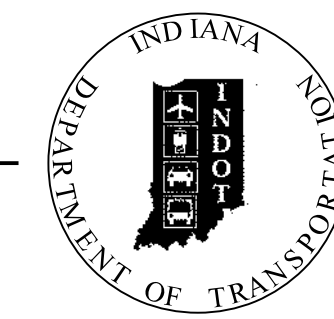


PROJECT	DESIGNATION
1902785	1902785
CONTRACT	BRIDGE FILE
B-42807	51-00058

STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
51-00058	Continuous Composite Prestressed Concrete Bulb-T Beam Bridge	3 Spans: 50'-0", 64'-0", 50'-0"; 0°0'0" Skew	Boggs Creek	12+52.00 Line "A"

INDIANA DEPARTMENT OF TRANSPORTATION

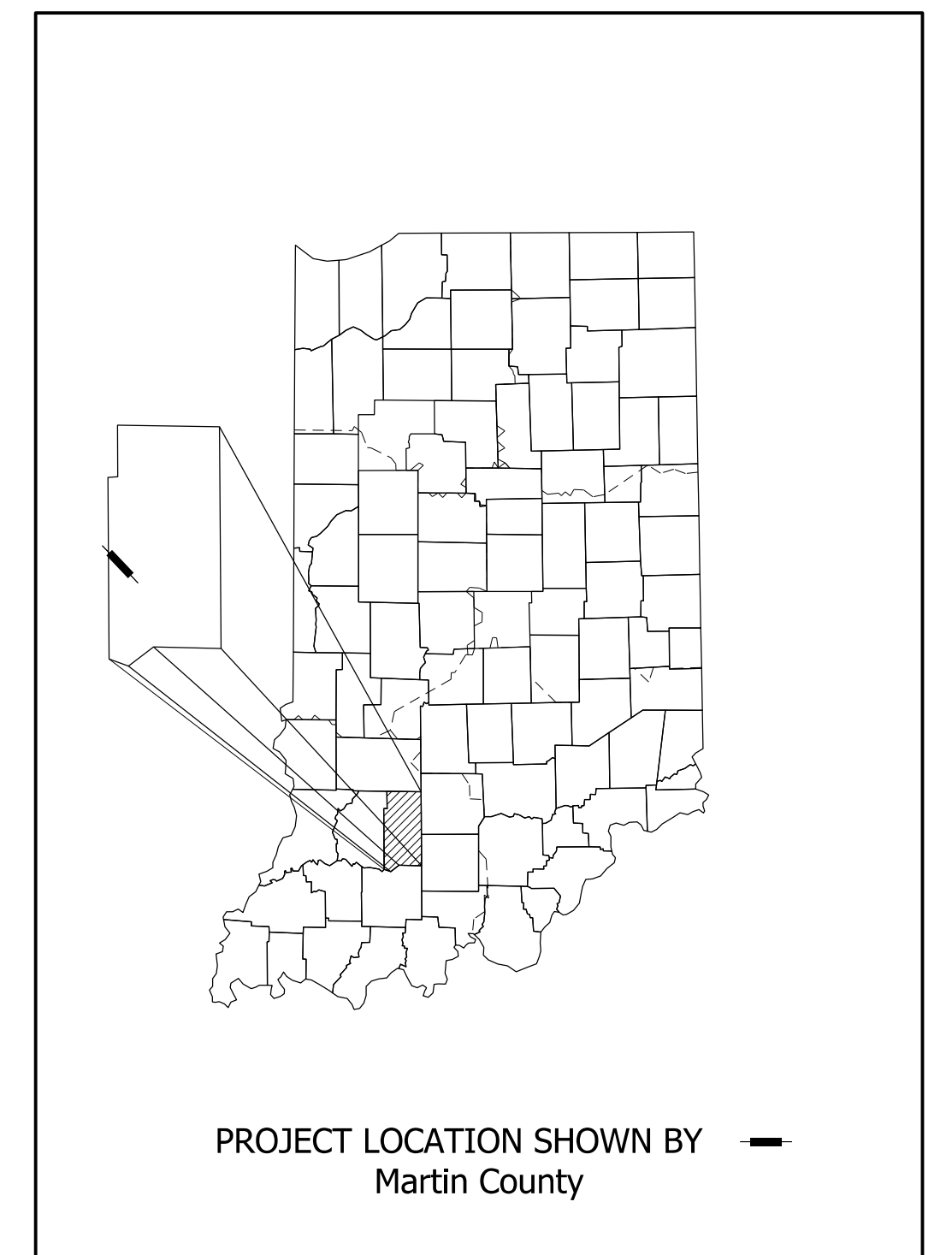


BRIDGE PLANS FOR SPANS OVER 20 FEET ROUTE: BRICKYARD ROAD

PROJECT NO. 1902785 P.E.
1902785 R/W
1902785 CONST.

Bridge Replacement on Brickyard Road over Boggs Creek
Located 0.04 Miles North of US 50
Section 20, T-3-N, R-4-W, Center Township, Martin County, Indiana

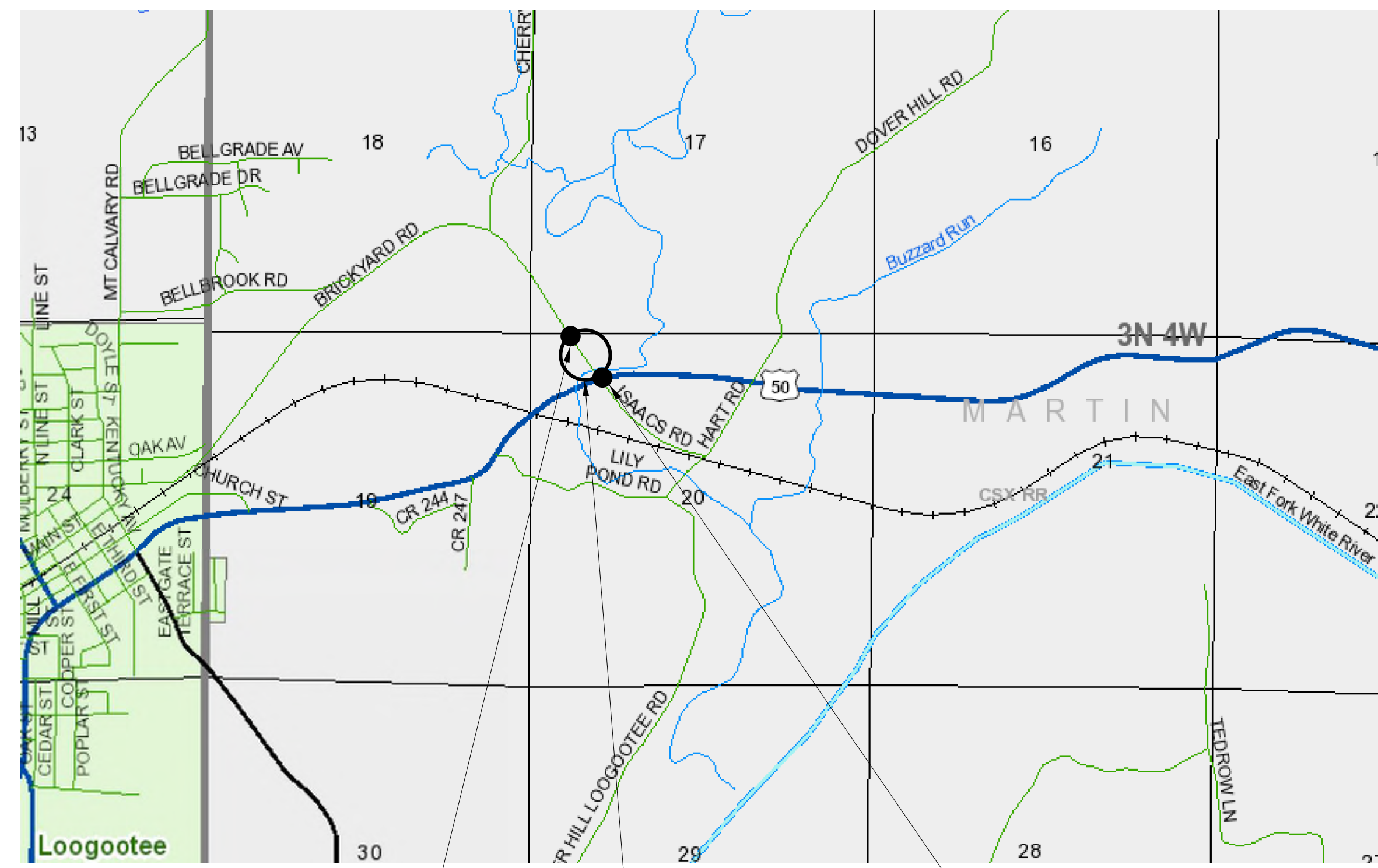
TRAFFIC DATA		
A.A.D.T. (2025)		260 V.P.D.
A.A.D.T. (2045)		320 V.P.D.
D.H.V. (2045)		N/A V.P.H.
DIRECTIONAL DISTRIBUTION		50 %
TRUCKS		1% A.A.D.T. N/A D.H.V.
DESIGN DATA		
DESIGN SPEED		35 M.P.H.
PROJECT DESIGN CRITERIA		3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION		LOCAL ROAD
RURAL/URBAN		RURAL
TERRAIN		LEVEL
ACCESS CONTROL		NONE



LATITUDE: 38° 41' 06" N LONGITUDE: 86° 53' 01" W

BRIDGE LENGTH:	0.031 MI.
ROADWAY LENGTH:	0.146 MI.
TOTAL LENGTH:	0.177 MI.
MAX. GRADE:	2.347 %

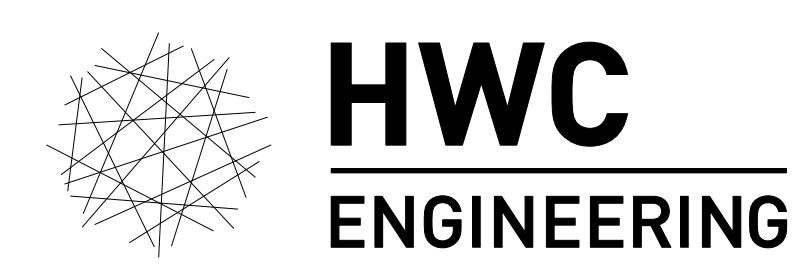
HUC: 051202081103



NOTE TO REVIEWER
ANY QUANTITIES THAT ARE NOT COMPLETED WILL BE PROVIDED IN FUTURE SUBMISSION

End Project Des. No. 1902785 Sta. 19+50.00, Line "A"
Structure 51-00058 over Boggs Creek Sta. 12+52.00, Line "A"
Begin Project Des. No. 1902785 Sta. 10+17.38, Line "A"

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2022
TO BE USED WITH THESE PLANS.



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

NOT FOR CONSTRUCTION
3/2023

PLANS PREPARED BY: HWC Engineering (317) 347-3663 PHONE NUMBER
CERTIFIED BY: _____ DATE
APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE	
51-00058	
DESIGNATION	
1902785	
REVISION	SHEETS
N/A	1 of 31
CONTRACT	PROJECT
B-42807	1902785

UTILITIES

COMMUNICATIONS: FRONTIER COMMUNICATIONS
 SCOTT SHIELDS
 505 NEWTON ST.
 JASPER, IN 47546
 812-634-0335 (O)
 812-639-1835 (C)
 SCOTT.D.SHIELDS@FTR.COM

SPARKLIGHT (NEWWAVE)
 DAVE McCALL
 102 N. 5TH ST.
 VINCENNES, IN 47591
 812-890-4285
 DAVID.MCCALL@SPARKLIGHT.BIZ

SMITHVILLE TELEPHONE
 JOE BRYNIAIRSKI
 1600 TEMPERENCE ST.
 ELLETTTSVILLE, IN 47429
 812-935-2262 (O)
 812-320-9317 (C)
 JOE.BRYNIAIRSKI@SMITHVILLE.COM

INDIANA UNDERGROUND PLANT PROTECTION SERVICE, INC.



Per Indiana State Law IC-8-1-26-16, It is against the law to excavate without notifying the underground location service two (2) working days before commencing work.

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

Note: Utility Locations are shown based upon information (maps and paint marks) supplied by others, and there is no guarantee of the accuracy or completeness of said locations.

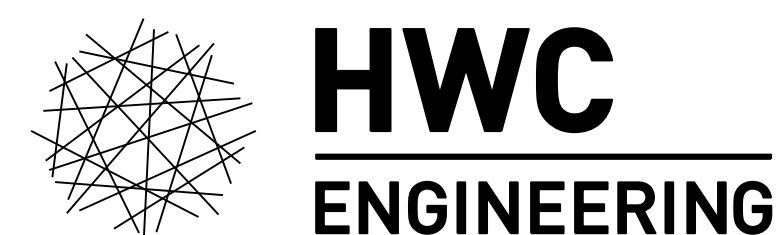
INDEX

SHEET NO.	SUBJECT
1	TITLE SHEET
2	INDEX
3	TYPICAL CROSS SECTIONS
4	PLAT NO. 1
5 - 6	MAINTENANCE OF TRAFFIC
7	PLAN & PROFILE
8 - 9	ROADWAY CONSTRUCTION DETAILS
10 - 12	EROSION CONTROL
13 - 16	SOIL BORINGS
17	LAYOUT
18	GENERAL PLAN
19	BRIDGE SUMMARY
20 - 22	ROADWAY SUMMARY
23 - 31	CROSS SECTIONS

REVISIONS

SHEET NO.	DATE	REVISED

PLOT: 3/6/2023 9:34:13 AM



INDIANAPOLIS - TERRE HAUTE
 LAFAYETTE - MUNCIE - NEW ALBANY
 www.hwcengineering.com

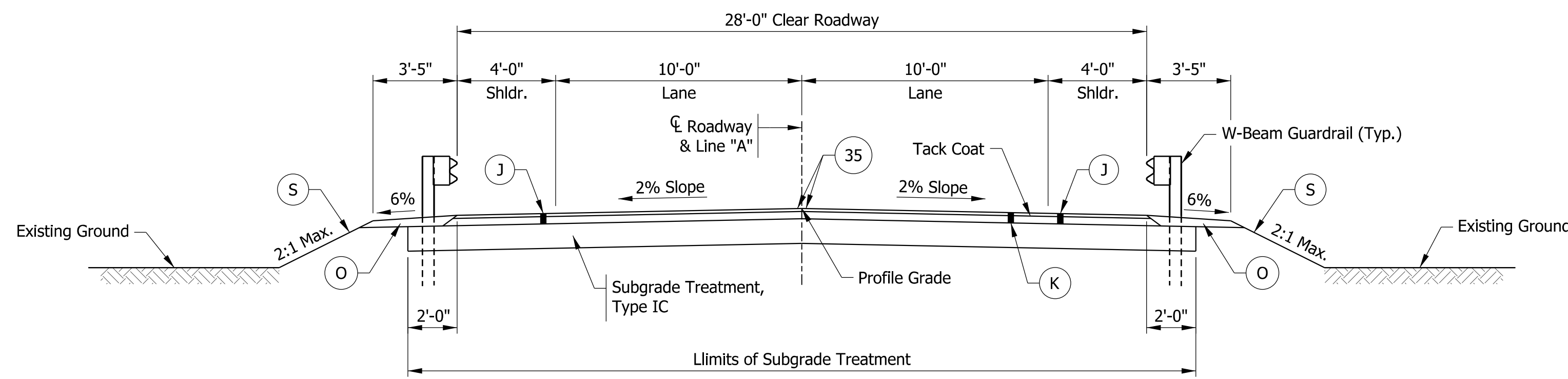
**NOT FOR
 CONSTRUCTION**
 3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
3/2023		3/2023
CHECKED: JL	3/2023	CHECKED: JL
		3/2023

INDIANA
 DEPARTMENT OF TRANSPORTATION

INDEX

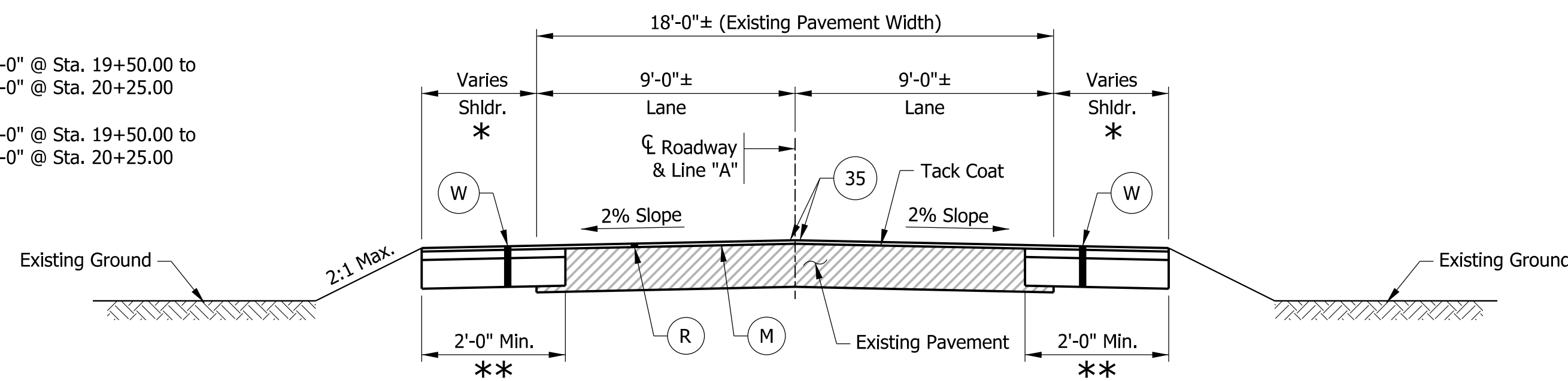
SCALE	BRIDGE FILE
N/A	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	2 of 31
CONTRACT	PROJECT
B-42807	1902785



TYPICAL FULL DEPTH ROADWAY SECTION

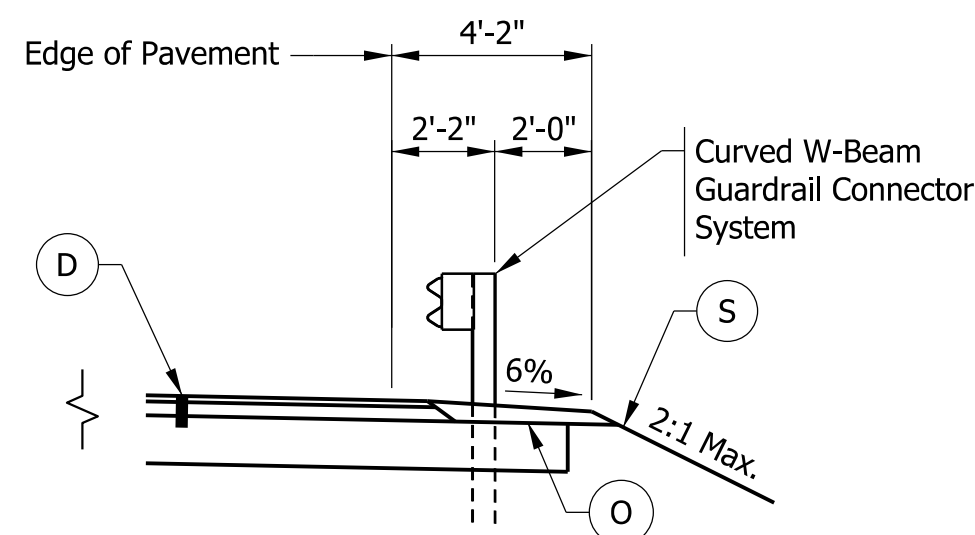
Scale: 1/4" = 1'-0"
Sta. 11+22.00 to Sta. 11+48.50
Sta. 13+55.50 to Sta. 19+50.00

- * Shldr. Varies: 4'-0" @ Sta. 19+50.00 to 0'-0" @ Sta. 20+25.00
- ** (W) Varies: 6'-0" @ Sta. 19+50.00 to 2'-0" @ Sta. 20+25.00



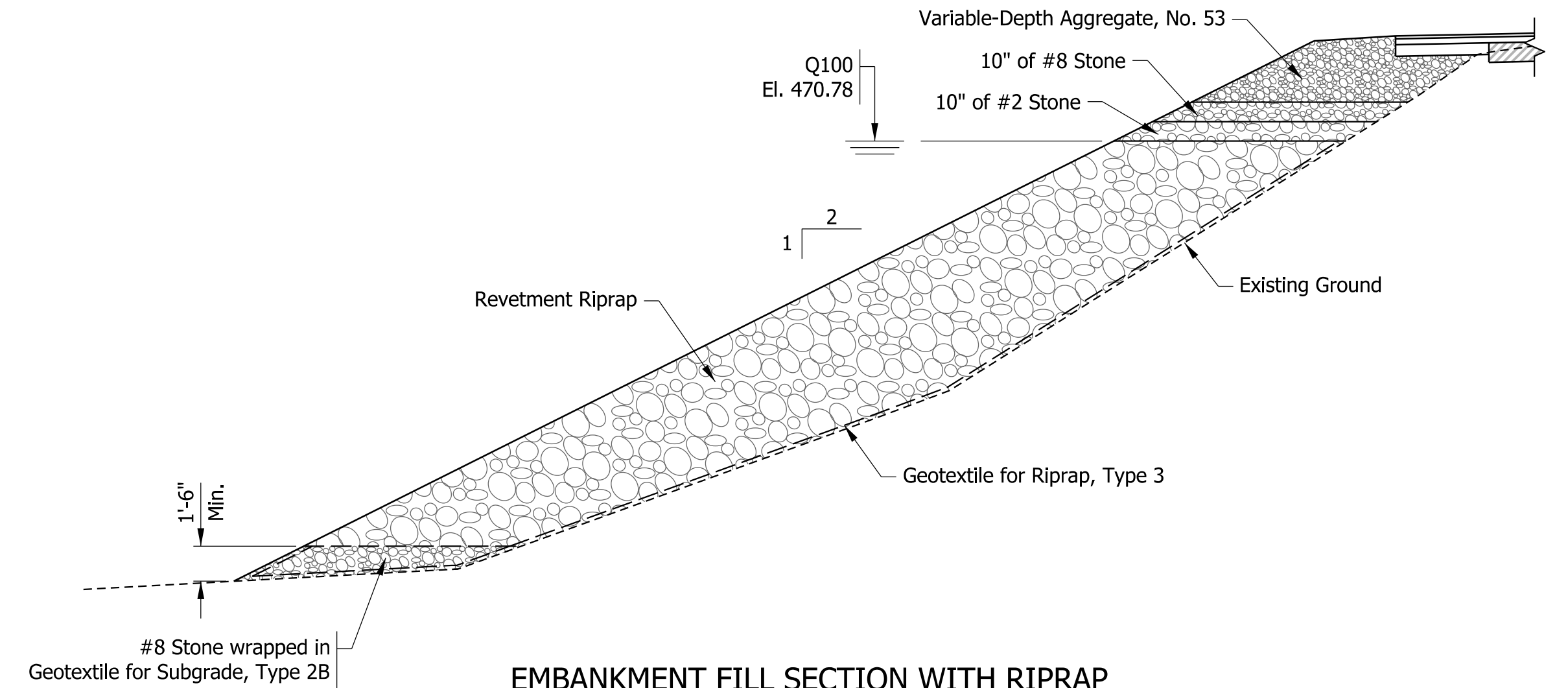
INCIDENTAL SECTION WITH WIDENING

Scale: 1/4" = 1'-0"
Sta. 19+50.00 to Sta. 20+25.00



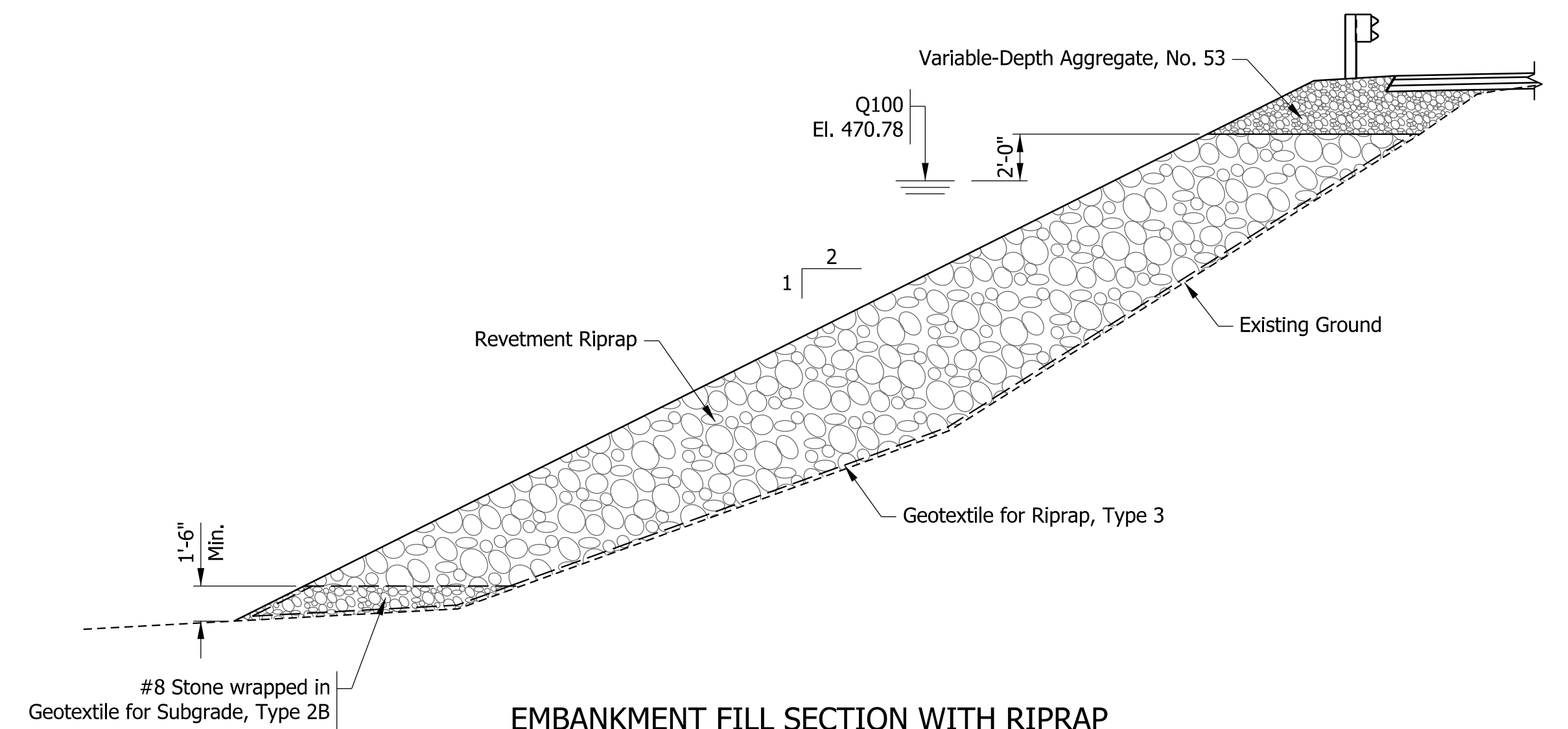
PUBLIC ROAD APPROACH SECTION WITH GUARDRAIL

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



EMBANKMENT FILL SECTION WITH RIPRAP INCIDENTAL SECTION NORTH OF BRIDGE

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



EMBANKMENT FILL SECTION WITH RIPRAP INCIDENTAL SECTION SOUTH OF BRIDGE

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

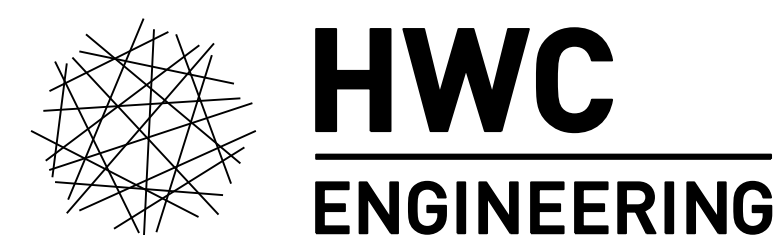
LEGEND

- (D) HMA for Approaches, consisting of:
165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC
- (J) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC
- (K) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC
- (M) Transition Milling (1.5" Max.)
- (O) Variable-Depth Compacted Aggregate No. 53
- (R) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm
(Layer Thickness shall be in accordance with Std. Specifications)
- (S) Mulched Seeding, R and Erosion Control Blankets
(See Erosion Control Plan)
- (W) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
Widening with HMA, consisting of:
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC
- (35) Line, Paint, Solid, Yellow, 4 in.

