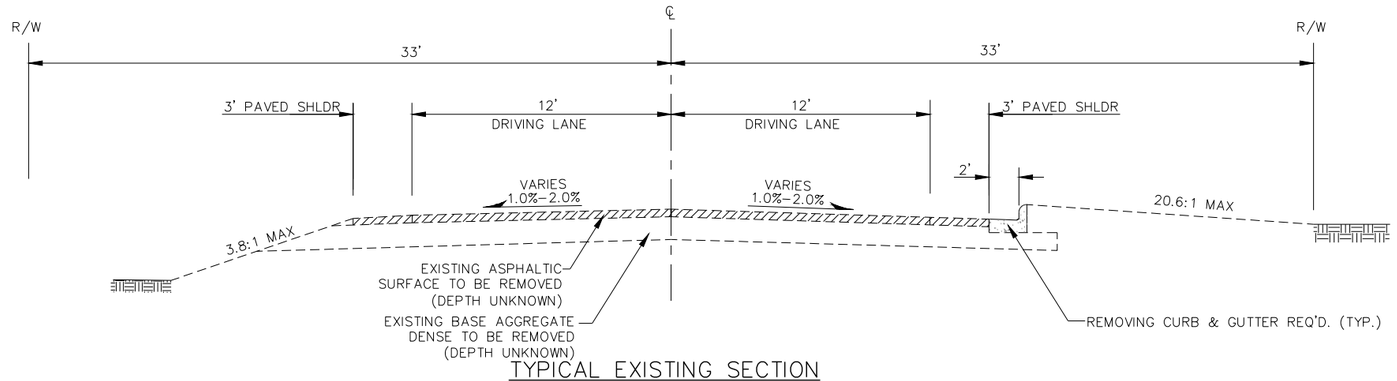
CTH N
STA. 14+74 - STA. 72+55



TYPICAL EXISTING SECTION

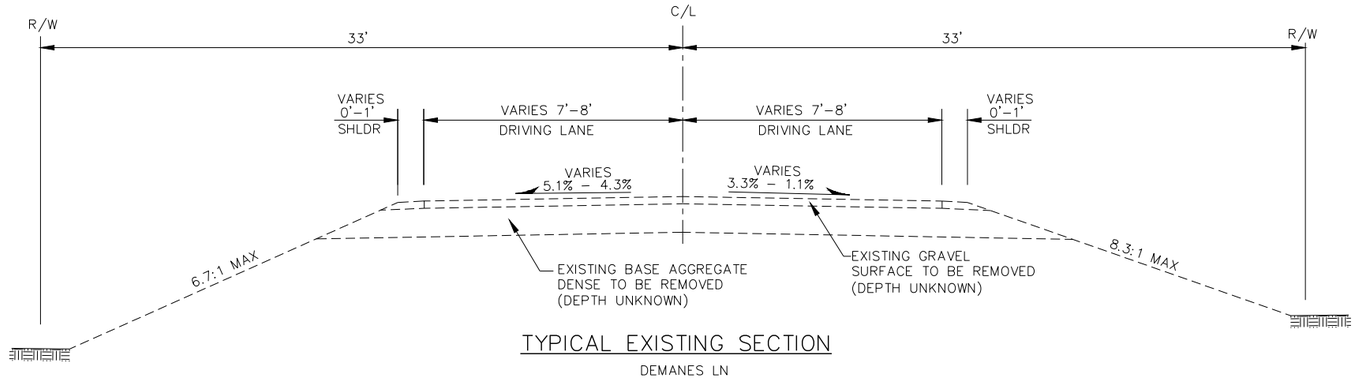
CTH N
STA. 72+55 - STA. 85+89

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TYPICAL EXISTING SECTIONS	SHEET 4	E



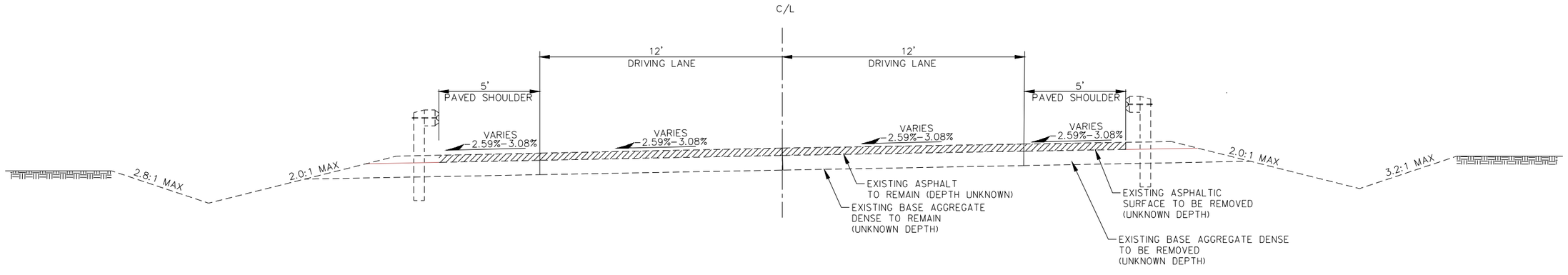
TYPICAL EXISTING SECTION

CTH N
STA. 85+89 – STA. 89+00



TYPICAL EXISTING SECTION

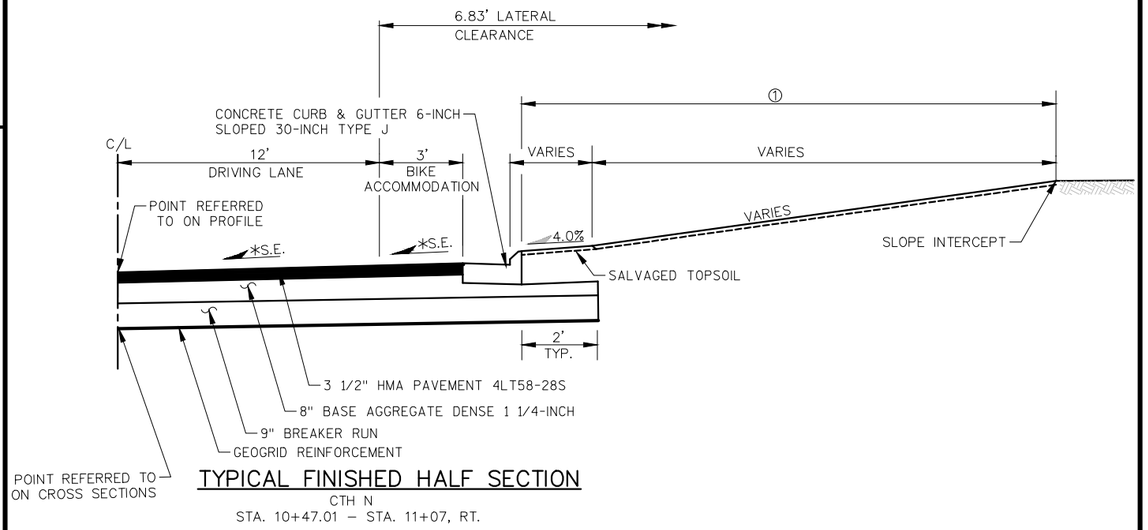
DEMANES LN
SLAMA LN



TYPICAL EXISTING SECTION

STH 35
STA. 301+65 – STA. 307+31, RT.
STA. 303+90 – STA. 305+45, LT.

PROJECT NO: 5496–00–74	HWY: CTH N	COUNTY: CRAWFORD	TYPICAL EXISTING SECTIONS	SHEET 5	E



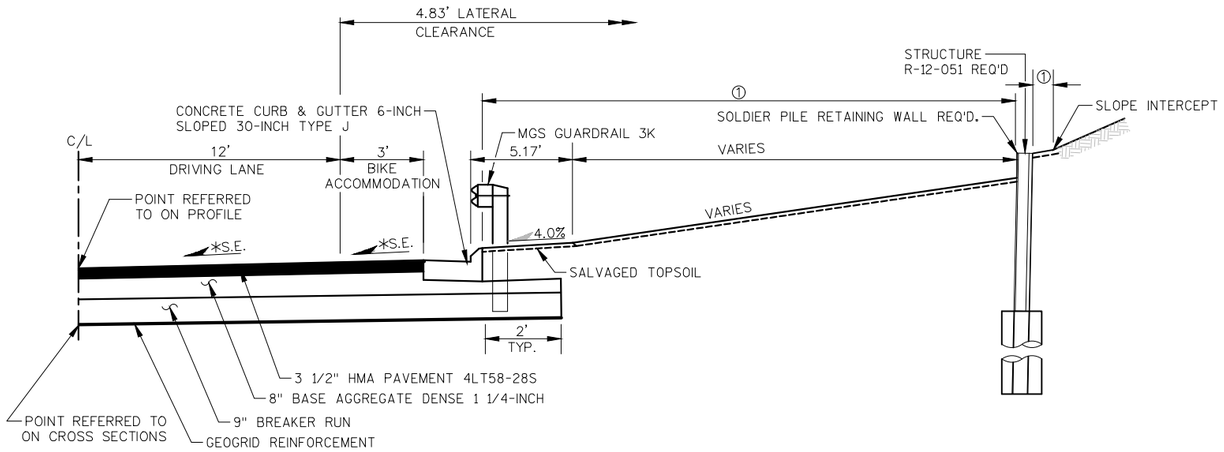
TYPICAL FINISHED HALF SECTION

CTH N
STA. 10+47.01 – STA. 11+07, RT.

① LIMITS OF SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO. 70, SEEDING TEMPORARY & EROSION MAT (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.



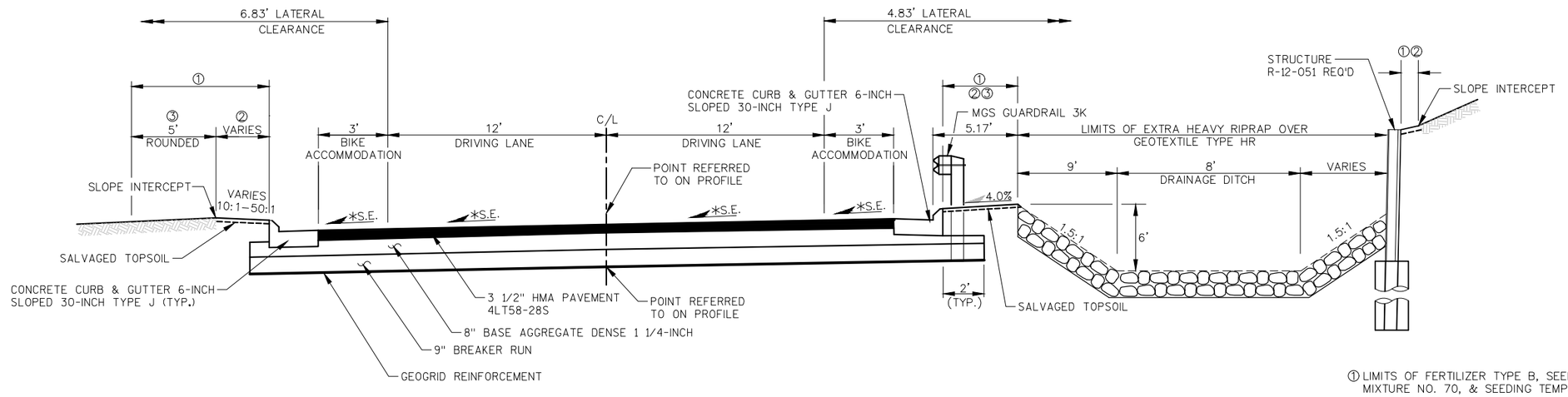
TYPICAL FINISHED HALF SECTION

CTH N
STA. 11+07 – STA. 11+43, RT.

① LIMITS OF SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO. 70, SEEDING TEMPORARY & EROSION MAT (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.



TYPICAL FINISHED SECTION

CTH N
STA. 10+47.01 – STA. 15+75, LT.
STA. 11+43 – STA. 13+06, RT.

① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 70, & SEEDING TEMPORARY (AS DIRECTED BY ENGINEER)

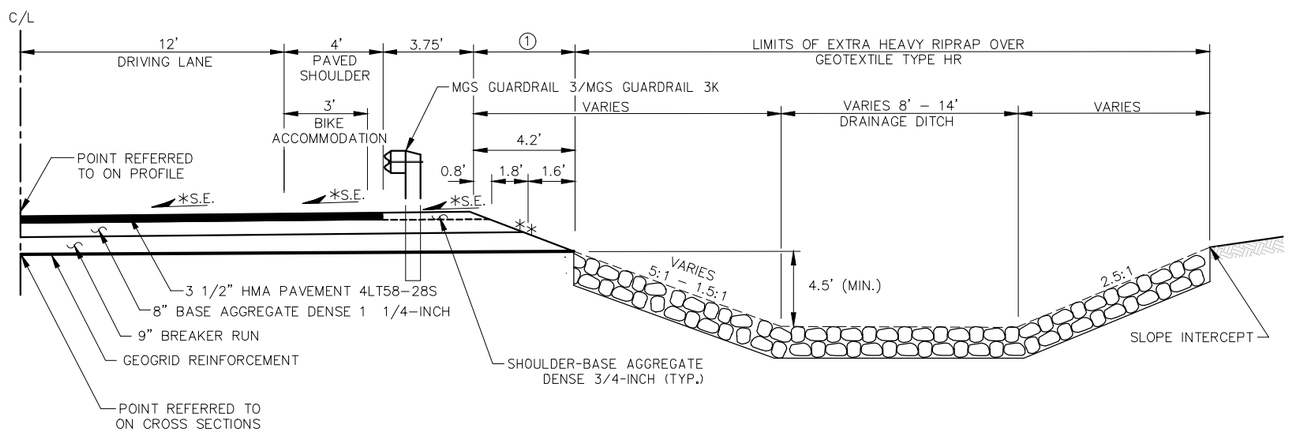
② LIMITS OF SALVAGED TOPSOIL & EROSION MAT (AS DIRECTED BY ENGINEER)

③ LIMITS OF MULCHING (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

PROJECT NO: 5496–00–74	HWY: CTH N	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS	SHEET 6	E



TYPICAL FINISHED HALF SECTION
GUARDRAIL PLACEMENT & DRAINAGE DITCH

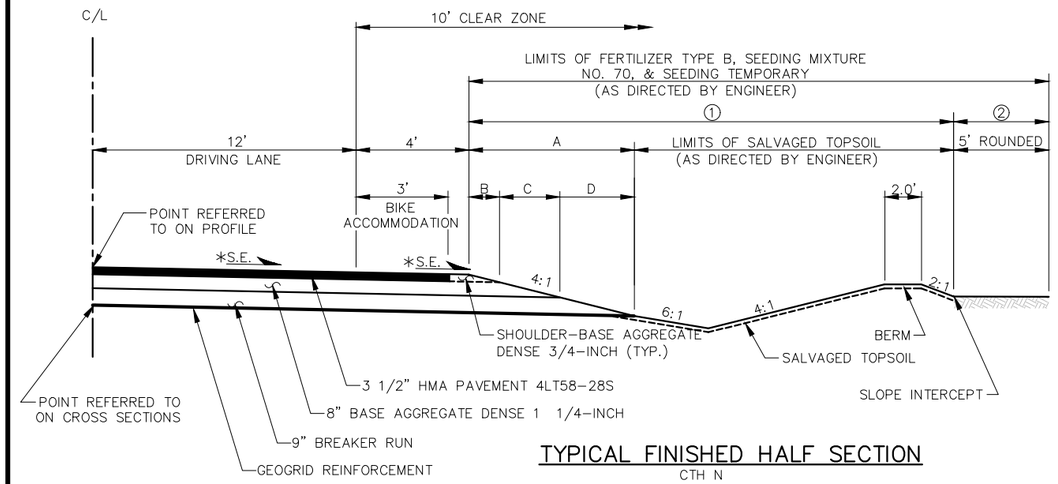
STA. 13+06 – STA. 15+01, RT.

① LIMITS OF SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO. 70, SEEDING TEMPORARY, & EROSION MAT (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

** VARIES 5:1 – 1.5:1

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.



TYPICAL FINISHED HALF SECTION

CTH N

STA. 15+50 – STA. 17+50, RT.

① LIMITS OF EROSION MAT (AS DIRECTED BY ENGINEER)

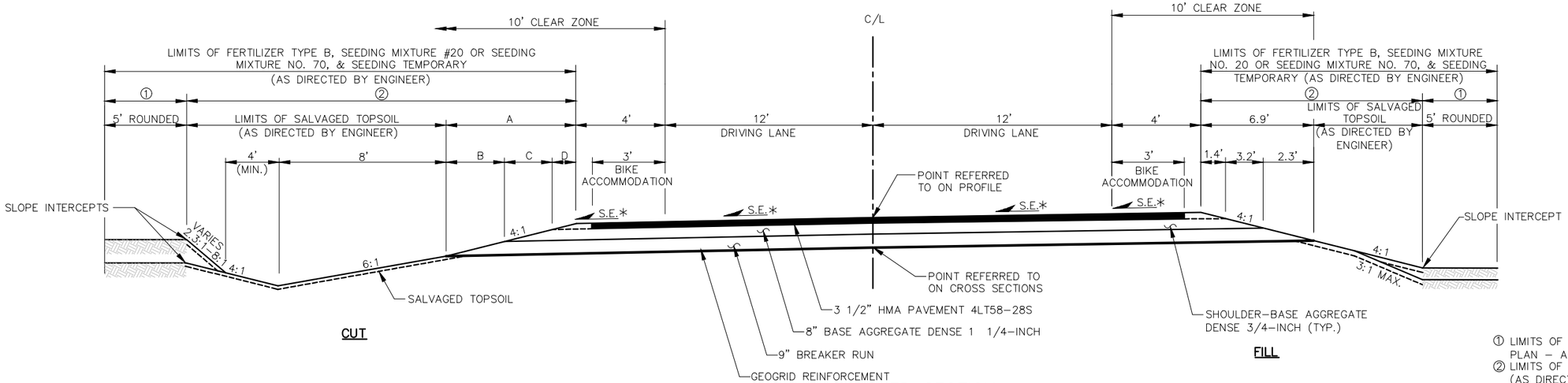
② LIMITS OF MULCHING (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

A/B/C/D – SEE SUPERELEVATION TABLE FOR DIMENSIONS

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATION IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION.



CUT

FILL

TYPICAL FINISHED SECTION

CTH N

STA. 15+01 – STA. 15+50, RT.
STA. 15+75 – STA. 29+00, LT.
STA. 17+50 – STA. 28+50, RT.
STA. 37+56 – STA. 53+00, RT.
STA. 70+00 – STA. 89+00, LT.
STA. 73+06 – STA. 86+00, RT.
STA. 88+50 – STA. 89+00, RT.

① LIMITS OF MULCHING (SEE EROSION CONTROL PLAN – AS DIRECTED BY ENGINEER)

② LIMITS OF EROSION MAT (AS DIRECTED BY ENGINEER)

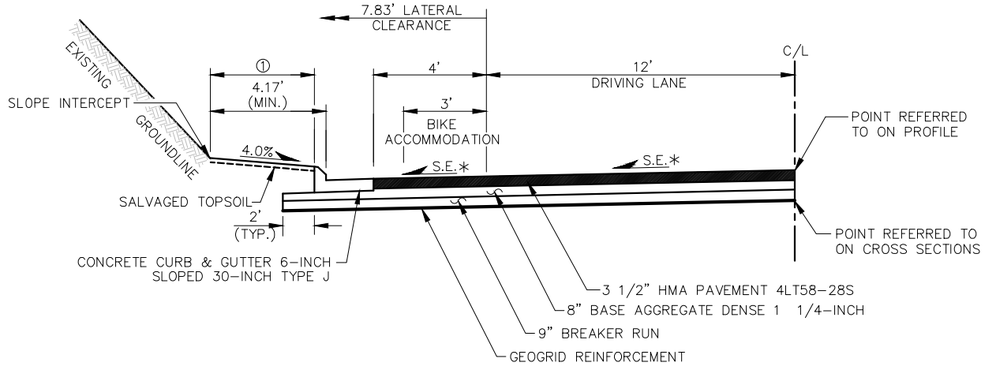
* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

A/B/C/D – SEE SUPERELEVATION TABLE FOR DIMENSIONS

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS	SHEET 7	E

2



TYPICAL FINISHED HALF SECTION
CURB & GUTTER PLACEMENT

CTH N

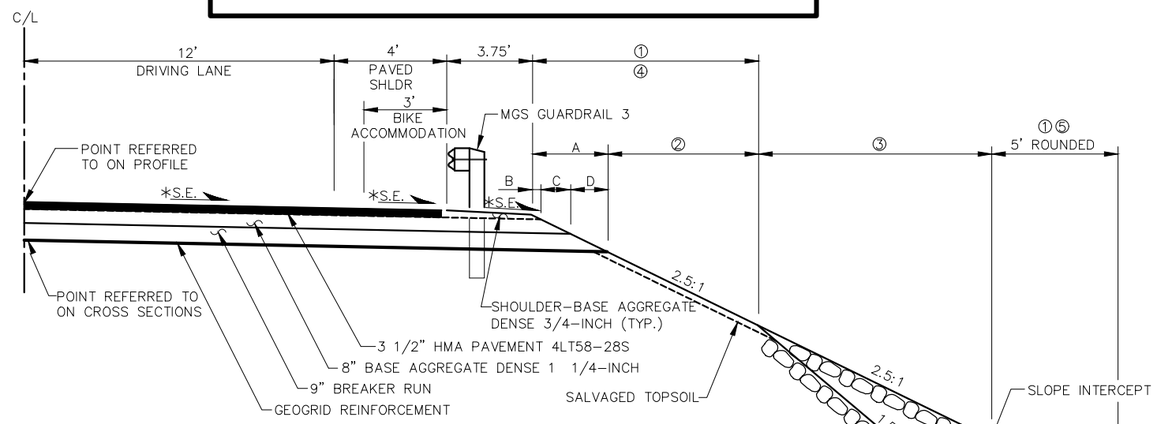
STA. 29+00 – STA. 29+50, LT.
STA. 34+50 – STA. 35+50, LT.
STA. 39+50 – STA. 43+50, LT.
STA. 47+50 – STA. 50+50, LT.
STA. 68+50 – STA. 70+00, LT.

① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 20 OR SEEDING MIXTURE NO. 70, SEEDING TEMPORARY, EROSION MAT, & SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATION IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION.



TYPICAL FINISHED HALF SECTION
GUARDRAIL PLACEMENT

CTH N

STA. 28+50 – STA. 37+56, RT.
STA. 53+00 – STA. 73+06, RT.

① LIMITS OF SEEDING MIXTURE NO. 20 OR SEEDING MIXTURE NO. 70, SEEDING TEMPORARY, & FERTILIZER TYPE B (AS DIRECTED BY ENGINEER)

② LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

③ LIMITS OF EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR

④ LIMITS OF EROSION MAT (AS DIRECTED BY ENGINEER)

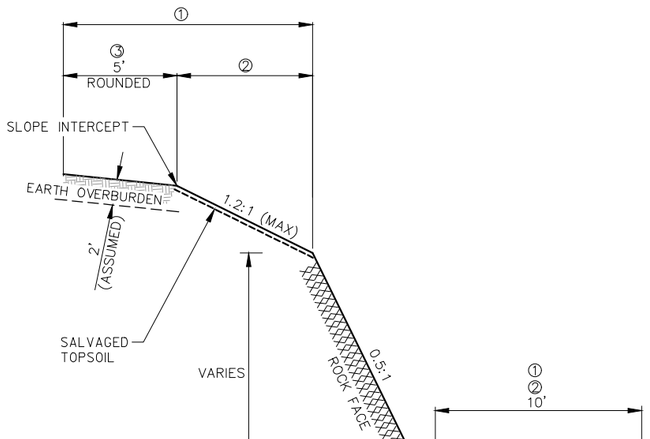
⑤ LIMITS OF MULCHING (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

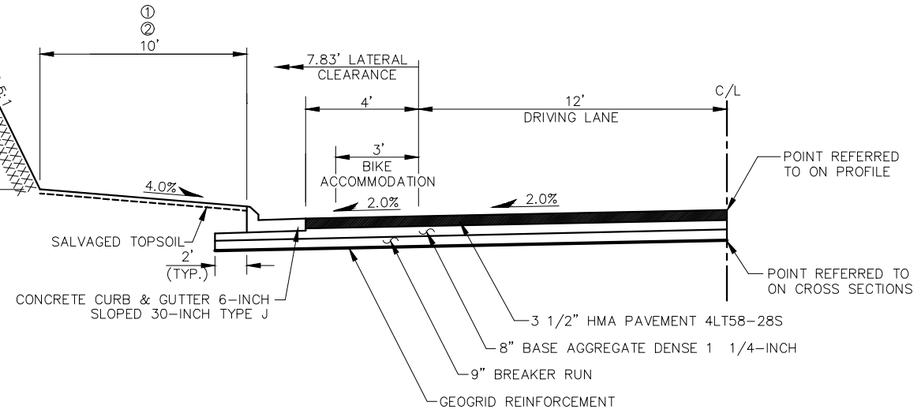
A/B/C/D – SEE SUPERELEVATION TABLE FOR DIMENSIONS

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS	SHEET 8	E



CUT



TYPICAL FINISHED HALF SECTION
EMBANKMENT BENCH CUT

CTH N
STA. 35+50 – STA. 39+50, LT.

① LIMITS OF SEEDING MIXTURE NO. 20 OR SEEDING MIXTURE NO. 70, SEEDING TEMPORARY & FERTILIZER TYPE B (AS DIRECTED BY ENGINEER)

② LIMITS OF SALVAGED TOPSOIL & EROSION MAT (AS DIRECTED BY ENGINEER)

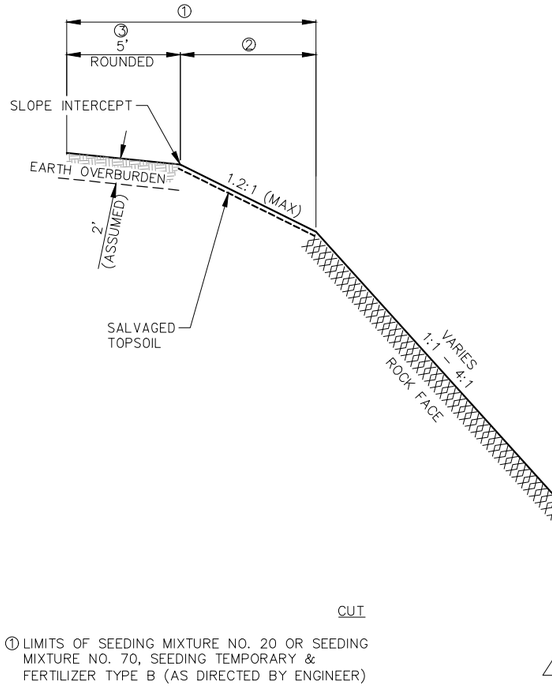
③ LIMITS OF MULCHING (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

NOTE: ELIMINATE OVERBURDEN GRADING AREAS WHERE PROPOSED ROCK CUT SLOPE CLOSELY MATCHES THE EXISTING SLOPE AT SLOPE INTERCEPT AS SHOWN ON THE CROSS SECTIONS.

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

CUT



TYPICAL FINISHED HALF SECTION
EMBANKMENT CUT/FILL

CTH N
STA. 29+50 – STA. 34+50, LT.
STA. 43+50 – STA. 47+50, LT.
STA. 50+50 – STA. 55+25, LT.
STA. 66+75 – STA. 68+50, LT.

① LIMITS OF SEEDING MIXTURE NO. 70, SEEDING TEMPORARY, & FERTILIZER TYPE B (AS DIRECTED BY ENGINEER)

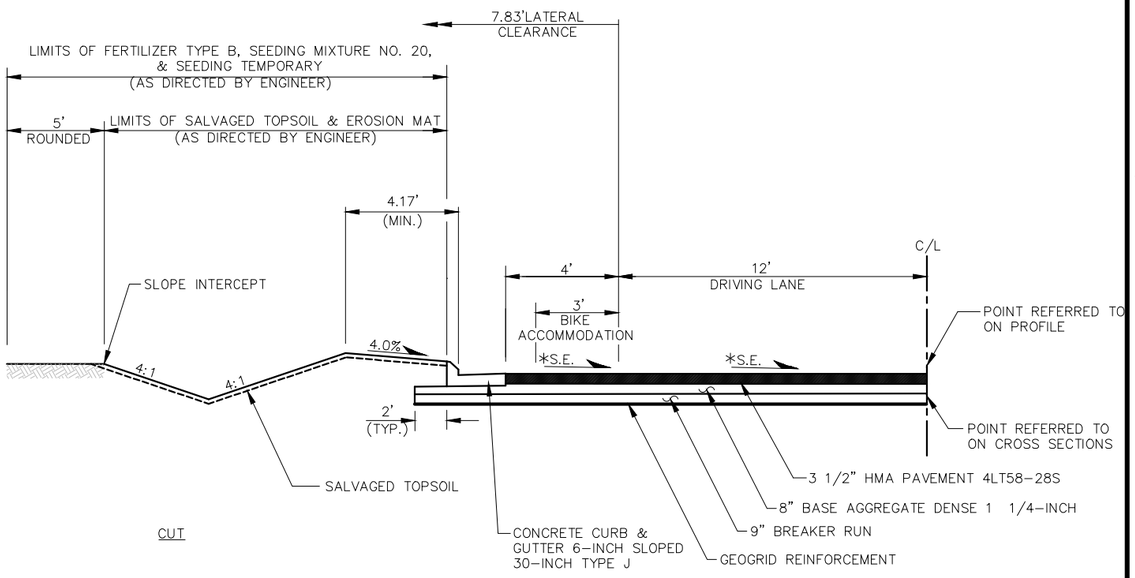
② LIMITS OF SALVAGED TOPSOIL & EROSION MAT (AS DIRECTED BY ENGINEER)

③ LIMITS OF MULCHING (AS DIRECTED BY ENGINEER)

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

NOTE: ELIMINATE OVERBURDEN GRADING AREAS WHERE PROPOSED ROCK CUT SLOPE CLOSELY MATCHES THE EXISTING SLOPE AT SLOPE INTERCEPT AS SHOWN ON THE CROSS SECTIONS.

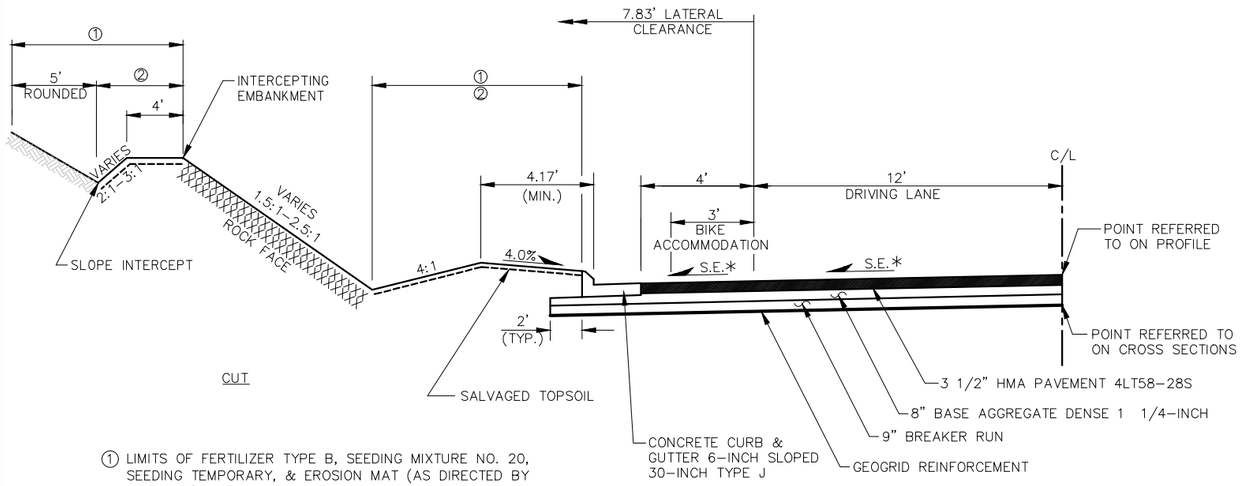
NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.



TYPICAL FINISHED HALF SECTION CURB & GUTTER DITCH PLACEMENT

CTH N
STA. 55+25 – STA. 57+50, LT.

*S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES



① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, & EROSION MAT (AS DIRECTED BY ENGINEER)

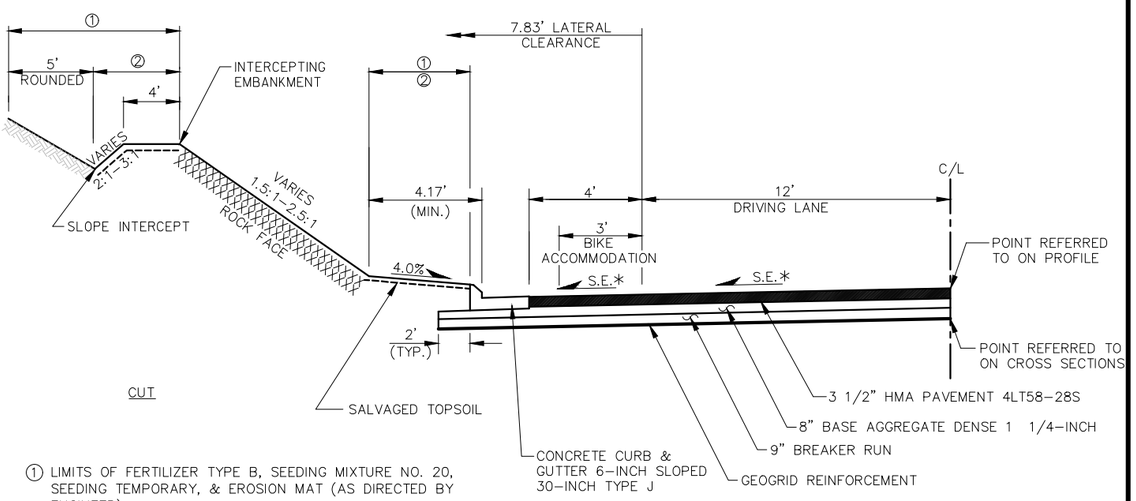
② LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

NOTE: STA. 57+00 – STA. 58+00, LT. ARTICULATED CONCRETE BLOCK TYPE C FLUME REQ'D (SEE CONSTRUCTION DETAILS FOR FURTHER INFORMATION)

*S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

TYPICAL FINISHED HALF SECTION EMBANKMENT CUT/FILL

CTH N
STA. 57+50 – STA. 58+50, LT.



① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, & EROSION MAT (AS DIRECTED BY ENGINEER)

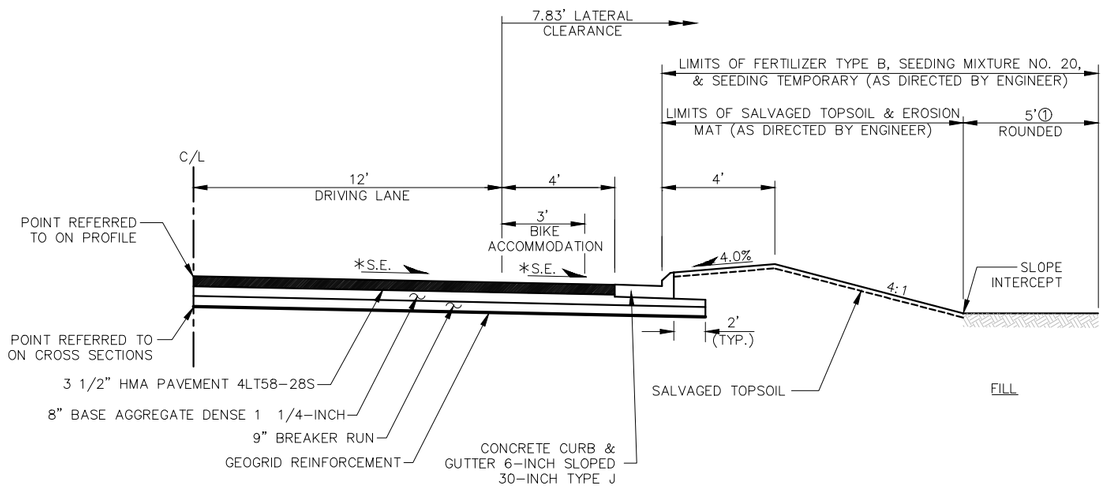
② LIMITS OF SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

NOTE: STA. 57+00 – STA. 58+00, LT. ARTICULATED CONCRETE BLOCK TYPE C FLUME REQ'D (SEE CONSTRUCTION DETAILS FOR FURTHER INFORMATION)

*S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

TYPICAL FINISHED HALF SECTION EMBANKMENT CUT/FILL

CTH N
STA. 58+50 – STA. 66+75, LT.



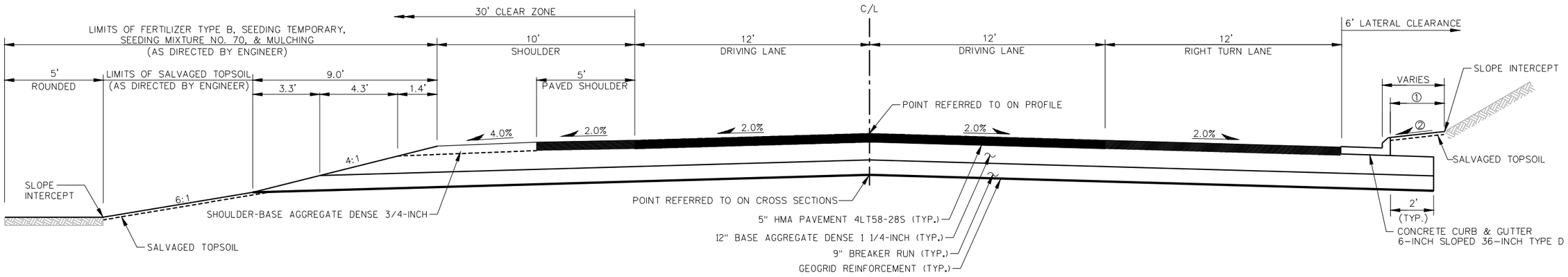
TYPICAL FINISHED HALF SECTION CURB & GUTTER PLACEMENT

CTH N
STA. 86+00 – STA. 88+50, RT.

① LIMITS OF MULCHING (AS DIRECTED BY ENGINEER)

*S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS	SHEET 10	E



FILL

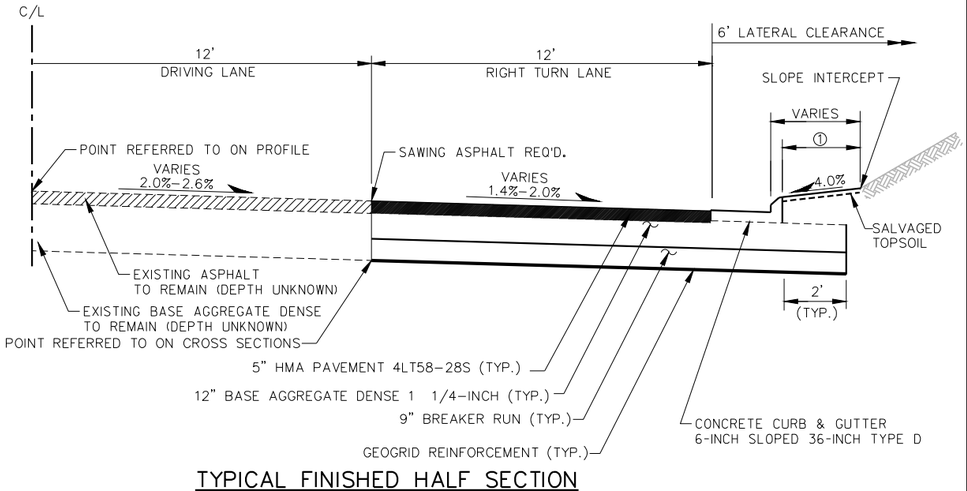
TYPICAL FINISHED SECTION

STH 35
STA. 303+90 – STA. 305+45

① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 70, SEEDING TEMPORARY, MULCHING OR EROSION MAT & SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

② VARIES 4.0% – 4:1

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

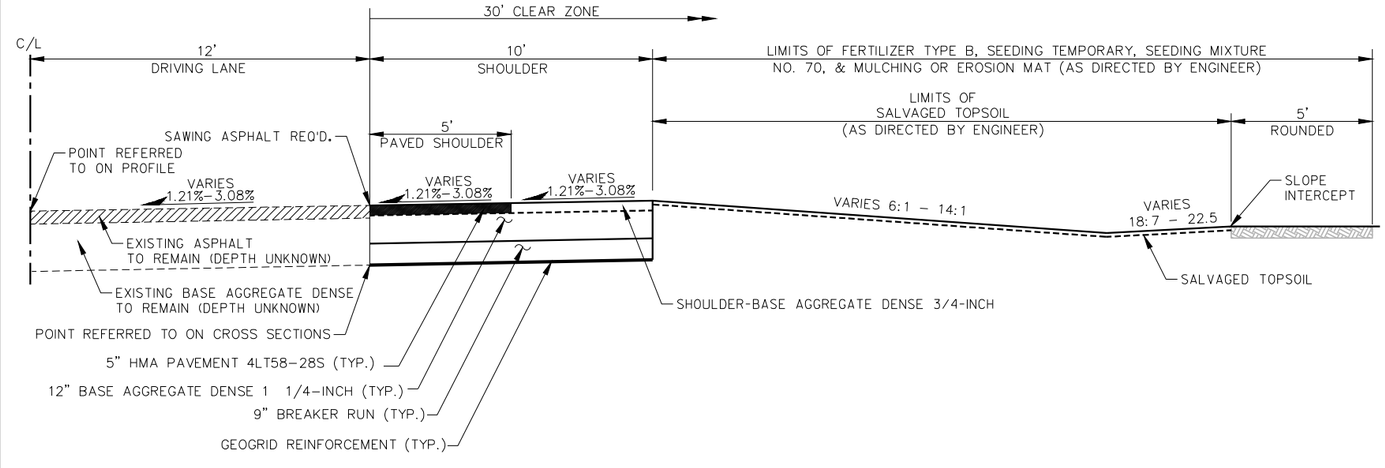


TYPICAL FINISHED HALF SECTION

STH 35
STA. 301+65 – STA. 303+90, RT.

① LIMITS OF FERTILIZER TYPE B, SEEDING MIXTURE NO. 70, SEEDING TEMPORARY, MULCHING, & SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

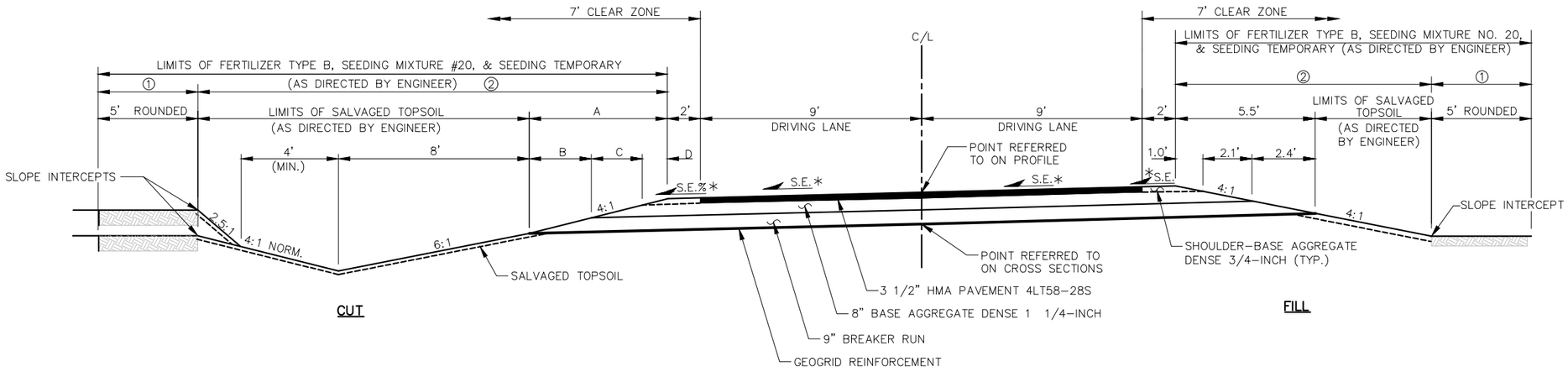


TYPICAL FINISHED HALF SECTION

STH 35
STA. 305+45 – STA. 307+31, RT.

NOTE: USE SEEDING NURSE CROP IN AREAS OF SEEDING MIXTURE NO. 70.

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS	SHEET 11	E



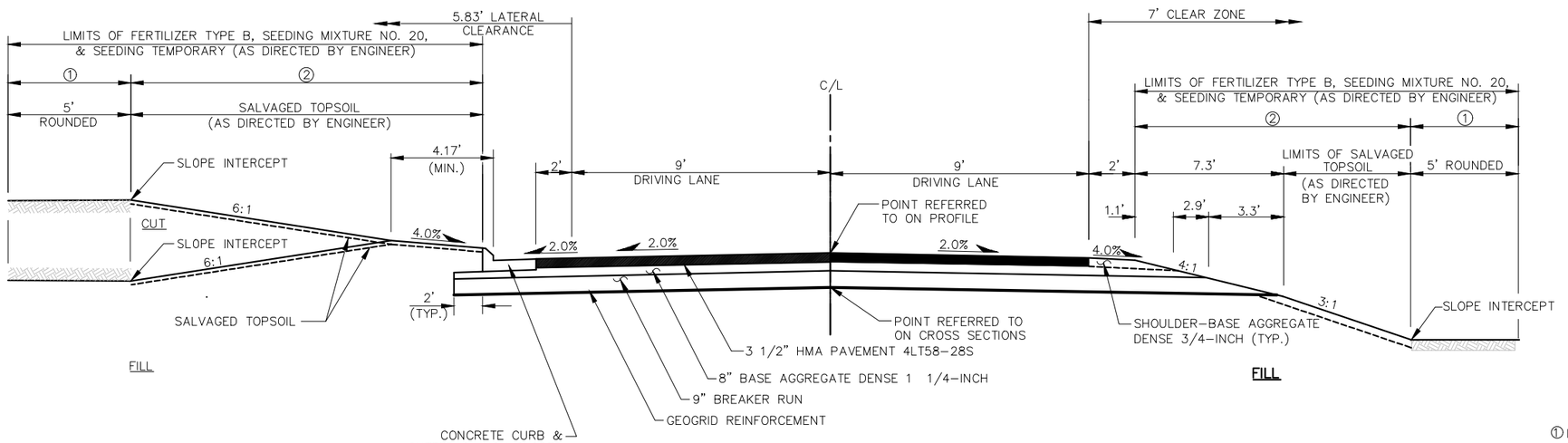
TYPICAL FINISHED SECTION

DEMANES LN
STA. 100+00 – STA. 105+39.14
SLAMA LN
STA. 200+17 – STA. 205+00

OLD CTH N (EAST)
STA. 570+16 – STA. 571+25

① LIMITS OF MULCHING (AS DIRECTED BY ENGINEER)
② LIMITS OF EROSION MAT (AS DIRECTED BY ENGINEER)
* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES
A/B/C/D – SEE SUPERELEVATION TABLE FOR DIMENSIONS

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATION IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION.



TYPICAL FINISHED SECTION

OLD CTH N (WEST)
STA. 400+11.56 – STA. 402+75

① LIMITS OF MULCHING (AS DIRECTED BY ENGINEER)
② LIMITS OF EROSION MAT (AS DIRECTED BY ENGINEER)

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TYPICAL FINISHED SECTIONS	SHEET 12	E

SUPERELEVATION TABLE-CURVE 1

(MAINLINE)

STATION	LEFT	RIGHT
10+91.60	2.0	2.0
11+00	2.0	1.6
12+00	3.2	3.2
12+16.60	4.0	4.0
12+28.52	4.0	4.0
13+00	2.0	0.6
13+53.52	2.0	2.0

SUPERELEVATION TABLE-CURVE 2

(MAINLINE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
15+04.53	2.0	2.0	-	-	-	-
16+00	2.6	2.6	7.5	1.4	3.2	2.9
16+29.53	4.0	4.0	8.2	1.4	3.2	3.6
17+00	4.0	4.0	8.2	1.4	3.2	3.6
17+31.48	4.0	4.0	8.2	1.4	3.2	3.6
18+00	0.7	2.0	-	-	-	-
18+56.48	2.0	2.0	-	-	-	-

SUPERELEVATION TABLE-CURVE 3

(MAINLINE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
20+90.73	2.0	2.0	-	-	-	-
21+00	1.6	2.0	-	-	-	-
22+00	3.3	3.3	7.9	1.4	3.2	3.3
22+30.73	4.8	4.8	8.4	1.4	3.3	3.7
23+00	4.8	4.8	8.4	1.4	3.3	3.7
24+00	4.8	4.8	8.4	1.4	3.3	3.7
25+00	4.8	4.8	8.4	1.4	3.3	3.7
26+00	4.8	4.8	8.4	1.4	3.3	3.7
27+00	4.8	4.8	8.4	1.4	3.3	3.7
27+69.58	4.8	4.8	8.4	1.4	3.3	3.7
28+00	3.3	3.3	7.9	1.4	3.2	3.3
28+68.58	0.0	0.0	-	-	-	-

SUPERELEVATION TABLE-CURVE 4

(MAINLINE)

STATION	LEFT	RIGHT
28+68.58	0.0	0.0
29+00	1.5	1.5
29+92.58	2.0	0.2
30+00	6.0	6.0
31+00	6.0	6.0
32+00	6.0	6.0
32+08.38	6.0	6.0
33+00	2.0	1.6
33+73.38	2.0	2.0

SUPERELEVATION TABLE-CURVE 5

(MAINLINE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
39+56.76	2.0	2.0	-	-	-	-
40+00	0.1	2.0	-	-	-	-
40+96.76	4.8	4.8	8.4	1.4	3.3	3.7
41+00	4.6	4.6	8.4	1.4	3.3	3.7
42+00	0.2	2.0	-	-	-	-
42+36.76	2.0	2.0	-	-	-	-

SUPERELEVATION TABLE-CURVE 6

(MAINLINE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
47+26.58	2.0	2.0	-	-	-	-
48+00	1.6	2.0	-	-	-	-
48+35.58	3.3	3.3	7.9	1.4	3.2	3.3
49+00	3.3	3.3	7.9	1.4	3.2	3.3
49+94.16	3.3	3.3	7.9	1.4	3.2	3.3
50+00	3.0	3.0	7.7	1.3	3.0	3.4
51+00	1.85	2.0	-	-	-	-
51+03.16	2.0	2.0	-	-	-	-

SUPERELEVATION TABLE-CURVE 7

(MAINLINE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
54+96.27	2.0	2.0	-	-	-	-
55+00	1.8	2.0	-	-	-	-
56+00	3.0	3.0	4.6	0.8	1.8	2.0
56+61.27	6.0	6.0	5.1	0.9	2.0	2.2
57+00	4.1	4.1	4.8	0.8	1.9	2.1
57+85.27	0.0	0.0	-	-	-	-

SUPERELEVATION TABLE-CURVE 8

(MAINLINE)

STATION	LEFT	RIGHT
57+85.27	0.0	0.0
58+00	0.7	0.7
59+00	5.6	5.6
59+09.27	6.0	6.0
60+00	6.0	6.0
61+00	6.0	6.0
62+00	6.0	6.0
62+26.19	6.0	6.0
63+00	2.4	2.4
63+50.19	0.0	0.0

SUPERELEVATION TABLE-CURVE 9

(MAINLINE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
63+50.19	0.0	0.0	-	-	-	-
64+00	2.4	2.4	7.6	1.3	3.0	3.3
64+74.19	6.0	6.0	5.1	0.9	2.0	2.2
65+00	6.0	6.0	5.1	0.9	2.0	2.2
65+04.38	6.0	6.0	5.1	0.9	2.0	2.2
66+00	1.3	2.0	-	-	-	-
66+69.38	2.0	2.0	-	-	-	-

SUPERELEVATION TABLE-CURVE 10

(MAINLINE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
69+27.47	2.0	2.0	-	-	-	-
70+00	1.5	2.0	-	-	-	-
71+00	4.8	4.8	4.8	0.8	1.9	2.1
72+00	4.8	4.8	4.8	0.8	1.9	2.1
73+00	4.8	4.8	4.8	0.8	1.9	2.1
74+00	4.8	4.8	8.4	1.4	3.3	3.7
74+08.00	4.8	4.8	8.4	1.4	3.3	3.7
75+00	0.4	2.0	-	-	-	-
75+48.47	2.0	4.8	-	-	-	-

SUPERELEVATION TABLE-CURVE 11

(MAINLINE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
83+75.60	2.0	2.0	-	-	-	-
84+00	0.8	2.0	-	-	-	-
85+00	4.0	4.0	8.2	1.4	3.2	3.6
85+15.60	4.8	4.8	8.4	1.4	3.3	3.7
86+00	4.8	4.8	-	-	-	-
87+00	4.8	4.8	-	-	-	-
87+28.08	4.8	4.8	-	-	-	-
88+00	1.3	2.0	-	-	-	-
88+68.08	2.0	2.0	-	-	-	-

SUPERELEVATION TABLE-CURVE 12

(STH 35)

NORMAL CROWN (N.C.) REQ'D - SEE CROSS SECTIONS FOR FURTHER INFORMATION

SUPERELEVATION TABLE-CURVE 13

(STH 35)

MATCH EXISTING - SEE CROSS SECTIONS FOR FURTHER INFORMATION

SUPERELEVATION TABLE-CURVE 14

(DEMANES LANE)

STATION	LEFT	RIGHT
100+00	MATCH EXISTING	MATCH EXISTING
100+82.50	2.0	2.0
101+00	1.2	2.0
101+65	2.0	2.0

SUPERELEVATION TABLE-CURVE 15

(DEMANES LANE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
101+87.41	2.0	2.0	-	-	-	-
102+00	2.0	1.3	-	-	-	-
103+00	4.2	4.2	8.2	1.4	3.2	3.6
103+32.41	6.0	6.0	8.9	1.5	3.5	3.9
104+00	6.0	6.0	8.9	1.5	3.5	3.9
105+00	6.0	6.0	8.9	1.5	3.5	3.9
105+39.14	6.0	6.0	-	-	-	-

SUPERELEVATION TABLE-CURVE 16

(SLAMA LANE)

STATION	LEFT	RIGHT	"A" (FT.)	"B" (FT.)	"C" (FT.)	"D" (FT.)
200+17	6.0	6.0	-	-	-	-
201+00	6.0	6.0	8.9	1.5	3.5	3.9
202+00	6.0	6.0	8.9	1.5	3.5	3.9
202+66.76	6.0	6.0	8.9	1.5	3.5	3.9
203+00	4.2	4.2	8.2	1.4	3.2	3.6
204+00	2.0	1.4	-	-	-	-
204+11.76	2.0	2.0	-	-	-	-
205+00	MATCH EXISTING	MATCH EXISTING	-	-	-	-

SUPERELEVATION TABLE-CURVE 17

(OLD CTH N - WEST)

NORMAL CROWN (N.C.) REQ'D - SEE CROSS SECTIONS FOR FURTHER INFORMATION

SUPERELEVATION TABLE-CURVE 18

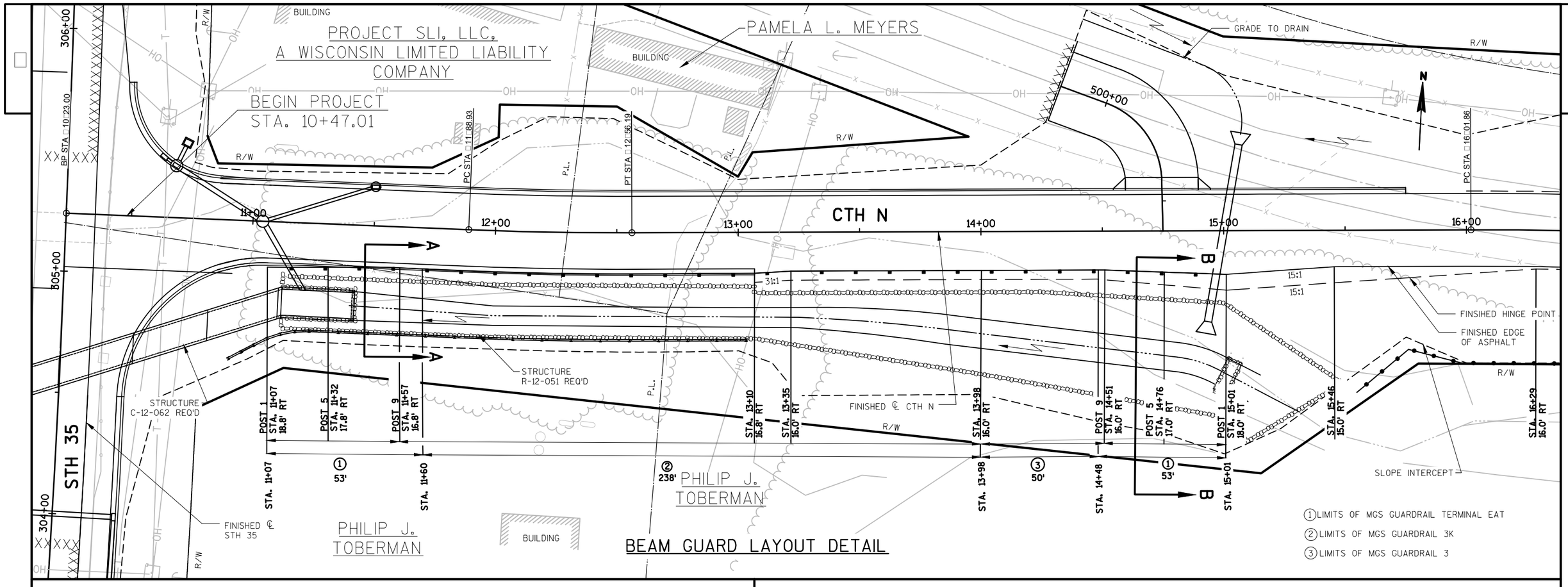
(OLD CTH N - WEST)

NORMAL CROWN (N.C.) REQ'D - SEE CROSS SECTIONS FOR FURTHER INFORMATION

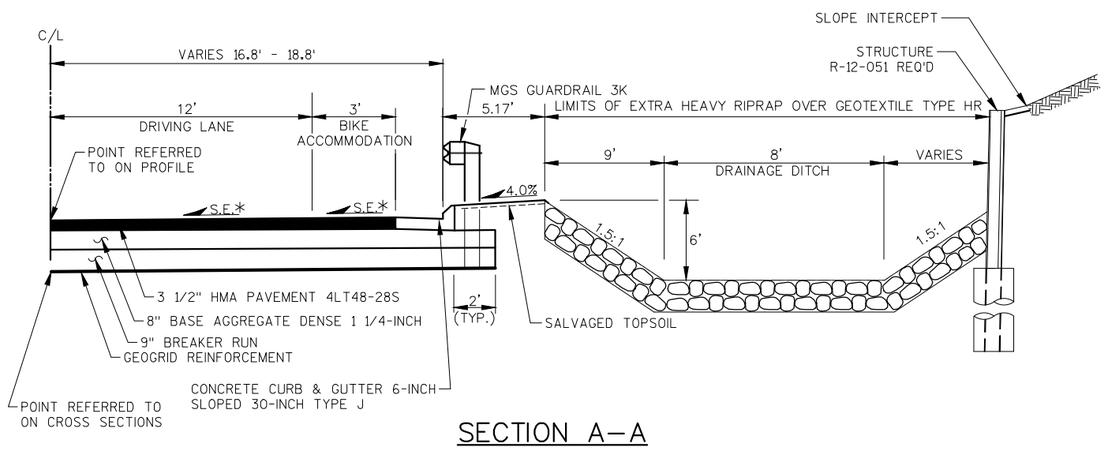
SUPERELEVATION TABLE-CURVE 19

(OLD CTH N - EAST)

NORMAL CROWN (N.C.) REQ'D - SEE CROSS SECTIONS FOR FURTHER INFORMATION

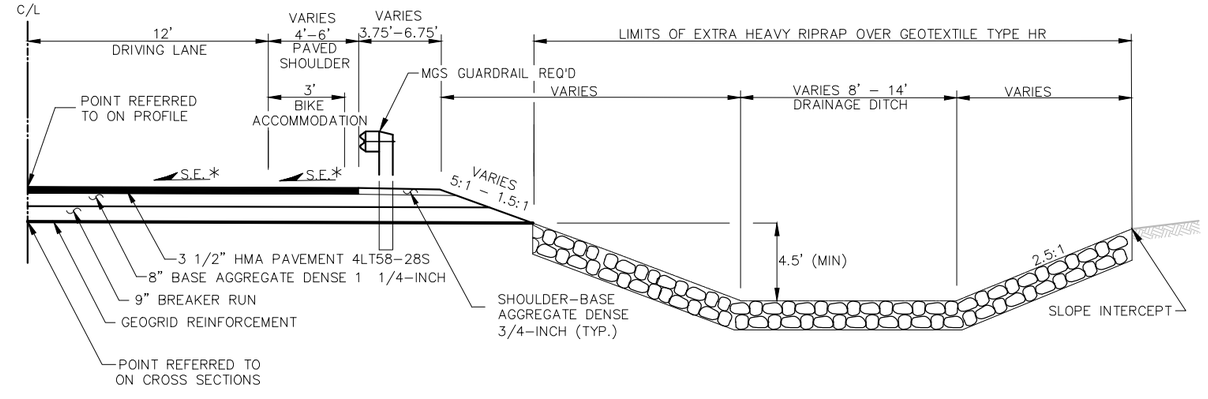


BEAM GUARD LAYOUT DETAIL



SECTION A–A

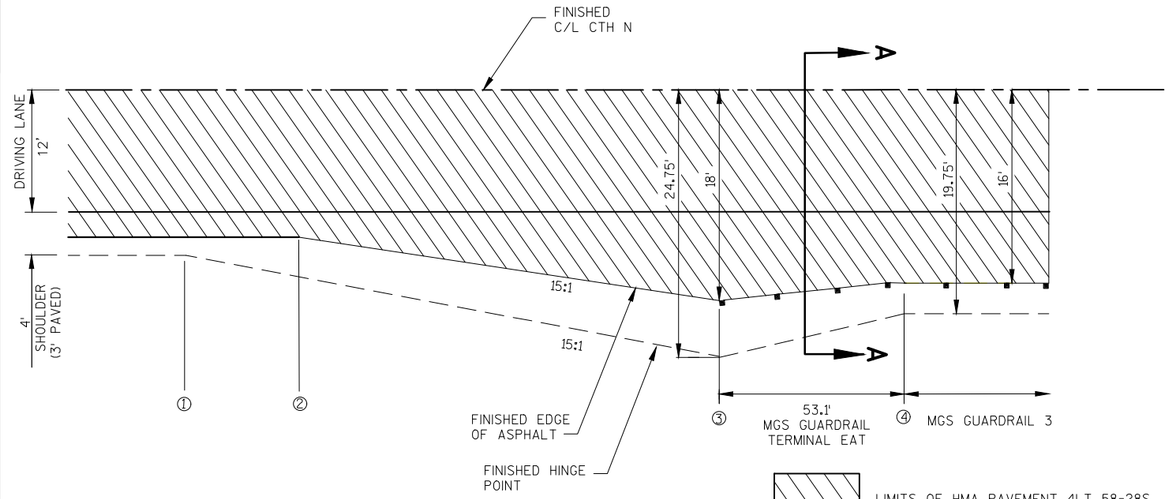
* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES



SECTION B – B

* S.E.–SEE SUPERELEVATION TABLE FOR SUPERELEVATION RATES

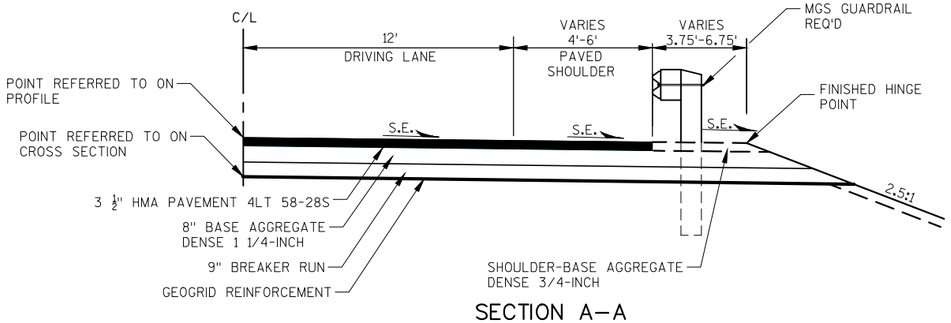
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS (BEAM GUARD LAYOUT)	SHEET 14	E



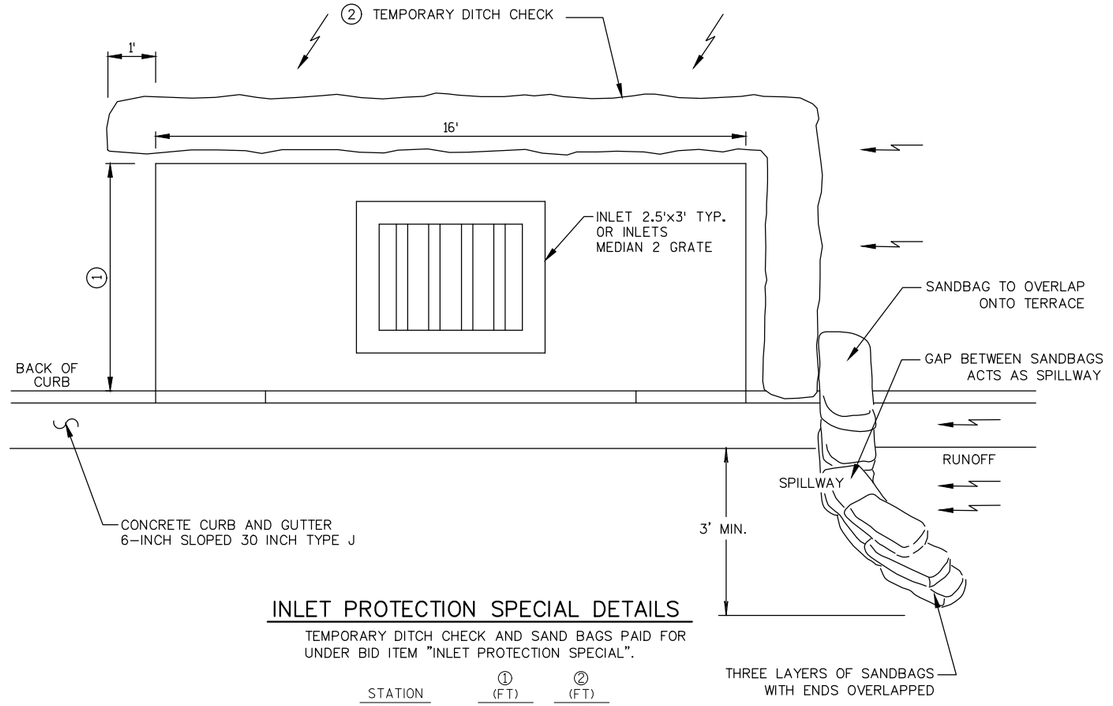
BEAMGUARD LAYOUT DETAIL

BEAMGUARD LAYOUT TABLE

LOCATION	STATION ①	②	③	④
MAINLINE, RT.	27+22	27+76	28+50	29+03
MAINLINE, RT.	38+83	38+00	37+56	37+03
MAINLINE, RT.	51+73	52+55	53+00	53+53
MAINLINE, RT.	74+23	73+80	73+06	72+53



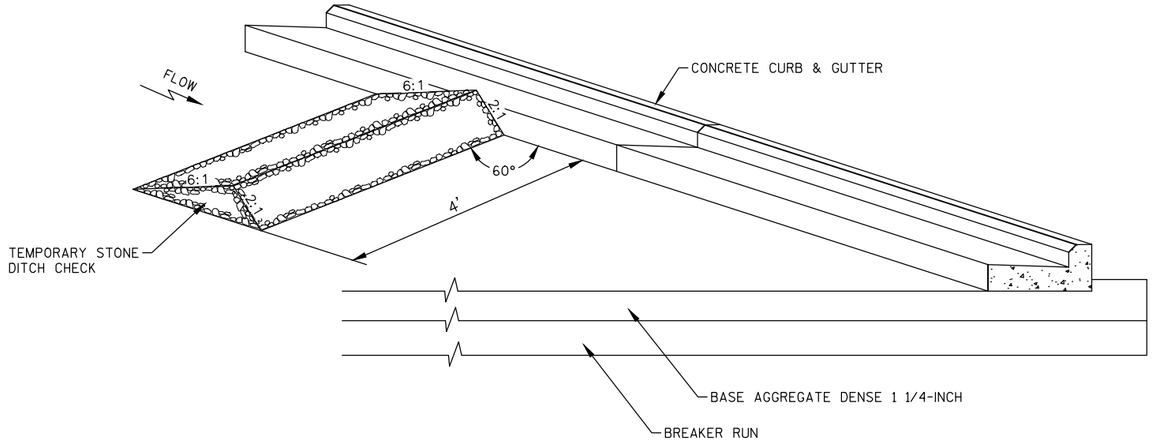
SECTION A–A



INLET PROTECTION SPECIAL DETAILS

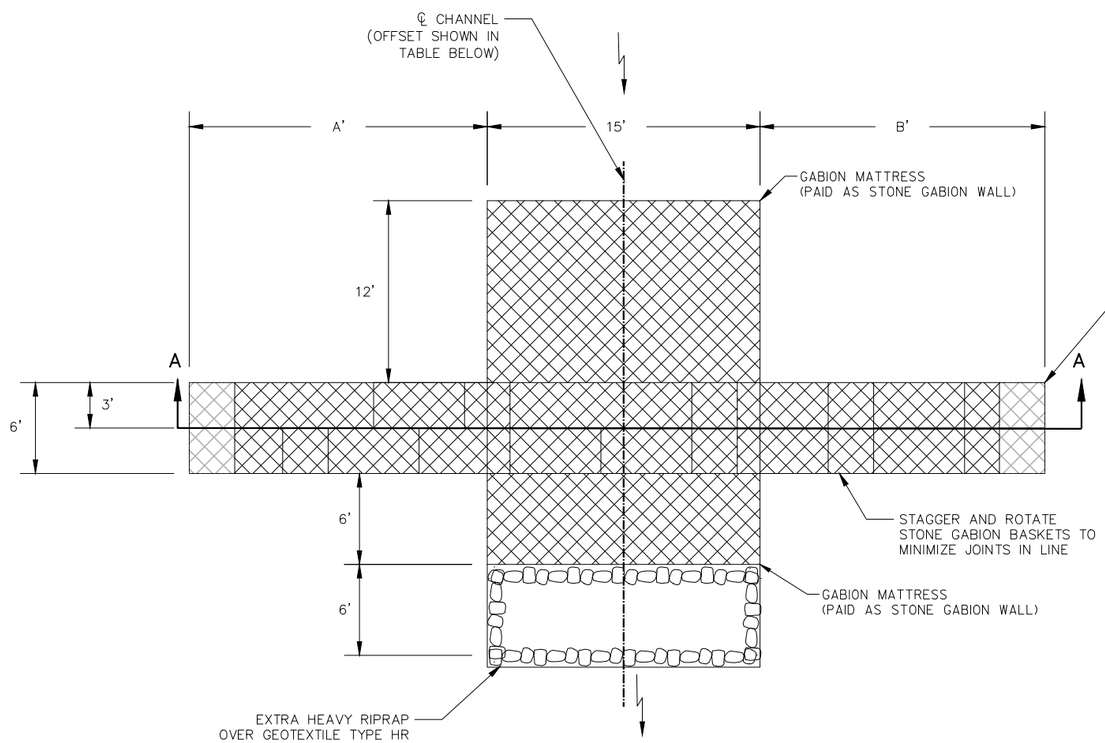
TEMPORARY DITCH CHECK AND SAND BAGS PAID FOR UNDER BID ITEM "INLET PROTECTION SPECIAL".

STATION	① (FT)	② (FT)
34+75	9	27
42+00	9	27
43+50	9	27
49+01	15	33
63+00	9	27
66+65	9	27



TEMPORARY STONE DITCH CHECKS

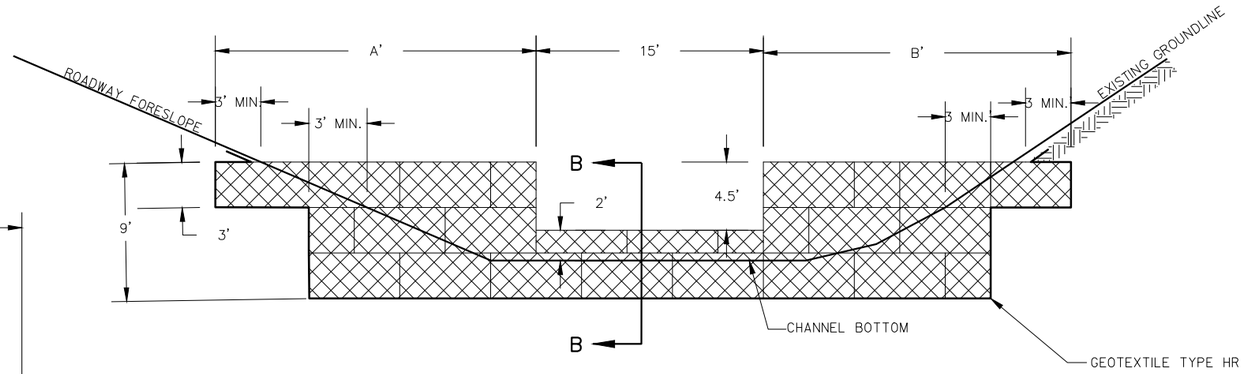
(SEE MISCELLANEOUS QUANTITIES SHEET FOR LOCATION)



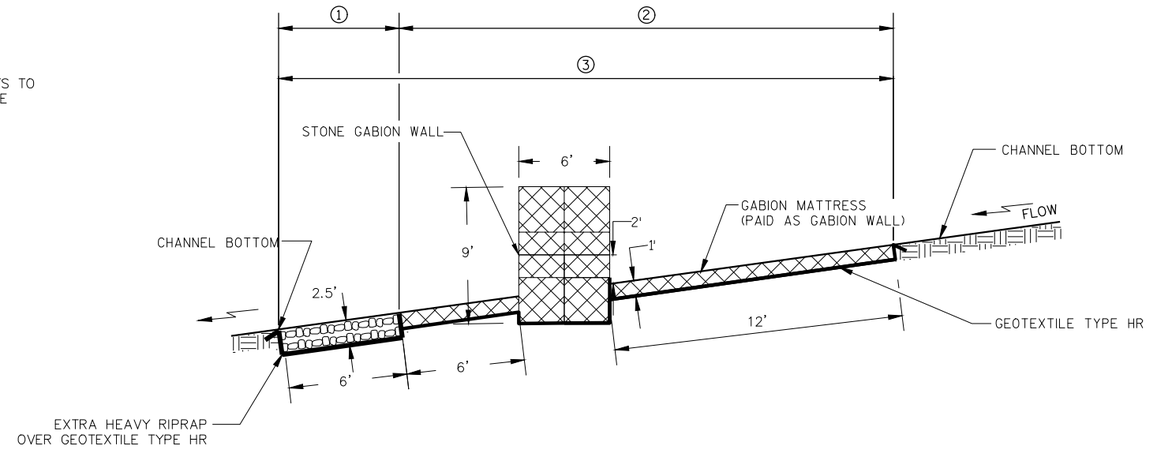
PLAN VIEW OF GABION WEIR

STA. 19+00, RT – 0° SKEW
STA. 25+13, RT – 8° LHF SKEW
STA. 53+89, RT – 10° RHF SKEW

STA.	A (ft)	B (ft)
19+00	26'	37'
25+13	36'	17'
53+89	10'	15'



SECTION A–A

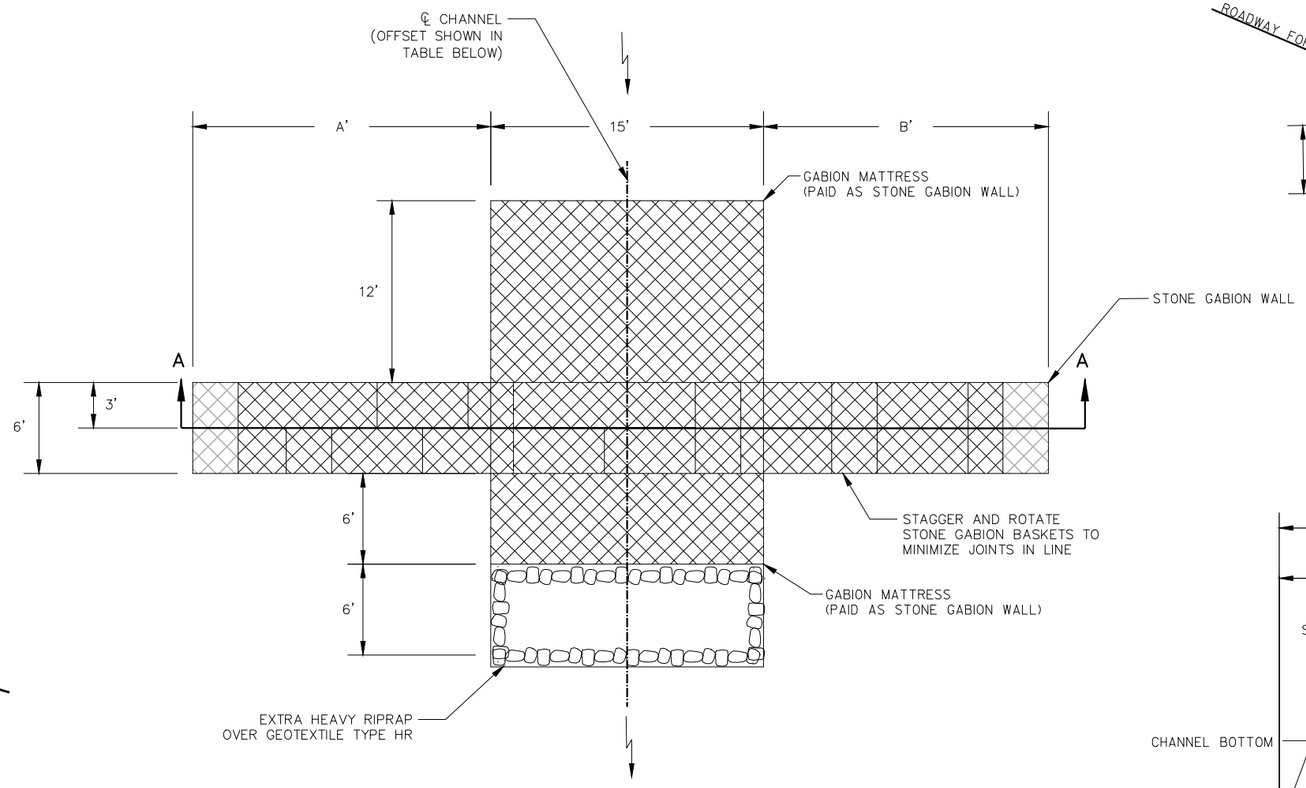


SECTION B–B

① LIMITS OF EXTRA HEAVY RIPRAP
② LIMITS OF STONE GABION WALL
③ LIMITS OF GEOTEXTILE TYPE HR

GABION WEIR

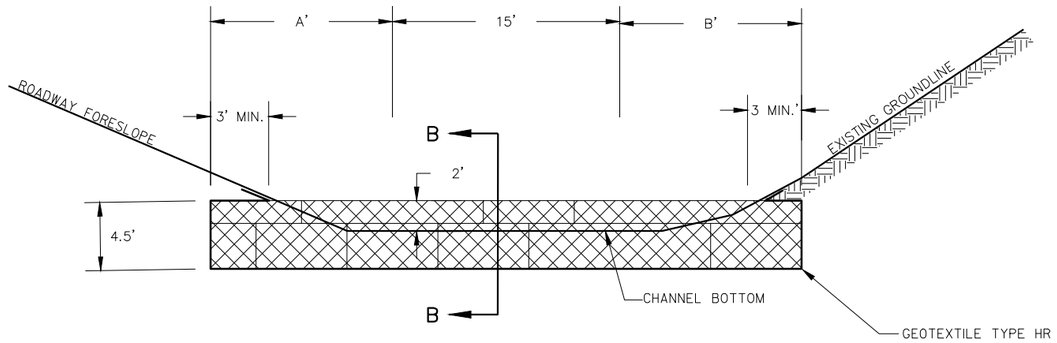
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 16	E



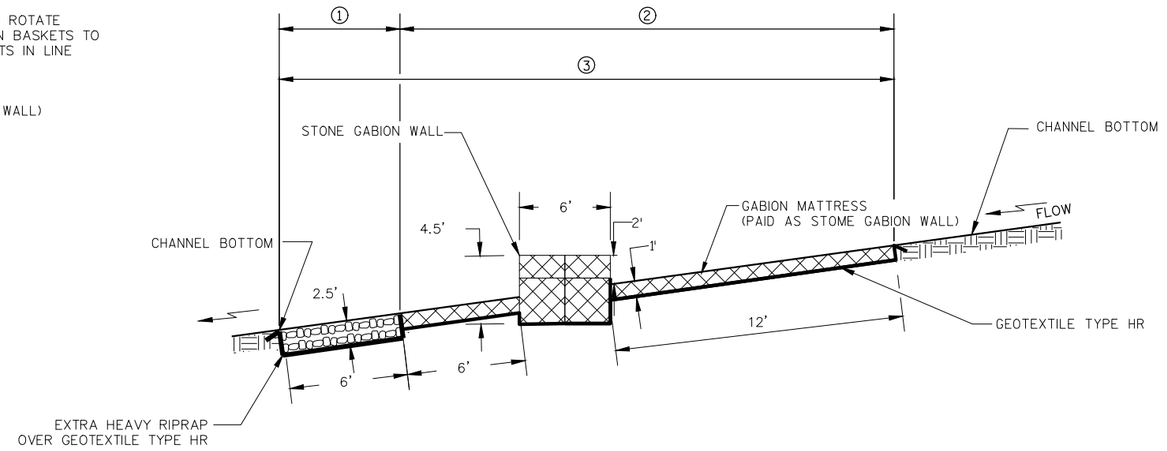
PLAN VIEW OF GABION CHECK

STA. 15+43, RT – 25° LHF SKEW
STA. 36+07, RT – 11° LHF SKEW
STA. 41+00, RT – 0° SKEW
STA. 62+50, RT – 0° SKEW

STA.	A (ft)	B (ft)
15+43	17'	6'
36+07	2'	0'
41+00	7'	3'
62+50	1'	0'



SECTION A–A



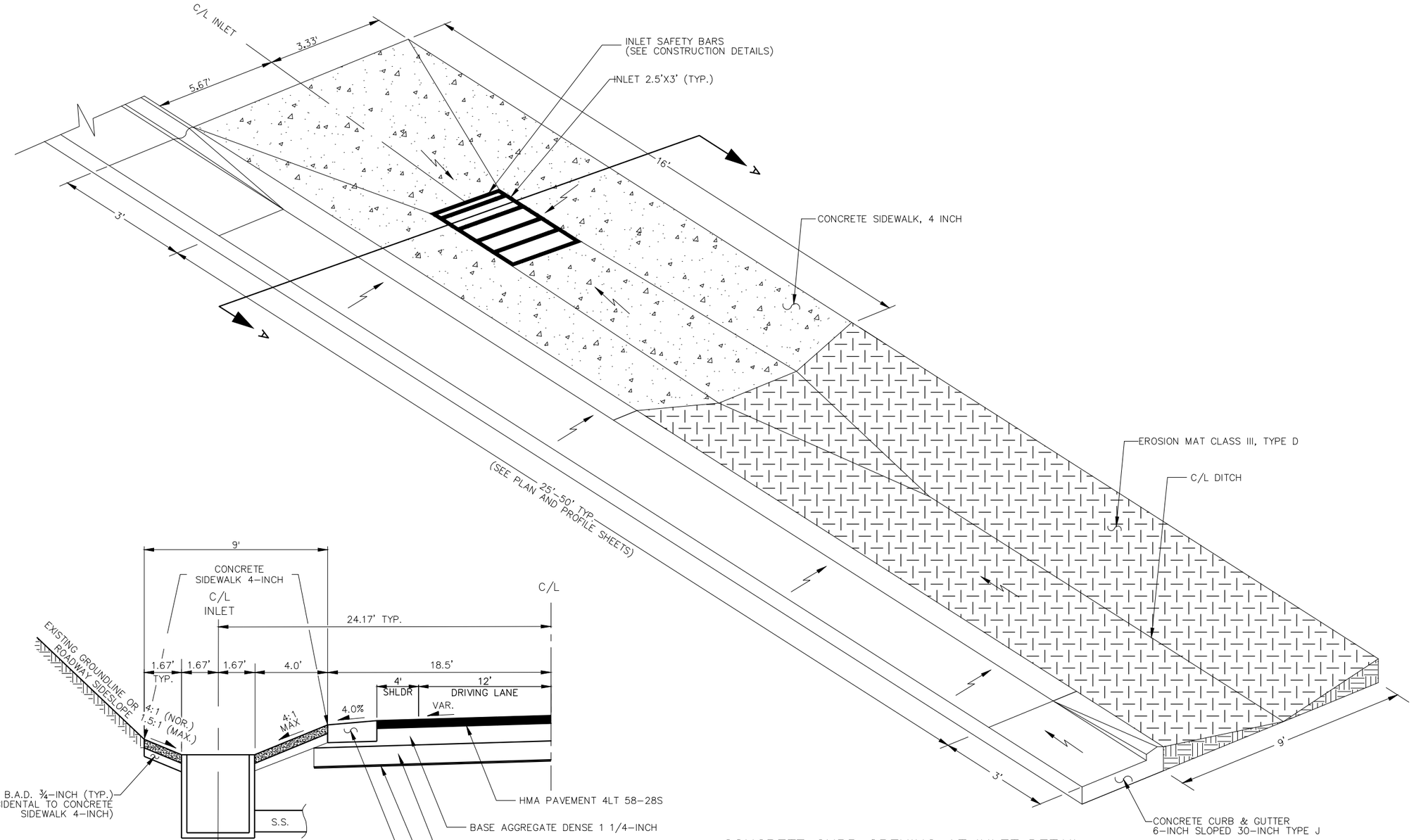
SECTION B–B

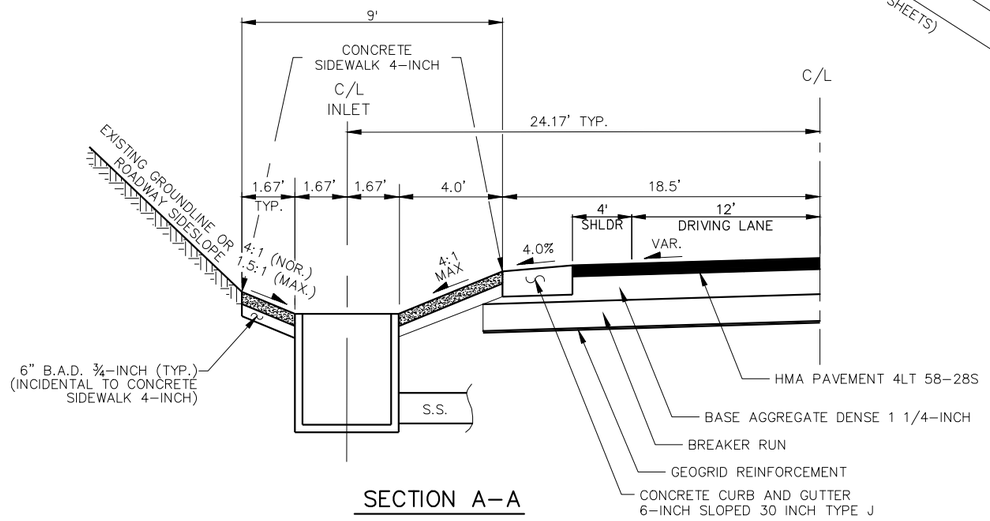
① LIMITS OF EXTRA HEAVY RIPRAP
② LIMITS OF STONE GABION WALL
③ LIMITS OF GEOTEXTILE TYPE HR

GABION CHECK

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 17	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_DRAINAGE DETAILS.DWG
LAYOUT : LAYOUT5
PLOT DATE : 10/26/2018
PLOT TIME : 11:33:25 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1 IN:2 FT_XREF



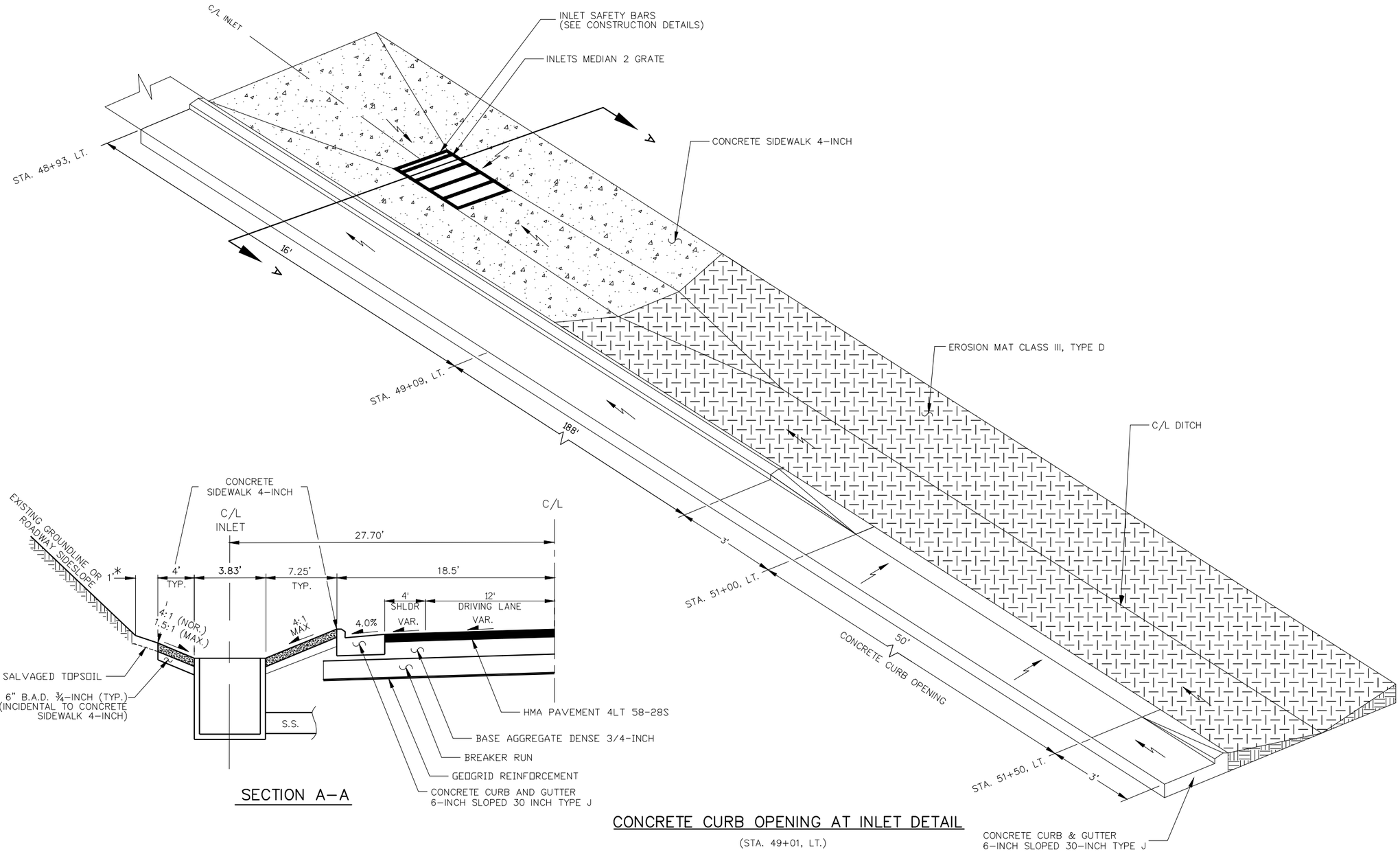


SECTION A-A

CONCRETE CURB OPENING AT INLET DETAIL

CURB OPENING	INLET
STA. 34+75 – STA.35+00, LT.	STA. 34+75, LT.
STA. 42+00 – STA. 42+50, LT.	STA. 42+00, LT.
STA. 43+50 – STA. 44+00, LT.	STA. 43+50, LT.
STA. 58+00 – STA. 58+50, LT.	NO INLET REQ'D-DRAIN TO DITCH
STA. 63+00 – STA. 63+25, LT.	STA. 63+00, LT.
STA. 66+65 – STA. 66+90, LT.	STA. 66+65, LT.

2



SECTION A–A

CONCRETE CURB OPENING AT INLET DETAIL

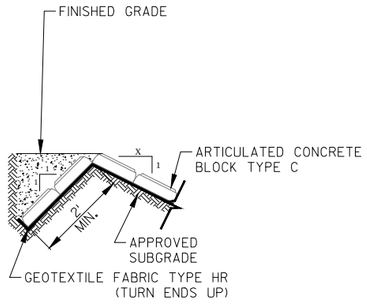
(STA. 49+01, LT.)

CURB OPENING
STA. 51+00 – STA. 51+50, LT.

INLET
STA. 49+01, LT.

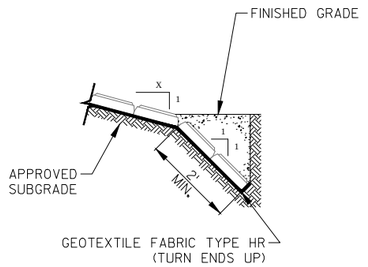
* LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, FERTILIZER TYPE B, SALVAGED TOPSOIL, & EROSION MAT (AS DIRECTED BY ENGINEER)

PROJECT NO: 5496–00–74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 19	E



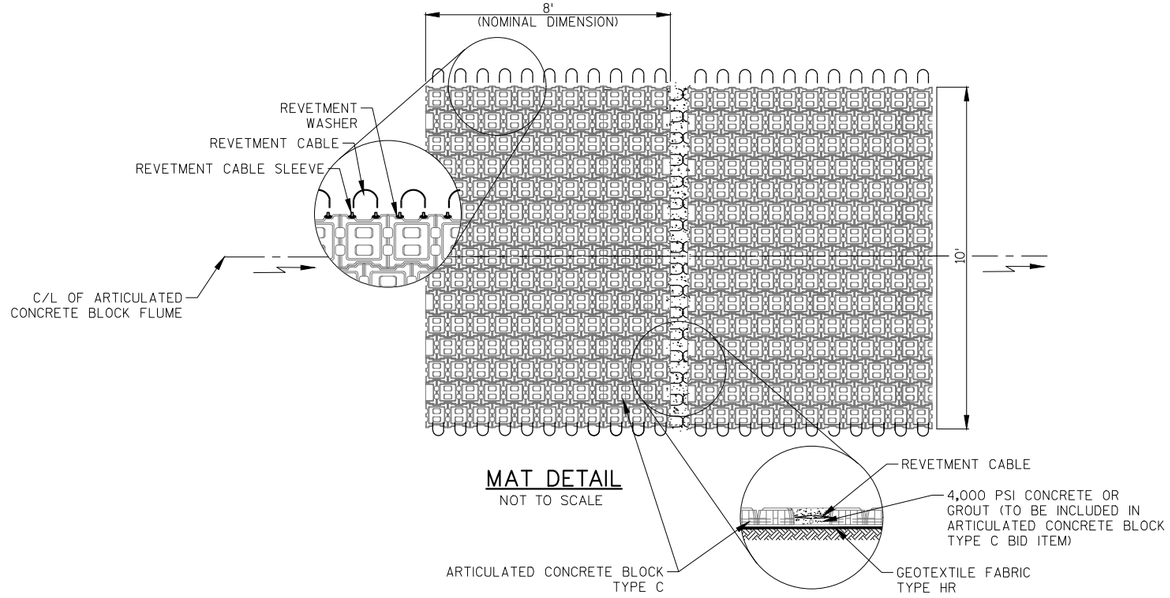
TOP OF SLOPE KEY DETAIL

NOT TO SCALE



TOE OF SLOPE KEY DETAIL

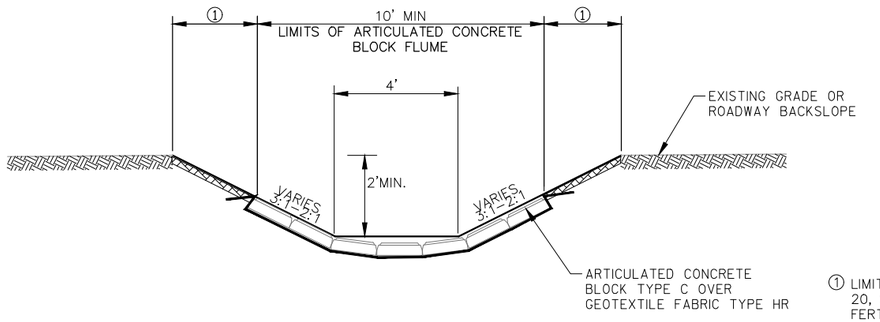
NOT TO SCALE



MAT DETAIL

NOT TO SCALE

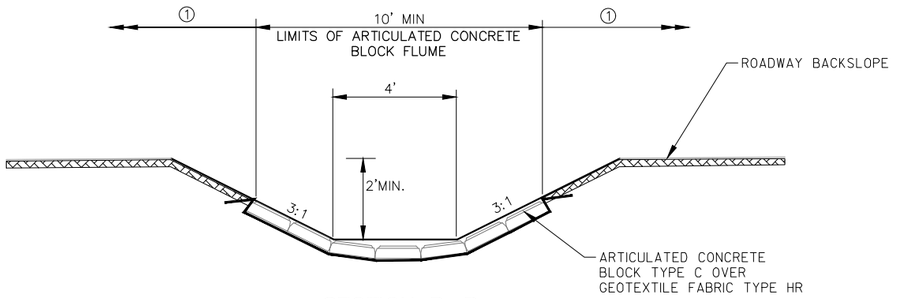
MAT TO MAT CONNECTION DETAIL



SECTION A–A
TYPICAL SECTION OF ARTICULATED CONCRETE BLOCK FLUME

(STA. 56+95 – STA. 57+96, LT.)

NOT TO SCALE

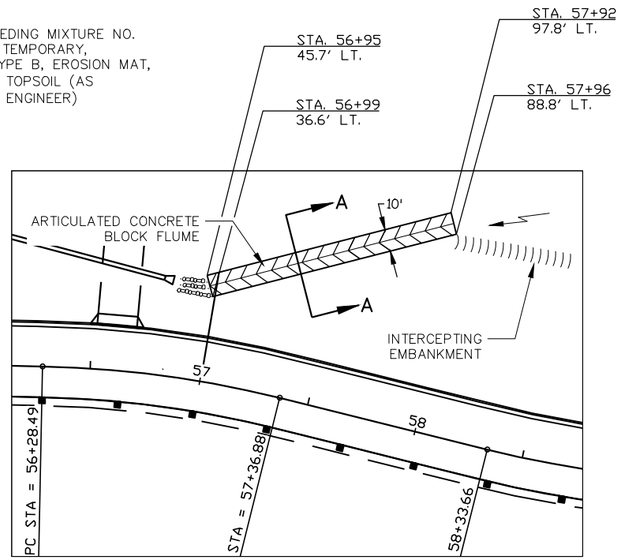


SECTION B–B
TYPICAL SECTION OF ARTICULATED CONCRETE BLOCK FLUME

(STA. 62+95 – STA. 63+05, LT.)

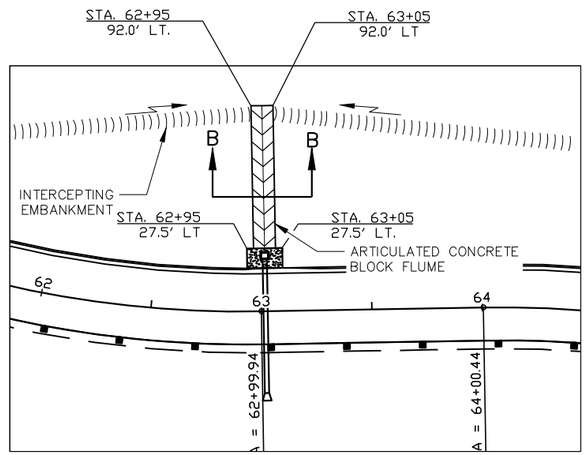
NOT TO SCALE

① LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, FERTILIZER TYPE B, EROSION MAT, & SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)



PLAN VIEW OF ARTICULATED CONCRETE BLOCK FLUME

(STA. 56+95 – STA. 57+96, LT.)

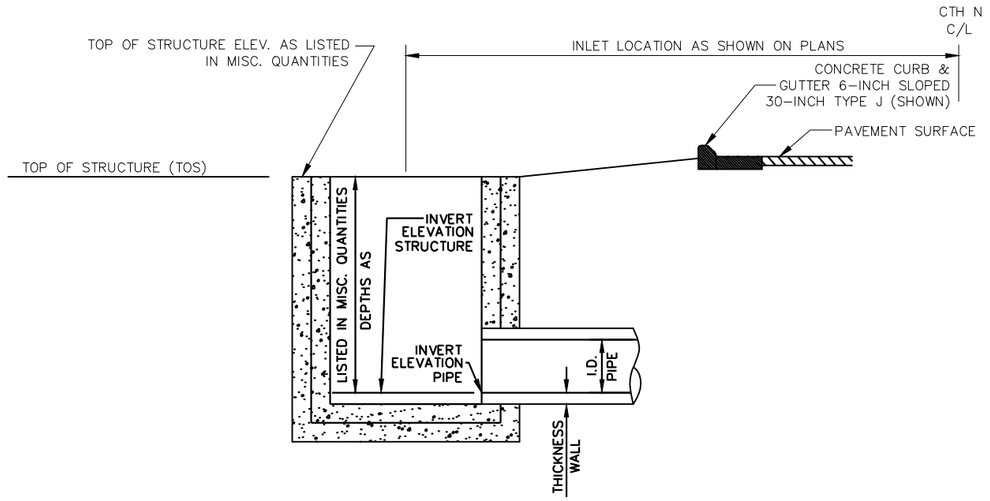


PLAN VIEW OF ARTICULATED CONCRETE BLOCK FLUME

(STA. 62+95 – STA. 63+05, LT.)

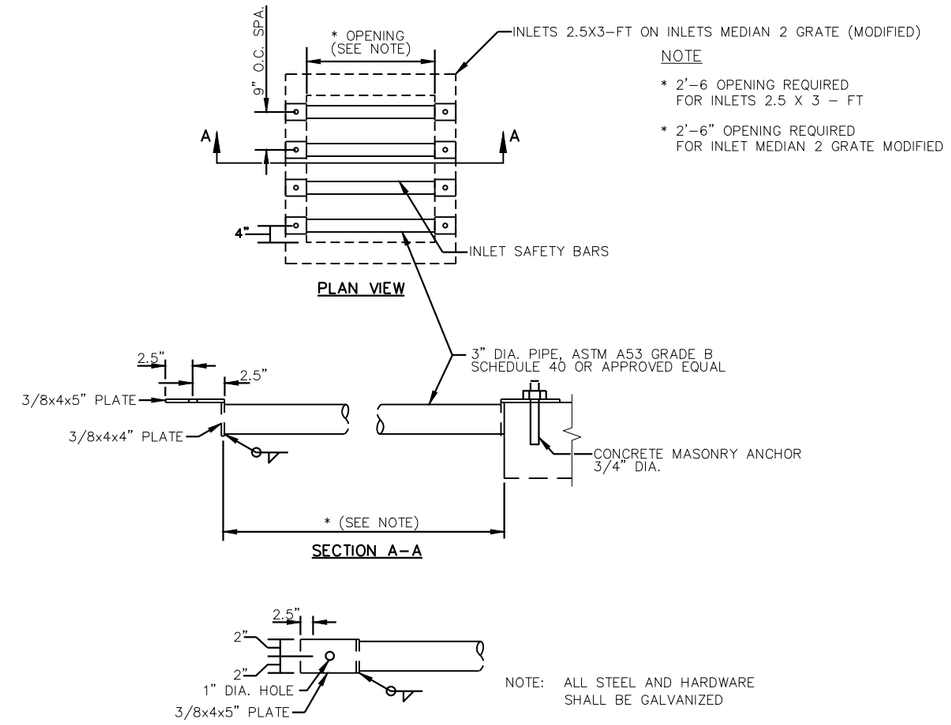
① LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY, FERTILIZER TYPE B, EROSION MAT, & SALVAGED TOPSOIL (AS DIRECTED BY ENGINEER)

PROJECT NO: 5496–00–74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 20	E

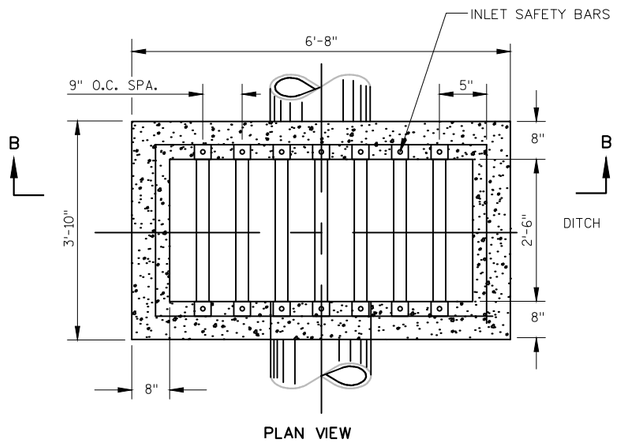


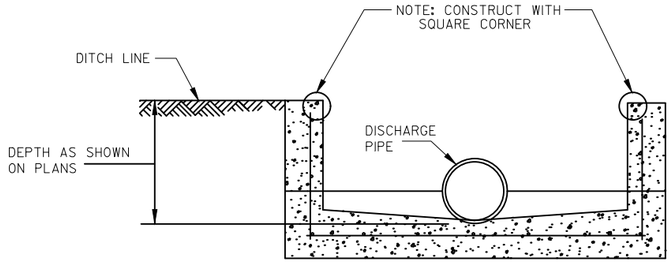
DETAIL OF CURB & GUTTER AND INLETS 2.5 X 3 – FT

(URBAN SECTION SHOWN – RURAL SECTION SIMILAR)



INLET SAFETY BARS



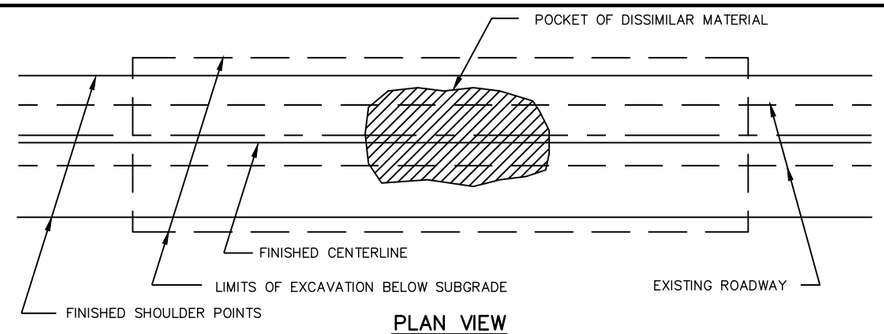


NOTE: DETAILS NOT SHOWN SHALL CONFORM TO STANDARD DETAIL DRAWING FOR INLET MEDIAN 2 GRATE.

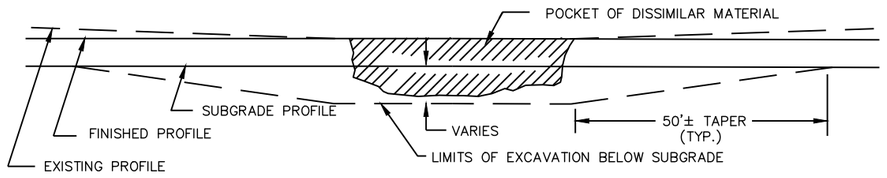
INLET MEDIAN 2 GRATE (MODIFIED)

PAID FOR AS "INLET MEDIAN 2 GRATE"

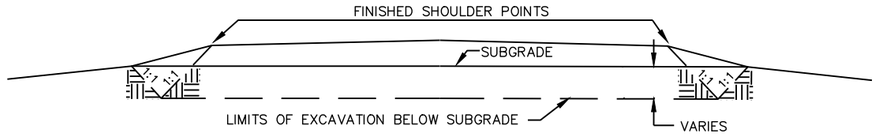
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 21	E



PLAN VIEW



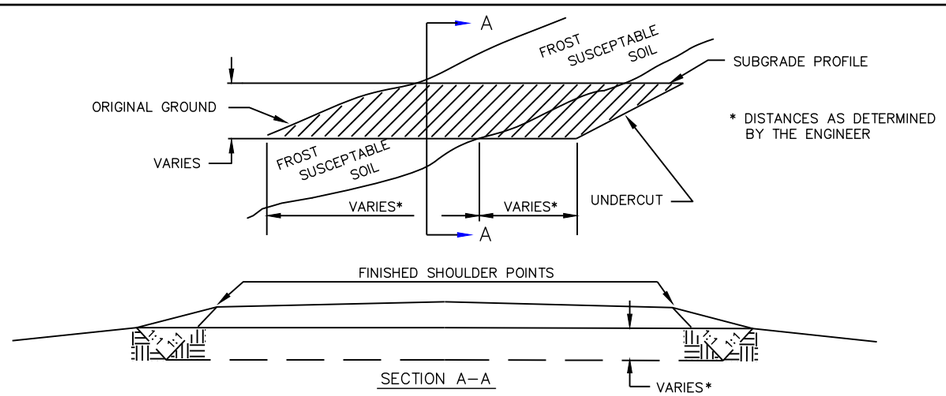
PROFILE VIEW



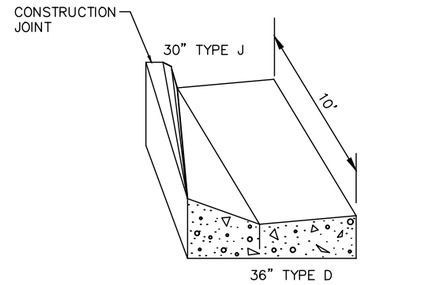
CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

EXCAVATION BELOW SUBGRADE (E.B.S.)

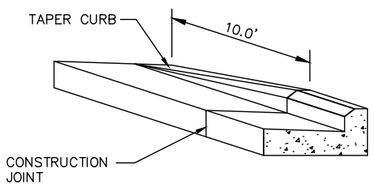


DETAIL FOR EXCAVATION AT MOUNTH OF CUTS



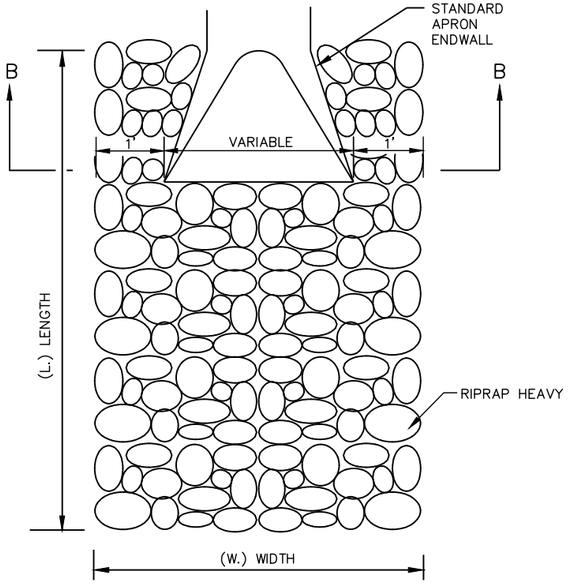
CURB & GUTTER TRANSITION DETAIL

PAID FOR AS CONCRETE CURB & GUTTER 36–INCH TYPE D

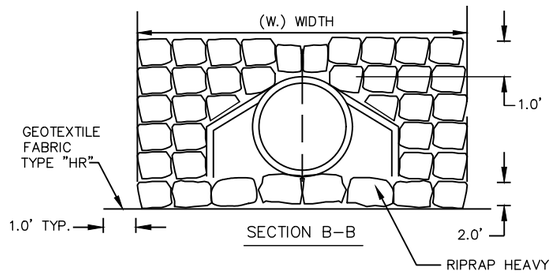


DETAIL OF CURB & GUTTER TERMINI

PROJECT NO: 5496–00–74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 22	E



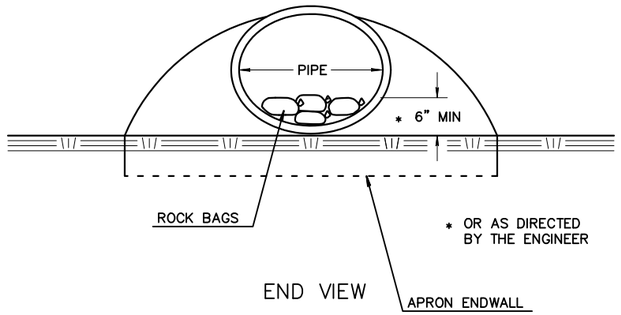
PLAN VIEW



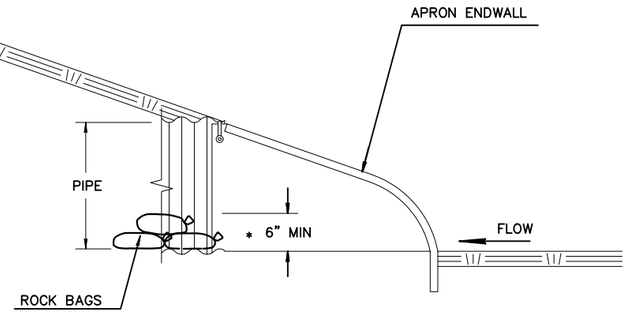
SECTION B–B

RIPRAP HEAVY DISCHARGE APRON

SEE MISCELLANEOUS QUANTITIES
FOR LOCATIONS AND DIMENSIONS



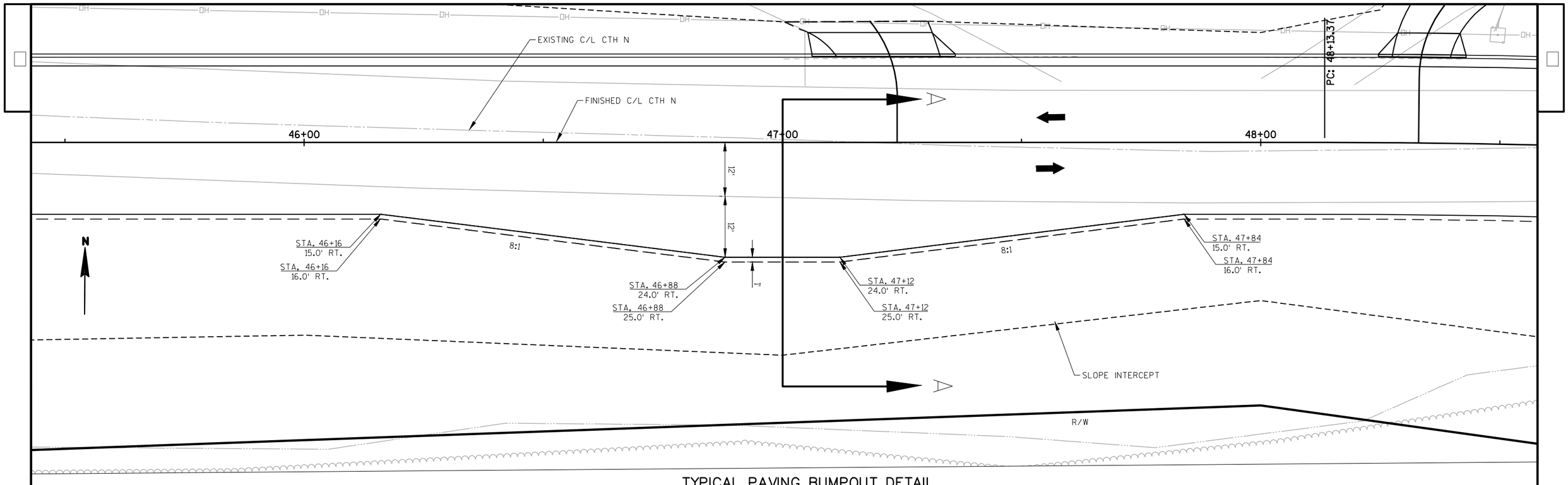
END VIEW



SIDE VIEW

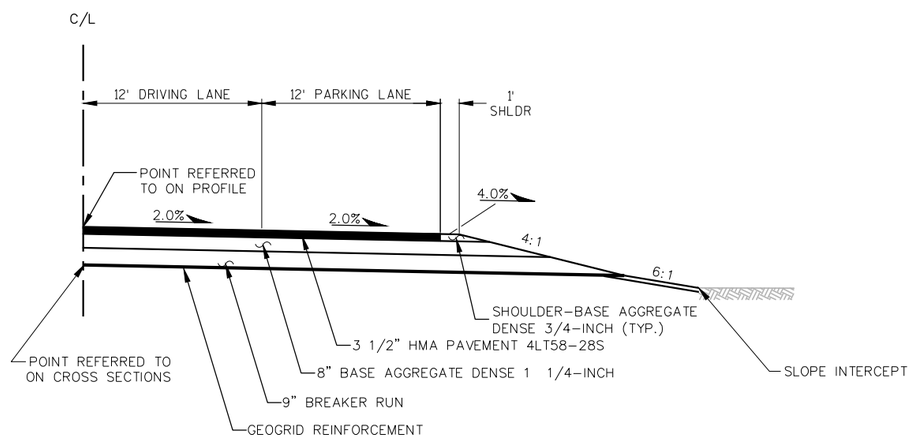
CULVERT PIPE CHECKS

ESTIMATED BAG SIZE = 18" X 12" X 6"	
PIPE SIZE	ESTIMATED NO. OF BAGS
12"	1
15"	2
18"	2
21"	3
14" X 23"	3
24"	3
27"	4
30"	5
19" X 30"	5
36"	7
24" X 38"	8
42"	8
29" X 45"	10
48"	10
34" X 53"	10
38" X 60"	13
60"	13
66"	15
53" X 83"	19



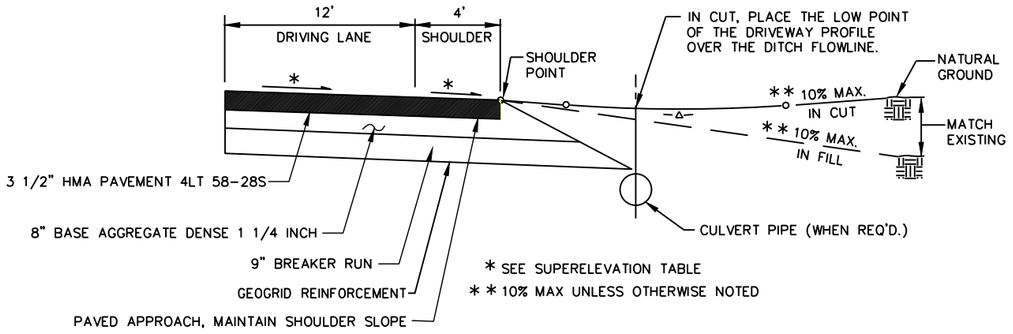
TYPICAL PAVING BUMPOUT DETAIL

CTH N
(STA. 46+88 - STA. 47+12, RT.)

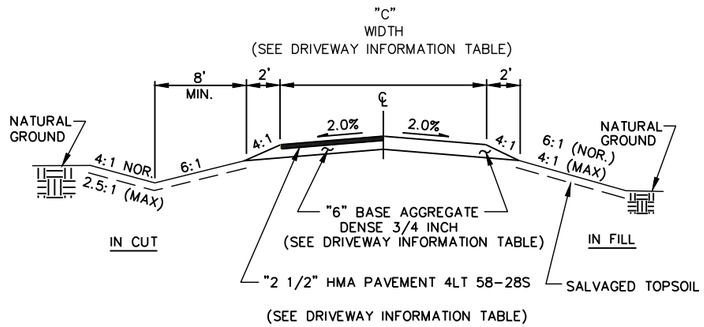


SECTION A-A

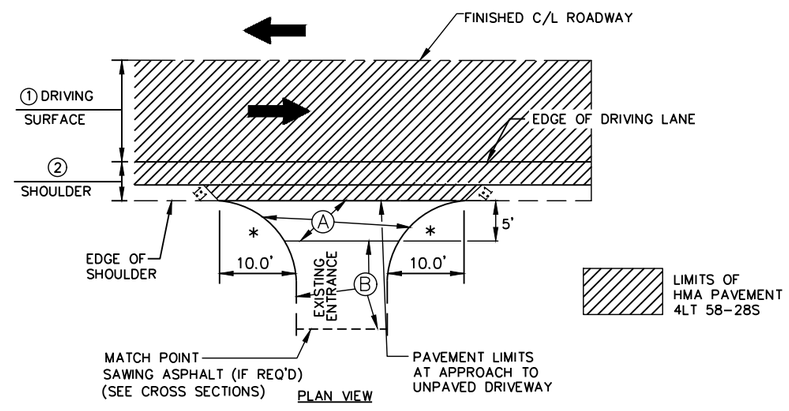
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 24	E



TYPICAL RURAL ENTRANCE PROFILES



TYPICAL CROSS-SECTION FOR RURAL ENTRANCE



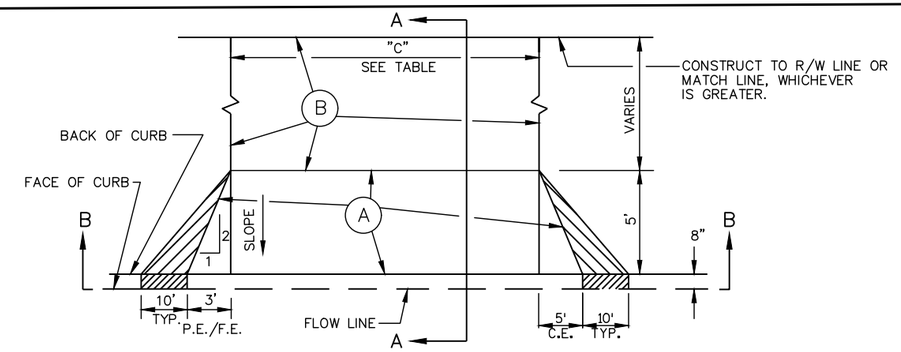
* RADIUS = 10'

RURAL ENTRANCE DETAIL

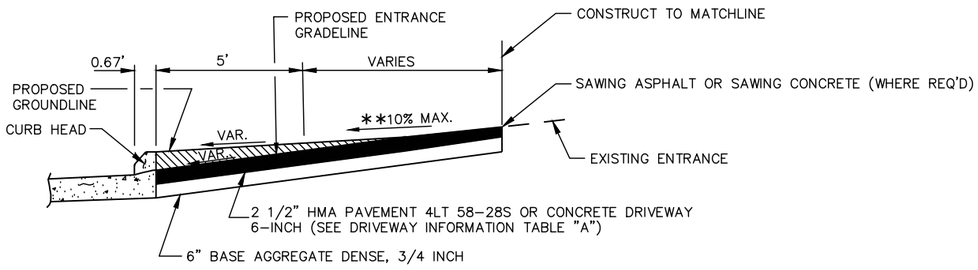
ROADWAY	①	②
CTH N	12'	4' (3' PAVED)
SLAMA LANE	9'	2' (0' PAVED)

DRIVEWAY INFORMATION TABLE

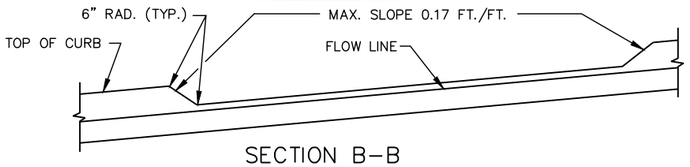
ENTRANCE TYPE	STATION	TYPE	EXISTING PAVEMENT STRUCTURE	PROPOSED PAVEMENT STRUCTURE A	PROPOSED PAVEMENT STRUCTURE B	"C" WIDTH
URBAN	14+75, LT.	C.E.	ASPHALT	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	30'
RURAL	19+70, LT.	F.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	24'
RURAL	27+45, LT.	F.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	16'
RURAL	27+45, RT.	F.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	18'
URBAN	47+24, LT.	F.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	25'
URBAN	48+33, LT.	P.E.	ASPHALT	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	12'
URBAN	53+39, LT.	P.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	12'
URBAN	56+60, LT.	F.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	18'
URBAN	69+50, LT.	P.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	10'
RURAL	85+50, LT.	F.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	24'
RURAL	85+50, RT.	F.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	16'
URBAN	87+12, RT.	P.E.	CONCRETE	CONCRETE DRIVEWAY 6" OVER 6" B.A.D.	CONCRETE DRIVEWAY 6" OVER 6" B.A.D.	21'
RURAL	202+45, RT.	P.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	20'
URBAN	401+40, LT.	P.E.	ASPHALT	CONCRETE DRIVEWAY 6" OVER 6" B.A.D.	CONCRETE DRIVEWAY 6" OVER 6" B.A.D.	19'
URBAN	401+90, LT.	P.E.	CONCRETE	CONCRETE DRIVEWAY 6" OVER 6" B.A.D.	CONCRETE DRIVEWAY 6" OVER 6" B.A.D.	16'
RURAL	570+90, RT.	P.E.	B.A.D.	2 1/2" HMA PAVEMENT OVER 6" B.A.D.	8 1/2" B.A.D.	20'



URBAN DRIVEWAY DETAIL



SECTION A-A

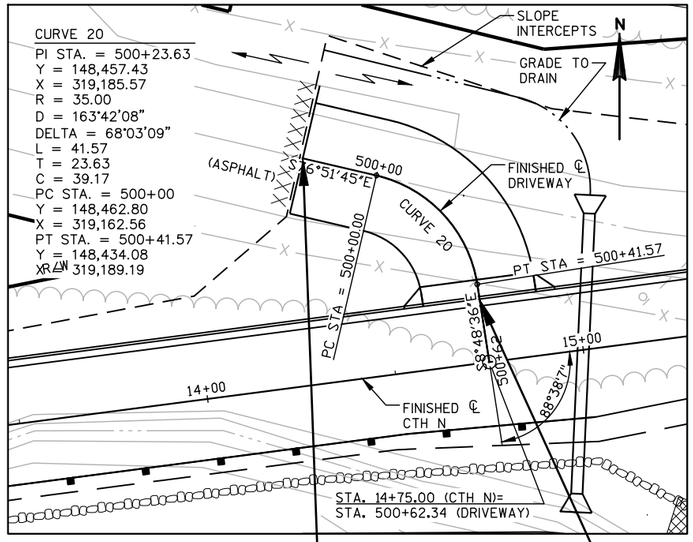


SECTION B-B

** 10% MAX UNLESS OTHERWISE NOTED

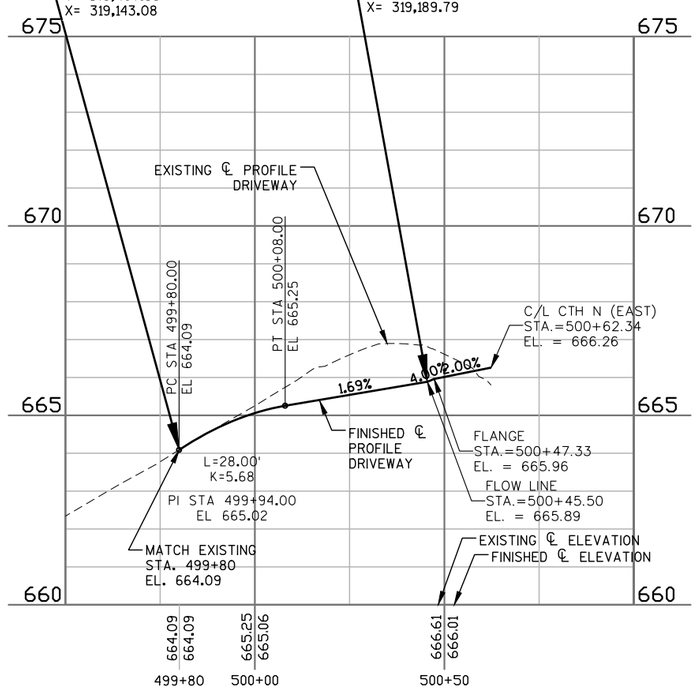
	EXISTING	PROPOSED
Ⓐ	CRUSHED AGGREGATE BASE COURSE	2 1/2" PROPOSED ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 3/4-INCH
	ASPHALT	2 1/2" PROPOSED ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 3/4-INCH
	CONCRETE	6" PROPOSED CONCRETE DRIVEWAY OVER 6" BASE AGGREGATE DENSE 3/4-INCH

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_CONSTRUCTION DETAILS DRIVEWAY TABLE.DWG
LAYOUT :
PLOT DATE : 7/27/2018
PLOT TIME : 4:11:08 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1 IN:2 FT_XREF

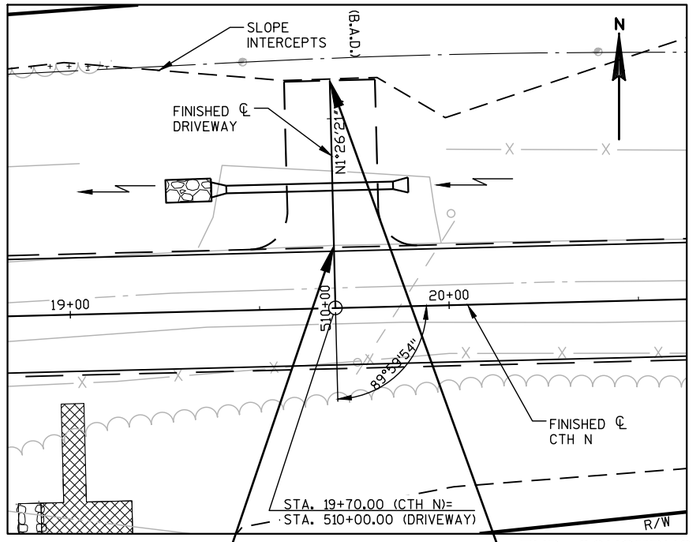


BEIGN CONSTRUCTION
STA. 499+80.00
Y= 148,467.35
X= 319,143.08

END CONSTRUCTION
STA. 500+45.50
Y= 148,430.20
X= 319,189.79

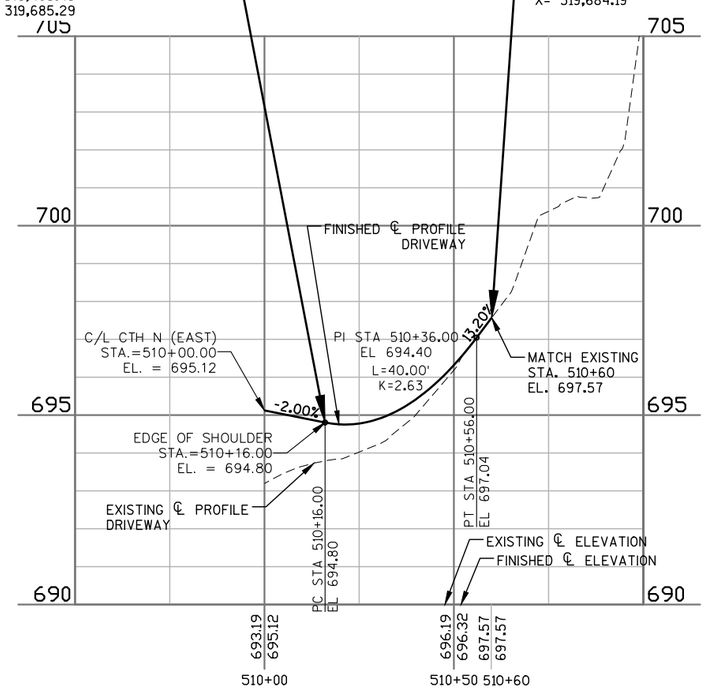


C.E. - STA. 14+75, LT

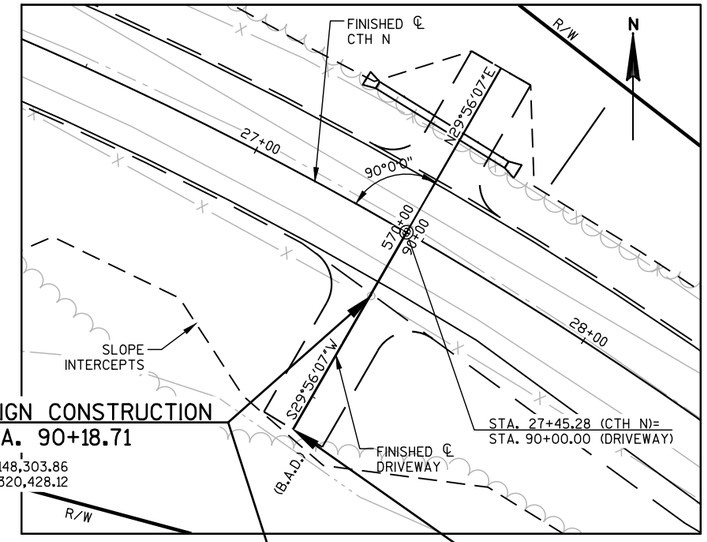


BEIGN CONSTRUCTION
STA. 510+16.00
Y= 148,463.45
X= 319,685.29

END CONSTRUCTION
STA. 510+60.00
Y= 148,507.44
X= 319,684.19

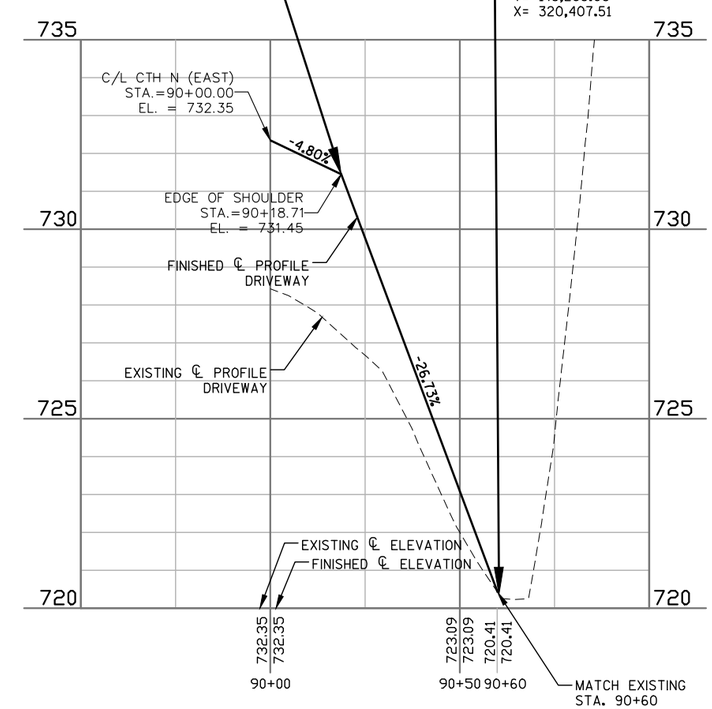


F.E. - STA. 19+70, LT



BEIGN CONSTRUCTION
STA. 90+18.71
Y= 148,303.86
X= 320,428.12

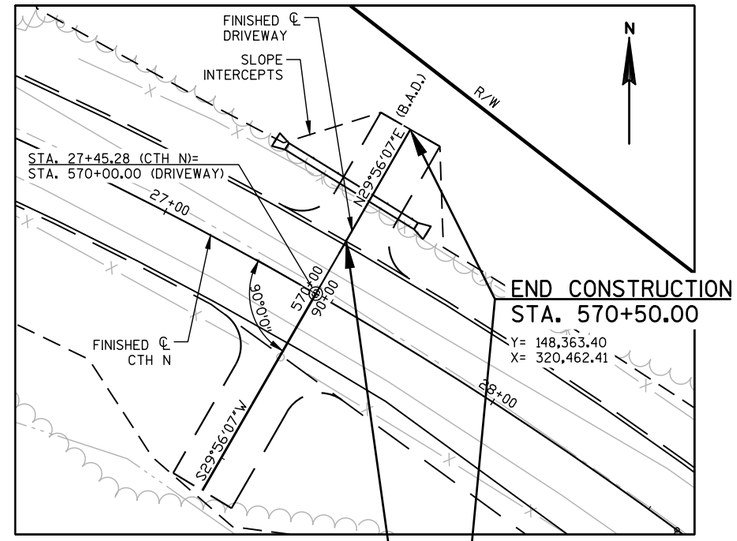
END CONSTRUCTION
STA. 90+60.00
Y= 148,268.08
X= 320,407.51



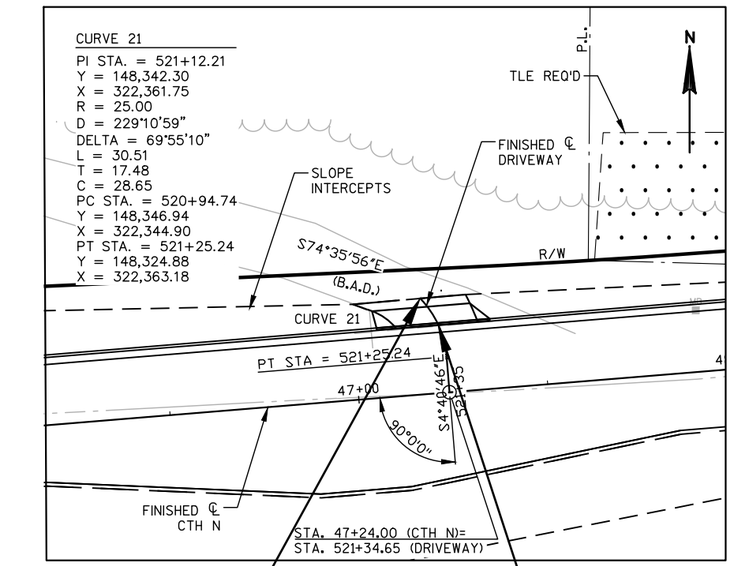
F.E. - STA. 27+45, RT

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS - DRIVEWAYS	SHEET 26	E

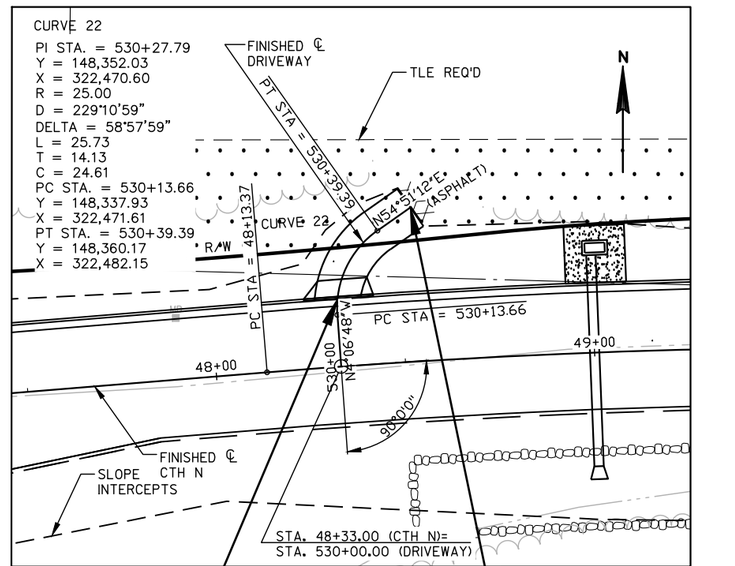
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_CONSTRUCTION DETAILS DRIVEWAYS.DWG
LAYOUT :
PLOT DATE : 7/27/2018
PLOT TIME : 4:07:59 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 6" = 1'-0"_XREF



F.E. - STA. 27+45, LT



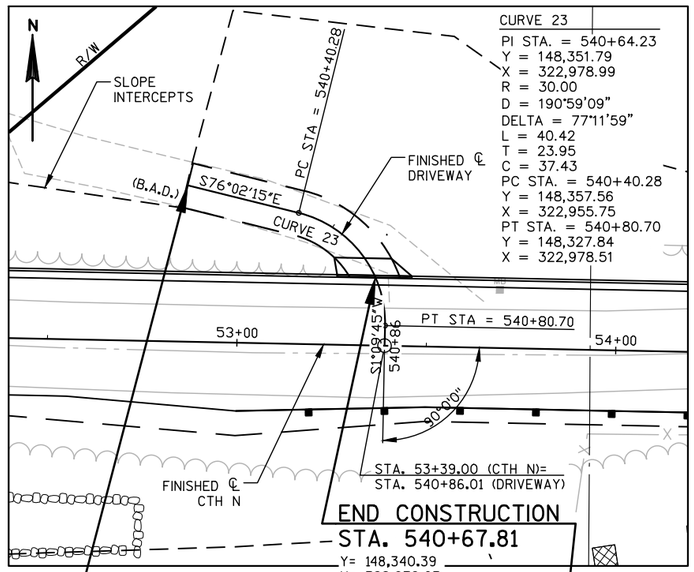
F.E. - STA. 47+24, LT



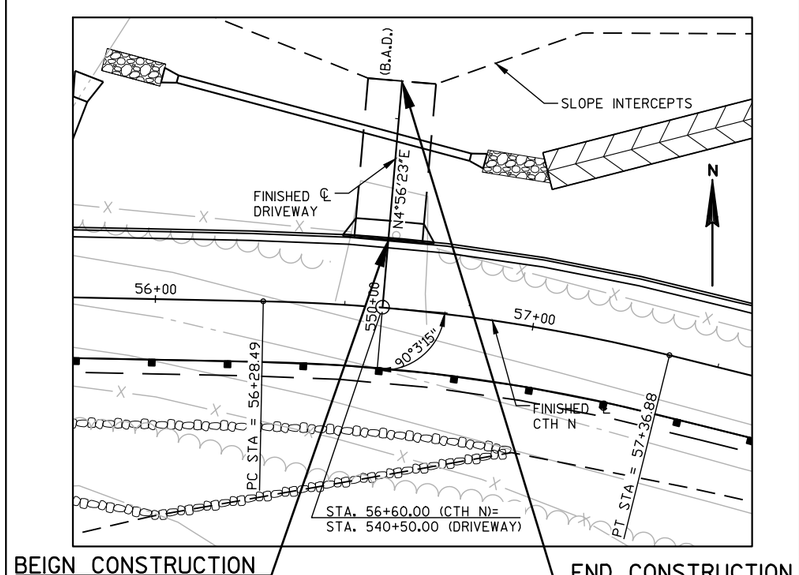
P.E. - STA. 48+33, LT

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS - DRIVEWAYS	SHEET 27	E

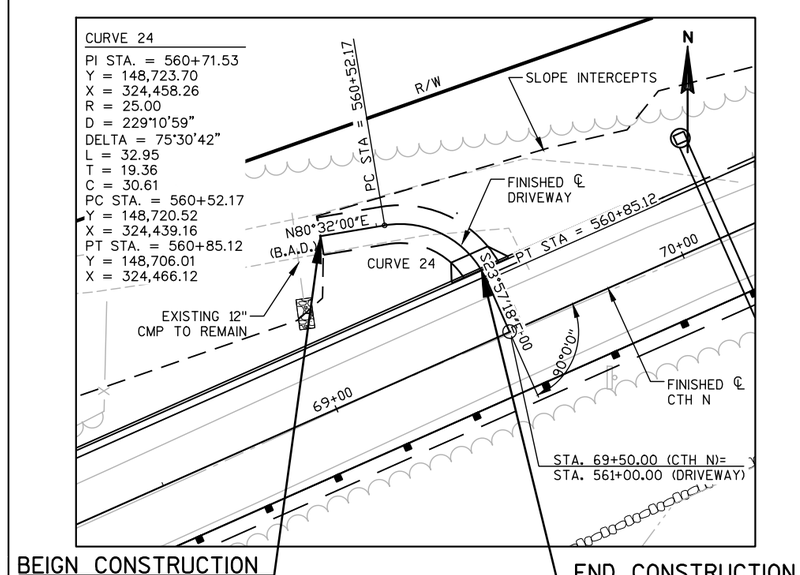
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_CONSTRUCTION DETAILS DRIVEWAYS.DWG
LAYOUT :
PLOT DATE : 7/27/2018
PLOT TIME : 4:08:31 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 6" = 1'-0"_XREF



P.E. - STA. 53+39, LT



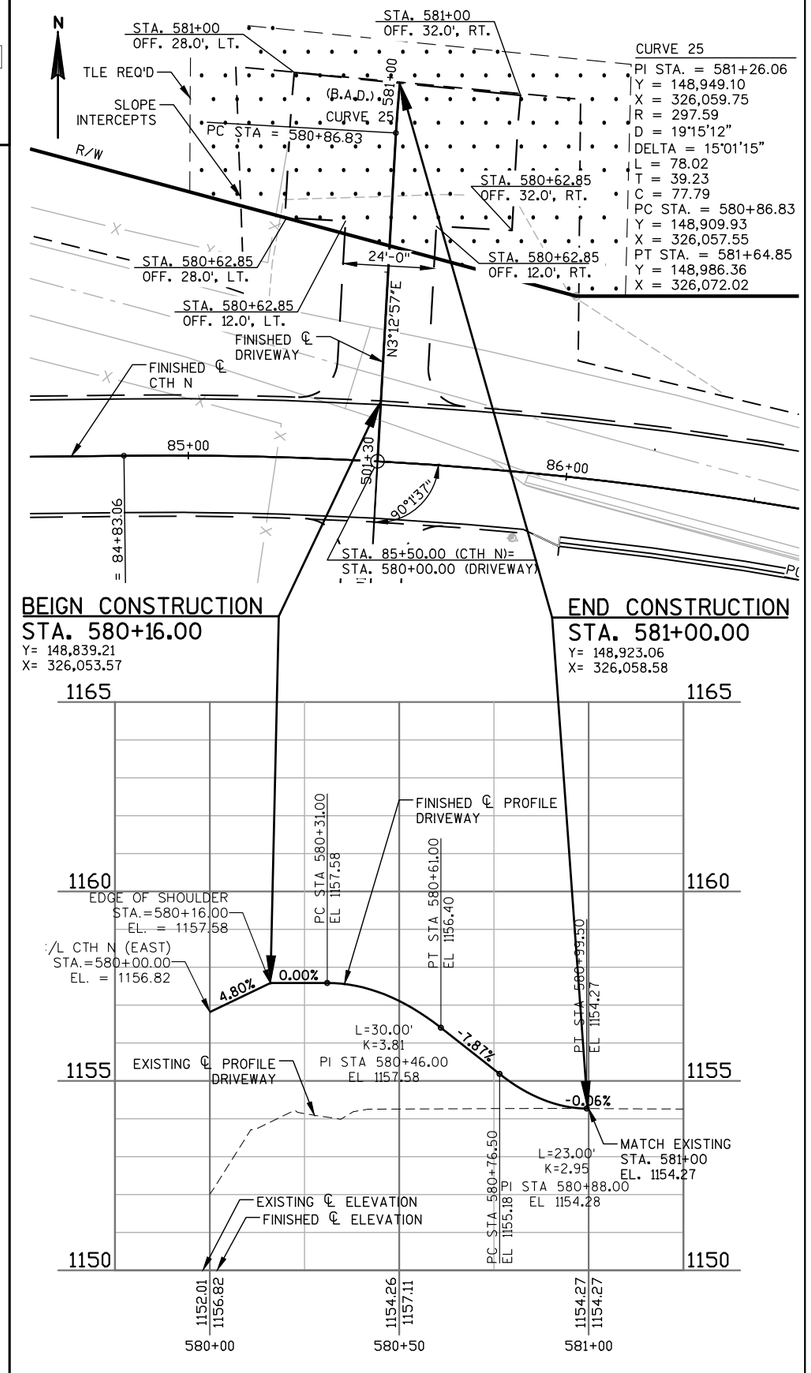
F.E. - STA. 56+60, LT



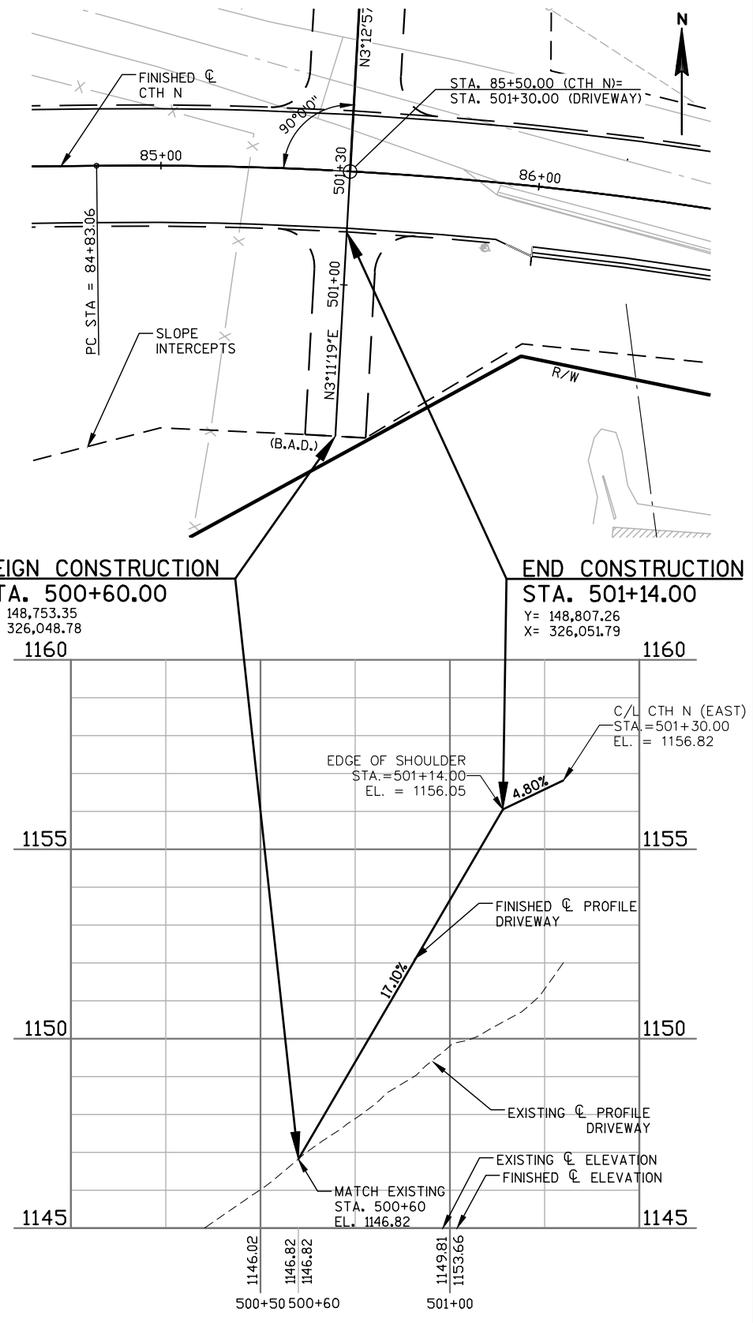
P.E. - STA. 69+50, LT

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS - DRIVEWAYS	SHEET 28	E

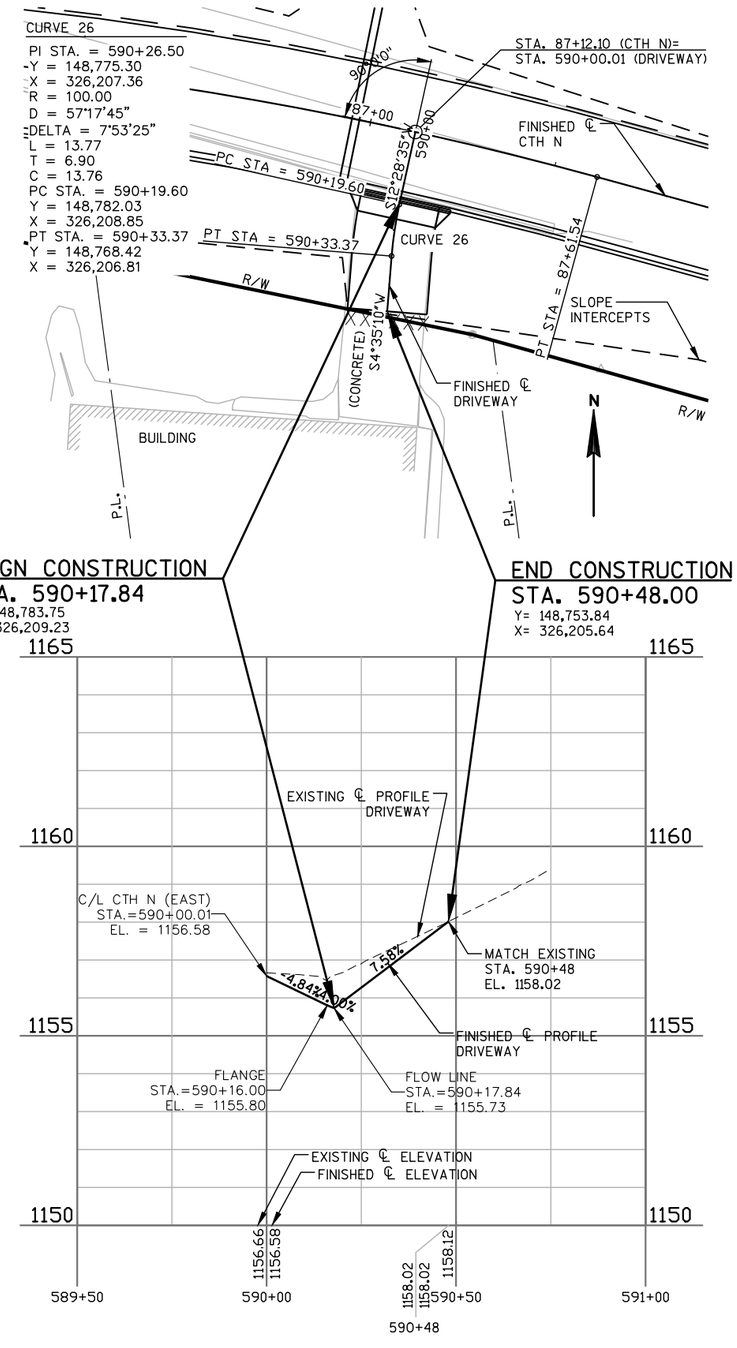
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_CONSTRUCTION DETAILS DRIVEWAYS.DWG
LAYOUT :
PLOT DATE : 7/27/2018
PLOT TIME : 4:09:07 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 6" = 1'-0"_XREF



F.E. - STA. 85+50, LT



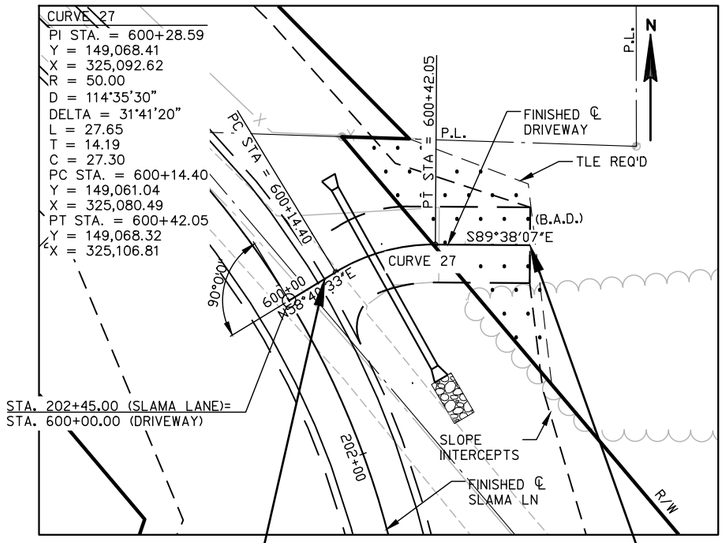
F.E. - STA. 85+50, RT

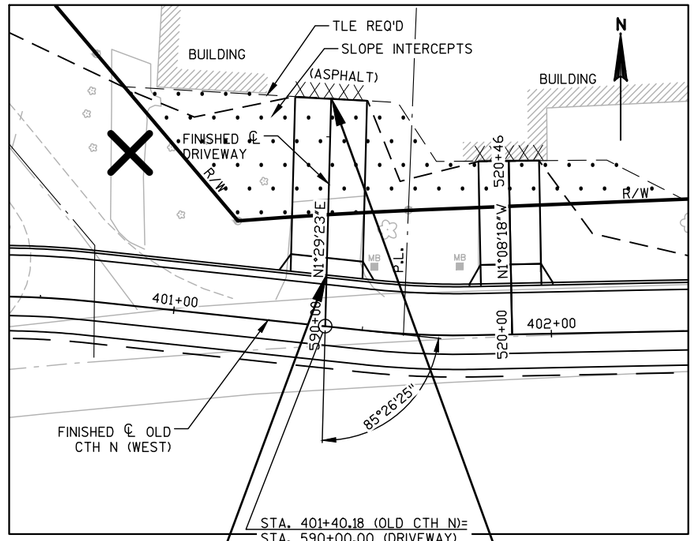


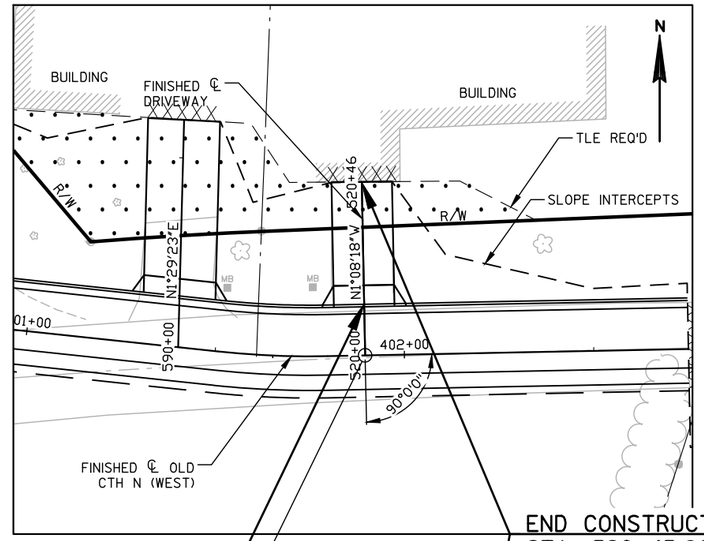
P.E. - STA. 87+12, RT

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS - DRIVEWAYS	SHEET 29	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_CONSTRUCTION DETAILS DRIVEWAYS.DWG
LAYOUT :
PLOT DATE : 7/27/2018
PLOT TIME : 4:09:45 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 6" = 1'-0"_XREF

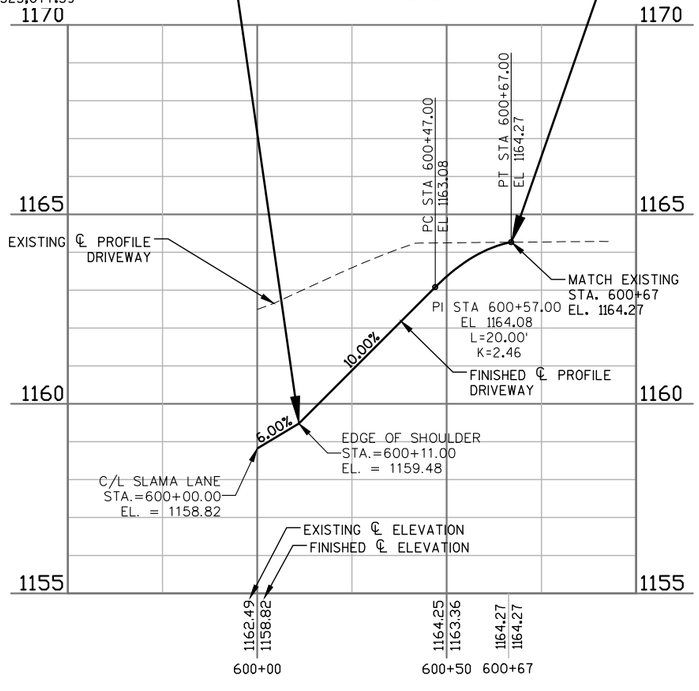






BEIGN CONSTRUCTION
STA. 600+11.00
Y= 149,059.27
X= 325,077.59

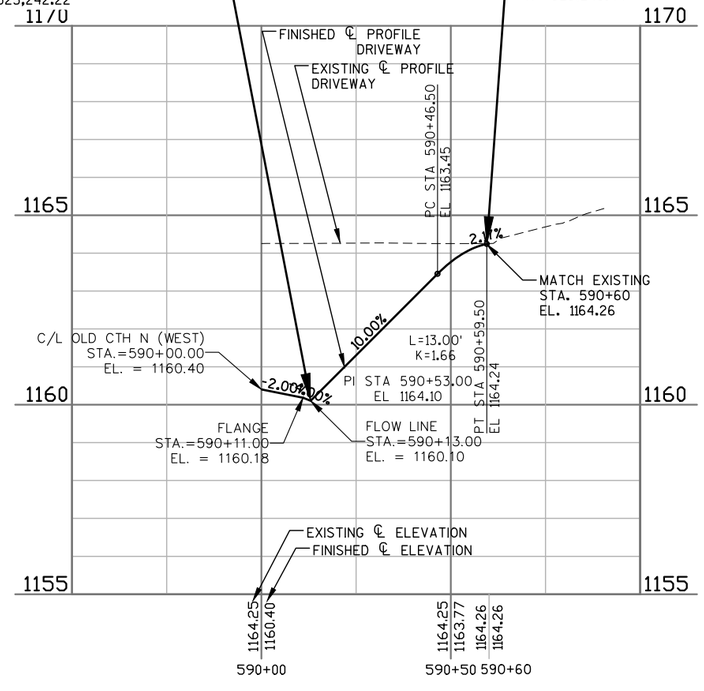
END CONSTRUCTION
STA. 600+67.00
Y= 149,068.17
X= 325,131.75



P.E. - STA. 202+45, RT

BEIGN CONSTRUCTION
STA. 590+13.00
Y= 148,920.51
X= 325,242.22

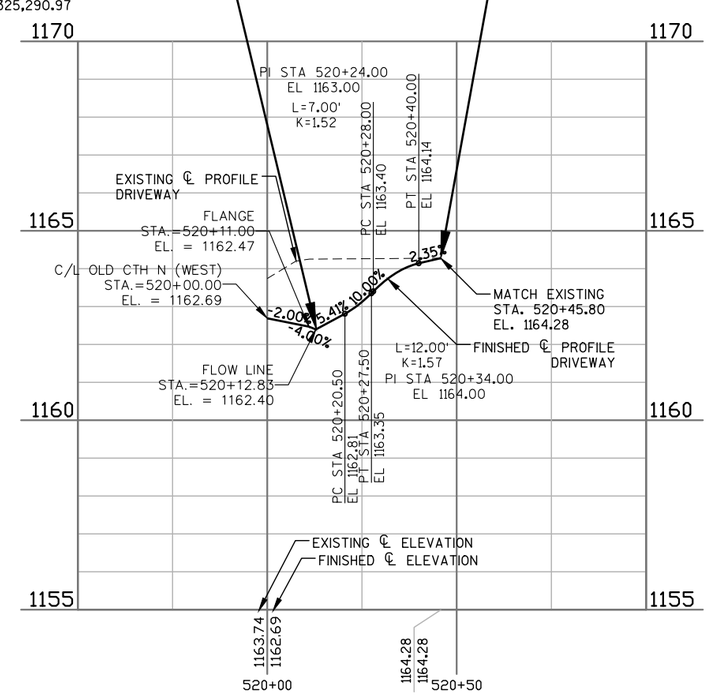
END CONSTRUCTION
STA. 590+60.00
Y= 148,967.49
X= 325,243.44



P.E. - STA. 401+40, LT

BEIGN CONSTRUCTION
STA. 520+13.00
Y= 148,918.35
X= 325,290.97

END CONSTRUCTION
STA. 520+45.80
Y= 148,951.14
X= 325,290.32

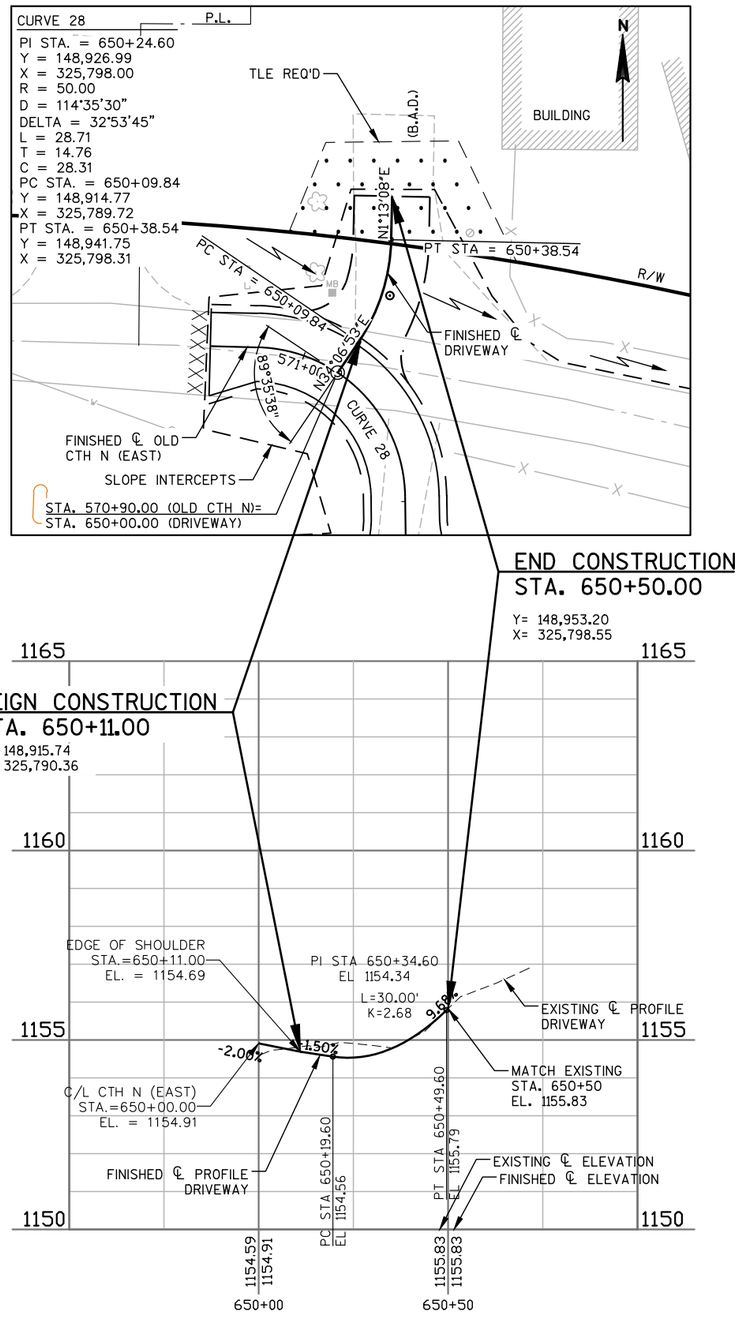


P.E. - STA. 401+90, LT

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS - DRIVEWAYS	SHEET 30	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_CONSTRUCTION DETAILS DRIVEWAYS.DWG
LAYOUT :
PLOT DATE : 7/27/2018
PLOT TIME : 4:25:35 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 6" = 1'-0"_XREF

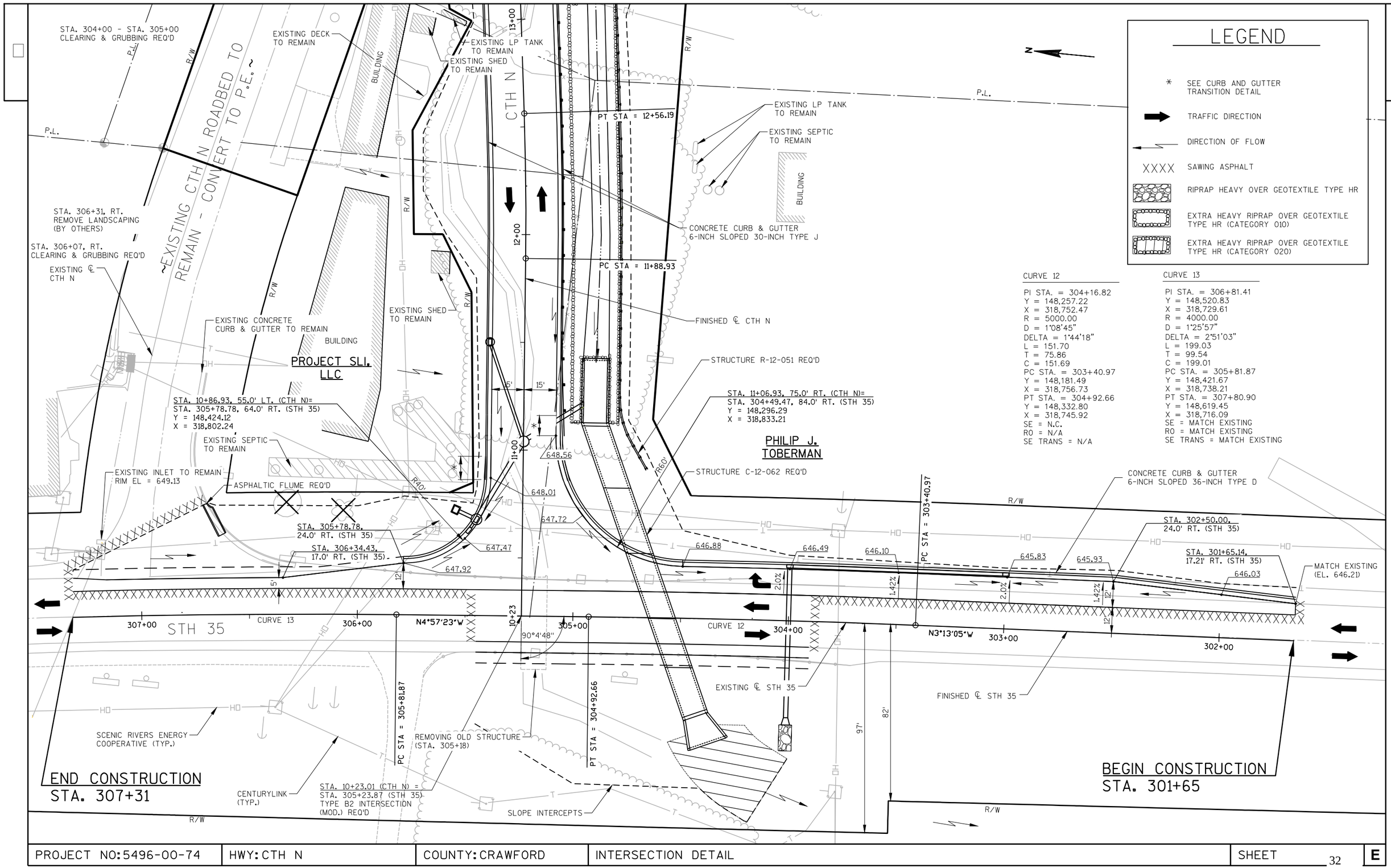
NOTE: DRAIN DITCH ALONG NORTH SIDE OF OLD CTH N ACROSS P.E. LOCATED AT STA. 570+90, RT. TO MATCH EXISTING CONDITIONS.



