BDA 100-05 | DECEMBER 21, 2023 (REV. MAY 2025)

BRIDGE SAMPLE PLANS - REHABILITATION

Reference: IDM 14 Plan Preparation

The following set of sample bridge rehabilitation plans has been created to illustrate a typical set for designers. This set is provided for illustrative purposes only. See the title sheet for complete Intended Use and Disclaimer Information.

Summary of Revisions

Sheet	Revision Date	Note
Title	5/2/2025	The title sheet has been updated for bundled and stand-alone projects. The border has been updated to remove the project number. The structure data table has been updated to change “Flowline” to “Invert.”

PURPOSE:

The purpose of this drawing is to provide an overview of the project, including project data, design data, project location, and approval signatures.

DESIGNATION	
9999999	
CONTRACT	BRIDGE FILE
B-99999	156-78-00000 B

(1) Match Title Block Text Style

STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
156-78-00000 B	Continuous Composite Steel Beam Bridge	7 Spans: Unit 1: 43'-0" & 42'-3" Unit 2: 60'-0", 72'-0" & 60'-0" Unit 3: 42'-3" & 43'-0" Skew: 0°	Log Lick Creek	℄ Structure 259+85.00 Line "K"

(2)

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
0000000 (LEAD)	TITLE OR BRIEF DESCRIPTION OF LEAD ASSOCIATED PROJECT
1111111	TITLE OR BRIEF DESCRIPTION OF ASSOCIATED PROJECT
9999999	TITLE OR BRIEF DESCRIPTION OF PROJECT DESCRIBED IN THESE PLANS

(14)

REQUIRED ELEMENTS:

1. Project Information Block (Upper Left and Lower Right Corners)
2. Structure Information Table
3. Designation Number
4. Reference Post
5. Project Work Description
6. Project Location Map:
   - North Arrow and Scale
   - Begin and End Project Callouts
7. Traffic/Design Data Table
   - See IDM Fig 14-3C for acceptable values for Design Data Table
8. County Location Map
9. Latitude and Longitude
10. Project Length Table
    - Do not include length of S-lines
    - Do not include length of incidental construction
11. Hydrologic Unit Code (Where needed for a waterway permit application, typ. HUC 12)
12. Standard Specification Reference
13. Signature Block and PE Seal
14. Kin Project Information Table (when applicable)
15. Owner and LPA Employee in Reponsible Charge (ERC) signatures (LPA Projects Only)

INDIANA DEPARTMENT OF TRANSPORTATION

Text Font = Tahoma (Typ. All Text)
Text Height = 0.50", Bold

BRIDGE REHABILITATION PLANS

Text Height = 0.70"

FOR SPANS OVER 20 FEET

Text Height = 0.37"

ROUTE: SR 156 AT: RP 4+88

(4) Text Height = 0.40"

DESIGNATION NO. 9999999

(3) Text Height = 0.46"

This note placed only when applicable.

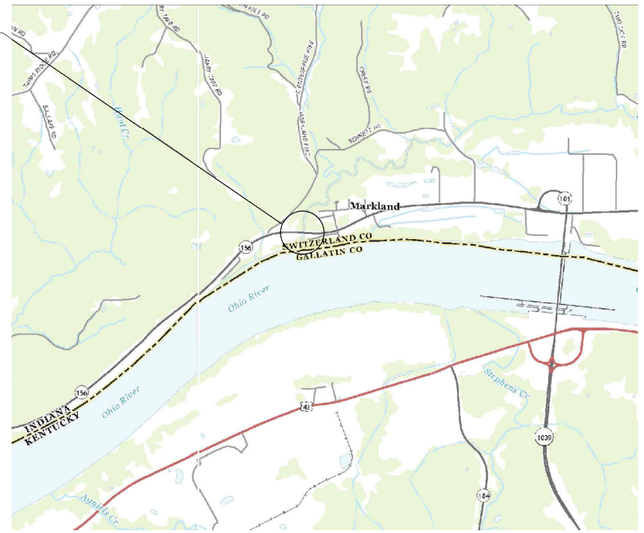
NO ADDITIONAL RIGHT-OF-WAY REQUIRED FOR THIS PROJECT

Text Style: 14 Pt Text (8)

Partial Superstructure Replacement and Full Deck Replacement on SR 156 over Log Lick Creek
Located 1.27 Miles West of S.R. 101 in
Sections 3 & 8, 4, T-1-N, R-2-W, York Township, Switzerland County, Indiana

(5) A complete description of the location for the project must be shown. This is not the survey legal description.
Location Description: 18 Pt Text

PROJECT LOCATION
Begin Project-Sta.257+81.00 "K"
End Project-Sta.261+89.00 "K"



LOCATION MAP

SCALE: 1" = 2000'

Typical Scales:
1" = 500'
1" = 1000'
1" = 2000'
1" = 4000'
1" = 5000'

(6)

Location Map must be of sufficient enough scope and appropriate scale to clearly depict the relation of the project to the area in which it is being placed.
Location Map Text Callouts: 14 Pt Text
Location Map Labels: 12 Pt Text Min.
Section Labels: 18 Pt Text

TRAFFIC DATA

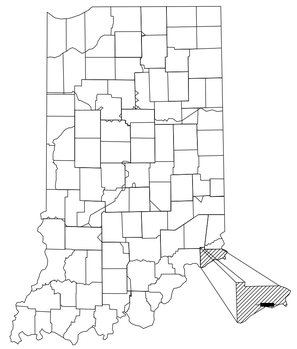
A.A.D.T.	(2022)	4810 V.P.D.
A.A.D.T.	(2042)	5325 V.P.D.
D.H.V	(2042)	484 V.P.H.
DIRECTIONAL DISTRIBUTION		45.45 %
TRUCKS		15.63 % A.A.D.T.
		9.08 % D.H.V.

DESIGN DATA

DESIGN SPEED	55 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE

Typ. All Tables on Title Sheet:
Table Title Text Height = 0.25"
Table Data: 12 Pt Text

(7)



PROJECT LOCATION SHOWN BY
SWITZERLAND COUNTY

Text Style: 14 Pt Text (9)

LATITUDE: 38°46'48.36" N LONGITUDE: 84°59'23.39" W

Text Style: 14 Pt Text (10)

Show lengths to three decimal places. Do not round.

BRIDGE LENGTH: 0.070 MI.
ROADWAY LENGTH: 0.008 MI.
TOTAL LENGTH: 0.078 MI.
MAX. GRADE: 1.59 %

(11) HUC 12: 050902031007

APPROVED BY (15) DATE

BOARD OF COMMISSIONERS

APPROVED BY DATE

SWITZERLAND COUNTY ENGINEER

ATTESTED DATE

SWITZERLAND COUNTY, INDIANA

INTENDED USE AND DISCLAIMER INFORMATION:

This set of sample plan sheets is provided for illustrative purposes only. The callouts and notes in this sample plan are intended only to show a need for a callout, level of specificity, and its expected appearance. INDOT makes no guarantee of the accuracy of data used for this hypothetical project although every attempt has been made to produce a reasonable design in accordance with the current *Indiana Design Manual*. The Designer must determine specific content of plan sheets and notes for his/her individual project. In the event of a conflict, the policies stated in the current *Indiana Design Manual* and *INDOT CAD Standards Manual* will govern.

Text Style: 14 Pt Text (12)

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2024
TO BE USED WITH THESE PLANS.

(13)

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

PLANS PREPARED BY: Engineer of Record 317-555-1234 PHONE NUMBER

CERTIFIED BY: *Engineer of Record Signature* MM/DD/YY DATE

APPROVED FOR LETTING: INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE
156-78-00000 B
DESIGNATION
9999999
SHEET
1 of 71
CONTRACT
B-99999

(1)

PURPOSE:

The purpose of this Index sheet is to provide a listing of all sheets in the plans, utilities contact information, and a record of revisions to the plans.

See IDM 14-3.07(02) for information regarding sequence of sheets when additional sheets are required for a project.

(1)

INDEX

Cross Sections should be included when road work/resurfacing is part of the rehabilitation project scope of work.

(2)

UTILITIES

SOUTHEASTERN INDIANA REMC
712 S. Buckeye Street
Osgood, IN 47037
Attn: Ian Kindler
Ph: 812-689-4111 Ext. 243
Email: iank@seiremc.com

SWITZERLAND COUNTY NATURAL GAS
105 East Seminary Street
Vevay, IN 47043
Attn: Alan Konkle
Ph: 812-292-4320
Email: switzco@gmail.com

CENTURYLINK COMMUNICATIONS, LLC
426 S. Main Street
Lawrenceburg, IN 47025
Attn: David Baker
Ph: 812-584-8471
Email: dbaker@truenetcommunications.com

(3) 811 Know what's below. Call before you dig.

INDIANA UNDERGROUND
1-800-382-5544 OR CALL 811
24 HOURS A DAY 7 DAYS A WEEK

Typ. Table on Index Sheet:
Table Title Text Height: 0.25"
Table Data: 12 Pt Text

(4)

REVISIONS

SHEET NO.	DATE	REVISED

REQUIRED ELEMENTS:

1. Sheet Index
2. Utilities Information
   - Name
   - Address
   - Contact Person
   - Contact Phone No.
   - Contact Email
3. 811 Indiana Underground Logo
4. Revisions Block
5. Signature Block and PE Seal

(5)

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

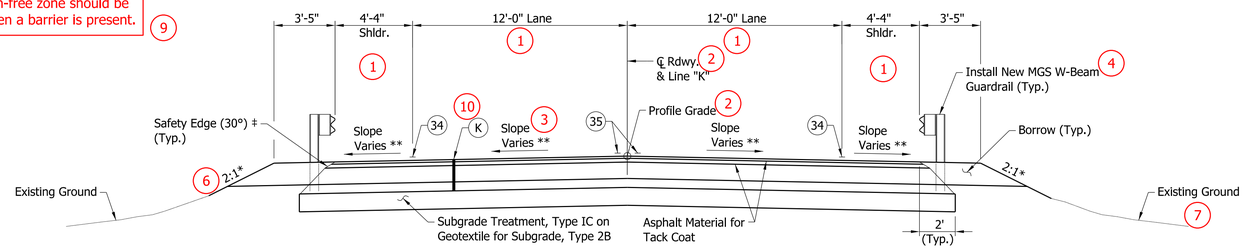
INDEX

HORIZONTAL SCALE	BRIDGE FILE
N/A	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	2 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this drawing is to show materials, details, and dimensions for roadway sections which vary from those included in the Standard Drawings.

NOTE: Neither clear zone nor obstruction-free zone should be shown when a barrier is present. (9)



TYPICAL SECTION - FULL DEPTH HMA

Sta. 257+25.00 "K" to Sta. 257+81.00 "K"

Sta. 261+89.00 "K" to Sta. 262+25.00 "K"

Scale: 1/4" = 1'-0"

Typ. All Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

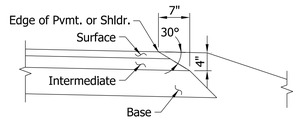
(11) LEGEND

(R) Milling Asphalt, 1 1/2"
165 lbs/syd QC/QA-HMA, 3, 70, Surface, 9.5 mm

(K) 165 lbs/syd QC/QA-HMA, 3, 70, Surface, 9.5 mm on
275 lbs/syd QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
1210 lbs/syd QC/QA-HMA, 3, 64, Base, 25.0 mm on
6 in. of Compacted Aggregate, No. 53

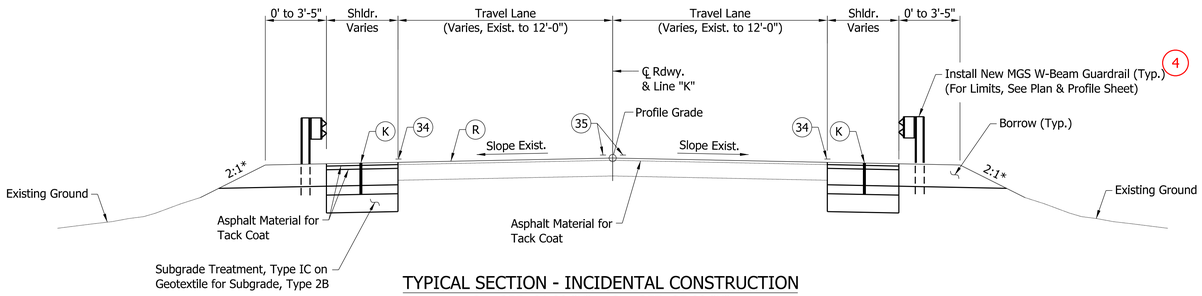
(34) Line, Paint, Solid, White, 4 in.

(35) Line, Paint, Solid, Yellow, 4 in.



30° SAFETY EDGE

Scale: 3/4" = 1'-0"

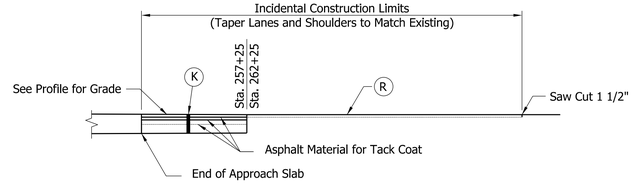


TYPICAL SECTION - INCIDENTAL CONSTRUCTION

Sta. 255+81.00 "K" to Sta. 257+25.00 "K"

Sta. 262+25.00 "K" to Sta. 264+49.00 "K"

Scale: 1/4" = 1'-0"



MATCHING EXISTING PAVEMENT - LINE "K"

(Req'd. @ Beginning and End of Project)

Not to Scale

NOTES

The pavement safety edge is not required in locations of guardrail, or barrier rail; however, the Contractor has the option to construct the pavement safety edge within these limits if they choose.

* See Cross Sections for Slope.

** Transition Slope and Width between Approach Slab & Existing Section.

For Plan & Profile Sheet, See Sht. 8.

‡ Safety Edge (30°) applicable to Surface & Intermediate Layers only.

REQUIRED ELEMENTS:

(1) Lane and Shoulder Widths
(2) Profile Grade, Construction Centerline, paper Relocation Line, and Survey Line Locations
(3) Cross Slopes
(4) Curbs and Guardrails
(5) Sidewalk Locations and Widths
(6) Side Slopes
(7) Ditches
(8) Bicycle Facilities
(9) Clear Zone (4R projects) or Obstruction-Free Zone (3R Projects)
(10) Pavement Design
(11) Legend
See IDM Fig. 14-3A for Recommended Plans Legends
(12) Signature Block and PE Seal

(12)

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

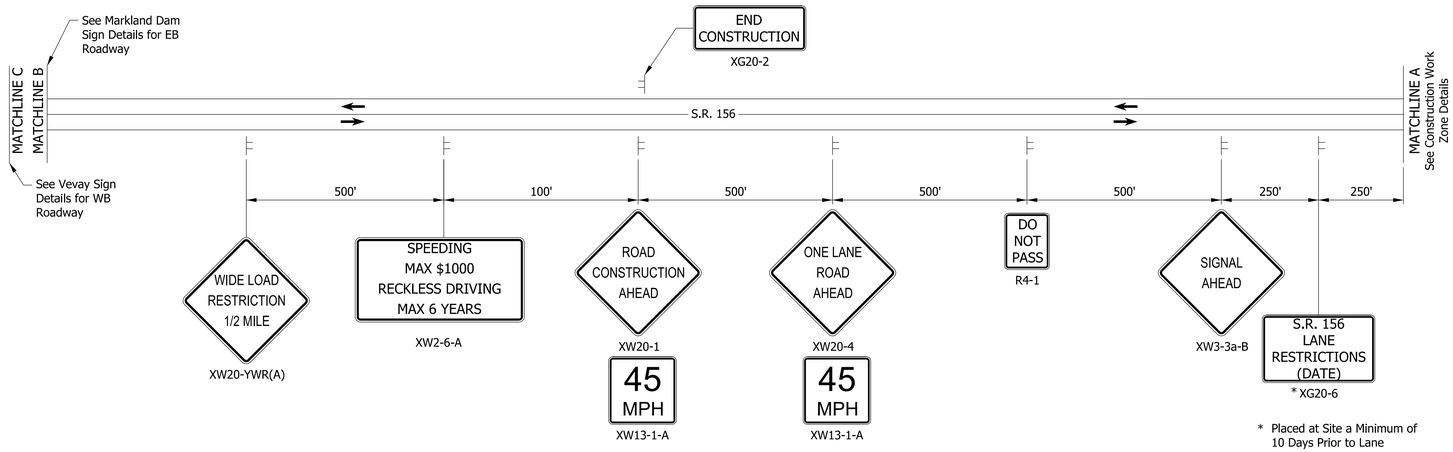
INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	3 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this drawing is to show the Advance Signing Plan layout and details.

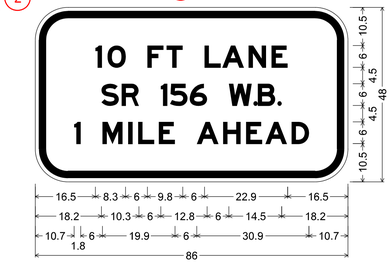


* Placed at Site a Minimum of 10 Days Prior to Lane Restrictions

1 ADVANCE SIGNING PLAN
Not to Scale

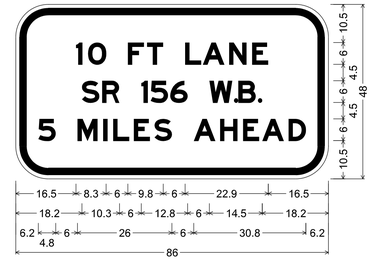
2

3



XIGDO-1;
Job Number : 1701500;
State : Indiana;
Item : Temporary Panel Signs;
Quantity : 29 SFT;
Sign Type : Temporary Construction;
Supports : Wood Posts, 2 EA. (6" X 8"), Min.;
Mounting : See Std. Dwg. No. E-801-TCSN-07;
Drawn by : KCH;
9.0" Radius, 2.0" Border, 1.0" Indent, Black on Orange;
"10 FT LANE", E Mod;
"SR 156 W.B.", E Mod 50% spacing;
"1 MILE AHEAD", E Mod;

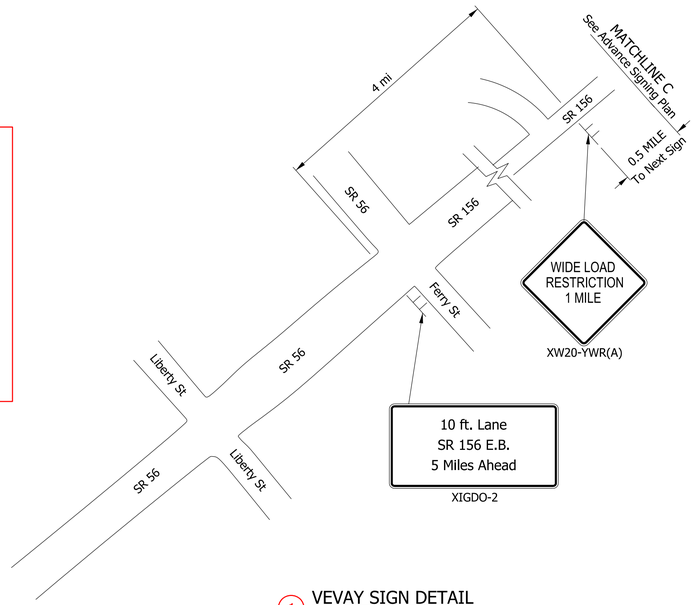
3



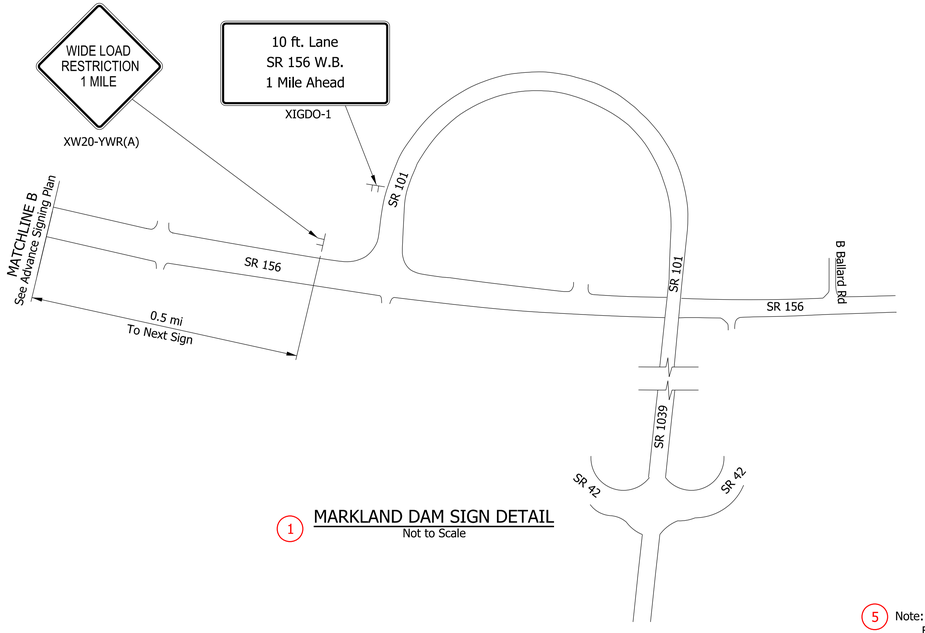
XIGDO-2;
Job Number : 1701500;
State : Indiana;
Item : Temporary Panel Signs;
Quantity : 29 SFT;
Sign Type : Temporary Construction;
Supports : Wood Posts, 2 EA. (6" X 8"), Min.;
Mounting : See Std. Dwg. No. E-801-TCSN-07;
Drawn by : KCH;
9.0" Radius, 2.0" Border, 1.0" Indent, Black on Orange;
"10 FT LANE", E Mod;
"SR 156 W.B.", E Mod 50% spacing;
"5 MILES AHEAD", E Mod;

REQUIRED ELEMENTS:

1. Advance Signing Layout
2. North Arrow
3. Non-standard Sign Details
4. Legend
5. Notes
6. Construction Zone Design Speed
7. Signature Block and PE Seal



1 VEVAY SIGN DETAIL
Not to Scale



1 MARKLAND DAM SIGN DETAIL
Not to Scale

4 LEGEND

Construction Sign

5 Note:
For Construction Work Zone Details, See Sht. 5.

6 CONSTRUCTION ZONE DESIGN SPEED IS 45 MPH

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

7

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

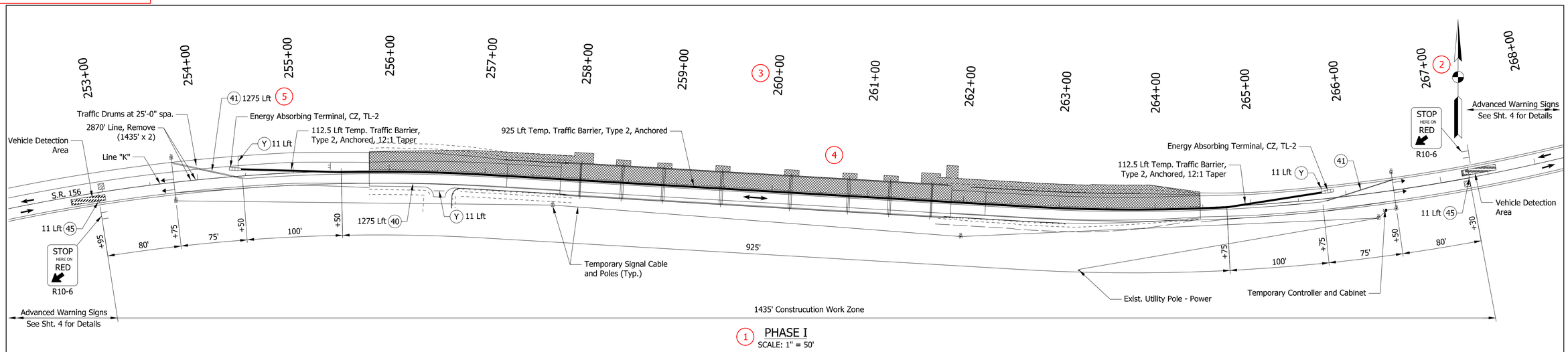
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETAILS

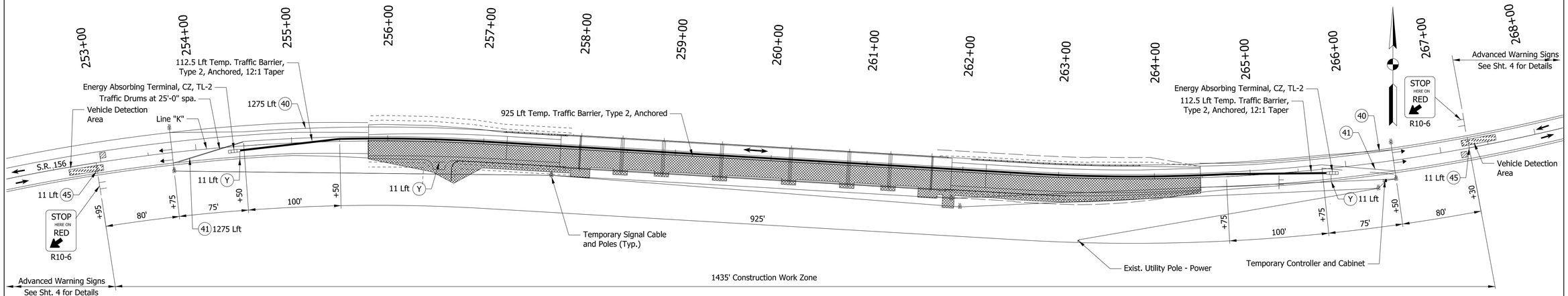
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
N/A	9999999
	SHEET
	4 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this drawing is to show Traffic Control Layout and devices by Construction/MOT Phase.



1 PHASE I
SCALE: 1" = 50'



1 PHASE II
SCALE: 1" = 50'

9 ESTIMATED MOT QUANTITIES

ITEM	UNIT	PHASE I	PHASE II	TOTAL
Maintaining Traffic	LSUM	1	1	1
Fixed Temporary Signal, With Detection	LSUM	1	1	1
Construction Sign, A	EACH	18	18	18
Construction Sign, B	EACH	12	12	12
Construction Sign, C	EACH	2	2	2
Snowplowable Raised Pavement Marker, Removed	EACH	19	0	19
Snowplowable Raised Pavement Marker	EACH	19	0	19
Barricade, III-B	LFT	36	36	36
Line, Remove	LFT	2405	405	2810
Temporary Pavement Marking, Removable, 4 in.	LFT	2550	2550	5100
Temporary Pavement Marking, Removable, 24 in.	LFT	22	0	22
Temporary Traffic Barrier, Anchored, Type 2	LFT	1150	1150	1150

Typ. Table:
Table Title: 18 Pt Text
Table Data: 12 Pt Text

6 LEGEND

- 40 Temporary Pavement Marking, Removable, 4 in. (White)
- 41 Temporary Pavement Marking, 4 in. (Yellow)
- 45 Temporary Pavement Marking, Removable, 24 in. (White)
- Y Barricade, III-B
- Area of Construction
- Construction Drum with Warning Lights
- Direction of Traffic
- Traffic Signal Poles
- Temporary Traffic Signal Head, 3 Section
- Construction Sign

7 PHASE DIAGRAM

Φ1	Φ2	Φ3	Φ4
→		←	

8 CONSTRUCTION ZONE DESIGN SPEED IS 45 MPH

REQUIRED ELEMENTS:

1. Plan View by Phase
2. North Arrow
3. Alignment and Stations
4. Construction Area
5. Pavement Markings w/ Estimated Quantities
6. Legend
7. Temporary Traffic Signal Phase Diagram (when needed)
8. Construction Zone Design Speed
9. MOT Quantity Summary Table
10. Signature Block and PE Seal

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

10

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER — MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

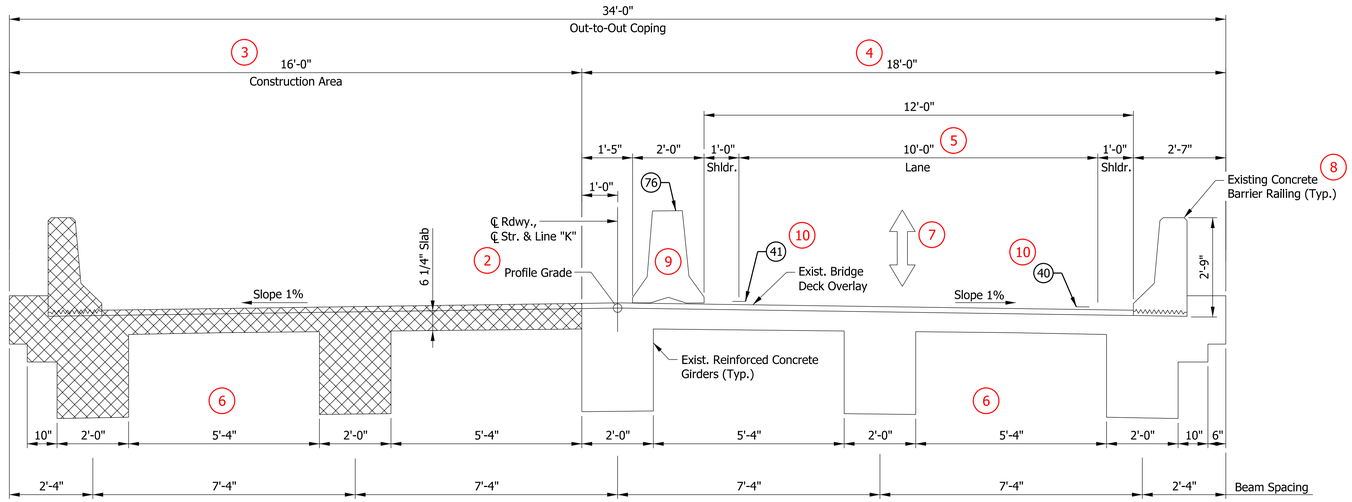
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
N/A	9999999
	SHEET
	5 of 71
	CONTRACT
	B-99999

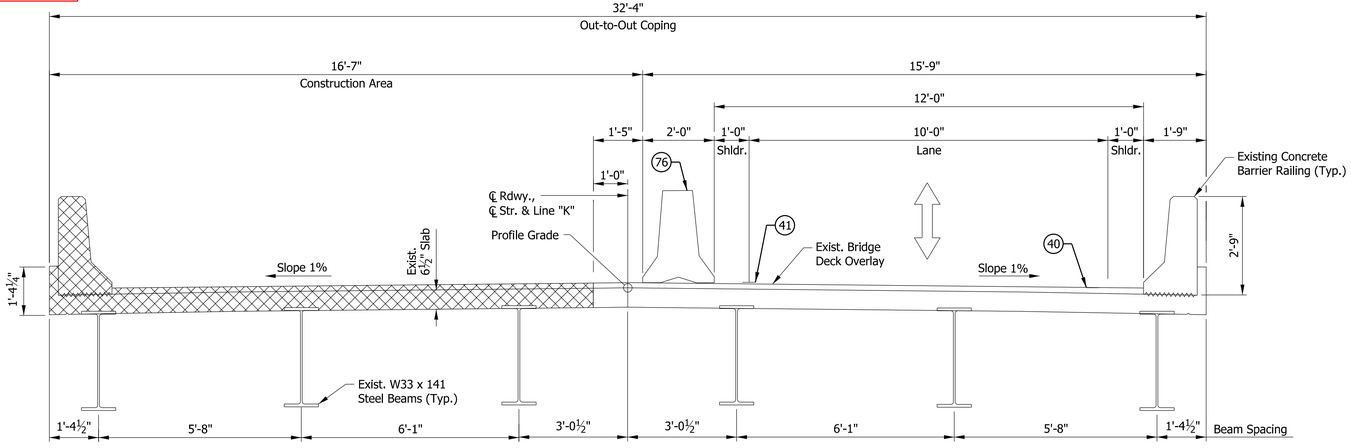
PURPOSE:

The purpose of this drawing is to show Traffic Control Devices and travel lanes by Construction/MOT Phase.



1 TYPICAL SECTION - PHASE I
(SPANS "A", "B", "F", "G")
Scale: 1/2" = 1'-0"

Typ. All Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



1 TYPICAL SECTION - PHASE I
(SPANS "C" thru "E")
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Typical Structure Sections for Construction Phase
2. Profile Grade & Construction Survey Lines
3. Construction Area
4. Traffic Area
5. Shoulder & Lane Widths
6. Superstructure Information (Existing & New Construction)
7. Traffic Flow Direction
8. Guardrail or Bridge Railing in Traffic Area
9. Traffic Control Devices
10. Temporary Pavement Markings
11. Legend
See IDM Fig. 14-3A for Recommended Plans Legends
12. Construction Zone Design Speed
13. Signature Block and PE Seal

11 LEGEND

- 40 Temporary Pavement Marking, Removable, 4 in. (White)
- 41 Temporary Pavement Marking, 4 in. (Yellow)
- 76 Temporary Traffic Barrier, Type 2, Anchored
- Area of Construction

12 CONSTRUCTION ZONE DESIGN SPEED IS 45 MPH

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

13

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

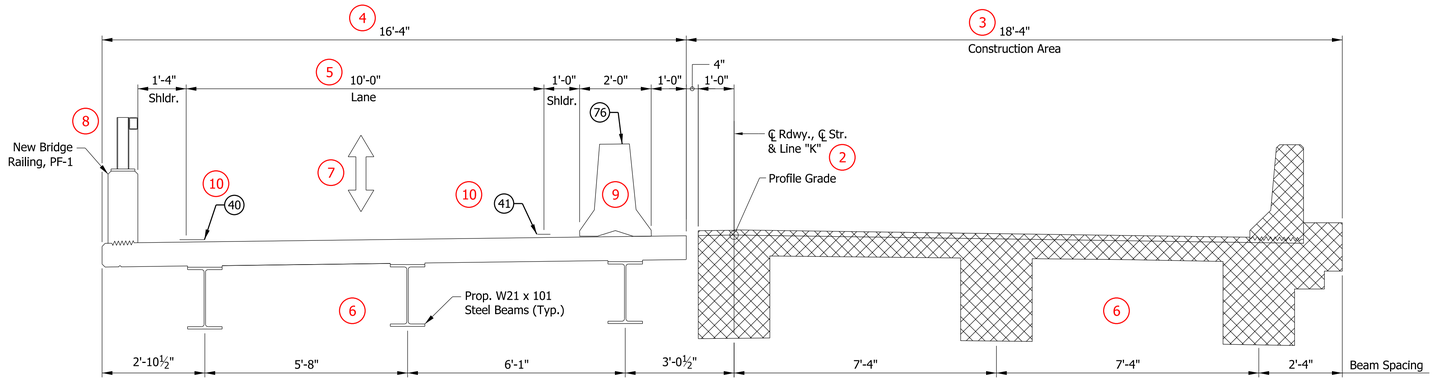
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	6 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this drawing is to show Traffic Control Devices and travel lanes by Construction/MOT Phase.

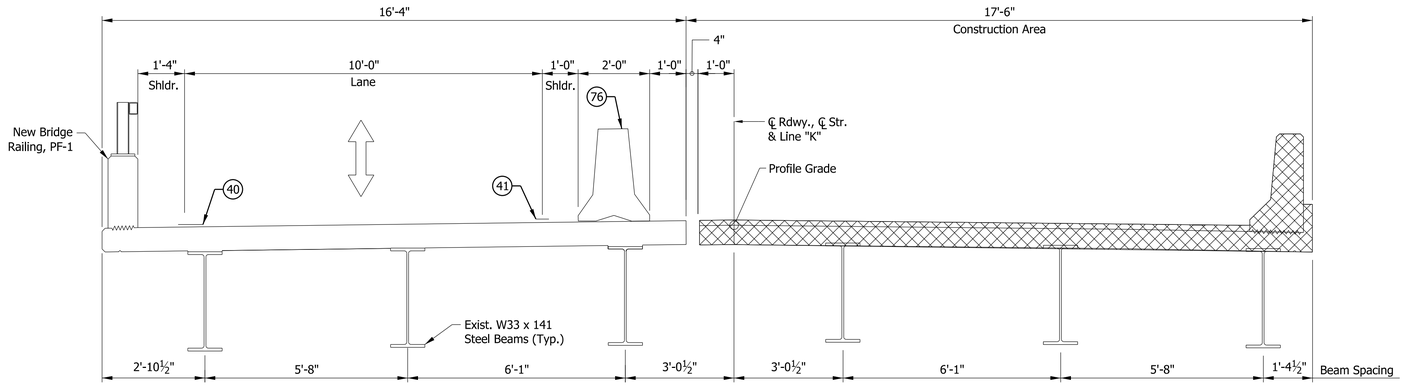


Typ. All Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

1 TYPICAL SECTION - PHASE II
(SPANS "A", "B", "F", "G")
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Typical Structure Sections for Construction Phase
2. Profile Grade & Construction Survey Lines
3. Construction Area
4. Traffic Area
5. Shoulder & Lane Widths
6. Superstructure Information (Existing & New Construction)
7. Traffic Flow Direction
8. Guardrail or Bridge Railing in Traffic Area
9. Traffic Control Devices
10. Temporary Pavement Markings
11. Legend
See IDM Fig. 14-3A for Recommended Plans Legends
12. Construction Zone Design Speed
13. Signature Block and PE Seal



TYPICAL SECTION - PHASE II
1 (SPANS "C" thru "E")
Scale: 1/2" = 1'-0"

11 LEGEND

- 40 Temporary Pavement Marking, Removable, 4 in. (White)
- 41 Temporary Pavement Marking, 4 in. (Yellow)
- 76 Temporary Traffic Barrier, Type 2, Anchored
- Area of Construction

12 CONSTRUCTION ZONE DESIGN SPEED IS 45 MPH

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

13 PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

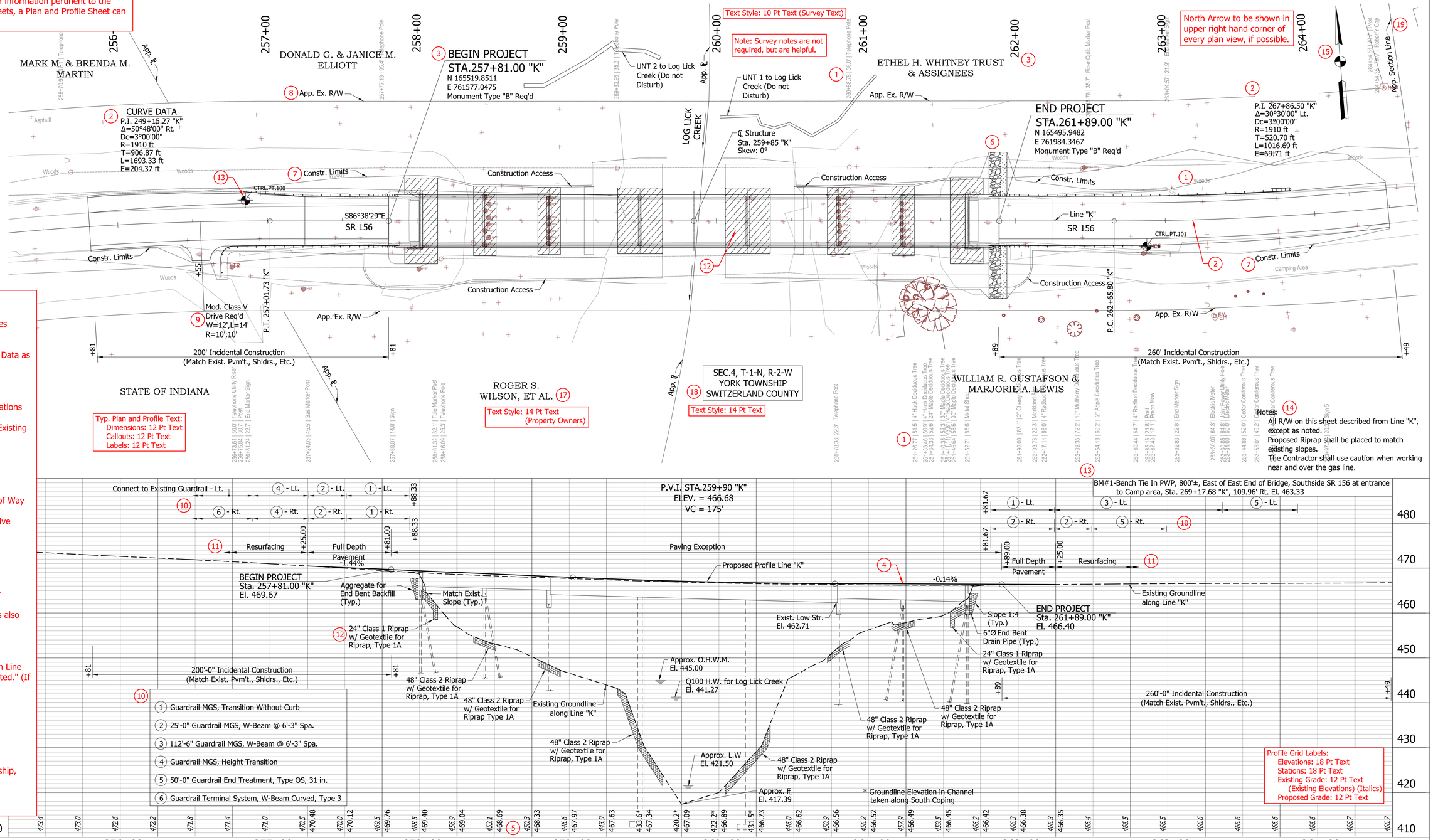
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	7 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of the Plan and Profile sheet is to facilitate Engineering and Construction by providing complete topo, alignment data, R/W, and profile information from beginning to end of Project. Plan and Profile is not necessary for every rehabilitation project. If existing R/W, proposed guardrail and other information pertinent to the project can be shown on other sheets, a Plan and Profile Sheet can be omitted.