NOTES

1. Shoulder Widening in Incidental Construction area will require encroachment into existing roadway to achieve desirable taper into existing aggregate shoulder.
2. Shoulder Widening Surface material to be paid with Mainline Surface material.
3. After milling existing HMA Surface in Incidental Construction area, cracks that remain visible with a 0.25" width or greater shall be sealed before applying Tack Coat to milled surface.
4. Tack Coat shall be applied between all layers of Asphalt.
5. Longitudinal Joint Adhesive is required for Surface and Intermediate layers of Asphalt.
6. Liquid Asphalt Sealant is required on Surface layer over longitudinal joint applied at 24" width.

PLOT: 3/6/2023 9:34:14 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

NOT FOR CONSTRUCTION
3/2023

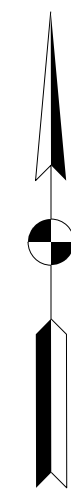
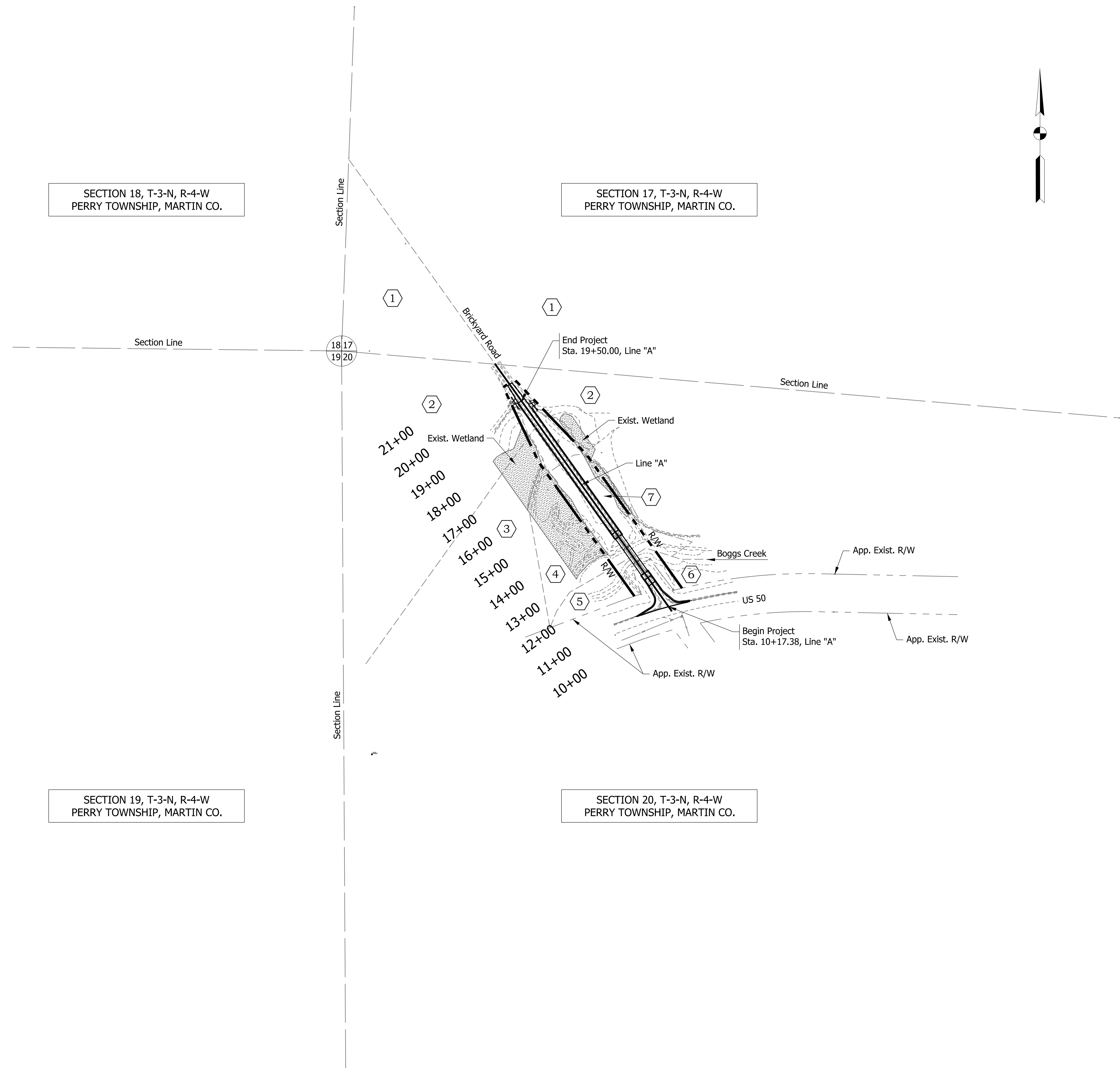
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

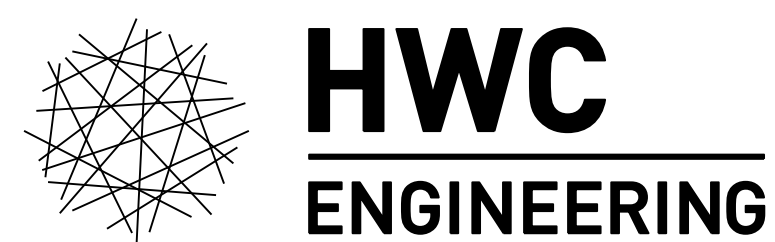
SCALE	BRIDGE FILE
AS NOTED	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	3 of 31
CONTRACT	PROJECT
B-42807	1902785

SECTION	INDEX NO.	OWNER
17	①	MARGARET E. WALTON, AS TRUSTEE OF THE REVOCABLE TRUST AGREEMENT OF MARGARET E. WALTON INSTR. #2006000185 PARCEL #51-07-17-300-022.000-007
20	②	MARGARET E. WALTON, AS TRUSTEE OF THE REVOCABLE TRUST AGREEMENT OF MARGARET E. WALTON INSTR. #2006000185 PARCEL #51-07-20-200-001.000-007
20	③	JAMES E. PORTER & THOMAS H. PORTER PARCEL #51-07-20-200-006.000-007
20	④	OHIO & MISSISSIPPI RAILROAD PART OF PARCEL #51-07-20-200-006.000-007 PER GIS
20	⑤	OWNERSHIP UNKNOWN PART OF PARCEL #51-07-20-200-006.000-007 PER GIS
20	⑥	OWNERSHIP UNKNOWN PART OF PARCEL #51-07-20-200-001.000-007 PER GIS
20	⑦	OHIO & MISSISSIPPI RAILROAD PART OF PARCEL #51-07-20-200-001.000-007 PER GIS



PLOT: 3/6/2023 9:34:16 AM

W:\Martin County\2020-110 Martin Co- Bridge 58\Design\CAD\04 - Sht Plat No 1.dgn



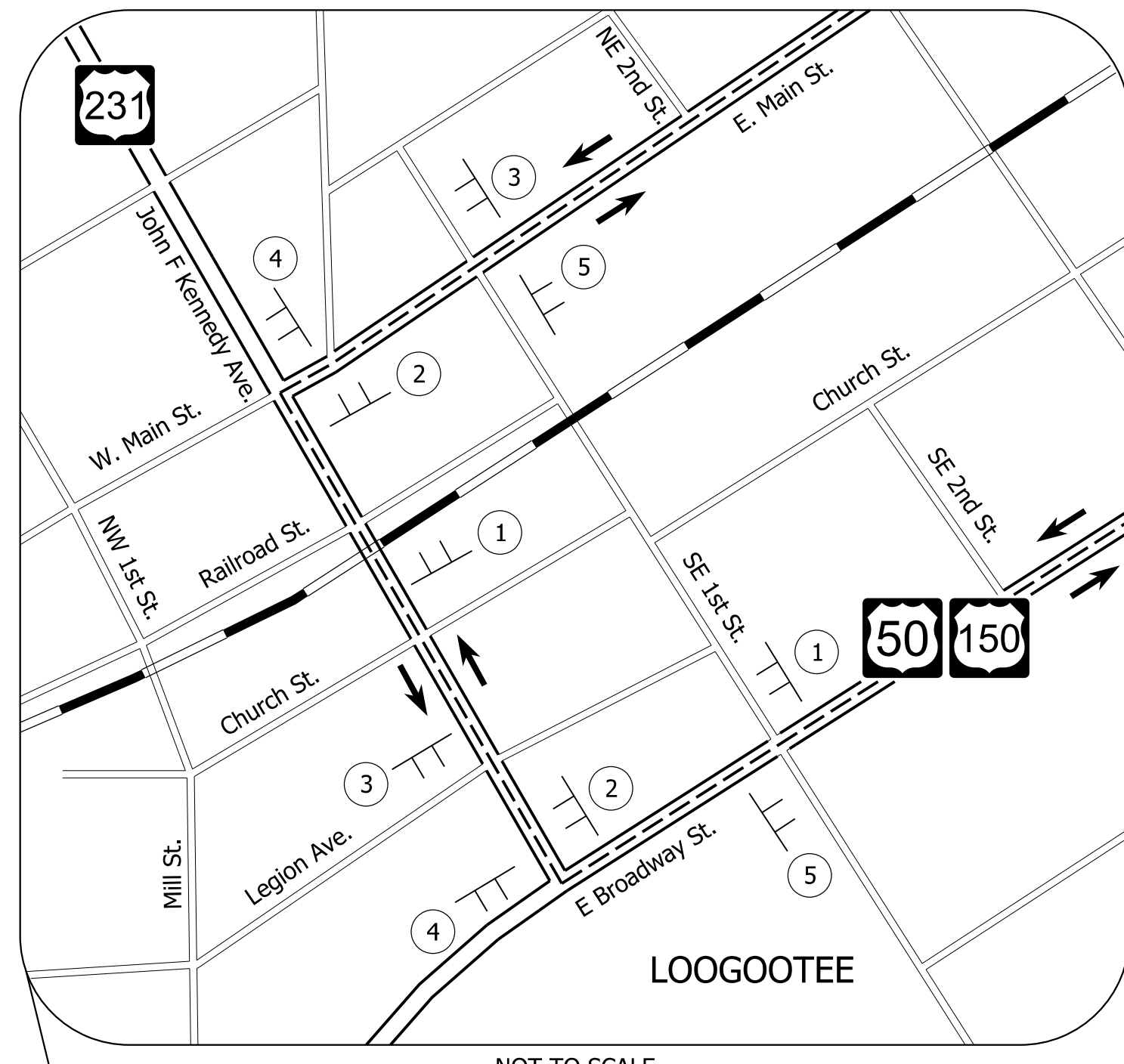
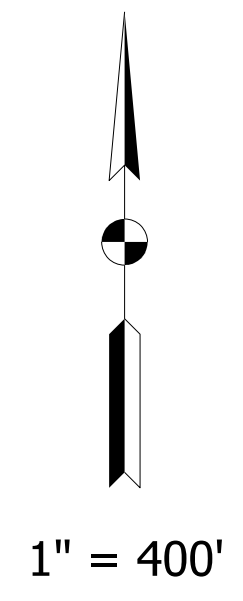
INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

NOT FOR
CONSTRUCTION
3/2023

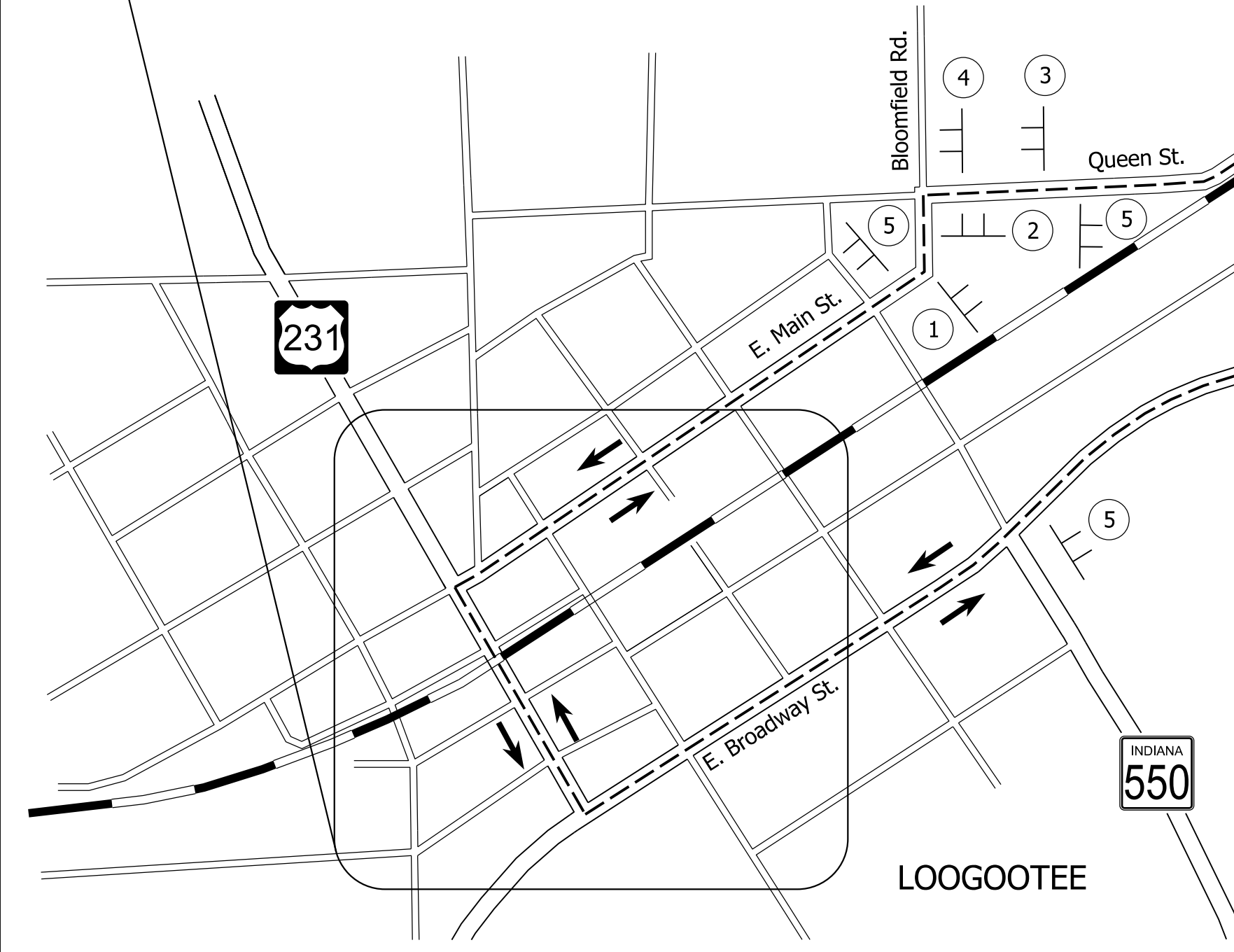
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

INDIANA DEPARTMENT OF TRANSPORTATION	
PLAT NO. 1	

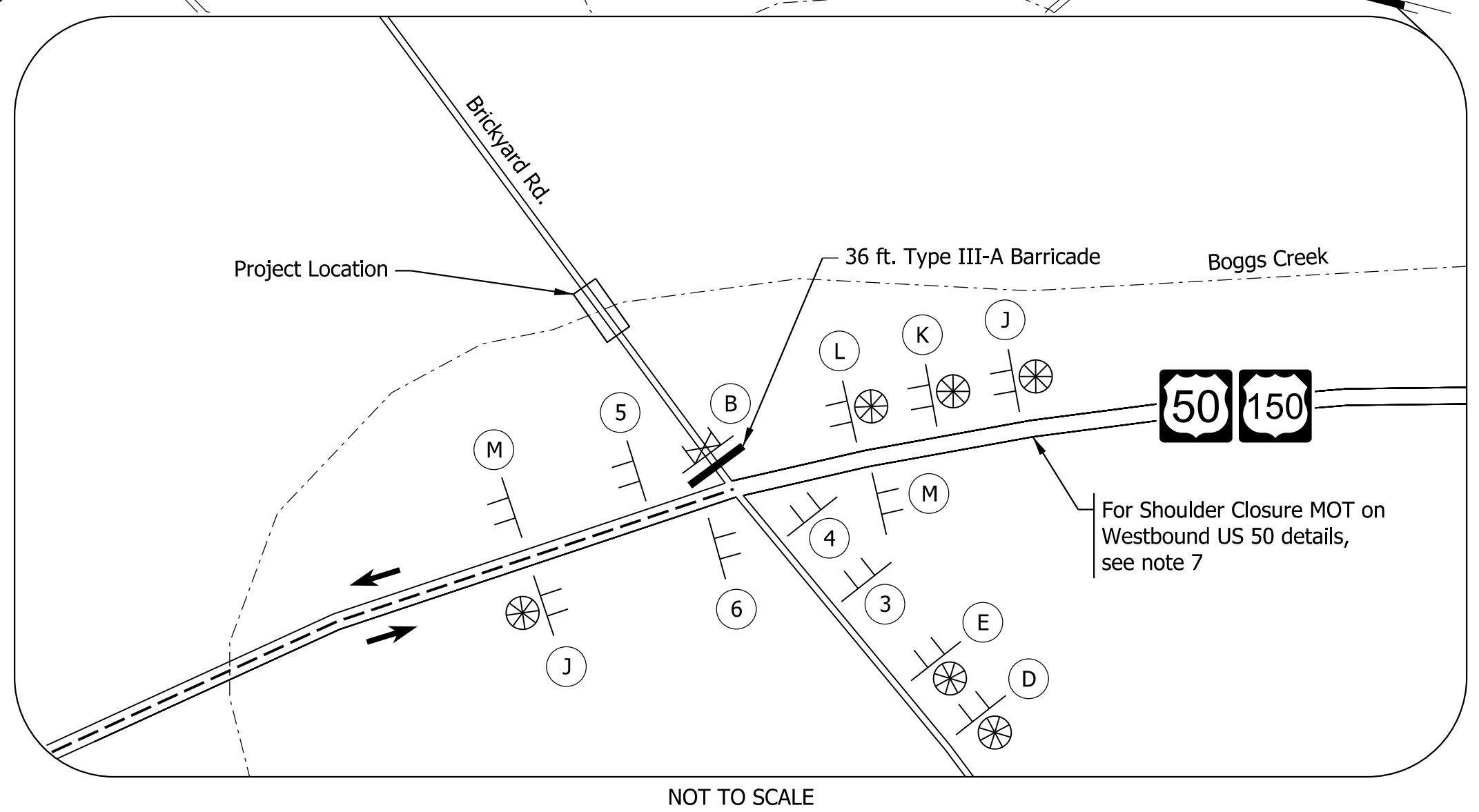
SCALE	BRIDGE FILE
1" = 200'	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	4 of 31
CONTRACT	PROJECT
B-42807	1902785



NOT TO SCALE



MAINTENANCE OF TRAFFIC DETOUR PLAN



NOT TO SCALE

LEGEND

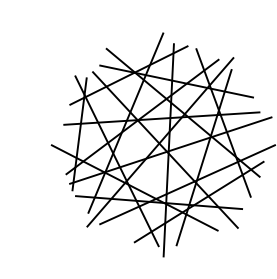
- Route of Detour Traffic
- Railroad
- Construction Sign or Detour Assembly and Supports with Low Intensity Construction Warning Light, Type A

- Typical Sign Standard (Detour Route Marker Assembly)
- Typical Sign Standard (Road Closure Assembly)
- Standard Type III-A Barricade as Required
- Standard Type III-B Barricade as Required
- Detour Traffic Arrows

NOTES

1. Detour signage shall be placed in accordance with INDOT Specifications. For additional details, see Standard Drawing E-801-TCDDT-01.
2. Advanced notice of closure (XG20-5 signs) shall be placed at least 14 days prior to start of construction.
3. For Detour Assemblies, additional sign information and quantities, see sheet 6.
4. Directional Detour signs assemblies shall be located 100 ft. to 200 ft. in advance of all required turns within the Detour limits.
5. Confirming Detour sign assemblies shall be located 200 ft. after all required turns as well as not be spaced by more than 3 miles within the Detour limits.
6. Detour signage locations may not be shown to scale and should be confirmed in the field by Contractor.
7. Shoulder Work closure will be required on Westbound US 50 for Public Road Approach Construction. Posted speed limit for US 50 is 55 MPH. For additional MOT information, see Standard Drawing E 801-TCSC-06.

PLOT: 3/6/2023 9:34:18 AM



HWC
ENGINEERING

INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

NOT FOR CONSTRUCTION
3/2023

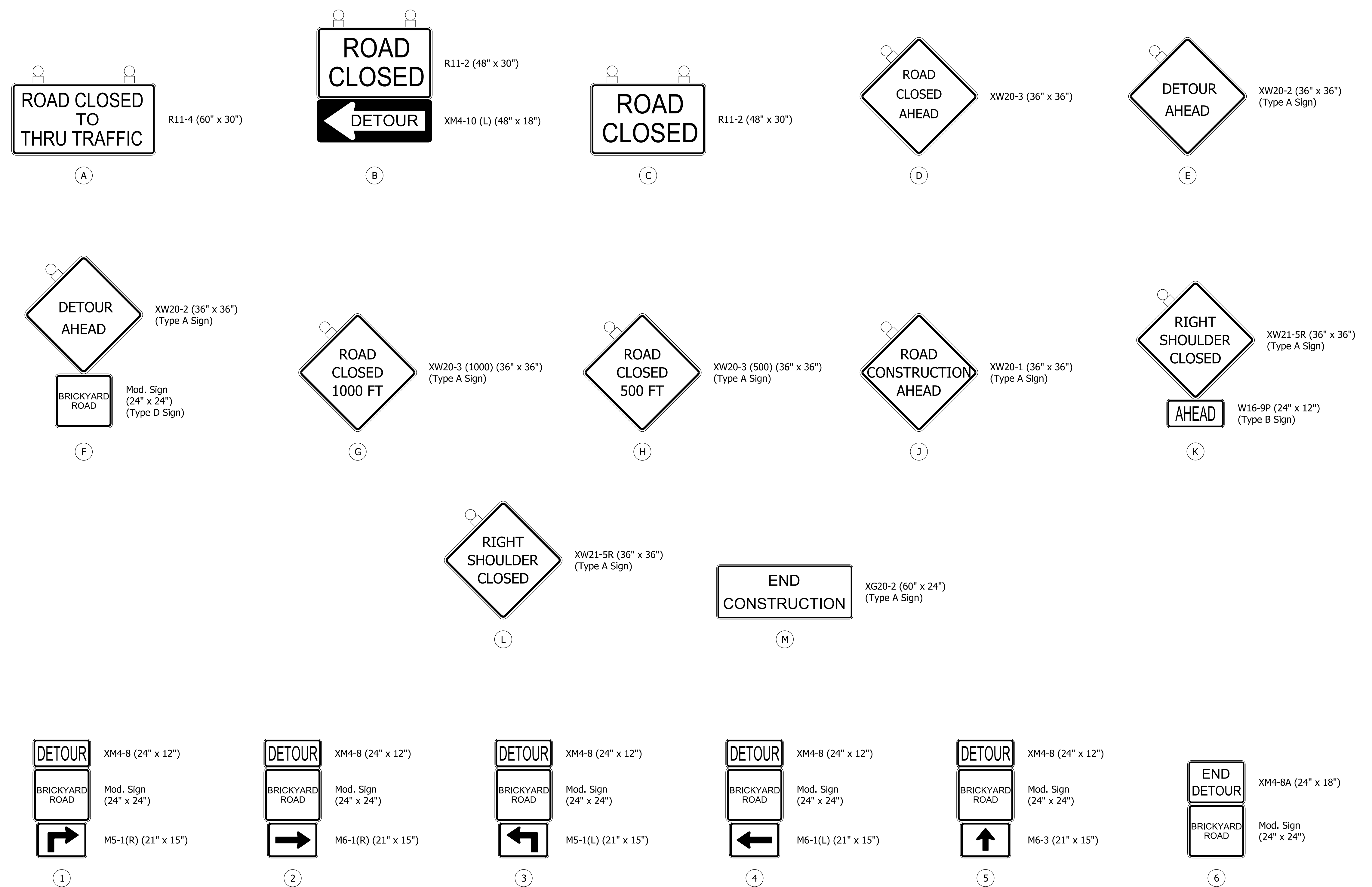
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ 3/2023
CHECKED: JL	3/2023	CHECKED: JL 3/2023

INDIANA DEPARTMENT OF TRANSPORTATION	
MAINTENANCE OF TRAFFIC	

SCALE	BRIDGE FILE
AS NOTED	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	5 of 31
CONTRACT	PROJECT
B-42807	1902785

MAINTENANCE OF TRAFFIC QUANTITIES			
Designation	Item	Unit	Quantity
(A) (B) (C)	Road Closure Sign Assembly	Each	4
(D) (E) (F) (G) (H) (J) (K) (L) (M)	Construction Sign, Type A ##	Each	17
(K)	Construction Sign, Type B	Each	1
(F)	Construction Sign, Type D	Each	1
(1) (2) (3) (4) (5) (6)	Detour Route Sign Assembly	Each	27
	Barricade, Type III-A	Lft	60
	Barricade, Type III-B	Lft	28

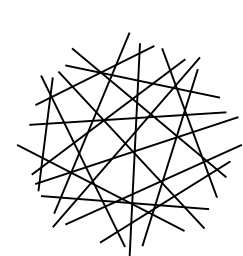
Quantity includes 2 XG20-5 Route Closure Notice Signs
(Locations shall be determined by Project Engineer in the field)



NOTES

1. Detour signage shall be placed in accordance with INDOT Specifications. For additional details, see Standard Drawing E-801-TCDDT-01.
2. Advanced notice of closure (XG20-5 signs) shall be placed at least 14 days prior to start of construction.
3. Directional Detour signs assemblies shall be located 100 ft. to 200 ft. in advance of all required turns within the Detour limits.
4. Confirming Detour sign assemblies shall be located 200 ft. after all required turns as well as not be spaced by more than 3 miles within the Detour limits.
5. Detour signage locations may not be shown to scale and should be confirmed in the field by Contractor.
6. Shoulder Work closure will be required on Westbound US 50 for Public Road Approach Construction. Posted speed limit for US 50 is 55 MPH. For additional MOT information, see Standard Drawing E 801-TCSC-06.

