WisDOT Division of Transportation
System Development
Northeast Region
944 Vanderperren Way
Green Bay, WI 54304

Governor Tony Evers
Secretary Craig Thompson
wisconsindot.gov
Telephone: (920)492-5643
FAX: (920)492-5640
Email: ner.dtsd@dot.wi.gov

March 25, 2019

Jessica Kempke
U.S. Army Corps of Engineers
Old Fort Square
211 N. Broadway, Suite 221
Green Bay, WI 54303

Subject: Application for 404 Permit
Project I.D. 4085-33-71
WIS 32
Hilbert – Green Bay
Brown County

Dear Ms. Kempke,

The Wisconsin Department of Transportation (WisDOT), Northeast Region, is submitting a Permit Application for Project I.D. 4085-33-71 in Brown County for your review. As the enclosed permit application and supporting documentation indicates, unavoidable wetland filling associated with construction of this project total 0.50 acres. Please see the Permit Application and attachments for a detailed project description and a detailed discussion regarding wetland impacts, including type, location and amount.

According to the *Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guideline* (1993, Revised 1997 and 2002), compensatory wetland mitigation must be provided and ratios of replacement versus loss and dependent on the wetland type lost and the wetland available for replacement. WisDOT is proposing to debit the impacts to Oneida Bank site in Oconto County. Based on the 0.50 acres of wetland loss, a total of 0.51 acres of compensatory mitigation will be required for this project.

The project has been coordinated with the Wisconsin Department of Natural Resources (WDNR) through the WisDOT/WDNR Cooperative Agreement. Section 401 Water Quality Certification has been solicited from WDNR.

A PS&E (plans, specifications & estimate) submittal date of May 1, 2020 is scheduled for this project. Please contact me if you have any questions regarding this request or need any further information.

Sincerely,

Kelsey Lorenz

Kelsey Lorenz, P.E.
WisDOT Project Leader

cc: Mike Helmrick, WisDOT Environmental Coordinator
Jim Doperalski, WDNR Liaison

State of Wisconsin
Department of Natural Resources
(Return to appropriate DNR Regional/Service Center Office)

State / Federal Application for Water Regulatory Permits and Approvals

Form 3500-053 (R 4/01)

PLEASE COMPLETE BOTH PAGES 1 & 2 OF THIS APPLICATION. PRINT OR TYPE. The Department requires use of this form for any application filed pursuant to Chapter 30, Wis. Stats. The Department will not consider your application unless you complete and submit this application form. Personally identifiable information on this form will not be used for any other purpose, but it must be made available to requesters under Wisconsin's open records law [s. 19.31-19.39, Wis. Stats.].

1. Applicant (Individual or corporate name)
Wisconsin Department of Transportation

Address
944 Vanderperren Way

City, State, Zip Code
Green Bay, WI 54304

Fire Number

Tax Parcel Number

Telephone No. (Include area code)
Kelsey Lorenz (920) 492-0142

2. Agent/Contractor (firm name)

Address

City, State, Zip Code

Telephone No. (Include area code)

3. If applicant is not owner of the property where the proposed activity will be conducted, provide name and address of owner and include letter of authorization from owner. Owner must be the applicant or co-applicant for structure, diversion and stream realignment activities.

Owner's Name Address City, State, Zip Code

4. Is the applicant a business? ☐ Yes ■ No

If YES, is the permit or approval you are applying for necessary for you to conduct this business in the State of Wisconsin?

☐ Yes ☐ No

If YES, please explain why (attach additional sheets if necessary):

5. Project Location

Address *See Exhibit 2 (Project Location Map)

Village/City/Town

Fire Number _____ Tax Parcel Number _____

Waterway

County

Govt. Lot _____ OR ____1/4,____1/4, of Section _____ ,

Township _____North, Range _____ (East) (West)

6. Adjoining Riparian (Neighboring Waterfront Property Owner) Information ***See Exhibit 6 (Riparian Owners along WisDOT Right-of-Way)**

Name of Riparian #1 Address

Name of Riparian #2 Address City, State, Zip Code

7. Project Information (Attach additional sheets if necessary)

(a) Describe proposed activity (include how this project will be constructed)

See Exhibit 1 (Project Narrative)

(b) Purpose, need and intended use of project

See Exhibit 1 (Project Narrative)

(c) I have applied for or received permits from the following agencies: (Check all that apply)

☐ Municipal ☐ County ■ Wis. DNR ■ Corps of Engineers

(d) Date activity will begin if permit is issued April 1, 2021; be completed: November 30, 2021.

(e) Is any portion of the requested project now complete? ☐ Yes ■ No

If yes, identify the completed portion on the enclosed drawings and indicate here the date activity was completed:

I hereby certify that the information contained herein is true and accurate. I also certify that I am entitled to apply for a permit, or that I am the duly authorized representative or agent of an applicant who is entitled to apply for a permit. Any inaccurate information submitted may result in permit revocation, the imposition of a forfeiture(s) and requirement of restoration.

Signature of Applicant(s) or Duly Authorized Agent

Kelsey Lorenz

Date Signed
3/25/2019

LEAVE BLANK - FOR RECEIVING AGENCY USE ONLY

Corps of Engineers Process No.	Wisconsin DNR File No.	
Received By	Date Received	Date Application Was Complete

Drawings of proposed activity should be prepared in accordance with sample drawing.

Proposed Materials

Location Sketch (Indicate scale)
Show route to project site: include nearest main road and crossroad.

N 1" = _____ ft.

Fire Number _____

See Exhibit 2 (Project Location Map)

Project Plans (Include top view and typical cross sections. Clearly identify features and dimensions or indicate scale.)
Use additional sheets if necessary.

N 1" = _____ ft.

Top View

See Exhibit 3 (Project Plan Set)

Cross Section

List of Exhibits

1: Project Narrative

2: Project Location Map

3: Project Plan Set

4: Special Provisions

5: Wetland Impact Map

6: Wetland Impact Tracking Form

7: Riparian owners along WisDOT Right-of-Way

8: WDNR Initial Project Review

9: Section 106 Screening List

10: Fish & Wildlife Service Coordination

Exhibit 1

State Project Number 4085-33-71
WIS 32/57
Description: Hilbert – Green Bay
Project Limits: South County Line – Deuster Street
Brown County

Introduction and Project Location

The Wisconsin Department of Transportation (WisDOT) Northeast Region is in the process of developing plans for a proposed project located on WIS 32/57. The project begins approximately 600 feet south of the South County Line in the town of Brillion and proceeds 6.8 miles ending north of Deuster Street. The section of pavement on WIS 32 consists of a two-lane highway with 12-foot lanes and is classified as a principal arterial.

Purpose, Need, and Intended Use of Project

The purpose of the project is to address the pavement, safety, roadway deficiencies and maintain drainage.

The pavement will be at the end of its service life by the time of construction. This section of WIS 32 was constructed in 1931 to 1946 and has been rehabbed a few times with the most recent being in 2014.

The intersection of Hill Road will be upgraded to the standard B1 intersection based on AADT and traffic counts. There has been documented crashes including a fatality at the intersection in the past. The intersection of Man Cal Road is a skewed intersection and has been flagged for right angle crashes. The intersection is proposed to be realigned to improve the skew.

Two of the horizontal curves along the project have substandard superelevation rates. The superelevation will be adjusted with the project to meet standard. The existing beam guard does not meet desirable standards and will be upgraded to standards for safety purposes. The beam guard at the STA 419+00 LT will be removed and the west side of the existing box culvert will be extended. The MGS end terminal would not be able to be properly installed and graded on the west side due to the proximity of a driveway to the box culvert; therefore, it is proposed to remove the existing beam guard and extend the box culvert outside of the clear zone.

Several culvert pipes are deteriorating and not functioning properly. The culvert pipes will be replaced, repaired, lined or extended to avoid any potential drainage issues across the roadway or in ditches.

Project Alternatives Analysis

Three alternatives, including a “do-nothing” alternative, were considered for this project. Due to the purpose of the project, which is to address the pavement, roadway deficiencies, safety and maintaining drainage, the “do-nothing” alternative was not recommended.

The second alternative was to resurface the roadway and replace the beam guard and culvert pipes in kind. This alternative would address the pavement, roadway deficiencies and drainage, but does not address all the safety issues throughout the corridor. This alternative was not recommended.

The third alternative was to resurface the roadway, remove and replace the beam guard, replace culvert pipes, and improve two intersections. This alternative also includes removing the beam guard at the north end of the project, extend the box culvert and regrade. This alternative addresses the pavement, roadway deficiencies, safety and drainage. This alternative was chosen.

Proposed Activity

The proposed project includes resurfacing WIS 32, improving the deficient superelevations, beam guard replacements, centerline rumble strips, culvert replacements, intersection realignment, box culvert extension, upgrade intersection right turn lanes, signing and pavement marking.

See Exhibit 3 for project plan sheets.

Wetlands

The affected wetlands within the proposed project area are located throughout the project between the South County Line and Deuster Street. The wetlands were identified and drawn on the plan sheets using data from a field review performed in October 2017 by Wisconsin Department of Natural Resources (WDNR) and WisDOT staff. Following the wetland investigation, it was determined that the construction of the project would require excavation and fill within the delineated wetland boundaries. See Exhibit 5 for a wetland impact map. Unavoidable permanent impacts to these wetlands total 0.50 acres.

Wetland Impact Avoidance and Minimization

Avoidance of wetlands adjacent to the roadway is not possible due to culvert and beam guard replacements, box culvert extension and intersection safety improvements.

Wetland impacts were minimized by keeping WIS 32 on the same alignment. Impacts were also minimized by steepening ditch fore slopes behind the beam guard and outside of the clear zone where possible.

Wetland Mitigation

Compensation ratios were obtained from Wisconsin Department of Transportation Wetland Mitigation Banking Technical Guideline (1993, revised 1997 and 2002). See the Wetland Impact Tracking Form (Exhibit 6). A total of 0.50 acres of wetland is expected to be permanently filled as part of these improvements. It was determined that an existing WisDOT mitigation site would be used for compensation. Mitigation of 0.51 acres of wetland will take place off-site at the Oneida Bank site in Oconto County.

Adjoining Riparian Owners

See Exhibit 7 for a list of adjoining riparian owners at wetland impact locations along the project.

Erosion Control

Erosion Control and storm water management will be conducted in accordance with the Best Management Practices (BMP) and other guidance provided by TRANS 401 – Construction Site and Erosion Control and Storm Water Management Procedures. All erosion control/storm water management measures will be coordinated with the WDNR. TRANS 401 also requires that the contractor prepare an Erosion Control Implementation Plan (ECIP), which identifies timing and staging of erosion

control measures. Erosion control and storm water management measures proposed for the project include the following:

- Silt Fence
- Ditch Checks
- Erosion Mat
- Temporary and permanent seeding
- Mulching
- Rock bags/culvert pipe checks

Agency Coordination Summary

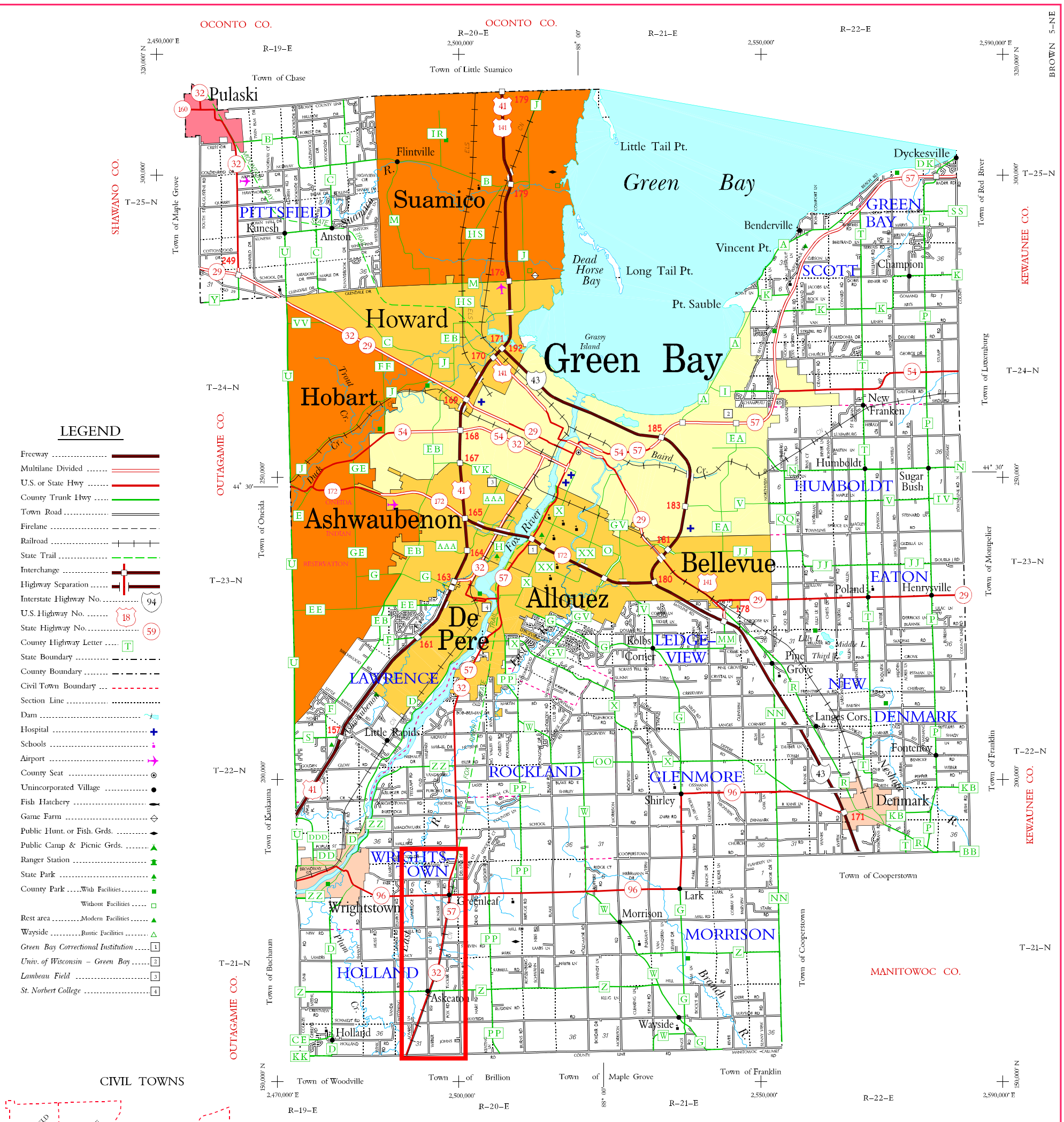
During the preparation of the environmental document for the proposed project, the following agency coordination occurred:

Wisconsin Department of Natural Resources (WDNR) – The WDNR provided comments on public lands, wetlands & waterways, endangered resources, culverts/aquatic organism passage, invasive species, floodplains, erosion control/storm water and other concerns in an initial project review letter dated September 28, 2015. See Exhibit 8 for a copy of the letter. A Natural Heritage Inventory (NHI) database search was completed on 11/16/2017 and no records for NLEB or the Rusty Patch Bumble Bee were identified. See Exhibit 10 for correspondence.

State Historical Society (SHS) – The project was placed on the screening list for both history and archeology, dated February 14, 2018. See Exhibit 9 for the Section 106 Screening List.

US Fish & Wildlife Service (FWS) – The project coordinated with FWS on 11/16/2017 under the Final 4(d) Rule for the Northern long-eared bat. A response from the FWS was not received, which indicates concurrence with the effect determinations for the NLEB and other listed species. See Exhibit 10 for FWS coordination.

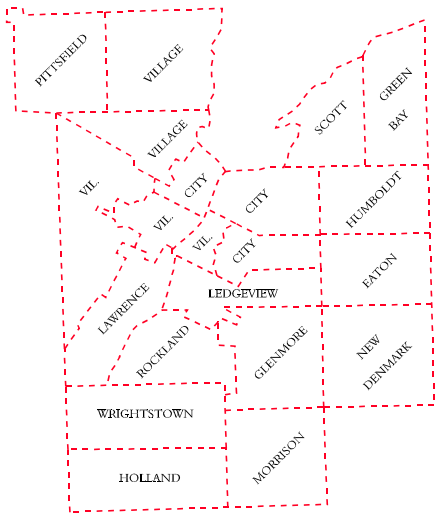
Exhibit 2



LEGEND

Freeway
Multilane Divided
U.S. or State Hwy
County Trunk Hwy
Town Road
Firelane
Railroad
State Trail
Interchange
Highway Separation
Interstate Highway No. 94
U.S. Highway No. 18
State Highway No. 59
County Highway Letter T
State Boundary
County Boundary
Civil Town Boundary
Section Line
Dam
Hospital
Schools
Airport
County Seat
Unincorporated Village
Fish Hatchery
Game Farm
Public Hunt. or Fish. Grds.
Public Camp & Picnic Grds.
Ranger Station
State Park
County Park — With Facilities
Without Facilities
Rest area — Modern Facilities
Wayside — Rustic Facilities
Green Bay Correctional Institution 1
Univ. of Wisconsin – Green Bay 2
Lambeau Field 3
St. Norbert College 4

CIVIL TOWNS

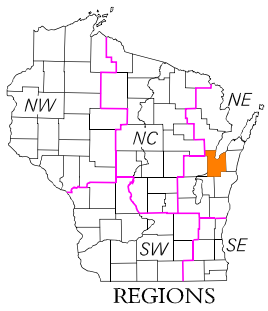


For boundaries of public hunting and fishing grounds please contact the Department of Natural Resources

Grid based on the state plane coordinate system central zone and the NAD 27

SECTION NUMBERING OF A TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36



REGIONS

MILES OF HIGHWAY
as of Dec. 31, 2010

STATE	184
COUNTY	359
LOCAL ROADS	1773
OTHER ROADS	8
TOTAL FOR COUNTY	2,324

Land Area (2000 Census) ..... 529 sq mi
Population (2000 Census) 226,778
County Seat ..... Green Bay

BROWN CO.

DEPARTMENT OF TRANSPORTATION
STATE OFFICE BUILDING
Madison, Wisconsin

SCALE 0 1 2 MILES

Corrected for
JAN. 2012

Base compiled from U.S.G.S. Quadrangles
1:100,000 Series

BROWN 5-NE

Exhibit 3

PROJECT ID: 4085-33-71
WITH: N/A

COUNTY: BROWN

ORDER OF SHEETS

TOTAL SHEETS =

N

DESIGN DESIGNATION 4085-33-71

A.A.D.T.	2023	=	5100
A.A.D.T.	2043	=	5600
D.H.V.		=	611
D.D.		=	60/40
T.		=	9.6%
DESIGN SPEED		=	55 MPH
ESALS		=	1,400,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

HILBERT - GREEN BAY

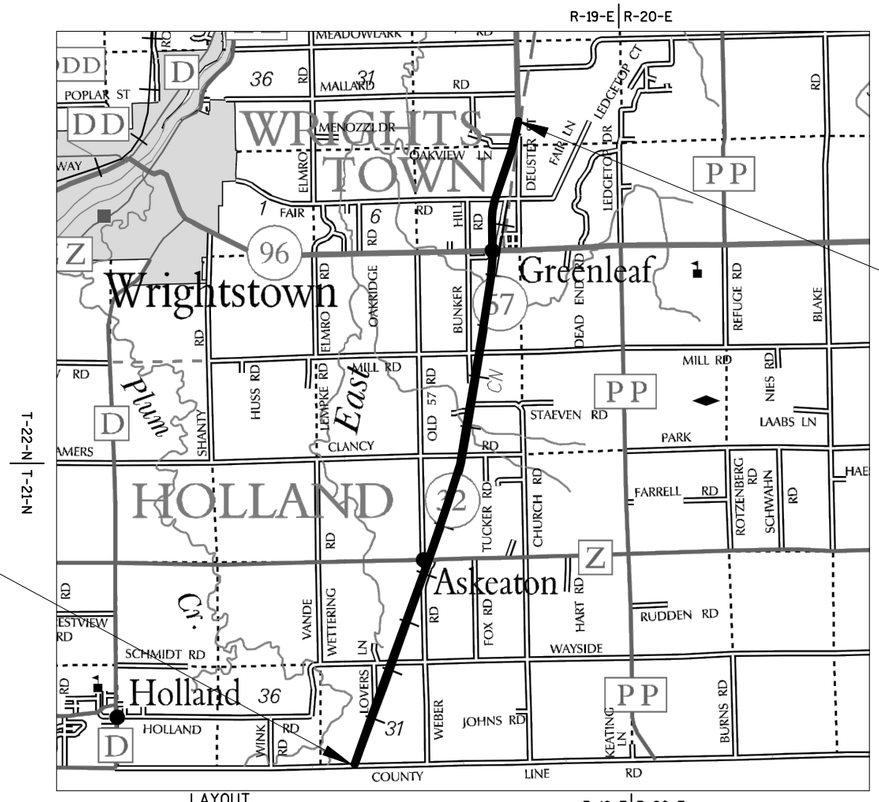
SOUTH COUNTY LINE - DEUSTER STREET

STH 32

BROWN COUNTY

STATE PROJECT NUMBER
4085-33-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4085-33-71		



END PROJECT
STA 422+21.77

BEGIN PROJECT
STA 61+79.34
X = 70603.0437
Y = 467006.8347

LAYOUT
SCALE 0 1.5 MILE

TOTAL NET LENGTH OF CENTERLINE = 6.826 MI

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NATIONAL AMERICAN VERTICAL DATUM OF 2012 (NAVD88).

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT NE REGION
Designer	K. LORENZ
Project Manager	A. FULCER
Regional Examiner	
Regional Supervisor	D. SEGERSTROM

APPROVED FOR THE DEPARTMENT

DATE: _____ _____ (Signature)

PRE_1

E

2

GENERAL NOTES

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

UTILITIES

COMMUNICATIONS

AT&T WISCONSIN
JOSEPH KASSAB
205 S JEFFERSON ST
GREEN BAY, WI 54301
PHONE: 920-735-3206
EMAIL: JK572K@ATT.NET

CENTURYLINK
KEVIN ZICKERT
224 INDUSTRIAL DR
NORTH PRAIRIE, WI 53153
PHONE: 262-392-5200
EMAIL: KEVIN.ZICKERT@CENTURYLINK.COM

TDS TELECOM
STEVE JAKUBIEC
10 COLLEGE AVENUE
APPLETON, WI 54911
PHONE: 920-882-4166
EMAIL: STEVE.JAKUBIEC@TDSTELECOM.COM

CHARTER COMMUNICATIONS
VINCENT ALBIN
3520 E DESTINATION DRIVE
APPLETON, WI 54915
PHONE: 920-831-9249
EMAIL: VINCE.ALBIN@CHARTER.COM

ELECTRICITY

ATC MANAGEMENT, INC.
MIKE OLSEN
801 O'KEEFE ROAD
P.O. BOX 6113
PHONE: 920-338-6582
EMAIL: MOLSEN@ATCLLC.COM

WISCONSIN PUBLIC SERVICE CORP.
RANDY STEIER
2850 S ASHLAND AVENUE
GREEN BAY, WI 54304
PHONE: 920-617-5167

GAS/PETROLEUM

WISCONSIN PUBLIC SERVICE CORP.
DAVE RETZLAFF
2850 S ASHLAND AVENUE
GREEN BAY, WI 54307
PHONE: 920-617-5237
EMAIL: DPRETZLAFF@WISCONSINPUBLICSERVICE.COM

SEWER/WATER

WRIGHTSTOWN SANITARY DISTRICT #1
TODD WEYENBERG
1250 CENTENNIAL CENTRE BLVD
HOBART, WI 54155
PHONE: 920-662-9641
EMAIL: TWEYENBERG@RELEEINC.COM

DNR AREA LIASION

JIM DOPERALSKI
DEPARTMENT OF NATURAL RESOURCES
NORTHEAST REGION
2984 SHAWANO AVE
GREEN BAY, WI 54313
920-412-0165
JAMES.DOPERALSKI@WISCONSIN.GOV

COUNTY SURVEYOR OR SURVEYS CONTACT PERSON

CONTACT: CORMAC MCINNIS
NORTHEAST REGION SURVEY COORDINATOR
944 VANDERPERREN WAY
GREEN BAY, WI 54304
920-492-5638
CORMAC.MCINNIS@DOT.WI.GOV

WISDOT CONTACT PERSON

CONTACT: ANDREW FULCER, P.E.
NORTHEAST REGION PROJECT MANAGER
944 VANDERPERREN WAY
GREEN BAY, WI 54304
920-362-6162
ANDREW.FULCER@DOT.WI.GOV

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

2

N

END PROJECT
STA 422+21.77

EXISTING CULVERT C-05-1736

EXISTING CULVERT C-1741-46

EXISTING CULVERT C-05-1734

N COUNTY LINE ROAD

MAN CAL ROAD

LOVERS LANE

WAYSIDE ROAD

STH 32/57

CTH Z

WEBBER ROAD

HILL ROAD

LAMERS CLANCY ROAD

CTH IL

STH 32/57

STH 96

DAY ST

TAINTOR ST

FAIR ROAD

OAKVIEW LANE

DEUSTER STREET

MALLARD ROAD

SCHOOL ROAD

EXISTING CULVERT C-05-1745

ST PATS CHURCH ROAD

MILL ROAD

EXISTING CULVERT C-05-1737

EXISTING STRUCTURE B-05-0262

EXISTING CULVERT C-05-1735

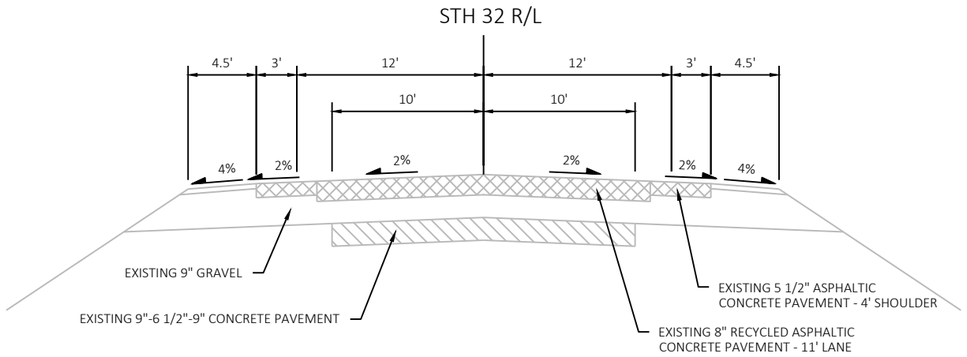
EXISTING CULVERT C-05-1731

EXISTING CULVERT C-05-0097

BEGIN PROJECT
STA 61+79.34

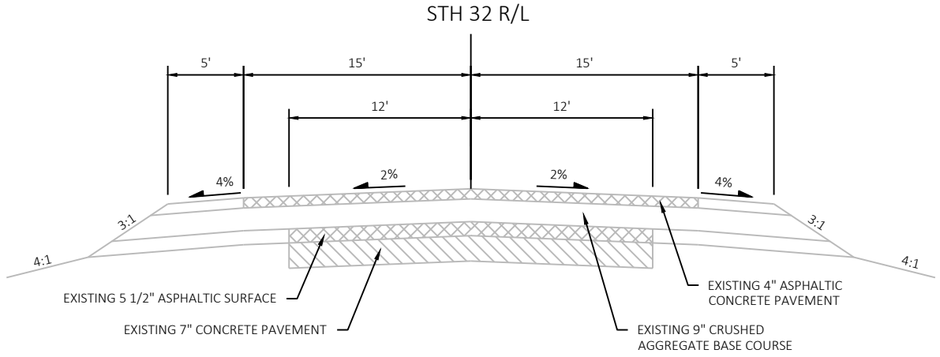
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PROJECT OVERVIEW	SHEET E

PRE_3



EXISTING TYPICAL CROSS SECTION STH 32

STA 61+79 TO STA 167+18



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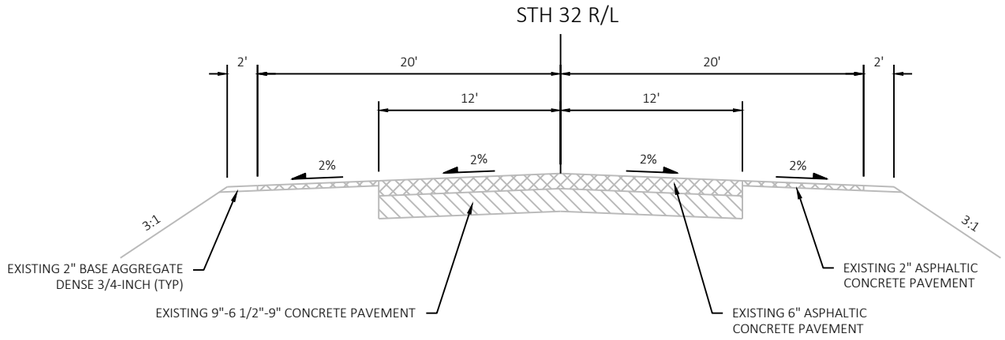
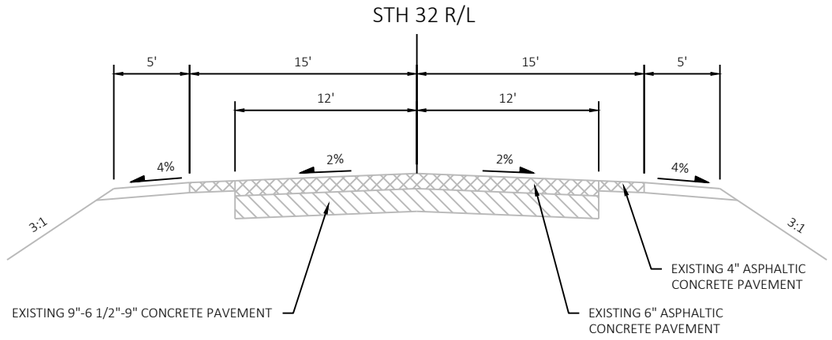
STA 167+18 TO STA 340+93



EXISTING TYPICAL CROSS SECTION STH 32

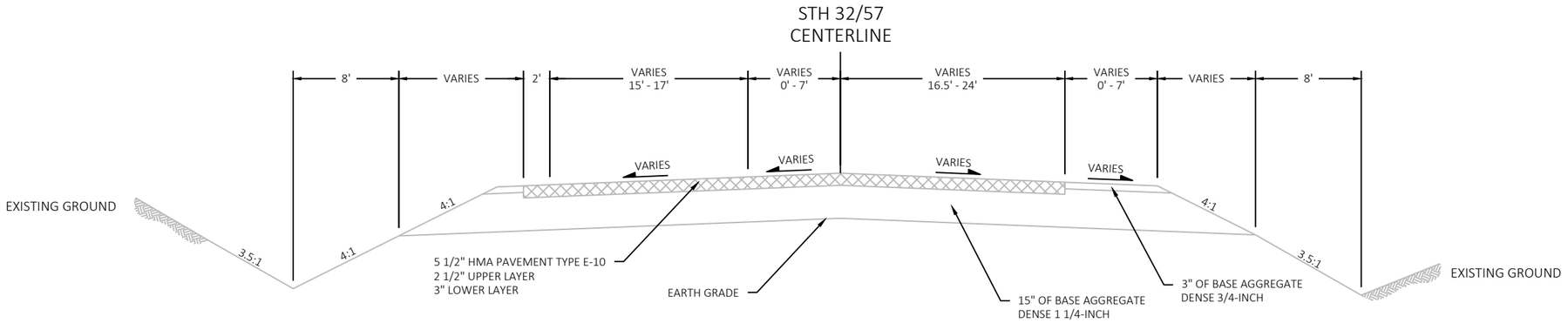
STA 345+44 TO STA 369+98



EXISTING TYPICAL CROSS SECTION STH 32

STA 369+98 TO STA 417+90

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	EXISTING TYPICAL CROSS SECTIONS	SHEET E



EXISTING TYPICAL CROSS SECTION STH 32/57

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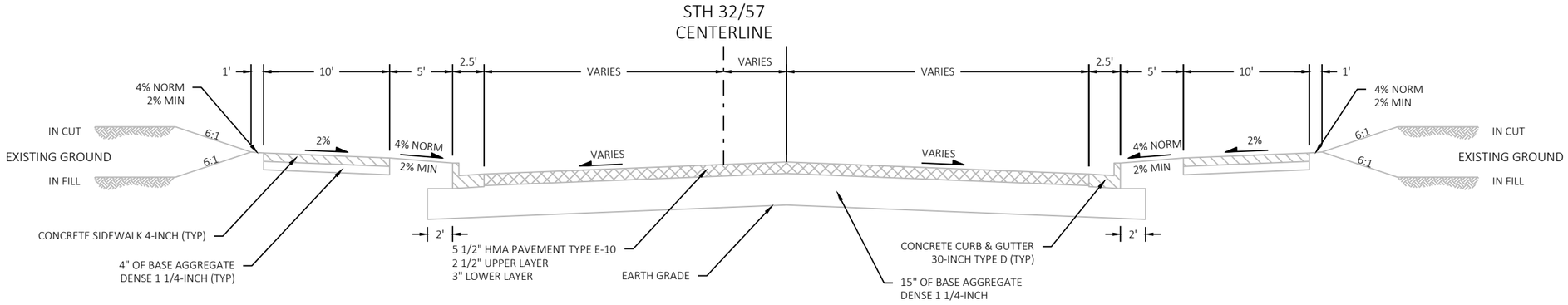

EXISTING TYPICAL CROSS SECTION STH 32/57

NORTH LEG

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	EXISTING TYPICAL CROSS SECTIONS	SHEET E

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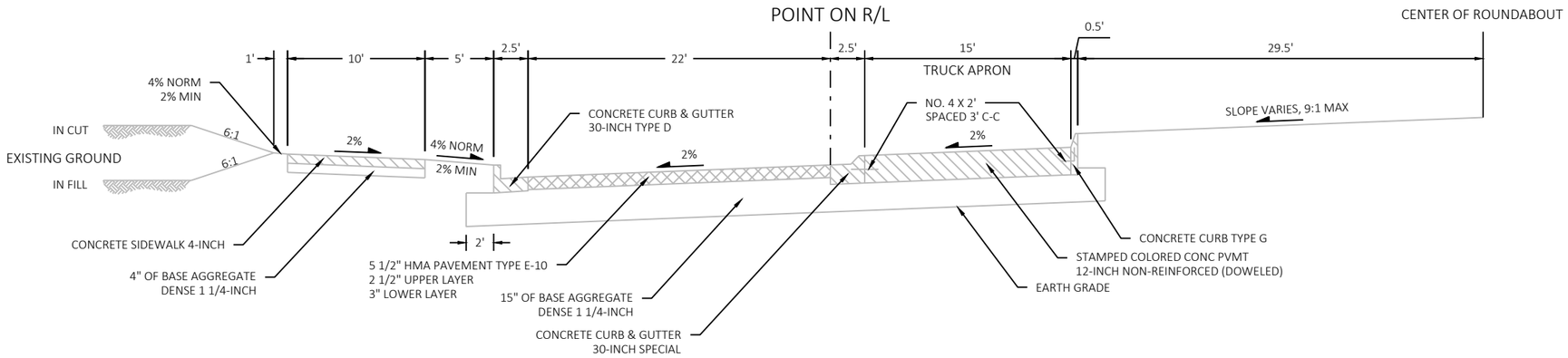
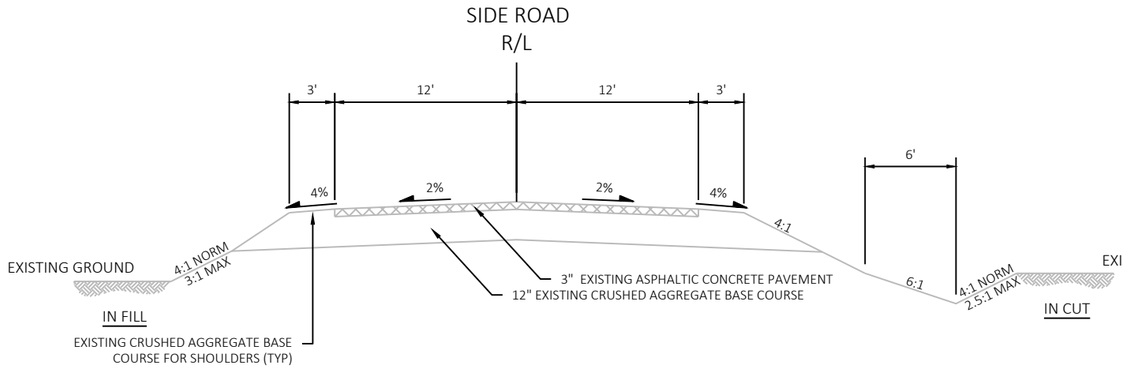
LAYOUT NAME - 020302-ts
PLOT DATE : 2/7/2019 1:45 PM
PLOT BY : LORENZ, KELSEY ANN
PLOT NAME :
PLOT SCALE : 1IN:10 FT
PRE_5
WISDOT/CADDS SHEET 42

2

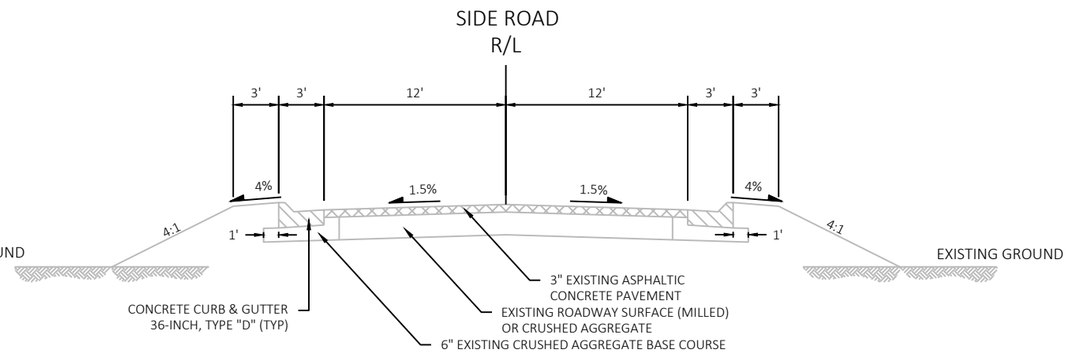


EXISTING TYPICAL HALF SECTION ROUNDABOUT



EXISTING TYPICAL CROSS SECTION FOR SIDE ROAD

CTH Z



EXISTING TYPICAL CROSS SECTION FOR SIDE ROADS

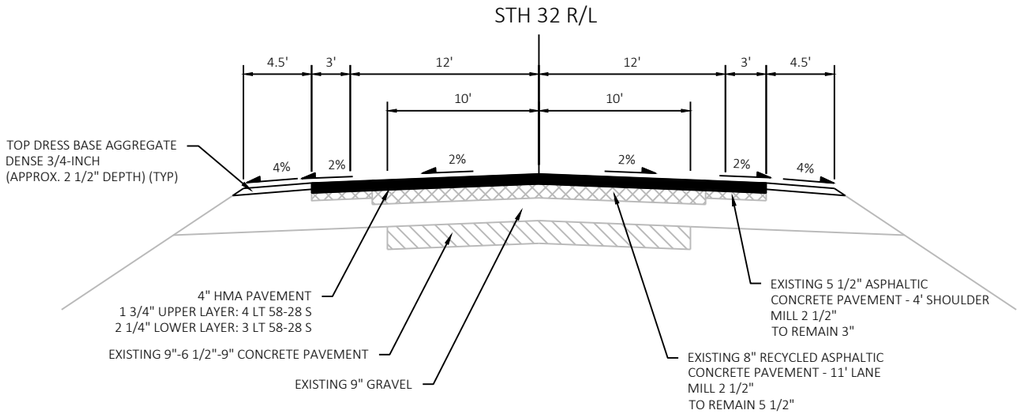
MAN-CAL RD
WAYSIDE RD
LAMERS CLANCY RD

ST. PAT'S CHURCH RD
MILL RD
DEUSTER RD

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	FINISHED TYPICAL CROSS SECTIONS	SHEET E

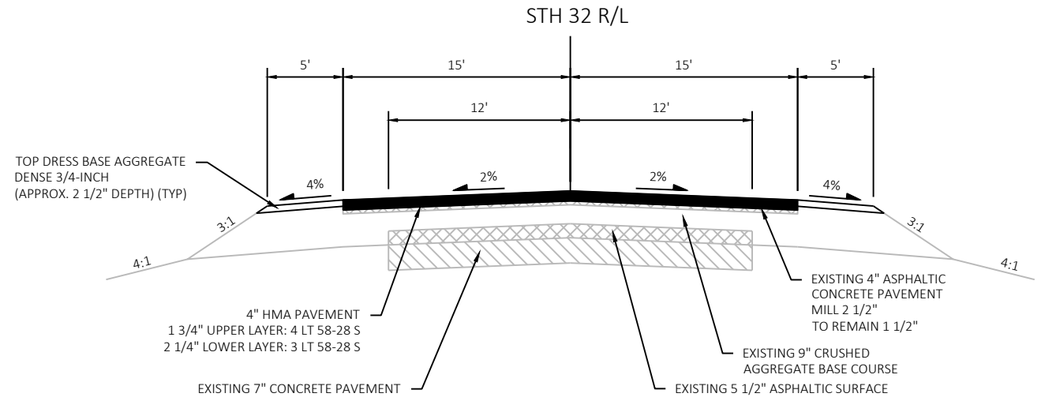
PRE_6

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020303-ts
PLOT DATE : 2/7/2019 1:45 PM
PLOT BY : LORENZ, KELSEY ANN
PLOT NAME :
PLOT SCALE : 1IN:10 FT



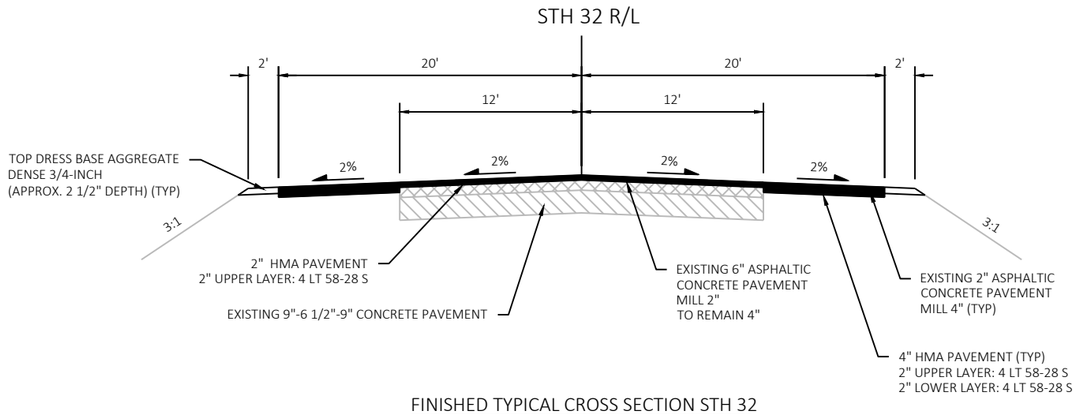
FINISHED TYPICAL CROSS SECTION STH 32

STA 61+79 TO STA 167+18



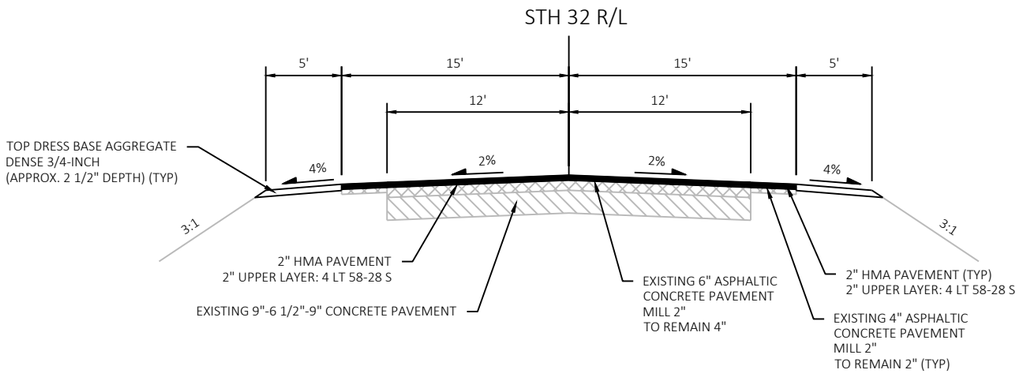
FINISHED TYPICAL CROSS SECTION STH 32

STA 167+18 TO STA 340+93



FINISHED TYPICAL CROSS SECTION STH 32

STA 345+44 TO STA 369+98



FINISHED TYPICAL CROSS SECTION STH 32

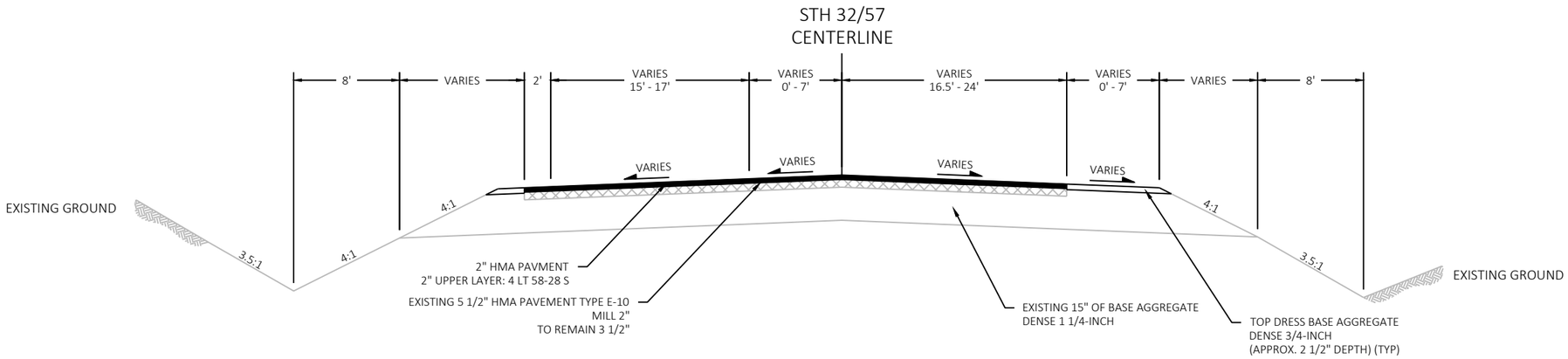
STA 369+98 TO STA 417+90

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	FINISHED TYPICAL CROSS SECTIONS	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020304-ts

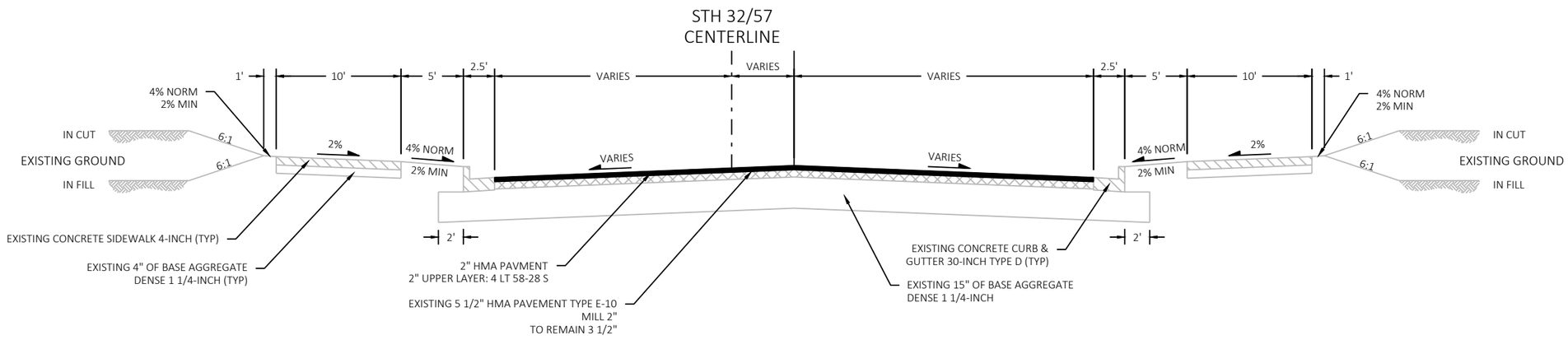
PLOT DATE : 2/7/2019 1:45 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1IN:10 FT

PRE_7



FINISHED TYPICAL CROSS SECTION STH 32/57

STA 340+93 TO STA 345+44

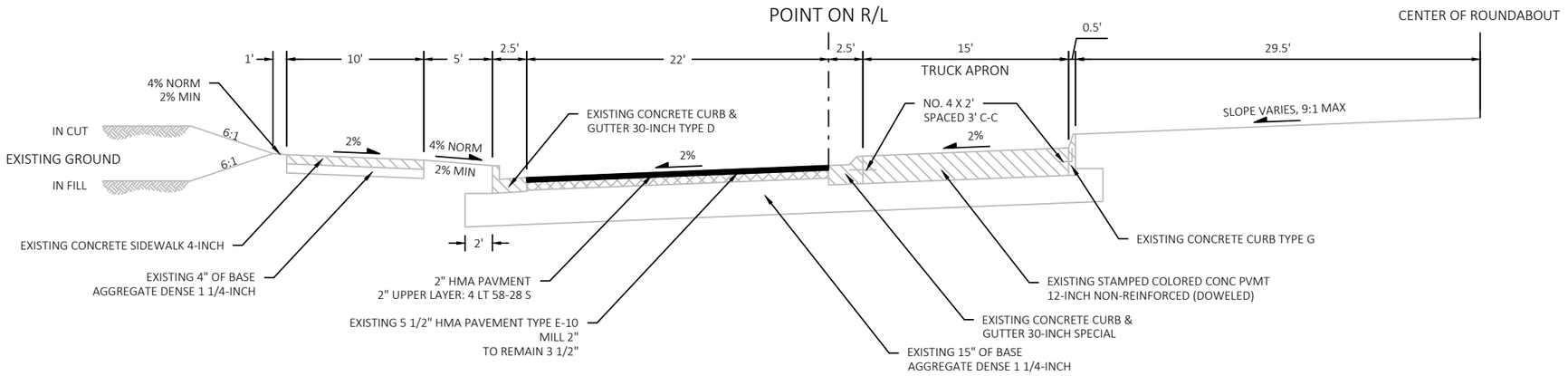


FINISHED TYPICAL CROSS SECTION STH 32/57

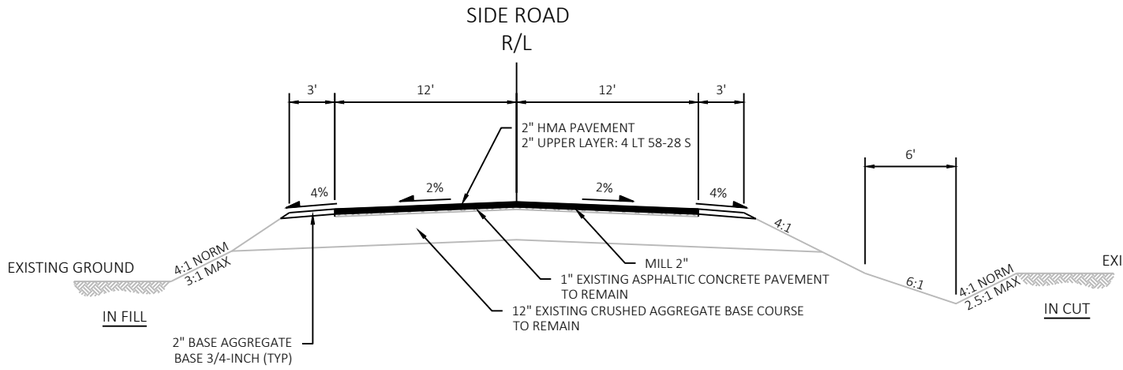
NORTH LEG

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	FINISHED TYPICAL CROSS SECTIONS	SHEET E

2

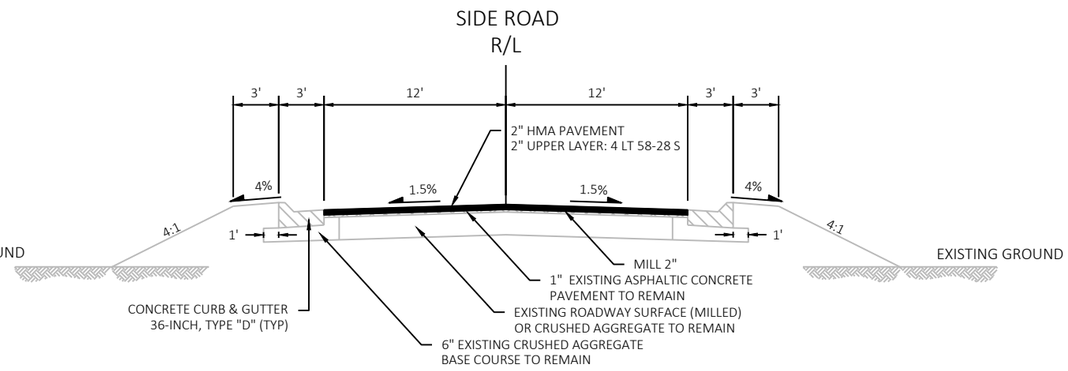


FINISHED TYPICAL HALF SECTION ROUNDABOUT



EXISTING TYPICAL CROSS SECTION FOR SIDE ROAD

CTH Z



EXISTING TYPICAL CROSS SECTION FOR SIDE ROADS

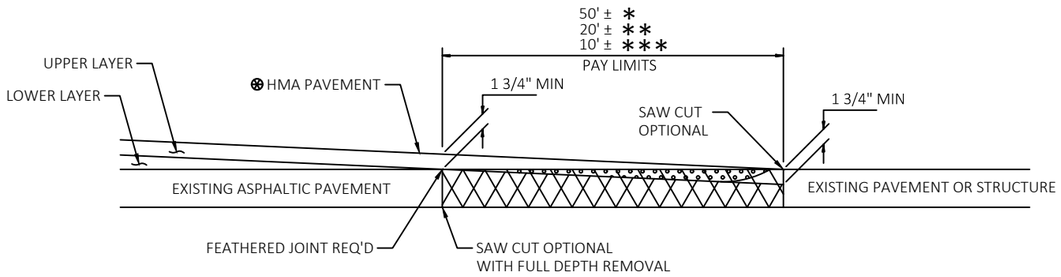
MAN-CAL RD
WAYSIDE RD
LAMERS CLANCY RD

ST. PAT'S CHURCH RD
MILL RD
DEUSTER RD

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN: TYPICAL SECTIONS	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020305-ts

PLOT DATE : 2/7/2019 1:46 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1IN:10 FT



⊛ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

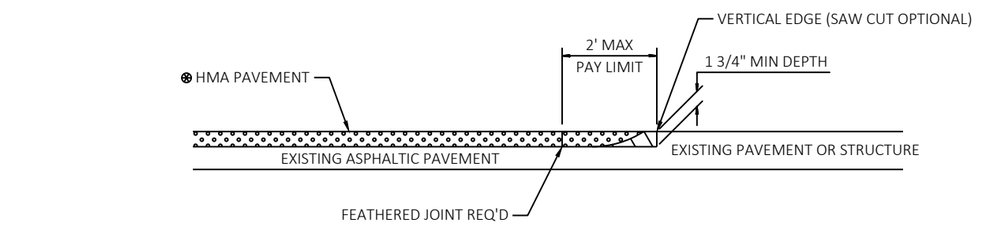
REMOVING ASPHALTIC SURFACE, BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)

ASPHALTIC WEDGING (FULL DEPTH REMOVAL OPTION)

REMOVING ASPHALTIC SURFACE, BUTT JOINTS (MILLING OPTION)

BUTT JOINT DETAIL FOR NON MILLED ASPHALTIC PAVEMENTS (PROFILE CHANGE)

✱ MAINLINE
✱✱ SIDEROADS
✱✱✱ PRIVATE ENTRANCES

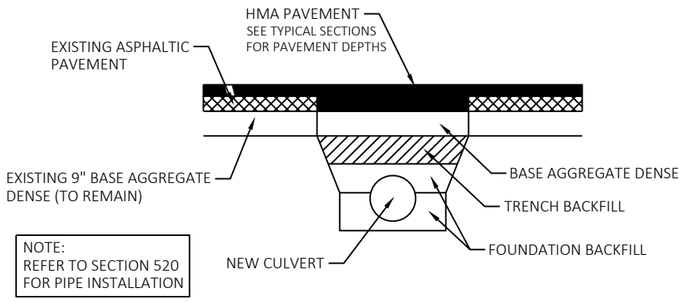


⊛ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

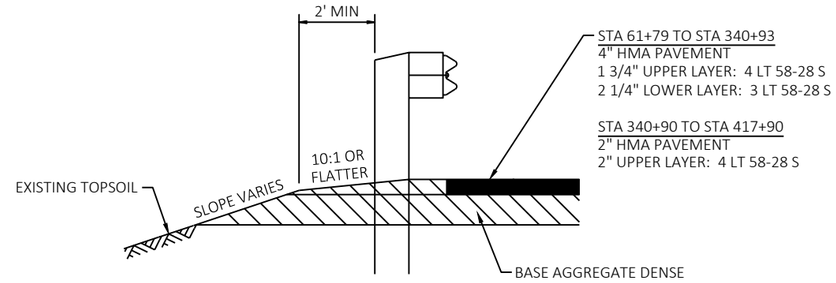
REMOVING ASPHALTIC SURFACE, MILLING

REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE

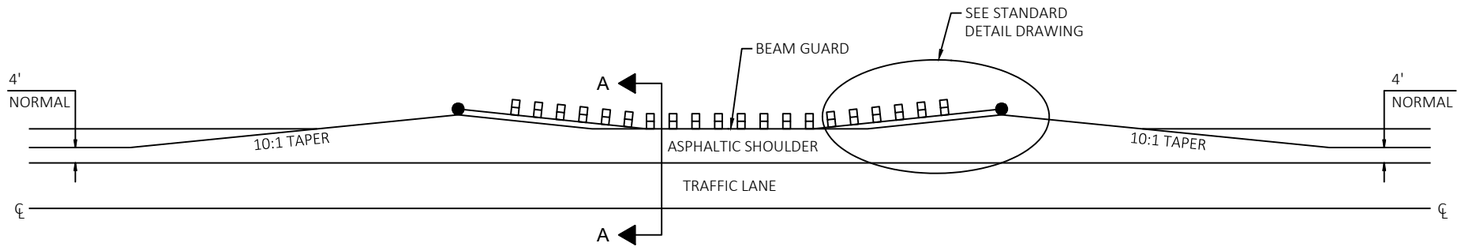
BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)



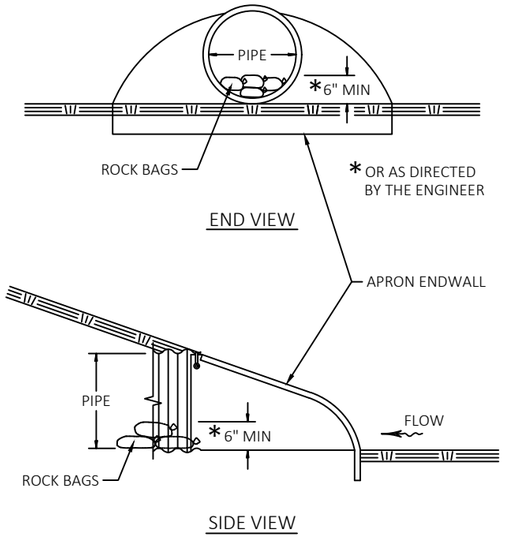
PAVEMENT AT CULVERT REPLACEMENTS



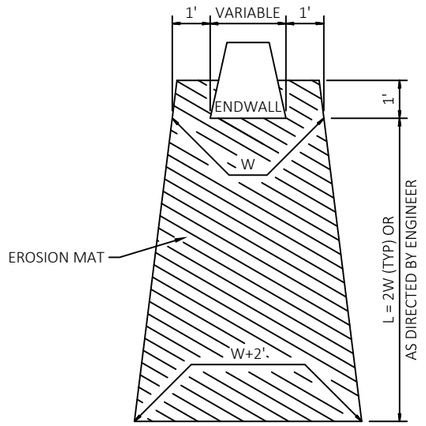
SECTION A-A



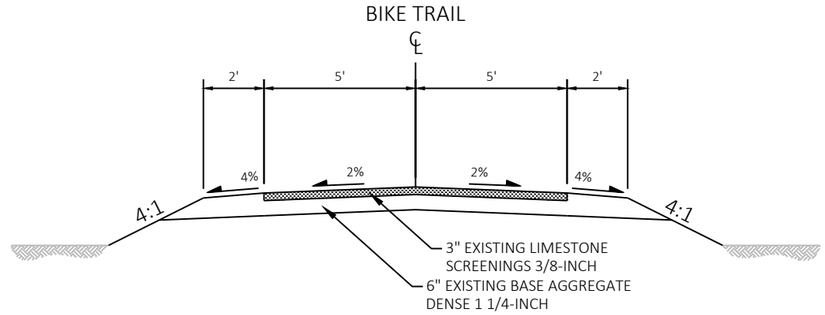
DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD



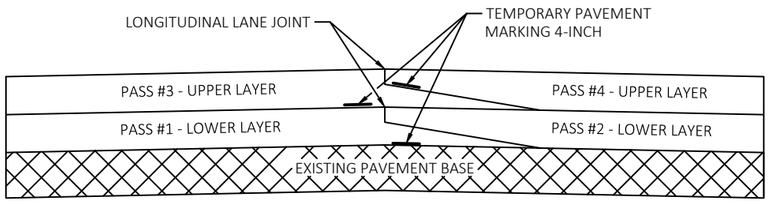
CULVERT PIPE CHECKS



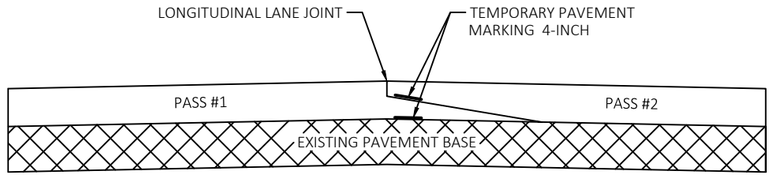
EROSION MAT TREATMENT AT CULVERTS



EXISTING TYPICAL SECTION FOR BIKE TRAIL



PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS



PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS

2

N

EXIST R/W

SLOPE INTERCEPTS

EXIST R/W

69+00

STH 32/57

12'

68+68.03, 12.00' RT

REMOVE EXISTING CURB
& GUTTER (TYPICAL)

67+74.73, -27.00' LT

67+74.73, -84.00' LT

11+15.37, -18.00' LT

PROPOSED R/W

BP: 10+00.00

10+95.83, -15.89' LT

10+79.25, -14.07' LT

10+48.50, -11.00' LT

PC: 10+79.25

PT: 11+12.41

R58'

PI: 67+45.93

24'

759.34

759.82

759.86

759.30

759.32

759.40

759.22

759.10

759.96

759.43

758.56

758.73

758.92

758.86

758.97

758.96

760.10

759.51

760.19

760.05

759.79

760.06

759.84

760.21

760.23

759.84

760.44

760.36

759.62

759.86

760.15

759.54

759.62

760.54

760.57

760.62

759.85

760.14

759.55

760.37

759.93

760.09

759.17

758.91

758.66

759.34

759.84

67+00

68+00

11+00

12+00

13+00

14+00

15+00

16+00

17+00

15'

16'

84.81'

R38'

R38'

R58'

67+68.03, 27.00' RT

PROPOSED R/W

67+68.03, 64.00' RT

12+62.16, -18.00' LT

OBLITERATING OLD ROAD

RECONSTRUCT TRAIL

PC: 12+69.94

PT: 14+20.42

PC: 14+81.34

SLOPE INTERCEPTS

PROPOSED R/W

PT: 16+55.43

EP: 17+02.87

13+04.82, -13.00' LT

13+37.35, -11.00' LT

MAN CAL RD

13+37.35, 11.00' RT

13+03.88, 14.50' RT

12+70.41, 18.00' RT

END CONSTRUCTION
STA 10+00
MATCH EXISTING
BUTT JOINT REQ'D

10+48.50, 11.00' RT

10+79.25, 12.98' RT

10+95.83, 13.95' RT

11+23.65, 18.00' RT

66+45.98, -64.00 LT

CONCRETE CURB & GUTTER
6-INCH SLOPED 36-INCH TYPE D
(TYPICAL)

PROPOSED R/W

66+45.98, -27.00' LT

STA 66+38
78' X 48" RCCP
APRON ENDWALLS REQ'D

EXIST R/W

65+45.98, -12.00' LT

12'

SLOPE INTERCEPTS

STA 67+07.02 R/L STH 32 =
STA 11+92.91 R/L MAN CAL RD
Y=467,498.535
X=70,794.552

66+39.34, 84.00' RT

STA 66+64
REMOVE 98' X 48" RCCP

66+39.34, 27.00' RT

PROPOSED R/W

EXIST R/W

SLOPE INTERCEPTS

PROPOSED R/W

END CONSTRUCTION
STA 17+02.87
MATCH EXISTING
BUTT JOINT REQ'D

NOTE:
RADIUS DIMENSIONS ARE TO FACE OF CURB

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	INTERSECTION DETAIL (MAN CAL RD)	SHEET E

2

N

371+03.87, 26.65' RT

CONCRETE CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D (TYPICAL)

REMOVE EXISTING CURB & GUTTER

SLOPE INTERCEPT

370+90.32, 45.72' RT

ASPHALTIC FLUME

20+68.94, -22.24' LT

618
716.140
BM

STA 370+29.22 R/L STH 32/57 =
STA 20+00.00 R/L FAIR ROAD EAST
Y=496,538.650
X=78,765.499

END CONSTRUCTION
STA 10+39.16
MATCH EXISTING
BUTT JOINT REQ'D

END CONSTRUCTION
STA 20+67.77
MATCH EXISTING
BUTT JOINT REQ'D

371+00
714.07
714.10
714.06
714.05
713.46
713.71
714.07
713.60
713.55
713.46
713.42
713.68

10+00
11+00
21+00

FAIR RD

370+00

STH 32/57

STA 370+25.09 R/L STH 32/57 =
STA 11+03.53 R/L FAIR ROAD WEST
Y=496,534.738
X=78,764.169

NOTE:
RADIUS DIMENSIONS ARE TO FACE OF CURB

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	INTERSECTION DETAIL (FAIR ROAD)	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\021102-ID.DWG
LAYOUT NAME - 021202-id
PLOT DATE : 2/28/2019 8:23 AM
PLOT BY : LORENZ, KELSEY ANN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT

2

2

N

13'
15'
STH 32/57
A
C
A
D
B
617
712.260
BM
CANOPY
FILLER CAP
POST
POST
T
G.P.
W
20'
20'
A
A
A
D
C
STH 96
B
B
D
STH 96
A
19.2'
19.7'
C
A
W
FLAG
MATCHLINE
A
A
12'
12'
STH 32/57
D
A
C
A
MATCHLINE

LEGEND

- A — CENTERLINE, 4" (DOUBLE YELLOW)
- B — CHANNELIZING LINE, 16" (3' LINE/3' SPACE) (WHITE)
- C — DIAGONAL LINE, 12" (YELLOW)
- D — ISLAND NOSE MARKING (YELLOW)

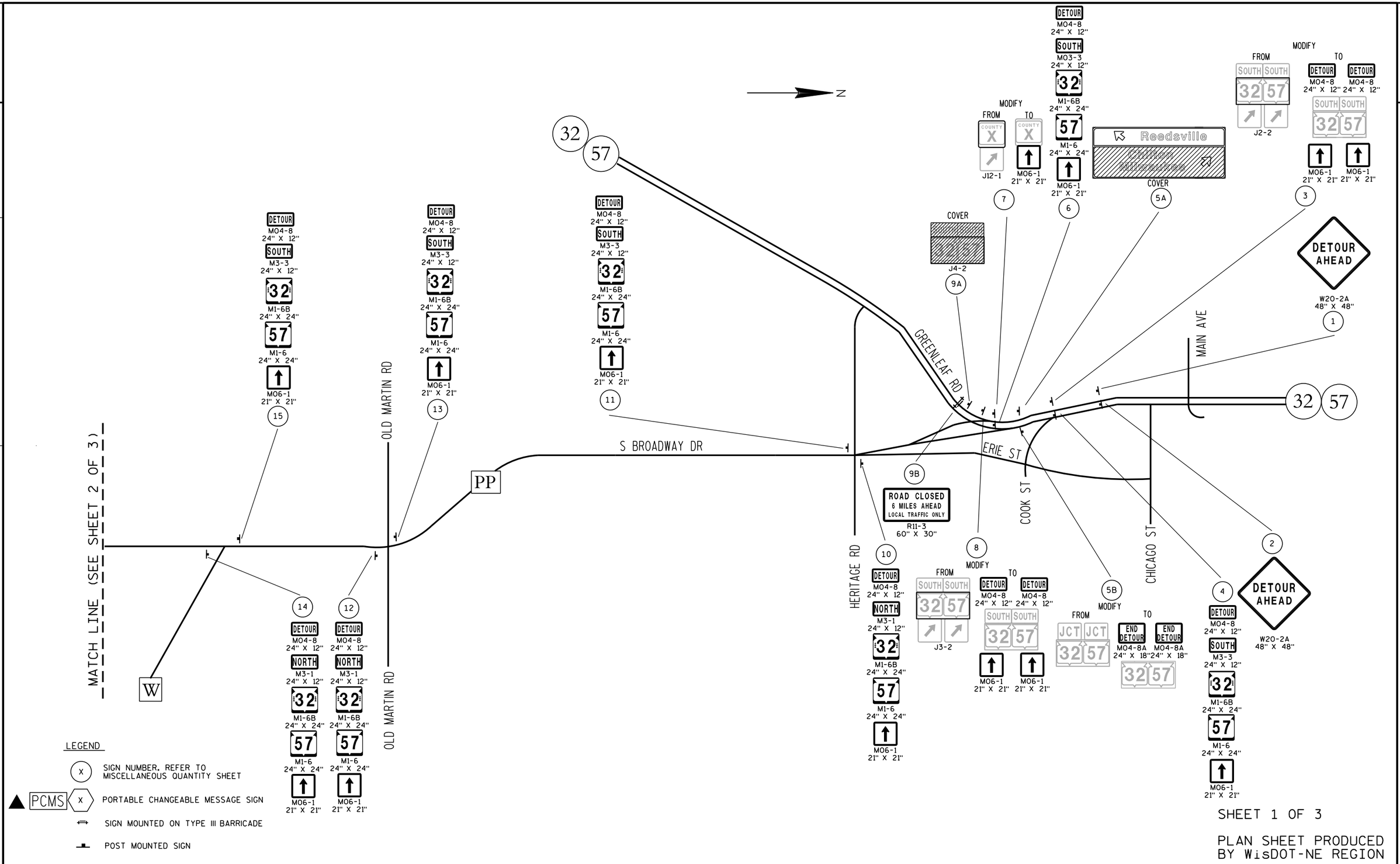
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PAVEMENT MARKING	SHEET E