REQUIRED ELEMENTS:

1. Existing Topography and Notes
2. Horizontal Alignment and Annotations, Including Curve Data as Needed
3. Begin/End of Project
4. Vertical Alignment and Annotations
5. Elevations Along Alignment: Existing (Italics) and Proposed
6. Drainage Features
7. Construction Limits
8. Existing and Proposed Right of Way
9. Public Road Approach and Drive Locations
10. Barrier and Guardrail Limits
11. Paving Limits
12. Permanent Erosion and Scour Protection (Optional if this information is also shown on Layout)
13. Alignment Reference Ties
14. Note: "All R/W described from Line ___. Line ___ to be constructed." (If multiple alignments shown.)
15. North Arrow
16. Sheet Scales
17. Existing Property Owners
18. Township, Range, Civil Township, and County
19. Section Line



10
1. Guardrail MGS, Transition Without Curb
2. 25'-0" Guardrail MGS, W-Beam @ 6'-3" Spa.
3. 112'-6" Guardrail MGS, W-Beam @ 6'-3" Spa.
4. Guardrail MGS, Height Transition
5. 50'-0" Guardrail End Treatment, Type OS, 31 in.
6. Guardrail Terminal System, W-Beam Curved, Type 3

13

CONTROL PT. #100	CONTROL PT. #101
N 761482.3393 E 165539.2515	N 762081.8070 E 165473.2969
Top corner SW Cor Handrail	NE End Marker Post
N.O.R.A	South Edge Delinator Post
SR 156	SR 156
Center Wood Post	NE Cor Sign Post MARKLAND
NW Cor Handrail	NW Cor End Marker Post

Reference Ties Text:
Labels: 8 Pt Text
Titles: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE LINE "K"

16 HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	156-78-00000 B
16 VERTICAL SCALE	DESIGNATION
1" = 10'	9999999
	SHEET
	8 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this drawing is to facilitate Engineering and Construction by providing Approach and Incidental Construction Details.

Typ. All Notes Blocks:
Titles: 18 Pt Text
Section Headings: 14 Pt Text
Notes Body: 12 Pt Text

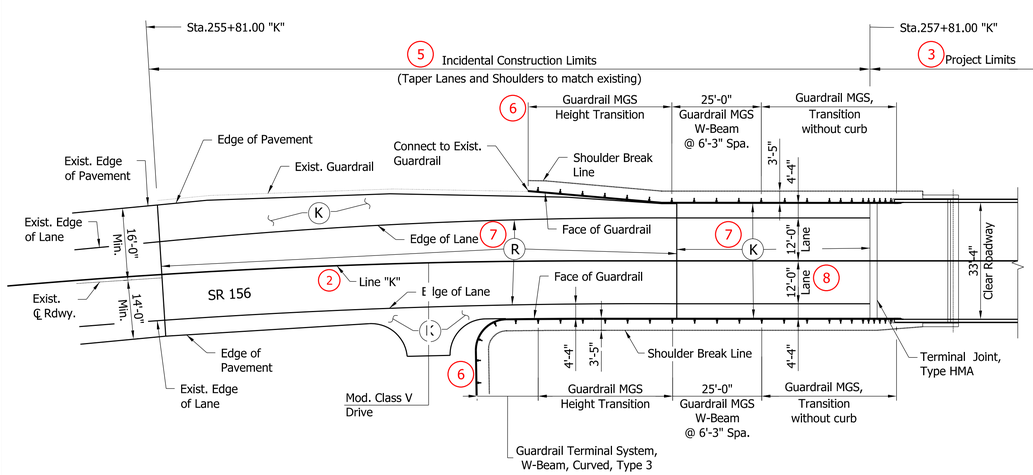
(10) LEGEND

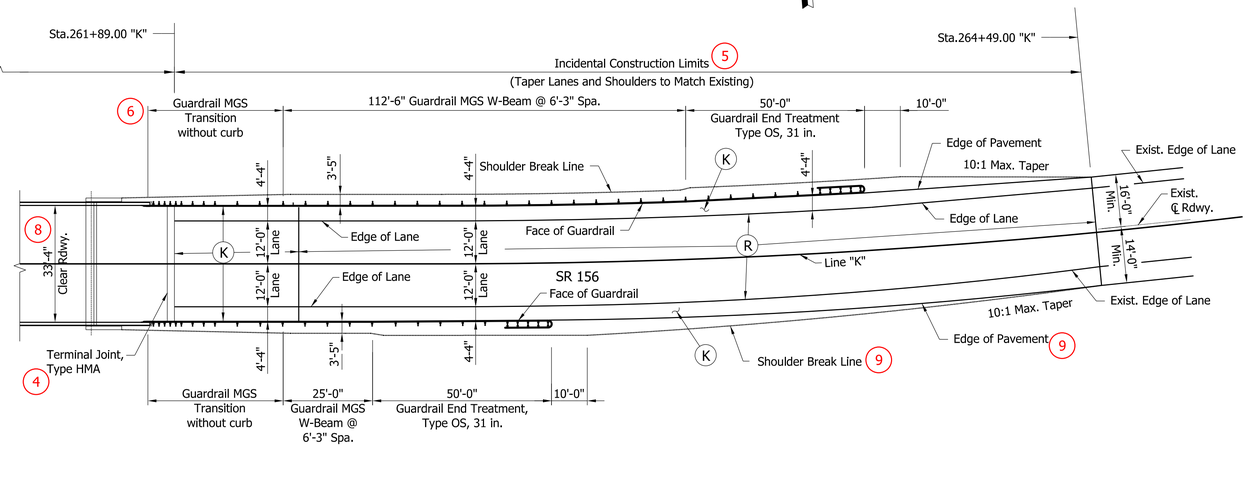
(R) Milling Asphalt, 1 1/2"
165 lbs/syd QC/QA-HMA, 3, 70, Surface, 9.5 mm

(K) 165 lbs/syd QC/QA-HMA, 3, 70, Surface, 9.5 mm on
275 lbs/syd QC/QA-HMA, 3, 70, Intermediate, 19.0 mm on
880 lbs/syd QC/QA-HMA, 3, 64, Base, 25.0 mm on
6 in. of Compacted Aggregate, No. 53 on
Subgrade Treatement, Type IC on
Geotextile for Pavement, Type 2B

North Arrow to be shown in upper right hand corner of every plan, if possible.

(1)





Typ. Plan View Text:
Dimensions: 12 Pt Text
Callouts: 12 Pt Text
Labels: 12 Pt Text

SHOULDER AND GUARDRAIL DETAILS
(Req'd. at Begin of Project)

SHOULDER AND GUARDRAIL DETAILS
(Req'd. at End Of Project)

Typ. All Views:
View Title: 18 Pt Text
View Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

REQUIRED ELEMENTS:

(1) North Arrow
(2) Survey Line Designation
(3) Project Limits
(4) Terminal Joint (if required)
(5) Incidental Construction Limits
(6) Guardrail Limits
(7) Paving Limits and Pavement Design
(8) Lane and Shoulder Widths, Clear Roadway
(9) Edge of Pavement, Shoulder Break
(10) Legend
See IDM Fig. 14-3A for Recommended Plans Legends
(11) Signature Block and PE Seal

(11)

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

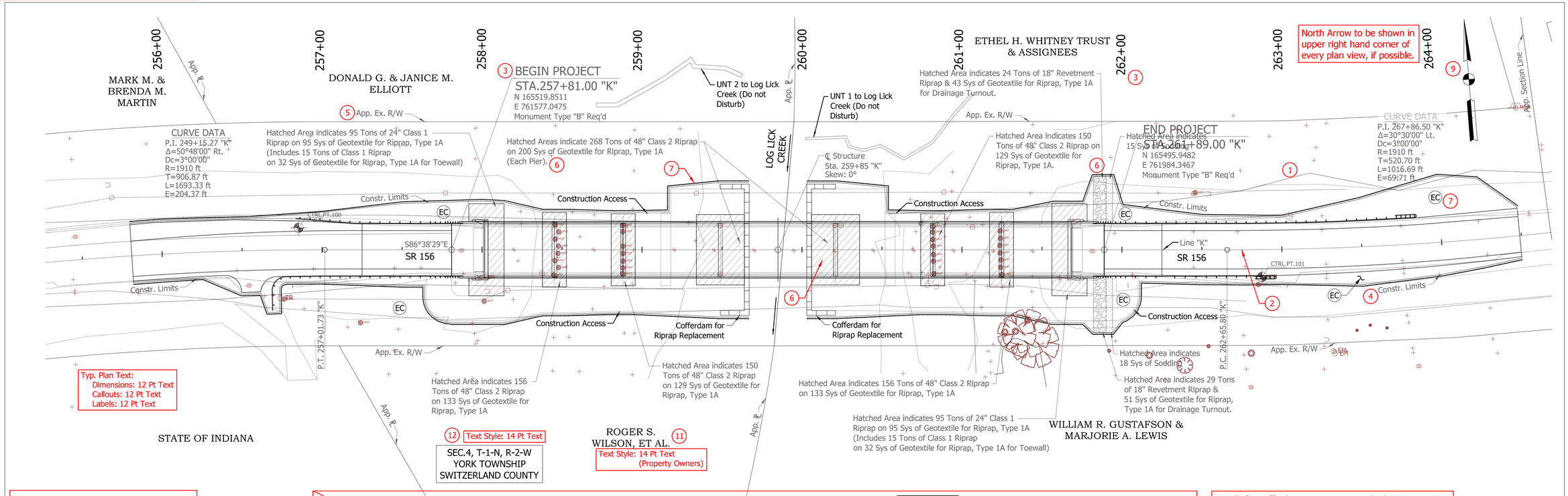
INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION LAYOUT DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	9 of 71
	CONTRACT
	B-99999

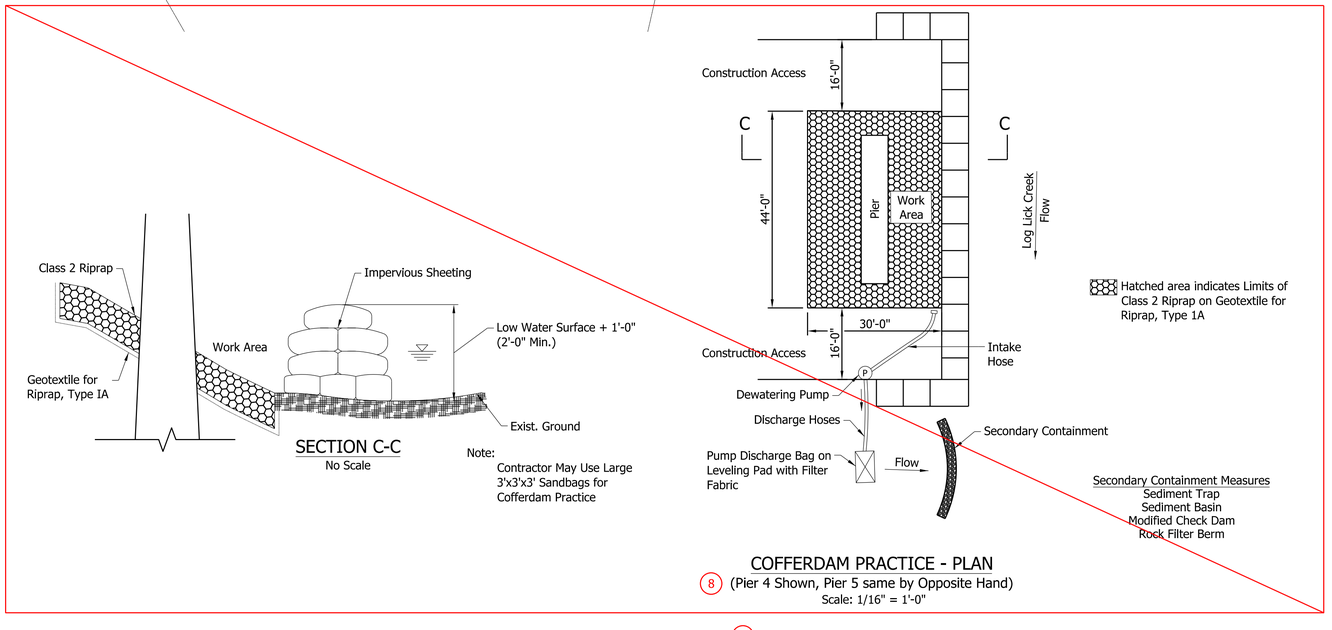
PURPOSE:

The purpose of the Erosion Control Plan sheet is to facilitate Engineering and Construction by providing topo, alignment data, R/W, and proposed temporary erosion control measures from Beginning to End of Project.



REQUIRED ELEMENTS:

1. Existing Topography (Contours not shown)
2. Horizontal Alignment and Annotations, Including Curve Data as Needed
3. Begin/End of Project
4. Construction Limits
5. Existing and Proposed Right of Way
6. Permanent Erosion Control Measures
7. Temporary Erosion Control Measures
8. Erosion Control Details (as needed)
9. North Arrow
10. Sheet Scales
11. Existing Property Owners
12. Township, Range, Civil Township, and County
13. Legend
14. Notes
15. Signature Block and PE Seal



Details for cofferdams, causeways and other non-erosion control related temporary works should be included with the approved environmental permits in the Final Tracings submission and not in the design plans.

LEGEND

- Temporary Silt Fence
- EC — Erosion Control Blankets
- Revetment Riprap on Geotextile for Riprap Type 1A
- Class 1 or 2 Riprap on Geotextile for Riprap Type 1A
- Sodding

Notes:

Erosion Control Blankets are to be used on side slopes steeper than 3:1.
Install Temporary Inlet Protection at existing deck drains during construction.

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
LINE "K"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	156-78-00000 B
VERTICAL SCALE	DESIGNATION
1" = 10'	9999999
	SHEET
	8 of 71
	CONTRACT
	B-99999

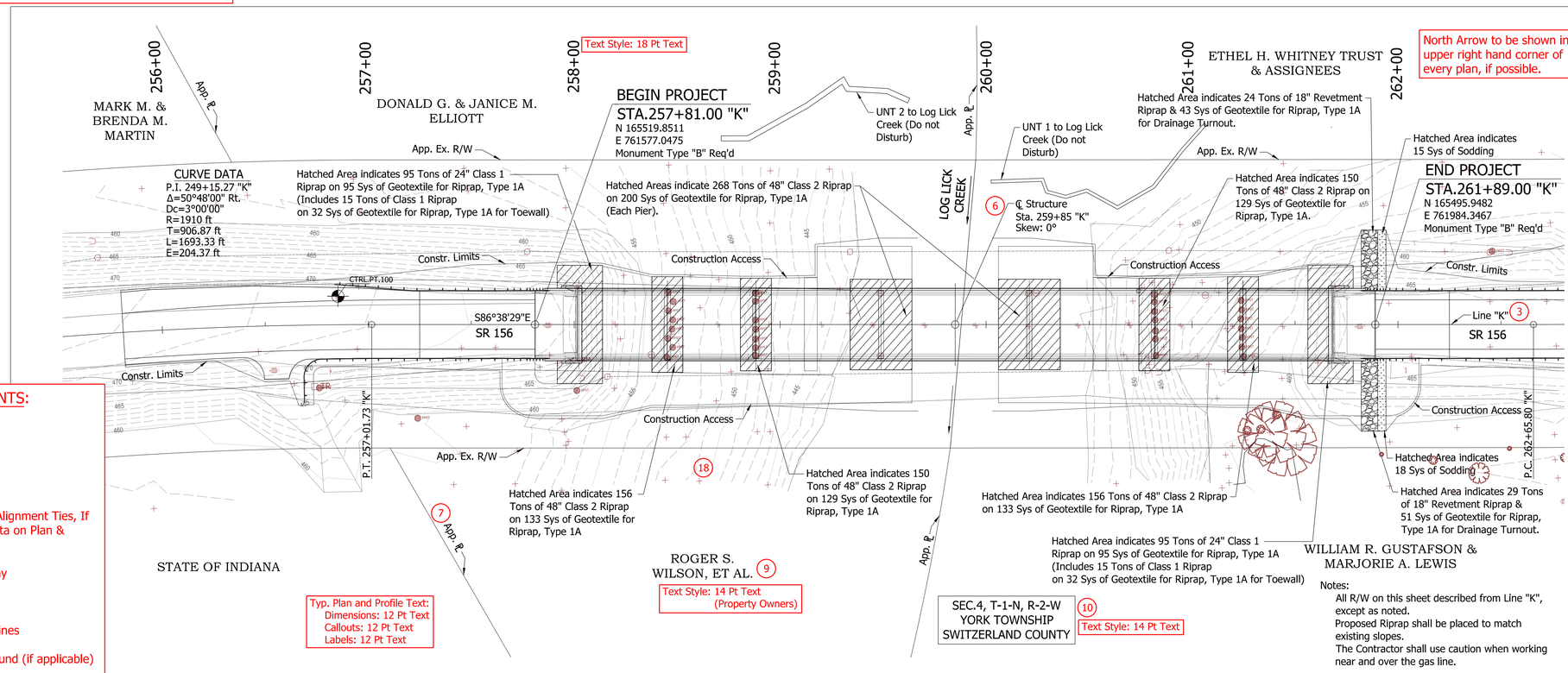
Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PURPOSE:

The purpose of the Layout sheet is to show the bridge construction details in relationship to the existing topography, and property owners, as well as hydraulic data and earthwork estimates.

REQUIRED ELEMENTS:

1. North Arrow
2. Sheet Scales
3. Line Designation
4. Reference Points, Alignment Ties, If Not Identical to Data on Plan & Profile Sheet
5. Existing Topography
6. Skew Angle
7. Existing Property Lines
8. Temporary Runaround (if applicable)
9. Property Owners
10. Township, Range, Civil Township, and County
11. Profile Grade Data (Existing & Proposed)
12. Begin and End Stations for Structure Limits
13. Stations (on profile grid)
14. Elevations (Existing and Proposed)
15. Indication of Existing Structure
16. Hydraulic Data, Hydraulic Scour Data, and Earthwork Tabulation
17. Project Title
    - Superstructure Type
    - No. of Spans
    - Span Lengths
    - Skew
    - Clear Roadway Width
    - Route/Crossing
    - County
18. Existing Contours at 1' with Labels at 5'



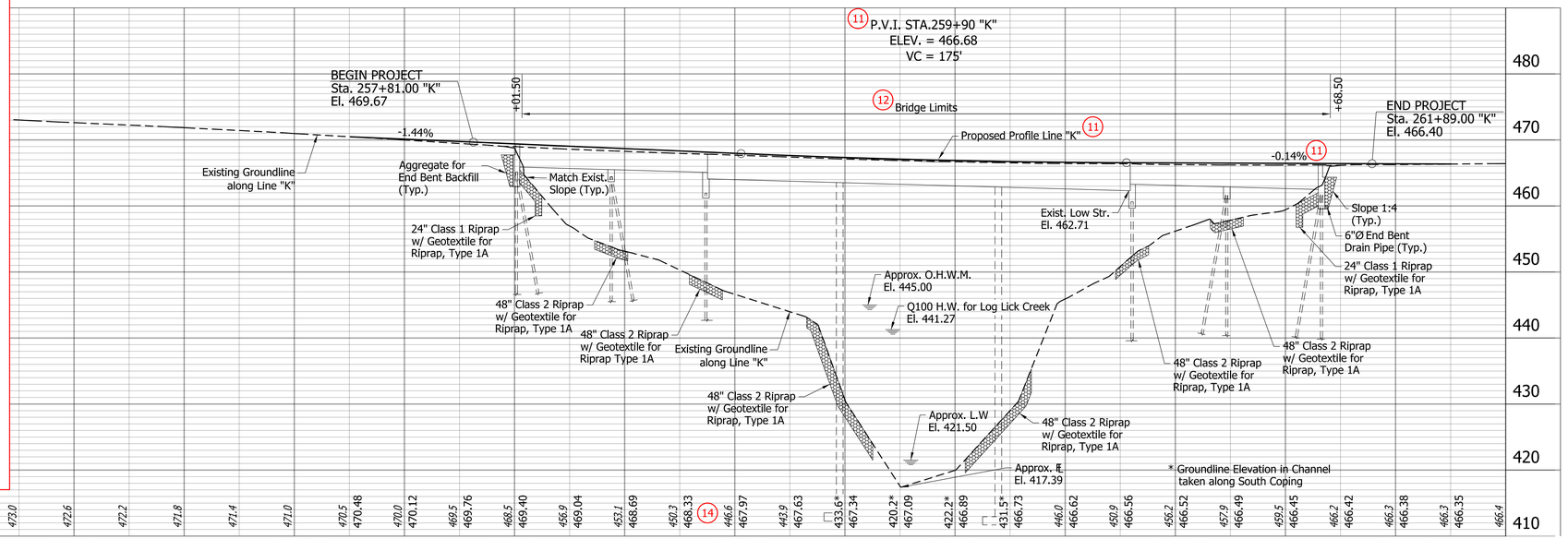
North Arrow to be shown in upper right hand corner of every plan, if possible.

Typ. Plan and Profile Text:
Dimensions: 12 Pt Text
Callouts: 12 Pt Text
Labels: 12 Pt Text

Text Style: 14 Pt Text (Property Owners)

Text Style: 14 Pt Text

Notes:
All R/W on this sheet described from Line "K", except as noted.
Proposed Riprap shall be placed to match existing slopes.
The Contractor shall use caution when working near and over the gas line.



Profile Grid Labels:
Elevations: 18 Pt Text
Stations: 18 Pt Text
Existing Grade: 12 Pt Text
(Existing Elevations) (Italics)
Proposed Grade: 12 Pt Text

15 EXISTING STRUCTURE

Existing Structure is a 3-Span Continuous Non-Composite Steel Beam Bridge (60'-0", 72'-0", 60'-0") with two 2-Span Reinforced Concrete Girder Approach Spans (4 @ 40'-0"). Structure Number 156-78-00000 A (To Be Rehabilitated)

16 HYDRAULIC SCOUR DATA

Drainage Area	23.7 Sq. Mi
Design Discharge, Q100	9,460 cfs
High Water Elevation, Q100	El. 441.27
Contraction Scour, Q100	1.36 ft
Total Scour, Q100	12.85 ft
Flowline Elevation	El. 417.39
Low Scour Elev., Q100	El. 404.54
Max. Velocity, Q100	11.26 ft/sec
Avg. Velocity, Q100	8.27 ft/sec

16 EARTHWORK SUMMARY

Common Excavation	300 Cys
Usable Common Excavation (50%)	150 Cys
Fill + 25%	160 Cys
Borrow	10 Cys

The estimated quantities for Benching are 105 Cys for Cut and 130 Cys for Fill and are not included in the Earthwork Summary.

Typ. All Notes Blocks:
Titles: 18 Pt Text
Section Headings: 14 Pt Text
Notes Body: 12 Pt Text

Text Style: 18 Pt Text

17 CONTINUOUS COMPOSITE STEEL BEAM BRIDGE
7 SPANS: UNIT 1: 43'-0" & 42'-3"
UNIT 2: 60'-0", 72'-0" & 60'-0"
UNIT 3: 42'-3" & 43'-0"
33'-4" CLEAR ROADWAY SKEW: SQUARE
SR 156 OVER LOG LICK CREEK
SWITZERLAND COUNTY

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA DEPARTMENT OF TRANSPORTATION

LAYOUT
LINE "K"

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	156-78-00000 B
VERTICAL SCALE	DESIGNATION
1" = 10'	9999999
	SHEET 11 of 71
	CONTRACT B-99999

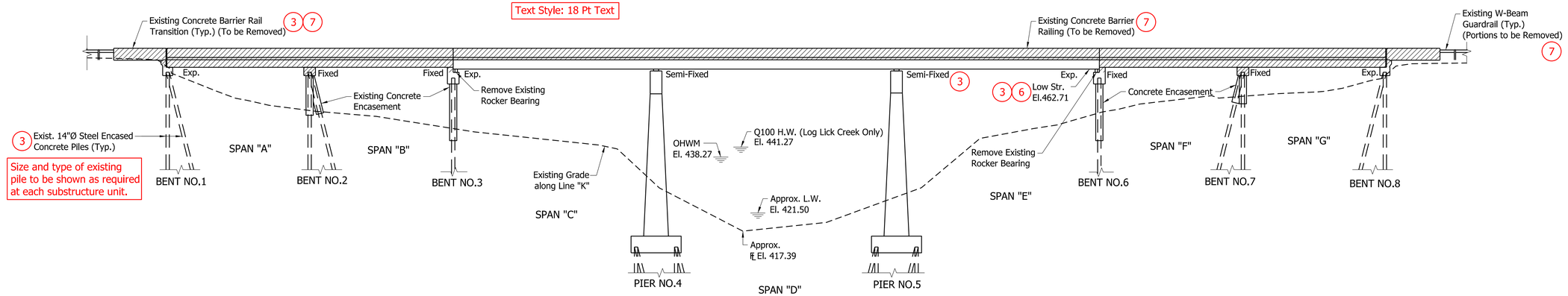
Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PURPOSE:

The purpose of this General Plan - Existing is to show necessary information about the existing structure including removal limits.

STRUCTURE BUILT ON A 400' VERTICAL CURVE

Text Style: 18 Pt Text

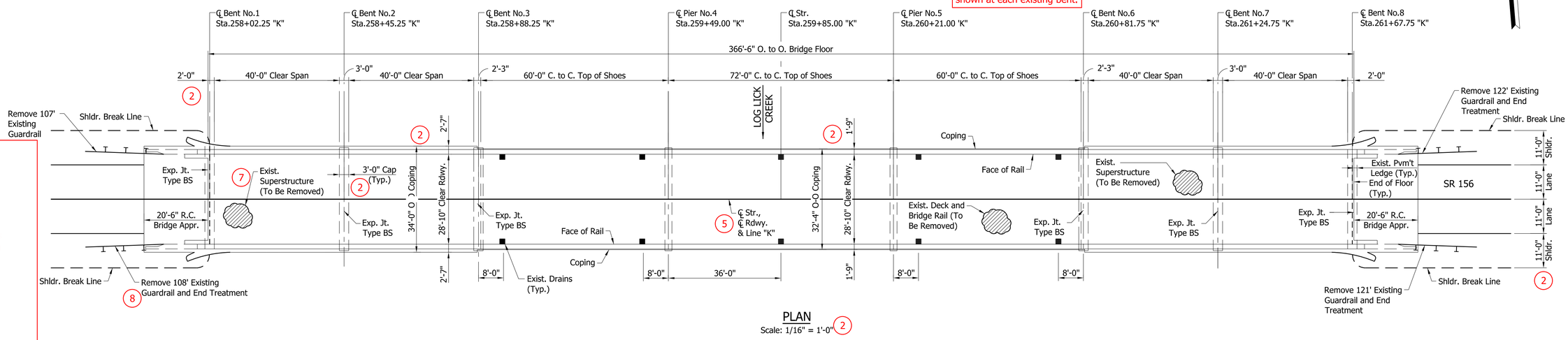


Typ. All Views:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

ELEVATION 3
Scale: 1/16" = 1'-0"

North Arrow to be shown in upper right hand corner of every plan view, if possible. 1

Bent No. and Station to be shown at each existing bent.



PLAN
Scale: 1/16" = 1'-0" 2

Notes:
For Typical Section, Design Data & General Notes, See Sht. 14.
Hatched areas indicate Portions to be Removed.

Text Style: 18 Pt Text

CONTINUOUS STEEL BEAM (MAIN) AND
4 REINFORCED CONCRETE GIRDER (APPROACH) BRIDGE
7 SPANS: UNIT 1: 2 @ 40'-0"
UNIT 2: 60'-0", 72'-0" & 60'-0"
UNIT 3: 2 @ 40'-0"
28'-10" CLEAR ROADWAY SKEW: SQUARE
SR 156 OVER LOG LICK CREEK
SWITZERLAND COUNTY

REQUIRED ELEMENTS:

1. North Arrow
2. Plan
   - Superstructure Dimensions
   - Substructure Dimensions
   - Bridge Approach Dimensions
   - Lane/Shoulder Configuration
3. Elevation
   - Pile Size and Type
   - Substructure Fixity
   - Low Structure El.
   - Bridge Railing
4. Title (Existing Structure)
   - Superstructure Type
   - No. of Spans
   - Span Lengths
   - Skew
   - Clear Roadway Width
   - Route/Crossing
   - County
5. Line Designation
6. Clearances
   - Low Structure Elevation for Waterway Crossing
   - Min. Clearance (Vertical and Horizontal) and Point of Mininum Clearance in Plan View for Street or Railroad Crossing
7. Limits of Existing Structure Removal
8. Limits of Guardrail and Pavement Removal
9. Signature Block and PE Seal

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

9

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
EXISTING

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

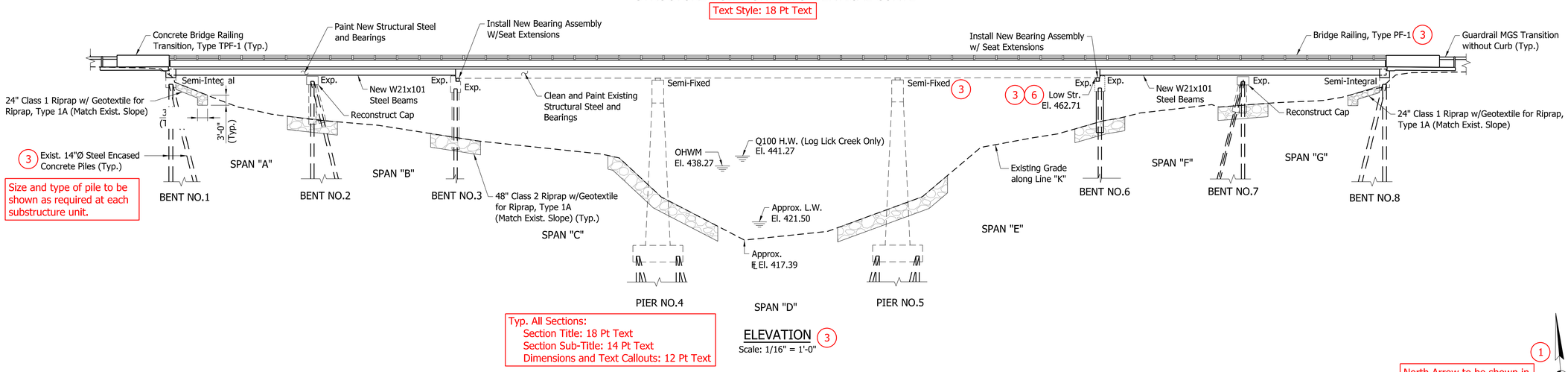
SHEET 12 of 71
CONTRACT B-99999

PURPOSE:

The purpose of this General Plan - Proposed is to show necessary information to proceed with the final detail drawings.

STRUCTURE BUILT ON A 175' VERTICAL CURVE

Text Style: 18 Pt Text

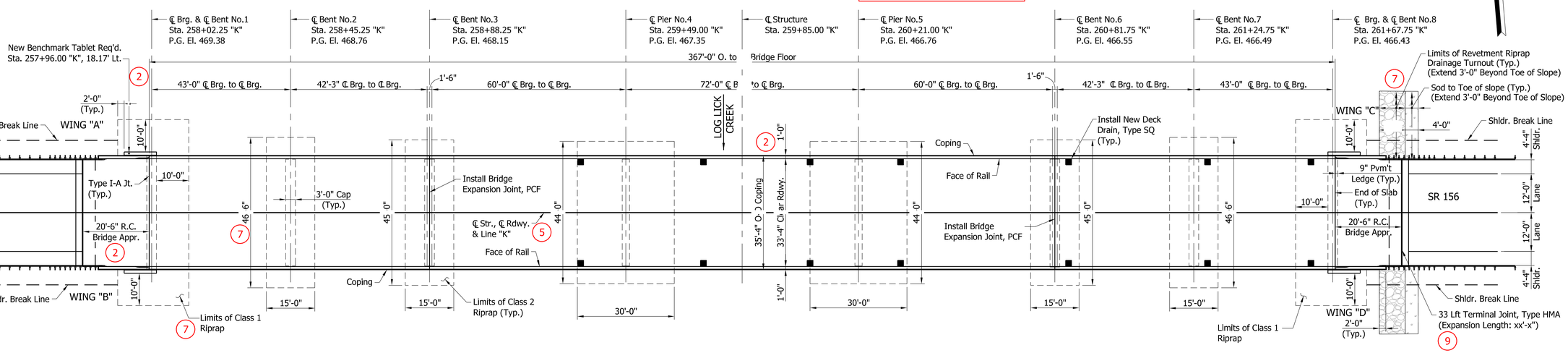


Typ. All Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

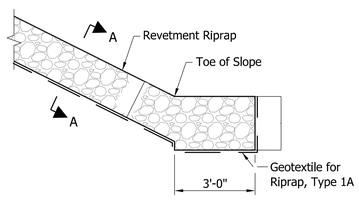
ELEVATION 3
Scale: 1/16" = 1'-0"

Bent No., Station, & Profile Grade Elevation to be shown at each bent.

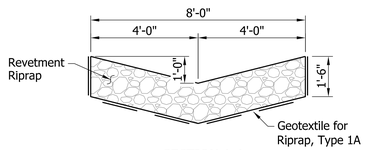
North Arrow to be shown in upper right hand corner of every plan view, if possible. 1



PLAN 2
Scale: 1/16" = 1'-0"



LONGITUDINAL SECTION



SECTION A-A

RIPRAP DRAINAGE TURNOUT DETAIL
Scale: 3/8"=1'-0"

8

DECK DRAIN LOCATIONS (Each Coping)
Station
* 259+35.00 "K"
* 259+73.00 "K"
* 260+06.00 "K"
* 260+34.00 "K"
* 260+86.00 "K"
261+29.00 "K"
261+61.00 "K"

* Drains connect to Bridge Drainage System, For details see Sht 44.

Note:
For Typical Section, Design Data & General Notes, See Sht 14.

Text Style: 18 Pt Text

4 CONTINUOUS COMPOSITE STEEL BEAM BRIDGE
7 SPANS: UNIT 1: 43'-0" & 42'-3"
UNIT 2: 60'-0", 72'-0" & 60'-0"
UNIT 3: 42'-3" & 43'-0"
33'-4" CLEAR ROADWAY SKEW: SQUARE
SR 156 OVER LOG LICK CREEK
SWITZERLAND COUNTY

REQUIRED ELEMENTS:

1. North Arrow
2. Plan
   - Superstructure Dimensions
   - Substructure Dimensions
   - Bridge Approach Dimensions
   - Lane/Shoulder Configuration
3. Elevation
   - Pile Size and Type
   - Substructure Fixity
   - Low Structure El.
   - Bridge Railing
4. Title (Proposed Structure)
   - Superstructure Type
   - No. of Spans
   - Span Lengths
   - Skew
   - Clear Roadway Width
   - Route/Crossing
   - County
5. Line Designation
6. Clearances
   - Low Structure Elevation for Waterway Crossing
   - Min. Clearance (Vertical and Horizontal) and Point of Mininum Clearance in Plan View for Street or Railroad Crossing
7. Limits of Proposed Slope/Scour Protection
8. Proposed Deck Drain Locations
9. Terminal Joint Information
10. Signature Block and PE Seal

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

10

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
PROPOSED

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

SHEET 13 of 71
CONTRACT B-99999

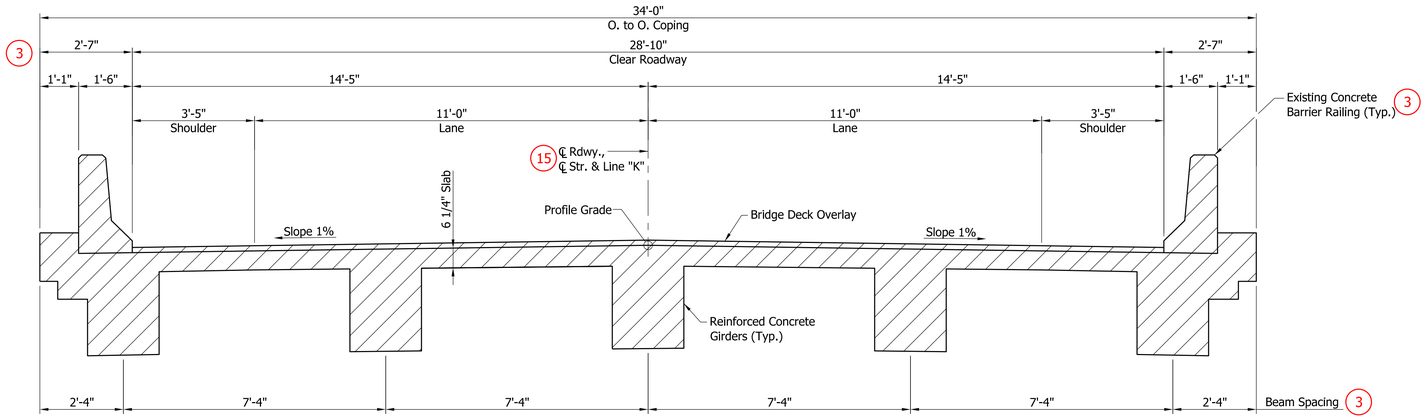
PURPOSE:

The purpose of the General Plan - Typical Section is to show necessary information to proceed with the final detail drawings.

REQUIRED ELEMENTS:

1. Existing Typical Section
2. Proposed Typical Section
3. Structure Dimensions
   - Lane/Shoulder Configuration
   - O. to O. Coping
   - Clear Roadway
   - Beam Spacing
   - Guardrail Type and Height
4. Limits of Removal
5. Limits of Surface Seal
6. Deck Drains
7. General Notes
8. Tie New Survey to Existing Plans
9. Indication of Existing Structure
10. Design Data
11. Construction Loading Data
12. Seismic Design Data
13. Jacking Loads (when temporary support of the existing structure is required)
14. Title (Proposed Structure)
    - Superstructure Type
    - No. of Spans
    - Span Lengths
    - Skew
    - Clear Roadway Width
    - Route/Crossing
    - County
15. Line Designation
16. Signature Block and PE Seal

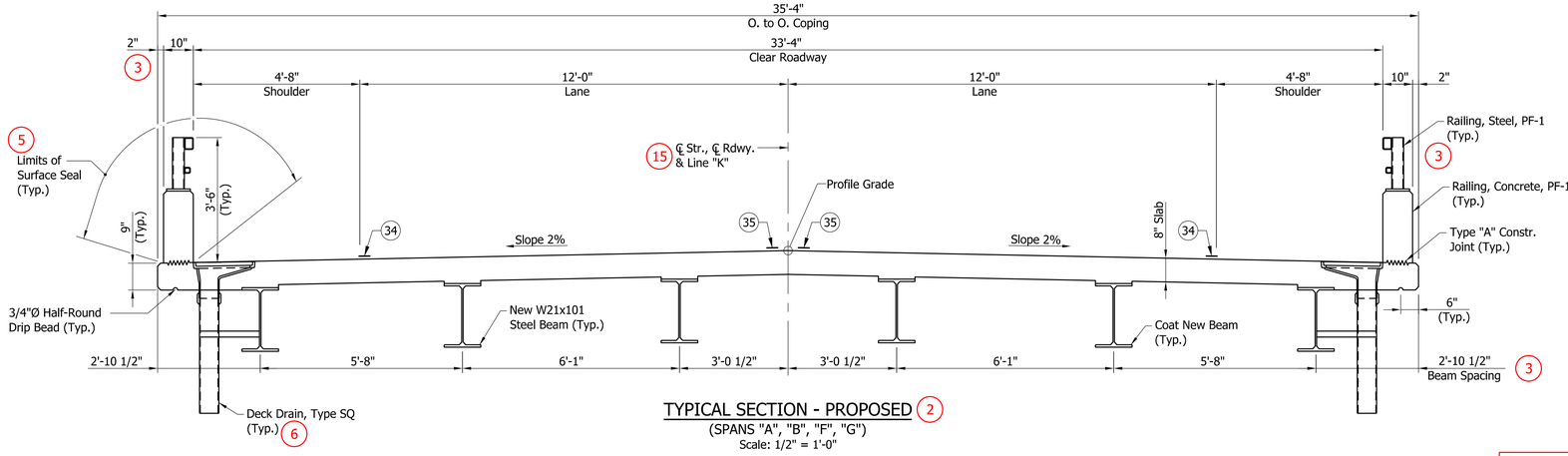
Typ. All Notes Blocks:
Titles: 18 Pt Text
Section Headings: 14 Pt Text
Notes Body: 12 Pt Text



Typ. All Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

TYPICAL SECTION - EXISTING (1)
(SPANS "A", "B", "F", "G")
Scale: 1/2" = 1'-0"

Notes:
4. Hatched areas indicate Portions to be Removed.
   Concrete Girder spans shall be removed outside of bat roosting season unless exclusionary measures are taken. (See Special Provisions.)



TYPICAL SECTION - PROPOSED (2)
(SPANS "A", "B", "F", "G")
Scale: 1/2" = 1'-0"

(7) GENERAL NOTES

Reinforcing steel covering shall be 2 1/2" in top and 1" minimum in the bottom of the floor slabs and 2" in all other parts unless noted.

All exposed faces of wing walls, tops of pier caps and concrete railing shall be sealed in accordance with Article 702.21 of Specifications. Estimated Quantity = 4,454 Sft.

Portions of Present Structure to be removed.

(8) Data shown for existing bridge and subsequent geometry for proposed structure taken from original structure plans. Due to the unknown original datum from the existing plans, the Q100 Elevation from the hydraulics and the Low Water Elevation from the existing plans were adjusted by 1.33' which is the approximate difference between the bridge seat elevations from the existing plans versus the 2019 survey.

(9) Plans for existing structure are on file in the Research and Document Section at the Indiana Department of Transportation, as Bridge File No. 156-78-03115 and are available upon request. The existing bridge was built and alignment was established under Project No. S-33(5) and Contract No. 4418.

Where new work is to be fitted to old work, the Contractor shall check and verify all dimensions, elevations, and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of the new construction to the existing structure.

(10) DESIGN DATA

LIVE LOAD
Originally designed for H20-S16-44 loading in accordance with 1953 AASHO Specifications.

New Deck, New Steel Beams in Approach Spans, and reconstructed bent caps designed for HL-93 loading in accordance with the AASHTO LRFD Bridge Design Specifications, Ninth Edition, 2020.

Existing Steel Beams in Main Spans checked for HS20-44 loading with impact and distribution of loads, in accordance with 2002 AASHTO Standard Specifications.

DEAD LOAD
Actual weight plus 35 psf (composite) for future wearing surface and 15 psf for permanent metal deck forms.

FLOOR SLAB
Designed with a 7 1/2" structural depth plus 1/2" sacrificial wearing surface.

DESIGN STRENGTHS
To be in accordance with AASHTO LRFD Bridge Design Specifications, Ninth Edition, 2020.

CONCRETE
Class "C": f'c=4000 psi
Class "A": f'c=3500 psi

REINFORCING STEEL
Grade 60: fy=60,000 psi

STRUCTURAL STEEL
All new Structural Steel to be ASTM A709 Grade 50 unless otherwise noted.
Existing Structural Steel Fy=36 ksi as indicated in existing plans.

(12) SEISMIC DATA

AASHTO Guide Specifications for LRFD Seismic Bridge Design, Second Edition, 2011 and Interims through 2015.

Seismic Design Category "A"
S1 = 0.052g
Site Class D (Assumed)
Fv = 2.4

LEGEND

(34) Line, Multi-Component, Solid, White, 4 in.
(35) Line, Multi-Component, Solid, Yellow, 4 in.

(11) (13) Note:
For Construction Loading & Jacking Loads, See Sht. 15.

Text Style: 18 Pt Text

(14) CONTINUOUS COMPOSITE STEEL BEAM BRIDGE
7 SPANS: UNIT 1: 43'-0" & 42'-3"
UNIT 2: 60'-0", 72'-0" & 60'-0"
UNIT 3: 42'-3" & 43'-0"
33'-4" CLEAR ROADWAY SKEW: SQUARE
SR 156 OVER LOG LICK CREEK
SWITZERLAND COUNTY

(16)

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
TYPICAL SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET 14 of 71
	CONTRACT B-99999

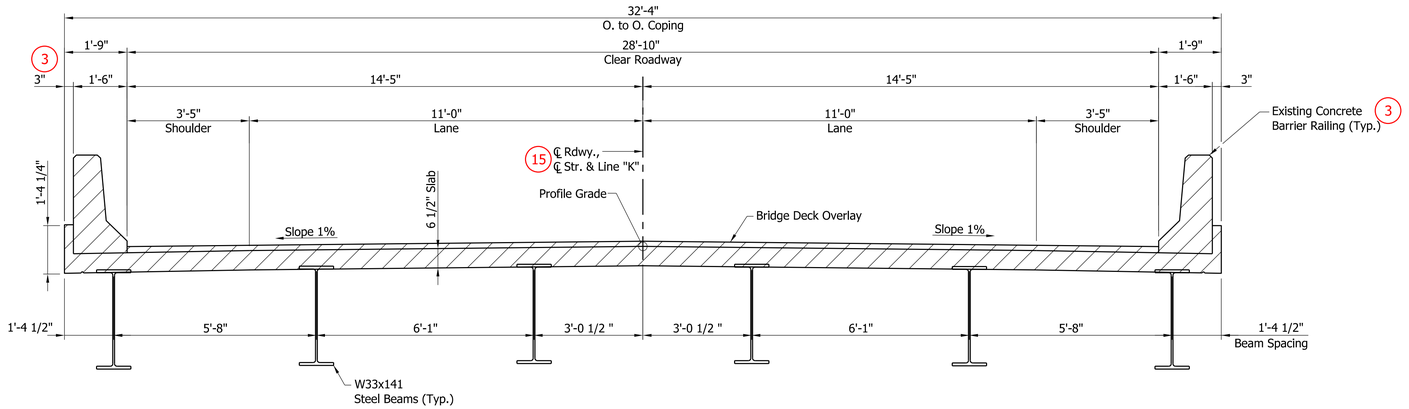
PURPOSE:

The purpose of the General Plan - Typical Section is to show necessary information to proceed with the final detail drawings.

REQUIRED ELEMENTS:

1. Existing Typical Section
2. Proposed Typical Section
3. Structure Dimensions
   - Lane/Shoulder Configuration
   - Out to Out Coping
   - Clear Roadway
   - Beam Spacing
   - Guardrail Type and Height
4. Limits of Removal
5. Limits of Surface Seal
6. Deck Drains
7. General Notes
8. Tie New Survey to Existing Plans
9. Indication of Existing Structure
10. Design Data
11. Construction Loading Data
12. Seismic Design Data
13. Jacking Loads (when temporary support of the existing structure is required)
14. Title (Proposed Structure)
    - Superstructure Type
    - No. of Spans
    - Span Lengths
    - Skew
    - Clear Roadway Width
    - Route/Crossing
    - County
15. Line Designation
16. Signature Block and PE Seal

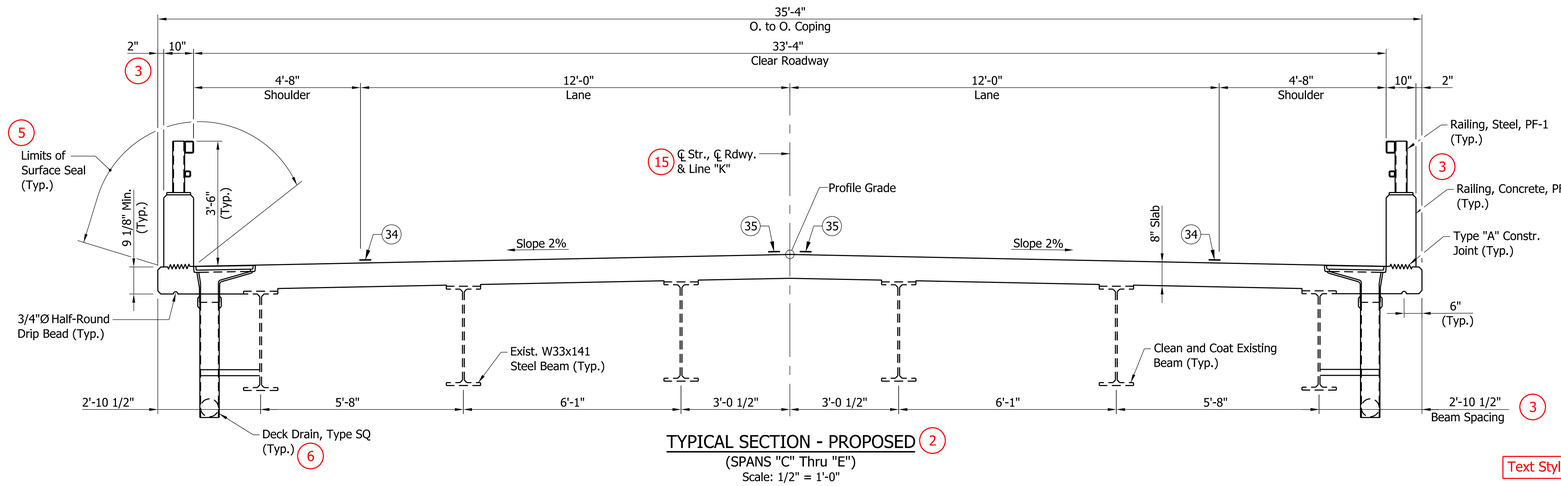
Typ. All Notes Blocks:
Titles: 18 Pt Text
Section Headings: 14 Pt Text
Notes Body: 12 Pt Text



Typ. All Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

TYPICAL SECTION - EXISTING (1)
(SPANS "C" Thru "E")
Scale: 1/2" = 1'-0"

4 Note:
Hatched areas indicate Portions to be Removed.



TYPICAL SECTION - PROPOSED (2)
(SPANS "C" Thru "E")
Scale: 1/2" = 1'-0"

LEGEND
34 Line, Multi-Component, Solid, White, 4 in.
35 Line, Multi-Component, Solid, Yellow, 4 in.

7 10 Note:
For General Notes & Design Data, See Sht. 14.

11 CONSTRUCTION LOADING

The exterior beam has been checked for strength, deflection and overturning using the construction loads shown below. Cantilever overhang brackets were assumed for support of the deck overhang past the edge of the exterior beam. The finishing machine was assumed to be supported 6 inches outside the vertical coping form. The top overhang brackets were assumed to be located 6 inches past the edge of the vertical coping form. The bottom overhang brackets were assumed to be braced against the intersection of the beam bottom flange and web. The Contractor shall use blocking or other methods to ensure beam rotation does not occur prior to or during concrete placement on the exterior beam.

DECK FALSEWORK LOADS
Designed for 15 psf for permanent metal stay-in-place deck forms, removable deck forms and 2' exterior walkway.

CONSTRUCTION LIVE LOAD
Designed for 20 psf Construction Live Load extending 2' past the edge of coping and 75 plf vertical force applied at a distance of 6 inches outside the face of coping over a 30 foot length of deck area centered with the finishing machine.

FINISHING MACHINE LOAD
4500 lbs distributed over 10 feet along the coping.

WIND LOAD
Designed for 70 mph horizontal wind loading in accordance with AASHTO LRFD 3.8.1.

13 JACKING LOADS

All beams with bearing replacements shall be jacked simultaneously for each phase an equal amount to a distance no greater than 1/4". No field welding on existing structural steel elements will be permitted. No jacking will be permitted while under traffic. Jacking Load = 5 Kips/ Beam for steel weight only.

Text Style: 18 Pt Text

14 CONTINUOUS COMPOSITE STEEL BEAM BRIDGE
7 SPANS: UNIT 1: 43'-0" & 42'-3"
UNIT 2: 60'-0", 72'-0" & 60'-0"
UNIT 3: 42'-3" & 43'-0"
33'-4" CLEAR ROADWAY SKEW: SQUARE
SR 156 OVER LOG LICK CREEK
SWITZERLAND COUNTY

16

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

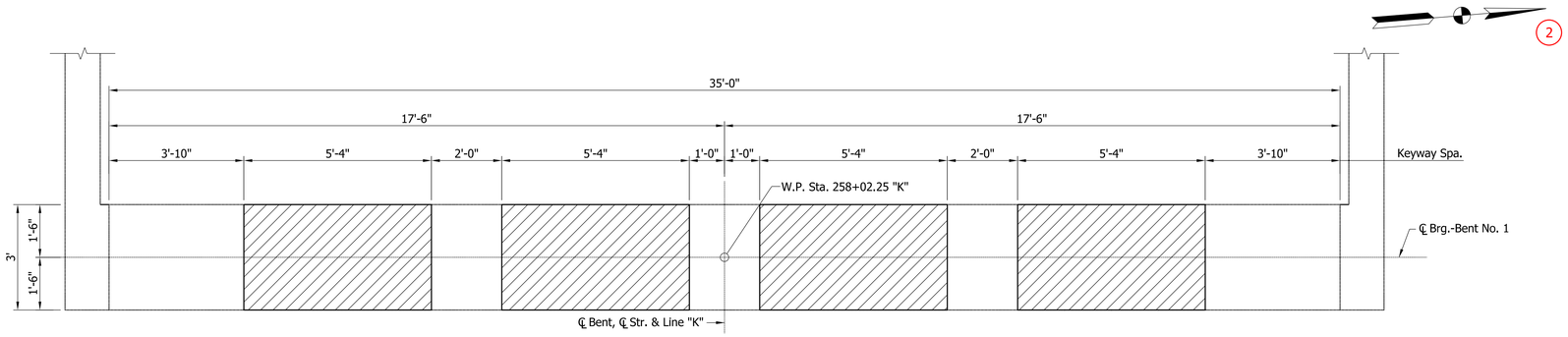
INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
TYPICAL SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	15 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Removal Details sheet is to show physical dimensions and limits of removal of material on an existing bent/pier.



1 PLAN
Scale: 1/2" = 1'-0"
Looking Back Station

2

Typ. All Views and Sections:
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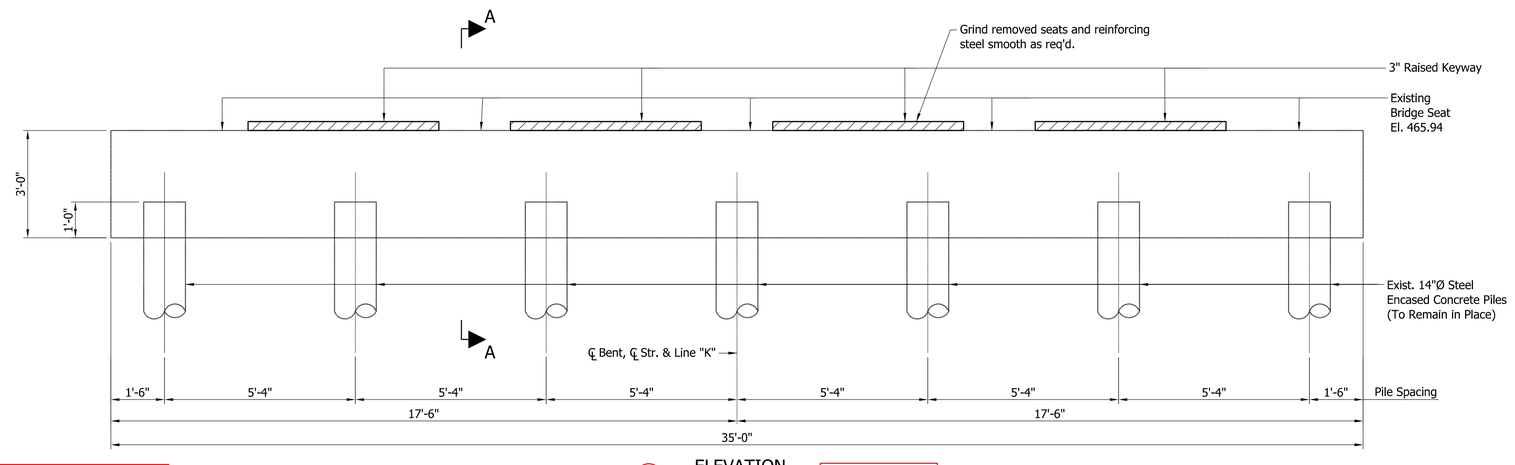
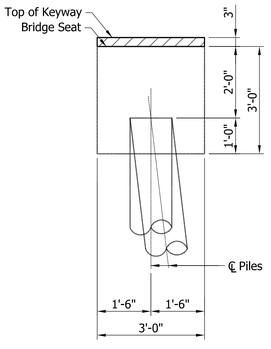
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
Scale: 1/2" = 1'-0"
Looking Back Station



4 SECTION A-A
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Plan Showing Hatched Removal Limits
2. North Arrow
3. Elevation Showing Hatched Removal Limits
4. Sections as Necessary Showing Hatched Removal Limits
5. Notes
6. Signature Block and PE Seal

5 Notes:
Hatched areas indicate portions to be removed.
For General Notes, see Sht. 14.
For Superstructure Details, see Shts. 42 - 51.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

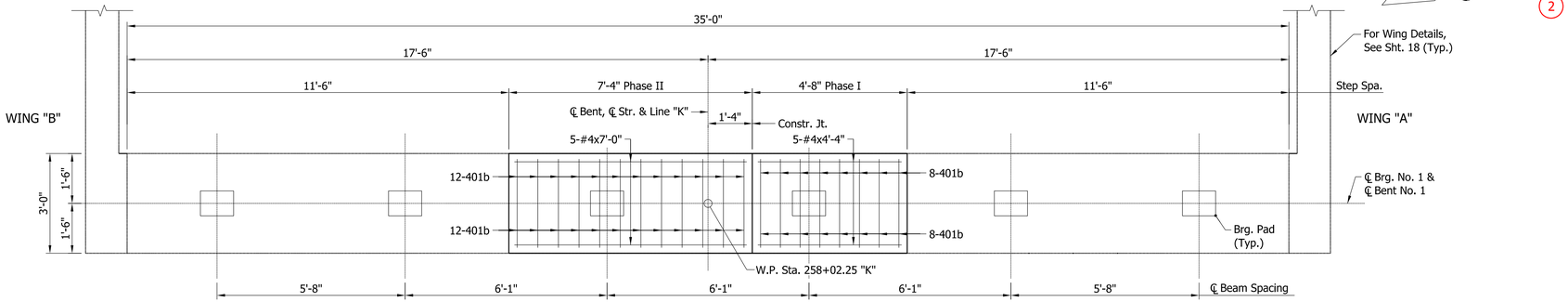
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 1
REMOVAL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	16 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Reconstruction Details sheet is to show physical dimensions, reinforcement and pertinent information necessary for reconstruction of bent/pier.

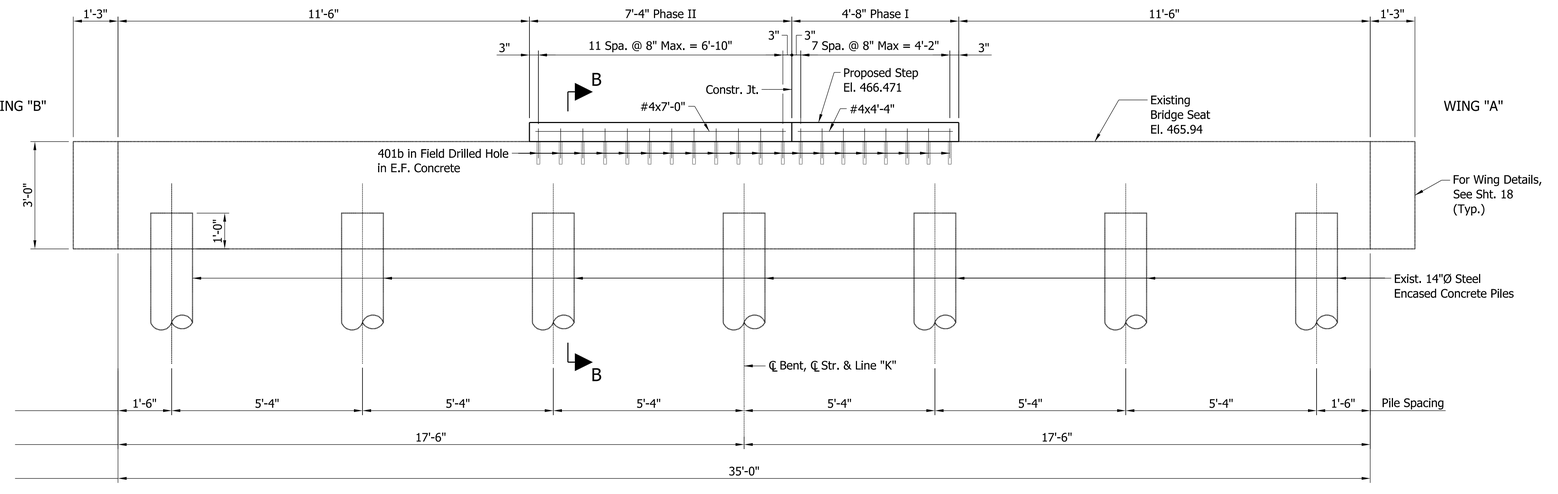


1 PLAN

Scale: 1/2" = 1'-0"

Looking Back Station

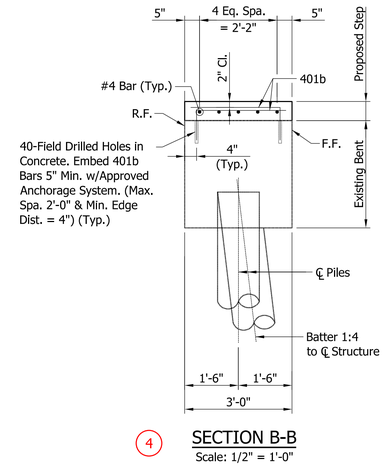
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION

Scale: 1/2" = 1'-0"

Looking Back Station



4 SECTION B-B

Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Plan
2. North Arrow
3. Elevation Showing Reinforcing
4. Sections as Necessary
5. Notes
6. Signature Block and PE Seal

5 Notes:

For General Notes, see Sht. 14.
For Removal Details, see Sht. 16.
For Bearing Assembly Details, see Sht. 38.
For Superstructure Details, see Shts. 42 - 51.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
For Bar Bending Diagrams and Bill of Materials, see Sht. 18.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

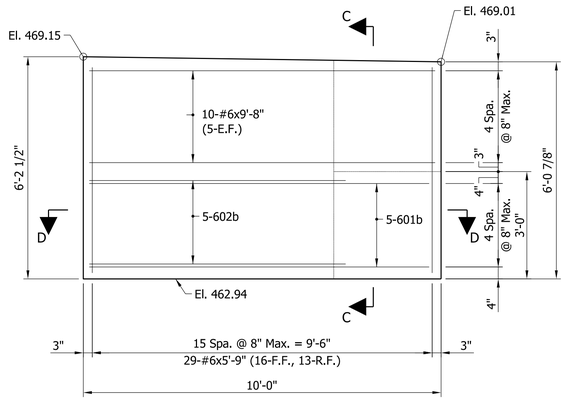
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 1
RECONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	17 of 71
	CONTRACT
	B-99999

PURPOSE:

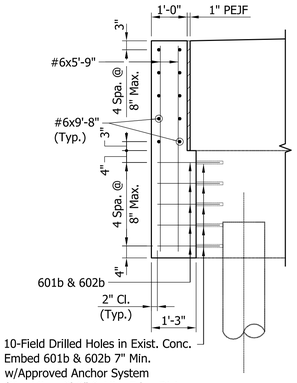
The purpose of this Bent Reconstruction Details sheet is to show physical dimensions, reinforcement and pertinent information necessary for reconstruction of bent/pier.



1 WING "B" ELEVATION

(Wing "A" Same By Opposite Hand)

Scale: 1/2" = 1'-0"



10-Field Drilled Holes in Exist. Conc. Embed 601b & 602b 7" Min. w/Approved Anchor System (Max. Spa. 2'-0" & Min. Edge Dist. = 4") (Typ.) (5 Ea. Fa.)

SECTION C-C

Scale: 1/2" = 1'-0"

2

4

When the construction is to be phased, Bills of Materials should be separated by phase.

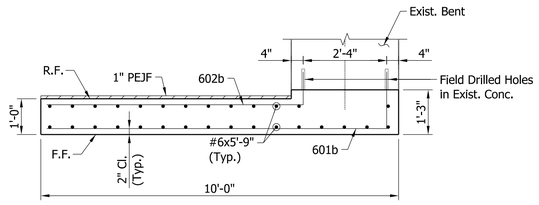
BILL OF MATERIALS
BENT NO. 1

REINFORCING BARS			
SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
601b	10	8'-1"	
602b	10	11'-1"	
#6	20	9'-8"	
#6	58	5'-9"	
Total #6			1078
401b	40	3'-4"	
#4	5	7'-0"	
#4	5	4'-4"	
Total #4			126
Total Reinforcing Bars			1204

CONCRETE	
Concrete Class "A" in Substructure	
Phase I	2.7 Cys
Phase II	2.8 Cys
Total Concrete "A" in Substructure	5.5 Cys

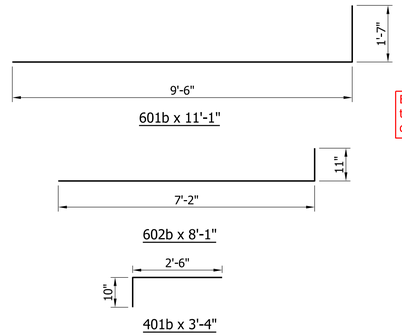
MISCELLANEOUS	
Field Drilled Hole in Concrete	60 Ea
Aggregate for End Bent Backfill	13 Cys
Pipe, End Bent Drain, 6"	47 Lft
Geotextile for Underdrain, Type 2B	40 Sys
Surface Seal (Est. Quantity)	120 Sft

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



2 SECTION D-D

Scale: 1/2" = 1'-0"



3 BAR BENDING DETAILS

Not to Scale

Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.

Show bar mark and total length of bar, rounded to nearest 1 in.

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.

REQUIRED ELEMENTS:

1. Wing Elevation
2. Sections as Necessary
3. Reinforcing Bar Bending Diagrams
4. Bill of Materials
5. Notes
6. Signature Block and PE Seal

5 Notes:

For General Notes, see Sht. 14.
For Removal Details, see Sht. 16.
For Bearing Assembly Details, see Sht. 38.
For Superstructure Details, see Shts. 42 - 51.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

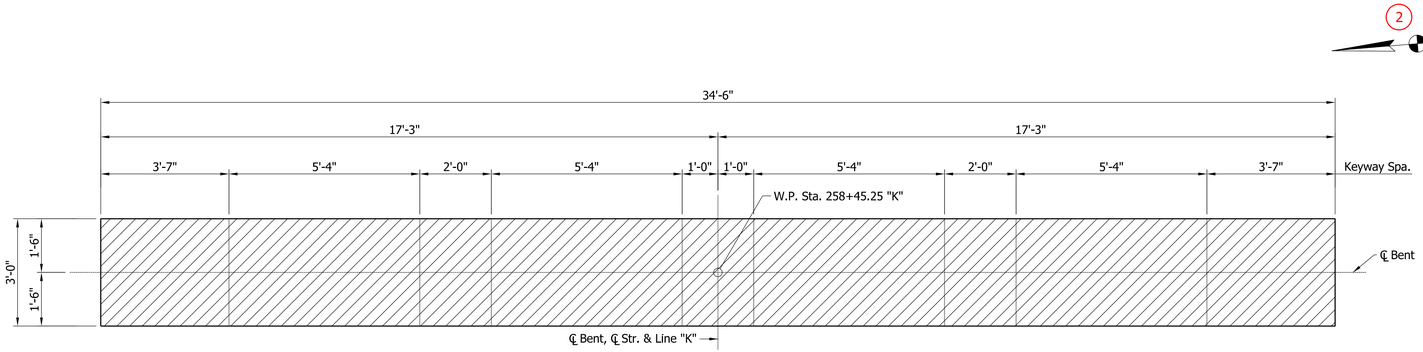
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO.1
RECONSTRUCTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	18 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Removal Details sheet is to show physical dimensions and limits of removal of material on an existing bent/pier.

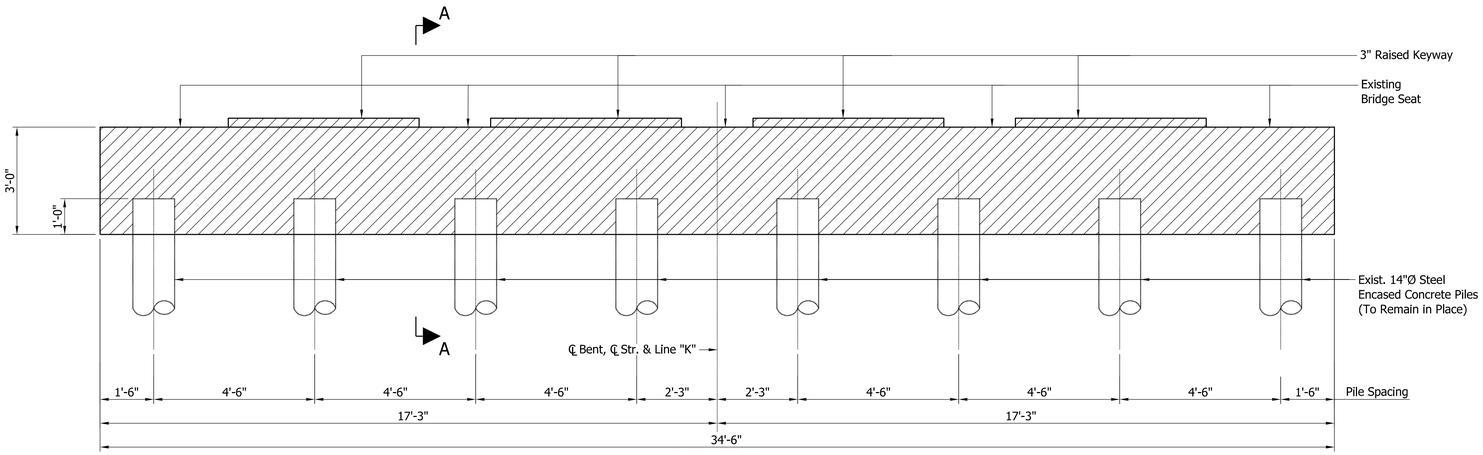


1 PLAN
Scale: 1/2" = 1'-0"

Looking Ahead Station

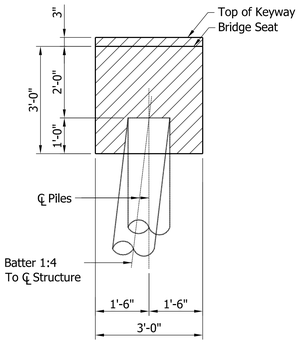
2

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
Scale: 1/2" = 1'-0"

Looking Ahead Station



4 SECTION A-A
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Plan Showing Hatched Removal Limits
2. North Arrow
3. Elevation Showing Hatched Removal Limits
4. Sections as Necessary Showing Hatched Removal Limits
5. Notes
6. Signature Block and PE Seal

5 Notes:
Hatched areas indicate portions to be removed.
For General Notes, see Sht. 14.
For Reconstruction Details, see Sht. 20.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

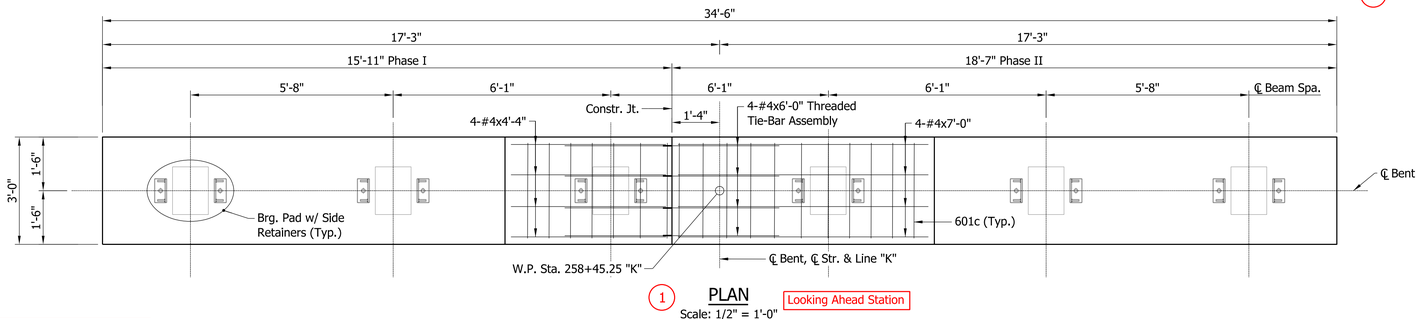
BENT NO. 2
REMOVAL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	19 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Reconstruction Details sheet is to show physical dimensions, reinforcement and pertinent information necessary for reconstruction of bent/pier.

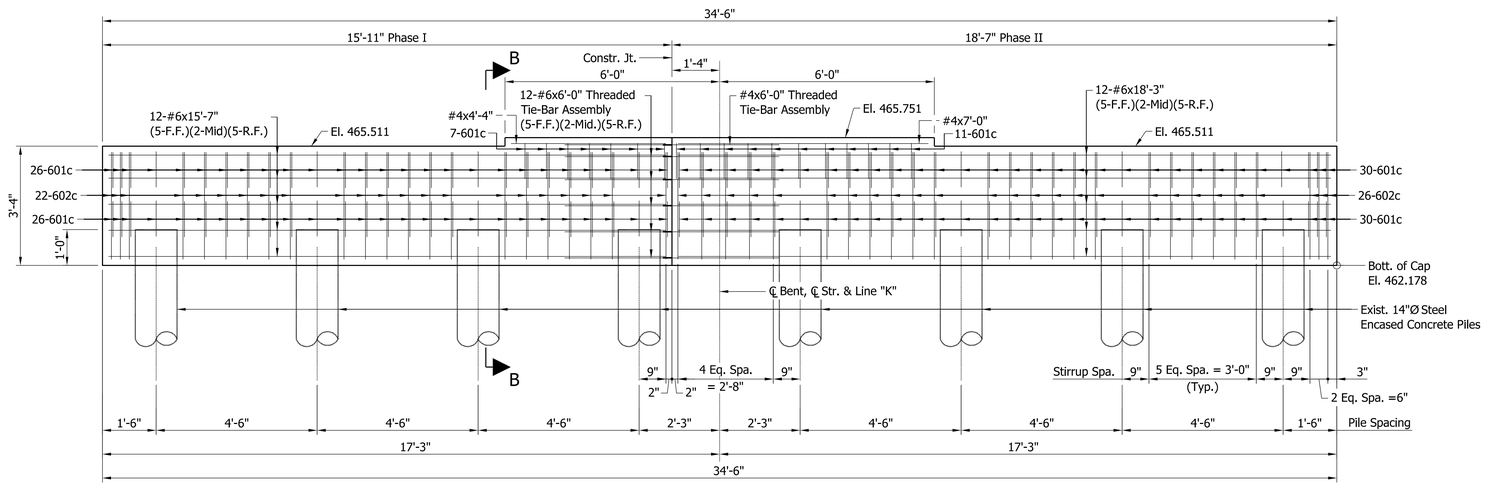
2



1 PLAN
Scale: 1/2" = 1'-0"

Looking Ahead Station

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
Scale: 1/2" = 1'-0"

Looking Ahead Station

4

When the construction is to be phased, Bills of Materials should be separated by phase.

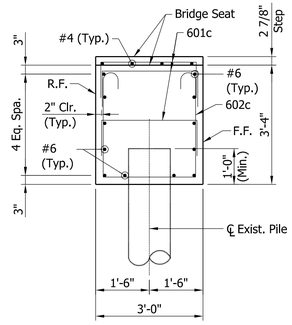
BILL OF MATERIALS
BENT NO. 2

REINFORCING BARS			
SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
601c	130	4'-8"	
602c	48	9'-10"	
#6	12	18'-3"	
#6	12	15'-7"	
Total #6			2230
#4	4	7'-0"	
#4	4	4'-4"	
Total #4			31
Total Reinforcing Bars			2261

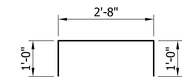
CONCRETE	
Concrete Class "A" in Substructure	
Phase I	6.0 Cys
Phase II	7.1 Cys
Total Concrete "A" in Substructure	13.1 Cys

MISCELLANEOUS	
Threaded Tie-Bar Assembly (#4)	4 Ea
Threaded Tie-Bar Assembly (#6)	12 Ea

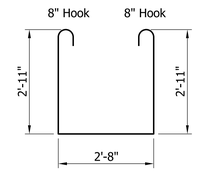
Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.



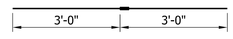
4 SECTION B-B
Scale: 1/2" = 1'-0"



601c x 4'-8"



602c x 9'-10"



THREADED TIE-BAR ASSEMBLY

3 BAR BENDING DETAILS
Not to Scale

Show bar mark and total length of bar, rounded to nearest 1 in.

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.

REQUIRED ELEMENTS:

1. Plan
2. North Arrow
3. Elevation Showing Reinforcing
4. Sections as Necessary
5. Notes
6. Signature Block and PE Seal

5 Notes:
For General Notes, see Sht. 14.
For Removal Details, see Sht. 19.
For Bearing Assembly Details, see Sht. 39.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL — *Engineer of Record Signature* — DESIGN ENGINEER — MM/DD/YY DATE

DESIGNED: ABC | DRAWN: PQR

CHECKED: BCD | CHECKED: RST

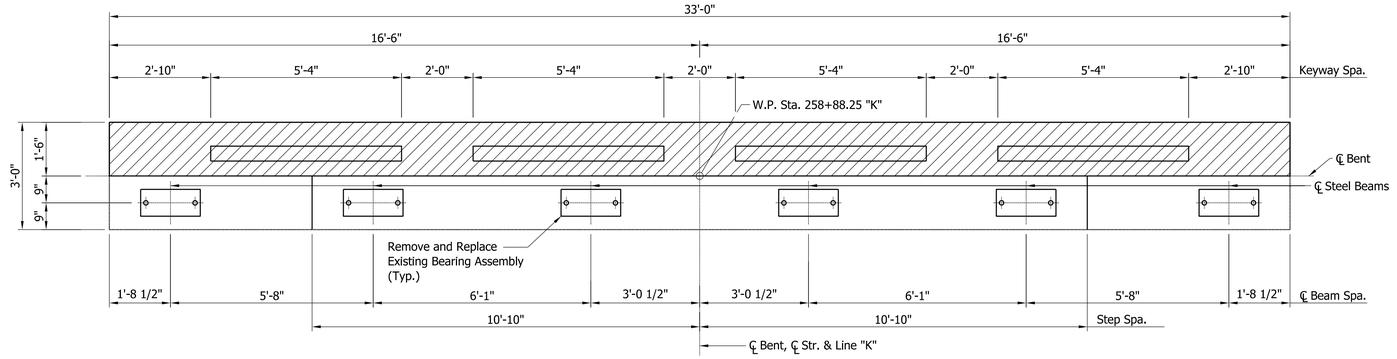
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 2
RECONSTRUCTION DETAILS

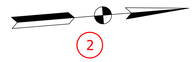
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	20 of 70
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Removal Details sheet is to show physical dimensions and limits of removal of material on an existing bent/pier.

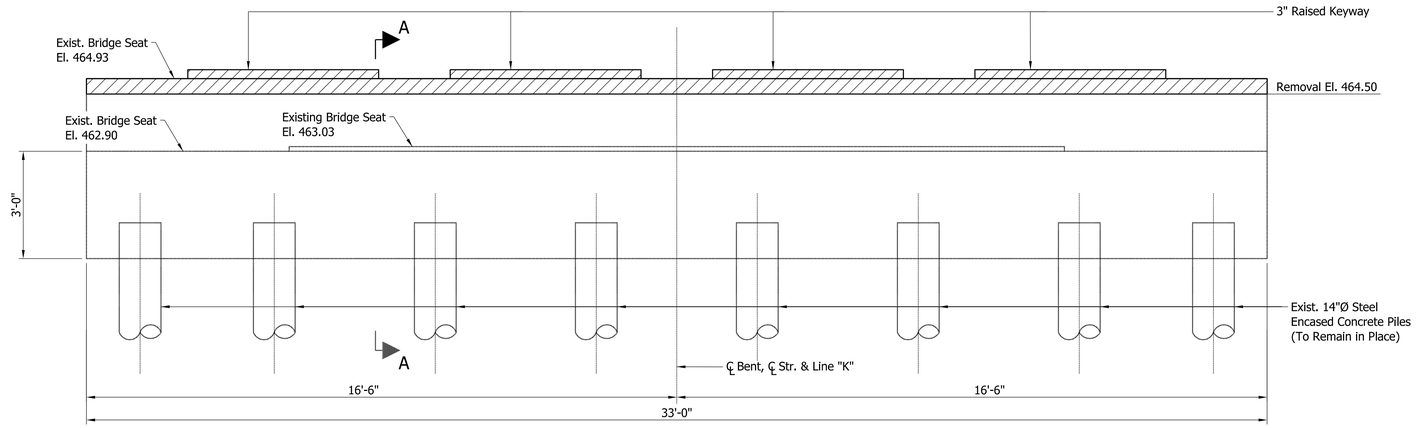


1 PLAN
(Looking Back Station)
Scale: 1/2" = 1'-0"



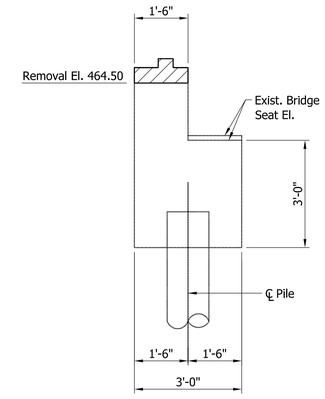
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

Note: "Looking Back Station" called out since non-typical for an interior bent.



3 ELEVATION
(Looking Back Station)
Scale: 1/2" = 1'-0"

Note: "Looking Back Station" called out since non-typical for an interior bent.



4 SECTION A-A
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Plan Showing Hatched Removal Limits
2. North Arrow
3. Elevation Showing Hatched Removal Limits
4. Sections as Necessary Showing Hatched Removal Limits
5. Notes
6. Signature Block and PE Seal

5 Notes:
Hatched areas indicate portions to be removed.
For General Notes, see Sht. 14.
For Reconstruction Details, see Sht. 22.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

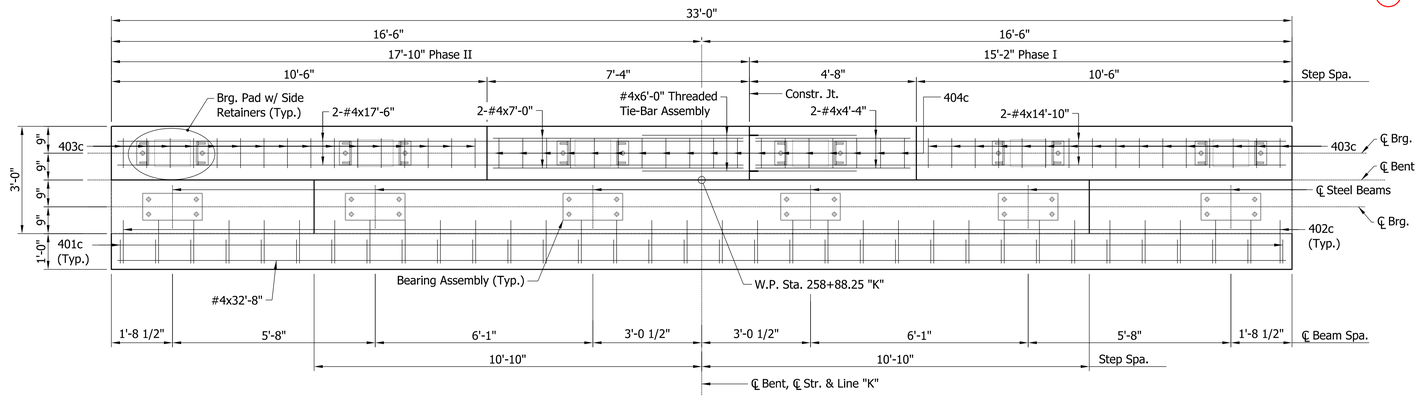
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 3
REMOVAL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	21 of 71
	CONTRACT
	B-99999

PURPOSE:

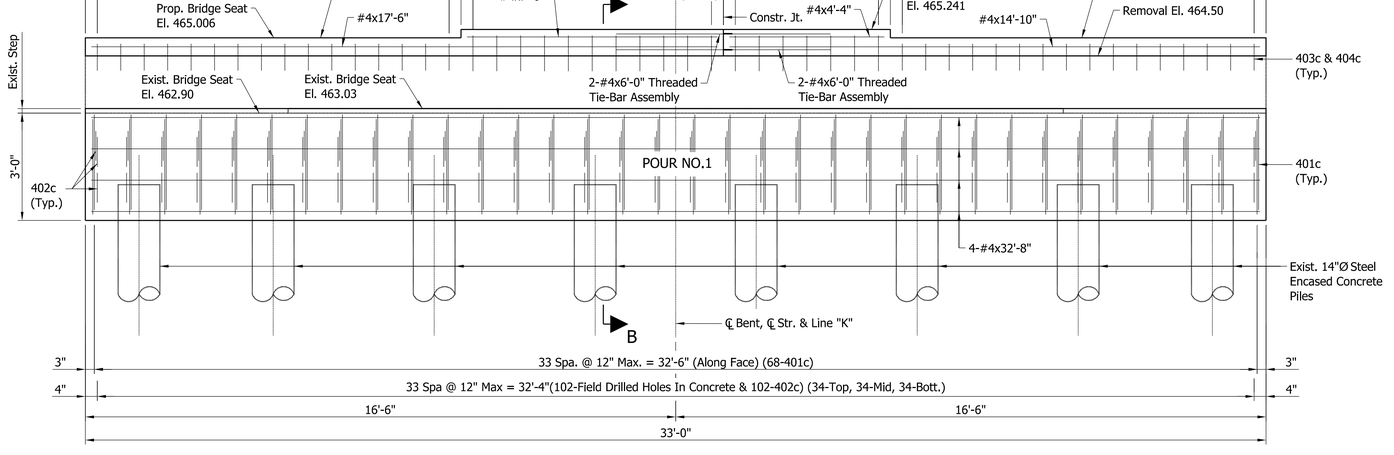
The purpose of this Bent Reconstruction Details sheet is to show physical dimensions, reinforcement and pertinent information necessary for reconstruction of bent/pier.



1 PLAN
(Looking Back Station)
Scale: 1/2" = 1'-0"

Note: "Looking Back Station" called out since non-typical for an interior bent.

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
(Looking Back Station)
Scale: 1/2" = 1'-0"

Note: "Looking Back Station" called out since non-typical for an interior bent.

REQUIRED ELEMENTS:

1. Plan
2. North Arrow
3. Elevation Showing Reinforcing
4. Sections as Necessary
5. Notes
6. Signature Block and PE Seal

When the construction is to be phased, Bills of Materials should be separated by phase.

BILL OF MATERIALS
BENT NO. 3

REINFORCING BARS

SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
401c	68	3'-4"	
402c	102	2'-1"	
403c	32	2'-4"	
404c	18	2'-10"	
#4	4	32'-8"	
#4	2	17'-6"	
#4	2	14'-10"	
#4	2	7'-0"	
#4	2	4'-4"	
Total #4			522
Total Reinforcing Bars			522

CONCRETE

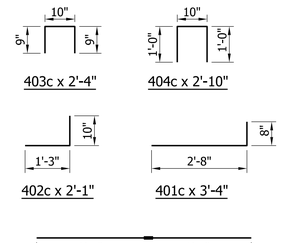
Concrete Class "A" in Substructure	
Pour No. 1	3.8 Cys
Pour No. 2	0.5 Cys
Pour No. 3	0.6 Cys
Total Class "A" in Substructure	4.9 Cys

MISCELLANEOUS

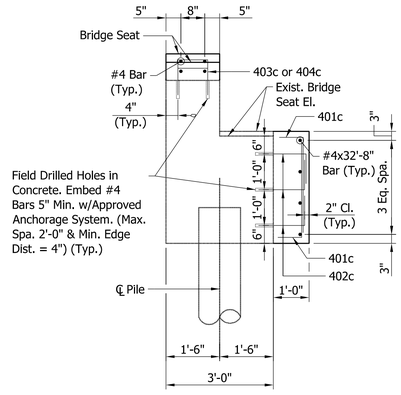
Field Drilled Holes in Concrete	202 Ea
Threaded Tie-Bar Assembly (#4)	4 Ea
Surface Seal (Est. Quantity)	99 Sft

Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.

Show bar mark and total length of bar, rounded to nearest 1 in.



THREADED TIE-BAR ASSEMBLY



3 BAR BENDING DETAILS
Not to Scale

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.

4 SECTION B-B
Scale: 1/2" = 1'-0"

5 Notes:
For General Notes, see Sht. 14.
For Removal Details, see Sht. 21.
For Bearing Assembly Details, see Shts. 40 & 41.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

6

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

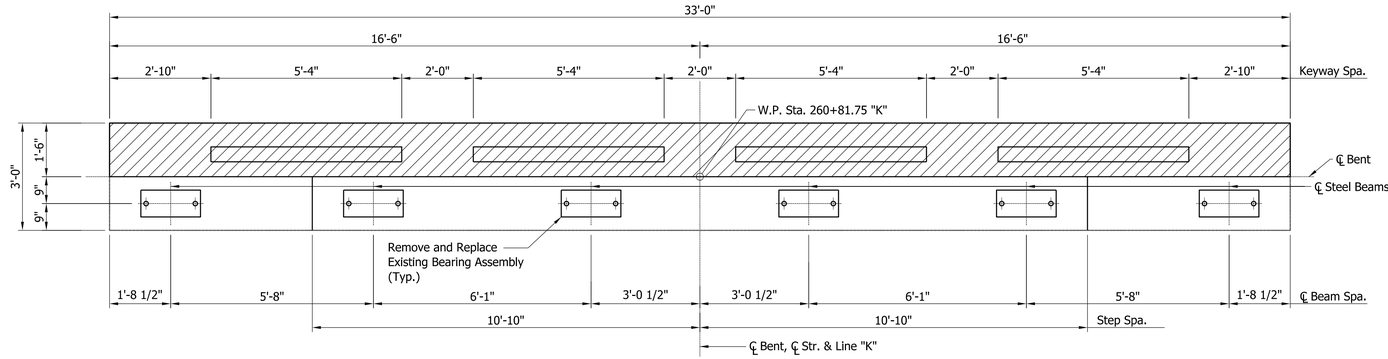
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 3
RECONSTRUCTION DETAILS

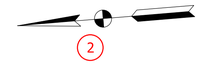
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	22 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Removal Details sheet is to show physical dimensions and limits of removal of material on an existing bent/pier.

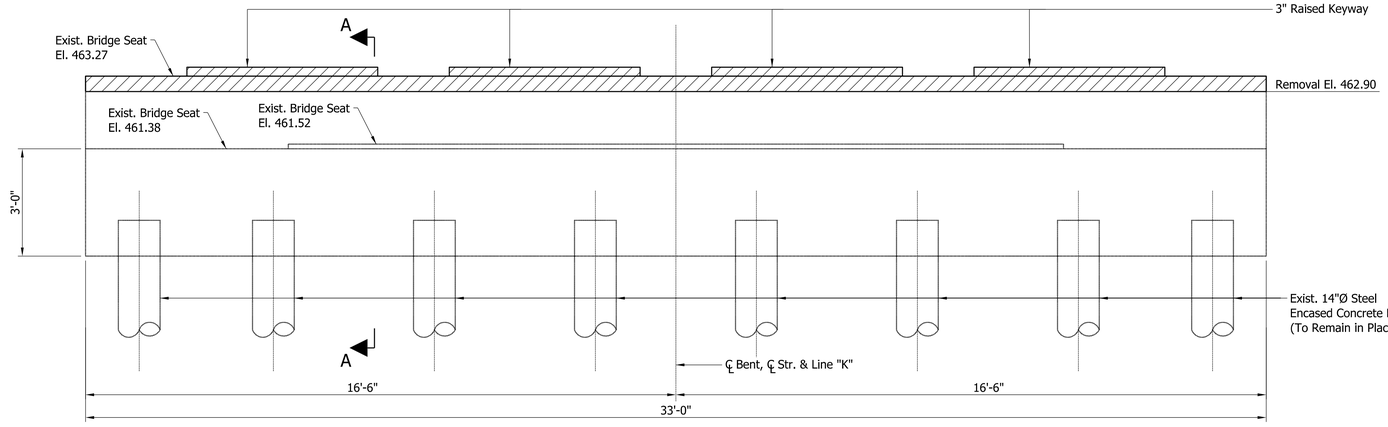


1 PLAN
Scale: 1/2" = 1'-0"
Looking Ahead Station

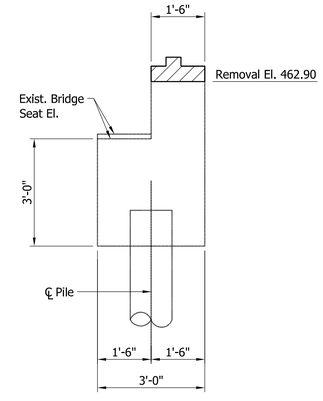


2

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
Scale: 1/2" = 1'-0"
Looking Ahead Station



4 SECTION A-A
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Plan Showing Hatched Removal Limits
2. North Arrow
3. Elevation Showing Hatched Removal Limits
4. Sections as Necessary Showing Hatched Removal Limits
5. Notes
6. Signature Block and PE Seal

5 Notes:
Hatched areas indicate portions to be removed.
For General Notes, see Sht. 14.
For Reconstruction Details, see Sht. 24.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

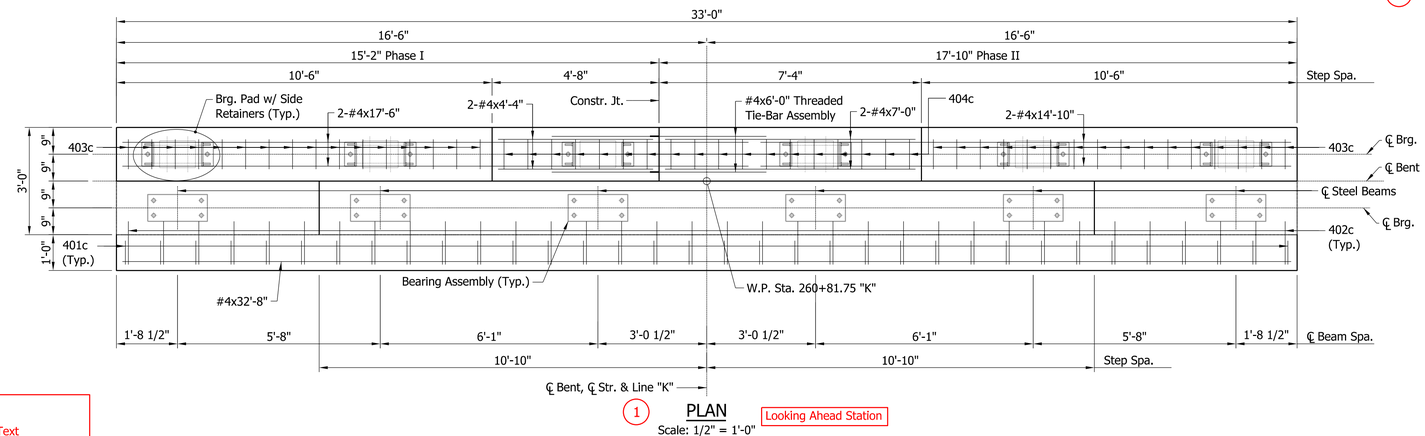
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 6
REMOVAL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	23 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Reconstruction Details sheet is to show physical dimensions, reinforcement and pertinent information necessary for reconstruction of bent/pier.

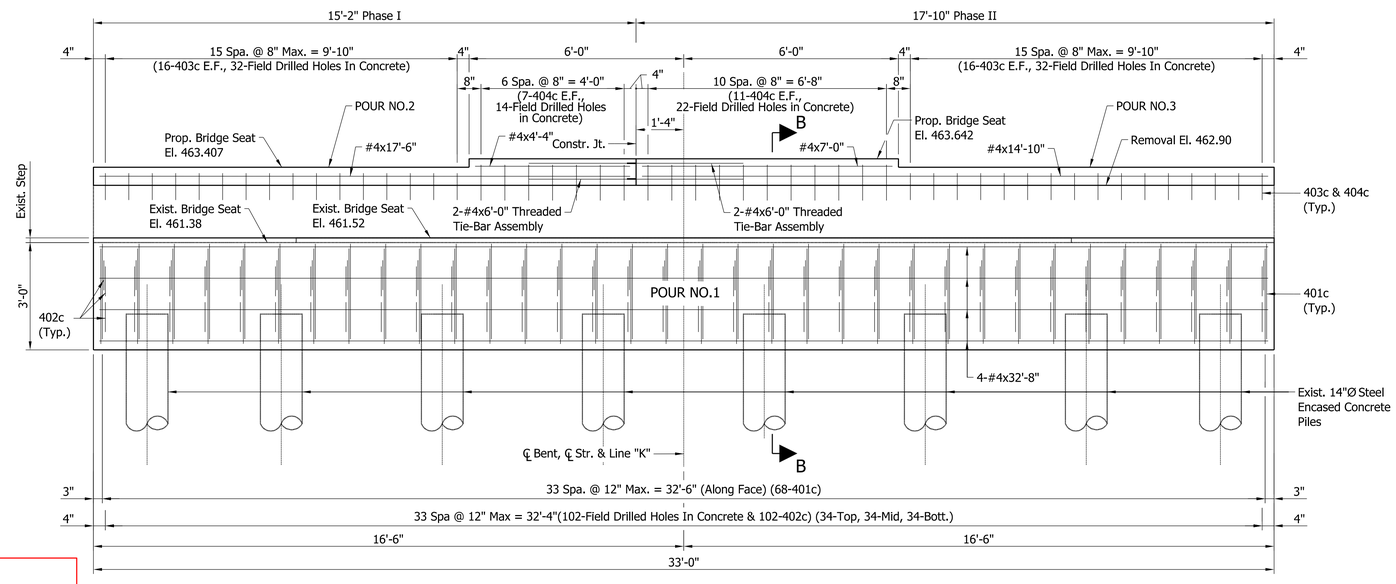


1 PLAN

Scale: 1/2" = 1'-0"

Looking Ahead Station

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION

Scale: 1/2" = 1'-0"

Looking Ahead Station

REQUIRED ELEMENTS:

1. Plan
2. North Arrow
3. Elevation Showing Reinforcing
4. Sections as Necessary
5. Notes
6. Signature Block and PE Seal

4

When the construction is to be phased, Bills of Materials should be separated by phase.

BILL OF MATERIALS BENT NO. 6

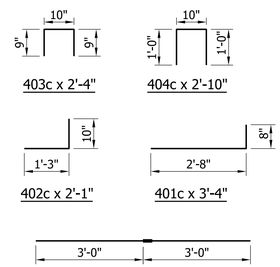
REINFORCING BARS			
SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
401c	68	3'-4"	
402c	102	2'-1"	
403c	32	2'-4"	
404c	18	2'-10"	
#4	4	32'-8"	
#4	2	17'-6"	
#4	2	14'-10"	
#4	2	7'-0"	
#4	2	4'-4"	
Total #4			522
Total Reinforcing Bars			522

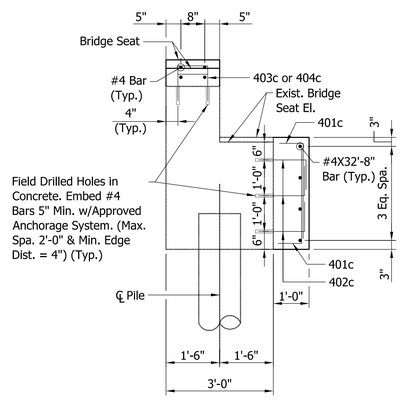
CONCRETE	
Concrete Class "A" in Substructure	
Pour No. 1	3.8 Cys
Pour No. 2	0.5 Cys
Pour No. 3	0.6 Cys
Total Class "A" in Substructure	4.9 Cys

MISCELLANEOUS	
Field Drilled Holes in Concrete	202 Ea
Threaded Tie-Bar Assembly (#4)	4 Ea
Surface Seal (Est. Quantity)	99 Sft

Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.

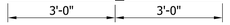
Show bar mark and total length of bar, rounded to nearest 1 in.





4 SECTION B-B

Scale: 1/2" = 1'-0"



THREADED TIE-BAR ASSEMBLY

3 BAR BENDING DETAILS

Not to Scale

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.

5 Notes:
For General Notes, see Sht. 14.
For Removal Details, see Sht. 23.
For Bearing Assembly Details, see Shts. 40 & 41.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

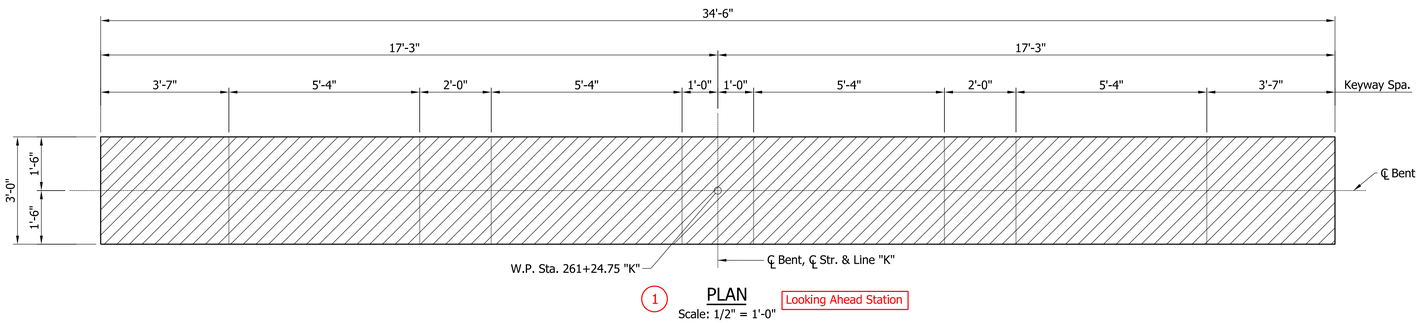
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 6
RECONSTRUCTION DETAILS

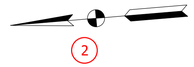
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	24 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Removal Details sheet is to show physical dimensions and limits of removal of material on an existing bent/pier.

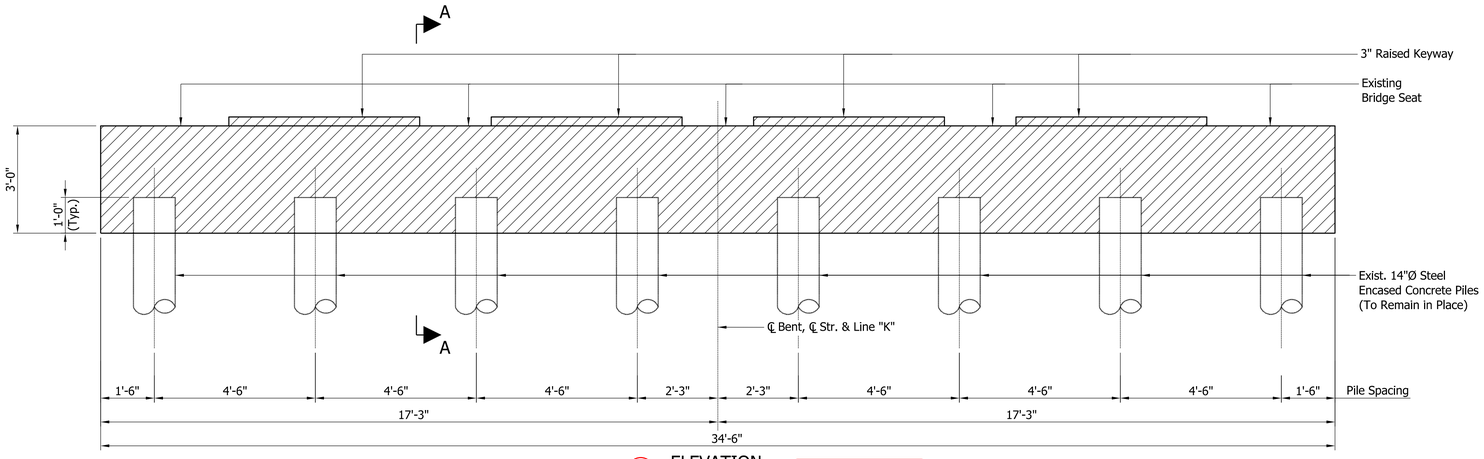


1 PLAN
Scale: 1/2" = 1'-0"
Looking Ahead Station

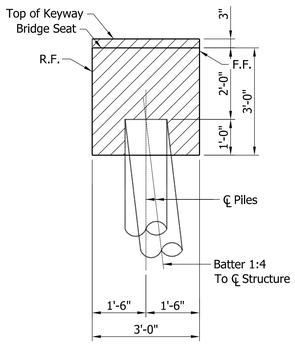


2

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
Scale: 1/2" = 1'-0"
Looking Ahead Station



4 SECTION A-A
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Plan Showing Hatched Removal Limits
2. North Arrow
3. Elevation Showing Hatched Removal Limits
4. Sections as Necessary Showing Hatched Removal Limits
5. Notes
6. Signature Block and PE Seal

5 Notes:
Hatched areas indicate portions to be removed.
For General Notes, see Sht. 14.
For Reconstruction Details, see Sht. 26.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

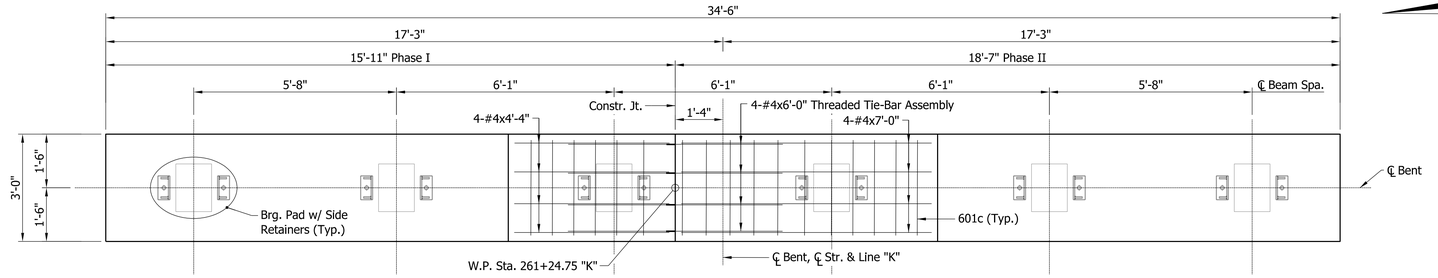
BENT NO. 7
REMOVAL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

	SHEET
	25 of 71
	CONTRACT
	B-99999

PURPOSE:

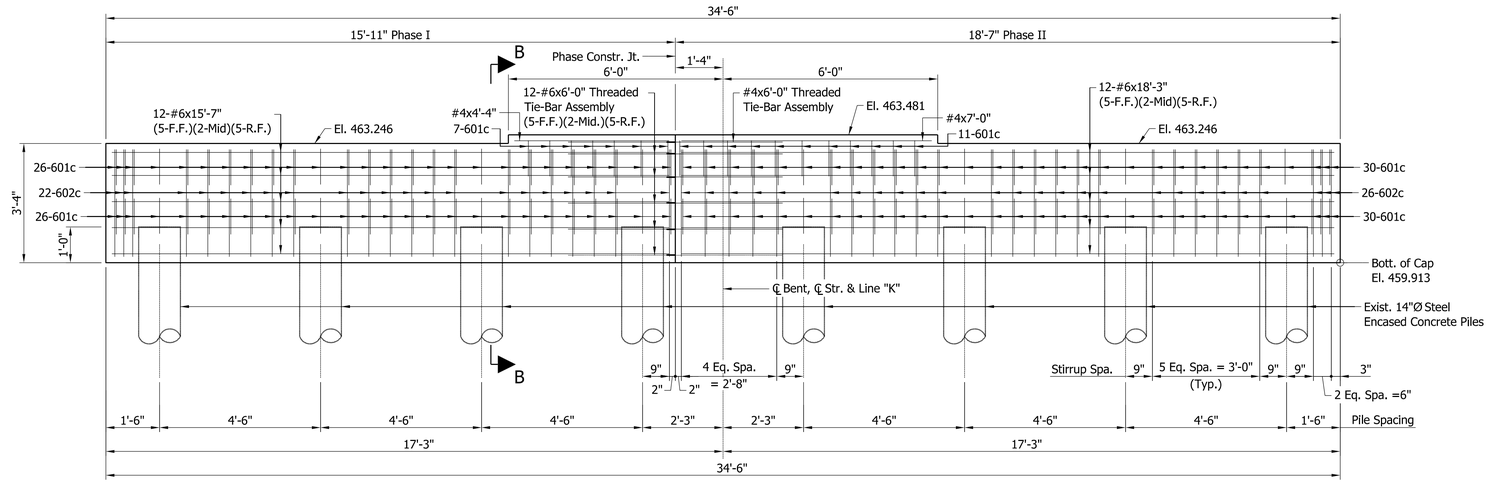
The purpose of this Bent Reconstruction Details sheet is to show physical dimensions, reinforcement and pertinent information necessary for reconstruction of bent/pier.



1 PLAN
Scale: 1/2" = 1'-0"

Looking Ahead Station

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
Scale: 1/2" = 1'-0"

Looking Ahead Station

REQUIRED ELEMENTS:

1. Plan
2. North Arrow
3. Elevation Showing Reinforcing
4. Sections as Necessary
5. Notes
6. Signature Block and PE Seal

4

When the construction is to be phased, Bills of Materials should be separated by phase.

BILL OF MATERIALS
BENT NO. 7

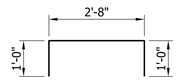
REINFORCING BARS			
SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
601c	130	4'-8"	
602c	48	9'-10"	
#6	12	18'-3"	
#6	12	15'-7"	
Total #6			2230
#4	4	7'-0"	
#4	4	4'-4"	
Total #4			31
Total Reinforcing Bars			2261

CONCRETE	
Concrete Class "A" in Substructure	
Phase I	6.0 Cys
Phase II	7.1 Cys
Total Concrete "A" in Substructure	13.1 Cys

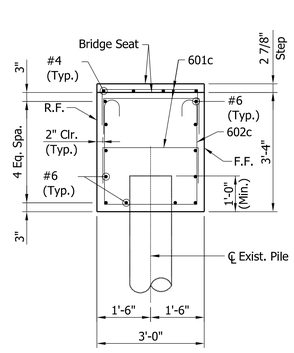
MISCELLANEOUS	
Threaded Tie-Bar Assembly (#4)	4 Ea
Threaded Tie-Bar Assembly (#6)	12 Ea

Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.

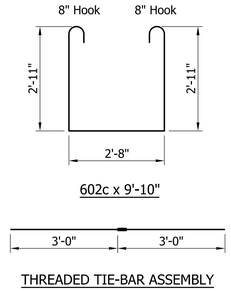
Show bar mark and total length of bar, rounded to nearest 1 in.



601c x 4'-8"



4 SECTION B-B
Scale: 1/2" = 1'-0"



602c x 9'-10"

THREADED TIE-BAR ASSEMBLY

3 BAR BENDING DETAILS
Not to Scale

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.

MIN. LAP LENGTH

2'-10" #6 Bars to #6 Bars

5 Notes:
For General Notes, see Sht. 14.
For Removal Details, see Sht. 25.
For Bearing Assembly Details, see Sht. 39.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

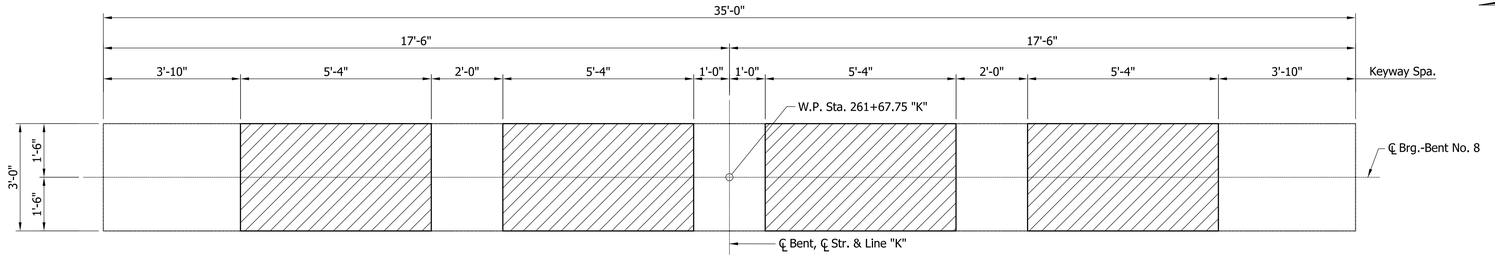
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 7
RECONSTRUCTION DETAILS

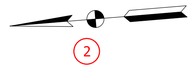
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	26 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bent Removal Details sheet is to show physical dimensions and limits of removal of material on an existing bent/pier.

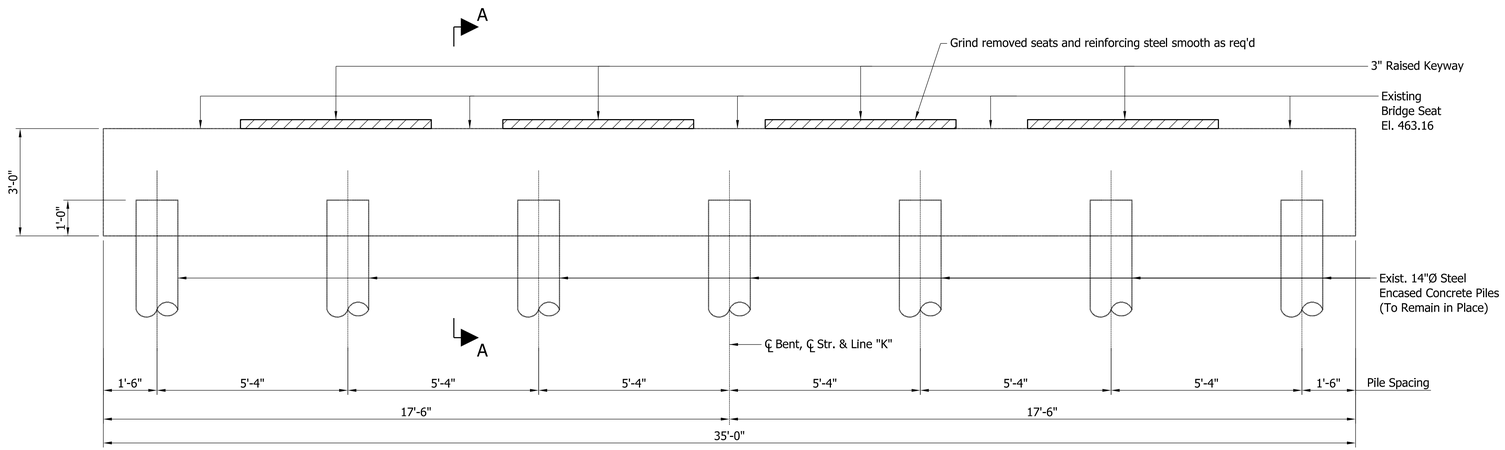


1 PLAN
Scale: 1/2" = 1'-0"
Looking Ahead Station

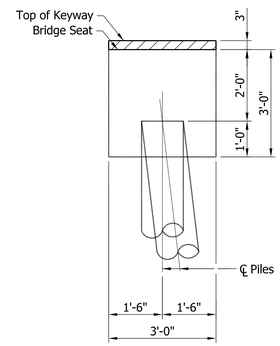


2

Typ. All Views and Sections:
- Section Title: 18 Pt Text
- Section Sub-Title: 14 Pt Text
- Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
Scale: 1/2" = 1'-0"
Looking Ahead Station



4 SECTION A-A
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Plan Showing Hatched Removal Limits
2. North Arrow
3. Elevation Showing Hatched Removal Limits
4. Sections as Necessary Showing Hatched Removal Limits
5. Notes
6. Signature Block and PE Seal

5 Notes:
For General Notes, see Sht. 14.
For Reconstruction Details, see Sht. 28.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

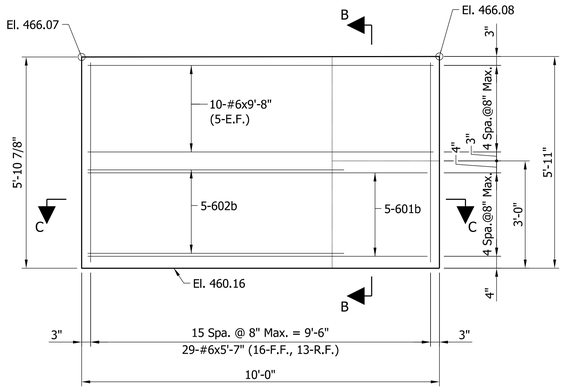
INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 8
REMOVAL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	27 of 71
	CONTRACT
	B-99999

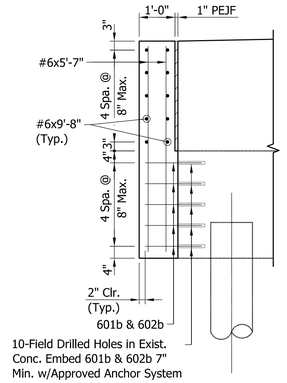
PURPOSE:

The purpose of this Bent Reconstruction Details sheet is to show physical dimensions, reinforcement and pertinent information necessary for reconstruction of bent/pier.



1 WING "C" ELEVATION
(Wing "D" Same By Opposite Hand)
Scale: 1/2" = 1'-0"

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



10-Field Drilled Holes in Exist. Conc. Embed 601b & 602b 7" Min. w/Approved Anchor System (Max. Spa. 2'-0" & Min. Edge Dist. = 4") (Typ.) (5 Ea. Fa.)

2 SECTION B-B
Scale: 1/2" = 1'-0"

4

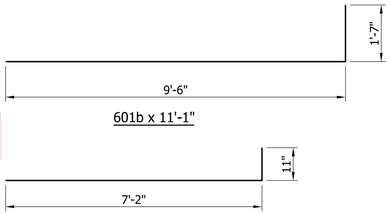
When the construction is to be phased, Bills of Materials should be separated by phase.

BILL OF MATERIALS
BENT NO. 8

REINFORCING BARS			
SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
601b	10	8'-1"	
602b	10	11'-1"	
#6	20	9'-8"	
#6	58	5'-7"	
Total #6			1063
Total Reinforcing Bars			1063

CONCRETE	
Concrete Class "A" in Substructure	
Phase I	2.3 Cys
Phase II	2.3 Cys
Total Concrete "A" in Substructure	4.6 Cys

MISCELLANEOUS	
Field Drilled Hole in Concrete	20 Ea
Surface Seal (Est. Quantity)	99 Sft
Aggregate for End Bent Backfill	13 Cys
Geotextile for Underdrain, Type 2B	41 Sys
Pipe, End Bent Drain, 6"	47 Lft

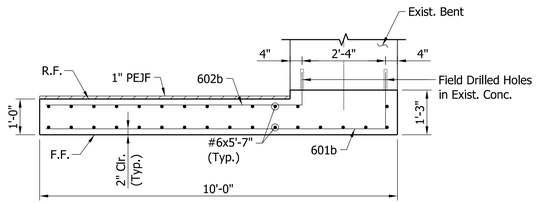


Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.

3 BAR BENDING DETAILS
Not to Scale

Show bar mark and total length of bar, rounded to nearest 1 in.

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.



2 SECTION C-C
Scale: 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Wing Elevation
2. Sections as Necessary
3. Reinforcing Bar Bending Diagrams
4. Bill of Materials
5. Notes
6. Signature Block and PE Seal

5 Notes:
For General Notes, see Sht. 14.
For Removal Details, see Sht. 27.
For Bearing Assembly Details, see Sht. 38.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

BENT NO. 8
RECONSTRUCTION DETAILS

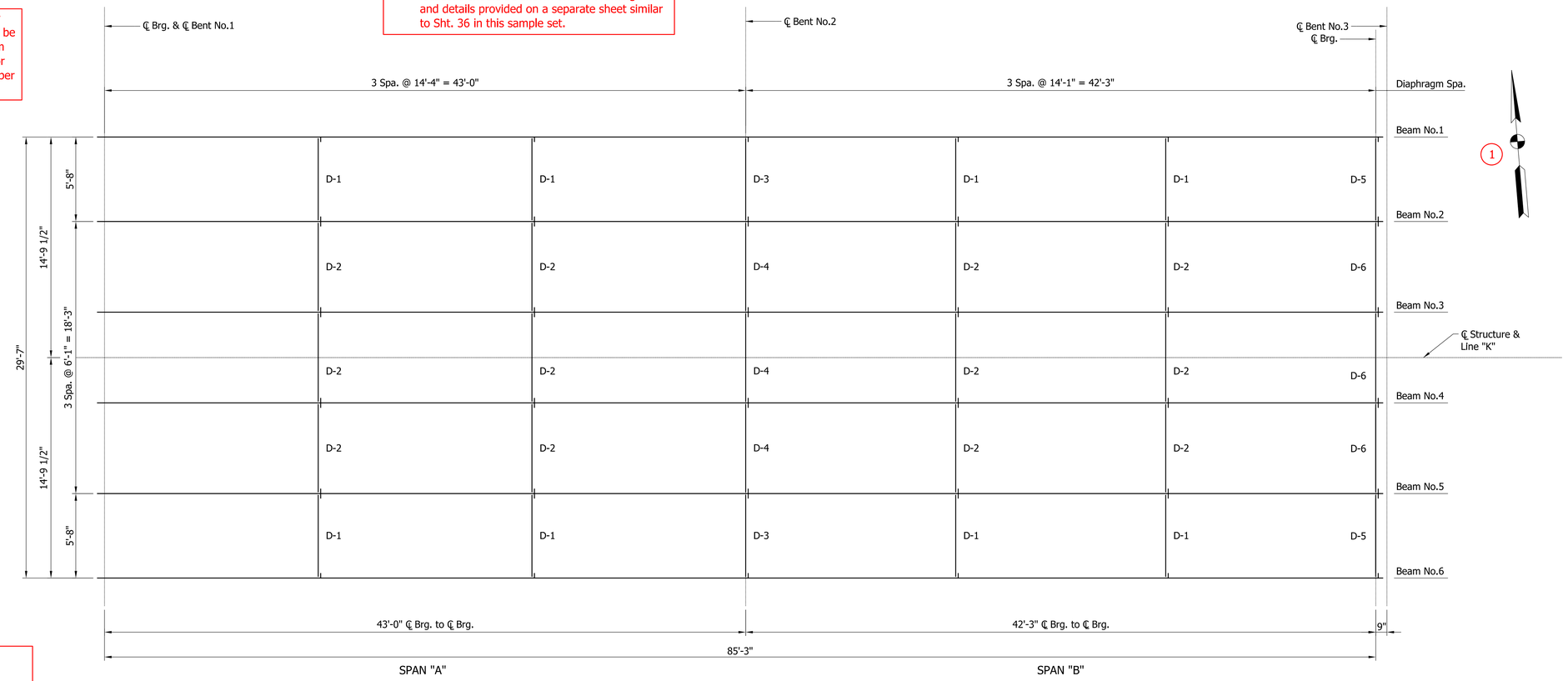
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	28 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Framing Plan sheet is to provide all necessary tie-in dimensions and beam end details as required.

Note: The first interior cross-frame or intermediate diaphragm should be located no further than 10' from face of bent when an integral or semi-integral end bent is used per IDM Ch. 407.

Note: The new beams in this sample project did not require a splice. When a splice is required, the locations should be shown on this Framing Plan and details provided on a separate sheet similar to Sht. 36 in this sample set.



2 FRAMING PLAN
Scale: 1/4" = 1'-0"

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

REQUIRED ELEMENTS:

1. North Arrow
2. Framing Plan
3. Fabrication & Erection Notes w/Estimated Weight of Structural Steel
4. Sheet Notes
5. Signature Block and PE Seal

Note: The limits on bridge beam painting/coating of 50W structural steel should be clearly shown on plans, per Design Memo 23-10.

3 FABRICATION AND ERECTION NOTES

All Structural Steel is to be ASTM A709, Grade 50, unless noted.
All Bolts shall be High Strength F3125 Grade A325 Type 1 Bolts, 7/8" diameter, unless noted. Open holes shall be 15/16" diameter, unless noted.
All Anchor Bolts shall be ASTM F1554, Grade 105, unless noted.
All Threaded Studs shall be ASTM F1554, Grade 105, unless noted.
Coating limits shall be as shown on Std. Dwg. series E 619-PRWS.
Clean existing steel and coat all new and existing steel except top of beams and shear connectors. See Sht. 58 for dried coat film information.
Per Original Bridge Plans, Lead Based Primer may be present on Top Flange. The remainder of the bridge was last painted in 1979 and the presence of lead is unknown.

Estimated weight of structural steel:

62,240 lbs	(A709 Grade 50)
296 lbs	(F3125 Grade A325 Type 1 Bolts)
116 lbs	(F1554 Grade 105 Anchor Bolts)
104 lbs	(F1554 Grade 105 Threaded Studs)
62,756 lbs	(Total)

4 Notes:
For General Notes, see Sht. 14.
For Diaphragm Details, see Sht. 32.
For Bearing Details, see Shts. 38 - 41.
For Superstructure Details, see Shts. 42 - 51.

5

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

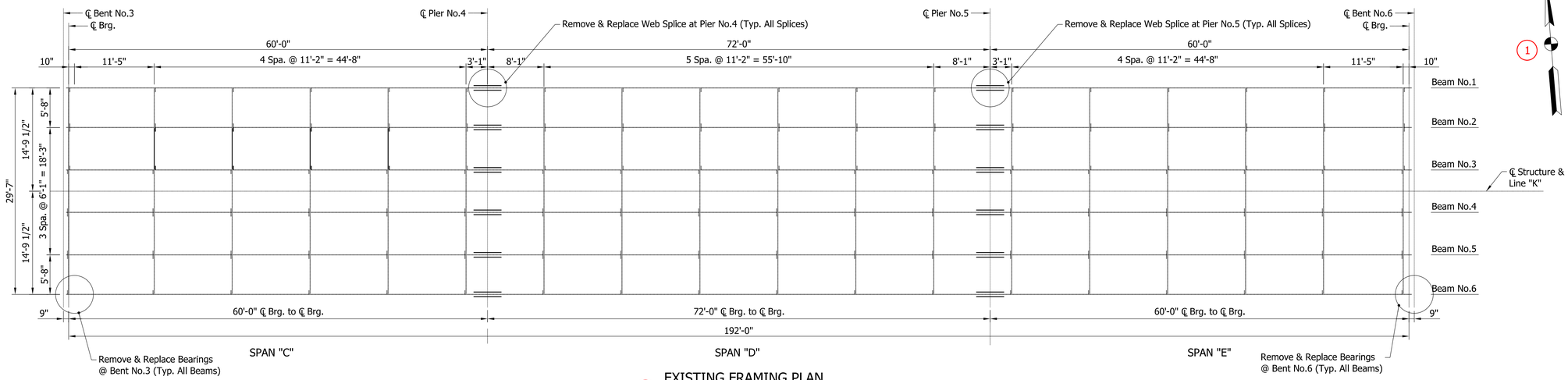
INDIANA
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
SPANS "A" - "B"

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	29 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Framing Plan sheet is to provide all necessary tie-in dimensions and beam end details as required.



2 EXISTING FRAMING PLAN

Scale: 1/8" = 1'-0"

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

REQUIRED ELEMENTS:

1. North Arrow
2. Framing Plan
3. Fabrication & Erection Notes w/Estimated Weight of Structural Steel
4. Sheet Notes
5. Signature Block and PE Seal

3 FABRICATION AND ERECTION NOTES

All Structural Steel is to be ASTM A709, Grade 50, unless noted.
All Bolts shall be High Strength F3125 Grade A325 Type 1 Bolts, 7/8" diameter, unless noted. Open holes shall be 15/16" diameter, unless noted.
All Anchor Bolts shall be ASTM F1554, Grade 105, unless noted.
Clean existing steel and coat all new and existing steel except top of beams and shear connectors. See Sht. 58 for dried coat film information.
Per Original Bridge Plans, Lead Based Primer may be present on Top Flange. The remainder of the bridge was last painted in 1979 and the presence of lead is unknown.

Estimated weight of structural steel:

4,684 lbs	(A709 Grade 50)
758 lbs	(F3125 Grade A325 Type 1 Bolts)
117 lbs	(F1554 Grade 105 Anchor Bolts)
5,559 lbs	(Total)

4 Notes:

For General Notes, see Sht. 14.
For Web Splice Retrofit Detail, see Sht. 34.
For Bearing Details, see Sht. 41.
For Superstructure Details, see Shts. 42 - 51.

5

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

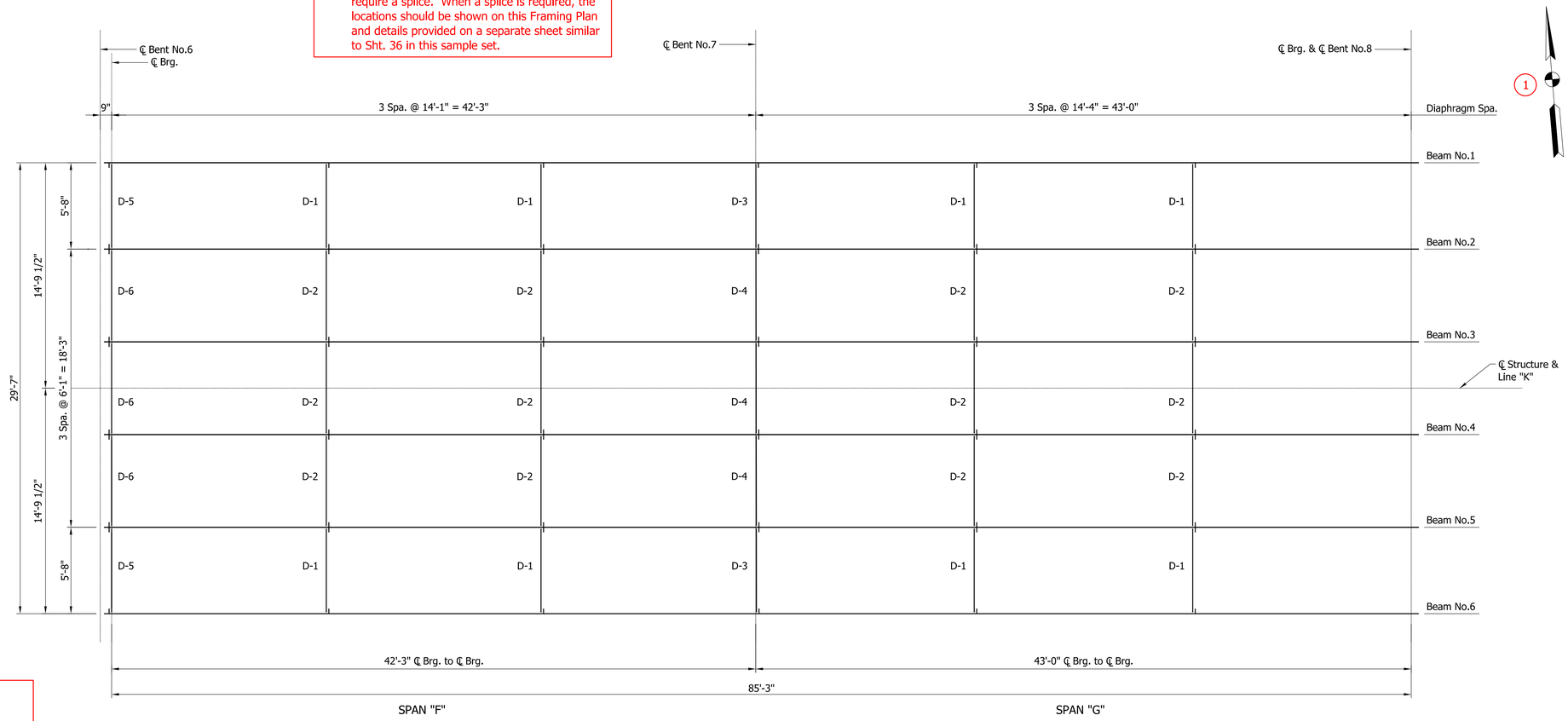
FRAMING PLAN
SPANS "C" - "E"

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	30 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Framing Plan sheet is to provide all necessary tie-in dimensions and beam end details as required.

Note: The new beams in this sample project did not require a splice. When a splice is required, the locations should be shown on this Framing Plan and details provided on a separate sheet similar to Sht. 36 in this sample set.



2 FRAMING PLAN
Scale: 1/4" = 1'-0"

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

REQUIRED ELEMENTS:

1. North Arrow
2. Framing Plan
3. Fabrication & Erection Notes w/Estimated Weight of Structural Steel
4. Sheet Notes
5. Signature Block and PE Seal

Note: The limits on bridge beam painting/coating of 50W structural steel should be clearly shown on plans, per Design Memo 23-10.

3 FABRICATION AND ERECTION NOTES

All Structural Steel is to be ASTM A709, Grade 50, unless noted.
All Bolts shall be High Strength F3125 Grade A325 Type 1 Bolts, 7/8" diameter, unless noted. Open holes shall be 15/16" diameter, unless noted.
All Anchor Bolts shall be ASTM F1554, Grade 105, unless noted.
All Threaded Studs shall be ASTM F1554, Grade 105, unless noted.
Clean existing steel and coat all new and existing steel except top of beams and shear connectors. See Sht. 58 for dried coat film information.
Per Original Bridge Plans, Lead Based Primer may be present on Top Flange. The remainder of the bridge was last painted in 1979 and the presence of lead is unknown.

Estimated weight of structural steel:

62,168 lbs	(A709 Grade 50)
296 lbs	(F3125 Grade A325 Type 1 Bolts)
116 lbs	(F1554 Grade 105 Anchor Bolts)
104 lbs	(F1554 Grade 105 Threaded Studs)
62,684 lbs	(Total)

4 Notes:
For General Notes, see Sht. 14.
For Diaphragm Details, see Sht. 32.
For Bearing Details, see Shts. 38 - 41.
For Superstructure Details, see Shts. 42 - 51.

5

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

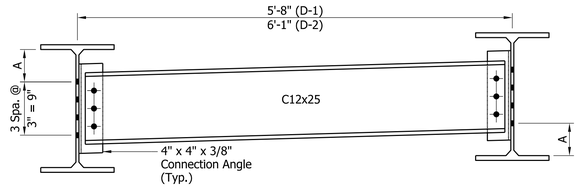
INDIANA
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
SPANS "F" - "G"

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	31 of 71
	CONTRACT
	B-99999

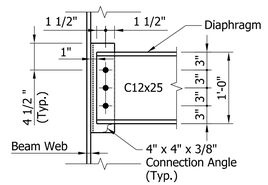
PURPOSE:

The purpose of this Structural Steel Details sheet is to provide dimensions and details required for fabrication and installation of steel diaphragms.

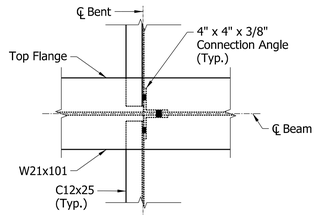


DIAPHRAGM ELEVATION - D-1 & D-2

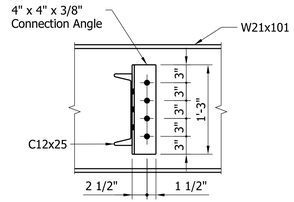
Note: Bolted diaphragm connections are allowed per AASHTO LRFD. Forthcoming IDM updates will address this.



CONNECTION DETAIL - D-1 & D-2

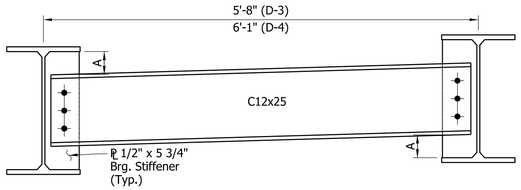


PLAN - D-1 & D-2

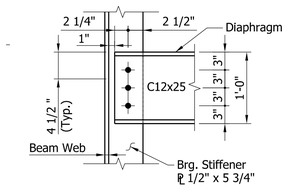


BEAM ELEVATION - D-1 & D-2

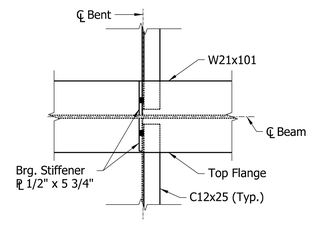
1 TYPICAL DIAPHRAGM - D-1 & D-2
Scale: 1"=1'-0"



DIAPHRAGM ELEVATION - D-3 & D-4



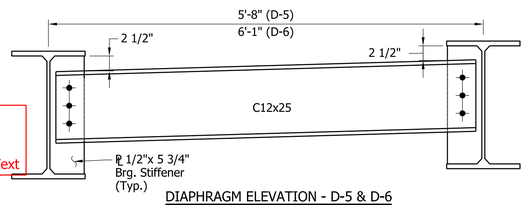
CONNECTION DETAIL - D-3 & D-4



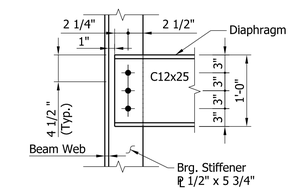
PLAN - D-3 & D-4

1 TYPICAL DIAPHRAGM - D-3 & D-4
Scale: 1"=1'-0"

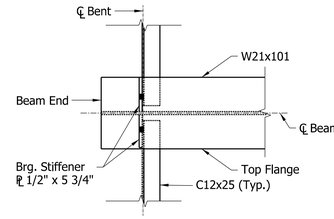
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



DIAPHRAGM ELEVATION - D-5 & D-6



CONNECTION DETAIL - D-5 & D-6

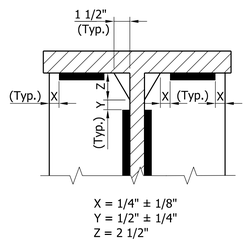


PLAN - D-5 & D-6

1 TYPICAL DIAPHRAGM - D-5 & D-6
Scale: 1"=1'-0"

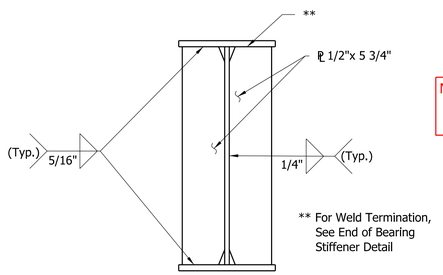
REQUIRED ELEMENTS:

1. Diaghragm Elevation and Connection Details
2. Bearing Stiffener, Transverse Stiffener & Connection Plate Details as Required by Design
3. Notes
4. Signature Block and PE Seal



X = 1/4" ± 1/8"
Y = 1/2" ± 1/4"
Z = 2 1/2"

2 END OF BEARING STIFFENER DETAIL
Not to Scale



** For Weld Termination, See End of Bearing Stiffener Detail

BEARING STIFFENER DETAIL
Not to Scale

Note: Designer should see IDM for alternate detail to include for tension flange connections and other details not included in this sample plan set.

3 Notes:
For General Notes, see Sht. 14.
For Framing Plan & Erection Notes, see Shts. 29 - 31.
Dimension "A" shall be equal.

4

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL — *Engineer of Record Signature* — MM/DD/YY
DESIGN ENGINEER — DATE

DESIGNED: ABC | DRAWN: PQR
CHECKED: BCD | CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

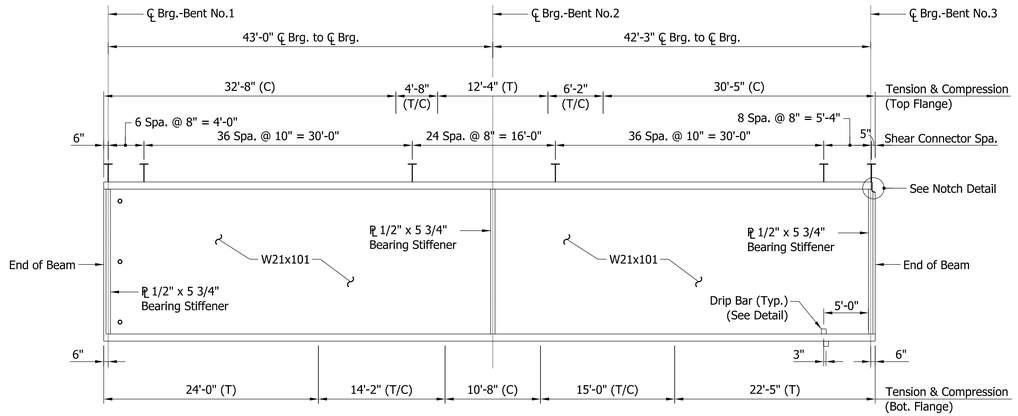
STRUCTURAL STEEL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

SHEET 32 of 71
CONTRACT B-99999

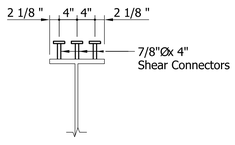
PURPOSE:

The purpose of this Structural Steel Details sheet is to provide all necessary dimensions details required for steel beam fabrication for end span beams.

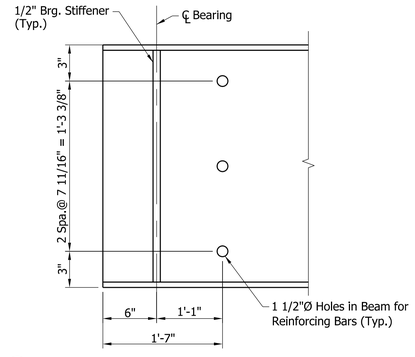


1 BEAM ELEVATION
Not to Scale

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

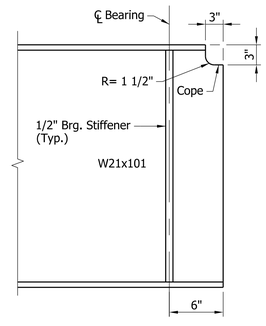


2 SHEAR CONNECTORS TYPICAL DETAIL
Scale: 3/4" = 1'-0"

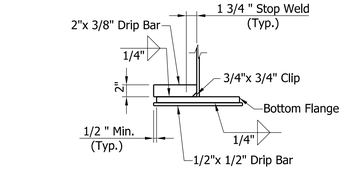


3 BEAM WEB HOLE DETAIL @ BENT NO. 1
Not to Scale

Note: When possible, this notch should be avoided in rolled beams. It is not always possible to avoid on rehabilitation projects.

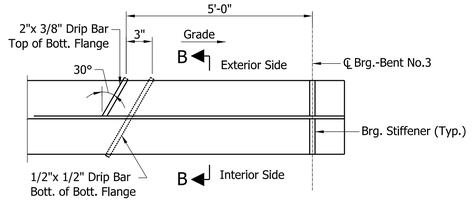


4 NOTCH DETAIL FOR END OF BEAM @ BENT NO. 3
Not to Scale



SECTION B-B
Not to Scale

Note:
Drip Bars shall be located on the upward slope of all exterior girders adjacent to bents and piers.
Drip Bars shall be caulked with dark brown caulking against flange, web and fillet welds.



5 TYPICAL DRIP BAR DETAIL
Not to Scale

REQUIRED ELEMENTS:

1. Beam Elevation w/ T&C Diagram
2. Shear Connectors Details (when req'd.)
3. Beam Web Hole Detail
4. Notch Detail for End of Beam (when req'd.)
5. Drip Bar Detail
6. Notes
7. Signature Block and PE Seal

6 Notes:
For General Notes, see Sht. 14.
For Framing Plan & Erection Notes, see Shts. 29 - 31.
Beam ends and bearing stiffeners shall be fabricated such that they are vertical under full dead load.
Shear connectors located within the limits of the deck drain shall be relocated to miss the deck drain.

7

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

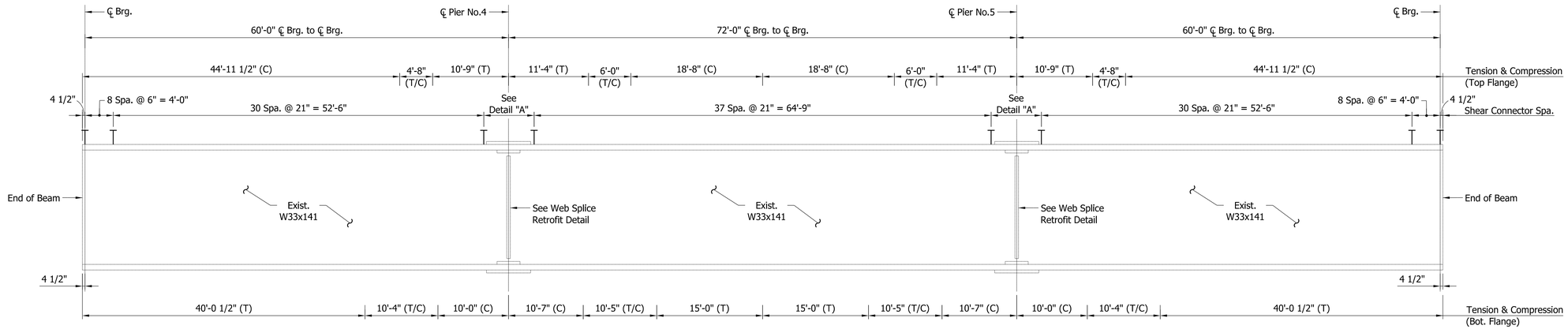
STRUCTURAL STEEL DETAILS
SPANS "A" - "B"

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

	SHEET
	33 of 71
	CONTRACT
	B-99999

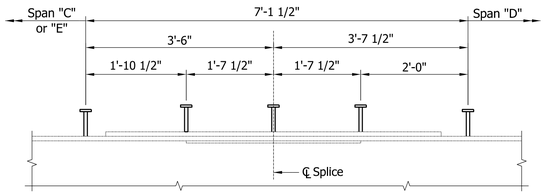
PURPOSE:

The purpose of this Structural Steel Details sheet is to provide all necessary dimensions details required for steel beam fabrication for interior span beams.

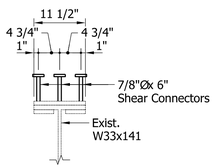


1 BEAM ELEVATION
Not to Scale

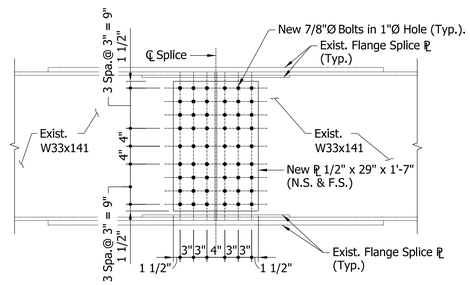
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



2 DETAIL "A"
Scale: 3/4" = 1'-0"



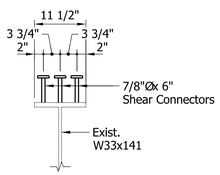
2 SHEAR CONNECTORS TYPICAL DETAIL @ SPLICE
Scale: 3/4" = 1'-0"



3 WEB SPLICE RETROFIT DETAIL
Scale: 3/4" = 1'-0"

REQUIRED ELEMENTS:

1. Beam Elevation w/ T&C Diagram
2. Shear Connectors Details (when req'd.)
   Typical Section
   Detail at Splice
   Detail at Connection Plate
3. Web Splice Details
4. Notes
5. Signature Block and PE Seal



2 SHEAR CONNECTORS TYPICAL DETAIL
Scale: 3/4" = 1'-0"

4 Notes:
For General Notes, see Sht. 14.
For Framing Plan & Erection Notes, see Shts. 29 - 31.
All Bolts in new Web Splice shall be High Strength F3125 Grade A325 Type 1 Bolts, 7/8"Ø.
All Holes for new Web Splice Plates shall be 1"Ø.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

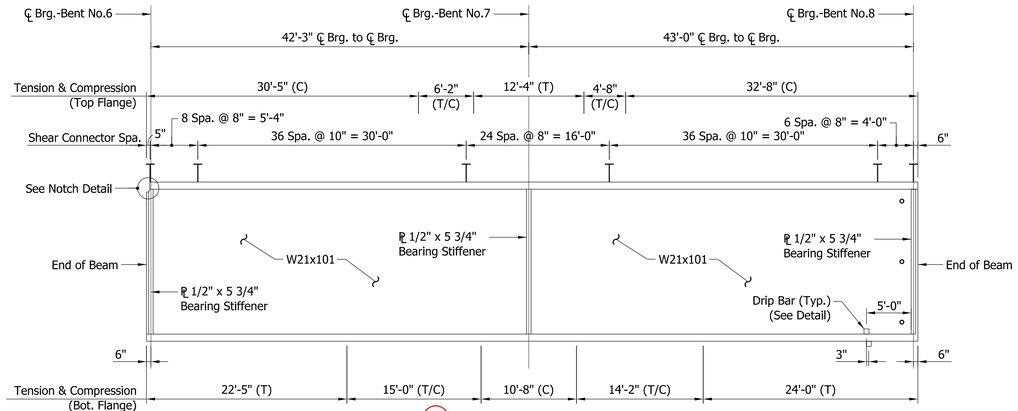
INDIANA
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
SPANS "C" - "E"

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	34 of 71
	CONTRACT
	B-99999

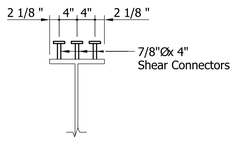
PURPOSE:

The purpose of this Structural Steel Details sheet is to provide all necessary dimensions details required for steel beam fabrication for end span beams.

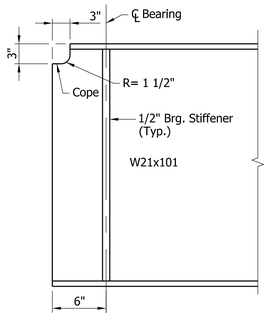


1 BEAM ELEVATION
Not to Scale

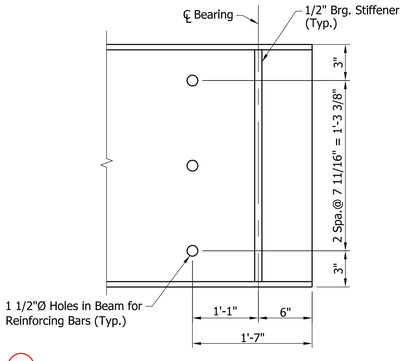
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



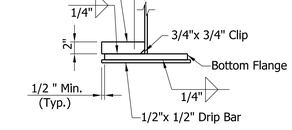
2 SHEAR CONNECTORS TYPICAL DETAIL
Scale: 3/4" = 1'-0"



4 NOTCH DETAIL FOR END OF BEAM @ BENT NO. 6
Not to Scale

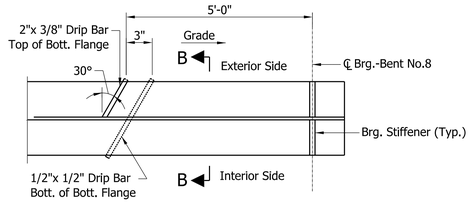


3 BEAM WEB HOLE DETAIL @ BENT NO. 8
Not to Scale



SECTION B-B
Not to Scale

Note:
Drip Bars shall be located on the upward slope of all exterior girders adjacent to bents and piers.
Drip Bars shall be caulked with dark brown caulking against flange, web and fillet welds.



5 TYPICAL DRIP BAR DETAIL
Not to Scale

REQUIRED ELEMENTS:

1. Beam Elevation w/ T&C Diagram
2. Shear Connectors Details (when req'd.)
3. Beam Web Hole Detail
4. Notch Detail for End of Beam (when req'd.)
5. Notes
6. Signature Block and PE Seal

5 Notes:
For General Notes, see Sht. 14.
For Framing Plan & Erection Notes, see Shts. 29 - 31.

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

6 PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
SPANS "F" - "G"

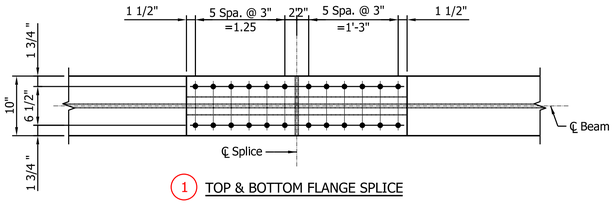
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	35 of 71
	CONTRACT
	B-99999

PURPOSE:

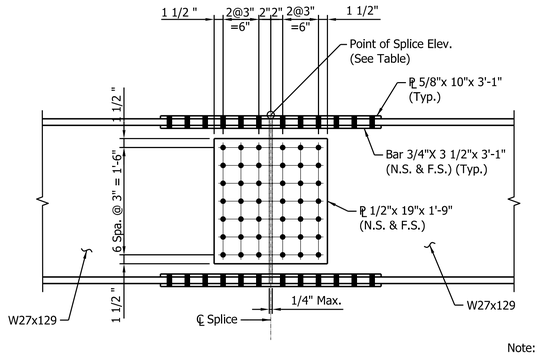
The purpose of this Structural Steel Details sheet is to provide all necessary dimensions details required for fabrication and installation of beam field splices.

NOTE:

The splice details shown on this sheet are not related to the rest of the project for this set of sample rehab plans. The details are for illustrative purposes only and should be included as appropriate for a project with steel beams or plate girders.



1 TOP & BOTTOM FLANGE SPLICE



1 TYPICAL SPLICE DETAIL
Scale: 1" = 1'-0"

Note:
Due to Bolt Clearance, Flange Splice Bolts may need to be installed prior to Web Splice Bolts.

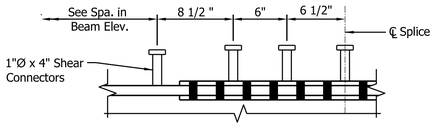
3

TOP OF SPLICE ELEVATIONS

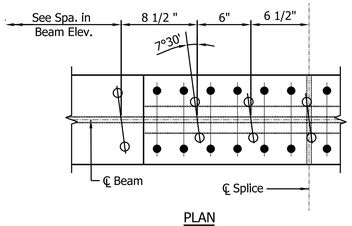
	Optional Splice 1-1	Splice 3-1	Optional Splice 4-1
Beam No. 1	1022.631	1023.260	1022.036
Beam No. 2	1022.781	1023.380	1022.139
Beam No. 3	1022.925	1023.498	1022.237
Beam No. 4	1023.070	1023.614	1022.335
Beam No. 5	1023.214	1023.731	1022.432
Beam No. 6	1023.232	1023.722	1022.404
Beam No. 7	1023.126	1023.589	1022.250
Beam No. 8	1023.019	1023.454	1022.096
Beam No. 9	1022.912	1023.320	1021.942
Beam No. 10	1022.800	1023.182	1021.783

Note:
Top of beam splice shall be adjusted to these elevations before bolting field splice connections. These elevations are with falsework removed and carrying steel dead load only.

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

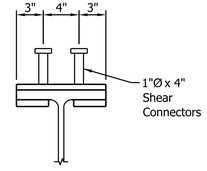


ELEVATION



PLAN

2 DETAIL "C"
Scale: 1 1/2" = 1'-0"



SHEAR CONNECTORS
TYPICAL DETAIL @ SPLICE
Scale: 1 1/2" = 1'-0"

REQUIRED ELEMENTS:

1. Typical Splice Detail
   Elevation showing Web Splice Plates
   Plan View(s) showing Top & Bottom Flange Plates
2. Detail showing configuration with Shear Connectors
3. Top of Splice Elevations Table
4. Notes
5. Signature Block and PE Seal

4 Notes:
For General Notes, see Sht. 14.
For Framing Plan & Erection Notes, see Shts. 29-31.

5

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

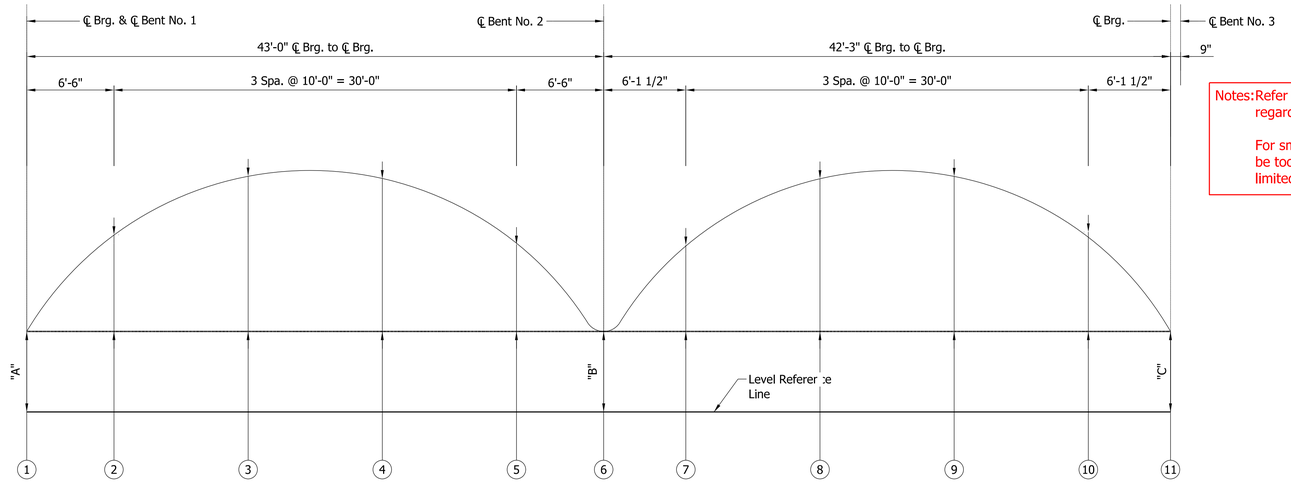
INDIANA
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
SPLICE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	36 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Structural Steel Details sheet is to provide No Load Camber and Reaming Information required for steel beam fabrication.

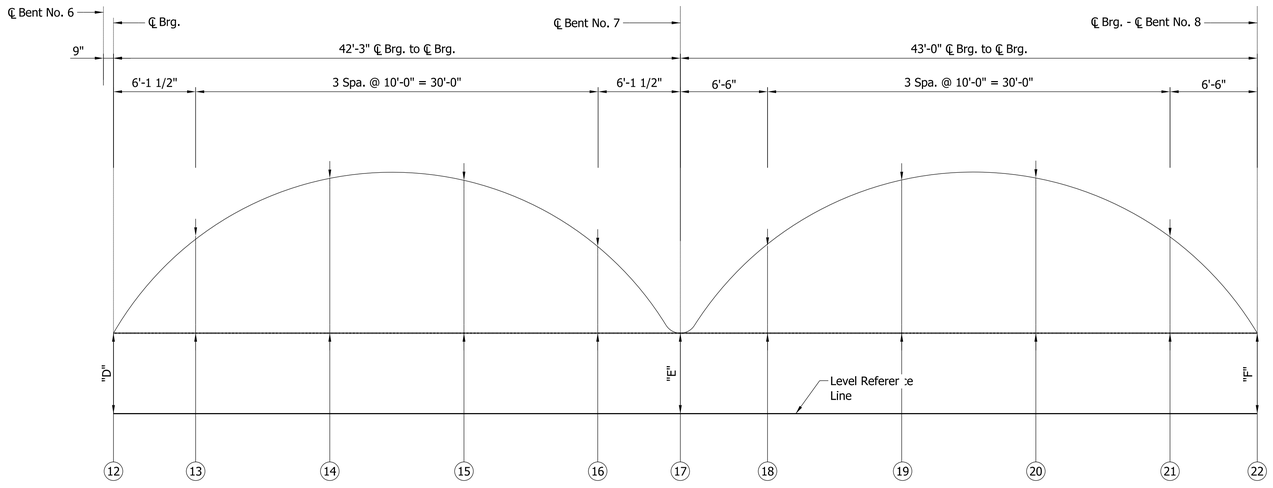


1 NO LOAD CAMBER AND REAMING DIAGRAM - SPANS "A" - "B"

Notes: Refer to IDM for current practice regarding spacing.

For smaller spans 10th points may be too close. Spacing should be limited to a minimum of 8'.

Note: If a field splice is required, that location should also be included in the Camber Diagrams and Table of Cambers.



1 NO LOAD CAMBER AND REAMING DIAGRAM - SPANS "F" - "G"

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

Typ. Table:
Table Title: Text Height = 0.25"
Table Data: 12 Pt Text

3 BLOCKING DIMENSIONS

LOCATION	"A"	"B"	"C"
Beam No. 1 - 6	12"	12"	12"

3 BLOCKING DIMENSIONS

LOCATION	"D"	"E"	"F"
Beam No. 1 - 6	12"	12"	12"

REQUIRED ELEMENTS:

1. No Load Camber and Reaming Diagram
2. Table of Cambers
3. Blocking Dimensions Table
4. Notes
5. Signature Block and PE Seal

2 TABLE OF CAMBERS (in.)

POINT	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Beams 1-6	Dead Load - Steel Beam	0.00	0.03	0.05	0.04	0.01	0.00	0.01	0.04	0.05	0.02	0.00	0.00	0.02	0.05	0.04	0.01	0.00	0.01	0.04	0.05	0.03	0.00
	Dead Load - Slab and Forms	0.00	0.18	0.32	0.25	0.07	0.00	0.05	0.22	0.28	0.15	0.00	0.00	0.15	0.28	0.22	0.05	0.00	0.07	0.25	0.32	0.18	0.00
	Dead Load - Railing	0.00	0.01	0.02	0.02	0.01	0.00	0.00	0.02	0.02	0.01	0.00	0.00	0.01	0.02	0.02	0.00	0.00	0.01	0.02	0.02	0.01	0.00
	Subtotal - Dead Load	0.00	0.22	0.39	0.31	0.08	0.00	0.06	0.27	0.35	0.19	0.00	0.00	0.19	0.35	0.27	0.06	0.00	0.08	0.31	0.39	0.22	0.00
	Geometric Camber	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Camber	0.00	0.22	0.39	0.31	0.08	0.00	0.06	0.27	0.35	0.19	0.00	0.00	0.19	0.35	0.27	0.06	0.00	0.08	0.31	0.39	0.22	0.00

4 Notes:
For General Notes, see Sht. 14.
For Framing Plan & Erection Notes, see Shts. 29 - 31.

5

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

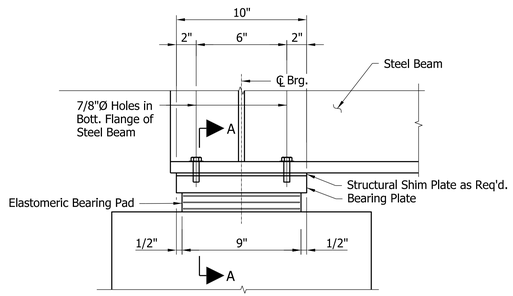
STRUCTURAL STEEL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
NONE	156-78-00000 B
VERTICAL SCALE	DESIGNATION
NONE	9999999
	SHEET
	37 of 71
	CONTRACT
	B-99999

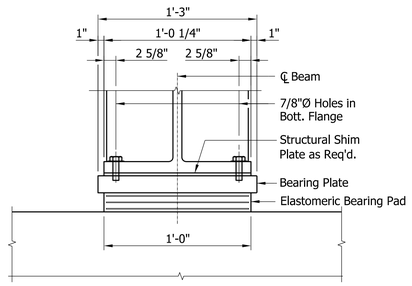
PURPOSE:

The purpose of this Bearing Assembly Details sheet is to provide information necessay for fabrication of the steel beam elastomeric bearing pad and bearing assembly at the end bents.

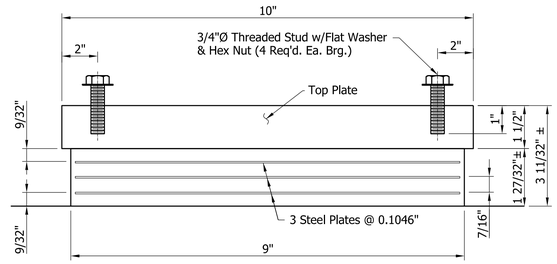
Note: It is common to show a plan view detail of bearings with clearances on Bent or Framing Plan sheet. (Dimensions shown on Sht. 17 of these Sample Plans.)



SECTION @ BENT



SECTION A-A



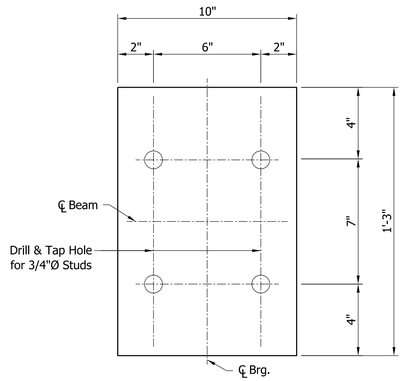
BEARING ASSEMBLY

Notes:
Elastomeric Material shall have 55 (±5) Durometer Elastomeric.
(a) Side Retainer (Place at both faces of all beams)
(b) 1 1/8"Ø x 1'-3" Anchor Bolt w/ Cut Washer under Nut. (ASTM F1554, Gr. 105) (Typ.)
(c) Shim Plate (see Table of Shims)

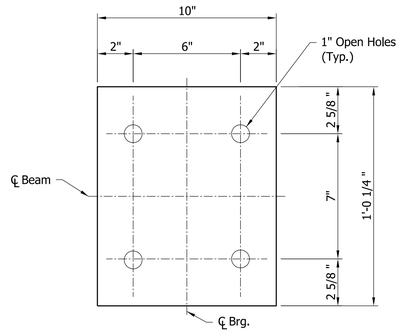
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

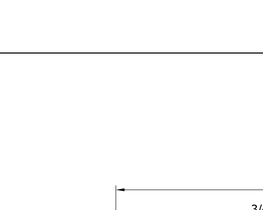
(1) ELASTOMERIC BEARING ASSEMBLY
Not To Scale

Bearing Plate to be Vulcanized to Elastomeric Pad



(2) BEARING PLATE
Scale: 3" = 1'-0"





(3) BEVELED SHIM PLATE
Scale: 3" = 1'-0"

Typ. Table:
Table Title: 18 Pt Text
Table Data: 12 Pt Text

(4)

TABLE OF SHIMS

Beam Line	1		2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B	A	B
Bent No. 1	4 1/8"	4"	5 1/2"	5 3/8"	5/8"	1/2"	5/8"	1/2"	5 1/2"	5 3/8"	4 1/8"	4"
Bent No. 8	2"	2"	3 3/8"	3 3/8"	4 7/8"	4 7/8"	4 7/8"	4 7/8"	3 3/8"	3 3/8"	2"	2"

Note:
For Dimension "A" & "B" location, see Beveled Shim Plate Detail. Shims packs to consist of two or more shim plates with a minimum shim plate thickness of 1/8".

REQUIRED ELEMENTS:

1. Elastomeric Bearing Assembly Details
   - Bearing Assembly
   - Section at Bent
   - Section through Steel Beam
2. Top Plate Detail
3. Beveled Shim Plate Detail
4. Table of Shims
5. Notes
6. Signature Block and PE Seal

(5) Notes:
For General Notes, see Sht. 14.
For Fabrication & Erection Notes, see Sht. 29 - 31.

(6)

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

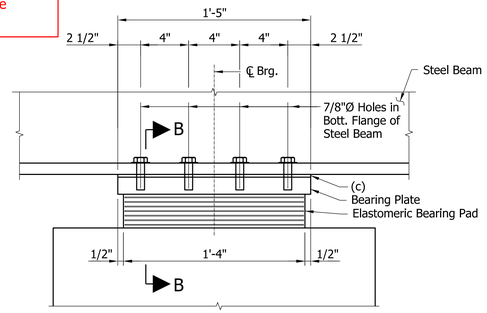
BEARING ASSEMBLY DETAILS
BENT NO. 1 & BENT NO. 8

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	38 of 71
	CONTRACT
	B-99999

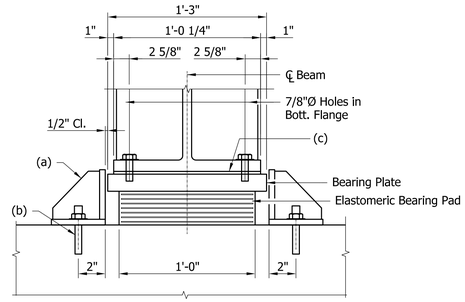
PURPOSE:

The purpose of this Bearing Assembly Details sheet is to provide information necessay for fabrication of the steel beam elastomeric bearing pad and bearing assembly at the interior bents.

Note: It is common to show a plan view detail of bearings with clearances on Bent or Framing Plan sheet. (Dimensions shown on Shts. 20 & 26 of these Sample Plans.)

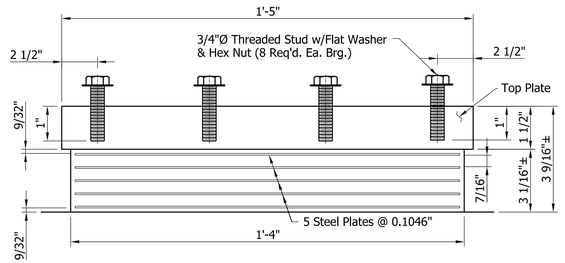


SECTION @ BENT



SECTION B-B

Bearing Plate to be Vulcanized to Elastomeric Pad



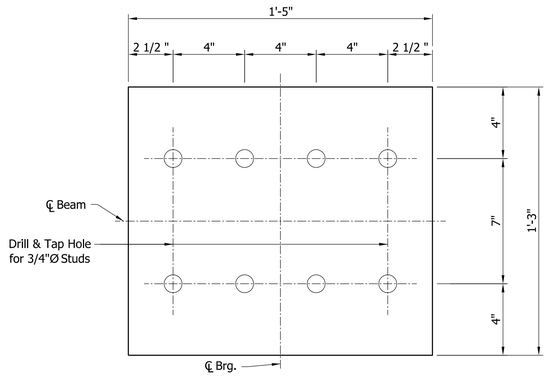
BEARING ASSEMBLY

Notes:
Elastomeric Material shall have 55± Durometer hardness.

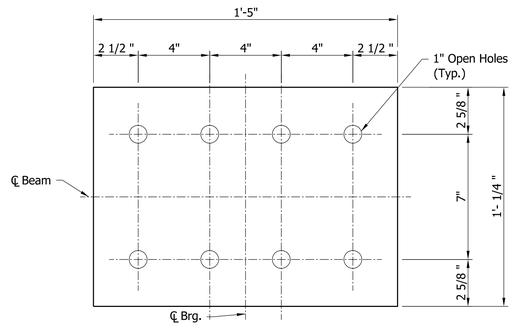
(a) Side Retainer (Place at both faces of all Beams)
(b) 1 1/8Ø x 1'-3" Anchor Bolt w/ Cut Washer under Nut. (ASTM F1554, Gr.105) (Typ.)
(c) Shim Plate (See Table of Shims)

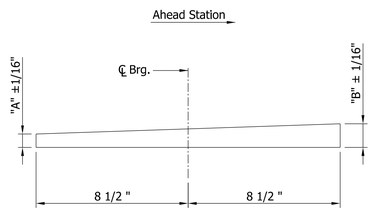
1 ELASTOMERIC BEARING ASSEMBLY
Not to Scale

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



2 BEARING PLATE
Scale: 3" = 1'-0"





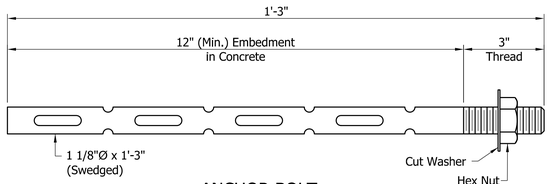
3 BEVELED SHIM PLATE
Scale: 3" = 1'-0"

Typ. Table:
Table Title: 18 Pt Text
Table Data: 12 Pt Text

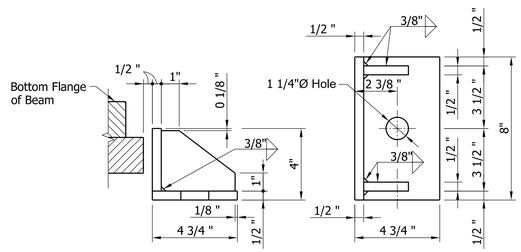
4 TABLE OF SHIMS

Beam Line	1		2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B	A	B
Bent No. 2	5/8"	1/2"	2"	1 7/8"	5/8"	1/2"	5/8"	1/2"	2"	1 7/8"	5/8"	1/2"
Bent No. 7	1/2"	1/2"	1 7/8"	1 7/8"	1/2"	1/2"	1/2"	1/2"	1 7/8"	1 7/8"	1/2"	1/2"

Note:
For Dimension "A" & "B" location, see Beveled Shim Plate Detail. Shims packs to consist of two or more shim plates with a minimum shim plate thickness of 1/8".



6 ANCHOR BOLT
(No Paint)
Not to Scale



5 SIDE RETAINER
Scale: 3" = 1'-0"

REQUIRED ELEMENTS:

1. Elastomeric Bearing Assembly Details
   - Bearing Assembly
   - Section at Bent
   - Section through Steel Beam
2. Top Plate Detail
3. Beveled Shim Plate Detail
4. Table of Shims
5. Side Retainer Detail
6. Anchor Bolt Detail
7. Notes
8. Signature Block and PE Seal

7 Notes:
For General Notes, see Sht. 14.
For Fabrication & Erection Notes, see Sht. 29 - 31.

8

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

BEARING ASSEMBLY DETAILS
BENT NO. 2 & BENT NO. 7

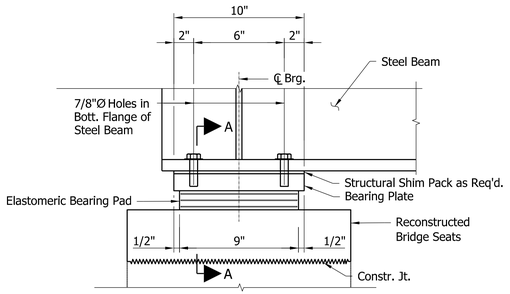
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

SHEET 39 of 71
CONTRACT B-99999

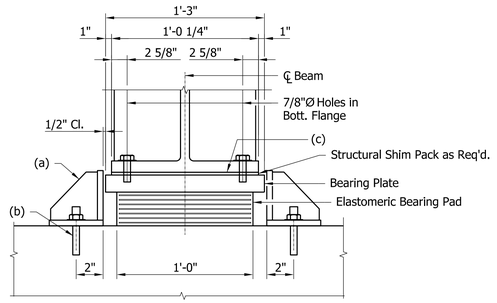
PURPOSE:

The purpose of this Bearing Assembly Details sheet is to provide information necessary for fabrication of the steel beam elastomeric bearing pad and bearing assembly at the interior bents.

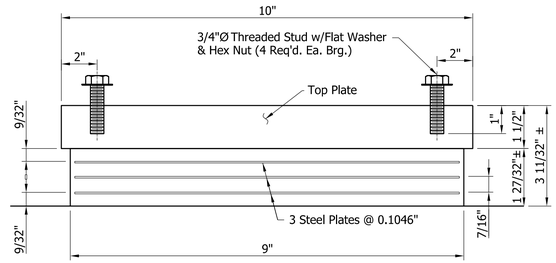
Note: It is common to show a plan view detail of bearings with clearances on Bent or Framing Plan sheet. (Dimensions shown on Shts. 22 & 24 of these Sample Plans.)



SECTION @ BENT



SECTION A-A



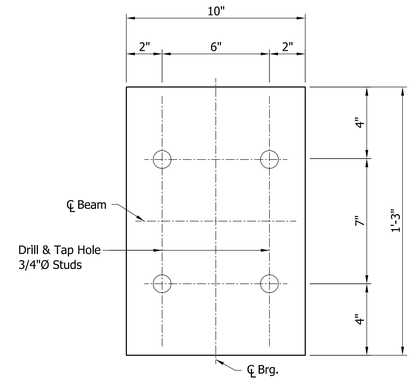
BEARING ASSEMBLY

Notes:
- Elastomeric Material shall have 55 (±5) Durometer Elastomeric.
- (a) Side Retainer (Place at both faces of all beams)
- (b) 1 1/8"Ø x 1'-3" Anchor Bolt w/ Cut Washer under Nut. (ASTM F1554, Gr. 105) (Typ.)
- (c) Shim Plate (see Table of Shims)

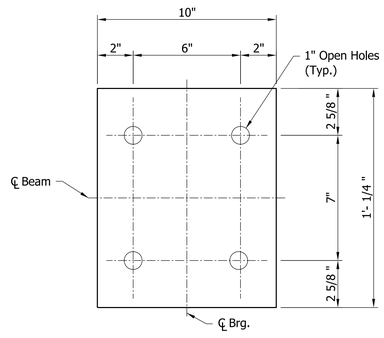
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

① ELASTOMERIC BEARING ASSEMBLY
Not To Scale

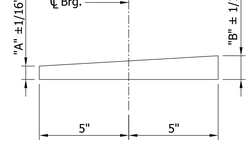
Bearing Plate to be Vulcanized to Elastomeric Pad



② BEARING PLATE
Scale: 3" = 1'-0"



③ BEVELED SHIM PLATE
Scale: 3" = 1'-0"



Typ. Table:
Table Title: 18 Pt Text
Table Data: 12 Pt Text

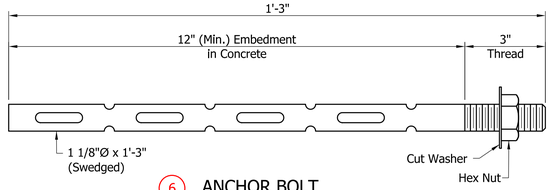
④ TABLE OF SHIMS

Beam Line	1		2		3		4		5		6	
	A	B	A	B	A	B	A	B	A	B	A	B
Bent No. 3	5/8"	1/2"	2"	1 7/8"	5/8"	1/2"	5/8"	1/2"	2"	1 7/8"	5/8"	1/2"
Bent No. 6	1/2"	1/2"	1 7/8"	1 7/8"	1/2"	1/2"	1/2"	1/2"	1 7/8"	1 7/8"	1/2"	1/2"

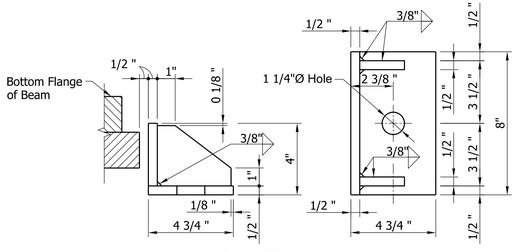
Note:
For Dimension "A" & "B" location, see Beveled Shim Plate Detail. Shims packs to consist of two or more shim plates with a minimum shim plate thickness of 1/8".

REQUIRED ELEMENTS:

1. Elastomeric Bearing Assembly Details
   - Bearing Assembly
   - Section at Bent
   - Section through Steel Beam
2. Top Plate Detail
3. Beveled Shim Plate Detail
4. Table of Shims
5. Side Retainer Detail
6. Anchor Bolt Detail
7. Notes
8. Signature Block and PE Seal



⑥ ANCHOR BOLT
(No Paint)
Not to Scale



⑤ SIDE RETAINER
Scale: 3" = 1'-0"

⑦ Notes:
For General Notes, see Sht. 14.
For Fabrication & Erection Notes, see Sht. 29 - 31.

⑧

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

BEARING ASSEMBLY DETAILS
BENT NO. 3 & BENT NO. 6 - APPROACH SPANS

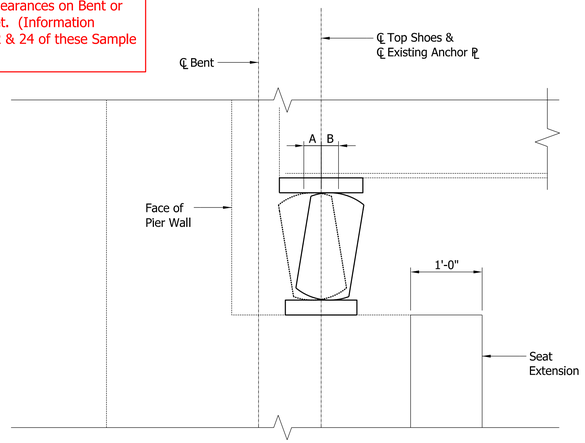
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

SHEET 40 of 71
CONTRACT B-99999

PURPOSE:

The purpose of this Bearing Assembly Details sheet is to provide information necessay for fabrication of the steel beam rocker bearing assembly at the interior bents.

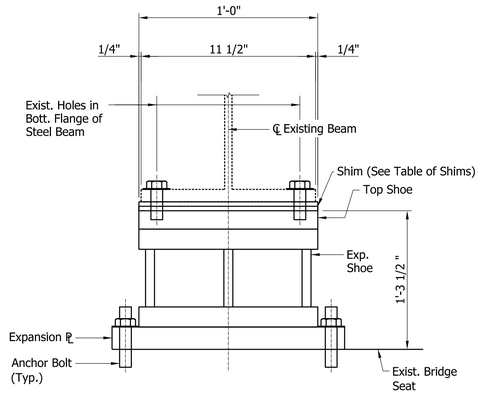
Note: It is common to show a plan view detail of bearings with clearances on Bent or Framing Plan sheet. (Information shown on Shts. 22 & 24 of these Sample Plans.)



Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

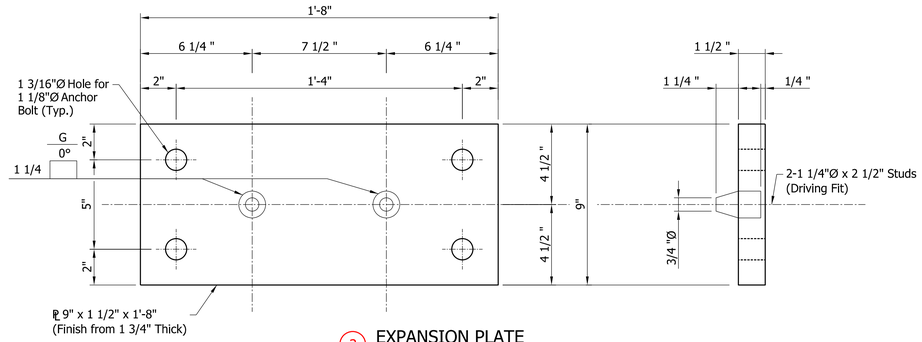
1 BEARING INSTALLATION
(Bent No.3 Shown, Bent No.6 Same by Opposite Hand)
Scale: 1" = 1'-0"

	DIMENSION A				DIMENSION B		
TEMP. (°F)	0	20	40	60	80	100	120
Bent No. 3	7/16"	5/16"	1/8"	0"	1/8"	5/16"	7/16"
Bent No. 6	7/16"	5/16"	1/8"	0"	1/8"	5/16"	7/16"

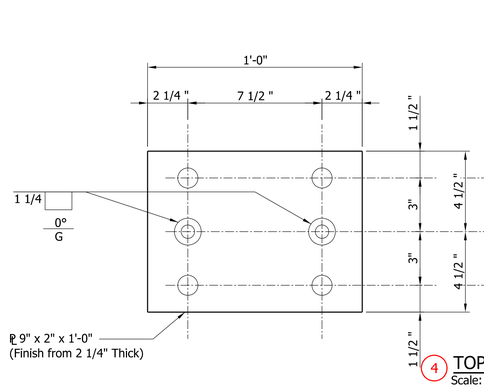


2 EXPANSION SHOE ASSEMBLY
Scale: 3" = 1'-0"

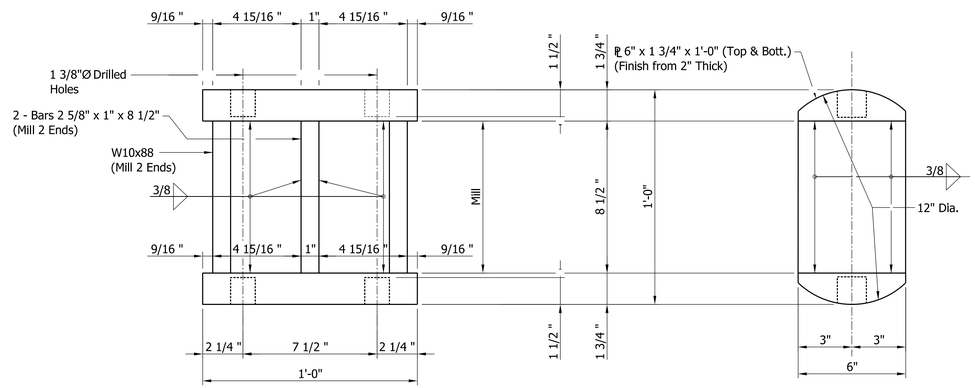
Note: Elastomeric Bearings are preferred to Rocker Bearings. However, Designer must verify that existing substructure can accommodate additional design loads if changed to elastomeric bearings.



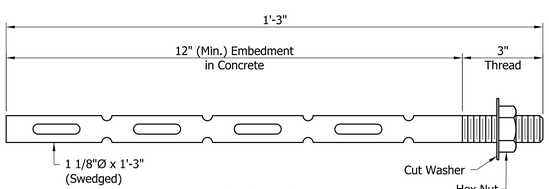
3 EXPANSION PLATE
Scale: 3" = 1'-0"



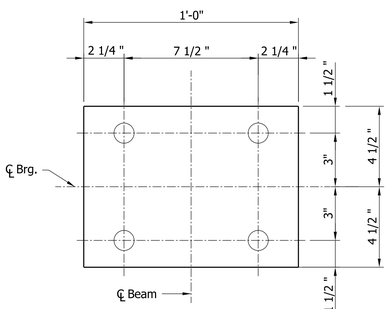
4 TOP SHOE
Scale: 3" = 1'-0"



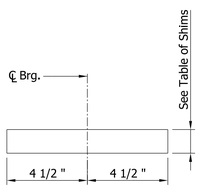
5 EXPANSION SHOE
Scale: 3" = 1'-0"



8 ANCHOR BOLT
(No Paint)
Not to Scale



6 SHIM PLATE
Scale: 3" = 1'-0"



7 TABLE OF SHIMS

BEAM	SHIM THICKNESS
No. 1	1/2"
No. 2	0"
No. 3	13/16"
No. 4	13/16"
No. 5	0"
No. 6	1/2"

Typ. Table:
Table Title: 18 Pt Text
Table Data: 12 Pt Text

9 Notes:
For General Notes, see Sht. 14.
For Fabrication & Erection Notes, see Sht. 29 - 31.
For Seat Extension Details, see Shts. 22 & 24.
All Studs shall be F1554, Grade 105, 3/4" diameter unless noted.
A709 Grade 50 Steel for the pintles may be used in lieu of A662, Grade F.
All exposed surfaces of bearing shall be coated.

10

REQUIRED ELEMENTS:

1. Rocker Bearing Installation Detail
2. Expansion Shoe Detail and Assembly
3. Expansion Plate Detail
4. Top Shoe Detail
5. Expansion Shoe Detail
6. Shim Plate Detail
7. Table of Shims
8. Anchor Bolt Detail
9. Notes
10. Signature Block and PE Seal

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

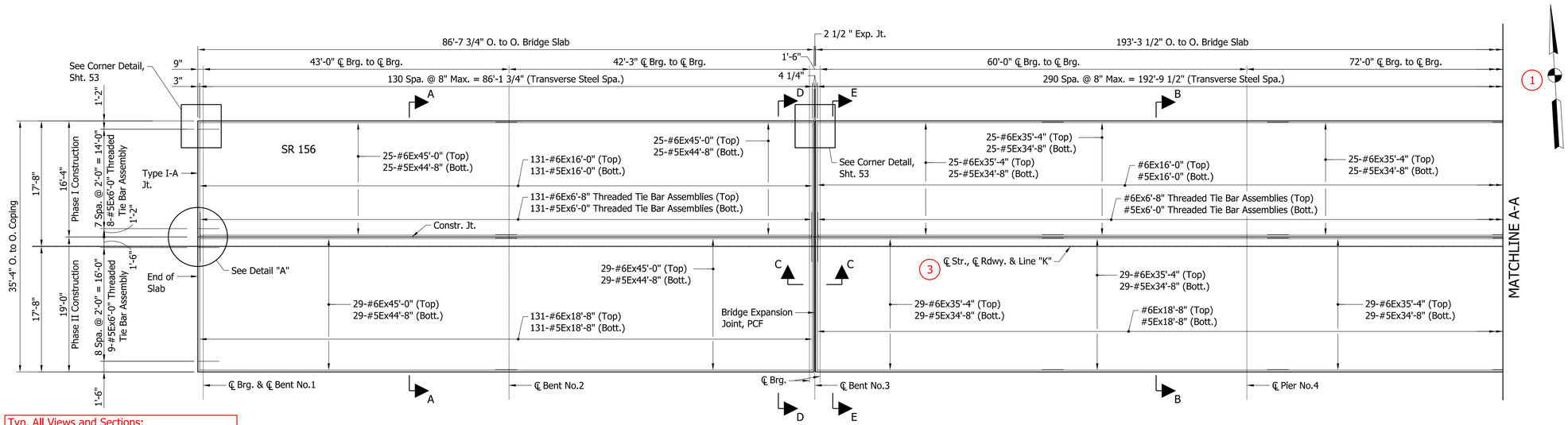
BEARING ASSEMBLY DETAILS
BENT NO. 3 & BENT NO. 6 - MAIN SPAN

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

SHEET 41 of 71
CONTRACT
B-99999

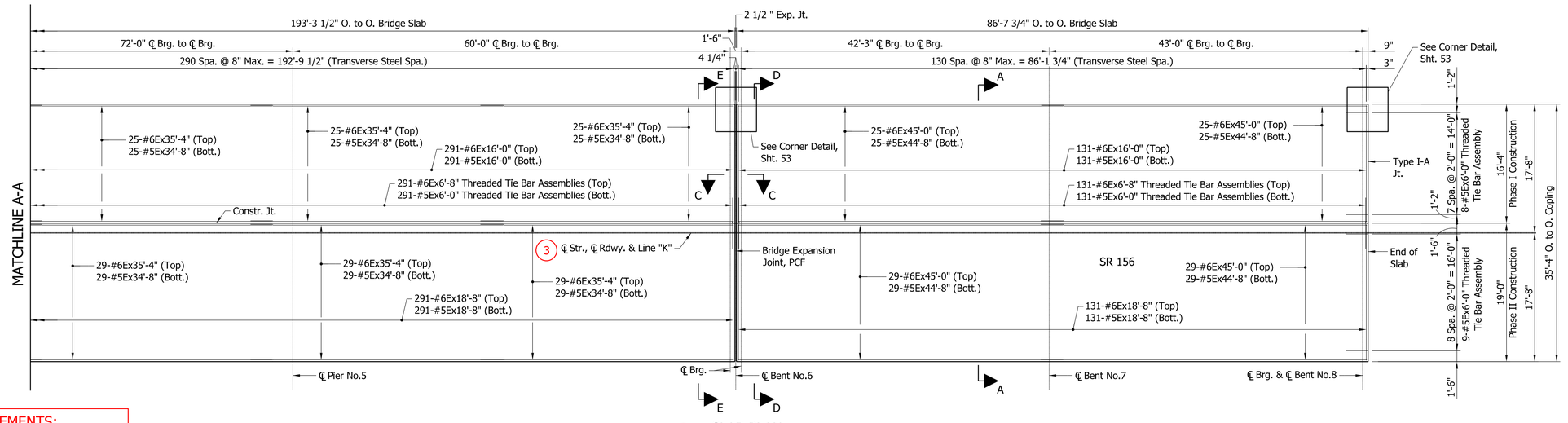
PURPOSE:

The purpose of these Superstructure Details sheets is to show physical dimensions and pertinent information necessary for the contractor to construct the bridge deck.



2 SLAB PLAN
Scale: 1/8" = 1'-0"

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



2 SLAB PLAN
Scale: 1/8" = 1'-0"

REQUIRED ELEMENTS:

1. North Arrow
2. Deck Floor Plan
3. Line Designation
4. Skew Angle
5. Notes
6. Signature Block and PE Seal

1 MINIMUM LAP LENGTHS
3'-9" (#6E to #6E)
3'-0" (#5E to #5E)

5 Notes:
For General Notes, see Sht. 14.
For additional details, see Shts. 43 - 51.
For Section A-A & B-B, see Sht. 43.
For Section C-C, D-D & E-E, see Sht. 44.
For Detail "A", see Sht. 43.
For Deck Drain Details, see Sht. 45.
For locations of deck drains, see Sht. 13.
For Railing Details, see Sht. 52.
For Bar Bending Diagrams and Bill of Materials, see Sht. 51.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

6

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

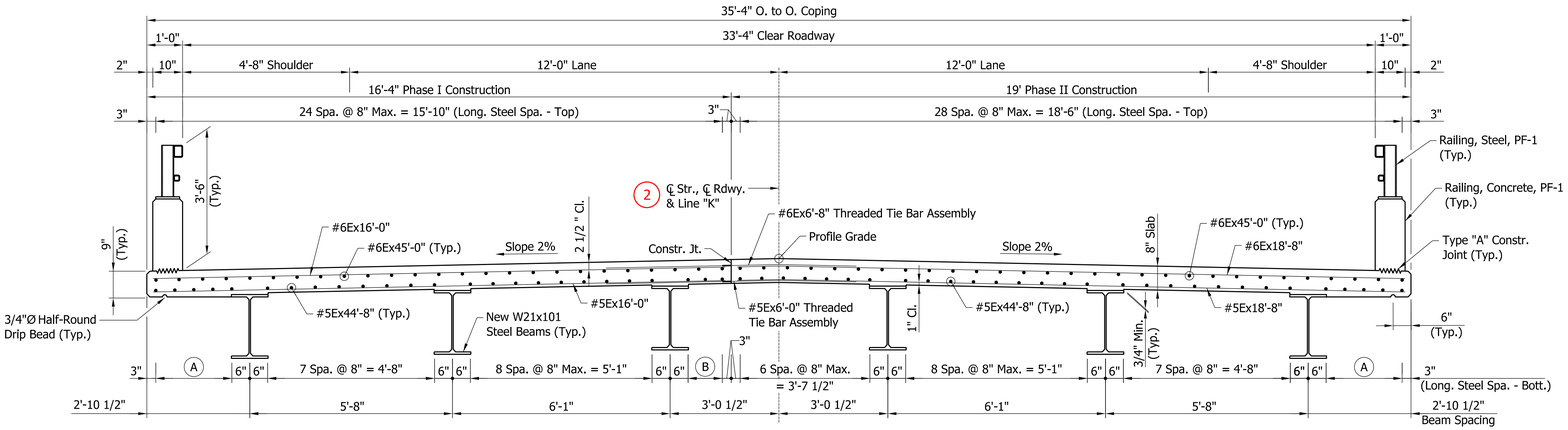
SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/8" = 1'-0"	156-78-00000 B
VERTICAL SCALE	DESIGNATION
1/8" = 1'-0"	9999999

	SHEET
	42 of 71
	CONTRACT
	B-99999

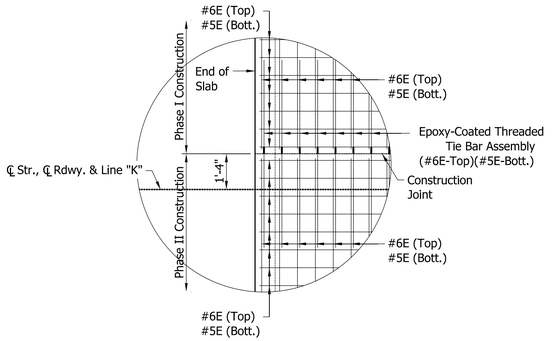
PURPOSE:

The purpose of these Superstructure Details sheets is to show physical dimensions and pertinent information necessary for the contractor to construct the bridge deck.



1 SECTION A-A
(SPANS "A", "B", "F", "G")
Scale: 1/2"=1'-0"

(A) 4 Spa. @ 8" Max. = 2'-1 1/2"
(B) 2 Spa. @ 8" Max. = 11 1/2"

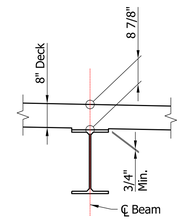


3 DETAIL "A"
Scale: 3/8" = 1'-0"

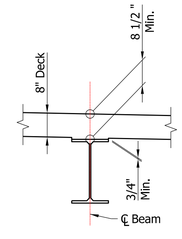
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

1 SECTION B-B
(SPANS "C" Thru "E")
Scale: 1/2"=1'-0"

(A) 4 Spa. @ 8" Max. = 2'-1 1/2"
(B) 2 Spa. @ 8" Max. = 11 1/2"



SECTION @ BEAMS
(Spans "A", "B", "F", & "G")
Not To Scale



SECTION @ BEAMS
(Spans "C" thru "E")
No Scale

REQUIRED ELEMENTS:

1. Typical Section
2. Line Designation and Phase Construction Lines (when necessary) Tied to Survey Line
3. Details as Needed
4. Notes
5. Signature Block and PE Seal

4 Notes:

For General Notes, see Sht. 14.
For additional details, see Shts. 42 & 44 - 51.
For Location of Section A-A & B-B, see Sht. 42.
For Location of Detail "A", see Sht. 42.
For Slab Plan, see Sht. 42.
For Railing Details, see Sht. 52.
For Bar Bending Diagrams and Bill of Materials, see Sht. 51.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.
For Type "A" Construction Joint, see Std. Dwg. E 702-CJTA-01.

5

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

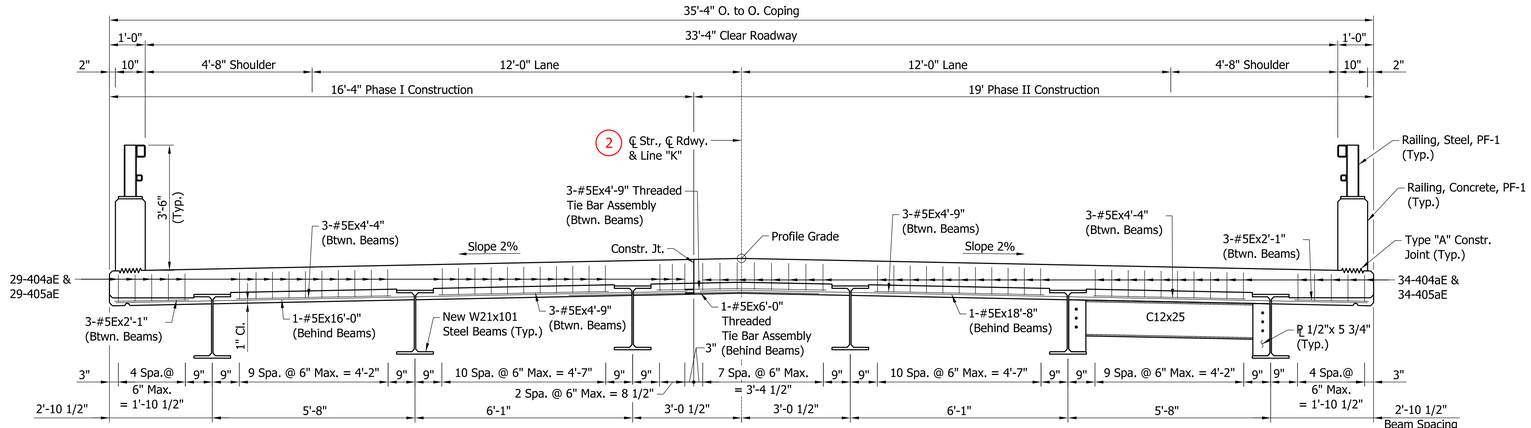
SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

SHEET 43 of 71
CONTRACT B-99999

PURPOSE:

The purpose of these Superstructure Details sheets is to show physical dimensions and pertinent information necessary for the contractor to construct the bridge deck.

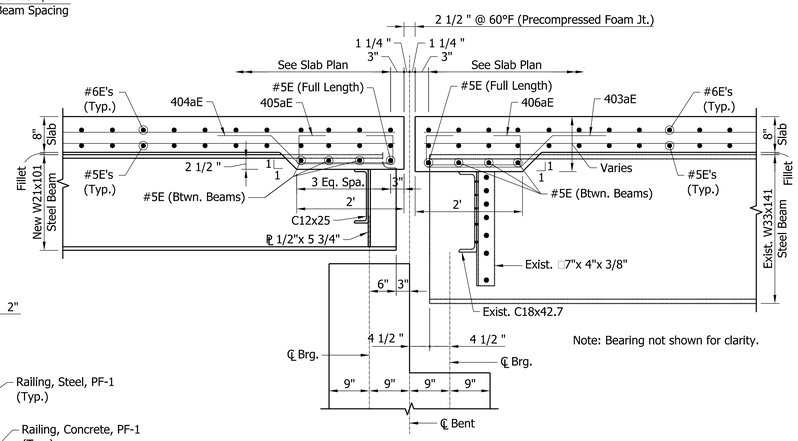


TYPICAL END DIAPHRAGM

1 SECTION D-D
Scale: 1/2"=1'-0"

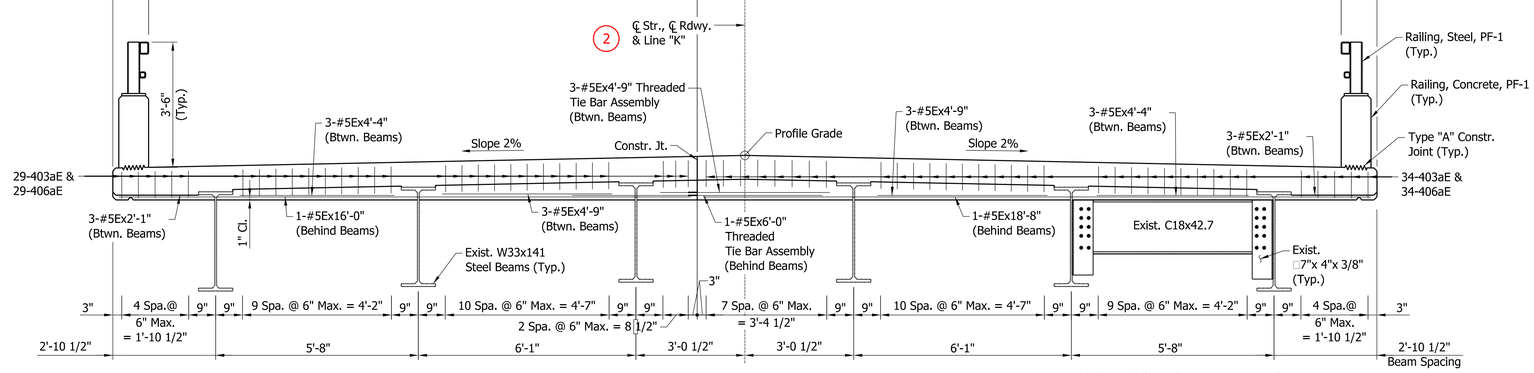
Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

Note: A Joint Setting Table may be required for expansion lengths exceeding 150 ft.



Note: Bearing not shown for clarity.

2 SECTION C-C
Scale: 3/4" = 1'-0"



TYPICAL EXISTING END DIAPHRAGM

1 SECTION E-E
Scale: 1/2"=1'-0"

4 Notes:
For General Notes, see Sht. 14.
For additional details, see Shts. 42, 43 & 45 - 51.
For Location of Section C-C, D-D & E-E, see Sht. 42.
For Slab Plan, see Sht. 42.
For End Diaphragm Details, see Sht. 32.
For Railing Details, see Shts. 52.
For Bar Bending Diagrams and Bill of Materials, see Sht. 51.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.
For Type "A" Construction Joint, see Std. Dwg. E 702-CJTA-01.

REQUIRED ELEMENTS:

1. Typical Section
2. Line Designation
3. Details as Needed
4. Notes
5. Signature Block and PE Seal

5

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

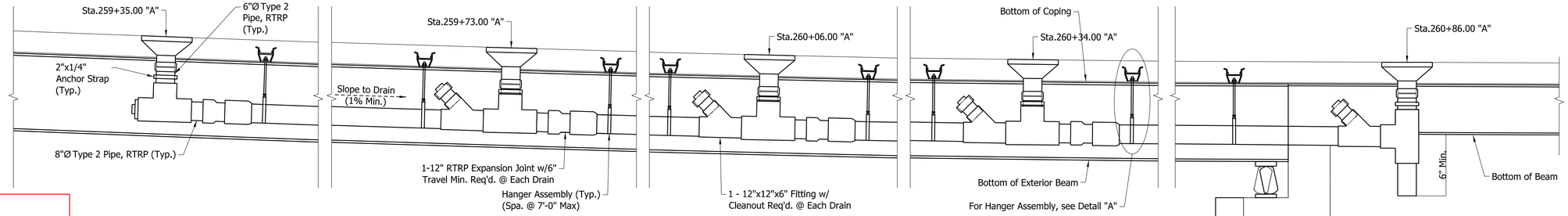
SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

	SHEET
	44 of 71
	CONTRACT
	B-99999

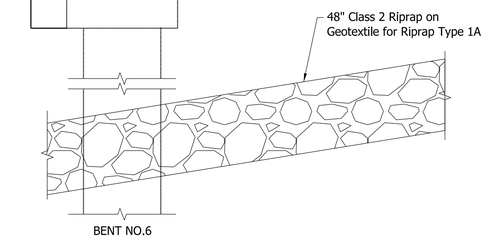
PURPOSE:

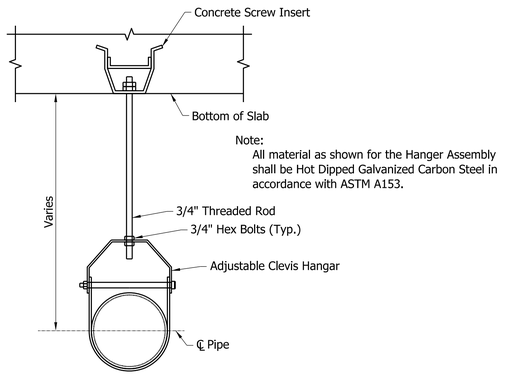
The purpose of this Superstructure Details sheet is to show information necessary for the contractor to construct a deck drain pipe system.



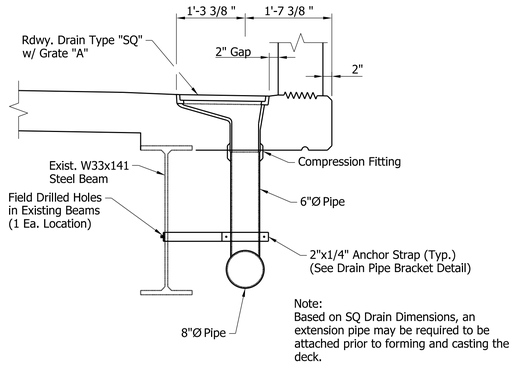
Typ. All Views and Sections:
- Section Title: 18 Pt Text
- Section Sub-Title: 14 Pt Text
- Dimensions and Text Callouts: 12 Pt Text

2 PARTIAL SECTION @ BENT NO.6
Scale: 1/2" = 1'-0"

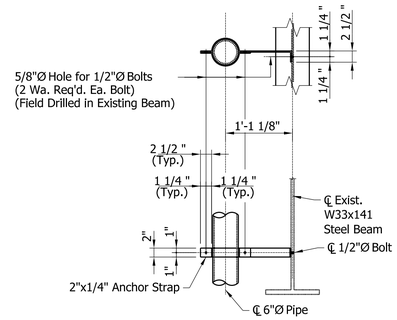




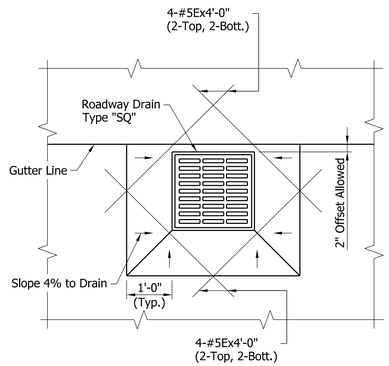
2 DETAIL "A"
Not To Scale



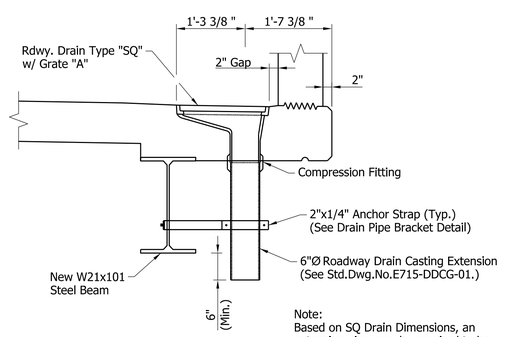
2 ROADWAY DRAIN TYPE "SQ" FOR DRAIN SYSTEM
(8 Req'd.)
Scale: 3/4" = 1'-0"



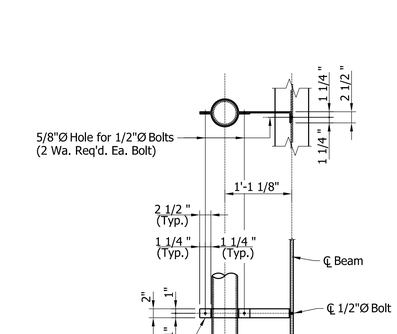
2 DRAIN PIPE BRACKET DETAIL FOR DRAIN SYSTEM
(8 Req'd.)
Not To Scale



1 TYP. ADDITIONAL REINFORCING AT ROADWAY DRAIN TYPE "SQ"
(14 Req'd.)
Scale: 3/4" = 1'-0"



1 ROADWAY DRAIN TYPE "SQ"
(6 Req'd.)
Scale: 3/4" = 1'-0"



1 DRAIN PIPE BRACKET DETAIL
(6 Req'd.)
Not To Scale

REQUIRED ELEMENTS:

1. Roadway Drain Details
   - Drain Section
   - Additional Deck Reinforcing Detail
   - Drain Pipe Bracket Detail
2. Roadway Drain Pipe System Details (When Req'd.)
   - Elevation along Drain Pipe
   - Drain Section
   - Drain Pipe Bracket Details
3. Notes
4. Signature Block and PE Seal

3 Notes:
- For General Notes, see Sht. 14.
- For Slab Plan, see Sht. 42.
- For Roadway Drain Locations, see Sht. 13.
- For Bar Bending Diagrams and Bill of Materials, see Sht. 51.
- For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
- "E" denotes Epoxy Coated Reinforcing Steel.
- RTRP denotes Reinforced Thermosetting Resin Pipe.

4

Title Block Text:
- Labels: 10 Pt Text
- Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

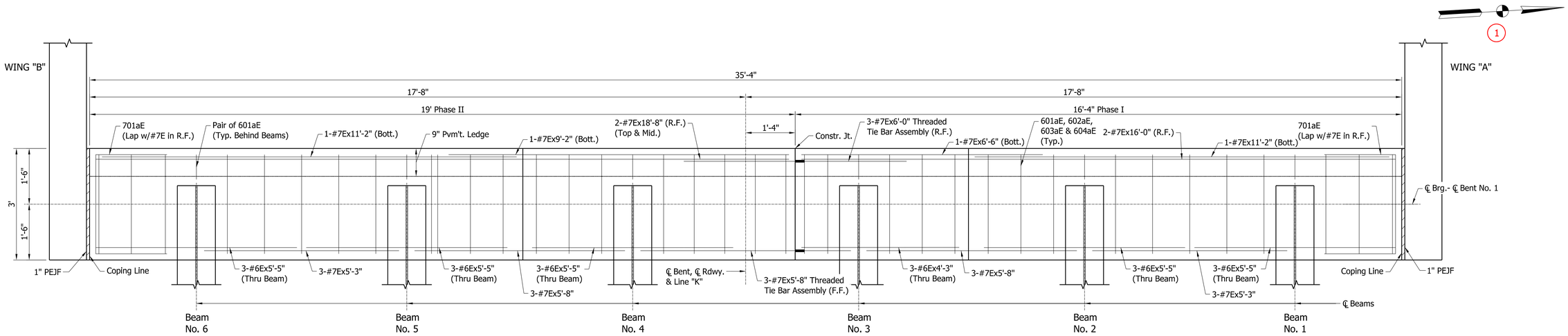
INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET 45 of 71
	CONTRACT B-99999

PURPOSE:

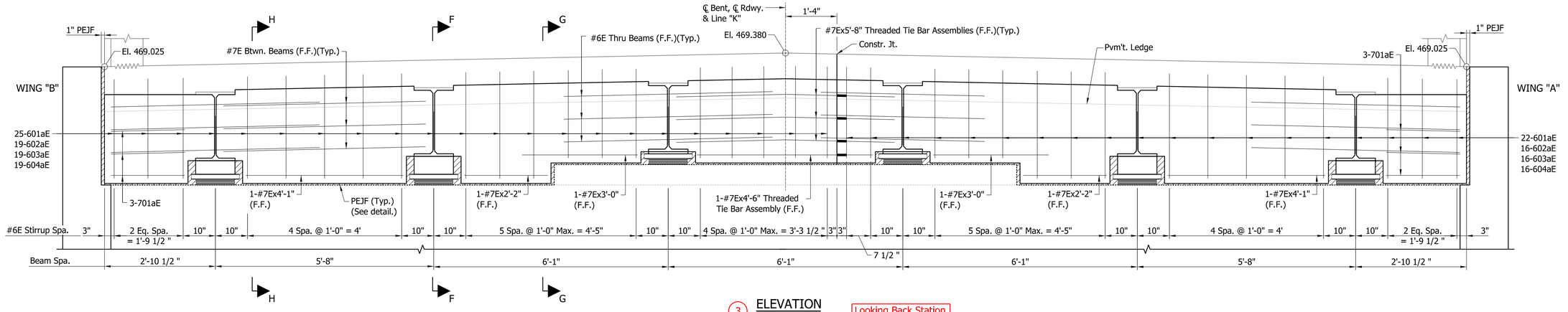
The purpose of this Superstructure Details sheet is to show physical dimensions and pertinent information necessary for the contractor to construct the end diaphragm for a semi-integral end bent conversion.



2 PLAN
Scale: 3/4" = 1'-0"

Looking Back Station

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

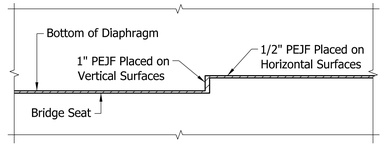


3 ELEVATION
Scale: 3/4" = 1'-0"

Looking Back Station

REQUIRED ELEMENTS:

1. North Arrow
2. Plan
3. Elevation
4. Bridge Seat Detail
5. Notes
6. Signature Block and PE Seal



4 BRIDGE SEAT DETAIL
Scale: 3/4"=1'-0"

5 Notes:
For General Notes, see Sht. 14.
For Section F-F, G-G & H-H, see Sht. 48.
For additional details, see Shts. 42 - 45 & 47 - 51.
For Bent No. 1 Details, see Shts. 16 - 18.
For Detail of Drilled Holes through Steel Beams, see Sht. 33.
For Slab Plan, see Sht. 42.
For Railing Details, see Sht. 52.
For Bar Bending Diagrams and Bill of Materials, see Sht. 51.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.

6

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

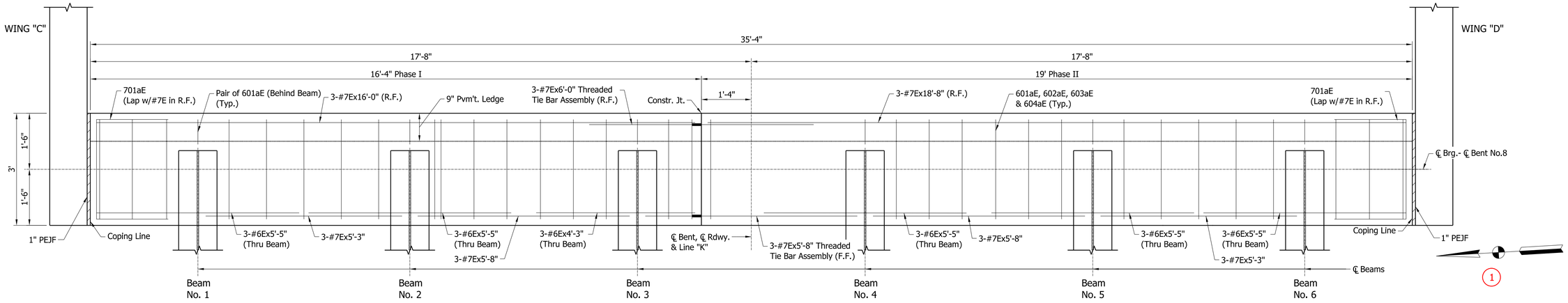
INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
BENT NO. 1 RECONSTRUCTION

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	46 of 71
	CONTRACT
	B-99999

PURPOSE:

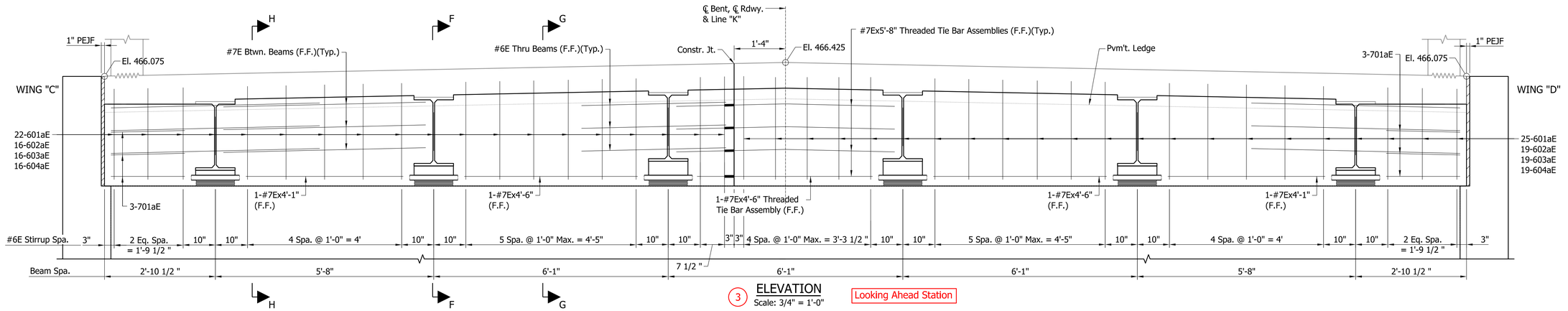
The purpose of this Superstructure Details sheet is to show physical dimensions and pertinent information necessary for the contractor to construct the end diaphragm for a semi-integral end bent conversion.



2 PLAN
Scale: 3/4" = 1'-0"

Looking Ahead Station

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



3 ELEVATION
Scale: 3/4" = 1'-0"

Looking Ahead Station

REQUIRED ELEMENTS:

1. North Arrow
2. Plan
3. Elevation
4. Notes
5. Signature Block and PE Seal

4 Notes:
For General Notes, see Sht. 14.
For Section F-F, G-G & H-H, see Sht. 48.
For additional details, see Shts. 42 - 46 & 48 - 51.
For Bent No. 8 Details, see Shts. 27 - 28.
For Detail of Drilled Holes through Steel Beams, see Sht. 35.
For Slab Plan, see Sht. 42.
For Railing Details, see Sht. 52.
For Bar Bending Diagrams and Bill of Materials, see Sht. 51.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

5

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

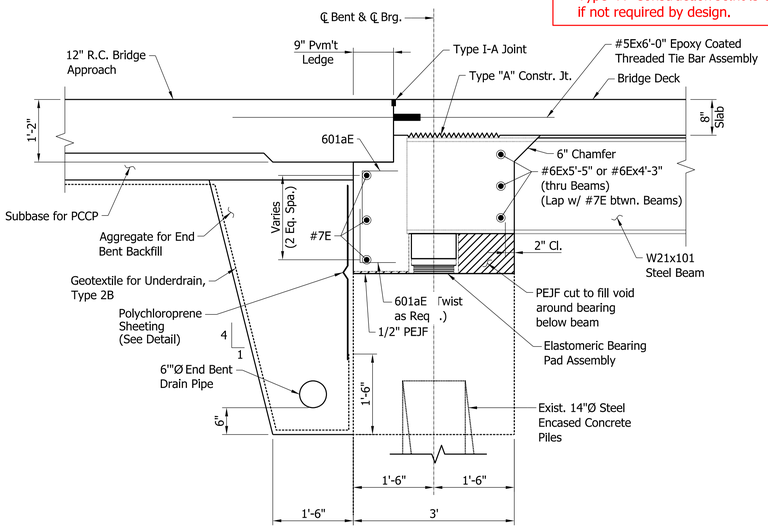
SUPERSTRUCTURE DETAILS
BENT NO.8 RECONSTRUCTION

HORIZONTAL SCALE	BRIDGE FILE
3/4" = 1'-0"	156-78-00000 B
VERTICAL SCALE	DESIGNATION
3/4" = 1'-0"	9999999
	SHEET
	47 of 71
	CONTRACT
	B-99999

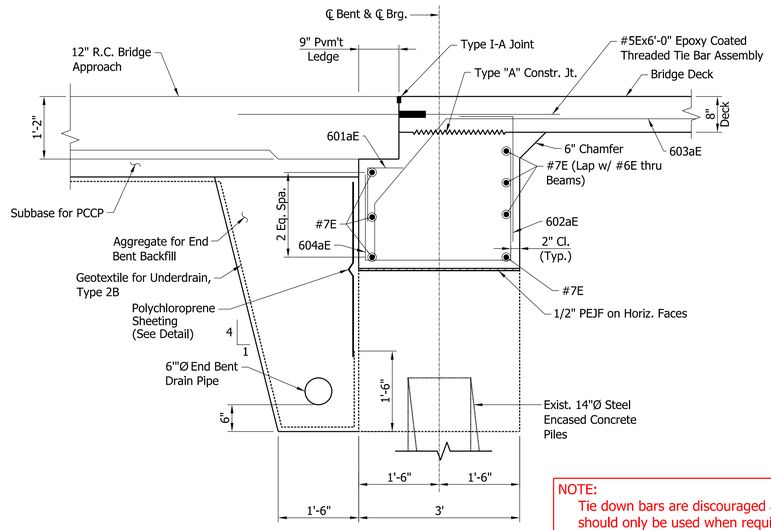
PURPOSE:

The purpose of this Superstructure Details sheet is to show physical dimensions and pertinent information necessary for the contractor to construct the end diaphragm for a semi-integral end bent conversion.

NOTE:
Type "A" Construction Joint is Optional if not required by design.



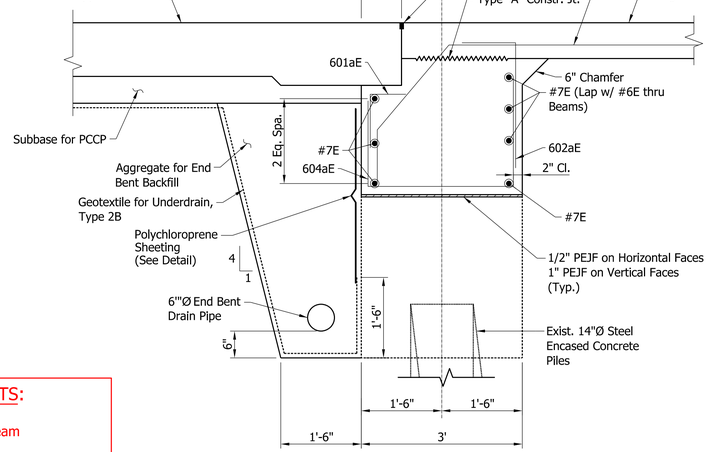
1 SECTION F-F
Scale: 3/4" = 1'-0"



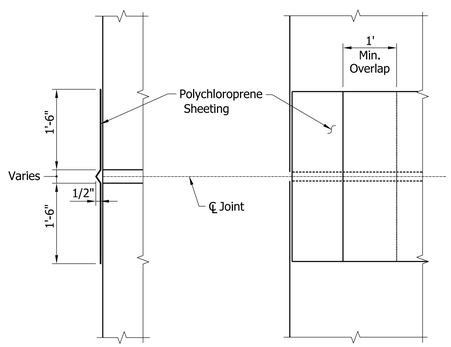
2 SECTION G-G
Scale: 3/4" = 1'-0"

NOTE:
Tie down bars are discouraged and should only be used when required by analysis for seismic or uplift forces.

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



2 SECTION H-H
Scale: 3/4" = 1'-0"



3 POLYCHLOROPRENE SHEETING DETAIL
Scale: 3/4" = 1'-0"

REQUIRED ELEMENTS:

1. Typical Section at Beam
2. Typical Section between Beams
3. Polychloroprene Sheeting Detail
4. Notes
5. Signature Block and PE Seal

4 Notes:
For General Notes, see Sht. 14.
For additional details, see Shts. 42 - 47 & 49 - 51.
For Slab Plan, see Sht. 42.
For Railing Details, see Sht. 52.
For Pavement Ledge Details, see Sht. 57.
For Bar Bending Diagrams and Bill of Materials, see Sht. 51.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.
For Type "A" Construction Joint, see Std. Dwg. E 702-CJTA-01.
For Detail of Drilled Holes Through Steel Beams, see Shts. 33 & 35.

5

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

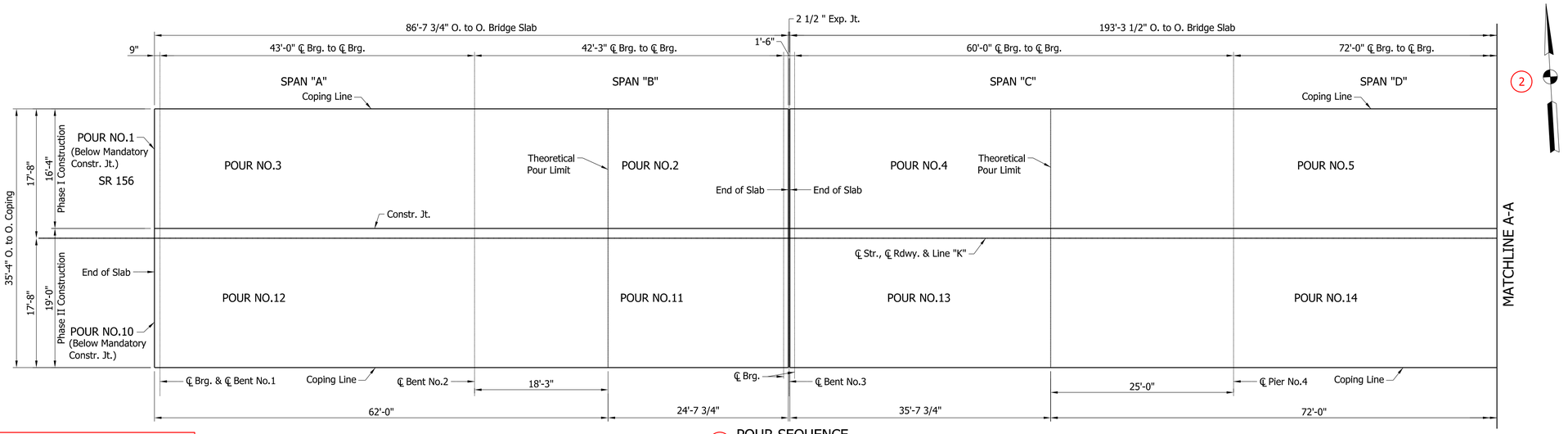
INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	48 of 71
	CONTRACT
	B-99999

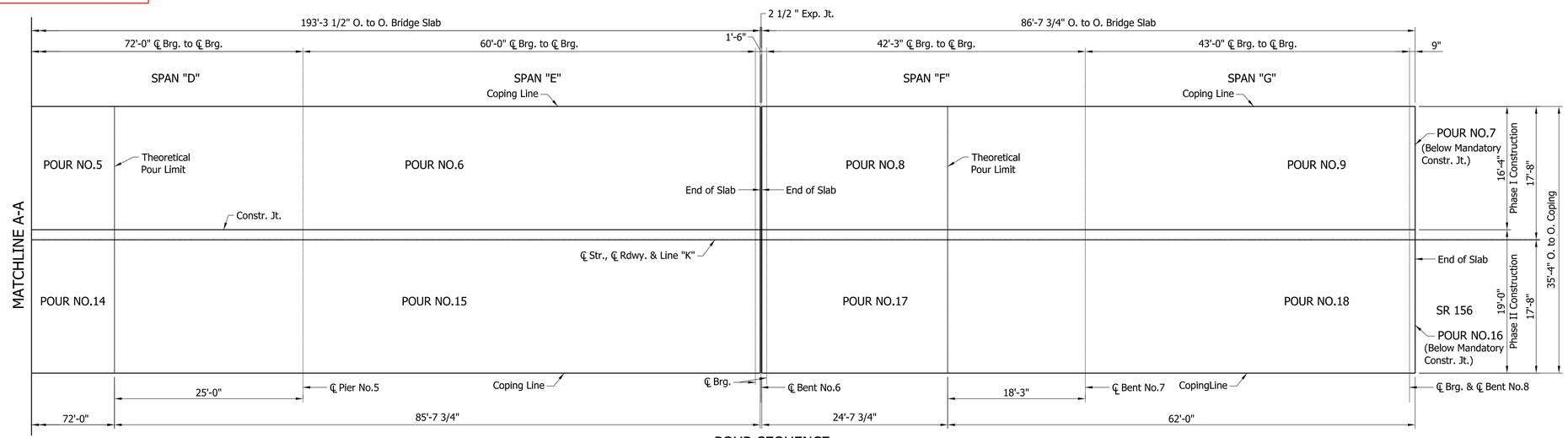
PURPOSE:

The purpose of this Superstructure Details sheet is to show the Pour Sequence and other pertinent instructions related to placing concrete in the deck.



1 POUR SEQUENCE
Scale: 1/8" = 1'-0"

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



1 POUR SEQUENCE
Scale: 1/8" = 1'-0"

3 Notes:
Sequence of pours to be made in order of pour numbers. The Contractor may change the sequence of pours or location of construction joints subject to approval of the Engineer.

The overhang formwork for Beam No.1 and Beam No.6 in Spans "A" - "B" and Spans "F" - "G" shall be supported to prevent over-rotation during deck placement.

REQUIRED ELEMENTS:

1. Pour Sequence Plan
2. North Arrow
3. Notes
4. Signature Block and PE Seal

3 Notes:
For General Notes, see Sht. 14.
For additional details, see Shts. 42 - 48, 51 & 52.

4

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

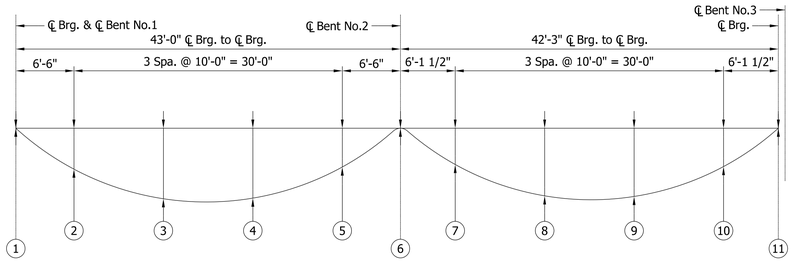
INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/8" = 1'-0"	156-78-00000 B
VERTICAL SCALE	DESIGNATION
1/8" = 1'-0"	9999999
	SHEET
	49 of 71
	CONTRACT
	B-99999

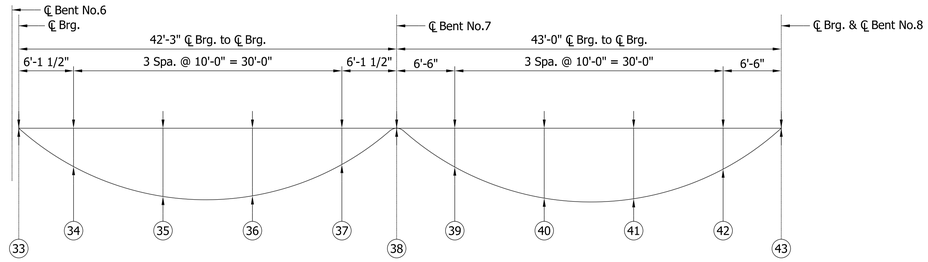
PURPOSE:

The purpose of this Superstructure Details sheet is to provide Dead Load Deflections in support of the Screed elevations used to place the floor slab and coping.

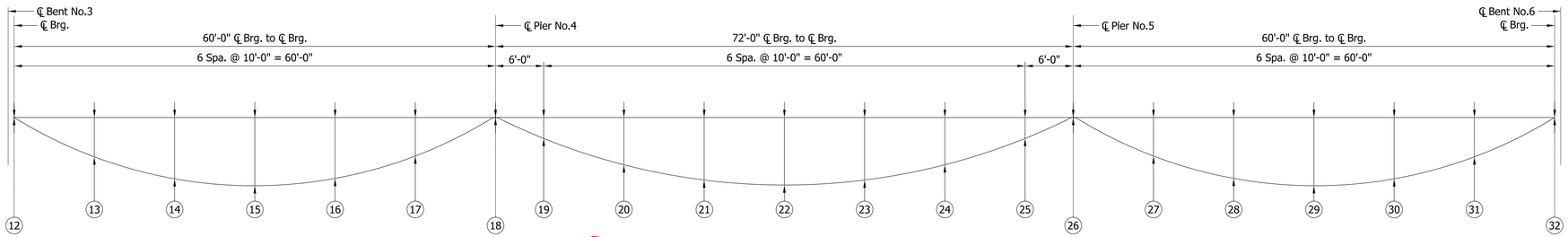


1 CONCRETE DEAD LOAD DEFLECTION DIAGRAM
(Spans "A" & "B")
Not To Scale

Note: Refer to IDM for current practice regarding spacing to be used.



1 CONCRETE DEAD LOAD DEFLECTION DIAGRAM
(Spans "F & "G")
Not To Scale



1 CONCRETE DEAD LOAD DEFLECTION DIAGRAM
(Spans "C", "D" & "E")
Not To Scale

See IDM 405-3.02 for information related to computation of slab dead-load deflections and development of the diagram.

2

CONCRETE DEAD LOAD DEFLECTION TABLE (in.)

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Beams 1-6	0.0	-0.2	-0.3	-0.3	-0.1	0.0	-0.1	-0.2	-0.3	-.02	0.0	0.0	-0.3	-0.4	-0.4	-0.3	-0.1	0.0	-0.0	-0.2	-0.3	-0.4	-0.3	-0.2	-0.0	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	0.0	0.0	-0.2	-0.3	-0.2	-0.1	0.0	-0.1	-0.3	-0.3	-0.2	0.0

Note:
All Dead Load Deflections are in inches.

REQUIRED ELEMENTS:

1. Concrete Dead Load Deflection Diagram
2. Concrete Dead Load Deflection Table
3. Notes
4. Signature Block and PE Seal

3 Notes:
For General Notes, see Sht. 14.
For Screeds, see Shts. 54 - 56.

4

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* DESIGN ENGINEER MM/DD/YY DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
NONE	156-78-00000 B
VERTICAL SCALE	DESIGNATION
NONE	9999999
	SHEET
	50 of 71
	CONTRACT
	B-99999

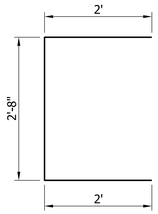
PURPOSE:

The purpose of this Superstructure Details sheet is to show the Bar Bending Details and Bill of Materials required for construction of the Superstructure.

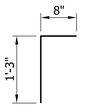
When the construction is to be phased, Bills of Materials should be separated by phase. (6)

3'-0"	3'-0"	#5Ex6'-0" Bars
3'-8"	1'-1"	#5Ex4'-9" Bars
3'-4"	3'-4"	#6Ex6'-8" Bars
3'-0"	3'-0"	#7Ex6'-0" Bars
3'-7"	11"	#7Ex4'-6" Bars
4'-2"	1'-6"	#7Ex5'-8" Bars

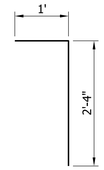
THREADED TIE BAR ASSEMBLY, EPOXY COATED



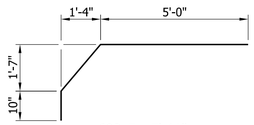
701aE x 6'-8"



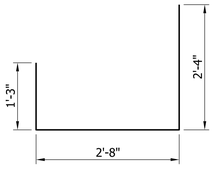
601aE x 1'-11"



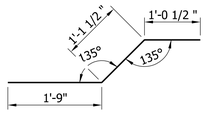
602aE x 3'-4"



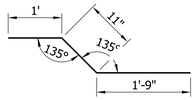
603aE x 7'-11"



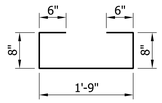
604aE x 6'-3"



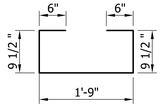
403aE x 3'-11"



404aE x 3'-8"



405aE x 4'-1"



406aE x 4'-4"

Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.

BAR BENDING DETAILS
Not to Scale

BILL OF MATERIALS SUPERSTRUCTURE PHASE I

EPOXY COATED REINFORCING BARS

SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
701aE	6	6'-8"	
#7E	5	16'-0"	
#7E	1	11'-2"	
#7E	1	6'-6"	
#7E	6	5'-8"	
#7E	6	5'-3"	
#7E	1	4'-6"	
#7E	2	4'-1"	
#7E	1	3'-0"	
#7E	1	2'-2"	
Total #7E			451
601aE	44	1'-11"	
602aE	32	3'-4"	
603aE	32	7'-11"	
604aE	32	6'-3"	
#6E	100	45'-0"	
#6E	150	35'-4"	
#6E	553	16'-0"	
#6E	12	5'-5"	
#6E	6	4'-3"	
Total #6E			29113
#5E	100	44'-8"	
#5E	150	34'-8"	
#5E	557	16'-0"	
#5E	12	4'-9"	
#5E	12	4'-4"	
#5E	56	4'-0"	
#5E	12	2'-1"	
Total #5E			20000
403aE	58	3'-11"	
404aE	58	3'-8"	
405aE	58	4'-1"	
406aE	58	4'-4"	
Total #4E			6935
Total Epoxy Coated Reinforcing Bars			56519

CONCRETE

Concrete Class "C" in Superstructure	
Pour No.1	4.4 Cys
Pour No.2	10.8 Cys
Pour No.3	26.9 Cys
Pour No.4	16.4 Cys
Pour No.5	31.8 Cys
Pour No.6	38.5 Cys
Pour No.7	4.4 Cys
Pour No.8	10.8 Cys
Pour No.9	26.9 Cys
Total Class "C" Conc. in Superstructure	170.9 Cys

MISCELLANEOUS

Bridge Expansion Joint, PCF	33 Lft
Grates, Basins, and Fittings, Cast Iron	7 Ea
Pipe Roadway Drain, Casting Extension	2 Ea
Threaded Tie Bar Assembly, Epoxy Coated (#7E)	14 Ea
Threaded Tie Bar Assembly, Epoxy Coated (#6E	553 Ea
Threaded Tie Bar Assembly, Epoxy Coated (#5E)	603 Ea
Field Drilled Holes in Concrete	4 Ea

BILL OF MATERIALS SUPERSTRUCTURE PHASE II

EPOXY COATED REINFORCING BARS

SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
701aE	6	6'-8"	
#7E	5	18'-8"	
#7E	1	11'-2"	
#7E	1	9'-2"	
#7E	6	5'-8"	
#7E	6	5'-3"	
#7E	1	4'-6"	
#7E	2	4'-1"	
#7E	1	3'-0"	
#7E	1	2'-2"	
Total #7E			484
601aE	50	1'-11"	
602aE	38	3'-4"	
603aE	38	7'-11"	
604aE	38	6'-3"	
#6E	116	45'-0"	
#6E	174	35'-4"	
#6E	553	18'-8"	
#6E	18	5'-5"	
Total #6E			33867
#5E	116	44'-8"	
#5E	174	34'-8"	
#5E	557	18'-8"	
#5E	12	4'-9"	
#5E	12	4'-4"	
#5E	56	4'-0"	
#5E	12	2'-1"	
Total #5E			22912
403aE	68	3'-11"	
404aE	68	3'-8"	
405aE	68	4'-1"	
406aE	68	4'-4"	
Total #4E			7042
Total Epoxy Coated Reinforcing Bars			64333

CONCRETE

Concrete Class "C" in Superstructure	
Pour No.10	5.1 Cys
Pour No.11	12.5 Cys
Pour No.12	31.0 Cys
Pour No.13	18.8 Cys
Pour No.14	36.6 Cys
Pour No.15	44.3 Cys
Pour No.16	5.1 Cys
Pour No.17	12.5 Cys
Pour No.18	31.0 Cys
Total Class "C" Conc. in Superstructure	196.9 Cys

MISCELLANEOUS

Bridge Expansion Joint, PCF	38 Lft
Grates, Basins, and Fittings, Cast Iron	7 Ea
Pipe Roadway Drain, Casting Extension	2 Ea
Field Drilled Holes in Concrete	6 Ea

REQUIRED ELEMENTS:

1. Reinforcing Bar Bending Details and Cutting Diagrams
2. Bill of Materials
3. Notes
4. Signature Block and PE Seal

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.

(5) Show bar mark and total length of bar, rounded to nearest 1 in.

(7) Notes:
For General Notes, see Sht. 14.
For additional details, see Shts. 42 - 50.
For Slab Plan, see Sht. 42.
For Railing Details, see Sht. 52.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

(8)

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

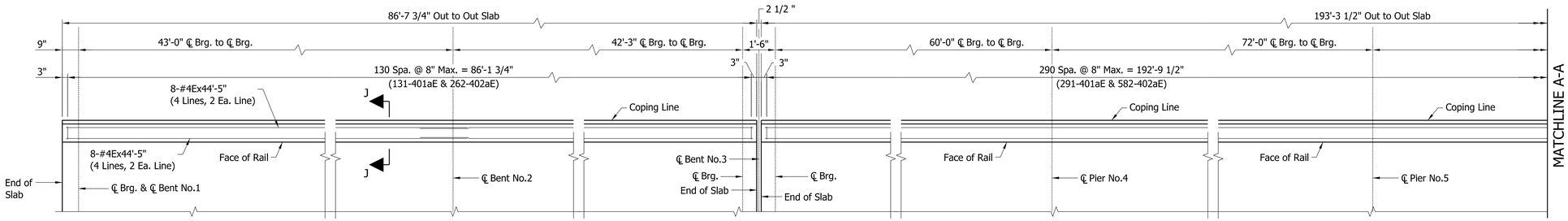
INDIANA
DEPARTMENT OF TRANSPORTATION

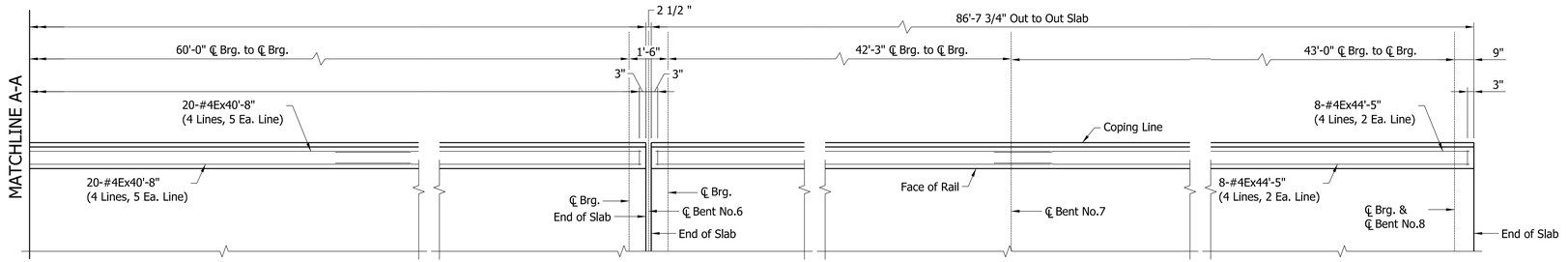
SUPERSTRUCTURE DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
	9999999
	SHEET
	51 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Railing Details sheet is to show physical dimensions, reinforcing, and pertinent information necessary for the contractor to construct the bridge railing and bridge railing transitions.





BILL OF MATERIALS
BRIDGE RAILING

EPOXY COATED REINFORCING BARS

SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
401aE	1106	3'-11"	
402aE	2212	3'-10"	
#4E	64	44'-5"	
#4E	80	40'-8"	
Total #4E			12630
Total Epoxy Coated Reinforcing Bars			12630

MISCELLANEOUS

Railing, Steel, PF-1	752 Lft
Railing, Concrete, PF-1	734 Lft
Barrier Delineator	20 Ea
Surface Seal (Est. Quantity)	3540 Sft

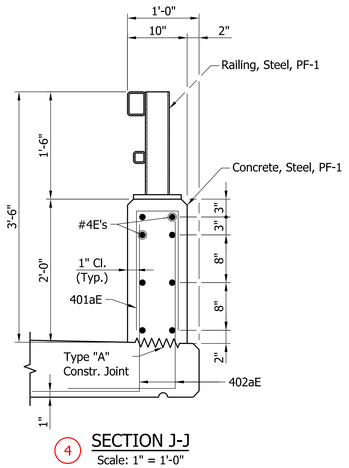
When the construction is to be phased, Bills of Materials should be separated by phase.

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

REQUIRED ELEMENTS:

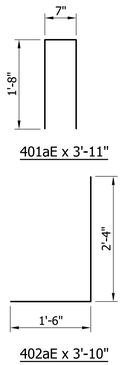
1. Railing Plan
2. North Arrow
3. Elevation(s), when required to show unique railing elements.
4. Section(s) Showing Dimensions and Reinforcing
5. Reinforcing Bar Bending Details
6. Bill of Materials
7. Notes
8. Signature Block and PE Seal

1 RAILING PLAN - NORTH COPING
(South Coping Same by Opposite Hand)
Scale: 3/8" = 1'-0"



4 SECTION J-J
Scale: 1" = 1'-0"

MINIMUM LAP LENGTHS
2'-6" (#4E to #4E)



Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.

5 BAR BENDING DETAILS
Not to Scale

Show bar mark and total length of bar, rounded to nearest 1 in.

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.

7 Notes
For General Notes, see Sht. 14.
For PF-1 Railing Details, see Std. Dwg. E 706-BRPP-01 thru -05.
For Slab Plan, see Sht. 42.
For Type "A" Construction Joint, see Std. Dwg. E 702-CJTA-01.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.

8

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

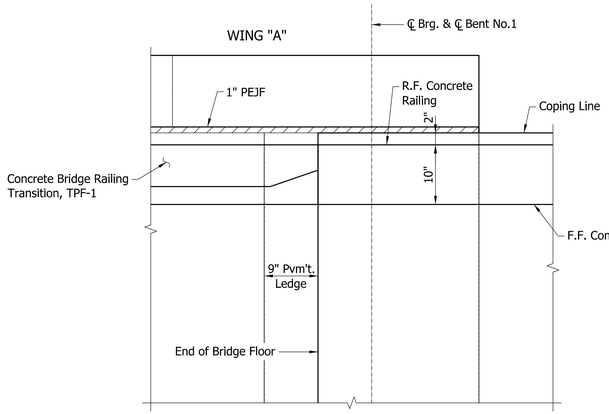
RAILING DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET 52 of 71
	CONTRACT B-99999

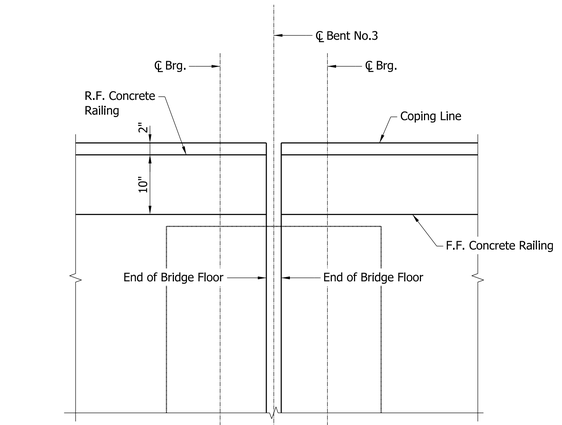
PURPOSE:

The purpose of this Superstructure Details sheet is to show additional physical dimensions and pertinent information at the ends of the bridge necessary for the contractor to construct the bridge deck.

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



1 CORNER DETAILS - BENT NO.1
(Bent No.8 Same by Opposite Hand)
Scale: 1" = 1'-0"



1 CORNER DETAILS - BENT NO.3
(Bent No.6 Same by Opposite Hand)
Scale: 1" = 1'-0"

2

REQUIRED ELEMENTS:

1. Corner Details
2. North Arrow
3. Notes
4. Signature Block and PE Seal

3 Notes:
For General Notes, see Sht. 14.
For Slab Plan, see Sht. 42.
For Railing Details, see Sht. 52.
For Concrete Bridge Railing Transition, TPF-1, see Std. Dwgs. E 706-TTPP-01 thru -03.
For Type I-A Joint, see Std. Dwg. E 609-BRJT-01.

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

4

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

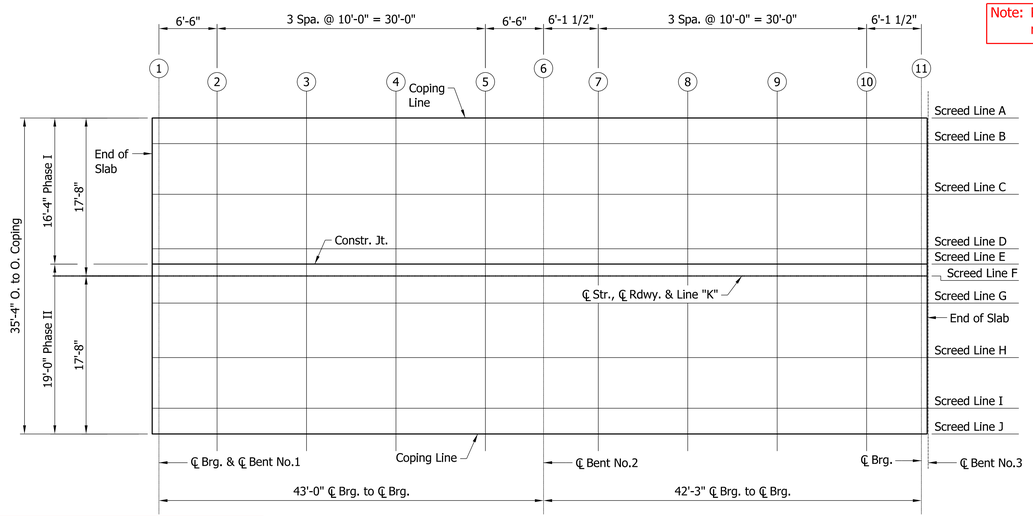
CORNER DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1" = 1'-0"	156-78-00000 B
VERTICAL SCALE	DESIGNATION
1" = 1'-0"	9999999
	SHEET
	53 of 71
	CONTRACT
	B-99999

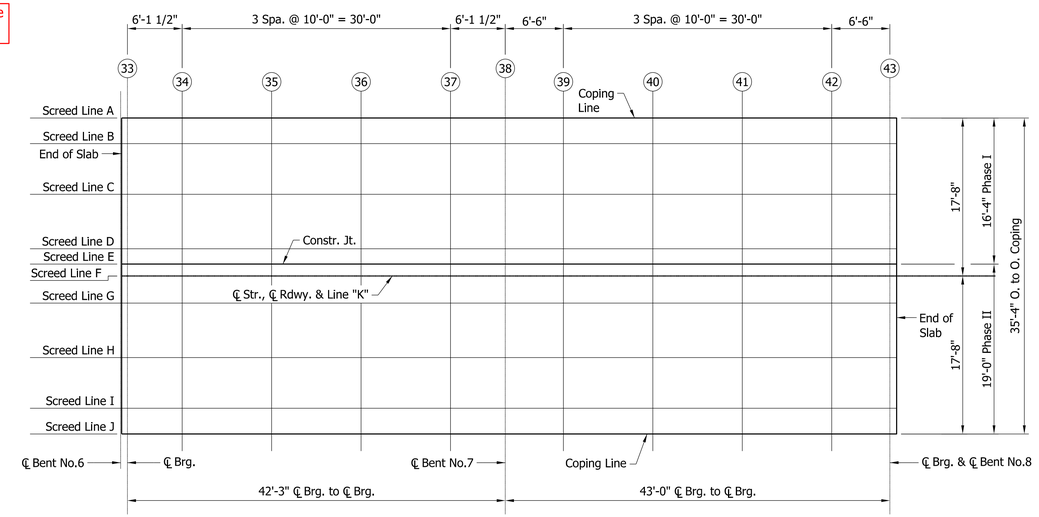
PURPOSE:

The purpose of these Screed Details sheets is to provide elevations for setting forms in order to place the floor slab and coping.

Note: Refer to IDM for current practice regarding spacing to be used.

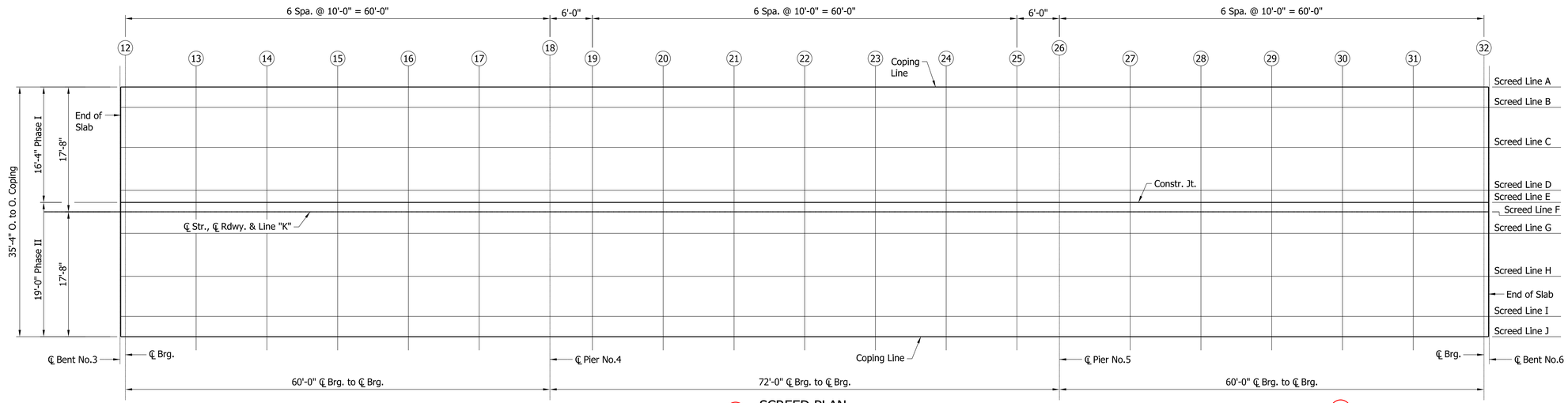


1 **SCREED PLAN**
(Spans "A" & "B")
Scale: 1/8" = 1'-0"



1 **SCREED PLAN**
(Spans "F & "G")
No Scale

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text



2

1 **SCREED PLAN**
(Spans "C", "D" & "E")
Scale: 1/8" = 1'-0"

See *IDM* 404-2.02(01) for information related to determination of screed elevations and development of the Plan of Screeds.

3 Notes:

After Beams are set or existing deck is removed, take elevations at all screed points on top of Beams. Enter these elevations in the table on Sht. 55. Subtract these elevations from the tabulated elevations and use the resulting dimensions as the height for setting screed forms above these points. These dimensions remain constant regardless of how much or in what order the concrete is poured. DO NOT SET SCREED FORMS BY LEVELING. No concrete in the floor slab shall be poured until the above operations are completed.

Screed elevations as shown in the tables include an allowance for concrete dead load deflections.

For General Notes, see Sht. 14.

For Screed Typical Sections, see Sht. 55.

For Concrete Dead Load Deflection Diagram, see Sht. 50.

For Table of Screed Elevations, see Sht. 56.

REQUIRED ELEMENTS:

1. Plan
2. North Arrow
3. Procedure and Notes
4. Signature Block and PE Seal

4

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

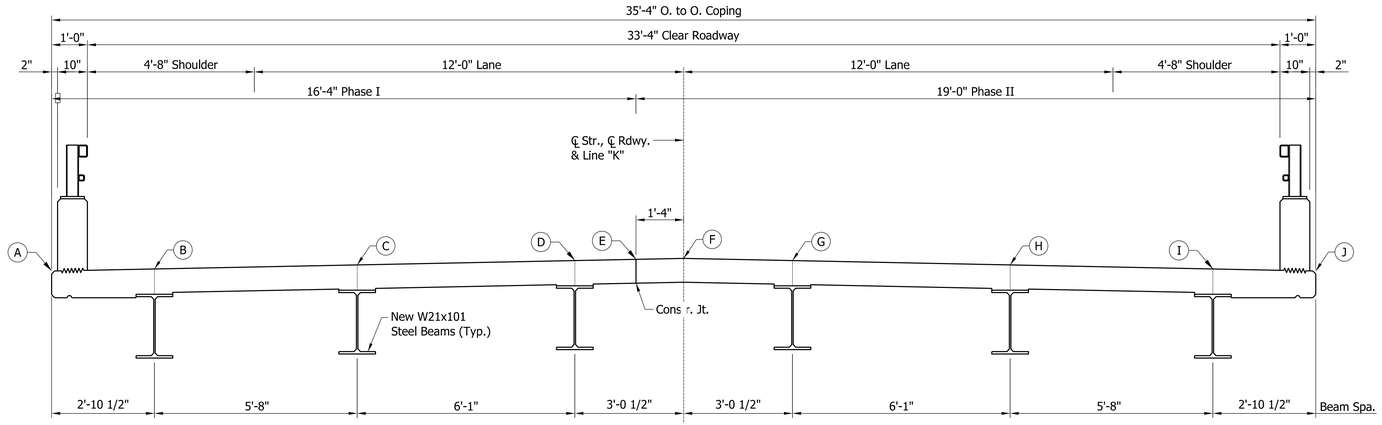
INDIANA
DEPARTMENT OF TRANSPORTATION

SCREEDS

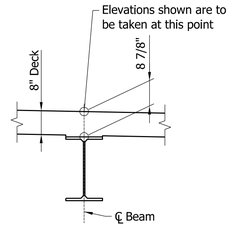
HORIZONTAL SCALE	BRIDGE FILE
1/8" = 1'-0"	156-78-00000 B
VERTICAL SCALE	DESIGNATION
1/8" = 1'-0"	9999999
	SHEET
	54 of 71
	CONTRACT
	B-99999

PURPOSE:

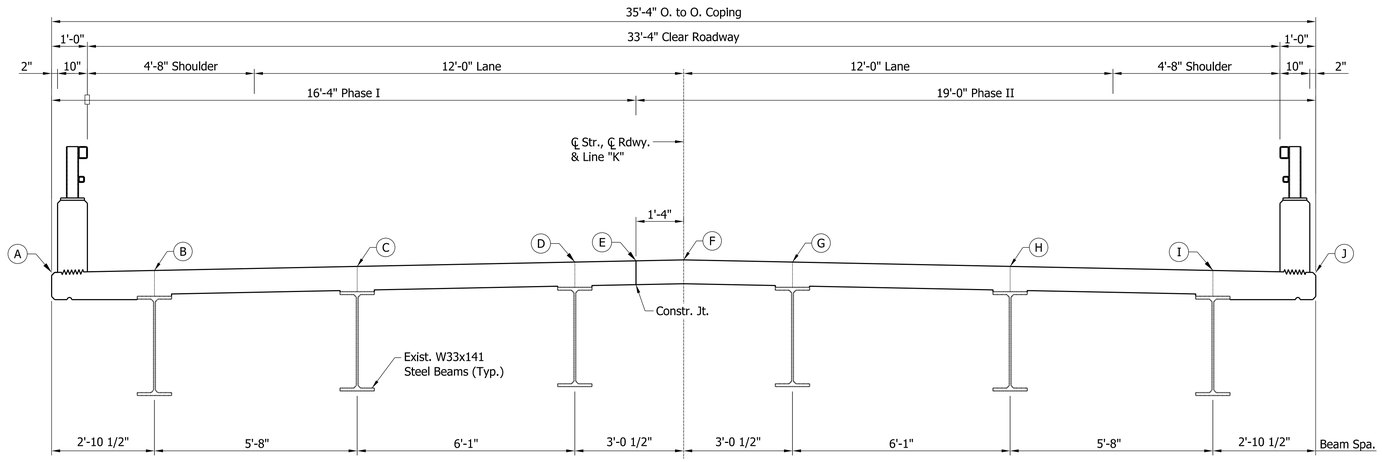
The purpose of these Screed Details sheets is to provide elevations for setting forms in order to place the floor slab and coping.



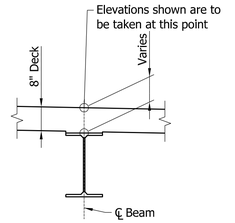
1 TYPICAL SECTION
(SPANS "A", "B", "F", "G")
Scale: 1/2"=1'-0"



2 SECTION @ BEAMS
(Spans "A", "B", "F", & "G")
Not To Scale



1 TYPICAL SECTION
(SPANS "C" Thru "E")
Scale: 1/2"=1'-0"



2 SECTION @ BEAMS
(Spans "C" thru "E")
No Scale

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

See *IDM* 404-2.02(01) for information related to determination of screed elevations and development of the Plan of Screeds.

3 Notes:

After Beams are set or existing deck is removed, take elevations at all screed points on top of Beams. Enter these elevations in the table on Sht. 55. Subtract these elevations from the tabulated elevations and use the resulting dimensions as the height for setting screed forms above these points. These dimensions remain constant regardless of how much or in what order the concrete is poured. DO NOT SET SCREED FORMS BY LEVELING. No concrete in the floor slab shall be poured until the above operations are completed.

Screed elevations as shown in the tables include an allowance for concrete dead load deflections.

For General Notes, see Sht. 14.

For Screed Plan, see Sht. 54.

For Concrete Dead Load Deflection Diagram, see Sht. 50.

For Table of Screed Elevations, see Sht. 56.

REQUIRED ELEMENTS:

1. Transverse Section
2. Section at Beam showing Locations of Elevations
3. Procedure and Notes
4. Signature Block and PE Seal

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

4

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

SCREEDS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999

	SHEET
	55 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of these Screed Details sheets is to provide elevations for setting forms in order to place the floor slab and coping.

(1)

TABLE OF SCREED ELEVATIONS

POINT	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
A	Elevation - Top of Screed	469.025	468.945	468.815	468.665	468.505	468.405	468.320	468.195	468.055	467.900	467.800	467.775	467.655	467.525	467.390	467.250	467.115	466.990	466.930	466.840	466.760	466.680	466.595	466.510	466.435	466.395	466.355	466.325	466.300	466.270	466.230	466.195
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
B	Elevation - Top of Screed	469.085	469.005	468.875	468.725	468.565	468.465	468.380	468.250	468.115	467.955	467.855	467.835	467.710	467.585	467.450	467.310	467.175	467.050	466.990	466.900	466.820	466.740	466.655	466.570	466.490	466.455	466.410	466.385	466.355	466.325	466.290	466.250
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
C	Elevation - Top of Screed	469.195	469.120	468.985	468.835	468.675	468.575	468.495	468.365	468.225	468.070	467.970	467.945	467.825	467.695	467.560	467.420	467.285	467.165	467.100	467.015	466.930	466.850	466.765	466.680	466.605	466.570	466.525	466.495	466.470	466.440	466.405	466.365
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
D	Elevation - Top of Screed	469.320	469.240	469.110	468.960	468.800	468.700	468.615	468.485	468.350	468.190	468.090	468.070	467.945	467.820	467.685	467.545	467.410	467.285	467.225	467.135	467.055	466.975	466.890	466.805	466.725	466.690	466.645	466.620	466.590	466.560	466.525	466.485
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
E	Elevation - Top of Screed	469.350	469.275	469.145	468.995	468.830	468.735	468.650	468.520	468.380	468.225	468.125	468.105	467.980	467.850	467.715	467.580	467.440	467.320	467.260	467.170	467.090	467.005	466.925	466.840	466.760	466.725	466.680	466.650	466.625	466.595	466.560	466.520
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
F	Elevation - Top of Screed	469.380	469.300	469.170	469.020	468.860	468.760	468.675	468.545	468.410	468.255	468.150	468.130	468.005	467.880	467.745	467.605	467.470	467.345	467.285	467.195	467.115	467.035	466.950	466.865	466.790	466.750	466.705	466.680	466.650	466.620	466.585	466.550
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
G	Elevation - Top of Screed	469.320	469.240	469.110	468.960	468.800	468.700	468.615	468.485	468.350	468.190	468.090	468.070	467.945	467.820	467.685	467.545	467.410	467.285	467.225	467.135	467.055	466.975	466.890	466.805	466.725	466.690	466.645	466.620	466.590	466.560	466.525	466.485
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
H	Elevation - Top of Screed	469.195	469.120	468.985	468.835	468.675	468.575	468.495	468.365	468.225	468.070	467.970	467.945	467.825	467.695	467.560	467.420	467.285	467.165	467.100	467.015	466.930	466.850	466.765	466.680	466.605	466.570	466.525	466.495	466.470	466.440	466.405	466.365
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
I	Elevation - Top of Screed	469.085	469.005	468.875	468.725	468.565	468.465	468.380	468.250	468.115	467.955	467.855	467.835	467.710	467.585	467.450	467.310	467.175	467.050	466.990	466.900	466.820	466.740	466.655	466.570	466.490	466.455	466.410	466.385	466.355	466.325	466.290	466.250
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																
J	Elevation - Top of Screed	469.025	468.945	468.815	468.665	468.505	468.405	468.320	468.195	468.055	467.900	467.800	467.775	467.655	467.525	467.390	467.250	467.115	466.990	466.930	466.840	466.760	466.680	466.595	466.510	466.435	466.395	466.355	466.325	466.300	466.270	466.230	466.195
	Elevation - Top of Beam																																
	Distance - Top of Beam to Top of Screed																																

(1)

TABLE OF SCREED ELEVATIONS

POINT	LOCATION	33	34	35	36	37	38	39	40	41	42	43
A	Elevation - Top of Screed	466.190	466.195	466.195	466.175	466.145	466.135	466.130	466.130	466.125	466.100	466.075
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
B	Elevation - Top of Screed	466.250	466.255	466.250	466.235	466.205	466.190	466.190	466.190	466.180	466.155	466.130
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
C	Elevation - Top of Screed	466.365	466.370	466.365	466.345	466.315	466.305	466.300	466.305	466.295	466.270	466.245
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
D	Elevation - Top of Screed	466.485	466.490	466.485	466.470	466.440	466.425	466.425	466.425	466.415	466.390	466.365
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
E	Elevation - Top of Screed	466.520	466.525	466.520	466.500	466.475	466.460	466.455	466.460	466.450	466.425	466.400
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
F	Elevation - Top of Screed	466.545	466.550	466.550	466.530	466.500	466.485	466.485	466.485	466.480	466.450	466.425
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
G	Elevation - Top of Screed	466.485	466.490	466.485	466.470	466.440	466.425	466.425	466.425	466.415	466.390	466.365
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
H	Elevation - Top of Screed	466.365	466.370	466.365	466.345	466.315	466.305	466.300	466.305	466.295	466.270	466.245
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
I	Elevation - Top of Screed	466.250	466.255	466.250	466.235	466.205	466.190	466.190	466.190	466.180	466.155	466.130
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											
J	Elevation - Top of Screed	466.190	466.195	466.195	466.175	466.145	466.135	466.130	466.130	466.125	466.100	466.075
	Elevation - Top of Beam											
	Distance - Top of Beam to Top of Screed											

REQUIRED ELEMENTS:

1. Table of Screed Elevations
2. Procedure and Notes
3. Signature Block and PE Seal

(2) Notes:
For General Notes, see Sht. 14.
For Screed Typical Sections, see Sht. 55.
For Screed Plan, see Sht. 54.

(3)

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR
CHECKED: BCD CHECKED: RST

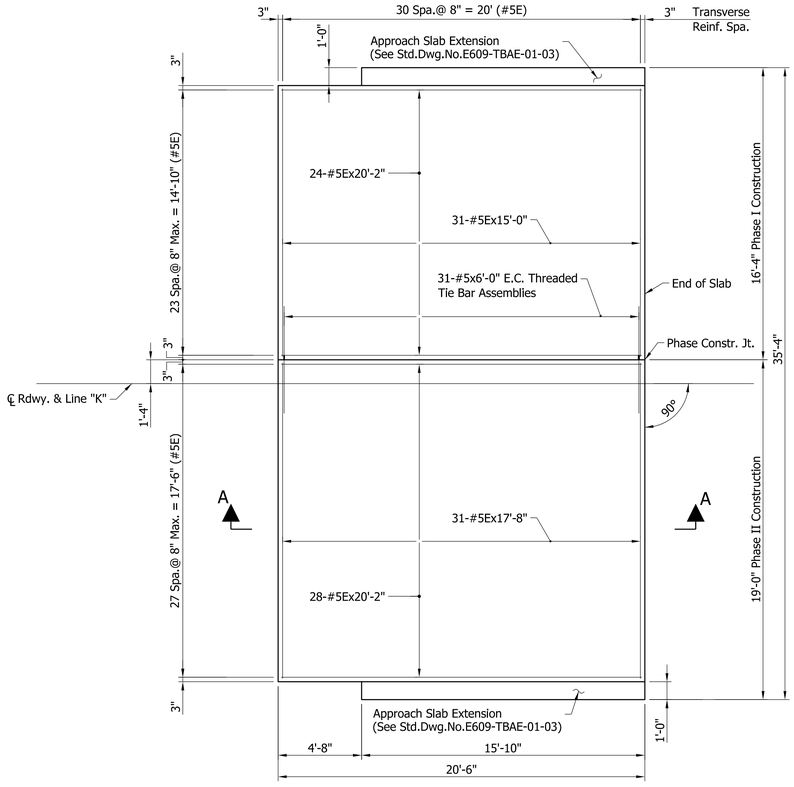
INDIANA
DEPARTMENT OF TRANSPORTATION

SCREEDS

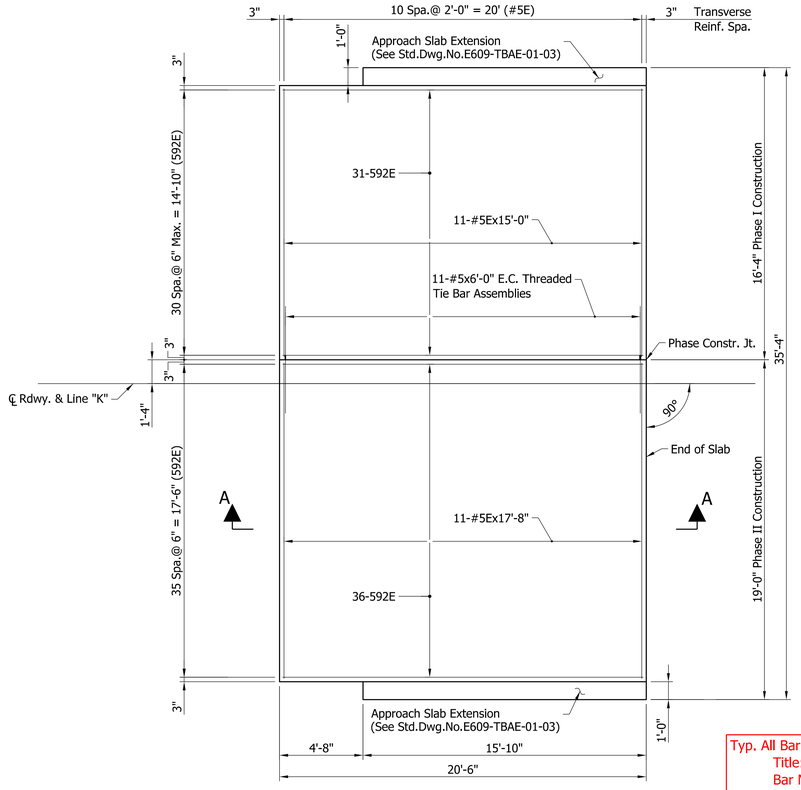
HORIZONTAL SCALE	BRIDGE FILE
NONE	156-78-00000 B
VERTICAL SCALE	DESIGNATION
NONE	9999999
	SHEET
	56 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Approach Slab Details sheet is to provide all necessary dimensions and reinforcing details needed to construct the bridge approach slab.



TOP REINFORCING



BOTTOM REINFORCING

Typ. All Views and Sections:
Section Title: 18 Pt Text
Section Sub-Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text

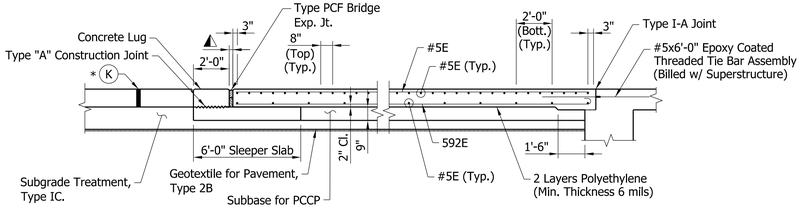
2 APPROACH SLAB PLAN - BENT NO.1

(Bent No.8, Same by Opposite Hand)
Scale: 1/4"=1'-0"

REQUIRED ELEMENTS:

1. North Arrow
2. Approach Slab Plan
3. Section
4. Pavement Ledge Detail
5. Reinforcing Bar Bending Details and Cutting Diagrams
6. Bill of Materials
7. Notes
8. Signature Block and PE Seal

Note: A Joint Setting Table may be required for expansion lengths exceeding 150 ft.

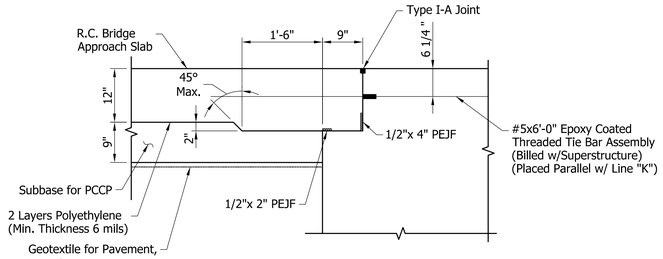


3 SECTION A-A

Scale: 1/4"=1'-0"

See Std. Dwg. E 503-BATJ-02 for joint opening notes. See Sht. 13 for Expansion Length.

* For Legend, see Sht. 3.



4 PAVEMENT LEDGE DETAIL

Scale: 3/4" = 1'-0"

1

When the construction is to be phased, Bills of Materials should be separated by phase.

6 BILL OF MATERIALS APPROACH SLAB - BENT NO. 1 (BENT NO. 8 SAME)

EPOXY COATED REINFORCING BARS

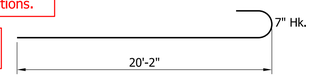
SIZE or MARK	No. of BARS	LENGTH	WEIGHT (Lbs)
592E	67	20'-9"	
#5E	52	20'-2"	
#5E	42	17'-8"	
#5E	42	15'-0"	
Total #5E			3975
Total from Br. Railing Transition, TPF-1 (2)			1460
Total from Approach Slab Extension (2)			460
Total Epoxy Coated Reinforcing Bars			5895

MISCELLANEOUS

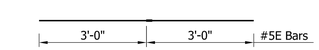
Reinf. Conc. Bridge Approach, 12"	80 Sys
Terminal Joint, Type HMA	33 Lft
Threaded Tie Bar Assembly, Epoxy Coated (#5E)	42 Ea
Concrete Bridge Railing Transition, TPF-1	2 Ea
Geotextile for Pavement, Type 2B	101 Sys
Subbase for PCCP	20 Cys
Surface Seal (Est. Quantity)	238 Sft
Subgrade Treatment, Type IC	86 Sys

Bar bending diagrams are not shown to scale. However, they should be drawn to approximate proportions.

Show bar mark and total length of bar, rounded to nearest 1 in.



592E x 20'-9"



THREADED TIE-BAR ASSEMBLY, EPOXY COATED

5 BAR BENDING DETAILS

Not To Scale

Typ. All Bar Bending Diagrams:
Title: 18 Pt Text
Bar Mark Title: 14 Pt Text
Dimensions and Text Callouts: 12 Pt Text
See IDM 405-2.0 for guidance regarding detailing reinforcing steel.

7 Notes:

For General Notes, see Sht. 14.
For Additional R.C. Bridge Approach Slab Details, see Std. Dwg. E 609-RCBA-04.
For Reinforcing Bar Notes, see Std. Dwg. E 703-BRST-01.
"E" denotes Epoxy Coated Reinforcing Steel.

8

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL — *Engineer of Record Signature* — DESIGN ENGINEER — MM/DD/YY DATE

DESIGNED: ABC | DRAWN: PQR | CHECKED: BCD | CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

APPROACH SLAB DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	156-78-00000 B
VERTICAL SCALE	DESIGNATION
AS NOTED	9999999
	SHEET
	57 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Bridge Summary sheet is to summarize quantities by superstructure, substructure elements, and approach structure for the bridge.

(1) SUMMARY OF BRIDGE QUANTITIES

ITEM	CONCRETE				PIPE ROADWAY DRAIN CASTING EXTENSION	PIPE, END BENT PIPE, 6"	RAILING, CONCRETE, PF-1	RAILING, STEEL, PF-1	CONCRETE BRIDGE RAILING TRANSITION, TPF-1	THREADED TIE BAR ASSEMBLY	REINF. BARS	REINF. BARS, EPOXY COATED	THREADED TIE BAR ASSEMBLY, EPOXY COATED	REINF. CONC. BRIDGE APPROACH (12")	TERMINAL JOINT, TYPE HMA	FIELD DRILLED HOLE IN CONCRETE	FIELD DRILLED HOLE	BRIDGE EXPANSION JOINT, PCF	GRATES, BASINS AND FITTINGS, CAST IRON	AGGREGATE FOR END BENT BACKFILL	GEOTEXTILE FOR UNDERDRAIN, TYPE 2B	GEOTEXTILE FOR PAVEMENT, TYPE 2B	SUBBASE FOR PCCP	SUBGRADE TREATMENT, TYPE IC	RIPRAP, CLASS 1	RIPRAP, CLASS 2	GEOTEXTILE FOR RIPRAP, TYPE 1A	SURFACE SEAL*	STRUCTURAL STEEL*	SHEAR STUD CONNECTORS
	CLASS C	CLASS A	CLASS B																											
	SUPERSTR.	SUBSTR.	ABOVE FTG.	IN FTG.																											
	CYS	CYS	CYS	CYS	EACH	LFT	LFT	LFT	EACH	EACH	LBS	LBS	EACH	SYS	LFT	EACH	EACH	LFT	EACH	CYS	SYS	SYS	CYS	SYS	TON	TON	SYS	SFT	LBS	EACH
BENT NO. 1		5.5				47					1204					65				13	40				110		127	120		
BENT NO. 2		13.1								16	2261															156	133			
BENT NO. 3		4.9								4	522					202										150	129	99		
PIER NO. 4																										268	200			
PIER NO. 5																										268	200			
BENT NO. 6		4.9								4	522					202										150	129	99		
BENT NO. 7		13.1								16	2261															156	133			
BENT NO. 8		4.6				47					1063					25				13	41				110		127	120		
SUPERSTRUCTURE	367.8				4							120852	1170				8	71	14										130999	2196
BRIDGE RAILING							734	752				12630																3540		
R.C. BRIDGE APPROACH - BENT NO. 1									2			5895	42	80	33								101	20	86			238		
R.C. BRIDGE APPROACH - BENT NO. 8									2			5895	42	80	33								101	20	86			238		
TOTALS	367.8	46.1			4	94	734	752	4	40	7833	145272	1254	160	66	494	8	71	14	26	81	202	40	172	220	1148	1178	4454	130999	2196

* Estimated Quantity

(2) BRIDGE COATING LOCATIONS AND INFORMATION

ADDITIONAL INFORMATION

CONTRACT BRIDGE NO. (1)	DES. NO.	BRIDGE FILE NUMBER	ROUTE AND CROSSING	ROUTE	REF. POST	COUNTY	LOCATION	YEAR BUILT	YEAR LAST PAINTED	EXISTING PRIMER TYPE (HAZARDOUS OR NON-HAZARDOUS)	NO. SPANS	SPAN LENGTHS	SURF. AREA STRUCTURAL STEEL (SFT) (2)	NEW COATING COLOR NAME (NUMBER) (3)	CLEAN AND COAT CASTING (EACH)	ROADWAY DRAIN CASTING EXTENSION (EACH)	CLEAN AND COAT BEARING ASSY. (EACH)	CLEAN AND COAT STEEL PILING (SFT) (2)
2	9999999	156-78-00000 B	SR 156 OVER LOG LICK CREEK	SR 156	4+88	SWITZERLAND	1.27 MI. WEST OF SR 101	1958	1979	HAZARDOUS	7	UNIT 1: 43'-0" & 42'-3" UNIT 2: 60'-0", 72'-0" & 60'-0" UNIT 3: 42'-3" & 43'-0"	20,300	GREEN	-	-	12	-

(1) See RSP 101-B-042, Bridge Numbers for Pay Item.
(2) Quantities shown are approximate. The Contractor shall determine the quantities upon which to base its bid.
(3) See Standard Specifications section 909.02 for allowable color numbers for full or partial bridge coating. Color numbers should only be included in the table for color names not listed in 909.02.

* Clean existing bearing assemblies at Pier No. 4 and Pier No. 5. Paint all new and existing bearing assemblies.

Typ. Table:
Table Title: Text Height = 0.25"
Table Data: 12 Pt Text

REQUIRED ELEMENTS:

1. Summary of Bridge Quantities Table
2. Bridge Coating Locations and Information, If Needed
3. Signature Block and PE Seal

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

(3)

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

BRIDGE SUMMARY OF QUANTITIES

HORIZONTAL SCALE	BRIDGE FILE
N/A	156-78-00000 B
VERTICAL SCALE	DESIGNATION
N/A	9999999
	SHEET
	58 of 71
	CONTRACT
	B-99999

PURPOSE:

The purpose of this Road Summary sheet is to summarize quantities for the project in addition to the bridge structure itself.

1 PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII	DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE: COMPACTED AGGREGATE NO. 73	SURFACE BEYOND R/W LINE: HMA FOR APPR., TYPE B	SURFACE BEYOND R/W LINE: PCCP	GRADE 1	GRADE 2	EXCAVATION: CUT	EXCAVATION: FILL	CLEAR ZONE AT DRIVE	HMA FOR APPROACHES: SURFACE TYPE B	HMA FOR APPROACHES: INTERMD TYPE ___	HMA FOR APPROACHES: BASE TYPE ___	HMA FOR APPROACHES:	QC/QA HMA FOR ROADS						PCCP FOR APPROACHES, 9"	ASPHALT MATERIAL FOR: PRIME COAT	ASPHALT MATERIAL FOR: TACK COAT	COMPACTED AGGREGATE FOR BASE NO. 53		COMPACTED AGGREGATE FOR SURFACE NO. 73		MILLING ASPHALT, 1 1/2"	JOINT ADHESIVE, SURFACE	JOINT ADHESIVE, INTERMEDIATE	LIQUID ASPHALT SEALANT	SUBGRADE TREATMENT TYPE IC	GEOTEXTILE FOR PAVEMENT TYPE 2B	SUBGRADE TREATMENT TYPE ID (UND.)	COMBINED CURB & GUTTER, TYPE C	CURB, CONCRETE, MODIFIED	CONCRETE SIDEWALK, 4"	CURB RAMP, CONCRETE, G	REMARKS
														LBS PER SYD				HMA 3,70, SURFACE, 9.5 mm	HMA 3,70, INTERMD, 19.0 mm	HMA 3,64, BASE, 25.0 mm							DEPTH 3"		DEPTH 3"													
		LFT	LFT	FT	LFT	SYS	SYS	SYS	%	%	CYS	CYS	LFT	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	SYS	SYS	SYS	TONS	TONS	TONS	TONS	SYS	LFT	LFT	LFT	SYS	SYS	SYS	LFT	LFT	SYS	SYS	
Line "K"																																					130				
Sta.255+81 to Sta.257+25	Widening	Varies	144															46	25	80						952					356	432	288	432	213	213					
Sta.257+25 to Sta.257+81	Mainline	32.67	56															17	29	94						610						168	168	168	229	229					
Sta.261+89 to Sta.262+25	Mainline	32.67	36															11	19	60						393						108	108	108	147	147					
Sta.262+25 to Sta.264+49	Widening	Varies	224															66	30	91						1207					589	672	448	672	257	257					
Sta.256+55 (Rt.)	Mod. Class V Drive	12	14	10,10														2	3	8						18					18				19	19					
TOTALS																		142	106	333						3180					963	1380	1012	1380	865	865	130				

2 STRUCTURE DATA TABLE

STRUCTURE NUMBER	LOCATION: STATION	LOCATION: LEFT	LOCATION: CROSS	LOCATION: RIGHT	SIZE	PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE	LENGTH	SKEW	COVER	INVERT: UP STREAM	INVERT: DOWN STREAM	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL		REVETMENT RIPRAP	PIPE CASING, STEEL, 20 IN.	GEOTEXTILES	PIPE END SECTION	GRATED BOX END SECTION			SAFETY METAL END SECTION			CONNECT TO STR.	REMARKS
																	TYPE	CYS	TONS	LFT	SYS	EA.	TYPE	SLOPE	EA.	SIZE	SLOPE	EA.		
					IN.			LFT		FT	ELEV.	ELEV.	YR																	

3 PAVED SIDE DITCH, RIPRAP DITCH AND SODDING SUMMARY TABLE

LOCATION: FROM STATION	LOCATION: TO STATION	LEFT	MEDIAN	RIGHT	ACTUAL LENGTH	CUT OFF WALLS (8 FT EQUIVAL. LENGTH EACH)	PAVEMENT SIDE DITCH: TOTAL EQUIVALENT PAY LENGTHS TYPE					RIPRAP DITCH: RIPRAP, REVETMENT	RIPRAP, UNIFORM	GEOTEXTILE FOR RIPRAP, TYPE 1A	SODDING: FOR PAVED SIDE DITCHES	FOR TURNOUT	FOR MEDIAN	FOR SHOULDER BREAK	SODDING AT BRIDGE CONE	TOTAL SODDING	EROSION CONTROL BLANKET	MULCHED SEEDING, R
					LFT	EACH	LFT	LFT	LFT	LFT	LFT	TONS	TONS	SYS	SYS	SYS	SYS	SYS	SYS	SYS	SYS	SYS
Sta.261+82.17 "K"	Sta.261+94.17 "K"	X										24		43		15				15		
Sta.261+82.17 "K"	Sta.261+94.17 "K"			X								29		51		18				18		
Sta.255+81.00 "K"	Sta.264+49.00 "K"																				280	1016
TOTALS												53		94		33				33	280	1016

4 GUARDRAIL SUMMARY TABLE

LOCATION: FROM STATION	LOCATION: TO STATION	LEFT	MEDIAN LEFT	MEDIAN RIGHT	RIGHT	GUARDRAIL MGS W-BEAM LENGTH: STANDARD POST AT 6 FT 3 IN. SPA.	STANDARD POST AT 3 FT 1.5 IN. SPA.	DOUBLE FACED AT 6 FT 3 IN. SPA.	DOUBLE FACED AT 3 FT 1.5 IN. SPA.		SHOP CURVED AT ____FT. SPA.	NESTING GUARDRAIL	GUARDRAIL FLARE RATE	GUARDRAIL MGS TRANSITION WITHOUT CURB	GUARDRAIL TRANSITION TYPE ____	GUARDRAIL MGS, HEIGHT TRANSITION	GUARDRAIL END TREATMENT TYPE OS		CURVED W-BEAM GUARDRAIL SYSTEM: TERMINAL SYSTEM		CONNECTOR SYSTEM		GUARDRAIL REMOVE	GUARDRAIL RESET	IMPACT ATTENUATOR TYPE CR-1, W1, TL-2	IMPACT ATTENUATOR TYPE ____	REMARKS
						LFT	LFT	LFT	LFT	LFT	LFT	EACH		EACH	EACH	EACH	EACH		TYPE	EACH	TYPE	EACH	LFT	LFT	EACH	EACH	
Sta.256+83.61 "K"	Sta.257+88.33 "K"	X				25								1		1							107				
Sta.256+68.23 "K"	Sta.257+88.33 "K"				X	25								1		1							108				
Sta.261+81.67 "K"	Sta.263+86.68 "K"	X				112.5								1			1						122				
Sta.261+81.67 "K"	Sta.262+99.18 "K"				X	25								1			1						121				
TOTALS						187.5								4		2	2			1			458				

5 MONUMENT TABLE

LOCATION	OFFSET	TYPE	SECTION CORNER
257+01.73 "K"	℄	B	
257+81.00 "K"	℄	B	
261+89.00 "K"	℄	B	
262+65.80 "K"	℄	B	
TOTAL		4	

6 R/W MARKER SUMMARY

LT./RT.	STATION	OFFSET (ft)	NO. REQ'D.	FLUSH MOUNT
TOTAL				

7 SHEET SIGN SUMMARY

STATION	OFFSET (FT)	DESCRIPTION	SIZE	ENCAPS. LENS 0.08"	ENCAPS. LENS 0.10"	ENCLOSED LENS -	ENCLOSED LENS -	POST LENGTH 1	POST LENGTH 2	POST LENGTH 3	POST PAY LENGTH A	POST PAY LENGTH SQ.	POST PAY LENGTH B	SIGN, GROUND MOUNTED, RESET
257+88.00 "K", Rt.	19	Reference Post												1
262+04.00 "K", Rt.	22	Markland												1
263+97.00 "K", Rt.	19	Reference Post												1
TOTALS														3

8 PAVEMENT MARKING TABLE

LOCATION: LT/RT	LOCATION: STATION	4 in., MULTI-COMPONENT, SOLID, WHITE EDGE LINE	4 in., THERMO, SOLID YELLOW CENTERLINE	TRANSVERSE MARKING, THERMO, CROSSWALK, 6 in.	4 in., MULTI-COMPONENT, SOLID, YELLOW CENTERLINE	TRANSVERSE MARKING, THERMO, STOP LINE, 24 in.
Lt.	Sta.252+95 to Sta.267+30.00	1435				
Rt.	Sta.252+95 to Sta.267+30.00	1435				
	Sta.252+95 to Sta.267+30.00				2870	
TOTALS		2870			2870	

9 MAILBOX APPROACHES

LT./RT.	℄ BOX STATION	DESCRIPTION	WIDTH, W (FT)	ASSEMBLY REQ'D SINGLE	ASSEMBLY REQ'D DOUBLE	ASSEMBLY REQ'D TRIPLE
TOTALS						

Note: All road summary tables have been shown on this sample for format and typical location only. Tables may be left off of plans for which there are no related quantities.

Typ. Table:
Table Title: Text Height = 0.25"
Table Data: 12 Pt Text

REQUIRED ELEMENTS:

1. Pavement Quantities and Approach Table
2. Structure Data Table, If Needed
3. Permanent Erosion Control Summary Table
4. Guardrail Summary Table
5. Monument Table
6. R/W Marker Summary, If Needed
7. Sheet Sign Summary, If Needed
8. Permanent Pavement Marking Table
9. Mailbox Approaches Table, If Needed
10. Signature Block and PE Seal

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA
DEPARTMENT OF TRANSPORTATION

ROAD SUMMARY OF QUANTITIES

HORIZONTAL SCALE	BRIDGE FILE
N/A	156-78-00000 B
VERTICAL SCALE	DESIGNATION
N/A	9999999

SHEET 59 of 71

CONTRACT B-99999

PURPOSE:

The purpose of this Road Summary sheet is to summarize quantities for the project in addition to the bridge structure itself.

(1) PIPE MATERIAL TABLE

PIPE TYPE/SHAPE									
SMOOTH PIPE SIZE									
CORRUGATED PIPE SIZE									
RCP/RCHEP (S)	CLASS								
	$D_{0.01}$ RATING								
NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)									
CORRUGATED PE PIPE, TYPE S (S) *									
RIBBED PE PIPE (S)									
SMOOTH WALL PE PIPE (S)/MAXIMUM DR									
PROFILE WALL PVC PIPE (S)									
SMOOTH WALL PVC PIPE (S)									
VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)									
CORRUGATED STEEL PIPE\ PIPE-ARCH	FULLY BIT. PAVED & LINED (S)	CORR. PROFILE							
		THICKNESS							
	ZINC COATED (C)	CORR. PROFILE							
		THICKNESS							
	ZINC COATED W/BPI (LS)	CORR. PROFILE							
		THICKNESS							
	ALUM. COATED TYPE 2 (C)	CORR. PROFILE							
		THICKNESS							
	ALUM. COATED TYPE 2 W/ BPI (C) (S) IA OR IIA	CORR. PROFILE							
		THICKNESS							
	POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE							
		THICKNESS							
	POLYMER PRECOATED GALVANIZED (S) IA OR IIIA	CORR. PROFILE							
		THICKNESS							
	CORRUGATED ALUM. ALLOY PIPE W/ BPI	CORR. PROFILE							
		THICKNESS							
	CORRUGATED ALUM. ALLOY PIPE (C)	CORR. PROFILE							
		THICKNESS							
	STR. PLATE ALUMINUM ALLOY PIPE (C)	CORR. PROFILE							
		THICKNESS							
	STR. PLATE ALUMINUM ALLOY PIPE W/BPI (C)	CORR. PROFILE							
		THICKNESS							
	STR. PLATE STEEL PIPE (C)	CORR. PROFILE							
		THICKNESS							
	STR. PLATE STEEL PIPE W/ CFP (C)	CORR. PROFILE							
		THICKNESS							

LEGEND

RCP - REINFORCED CONCRETE PIPE

RCHEP - REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE

PE - POLYETHYLENE

DR - DIMENSION RATIO

PVC - POLYVINYL CHLORIDE

BIT - BITUMINOUS

CORR - CORRUGATION

BPI - BITUMINOUS PAVED INVERT

ALUM - ALUMINUM

STR - STRUCTURAL

CFP - CONCRETE FIELD PAVING

(S) - SMOOTH PIPE MATERIAL

(C) - CORRUGATED PIPE MATERIAL

OK - ACCEPTABLE FOR USE

(LS) - LOCK SEAM PIPE REQUIRED

(SP) - PERFORATED SMOOTH PIPE MATERIAL

* - REFER TO STANDARD DRAWING 715-PHCL-18 OR -19 FOR DIAMETER APPROPRIATE FOR PAY ITEM DIAMETER.

** - TABULATED THICKNESS REFERS TO TOP & SIDE PLATES. BOTTOM PLATES SHALL BE OF NEXT GREATER AVAILABLE THICKNESS.

*** - UNDISTRIBUTED QUANTITY

Note: All road summary tables have been shown on this sample for format and typical location only. Tables may be left off of plans for which there are no related quantities.

(2) TEMPORARY EROSION CONTROL TABLE

LOCATION	TEMPORARY SILT FENCE	DRAINAGE BARRIER AT SWALE	TEMPORARY INLET PROTECTION	TEMPORARY SLOPE DRAIN	CHECK DAM		TEMPORARY CHECK DAM, REVETMENT RIPRAP	TEMPORARY CHECK DAM, REVETMENT RIPRAP, MODIFIED	TEMPORARY CHECK DAM, TRANSVERSABLE	TEMPORARY FILTER BERM	TEMPORARY SEDIMENT TRAP	TEMPORARY GEOTEXTILE	TEMPORARY FILTER SOCK	TEMPORARY FILTER STONE	SEDIMENT, REMOVE	NO. 2 STONE	TEMPORARY MULCH	TEMPORARY SEED MIXTURE	TEMPORARY MULCH STABILIZATION	MANUFACTURED SURFACE PROTECTION PRODUCT	EROSION CONTROL BLANKET
					NO.REQ'D.	SPA.															
STATION TO STATION	LFT	LFT	EACH	LFT	EACH	LFT	TON	TON	LFT	LFT	TON	SYS	LFT	TON	CYS	TON	TON	LBS	SYS	SYS	SYS
Line "K"																					
255+81.00 to 259+67.00 (Lt.)	404														1						
255+81.00 to 259+67.00 (Rt.)	430														2						
260+03.00 to 264+49.00 (Lt.)	495														2						
260+03.00 to 264+49.00 (Rt.)	474														2						
Existing Bridge			10																		
255+81.00 to 257+94.00 (Lt.)																	0.2	8		90	
255+81.00 to 257+94.00 (Rt.)																	0.2	9		52	
261+76.00 to 264+49.00 (Lt.)																	0.4	20	140	80	
260+76.00 to 264+49.00 (Rt.)																	0.2	11	66	58	
Construction Entrance/ Access												1794				1196					
TOTAL	1803		10									1794			7	1196	1	48	206	280	

Typ. Table:
Table Title: Text Height = 0.25"
Table Data: 12 Pt Text

REQUIRED ELEMENTS:

1. Pipe Material Table w/ Legend, If Needed
2. Temporary Erosion Control Table, If Needed
3. Signature Block and PE Seal

Title Block Text:
Labels: 10 Pt Text
Signature: 12 Pt Text

PE SEAL

RECOMMENDED FOR APPROVAL *Engineer of Record Signature* MM/DD/YY
DESIGN ENGINEER DATE

DESIGNED: ABC DRAWN: PQR

CHECKED: BCD CHECKED: RST

INDIANA DEPARTMENT OF TRANSPORTATION

ROAD SUMMARY OF QUANTITIES

HORIZONTAL SCALE	BRIDGE FILE
N/A	156-78-00000 B
VERTICAL SCALE	DESIGNATION
N/A	9999999
	SHEET
	60 of 71
	CONTRACT
	B-99999

3