P.E. - STA. 570+90, RT

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONSTRUCTION DETAILS - DRIVEWAYS	SHEET E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_CONSTRUCTION DETAILS DRIVEWAYS.DWG
LAYOUT : P.E.
PLOT DATE : 7/27/2018
PLOT TIME : 4:10:25 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 6" = 1'-0" _XREF



LEGEND

*	SEE CURB AND GUTTER TRANSITION DETAIL
➡	TRAFFIC DIRECTION
⇜	DIRECTION OF FLOW
XXXX	SAWING ASPHALT
	RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
	EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)
	EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 020)

CURVE 12

PI STA. = 304+16.82
Y = 148,257.22
X = 318,752.47
R = 5000.00
D = 1°08'45"
DELTA = 1°44'18"
L = 151.70
T = 75.86
C = 151.69
PC STA. = 303+40.97
Y = 148,181.49
X = 318,756.73
PT STA. = 304+92.66
Y = 148,332.80
X = 318,745.92
SE = N.C.
RO = N/A
SE TRANS = N/A

CURVE 13

PI STA. = 306+81.41
Y = 148,520.83
X = 318,729.61
R = 4000.00
D = 1°25'57"
DELTA = 2°51'03"
L = 199.03
T = 99.54
C = 199.01
PC STA. = 305+81.87
Y = 148,421.67
X = 318,738.21
PT STA. = 307+80.90
Y = 148,619.45
X = 318,716.09
SE = MATCH EXISTING
RO = MATCH EXISTING
SE TRANS = MATCH EXISTING

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	INTERSECTION DETAIL	SHEET 32	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N
LAYOUT : RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_INTERSECTION DETAIL.DWG
PLOT DATE : 10/26/2018
PLOT TIME : 12:05:36 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

EXISTING ℄ CTH N

PT STA = 74+41.73

CTH N

73+00 74+00 75+00 76+00 77+00 78+00 79+00

200+

105+00

90°0'37"

15' 15' 17' 17' 15'

3' (TYP.)

75'

50'

STA. 74+43

STA. 77+04

FINISHED ℄ CTH N

PT STA = 105+25.89

R=60'

R40'

STA. 75+18.30, 77.0' RT. (CTH N)=
STA. 104+55.56, 75.0' LT. (DEMANES LN)
Y = 148,736.84
X = 325,021.93

STA. 76+54.22, 57.0' RT. (CTH N)=
STA. 105+04.26, 55.0' RT. (DEMANES LN)
Y = 148,758.37
X = 325,157.63

STA. 76+00.49 (CTH N)=
STA. 105+56.14 (DEMANES LN)
TYPE C INTERSECTION REQ'D

CENTURYLINK

N

R/W

SCENIC RIVERS ENERGY COOPERATIVE

GREGORY & KELLI TAYLOR

10:1

CURVE 15

L=0.00

9'

FINISHED ℄ DEMANES LN

DEMANES LN.

103+00

102+00

PC STA = 102+96.44

SLOPE INTERCEPTS

JOHN & CHERYL KRAMER

REMOVING SMALL PIPE CULVERTS
STA. 102+65, LT.
REMOVE 18" CMP

P.L.

MATTHEW C. HILL

CURVE 15
PI STA. = 104+21.63
Y = 148,659.33
X = 325,104.97
R = 231.00
D = 24°48'12"
DELTA = 56°54'37"
L = 229.45
T = 125.19
C = 220.13
PC STA. = 102+96.44
Y = 148,589.82
X = 325,000.85
PT STA. = 105+25.89
Y = 148,784.51
X = 325,103.58
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

STA. 102+00
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 0°
SE INV. = 1137.62
NW INV. = 1135.88

STA. 100+00 - STA. 105+00
CLEARING & GRUBBING REQ'D

LEGEND
TRAFFIC DIRECTION
DIRECTION OF FLOW

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	INTERSECTION DETAIL	SHEET 33	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N
LAYOUT : RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_INTERSECTION DETAIL.DWG

PLOT DATE : 10/26/2018
PLOT TIME : 12:04:44 PM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'

LEGEND

- TRAFFIC DIRECTION
- DIRECTION OF FLOW
- XXXX SAWING ASPHALT/CONCRETE

CURVE 16
PI STA. = 202+16.99
Y = 149,031.73
X = 325,100.77
R = 231.00
D = 24°48'12"
DELTA = 44°59'45"
L = 181.41
T = 95.67
C = 176.78
PC STA. = 201+21.32
Y = 148,936.07
X = 325,101.85
PT STA. = 203+02.73
Y = 149,098.62
X = 325,032.36
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 17
PI STA. = 400+64.61
Y = 148,915.48
X = 325,166.70
R = 231.00
D = 24°48'12"
DELTA = 6°41'47"
L = 27.00
T = 13.51
C = 26.98
PC STA. = 400+51.10
Y = 148,915.33
X = 325,153.19
PT STA. = 400+78.10
Y = 148,914.06
X = 325,180.14
SE = N.C.
RO = N/A
SE TRANS = N/A

CURVE 18
PI STA. = 401+65.27
Y = 148,904.87
X = 325,266.83
R = 231.00
D = 24°48'12"
DELTA = 7°11'16"
L = 28.98
T = 14.51
C = 28.96
PC STA. = 401+50.77
Y = 148,906.40
X = 325,252.40
PT STA. = 401+79.74
Y = 148,905.16
X = 325,281.34
SE = N.C.
RO = N/A
SE TRANS = N/A

STA. 201+00 - STA. 202+00
CLEARING & GRUBBING REQ'D

STA. 202+45, RT.
CONSTRUCT P.E. (B.A.D.)
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 9° RHF
N. INV. = 1157.37
S. INV. = 1154.50

STA. 401+11.56 - STA. 402+00
CLEARING & GRUBBING REQ'D

STA. 401+40, LT.
CONSTRUCT P.E. (ASPHALT)

STA. 401+90, LT.
CONSTRUCT P.E. (CONCRETE)

STA. 400+85, LT
REMOVE P.E.

STA. 400+36
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 9° RHF
N. INV. = 1147.51
S. INV. = 1145.13

STA. 200+50
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 0°
E. INV. = 1143.38
W. INV. = 1139.98

STA. 201+29.90, 29.6' RT. (SLAMA LN)
STA. 400+29.40, 31.0' LT. (OLD CTH N-WEST)
Y = 148,946.08
X = 325,131.14

STA. 75+45.46, 57.0' LT. (CTH N)=
STA. 200+57.00, 55.0' LT. (SLAMA LN)
Y = 148,871.13
X = 325,047.58

STA. 76+75.46, 77.0' LT. (CTH N)=
STA. 200+77.00, 75.0' RT. (SLAMA LN)
Y = 148,892.60
X = 325,177.35

STA. 200+71.00, 35.5' RT. (SLAMA LN)=
STA. 400+35.45, 29.0' RT. (OLD CTH N (WEST))
Y = 148,886.15
X = 325,137.87

STA. 76+00.46 (CTH N)=
STA. 200+00.00 (SLAMA LN)
TYPE C INTERSECTION REQ'D

PT STA = 203+02.73
PC STA = 201+21.32
PT STA = 74+41.73
PC STA = 400+51.10
PT STA = 400+78.10
PC STA = 401+50.77
PT STA = 401+79.74
PT STA = 105+25.89

SLAMA LN.
CTH N
CURVE 16
CURVE 17
CURVE 18
SLOPE INTERCEPT
FINISHED ℄ SLAMA LN
FINISHED ℄ OLD CTH N (WEST)
FINISHED ℄ CTH N
TLE REQ'D
ASPHALTIC FLUME REQ'D
REMOVING SMALL PIPE CULVERTS
STA. 201+31, RT.
REMOVE 12" CMP
CONCRETE CURB & GUTTER
6-INCH SLOPED 30-INCH TYPE J
MATCH EXISTING (EL. 1163.93)
STA. 74+95
STA. 77+50
BUILDING
CENTURYLINK
SCENIC RIVERS ENERGY COOPERATIVE
R/W
P.L.
OH
T
MB
80'
50'
75'
3' (TYP.)
90°0'0"
5.50%
0.50%
R=20'
R=40'
R=60'
9'
2'
10:1
15.5'
15'
17'
11'
9'
1150.61
1150.81
1150.71
1152.87
1157.42
1160.74
1162.79
1163.58
73+00
74+00
75+00
76+00
77+00
78+00
79+00
200+00
201+00
202+00
203+00
401+00
402+00
105+00

DALE F. SLAMA

RONALD & NIKKI KRAMER

TIMOTHY & LORI CLARK

JOHN & NANCY WACHTER

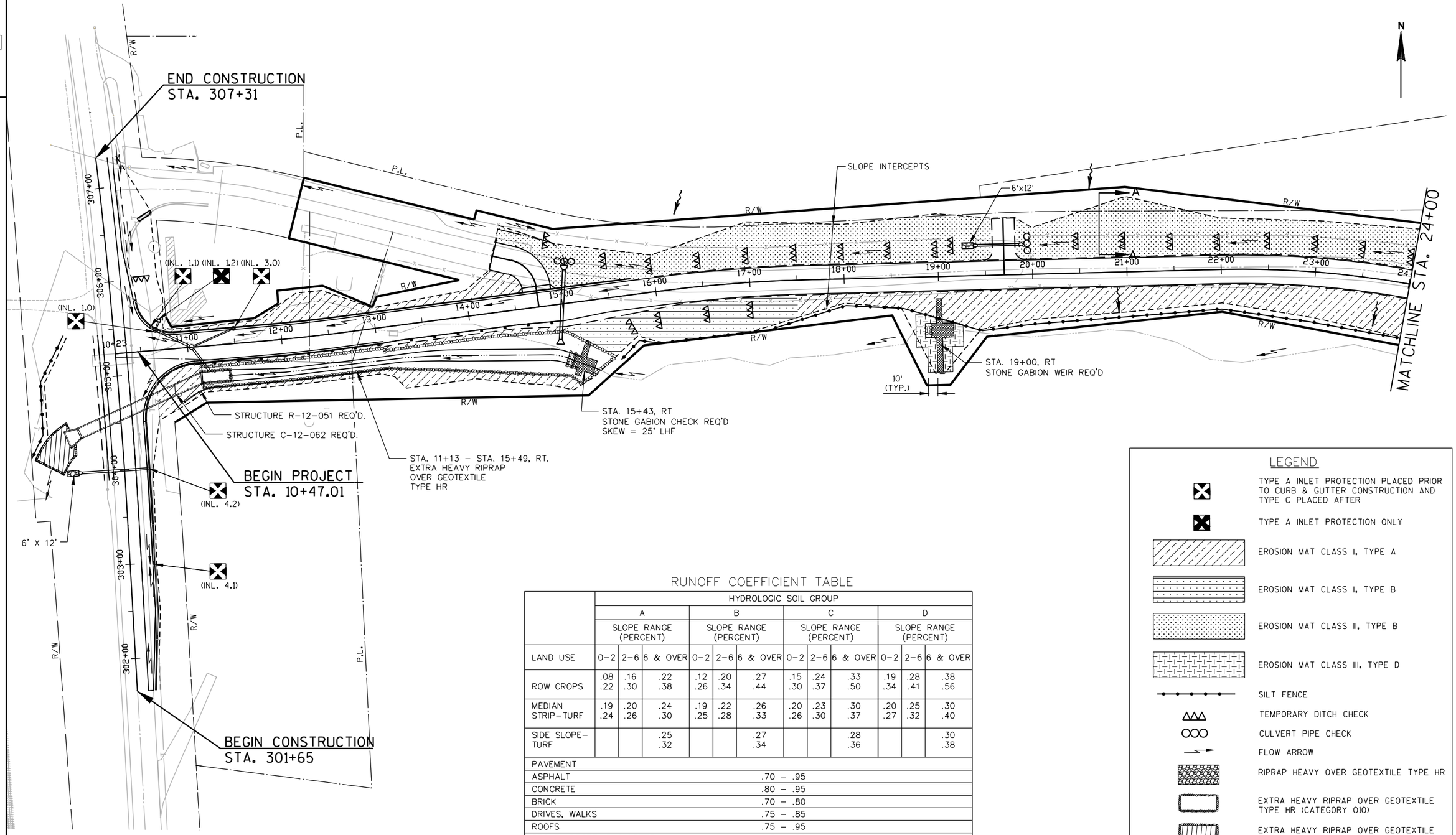
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	INTERSECTION DETAIL	SHEET 34	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N
LAYOUT : RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_INTERSECTION DETAIL.DWG

PLOT DATE : 10/26/2018
PLOT TIME : 12:06:04 PM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'



RUNOFF COEFFICIENT TABLE

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

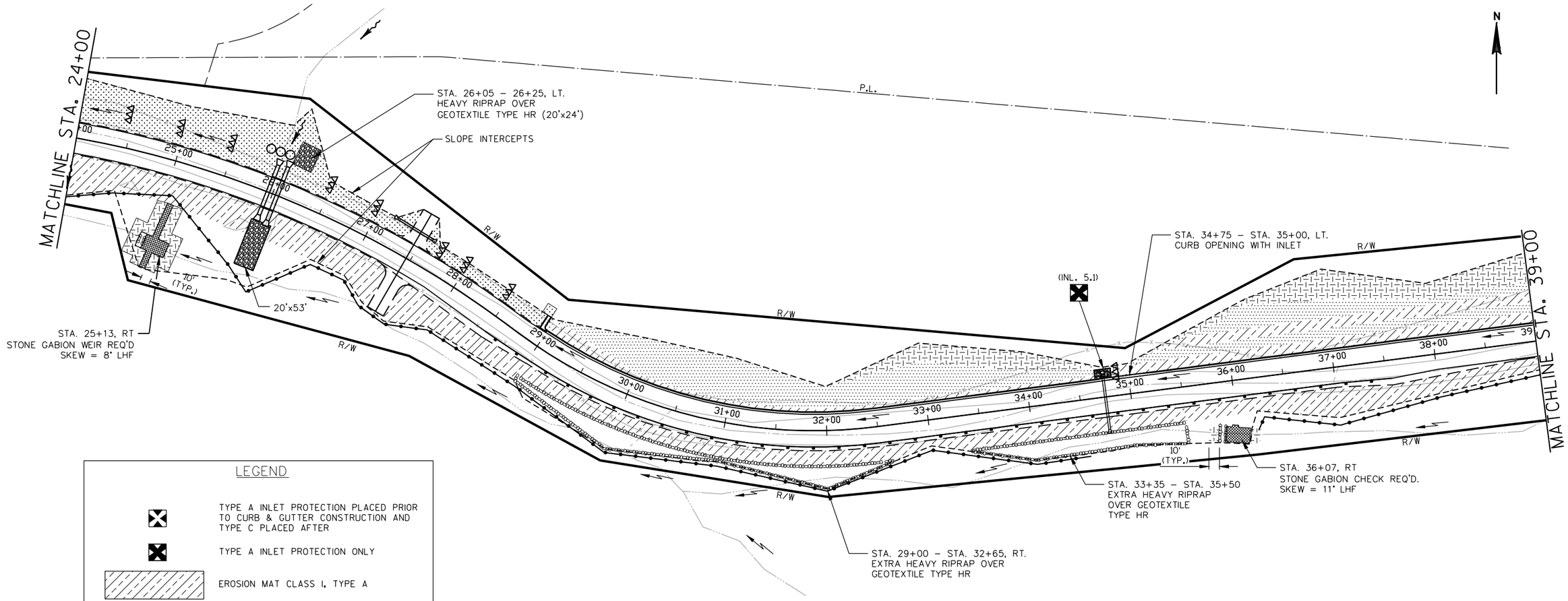
TOTAL PROJECT AREA= 31.89 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 23.31 ACRES

LEGEND

- TYPE A INLET PROTECTION PLACED PRIOR TO CURB & GUTTER CONSTRUCTION AND TYPE C PLACED AFTER
- TYPE A INLET PROTECTION ONLY
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE B
- EROSION MAT CLASS III, TYPE D
- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- FLOW ARROW
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 020)

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 35	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_EROSION CONTROL.DWG
LAYOUT :
PLOT DATE : 12/10/2018
PLOT TIME : 9:37:30 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'



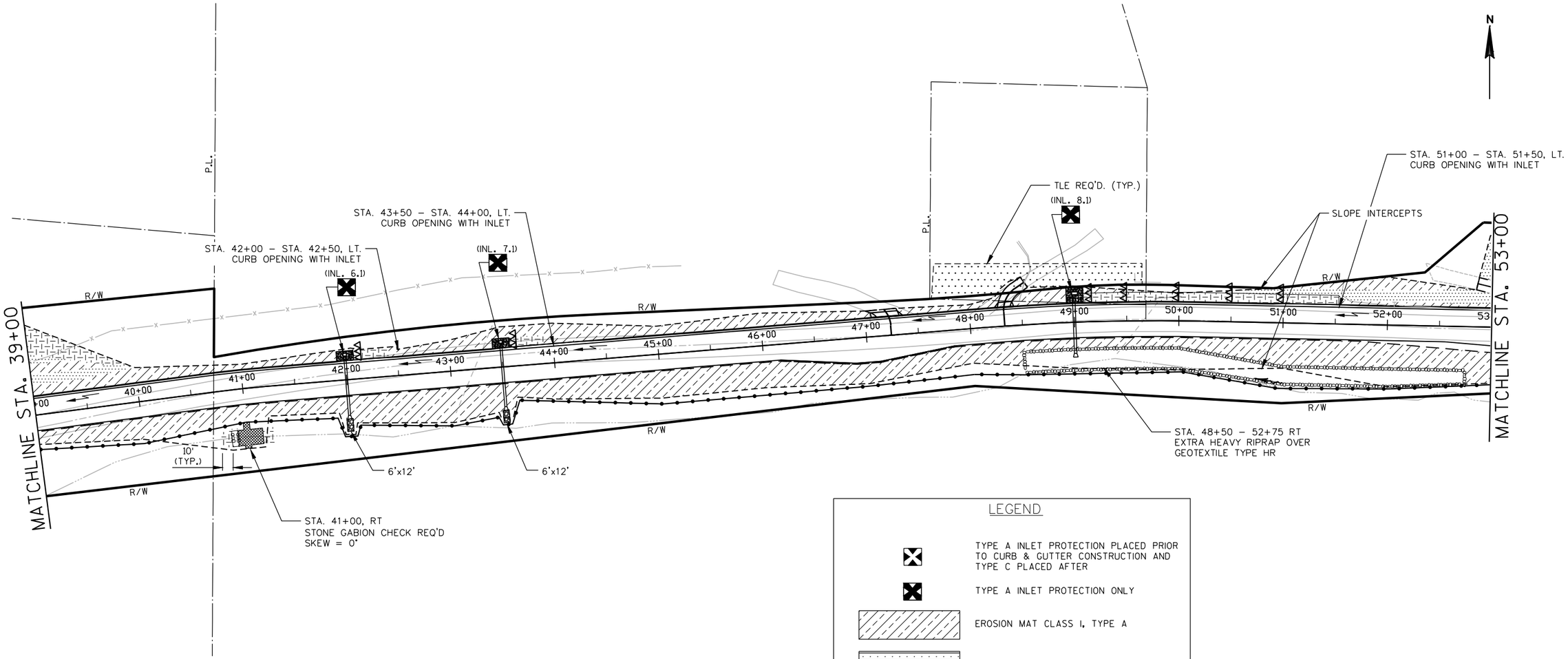
LEGEND

- TYPE A INLET PROTECTION PLACED PRIOR TO CURB & GUTTER CONSTRUCTION AND TYPE C PLACED AFTER
- TYPE A INLET PROTECTION ONLY
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE B
- EROSION MAT CLASS III, TYPE D
- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- FLOW ARROW
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- ROCK FACE

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 36	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_EROSION CONTROL.DWG
LAYOUT :

PLOT DATE : 12/10/2018
PLOT TIME : 9:38:29 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'

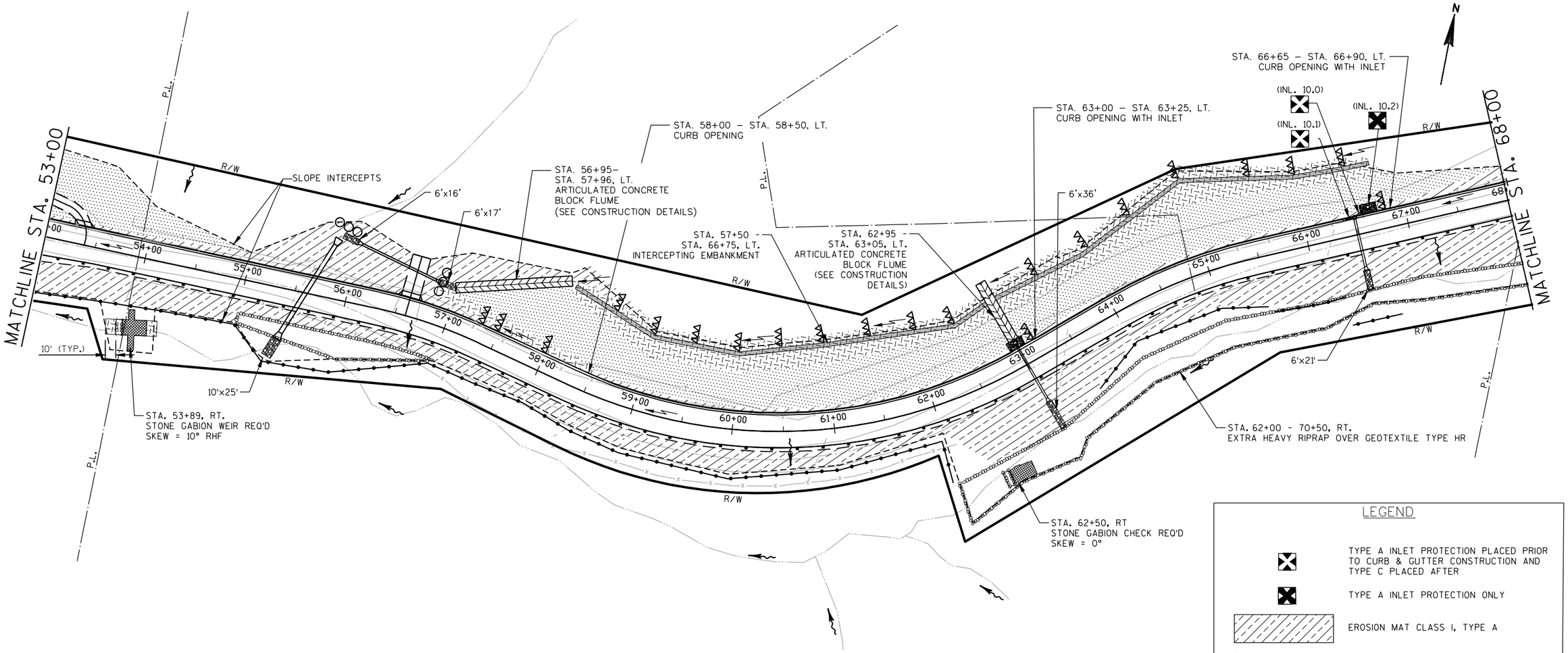


LEGEND

- TYPE A INLET PROTECTION PLACED PRIOR TO CURB & GUTTER CONSTRUCTION AND TYPE C PLACED AFTER
- TYPE A INLET PROTECTION ONLY
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE B
- EROSION MAT CLASS III, TYPE D
- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- FLOW ARROW
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 37	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_EROSION CONTROL.DWG
LAYOUT :
PLOT DATE : 12/10/2018
PLOT TIME : 9:47:34 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'



LEGEND

- TYPE A INLET PROTECTION PLACED PRIOR TO CURB & GUTTER CONSTRUCTION AND TYPE C PLACED AFTER
- TYPE A INLET PROTECTION ONLY
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE B
- EROSION MAT CLASS III, TYPE D
- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- FLOW ARROW
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- ROCK FACE

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 38	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_EROSION CONTROL.DWG
LAYOUT :
PLOT DATE : 12/10/2018
PLOT TIME : 9:49:04 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'

LEGEND

- TYPE A INLET PROTECTION PLACED PRIOR TO CURB & GUTTER CONSTRUCTION AND TYPE C PLACED AFTER
- TYPE A INLET PROTECTION ONLY
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- EROSION MAT CLASS II, TYPE B
- EROSION MAT CLASS III, TYPE D
- SILT FENCE
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- FLOW ARROW
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)

N

END CONSTRUCTION
STA. 205+00

BEGIN CONSTRUCTION
STA. 200+17

BEGIN CONSTRUCTION
STA. 400+11.56

END CONSTRUCTION
STA. 571+25

6'x12'

TLE REQ'D.
(TYP.)

EXISTING WELL
TO REMAIN

EXISTING WATER FAUCET
SERVICE LINE TO REMAIN

SLOPE INTERCEPTS

10' (TYP.)

EXISTING 12" CMP TO REMAIN

(INL. 11.1)

4'x8'

7'x4'

MATCHLINE STA. 68+00

MATCHLINE STA. 83+00

END CONSTRUCTION
STA. 105+39.14

BEGIN CONSTRUCTION
STA. 100+00

BEGIN CONSTRUCTION
STA. 570+16

END PROJECT
STA. 89+00

(INL. 12.3)

(INL. 12.1)

R/W

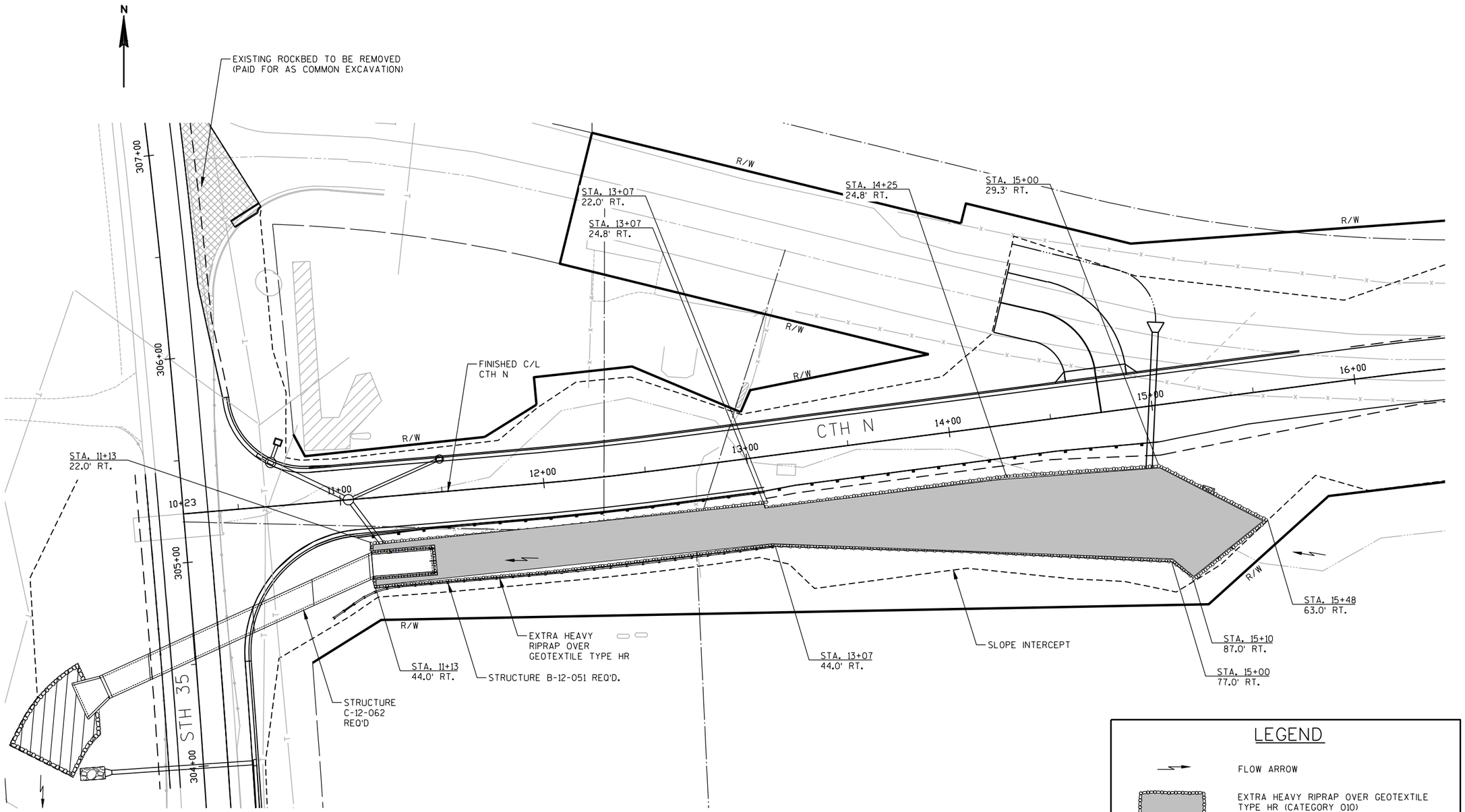
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 39	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_EROSION CONTROL.DWG
LAYOUT :

PLOT DATE : 12/10/2018
PLOT TIME : 9:50:23 AM

PLOT BY : STRINE, THERESA

PLOT SCALE : 1" = 1'

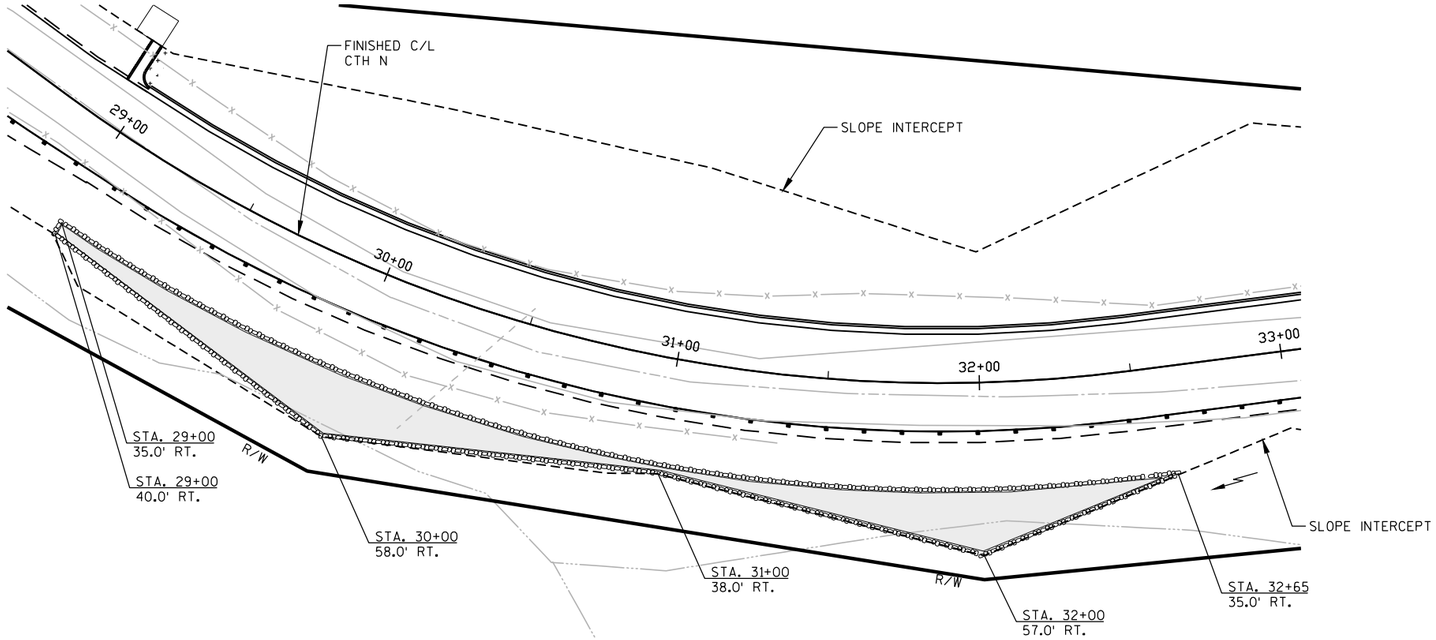


EXTRA HEAVY RIPRAP LAYOUT DETAIL

(STA. 11+13 - STA. 15+49, RT.)

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 40	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_EROSION CONTROL DET SHEET 1.DWG
LAYOUT : EROSION CONTROL DET SHEET 1
PLOT DATE : 10/26/2018
PLOT TIME : 9:59:22 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 1" = 1'



EXTRA HEAVY RIPRAP LAYOUT DETAIL

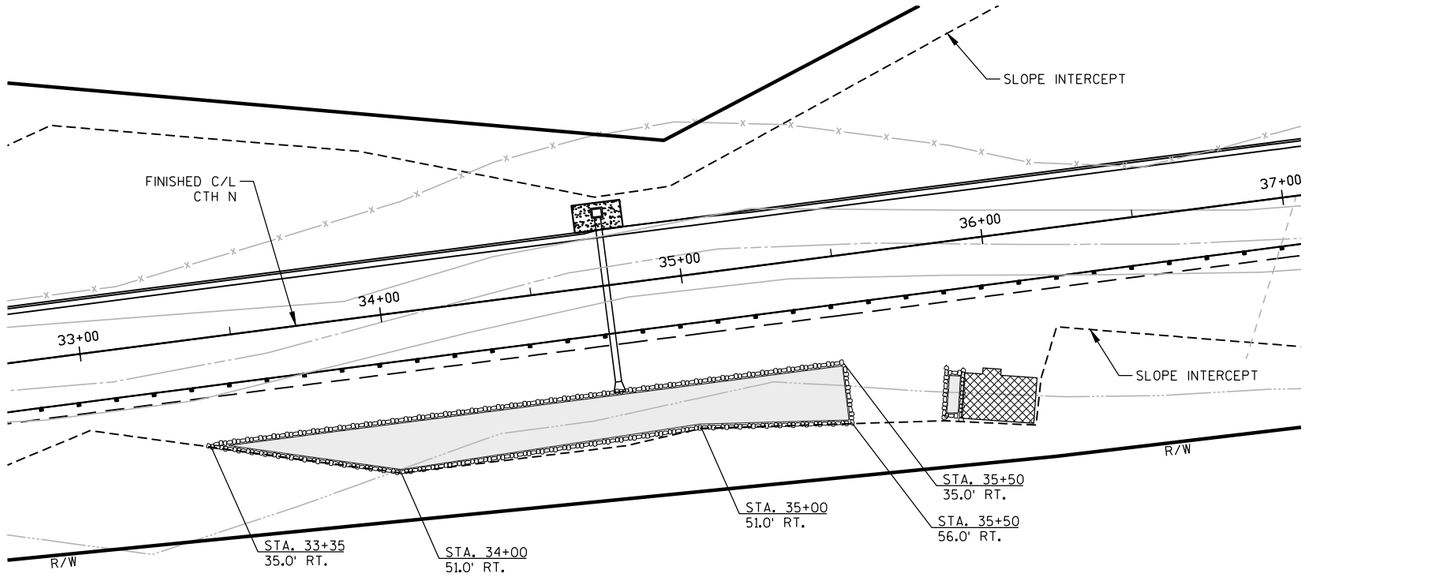
(STA. 29+00 - STA. 32+65, RT.)

N

LEGEND

FLOW ARROW

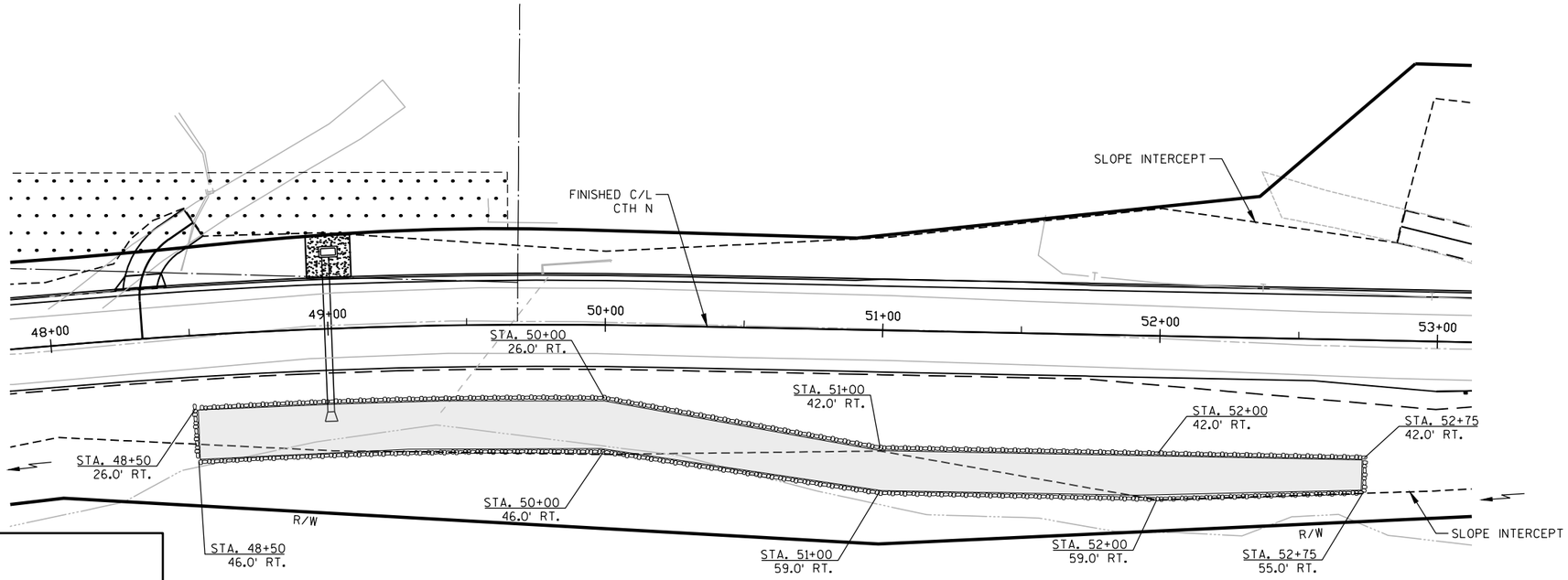
EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)



EXTRA HEAVY RIPRAP LAYOUT DETAIL

(STA. 33+35 - STA. 35+50, RT.)

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 41	E



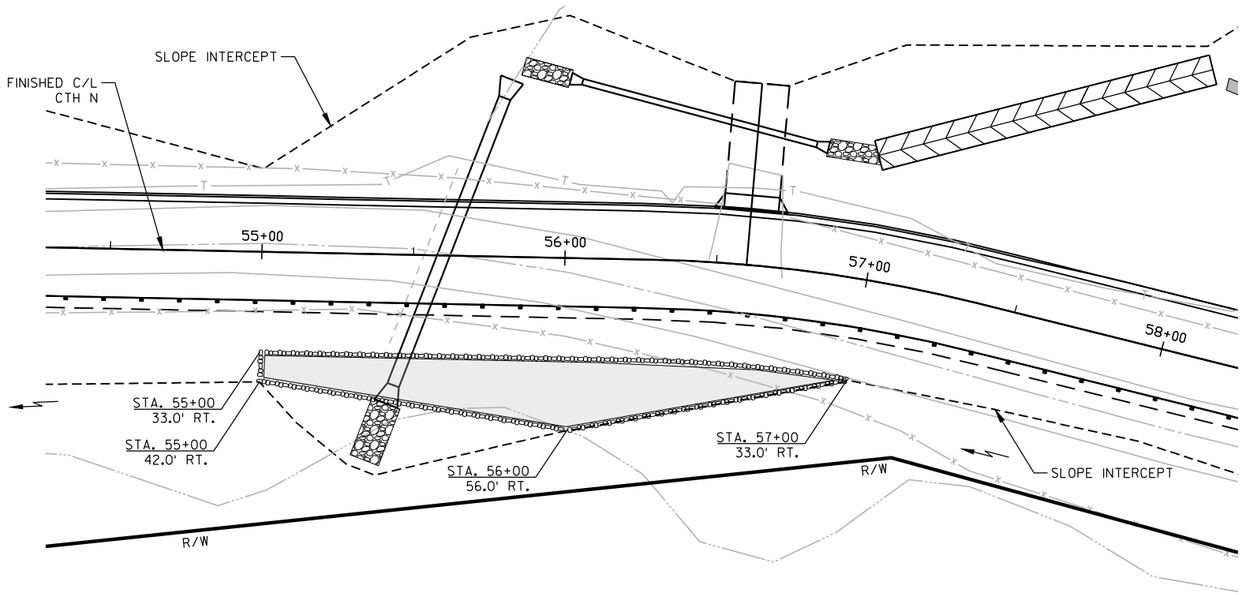
EXTRA HEAVY RIPRAP LAYOUT DETAIL

(STA. 48+50 - STA. 52+75, RT.)

LEGEND

FLOW ARROW

EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)



EXTRA HEAVY RIPRAP LAYOUT DETAIL

(STA. 55+00 - STA. 57+00, RT.)

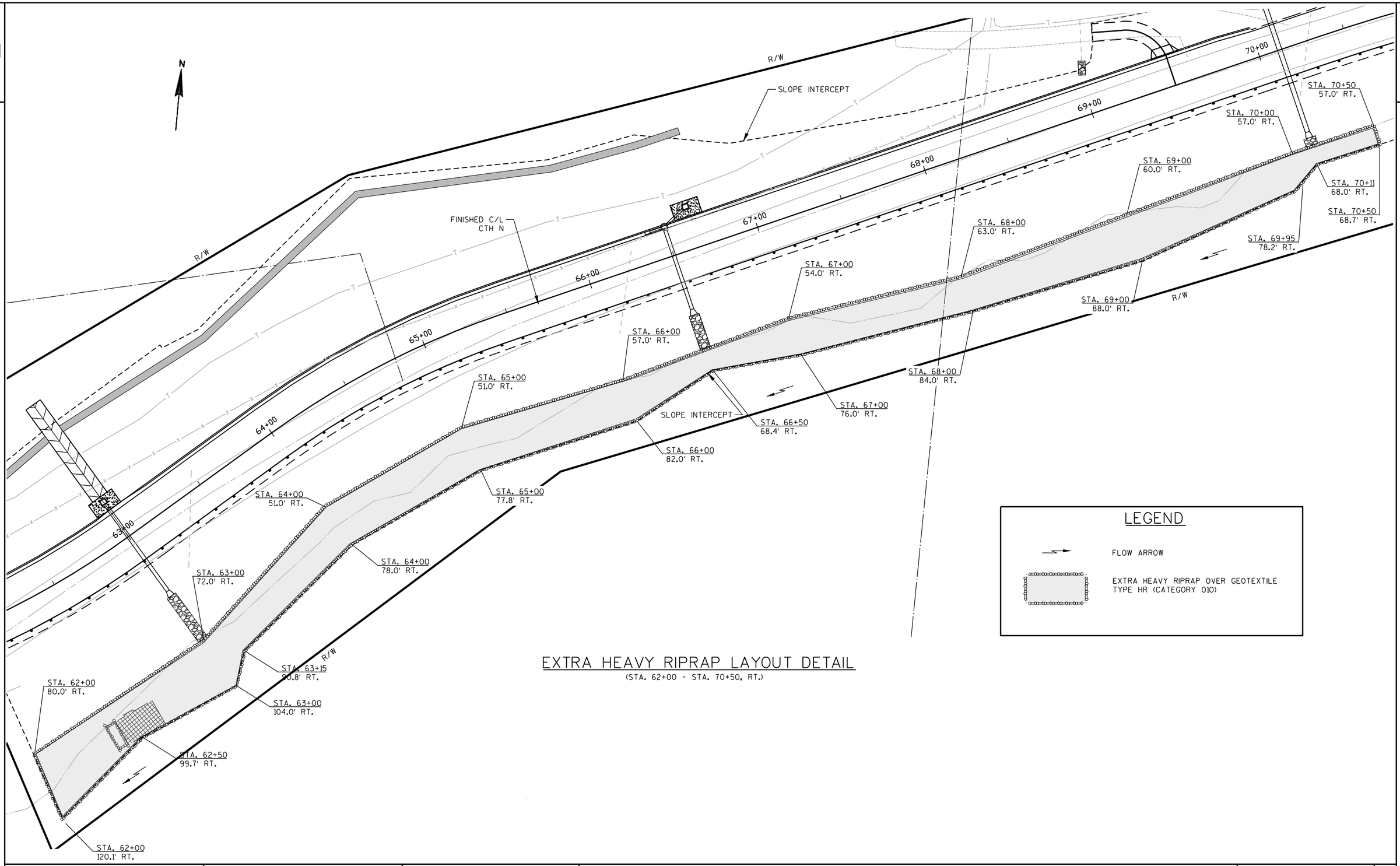
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 42	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_EROSION CONTROL.DWG
LAYOUT : EXTRA HEAVY RIPRAP LAYOUT DET SHEET 3

PLOT DATE : 7/26/2018
PLOT TIME : 2:29:17 PM

PLOT BY : KARTER ZAJICEK

PLOT SCALE : 1" = 1'



EXTRA HEAVY RIPRAP LAYOUT DETAIL

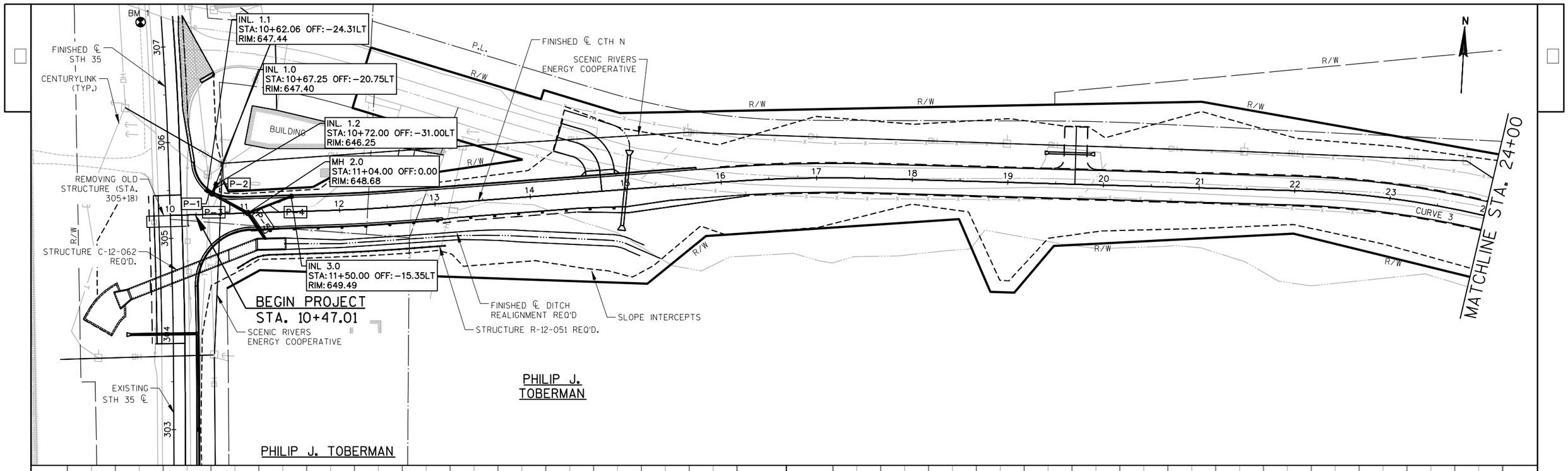
(STA. 62+00 - STA. 70+50, RT.)

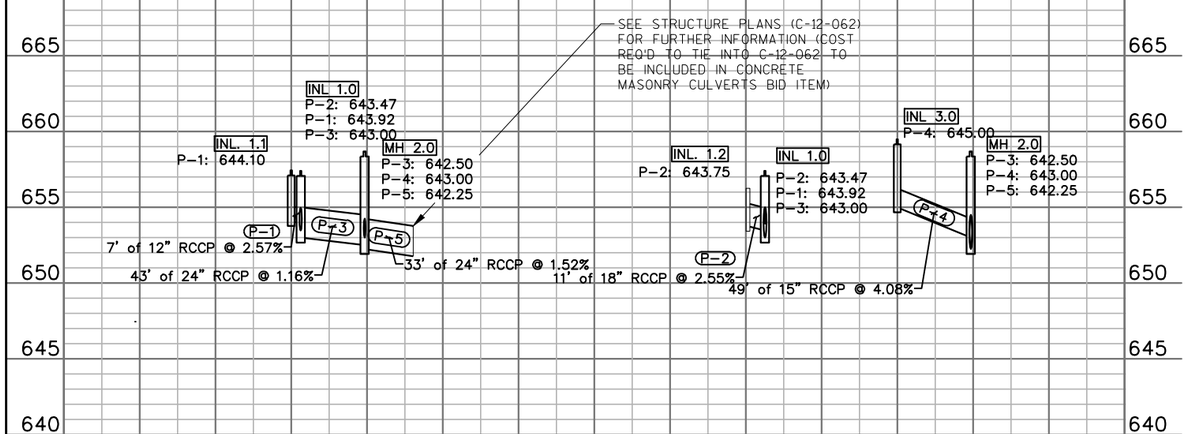
LEGEND

- FLOW ARROW
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	EROSION CONTROL PLAN	SHEET 43	E

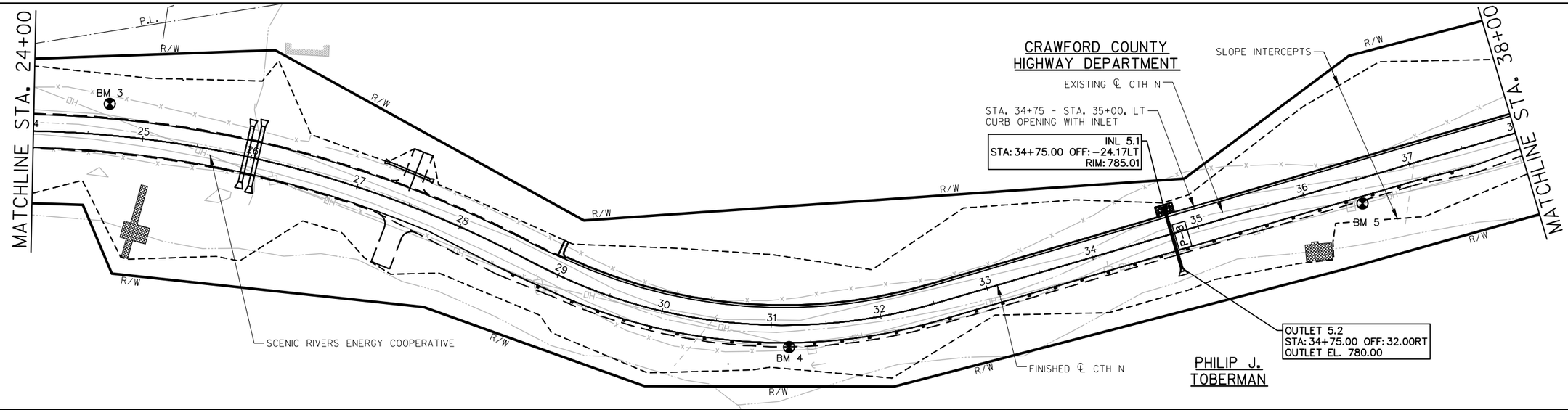
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_EROSION CONTROL LAYOUT DET SHEET 5.DWG
LAYOUT :
PLOT DATE : 7/26/2018
PLOT TIME : 9:32:35 AM
PLOT BY : KARTER ZAJICEK
PLOT SCALE : 1" = 1'

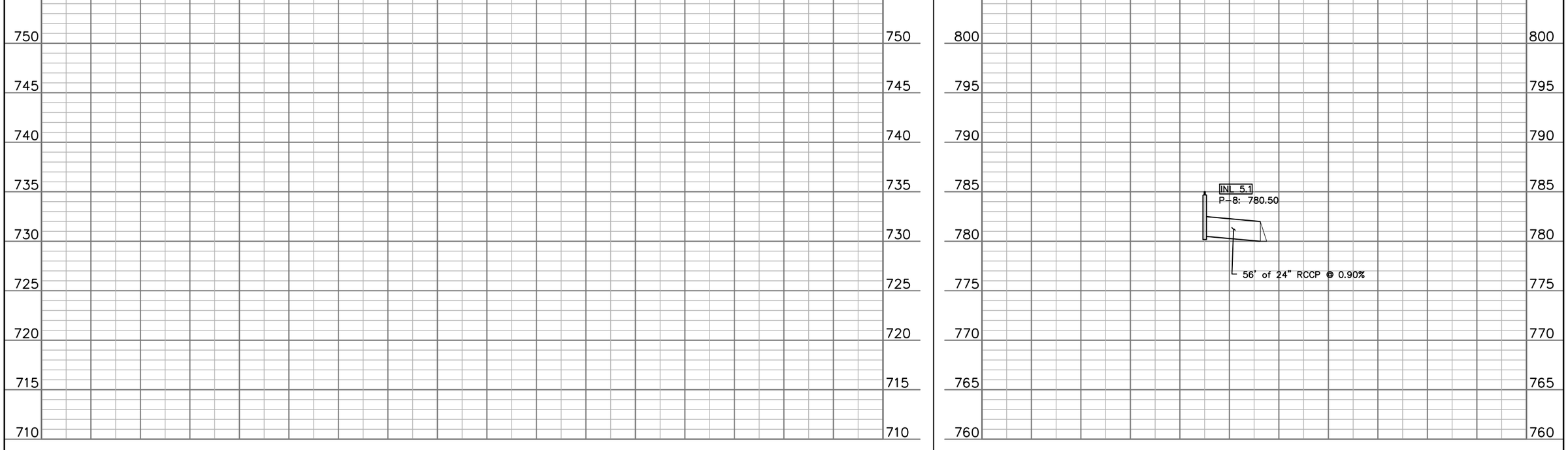




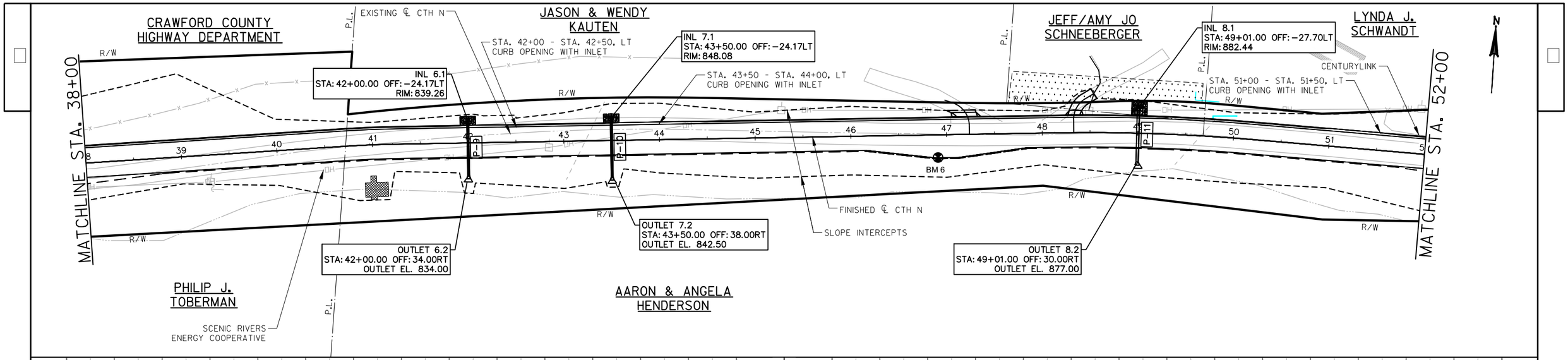
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	STORM SEWER PLAN	SHEET 44	E

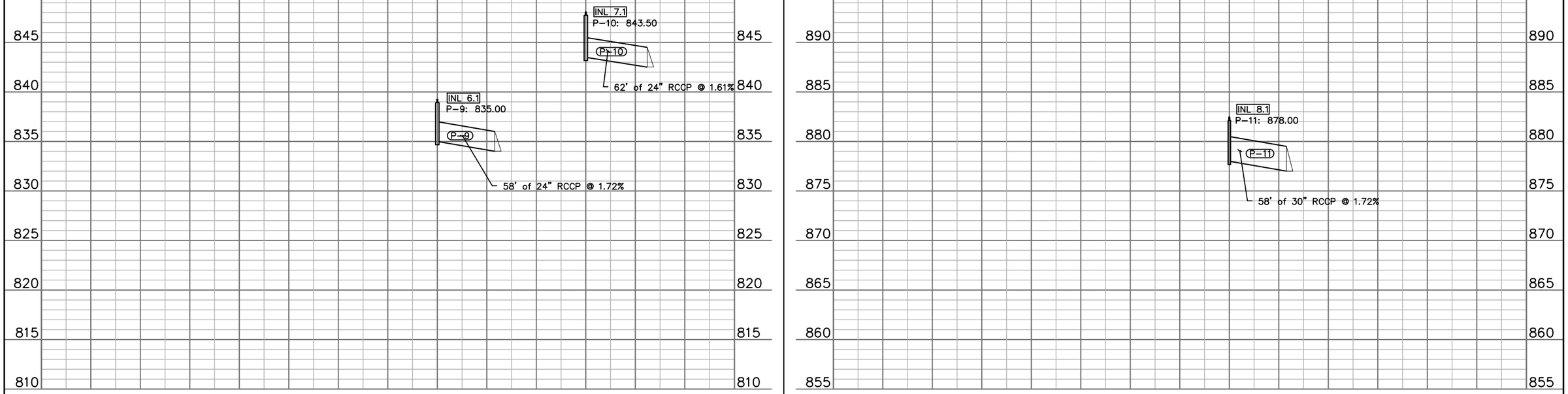
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320 PIPE NETWORK.DWG
LAYOUT : SS1
PLOT DATE : 10/26/2018
PLOT TIME : 10:07:51 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 6" = 1'-0"_XREF





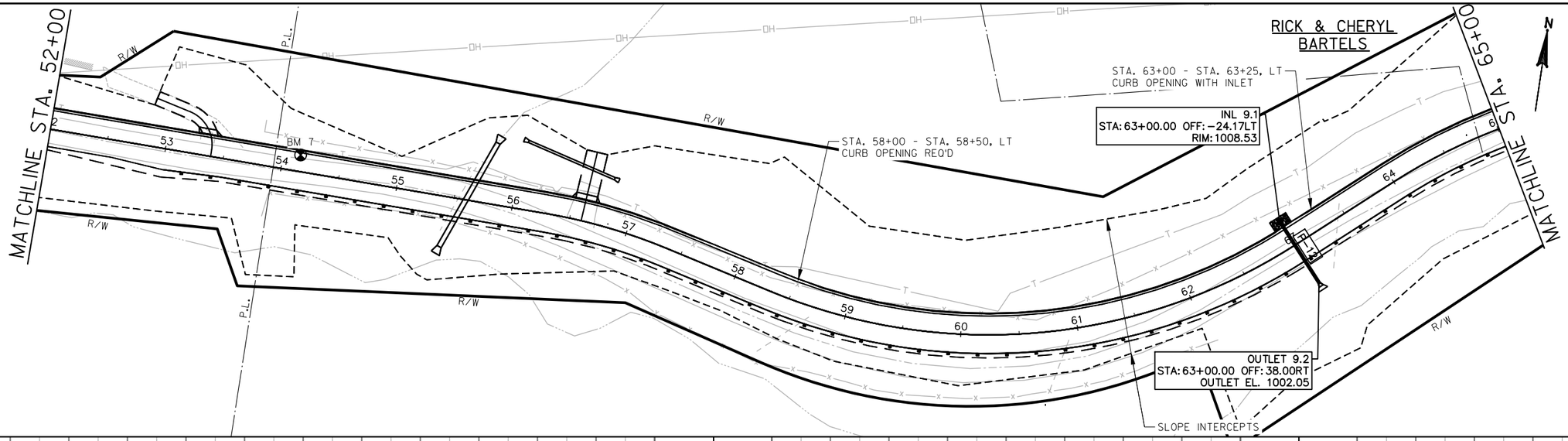
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	STORM SEWER PLAN	SHEET 45	E

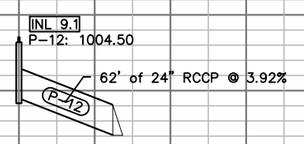




PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	STORM SEWER PLAN	SHEET 46	E

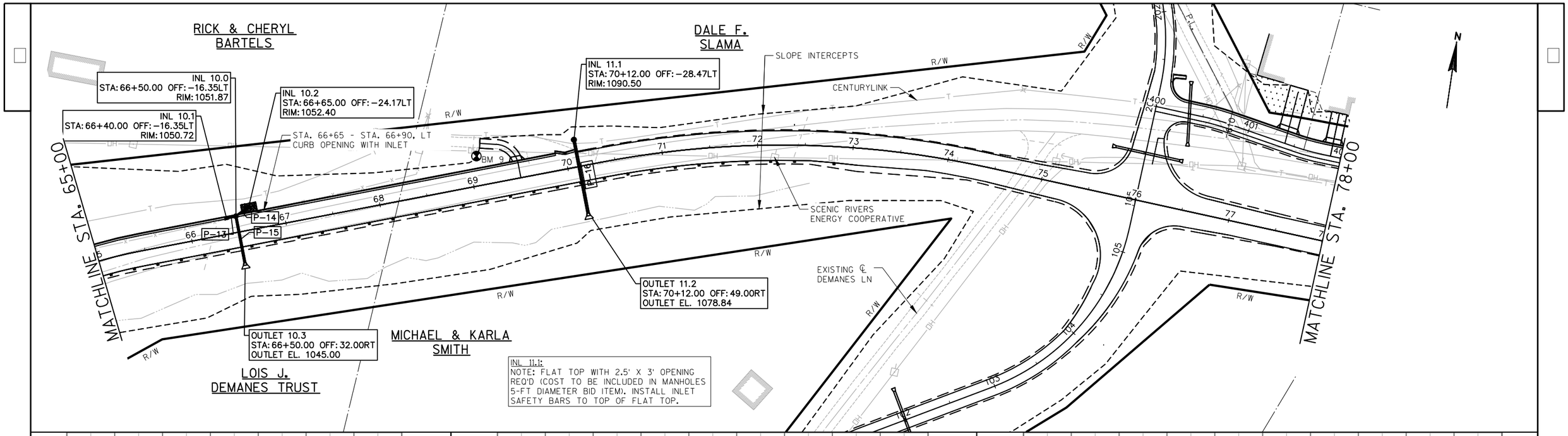
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320 PIPE NETWORK.DWG
LAYOUT : SS3
PLOT DATE : 8/2/2018
PLOT TIME : 10:25:56 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 6" = 1'-0"_XREF

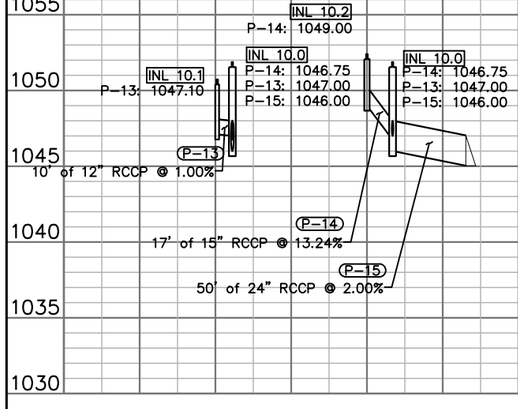


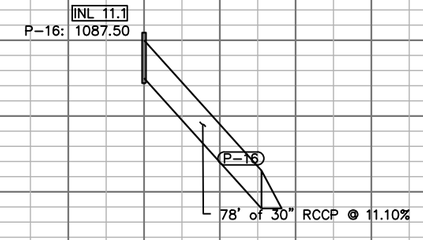


PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	STORM SEWER PLAN	SHEET 47	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320 PIPE NETWORK.DWG
LAYOUT : SS4
PLOT DATE : 8/2/2018
PLOT TIME : 10:27:03 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 6" = 1'-0"_XREF







PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	STORM SEWER PLAN	SHEET 48	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320 PIPE NETWORK.DWG
LAYOUT : SS5
PLOT DATE : 8/2/2018
PLOT TIME : 10:28:10 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 6" = 1'-0"_XREF

MATCHLINE STA. 78+00

TLE REQ'D

R/W

P.L.

OH

78 79 80 81 82 83 84 85 86 87 88 89

P-18

P-17

OUTLET 12.2
STA: 86+96.00 OFF: -38.00LT
OUTLET EL. 1150.77

INL 12.3
STA: 86+86.00 OFF: 16.35RT
RIM: 1155.83

INL 12.1
STA: 86+96.00 OFF: 16.35RT
RIM: 1155.82

END PROJECT
STA. 89+00

BM 13

N

1170 1165 1160 1155 1150 1145 1140 1135 1130

INL 12.3
P-18: 1152.33

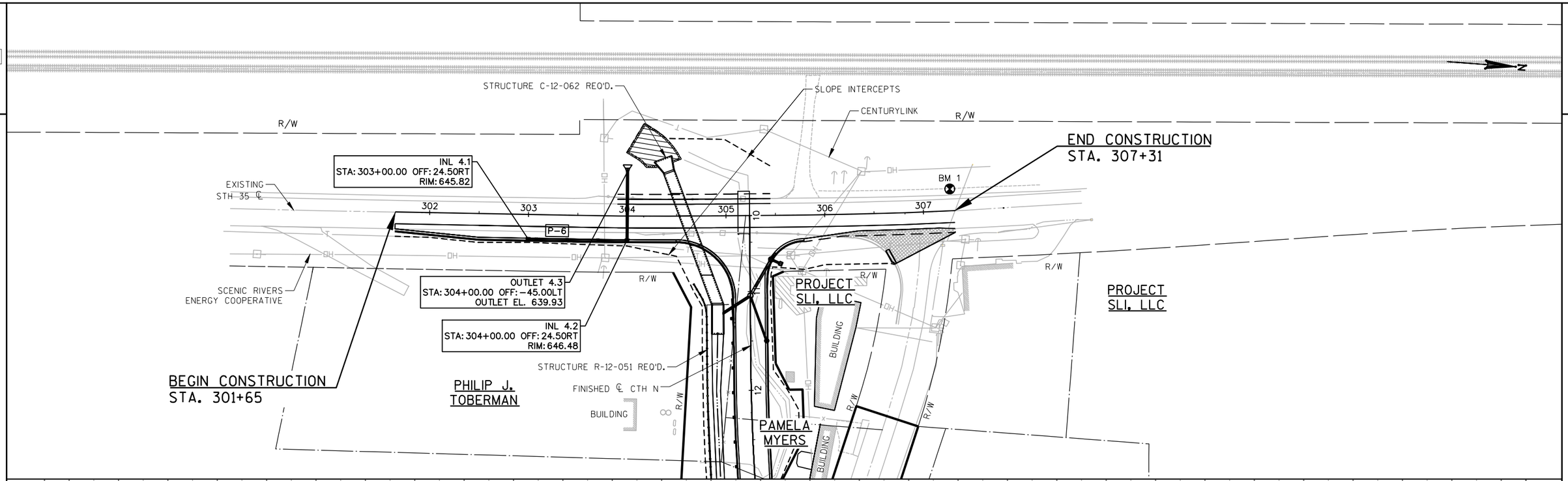
INL 12.1
P-17: 1151.77
P-18: 1151.87

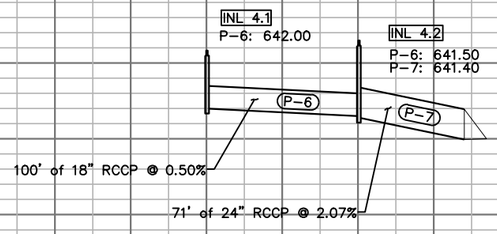
P-18
10' of 12" RCCP @ -4.60%

P-17
56' of 24" RCCP @ -1.79%

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	STORM SEWER PLAN	SHEET 49	E

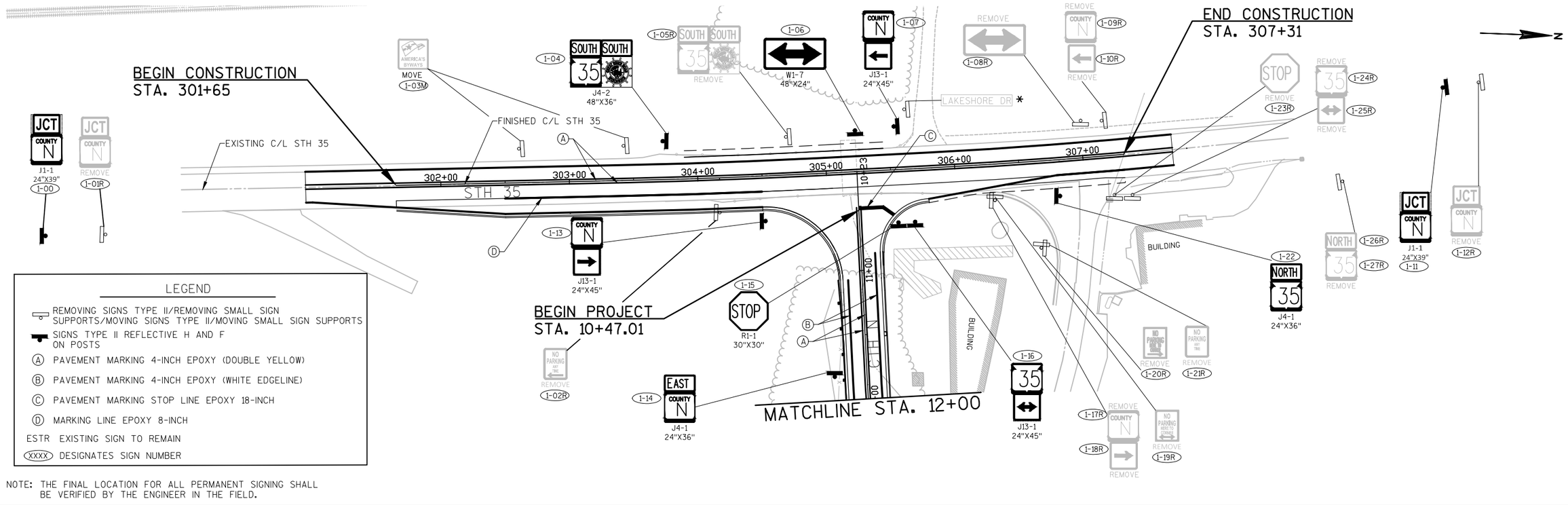
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320 PIPE NETWORK.DWG
LAYOUT : SS6
PLOT DATE : 8/2/2018
PLOT TIME : 10:29:19 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 6" = 1'-0"_XREF





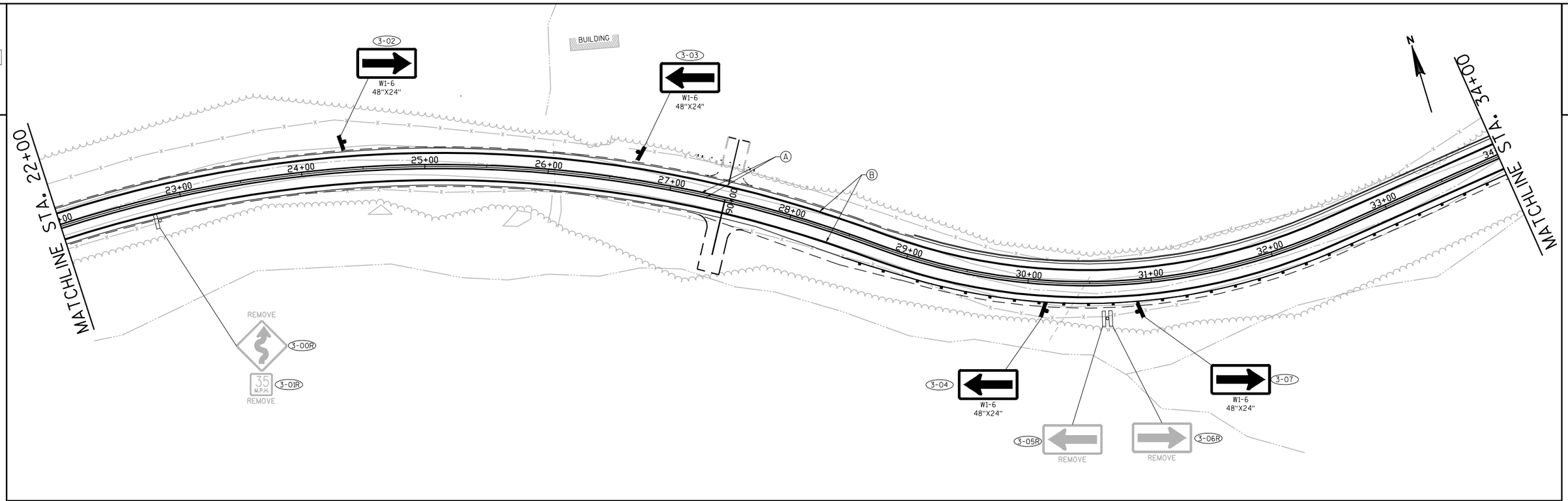
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	STORM SEWER PLAN	SHEET 50	E

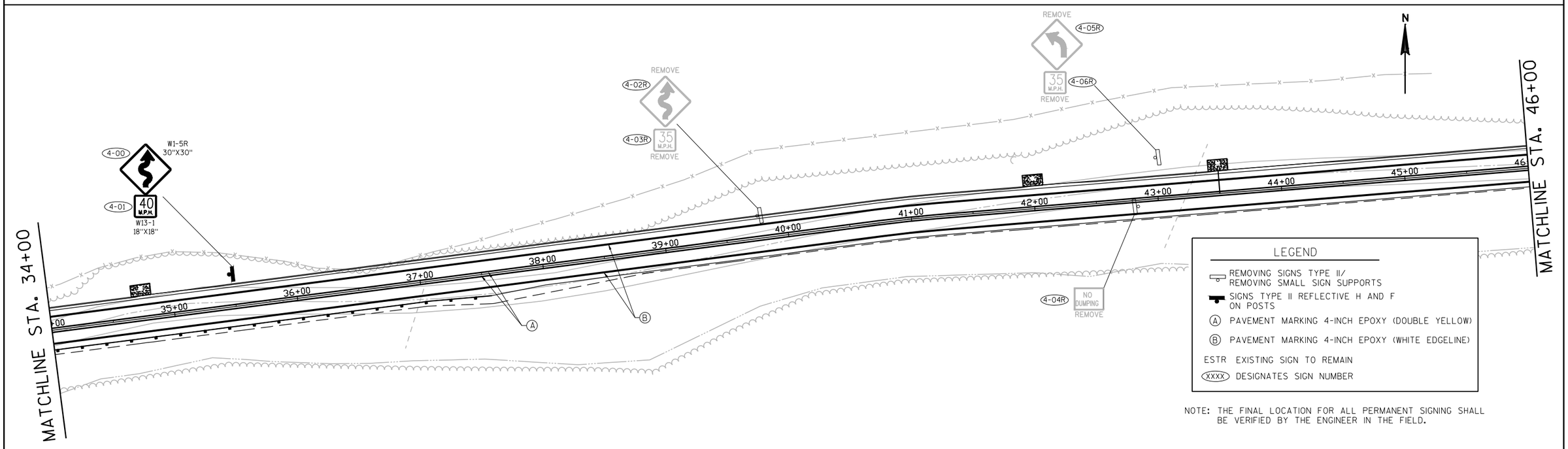
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320 PIPE NETWORK.DWG
LAYOUT : SS7
PLOT DATE : 10/26/2018
PLOT TIME : 10:09:48 AM
PLOT BY : STRINE, THERESA
PLOT SCALE : 6" = 1'-0"_XREF



PROJECT NO:5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PERMANENT SIGNING/PAVEMENT MARKING PLAN	SHEET 51	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_PAVEMENT MARKING & SIGNS.DWG
PLOT DATE : 12/11/2018
PLOT TIME : 10:07:37 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 6" = 1'-0"_XREF



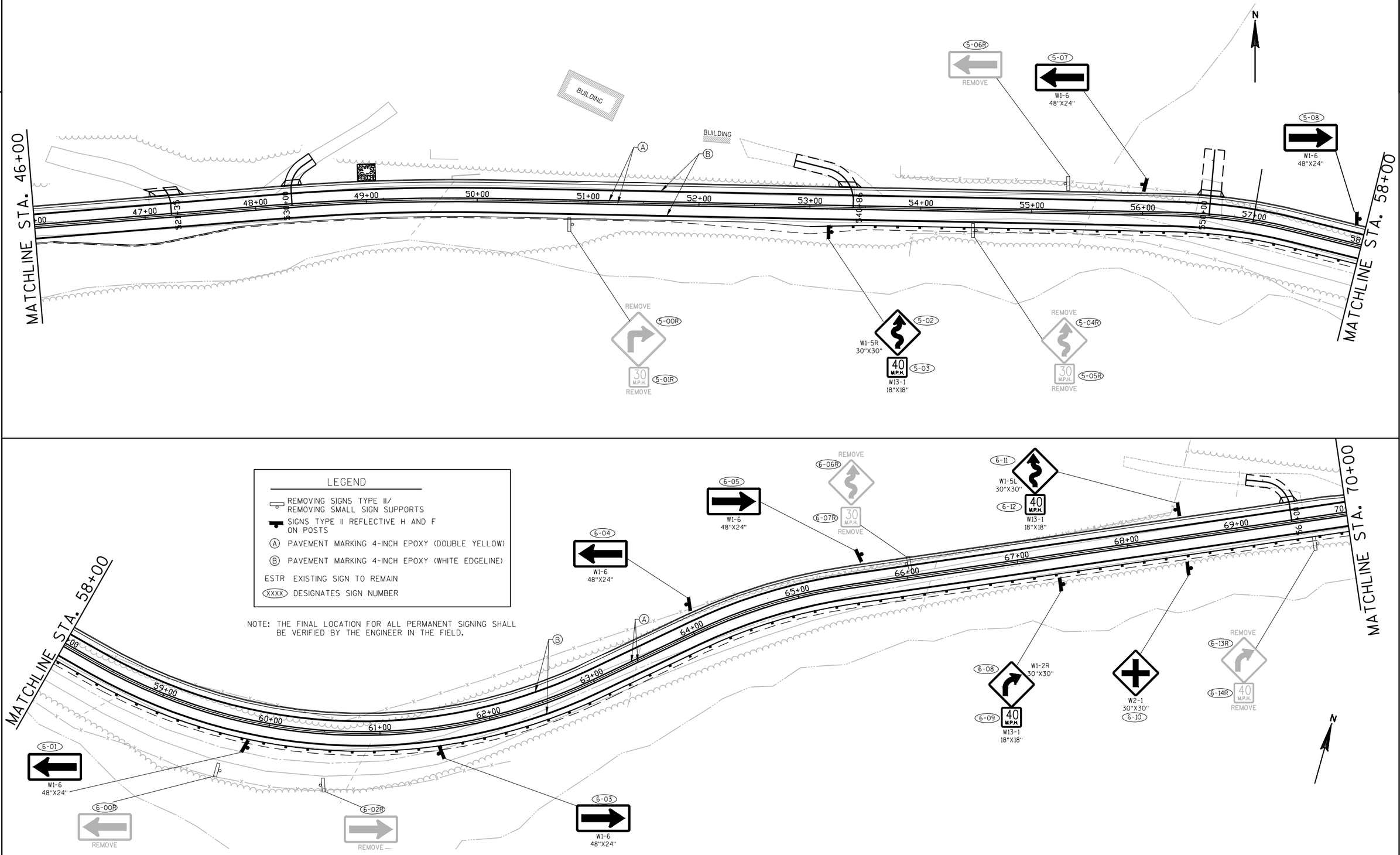


NOTE: THE FINAL LOCATION FOR ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

PROJECT NO:5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PERMANENT SIGNING/PAVEMENT MARKING PLAN	SHEET 52	E

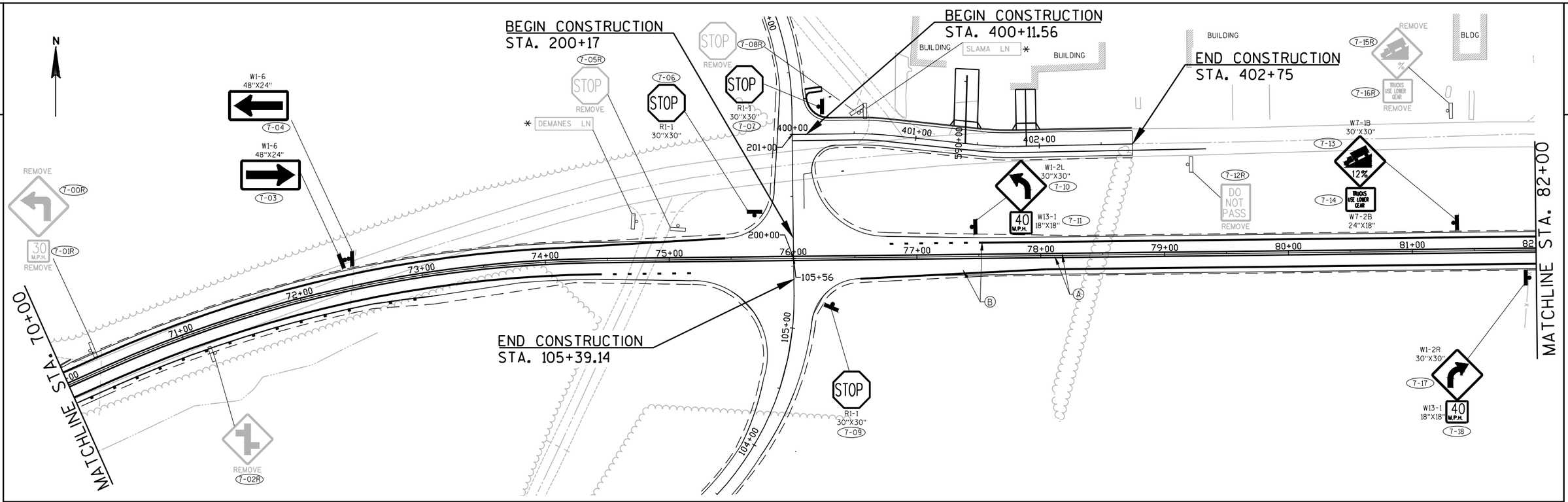
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_PAVEMENT MARKING & SIGNS.DWG
LAYOUT :

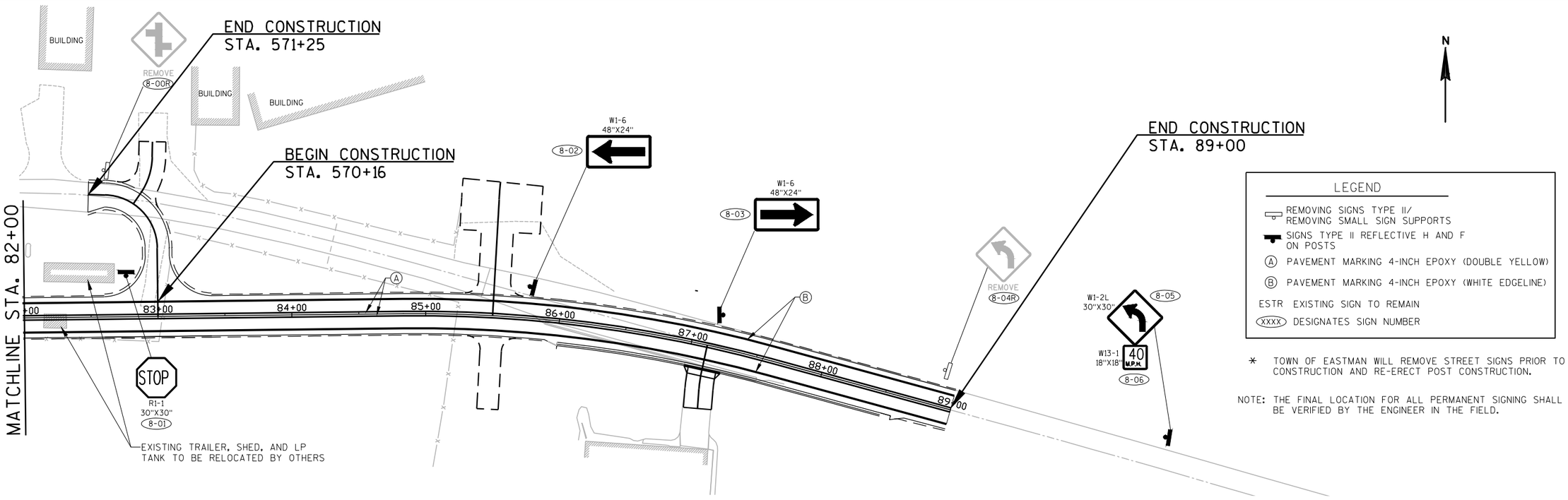
PLOT DATE : 7/25/2018
PLOT TIME : 11:18:54 AM
PLOT BY : KARTER ZAJICEK
PLOT SCALE : 1 IN:2 FT_XREF



PROJECT NO:5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PERMANENT SIGNING/PAVEMENT MARKING PLAN	SHEET 53	E

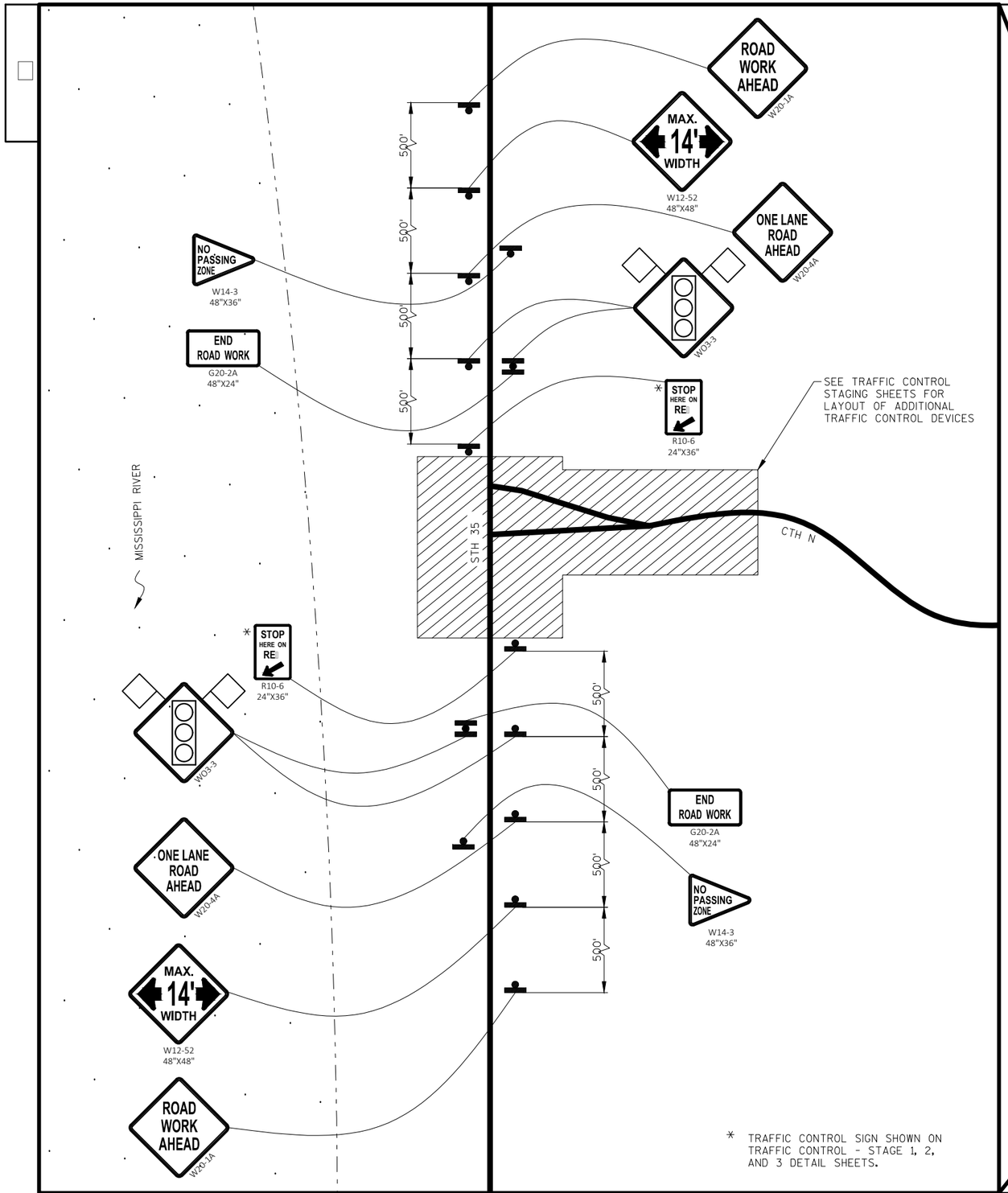
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_PAVEMENT MARKING & SIGNS.DWG
LAYOUT :
PLOT DATE : 7/25/2018
PLOT TIME : 11:23:50 AM
PLOT BY : KARTER ZAJICEK
PLOT SCALE : 1 IN:2 FT_XREF

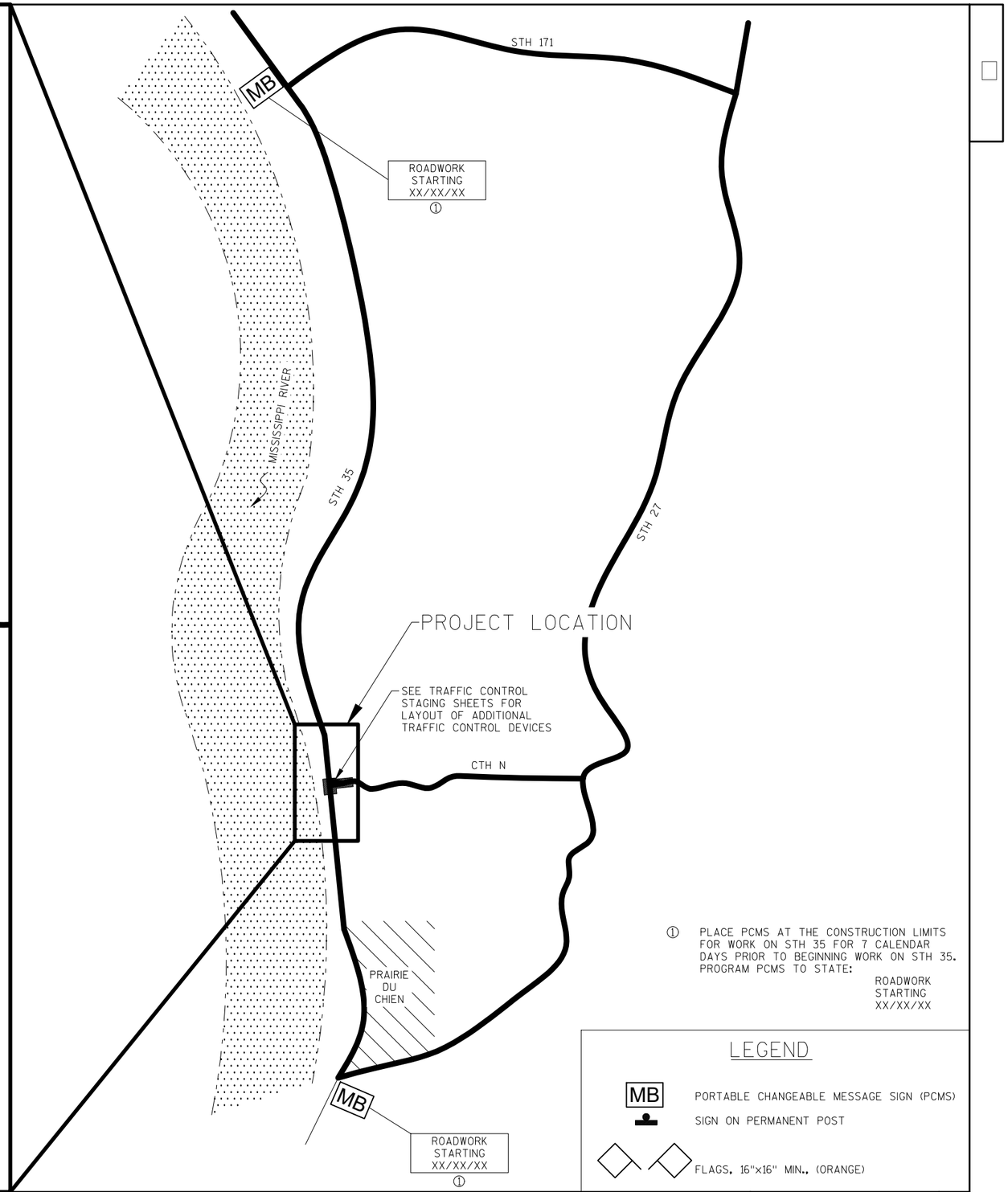




PROJECT NO:5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PERMANENT SIGNING/PAVEMENT MARKING PLAN	SHEET 54	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_PAVEMENT MARKING & SIGNS.DWG
PLOT DATE : 12/10/2018
PLOT TIME : 9:15:38 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 6" = 1'-0"_XREF





PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TRAFFIC CONTROL - OVERVIEW	SHEET 55	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_TRAFFIC CONTROL OVERVIEW.DWG
LAYOUT :

PLOT DATE : 10/30/2018
PLOT TIME : 8:20:41 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

GENERAL NOTES:

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

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

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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.

FOR MOVING OPERATION SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATION)".

PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, LIGHTS, TEMPORARY MARKINGS, FLAGGERS, AND SUCH OTHER SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL SIGN LAYOUT SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS.

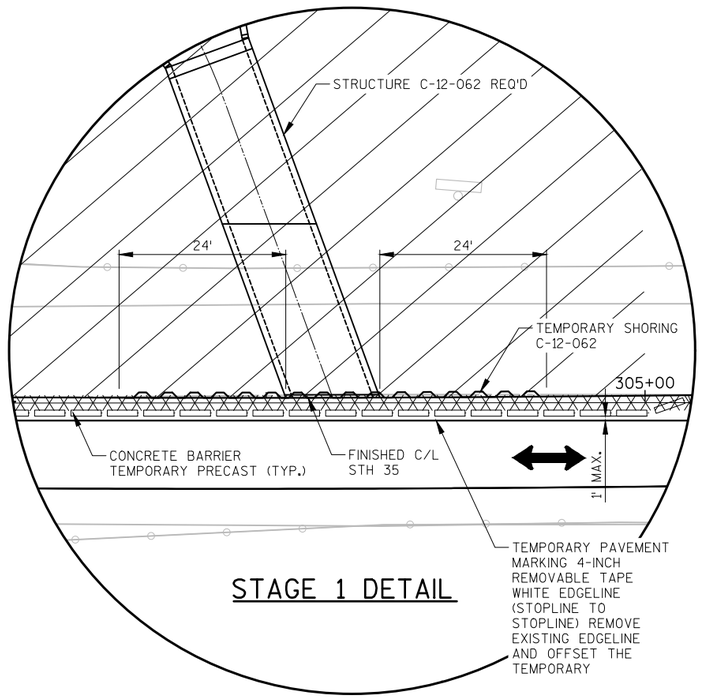
ROAD MACHINERY, FLAGGERS AHEAD, ETC. SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED AT NIGHTS, ON WEEKENDS OR WHEN THE ACTIVITY DOES NOT EXIST.

ADDITIONAL DRUMS OR TYPE III BARRICADES MAY BE REQUIRED ADJACENT TO DROP-OFFS, OPEN TRENCHES, OR PROTRUSIONS. COST TO BE INCLUDED WITH OPERATION WHICH CREATES THE HAZARD.

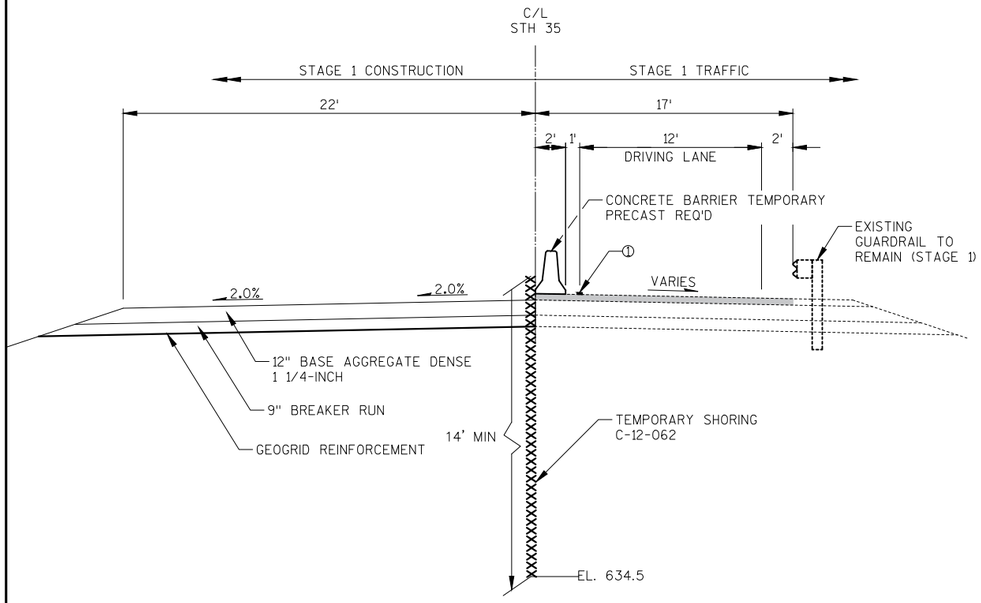
DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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



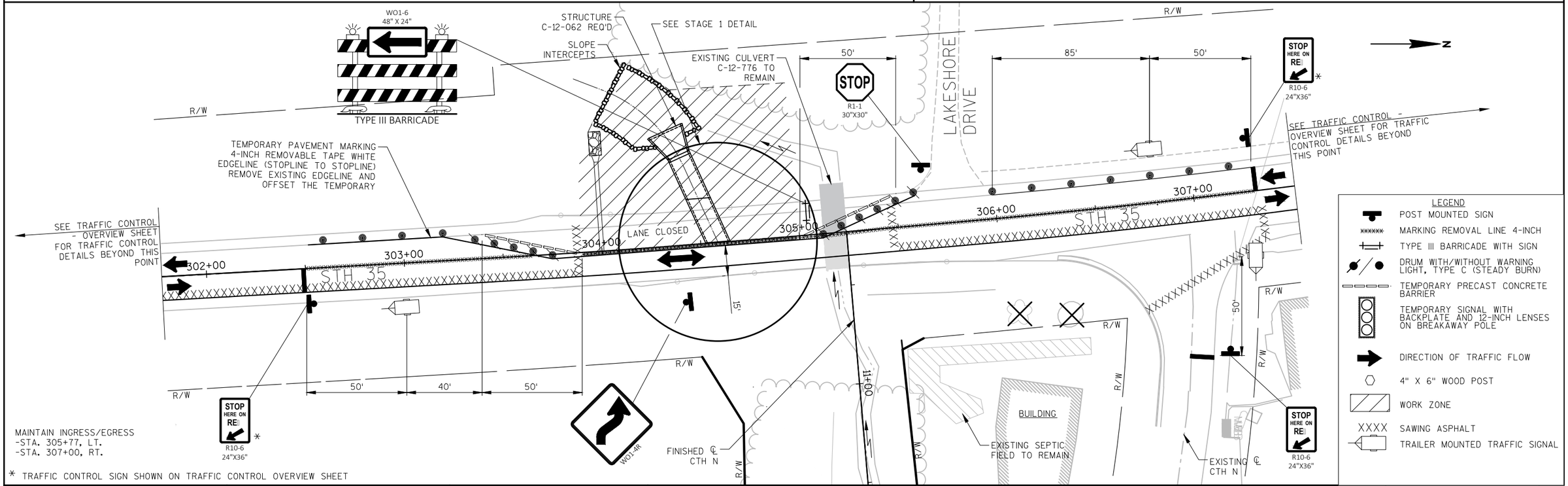
STAGE 1 DETAIL



TYPICAL STAGING SECTION AT C-12-062

STAGE 1 (LOOKING NORTH)

① TEMPORARY PAVEMENT MARKING 4-INCH REMOVABLE TAPE WHITE EDGELINE



* TRAFFIC CONTROL SIGN SHOWN ON TRAFFIC CONTROL OVERVIEW SHEET

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TRAFFIC CONTROL - STAGE 1	SHEET 56	E

GENERAL NOTES:

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

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

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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.

FOR MOVING OPERATION SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATION)".

PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, LIGHTS, TEMPORARY MARKINGS, FLAGGERS, AND SUCH OTHER SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL SIGN LAYOUT SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS.

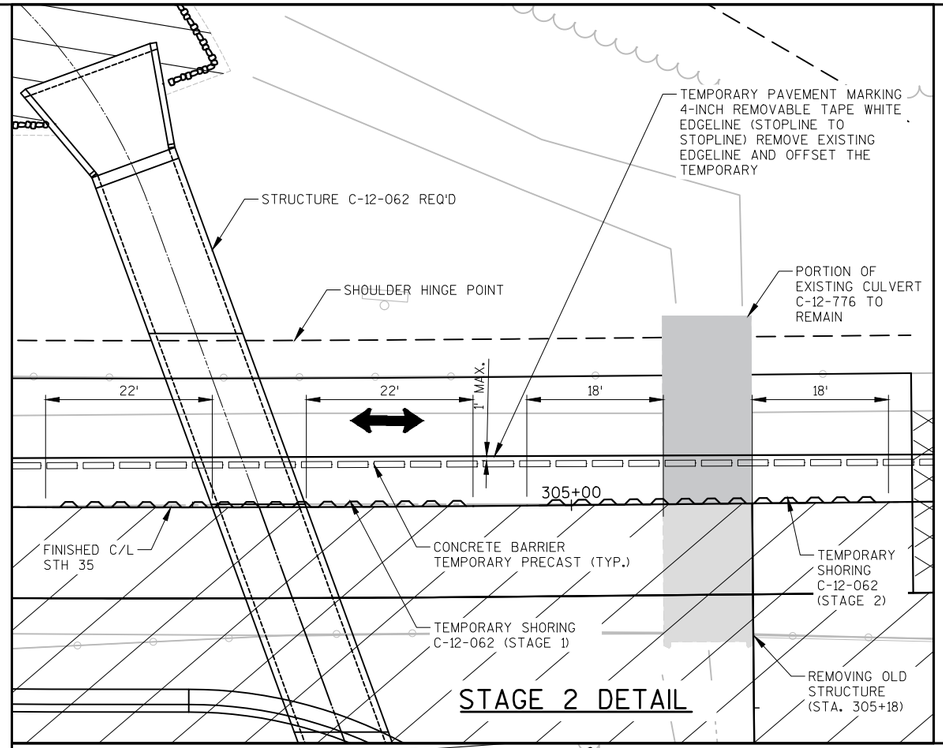
ROAD MACHINERY, FLAGGERS AHEAD, ETC. SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED AT NIGHTS, ON WEEKENDS OR WHEN THE ACTIVITY DOES NOT EXIST.

ADDITIONAL DRUMS OR TYPE III BARRICADES MAY BE REQUIRED ADJACENT TO DROP-OFFS, OPEN TRENCHES, OR PROTRUSIONS. COST TO BE INCLUDED WITH OPERATION WHICH CREATES THE HAZARD.

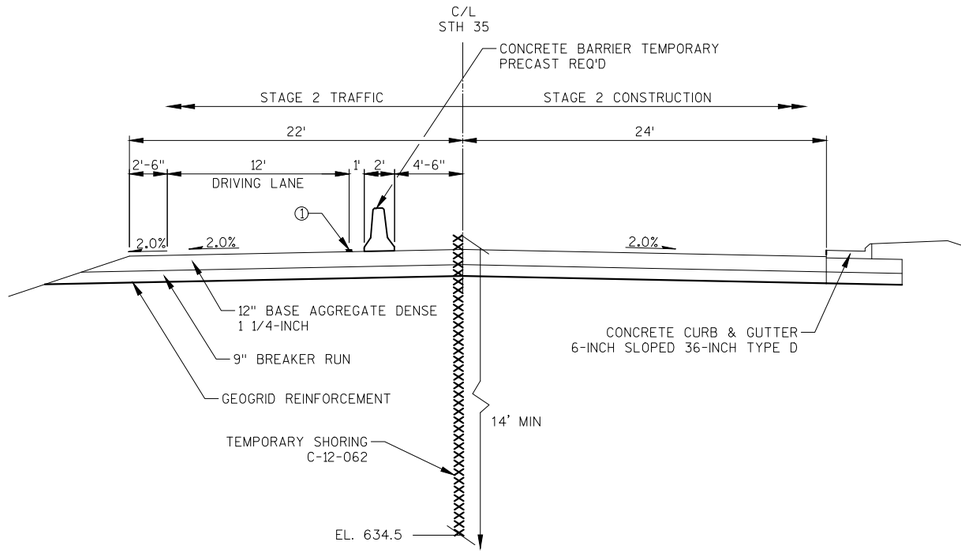
DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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



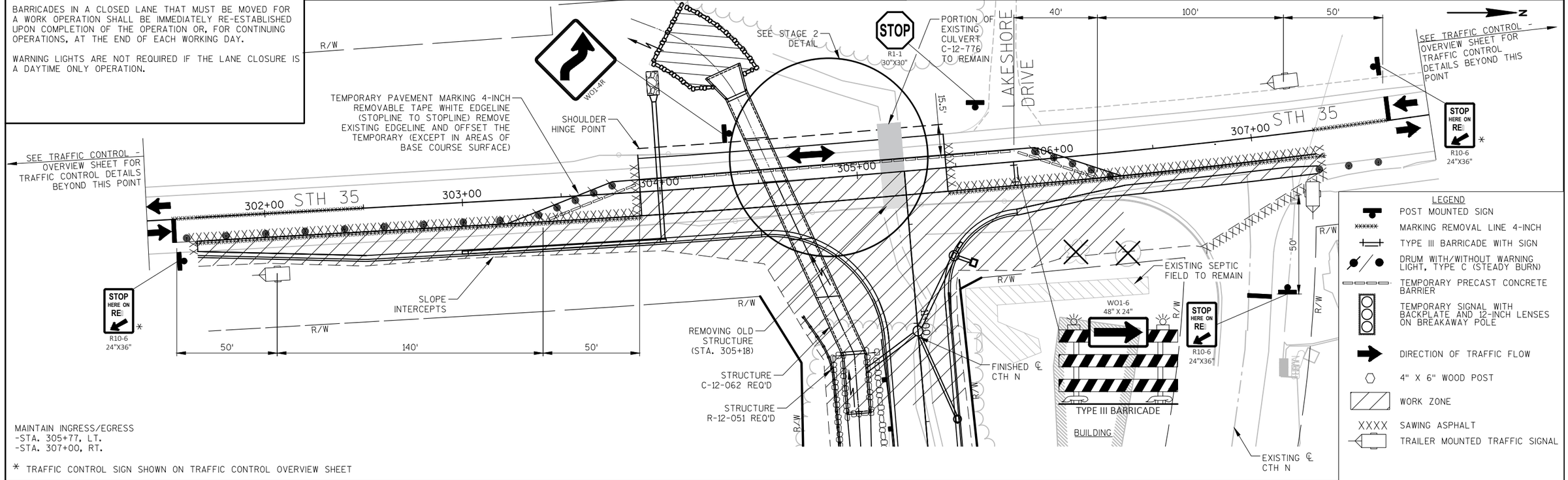
STAGE 2 DETAIL



TYPICAL STAGING SECTION AT C-12-062/C-12-776

STAGE 2 (LOOKING NORTH)

① TEMPORARY PAVEMENT MARKING 4-INCH REMOVABLE TAPE WHITE EDGELINE



MAINTAIN INGRESS/EGRESS
-STA. 305+77, LT.
-STA. 307+00, RT.

* TRAFFIC CONTROL SIGN SHOWN ON TRAFFIC CONTROL OVERVIEW SHEET

LEGEND

- POST MOUNTED SIGN
- MARKING REMOVAL LINE 4-INCH
- TYPE III BARRICADE WITH SIGN
- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY BURN)
- TEMPORARY PRECAST CONCRETE BARRIER
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE
- DIRECTION OF TRAFFIC FLOW
- 4" X 6" WOOD POST
- WORK ZONE
- XXXX SAWING ASPHALT
- TRAILER MOUNTED TRAFFIC SIGNAL

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TRAFFIC CONTROL - STAGE 2	SHEET 57	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_TRAFFIC STAGE2.DWG
LAYOUT : STAGE2
PLOT DATE : 12/10/2018
PLOT TIME : 3:23:58 PM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

GENERAL NOTES:

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

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

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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.

FOR MOVING OPERATION SEE STANDARD DETAIL DRAWING "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATION)".

PROVIDE AND MAINTAIN ALL NECESSARY BARRICADES, SIGNS, LIGHTS, TEMPORARY MARKINGS, FLAGGERS, AND SUCH OTHER SAFETY DEVICES AS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ANY STOP SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL SIGN LAYOUT SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS.

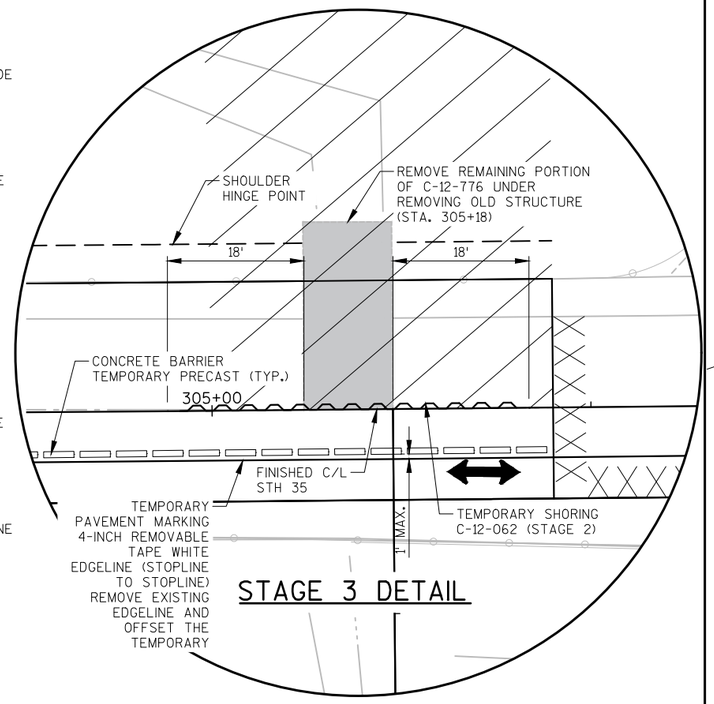
ROAD MACHINERY, FLAGGERS AHEAD, ETC. SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED AT NIGHTS, ON WEEKENDS OR WHEN THE ACTIVITY DOES NOT EXIST.

ADDITIONAL DRUMS OR TYPE III BARRICADES MAY BE REQUIRED ADJACENT TO DROP-OFFS, OPEN TRENCHES, OR PROTRUSIONS. COST TO BE INCLUDED WITH OPERATION WHICH CREATES THE HAZARD.

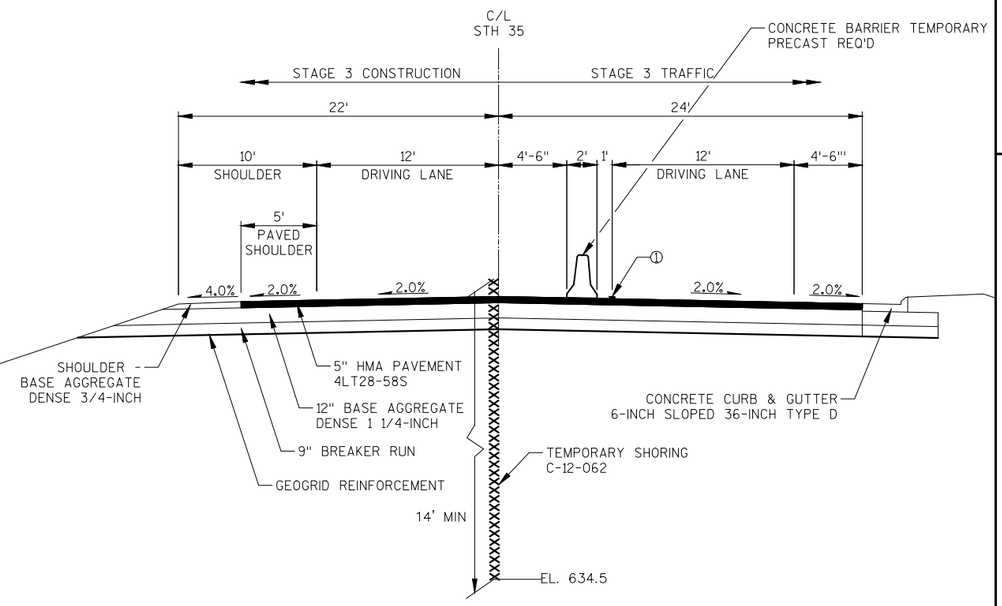
DRUMS PLACED ADJACENT TO WORK AREAS SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

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



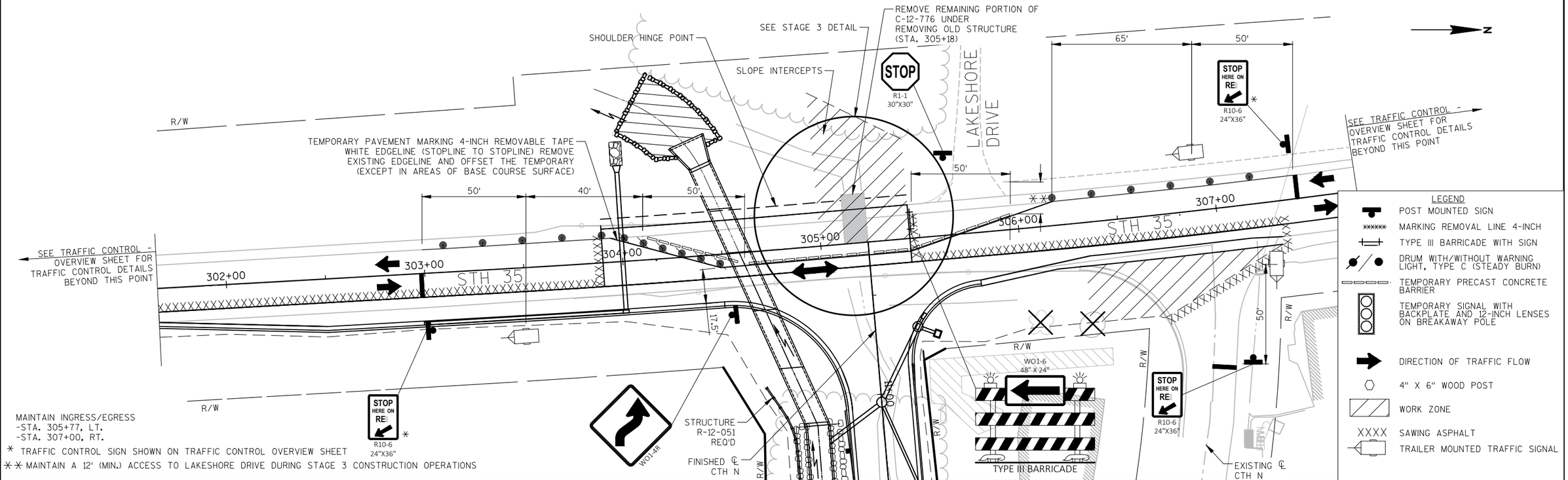
STAGE 3 DETAIL



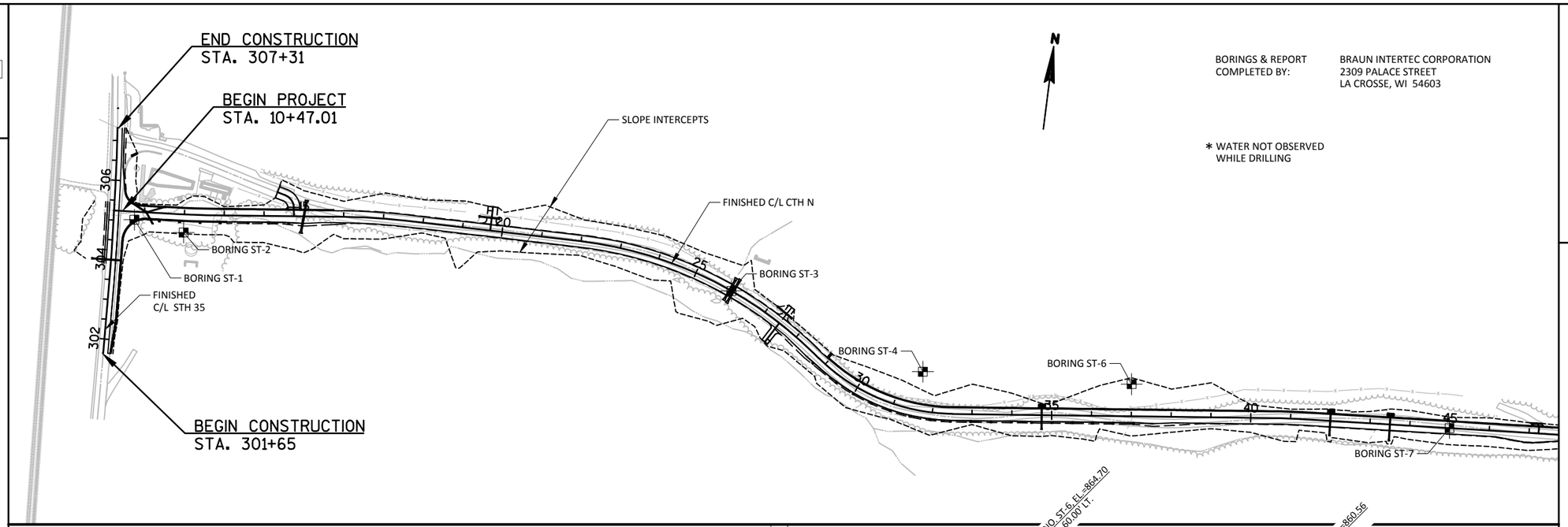
TYPICAL STAGING SECTION AT C-12-776

STAGE 3 (LOOKING NORTH)

① TEMPORARY PAVEMENT MARKING 4-INCH TAPE REMOVABLE WHITE EDGELINE



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	TRAFFIC CONTROL - STAGE 3	SHEET 58	E



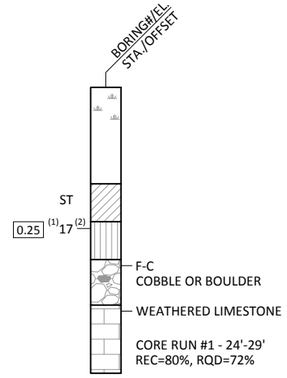
BORINGS & REPORT COMPLETED BY: BRAUN INTERTEC CORPORATION
2309 PALACE STREET
LA CROSSE, WI 54603

* WATER NOT OBSERVED WHILE DRILLING

MATERIAL SYMBOLS

Asphalt · Topsoil · Peat
Concrete · Fill · Gravel
Sand · Clay · Silt
Boulders or Cobbles · Limestone · Bedrock (unknown)
Shale · Sandstone · Igneous/ meta

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

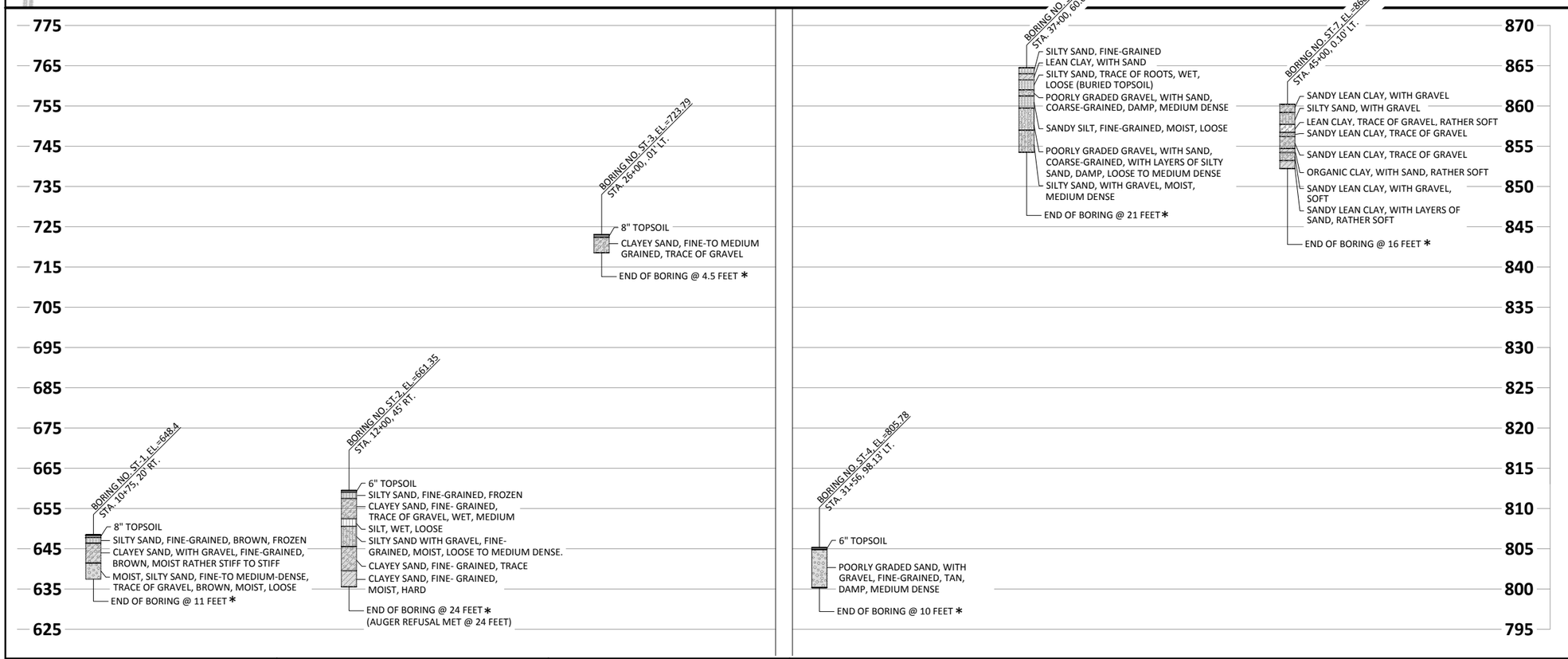
AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

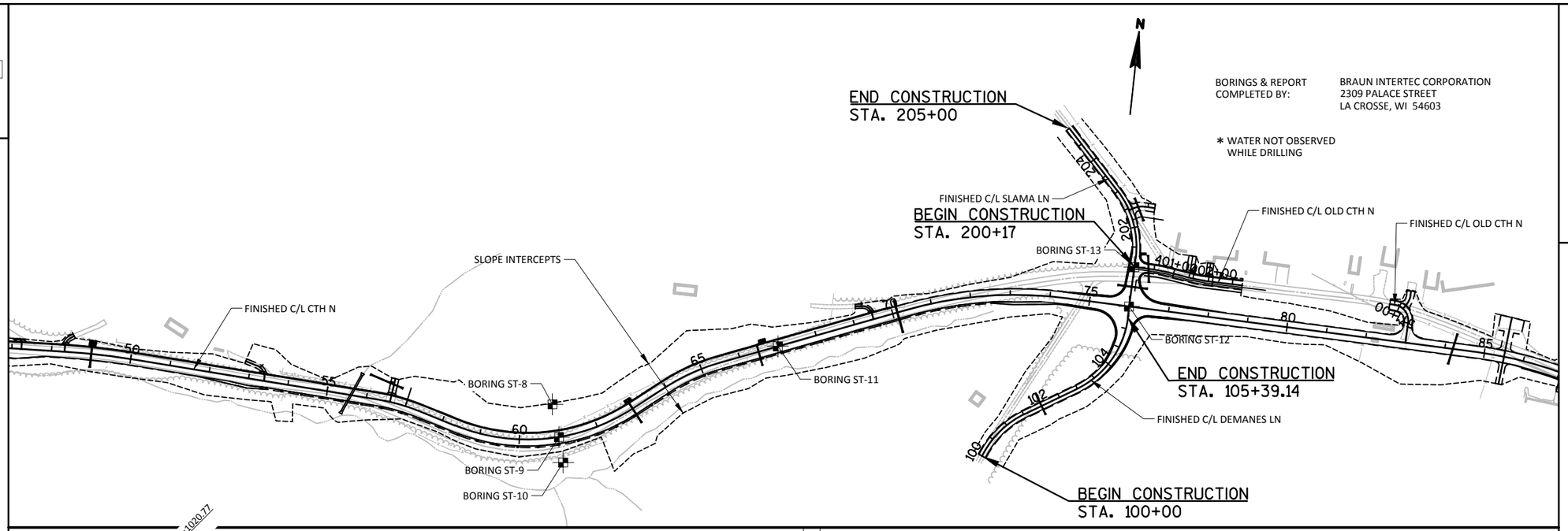
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	SUBSURFACE EXPLORATION	SHEET 59	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\SOIL BORINGS DETAIL.DWG
LAYOUT : SOIL BORINGS DETAIL1
PLOT DATE : 10/26/2018
PLOT TIME : 9:49:59 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



BORINGS & REPORT COMPLETED BY:

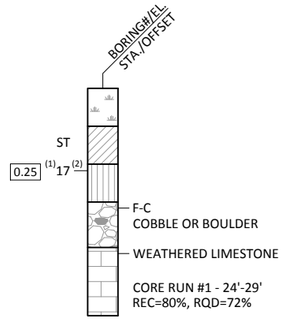
BRAUN INTERTEC CORPORATION
2309 PALACE STREET
LA CROSSE, WI 54603

* WATER NOT OBSERVED WHILE DRILLING

MATERIAL SYMBOLS

Asphalt	Topsoil	Peat
Concrete	Fill	Gravel
Sand	Clay	Silt
Boulders or Cobbles	Limestone	Bedrock (unknown)
Shale	Sandstone	Igneous/ meta

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

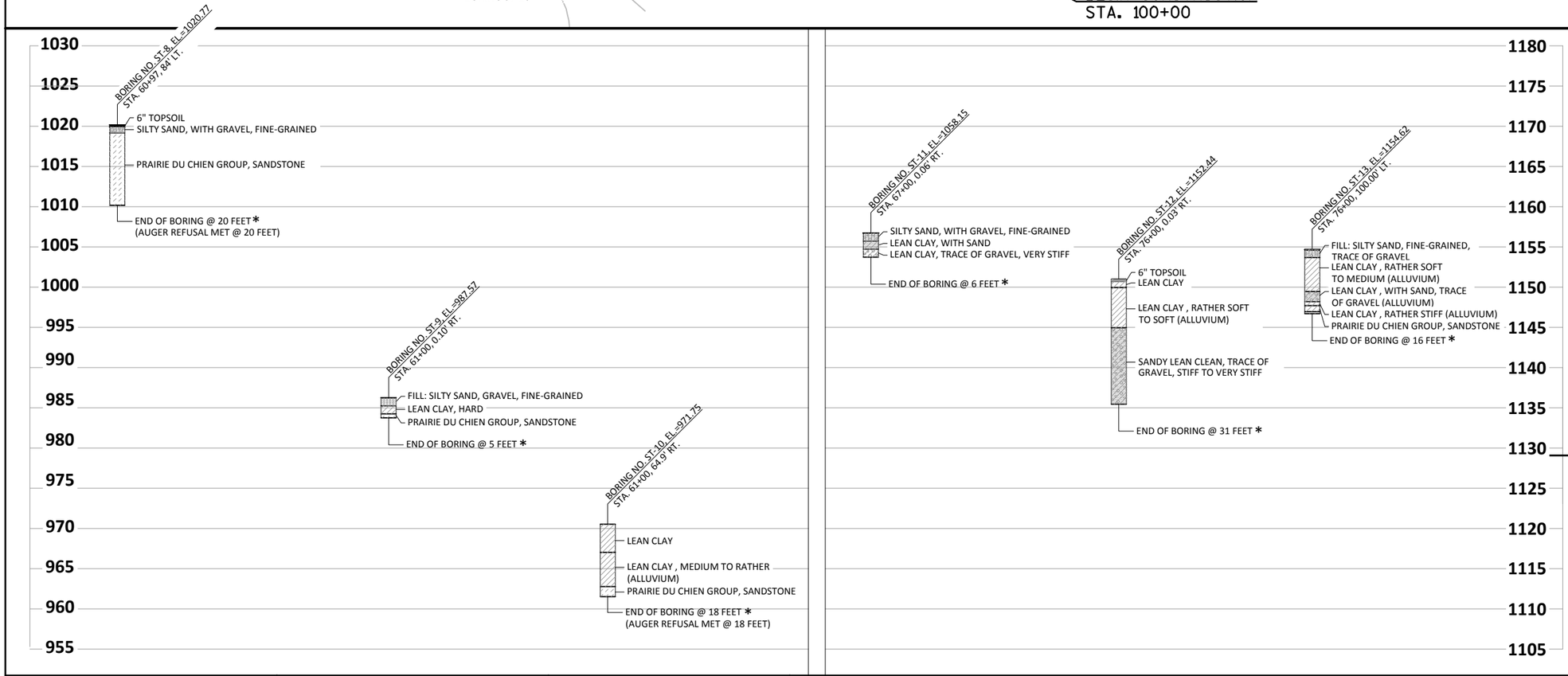
- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

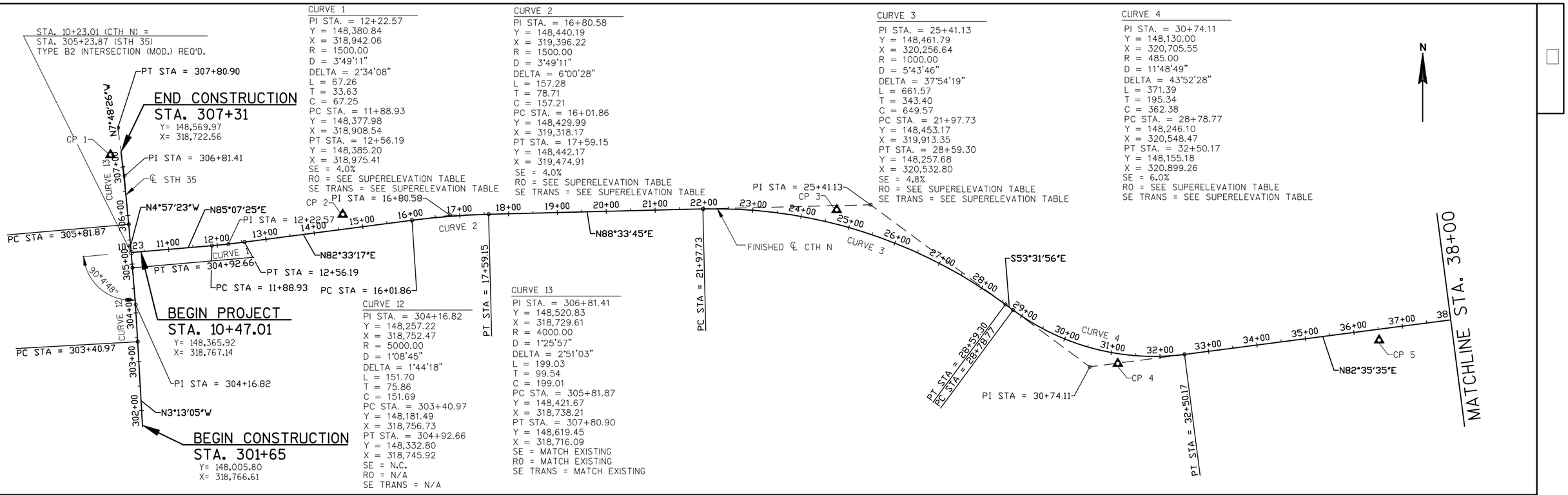
F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

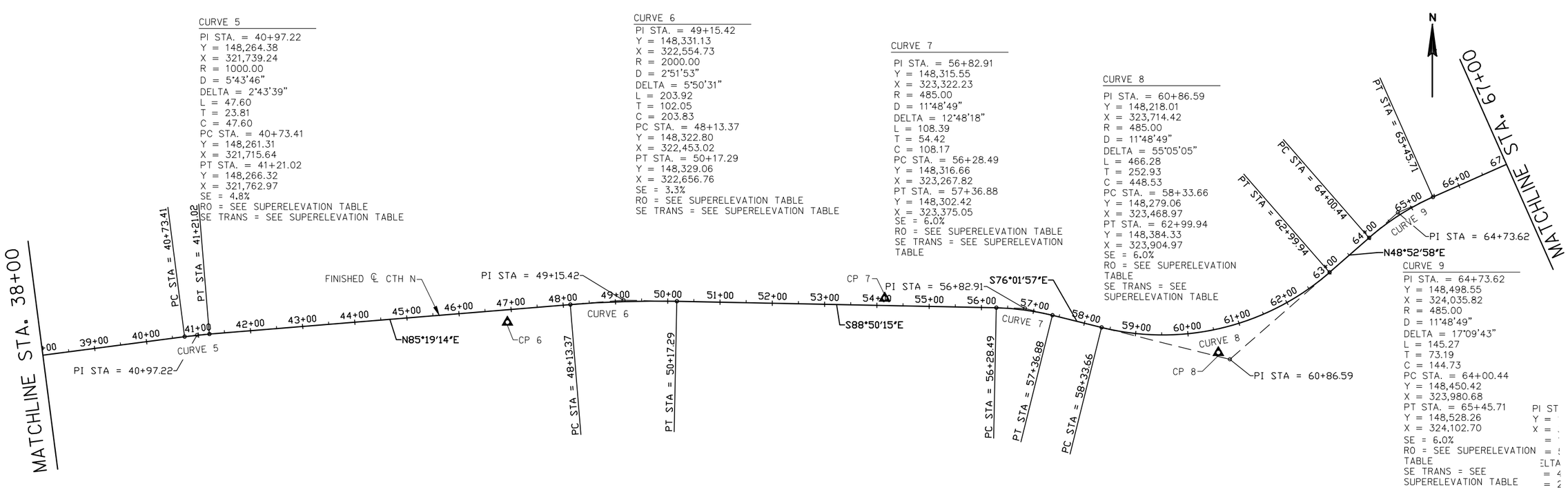
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.