PLOT: 3/6/2023 9:34:19 AM



HWC
ENGINEERING

INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

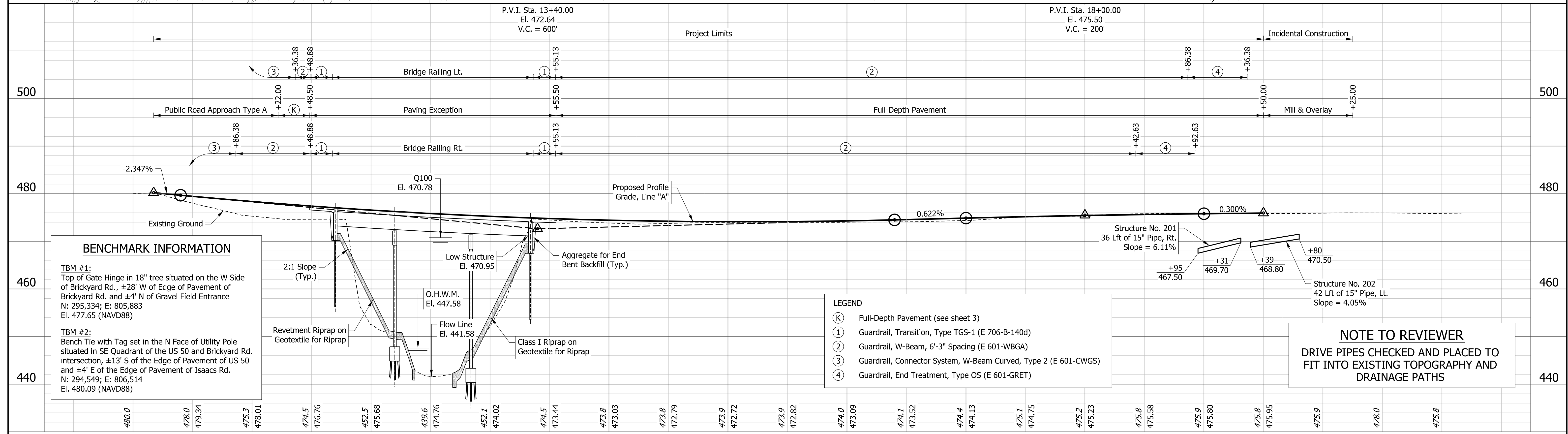
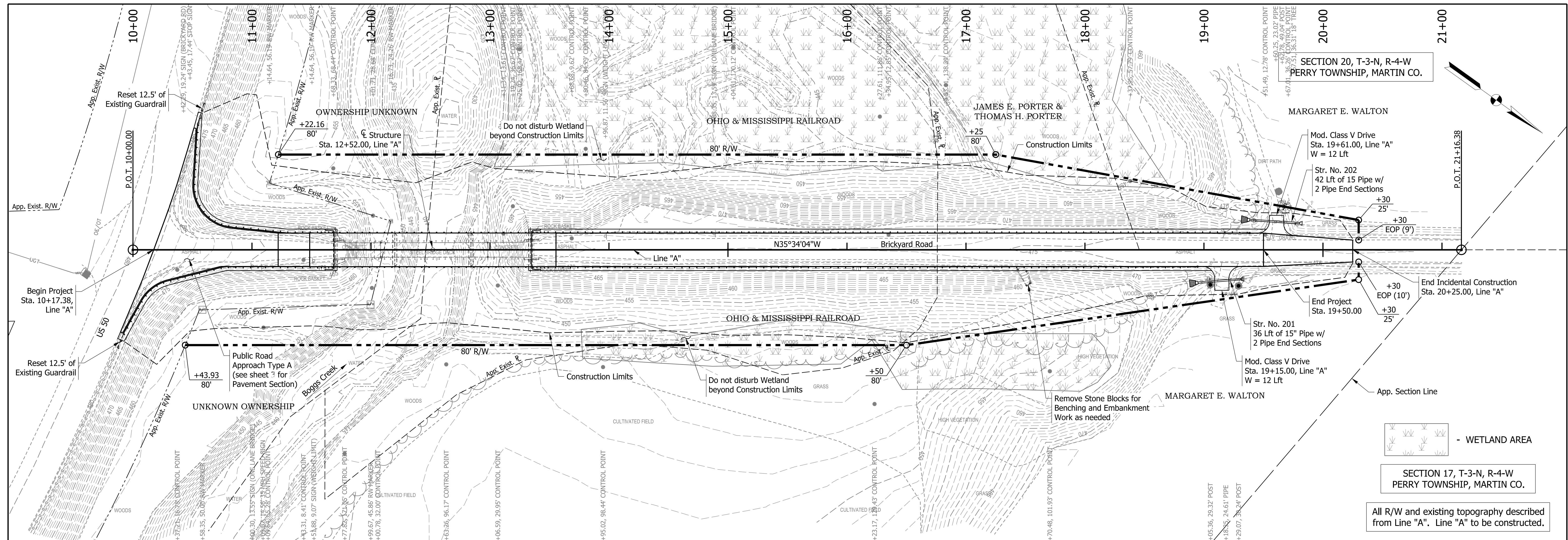
NOT FOR
CONSTRUCTION
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ 3/2023
CHECKED: JL	3/2023	CHECKED: JL 3/2023

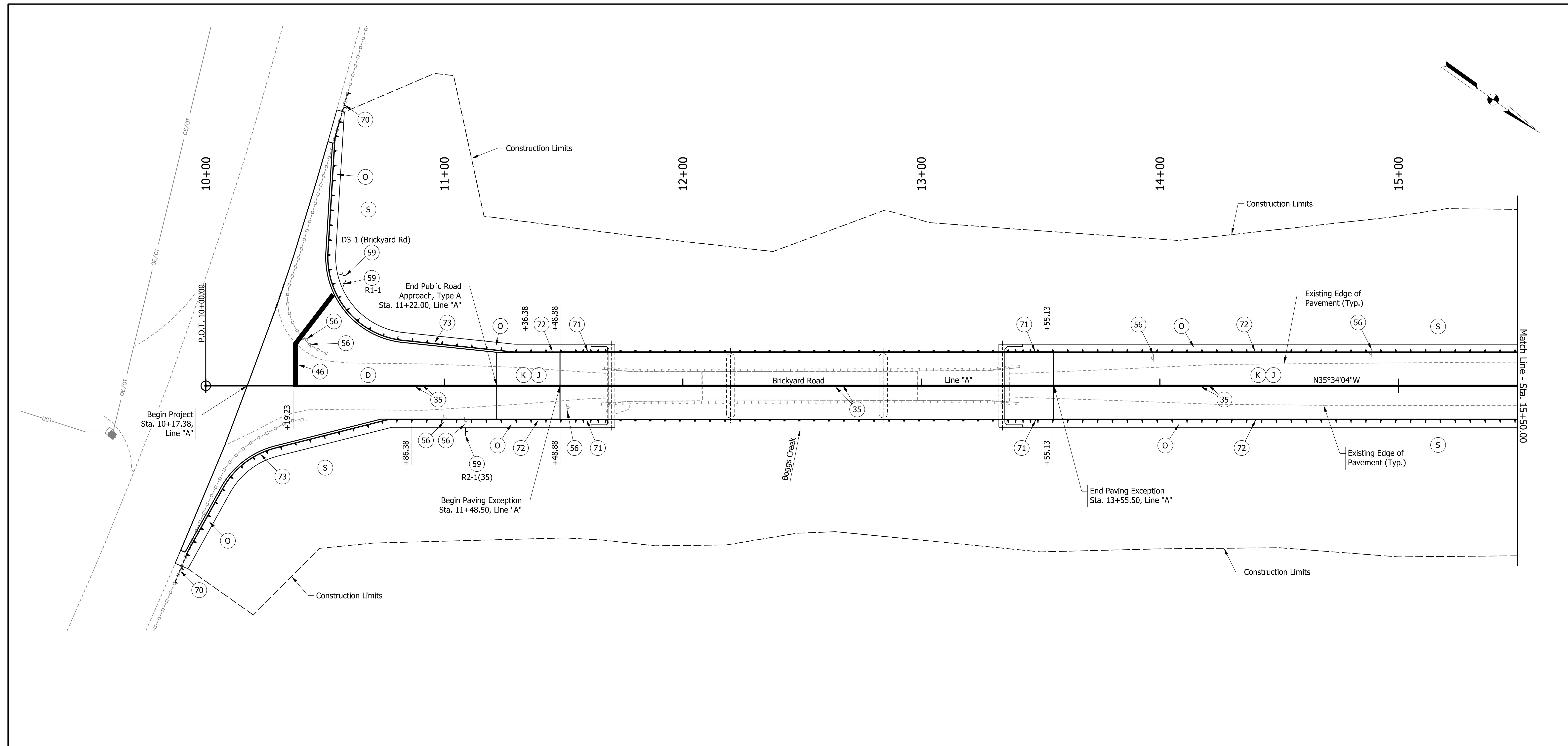
INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC DETAILS

SCALE	BRIDGE FILE
N/A	51-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	6 of 31
CONTRACT	PROJECT
B-42807	1902785



102	REBAR W/ HWC RANDOM CAP	103	REBAR W/ HWC RANDOM CAP	104	REBAR W/ HWC RANDOM CAP	502	MAG NAIL W/ FIRM WASHER	505	MAG NAIL W/ FIRM WASHER	506	MAG NAIL W/ FIRM WASHER
<p>INDIANA DEPARTMENT OF TRANSPORTATION</p> <p>PLAN & PROFILE</p> <p>DESIGNED: DMH 3/2023 DRAWN: AJ 3/2023 CHECKED: JL 3/2023 CHECKED: JL 3/2023</p>											
<p>NOT FOR CONSTRUCTION 3/2023</p>						<p>RECOMMENDED FOR APPROVAL</p>					
<p>HORIZONTAL SCALE 1" = 40'</p>						<p>BRIDGE FILE S1-00058</p>					
<p>VERTICAL SCALE 1" = 10'</p>						<p>DESIGNATION 1902785</p>					
<p>SURVEY BOOK N/A</p>						<p>SHEETS 7 of 31</p>					
<p>CONTRACT B-42807</p>						<p>PROJECT 1902785</p>					



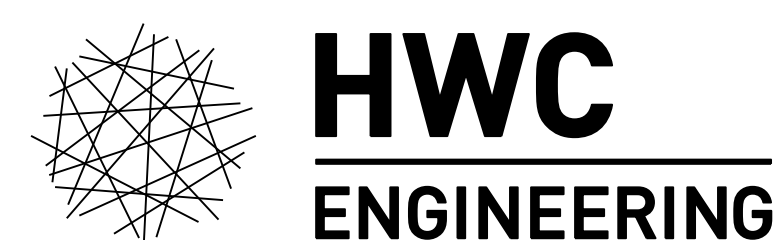
LEGEND

- | | | |
|--|---|--|
| <p>(D) HMA for Approaches, consisting of:
165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC</p> <p>(J) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC</p> <p>(K) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC</p> <p>(M) Transition Milling (1.5" Max.)</p> <p>(O) Variable-Depth Compacted Aggregate No. 53</p> | <p>(R) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm
(Layer Thickness shall be in accordance with Std. Specifications)</p> <p>(S) Mulched Seeding, R and Erosion Control Blankets
(See Erosion Control Plan)</p> <p>(W) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
Widening with HMA, consisting of:
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC</p> <p>(35) Line, Paint, Solid, Yellow, 4 in.</p> <p>(46) Line, Thermoplastic, Stop Line, White, 24 in.</p> | <p>(56) Remove Existing Sheet Sign and Supports</p> <p>(59) Existing Sheet Sign on New Supports</p> <p>(70) Guardrail, Reset</p> <p>(71) Guardrail, Transition, Type TGS-1 (E 706-B-140d)</p> <p>(72) Guardrail, W-Beam, 6'-3" Spacing (E 601-WBGA)</p> <p>(73) Guardrail, Connector System, W-Beam Curved, Type 2 (E 601-CWGS)</p> <p>(74) Guardrail, End Treatment, Type OS (E 601-GRET)</p> |
|--|---|--|

NOTES

- For Roadway Typical Cross Section information, see sheet 3.
- Full-Depth Pavement Widening shown as a minimum 2 ft. width.
- Tack Coat shall be applied between all layers of Asphalt.
- Longitudinal Joint Adhesive is required for Surface and Intermediate layers of Asphalt.
- Liquid Asphalt Sealant is required on Surface layer over longitudinal joint applied at 24" width.
- For additional information regarding Public Road Approach, Type A, see INDOT Std. Dwg. E 610-PRAP-02.

PLOT: 3/6/2023 9:34:23 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

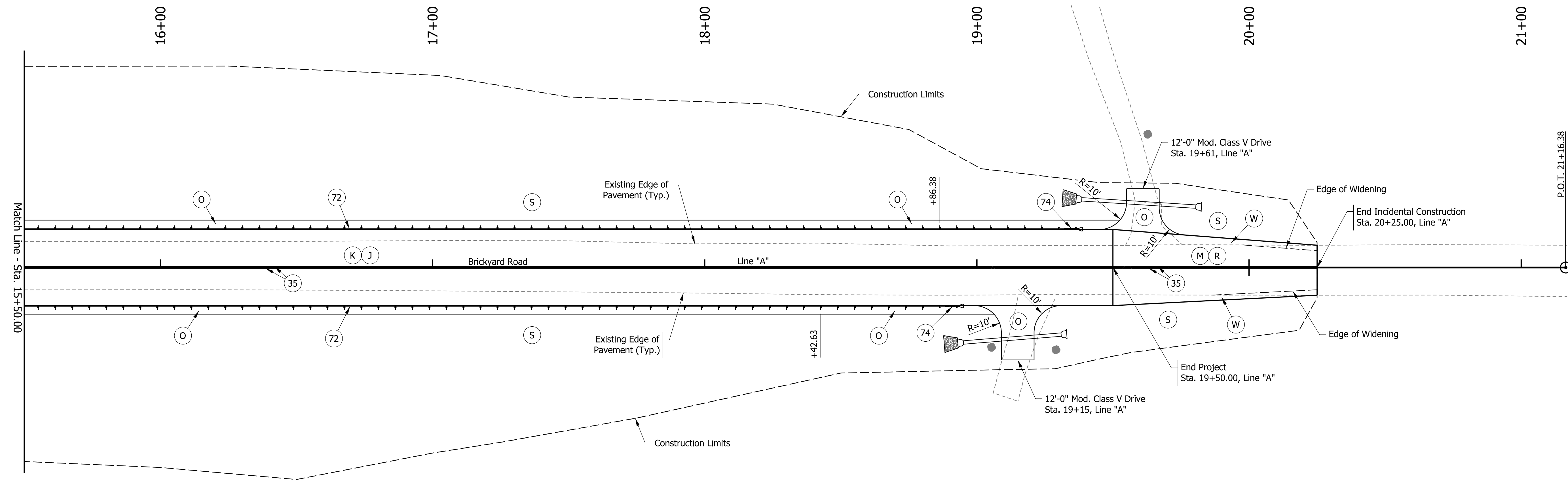
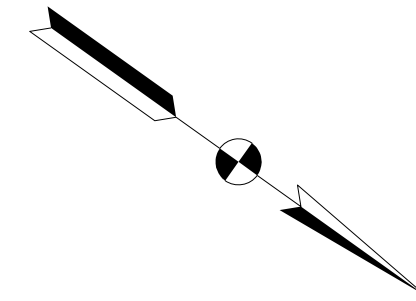
**NOT FOR
CONSTRUCTION**
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY CONSTRUCTION DETAILS

SCALE	BRIDGE FILE
1" = 20'	51-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	8 of 31
CONTRACT	PROJECT
B-42807	1902785



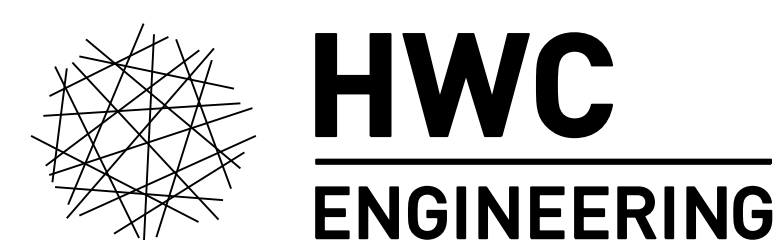
LEGEND

- | | | |
|--|---|--|
| <p>(D) HMA for Approaches, consisting of:
165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC</p> <p>(J) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC</p> <p>(K) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC</p> <p>(M) Transition Milling (1.5" Max.)</p> <p>(O) Variable-Depth Compacted Aggregate No. 53</p> | <p>(R) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm
(Layer Thickness shall be in accordance with Std. Specifications)</p> <p>(S) Mulched Seeding, R and Erosion Control Blankets
(See Erosion Control Plan)</p> <p>(W) 165 lb/syd QC/QA-HMA, 2, 64, Surface 9.5 mm on
Widening with HMA, consisting of:
385 lb/syd QC/QA-HMA, 2, 64, Intermediate 19.0 mm on
Subgrade Treatment, Type IC</p> <p>(35) Line, Paint, Solid, Yellow, 4 in.</p> <p>(46) Line, Thermoplastic, Stop Line, White, 24 in.</p> | <p>(56) Remove Existing Sheet Sign and Supports</p> <p>(59) Existing Sheet Sign on New Supports</p> <p>(70) Guardrail, Reset</p> <p>(71) Guardrail, Transition, Type TGS-1 (E 706-B-140d)</p> <p>(72) Guardrail, W-Beam, 6'-3" Spacing (E 601-WBGA)</p> <p>(73) Guardrail, Connector System, W-Beam Curved, Type 2 (E 601-CWGS)</p> <p>(74) Guardrail, End Treatment, Type OS (E 601-GRET)</p> |
|--|---|--|

NOTES

- For Roadway Typical Cross Section information, see sheet 3.
- Full-Depth Pavement Widening shown as a minimum 2 ft. width.
- Tack Coat shall be applied between all layers of Asphalt.
- Longitudinal Joint Adhesive is required for Surface and Intermediate layers of Asphalt.
- Liquid Asphalt Sealant is required on Surface layer over longitudinal joint applied at 24" width.

PLOT: 3/6/2023 9:34:24 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

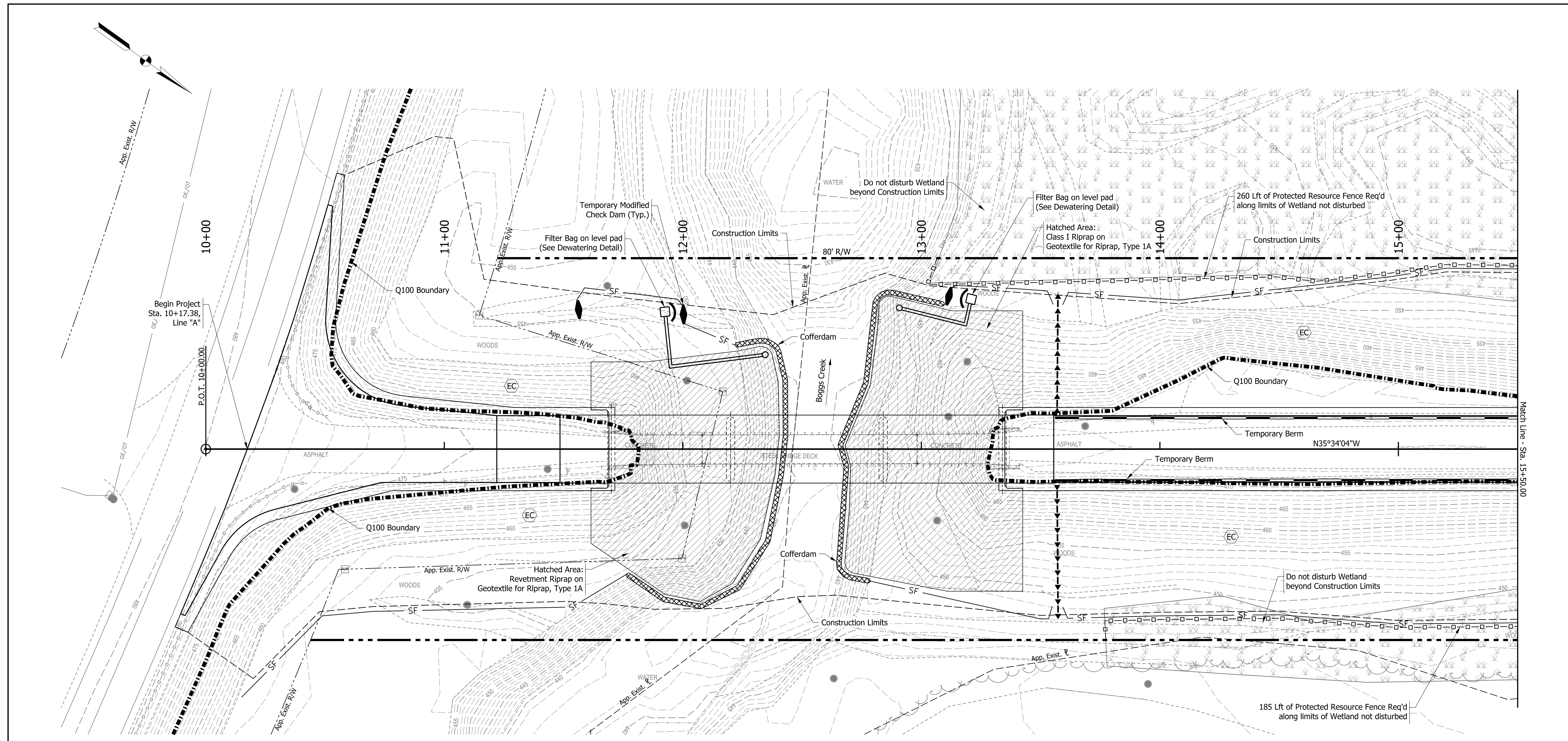
**NOT FOR
CONSTRUCTION**
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

INDIANA
DEPARTMENT OF TRANSPORTATION

ROADWAY CONSTRUCTION DETAILS

SCALE	BRIDGE FILE
1" = 20'	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	9 of 31
CONTRACT	PROJECT
B-42807	1902785



Begin Project
Sta. 10+17.38,
Line "A"

P.O.T. 10+00.00

Match Line - Sta. 15+50.00

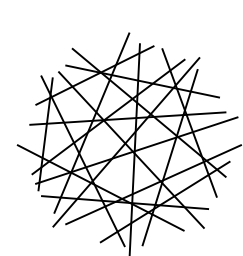
LEGEND

- | | | | |
|--|---|--|--|
| | Erosion Control Blanket | | Temporary Berm |
| | Temporary Perimeter Protection, Filter Sock | | Cofferdam |
| | Permanent Riprap over Geotextiles | | Temporary Modified Check Dam, Revetment Riprap |
| | Temporary Slope Drain | | Protected Resource Fence |
| | Temporary Inlet Protection, Gravel Ring | | |

NOTES

1. See INDOT Standard Specifications, Section 205 for installation and maintenance guidance for Stormwater Management items.
2. All disturbed area shall be permanently seeded upon final stabilization. Any area to be inactive for 7 days or more shall be temporarily seeded. For additional Riprap quantity information, see Layout sheet.
3. For additional Erosion Control details and quantities, see sheet 12.
4. Cofferdams shall be constructed of non-erosive materials.
5. Installation of dewatering measures should occur in dry conditions.
6. Maintenance of measures should occur within 48 hours of identification of concern, if feasible a schedule shall be discussed and approved by the PE. Erosion Control Blanket shall be used for any slopes exceeding 3:1. Areas below Q100 will require Excelsior Blanket.
7. For information regarding Temporary Perimeter Protection with Filter Sock, see INDOT Std. Dwg. E 205-TECD-10.
8. For information regarding Temporary Inlet Protection with Gravel Ring, see INDOT Std. Dwg. E 205-TECD-03.
9. For information regarding Temporary Check Dam, Revetment Riprap, see INDOT Std. Dwg. E 205-TECD-06.

