Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

Drawing Approval

All shop drawings and falsework drawings that require approval shall be submitted to and approved by the Contractor, who shall stamp, certify or provide other such evidence on the drawings that they have received contractor approval. The approved drawings shall then be submitted to the Poweshiek County Engineer for review and approval.

Address: 102 S 3rd St.
PO Box 306
Montezuma, IA 50171
Telephone: (641) 623-5435

Shop drawings shall be independent drawings with adequate dimensioning for fabrication of individual pieces of each component. Photocopies of plan drawings and non-contractor approved plans will be rejected.

These drawings shall NOT be sent to Iowa D.O.T. Office of Bridges and Structures.

IOWA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLANS OF PROPOSED IMPROVEMENT ON THE

SECONDARY ROAD SYSTEM

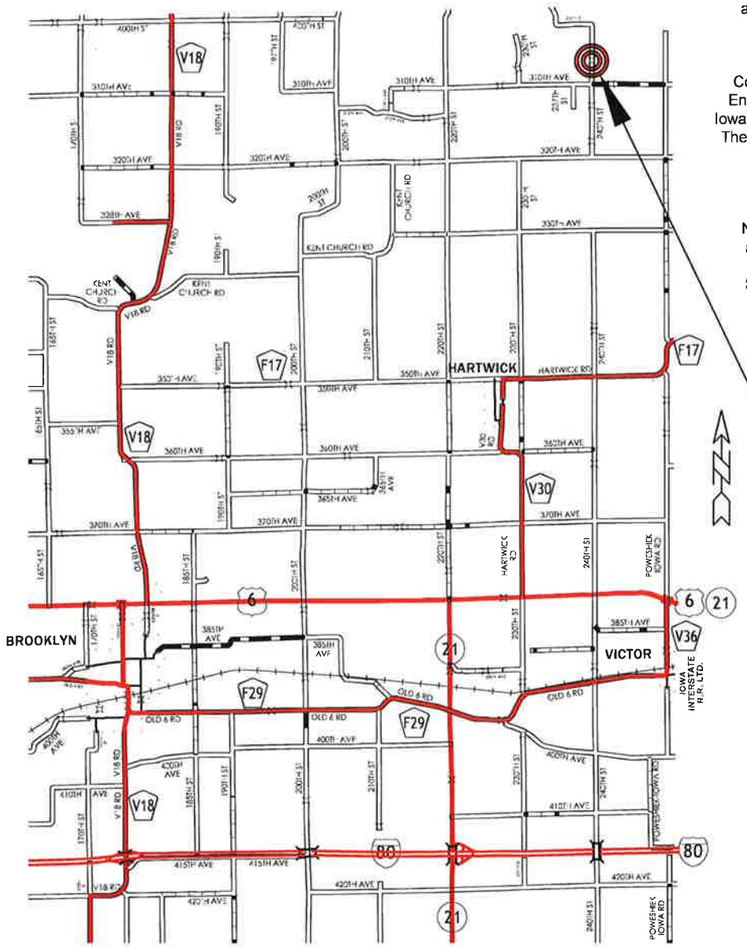
POWESHIEK COUNTY

BRIDGE REPLACEMENT - PPCB
On 240th Street, Over Walnut Creek, Sec. 01-T81N-R13W
Refer to the Proposal Form for list of applicable specifications.

TRAFFIC CONTROL PLAN
This road will be closed to thru traffic during construction. Access shall be maintained as provided for in Article 1107.08 of the current Standard Specifications and Standard Road Plan TC-252. Contractor is to furnish and maintain all signs and barricades required for this project. A posted detour will not be provided.

US ARMY CORPS OF ENGINEERS 404 PERMIT
Construct this project according to the requirements of US Army Corps of Engineers Nationwide Permit 14. A copy of this permit is available from the Iowa DOT website (http://envpermits.iowadot.gov/CMEPortalENV/Home.aspx). The US Army of Corps of Engineers reserves the right to visit the site without prior notice.

POLLUTION PREVENTION PLAN
This project is covered by the Iowa Department of Natural Resources NPDES General Permit No. 2. The Contractor shall carry out the terms and conditions of General Permit No. 2 and the Storm Water Pollution Prevention Plan which is a part of these contract documents. Refer to Section 2602 of the Standard Specifications for additional information.



BROS-C079(74)--8J-79 — Total Sheets - 21

INDEX OF SHEETS

Sheet	Content	
1	Title Sheet	
2	ESTIMATED PROJECT QUANTITIES, TYPICAL SECTIONS, UTILITY CONTACT INFORMATION, STANDARD ROAD PLANS, SAFETY CLOSURES	
3	ESTIMATE REFERENCE INFORMATION	
4	ESTIMATE REFERENCE INFORMATION	
5	Tabulations	CLEARING AND GRUBBING, EARTHWORK, SPREADING TOPSOIL
6	Tabulations	PERIMETER AND SEDIMENT CONTROL DEVICES, SILT FENCES, GRANULAR SURFACING ON ROADWAY, REMOVAL OF EXISTING STRUCTURES, REMOVAL OF FENCE, ACCESS POINTS, SEEDING
7	Tabulations	TABULATION OF BRIDGE QUANTITIES, H30-06 THREE-SPAN PPCB BRIDGE STANDARDS
8	Tabulations	REVETMENT, LIST OF SUBDRAIN WORK, FENCING
9	SITE PLAN VIEW & SITE PROFILE VIEW	
10	BRIDGE PLAN VIEW & BRIDGE PROFILE VIEW	
11	EROSION CONTROL PLAN VIEW	
12	FENCING PLAN VIEW	
13	PILE DRIVING NOTES	
14	DECK ELEVATION GRID, SURVEY INFORMATION, STAKING AID	
15	BORING LOG (SOUTH ABUTMENT)	
16	BORING LOG (S. ABUTMENT/S. PIER)	
17	BORING LOG (SOUTH PIER)	
18	BORING LOG (NORTH PIER)	
19	BORING LOG (N. PIER/N. ABUTMENT)	
20	BORING LOG (NORTH ABUTMENT)	
21	POLLUTION PREVENTION PLAN	

LICENSED PROFESSIONAL ENGINEER — LYLE W. BREHM 15048 — IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE THE LAWS OF THE STATE OF IOWA.

LYLE W. BREHM, P.E. — DATE 8/17/2026

MY LICENSE RENEWAL IS DECEMBER 31, 2027.

PAGES OR SHEETS COVERED BY THIS SEAL 1-14 & 21 OF 21 SHEETS.

LICENSED PROFESSIONAL ENGINEER — NICHOLAS GILLES 21385 — IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE THE LAWS OF THE STATE OF IOWA.

NICHOLAS GILLES, P.E. — DATE 9-2-2026

MY LICENSE RENEWAL IS DECEMBER 31, 2027.

PAGES OR SHEETS COVERED BY THIS SEAL 15-20 OF 21 SHEETS.

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BOARD OF SUPERVISORS

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Jacki Bolen

Chair, Jason Roudabush

Poweshiek County
Secondary Roads

ACCEPTED FOR LETTING

POWESHIEK COUNTY ENGINEER — DATE 8/17/2026

2018 Traffic Count = 40 vpd

POWESHIEK COUNTY	BROS-C079(74)--8J-79	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		IOWA	2027	1	21

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

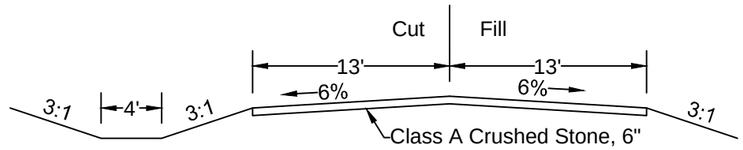
POWESHIEK COUNTY
Letting Date: December 15, 2026

ESTIMATED PROJECT QUANTITIES

REF	CODE NO.	DESCRIPTION	UNIT	TOTAL	As Built
0010	2101-0850001	CLEARING AND GRUBBING	ACRE	0.070	
0020	2102-2625000	EMBANKMENT-IN-PLACE	CY	8,804.500	
0030	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	3,155.700	
0040	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	5,777.600	
0050	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	1,379.300	
0060	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	1,319.900	
0070	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	45.000	
0080	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	1.000	
0090	2402-2720000	EXCAVATION, CLASS 20	CY	137.000	
0100	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	272.800	
0110	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	69,469.000	
0120	2407-0551259	BEAM, PRETENSIONED PRESTRESSED CONCRETE, B59	EACH	10.000	
0130	2407-0551267	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, B67	EACH	5.000	
0140	2408-7800000	STRUCTURAL STEEL	LB	3,149.000	
0150	2414-6424124	CONCRETE OPEN RAILING, TL-4	LF	411.700	
0160	2417-0225018	APRONS, METAL, 18 IN. DIA.	EACH	3.000	
0170	2417-0225036	APRONS, METAL, 36 IN. DIA.	EACH	2.000	
0180	2417-0225060	APRONS, METAL, 60 IN. DIA.	EACH	2.000	
0190	2417-1040018	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 18 IN. DIA.	LF	444.000	
0200	2417-1040036	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 36 IN. DIA.	LF	60.000	
0210	2417-1040060	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 60 IN. DIA.	LF	52.000	
0220	2501-0201057	PILES, STEEL, HP 10 X 57	LF	960.000	
0230	2501-0201473	PILES, STEEL, HP 14 X 73	LF	1,120.000	
0240	2501-5478073	CONCRETE ENCASEMENT OF STEEL H PILES, HP 14 X 73 (P10L TYPE 3)	LF	249.200	
0250	2501-6335010	PREBORED HOLES	LF	120.000	
0260	2502-8215808	SUBDRAIN, TILE, 8 IN. DIA.	LF	10.000	
0270	2503-3775018	GATE, OUTLET CONTROL, FLAP, 18 IN.	EACH	1.000	
0280	2507-6800061	REVETMENT, CLASS E	TON	1,000.400	
0290	2519-3280000	FENCE, FIELD	LF	1,112.000	
0300	2519-3300400	FIELD FENCE BRACE PANELS	EACH	29.000	
0310	2519-4200110	REMOVAL OF FENCE, BARBED WIRE	LF	1,983.200	
0320	2524-9100030	OBJECT MARKER, TYPE 3	EACH	4.000	
0330	2526-8285010	CONSTRUCTION SURVEY, MONUMENT PRESERVATION	LS	1.000	
0340	2526-8285020	CONSTRUCTION SURVEY, CONTROL POINT SURVEY	LS	1.000	
0350	2526-8285030	CONSTRUCTION SURVEY, ROW	LS	1.000	
0360	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	1.000	
0370	2528-2518000	SAFETY CLOSURE	EACH	4.000	
0380	2528-8445110	TRAFFIC CONTROL	LS	1.000	
0390	2533-4980005	MOBILIZATION	LS	1.000	
0400	2601-2634100	MULCHING	ACRE	3.300	
0410	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	3.300	
0420	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	3.300	
0430	2602-0000020	SILT FENCE	LF	390.000	
0440	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	600.000	
0450	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	990.000	
0460	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	2.000	
0470	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1.000	