PRE_14

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\024501-PM.DWG
LAYOUT NAME - 024501-pm

PLOT DATE : 2/7/2019 1:46 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42



LEGEND

- (X) SIGN NUMBER, REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

SHEET 1 OF 3

PLAN SHEET PRODUCED BY WisDOT-NE REGION

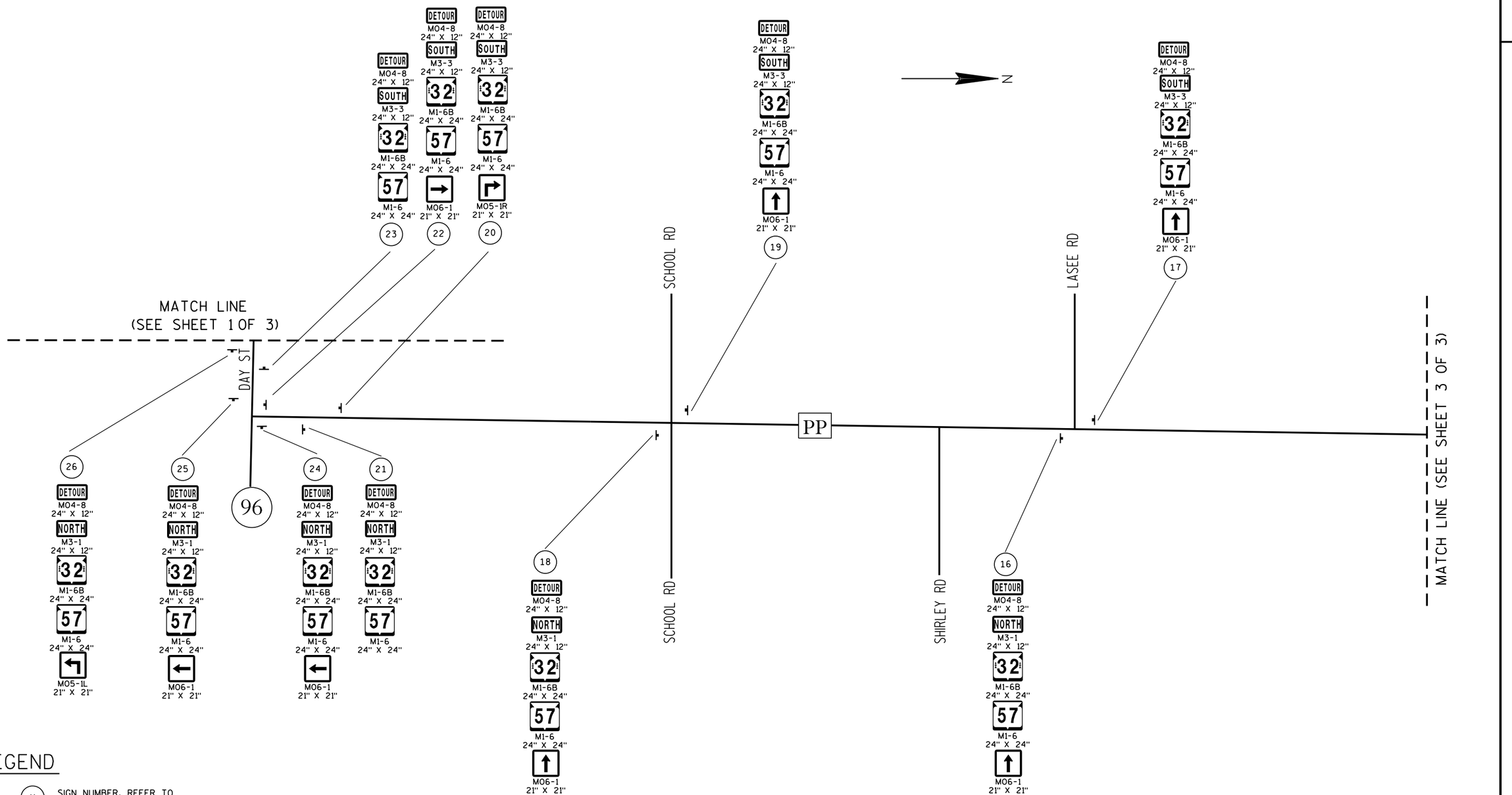
PROJECT NO: 4085-33-71	HWY: STH 32/57	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET E

PRE_15

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Brown County\STH 32-57\for Greenleaf RAB rahab\STH 32-57 Detour\027003_dt.dgn PLOT DATE : 26-OCT-2017 08:24 PLOT BY : dotjlf PLOT NAME : PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2



LEGEND

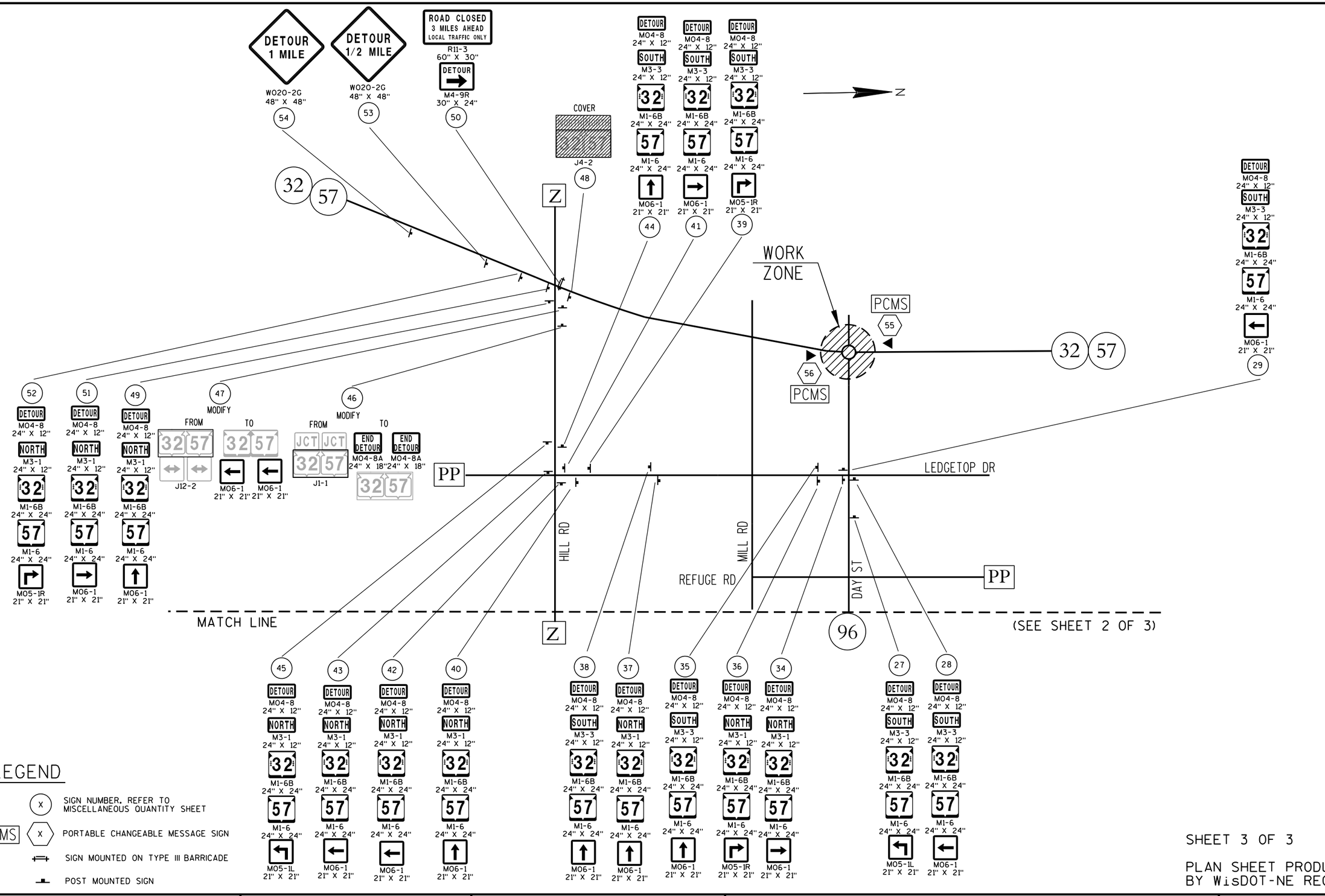
- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

SHEET 2 OF 3

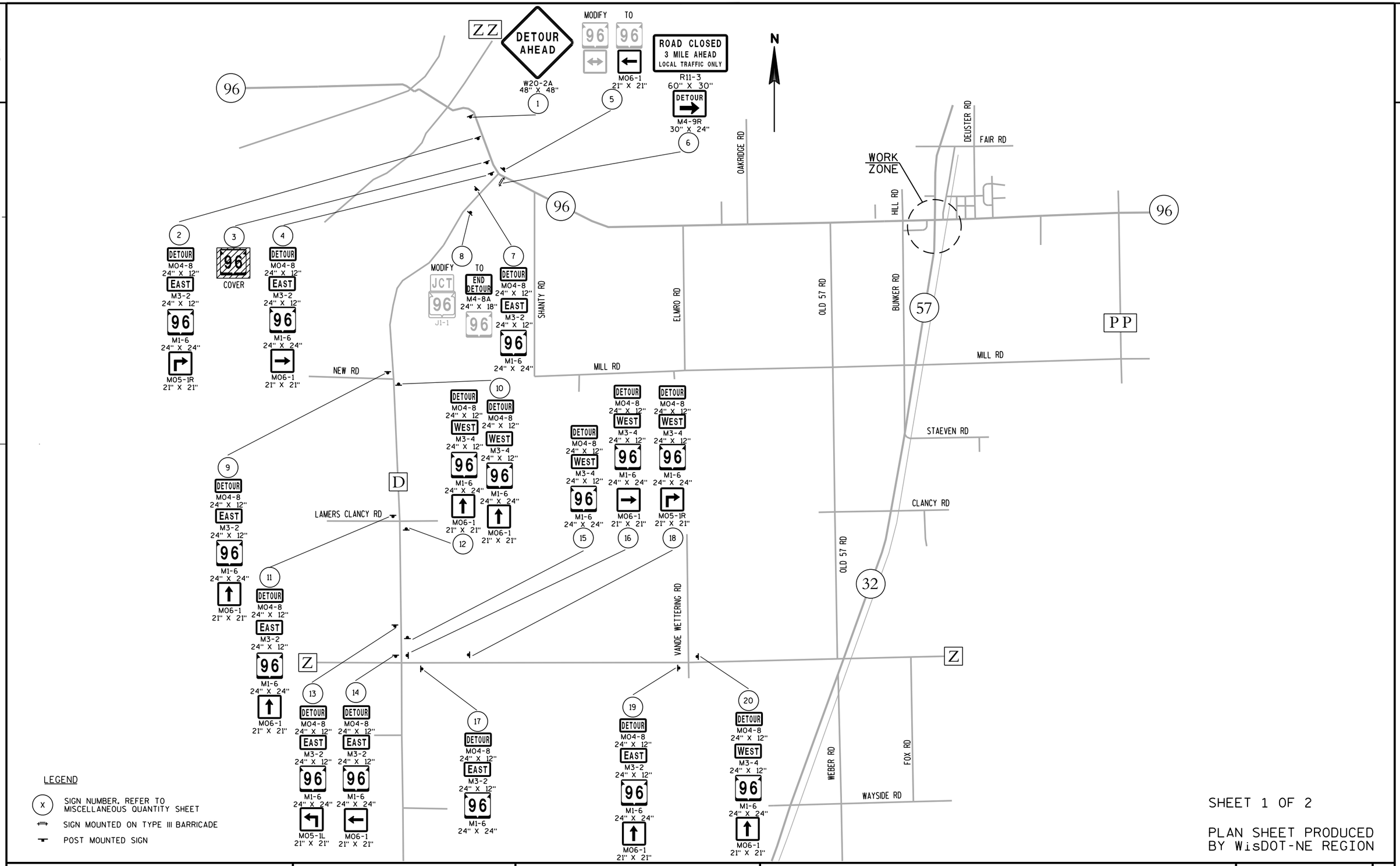
PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 4085-33-71	HWY: STH 32/57	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET E

PRE_16



PROJECT NO: 4085-33-71	HWY: STH 32/57	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET E

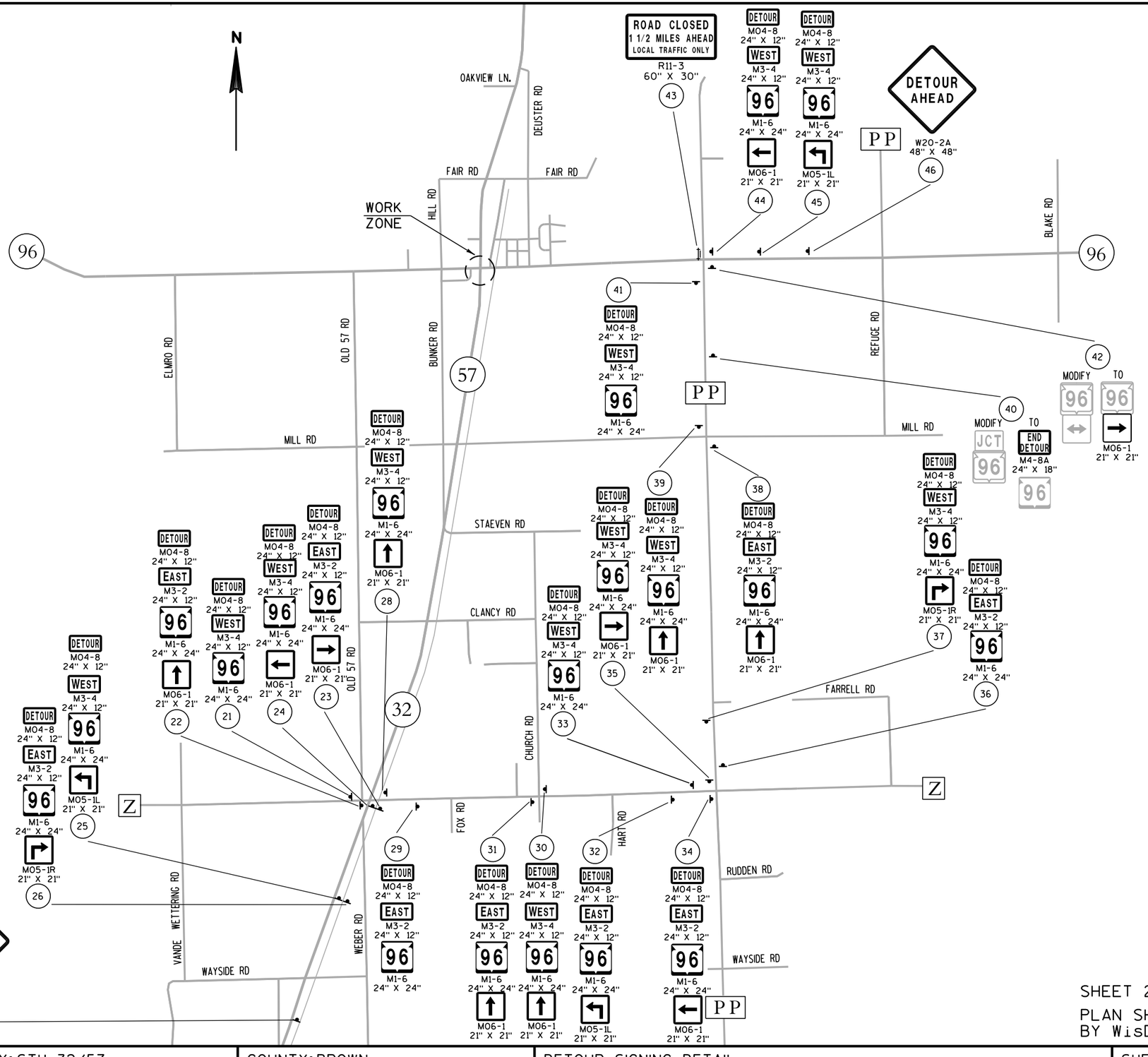


PROJECT NO: 4085-33-71	HWY: STH 32/57	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET E

PRE_18

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Brown County\STH 32-57\for Greenleaf RAB rahab\STH 96 Detour\027001_dt.dgn PLOT DATE : 25-OCT-2017 15:30 PLOT BY : dotj1f PLOT NAME : 027001dt.i PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42



PROJECT NO: 4085-33-71	HWY: STH 32/57	COUNTY: BROWN	DETOUR SIGNING DETAIL	SHEET E

PRE_19

FILE NAME : N:\spo\traffic\A Work Zone\Detours\Brown County\STH 32-57\for Greenleaf RAB rqhab\STH 96 Detour\027002_dt.dgn PLOT DATE : 26-OCT-2017 08:08 PLOT BY : dotj1f PLOT NAME : 027001dt.i PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

3

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	200' E OF MICHIGAN ST ON STH 32/57	WO 20-2A	48"x48"	1	5	5						
2	ACROSS FROM SIGN # 1 (MEDIAN SIDE)	WO 20-2A	48"x48"	1	5	5						
3	MODIFY J 3-2 (S-32-TILT RT, S-57-TILT RT	MO 4-8	24"x12"	2	5	10						
	" "	M 3-3	EXISTING									
	" "	M 50-2	EXISTING									32/57
	" "	MO 6-1	21"x21"	2	5	10						AHEAD
4	RT OF J 1-1 (JCT PP) (MEDIAN SIDE)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
5A	D1-3 (TILT LT-REEDSVILLE; CHILTON/MILWAUKEE-TILT RT										1	CHILTON/MILWAUKEE-TILT RT
5B	MODIFY J 1-1 (JCT 32, JCT 57)	MO 4-8A	24"x18"	2	5	10						
	" "	MO 50-2	EXISTING									32/57
6	RT OF J 13-1 (S-PP-AH)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
7	MODIFY J 13-1 (X-TILT RT)	M 1-5A	EXISTING									
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
8	MODIFY J 3-2 (S-32-TILT RT, S-57-TILT RT	MO 4-8	24"x12"	2	5	10						
	" "	M 3-3	EXISTING									
	" "	M 50-2	EXISTING									32/57
	" "	MO 6-1	21"x21"	2	5	10						AHEAD
9A	J4-2 (S-32, S-57)										1	S-32, S-57
9B	@ 32/57 SPLIT (RIGHT SHOULDER)	R 11-3	60"x30"	1	5	5	5	10				6 MILES
10	200' N OF CTY X INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	2	5	10						AHEAD
11	200' S OF CTY X INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
12	200' N OF OLD MARTIN RD INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
13	200' S OF OLD MARTIN RD INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
14	200' N OF CTY W INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
	PAGE SUBTOTALS			**50**		**250**	**5**	**10**	**0**		**2**	

PLAN SHEET PRODUCED BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
15	200' S OF CTY W INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
16	200' N OF LASEE RD INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
17	200' S OF LASEE RD INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
18	200' N OF SCHOOL RD INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
19	200' S OF SCHOOL RD INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
20	RT OF J 1-1 (JCT 96) ON CTY PP SB	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 5-1R	21"x21"	1	5	5						
21	200' N OF HWY 96 INTERSECTION ON CTH PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
22	200' N OF J4-2 (HWY 96-LT & RT, CTY PP-RT)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						RIGHT
23	ABOVE J 4-2 (W-96, S-PP)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	PAGE SUBTOTALS			**43**		**215**	**0**	**0**	**0**		**0**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
24	ON BACK OF J 13-1 (CTH PP AH & RT)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						LEFT
25	RT OF J 13-1 (CTY PP-RT) ON HWY 96 EB	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						LEFT
26	500' W OF SIGN # 25 ON HWY 96 EB	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 5-1L	21"x21"	1	5	5						
27	250' E OF D1-1 (LT-BRILLION)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 5-1L	21"x21"	1	5	5						
28	RT OF J 3-1 (PP-LT)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						LEFT
29	ON BACK OF J 13-1 (CTH PP AH & RT) STH 96 WB	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						LEFT
	GAP IN NUMBERING (30-33)											
34	RT OF J3-2 (96-LT & RT; PP-RT)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						RIGHT
35	250' S OF STH 96 INTERSECTION ON CTY PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
	PAGE SUBTOTALS			**40**		**200**	**0**	**0**	**0**		**0**	

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BY WisDOT - NE REGION

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
36	200' N OF J1-1 (JCT 96)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 5-1R	21"x21"	1	5	5						
37	200' N OF PARK RD INTERSECTION ON CTY PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
38	200' S OF PARK RD INTERSECTION ON CTY PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
39	RT OF J1-1 (JCT Z)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 5-1R	21"x21"	1	5	5						
40	200' N OF CTY Z INTERSECTION ON CTY PP	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
41	RT OF J3-2 (Z-LT & RT; PP-AH)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						RIGHT
42	ON BACK J3-2 (CTY PP LT & RT; CTH Z-AH) CTY Z (WB)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						LEFT
43	RT OF J3-2 (CTY PP LT & RT; CTH Z-AH) CTY Z (EB)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						LEFT
44	200' W OF CTY PP INTERSECTION ON CTH Z (WB)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-3	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
	PAGE SUBTOTALS			**45**		**225**	**0**	**0**	**0**		**0**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 5 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
45	250' W OF SIGN # 42	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 5-1L	21"x21"	1	5	5						AHEAD
46	MODIFY J1-1 (JCT 32/57)	MO 4-8A	24"x18"	2	5	10						
	" "	M 50-2	EXISTING									
47	MODIFY J3-2 (32-LT & RT; 57-LT & RT)	M 50-2	EXISTING									
	" "	MO 6-1	21"x21"	2	5	10						LEFT
48	J 4-2 (N-32; N-57)									1	1	NORTH 32, NORTH-57
49	250' E OF HWY 32/57 INTERSECTION ON CTH Z	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						AHEAD
50	NE QUAD OF HWY 32/57 & CTY Z INTERSECTION	R 11-3	60"x30"	1	5	5	5	10				3 MILES
51	RT OF J 13-1 (CTY Z - LT & RT)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 6-1	21"x21"	1	5	5						RIGHT
52	200' S OF D1-2 (LT-KAUKAUNA; ASKEATON-RT)	MO 4-8	24"x12"	1	5	5						
	" "	M 3-1	24"x12"	1	5	5						
	" "	M 1-6B	24"x24"	1	5	5						32
	" "	M 1-6	24"x24"	1	5	5						57
	" "	MO 5-1R	21"x21"	1	5	5						
53	2600' S OF SIGN # 51	WO20-2G	48"x48"	1	5	5						
54	5300' S OF SIGN # 51	WO 20-2F	48"x48"	1	5	5						
55	FIELD DETERMINED - HWY 32/57 SB	PCMS		1					7			
56	FIELD DETERMINED - HWY 32/57 NB	PCMS		1					7			
	PAGE SUBTOTALS			**29**		**135**	**5**	**10**	**14**		**1**	
	STH 32/57 DETOUR TOTALS			**207**		**1,025**	**10**	**20**	**14**		**3**	

PLAN SHEET PRODUCED

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
1	STH 96, N. OF CTH D, PLACE 1/4 MILE N. OF CTH D INTERSECTION	W 20-2A	48"X48"	1	4	4						
2	STH 96, N. OF CTH D, PLACE 750' N. OF CTH D INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 5-1R	21"X21"	1	4	4						
3	STH 96, N. OF CTH D, COVER EXISTING SIGN AS SHOWN									1	1	COVER ENTIRE SIGN
4	STH 96, N. OF CTH D, PLACE 150' N. OF CTH D INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						RIGHT
5	STH 96, AT CTH D, MODIFY EXISITNG J13-2 AS SHOWN	MO 6-1	21"X21"	1	4	4						LEFT
6	STH 96, AT CTH D, PLACE IN SE QUADRANT BEHIND BACK OF CURB	R 11-3	60"X30"	1	4	4	4	8				3 MILE AHEAD
	"	M 4-9R	30"X24"	1	4	4						
7	CTH D, S. OF STH 96, PLACE 100' S. OF STH 96 INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
8	CTH D, S. OF STH 96, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	4	4						
9	CTH D, AT NEW RD, PLACE 100' N. OF NEW RD	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
10	CTH D, AT NEW RD, PLACE 100' S. OF NEW RD	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
11	CTH D, AT LAMERS CLANCY RD, PLACE 100' N. OF LAMERS CLANCY RD	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
12	CTH D, AT LAMERS CLANCY RD, PLACE 100' S. OF LAMERS CLANCY RD	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
13	CTH D, N. OF CTH Z, PLACE 750' N. OF CTH Z INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 5-1L	21"X21"	1	4	4						
14	CTH D, N. OF CTH Z, PLACE 100' N. OF CTH Z INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						LEFT
15	CTH D, N. OF CTH Z, PLACE 150' N. OF CTH Z INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	PAGE SUBTOTALS			**43**		**172**	**4**	**8**	**0**		**1**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

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TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
16	CTH Z, AT CTH D, PLACE RIGHT OF EXISTING J13-2 SIGN	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						RIGHT
17	CTH Z, E. OF CTH D, PLACE 150' E. OF CTH D INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
18	CTH Z, E. OF CTH D, PLACE 750' E. OF CTH D INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 5-1R	21"X21"	1	4	4						
19	CTH Z, W. OF VANDE WETTERING RD, PLACE 100' W. OF VANDE WETTERING RD	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
20	CTH Z, E. OF VANDE WETTERING RD, PLACE 100' E. OF VANDE WETTERING RD	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
21	CTH Z, W. OF OLD 57 RD, PLACE 100' W. OF OLD 57 RD	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
22	CTH Z, AT STH 32/57, PLACE RIGHT OF EXISITNG J13-2 SIGN AT STH 32/57	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
23	STH 32/57, AT CTH Z, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						RIGHT
24	STH 32/57, AT CTH Z, PLACE LEFT OF EXISTING J13-1 SIGN	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						LEFT
25	STH 32/57, S. OF CTH Z, PLACE 750' S. OF CTH Z INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 5-1L	21"X21"	1	4	4						
26	STH 32/57, S. OF CTH Z, PLACE 750' S. OF CTH Z INTERSECTION, PLACE RIGHT OF SIGN #25	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 5-1R	21"X21"	1	4	4						
27	STH 32/57, S. OF CTH Z, PLACE 1/4 MILE S. OF CTH Z INTERSECTION	M 1-6	24"X24"	1	4	4						96
	"	W 20-2A	48"X48"	1	4	4						
28	CTH Z, AT STH 32/57, PLACE RIGHT OF EXISITNG J13-2 SIGN AT STH 32/57	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
	PAGE SUBTOTALS			**48**		**192**	**0**	**0**	**0**		**0**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
29	CTH Z, E. OF STH 32/57, PLACE 150' E. OF STH 32/57 INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
30	CTH Z, E. OF CHURCH RD, PLACE 100' E. OF CHURCH RD INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
31	CTH Z, W. OF CHURCH RD, PLACE 100' W. OF CHURCH RD INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
32	CTH Z, W. OF CTH PP, PLACE 750' W. OF CTH PP INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 5-1L	21"X21"	1	4	4						
33	CTH Z, W. OF CTH PP, PLACE 150' W. OF CTH PP INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
34	CTH Z, AT CTH PP, PLACE BETWEEN R1-1 AND J13-2 SIGNS AT CTH PP INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						LEFT
35	CTH PP, N. OF CTH Z, PLACE RIGHT OF EXISTING J13-2 SIGN	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						RIGHT
36	CTH PP, N. OF CTH Z, PLACE 150' N. OF CTH Z INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
37	CTH PP, N. OF CTH Z, PLACE 1000' N. OF CTH Z INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 5-1R	21"X21"	1	4	4						
38	CTH PP, S. OF MILL RD, PLACE 100' S. OF MILL RD INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-2	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
39	CTH PP, N. OF MILL RD, PLACE 100' N. OF MILL RD INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						AHEAD
40	CTH PP, S. OF STH 96, MODIFY EXISTING J1-1 SIGN AS SHOWN	M 4-8A	24"X18"	1	4	4						
41	CTH PP, S. OF STH 96, PLACE 150' S. OF STH 96 INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	PAGE SUBTOTALS			**45**		**180**	**0**	**0**	**0**		**0**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

3

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 4 DAYS	643.0900 SIGNS DAYS	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.1050 SIGNS PORTABLE CHANGEABLE MESSAGE DAYS	NO. OF CYCLES	643.0920 COVERING SIGNS TYPE II EACH	REMARKS
42	CTH PP, AT STH 96, MODIFY EXISTING J13-1 SIGN AS SHOWN	MO 6-1	21"X21"	1	4	4						RIGHT
43	STH 96, AT CTH PP, PLACE ON RIGHT SHOULDER IN NW QUADRANT OF INTERSECTION	R 11-3	60"X30"	1	4	4	4	8				1 1/2 MILES AHEAD
44	STH 96, AT CTH PP, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 6-1	21"X21"	1	4	4						LEFT
45	STH 96, E. OF CTH PP, PLACE 750' E. OF CTH PP/LEDGETOP DR INTERSECTION	MO 4-8	24"X12"	1	4	4						
	"	M 3-4	24"X12"	1	4	4						
	"	M 1-6	24"X24"	1	4	4						96
	"	MO 5-1L	21"X21"	1	4	4						
46	STH 96, E. OF CTH PP, PLACE 1/4 MILE E. OF CTH PP/LEDGETOP DR INTERSECTION	W 20-2A	48"X48"	1	4	4						
	PAGE SUBTOTALS			**11**		**44**	**4**	**8**	**0**		**0**	
	STH 96 DETOUR TOTALS			**147**		**588**	**8**	**16**	**0**		**1**	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PROJECT PLAT TITLE SHEET
4085-33-21
HILBERT - GREEN BAY
SCL - DEUSTER ST
STH 32/57
BROWN COUNTY CALUMET COUNTY

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
TO BE REMOVED
BRIDGE

SECTION CORNER SYMBOL (21 / 30 29 / 31 32 / 36)
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN (#1-25)

R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED) IP

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER (25)
UTILITY NUMBER (40)
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

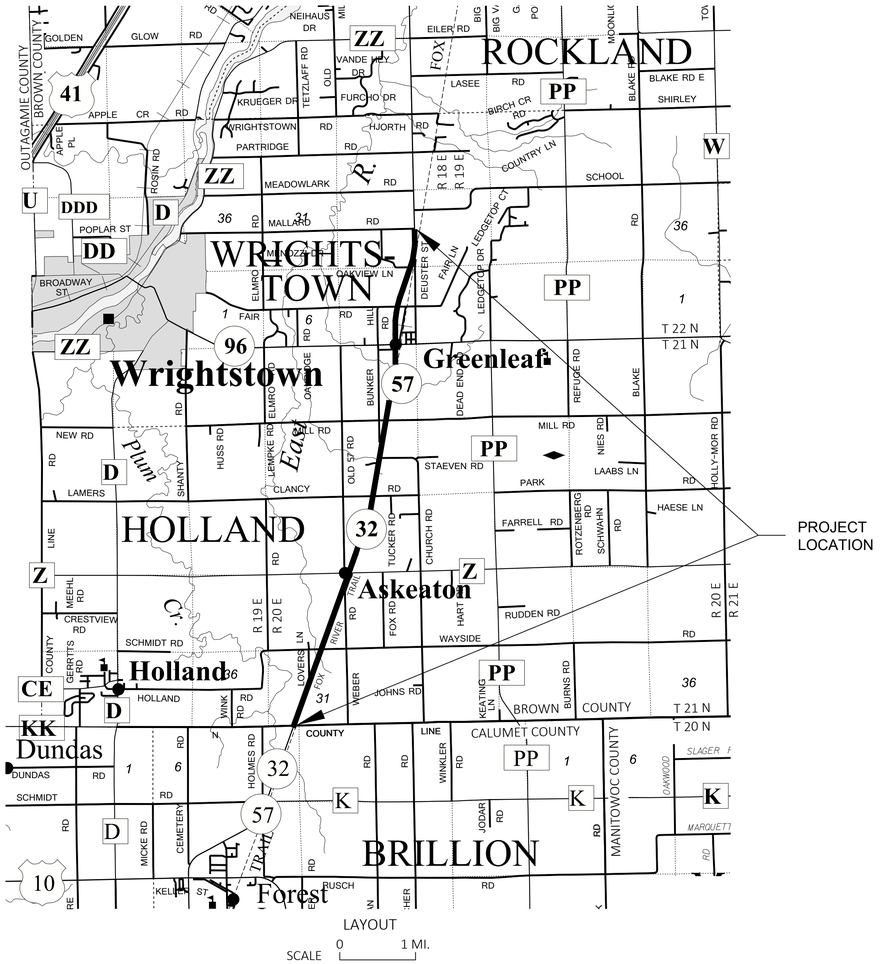
ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	CONC	SECTION	SEC
COUNTY	CO	SEPTIC VENT	SEPV
COUNTY TRUNK HIGHWAY	CTH	SQUARE FEET	SF
DISTANCE	DIST	STATE TRUNK HIGHWAY	STH
CORNER	COR	STATION	STA
DOCUMENT NUMBER	DOC	TELEPHONE PEDESTAL	TP
EASEMENT	EASE	TEMPORARY LIMITED EASEMENT	TLE
EXISTING	EX	TRANSPORTATION PROJECT PLAT	TPP
GAS VALVE	GV	UNITED STATES HIGHWAY	USH
GRID NORTH	GN	VOLUME	V
HIGHWAY EASEMENT	HE		
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY NUMBER	NGS NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

W	WATER
G	GAS
T	TELEPHONE
OH	OVERHEAD TRANSMISSION LINES
E	ELECTRIC
TV	CABLE TELEVISION
FO	FIBER OPTIC
SAN	SANITARY SEWER
SS	STORM SEWER



THE NOTES,CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 4085-33-21.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), BROWN COUNTY, NAD83(2011) IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1" I.D. X 24" IRON PIPES), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

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.

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

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

A HIGHWAY EASEMENT (HE) IS AN EASEMENT FOR HIGHWAY PURPOSES, AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE.

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

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

PARCEL IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE SCHEDULE OF LANDS & INTERESTS REQUIRED.

FOR EXISTING HIGHWAY RIGHT-OF-WAY AND ACCESS CONTROL POINTS OF REFERENCE SEE INDIVIDUAL TPP DETAIL PAGES.

PROJECT NUMBER	4085-33-21 - 4.01
SHEET	2 OF 2
AMENDMENT NO:	

FILE NAME : S:\CURRPROJ\BROWN COUNTY\STH 32-57 TPP\CIVIL3D\40853300\RW\040400-RP.DWG
LAYOUT NAME: TPP Title 34x22
PLOT DATE : 2/4/2019 8:44 AM PLOT BY : JAY PANETTI PLOT NAME : _____
APPRAISAL PLAT DATE: 2/4/2019

TRANSPORTATION PROJECT PLAT NO: 4085-33-21 - 4.01

PART OF THE FRACTIONAL NE1/4-NE1/4 OF SECTION 5, T20N, R20E, TOWN OF BRILLION, CALUMET COUNTY,
AND PART OF THE SE1/4-SW1/4 OF SECTION 31, T21N, R20E, TOWN OF HOLLAND, BROWN COUNTY, WISCONSIN

RELOCATION ORDER STH 32/57 HILBERT - GREEN BAY (SCL - DEUSTER ST) BROWN COUNTY CALUMET COUNTY

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), BROWN COUNTY, NAD83(2011) IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1" I.D. X 24" IRON PIPES), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED AS SHEET 2 OF 2.

DOCUMENT # 536700
TAMARA ALTEN
REGISTER OF DEEDS
CALUMET COUNTY, WI
02/06/2019 03:03 PM
VOL: D PAGE: 118
RECORDING FEE: 25.00

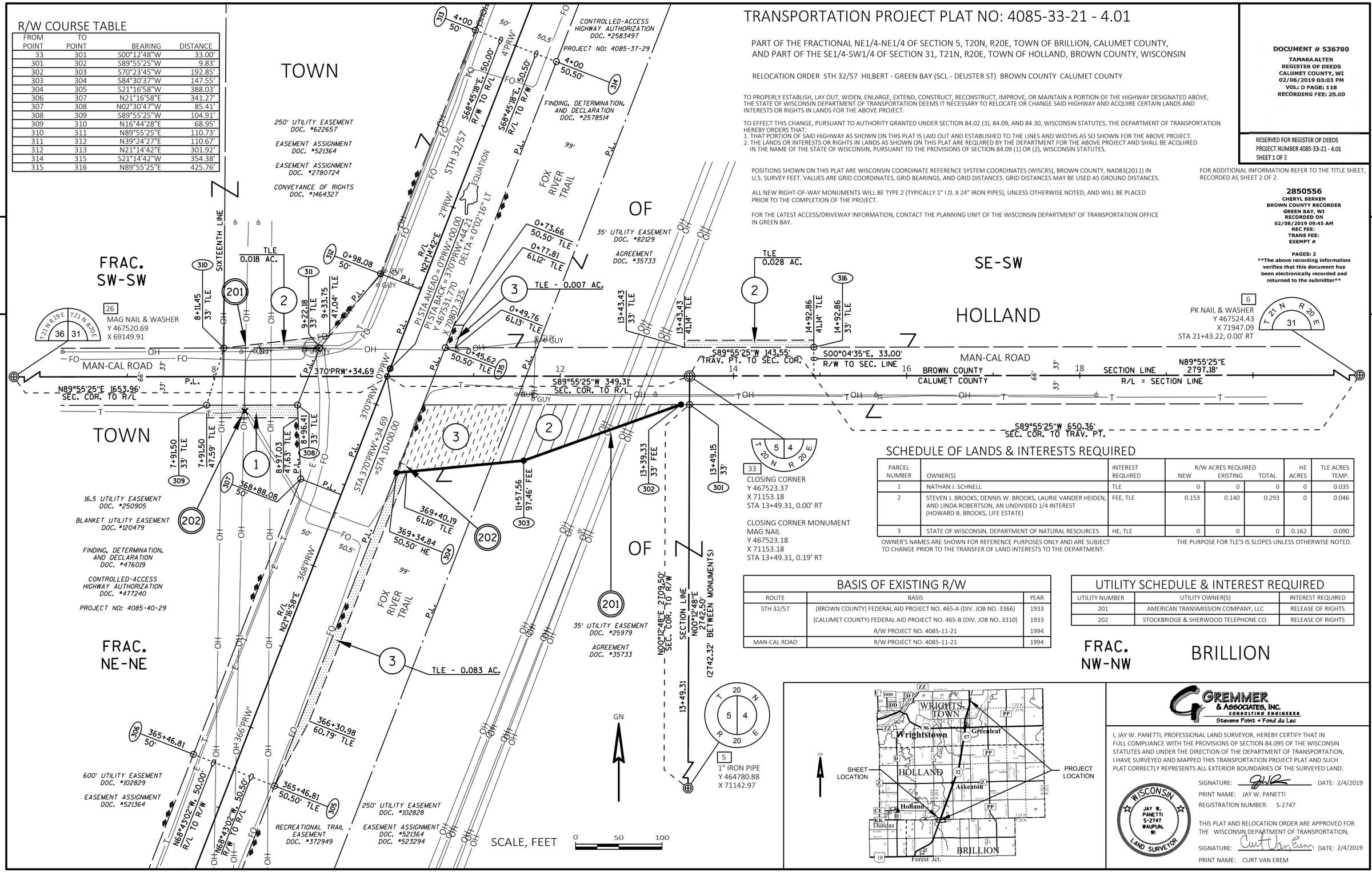
RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4085-33-21 - 4.01
SHEET 1 OF 2

2850556
CHERYL BERKEN
BROWN COUNTY RECORDER
GREEN BAY, WI
RECORDED ON
02/08/2019 09:45 AM
REC FEE:
TRANS FEE:
EXEMPT #

PAGES: 2
The above recording information verifies that this document has been electronically recorded and returned to the submitter

R/W COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
33	301	S00°12'48"W	33.00'
301	302	S89°55'25"W	9.83'
302	303	S70°23'45"W	192.85'
303	304	S84°30'37"W	147.55'
304	305	S21°16'58"W	388.03'
306	307	N21°16'58"E	341.27'
307	308	N02°30'47"W	85.41'
308	309	S89°55'25"W	104.91'
309	310	N16°44'28"E	68.95'
310	311	N89°55'25"E	110.73'
311	312	N39°24'27"E	110.67'
312	313	N21°14'42"E	301.92'
314	315	S21°14'42"W	354.38'
315	316	N89°55'25"E	425.76'



SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	HE ACRES	TLE ACRES TEMP.
1	NATHAN J. SCHNELL	TLE	0	0	0	0	0.035
2	STEVEN J. BROOKS, DENNIS W. BROOKS, LAURIE VANDER HEIDEN, AND LINDA ROBERTSON, AN UNDIVIDED 1/4 INTEREST (HOWARD B. BROOKS, LIFE ESTATE)	FEE, TLE	0.153	0.140	0.293	0	0.046
3	STATE OF WISCONSIN, DEPARTMENT OF NATURAL RESOURCES	HE, TLE	0	0	0	0.162	0.090

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

THE PURPOSE FOR TLE'S IS SLOPES UNLESS OTHERWISE NOTED.

BASIS OF EXISTING R/W

ROUTE	BASIS	YEAR
STH 32/57	(BROWN COUNTY) FEDERAL AID PROJECT NO. 465-A (DIV. JOB NO. 3366)	1933
	(CALUMET COUNTY) FEDERAL AID PROJECT NO. 465-B (DIV. JOB NO. 3310)	1933
	R/W PROJECT NO. 4085-11-21	1994
MAN-CAL ROAD	R/W PROJECT NO. 4085-11-21	1994

UTILITY SCHEDULE & INTEREST REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
201	AMERICAN TRANSMISSION COMPANY, LLC	RELEASE OF RIGHTS
202	STOCKBRIDGE & SHERWOOD TELEPHONE CO.	RELEASE OF RIGHTS

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac

I, JAY W. PANETTI, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

SIGNATURE: _____ DATE: 2/4/2019
PRINT NAME: JAY W. PANETTI
REGISTRATION NUMBER: S-2747

WISCONSIN JAY W. PANETTI S-2747 WAUPUN, WI LAND SURVEYOR

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

SIGNATURE: _____ DATE: 2/4/2019
PRINT NAME: CURT VAN EREM

FILE NAME : S:\CURRPROJ\BROWN COUNTY\STH 32-57 TPP\CIVIL3D\40853300\RW\040401-RP.DWG
APPRAISAL PLAT DATE : 2/4/2019
PLOT DATE : 2/4/2019 10:39 AM
PLOT BY : JAY PANETTI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

TRANSPORTATION PROJECT PLAT NO: 4085-33-21 - 4.02

PART OF THE NE1/4-SE1/4 OF SECTION 32, T22N, R20E, TOWN OF WRIGHTSTOWN, BROWN COUNTY, WISCONSIN

RELOCATION ORDER STH 32/57 HILBERT - GREEN BAY (SCL - DEUSTER ST) BROWN COUNTY CALUMET COUNTY

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

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), BROWN COUNTY, NAD83(2011) IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

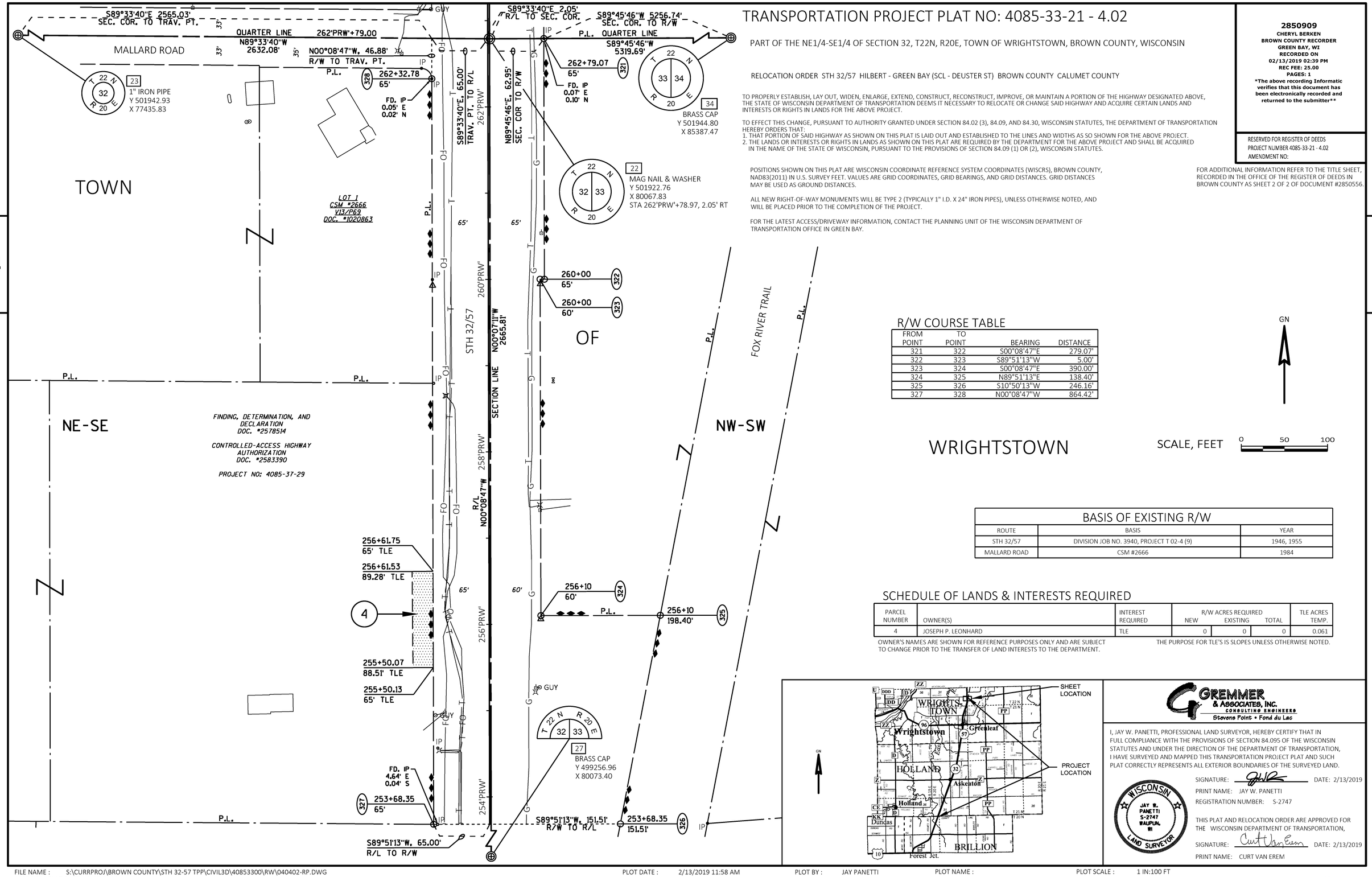
ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 1" I.D. X 24" IRON PIPES), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

2850909
CHERYL BERKEN
BROWN COUNTY RECORDER
GREEN BAY, WI
RECORDED ON
02/13/2019 02:39 PM
REC FEE: 25.00
PAGES: 1
*The above recording Informatic verifies that this document has been electronically recorded and returned to the submitter**

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 4085-33-21 - 4.02
AMENDMENT NO:

FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN BROWN COUNTY AS SHEET 2 OF 2 OF DOCUMENT #2850556.



R/W COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
321	322	S00°08'47"E	279.07'
322	323	S89°51'13"W	5.00'
323	324	S00°08'47"E	390.00'
324	325	N89°51'13"E	138.40'
325	326	S10°50'13"W	246.16'
327	328	N00°08'47"W	864.42'

GN

WRIGHTSTOWN

SCALE, FEET 0 50 100

BASIS OF EXISTING R/W

ROUTE	BASIS	YEAR
STH 32/57	DIVISION JOB NO. 3940, PROJECT T 02-4 (9)	1946, 1955
MALLARD ROAD	CSM #2666	1984

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES TEMP.
4	JOSEPH P. LEONHARD	TLE	0	0	0	0.061

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

THE PURPOSE FOR TLE'S IS SLOPES UNLESS OTHERWISE NOTED.

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac

I, JAY W. PANETTI, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN JAY W. PANETTI S-2747 WAUPUN, WI LAND SURVEYOR

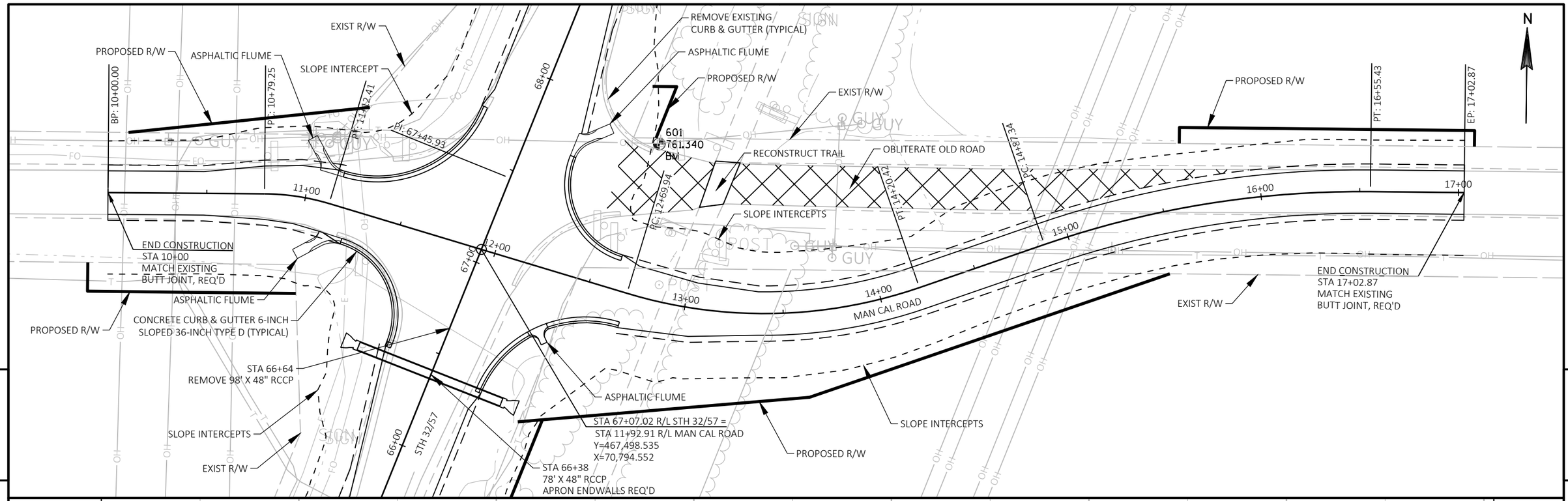
SIGNATURE: _____ DATE: 2/13/2019
PRINT NAME: JAY W. PANETTI
REGISTRATION NUMBER: S-2747

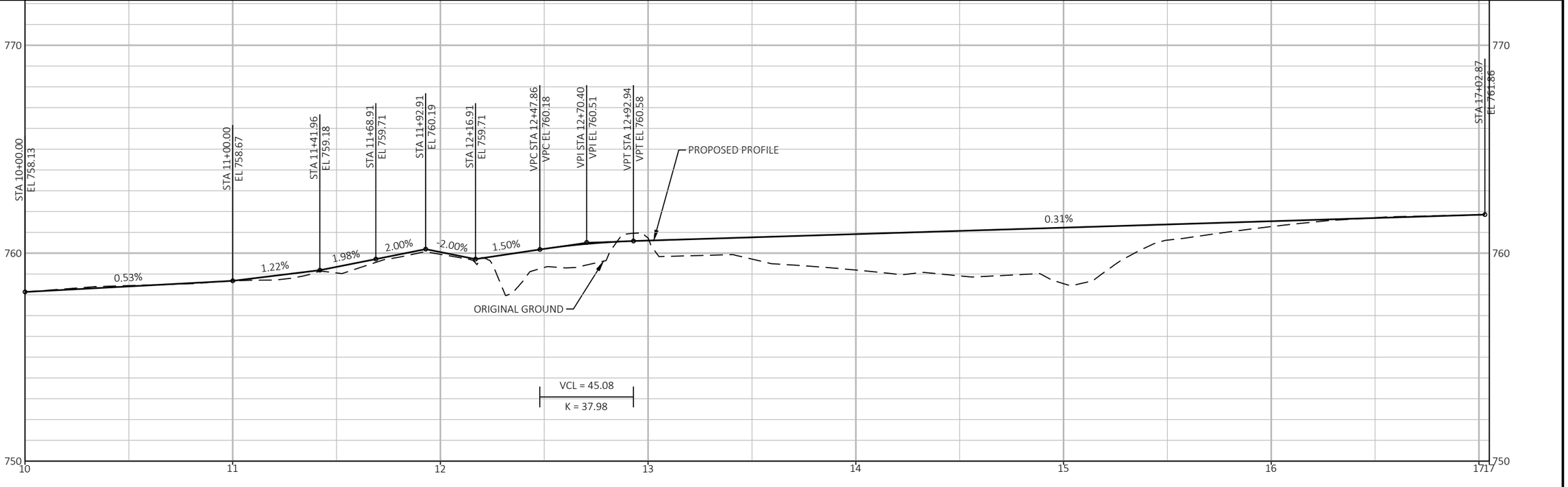
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION,

SIGNATURE: _____ DATE: 2/13/2019
PRINT NAME: CURT VAN EREM

FILE NAME : S:\CURRPROJ\BROWN COUNTY\STH 32-57 TPP\CIVIL3D\40853300\RW\040402-RP.DWG
APPRAISAL PLAT DATE : 2/13/2019
PLOT DATE : 2/13/2019 11:58 AM
PLOT BY : JAY PANETTI
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

4085-33-21 - 4.02

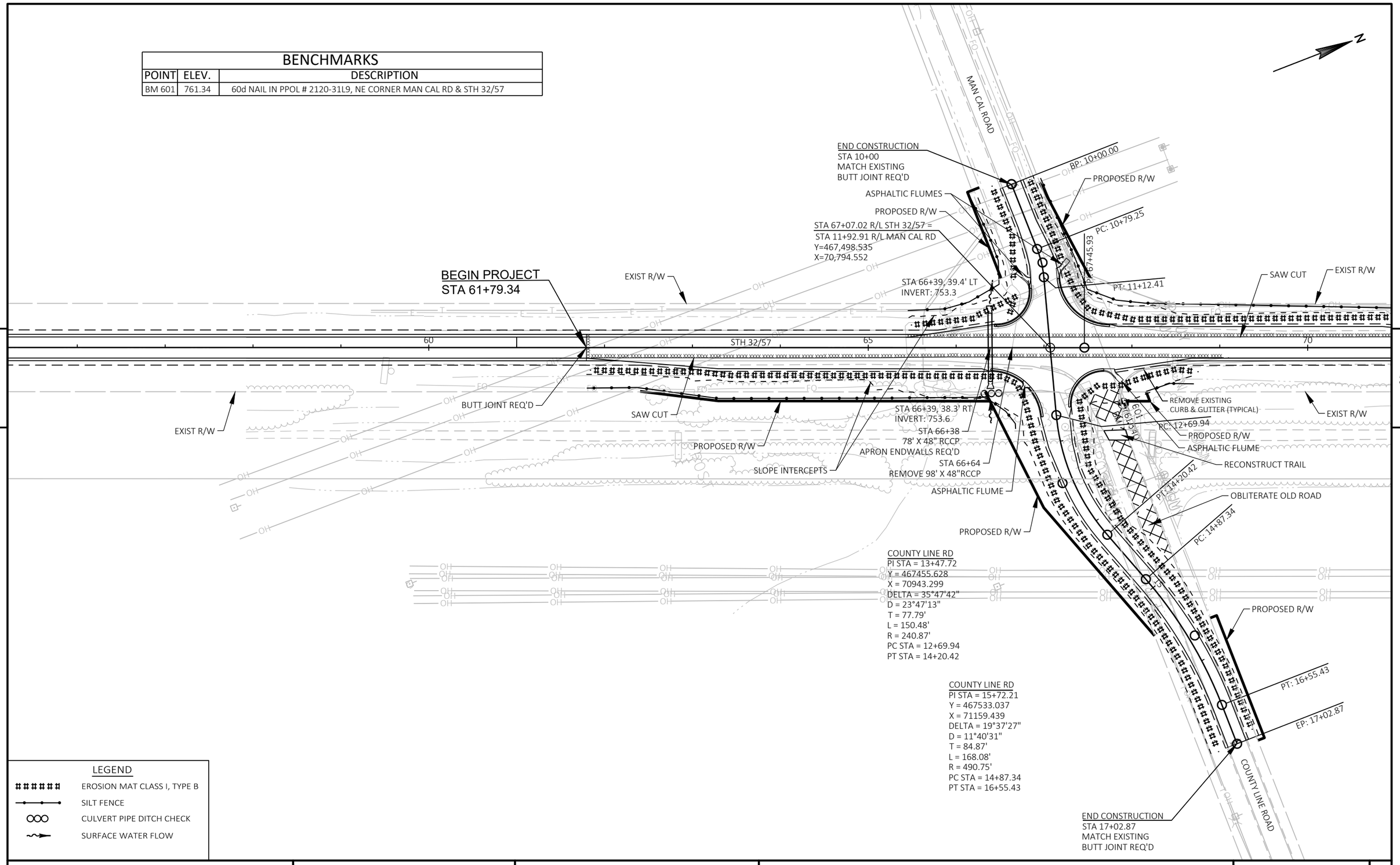




PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN AND PROFILE: MAN CAL ROAD	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050101-pp
PLOT DATE : 2/28/2019 8:28 AM
PLOT BY : LORENZ, KELSEY ANN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT
PRE_32
WISDOT/CADDS SHEET 44

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 601	761.34	60d NAIL IN PPOL # 2120-31L9, NE CORNER MAN CAL RD & STH 32/57



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050201-pn
PLOT DATE : 2/28/2019 8:31 AM
PLOT BY : LORENZ, KELSEY ANN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

PRE_33

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 602	739.94	DISK ON SE CORNER HEADWALL C-5-96-97 APPROX 1410' N OF C/L MAN CAL RD

N

5

5

70 75 STH 32/57 80 85

APPROACH = 78+26.84, -20.00' LT
POST 1 = 79+31.84, -22.23' LT
POST 5 = 79+56.84, -21.23' LT
POST 9 = 79+81.84, -20.23' LT
POST 9 = 84+00.46, -19.60' LT
POST 5 = 84+25.45, -20.53' LT
POST 1 = 84+50.45, -21.61' LT
APPROACH = 85+55.45, -20.00' LT

BEAMGUARD REMOVE AND REPLACE WITH MIDWEST GUARDRAIL (MGS) SYSTEM

SLOPE INTERCEPTS

BM 602 739.940

USGS

APPROACH = 77+55.13, 20.00' RT
POST 1 = 78+60.13, 21.22' RT
POST 5 = 78+85.13, 20.16' RT
POST 9 = 79+10.13, 19.10' RT
POST 9 = 85+53.75, 19.17' RT

BEAMGUARD REMOVE AND REPLACE WITH MIDWEST GUARDRAIL (MGS) SYSTEM AND MIDWEST GUARDRAIL SYSTEM LONG SPAN (MGSL)

16+55.43

EP: 17+02.87

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

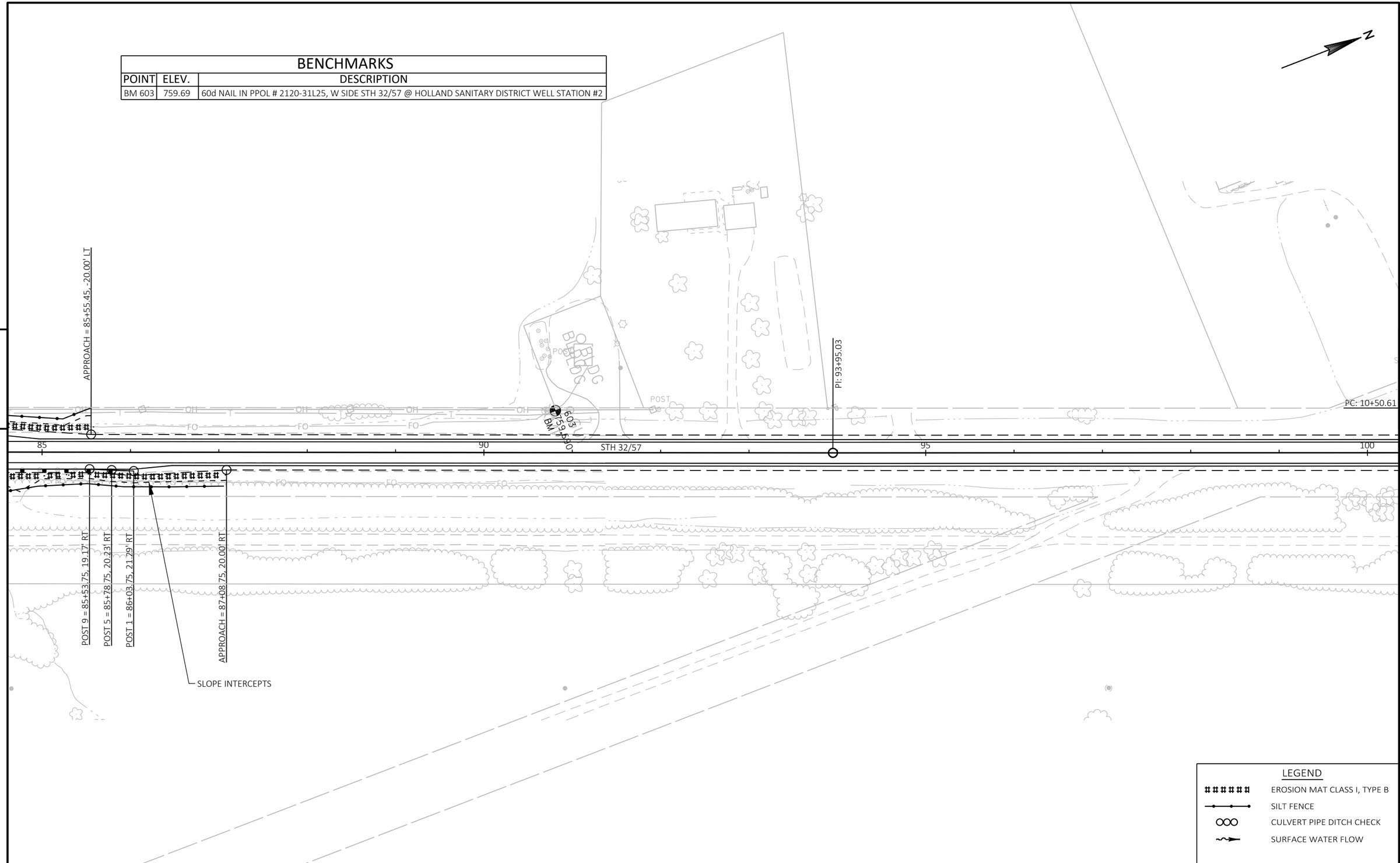
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050202-pn

PLOT DATE : 2/28/2019 8:31 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

PRE_34

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 603	759.69	60d NAIL IN PPOL # 2120-31L25, W SIDE STH 32/57 @ HOLLAND SANITARY DISTRICT WELL STATION #2



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_35

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050203-pn

PLOT DATE : 2/28/2019 8:31 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

5

5

N

EP: 21+31.89

20

15

PT: 10+87.68

LOVERS LANE

SIGN

PC: 10+50.61

100

105

STH 32/57

110

115

FO

FO

FO

APPROACH = 114+98.35, -20.00' LT

STA 101+02.89 R/L STH 32/57 =
STA 10+00.00 R/L LOVERS LANE
Y=470,663.666
X=72,024.954

APPROACH = 114+46.29, 20.00' RT

SLOPE INTERCEPTS

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_36

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050204-pn

PLOT DATE : 2/28/2019 8:31 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 605	744.47	60d NAIL IN PPOL # 2120-30R9, NE CORNER WAYSIDE RD & STH 32/57
BM 604	742.1	DISK ON NE ABUTMENT B-5-262-81, APPROX 620' S OF WAYSIDE RD

N

APPROACH = 114+98.35, -20.00' LT
POST 1 = 116+03.35, -22.56' LT
POST 5 = 116+28.32, -21.50' LT
POST 9 = 116+53.31, -20.44' LT
POST 9 = 119+34.50, -20.38' LT
POST 5 = 119+59.48, -21.49' LT
POST 1 = 119+84.46, -22.59' LT
APPROACH = 120+89.46, -20.00' LT

SLOPE INTERCEPTS
EXISTING STRUCTURE B-05-0262

WAYSIDE ROAD

END CONSTRUCTION
STA 19+26
MATCH EXISTING
BUTT JOINT REQ'D

STA 123+97.55 R/L STH 32/57 =
STA 20+00.00 R/L WAYSIDE ROAD
Y=472,803.211
X=72,854.296

115 120 STH 32/57 125 130

BM 604 742.00

605 744.470 BM

POST 1 = 115+51.29, 21.76' RT
POST 5 = 115+76.29, 20.73' RT
POST 9 = 116+01.29, 19.62' RT
POST 9 = 118+69.91, 19.90' RT
POST 5 = 118+94.91, 20.95' RT
POST 1 = 119+19.91, 22.01' RT
APPROACH = 120+24.90, 20.00' RT

END CONSTRUCTION
STA 20+75
MATCH EXISTING
BUTT JOINT REQ'D

BEAMGUARD REMOVE AND REPLACE
WITH MIDWEST GUARDRAIL (MGS) SYSTEM

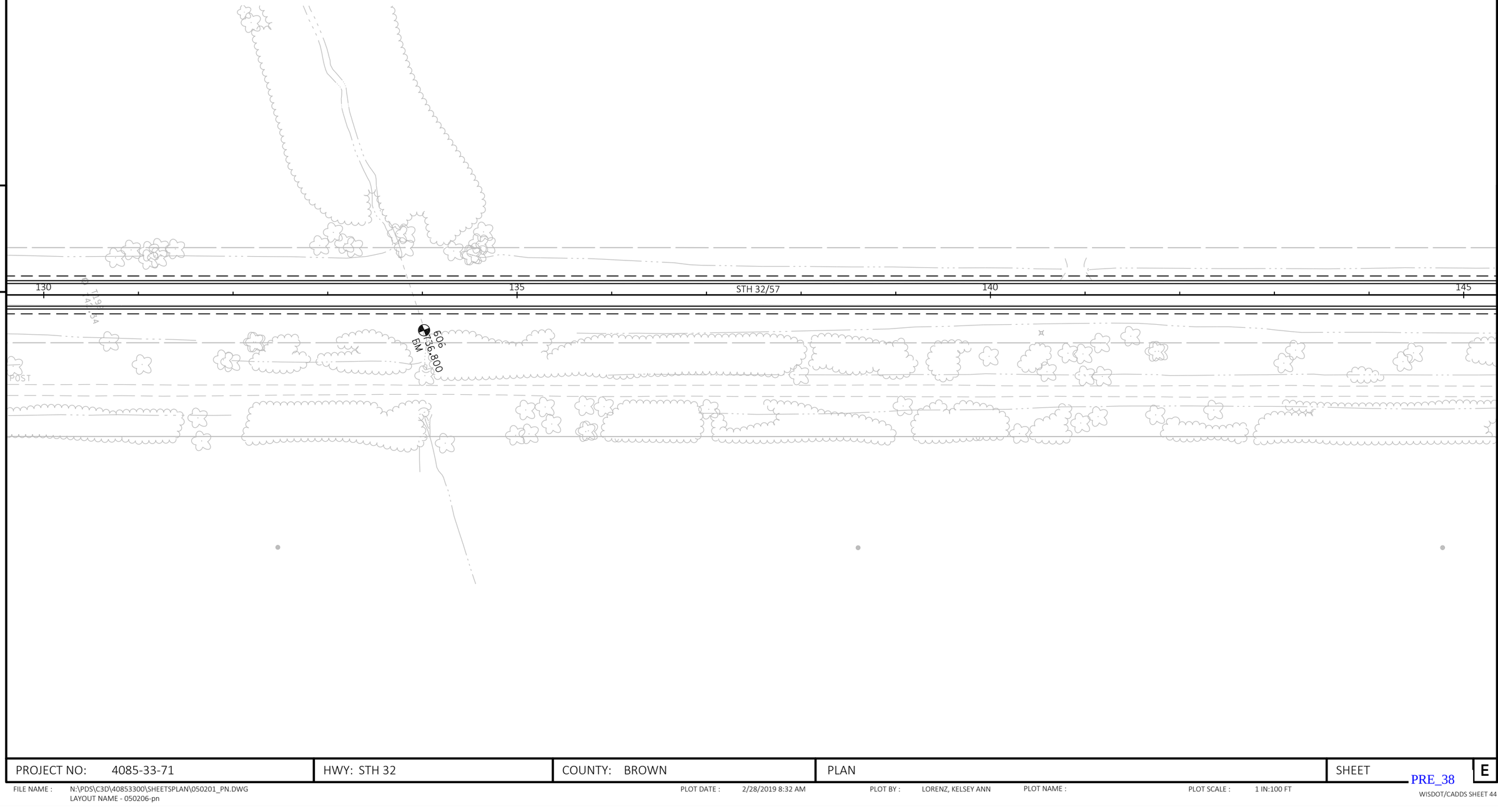
LEGEND
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_37

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050205-pn
PLOT DATE : 2/28/2019 8:32 AM
PLOT BY : LORENZ, KELSEY ANN
PLOT NAME :
PLOT SCALE : 1 IN:100 FT

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 606	736.8	CUT SQUARE TOP EAST END 48" RCCP APPROX 1000' NORTH OF WAYSIDE RD

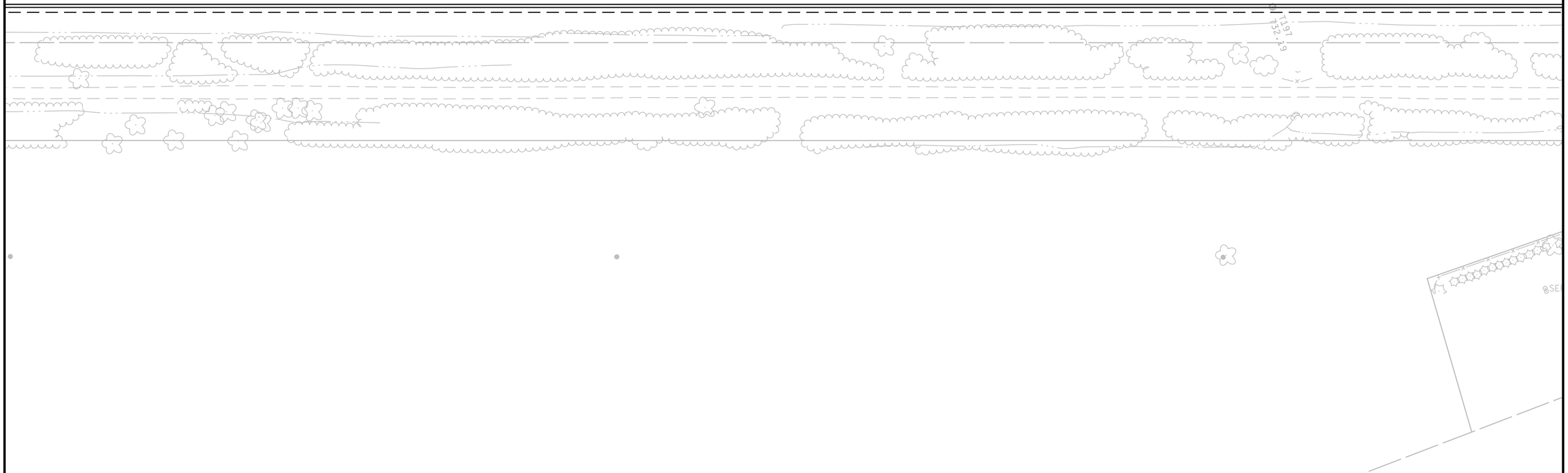


PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

5

5

145 150 STH 32/57 155 160



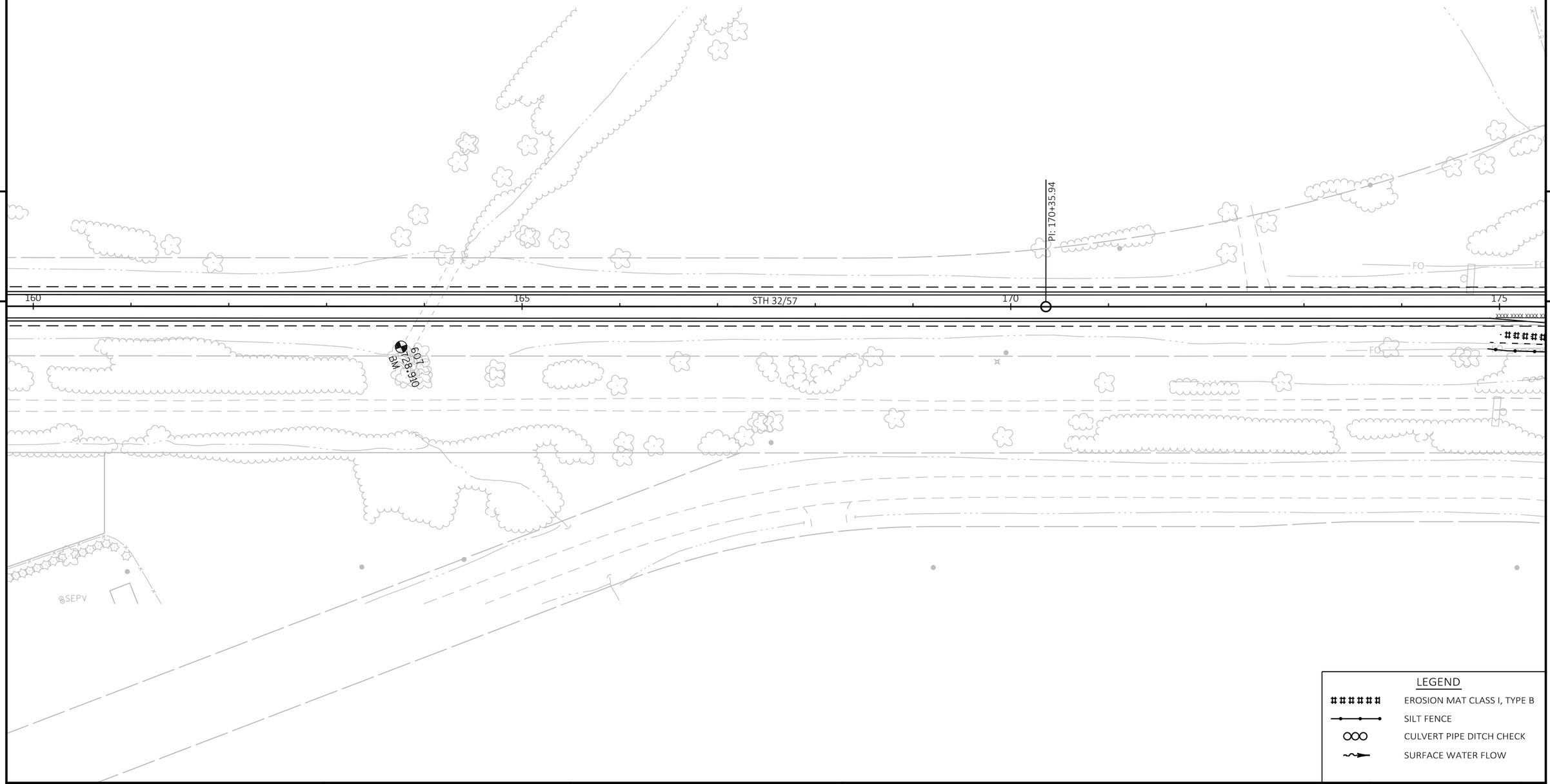
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050207-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

PRE_39

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 607	728.91	CUT SQUARE TOP EAST END 60" RCCP APPROX 1640' SOUTH OF CTH Z



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET	E

PRE_40

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050208-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 608	740.14	60d NAIL IN PPOL # 2120-20R8, NE CORNER CTH Z & STH 32/57

REMOVE MASONRY ENDWALL
CULVERT PIPE EXTENSION
2' X 36" RCCP
CONCRETE COLLAR REQ'D
JOINT TIES REQ'D
APRON ENDWALL REQ'D

END CONSTRUCTION
STA 119+29
MATCH EXISTING
BUTT JOINT REQ'D

STA 176+39, 30.9' LT
INVERT: 732.430

SLOPE INTERCEPTS

CTH Z

PC: 118+56.90

STA 181+10, 44.1' LT
INVERT: 737.6

24' X 18" CMCP DRIVEWAY CULVERT
REMOVE 18" CMCP DRIVEWAY CULVERT

STA 181+34, 43.2' LT
INVERT: 738.00

PT: 119+80.70

STH 32/57

STA 176+64, 36.7' RT
INVERT: 733.9

STA 180+14.52 R/L STH 32/57 =
STA 119+97.09 R/L HILL ROAD
Y=478,040.659
X=74,883.939

REMOVE MASONRY ENDWALL
RESET LAST SECTION OF PIPE
CULVERT PIPE EXTENSION
10' X 36" RCCP
CONCRETE COLLAR REQ'D
JOINT TIES REQ'D
APRON ENDWALL REQ'D

END CONSTRUCTION
STA 120+71
MATCH EXISTING
BUTT JOINT REQ'D

WEBER ROAD

PC: 120+38.26

BM 608 740.14

SLOPE INTERCEPTS

PT: 122+39.99

PC: 122+47.15

PT: 123+87.51

PI: 125+07.67

LEGEND

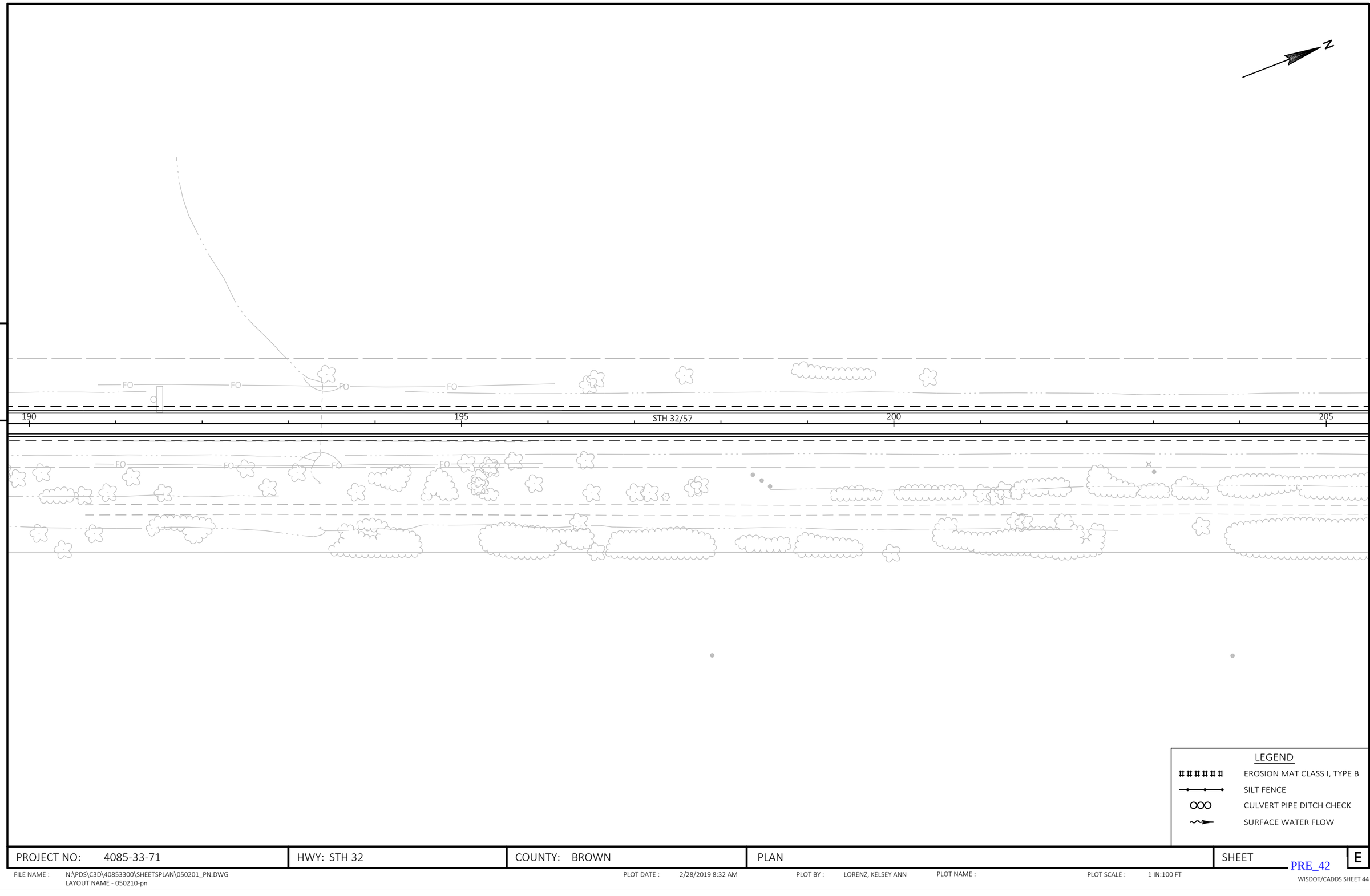
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_41

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050209-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_42

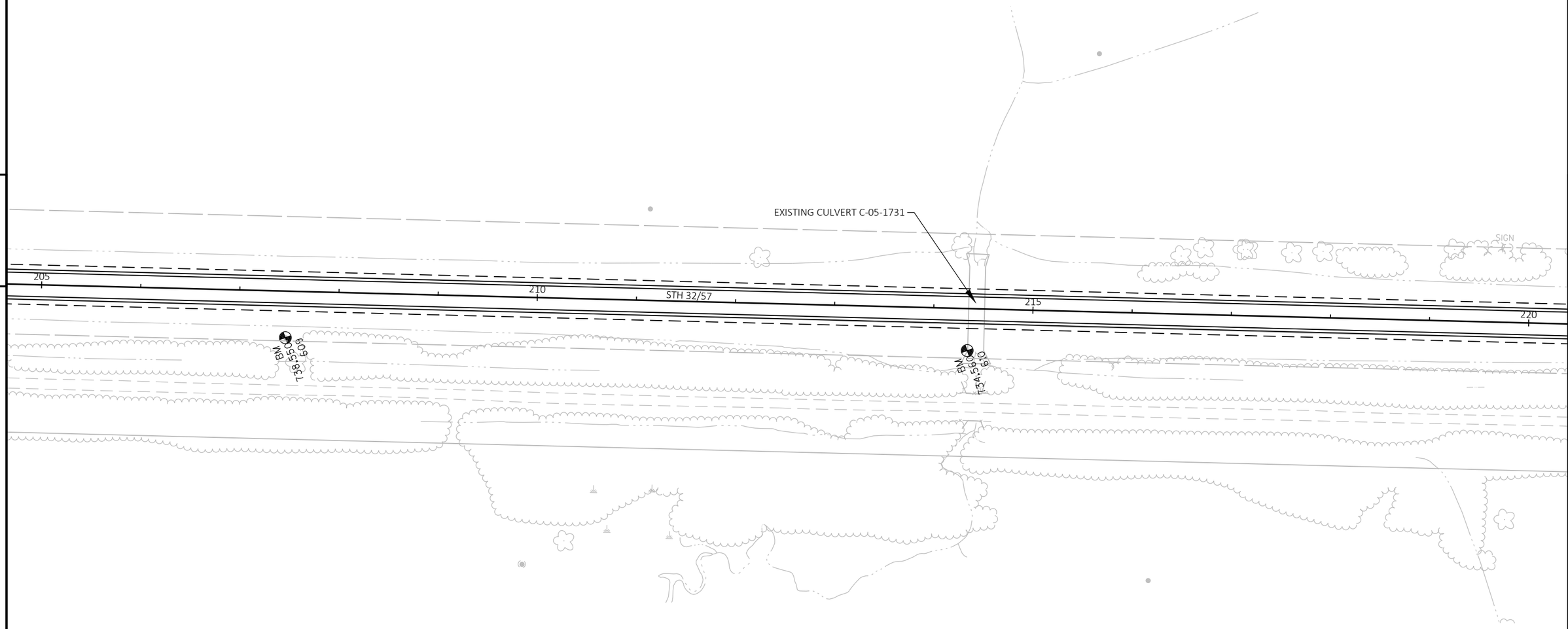
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050210-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 610	734.56	DISK SE WING WALL C-5-1731-97, APPROX 3420' N OF C/L CTH Z
BM 609	738.55	60d NAIL IN ATC PPOL # 133356, E SIDE STH 32/57, APPROX 2730' N OF C/L CTH Z

N



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050211-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

PRE_43

WISDOT/CADDS SHEET 44

STH 32/57
PI STA = 226+11.96
Y = 482328.153
X = 76543.422
DELTA = 10°17'48"
D = 1°00'00"
T = 516.23'
L = 1029.67'
R = 5729.58'
PC STA = 220+95.73
PT STA = 231+25.41
SE = 2.7% (MATCH EXISTING)

REMOVE MASONRY ENDWALL
CULVERT PIPE EXTENSION
2' X 24" RCCP
CONCRETE COLLAR REQ'D
JOINT TIES REQ'D
APRON ENDWALL REQ'D

STA 230+95, 28.6' LT
INVERT: 730.483

STA 230+97, 28.4' RT
INVERT: 730.407

REMOVE MASONRY ENDWALL
CULVERT PIPE EXTENSION
2' X 24" RCCP
CONCRETE COLLAR REQ'D
JOINT TIES REQ'D
APRON ENDWALL REQ'D

PC: 220+95.73
PT: 231+25.41
STH 32/57
RUINS
SIGN
220
225
230
235

LEGEND
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 611	735.26	60d NAIL IN PPOL # 2120-17L19, NE CORNER LAMERS-CLANCY ROAD & STH 32/57

N

T178
722.78

RUINS

SIGN

END CONSTRUCTION
STA 19+30
MATCH EXISTING
BUTT JOINT REQ'D

STA 236+81.76 R/L STH 32/57 =
STA 20+00.00 R/L LAMERS CLANCY ROAD
Y=483,381.516
X=76,745.549

235

240

STH 32/57

245

250

T182
734.71

T180
731.90

BM
735.26
611

END CONSTRUCTION
STA 20+68
MATCH EXISTING
BUTT JOINT REQ'D

LAMERS CLANCY ROAD

5

5

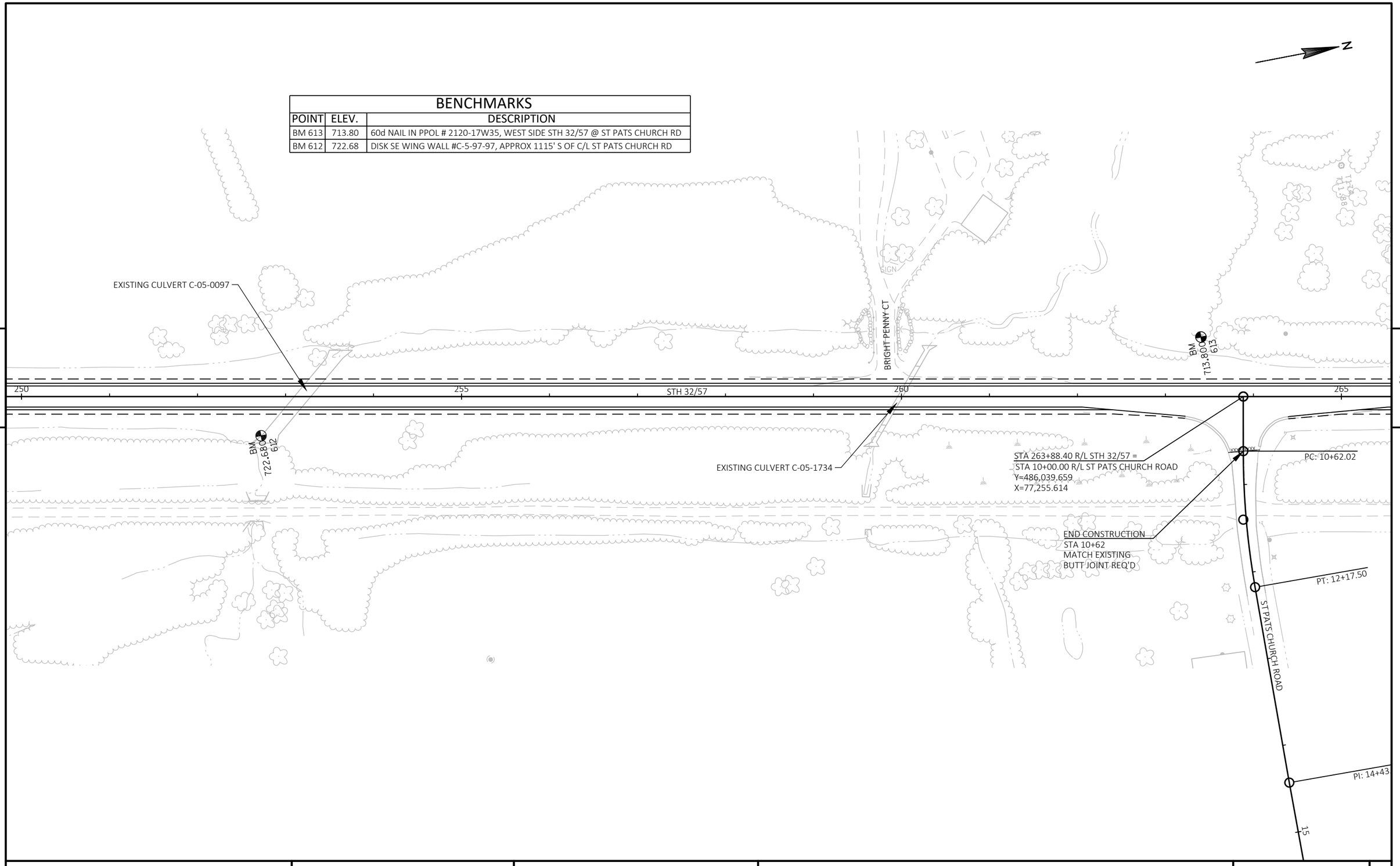
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050213-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

PRE_45

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 613	713.80	60d NAIL IN PPOL # 2120-17W35, WEST SIDE STH 32/57 @ ST PATS CHURCH RD
BM 612	722.68	DISK SE WING WALL #C-5-97-97, APPROX 1115' S OF C/L ST PATS CHURCH RD



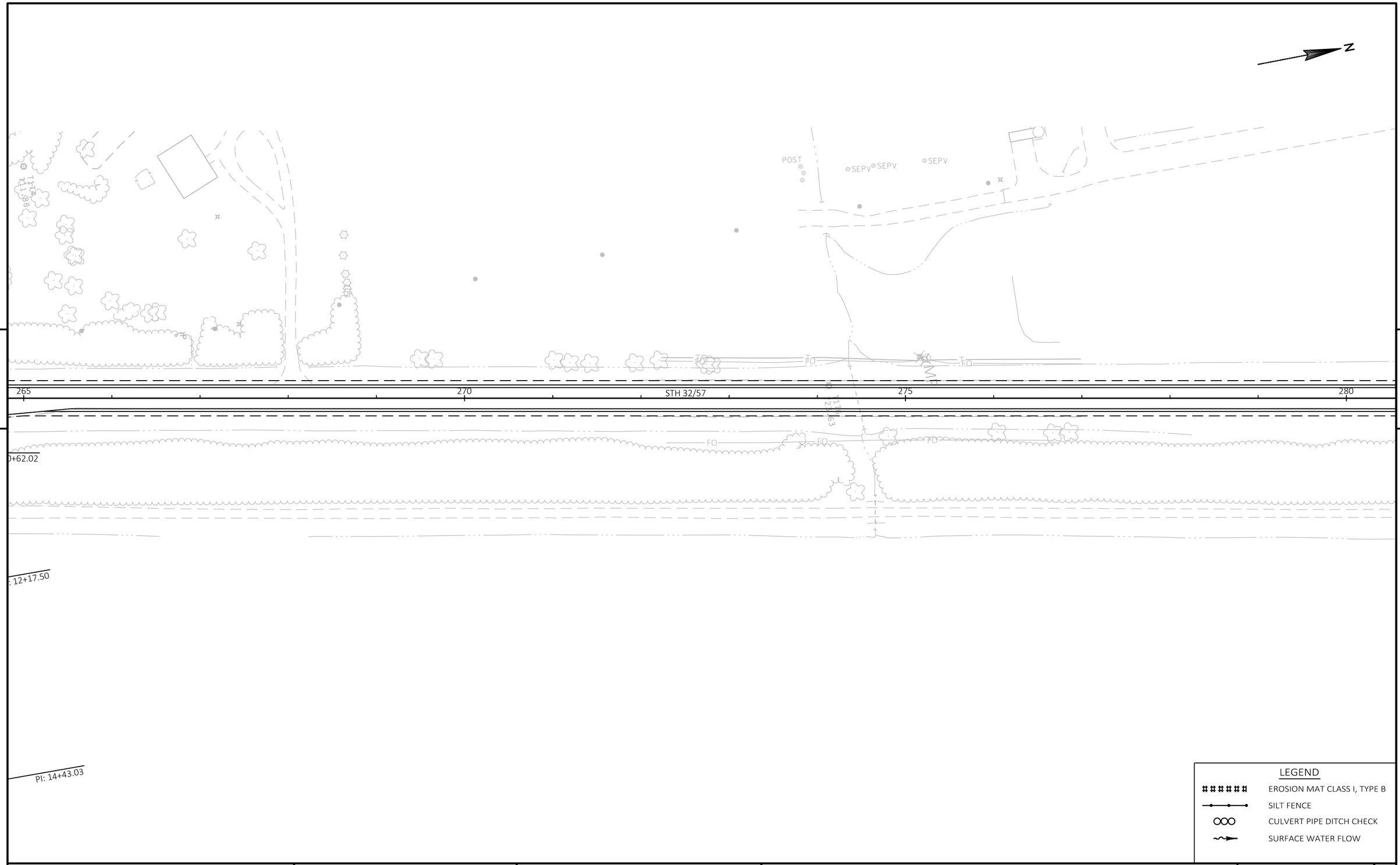
5 5

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050214-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

PRE_46



5 5

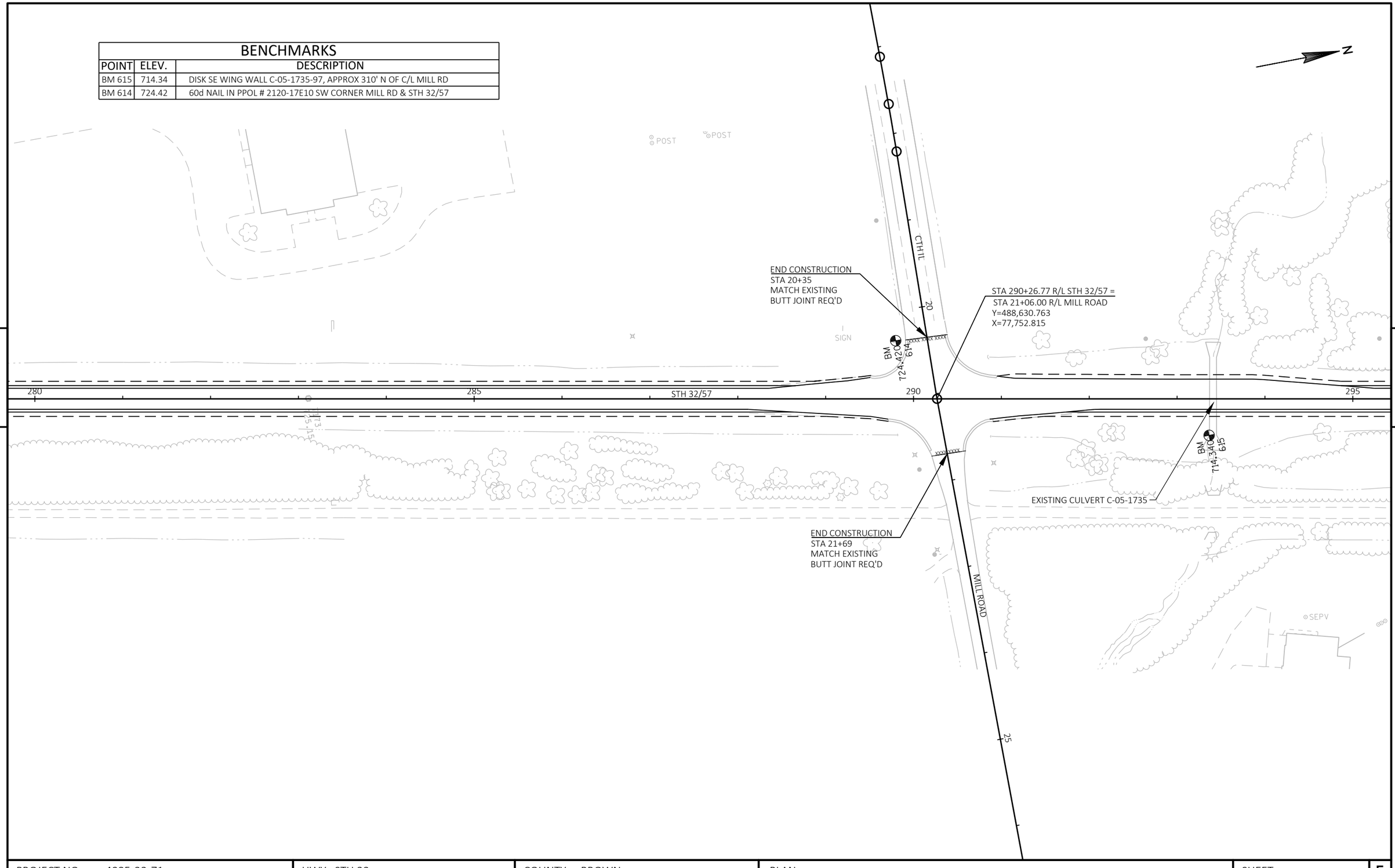
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_47

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050215-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 615	714.34	DISK SE WING WALL C-05-1735-97, APPROX 310' N OF C/L MILL RD
BM 614	724.42	60d NAIL IN PPOL # 2120-17E10 SW CORNER MILL RD & STH 32/57



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

N

SEPC

5

295

300

STH 32/57

305

310

5

EXISTING CULVERT C-05-1736

LEGEND

EROSION MAT CLASS I, TYPE B

SILT FENCE

CULVERT PIPE DITCH CHECK

SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET	E

PRE_49

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050217-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 616	698.73	DISK ON SE WING WALL C-5-1737-97, APPROX 2880' N OF C/L OF MILL RD

N

5

5

310 315 STH 32/57 320 325

FO FO

BM 616 698.73

EXISTING CULVERT C-05-1737

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_50

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050218-pn

PLOT DATE : 2/28/2019 8:32 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

PC: 326+11.88

APPROACH = 327+98.54, -20.00' LT

POST 1 = 329+03.98, -21.95' LT

POST 5 = 329+29.07, -20.74' LT

POST 9 = 329+54.15, -19.68' LT

SLOPE INTERCEPTS

BEAMGUARD REMOVE AND REPLACE
WITH MIDWEST GUARDRAIL (MGS) SYSTEM

POST 9 = 333+86.72, -18.94' LT

POST 5 = 334+11.80, -19.77' LT

POST 1 = 334+36.89, -21.08' LT

APPROACH = 335+42.33, -20.00' LT

PT: 336+16.50

STH 32/57

STA 330+78
EXISTING 30" RCCP
132' X 27" CULVERT LINER

STH 32/57
PI STA = 331+15.48
Y = 492646.214
X = 78523.330
DELTA = 10°02'46"
D = 1°00'00"
T = 503.60'
L = 1004.62'
R = 5729.58'
PC STA = 326+11.88
PT STA = 336+16.50
SE = 2.1% (MATCH EXISTING)

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050219-pn

PLOT DATE : 2/28/2019 8:33 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

PRE_51

WISDOT/CADDS SHEET 44

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 617	712.26	CHISELED SQ SW CORNER CONC PAD WISDOT SIGNAL BOX, NW CORNER STH 96 & STH 32/57

N

BP: 45+93.70

END CONSTRUCTION
STA 46+68
MATCH EXISTING
BUTT JOINT REQ'D

DAY ST
PI STA = 49+02.04
Y = 493902.223
X = 78449.479
DELTA = 11°08'33"
D = 28°38'52"
T = 19.51'
L = 38.89'
R = 200.00'
PC STA = 48+82.53
PT STA = 49+21.43

DAY ST

PI: 47+73.59

PC: 48+82.53

PT: 49+21.43

STA 49+52.50 R/L STH 96 =
STA 2+98.44 R/L STH 32 - RAB
Y=493,895.650
X=78,499.629

PI: 341+14.12

PC: 342+38.76

PT: 342+54.26

PC: 344+32.69

PT: 344+59.21

PI: 345+51.06

BUTT JOINT REQ'D

BM 617 712.26

340

345

STH 32/57

350

355

BUTT JOINT REQ'D

STA 343+57.11 R/L STH 32/57 =
STA 50+00.00 R/L STH 96
Y=493,889.457
X=78,546.724

PC: 50+79.80

PT: 51+12.46

STH 32/57
PI STA = 344+45.97
Y = 493978.173
X = 78551.763
DELTA = 7°35'46"
D = 28°38'52"
T = 13.28'
L = 26.52'
R = 200.00'
PC STA = 344+32.69
PT STA = 344+59.21

END CONSTRUCTION
STA 51+67
MATCH EXISTING
BUTT JOINT REQ'D

PI: 52+17.21

STH 32/57
PI STA = 342+46.52
Y = 493779.664
X = 78533.247
DELTA = 8°52'41"
D = 57°17'45"
T = 7.76'
L = 15.50'
R = 100.00'
PC STA = 342+38.76
PT STA = 342+54.26

STH 96

STH 96
PI STA = 50+96.17
Y = 493883.164
X = 78642.689
DELTA = 9°21'31"
D = 28°38'52"
T = 16.37'
L = 32.67'
R = 200.00'
PC STA = 50+79.80
PT STA = 51+12.46

EP: 53+95.69

POST
POOL
SIGN
RUINS

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050220-pn

PLOT DATE : 2/28/2019 8:33 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

PRE_52

WISDOT/CADDS SHEET 44

STH 32/57
PI STA = 364+64.88
Y = 495996.627
X = 78571.057
DELTA = 18°52'23"
D = 1°30'00"
T = 634.85'
L = 1258.20'
R = 3819.72'
PC STA = 358+30.03
PT STA = 370+88.23
SE = 3.7% (MATCH EXISTING)

PC: 358+30.03

STA 364+91
TIE LAST 2 JOINTS

STA 364+91
TIE LAST JOINT

END CONSTRUCTION
STA 10+39
MATCH EXISTING
BUTT JOINT REQ'D

STA 370+25.08 R/L STH 32/57 =
STA 11+03.51 R/L FAIR RD (WEST)
Y=496,534.738
X=78,764.148

STA 370+29.22 R/L STH 32/57 =
STA 20+00.00 R/L FAIR RD (EAST)
Y=496,538.650
X=78,765.499

END CONSTRUCTION
STA 20+68
MATCH EXISTING
BUTT JOINT REQ'D

STH 32/57
FAIR ROAD
TAINTOR ST
ATHLETIC FIELD
SIGN
POST
FLAG
FO
355
360
365
370

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_53

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050221-pn

PLOT DATE : 2/28/2019 8:33 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 618	716.14	60d NAIL IN PPOL # 2120-5E18, NE CORNER FAIR RD & STH 32/57

N

END CONSTRUCTION
STA 10+39
MATCH EXISTING
BUTT JOINT REQ'D

PT: 370+88.23

10

370

375

STH 32/57

380

385

SIGN

REMOVE EXISTING CURB & GUTTER

SLOPE INTERCEPT

618

716.14

BM

ASPHALTIC FLUME

CURB & GUTTER 6-INCH
SLOPED 36-INCH TYPE D (TYPICAL)

FAIR ROAD

END CONSTRUCTION
STA 20+68
MATCH EXISTING
BUTT JOINT REQ'D

FLAG

POST

SEPV

SEPV

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

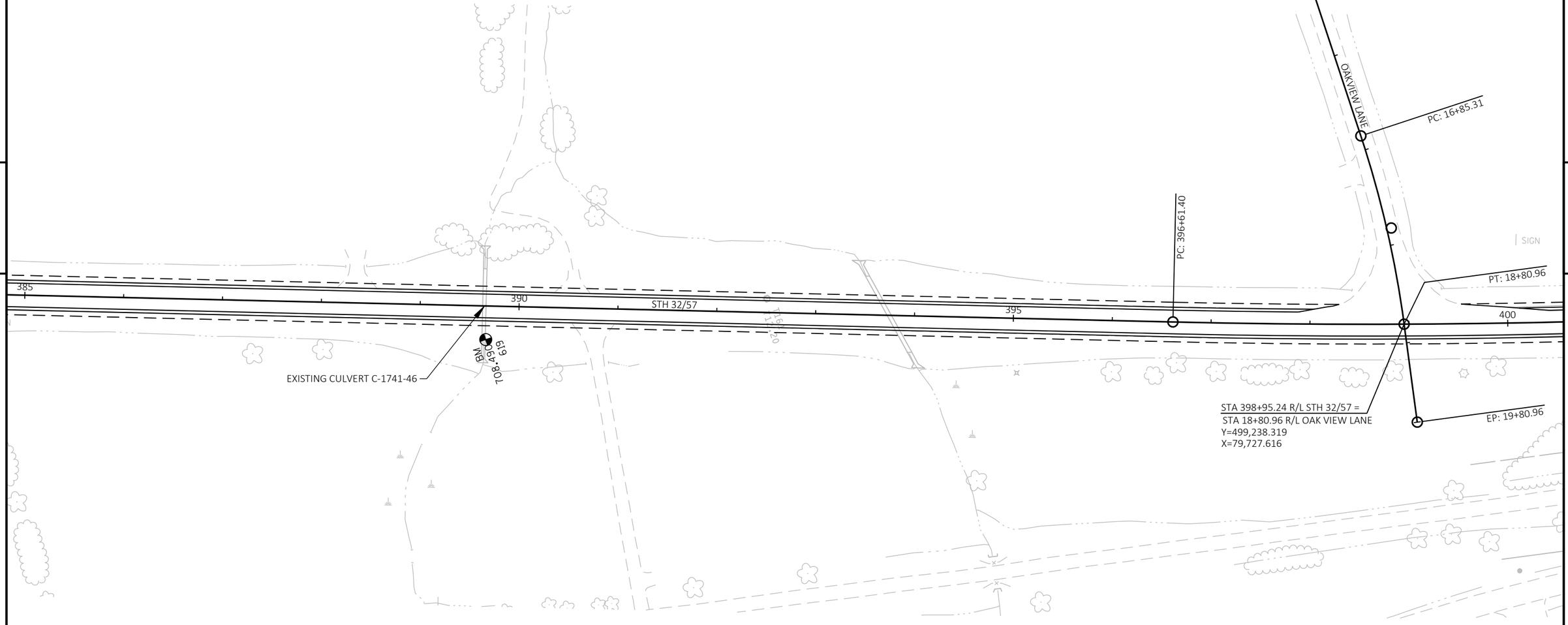
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050222-pn

PLOT DATE : 2/28/2019 8:33 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

PRE_54

WISDOT/CADDS SHEET 44

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 619	708.49	CHISELED SQ TOP NE CORNER C-1741-46, APPROX 940' S OF C/L OF OAKVIEW LN



5

5

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET	E

PRE_55

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050223-pn

PLOT DATE : 2/28/2019 8:33 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 620	711.03	60d NAIL IN PPOL # 2220-32R5, SE CORNER DEUSTER ST & STH 32/57

N

STH 32/57
PI STA = 403+38.46
Y = 499654.564
X = 79880.011
DELTA = 9°11'18"
D = 0°40'48"
T = 677.06'
L = 1351.23'
R = 8425.85'
PC STA = 396+61.40
PT STA = 410+12.62
SE = 2.0% (MATCH EXISTING)

STA 404+99.62 R/L STH 32/57 =
STA 15+35.90 R/L DEUSTER RD
Y=499,819.032
X=79,894.618

STH 32/57
PI STA = 413+69.86
Y = 500671.540
X = 80068.512
DELTA = 10°37'39"
D = 1°31'00"
T = 351.37'
L = 700.72'
R = 3777.75'
PC STA = 410+18.49
PT STA = 417+19.21
SE = 3.3%

PT: 410+12.62
PC: 410+18.49

PT: 18+80.96
P: 19+80.96
400
405
410
415
STH 32/57
DEUSTER STREET
15
BP: 10+00.00
PC: 13+01.18
PT: 13+86.01
BM
711.03
620
END CONSTRUCTION
STA 14+72
MATCH EXISTING
BUTT JOINT REQ'D
APPROACH = 415+41.19, 20.00' RT
POOL
SIGN
FLAG
FO
OH
G
OB

5

5

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

BENCHMARKS		
POINT	ELEV.	DESCRIPTION
BM 622	708.96	60d NAIL IN PPOL # 2220-32E1, NW CORNER MALLARD RD & STH 32/57
BM 621	703.61	CHISELED SQ ON SE HEAD/WING WALL, APPROX 700' S OF C/L MALLARD DR

N

EXTEND BOX CULVERT-
WEST WINGWALL

EXISTING CULVERT C-05-1745

REMOVE 28'' X 18" CMCP DRIVEWAY CULVERT AND
REPLACE WITH X' X 18" CMCP DRIVEWAY CULVERT

PROPOSED R/W

SLOPE INTERCEPTS

EXIST R/W

REMOVE BEAMGUARD

PT: 417+19.21

MALLARD ROAD

BM 622 708.96

STH 32/57

415 420 425 430

703.61

SLOPE INTERCEPTS

STA 417+90
END PAVING LIMITS
BUTT JOINT REQ'D

APPROACH = 415+41.19, 20.00' RT

POST 1 = 416+45.66, 22.19' RT

POST 5 = 416+70.52, 21.46' RT

POST 9 = 416+95.39, 20.79' RT

POST 9 = 420+26.40, 21.65' RT

POST 5 = 420+51.40, 22.59' RT

POST 1 = 420+76.40, 23.60' RT

APPROACH = 421+81.39, 20.00' RT

END PROJECT
STA 422+21.77

BEAMGUARD REMOVE AND REPLACE
WITH MIDWEST GUARDRAIL (MGS) SYSTEM
AND MIDWEST GUARDRAIL SYSTEM
LONG SPAN (MGSL)

LEGEND

- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	PLAN	SHEET E

PRE_57

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\050201_PN.DWG
LAYOUT NAME - 050225-pn

PLOT DATE : 2/28/2019 8:33 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

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.

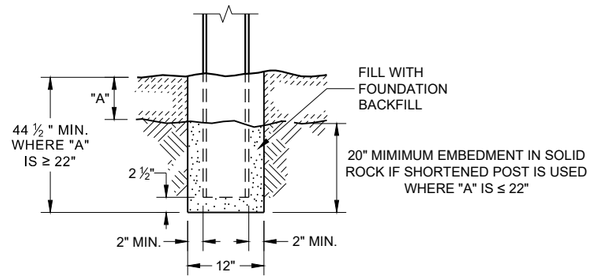
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS 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).

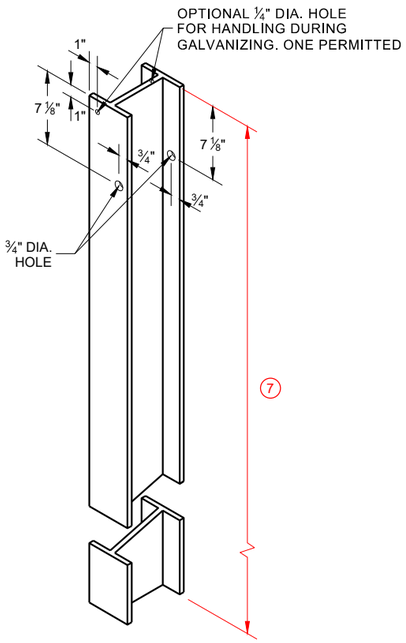
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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.

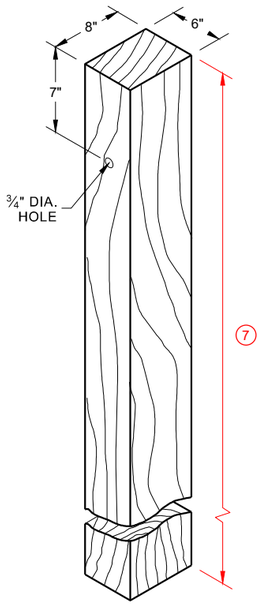
7. TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



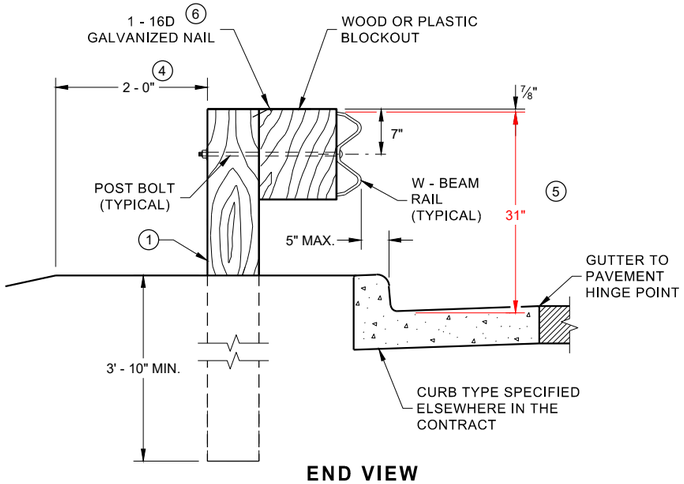
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



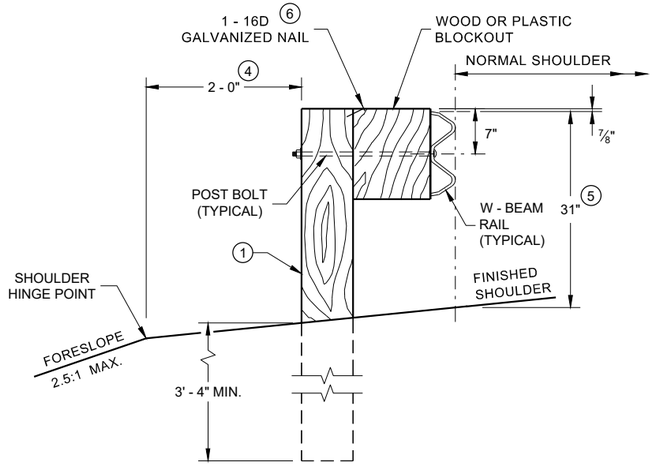
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



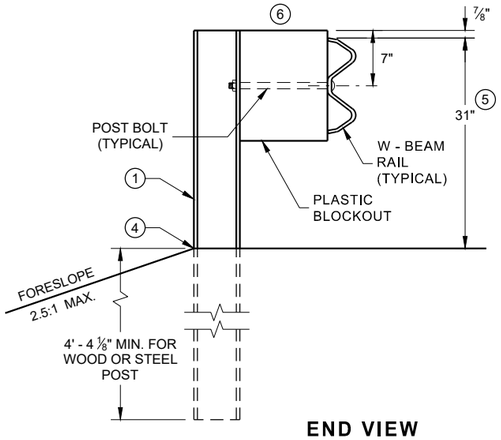
WOOD POST (6" X 8") NOMINAL (1)



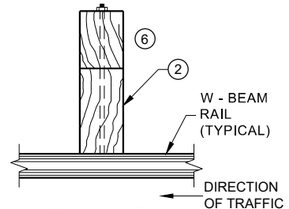
END VIEW
LOCATED ALONG A CURBED ROADWAY



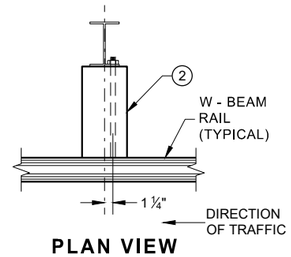
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



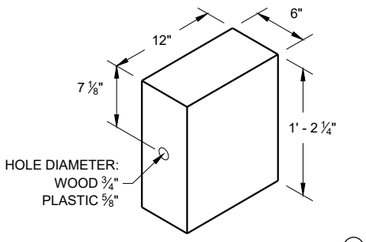
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

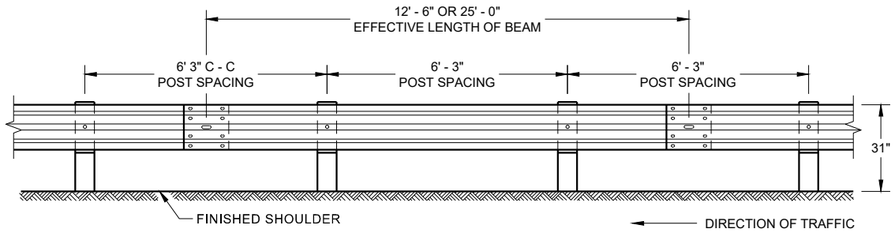
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO PRE_58

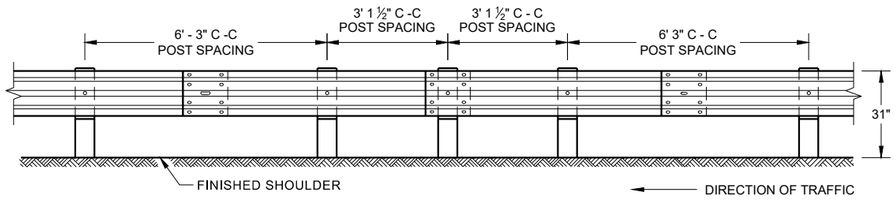
SDD14B42 - 06a

SDD14B42 - 06a

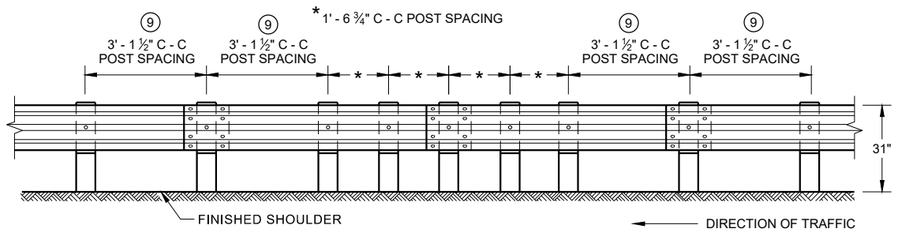
6



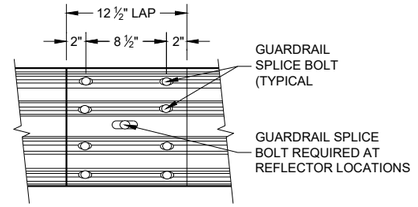
FRONT VIEW
POST SPACING STANDARD INSTALLATION



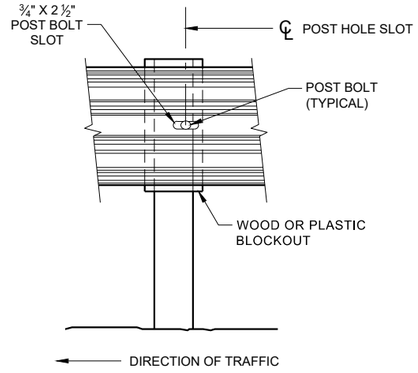
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



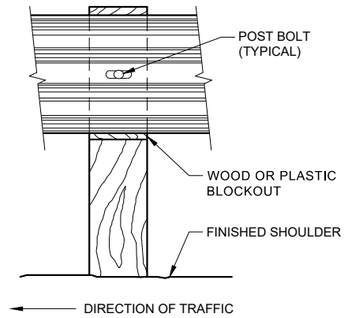
FRONT VIEW
QUARTER POST SPACING (QS)



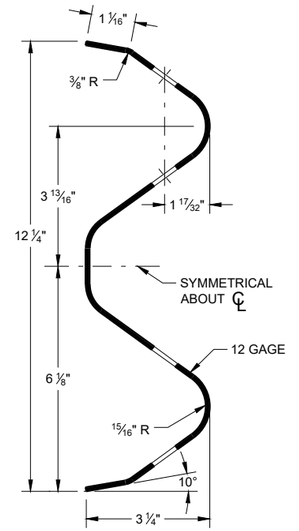
FRONT VIEW
MID-SPAN BEAM SPLICE



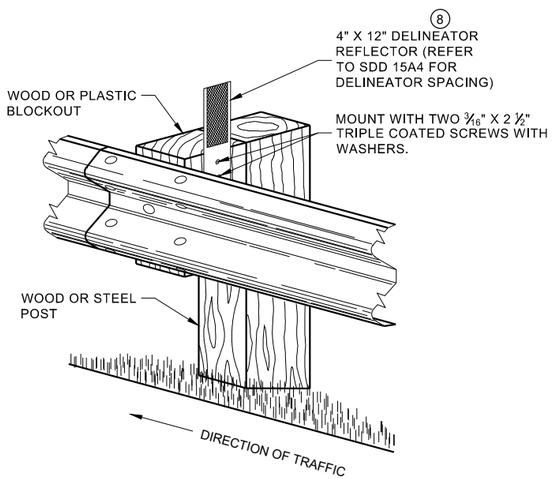
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

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.

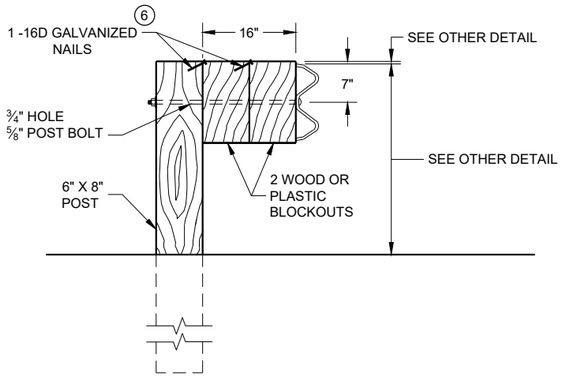
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

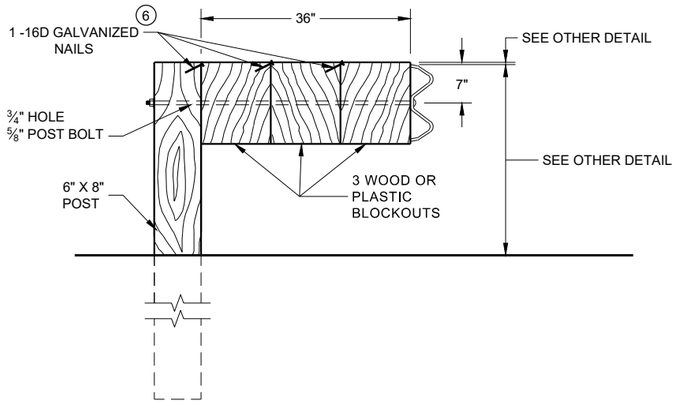
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO PRE_59



DETAIL FOR 16" BLOCKOUT DEPTH

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



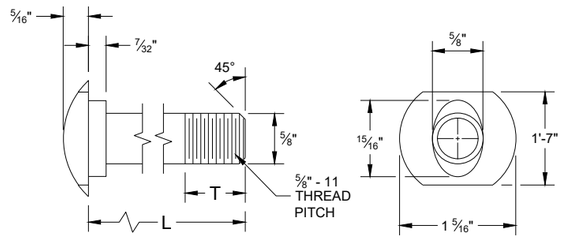
DETAIL FOR 36" BLOCKOUT DEPTH

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

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

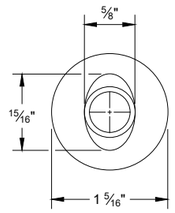
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

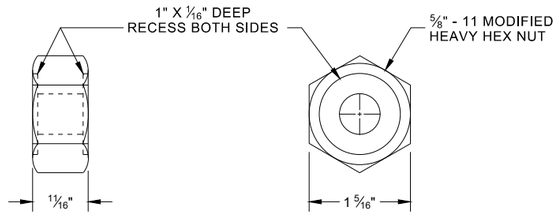


POST BOLT TABLE

L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

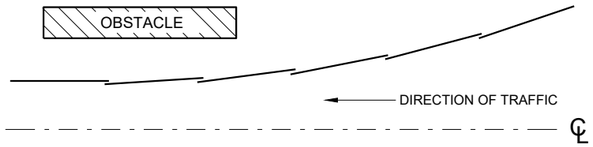


ALTERNATE BOLT HEAD

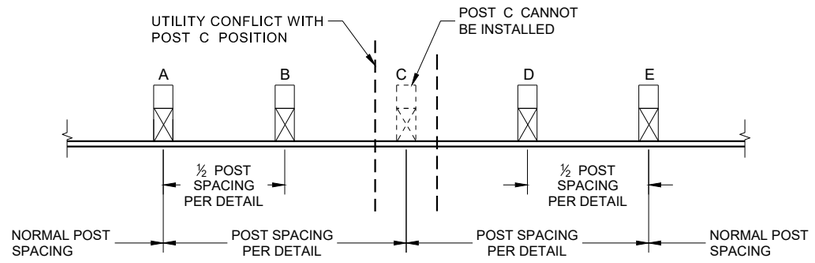


POST BOLT, SPLICE BOLT AND RECESS NUT

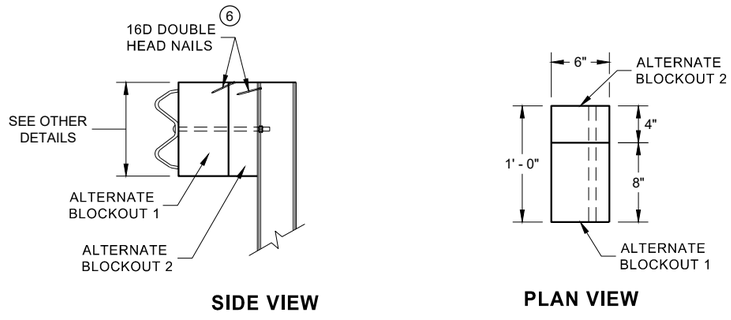
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

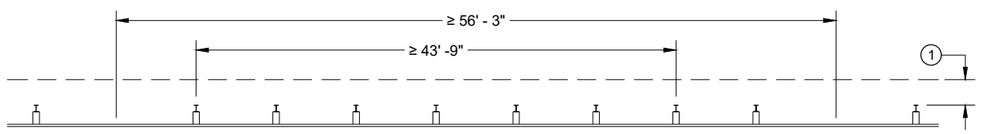
PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

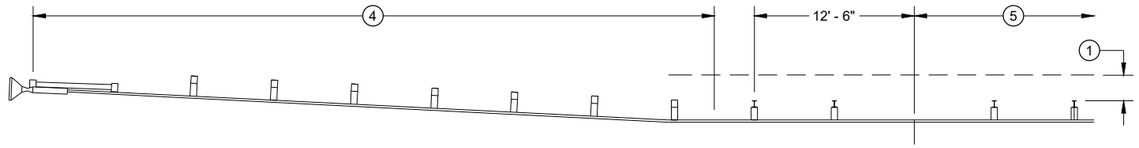
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO PRE_60

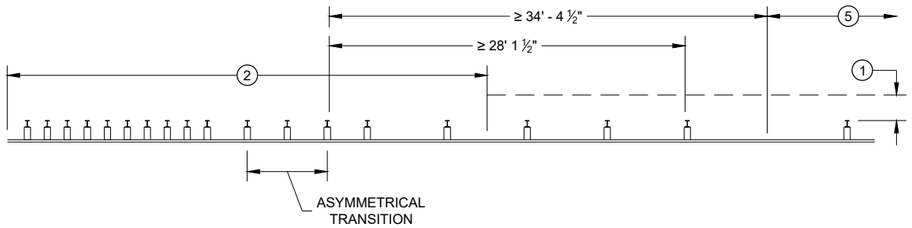
6
SDD 14B42 - 06c



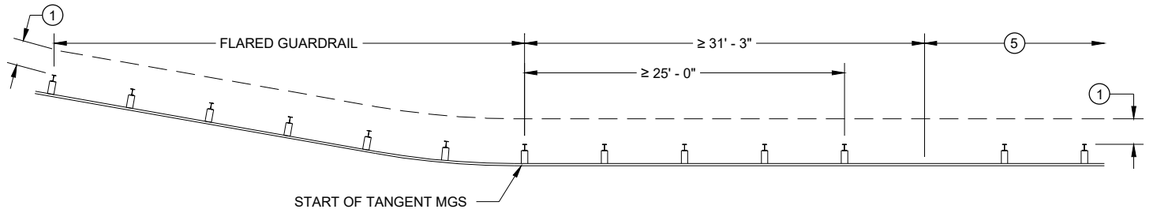
MISSING POST IN NORMAL BEAM GUARD RUN



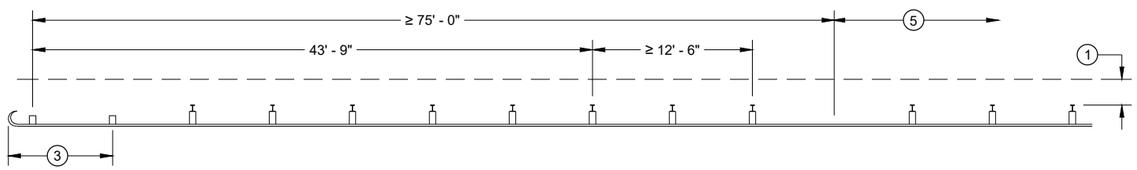
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



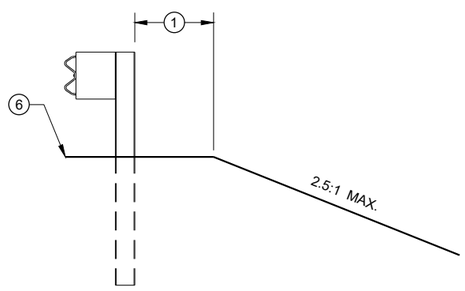
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



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/ Rodney Tavlor
ROADWAY STANDARDS
UNIT SUPER

FHWA

PRE_61

6

SDD 14B42 - 06d

6

SDD 14B42 - 06d

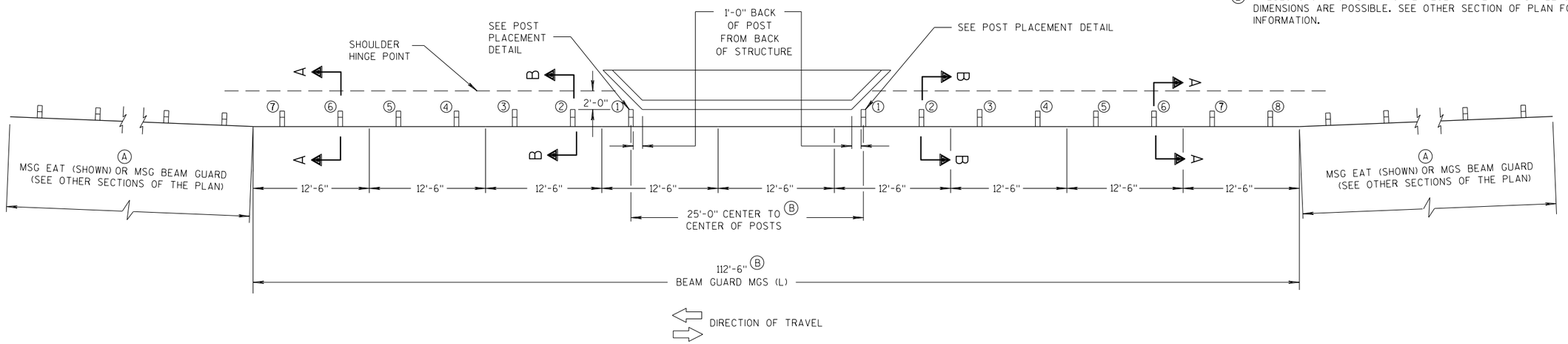
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

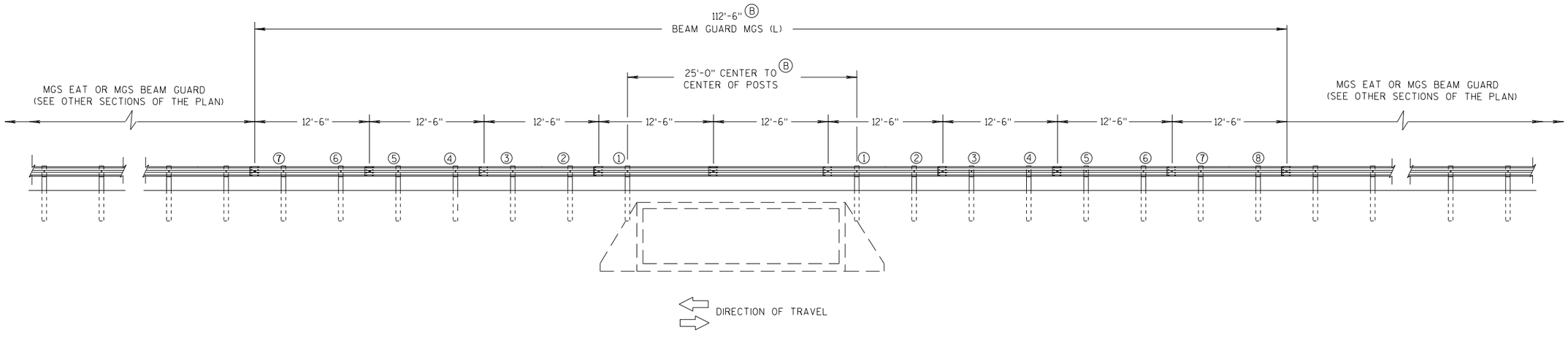
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANS

PRE_62

6

S.D.D. 14 B 43-4a

6

S.D.D. 14 B 43-4a

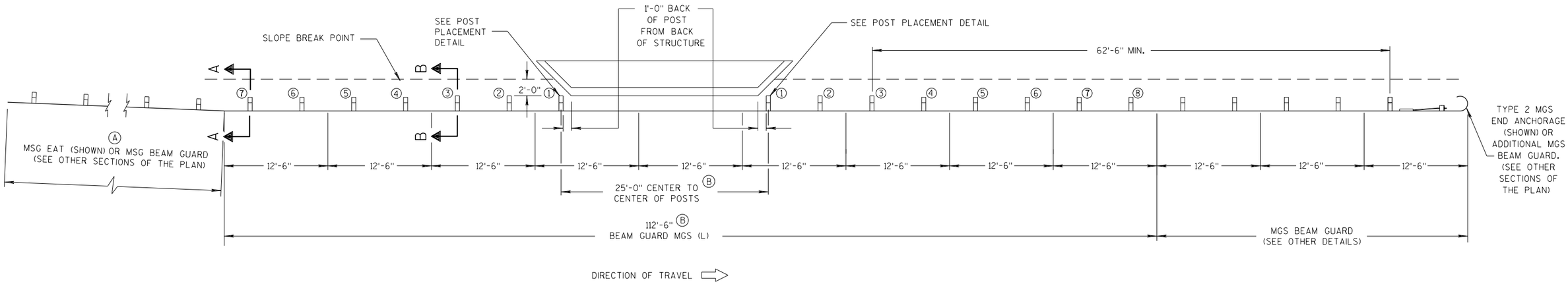
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

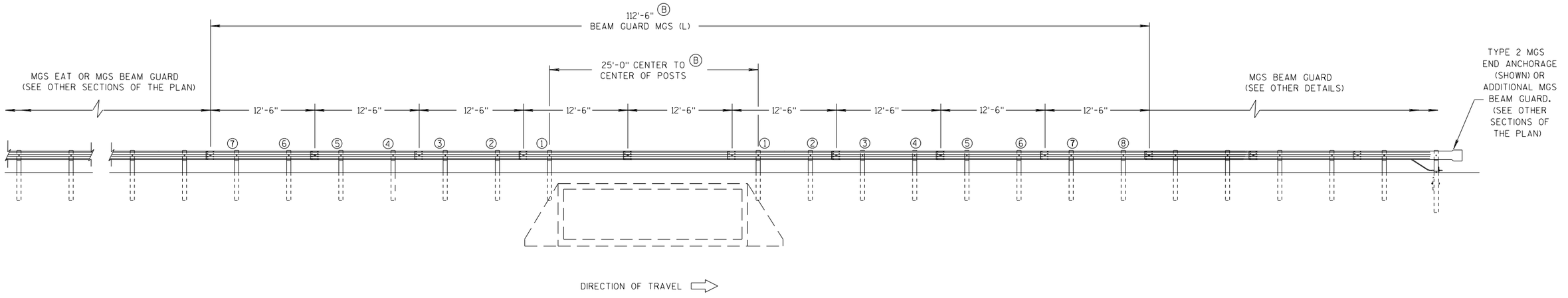
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

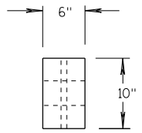
PRE_63

6

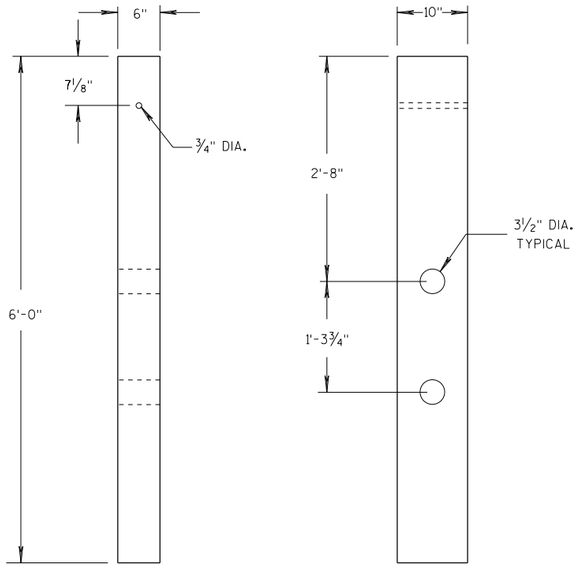
S.D.D. 14 B 43-4b

6

S.D.D. 14 B 43-4b

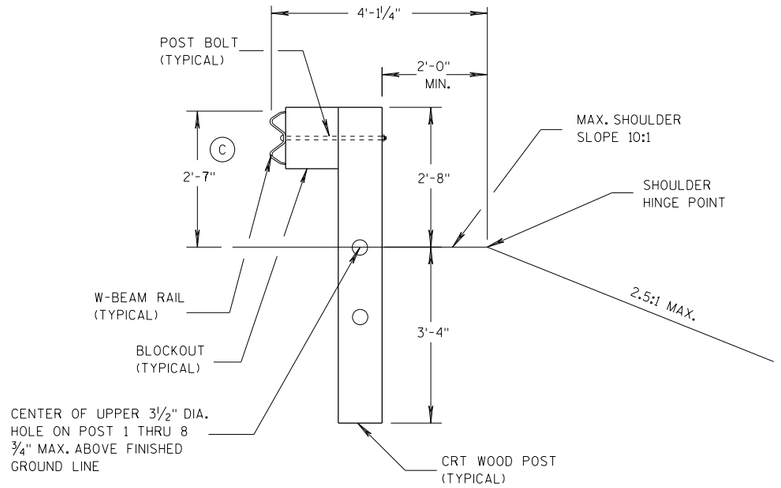


PLAN VIEW



FRONT VIEW SIDE VIEW

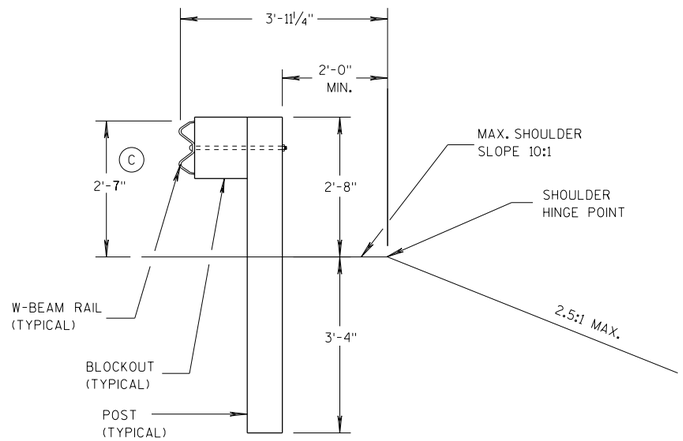
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



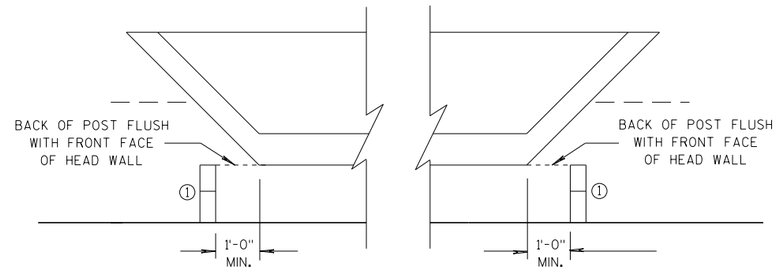
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

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



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT ENGINEER

PRE_64

6

S.D.D. 14 B 43-4c

6

S.D.D. 14 B 43-4c

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 REQUIRE 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.

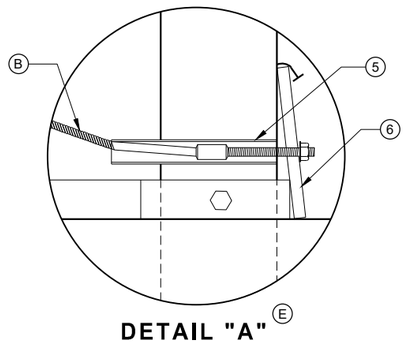
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

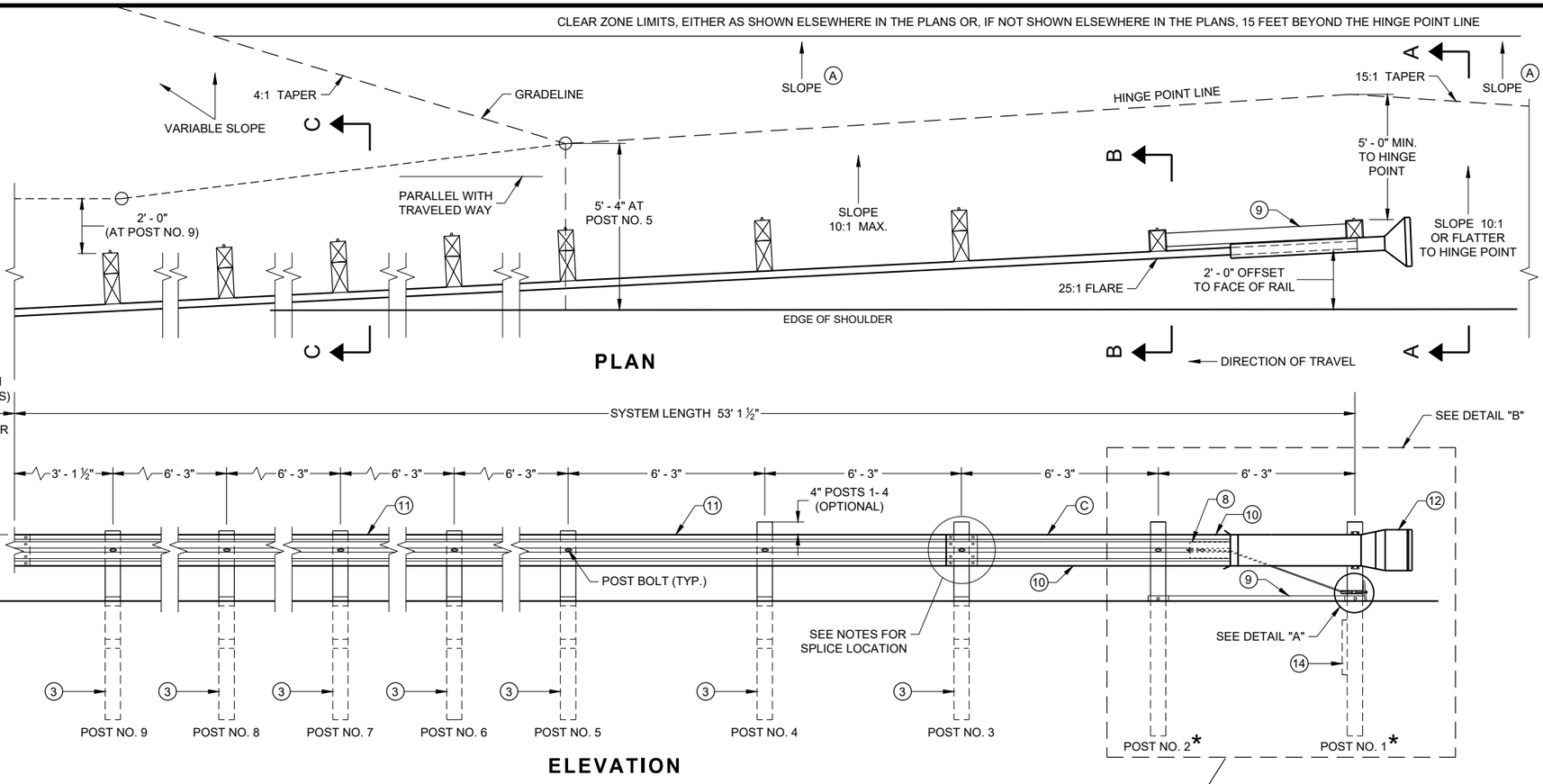
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

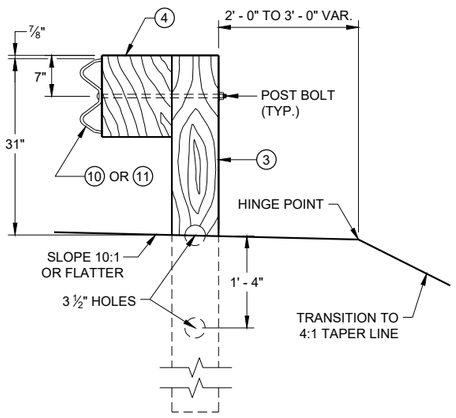
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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 ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

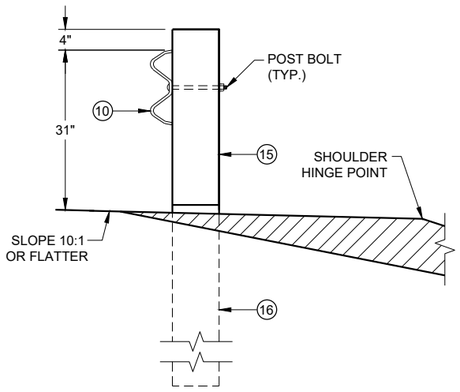


DETAIL "A" (E)

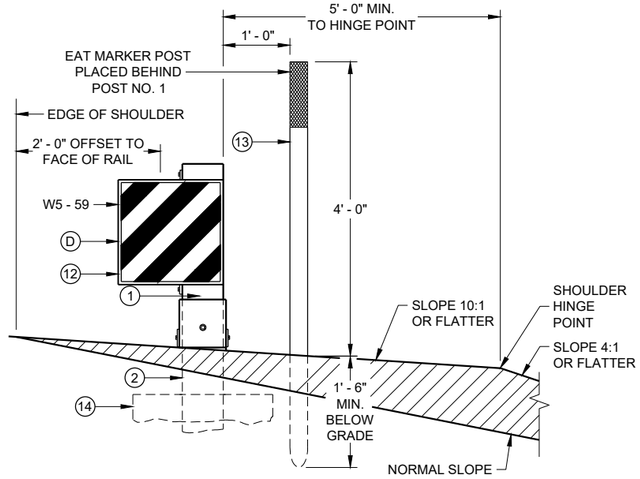




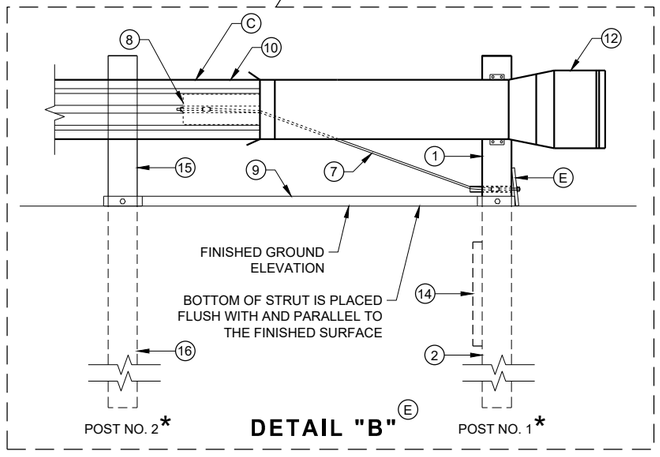
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



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 TRANSPO PRE_65

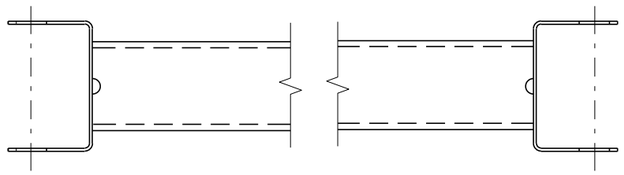
SDD 14B44 - 04a

SDD 14B44 - 04a

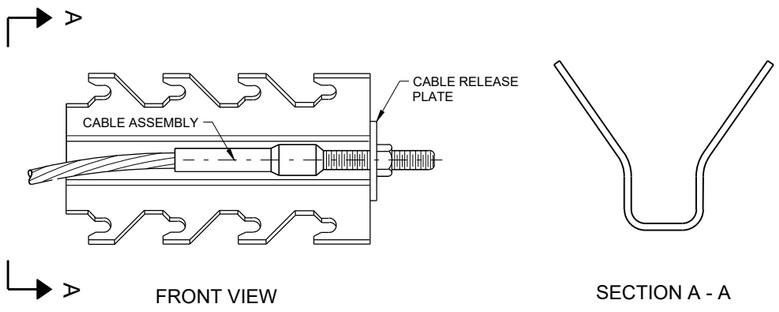
6

BILL OF MATERIALS

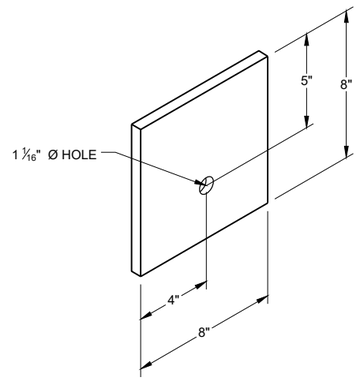
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
1	UPPER POST NO. 1 6" X 6" TUBE
2	LOWER POST NO. 1
3	WOOD CRT
4	WOOD BLOCKOUT
5	PIPE SLEEVE
6	BEARING PLATE
7	BCT CABLE ASSEMBLY
8	ANCHOR CABLE BOX
9	GROUND STRUT
10	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
11	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. 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 GROUND STRUT (9) (E)



GENERIC ANCHOR CABLE BOX (9) (E)

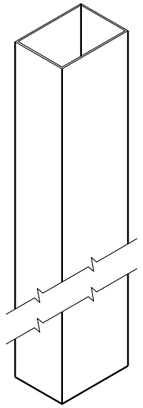


BEARING PLATE (6) (E)

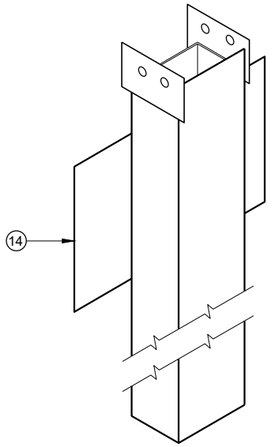
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO PRE_66

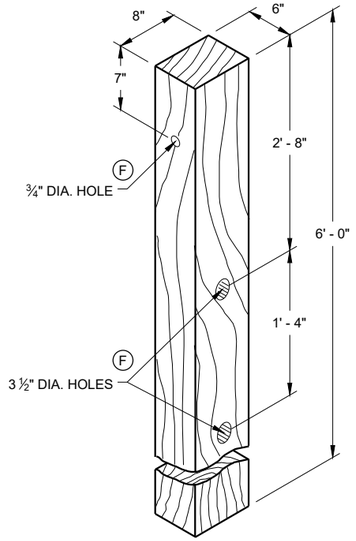
6
SDD 14B45 - 04b



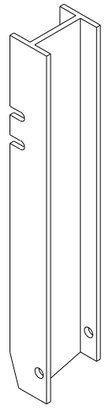
UPPER POST NO. 1 (1) (E)



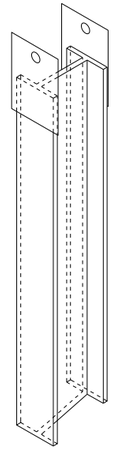
LOWER POST NO. 1 (2) (E)



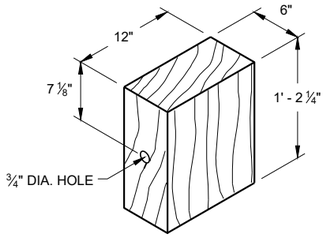
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



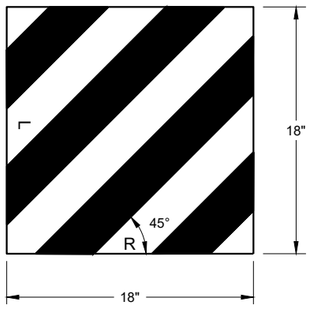
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)



WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



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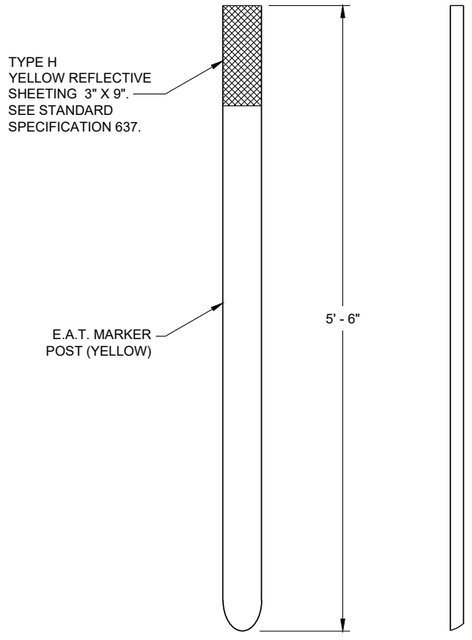
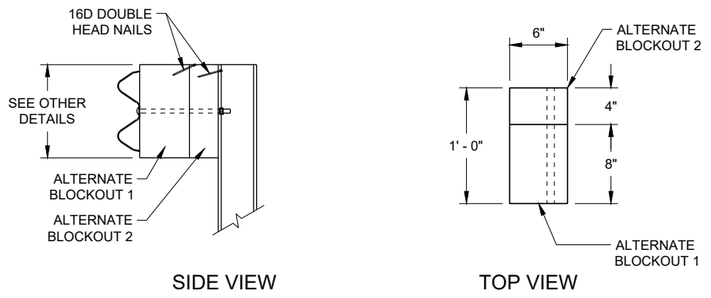
REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS UNIT SUPER
FHWA

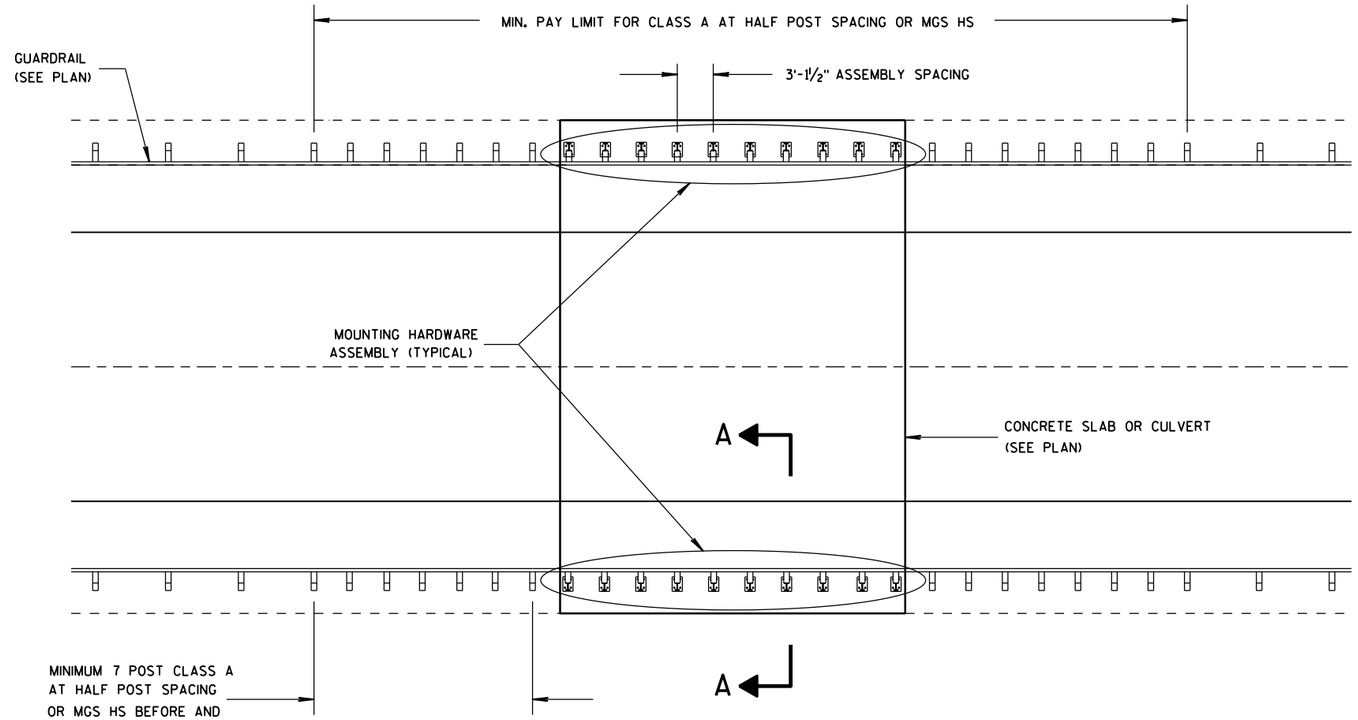
PRE_67

6

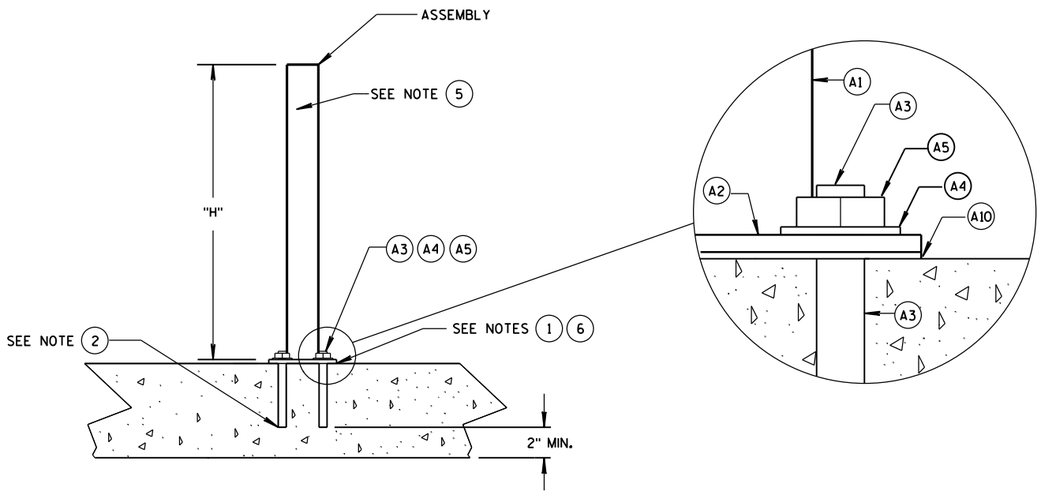
6

SDD 14B44 - 04c

SDD 14B44 - 04c

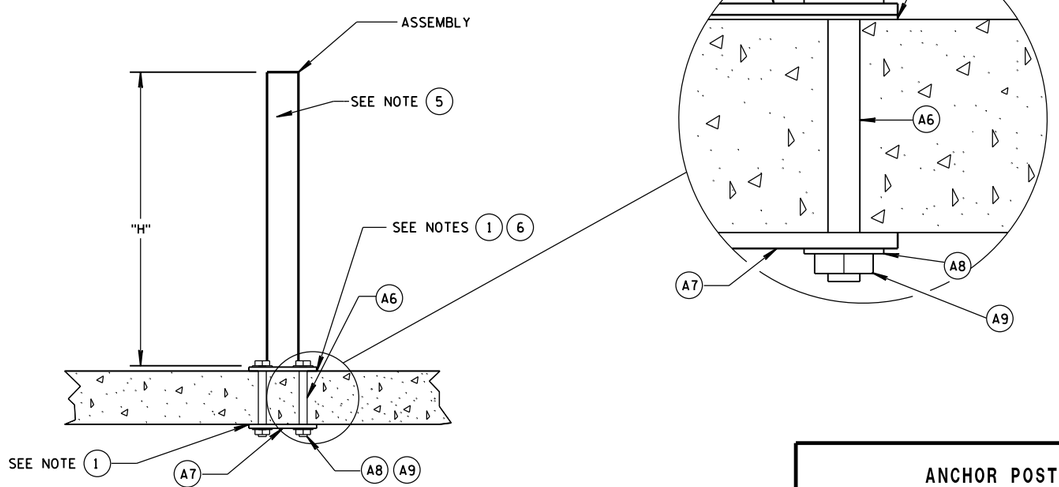


PLAN VIEW



ADHESIVE ANCHOR DETAIL

SEE NOTE (4)



BOLT THROUGH DETAIL

SEE NOTE (4)

GENERAL NOTES

HOLES DRILLED INTO CONCRETE SLAB OR CULVERT ARE 1⅛-INCH DIAMETER.

POST BASE PLATE (AND BOTTOM PLATES IF USED) SHALL BE FLAT WITH ALL SURFACES SMOOTH, AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS. CUT BOTTOM OF POST SO THAT POST WILL BE VERTICAL WHEN POST ASSEMBLY IS PLACED ON TOP OF CONCRETE. HEX BOLTS AND THREADED RODS ARE TO BE PLACED PERPENDICULAR TO THE BASE PLATE.

"H" DIMENSION WILL VARY. SEE PLAN FOR "H" DIMENSION. CONTRACTOR HAS OPTION OF INSTALLING POSTS THAT ARE TALLER THAN "H" DIMENSION AND CUT POSTS TO PROPER "H" DIMENSION IN THE FIELD. IF ELECTING TO FIELD CUT POSTS, DRILL HOLES AT APPROPRIATE LOCATIONS AND APPLY GALVANIZATION.

GALVANIZE STEEL COMPONENTS AFTER FABRICATION PER SECTION 614 OF THE WISCONSIN DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS.

INSTALL 1 NUT AND 1 WASHER WHERE APPLICABLE. PROVIDE SUFFICIENT LENGTH OF BOLT OR THREADED ROD TO ALLOW FOR ¼-INCH TO ½-INCH OF THREAD TO BEYOND THE NUT.

(1) PLACE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER ON THE BOTTOM (A2) AND IN DRILL HOLES FOR BOLT THROUGH OPTION.

(2) BOND STRENGTH OF ADHESIVE IS 1,305 PSI OR GREATER WITH A MINIMUM EMBEDMENT DEPTH OF 8-INCHES. IF MINIMUM EMBEDMENT CANNOT BE ACHIEVED BOLT THROUGH STRUCTURE.

(3) USE GAS-METAL ARC WELDING (GMAW) PROCESS WITH ER70S-3 WELDING WIRE AND ARGON-OXYGEN OR CO2 COVER GAS.

(4) OTHER COMPONENT OF BARRIER SYSTEM NOT SHOWN. SEE OTHER STANDARD DETAIL DRAWINGS. SEE SDD 14 B 15 OR SDD 14 B 42 FOR MORE DETAILS.

(5) HOLES TO MOUNT BEAM GUARD AND BLOCK NOT SHOWN ON DRAWINGS. SEE OTHER STANDARD DETAIL DRAWINGS. SEE SDD 14 B 15 OR SDD 14 B 42 FOR MORE DETAILS.

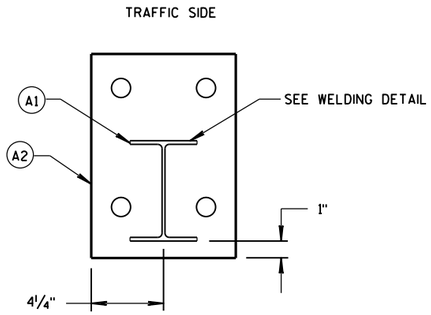
(6) ADD AND ADJUST SHIM PLATES AS NECESSARY TO INSTALL POST PLUMB. SEE (A10) FOR DETAIL.

ANCHOR POST
ASSEMBLY TOP-MOUNTED

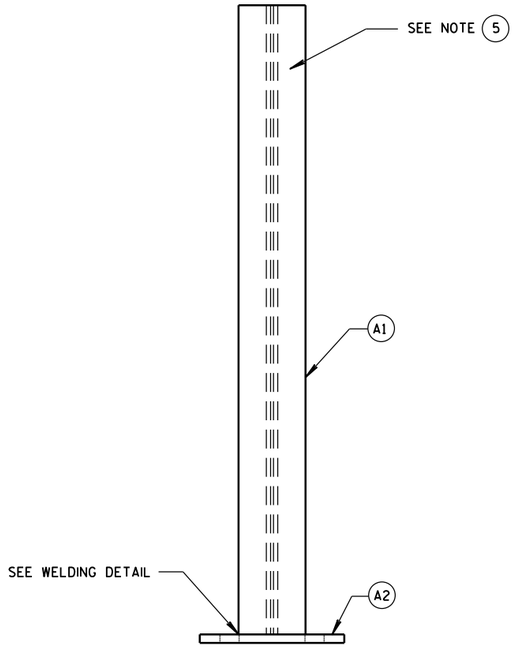
STATE OF WISCONSIN
DEPARTMENT OF TRAN

6

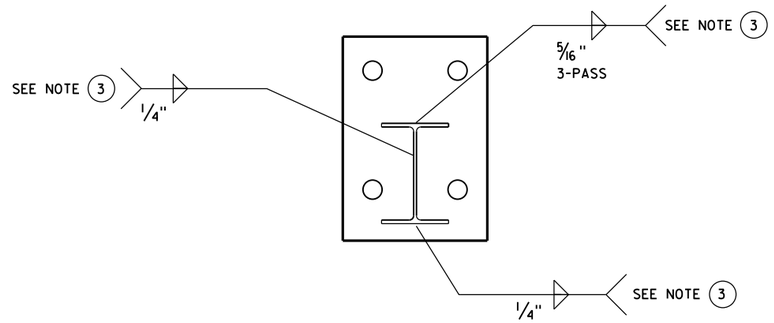
S.D.D. 14 B 51-1a



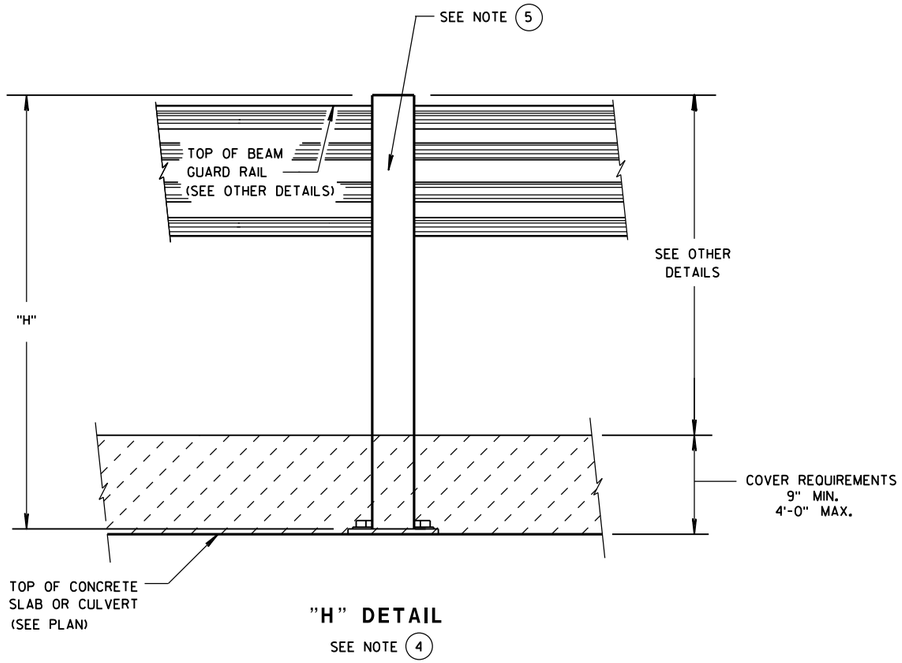
PLAN VIEW OF ASSEMBLY



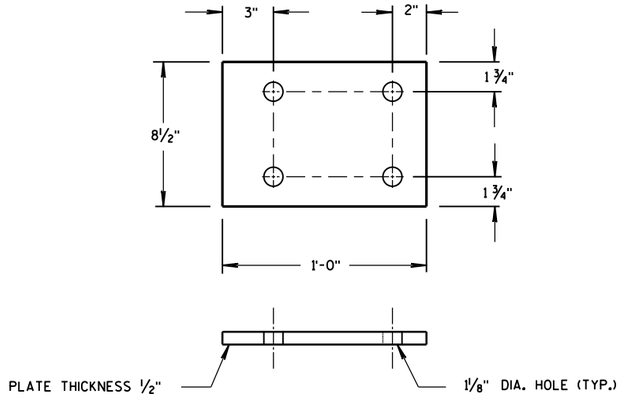
PROFILE VIEW OF ASSEMBLY



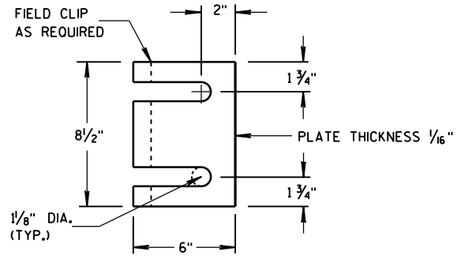
WELDING DETAIL



"H" DETAIL
SEE NOTE (4)



A2 DETAILS



A10 DETAILS

ANCHOR POST
ASSEMBLY TOP-MOUNTED

STATE OF WISCONSIN
DEPARTMENT OF TRAN PRE_69

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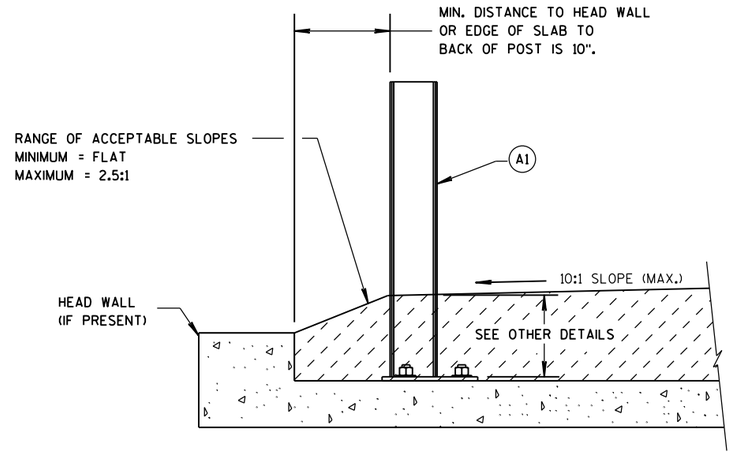
S.D.D. 14 B 51-1b

6

S.D.D. 14 B 51-1b

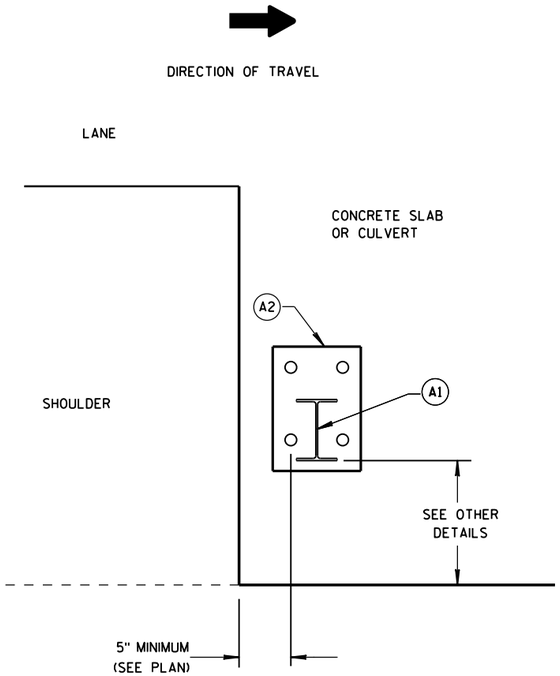
MATERIALS LIST

ITEM	DESCRIPTION	MATERIAL SPECIFICATIONS	NOTES
(A1)	W6x9 or W6x8.5	ASTM A992, 50 KSI MIN. ASTM A709 GRADE 50 OR ASTM A36	SEE SDD 14B15 OR 14B42 LENGTH WILL VARY
(A2)	STEEL BASE PLATE	ASTM A992 50 KSI MIN., ASTM A529 GRADE 50, ASTM A572 GRADE 50, OR ASTM A36	
(A3)	1" DIA. THREADED ROD	SAE J429 GRADE 2, ASTM A307 GRADE C, OR ASTM F1554 GRADE 36	LENGTH WILL VARY
(A4)	1" DIA. FLAT WASHER	ASTM F844	
(A5)	1" HEX NUT	ASTM A563A	
(A6)	1" DIA. HEX BOLT	ASTM A307	LENGTH WILL VARY
(A7)	PLATE WASHER	ASTM A992 50 KSI MIN., ASTM A529 GRADE 50, ASTM A572 GRADE 50, OR ASTM A36	
(A8)	1" DIA. FLAT WASHER	ASTM F844	
(A9)	1" DIA. HEX NUT	ASTM A563A	
(A10)	SHIM PLATE	SEE (A2)	4 MAX PER POST



SECTION A-A

SEE NOTE (4)



EDGE PLACEMENT

SEE NOTE (4)

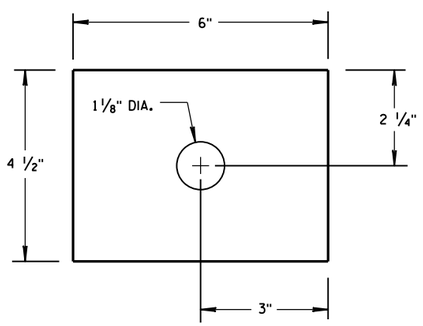
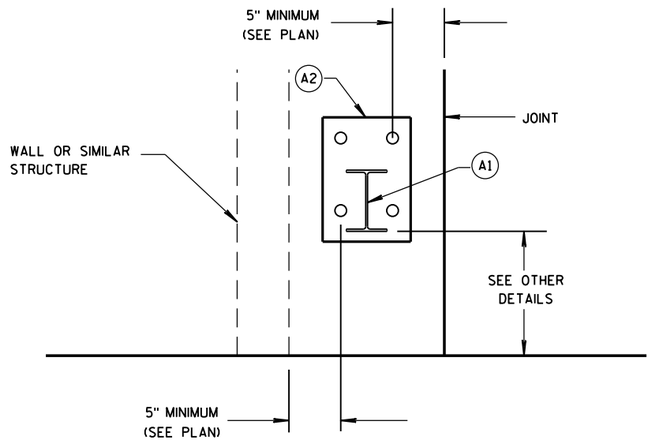


PLATE WASHER - (A7)



OBSTRUCTION AND JOINT PLACEMENT

SEE NOTE (4)

ANCHOR POST
ASSEMBLY TOP-MOUNTED

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

PRE_70

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S.D.D. 14 B 51-1c

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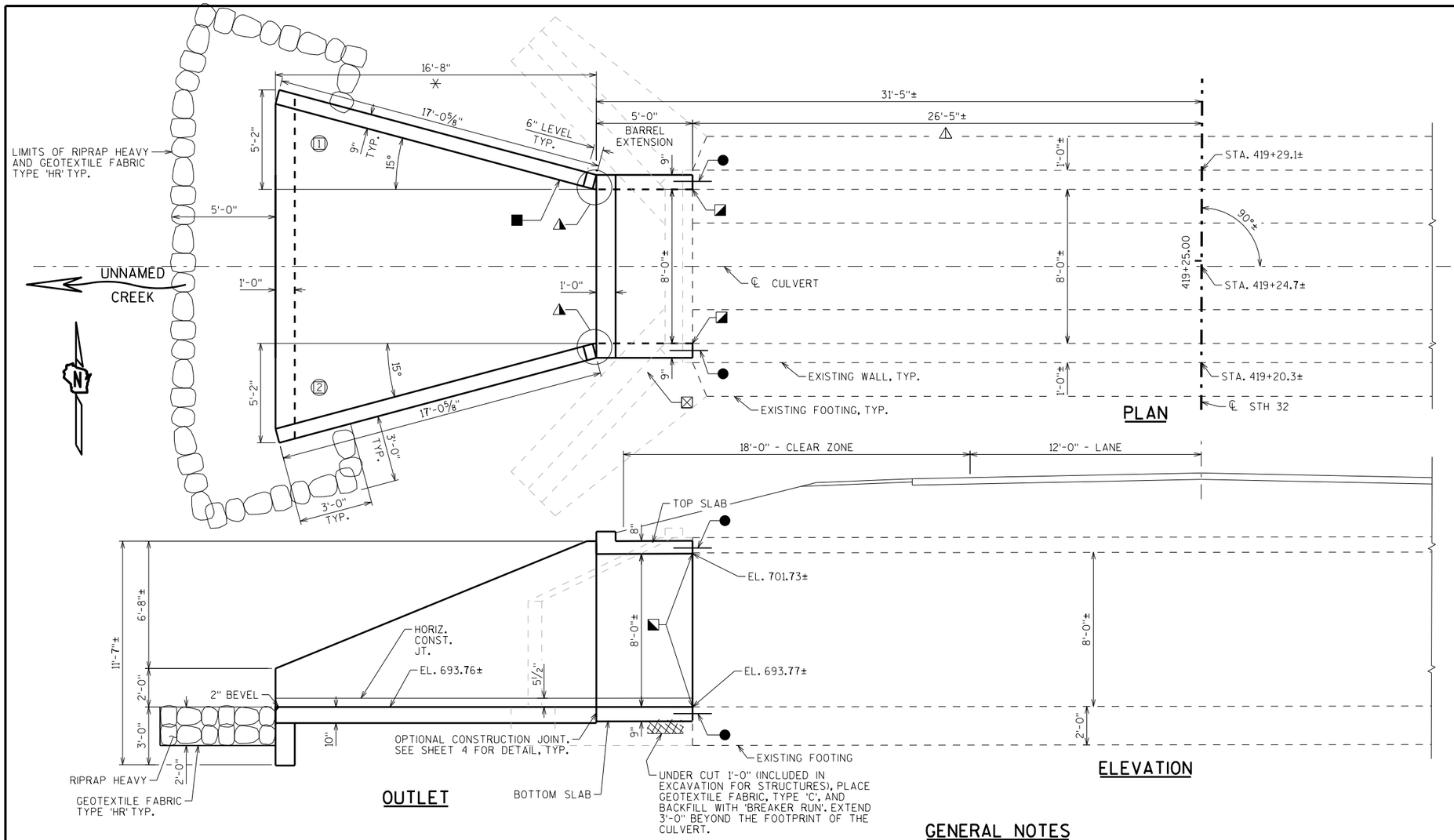
S.D.D. 14 B 51-1c



STATE PROJECT NUMBER

4085-33-71

- SEE CORNER DETAILS ON "DETAILS" SHEET (TYP.)
- NAME PLATE LOCATION (SEE "DETAILS" SHEET)
- BUILD APRON AND END OF BOX LEVEL
- INDICATES WING NUMBER
- EXIST. BARREL TO REMAIN IN PLACE
- INSIDE WALLS TO MATCH EXISTING (TYP.)
- REMOVE EXISTING APRON AND WINGS.
- ADHESIVE ANCHORS NO. 5 BARS, EMBED 6" INTO SOUND CONCRETE AND SPACE AT 1'-0" CENTERS. (TYP. IN ALL WALLS AND BOTTOM SLAB)

PRELIMINARY PLAN

LIST OF DRAWINGS

1. CULVERT EXTENSION

DESIGN DATA

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

EARTHLOAD:
DESIGNED FOR 2.5 TO 3.5 FT. OF FILL.

MATERIAL PROPERTIES:
CONCRETE MASONRY: ——— f'c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT: ——— fy = 60,000 P.S.I.

TRAFFIC VOLUME

STH 32
ADT = 6,200 (2043)
R.D.S. = 55 M.P.H.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 419+25	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-5-1745	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	
311.0115	BREAKER RUN	CY	
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	
504.0100	CONCRETE MASONRY CULVERTS	CY	
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	
606.0300	RIPRAP HEAVY	CY	
645.0105	GEOTEXTILE TYPE C	SY	
645.0120	GEOTEXTILE TYPE HR	SY	
	NON-BID ITEMS		
	FILLER	EACH	¾"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-5-1745" SHALL BE THE EXISTING GROUNDLINE.

ALL VOLUME WHICH CANNOT BE PLACED BEFORE CULVERT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL WITHIN THE LENGTH OF THE CULVERT INCLUDING THE APRON WING WALLS.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE CONCRETE IN THE CUTOFF WALLS MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.

PLACE 18" (MIN.) WIDE SHEET OF "RUBBERIZED MEMBRANE WATERPROOFING" ON TOP SLAB OVER ALL CONSTRUCTION JOINTS AND EXTEND DOWN TO BOTTOM OF OUTSIDE WALLS.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO PRECAST DETAILS ON CHAPTER 36 STANDARDS OF THE CURRENT WISC. DOT BRIDGE MANUAL. PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND PRICES BID FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES".

THE CONTRACTOR MAY ELECT TO SUBSTITUTE #1 OR #2 CONCRETE COARSE AGGREGATE, SELECT CRUSHED MATERIAL OR OTHER GRANULAR MATERIAL AS APPROVED BY THE FIELD ENGINEER, IN LIEU OF THE BREAKER RUN, TO BE UTILIZED AS A CONSTRUCTION PLATFORM FOR THE BOX. THE CONTRACTOR IS RESPONSIBLE FOR BASE STABILITY WITH ANY SUBSTITUTED MATERIAL.

STRUCTURE DESIGN CONTACTS:
MICHAEL LARSON (608) 267-4539
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY

WISCONSIN DEPARTMENT OF TRANSPORTATION — BUREAU OF STRUCTURES

ACCEPTED _____ _____
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE C-5-1745

STH 32 OVER UNNAMED CREEK

COUNTY	TOWN
BROWN	ROCKLAND

DESIGN SPEC. N/A — REHABILITATION

DESIGNED BY	MJL	DESIGNED CK'D.	JLR	DRAWN BY	MJL	PLANS CK'D.	

CULVERT EXTENSION

SHEET 1 OF 1

PRE_71

I.D. 4085-33-00A DATE: JULY 2018

SCALE = 3.00

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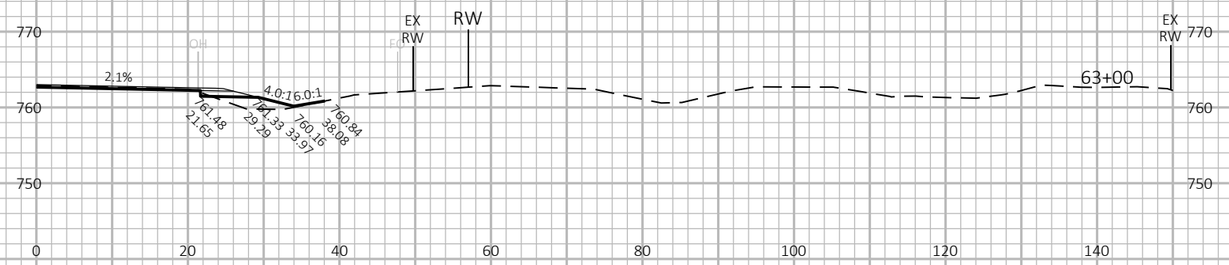

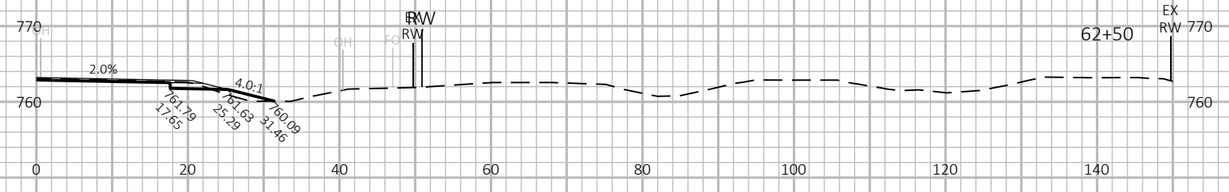

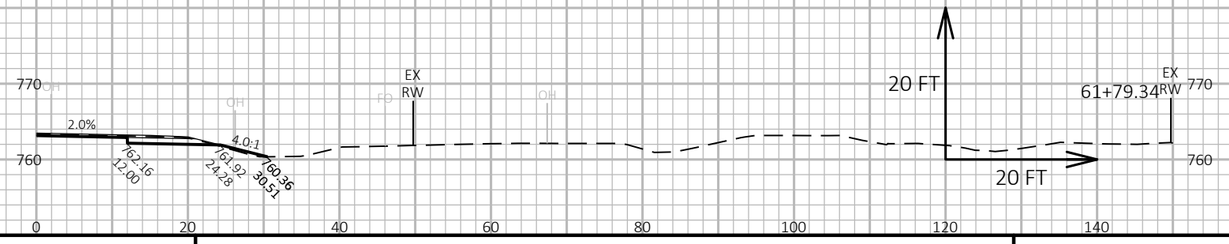

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PRE_72

WISDOT/CADDS SHEET 49

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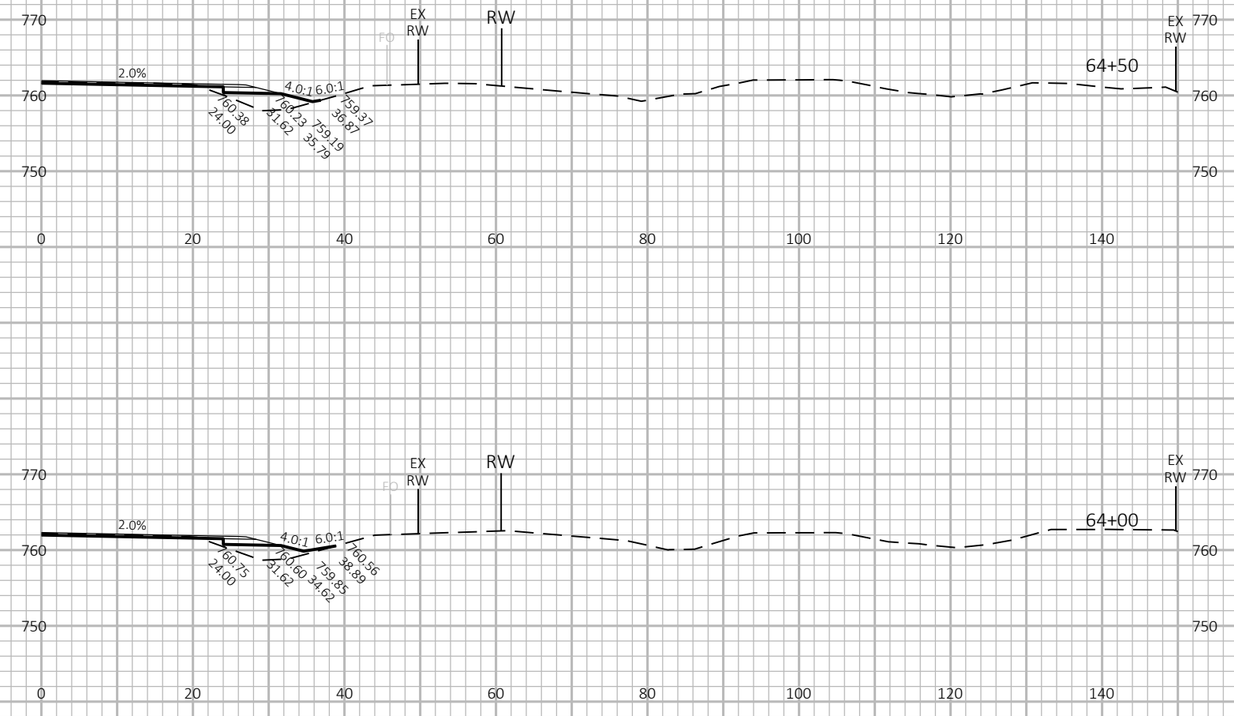

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PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

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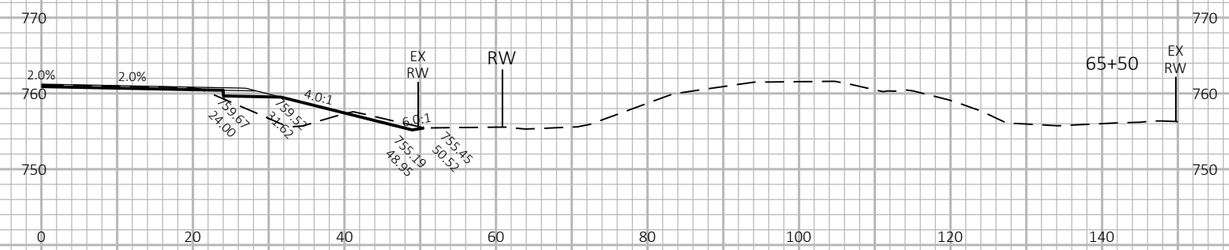
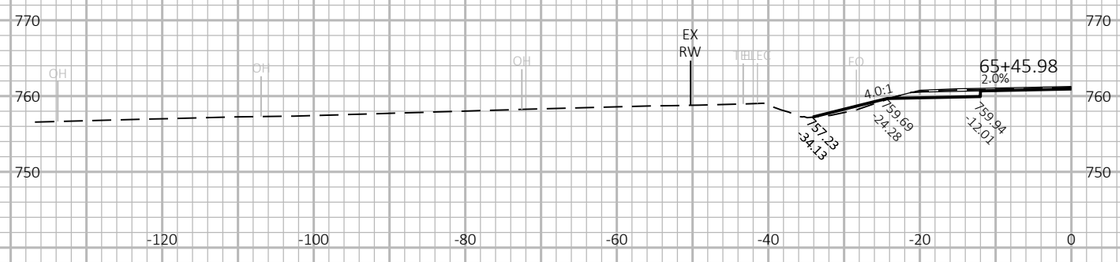
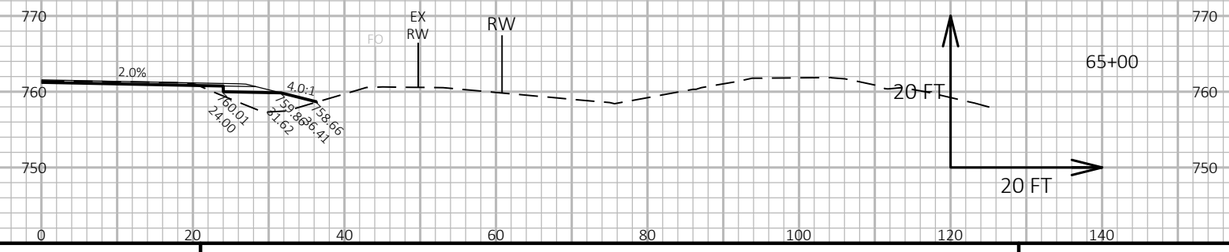
PRE_73







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PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

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PLOT NAME :

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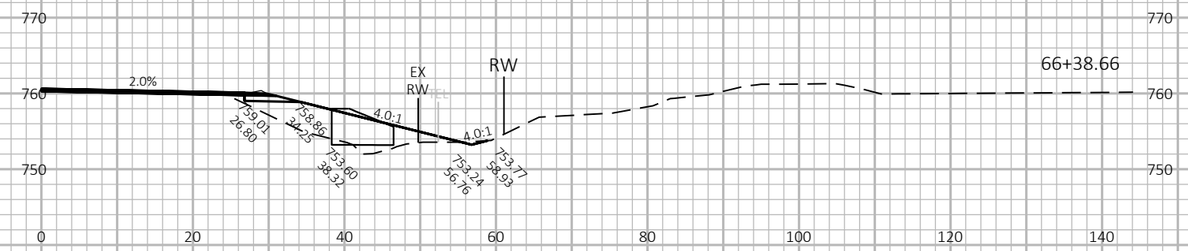
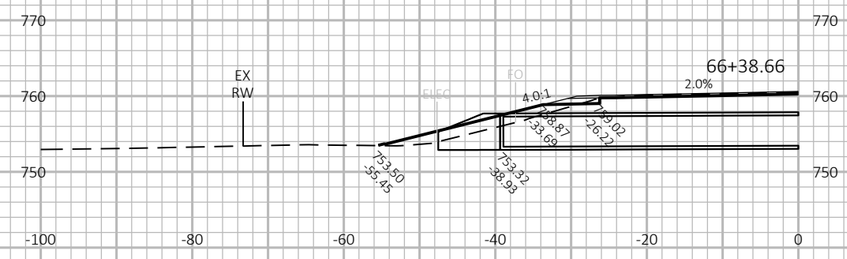
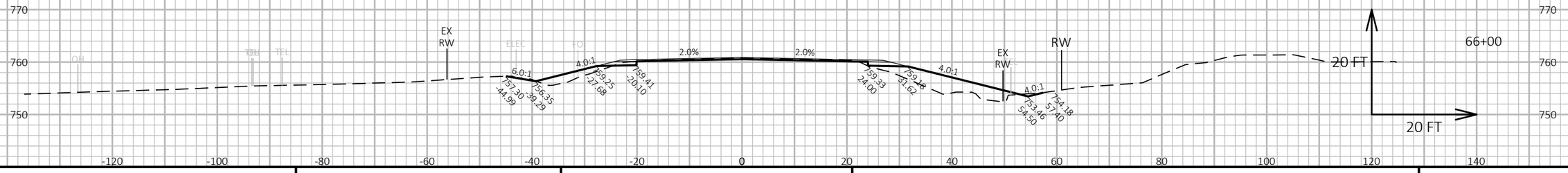
PRE_74







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PRE_75

WISDOT/CADDS SHEET 49

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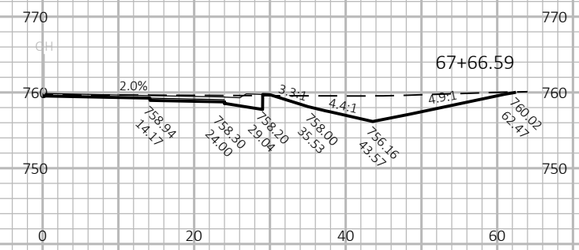

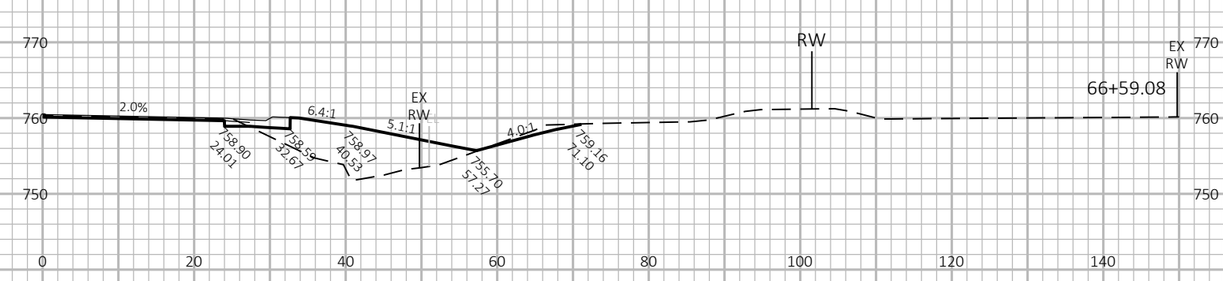

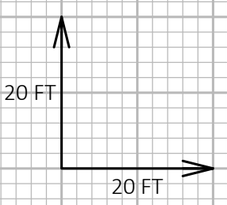

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PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

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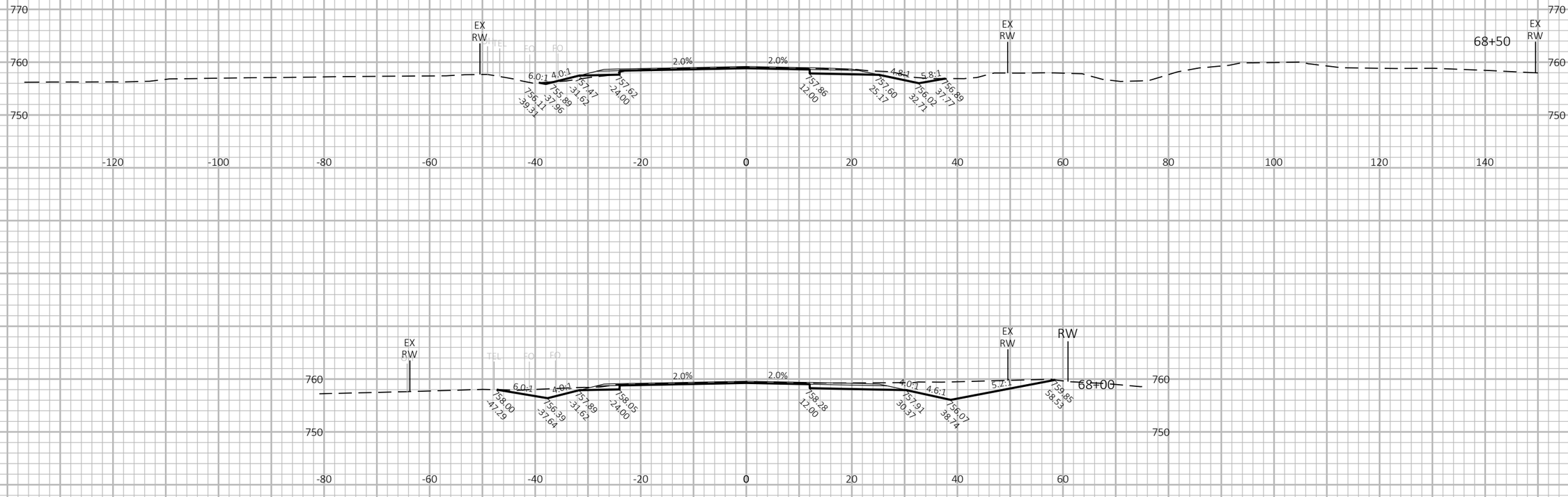
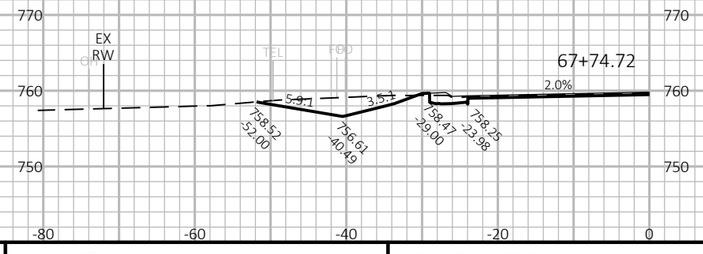
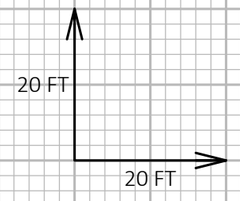
PRE_76







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PLOT BY : LORENZ, KELSEY ANN

PLOT NAME :

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PRE_77

WISDOT/CADDS SHEET 49

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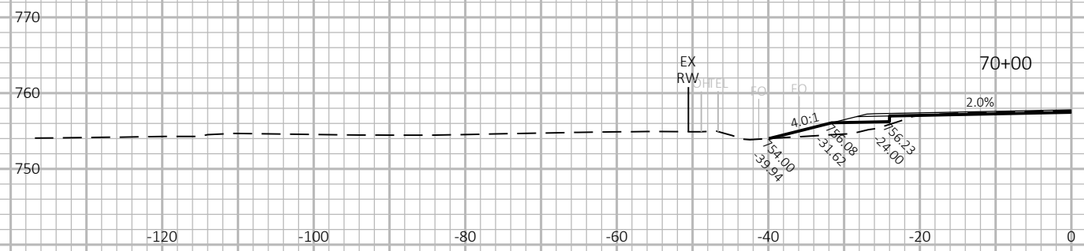

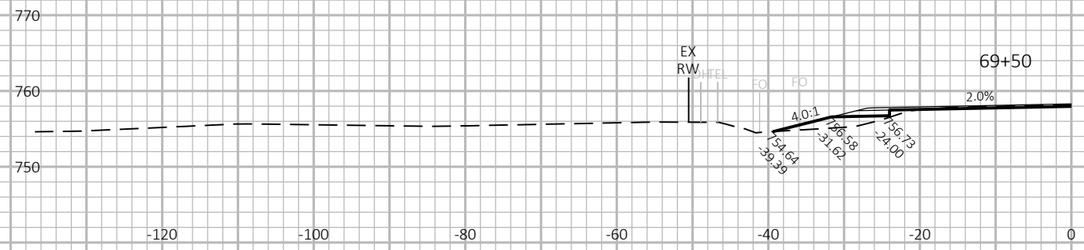

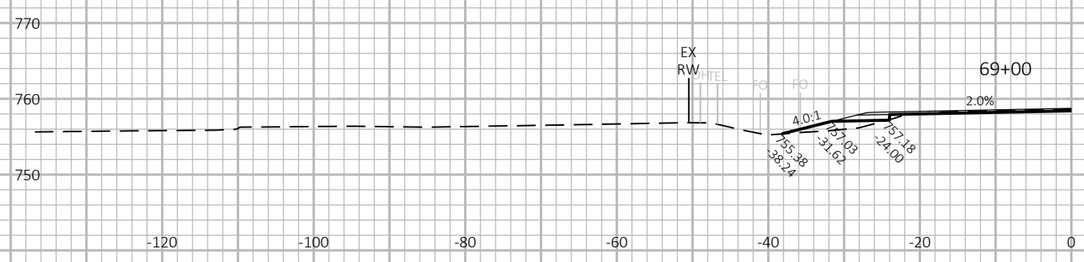

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PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

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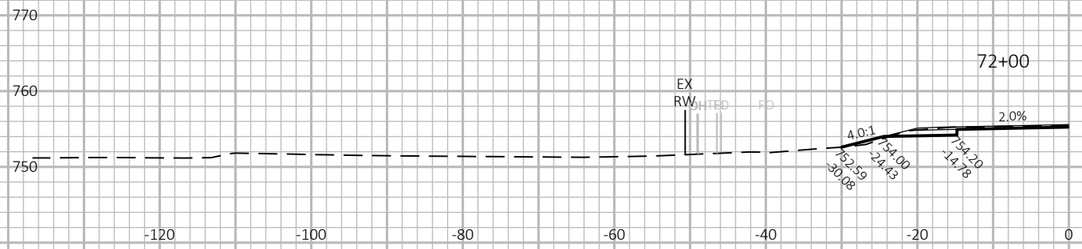
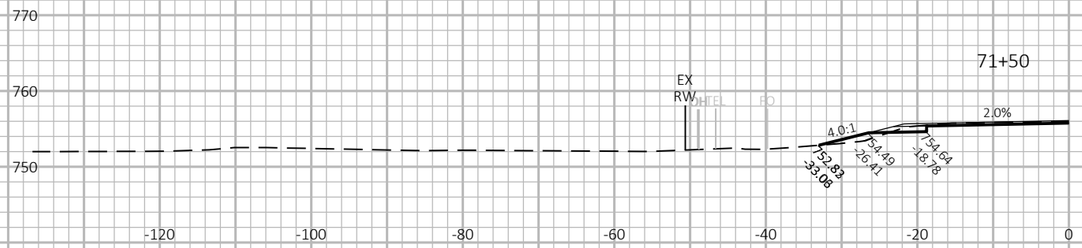
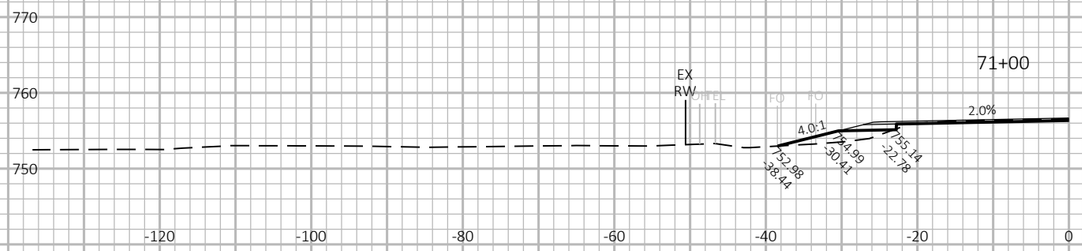
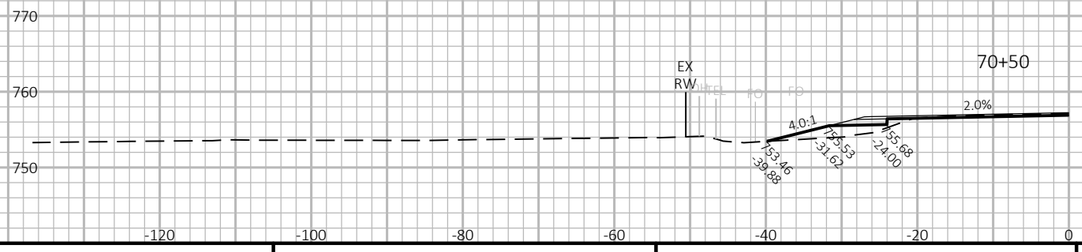
PRE_78









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PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

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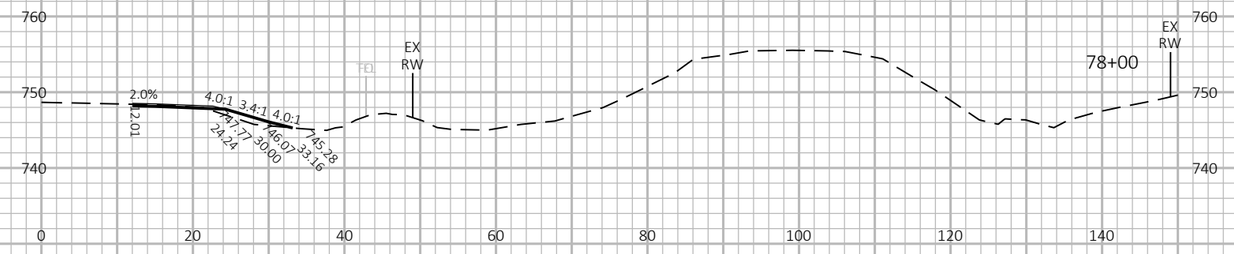
PLOT DATE : 2/27/2019 3:40 PM

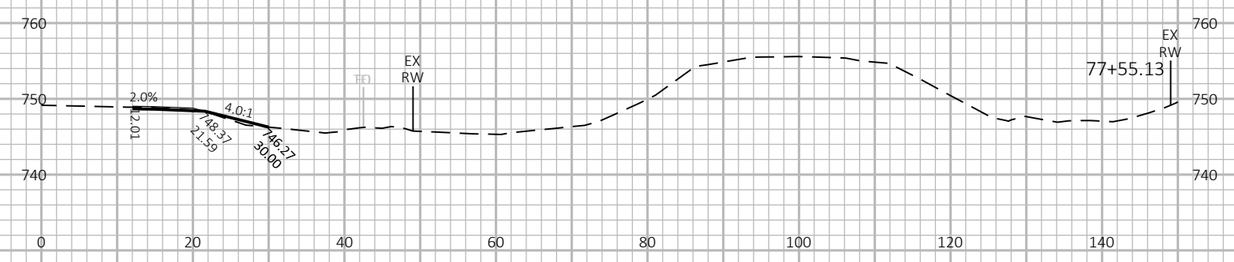
PLOT BY : LORENZ, KELSEY ANN

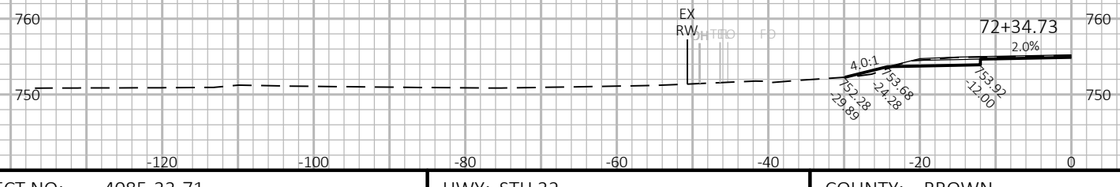
PLOT NAME :

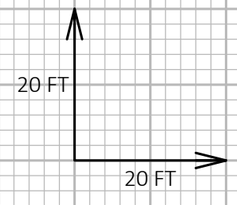
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_79









9

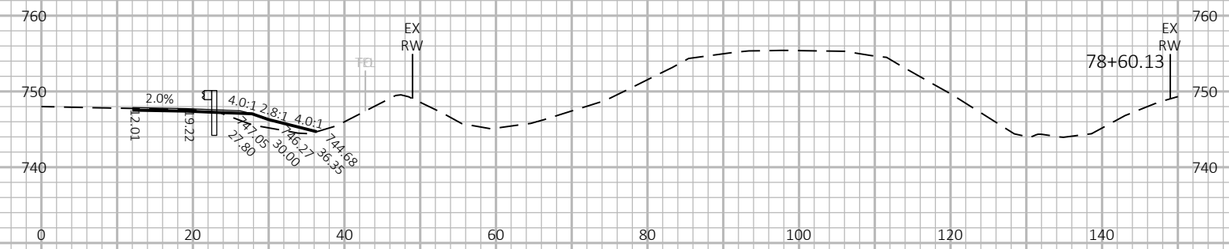
9

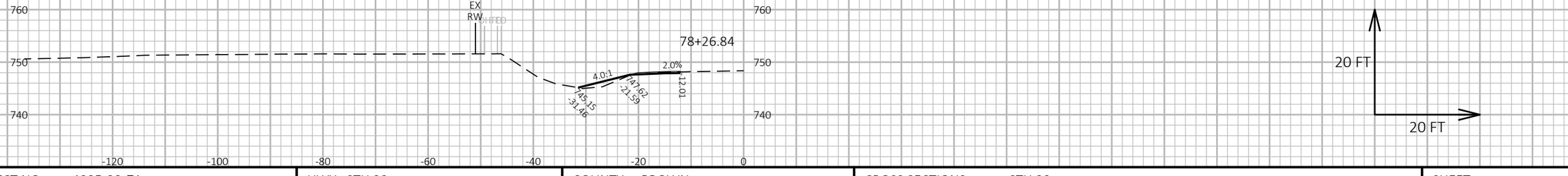
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (9)

PLOT DATE : 2/27/2019 3:41 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_80





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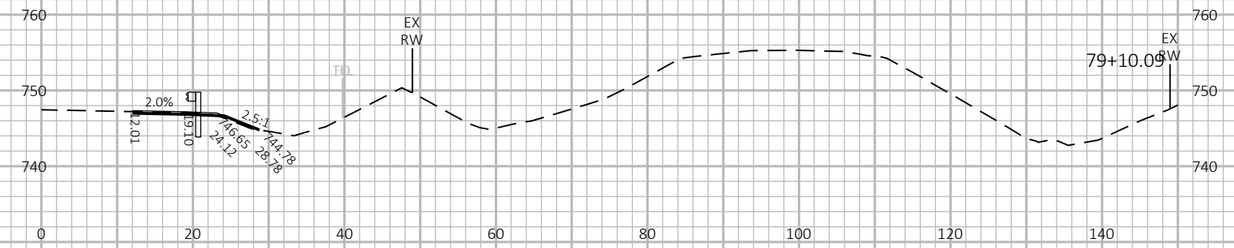
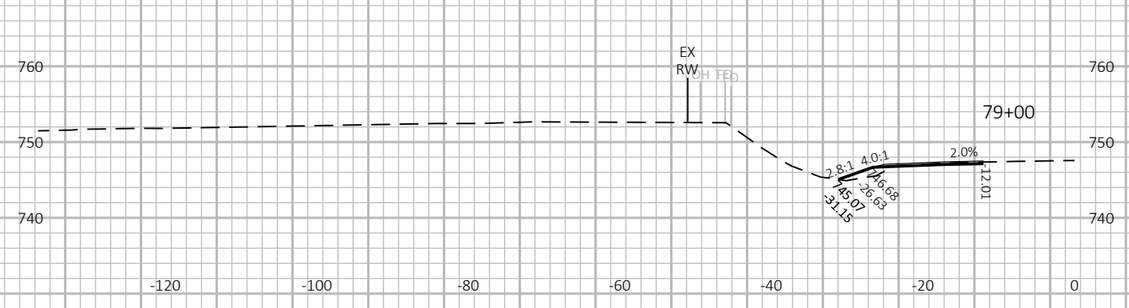
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

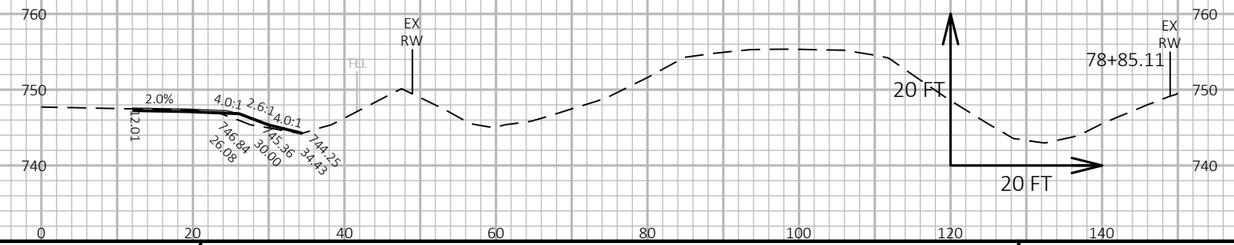
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (10)

PLOT DATE : 2/27/2019 3:41 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_81







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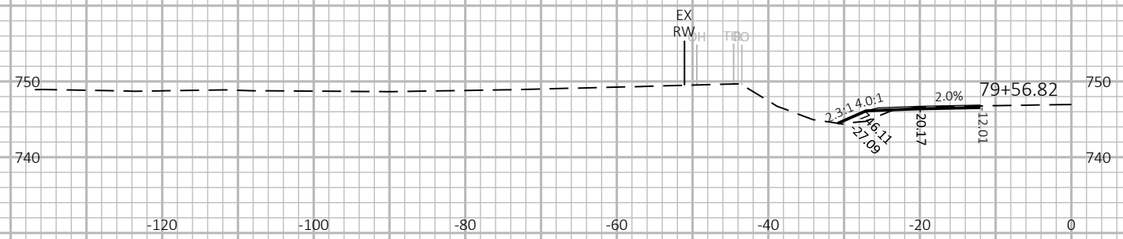
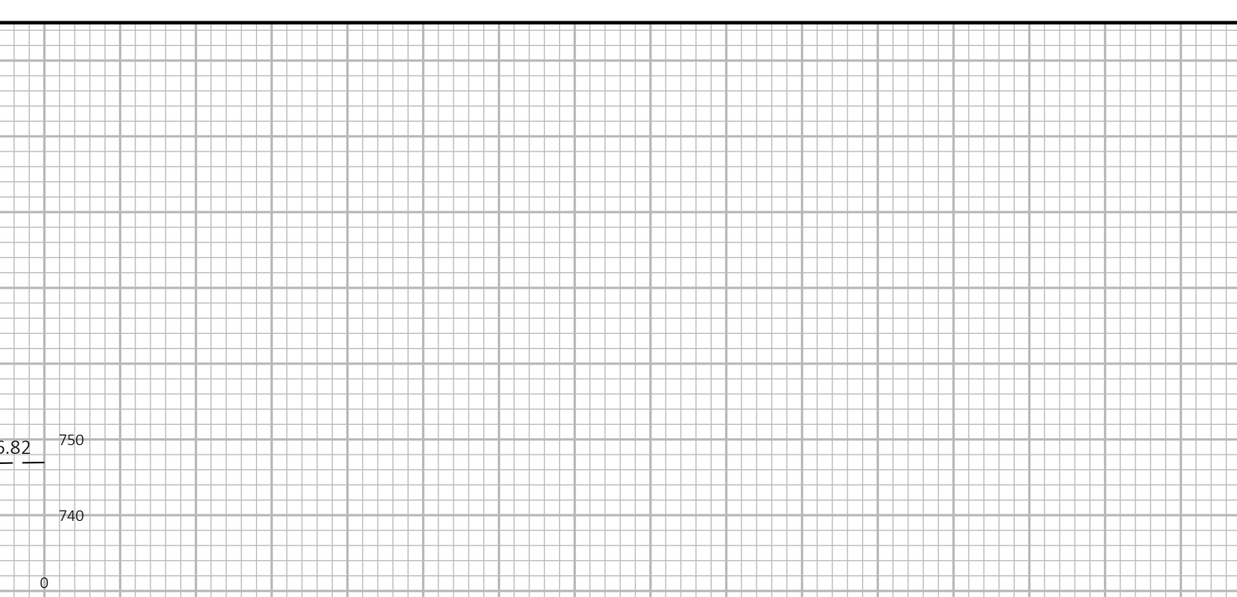
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

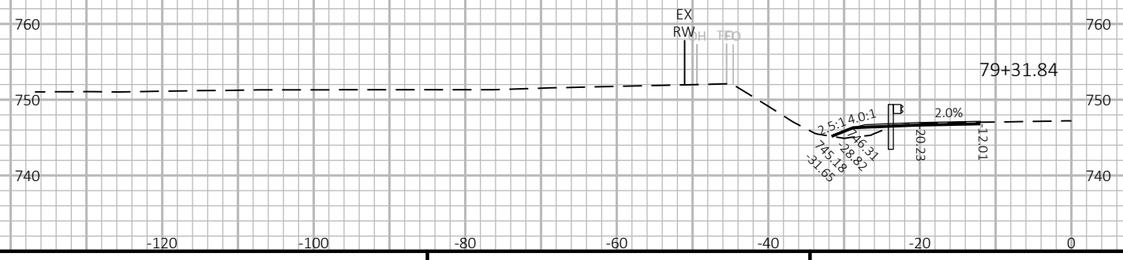
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (11)

PLOT DATE : 2/27/2019 3:41 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_82







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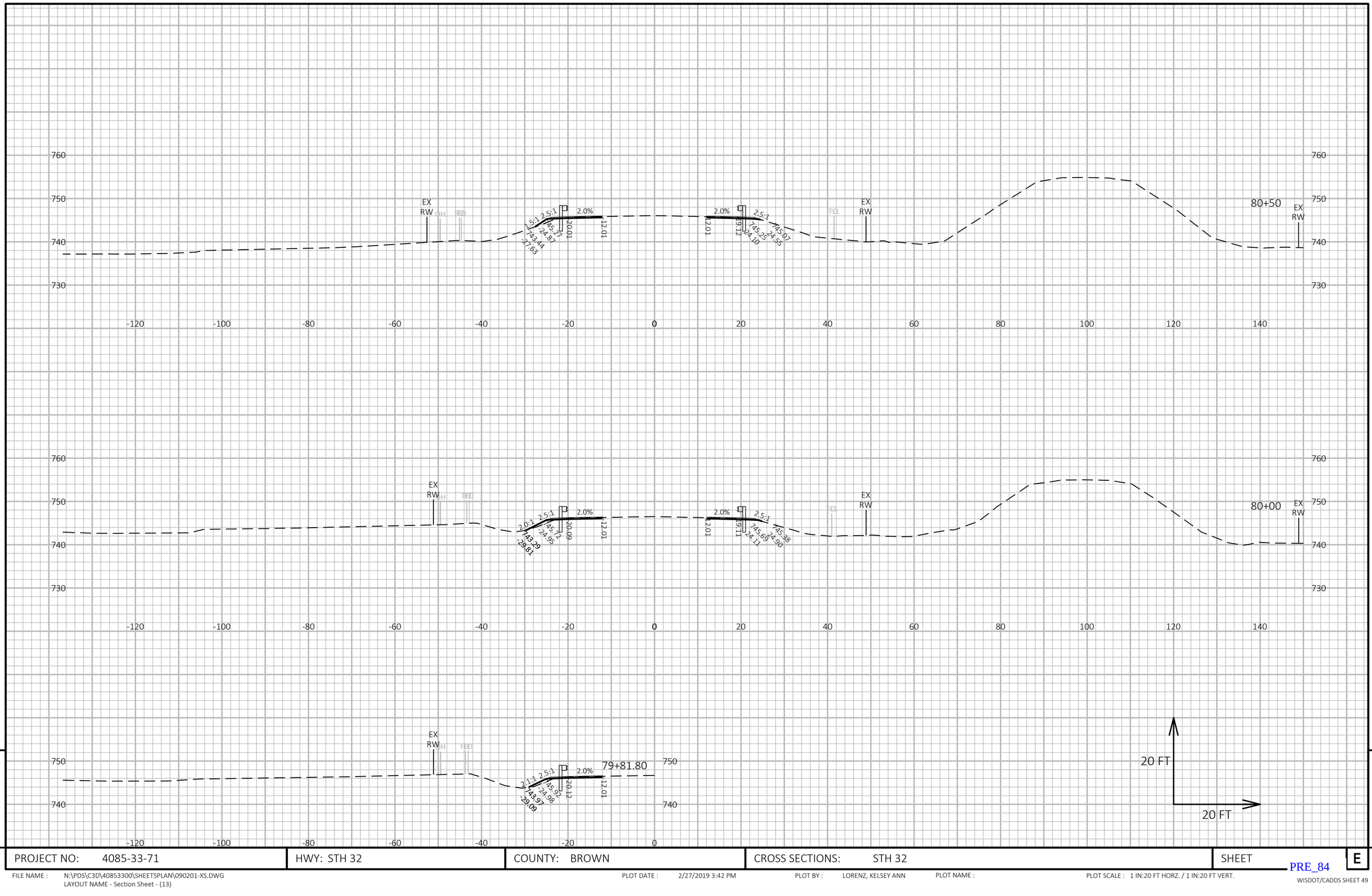
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (12)

PLOT DATE : 2/27/2019 3:42 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_83



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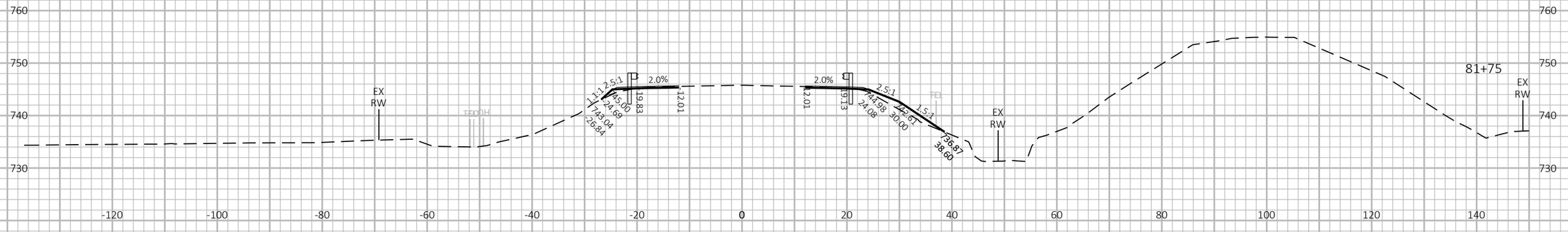
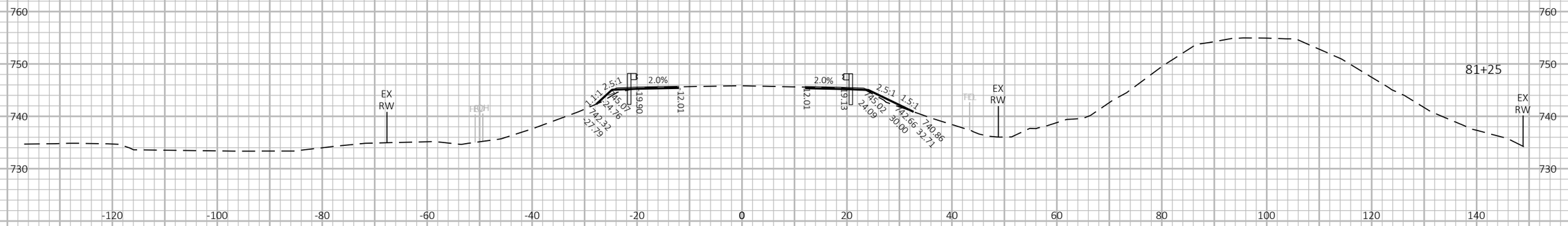
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

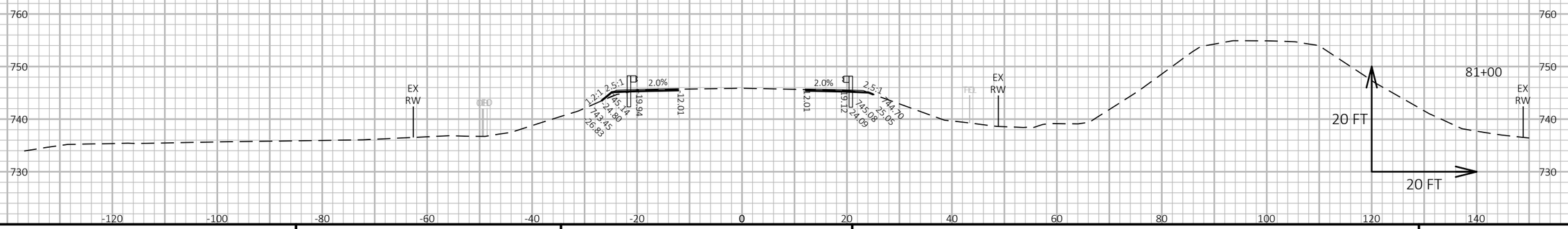
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (13)

PLOT DATE : 2/27/2019 3:42 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_84







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PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (14)

PLOT DATE : 2/27/2019 3:42 PM

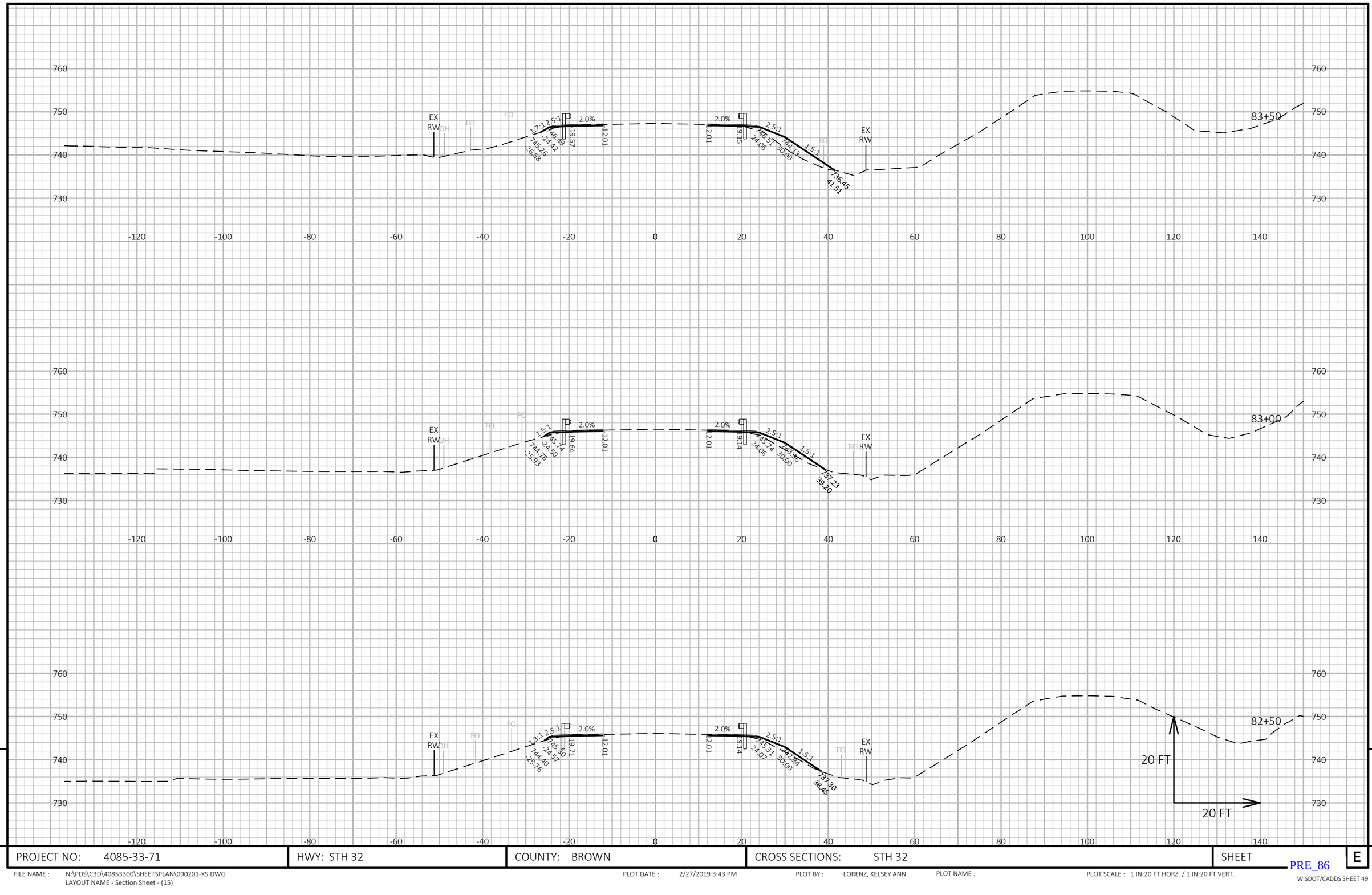
PLOT BY : LORENZ, KELSEY ANN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_85

WISDOT/CADDS SHEET 49



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (15)

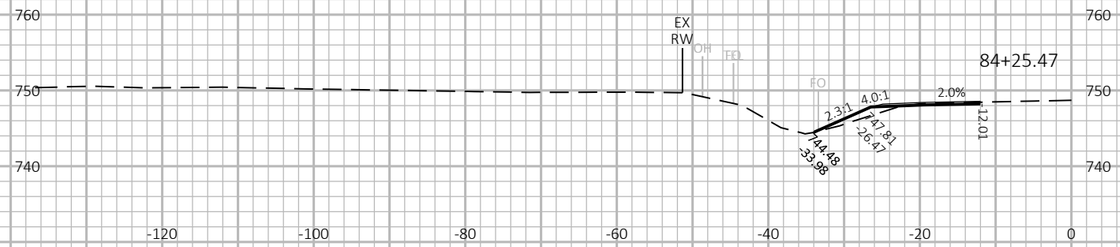
PLOT DATE : 2/27/2019 3:43 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

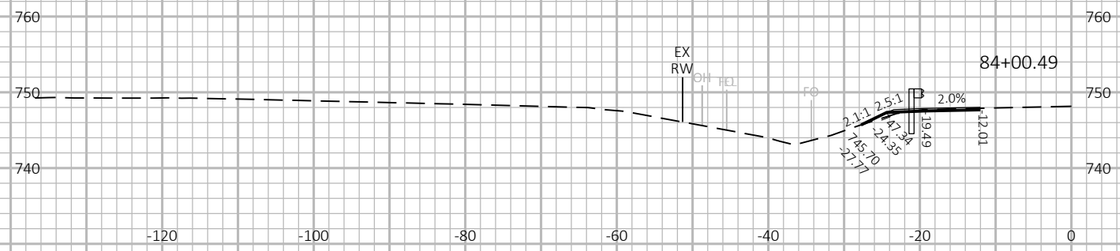
PRE_86

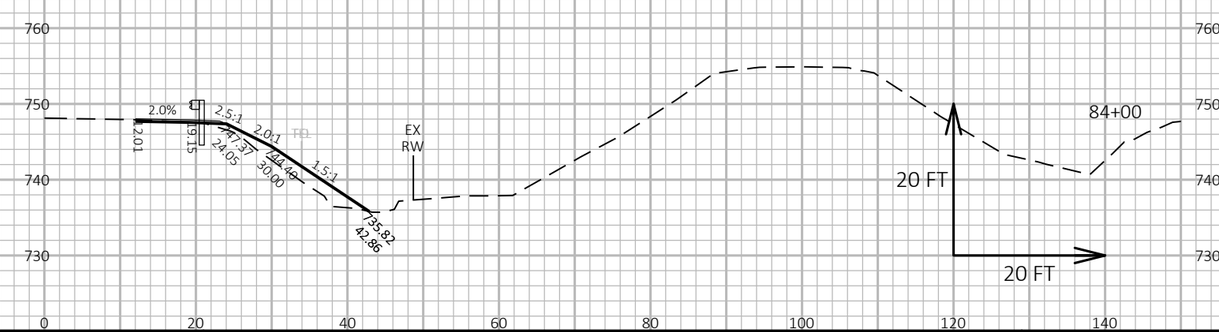
WISDOT/CADDS SHEET 49

9

9







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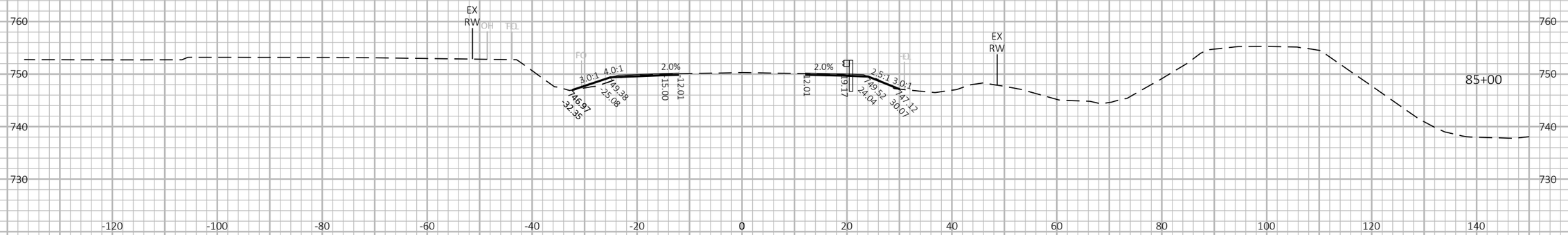
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

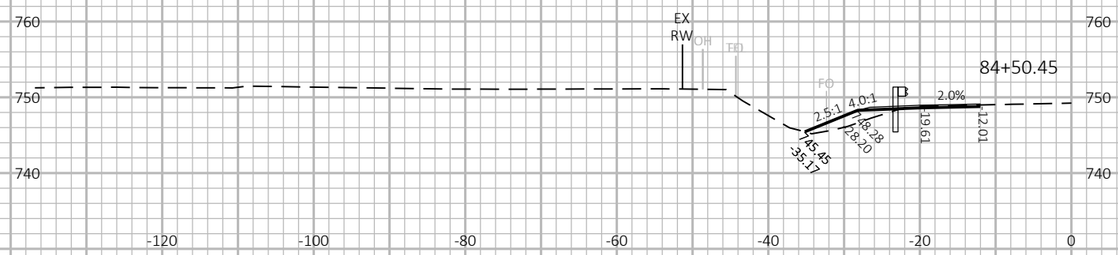
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (16)

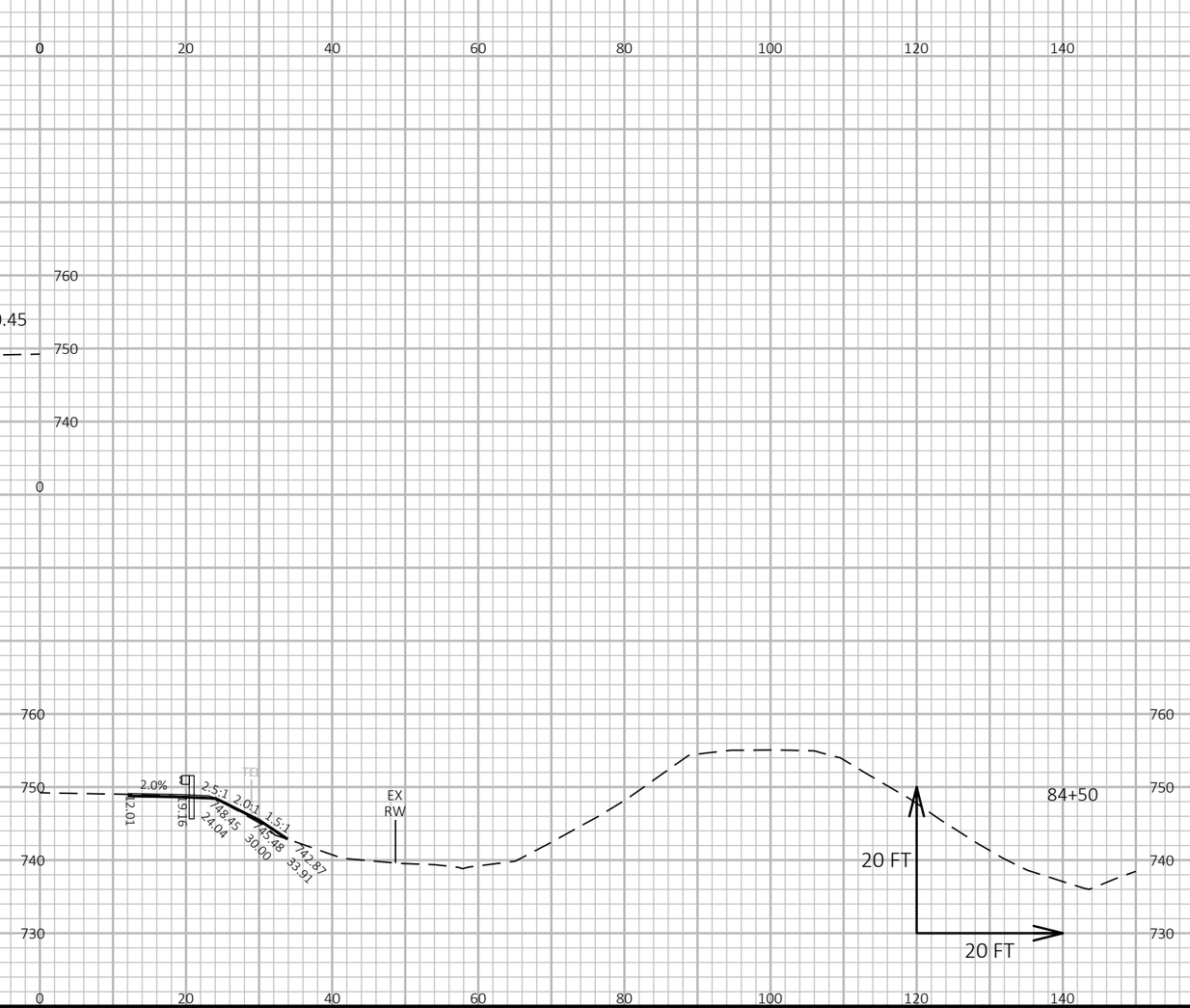
PLOT DATE : 2/27/2019 3:43 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_87

WISDOT/CADDS SHEET 49







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PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (17)

PLOT DATE : 2/27/2019 3:43 PM

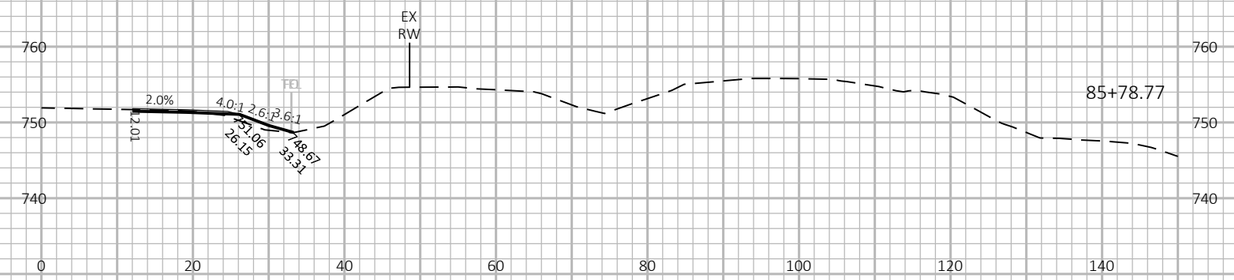
PLOT BY : LORENZ, KELSEY ANN

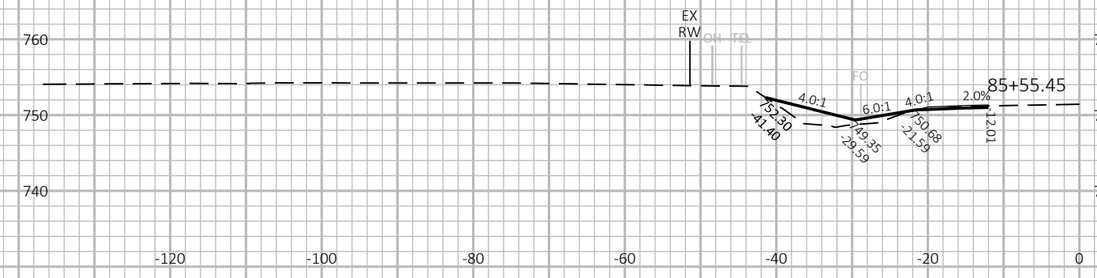
PLOT NAME :

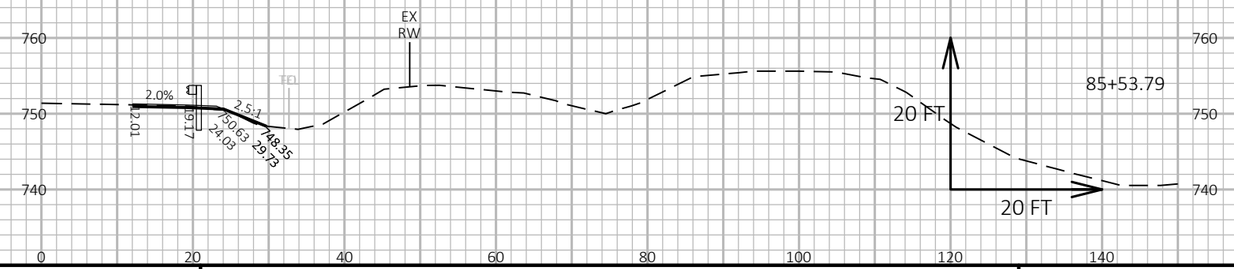
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_88

WISDOT/CADDS SHEET 49







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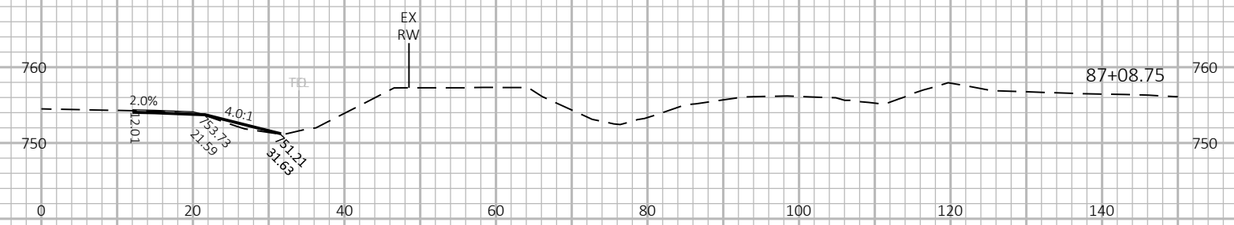
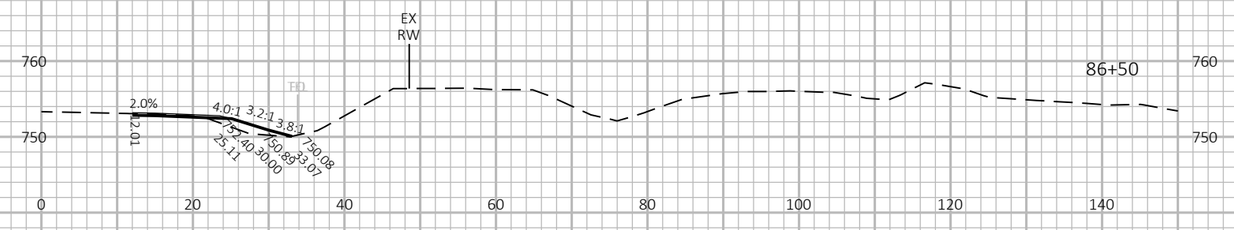
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

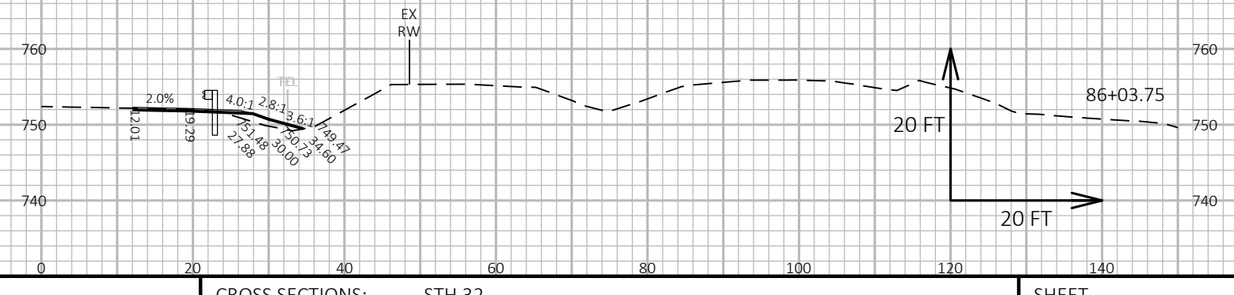
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (18)

PLOT DATE : 2/27/2019 3:44 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_89







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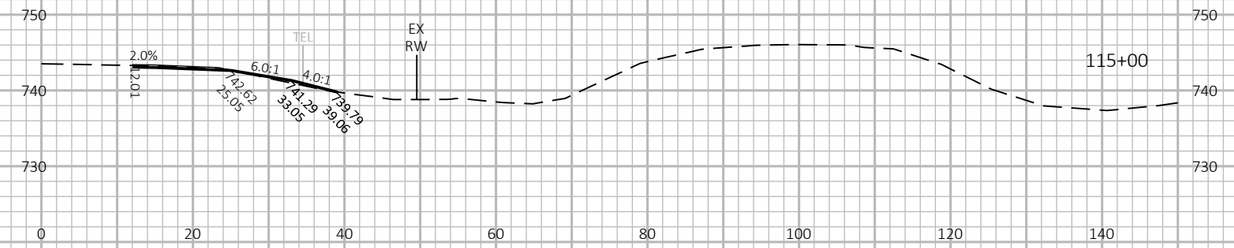
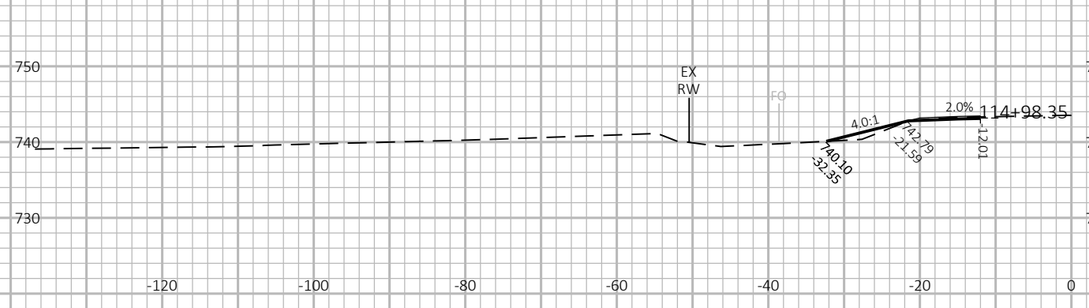
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

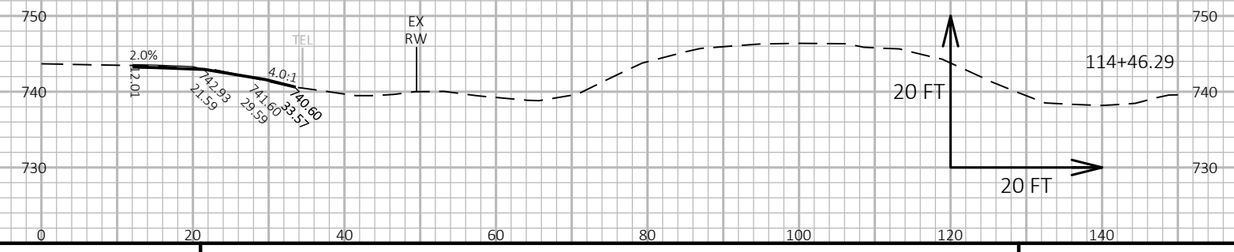
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (19)

PLOT DATE : 2/27/2019 3:44 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_90







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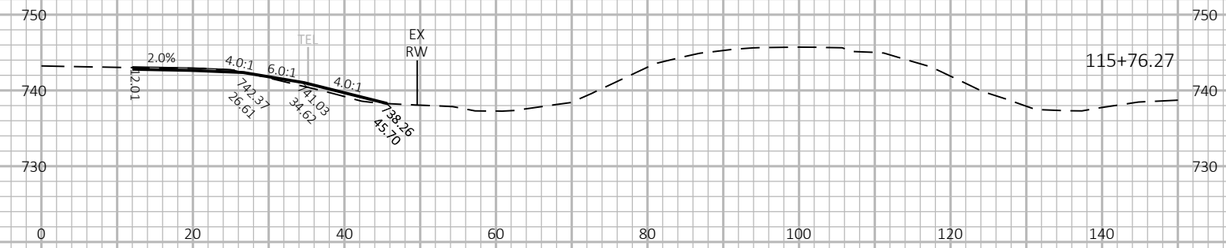
9

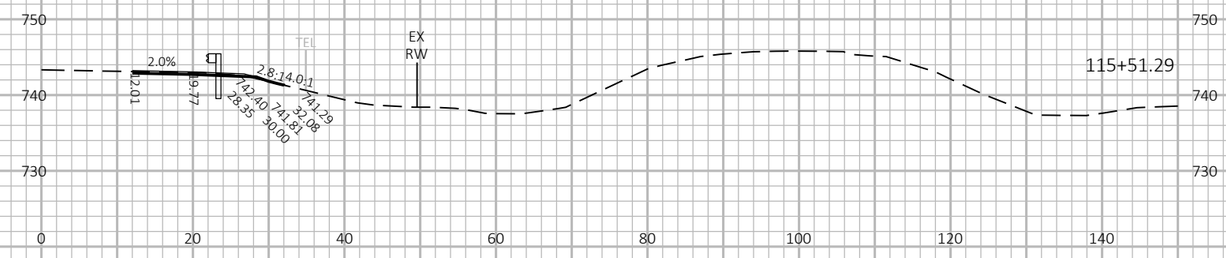
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

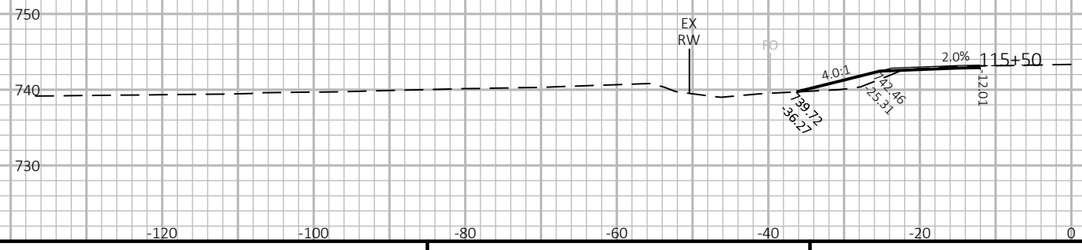
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (20)

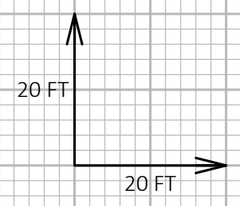
PLOT DATE : 2/27/2019 3:44 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_91









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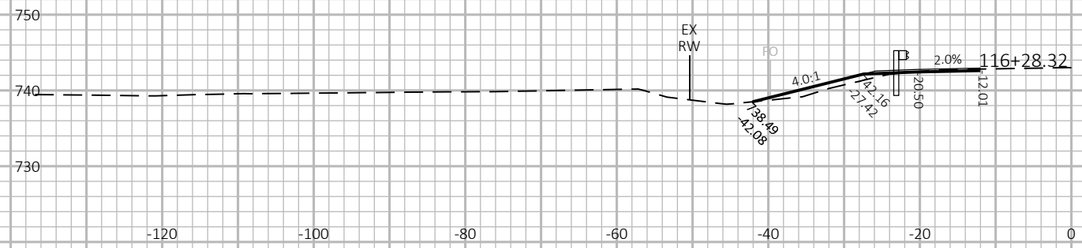
9

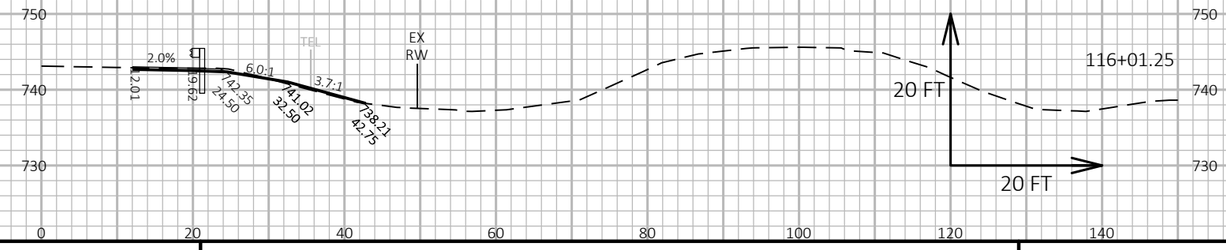
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (21)

PLOT DATE : 2/27/2019 3:44 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_92





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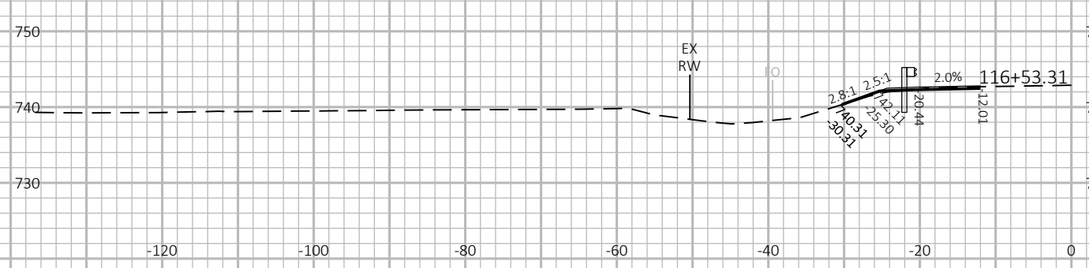
9

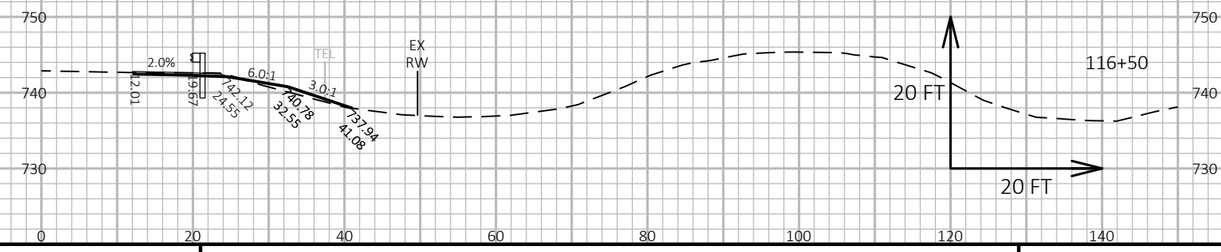
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (22)

PLOT DATE : 2/27/2019 3:45 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_93





9

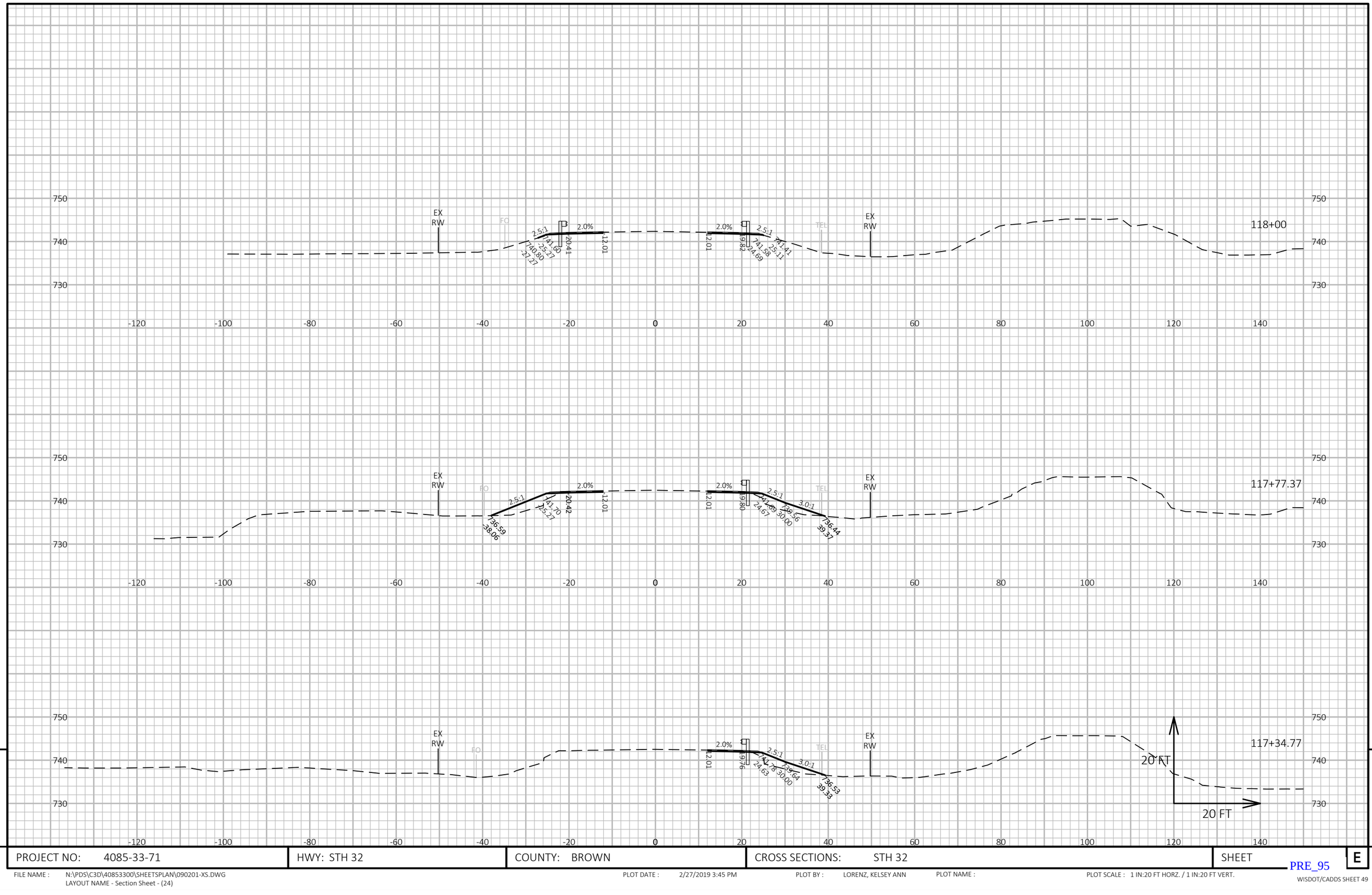
9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (23)

PLOT DATE : 2/27/2019 3:45 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_94



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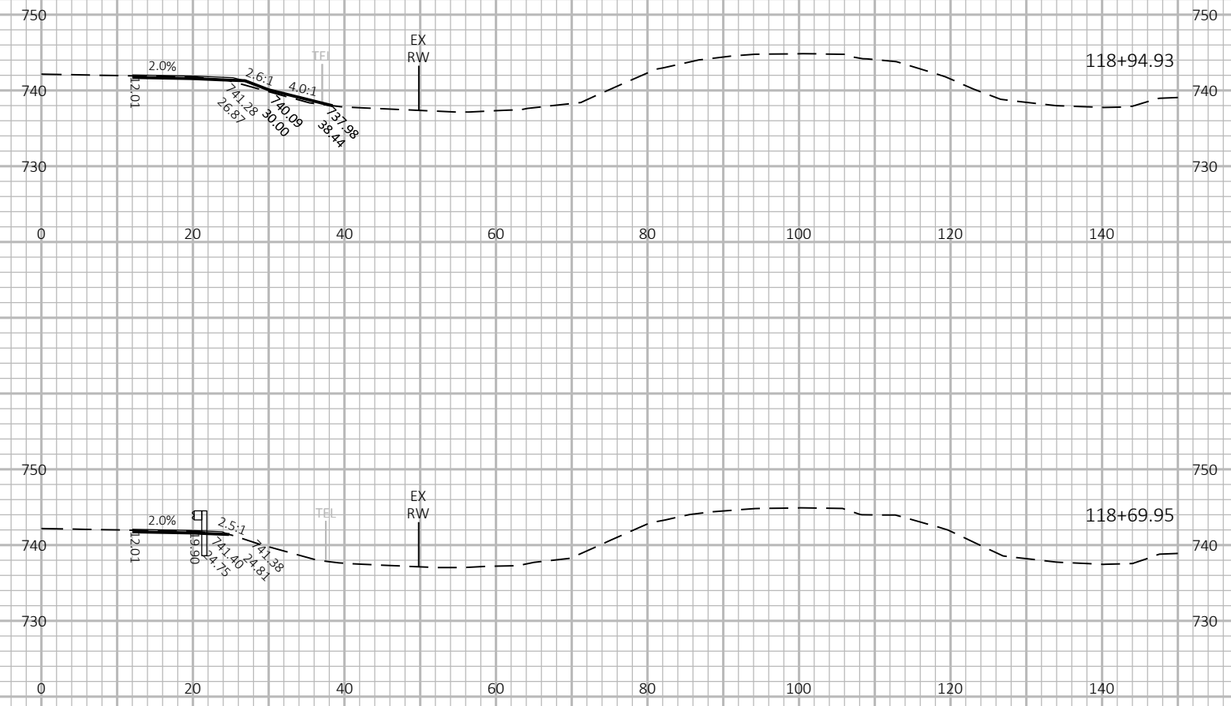
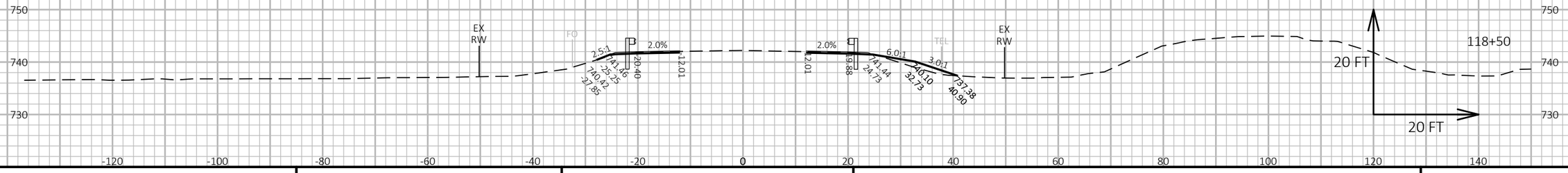
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (24)

PLOT DATE : 2/27/2019 3:45 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_95





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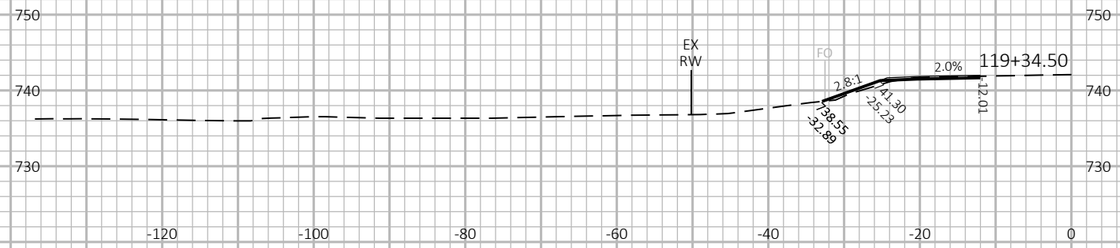
9

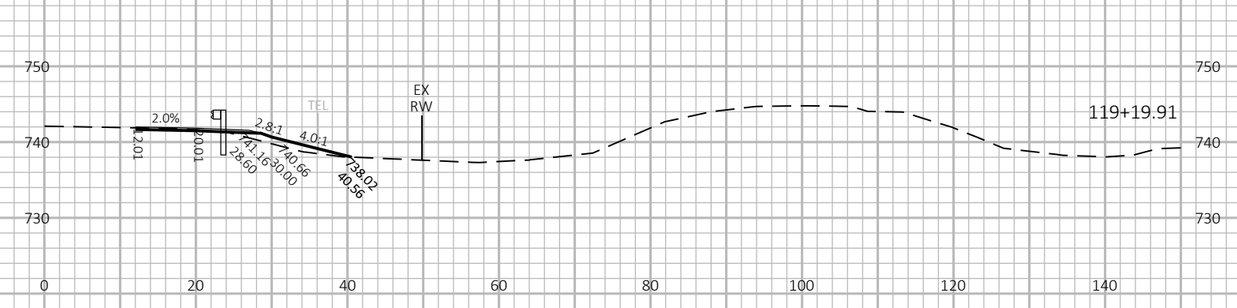
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

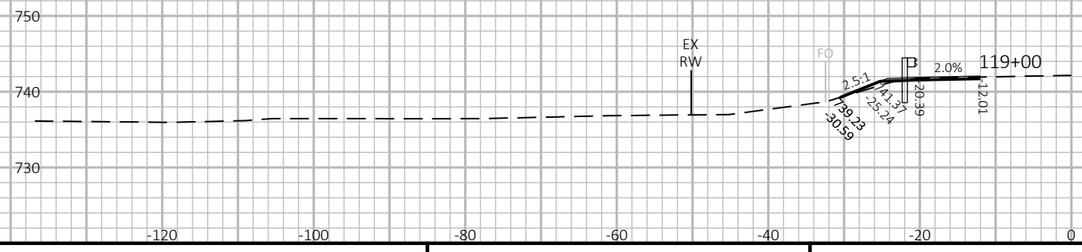
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (25)

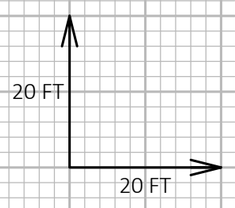
PLOT DATE : 2/27/2019 3:46 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_96









9

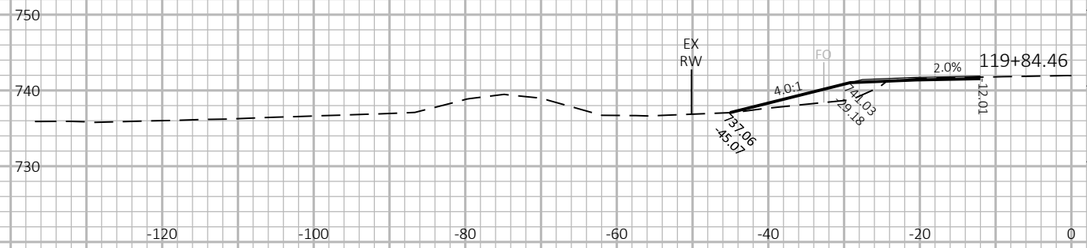
9

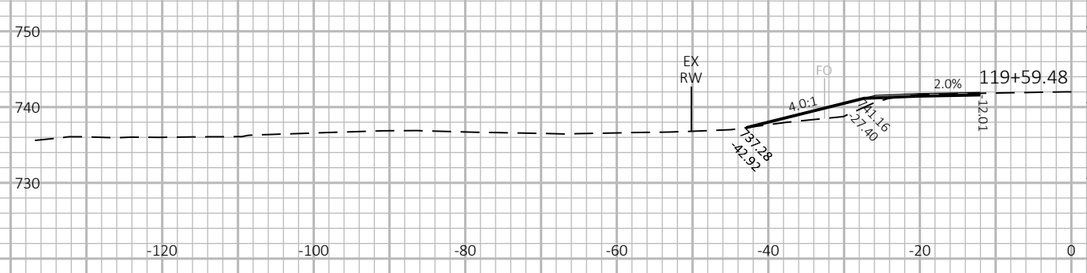
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

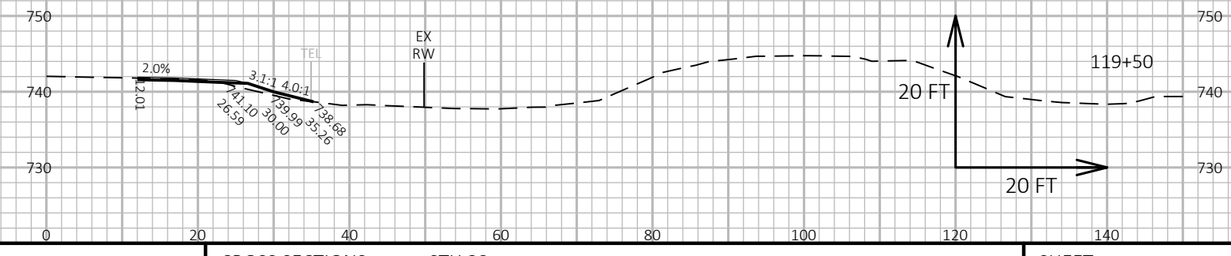
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (26)

PLOT DATE : 2/27/2019 3:46 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_97







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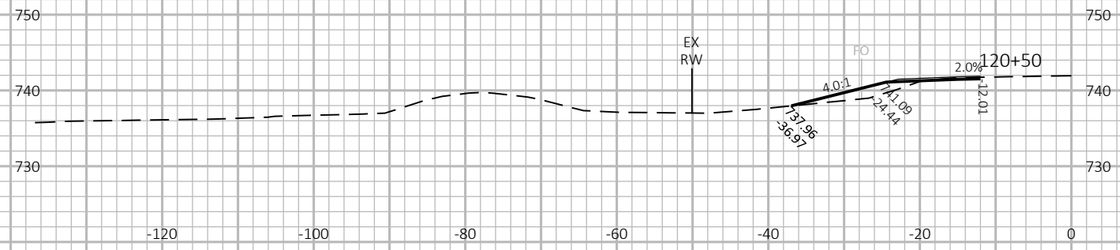
9

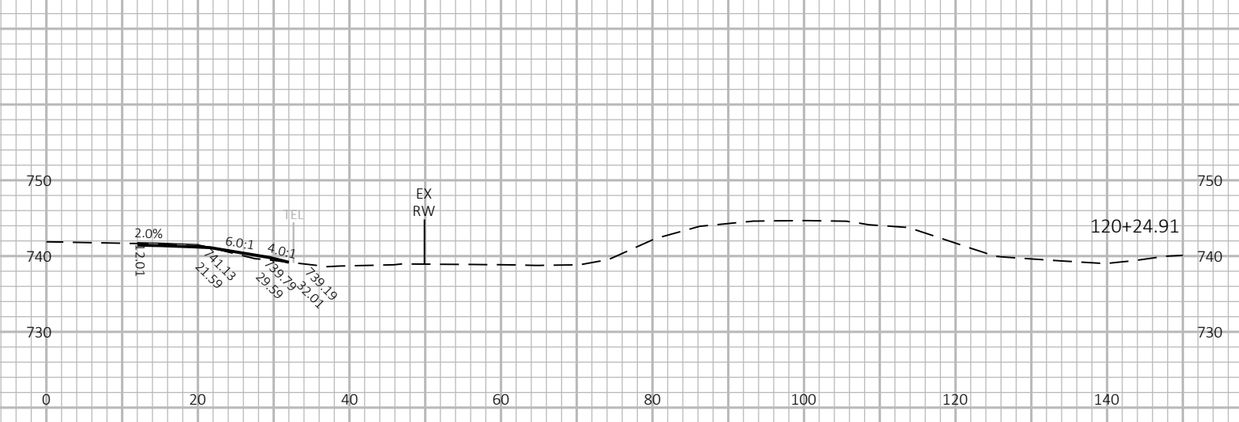
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

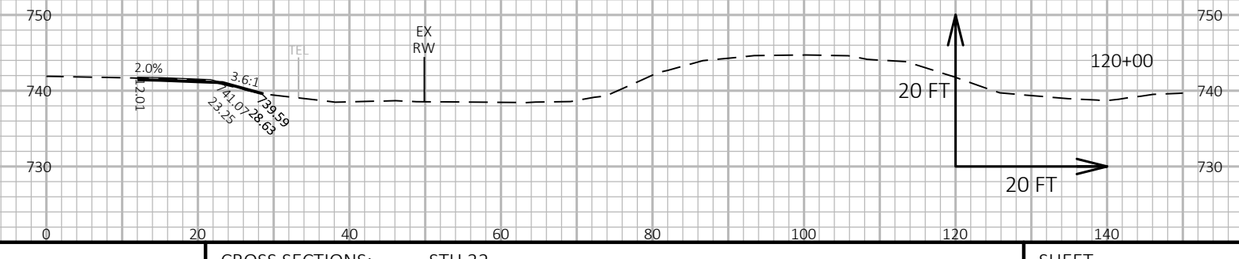
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (27)

PLOT DATE : 2/27/2019 3:46 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_98







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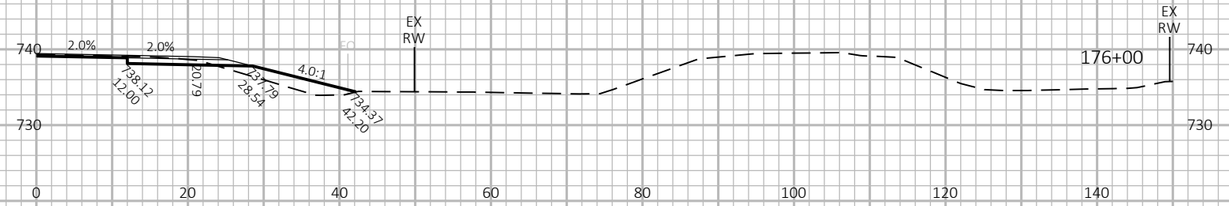
9

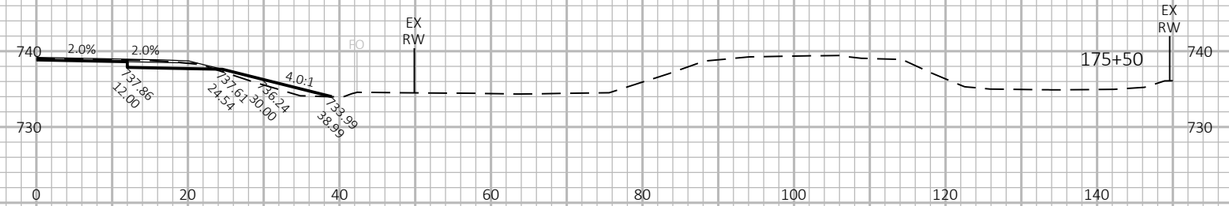
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

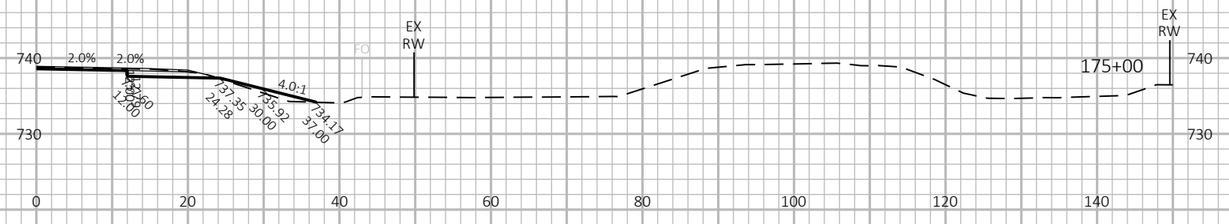
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (28)

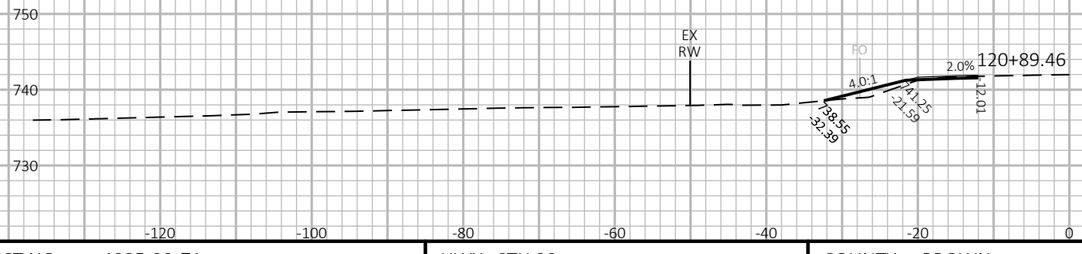
PLOT DATE : 2/27/2019 3:47 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

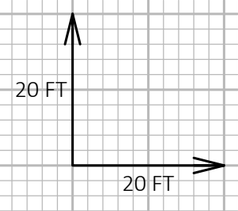
PRE_99











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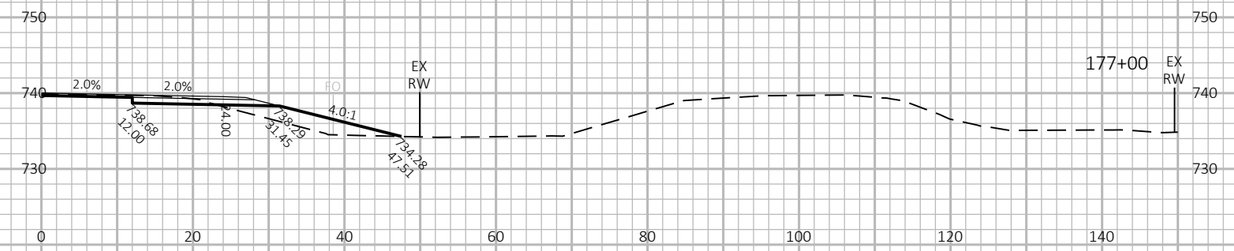
9

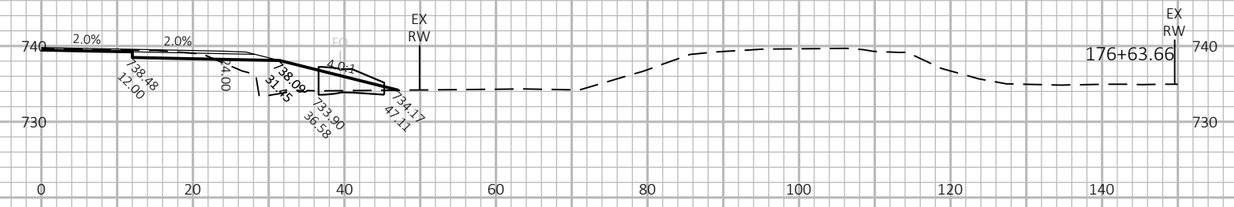
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

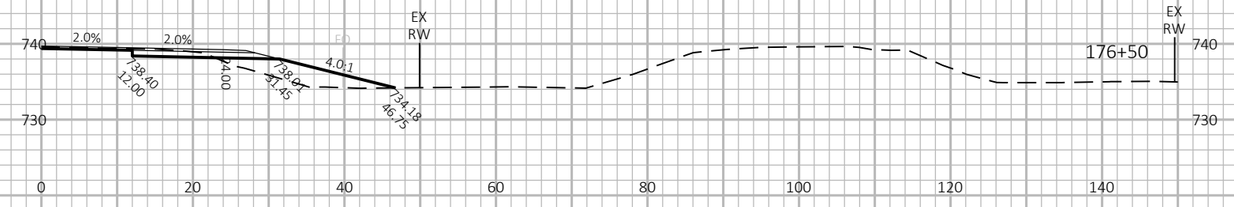
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (29)

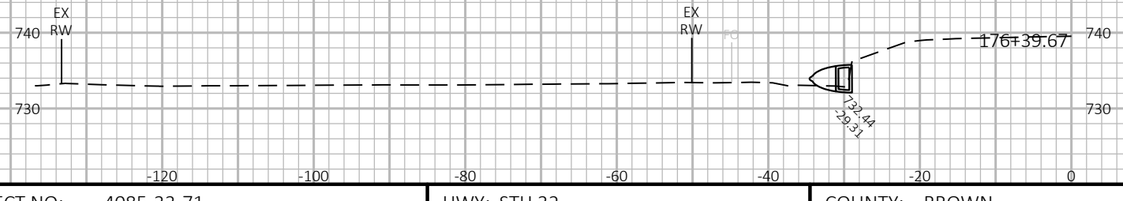
PLOT DATE : 2/27/2019 3:47 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

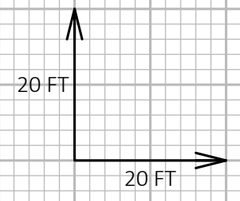
PRE_100











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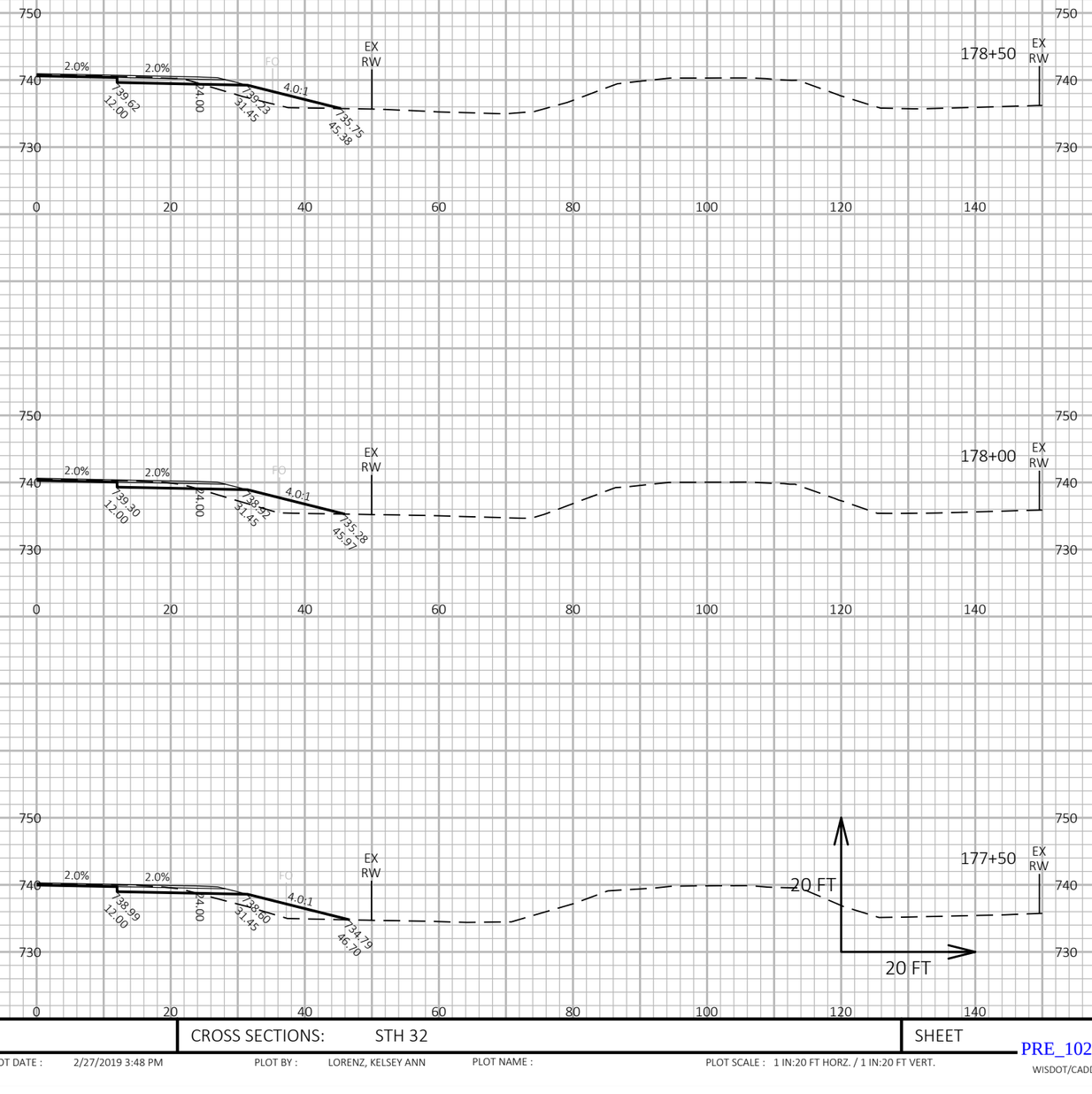
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (30)

PLOT DATE : 2/27/2019 3:47 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

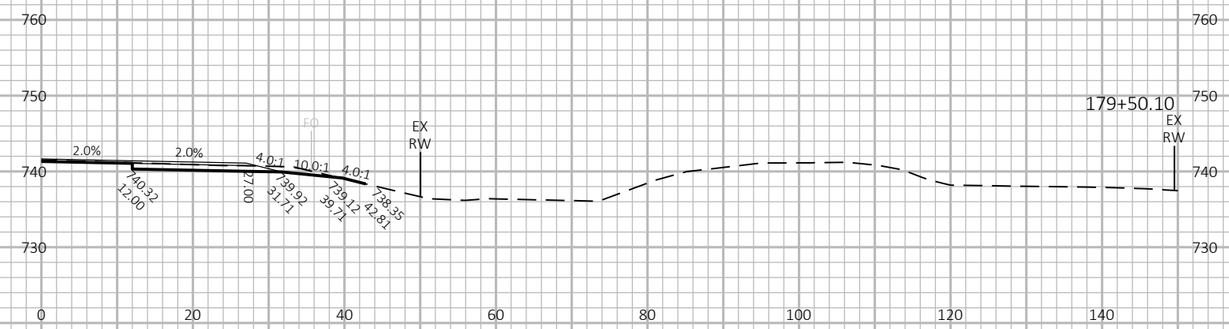
PRE_101

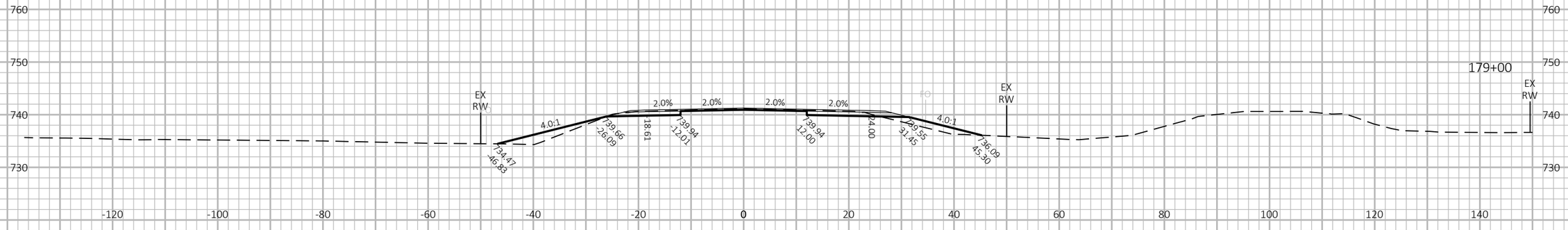


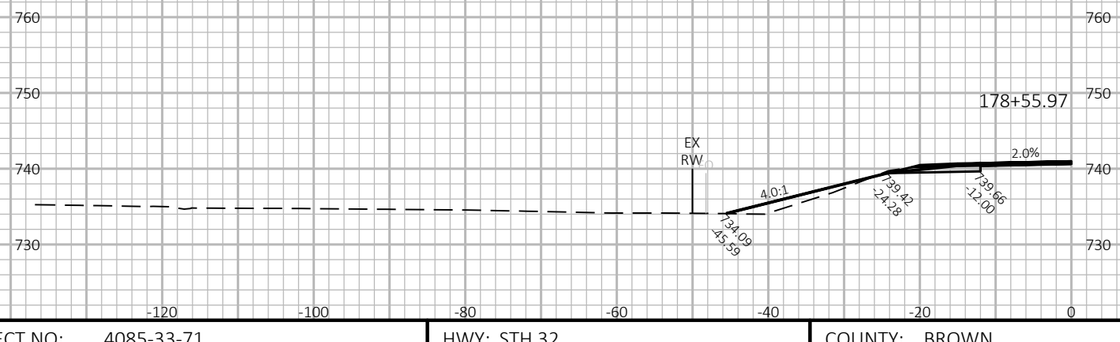
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET E

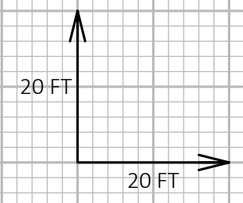
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (31)
PLOT DATE : 2/27/2019 3:48 PM
PLOT BY : LORENZ, KELSEY ANN
PLOT NAME :
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.
PRE_102
WISDOT/CADDS SHEET 49

9









9

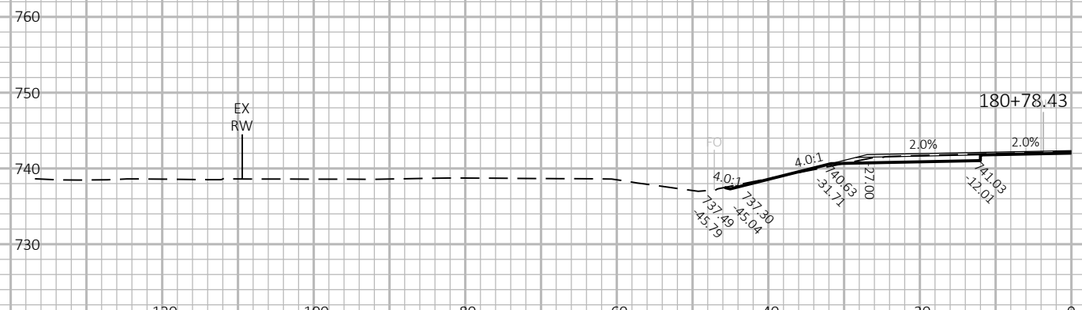
9

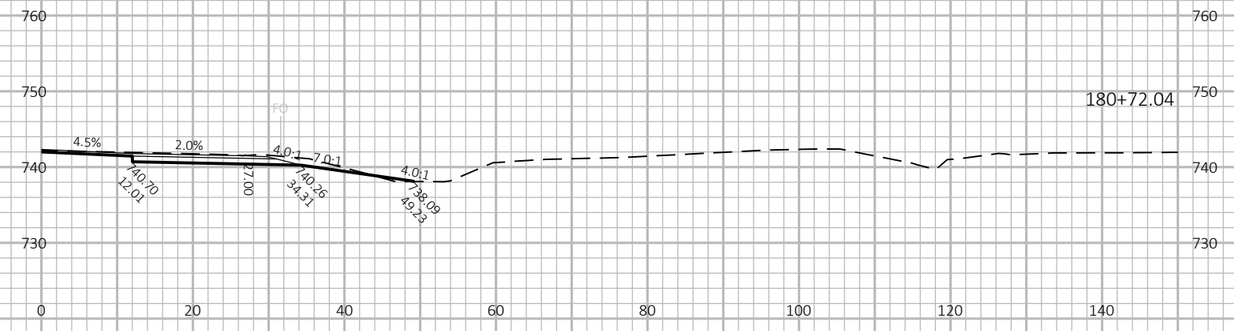
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

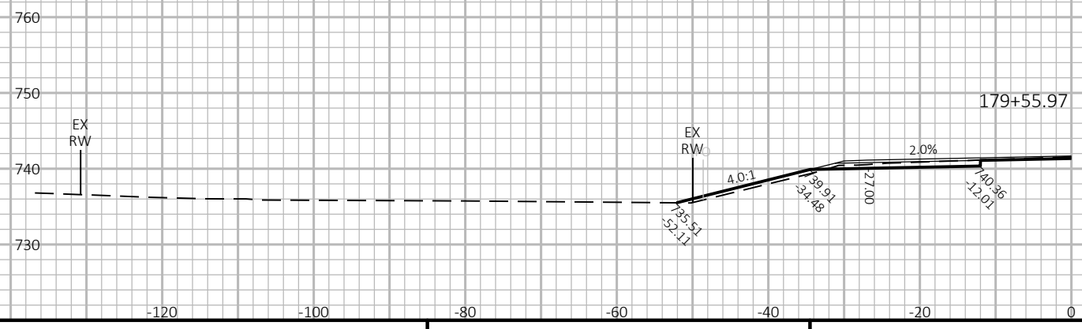
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (32)

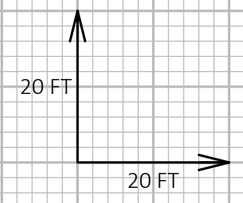
PLOT DATE : 2/27/2019 3:48 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_103









9

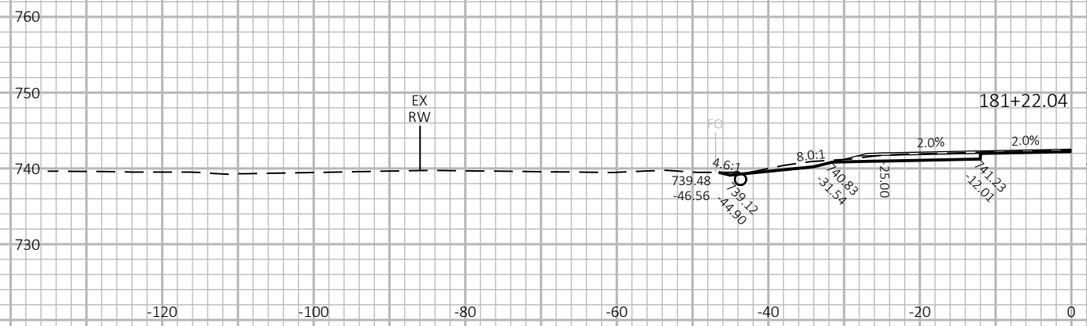
9

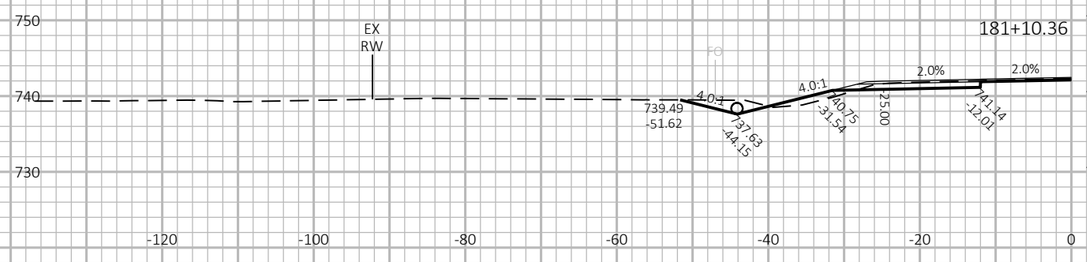
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (33)

PLOT DATE : 2/27/2019 3:48 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_104





9

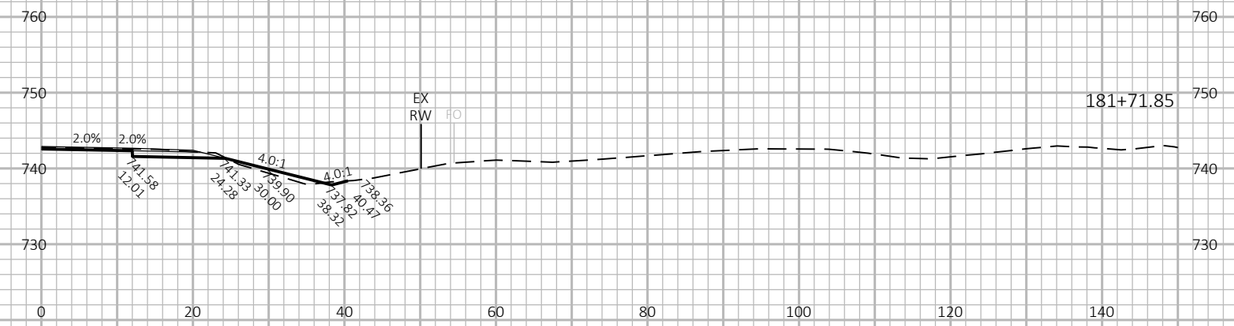
9

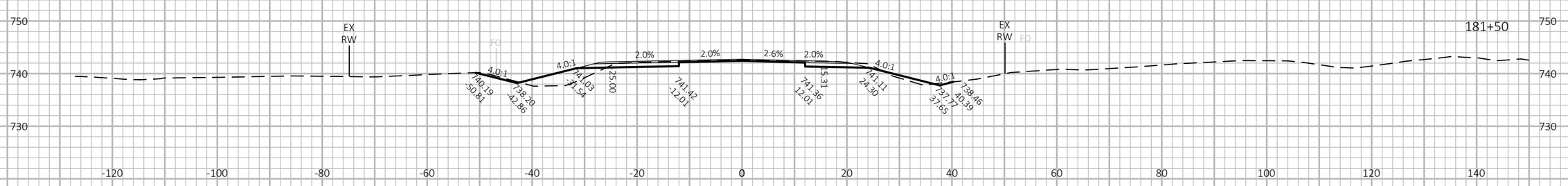
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

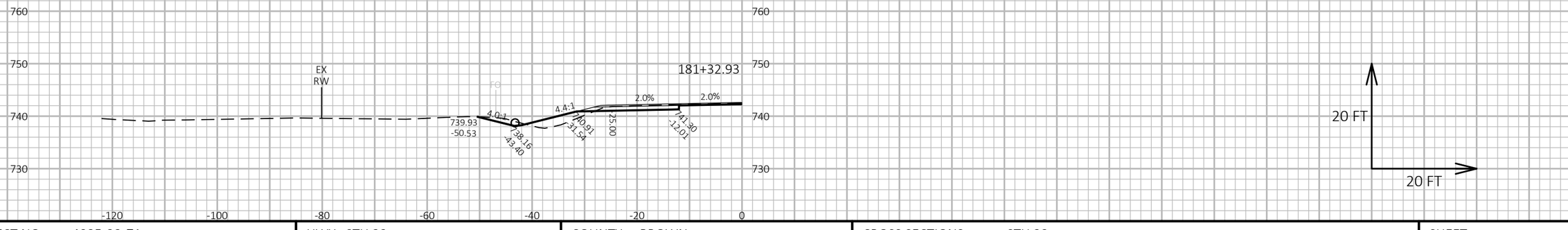
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (34)

PLOT DATE : 2/27/2019 3:49 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_105







9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (35)

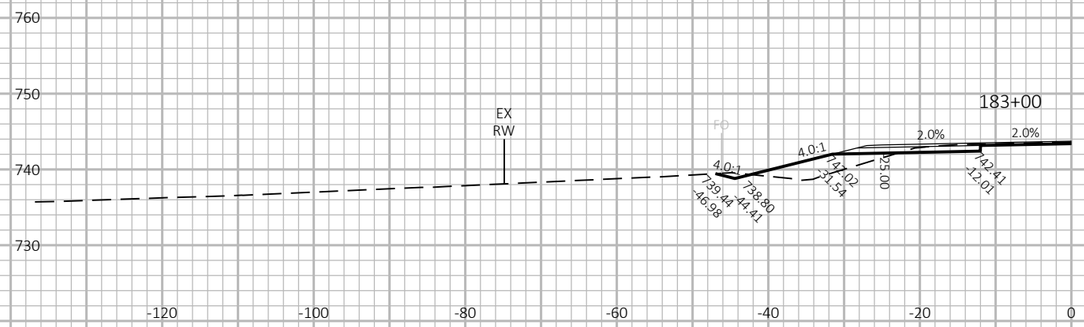
PLOT DATE : 2/27/2019 3:49 PM

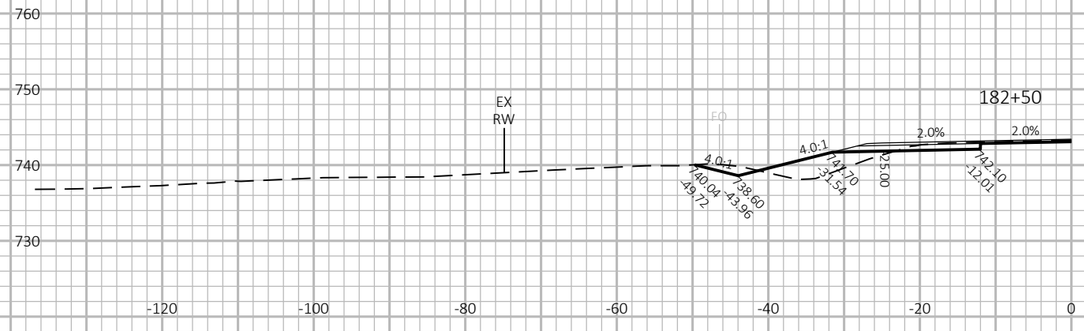
PLOT BY : LORENZ, KELSEY ANN

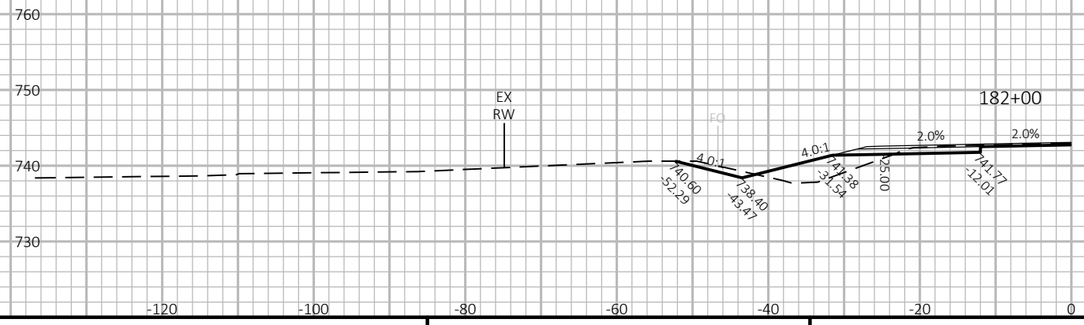
PLOT NAME :

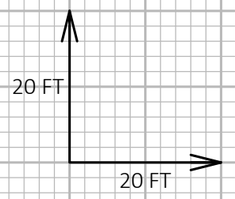
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_106









9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (36)

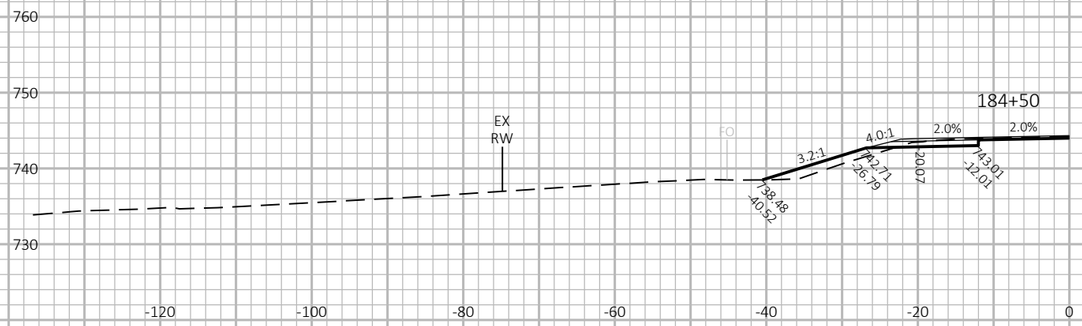
PLOT DATE : 2/27/2019 3:49 PM

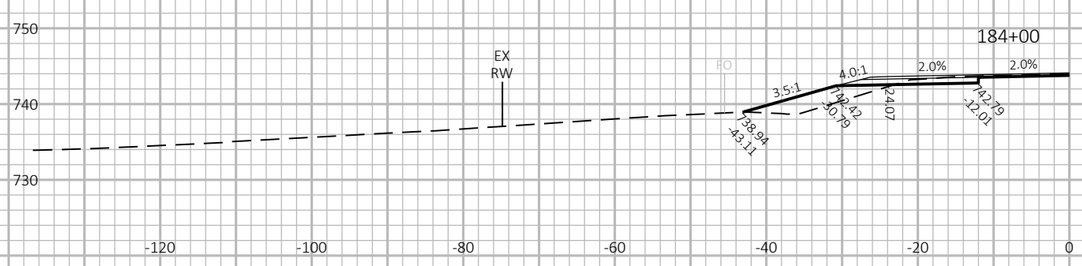
PLOT BY : LORENZ, KELSEY ANN

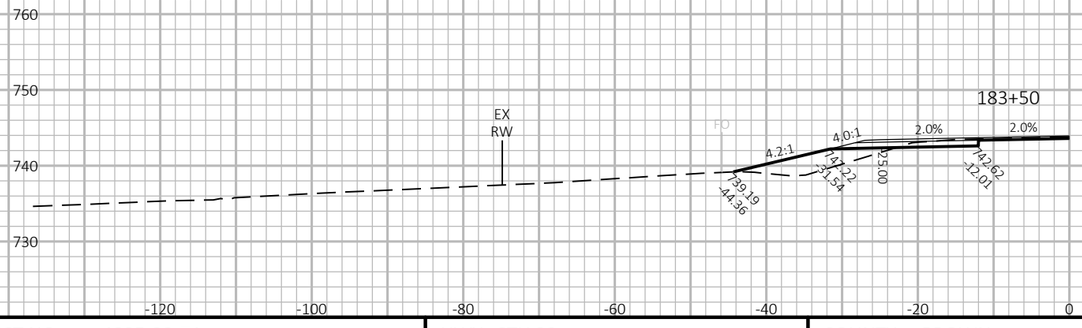
PLOT NAME :

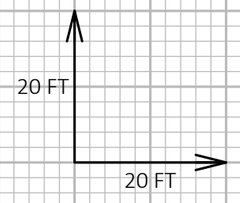
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_107









9

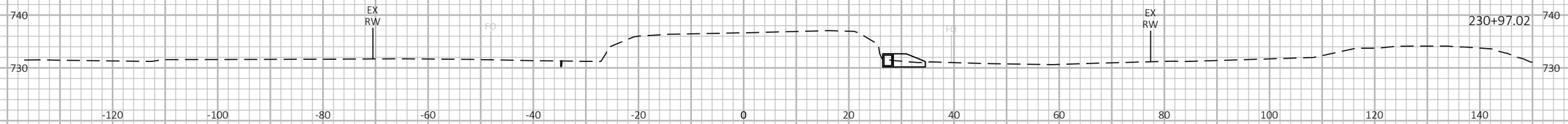
9

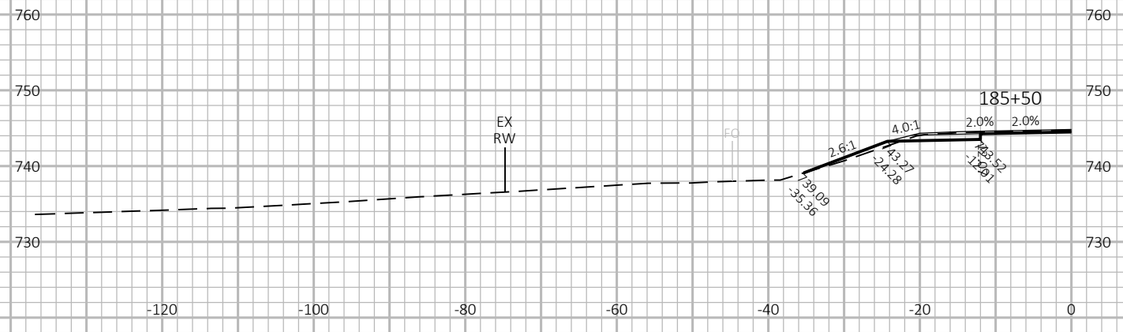
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

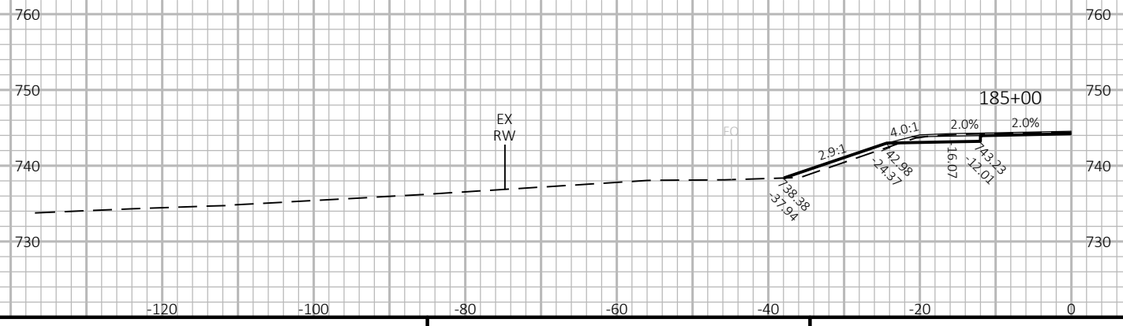
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (37)

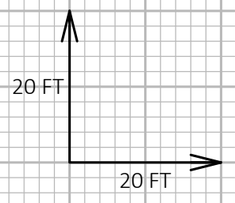
PLOT DATE : 2/27/2019 3:50 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_108









9

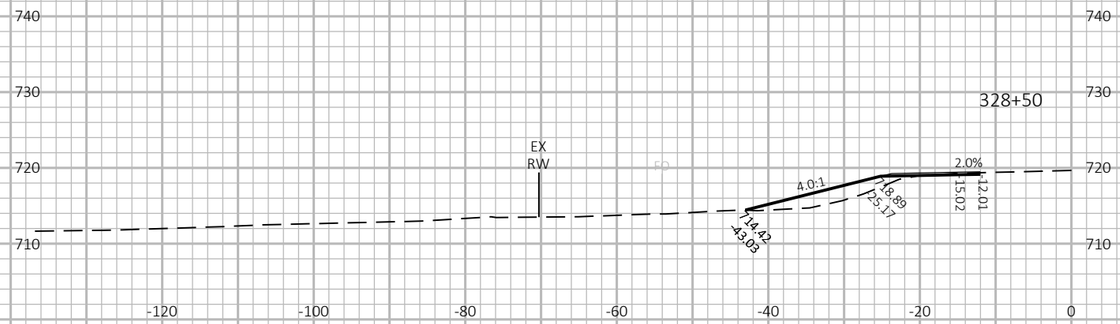
9

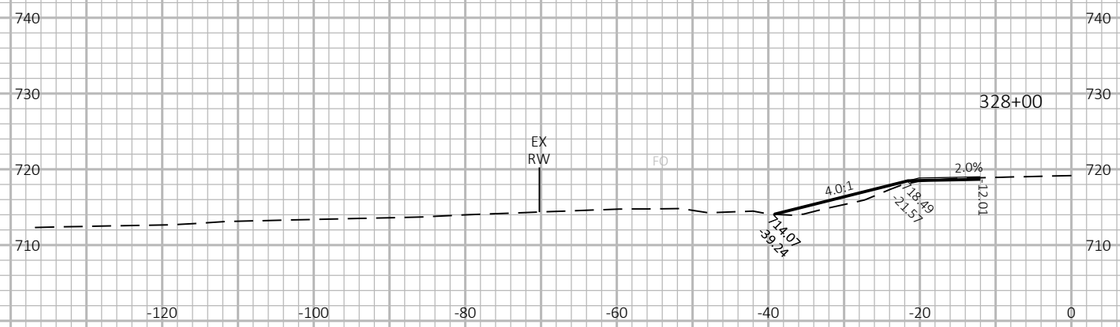
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

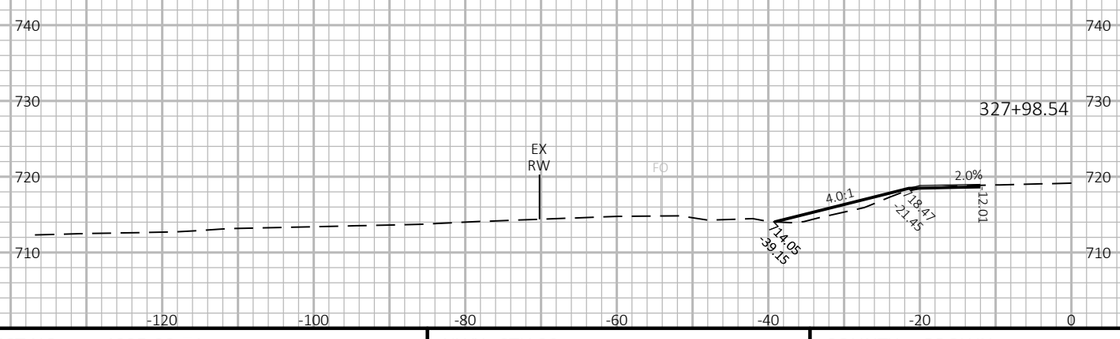
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (38)

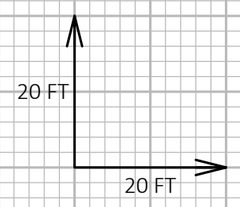
PLOT DATE : 2/27/2019 3:50 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_109









9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (40)

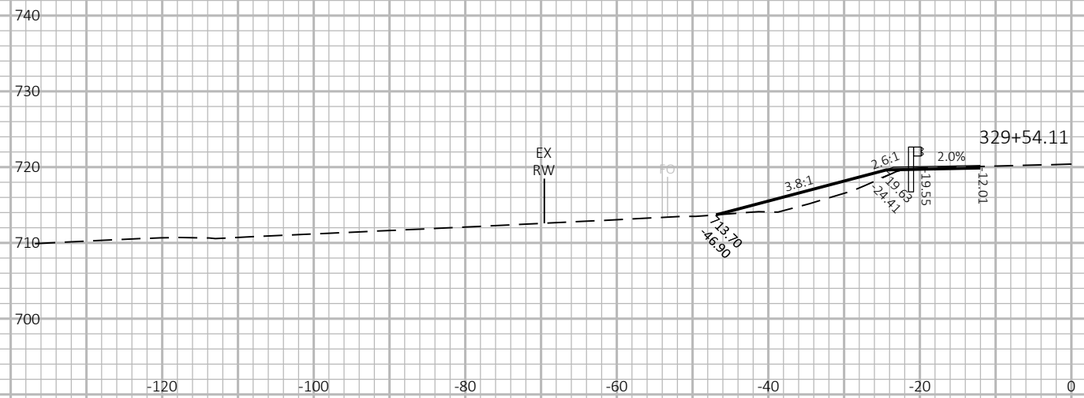
PLOT DATE : 2/27/2019 3:50 PM

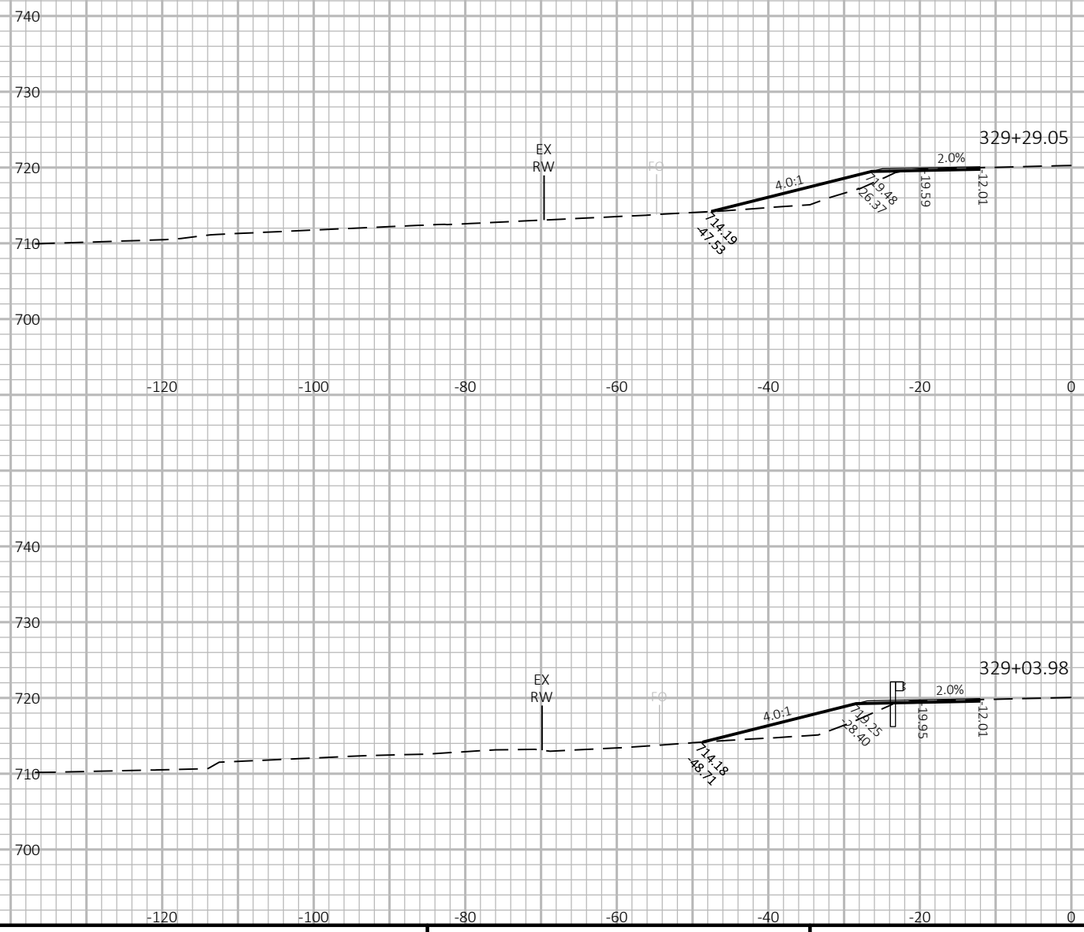
PLOT BY : LORENZ, KELSEY ANN

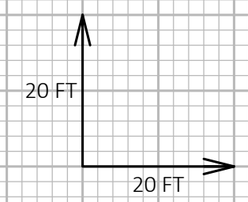
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_110







9

9

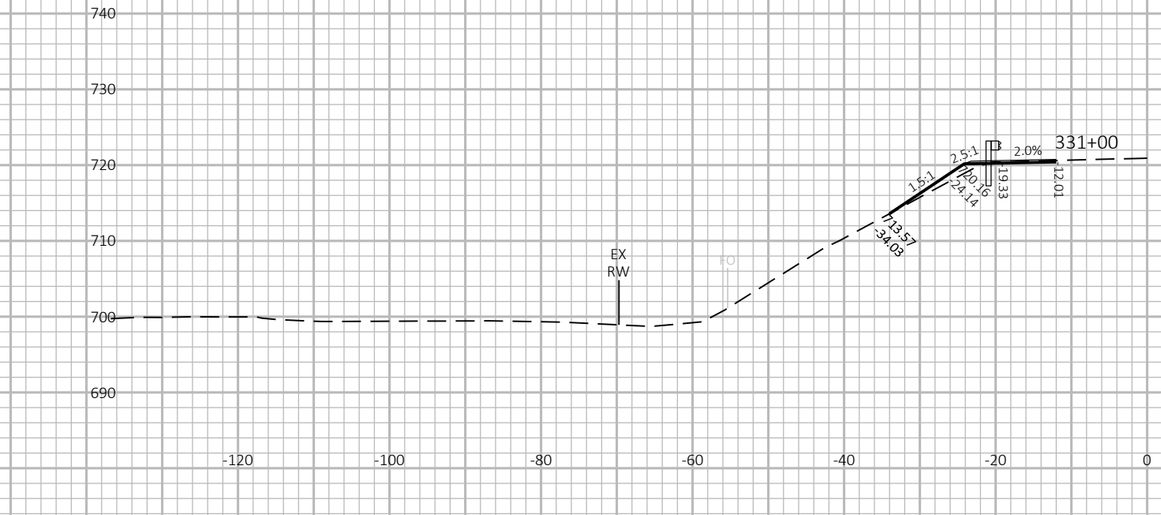
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

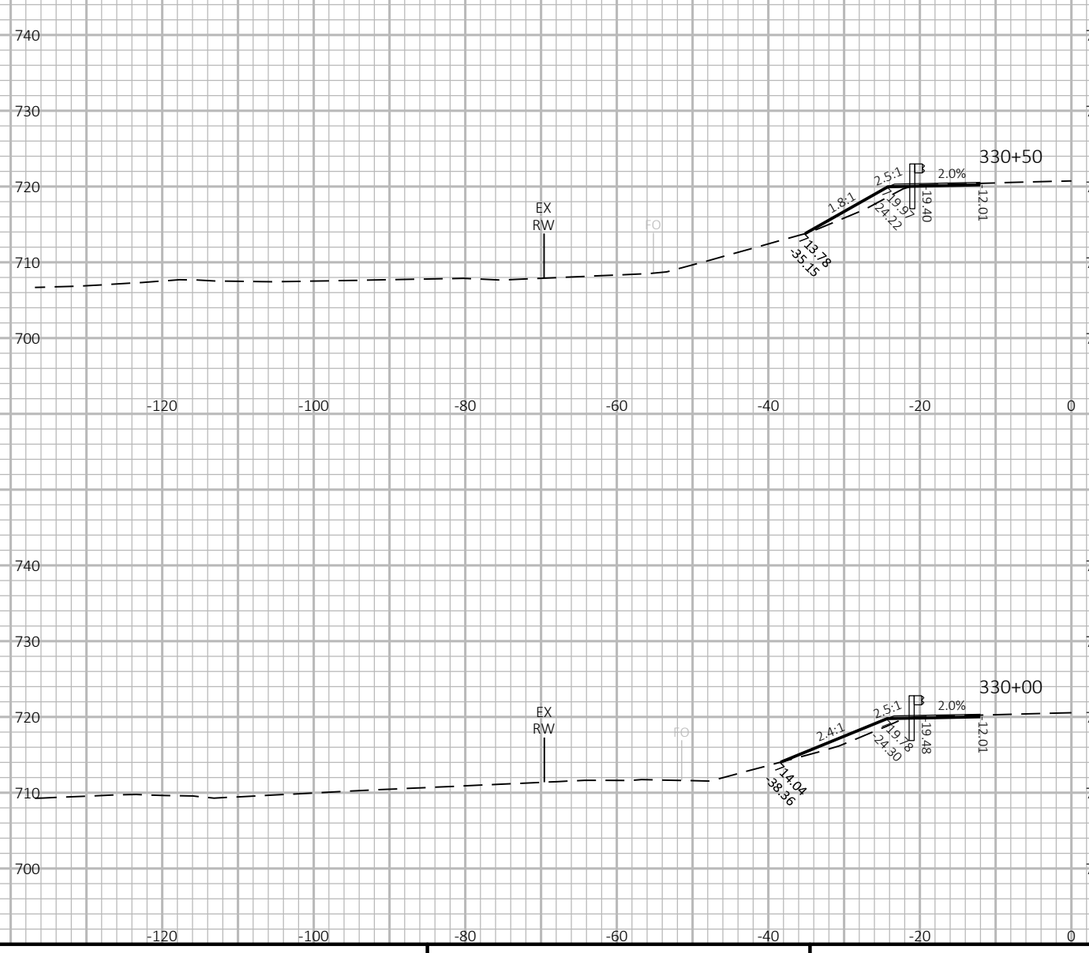
PRE_111

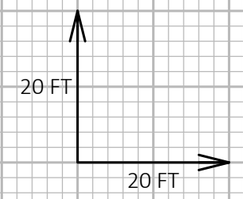
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (41)

PLOT DATE : 2/27/2019 3:51 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

WISDOT/CADDS SHEET 49







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9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (42)

PLOT DATE : 2/27/2019 3:51 PM

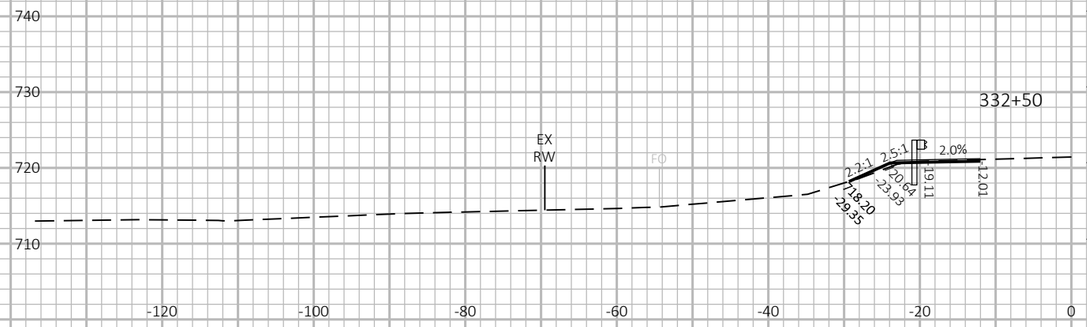
PLOT BY : LORENZ, KELSEY ANN

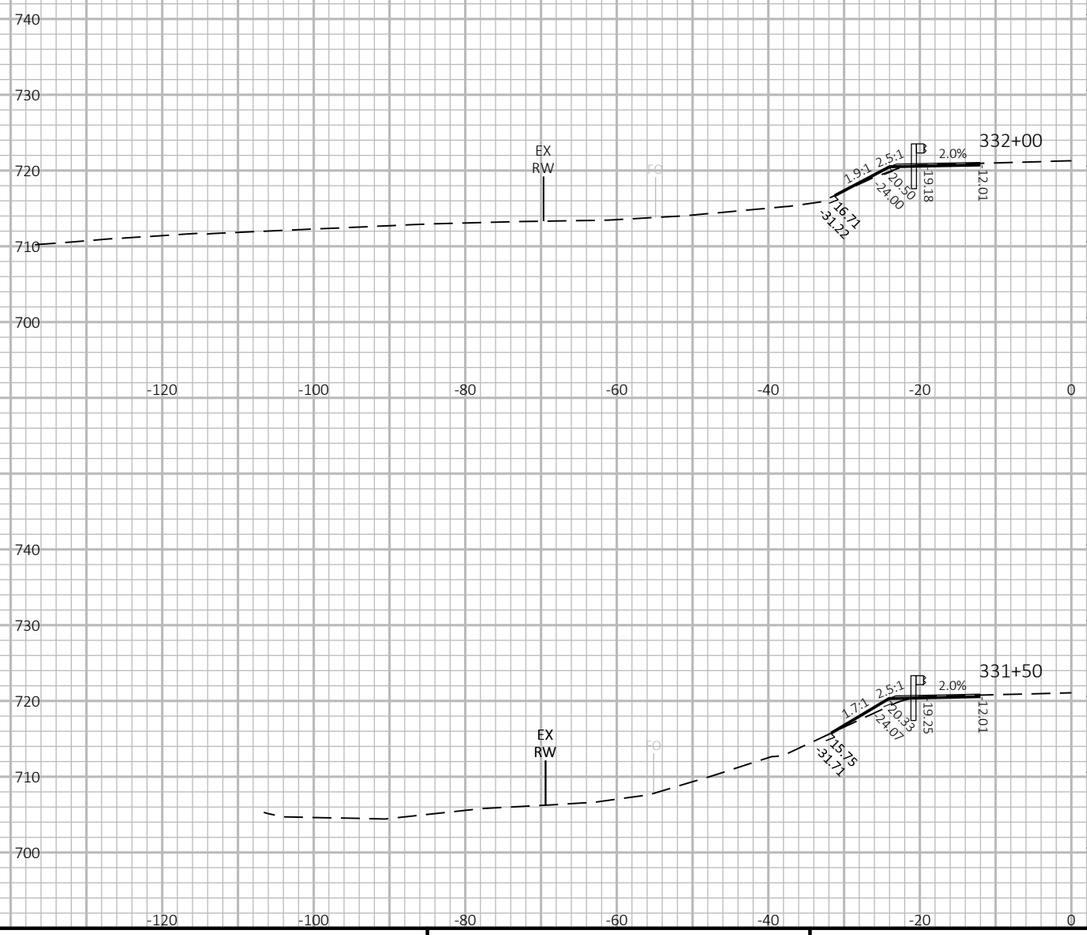
PLOT NAME :

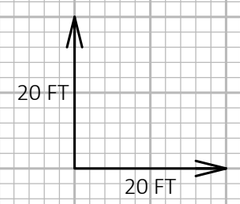
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_112

WISDOT/CADDS SHEET 49







9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (43)

PLOT DATE : 2/27/2019 3:51 PM

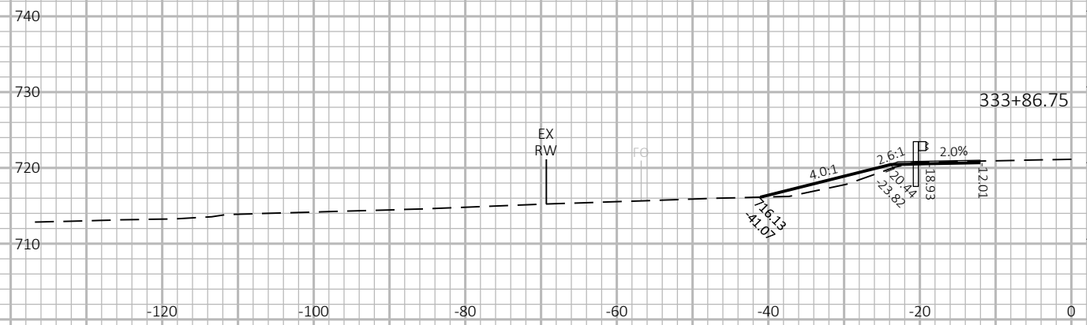
PLOT BY : LORENZ, KELSEY ANN

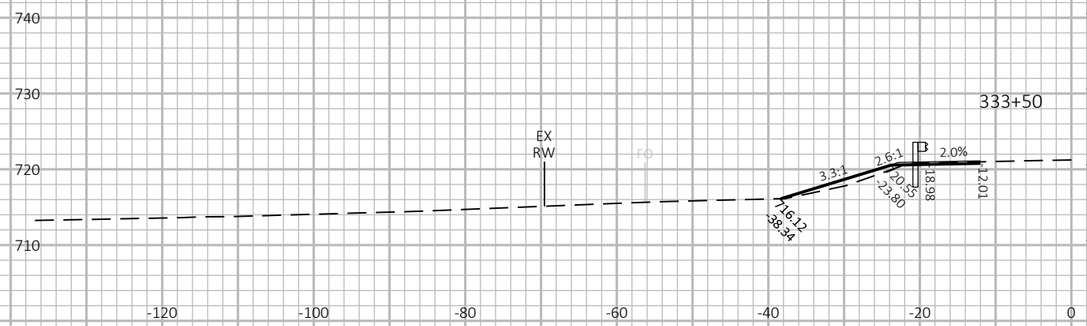
PLOT NAME :

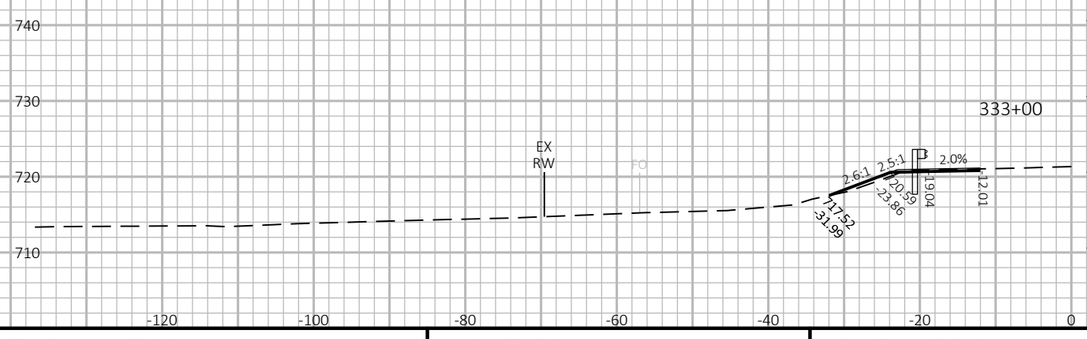
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

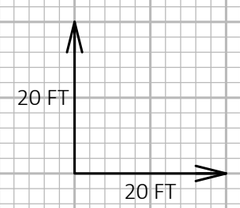
PRE_113

WISDOT/CADDS SHEET 49









9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (44)

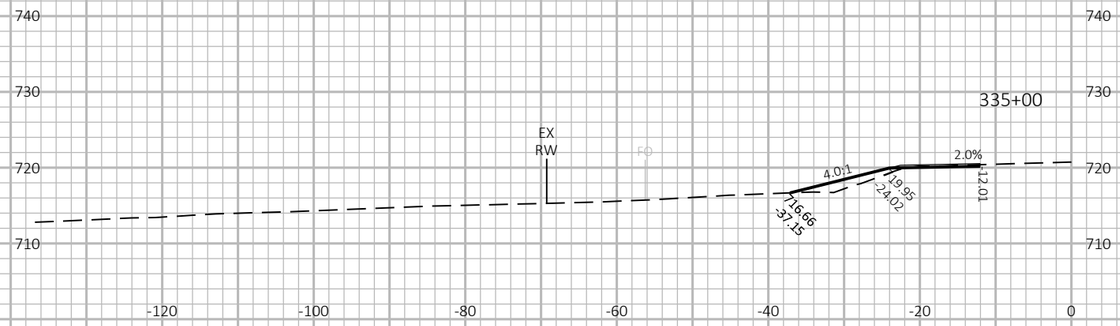
PLOT DATE : 2/27/2019 3:51 PM

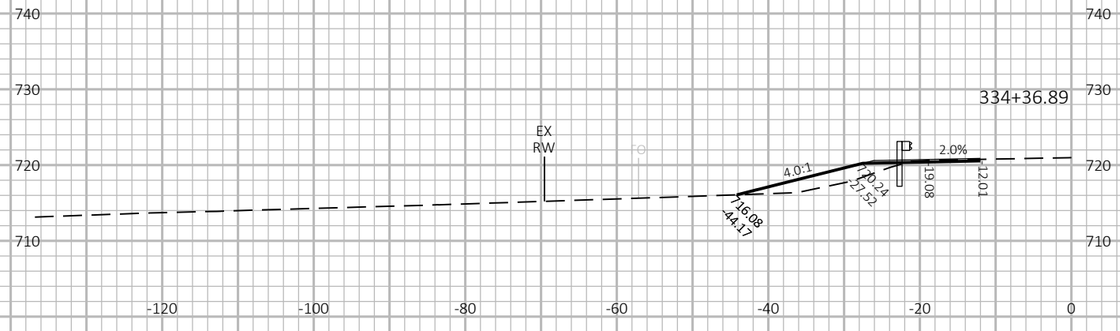
PLOT BY : LORENZ, KELSEY ANN

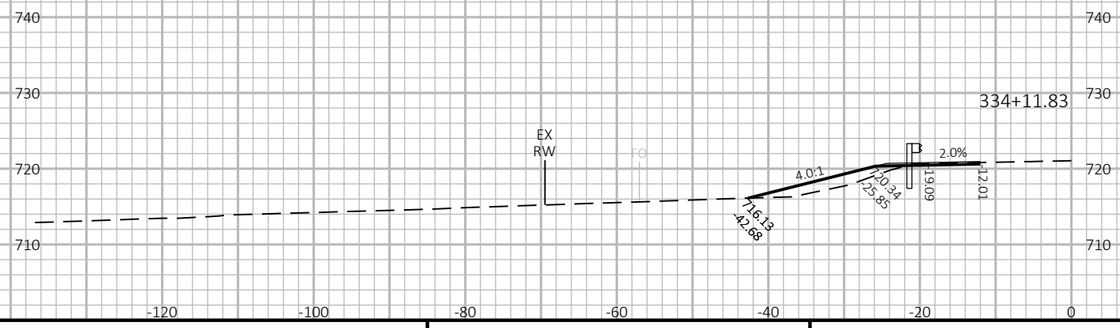
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_114







9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (45)

PLOT DATE : 2/27/2019 3:52 PM

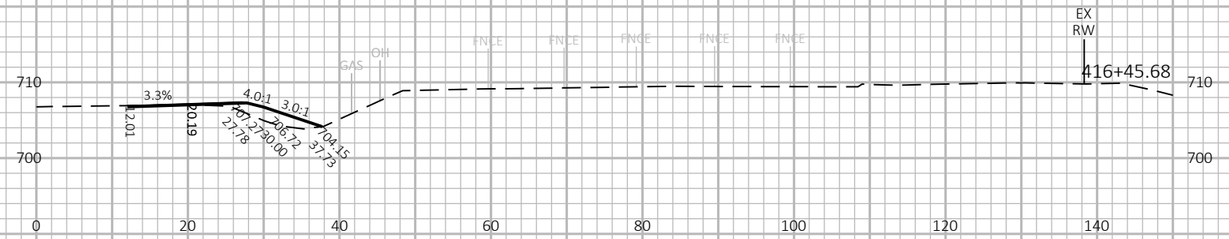
PLOT BY : LORENZ, KELSEY ANN

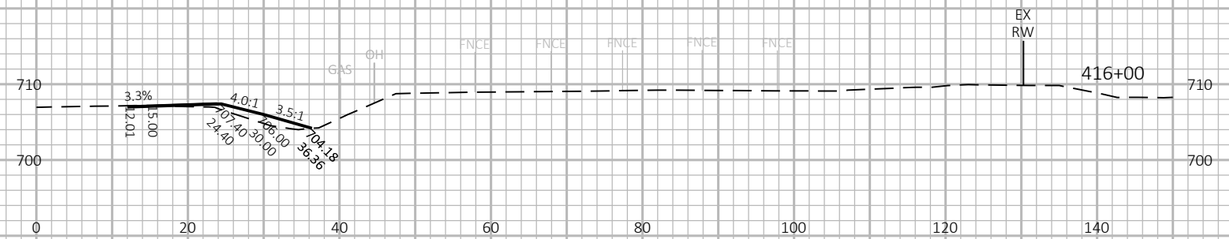
PLOT NAME :

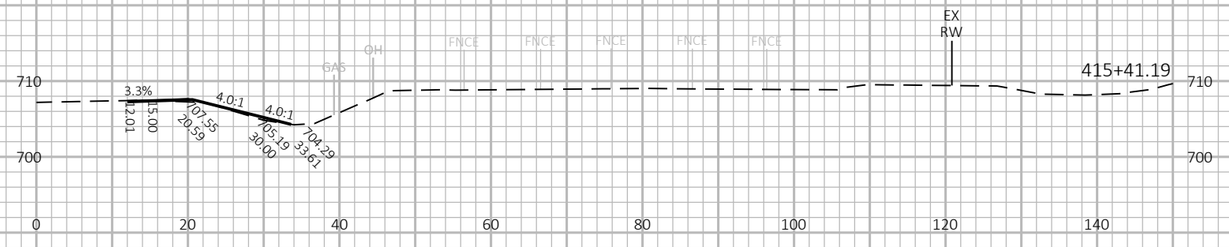
PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

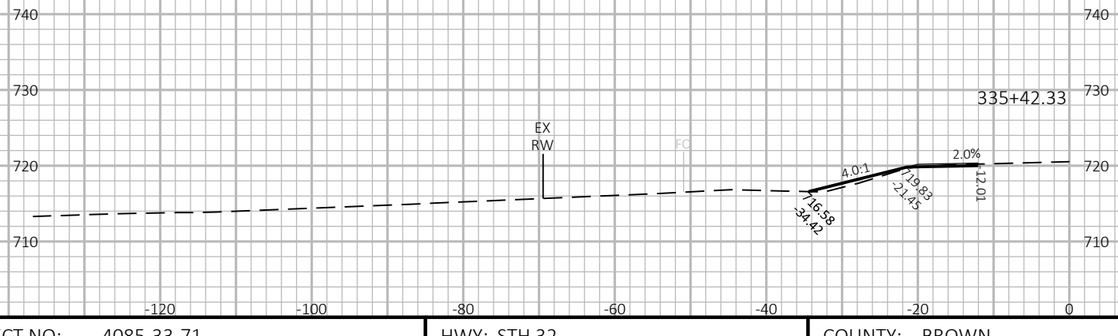
PRE_115

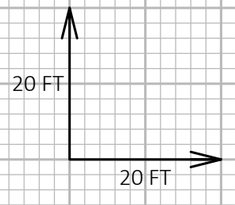
WISDOT/CADDS SHEET 49











9

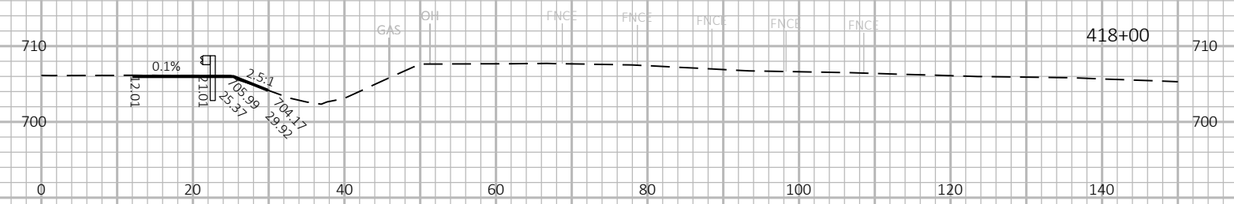
9

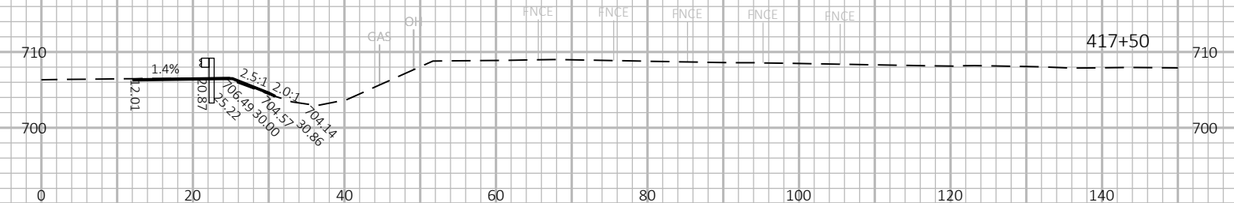
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

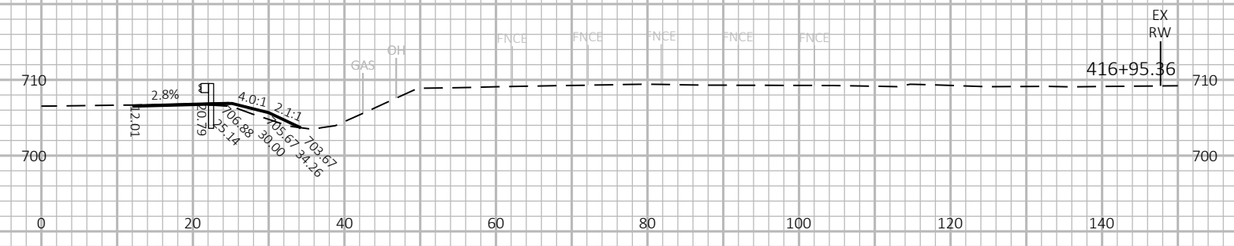
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (46)

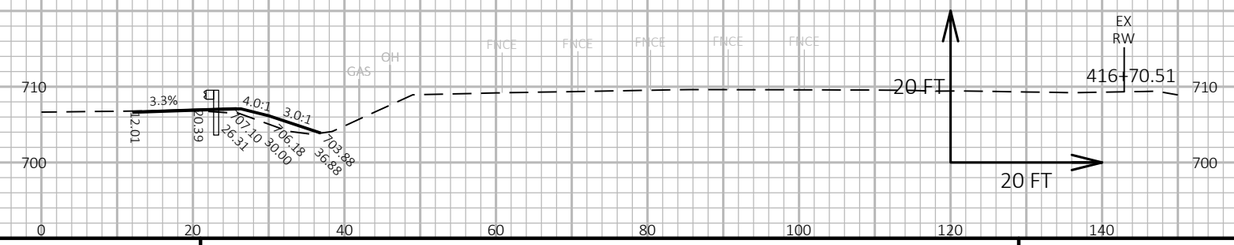
PLOT DATE : 2/27/2019 3:52 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_116









9

9

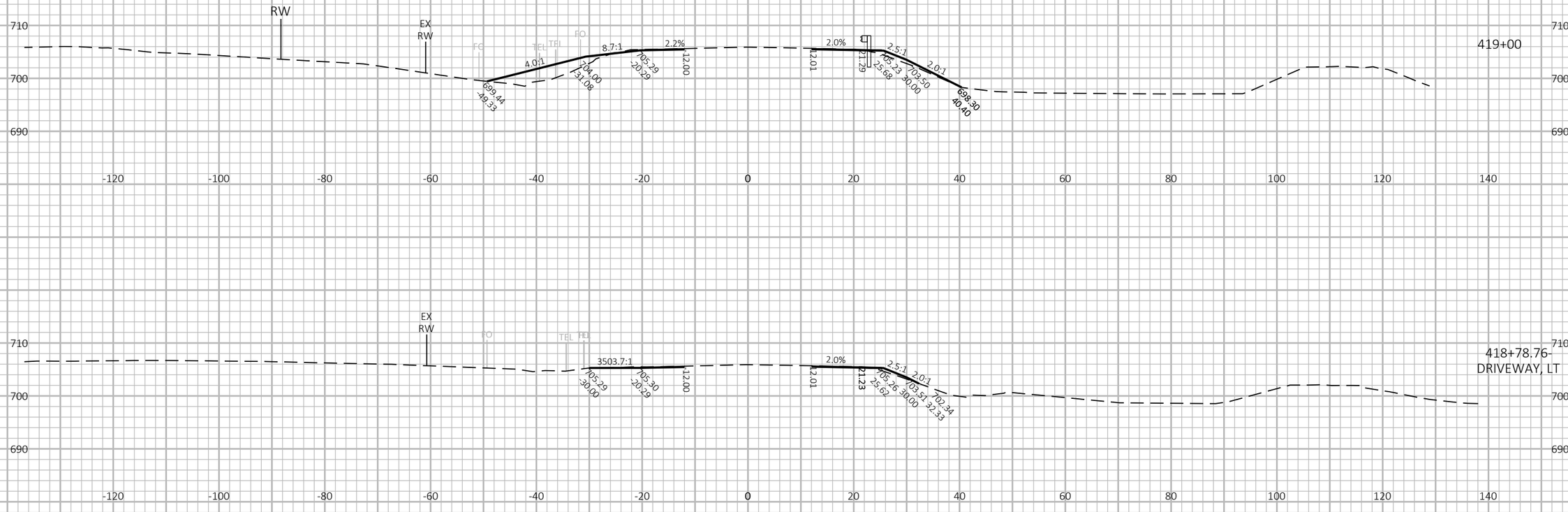
PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (48)

PLOT DATE : 2/27/2019 3:52 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_117

WISDOT/CADDS SHEET 49



9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

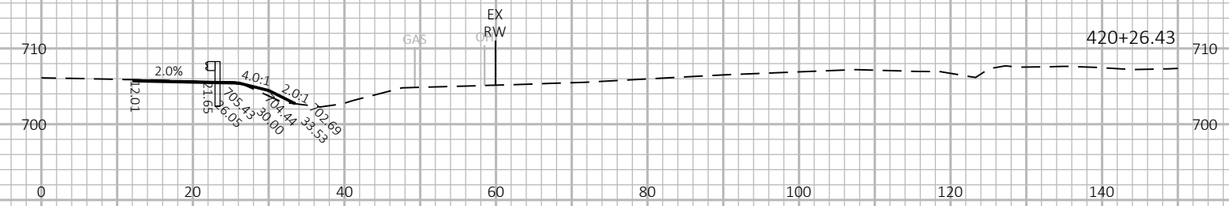
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (49)

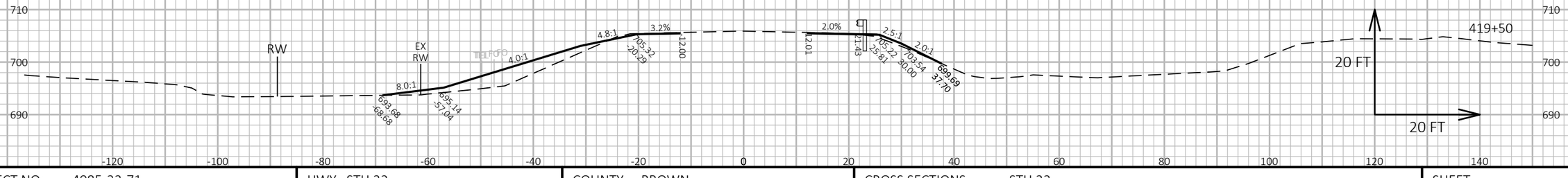
PLOT DATE : 2/27/2019 3:52 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_118

WISDOT/CADDS SHEET 49

9





9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (50)

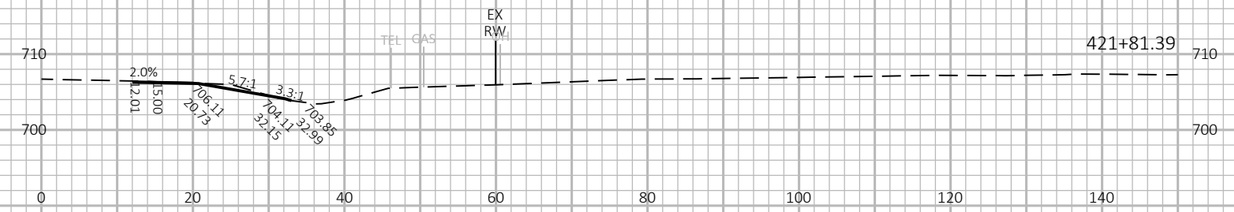
PLOT DATE : 2/27/2019 3:53 PM

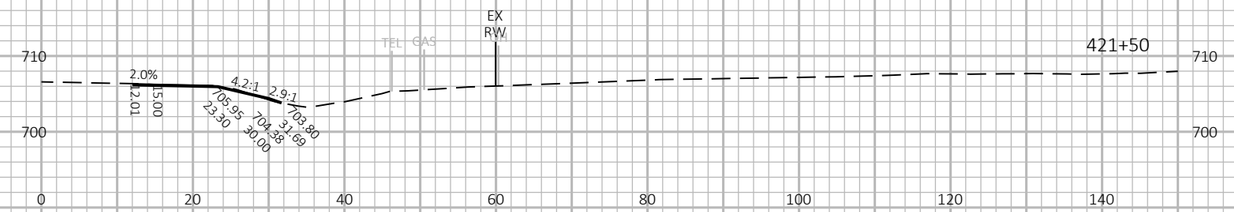
PLOT BY : LORENZ, KELSEY ANN

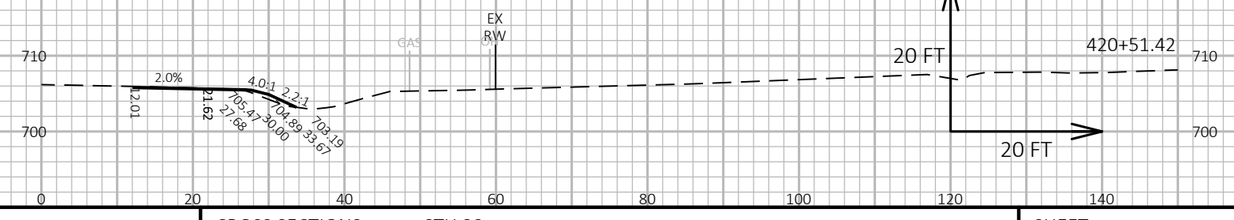
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_119







9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: STH 32	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (51)

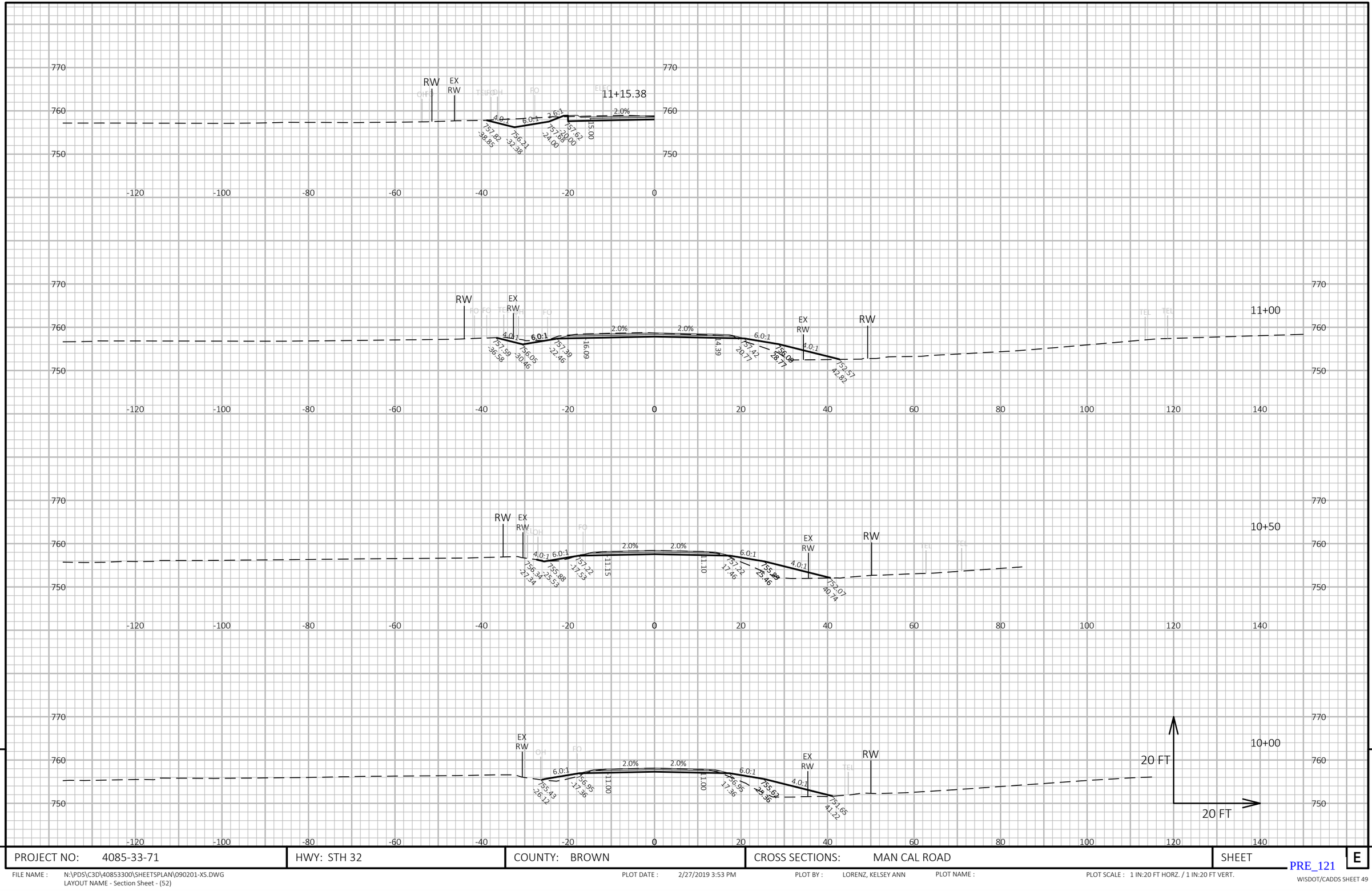
PLOT DATE : 2/27/2019 3:53 PM

PLOT BY : LORENZ, KELSEY ANN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_120



9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: MAN CAL ROAD	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (52)

PLOT DATE : 2/27/2019 3:53 PM

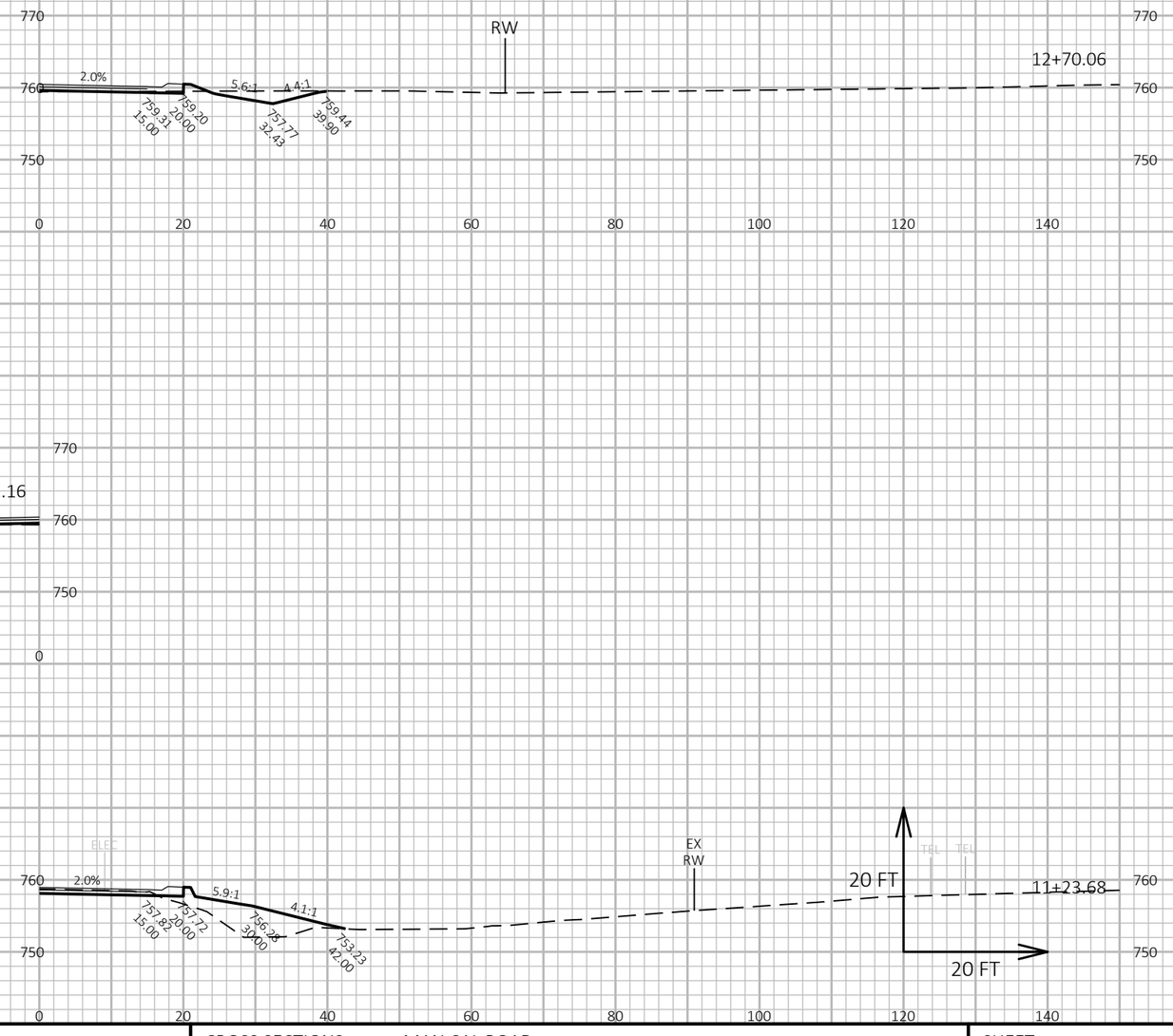
PLOT BY : LORENZ, KELSEY ANN

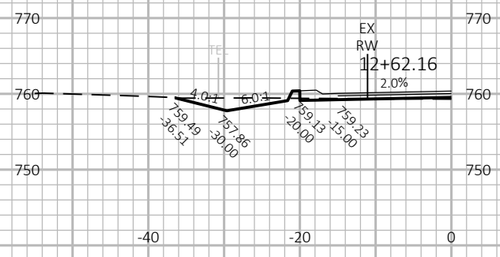
PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_121

WISDOT/CADDS SHEET 49





9

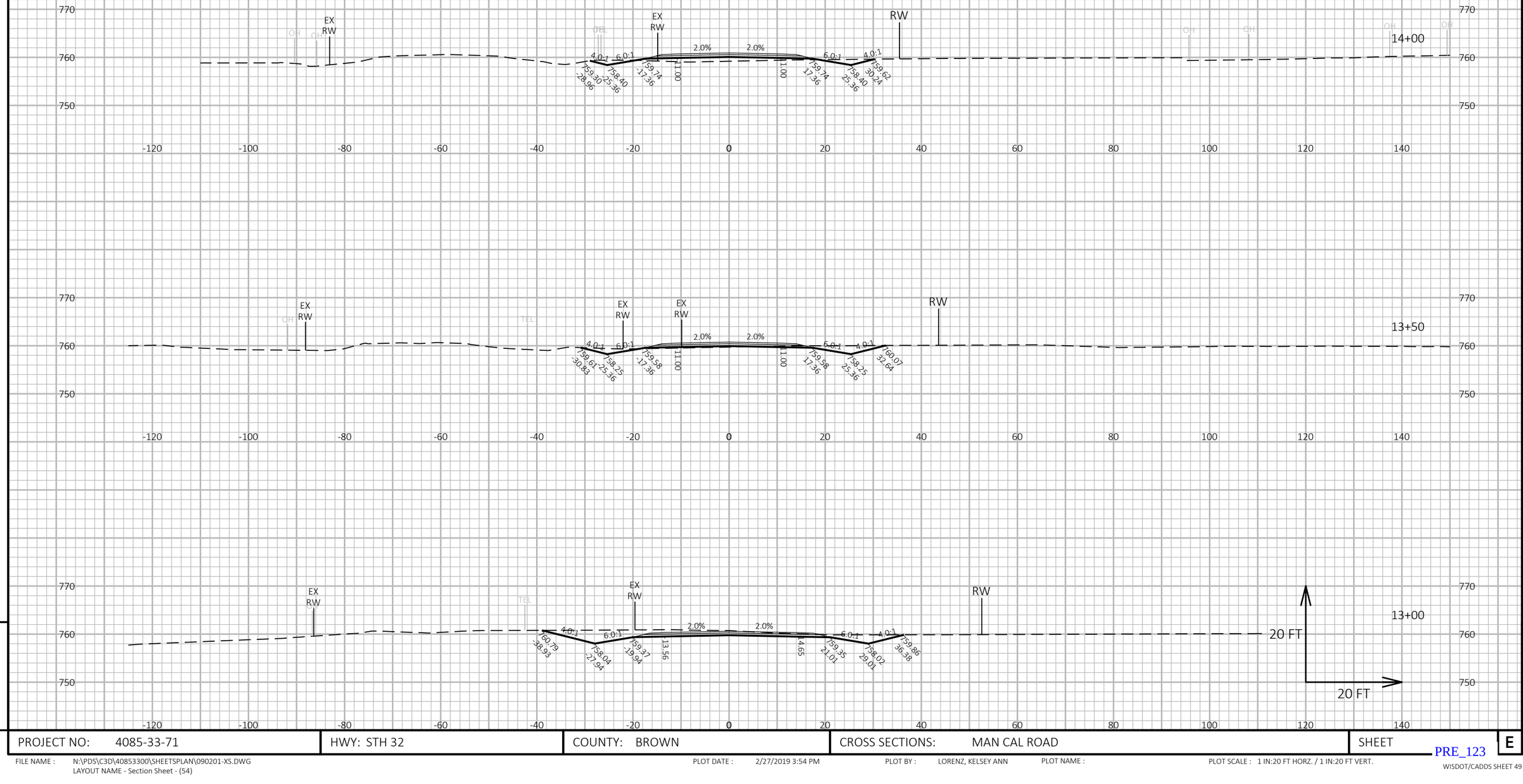
9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: MAN CAL ROAD	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (53)

PLOT DATE : 2/27/2019 3:54 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_122



9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: MAN CAL ROAD	SHEET E

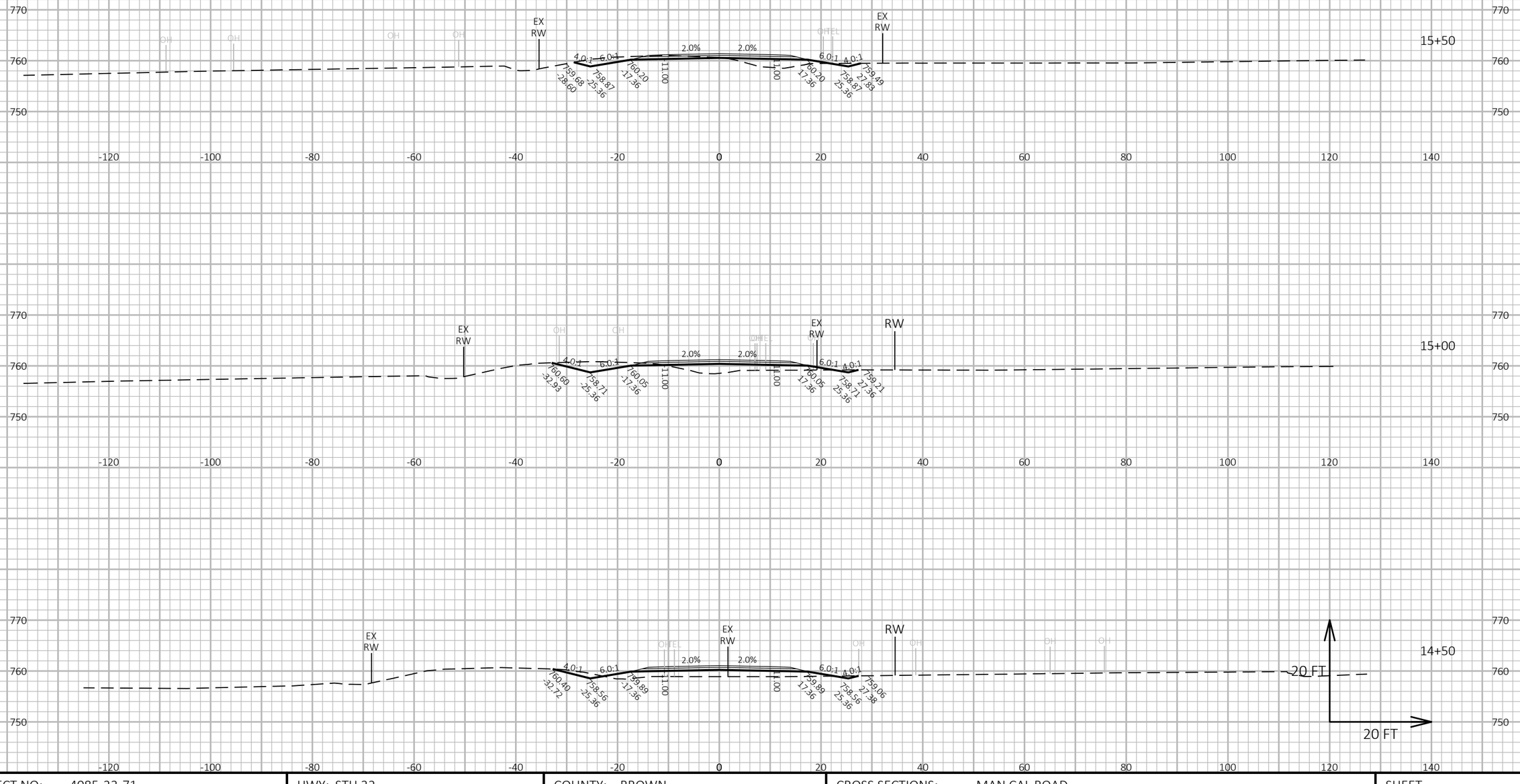
FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (54)

PLOT DATE : 2/27/2019 3:54 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_123

WISDOT/CADDS SHEET 49

9



9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: MAN CAL ROAD	SHEET E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (55)

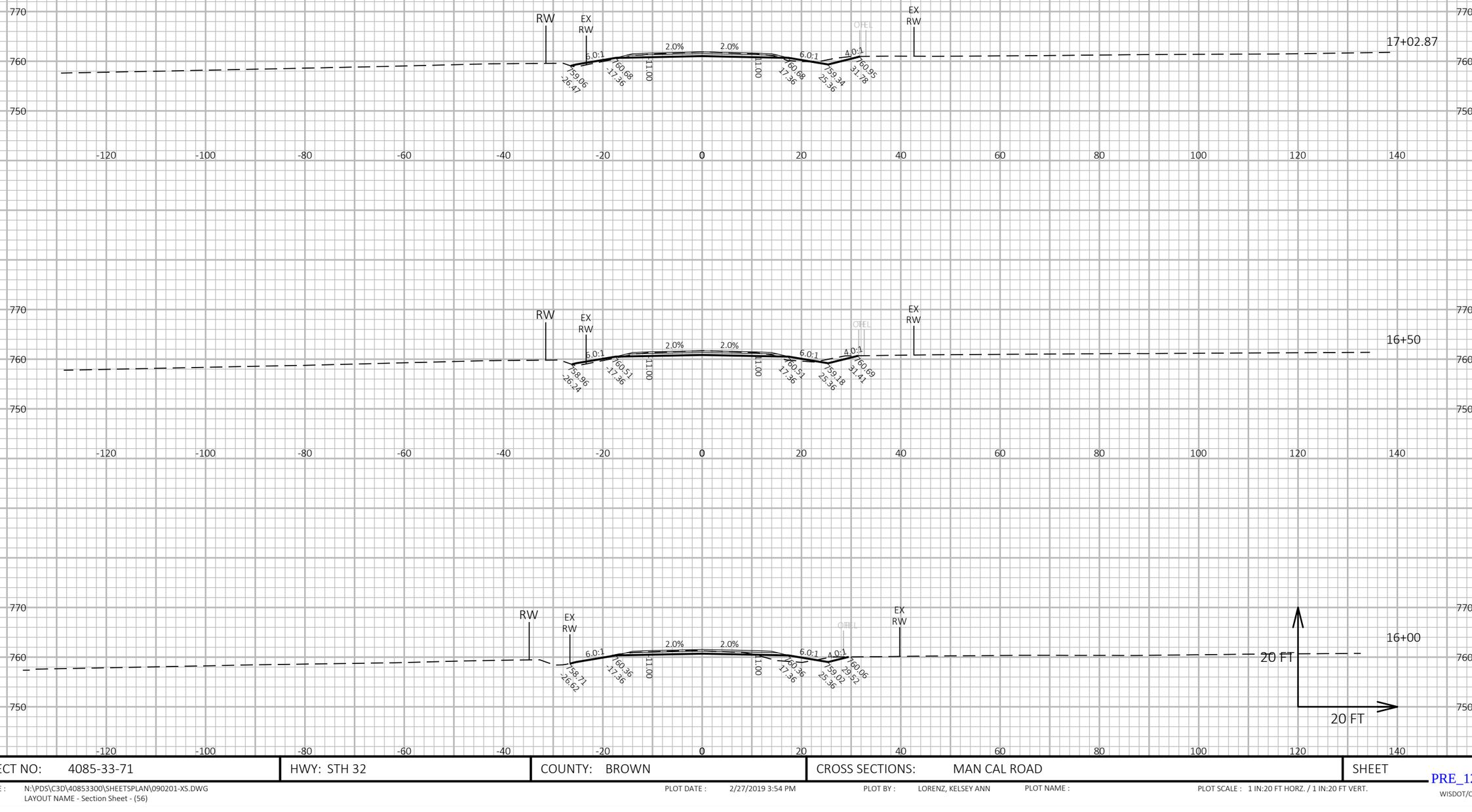
PLOT DATE : 2/27/2019 3:54 PM

PLOT BY : LORENZ, KELSEY ANN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_124



9

9

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	CROSS SECTIONS: MAN CAL ROAD	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Section Sheet - (56)

PLOT DATE : 2/27/2019 3:54 PM

PLOT BY : LORENZ, KELSEY ANN

PLOT NAME :

PLOT SCALE : 1 IN:20 FT HORZ. / 1 IN:20 FT VERT.

PRE_125

WISCONSIN DEPARTMENT OF TRANSPORTATION

EPlans Preliminary Sheet Numbering Tool

This sheet: ftp://ftp.dot.state.wi.us/transp/roads/eplans/prelim_sheet_numbers.pdf

Notes

- Acrobat 5 or higher is required to use this tool.
- The Bureau of Highway Construction places sheet numbers in the final plan.
- This sheet is for placing preliminary sheet numbers with a “PRE_" prefix.
- If a plan contains multiple projects, number each plan individually.
- Leave this sheet in the plan.

TO ADD PRELIMINARY SHEET NUMBERS

1. Insert this sheet at the end of the plan

a. With the plan open in Acrobat, select Document > Insert Pages.
b. In the Select File to Insert dialog box, select this file (prelim_sheet_numbers.pdf)
c. In the Insert dialog box, choose After for Location and Last page for Page.
d. Click OK.

2. Click the Place Preliminary Sheet Numbers button

a. Go to the last sheet of the plan.
b. Click the Place Preliminary Sheet Numbers button once.
(The preliminary sheet number appears in the bottom right corner of the sheets.
The number should match te page number in the Acrobat Status bar).

3. Re-Save the PDF

a. Select File > Save As and save the PDF.

Place Preliminary Sheet Numbers

TO REMOVE PRELIMINARY SHEET NUMBERS

Remove

Exhibit 4

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 4085-33-71, Hilbert – Green Bay, South County Line – Deuster Street, STH 32, Brown County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2019 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.

100-005 (20181119)

2. Scope of Work.

The work under this contract shall consist of milling, HMA pavement, culvert replacements, beam guard replacements, structure work, concrete curb and gutter, pavement marking, centerline rumble strips and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

Begin work within ten calendar days after the engineer issues a written notice to do so.

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the department's scheduled resources.

Migratory Birds

Swallow and other migratory birds' nests have been observed on or under the existing bridge. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act.

The nesting season for swallows and other birds is usually between May 1 and August 30. Either prevent active nests from becoming established or apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds or clearing nests from all structures before the nests become active in early spring. As a last resort, prevent birds from nesting by installing a suitable netting device on the remaining structure prior to nesting activity. Include the cost for preventing nesting in the cost of Removing Old Structure Over Waterway.

0074 (20090901)

Northern Long-eared Bat *(Myotis septentrionalis)*

Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts have been identified within 150 feet of the project limits. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

To avoid adverse impacts upon the NLEBs, no Clearing is allowed between June 1 and July 31, both dates inclusive.

If the required Clearing is not completed by May 31, the department will suspend all clearing and associated work directly impacted by Clearing. The department will issue a notice to proceed with Clearing and associated work directly impacted by clearing after consulting with the United States Fish and Wildlife Service (USFWS).

Submit a schedule and description of Clearing operations with the ECIP 14 days prior to any Clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of Clearing operations, and list those additional measures in the ECIP.

4. Traffic

Portable Changeable Message Signs - Message Prior Approval

After coordinating with department construction field staff, notify the Northeast Region Traffic Section at 920-366-8033 (secondary contact number is 920-360-3107) 3 business days before deploying or changing a message on a PCMS to obtain approval of the proposed message. The Northeast Region Traffic Unit will review the proposed message and either approve the message or make necessary changes.

PCMS boards must be deployed 7 days before the closure of STH 32 and STH 96.

ner-643-035 (20171213)

Wisconsin Lane Closure System Advance Notification

Provide the following advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16')	**MINIMUM NOTIFICATION**
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥16')	**MINIMUM NOTIFICATION**
Lane and shoulder closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly project meetings in order to manage closures nearing their completion date.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 32 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, May 28 to 6:00 AM Tuesday, June 1 for Memorial Day;
- From noon Friday, July 2 to 6:00 AM Tuesday, July 6 for Independence Day;
- From noon Friday, September 3 to 6:00 AM Monday, September 6 for Labor Day;
- From 5 hours prior to start to 5 hours after completion of home Packer games.

stp-107-005 (20181119)

6. Environmental Protection, By-Pass Pumping

Add the following to standard spec 107.18:

If by-pass pumping is required, the means and methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for each location it is required. The submittal shall include how the intake will be managed to not cause an increase in the background level turbidity during pumping; equipment pumping rate capabilities; discharge energy dissipation; and erosion controls. For by-pass pumping that will extend beyond one working day, the submittal should also

include how the work zone will be managed and protected should the pump fail; be shut down due to unacceptable water quality; or storm water flows exceed the pumping rate of equipment. After setup of the approved by-pass pumping operation, the contractor shall demonstrate that the means and methods will pump the water at an acceptable water quality before starting work that necessitates the by-pass pumping. The cost of all work and materials associated with by-pass pumping is incidental to the bid items the work is associated with. Erosion control devices beyond the discharge energy dissipation point will be paid for at the contract unit prices for the items that are included in the plan.

ner-107-035 (20180212)

7. Environmental Protection, Dewatering

Add the following to standard spec 107.18:

If dewatering is required, treat the water to remove suspended sediments by filtration, settlement or other appropriate best management practice before discharge. The means and methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for dewatering at each location it is required. The submittal shall also include the details of how the intake will be managed to not cause an increase in the background level turbidity before treatment and any additional erosion controls necessary to prevent sediments from reaching the project limits or wetlands and waterways. Guidance on dewatering can be found on the Wisconsin Department of Natural Resources website located in the Storm Water Construction Technical Standards, Dewatering Code #1061, “Dewatering”. This document can be found at the WisDNR website:

http://dnr.wi.gov/topic/stormwater/standards/const_standards.html

The cost of all work and materials associated with water treatment and/or dewatering is incidental to the bid items the work is associated.

ner-107-040 (20180212)

8. Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Mike Helmrick at 920-492-7738.

stp-107-054 (20080901)

9. Information to Bidders, WPDES General Construction Storm Water Discharge Permit.

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting Andy Fulcer at 920-362-6126. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

10. Utilities.

This contract comes under the provision of Administrative Rule Trans 220.

stp-107-065 (20080501)

11. Coordination with Businesses

The contractor will arrange and conduct a meeting between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting 7 days prior to the start of work under this contract and monthly thereafter. The contractor shall notify all parties in writing a minimum of 10 days before the first meeting being held.

ner-105-005 (20180212)

12. Grading, Shaping and Finishing Intersection Man Cal Road, Item 205.9015.S.

A Description

This special provision describes excavating, filling, grading, shaping, compacting, and finishing as necessary to construct the intersection as the plans show.

B (Vacant)

C Construction

Dispose of all surplus and unsuitable material as specified in standard spec 205.3.12.

D Measurement

The department will measure Grading, Shaping, and Finishing Intersection (Location) as a single complete unit of work.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
205.9015.S	Grading, Shaping, and Finishing Intersection Man Cal Road	LS

Payment is full compensation for all excavating, grading, shaping, and compacting; and for providing and placing fill, topsoil, fertilizer, seed, and mulch.

The base course and surfacing items will be measured and paid for under other contract bid items.

stp-205-015 (20060512)

13. Grading, Shaping and Finishing Intersection Hill Road, Item 205.9015.S.

A Description

This special provision describes excavating, filling, grading, shaping, compacting, and finishing as necessary to construct the intersection as the plans show.

B (Vacant)

C Construction

Dispose of all surplus and unsuitable material as specified in standard spec 205.3.12.

D Measurement

The department will measure Grading, Shaping, and Finishing Intersection (Location) as a single complete unit of work.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
205.9015.S	Grading, Shaping, and Finishing Intersection Hill Road	LS

Payment is full compensation for all excavating, grading, shaping, and compacting; and for providing and placing fill, topsoil, fertilizer, seed, and mulch.

The base course and surfacing items will be measured and paid for under other contract bid items.

stp-205-015 (20060512)

14. Reheating HMA Pavement Longitudinal Joints, Item 460.4110.S.

A Description

This special provision describes reheating the abutting edge of the previously compacted layer in the adjacent lane while paving mainline asphalt pavements.

B (Vacant)

C Construction

C.1 Equipment

Provide a self-contained heating unit that heats by convection only. Do not use forced air to enhance the flame. Provide a fireproof barrier between the flame and the heater's fuel source. The heater must produce a uniform distribution of heat within the heat box. Provide automatic controls to regulate the heater output and shutoff the heater when the paver stops or the heater control system loses power.

Mount the heater on the paver inside the paver's automatic leveling device.

C.2 Reheating Joints

Evenly reheat at least an 8 inch (200 mm) wide strip of the previously compacted layer in the adjacent lane as follows:

- Reheat the joint to within 60 degrees F (15 degrees C) of the mix temperature at the paver auger. Measure joint temperature immediately behind the heater.

The engineer may allow the required joint reheat temperatures to be cooler than specified to adjust for weather, wind, and other field conditions. Coordinate the heater output and paver speed to achieve the required joint reheat temperature without visible smoke emission.

D Measurement

The department will measure Reheating HMA Pavement Longitudinal Joints by the linear foot acceptably completed as measured along each joint for each layer of asphalt placed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF

Payment is full compensation for all the work required under this bid item.

stp-460-015 (20140630)

15. HMA Percent Within Limits (PWL) Test Strip Volumetrics, Item 460.0105.S; HMA Percent Within Limits (PWL) Test Strip Density Item 460.0110.S.

A Description

This special provision describes the Hot Mix Asphalt (HMA) density and volumetric testing tolerances required for an HMA test strip. An HMA test strip is required for contracts constructed under HMA Percent Within Limits (PWL) QMP. A density test strip is required for each pavement layer placed over a specific, uniform underlying material, unless specified otherwise in the plans. Each contract is restricted to a single mix design per mix type per layer (e.g., upper layer and lower layer may have different mix type specified or may have the same mix type with different mix designs). Each mix design requires a separate test strip. Density and volumetrics testing will be conducted on the same test strip whenever possible.

Perform work according to standard spec 460 and as follows.

B Materials

Use materials conforming to HMA Pavement Percent Within Limits (PWL) QMP special provision.

C Construction

C.1 Test Strip

Submit the test strip start time and date to the department in writing at least 5 calendar days in advance of construction of the test strip. If the contractor fails to begin paving within 2 hours of the submitted start time, the test strip is delayed and the department will assess the contractor $2,000 for each instance according to Section E of this document. Alterations to the start time and date must be submitted to the department in writing a minimum of 24 hours prior to the start time. The contractor will not be liable for changes in start time related to adverse weather days as defined by standard spec 101.3 or equipment breakdown verified by the department.

On the first day of production for a test strip, produce approximately 750 tons of HMA. (Note: adjust tonnage to accommodate natural break points in the project.) Locate test strips in a section of the roadway to allow a representative rolling pattern (i.e. not a ramp or shoulder, etc.).

C.1.1 Sampling and Testing Intervals

C.1.1.1 Volumetrics

Laboratory testing will be conducted from a split sample yielding three components, with portions designated for QC (quality control), QV (quality verification), and retained.

During production for the test strip, obtain sufficient HMA mixture for three-part split samples from trucks prior to departure from the plant. Collect three split samples during the production of test strip material. Perform sampling from the truck box and three-part splitting of HMA according to CMM 8-36. These three samples will be randomly selected by the engineer from each *third* of the test strip tonnage (T), excluding the first 50 tons:

Sample Number	Production Interval (tons)
1	50 to $\frac{T}{3}$
2	$\frac{T}{3}$ to $\frac{2T}{3}$
3	$\frac{2T}{3}$ to T

C.1.1.2 Density

Required field tests include contractor QC and department QV nuclear density gauge tests and pavement coring at ten individual locations (five in each half of the test strip length) in accordance with Appendix A: *Test Methods and Sampling for HMA PWL QMP Projects*. Both QV and QC teams shall have two nuclear density gauges present for correlation at the time the test strip is constructed. QC and QV teams may wish to scan with additional gauges at the locations detailed in Appendix A, as only gauges used during the test strip correlation phase will be allowed.

C.1.2 Field Tests

C.1.2.1 Density

A gauge comparison according to CMM 8-15.7 shall be completed prior to the day of test strip construction. Daily standardization of gauges on reference blocks and a project reference site shall be performed according to CMM 8-15.8. A standard count shall be performed for each gauge on the material placed for the test strip, prior to any additional data collection. Nuclear gauge readings and pavement cores shall be used to determine nuclear gauge correlation in accordance with Appendix A. The two to three readings for the five locations across the mat for each of two zones shall be provided to the engineer. The engineer will analyze the readings of each gauge relative to the densities of the cores taken at each location. The engineer will determine the average difference between the nuclear gauge density readings and the measured core densities to be used as a constant offset value. This offset will be used to adjust raw density readings of the specific gauge and shall appear on the density data sheet along with gauge and project identification. An offset is specific to the mix and layer, therefore a separate value shall be determined for each layer of each mix placed over a differing underlying material for the contract. This constitutes correlation of that individual gauge for the given layer. Two gauges per team are not required to be onsite daily after completion of the test strip. Any data collected without a correlated gauge will not be accepted.

The contractor is responsible for coring the pavement from the footprint of the density tests and filling core holes according to Appendix A. Coring and filling of pavement core holes must be approved by the engineer. The QV team is responsible for the labeling and safe transport of the cores from the field to the QC laboratory. Testing of cores shall be conducted by the contractor and witnessed by department

personnel. The contractor is responsible for drying the cores following testing. The department will take possession of cores following laboratory testing and will be responsible for any verification testing at the discretion of the engineer.

The target maximum density to be used in determining core density is the average of the three volumetric/mix Gmm values from the test strip multiplied by 62.24 lb/ft^3. In the event mix and density portions of the test strip procedure are separated, or if an additional density test strip is required, the mix portion must be conducted prior to density determination. The target maximum density to determine core densities shall then be the Gmm four-test running average (or three-test average from a PWL volumetric-only test strip) from the end of the previous day's production multiplied by 62.24 lb/ft^3. If no PWL production volumetric test is to be taken in a density-only test strip, a non-random three-part split mix sample will be taken and tested for Gmm by the department representative. The department Gmm test results from this non-random test will be entered in the HMA PWL Test Strip Spreadsheet and must conform to the Acceptance Limits presented in C.2.1.

Exclusions such as shoulders and appurtenances shall be tested and reported according to CMM 8-15. However, all acceptance testing of shoulders and appurtenances will be conducted by the department, and average lot (daily) densities must conform to standard spec Table 460-3. No density incentive or disincentive will be applied to shoulders or appurtenances. However, unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 8-15.11.

C.1.3 Laboratory Tests

C.1.3.1 Volumetrics

Obtain random samples according to C.1.1.1 and Appendix A. Perform tests the same day as taking the sample.

Theoretical maximum specific gravities of each mixture sample will be obtained according to AASHTO T 209. Bulk specific gravities of both gyratory compacted samples and field cores shall be determined according to AASHTO T 166. The bulk specific gravity values determined from field cores shall be used to calculate a correction factor (i.e., offset) for each QC and QV nuclear density gauge. The correction factor will be used throughout the remainder of the layer.

C.2 Acceptance

C.2.1 Volumetrics

Produce mix conforming to the following limits based on individual QC and QV test results (tolerances based on most recent JMF):

ITEM	ACCEPTANCE LIMITS
Percent passing given sieve:	
37.5-mm	+/- 8.0
25.0-mm	+/- 8.0
19.0-mm	+/- 7.5
12.5-mm	+/- 7.5
9.5-mm	+/- 7.5
2.36-mm	+/- 7.0
75-µm	+/- 3.0
Asphaltic content in percent[1]	- 0.5
Air Voids	-1.5 & +2.0
VMA in percent[2]	- 1.0
Maximum specific gravity	+/- 0.024

[1] Asphalt content more than -0.5% below the JMF will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction according to WisDOT Modified ASTM D8159.

[2] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

QV samples will be tested for Gmm, Gmb, and AC. Air voids and VMA will then be calculated using these test results.

Calculation of air voids shall use either the QC, QV, or retained split sample test results, as identified by conducting the paired t-test with the WisDOT PWL Test Strip Spreadsheet.

If QC and QV test results do not correlate as determined by the split sample comparison, the retained split sample will be tested by the department's AASHTO accredited laboratory and HTCP certified personnel as a referee test. Additional investigation shall be conducted to identify the source of the difference between QC and QV data. Referee data will be used to determine material conformance and pay.

C.2.2 Density

Compact all layers of test strip HMA mixture to the applicable density shown in the following table:

TABLE 460-3 MINIMUM REQUIRED DENSITY[1]

	MIXTURE TYPE	
LAYER	LT & MT	HT
LOWER	93.0[2]	93.0[3]
UPPER	93.0	93.0

[1] If any individual core density test result falls more than 3.0 percent below the minimum required target maximum density, the engineer will investigate the acceptability of that material per CMM 8-15.11.

[2] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

[3] Minimum reduced by 1.0 percent for lower layer constructed directly on crushed aggregate or recycled base courses.

Nuclear density gauges are acceptable for use on the project only if correlation is completed for that gauge during the time of the test strip and the department issues documentation of acceptance stating the correlation offset value specific to the gauge and mix design. The offset is not to be entered into any nuclear density gauge as it will be applied by the department-furnished Field Density Worksheet.

C.2.3 Test Strip Approval and Material Conformance

All applicable laboratory and field testing associated with a test strip shall be completed prior to any additional mainline placement of the mix. All test reports shall be submitted to the department upon completion, and approved before paving resumes. The department will notify the contractor within 24 hours from start of test strip regarding approval to proceed with paving, unless an alternate time frame is agreed upon in writing with the department. The 24-hour approval time includes only working days as defined in standard spec 101.3.

The department will evaluate material conformance and make pay adjustments based on the PWL value of air voids and density for the test strip. The QC core densities and QC and QV mix results will be used to determine the PWL values as calculated in accordance with Appendix A.

The PWL values for air voids and density shall be calculated after determining core densities. An approved test strip is defined as the individual PWL values for air voids and density both being equal to or greater than 75, mixture volumetric properties conforming to the limits specified in C.2.1, and an acceptable gauge-to-core correlation. Further clarification on PWL test strip approval and appropriate post-test strip actions are shown in the following table:

PWL Test Strip Approval and Material Conformance Criteria

PWL Value for Air Voids and Density	Test Strip Approval	Material Conformance	Post-Test Strip Action
Both PWL ≥ 75	Approved[1]	Material paid for according to Section E.	Proceed with Production
50 ≤ Either PWL < 75	Not Approved	Material paid for according to Section E.	Consult BTS to determine need for additional test strip.
Either PWL < 50	Not Approved	Unacceptable material removed and replaced or paid for at 50% of the contract unit price according to Section E.	Construct additional Volumetrics or Density test strip as necessary.

[1] In addition to these PWL criteria, mixture volumetric properties must conform to the limits specified in C.2.1, split sample comparison must have a passing result and an acceptable gauge-to-core correlation must be completed.

A maximum of two test strips will be allowed to remain in place per pavement layer per contract. If material is removed, a new test strip shall replace the previous one at no additional cost to the department. If the contractor changes the mix design for a given mix type during a contract, no additional compensation will be paid by the department for the required additional test strip and the department will assess the contractor $2,000 for the additional test strip according to Section E of this special provision. For simultaneously conducted density and volumetric test strip components, the following must be achieved:

i. Passing/Resolution of Split Sample Comparison
ii. Volumetrics/mix PWL value ≥ 75
iii. Density PWL value ≥ 75
iv. Acceptable correlation

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If not conducted simultaneously, the mix portion of a test strip must accomplish (i) & (ii), while density must accomplish (iii) & (iv). If any applicable criteria are not achieved for a given test strip, the engineer, with authorization from the department's Bureau of Technical Services, will direct an additional test strip (or alternate plan approved by the department) be conducted to prove the criteria can be met prior to additional paving of that mix. For a density-only test strip, determination of mix conformance will be according to main production, i.e., HMA Pavement Percent Within Limits (PWL) QMP special provision.

D Measurement

The department will measure HMA Percent Within Limits (PWL) Test Strip as each unit of work, acceptably completed as passing the required air void, VMA, asphalt content, gradation, and density correlation for a Test Strip. Material quantities shall be determined according to standard spec 450.4 and detailed here within.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH
460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH

These items are intended to compensate the contractor for the construction of the test strip for contracts paved under the HMA Pavement Percent Within Limits QMP article.

Payment for HMA Percent Within Limits (PWL) Test Strip Volumetrics is full compensation for volumetric sampling, splitting, and testing; for proper labeling, handling, and retention of split samples.

Payment for HMA Percent Within Limits (PWL) Test Strip Density is full compensation for collecting and measuring of pavement cores, acceptably filling core holes, providing of nuclear gauges and operator(s), and all other work associated with completion of a core-to-gauge correlation, as directed by the engineer.

Acceptable HMA mixture placed on the project as part of a volumetric or density test strip will be compensated by the appropriate HMA Pavement bid item with any applicable pay adjustments. If a test strip is delayed as defined in C.1 of this document, the department will assess the contractor $2,000 for each instance, under the HMA Delayed Test Strip administrative item. If an additional test strip is required because the initial test strip is not approved by the department or the mix design is changed by the contractor, the department will assess the contractor $2,000 for each additional test strip (i.e. $2,000 for each individual volumetrics or density test strip) under the HMA Additional Test Strip administrative item.

Pay adjustment will be calculated using 65 dollars per ton of HMA pavement. The department will pay for measured quantities of mix based on $65/ton multiplied by the following pay adjustment:

PAY ADJUSTMENT FOR HMA PAVEMENT AIR VOIDS & DENSITY

PERCENT WITHIN LIMITS (PWL)	*PAYMENT FACTOR, PF (percent of $65/ton)*
≥ 90 to 100	PF = ((PWL – 90) * 0.4) + 100
≥ 50 to < 90	(PWL * 0.5) + 55
<50	50%[1]

where, PF is calculated per air voids and density, denoted $PF_{air\ voids}$ & $PF_{density}$

[1] Material resulting in PWL value less than 50 shall be removed and replaced, unless the engineer allows for such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density will be according to Table 460-3 as modified herein. Pay adjustment will be determined for an acceptably completed test strip and will be computed as shown in the following equation:

Pay Adjustment = (PF-100)/100 x (WP) x (tonnage) x ($65/ton)*

*Note: If Pay Factor <50, the contract unit price will be used in lieu of $65/ton

The following weighted percentage (WP) values will be used for the corresponding parameter:

Parameter	WP
Air Voids	0.5

	Density	0.5

Individual Pay Factors for each air voids ($PF_{air\ voids}$) and density ($PF_{density}$) will be determined. $PF_{air\ voids}$ will be multiplied by the total tonnage produced (i.e., from truck tickets), and $PF_{density}$ will be multiplied by the calculated tonnage used to pave the mainline only (i.e., traffic lane excluding shoulder) as determined in accordance with Appendix A.

The department will pay incentive for air voids under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
460.2005	Incentive Density PWL HMA Pavement	DOL
460.2010	Incentive Air Voids HMA Pavement	DOL

The department will administer disincentives under the Disincentive Density HMA Pavement and the Disincentive Air Voids HMA Pavement administrative items.

stp-460-040 (20181119)

16. HMA Pavement Percent Within Limits (PWL) QMP.

A Description

This special provision describes percent within limits (PWL) pay determination, providing and maintaining a contractor Quality Control (QC) Program, department Quality Verification (QV) Program, required sampling and testing, dispute resolution, corrective action, pavement density, and payment for HMA pavements. Pay is determined by statistical analysis performed on contractor and department test results conducted according to the Quality Management Program (QMP) as specified in standard spec 460, except as modified below.

B Materials

Conform to the requirements of standard specs 450, 455, and 460 except where superseded by this special provision. The department will allow only one mix design for each HMA mixture type per layer required for the contract, unless approved by the engineer. The use of more than one mix design for each HMA pavement layer will require the contractor to construct a new test strip in accordance with HMA Pavement Percent Within Limits (PWL) QMP Test Strip Volumetrics and HMA Pavement Percent Within Limits (PWL) QMP Test Strip Density articles at no additional cost to the department.

Replace standard spec 460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater with the following:

460.2.8.2.1.3.1 Contracts under Percent within Limits

(1) Furnish and maintain a laboratory at the plant site fully equipped for performing contractor QC testing. Have the laboratory on-site and operational before beginning mixture production.

(2) Obtain random samples and perform tests according to this special provision and further defined in Appendix A: *Test Methods & Sampling for HMA PWL QMP Projects*. Obtain HMA mixture samples from trucks at the plant. For the sublot in which a QV sample is collected, discard the QC sample and test a split of the QV sample.

(3) Perform sampling from the truck box and three-part splitting of HMA samples according to CMM 8-36. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield three splits for all random sampling per sublot. All QC samples shall provide the following: QC, QV, and Retained. The contractor shall take possession and test the QC portions. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. Additional sampling details are found in Appendix A. Label samples according to CMM 8-36. Additional handling instructions for retained samples are found in CMM 8-36.

(4) Use the test methods identified below to perform the following tests at a frequency greater than or equal to that indicated:

- Blended aggregate gradations in accordance with AASHTO T 30
- Asphalt content (AC) in percent determined by ignition oven method according to AASHTO T 308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to ASTM D8159 as modified in CMM 8-36.6.3.1.
- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166.
- Maximum specific gravity (Gmm) according to AASHTO T 209.
- Air voids (V_a) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R35.

(5) Lot size shall consist of 3750 tons with sublots of 750 tons. Test each design mixture at a frequency of 1 test per 750 tons of mixture type produced and placed as part of the contract. Add a random sample for any fraction of 750 tons at the end of production for a specific mixture design. Partial lots with less than three sublot tests will be included into the previous lot for data analysis and pay adjustment. Volumetric lots will include all tonnage of mixture type under specified bid item unless otherwise specified in the plan.

(6) Conduct field tensile strength ratio tests according to AASHTO T283, without freeze-thaw conditioning cycles, on each qualifying mixture in accordance with CMM 8-36.6.14. Test each full 50,000 ton production increment, or fraction of an increment, after the first 5,000 tons of production. Perform required increment testing in the first week of production of that increment. If field tensile strength ratio values are below the spec limit, notify the engineer. The engineer and contractor will jointly determine a corrective action.

Delete standard spec 460.2.8.2.1.5 and 460.2.8.2.1.6.

Replace standard spec 460.2.8.2.1.7 Corrective Action with the following:

460.2.8.2.1.7 Corrective Action

(1) Material must conform to the following action and acceptance limits based on individual QC and QV test results (tolerances relative to the JMF used on the PWL Test Strip):

ITEM	ACTION LIMITS	ACCEPTANCE LIMITS
Percent passing given sieve:		
37.5-mm	+/- 8.0	
25.0-mm	+/- 8.0	
19.0-mm	+/- 7.5	
12.5-mm	+/- 7.5	
9.5-mm	+/- 7.5	
2.36-mm	+/- 7.0	
75-µm	+/- 3.0	
AC in percent[1]	-0.3	-0.5
Va		- 1.5 & +2.0
VMA in percent[2]	- 0.5	-1.0

[1] The department will not adjust pay based on QC AC in percent test results; however corrective action will be applied to nonconforming material according to 460.2.8.2.1.7(3) as modified herein.
[2] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

(2) QV samples will be tested for Gmm, Gmb, and AC. Air voids and VMA will then be calculated using these test results.

(3) Notify the engineer if any individual test result falls outside the action limits, investigate the cause and take corrective action to return to within action limits. If two consecutive test results fall outside the action limits, stop production. Production may not resume until approved by the engineer. Additional QV samples may be collected upon resuming production, at the discretion of the engineer.

(4) For any additional tests outside the random number testing conducted for volumetrics, the data collected will not be entered into PWL calculations. Additional QV tests must meet acceptance limits or be subject to production stop and/or remove and replace.

(5) Remove and replace unacceptable material at no additional expense to the department. Unacceptable material is defined as any individual QC or QV tests results outside the acceptance limits or a PWL value < 50. The engineer may allow such material to remain in place with a price reduction. The department will pay for such HMA Pavement allowed to remain in place at 50 percent of the contract unit price.

Replace standard spec 460.2.8.3.1.2 Personnel Requirements with the following:

460.2.8.3.1.2 Personnel Requirements

(1) The department will provide at least one HTCP-certified Transportation Materials Sampling (TMS) Technician, to observe QV sampling of HMA mixtures.

(2) Under departmental observation, a contractor TMS technician shall collect and split samples.

(3) A department HTCP-certified Hot Mix Asphalt, Technician I, Production Tester (HMA-IPT) technician will ensure that all sampling is performed correctly and conduct testing, analyze test results, and report resulting data.

(4) The department will make an organizational chart available to the contractor before mixture production begins. The organizational chart will include names, telephone numbers, and current certifications of all QV testing personnel. The department will update the chart with appropriate changes, as they become effective.

Replace standard spec 460.2.8.3.1.4 Department Verification Testing Requirements with the following:

460.2.8.3.1.4 Department Verification Testing Requirements

(1) HTCP-certified department personnel will obtain QV random samples by directly supervising HTCP-certified contractor personnel sampling from trucks at the plant. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield three splits for all random sampling per sublot. All QV samples shall furnish the following: QC, QV, and Retained. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. The department will take possession of retained samples accumulated to date each day QV samples are collected. The department will retain samples until surpassing the analysis window of up to 5 lots, as defined in 460.2.8.3.1.7(2) of this special provision. Additional sampling details are found in Appendix A.

(2) The department will verify product quality using the test methods specified here in 460.2.8.3.1.4(3). The department will identify test methods before construction starts and use only those methods during production of that material unless the engineer and contractor mutually agree otherwise.

(3) The department will perform all testing conforming to the following standards:

- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166.
- Maximum specific gravity (Gmm) according to AASHTO T 209.
- Air voids (Va) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R 35.
- Asphalt Content (AC) in percent determined by ignition oven method according to AASHTO T 308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to ASTM D8159 as modified in CMM 8-36.6.3.1.

(4) The department will randomly test each design mixture at the minimum frequency of one test for each lot.

Delete standard spec 460.2.8.3.1.6.

Replace standard spec 460.2.8.3.1.7 Dispute Resolution with the following:

460.2.8.3.1.7 Data Analysis for Volumetrics

(1) Analysis of test data for pay determination will be contingent upon QC and QV test results. Statistical analysis will be conducted on Gmm and Gmb test results for calculation of Va. If either Gmm or Gmb analysis results in non-comparable data as described in 460.2.8.3.1.7(2), subsequent testing will be performed for both parameters as detailed in the following paragraph.

(2) The engineer, upon completion of the first 3 lots, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. Additional comparisons incorporating the first 3 lots of data will be performed following completion of the 4th and 5th lots (i.e., lots 1-3, 1-4, and 1-5). A rolling window of 5 lots will be used to conduct F & t comparison for the remainder of the contract (i.e., lots 2-6, then lots 3-7, etc.), reporting comparison results for each individual lot. Analysis will use a set alpha value of 0.025. If the F- and t-tests report comparable data, the QC and QV data sets are determined to be statistically similar and QC data will be used to calculate the Va used in PWL and pay adjustment calculations. If the F- and t-tests result in non-comparable data, proceed to the *dispute resolution* steps found below. Note: if both QC and QV Va PWL result in a pay adjustment of 102% or greater, dispute resolution testing will not be conducted. Dispute resolution via further investigation is as follows:

[1] The Retained portion of the split from the most recent lot in the analysis window (specifically the sublot identifying that variances or means do not compare) will be referee tested by the bureau's AASHTO accredited laboratory and certified personnel. If the non-comparison occurs following Lot 3, 4, or 5, all previous lots are subject to referee testing. Referee test results will replace the QV data of the sublot(s).

[2] Statistical analysis will be conducted with referee test results replacing QV results.

i. If the F- and t-tests indicate variances and means compare, no further testing is required for the lot and QC data will be used for PWL and pay factor/adjustment calculations.

ii. If the F- and t-tests indicate non-comparable variances or means, the Retained portion of the random QC sample will be tested by the department’s regional lab for the remaining 4 sublots of the lot which the F- and t- tests indicate non-comparable datasets. The department’s regional lab and the referee test results will be used for PWL and pay factor/adjustment calculations. Upon the second instance of non-comparable variance or means and for every instance thereafter, the department will assess a pay reduction for the additional testing of the remaining 4 sublots at $2,000/lot under the HMA Regional Lab Testing administrative item.

[3] The contractor may choose to dispute the regional test results on a lot basis. In this event, the retained portion of each sublot will be referee tested by the department's AASHTO accredited laboratory and certified personnel. The referee Gmm and Gmb test results will supersede the regional lab results for the disputed lot.

i. If referee testing results in an increased calculated pay factor, the department will pay for the cost of the additional referee testing.

ii. If referee testing of a disputed lot results in an equal or lower calculated pay factor, the department will assess a pay reduction for the additional referee testing at $2,000/lot under the Referee Testing administrative item.

(3) The department will notify the contractor of the referee test results within 3 working days after receipt of the samples by the department's AASHTO accredited laboratory. The intent is to provide referee test results within 7 calendar days from completion of the lot.

(4) The department will determine mixture conformance and acceptability by analyzing referee test results, reviewing mixture data, and inspecting the completed pavement according to the standard spec, this special provision, and accompanying Appendix A.

(5) Unacceptable material (i.e., resulting in a PWL value less than 50 or individual QC or QV test results not meeting the Acceptance Requirements of 460.2.8.2.1.7 as modified herein) will be referee tested by the bureau's AASHTO accredited laboratory and certified personnel. Such material may be subject to remove and replace, at the discretion of the engineer. If the engineer allows the material to remain in place, it will be paid at 50% of the HMA Pavement contract unit price. Replacement or pay adjustment will be conducted on a sublot basis. If an entire PWL sublot is removed and replaced, the test results of the

newly placed material will replace the original data for the sublot. Any remove and replace shall be performed at no additional cost to the department. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test will be conducted and under such circumstances will be entered into the HMA PWL Production spreadsheet for data analysis and pay determination.] The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

Delete standard spec 460.2.8.3.1.8 Corrective Action.

C Construction

Replace standard spec 460.3.3.2 Pavement Density Determination with the following:

460.3.3.2 Pavement Density Determination

(1) The engineer will determine the target maximum density using department procedures described in CMM 8-15. The engineer will determine density as soon as practicable after compaction and before placement of subsequent layers or before opening to traffic.

(2) Do not re-roll compacted mixtures with deficient density test results. Do not operate continuously below the specified minimum density. Stop production, identify the source of the problem, and make corrections to produce work meeting the specification requirements.

(3) A lot is defined as 7500 lane feet with sublots of 1500 lane feet (excluding shoulder, even if paved integrally) and placed within a single layer for each location and target maximum density category indicated in table 460-3. The contractor is required to complete three tests randomly per sublot and the department will randomly conduct one QV test per sublot. A partial quantity less than 750 lane feet will be included with the previous sublot. Partial lots with less than three sublots will be included in the previous lot for data analysis/acceptance and pay, by the engineer. If density lots/sublots are determined prior to construction of the test strip, any random locations within the test strip shall be omitted. Exclusions such as shoulders and appurtenances shall be tested and recorded in accordance with CMM 8-15. However, all acceptance testing of shoulders and appurtenances will be conducted by the department, and average lot (daily) densities must conform to standard spec Table 460-3. No density incentive or disincentive will be applied to shoulders or appurtenances. Offsets will not be applied to nuclear density gauge readings for shoulders or appurtenances. Unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 8-15.11.

(4) The three QC locations per sublot represent the outside, middle, and inside of the paving lane. The QC density testing procedures are detailed in Appendix A.

(5) QV nuclear testing will consist of one randomly selected location per sublot. The QV density testing procedures will be the same as the QC procedure at each testing location and are also detailed in Appendix A.

(6) An HTCP-certified nuclear density technician (NUCDENSITYTEC-I) shall identify random locations and perform the testing for both the contractor and department. The responsible certified technician shall ensure that sample location and testing is performed correctly, analyze test results, and provide density results to the contractor weekly, or at the completion of each lot.

(7) For any additional tests outside the random number testing conducted for density, the data collected will not be entered into PWL calculations. However, additional QV testing must meet the tolerances for material conformance as specified in the standard specification and this special provision. If additional density data identifies unacceptable material, proceed as specified in CMM 8-15.11.

Replace standard spec 460.3.3.3 Waiving Density Testing with Acceptance of Density Data with the following:

460.3.3.3 Analysis of Density Data

(1) Analysis of test data for pay determination will be contingent upon test results from both the contractor (QC) and the department (QV).

(2) As random density locations are paved, the data will be recorded in the HMA PWL Production Spreadsheet for analysis in chronological order. The engineer, upon completion of the analysis lot, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. Analysis will use a set alpha value of 0.025.

i. If the F- and t-tests indicate variances and means compare, the QC and QV data sets are determined to be statistically similar and QC data will be used for PWL and pay adjustment calculations.
ii. If the F- and t-tests indicate variances or means do not compare, the QV data will be used for subsequent calculations.

(3) The department will determine mixture density conformance and acceptability by analyzing test results, reviewing mixture data, and inspecting the completed pavement according to standard spec, this special provision, and accompanying Appendix A.

(4) Density resulting in a PWL value less than 50 or not meeting the requirements of 460.3.3.1 (any individual density test result falling more than 3.0 percent below the minimum required target maximum density as specified in standard spec Table 460-3) is unacceptable and may be subject to remove and replace at no additional cost to the department, at the discretion of the engineer.

i. Replacement may be conducted on a sublot basis. If an entire PWL sublot is removed and replaced, the test results of the newly placed material will replace the original data for the sublot.
ii. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test must be conducted and under such circumstances will be entered into the data analysis and pay determination.]
iii. If the engineer allows such material to remain in place, it will be paid for at 50% of the HMA Pavement contract unit price. The extent of unacceptable material will be addressed as specified in CMM 8-15.11. The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

D Measurement

The department will measure the HMA Pavement bid items acceptably completed by the ton as specified in standard spec 450.4 and as follows in standard spec 460.5 as modified in this special provision.

E Payment

Replace standard spec 460.5.2 HMA Pavement with the following:

460.5.2 HMA Pavement

460.5.2.1 General

(1) Payment for HMA Pavement Type LT, MT, and HT mixes is full compensation for providing HMA mixture designs; for preparing foundation; for furnishing, preparing, hauling, mixing, placing, and compacting mixture; for HMA PWL QMP testing and aggregate source testing; for warm mix asphalt additives or processes; for stabilizer, hydrated lime and liquid antistripping agent, if required; and for all materials including asphaltic materials.

(2) If provided for in the plan quantities, the department will pay for a leveling layer, placed to correct irregularities in an existing paved surface before overlaying, under the pertinent paving bid item. Absent a plan quantity, the department will pay for a leveling layer as extra work.

460.5.2.2 Calculation of Pay Adjustment for HMA Pavement using PWL

(1) Pay adjustments will be calculated using 65 dollars per ton of HMA pavement. The HMA PWL Production Spreadsheet, including data, will be made available to the contractor by the department as soon as practicable upon completion of each lot. The department will pay for measured quantities of mix based on this price multiplied by the following pay adjustment calculated in accordance with the HMA PWL Production Spreadsheet:

PAY FACTOR FOR HMA PAVEMENT AIR VOIDS & DENSITY

PERCENT WITHIN LIMITS (PWL)	*PAYMENT FACTOR, PF (percent of $65/ton)*
≥ 90 to 100	PF = ((PWL – 90) * 0.4) + 100
≥ 50 to < 90	(PWL * 0.5) + 55
<50	50%[1]

where PF is calculated per air voids and density, denoted $PF_{air\ voids}$ & $PF_{density}$

[1] Any material resulting in PWL value less than 50 shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density shall be in accordance with standard spec Table 460-3. Pay adjustment will be determined on a lot basis and will be computed as shown in the following equation.

Pay Adjustment = (PF-100)/100 x (WP) x (tonnage) x ($65/ton)*

*Note: If Pay Factor <50, the contract unit price will be used in lieu of $65/ton

The following weighted percentage (WP) values will be used for the corresponding parameter:

Parameter	WP
Air Voids	0.5
Density	0.5

Individual Pay Factors for each air voids ($PF_{air\ voids}$) and density ($PF_{density}$) will be determined. $PF_{air\ voids}$ will be multiplied by the total tonnage placed (i.e., from truck tickets), and $PF_{density}$ will be multiplied by the calculated tonnage used to pave the mainline only (i.e., travel lane excluding shoulder) as determined in accordance with Appendix A.

The department will pay incentive for air voids and density under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
460.2005	Incentive Density PWL HMA Pavement	DOL
460.2010	Incentive Air Voids HMA Pavement	DOL

The department will administer disincentives under the Disincentive Density HMA Pavement and the Disincentive Air Voids HMA Pavement administrative items.

The department will administer a disincentive under the Disincentive HMA Binder Content administrative item for each individual QV test result indicating asphalt binder content below the Action Limit in 460.2.8.2.1.7 presented herein. The department will adjust pay per sublot of mix at 65 dollars per ton of HMA pavement multiplied by the following pay adjustment calculated according to the HMA PWL Production Spreadsheet:

AC Binder Relative to JMF	Pay Adjustment / Sublot
-0.4% to -0.5%	75%
More than -0.5%	50%[1]

[1] Any material resulting in an asphalt binder content more than 0.5% below the JMF AC content shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement. Such material will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction according to automated extraction according to ASTM D8159 as modified in CMM 8-36.6.3.1.

Note: PWL value determination is further detailed in the *Calculations* worksheet of the HMA PWL Production spreadsheet.

stp-460-050 (20181119)

17. Culvert Pipe Liners, 27-Inch, Item 520.9700.S; Cleaning Culvert Pipes for Liner Verification, Item 520.9750.S.

A Description

This special provision describes providing, verifying, and pressure grouting culvert pipe liners for circular culverts.

B Materials

B.1 General

Provide flow calculations at the preconstruction conference. Use contractor-proposed liner properties, the Manning's coefficients listed on the department's approved products list, and base calculations on existing culvert sizes and liner sizes the plans show. Ensure that pipes when lined have a capacity within ±5% of the original full flow capacity of the pipe.

B.2 Flexible Pipe Liner

Use liners with a Manning's coefficient value published on the department's approved products list. Upon delivery provide manufacturer certificates of compliance certifying that the liners conform to the following:

Pipe Type	ASTM Designation	ASTM D3350 Resin
High Density Polyethylene (HDPE)		
Profile Wall Pipe	F894	345463C
Solid Wall Pipe	F714	345463C
Polyvinylchloride (PVC)	F949	---

B.3 Grout

B.3.1 Cement

Furnish cement meeting the requirements of standard specification 501.2.1 for Type I or II Portland Cement.

B.3.2 Fly Ash

Furnish Class C or F Fly Ash meeting the requirements of standard specification 501.2.6.

B.3.3 Sand

Furnish natural sand meeting the fine aggregate requirements of standard specification 501.2.5.3. In addition to the size requirements of standard specification 501.2.5.3.4 the percent passing of the number 200 sieve shall be 0-5 percent passing by weight.

B.3.4 Water

Furnish water meeting the requirements of standard specification 501.2.4.

B.3.5 Mix Design

Use the basic proportions of dry materials per cubic yard of grout as follows:

Cement 100 pounds
Fly Ash 400 pounds
Fine Aggregate 2600 pounds

Air entraining and chemical admixtures to control fluidity of the grout are allowable. Ten days before placement, furnish to the engineer a design mix detailing all components and their proportions in the mix.

B.8.6 Fluidity

Measure the fluidity of the grout per ASTM C939. Prior to filling the flow cone with flowable mortar, pass the mixture through a 1/4-inch screen. Use an efflux time of 10 seconds to 16 seconds. Measure in the presence of the engineer prior to placement and at least once every 4 working hours until work is complete.

B.8.7 Cellular Grout

Alternatively, the contractor may use, or if the manufacturer recommends, an engineer-approved commercial cellular concrete grout conforming to the following:

Cement	ASTM C150	Type I or II
Density	ASTM C495 (no oven drying)	50 pcf min
Compressive Strength	ASTM C495	300 psi @ 28 day min 100 psi in 24 hours
Shrinkage	ASTM	1% by volume
Flow	ASTM C939	35 sec max

C Construction

C.1 General

As soon as possible after contract execution, survey existing culvert pipes to determine which culverts need cleaning in order to verify the required liner diameter and length. Notify the engineer before cleaning to confirm payment under the Cleaning Culvert Pipes for Liner Verification bid item.

Coordinate with the engineer to field verify culvert diameter and length, shape, material, and condition before ordering the liners.

Obtain easements if necessary for installing long sections of pipe.

C.2 Excavating and Cleaning

Before inserting the liner, clean and dry the pipe. Excavate and pump as required to remove debris and other materials that would interfere with the placement or support of the inserted liner. Dispose of and replace unserviceable endwalls as the engineer directs.

C.3 Placing Liners

Unload liners using slings and boom-type trucks or equivalents. Do not use chains or wire rope to handle liners and do not dump liners from the trucks when unloading.

Install liners such that the alignment and invert lie true to the lines, grades, and elevations in the plan. In absence of plan details, install liners horizontally to provide even annular space between the host pipe and sides of the liner. Install liners vertically with the invert as close to the host pipe invert as possible.

Obtain additional easements, if necessary, for installing long sections of liner.

Connect joints and install the liner per the manufacturer's recommendations and this part.

C.4 Pressure Grouting

Furnish a written plan for grouting the annular space between the host pipe and culvert pipe liner to the engineer for acceptance. Furnish the grouting plan prior to or at the project preconstruction conference so that it can be reviewed and discussed. At a minimum, the grouting plan shall consist of the following:

Intended grout mix(es)
Testing methods and frequency
Pumping equipment and pressure regulation
Intended grout staging
Grout monitoring
Bracing/floatation control

Include a description of staging in the grouting plan. Based on the length and slope of the host culvert, multiple stages may be required to minimize external loads on the culvert pipe liner. Develop the staging plan with the manufacturer based on the recommended maximum loading for the culvert pipe liner and the condition of the host culvert. Unless approved by the manufacturer, in no case shall a single lift of grout exceed 1/3rd the pipe external diameter at any point in the pour.

After the liner is in place, fill the area between the original culvert and the liner completely with grout per the accepted grouting plan. Block, grout in lifts, or otherwise secure liners to prevent floatation or deformation of the liner while grouting. Grout ports can be fabricated to allow placement of anti-floatation bracing or spacers.

Use a grout plant that is capable of accurately measuring, proportioning, mixing, and discharging by volume and at discharge pressures the liner manufacturer recommends. Do not exceed manufacturer-specified maximum pressures. Place grout in lifts to prevent exceeding maximum allowable pressures and to prevent flotation.

Use grout and witness ports to vent grouting and monitoring grouting progress. Plug ports as necessary as grout reaches them.

Do not remove any bracing inside of the liner until the grouting process is complete.

C.5 Assembly, Floatation, and Deflection Mitigation

Damage or misalignment due to assembly, floatation or deformation during grouting, or otherwise resulting from workmanship will be mitigated at the contractor's expense.

C.6 Site Restoration

Replace pipe sections damaged or collapsed during installation or grouting operations. Restore the grade to its original or improved cross section. Dispose of waste material.

D Measurement

The department will measure the Culvert Pipe Liners bid items by the linear foot measured in place for each culvert location acceptably completed.

The department will measure Cleaning Culvert Pipes for Liner Verification as each culvert, acceptably cleaned. The department will only measure culverts the engineer approves for payment.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
520.9700.S	Culvert Pipe Liners 27-Inch	LF
520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH

Payment for the Culvert Pipe Liners bid items is full compensation for providing pipe liners; obtaining easements; for excavation and pumping; for cleaning the existing pipe before liner installation; for pressure grouting; for replacing contractor-damaged pipe and endwalls; and for restoring the grade and disposing of waste materials.

The department will pay the contractor $150 per cubic yard for grout required in excess of 110 percent of the theoretical quantity required to fill the space between the inside diameter of the existing pipe and the outside diameter of the liner.

Payment for Cleaning Culvert Pipes for Liner Verification is full compensation for cleaning required to verify liner length and diameter; for excavation and pumping; and for disposing of waste material.

The department will pay separately for replacing unserviceable endwalls not rendered unserviceable by contractor operations under the appropriate contract endwall bid item, or absent the appropriate item as extra work.

stp-520-015 (20180628)

18. Traffic Control

Perform this work conforming to standard spec 643, and as the plans show, or as the engineer approves, except as follows.

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as the plans show. Submit this plan ten (10) days before the preconstruction conference.

Provide 24 hours-a-day availability of equipment and forces to expeditiously restore lights, signs, or other traffic control devices that are damaged or disturbed. The cost to maintain and restore the above items shall be considered incidental to the item as bid and no additional payment will be made therefore.

Supply the name and telephone number of a local contact person for traffic control repair before starting work.

Have available at all times sufficient experienced personnel to promptly install, remove and reinstall the required traffic control devices to route traffic during the construction operations.

The turning of traffic control devices when not in use to obscure the message will not be allowed under this contract.

Obtain prior approval from the engineer for the location of egress and ingress for construction vehicles to prosecute the work.

Cover existing signs which conflict with traffic control as the engineer directs.

Conduct operations in such a manner that causes the least interference and inconvenience to the free flow of vehicles on the roadways. This includes the following:

Do not park or store any vehicle, piece of equipment, or construction materials on the right of way, unless otherwise specified in the traffic control article or without approval of the engineer.

All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic.

Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency.

ner-643-065 (20171213)

19. Locating No-Passing Zones, Item 648.0100.

For this project, the spotting sight distance in areas with a 55 mph posted speed limit is ***Select from drop-down.***.

stp-648-005 (20060512)

20. Grading, Shaping and Finishing Culvert Pipes and Apron Endwalls, Item SPV.0060.01

A Description

Grade, Shape and Finish Culvert Pipes and Apron Endwall outside of the shoulder point as the plans show and as follows.

B Materials

Furnish materials conforming to the following:

Common excavation and material disposal.....205
Borrow.....208.2.1(1)1
Topsoil.....625
Erosion mat.....628
Mulch.....627
Fertilizer.....629
Seeding.....630

C Construction

Grade, shape and finish embankments slopes for apron endwalls and culvert pipes at the locations the plan show. Construct as plans show and engineer directs conforming to the following:

Common excavation and material disposal.....205
Borrow.....208
Topsoil.....625
Erosion mat.....628
Mulch.....627
Fertilizer.....629
Seeding.....630

D Measurement

The department will measure Grading, Shaping and Finishing Endwalls as a unit for each endwall or culvert end acceptably completed.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Grading, Shaping and Finishing Endwalls	EACH

Payment is full compensation for all, borrow, topsoil, erosion mat, mulch, fertilizer and seeding when culvert pipes and endwalls are out of the contract grading limits. If the work specified above falls with in the contract grading limits, the department will pay separately for that work under the excavation, borrow, topsoil, erosion mat, mulch, fertilizer and seeding bid items.

ner-205-010 (20180805)

21. Traffic Bond Limestone 3/8-Inch, SPV.0195.01

A Description

This special provision describes providing 3/8-inch traffic bond limestone.

B Materials

Provide limestone screenings conforming to the following gradation requirements:

SIEVE SIZE	PERCENT PASSING BY WEIGHT
3/8 inch	100
No. 4	80 – 95
No. 40	65 – 86
No. 100	25 – 40
No. 200	8 - 25

C Construction

Construct traffic bond limestone conforming to standard spec 301.3.

Two days after the limestone screenings have been placed or when the screenings are dry and firm, taper the edges of the limestone screenings using the drivers' side wheels of a truck. Compact and roll the edge of the limestone screenings to create a neat bevel.

D Measurement

The department will measure Traffic Bond Limestone 3/8-Inch by the ton acceptably completed.

The department will determine the weight, adjusted for moisture as specified in 301.4. The department may deduct for contaminated limestone or unrecovered limestone deposited outside the driveway.

E Payment

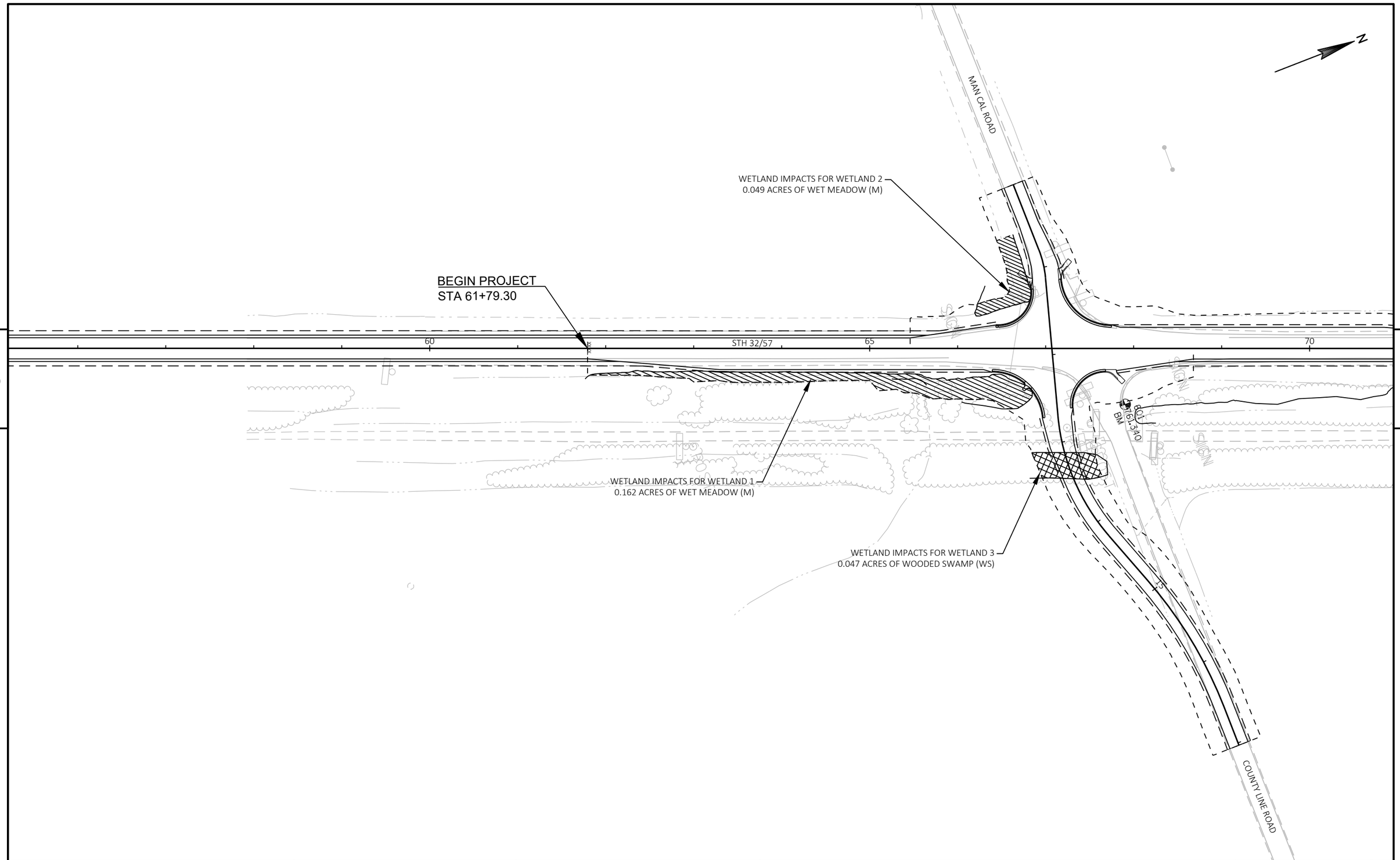
The department will pay for the measured quantity at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	Traffic Bond Limestone 3/8-Inch	TON

Payment is full compensation for preparing the foundation; and for stockpiling, placing, shaping, compacting, and maintaining the limestone surface throughout construction.

ner-301-015 (20180522)

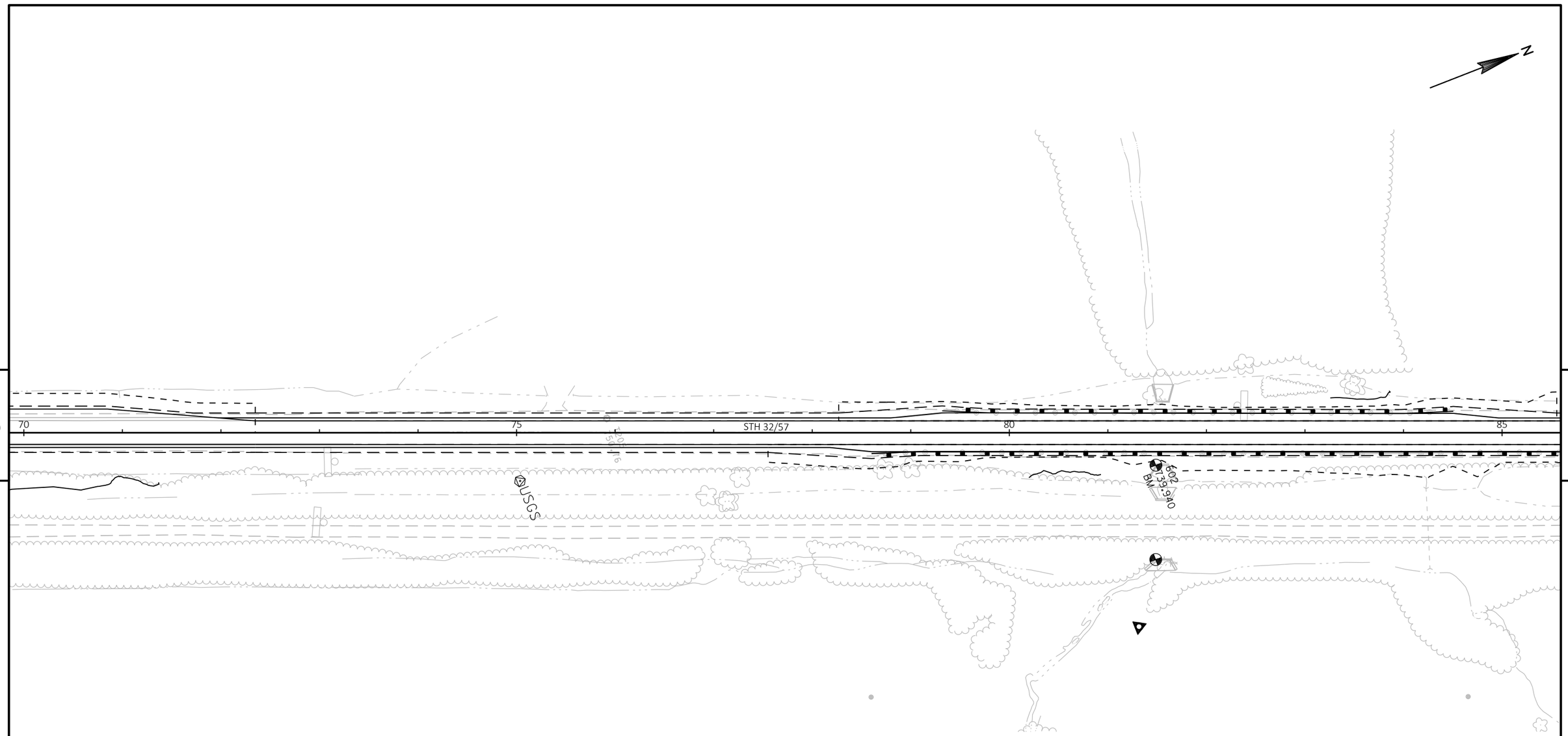
Exhibit 5



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050201-pn

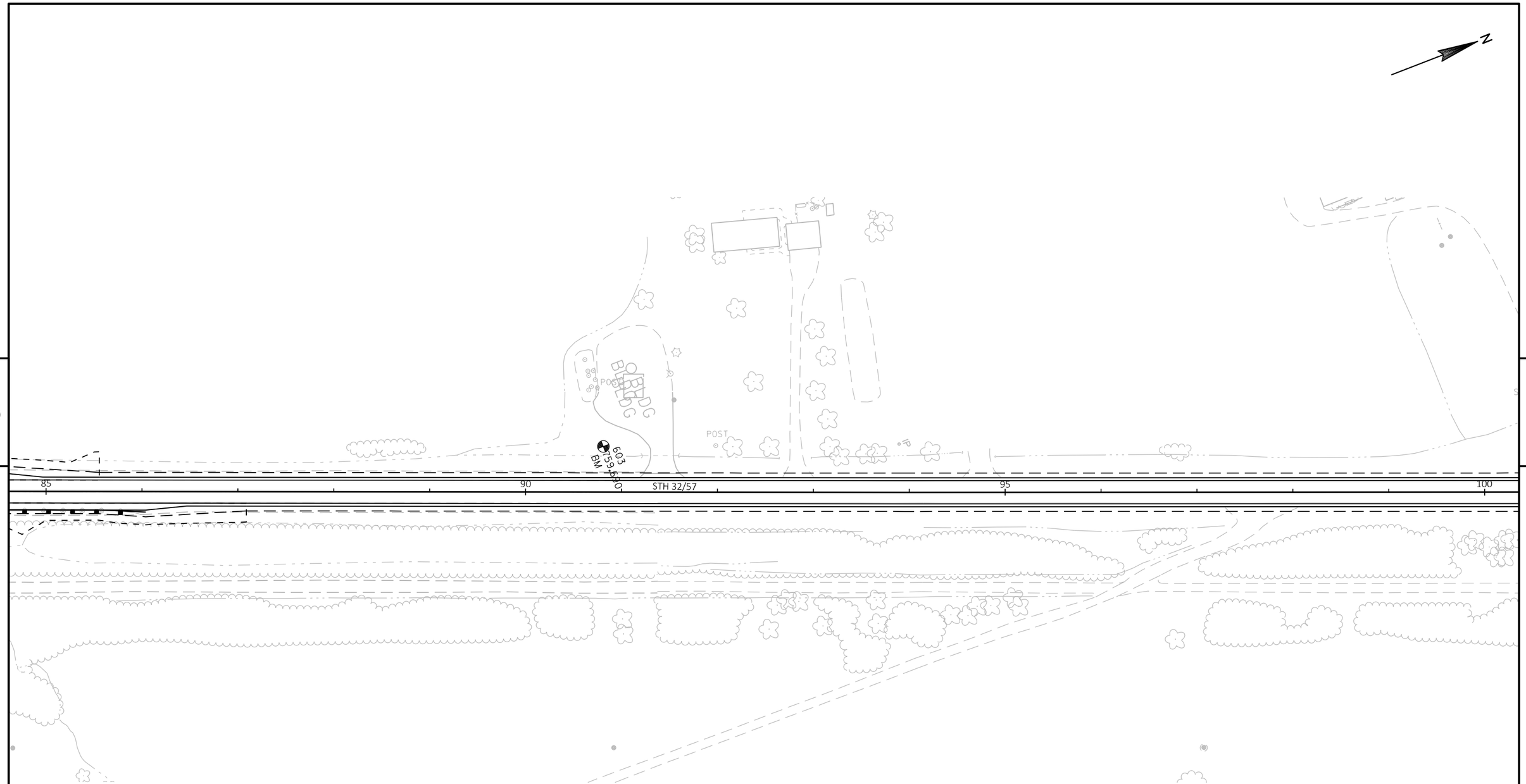
PLOT DATE : 3/5/2019 11:55 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050202-pn

PLOT DATE : 3/5/2019 11:55 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

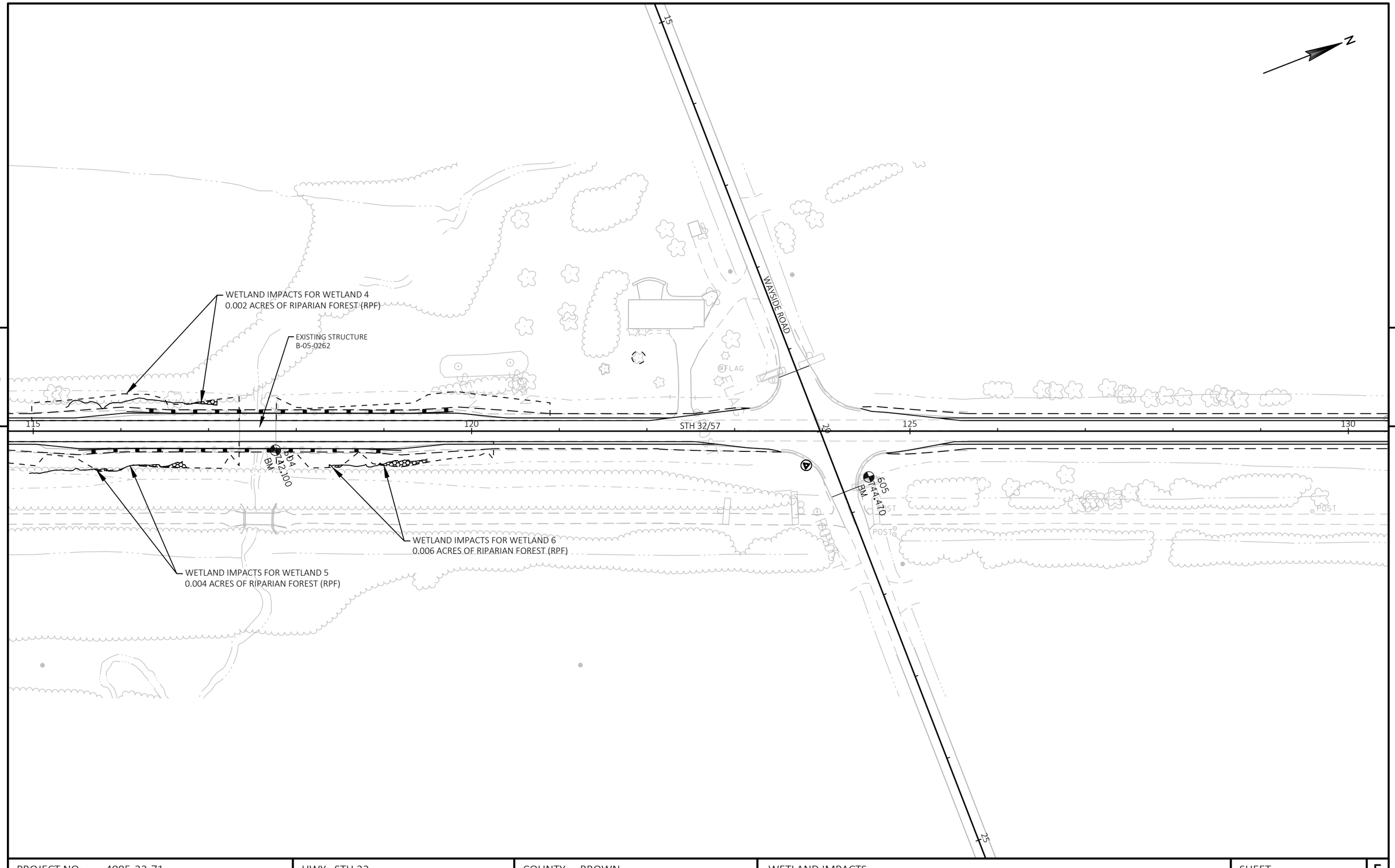


PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050203-pn

PLOT DATE : 3/5/2019 11:56 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050205-pn

PLOT DATE : 3/5/2019 11:56 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WETLAND IMPACTS FOR WETLAND 9
0.020 ACRES OF WET MEADOW (M)

WETLAND IMPACTS FOR WETLAND 8
0.006 ACRES OF SHALLOW MARSH (SM)

WETLAND IMPACTS FOR WETLAND 11
0.009 ACRES OF WET MEADOW (M)

WETLAND IMPACTS FOR WETLAND 12
0.018 ACRES OF WET MEADOW (M)

WETLAND IMPACTS FOR WETLAND 7
0.129 ACRES OF SHALLOW MARSH (SM)

WETLAND IMPACTS FOR WETLAND 10
0.030 ACRES OF SHALLOW MARSH (SM)

115 CTH Z 120 125

FLAG SIGN

STH 32/57

175 180 185 190

WEBER ROAD 80

608 BM 40.40

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050209-pn

PLOT DATE : 3/5/2019 11:56 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

5

5

SIGN

T186
T53

220

225

STH 32/57

230

235

RUINS

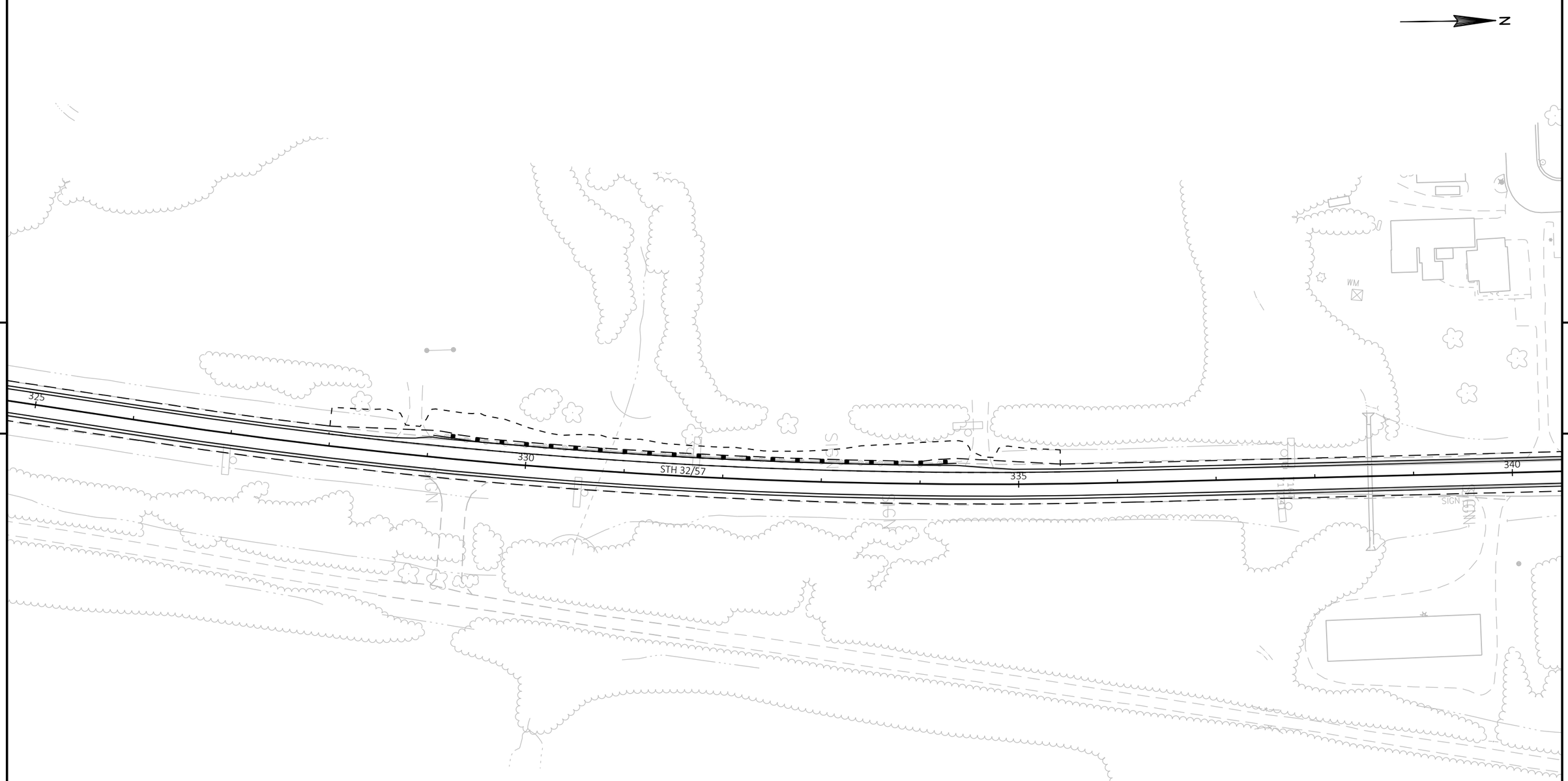
WETLAND IMPACTS FOR WETLAND 13
0.002 ACRES OF SHALLOW MARSH (SM)

WETLAND IMPACTS FOR WETLAND 14
0.003 ACRES OF SHALLOW MARSH (SM)

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050212-pn

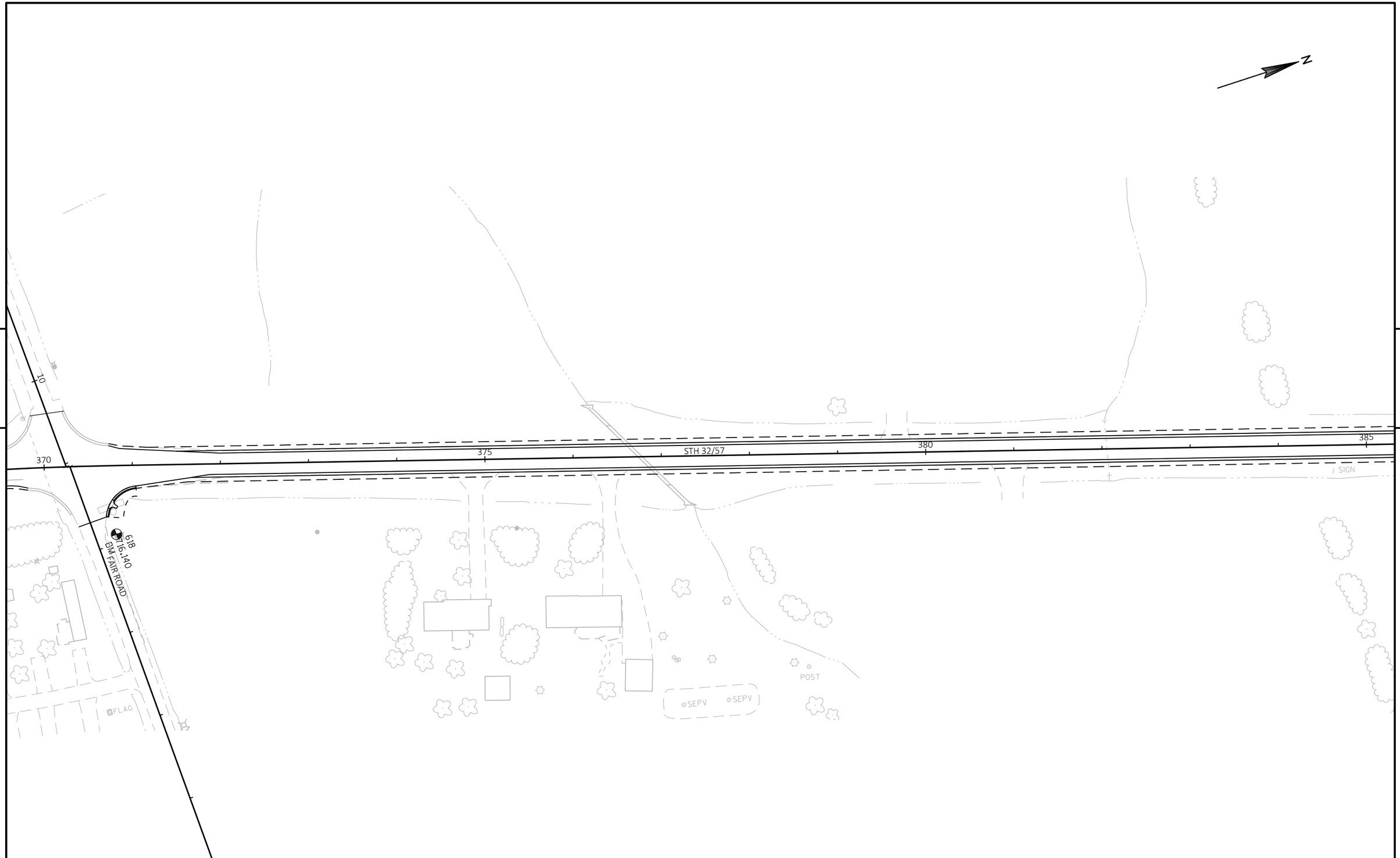
PLOT DATE : 3/5/2019 12:46 PM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050219-pn

PLOT DATE : 3/5/2019 11:57 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050222-pn

PLOT DATE : 3/5/2019 11:57 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WETLAND IMPACTS FOR WETLAND 15
0.004 ACRES OF RIPARIAN EMERGENT (RPE)

EXISTING CULVERT C-05-1745

MALLARD ROAD

BM
708.960
622

BM
703.610
621

STH 32/57

END PROJECT
STA 424+00.00

5

5

PROJECT NO: 4085-33-71	HWY: STH 32	COUNTY: BROWN	WETLAND IMPACTS	SHEET	E

FILE NAME : N:\PDS\C3D\40853300\SHEETSOTHER\40853300 WETLAND IMPACTS.DWG
LAYOUT NAME - 050225-pn

PLOT DATE : 3/5/2019 11:58 AM PLOT BY : LORENZ, KELSEY ANN PLOT NAME : PLOT SCALE : 1 IN:100 FT

Exhibit 6

Wisconsin Department of Transportation
Division of Transportation System Development
Northeast Region

WETLAND IMPACT TRACKING FORM

This form must be filled out for all projects.

Return This Completed Form to:
Jennifer Gibson
Environmental Coordinator
WisDOT - Northeast Region
944 Vanderperren Way
Green Bay, WI 54304
Phone : (920) 492-4160

FAX: (920) 492-0144
Jennifer.Gibson@dot.wi.gov

Please Complete All Information Highlighted In Yellow

WisDOT Regional Environmental Coordinator (REC) Will Complete Sections Highlighted In Green

Project Design I.D. #:	4085-33-00
Project Construction I.D. #:	4085-33-71
Hwy/ Project Title :	STH 32
	Hilbert - Green Bay
County :	Brown
Construction Year :	2021
Let Date:	5/10/2021
Date this form is completed:	3/5/2019
Date this form is approved:	3/5/2019

	NAME	PHONE	EMAIL
This Form Prepared by:	Kelsey Lorenz	920-492-0142	kelsey.lorenz@dot.wi.gov
This Form Approved by:	Jennifer Gibson	920-492-4160	Jennifer.Gibson@dot.wi.gov

Is a discharge of dredged or fill material into wetlands anticipated?

NO [ ] ➡ **Form complete; no further information is required (RETURN FORM).**

YES [X] ➡ **1. Complete remainder of form:**

- Complete yellow portions on both pages of the form and return to REC for finalization and approval.
- Include comment about sending for approval only after final impacts are determined.

2. Include final APPROVED form with DNR 401 and COE 404 permit applications.

	NAME	PHONE	EMAIL
Wetland Delineation/ Determination completed by:	Mike Helmrick	920-492-7738	Michael.Helmrick@dot.wi.gov

Region Environmental Coordinator
QUALIFICATIONS

Describe methods used to avoid and minimize impacts to wetlands:

Ditch foreslopes are steepened outside the clearzone where possible to minimize impacts to wetlands.

Was professional discretion used to determine debit ratio?

No [x]
Yes [ ] ➡ Describe discretionary rationale below:

WETLAND IMPACT / REPLACEMENT SUMMARY

Type Impacted	Area Impacted	Type Mitigated	Area Mitigated
AB	-	AB	-
BOG	-	BOG	-
DM	-	DM	-
M	0.26	M	0.26
RPE	0.01	RPE	-
RPF	0.01	RPF	-
SM	0.17	SM	0.17
SS	-	SS	-
WS	0.05	WS	0.08
AB(D)	-	**TOTAL**	**0.51**
DM(D)	-		
M(D)	-		
RPE(D)	-		
RPF(D)	-		
SM(D)	-		
SS(D)	-		
WS(D)	-		
TOTAL	**0.50**		

Wisconsin Department of Transportation

Project Design ID: 4085-33-00

Division of Transportation System Development
Northeast Region

WETLAND IMPACT TRACKING FORM - PAGE 2
DETAILED TABLE OF WETLAND IMPACTS

Directions to complete Page 2:

1. One location may be made up of several different wetland types. List each type of wetland impacted from each location on the project corridor separately in the table below.
2. Contact the Environmental Coordinator for appropriate ratio and bank information.
3. Use Department of Transportation Wetland Classification System: http://roadwaystandards.dot.wi.gov/standards/fdm/24-05-010att.pdf#fd24-5a10.2
4. Individual wetland areas should be reported to the nearest 0.001-acre. Impacts are summed by type and rounded to the nearest 0.01-acre.

						DOT REC will provide this information.		
Point #	Wetland ID	Impact Location (project station)	Lat/Long	Type Impacted	Area Impacted	Debit Ratio	Type Mitigated	Area Mitigated
	1	STA 61+79 - 66+85 RT	Lat: 44.240880 Long: -88.125367	M	0.162	1.000	M	0.162
	2	STA 66+20 - 66+84 LT	Lat: 44.240969 Long: -88.125764	M	0.049	1.000	M	0.049
	3	STA 3+12 - 3+43 RT	Lat: 44.241035 Long: -88.124923	WS	0.047	1.000	WS	0.047
	4	STA 115+36 - 117+11 LT	Lat: 44.253845 Long: -88.118763	RPF	0.002	1.300	WS	0.003
	5	STA 115+63 - 116+70 RT	Lat: 44.253725 Long: -88.118484	RPF	0.004	1.300	WS	0.005
	6	STA 118+38 - 119+50 RT	Lat: 44.254273 Long: -88.118161	RPF	0.006	1.300	WS	0.008
	7	STA 174+90 - 179+50 RT	Lat: 44.269493 Long: -88.110010	SM	0.129	1.000	SM	0.129
	8	STA 176+26 - 176+51 LT	Lat: 44.269039 Long: -88.110576	SM	0.006	1.000	SM	0.006
	9	STA 178+56 - 179+56 LT	Lat: 44.269831 Long: -88.110191	M	0.020	1.000	M	0.020
	10	STA 180+72 - 181+72 RT	Lat: 44.270204 Long: -88.109613	SM	0.030	1.000	SM	0.030
	11	STA 180+78 - 181+15 LT	Lat: 44.270220 Long: -88.109932	M	0.009	1.000	M	0.009
	12	STA 181+32 - 182+33 LT	Lat: 44.270321 Long: -88.109866	M	0.018	1.000	M	0.018
	13	STA 230+92 - 230+99 LT	Lat: 44.283053 Long: -88.103368	SM	0.002	1.000	SM	0.002
	14	STA 230+93 - 231+01 RT	Lat: 44.283024 Long: -88.103124	SM	0.003	1.000	SM	0.003
	15	STA 419+12 - 419+44 LT	Lat: 44.333594 Long: -88.090360	RPE	0.004	1.200	WS	0.005

Is there potential for onsite mitigation? If unknown, check with the REC.

YES [ ] Where is it located? (T/R, station, map)

NO [X] List bank site to be used. **(Determined by REC)** Oneida Bank

Exhibit 7

Riparian Owners other than WisDOT Right-of-Way

Wetland Number	Property Owner(s)	Owner Address		Site Address		Wetland Location
1	STATE OF WI DNR VAC/RR	101 S WEBSTER ST PO BOX 7921	MADISON, WI 53707	VACATED RR/ROW	BRILLION, WI 54110	STA 61+79 - 66+85 RT
2	NATHAN J SCHNELL	W979 COUNTY K	BRILLION, WI 54110	MAN-CAL RD	BRILLION, WI 54110	STA 66+20 - 66+84 LT
3	STATE OF WI DNR VAC/RR	101 S WEBSTER ST PO BOX 7921	MADISON, WI 53707	VACATED RR/ROW	BRILLION, WI 54110	STA 3+12 - 3+43 RT
4	ANNABELLE WEBER	7637 ST PATS CHURCH RD	GREENLEAF, WI 54216	WAYSIDE RD	GREENLEAF, WI 54126	STA 115+36 - 117+11 LT
5	STATE OF WI DNR VAC/RR	101 S WEBSTER ST PO BOX 7921	MADISON, WI 53707	VACATED RR/ROW	GREENLEAF, WI 54126	STA 115+63 - 116+70 RT
6	STATE OF WI DNR VAC/RR	101 S WEBSTER ST PO BOX 7921	MADISON, WI 53707	VACATED RR/ROW	GREENLEAF, WI 54126	STA 118+38 - 119+50 RT
7	STATE OF WI DNR VAC/RR	101 S WEBSTER ST PO BOX 7921	MADISON, WI 53707	VACATED RR/ROW	GREENLEAF, WI 54126	STA 174+90 - 179+50 RT
8	COUNTRY AIRE FARMS LLC	1440 LAMERS CLANCY RD	GREENLEAF, WI 54216	CTH Z	GREENLEAF, WI 54126	STA 176+26 - 176+51 LT
9	COUNTRY AIRE FARMS LLC	1440 LAMERS CLANCY RD	GREENLEAF, WI 54216	CTH Z	GREENLEAF, WI 54126	STA 178+56 - 179+56 LT
10	STATE OF WI DNR VAC/RR	101 S WEBSTER ST PO BOX 7921	MADISON, WI 53707	VACATED RR/ROW	GREENLEAF, WI 54126	STA 180+72 - 181+72 RT
11	CINDY S SUMMERS ETAL	1405 HILL RD	GREENLEAF, WI 54216	1405 STH 57	GREENLEAF, WI 54126	STA 180+78 - 181+15 LT
12	CINDY S SUMMERS ETAL	1405 HILL RD	GREENLEAF, WI 54216	1405 STH 57	GREENLEAF, WI 54126	STA 181+32 - 182+33 LT
13	COUNTRY AIRE FARMS LLC	1440 LAMERS CLANCY RD	GREENLEAF, WI 54216	STH 57	GREENLEAF, WI 54126	STA 230+92 - 230+99 LT
14	STATE OF WI DNR VAC/RR	101 S WEBSTER ST PO BOX 7921	MADISON, WI 53707	VACATED RR/ROW	GREENLEAF, WI 54126	STA 230+93 - 231+01 RT
15	JOSEPH P LEONHARD	6392 STH 57	GREENLEAF, WI 54216	6392 STH 57	GREENLEAF, WI 54126	STA 419+12 - 419+44 LT

Exhibit 8

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

September 28, 2015 DOT: Brown

Andrew Fulcer
Wisconsin Department of Transportation
944 Vanderperren Way
Green Bay, WI 54304

Subject: **DNR Initial Project Review**:
Project I.D. 4085-33-00
STH 32 Resurface
South Brown County Line to Deuster Road
Brown County

Dear Mr. Fulcer:

The Department has received the information you provided for the proposed above-referenced project on September 14, 2015. According to your proposal, the purpose of this project is to resurface STH 32. Proposed improvements include beam guard replacement, culvert pipe work, signing and pavement marking.

Preliminary information has been reviewed by DNR staff for the project under the DOT/DNR Cooperative Agreement. Initial comments on the project as proposed are included below and assume that additional information will be provided that addresses all resource concerns identified.

A. Project-Specific Resource Concerns

Public Lands

The Fox River Trail runs parallel with STH 32 through much of this project. If any impacts are anticipated to the trail or its right of way further coordination will be needed.

There is an additional U.S. Dept. of Transportation "Section 4(f)" process for federally funded transportation projects that impact various types of public parks, wildlife refuges, and recreation areas. This requirement is coordinated by state and federal transportation departments. Please be aware that while both the 4(f) and 6(f) processes may be initiated concurrently, DNR must have final 4(f) approval from the Federal Highways Administration before we may send 6(f) materials to the National Park Service for their approval.

Wetlands & Waterways:

There are wetlands and waterways mapped along this route. The waterways are mostly tributaries to either Plum Creek or East River.

There is potential for wetland impacts to occur as a result of this project and therefore wetland impacts must be avoided and/or minimized to the greatest extent possible. Unavoidable wetland impacts must be mitigated for in accordance with the DOT/DNR Cooperative Agreement and the Wisconsin Department of Transportation

Wetland Mitigation Banking Technical Guideline. The Department requests information regarding the amount and type of unavoidable wetland impacts.

Both Plum Creek and East river are used during the spring fish spawning season. Further information will be needed as to which culverts will be replaced or worked on before DNR can assess whether spawning date restrictions are warranted.

Endangered Resources (ER)

There is a Migratory Bird Concentration Site near the project location. To minimize impacts tree clearing should be kept to a minimum.

The Wisconsin Natural Heritage Inventory (NHI Portal) database contains all current Northern Long-eared Bat roost sites and hibernacula in Wisconsin. The NHI Portal contains verified survey results from WI DNR, FWS, and private organizations and is updated on a weekly basis. The NHI Portal was consulted for this project, and per U.S. Fish and Wildlife Service's interim 4(d) rule, it was determined that this project is more than 1/4 mile from a known maternity roost tree AND is more than 1/4 mile from a known hibernacula. Therefore, there will be no impacts to the Northern Long-eared Bat.

Culverts/Aquatic organism passage

Culverts should be set in such a manner that it does not cause stream fragmentation and allows fish and other aquatic organisms to migrate upstream and downstream during low-flow conditions. This requires that the invert be set an adequate distance below the final streambed elevation to allow a natural and continuous streambed condition to occur. A gravel bed substrate may be installed in the culvert to obtain this condition. The desired end-result is that during high-flow conditions, the stream does not cause a large pool (scour hole) to develop at the downstream edge of the structure. Such a pool can act as an impassable barrier to aquatic organisms during low-flow conditions.

Invasive species & VHS

Adequate precautions should be taken to prevent transporting or introducing invasive species via construction equipment, as provided under NR 40, Wis. Administrative Code. This website provides further information and lists those species classified as Restricted or Prohibited under NR 40:
http://dnr.wi.gov/topic/Invasives/classification.html

Floodplains

A determination must be made as to whether the project lies within a mapped/zoned floodplain. In order to meet the standards of NR 116, Floodplain Management, a hydraulic and hydrologic analysis must be conducted for the 100-year flood event for any new structures. Plans for the structure must comply with the provisions of the local community's floodplain zoning ordinance. DNR requires submittal of the results of a 100-year flood analysis for the structure(s).

If the new structure(s) will create an increase of 0.01 feet or more in the 100-year backwater condition, DNR requires that all affected upstream landowners be notified, appropriate legal arrangements made, and the local floodplain ordinance must be amended. For areas lying outside mapped/zoned floodplain, DNR may request the results of DOT flow and backwater calculations. For project-specific information, please consult with the Brown

County Zoning Administrator.

B. Construction Site Considerations:

The following issues may be addressed in the Special Provisions and the contractor will be required to outline their construction methods in the Erosion Control Implementation Plan (ECIP).

Erosion control/Stormwater

Erosion control devices should be specified on the construction plans. All disturbed bank areas should be adequately protected and restored as soon as feasible.

An adequate erosion control implementation plan (ECIP) for the project must be developed by the contractor and submitted to this office for review at least 14 days prior to the preconstruction conference.

If erosion mat is used along stream banks, the department recommends that biodegradable and non-netted mat be used (e.g., Class I Type A Urban, Class I Type B Urban, or Class II Type C). Long-term netted mats may cause animals to become entrapped while moving in and out of the stream. Avoid the use of fine mesh matting that is tied or bonded at the mesh intersection such that the openings in the mesh are fixed in size.

The above comments represent the Department's initial concerns for the proposed project and do not constitute final concurrence. Final concurrence will be granted after review of plans and further consultation if necessary. If any of the concerns or information provided in this letter requires further clarification, please contact this office at (920) 412-0165.

Sincerely,

James P. Dopralski Jr.

Environmental Analysis & Review Specialist

c: Mike Helmrick, Regional Environmental Coordinator
File

From:	Doperalski, James P - DNR
To:	Lorenz, Kelsey A - DOT
Subject:	FW: Fox River State Trail 6f Clarification
Date:	Monday, April 09, 2018 8:57:01 AM

Kelsey,

See the email below. 6f encumbrances only extend to Brown County.

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

James P. Doperalski Jr.
Cell Phone: (920) 412-0165
James.Doperalski@wisconsin.gov

From: Raleigh Moses, Kelly L - DNR
Sent: Sunday, April 8, 2018 2:00 PM
To: Kerska, Renee L - DNR <Renee.Kerska@wisconsin.gov>; Doperalski, James P - DNR <James.Doperalski@wisconsin.gov>
Subject: FW: Fox River State Trail 6f Clarification

See the below regarding the WISDOT STH 32/57 project. 6f in Brown County, none in Calumet County. Have we received an updated project map with county boundaries and proposed easement areas?

Thanks
Kelly

-----Original Message-----
From: Gihring, Jennifer L - DNR [Jennifer.Gihring@wisconsin.gov]
Received: Friday, 06 Apr 2018, 2:21PM
To: Raleigh Moses, Kelly L - DNR [Kelly.RaleighMoses@wisconsin.gov]
CC: Terrien, Jessica N - DNR [Jessica.Terrien@wisconsin.gov]
Subject: Fox River State Trail 6f Clarification

Hello Kelly,

Per our recent discussions, this email clarifies our understanding re: 6f boundaries & federal interest for the Fox River State Trail.

Although the Fox River State Trail corridor is owned by DNR, the LAWCON 6f boundary only applies to those portions of the trail that are located in Brown County. This federal interest is derived from LAWCON grant 55-01840 (Fox River State Trail Development; $88,286), granted to Brown County in April 2005. Although 6f encumbrance would typically apply to the entirety of the sponsor's

ownership when the grant was executed, this case is unique. Because Brown County was the grant recipient, the 6f boundary only extends to portions of the trail that are under their control. As such, portions of the trail that are located in Calumet County are not currently 6f encumbered. If Calumet County were to receive LAWCON funds in the future to develop the segment of the FRST that they maintain, the Calumet County segment of the FRST would become LAWCON encumbered. Similarly, if WDNR accepts LAWCON funds for acquisition or new trail or development of any portion of the FRST, the ***entirety*** of the trail would then be LAWCON encumbered.

Sincerely,
Jennifer

Jennifer Gihring
Grant Manager – Bureau of Facilities and Lands
Wisconsin Department of Natural Resources
101 S. Webster Street
Madison, WI 53702
Phone: (608) 264-6138
Jennifer.Gihring@wisconsin.gov

dnr.wi.gov

We are committed to service excellence.
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Exhibit 9

Pursuant to 36 CFR 800.3 (a)(1) WisDOT (Cultural Resources) has determined the proposed actions for these undertakings (projects) will have no potential to cause effects to historic properties. No further section 106 obligations are required. However, if the proposed actions for an undertaking (project) should change in any way that would involve ground disturbing activities, additional section 106 coordination is required for that undertaking (project).

County	Main ID	Notification Date	Project Put on Screening List for	Route	Title	Bridge ID
Brown	1227-08-00	03/25/2011	Both Archaeology and History	IH 43	STH 96 - STH 172	
Brown	1227-08-71	03/04/2016	Both Archaeology and History	STH 172	Broadway St - IH 43	
Brown	1227-08-73	09/14/2015	Both Archaeology and History	IH-43	STH 172 - Atkinson Drive	
Brown	1227-13-60	02/28/2014	Both Archaeology and History	STH 172	STH 172 EB - IH 43 NB Ramp Expansio	
Brown	1450-20-00	06/06/2016	Both Archaeology and History	USH 141	Main Street; USH 141 & STH 29 Interse	
Brown	1451-18-00	01/26/2007	Both Archaeology and History	Main St, City of Green	Baird St - Fox River	B050255
Brown	1480-22-00	02/19/2014	Both Archaeology and History	STH 54	STH 57 - Casco Stump Rd - Valley Rd	
Brown	3271-00-00	11/07/2016	Both Archaeology and History	V of Suamico, CTH HS	Riverside Dr. - CTH B; Bridge over Sua	B-05-0711
Brown	4061-02-00	08/10/2009	Both Archaeology and History	Denmark Safe Routes t	Pedestrian Safety Improvements	
Brown	4075-25-00	02/17/2011	Both Archaeology and History	STH 96	Shanty Road - Old 57 Road (Wrightstow	
Brown	4075-39-00	01/31/2018	History Only	STH 96	Wrightstown-Denmark; STH 32 to IH 43	
Brown	4085-22-00	03/14/2007	Archaeology Only	Greenleaf - Depere	Duester St - Heritage St	
Brown	4085-33-00	02/14/2018	Both Archaeology and History	STH 32	South County Line - Duester Street	
Brown	4085-37-29	12/02/2011	Both Archaeology and History	STH 32/57	South Cty Line - DePere	
Brown	4085-42-00	05/22/2013	Archaeology Only	STH 32 (8th St in DePe	Main Ave - Ashland Ave	
Brown	4085-43-00	03/06/2013	Both Archaeology and History	STH 32	CTH X Intersection	
Brown	4085-49-30	09/18/2013	Both Archaeology and History	STH 32	Hilbert - De Pere	
Brown	4085-50-00	11/07/2013	Both Archaeology and History	STH 32	Roundabout intersection of STH 57 and	
Brown	4085-59-01	12/09/2015	History Only	STH 57	Randall Ave. - Grignon St.	
Brown	4095-13-30	03/27/2008	Both Archaeology and History	STH 96	CTH NN - IH 43	B0502390
Brown	4125-08-00	07/28/2016	History Only	ST 29	USH 141 - E Cty Line	
Brown	4125-08-01	09/16/2016	Both Archaeology and History	STH 29	USH 141/STH 29 Intersection - East of	
Brown	4180-07-00	11/17/2010	Both Archaeology and History	Walnut Street Bridge R	over the Fox River, City of Green Bay	B05-269
Brown	4190-16-00	07/09/2014	Both Archaeology and History	STH 32	8th St to Lomardi Avenue	
Brown	4190-16-01	01/03/2017	History Only	STH 32/ Ashland Ave	Parkview Rd Intersection	
Brown	4327-08-00	09/28/2016	Both Archaeology and History	T of New Denmark; CT	CTH T - Hershman Ave.; Replacement o	B-05-0033
Brown	4327-09-00	09/28/2016	Both Archaeology and History	T of New Denmark, CT	CTH T - Hershman Ave; Replacement of	P-05-0038
Brown	4503-00-00	01/21/2015	Both Archaeology and History	Cooperstown Rd/ T of	Bridge Replacement P-05-0932	P-05-0932
Brown	4503-03-00	01/21/2015	Both Archaeology and History	Wanek Road/T of New	Bridge Replacement P-05-0906	P-05-0906
Brown	4504-00-00	07/31/2007	Both Archaeology and History	Allen Road	Pine Grove Rd - Blahnik Road	
Brown	4508-08-00	01/21/2015	Both Archaeology and History	Park View Rd/ T of Mor	Bridge Replacement P-05-0145	P-05-0145
Brown	4509-02-00	02/03/2015	Both Archaeology and History	Pine Grove Rd/ T of Gl	Bridge Replacement P-05-0134	P-05-0134
Brown	4516-05-00	04/09/2010	History Only	Village of Bellevue	Manitowoc Rd (CTH JJ to Allouez Ave)	
Brown	4516-06-00	09/04/2013	Both Archaeology and History	Bower Creek Bridge	Village of Bellevue	P05-0103
Brown	4517-05-00	03/02/2015	Archaeology Only	Webster Elementary Sc	Additional sidewalks and at grade crossi	
Brown	4519-06-00	06/18/2007	Both Archaeology and History	CTHD/Lost Dauphin Ro	CTH D Bridge @ Apple Creek	B05-0460
Brown	4519-07-71	10/05/2006	Both Archaeology and History	Village of Wrightstown/	Track Construction Project	
Brown	4519-08-00	09/04/2013	Both Archaeology and History	Fair Road (town of Wrig	Branch East River Bridge	P05-0911
Brown	4519-09-00	01/21/2015	History Only	County Line Rd/ T of W	Bridge Replacement P-05-0155	P-05-0155
Brown	4538-01-00	06/18/2007	Archaeology Only	CTH KB - De Pere Roa	Bohemia Drive to CTH R	
Brown	4538-02-00	06/18/2007	Both Archaeology and History	Park Road	Park Road Bridge @ Neshota River	P05-0137
Brown	4538-05-00	05/17/2016	Both Archaeology and History	T New Denmark, CTH	Wisconsin Ave - Irish Road	
Brown	4546-02-00	10/12/2016	Both Archaeology and History	T of Wrightstown, CTH	E New Road - Golden Wheat Lane; Plu	B-05-0010

Exhibit 10

From:	Helmrick, Michael - DOT
To:	"Horton, Andrew"
Cc:	Fulcer, Andrew - DOT; Lorenz, Kelsey A - DOT
Subject:	RE: Request to Initiate Informal Section 7 Consultation - Project ID4085-33-00/71, Brown County, WI
Date:	Thursday, November 16, 2017 2:15:00 PM
Attachments:	final packet 4085-33-00 StreamlinedConsultationForm29Feb2016.pdf

RE: Request to Initiate Informal Section 7 Consultation - **May affect, not likely to adversely affect NLEB**; Project ID 4085-33-00/71, Brown County, WI

Andrew,

WisDOT is submitting the following information and determination to fulfil Section 7(a)(2) responsibilities under the ESA pertaining to potential impacts to the Dwarf Lake Iris and Whooping Crane in addition to the Northern long-eared bat. Submittal materials are in the attached PDF.

In accordance with the final 4(d) rule issued for the northern long-eared bat, WisDOT has determined that the proposed activity, described in greater detail below, will not result in prohibited take of the NLEB. Some tree removal is anticipated.

The asphaltic pavement along this section of WIS 32 will be at its service life by the time of construction. The project will involve a resurface of WIS 32 including beam guard and culvert replacements. The roundabout footprint at WIS 96 will be included in the project and will be resurfaced. Intersection improvements, if warranted, at the WIS 32/Man Cal Road intersection may be included to address an existing safety issue.

In accordance with the streamlined consultation framework, WisDOT intends to rely on the programmatic biological opinion developed for the final 4(d) rule and this submittal to satisfy our Section 7(a)(2) responsibilities.

If you have questions, please contact me at 920-492-7738.

Thanks

Mike

Mike Helmrick

Region Environmental Coordinator
Wisconsin Department of Transportation
Northeast Region
Phone: (920) 492-7738
wisconsindot.gov

If this is related to a records request, please email: dotdtsdnerecords@dot.wi.gov

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:	**YES**	**NO**
1. Does the project occur wholly outside of the WNS Zone[1]?	☐	☒
2. Have you contacted the appropriate agency[2] to determine if your project is near known hibernacula or maternity roost trees?	☒	☐
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	☐	☒
4. Could the project alter the entrance or interior environment of a known hibernaculum?	☐	☒
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	☐	☒
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	☐	☒

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant[3] (Name, Email, Phone No.):

Mike Helmrick
michael.helmrick@dot.wi.gov
920-492-7738

Project Name: 4085-33-00 resurfacing, South County line to Duester Street

Project Location (include coordinates if known):

Brown County, Wisconsin (Coordinates are too numerous to list).
See attachment 1 for project location maps.

[1] http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf
[2] See http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html
[3] If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

Basic Project Description (provide narrative below or attach additional information):

The asphaltic pavement along this section of WIS 32 will be at its service life by the time of construction. The project will involve a resurface of WIS 32 including beam guard and culvert replacements. The roundabout footprint at WIS 96 will be included in the project and will be resurfaced. Intersection improvements, if warranted, at the WIS 32/Man Cal Road intersection may be included to address an existing safety issue.

The Wisconsin Department of Natural Resources (WDNR) reviewed their Natural Heritage Inventory database on 11/16/2017. In that review, WDNR determined that there are no known NLEB maternity roost trees within 150 feet and no known hibernacula within 0.25 miles of the proposed project (Attachment 2).

Attachment 3 contains the official species list generated using the IPAC tool on 11/16/2017 (Consultation Code: 03E17000-2018-SLI-0211). The effect determinations for the Federally-listed species are in Attachment 4.

General Project Information	**YES**	**NO**
Does the project occur within 0.25 miles of a known hibernaculum?	☐	☒
Does the project occur within 150 feet of a known maternity roost tree?	☐	☒
Does the project include forest conversion[4]? (if yes, report acreage below)	☒	☐
Estimated total acres of forest conversion	Less than 1	
If known, estimated acres[5] of forest conversion from April 1 to October 31	Unknown	
If known, estimated acres of forest conversion from June 1 to July 31[6]	Unknown	
Does the project include timber harvest? (if yes, report acreage below)	☐	☒
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	☐	☒
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	☐	☒
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5,

[4] Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).
[5] If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
[6] If the activity includes tree clearing in June and July, also include those acreage in April to October.

2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

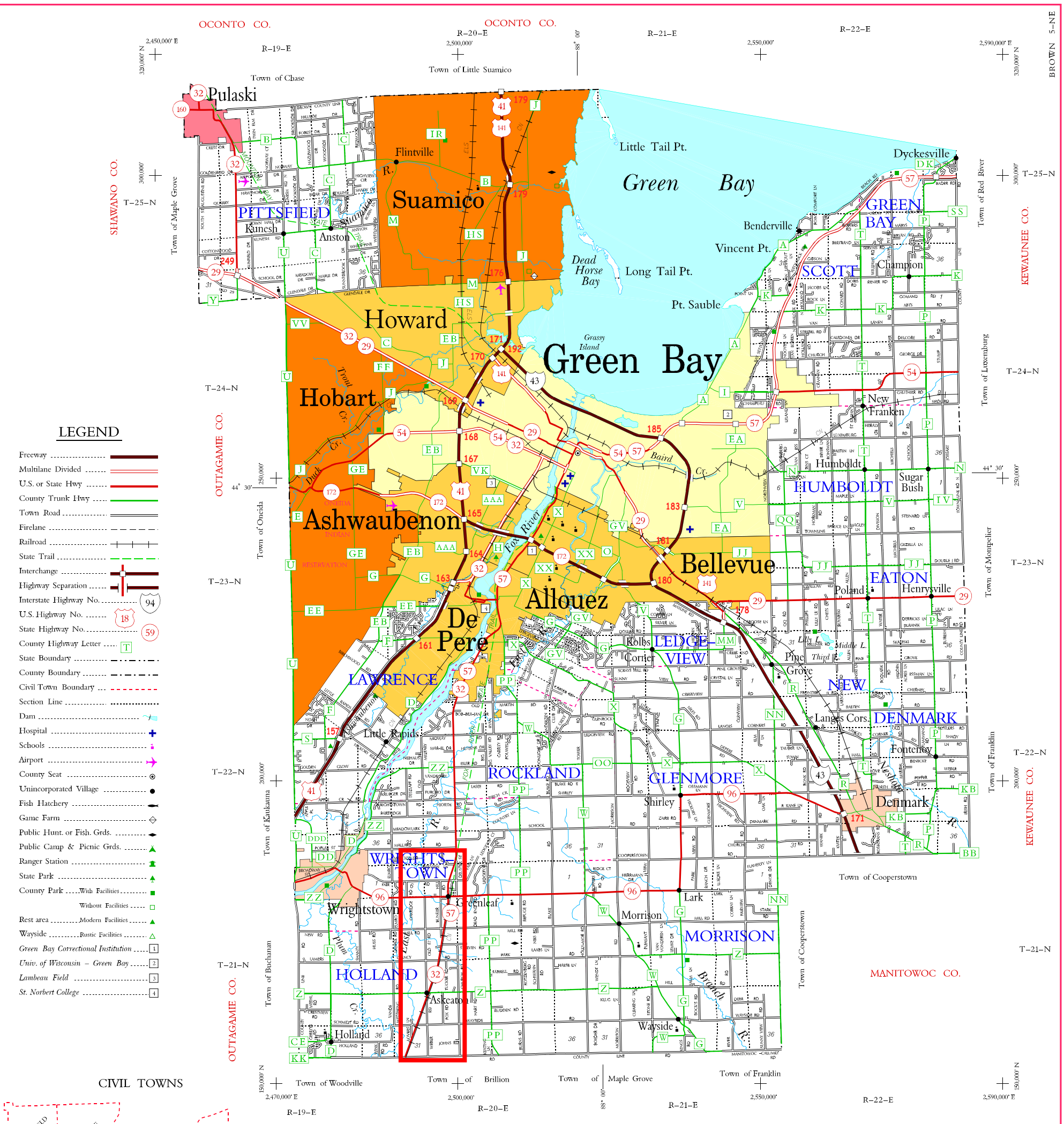
The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: _____ Date Submitted: 11-16-2017

List of Attachments

1: Project Location Map
2: WDNR NHI Review
3: Official Species List
4: Effect Determinations for Federally Listed Species

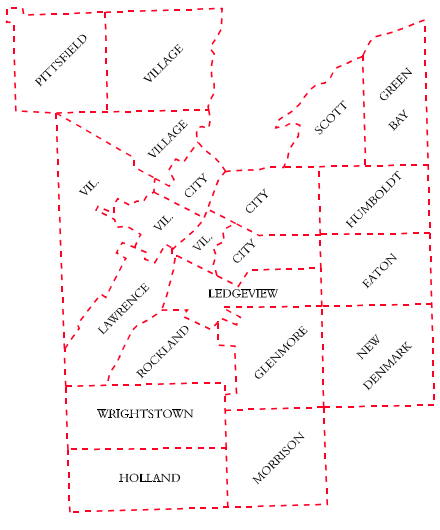
1: Project Location Map



LEGEND

- Freeway
- Multilane Divided
- U.S. or State Hwy
- County Trunk Hwy
- Town Road
- Firelane
- Railroad
- State Trail
- Interchange
- Highway Separation
- Interstate Highway No. (94)
- U.S. Highway No. (18)
- State Highway No. (59)
- County Highway Letter (T)
- State Boundary
- County Boundary
- Civil Town Boundary
- Section Line
- Dam
- Hospital
- Schools
- Airport
- County Seat
- Unincorporated Village
- Fish Hatchery
- Game Farm
- Public Hunt. or Fish. Grds.
- Public Camp & Picnic Grds.
- Ranger Station
- State Park
- County Park ..... With Facilities
- Without Facilities
- Rest area ..... Modern Facilities
- Wayside ..... Rustic Facilities
- *Green Bay Correctional Institution* (1)
- *Univ. of Wisconsin – Green Bay* (2)
- *Lambeau Field* (3)
- *St. Norbert College* (4)

CIVIL TOWNS

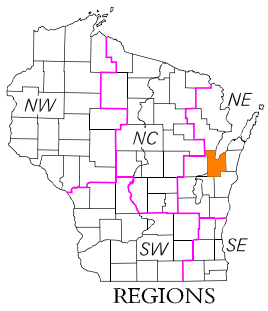


For boundaries of public hunting and fishing grounds please contact the Department of Natural Resources

Grid based on the state plane coordinate system central zone and the NAD 27

SECTION NUMBERING OF A TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36



REGIONS

MILES OF HIGHWAY
as of Dec. 31, 2010

STATE	184
COUNTY	359
LOCAL ROADS	1773
OTHER ROADS	8
TOTAL FOR COUNTY	2,324

Land Area (2000 Census) ..... 529 sq mi
Population (2000 Census) 226,778
County Seat ..... Green Bay

BROWN CO.

DEPARTMENT OF TRANSPORTATION
STATE OFFICE BUILDING
Madison, Wisconsin

SCALE 0 1 2 MILES

Corrected for
JAN. 2012

Base compiled from U.S.G.S. Quadrangles
1:100,000 Series

BROWN 5-NE

2: WDNR NHI review

Helmrick, Michael - DOT

From: Doperalski, James P - DNR
Sent: Thursday, November 16, 2017 1:20 PM
To: Helmrick, Michael - DOT
Subject: RE: NLEB check for 4085-33-00

Mike,

I checked the NHI database on November 16, 2017 and did not find any records for either the NLEB or the Rusty Patch Bumble Bee.

We are committed to service excellence.
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

James P. Doperalski Jr.
Cell Phone: (920) 412-0165
James.Doperalski@wisconsin.gov

From: Helmrick, Michael - DOT
Sent: Thursday, November 16, 2017 10:56 AM
To: Doperalski, James P - DNR <James.Doperalski@wisconsin.gov>
Subject: NLEB check for 4085-33-00

Jim –

Another project for a NLEB check. Project 4085-33-00 on highway 32 in Brown County, South County Line to Duester Street. Prelim comment letter is from 2015, and no mention of NLEB, so I need an update. It's another one that we looked at wetlands on this summer.

Thanks

Mike

Mike Helmrick
Region Environmental Coordinator
Wisconsin Department of Transportation
Northeast Region
Phone: (920) 492-7738
wisconsindot.gov

If this is related to a records request, please email: dotdtsdnerecords@dot.wi.gov

3: Official Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229-9565
Phone: (920) 866-1717 Fax: (920) 866-1710

In Reply Refer To: November 16, 2017
Consultation Code: 03E17000-2018-SLI-0211
Event Code: 03E17000-2018-E-00490
Project Name: 4085-33-00, WIS 32, Brown County

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or**

are over 200 feet in height (e.g., communication towers), please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.) and Migratory Bird Treaty Act (16 U.S.C. 703 et seq), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Green Bay Ecological Services Field Office
2661 Scott Tower Drive
New Franken, WI 54229-9565
(920) 866-1717

Project Summary

Consultation Code: 03E17000-2018-SLI-0211

Event Code: 03E17000-2018-E-00490

Project Name: 4085-33-00, WIS 32, Brown County

Project Type: TRANSPORTATION

Project Description: Wis 32 from the South County Line to Duester Street.
The asphaltic pavement along this section of WIS 32 will be at its service life by the time of construction. The project will involve a resurface of WIS 32 including beam guard and culvert replacements. The roundabout footprint at WIS 96 will be included in the project and will be resurfaced. Intersection improvements, if warranted, at the WIS 32/Man Cal Road intersection may be included to address an existing safety issue.

Project Location:

Approximate location of the project can be viewed in Google Maps:
https://www.google.com/maps/place/44.28800721845536N88.10194234037263W

Counties: Brown, WI | Calumet, WI

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

Flowering Plants

NAME	STATUS
Dwarf Lake Iris *Iris lacustris* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/598	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

4: Effect Determinations for Federally Listed Species

4085-33-00
WIS 32
South County Line to Duester Street
Brown County

Effect determination for Federally Listed Species:

Species Common Name	Species Scientific Name	Effect Determination	Justification
Dwarf Lake Iris	*Iris lacustris*	No effect	No occurrence in NHI and habitat not present
Northern long-eared Bat	*Myotis septentrionalis*	may effect, but will not result in a prohibited take	Activity will not remove a known roost tree or any other tree within 150 feet of a known maternity roost tree from June 1 – July 31. Activity is not within 0.25 miles of known hibernacula
Whooping Crane	*Grus Americana*	No effect	No occurrence in NHI and habitat not present, experimental population