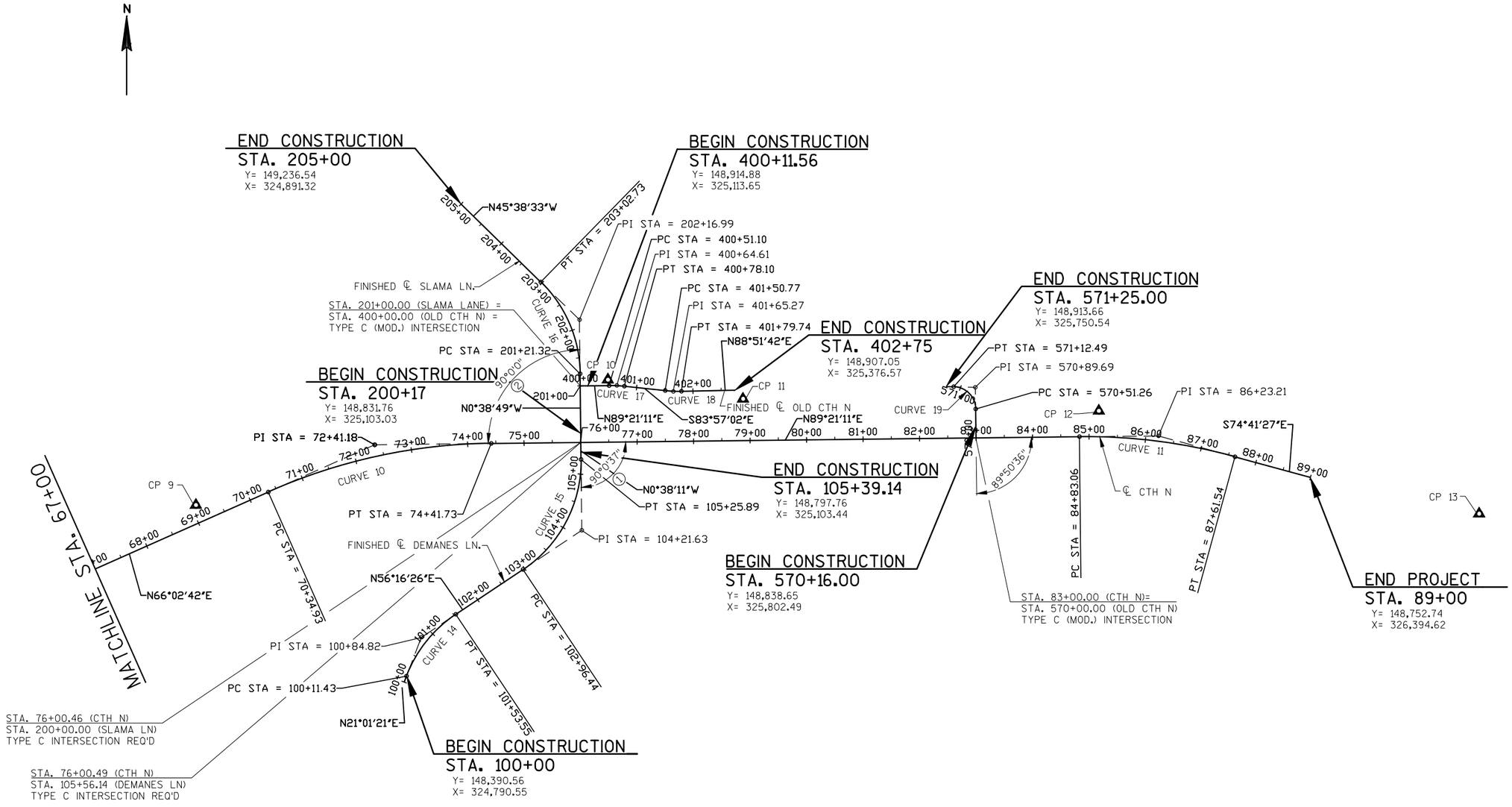
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\SOIL BORINGS DETAIL.DWG
LAYOUT : SOIL BORINGS DETAIL 2
PLOT DATE : 7/26/2018
PLOT TIME : 2:15:05 PM
PLOT BY : KARTER ZAJICEK
PLOT SCALE : 1" = 1'





PROJECT NO:5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	ALIGNMENT DETAILS	SHEET 61 E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\C54320_ALIGNMENT DETAILS.DWG
LAYOUT :
PLOT DATE : 7/26/2018
PLOT TIME : 1:52:26 PM
PLOT BY : KARTER ZAJICEK
PLOT SCALE : 0.500000



CURVE 10
PI STA. = 72+41.18
Y = 148,810.64
X = 324,738.26
R = 1000.00
D = 5°43'46"
DELTA = 23°18'30"
L = 406.81
T = 206.26
C = 404.01
PC STA. = 70+34.93
Y = 148,726.89
X = 324,549.77
PT STA. = 74+41.73
Y = 148,812.97
SE = 4.8%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 11
PI STA. = 86+23.21
Y = 148,826.30
X = 326,125.90
R = 1000.00
D = 5°43'46"
DELTA = 15°57'21"
L = 278.48
T = 140.15
C = 277.59
PC STA. = 84+83.06
Y = 148,824.72
X = 325,985.76
PT STA. = 87+61.54
Y = 148,789.30
X = 326,261.08
SE = 4.8%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 14
PI STA. = 100+84.82
Y = 148,469.74
X = 324,820.98
R = 231.00
D = 24°48'12"
DELTA = 35°15'05"
L = 142.12
T = 73.39
C = 139.89
PC STA. = 100+11.43
Y = 148,401.23
X = 324,794.65
PT STA. = 101+53.55
Y = 148,510.49
X = 324,882.02
SE = 2.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 15
PI STA. = 104+21.63
Y = 148,659.33
X = 325,104.97
R = 231.00
D = 24°48'12"
DELTA = 56°54'37"
L = 229.45
T = 125.19
C = 220.13
PC STA. = 102+96.44
Y = 148,589.82
X = 325,000.85
PT STA. = 105+25.89
Y = 148,784.51
X = 325,103.58
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 16
PI STA. = 202+16.99
Y = 149,031.73
X = 325,100.77
R = 231.00
D = 24°48'12"
DELTA = 44°59'45"
L = 181.41
T = 95.67
C = 176.78
PC STA. = 201+21.32
Y = 148,936.07
X = 325,101.85
PT STA. = 203+02.73
Y = 149,098.62
X = 325,032.36
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

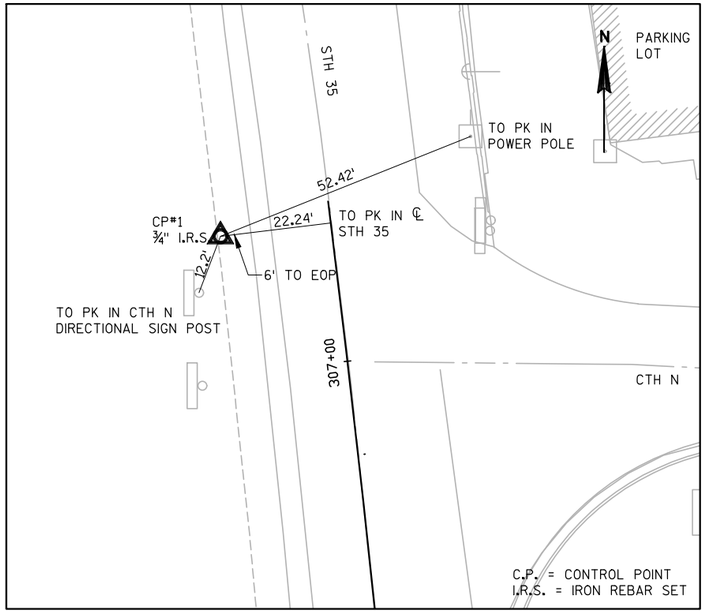
CURVE 17
PI STA. = 400+64.61
Y = 148,915.48
X = 325,166.70
R = 231.00
D = 24°48'12"
DELTA = 6°41'47"
L = 27.00
T = 13.51
C = 26.98
PC STA. = 400+51.10
Y = 148,915.33
X = 325,153.19
PT STA. = 400+78.10
Y = 148,914.06
X = 325,180.14
SE = N.C.
RO = N/A
SE TRANS = N/A

CURVE 18
PI STA. = 401+65.27
Y = 148,904.87
X = 325,266.83
R = 231.00
D = 24°48'12"
DELTA = 7°11'16"
L = 28.98
T = 14.51
C = 28.96
PC STA. = 401+50.77
Y = 148,906.40
X = 325,252.40
PT STA. = 401+79.74
Y = 148,905.16
X = 325,281.34
SE = N.C.
RO = N/A
SE TRANS = N/A

CURVE 19
PI STA. = 570+89.69
Y = 148,912.34
X = 325,801.46
R = 40.00
D = 143°14'22"
DELTA = 87°42'06"
L = 61.23
T = 38.43
C = 55.42
PC STA. = 570+51.26
Y = 148,873.91
X = 325,802.00
PT STA. = 571+12.49
Y = 148,913.34
X = 325,763.04
SE = N.C.
RO = N/A
SE TRANS = N/A

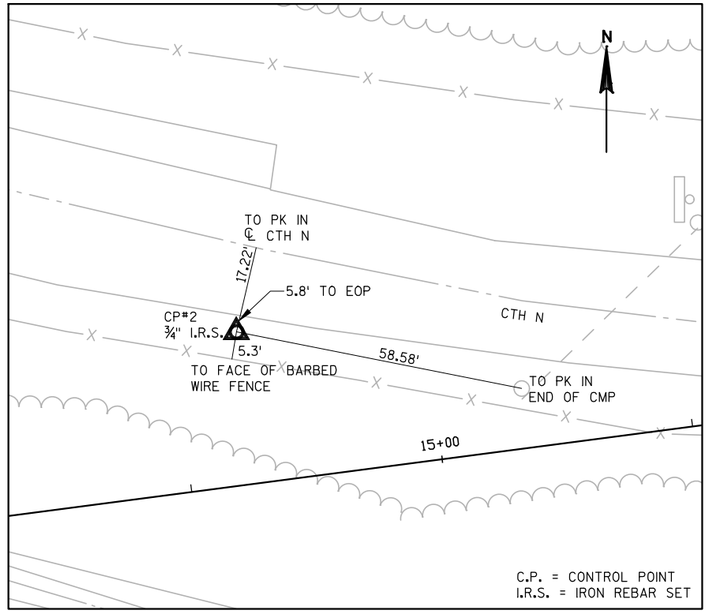
① MEASURED BETWEEN FINISHED C/L CTH N & FINISHED C/L DEMANES LANE

② MEASURED BETWEEN FINISHED C/L CTH N & FINISHED C/L SLAMA LANE



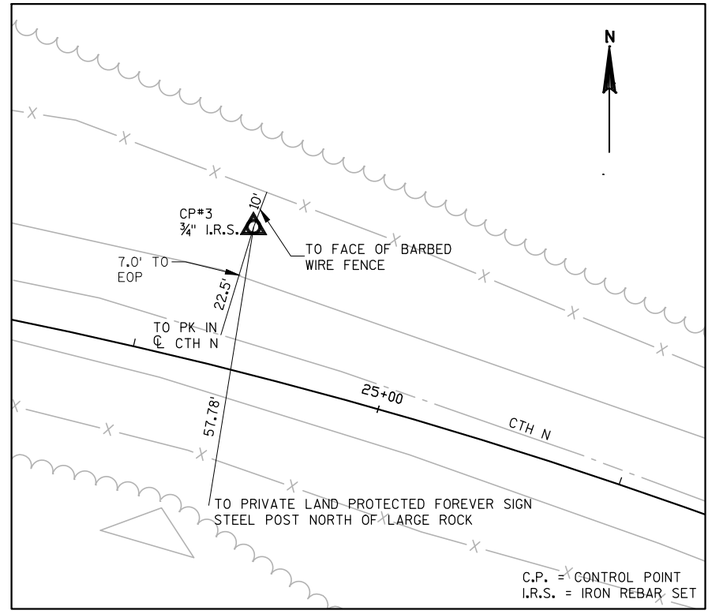
TIES TO CP#1

STA. 307+27.64, 22.01' LT
Y=148,563.93
X=318,701.13



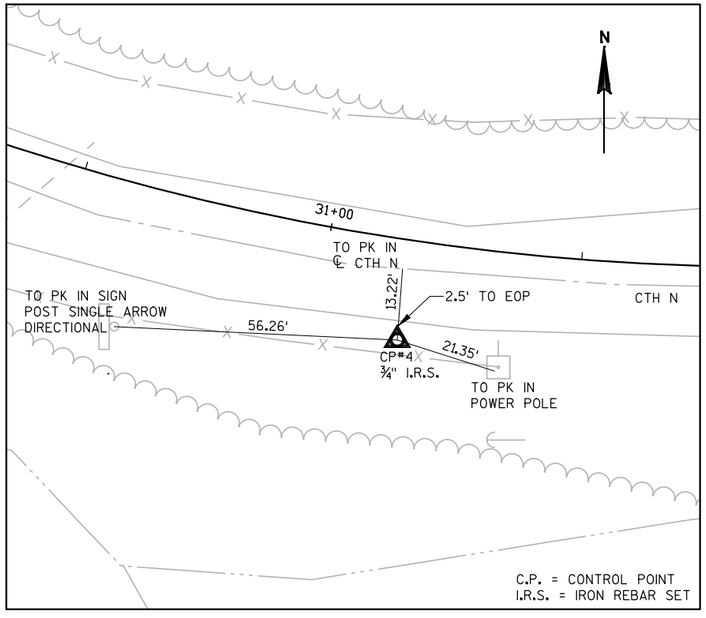
TIES TO CP#2

STA. 14+62.87, 30.24' LT
Y=148,441.97
X=319,176.43



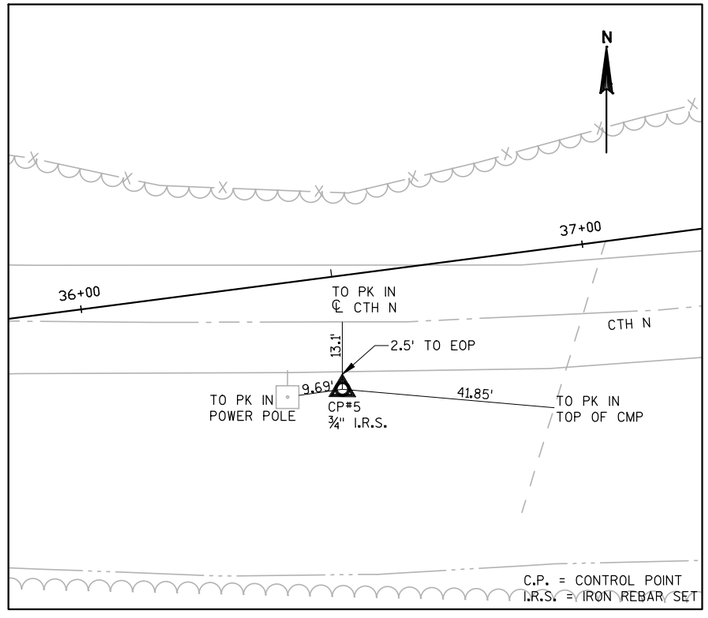
TIES TO CP#3

STA. 24+67.35, 28.47' LT
Y=148,451.36
X=320,187.43



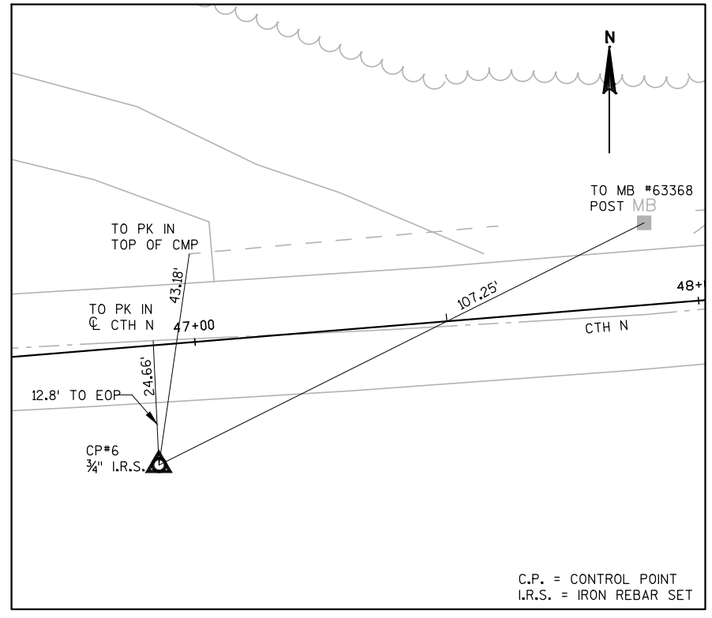
TIES TO CP#4

STA. 31+16.17, 19.91' RT
Y=148,136.67
X=320,762.78



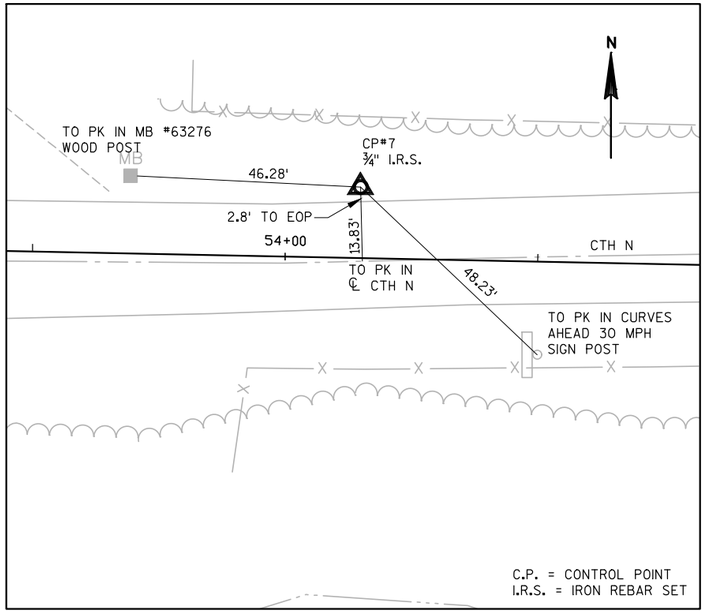
TIES TO CP#5

STA. 36+49.21, 22.33' RT
Y=148,184.48
X=321,297.85



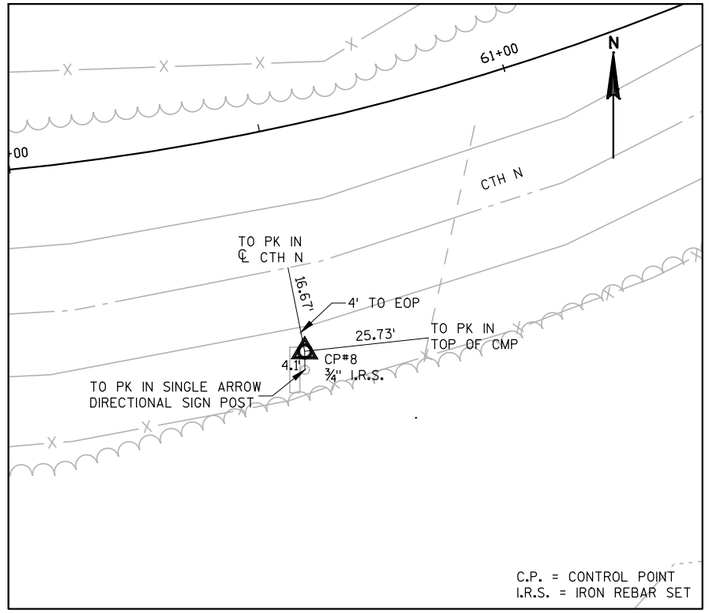
TIES TO CP#6

STA. 46+90.89, 23.70' RT
Y=148,289.19
X=322,332.88



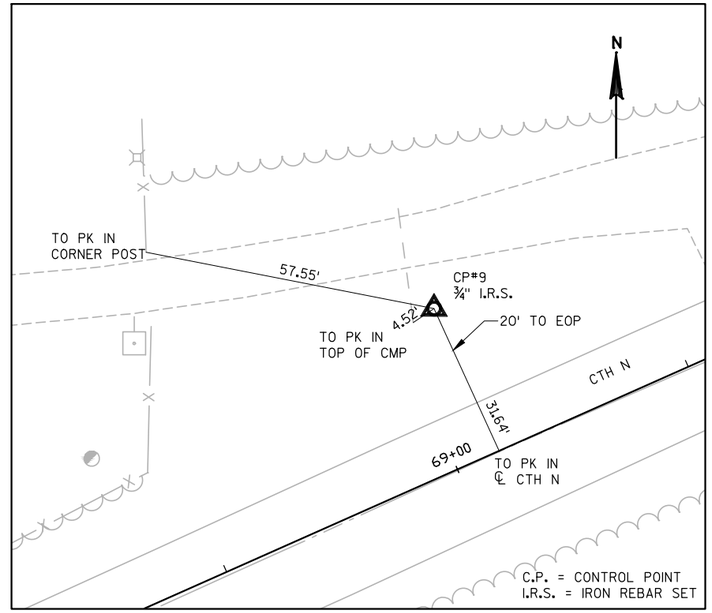
TIES TO CP#7

STA. 54+14.65, 14.05' LT
Y=148,335.05
X=323,054.31



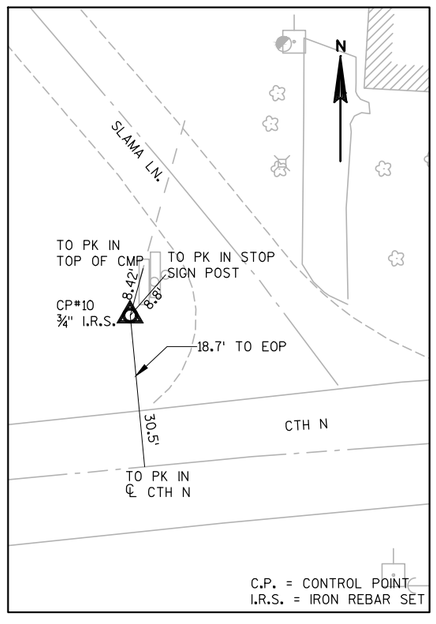
TIES TO CP#8

STA. 60+50.04, 44.38' RT
Y=148,231.14
X=323,692.43



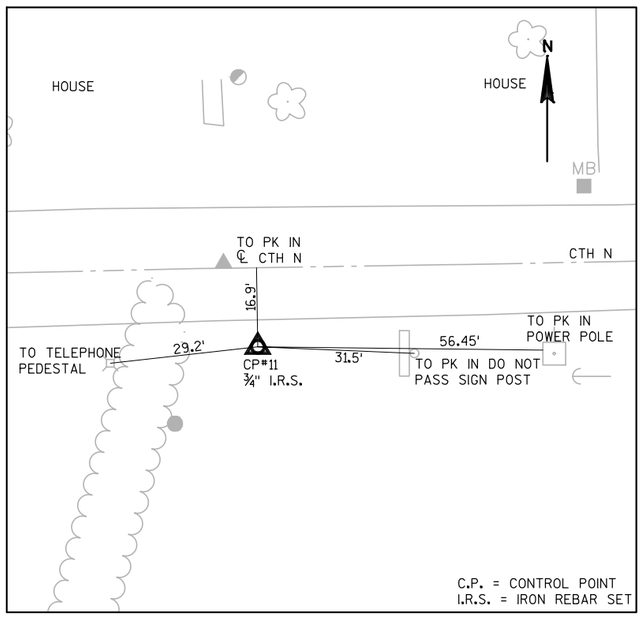
TIES TO CP#9

STA. 69+08.68, 30.98' LT
Y=148,703.94
X=324,421.82



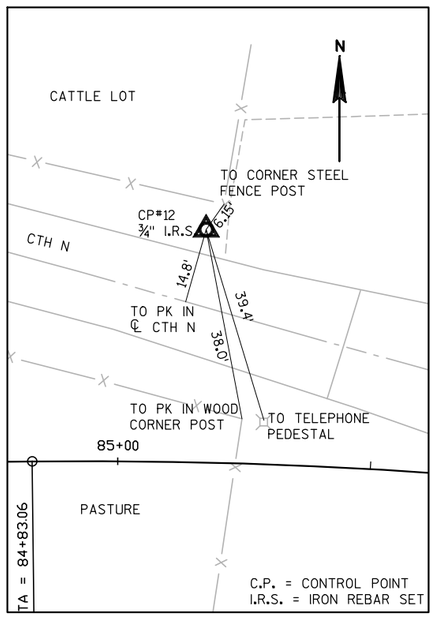
TIES TO CP#10

STA. 76+49.61, 110.38' LT
Y=148,925.68
X=325,151.12



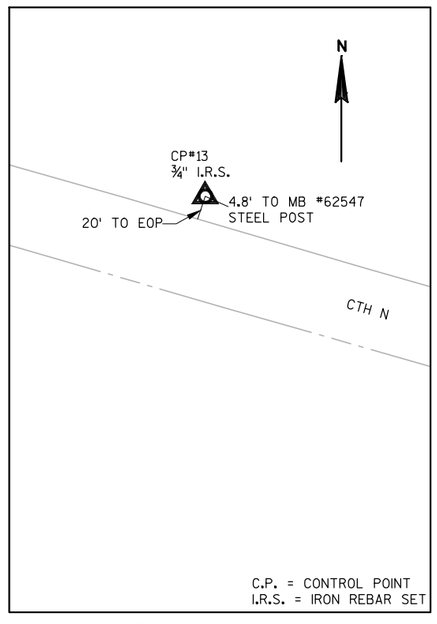
TIES TO CP#11

STA. 78+88.44, 73.85' LT
Y=148,891.85
X=325,390.35



TIES TO CP#12

STA. 85+16.48, 46.10' LT
Y=148,870.63
X=326,020.20



TIES TO CP#13

STA. 92+05, 17.00' L.T.
Y=148,688.50
X=326,693.39

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CONTROL POINT TIES	SHEET 64	E

CTH N STATION LAYOUT

Station	Y	X	Remarks
10+47.01	148,365.92	318,767.14	Begin Project
11+00.00	148,370.43	318,819.93	-
12+00.00	148,378.97	318,919.57	-
13+00.00	148,390.88	319,018.85	-
14+00.00	148,403.84	319,118.01	-
15+00.00	148,416.79	319,217.16	-
16+00.00	148,429.75	319,316.32	-
17+00.00	148,439.52	319,415.82	-
18+00.00	148,443.19	319,515.75	-
19+00.00	148,445.70	319,615.71	-
20+00.00	148,448.21	319,715.68	-
21+00.00	148,450.72	319,815.65	-
22+00.00	148,453.23	319,915.62	-
23+00.00	148,450.51	320,015.54	-
24+00.00	148,437.83	320,114.69	-
25+00.00	148,415.31	320,212.08	-
26+00.00	148,383.19	320,306.74	-
27+00.00	148,341.78	320,397.71	-
28+00.00	148,291.49	320,484.10	-
29+00.00	148,233.86	320,565.81	-
30+00.00	148,186.92	320,653.90	-
31+00.00	148,159.00	320,749.74	-
32+00.00	148,151.30	320,849.27	-
33+00.00	148,161.61	320,948.68	-
34+00.00	148,174.50	321,047.84	-
35+00.00	148,187.39	321,147.01	-
36+00.00	148,200.28	321,246.17	-
37+00.00	148,213.17	321,345.34	-
38+00.00	148,226.06	321,444.51	-
39+00.00	148,238.95	321,543.67	-
40+00.00	148,251.84	321,642.84	-
41+00.00	148,264.39	321,742.05	-
42+00.00	148,272.76	321,841.69	-
43+00.00	148,280.92	321,941.36	-
44+00.00	148,289.08	322,041.03	-
45+00.00	148,297.24	322,140.69	-
46+00.00	148,305.40	322,240.36	-
47+00.00	148,313.55	322,340.03	-
48+00.00	148,321.71	322,439.69	-
49+00.00	148,328.00	322,539.49	-
50+00.00	148,329.33	322,639.47	-
51+00.00	148,327.38	322,739.45	-
52+00.00	148,325.35	322,839.43	-
53+00.00	148,323.32	322,939.41	-
54+00.00	148,321.29	323,039.38	-
55+00.00	148,319.26	323,139.36	-
56+00.00	148,317.24	323,239.34	-
57+00.00	148,309.95	323,338.96	-
58+00.00	148,287.18	323,436.30	-
59+00.00	148,267.49	323,534.24	-
60+00.00	148,267.10	323,634.06	-
61+00.00	148,287.16	323,731.85	-
62+00.00	148,326.81	323,823.46	-
63+00.00	148,384.37	323,905.01	-
64+00.00	148,450.13	323,980.35	-
65+00.00	148,507.76	324,061.86	-
66+00.00	148,550.30	324,152.31	-
67+00.00	148,590.91	324,243.69	-
68+00.00	148,631.51	324,335.08	-
69+00.00	148,672.11	324,426.47	-
70+00.00	148,712.71	324,517.85	-
71+00.00	148,751.36	324,610.06	-
72+00.00	148,781.19	324,705.46	-
73+00.00	148,801.34	324,803.37	-
74+00.00	148,811.62	324,902.80	-
75+00.00	148,813.62	325,002.77	-

CTH N STATION LAYOUT

76+00.00	148,814.75	325,102.76	-
77+00.00	148,815.88	325,202.75	-
78+00.00	148,817.01	325,302.75	-
79+00.00	148,818.14	325,402.74	-
80+00.00	148,819.27	325,502.74	-
81+00.00	148,820.40	325,602.73	-
82+00.00	148,821.53	325,702.72	-
83+00.00	148,822.66	325,802.72	-
84+00.00	148,823.78	325,902.71	-
85+00.00	148,824.77	326,002.70	-
86+00.00	148,819.21	326,102.51	-
87+00.00	148,803.71	326,201.26	-
88+00.00	148,779.15	326,298.17	-
89+00.00	148,752.74	326,394.62	End Project

STH 35 STATION LAYOUT

Station	Y	X	Remarks
301+65.00	148,005.80	318,766.61	Begin Construction
302+00.00	148,040.74	318,764.64	-
303+00.00	148,140.59	318,759.03	-
304+00.00	148,240.41	318,753.07	-
304+58.79	148,299.04	318,748.73	C/L C-12-062
305+00.00	148,340.10	318,745.29	-
306+00.00	148,439.73	318,736.60	-
307+00.00	148,539.19	318,726.27	-
307+31.00	148,569.97	318,722.56	End Construction

SLAMA LN STATION LAYOUT

Station	Y	X	Remarks
200+17.00	148,831.76	325,103.03	Begin Construction
201+00.00	148,914.75	325,102.09	
202+00.00	149,013.08	325,087.71	
203+00.00	149,096.70	325,034.30	-
204+00.00	149,166.63	324,962.82	-
205+00.00	149,236.54	324,891.32	End Construction

DEMANES LN STATION LAYOUT

Station	Y	X	Remarks
100+00.00	148,390.56	324,790.55	Begin Construction
101+00.00	148,475.88	324,841.31	
102+00.00	148,536.27	324,920.65	-
103+00.00	148,591.82	325,003.80	-
104+00.00	148,664.40	325,071.46	-
105+00.00	148,758.66	325,102.42	-
105+39.14	148,797.76	325,103.44	End Construction

OLD CTH N STATION LAYOUT (WEST)

Station	Y	X	Remarks
400+11.56	148,914.88	325,113.65	Begin Construction
401+00.00	148,911.75	325,201.92	-
402+00.00	148,905.56	325,301.59	-
402+75.00	148,907.05	325,376.57	End Construction

OLD CTH N STATION LAYOUT (EAST)

Station	Y	X	Remarks
570+16.00	148,838.65	325,802.49	Begin Construction
571+00.00	148,911.08	325,775.28	-
571+25.00	148,913.66	325,750.54	End Construction

STRUCTURE R-12-051 STATION LAYOUT

Station	Y	X	Remarks
1W+00.00	148,313.22	318,816.69	Begin Construction
1W+50.00	148,329.90	318,862.53	-
2W+00.00	148,334.15	318,912.35	-
2W+50.00	148,339.21	318,962.09	-
3W+00.00	148,345.57	319,011.69	-
3W+16.00	148,347.64	319,027.55	End Construction

STRUCTURE C-12-062 STATION LAYOUT

SEE STRUCTURE PLANS FOR LAYOUT INFORMATION

CULVERT PIPE LAYOUT

STATION	LOCATION	UPSTREAM				DOWNSTREAM			
		STATION	OFFSET	Y	X	STATION	OFFSET	Y	X
15+00	MAINLINE	15+06.25	-35.45	148,452.76	319,218.77	14+93.40	37.42	148,378.83	319,215.47
19+70	MAINLINE, LT.	19+86.00	-32.00	148,479.85	319,700.88	19+42.00	-32.00	148,478.74	319,656.90
25+95	MAINLINE	25+95.17	-28.00	148,411.04	320,312.43	25+95.17	24.00	148,362.60	320,293.51
26+05	MAINLINE	26+04.683	-30.00	148,409.24	320,322.41	26+04.83	26.00	148,357.28	320,301.53
27+45	MAINLINE, LT.	27+58.89	-28.75	148,337.92	320,463.89	27+20.04	-30.21	148,358.94	320,429.83
55+60	MAINLINE	55+79.09	-52.33	148,369.98	323,219.50	55+44.43	43.13	148,275.25	323,182.62
56+60	MAINLINE, LT.	56+78.17	-41.88	148,354.67	323,322.49	56+04.67	-58.17	148,375.30	323,145.19
84+20	MAINLINE	84+26.24	-35.45	148,859.53	325,928.54	84+13.74	35.45	148,788.49	325,916.85
102+00	DEMANES LN.	102+00.00	20.00	148,519.64	324,931.75	102+00.00	-32.00	148,562.89	324,902.88
200+50	SLAMA LN.	200+50.00	36.00	148,865.16	325,138.65	200+50.00	-32.00	148,864.39	325,070.66
202+45	SLAMA LN., RT.	202+61.97	26.37	149,083.03	325,080.30	202+13.38	26.05	149,035.88	325,106.63
400+30	OLD CTH N	400+30.90	-30.00	148,945.10	325,132.65	400+40.42	30.00	148,885.21	325,142.85

5496-00-74

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	64.000	64.000
0004	201.0120	Clearing	ID	140.000	140.000
0006	201.0205	Grubbing	STA	64.000	64.000
0008	201.0220	Grubbing	ID	140.000	140.000
0010	203.0100	Removing Small Pipe Culverts	EACH	20.000	20.000
0012	203.0200	Removing Old Structure (station) 01. 305+18	LS	1.000	1.000
0014	204.0150	Removing Curb & Gutter	LF	220.000	220.000
0016	204.0165	Removing Guardrail	LF	380.000	380.000
0018	204.0180	Removing Delineators and Markers	EACH	5.000	5.000
0020	204.9105.S	Removing (item description) 01. Retaining Wall	LS	1.000	1.000
0022	204.9105.S	Removing (item description) 02. Steel Grate	LS	1.000	1.000
0024	205.0100	Excavation Common	CY	64,100.000	64,100.000
0026	205.0200	Excavation Rock	CY	25,800.000	25,800.000
0028	206.2000	Excavation for Structures Culverts (structure) 01. C-12-0062	LS	1.000	1.000
0030	206.3000	Excavation for Structures Retaining Walls (structure) 02. R-12-0051	LS	1.000	1.000
0032	208.1100	Select Borrow	CY	7,550.000	7,550.000
0034	210.1500	Backfill Structure Type A	TON	640.000	640.000
0036	210.2500	Backfill Structure Type B	TON	2,550.000	2,550.000
0038	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 5496-00-74	LS	1.000	1.000
0040	213.0100	Finishing Roadway (project) 01. 5496-00-74	EACH	1.000	1.000
0042	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,800.000	1,800.000
0044	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	20,000.000	20,000.000
0046	311.0110	Breaker Run	TON	22,320.000	22,320.000
0048	416.0160	Concrete Driveway 6-Inch	SY	130.000	130.000
0050	450.4000	HMA Cold Weather Paving	TON	1,640.000	1,640.000
0052	455.0605	Tack Coat	GAL	1,660.000	1,660.000
0054	460.2000	Incentive Density HMA Pavement	DOL	4,190.000	4,190.000
0056	460.5224	HMA Pavement 4 LT 58-28 S	TON	6,910.000	6,910.000
0058	465.0315	Asphaltic Flumes	SY	40.000	40.000
0060	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	5,400.000	5,400.000
0062	504.0100	Concrete Masonry Culverts	CY	266.000	266.000
0064	504.0500	Concrete Masonry Retaining Walls	CY	90.000	90.000
0066	505.0400	Bar Steel Reinforcement HS Structures	LB	23,850.000	23,850.000
0068	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	3,110.000	3,110.000
0070	506.0605	Structural Steel HS	LB	114,530.000	114,530.000
0072	511.1200	Temporary Shoring (structure) 01. C-12-0062	SF	830.000	830.000
0074	516.0500	Rubberized Membrane Waterproofing	SY	90.000	90.000

5496-00-74

Line	Item	Item Description	Unit	Total	Qty
0076	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	14.000	14.000
0078	520.3324	Culvert Pipe Class III-A 24-Inch	LF	398.000	398.000
0080	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	72.000	72.000
0082	522.0136	Culvert Pipe Reinforced Concrete Class III 36-Inch	LF	74.000	74.000
0084	522.0142	Culvert Pipe Reinforced Concrete Class III 42-Inch	LF	108.000	108.000
0086	522.0148	Culvert Pipe Reinforced Concrete Class III 48-Inch	LF	102.000	102.000
0088	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	9.000	9.000
0090	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	2.000
0092	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	2.000	2.000
0094	522.1042	Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	EACH	4.000	4.000
0096	522.1048	Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	EACH	2.000	2.000
0098	601.0415	Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	LF	5,280.000	5,280.000
0100	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	460.000	460.000
0102	602.0405	Concrete Sidewalk 4-Inch	SF	880.000	880.000
0104	603.8000	Concrete Barrier Temporary Precast Delivered	LF	280.000	280.000
0106	603.8125	Concrete Barrier Temporary Precast Installed	LF	675.000	675.000
0108	606.0300	Riprap Heavy	CY	260.000	260.000
0110	606.0400	Riprap Extra-Heavy	CY	5,445.000	5,445.000
0112	608.0005	Storm Sewer Rock Excavation	CY	65.000	65.000
0114	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	27.000	27.000
0116	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	66.000	66.000
0118	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	111.000	111.000
0120	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	491.000	491.000
0122	608.0330	Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	LF	136.000	136.000
0124	611.0535	Manhole Covers Type J-Special	EACH	1.000	1.000
0126	611.0630	Inlet Covers Type HM-GJ	EACH	3.000	3.000
0128	611.0633	Inlet Covers Type HM-GJ-S	EACH	2.000	2.000
0130	611.0636	Inlet Covers Type HM-S	EACH	4.000	4.000
0132	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000
0134	611.2005	Manholes 5-FT Diameter	EACH	3.000	3.000
0136	611.3230	Inlets 2x3-FT	EACH	6.000	6.000
0138	611.3253	Inlets 2.5x3-FT	EACH	6.000	6.000

5496-00-74

Line	Item	Item Description	Unit	Total	Qty
0140	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0142	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	240.000	240.000
0144	614.2300	MGS Guardrail 3	LF	2,750.000	2,750.000
0146	614.2330	MGS Guardrail 3 K	LF	238.000	238.000
0148	614.2610	MGS Guardrail Terminal EAT	EACH	6.000	6.000
0150	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5496-00-74	EACH	1.000	1.000
0152	619.1000	Mobilization	EACH	1.000	1.000
0154	624.0100	Water	MGAL	360.000	360.000
0156	625.0500	Salvaged Topsoil	SY	58,300.000	58,300.000
0158	627.0200	Mulching	SY	13,150.000	13,150.000
0160	628.1504	Silt Fence	LF	8,900.000	8,900.000
0162	628.1520	Silt Fence Maintenance	LF	53,400.000	53,400.000
0164	628.1905	Mobilizations Erosion Control	EACH	12.000	12.000
0166	628.1910	Mobilizations Emergency Erosion Control	EACH	8.000	8.000
0168	628.2002	Erosion Mat Class I Type A	SY	42,800.000	42,800.000
0170	628.2004	Erosion Mat Class I Type B	SY	11,400.000	11,400.000
0172	628.2023	Erosion Mat Class II Type B	SY	8,800.000	8,800.000
0174	628.2039	Erosion Mat Class III Type D	SY	6,600.000	6,600.000
0176	628.7005	Inlet Protection Type A	EACH	17.000	17.000
0178	628.7015	Inlet Protection Type C	EACH	9.000	9.000
0180	628.7504	Temporary Ditch Checks	LF	1,400.000	1,400.000
0182	628.7555	Culvert Pipe Checks	EACH	73.000	73.000
0184	629.0210	Fertilizer Type B	CWT	55.000	55.000
0186	630.0120	Seeding Mixture No. 20	LB	1,350.000	1,350.000
0188	630.0170	Seeding Mixture No. 70	LB	110.000	110.000
0190	630.0200	Seeding Temporary	LB	1,100.000	1,100.000
0192	630.0400	Seeding Nurse Crop	LB	220.000	220.000
0194	633.5100	Markers Row	EACH	88.000	88.000
0196	633.5200	Markers Culvert End	EACH	25.000	25.000
0198	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0200	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	38.000	38.000
0202	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	1.000	1.000
0204	636.0050.S	Foundation Drilling (diameter) 01. 30-Inch	LF	497.000	497.000
0206	637.2210	Signs Type II Reflective H	SF	118.650	118.650
0208	637.2230	Signs Type II Reflective F	SF	212.500	212.500
0210	638.2102	Moving Signs Type II	EACH	1.000	1.000
0212	638.2602	Removing Signs Type II	EACH	61.000	61.000
0214	638.3000	Removing Small Sign Supports	EACH	37.000	37.000
0216	638.4000	Moving Small Sign Supports	EACH	1.000	1.000

5496-00-74

Line	Item	Item Description	Unit	Total	Qty
0218	642.5401	Field Office Type D	EACH	1.000	1.000
0220	643.0300	Traffic Control Drums	DAY	1,540.000	1,540.000
0222	643.0310.S	Temporary Portable Rumble Strips	LS	1.000	1.000
0224	643.0420	Traffic Control Barricades Type III	DAY	6,020.000	6,020.000
0226	643.0705	Traffic Control Warning Lights Type A	DAY	9,740.000	9,740.000
0228	643.0715	Traffic Control Warning Lights Type C	DAY	720.000	720.000
0230	643.0900	Traffic Control Signs	DAY	5,820.000	5,820.000
0232	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0234	643.5000	Traffic Control	EACH	1.000	1.000
0236	645.0105	Geotextile Type C	SY	385.000	385.000
0238	645.0120	Geotextile Type HR	SY	10,275.000	10,275.000
0240	646.1020	Marking Line Epoxy 4-Inch	LF	33,400.000	33,400.000
0242	646.3020	Marking Line Epoxy 8-Inch	LF	200.000	200.000
0244	646.6120	Marking Stop Line Epoxy 18-Inch	LF	32.000	32.000
0246	646.9000	Marking Removal Line 4-Inch	LF	2,045.000	2,045.000
0248	646.9200	Marking Removal Line Wide	LF	15.000	15.000
0250	649.0105	Temporary Marking Line Paint 4-Inch	LF	2,980.000	2,980.000
0252	649.0850	Temporary Marking Stop Line Removable Tape 18-Inch	LF	84.000	84.000
0254	650.4000	Construction Staking Storm Sewer	EACH	27.000	27.000
0256	650.4500	Construction Staking Subgrade	LF	9,820.000	9,820.000
0258	650.5000	Construction Staking Base	LF	9,820.000	9,820.000
0260	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	5,740.000	5,740.000
0262	650.6000	Construction Staking Pipe Culverts	EACH	12.000	12.000
0264	650.6500	Construction Staking Structure Layout (structure) 01. C-12-0062	LS	1.000	1.000
0266	650.6500	Construction Staking Structure Layout (structure) 02. R-12-0051	LS	1.000	1.000
0268	650.9910	Construction Staking Supplemental Control (project) 01. 5496-00-74	LS	1.000	1.000
0270	650.9920	Construction Staking Slope Stakes	LF	9,820.000	9,820.000
0272	661.0100	Temporary Traffic Signals for Bridges (structure) 01. C-12-062	LS	1.000	1.000
0274	690.0150	Sawing Asphalt	LF	860.000	860.000
0276	690.0250	Sawing Concrete	LF	40.000	40.000
0278	740.0440	Incentive IRI Ride	DOL	5,950.000	5,950.000
0280	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	900.000	900.000
0282	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	400.000	400.000
0284	SPV.0035	Special 01. Stone Gabion Wall	CY	560.000	560.000
0286	SPV.0035	Special 02. Temporary Stone Ditch Checks	CY	8.000	8.000
0288	SPV.0060	Special 01. Inlet Safety Bars	EACH	8.000	8.000
0290	SPV.0060	Special 02. Inlet Protection Special	EACH	6.000	6.000

5496-00-74

Line	Item	Item Description	Unit	Total	Qty
0292	SPV.0165	Special 01. Precast Panels for Soldier Pile Walls	SF	3,471.000	3,471.000
0294	SPV.0180	Special 01. Geogrid Reinforcement	SY	49,900.000	49,900.000
0296	SPV.0180	Special 02. Articulated Concrete Block Type C	SY	210.000	210.000

3

CLEARING & GRUBBING

STATION - STATION	LOCATION	CLEARING 201.0105 (STA.)	CLEARING 201.0120 (ID)	GRUBBING 201.0205 (STA.)	GRUBBING 201.0220 (ID)
11+00 - 15+00	MAINLINE, LT. & RT.	4	-	4	-
15+00 - 17+00	MAINLINE, RT.	2	-	2	-
18+00 - 22+00	MAINLINE, LT. & RT.	4	-	4	-
22+00 - 24+00	MAINLINE, RT.	2	-	2	-
24+00 - 27+00	MAINLINE, LT. & RT.	3	-	3	-
27+00 - 29+00	MAINLINE, RT.	2	-	2	-
29+00 - 36+00	MAINLINE, LT. & RT.	7	-	7	-
36+00 - 40+00	MAINLINE, LT.	4	-	4	-
40+00 - 41+00	MAINLINE, RT.	1	-	1	-
50+00 - 57+00	MAINLINE, LT. & RT.	7	-	7	-
57+00 - 62+00	MAINLINE, LT.	5	-	5	-
62+00 - 69+00	MAINLINE, LT. & RT.	7	-	7	-
69+00 - 73+00	MAINLINE, RT.	4	-	4	-
73+00 - 74+00	MAINLINE, LT. & RT.	1	-	1	-
74+00 - 75+00	MAINLINE, LT.	1	-	1	-
78+00 - 79+00	MAINLINE, LT. & RT.	1	-	1	-
81+94	MAINLINE, LT.	-	51	-	51
81+99	MAINLINE, LT.	-	51	-	51
304+00 - 305+00	STH 35, LT.	1	-	1	-
306+07	STH 35, RT.	-	38	-	38
100+00 - 102+00	DEMANES LANE, RT.	2	-	2	-
102+00 - 105+00	DEMANES LANE, LT. & RT.	3	-	3	-
201+00 - 202+00	SLAMA LANE, LT. & RT.	1	-	1	-
400+11.56 - 402+00	OLD CTH N, LT.	2	-	2	-
	TOTALS =	64	140	64	140

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	DESCRIPTION	203.0100 EACH
15+37	MAINLINE, LT	18" CMP; L=49'	1
19+87	MAINLINE	24" CMP; L=48'	1
26+05	MAINLINE	48" CMP; L=41'	1
30+47	MAINLINE	24" CMP; L=61'	1
36+93	MAINLINE, RT.	18" CMP; L=56'	1
43+23	MAINLINE	18" CMP; L=91'	1
47+31	MAINLINE, LT	12" CMP; L=62'	1
48+21	MAINLINE, LT.	12" CMP; L=41'	1
49+66	MAINLINE	24" CMP; L=63'	1
55+53	MAINLINE	48" CMP; L=62'	1
58+58	MAINLINE, RT.	18" CMP; L=53'	1
60+83	MAINLINE, RT.	24" CMP; L=47'	1
63+44	MAINLINE	24" CMP; L=55'	1
66+23	MAINLINE	18" CMP; L=47'	1
70+29	MAINLINE	18" CMP; L=52'	1
72+42	MAINLINE	24" CMP; L=53'	1
74+97	MAINLINE, LT	12" CMP; L=42'	1
84+31	MAINLINE, LT	24" CMP; L=31'	1
102+65	DEMANES LANE	18" CMP; L=22'	1
201+31	SLAMA LANE, RT.	12" CMP; L=33'	1
	TOTAL =		20

CONCRETE DRIVEWAY 6-INCH

STATION	LOCATION	416.0160 (SY)
87+10	MAINLINE, RT.	70
401+90	OLD CTH N (WEST), LT.	60
	TOTAL =	130

ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

REMOVING STEEL GRATE

STATION - STATION	LOCATION	204.9105.S (LS)
13+18	MAINLINE, 8' RT.	1
	TOTAL =	1

REMOVING CURB & GUTTER

STATION - STATION	LOCATION	204.0150 (LF)
85+90 - 87+54	MAINLINE, RT.	165
306+29 - 306+71	STH 35, RT.	55
	TOTAL =	220

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 (LF)
303+70 - 305+69	STH 35, LT	202
304+18 - 305+97	STH 35, RT.	178
	TOTAL =	380

REMOVING DELINEATORS AND MARKERS

STATION	LOCATION	204.0180 (EACH)
15+17	MAINLINE, LT.	1
15+56	MAINLINE, LT.	1
19+75	MAINLINE, RT.	1
20+01	MAINLINE, LT.	1
49+40	MAINLINE, RT.	1
	TOTAL =	5

EARTHWORK SUMMARY

CATEGORY	STATION - STATION	LOCATION	(1) 205.0100 COMMON EXCAVATION CUT (2) (CY)	(1) 205.0100 COMMON EXCAVATION EBS (3) (CY)	AVAILABLE MATERIAL (CY) (4)	205.0200 ROCK EXCAVATION (CY) (5)	REDUCED EBS IN FILL (CY) FACTOR 0.8 (6)	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 (7)	EXPANDED ROCK (CY) FACTOR 1.1 (8)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (9)	MASS ORDINATE +/- (CY) (10)	WASTE (CY)
010	10+47.01 - 89+00	MAINLINE	30330	3033	30330	25750	2426	3943	28325	44130	16724	13606	13606
	303+90 - 305+00	STH 35 - STAGE 1	203	20	203	-	16	26	-	-	-20	223	223
	301+65 - 307+31	STH 35 - STAGE 2	831	83	831	-	66	108	-	98	40	792	792
	305+00 - 307+31	STH 35 - STAGE 3	138	14	138	-	11	18	-	212	251	-113	-113
	100+00 - 105+39.14	DEMANES LANE	10187	1019	10187	-	815	1325	-	90	-907	11094	11094
	200+17 - 205+00	SLAMA LANE	9183	918	9183	-	734	1193	-	-	-918	10101	10101
	400+11.56 - 402+75	OLD CTH N (WEST)	6603	660	6603	-	528	858	-	-	-660	7263	7263
	570+16 - 571+25	OLD CTH N (EAST)	267	27	267	-	22	35	-	1083	1326	-1059	-1059
	-	P.E. / F.E. / C.E.	558	26	558	50	21	44	55	174	123	436	436
	SUBTOTALS =		58300	5800	58300	25800	4640	7550	28380	45787	15959	42343	42343
	TOTALS =		64100		58300	25800	4640	7550	28380	45787	15959	42343	42343

NOTES:
1.) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
2.) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
3.) EBS IS ESTIMATED AT 10% OF THE CUT VOLUME (CY). EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL.
4.) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
5.) ROCK EXCAVATION. ITEM NUMBER 205.0200
6.) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USEABLE IN FILLS OUTISDE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.8
7.)EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL. EBS BACKFILL FACTOR = 1.3. ITEM NUMBER 208.1100
8.) EXPANDED ROCK FACTOR = 1.1
9.) EXPANDED FILL FACTOR 1.25. EXPANDED FILL = (UNEXPANDED FILL - (ROCK *ROCK FACTOR) - REDUCED EBS)*1.25
10.) THE MASS ORDINATE+ OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE

REMOVING RETAINING WALL

STATION - STATION	LOCATION	204.9105.S (LS)
49+77 - 50+02	MAINLINE, LT.	1
	TOTAL =	1

RUMBLE STRIPS

STATION - STATION	LOCATION	ASPHALTIC CENTERLINE 2-LANE RURAL 465.0475 (LF)	TEMPORARY PORTABLE 643.0310.S (LS)
10+47.01 - 89+00	MAINLINE	5400	1
	TOTALS=	5400	1

PREPARE FOUNDATION FOR ASPHALTIC PAVING (01. 5496-00-74)

LOCATION	211.0100 (LS)
PROJECT	1
TOTAL =	1

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : 1
PLOT DATE : 10/26/2018
PLOT TIME : 10:00:08 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

3

CULVERT PIPE

STATION	LOCATION	520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH (EACH)	520.3324 CULVERT PIPE CLASS III-A 24-INCH (LF)	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH (LF)	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH (LF)	522.0142 CULVERT PIPE REINFORCED CONCRETE CLASS III 42-INCH (LF)	522.0148 CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH (LF)	* 522.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH (EACH)	522.1036 APRON ENDWALLS FOR CULVERT PIPE 36-INCH (EACH)	522.1042 APRON ENDWALLS FOR CULVERT PIPE 42-INCH (EACH)	522.1048 APRON ENDWALLS FOR CULVERT PIPE 48-INCH (EACH)	628.7555 CULVERT PIPE CHECKS (EACH)	*633.5200 MARKERS CULVERT END (EACH)	650.6000 CONSTRUCTION STAKING CULVERT PIPES (EACH)
15+00	MAINLINE	-	-	-	74	-	-	-	2	-	-	7	2	1
19+70	MAINLINE, LT.	2	44	-	-	-	-	-	-	-	-	3	-	1
25+95	MAINLINE	-	-	-	-	52	-	-	-	2	-	8	2	1
26+05	MAINLINE	-	-	-	-	56	-	-	-	2	-	8	2	1
27+45	MAINLINE, LT.	2	40	-	-	-	-	-	-	-	-	3	-	1
55+60	MAINLINE	-	-	-	-	-	102	-	-	-	2	10	2	1
56+60	MAINLINE, LT.	2	80	-	-	-	-	-	-	-	-	3	-	1
84+20	MAINLINE	-	-	72	-	-	-	2	-	-	-	3	2	1
102+00	DEMANES LN.	2	52	-	-	-	-	-	-	-	-	3	2	1
200+50	SLAMA LN.	2	68	-	-	-	-	-	-	-	-	3	2	1
202+45	SLAMA LN., RT.	2	54	-	-	-	-	-	-	-	-	3	-	1
400+30	OLD CTH N	2	60	-	-	-	-	-	-	-	-	3	2	1
-	UNDISTRIBUTED	-	-	-	-	-	-	-	-	-	-	16	-	-
	TOTALS =	14	398	72	74	108	102	2	2	4	2	73	16	12

PIPE SIZE	MINIMUM THICKNESS (INCHES) STEEL	ALUMINUM
24-INCH	0.064	0.075
36-INCH	0.079	0.105
42-INCH	0.109	0.105
48-INCH	0.109	0.105

* MORE LISTED ELSEWHERE

ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 (SY)
28+94	MAINLINE, LT.	10
88+56	MAINLINE, RT.	14
306+66	STH 35, RT.	8
201+35	SLAMA LANE, RT.	8
	TOTAL =	40

CONCRETE SIDEWALK 4-INCH

STATION	LOCATION	602.0405 (SF)
34+75	MAINLINE, LT.	132
42+00	MAINLINE, LT.	132
43+50	MAINLINE, LT	132
49+01	MAINLINE, LT.	132
63+00	MAINLINE, LT.	220
66+25	MAINLINE, LT.	132
	TOTALS =	880

HMA PAVEMENT

STATION - STATION	LOCATION	740.0440 INCENTIVE IRI RIDE (DOL)	450.4000 HMA COLD WEATHER PAVING (TON)	455.0605 TACK COAT (GAL)	460.2000 INCENTIVE DENSITY HMA PAVEMENT (DOL)	460.5224 HMA PAVEMENT 4LT58-28S (TON)
10+47.01 - 89+00	MAINLINE	-	-	1368	-	5505
303+90 - 305+00	STH 35, LT. - STAGE 1	-	-	11	-	60
301+65 - 307+31	STH 35, RT. - STAGE 2	-	-	42	-	240
305+00 - 305+45	STH 35, LT. - STAGE 3	-	-	5	-	25
100+00 - 105+39.14	DAMANES LN.	-	-	69	-	277
200+17 - 205+00	SLAMA LN.	-	-	61	-	243
400+11.56 - 402+75	OLD CTH N (WEST)	-	-	31	-	123
570+16 - 571+25	OLD CTH N (EAST)	-	-	16	-	62
-	P.E. / F.E. / C.E.	-	-	-	-	140
-	PROJECT	5950	1640	-	4190	-
-	UNDISTRIBUTED	-	-	57		235
	TOTALS =	5950	1640	1660	4190	6910

BASE AGGREGATE DENSE / BREAKER RUN

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	*311.0110 BREAKER RUN (TON)
10+47.01 - 89+00	MAINLINE	689	15728	17509
303+90 - 305+00	STH 35, LT. - STAGE 1	21	209	162
301+65 - 307+31	STH 35, RT. - STAGE 2	29	738	505
305+00 - 305+45	STH 35, LT. - STAGE 3	9	86	67
100+00 - 105+39.14	DAMANES LN.	69	826	922
200+17 - 205+00	SLAMA LN.	62	725	1025
400+11.56 - 402+75	OLD CTH N (WEST)	16	380	415
570+16 - 571+25	OLD CTH N (EAST)	13	147	174
-	P.E. / F.E. / C.E.	803	-	-
-	UNDISTRIBUTED	89	1161	1271
	TOTALS =	1800	20000	22050

* MORE LISTED ELSEWHERE

SILT FENCE

STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
15+50 - 33+50	MAINLINE, RT.	1965	11790
36+00 - 62+00	MAINLINE, RT.	2865	17190
63+50 - 65+50	MAINLINE, RT.	200	1200
66+25 - 66+75	MAINLINE, RT.	50	300
80+50 - 86+00	MAINLINE, RT.	575	3450
85+00 - 89+00	MAINLINE, LT	560	3360
87+25 - 89+00	MAINLINE, RT.	175	1050
100+00 - 104+70	DEMANES LANE, LT.	420	2520
304+20 - 305+45	STH 35, LT	125	750
570+14 - 571+25	OLD CTH N (EAST), LT.	50	300
570+68 - 571+25	OLD CTH N (EAST), RT.	115	690
	UNDISTRIBUTED	1800	10800
	TOTALS =	8900	53400

WATER

LOCATION	624.0100 (MGAL)
PROJECT	347
UNDISTRIBUTED	13
TOTALS =	360

CONCRETE BARRIER TEMPORARY PRECAST

STATION - STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST 603.8000 DELIVERED (LF)	603.8125 INSTALLED (LF)	COMMENTS
303+40 - 305+50	STH 35	210	210	STAGE 1
303+40 - 306+20	STH 35	70	280	STAGE 2
304+10 - 305+95	STH 35	-	185	STAGE 3
	TOTALS =	280	675	

MGS GUARDRAIL

STATION - STATION	LOCATION	614.2300 MGS GUARDRAIL 3 (LF)	614.2330 MGS GUARDRAIL 3K (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
11+07 - 15+01	MAINLINE, RT.	50	238	2
28+50 - 37+56	MAINLINE, RT.	800	-	2
53+00 - 73+06	MAINLINE, RT.	1900	-	2
	TOTALS =	2750	238	6

CONCRETE CURB & GUTTER

STATION-STATION	LOCATION	CONCRETE CURB & GUTTER 601.0415 6-INCH SLOPED 30-INCH TYPE J (LF)	601.0557 6-INCH SLOPED 36-INCH TYPE D (LF)	650.5500 CONCRETE STAKING CURB & GUTTER (LF)
11+97 - 15+75	MAINLINE, LT.	475	-	475
11+16 - 13+06	MAINLINE, RT.	190	-	190
29+00 - 70+00	MAINLINE, LT.	4100	-	4100
86+00 - 88+50	MAINLINE, RT.	250	-	250
301+65 - 305+09	STH 35, RT	-	387	387
305+41 - 305+79	STH 35, RT	-	73	73
400+10 - 402+75	OLD CTH N, LT.	265		265
	TOTALS =	5280	460	5740

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : 2
PLOT DATE : 10/26/2018
PLOT TIME : 12:01:22 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

STORM SEWER PIPE

PIPE NUMBER	FROM STRUCTURE	TO STRUCTURE	INLET ELEVATION (FT)	DISCHARGE ELEVATION (FT)	% SLOPE	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH (EACH)	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH (EACH)	608.0005 STORM SEWER ROCK EXCAVATION (CY)	REINFORCED CONCRETE PIPE CLASS III STORM SEWER 608.0312 12-INCH (LF)	608.0315 15-INCH (LF)	608.0318 18-INCH (LF)	608.0324 24-INCH (LF)	608.0330 30-INCH (LF)	INFORMATIONAL PURPOSES ONLY JOINT TIES (EACH)
P-1	1.1	1.0	644.10	643.92	2.57	-	-	-	7	-	-	-	-	-
P-2	1.2	1.0	643.75	643.47	2.55	-	-	-	-	-	11	-	-	-
P-3	1.0	2.0	643.00	642.50	1.16	-	-	-	-	-	-	43	-	-
P-4	3.0	2.0	645.00	643.00	4.08	-	-	-	-	49	-	-	-	-
P-5	2.0	C-12-062	642.25	641.75	1.52	-	-	-	-	-	-	33	-	-
P-6	4.1	4.2	642.00	641.50	0.50	-	-	-	-	-	100	-	-	-
P-7	4.2	4.3	641.40	639.93	2.07	1	-	-	-	-	-	71	-	6
P-8	5.1	5.2	780.50	780.00	0.90	1	-	5	-	-	-	56	-	6
P-9	6.1	6.2	835.00	834.00	1.72	1	-	12	-	-	-	58	-	6
P-10	7.1	7.2	843.50	842.50	1.61	1	-	4	-	-	-	62	-	6
P-11	8.1	8.2	878.00	877.00	1.72	-	1	2	-	-	-	-	58	6
P-12	9.1	9.2	1004.50	1002.05	3.95	1	-	12	-	-	-	62	-	6
P-13	10.1	10.0	1047.10	1047.00	1.00	-	-	5	10	-	-	-	-	-
P-14	10.2	10.0	1049.00	1046.75	13.24	-	-	6	-	17	-	-	-	-
P-15	10.0	10.3	1046.00	1045.00	2.00	1	-	12	-	-	-	50	-	6
P-16	11.1	11.2	1087.50	1078.84	11.10	-	1	7	-	-	-	-	78	6
P-17	12.1	12.2	1151.77	1150.77	1.79	1	-	-	-	-	-	56	-	6
P-18	12.3	12.1	1152.33	1151.87	4.60	-	-	-	10	-	-	-	-	-
					TOTALS =	7	2	65	27	66	111	491	136	

NOTES:
PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURES.

STORM SEWER STRUCTURES

STRUCTURE NUMBER	STATION	LOCATION	RIM ELEVATION (FT)	611.0535 MANHOLE COVERS TYPE J-S (EACH)	611.0630 INLET COVERS TYPE HM-GJ (EACH)	611.0633 INLET COVERS TYPE HM-GJ-S (EACH)	611.0636 INLET COVERS TYPE HM-S (EACH)	611.2004 MANHOLES 4-FT DIAM. (EACH)	611.2005 MANHOLES 5-FT DIAM. (EACH)	611.3230 INLETS 2X3-FT (EACH)	611.3253 INLETS 2.5X3-FT (EACH)	611.3902 INLETS MEDIAN 2 GRATE (EACH)	SPV.0060.01 INLET SAFETY BARS (EACH)	STRUCTURE DEPTH (FT)	628.7005 INLET PROTECTION TYPE A (EACH)	628.7015 INLET PROTECTION TYPE C (EACH)	*650.4000 CONSTRUCTION STAKING STORM SEWER (EACH)
I-1.0	10+67.25	20.75' LT.	647.40	-	-	-	1	-	1	-	-	-	-	3.15	1	1	1
I-1.1	10+62.06	24.31' LT.	647.44	-	-	-	1	-	-	1	-	-	-	2.34	1	1	1
I-1.2	10+72.00	31.00' LT	646.25	-	-	-	-	-	-	-	1	-	1	2.50	1	-	1
MH-2 0	11+04	0 00'	648.68	1	-	-	-	-	1	-	-	-	-	5.18	-	-	1
I-3.0	11+50	15.35' LT	649.49	-	1	-	-	1	-	-	-	-	-	3.24	1	1	1
I-4.1	303+00	24.50' RT.	645.82	-	-	-	1	-	-	1	-	-	-	2.82	1	1	1
I-4.2	304+00	24.50' RT.	646.48	-	-	-	1	-	-	1	-	-	-	4.08	1	1	1
I-5.1	34+75	24.17' LT.	785.01	-	-	-	-	-	-	-	1	-	1	4.51	1	-	1
I-6.1	42+00	24.17' LT.	839.26	-	-	-	-	-	-	-	1	-	1	4.26	1	-	1
I-7.1	43+50	24.17' LT.	848.08	-	-	-	-	-	-	-	1	-	1	4.58	1	-	1
I-8.1	49+01	27.70' LT.	882.44	-	-	-	-	-	-	-	-	1	1	4.44	1	-	1
I-9.1	63+00	24.17' LT.	1008.53	-	-	-	-	-	-	-	1	-	1	4.03	1	-	1
I-10.0	66+50	16.35' LT.	1051.87	-	1	-	-	1	-	-	-	-	-	4.62	1	1	1
I-10.1	66+40	16.35' LT.	1050.72	-	1	-	-	-	-	1	-	-	-	2.62	1	1	1
I-10.2	66+65	24.17' LT.	1052.40	-	-	-	-	-	-	-	1	-	1	3.40	1	-	1
I-11.1	70+12	28.47' LT.	1190.50	-	-	-	-	-	1	-	-	-	1	3.00	1	-	1
I-12.1	86+96	16.35' RT.	1155.82	-	-	1	-	-	-	1	-	-	-	3.05	1	1	1
I-12.3	86+86	16.35' RT.	1155.83	-	-	1	-	-	-	1	-	-	-	2.50	1	1	1
			TOTALS =	1	3	2	4	2	3	6	6	1	8		17	9	18

NOTES:
STATION AND OFFSET OF STORM SEWER STRUCTURES WITH MANHOLE COVERS TYPE J-S AND INLET SAFETY BARS ARE MEASURED FROM CENTER OF STRUCTURE.
STATION AND OFFSET OF STORM SEWER STRUCTURES WITH INLET COVERS TYPE HM-GJ/HM-GJ-S/HM-S ARE MEASURED TO THE FLANGE OF INLET.
ALL RIM ELEVATIONS FOR STORM SEWER STRUCTURES WITH MANHOLE COVERS TYPE J-S ARE MEASURED TO THE TOP OF MANHOLE COVER RIM.
ALL RIM ELEVATIONS FOR STORM SEWER STRUCTURES WITH INLET SAFETY BARS ARE MEASURED TO THE TOP OF STORM STRUCTURE OPENING.
ALL RIM ELEVATIONS FOR STORM SEWER STRUCTURES WITH INLET COVERS TYPE HM-GJ/HM-GJ-S/HM-S ARE MEASURED TO THE FLANGE OF INLET
STRUCTURE DEPTH (MANHOLE 4-FT/5-FT DIAM. WITH MANHOLE COVERS TYPE J-S, INLET COVERS TYPE HM-GJ/HM-GJ-S/HM-S) = RIM ELEVATION - INVERT LOWEST PIPE- 6 INCHES (RINGS) - 9 INCHES (CASTING HEIGHT)
STRUCTURE DEPTH (INLETS 2X3-FT/INLETS 2.5X3-FT WITH INLET COVERS TYPE HM-GJ/HM-GJ-S/HM-S) = RIM ELEVATION - INVERT LOWEST PIPE- 6 INCHES (RINGS) - 6 INCHES (CASTING HEIGHT).
STRUCTURE DEPTH (INLETS 2.5X3-FT WITH INLET SAFETY BARS) = RIM ELEVATION (STORM STRUCTURE OPENING) - INVERT LOWEST PIPE.
STRUCTURE DEPTH (INLETS MEDIAN 2 GRATE) = RIM ELEVATION (STORM STRUCTURE OPENING) - INVERT LOWEST PIPE

* MORE LISTED ELSEWHERE

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : 3
PLOT DATE : 8/31/2018
PLOT TIME : 1:29:52 PM
PLOT BY : KARTER ZAJICEK
PLOT SCALE : 1" = 1'

STORM SEWER STRUCTURES CONTINUED

STRUCTURE NUMBER	STATION	LOCATION	PIPE INVERT ELEVATION	DISCHARGE ELEVATION	*633.5200 MARKERS CULVERT END (EACH)	*650.4000 CONSTRUCTION STAKING STORM SEWER (EACH)
OUTLET 4.3	304+00	45.00' LT.	641.40	639.93	1	1
OUTLET 5.2	34+75	32.0' RT.	780.50	780.00	1	1
OUTLET 6.2	42+00	34.0' RT.	835.00	834.00	1	1
OUTLET 7.2	43+50	38.0' RT.	843.50	842.50	1	1
OUTLET 8.2	49+00	30.0' RT.	878.00	877.00	1	1
OUTLET 9.2	63+00	38.0' RT.	1004.50	1002.05	1	1
OUTLET 10.3	66+50	32.0' RT.	1045.08	1045.03	1	1
OUTLET 11.2	70+12	49.0' RT.	1078.84	1078.79	1	1
OUTLET 12.2	86+96	38.0' LT.	1151.77	1150.77	1	1
				TOTAL	9	9

*MORE LISTED ELSEWHERE

ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

FINISHING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0170 SEEDING MIXTURE NO. 70 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0400 SEEDING NURSE CROP (LB)
10+47.01 - 48+00	MAINLINE	14760	3919	15.0	-	81	299	162
48+00 - 76+00	MAINLINE	12593	2612	12.0	469	-	235	-
76+00 - 89+00	MAINLINE	8459	1278	8.0	327	-	164	-
301+65 - 307+31	STH 35	1400	1462	1.0	-	6	22	12
100+00 - 105+39.14	DEMANES LANE	5799	599	4.0	180	-	90	-
200+17 - 205+00	SLAMA LANE	3027	509	3.0	116	-	58	-
400+11.56 - 402+75	OLD CTH N (WEST	662	147	1.0	22	-	11	-
-	UNDISTRIBUTED	11600	2624	11.0	236	23	221	46
	TOTALS=	58300	13150	55	1350	110	1100	220

NOTE: OLD CTH N (EAST) QUANTITIES INCLUDED IN MAINLINE QUANTITIES

RIPRAP HEAVY & RIPRAP EXTRA-HEAVY

STATION - STATION	LOCATION	606.0300 RIPRAP HEAVY (CY)	*606.0400 RIPRAP EXTRA HEAVY (CY)	*645.0120 GEOTEXTILE TYPE HR (SY)
11+13 - 15+49	MAINLINE, RT.	-	1134	1636
19+70	MAINLINE, LT.	6	-	18
26+00	MAINLINE, RT.	79	-	136
26+05 - 26+25	MAINLINE, LT.	36	-	75
29+00 - 32+65	MAINLINE, RT.	-	404	714
33+35 - 35+50	MAINLINE, RT.	-	293	484
48+50 - 52+75	MAINLINE, RT.	-	707	1095
55+00 - 57+00	MAINLINE, RT.	-	277	447
62+00 - 70+50	MAINLINE, RT.	-	1939	2821
42+00	MAINLINE, RT.	6	-	18
43+50	MAINLINE, RT.	6	-	18
55+60	MAINLINE, RT.	15	-	38
55+92	MAINLINE, LT.	8	-	23
56+89	MAINLINE, LT.	8	-	24
63+00	MAINLINE, RT.	14	-	38
66+50	MAINLINE, RT.	10	-	29
69+00	MAINLINE, LT.	3	-	11
70+12	MAINLINE, RT.	3	-	10
84+20	MAINLINE, RT.	6	-	18
86+96	MAINLINE, LT.	6	-	18
304+00	STH 35, LT.	6	-	18
102+00	DEMANES LANE, LT.	6	-	18
200+50	SLAMA LANE, LT.	6	-	18
202+45	SLAMA LANE, LT.	6	-	18
400+30	OLD CTH N (WEST), RT.	6	-	18
-	UNDISTRIBUTED	24	496	739
	TOTALS =	260	5250	8500

*MORE LISTED ELSEWHERE

MOBILIZATION EROSION CONTROL

PROJECT	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
5496-00-74	12	8
TOTALS =	12	8

PAVEMENT MARKING

STATION - STATION	LOCATION	DESCRIPTION	MARKING LINE 646.1020 EPOXY 4-INCH (LF)	646.3020 EPOXY 8-INCH (LF)	646.6120 EPOXY 18-INCH (LF)
10+47.01	MAINLINE, LT.	STOP BAR	-	-	32
10+47.01 - 89+00	MAINLINE	DOUBLE YELLOW	15706	-	-
10+47.01 - 89+00	MAINLINE, LT.	WHITE EDGELINE	7674	-	-
10+47.01 - 89+00	MAINLINE, RT.	WHITE EDGELINE	7670	-	-
301+50 - 307+70	STH 35	DOUBLE YELLOW	1240	-	-
301+50 - 307+70	STH 35, LT.	WHITE EDGELINE	620	-	-
301+50 - 307+70	STH 35, RT.	WHITE EDGELINE	490	-	-
302+50 - 304+50	STH 35, RT.	TURN LANE	-	200	-
		TOTALS =	33400	200	32

TRAFFIC CONTROL

LOCATION	643.0300 DRUMS (DAY)	643.0420 BARRICADES TYPE III (DAY)	WARNING LIGHTS 643.0705 TYPE A (DAY)	WARNING LIGHTS 643.0715 TYPE C (DAY)	643.0900 SIGNS (DAY)	643.1050 SIGNS PCMS (DAY)	643.5000 TRAFFIC CONTROL (EACH)	661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (C-12-062) (LS)	643.0310.S TEMPORARY PORTABLE RUMBLE STRIPS (LS)
CTH N	-	5950	9600	-	4420	-	-	-	-
STH 35	-	-	-	-	-	-	-	-	1
STH 35 - STAGE 1	682	30	60	340	600	-	-	-	-
STH 35 - STAGE 2	770	35	70	350	700	-	-	-	-
STH 35 - STAGE 3	88	5	10	30	100	-	-	-	-
PROJECT	-	-	-	-	-	14	1	1	-
TOTALS =	1540	6020	9740	720	5820	14	1	1	1

EROSION MAT

STATION - STATION	LOCATION	628.2002 EROSION MAT CLASS I TYPE A SY	628.2004 EROSION MAT CLASS I TYPE B SY	628.2023 EROSION MAT CLASS II TYPE B SY	628.2039 EROSION MAT CLASS III TYPE D SY
10+47.01 - 14+75	MAINLINE, LT.	524	-	-	-
10+47.01 - 15+00	MAINLINE, RT.	780	-	-	-
14+75 - 29+00	MAINLINE, LT.	-	-	5925	-
15+00 - 17+50	MAINLINE, RT.	-	875	-	-
17+50 - 74+00	MAINLINE, RT.	14746	-	-	-
19+00	MAINLINE, RT.	-	-	-	168
25+13	MAINLINE, RT.	-	-	-	205
29+00 - 34+75	MAINLINE, LT.	282	-	-	-
32+00 - 34+75	MAINLINE, LT.	-	-	-	384
34+75 - 49+83	MAINLINE, LT.	1999	-	-	-
34+91 - 35+00	MAINLINE, LT.	-	-	-	9
35+00 - 40+00	MAINLINE, LT.	-	-	-	883
36+07	MAINLINE, RT.	-	-	-	34
41+00	MAINLINE, RT.	-	-	-	34
42+16 - 42+50	MAINLINE, LT.	-	-	-	34
43+66 - 44+00	MAINLINE, LT.	-	-	-	34
49+09 - 51+53	MAINLINE, LT.	-	-	-	246
51+00 - 52+85	MAINLINE, LT.	134	-	-	-
51+53 - 69+50	MAINLINE, LT.	1923	-	-	-
54+00	MAINLINE, RT.	-	-	-	34
56+80 - 58+50	MAINLINE, LT.	-	-	-	173
57+92 - 67+00	MAINLINE, LT.	-	-	-	2480
63+16 - 63+25	MAINLINE, LT.	-	-	-	9
66+81 - 66+90	MAINLINE, LT.	-	-	-	9
69+50 - 76+00	MAINLINE, LT.	1457	-	-	-
70+12 - 75+52	MAINLINE, LT.	-	-	-	620
76+00 - 83+00	MAINLINE, LT.	-	3405	-	-
76+00 - 80+00	MAINLINE, RT.	-	1200	-	-
80+00 - 89+00	MAINLINE, RT.	3984	-	-	-
83+00 - 89+00	MAINLINE, LT.	2165	-	-	-
100+00 - 105+39.14	DEMANES LANE, LT.	4391	-	-	-
100+00 - 105+39.14	DEMANES LANE, RT.	-	2250	-	-
200+50 - 203+00	SLAMA LANE, LT.	1186	-	659	-
201+31 - 202+45	SLAMA LANE, RT.	-	-	496	-
203+00 - 205+00	SLAMA LANE, LT.	-	563	-	-
202+45 - 205+00	SLAMA LANE, RT.	-	876	-	-
305+54 - 307+00	STH 35, RT.	-	164	-	-
400+11.56 - 402+75	OLD CTH N (WEST), LT.	662	-	-	-
-	UNDISTRIBUTED	8567	2067	1720	1244
	TOTALS =	42800	11400	8800	6600

NOTE: OLD CTH N (EAST) QUANTITIES INCLUDED IN MAINLINE QUANTITIES

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	MISCELLANEOUS QUANTITIES	SHEET 74	E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : 4
PLOT DATE : 10/26/2018
PLOT TIME : 10:47:25 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

MARKERS ROW

PT #	STATION	LOCATION	OFFSET FROM FINISHED C/L FT	633.5100 MARKERS ROW EACH
100	10+79.88	MAINLINE, LT.	34.20	1
101	10+84.65	MAINLINE, LT.	23.10	1
102	11+73.00	MAINLINE, LT.	25.00	1
103	12+00.00	MAINLINE, LT.	38.50	1
104	12+00.00	MAINLINE, LT.	52.00	1
105	12+50.00	MAINLINE, LT.	52.00	1
106	13+00.00	MAINLINE, LT.	23.00	1
107	13+06.00	MAINLINE, LT.	33.00	1
108	13+95.00	MAINLINE, LT.	39.09	1
109	14+18.91	MAINLINE, LT.	100.61	1
110	14+22.54	MAINLINE, LT.	109.93	1
111	15+00.00	MAINLINE, LT.	80.00	1
112	15+22.19	MAINLINE, LT.	78.74	1
113	15+01.48	MAINLINE, RT.	98.49	1
114	11+15.00	MAINLINE, RT.	60.00	1
115	10+79.77	MAINLINE, RT.	78.00	1
116	21+00.00	MAINLINE, LT.	90.00	1
117	26+00.00	MAINLINE, LT.	100.00	1
118	26+51.30	MAINLINE, LT.	85.20	1
119	27+44.34	MAINLINE, RT.	94.95	1
120	24+85.00	MAINLINE, RT.	125.00	1
121	24+50.00	MAINLINE, RT.	65.00	1
122	22+00.00	MAINLINE, RT.	45.00	1
123	19+50.00	MAINLINE, RT.	65.00	1
124	19+10.00	MAINLINE, RT.	115.00	1
125	18+85.00	MAINLINE, RT.	115.00	1
126	18+50.00	MAINLINE, RT.	40.00	1
127	15+80.00	MAINLINE, RT.	55.00	1
128	15+15.00	MAINLINE, RT.	100.00	1
129	29+00.00	MAINLINE, LT.	55.00	1
130	35+00.00	MAINLINE, LT.	45.00	1
131	36+75.0	MAINLINE, LT.	110.00	1
132	40+84.15	MAINLINE, LT.	98.22	1
133	40+61.04	MAINLINE, RT.	80.05	1
134	36+15.00	MAINLINE, RT.	75.00	1
135	32+00.00	MAINLINE, RT.	65.00	1
136	30+00.00	MAINLINE, RT.	70.00	1
137	28+00.00	MAINLINE, RT.	80.00	1
139	40+76.29	MAINLINE, LT.	33.11	1
140	44+50.96	MAINLINE, LT.	42.77	1
141	47+22.37	MAINLINE, LT.	32.84	1
142	48+69.46	MAINLINE, LT.	32.58	1
143	49+90.44	MAINLINE, LT.	34.24	1
144	50+90.00	MAINLINE, LT.	33.05	1
		SUBTOTAL 1 =		44

PT #	STATION	LOCATION	OFFSET FROM FINISHED C/L FT	633.5100 MARKERS ROW EACH
145	52+90.00	MAINLINE, LT	100.00	1
146	53+91.93	MAINLINE, LT.	99.22	1
147	53+94.62	MAINLINE, RT.	103.16	1
148	53+80.00	MAINLINE, RT.	105.00	1
149	53+50.00	MAINLINE, RT.	60.00	1
150	51+00.00	MAINLINE, RT.	77.00	1
151	48+00.00	MAINLINE, RT.	55.00	1
152	61+50.00	MAINLINE, LT	105.00	1
153	65+00.00	MAINLINE, LT.	105.00	1
154	68+53.61	MAINLINE, LT.	73.53	1
155	67+73.12	MAINLINE, RT.	103.57	1
156	65+50.00	MAINLINE, RT.	95.00	1
157	61+90.00	MAINLINE, RT.	135.00	1
158	61+90.00	MAINLINE, RT.	47.12	1
159	58+46.04	MAINLINE, RT.	59.36	1
160	57+20.00	MAINLINE, RT.	56.06	1
161	75+15.00	MAINLINE, LT.	140.00	1
162	202+05.00	SLAMA LN., LT	60.00	1
163	205+00.00	SLAMA LN., LT.	50.00	1
164	205+00.00	SLAMA LN., LT.	32.01	1
165	205+00.00	SLAMA LN., RT.	33.99	1
166	205+00.00	SLAMA LN., RT.	50.00	1
167	202+61.41	SLAMA LN., RT.	50.00	1
168	77+65.66	MAINLINE, LT.	121.60	1
169	78+84.41	MAINLINE, LT	125.10	1
170	81+53.68	MAINLINE, LT.	127.01	1
171	81+52.29	MAINLINE, LT	61.00	1
172	81+49.66	MAINLINE, RT.	63.21	1
173	81+00.00	MAINLINE, RT.	45.00	1
174	76+95.00	MAINLINE, RT.	70.00	1
175	103.50.00	DEMANES LN., RT.	55.00	1
176	100+00.00	DEMANES LN., RT.	70.00	1
177	100+00.00	DEMANES LN., RT.	32.45	1
178	100+00.00	DEMANES LN, LT	33.69	1
179	74+14.84	MAINLINE, RT.	60.00	1
180	81+61.36	MAINLINE, LT.	127.07	1
181	84+20.11	MAINLINE, LT.	92.25	1
182	89+00.00	MAINLINE, LT	118.41	1
183	89+00.00	MAINLINE, RT.	49.85	1
184	87+75.76	MAINLINE, RT.	48.99	1
185	86+00.00	MAINLINE, RT.	45.00	1
186	84+00.00	MAINLINE, RT.	155.00	1
187	52+35.00	MAINLINE, LT.	51.00	1
188	12+19.06	MAINLINE, LT	106.04	1
		SUBTOTAL 2 =		44
		PROJECT TOTAL =		88

TEMPORARY DITCH CHECKS

STATION	LOCATION	628.7504 (LF)
14+90	MAINLINE, LT	10
15+50	MAINLINE, LT.	10
15+75	MAINLINE, RT	10
16+00	MAINLINE, LT.	10
16+00	MAINLINE, RT.	10
16+50	MAINLINE, LT.	10
16+50	MAINLINE, RT.	10
17+00	MAINLINE, LT.	10
17+00	MAINLINE, RT.	10
17+50	MAINLINE, LT.	10
18+00	MAINLINE, LT.	10
18+50	MAINLINE, LT.	10
19+00	MAINLINE, LT.	10
19+25	MAINLINE, LT.	10
20+50	MAINLINE, LT.	10
21+00	MAINLINE, LT.	10
21+50	MAINLINE, LT.	10
22+00	MAINLINE, LT.	10
22+50	MAINLINE, LT.	10
23+00	MAINLINE, LT.	10
23+50	MAINLINE, LT.	10
24+00	MAINLINE, LT.	10
24+50	MAINLINE, LT.	10
25+00	MAINLINE, LT.	10
25+50	MAINLINE, LT.	10
26+50	MAINLINE, LT.	10
27+00	MAINLINE, LT.	10
27+75	MAINLINE, LT.	10
28+00	MAINLINE, LT.	10
28+50	MAINLINE, LT.	10
	SUBTOTAL =	300

STATION	LOCATION	628.7504 (LF)
34+85	MAINLINE, LT.	10
42+10	MAINLINE, LT.	10
43+60	MAINLINE, LT.	10
49+10	MAINLINE, LT.	10
49+50	MAINLINE, LT.	10
50+00	MAINLINE, LT.	10
50+50	MAINLINE, LT.	10
51+00	MAINLINE, LT.	10
57+25	MAINLINE, LT.	10
57+50	MAINLINE, LT.	10
58+00	MAINLINE, LT.	10
58+50	MAINLINE, LT.	10
59+00	MAINLINE, LT.	10
59+50	MAINLINE, LT.	10
60+00	MAINLINE, LT.	10
60+50	MAINLINE, LT.	10
61+00	MAINLINE, LT.	10
61+50	MAINLINE, LT.	10
62+00	MAINLINE, LT.	10
62+50	MAINLINE, LT.	10
63+15	MAINLINE, LT.	10
63+50	MAINLINE, LT.	10
64+00	MAINLINE, LT.	10
64+50	MAINLINE, LT.	10
65+00	MAINLINE, LT.	10
65+50	MAINLINE, LT.	10
66+00	MAINLINE, LT.	10
66+50	MAINLINE, LT.	10
66+80	MAINLINE, LT.	10
70+25	MAINLINE, LT.	10
	SUBTOTAL =	300

STATION	LOCATION	628.7504 (LF)
70+50	MAINLINE, LT.	10
70+75	MAINLINE, RT.	10
71+00	MAINLINE, LT.	10
71+00	MAINLINE, RT.	10
71+50	MAINLINE, LT.	10
71+50	MAINLINE, RT.	10
72+00	MAINLINE, LT.	10
72+00	MAINLINE, RT.	10
72+50	MAINLINE, LT.	10
72+50	MAINLINE, RT.	10
73+00	MAINLINE, LT.	10
73+00	MAINLINE, RT.	10
73+50	MAINLINE, LT.	10
73+50	MAINLINE, RT.	10
74+00	MAINLINE, LT.	10
74+00	MAINLINE, RT.	10
74+50	MAINLINE, LT.	10
74+50	MAINLINE, RT.	10
75+00	MAINLINE, LT.	10
75+00	MAINLINE, RT.	10
77+00	MAINLINE, LT.	10
77+00	MAINLINE, RT.	10
78+00	MAINLINE, LT.	10
78+00	MAINLINE, RT.	10
79+00	MAINLINE, LT.	10
79+00	MAINLINE, RT.	10
80+00	MAINLINE, LT.	10
81+00	MAINLINE, LT.	10
82+00	MAINLINE, LT.	10
100+50	DAMANES LANE, RT	10
	SUBTOTAL =	300

STATION	LOCATION	628.7504 (LF)
101+00	DAMANES LANE, RT	10
101+50	DAMANES LANE, RT	10
102+50	DAMANES LANE, RT	10
103+50	DAMANES LANE, RT	10
104+50	DAMANES LANE, RT	10
105+00	DAMANES LANE, RT	10
200+70	SLAMA, LANE, LT.	10
201+00	SLAMA LANE, LT.	10
201+50	SLAMA LANE, LT.	10
202+00	SLAMA LANE, LT.	10
202+00	SLAMA LANE, RT.	10
202+50	SLAMA LANE, LT.	10
203+00	SLAMA LANE, LT.	10
203+00	SLAMA LANE, RT.	10
203+50	SLAMA LANE, LT.	10
203+50	SLAMA LANE, RT.	10
204+00	SLAMA LANE, LT.	10
204+00	SLAMA LANE, RT.	10
204+50	SLAMA LANE, LT.	10
204+50	SLAMA LANE, RT.	10
306+00	STH 35, RT.	10
	UNDISTRIBUTED	290
	SUBTOTAL =	500
	TOTAL =	1400

CONSTRUCTION STAKING

STATION - STATION	LOCATION	CONSTRUCTION STAKING 650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	*650.6500 STRUCTURE LAYOUT (01. C-12-062) (LS)	**650.6500 STRUCTURE LAYOUT (01. R-12-051) (LS)	650.9910 SUPPLEMENTAL CONTROL (01. 5496-00-74) (LS)	650.9920 SLOPE STAKES (LF)
10+47.01 - 89+00	MAINLINE	7855	7855	-	-	-	7855
301+65 - 307+31	STH 35	567	567	-	-	-	567
100+00 - 105+39.14	DEMANES LANE	541	541	-	-	-	541
200+17 - 205+00	SLAMA LANE	484	484	-	-	-	484
400+11.56 - 402+75	OLD CTH N (WEST)	264	264	-	-	-	264
570+16 - 571+25	OLD CTH N (EAST)	109	109	-	-	-	109
-	PROJECT	-	-	1	1	1	-
	TOTALS =	9820	9820	1	1	1	9820

*INDICATES BID ITEM IS CATEGORY 020
**INDICATES BID ITEM IS CATEGORY 030

TEMPORARY PAVEMENT MARKING

STATION - STATION	LOCATION	DESCRIPTION	MARKING REMOVAL LINE 646.9000 4-INCH (LF)	MARKING REMOVAL LINE 646.9200 WIDE (LF)	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 649.0105 4-INCH (LF)	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 649.0850 STOP LINE 18-INCH (LF)
10+53	MAINLINE, LT.	STOP BAR	-	15	-	-
10+98	MAINLINE, LT. - STAGE 1	STOP BAR	-	-	-	12
294+50 - 295+50	STH 35 - STAGE 2	YELLOW C/L	-	-	100	-
295+50 - 302+50	STH 35 - STAGE 1	YELLOW C/L	-	-	700	-
302+50 - 307+30	STH 35 - STAGE 1	DOUBLE YELLOW	960	-	-	-
302+50 - 307+30	STH 35, LT - STAGE 1	WHITE EDGELINE	480	-	500	-
302+50 - 307+30	STH 35, RT. - STAGE 1	WHITE EDGELINE	325	-	-	-
301+53 - 302+50	STH 35 - STAGE 2	DOUBLE YELLOW	200	-	-	-
301+53 - 307+70	STH 35 - STAGE 2	WHITE EDGELINE	-		470	-
301+53 - 303+00	STH 35 - STAGE 3	YELLOW C/L	-	-	150	-
301+53	STH 35, RT. - STAGE 2	STOP BAR	-	-	-	12
302+50	STH 35, RT. - STAGE 1	STOP BAR	-	-	-	12
303+00	STH 35, RT - STAGE 3	STOP BAR	-	-	-	12
303+00 - 307+40	STH 35 - STAGE 3	WHITE EDGELINE	-		290	-
307+30	STH 35, LT - STAGE 1	STOP BAR	-	-	-	12
307+40	STH 35, LT. - STAGE 3	STOP BAR	-	-	-	12
307+70	STH 35, LT. - STAGE 2	STOP BAR	-	-	-	12
307+30 - 307+70	STH 35 - STAGE 2	DOUBLE YELLOW	80	-	-	-
307+30 - 314+30	STH 35 - STAGE 1	YELLOW C/L	-	-	700	-
307+40 - 307+70	STH 35 - STAGE 3	YELLOW C/L	-	-	30	-
314+30 - 314+70	STH 35 - STAGE 2	YELLOW C/L	-	-	40	-
		TOTALS =	2045	15	2980	84

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\DETAILS\MISC QUANT.DWG
LAYOUT : 5
PLOT DATE : 8/31/2018
PLOT TIME : 1:30:32 PM
PLOT BY : KARTER ZAJICEK
PLOT SCALE : 1" = 1'

ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

PERMANENT SIGNING

SIGN NUMBER	APPROX. STATION	LOCATION	POSITIION	SIGN CODE	SIGN DESCRIPTION	ORDER LINES	SIZE (INCH X INCH)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	POSTS WOOD 4X6-INCH 634.0614 14 FT (EACH)	634.0616 16 FT (EACH)	634.0618 18 FT (EACH)	638.2102 MOVING SIGNS TYPE II (EACH)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)	SIGN MOUNTED ON SAME POST AS
1-00	295+30	STH 35	LEFT	J1-1	JUNCTION ASSEMBLY	JCT	24X39	6.50	-	-	1	-	-	-	-	-	
1-01R	297+00	STH 35	LEFT	M1-5A	CTH ROUTE MARKER	N	24X24	-	-	-	-	-	-	1	1	-	
1-01R	297+00	STH 35	LEFT	M2-1	JUNCTION ASSEMBLY	JCT	21X15	-	-	-	-	-	-	1	-	-	1-01R
1-02R	304+20	STH 35	RIGHT	R7-1L	NO PARKING ANYTIME-LEFT ARROW	-	18X24	-	-	-	-	-	-	1	1	-	
1-03M	303+60	STH 35	LEFT	-	AMERICAS BYWAYS	-	18X24	-	-	-	-	-	1	-	-	1	
1-04	303+74	STH 35	LEFT	J4-2	REASSURANCE ASSEMBLY (2 HEADED ROUTE PANEL)	SOUTH/35 SOUTH/GREAT RIVER ROAD	48X36	12.00	-	-	1	-	- -	-	-	- -	
1-05R	304+74	STH 35	LEFT	M1-6	STATE ROUTE MARKER	35	24X24	-	-	-	-	-	-	1	1	-	
1-05R	304+74	STH 35	LEFT	M3-3	SOUTH CARDINAL MARKER	-	24X12	-	-	-	-	-	-	1	-	-	1-05R
1-05R	304+74	STH 35	LEFT	M3-3	SOUTH CARDINAL MARKER	-	24X12	-	-	-	-	-	-	1	-	-	1-05R
1-05R	304+74	STH 35	LEFT	M1-96	GREAT RIVER ROAD MARKER	-	24X24	-	-	-	-	-	-	1	-	-	1-05R
1-06	305+24	STH 35	LEFT	W1-7	NARROW ARROW (DOUBLE)	-	48X24	-	8.00	-	1	-	-	-	-	-	
1-07	305+54	STH 35	LEFT	J13-1	DIRECTIONAL WITHOUT CARDINAL (1 HEADED ROUTE PANEL)	N/LEFT	24X45	7.50	-	-	1	-	-	-	-	-	
1-08R	307+00	STH 35	LEFT	W1-7	NARROW ARROW (DOUBLE)	-	48X24	-	-	-	-	-	-	1	1	-	
1-09R	307+16	STH 35	LEFT	M1-5-A	COUNTY MARKER	N	24X24	-	-	-	-	-	-	1	1	-	
1-10R	307+16	STH 35	LEFT	M6-1	ARROW LEFT	-	21X21	-	-	-	-	-	-	1	-	-	1-09R
1-11	315+30	STH 35	LEFT	J1-1	JUNCTION ASSEMBLY	JCT	24X39	6.50	-	-	1	-	-	-	-	-	
1-12R	317+00	STH 35	LEFT	M1-5A	CTH ROUTE MARKER	N	24X24	-	-	-	-	-	-	1	1	-	
1-12R	317+00	STH 35	LEFT	M2-1	JUNCTION ASSEMBLY	JCT	21X15	-	-	-	-	-	-	1	-	-	1-12R
1-13	304+51	STH 35	RIGHT	J13-1	DIRECTIONAL WITHOUT CARDINAL (1 HEADED ROUTE PANEL)	N/RIGHT	24X45	7.50	-	-	1	-	-	-	-	-	
1-14	11+80	MAINLINE	RIGHT	J4-1	REASSURANCE ASSEMBLY (1 HEADED ROUTE PANEL)	N/EAST	24X36	6.00	-	-	1	-	-	-	-	-	
1-15	10+65	MAINLINE	LEFT	R1-1	STOP	-	30X30	5.18	-	1	-	-	-	-	-	-	
1-16	10+65	MAINLINE	LEFT	J13-1	DIRECTIONAL WITHOUT CARDINAL (1 HEADED ROUTE PANEL)	35/DOUBLE ARROW	24X45	7.50	-	-	1	-	-	-	-	-	
1-17R	306+29	STH 35	RIGHT	M1-5A	COUNTY MARKER	N	24X24	-	-	-	-	-		1	1		
1-18R	306+29	STH 35	RIGHT	M6-1	ARROW RIGHT	-	21X21	-	-	-	-	-	-	1	-	-	1-17R
1-19R	306+29	STH 35	RIGHT	R7-1D	NO PARKING ANYTIME-DOUBLE ARROW	-	18X24	-	-	-	-	-	-	1	-	-	1-17R
1-20R	306+63	STH 35	RIGHT	R7-51R	NO PARKING HERE TO CORNER-RIGHT ARROW	-	18X24	-	-	-	-	-	-	1	1	-	
1-21R	306+63	STH 35	RIGHT	R7-1	NO PARKING ANYTIME	-	18X24	-	-	-	-	-	-	1	-	-	1-20R
1-22	306+80	STH 35	RIGHT	J4-1	REASSURANCE ASSEMBLY (1 HEADED ROUTE PANEL)	35/NORTH	24X36	6.00	-	-	1	-	-	-	-	-	
1-23R	307+23	STH 35	RIGHT	R1-1	STOP	-	30X30	-	-	-	-	-	-	1	1	-	
1-24R	307+31	STH 35	RIGHT	M1-6	STATE ROUTE MARKER	35	24X24	-	-	-	-	-	-	1	1	-	
1-25R	307+31	STH 35	RIGHT	M6-4	DIRECTIONAL ARROWS LEFT-RIGHT	-	21X21	-	-	-	-	-	-	1	-	-	1-24R
1-26R	308+94	STH 35	RIGHT	M3-1	NORTH CARDINAL ROUTE MARKER	-	24X12	-	-	-	-	-	-	1	1	-	
1-27R	308+94	STH 35	RIGHT	M1-6	STATE ROUTE MARKER	35	24X24	-	-	-	-	-	-	1	-	-	1-26R
2-00	13+50	MAINLINE	RIGHT	W1-5R	RIGHT WINDING ROAD	-	30X30	-	6.25	-	-	1	-	-	-	-	
2-01	13+50	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H.	18X18	-	2.25	-	-	-	-	-	-	-	2-00
2-02R	13+82	MAINLINE	LEFT	D2-2	DESTINATION/DISTAMCE (TWO) WITH DIE CUT LETTERS	STH 27 5/WAUZEKA 14	-	-	-	-	-	-	-	1	1	-	
2-03R	13+82	MAINLINE	LEFT	R12-58	WEIGHT LIMIT 1 AXLE...TONS,2 AXLE...TONS,MAX	6,10,24	54X42	-	-	-	-	-	-	1	1	-	
2-04R	13+82	MAINLINE	LEFT	M3-2	EAST CARDINAL ROUTE MARKER	-	24X12	-	-	-	-	-	-	1	-	-	2-03R
2-05R	13+82	MAINLINE	LEFT	M1-5A	COUNTY MARKER	N	24X24	-	-	-	-	-	-	1	-	-	2-03R
2-06	14+00	MAINLINE	RIGHT	D2-2	DESTINATION/DISTANCE (TWO) WITH DIE CUT LETTERS	HWY 27 5/WAUZEKA 14	72X24	12.00	-	-	2	-	-	-	-	-	
2-07	14+00	MAINLINE	LEFT	D1-2	DESTINATION/DISTANCE (TWO) WITH DIE CUT LETTERS	← PRAIRIE DU CHIEN/LYNXVILLE →	102X30	21.25	-	2	-	-	-	-	-	-	
2-08R	15+55	MAINLINE	LEFT	D1-2	DESTINATION/DISTANCE (TWO) WITH DIE CUT LETTERS	← PRAIRIE DU CHIEN/LYNXVILLE →	102X30	-	-	-	-	-	-	1	2	-	
2-09R	17+58	MAINLINE	LEFT	W3-1	STOP AHEAD	-	36X36	-	-	-	-	-	-	1	1	-	
2-10R	17+58	MAINLINE	LEFT	W3-1	STOP AHEAD	STOP AHEAD	-	-	-	-	-	-	-	1	-	-	2-09R
2-11	17+97	MAINLINE	LEFT	W3-1	STOP AHEAD	-	36X36	-	9.00	-	1	-	-	-	-	-	
2-12R	18+20	MAINLINE	RIGHT	W1-2R	RIGHT CURVE	-	30X30	-	-	-	-	-	-	1	1	-	
2-13R	18+20	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	35 M.P.H.	18X18	-	-	-	-	-	-	1	-	-	2-12R
3-00R	22+79	MAINLINE	RIGHT	W1-5R	RIGHT WINDING ROAD	-	30X30	-	-	-	-	-	-	1	1	-	
3-01R	22+79	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	35 M.P.H.	18X18	-	-	-	-	-	-	1	-	-	3-00R
3-02	24+36	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	8.00	-	1	-		-	-	-	-
3-03	26+69	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	8.00	-	1	-	-	-	-	-	-
3-04	30+17	MAINLINE	RIGHT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	8.00	-	1	-	-	-	-	-	-
3-05R	30+63	MAINLINE	RIGHT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	-	-	-	-	-	1	1	-	-
3-06R	30+63	MAINLINE	RIGHT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	-	-	-	-	-	1	-	-	3-05R
3-07	30+90	MAINLINE	RIGHT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	8.00	-	1	-	-	-	-	-	-
4-00	35+48	MAINLINE	LEFT	W1-5R	RIGHT WINDING ROAD	-	30X30	-	6.25	-	1	-	-	-	-	-	-
4-01	35+48	MAINLINE	LEFT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H.	18X18	-	2.25	-	-	-	-	-	-	-	4-00
4-02R	39+76	MAINLINE	LEFT	W1-5R	RIGHT WINDING ROAD	-	30X30	-	-	-	-	-	-	1	1	-	-
4-03R	39+76	MAINLINE	LEFT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	35 M.P.H.	18X18	-	-	-	-	-	-	1	-	-	4-02R
						SHEET TOTALS=		97.93	66	3	17	1	1	37	20	1	

ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

PERMANENT SIGNING CONTINUED

SIGN NUMBER	APPROX. STATION	LOCATION	POSITIION	SIGN CODE	SIGN DESCRIPTION	ORDER LINES	SIZE (INCH X INCH)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	POSTS WOOD 4X6-INCH 634.0614 14 FT (EACH)	634.0616 16 FT (EACH)	634.0618 18 FT (EACH)	638.2102 MOVING SIGNS TYPE II (EACH)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	638.4000 MOVING SMALL SIGN SUPPORTS (EACH)	SIGN MOUNTED ON SAME POST AS
4-04R	42+83	MAINLINE	RIGHT	R9-53	NO DUMPING	-	21X21	-	-	-	-	-	-	1	1	-	-
4-05R	43+00	MAINLINE	LEFT	W1-2L	LEFT CURVE	-	30X30	-	-	-	-	-	-	1	1	-	-
4-06R	43+00	MAINLINE	LEFT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	35 M.P.H.	18X18	-	-	-	-	-	-	1	-	-	4-05R
5-00R	50+86	MAINLINE	RIGHT	W1-1R	RIGHT TURN	-	36X36	-	-	-	-	-	-	1	1	-	-
5-01R	50+86	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	30 M.P.H.	18X18	-	-	-	-	-	-	1	-	-	5-00R
5-02	53+20	MAINLINE	RIGHT	W1-5R	RIGHT WINDING ROAD	-	30X30	-	6.25	-	1	-	-	-	-	-	-
5-03	53+20	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H.	18X18	-	2.25	-	-	-		-	-	-	5-02
5-04R	54+51	MAINLINE	RIGHT	W1-5R	RIGHT WINDING ROAD	-	30X30	-	-	-	-	-	-	1	1	-	-
5-05R	54+51	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	30 M.P.H.	18X18	-	-	-	-	-	-	1	-	-	5-04R
5-06R	55+30	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	-	-	-	-	-	1	1	-	-
5-07	55+99	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	8.00	-	1	-	-	-	-	-	-
5-08	57+95	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	8.00	-	1	-	-	-	-	-	-
6-00R	59+66	MAINLINE	RIGHT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	-	-	-	-	-	1	1	-	-
6-01	59+85	MAINLINE	RIGHT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	8.00	-	1	-	-	-	-	-	-
6-02R	60+50	MAINLINE	RIGHT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	-	-	-	-	-	1	1	-	-
6-03	61+50	MAINLINE	RIGHT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	8.00	-	1	-	-	-	-	-	-
6-04	64+05	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	8.00	-	1	-	-	-	-	-	-
6-05	65+47	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	8.00	-	1	-	-	-	-	-	-
6-06R	66+00	MAINLINE	LEFT	W1-5R	RIGHT WINDING ROAD	-	30X30	-	-	-	-	-	-	1	1	-	-
6-07R	66+00	MAINLINE	LEFT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	30 M.P.H.	18X18	-	-	-	-	-	-	1	-	-	6-06R
6-08	67+37	MAINLINE	RIGHT	W1-2R	RIGHT CURVE	-	30X30	-	6.25	-	1	-	-		-	-	-
6-09	67+37	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H	18X18	-	2.25	-	-	-	-	-	-	-	6-08
6-10	68+55	MAINLINE	RIGHT	W2-1	CROSS ROAD	-	30X30	-	6.25	-	1	-	-	-	-	-	-
6-11	68+47	MAINLINE	LEFT	W1-5L	LEFT WINDING ROAD	-	30X30	-	6.25	-	1	-	-	-	-	-	-
6-12	68+47	MAINLINE	LEFT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H.	18X18	-	2.25	-	-	-	-	-	-	-	6-11
6-13R	69+71	MAINLINE	RIGHT	W1-2R	RIGHT CURVE	-	30X30	-	-	-	-	-	-	1	1	-	-
6-14R	69+71	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H	18X18	-	-	-	-	-	-	1	-	-	6-13R
7-00R	70+27	MAINLINE	LEFT	W1-1-L	LEFT TURN	-	36X36	-	-		-	-	-	1	1	-	-
7-01R	70+27	MAINLINE	LEFT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	30 M.P.H.	18X18	-	-	-	-	-	-	1	-	-	7-00R
7-02R	71+20	MAINLINE	RIGHT	W2-7R	OFFSET INTERSECTION (RIGHT TO LEFT)	-	30X30	-	-	-	-	-	-	1	1	-	-
7-03	72+41	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	8.00	-	1	-	-	-	-	-	-
7-04	72+45	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	8.00	-	1	-	-	-	-	-	-
7-05R	75+08	MAINLINE	LEFT	R1-1	STOP	-	30X30	-	-	-	-	-	-	1	1	-	-
7-06	75+70	MAINLINE	LEFT	R1-1	STOP	-	30X30	5.18	-	-	1	-	-	-	-	-	-
7-07	400+12	OLD CTH N (WEST)	LEFT	R1-1	STOP	-	30X30	5.18	-	1	-	-	-	-	-	-	-
7-08R	400+60	OLD CTH N (WEST)	LEFT	R1-1	STOP	-	30X30	-	-	-	-	-	-	1	1	-	-
7-09	76+32	MAINLINE	RIGHT	R1-1	STOP	-	30X30	5.18	-	-	1	-	-	-	-	-	-
7-10	77+45	MAINLINE	LEFT	W1-2L	LEFT CURVE	-	30X30	-	6.25	-	1	-	-	-	-	-	-
7-11	77+45	MAINLINE	LEFT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H.	18X18	-	2.25	-	-	-	-	-	-	-	7-10
7-12R	79+20	MAINLINE	LEFT	R4-1	DO NOT PASS	-	24X30	-	-	-	-	-	-	1	1	-	-
7-13	81+35	MAINLINE	LEFT	W7-1B	HILL	12%	30X30	-	6.25	-	1	-	-	-	-	-	-
7-14	81+35	MAINLINE	LEFT	W7-2B	TRUCKS USE LOWER GEAR (SUPPLEMENTAL PLAQUE)	-	24X18	-	3.00	-	-	-	-	-	-	-	7-13
7-15R	81+30	MAINLINE	LEFT	W7-1B	HILL	-	30X30	-	-	-	-	-	-	1	1	-	-
7-16R	81+30	MAINLINE	LEFT	W7-2B	TRUCKS USE LOWER GEAR (SUPPLEMENTAL PLAQUE)	-	24X18	-	-	-	-	-	-	1	-	-	7-15R
7-17	81+95	MAINLINE	RIGHT	W1-2R	RIGHT CURVE	-	30X30	-	6.25	-	1	-	-	-	-	-	-
7-18	81+95	MAINLINE	RIGHT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H.	18X18	-	2.25	-	-	-	-	-	-	-	-
8-00R	571+25	OLD CTH N (EAST)	RIGHT	W2-7R	OFFSET INTERSECTION (RIGHT TO LEFT)	-	30X30	-	-	-	-	-	-	1	1	-	-
8-01	570+45	OLD CTH N (EAST)	LEFT	R1-1	STOP	-	30X30	5.18	-	-	1	-	-	-	-	-	-
8-02	85+74	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	LEFT	48X24	-	8.00	-	1	-	-	-	-	-	-
8-03	87+19	MAINLINE	LEFT	W1-6	NARROW ARROW (SINGLE)	RIGHT	48X24	-	8.00	-	1	-	-	-	-	-	-
8-04R	88+89	MAINLINE	LEFT	W1-2L	LEFT CURVE	-	30X30	-	-	-	-	-	-	1	1	-	-
8-05	90+20	MAINLINE	LEFT	W1-2L	LEFT CURVE	-	30X30	-	6.25	-	1	-	-	-	-	-	-
8-06	90+20	MAINLINE	LEFT	W13-1	ADVISORY SPEED PLATE (YELLOW BLACK)	40 M.P.H.	18X18	-	2.25	-	-	-	-	-	-	-	8-05
					SHEET TOTALS =			20.72	146.50	1	21	0	0	24	17	0	
					PROJECT TOTALS=			118.65	212.50	4.00	38.00	1.00	1.00	61.00	37.00	1.00	

ALL ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

3

SAWING ASPHALT / SAWING CONCRETE

STATION - STATION	LOCATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)	COMMENTS
14+75	MAINLINE, LT.	35	-	
48+33	MAINLINE, LT.	12	-	
87+12	MAINLINE, RT.	-	21	
89+00	MAINLINE	30	-	
303+90 - 305+00	STH 35 - STAGE 1	111	-	SAWCUT ALONG STH 35 C/L
303+90	STH 35 - STAGE 1	19	-	
305+00	STH 35 - STAGE 1	17	-	
301+65 - 303+90	STH 35 - STAGE 2	231	-	
303+90	STH 35 - STAGE 2	12	-	
305+00 - 305+45	STH 35 - STAGE 2	45	-	SAWCUT ALONG STH 35 C/L
305+45	STH 35 - STAGE 2	12	-	
305+45 - 307+31	STH 35 - STAGE 2	193	-	
306+70 - 307+31	STH 35, RT. - STAGE 3	79	-	REMOVAL OF STH 35/CTH N INTERSECTION
306+71	STH 35, RT. - STAGE 3	-	3	
401+40	OLD CTH N, LT.	19	-	
401+90	MAINLINE, LT.	-	16	
402+75	OLD CTH N, LT.	23	-	
571+25	OLD CTH N, LT.	22		
	TOTAL=	860	40	

INLET PROTECTION SPECIAL

STATION	LOCATION	SPV.0060.02 (EACH)
34+75	MAINLINE, LT.	1
42+00	MAINLINE, LT	1
43+50	MAINLINE, LT.	1
49+01	MAINLINE, LT.	1
63+00	MAINLINE, LT	1
66+65	MAINLINE, LT.	1
	TOTAL =	6

GEOGRID REINFORCEMENT

STATION-STATION	LOCATION	SPV.0180.01 (SY)
10+47.01 - 89+00	MAINLINE	40531
303+90 - 305+00	STH 35, LT. - STAGE 1	379
301+65 - 307+31	STH 35, RT - STAGE 2	1121
305+00 - 305+45	STH 35, LT. - STAGE 3	156
100+00 - 105+39.14	DAMANES LN.	2416
200+17 - 205+00	SLAMA LN.	2141
400+11.56 - 402+75	OLD CTH N (WEST)	975
570+16 - 571+25	OLD CTH N (EAST)	431
-	UNDISTRIBUTED	1750
	TOTALS =	49900

TEMPORARY STONE DITCH CHECK

STATION	LOCATION	SPV.0035.02 (CY)
11+00	MAINLINE, RT.	0.6
12+00	MAINLINE, LT.	0.6
30+00	MAINLINE, LT.	0.6
32+50	MAINLINE, LT.	0.6
35+00	MAINLINE, LT.	0.6
38+00	MAINLINE, LT.	0.6
42+50	MAINLINE, LT.	0.6
44+00	MAINLINE, LT.	0.6
59+00	MAINLINE, LT.	0.6
62+00	MAINLINE, LT.	0.6
66+90	MAINLINE, LT.	0.6
-	UNDISTRIBUTED	1.4
	TOTAL =	8.0

ARTICULATED CONCRETE BLOCK TYPE C

STATION-STATION	LOCATION	*645.0120 GEOTEXTILE TYPE HR (SY)	SPV.0180.02 ARTICULATED CONCRETE BLOCK TYPE C (SY)
56+95 - 57+96	MAINLINE, LT.	189	128
62+95 - 63+05	MAINLINE, LT.	111	72
-	UNDISTRIBUTED	30	10
	TOTALS =	330	210

*MORE LISTED ELSEWHERE

STONE GABION WALL

STATION	LOCATION	*606.0400 RIPRAP EXTRA-HEAVY (CY)	*645.0120 GEOTEXTILE TYPE HR (SY)	SPV.0035.01 STONE GABION WALL (CY)
15+43	MAINLINE, RT.	9	143	48
19+00	MAINLINE, RT.	9	278	166
25+13	MAINLINE, RT.	9	254	146
36+07	MAINLINE, RT.	9	108	27
41+00	MAINLINE, RT.	9	121	35
53+89	MAINLINE, RT.	9	179	90
62+50	MAINLINE, RT.	9	106	26
-	UNDISTRIBUTED	7	71	22
	TOTALS =	70	1260	560

*MORE LISTED ELSEWHERE

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5496-00-04		
FEDERAL PROJECT NUMBER	4.01	10

PLAT OF RIGHT-OF-WAY REQUIRED FOR

STH 35 – STH 27

(STH 35 – TETER LANE)

CTH N — CRAWFORD COUNTY

CONSTRUCTION PROJECT NUMBER

5496-00-74

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
BARN	B.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
GARAGE	G.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH
HOUSE	H.	LONG CHORD BEARING	LCB
HOUSE TRAILER	H.T.	RADIUS	R
LAND CONTRACT	LC	DEGREE OF CURVE	D
MONUMENT	MON.	CENTRAL ANGLE OR DELTA	DELTA
PAGE	P.	LENGTH OF CURVE	L
PERMANENT LIMITED EASEMENT	PLE	TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER)	o1040	PROPOSED R/W LINE	
R/W MONUMENT	○ ● (SET)	EXISTING H.E. LINE	
R/W STANDARD	△ ▲ (SET)	PROPERTY LINE	
SIGN	|SIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT		SLOPE INTERCEPTS	
SECTION CORNER SYMBOL		CORPORATE LIMITS	
FEE (HATCH VARIES)		NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
R/W BOUNDARY POINT	RWBP20	SECTION LINE	
PARCEL NUMBER	8	QUARTER LINE	
UTILITY PARCEL NUMBER	92	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21-	EXISTING CENTERLINE	
BUILDING TO BE REMOVED		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	
		ENCROACHMENT	E-D/TYPE
		HIGHWAY EASEMENT	

CONVENTIONAL UTILITY SYMBOLS

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

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, CRAWFORD COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" X 24" REBAR) 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."

N

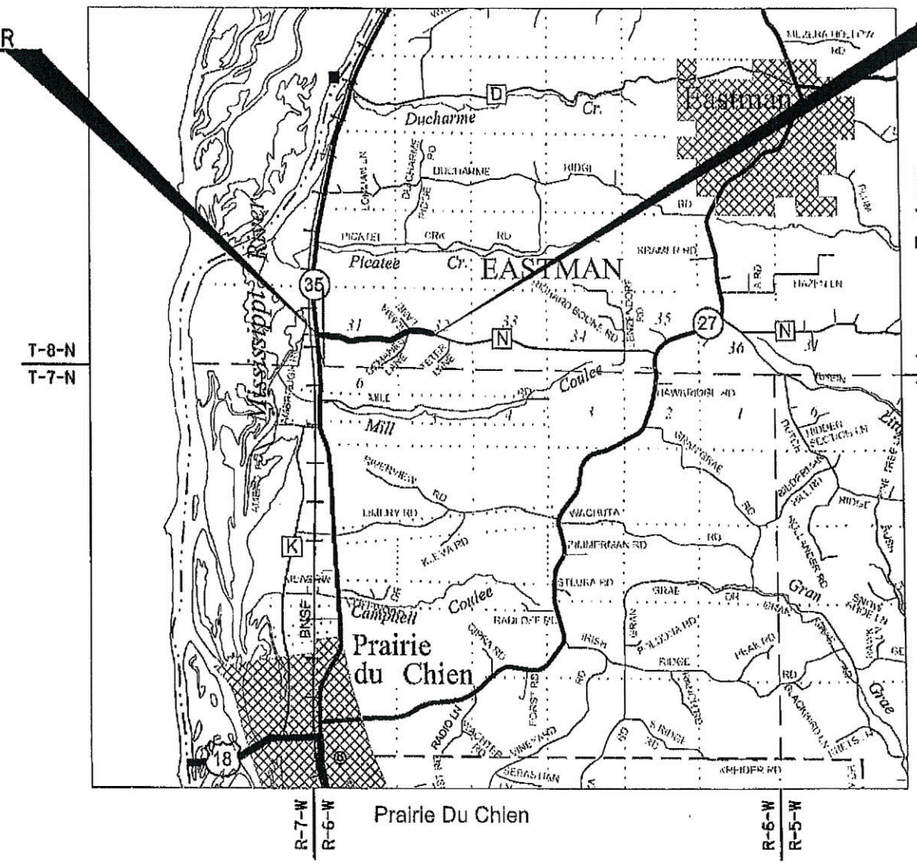
FILED

SEP 12 2018

County Clerk
Crawford County, WI

BEGIN RELOCATION ORDER
STA. 10+35
1818.57' NORTH AND 500.38' WEST OF THE S.E. CORNER OF SECTION 36, T8N, R7W, TOWN OF EASTMAN, CRAWFORD COUNTY, WI.
Y= 148,364.90
X= 318,755.17

END RELOCATION ORDER
STA. 89+00
2226.28' NORTH AND 2059.03' EAST OF THE SW CORNER OF SECTION 32, T8N, R6W, TOWN OF EASTMAN, CRAWFORD COUNTY, WI.
Y= 148,752.74
X= 320,394.62



LAYOUT

SCALE 0 — 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.490 MI.

REVISION DATE

8-20-18(N.C.)

JEWELL
associates engineers, inc.
Engineers - Architects - Surveyors

560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
FAX : 608.588.9322

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR CRAWFORD COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
WESLEY L KRAEMER
S-3028
SPRING GREEN WIS.
July 2, 2018
LAND SURVEYOR

APPROVED FOR CRAWFORD COUNTY

DATE 7-10-18 (NAME/TITLE) Commissioner

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\RW\C54320 RW PLAT TITLE SHEET.DWG
LAYOUT NAME - ****

PLOT DATE : 6/27/2018 5:55 PM PLOT BY : KRAEMER, WES PLOT NAME :

WISDOT/CADDS SHEET 50

SCHEDULE OF LANDS & INTERESTS REQUIRED

SHEET NUMBER	PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			T.L.E. ACRES
				NEW	EXISTING	TOTAL	
4.04	1	PROJECT SLI, LLC, A WISCONSIN LIMITED LIABILITY COMPANY	FEE	0.17	0.01	0.18	--
4.04	2	PHILIP J. TOBERMAN & CAROL A. TOBERMAN, AS SURVIVORSHIP MARITAL PROPERTY.	FEE	0.20	--	0.20	--
4.04	3	PAMELA L. MYERS	FEE	0.09	0.07	0.16	--
4.04, 4.05, 4.06	4	PHILIP J. TOBERMAN	FEE	2.83	2.09	4.92	--
4.04, 4.05, 4.06	5	CRAWFORD COUNTY, A MUNICIPAL CORPORATION	FEE	2.69	--	2.69	--
4.05	6	DILLMAN FARMS, LLC, A WISCONSIN LIMITED LIABILITY COMPANY	FEE	0.24	2.03	2.27	--
4.07	8	AARON M. HENDERSON & ANGELA L. HENDERSON, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE	1.19	1.00	2.19	--
4.07	9	JEFF & AMY JO SCHNEEBERGER	TLE	--	--	--	0.12
4.07	10	LYNDA J. SCHWANDT, AN UNMARRIED PERSON	FEE	0.25	0.32	0.57	--
4.08	11	MATTHEW C. HILL	FEE	2.22	0.83	3.05	--
4.08	12	LOIS J. DEMANES, AS TRUSTEE OF THE LOIS J. DEMANES DECLARATION OF TRUST DATED DECEMBER 13, 1996, AND KNOWN AS THE LOIS J. DEMANES DECLARATION OF TRUST DATED DECEMBER 13, 1996, AND TO ALL AND EVERY SUCCESSOR OR SUCCESSORS IN TRUST UNDER THE TRUST AGREEMENT	FEE	1.26	1.09	2.35	--
4.08	13	CHERYL BARTELS A/K/A CHERYL ANN BARTELS	FEE	0.56	0.26	0.82	--
4.09	14	DALE F. SLAMA, A SINGLE PERSON	FEE	0.88	1.13	2.01	--
4.09	15	GREGORY L. TAYLOR & KELLI J. TAYLOR, HUSBAND & WIFE AS SURVIVORSHIP MARITAL PROPERTY	FEE	1.09	0.90	1.99	--
4.09	16	JOHN H. KRAMER & CHERYL E. KRAMER, HUSBAND & WIFE, AS SURVIVORSHIP MARITAL PROPERTY	FEE	2.11	0.67	2.78	--
4.09	17	RONALD C. KRAMER & NIKKI D. KRAMER, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY	TLE	--	--	--	0.07
4.09	18	JOHN F. WACHTER & NANCY M. WACHTER, HIS WIFE, AS TENANTS IN COMMON	FEE, TLE	--	0.09	0.09	0.02
4.09	19	MATTHEW C. HILL, A SINGLE PERSON	FEE	0.78	0.21	0.99	--
4.10	20	ROGER D. STRAM, JEANNE I. STRAM, & RANDOLPH C. STRAM AS JOINT TENANTS	FEE	--	0.08	0.08	--
4.10	21	LARRY E. KAPINUS, SR., LARRY L. KAPINUS, JR. AND CAMILLE KAPINUS, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY, AND LONNIE L. KAPINUS, ALL AS JOINT TENANTS	FEE, TLE	1.40	0.63	2.03	0.18
4.10	22	LARRY L. KAPINUS, JR. AND CAMILLE KAPINUS, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY	FEE	0.02	--	0.02	--
4.04, 4.05, 4.07, 4.08, 4.09, 4.10	201	SCENIC RIVERS ENERGY COOPERATIVE	RELEASE OF RIGHTS				
4.07, 4.08, 4.09, 4.10	202	CENTURYLINK, INC.	RELEASE OF RIGHTS				

PARCEL 7 IS NOT USED.

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO CRAWFORD COUNTY.

4

N

TOWN OF EASTMAN

31

32

END RELOCATION ORDER
STA. 89+00
2226.28' NORTH AND 2059.03'
EAST OF THE SW CORNER OF
SECTION 32, T8N, R6W, TOWN
OF EASTMAN, CRAWFORD
COUNTY, WI.
Y= 148,752.74
X= 326,394.62

BEGIN RELOCATION ORDER
STA. 10+35
1818.57' NORTH AND 500.36'
WEST OF THE S.E. CORNER
OF SECTION 36, T8N, R7W,
TOWN OF EASTMAN,
CRAWFORD COUNTY, WI.
Y= 148,364.90
X= 318,755.17

STH 35

RAILROAD

CTH 'N'

SLAMA LANE

DEMANES LANE

GOV'T. LOT 3 SEC. 36

NW¼-SW¼ SEC. 31

NE¼-SW¼ SEC. 31

NW¼-SE¼ SEC. 31

NE¼-SE¼ SEC. 31

SW¼-NW¼ SEC. 32

NW¼-SW¼ SEC. 32

NE¼-SW¼ SEC. 32

SHEET 4.04

SHEET 4.05

SHEET 4.06

SHEET 4.07

SHEET 4.08

SHEET 4.09

SHEET 4.10

TOWN OF EASTMAN

REVISION DATE 8–20–18 N.C. 10–12–18 N.C.	DATE: JULY 2, 2018 GRID FACTOR N/A	SCALE, FEET 0 300 600	HWY: CTH N COUNTY: CRAWFORD	R/W PROJECT NUMBER: 5496–00–04 CONSTRUCTION PROJECT NUMBER: 5496–00–74	PLAT SHEET 4.03 PS&E SHEET

E

S:\Projects\C54320 Crawford Co. CTH N Reconstruct\RW\RW Plat Overview Sheet.dwg PLOT DATE : 10/26/2018 8:28 AM PLOT BY : Stephanie PotterPLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
100 TO 101	S28°08'30"E	12.08'
101 TO 102	N83°53'33"E	88.37'
102 TO 103	N58°14'51"E	29.95'
103 TO 104	N05°17'57"W	13.50'
104 TO 105	N83°44'46"E	48.26'
105 TO 106	S67°12'50"E	57.62'
106 TO 107	N23°31'06"E	11.66'
107 TO 108	N78°38'15"E	89.21'
108 TO 188	N76°12'09"W	185.95'
188 TO 3	N13°47'51"E	66.00'
3 TO 109	S76°12'09"E	185.95'
109 TO 110	N13°47'51"E	10.00'
110 TO 111	S76°19'12"E	83.04'
111 TO 112	N85°47'52"E	22.23'
112 TO 113	S00°46'48"E	178.44'
113 TO 114	S88°54'57"W	391.48'
114 TO 115	S58°03'25"W	39.56'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET FROM FINISHED C/L	Y	X
100	10+79.88	34.20' LT.	148402.79	318796.98
101	10+84.65	23.10' LT.	148392.14	318802.68
102	11+73.00	25.00' LT.	148401.54	318890.54
103	12+00.00	38.50' LT.	148417.30	318916.01
104	12+00.00	52.00' LT.	148430.74	318914.77
105	12+50.00	52.00' LT.	148446.00	318962.74
106	13+00.00	23.00' LT.	148413.69	319015.87
107	13+06.00	33.00' LT.	148424.38	319020.52
108	13+95.00	39.09' LT.	148441.95	319107.98
109	14+18.91	100.61' LT.	148506.05	319123.72
110	14+22.54	109.93' LT.	148515.76	319126.11
111	15+00.00	80.00' LT.	148496.12	319206.80
112	15+22.19	78.74' LT.	148497.75	319228.97
113	15+01.48	98.49' RT.	148319.32	319231.39
114	11+15.00	60.00' RT.	148311.92	318839.98
115	10+79.77	78.00' RT.	148290.99	318806.41
188	12+19.06	106.04' LT.	148486.30	318927.40

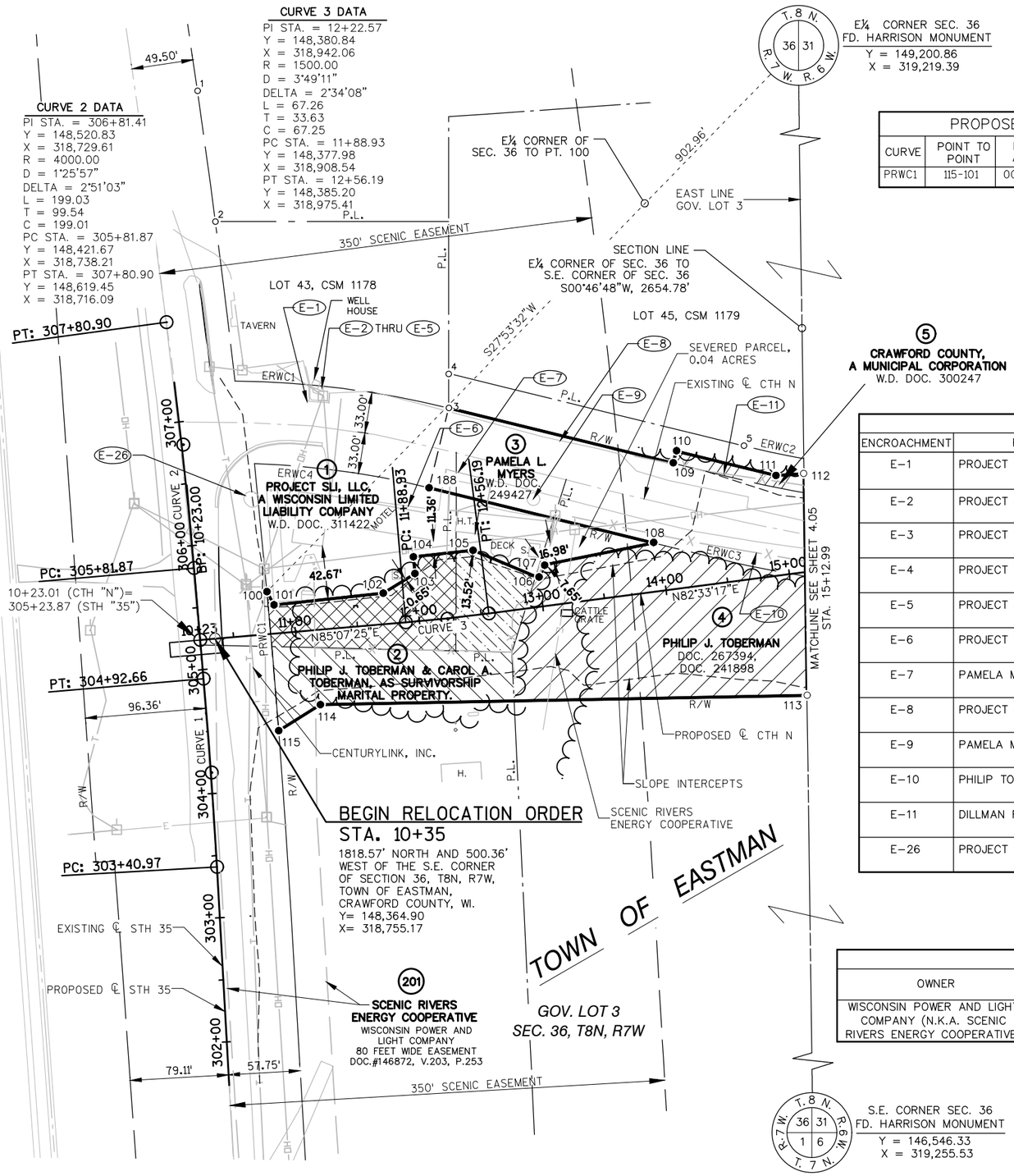
NOTE: EXISTING C/L OF CTH N WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR CTH 'N' WAS BASED ON C.S.M. 1178, C.S.M. 1179, AND OTHER COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

CURVE 1 DATA
PI STA. = 304+16.82
Y = 148,257.22
X = 318,752.47
R = 5000.00
D = 1°08'45"
DELTA = 1°44'18"
L = 151.70
T = 75.86
C = 151.69
PC STA. = 303+40.97
Y = 148,181.49
X = 318,756.73
PT STA. = 304+92.66
Y = 148,332.80
X = 318,745.92

CURVE 2 DATA
PI STA. = 306+81.41
Y = 148,520.83
X = 318,729.61
R = 4000.00
D = 1°25'57"
DELTA = 2°51'03"
L = 199.03
T = 99.54
C = 199.01
PC STA. = 305+81.87
Y = 148,421.67
X = 318,738.21
PT STA. = 307+80.90
Y = 148,619.45
X = 318,716.09

CURVE 3 DATA
PI STA. = 12+22.57
Y = 148,380.84
X = 318,942.06
R = 1500.00
D = 3°49'11"
DELTA = 2°34'08"
L = 67.26
T = 33.63
C = 67.25
PC STA. = 11+88.93
Y = 148,377.98
X = 318,908.54
PT STA. = 12+56.19
Y = 148,385.20
X = 318,975.41



PROPOSED RIGHT OF WAY CURVE TABLE (PRWC)							
CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
PRWC1	115-101	00°50'04"	56.10'	7702.79'	112.20'	112.20'	N04°49'24"W

COORDINATE TABLE – FOUND SURVEY MONUMENTS					
PT.#	STATION	OFFSET	Y	X	DESCRIPTION
1	10+58.42	440.06' LT.	148805.36	318741.10	FOUND ¾" ø REBAR
2	10+63.76	334.04' LT.	148700.18	318755.43	FOUND ¾" ø REBAR
3	12+44.39	168.00' LT.	148550.40	318943.13	FOUND ¾" ø REBAR
4	12+48.02	195.12' LT.	148577.78	318943.07	FOUND ¾" ø REBAR
5	14+77.21	107.20' LT.	148520.14	319180.67	FOUND ¾" ø REBAR

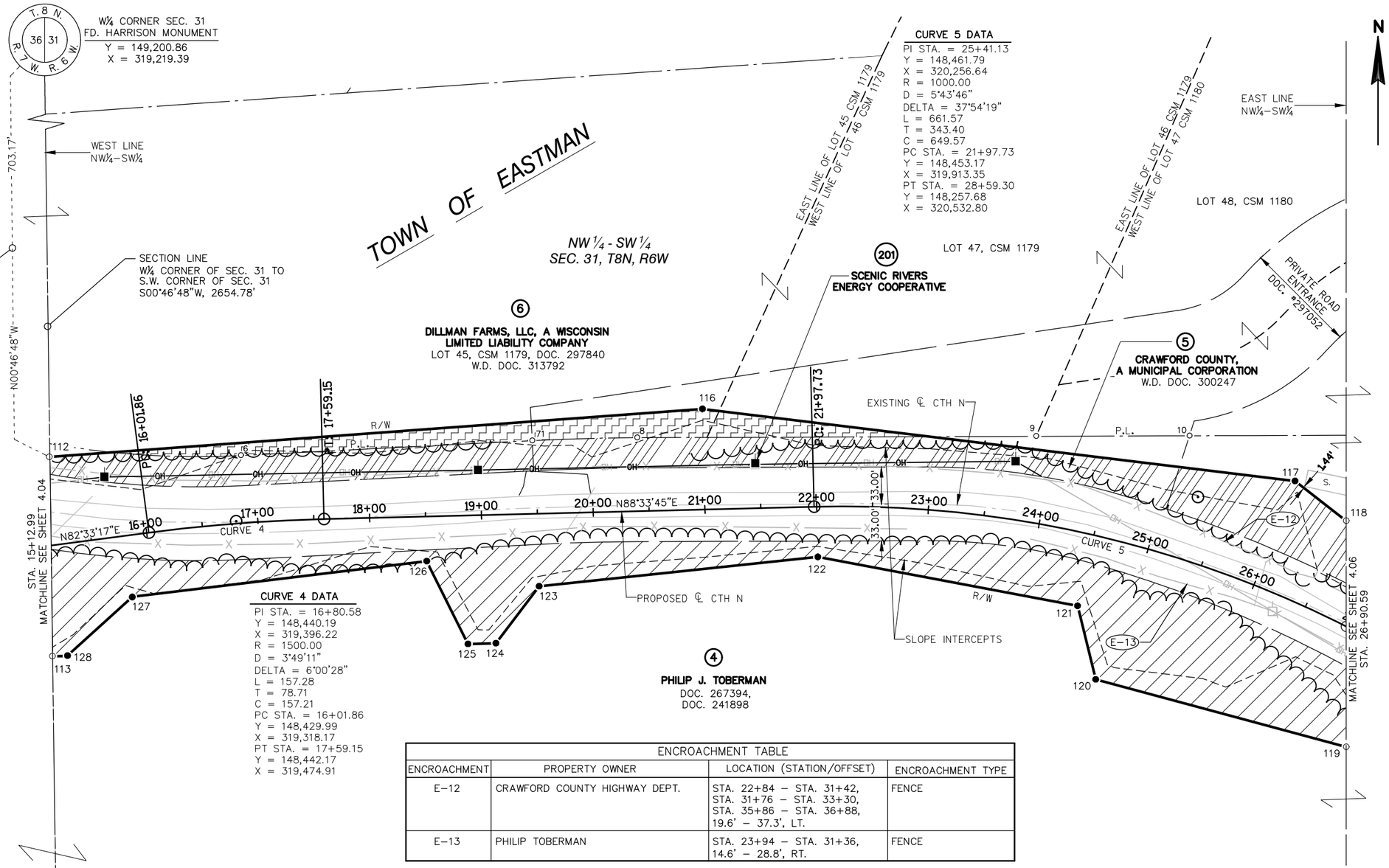
ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-1	PROJECT SLI, LLC	STA. 10+77 – STA. 11+27, 184.0' – 205.0', LT.	ASPHALT PARKING LOT
E-2	PROJECT SLI, LLC	STA. 11+29 – STA. 11+36, 192.8' – 196.6', LT.	WELL HOUSE BUILDING
E-3	PROJECT SLI, LLC	STA. 11+30 – STA. 11+39, 187.7' – 193.8', LT.	LP TANK
E-4	PROJECT SLI, LLC	STA. 11+28 – STA. 11+44, 182.4' – 196.9', LT.	STONE LANDSCAPING EDGING
E-5	PROJECT SLI, LLC	STA. 11+44 – STA. 11+54, 179.4' – 139.9', LT.	WASTE DISPOSAL CONTAINERS
E-6	PROJECT SLI, LLC	STA. 12+02 – STA. 12+30, 102.5' – 114.5', LT.	ASPHALT PARKING LOT
E-7	PAMELA MYERS	STA. 12+36 – STA. 12+44, 97.4' – 106.0', LT.	AGGREGATE PARKING STALL
E-8	PROJECT SLI, LLC	STA. 11+42 – STA. 13+89, 98.4' – 187.7', LT.	ASPHALT PARKING LOT
E-9	PAMELA MYERS	STA. 13+04, 86.4' LT.	METAL POLE WITH SATELLITE DISH
E-10	PHILIP TOBERMAN	STA. 13+20 – STA. 22+82, 71.3' LT. – 18.4' RT.	FENCE
E-11	DILLMAN FARMS, LLC	STA. 13+89 – STA. 14+35, 94.5' LT. – 110.2' LT.	FENCE
E-26	PROJECT SLI, LLC	STA. 306+25 – STA. 306+38, 45.2' LT. – 57.0' RT.	LANDSCAPING EDGING

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
WISCONSIN POWER AND LIGHT COMPANY (N.K.A. SCENIC RIVERS ENERGY COOPERATIVE)	DOC. 146872, V.203, P.253	1 & 2	80' WIDE EASEMENT FOR A LINE OF SINGLE POLE STRUCTURES ACROSS LAND DESCRIBED IN V.164, P.3734

REVISION DATE	DATE: JULY 2, 2018	SCALE, FEET 0 50 100	HWY: CTH N	R/W PROJECT NUMBER: 5496-00-04	PLAT SHEET 4.04	
8-20-18 N.C. 10-12-18 N.C.	GRID FACTOR N/A		COUNTY: CRAWFORD	CONSTRUCTION PROJECT NUMBER: 5496-00-74	PS&E SHEET 82	E

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
112 TO 116	N85°47'52"E	586.00'
116 TO 117	S83°03'37"E	534.09'
117 TO 118	S52°08'04"E	57.97'
118 TO 119	S00°00'00"E	202.36'
119 TO 120	N74°55'27"W	232.09'
120 TO 121	N13°48'48"W	67.84'
121 TO 122	N79°19'53"W	236.47'
122 TO 123	S83°59'14"W	250.70'
123 TO 124	S37°13'20"W	64.03'
124 TO 125	S88°33'45"W	25.00'
125 TO 126	N26°27'16"W	82.76'
126 TO 127	S83°06'04"W	265.04'
127 TO 128	S47°51'34"W	79.06'
128 TO 113	S88°54'57"W	13.60'
113 TO 112	N00°46'48"W	178.44'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET FROM FINISHED C/L	Y	X
112	15+22.19	78.74' LT.	148497.75	319228.97
113	15+01.48	98.49' RT.	148319.32	319231.39
116	21+00.00	90.00' LT.	148540.69	319813.39
117	26+00.00	100.00' LT.	148476.16	320343.57
118	26+51.30	85.20' LT.	148440.58	320389.33
119	27+44.34	94.95' RT.	148238.22	320389.33
120	24+85.00	125.00' RT.	148298.58	320165.23
121	24+50.00	65.00' RT.	148364.46	320149.03
122	22+00.00	45.00' RT.	148408.24	319916.65
123	19+50.00	65.00' RT.	148381.98	319667.33
124	19+10.00	115.00' RT.	148330.99	319628.60
125	18+85.00	115.00' RT.	148330.36	319603.60
126	18+50.00	40.00' RT.	148404.46	319566.73
127	15+80.00	55.00' RT.	148372.62	319303.61
128	15+15.00	100.00' RT.	148319.58	319244.99



ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E–12	CRAWFORD COUNTY HIGHWAY DEPT.	STA. 22+84 – STA. 31+42, STA. 31+76 – STA. 33+30, STA. 35+86 – STA. 36+88, 19.6' – 37.3', LT.	FENCE
E–13	PHILIP TOBERMAN	STA. 23+94 – STA. 31+36, 14.6' – 28.8', RT.	FENCE

NOTE: EXISTING C/L OF CTH N WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT–OF–WAY FOR CTH 'N' WAS BASED ON C.S.M. 1179, C.S.M. 1180, AND OTHER COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

S.W. CORNER SEC. 31
FD. HARRISON MONUMENT
Y = 146,546.33
X = 319,255.53

COORDINATE TABLE – FOUND SURVEY MONUMENTS					
PT.#	STATION	OFFSET	Y	X	DESCRIPTION
6	16+88.95	60.55' LT.	148499.16	319400.45	FOUND ¾" ø REBAR
7	19+47.12	65.51' LT.	148512.38	319661.18	FOUND ¾" ø REBAR
8	20+41.02	65.89' LT.	148515.11	319755.04	FOUND ¾" ø REBAR
9	23+84.68	76.94' LT.	148516.35	320111.99	FOUND ¾" ø REBAR
10	25+07.16	107.80' LT.	148516.80	320249.20	FOUND ¾" ø REBAR

REVISION DATE 8–20–18 N.C. 10–12–18 N.C.	DATE: JULY 2, 2018 GRID FACTOR N/A	SCALE, FEET 0 50 100	HWY: CTH N COUNTY: CRAWFORD	R/W PROJECT NUMBER: 5496–00–04 CONSTRUCTION PROJECT NUMBER: 5496–00–74	PLAT SHEET 4.05 PS&E SHEET 83	E

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET FROM FINISHED C/L	Y	X
118	26+51.30	85.20' LT.	148440.58	320389.33
119	27+44.34	94.95' RT.	148238.22	320389.33
129	29+00.00	55.00' LT.	148279.48	320596.53
130	35+00.00	45.00' LT.	148232.01	321141.21
131	36+75.00	110.00' LT.	148319.03	321306.37
132	40+84.15	98.22' LT.	148360.17	321714.67
133	40+61.04	80.05' RT.	148180.33	321713.69
134	36+15.00	75.00' RT.	148127.84	321270.72
135	32+00.00	65.00' RT.	148086.32	320850.95
136	30+00.00	70.00' RT.	148122.08	320627.51
137	28+00.00	80.00' RT.	148224.45	320440.45

NOTE: EXISTING C/L OF CTH N WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT–OF–WAY FOR CTH N WAS BASED ON C.S.M. 1180 AND OTHER COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

N

4

4

P.L.

EAST LINE NW¼–SW¼

DILLMAN FARMS, LLC, A WISCONSIN LIMITED LIABILITY COMPANY

EAST LINE NE¼–SW¼

NE ¼ - SW ¼
SEC. 31, T8N, R6W

TOWN OF EASTMAN

LOT 48, CSM 1180

⑤ CRAWFORD COUNTY, A MUNICIPAL CORPORATION
W.D. DOC. 300247

STA. 26+90.59 MATCHLINE SEE SHEET 4.05

MATCHLINE SEE SHEET 4.07 STA. 40+76.29

PROPOSED ℄ CTH N

R/W

EXISTING ℄ CTH N

SLOPE INTERCEPTS

SCENIC RIVERS ENERGY COOPERATIVE

PT: 28+59.30

PC: 28+78.77

PT: 32+50.17

33.00'

33.00'

S53°31'56"E

N82°35'35"E

S34°33'56"E

2318.35'

CURVE 5

CURVE 6

118 119 129 130 131 132 133 134 135 136 137 11

26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00

CURVE 5 DATA
PI STA. = 25+41.13
Y = 148,461.79
X = 320,256.64
R = 1000.00
D = 5°43'46"
DELTA = 37°54'19"
L = 661.57
T = 343.40
C = 649.57
PC STA. = 21+97.73
Y = 148,453.17
X = 319,913.35
PT STA. = 28+59.30
Y = 148,257.68
X = 320,532.80

CURVE 6 DATA
PI STA. = 30+74.11
Y = 148,130.00
X = 320,705.55
R = 485.00
D = 11°48'49"
DELTA = 43°52'28"
L = 371.39
T = 195.34
C = 362.38
PC STA. = 28+78.77
Y = 148,246.10
X = 320,548.47
PT STA. = 32+50.17
Y = 148,155.18
X = 320,899.26

④ PHILIP J. TOBERMAN
DOC. 267394,
DOC. 241898

S¼ CORNER OF SEC. 31 TO PT. 118

COORDINATE TABLE – FOUND SURVEY MONUMENTS					
PT.#	STATION	OFFSET	Y	X	DESCRIPTION
11	40+89.44	148.96 LT.	148411.26	321714.71	FOUND ¾" ø REBAR

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
118 TO 129	S52°08'04"E	262.46'
129 TO 130	S85°01'10"E	546.74'
130 TO 131	N62°13'00"E	186.68'
131 TO 132	N84°14'47"E	410.37'
132 TO 133	S00°18'51"W	179.84'
133 TO 134	S83°14'31"W	446.07'
134 TO 135	S84°21'04"W	421.82'
135 TO 136	N80°54'23"W	226.28'
136 TO 137	N61°18'41"W	213.24'
137 TO 119	N74°55'27"W	52.94'
119 TO 118	N00°00'00"W	202.36'

T. 8 N. R. 7 W. R. 6 W. (36 31 1 6)

S.W. CORNER SEC. 31
FD. HARRISON MONUMENT
Y = 146,546.33
X = 319,255.53

SECTION LINE
SW CORNER OF SEC. 31 TO
S¼ CORNER SEC. 31
S89°39'09"E, 2449.16'

T. 8 N. R. 6 W. (31 6)

S¼ CORNER SEC. 31
FD. HARRISON MONUMENT
Y = 146,531.47
X = 321,704.65

REVISION DATE	DATE: JULY 2, 2018	SCALE, FEET 0 50 100	HWY: CTH N	R/W PROJECT NUMBER: 5496–00–04	PLAT SHEET 4.06	
8–20–18 N.C. 10–12–18 N.C.	GRID FACTOR N/A		COUNTY: CRAWFORD	CONSTRUCTION PROJECT NUMBER: 5496–00–74	PS&E SHEET 84	E

S:\Projects\C54320 Crawford Co. CTH N Reconstruct\RW\RW Plat Sheets.dwg PLOT DATE : 10/26/2018 8:23 AM PLOT BY : Stephanie PotterPLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS				
PT.#	STATION	OFFSET	Y	X
201	47+65.00	31.64' LT.	148350.39	322402.23
202	47+70.00	65.00' LT.	148384.05	322404.49
203	49+65.00	55.00' LT.	148384.43	322604.14
204	49+65.00	34.64' LT.	148364.08	322604.26

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
140 TO 141	N87°24'53"E	271.59'
143 TO 144	S88°15'53"E	100.02'
144 TO 187	N84°06'24"E	146.11'
187 TO 145	N49°27'52"E	73.66'
145 TO 146	S88°23'54"E	101.93'
146 TO 147	S00°24'00"W	202.40'
147 TO 148	S84°00'06"W	14.74'
148 TO 149	N27°53'32"W	51.48'
149 TO 150	S87°20'54"W	255.57'
150 TO 151	N86°47'05"W	294.17'
151 TO 133	S83°14'31"W	735.60'
133 TO 139	N00°18'51"E	114.19'

TLE LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
201 TO 202	N03°50'44"E	33.73'
202 TO 203	N89°53'21"E	199.65'
203 TO 204	S00°20'08"E	20.36'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET FROM FINISHED C/L	Y	X
132	40+84.15	98.22' LT.	148360.17	321714.67
133	40+61.04	80.05' RT.	148180.33	321713.69
139	40+76.29	33.11' LT.	148294.52	321714.31
140	44+50.96	42.77' LT.	148335.86	322088.33
141	47+22.37	32.84' LT.	148348.11	322359.64
142	48+69.46	32.58' LT.	148359.13	322507.23
143	49+90.44	34.24' LT.	148363.66	322630.14
144	50+90.00	33.05' LT.	148360.63	322730.12
145	52+90.00	100.00' LT.	148423.50	322931.44
146	53+91.93	99.22' LT.	148420.66	323033.33
147	53+94.62	103.16' RT.	148218.26	323031.91
148	53+80.00	105.00' RT.	148216.72	323017.26
149	53+55.00	60.00' RT.	148262.22	322993.18
150	51+00.00	77.00' RT.	148250.40	322737.88
151	48+00.00	55.00' RT.	148266.89	322444.18
187	52+35.00	51.00' LT.	148375.63	322875.45

NOTE: EXISTING C/L OF CTH N WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT–OF–WAY FOR CTH 'N' WAS BASED ON COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

N

4

4

TOWN OF EASTMAN

NW¼ - SE¼
SEC. 31, T8N, R6W

EAST LINE NE¼–SW¼

JOHN M. KAUTEN & WENDY K. KAUTEN, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY

⑨ JEFF & AMY JO SCHNEEBERGER
DOC. 318367

⑩ LYNDA J. SCHWANDT, AN UNMARRIED PERSON
W.D. DOC. 296440

201 SCENIC RIVERS ENERGY COOPERATIVE

202 CENTURYLINK, INC.

SCENIC RIVERS ENERGY COOPERATIVE

CENTURYLINK, INC.

TLE FOR DRIVEWAY CONSTRUCTION & SLOPES 0.12 ACRES

P.L.

PC: 40+73.41

PT: 41+21.02

PC: 48+13.37

PT: 50+17.29

EXISTING ℄ CTH N

PROPOSED ℄ CTH N

SLOPE INTERCEPTS

PRWC2 PRWC3 PRWC4

CURVE 7

CURVE 8

N85°19'14"E

S88°50'15"E

33.00'

36.33'

9.98' 5.59'

R/W

E–14

E–15&E–16

OH

G.

T

H.

MATCHLINE SEE SHEET 4.06 STA. 40+76.29

MATCHLINE SEE SHEET 4.08 STA. 53+93.25

1763.07'

S00°18'51"W

⑧ AARON M. HENDERSON & ANGELA L. HENDERSON, HUSBAND AND WIFE AS SURVIVORSHIP MARITAL PROPERTY
W.D. DOC. 296113

CURVE 7 DATA
PI STA. = 40+97.22
Y = 148,264.38
X = 321,739.24
R = 1000.00
D = 5°43'46"
DELTA = 2°43'39"
L = 47.60
T = 23.81
C = 47.60
PC STA. = 40+73.41
Y = 148,261.31
X = 321,715.64
PT STA. = 41+21.02
Y = 148,266.32
X = 321,762.97

CURVE 8 DATA
PI STA. = 49+15.42
Y = 148,331.13
X = 322,554.73
R = 2000.00
D = 2°51'53"
DELTA = 5°50'31"
L = 203.92
T = 102.05
C = 203.83
PC STA. = 48+13.37
Y = 148,322.80
X = 322,453.02
PT STA. = 50+17.29
Y = 148,329.06
X = 322,656.76

ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E–14	LYNDA J. SCHWANDT	STA. 49+77 – STA. 50+02, 18.2' – 23.5', LT.	CONCRETE RETAINING WALL
E–15	LYNDA J. SCHWANDT	STA. 53+63 – STA. 53+69, 12.6' – 15.6', LT.	FENCE
E–16	LYNDA J. SCHWANDT	STA. 53+47, 18.4', LT.	PRIVATE STREET SIGN (PACKER BACKER BLVD)

COORDINATE TABLE – FOUND SURVEY MONUMENTS					
PT.#	STATION	OFFSET	Y	X	DESCRIPTION
11	40+89.44	148.96 LT.	148411.26	321714.71	FOUND ¾" ø REBAR

PROPOSED RIGHT OF WAY CURVE TABLE (PRWC)							
CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
PRWC2	139-140	07°26'43"	188.54'	2897.79'	376.56'	376.29'	N83°41'32"E
PRWC3	141-142	03°22'10"	74.03'	2517.00'	148.02'	148.00'	N85°43'48"E
PRWC4	142-143	07°41'23"	61.64'	917.13'	123.09'	123.00'	N87°53'25"E

T. 8 N. R. 6 W. (31, 6)

S¼ CORNER SEC. 31
FD. HARRISON MONUMENT
Y = 146,531.47
X = 321,704.65

S¼ CORNER OF SEC. 31 TO PT. 139

SECTION LINE
S¼ CORNER OF SEC. 31 TO SE CORNER SEC. 31
S89°53'27"E, 2630.95'

T. 8 N. R. 6 W. (31, 32, 6, 5)

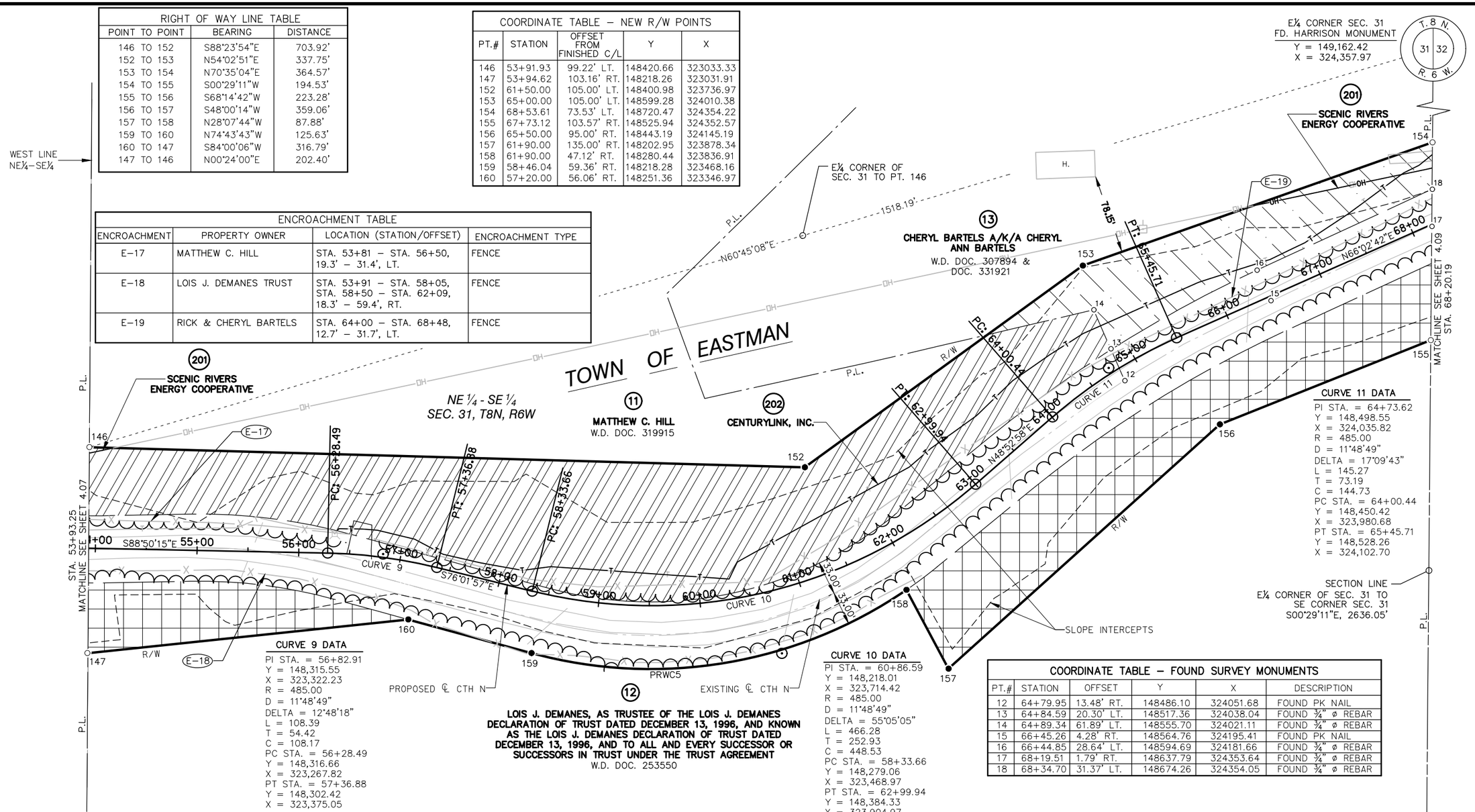
S.E. CORNER SEC. 31
FD. HARRISON MONUMENT
Y = 146,526.47
X = 324,335.59

REVISION DATE 8–20–18 N.C. 10–12–18 N.C.	DATE: JULY 2, 2018 GRID FACTOR N/A	SCALE, FEET 0 50 100	HWY: CTH N COUNTY: CRAWFORD	R/W PROJECT NUMBER: 5496–00–04 CONSTRUCTION PROJECT NUMBER: 5496–00–74	PLAT SHEET 4.07 PS&E SHEET 85	E

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
146 TO 152	S88°23'54"E	703.92'
152 TO 153	N54°02'51"E	337.75'
153 TO 154	N70°35'04"E	364.57'
154 TO 155	S00°29'11"W	194.53'
155 TO 156	S68°14'42"W	223.28'
156 TO 157	S48°00'14"W	359.06'
157 TO 158	N28°07'44"W	87.88'
159 TO 160	N74°43'43"W	125.63'
160 TO 147	S84°00'06"W	316.79'
147 TO 146	N00°24'00"E	202.40'

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET FROM FINISHED C/L	Y	X
146	53+91.93	99.22' LT.	148420.66	323033.33
147	53+94.62	103.16' RT.	148218.26	323031.91
152	61+50.00	105.00' LT.	148400.98	323736.97
153	65+00.00	105.00' LT.	148599.28	324010.38
154	68+53.61	73.53' LT.	148720.47	324354.22
155	67+73.12	103.57' RT.	148525.94	324352.57
156	65+50.00	95.00' RT.	148443.19	324145.19
157	61+90.00	135.00' RT.	148202.95	323878.34
158	61+90.00	47.12' RT.	148280.44	323836.91
159	58+46.04	59.36' RT.	148218.28	323468.16
160	57+20.00	56.06' RT.	148251.36	323346.97

ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E–17	MATTHEW C. HILL	STA. 53+81 – STA. 56+50, 19.3' – 31.4', LT.	FENCE
E–18	LOIS J. DEMANES TRUST	STA. 53+91 – STA. 58+05, STA. 58+50 – STA. 62+09, 18.3' – 59.4', RT.	FENCE
E–19	RICK & CHERYL BARTELS	STA. 64+00 – STA. 68+48, 12.7' – 31.7', LT.	FENCE

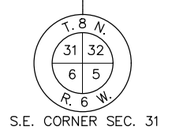


COORDINATE TABLE – FOUND SURVEY MONUMENTS					
PT.#	STATION	OFFSET	Y	X	DESCRIPTION
12	64+79.95	13.48' RT.	148486.10	324051.68	FOUND PK NAIL
13	64+84.59	20.30' LT.	148517.36	324038.04	FOUND ¾" ø REBAR
14	64+89.34	61.89' LT.	148555.70	324021.11	FOUND ¾" ø REBAR
15	66+45.26	4.28' RT.	148564.76	324195.41	FOUND PK NAIL
16	66+44.85	28.64' LT.	148594.69	324181.66	FOUND ¾" ø REBAR
17	68+19.51	1.79' RT.	148637.79	324353.64	FOUND ¾" ø REBAR
18	68+34.70	31.37' LT.	148674.26	324354.05	FOUND ¾" ø REBAR

PROPOSED RIGHT OF WAY CURVE TABLE (PRWC)							
CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
PRWC5	158-159	49°40'55"	206.04'	445.07'	385.93'	373.95'	S80°25'50"W

NOTE: EXISTING C/L OF CTH N WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT–OF–WAY FOR CTH 'N' WAS BASED ON COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).



S.E. CORNER SEC. 31
FD. HARRISON MONUMENT
Y = 146,526.47
X = 324,335.59

REVISION DATE 8–20–18 N.C. 10–12–18	DATE: JULY 2, 2018	SCALE, FEET 0 50 100	HWY: CTH N	R/W PROJECT NUMBER: 5496–00–04	PLAT SHEET 4.08
	GRID FACTOR N/A		COUNTY: CRAWFORD	CONSTRUCTION PROJECT NUMBER: 5496–00–74	PS&E SHEET 86 E

S:\Projects\C54320 Crawford Co. CTH N Reconstruct\RW\RW Plat Sheets.dwg PLOT DATE : 10/26/2018 8:24 AM PLOT BY : Stephanie PotterPLOT NAME : PLOT SCALE : 1:1

WISDOT/CADDS SHEET 75

W¼ CORNER SEC. 32
FD. HARRISON MONUMENT
Y = 149,162.42
X = 324,357.97

T. 8 N. / 31 32 / R. 6 W.

SECTION LINE
E¼ CORNER OF SEC. 31 TO
SE CORNER SEC. 31
S00°29'11"E, 2636.05'

W¼ CORNER OF
SEC. 32 TO PT. 154

S.W. CORNER SEC. 32
FD. HARRISON MONUMENT
Y = 146,526.47
X = 324,335.59

T. 8 N. / 31 32 6 1 / R. 6 W.

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS

PT.#	STATION	OFFSET	Y	X
205	202+40.00	70.00' RT.	149084.34	325131.32
206	202+00.00	53.06' RT.	149031.37	325137.51
207	76+87.85	155.00' LT.	148970.73	325188.86
208	77+60.00	150.00' LT.	148966.55	325261.06
209	77+70.00	134.35' LT.	148951.01	325271.23
210	78+15.00	134.20' LT.	148951.37	325316.23
211	78+35.00	123.64' LT.	148941.04	325336.35

ENCROACHMENT TABLE

ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E–20	RICK & CHERYL BARTELS	STA. 70+27, 12.5' – 15.5', LT.	LANDSCAPING TIMBERS
E–21	ROGER, JEANNE, AND RANDOLPH STRAM	STA. 81+27 – STA. 81+32, 123.6' – 126.8', LT.	LP TANK
E–25	DALE SLAMA	STA. 202+71 – STA. 205+00, 22.5' – 33.0', RT.	LP TANK

CURVE 15 DATA
PI STA. = 202+16.99
Y = 149,031.73
X = 325,100.77
R = 231.00
D = 24°48'12"
DELTA = 44°59'45"
L = 181.41
T = 95.67
C = 176.78
PC STA. = 201+21.32
Y = 148,936.07
X = 325,101.85
PT STA. = 203+02.73
Y = 149,098.62
X = 325,032.36

CURVE 12 DATA
PI STA. = 72+41.18
Y = 148,810.64
X = 324,738.26
R = 1000.00
D = 5°43'46"
DELTA = 23°18'30"
L = 406.81
T = 206.26
C = 404.01
PC STA. = 70+34.93
Y = 148,726.89
X = 324,549.77
PT STA. = 74+41.73
Y = 148,812.97
X = 324,944.51

CURVE 13 DATA
PI STA. = 100+84.82
Y = 148,469.74
X = 324,820.98
R = 231.00
D = 24°48'12"
DELTA = 35°15'05"
L = 142.12
T = 73.39
C = 139.89
PC STA. = 100+11.43
Y = 148,401.23
X = 324,794.65
PT STA. = 101+53.55
Y = 148,510.49
X = 324,882.02

CURVE 14 DATA
PI STA. = 104+21.63
Y = 148,659.33
X = 325,104.97
R = 231.00
D = 24°48'12"
DELTA = 56°54'37"
L = 229.45
T = 125.19
C = 220.13
PC STA. = 102+96.44
Y = 148,589.82
X = 325,000.85
PT STA. = 105+25.89
Y = 148,784.51
X = 325,103.58

COORDINATE TABLE – FOUND SURVEY MONUMENTS

PT.#	STATION	OFFSET	Y	X	DESCRIPTION
17	68+19.51	1.79' RT.	148637.79	324353.64	FOUND ¾" ø REBAR
18	68+34.70	31.37' LT.	148674.26	324354.06	FOUND ¾" ø REBAR
19	75+12.06	64.77' LT.	148878.52	325014.10	FOUND RR SPIKE
20	77+17.43	119.26' LT.	148935.33	325218.84	FOUND ¾" ø REBAR
21	76+80.60	163.76' LT.	148979.41	325181.51	FOUND ¾" ø REBAR
22	75+82.54	282.26' LT.	149096.80	325082.11	FOUND ¾" ø REBAR
23	76+60.23	278.83' LT.	149094.24	325159.84	FOUND ¾" ø REBAR
24	78+71.89	58.82' LT.	148876.64	325373.97	FOUND 1" ø IRON PIPE
25	78+81.84	90.41' LT.	148908.34	325383.57	FOUND RR SPIKE
26	78+84.93	125.22' LT.	148943.18	325386.26	FOUND ¾" ø REBAR
27	80+20.20	125.79' LT.	148945.28	325521.51	FOUND 1" ø IRON PIPE
28	81+23.63	126.95' LT.	148947.61	325624.92	FOUND 1" ø IRON PIPE

PROPOSED RIGHT OF WAY CURVE TABLE (PRWC)

CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
PRWC6	20–168	02°10'56"	24.15'	1268.00'	48.29'	48.29'	N86°34'25"E

COORDINATE TABLE – NEW R/W POINTS

PT.#	STATION	OFFSET FROM FINISHED C/L	Y	X
154	68+53.61	73.53' LT.	148720.47	324354.22
155	67+73.12	103.57' RT.	148525.94	324352.57
161	75+15.00	140.00' LT.	148953.78	325016.19
162	202+05.00	60.00' LT.	148995.86	325030.07
163	205+00.00	50.00' LT.	149200.79	324856.36
164	205+00.00	32.01' LT.	149213.65	324868.94
165	205+00.00	33.99' RT.	149260.85	324915.08
166	205+00.00	50.00' RT.	149272.29	324926.27
167	202+61.41	50.00' RT.	149096.22	325099.93
168	77+65.66	121.60' LT.	148938.21	325267.04
169	78+84.41	125.10' LT.	148943.05	325385.74
170	81+53.68	127.01' LT.	148948.01	325654.98
171	81+52.29	61.00' LT.	148881.98	325654.33
172	81+49.66	63.21' RT.	148757.75	325653.10
173	81+00.00	45.00' RT.	148775.40	325603.24
174	76+95.00	70.00' RT.	148745.83	325198.54
175	103+50.00	55.00' RT.	148586.93	325081.80
176	100+00.00	70.00' RT.	148365.45	324855.89
177	100+00.00	32.45' RT.	148378.92	324820.84
178	100+00.00	33.69' LT.	148402.65	324759.10

RIGHT OF WAY LINE TABLE

POINT TO POINT	BEARING	DISTANCE
154 TO 161	N70°35'04"E	701.88'
161 TO 162	N18°15'51"E	44.31'
162 TO 163	N40°17'12"W	268.65'
163 TO 164	N44°21'27"E	17.99'
164 TO 165	N44°21'27"E	66.00'
165 TO 166	N44°21'27"E	16.01'
166 TO 167	S44°36'14"E	247.31'
167 TO 22	N88°06'54"W	17.83'
22 TO 20	S40°15'19"E	211.58'
168 TO 169	N87°39'53"E	118.80'
169 TO 170	N88°56'46"E	269.28'
170 TO 172	S00°33'50"W	190.26'
172 TO 173	N70°30'38"W	52.90'
173 TO 174	S85°49'15"W	405.77'
174 TO 175	S36°18'16"W	197.17'
175 TO 176	S45°34'03"W	316.37'
176 TO 177	N68°58'39"W	37.55'
177 TO 178	N68°58'39"W	66.14'
178 TO 179	N24°41'41"E	384.90'
179 TO 155	S68°14'42"W	610.85'
155 TO 154	N00°29'11"E	194.53'

EASEMENT TABLE

OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
GENERAL TELEPHONE COMPANY OF WISCONSIN, A WISCONSIN CORPORATION	DOC. 194026, V.338, P.342	14, 16, & 19	10 FEET WIDE EASEMENT CENTERED ON FIRST BURIED CABLE IN THE NW¼–SW¼ AND SW¼–NW¼
GENERAL TELEPHONE COMPANY OF WISCONSIN, A WISCONSIN CORPORATION	DOC. 196321, V.349, P.223	14, 16, & 19	16 FEET WIDE EASEMENT CENTERED ON FIRST BURIED CABLE IN THE NW¼–SW¼ AND SW¼–NW¼
GENERAL TELEPHONE COMPANY OF WISCONSIN, A WISCONSIN CORPORATION	DOC. 191380, V.326, P.308	16, 19, 21, & 22	2 RODS WIDE EASEMENT SOUTH OF CTH N OVER THE EAST 460 FEET OF NW¼–SW¼ AND ALL OF NE¼–SW¼

NOTE: EXISTING C/L OF CTH N WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT–OF–WAY FOR CTH N WAS BASED ON C.S.M. 153 AND OTHER COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

SW¼ - NW¼ SEC. 32, T8N, R6W

NW¼ - SW¼ SEC. 32, T8N, R6W

(17) RONALD C. KRAMER & NIKKI D. KRAMER, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY
DOC. 245268, DOC. 317350, DOC. 245269, DOC. 317349

(18) JOHN F. WACHTER & NANCY M. WACHTER, HIS WIFE, AS TENANTS IN COMMON
V.405, P.181

TIMOTHY W. CLARK & LORI J. CLARK, HUSBAND AND WIFE, AS SURVIVORSHIP MARITAL PROPERTY

ROGER D. STRAM, JEANNE I. STRAM, & RANDOLPH C. STRAM AS JOINT TENANTS
DOC. 283771

NOTE: A ¾"ø IRON ROD WAS FOUND 0.13' N. & 0.52' E.