UTILITY CONTACT INFORMATION

Company	Contact Name	Email Address	Phone Number
Windstream	Trae Bodensteiner	trae.bodensteiner@windstream.com	(641) 840-5500
TIP REC	Cole Calkins	ccalkins@tiprec.com	(641) 522-9221



Typical Section

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
DR-203	04-21-20	Metal Pipe Aprons and Beveled Ends
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-502	04-21-15	Seeding in Rural Areas
EW-101	10-17-17	Embankment & Rebuilding Embankments
EW-102	10-20-15	Allowable Placement of Unsuitable Soil in Embankments
EW-202	04-19-16	Bridge Berm Grading Without Recoverable Slope (Non-Barnroof Section)
MI-101	10-20-15	Fencing Layout
MI-103	10-20-15	Deer Fence and Field Fence Construction
SI-173	04-19-16	Object Markers
TC-252	10-20-26	Routes Closed to Traffic

Bid Items Referenced: 108-13A
0370 08-01-08

SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
	1		At 390th St & W Ave
27+50		1	EOP
06+50		1	BOP
	1		At 240th St & 310th Ave
Total	2	2	

Scrape samples of paint were taken to get an indication of the existence of and level of total chromium and total lead. The analysis of total chromium in the sample was 23,600 ppm. The analysis of total lead in the sample was 6160 ppm. The analysis shows the existence of these two toxic constituents. The levels indicated by these tests could create conditions above regulatory limits for health safety requirements. No other substances were analyzed. The bidder should not rely on the LPA's testing and analysis for any purpose other than an indication of the existence of these two constituents.

An investigation was made for the presence of asbestos by Scott Brown (License #17-8740I). Asbestos was not detected in the bridge elements.
If asbestos is discovered during removal Poweshiek County will contract with a licensed asbestos contractor. The Prime Contractor will be required to coordinate with the asbestos contractor.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
0010	2101-0850001	CLEARING AND GRUBBING Work is located in an area of forested wetlands and is to be minimized. See Tabulation CLEARING AND GRUBBING on Sheet 5 and EROSION CONTROL PLAN VIEW on Sheet 11.
0020	2102-2625000	EMBANKMENT-IN-PLACE To be provided by Contractor. See Tabulation EARTHWORK on Sheet 5.
0030	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW Suitable material shall be used in construction of approach grading. Unsuitable material may be wasted on site. See STANDARD ROAD PLAN EW-102 for placement. Excess material may be wasted on site. See Tabulation EARTHWORK on Sheet 5. Please note guardrail blisters are omitted (not to be constructed).
0040	2104-2710020	EXCAVATION, CLASS 10, CHANNEL See Tabulation EARTHWORK on Sheet 5.
0050	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD This is required to meet NPDES permit requirements. Quantity pertains to work within project limits. Topsoil shall be stripped from within project limits and spread uniformly (min. 4 inch depth) over all areas not covered by pavement or granular material. Areas shall be undercut prior to placing topsoil. Contractor is to familiarize themself with Iowa law as it pertains to removal and replacement of topsoil within project area. See Tabulation SPREADING TOPSOIL on Sheet 5.
0060	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE See Tabulation GRANULAR SURFACING ON ROADWAY on Sheet 6. Rock is estimated at a density of 130 PCF.
0070	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE See Tabulation ACCESS POINTS on Sheet 6.
0080	2401-6745625	REMOVAL OF EXISTING BRIDGE Existing structure (153'x20' Steel I-Beam Bridge, Concrete Abutments/Piers with Spread Footing, Concrete Deck) to become property of Contractor and shall be removed from the site by the Contractor. Existing structure shall be removed to at least 1' below streambed. See Tabulation REMOVAL OF EXISTING STRUCTURES on Sheet 6.
0090	2402-2720000	EXCAVATION, CLASS 20 Quantity is based on the assumption that CLASS 10 R&B and CLASS 10 CHANNEL work is completed prior to starting excavation for abutments. Suitable material shall be used in construction of approach grading. No payment for Overhaul will be allowed. Unsuitable and excess material may be wasted on site. See STANDARD ROAD PLAN EW-102 for allowable placement.
0100	2403-0100010	STRUCTURAL CONCRETE (BRIDGE) Quantity excludes STRUCTURAL CONCRETE for PILE ENCASEMENTS and OPEN RAIL (incidental). All Structural Concrete shall be Class 'C'. Shall include Certified Plant Inspection. See TABULATION OF BRIDGE QUANTITIES on Sheet 7.
0110	2404-7775005	REINFORCING STEEL, EPOXY COATED Quantity excludes REINFORCING STEEL for PILE ENCASEMENTS (incidental). See TABULATION OF BRIDGE QUANTITIES on Sheet 7 and H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.
0120	2407-0551259	BEAM, PRETENSIONED PRESTRESSED CONCRETE, B59 See H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.
0130	2407-0551267	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, B67 See H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.
0140	2408-7800000	STRUCTURAL STEEL See H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.
0150	2414-6424124	CONCRETE OPEN RAILING, TL-4 Shall include Certified Plant Inspection. See TABULATION OF BRIDGE QUANTITIES on Sheet 7 and H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.
0160	2417-0225018	APRONS, METAL, 18 IN. DIA. See Tabulation ACCESS POINTS on Sheet 6.
0170	2417-0225036	APRONS, METAL, 36 IN. DIA. See Tabulation ACCESS POINTS on Sheet 6.
0180	2417-0225060	APRONS, METAL, 60 IN. DIA. See Tabulation ACCESS POINTS on Sheet 6.
0190	2417-1040018	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 18 IN. DIA. See Tabulation ACCESS POINTS on Sheet 6.
0200	2417-1040036	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 36 IN. DIA. See Tabulation ACCESS POINTS on Sheet 6.
0210	2417-1040060	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 60 IN. DIA. See Tabulation ACCESS POINTS on Sheet 6.
0220	2501-0201057	PILES, STEEL, HP 10 X 57 Piles are friction bearing. Drive to full penetration where practical. See TABULATION OF BRIDGE QUANTITIES on Sheet 7, PILE DRIVING NOTES on Sheet 13, and BRIDGE PLAN VIEW on Sheet 10 for length and location. Refer to H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.
0230	2501-0201473	PILES, STEEL, HP 14 X 73 Piles are friction bearing. Drive to full penetration where practical. See TABULATION OF BRIDGE QUANTITIES on Sheet 7, PILE DRIVING NOTES on Sheet 13, and BRIDGE PLAN VIEW on Sheet 10 for length and location. Refer to H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.
0240	2501-5478073	CONCRETE ENCASEMENT OF STEEL H PILES, HP 14 X 73 (P10L TYPE 3) All Structural Concrete shall be Class 'C'. Shall include Certified Plant Inspection. See TABULATION OF BRIDGE QUANTITIES on Sheet 7 for lengths and locations. Refer to H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.
0250	2501-6335010	PREBORED HOLES See Tabulation TABULATION OF BRIDGE QUANTITIES on Sheet 7 and H30-06 THREE-SPAN PPCB BRIDGE STANDARDS listed on Sheet 7.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
0260	2502-8215808	SUBDRAIN, TILE, 8 IN. DIA. Item is for replacement of farm tile. Includes connections to existing farm tile, tile outlet and rodent guard. See LIST OF SUBDRAIN WORK on Sheet 8.
0270	2507-3250005	GATE, OUTLET CONTROL, FLAP, 18 IN. To be placed at outlet in SW Quadrant. See EROSION CONTROL PLAN VIEW on Sheet 11 for limits and Tabulation LIST OF SUBDRAIN WORK on Sheet 8 for locations and quantities. Method of Measurement and Basis of Payment to be per installation.
0280	2507-6800061	REVETMENT, CLASS E To be placed at a thickness of 2 feet. See EROSION CONTROL PLAN VIEW on Sheet 11 for limits and Tabulation REVETMENT on Sheet 8 for locations and quantities.
0290	2519-3280000	FENCE, FIELD See Tabulation FENCING on Sheet 8 and FENCING PLAN VIEW on Sheet 12.
0300	2519-3300400	FIELD FENCE BRACE PANELS See Tabulation FENCING on Sheet 8 and FENCING PLAN VIEW on Sheet 12.
0310	2519-4200110	REMOVAL OF FENCE, BARBED WIRE See Tabulation REMOVAL OF FENCE on Sheet 6
0320	2524-9100030	OBJECT MARKER, TYPE 3 To be placed at the four corners of the bridge. See STANDARD ROAD PLAN SI-173. Method of Measurement and Basis of Payment to be per each OBJECT MARKER installed.
0330	2526-8285010	CONSTRUCTION SURVEY, MONUMENT PRESERVATION Includes preservation of property pins, cornerstone, and re-establishment of cornerstones located within the project limits.
0340	2526-8285010	CONSTRUCTION SURVEY, CONTROL POINT SURVEY Place any control points required by the prime contractor or any subcontractors.
0350	2526-8285030	CONSTRUCTION SURVEY, ROW Locate and place monumentation for ROW. Provide additional ROW markers as required by the contractor. May include locating FENCE, FIELD.
0360	2528-2518000	CONSTRUCTION SURVEY, LOCATION SURVEY The use of Automated Machine Guidance is optional. Surveyor must communicate with the prime contractor or any subcontractors to coordinate staking requirements.
0370	2528-2518000	SAFETY CLOSURE Shall include 2 Hazard Closures and 2 Safety Closures. See Tabulation SAFETY CLOSURES on Sheet 2 and STANDARD ROAD PLAN TC-252.
0400	2601-2634100	MULCHING Contractor is to reshape, fertilize, seed, and mulch any areas disturbed during construction (excluding areas with GRANULAR SURFACING or REVETMENT). See EROSION CONTROL PLAN VIEW on Sheet 11 for limits and Tabulation SEEDING on Sheet 6 for locations and areas.
0410	2601-2636043	SEEDING AND FERTILIZING (RURAL) Contractor is to reshape, fertilize, seed, and mulch any areas disturbed during construction (excluding areas with GRANULAR SURFACING or REVETMENT). See EROSION CONTROL PLAN VIEW on Sheet 11 for limits and Tabulation SEEDING on Sheet 6 for locations and areas.
0420	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING Shall be used at the discretion of the Engineer to seed disturbed areas outside of dates allowed by specifications. Item may be omitted if seeding within specified dates can be achieved in a timely manner.
0430	2602-0000020	SILT FENCE See EROSION CONTROL PLAN VIEW on Sheet 11 and Tabulation PERIMETER AND SEDIMENT CONTROL DEVICES on Sheet 6 for locations.
0440	2602-0000030	SILT FENCE FOR DITCH CHECKS See EROSION CONTROL PLAN VIEW on Sheet 11 and Tabulation PERIMETER AND SEDIMENT CONTROL DEVICES on Sheet 6 for locations.
0450	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA. See EROSION CONTROL PLAN VIEW on Sheet 11 and Tabulation PERIMETER AND SEDIMENT CONTROL DEVICES on Sheet 6 for locations.
0460	2602-0010010	MOBILIZATIONS, EROSION CONTROL See EROSION CONTROL PLAN VIEW on Sheet 11 and Tabulation PERIMETER AND SEDIMENT CONTROL DEVICES on Sheet 6 for locations.
0470	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL Item is intended to allow temporary erosion control when placement of Silt Fence is not possible. Item may be omitted if Silt Fence can be placed in a timely manner. See EROSION CONTROL PLAN VIEW on Sheet 11, and Tabulation PERIMETER AND SEDIMENT CONTROL DEVICES ON SHEET 6 for locations.