PLOT: 3/6/2023 9:34:25 AM



HWC
ENGINEERING

INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

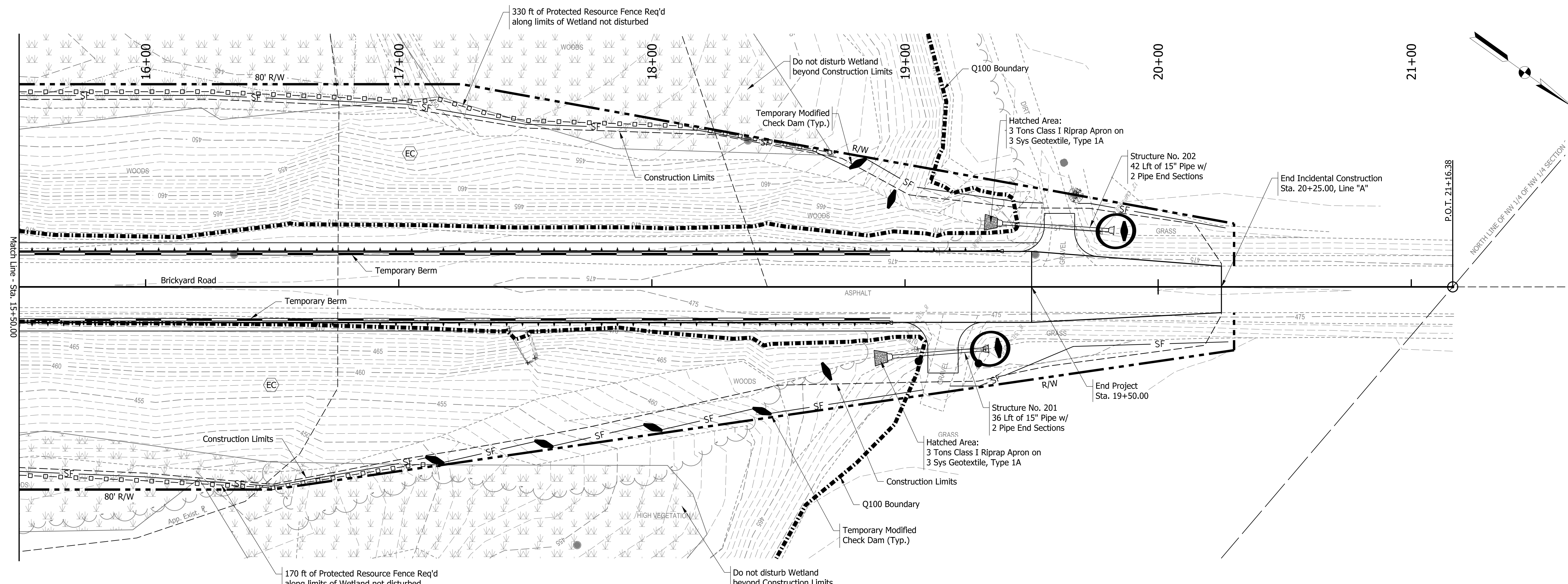
NOT FOR
CONSTRUCTION
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
3/2023		3/2023
CHECKED: JL	3/2023	CHECKED: JL
		3/2023

INDIANA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL

SCALE	BRIDGE FILE
1" = 20'	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	10 of 31
CONTRACT	PROJECT
B-42807	1902785



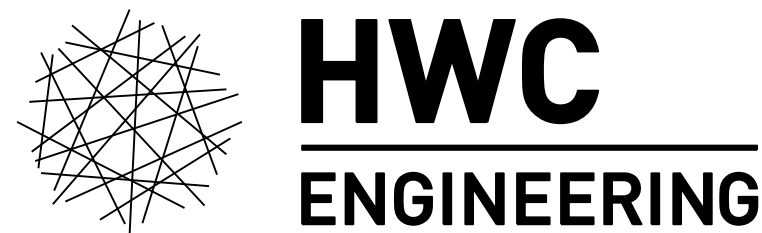
NOTES

1. See INDOT Standard Specifications, Section 205 for installation and maintenance guidance for Stormwater Management items.
2. All disturbed area shall be permanently seeded upon final stabilization. Any area to be inactive for 7 days or more shall be temporarily seeded. For additional Riprap quantity information, see Layout sheet.
3. For additional Erosion Control details and quantities, see sheet 12.
4. Cofferdams shall be constructed of non-erosive materials.
5. Installation of dewatering measures should occur in dry conditions.
6. Maintenance of measures should occur within 48 hours of identification of concern, if feasible a schedule shall be discussed and approved by the PE. Erosion Control Blanket shall be used for any slopes exceeding 3:1. Areas below Q100 will require Excelsior Blanket.
7. For information regarding Temporary Perimeter Protection with Filter Sock, see INDOT Std. Dwg. E 205-TECD-10.
8. For information regarding Temporary Inlet Protection with Gravel Ring, see INDOT Std. Dwg. E 205-TECD-03.
9. For information regarding Temporary Check Dam, Revetment Riprap, see INDOT Std. Dwg. E 205-TECD-06.

LEGEND

- | | | | |
|--|---|--|--|
| | Erosion Control Blanket | | Temporary Berm |
| | Temporary Perimeter Protection, Filter Sock | | Cofferdam |
| | Permanent Riprap over Geotextiles | | Temporary Modified Check Dam, Revetment Riprap |
| | Temporary Slope Drain | | Protected Resource Fence |
| | Temporary Inlet Protection, Gravel Ring | | |

PLOT: 3/6/2023 9:34:27 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

NOT FOR CONSTRUCTION
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

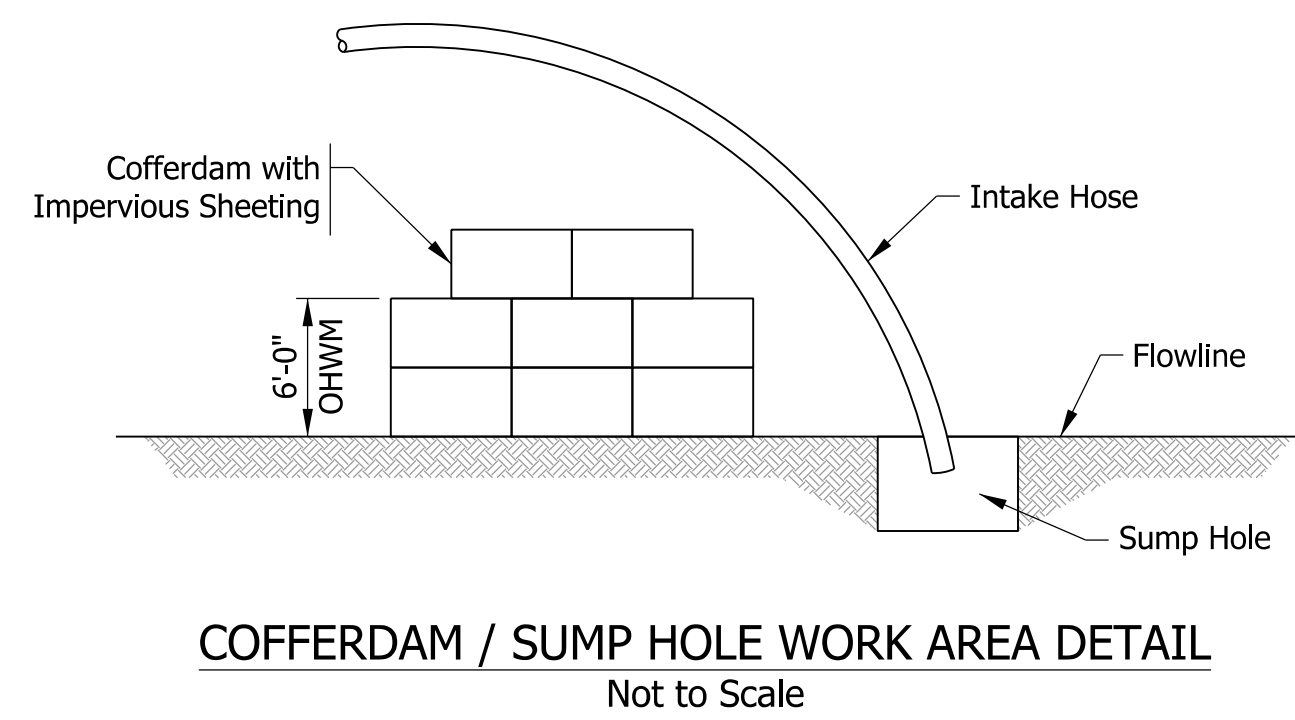
INDIANA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL

SCALE	BRIDGE FILE
1" = 20'	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	11 of 31
CONTRACT	PROJECT
B-42807	1902785

TEMPORARY EROSION CONTROL QUANTITIES	
Item	Quantity
Temporary Fertilizer	1 Ton
Temporary Filter Sock	1730 Lft
Mobilization & Demobilization for Surface Stabilization	2 Each
No. 2 Stone	100 Ton
Protected Resource Fence	950 Lft
Protected Resource Sign	38 Each
Sediment, Remove	71 Cys
Temporary Check Dam, Revetment Riprap	93 Ton
Temporary Filter Berm	1080 Lft
Filter Stone	9 Ton
Temporary Geotextile	351 Sys
Temporary Inlet Protection	2 Each
Temporary Mulch	5 Ton
Temporary Seed	253 Lbs
Temporary Slope Drain	111 Lft

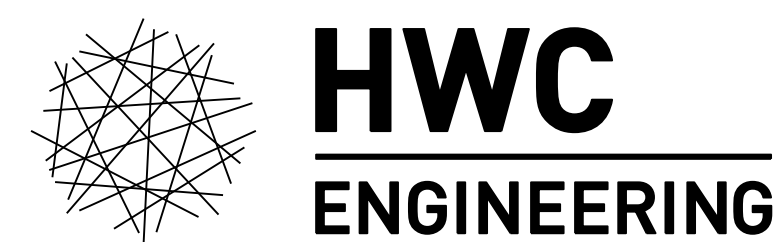
TEMPORARY PERIMETER PROTECTION TABLE			
Stations	Lt./Rt.	Quantity (Lft.)	
10+15 to 11+80	Rt.	185	
11+55 to 12+00	Lt.	50	
12+00 to 12+25	Lt.	25	
12+75 to 13+55	Rt.	85	
13+55 to 17+10	Rt.	360	
13+10 to 13+55	Lt.	50	
13+55 to 18+80	Lt.	530	
17+15 to 17+55	Rt.	40	
17+60 to 17+95	Rt.	40	
18+05 to 18+40	Rt.	40	
18+45 to 19+10	Rt.	65	
18+85 to 19+55	Lt.	75	
19+20 to 20+30	Rt.	120	
19+70 to 20+30	Lt.	65	
Total:			1730



NOTES

- For Erosion Control details, see sheets 10 & 11.
- See INDOT Standard Specifications, Section 205 for installation and maintenance guidance for Stormwater Management items.
- For information regarding Temporary Perimeter Protection with Filter Sock, see INDOT Std. Dwg. E 205-TECD-10.
- For information regarding Temporary Inlet Protection with Gravel Ring, see INDOT Std. Dwg. E 205-TECD-03.
- For information regarding Temporary Check Dam, Revetment Riprap, see INDOT Std. Dwg. E 205-TECD-06.

PLOT: 3/6/2023 9:34:28 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

**NOT FOR
CONSTRUCTION**
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

INDIANA
DEPARTMENT OF TRANSPORTATION

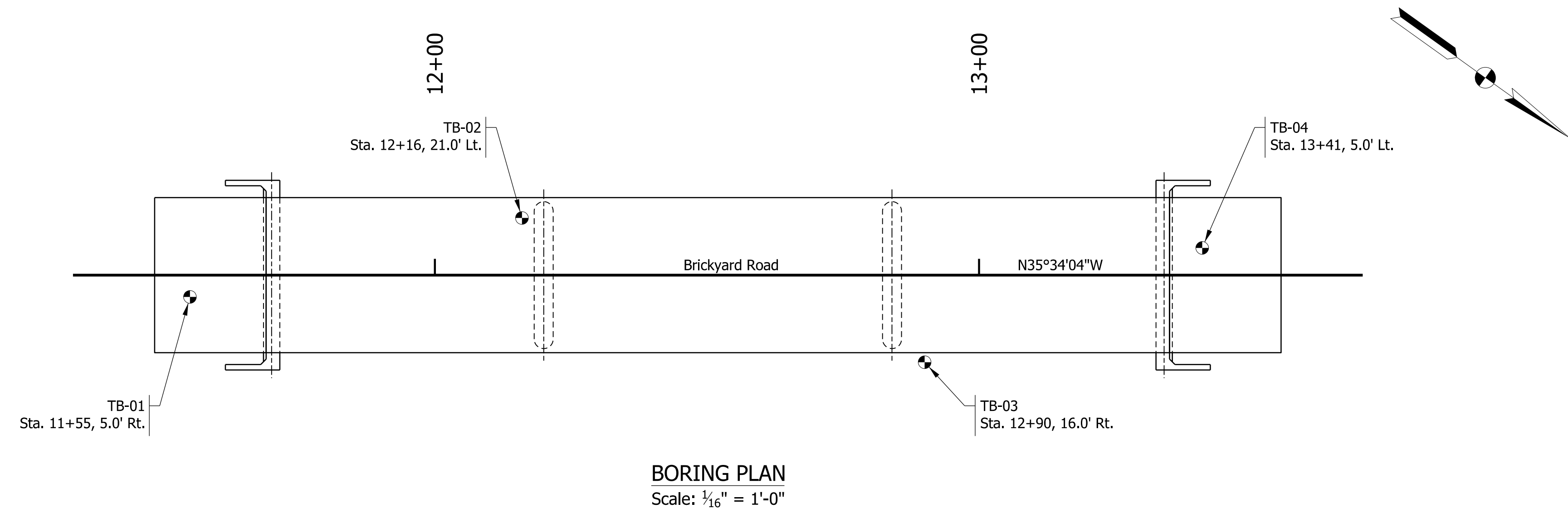
EROSION CONTROL

SCALE	BRIDGE FILE
AS NOTED	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	12 of 31
CONTRACT	PROJECT
B-42807	1902785

LOG OF TEST BORING									
Terracon		CLIENT: HWC Engineering		BORING NO.: TB-01		SHEET: 1 OF 3		LATITUDE: 38.68486	
PROJECT TYPE: Bridge Replacement		DES NO.: 1902785		STRUCTURE #: Martin 58		LONGITUDE: -86.88349		DATUM:	
LOCATION: Brickyard Road over Boggs Creek		PROJECT NO.: CJ205163		DATE STARTED: 03-16-22		DATE COMPLETED: 03-17-22		WEATHER: Sunny	
ELEVATION: 474.0		BORING METHOD: Hollow Stem Auger		HAMMER: Auto		DRILLER/INSP: D.C.		TEMPERATURE: 70 °F	
STATION: 11+55		RIG TYPE: CME 55 Truck		CASING DIA.:		CORE SIZE:		GROUNDWATER: Encountered at 28.0 ft. At completion 28.0 ft. Caved in at 32.0 ft.	
DEPTH: 90.0 ft		COUNTRY: Martin		DATE COMPLETED: 03-17-22		WEATHER: Sunny		GROUNDWATER: Encountered at 28.0 ft. At completion 28.0 ft. Caved in at 32.0 ft.	
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	POCKET PEN. (bl)	ATTEBERG LIMITS	REMARKS
474.0	0.3	Asphaltic Concrete	SS 1	5-11-9	28	21.7	0.25		
473.7	0.3	Granular Subbase (sand and gravel)	SS 2	3-3-3	67	23.3	1.75		
473.4	3.0	Silty Clay, very stiff, moist, brown, with boulder fragments near 2 ft. (Rt. visual)	SS 3	3-3-3	67	23.3	1.25		2.0, soluble sulfate = 290 ppm
470.0	5.0	Silty Clay Loam, medium stiff, moist, brown to gray below 10 ft, with clay seam near 7 ft, with clay loam seam near 10 ft, with roots near 12 ft. (Rt. A-6), Lab No. 33284	SS 4	4-4-5	89	16.5	0.75		7.0, LOI = 2 percent
465.0	10.0	Clay Loam, medium stiff, moist, red to gray below 14 ft. (Rt)	SS 5	5-5-5	78	21.4	1.75	30	11.0, pH = 6.6, SG = 2.75, LOI = 2 percent
460.0	15.0	Clay Loam, medium stiff, moist, red to gray below 14 ft. (Rt)	SS 6	4-4-5	100	20.5	0.5		
455.0	17.5	Silty Clay Loam, medium stiff to stiff, moist, brown, with clay loam seam near 17 ft. A-4, Lab No. 33721	SS 7	4-5-6	100	25.0	1.75		17.0, LOI = 3 percent
450.0	20.0	Sandy Loam, stiff, moist, brown, A-4, Lab No. 33280	SS 8	3-3-5	67	22.0	0.75		
445.0	27.0	Silty Clay, medium stiff, moist, brown to dark gray below 33 ft, with organic matter near 33 ft. A-6, Lab No. 33722	SS 9	4-5-7	100	16.9	2.0		
440.0	30.0	Silty Clay, medium stiff, moist, brown to dark gray below 33 ft, with organic matter near 33 ft. A-6, Lab No. 33722	SS 10	3-3-4	100	17.3	0.5		

LOG OF TEST BORING									
Terracon		CLIENT: HWC Engineering		BORING NO.: TB-01		SHEET: 2 OF 3		LATITUDE: 38.68486	
PROJECT TYPE: Bridge Replacement		DES NO.: 1902785		STRUCTURE #: Martin 58		LONGITUDE: -86.88349		DATUM:	
LOCATION: Brickyard Road over Boggs Creek		PROJECT NO.: CJ205163		DATE STARTED: 03-16-22		DATE COMPLETED: 03-17-22		WEATHER: Sunny	
ELEVATION: 474.0		BORING METHOD: Hollow Stem Auger		HAMMER: Auto		DRILLER/INSP: D.C.		TEMPERATURE: 70 °F	
STATION: 11+55		RIG TYPE: CME 55 Truck		CASING DIA.:		CORE SIZE:		GROUNDWATER: Encountered at 28.0 ft. At completion 28.0 ft. Caved in at 32.0 ft.	
DEPTH: 90.0 ft		COUNTRY: Martin		DATE COMPLETED: 03-17-22		WEATHER: Sunny		GROUNDWATER: Encountered at 28.0 ft. At completion 28.0 ft. Caved in at 32.0 ft.	
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	POCKET PEN. (bl)	ATTEBERG LIMITS	REMARKS
440.0	33.0	Silty Clay, medium stiff, moist, brown to dark gray below 33 ft, with organic matter near 33 ft. A-6, Lab No. 33722	SS 11	3-3-3	94	23.4	1.10		
435.0	40.0	Silty Clay Loam, stiff, moist, gray, A-4, Lab No. 33721	SS 12	4-4-6	89	23.8	1.5		
430.0	45.0	Silty Clay Loam, stiff, moist, gray, A-4, Lab No. 33721	SS 13	4-4-7	94	23.4	1.75		
425.0	50.0	Silty Clay Loam, medium stiff to stiff, moist, gray, A-4(5), Lab No. 33285	SS 14	3-3-6	100	20.2	1.5	20	49.0, pH = 8.1, SG = 2.76
420.0	55.0	Silty Clay Loam, medium stiff to stiff, moist, gray, A-4(5), Lab No. 33285	SS 15	4-4-4	83	29.6	1.5		
415.0	60.0	Silty Clay, medium stiff, moist, gray, A-4(5), Lab No. 33286	SS 16	4-5-6	94	27.3	1.25		
410.0	65.0	Silty Clay, medium stiff, moist, gray, A-4(5), Lab No. 33286	SS 17	4-4-4	89	28.4	2.0	24	64.0, pH = 8.1, SG = 2.75

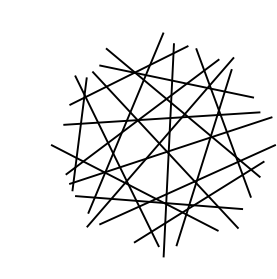
LOG OF TEST BORING									
Terracon		CLIENT: HWC Engineering		BORING NO.: TB-01		SHEET: 3 OF 3		LATITUDE: 38.68486	
PROJECT TYPE: Bridge Replacement		DES NO.: 1902785		STRUCTURE #: Martin 58		LONGITUDE: -86.88349		DATUM:	
LOCATION: Brickyard Road over Boggs Creek		PROJECT NO.: CJ205163		DATE STARTED: 03-16-22		DATE COMPLETED: 03-17-22		WEATHER: Sunny	
ELEVATION: 474.0		BORING METHOD: Hollow Stem Auger		HAMMER: Auto		DRILLER/INSP: D.C.		TEMPERATURE: 70 °F	
STATION: 11+55		RIG TYPE: CME 55 Truck		CASING DIA.:		CORE SIZE:		GROUNDWATER: Encountered at 28.0 ft. At completion 28.0 ft. Caved in at 32.0 ft.	
DEPTH: 90.0 ft		COUNTRY: Martin		DATE COMPLETED: 03-17-22		WEATHER: Sunny		GROUNDWATER: Encountered at 28.0 ft. At completion 28.0 ft. Caved in at 32.0 ft.	
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY	MOISTURE CONTENT	POCKET PEN. (bl)	ATTEBERG LIMITS	REMARKS
405.0	70.0	Silty Clay, medium stiff, moist, gray, A-4(5), Lab No. 33286	SS 18	3-3-3	100	19.5	1.0		
400.0	75.0	Silty Clay, medium stiff, moist, gray, A-4(5), Lab No. 33286	SS 19	3-3-4	94	18.4	0.75		
395.0	80.0	Sandy Clay Loam, medium stiff to very stiff, moist, gray, with sandy loam seam near 78 ft, with clay seam near 80 ft. (visual)	SS 20	4-5-9	89	24.6	0.5		
390.0	85.0	Silty Clay, medium stiff, moist, gray, A-4(5), Lab No. 33286	SS 21	8-12-15	84	20.6	<0.25		
385.0	90.0	Silty Clay, medium stiff, moist, gray, A-4(5), Lab No. 33286	SS 22	9-13-13	83	19.8	<0.25		
		Bottom of Boring at 90.0 ft							



PILE LOADING FOR GEOTECHNICAL TESTING			
	End Bent No. 1	Pier Nos. 2 & 3	End Bent No. 4
Boring Identification	TB-01	TB-02 & TB-03	TB-04
Pile Size and Type	HP 12x74	HP 12x74	HP 12x74
Maximum Design Soil Resistance, Rr (kip)	280	249	280
Resistance Factor, φ _{dyn} *	0.7	0.7	0.7
Downdrag Load, DD (kip)	Negligible**	Negligible	Negligible**
Maximum Nominal Soil Resistance, Rn (kip)	400	355	400
Downdrag Friction, R _{scd} (kip)	Negligible**	n/a	Negligible**
Scour Zone Friction, R _{sscur} (kip)	n/a	45***	n/a
Relaxation in Shale (kip)	100	100	100
Maximum Nominal Driving Resistance, R _{ndr} (kip)	500	500	500
Estimated Pile Tip Elevation	355	355	355
Minimum Pile Tip Elevation	433	415	433

* Driving resistance evaluated using ISS 701.05(b)
 ** Piles predrilled to El. 444 in order to achieve negligible downdrag.
 *** Using approx. average of FHWA and API
 Note: For bents with four or fewer piles, the resistance factor should be reduced by 20% in accordance with AASHTO C10.5.5.2.3 and the INDOT Design Manual.

PLOT: 3/6/2023 9:34:25 AM



HWC ENGINEERING
 INDIANAPOLIS - TERRE HAUTE
 LAFAYETTE - MUNCIE - NEW ALBANY
 www.hwcengineering.com

NOT FOR CONSTRUCTION
 3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

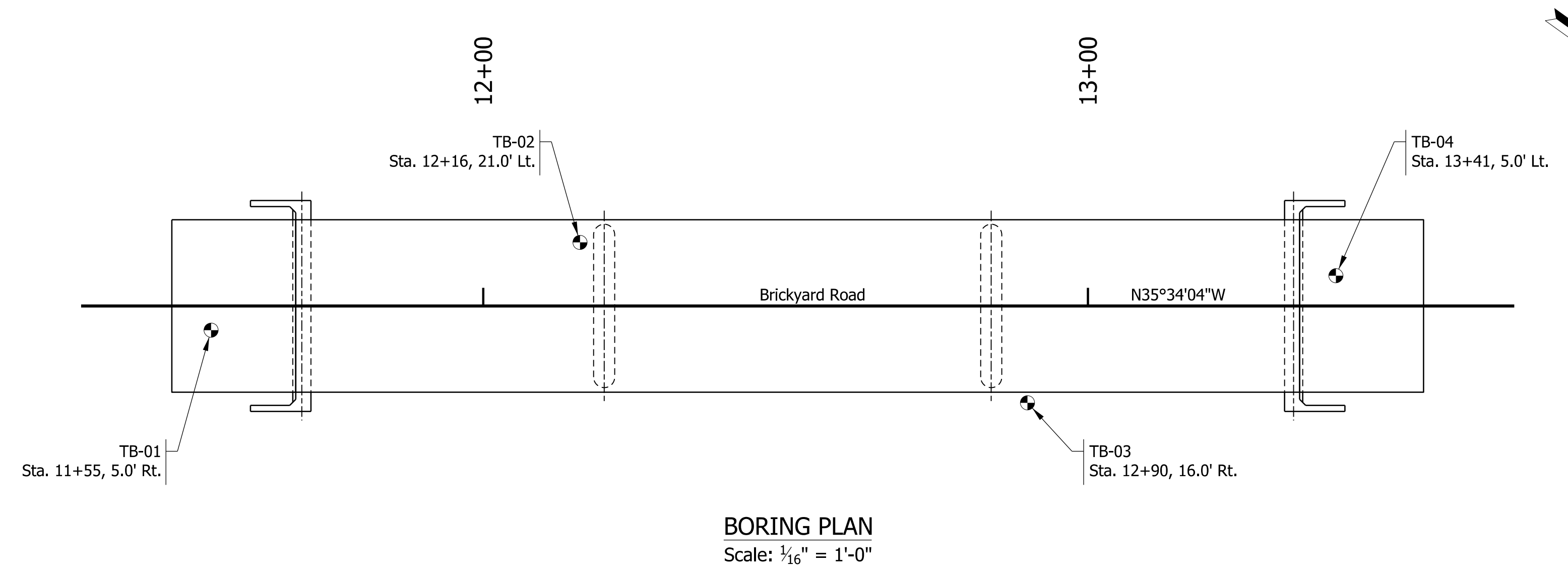
INDIANA DEPARTMENT OF TRANSPORTATION
SOIL BORINGS

SCALE	BRIDGE FILE
AS NOTED	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	13 of 31
CONTRACT	PROJECT
B-42807	1902785

LOG OF TEST BORING									
Terracon CLIENT: HWC Engineering		BORING NO.: TB-02		SHEET: 1 OF 3		LATITUDE: 38.68495		LONGITUDE: -86.88368	
DES NO.: 1902785 STRUCTURE #: 51-00058		PROJECT TYPE: Bridge Replacement		DATE STARTED: 08-26-22		DATE COMPLETED: 08-29-22		WEATHER: Sunny	
LOCATION: Brickyard Road over Boggs Creek		PROJECT NO.: CJ205163		HAMMER: Auto		TEMPERATURE: 90 °F		GROUNDWATER: Encountered at 12.0 ft	
STATION: 12+16		BORING METHOD: Hollow Stem Auger		DRILLER/INSP: J.R.		CUTTING SPEED: 120 RPM		Caved in at 30.0 ft	
OFFSET: 21.0 ft Left		RIG TYPE: B-57 Track		CASING DIA.:		CORE SIZE:			
LINE: W		DEPTH: 98.9 ft		GROUNDWATER: Encountered at 12.0 ft		At completion NW		Caved in at 30.0 ft	
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY %	MOISTURE CONTENT %	POCKET PEN. (bl)	ATTEBERG LIMITS	REMARKS
450.0	0.5	Topsoil	SS 1	84.5	50	14.0	3.5		
450.0	2.5	Silty Loam, medium stiff, moist, brown, A-4, Lab No. 33723	SS 2	2-3-3	72	21.1	103.4	3.75	
450.0	5.0	Sandy Loam, medium stiff, moist, gray, A-2-4, Lab No. 33724	SS 3	2-3-3	83	19.2	1.5		
450.0	7.5	Sandy Loam, very loose, wet, gray, with sand and gravel seam near 17 ft, with wood fragments near 18 ft, A-2-4, Lab No. 33724	SS 4	2-3-4	89	23.0	108.5	1.0	
450.0	10.0	Sand, very loose, wet, gray, (visual)	SS 5	2-1-1	89				
450.0	12.0	Sandy Loam, very loose, wet, gray, with sand and gravel seam near 17 ft, with wood fragments near 18 ft, A-2-4, Lab No. 33724	SS 6	2-3-2	78				
450.0	15.0	Silty Loam, medium stiff, moist, gray, A-4, Lab No. 33723	SS 7	2-3-4	89	24.2	0.5		
450.0	17.5	Silty Loam, medium stiff, moist, gray, A-4, Lab No. 33723	SS 8	3-3-4	83	24.0	104.4	0.5	0.94
450.0	20.0	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 9	5-5-3	89	28.2	0.5		
450.0	22.5	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 10	2-4-4	83	29.2	0.75		27.0, LOI = 2 percent, SG = 2.74, UU = 1.472 tf
450.0	25.0	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 11	3-4-5	89	29.9	1.25		32.0, SG = 2.75, UU = 3.162 tf