(14) DALE F. SLAMA, A SINGLE PERSON
W.D. DOC. 294280
Q.C.D. DOC. 269900

(201) SCENIC RIVERS ENERGY COOPERATIVE

(202) CENTURYLINK, INC.
GENERAL TELEPHONE COMPANY OF WISCONSIN (CENTURYLINK)
10 FEET WIDE EASEMENT DOC.#194026,
16 FEET WIDE EASEMENT DOC.#196321

(202) CENTURYLINK, INC.
GENERAL TELEPHONE COMPANY OF WISCONSIN (CENTURYLINK)
2 RODS WIDE EASEMENT SOUTH OF CTH N OVER THE EAST 460 FEET OF NW¼–SW¼ AND ALL OF NE¼–SW¼ DOC.#191380

(15) GREGORY L. TAYLOR & KELLI J. TAYLOR, HUSBAND & WIFE AS SURVIVORSHIP MARITAL PROPERTY
W.D. DOC. 326511

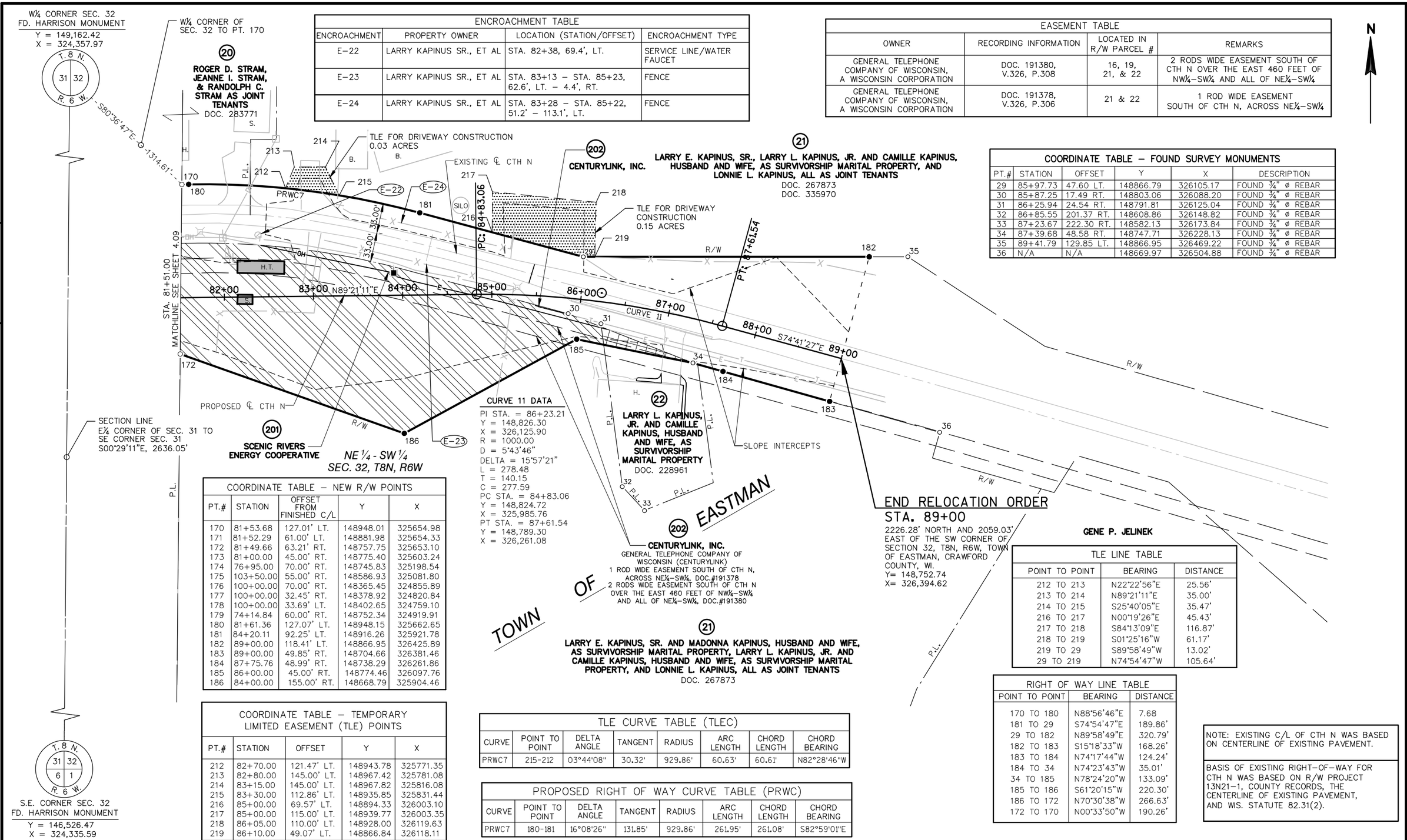
(16) JOHN H. KRAMER & CHERYL E. KRAMER, HUSBAND & WIFE, AS SURVIVORSHIP MARITAL PROPERTY
W.D. DOC. 285894

(19) MATTHEW C. HILL, A SINGLE PERSON
DOC. 317204

SLAMA LANE
DEMANES LANE
EXISTING ℄ CTH N
PROPOSED ℄ CTH N
PROPOSED ℄ SLAMA LANE
PROPOSED ℄ DEMANES LANE
EAST LINE NW¼–SW¼
TOWN OF EASTMAN
SLOPE INTERCEPTS
TLE FOR SLOPES 0.03 ACRES
TLE FOR DRIVEWAY CONSTRUCTION & SLOPES, 0.02 ACRES
TLE FOR DRIVEWAY CONSTRUCTION & SLOPES, 0.04 ACRES
STA. 76+00.46 (CTH "N")= STA. 200+00.00 (SLAMA LANE)
STA. 76+00.49 (CTH "N")= STA. 105+56.14 (DEMANES LANE)
BP: 200+00.00
EP: 105+56.14
PT: 105+25.89
PC: 201+21.32
PT: 203+02.73
PC: 70+34.93
PT: 74+41.73
PC: 100+11.43
PT: 101+53.55
PC: 102+96.44
PT: 74+41.73
N45°38'33"W
N00°38'11"W
N89°21'11"E
N66°02'42"E
N21°07'42"E
N56°16'26"E
S.
STA. 68+20.19 MATCHLINE SEE SHEET 4.08
STA. 81+51.00 MATCHLINE SEE SHEET 4.10
441.97'

REVISION DATE 8–20–18 N.C. 10–12–18 N.C.	DATE: JULY 2, 2018	SCALE, FEET 0 50 100	HWY: CTH N	R/W PROJECT NUMBER: 5496–00–04
	GRID FACTOR N/A		COUNTY: CRAWFORD	CONSTRUCTION PROJECT NUMBER: 5496–00–74

PLAT SHEET 4.09
PS&E SHEET 87 E



ENCROACHMENT TABLE			
ENCROACHMENT	PROPERTY OWNER	LOCATION (STATION/OFFSET)	ENCROACHMENT TYPE
E-22	LARRY KAPINUS SR., ET AL	STA. 82+38, 69.4', LT.	SERVICE LINE/WATER FAUCET
E-23	LARRY KAPINUS SR., ET AL	STA. 83+13 – STA. 85+23, 62.6', LT. – 4.4', RT.	FENCE
E-24	LARRY KAPINUS SR., ET AL	STA. 83+28 – STA. 85+22, 51.2' – 113.1', LT.	FENCE

EASEMENT TABLE			
OWNER	RECORDING INFORMATION	LOCATED IN R/W PARCEL #	REMARKS
GENERAL TELEPHONE COMPANY OF WISCONSIN, A WISCONSIN CORPORATION	DOC. 191380, V.326, P.308	16, 19, 21, & 22	2 RODS WIDE EASEMENT SOUTH OF CTH N OVER THE EAST 460 FEET OF NW¼–SW¼ AND ALL OF NE¼–SW¼
GENERAL TELEPHONE COMPANY OF WISCONSIN, A WISCONSIN CORPORATION	DOC. 191378, V.326, P.306	21 & 22	1 ROD WIDE EASEMENT SOUTH OF CTH N, ACROSS NE¼–SW¼

COORDINATE TABLE – FOUND SURVEY MONUMENTS					
PT.#	STATION	OFFSET	Y	X	DESCRIPTION
29	85+97.73	47.60 LT.	148866.79	326105.17	FOUND ¾" ø REBAR
30	85+87.25	17.49 RT.	148803.06	326088.20	FOUND ¾" ø REBAR
31	86+25.94	24.54 RT.	148791.81	326125.04	FOUND ¾" ø REBAR
32	86+85.55	201.37 RT.	148608.86	326148.82	FOUND ¾" ø REBAR
33	87+23.67	222.30 RT.	148582.13	326173.84	FOUND ¾" ø REBAR
34	87+39.68	48.58 RT.	148747.71	326228.13	FOUND ¾" ø REBAR
35	89+41.79	129.85 LT.	148866.95	326469.22	FOUND ¾" ø REBAR
36	N/A	N/A	148669.97	326504.88	FOUND ¾" ø REBAR

CURVE 11 DATA
PI STA. = 86+23.21
Y = 148,826.30
X = 326,125.90
R = 1000.00
D = 5°43'46"
DELTA = 15°57'21"
L = 278.48
T = 140.15
C = 277.59
PC STA. = 84+83.06
Y = 148,824.72
X = 325,985.76
PT STA. = 87+61.54
Y = 148,789.30
X = 326,261.08

COORDINATE TABLE – NEW R/W POINTS				
PT.#	STATION	OFFSET FROM FINISHED C/L	Y	X
170	81+53.68	127.01' LT.	148948.01	325654.98
171	81+52.29	61.00' LT.	148881.98	325654.33
172	81+49.66	63.21' RT.	148757.75	325653.10
173	81+00.00	45.00' RT.	148775.40	325603.24
174	76+95.00	70.00' RT.	148745.83	325198.54
175	103+50.00	55.00' RT.	148586.93	325081.80
176	100+00.00	70.00' RT.	148365.45	324855.89
177	100+00.00	32.45' RT.	148378.92	324820.84
178	100+00.00	33.69' LT.	148402.65	324759.10
179	74+14.84	60.00' RT.	148752.34	324919.91
180	81+61.36	127.07' LT.	148948.15	325662.65
181	84+20.11	92.25' LT.	148916.26	325921.78
182	89+00.00	118.41' LT.	148866.95	326425.89
183	89+00.00	49.85' RT.	148704.66	326381.46
184	87+75.76	48.99' RT.	148738.29	326261.86
185	86+00.00	45.00' RT.	148774.46	326097.76
186	84+00.00	155.00' RT.	148668.79	325904.46

COORDINATE TABLE – TEMPORARY LIMITED EASEMENT (TLE) POINTS				
PT.#	STATION	OFFSET	Y	X
212	82+70.00	121.47' LT.	148943.78	325771.35
213	82+80.00	145.00' LT.	148967.42	325781.08
214	83+15.00	145.00' LT.	148967.82	325816.08
215	83+30.00	112.86' LT.	148935.85	325831.44
216	85+00.00	69.57' LT.	148894.33	326003.10
217	85+00.00	115.00' LT.	148939.77	326003.35
218	86+05.00	110.00' LT.	148928.00	326119.63
219	86+10.00	49.07' LT.	148866.84	326118.11

TLE LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
212 TO 213	N22°22'56"E	25.56'
213 TO 214	N89°21'11"E	35.00'
214 TO 215	S25°40'05"E	35.47'
216 TO 217	N00°19'26"E	45.43'
217 TO 218	S84°13'09"E	116.87'
218 TO 219	S01°25'16"W	61.17'
219 TO 29	S89°58'49"W	13.02'
29 TO 219	N74°54'47"W	105.64'

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
170 TO 180	N88°56'46"E	7.68
181 TO 29	S74°54'47"E	189.86'
29 TO 182	N89°58'49"E	320.79'
182 TO 183	S15°18'33"W	168.26'
183 TO 184	N74°17'44"W	124.24'
184 TO 34	N74°23'43"W	35.01'
34 TO 185	N78°24'20"W	133.09'
185 TO 186	S61°20'15"W	220.30'
186 TO 172	N70°30'38"W	266.63'
172 TO 170	N00°33'50"W	190.26'

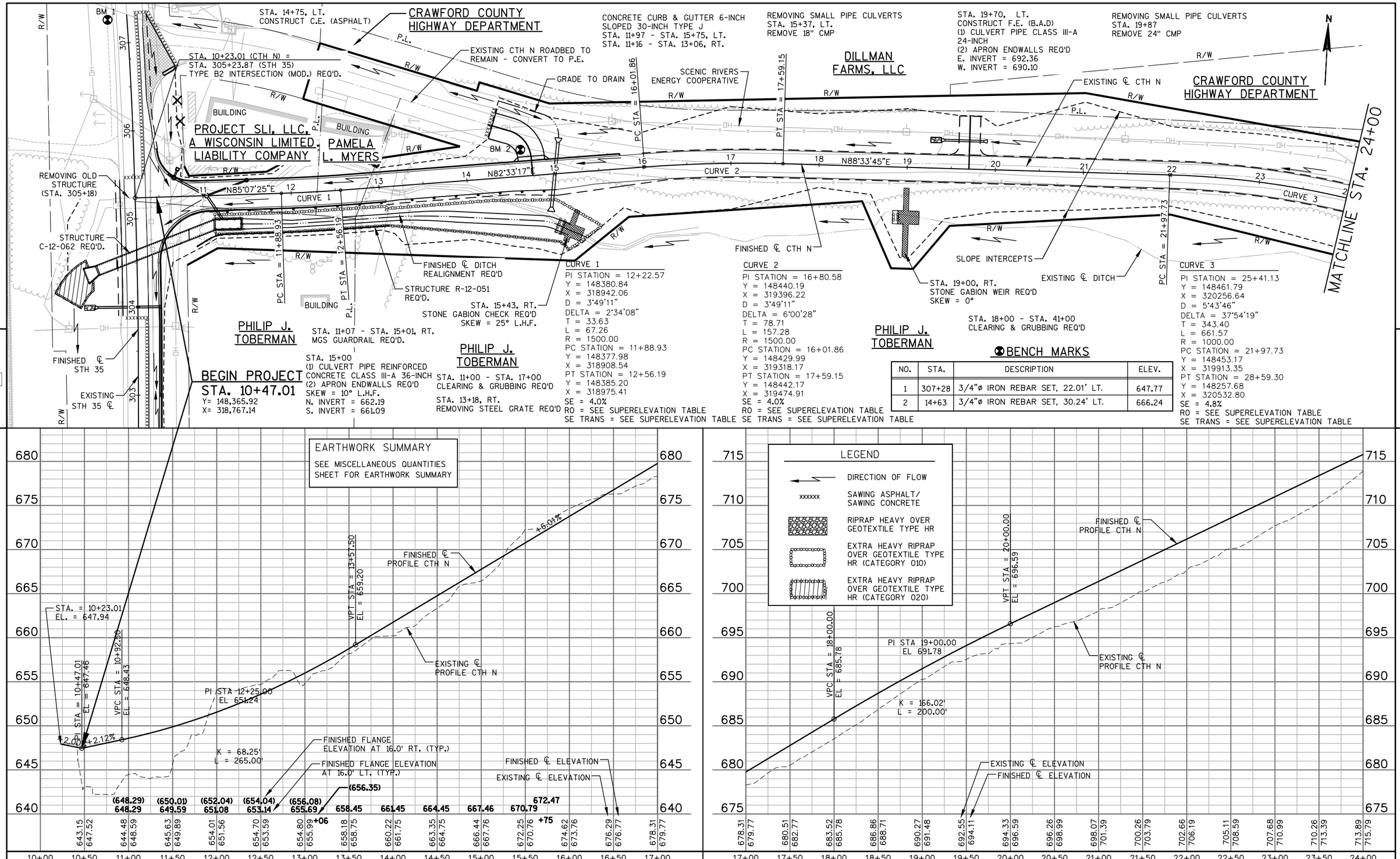
TLE CURVE TABLE (TLEC)							
CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
PRWC7	215-212	03°44'08"	30.32'	929.86'	60.63'	60.61'	N82°28'46"W

PROPOSED RIGHT OF WAY CURVE TABLE (PRWC)							
CURVE	POINT TO POINT	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
PRWC7	180-181	16°08'26"	131.85'	929.86'	261.95'	261.08'	S82°59'01"E

NOTE: EXISTING C/L OF CTH N WAS BASED ON CENTERLINE OF EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT–OF–WAY FOR CTH N WAS BASED ON R/W PROJECT 13N21–1, COUNTY RECORDS, THE CENTERLINE OF EXISTING PAVEMENT, AND WIS. STATUTE 82.31(2).

REVISION DATE 8–20–18 N.C. 10–12–18	DATE: JULY 2, 2018	SCALE, FEET 0 50 100	HWY: CTH N	R/W PROJECT NUMBER: 5496–00–04	PLAT SHEET 4.10	
	GRID FACTOR N/A		COUNTY: CRAWFORD	CONSTRUCTION PROJECT NUMBER: 5496–00–74	PS&E SHEET 88	E



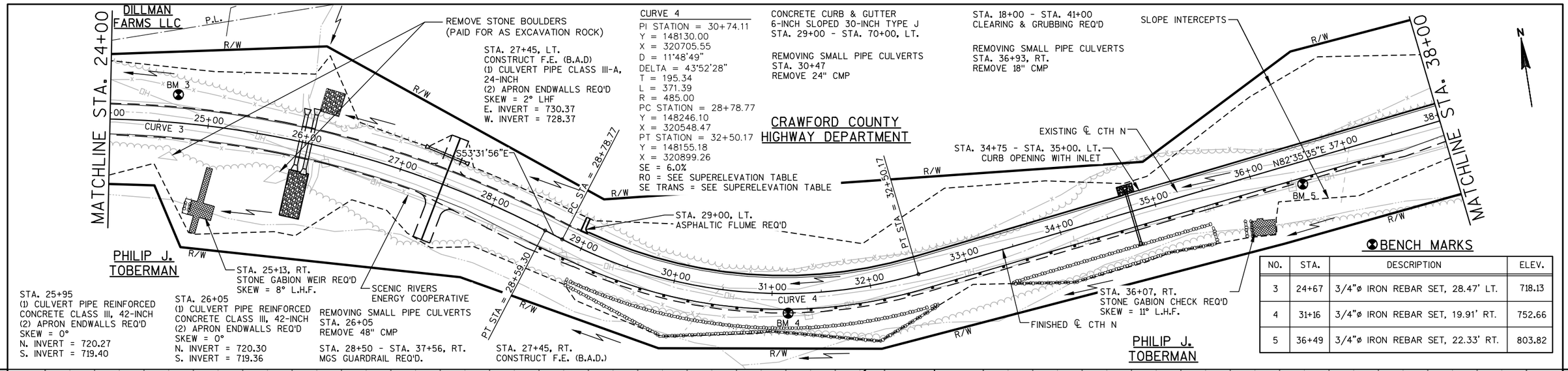
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PLAN & PROFILE: MAINLINE	SHEET 89	E

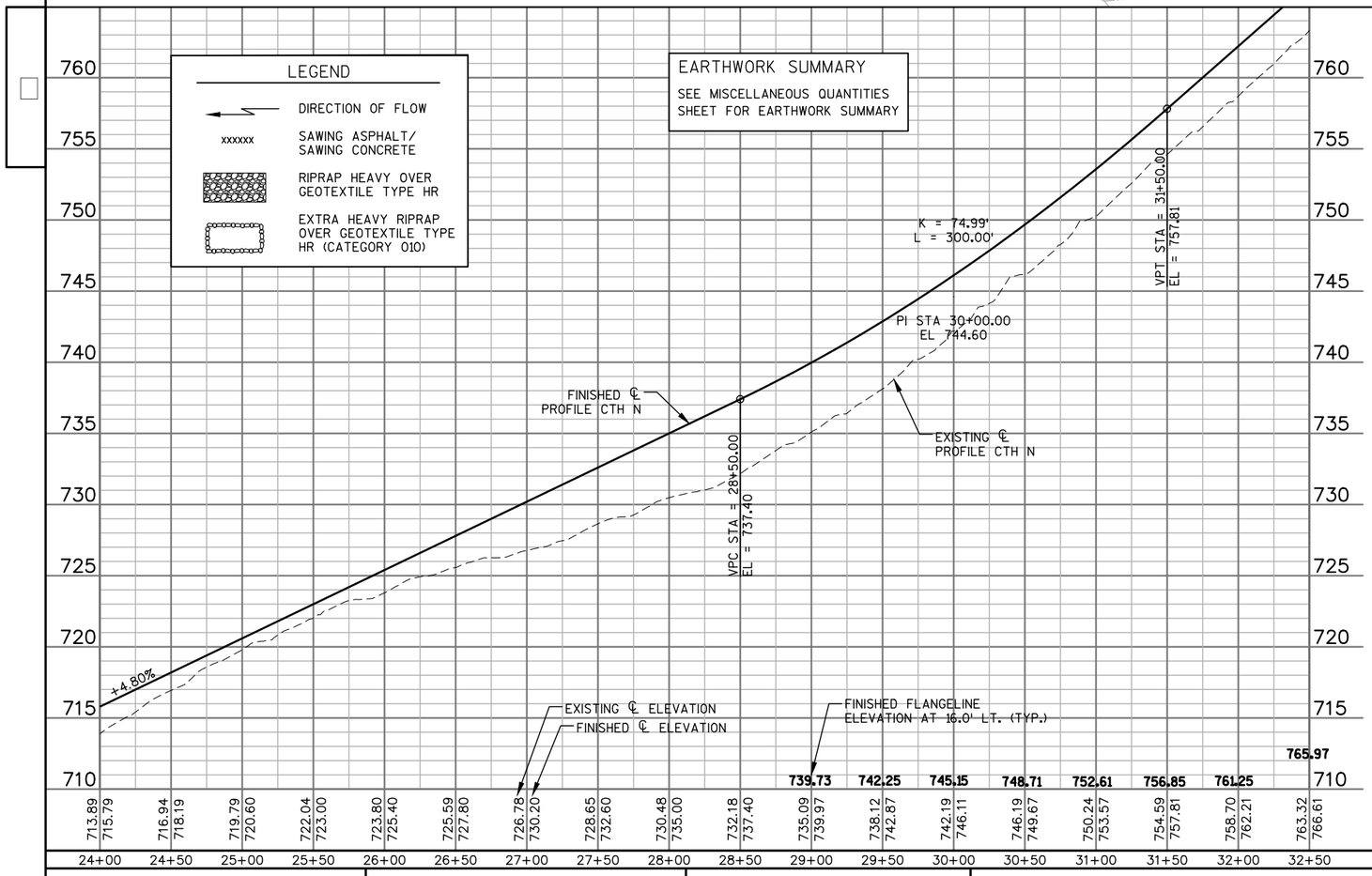
FILE NAME : S:±PROJECTS±C54320 CRAWFORD CO. CTH N RECONSTRUCT±SHEETSPLAN±PLAN & PROFILE SHEETS±P&P1.DWG
LAYOUT : P&P1

PLOT DATE : 10/26/2018
PLOT TIME : 10:16:06 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 6" = 1'-0"





PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PLAN & PROFILE: MAINLINE	SHEET 90	E

FILE NAME : S:±PROJECTS±C54320 CRAWFORD CO. CTH N RECONSTRUCT±SHEETSPLAN±PLAN & PROFILE SHEETS±P&P2.DWG
LAYOUT : P&P2
PLOT DATE : 10/26/2018
PLOT TIME : 10:17:25 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1:2

CRAWFORD COUNTY HIGHWAY DEPARTMENT

JOHN & WENDY KAUTEN

JEFF & AMY JO SCHNEEBERGER

LYNDA J. SCHWANDT

AARON & ANGELA HENDERSON

PHILIP J. TOBERMAN

MATCHLINE STA. 38+00

MATCHLINE STA. 52+00

CONCRETE CURB & GUTTER
6-INCH SLOPED 30-INCH TYPE J
STA. 29+00 - STA. 70+00, LT.

REMOVING SMALL PIPE CULVERTS
STA. 47+31, LT.
REMOVE 12" CMP

STA. 47+24, LT.
CONSTRUCT F.E., LT. (B.A.D.)

REMOVING SMALL PIPE CULVERTS
STA. 48+21, LT.
REMOVE 12" CMP

STA. 48+33, LT.
CONSTRUCT P.E., LT. (ASPHALT)

STA. 42+00 -
STA. 42+50, LT.
CURB OPENING WITH INLET

STA. 43+50 -
STA. 44+00, LT.
CURB OPENING WITH INLET

TLE REQ'D

EXISTING TIMBER RETAINING WALL TO REMAIN

CENTURYLINK

REMOVING RETAINING WALL REQ'D

R/W

P.I. STA = 40+73.41

PC STA = 48+13.37

PT STA = 41+21.02

PT STA = 50+17.29

CURVE 5

CURVE 6

39+00 N82°35'35"E 40+00

41+00 42+00 43+00 44+00 N85°19'14"E 45+00 46+00 47+00 48+00 49+00 50+00 51+00 S88°50'15"E 52+00

FINISHED ℄ CTH N

BM 6

EXISTING ℄ CTH N

SLOPE INTERCEPTS

SCENIC RIVERS ENERGY COOPERATIVE

STA. 41+00, RT.
STONE GABION CHECK REQ'D
SKEW = 0°

REMOVING SMALL PIPE CULVERTS
STA. 43+23
REMOVE 18" CMP

STA. 18+00 - STA. 44+00
CLEARING & GRUBBING REQ'D

STA. 51+00 -
STA. 51+50, LT.
CURB OPENING WITH INLET

REMOVING SMALL PIPE CULVERTS
STA. 49+66
REMOVE 24" CMP

STA. 50+00 - STA. 75+00
CLEARING & GRUBBING REQ'D

N

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
6	46+91	3/4"ø IRON REBAR SET, 23.70' RT.	869.32

LEGEND

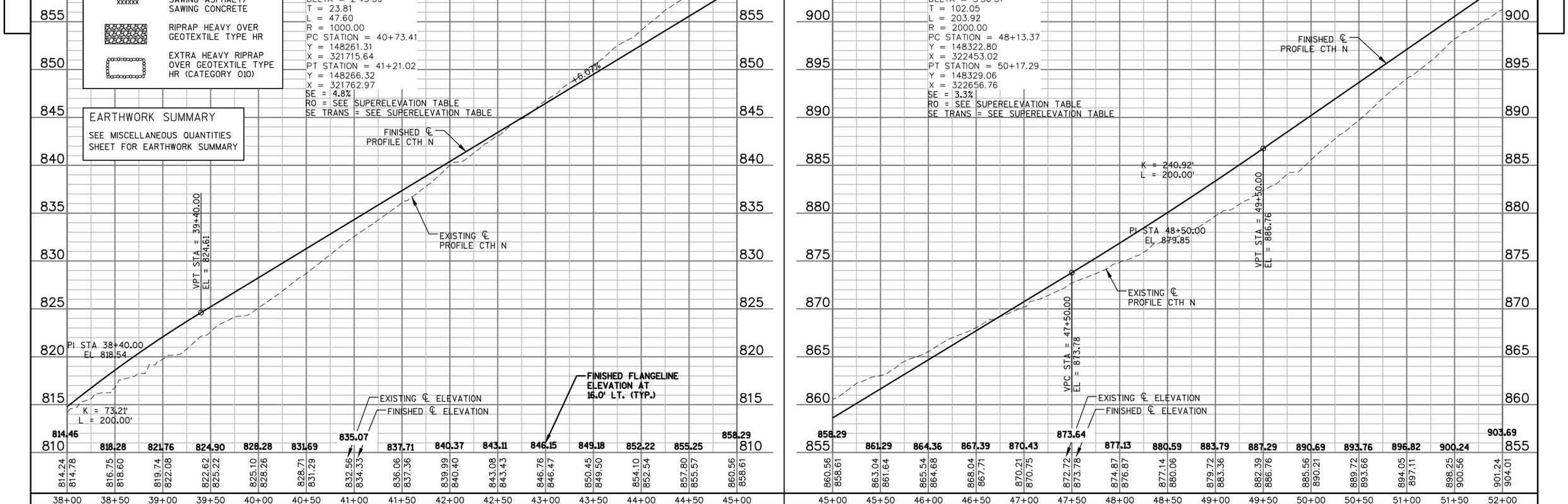
- DIRECTION OF FLOW
- xxxxxx SAWING ASPHALT/ SAWING CONCRETE
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)

EARTHWORK SUMMARY

SEE MISCELLANEOUS QUANTITIES SHEET FOR EARTHWORK SUMMARY

CURVE 5
PI STATION = 40+97.22
Y = 148264.38
X = 321739.24
D = 5°43'46"
DELTA = 2°43'39"
T = 23.81
L = 47.60
R = 1000.00
PC STATION = 40+73.41
Y = 148261.31
X = 321715.64
PT STATION = 41+21.02
Y = 148266.32
X = 321762.97
SE = 4.8%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 6
PI STATION = 49+15.42
Y = 148331.13
X = 322554.73
D = 2°51'53"
DELTA = 5°50'31"
T = 102.05
L = 203.92
R = 2000.00
PC STATION = 48+13.37
Y = 148322.80
X = 322453.02
PT STATION = 50+17.29
Y = 148329.06
X = 322656.76
SE = 3.3%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE



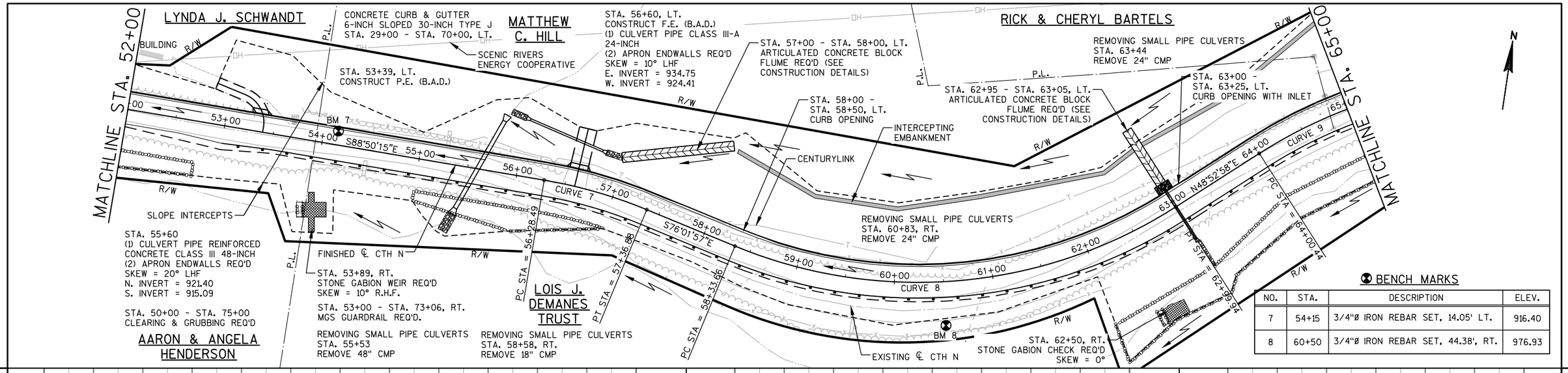
PROJECT NO: 5496-00-74 | HWY: CTH N | COUNTY: CRAWFORD | PLAN & PROFILE: MAINLINE | SHEET 91 E

FILE NAME : S:±PROJECTS±C54320 CRAWFORD CO. CTH N RECONSTRUCT±SHEETSPLAN±PLAN & PROFILE SHEETS±P&P3.DWG
LAYOUT : P&P3

PLOT DATE : 10/26/2018
PLOT TIME : 10:18:44 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1:2



BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
7	54+15	3/4"Ø IRON REBAR SET, 14.05' LT.	916.40
8	60+50	3/4"Ø IRON REBAR SET, 44.38', RT.	976.93

LEGEND

- DIRECTION OF FLOW
- XXXXXX — SAWING ASPHALT/ SAWING CONCRETE
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)

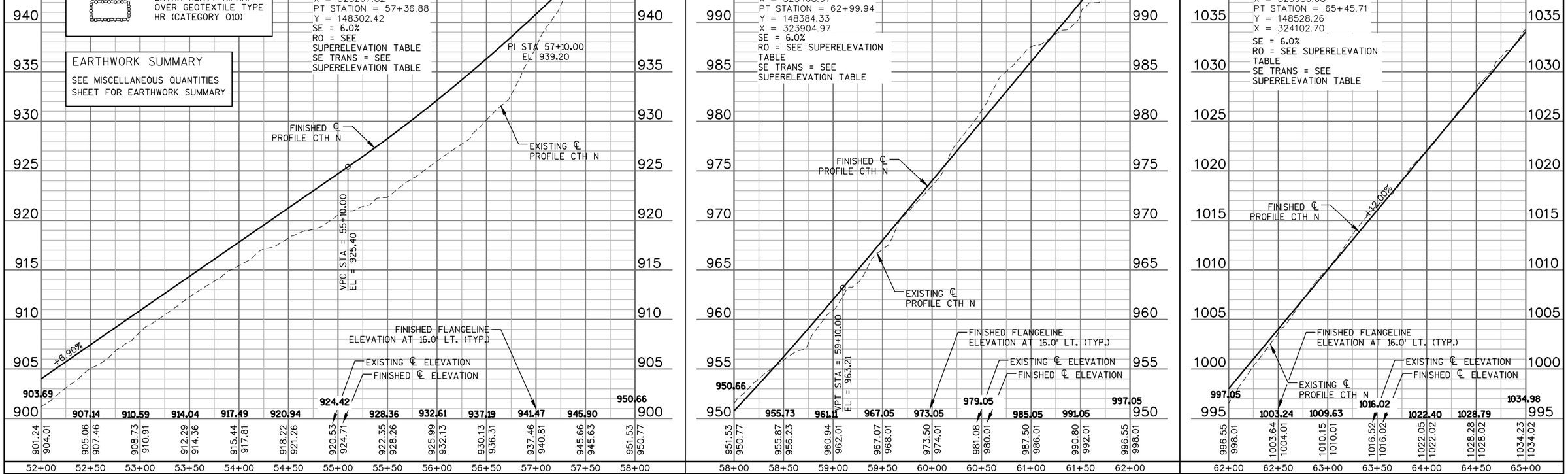
EARTHWORK SUMMARY

SEE MISCELLANEOUS QUANTITIES SHEET FOR EARTHWORK SUMMARY

CURVE 7
PI STATION = 56+82.91
Y = 148315.55
X = 323322.23
D = 11°48'49"
DELTA = 12°48'18"
T = 54.42
L = 108.39
R = 485.00
PC STATION = 56+28.49
Y = 148316.66
X = 323267.82
PT STATION = 57+36.88
Y = 148302.42
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 8
PI STATION = 60+86.59
Y = 148218.01
X = 323714.42
D = 11°48'49"
DELTA = 55°05'05"
T = 252.93
L = 466.28
R = 485.00
PC STATION = 58+33.66
Y = 148279.06
X = 323468.97
PT STATION = 62+99.94
Y = 148384.33
X = 323904.97
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 9
PI STATION = 64+73.62
Y = 148498.55
X = 324035.82
D = 11°48'49"
DELTA = 17°09'43"
T = 73.19
L = 145.27
R = 485.00
PC STATION = 64+00.44
Y = 148450.42
X = 323980.68
PT STATION = 65+45.71
Y = 148528.26
X = 324102.70
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PLAN & PROFILE: MAINLINE	SHEET 92 E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\PLAN & PROFILE SHEETS\P&P4.DWG
LAYOUT : P&P4
PLOT DATE : 10/26/2018
PLOT TIME : 10:20:03 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1:2

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
9	69+09	3/4"Ø IRON REBAR SET, 30.98' LT.	1085.24
10	76+50	3/4"Ø IRON REBAR SET, 110.38', LT.	1159.96

CONCRETE CURB & GUTTER
6-INCH SLOPED 30-INCH TYPE J
STA. 29+00 - STA. 70+00, LT.

STA. 69+50, LT.
CONSTRUCT P.E. (B.A.D.)

REMOVING SMALL PIPE CULVERTS
STA. 70+29
REMOVE 18" CMP

REMOVING SMALL PIPE CULVERTS
STA. 72+42
REMOVE 24" CMP

REMOVING SMALL PIPE CULVERTS
STA. 74+97, LT.
REMOVE 12" CMP

STA. 76+00.46 (CTH N) =
STA. 200+00.00 (SLAMA LANE)
TYPE C INTERSECTION REQ'D.

STA. 400+85, LT.
REMOVE P.E.

RICK & CHERYL BARTELS

DALE F. SLAMA

RONALD & NIKKI KRAMER

JOHN & NANCY WACHTER

LOIS J. DEMANES TRUST

GREGORY & KELLY TAYLOR

JOHN & CHERYL KRAMER

SCENIC RIVERS ENERGY COOPERATIVE

INTERCEPTING EMBANKMENT

EXISTING 12" CMP TO REMAIN

CENTURYLINK

EXISTING ℄ CTH N

EXISTING ℄ SLAMA LN

FINISHED ℄ SLAMA LN

BUILDING

TLE REQ'D

FINISHED ℄ OLD CTH N (WEST)

SLOPE INTERCEPTS

FINISHED ℄ CTH N

EXISTING ℄ DEMANES LN

FINISHED ℄ DEMANES LN

MATCHLINE STA. 65+00

MATCHLINE STA. 78+00

STA. 66+65 - STA. 66+90, LT.
CURB OPENING WITH INLET

STA. 50+00 - STA. 75+00
CLEARING & GRUBBING REQ'D

REMOVING SMALL PIPE CULVERTS
STA. 66+23
REMOVE 18" CMP

STA. 53+00 - STA. 73+06, RT.
MGS GUARDRAIL REQ'D.

STA. 76+00.49 (CTH N) =
STA. 105+56.14 (DEMANES LANE)
TYPE C INTERSECTION REQ'D.

① MEASURED BETWEEN FINISHED C/L CTH N & FINISHED C/L DEMANES LANE

② MEASURED BETWEEN FINISHED C/L CTH N & FINISHED C/L SLAMA LANE

CURVE 9
PI STATION = 64+73.62
Y = 148498.55
X = 324035.82
D = 11°48'49"
DELTA = 17°09'43"
T = 73.19
L = 145.27
R = 485.00
PC STATION = 64+00.44
Y = 148450.42
X = 323980.68
PT STATION = 65+45.71
Y = 148528.26
X = 324102.70
SE = 6.0%
RO = SEE SUPERELEV. TABLE
SE TRANS = SEE SUPERELEV. TABLE

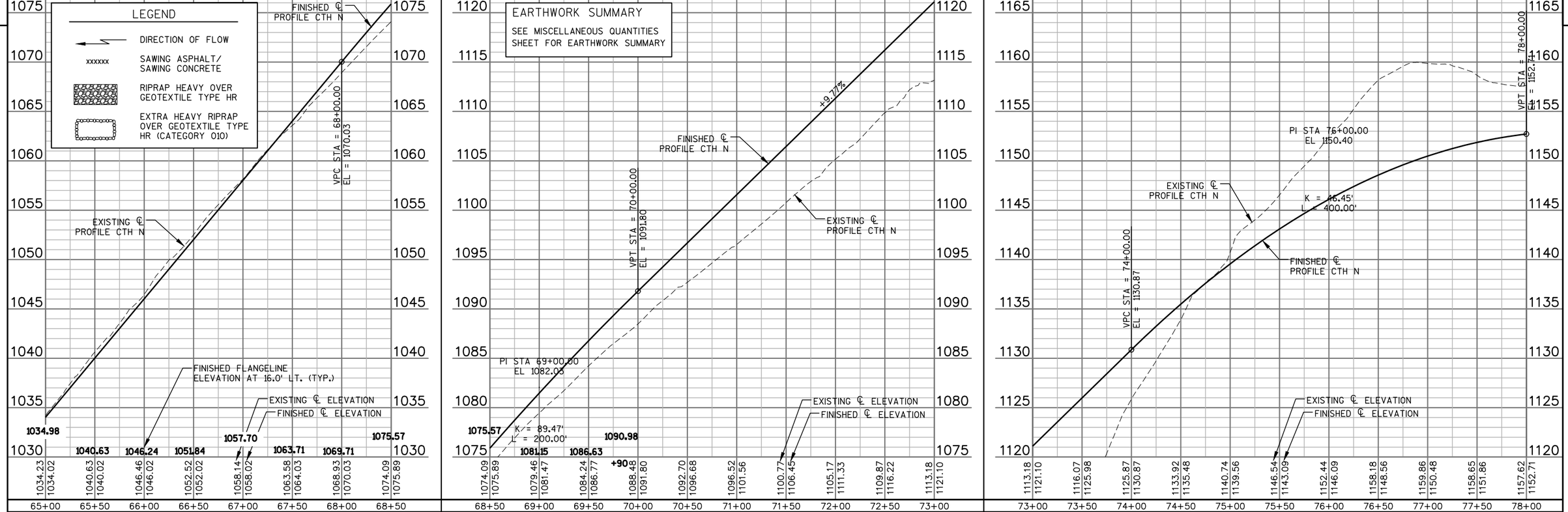
CURVE 10
PI STATION = 72+41.18
Y = 148810.64
X = 324738.26
D = 5°43'46"
DELTA = 23°18'30"
T = 206.26
L = 406.81
R = 1000.00
PC STATION = 70+34.93
Y = 148726.89
X = 324549.77
PT STATION = 74+41.73
Y = 148812.97
X = 324944.51
SE = 4.8%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

LEGEND

- DIRECTION OF FLOW
- xxxxxx — SAWING ASPHALT/ SAWING CONCRETE
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)

EARTHWORK SUMMARY

SEE MISCELLANEOUS QUANTITIES SHEET FOR EARTHWORK SUMMARY



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PLAN & PROFILE: MAINLINE

SHEET 93 E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETS\PLAN & PROFILE SHEETS\P&P5.DWG
LAYOUT : P&P5
PLOT DATE : 10/26/2018
PLOT TIME : 10:21:23 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1 IN:2 FT_XREF

JOHN & NANCY WACHTER

TIMOTHY & LORI CLARK

ROGER, JEANNE, & RANDOLPH STRAM

ROGER, JEANNE, & RANDOLPH STRAM

LARRY KAPINUS SR. & MADONNA KAPINUS

MATCHLINE STA. 78+00

BUILDING

TLE REQ'D

R/W

P.L.

EXISTING WELL TO REMAIN

EXISTING WATER FAUCET SERVICE LINE TO REMAIN

EXISTING ℄ CTH N

FINISHED ℄ OLD CTH N (EAST)

REMOVING SMALL PIPE CULVERTS
STA. 83+31, LT.
REMOVE 24" CMP

STA. 85+50, LT.
CONSTRUCT F.E. (B.A.D.)

CURVE 11
PI STATION = 86+23.21
Y = 148826.30
X = 326125.90
D = 5°43'46"
DELTA = 15°57'21"
T = 140.15
L = 278.48
R = 1000.00
PC STATION = 84+83.06
Y = 148824.72
X = 325985.76
PT STATION = 87+61.54
Y = 148789.30
X = 326261.08
SE = 4.8%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
11	78+88	3/4"Ø IRON REBAR SET, 73.85' LT.	1162.35
12	85+17	3/4"Ø IRON REBAR SET, 46.10', LT.	1153.17
13	92+05	3/4"Ø IRON REBAR SET, 17.00', LT.	1154.28

N

BM 11

BM 12

BM 13

FINISHED ℄ OLD CTH N

CENTURYLINK

SCENIC RIVER ENERGY COOPERATIVE

FINISHED ℄ CTH N

SLOPE INTERCEPTS

78+00 79+00 80+00 N89°21'11"E 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00

89°50'36"

STA = 84+83.06

CURVE 11

10:1

S74°41'27"E

PT STA = 87+61.54

STA. 85+90
15.0', RT.

STA. 86+00
16.0', RT.

STA. 88+68
15.0', RT.

STA. 88+58
16.0', RT.

STA. 78+00 - STA. 79+00
CLEARING & GRUBBING REQ'D

STA. 81+94, LT.
CLEARING & GRUBBING REQ'D

STA. 81+99, LT.
CLEARING & GRUBBING REQ'D

STA. 82+93, LT.
REMOVE P.E. (B.A.D.)

EXISTING TRAILER, SHED, HOLDING TANK, AND LP TANK TO BE REMOVED PRIOR TO CONSTRUCTION

STA. 83+00.00 (CTH N) =
STA. 570+00.00 (OLD CTH N) EAST
TYPE C (MOD.) INTERSECTION

STA. 84+20
(1) CULVERT PIPE REINFORCED CONCRETE CLASS III-A 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 10° L.H.F.
N. INVERT = 1150.56
S. INVERT = 1149.12

STA. 86+00 - STA. 88+50, RT.
CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J

STA. 85+50, RT.
CONSTRUCT F.E. (B.A.D.)

ASPHALTIC FLUME REQ'D

REMOVING CURB & GUTTER
STA. 85+90 - STA. 87+54, RT.

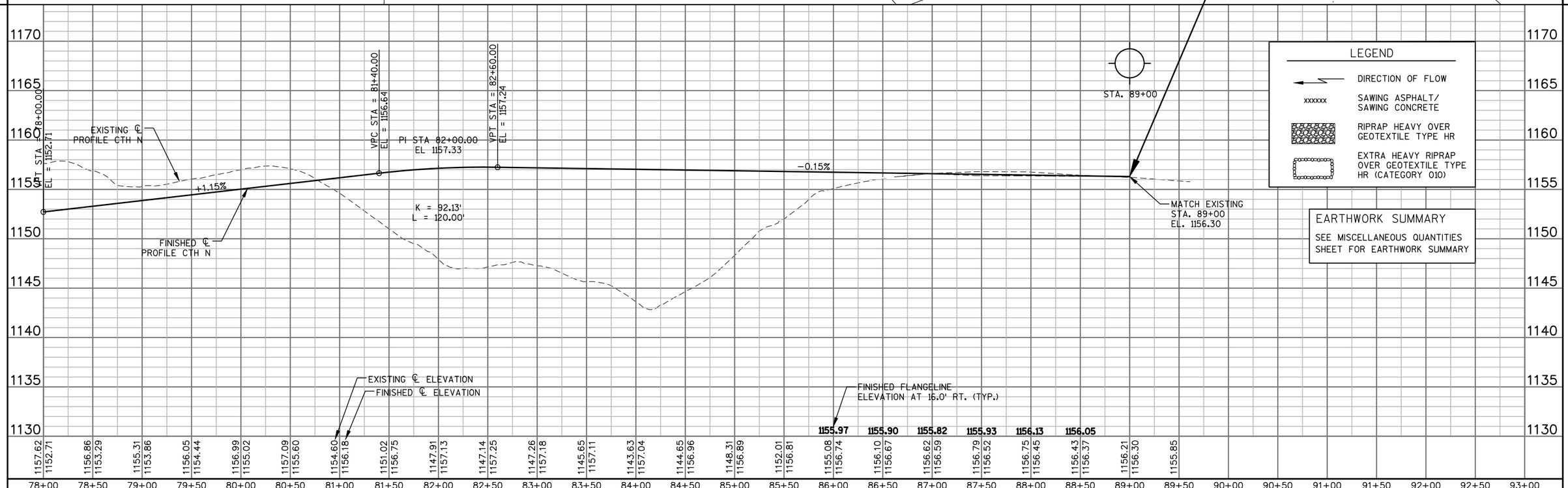
STA. 87+12, RT.
CONSTRUCT P.E. (CONCRETE)

MATTHEW C. HILL

LARRY KAPINUS SR. & MADONNA KAPINUS

LARRY KAPINUS JR. & CAMILLE KAPINUS

END PROJECT
STA. 89+00
Y= 148,752.74
X= 326,394.62



LEGEND

- DIRECTION OF FLOW
- xxxxxx SAWING ASPHALT/ SAWING CONCRETE
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)

EARTHWORK SUMMARY

SEE MISCELLANEOUS QUANTITIES SHEET FOR EARTHWORK SUMMARY

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PLAN & PROFILE: MAINLINE	SHEET 94	E

CURVE 12
PI STATION = 304+16.82
Y = 148257.22
X = 318752.47
D = 1°08'45"
DELTA = 1°44'18"
T = 75.86
L = 151.70
R = 5000.00
PC STATION = 303+40.97
Y = 148181.49
X = 318756.73
PT STATION = 304+92.66
Y = 148332.80
X = 318745.92
SE = N.C.
RO = N/A
SE TRANS = N/A

CURVE 13
PI STATION = 306+81.41
Y = 148520.83
X = 318729.61
D = 1°25'57"
DELTA = 2°51'03"
T = 99.54
L = 199.03
R = 4000.00
PC STATION = 305+81.87
Y = 148421.67
X = 318738.21
PT STATION = 307+80.90
Y = 148619.45
X = 318716.09
SE = MATCH EXISTING
RO = MATCH EXISTING
SE TRANS = MATCH EXISTING

REMOVING OLD STRUCTURE (STA. 305+18)
STRUCTURE C-12-062 REQ'D.
STA. 10+23.01 (CTH N) = STA. 305+23.87 (STH 35) TYPE B2 INTERSECTION (MOD.) REQ'D.
CENTURYLINK (TYP.)
EXISTING 12" CMP TO REMAIN
STA. 304+00 -STA. 305+00 CLEARING & GRUBBING REQ'D
REMOVING GUARDRAIL STA. 303+70 - STA. 305+69, LT. STA. 304+18 - STA. 305+97, RT.
STA. 301+65 - STA. 305+09, RT. CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D
STA. 305+41 - STA. 305+79, RT. CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D
STA. 306+07, RT. CLEARING & GRUBBING REQ'D
REMOVING CURB & GUTTER STA. 306+29 - STA. 306+71, RT.
EXISTING STH 35 ℄
N3°13'05"W
N4°57'23"W
N7°48'26"W
90°4'48"
PC STA = 303+40.97
PT STA = 304+92.66
PC STA = 305+81.87
PT STA = 307+80.90
CURVE 12
CURVE 13
BM 1
R/W
SCENIC RIVERS ENERGY COOPERATIVE
SLOPE INTERCEPT (TYP.)
STRUCTURE R-12-051 REQ'D
FINISHED ℄ CTH N
PC STA = 11+88.93
PT STA = 12+56.19
N85°07'25"E
PROJECT SLI, LLC
PROJECT SLI, LLC
PHILIP J. TOBERMAN
PAMELA MYERS
BUILDING
P.L.

BEGIN CONSTRUCTION
STA. 301+65
Y= 148,005.80
X= 318,766.61

END CONSTRUCTION
STA. 307+31
Y= 148,569.97
X= 318,722.56

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	307+28	3/4"ø IRON REBAR SET, 22.01' LT.	647.77

LEGEND
- DIRECTION OF FLOW
- xxxxxx SAWING ASPHALT/ SAWING CONCRETE
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 020)

EARTHWORK SUMMARY
SEE MISCELLANEOUS QUANTITIES SHEET FOR EARTHWORK SUMMARY

FINISHED ℄ PROFILE STH 35
+0.78%
MATCH EXISTING STA. 303+90 EL. 646.90
MATCH EXISTING STA. 305+45 EL = 648.10
EXISTING ℄ PROFILE STH 35
EXISTING ℄ ELEVATION
FINISHED ℄ ELEVATION

NOTE: SEE INTERSECTION DETAIL FOR CONCRETE CURB & GUTTER FLANGE LINE ELEVATIONS.

298+50	299+00	299+50	300+00	300+50	301+00	301+50	302+00	302+50	303+00	303+50	304+00	304+50	305+00	305+50	306+00	306+50	307+00	307+50	308+00	308+50	309+00	309+50	310+00	310+50	311+00	311+50	312+00	312+50	313+00
			646.46	646.51	646.81	646.50	646.46	646.29	646.28	646.61	646.98	646.97	647.41	647.36	647.88	647.75	648.14	648.47	648.57	648.74	648.95	649.15	649.50							

670 665 660 655 650 645 640 635 630

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PLAN & PROFILE: STH 35	SHEET 95	E

FILE NAME : S:±PROJECTS±C54320 CRAWFORD CO. CTH N RECONSTRUCT±SHEETSPLAN±PLAN & PROFILE SHEETS±P&P STH 35.DWG
LAYOUT : STH 35
PLOT DATE : 10/26/2018
PLOT TIME : 10:26:53 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 6" = 1'-0"

CURVE 14
PI STATION = 100+84.82
Y = 148469.74
X = 324820.98
D = 24°48'12"
DELTA = 35°15'05"
T = 73.39
L = 142.12
R = 231.00
PC STATION = 100+11.43
Y = 148401.23
X = 324794.65
PT STATION = 101+53.55
Y = 148510.49
X = 324882.02
SE = 2.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

CURVE 15
PI STATION = 104+21.63
Y = 148659.33
X = 325104.97
D = 24°48'12"
DELTA = 56°54'37"
T = 125.19
L = 229.45
R = 231.00
PC STATION = 102+96.44
Y = 148589.82
X = 325000.85
PT STATION = 105+25.89
Y = 148784.51
X = 325103.58
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
10	76+50	3/4"ø IRON REBAR SET, 110.38' LT.	1159.96
11	78+88	3/4"ø IRON REBAR SET, 73.85' LT.	1162.35

GREGORY & KELLY TAYLOR

REMOVING SMALL PIPE CULVERTS
STA. 102+65, LT.
REMOVE 18" CMP

BUILDING

EXISTING ℄ DEMANES LN

R/W

N21°01'21"E

100+00 (B.A.D.)

CURVE 14

101+00

102+00

103+00

104+00

105+00

PT STA = 74+41.73

PT STA = 105+25.89

N56°16'26"E

SCENIC RIVER ENERGY COOPERATIVE

PC STA = 100+11.43

PT STA = 101+53.55

PC STA = 102+96.44

SLOPE INTERCEPTS

FINISHED ℄ DEMANES LN

CURVE 15

N0°38'11"W

JOHN & CHERYL KRAMER

STA. 100+00 - STA. 105+00
CLEARING & GRUBBING REQ'D

STA. 102+00
(1) CULVERT PIPE CLASS III-A, 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 0°
SE INVERT = 1137.62
NW INVERT = 1135.88

STA. 76+00.49 (CTH N)=
STA. 105+56.14 (DEMANES LN)
TYPE C INTERSECTION REQ'D

DALE F. SLAMA

CENTURYLINK

EXISTING ℄ CTH N

FINISHED ℄ SLAMA LN

R/W

74+00

75+00

PC STA = 201+21.32

PT STA = 203+02.73

203+00

202+00

201+00

200+00

N0°38'49"W

90°0'37"

BM 10

TLE REQ'D

RONALD & NIKKI KRAMER

EXISTING ℄ SLAMA LN

P.I.

BUILDING

TLE REQ'D

PC STA = 400+51.10

PT STA = 400+78.10

PC STA = 401+50.77

PT STA = 401+79.74

401+00

402+00

END CONSTRUCTION
STA. 105+39.14
Y= 148,797.76
X= 325,103.44

BUILDING

JOHN & NANCY WACHTER

77+00 N89°21'11"E 78+00

TIMOTHY & LORI CLARK

BUILDING

BM 11

FINISHED ℄ CTH N

① MEASURED BETWEEN FINISHED C/L CTH N & FINISHED C/L DEMANES LANE

BEGIN CONSTRUCTION
STA. 100+00
Y= 148,390.56
X= 324,790.55

STA. 100+00

STA. 105+39.14

EXISTING ℄ PROFILE DEMANES LN

K = 26.66'
L = 125.00'

3.46%

+1.23%

+2.00%

PI STA 100+82.53
EL 1140.15

PI STA = 105+39.14
EL = 1145.78

MATCH EXISTING
STA. 100+00
EL. 1143.00

VPC STA = 100+20.03
EL = 1142.31

VPT STA = 101+45.03
EL = 1140.92

FINISHED ℄ PROFILE DEMANES LN

STA. 105+56.14
EL. 1146.12

EXISTING ℄ ELEVATION

FINISHED ℄ ELEVATION

| | | |

JOHN & CHERYL KRAMER

DALE F. SLAMA

MATTHEW C. HILL

RONALD & NIKKI KRAMER

PC STA = 102+96.44

N56°16'W

103+00

104+00

105+00

200+50

N0°38'11"W

N0°38'49"W

P.I.

R/W

EXISTING ℄ DEMANES LN

FINISHED ℄ DEMANES LN

PT STA = 74+41.73

74+00

75+00

CENTURYLINK

EXISTING ℄ CTH N

STA. 76+00.46 (CTH N)=
STA. 200+00.00 (SLAMA LN)
TYPE C INTERSECTION REQ'D

SCENIC RIVER ENERGY COOPERATIVE

N45°38'33"W

205+00 (B.A.D.)

204+00

203+00

202+00

201+00

400+00

CURVE 16

PC STA = 400+51.10

PT STA = 400+78.10

BM 10

201.22

FINISHED ℄ SLAMA LN

SLOPE INTERCEPTS

PT STA = 203+02.73

PC STA = 201+22.73

PC STA = 401+50.77

PT STA = 401+79.74

77+00

78+00

401+00

402+00

N89°21'11"E

FINISHED ℄ CTH N

EXISTING ℄ SLAMA LN

BUILDING

FINISHED ℄ OLD CTH N (WEST)

① 90°00'00" 105+25.89

① MEASURED BETWEEN FINISHED C/L CTH N & FINISHED C/L SLAMA LANE

STA. 200+50
(1) CULVERT PIPE CLASS III-A, 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 0°
E. INVERT = 1143.38
W. INVERT = 1139.98

STA. 201+00 - STA. 202+00
CLEARING & GRUBBING REQ'D

REMOVING SMALL PIPE CULVERTS
STA. 201+31, RT.
REMOVE 12" CMP

CURVE 16
PI STATION = 202+16.99
Y = 149031.73
X = 325100.77
D = 24°48'12"
DELTA = 44°59'45"
T = 95.67
L = 181.41
R = 231.00
PC STATION = 201+21.32
Y = 148936.07
X = 325101.85
PT STATION = 203+02.73
Y = 149098.62
X = 325032.36
SE = 6.0%
RO = SEE SUPERELEVATION TABLE
SE TRANS = SEE SUPERELEVATION TABLE

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
10	76+50	3/4"Ø IRON REBAR SET, 110.38' LT.	1159.96

BEGIN CONSTRUCTION
STA. 200+17
Y= 148,831.76
X= 325,103.03

END CONSTRUCTION
STA. 205+00
Y= 149,236.54
X= 324,891.32

STA. 202+45, RT.
CONSTRUCT P.E. (B.A.D.)
(1) CULVERT PIPE CLASS III-A, 24-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 9° RHF
N. INVERT = 1157.38
S. INVERT = 1154.11

LEGEND

- DIRECTION OF FLOW
- xxxxxx SAWING ASPHALT/ SAWING CONCRETE
- RIPRAP HEAVY OVER GEOTEXTILE TYPE HR
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 010)
- EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR (CATEGORY 020)

EARTHWORK SUMMARY

SEE MISCELLANEOUS QUANTITIES SHEET FOR EARTHWORK SUMMARY

STA. 200+17
EL = 1145.78

PI STA = 200+17.00
EL = 1145.78

VPC STA = 200+27.05
EL = 1145.99

-2.00%

1.14%

STA. 200+00
EL. 1146.12

PI STA 201+04.55
EL 1147.65

K = 26.64'
L = 155.00'

VPT STA = 201+82.05
EL = 1153.82

+7.96%

VPC STA = 202+39.37
EL = 1158.38

PI STA 203+64.37
EL 1168.33

K = 22.19'
L = 250.00'

VPT STA = 204+89.37
EL = 1164.19

4.98%

MATCH EXISTING
STA. 205+00
EL. 1163.84

STA. 205+00

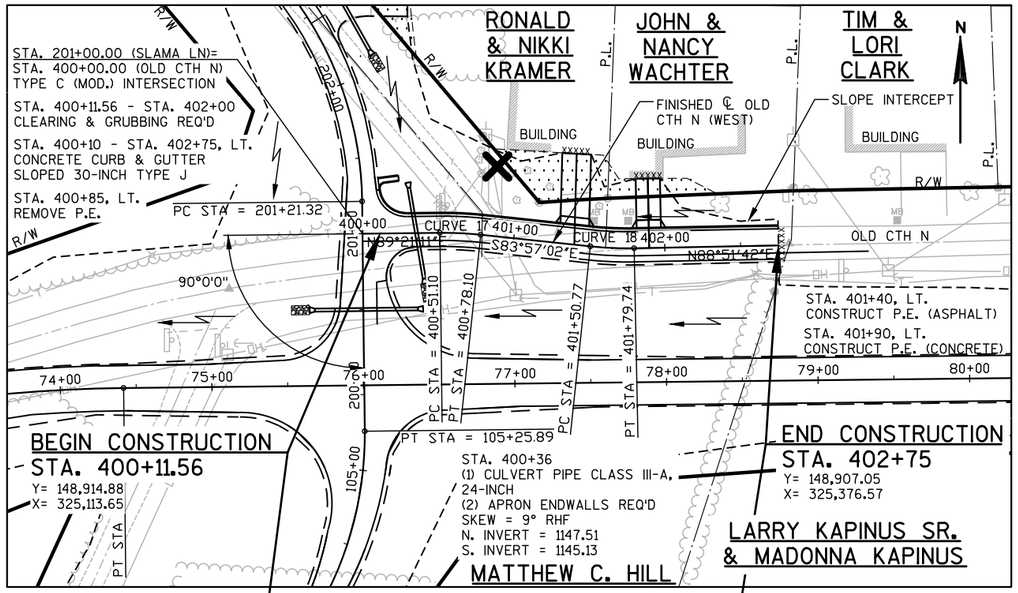
EXISTING ℄ PROFILE SLAMA LN

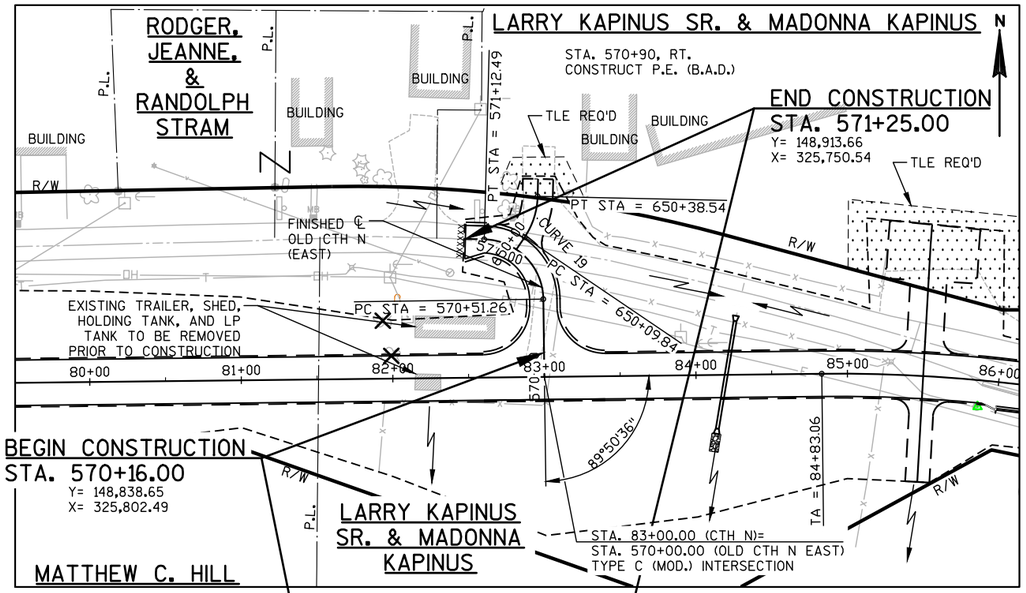
FINISHED ℄ PROFILE SLAMA LN

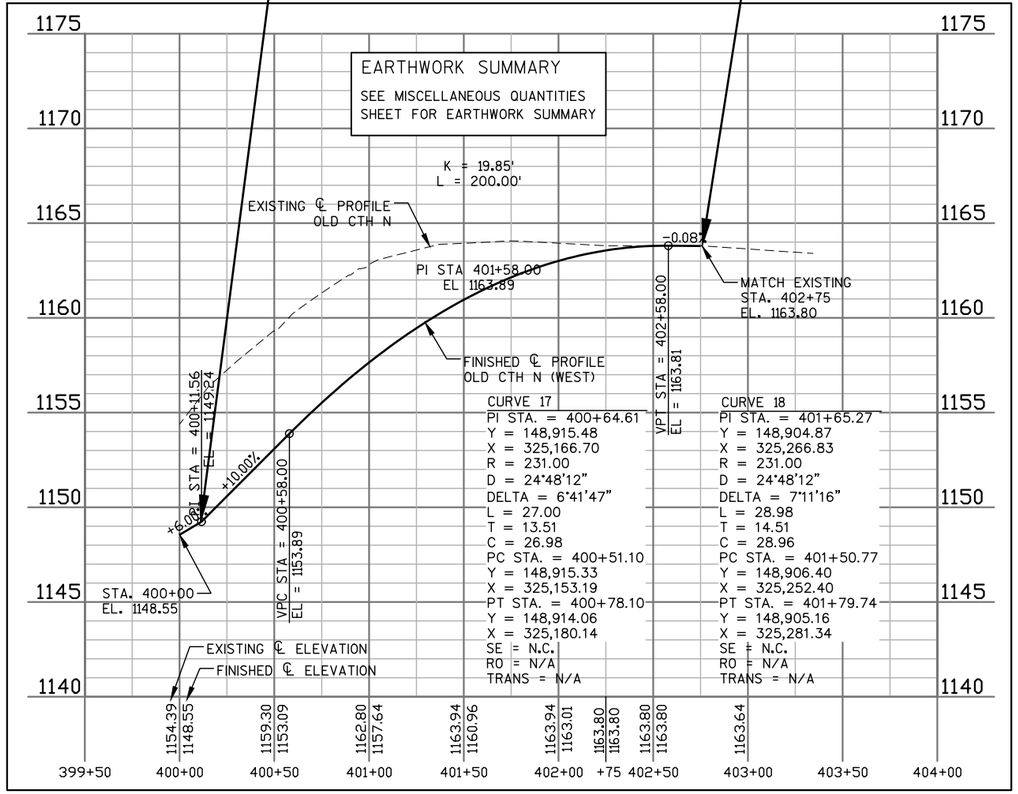
EXISTING ℄ ELEVATION

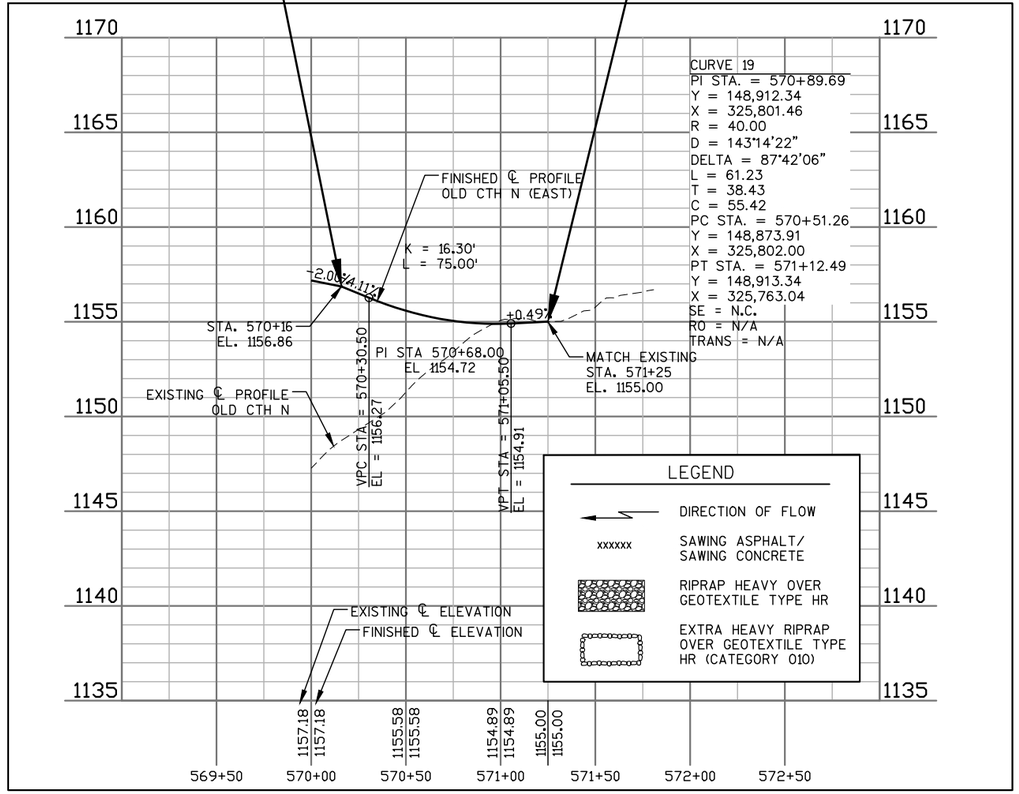
FINISHED ℄ ELEVATION

| | | |









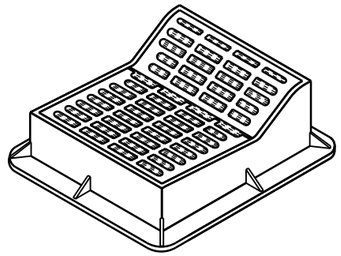
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PLAN & PROFILE: OLD CTH N (WEST) & OLD CTH N (EAST)	SHEET 98	E

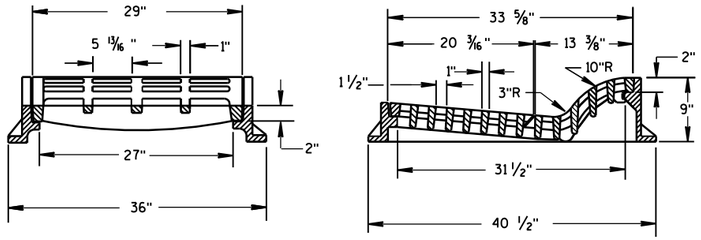
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\SHEETSPLAN\PLAN & PROFILE SHEETS\OLD CTH N PPS.DWG
LAYOUT : LAYOUT
PLOT DATE : 10/26/2018
PLOT TIME : 10:28:42 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 6" = 1'-0"_XREF

Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-02	INLETS MEDIAN 1 AND 2 GRATE
08D01-20A	CONCRETE CURB & GUTTER
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
12A03-10	NAME PLATE (STRUCTURES)
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D03-04	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D33-04	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

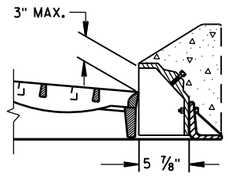
6





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

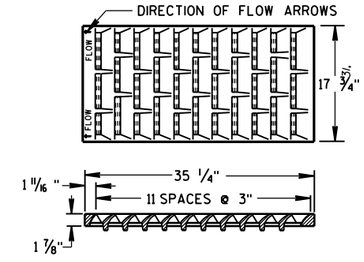
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

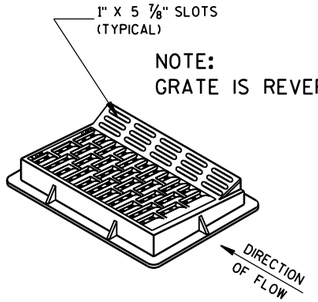
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

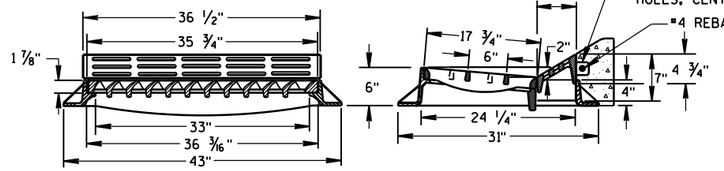
GENERAL NOTES

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

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



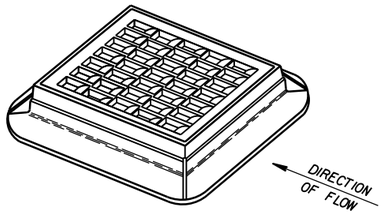


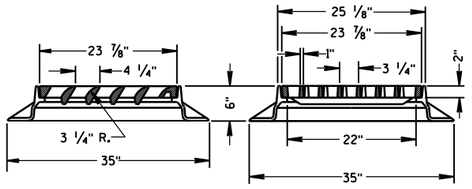


TYPE "HM"

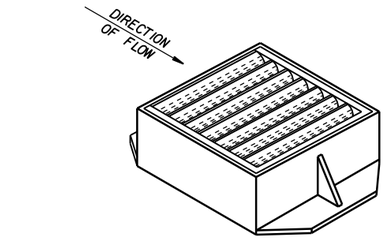
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

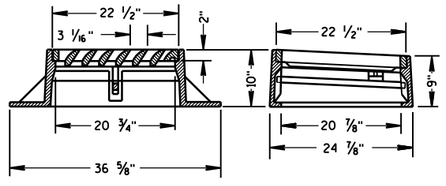
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



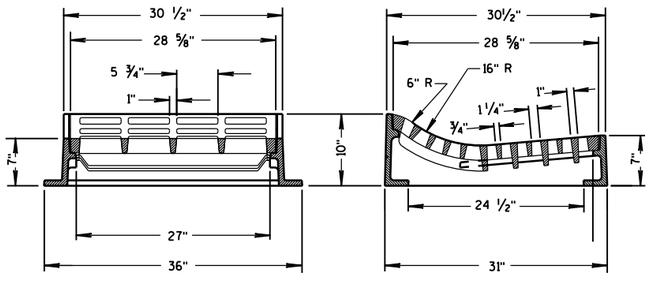


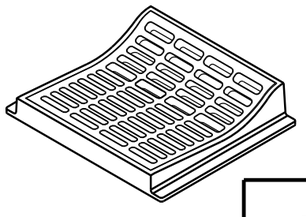
TYPE "S"





TYPE "V"





TYPE "T"

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

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

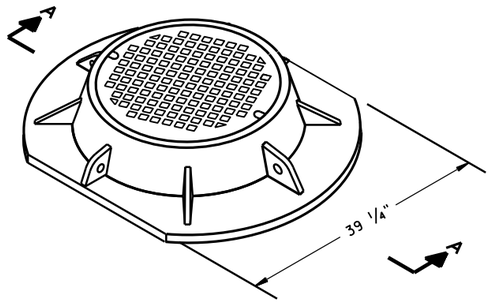
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

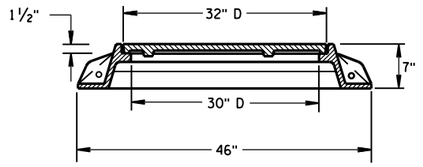
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

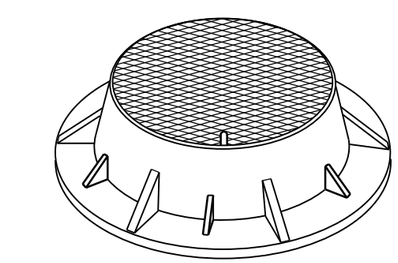
FHWA

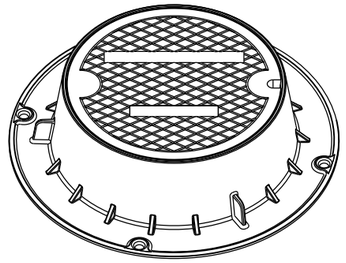
6
S.D.D. 8 A 5-19c

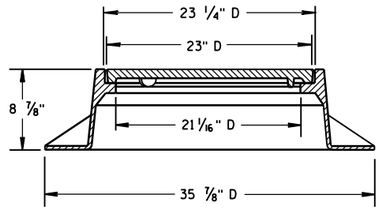


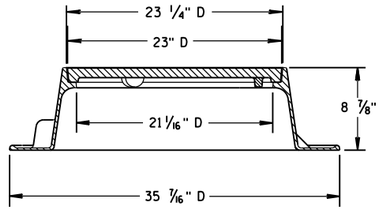


SECTION A-A
TYPE "K"









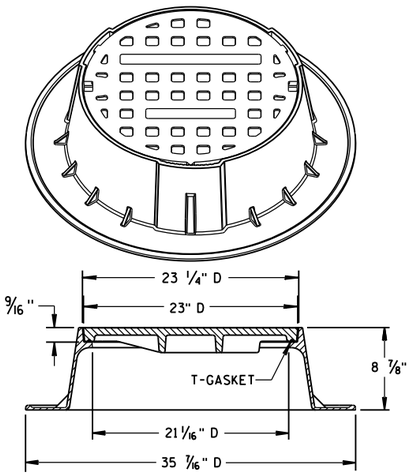
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

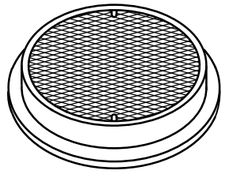
GENERAL NOTES

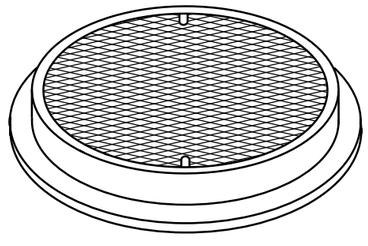
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

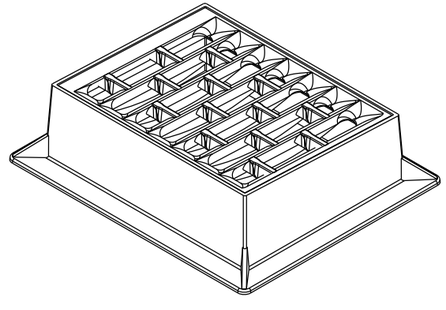
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

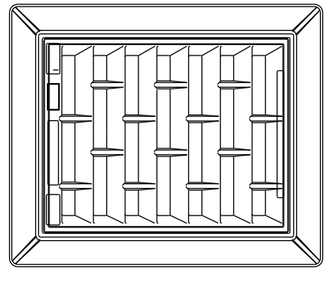
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

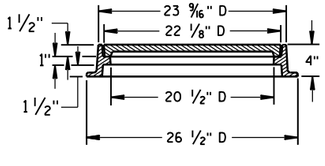




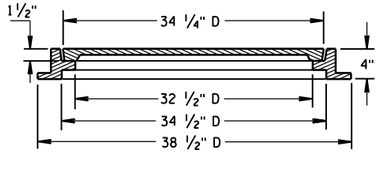




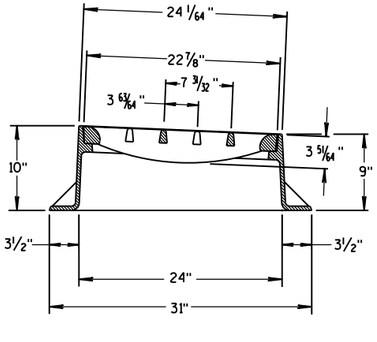


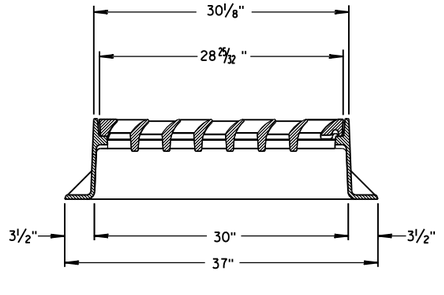


TYPE "L"

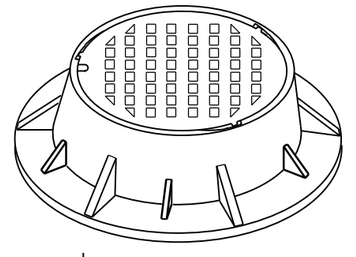


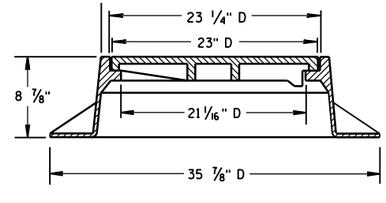
TYPE "M"





INLET COVER TYPE "BW"





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

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

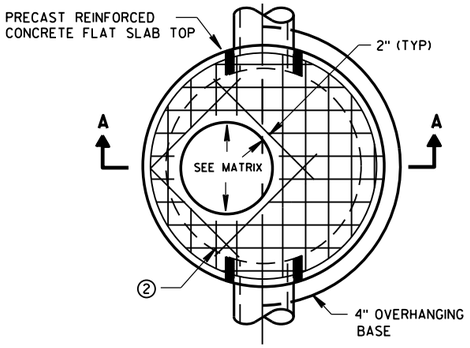
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

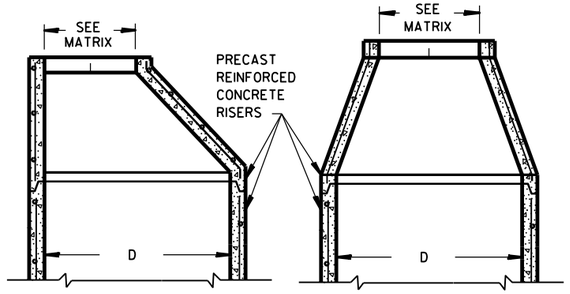
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

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

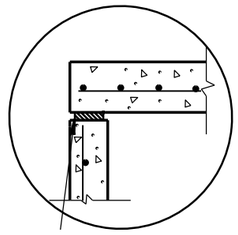


PLAN VIEW CIRCULAR OPENING

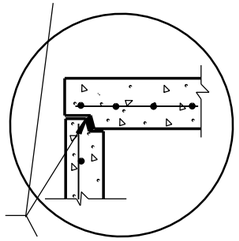


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

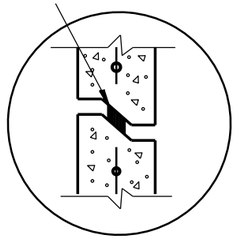


TOP WITH PLAIN END JOINT



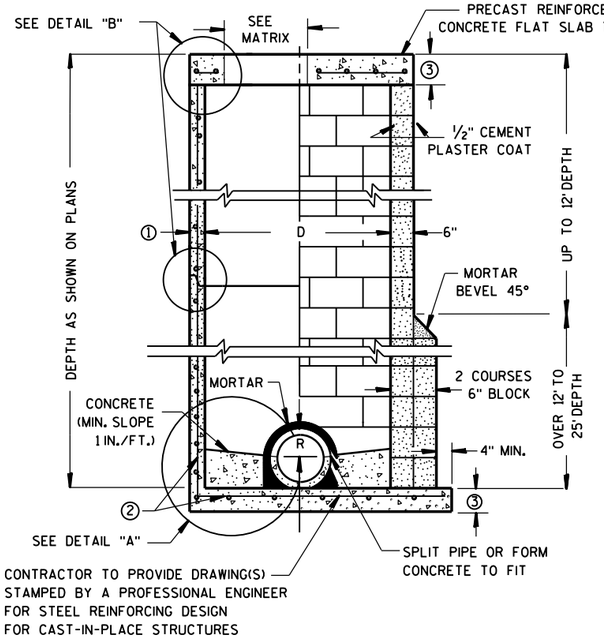
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



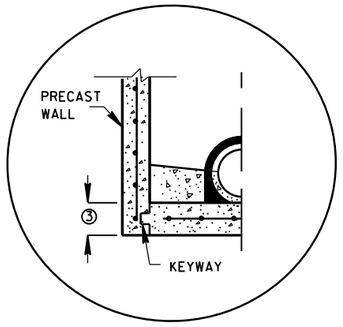
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

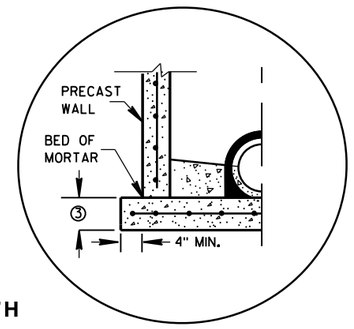


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

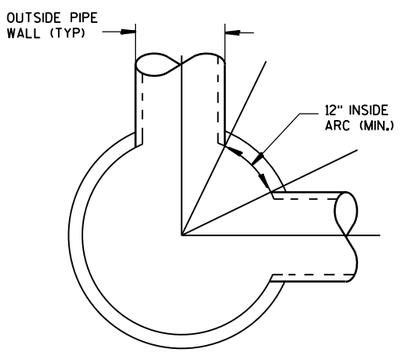


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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

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

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

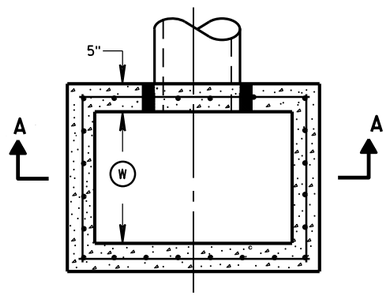
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

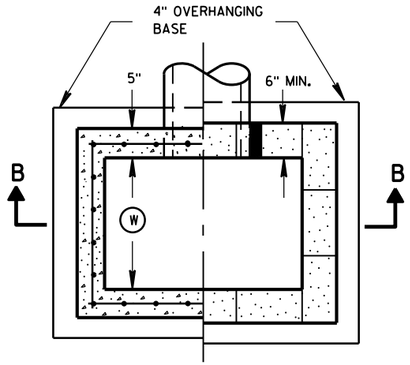
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERV
FHWA

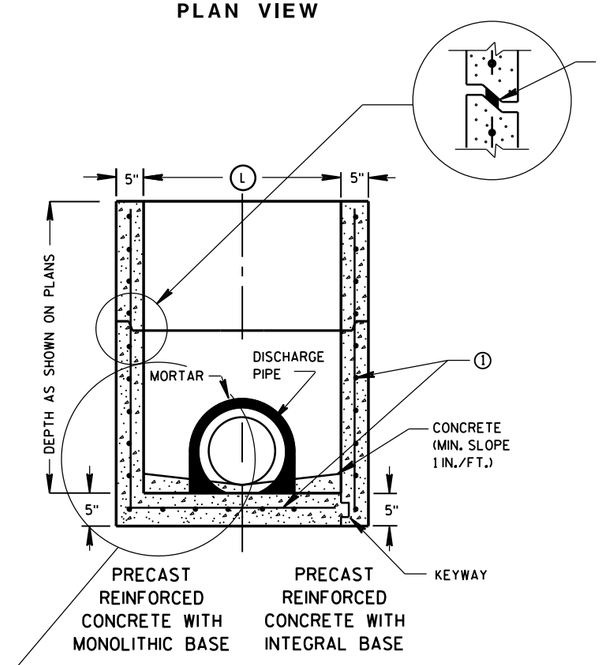
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER



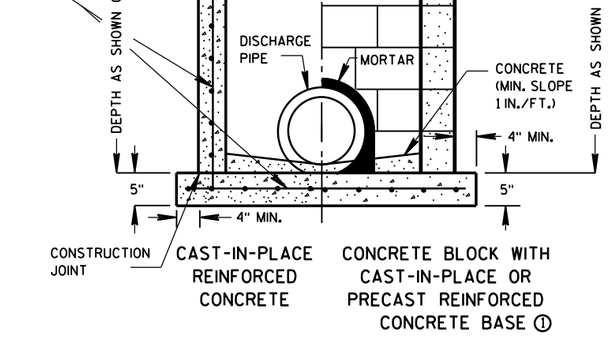
PLAN VIEW



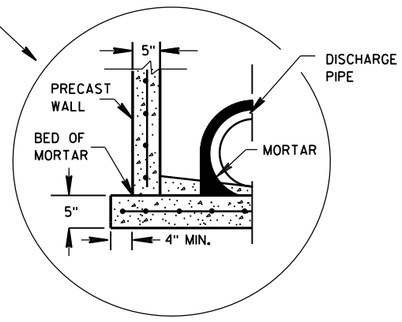
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

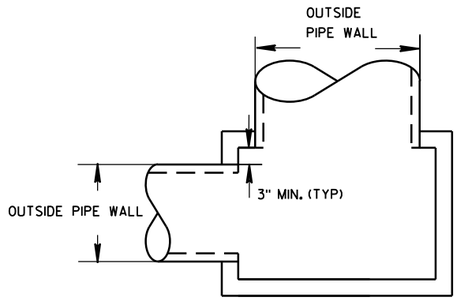
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



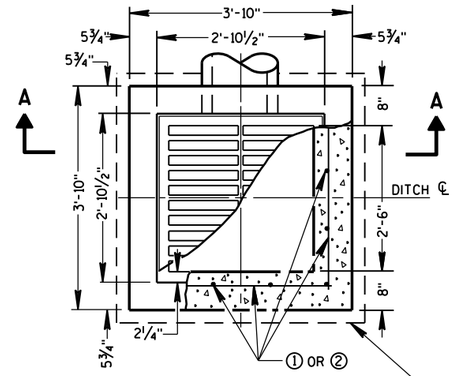
DETAIL "A"

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

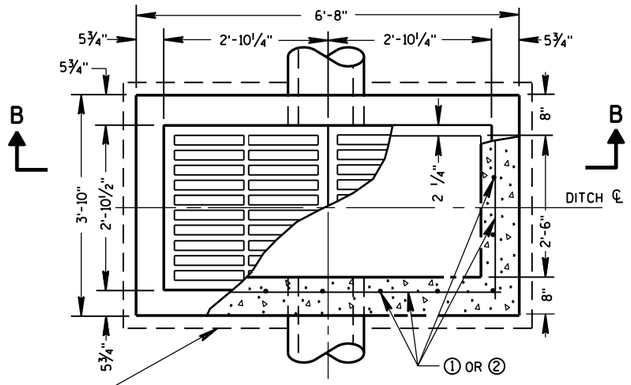
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

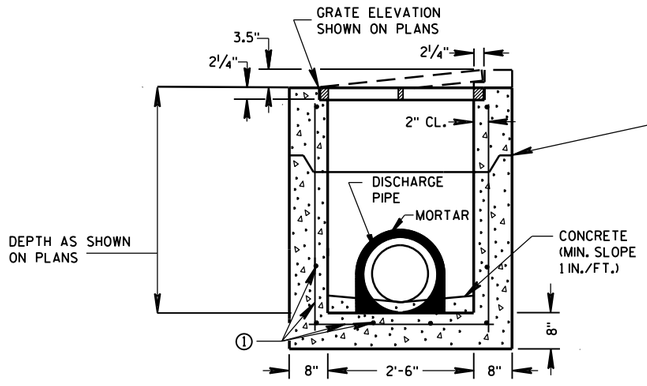


PLAN VIEW

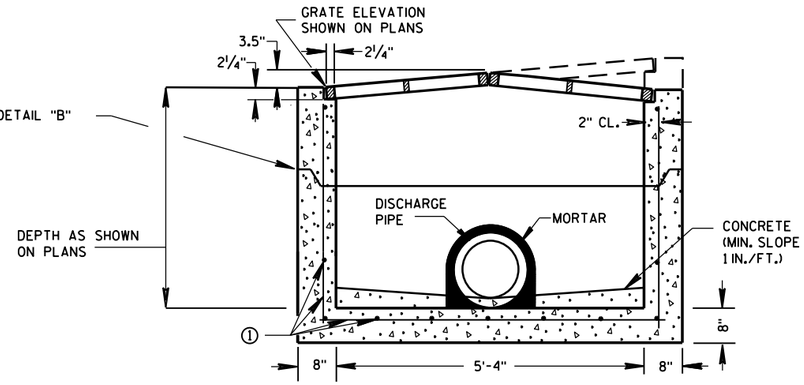


PLAN VIEW

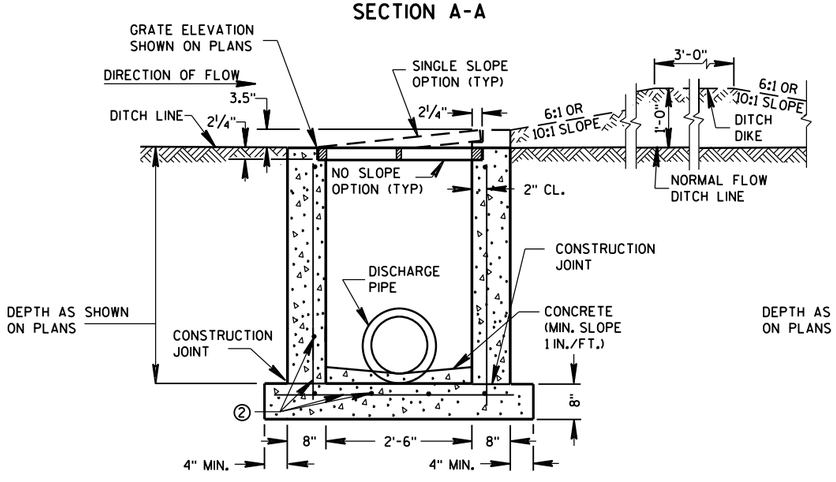
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



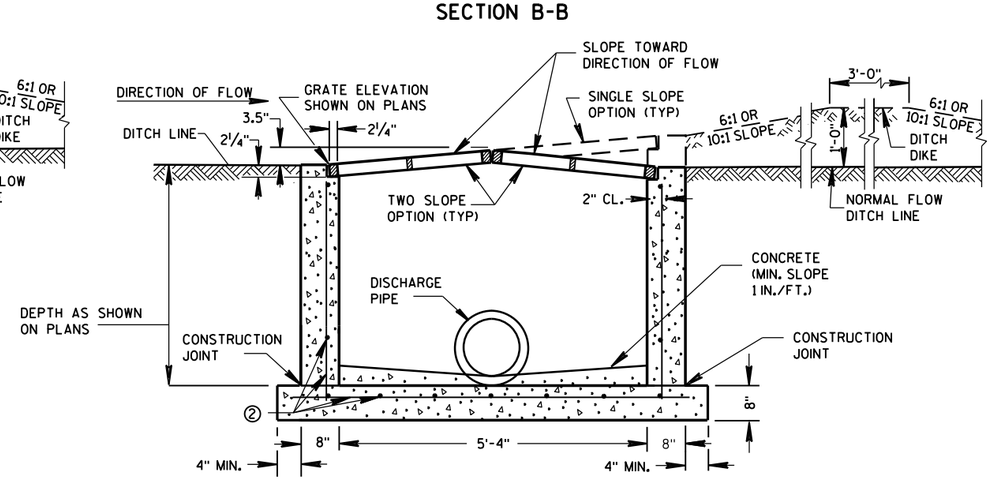
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

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

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

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

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

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

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

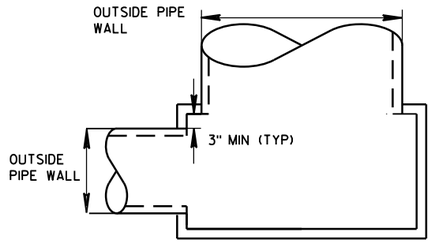
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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

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

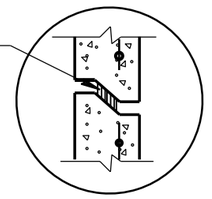
PIPE MATRIX

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



DETAIL "A"

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



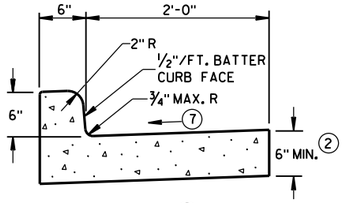
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

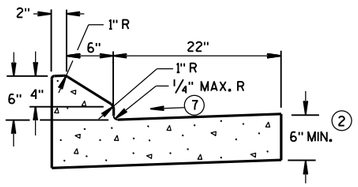
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

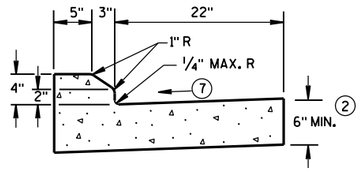
6
S.D.D. 8 C 8-2



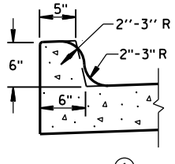
TYPES A (1) & D



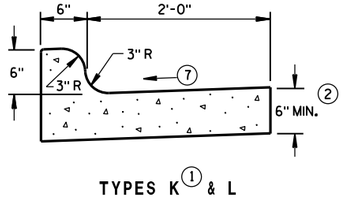
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

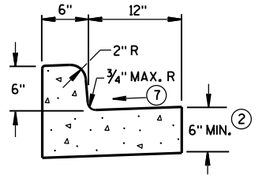


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



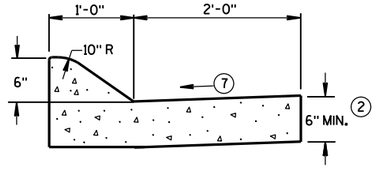
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

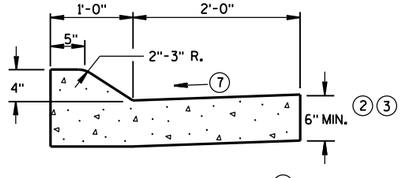


TYPES A (1) & D

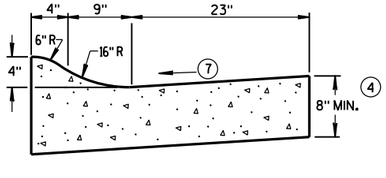
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

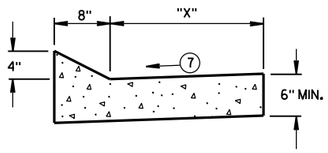


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

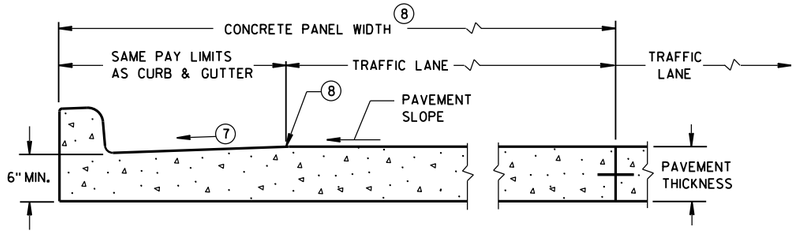
CONCRETE CURB & GUTTER 36"



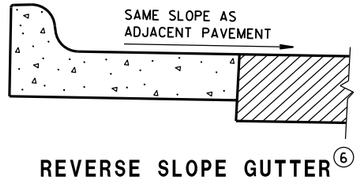
TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER



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

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.

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, R AND TBTT.

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

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

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

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

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.

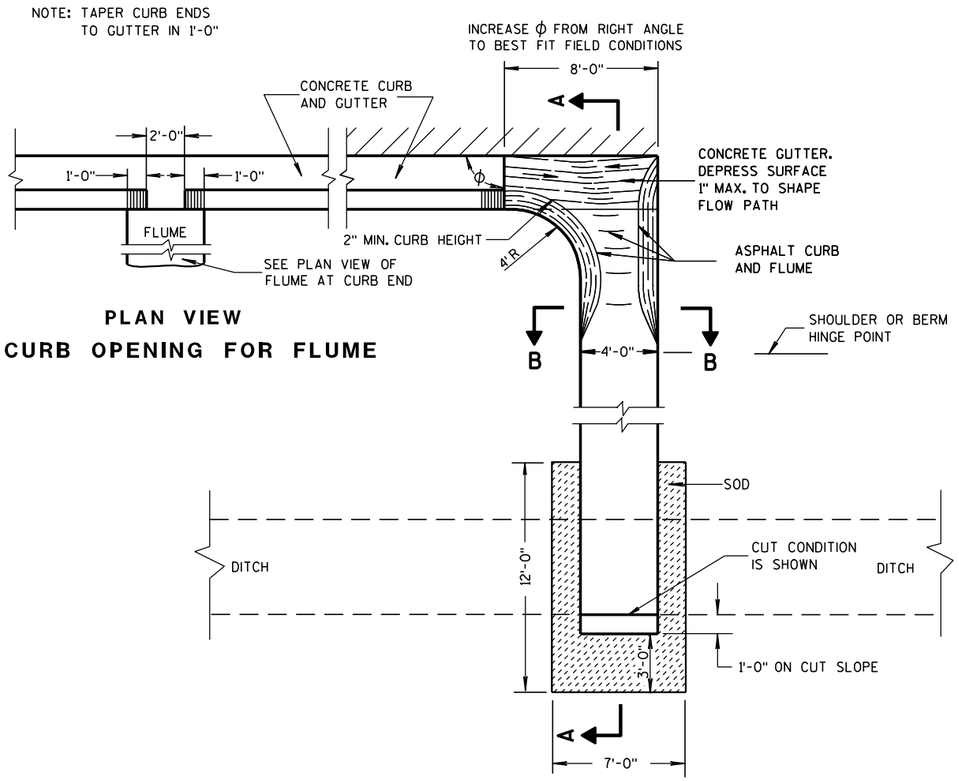
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

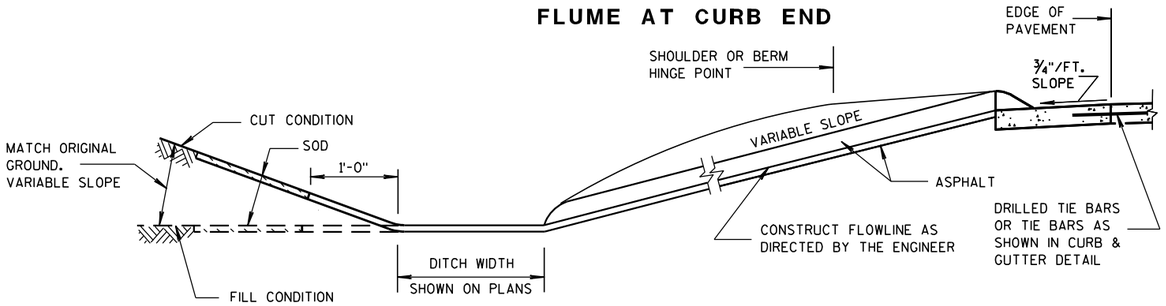
S.D.D. 8 D 1-20a
S.D.D. 8 D 1-20a

ASPHALTIC FLUME

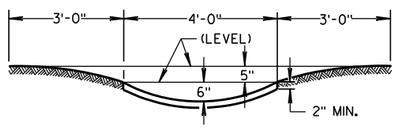


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

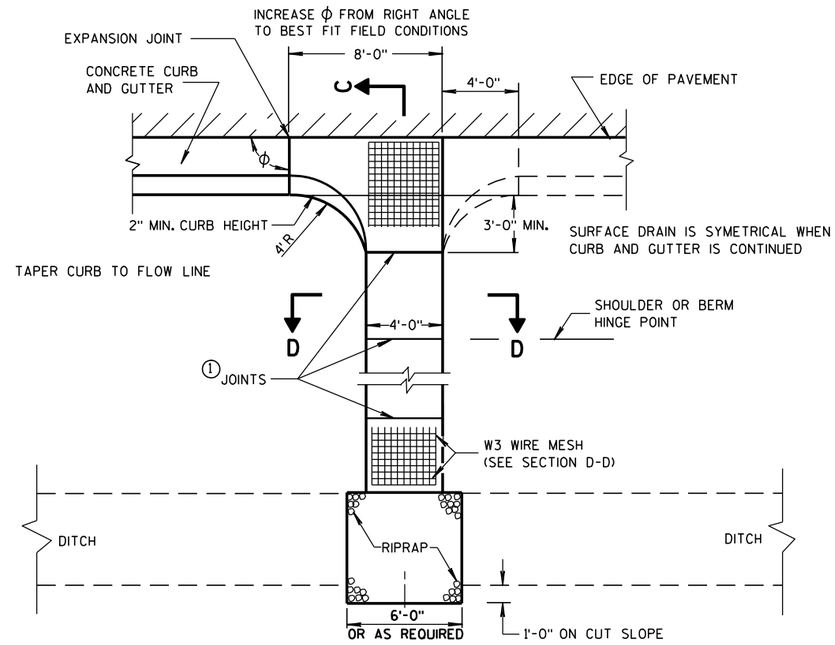
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

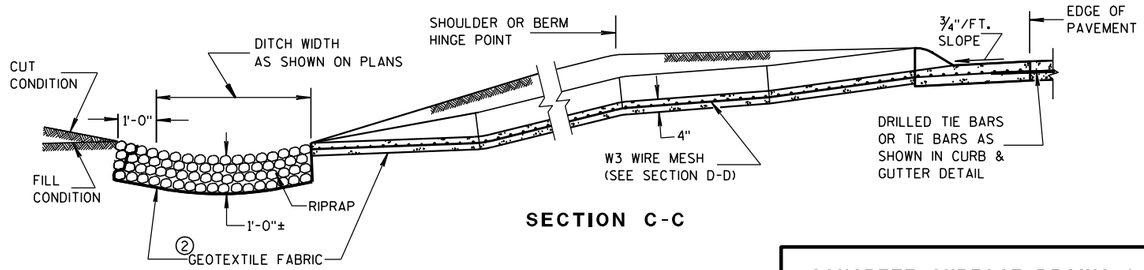
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

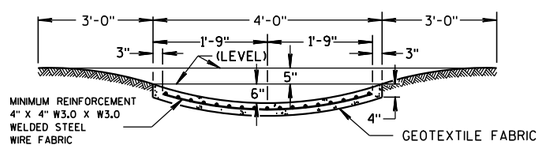
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

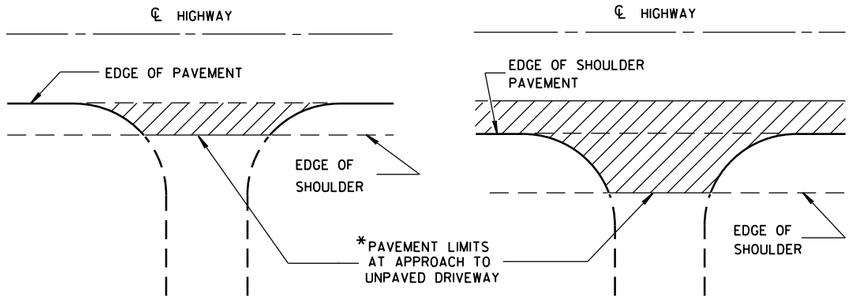
APPROVED
9-4-08 DATE
/S/ Jerry H. ... ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 D 4-5

6

S.D.D. 8 D 4-5

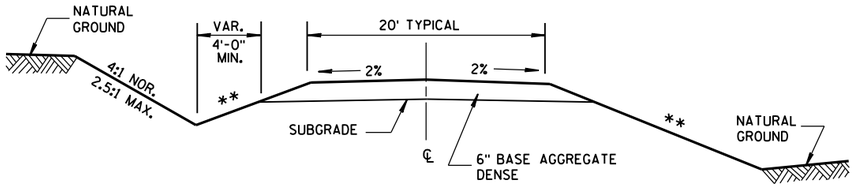


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)

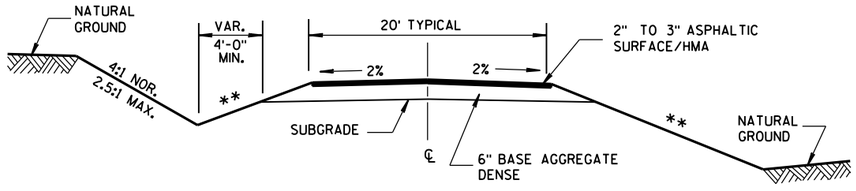


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

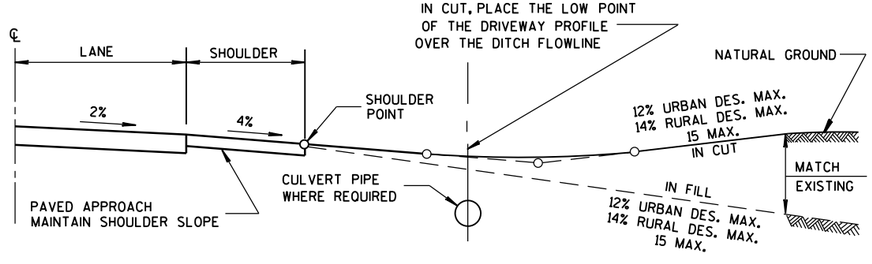
** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥35 TO <60	6:1
≥60	10:1



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE



TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

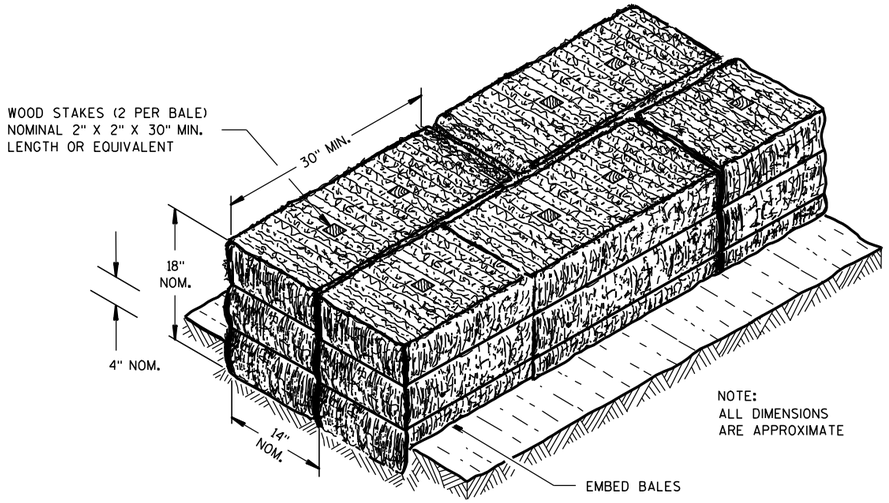
APPROVED
December, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS UNIT SUPERV
FHWA

6

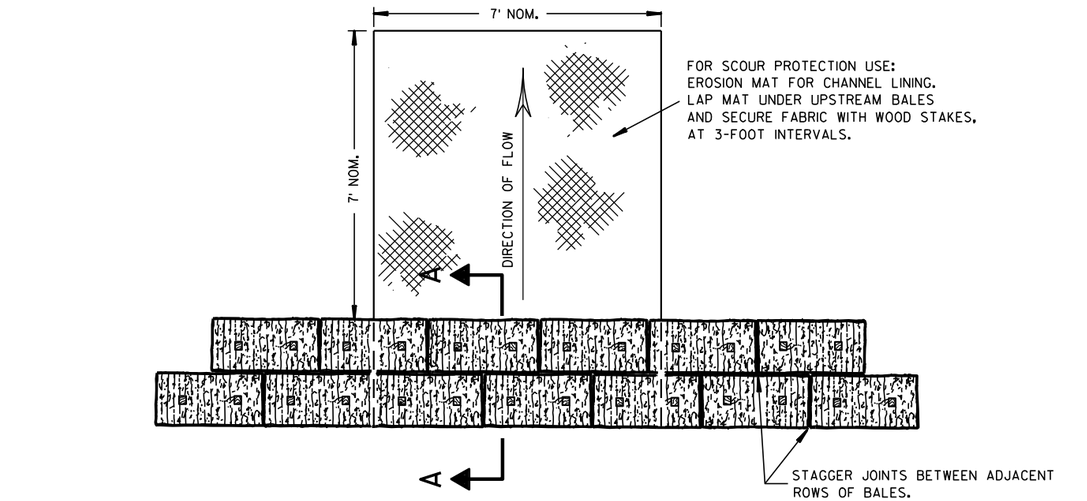
S.D.D. 8 D 21-1

6

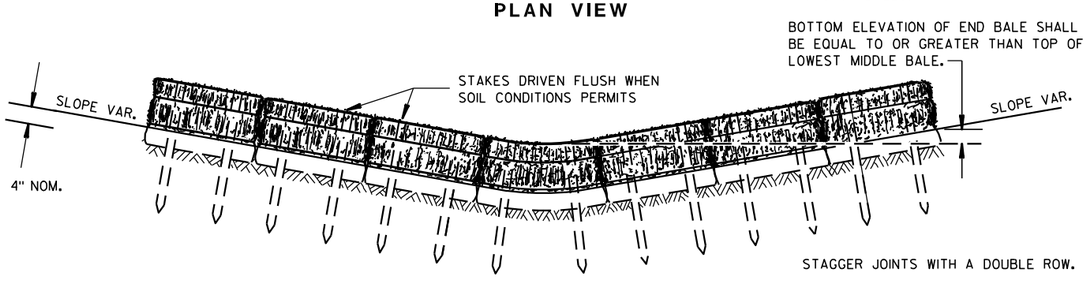
S.D.D. 8 D 21-1



SECTION A-A



PLAN VIEW



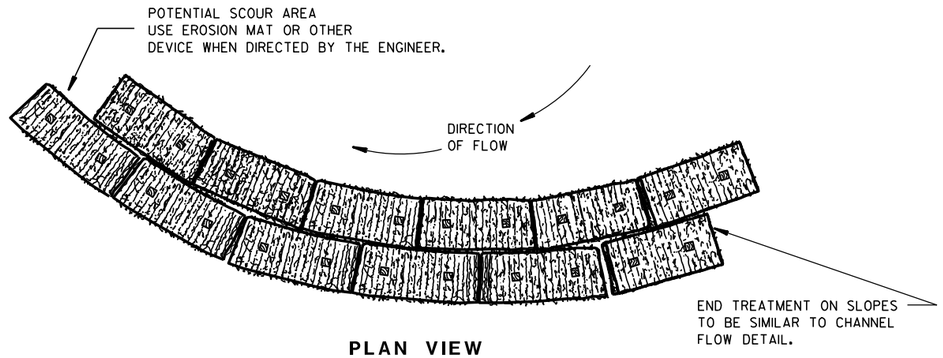
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

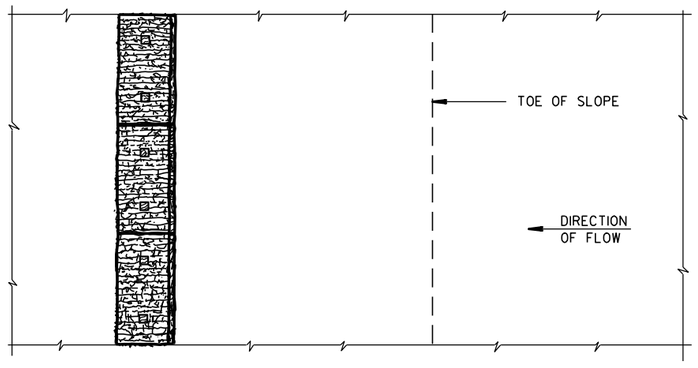
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

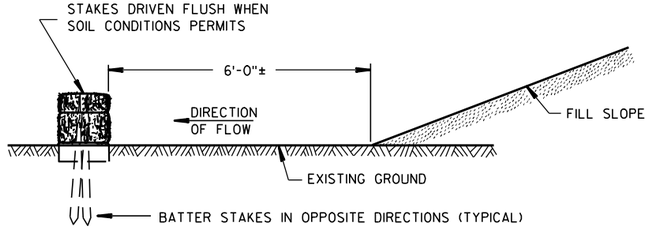


PLAN VIEW

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

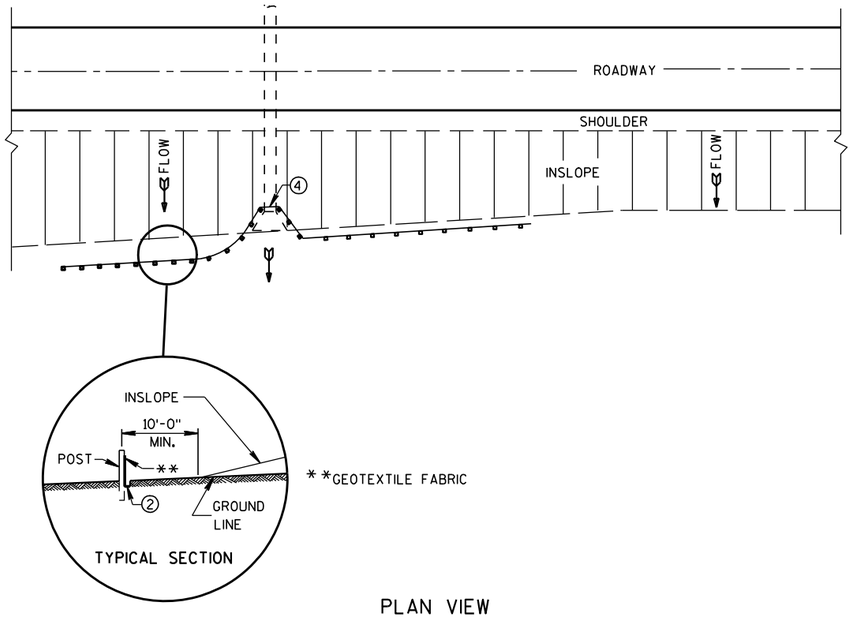
APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

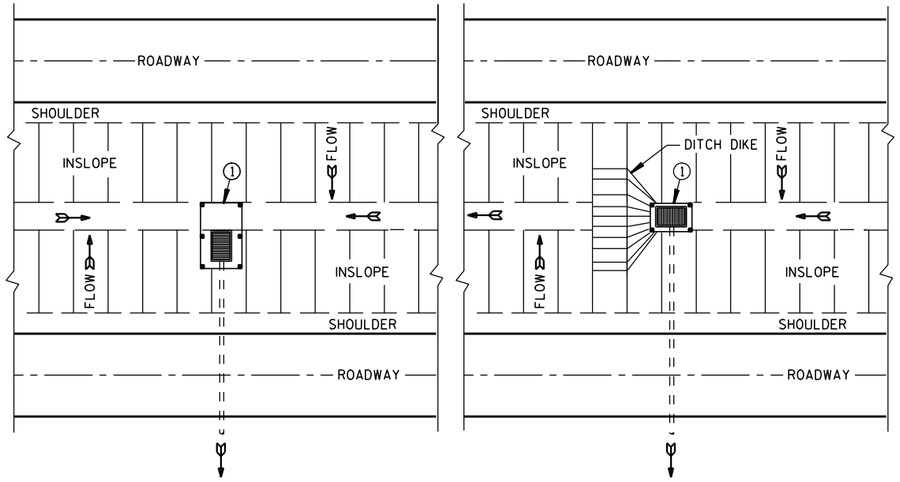
FHWA

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



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

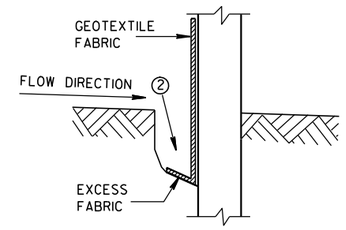
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

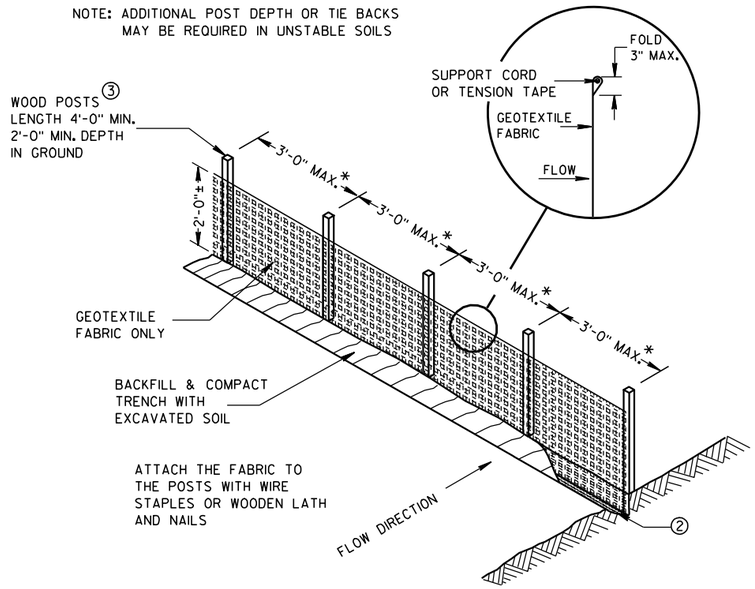
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

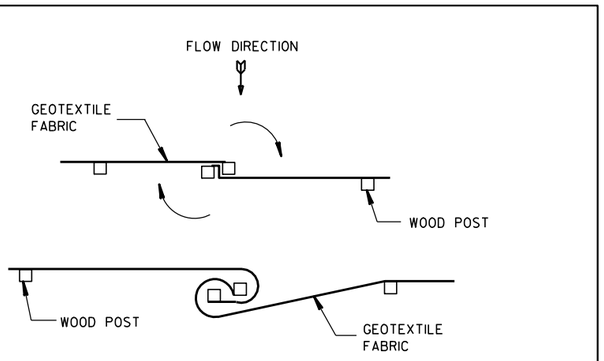
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



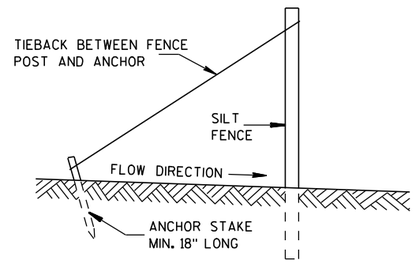
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

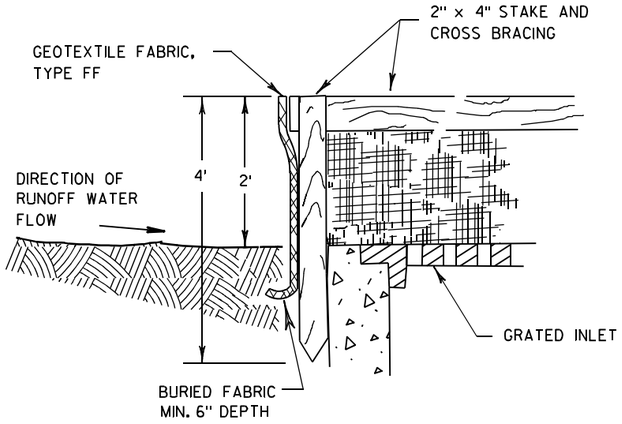
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

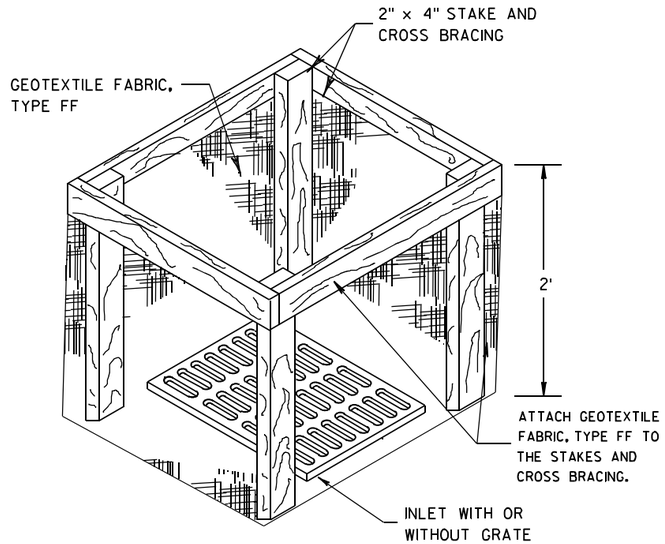
6

S.D.D. 8 E 9-6

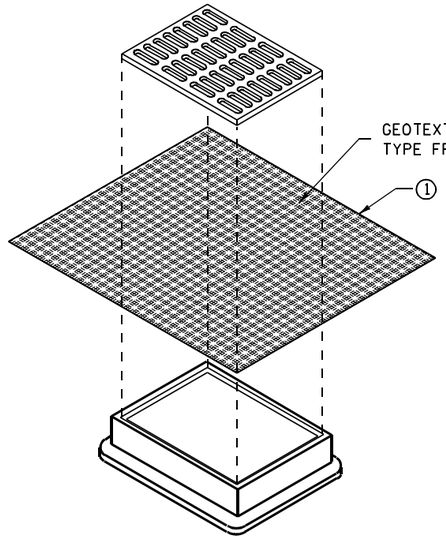
6

S.D.D. 8 E 9-6



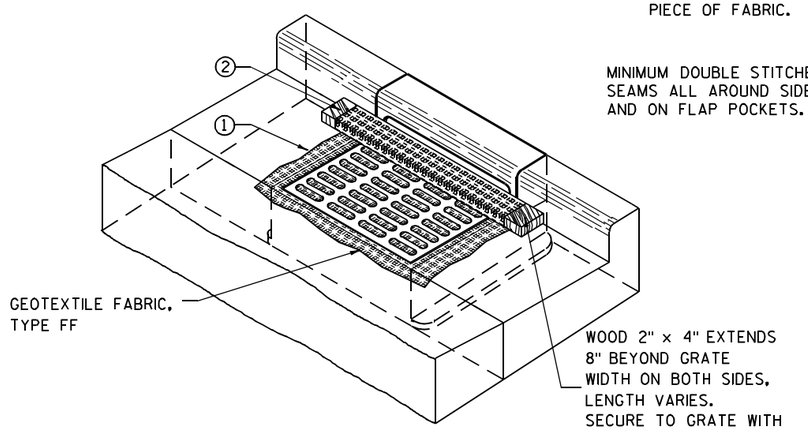


INLET PROTECTION, TYPE A

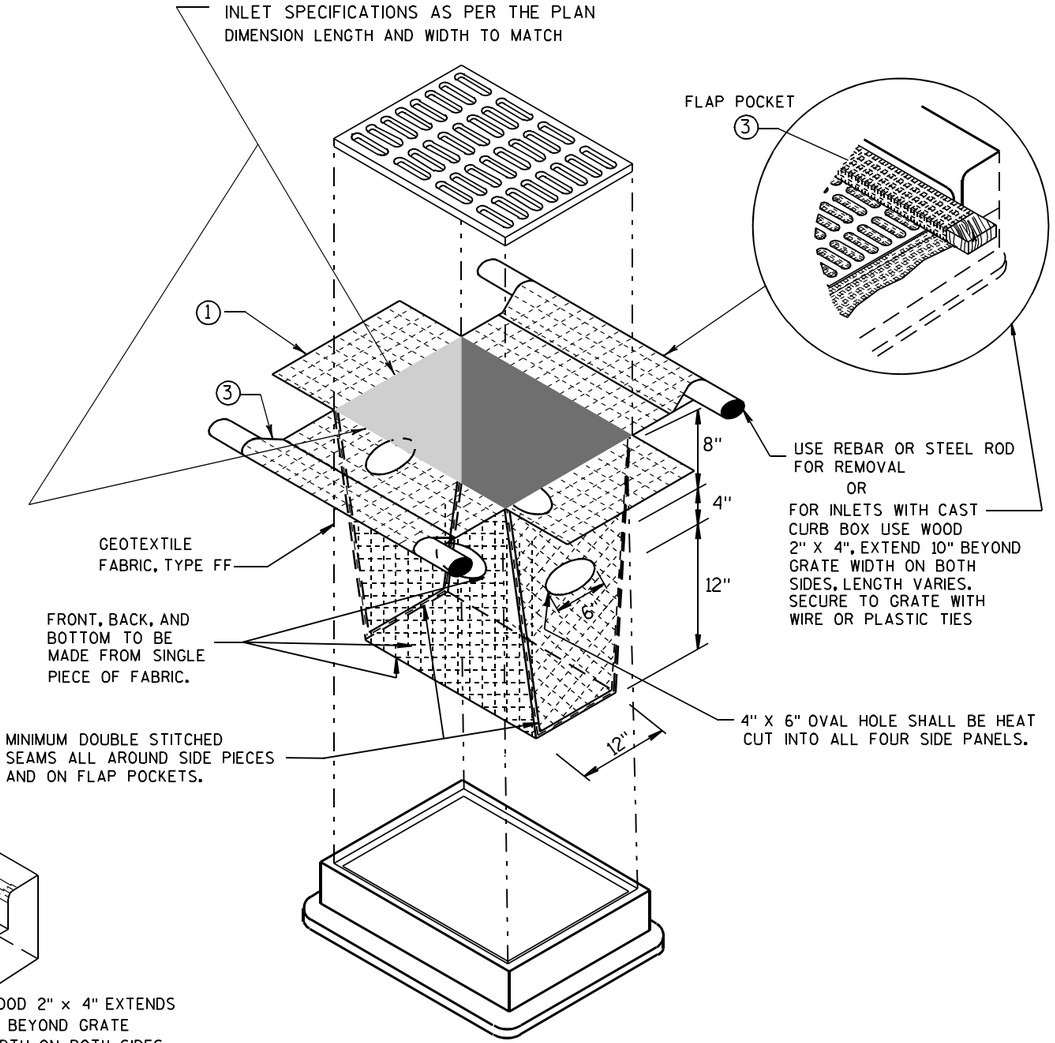


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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

METAL APRON ENDWALLS

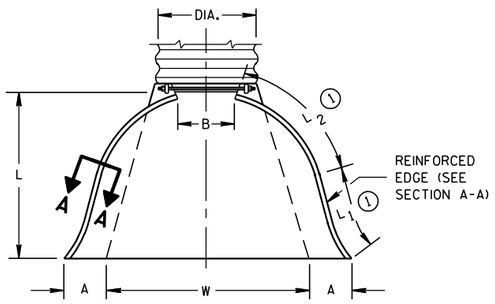
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

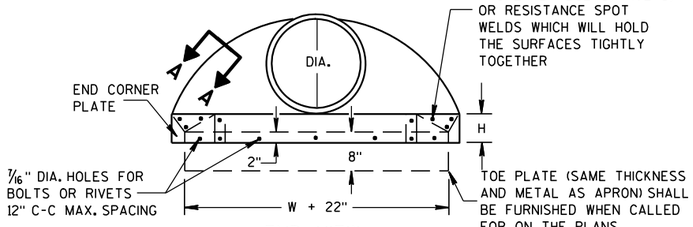
REINFORCED CONCRETE APRON ENDWALLS

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

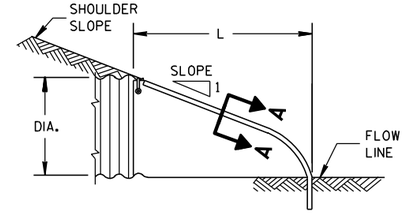
* MINIMUM
** MAXIMUM



PLAN VIEW

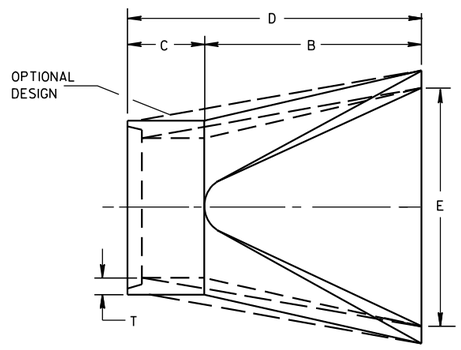


END VIEW

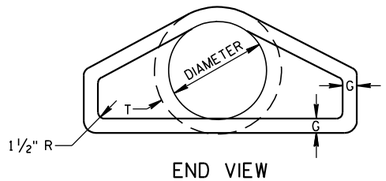


SIDE ELEVATION

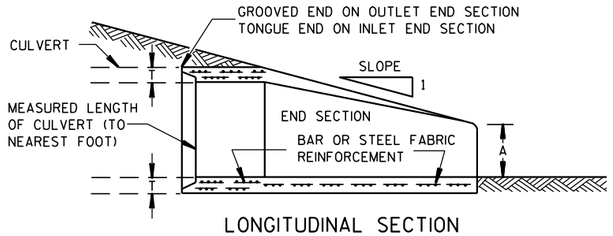
METAL ENDWALLS



PLAN

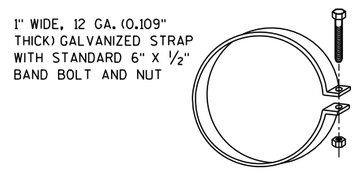


END VIEW



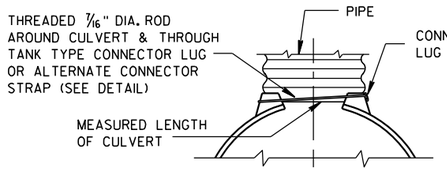
LONGITUDINAL SECTION

CONCRETE ENDWALLS

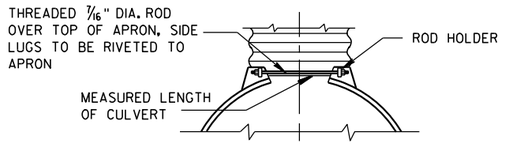


ALTERNATE FOR TYPE 1 CONNECTION

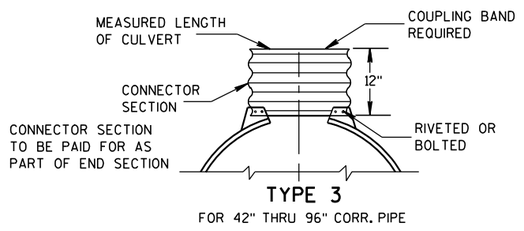
END SECTION CONNECTOR STRAP



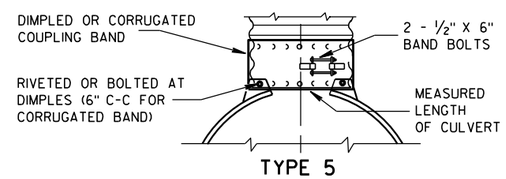
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

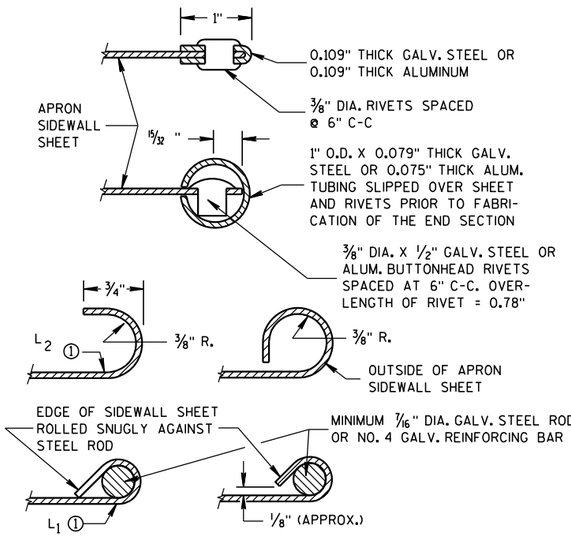
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

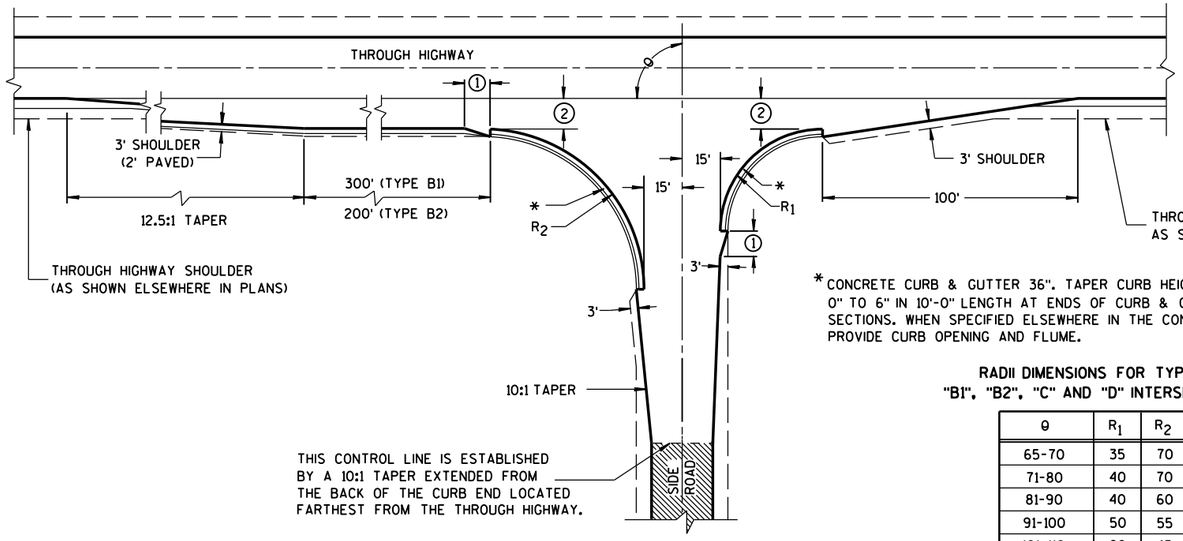
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

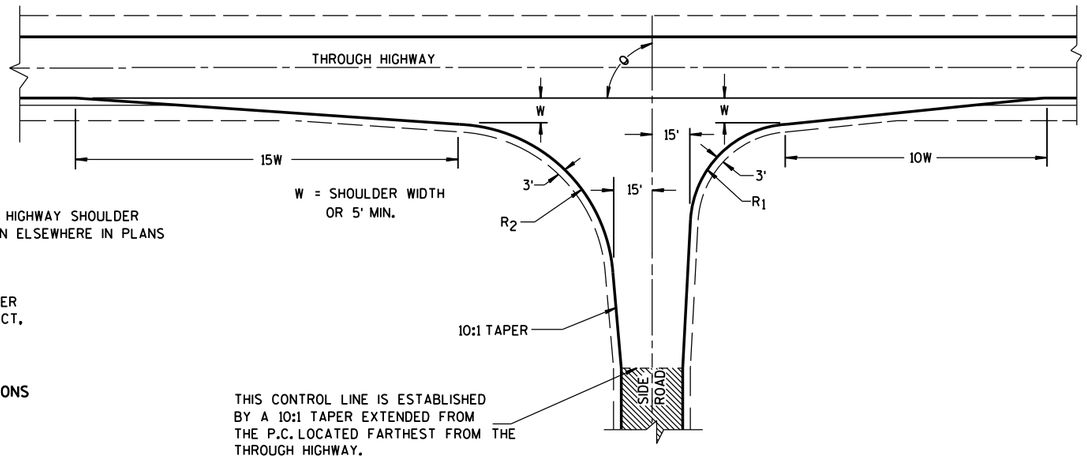


TYPE "B1" AND "B2"

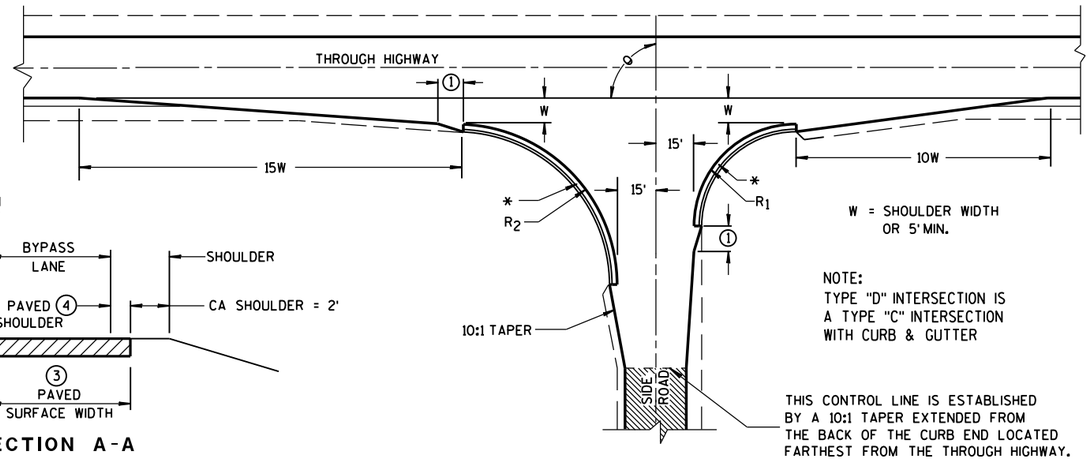
*CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

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

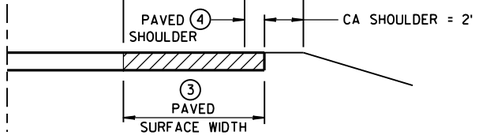
(1) 10-FT TYPICAL.

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

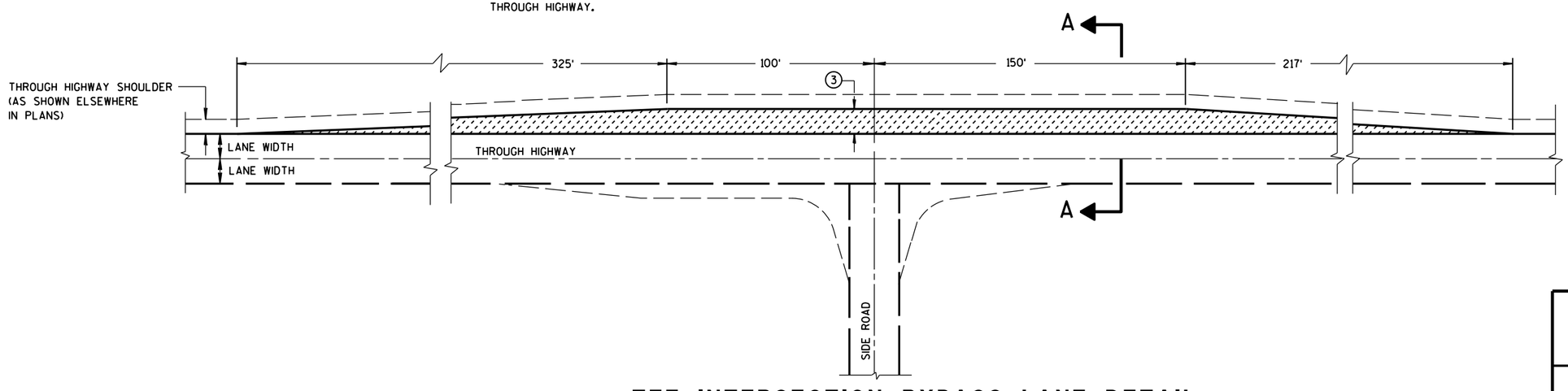
**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.

(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)



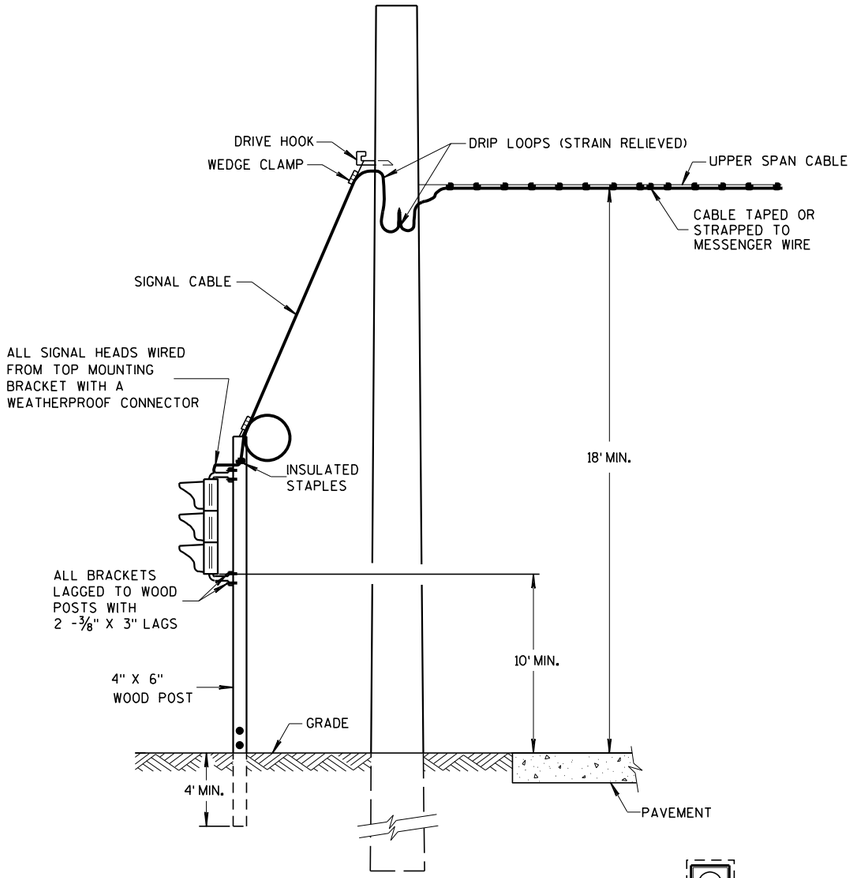
TEE INTERSECTION BYPASS LANE DETAIL

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

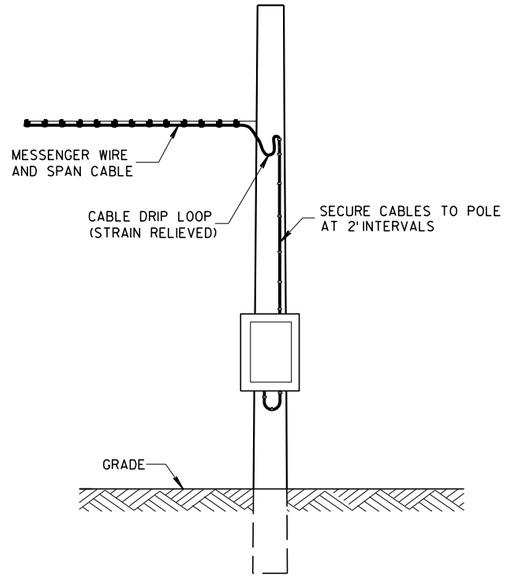
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

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



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAYBE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

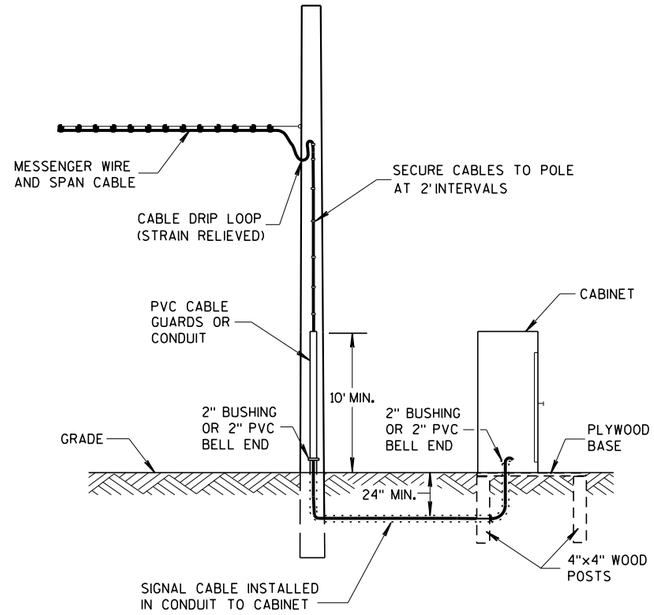
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.

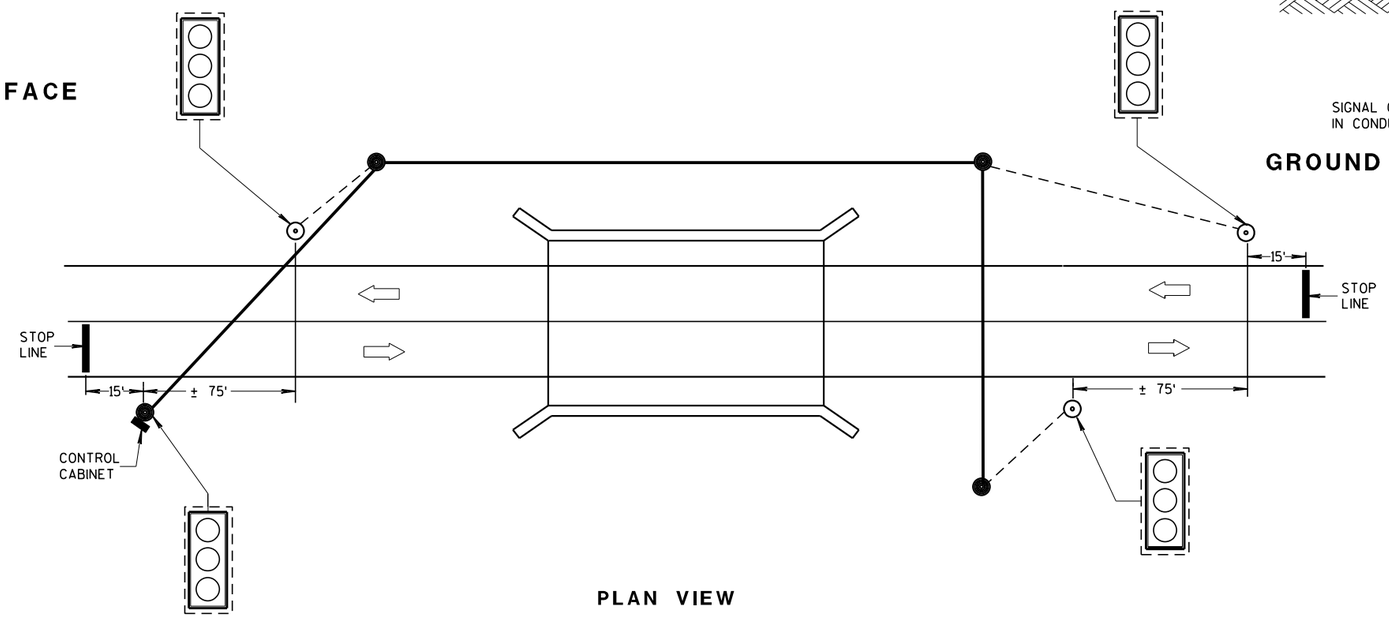
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



GROUND MOUNT CABINET INSTALLATION

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE**
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/ CURBS	2 FT

**NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.



PLAN VIEW

TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREAKAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- LED TRAFFIC SIGNAL FACE WITH BACKPLATE (3-12")
- DIRECTION OF TRAFFIC

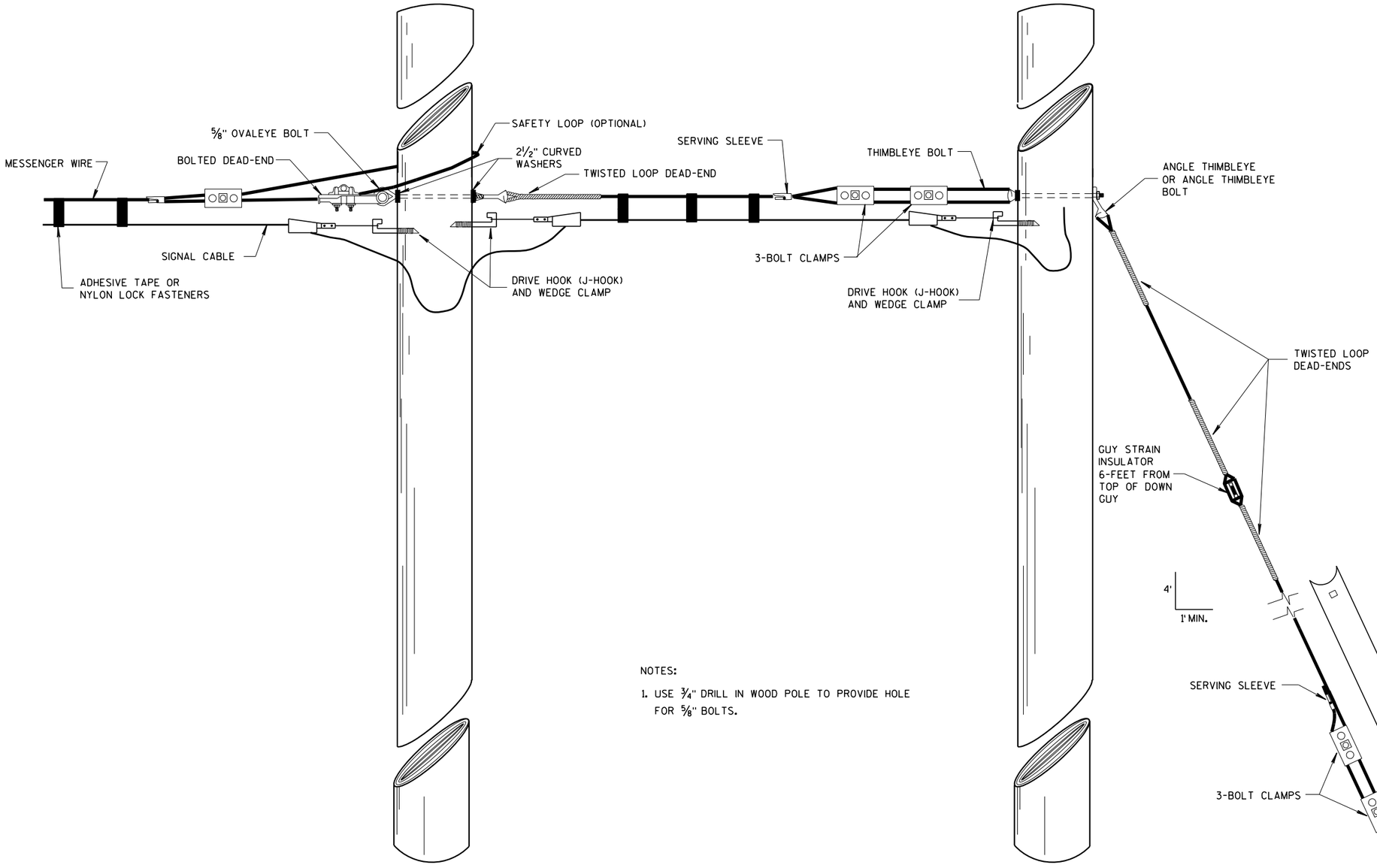
MINIMUM POLE LENGTHS	CLASS	MINIMUM BURIAL DEPTHS
25 FEET	V	5 FEET
30 FEET	V	6 FEET
35 FEET	IV	7 FEET
40 FEET	IV	8 FEET
45 FEET	IV	9 FEET

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICA
FHWA

6
S.D.D. 9 G 2-5a



SPAN WIRE POLE

GUY POLE

NOTES:

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE HOLE FOR 5/8" BOLTS.