Bid Items Referenced:
0010

110-17
04-18-17

CLEARING AND GRUBBING

Location		Work and Material Type	Trees, Stumps, and Logs and Down Timber Material Diameters											All Other Materials		Estimated Quantities			Remarks
Station to Station or Ref. Loc. Sign to Re. Loc. Sign or Description	Direction of Travel		3"-6"	>6"-9"	>9"-12"	>12"-15"	>15"-18"	>18"-24"	>24"-30"	>30"-36"	>36"-42"	>48"-60"	>60"-72"	>72"	Length	Width	Units	Area	Herbicide Application	
															FT	FT	Units	Acres	Each	
14+00 to 16+50	SB	Trees, brush, fence																0.07		
Total																		0.07		

Bid Items Referenced:
0020, 0030, 0040, 0090

EARTHWORK

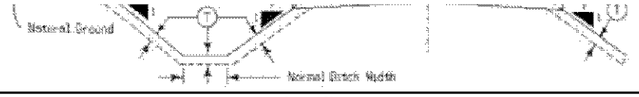
Refer to Section 2102 of the Standard Specifications, EW-101, & EW-102

* Excess shall be paid for as Class 10, Roadway & Borrow if used as Class 10, Roadway & Borrow "fill". Excess not used as Class 10 Roadway & Borrow shall be incidental to Class 10, Channel.

Location	Excavation Type	Cut	Raw Fill	Shrinkage Factor	Cut Req'd For Fill	Total Borrow Needed	Borrow Available from Site	Contractor Furnished Borrow	*Excess	Payment Quantity	Remarks
Station		CY	CY	%	CY	CY	CY	CY	CY	CY	
Total	Class 10 Channel	5777.6	2668.4	35%	3602.3	0.0	5777.6	0.0	2175.3	5,777.6	Suitable Class 10 Channel Excess may be used for Class 10, Roadway & Borrow. Class 10 Channel Excess may be wasted on site.
	Class 10, Roadway & Borrow	3155.7	8859.4	35%	11960.2	11,960.2	3155.7	8,804.5	0.0	3,155.7	Class 10 Excess shall be used or Class 10, Roadway & Borrow.
	Class 20	137								137	Suitable Class 20 may be used for Class 10, Roadway & Borrow. Class 20 may be wasted on site.

Bid Items Referenced:
0050

SPREADING TOPSOIL



Perform this work according to Section 2105. Prior to placing topsoil on any cohesive soil, scarify the area to be covered to a minimum depth of 3 inches.

Appropriate adjustments have been made in the template quantities to reflect the placement of topsoil on foreslope, backslope and ditch bottom as detailed hereon.

Location							Remarks	Topsoil Excavation Available From			
Station to Station		Side	Slope	T	Area	Quantity		Station to Station		Amount Reserved	Remarks
		LT or RT	B. or F.	IN	SF	CY				CY	
16+75	26+50	LT	Both	4.00	34,668.0	428.0	NW Quadrant	16+75	26+50	428.0	
17+50	26+50	RT	Both	4.00	43,914.1	542.1	NE Quadrant	17+50	26+50	542.1	
11+00	16+50	LT	Both	4.00	12,234.6	151.0	SW Quadrant	11+00	16+50	151.0	
11+00	17+00	RT	Both	4.00	20,911.6	258.2	SE Quadrant	11+00	17+00	258.2	
Total					111,728.3	1,379.3				1,379.3	

2018 Traffic Count = 40 vpd

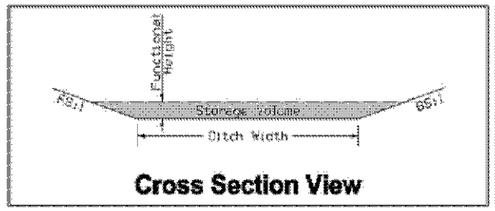
Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

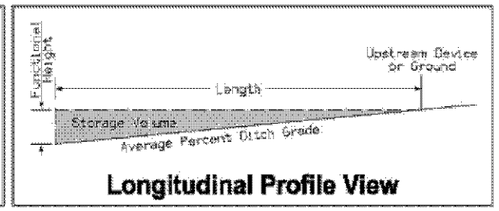
Bid Items Referenced:
0440, 0450

100-18
10-16-18

PERIMETER AND SEDIMENT CONTROL DEVICES



Cross Section View



Longitudinal Profile View

*The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.

*Volume equation: [0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]

Basin No.	Type	Location		Bid Items			Stormwater Storage Volume Summary							Remarks
		Station	Side	Installation	Maintenance	Removal	Foreslope	Backslope	Ditch Width	Avg.% Slope Ditch Grade	Spacing	Down Stream	Volume*	
				LF	LF	LF	FS:1	BS:1	FT				CF	
		26+00	RT	24.0			3.0	3.0	4.0				0.0	NE Quadrant
21		25+00	RT	24.0			3.0	3.0	4.0	1.00%	100		539.1	NE Quadrant
20		24+00	RT	24.0			3.0	3.0	4.0	1.00%	100		539.1	NE Quadrant
19		23+25	RT	24.0			3.0	3.0	4.0	1.00%	75		404.4	NE Quadrant
18		22+00	RT	24.0			3.0	3.0	4.0	0.75%	125		673.9	NE Quadrant
17		21+00	RT	24.0			3.0	3.0	4.0	0.50%	100		539.1	NE Quadrant
16		20+00	RT	24.0			3.0	3.0	4.0	0.50%	100		539.1	NE Quadrant
15		19+00	RT	24.0			3.0	3.0	4.0	1.25%	100		539.1	NE Quadrant
14		18+10	RT	24.0			3.0	3.0	4.0	2.25%	90		485.2	NE Quadrant
		26+00	LT	24.0			3.0	3.0	4.0				0.0	NW Quadrant
13		25+00	LT	24.0			3.0	3.0	4.0	1.00%	100		539.1	NW Quadrant
12		24+00	LT	24.0			3.0	3.0	4.0	0.25%	100		539.1	NW Quadrant
11		23+00	LT	24.0			3.0	3.0	4.0	0.50%	100		539.1	NW Quadrant
10		22+00	LT	24.0			3.0	3.0	4.0	0.50%	100		539.1	NW Quadrant
9		21+00	LT	24.0			3.0	3.0	4.0	0.50%	100		539.1	NW Quadrant
8		20+00	LT	24.0			3.0	3.0	4.0	0.50%	100		539.1	NW Quadrant
7		19+35	LT	24.0			3.0	3.0	4.0	0.50%	65		350.4	NW Quadrant
6		18+10	LT	24.0			3.0	3.0	4.0	1.25%	125		673.9	NW Quadrant
		15+50	RT	24.0			3.0	3.0	4.0				0.0	SE Quadrant
5		14+50	RT	24.0			3.0	3.0	4.0	0.50%	100		539.1	SE Quadrant
4		13+50	RT	24.0			3.0	3.0	4.0	0.50%	100		539.1	SE Quadrant
3		12+50	RT	24.0			3.0	3.0	4.0	0.75%	100		539.1	SE Quadrant
2		11+50	RT	24.0			3.0	3.0	4.0	0.75%	100		539.1	SE Quadrant
		12+50	LT	24.0			3.0	3.0	4.0				0.0	SW Quadrant
1		11+50	LT	24.0			3.0	3.0	4.0	0.75%	100		539.1	SW Quadrant
TOTAL				600.0									11214.3	

Bid Items Referenced:
0430

100-17
04-20-10

SILT FENCES

Refer to EC-201

Location			Length	Remarks
Begin Station	End Station	Side	LF	
12+50	16+40	LT	390.0	Toe of foreslope, West side of 240th Street
Total			390.0	

Bid Items Referenced:
0060

GRANULAR SURFACING ON ROADWAY

Location			Width (ft)	Depth (in)	Tons	Remarks
Station to Station		Side				
18+01	27+50	Both	26	6	801.9	Roadway
10+00	16+13	Both	26	6	518.0	Roadway
Total					1,319.9	

Bid Items Referenced:
0400, 0410, 0420

SEEDING

Location		Mulching	Native Grass Seeding	Mulching	Native Grass Seeding	Remarks
Begin Station	End Station	SF		ACRE		
17+50	26+50	53,154.0	53,154.0	1.220	1.220	NE
11+00	17+00	27,617.9	27,617.9	0.630	0.630	SE
16+75	26+50	45,082.7	45,082.7	1.030	1.030	NW
11+00	16+50	18,411.2	18,411.2	0.420	0.420	SW
Total		144265.8	144265.8	3.300	3.300	

Bid Items Referenced:
0070, 0160, 0170, 0180, 0190, 0200, 0210

ACCESS POINTS

*Predetermined for access point not constructed with this project.