LOG OF TEST BORING									
Terracon CLIENT: HWC Engineering		BORING NO.: TB-02		SHEET: 2 OF 3		LATITUDE: 38.68495		LONGITUDE: -86.88368	
DES NO.: 1902785 STRUCTURE #: 51-00058		PROJECT TYPE: Bridge Replacement		DATE STARTED: 08-26-22		DATE COMPLETED: 08-29-22		WEATHER: Sunny	
LOCATION: Brickyard Road over Boggs Creek		PROJECT NO.: CJ205163		HAMMER: Auto		TEMPERATURE: 90 °F		GROUNDWATER: Encountered at 12.0 ft	
STATION: 12+16		BORING METHOD: Hollow Stem Auger		DRILLER/INSP: J.R.		CUTTING SPEED: 120 RPM		Caved in at 30.0 ft	
OFFSET: 21.0 ft Left		RIG TYPE: B-57 Track		CASING DIA.:		CORE SIZE:			
LINE: W		DEPTH: 98.9 ft		GROUNDWATER: Encountered at 12.0 ft		At completion NW		Caved in at 30.0 ft	
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY %	MOISTURE CONTENT %	POCKET PEN. (bl)	ATTEBERG LIMITS	REMARKS
415.0	37.5	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 12	2-1-2	89	31.3	90.8	1.0	
415.0	40.0	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 13	3-3-3	89	31.4	28.5	2.0	
415.0	42.5	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 14	1-1-1	89	34.9	93.5	0.25	50.0, Begin rotary at 50 ft
415.0	45.0	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 15	1-2-2	89	18.5	1.25		
415.0	47.5	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 16	2-3-4	89	19.0	113.7	1.5	
415.0	50.0	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 17	2-3-3	83	27.4	107.5	0.5	
415.0	52.5	Silty Clay, very soft to medium stiff, moist, gray, with sand seams, with wood fragments near 25 ft, with silty clay loam seam near 32 ft, with silty loam seams near 43 ft and 48 ft, A-4, Lab No. 33296	SS 18	2-4-4	83	22.8	1.25		

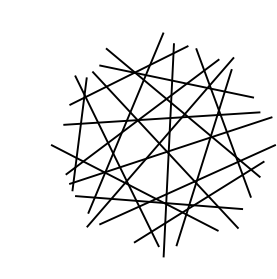
LOG OF TEST BORING									
Terracon CLIENT: HWC Engineering		BORING NO.: TB-02		SHEET: 3 OF 3		LATITUDE: 38.68495		LONGITUDE: -86.88368	
DES NO.: 1902785 STRUCTURE #: 51-00058		PROJECT TYPE: Bridge Replacement		DATE STARTED: 08-26-22		DATE COMPLETED: 08-29-22		WEATHER: Sunny	
LOCATION: Brickyard Road over Boggs Creek		PROJECT NO.: CJ205163		HAMMER: Auto		TEMPERATURE: 90 °F		GROUNDWATER: Encountered at 12.0 ft	
STATION: 12+16		BORING METHOD: Hollow Stem Auger		DRILLER/INSP: J.R.		CUTTING SPEED: 120 RPM		Caved in at 30.0 ft	
OFFSET: 21.0 ft Left		RIG TYPE: B-57 Track		CASING DIA.:		CORE SIZE:			
LINE: W		DEPTH: 98.9 ft		GROUNDWATER: Encountered at 12.0 ft		At completion NW		Caved in at 30.0 ft	
ELEVATION	SAMPLE DEPTH	SOIL/MATERIAL DESCRIPTION	SAMPLE NUMBER	SPT per 6"	RECOVERY %	MOISTURE CONTENT %	POCKET PEN. (bl)	ATTEBERG LIMITS	REMARKS
370.0	65.0	Silty Clay Loam, medium stiff, moist, gray, A-6, Lab No. 33720	SS 20	2-2-4	50	31.0	-0.25		
370.0	67.5	Silty Clay Loam, medium stiff, moist, gray, A-6, Lab No. 33720	SS 21	3-4-4	67	27.1	-0.25		
370.0	70.0	Silty Clay Loam, medium stiff, moist, gray, A-6, Lab No. 33720	SS 22	0-4-4	0				
370.0	72.5	Silty Clay Loam, medium stiff, moist, gray, A-6, Lab No. 33720	SS 23	33-33-37	22	14.4			
370.0	75.0	Weathered Shale, soft, gray, (visual)	SS 24	50-4	83	11.2	129.2		
370.0	77.5	Bottom of Boring at 98.9 ft							



PILE LOADING FOR GEOTECHNICAL TESTING			
	End Bent No. 1	Pier Nos. 2 & 3	End Bent No. 4
Boring Identification	TB-01	TB-02 & TB-03	TB-04
Pile Size and Type	HP 12x74	HP 12x74	HP 12x74
Maximum Design Soil Resistance, Rr (kip)	280	249	280
Resistance Factor, φ _{dyn} *	0.7	0.7	0.7
Downdrag Load, DD (kip)	Negligible**	Negligible	Negligible**
Maximum Nominal Soil Resistance, Rn (kip)	400	355	400
Downdrag Friction, R _{scd} (kip)	Negligible**	n/a	Negligible**
Scour Zone Friction, R _{sscour} (kip)	n/a	45***	n/a
Relaxation in Shale (kip)	100	100	100
Maximum Nominal Driving Resistance, R _{ndr} (kip)	500	500	500
Estimated Pile Tip Elevation	355	355	355
Minimum Pile Tip Elevation	433	415	433

* Driving resistance evaluated using ISS 701.05(b)
 ** Piles predrilled to El. 444 in order to achieve negligible downdrag.
 *** Using approx. average of FHWA and API
 Note: For bents with four or fewer piles, the resistance factor should be reduced by 20% in accordance with AASHTO C10.5.5.2.3 and the INDOT Design Manual.

PLOT: 3/6/2023 9:34:34 AM



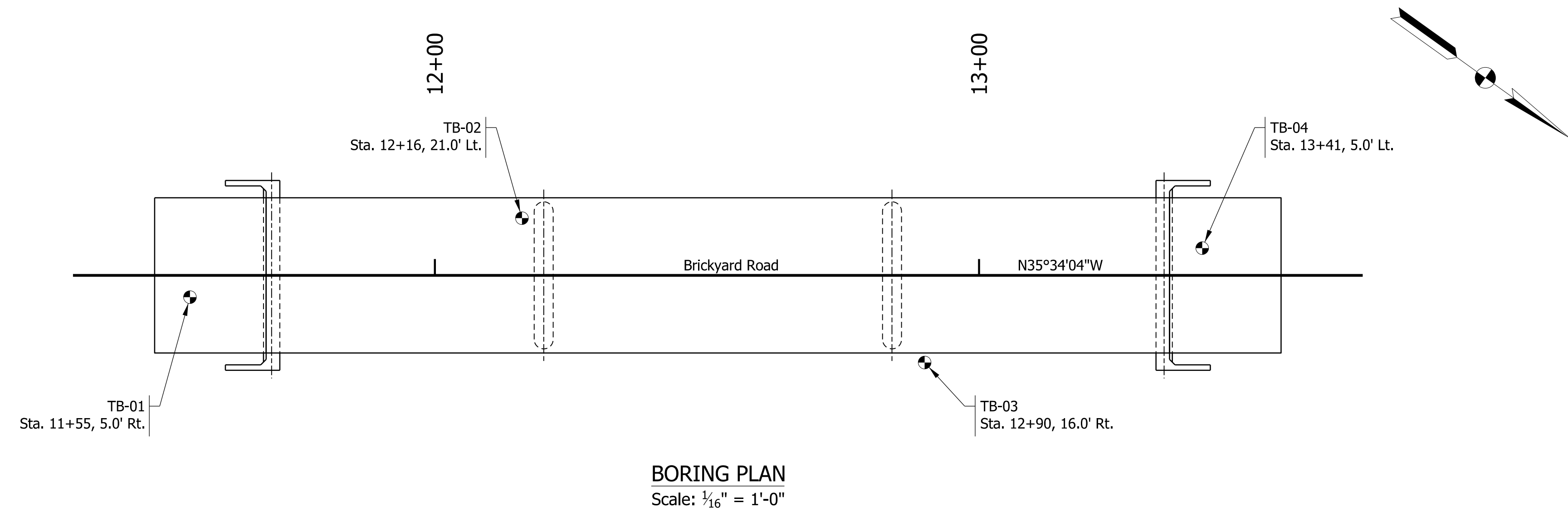
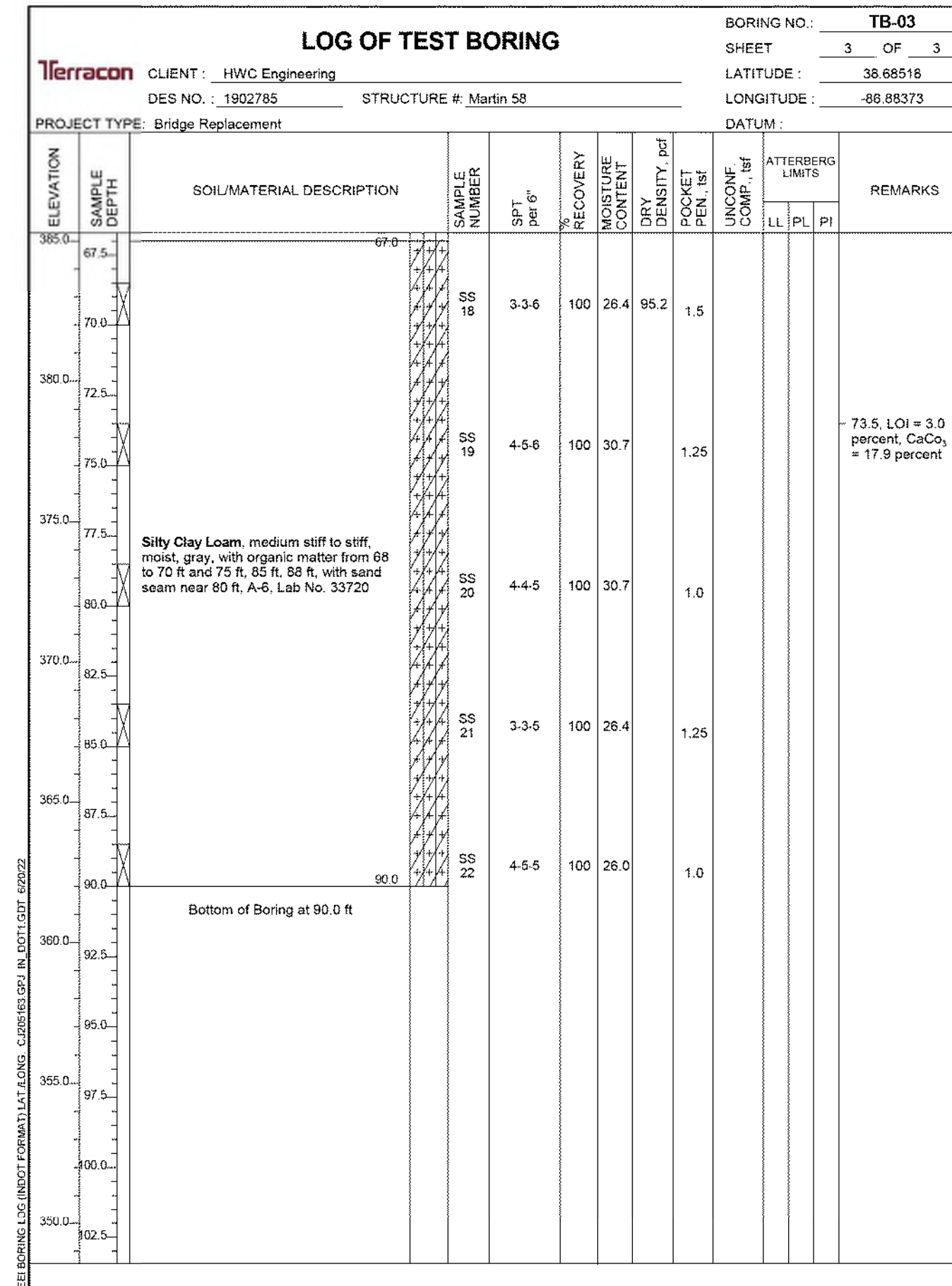
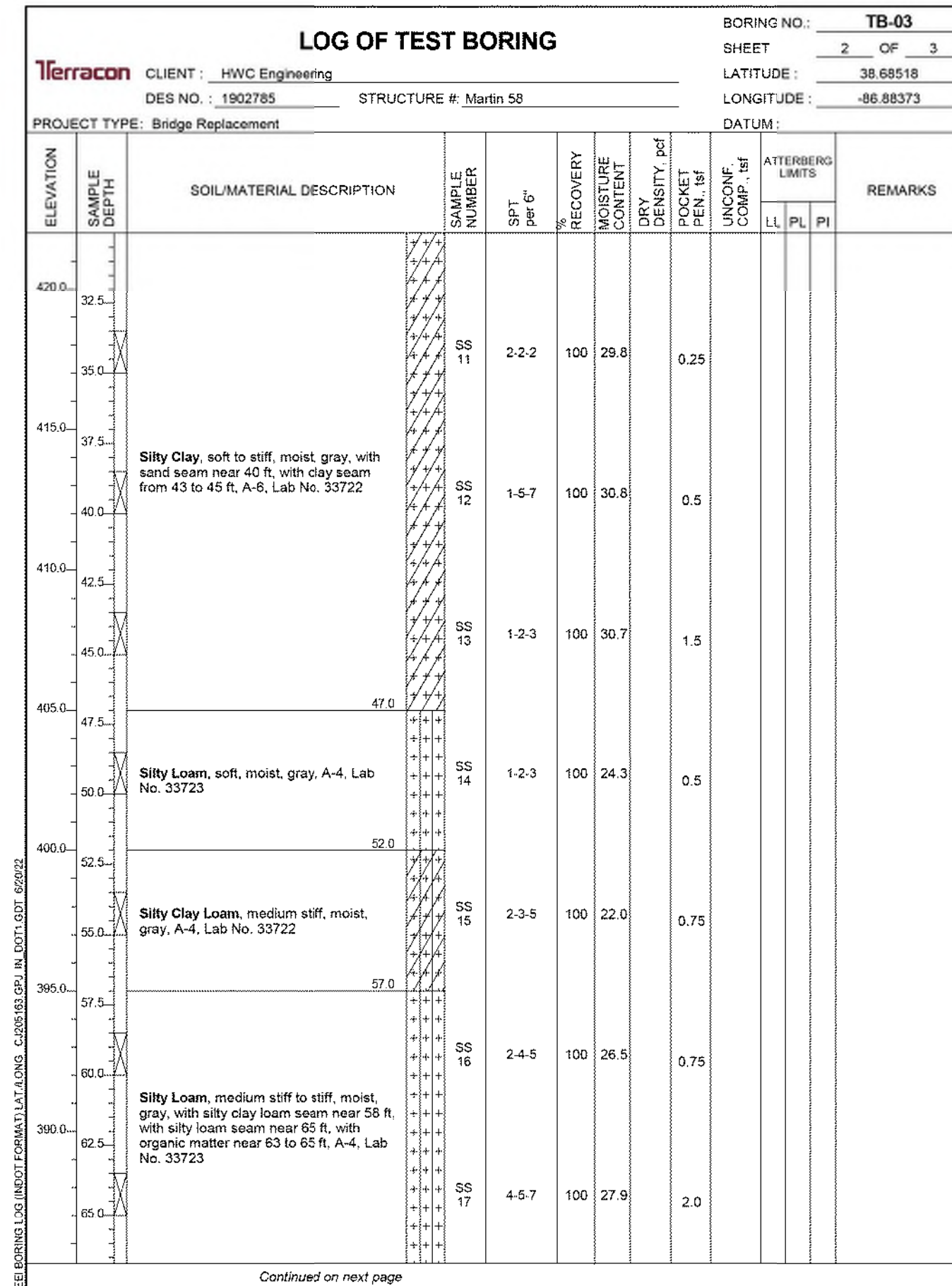
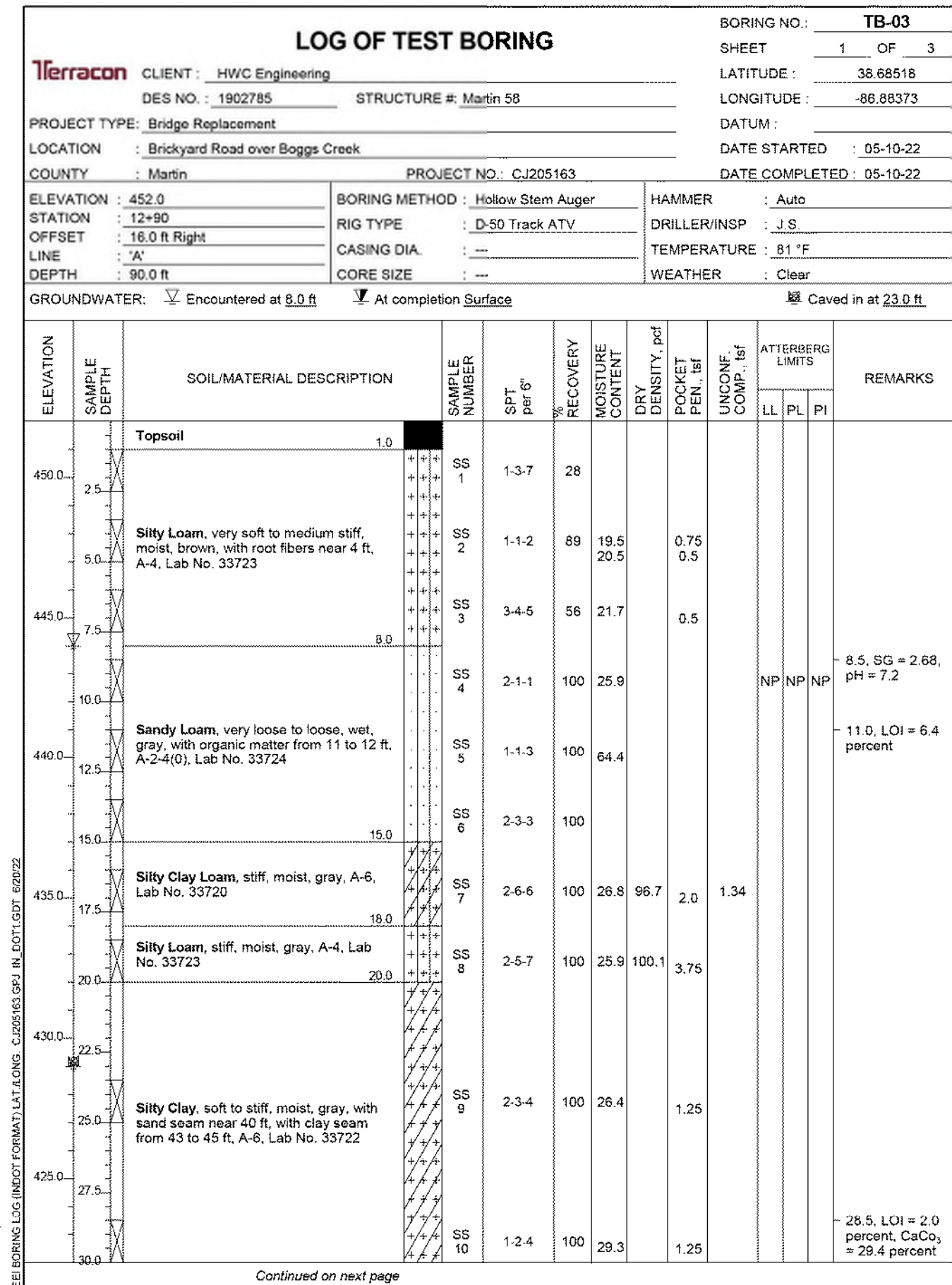
HWC ENGINEERING
 INDIANAPOLIS - TERRE HAUTE
 LAFAYETTE - MUNCIE - NEW ALBANY
 www.hwcengineering.com

NOT FOR CONSTRUCTION
 3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

INDIANA DEPARTMENT OF TRANSPORTATION
 SOIL BORINGS

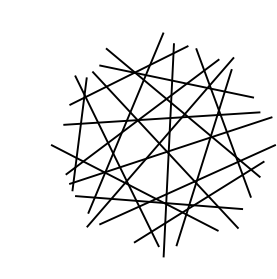
SCALE	BRIDGE FILE
AS NOTED	51-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	14 of 31
CONTRACT	PROJECT
B-42807	1902785



	End Bent No. 1	Pier Nos. 2 & 3	End Bent No. 4
Boring Identification	TB-01	TB-02 & TB-03	TB-04
Pile Size and Type	HP 12x74	HP 12x74	HP 12x74
Maximum Design Soil Resistance, R _r (kip)	280	249	280
Resistance Factor, φ _{dyn} *	0.7	0.7	0.7
Downdrag Load, DD (kip)	Negligible**	Negligible	Negligible**
Maximum Nominal Soil Resistance, R _n (kip)	400	355	400
Downdrag Friction, R _{sscd} (kip)	Negligible**	n/a	Negligible**
Scour Zone Friction, R _{sscour} (kip)	n/a	45***	n/a
Relaxation in Shale (kip)	100	100	100
Maximum Nominal Driving Resistance, R _{ndr} (kip)	500	500	500
Estimated Pile Tip Elevation	355	355	355
Minimum Pile Tip Elevation	433	415	433

* Driving resistance evaluated using ISS 701.05(b)
 ** Piles predrilled to El. 444 in order to achieve negligible downdrag.
 *** Using approx. average of FHWA and API
 Note: For bents with four or fewer piles, the resistance factor should be reduced by 20% in accordance with AASHTO C10.5.5.2.3 and the INDOT Design Manual.

PLOT: 3/6/2023 9:34:38 AM



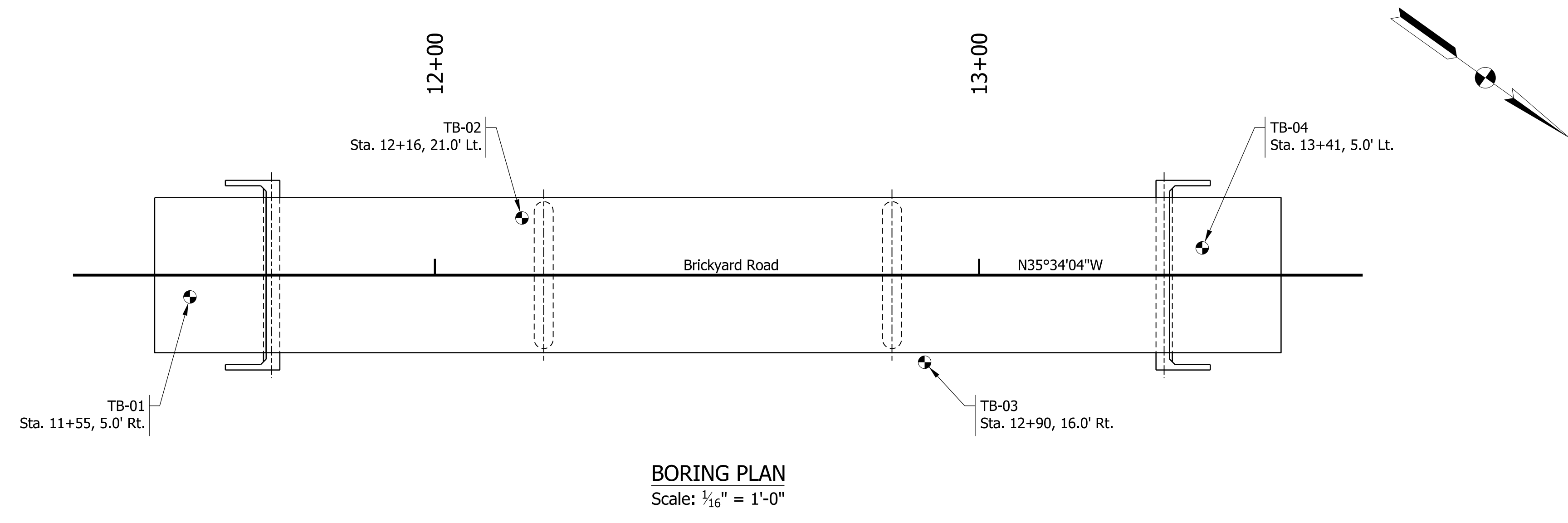
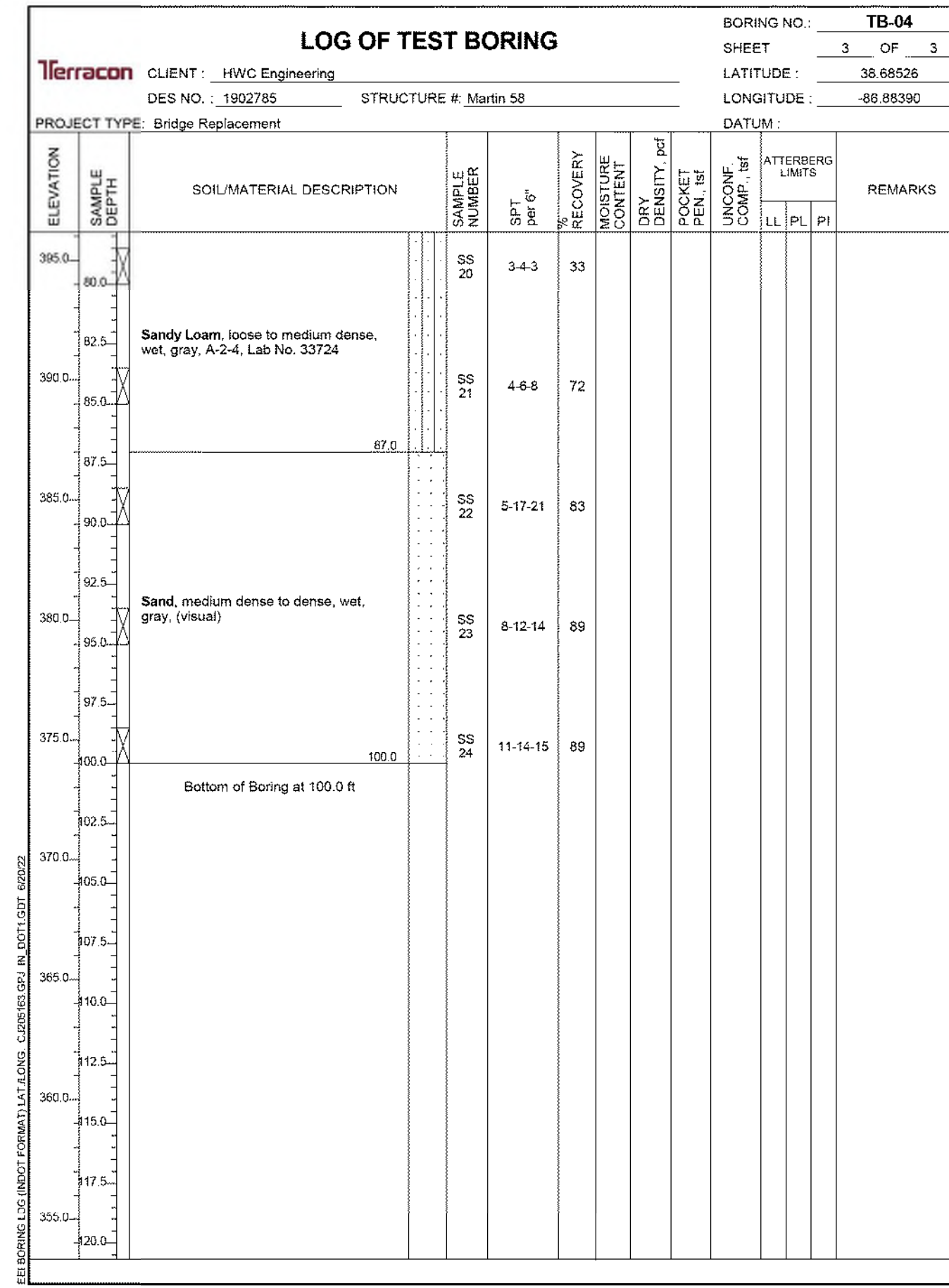
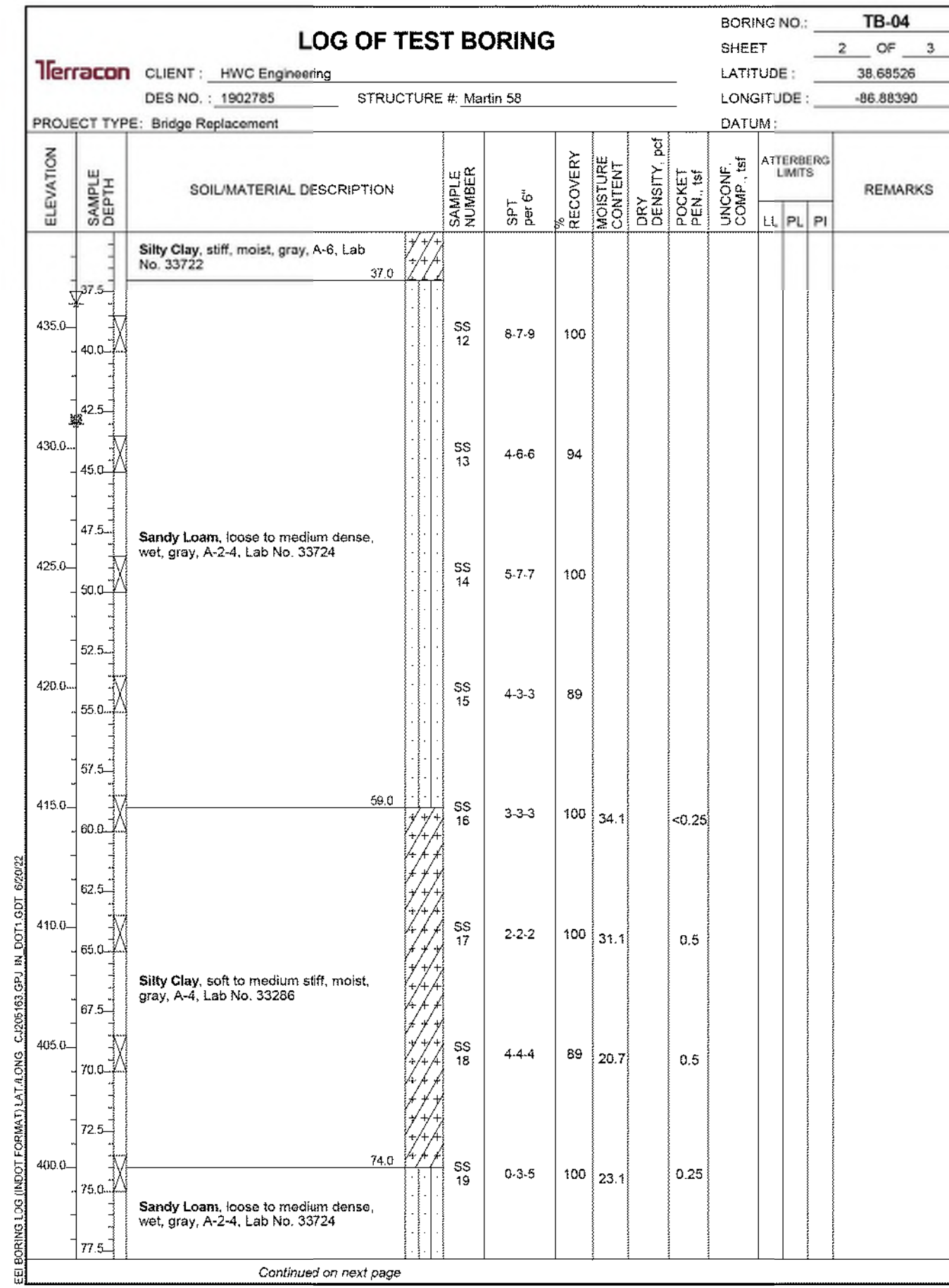
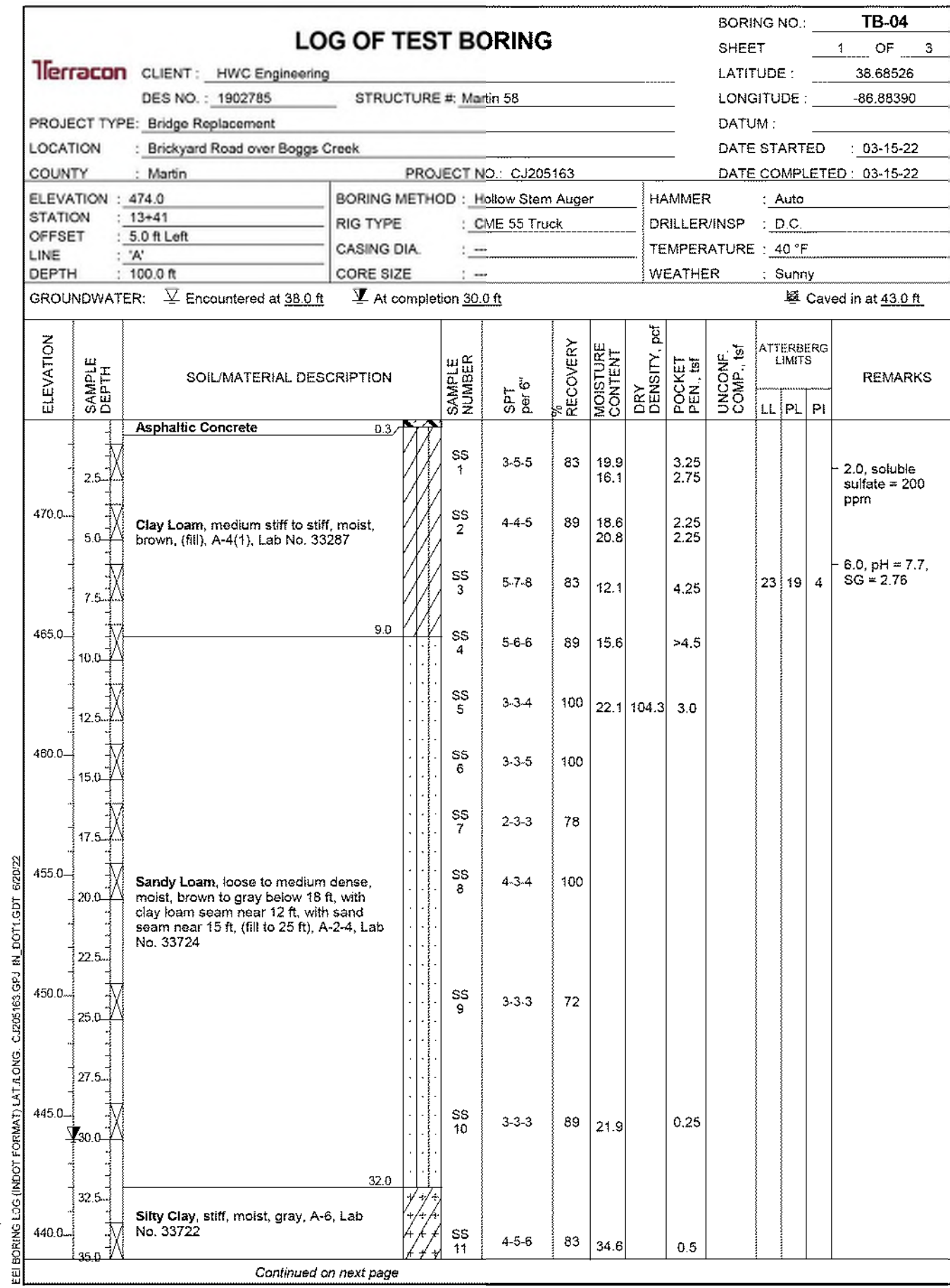
HWC ENGINEERING
 INDIANAPOLIS - TERRE HAUTE
 LAFAYETTE - MUNCIE - NEW ALBANY
 www.hwcengineering.com

NOT FOR CONSTRUCTION
 3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

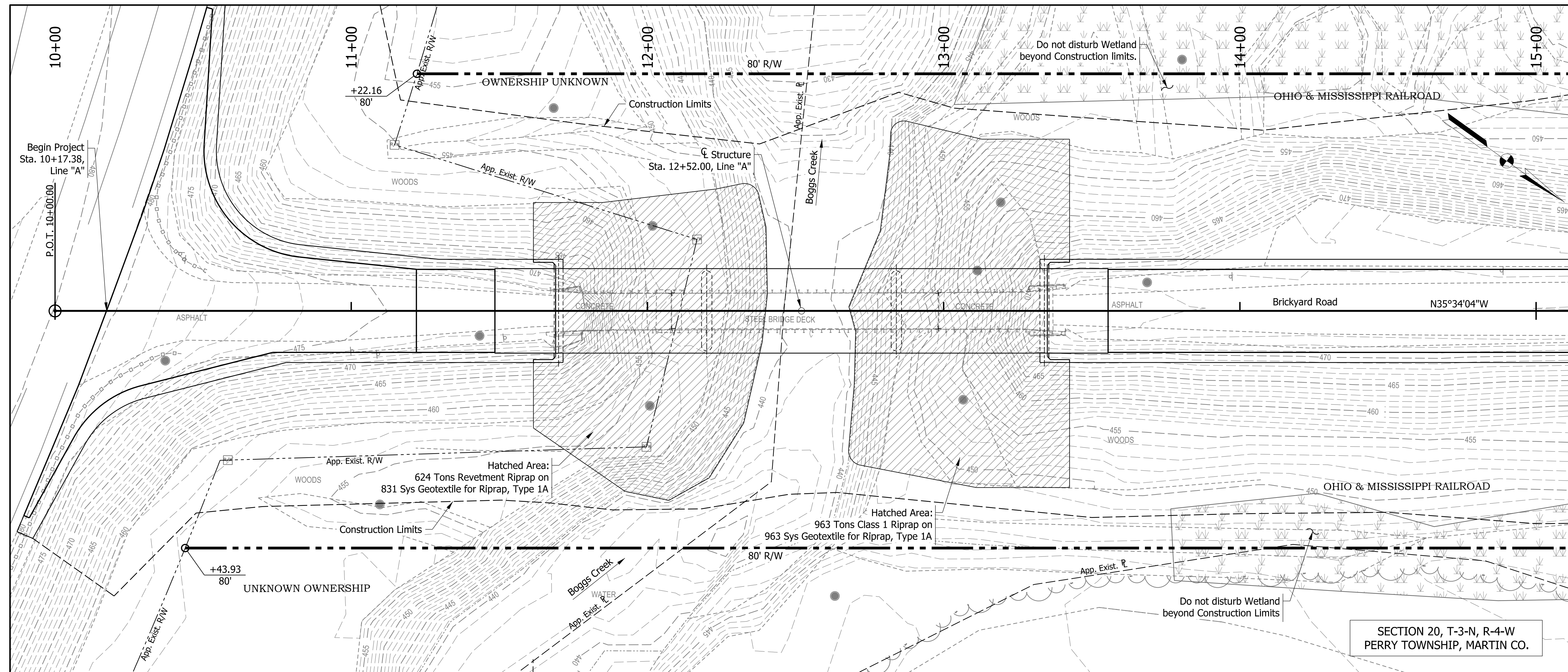
INDIANA DEPARTMENT OF TRANSPORTATION
 SOIL BORINGS

SCALE	BRIDGE FILE
AS NOTED	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	15 of 31
CONTRACT	PROJECT
B-42807	1902785



	End Bent No. 1	Pier Nos. 2 & 3	End Bent No. 4
Boring Identification	TB-01	TB-02 & TB-03	TB-04
Pile Size and Type	HP 12x74	HP 12x74	HP 12x74
Maximum Design Soil Resistance, Rr (kip)	280	249	280
Resistance Factor, φ _{dyn} *	0.7	0.7	0.7
Downdrag Load, DD (kip)	Negligible**	Negligible	Negligible**
Maximum Nominal Soil Resistance, Rn (kip)	400	355	400
Downdrag Friction, R _{scd} (kip)	Negligible**	n/a	Negligible**
Scour Zone Friction, R _{sscur} (kip)	n/a	45***	n/a
Relaxation in Shale (kip)	100	100	100
Maximum Nominal Driving Resistance, R _{ndr} (kip)	500	500	500
Estimated Pile Tip Elevation	355	355	355
Minimum Pile Tip Elevation	433	415	433

* Driving resistance evaluated using ISS 701.05(b)
 ** Piles predrilled to El. 444 in order to achieve negligible downdrag.
 *** Using approx. average of FHWA and API
 Note: For bents with four or fewer piles, the resistance factor should be reduced by 20% in accordance with AASHTO C10.5.5.2.3 and the INDOT Design Manual.



EXISTING STRUCTURE
 Existing Structure is a 150.4 ft. 3-span Bridge consisting of Stone Arch approach spans and a Steel Warren deck truss in the center span with a Clear Roadway width of 11.7 ft. Existing Structure to be removed.

HYDRAULIC DATA

Drainage Area Upstream	86.00	sq mi
Q100 Discharge Upstream	10100	cfs
Q500 Discharge Upstream	13200	cfs
Proposed Q100 Headwater Elevation	470.75	ft
Existing Q100 Headwater Elevation	471.30	ft
Proposed Q100 Elevation	470.78	ft
Existing Q100 Elevation	470.78	ft
Proposed Q100 Backwater	0.11	ft
Existing Q100 Backwater	0.66	ft
Proposed Gross Waterway Area Opening Below Q100	3587.96	sq ft
Existing Gross Waterway Area Opening Below Q100	1627.95	sq ft
Proposed Q100 Average Velocity	3.11	ft/sec
Existing Q100 Average Velocity	3.10	ft/sec
Proposed Q100 Road Overflow Area	0.00	sft
Existing Q100 Road Overflow Area	0.00	sft
Proposed Low Structure Elevation	470.95	ft
Existing Low Structure Elevation	460.37	ft
Proposed Skew to Flowline of Waterway	0	deg
Existing Skew to Flowline of Waterway	0	deg

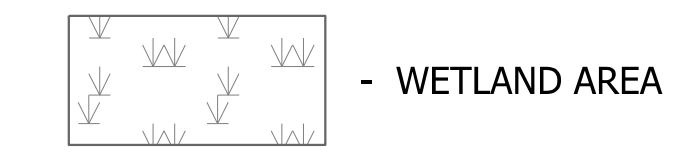
HYDRAULIC SCOUR DATA

	Q100	Q500
Discharge	10100 cfs	13200 cfs
Elevation	470.78 ft	473.06 ft
Contraction Scour Depth	7.38 ft	10.61 ft
Pier Scour Depth	5.53 ft	6.01 ft
Total Scour Depth	12.91 ft	16.62 ft
Flow Line Elevation	441.58 ft	441.58 ft
Low Scour Elevation	428.67 ft	424.96 ft
Maximum Velocity	4.60 ft/sec	5.56 ft/sec
D50 (Assumed)	0.01 mm	0.01 mm

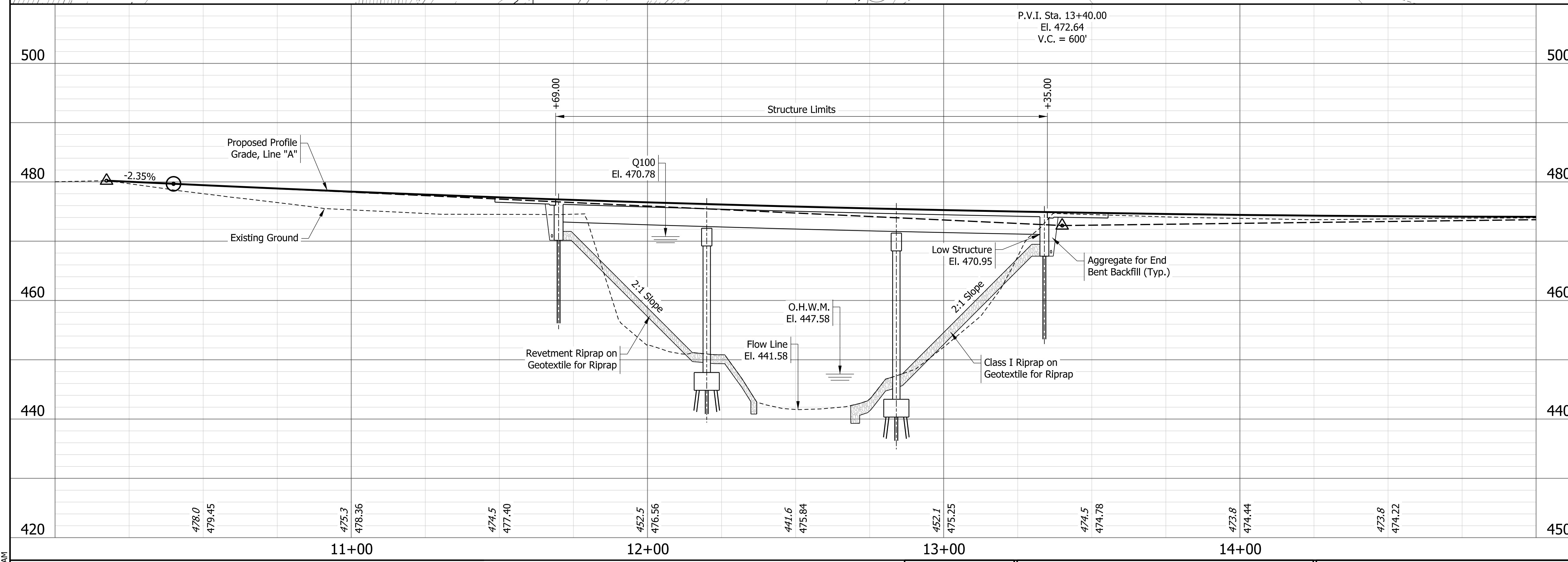
EARTHWORK TABULATION

Fill +20%	XXX	Cys
Common Excavation	XXX	Cys
Usable Waterway Excavation (70%)	XXX	Cys
Surplus/Waste	XXX	Cys
Wet Excavation	XXX	Cys
Waterway Excavation	XXX	Cys
Foundation Excavation Unclassified	XXX	Cys
Benching (Estimated)	XXX	Cys

NOTE TO REVIEWER
 DEPTHS OF PIER FOUNDATIONS, PILES, AND GEOTEXTILE TYPES TO BE DETERMINED UPON GEOTECH INVESTIGATION



CONTINUOUS COMPOSITE PRESTRESSED CONCRETE 36" x 49" BULB-TEE BEAM BRIDGE
 3 SPANS: 50'-0", 64'-0", 50'-0"
 28'-0" CLEAR ROADWAY; NO SKEW
 BRICKYARD ROAD OVER BOGGUS CREEK
 MARTIN COUNTY, IN



HWC ENGINEERING
 INDIANAPOLIS - TERRE HAUTE
 LAFAYETTE - MUNCIE - NEW ALBANY
 www.hwcengineering.com

NOT FOR CONSTRUCTION
 3/2023

RECOMMENDED FOR APPROVAL _____
 DESIGN ENGINEER _____ DATE _____

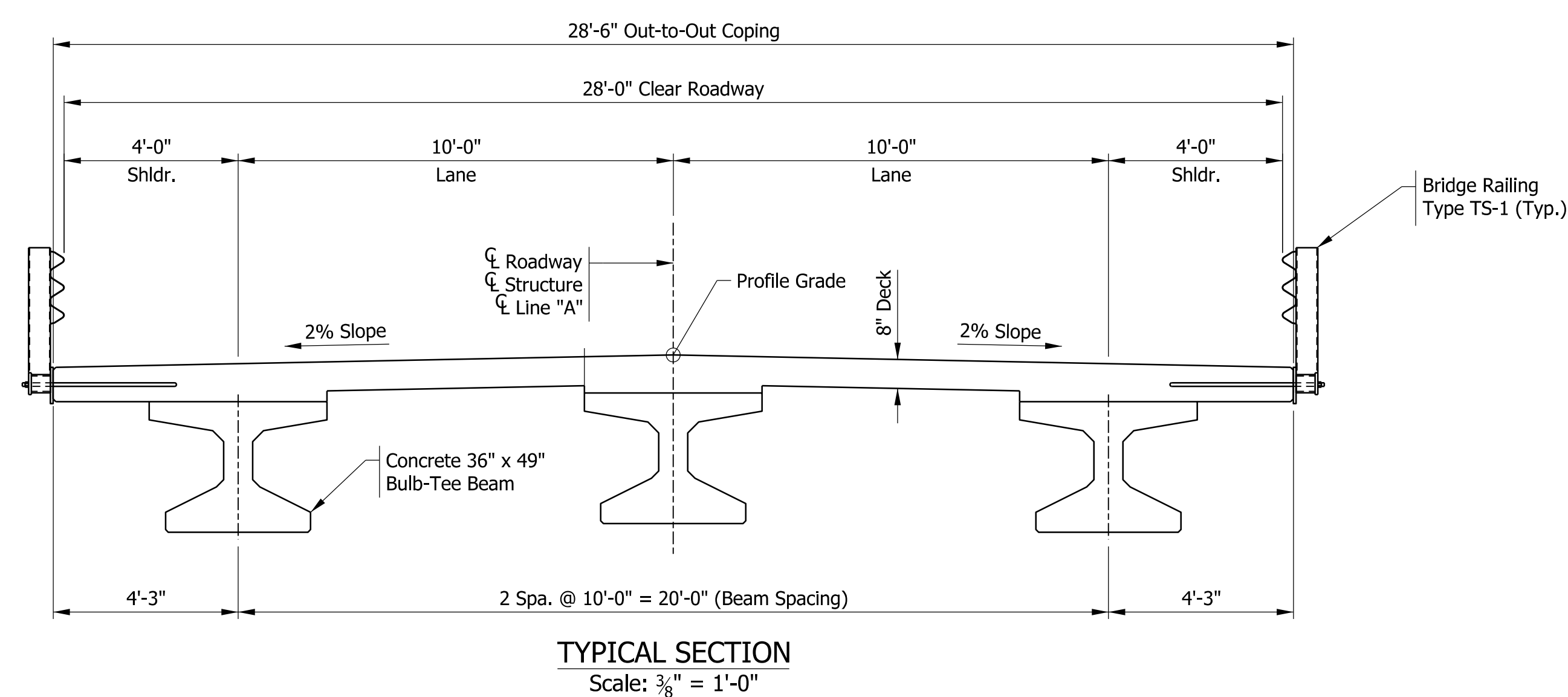
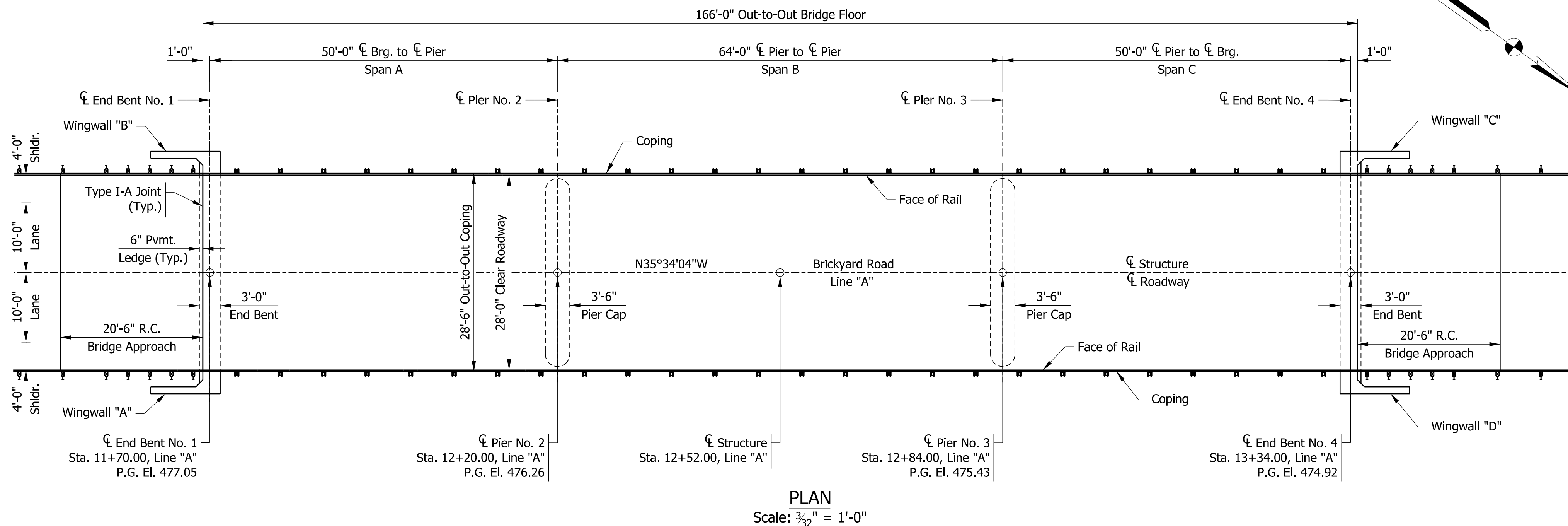
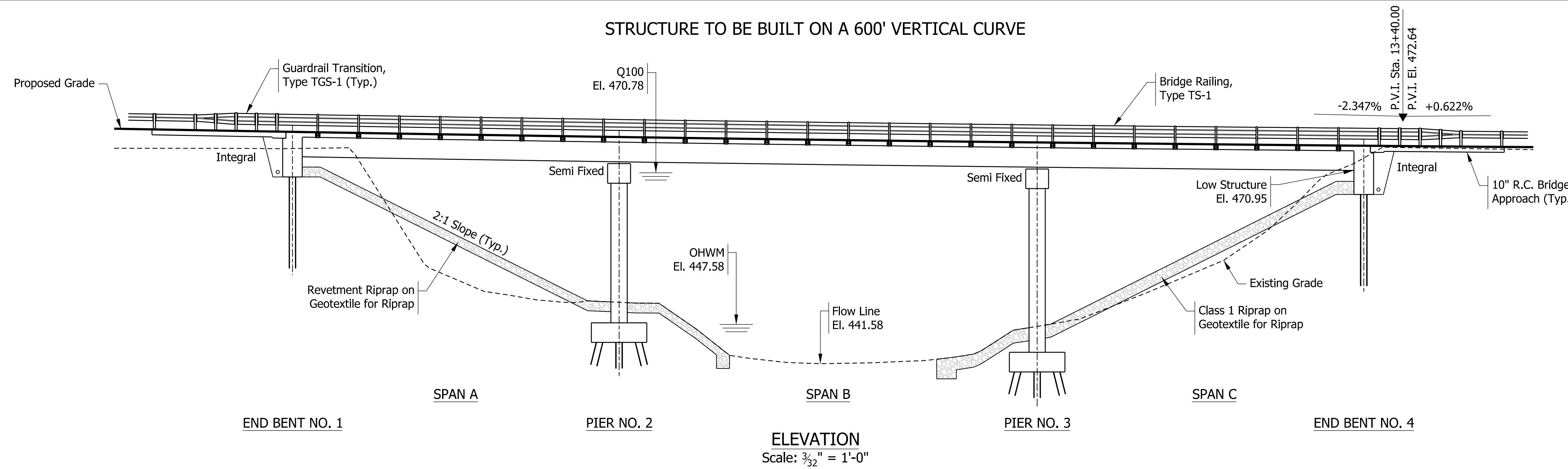
DESIGNED: DMH 3/2023 DRAWN: AJ 3/2023
 CHECKED: JL 3/2023 CHECKED: JL 3/2023

INDIANA DEPARTMENT OF TRANSPORTATION
 LAYOUT

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 5'	1902785
SURVEY BOOK	SHEETS
N/A	17 of 31
CONTRACT	PROJECT
B-42807	1902785

PLOT: 3/6/2023 9:34:48 AM

STRUCTURE TO BE BUILT ON A 600' VERTICAL CURVE



NOTE TO REVIEWER
USE OF A 3 BEAM SYSTEM AND TS-1 RAILING DOCUMENTATION INCLUDED IN DgnComps File.

GENERAL NOTES

Reinforcing steel cover shall be 2½" in top and 1" minimum in bottom of floor slab, 3" in footings, except bottom steel which shall be 4", and 2" in all other parts unless noted otherwise.

Chamfered edges shall be 1" unless noted otherwise.

Clean and Surface Seal concrete areas including Concrete Bridge Railings, Sidewalks, and exposed top and vertical portions of End Bents, Wingwalls and Piers. Concrete Bridge Deck and Approach Slabs do not require Surface Seal per INDOT Design Memo 21-12 and INDOT Standard Specification 702-R-691.

DESIGN DATA

Designed for HL-93 loading, in accordance with AASHTO LRFD Bridge Design Specifications, Eighth Edition and Interims.

DEAD LOAD
Actual weight plus 35 psf for future wearing surface.

FLOOR SLAB
Designed with a 7½" minimal structural depth plus ½" sacrificial wearing surface.

CONCRETE
Class C $f_c = 4,000$ psi
Class B $f_c = 3,000$ psi
Class A $f_c = 3,500$ psi

REINFORCING STEEL
Grade 60 $f_y = 60,000$ psi

CONSTRUCTION LOADING
The exterior girder 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 girder. Finishing machine was assumed to be supported 6 in. outside the vertical coping form. The top overhang brackets were assumed to be located 6 in. past the edge of the vertical coping form. The bottom overhang brackets were assumed to be braced against the intersection of the girder bottom flange and web.

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

CONSTRUCTION LIVE LOAD
Designed for 20 psf extending 2 ft. past the edge of coping and 75 lb/ft vertical force applied at a distance of 6 in. outside the face of coping over a 30 ft. length of the deck centered with the finishing machine.

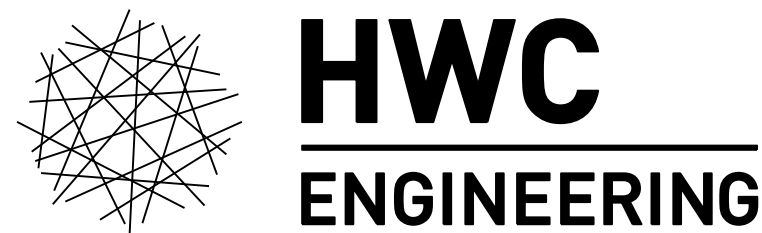
FINISHING MACHINE LOAD
4,500 lb distributed over 10 ft. along the coping.

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

SEISMIC PARAMETERS
Site Class: C
PGA: 0.10
 S_{SI} : 0.13
Seismic Zone: 1

CONTINUOUS COMPOSITE PRESTRESSED CONCRETE 36" x 49" BULB-TEE BEAM BRIDGE
3 SPANS: 50'-0", 64'-0", 50'-0"
28'-0" CLEAR ROADWAY; NO SKEW
BRICKYARD ROAD OVER BOGGS CREEK
MARTIN COUNTY, IN

PLOT: 3/6/2023 9:34:49 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

NOT FOR CONSTRUCTION
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ 3/2023
CHECKED: JL	3/2023	CHECKED: JL 3/2023

INDIANA DEPARTMENT OF TRANSPORTATION	
GENERAL PLAN	

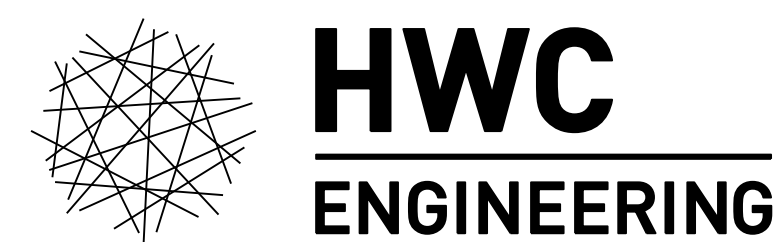
SCALE	BRIDGE FILE
AS NOTED	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	18 of 31
CONTRACT	PROJECT
B-42807	1902785

SUMMARY OF BRIDGE QUANTITIES

ITEM	CONCRETE					BRIDGE RAILING STEEL, TYPE TS-1 LFT	BRIDGE RAILING TRANSITION, TYPE TGS-1 LFT	REINF. BARS, GALVANIZED LBS	TIE-BAR ASSEMBLY, GALVANIZED EACH	R.C. BRIDGE APPROACH (12") SYS	SUBBASE FOR PCCP (9") CYS	AGGR. FOR END BENT BACKFILL CYS	6" END BENT DRAIN LFT	PILES						TEST PILES		SURFACE SEAL ** SFT			
	CLASS C	CLASS A	CLASS C	CLASS B	CLASS B									STEEL HP12 x 53	STEEL HP12 x 84	PILE SHOE HP12 x 53	PILE SHOE HP12 x 84	CORED HOLE IN CONCRETE	CORED HOLE IN ROCK		TEST PILE, INDICATOR, PRODUCTION		TEST PILE, INDICATOR, RESTRIKE		
	SUPERSTR CYS	SUBSTR CYS	SUBSTR CYS	ABOVE FTG. CYS	IN FTG. CYS									LFT	LFT	EACH	EACH	EACH	NO.	LFT	LFT		EACH		
Superstructure																									
End Bent No. 1																									
Pier No. 2																									
Pier No. 3																									
End Bent No. 4																									
R.C. Bridge Approach (12") at Bent No. 1																									
R.C. Bridge Approach (12") at Bent No. 4																									
Totals:	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0	0	0	0

** Estimated Quantity

PLOT: 3/6/2023 9:34:50 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

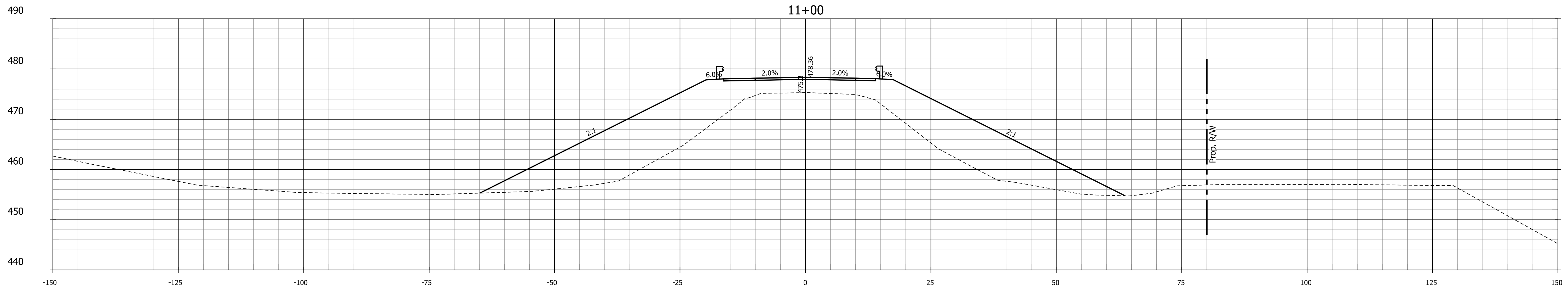
**NOT FOR
CONSTRUCTION**
3/2023

RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		DATE	
DESIGNED: DMH	3/2023	DRAWN: AJ	3/2023		
CHECKED: JL	3/2023	CHECKED: JL	3/2023		

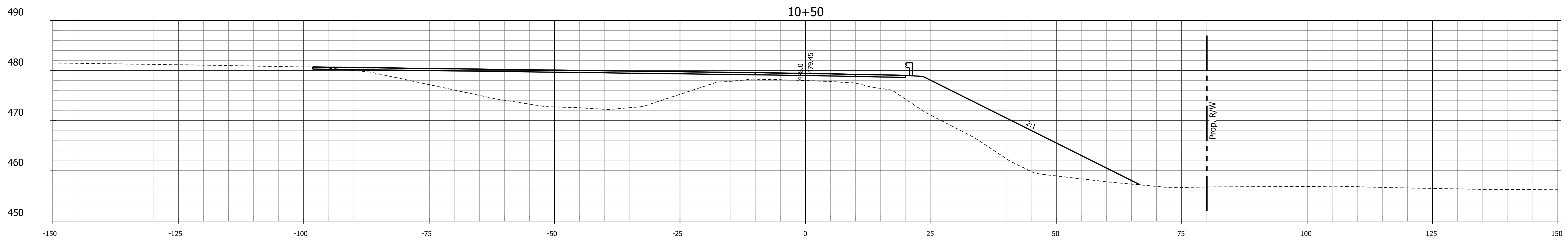
INDIANA
DEPARTMENT OF TRANSPORTATION

BRIDGE SUMMARY

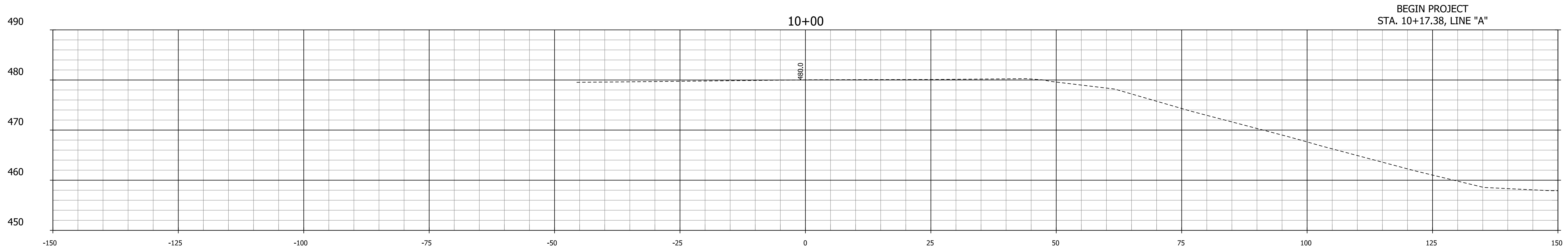
SCALE	BRIDGE FILE
N/A	S1-00058
	DESIGNATION
	1902785
SURVEY BOOK	SHEETS
N/A	19 of 31
CONTRACT	PROJECT
B-42807	1902785



Ac = 0.0 Sft	Af = 758.6 Sft
Vc = 0 Cys	Vf = 889 Cys



Ac = 0.0 Sft	Af = 201.7 Sft
Vc = 0 Cys	Vf = 187 Cys



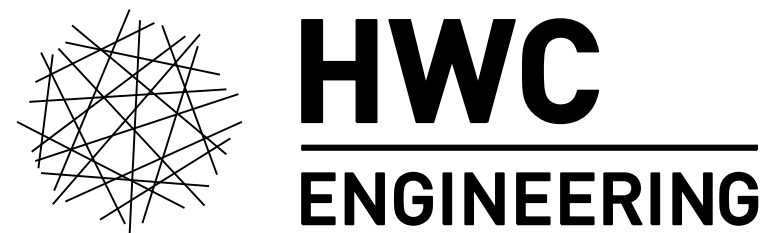
Ac = 0.0 Sft	Af = 0.0 Sft
Vc = 0 Cys	Vf = 0 Cys

BEGIN PROJECT
STA. 10+17.38, LINE "A"

NOTES

- For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:54 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

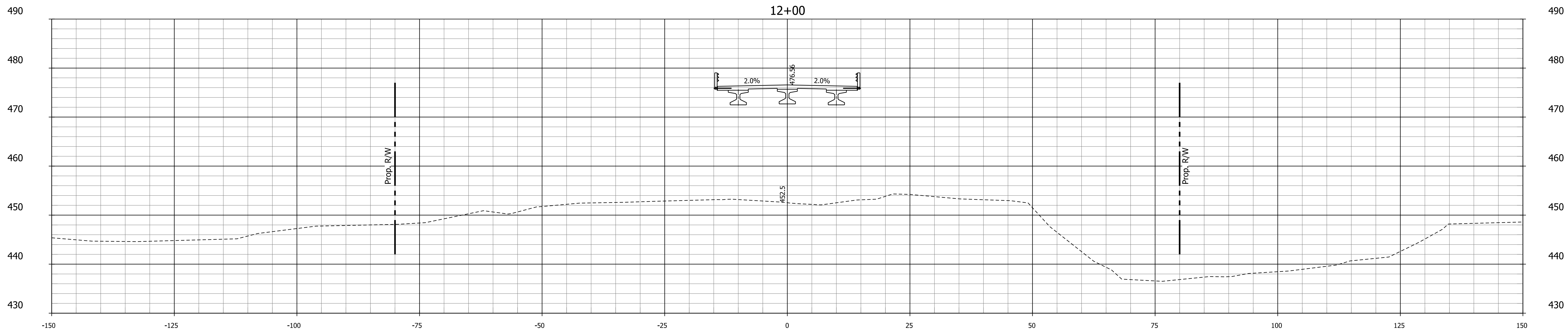
**NOT FOR
CONSTRUCTION**
3/2023

DESIGNED: DMH	3/2023	DRAWN: AJ	3/2023
CHECKED: JL	3/2023	CHECKED: JL	3/2023

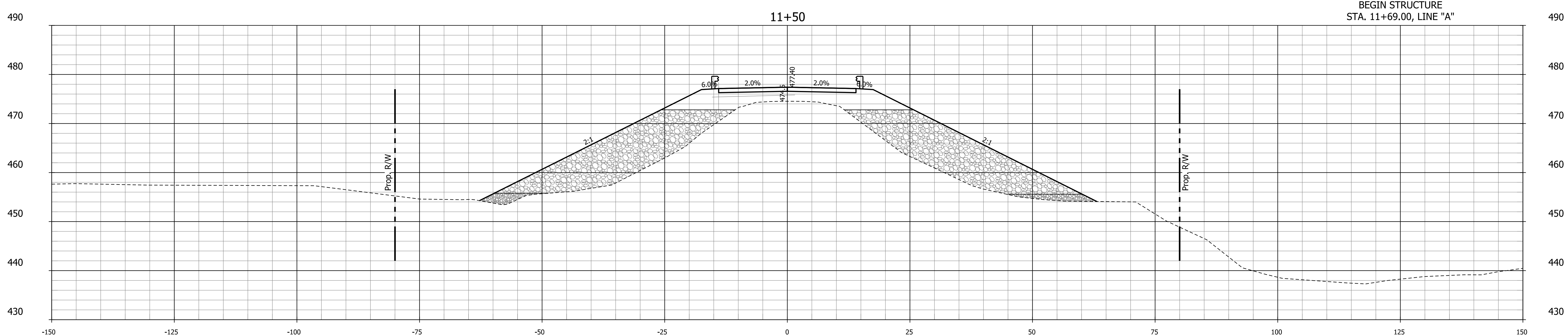
INDIANA
DEPARTMENT OF TRANSPORTATION

**CROSS SECTIONS
LINE "A"**

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	23 of 31
CONTRACT	PROJECT
B-42807	1902785



Ac = 0.0 Sft	Af = 0.0 Sft
Vc = 0 Cys	Vf = 741 Cys

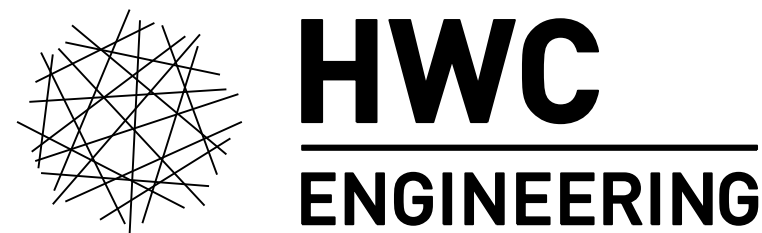


Ac = 0.0 Sft	Af = 800.4 Sft
Vc = 0 Cys	Vf = 1444 Cys

NOTES

1. For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:54 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

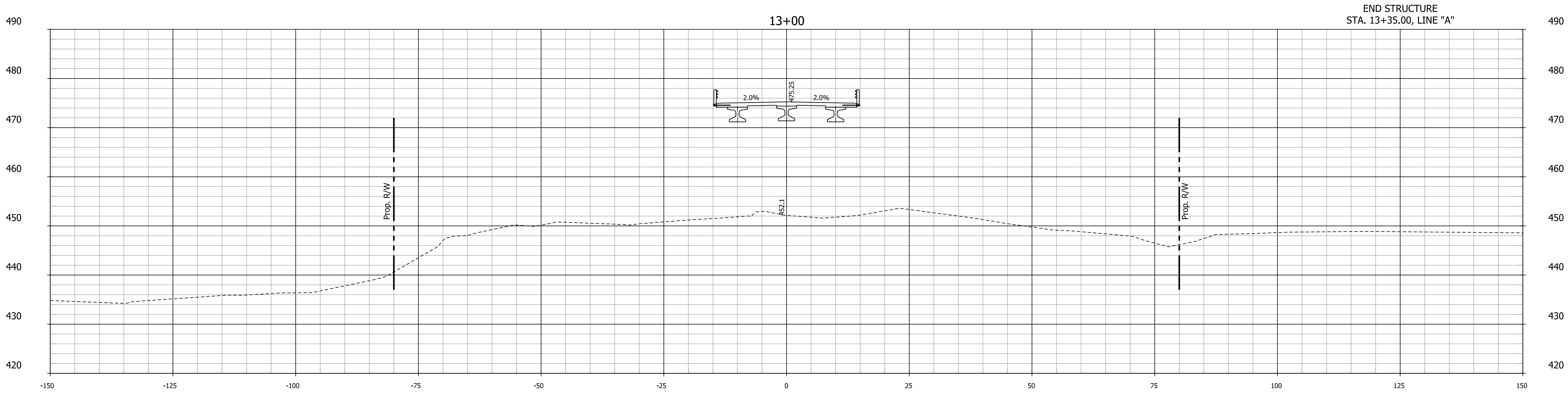
NOT FOR CONSTRUCTION
3/2023

DESIGNED: DMH	3/2023	DRAWN: AJ	3/2023
CHECKED: JL	3/2023	CHECKED: JL	3/2023

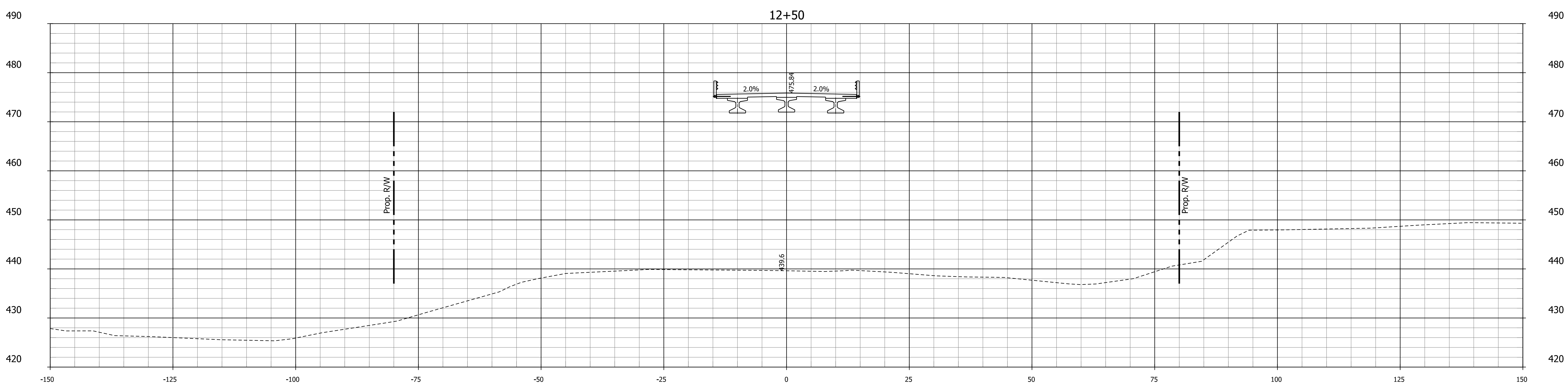
INDIANA
DEPARTMENT OF TRANSPORTATION

**CROSS SECTIONS
LINE "A"**

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	24 of 31
CONTRACT	PROJECT
B-42807	1902785



Ac = 0.0 Sft Af = 0.0 Sft
 Vc = 0 Cys Vf = 0 Cys

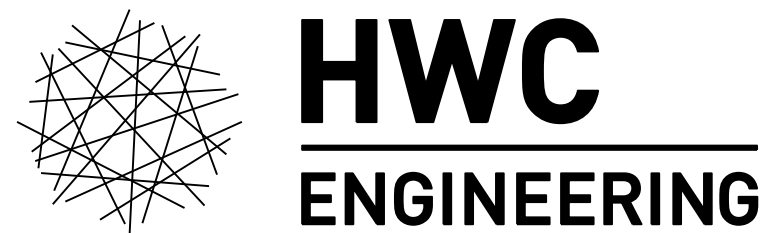


Ac = 0.0 Sft Af = 0.0 Sft
 Vc = 0 Cys Vf = 0 Cys

NOTES

- 1. For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:55 AM



INDIANAPOLIS - TERRE HAUTE
 LAFAYETTE - MUNCIE - NEW ALBANY
 www.hwcengineering.com

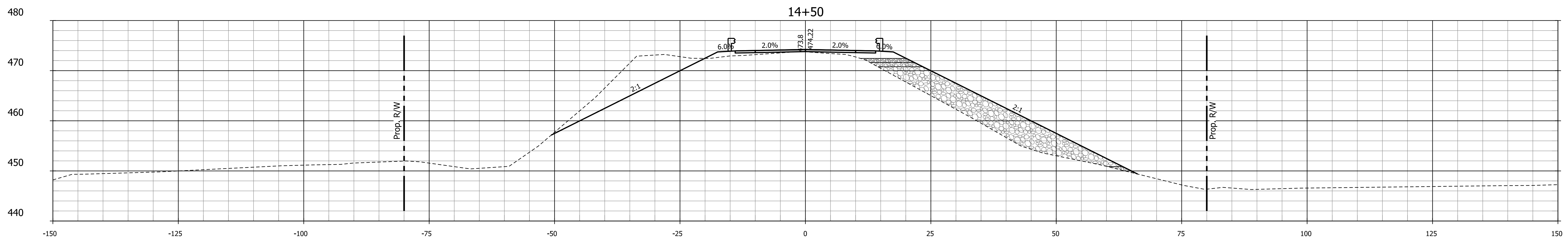
NOT FOR CONSTRUCTION
 3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

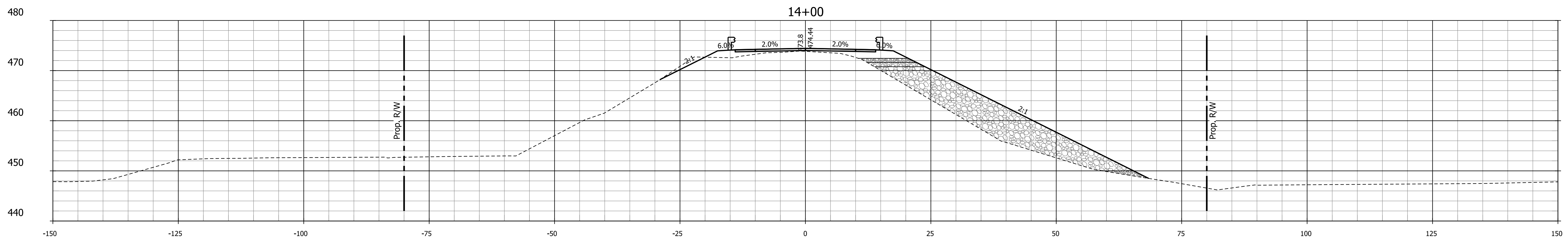
INDIANA
 DEPARTMENT OF TRANSPORTATION

**CROSS SECTIONS
 LINE "A"**

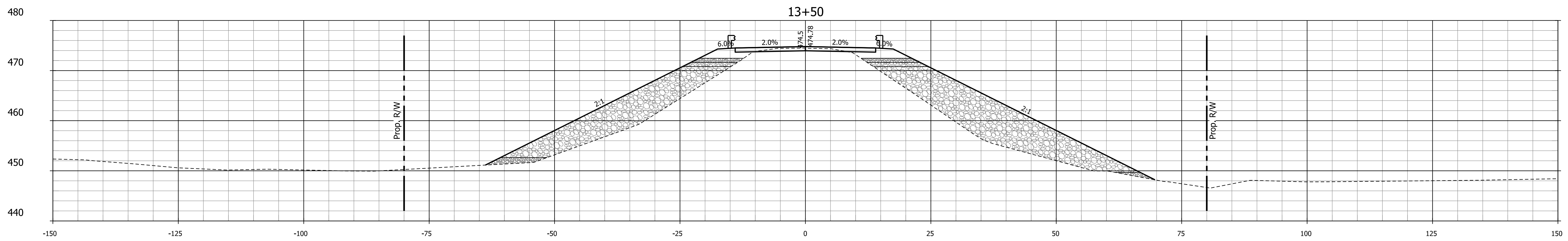
HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	25 of 31
CONTRACT	PROJECT
B-42807	1902785



Ac = 109.6 Sft	Af = 232.0 Sft
Vc = 106 Cys	Vf = 484 Cys



Ac = 5.4 Sft	Af = 290.9 Sft
Vc = 10 Cys	Vf = 822 Cys

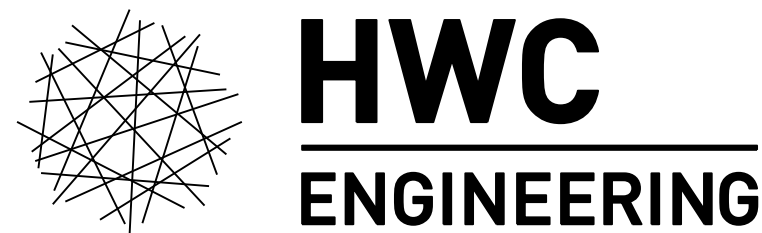


Ac = 5.0 Sft	Af = 596.7 Sft
Vc = 5 Cys	Vf = 553 Cys

NOTES

1. For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:55 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

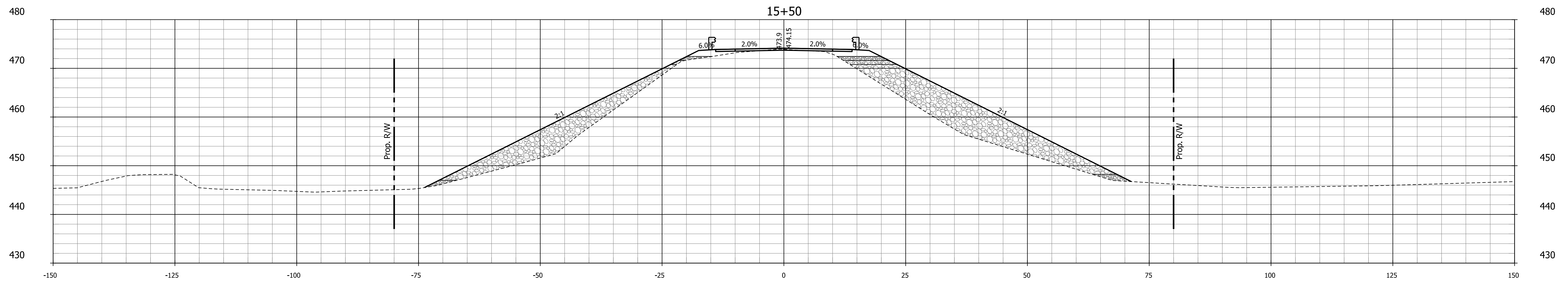
NOT FOR CONSTRUCTION
3/2023

DESIGNED: DMH	3/2023	DRAWN: AJ	3/2023
CHECKED: JL	3/2023	CHECKED: JL	3/2023

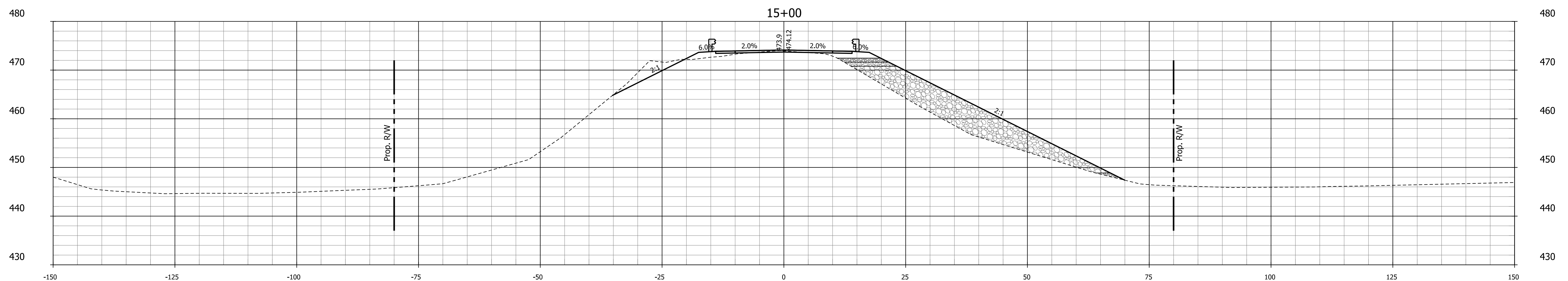
INDIANA
DEPARTMENT OF TRANSPORTATION

**CROSS SECTIONS
LINE "A"**

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	26 of 31
CONTRACT	PROJECT
B-42807	1902785



Ac = 4.7 Sft Af = 479.3 Sft
 Vc = 30 Cys Vf = 681 Cys

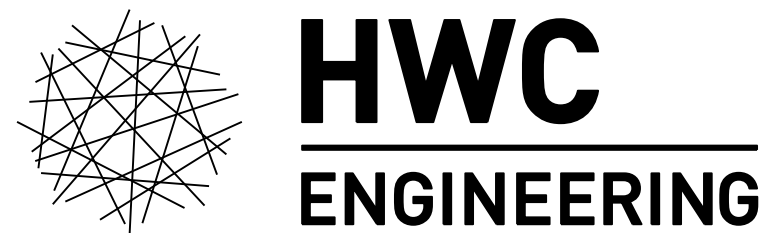


Ac = 27.5 Sft Af = 255.7 Sft
 Vc = 127 Cys Vf = 452 Cys

NOTES

1. For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:56 AM



INDIANAPOLIS - TERRE HAUTE
 LAFAYETTE - MUNCIE - NEW ALBANY
 www.hwcengineering.com

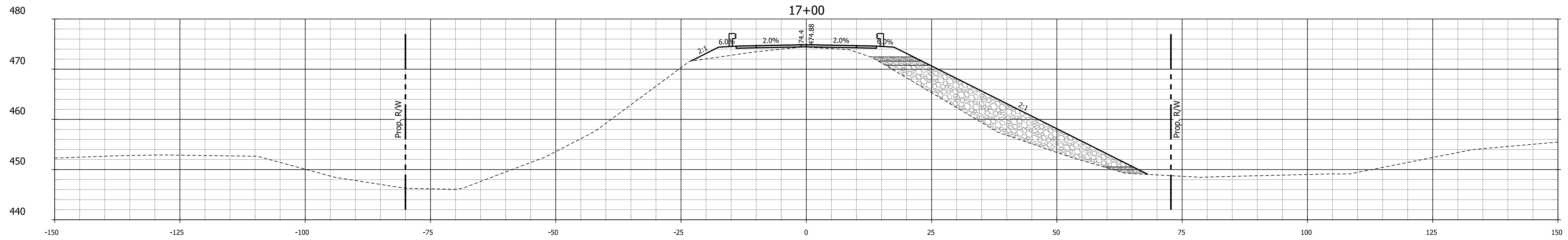
NOT FOR CONSTRUCTION
 3/2023

DESIGNED: DMH	3/2023	DRAWN: AJ	3/2023
CHECKED: JL	3/2023	CHECKED: JL	3/2023

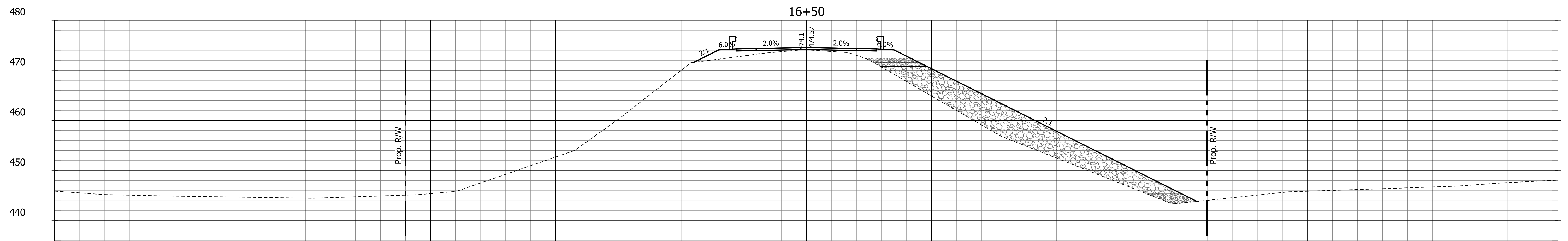
INDIANA
 DEPARTMENT OF TRANSPORTATION

**CROSS SECTIONS
 LINE "A"**

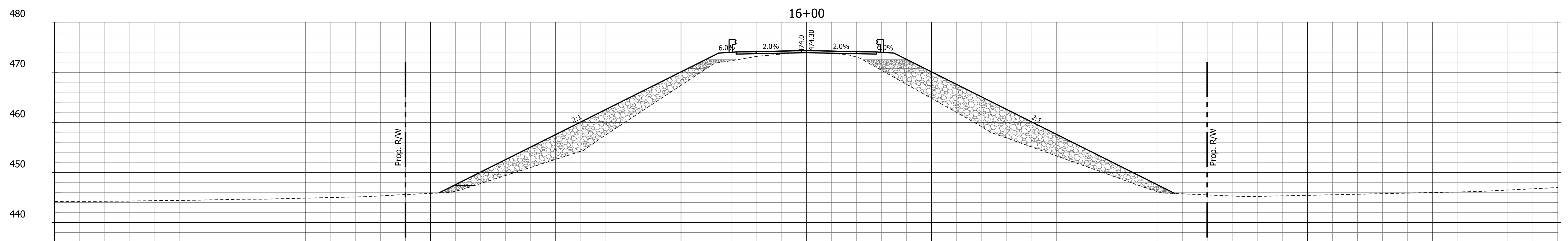
HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	27 of 31
CONTRACT	PROJECT
B-42807	1902785



Ac = 0.8 Sft	Af = 270.1 Sft
Vc = 2 Cys	Vf = 553 Cys



Ac = 0.9 Sft	Af = 327.1 Sft
Vc = 4 Cys	Vf = 726 Cys

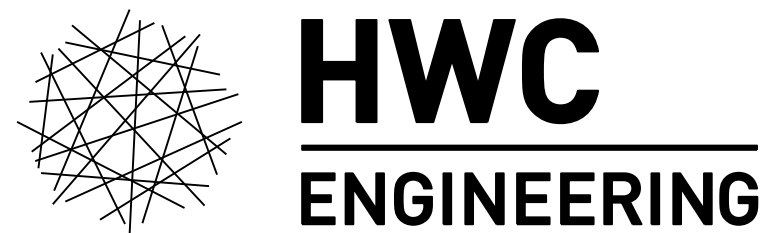


Ac = 3.1 Sft	Af = 457.5 Sft
Vc = 7 Cys	Vf = 867 Cys

NOTES

1. For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:57 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

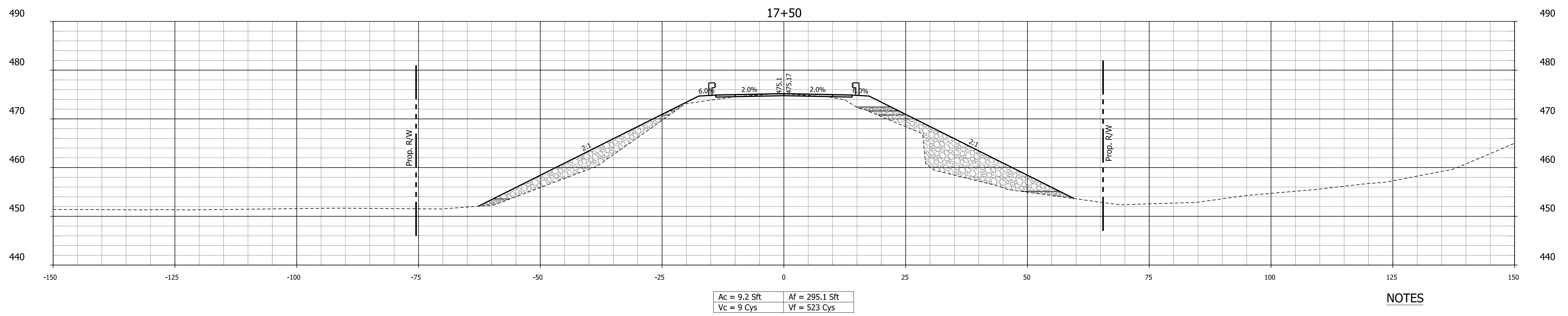
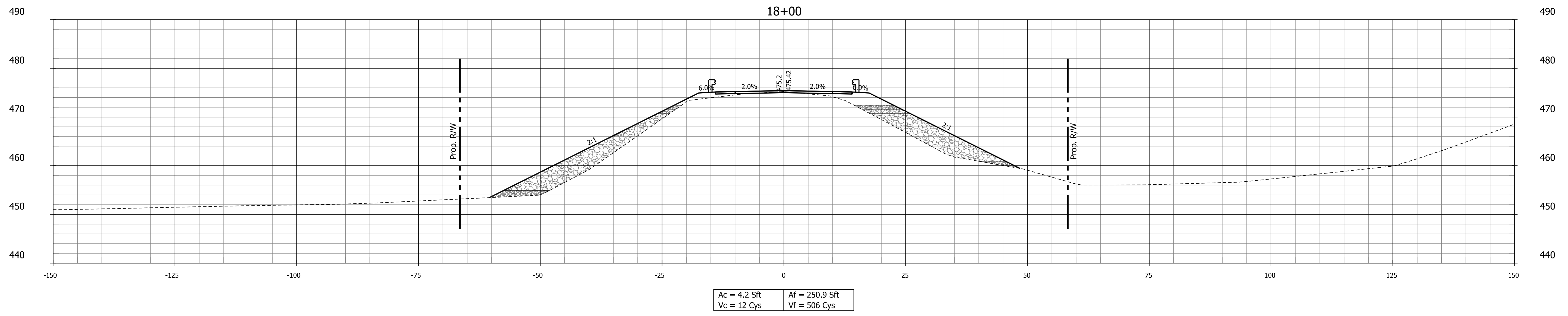
**NOT FOR
CONSTRUCTION**
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

INDIANA
DEPARTMENT OF TRANSPORTATION

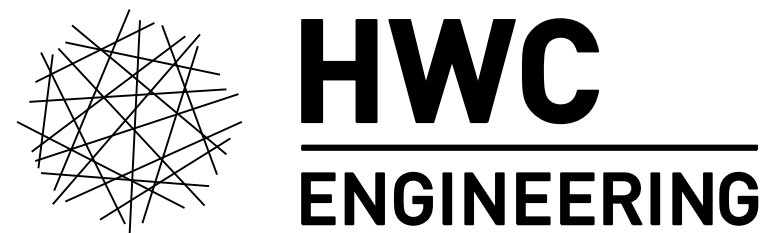
**CROSS SECTIONS
LINE "A"**

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	28 of 31
CONTRACT	PROJECT
B-42807	1902785



NOTES
1. For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:57 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

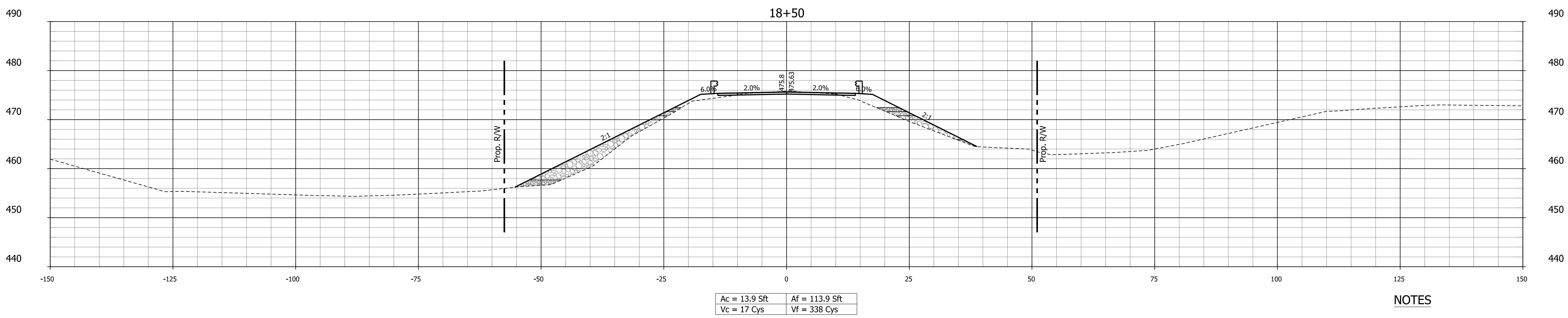
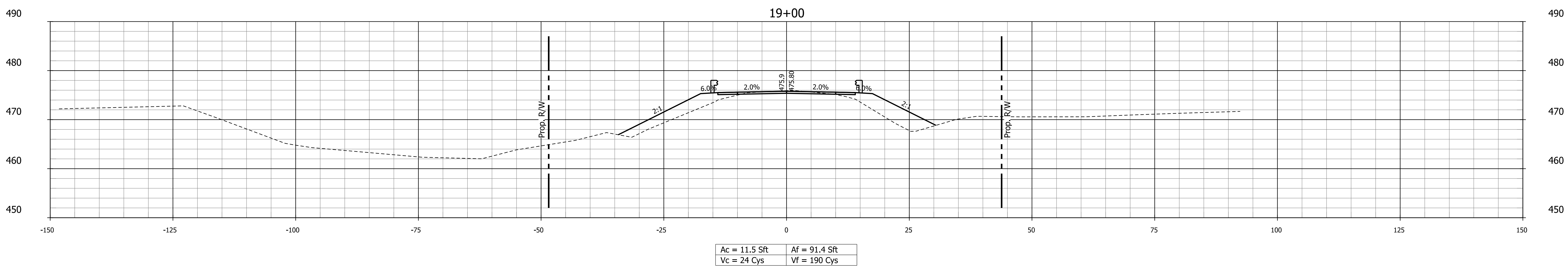
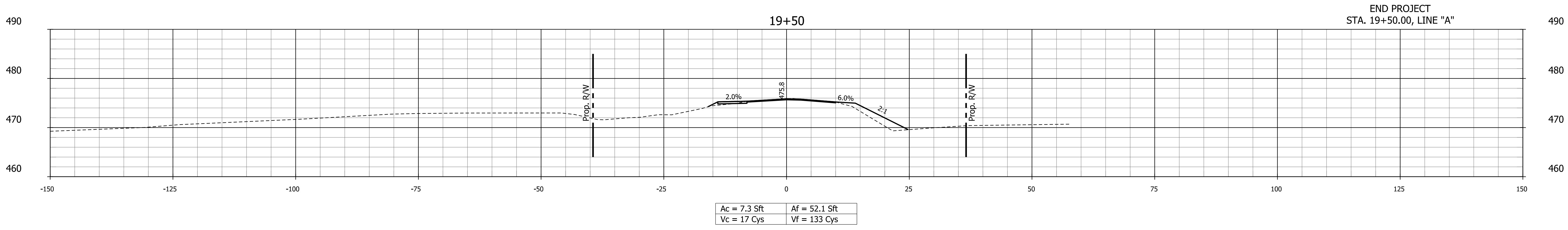
**NOT FOR
CONSTRUCTION**
3/2023

DESIGNED: DMH	3/2023	DRAWN: AJ	3/2023
CHECKED: JL	3/2023	CHECKED: JL	3/2023

INDIANA
DEPARTMENT OF TRANSPORTATION

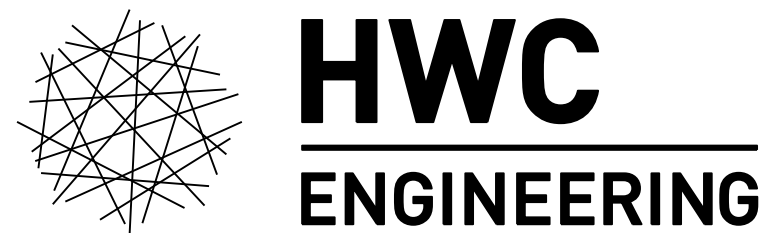
**CROSS SECTIONS
LINE "A"**

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	29 of 31
CONTRACT	PROJECT
B-42807	1902785



NOTES
1. For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:58 AM



INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

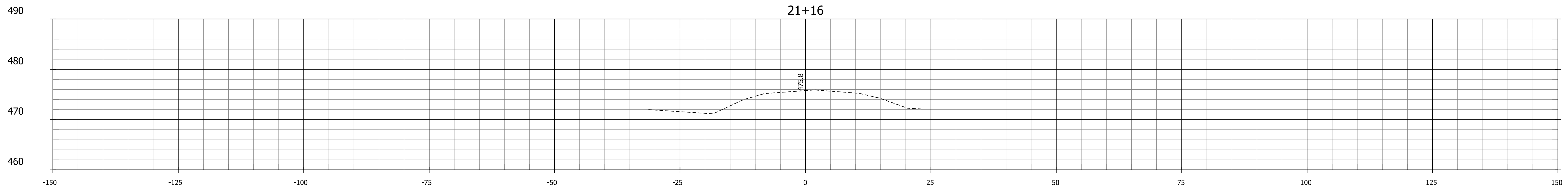
**NOT FOR
CONSTRUCTION**
3/2023

DESIGNED: DMH	3/2023	DRAWN: AJ	3/2023
CHECKED: JL	3/2023	CHECKED: JL	3/2023

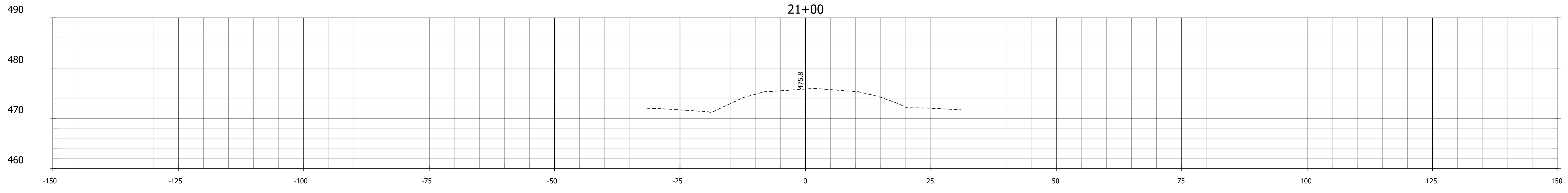
INDIANA
DEPARTMENT OF TRANSPORTATION

**CROSS SECTIONS
LINE "A"**

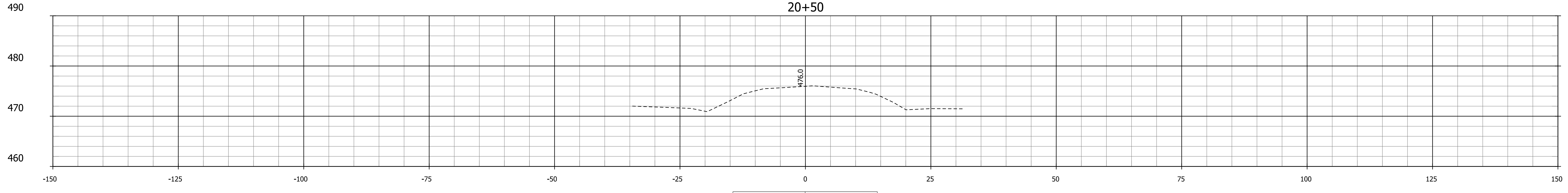
HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	30 of 31
CONTRACT	PROJECT
B-42807	1902785



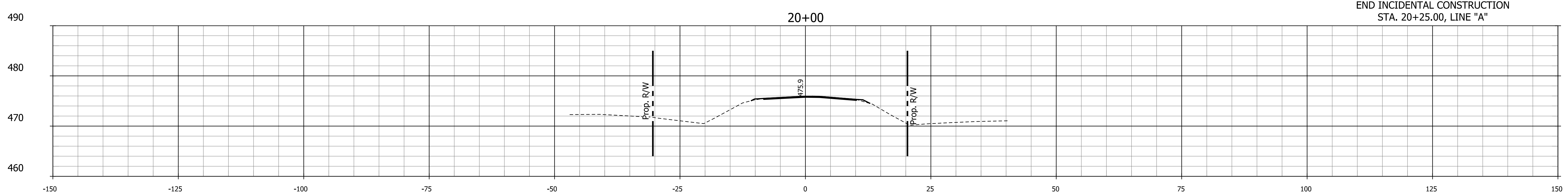
Ac = 0.0 Sft	Af = 0.0 Sft
Vc = 0 Cys	Vf = 0 Cys



Ac = 0.0 Sft	Af = 0.0 Sft
Vc = 0 Cys	Vf = 0 Cys



Ac = 0.0 Sft	Af = 0.0 Sft
Vc = 0 Cys	Vf = 0 Cys

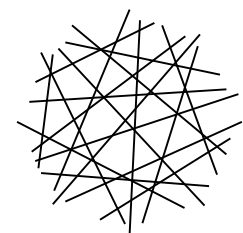


Ac = 0.0 Sft	Af = 0.0 Sft
Vc = 4 Cys	Vf = 15 Cys

NOTES

1. For additional information regarding embankment fill section, see sheet 3.

PLOT: 3/6/2023 9:34:58 AM



HWC
ENGINEERING

INDIANAPOLIS - TERRE HAUTE
LAFAYETTE - MUNCIE - NEW ALBANY
www.hwcengineering.com

**NOT FOR
CONSTRUCTION**
3/2023

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNED: DMH	3/2023	DRAWN: AJ
CHECKED: JL	3/2023	CHECKED: JL

INDIANA
DEPARTMENT OF TRANSPORTATION

**CROSS SECTIONS
LINE "A"**

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	S1-00058
VERTICAL SCALE	DESIGNATION
1" = 10'	1902785
SURVEY BOOK	SHEETS
N/A	31 of 31
CONTRACT	PROJECT
B-42807	1902785