TYPICAL DEAD-ENDINGS OR GUYING

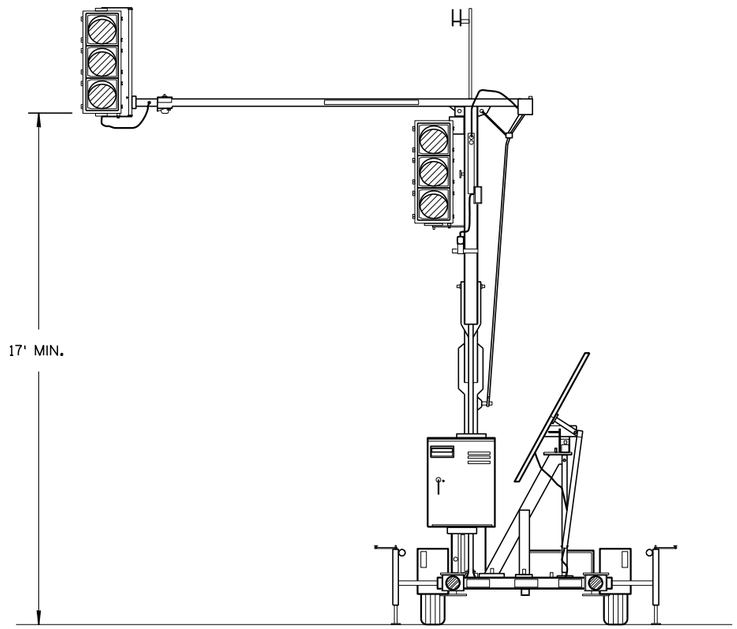
BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICA
FHWA

6

S.D.D. 9 G 2-5b
S.D.D. 9 G 2-5b

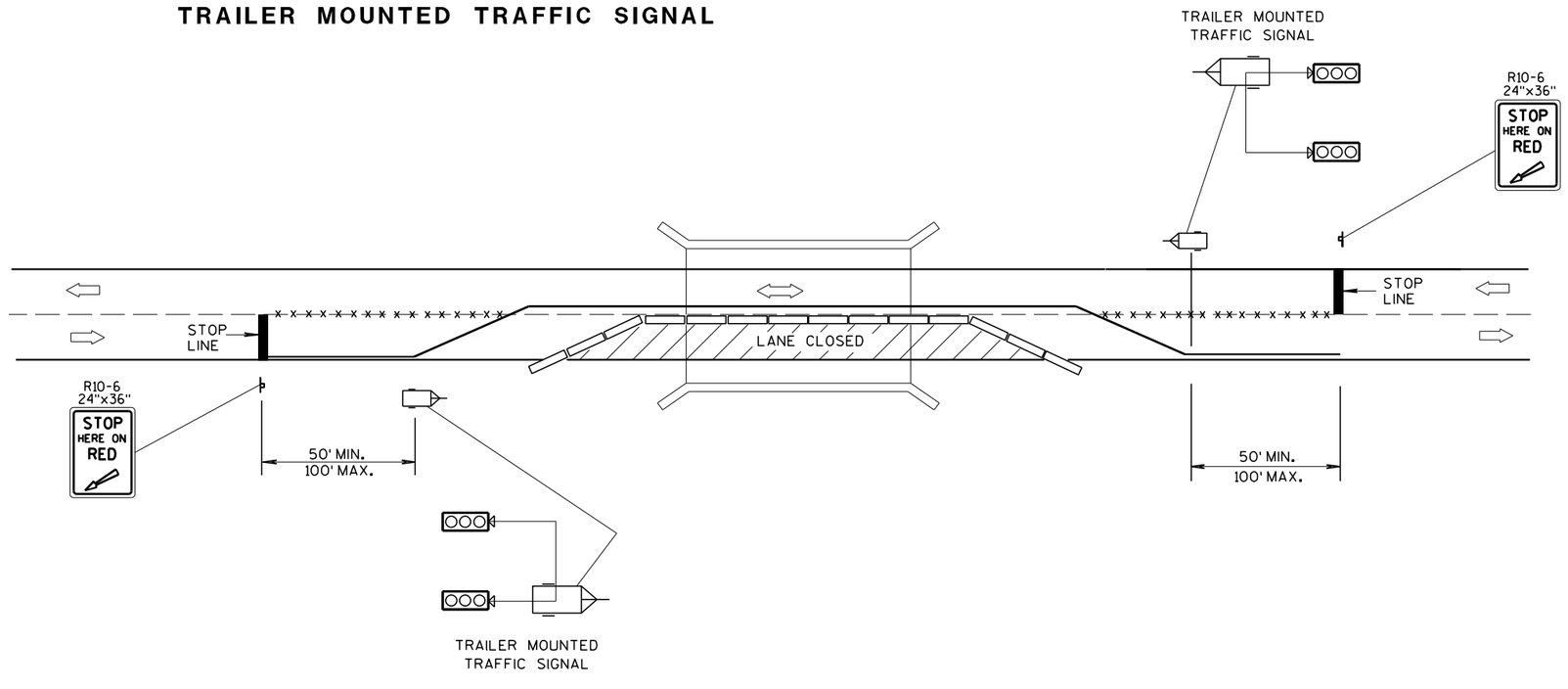


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

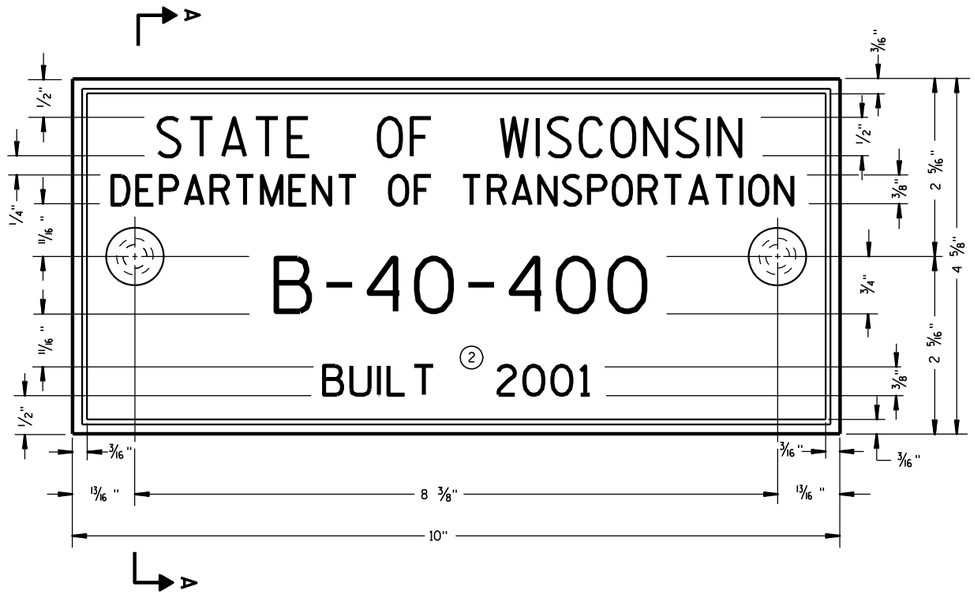
APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 G 2-5c

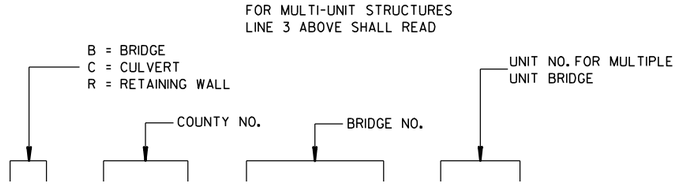
6

S.D.D. 9 G 2-5c



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

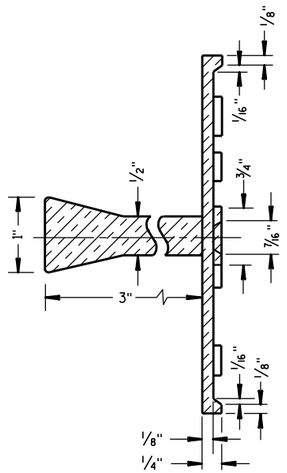
GENERAL NOTES

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

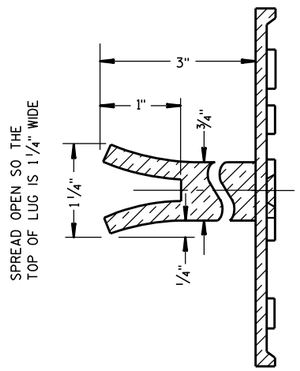
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

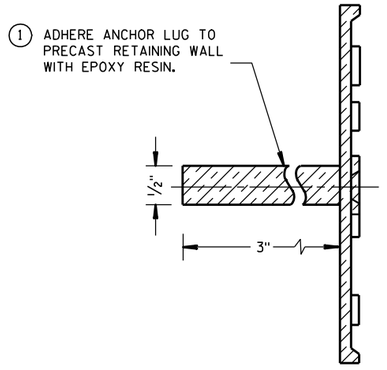
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

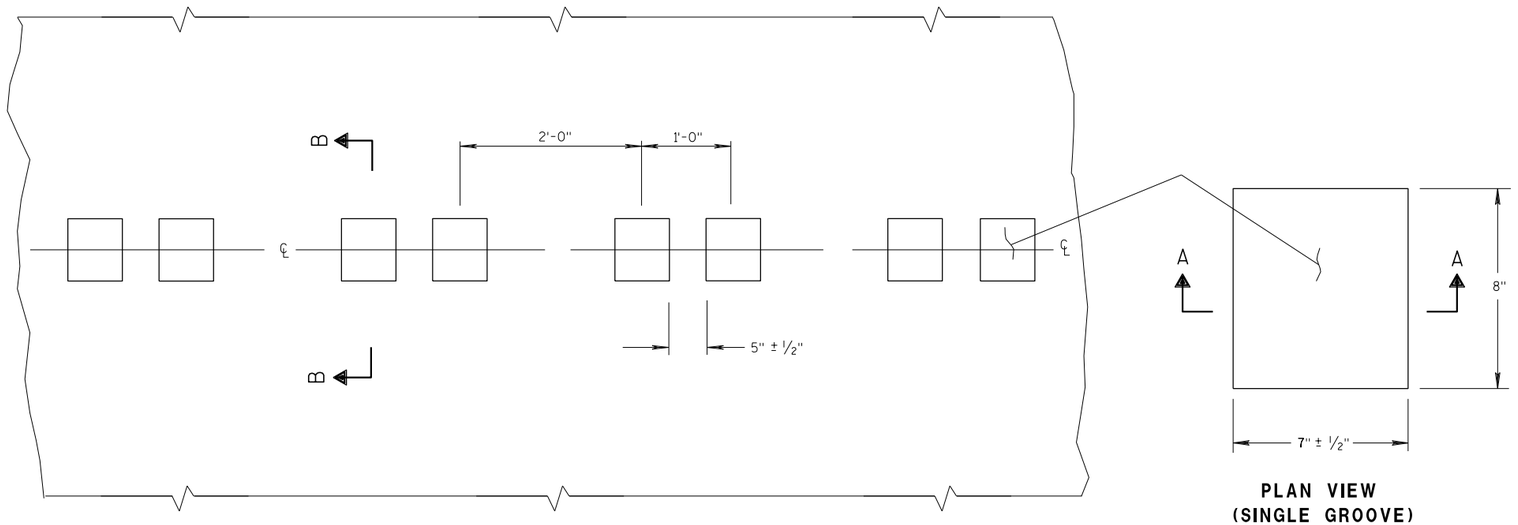
APPROVED

3/26/10 DATE — /S/ Scot Beck — CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 12 A 3-10



PLAN VIEW
CENTER LINE WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

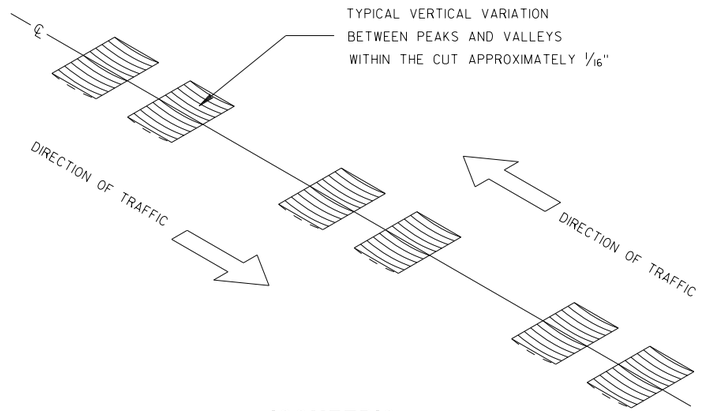
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

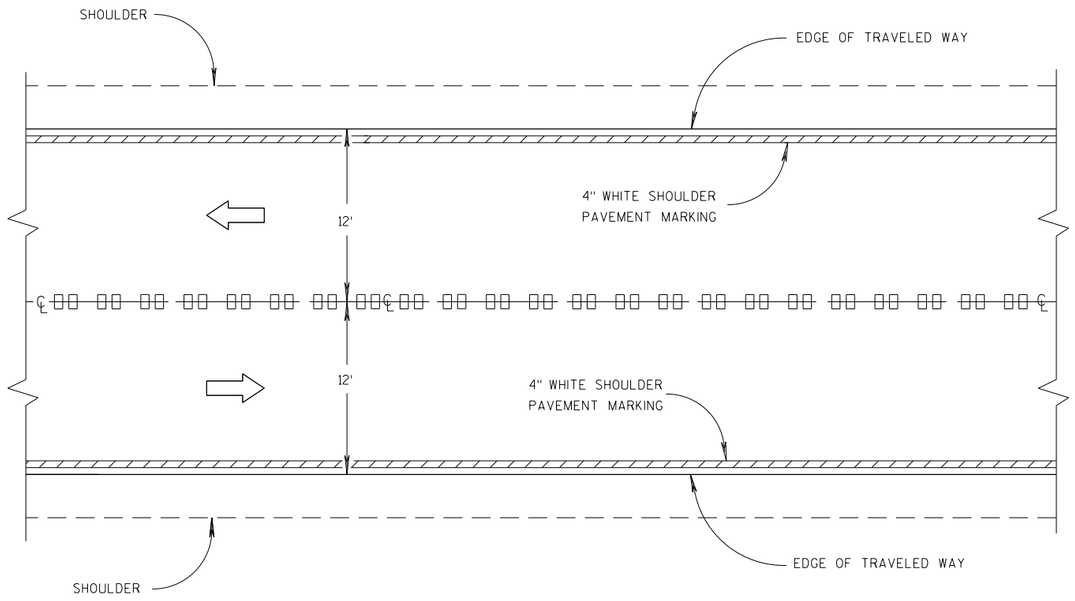
INSTALL PERMANENT MARKING EPOXY 4-INCH AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

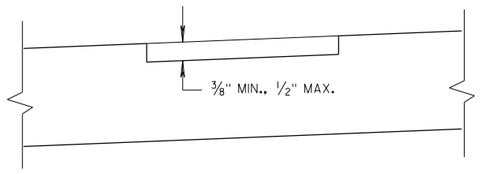
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



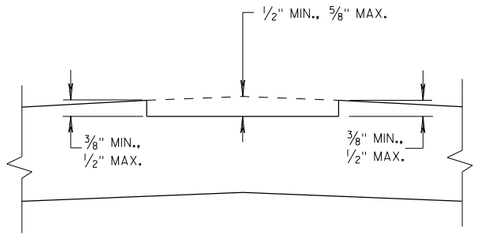
ISOMETRIC



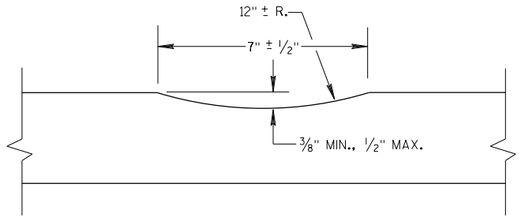
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY

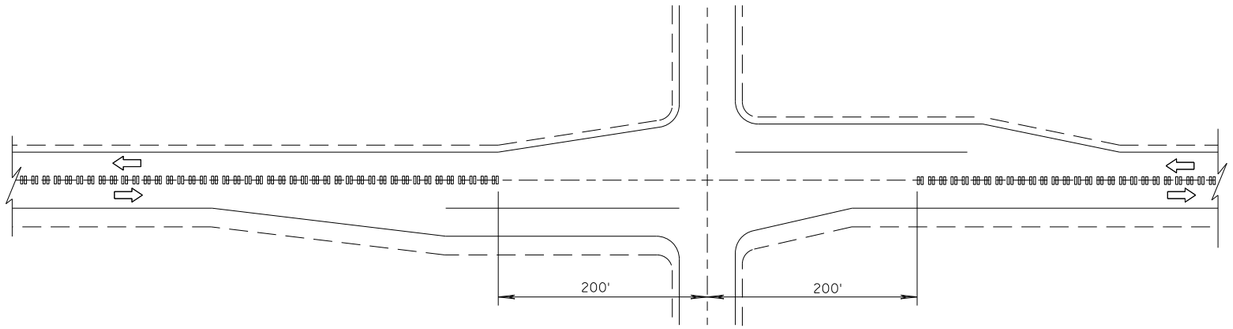


SECTION A-A

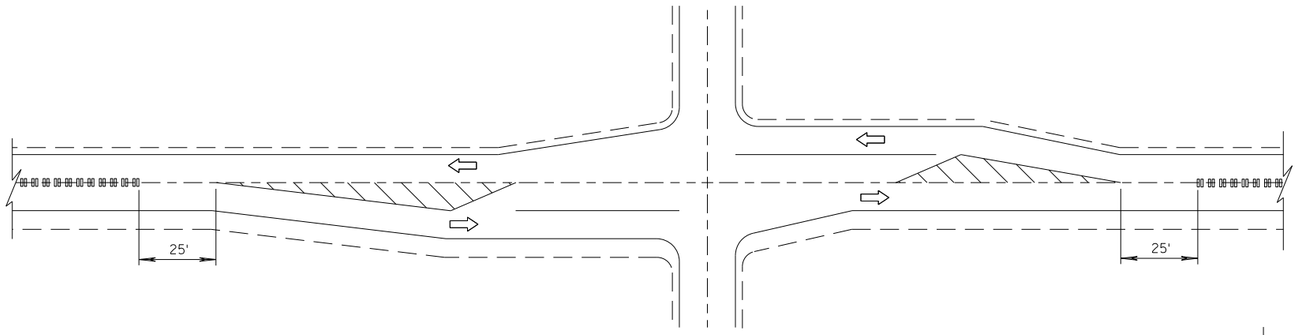
2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

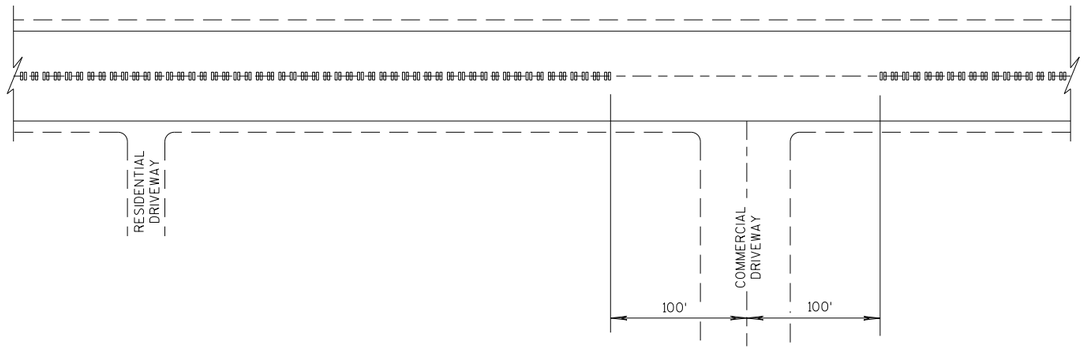
6
S.D.D. 13 A 11-3a



CENTER LINE GROOVES AT INTERSECTIONS

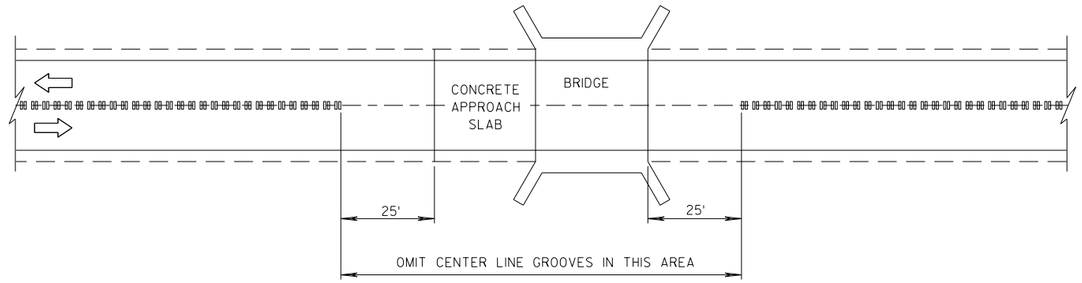


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

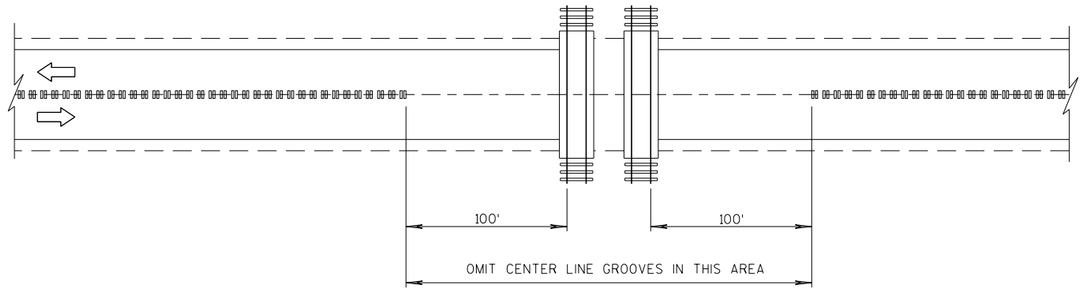


CENTER LINE GROOVES AT DRIVEWAYS (1)

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



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Rodney T — ROADWAY STANDARDS DE UNIT SUPERVISOR

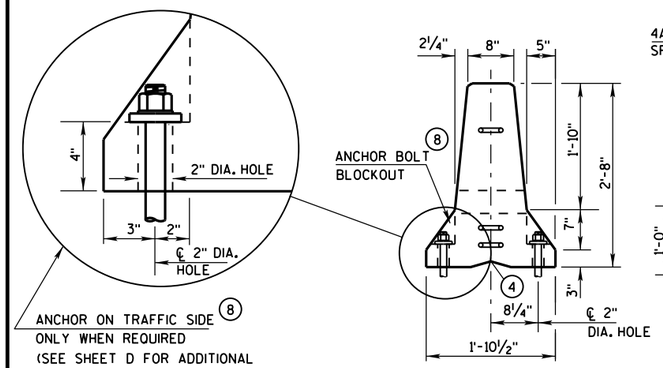
FHWA

6

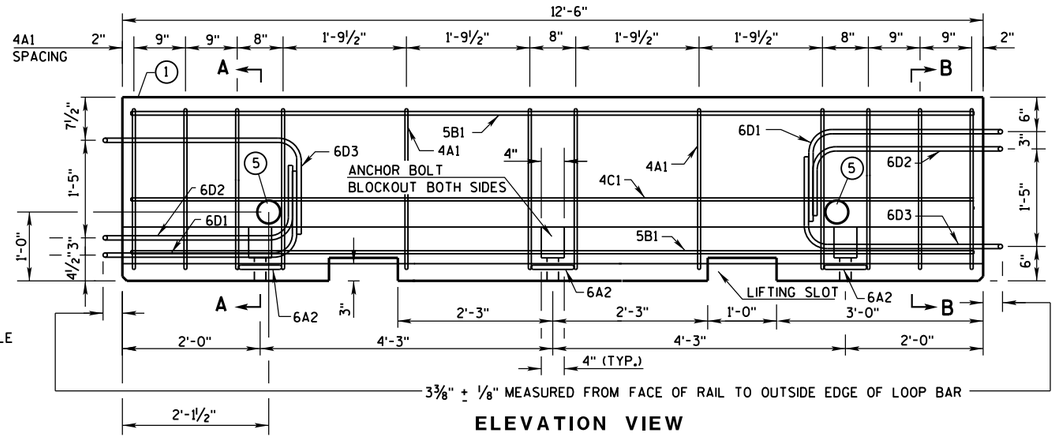
S.D.D. 13 A 11-3b

6

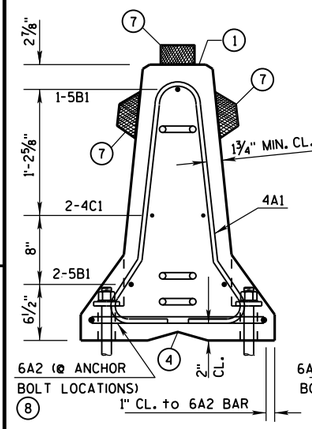
S.D.D. 13 A 11-3b



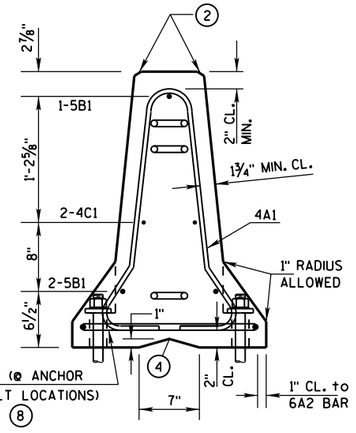
END VIEW



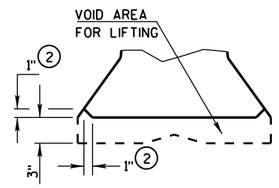
ELEVATION VIEW



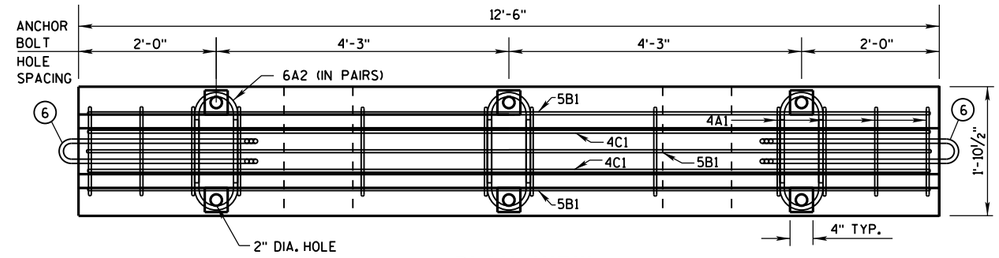
SECTION A-A
(STIRRUP PLACEMENT)



SECTION B-B
(STIRRUP PLACEMENT)

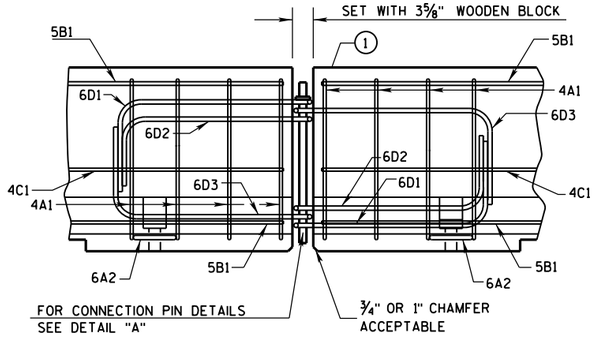


DETAIL "B"
LIFTING SLOT DETAIL

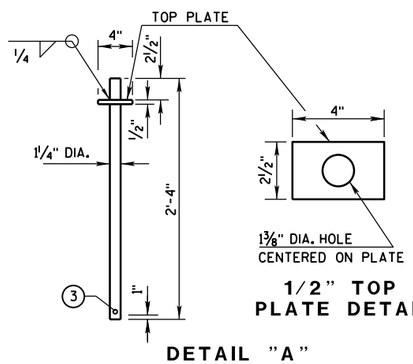


PLAN VIEW

DETAILS OF BARRIER SECTION

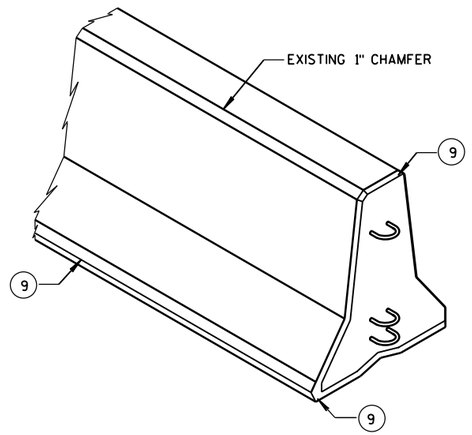


DETAILS OF BARRIER CONNECTION



1/2" TOP
PLATE DETAIL

DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE ¾" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

(1) MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WI CBTP
- b. MANUFACTURER
- c. DATE MANUFACTURED (MONTH AND YEAR)

(2) 1" CHAMFER TO PREVENT SPALLING.

(3) A ⅜" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

(4) "V" NOTCH IS OPTIONAL.

(5) THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

(6) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

(7) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

(8) SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.

(9) 1" CHAMFER OPTIONAL.

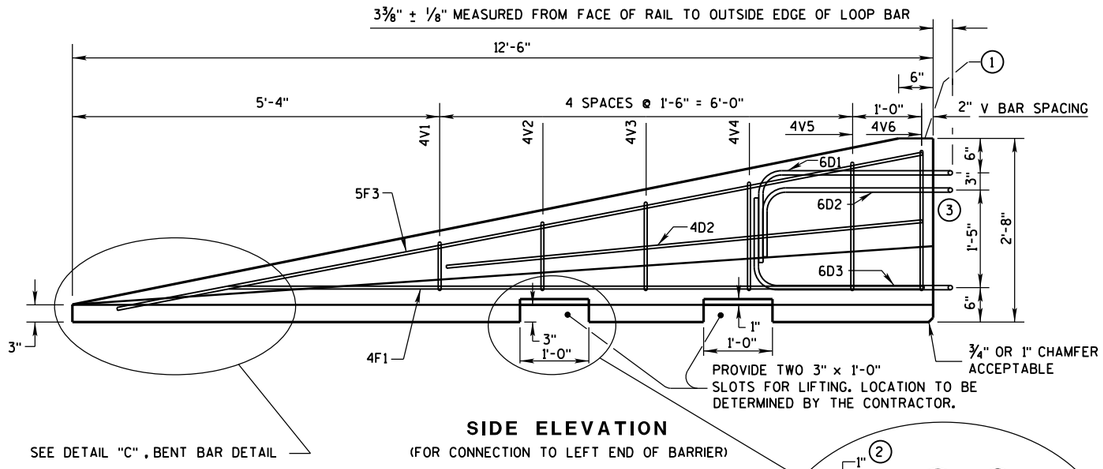
f'c = 4,000 psi

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

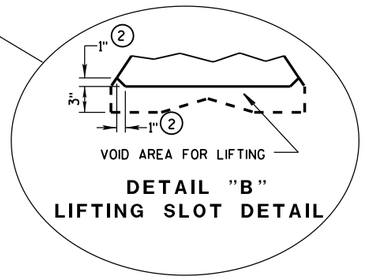
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

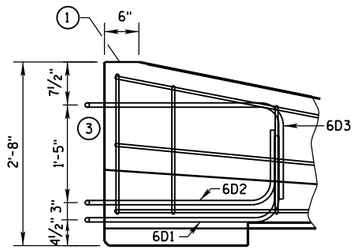
S.D.D. 14 B 7-15a



SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



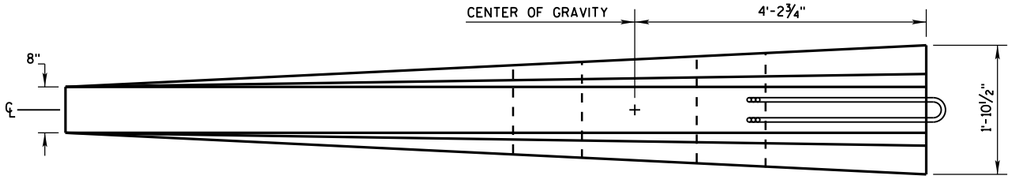
DETAIL "B"
LIFTING SLOT DETAIL



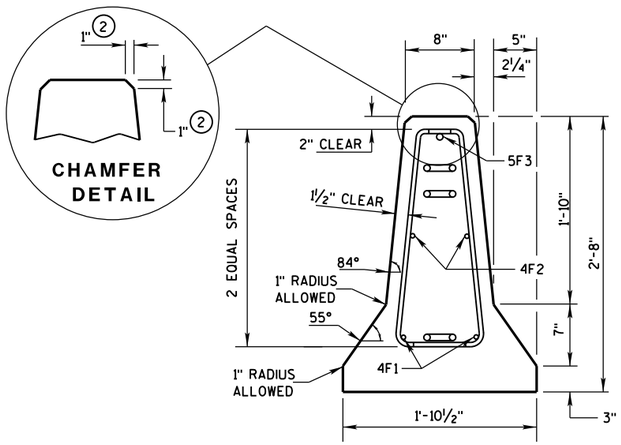
SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

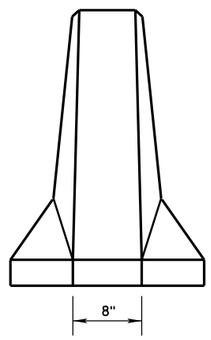
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



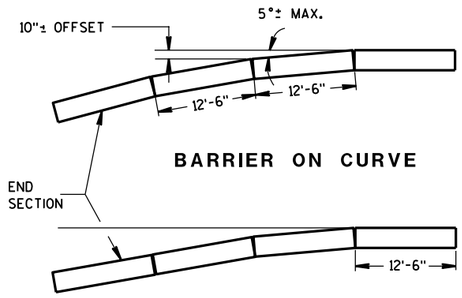
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

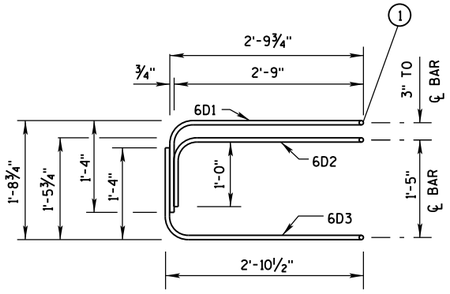
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15b

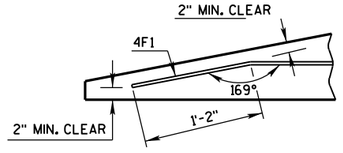
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

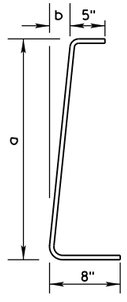
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

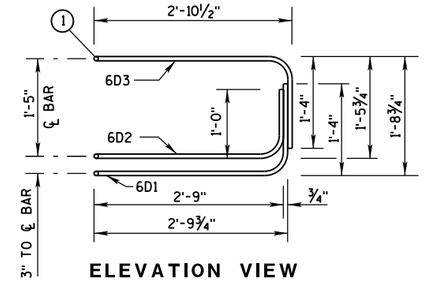
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

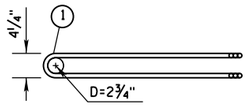
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

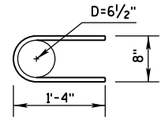
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



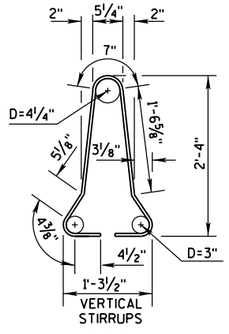
ELEVATION VIEW



PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



4A1

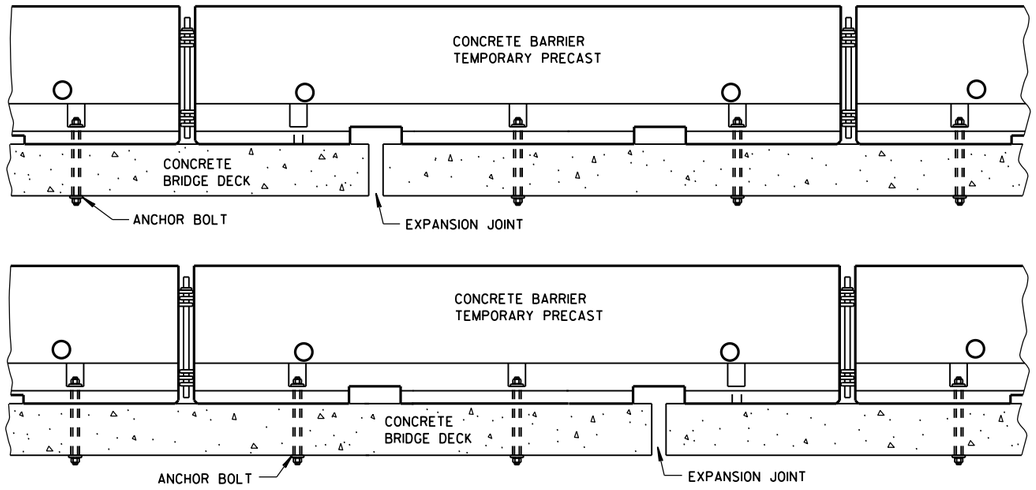
BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15c



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)

GENERAL NOTES

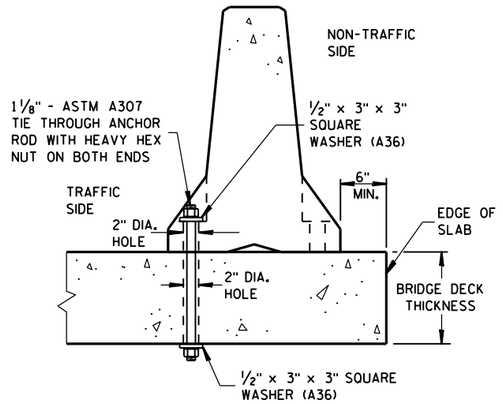
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERICAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(1) 1⅛" DIAMENTER A307 THREADED ROD. ½" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL. ASTM A563A HEAVY HEX NUT.

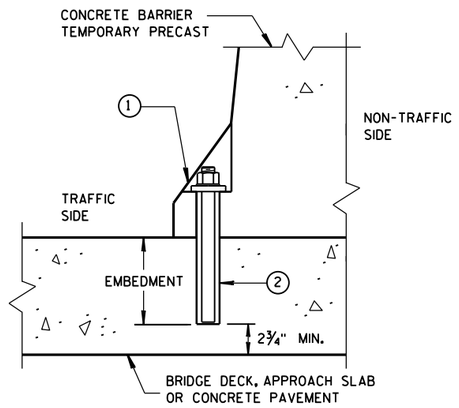
(2) ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5¼" EMBEDMENT. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.

(3) ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THAN DRIVE ASPHALT ANCHOR PIN.



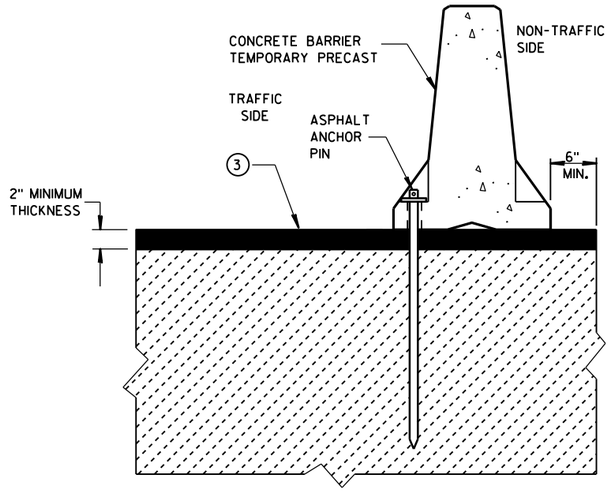
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

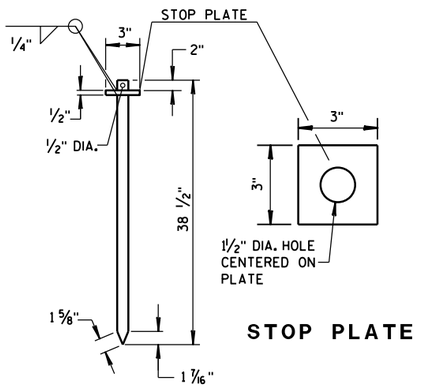


REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

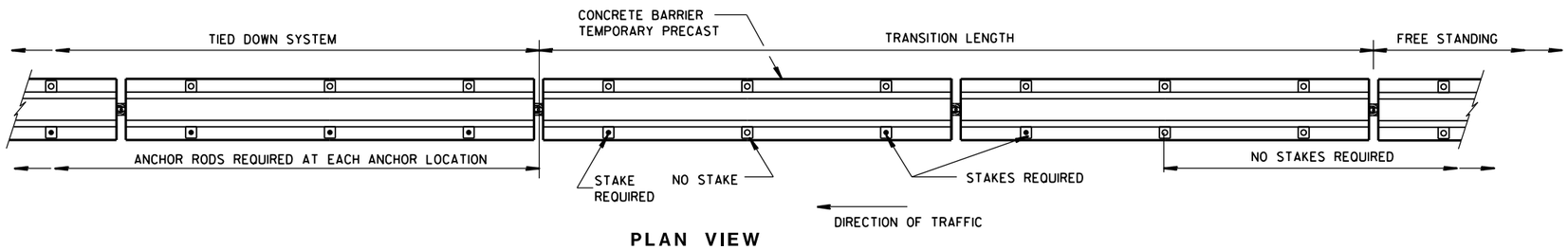


STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE



ASPHALT ANCHOR PIN

(ASTM A36 STEEL)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

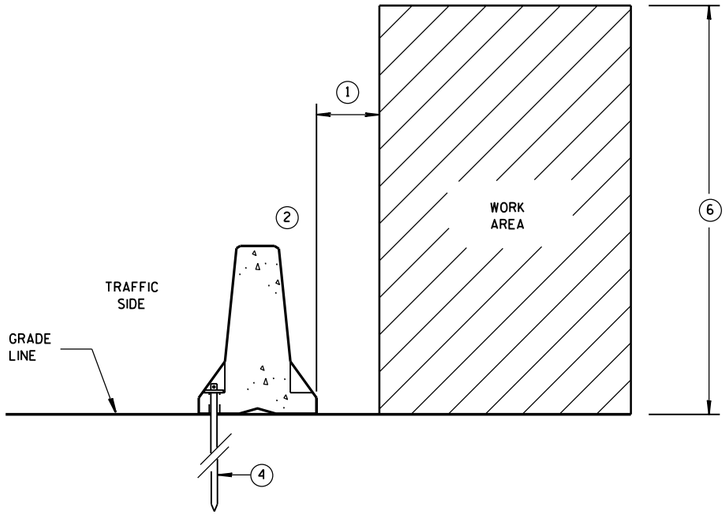
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

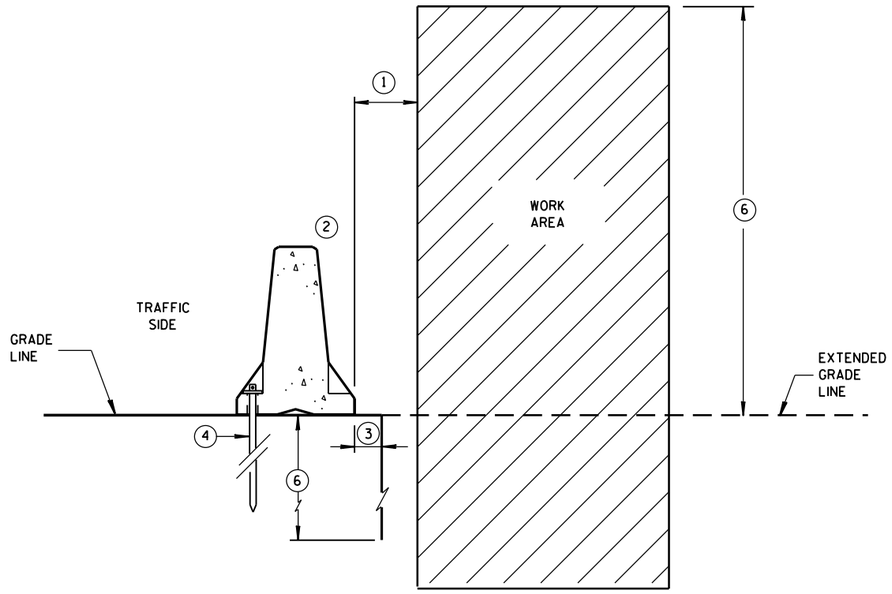
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15d



ANCHORED BARRIER SPACE REQUIREMENTS FOR HAZARDS EXTENDED ABOVE THE GRADE LINE

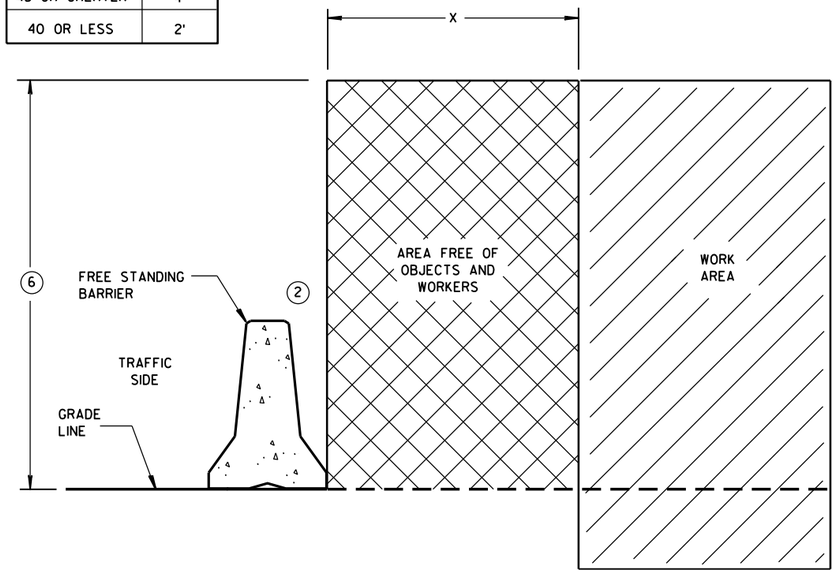


ANCHORED BARRIER SPACE REQUIREMENTS ON VERTICAL DROP OFFS

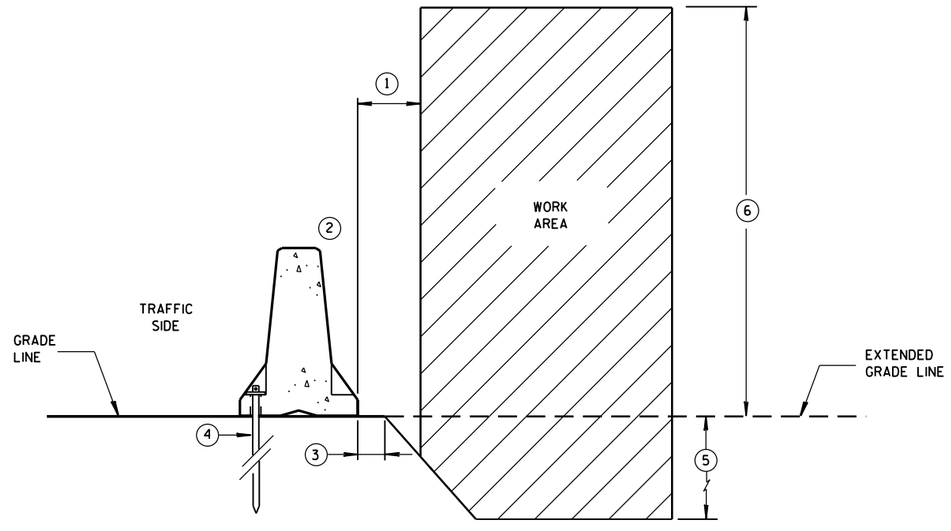
GENERAL NOTES

1. WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
2. OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
3. SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
4. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
5. DEPTH OF 3 FEET OR MORE.
6. Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



FREE STANDING BARRIER SPACE REQUIREMENTS



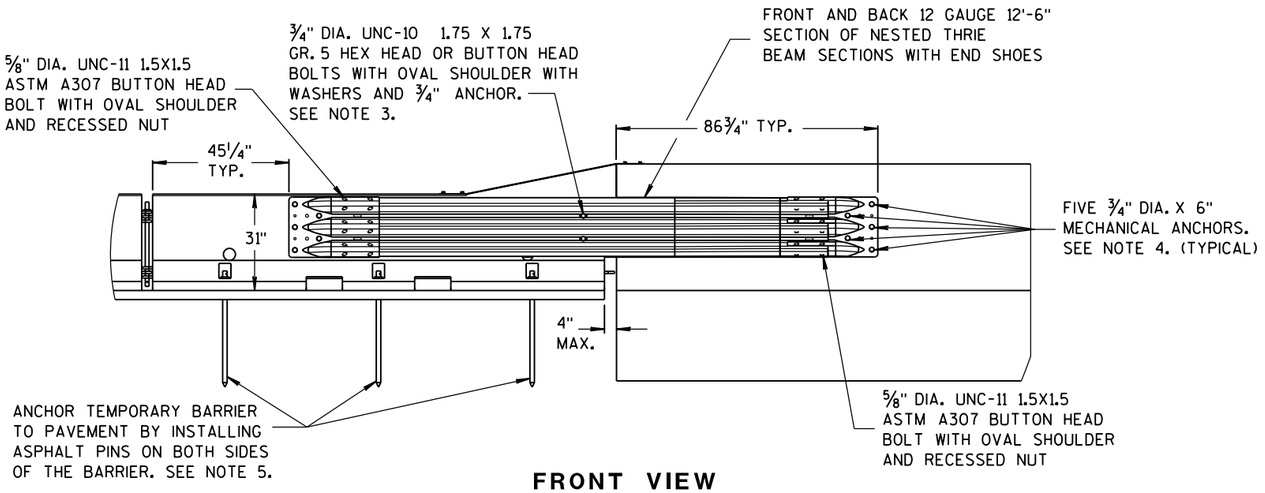
ANCHORED BARRIER SPACE REQUIREMENTS ON SLOPES

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

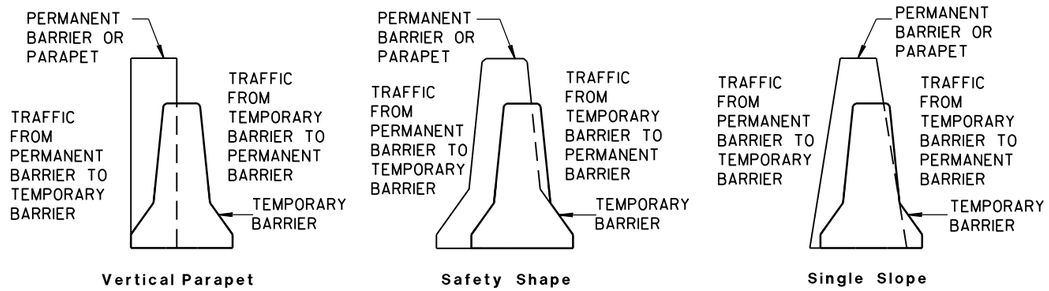
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 7-15e



FRONT VIEW

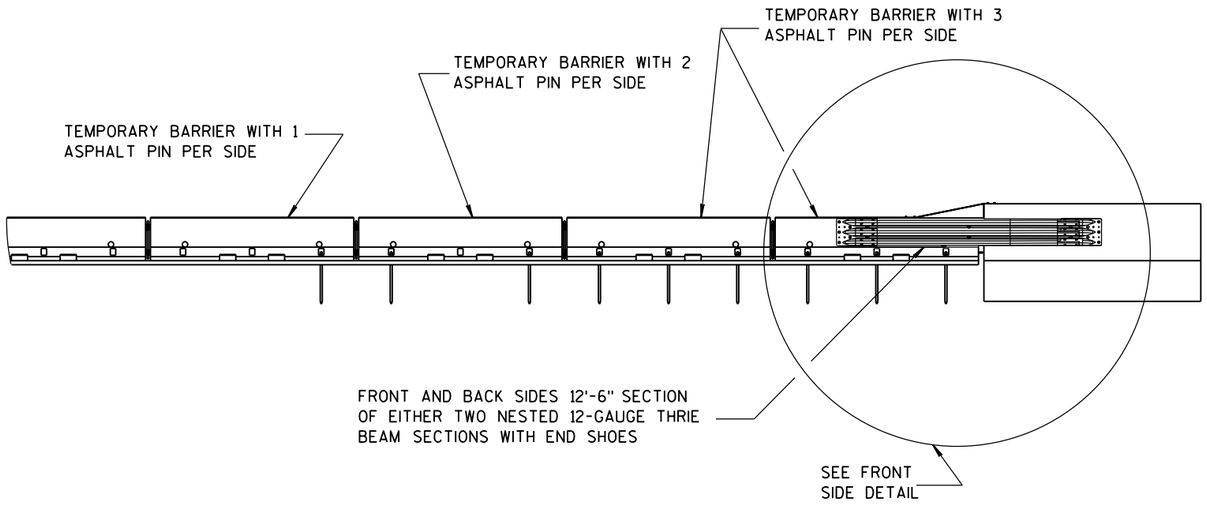


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

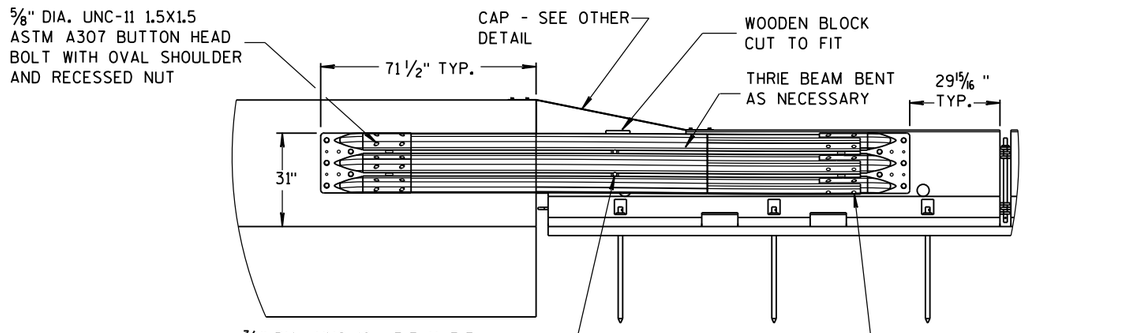
NOTES

NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

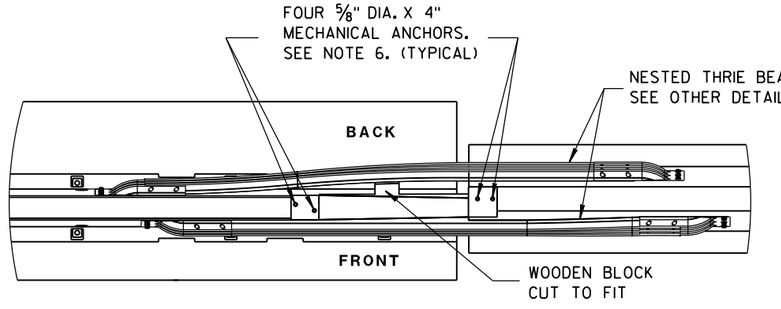
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



FRONT VIEW



BACK VIEW



PLAN VIEW

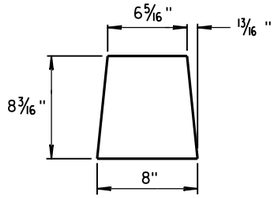
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

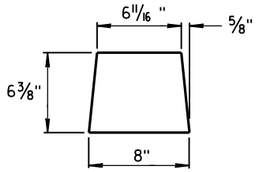
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

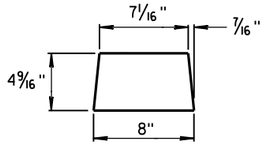
S.D.D. 14 B 7-15f



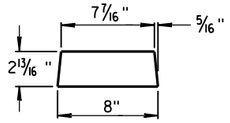
GUSSET 1



GUSSET 2

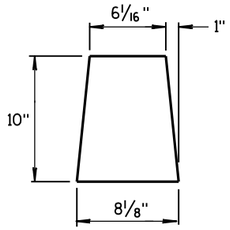


GUSSET 3

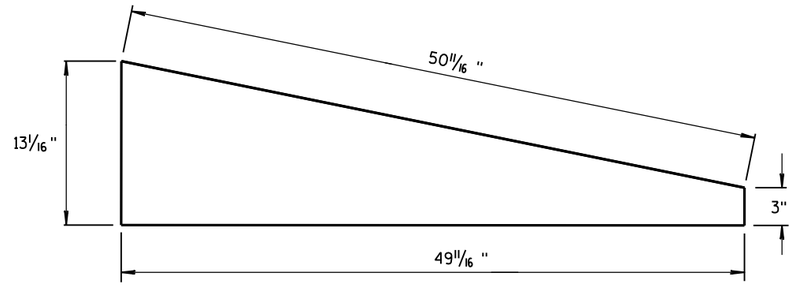


GUSSET 4

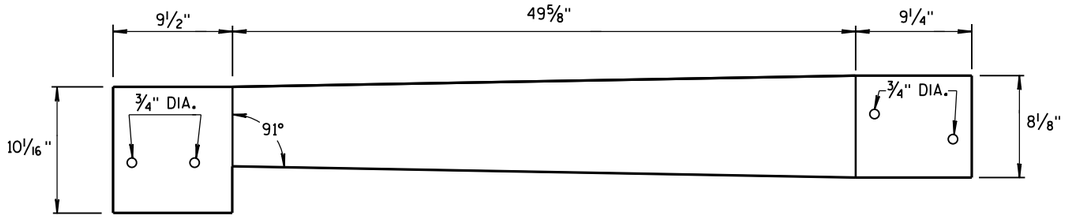
GUSSETS

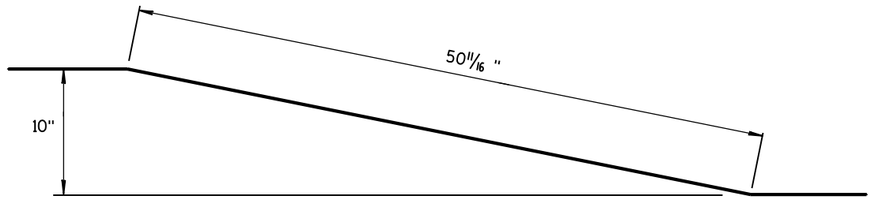


END PLATE



SIDE PLATE

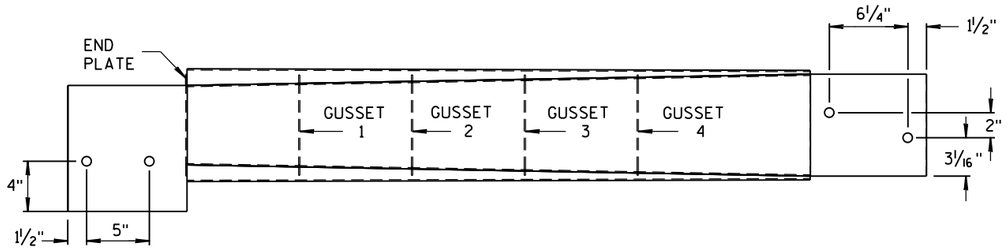


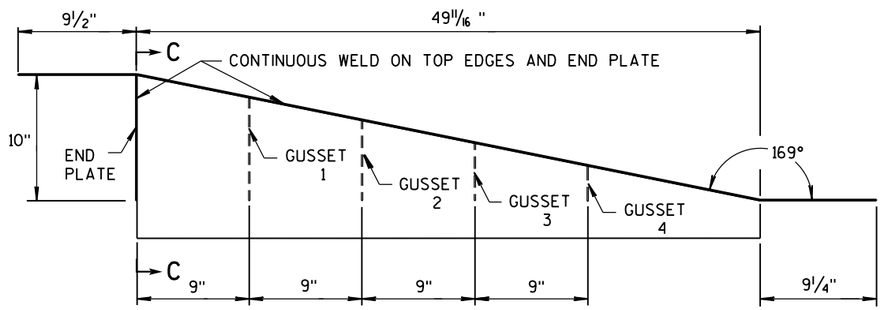


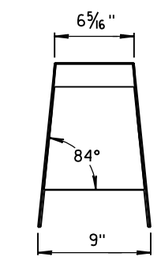
TOP PLATE

SIDE, TOP AND END PLATES FOR CAP FROM TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.







SECTION C-C

NOTES

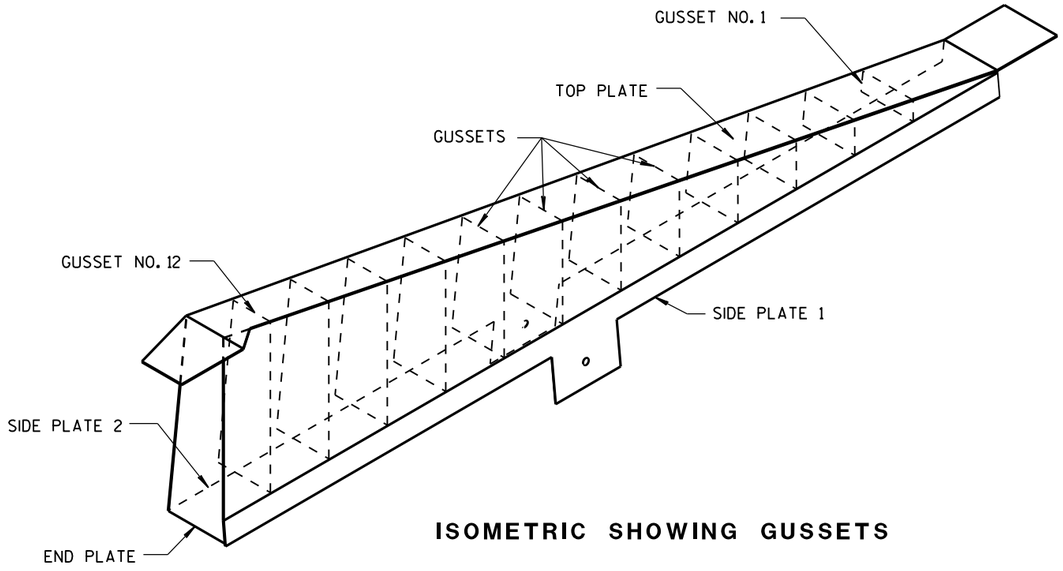
1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 42" PERMANENT CONCRETE BARRIER

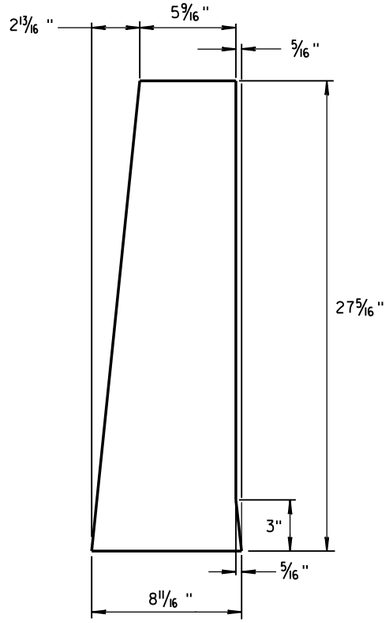
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 7-15g

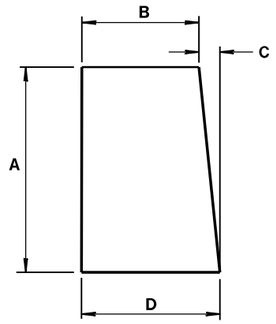


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



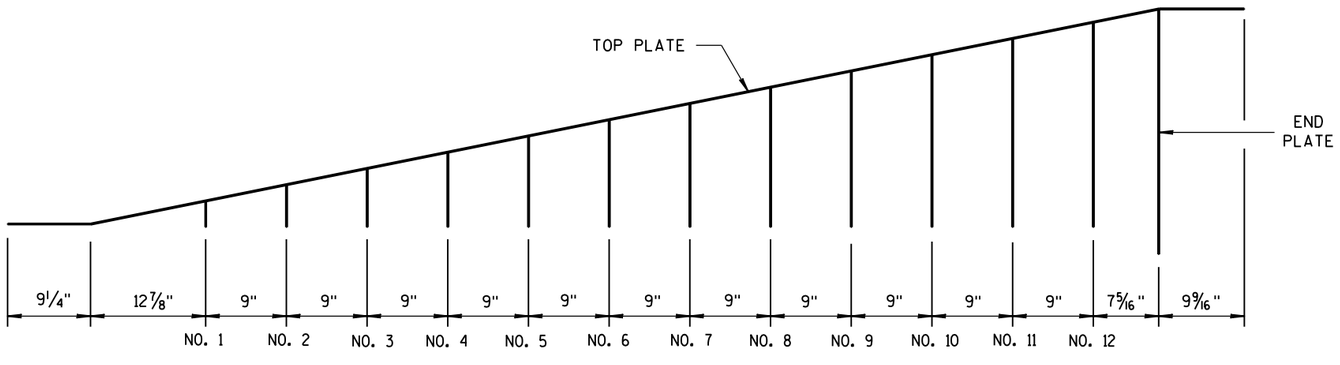
GUSSETS 1 - 12

ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8"	7"	1 1/16 "	8 1/16 "
6	11 15/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



GUSSET LOCATION

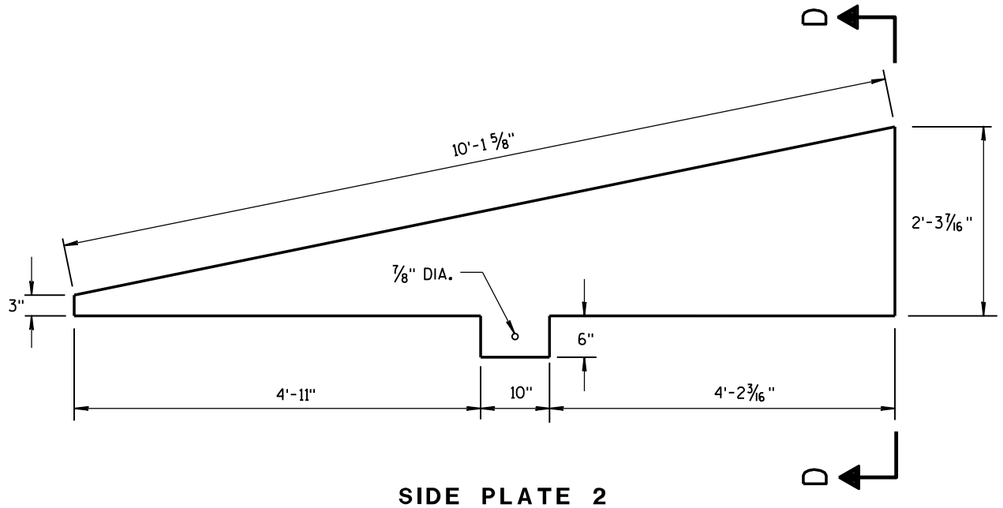
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

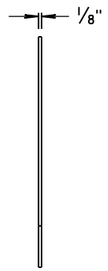
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

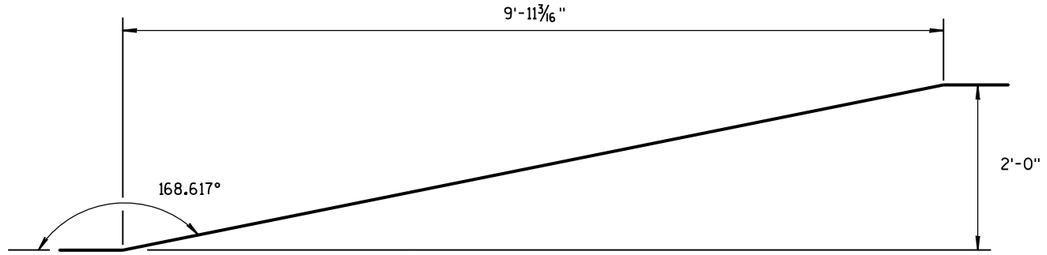
S.D.D. 14 B 7-15h



SIDE PLATE 2

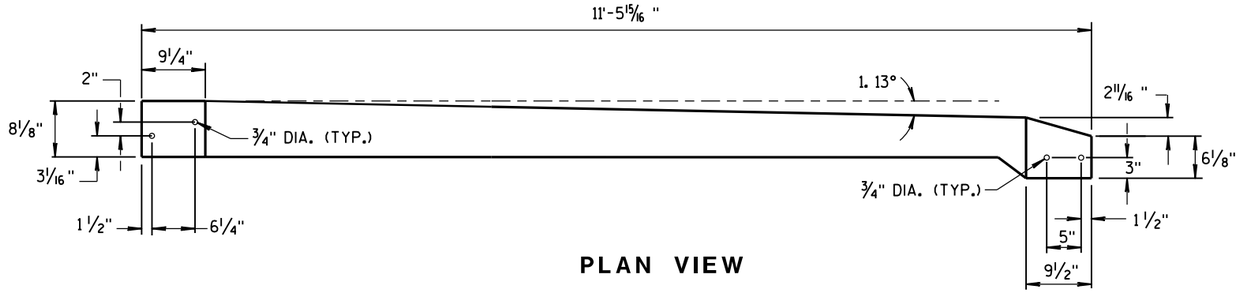


END VIEW



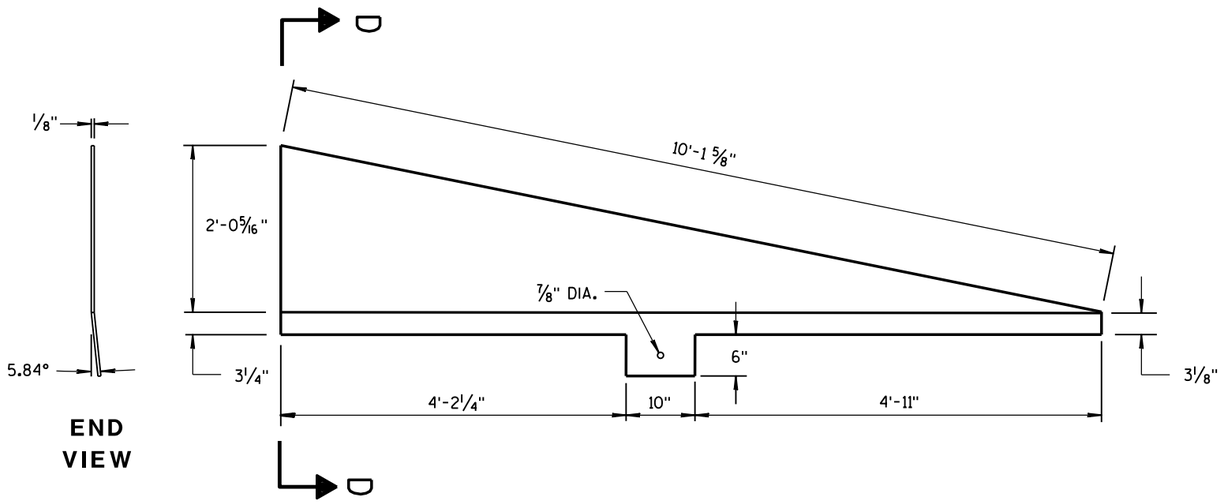
SIDE VIEW

TOP PLATE



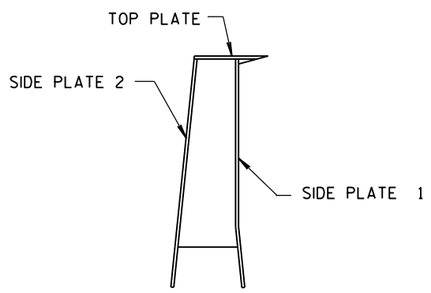
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPERV

127

ENT

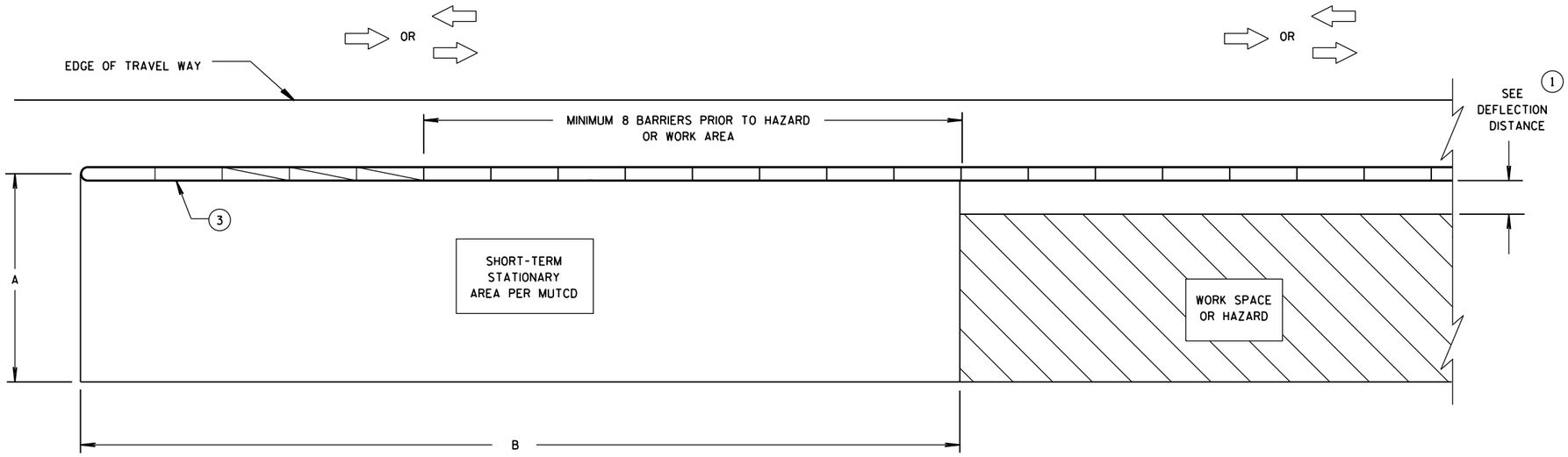
FHWA

6

S.D.D. 14 B 7-15i

6

S.D.D. 14 B 7-15i



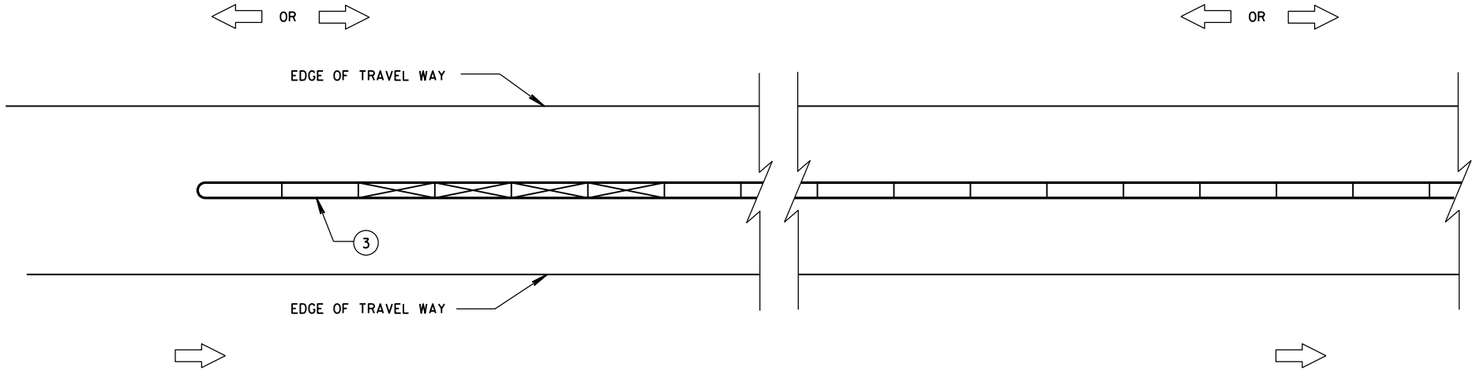
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

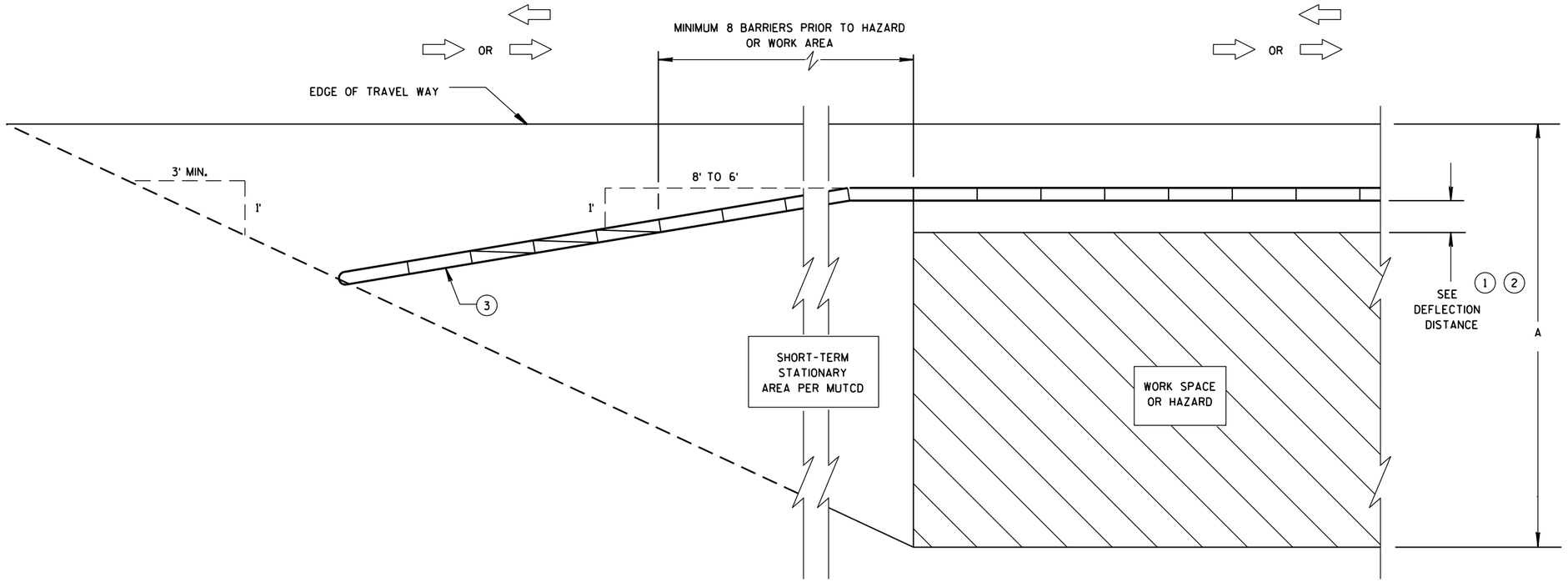
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

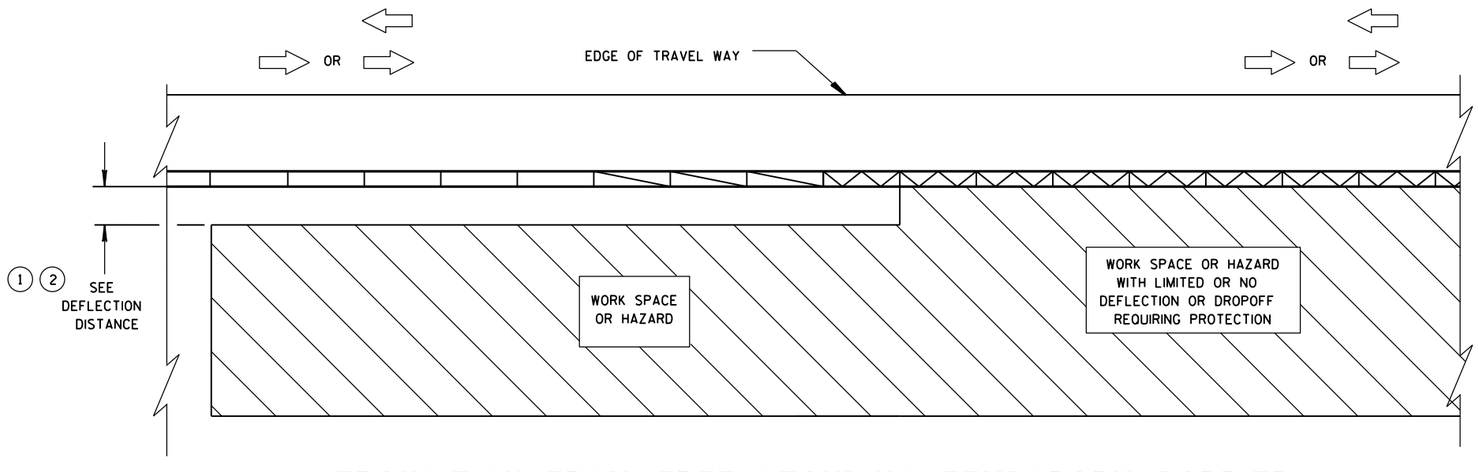
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

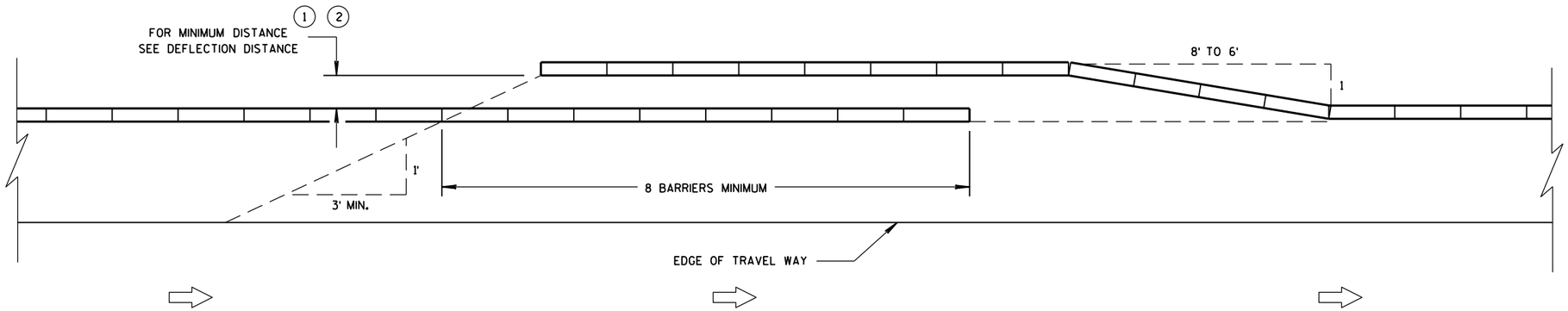
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

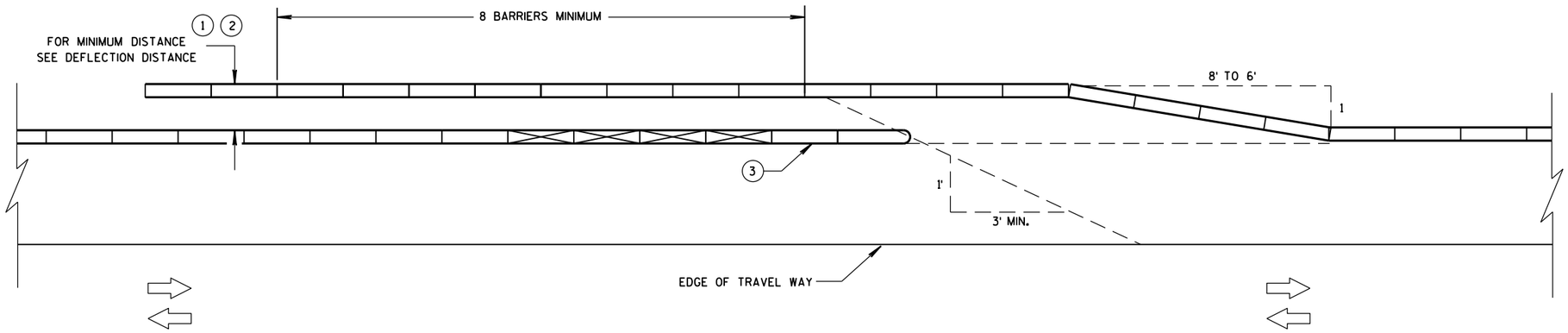
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

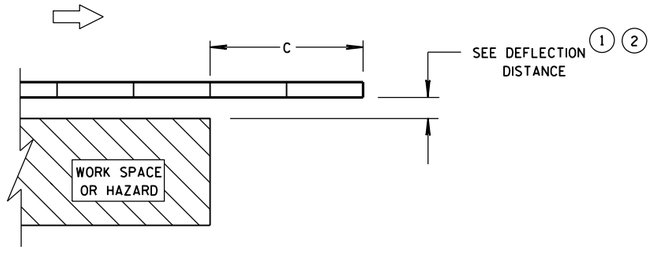
S.D.D. 14 B 8-2b



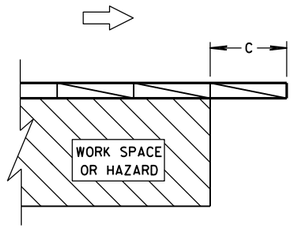
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

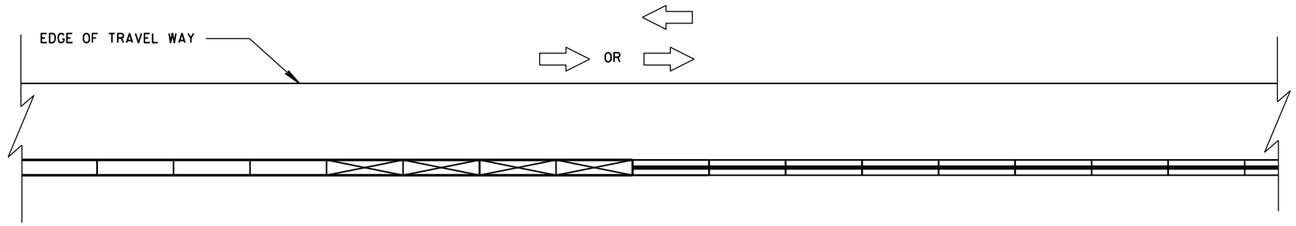
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

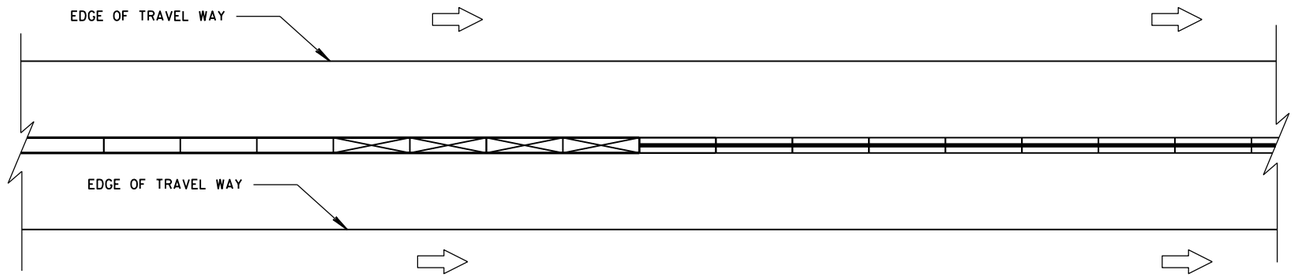
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



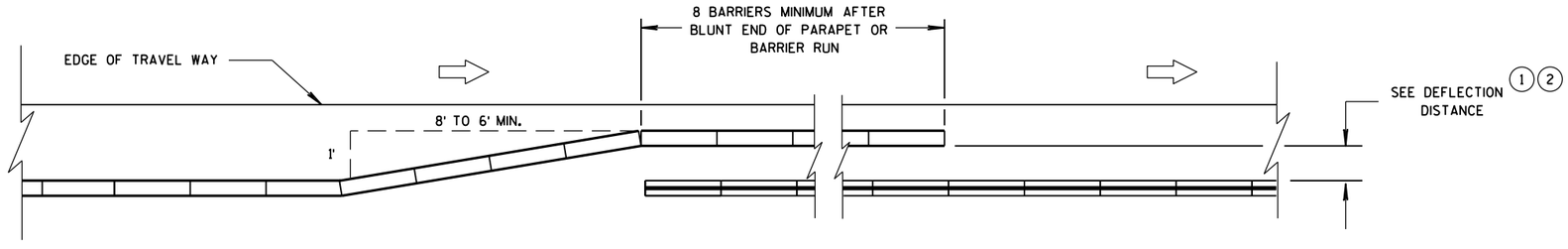
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



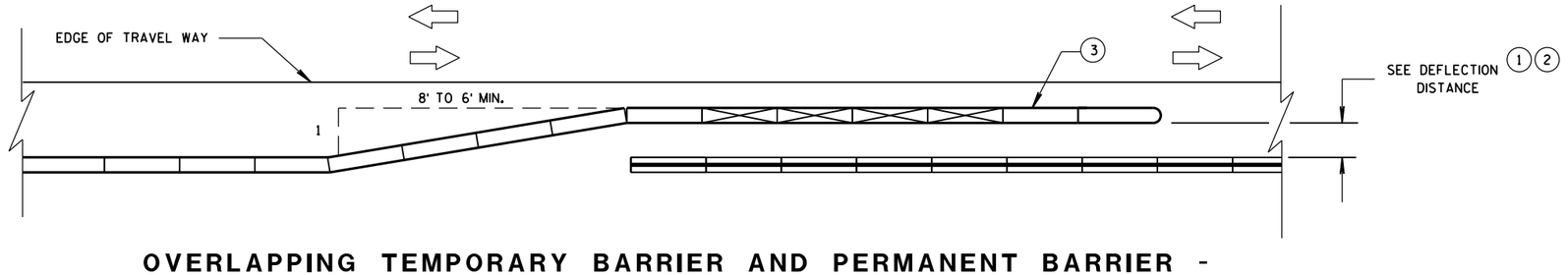
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

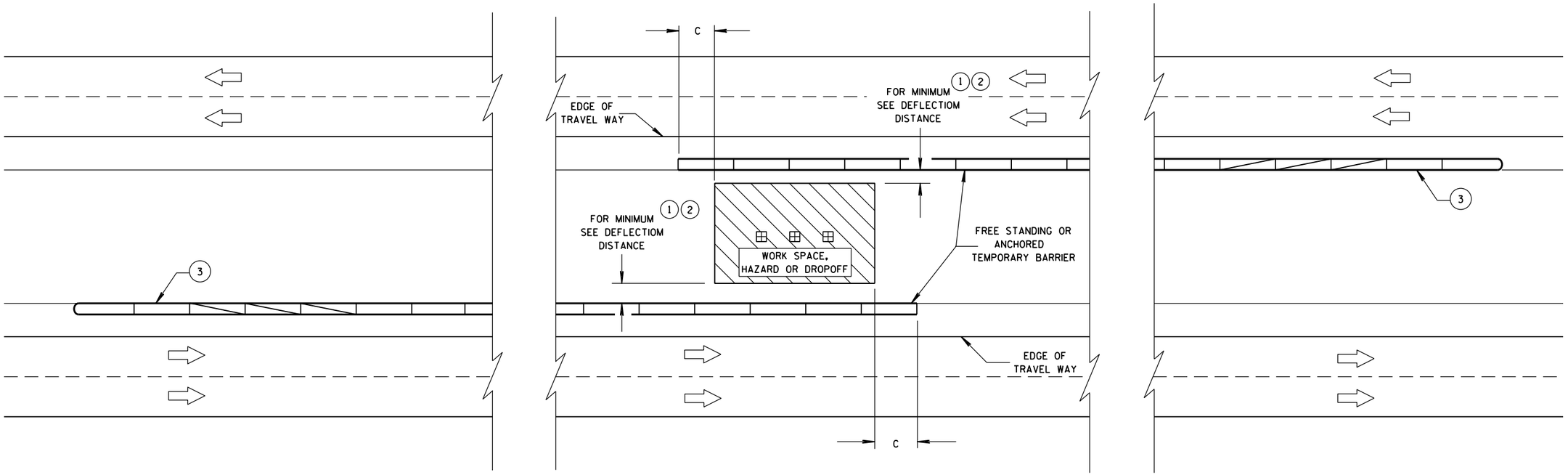
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

6

S.D.D. 14 B 8-2e

(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.

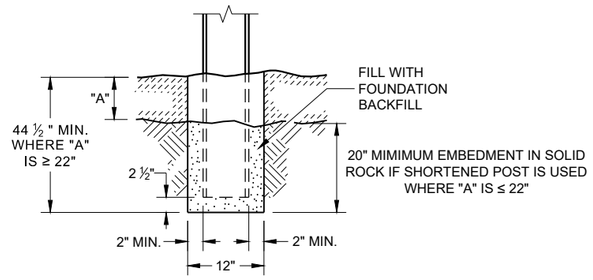
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL 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).

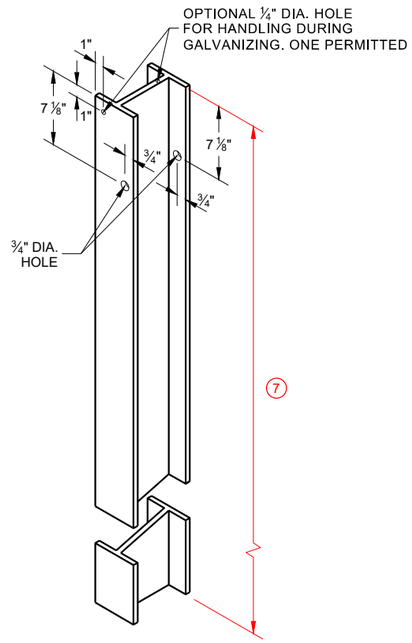
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

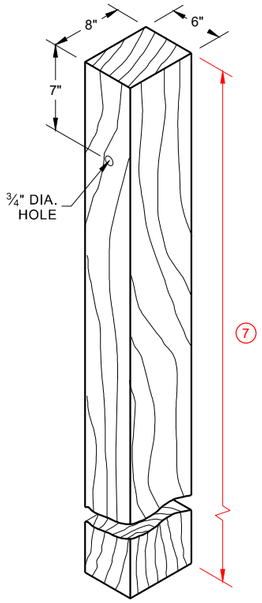
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



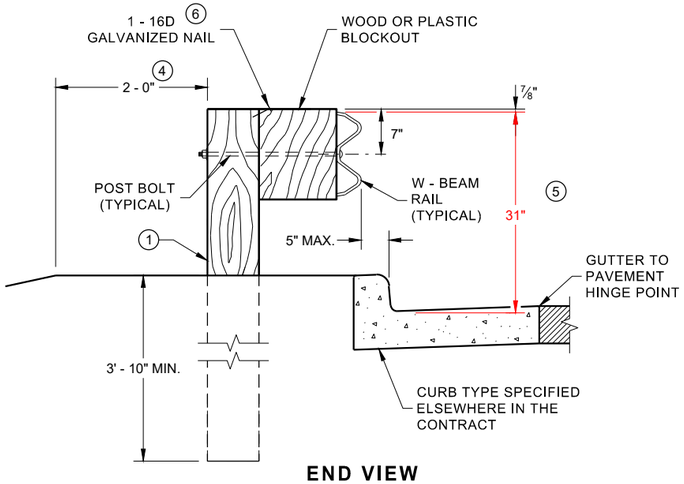
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



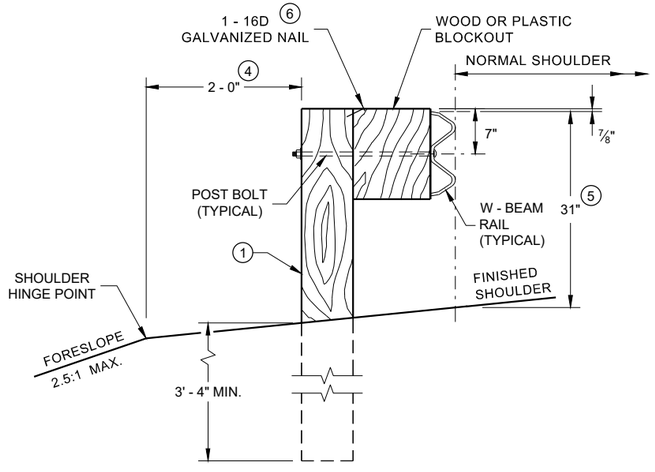
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



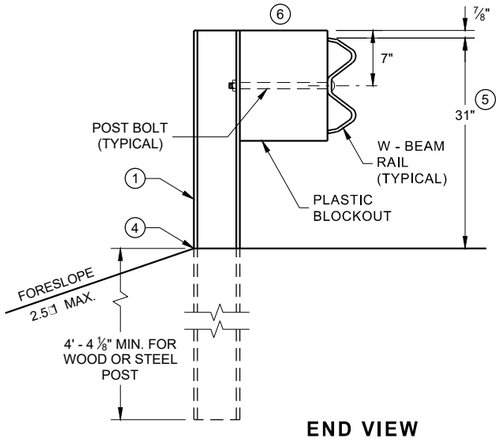
WOOD POST (6" X 8") NOMINAL (1)



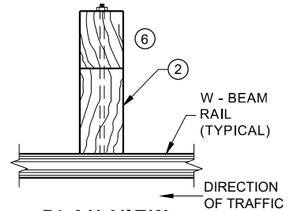
END VIEW
LOCATED ALONG A CURBED ROADWAY



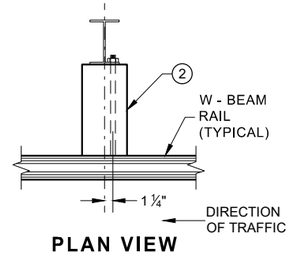
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



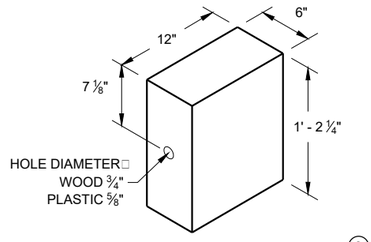
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



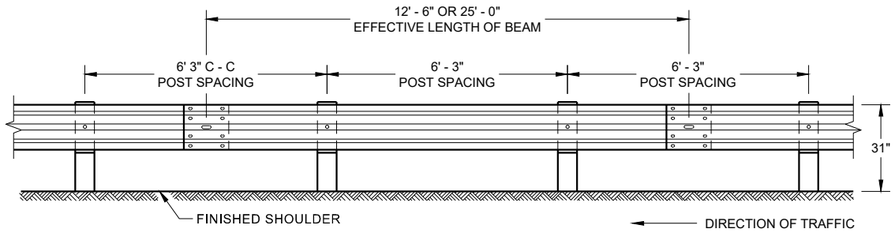
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

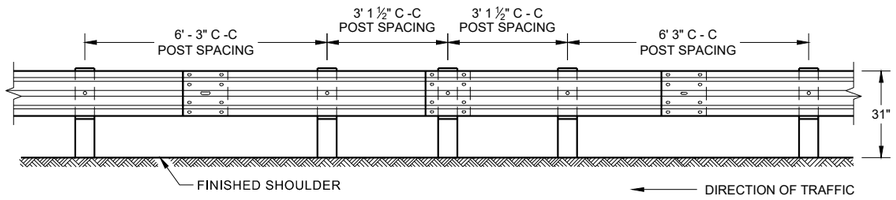
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 06a

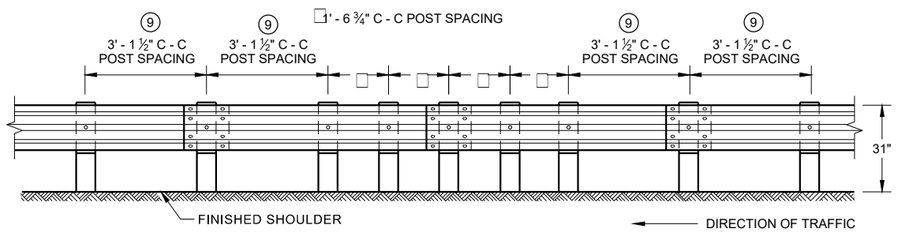
6
SDD 14B42 - 06a



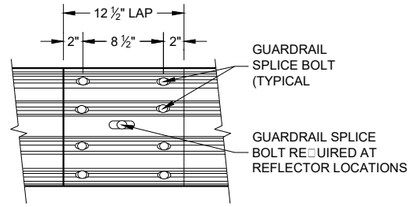
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

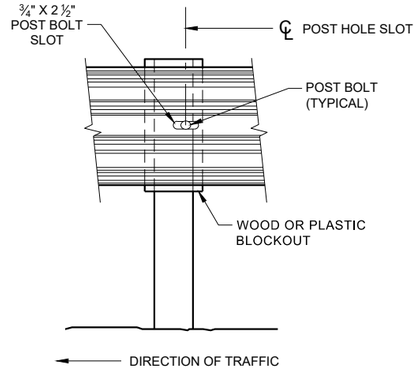
GENERAL NOTES

(8) 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.

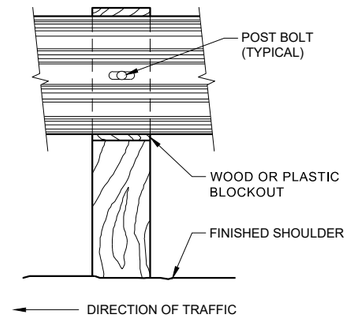
(9) 25 FEET OF HALF POST SPACING IS RE□UIRED ON APPROACH AND DEPARTURE ENDS OF □UARTER POST SPACING.

POST BOLTS ARE A ¾" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

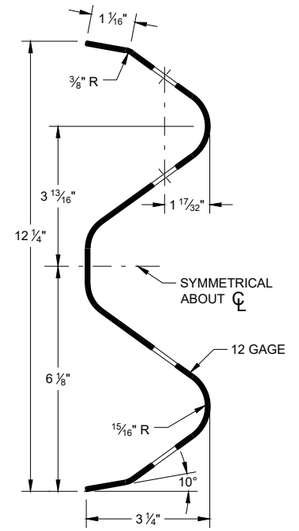
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



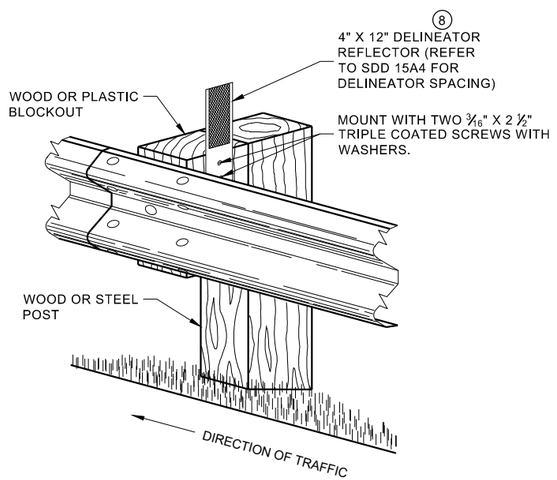
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



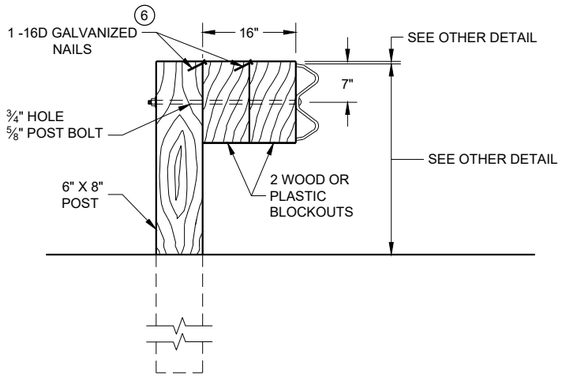
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

6

SDD 14B42 - 06b

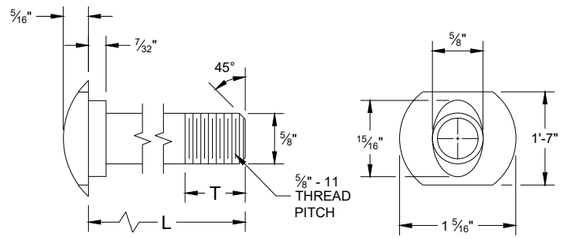


DETAIL FOR 16" BLOCKOUT DEPTH

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.

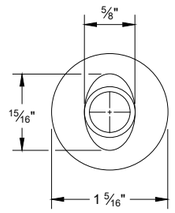
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

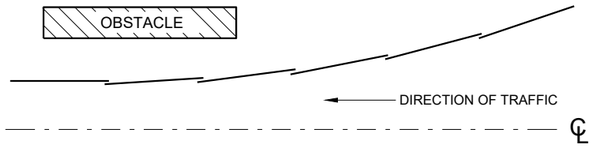


POST BOLT TABLE

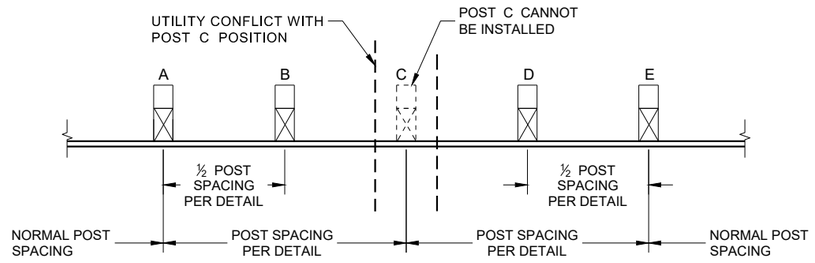
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



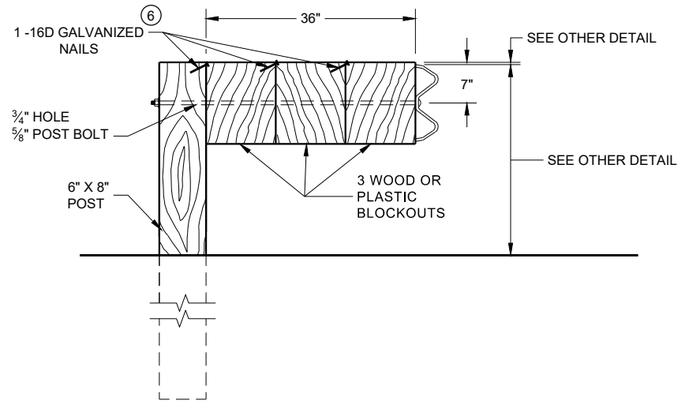
ALTERNATE BOLT HEAD



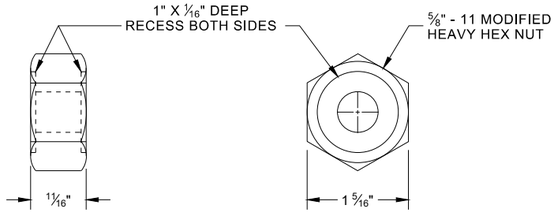
PLAN VIEW
BEAM LAPPING DETAIL



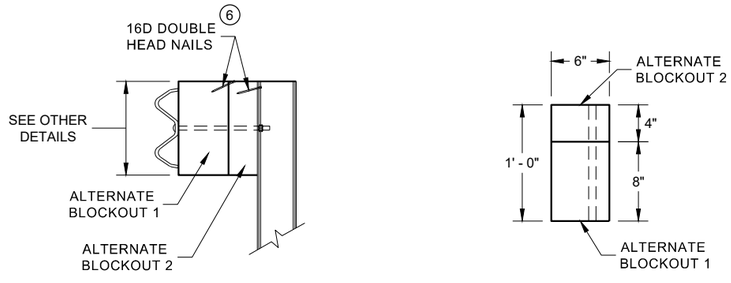
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW

PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

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.

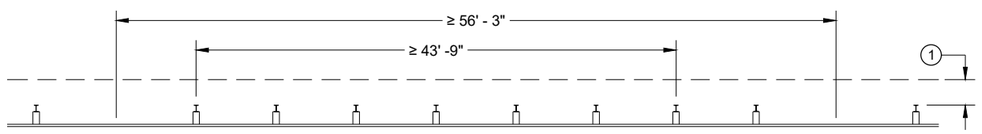
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

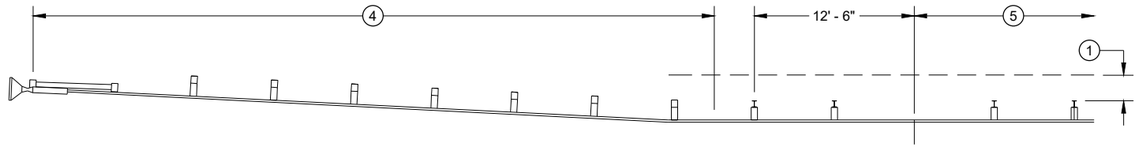
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

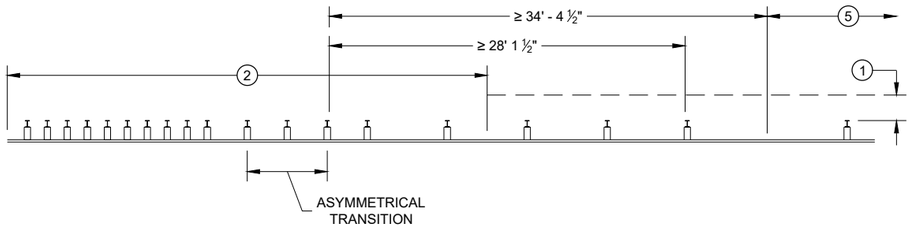
SDD 14B42 - 06c



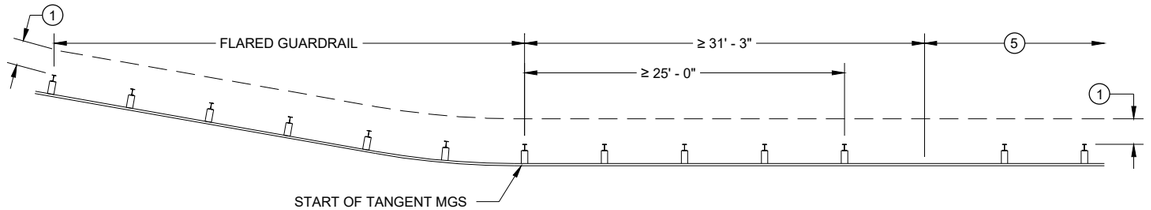
MISSING POST IN NORMAL BEAM GUARD RUN



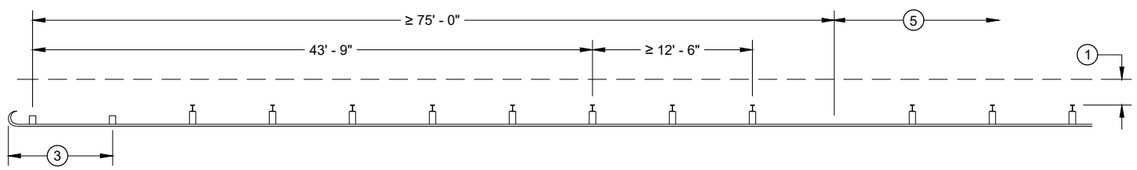
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



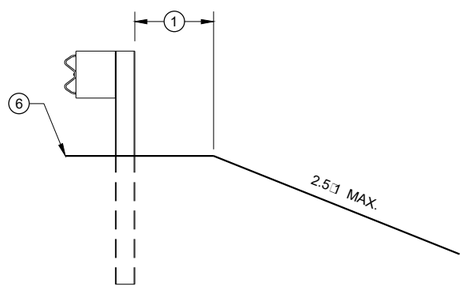
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ R□d□□□T□□□r
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 06d

6

SDD 14B42 - 06d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, 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 MANUFACTURERS RE□UIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

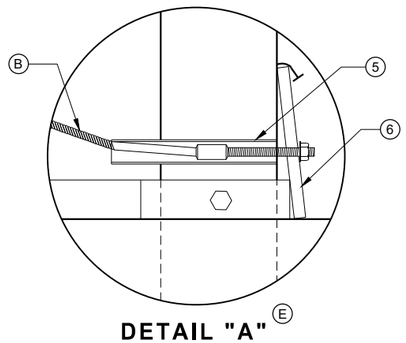
SEE SDD 14B42 FOR MORE INFORMATION.

□ DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

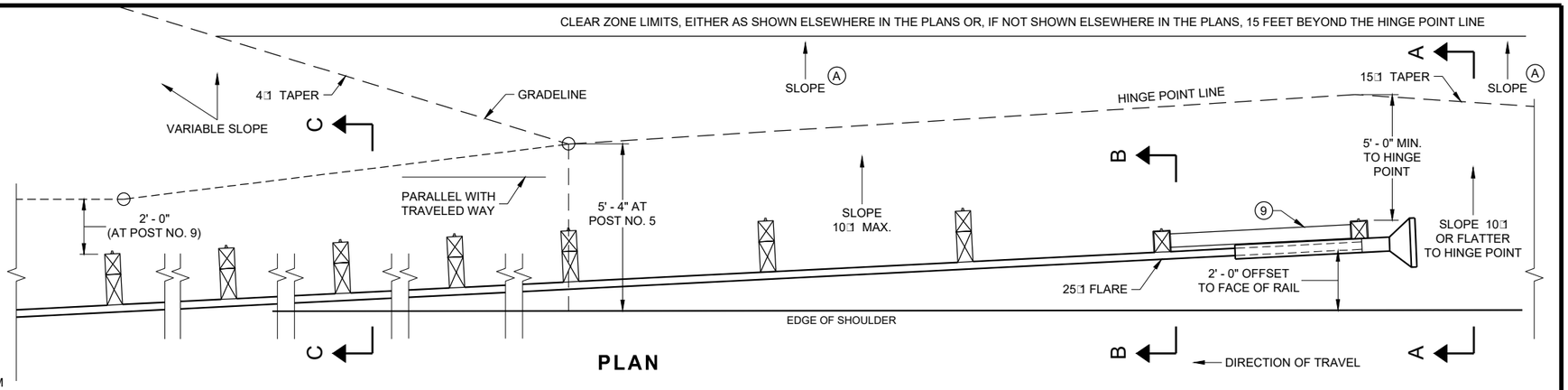
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

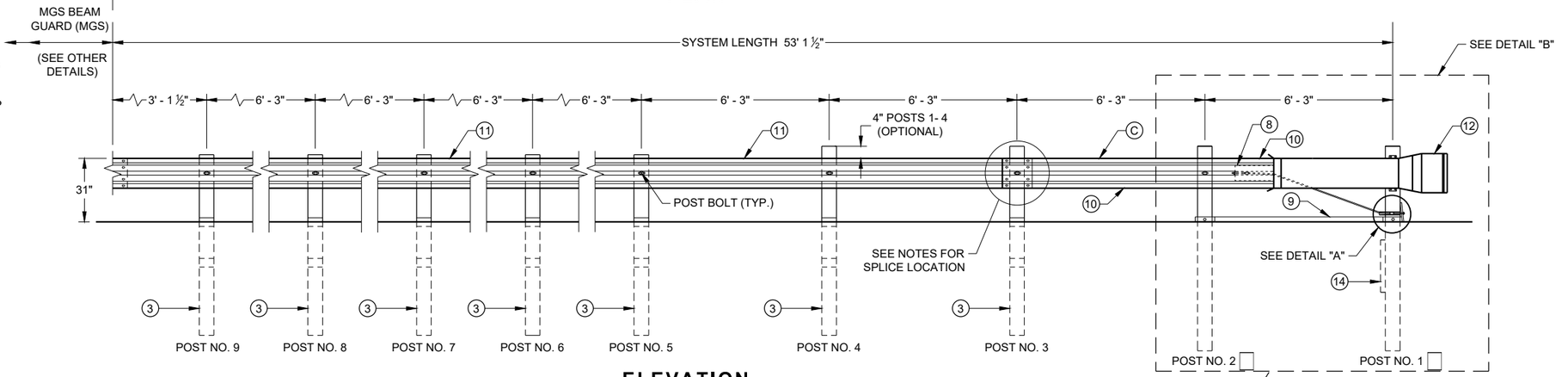
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE AD□USTED UP TO 3" ABOVE THE TOP OF POST.



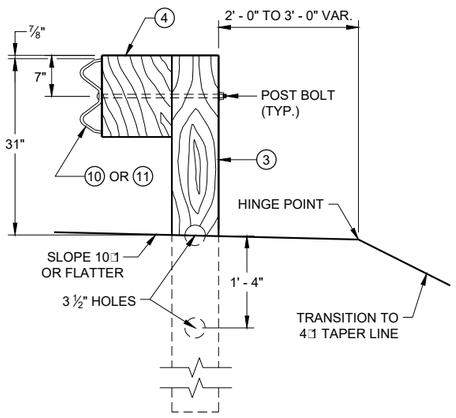
DETAIL "A" (E)



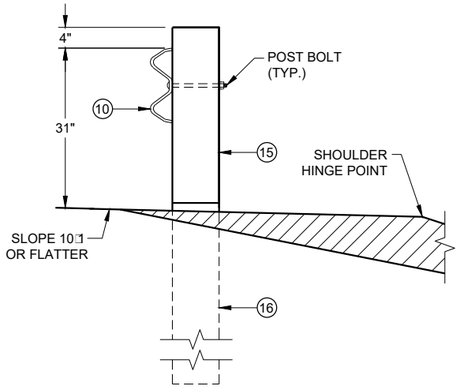
PLAN



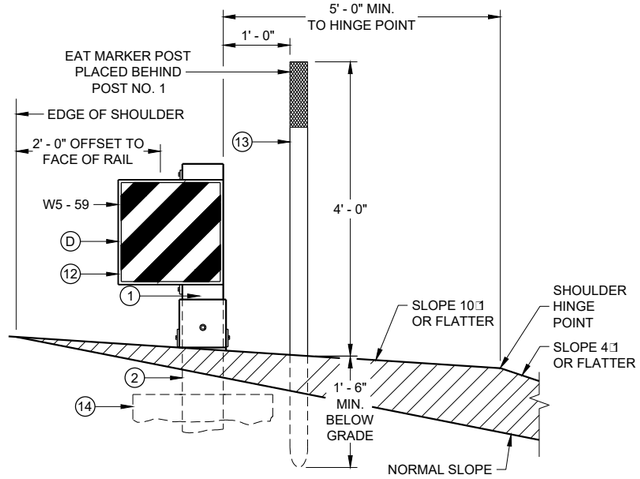
ELEVATION



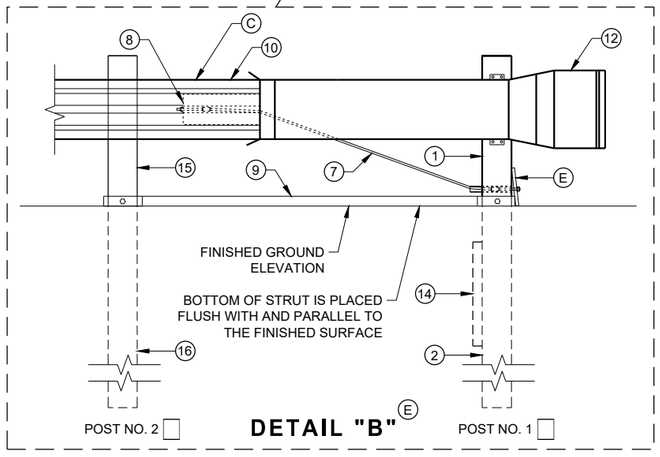
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2□



SECTION A - A
TYPICAL AT POST NO. 1□



DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

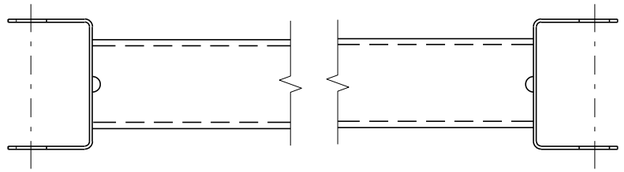
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA□ 137

SDD 14B44 - 04a

SDD 14B44 - 04a

6

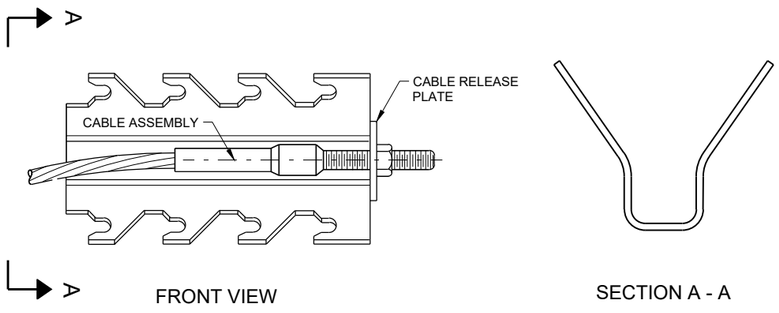
6



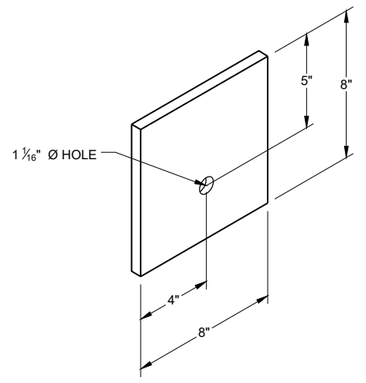
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
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 RE□UIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

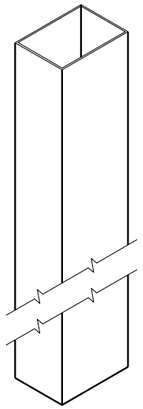
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA1 138

6

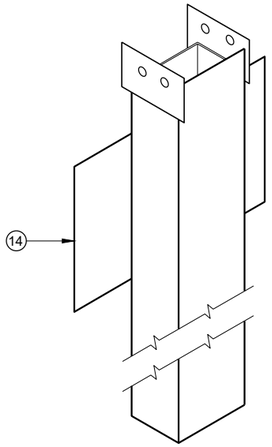
SDD 14B45 - 04b

6

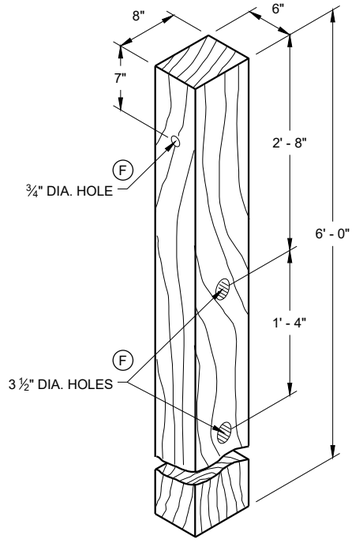
SDD 14B45 - 04b



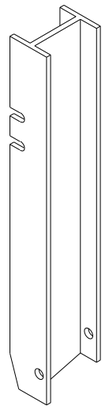
UPPER POST NO. 1 (1) (E)



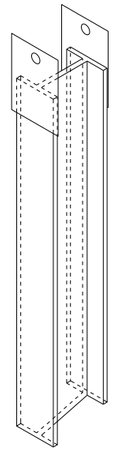
LOWER POST NO. 1 (2) (E)



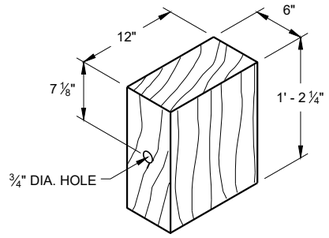
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



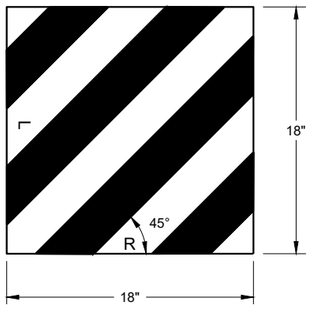
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

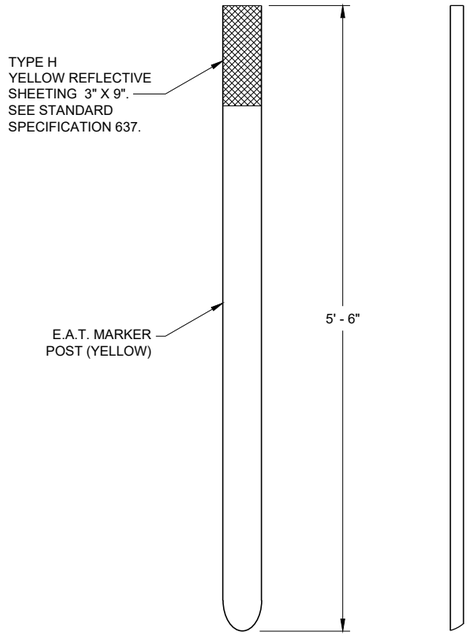


WOOD BLOCKOUT (4)
RE□'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

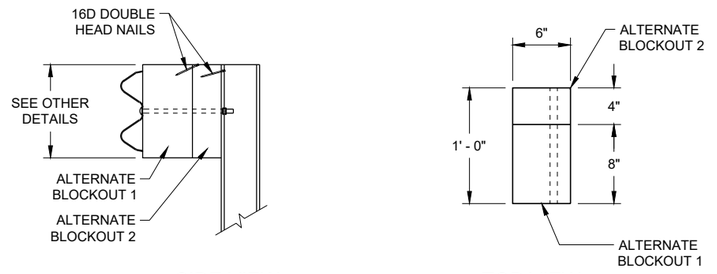


W5 - 59

REFLECTIVE SHEETING DETAIL (E)



E.A.T. MARKER POST (13)



ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ R□d□□□T□□□r
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

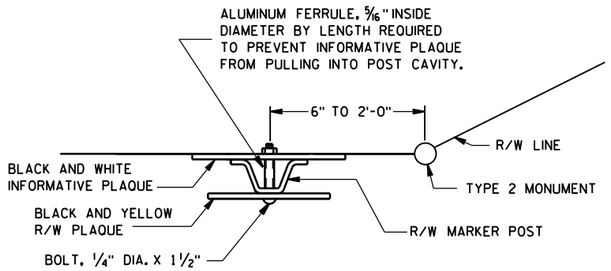
FHWA

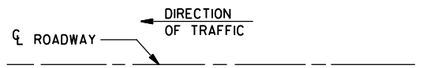
6

SDD 14B44 - 04c

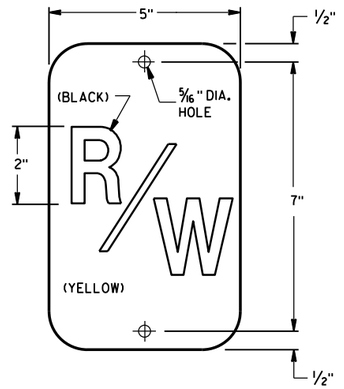
6

SDD 14B44 - 04c



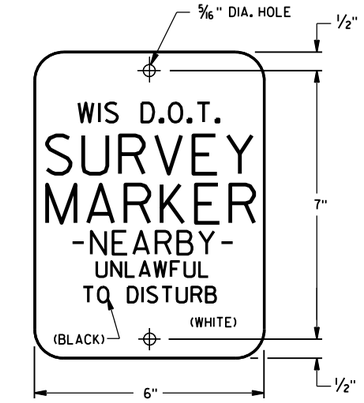


PLAN VIEW



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.

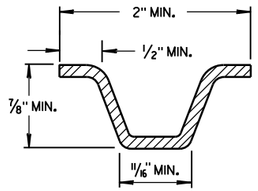
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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.

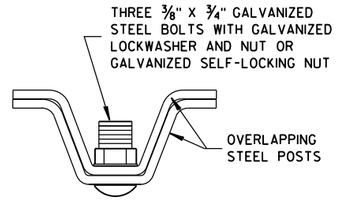
(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3'10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

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

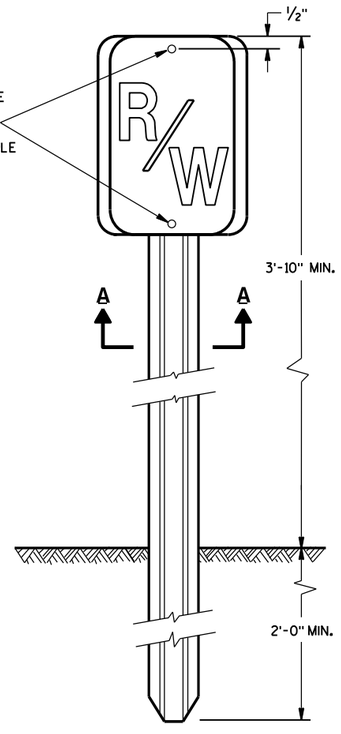


MIN. WEIGHT 1.12 LB./FT.

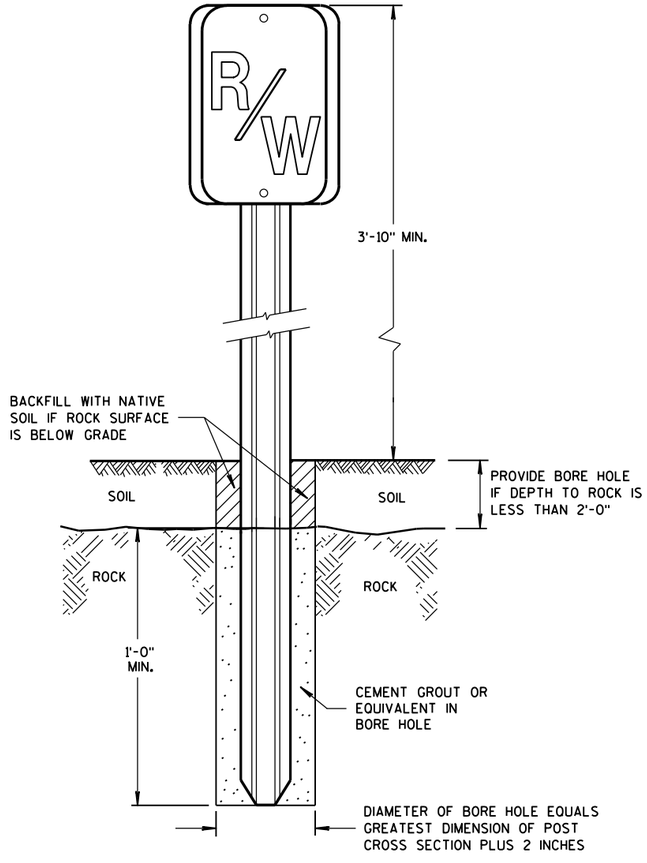
SECTION A-A



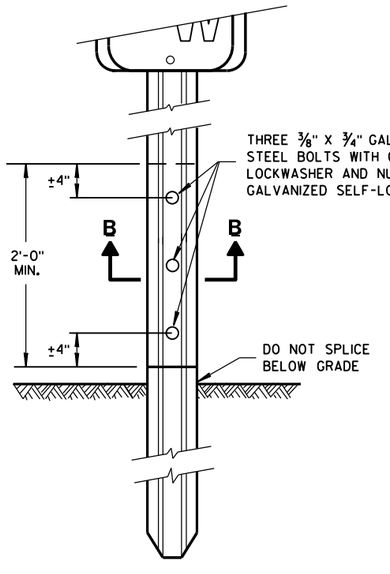
SECTION B-B



FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)



FRONT VIEW
SPLICE DETAIL

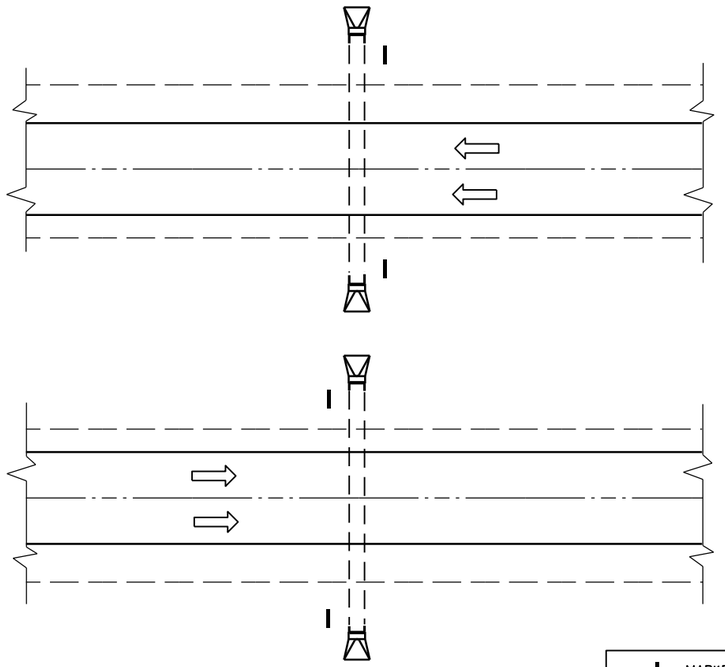
MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MA[illegible]INEER
FHWA

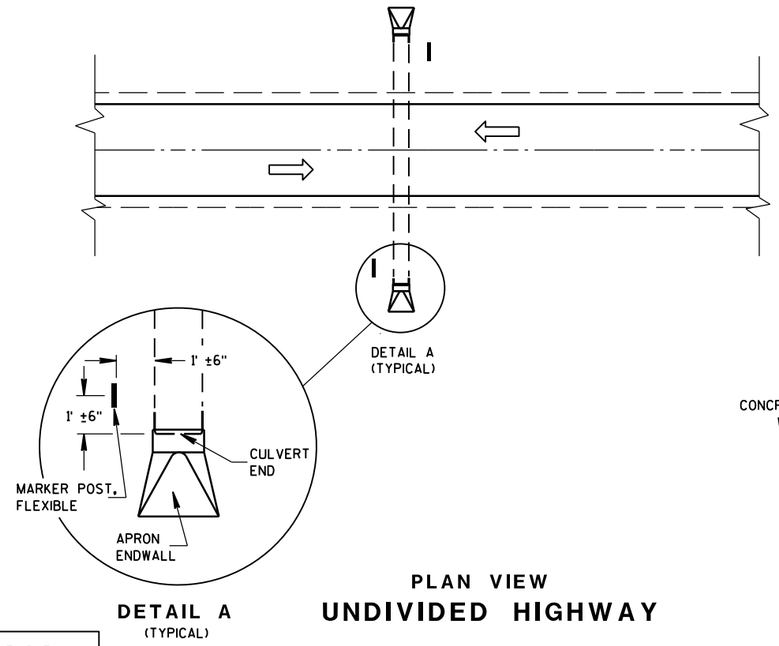
6

S.D.D. 15 A 1-13a



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

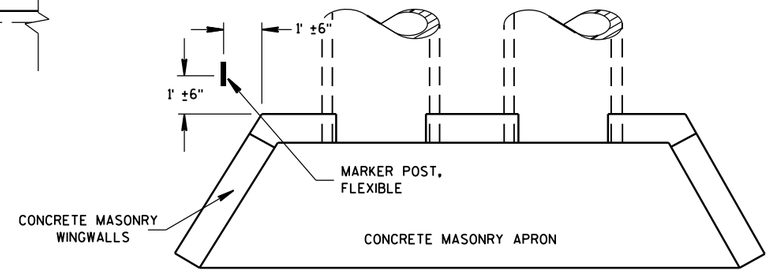
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

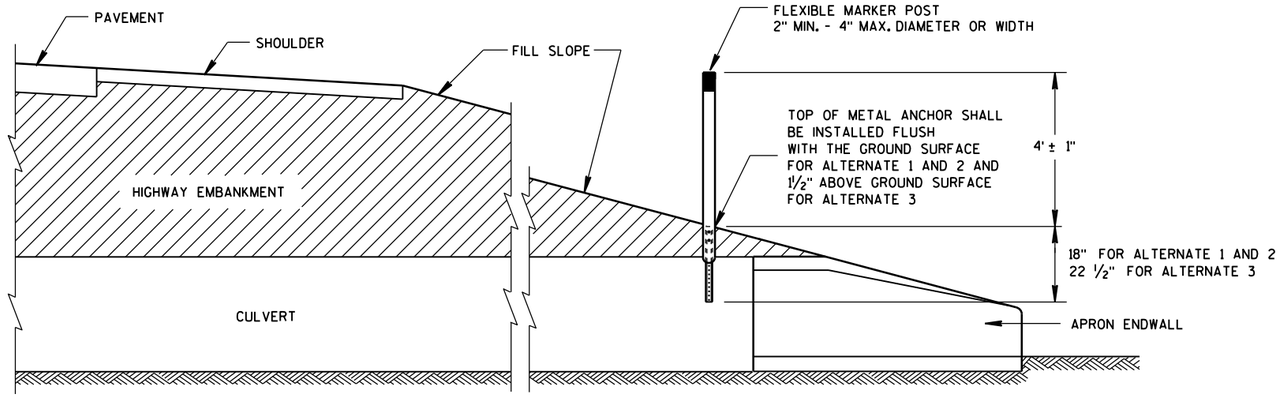
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

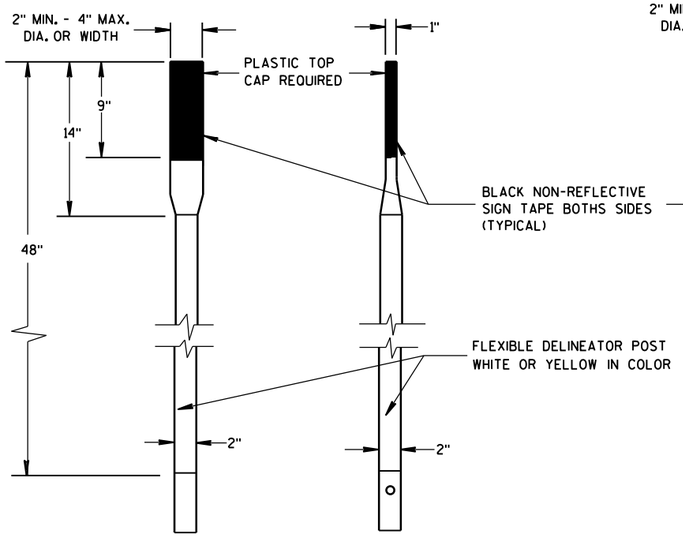
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

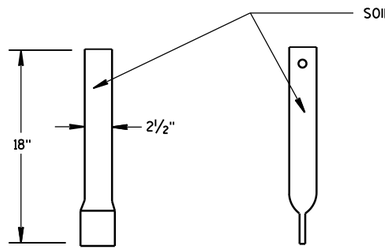
6

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

6

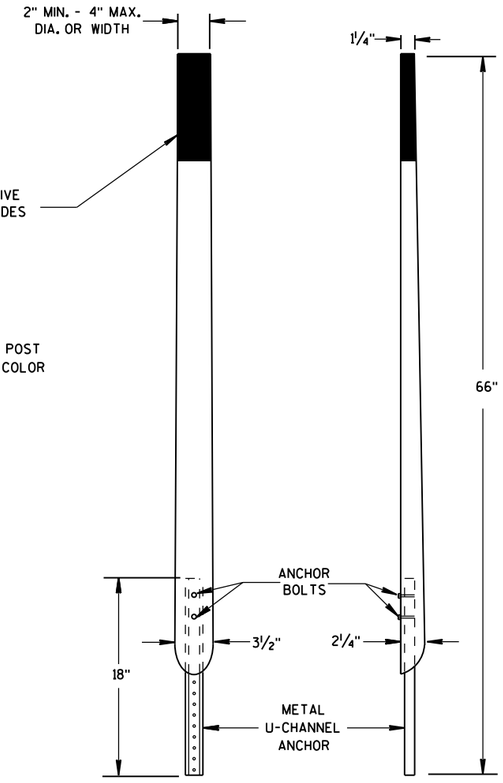
S.D.D. 15 A 3-2a





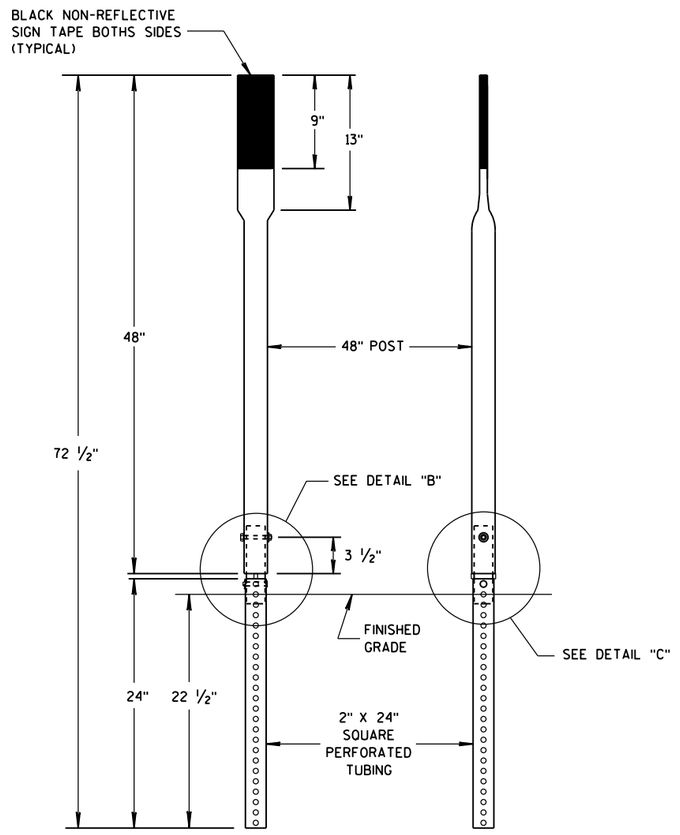
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

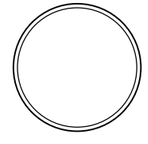
ALTERNATE 2



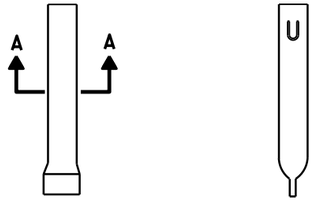
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

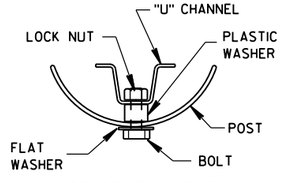


SECTION A-A

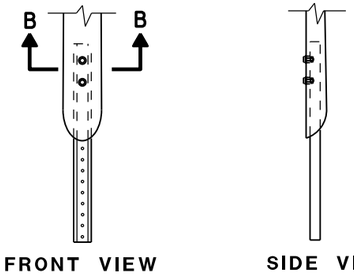


FRONT VIEW SIDE VIEW

ALTERNATE 1

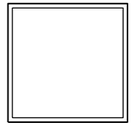


SECTION B-B

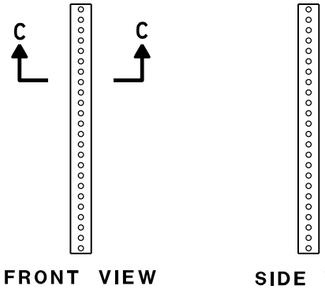


FRONT VIEW SIDE VIEW

ALTERNATE 2



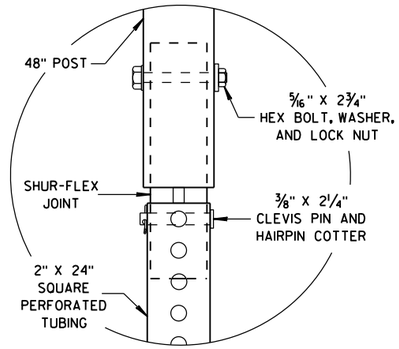
SECTION C-C



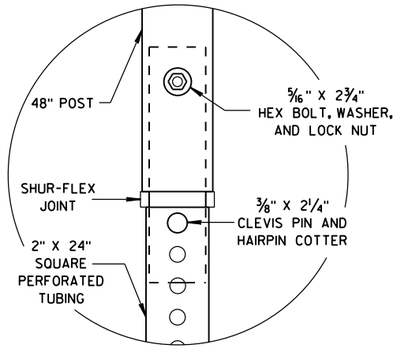
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

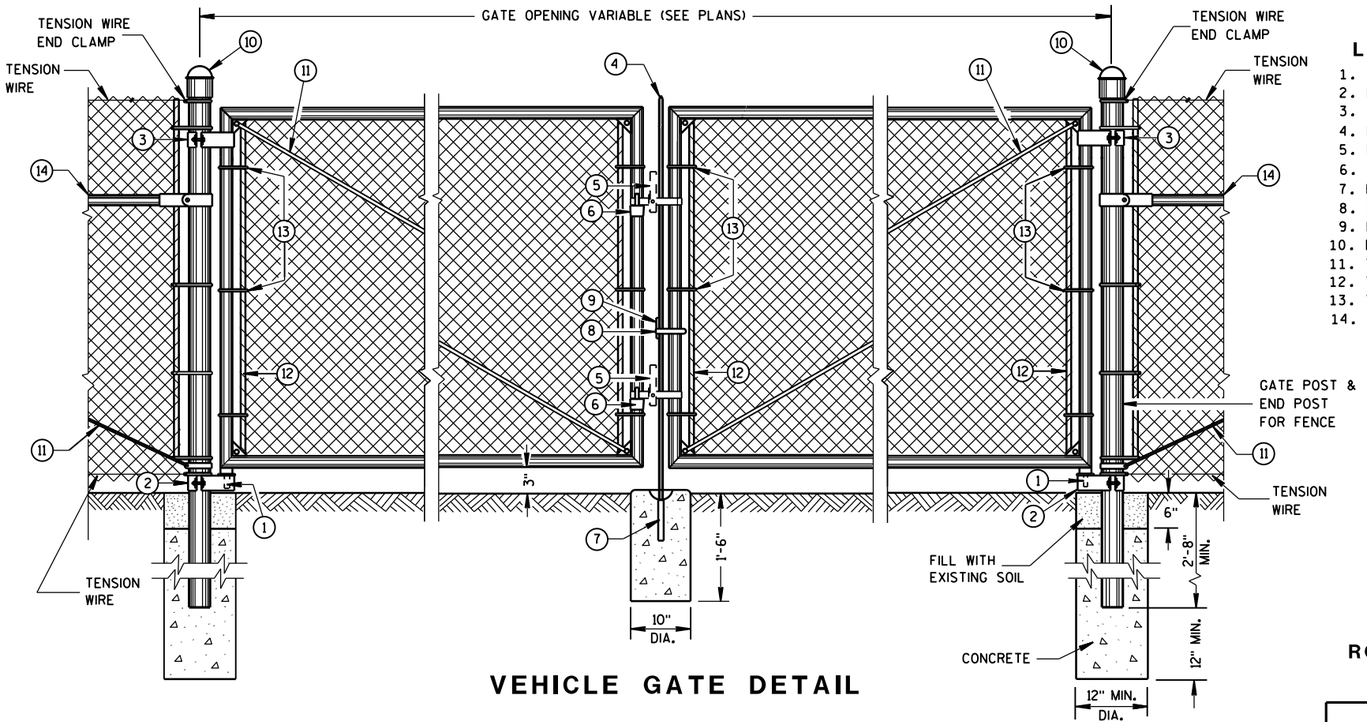
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

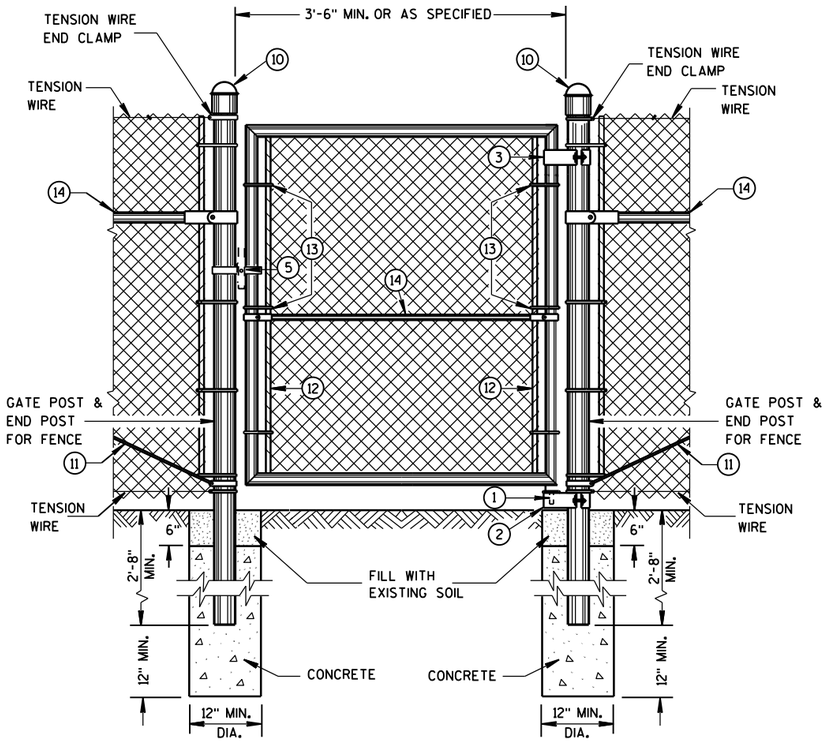
S.D.D. 15 A 3-2b

6

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



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

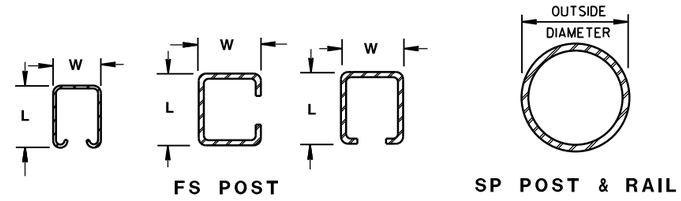
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



CROSS SECTIONS OF POSTS AND RAILS

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

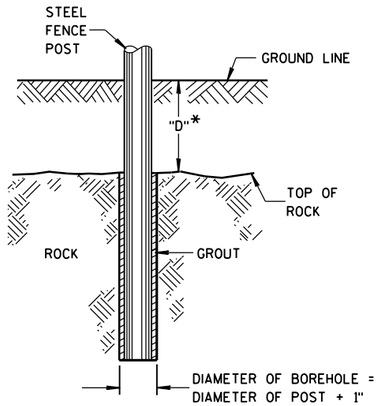
ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

FENCE CHAIN LINK

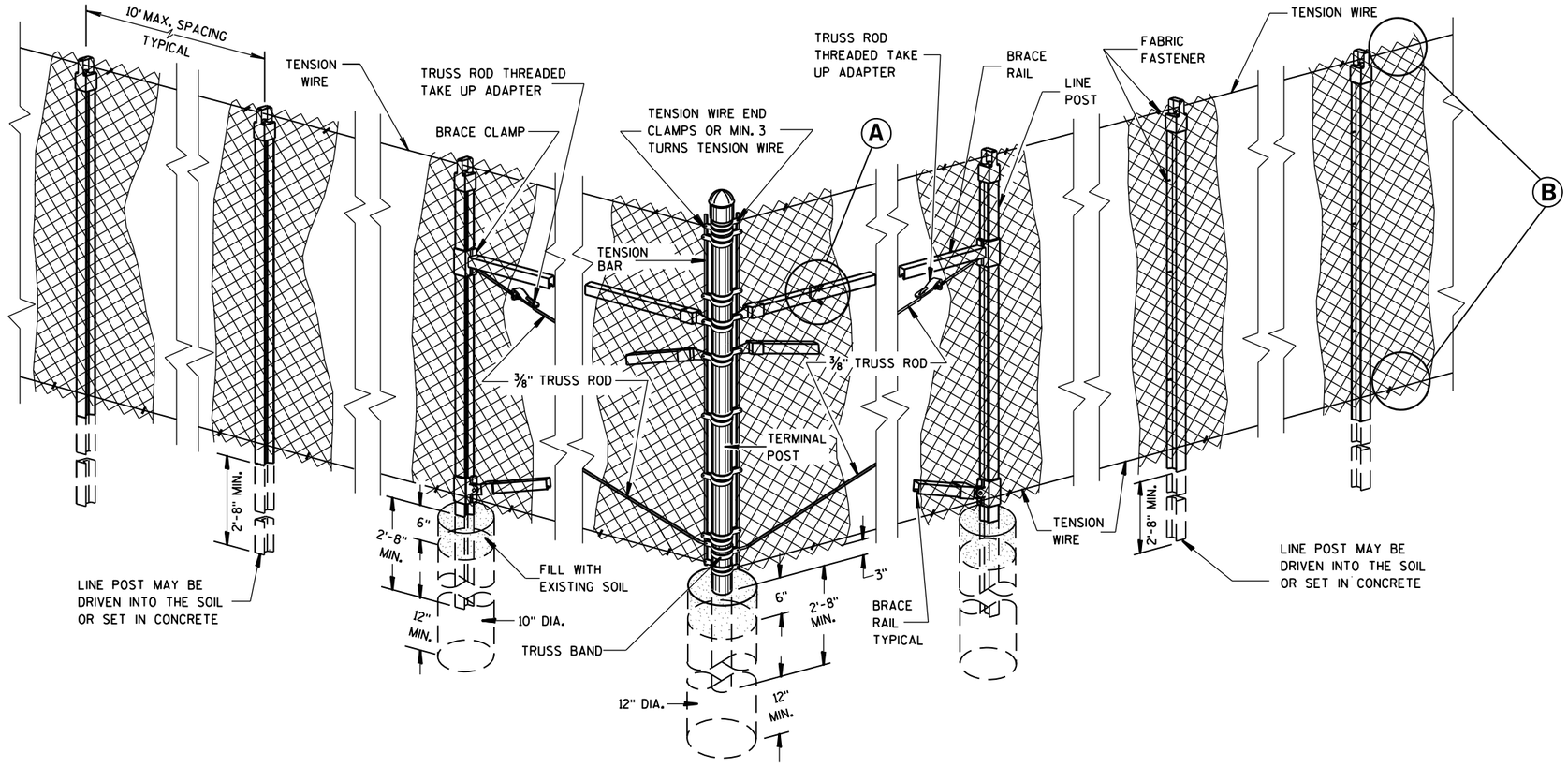
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 B 3-15a

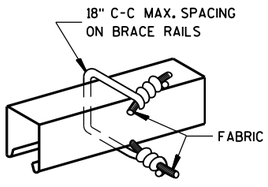


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



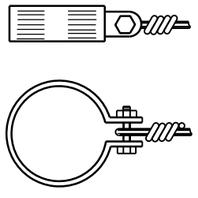
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



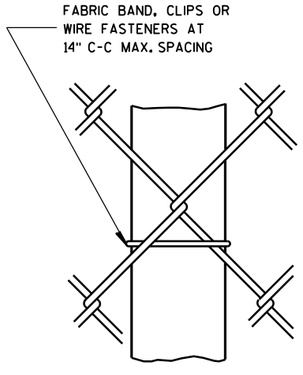
BRACE RAIL

FABRIC FASTENER

Ⓐ



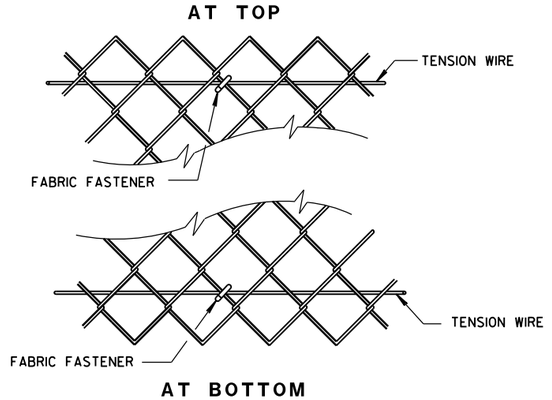
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

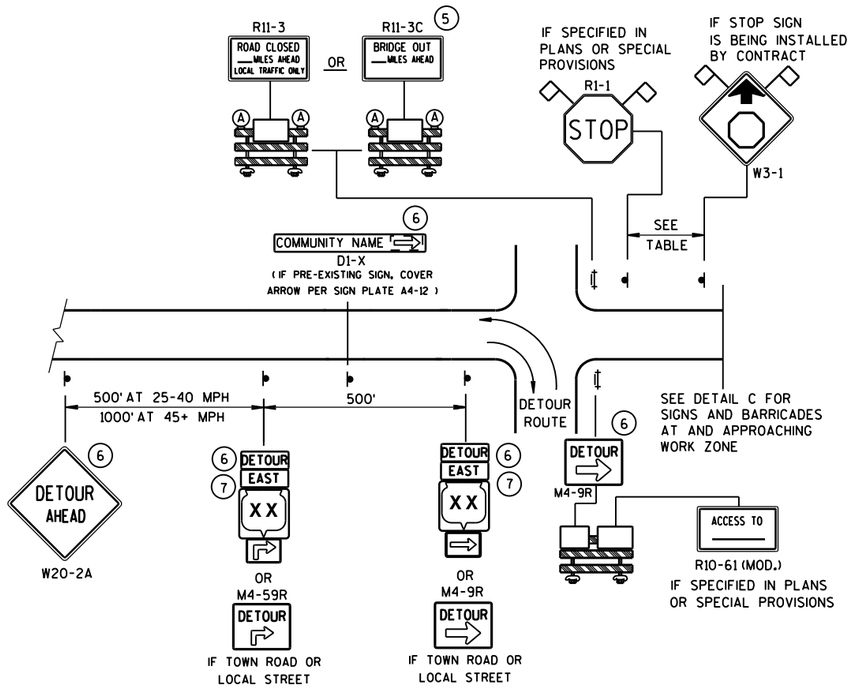
APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-15b

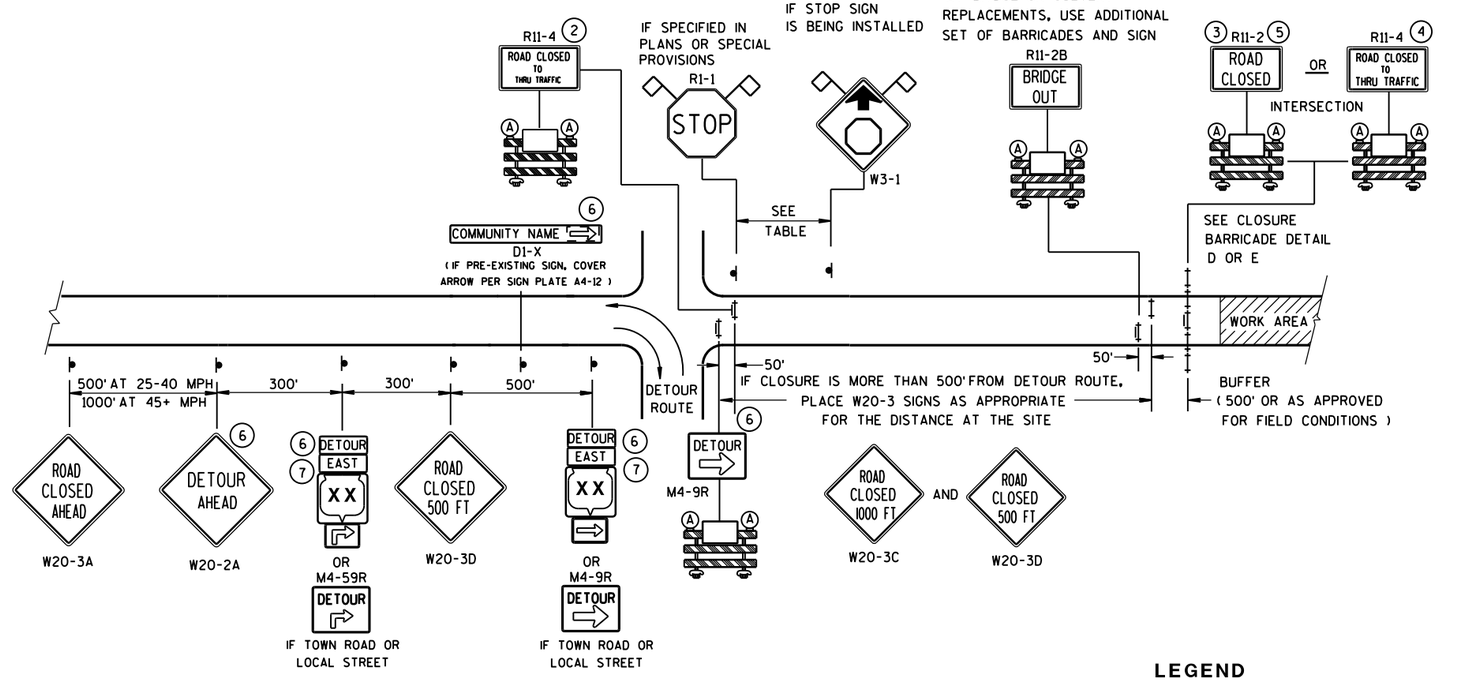
6

S.D.D. 15 B 3-15b



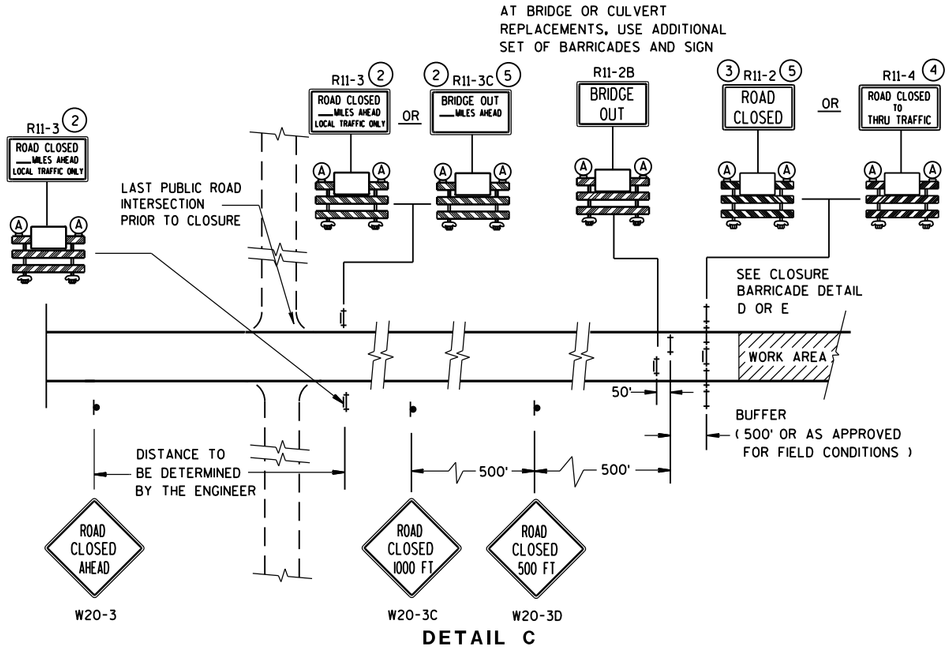
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

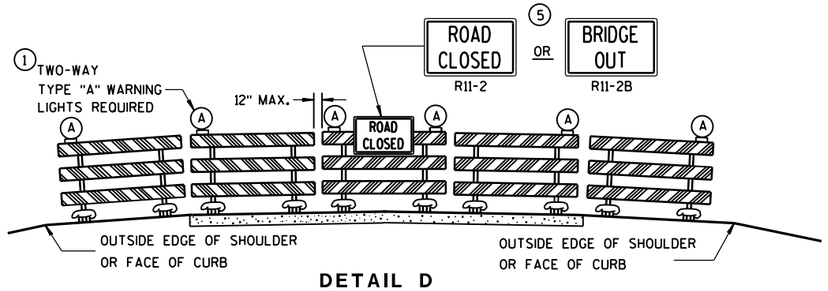
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

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

6

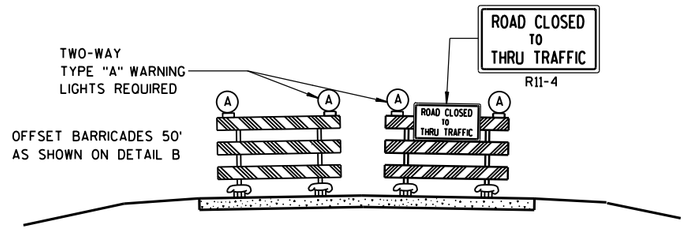
S.D.D. 15 C 2-6a



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

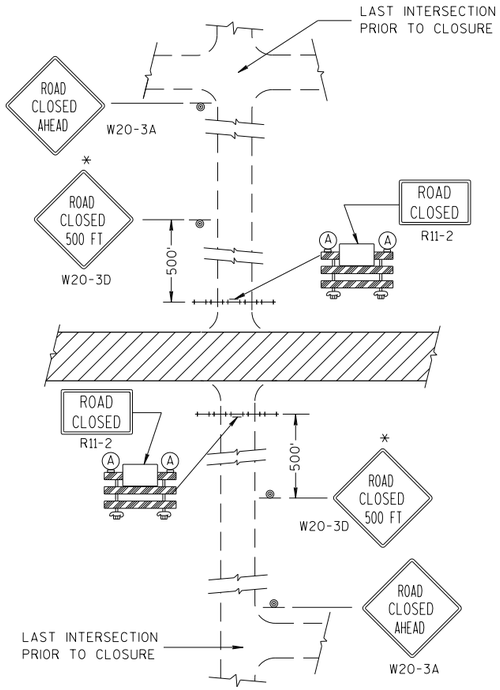
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FHWA

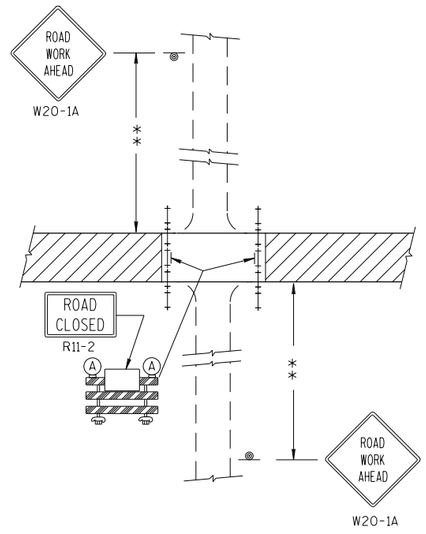
6

S.D.D. 15 C 2-6b



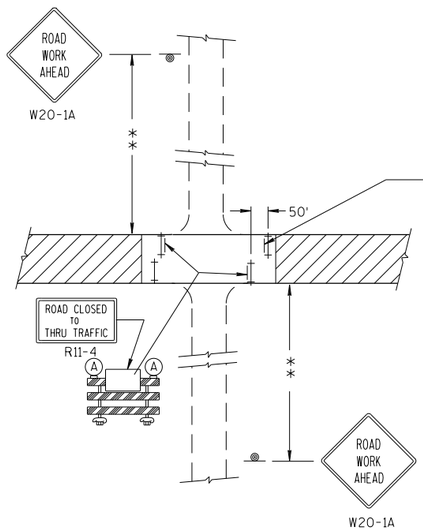
DETAIL 1

(NO ACCESS TO PROJECT)



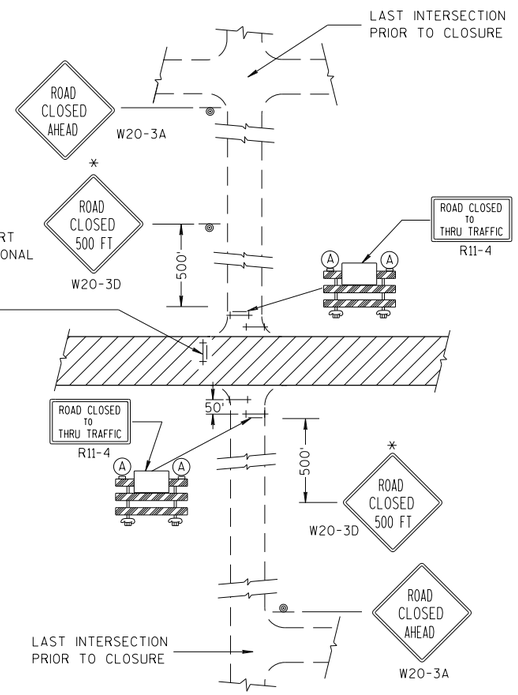
DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

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.