Location		Type*	W**	Pipe Culvert**					Aprons	Driveway Surfacing Material	Remarks
Station	Side	A, B, C or Predetermined		H	Size	PL	Lt.	Rt.			
			FT	FT	IN	FT	LF	LF	No.	TON	
											Drainage Areas
22+85	RT	C		4.00	60	52	26	26	2	15.0	
14+15	RT	C		2.50	18	60	30	30	2	15.0	
19+00	LT	C		4.00	36	60	30	30	2	15.0	
12+50	LT	C		2.00	18	384			1		Place GATE, OUTLET CONTROL at Outlet
Total					18"	444			3		
Total					36"	60			2		
Total					60"	52			2		
Total										45.0	

Bid Items Referenced:
0080,

REMOVAL OF EXISTING STRUCTURES

Refer to Section 2401 & 1104.06 B of the Standard Specifications

Station	Side	Description	Disposal
17+00	Center	153'x20' Steel I-Beam Bridge, Concrete Abutments/Piers with Spread Footing, Concrete Deck	As per Specification 2401

Bid Items Referenced:
0310

100-08
04-17-18

REMOVAL OF FENCE

Removal of Field Fence not listed below is incidental to Clearing and Grubbing

Location				Type	Length	Remarks
From		To				
Station	Offset	Station	Offset		LF	
11+00	RT 40'	14+00	RT 40'	Barbed	300.0	Field Fence
14+25	RT 89.5'	14+25	RT 120.5'	Barbed	31.0	Field Fence
14+25	RT 40'	16+30	RT 40'	Barbed	205.0	Field Fence
16+30	RT 40'	16+50	RT 110'	Barbed	72.3	Field Fence
17+55	RT 40'	17+60	RT 118'	Barbed	52.7	Field Fence
17+55	RT 40'	22+55	RT 40'	Barbed	500.0	Field Fence
22+80	RT 40'	22+80	RT 57.5'	Barbed	17.3	Field Fence
13+55	LT 40'	16+30	LT 40'	Barbed	275.0	Fence in Wooded Area
21+20	LT 40'	26+50	LT 40'	Barbed	530.0	Field Fence
Total					1,983.2	

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Bid Items Referenced:
0100, 0110, 0120, 0130, 0140, 0150, , 0230, 0240, 0250

TABULATION OF BRIDGE QUANTITIES

Refer to Standard Bridge Plan Sheets Listed Below

Segment	Source	Units	Quantity
188'-10" X 30'-6" PPCB on 0 Degree Skew			
Slab Including Haunch, Abutment Diaphragm & Wingwalls, Sections 1 & 3	H30-09-06	CY	121.5
Slab Including Haunch, Section 2	H30-09-06	CY	45.1
Slab Including Haunch & Pier Diaphragm, Sections 4 & 5	H30-09-06	CY	44.4
Paving Blocks	H30-09-06	CY	2.4
Abutment Wings	H30-09-06	CY	7.6
Abutment Footings (With Steel H Piles)	H30-09-06	CY	26.6
Total Structural Concrete in Superstructure Plus Integral Abutments (With Open Rail)	Calculation	CY	247.6
Pier Cap Structural Concrete (Each Pier)	H30-47-06	CY	12.6
Number of Pier Caps	H30-47-06	NO.	2
Total Pier Cap Structural Concrete	Calculation	CY	25.2
Total Structural Concrete	Calculation	CY	272.8
Pier Cap Reinforcing Steel (Each Pier)	H30-47-06	LB	2,122
Number of Pier Caps	H30-47-06	NO.	2
Total Pier Cap Reinforcing Steel	Calculation	LB	4,244
Superstructure & 2 Abutments Reinforcing Steel (With Steel H Piles & Open Rail)	H30-10-06	LB	53,873
Open Rail Reinforcing Steel (With Steel H Piles & Open Rail)	H30-10-06	LB	11,352
Total Reinforcing Steel (With Steel H Piles & Open Rail)	Calculation	LB	69,469
Pretensioned Prestressed Concrete Beam, Center Span	H30-09-06	NO.	5-B67
Pretensioned Prestressed Concrete Beam, End Spans	H30-09-06	NO.	10-B59
Concrete Rail (Open)	H30-09-06	LF	411.7
Structural Steel (With Pile Bent Piers & No Drains)	H30-09-06	LB	3,149

H30-06 THREE-SPAN PPCB BRIDGE STANDARDS

The following Standard Bridge Plans apply to construction work on this project.

Number	Date Issued	Date Revised	Title
H30-01-06	Dec 2006	April 2013	Index Sheet
H30-01A-06	Dec 2006	April 2013	General Notes
H30-02-06	Dec 2006	April 2013	General Information
H30-03-06	Dec 2006	June 2012	Superstructure Details
H30-04-06	Dec 2006	June 2012	Superstructure Details
H30-05-06	Dec 2006	April 2013	Abutment Details 0° Skew A & B Beams
H30-07-06	Dec 2006	July 2010	Longitudinal Section 0° Skew A & B Beams
H30-09-06	Dec 2006	July 2015	Superstructure Details 0° Skew
H30-10-06	Dec 2006	May 2011	Deck & Abutment Reinforcement 0° Skew
H30-34-06	Dec 2006	July 2010	B Beam Details
H30-35-06	Dec 2006	July 2010	B Beam Details
H30-38-06	Dec 2006	July 2010	Intermediate Steel Diaphragms
H30-42-06	Dec 2006	July 2010	Open Rail Details (TL-4)
H30-43-06	Dec 2006	May 2011	Open Rail Details (TL-4)
H30-44-06	Dec 2006	Sept 2012	Pier Bearing Details
H30-47-06	Dec 2006	April 2013	Pile Bent Piers HP14 Piles 0° Skew
H30-85-06	Dec 2006	July 2010	Subdrain Details
H30-86-06	Dec 2006	Sept 2014	Wing Armoring Details A & B Beams
H30-88-06	Dec 2006	Sept 2014	Abutment Backfill Details A & B Beams - 0° Skew
P10L	Jan 2009	June 2025	LRFD Trestle Pile Bents - P10L

North Abutment			
Centerline Grade Elevation at North Abutment	Bridge Hdy.	FT	787.00
Elevation Diff. "U" From Top of Deck to Abut Bridge Seat at CL (4'-3 1/16")	H30-09-06	FT	4.26
Top of North Abutment Elevation at Centerline	Calculation	FT	782.74
Elevation Diff. From Low Step to Centerline (2 7/8")	H30-02-06	FT	0.24
Abutment Height at Low Step	H30-03-06	FT	3.50
Bottom of North Abutment Elevation	Calculation	FT	779.00
Pile Embedment Into Abutment	H30-06-06	FT	2.00
Elevation at Top of North Abutment Piles	Calculation	FT	781.00
Number of Steel H Piles For North Abutment (HP10x57)	H30-09-06	NO.	6
Length of Each North Abutment Pile	Use IDOT BDM 6.2	LF	80
Length Of Steel H Piles For North Abutment	Calculation	LF	480
Prebore Length Per Pile (IDOT BDM 6.2, Table 6.2.4.2-1)	H30-09-06	LF	10
Length of Prebored Holes With Steel Piles For North Abutment	Calculation	LF	60
North Pier			
Number of North Pier Piles (HP14x73)	H30-47-06	NO.	7
Length of North Pier Piles (HP14x73)	Boring Report	FT	80
Pay Length of North Pier Piles (HP14x73)	Boring Report	FT	560
Centerline Grade Elevation at North Pier	Bridge Hdy.	FT	787.00
Elevation Diff. 'U' From Top of Deck to North Pier Bridge Seat at CL (4'-2 5/16)	H30-09-06	FT	4.19
Elevation of Bridge Seat at Centerline of North Pier	Calculation	FT	782.81
Elevation Diff. From Low Step to Centerline (2 7/8")	H30-02-06	FT	0.24
Pier Height at Low Step	H30-47-06	FT	3.50
Elevation at Bottom of Pier Cap	Calculation	FT	779.31
Pile Embedment Into Pier Cap	H30-47-06	FT	1.50
Elevation at Top of Pier Piles	Calculation	FT	780.81
Streambed Elevation	Bridge Hdy.	FT	767.98
Encasement Length Below Streambed	IDOT BDM 6.6.4.2.1.1	FT	3
Bottom Encasement Elevation	Calculation	FT	764.98
Length of Each North Pier Pile Encasement	Calculation	FT	17.80
Number of North Pier Piles to Encase	H30-47-06	NO.	7
Pay Length of North Pier Pile Encasements	Calculation	FT	124.6
South Pier			
Number of South Pier Piles (HP14x73)	H30-47-06	NO.	7
Length of South Pier Piles (HP14x73)	Boring Report	FT	80
Pay Length of South Pier Piles (HP14x73)	Boring Report	FT	560
Centerline Grade Elevation at South Pier	Bridge Hdy.	FT	787.00
Elevation Diff. 'U' From Top of Deck to South Pier Bridge Seat at CL (4'-2 5/16)	H30-09-06	FT	4.19
Elevation of Bridge Seat at Centerline of South Pier	Calculation	FT	782.81
Elevation Diff. From Low Step to Centerline (2 7/8")	H30-02-06	FT	0.24
Pier Height at Low Step	H30-47-06	FT	3.50
Elevation at Bottom of Pier Cap	Calculation	FT	779.31
Pile Embedment Into Pier Cap	H30-47-06	FT	1.50
Elevation at Top of Pier Piles	Calculation	FT	780.81
Streambed Elevation	Bridge Hdy.	FT	767.98
Encasement Length Below Streambed	IDOT BDM 6.6.4.2.1.1	FT	3
Bottom Encasement Elevation	Calculation	FT	764.98
Length of Each South Pier Pile Encasement	Calculation	FT	17.80
Number of South Pier Piles to Encase	H30-47-06	NO.	7
Pay Length of South Pier Pile Encasements	Calculation	FT	124.6
South Abutment			
Centerline Grade Elevation at South Abutment	Bridge Hdy.	FT	787.00
Elevation Diff. "U" From Top of Deck to Abut Bridge Seat at CL (X'-x x/xx")	H30-09-06	FT	4.26
Top of South Abutment Elevation at Centerline	Calculation	FT	782.74
Elevation Diff. From Low Step to Centerline (x x/x")	H30-02-06	FT	0.24
Abutment Height at Low Step	H30-03-06	FT	3.50
Bottom of South Abutment Elevation	Calculation	FT	779.00
Pile Embedment Into Abutment	H30-06-06	FT	2.00
Elevation at Top of South Abutment Piles	Calculation	FT	781.00
Number of Steel H Piles For South Abutment (HP10x57)	H30-09-06	NO.	6
Length of Each South Abutment Pile	Use IDOT BDM 6.2	LF	80
Length Of Steel H Piles For South Abutment	Calculation	LF	480
Prebore Length Per Pile (IDOT BDM 6.2, Table 6.2.4.2-1)	H30-09-06	LF	10
Length of Prebored Holes With Steel Piles For South Abutment	Calculation	LF	60

Bid Items Referenced:
0280

REVETMENT

Refer to Section 2507 of the Standard Specifications

Location			Approx. Length	Approx. Width	Area	Slope	Projected Area	Projected Area	Thickness	Projected Volume	Density	Weight	Weight	Remarks
Station to Station		Side	FT	FT	SF	_:1	SF	SY	INCH	CY	PCF	LBS	TONS	
17+50	18+00	Under Bridge	50	90	4500	2.5	4847	538.5	24	9693	120	1,163,196	581.6	Projected area based on 2.5:1 embankment slope
16+14	16+58	Under Bridge	45	72	3240	2.5	3490	387.7	24	6979	120	837,501	418.8	Projected area based on 2.5:1 embankment slope
Total					7740		8336	926.2		16672		2,000,696	1000.4	

Bid Items Referenced:
0260

104-5C
10-17-17

LIST OF SUBDRAIN WORK

Possible Standards: DR-121, DR-201, DR-203, DR-301, DR-302, DR-303, DR-305 and DR-306. Possible Detail: 500-10.