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.

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 AND R11-4 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.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

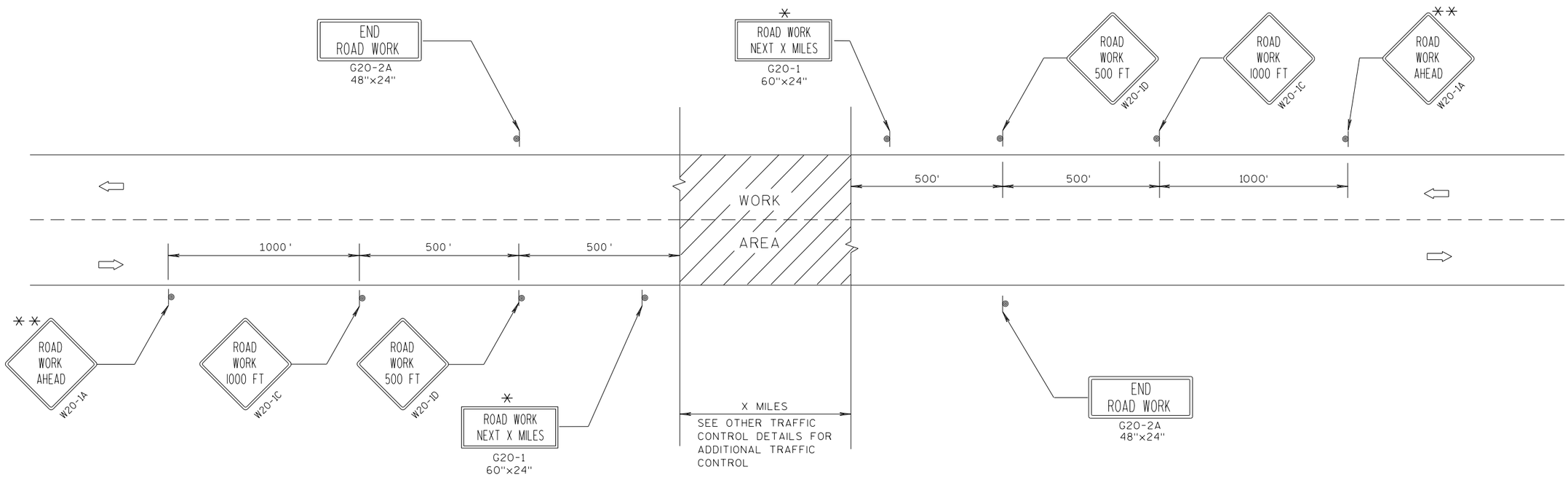
/S/ Andrew Heidtke
WORK ZONE ENGI

FHWA

6

S.D.D. 15 C 3-5

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

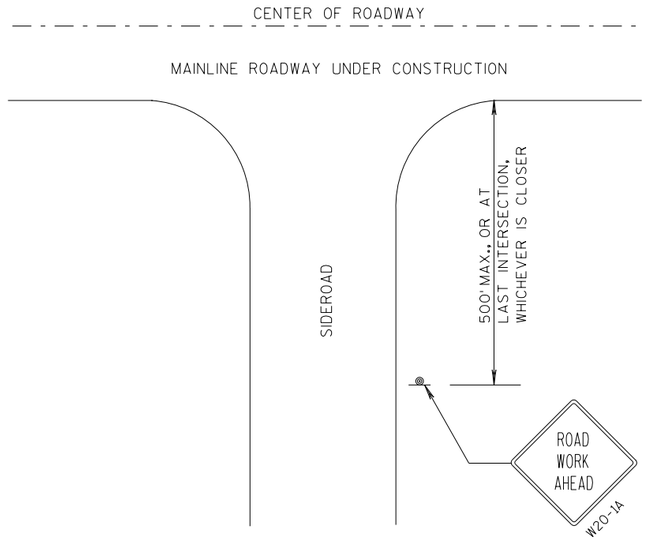
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

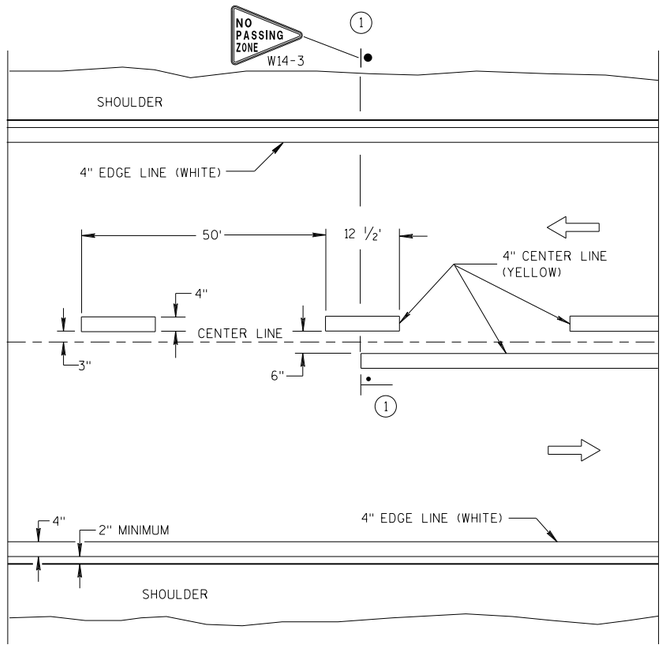
7/2018
DATE

/S/ Andrew Heldtke
WORK ZONE ENGI

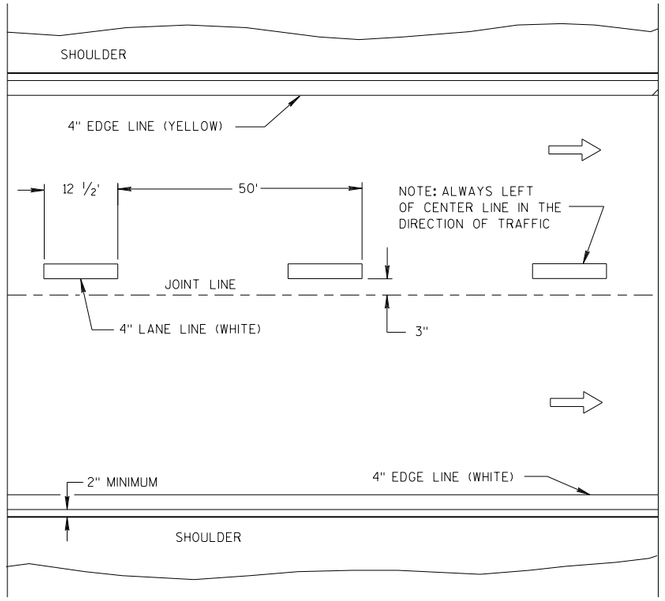
FHWA

6

S.D.D. 15 C 4-5



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

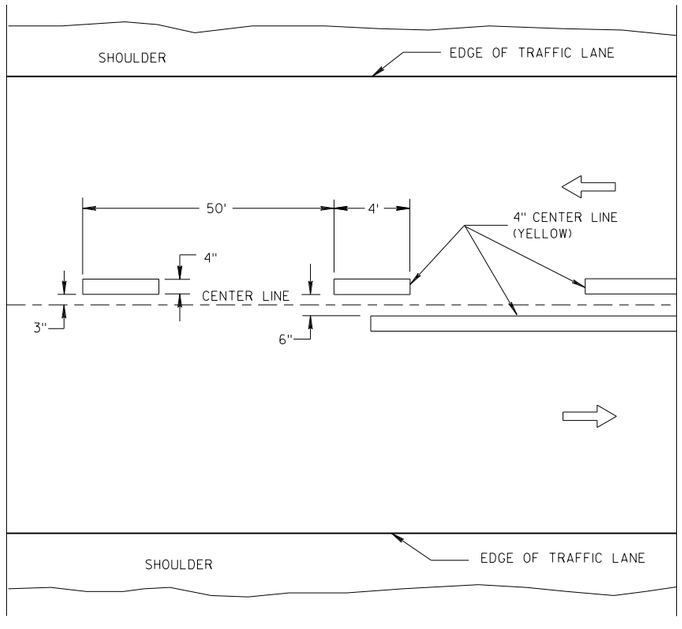
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

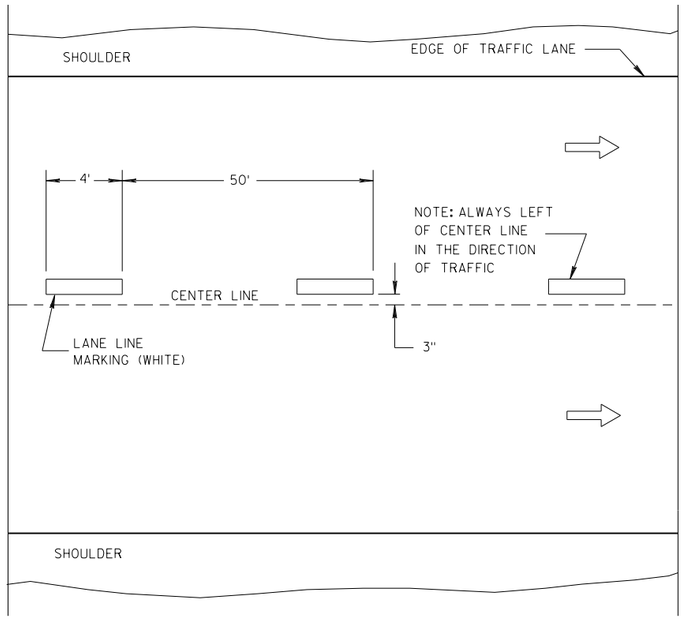
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

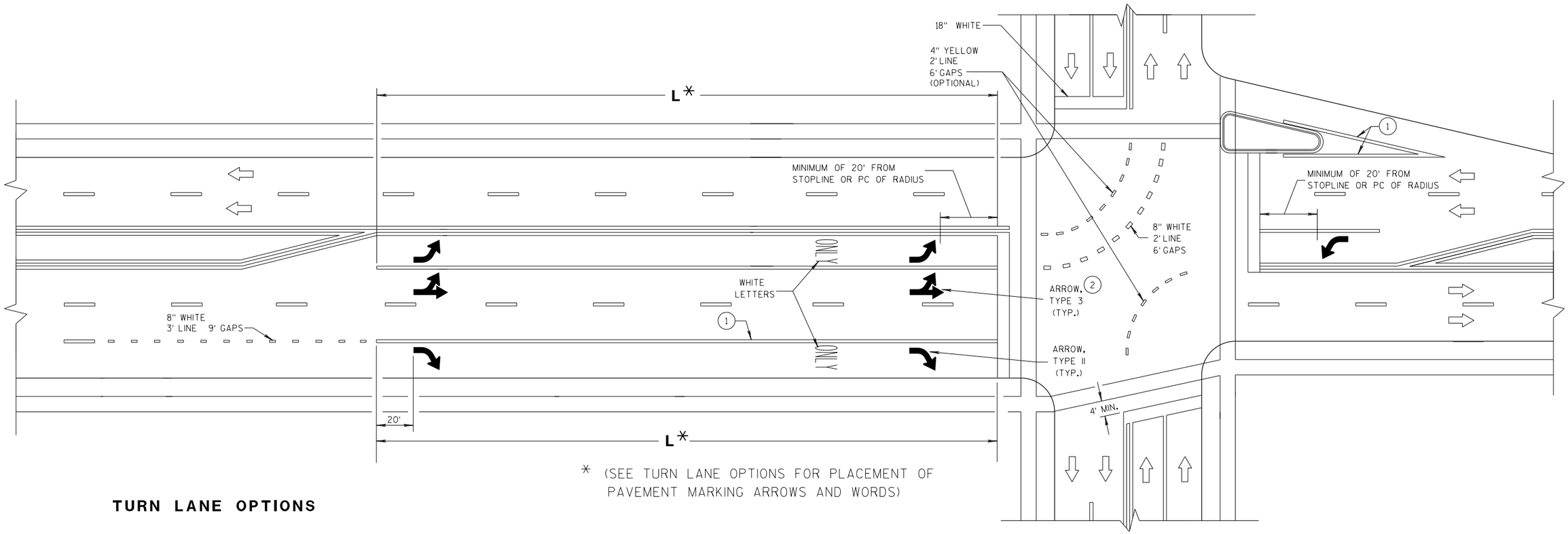
FHWA

6

S.D.D. 15 C 8-19a

6

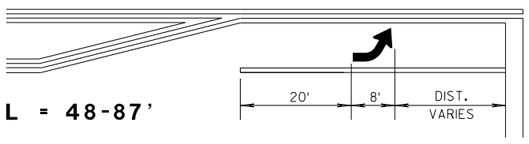
S.D.D. 15 C 8-19a



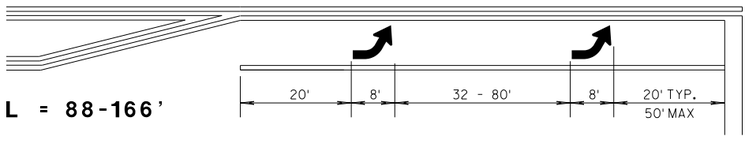
* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

TURN LANE OPTIONS

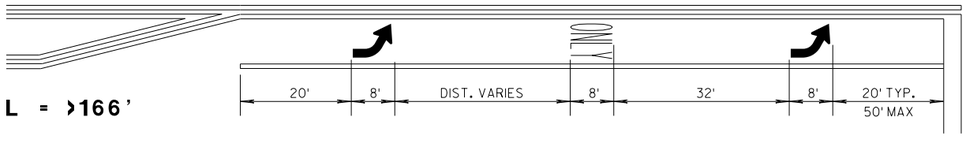
LENGTH OF TURN BAY (**L**) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



L = 48-87'



L = 88-166'



L = >166'

GENERAL NOTES

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

⇨ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORT

6

S.D.D. 15 C 8-19c

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA

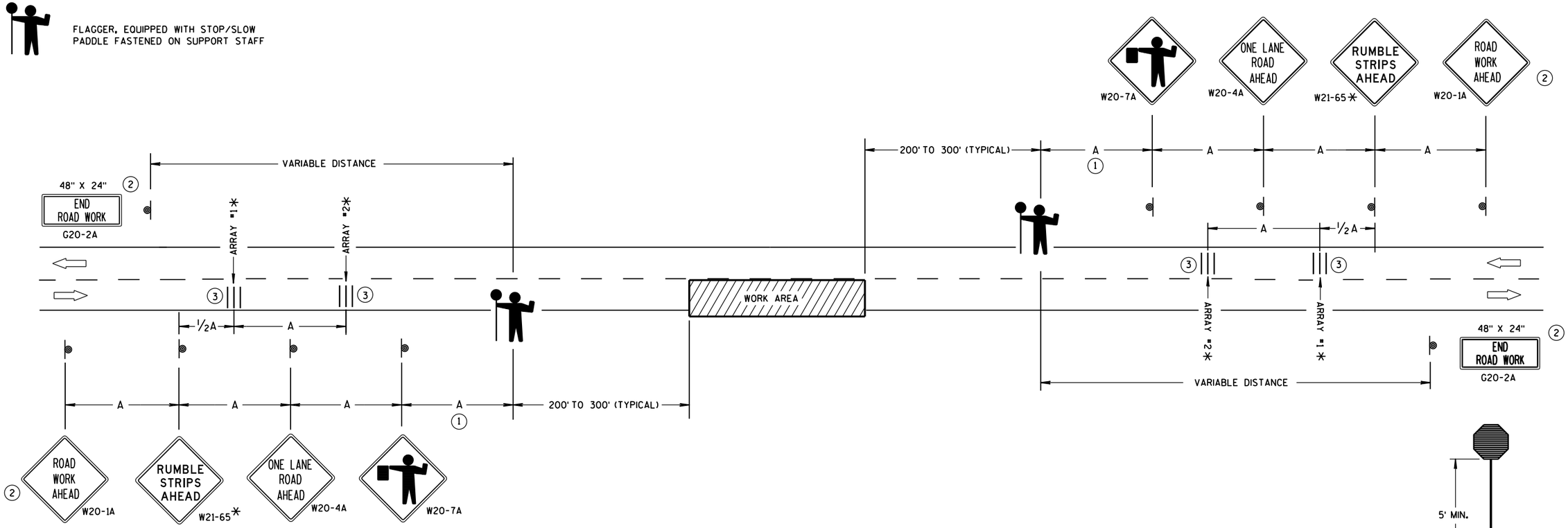
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

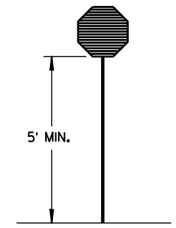
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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





STOP/SLOW PADDLE ON SUPPORT STAFF

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

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.

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

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.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 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.

(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

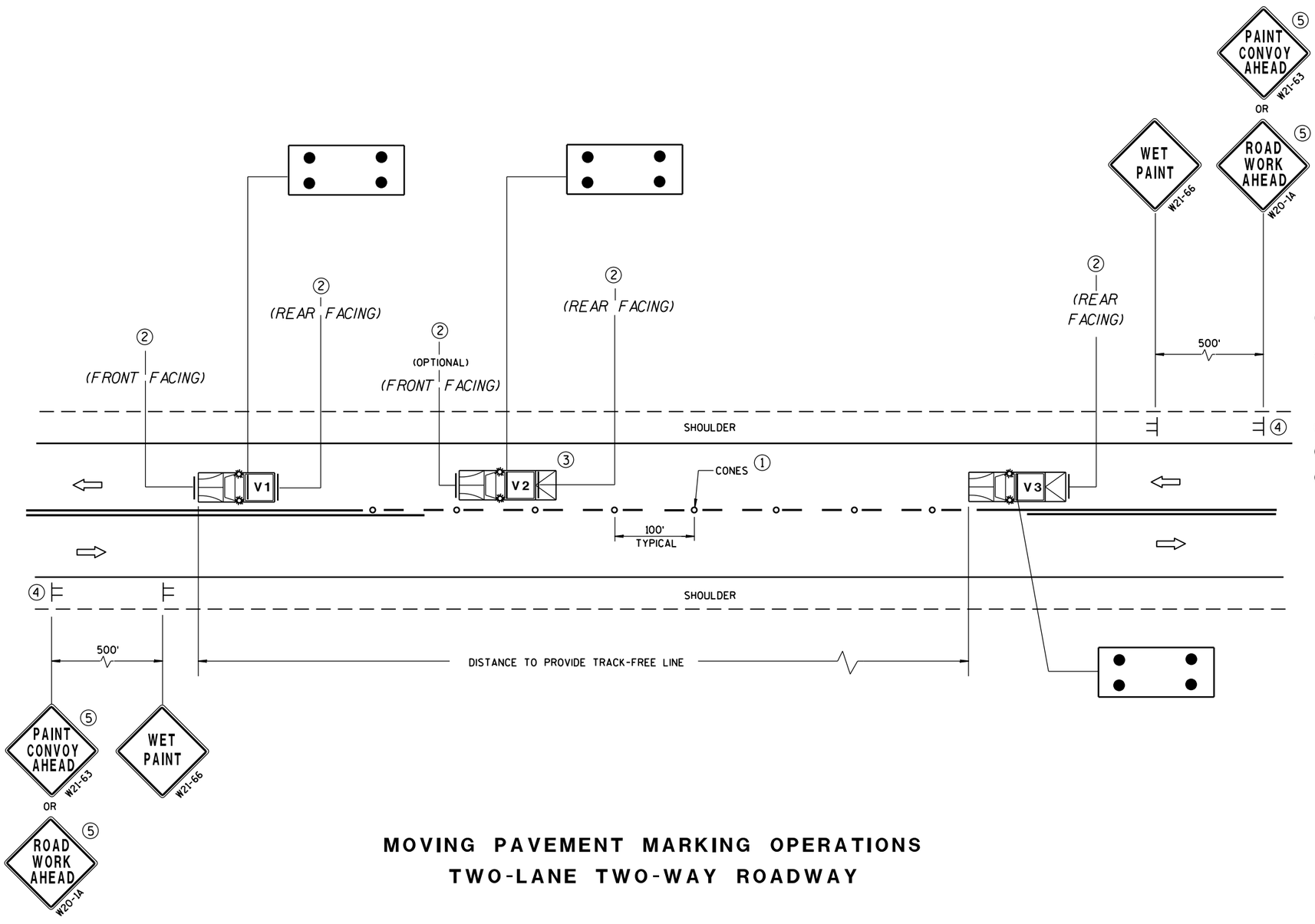
APPROVED
June 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE ENG
FHWA

6

S.D.D. 15 C 12-6

6

S.D.D. 15 C 12-6



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

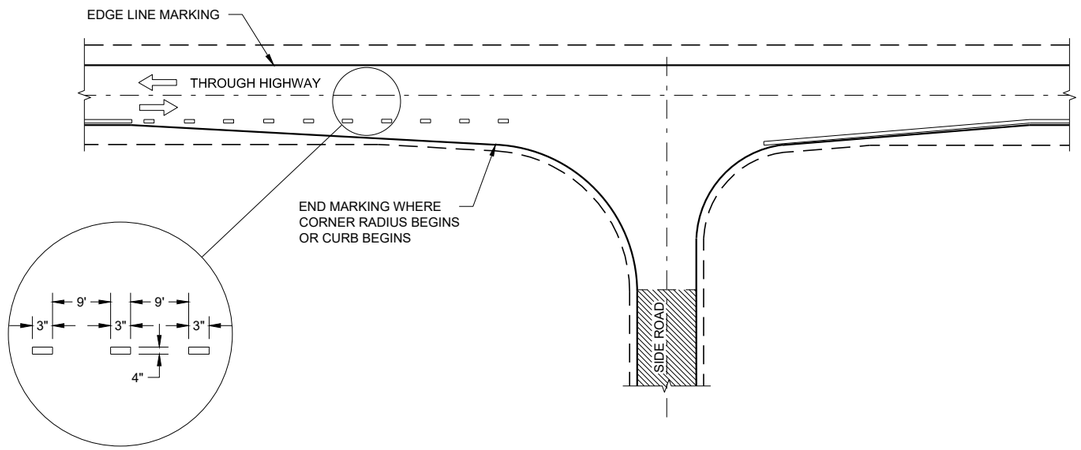
(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

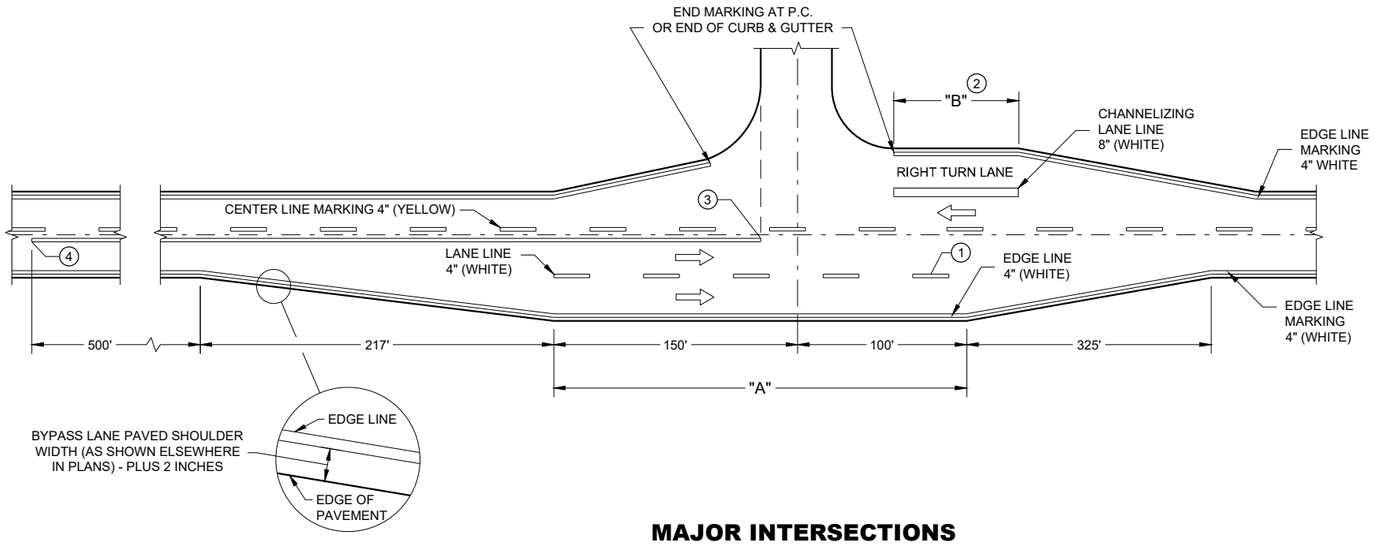
LEGEND

- **V1** LEAD VEHICLE
- **V2** SHADOW VEHICLE
- **V3** TRAIL VEHICLE WITH TMA
- **TMA** TRUCK-MOUNTED ATTENUATOR
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- CONES
- FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
Sept., 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGR
FHWA	



MINOR INTERSECTION



MAJOR INTERSECTIONS

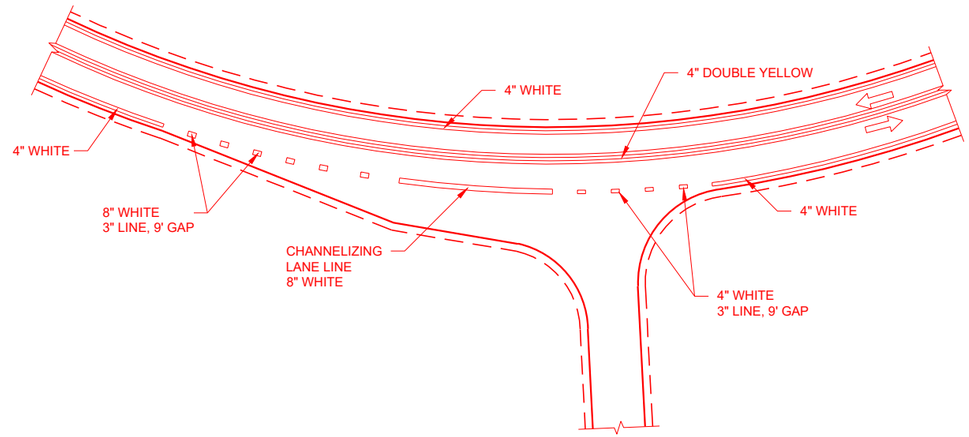
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

GENERAL NOTES

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

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

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING (INTERSECTIONS)

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

L, TAPER LENGTH (MPH)							
SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120



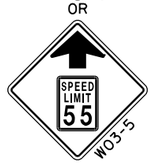


W057-52
48"x36"

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).



OR



LOCATED 2600 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



OR



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

LOCATED 500 FEET BEYOND W20-5G SIGN.

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.

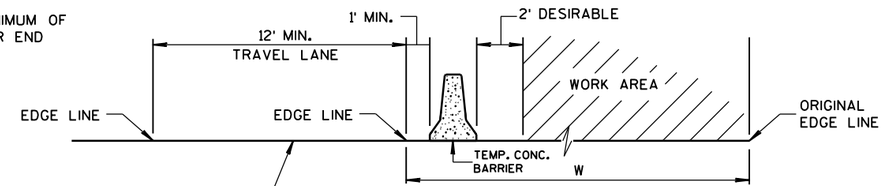
(1) CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUM TAPER.

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.

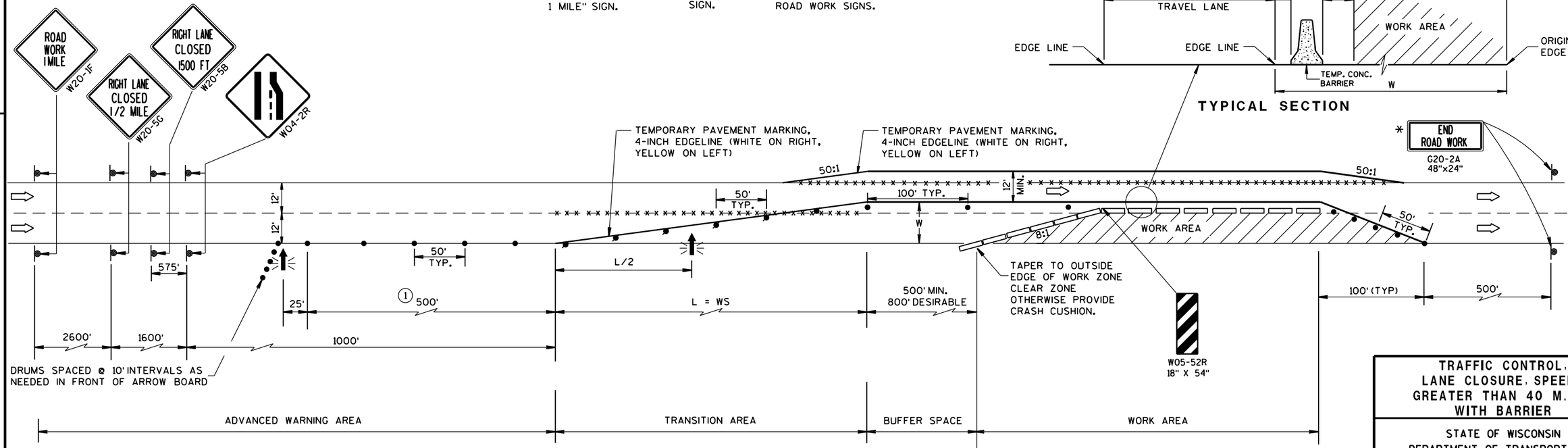
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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
Sept., 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZOI SAFETY ENGIN
FHWA

6

S.D.D. 15 D 3-4

6

S.D.D. 15 D 3-4

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



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.

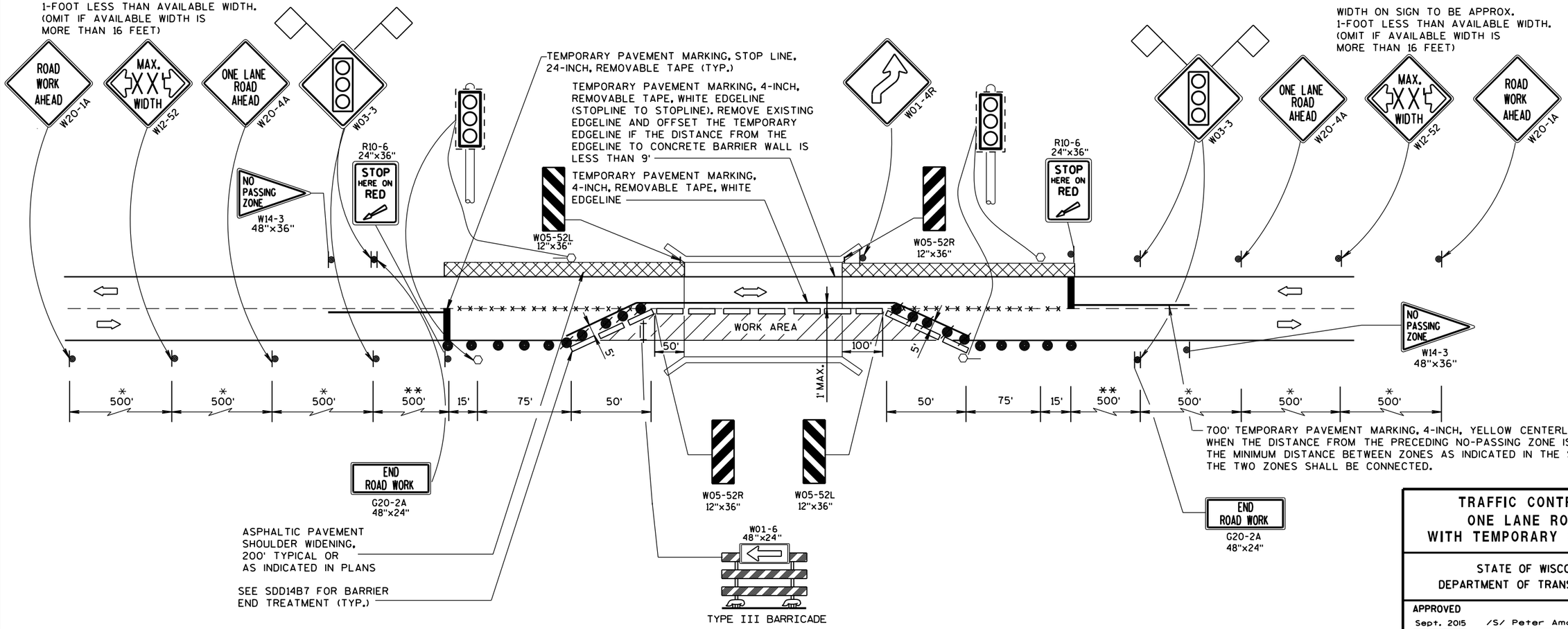
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI

FHWA

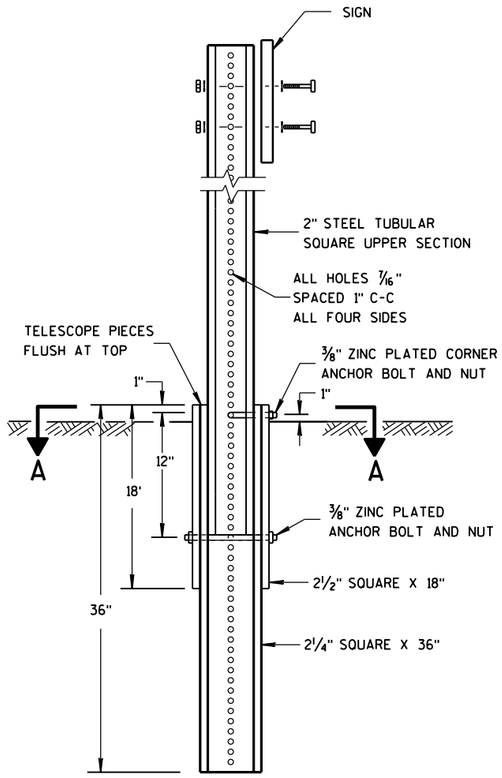
C

6

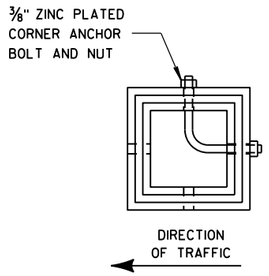
S.D.D. 15 D 33-4

6

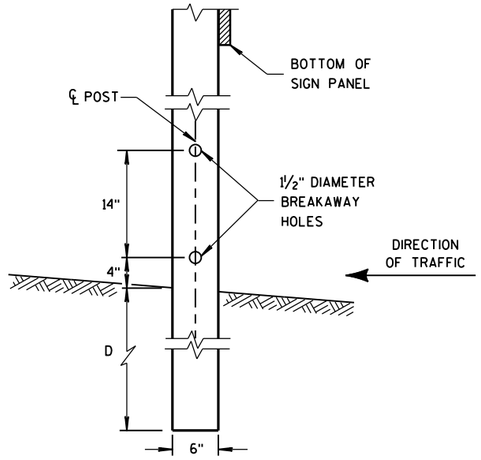
S.D.D. 15 D 33-4



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



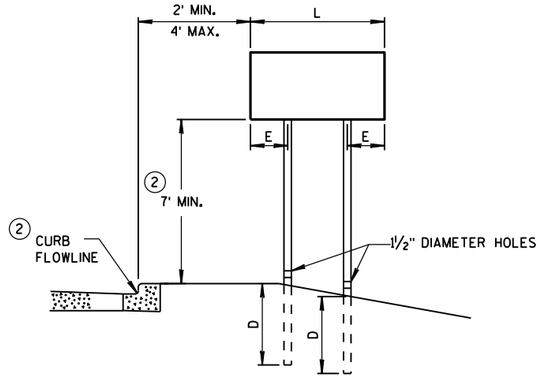
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

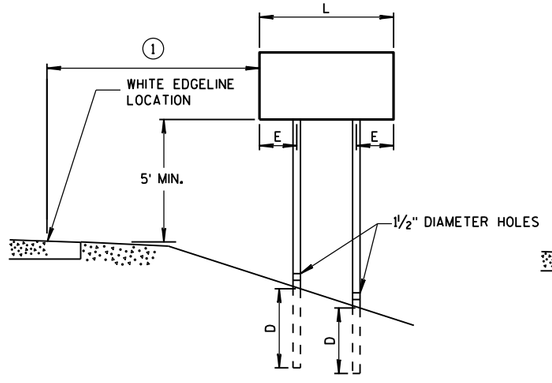
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

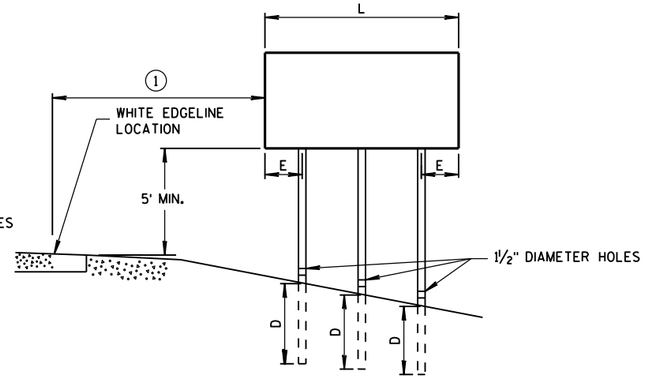
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

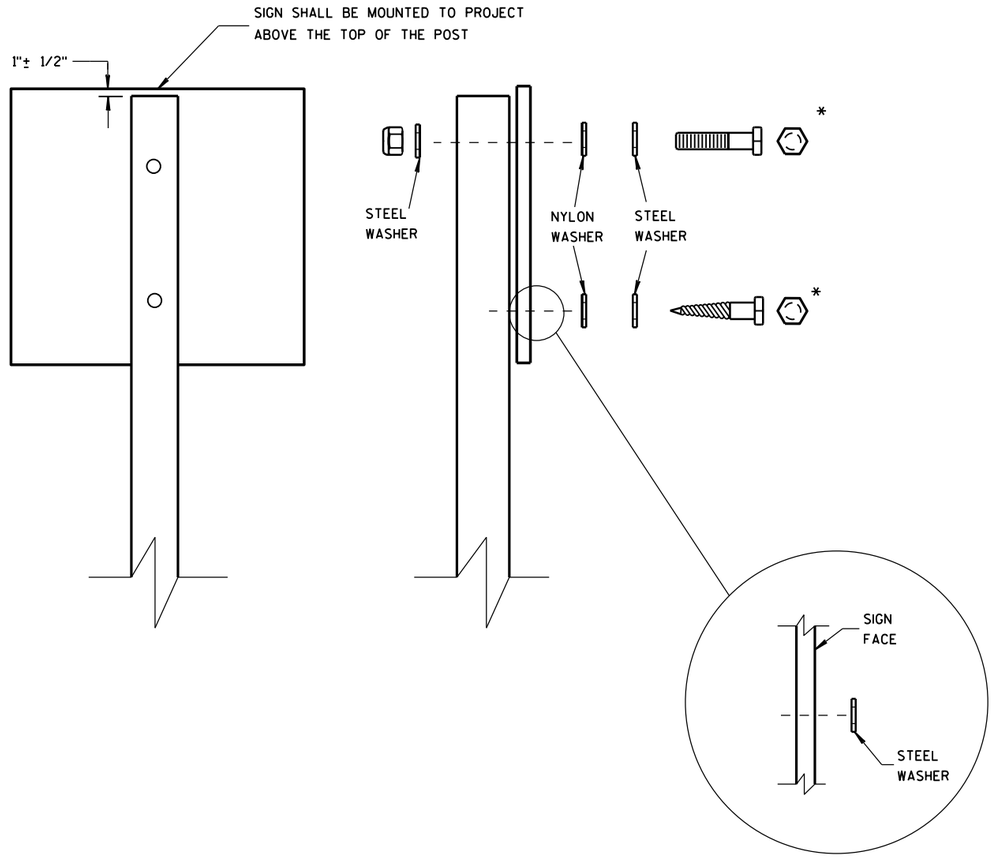
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

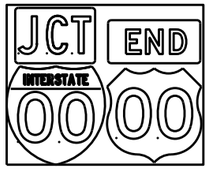
/S/ Andrew Heldtke
WORK ZONE ENG

FHWA

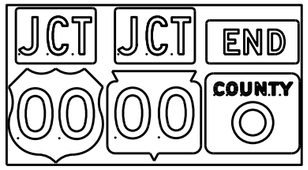
TYPICAL ASSEMBLIES



J1-1



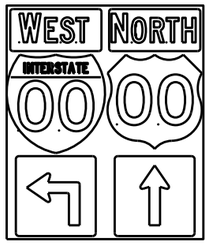
J1-2



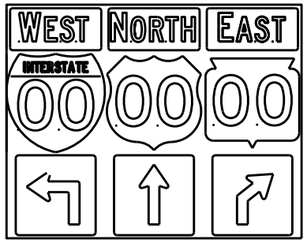
J1-3



J2-1



J2-2

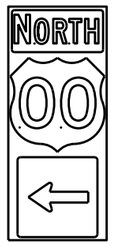


J2-3

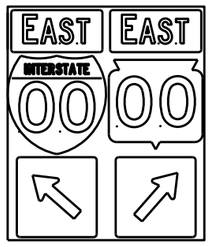


JV

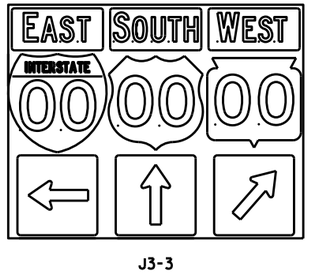
(Typical Vertical J-Assembly
See Note 10 and 11)



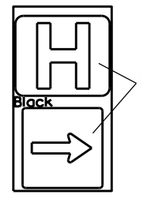
J3-1



J3-2



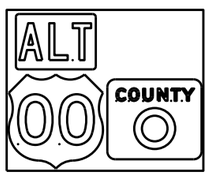
J3-3



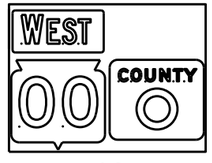
JH-1



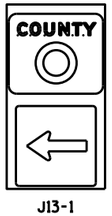
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

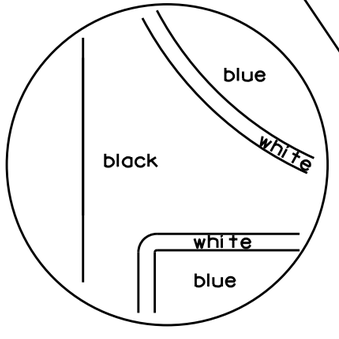


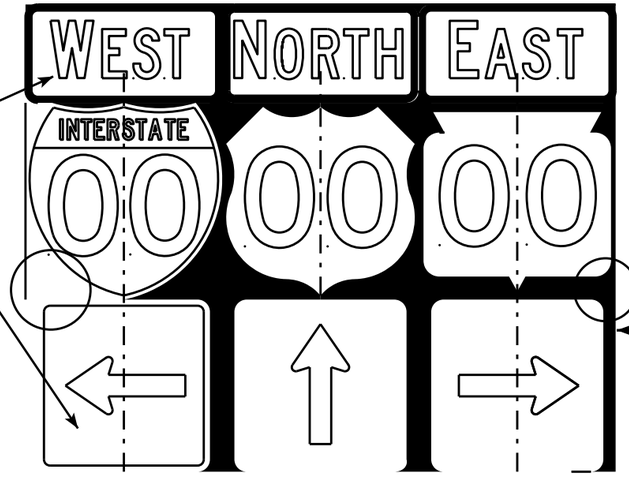
J23-1

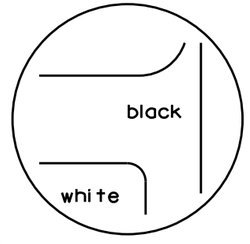


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

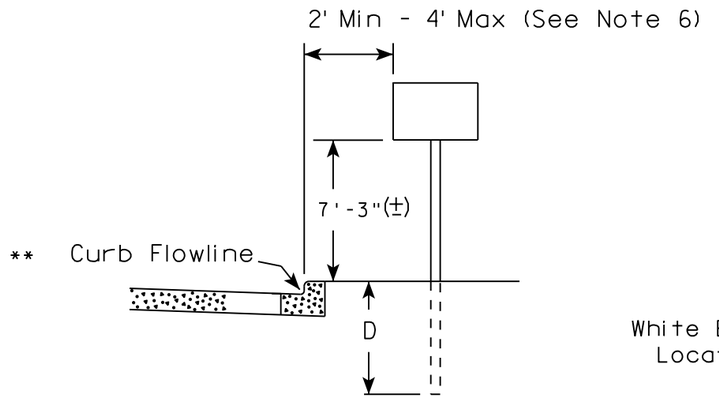
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

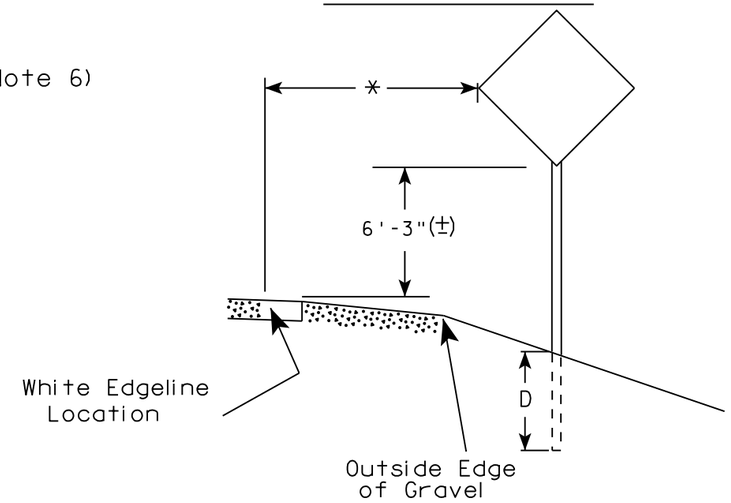
PROJECT NO: | SHEET NO: E

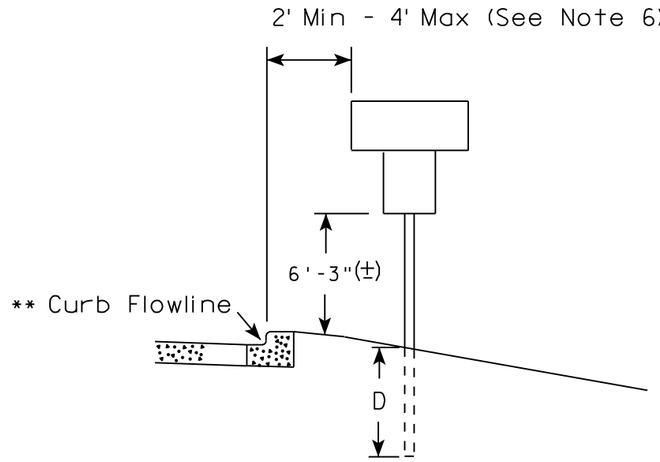
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

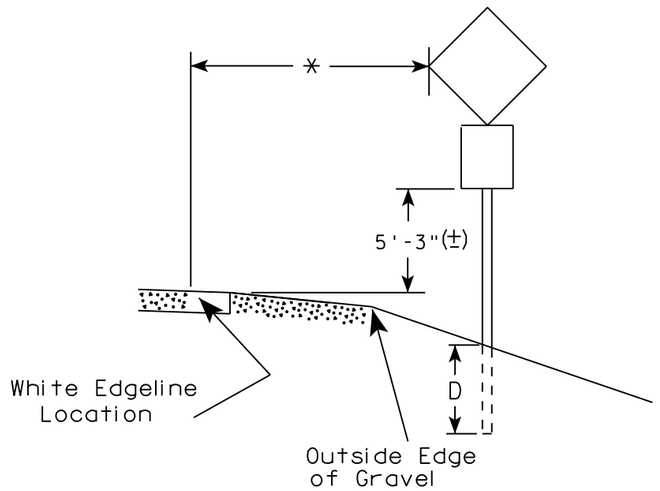
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

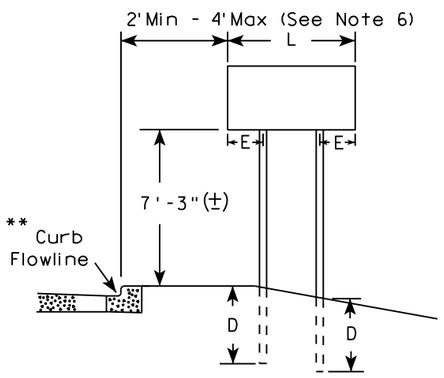
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

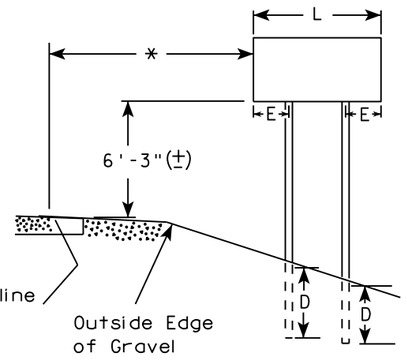
APPROVED Matthew R Rauch
for State Traffic Engineer

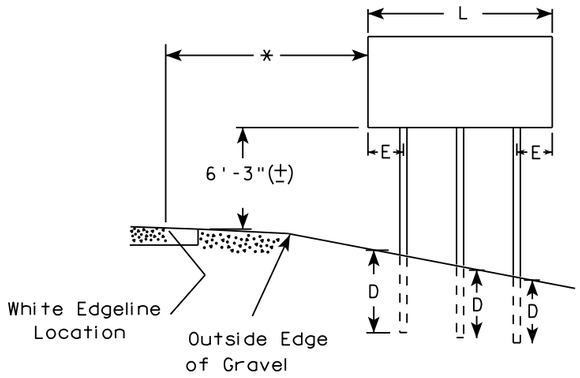
DATE 8/21/17 PLATE NO. A4-3.21

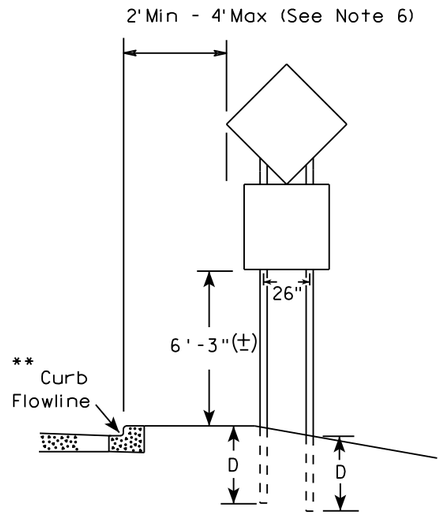
URBAN AREA



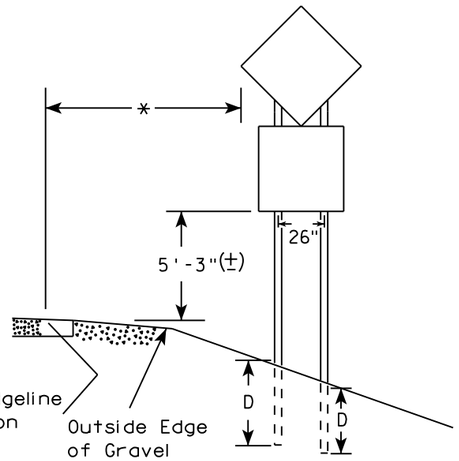
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

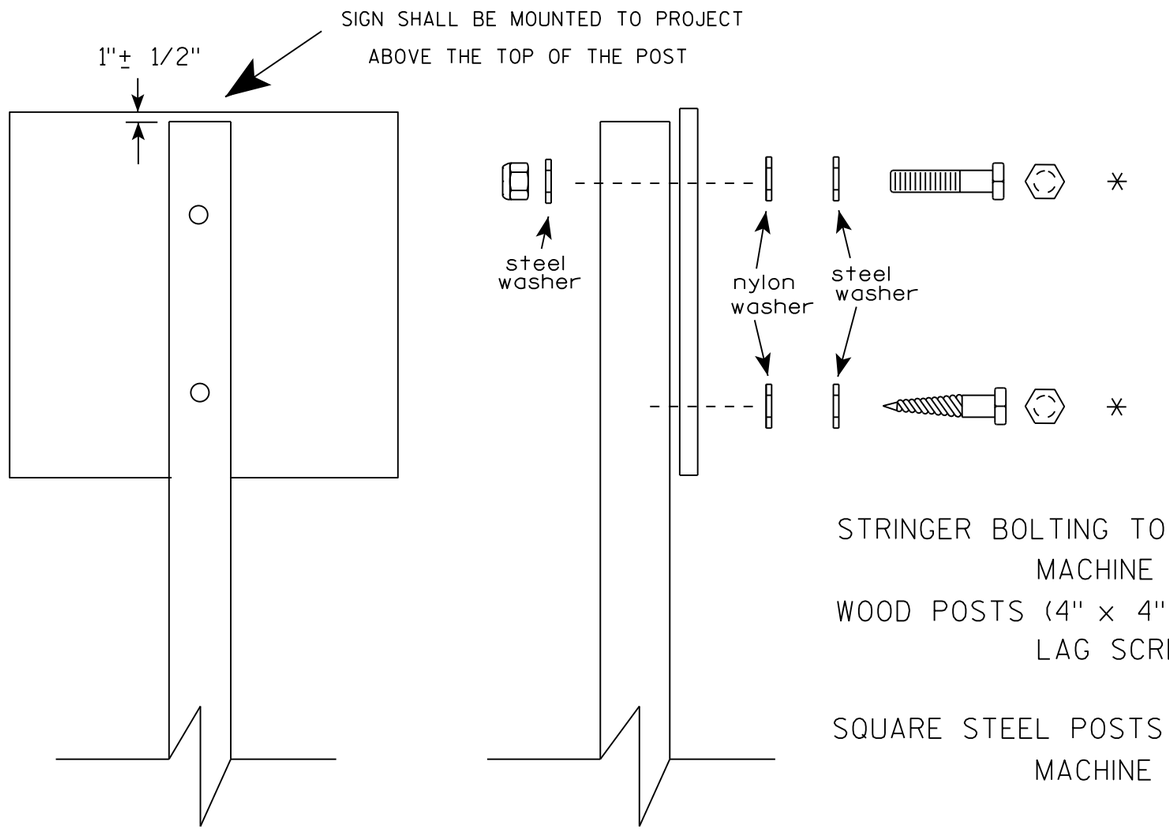
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 160	E



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

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

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

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

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

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

WOOD POSTS (4" x 4" or 4" x 6")

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

3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

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

3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

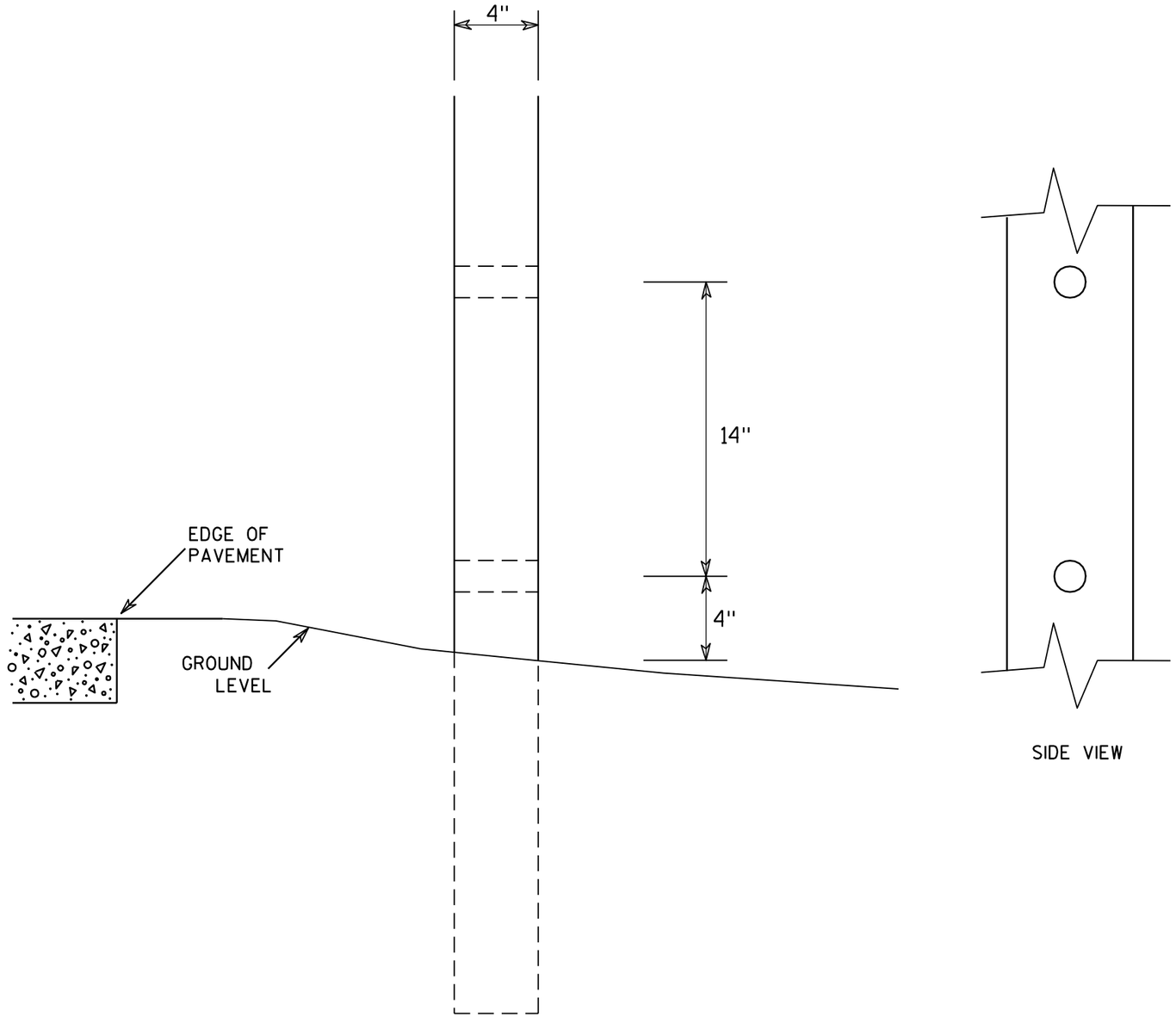
DATE 8/11/16 PLATE NO. A4-8.8

7

PROJECT NO:

SHEET NO: E

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



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

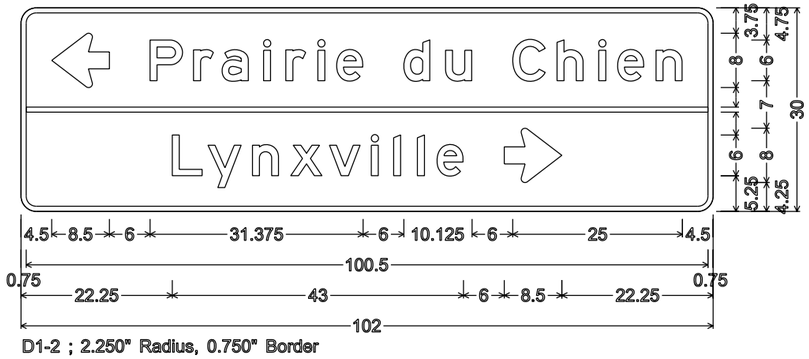
APPROVED Chester J Spang for State Traffic Engineer

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

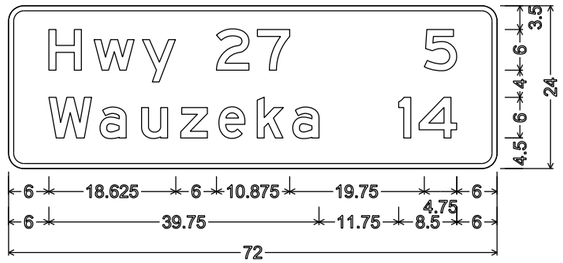
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 162	E

NOTES

1. All Signs are Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



D1-2 ; 2.250" Radius, 0.750" Border

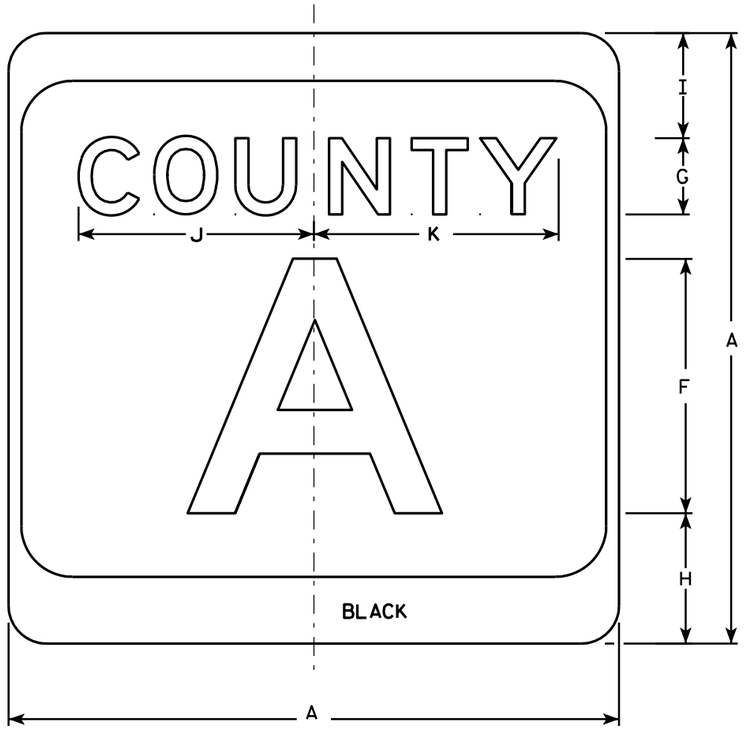


D2-2; 2.250" Radius, 0.750" Border

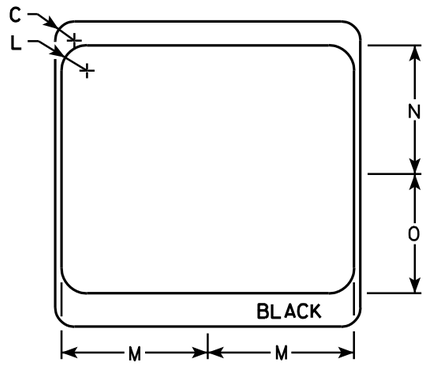
7

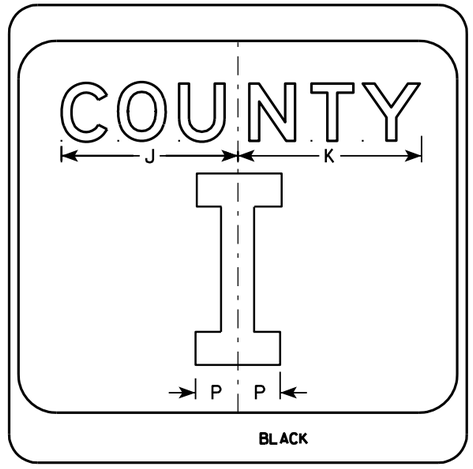
7

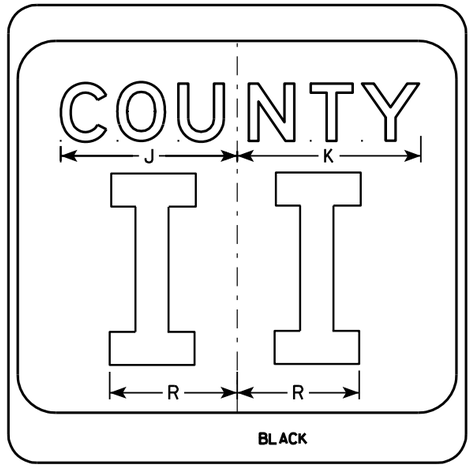
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	PERMANENT SIGNING	SHEET NO: 163	E



M1-5A







NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
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. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

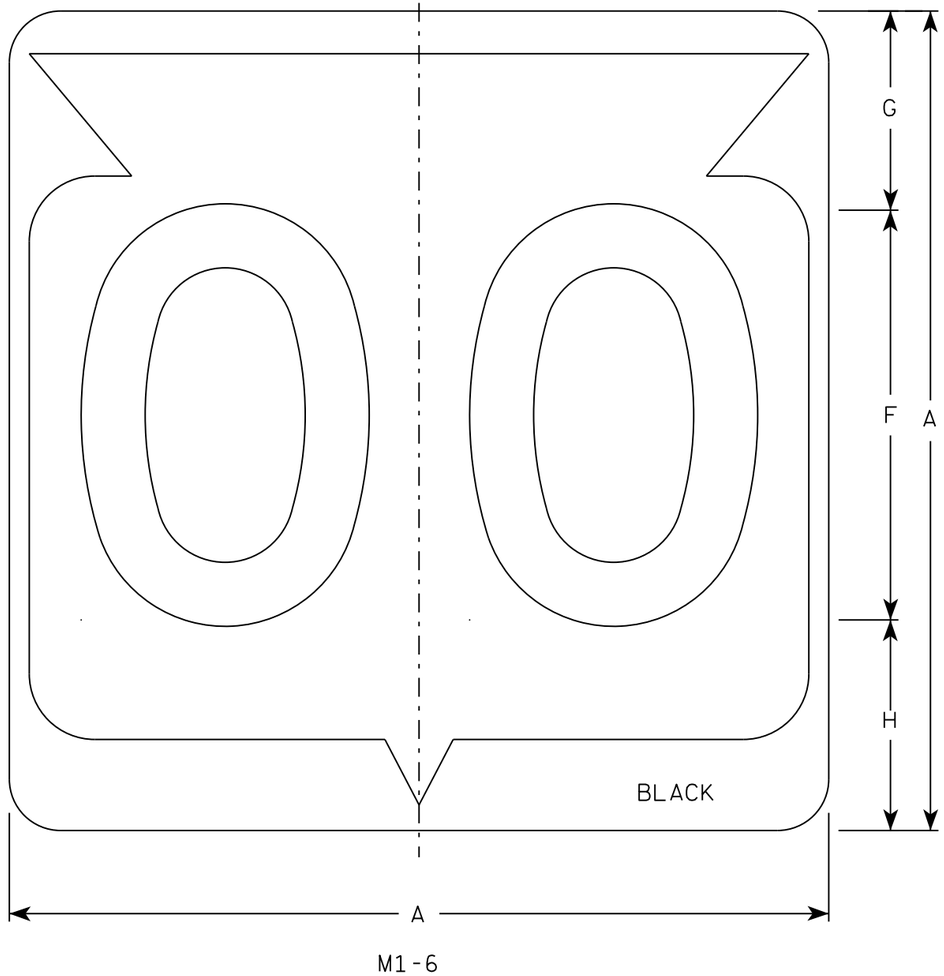
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

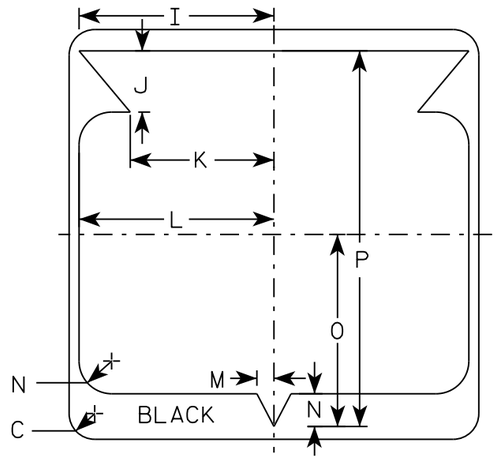
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 164	E



M1-6

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

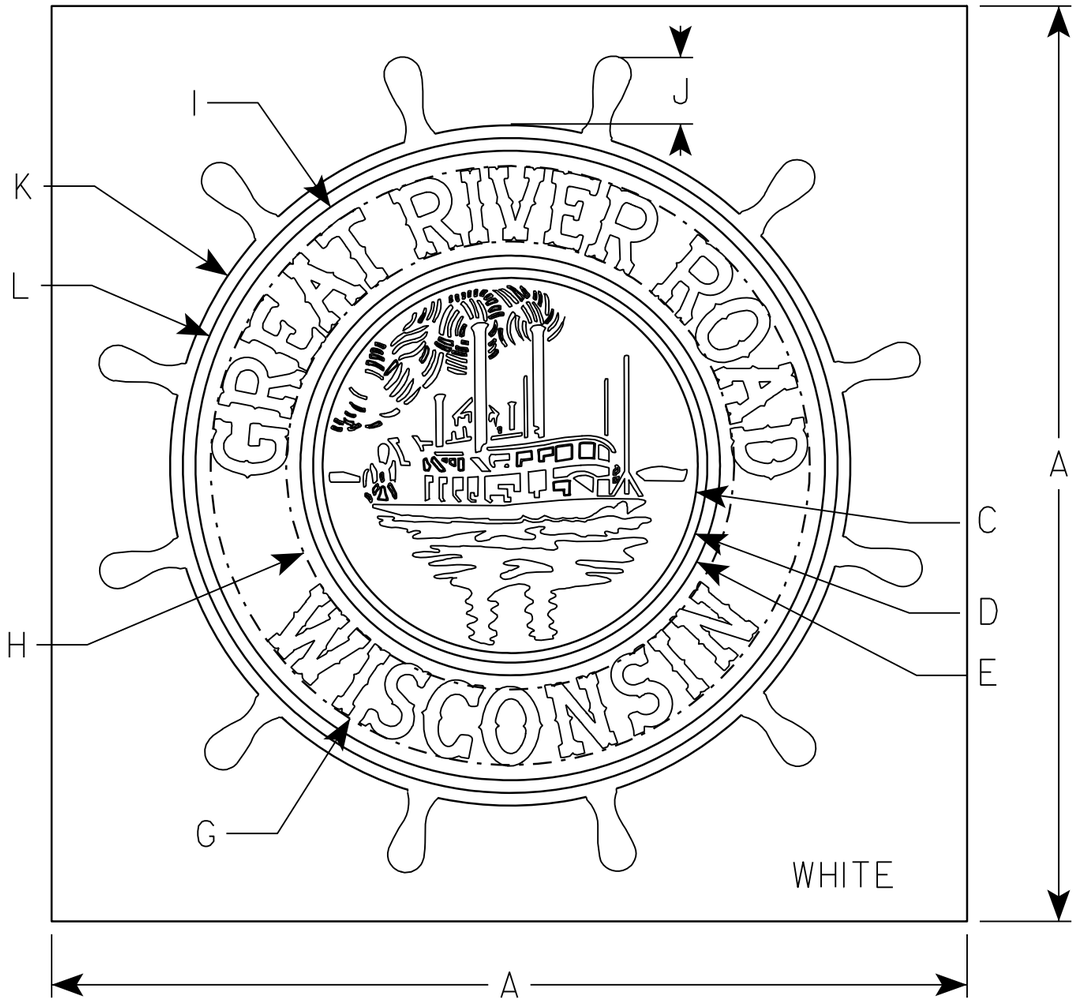
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

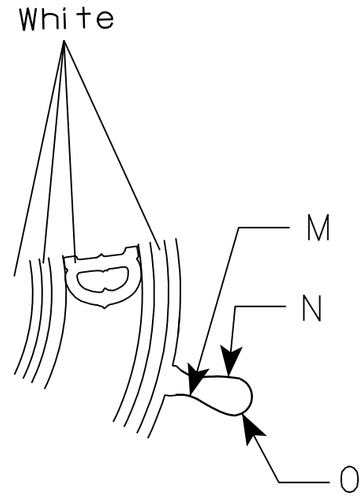
DATE 3/16/18 PLATE NO. M1-6.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 165 | 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 - White
   Message - Words - White - Graphics - Green
3. Message Series - Special
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		R 5	R 5 1/4	R 5 1/2		R 7 7/8	R 5 7/8	R 8 1/2	1 3/4	R 4 1/2	R 8 1/2	R 7/8	R 3 1/2	R 1/2												4.0
3																											
4	36		R 7 3/8	R 7 3/4	R 8 1/4		R 11 3/4	R 8 3/4	R 12 3/8	2 5/8	R 13 3/8	R 12 7/8	R 1 3/8	R 5 1/4	R 3/4												9.0
5																											

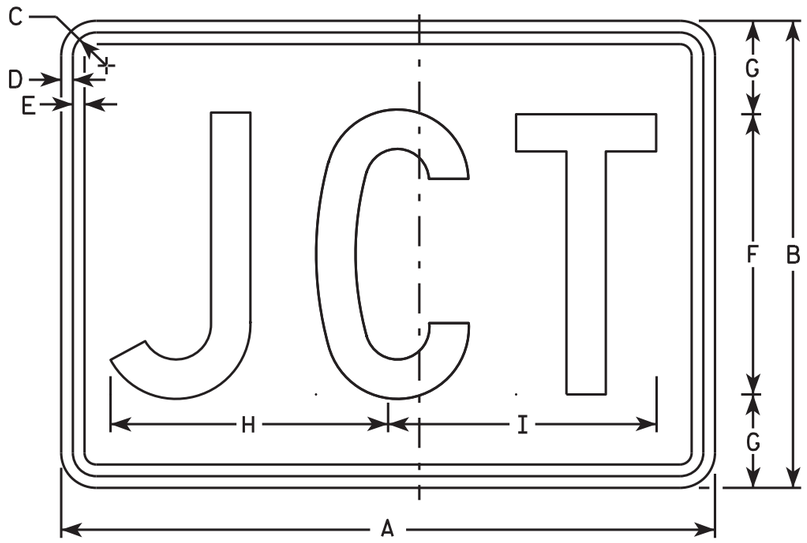
STANDARD SIGN
M1-96

WISCONSIN DEPT OF TRANSPORTATION

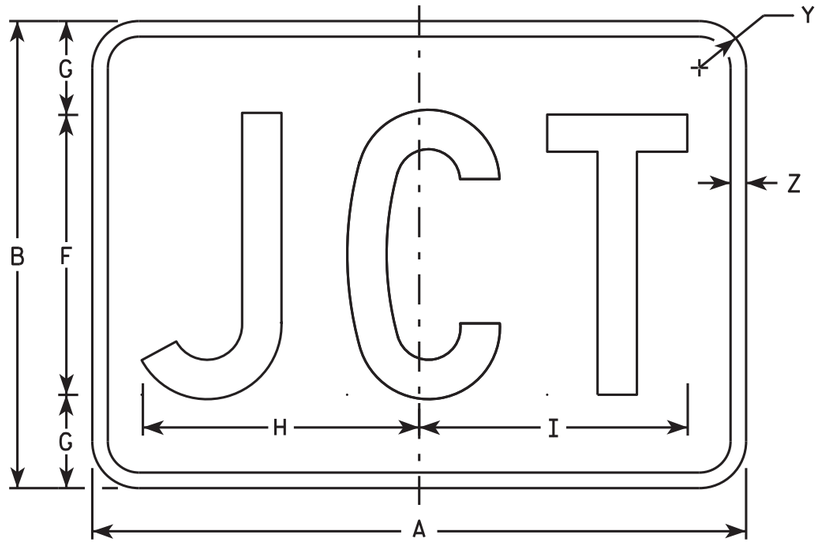
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/23/10 PLATE NO. M1-96.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 166	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

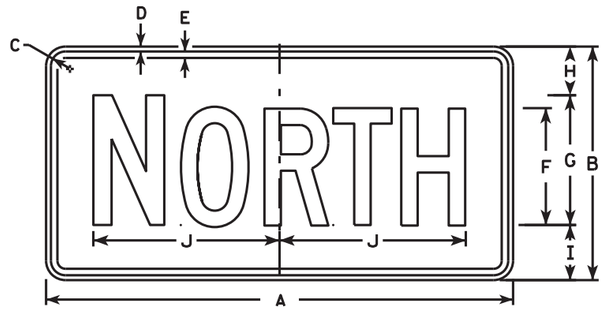
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

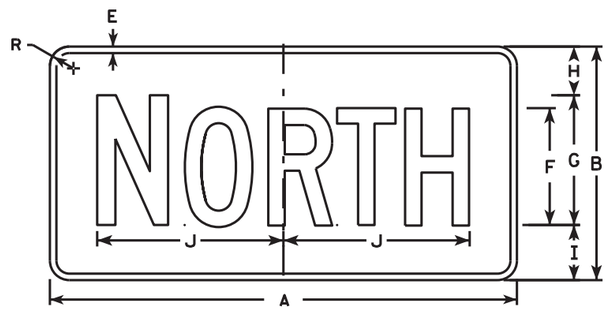
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M2-1.12

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



M3-1
MM3-1
MP3-1



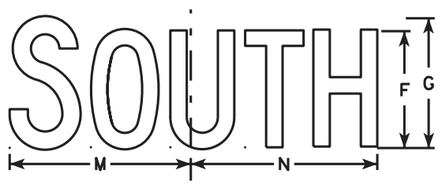
MB3-1
MK3-1
MN3-1



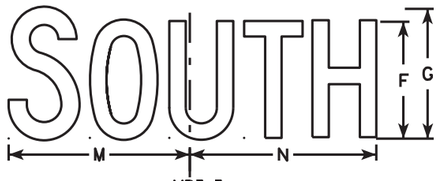
M3-2
MM3-2
MP3-2



MB3-2
MK3-2
MN3-2



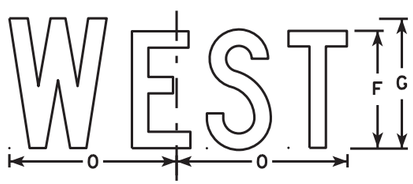
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

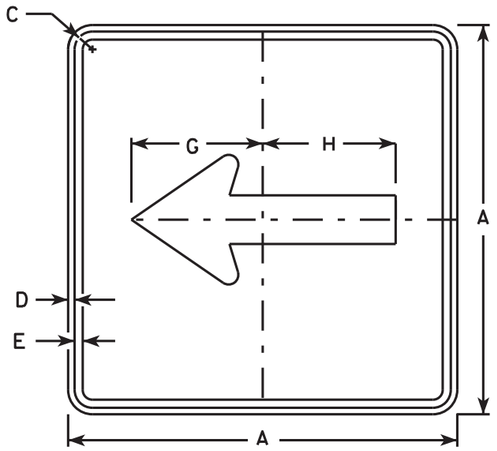
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

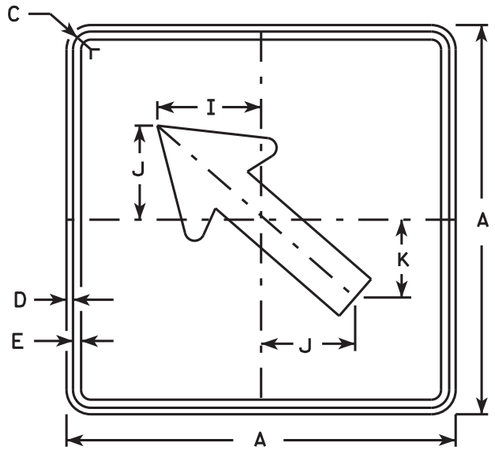
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

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



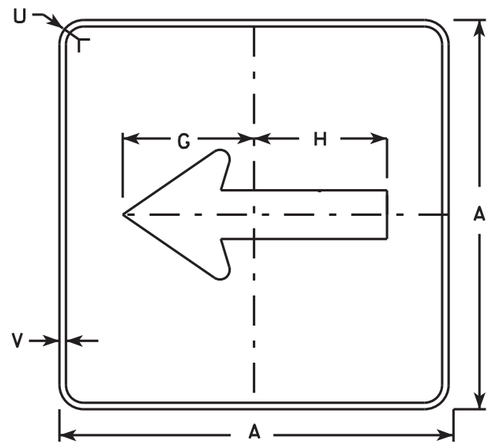
M6-1
MM6-1
MO6-1
MP6-1



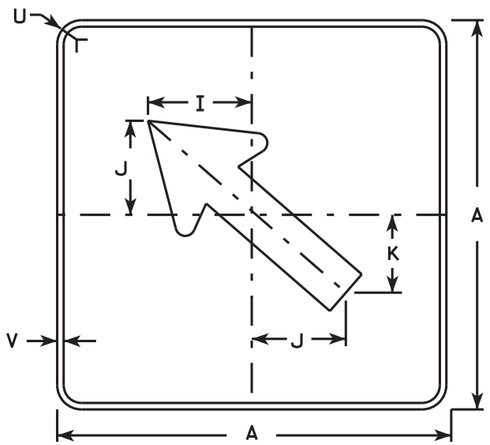
M6-2
MM6-2
MO6-2
MP6-2

NOTES

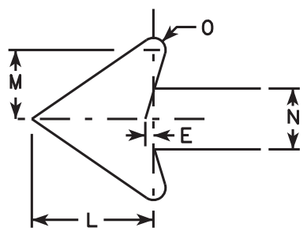
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

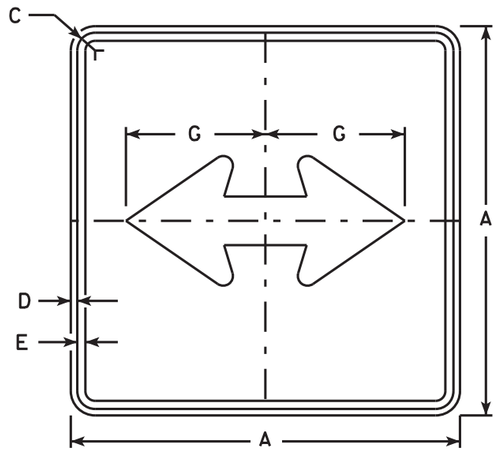
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

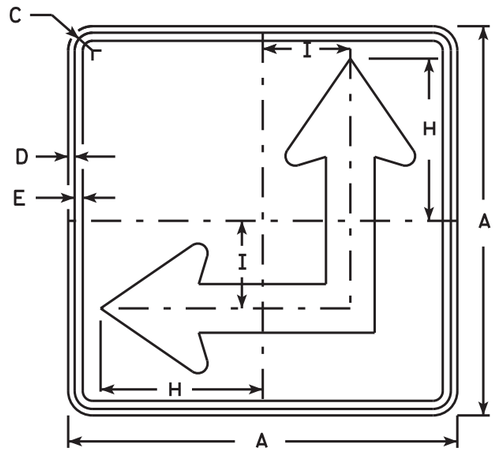
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

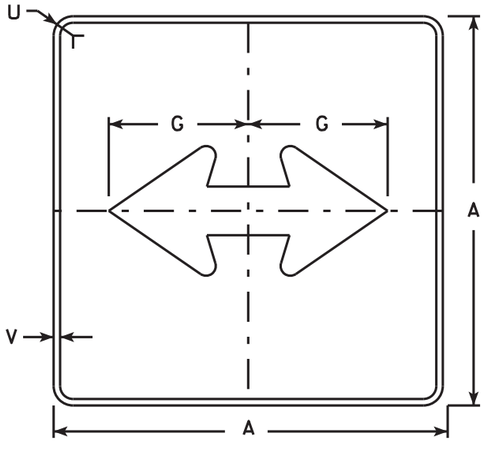
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



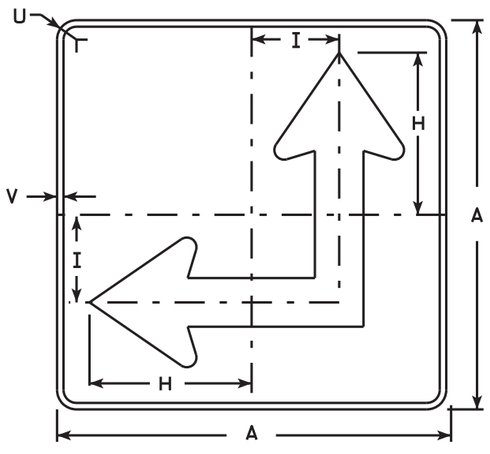
M6-4
MM6-4
MO6-4
MP6-4



M6-6
MM6-6
MO6-6
MP6-6



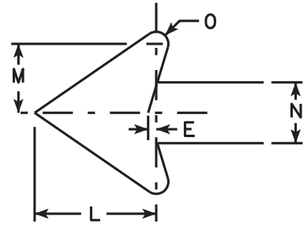
MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6

NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

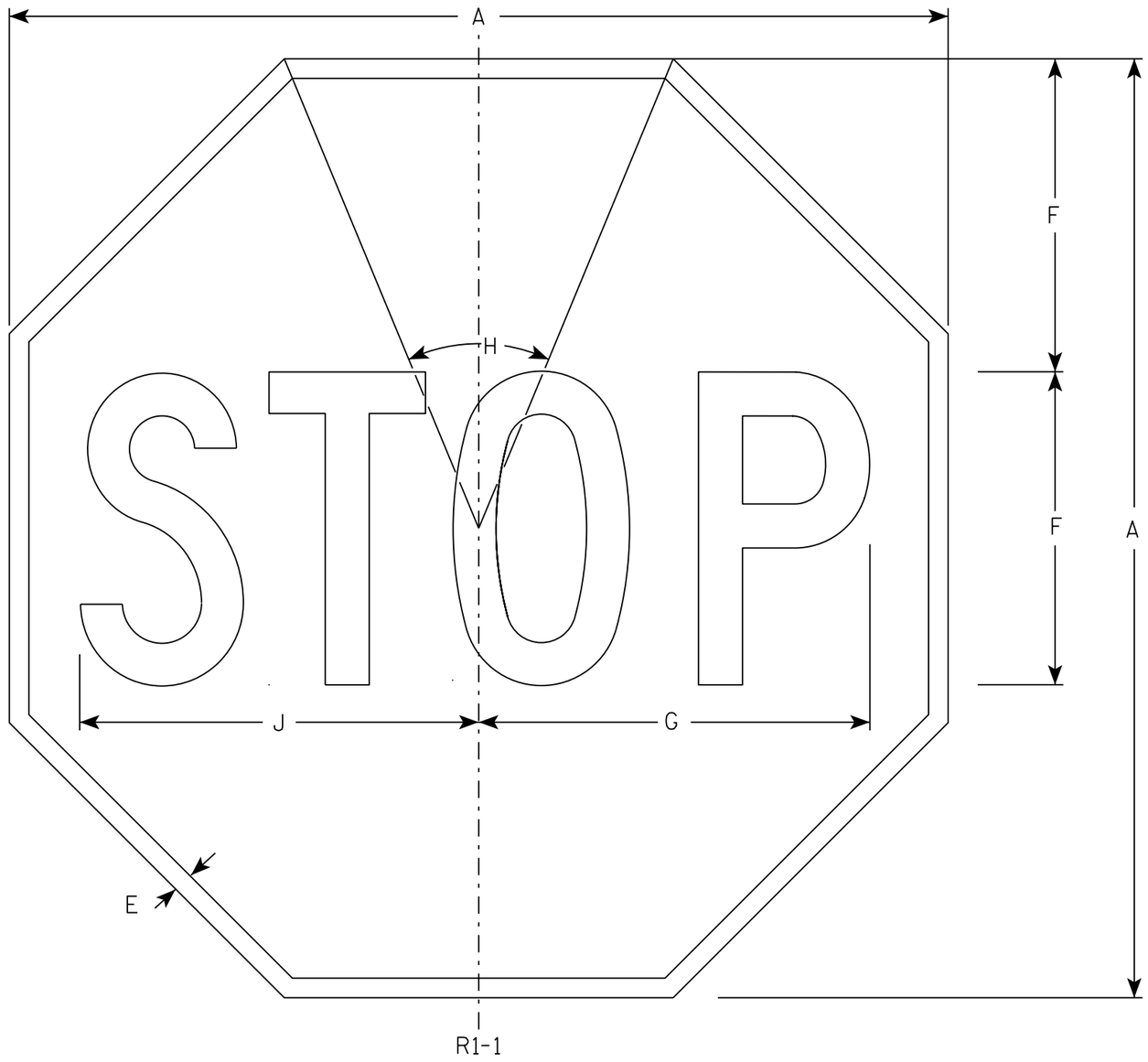
STANDARD SIGN M6-4 & M6-6 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	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	30				5/8	10	12 1/2	45°		12 3/4																	5.18
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

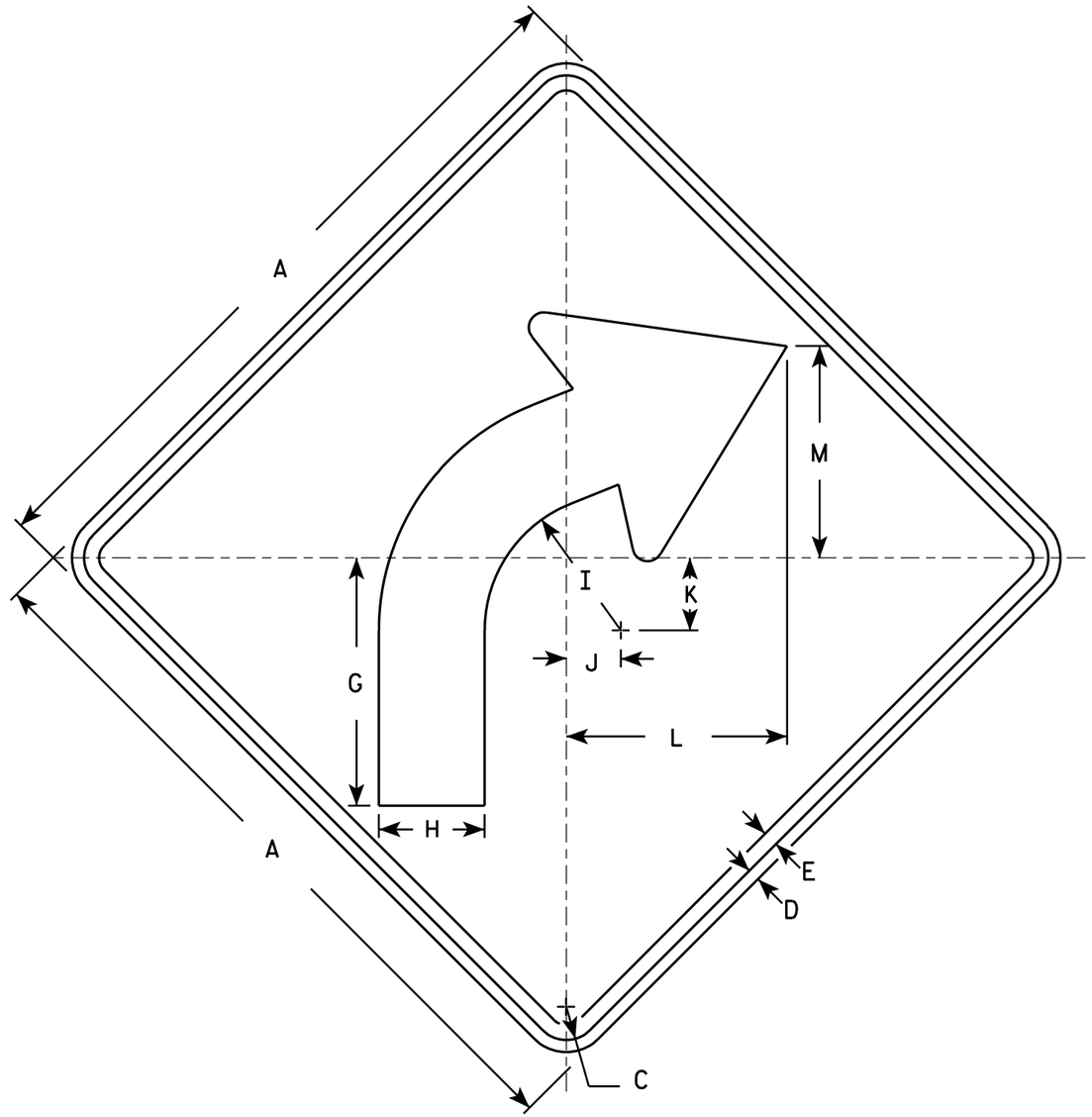
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

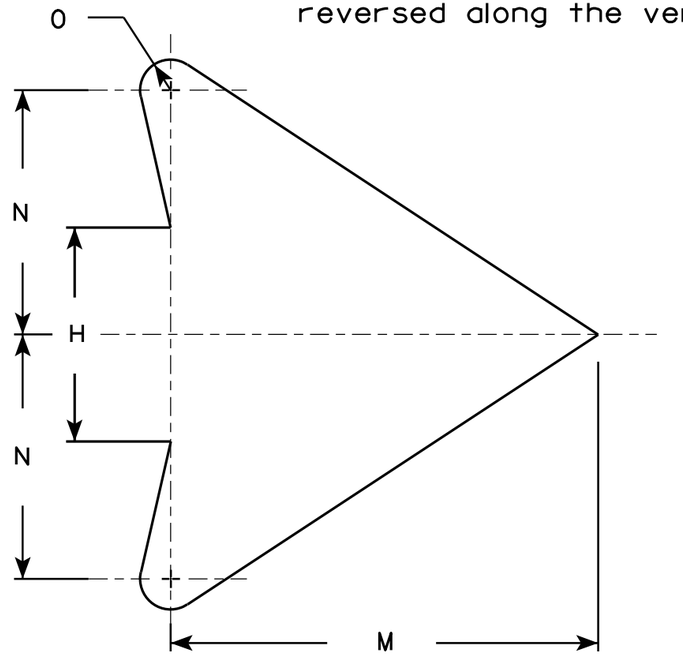
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 171	E

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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

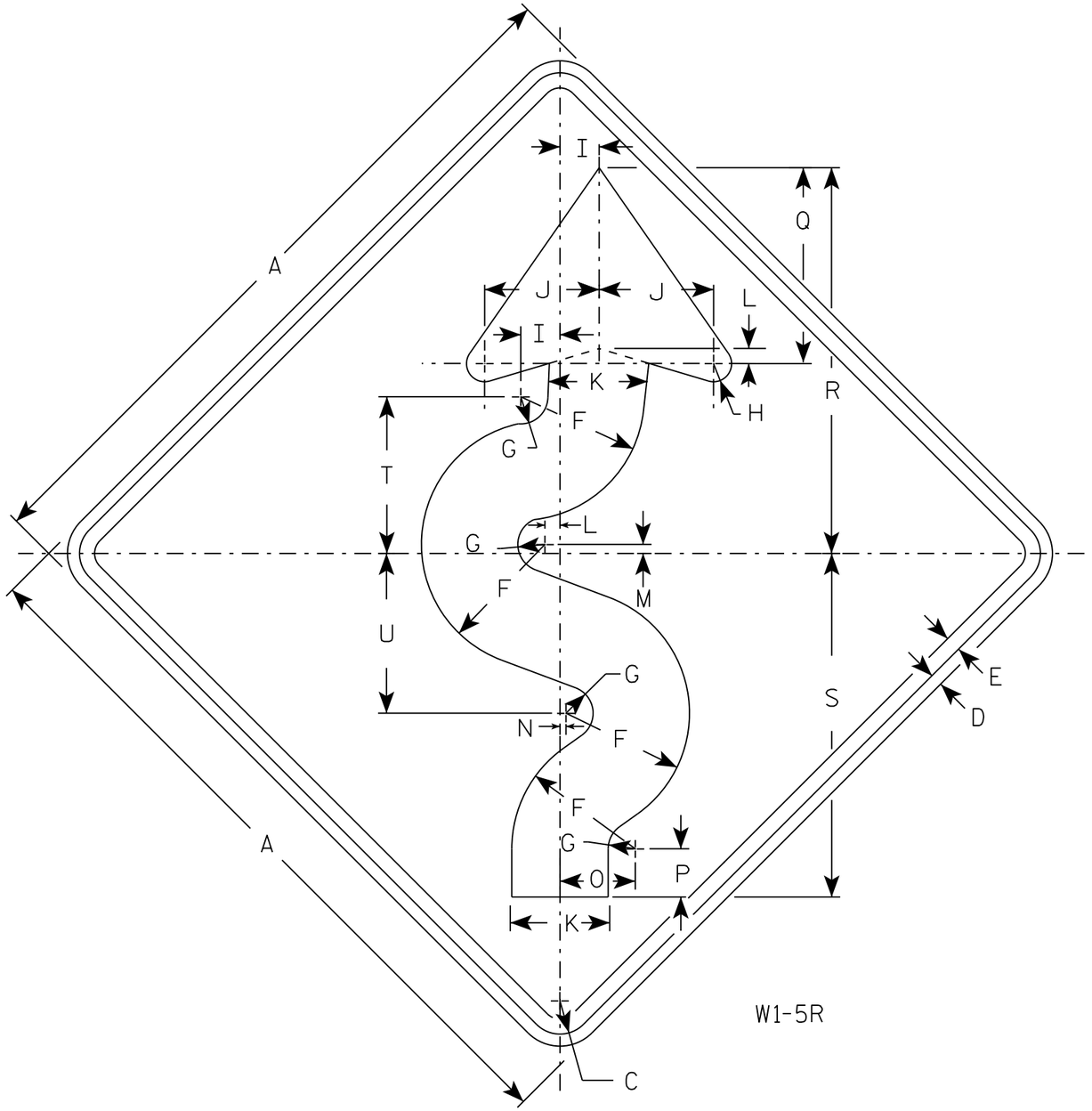
STANDARD SIGN
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 172	E



W1-5R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W1-5L is the same as W1-5R except the arrow is reversed along the vertical centerline.
4. If used with W13-1 of 30 MPH or less, use 36" sign for Size 2S.

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		1 1/8	3/8	1/2	4 1/8	7/8	5/8	1 1/4	3 3/4	3 1/4	1/2	1/4	1/8	2 1/2	1 5/8	6 1/2	12 3/4	11 3/8	5 1/4	5 1/4						4.0
2S	30		1 3/8	1/2	5/8	5 1/8	1 1/8	3/4	1 5/8	4 3/4	4 1/8	5/8	3/8	1/4	3 1/8	2	8 1/8	16	14 1/4	6 1/2	6 5/8						6.25
2M	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
3	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
4	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
5	48		2 1/4	3/4	1	8 1/4	1 3/4	1 1/4	2 1/2	7 1/2	6 1/2	1	1/2	3/8	5	3 1/4	13	25 1/2	22 3/4	10 3/8	10 1/2						16.0

STANDARD SIGN

W1-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

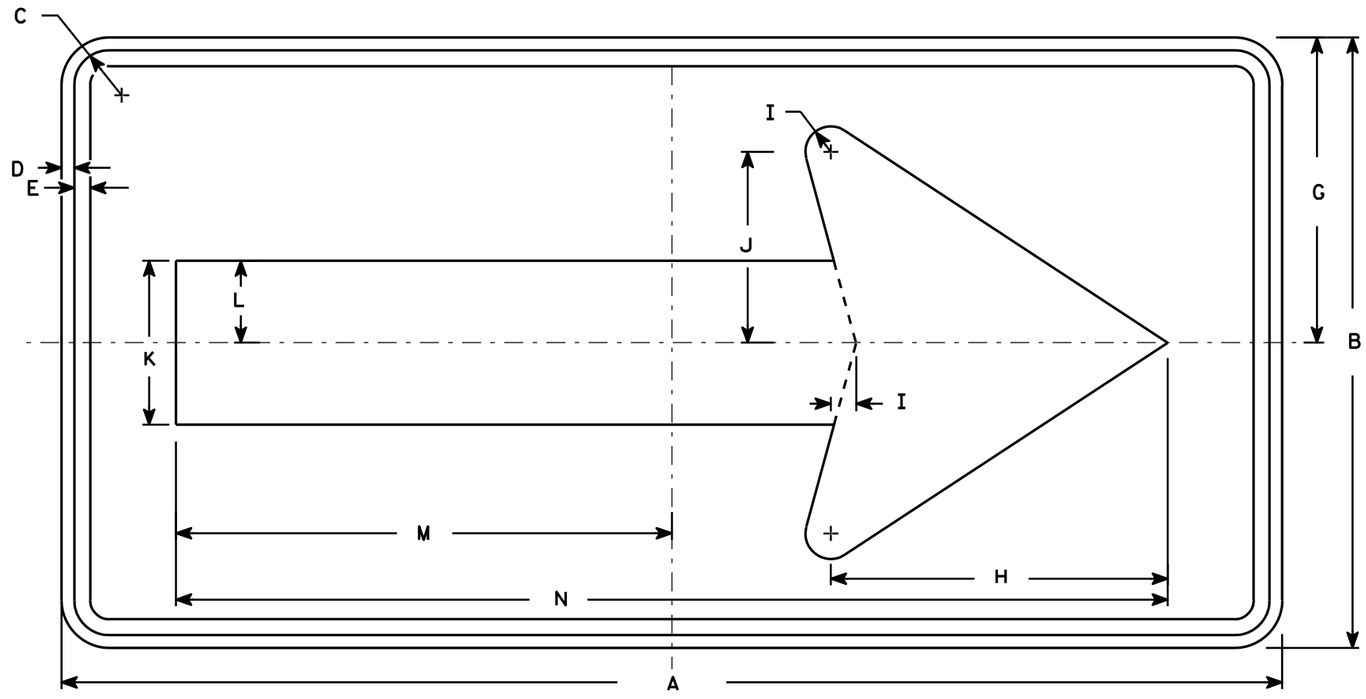
DATE 8/1/16 PLATE NO. W1-5.9

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W15.DGN PLOT DATE : 01-AUG-2016 09:34 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.594294:1.000000

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. 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.



W1-6

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

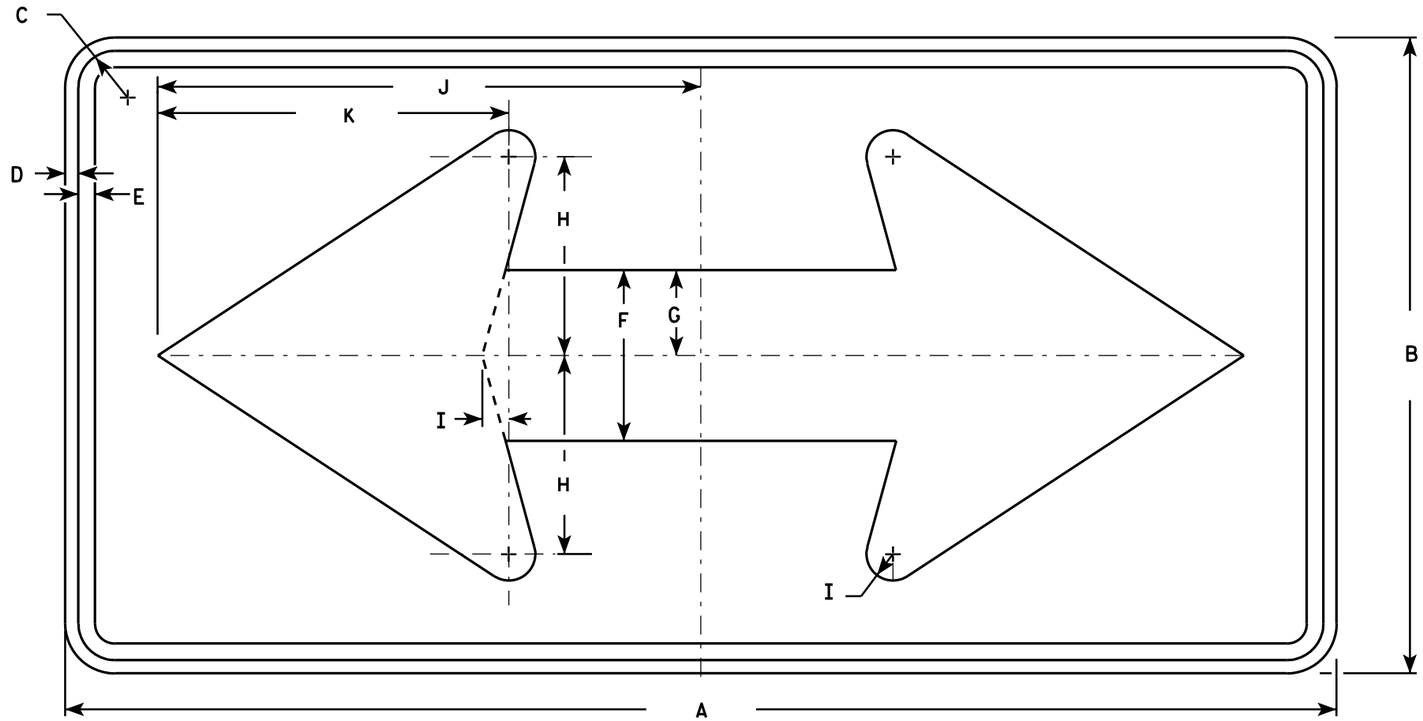
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 174



W1-7

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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

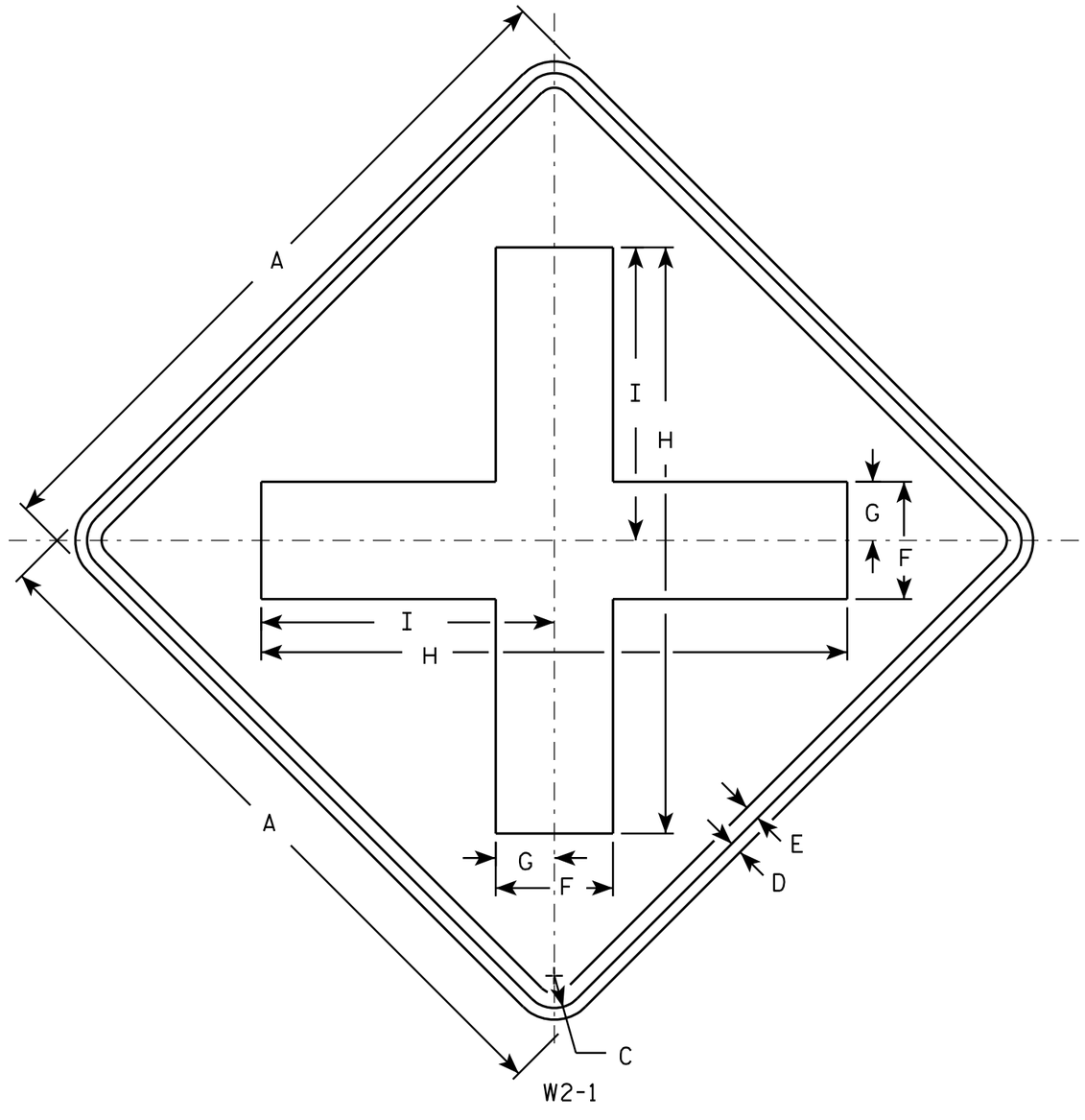
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 175 | E



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. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	4	2	20	10																		4.0
2S	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3	30	15																		9.0
4	48		2 1/4	3/4	1	8	4	40	20																		16.0
5																											

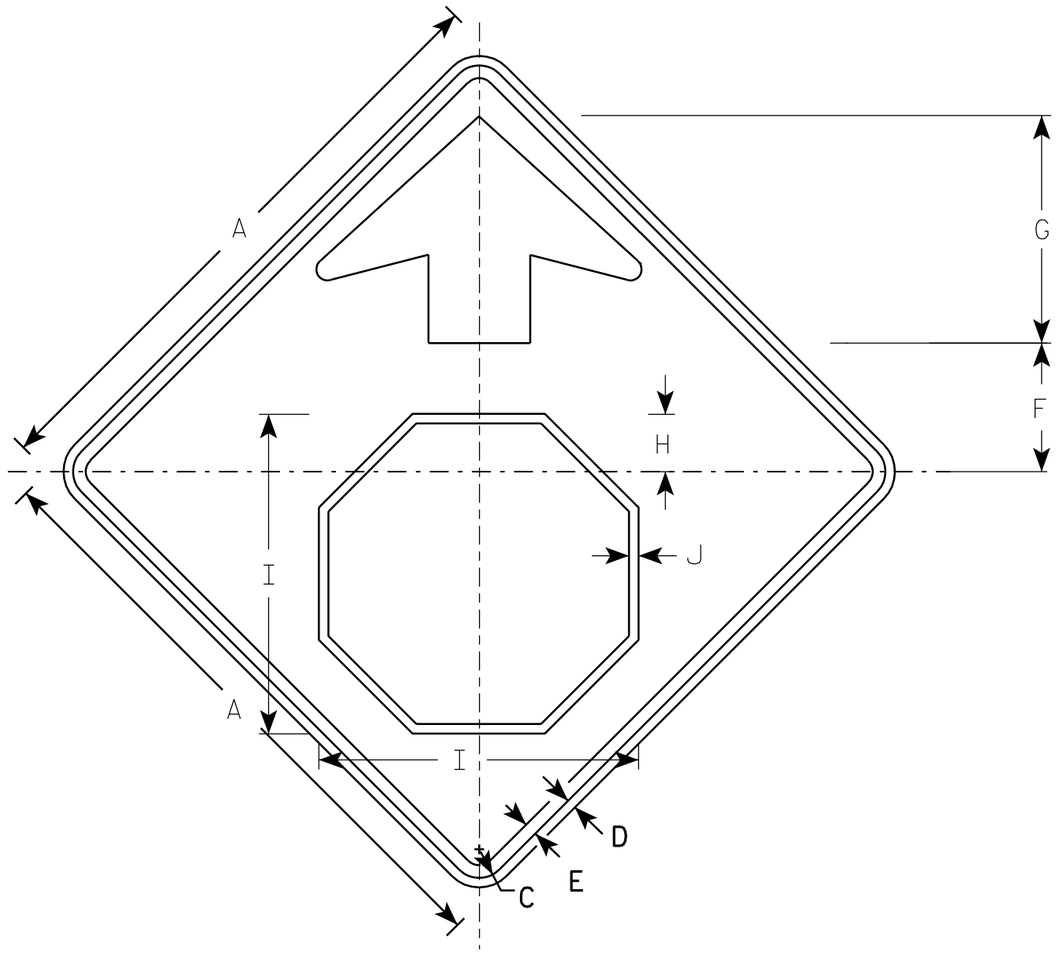
STANDARD SIGN
W2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-1.9

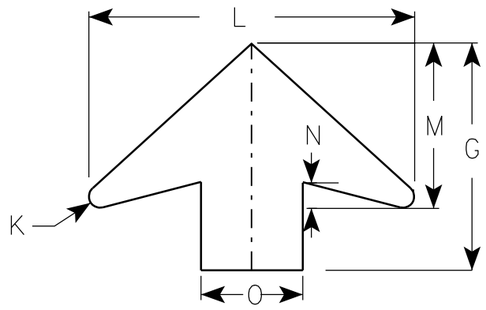
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 176	E



W3-1

NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

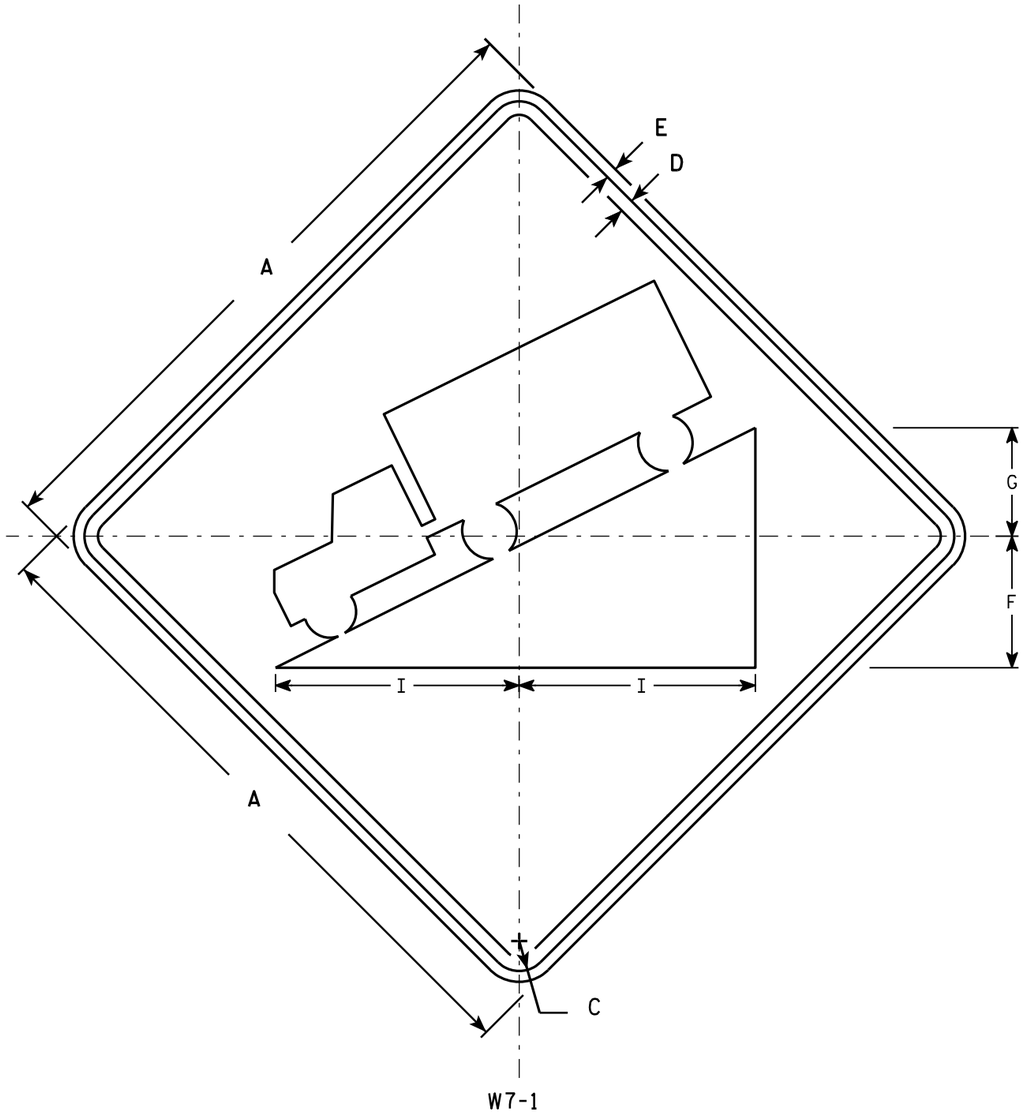
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 177 E



W7-1

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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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		1 1/8	3/8	3/8	5	4		8 3/4																		4.0
2S	30		1 3/8	1/2	5/8	6	5		11																		6.25
2M	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
3	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
4	36		1 5/8	5/8	3/4	7 1/4	6		13 1/4																		9.0
5	48		2 1/4	3/4	1	9 3/4	8		17 1/2																		16.0

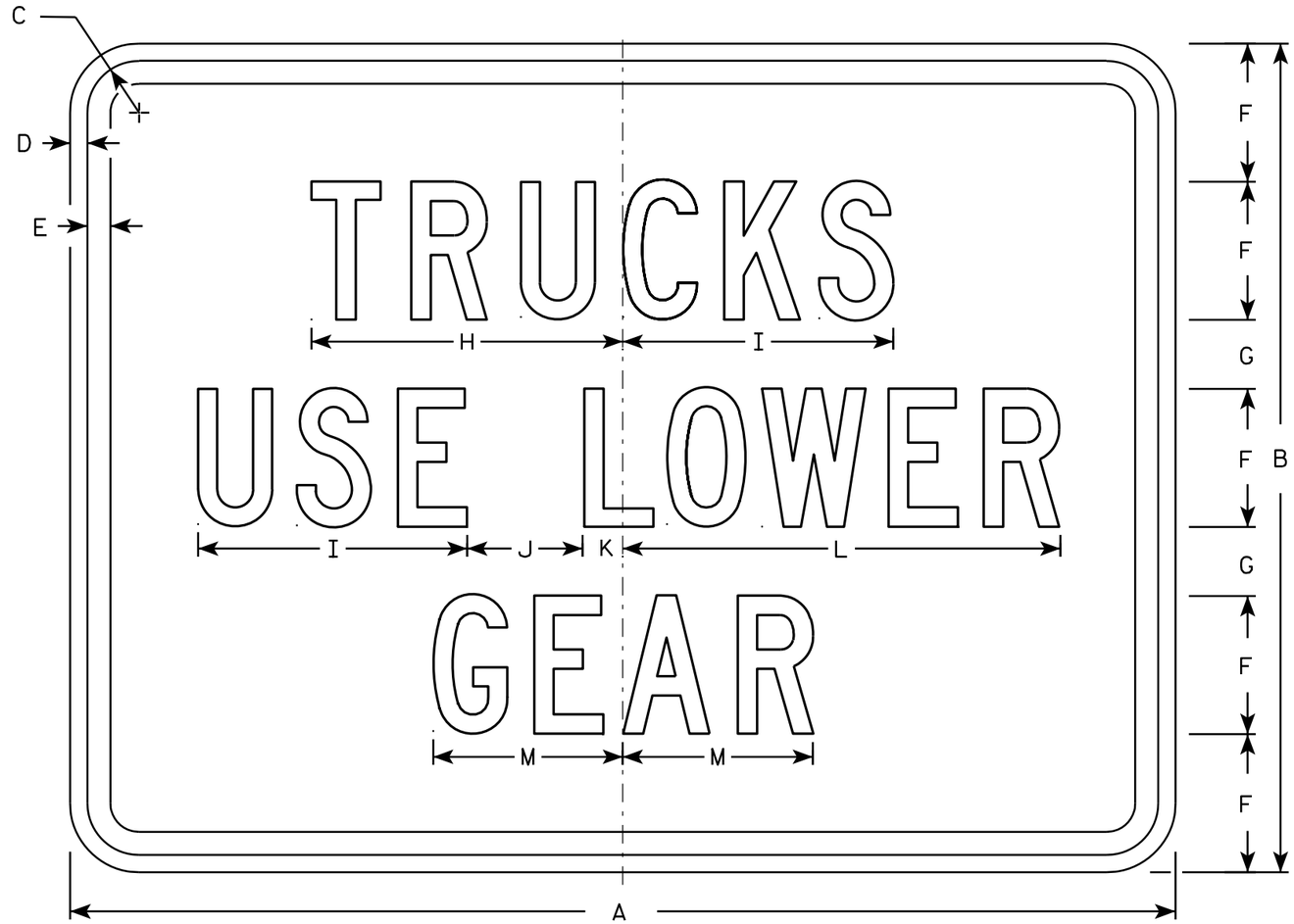
STANDARD SIGN
W7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W7-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E



W7-2B

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 - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	18	1 1/8	3/8	1/2	3	1 1/2	6 3/4	5 7/8	2 1/2	7/8	9 1/2	4 1/8														3.0
2M	24	18	1 1/8	3/8	1/2	3	1 1/2	6 3/4	5 7/8	2 1/2	7/8	9 1/2	4 1/8														3.0
3																											
4	30	24	1 3/8	1/2	5/8	4	2	8 3/4	7 3/4	3 3/8	1 1/4	2 3/4	5 1/2														5.0
5	48	36	2 1/4	3/4	1	6	3	13 1/2	11 3/4	5	1 3/4	19	8 1/4														12.0

STANDARD SIGN
W7-2B

WISCONSIN DEPT OF TRANSPORTATION

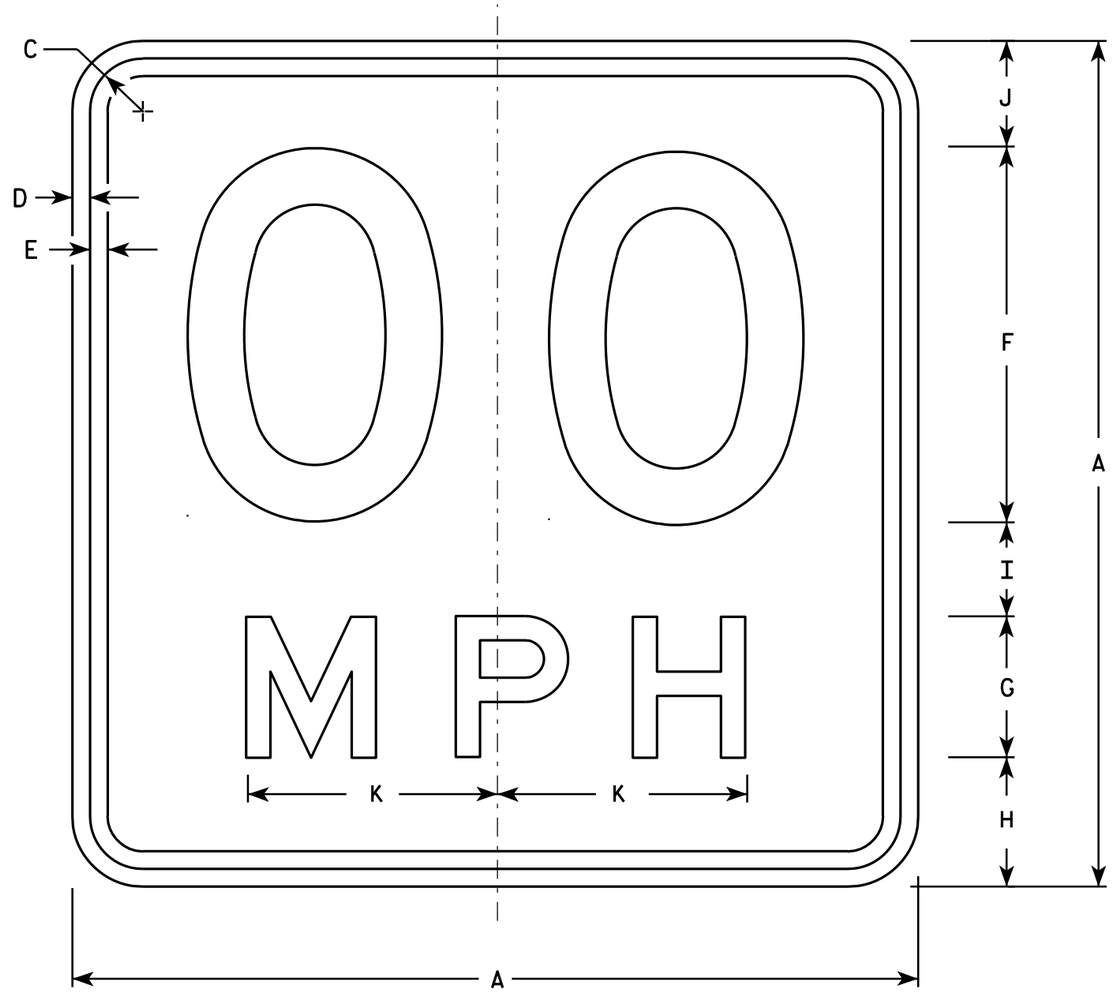
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W7-2B.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 179	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W72B.DGN PLOT DATE : 12-MAR-2013 14:46 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.225232:1.000000

WISDOT/CADDS SHEET 42



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

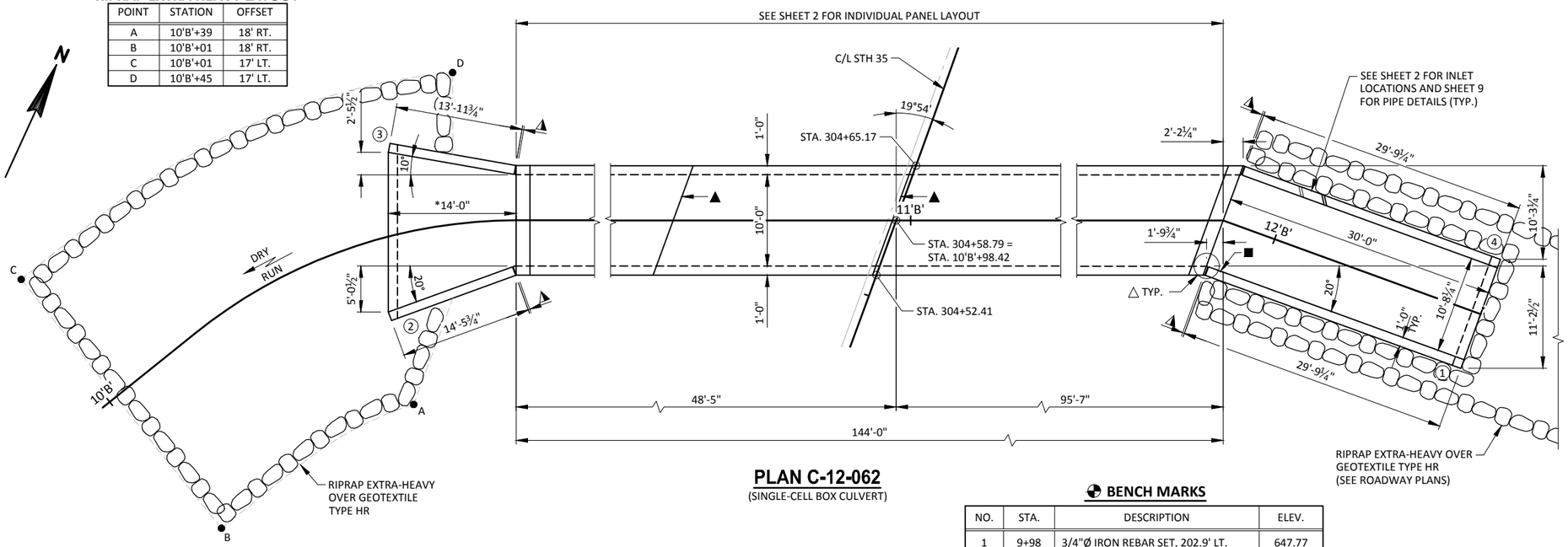
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 180 | E

STATE PROJECT NUMBER

5496-00-74

RIPRAP EXTRA HEAVY LAYOUT

POINT	STATION	OFFSET
A	10'B'+39	18' RT.
B	10'B'+01	18' RT.
C	10'B'+01	17' LT.
D	10'B'+45	17' LT.

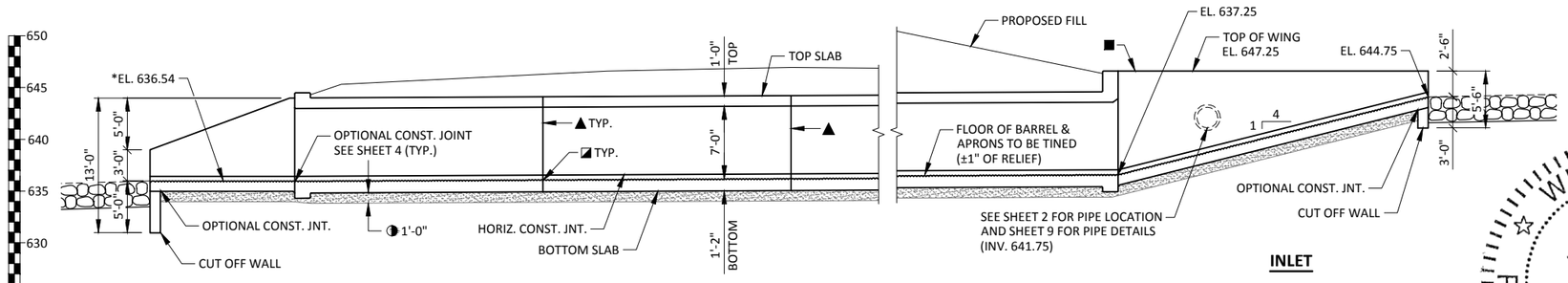


PLAN C-12-062

(SINGLE-CELL BOX CULVERT)

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	9+98	3/4"Ø IRON REBAR SET, 202.9' LT.	647.77
2	14+63	3/4"Ø IRON REBAR SET, 30.2' LT.	666.24



OUTLET **INLET**

ELEVATION

DESIGN DATA

LIVE LOAD:

DESIGN LOADING — HL-93
INVENTORY RATING FACTOR — RF=1.05
OPERATING RATING FACTOR — RF=1.35
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) — 255 KIPS

EARTH LOAD:

DESIGNED FOR 2.5 FEET TO 10.2 FEET OF FILL.

MATERIAL PROPERTIES:

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

TRAFFIC DATA

A.D.T. (2037) — STH 35 — 4,500
CTH N — 250
DESIGN SPEED — STH 35 — 60 M.P.H.
CTH N — 40 M.P.H.

HYDRAULIC DATA

100-YEAR FREQUENCY
DRAINAGE AREA — 0.5 SQ. MI.
Q_{100} TOTAL — 360 C.F.S.
THROUGH STRUCTURE — 360 C.F.S.
OVERTOPPING ROADWAY — N/A
VELOCITY - THROUGH STRUCTURE — 14.0 F.P.S.
WATERWAY AREA - THROUGH STRUCTURE — 25.7 SQ. FT.
HIGH $WATER_{100}$ ELEVATION — 648.64
SCOUR CRITICAL CODE — 8

EROSION CONTROL
Q_2 — 42 C.F.S.
HIGH $WATER_2$ ELEVATION — 646.63
$VELOCITY_2$ — 3.8 F.P.S.

LIST OF DRAWINGS

GENERAL PLAN — 1.
INDIVIDUAL PANEL LAYOUT — 2.
SUBSURFACE EXPLORATION — 3.
OUTSIDE STEEL AND OUTLET PANEL SECTION — 4.
INSIDE STEEL AND INTERIOR PANEL SECTIONS — 5.
WALL STEEL AND INLET PANEL SECTION — 6.
APRON DETAILS — 7.
WING WALL DETAILS — 8.
DETAILS — 9.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL
203.0200	REMOVING OLD STRUCTURE STA. 305+18	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-12-062	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	2,550
311.0110	BREAKER RUN	TON	270
504.0100	CONCRETE MASONRY CULVERTS	CY	266
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	23,850
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	3,110
511.1200	TEMPORARY SHORING C-12-062	SF	830
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	90
606.0400	RIPRAP EXTRA-HEAVY	CY	125
645.0105	GEOTEXTILE TYPE C	SY	385
645.0120	GEOTEXTILE TYPE HR	SY	185
	NON-BID ITEMS		
	FILLER	SIZE	¾"
	NAME PLATE		

LEGEND

△ SEE CORNER DETAILS (SHEET 6).

■ NAME PLATE LOCATION (SEE SHEET 5) AND BENCHMARK CAP (WHEN SUPPLIED).

▲ VERT. CONST. JOINT (TYP.). 18" MIN. WIDTH RUBBERIZED MEMBRANE WATER-PROOFING UP WALLS AND ACROSS TOP SLAB.

✳ BUILD APRON AND END OF BOX LEVEL.

◯ INDICATES WING NUMBER.

◪ SEE INVERT ELEVATION TABLE FOR FLOOR ELEVATIONS (SHEET 2).

◑ UNDER CUT STRUCTURE (TO BE PAID FOR UNDER "EXCAVATION FOR STRUCTURES"), PLACE GEOTEXTILE FABRIC TYPE C, AND BACKFILL WITH BREAKER RUN. EXTEND 3'-0" BEYOND THE FOOTPRINT OF THE CULVERT.

◭ ¾" FILLER & 18" RUBBERIZED MEMBRANE WATER-PROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WING WALL.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES SHALL BE THE EXISTING GROUNDLINE. ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE B TO AN ELEVATION 12" ABOVE THE TOP OF THE BOX WITHIN THE LENGTH OF THE CULVERT. SEE SHEET 2 FOR BACKFILL STRUCTURE DETAILS.

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

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH APPROVAL OF THE STRUCTURES DESIGN SECTION. THE FLOOR OF THE PRECAST STRUCTURE SHALL BE TINED AS CALLED OUT IN THE SPECIFICATIONS (±1" OF RELIEF). MATERIALS, FABRICATION AND DESIGN OF PRECAST BOXES SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR TRANSPORTATION MATERIALS, M259 OR M273, AND AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION 2, SECTION 27, EXCEPT THE CONCRETE MIXTURE SHALL CONTAIN NOT LESS THAN 565 POUNDS OF CEMENTITIOUS MATERIALS PER CUBIC YARD.

WISCONSIN PROFESSIONAL ENGINEER
PATRICK T. BOLAND
E-36303
SPRING GREEN WIS.
Patrick Boland 12-10-18

DESIGN CONSULTANT
PATRICK BOLAND, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc. Engineers - Architects - Surveyors

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — 12/11/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-12-062

STH 35 OVER DRY RUN

COUNTY: CRAWFORD — TOWN/~~CITY/VILLAGE~~: EASTMAN

DESIGN SPEC: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

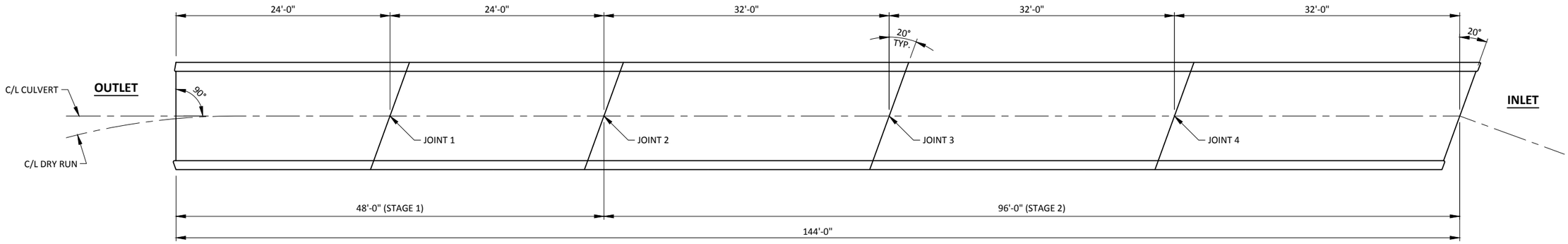
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
PTB	TJR	PTB	TJR

GENERAL PLAN

SHEET 1 OF 9

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\STRUCTURE\CAD FILES\BOX CULVERT FINALS\GENERAL PLAN.DWG
LAYOUT : LAYOUT1
PLOT DATE : 12/10/2018
PLOT TIME : 8:29:40 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'

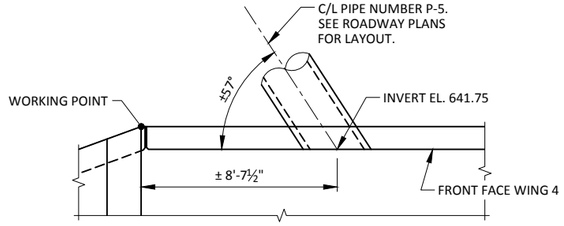
STATE PROJECT NUMBER
5496-00-74



INDIVIDUAL PANEL LAYOUT

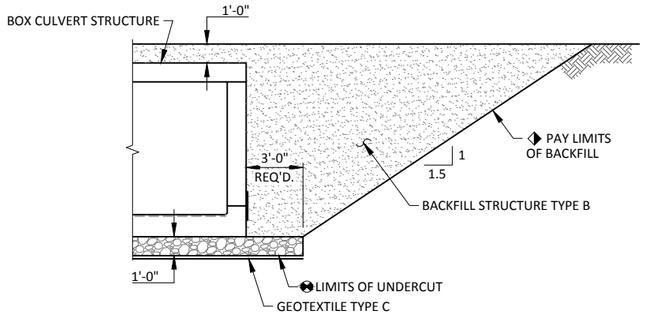
INVERT ELEVATION TABLE

JOINT	STATION	DIST. ABOVE OUTLET	ELEVATION
OUTLET	10'B'+50	0	636.54
1	10'B'+74	24	636.66
2	10'B'+98	48	636.78
3	11'B'+30	80	636.93
4	11'B'+62	112	637.09
INLET	11'B'+94	144	637.25
END APRON	12'B'+24	174	644.75



INLET LOCATION AT WING 4

SEE SHEET 9 FOR PIPE DETAILS.

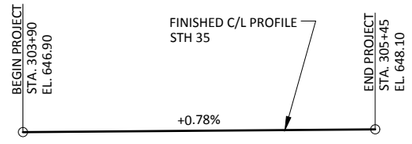


BACKFILL STRUCTURE DETAIL

PARTIAL BARREL SECTION SHOWN.
SEE SHEET 7 FOR PAY LIMITS AT APRON WINGS.

◆ BACKFILL STRUCTURE TYPE B PAY LIMITS. THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT THE ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE B" REQ'D. AT THE BARREL AND BEHIND THE APRON WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES C-12-062". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

◓ UNDERCUT 1'-0". EXCAVATION FOR UNDERCUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. PLACE "GEOTEXTILE TYPE C" AND BACKFILL WITH "BREAKER RUN".



PROFILE GRADE LINE

STH 35

NOTES

UNLESS NOTED OTHERWISE, ALL BAR STEEL AND MEASUREMENTS SHOWN IN THE SECTION VIEW ARE SYMMETRICAL ABOUT THE C/L BOX CULVERT.

SEE SHEET 9 FOR BILL OF BARS.

LEGEND

▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

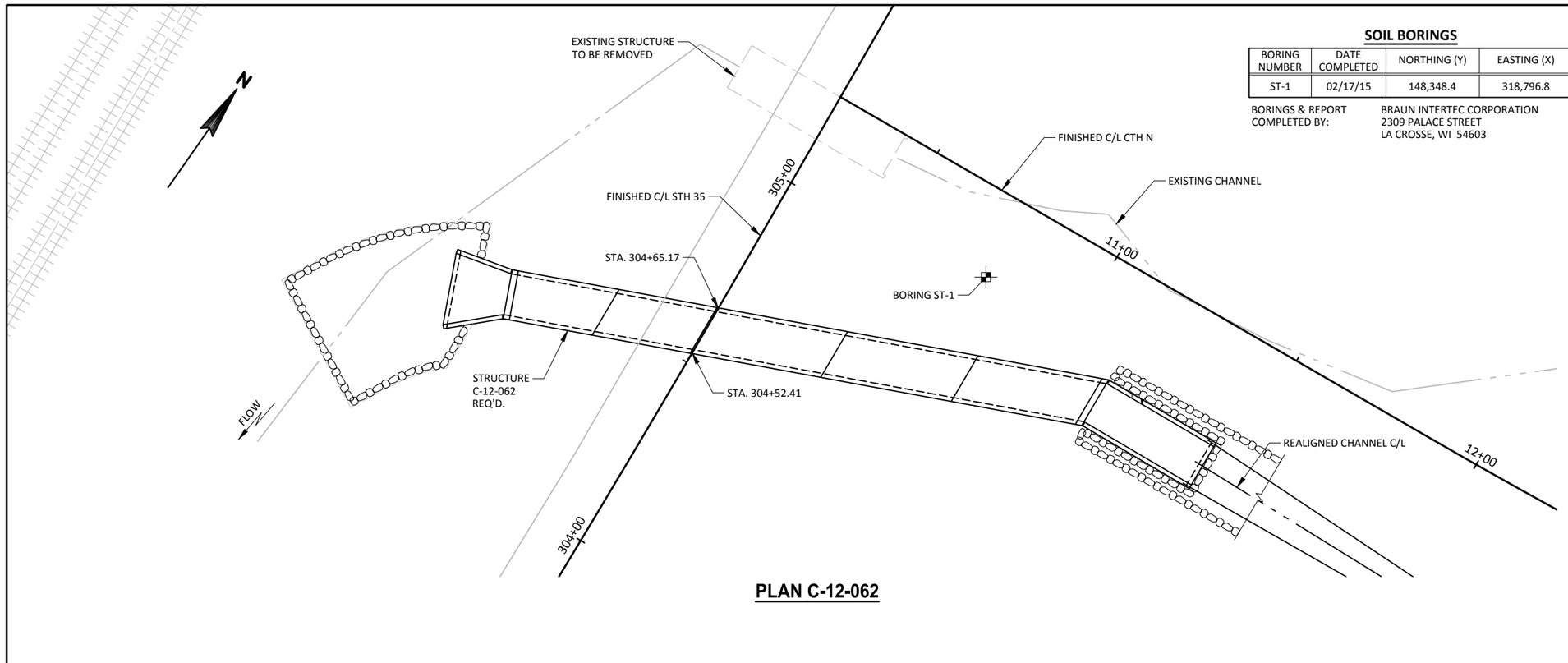
STRUCTURE C-12-062

DRAWN BY PTB | PLANS CK'D. TJR

INDIVIDUAL PANEL LAYOUT

SHEET 2 OF 9

182

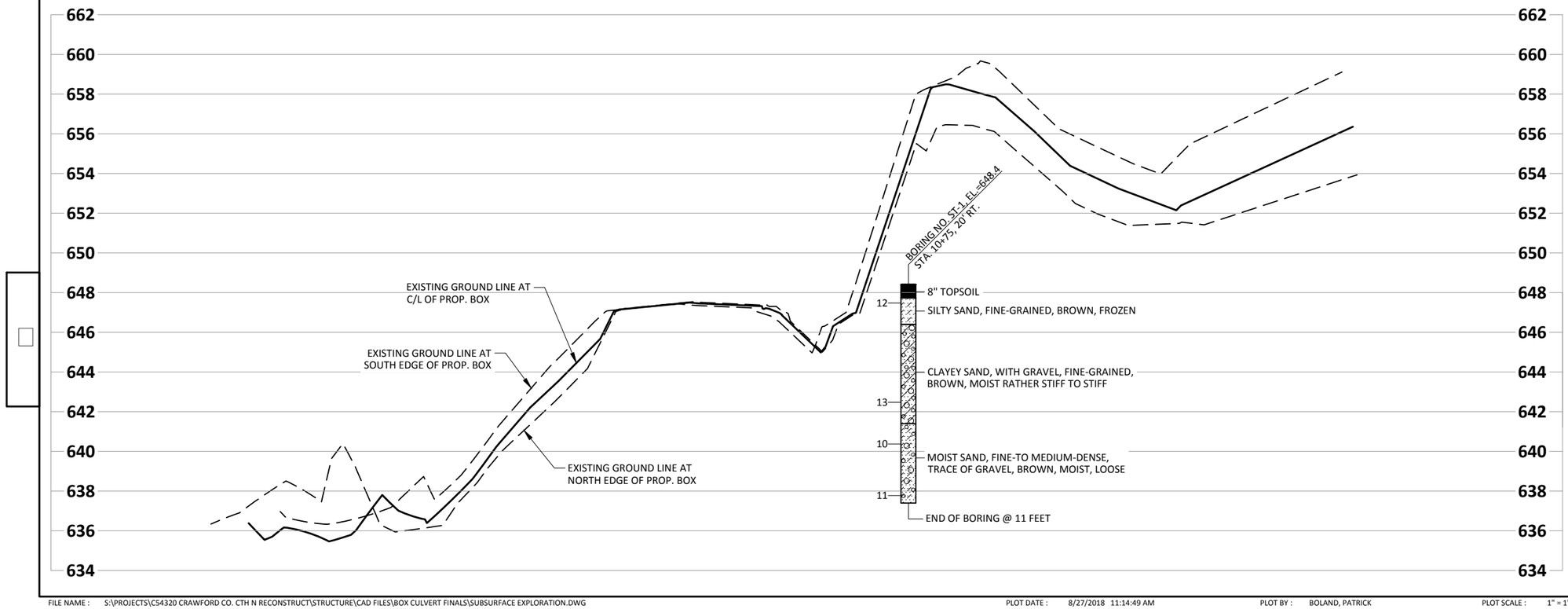


PLAN C-12-062

SOIL BORINGS

BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
ST-1	02/17/15	148,348.4	318,796.8

BORINGS & REPORT COMPLETED BY: BRAUN INTERTEC CORPORATION
2309 PALACE STREET
LA CROSSE, WI 54603



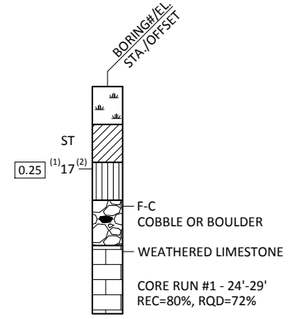
STATE PROJECT NUMBER

5496-00-74

MATERIAL SYMBOLS

Asphalt, Topsoil, Peat, Concrete, Fill, Gravel, Sand, Clay, Silt, Boulders or Cobbles, Limestone, Bedrock (unknown), Shale, Sandstone, Igneous/meta

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-12-062

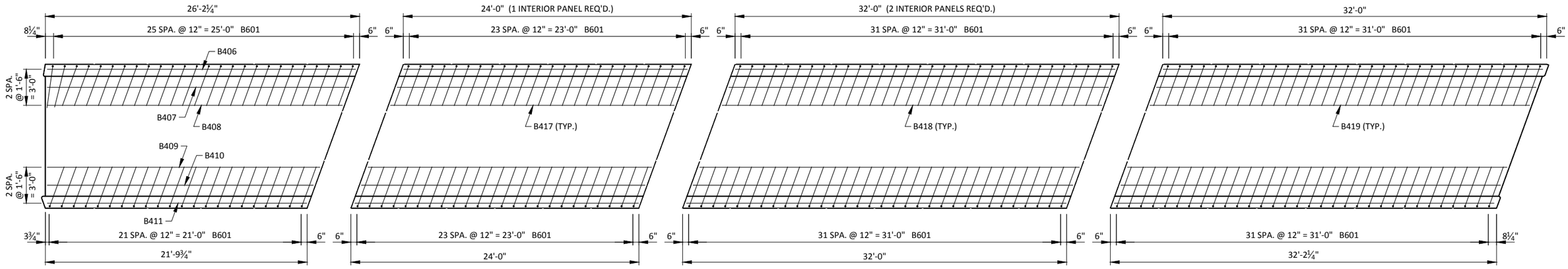
DRAWN BY PTB | PLANS CK'D. TJR

SUBSURFACE EXPLORATION

SHEET 3 OF 9

183

STATE PROJECT NUMBER
5496-00-74

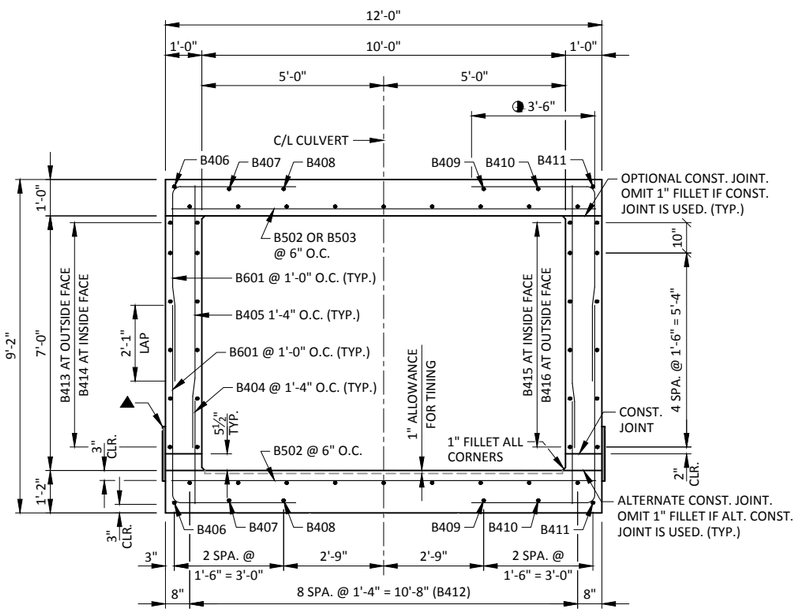


OUTLET PANEL
OUTSIDE STEEL

24-FOOT INTERIOR PANEL
OUTSIDE STEEL

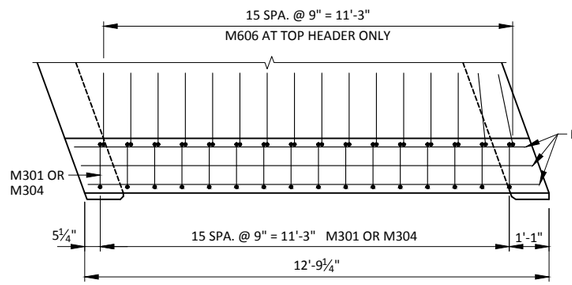
32-FOOT INTERIOR PANEL
OUTSIDE STEEL

INLET PANEL
OUTSIDE STEEL

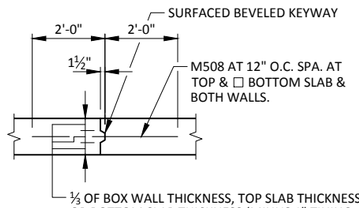


SECTION THROUGH BARREL - OUTLET PANEL
(LOOKING UPSTREAM)

HEADER PLAN VIEW - OUTLET

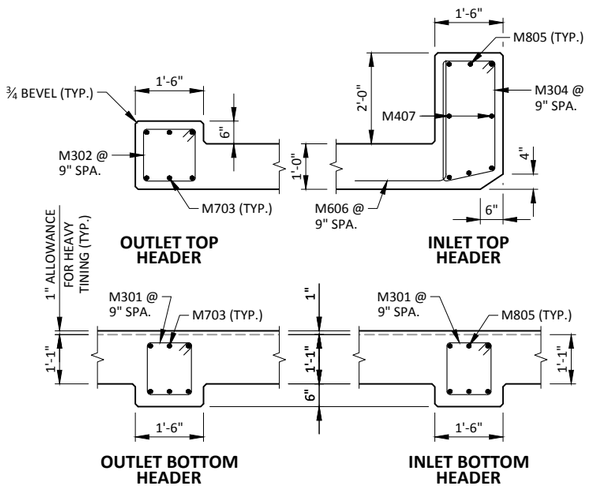


HEADER PLAN VIEW - INLET



TYPICAL CONSTRUCTION JOINT

□ IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 3" DEEP SAWCUTS WITHIN 12 HOURS AFTER POURING.



HEADER SECTIONS

NOTES

UNLESS NOTED OTHERWISE, ALL BAR STEEL AND MEASUREMENTS SHOWN IN THE SECTION VIEW ARE SYMMETRICAL ABOUT THE C/L BOX CULVERT.

SEE SHEET 9 FOR BILL OF BARS.

LEGEND

▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING

◑ BAR LENGTH MEASURED ALONG SKEW, PARALLEL TO VERTICAL CONSTRUCTION JOINTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-12-062

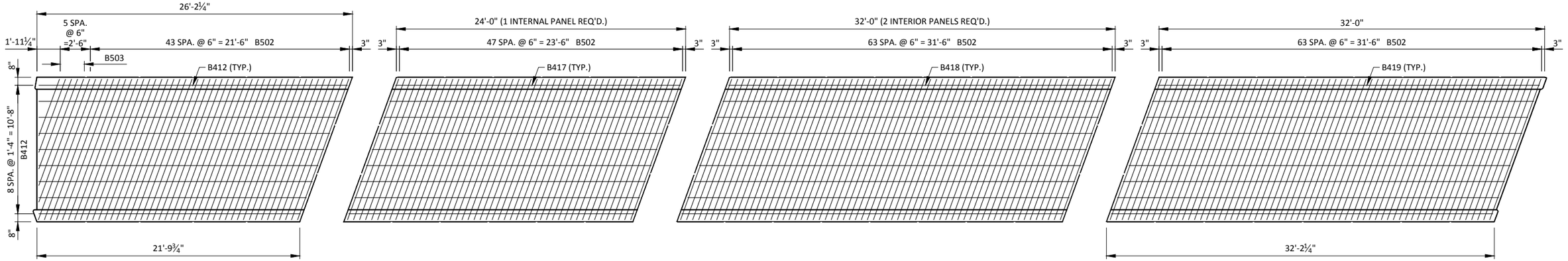
DRAWN BY	PTB	PLANS CK'D.	TJR

OUTSIDE STEEL AND OUTLET PANEL SECTION

SHEET 4 OF 9

184

STATE PROJECT NUMBER
5496-00-74

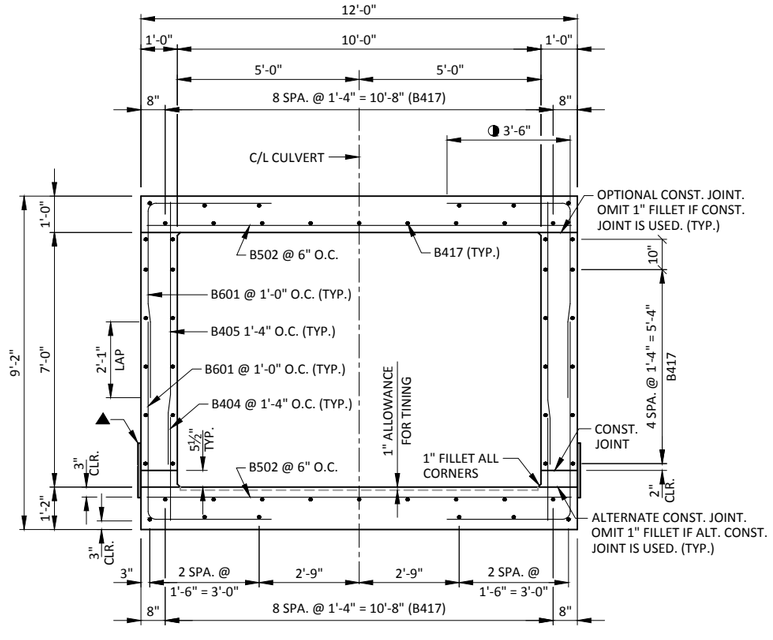


OUTLET PANEL
INSIDE STEEL

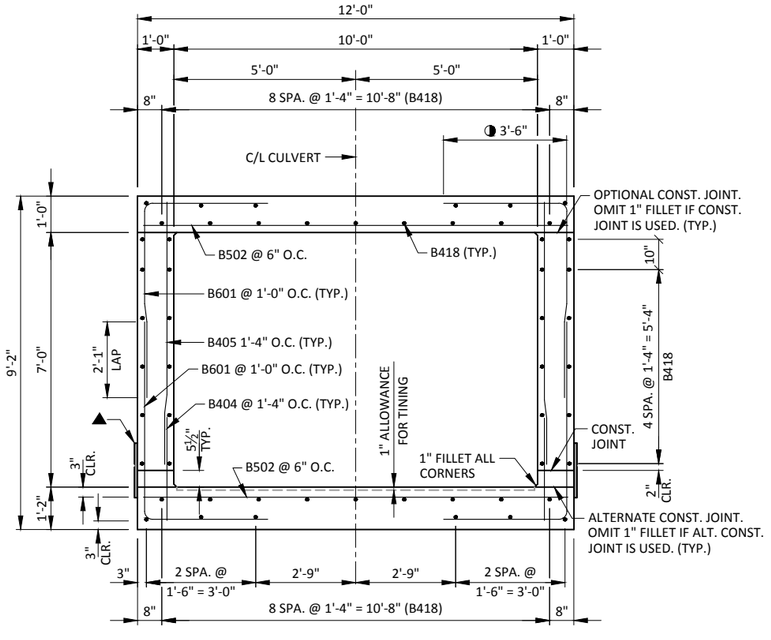
24-FOOT INTERIOR PANEL
INSIDE STEEL

32-FOOT INTERIOR PANEL
INSIDE STEEL

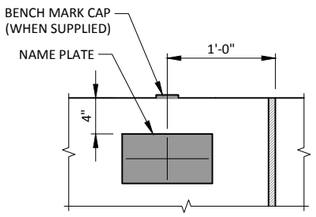
INLET PANEL
INSIDE STEEL



TYPICAL SECTION THROUGH BARREL - 24' INTERIOR PANEL
(LOOKING UPSTREAM)



TYPICAL SECTION THROUGH BARREL - 32' INTERIOR PANEL
(LOOKING UPSTREAM)



NAME PLATE LOCATION
WING 1

NOTES

UNLESS NOTED OTHERWISE, ALL BAR STEEL AND MEASUREMENTS SHOWN IN THE SECTION VIEW ARE SYMMETRICAL ABOUT THE C/L BOX CULVERT.

SEE SHEET 9 FOR BILL OF BARS.

LEGEND

▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING

◑ BAR LENGTH MEASURED ALONG SKEW, PARALLEL TO VERTICAL CONSTRUCTION JOINTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-12-062

DRAWN BY PTB | PLANS CK'D. TJR

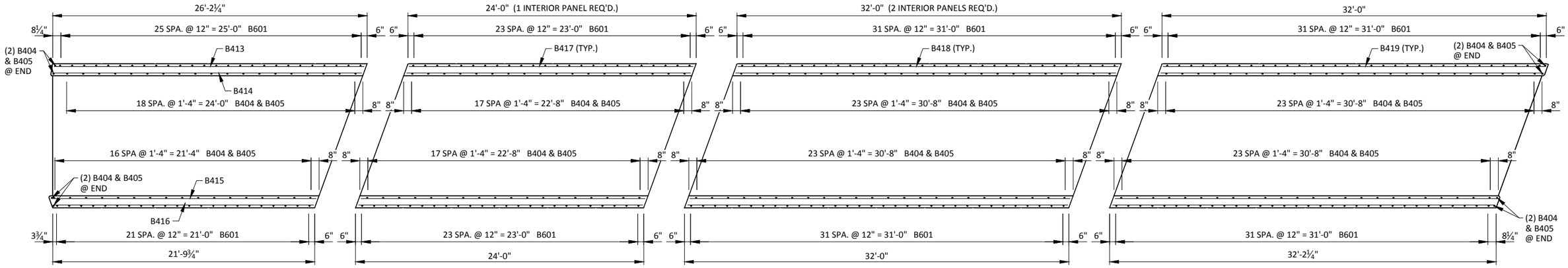
INSIDE STEEL AND INTERIOR PANEL SECTIONS

SHEET 5 OF 9

185

STATE PROJECT NUMBER

5496-00-74

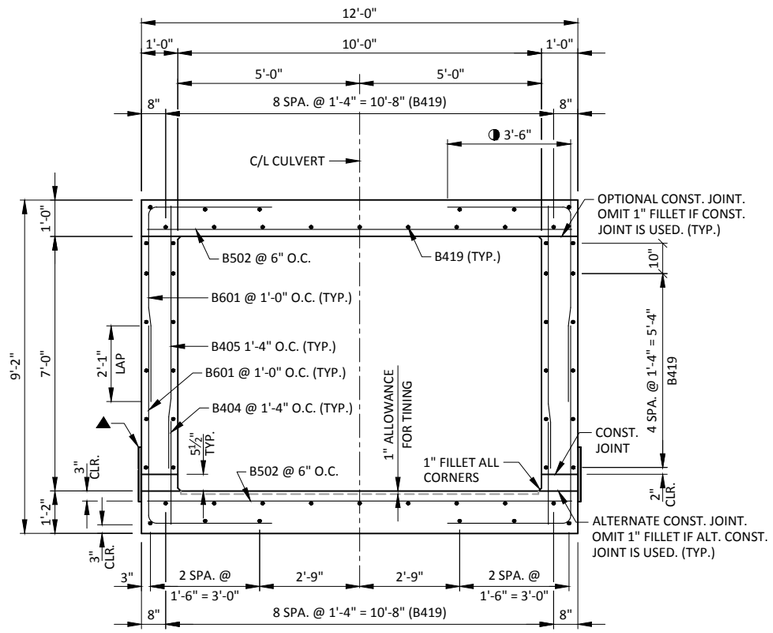


OUTLET PANEL
WALL STEEL

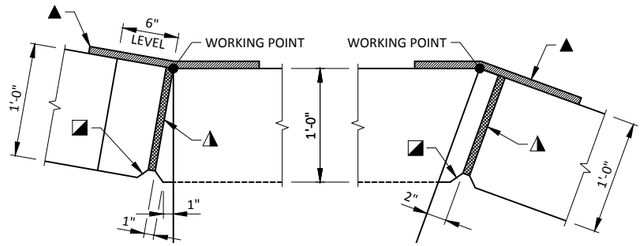
24-FOOT INTERIOR PANEL
WALL STEEL

32-FOOT INTERIOR PANEL
WALL STEEL

INLET PANEL
WALL STEEL

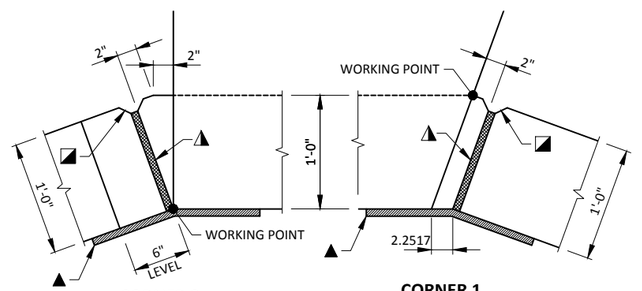


TYPICAL SECTION THROUGH BARREL - INLET PANEL
(LOOKING UPSTREAM)



CORNER 3

CORNER 4



CORNER 2

CORNER 1

CORNER DETAILS

NOTES

UNLESS NOTED OTHERWISE, ALL BAR STEEL AND MEASUREMENTS SHOWN IN THE SECTION VIEW ARE SYMMETRICAL ABOUT THE C/L BOX CULVERT.

SEE SHEET 9 FOR BILL OF BARS.

LEGEND

▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING. EXTEND FROM HORIZ. CONST. JOINT TO TOP OF WALL. (FLUSH WITH FACE OF CONCRETE)

◪ 1" BEVEL TYPICAL

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

◑ BAR LENGTH MEASURED ALONG SKEW, PARALLEL TO VERTICAL CONSTRUCTION JOINTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-12-062

DRAWN BY: PTB | PLANS CK'D.: TJR

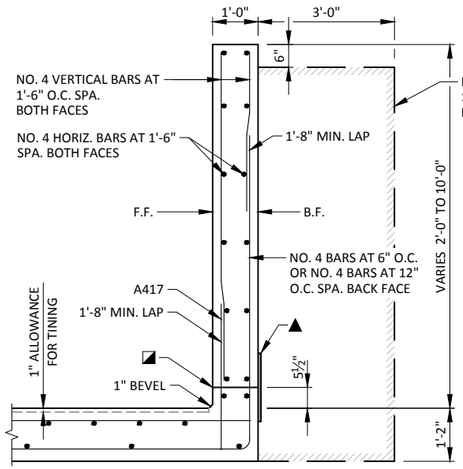
WALL STEEL AND INLET PANEL SECTION

SHEET 6 OF 9

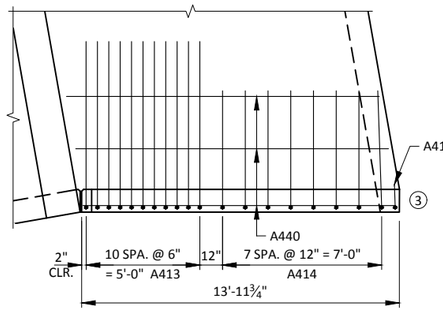
186

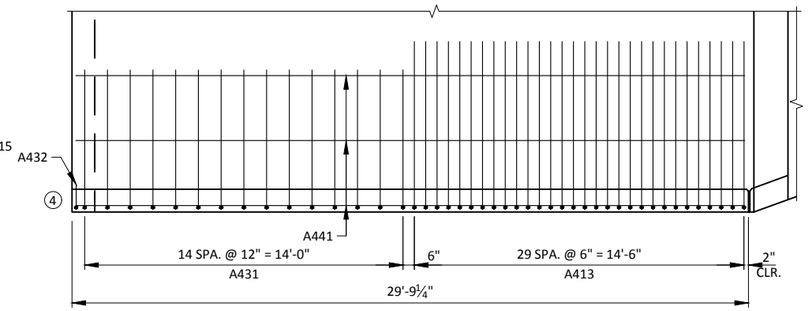
STATE PROJECT NUMBER

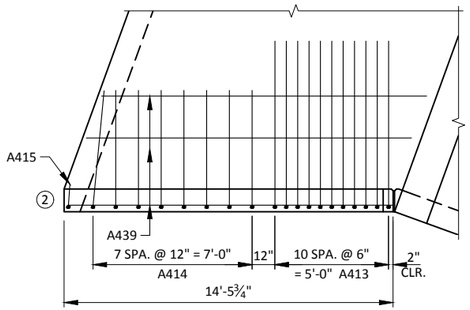
5496-00-74

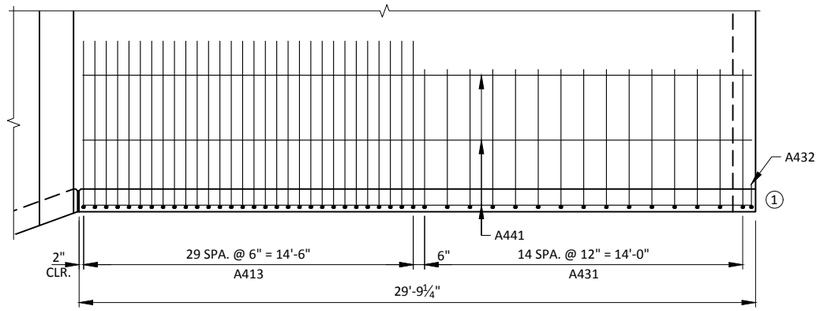


TYPICAL SECTION THROUGH WINGS

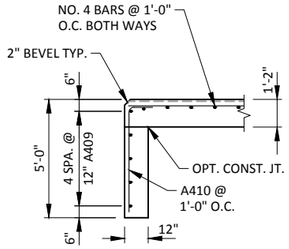




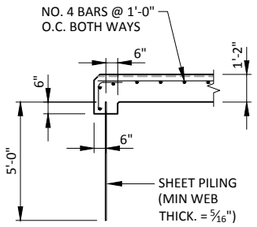




APRON BOTTOM STEEL

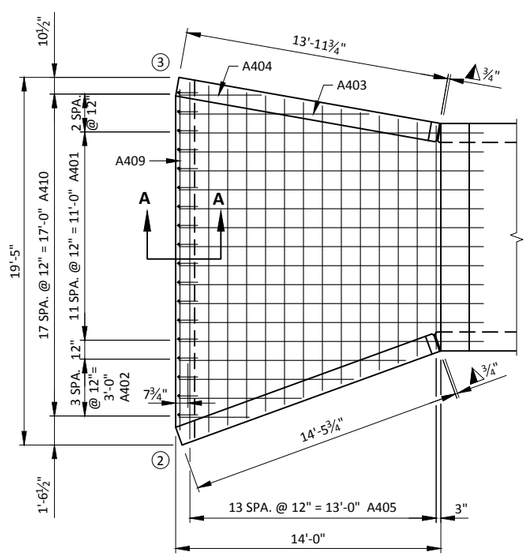


SECTION VIEW A-A

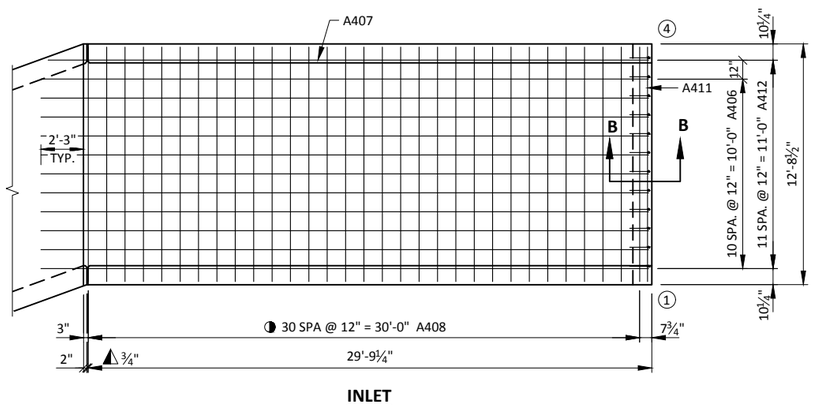


ALTERNATE CUT-OFF WALL

THE ABOVE ALT. MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONC CUT-OFF WALL. PAYMENT WILL BE BASED ON THE CONC. CUT OFF WALL.

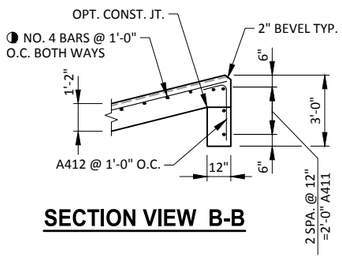


OUTLET

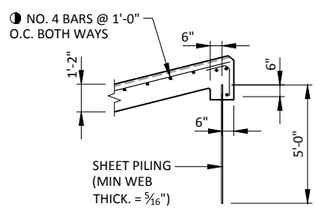


INLET

PLAN VIEW - APRON STEEL



SECTION VIEW B-B



ALTERNATE CUT-OFF WALL

THE ABOVE ALT. MAY BE USED IN LIEU OF THE CAST-IN-PLACE CONC CUT-OFF WALL. PAYMENT WILL BE BASED ON THE CONC. CUT OFF WALL.

NOTES

SEE SHEET 9 FOR BILL OF BARS.

LEGEND

- ▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING, PLACE ALONG HORIZONTAL CONSTRUCTION JOINT FOR ENTIRE WING LENGTH. (TYP.)
- ◪ HORIZONTAL CONSTRUCTION JOINT LOCATED 5½" ABOVE FLOOR OF APRON.
- ◑ TRANSVERSE BAR SPACING MEASURED ALONG INCLINE OF APRON FLOOR.
- ◮ ¾" FILLER & 18" RUBBERIZED MEMBRANE WATER-PROOFING. EXTEND FROM HORIZONTAL CONSTRUCTION JOINT TO TOP OF WING WALL.
- (1) INDICATES WING NUMBER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-12-062

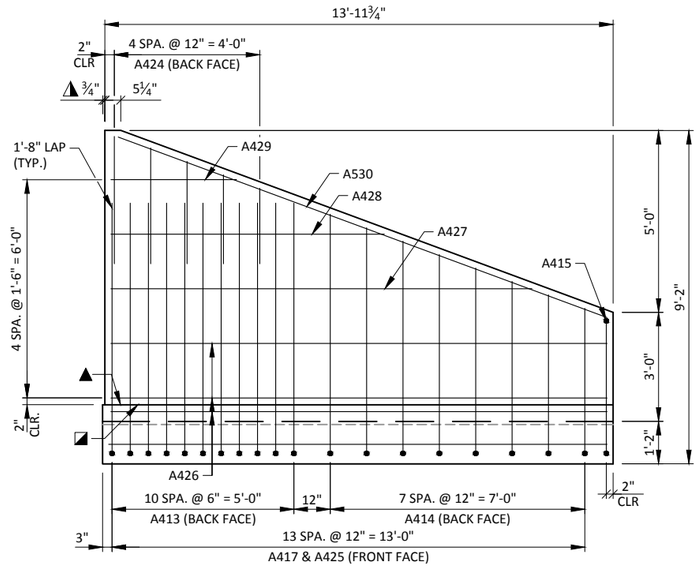
DRAWN BY PTB | PLANS CK'D. TJR

APRON DETAILS

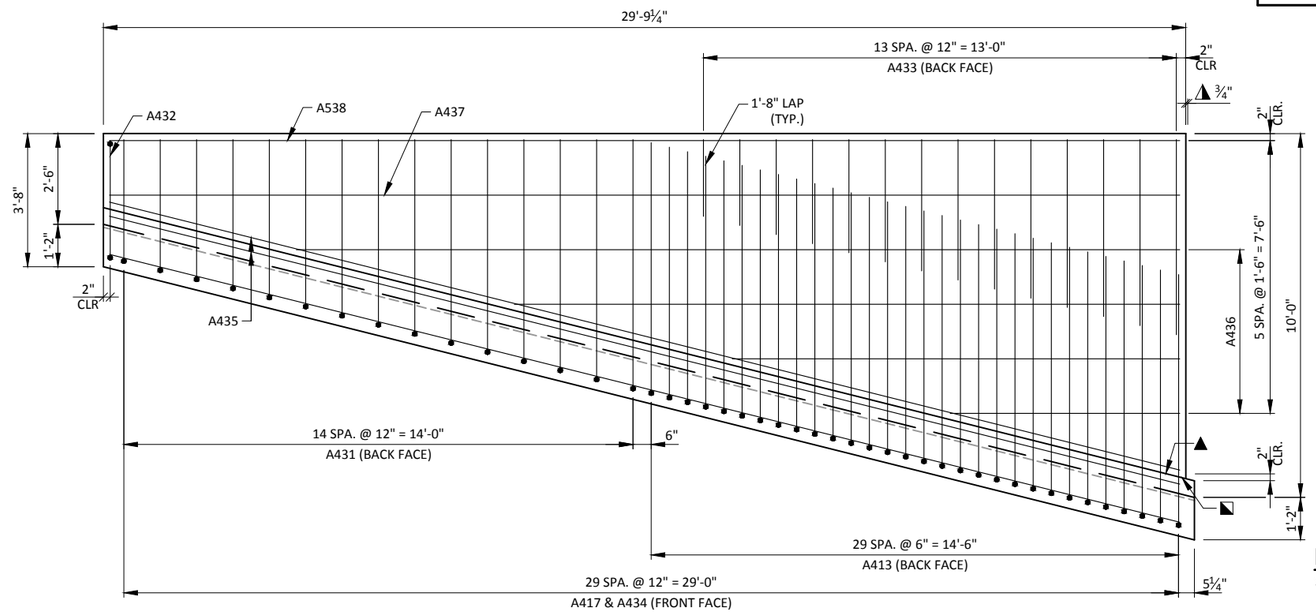
SHEET 7 OF 9

187

STATE PROJECT NUMBER
5496-00-74



WINGWALL 3



WINGWALL 4

NOTES

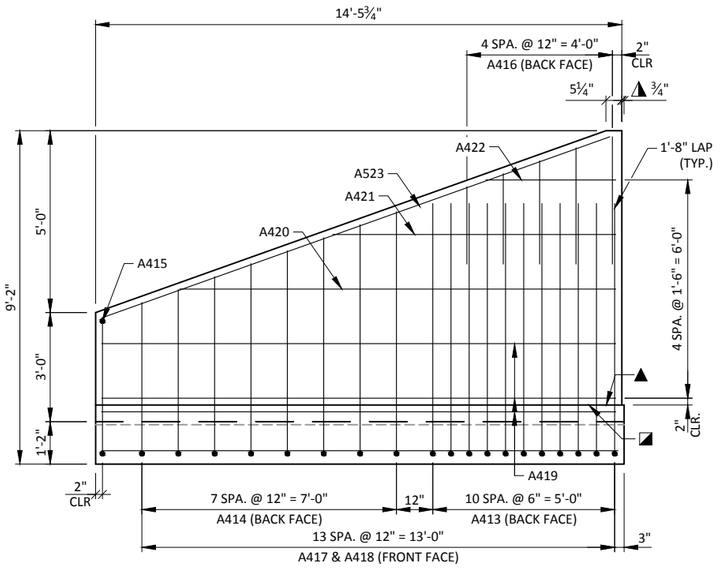
SEE SHEET 9 FOR BILL OF BARS

LEGEND

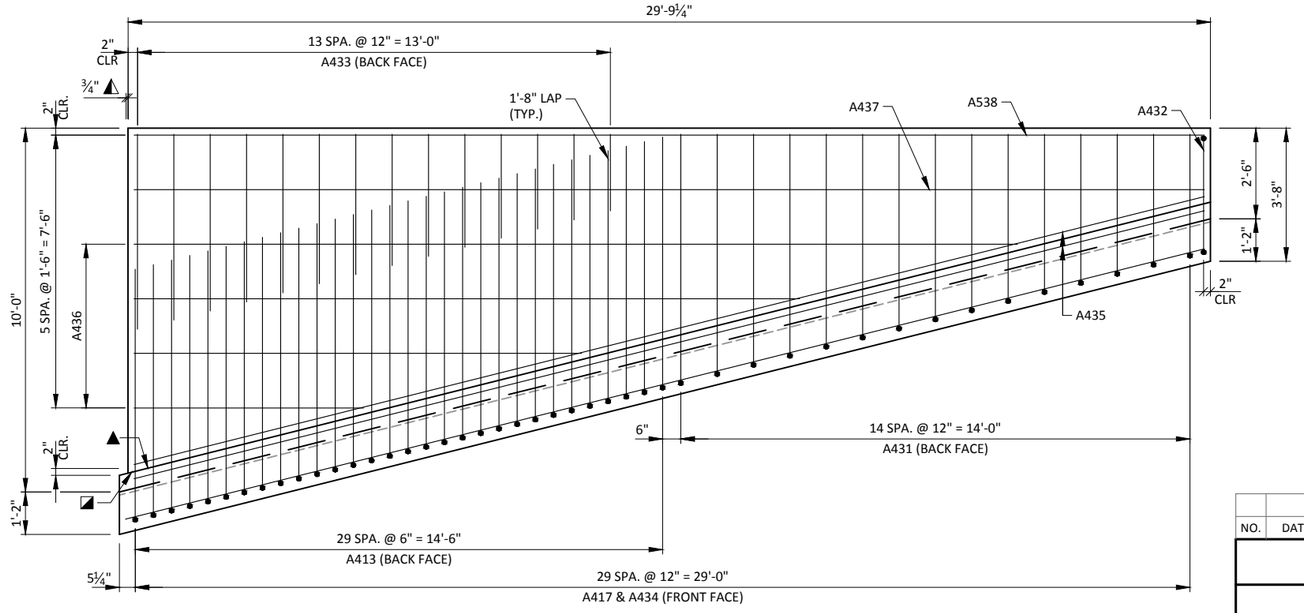
▲ 18" RUBBERIZED MEMBRANE WATER-PROOFING. PLACE ALONG HORIZONTAL CONSTRUCTION JOINT FOR ENTIRE WING LENGTH. (TYP.)

◪ HORIZONTAL CONSTRUCTION JOINT LOCATED 5½" ABOVE FLOOR OF APRON.

▲ ¾" FILLER & 18" RUBBERIZED MEMBRANE WATER-PROOFING. EXTEND FROM HORIZ. CONST. JT. TO TOP OF WING WALL.



WINGWALL 2



WINGWALL 1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-12-062

DRAWN BY PTB | PLANS CK'D. TJR

WING WALL DETAILS

SHEET 8 OF 9

188

STATE PROJECT NUMBER
5496-00-74

BILL OF BARS
BARREL
21,650 LB (UNCOATED)

BAR MARK	NUMBER REQ'D. STAGE 1	NUMBER REQ'D. STAGE 2	LENGTH	BEND "D"	COAT	BAR SERIES	LOCATION
B601	192	384	8-9	3-6			WALLS - VERT. - OUTSIDE
B502	184	384	12-5				SLABS - INSIDE
B503	10	0	7-11			⚹	SLABS - INSIDE - INLET
B404	76	148	2-10				WALLS - VERT. - INSIDE - BOTTOM
B405	76	148	7-2				WALLS - VERT. - INSIDE
B406	2	0	25-8				OUTLET PANEL - SLABS - OUTSIDE
B407	2	0	25-2				OUTLET PANEL - SLABS - OUTSIDE
B408	2	0	24-7				OUTLET PANEL - SLABS - OUTSIDE
B409	2	0	22-8				OUTLET PANEL - SLABS - OUTSIDE
B410	2	0	22-2				OUTLET PANEL - SLABS - OUTSIDE
B411	2	0	21-8				OUTLET PANEL - SLABS - OUTSIDE
B412	18	0	23-7			⚹	OUTLET PANEL - SLABS - INSIDE
B413	6	0	25-10				OUTLET PANEL - WALL - OUTSIDE
B414	6	0	25-8				OUTLET PANEL - WALL - INSIDE
B415	6	0	22-0				OUTLET PANEL - WALL - INSIDE
B416	6	0	21-8				OUTLET PANEL - WALL - OUTSIDE
B417	54	0	23-8				INTERIOR 24' PANEL - HORIZ.
B418	0	108	31-8				INTERIOR 32' PANEL - HORIZ.
B419	0	54	31-10				INLET PANEL - HORIZ.

BILL OF BARS
MISCELLANEOUS
630 LB (COATED)
1,020 LB (UNCOATED)

BAR MARK	NUMBER REQ'D. STAGE 1	NUMBER REQ'D. STAGE 2	LENGTH	BEND "D"	COAT	BAR SERIES	LOCATION
M301	16	16	4-10	■			HEADERS - STIRRUP - BOTTOM
M302	16	0	5-2	■			OUTLET HEADER - STIRRUP - TOP
M703	12	0	11-8				OUTLET HEADER - HORIZ.
M304	0	16	7-11	■			INLET HEADER - STIRRUP - TOP
M805	0	12	12-5				INLET HEADER - HORIZ.
M606	0	16	4-6	2-8			INLET HEADER - VERT.
M407	0	2	12-5				INLET HEADER - HORIZ.
M508	76	76	4-0		X		DOWEL BARS AT JOINTS (38 PER JOINT)
M609	0	6	4-0				PIPE OPENING - VERT. - EXTERIOR FACE
M410	0	4	4-4				PIPE OPENING - DIAGONALS
M411	0	4	4-0				PIPE OPENING - VERT. - INTERIOR FACE
M412	0	4	4-6				PIPE OPENING - HORIZ. - BOTH FACES

BILL OF BARS
APRONS
2,480 LB (COATED)
1,180 LB (UNCOATED)

BAR MARK	NUMBER REQ'D. STAGE 1	NUMBER REQ'D. STAGE 2	LENGTH	BEND "D"	COAT	BAR SERIES	LOCATION
A401	12	0	16-1				APRON - TOP - OUTLET
A402	4	0	7-10			⚹	APRON - TOP - OUTLET
A403	1	0	10-0				APRON - TOP - OUTLET
A404	1	0	4-4				APRON - TOP - OUTLET
A405	14	0	15-3			⚹	APRON - TOP - OUTLET - TRANS.
A406	0	11	33-0				APRON - TOP - INLET
A407	0	1	32-8				APRON - TOP - INLET
A408	0	31	12-4				APRON - TOP - INLET - TRANS.
A409	5	0	18-0				CUT OFF WALL - OUTLET - HORIZ.
A410	18	0	5-5	1-0			CUT OFF WALL - OUTLET - VERT.
A411	0	3	12-4				CUT OFF WALL - INLET - HORIZ.
A412	0	12	3-5	■			CUT OFF WALL - INLET - VERT.
A413	22	60	14-2	7-4	X		WINGWALLS - B.F. - VERT.
A414	16	0	10-5	5-2	X	⚹	WINGWALLS 2&3 - B.F. - VERT.
A415	2	0	8-5	■	X		WINGWALLS 2&3 - B.F. - VERT. - END
A416	5	0	2-10		X	⚹	WINGWALL 2 - B.F. - VERT. - TOP
A417	28	60	3-3		X		WINGWALLS - F.F. - VERT. - BOT.
A418	14	0	4-11		X	⚹	WINGWALL 2 - F.F. - VERT.
A419	6	0	14-1		X		WINGWALL 2 - HORIZ. - BOT.
A420	2	0	12-0		X		WINGWALL 2 - HORIZ.
A421	2	0	7-9		X		WINGWALL 2 - HORIZ.
A422	2	0	3-7		X		WINGWALL 2 - HORIZ.
A523	2	0	14-10		X		WINGWALL 2 - TOP
A424	5	0	2-10		X	⚹	WINGWALL 1 - B.F. - VERT. - TOP
A425	14	0	4-10		X	⚹	WINGWALL 1 - F.F. - VERT.
A426	6	0	13-9		X		WINGWALL 1 - HORIZ. - BOT.
A427	2	0	11-7		X		WINGWALL 1 - HORIZ.
A428	2	0	7-6		X		WINGWALL 1 - HORIZ.
A429	2	0	3-5		X		WINGWALL 1 - HORIZ.
A530	2	0	14-4		X		WINGWALL 2 - TOP
A431	0	30	11-1	6-1	X	⚹	WINGWALL 1&4 - B.F. - VERT.
A432	0	2	7-5	■	X		WINGWALL 1&4 - B.F. - VERT. - END
A433	0	28	3-9		X	⚹	WINGWALL 1&4 - F.F. - VERT. - TOP
A434	0	60	5-6		X	⚹	WINGWALL 1&4 - F.F. - VERT.
A435	0	8	30-4		X		WINGWALL 1&4 - HORIZ. - BOT.
A436	0	16	15-3		X	⚹	WINGWALL 1&4 - HORIZ.
A437	0	4	29-5		X		WINGWALL 1&4 - HORIZ.
A538	0	4	29-5		X		WINGWALL 1&4 - TOP
A439	3	0	14-3				APRON - BOTTOM - OUTLET
A440	3	0	13-9				APRON - BOTTOM - OUTLET
A441	0	6	30-7				APRON - BOTTOM - INLET

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B503	2 SERIES OF 5	10-10 TO 5-0
B412	2 SERIES OF 9	25-6 TO 21-8
A402	1 SERIES OF 4	12-0 TO 3-8
A405	1 SERIES OF 14	18-9 TO 11-9
A414	2 SERIES OF 8	11-8 TO 9-2
A416	1 SERIES OF 5	3-6 TO 2-2
A418	1 SERIES OF 14	7-2 TO 2-8
A424	1 SERIES OF 5	3-6 TO 2-2
A425	1 SERIES OF 14	7-2 TO 2-6
A431	2 SERIES OF 15	12-10 TO 9-4
A433	2 SERIES OF 14	5-5 TO 2-1
A434	2 SERIES OF 30	9-0 TO 2-0
A436	4 SERIES OF 4	24-3 TO 6-3

BUNDLE AND TAG EACH SERIES SEPARATELY.

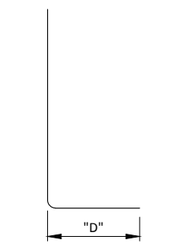
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

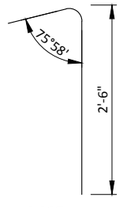
THE DIMENSION IN THE BEND COLUMN ("D") IS THE OUT TO OUT HORIZONTAL LEG OF AN "L" SHAPED BAR. SEE TYPICAL BENDING DETAIL ON THIS SHEET.

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

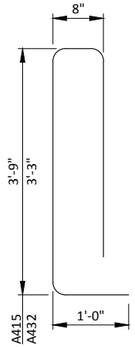
■ SEE BENDING DETAILS.



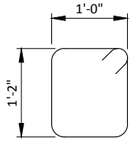
TYP. BENDING DETAIL



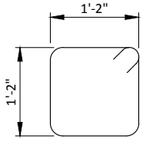
A412



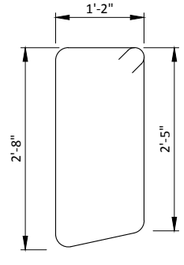
A415 & A432



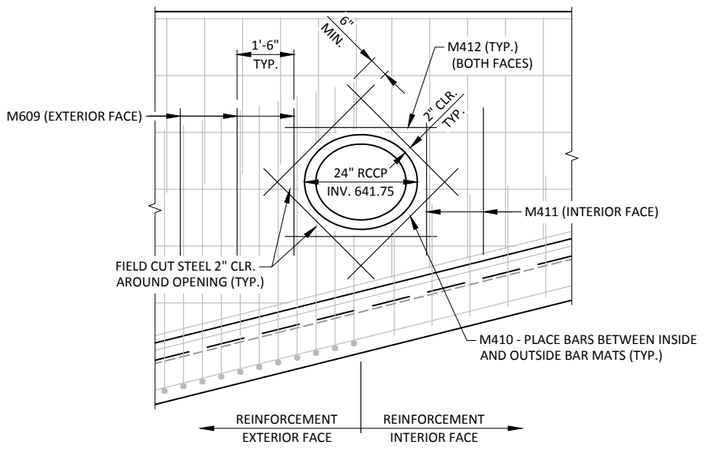
M301



M302



M304



PIPE OPENING

SEE SHEET 2 FOR LOCATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-12-062

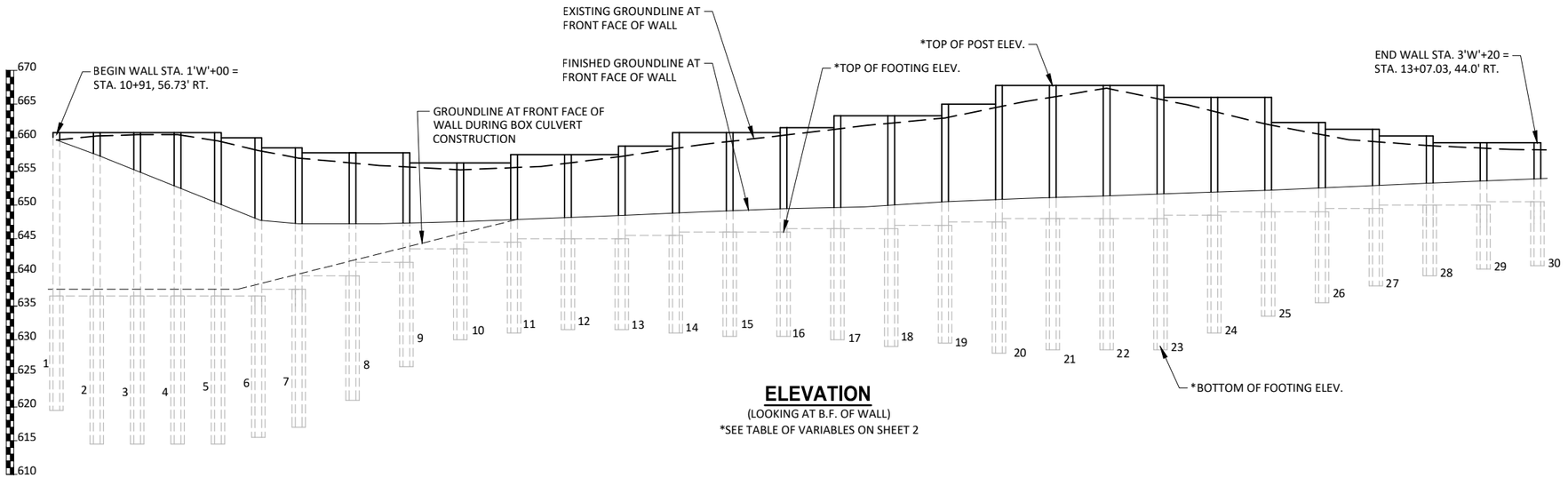
DRAWN BY PTB | PLANS CK'D. TJR

DETAILS

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\STRUCTURE\CAD FILES\BOX CULVERT FINALS\APRON DETAILS.DWG
PLOT DATE : 8/27/2018 11:15:31 AM
PLOT BY : BOLAND, PATRICK
PLOT SCALE : 1" = 1'
LAYOUT : DETAILS

STATE PROJECT NUMBER

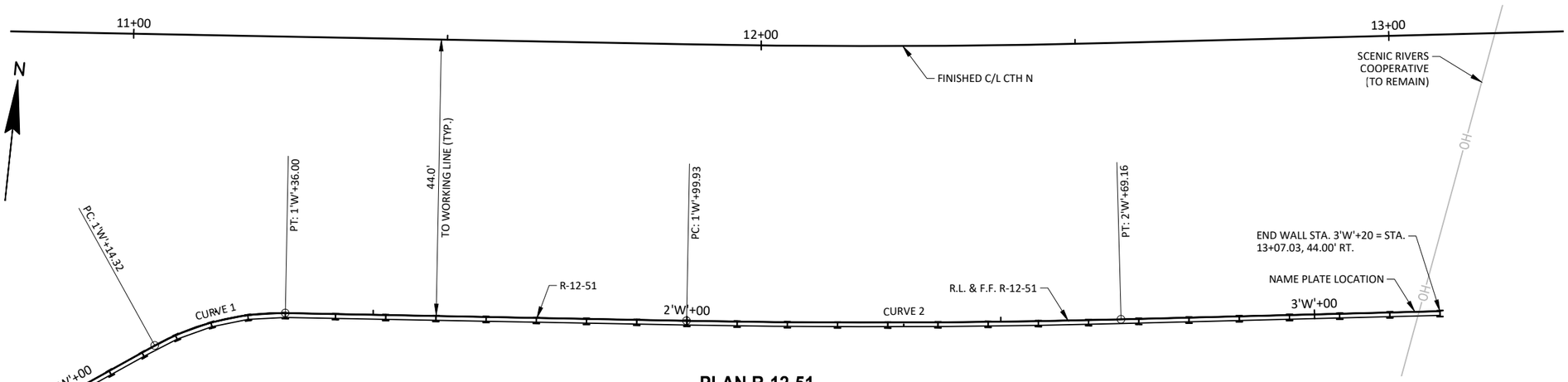
5496-00-74



ELEVATION

(LOOKING AT B.F. OF WALL)

*SEE TABLE OF VARIABLES ON SHEET 2



PLAN R-12-51

(SOLDIER PILE WALL)

DESIGN DATA

MATERIAL PROPERTIES:

CONCRETE MASONRY, PANELS	f'c = 4,000 P.S.I.
ALL OTHER	f'c = 3,500 P.S.I.
HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 P.S.I.
HIGH-STRENGTH STRUCTURAL STEEL (ASTM A709 GRADE 50)	fy = 50,000 P.S.I.

LIVE LOAD:

SURCHARGE	100 PSF

LIST OF DRAWINGS

GENERAL PLAN	1.
SECTION AND DETAILS	2.
TABLE OF VARIABLES	3.
SUBSURFACE EXPLORATION	4.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

TOTAL LENGTH OF WALL ALONG FRONT FACE EQUALS 220 FEET.

THE PLAN DETAILS ASSUME THE WALL PANELS WILL BE PRECAST AND SHIPPED TO THE PROJECT SITE FOR INSTALLATION. AT THE OPTION OF THE CONTRACTOR, THE WALL PANELS MAY BE CAST-IN-PLACE (CIP). IF THE CONTRACTOR ELECTS THE CAST-IN-PLACE OPTION, ALL MATERIALS AND APPLICABLE ITEMS OF WORK NECESSARY TO CAST THE PANELS IN PLACE SHALL BE IN CONFORMANCE WITH STANDARD SPECIFICATIONS AND WILL BE PAID FOR AT THE EQUIVALENT CONTRACT BID PRICE FOR THE PLAN QUANTITY "PRECAST PANELS FOR SOLDIER PILE WALLS". CIP PANELS SHALL BE A MINIMUM OF 10" THICK AND USE THE SAME REINFORCING STEEL AS SHOWN FOR THE PRECAST PANELS.

ALL STRUCTURAL STEEL POSTS SHALL RECEIVE AT A MINIMUM A PRIME COAT OF ZINC-RICH PAINT. ADDITIONALLY, THE TOP PORTION OF THE POSTS FROM TOP OF POST DOWN TO 1' BELOW THE TOP OF FOOTING SHALL RECEIVE A TOTAL OF THREE COATS OF PAINT (COLOR NO. 26622, PEARL GRAY) PER SECTION 517 OF THE STANDARD SPECIFICATIONS.

BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-12-51" SHALL INCLUDE ALL EXCAVATION REQUIRED TO CONSTRUCT THE RETAINING WALL.

FINAL GRADING TO THE PROPOSED GROUNDLINE AT THE FRONT FACE AND BACK FACE OF THE RETAINING WALL INCLUDING RIPRAP EXTRA HEAVY, GEOTEXTILE TYPE HR, SALVAGED TOPSOIL, SEEDING, AND OTHER FINISHING ITEMS SHALL BE INCLUDED WITH ROADWAY BID ITEMS.

SEE ROADWAY PLANS FOR FENCING DETAILS AT THE BACK OF THE PROPOSED RETAINING WALL.

F.F. = FRONT FACE

B.F. = BACK FACE

CURVE 1 DATA

PI STA. = 1'W'+25.42
Y = 148,327.77
X = 318,837.53
R = 41.34
D = 138°35'27"
DELTA = 30°02'50"
L = 21.68
T = 11.10
C = 21.43
PC STA. = 1'W'+14.32
Y = 148,321.41
X = 318,828.43
PT STA. = 1'W'+36
Y = 148,328.71
X = 318,848.58

CURVE 2 DATA

PI STA. = 2'W'+34.55
Y = 148,337.09
X = 318,946.78
R = 1544.00
D = 3°42'39"
DELTA = 2°34'08"
L = 69.23
T = 34.62
C = 69.22
PC STA. = 1'W'+99.93
Y = 148,334.14
X = 318,912.28
PT STA. = 2'W'+69.16
Y = 148,341.57
X = 318,981.11

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
1	9+98	3/4" IRON ROD SET, 202.9' LT.	647.77
2	14+63	3/4" IRON ROD SET, 30.2' LT.	666.24

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTALS
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-12-51	LS	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	640
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	90
506.0605	STRUCTURAL STEEL HS	LB	114,530
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	240
636.0050.S	FOUNDATION DRILLING 30-INCH DIAMETER	LF	497
SPV.0165.01	PRECAST PANELS FOR SOLDIER PILE WALLS	SF	3471

WISCONSIN
THOMAS J. ROMENESKO
E-26318
MADISON
WI
PROFESSIONAL ENGINEER
8/30/2018

DESIGN CONSULTANT
TOM ROMENESKO, PE
(608) 588-7484

BRIDGE OFFICE CONTACT
WILLIAM DREHER, PE
(608) 266-8489

NO.	DATE	REVISION	BY

JEWELL associates engineers, inc.
Engineers - Architects - Surveyors
560 SUNRISE DRIVE
SPRING GREEN, WI 53588
OFFICE: (608) 588-7484
www.JewellAssoc.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — CHIEF STRUCTURES DESIGN ENGINEER — 11/27/18 DATE

STRUCTURE R-12-51

CTH N / STH 35 INTERSECTION

COUNTY	TOWN/~~CITY/VILLAGE~~
CRAWFORD	EASTMAN

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
TJR	PTB	RBH	PTB

GENERAL PLAN

SHEET 1 OF 4

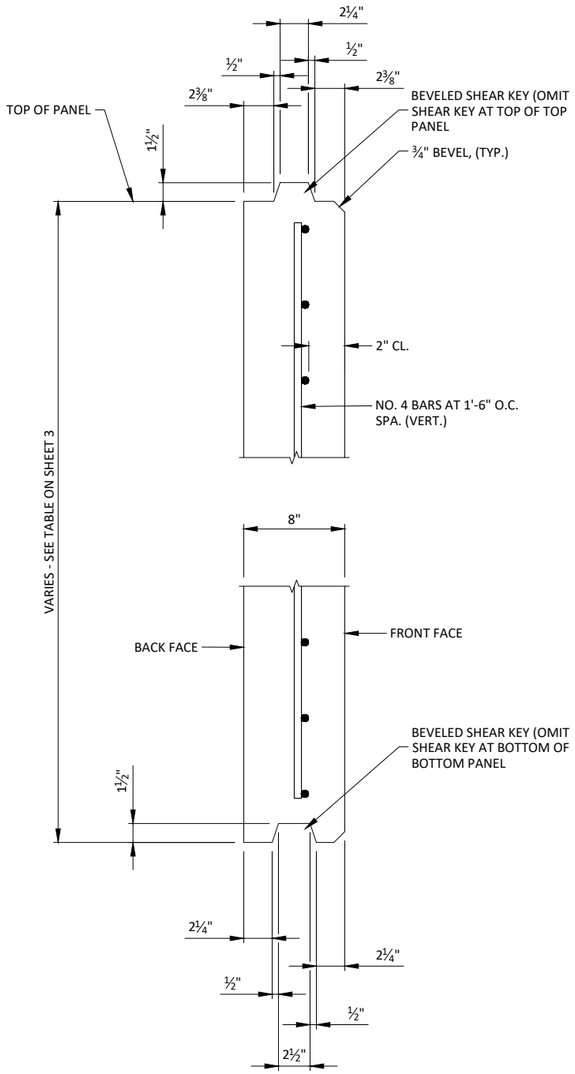
190

8

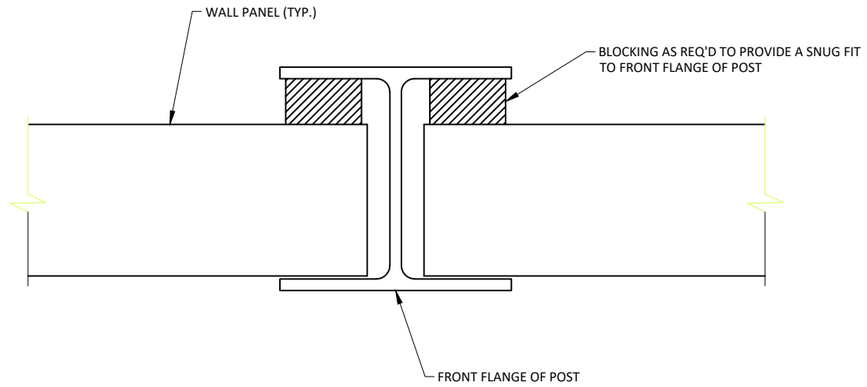
8

STATE PROJECT NUMBER

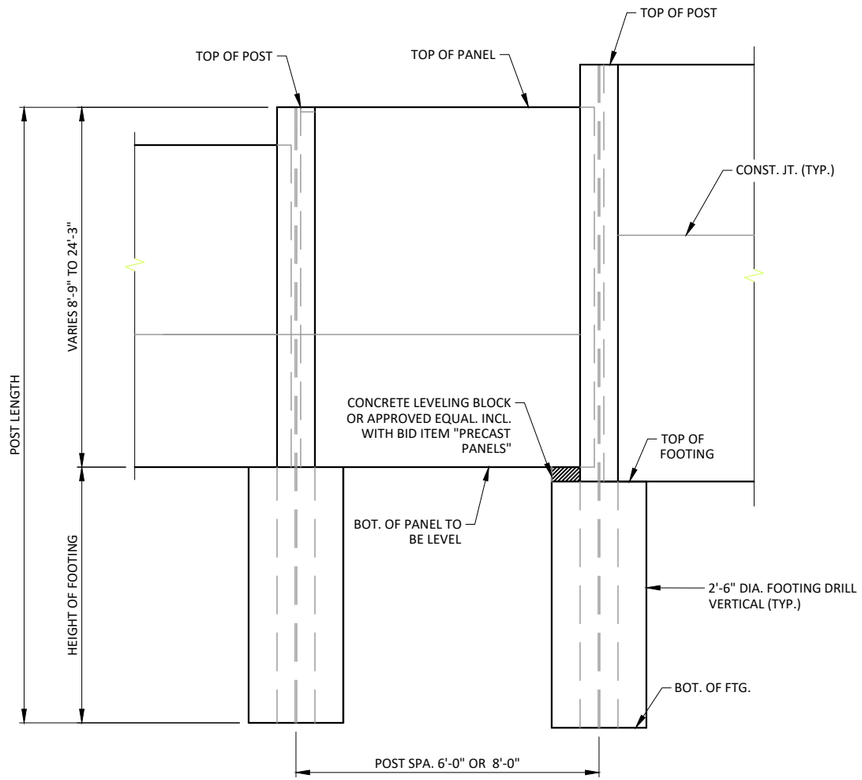
5496-00-74



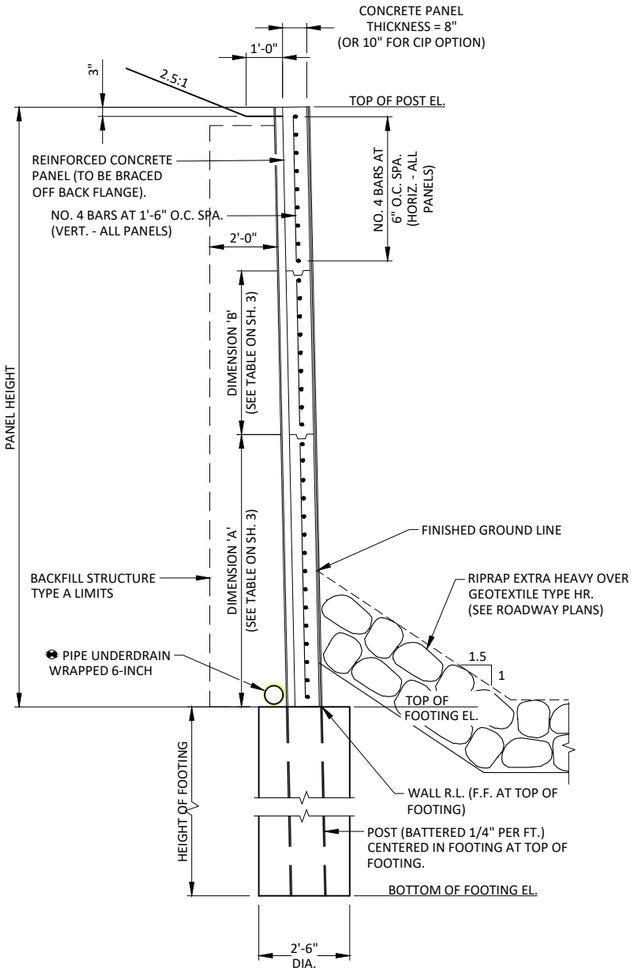
TYPICAL SECTION THRU PANEL



POST DETAIL



TYPICAL WALL ELEVATION



TYPICAL WALL SECTION

PANELS SHALL BE CLEARLY LABELED FOR CORRECT LOCATION AND ORIENTATION.

PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-12-51

DRAWN BY: RBH | PLANS CK'D.: PTB

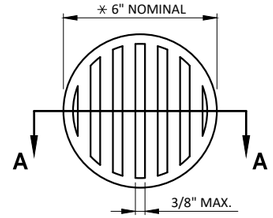
SECTION AND DETAILS

SHEET 2 OF 4

191

POST NO.	POST STA.	POST STA.	BOTTOM OF FOOTING EL.	TOP OF FOOTING EL.	HEIGHT OF FOOTING	TOP OF POST EL.	POST LENGTH	FINISHED GROUNDLINE BACK FACE	FINISHED GROUNDLINE FRONT FACE
1	1+00	W14X132	619.50	636.50	17	660.75	41.25	659.75	637.00
2	1+06	W14X132	614.50	636.50	22	660.75	46.25	660.34	637.00
3	1+12	W14X132	614.50	636.50	22	660.75	46.25	660.54	637.00
4	1+18	W14X132	614.50	636.50	22	660.75	46.25	660.55	637.00
5	1+24	W14X132	614.50	636.50	22	660.75	46.25	659.63	637.00
6	1+30	W14X132	615.50	636.50	21	660.00	44.5	658.18	637.50
7	1+36	W14X132	617.00	637.50	20.5	658.50	41.5	657.44	638.83
8	1+44	W14X132	621.00	639.50	18.5	657.75	36.75	656.70	640.17
9	1+52	HP14X102	626.00	641.50	15.5	657.75	31.75	655.95	641.50
10	1+60	HP14X73	630.00	643.50	13.5	656.25	26.25	655.32	647.55
11	1+68	HP14X73	631.00	644.50	13.5	657.50	26.5	655.99	647.86
12	1+76	HP14X73	631.50	645.00	13.5	658.75	27.25	656.66	648.17
13	1+84	HP14X73	631.50	645.00	13.5	658.75	27.25	657.32	648.48
14	1+92	HP14X73	631.00	645.50	14.5	660.75	29.75	658.36	648.81
15	2+00	HP14X102	630.50	646.00	15.5	660.75	30.25	659.40	649.15
16	2+08	HP14X102	630.50	646.00	15.5	661.50	31	660.43	649.48
17	2+16	HP14X102	630.00	646.50	16.5	663.25	33.25	661.30	649.82
18	2+24	W14X132	629.00	646.50	17.5	663.25	34.25	662.17	650.17
19	2+32	W14X132	629.50	647.00	17.5	664.75	35.25	663.03	650.51
20	2+40	W14X132	628.00	647.50	19.5	667.50	39.5	664.47	650.80
21	2+48	W14X132	628.50	648.00	19.5	667.50	39	665.90	651.09
22	2+56	W14X132	628.50	648.00	19.5	667.50	39	667.33	651.38
23	2+64	W14X132	628.50	648.00	19.5	667.50	39	665.57	651.66
24	2+72	W14X132	631.00	648.50	17.5	665.75	34.75	663.80	651.93
25	2+80	HP14X102	633.50	649.00	15.5	665.75	32.25	662.03	652.21
26	2+88	HP14X73	635.50	649.00	13.5	662.25	26.75	660.99	652.57
27	2+96	HP14X73	638.00	649.50	11.5	661.25	23.25	659.95	652.92
28	3+04	HP14X73	639.50	650.00	10.5	660.25	20.75	658.90	653.28
29	3+12	HP14X73	640.50	650.00	9.5	659.25	18.75	658.86	653.60
30	3+20	HP14X73	641.00	650.50	9.5	659.25	18.25	654.65	653.90

PANEL NO.	BOTTOM OF PANEL EL.	TOP OF PANEL EL.	PANEL HEIGHT	DIMENSION 'A'	DIMENSION 'B'
1	636.50	660.75	24.25	8.00	8.00
2	636.50	660.75	24.25	8.00	8.00
3	636.50	660.75	24.25	8.00	8.00
4	636.50	660.75	24.25	8.00	8.00
5	636.50	660.00	23.50	8.00	8.00
6	637.50	658.50	21.00	7.00	8.00
7	639.50	657.75	18.25	7.50	5.50
8	641.50	657.75	16.25	5.50	5.50
9	643.50	656.25	12.75	7.50	NA
10	644.50	656.25	11.75	6.50	NA
11	645.00	657.50	12.50	6.00	NA
12	645.00	657.50	12.50	6.00	NA
13	645.50	658.75	13.25	5.50	NA
14	646.00	660.75	14.75	5.00	4.00
15	646.00	660.75	14.75	5.00	4.00
16	646.50	661.50	15.00	4.50	4.00
17	646.50	663.25	16.75	4.50	8.00
18	647.00	663.25	16.25	4.00	8.00
19	647.50	664.75	17.25	7.50	4.00
20	648.00	667.50	19.50	7.00	7.25
21	648.00	667.50	19.50	7.00	7.25
22	648.00	667.50	19.50	7.00	7.25
23	648.50	665.75	17.25	6.50	7.25
24	649.00	665.75	16.75	6.00	7.25
25	649.00	662.25	13.25	6.00	NA
26	649.50	661.25	11.75	5.50	NA
27	650.00	660.25	10.25	5.00	NA
28	650.00	659.25	9.25	5.00	NA
29	650.50	659.25	8.75	4.50	NA



SECTION A-A

RODENT SCREEN

NOTES:

⁎ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SCREEN 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 ENDS OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

STATE PROJECT NUMBER

5496-00-74

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-12-51

DRAWN BY RBH | PLANS CK'D. PTB

TABLE OF VARIABLES

SHEET 3 OF 4

8

8

STATE PROJECT NUMBER

5496-00-74

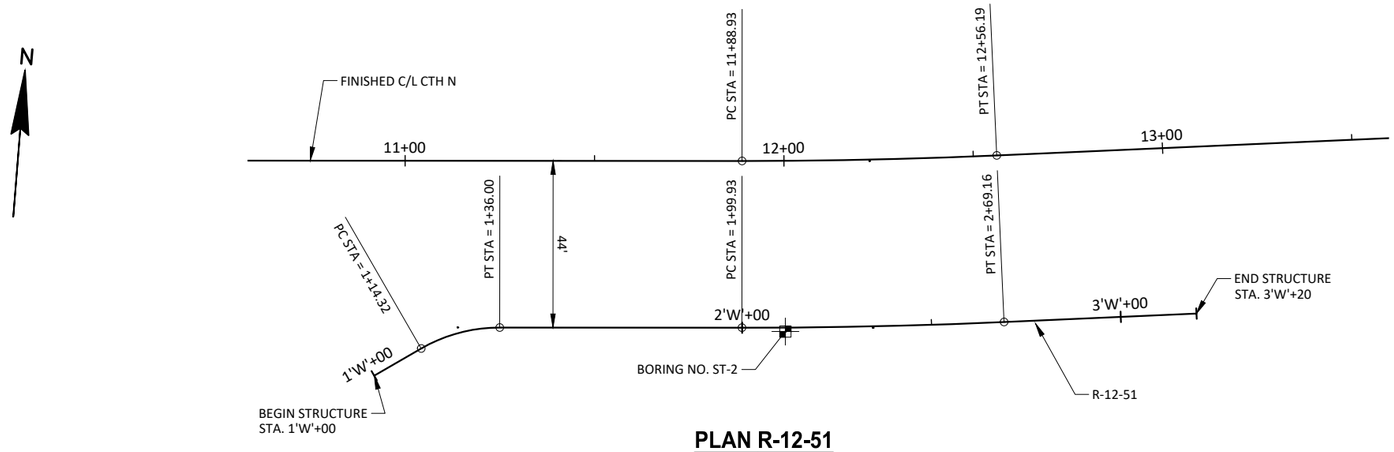
SOIL BORINGS

BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
ST-2	02/17/15	148,334.1	318,923.8

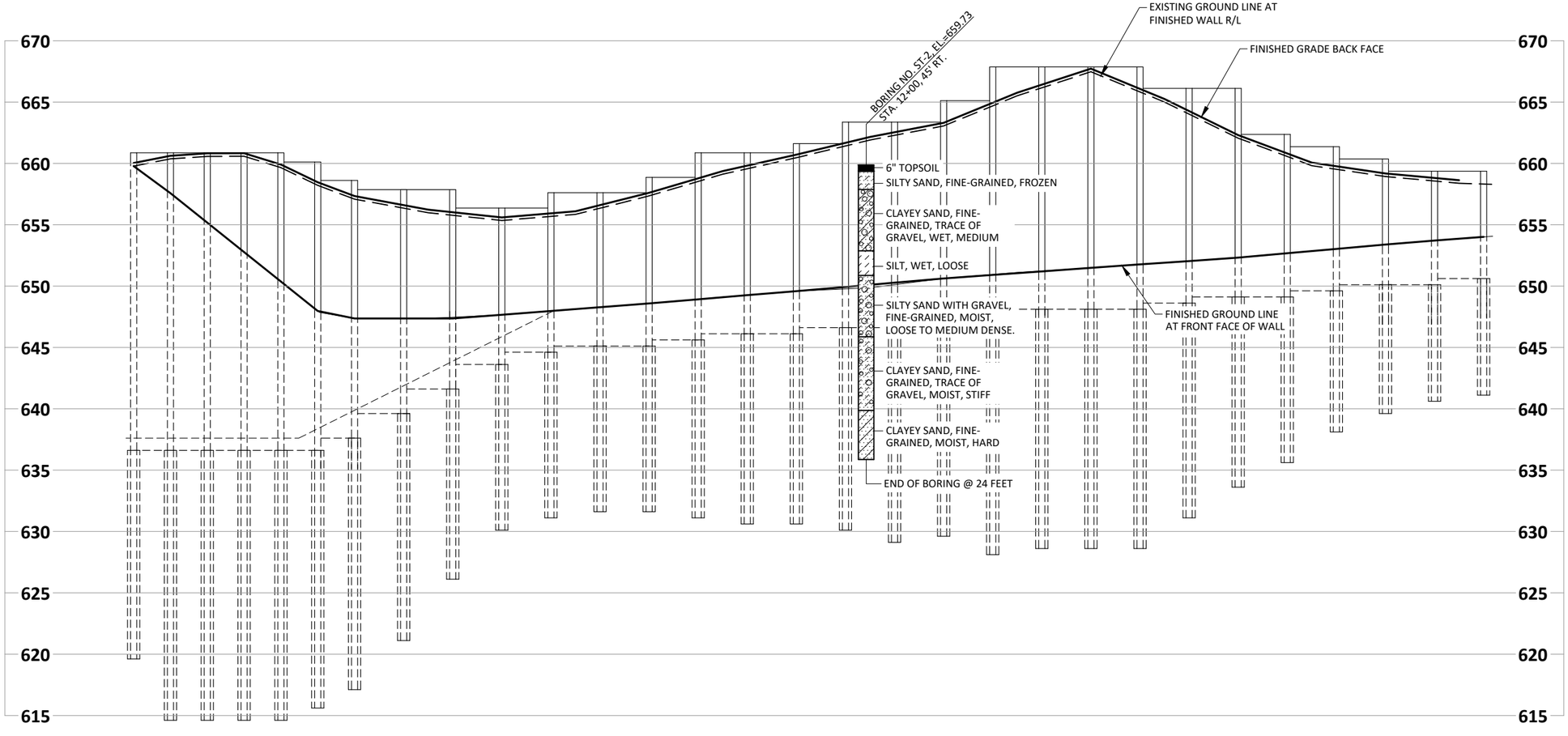
BORINGS & REPORT COMPLETED BY: BRAUN INTERTEC CORPORATION
2309 PALACE STREET
LA CROSSE, WI 54603

MATERIAL SYMBOLS

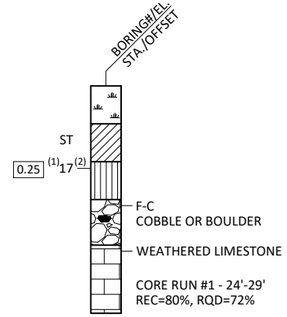
Asphalt · Topsoil · Peat
Concrete · Fill · Gravel
Sand · Clay · Silt
Boulders or Cobbles · Limestone · Bedrock (unknown)
Shale · Sandstone · Igneous/ meta



PLAN R-12-51



LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE SPECIFIED, THE SPT 'N' VALUE IS BASED ON AASHTO T-206 STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATIONS

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COURSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-12-51

DRAWN BY TMS | PLANS CK'D. PTB

SUBSURFACE EXPLORATION

SHEET 4 OF 4

193

8

8

EARTHWORK-MAINLINE

	AREA (SF)			INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)						
STATION	CUT	ROCK CUT	FILL	CUT NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	REDUCED EBS IN FILL (CY) FACTOR 0.8 NOTE 5	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED ROCK (CY) FACTOR 1.1 NOTE 7	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	CUT 1.00 NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	MASS ORDINATE NOTE 9
10+47	181	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11+00	174	0	47	348	0	97	35	28	45	0	86	348	0	97	35	45	86	262
12+00	307	0	50	891	0	180	89	71	116	0	136	1239	0	277	124	161	222	1017
13+00	177	0	0	896	0	93	90	72	116	0	27	2135	0	370	214	278	249	1886
14+00	314	0	0	909	0	1	91	73	118	0	-90	3044	0	371	304	396	159	2885
15+00	296	0	4	1129	0	7	113	90	147	0	-104	4173	0	378	417	542	55	4118
16+00	195	0	6	909	0	17	91	73	118	0	-70	5082	0	395	508	661	-14	5096
17+00	97	0	19	540	0	45	54	43	70	0	2	5622	0	440	562	731	-12	5634
18+00	67	0	38	304	0	104	30	24	40	0	100	5926	0	544	593	770	87	5839
19+00	177	0	4	452	0	76	45	36	59	0	50	6378	0	620	638	829	137	6241
20+00	50	0	59	420	0	115	42	34	55	0	102	6798	0	735	680	884	239	6559
21+00	127	0	109	329	0	311	33	26	43	0	356	7127	0	1046	713	927	595	6532
22+00	67	0	99	360	0	385	36	29	47	0	445	7487	0	1431	749	973	1040	6447
23+00	60	0	118	235	0	402	24	19	31	0	479	7722	0	1833	772	1004	1519	6203
24+00	84	0	58	267	0	327	27	21	35	0	382	7989	0	2160	799	1039	1901	6088
25+00	101	0	0	343	0	108	34	27	45	0	101	8332	0	2268	833	1083	2002	6330
26+00	149	0	25	462	0	47	46	37	60	0	13	8794	0	2315	879	1143	2014	6780
27+00	0	0	130	276	0	288	28	22	36	0	332	9070	0	2603	907	1179	2347	6723
28+00	0	0	184	0	0	582	0	0	0	0	728	9070	0	3185	907	1179	3074	5996
29+00	0	0	200	0	0	712	0	0	0	0	890	9070	0	3897	907	1179	3964	5106
30+00	0	208	183	0	384	709	0	0	0	422	358	9070	384	4606	907	1179	4323	4748
31+00	0	329	75	0	994	477	0	0	0	1093	-771	9070	1378	5083	907	1179	3552	5518
32+00	0	75	275	0	748	646	0	0	0	823	-221	9070	2126	5729	907	1179	3331	5739
33+00	5	356	6	9	797	519	1	1	1	877	-448	9079	2923	6248	908	1180	2883	6196
34+00	62	202	75	124	1032	150	12	10	16	1135	-1244	9203	3955	6398	920	1196	1639	7564
35+00	24	0	188	158	374	488	16	13	21	411	80	9361	4329	6886	936	1217	1719	7642
36+00	100	464	0	228	860	348	23	18	30	946	-770	9589	5189	7234	959	1247	949	8640
37+00	160	866	0	480	2463	0	48	38	62	2709	-3435	10069	7652	7234	1007	1309	-2486	12555
38+00	36	653	0	362	2814	0	36	29	47	3095	-3905	10431	10466	7234	1043	1356	-6391	16822
39+00	36	554	25	133	2235	46	13	11	17	2459	-3029	10564	12701	7280	1056	1373	-9420	19984
40+00	0	0	106	67	1025	243	7	5	9	1128	-1112	10631	13726	7523	1063	1382	-10533	21164
41+00	4	0	6	6	0	208	1	0	1	0	259	10637	13726	7731	1064	1383	-10273	20910
42+00	45	0	22	90	0	53	9	7	12	0	57	10727	13726	7784	1073	1395	-10216	20943
43+00	75	0	10	223	0	60	22	18	29	0	53	10950	13726	7844	1095	1424	-10163	21113
44+00	158	19	0	432	35	18	43	35	56	39	-69	11382	13761	7862	1138	1480	-10232	21614
45+00	180	7	0	626	48	0	63	50	81	53	-129	12008	13809	7862	1201	1561	-10361	22369
46+00	109	32	0	536	72	0	54	43	70	79	-153	12544	13881	7862	1254	1631	-10513	23057
47+00	69	25	0	330	105	0	33	26	43	116	-177	12874	13986	7862	1287	1674	-10691	23565
48+00	4	0	25	135	46	46	14	11	18	51	-19	13009	14032	7908	1301	1691	-10710	23719
49+00	0	0	183	8	0	384	1	1	1	0	479	13017	14032	8292	1302	1692	-10231	23248
50+00	0	0	231	0	0	767	0	0	0	0	959	13017	14032	9059	1302	1692	-9272	22289
51+00	0	14	96	0	25	606	0	0	0	28	723	13017	14057	9665	1302	1692	-8549	21566
52+00	13	35	183	25	90	516	3	2	3	99	519	13042	14147	10181	1304	1695	-8030	21072
53+00	16	40	120	54	138	560	5	4	7	152	505	13096	14285	10741	1310	1702	-7525	20621
54+00	1	48	68	31	163	348	3	2	4	179	208	13127	14448	11089	1313	1707	-7317	20444
55+00	0	0	181	2	89	460	0	0	0	98	452	13129	14537	11549	1313	1707	-6865	19994
56+00	142	0	390	263	0	1056	26	21	34	0	1294	13392	14537	12605	1339	1741	-5571	18963
57+00	325	0	94	866	0	895	87	69	113	0	1032	14258	14537	13500	1426	1854	-4539	18797
58+00	33	668	87	664	1236	335	66	53	86	1360	-1347	14922	15773	13835	1492	1940	-5886	20808
59+00	0	265	193	61	1763	519	6	5	8	1939	-1781	14983	17536	14354	1498	1948	-7668	22651
60+00	0	306	179	0	1094	690	0	0	0	1203	-642	14983	18630	15044	1498	1948	-8310	23293
61+00	0	427	123	0	1358	559	0	0	0	1494	-1169	14983	19988	15603	1498	1948	-9478	24461
62+00	2	309	41	4	1365	303	0	0	0	1502	-1499	14987	21353	15906	1499	1948	-10977	25964
63+00	57	207	420	109	958	854	11	9	14	1054	-261	15096	22311	16760	1510	1962	-11237	26333
64+00	77	179	31	247	717	835	25	20	32	789	33	15343	23028	17595	1534	1995	-11204	26547
65+00	83	279	165	297	849	362	30	24	39	934	-745	15640	23877	17957	1564	2033	-11949	27589
66+00	59	216	290	264	916	843	26	21	34	1008	-232	15904	24793	18800	1590	2068	-12181	28085
67+00	57	142	366	215	663	1214	22	17	28	729	584	16119	25456	20014	1612	2095	-11596	27715
68+00	33	8	363	165	279	1350	17	13	21	307	1287	16284	25735	21364	1628	2117	-10309	26593
69+00	1	0	379	63	15	1376	6	5	8	17	1693	16347	25750	22740	1635	2125	-8616	24963

EARTHWORK-MAINLINE CONTINUED

70+00	0	0	343	2	0	1338	0	0	0	0	1672	16349	25750	24078	1635	2125	-6944	23293
71+00	0	0	437	0	0	1445	0	0	0	0	1806	16349	25750	25523	1635	2125	-5137	21486
72+00	0	0	626	0	0	1968	0	0	0	0	2460	16349	25750	27491	1635	2125	-2677	19026
73+00	0	0	627	0	0	2320	0	0	0	0	2900	16349	25750	29811	1635	2125	223	16126
74+00	84	0	222	155	0	1572	16	12	20	0	1950	16504	25750	31383	1650	2146	2172	14332
75+00	663	0	0	1383	0	412	138	111	180	0	377	17887	25750	31795	1789	2325	2549	15338
75+50	663	0	0	1228	0	0	123	98	160	0	-123	19115	25750	31795	1912	2485	2426	16689
75+50	281	0	0	0	0	0	0	0	0	0	0	19115	25750	31795	1912	2485	2426	16689
76+00	281	0	0	520	0	0	52	42	68	0	-52	19635	25750	31795	1964	2553	2374	17261
76+50	281	0	0	520	0	0	52	42	68	0	-52	20155	25750	31795	2016	2620	2322	17833
76+50	1155	0	0	0	0	0	0	0	0	0	0	20155	25750	31795	2016	2620	2322	17833
77+00	1155	0	0	2138	0	0	214	171	278	0	-214	22293	25750	31795	2229	2898	2108	20185
78+00	511	0	0	3084	0	0	308	247	401	0	-308	25377	25750	31795	2538	3299	1800	23577
79+00	369	0	0	1629	0	0	163	130	212	0	-163	27006	25750	31795	2701	3511	1637	25369
80+00	409	0	0	1440	0	0	144	115	187	0	-144	28446	25750	31795	2845	3698	1493	26953
81+00	110	0	16	962	0	30	96	77	125	0	-59	29408	25750	31825	2941	3823	1434	27974
82+00	0	0	688	204	0	1302	20	16	27	0	1607	29612	25750	33127	2961	3850	3041	26571
82+60	0	0	688	0	0	1528	0	0	0	0	1910	29612	25750	34655	2961	3850	4951	24661
82+60	0	0	799	0	0	0	0	0	0	0	0	29612	25750	34655	2961	3850	4951	24661
83+00	0	0	799	0	0	1184	0	0	0	0	1480	29612	25750	35839	2961	3850	6431	23181
83+40	0	0	799	0	0	1184	0	0	0	0	1480	29612	25750	37023	2961	3850	7911	21701
83+40	16	0	1148	0	0	0	0	0	0	0	0	29612	25750	37023	2961	3850	7911	21701
84+00	16	0	1148	34	0	2551	3	3	4	0	3185	29646	25750	39574	2965	3854	11097	18549
85+00	3	0	536	34	0	3119	3	3	4	0	3895	29680	25750	42693	2968	3858	14992	14688
86+00	4	0	38	12	0	1064	1	1	2	0	1329	29692	25750	43757	2969	3860	16321	13371
87+00	69	0	0	135	0	71	14	11	18	0	75	29827	25750	43828	2983	3878	16396	13431
88+00	74	0	82	264	0	151	26	21	34	0	162	30091	25750	43979	3009	3912	16558	13533
89+00	55	0	0	239	0	151	24	19	31	0	165	30330	25750	44130	3033	3943	16723	13607
	COLUMN SUBTOTALS =			30330	25750	44130	3033	2426	3943	28325	16723	30330	25750	44130	3033	3943	16723	13607

NOTES:	
1 - CUT	CUT INCLUDEDS SALVAGED/UNUSABLE MATERIAL
2 -ROCK CUT	ROCK EXCVATION
3 - FILL	UNEXPANDED FILL
4 - EBS (EXCAVATION BELOW SUBGRADE)	EBS IS ESTIMATED AT 10% OF THE CUT VOLUME (CY). EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL.
5 -REDUCED EBS IN FILL	REDUCED EBS IN FILL FACTOR IS 0.8. EXCAVATED EBS MATERIAL IS USEABLE IN FILLS OUTSIDE 1:1 SLOPE.
6 - EXPANDED EBS BACKFILL	EXPANDED EBS BACKFILL FACTOR IS 1.3. THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL.
7 - EXPANDED ROCK	EXPANDED ROCK FACTOR IS 1.1.
8 -EXPANDED FILL	EXPANDED FILL FACTOR IS 1.25; EXPANDED FILL = (UNEXPANDED FILL-(ROCK*ROCK FACTOR)-REDUCED EBS)*1.25
9 - MASS ORDINATE	MASS ORDINATE = CUT-EXPANDED FILL

EARTHWORK - STH 35 STAGE 1

	AREA (SF)			INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)						
STATION	CUT	ROCK CUT	FILL	CUT NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	REDUCED EBS IN FILL (CY) FACTOR 0.8 NOTE 5	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED ROCK (CY) FACTOR 1.1 NOTE 7	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	CUT 1.00 NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	MASS ORDINATE NOTE 9
303+90	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
304+00	55	0	0	20	0	0	2	2	2	0	-2	20	0	0	2	2	-2	22
305+00	43	0	0	183	0	0	18	15	24	0	-18	203	0	0	20	26	-20	223
COLUMN SUBTOTALS =				203	0	0	20	16	26	0	-20	203	0	0	20	26	-20	223

EARTHWORK-STH 35 - STAGE 2

	AREA (SF)			INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)						
STATION	CUT	ROCK CUT	FILL	CUT NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	REDUCED EBS IN FILL (CY) FACTOR 0.8 NOTE 5	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED ROCK (CY) FACTOR 1.1 NOTE 7	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	CUT 1.00 NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	MASS ORDINATE NOTE 9
301+65	20	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
302+00	26	0	1	30	0	1	3	2	4	0	-2	30	0	1	3	4	-2	32
302+50	33	0	0	55	0	1	6	4	7	0	-4	85	0	2	9	11	-6	91
303+00	33	0	0	62	0	0	6	5	8	0	-6	147	0	2	15	19	-12	159
303+90	33	0	0	111	0	1	11	9	14	0	-10	258	0	3	26	34	-22	280
303+90	57	0	1	0	0	0	0	0	0	0	0	258	0	3	26	34	-22	280
304+00	57	0	1	21	0	0	2	2	3	0	-2	279	0	3	28	36	-24	303
304+50	57	0	1	106	0	2	11	8	14	0	-8	385	0	5	39	50	-32	417
304+50	53	0	0	0	0	0	0	0	0	0	0	385	0	5	39	50	-32	417
305+00	53	0	0	99	0	0	10	8	13	0	-10	484	0	5	48	63	-42	526
305+00	53	0	0	0	0	0	0	0	0	0	0	484	0	5	48	63	-42	526
305+12	53	0	0	24	0	0	2	2	3	0	-2	508	0	5	51	66	-45	553
305+12	53	0	128	0	0	0	0	0	0	0	0	508	0	5	51	66	-45	553
305+24	53	0	128	24	0	57	2	2	3	0	69	532	0	62	53	69	24	508
305+24	53	0	8	0	0	0	0	0	0	0	0	532	0	62	53	69	24	508
305+45	40	0	8	36	0	7	4	3	5	0	5	568	0	69	57	74	29	539
305+45	40	0	8	0	0	0	0	0	0	0	0	568	0	69	57	74	29	539
305+50	40	0	8	8	0	2	1	1	1	0	2	576	0	71	58	75	31	545
305+79	40	0	8	43	0	9	4	3	6	0	7	619	0	80	62	80	38	581
305+79	40	0	8	0	0	0	0	0	0	0	0	619	0	80	62	80	38	581
306+00	40	0	8	31	0	7	3	2	4	0	6	650	0	87	65	85	44	606
306+35	40	0	8	52	0	11	5	4	7	0	9	702	0	98	70	91	52	650
306+35	36	0	0	0	0	0	0	0	0	0	0	702	0	98	70	91	52	650
307+00	36	0	0	87	0	0	9	7	11	0	-9	789	0	98	79	103	44	745
307+32	36	0	0	42	0	0	4	3	5	0	-4	831	0	98	83	108	39	792
COLUMN SUBTOTALS =				831	0	98	83	66	108	0	40	831	0	98	83	108	40	792

NOTES:	
1 - CUT	CUT INCLUDEDS SALVAGED/UNUSABLE MATERIAL
2 -ROCK CUT	ROCK EXCVATION
3 - FILL	UNEXPANDED FILL
4 - EBS (EXCAVATION BELOW SUBGRADE)	EBS IS ESTIMATED AT 10% OF THE CUT VOLUME (CY) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL
5 -REDUCED EBS IN FILL	REDUCED EBS IN FILL FACTOR IS 0.8. EXCAVATED EBS MATERIAL IS USEABLE IN FILLS OUTSIDE 1:1 SLOPE.
6 - EXPANDED EBS BACKFILL	EXPANDED EBS BACKFILL FACTOR IS 1 3. THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL
7 - EXPANDED ROCK	EXPANDED ROCK FACTOR IS 1.1.
8 -EXPANDED FILL	EXPANDED FILL FACTOR IS 1.25: EXPANDED FILL = (UNEXPANDED FILL-(ROCK*ROCK FACTOR)-REDUCED EBS)*1.25
9 - MASS ORDINATE	MASS ORDINATE = CUT-EXPANDED FILL

EARTHWORK-STH 35 - STAGE 3

	AREA (SF)			INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)						
STATION	CUT	ROCK CUT	FILL	CUT NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	REDUCED EBS IN FILL (CY) FACTOR 0.8 NOTE 5	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED ROCK (CY) FACTOR 1.1 NOTE 7	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	CUT 1.00 NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	MASS ORDINATE NOTE 9
305+00	43	0	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
305+12	43	0	149	19	0	66	2	2	2	0	81	19	0	66	2	2	81	-62
305+12	43	0	329	0	0	0	0	0	0	0	0	19	0	66	2	2	81	-62
305+24	43	0	329	19	0	146	2	2	2	0	181	38	0	212	4	5	261	-223
305+24	43	0	0	0	0	0	0	0	0	0	0	38	0	212	4	5	261	-223
305+45	43	0	0	34	0	0	3	3	4	0	-3	72	0	212	7	9	258	-186
305+45	0	0	0	0	0	0	0	0	0	0	0	72	0	212	7	9	258	-186
305+50	0	0	0	0	0	0	0	0	0	0	0	72	0	212	7	9	258	-186
305+79	0	0	0	0	0	0	0	0	0	0	0	72	0	212	7	9	258	-186
305+79	0	0	0	0	0	0	0	0	0	0	0	72	0	212	7	9	258	-186
306+00	0	0	0	0	0	0	0	0	0	0	0	72	0	212	7	9	258	-186
306+35	0	0	0	0	0	0	0	0	0	0	0	72	0	212	7	9	258	-186
306+35	18	0	0	0	0	0	0	0	0	0	0	72	0	212	7	9	258	-186
307+00	18	0	0	44	0	0	4	4	6	0	-4	116	0	212	12	15	253	-137
307+32	18	0	0	22	0	0	2	2	3	0	-2	138	0	212	14	18	251	-113
			COLUMN SUBTOTALS =	138	0	212	14	11	18	0	251	138	0	212	14	18	251	-113

EARTHWORK-DEMANES LANE

	AREA (SF)			INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)						
STATION	CUT	ROCK CUT	FILL	CUT NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	REDUCED EBS IN FILL (CY) FACTOR 0.8 NOTE 5	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED ROCK (CY) FACTOR 1.1 NOTE 7	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	CUT 1.00 NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	MASS ORDINATE NOTE 9
100+00	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101+00	133	0	24	340	0	45	34	27	44	0	22	340	0	45	34	44	22	318
102+00	318	0	0	834	0	45	83	67	108	0	-27	1174	0	90	117	153	-5	1179
103+00	471	0	0	1461	0	0	146	117	190	0	-146	2635	0	90	264	343	-151	2786
104+00	775	0	0	2307	0	0	231	185	300	0	-231	4942	0	90	494	642	-382	5324
105+00	1027	0	0	3337	0	0	334	267	434	0	-334	8279	0	90	828	1076	-715	8994
105+39.14	1605	0	0	1908	0	0	191	153	248	0	-191	10187	0	90	1019	1325	-907	11094
			COLUMN SUBTOTALS =	10187	0	90	1019	815	1325	0	-907	10187	0	90	1019	1325	-907	11094

NOTES:	
1 - CUT	CUT INCLUDEDS SALVAGED/UNUSABLE MATERIAL
2 -ROCK CUT	ROCK EXCVATION
3 - FILL	UNEXPANDED FILL
4 - EBS (EXCAVATION BELOW SUBGRADE)	EBS IS ESTIMATED AT 10% OF THE CUT VOLUME (CY). EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL.
5 -REDUCED EBS IN FILL	REDUCED EBS IN FILL FACTOR IS 0.8 EXCAVATED EBS MATERIAL IS USEABLE IN FILLS OUTSIDE 1:1 SLOPE
6 - EXPANDED EBS BACKFILL	EXPANDED EBS BACKFILL FACTOR IS 1.3 THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL.
7 - EXPANDED ROCK	EXPANDED ROCK FACTOR IS 1.1.
8 -EXPANDED FILL	EXPANDED FILL FACTOR IS 1.25: EXPANDED FILL = (UNEXPANDED FILL-(ROCK*ROCK FACTOR)-REDUCED EBS)*1.25
9 - MASS ORDINATE	MASS ORDINATE = CUT-EXPANDED FILL

EARTHWORK-SLAMA LANE

	AREA (SF)			INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)						
STATION	CUT	ROCK CUT	FILL	CUT NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	REDUCED EBS IN FILL (CY) FACTOR 0.8 NOTE 5	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED ROCK (CY) FACTOR 1.1 NOTE 7	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	CUT 1.00 NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	MASS ORDINATE NOTE 9
200+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200+17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200+17	1824	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200+50	2149	0	0	2428	0	0	243	194	316	0	-243	2428	0	0	243	316	-243	2671
201+00	382	0	0	2344	0	0	234	188	305	0	-234	4772	0	0	477	620	-477	5249
202+00	607	0	0	1833	0	0	183	147	238	0	-183	6605	0	0	661	859	-661	7266
203+00	195	0	0	1485	0	0	149	119	193	0	-149	8090	0	0	809	1052	-809	8899
204+00	172	0	0	679	0	0	68	54	88	0	-68	8769	0	0	877	1140	-877	9646
205+00	51	0	0	414	0	0	41	33	54	0	-41	9183	0	0	918	1193	-918	10101
	COLUMN SUBTOTALS =			9183	0	0	918	734	1193	0	-918	9183	0	0	918	1193	-918	10101

EARTHWORK-OLD CTH N (WEST)

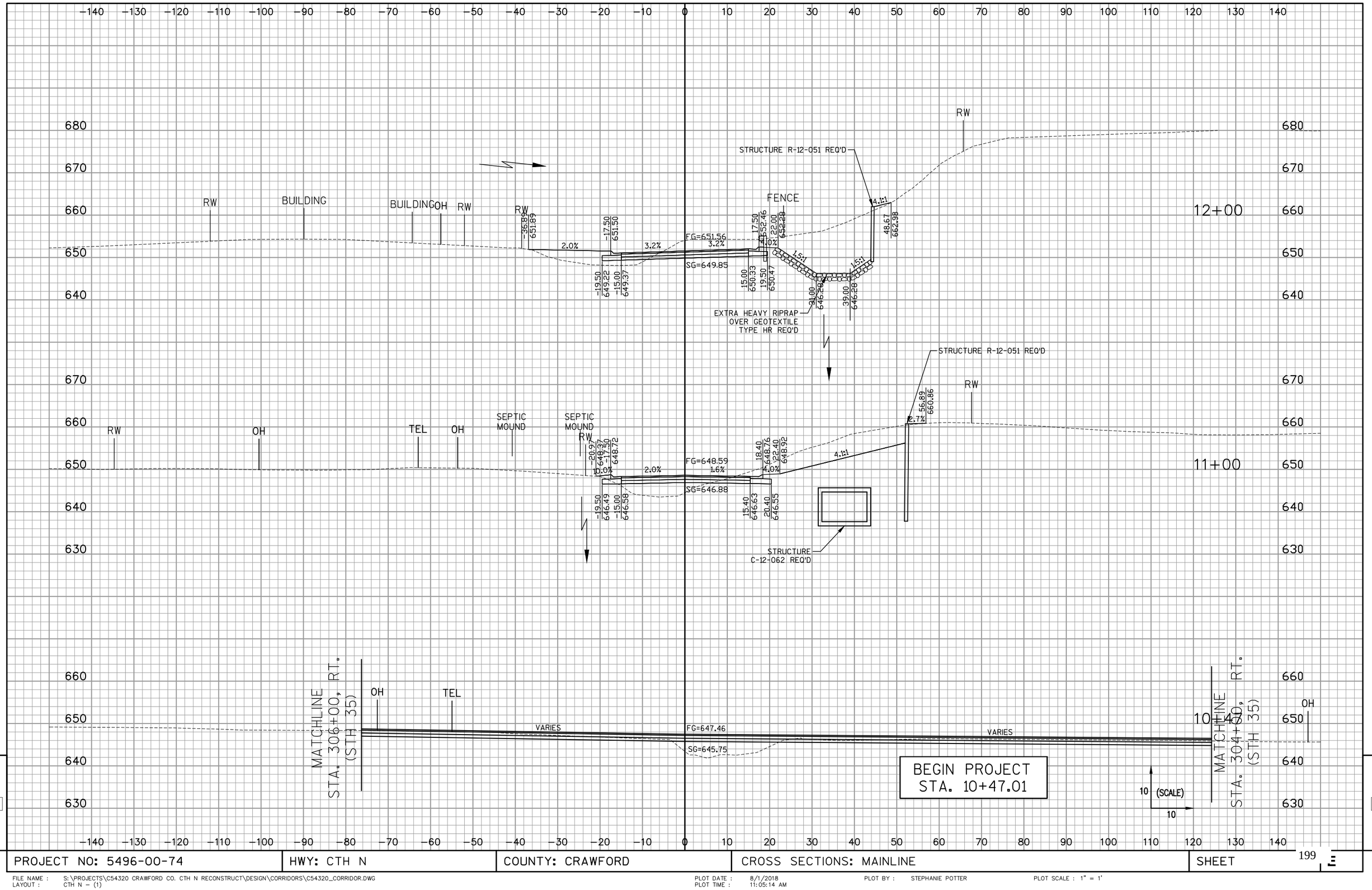
	AREA (SF)			INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)						
STATION	CUT	ROCK CUT	FILL	CUT NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	REDUCED EBS IN FILL (CY) FACTOR 0.8 NOTE 5	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED ROCK (CY) FACTOR 1.1 NOTE 7	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	CUT 1.00 NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	MASS ORDINATE NOTE 9
400+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400+12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400+12	1281	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400+30	1748	0	0	1010	0	0	101	81	131	0	-101	1010	0	0	101	131	-101	1111
401+00	684	0	0	3152	0	0	315	252	410	0	-315	4162	0	0	416	541	-416	4578
402+00	341	0	0	1897	0	0	190	152	247	0	-190	6059	0	0	606	788	-606	6665
402+75	51	0	0	544	0	0	54	44	71	0	-54	6603	0	0	660	858	-660	7263
	COLUMN SUBTOTALS =			6603	0	0	660	528	858	0	-660	6603	0	0	660	858	-660	7263

EARTHWORK-OLD CTH N (EAST)

	AREA (SF)			INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)						
STATION	CUT	ROCK CUT	FILL	CUT NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	REDUCED EBS IN FILL (CY) FACTOR 0.8 NOTE 5	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED ROCK (CY) FACTOR 1.1 NOTE 7	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	CUT 1.00 NOTE 1	ROCK CUT NOTE 2	FILL NOTE 3	EBS NOTE 4	EXPANDED EBS BACKFILL (CY) FACTOR 1.3 NOTE 6	EXPANDED FILL (CY) FACTOR 1.25 NOTE 8	MASS ORDINATE NOTE 9
570+16	0	0	1426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
570+50	0	0	119	0	0	973	0	0	0	0	1216	0	0	973	0	0	1216	-1216
571+00	175	0	0	162	0	110	16	13	21	0	121	162	0	1083	16	21	1338	-1176
571+25	51	0	0	105	0	0	11	8	14	0	-11	267	0	1083	27	35	1326	-1059
	COLUMN SUBTOTALS =			267	0	1083	27	22	35	0	1326	267	0	1083	27	35	1326	-1059

MAINLINE	30330	25750	44130	3033	2426	3943	28325	16723	30330	25750	44130	3033	3943	16723	13607
STH 35 - STAGE 1	203	0	0	20	16	26	0	-20	30533	25750	44130	3053	3969	16703	13830
STH 35 - STAGE 2	831	0	98	83	66	108	0	40	31364	25750	44228	3136	4077	16743	14621
STH 35 - STAGE 3	138	0	212	14	11	18	0	251	31502	25750	44440	3150	4095	16994	14508
DEMANES LANE	10187	0	90	1019	815	1325	0	-907	41689	25750	44530	4169	5420	16087	25602
SLAMA LANE	9183	0	0	918	734	1193	0	-918	50872	25750	44530	5087	6613	15169	35703
OLD CTH N (WEST)	6603	0	0	660	628	858	0	-660	57475	25750	44530	5747	7471	14509	42966
OLD CTH N (EAST)	267	0	1083	27	22	35	0	1326	57742	25750	45613	5774	7506	15835	41907
P.E. / F.E. / C.E.	558	50	174	26	21	44	55	123	58300	25800	45787	5800	7550	15959	42343

NOTES:	
1 - CUT	CUT INCLUDEDS SALVAGED/UNUSABLE MATERIAL
2 -ROCK CUT	ROCK EXCVATION
3 - FILL	UNEXPANDED FILL
4 - EBS (EXCAVATION BELOW SUBGRADE)	EBS IS ESTIMATED AT 10% OF THE CUT VOLUME (CY). EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL
5 -REDUCED EBS IN FILL	REDUCED EBS IN FILL FACTOR IS 0.8. EXCAVATED EBS MATERIAL IS USEABLE IN FILLS OUTSIDE 1:1 SLOPE.
6 - EXPANDED EBS BACKFILL	EXPANDED EBS BACKFILL FACTOR IS 1.3. THIS IS TO BE FILLED WITH SELECT BORROW MATERIAL
7 - EXPANDED ROCK	EXPANDED ROCK FACTOR IS 1.1.
8 -EXPANDED FILL	EXPANDED FILL FACTOR IS 1.25: EXPANDED FILL = (UNEXPANDED FILL-(ROCK*ROCK FACTOR)-REDUCED EBS)*1.25
9 - MASS ORDINATE	MASS ORDINATE = CUT-EXPANDED FILL



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (1)

PLOT DATE : 8/1/2018
PLOT TIME : 11:05:14 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'

STA. 15+00
(1) CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH
(2) APRON ENDWALLS REQ'D
SKEW = 10° L.H.F.

15+00

RW FENCE OH FENCE RW
-64.18 668.18
-21.00 667.88
-43.86 662.31
-36.00 662.19
-21.00 667.88
-19.50 665.38
-15.00 665.75
FG=667.76
SG=666.05
17.96 665.59
28.57 665.18
38.00 661.09
51.72 660.85
65.30 660.85
91.46 671.31
EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR REQ'D

14+00

RW FENCE OH FENCE RW
-27.91 662.92
-17.50 661.88
-19.50 659.65
-15.00 659.74
FG=661.75
SG=660.04
16.00 659.72
24.05 659.56
36.01 654.78
48.11 654.78
67.05 664.25
EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR REQ'D

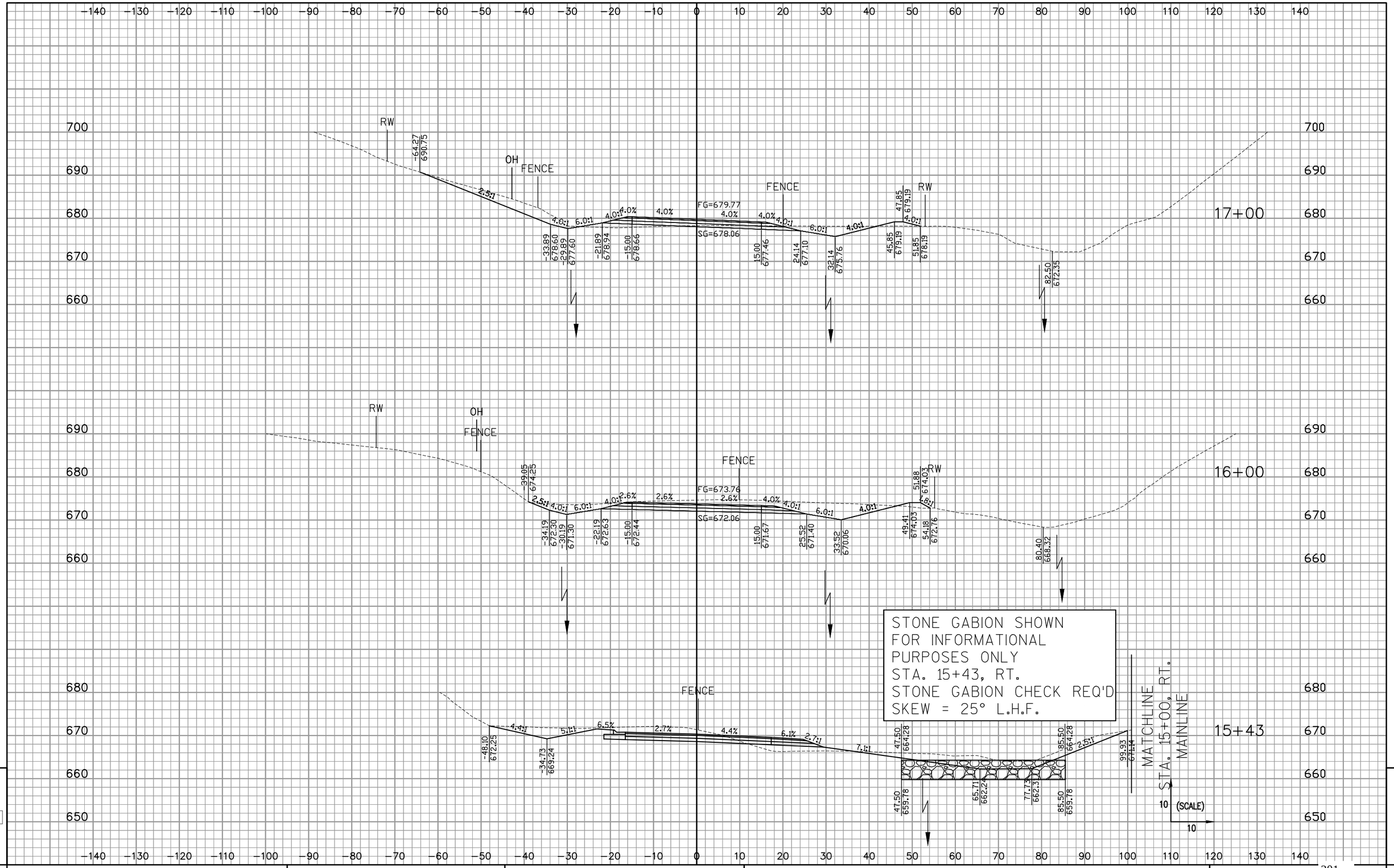
13+00

RW BUILDING FENCE LP TANK RW OH BUILDING RW
-21.5 656.19
-17.50 656.11
-19.50 653.89
-15.00 653.98
FG=655.99
SG=654.28
17.50 656.50
22.00 656.32
15.00 654.37
19.50 654.40
31.00 650.32
39.00 650.32
48.67 658.94
SOLDIER PILE WALL REQ'D
EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR REQ'D

10 (SCALE) 10

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET 200

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (2)
PLOT DATE : 10/25/2018
PLOT TIME : 3:41:48 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



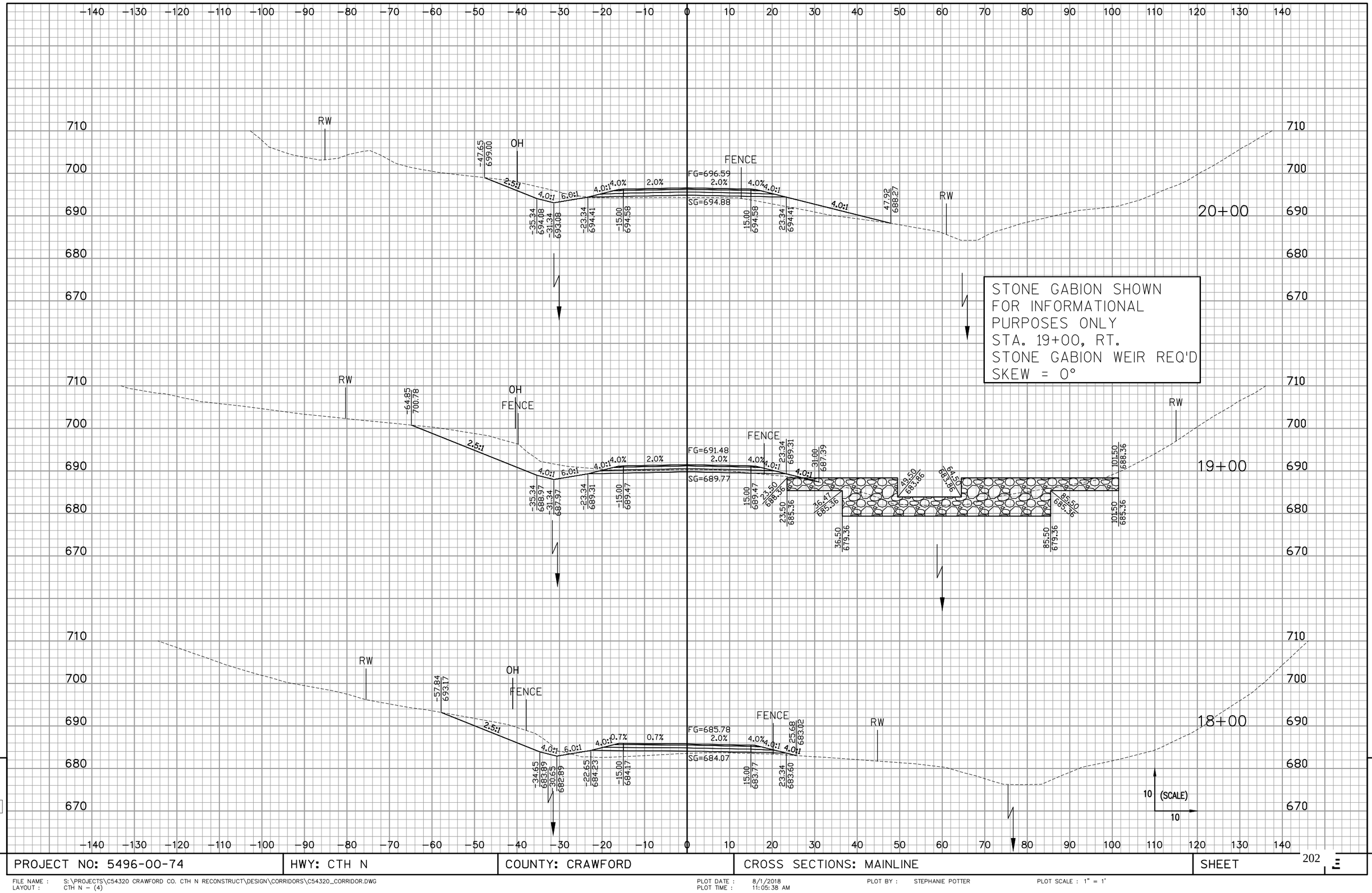
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (3)

PLOT DATE : 8/1/2018
PLOT TIME : 11:05:30 AM

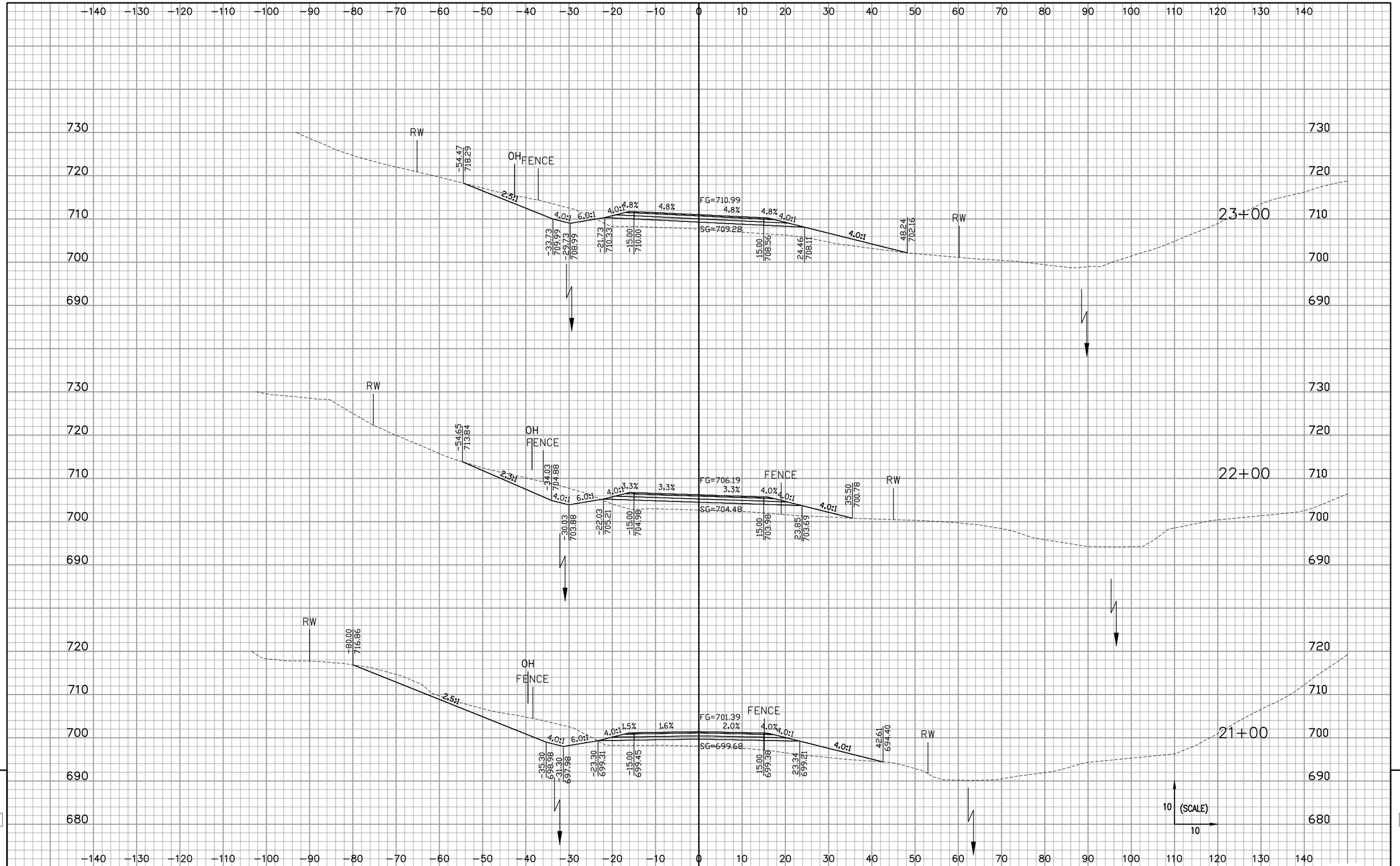
PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N - (4)
PLOT DATE : 8/1/2018
PLOT TIME : 11:05:38 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (5)

PLOT DATE : 8/1/2018
PLOT TIME : 11:05:46 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'

STONE GABION SHOWN
FOR INFORMATIONAL
PURPOSES ONLNY
STA. 25+13, RT.
STONE GABION WEIR REQ'D
SKEW = 7° L.H.F.

25+13

25+00

24+00

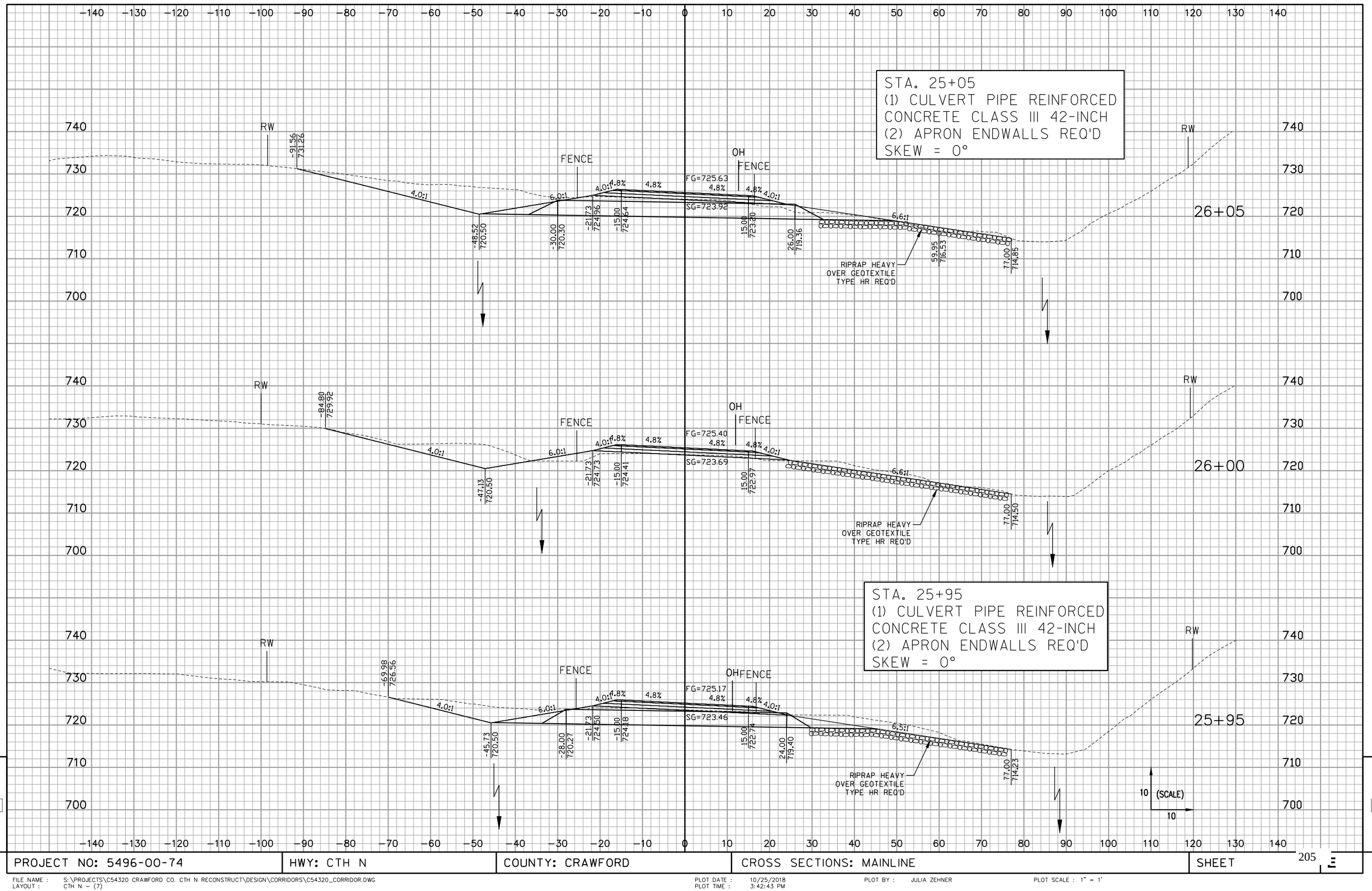
MATCHLINE
STA. 25+13
MAINLINE

GABION WEIR

10 (SCALE) 10

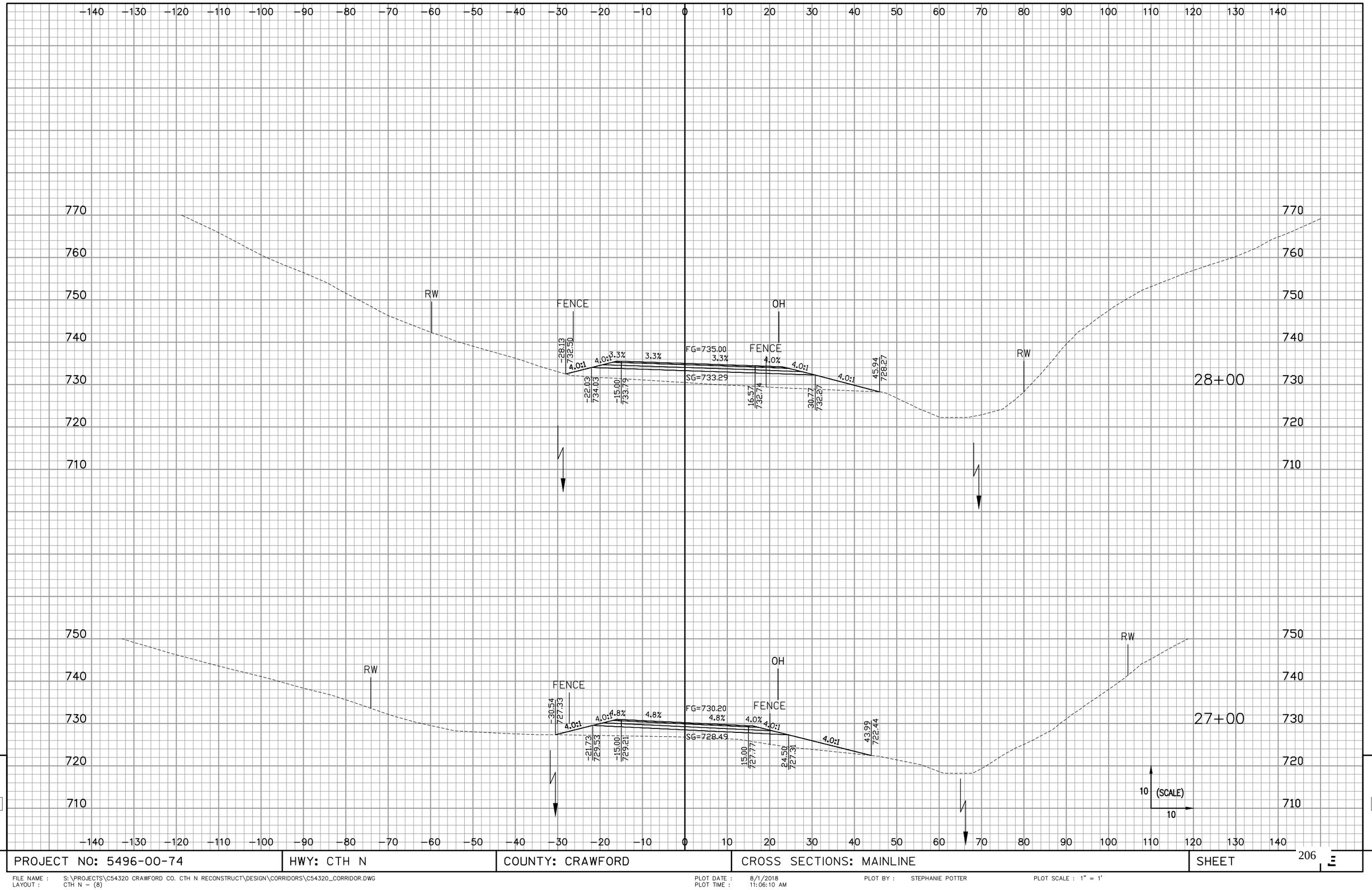
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (6)
PLOT DATE : 8/1/2018
PLOT TIME : 11:05:54 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



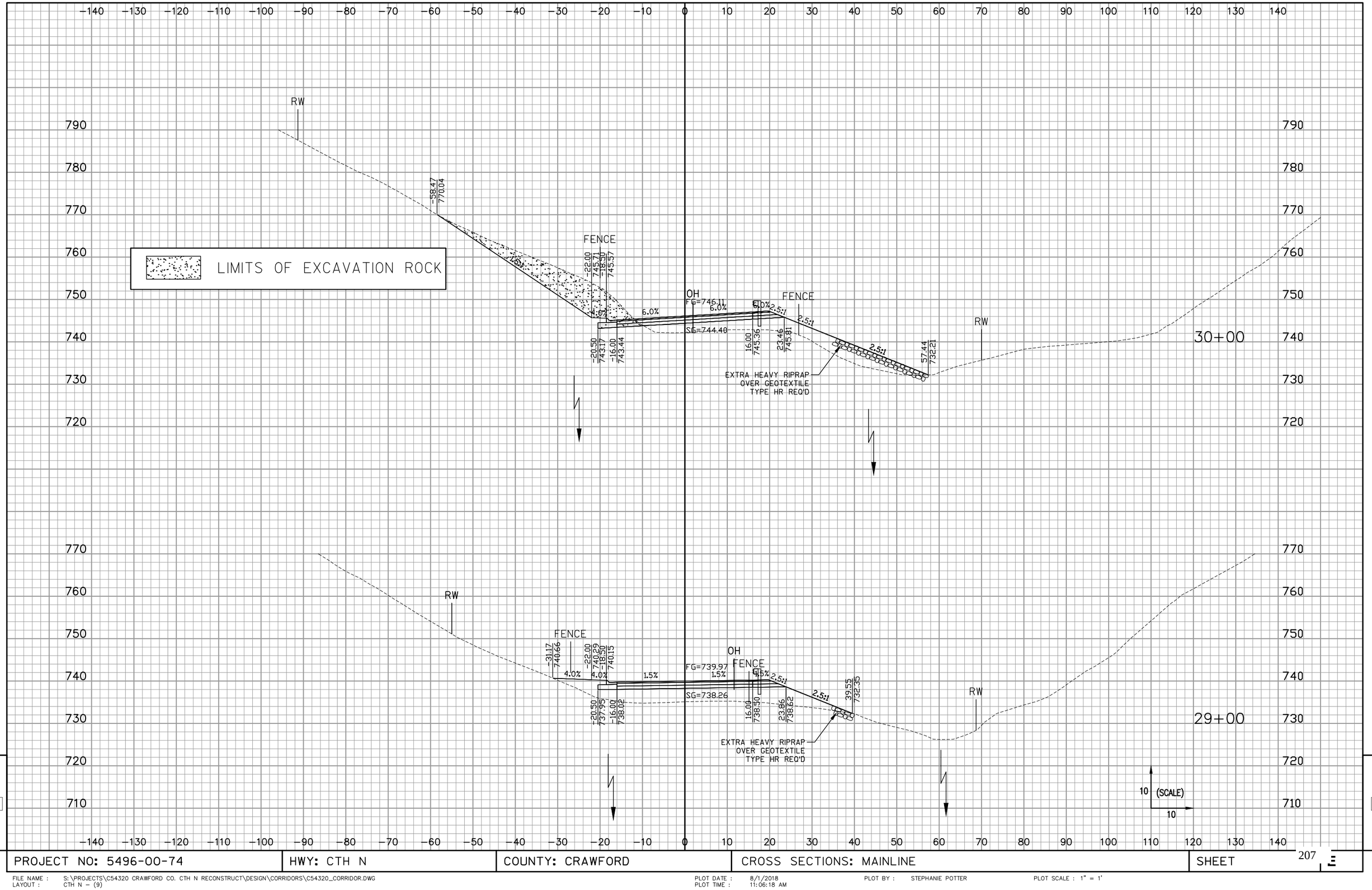
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N - (7)
PLOT DATE : 10/25/2018
PLOT TIME : 3:42:43 PM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N - (8)
PLOT DATE : 8/1/2018
PLOT TIME : 11:06:10 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



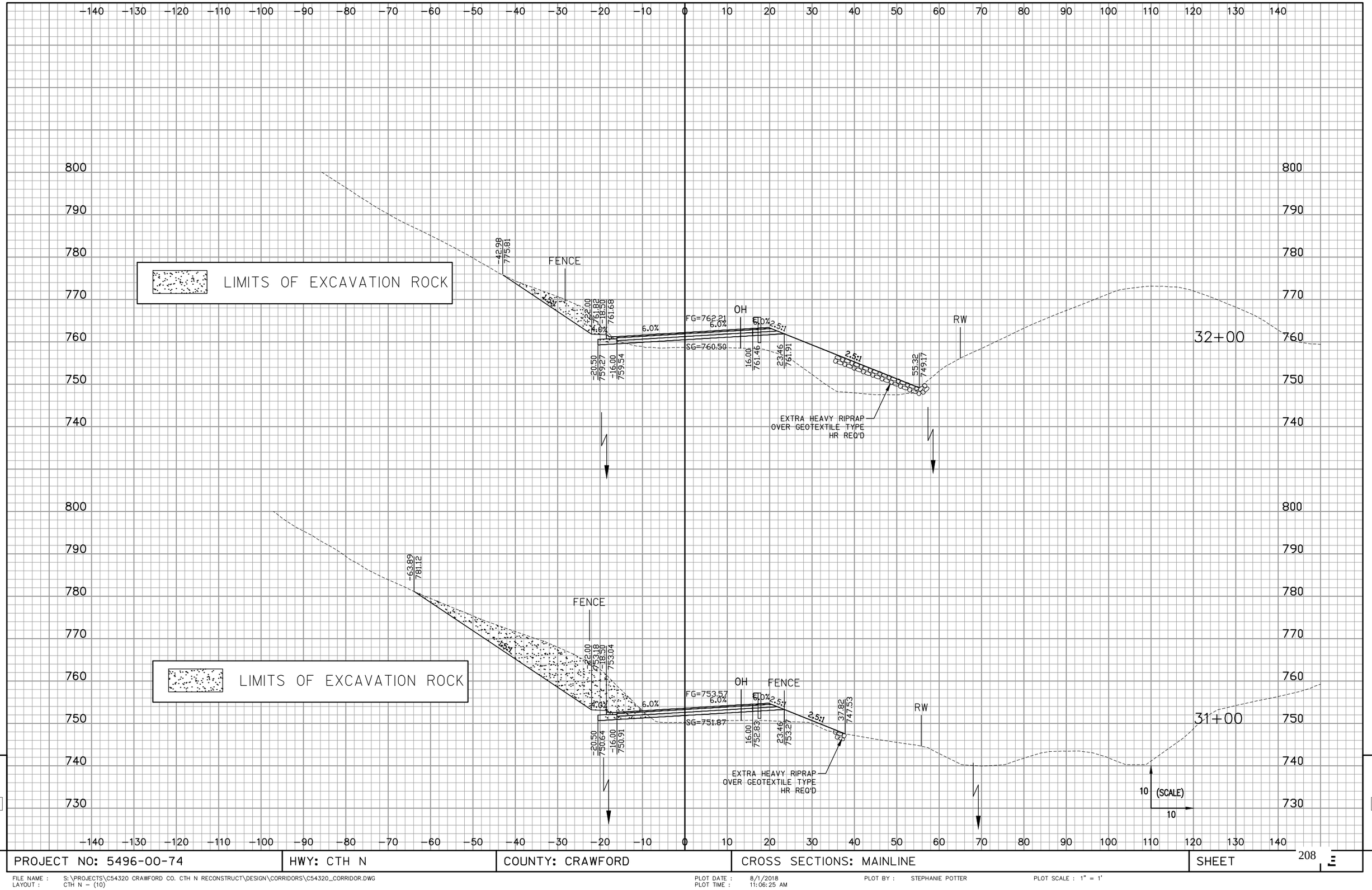
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (9)

PLOT DATE : 8/1/2018
PLOT TIME : 11:06:18 AM

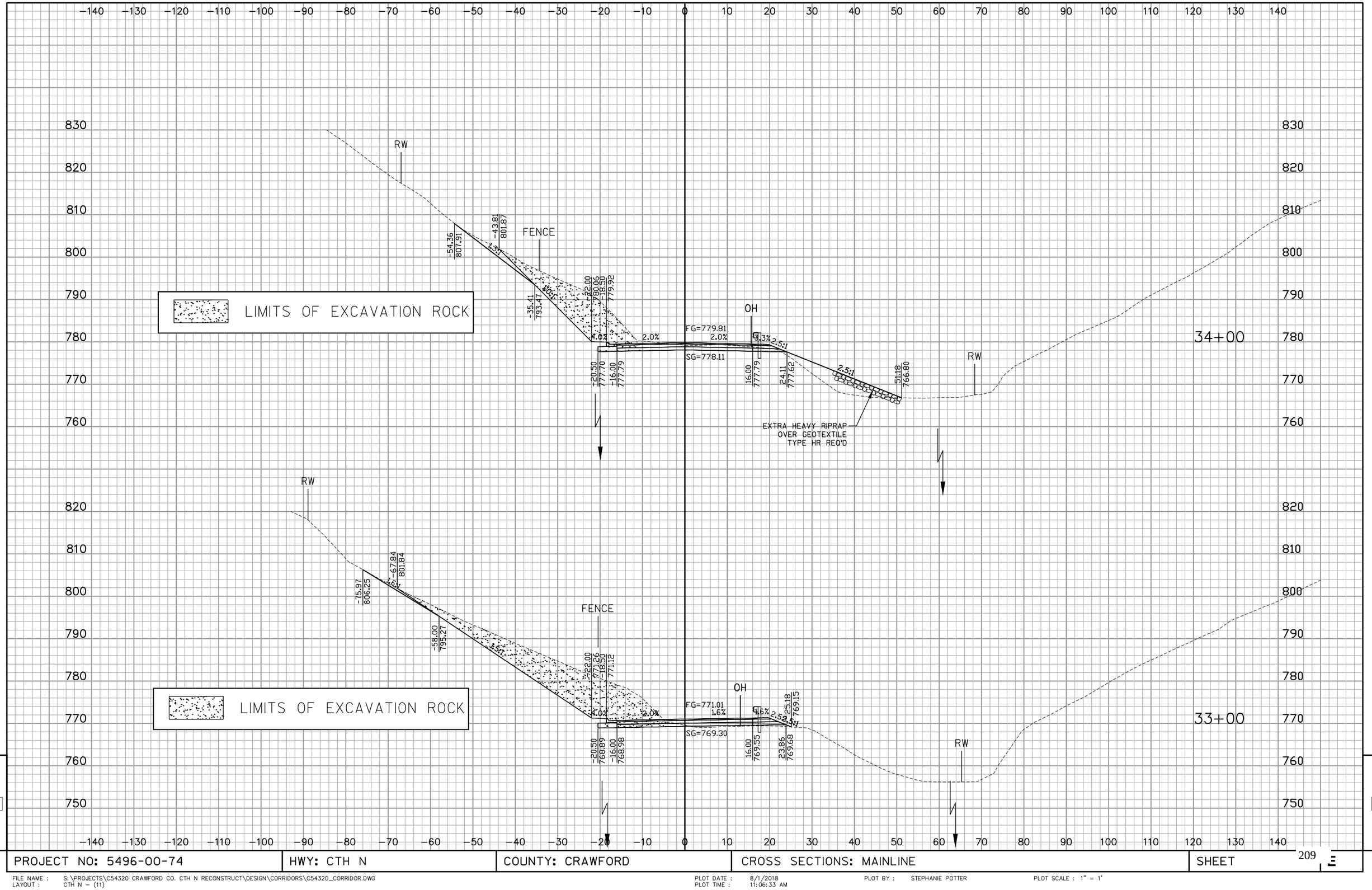
PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'



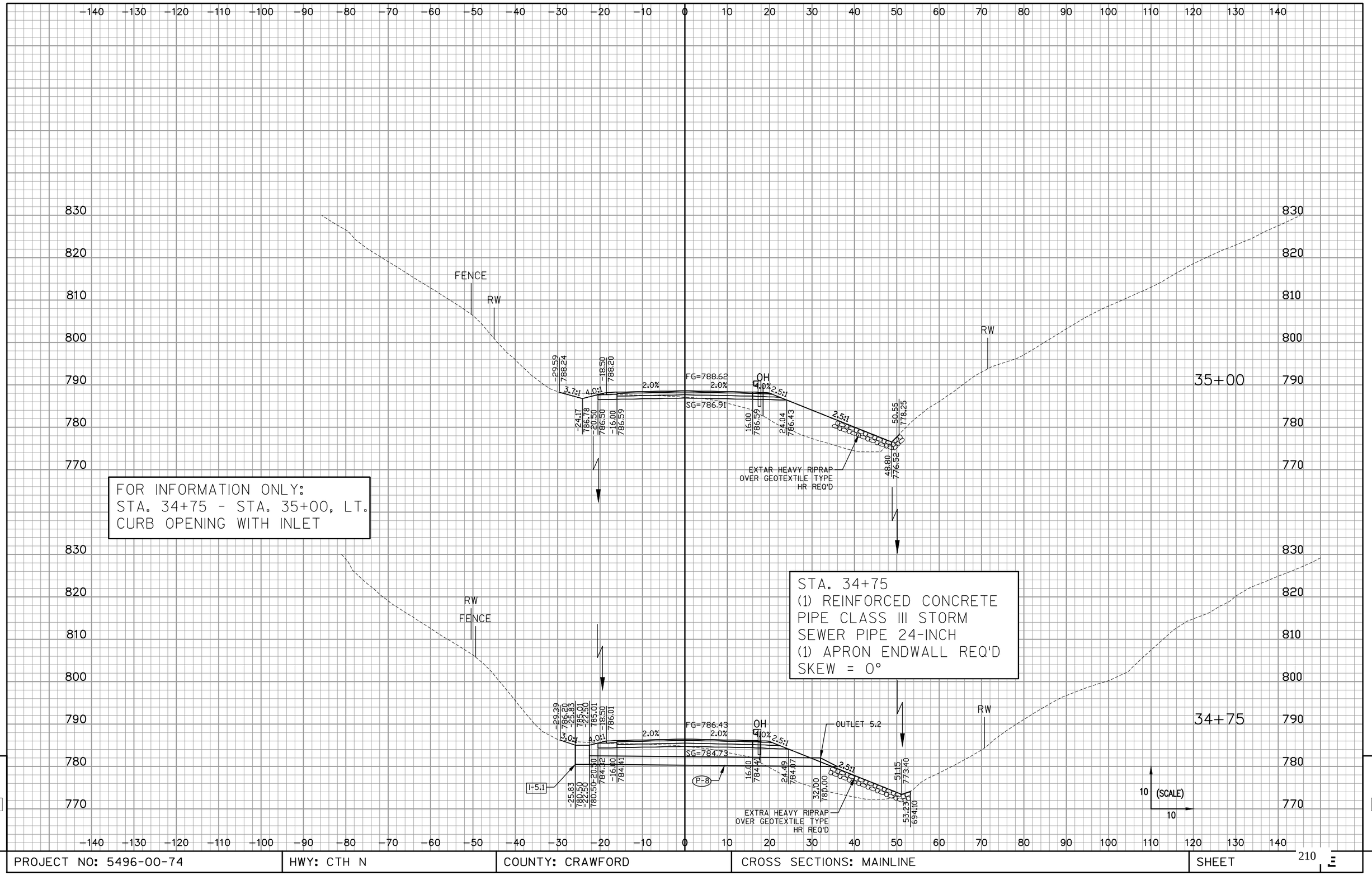
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (10)
PLOT DATE : 8/1/2018
PLOT TIME : 11:06:25 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



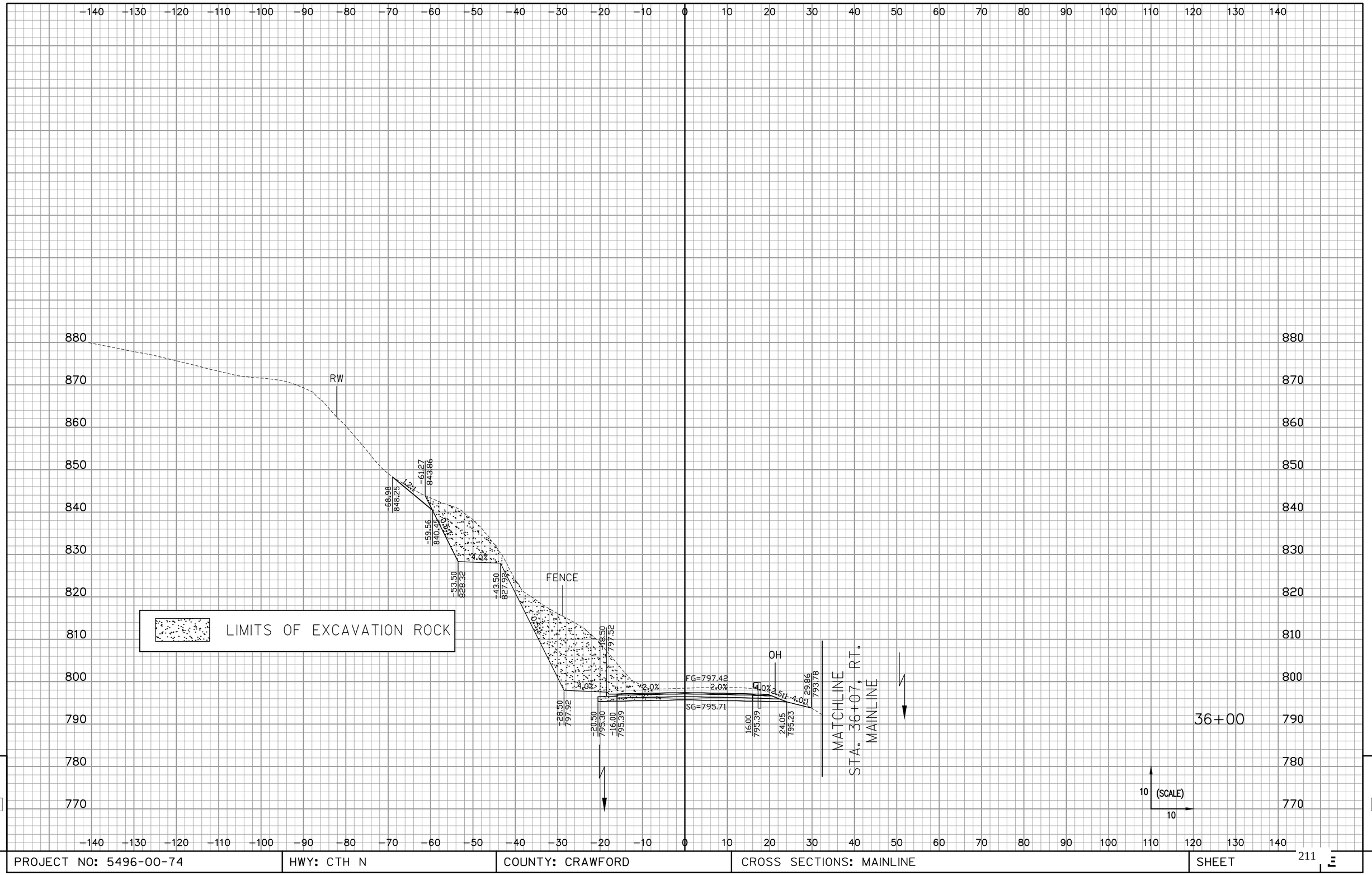
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (11)
PLOT DATE : 8/1/2018
PLOT TIME : 11:06:33 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N - (12)
PLOT DATE : 8/1/2018
PLOT TIME : 11:06:40 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (13)
PLOT DATE : 8/1/2018
PLOT TIME : 11:06:48 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

−140 −130 −120 −110 −100 −90 −80 −70 −60 −50 −40 −30 −20 −10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

880 870 860 850 840 830 820 810 800 790 780 770

RW

-64.00
849.12

-54.58
829.85

-44.38
829.22

FENCE

-29.07
799.01

LIMITS OF EXCAVATION ROCK

OH

24.77
795.37

30.58
793.78

RW

44.50
783.31

61.50
783.31

44.50
778.81

61.50
778.81

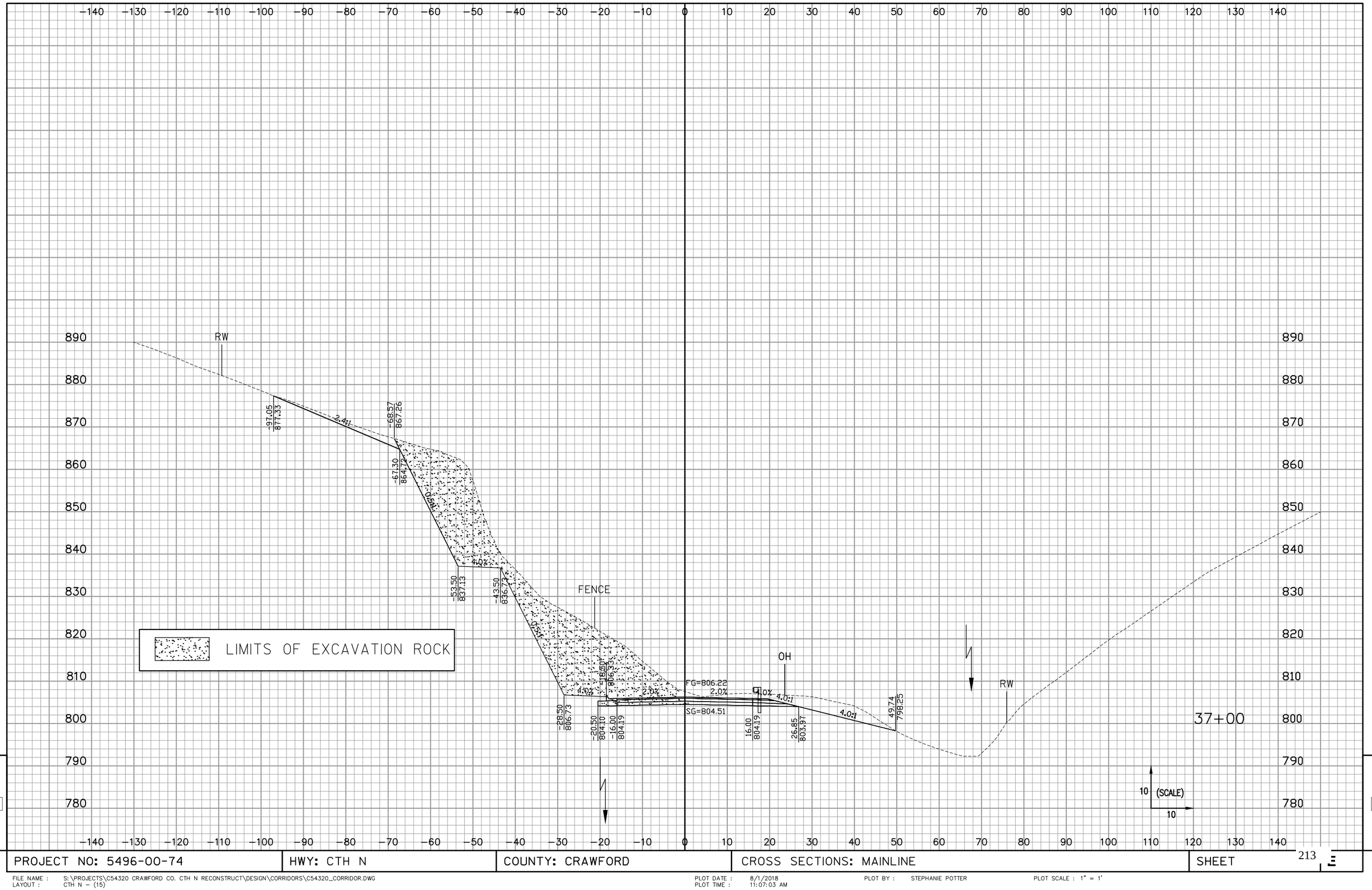
STONE GABAION SHOWN
FOR INFORMATIONAL
PURPOSES ONLY
STA. 36+07, RT.
STONE GABION CHECK REQ'D
SKEW = 11° L.H.F.