* Not a bid item

Location			Pipe			Aprons		Outlets				Connected Pipe Joints*		Trench Drain	Granular Material	Porous Backfill*	Class "A" Crushed Stone*	Remarks
No.	Station to Station	Type of Installation	Concrete, CMP, or Plastic	Dia.	Length	DR-201	DR-203	500-10	DR-305		DR-306	DR-121			Blanket CY			
		DR-301, DR-302, DR-303		IN	LF	No.	No.	No.	Type	No.	No.	Type	No.	LF		CY	CY	
01	17+43		CMP	8	10													Place tile, connect to existing tile.

Bid Items Referenced:
0290, 0300

100-7
10-16-12

FENCING

*Bid Item

Location				Side	Chain Link				Deer				Field				Channel Crossing		Remarks
From		To			Fence		Gate		Fence	Brace	Gate		Fence	Brace	Gate				
Station	Offset	Station	Offset		Length	Type	No.*	Type	Length*	Panels*	No.*	Type	Length*	Panels*	No.*	Type	Length	Type	
					LF		EACH		LF	EACH	EACH		LF	EACH	EACH		LF		
22+80	58'			RT									16.0	2.0					Connect remaining fence that runs East from Brace.
18+00	110'	22+55	60'	RT									458.0	5.0					
17+59	110'	18+00	110'	RT									41.0	4.0					
17+59	110'			RT									24.0	3.0					Connect remaining fence that runs East from Brace.
16+50	110'			RT									24.0	3.0					Connect remaining fence that runs East from Brace.
14+25	71'	16+50	110'	RT									228.0	5.0					
14+25	120'			RT									16.0	2.0					Connect remaining fence that runs East from Brace.
12+50	40'	14+02	67'	RT									155.0	3.0					
11+00	40'	12+50	40'	RT									150.0	2.0					
Total													1,112.0	29.0					

2018 Traffic Count = 40 vpd

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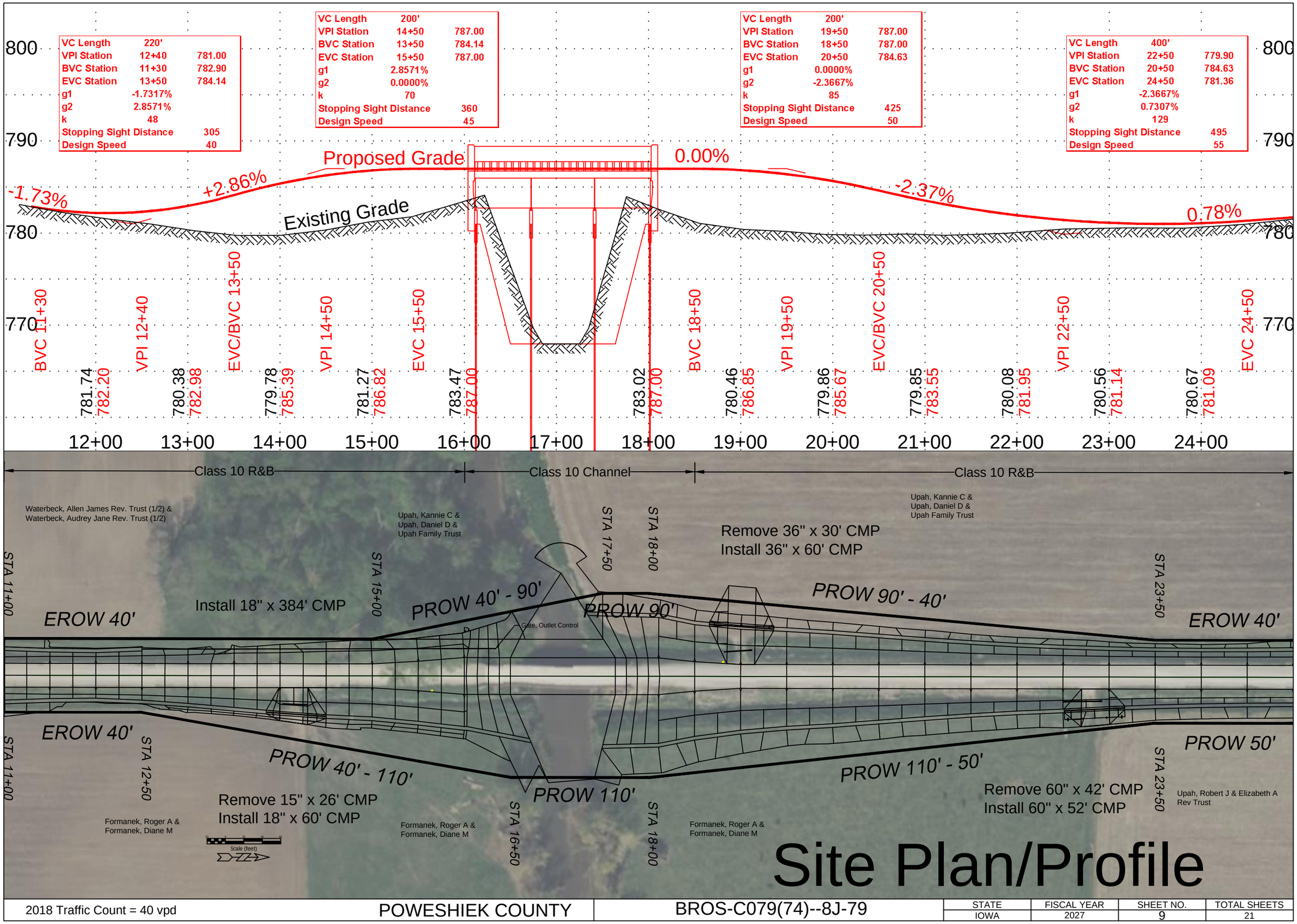
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VC Length	220'	
VPI Station	12+40	781.00
BVC Station	11+30	782.90
EVC Station	13+50	784.14
g1	-1.7317%	
g2	2.8571%	
k	48	
Stopping Sight Distance		305
Design Speed		40

VC Length	200'	
VPI Station	14+50	787.00
BVC Station	13+50	784.14
EVC Station	15+50	787.00
g1	2.8571%	
g2	0.0000%	
k	70	
Stopping Sight Distance		360
Design Speed		45

VC Length	200'	
VPI Station	19+50	787.00
BVC Station	18+50	787.00
EVC Station	20+50	784.63
g1	0.0000%	
g2	-2.3667%	
k	85	
Stopping Sight Distance		425
Design Speed		50

VC Length	400'	
VPI Station	22+50	779.90
BVC Station	20+50	784.63
EVC Station	24+50	781.36
g1	-2.3667%	
g2	0.7307%	
k	129	
Stopping Sight Distance		495
Design Speed		55



Site Plan/Profile

2018 Traffic Count = 40 vpd

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STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	2027	9	21

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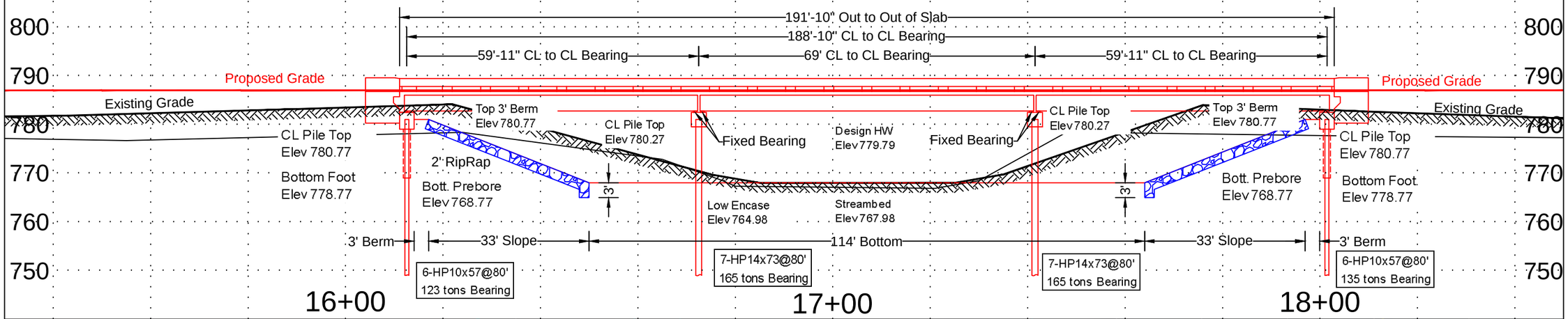
HYDRAULIC INFORMATION					
	Flowrate	Elevation	Velocity	Backwater Elevation	Scour Elevation
	(cfs)	(ft)	(fps)	(ft)	(ft)
Q500	15400	780.95	8.27		
Q200	14400	780.77	7.87		
Q100	11300	780.14	6.57	781.35	762.28
Q50-Design	9750	779.79	5.87	780.65	763.48
Q25	8160	779.39	5.13		
Q10	5650	778.48	3.92		
Q5	3950	777.41	3.11		
Q2	2240	775.30	2.37		
Streambed		767.98			
Drainage Area		85.2 square miles			
Stream Slope		0.001438 ft/ft		7.59 ft/mile	

Sta. 16+12.58 CL Abutment
CL Grade Elev = 787.00
Top Abutment Elev = 782.51
Bottom Footing Elev = 778.77

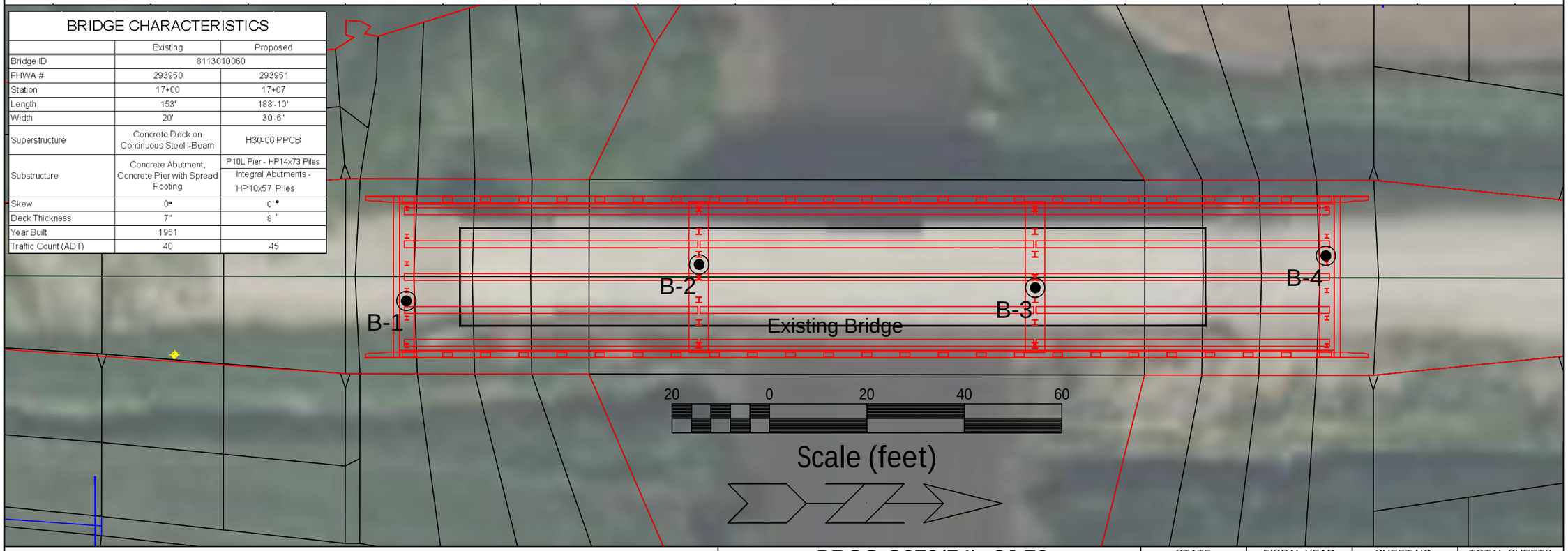
Sta. 16+72.50 CL Pier
CL Grade Elev = 787.00
Bottom Cap @ CL Elev = 778.77
Bott Cap (L Ext Pile) Elev = 778.77
Bott Cap (R Ext Pile) Elev = 778.77

Sta. 17+41.50 CL Pier
CL Grade Elev = 787.00
Bottom Cap @ CL Elev = 778.77
Bott Cap (L Ext Pile) Elev = 778.77
Bott Cap (R Ext Pile) Elev = 778.77

Sta. 18+01.42 CL Abutment
CL Grade Elev = 787.00
Top Abutment Elev = 782.27
Bottom Footing Elev = 778.77



BRIDGE CHARACTERISTICS		
	Existing	Proposed
Bridge ID	8113010060	
FHWA #	293950	293951
Station	17+00	17+07
Length	153'	188'-10"
Width	20'	30'-6"
Superstructure	Concrete Deck on Continuous Steel I-Beam	H30-06 PPCB
Substructure	Concrete Abutment, Concrete Pier with Spread Footing	P10L Pier - HP14x73 Piles Integral Abutments - HP10x57 Piles
Skew	0°	0 °
Deck Thickness	7"	8 "
Year Built	1951	
Traffic Count (ADT)	40	45



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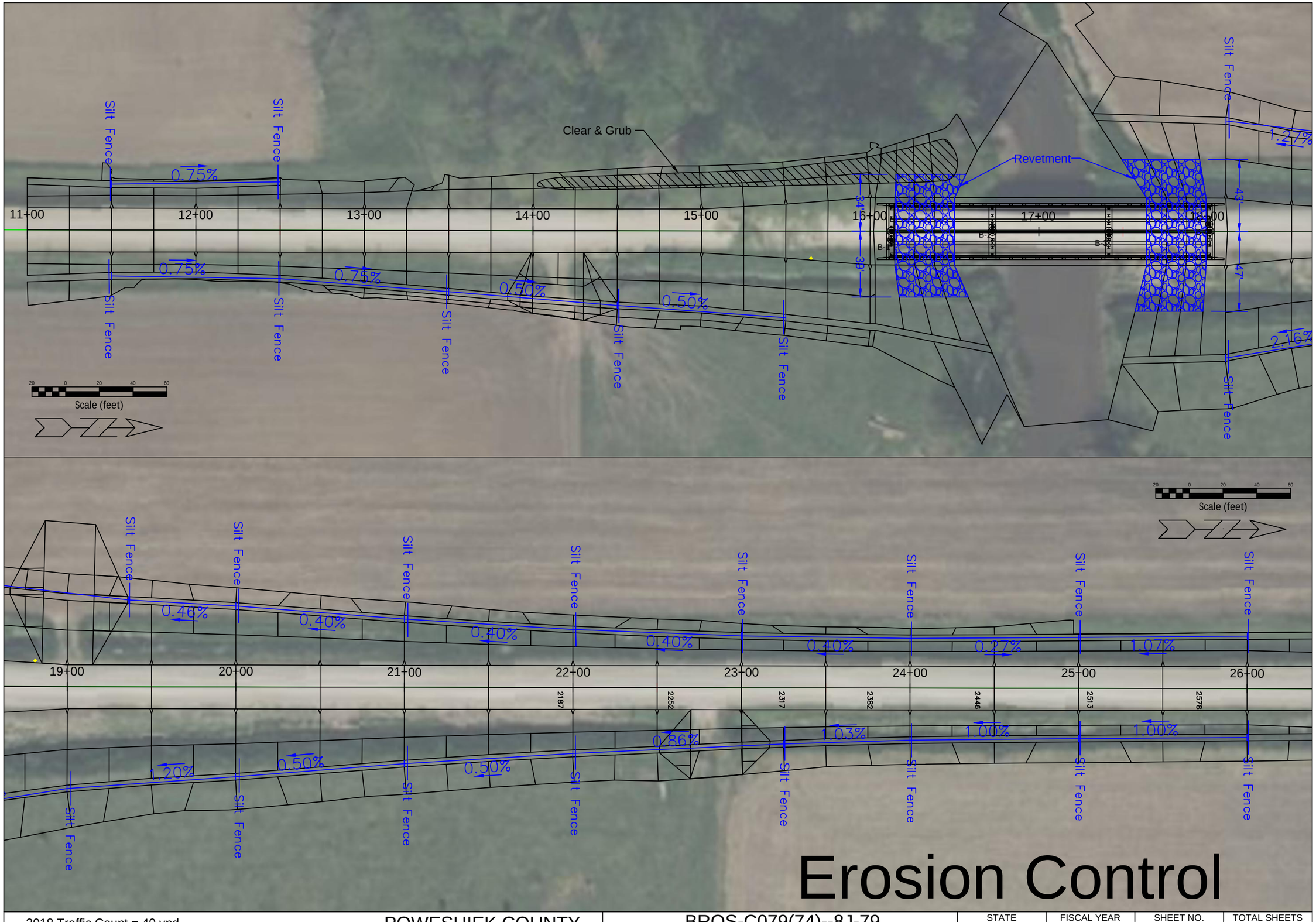
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STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	2027	10	21

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Letting Date: December 15, 2026



2018 Traffic Count = 40 vpd	POWESHIEK COUNTY	BROS-C079(74)--8J-79	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
			IOWA	2027	11	21

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026



Fence Detail

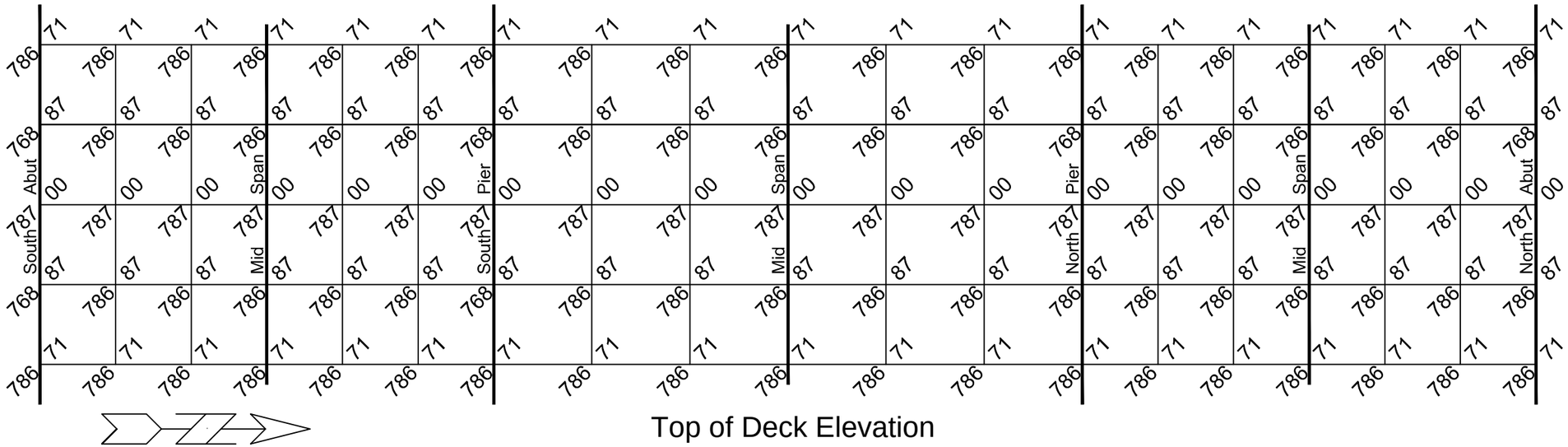
2018 Traffic Count = 40 vpd	POWESHIEK COUNTY	BROS-C079(74)--8J-79	STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
			IOWA	2027	12	21

THE CONTRACT LENGTH OF 80 FEET FOR THE SOUTH ABUTMENT PILES IS BASED ON A MIXED SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 135 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.6. PILES ALSO WERE DESIGNED FOR A FACTORED TENSION FORCE OF 0 KIPS.	THE CONTRACT LENGTH OF 80 FEET FOR THE NORTH ABUTMENT PILES IS BASED ON A MIXED SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 135 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.6. PILES ALSO WERE DESIGNED FOR A FACTORED TENSION FORCE OF 0 KIPS.
THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A MIXED SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55.	THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55.
THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR SOUTH ABUTMENT PILES IS 123 TONS AT END OF DRIVE OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. IN NO CASE SHALL A PILE BE EMBEDDED LESS THAN 35 FEET. CONSTRUCTION CONTROL REQUIRES A MODIFIED IOWA DOT ENR FORMULA.	THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR NORTH ABUTMENT PILES IS 135 TONS AT END OF DRIVE OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. IN NO CASE SHALL A PILE BE EMBEDDED LESS THAN 35 FEET. CONSTRUCTION CONTROL REQUIRES A MODIFIED IOWA DOT ENR FORMULA.

THE CONTRACT LENGTH OF 80 FEET FOR THE SOUTH PIER PILES IS BASED ON A MIXED SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 168 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.6. PILES ALSO WERE DESIGNED FOR A FACTORED TENSION FORCE OF 0 KIPS.	THE CONTRACT LENGTH OF 80 FEET FOR THE NORTH PIER PILES IS BASED ON A MIXED SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 168 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.6. PILES ALSO WERE DESIGNED FOR A FACTORED TENSION FORCE OF 0 KIPS.
THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55.	THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.55.
THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR SOUTH PIER PILES IS 165 TONS AT END OF DRIVE OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. IN NO CASE SHALL A PILE BE EMBEDDED LESS THAN 35 FEET. CONSTRUCTION CONTROL REQUIRES A MODIFIED IOWA DOT ENR FORMULA.	THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR NORTH PIER PILES IS 165 TONS AT END OF DRIVE OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. IN NO CASE SHALL A PILE BE EMBEDDED LESS THAN 35 FEET. CONSTRUCTION CONTROL REQUIRES A MODIFIED IOWA DOT ENR FORMULA.

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026



STAKING AID

*Toe of Foreslope position assumes entrances/sideroads are placed after grading is complete

Station	Toe of Foreslope Left		Centerline Elevation	Toe of Foreslope Right	
	Elevation	Offset		Offset	Elevation
26+50	776.50	29.6	782.82	26.6	777.50
26+00	776.30	29.1	782.46	27.0	777.00
25+50	776.10	28.6	782.09	27.4	776.50
25+00	775.90	28.2	781.73	27.9	776.00
24+50	775.70	27.6	781.36	28.2	775.50
24+00	775.50	27.4	781.09	28.9	775.00
23+50	775.30	27.8	781.02	30.2	774.50
23+00	775.10	28.8	781.14	32.2	773.95
22+50	774.90	30.3	781.45	34.8	773.40
22+00	774.70	32.4	781.95	37.1	773.15
21+50	774.50	35.1	782.65	39.9	772.90
21+00	774.30	38.4	783.55	43.4	772.65
20+50	774.10	42.3	784.63	47.4	772.40
20+00	773.90	46.0	785.67	51.2	772.15
19+50	773.70	48.8	786.41	54.2	771.90
19+00	773.35	51.2	786.85	58.4	770.95
18+50	773.00	56.1	787.00	65.1	770.00
18+00	Bridge		787.00	Bridge	
17+50			787.00		
17+00			787.00		
16+50			787.00		
16+00	777.70	46.7	787.00	54.8	775.00
15+50	778.00	41.1	786.82	49.3	775.25
15+00	777.53	38.5	786.82	44.6	775.50
14+50	777.54	36.9	786.29	42.3	775.75
14+00	777.64	33.9	785.39	38.8	776.00
13+50	776.77	32.8	784.14	34.3	776.25
13+00	776.80	28.9	782.98	30.1	776.50
12+50	777.00	26.7	782.33	26.7	777.00
12+00	777.50	24.8	782.20	24.8	777.50
11+50	777.75	25.2	782.60	25.2	777.75
11+00	778.00	26.9	783.42	26.9	778.00

Bid Items Referenced:
0330, 0340, 0350, 0360

SURVEY INFORMATION

Station	Side	Description	Elevation
00+00.00	CL	SW Corner Sec 01-T81N-R13W	
26+51	CL	Mag Nail	
14+75	37' RT	BM - RR Spike in PP	779.78'

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

S Abutment

BORING LOG No. 1

PROJECT Jefferson 01 Bridge **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 99.65
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	0.5 GRAVEL, gray 99.2	GP	0	1	AS			14			
	1.5 Lean CLAY, trace sand, very dark gray 98.2	CL									
	Fine to medium SAND, with silt, dark grayish brown	SP-SM		2	SS	6	5	9.6			
	SILTY SAND			3	SS	10	5	3.5			
	6.0 93.7		5								
	Lean CLAY, very dark gray	CL		4	SS	14	12	16.8			
	FIRM SILTY CLAY			5	SS	16	15	20.6			
	12.0 87.7		10								
	Lean CLAY, dark gray	CL		6	SS	17	2	32			
	SOFT SILTY CLAY		15								
	17.0 82.7										
	Silty fine to medium SAND, gray	SM		7	SS	14	2	24.9			
	SILTY SAND		20								
	22.0 77.7										
	Lean CLAY, dark gray	CL		8T	SS	9	9	29.5			
	FIRM SILTY CLAY			8B	SS	8	9	17.6			
	24.3 75.4		25								
	Fine to medium SAND, with silt, trace gravel, grayish brown	SP-SM		9	SS	15	15	17.6			
	FINE SAND		30								
				10	SS	13	27	16.2			

Notes: South Abutment of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-15-2025
Boring Completed: 9-15-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

1-5746.geo TSDOTCLS.fdt 9/12/2018

S Abutment

BORING LOG No. 1

PROJECT Jefferson 01 Bridge **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 99.65
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	Fine to medium SAND, with silt, trace gravel, grayish brown		35								
	COARSE SAND			11	SS	14	20	13.5			
			40								
				12	SS	12	36	14.4			
			45								
	47.0 52.7										
	Sandy lean CLAY, trace gravel, dark gray	CL		13	SS	18	30	17.5			
			50								
	VERY FIRM SANDY GLACIAL CLAY			14	SS	18	31	12.1			
			55								
				15	SS	18	31	15.3			
			60								
				16	SS	18	25	13.1			
			65								
				17	SS	18	24	11.1			

Notes: South Abutment of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-15-2025
Boring Completed: 9-15-2025
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THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

1-5746.geo TSDOTCLS.fdt 9/12/2018

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

S Abutment

BORING LOG No. 1

Page 3 of 3

PROJECT Jefferson 01 Bridge | **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 99.65
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	Sandy lean CLAY, trace gravel, dark gray		70								
				18	SS		22	14.5			
	VERY FIRM SANDY GLACIAL CLAY		75								
				19	SS	18	27	12.7			
			80								
				20	SS	18	22	13.4			
			85								
				21	SS	18	21	13.5			
	90.0 9.7 Bottom of boring		90								

Notes: South Abutment of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-15-2025
Boring Completed: 9-15-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

1-5746.gpj TSDOTCLS.tpl 9/12/2018

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

S Pier

BORING LOG No. 2

Page 1 of 3

PROJECT Jefferson 01 Bridge | **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 100.19
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	0.5 Reinforced Concrete Deck 99.7		0								
	AIR										
			5								
			10								
	12.0 88.2 Sandy SILT, dark gray	ML									
	VERY SOFT SILTY CLAY		15	1	SS	0	WH	31.6			
	18.5 81.7 Fine to medium SAND, with silt, trace gravel, dark grayish brown	SP-SM		2	SS	14	WH	24			
			20	3	SS	10	WH	21.8			
	SILTY SAND										
			25	4	SS	7	WH	28.6			
	27.0 73.2 Fine to medium SAND, with silt, trace gravel, dark grayish brown	SP-SM									
	COARSE SAND		30	5	SS	13	24	16.5			
				6	SS	10	29	22.5			

Notes: South Pier of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-12-2025
Boring Completed: 9-12-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

1-5746.gpj TSDOTCLS.tpl 9/12/2018

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

S Pier

BORING LOG No. 2

PROJECT Jefferson 01 Bridge **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 100.19
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	Fine to medium SAND, with silt, trace gravel, dark grayish brown		35								
	COARSE SAND		40	7	SS	11	26	16.8			
				8	SS	13	19	22			
	49.0 51.2		45								
	Sandy lean CLAY, trace gravel, dark gray	CL		9	SS	18	26	19.3			
			50								
				10	SS	18	26	11.9			
	VERY FIRM SANDY GLACIAL CLAY		55								
				11	SS	18	27	12.7			
			60								
				12	SS	17	22	12.9			
			65								
				13	SS	16	23	11.3			

Notes: South Pier of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-12-2025
Boring Completed: 9-12-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

1-5746.geo TSDOTCLS.tpl 9/12/2018

S Pier

BORING LOG No. 2

PROJECT Jefferson 01 Bridge **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 100.19
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	Sandy lean CLAY, trace gravel, dark gray		70								
	VERY FIRM SANDY GLACIAL CLAY		75	14	SS	18	23	14			
	80.0 20.2			15	SS	18	24	13.1			
	Bottom of boring		80								

Notes: South Pier of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-12-2025
Boring Completed: 9-12-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

1-5746.geo TSDOTCLS.tpl 9/12/2018

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

N Pier

BORING LOG No. 3

PROJECT Jefferson 01 Bridge | **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 100.18
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	0.5 Reinforced Concrete Deck 99.7 AIR		0								
	14.0 86.2 Lean CLAY, trace organic matter, dark gray **VERY SOFT SILTY CLAY**	CL	5								
	17.0 83.2 Silty fine to medium SAND, trace gravel, dark grayish brown **SILTY SAND**	SM	10	1	SS	10	WH	27.7			
	22.0 78.2 Silty fine to medium SAND, trace gravel, dark grayish brown **FINE SAND**	SM	15	2	SS	7	1	19.6			
			20	3	SS	6	15	30.5			
			25	4	SS	9	23	23.7			
			30	5T	SS	9	7	16.8			
				5B	SS	7	7	18.8			

Notes: North Pier of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-12-2025
Boring Completed: 9-12-2025
Rig: TRK | **Foreman:** JH
Approved: NG | **Job #:** 1-5746

1-5746.gpj TSDOTCLS.fdt 9/12/2018

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

N Pier

BORING LOG No. 3

PROJECT Jefferson 01 Bridge | **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 100.18
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	Silty fine to medium SAND, trace gravel, dark grayish brown **FINE SAND**		35								
	47.0 53.2 Sandy lean CLAY, trace gravel, dark gray **VERY FIRM SANDY GLACIAL CLAY**	CL	40	6	SS	11	16	18.8			
			45	7	SS	14	15	16.8			
			50	8	SS	18	27	15.6			
			55	9	SS	18	25	11.2			
			60	10	SS	18	24	10.3			
			65	11	SS	18	25	11.6			

Notes: North Pier of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-12-2025
Boring Completed: 9-12-2025
Rig: TRK | **Foreman:** JH
Approved: NG | **Job #:** 1-5746

1-5746.gpj TSDOTCLS.fdt 9/12/2018

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

N Pier

BORING LOG No. 3

PROJECT Jefferson 01 Bridge | **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 100.18
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES: NUMBER	TYPE	RECOVERY	SPT - N (BLOWS / FT.)	TESTS: MOISTURE, %	DRY DENSITY (PCF)	UNCONFINED STRENGTH (PSF)	OTHER
	Sandy lean CLAY, trace gravel, dark gray		70								
	VERY FIRM SANDY GLACIAL CLAY			12	SS	21	23	12.4			
			75								
				13	SS	23	21	12.8			
	80.0 20.2 Bottom of boring		80								

Notes: North Pier of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-12-2025
Boring Completed: 9-12-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

1-5746.gpj TSDOTCLS.fdt 9/12/2018

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

N Abutment

BORING LOG No. 4

PROJECT Jefferson 01 Bridge | **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 99.07
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES: NUMBER	TYPE	RECOVERY	SPT - N (BLOWS / FT.)	TESTS: MOISTURE, %	DRY DENSITY (PCF)	UNCONFINED STRENGTH (PSF)	OTHER
	1.0 GRAVEL, gray 98.1	GP	0	1	AS			3.3			
	Lean CLAY, dark gray and dark grayish brown	CL		2	SS	10	6	18.2			
	STIFF SILTY CLAY			3	SS	14	6	19.2			
	8.5 90.6		5								
				4	SS	13	6	18.6			
	SILT, dark gray	ML		5	SS	16	8	18.2			
	STIFF SILTY CLAY		10								
	12.0 87.1										
	SILT, dark gray	ML		6	SS	18	WH	20.8			
	VERY SOFT SILTY CLAY		15								
	17.0 82.1										
	Fine to medium SAND, with silt, trace gravel, dark grayish brown	SP-SM		7	SS	12	5	19			
	SILTY SAND		20								
	27.0 72.1										
	Fine to medium SAND, with silt, trace gravel, dark grayish brown	SP-SM		8	SS	13	4	27			
	COARSE SAND		25								
				9	SS	10	19	14.4			
			30								
				10	SS	12	27	19.5			

Notes: North Abutment of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-15-2025
Boring Completed: 9-15-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

1-5746.gpj TSDOTCLS.fdt 9/12/2018

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

N Abutment

BORING LOG No. 4

PROJECT Jefferson 01 Bridge | **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 99.07
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	Fine to medium SAND, with silt, trace gravel, dark grayish brown		35								
	37.0 62.1										
	Silty fine SAND, dark gray	SM									
	COARSE SAND		40	11	SS	13	20	21.1			
				12	SS	10	18	20.9			
	47.0 52.1		45								
	Sandy lean CLAY, trace gravel, dark gray	CL		13	SS	16	21	10.7			
			50								
				14	SS	12	18	10.7			
	VERY FIRM SANDY GLACIAL CLAY		55								
			60	15	SS	8	16	23.6			
				16	SS	5	35	21.1			
			65								
				17	SS	14	34	15.4			

Notes: North Abutment of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-15-2025
Boring Completed: 9-15-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

1-5746.geo TSDOTCLS.fdt 9/12/2018

N Abutment

BORING LOG No. 4

PROJECT Jefferson 01 Bridge | **SITE** Poweshiek, IA

Approx. Surface Elevation (ft): 99.07
Site Datum: Center of Exist. N. Abutment (100')
Drilling Method: HSA

GRAPHIC LOG	DESCRIPTION	USCS SYMBOL	DEPTH (ft.)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES RECOVERY	SAMPLES SPT - N (BLOWS / FT.)	TESTS MOISTURE, %	TESTS DRY DENSITY (PCF)	TESTS UNCONFINED STRENGTH (PSF)	TESTS OTHER
	70.0 29.1		70								
	Bottom of boring										

Notes: North Abutment of Proposed Bridge
USCS soil classifications are shown in black font. Classifications for using the Iowa DOT LRFD Driven Pile Design Charts are shown in blue.

* Calibrated hand penetrometer
Hammer Type: Automatic

Water Level:
18 Ft. While Drilling
Ft. After Drilling
Ft.

TEAM Services — Geotechnical and Construction Material Consultants

Boring Started: 9-15-2025
Boring Completed: 9-15-2025
Rig: TRK **Foreman:** JH
Approved: NG **Job #:** 1-5746

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES; IN-SITU, THE TRANSITION MAY BE GRADUAL.

1-5746.geo TSDOTCLS.fdt 9/12/2018

Bridge Replacement - PPCB
Project: BROS-C079(74)--8J-79

POWESHIEK COUNTY
Letting Date: December 15, 2026

POLLUTION PREVENTION PLAN

This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

I. ROLES AND RESPONSIBILITES

A. Designer:
1. Prepares Base PPP included in the project plan.
2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
3. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.

B. Contractor:
1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.
4. Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830321).
5. Supervises and implements good housekeeping practices according to Paragraph III, C, 2.
6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.
8. Submits amended PPP site map according to Section 2602 of the Standard Specifications.

C. Subcontractors:
1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or performing work that is a source of potential pollution in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Implement good housekeeping practices according to Paragraph III, C, 2.

D. RCE/Project Engineer:
1. Is Project Storm Water Manager.
2. On projects where DOT is the Contracting Authority, is current with erosion control training or certification.
3. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.
4. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
5. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
7. Is familiar with the Project PPP and storm water site map.
8. On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
9. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
10. Is signature authority on Notice of Discontinuation.
11. Maintains an up-to-date record of contractors, subcontractors, and subcontratted work items through Subcontractor Request Forms (Form 830231).
12. Makes information to determine permit compliance available to the DNR upon their request.

E. Inspector:
1. Updates PPP through field book entries and storm water sigte inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.
2. Makes information to determine permit compliance available to the DNR upon their request.
3. Conducts joint required inspections of the site with the contractor/subcontractor.
4. Completes an inspection report after each inspection.
5. Is signature authority on storm water inspection reports.

II. PROJECT SITE DESCRIPTION

A. This Pollution Prevention Plan (PPP) is for the construction of *one bridge and associated grading*.

B. This PPP covers approximately *3.49* acres with an estimated *3.49* acres being disturbed. The portion of the PPP covered by this contract has *3.49* acres disturbed.

C. The PPP is located in an area of ONE soil association (*Tama - Muscatine - Downs*). The estimated weighted average runoff coefficient number for this PPP after completion will be *0.24*.

D. Storm Water Site Map - Multiple sources of information comprise the base storm water site map including:
1. Drainage Patterns – Plan and Profile sheets and Situation plans.
2. Proposed Slopes – Cross Sections.
3. Areas of Soil Disturbance – Construction limits shown on Plan and Profile sheets.
4. Location of Structural Controls – Tabulations in plans and Erosion Control Plan View.
5. Locations of Non-structural Controls – Tabulations in plans and Erosion Control Plan View.
6. Locations of Stabilization Practices – Generally within construction limits shown on Plan and Profile sheets.
7. Surface Waters (including wetlands) – Project Location Map and Plan and Profile sheets.
8. Locations where Storm Water is Discharged – Plan and Profile sheets.

E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.

F. Runoff from this work will flow into: *Walnut Creek to Iowa River to Mississippi River*.

III. CONTROLS

A. The Contractor's ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.

B. Preserve vegetation in areas not needed for construction.

C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.

1. EROSION AND SEDIMENT CONTROLS

a. Stabilization Practices

1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.

2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:
a) Permanently ceased on any portion of the site, or
b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.

3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.

4) Permanent and Temporary Stabilization practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the plans. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the plans.

5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.

6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the plans. Additional information may be found in Tabulations in the plans or is referenced in Section 2105 of Standard Specifications.

b. Structural Practices

1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.

2) Structural practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the plans, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found in the plans or are referenced in the Standard Road Plans Tabulation (105-4) located in the plans.

c. Storm Water Management

Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the plans, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the plans. The installation of these devices may be subject to Section 404 of the Clean Water Act.

2. OTHER CONTROLS

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive applicable laws, rules or regulations shall apply.

a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.

b. Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.

c. Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.

d. Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.

e. Spill Prevention and Control - Implement chemical spill and leak prevention and response procedures to contain and clean-up spills and prevent material discharges to the storm drain system and waters of the state.

f. Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.

g. Concrete Grooving/Grinding Slurry – Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project.

h. Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.

i. Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.

j. Dewatering – Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point.

3. APPROVED STATE OR LOCAL PLANS

During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

IV. MAINTENANCE PROCEDURES

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS

A. Inspections shall be made jointly by the Contractor and the Contracting Authority at least once every seven calendar days. Storm water monitoring inspections will include:
1. Date of the inspection.
2. Summary of the scope of the inspection.
3. Name and qualifications of the personnel making the inspection.
5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
6. Major observations related to the implementation of the PPP.
7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.

B. Include storm water site inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documentad why it is impracticable and indicate an estimated date by which the corrections will be made.

VI. NON-STORM WATER DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS

A. Base PPP - Initial Pollution Prevention Plan.

B. Amended PPP - Base PPP ameded during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, and fieldbook entries made by the inspector amended PPP site map by the Contractor, ECIP, NOI, co-peremittee cerifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily aviaiable upon request.

C. Fieldbook Entries – This contains the inspector's daily diary and bid item postings.

D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).

E. Signature Authority - Representative authorized to sign various storm water documents.

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

Poweshiek County Engineer Lyle Brehm
Printed or Typed Name

2018 Traffic Count = 40 vpd

POWESHIEK COUNTY

BROS-C079(74)--8J-79

STATE	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
IOWA	2027	21	21