36+07

10 (SCALE) 10

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (14)
PLOT DATE : 8/1/2018
PLOT TIME : 11:06:55 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (15)
PLOT DATE : 8/1/2018
PLOT TIME : 11:07:03 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

LIMITS OF EXCAVATION ROCK

RW

FENCE

OH

RW

FG=814.78

SG=813.07

38+00

(SCALE)

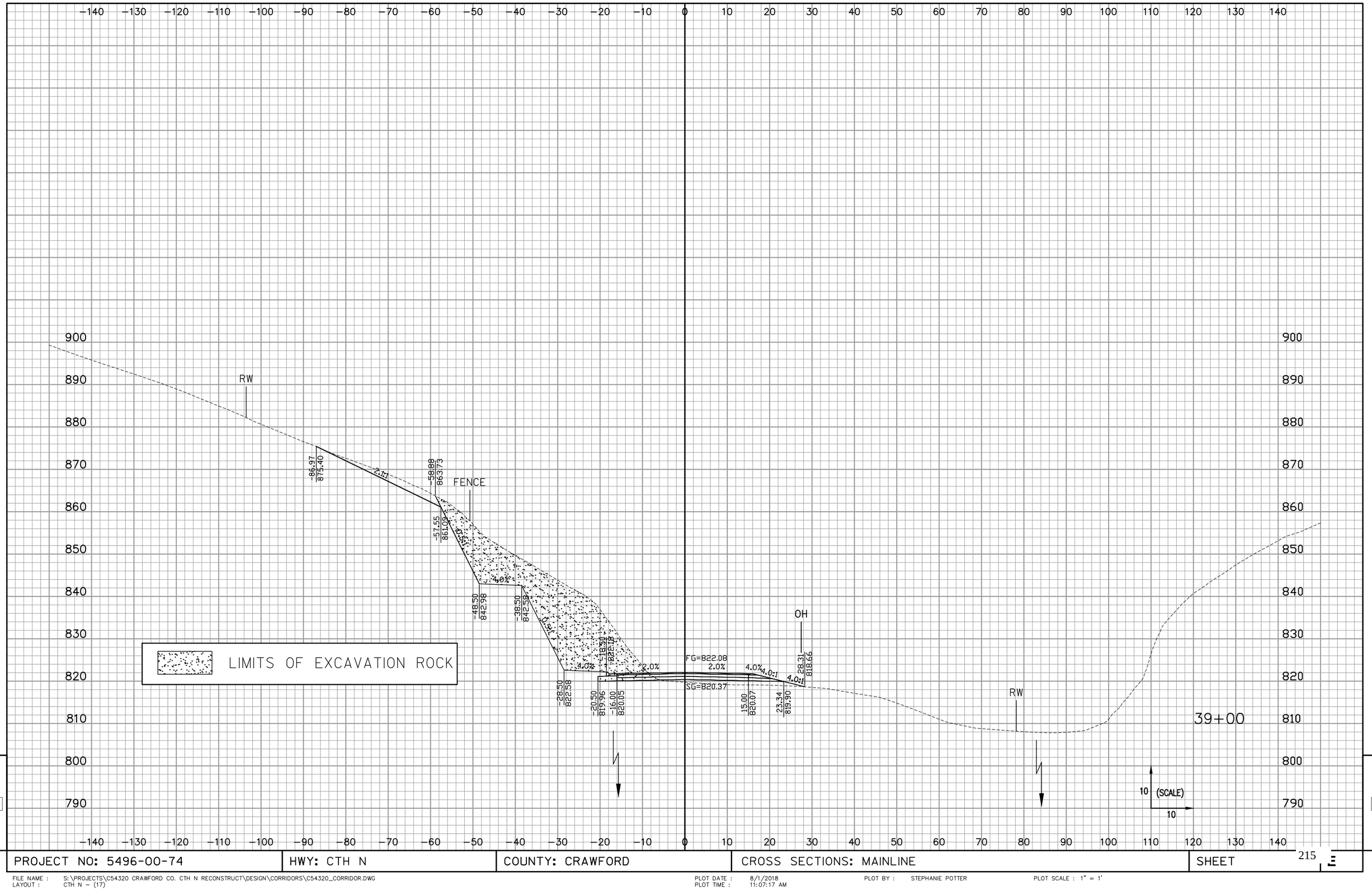
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (16)

PLOT DATE : 8/1/2018
PLOT TIME : 11:07:10 AM

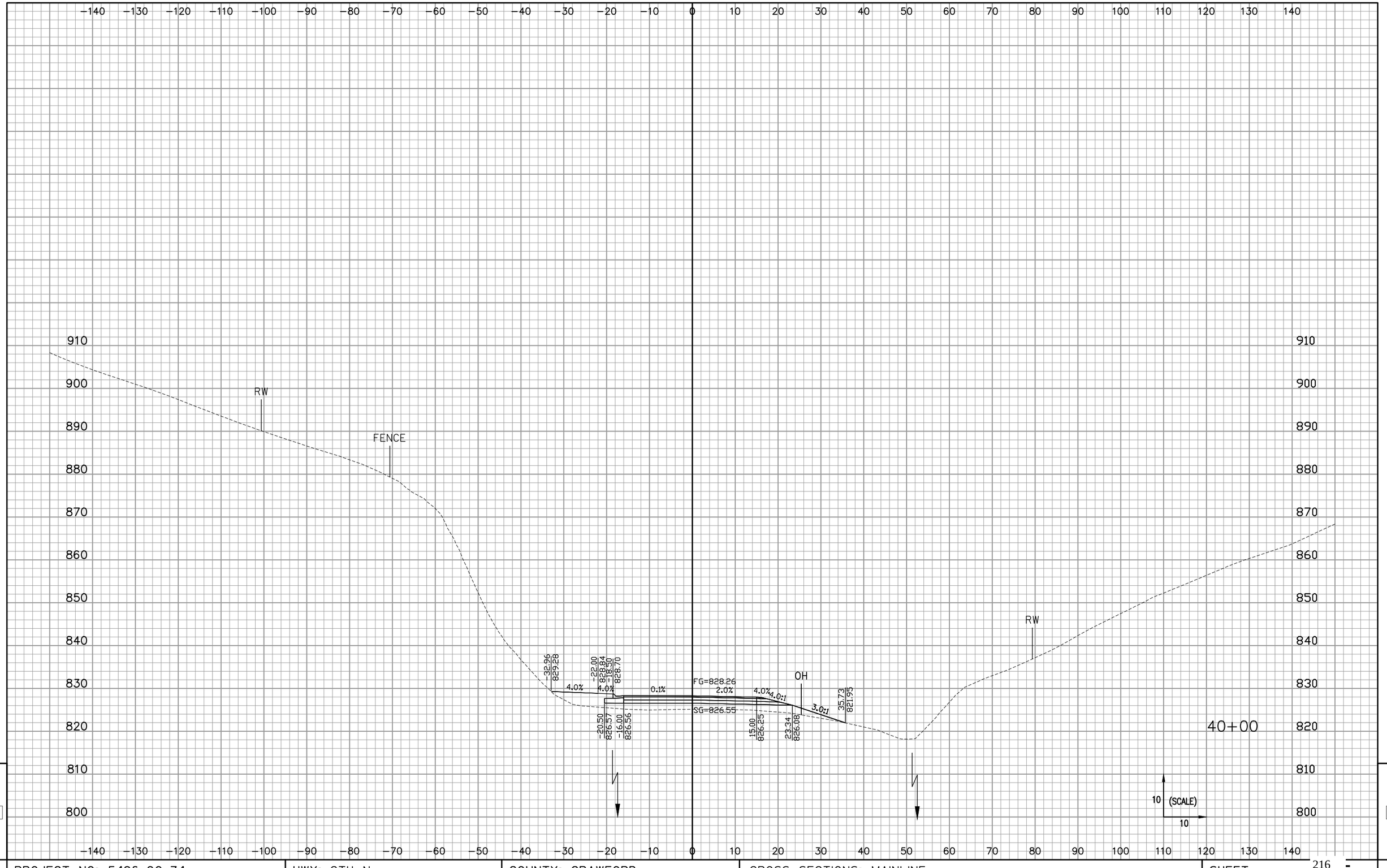
PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N - (17)
PLOT DATE : 8/1/2018
PLOT TIME : 11:07:17 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

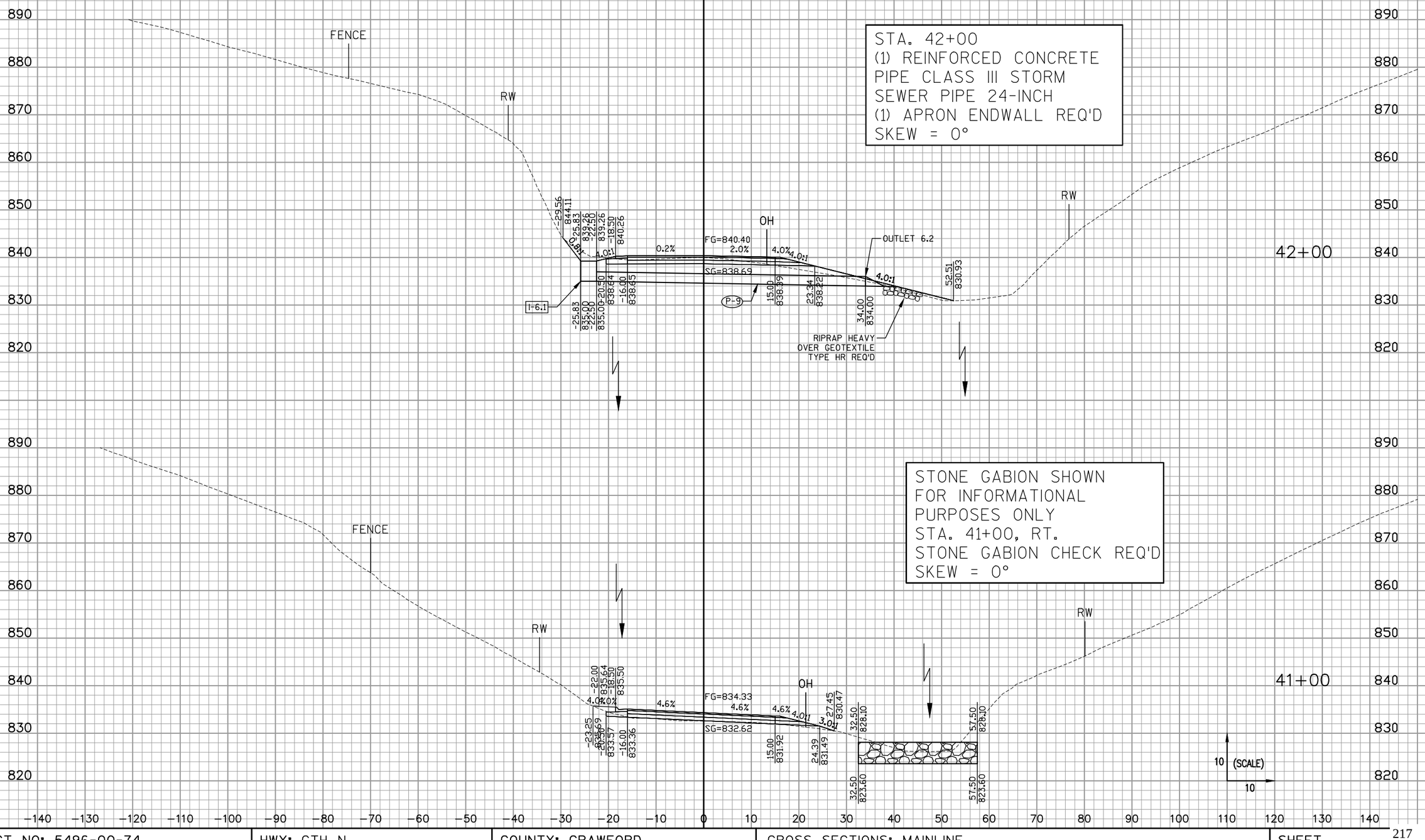


PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (18)
PLOT DATE : 8/1/2018
PLOT TIME : 11:07:25 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

FOR INFORMATION ONLY:
STA. 42+00 - STA. 42+50, LT.
CURB OPENING WITH INLET

STA. 42+00
(1) REINFORCED CONCRETE PIPE CLASS III STORM SEWER PIPE 24-INCH
(1) APRON ENDWALL REQ'D
SKEW = 0°

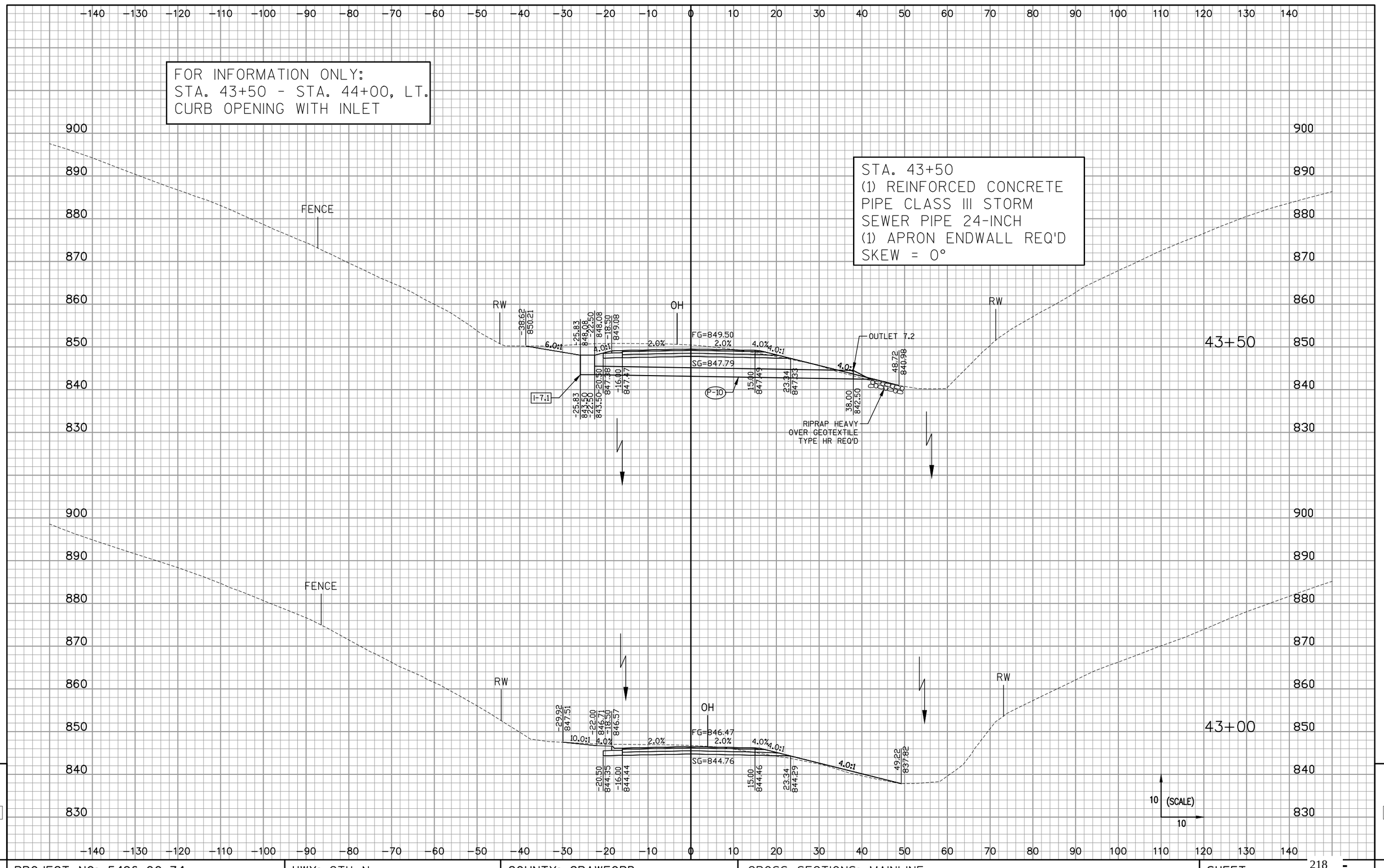


PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N - (19)
PLOT DATE : 8/1/2018
PLOT TIME : 11:07:32 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

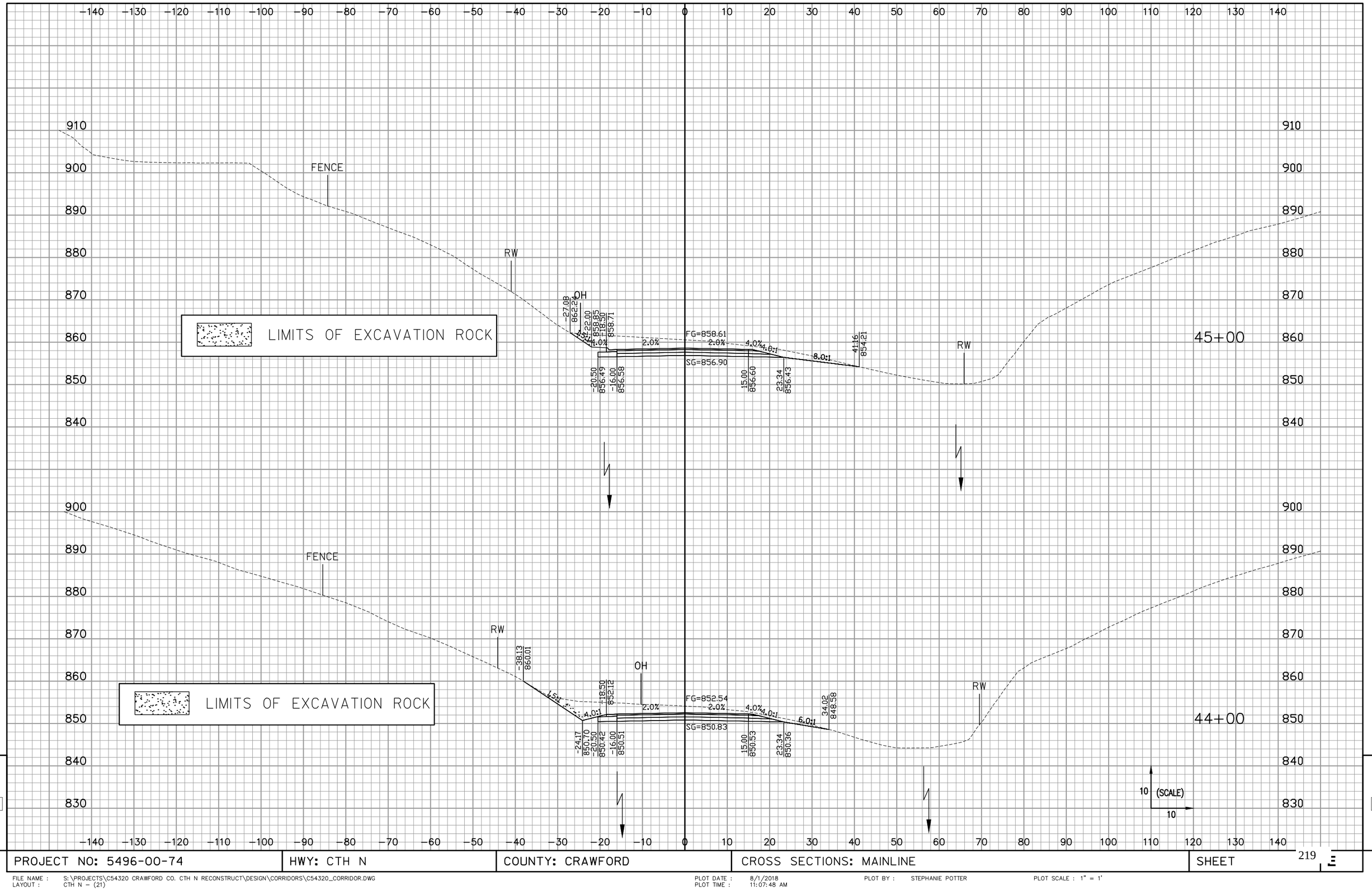
FOR INFORMATION ONLY:
STA. 43+50 - STA. 44+00, LT.
CURB OPENING WITH INLET

STA. 43+50
(1) REINFORCED CONCRETE PIPE CLASS III STORM SEWER PIPE 24-INCH
(1) APRON ENDWALL REQ'D
SKEW = 0°



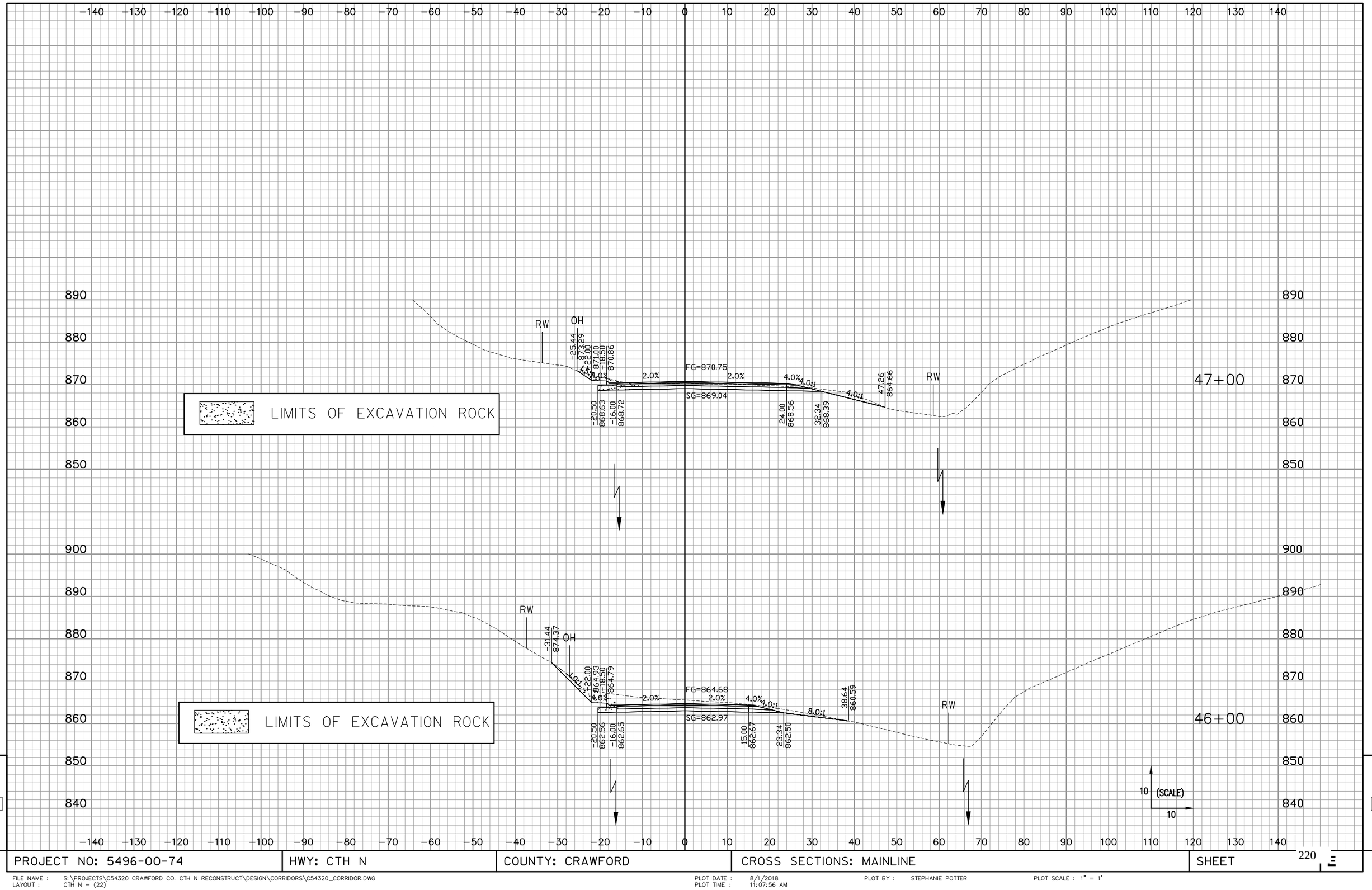
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (20)
PLOT DATE : 8/1/2018
PLOT TIME : 11:07:40 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



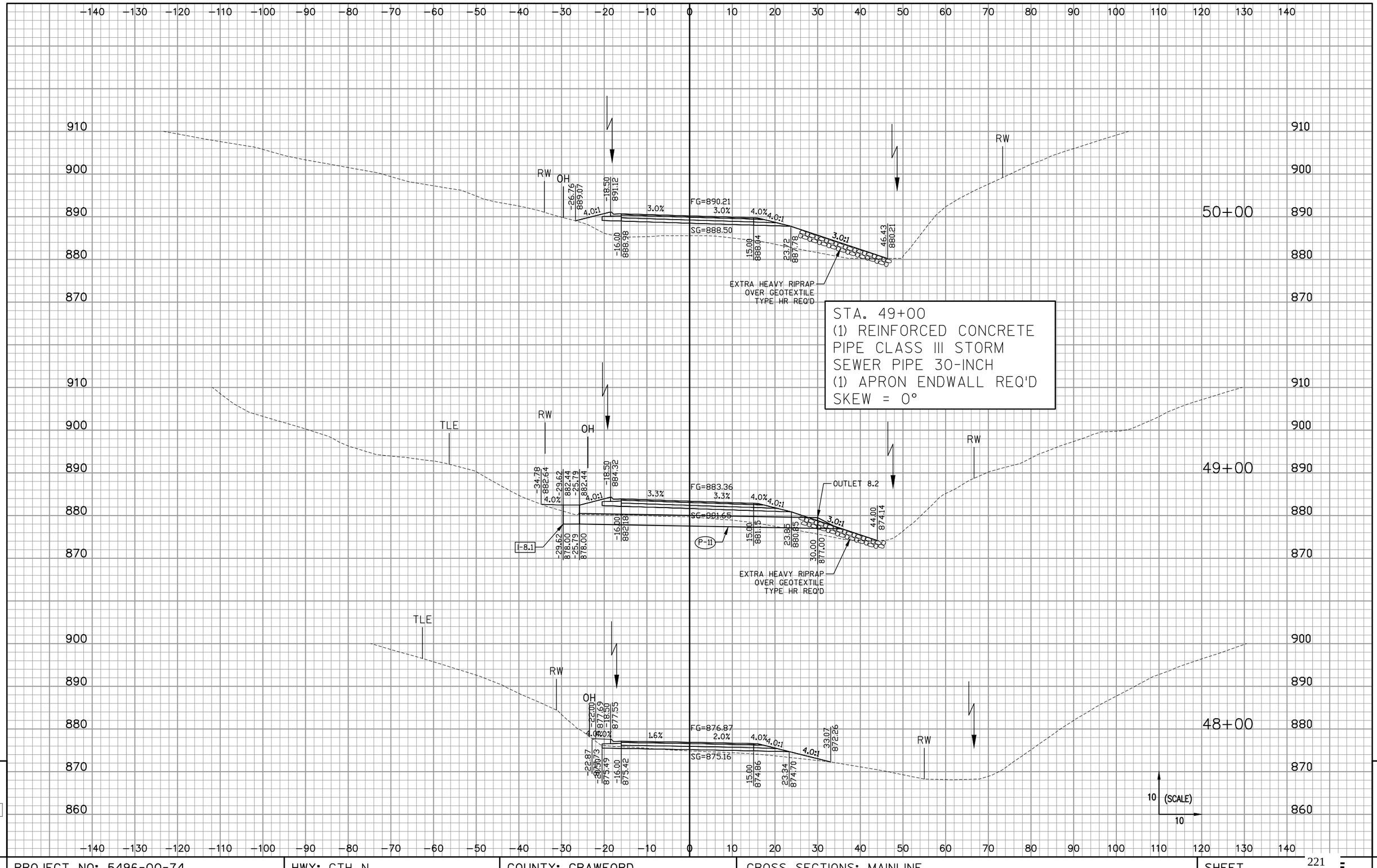
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N - (21)
PLOT DATE : 8/1/2018
PLOT TIME : 11:07:48 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (22)
PLOT DATE : 8/1/2018
PLOT TIME : 11:07:56 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (23)
PLOT DATE : 8/1/2018
PLOT TIME : 11:08:04 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

LIMITS OF EXCAVATION ROCK

LIMITS OF EXCAVATION ROCK

FOR INFORMATION ONLY:
STA. 51+00 - STA. 51+50, LT.
CURB OPENING WITH INLET

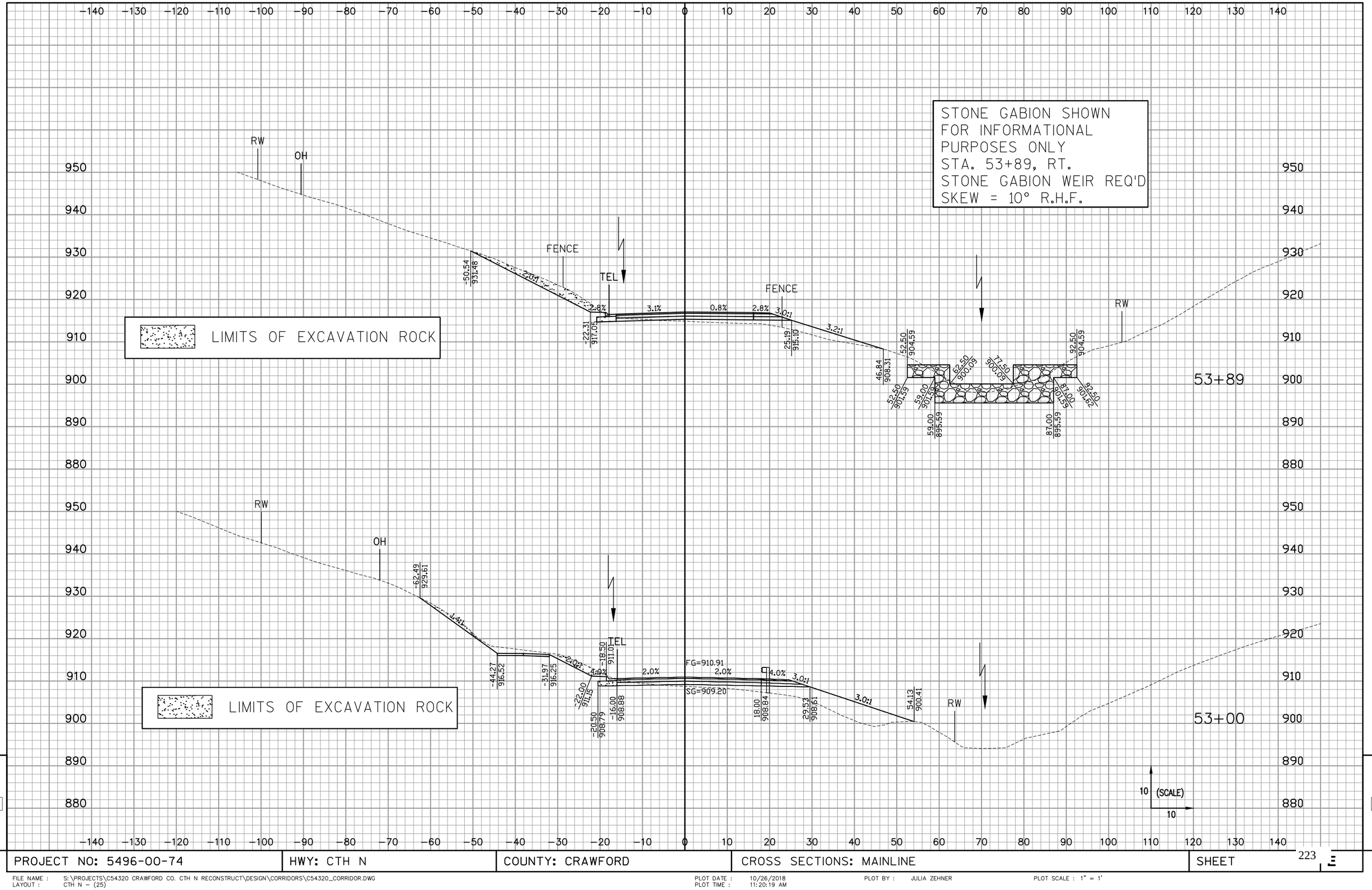
52+00

51+00

RW
OH
TEL
FG=904.01
SG=902.30
FG=897.11
SG=895.40
2.0%
4.0%
4.0:1
3.0:1
1.8%
1.5:1
EXTRA HEAVY RIPRAP OVER GEOTEXTILE TYPE HR REQ'D
-40.08 916.30
-45.97 916.66
-32.57 911.30
-22.00 904.25
-18.50 904.11
-20.50 901.89
-16.00 901.98
15.00 902.00
24.97 901.80
59.02 890.45
-33.79 901.66
-18.50 896.71
-24.22 895.28
-20.50 895.02
-16.00 895.10
15.00 895.10
23.34 894.93
42.88 888.42
10 (SCALE) 10

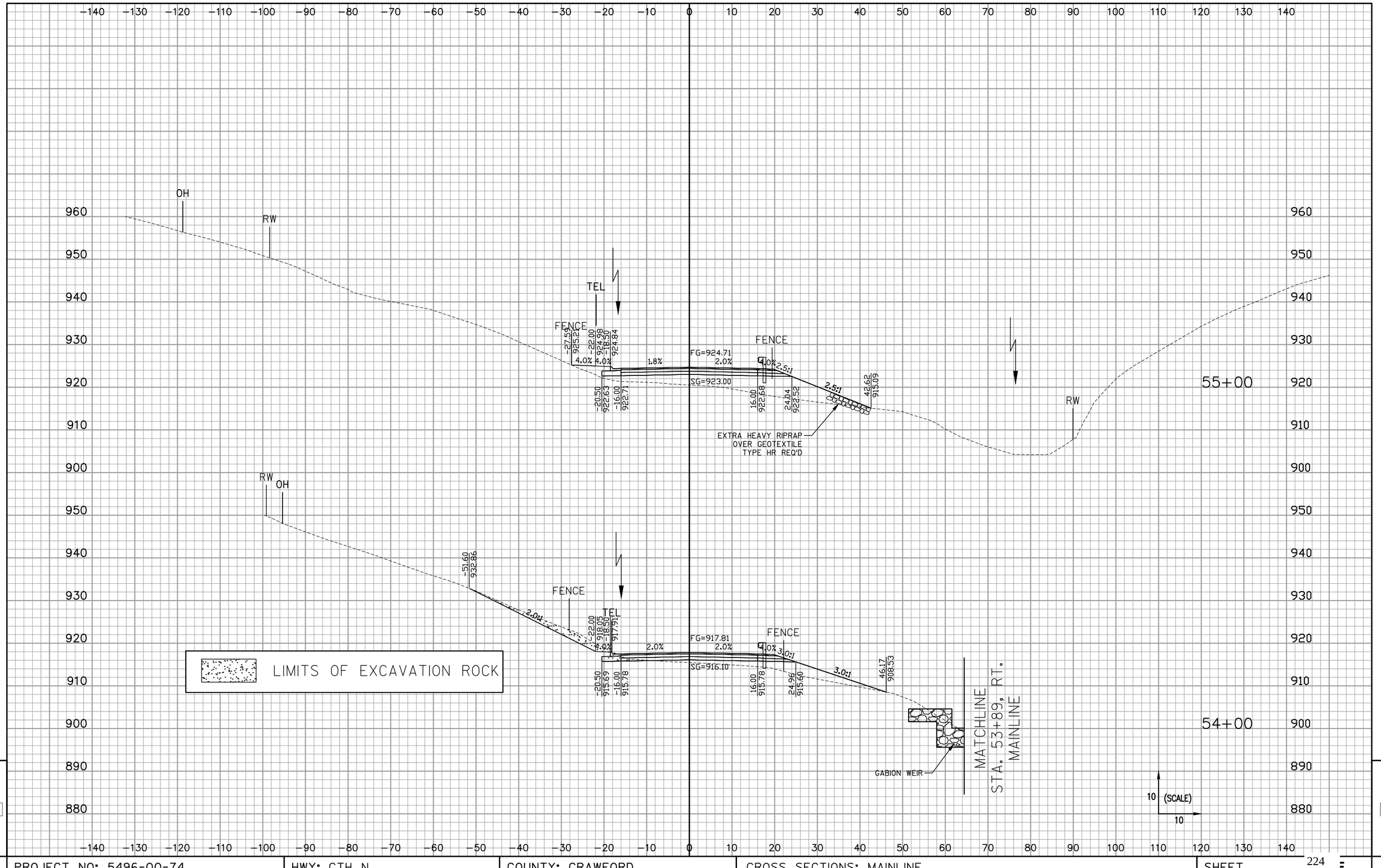
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (24)
PLOT DATE : 8/1/2018
PLOT TIME : 11:08:11 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (25)
PLOT DATE : 10/26/2018
PLOT TIME : 11:20:19 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



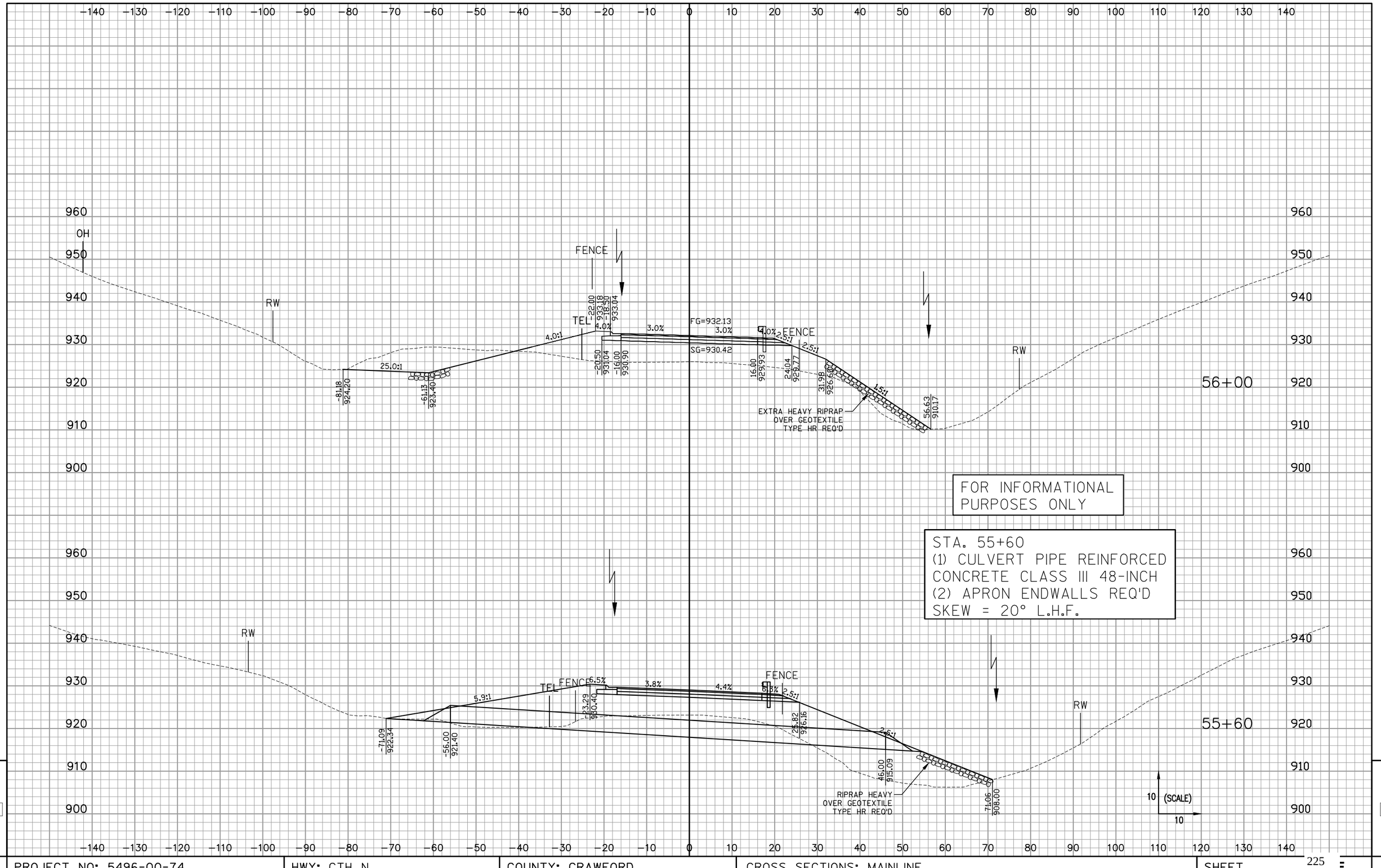
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (26)

PLOT DATE : 10/26/2018
PLOT TIME : 11:20:27 AM

PLOT BY : JULIA ZEHNER

PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET E

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (27)
PLOT DATE : 10/26/2018
PLOT TIME : 11:20:32 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

END ARTICULATED
CONCRETE BLOCK FLUME
STA. 57+94, 93.4', LT.
EL. 984.70

LIMITS OF EXCAVATION ROCK

FOR INFORMATION ONLY:
STA. 58+00 - STA. 58+50, LT.
CURB OPENING

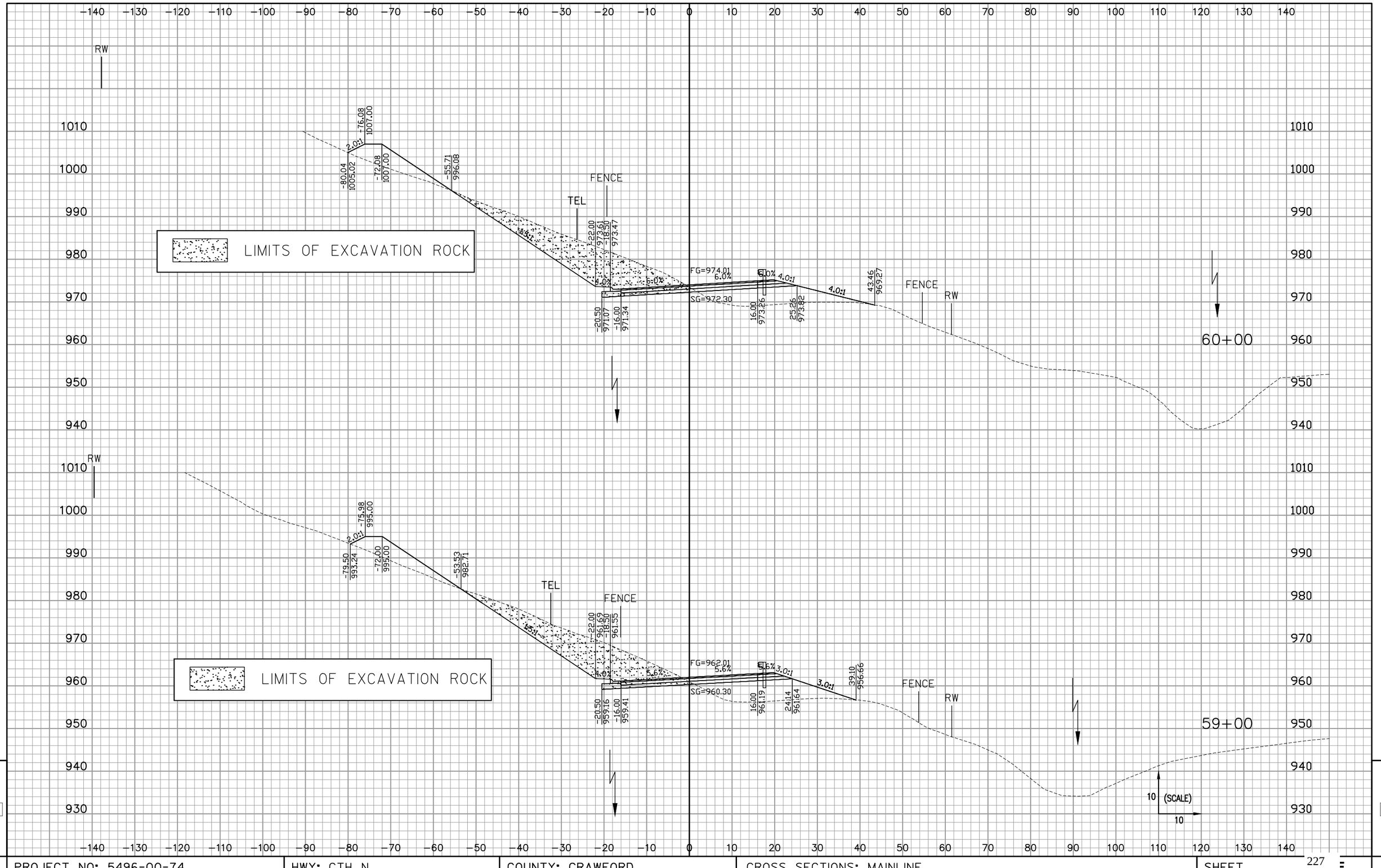
BEGIN ARTICULATED
CONCRETE BLOCK FLUME
STA. 56+97, 41.1', LT.
EL. 937.39

ARTICULATED CONCRETE BLOCK FLUME

RW
TEL
FENCE
FG=950.77
SG=949.07
FG=940.81
SG=939.10
58+00
57+00
(SCALE)

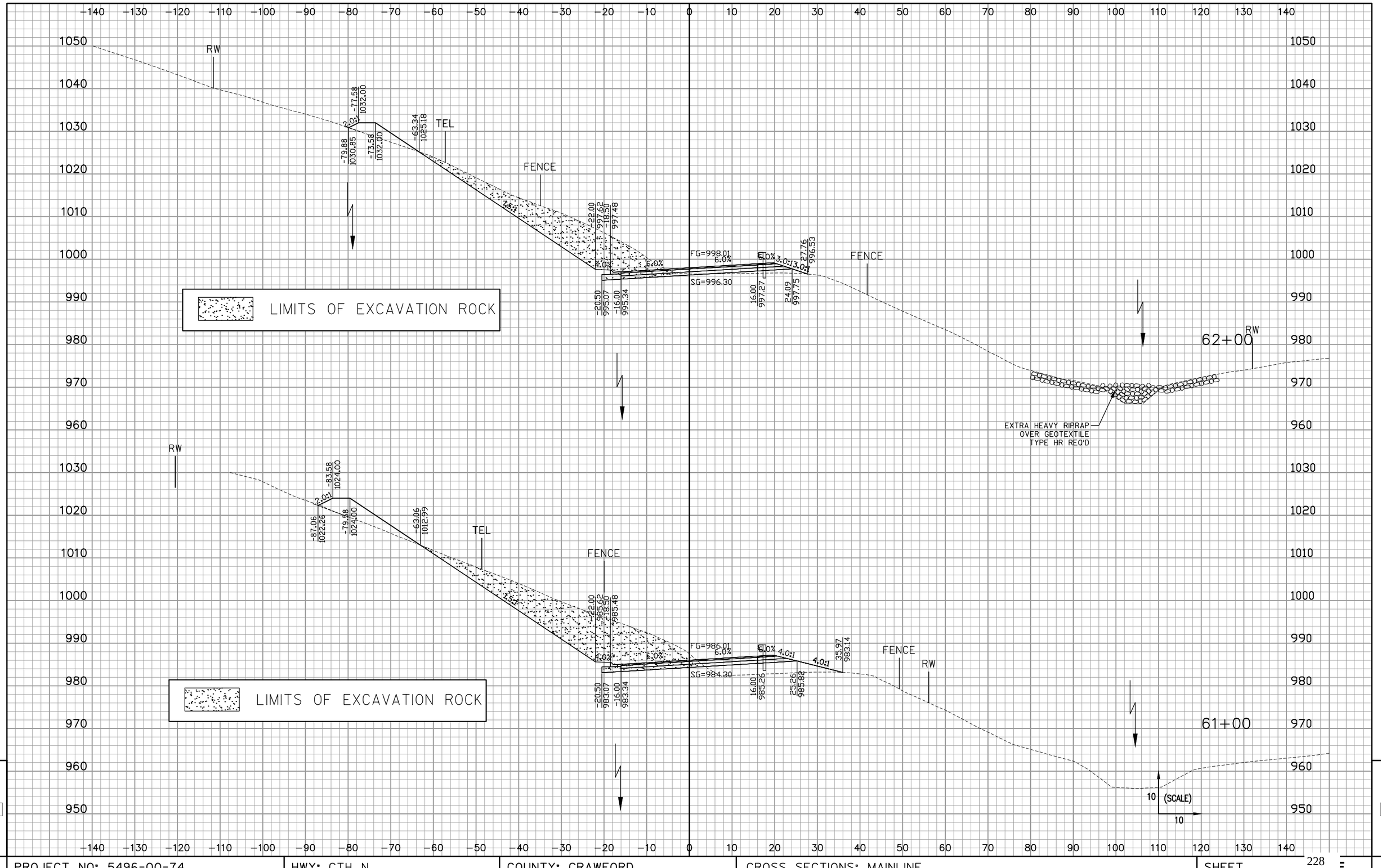
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (28)
PLOT DATE : 10/26/2018
PLOT TIME : 11:20:37 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (29)
PLOT DATE : 10/26/2018
PLOT TIME : 11:20:42 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



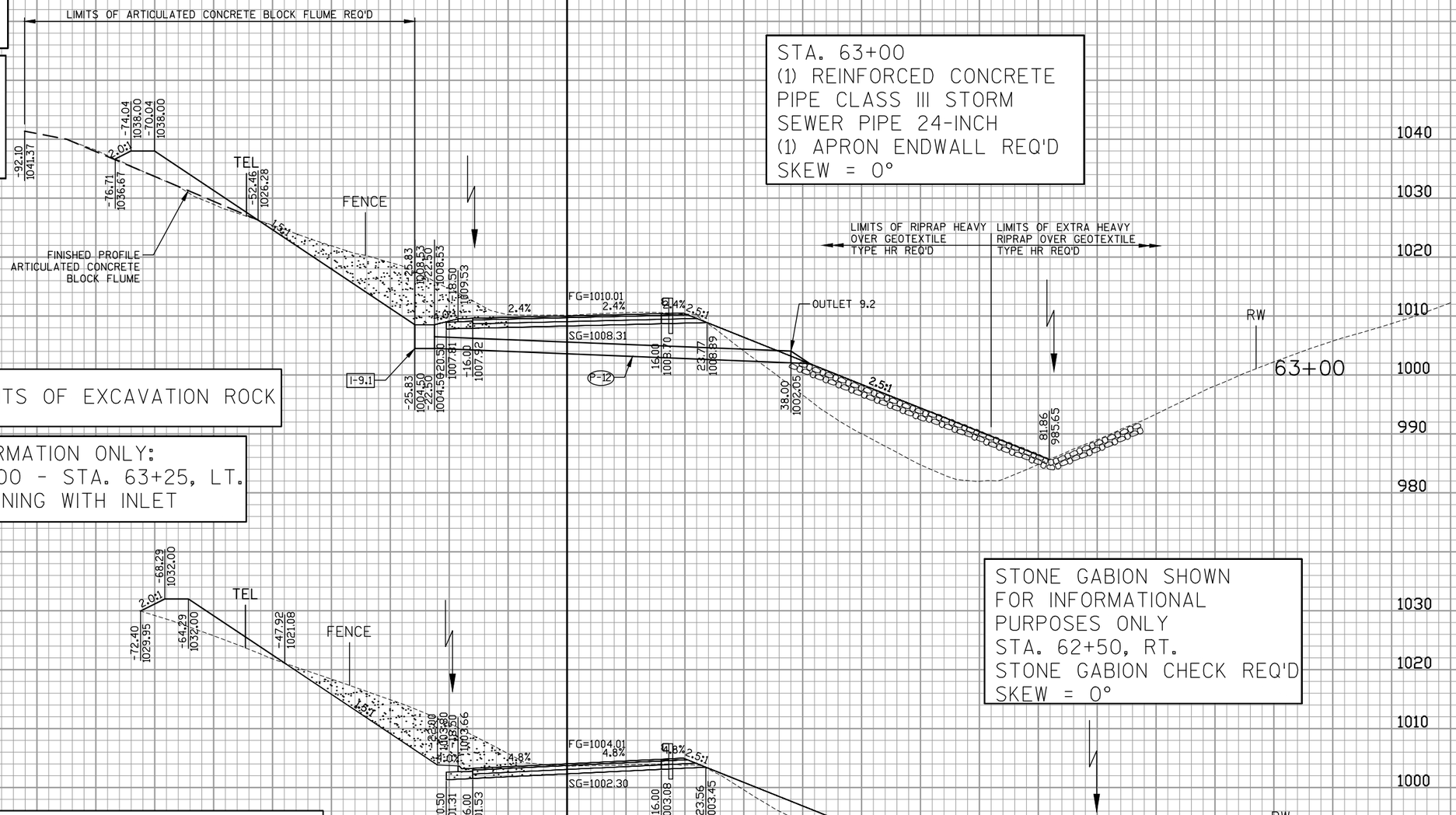
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (30)
PLOT DATE : 10/26/2018
PLOT TIME : 11:20:47 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'

END ARTICULATED
CONCRETE BLOCK FLUME
STA. 63+00, 27.5', LT.
EL. 1008.53

BEGIN ARTICULATED
CONCRETE BLOCK FLUME
STA. 63+00, 92.1', LT.
EL. 1041.37

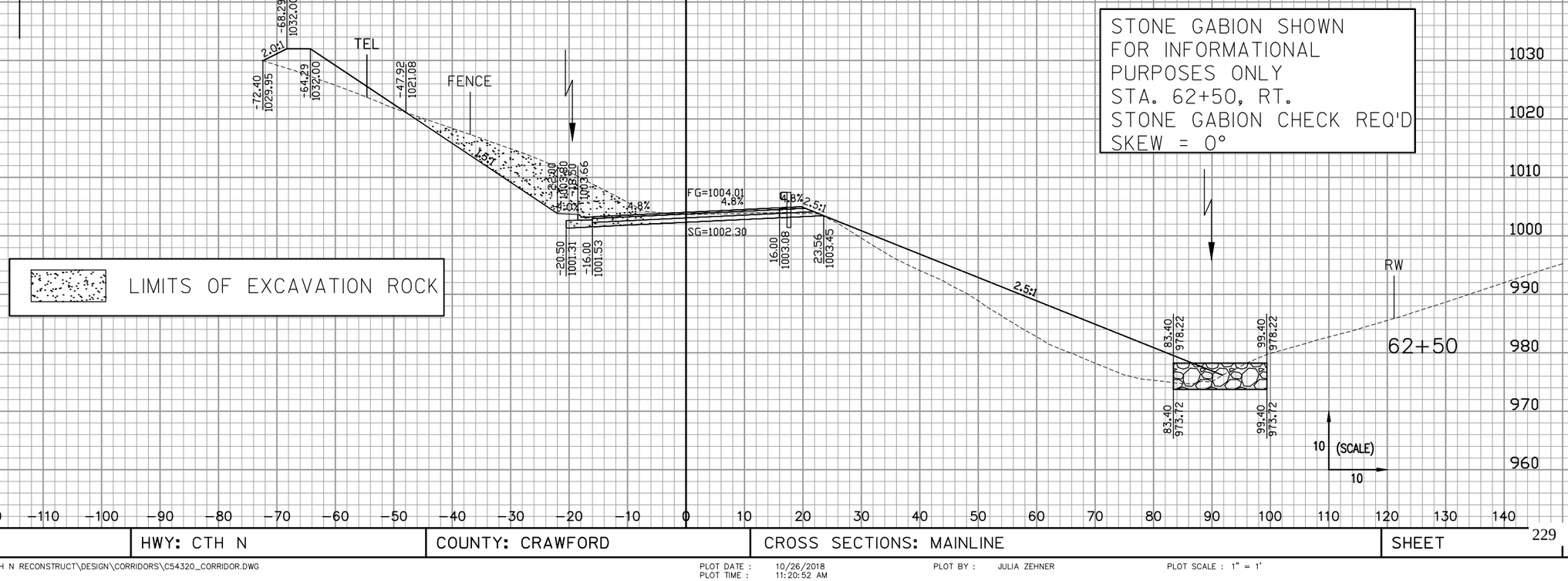
STA. 63+00
(1) REINFORCED CONCRETE
PIPE CLASS III STORM
SEWER PIPE 24-INCH
(1) APRON ENDWALL REQ'D
SKEW = 0°



LIMITS OF EXCAVATION ROCK

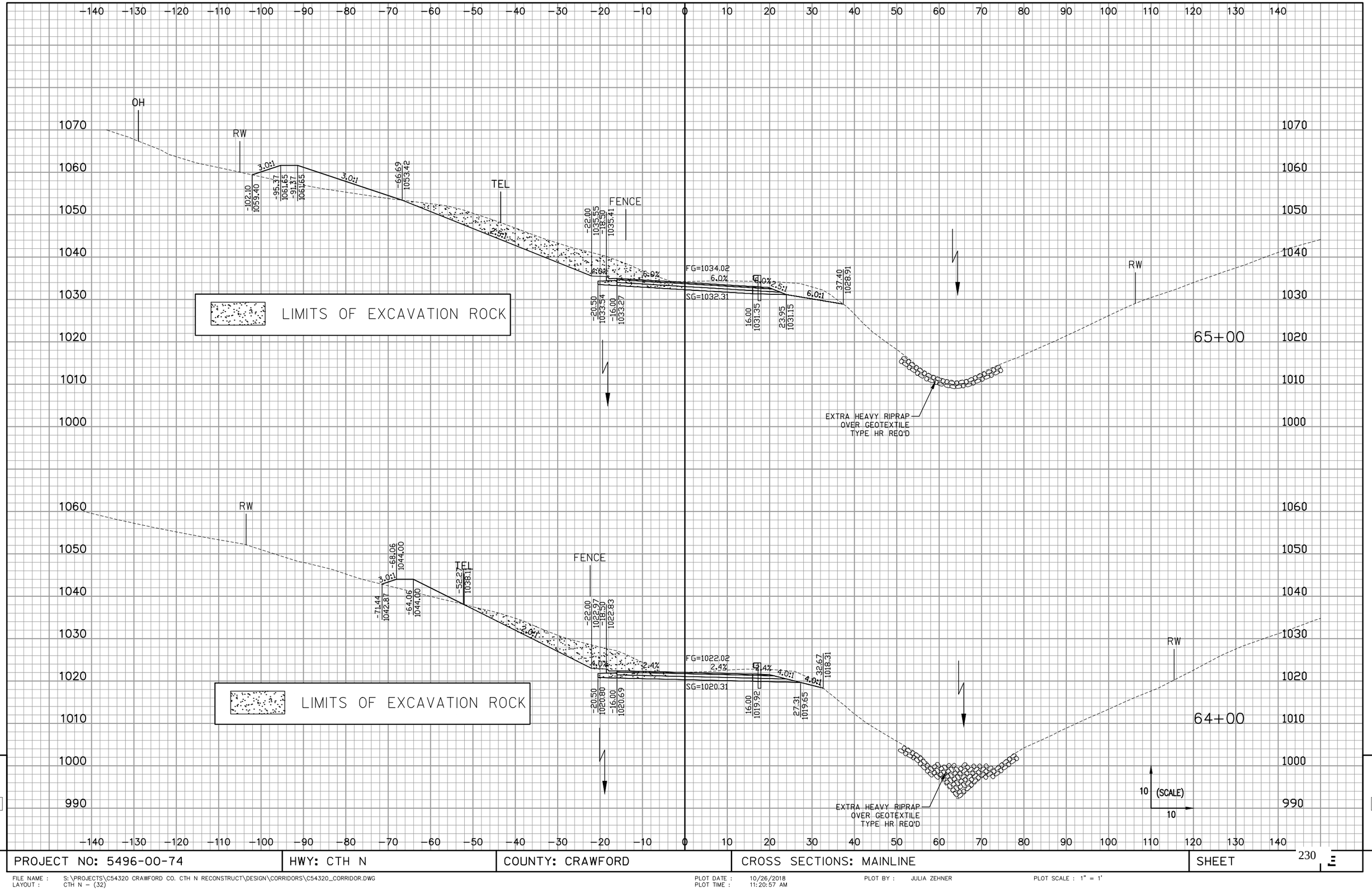
FOR INFORMATION ONLY:
STA. 63+00 - STA. 63+25, LT.
CURB OPENING WITH INLET

STONE GABION SHOWN
FOR INFORMATIONAL
PURPOSES ONLY
STA. 62+50, RT.
STONE GABION CHECK REQ'D
SKEW = 0°



LIMITS OF EXCAVATION ROCK

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (31)
PLOT DATE : 10/26/2018
PLOT TIME : 11:20:52 AM
PLOT BY : JULIA ZEHNER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (32)

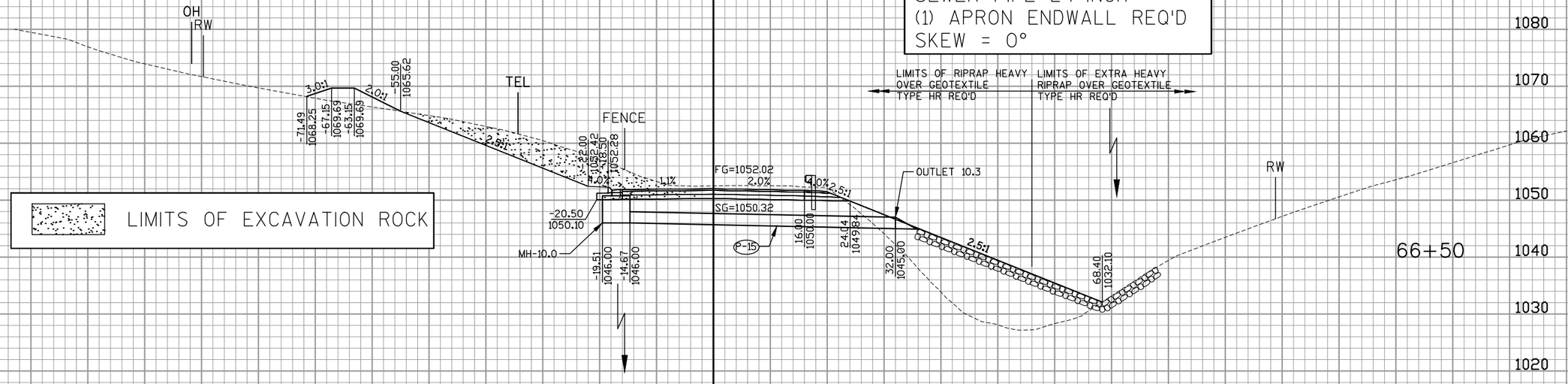
PLOT DATE : 10/26/2018
PLOT TIME : 11:20:57 AM

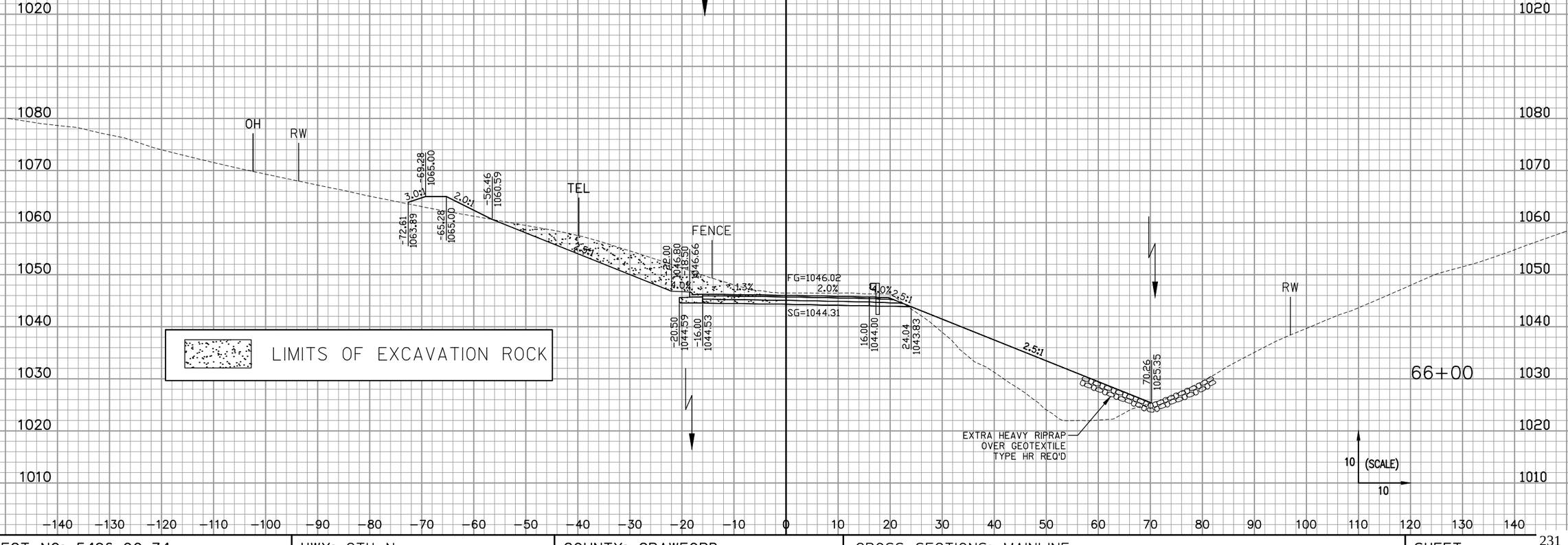
PLOT BY : JULIA ZEHNER

PLOT SCALE : 1" = 1'

FOR INFORMATION ONLY:
STA. 66+65 - STA. 66+90, LT.
CURB OPENING WITH INLET

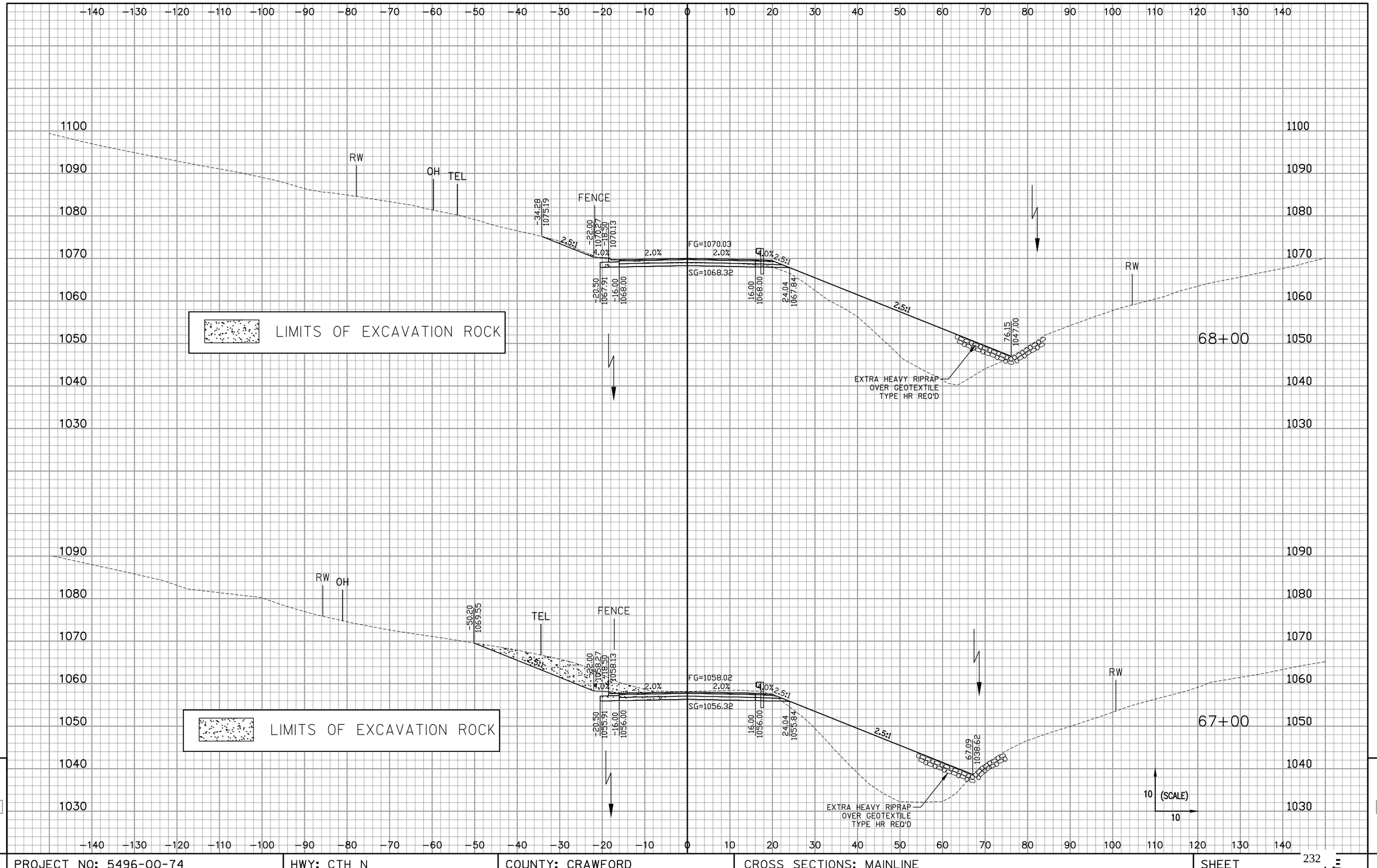
STA. 66+50
(1) REINFORCED CONCRETE PIPE CLASS III STORM SEWER PIPE 24-INCH
(1) APRON ENDWALL REQ'D
SKEW = 0°





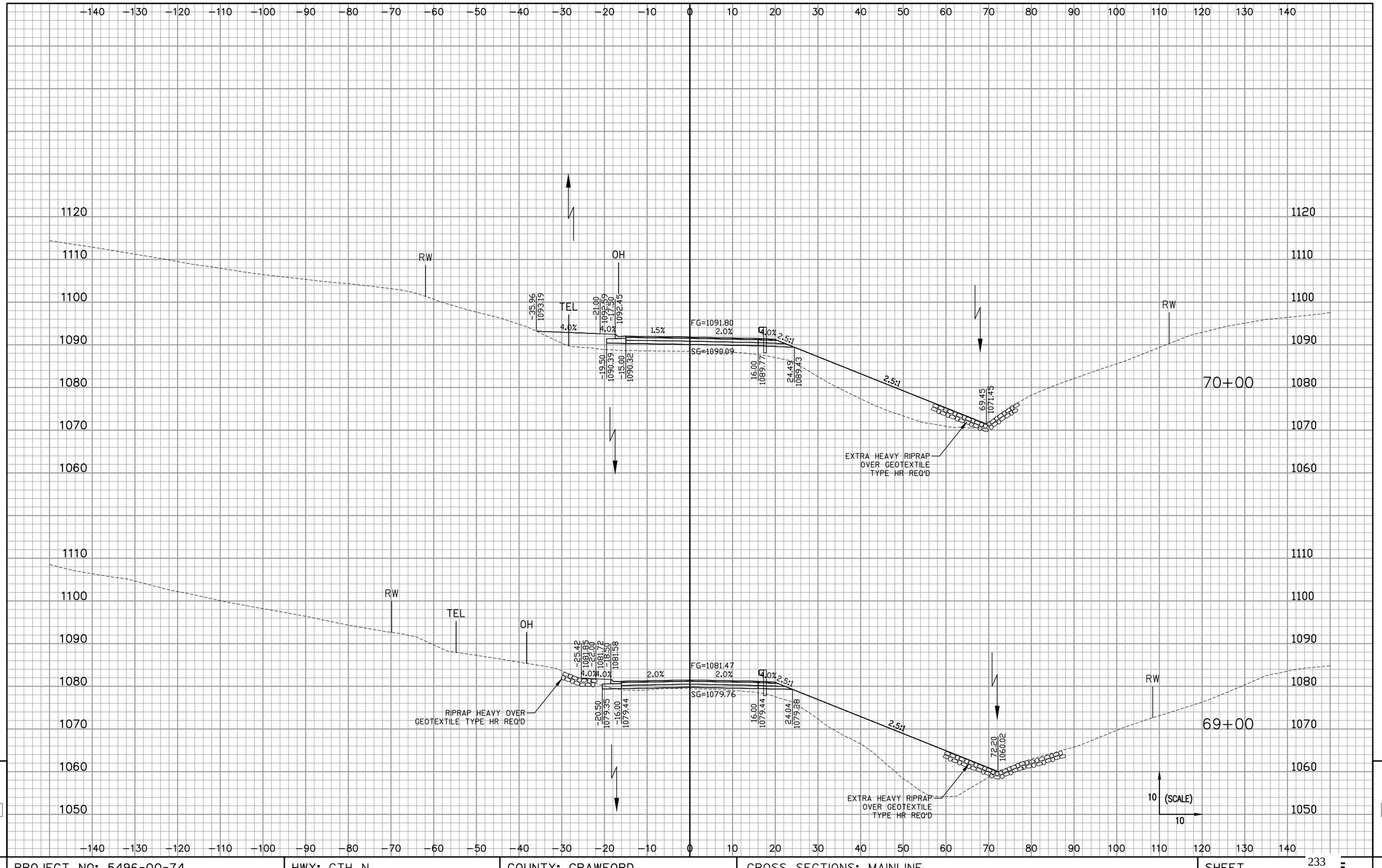
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N - (33)
PLOT DATE : 8/1/2018
PLOT TIME : 11:09:20 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



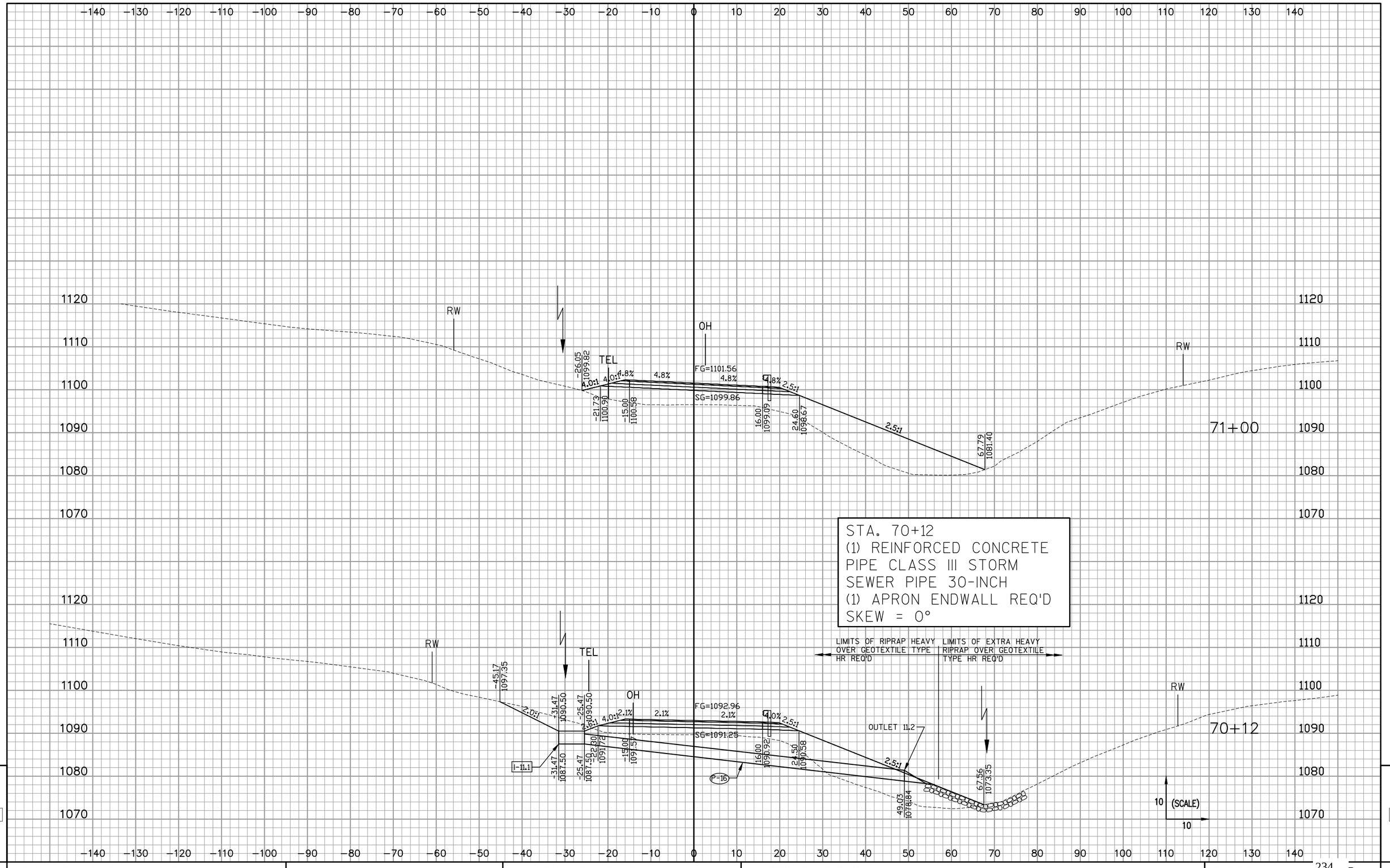
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (34)
PLOT DATE : 8/1/2018
PLOT TIME : 11:09:28 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

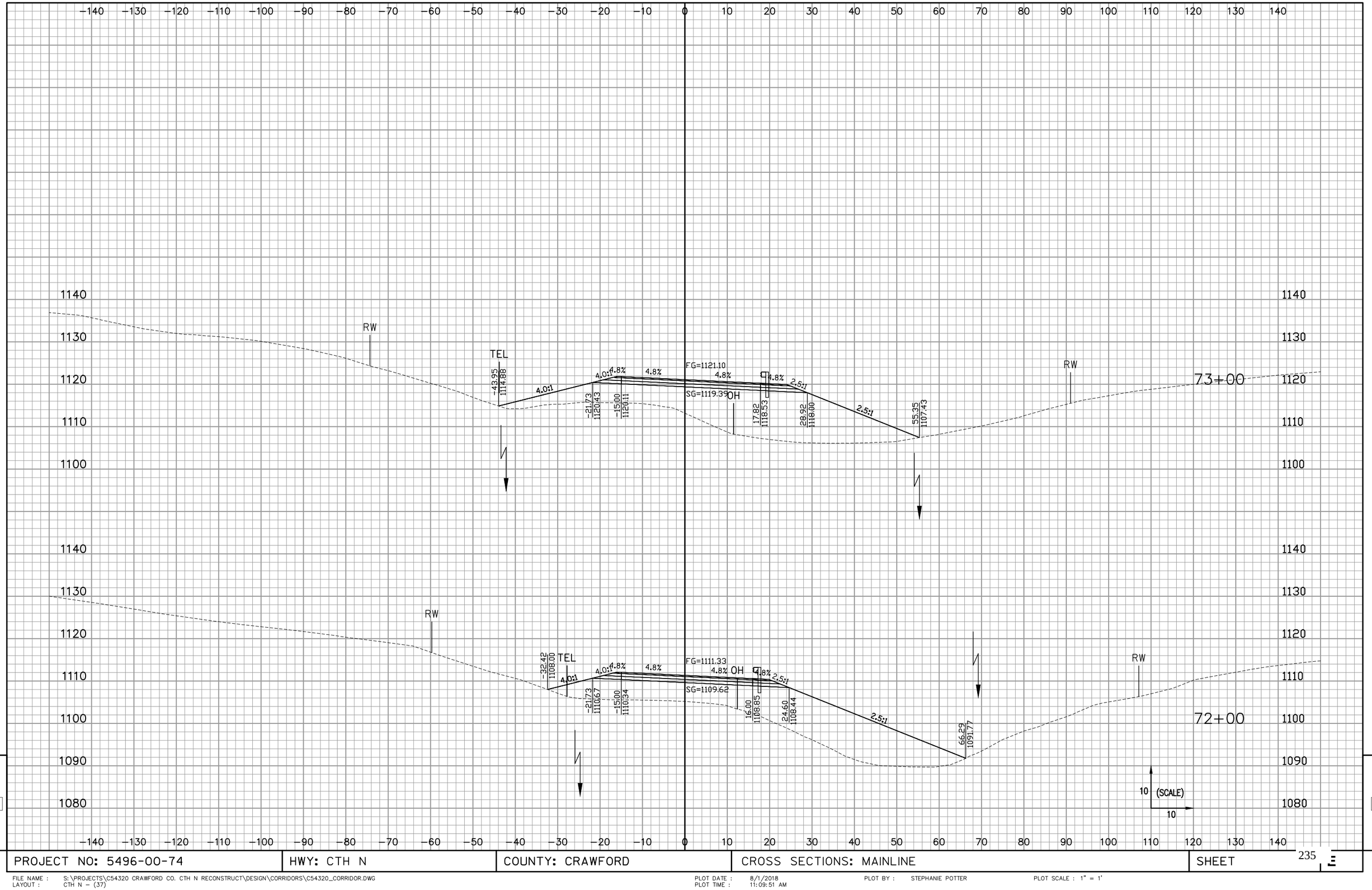
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (35)
PLOT DATE : 8/1/2018
PLOT TIME : 11:09:35 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



STA. 70+12
(1) REINFORCED CONCRETE PIPE CLASS III STORM SEWER PIPE 30-INCH
(1) APRON ENDWALL REQ'D
SKEW = 0°

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (36)
PLOT DATE : 8/1/2018
PLOT TIME : 11:09:43 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



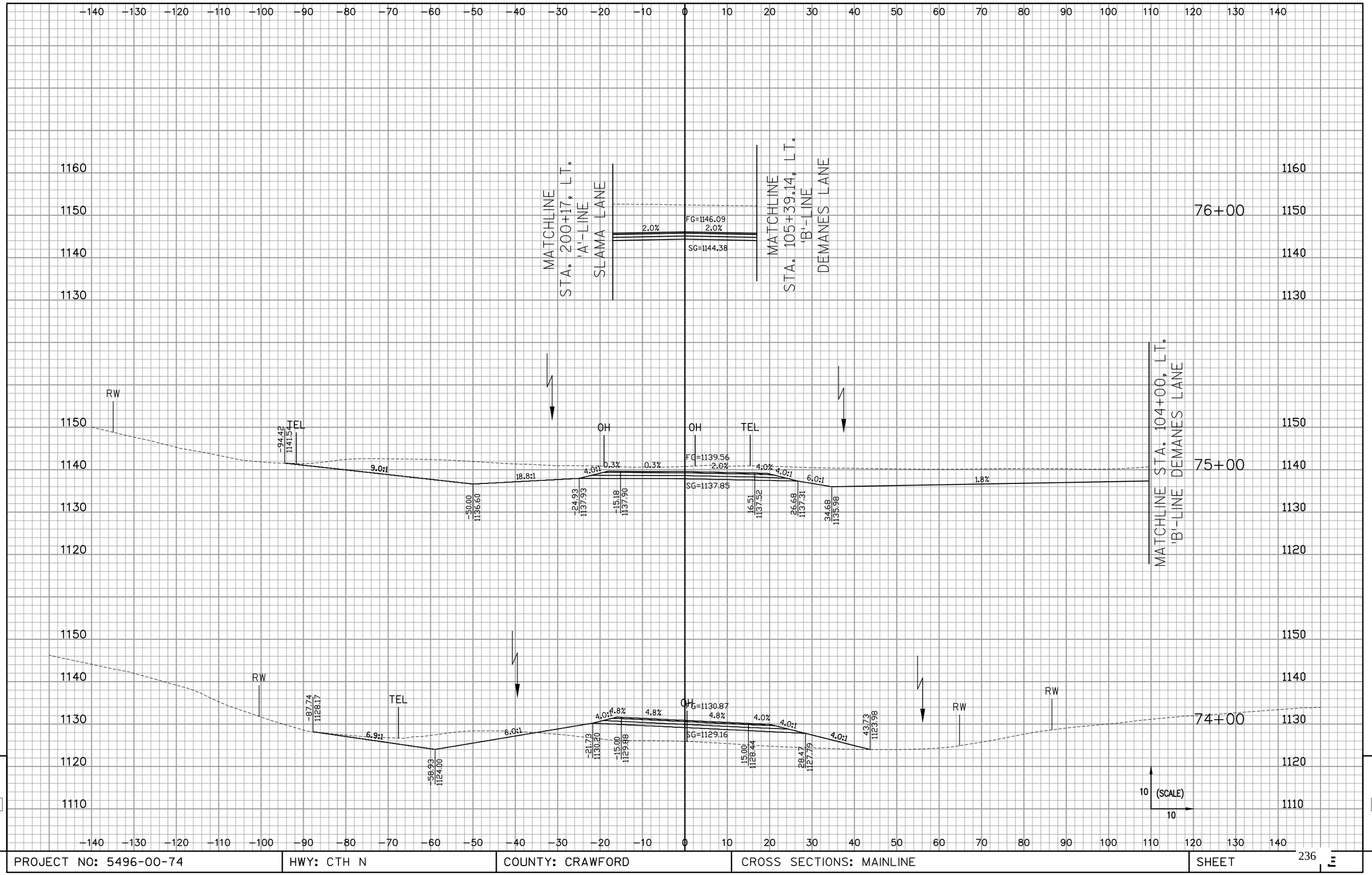
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (37)

PLOT DATE : 8/1/2018
PLOT TIME : 11:09:51 AM

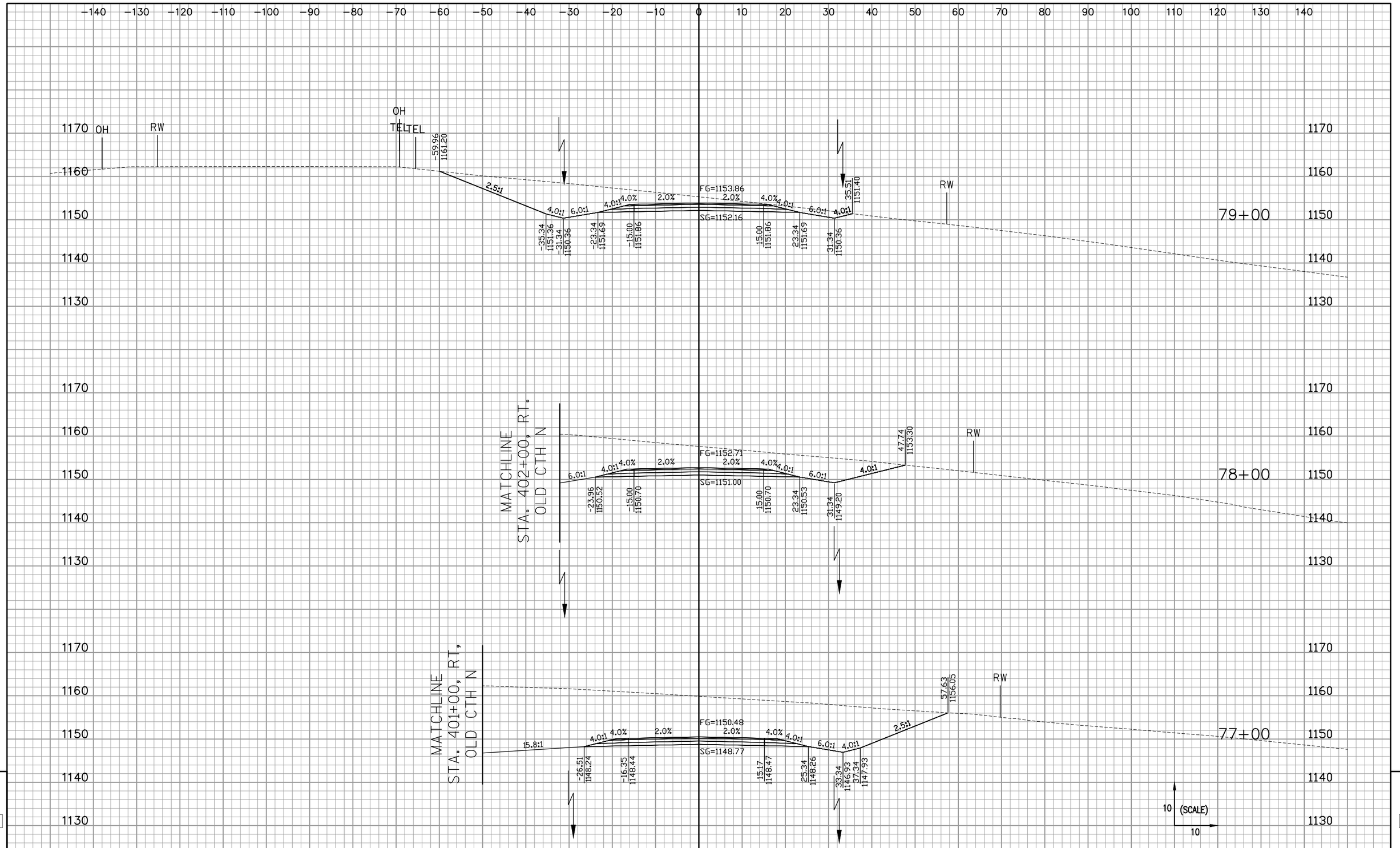
PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'



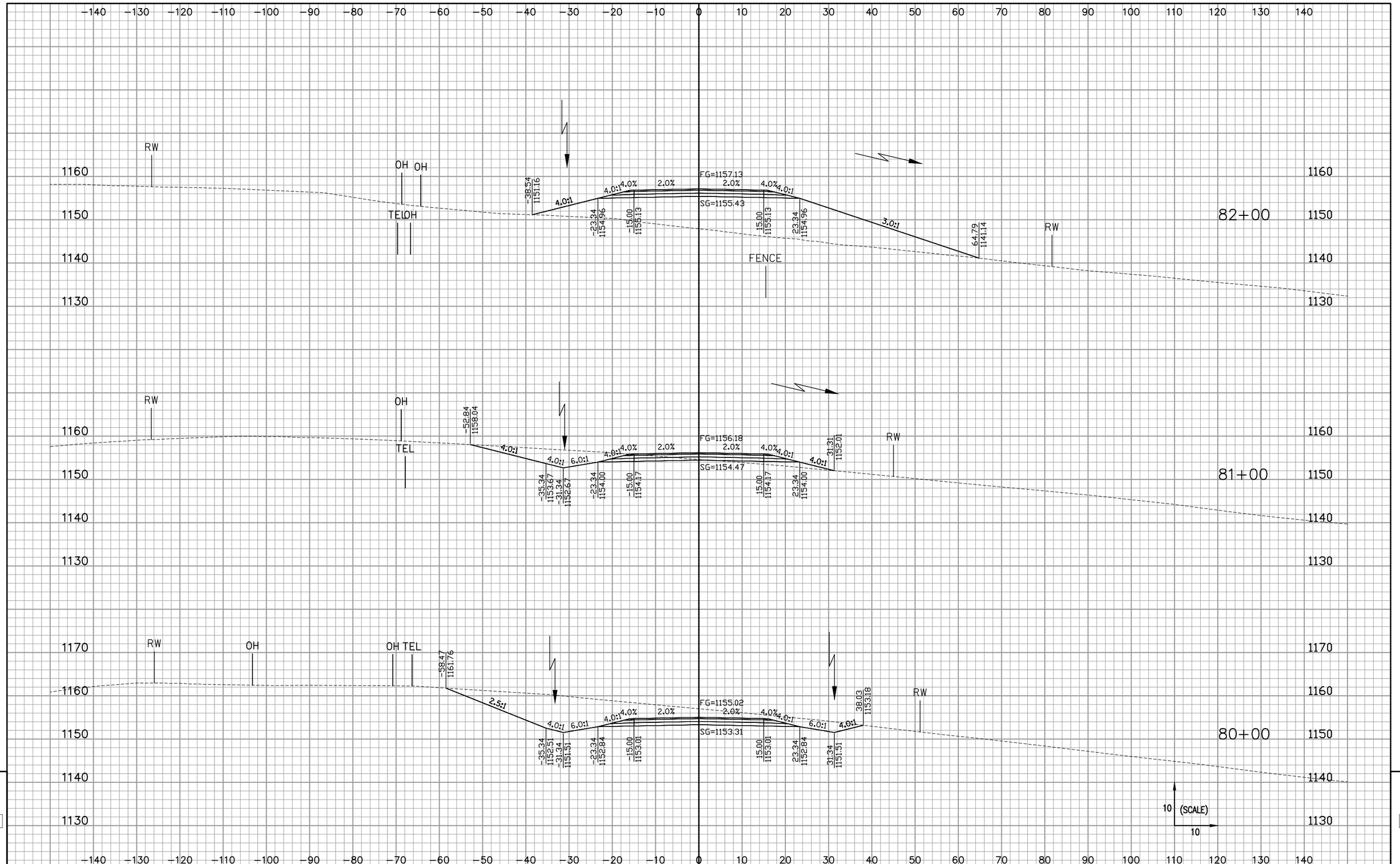
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (38)
PLOT DATE : 8/1/2018
PLOT TIME : 11:09:58 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (39)
PLOT DATE : 8/1/2018
PLOT TIME : 11:10:06 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



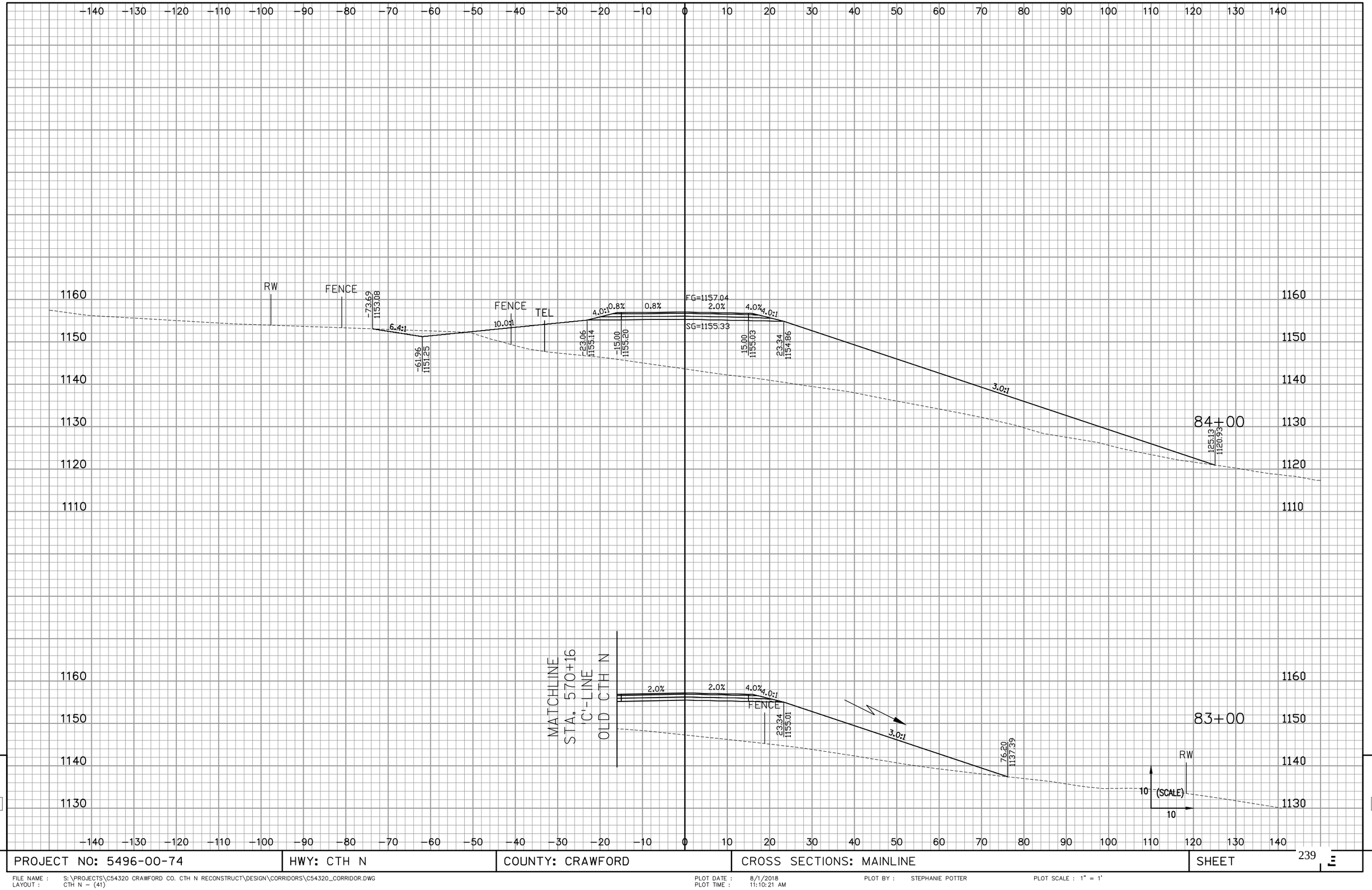
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (40)

PLOT DATE : 8/1/2018
PLOT TIME : 11:10:13 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'



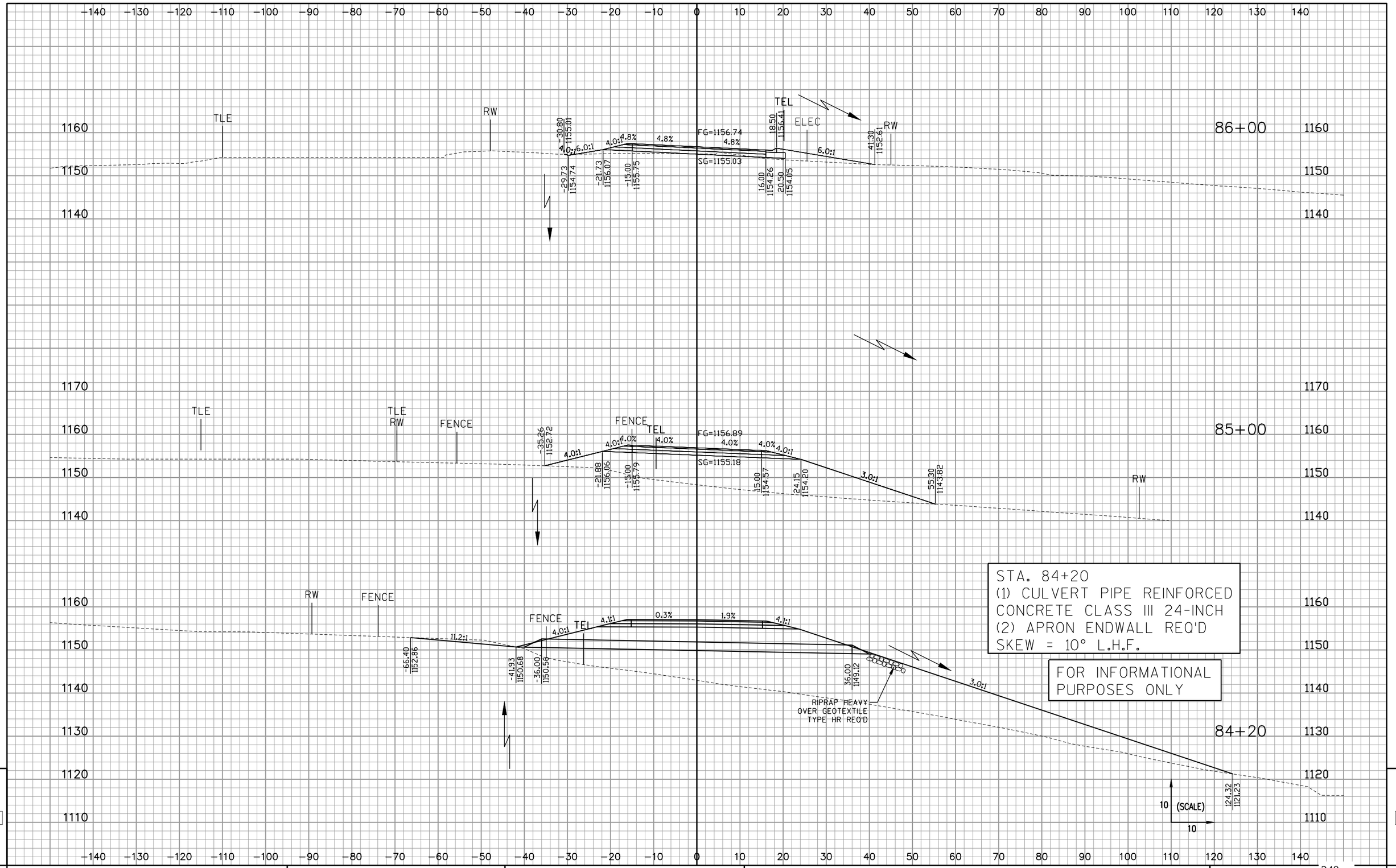
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (41)

PLOT DATE : 8/1/2018
PLOT TIME : 11:10:21 AM

PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'



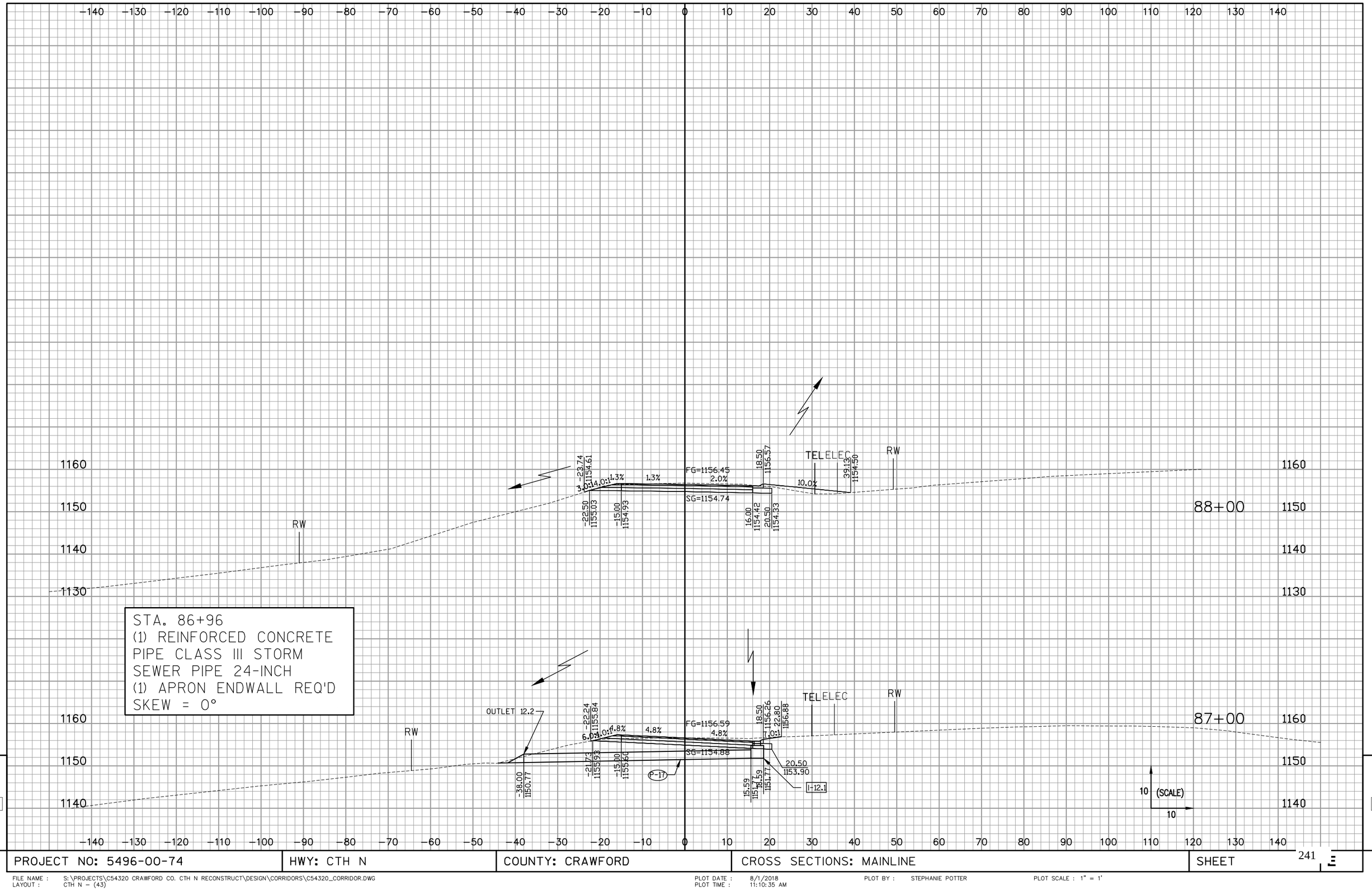
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET 240

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (42)

PLOT DATE : 10/25/2018
PLOT TIME : 3:45:00 PM

PLOT BY : JULIA ZEHNER

PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (43)
PLOT DATE : 8/1/2018
PLOT TIME : 11:10:35 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

END PROJECT
STA. 89+00
MATCH EXISTING

TEL
ELEC
RW
RW

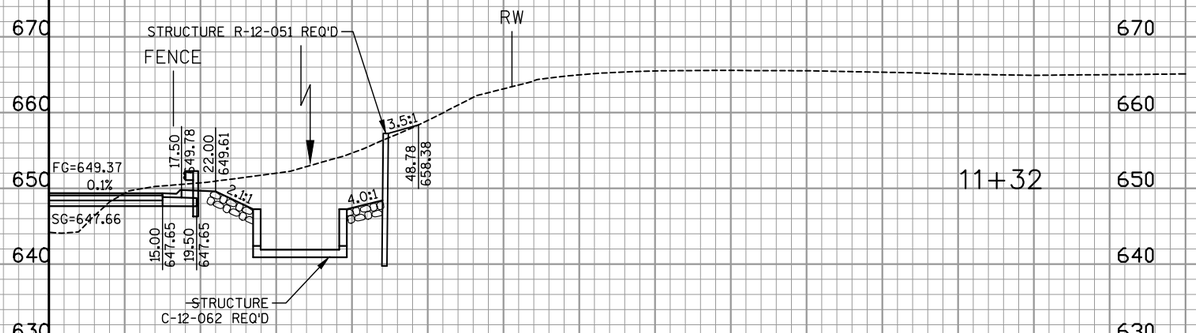
89+00

10 (SCALE) 10

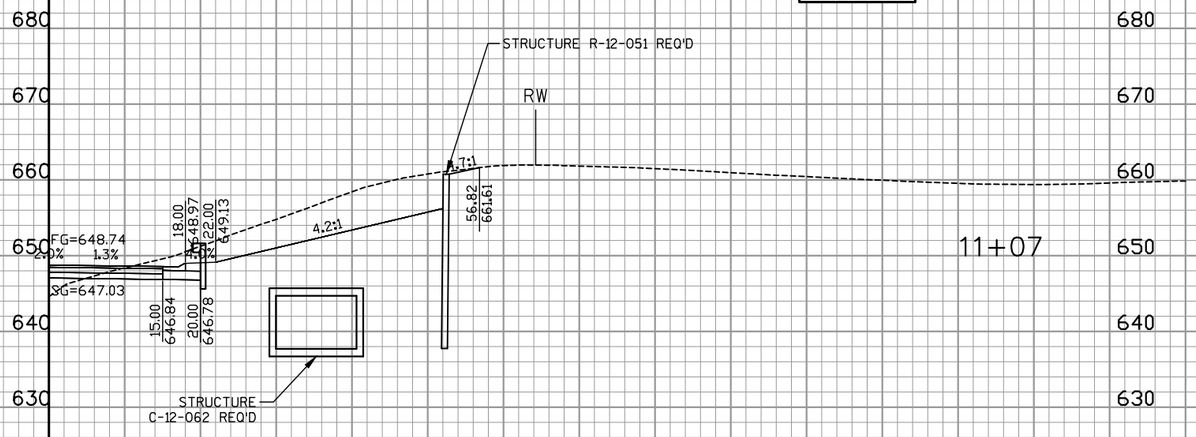
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CTH N – (44)
PLOT DATE : 8/1/2018
PLOT TIME : 11:10:43 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

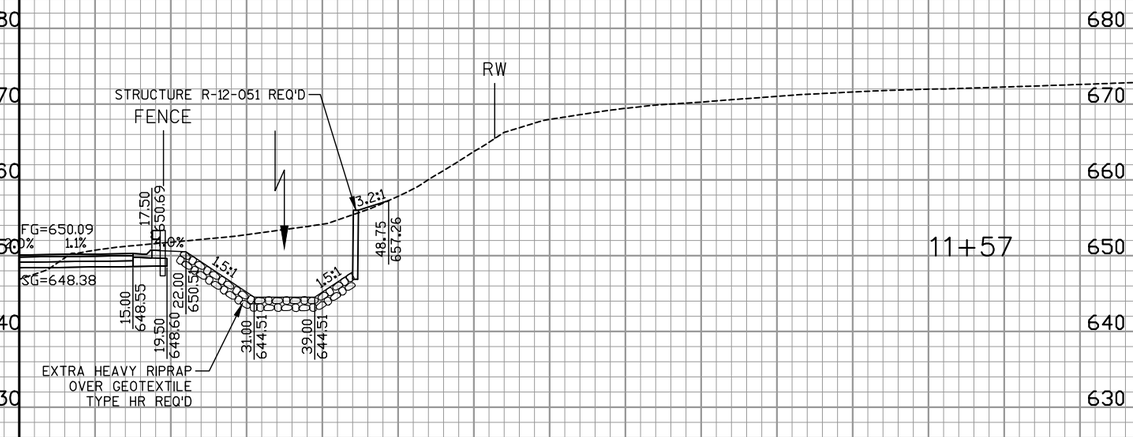
POST 5



POST 1



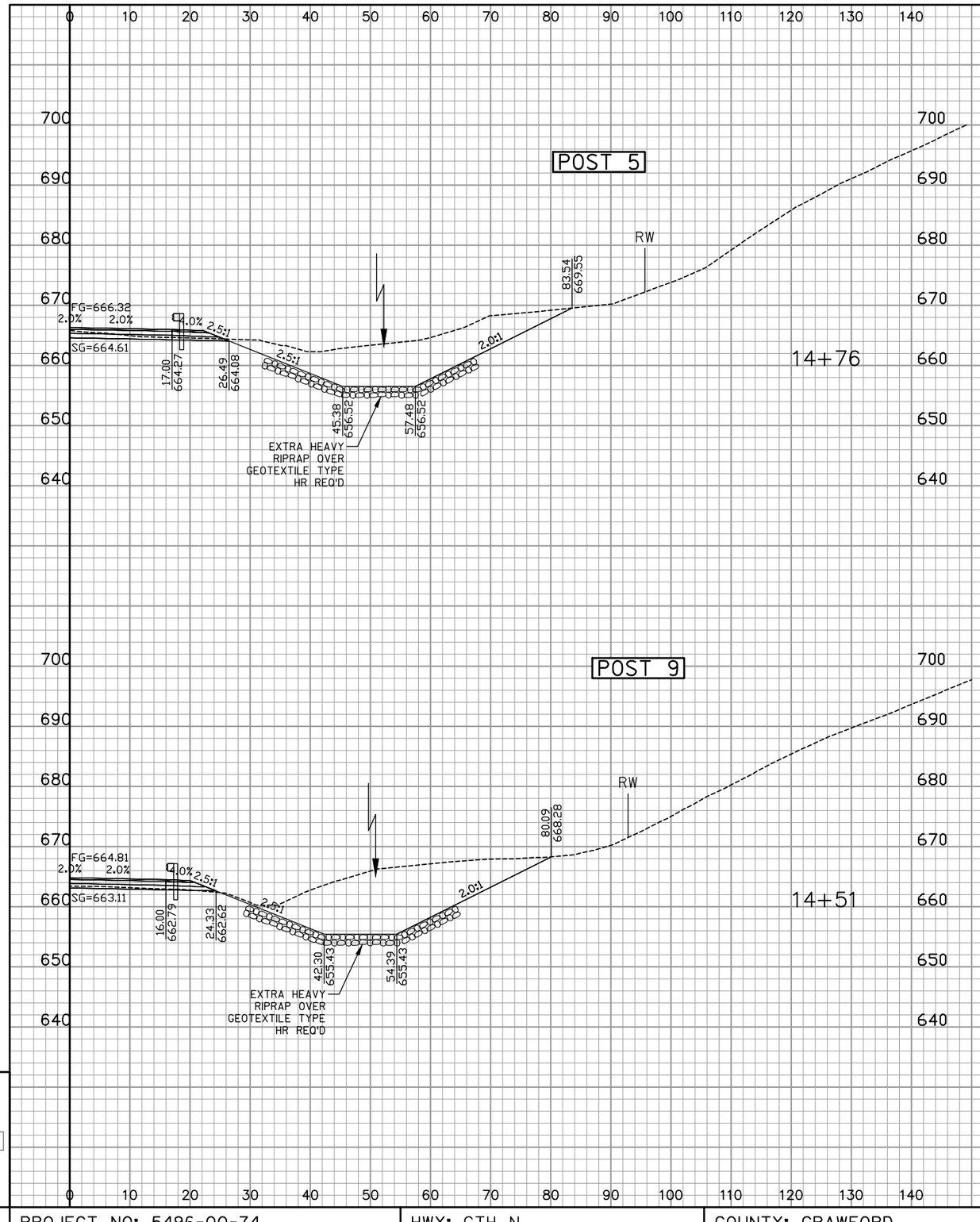
POST 9



NO END TAPER DUE TO CTHN/STH 35 INTERSECTION

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : EAT 1- (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:10:51 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



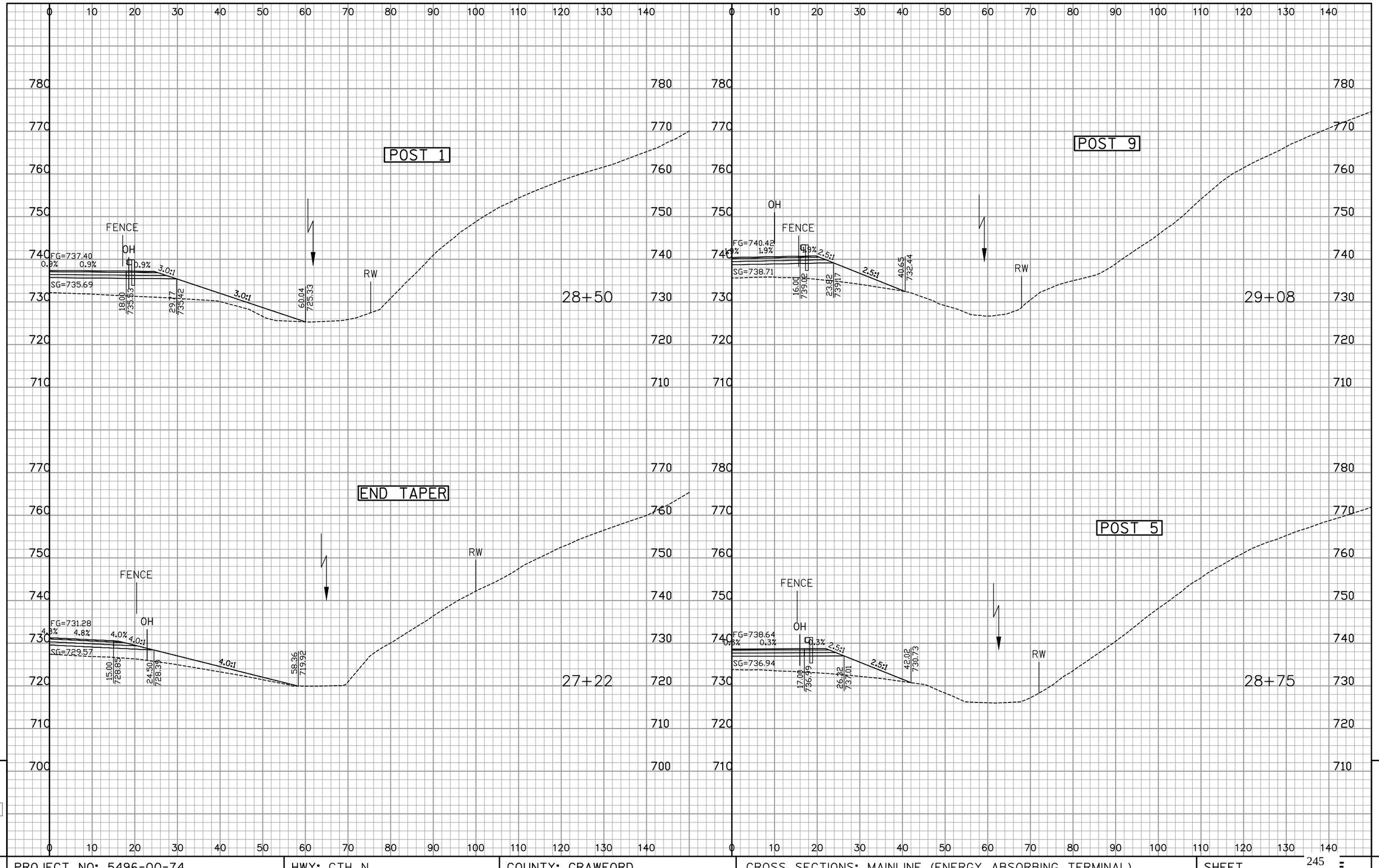
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET 244

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : EAT 2 - (1)

PLOT DATE : 8/1/2018
PLOT TIME : 11:10:59 AM

PLOT BY : STEPHANIE POTTER

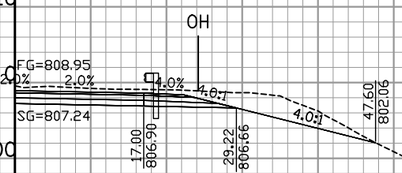
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET E

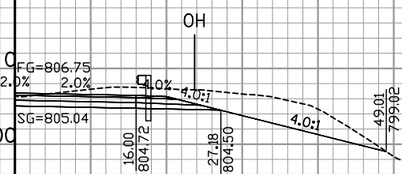
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : EAT 3- (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:11:10 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

POST 5



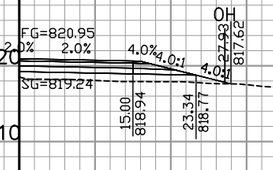
37+31

POST 9



37+06

END TAPER



38+83

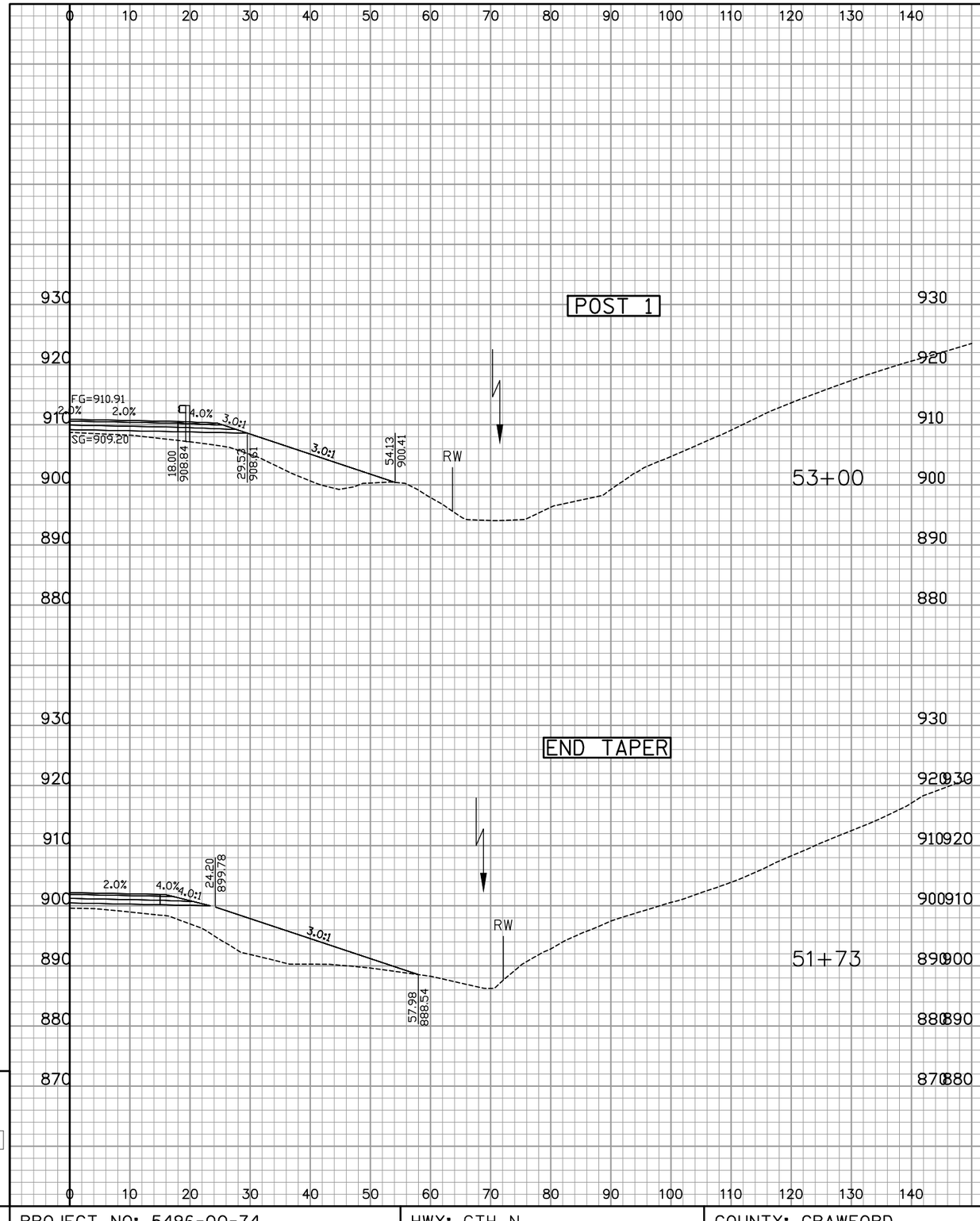
POST 1

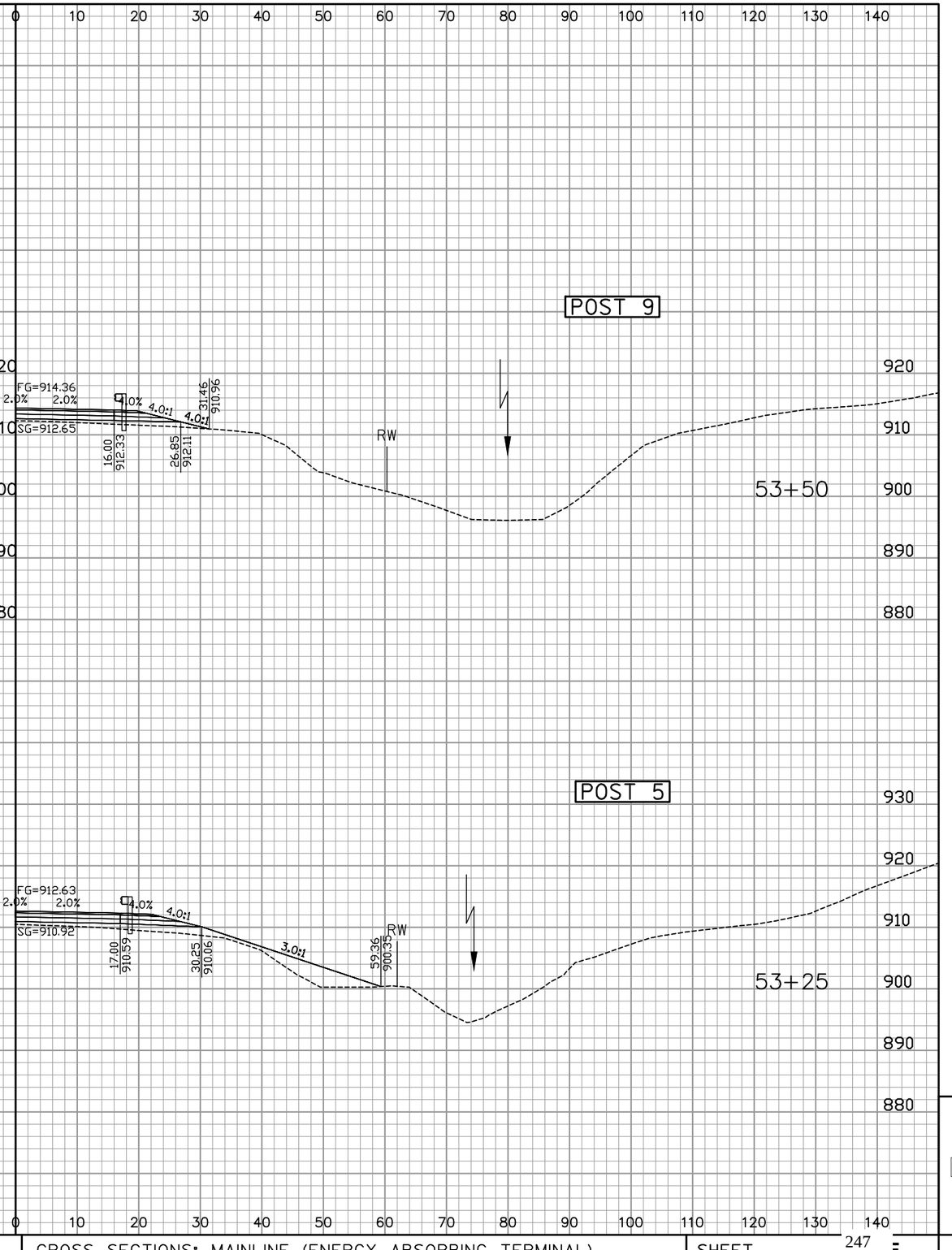


37+56

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET

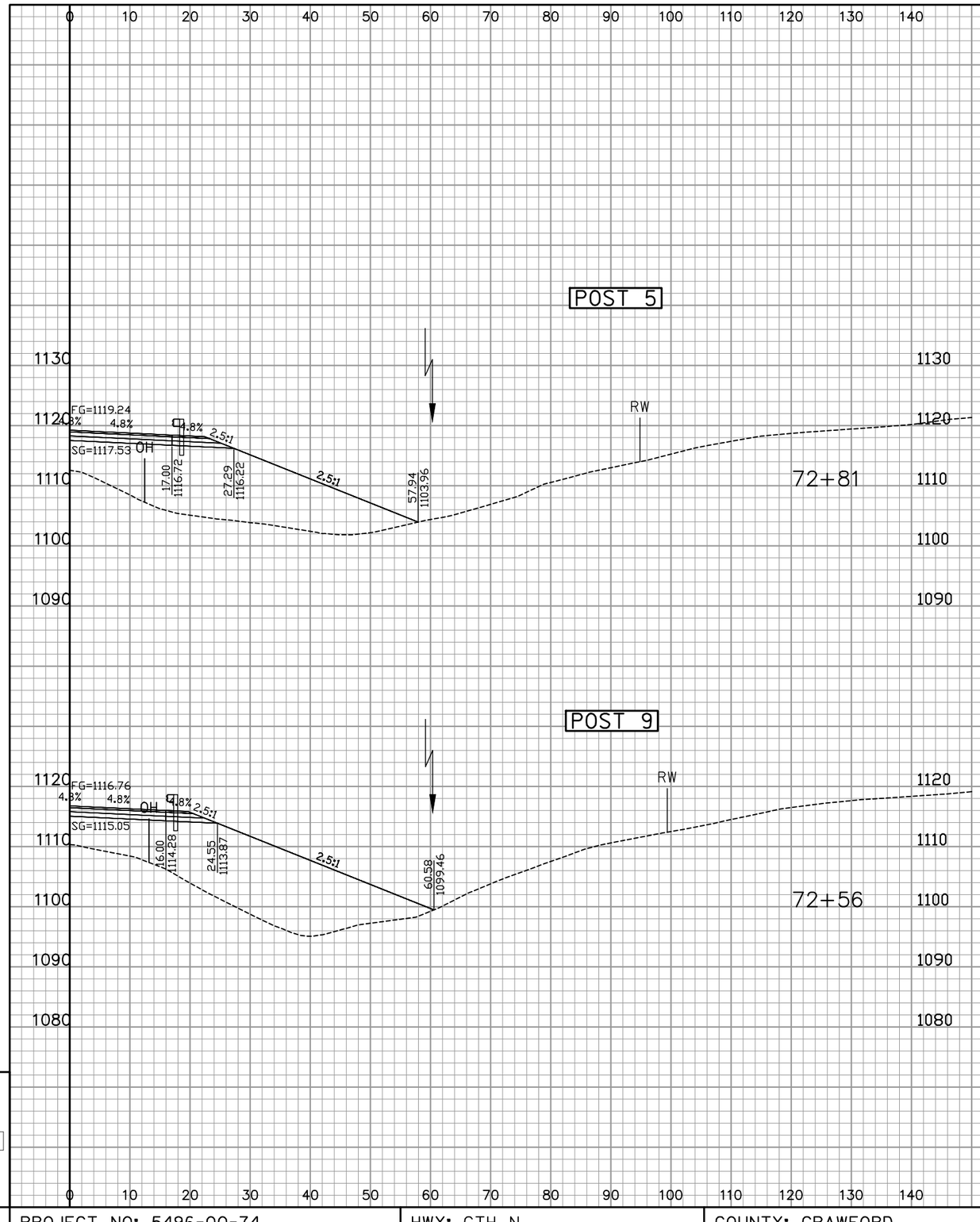
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : EAT 4 - (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:11:18 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

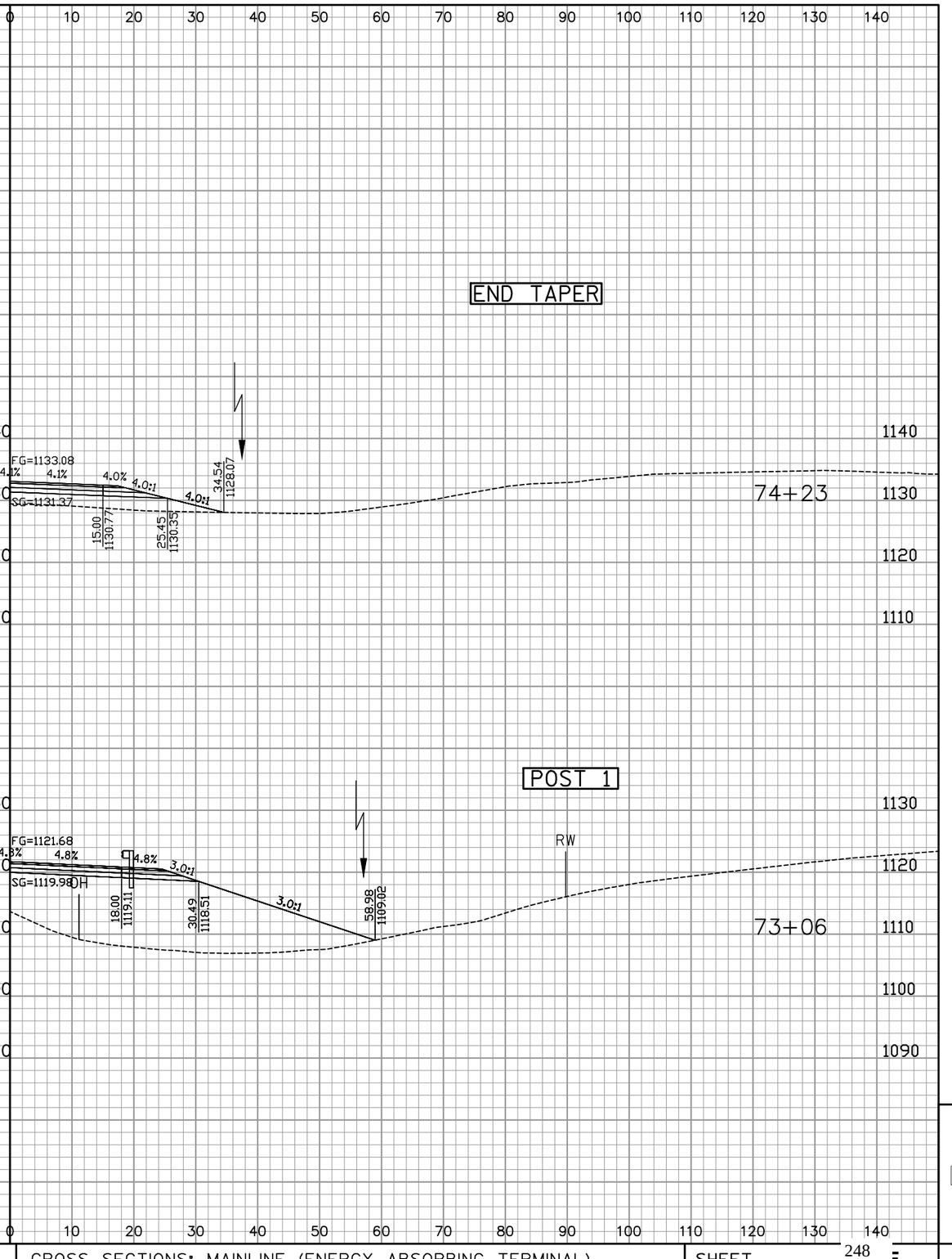




PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL)	SHEET

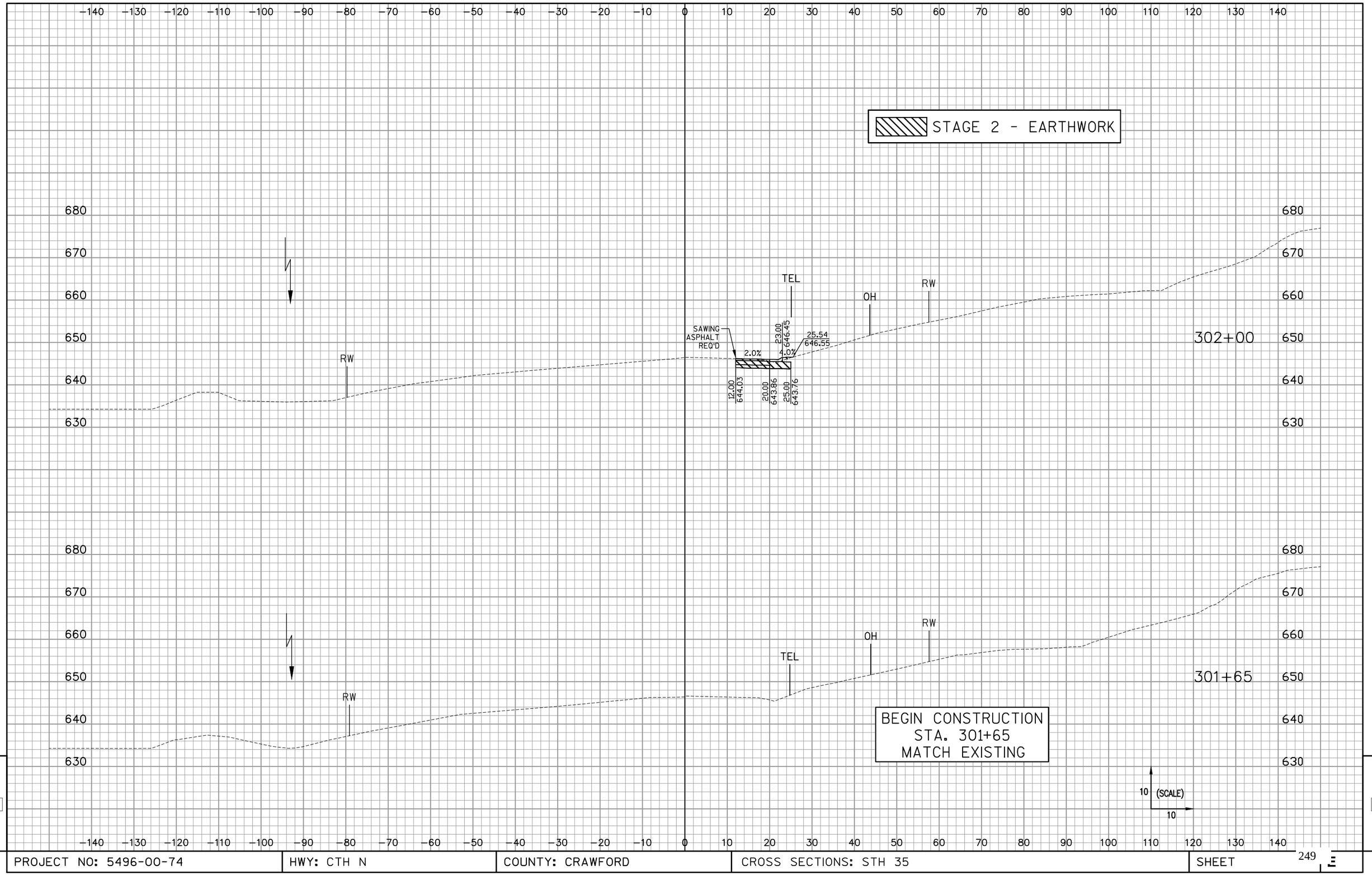
FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : EAT 5- (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:11:25 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'





PROJECT NO: 5496-00-74 | HWY: CTH N | COUNTY: CRAWFORD | CROSS SECTIONS: MAINLINE (ENERGY ABSORBING TERMINAL) | SHEET 248

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : EAT 6 - (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:11:33 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: STH 35	SHEET 249

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : STH 35 - (6)

PLOT DATE : 8/1/2018
PLOT TIME : 11:11:43 AM

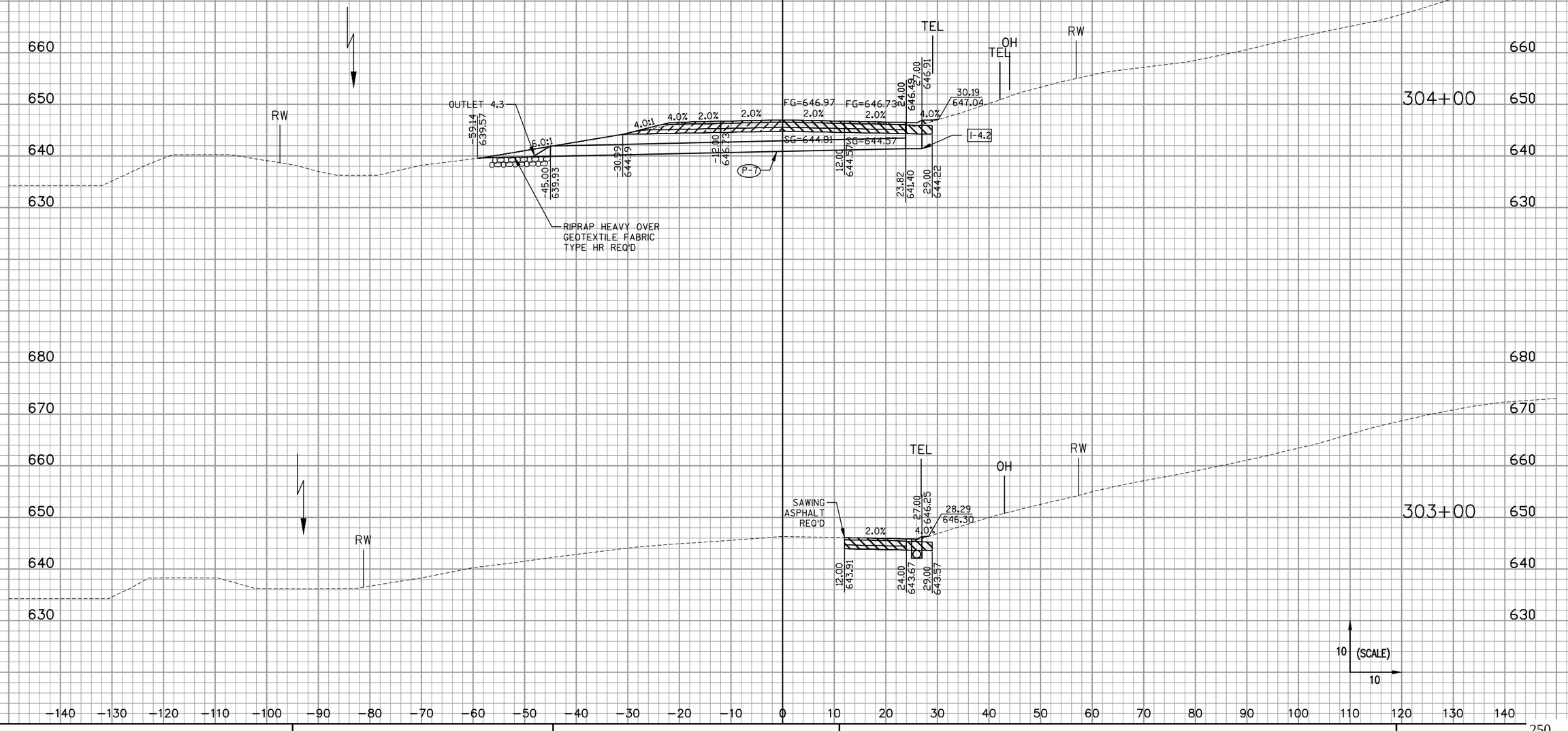
PLOT BY : STEPHANIE POTTER

PLOT SCALE : 1" = 1'

STAGE 1 - EARTHWORK

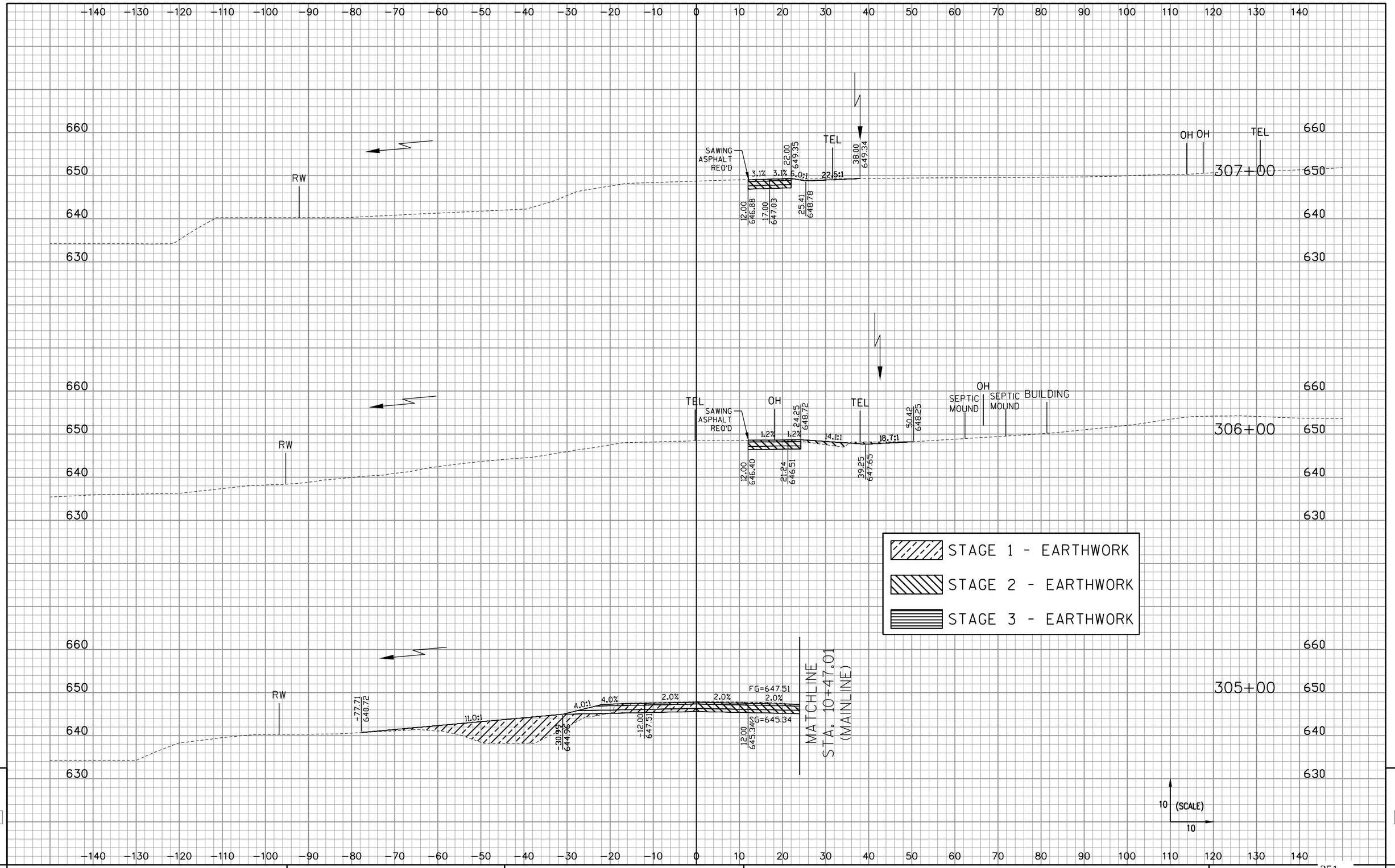
STAGE 2 - EARTHWORK

STA. 304+00
(1) REINFORCED CONCRETE PIPE CLASS III STORM SEWER PIPE 24-INCH
(1) APRON ENDWALL REQ'D
SKEW = 0°



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: STH 35	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : STH 35 - (7)
PLOT DATE : 8/2/2018
PLOT TIME : 10:42:58 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: STH 35	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : STH 35 - (8)

PLOT DATE : 10/25/2018
PLOT TIME : 3:45:48 PM

PLOT BY : JULIA ZEHNER

PLOT SCALE : 1" = 1'

END CONSTRUCTION
STA. 307+31
MATCH EXISTING

RW
TEL
RW
OH
307+31

10 (SCALE) 10

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: STH 35	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : STH 35 - (9)
PLOT DATE : 8/1/2018
PLOT TIME : 11:12:08 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

STA. 102+00
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALL REQ'D
SKEW = 0°

RW
-33.98
1131.47
9.4:1
OH
RIPRAP HEAVY OVER GEOTEXTILE TYPE HR REQ'D
-32.00
1135.88
4.0:1 4.0% 2.0%
FG=1141.60
-1.3% 1.3%
4.0:1
-18.26
1139.52
-9.00
1139.71
SG=1139.89
9.00
1139.77
18.21
1139.65
6.0:1
4.0:1
20.00
1137.66
30.42
1138.45
28.42
1137.95
2.5:1
55.91
1148.64
RW
102+00

RW
-30.97
1136.44
5.7:1
OH
4.0:1 4.0% 2.0%
FG=1140.74
2.0% 4.0%
4.0:1
SG=1139.04
-18.26
1138.67
-9.00
1138.86
9.00
1138.86
18.26
1138.67
6.0:1
62.70
1146.08
RW
101+00

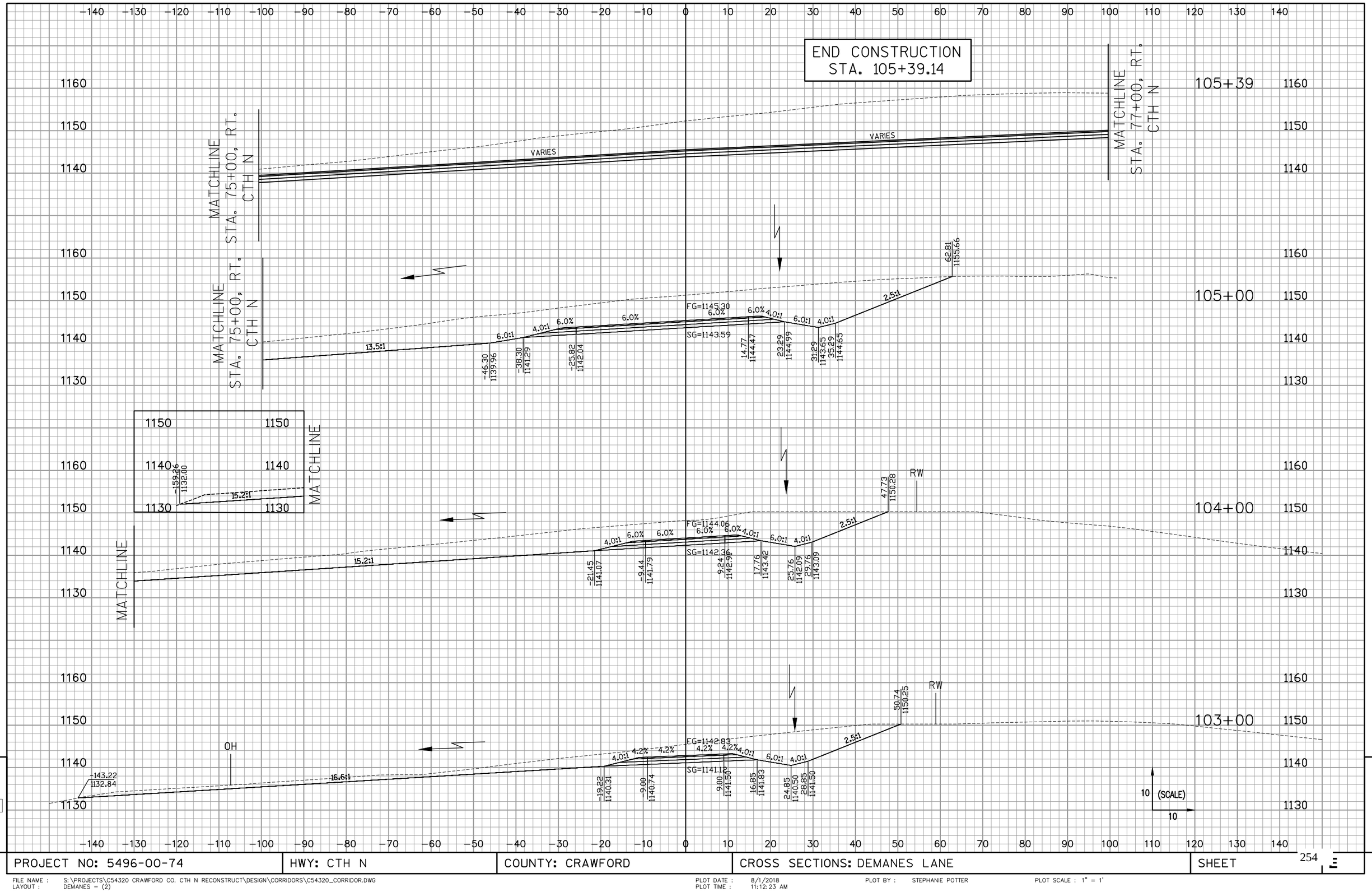
RW
RW
OH
RW
100+00

BEGIN CONSTRUCTION
STA. 100+00
MATCH EXISTING

10 (SCALE) 10

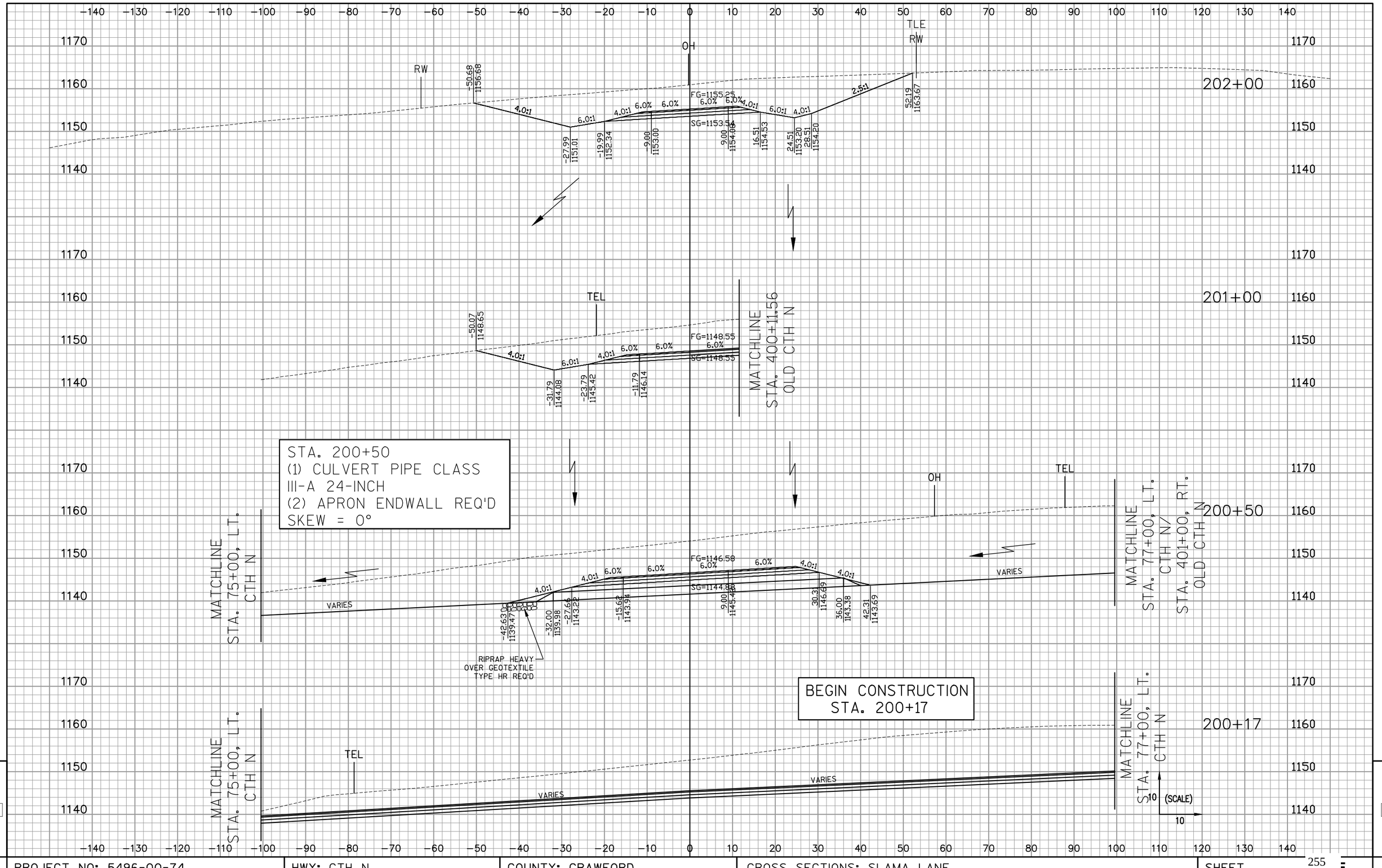
PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: DEMANES LANE	SHEET 253

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : DEMANES - (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:12:16 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: DEMANES LANE	SHEET 254

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : DEMANES - (2)
PLOT DATE : 8/1/2018
PLOT TIME : 11:12:23 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: SLAMA LANE	SHEET 255

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : SLAMA LN- (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:12:26 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

END CONSTRUCTION
STA. 205+00
MATCH EXISTING

205+00

RW
OH
FENCE

204+00

RW
OH
FENCE
RW

-34.95
1164.12
4.0:1
6.0:1
4.0%
4.0%
2.0%
FG=1165.35
1.4%
1.4%
4.0:1
6.0:1
4.0:1
42.50
1166.13
SG=1163.64
-26.26
1161.94
-18.26
1163.28
-9.00
1163.46
9.00
1163.52
18.23
1163.40
26.23
1162.06

203+00

RW
OH
OH
FENCE
RW

-36.36
1160.83
4.0:1
6.0:1
4.0:1
4.2%
4.2%
FG=1162.38
4.2%
4.2%
4.0:1
6.0:1
4.0:1
42.05
1164.34
SG=1160.67
-27.20
1158.54
-19.20
1159.87
-9.00
1160.30
9.00
1161.05
16.86
1161.37
24.86
1160.04

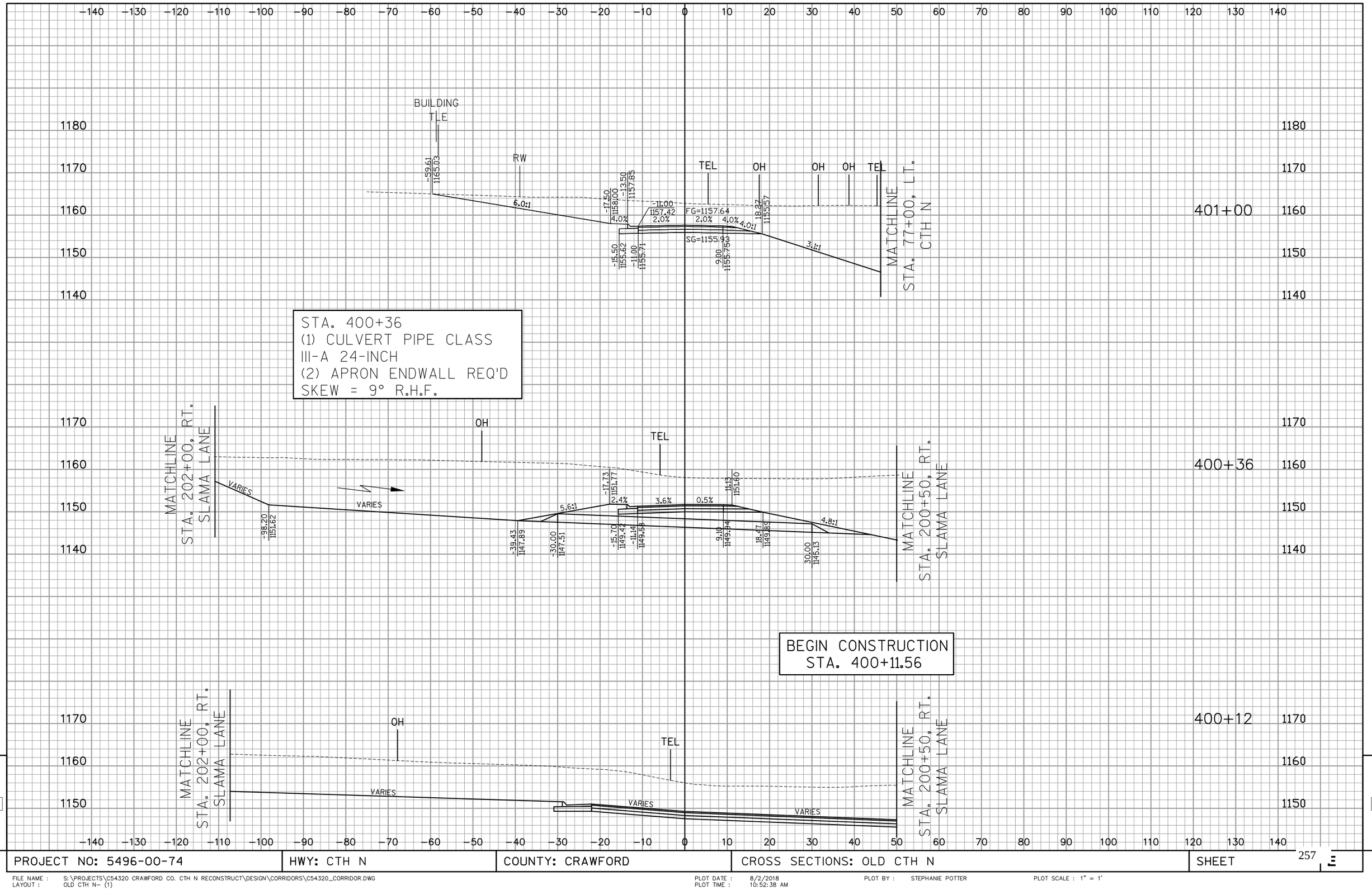
1170
1160
1150
1140

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

10 (SCALE) 10

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: SLAMA LANE	SHEET 256

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : SLAMA LN- (2)
PLOT DATE : 8/1/2018
PLOT TIME : 11:12:34 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'


BUILDING TLE
RW
TEL
OH
OH
OH
TEL
MATCHLINE STA. 77+00, LT. CTH N
401+00
59.61 1165.03
6.0:1
17.50 1158.00
4.0%
13.50 1157.85
11.00 1157.42
2.0%
FG=1157.64
2.0%
4.0%
4.0:1
18.27 1155.57
SG=1155.93
3.1:1
15.50 1155.62
11.00 1155.71
9.00 1155.753
STA. 400+36
MATCHLINE STA. 202+00, RT. SLAMA LANE
MATCHLINE STA. 200+50, RT. SLAMA LANE
VARIES
98.20 1151.62
5.6:1
17.73 1151.77
2.4%
3.6%
0.5%
11.13 1151.60
4.8:1
39.43 1147.89
30.00 1147.51
15.70 1149.42
11.14 1149.58
9.10 1149.54
18.47 1149.89
30.00 1146.13
BEGIN CONSTRUCTION
STA. 400+11.56
STA. 400+12
VARIES
VARIES
VARIES
VARIES
STA. 400+36
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALL REQ'D
SKEW = 9° R.H.F.
1180
1170
1160
1150
1140
−140 −130 −120 −110 −100 −90 −80 −70 −60 −50 −40 −30 −20 −10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

END CONSTRUCTION
STA. 402+75
MATCH EXISTING

RW

MATCHLINE
STA. 78+75, LT.
CTH N

402+75

TLE RW

-22.83
1164.26

-13.50
1163.21

-11.00
1162.79

FG=1163.01

18.27
1160.93

TEL
OH TEL

6.0:1 4.0% 2.0% 2.0% 4.0% 4.0:1

SG=1161.30

-15.50
1160.99

-11.00
1161.08

9.00
1161.12

3.2:1

52.59
1150.19

4.0:1

402+00

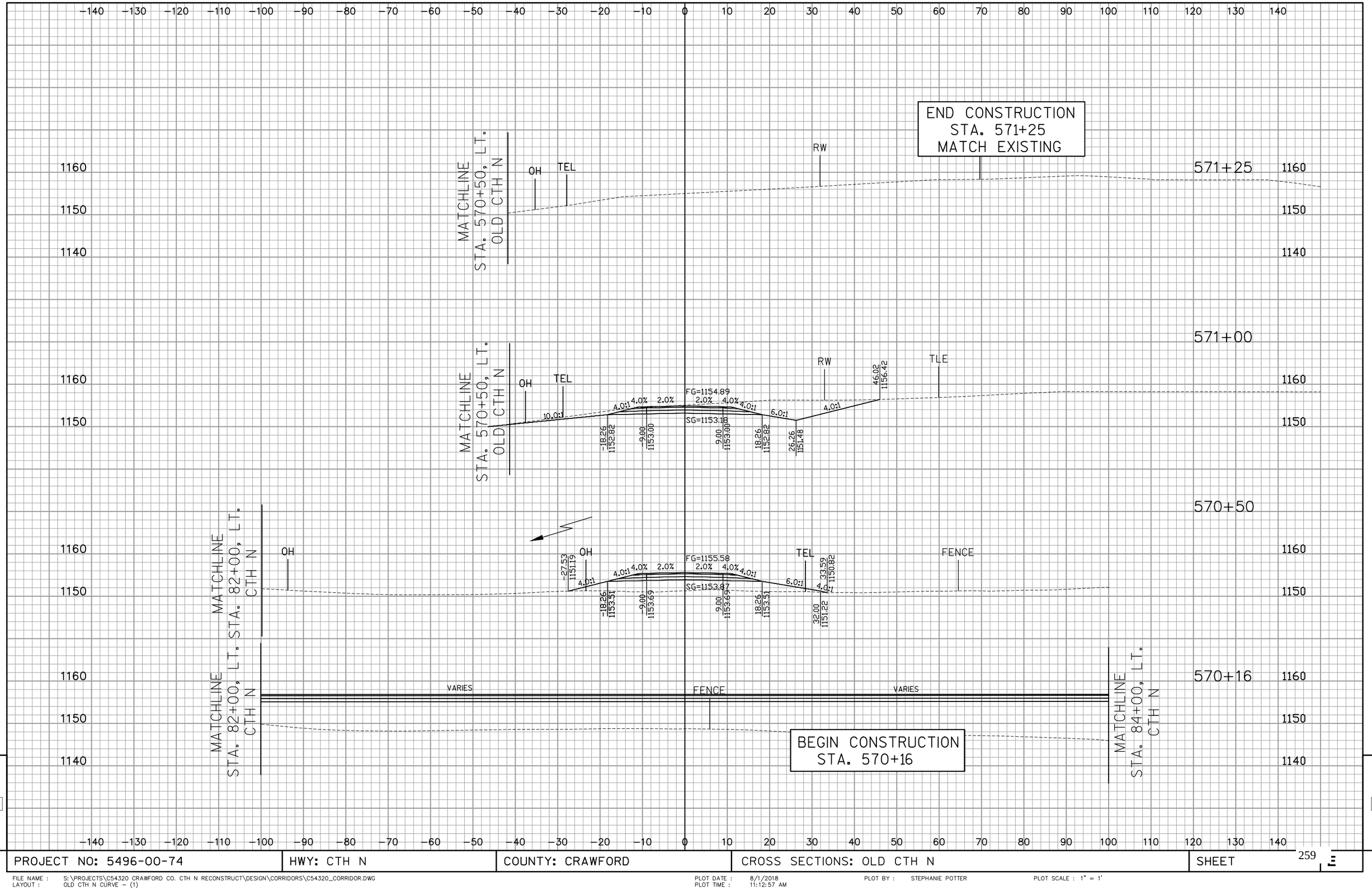
MATCHLINE
STA. 78+00, LT.
CTH N

1170 1160 1150 1140 1180

-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: OLD CTH N	SHEET 258

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : OLD CTH N- (2)
PLOT DATE : 8/1/2018
PLOT TIME : 11:12:49 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

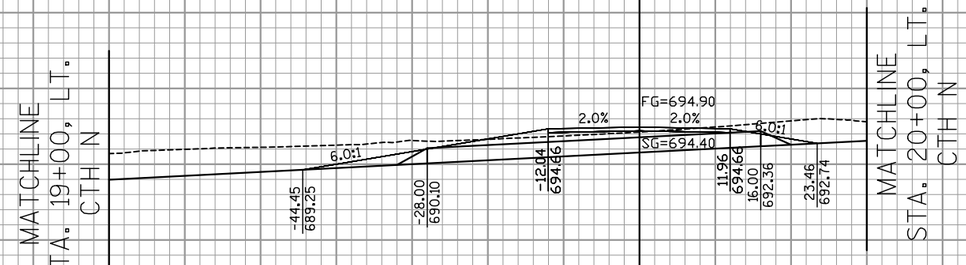


PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: OLD CTH N	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : OLD CTH N CURVE – (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:12:57 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

F.E. - STA. 19+70, LT.
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALL REQ'D
SKEW = 0°

FOR INFORMATION ONLY
F.E. - STA. 19+70, LT



700
690
680

510+30

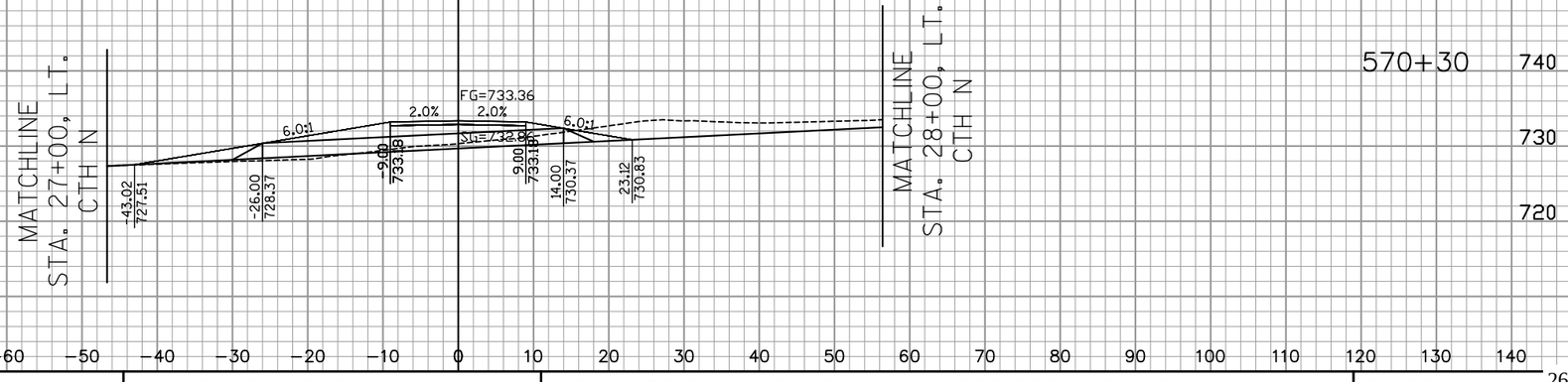
-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: DRIVEWAY (CULVERT REPLACEMENT)	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CULVERT FE 19+70 LT - (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:13:04 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

F.E. - STA. 27+45, LT.
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALL REQ'D
SKEW = 2° L.H.F.

FOR INFORMATION ONLY
F.E. - STA. 27+45, LT



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: DRIVEWAY (CULVERT REPLACEMENT)	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CULVERT FE 27+45 LT - (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:13:11 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

F.E. - STA. 56+60, LT.
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALL REQ'D
SKEW = 10° L.H.F.

FOR INFORMATION ONLY
F.E. - STA. 56+60, LT

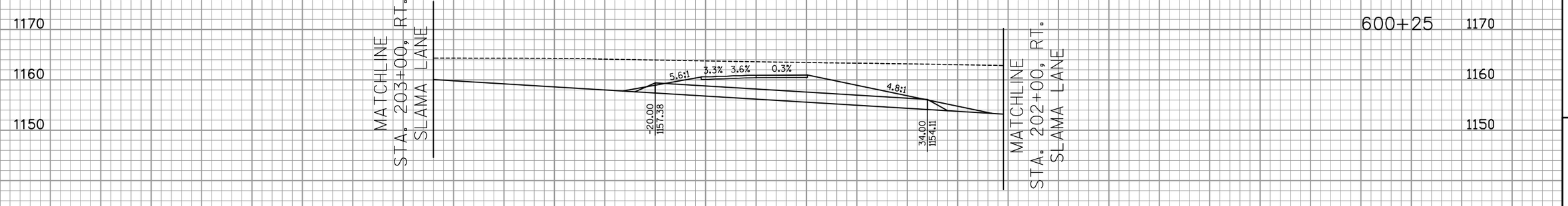


PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: DRIVEWAY (CULVERT REPLACEMENT)	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CULVERT FE 56+60 LT- (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:13:19 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

P.E. - STA. 202+45, RT.
(1) CULVERT PIPE CLASS III-A 24-INCH
(2) APRON ENDWALL REQ'D
SKEW = 10° R.H.F.

FOR INFORMATION ONLY
P.E. - STA. 202+45, LT



PROJECT NO: 5496-00-74	HWY: CTH N	COUNTY: CRAWFORD	CROSS SECTIONS: DRIVEWAY (CULVERT REPLACEMENT)	SHEET

FILE NAME : S:\PROJECTS\C54320 CRAWFORD CO. CTH N RECONSTRUCT\DESIGN\CORRIDORS\C54320_CORRIDOR.DWG
LAYOUT : CULVERT FE 202+45 RT - (1)
PLOT DATE : 8/1/2018
PLOT TIME : 11:13:26 AM
PLOT BY : STEPHANIE POTTER
PLOT SCALE : 1" = 1'

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov