MISSISSIPPI RIVER

RICE LAKE STATE FISH AND WILDLIFE AREA

FULTON COUNTY, ILLINOIS

U.S. ARMY CORPS OF ENGINEERS
UPPER MISSISSIPPI RIVER RESTORATION
HABITAT REHABILITATION AND ENHANCEMENT PROJECT

OPERATION AND MAINTENANCE MANUAL

SEPTEMBER 2021

US Army Corps
of Engineers ®
Rock Island District

RICE LAKE STATE FISH AND WILDLIFE AREA
UPPER MISSISSIPPI RIVER RESTORATION
HABITAT REHABILITATION AND ENHANCEMENT PROJECT
FULTON COUNTY, ILLINOIS

SEPTEMBER 2021

PREFACE

This Operation and Maintenance (O&M) manual is for the Rice Lake State Fish and Wildlife Area (SFWA) Upper Mississippi River Restoration (UMRR) Habitat Rehabilitation and Enhancement Project (HREP) located on the LaGrange Pool, Illinois Waterway, River Miles (RM) 132.0 through 138.0 in Fulton County, Illinois. This project was federally constructed and is thus considered a Federal project. This O&M manual has been compiled by the Rock Island District, U.S. Army Corps of Engineers (USACE), to assist local officials in complying with the requirements for operating and maintaining the project.

The O&M manual provides essential operation and maintenance instructions and references to be used by personnel knowledgeable of the project. Inspection of the completed Project is detailed in Section 9, *Maintenance and Inspections*. Inspection guidance for the Illinois Department of Natural Resources (ILDNR) and follow-up corrective action reporting is also provided. Additionally, the O&M manual serves as a reference document containing descriptions of the features involved in the original construction of the project, the construction history, post-construction modifications, a copy of the Project Partnership Agreement (PPA) between the ILDNR and the USACE, and a listing of project points of contact.

Included within this O&M manual are copies of as-built drawings, equipment data to include O&M guidance, and other references related to the Rice Lake SFWA UMRR HREP (Project).

The O&M manual should be periodically updated by the ILDNR to incorporate best professional practices. The O&M manual will only be updated by the USACE following Federal action at the Project. All points of contact, websites and supplier information should be checked and verified on a yearly basis by the ILDNR. Physical modifications and any operational changes impacting the Project must be approved and documented by USACE. A copy of the Project inspections should also be attached to the O&M manual.

OPERATION AND MAINTENANCE MANUAL

RICE LAKE STATE FISH AND WILDLIFE AREA
UPPER MISSISSIPPI RIVER RESTORATION
HABITAT REHABILITATION AND ENHANCEMENT PROJECT
FULTON COUNTY, ILLINOIS

SEPTEMBER 2021

TABLES

FIGURES

APPENDICES

OPERATION AND MAINTENANCE MANUAL

RICE LAKE STATE FISH AND WILDLIFE AREA
UPPER MISSISSIPPI RIVER RESTORATION
HABITAT REHABILITATION AND ENHANCEMENT PROJECT
FULTON COUNTY, ILLINOIS

SEPTEMBER 2021

1. GENERAL

1.1. Introduction and Purpose. The Rice Lake State Fish and Wildlife Area (SFWA) Upper Mississippi River Restoration (UMRR) Habitat Rehabilitation and Enhancement Project (HREP) was completed under the supervision of the Rock Island District, U.S. Army Corps of Engineers (USACE). Copies of the drawings and references pertaining to this project are included in this manual.

This Operation and Maintenance (O&M) manual describes the operation, maintenance and upkeep responsibilities for the Rice Lake SFWA UMRR HREP (Project) that is required by USACE to receive Federal assistance under the UMRR Program. The instructions are consistent with the general procedures presented in the Definite Project Report (DPR) dated March 2011.

This manual serves to furnish the Illinois Department of Natural Resources (ILDNR) officials with information and guidance to assist in the orderly and efficient use of the constructed features to meet project goals and objectives. Likewise, adequate maintenance of habitat rehabilitation and enhancement projects is required to ensure serviceability of project features. The intent of the maintenance instructions is to present preventative maintenance information consisting of systematic inspections and subsequent corrective actions, which should ensure long-term use. A timely preventative maintenance program reduces and prevents major damage to constructed features. The ILDNR shall maintain the Project in an acceptable condition as defined in this O&M manual. This manual was written for personnel familiar with the Project and does not contain detailed information which is common to site personnel or which is presented in other existing manuals or regulations. This manual provides the general standards of maintenance and establishes an initial frequency of maintenance inspections that should ensure satisfactory Project performance. This manual is the latest in a series of O&M guidance specifically designed to assist in the operation and maintenance of the Project. This document supersedes and incorporates previous Project specific O&M manuals. Although this document is intended to call out the most salient issues, additional guidance for proper operation and maintenance is present in USACE guidance and policy documents. The Code of Federal Regulations specifying O&M requirements is attached in Appendix C. Additionally, the USACE provides clarification of proper operation and maintenance of Project features that may require efforts that are additional to those stated in this document. The USACE encourages an active dialogue between the USACE and the ILDNR to indicate USACE policy clarifications that may have O&M implications for the Project. Table 1.1 gives a brief history of the planning, engineering, design and construction activities of the Project.

Table 1.1. Summary of Planning and Construction Activities

Project Phase	Purpose	Project Milestone	Date Completed
Pre-Project	Identify and define problems and establish need of project	Original Fact Sheet	October 1987
Planning, Engineering and Design	Quantify project objectives, perform preliminary design, satisfy NEPA[1] and permit requirements, develop performance evaluation plan, obtain project approval for construction	DPR Public & Agency Review	January 2010
		Final DPR with EA[2]	March 2011
		DPR MVD Approval	April 2011
		Obtain 401/404 Permits	July 2011
		Project Partnership Agreement	July 2011
Construction	Finalize plans and specifications, obtain O&M agreement, advertise and award construction contracts, construct project	Final Plans & Specs & Advertise Contract	July 2011
		Bid Opening	August 2011
		Award Contract & Notice to Proceed	September 2011
		Construction Complete	June 2015

[1] National Environmental Policy Act
[2] Environmental Assessment

1.2. Project Function. The Project is classified as a HREP that was federally constructed and is federally maintained. It was designed to restore wetland and aquatic habitat by increasing the areal coverage of annual emergent and moist soil vegetation, decreasing summer water levels to promote moist soil vegetation growth, and increasing connectivity between Big/Goose Lakes and the Illinois River during summer draw downs. Table 1.2 summarizes the goals, objectives, and features of the Project.

Table 1.2. Project Goals, Objectives and Features

Goals	Objectives	Project Features
Restore Wetland Habitat	Increase the areal coverage as measured in acres of annual emergent and moist soil vegetation in Big and Goose Lakes during the summer growing season	Construct overflow spillway across Goose Lake and repair natural spillway
	Decrease summer water levels to below EL 440 feet in Big Lake, Goose Lake and Rice Lake to promote moist soil vegetation growth during the summer growing season	Construct pump station and control building with discharge channel and water control structures
Restore Aquatic Habitat	Increase connectivity between Big/Goose Lakes and the Illinois River during summer drawdowns to reduce fish mortality and avian botulism	Construct fish egress or outlet structure between Goose Lake and the Illinois River

1.3. Project Description. This section describes the Project, as it exists at the time of the O&M manual's printing. The Project features consist of repairing the natural spillway, constructing an overflow spillway, a spillway access road, outlet structure, discharge channel, pump station, control building, 24-inch water control structures, and 48-inch water control structures. These features are shown generically in pump station, control building in Figure 1.1

and more specifically in the plates found in Appendix A, *As-Built Drawings and Cross Sections*. See Section 5, *Construction History*, for a discussion on the construction history of the Project including post-flood rehabilitation.

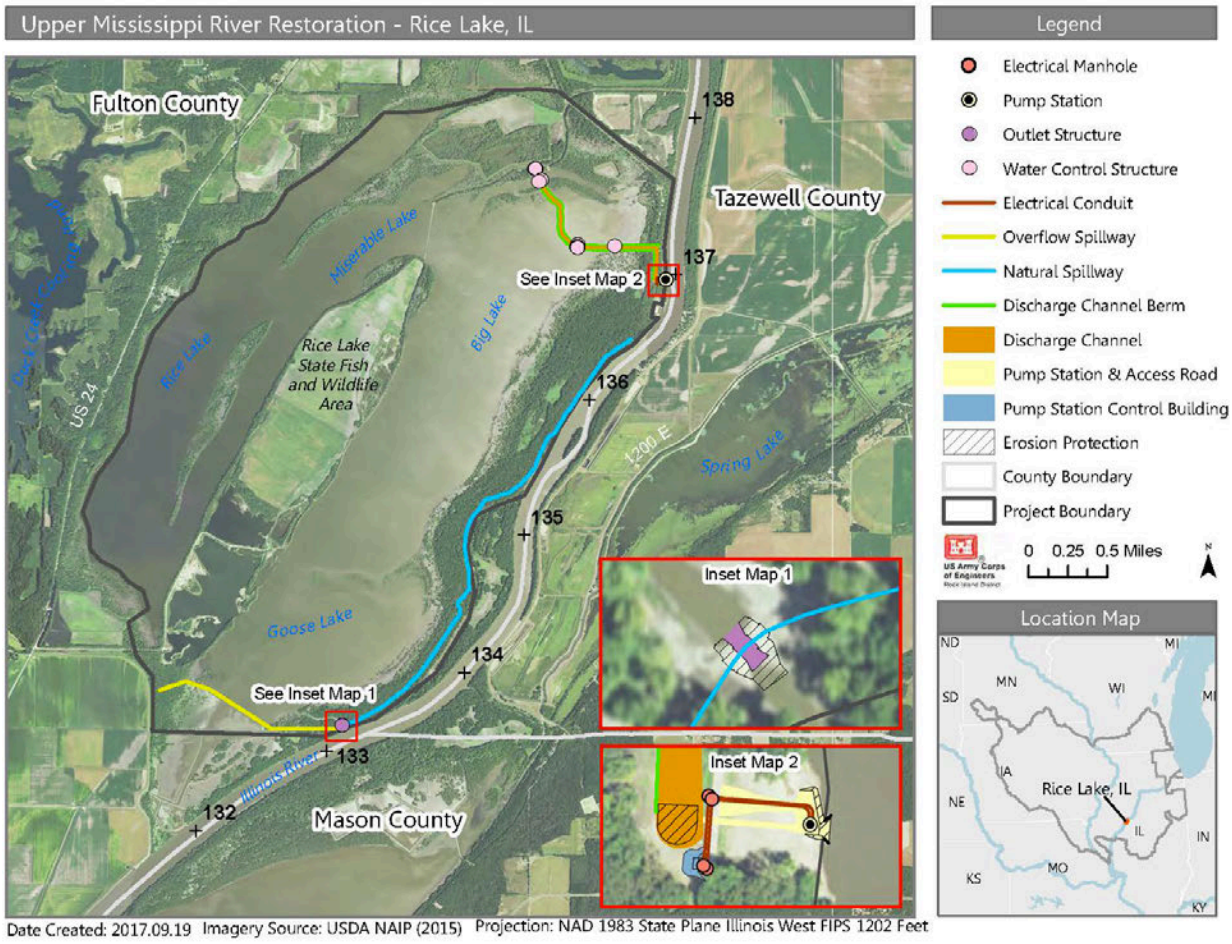


Figure 1.1. Rice Lake HREP Overview Map

2. AUTHORIZATION

This O&M manual serves to meet the Department of the Army's requirements under the 1985 Supplemental Appropriations Act (Public Law 99-88), Section 1103 of the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662), Section 405 of WRDA 1990 (Public Law 101-640), Section 107 of WRDA 1992 (Public Law 102-580), and Section 509 of WRDA 1999 (Public Law 106-53). The USACE funded and constructed the Project under these authorizations.

As set forth in the Project Partnership Agreement (PPA), included in Appendix B, *Project Partnership Agreement and Right of Way Drawings,* the ILDNR has agreed to maintain and operate, at no cost to the USACE, the Project including all the repaired or restored Project features in accordance with Section 107(b) of the WRDA of 1992, Public Law 102-580.

3. LOCATION

The Project is located on the Rice Lake SFWA on the right descending bank of the Illinois Waterway's LaGrange Pool, approximately 4 miles downstream of Banner, Illinois, between River Miles (RM) 132.0 and 138.0. It is located in Fulton County, Illinois, approximately 24 miles southwest of Peoria, Illinois. The ILDNR manages the Rice Lake SFWA to provide quality nesting and mid-migration habitat for migratory and resident waterfowl. The Project area is comprised of several backwater lakes, wet floodplain forests, and floodplain agricultural fields. The agricultural fields are located on a large tract of floodplain (Duck Island) that separates the two largest lakes, Rice Lake and Big Lake. Sheet G-002 provides vicinity and general location maps for the Rice Lake SFWA.

4. PERTINENT INFORMATION

4.1. Hydrology. The LaGrange Lock and Dam provides navigable channel depths by maintaining a water surface elevation of 429.2 feet (flat pool) or higher. The water levels are highly variable. The Project features are adjacent to the Illinois River 9-foot channel but are not contiguous, so navigation is unaffected. Historical flow data for the LaGrange Pool is provided in Figure 4.1. The maximum, minimum, and average daily flows are shown for the 25 year time period of 1990 to 2015.

Information from river gages can provide an indication of river levels and potential flooding at the Project. The Illinois River gage near Havana, Illinois is 12.4 miles downstream of the Project. Pertinent information for this gage is summarized below. Additional information can be obtained from the following website: https://rivergages.mvr.usace.army.mil/WaterControl/new/layout.cfm. First select "Rock Island District" from the "Water Levels By" drop down menu; then select "Illinois River Basin" from the "Rock Island District Basins" drop down menu; then select "Illinois River near Havana, IL" from the list. The gages are listed from upstream to downstream.

Illinois River near Havana, IL (HAV12)

- Gage Zero: 424.4 feet NGVD29
- Flat Pool: 4.8 feet or 429.2 feet NGVD29
- Flood Stage: 14.0 feet or 438.4 feet NGVD29
- River Mile: 119.6
- Location: Mason County, Havana, IL on the left bank 100 feet downstream of the U.S. Highway 136 bridge

Historical Top 5 Crests

1. 27.78 feet on 04/25/2013
2. 27.24 feet on 07/01/2015
3. 27.10 feet on 05/26/1943
4. 26.80 feet on 01/04/2016
5. 26.73 feet on 05/26/2020

It should be noted that the Illinois River gages are referenced to National Geodetic Vertical Datum (NGVD) 1929 datum. The Project datum is North American Vertical Datum (NAVD) 1988. Each of these datums is slightly different from the other, varying by a few tenths of a foot in elevation. The National Oceanic Atmospheric Administration (NOAA) provides an online conversion tool between 1929 and 1988 datum at the following location: http://www.ngs.noaa.gov/TOOLS/Vertcon/vertcon.html

4.2. Climate. The average annual daily minimum temperature was 42 degrees Fahrenheit (F), while the average annual daily maximum temperature was 64 degrees F. However, the temperatures in central Illinois can fluctuate over an extreme range. Average monthly temperatures range from a maximum of 89.2 degrees F in July to a minimum of 17.5 degrees F in January. The precipitation is moderate, with an average annual value of 34.0 inches. The average annual snowfall is 21.4 inches

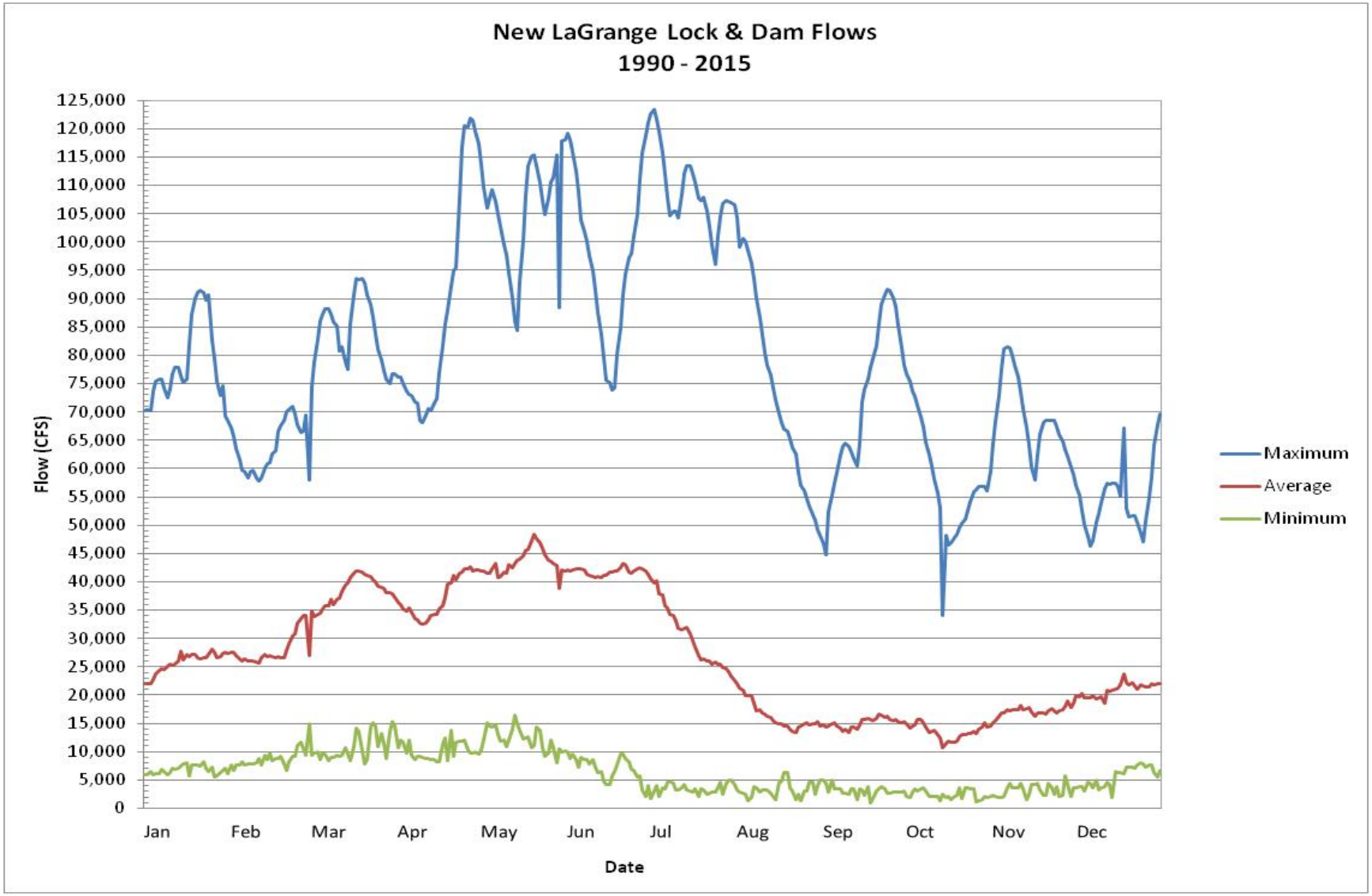


Figure 4.1. New LaGrange L&D Flows: 1990 – 2015

5. CONSTRUCTION HISTORY

5.1. Project Features. USACE designed and constructed the Project in coordination with the ILDNR. Several features were utilized in the Project to meet the objectives and goals. The Project features consist of repairing the natural spillway, constructing an overflow spillway, a spillway access road, outlet structure, discharge channel, pump station, control building, 24-inch water control structures, and 48-inch water control structures. These features are summarized in Table 5.1 and described in more detail below. Appendix E includes Project feature photos.

Table 5.1. Summary of Project Features

Feature	Measurement	Unit
Overflow Spillway		
Length	6,524	Feet
Top Elevation	440.0	Feet NAVD88
Top Width	10	Feet
Side Slopes	4:1	H:V
Embankment, Wet Material	19,610	Cubic Yards
Embankment, Dry Material	10,800	Cubic Yards
Natural Spillway		
Length	17,558	Feet
Outlet Structure		
Top Elevation	440	Feet NAVD88
Sill Elevation	431.5	Feet NAVD88
4'-6" Stoplog Bays	2	Each
5' x 5' Slide Gate Bay	1	Each
Pump Station		
Pumps	3	Each
Manufacturer	Sulzer ABS	
Type	Submersible Propeller	
Model Number	VUP 1001 M2200/12-92.60	
Flow	44,400	GPM
Top Elevation	440.0	Feet NAVD88
Riverside Sill Elevation	420.5	Feet NAVD88
Landside Sill Elevation	432.0	Feet NAVD88
6' x 12' Box Culvert Length	262	Feet
Jersey Barriers	110	Feet
Discharge Structure		
Sill Elevation	431.7	Feet NAVD88
24" Riprap (RR-5)	835	Tons
Discharge Channel		
Length	6,893	Feet
Berm Top Elevation	441.0	Feet NAVD88
Channel Bottom Elevation	430.0	Feet NAVD88
Channel Bottom Width	30	Feet
Side Slopes	3:1	H:V
Excavation	91,362	Cubic Yards
Water Control Structures		
48" Diameter CMP Stoplog Structures	6	Each
24" Diameter CMP Stoplog Structures	4	Each
Erosion Protection		
18" Riprap (RR-4)	696	Tons
6" to 9" Bedding Stone (RR-1)	547	Tons
9" Granular Surfacing	1,028	Tons

a. Overflow Spillway. An overflow spillway was constructed from Station 0+00 to Station 65+24 at the downstream end of the Project on the south end of Goose and Beebe Lakes to provide controlled overtopping of the embankment system. The spillway from Station 0+00 to 18+00 and from Station 40+00 to 65+24 was constructed with “dry” material from excavation of the discharge channel. The spillway from 18+00 to 40+00 was constructed with “wet” material from the bottom of Goose Lake. Refer to the overflow spillway plans and profiles on sheets C-102 to C-104 and typical sections on C-301.

b. Natural Spillway. A natural ridge at higher ground exists adjacent to the Project along the Illinois River. It was determined during design that this ridge was at a sufficient elevation to act as a natural spillway, except at three locations. These areas, totaling approximately 700 feet, were repaired or elevated during construction. See sheets C-113 to C-115. One repair area also included removing an existing 36” CMP stoplog structure. The natural spillway begins where the overflow spillway ends at Station 65+24 and extends upstream to Station 240+82, reference sheets C-104 to C-111.

c. Spillway Access Road. A spillway access road was constructed on the south end of the quarry pit and Beebe Lake. It allows access from the existing access road to the overflow spillway, refer to sheet C-101 for approximate location and sheet C-332 for typical section.

d. Outlet Structure. An outlet structure was constructed just beyond where the overflow spillway transitions to the natural spillway at approximate Station 66+50. See sheet C-112. The outlet structure consists of two stoplog bays and one slide gate bay which allow for manipulating and maintaining water levels within the Project. Two existing 36” CMP stoplog structures were also removed at this location prior to construction of the outlet structure.

e. Pump Station. A pump station was constructed at the upstream end of the Project between the Illinois River and Banner Dyke Road. See sheet C-121 for location and sheets S-101 and S-301 for details. The pump station allows for pumping water from the Illinois River into the discharge channel which flows into the Rice Lake SFWA. The pump station, in combination with the water control structures allow for control of the water into the Rice Lake SFWA.

f. Control Building. A control building for the pump station was constructed on the west side of Banner Dyke Road, south of the discharge structure. The control building is a masonry structure on a concrete foundation with a slab top elevation of 457.5 feet, which equates roughly to the 0.2 percent chance or 500-year flood event. The control building houses the pump station controls. Refer to sheet C-121 for location and sheets S-107 and S-203 for details.

g. Discharge Channel. A discharge channel approximately 6,893 feet in length was excavated beginning at the discharge structure on the west side of Banner Dyke Road, north of the control building. Water is piped from the pump station to the discharge structure through a concrete box culvert. The bottom elevation of the discharge channel is 430.0 feet. The bottom width is 30 feet with side slopes at 3H:1V. The discharge channel runs northward approximately 1,075 feet and then turns westward. It runs westward approximately 2,925 feet and then turns northward. The channel runs northward for approximately 1,360 feet and then turns north-northwestward. The channel runs approximately 1,533 feet north-northwestward and then connects to the existing channel which leads into the Rice Lake SFWA. Plans and profiles of the discharge channel can be found on sheets C-122 to C-124. Material excavated from the discharge channel was used to construct the overflow spillway.

h. 24-Inch Water Control Structures. Four (4) 24” water control structures were constructed for the Project. They are located along the discharge channel, one each at Stations 25+00 and 37+60, and two at Station 64+80. See sheets C-125 to C-127. All four structures consist of 24” diameter CMP with a prefabricated inline water control riser with stoplogs.

i. 48 Inch-Water Control Structures. Six (6) 48” water control structures were constructed for the Project. They are located along the discharge channel, three each at Station 37+60 and three each at Station 69+00, reference sheets C-126 and C-128. All six structures consist of 48” diameter CMP with a 54” diameter CMP riser with stoplogs.

5.2. Project Right of Way Drawings. The Project is cost-shared with the ILDNR, as the non-Federal Sponsor. All of the Project lands are owned in Fee Simple Title and managed by the ILDNR. The real estate interests acquired for the Project consist of approximately 4,029 acres in Fee Simple Title. Right of way (ROW) drawings for the Project were developed during design phase and are provided in Appendix B.

5.3. Project Construction. Construction contract information is listed below. An overall breakdown of construction costs is provided in Table 5.2.

Contract Name:	Rice Lake Habitat Rehab & Enhancement, Stage I
Contract Number:	W912EK-11-C0090
Contractor:	SAF, INC. 130 E Voris St, Ste A Akron, OH 44311
Date Awarded:	September 2011
Date Completed:	June 2015
Contract Cost:	$9,308,026.32

Table 5.2. Actual Construction Costs

Item No.	Supplies/Services	Qty	Unit	Unit Price	Amount
0001	Mobilization and Demobilization	1	LS	XXX	$93,293.00
0002	Temporary Field Office	1	LS	XXX	$67,400.00
0003	Telephone Bills for Temporary Field Office				
0003AA	First 1,000.00 Dollars	373	DL	$15.00	$5,594.19
0003AB	Over 1,000.00 Dollars	0	DL	$14.00	$0.00
0004	Clearing, Grubbing, and Stripping	1	LS	XXX	$104,781.00
0005	Demolition of Existing Water Control Structures	1	LS	XXX	$22,348.00
0006	Dredging/Excavating Pump Station Intake	1	LS	XXX	$86,444.00
0007	Electrical Service	1	LS	XXX	$261,484.00
0008	Pump Station and Control Building Electrical Work	1	LS	XXX	$372,739.00
0009	Pump Station and Wing Walls				
0009AA	Concrete Mud Slab and Bedding	1	LS	XXX	$10,843.00
0009AB	Reinforced Concrete	1	LS	XXX	$1,310,216.00
0009AC	Submersible Pumps, Discharge Tubes &	1	LS	XXX	$1,060,787.25
0009AD	Miscellaneous Metal Fabrications	1	LS	XXX	$180,445.00
0009AE	Steel H-Piles	1	LS	XXX	$265,834.95
0010	Pump Station Control Building				
0010AA	Reinforced Concrete	1	LS	XXX	$68,975.00
0010AB	Masonry	1	LS	XXX	$23,120.00
0010AC	Roof Assembly	1	LS	XXX	$29,995.00
0010AD	Steel Door, Stairs, and Handrail	1	LS	XXX	$53,218.00
0010AE	Control Building Mechanical	1	LS	XXX	$173,321.00
0011	Precast Concrete Box Culvert	224	LF	$3683.00	$824,992.00
0012	Pump Station Discharge Structure	1	LS	XXX	$71,596.00
0013	Discharge Channel Excavation				
0013AA	First 75,000 Cubic Yards	75,000	CY	$13.37	$1,002,750.00
0013AB	Over 75,000 Cubic Yards	16,362	CY	$16.11	$263,587.47
0014	24-Inch Diameter Water Control Structure	4	EA	$28,073.25	$112,293.00
0015	48-Inch Diameter Water Control Structure	6	EA	$63,449.00	$380,694.00
0016	Spillway Embankment, Wet Material Placement				
0016AA	First 16,000 Cubic Yards	18,500	CY	$18.82	$348,170.00
0016AB	Over 16,000 Cubic Yards	1,110	CY	$88.23	$97,935.30
0017	Spillway Embankment, Dry Material Placement				
0017AA	First 16,000 Cubic Yards	10,800	CY	$20.50	$221,400.00
0017AB	Over 16,000 Cubic Yards	0	CY	$23.67	$0.00

Table 5.2. Actual Construction Costs

Item No.	Supplies/Services	Qty	Unit	Unit Price	Amount
0018	Outlet Structure				
0018AA	Reinforced Concrete	1	LS	XXX	$193,173.00
0018AB	Grating	1	LS	XXX	$23,722.00
0018AC	Handrails	1	LS	XXX	$20,246.00
0018AD	Aluminum Stoplogs	1	LS	XXX	$17,185.00
0018AE	Aluminum Slide Gate	1	LS	XXX	$10,247.00
0019	Granular Surfacing				
0019AA	First 900 Tons	900	TN	$21.91	$19,719.00
0019AB	Over 900 Tons	128	TN	$21.92	$2,812.12
0020	Pump Station Access Road Swing Gate	1	LS	XXX	$8,873.00
0021	Stone Protection – Bedding Stone				
0021AA	First 500 Tons	500	TN	$61.02	$30,510.00
0021AB	Over 500 Tons	47	TN	$61.02	$2,867.94
0022	Stone Protection - Riprap (RR-4)				
0022AA	First 600 Tons	600	TN	$76.65	$45,990.00
0022AB	Over 600 Tons	96	TN	$383.25	$36,792.00
0023	Stone Protection - Riprap (RR-5)				
0023AA	First 700 Tons	700	TN	$79.66	$55,762.00
0023AB	Over 700 Tons	135	TN	$76.65	$10,324.75
0024	Concrete Jersey Barriers				
0024AA	First 110 Linear Feet	110	LF	$92.10	$10,131.00
0024AB	Over 110 Linear Feet	0	LF	$70.25	$0.00
0025	Seeding	1	LS	XXX	$85,157.60
0026	Outlet Structure Mud Slab	1	LS	XXX	$21,750.00
0027	Special Joint Sealant	1	LS	XXX	$10,229.15
0028	Modify Pump Station Discharge Chamber Hatches	1	LS	XXX	$37,651.53
0031	Degrade Overflow Spillway Wet Material	1	LS	XXX	$80,000.00
0032	Remove Pump Station Debris	1	LS	XXX	$33,000.00
0033	Repair Outlet Structure	1	LS	XXX	$160,848.71
0034	Repair Spillway & Berms	1	LS	XXX	$426,230.74
0035	Repair Water Control Structures	1	LS	XXX	$163,296.75
0037	Closeout	1	LS	XXX	$287,250.87
TOTAL CONSTRUCTION COST					**$9,308,026.32**

LS = Lump Sum TN = Tons EA = Each
DI = U.S. Dollars CY = Cubic Yards LF = Linear Feet

5.4 Construction Modifications. The Project construction contract had multiple modifications. Ten of the modifications required technical changes to the contract and are described below.

a. Special Joint Sealant. A special joint sealant was added to provide watertight seals at the precast box culvert sections, the annular space between the steel discharge pipes, and the top slab of the pump station. The design basis was SikaSwell® S-2 manufactured by Sika Corporation.

b. Outlet Structure Mud Slab. A 12-inch mud slab was incorporated to provide an adequate foundation for the outlet structure due to unsuitable materials that were encountered during excavation. See sheet S-309.

c. Adjust Limit of Wet & Dry Spillway. The limit of overflow spillway construction using wet material and using dry material was adjusted from Station 23+00 to Station 18+00 per request by the Contractor. See sheet C-102. Quantities for these bid items were adjusted accordingly.

d. Modify Pump Station Discharge Chamber Hatches. The three gate hatches on the discharge chamber side of the pump station were raised to prevent potential reverse flow through the discharge chamber side of the pump station during pumping operations when the water level in the discharge channel is elevated. See sheet S-301. Access equipment and safety features were also installed. The openings in the top slab of the pump station for the discharge piping on the discharge chamber side were also modified from oblong to circular. These changes were necessary to provide watertight seals. Reference sheet S-101.

e. Stoplog Security Device. A stoplog security device for the two stoplog bays was installed to prevent theft and unauthorized use of the stoplogs at the outlet structure. See sheet S-108.

f. Repair Spillway and Berms. A record flood in spring 2013 caused damage to the Project and it was necessary to repair the overflow spillway embankment (dry material placement) and discharge channel berms to pre-flood conditions. Approximately 4,400 feet of overflow spillway embankment and approximately 9,000 feet of discharge channel berms were repaired to include surface preparation, material placement, regrading/reshaping, seeding and surveying.

g. Repair Outlet Structure. A record flood in spring 2013 caused damage to the Project and repairs were required to provide a functional outlet structure. The outlet structure was modified to incorporate rock installation adjacent to the top of the structure. See sheets C-112 and C-201.

h. Remove Pump Station Debris. Debris that accumulated at the bottom of the pump station during the spring flood event of 2013 was removed and disposed offsite.

i. Degrade Overflow Spillway Wet Material. Approximately 2,200 feet of overflow spillway was degraded to a top elevation of 440.0 feet so this feature would function as hydraulically designed.

j. Repair Water Control Structures. A record flood in spring 2013 and ice in winter 2014 caused damage to the Project and repairs were required to provide functional water control structures. Two of the 24-inch CMP stoplog structures were reinstalled and the risers

lowered. See sheets C-125 and C-126. The six 48 -inch CMP gate structures were converted to stoplog structures. See sheet S-520.

5.5. Construction As-Built Drawings. The construction drawings, included in Appendix A, depict as-built or as-repaired Project features.

5.6. Post-Construction Modifications. The Project sustained another record flood in summer 2015. Each pump's electrical power and control cable end connections were inundated during this high water event rendering the pumps inoperable. As a result, a service contract (W912EK-16-C-0023) was awarded to the pump supplier to repair all three 48" submersible pumps. The pumps were disassembled and evaluated to identify all damaged or failed pump components requiring replacement or repair. The pumps were then repaired, reassembled and tested on site after reinstallation.

In addition to the pump repairs, a modified design was developed to elevate the junction boxes that house each pump's electrical power and control cable end connections. The existing 6.35" x 8" aluminum I-beams installed during construction to support the junction boxes were replaced with 15" x 30" steel I-beams (W30x173). The bottom of the junction boxes was raised from approximate EL 447.0 to EL 458.8. Reference sheets S-512, E-106, E-301, E-302 and E-503 in Appendix A for additional details. The reinstallation of the pumps and installation of the elevation junction boxes was performed by USACE personnel from the Operations Division, Maintenance Branch in the Mississippi River Project Office. This work was complete in early September 2017.

In late September 2017, the ILDNR Site Manager began running the pumps to raise the interior water elevations. After approximately 60 hours of operation, pump #2 shut down and became inoperable. As a result, a service contract (W912EK-18-P-0046) was awarded to the pump supplier to repair pump #2. The pump was disassembled and evaluated to identify all damaged or failed pump components requiring replacement or repair. The pump was then repaired, reassembled and tested on site after reinstallation. This work was complete in June 2018. See Appendix F for contract reports.

In September 2018, the non-Federal Sponsor notified the Government that Pump #2 became inoperable a third time. The other two pumps became inoperable the following week. The authorized pump supplier/manufacturer performed a service call in October 2018. See Appendix F for field service report. As a result, a service contract (W912EK-19-P-0071) was awarded to Quality Flow Systems, Inc. All three pumps were disassembled and evaluated to identify all damaged or failed pump components requiring replacement or repair. In addition, a complete electrical damage and functional operation inspection and assessment of the pump station motor control center (MCC) was performed and recommendations for repair were provided. The pumps were then repaired, reassembled and tested on site after reinstallation. Motor control center repairs were completed during pump reinstallation but prior to testing and included the following: verification of the service entrance ground / neutral bonding and correction of any deficiencies, fastening of the earth ground at the MCC ground bus bar in the bottom of the MCC structure, repair of the severed ground conductor outside of the control building, installation of new cable grips and three-pole electrical termination blocks in the upper junction boxes at the pump station for each pump, replacement of the water level transducers and suspension kits in the pump station, replacement of all three surge protector device arrestors for Phase A, B and C in the MCC, and replacement of the pump instrumentation multiconductor cables from the MCC in the control building to the upper junction boxes at the pump station for each pump. This work

was substantially complete in April 2021, however a mod was awarded in July 2021 to replace the Pump #1 display panel. Refer to Appendices F and H for contract reports.

In conjunction with the pump repairs, a service contract (W912EK-21-P-0028) was awarded to Hoerr Construction, Inc. in March 2021 to remove the sediment from the pump station bays using a vac truck just prior to the reinstallation of the pumps.

5.7. Project Encroachments and Modifications. 33 USC 408 (Section 408) provides authority solely to the Secretary of the Army for modifications or alterations to USACE projects. According to Army policy, there is very limited delegated authority to District Commanders to approve minor, low impact modifications to projects operated and maintained by sponsors. Approval from the Rock Island District Engineer is required prior to any minor improvement or change in any feature of the Project. In addition, no encroachment shall be made on Project rights-of-way without prior determination that the proposed work will not adversely affect the Project. Before starting work on any such improvements, changes, or encroachments, ILDNR officials shall submit for consideration and approval a complete set of the proposed plans to the USACE, Rock Island District, ATTN: CEMVR-EC-DN. Following review of the proposed plans, the USACE shall notify the ILDNR by letter of the findings and if approval is granted. If approval is granted, and after the work is completed, the ILDNR will update the O&M manual to reflect the modification to the Project and provide a copy to the USACE. Additionally, the sponsor shall furnish the USACE drawings, which show the new "as-built" condition.

6. PROJECT PERFORMANCE

6.1. Performance Monitoring and Assessment. The purpose of this section is to summarize monitoring and data collection aspects of the Project. Table 6.1 outlines the estimated annual post-construction costs for performance monitoring and assessment. ILDNR and USACE shall conduct the fish net sampling and moist soil vegetation mapping at the intervals specified. The estimated cost for collecting these data every 5 years was interpolated into an annual cost as shown in Table 6.1.

Table 6.2 presents the Monitoring and Performance Evaluation Matrix which highlights the main project phases, the types of activities involved for each phase, and their purposes. For each activity, it is defined who is the responsible agency, who is the implementing agency, what is the funding source, and any implementation instructions, if applicable.

Table 6.3 illustrates the Monitoring and Data Collection Summary, which outlines what is monitored, how it will be accomplished, who will collect the data, and at what intervals. For purposes of this manual, USACE and the ILDNR Site Manager are responsible for the engineering and natural resources data in the post-construction phase column.

6.2. Post-Construction Monitoring. Table 6.4 presents the Post-Construction Evaluation Plan. Monitoring includes both quantitative and qualitative data from federal and state agencies, research organizations, and the Site Manager. The monitoring parameters were developed to measure the effectiveness of the stated goals and objectives. Monitoring data, including annual field observations by the Site Manager, are used to evaluate the performance of the Project. The Site Manager should refer to Section 9, *Maintenance and Inspections*, and the inspection checklist in Appendix D for a more complete description of the requested field observations.

Table 6.1. Estimated Post-Construction Monitoring Costs

Description	Unit Cost	Frequency	Total Cost
Fish Net Sampling	$800	Years 1 thru 2	$1,600
Moist Soil Vegetation Mapping	$5,000	Years 1 thru 5	$25,000
TOTAL ESTIMATED MONITORING COST			**$26,600**

Table 6.2. Monitoring and Performance Evaluation Matrix

Project Phase	Type of Activity	Purpose	Responsible Agency	Implementing Agency	Funding Source	Implementation Instructions
Pre-Project	Pre-Project Monitoring	Identify and define problems at HREP site; establish need of proposed project features	Sponsor	Sponsor	Sponsor	N/A
	Baseline Monitoring	Establish baseline for performance evaluation	USACE	USACE/ Sponsor	HREP / Sponsor	See Table 6.3
Design	Data Collection for Design	Include quantification of project objectives; design of project; and development of performance evaluation plan	USACE	USACE	HREP	See Table 6.3
Construction	Construction Monitoring	Assess construction impacts; assure permit conditions are met	USACE	USACE	HREP	See State Section 401 Stipulations
Post-Construction	Performance Evaluation Monitoring	Determine success of project as related to objectives	USACE / Sponsor	USACE / Sponsor	HREP / Sponsor	See Tables 6.3 and 6.4

Table 6.3. Monitoring and Data Collection Summary

	WATER QUALITY DATA						ENGINEERING DATA			NATURAL RESOURCE				
	Pre-Project Phase		Design Phase		Post-Construction Phase		Pre-Project Phase	Design Phase	Post-Const. Phase	Pre-Project Phase	Design Phase	Post-Const. Phase		
Type Measurement	Apr-Sep	Oct-Mar	Apr-Sep	Oct-Mar	Apr-Sep	Oct-Mar							Sampling Agency	Remarks
POINT MEASUREMENTS														
Column Settling Stations														
Column Settling Analysis								1					USACE	
Boring Stations [1]														
Geotechnical Borings								1					USACE	
Fish Station [2]														
Net Sampling										1		Y1-2	ILDNR	
AREA MEASUREMENTS														
Mapping														
Moist Soil Vegetation										1		Y1-5	USACE	

LEGEND
M = Monthly
Yn = Year-n Interval where n = the number of years after construction completion that the data is collected

[1] Boring Stations - See B sheets in as-built drawings in Appendix A for locations and logs
[2] Fish Station - See sheet C-101 in as-built drawings in Appendix A for location of outlet structure

Table 6.4. Post-Construction Evaluation Plan

Goal	Objective	Enhancement Feature	Unit	Year 0 Without Project	Year 1 With Project	Year 25 With Project	Target Year 50 With Project	Feature Measurement See Table 6.2	Annual Field Observations by Site Manager
Restore Wetland Habitat	Increase the areal overage as measured in acres of annual emergent and moist soil vegetation in Big and Goose Lakes during the summer growing season Protect the interior (Big Lake, Goose Lake and Rice Lake) from river levels below EL 440 during the summer growing season (July to September) to promote moist soil vegetation growth	Construct overflow spillway across Goose Lake and repair natural spillway Construct pump station and control building with discharge channel and water control structures	Number of summer seasons with river levels below EL 440 to total years in operation (%)	10	40	40	40	Seasonal inundation and moist soil vegetation measurements by analysis of aerial photography / GIS mapping and ground observations	Record observations for both drawdown and flooding; inspect and record discharge channel and water control structures condition
Restore Aquatic Habitat	Increase connectivity between Big and Goose Lakes and the Illinois River during summer drawdowns to reduce fish mortality and avian botulism	Construct fish egress or outlet structure between Goose Lake and the Illinois River	Number of structures accessible to fish during lowering of interior water levels	0	1	1	1	Fish net sampling on riverside of outlet structure	Record observations on fish kills and avian botulism cases

7. PROJECT PARTNERSHIP AGREEMENT

The ILDNR and the USACE, Rock Island District Engineer entered into a PPA on 27 June 2011, as required by the UMRR Program. Upon execution of the PPA, lands acquired for Project purposes were eligible for credit against the non-Federal Sponsor's 35 percent requirement. Lands already owned as part of a previous Federal Project were not considered for credit.

As set forth in the PPA with the ILDNR, the ILDNR has agreed to "…operate, maintain, repair, rehabilitate, and replace the entire *Project* or *functional portion of the Project*, at no cost to the Government." A copy of the PPA is included as Appendix B of the O&M manual.

8. OPERATION

8.1. General. This section presents management instructions for the major project features that were designed and constructed to minimize O&M requirements. A formal Annual Management Plan has been developed for the Project. This plan was developed by the USACE, in coordination with the ILDNR, as shown in Table 8.1. The ILDNR is responsible for the operation and maintenance of all Project features in accordance with the PPA and the environmental management regulations contained in Section 107(b) of WRDA 1992. See Appendix C. The ILDNR shall be responsible for developing and sustaining a program that will operate and maintain the Project and its features. The USACE is responsible for administration of the UMRR Program in accordance with current laws and USACE policies.

Table 8.1. Annual Management Plan

Month	Action	Purpose
Jun to Jul	Dewater area by gravity through outlet structure	Expose mudflats to encourage production of moist-soil vegetation
Jul to Sept	Maintain lower water levels to maximum extent possible	Maintain mudflats to continue production of moist-soil vegetation
Sept to Oct	Gradually increase water levels through pump station and water control structures	Provide access to food plants for migratory waterfowl
Oct to Jun	Maintain higher water levels to maximum extent possible	Maintain winter furbearer habitat

Project features shall be continuously operated and maintained to obtain maximum benefits. No encroachment or trespass that will adversely affect the efficient operation or maintenance of the project shall be permitted upon the constructed features. No improvement shall be passed over, under, or through the constructed features, nor shall any excavation or construction be permitted within these features without prior approval by the USACE. Such improvements or alterations, which are desirable and permissible, shall be constructed in accordance with standard engineering practice. Advice regarding the effect of proposed improvements or alterations on the functioning of the project and information concerning methods of construction acceptable under standard engineering practice shall be obtained from the Rock Island District Engineer or, if otherwise obtained, shall be submitted for approval. As-built drawings or prints showing improvements or alterations as finally constructed shall be furnished to the Rock Island District Engineer or Authorized Representative after completion of such work.

8.2 Overflow Spillway. Specific operation requirements will be performed as determined by the ILDNR Site Manager. The top elevation of the overflow spillway needs to be maintained At EL 440 feet NAVD88 to ensure this feature operates as designed. During operational inundation periods, the overflow spillway shall be inspected to verify the following:

1) No indications of slides or sloughs are developing;
2) No wave wash or scouring action is occurring;
3) No high reaches exist above design grade to delay filling of the interior;
4) No low reaches exist below design grade that may be overtopped prematurely; and
5) No other conditions exist which might endanger the overflow spillway.

Steps shall be taken to control any condition that endangers the overflow spillway and to repair the damaged section.

8.3. Outlet Structure. Specific operation requirements will be performed as determined by the ILDNR Site Manager in accordance with the manufacturer's operation procedures provided in Appendix J. Water levels in the lakes and management units can be manipulated through the use of the stoplogs in the outlet structure. When the water levels of the Illinois River are expected to rise with heavy sediment loads during dewatering operations, the outlet structure shall be closed to prevent sediment from entering the Project. The outlet structure shall remain closed until the heavy sediment floodwaters recede or overtopping of the overflow spillway is forecasted. To prevent overtopping damage to the outlet structure, all stoplogs shall be removed and stored when the water levels of the Illinois River rise and overtopping of the overflow spillway is predicted. Overtopping of the overflow spillway occurs at EL 440 feet NAVD88. This elevation correlates to an approximate river stage of 15.6 at the Havana, IL gage. The stoplogs shall remain out until the water levels recede and the Project is back in operation.

8.4. Pump Station and Control Building. Specific operation requirements will be performed as determined by the ILDNR Site Manager. During the fall season, the pump station will be used to raise the water levels of the lakes and moist soil units. The capacity of all three pumps is approximately 133,200 GPM @ 15 feet total dynamic head. The Project interior is estimated to raise approximately 2 feet in 15 days at this capacity. Prior to activating the pumps, the siphon break or butterfly valves on the pump station discharge piping shall be opened. See vent detail on sheet M-102 in Appendix A for location and Appendix G for operation instructions. Each pump must then be activated manually. After pump start up and once all air has been vented from the discharge piping, the butterfly valves should be closed for operation. This reduces energy consumption of the pumps. The siphon break vent valves must be reopened upon pump shutdown to break siphon and prevent continuous flow through the discharge piping and pumps. Never operate or restart the pumps while in a siphon flow condition. Each pump must also be deactivated manually once the desired interior water elevations are achieved. Pumping to maintain interior elevations will also be by manual activation and deactivation. During operation, the pump monitoring and status unit in the MCC enclosure inside the control building shall be monitored to ensure the pumps are functioning properly. The following allowable starting frequency is based on motor power ratings as identified by the pump manufacturer. The maximum pump starts per hour is 10 at an internal of 6 minutes.

It is recommended the ILDNR Site Manager maintain a pump logbook for historical recordkeeping at the pump station. The following data is recommended for inclusion in the logbook; the date, pump hours, pump motor amperage, pump motor voltage, water level of the river, and significant pump station activities or alarms. See Appendix F for pump station log template. Technical information pertaining to the pumps is referenced in the Sulzer ABS Submersible Propeller Pump VUP Installation and Operating Instructions provided in Appendix F. The local authorized service center for ABS Sulzer pumps is Flow-Technics Inc. in Frankfort, IL and may be contacted at office number (815)277-2600. Appendix H includes System schematics and drawings for the MCC. Turning off the main circuit breaker in the control building to minimize energy usage is not recommended because this will disconnect power to

everything including the MCC enclosure compartment heaters, which are required to control condensation, and the building's exterior and interior light fixtures. It is recommended the ILDNR Site Manager operate the unit heater as needed to maintain the equipment inside the control building in good condition especially if there are beginning indicators of corrosion, damage or other deterioration due to excessive cold temperatures or moisture condensation. The following recommended interior temperatures are based on product ratings as identified by the equipment manufacturers. The minimum operating temperature for proper function of equipment inside the control building is 32 degrees Fahrenheit (32ºF), while the minimum storage temperature is -4 degrees Fahrenheit (-4ºF).

8.5. Water Control Structures. Specific operation requirements will be performed as determined by the ILDNR Site Manager. Water levels in the lakes and management units can be manipulated through the use of stoplogs in the water control structures. The stoplogs can be used to direct the flow of water from the discharge channel to the desired area during pumping. To prevent overtopping damage to the berms, all stoplogs shall be removed and stored when the water levels of the Illinois River rise and overtopping of the overflow spillway is predicted. Overtopping of the overflow spillway occurs at EL 440 feet NAVD88. This elevation correlates to an approximate river stage of 15.6 at the Havana, IL gage. The stoplogs shall remain out until the water levels recede and the Project is back in operation.

9. MAINTENANCE AND INSPECTIONS

9.1. Maintenance. An active preventative maintenance program reduces damage to existing Project features by taking early corrective action. Additional costs associated with repair and rehabilitation are also avoided. An effective preventative maintenance program requires regular, thorough inspections. Routine inspections can aid ILDNR officials in discovering deficiencies within the Project. They can also provide ILDNR officials with baseline condition data. This data is necessary for considering repair options for major damage within the Project. Steps will be taken by the ILDNR Site Manager to correct conditions disclosed by Project inspections. Regular maintenance repair measures will be accomplished during the appropriate season as scheduled by the ILDNR Site Manager to ensure structure serviceability. Table 9.1 includes estimated operation and maintenance costs for the Project. The maintenance items were developed during the feasibility phase, agreed to by the ILDNR and documented in the DPR. Quantities for maintenance dredging and riprap assume that approximately ten percent of the total construction volume would be excavated or replaced at years 40 or 30, respectively. The need for dredging will be evaluated after completion of the bathymetric surveys and documented in the Performance Evaluation Reports.

Table 9.1. Estimated Annual Operation and Maintenance Costs

Item	Qty	Unit	Unit Price	Total Cost
Operation				
Pump Operation	350	Hours	$40	$14,000
Project Inspection	40	Hours	$50	$2,000
Maintenance				
MCC Maintenance	40	Hours	$100	$4,000
Mowing, Spillway & Berms	80	Hours	$50	$4,000
Granular Surfacing	20	TN	$25	$500
Riprap	30	TN	$80	$2,400
Debris Removal (channel/structures)	100	Hours	$50	$5,000
TOTAL ESTIMATED ANNUAL O&M COST				**$31,900**

9.1.1. Overflow/Natural Spillways and Discharge Channel Berms. The ILDNR Site Manager shall provide at all times such maintenance as may be necessary to ensure the serviceability of the spillways and berms in time of inundation. Measures shall be taken such as mowing, burning, and herbicide application to promote the growth of sod, control burrowing animals, provide routine mowing to extend 15 feet horizontally from the toe of the spillway/berm where applicable, remove wild growth and drift deposits, and repair damage caused by erosion or other forces. Any major repairs shall be coordinated with USACE. Project inspections shall be made by the ILDNR Site Manager to ensure that the above maintenance measures are being effectively carried out and to verify the following:

1) Settlement, slough, or loss of section;
2) Wave wash and scouring;
3) Overtopping erosion;
4) Inadequate vegetative cover (too much or too little);
5) Unauthorized grazing or traffic;
6) Encroachments;
7) Unfavorable tree/shrub growth; and
8) Seepage distress.

Such inspections shall be made prior to the beginning of an inundation period, immediately following major high water periods, and otherwise at intervals necessary to insure the best care of the spillway or once per year. Steps shall be taken to correct conditions disclosed by such inspections. Regular maintenance repair measures shall be accomplished during the appropriate season as scheduled by the ILDNR Site Manager. All routine maintenance and corrective actions completed shall be documented in the inspection report found in Appendix D.

9.1.2. Spillway Access Road. The ILDNR Site Manager shall conduct annual observations of the spillway access road. The road shall be maintained to the design cross section and be free of ruts. Any significant displacement of the granular surfacing should also be noted and repaired as necessary.

9.1.3. Outlet Structure. The outlet structure shall be inspected annually and immediately following a high water event to determine whether seepage is taking place along the lines of its contact with the embankment. Corrective action shall be taken upon discovery of any adverse conditions at the structure. Project inspections of the outlet structure shall be made by the ILDNR Site Manager to verify the following:

1) Slide gate and stop logs are in good operating condition;
2) Riprap is clear of unwanted woody vegetation;
3) No displacement of riprap has occurred;
4) Inlet and outlet channels are open;
5) Care is being exercised to prevent the accumulation of trash and debris; and
6) Erosion is not occurring adjacent to the structure that may endanger its function.

Steps shall be taken to repair damage, replace missing or broken parts, or remedy adverse conditions disclosed by such inspections.

9.1.4. Discharge Channel. The ILDNR Site Manager shall perform annual observations of the excavated channel. If debris such as fallen trees blocks portions of the channel, the debris could cause the water velocity to slow down and drop sediment.

The debris should be removed if potential sedimentation could occur as a result. The ILDNR Site Manager shall also conduct periodic inspections and report any significant sedimentation. Areas that appear to be filling in with sediment should be identified for closer monitoring and identified for maintenance dredging. Steps should be taken to remedy adverse conditions.

9.1.5. Discharge Structure. The ILDNR Site Manager shall conduct annual observations of the riprap at the discharge structure to observe unwanted tree growth. Keep the riprap clear of woody vegetation. Annual observation of any significant riprap displacement should also be noted and repaired as necessary.

9.1.6. Pump Station. The pump station and all associated items shall be properly maintained to not adversely impact the Project. Specific pump maintenance should be performed as determined by the ILDNR Site Manager in accordance with the pump manufacturer's O&M manual. See Appendix F. Before commencing any maintenance work, the pump should be completely disconnected from the mains by qualified personnel, properly locked out and tagged out, and care should be taken that it cannot be inadvertently switched back on.

The ILDNR Site Manager shall perform inspections of the pump station as necessary, but at a minimum, no less than once per year. Ideally, routine inspections will occur prior to pump operation in the fall. Steps shall be taken to correct conditions disclosed by such inspections. In addition, the ILDNR Site Manager may request the USACE to perform a periodic pump station inspection. Project inspections shall be made by the ILDNR Site Manager to ensure that the above maintenance measures are being effectively carried out and to check the following:

1) Structure: Visually inspect all structural surfaces to discover any adverse conditions such as cracks or excessive corrosion. Conditions that may affect the integrity of the structure shall be corrected as soon as practicable.

2) Electrical: Inspect the pump's electrical power and control cables in the manholes and at the pump station for evidence of damage or deterioration. The lower junction boxes and the elevated junction boxes at the pump station to include the electrical cables and connections will be examined closely and their overall condition assessed. Any damage to the conduits, evidence of leakage in the electrical junction box enclosures, or deterioration of electrical terminations or power blocks shall be repaired as needed. The lower junction boxes may endure flood water which can deposit silt inside the enclosures. Dried silt that may be existing in the bottom of the lower junction boxes should be removed and if the enclosures were flooded then each enclosure drain should also be cleaned so they allow drainage and breathing as intended.

3) Pump: The pump shall be observed for indications of improper operation or damage. Avoid operation of pump during sump cavitation or ice conditions. The lifting tools to include chains and shackles should be visually checked in regular intervals, approximately every 3 months, for wear and corrosion. These parts should be replaced if required. The pump manufacturer recommends that the pumps be run for a maximum of 1 minute every 3 months in order to check both its functioning and availability. However, it is further recommended that the pumps be operated throughout the year at least once per week for 30 minutes each when ice conditions do not persist to minimize the amount of sediment accumulation in the pump chambers. When river elevations are above the top slab of the pump station, only operate one pump at a time and monitor for erosion of surrounding soils along the box culvert alignment.

4) Bulkhead: The bulkhead shall be properly secured on site or stored off site to prevent vandalism or loss during high water events. The bulkhead shall be installed in the proper slot prior to removing a pump for repair or maintenance.

5) Trash Rack: The ILDNR Site Manager shall periodically check for trash accumulation at rack and clear as necessary. If operating conditions or observations indicate an issue is developing and as operating conditions will permit, inspections shall be routinely performed to investigate general condition. It is recommend that the trash rack be cleared of floating and sunken debris routinely during pump operation and annually for regular scheduled maintenance.

6) Sump: The ILDNR Site Manager shall periodically check the sump for proper water depth and sedimentation, especially prior to extended operation. Accumulated sediments in the sump may cause cavitation and interfere with the proper operation of the pump. It is recommended that the pumps be operated periodically throughout the year, at least once per month when ice conditions do not persist, to minimize sediment accumulation in the sump.

9.1.7. Control Building. Inspect the MCC for evidence of insects, corrosion, or other deterioration. Inspect the pump's electrical power and control cables inside and under the control building for evidence of damage or deterioration. Any damage to the conduits or deterioration of electrical terminations or power blocks shall be repaired as needed. All electrical lighting and associated wiring shall be examined closely and their overall condition assessed. Any corroded, loose, or broken contacts shall be cleaned, tightened and repaired as needed. Information on the light fixtures and ballasts is provided in Appendix I. Inspection and maintain the building ventilation system to include the exhaust fan. Clean intake screens of dust and cottonwood fluff. Inspect and maintain the electric unit heaters. Once a year inspect the control panel wiring to make certain insulation is intact and all connections are tight. Inspect all heater and relay contacts. If the contacts appear badly pitted or burned, replace the contactor/relay. Clean the unit heater casing, fan and motor once a year. A dirty motor will tend to run hot and eventually will be damaged internally. Any rust spots on the casing should be cleaned and repainted.

9.1.8. Water Control Structures. The water control structures shall be inspected annually and immediately following a high water event to determine whether seepage is taking place along the lines of its contact with the embankment. Corrective action shall be taken upon discovery of any adverse conditions at the structures. The ILDNR Site Manager shall inspect place along the lines of its contact with the embankment. Corrective action shall be taken upon discovery of any adverse conditions at the structures. The ILDNR Site Manager shall inspect the water control structures to verify the following:

1) Stoplog channels are clear of debris and the stoplogs are present;
2) Inlet and outlet channels are open;
3) Care is being exercised to prevent the accumulation of trash and debris; and
4) Erosion is not occurring adjacent to the structure that may endanger its function.

Steps shall be taken to repair damage, replace missing or broken parts, or remedy adverse conditions disclosed by such inspections.

9.1.9. Miscellaneous Features. Any other feature not discussed in this O&M manual but nevertheless constructed as a part of the Project, or which function as a part of or affect the efficient functioning of the Project, shall be routinely inspected by the ILDNR Site Manager and

appropriate maintenance measures taken. Features with damaged or unserviceable parts shall be repaired or replaced without delay.

9.2. Inspections. An active maintenance program is based on inspections and subsequent servicing, adjustment, or repair. An effective maintenance program ensures Project serviceability by timely and thorough inspections, thereby avoiding or reducing maintenance costs. Also, by documenting the condition of the Project, a baseline for consideration of rehabilitation can be established for Project damage resulting from a major storm or flood event. The two types of inspections for the Project are: (1) routine inspections by the ILDNR Site Manager and (2) joint inspections by the ILDNR Site Manager and the USACE. A blank inspection form is shown in Appendix D. Should any improvements or modifications be made to the Project, additional instructions may become necessary for proper operation and maintenance.

9.2.1. Routine Inspections. Routine inspections of the Project shall be performed by the ILDNR Site Manager or an appropriate representative for the purpose of noting deficiencies and initiating corrective actions. This inspection will be performed at periods not exceeding 12 months and will follow inspection guidance presented in subsequent sections of this manual. It is suggested that the inspection be conducted late summer or early fall, which would be representative of post-flood season conditions but prior to pumping operations. Additional routine inspections should occur as necessary when determined by the ILDNR Site Manager. A Project inspection checklist has been developed and is presented in Appendix D. The ILDNR Site Manager shall furnish a copy of the completed checklist to the USACE, Rock Island District, ATTN: UMRR MVR Project Manager, CEMVR-PM-M, Clock Tower Building, P.O. Box 2004, Rock Island, Illinois 61204-2004, immediately following each routine inspection.

9.2.2. Joint Inspections. Joint inspections of the Project should be performed periodically by the ILDNR Site Manager and the USACE. The purpose of this inspection is to monitor performance and to assure that adequate maintenance is being performed as presented in the DPR and this manual. The District Engineer or authorized representative shall have the right to enter all portions of the Project upon coordination with the ILDNR Site Manager for this purpose. After a joint inspection, the USACE shall provide the ILDNR with a copy of the performance evaluation report.

a. Post-Flood Inspections. If a major storm or flood event is forecasted, it is recommended that the ILDNR Site Manager take photographs of the pre-flood condition of major Project features. The ILDNR Site Manager shall request a joint inspection with the USACE immediately following a specific storm or flood event which causes damage exceeding the annual O&M as specified in the DPR and this manual. It is recommended to notify the project cooperators as well. The routine inspections by the ILDNR Site Manager and the joint inspection results will be the basis for determining maintenance responsibility and potential rehabilitation by the USACE. Along with the request for a joint inspection, the ILDNR shall compile and provide a post-flood report. The report shall outline a complete history of the flood event to include the following:

1) Date damages incurred;
2) Description of damages sustained;
3) Photographs of damages sustained and pre-flood condition (if available);
4) A daily tabulation of river stages throughout the event from the nearest river gage;
5) Date of last inspection and a copy of the completed inspection checklist; and
6) Any other useful information.

9.2.3. Inspection Timeline. Table 9.2 presents a general guideline of the Project's proposed inspection schedules. The actual schedule will vary due to unforeseen conflicts, individual schedule constraints, and weather.

Table 9.2. Inspection Timeline

Timeframe	Action
Late summer/early fall	ILDNR performs routine inspection prior to pump operation
Late fall /early winter	ILDNR submits inspection results. See template in Appendix D
After major flood events	USACE and ILDNR conducts post-flood inspection

10. REPAIR, REPLACEMENT AND REHABILITATION

Repair, Replacement and Rehabilitation actions are to conform to the Project as-builts, reference Appendix A, unless otherwise approved by the USACE and shall be performed in accordance with the project PPA. Deficient or deferred Project maintenance items, obvious when the damage occurs, must be accomplished by or at the expense of ILDNR.

10.1. Repair. Repairs are those activities of a routine nature that maintain the Project in good condition after it has been damaged by a natural or manmade cause.

10.2. Replacement. Replacement covers features that no longer operate or function as designed and must be replaced.

10.3. Rehabilitation. Rehabilitation refers to those activities of a more significant nature to restore the Project to good condition after is has been damaged. The options of rehabilitation or abandonment of the Project may be considered at such time that damage exceeds O&M requirements. Any decision would be carried forth only upon written mutual agreement of the ILDNR and the USACE.

11. CONTACT INFORMATION

11.1. Chain of Command. The main point of contact for the Project is the ILDNR Site Manager, Scott Schlueter. Additional key personnel in the ILDNR that are listed as points of contact are the Civil Engineer, Arthur Neal and the HREP Coordinator, Lawrence Patterson. The chain of command for the USACE starts with the Project Engineer, who will be on site with the ILDNR after a flood event. This person will pass information along to the UMRR MVR Project Manager. Contact information is available in Sections 11.2 and 11.3.

11.2. State Personnel. The Project is managed by the ILDNR. It is located in the Rice Lake SFWA which has its administration buildings located onsite at address below. The ILDNR is required to provide the USACE with a current listing of ILDNR officials. It is the ILDNR's responsibility to maintain and update this list accordingly. The following is contact information for key State personnel as of September 2021.

Illinois Department of Natural Resources, Rice Lake State Fish & Wildlife Area
19721 N US 24
Canton, IL 61520
http://dnr.state.il.us/Lands/Landmgt/PARKS/R1/Rice.htm
Scott Schlueter, Site Manager
[redacted]

Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271
https://www.dnr.illinois.gov/Pages/default.aspx
Arthur Neal, Civil Engineer
(217) 785-4847
[redacted]

Chad Craycraft, Federal Programs Coordination Manager
(217) 782-9211
[redacted]

11.3. Federal Personnel. The following is a list of Federal personnel as of September 2021.

US Army Corps of Engineers, Rock Island District
Clock Tower Building, PO Box 2004
Rock Island IL 61204-2004
http://www.mvr.usace.army.mil
Marshall Plumley, UMRR Regional Program Manager
[redacted]

Julie Millhollin, UMRR MVR Project Manager
[redacted]

Rachel Fellman, Project Engineer
[redacted]

National Weather Service – Forecast Office Lincoln, IL
1362 IL-10
Lincoln, IL 62656
River Forecasts: (217) 732-3089
http://www.weather.gov/ilx/

OPERATION AND MAINTENANCE MANUAL

RICE LAKE STATE FISH AND WILDLIFE AREA
UPPER MISSISSIPPI RIVER RESTORATION
HABITAT REHABILITATION AND ENHANCEMENT PROJECT
FULTON COUNTY, ILLINOIS

SEPTEMBER 2021

APPENDIX A

AS-BUILT DRAWINGS AND CROSS SECTIONS

APPENDIX A

AS-BUILT DRAWINGS AND CROSS SECTIONS

TABLE OF CONTENTS

US Army Corps
of Engineers®

ILLINOIS WATERWAY

LAGRANGE POOL

FULTON COUNTY, IL

RICE LAKE HABITAT REHAB & ENHANCEMENT

STAGE I

Solicitation: W912EK-11-R-0029
Contract: W912EK-11-C-0090
June 2011

THIS PROJECT WAS DESIGNED BY THE ROCK ISLAND DISTRICTCORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152. SIGNATURES INDICATE OFFICIAL RECOMMENDATION OF ALL DRAWINGS IN THIS SET.

APPROVED BY: 5JUL11
DISTRICT COMMANDER DATE

APPROVAL RECOMMENDED BY:

1 July 2011
CHIEF, DESIGN BRANCH DATE

5 July 2011
CHIEF, HYDROLOGY & HYDRAULICS BRANCH DATE

Thomas E. Mack P.E. 5 July 2011
CHIEF, GEOTECHNICAL BRANCH DATE

Charles R Van Zandt 5 JUL2011
CHIEF, TECHNICAL SERVICES BRANCH DATE

Dennis L Ashley P.E. 5 July 2011
CHIEF, ENGINEERING & CONSTRUCTION DIVISION DATE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	USACE 7 AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RDF
DWN BY: LLH
SUBMITTED BY: HLA
PLOT SCALE:
PLOT DATE:
NOTES:
SIZE: ANSI D
DATE: 20110630
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODES: EP102
CHK'D BY: PJV
FILE NAME: EP102-0001.dgn

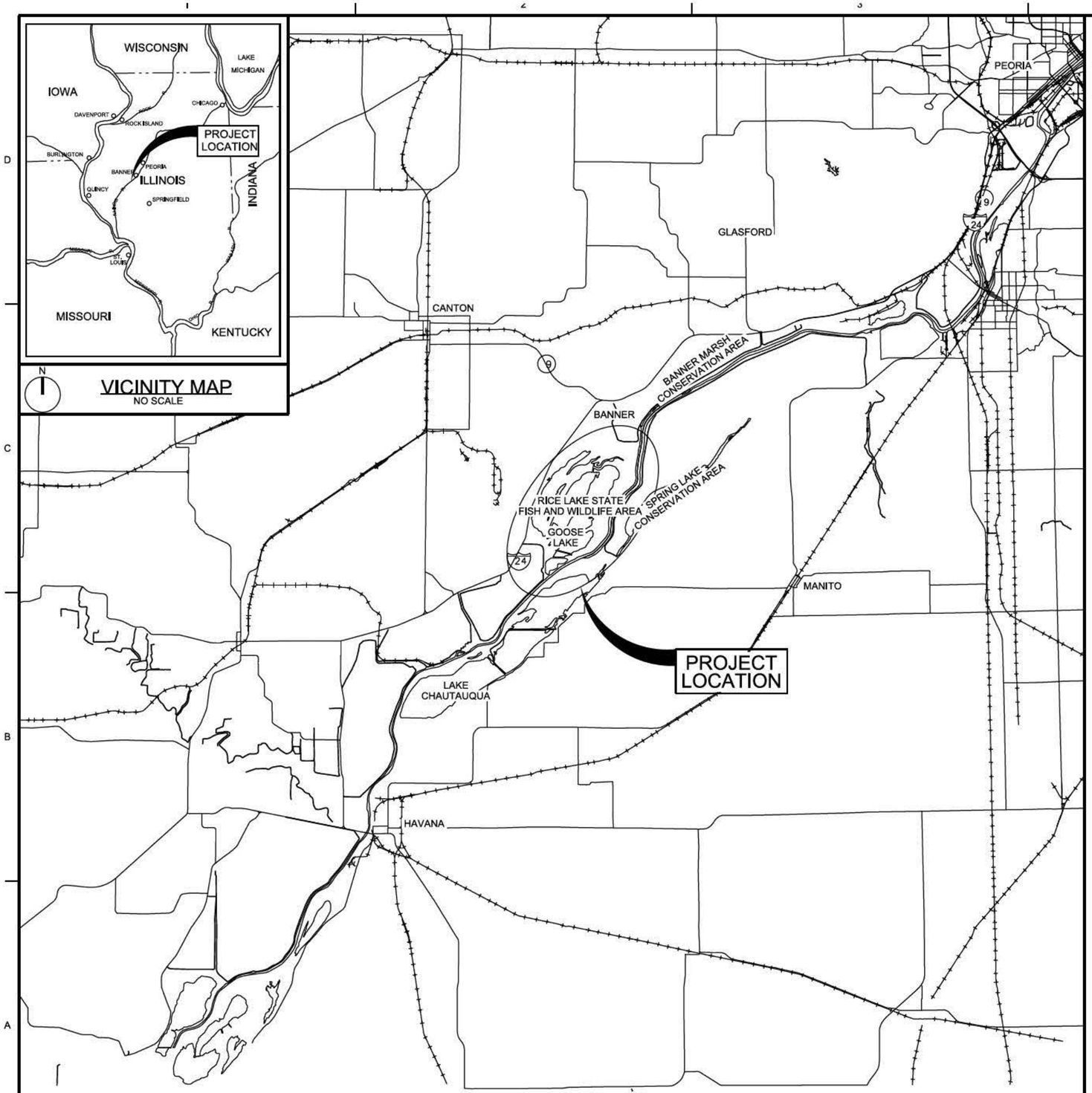
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
COVER SHEET

Sheet ID
G-001

AS-BUILT
A-1

N

VICINITY MAP
NO SCALE



N

LOCATION PLAN

1 0 1 2
SCALE IN MILE

LEGEND:

- PROJECT BOUNDARY
- WATER LEVEL
- CONCRETE MASONRY UNITS (CMU) ELEVATION
- STEEL CROSS SECTION
- ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE (UHMWPE) SEAL
- WATERSTOP / RUBBER SEAL
- INSULATION
- METAL DECK ROOF
- DOUBLE DOOR
- EXISTING BANNER DYKE ROAD
- RIPRAP/BEDDING STONE
- GRANULAR SURFACING/BEDDING MATERIAL
- EXCAVATION
- EXISTING GROUND
- FILL SECTION
- 36" EXISTING TREE
- ℄ CENTERLINE
- ℄ BASELINE
- RL-10-1 BORING LOCATION
- CP 21 CONTROL POINT
- TBM TEMPORARY BENCHMARK
- CUT AND/OR FILL SLOPE
- DREDGING/EXCAVATING CUT SLOPE
- CENTERLINE
- E S_x EXISTING OVERHEAD POWER LINE
- W EXISTING CITY OF CANTON WATER MAIN
- E ELECTRICAL CONDUITS
- EXISTING GROUND

A — INDICATES SECTION
IF DRAWN ON SAME SHEET

A — INDICATES SECTION
A-001 | A-001
SHEET REFERENCE NUMBER FROM WHICH SECTION IS TAKEN
SHEET REFERENCE NUMBER ON WHICH DETAIL IS DRAWN

LEGEND

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	SCALE: 1 AS OF 29 SEPTEMBER 2017		

DESIGNED BY: RDF
DWN BY: LLH
CHD BY: PJV
SUBMITTED BY: HLA
PLOT SCALE: AS SHOWN
PLOT DATE:
DATE: 20110930
SOLICITATION NO.: W912EK-11-B-0029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODE: EP102
FILE NAME: EP102G002.dgn
SHEET: ANED

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

LOCATION PLAN,
VICINITY MAP AND
LEGEND

Sheet ID
G-002

AS-BUILT
A-2

INDEX

Sheet ID	TITLE OF DRAWING
	GENERAL
G-001	COVER SHEET
G-002	LOCATION PLAN, VICINITY MAP AND LEGEND
G-003	INDEX, ABBREVIATIONS, GENERAL NOTES AND SCOPE OF WORK
	SURVEY
V-101	SURVEY CONTROL DIAGRAM
V-102	PUMP STATION LAYOUT
	GEOTECHNICIAL
B-101	BORING LOCATIONS
B-301	BORING LOGS I
B-302	BORING LOGS II
B-303	BORING LOGS III
B-304	BORING LOGS IV
	CIVIL
C-101	OVERALL SITE PLAN
C-102	OVERFLOW SPILLWAY PLAN AND PROFILE STA. 0+00 TO 25+00
C-103	OVERFLOW SPILLWAY PLAN AND PROFILE STA. 25+00 TO 50+00
C-104	OVERFLOW AND NATURAL SPILLWAY PLAN AND PROFILE STA. 50+00 TO 75+00
C-105	NATURAL SPILLWAY PLAN AND PROFILE STA. 75+00 TO 100+00
C-106	NATURAL SPILLWAY PLAN AND PROFILE STA. 100+00 TO 125+00
C-107	NATURAL SPILLWAY PLAN AND PROFILE STA. 125+00 TO 150+00
C-108	NATURAL SPILLWAY PLAN AND PROFILE STA. 150+00 TO 175+00
C-109	NATURAL SPILLWAY PLAN AND PROFILE STA. 175+00 TO 200+00
C-110	NATURAL SPILLWAY PLAN AND PROFILE STA. 200+00 TO 225+00
C-111	NATURAL SPILLWAY PLAN AND PROFILE STA. 225+00 TO 240+82
C-112	OUTLET STRUCTURE SITE PLAN
C-113	NATURAL SPILLWAY REPAIR AREA 1 SITE PLAN
C-114	NATURAL SPILLWAY REPAIR AREA 2 SITE PLAN
C-115	NATURAL SPILLWAY REPAIR AREA 3 SITE PLAN
C-120	PUMP STATION GENERAL PLAN
C-121	PUMP STATION SITE PLAN
C-122	DISCHARGE CHANNEL PLAN AND PROFILE STA. 0+00 TO 20+00
C-123	DISCHARGE CHANNEL PLAN AND PROFILE STA. 20+00 TO 45+00
C-124	DISCHARGE CHANNEL PLAN AND PROFILE STA. 45+00 TO 69+64
C-125	WATER CONTROL STRUCTURE PLAN AND SECTION STA. 25+00
C-126	WATER CONTROL STRUCTURES PLAN AND SECTION STA. 37+60
C-127	WATER CONTROL STRUCTURES PLAN AND SECTION STA. 64+80
C-128	WATER CONTROL STRUCTURES PLAN AND SECTION STA. 69+00
C-201	OUTLET STRUCTURE SITE PROFILE
C-220	PUMP STATION PROFILE
C-221	PUMP STATION ACCESS ROAD PROFILE AND GATE DETAILS
C-301	OVERFLOW AND NATURAL SPILLWAY TYPICAL SECTIONS
C-302	OVERFLOW SPILLWAY SECTIONS
C-303	NATURAL SPILLWAY SECTIONS
C-304	NATURAL SPILLWAY SECTIONS
C-320	PUMP STATION TYPICAL SECTIONS
C-321	PUMP STATION CROSS SECTIONS SHEET 1 OF 4
C-322	PUMP STATION CROSS SECTIONS SHEET 2 OF 4
C-323	PUMP STATION CROSS SECTIONS SHEET 3 OF 4
C-324	PUMP STATION CROSS SECTIONS SHEET 4 OF 4
C-325	DISCHARGE CHANNEL TYPICAL SECTIONS
C-326	DISCHARGE CHANNEL CROSS SECTIONS SHEET 1 OF 6
C-327	DISCHARGE CHANNEL CROSS SECTIONS SHEET 2 OF 6
C-328	DISCHARGE CHANNEL CROSS SECTIONS SHEET 3 OF 6
C-329	DISCHARGE CHANNEL CROSS SECTIONS SHEET 4 OF 6
C-330	DISCHARGE CHANNEL CROSS SECTIONS SHEET 5 OF 6
C-331	DISCHARGE CHANNEL CROSS SECTIONS SHEET 6 OF 6
C-332	DISCHARGE CHANNEL RIPRAP AND SPILLWAY ACCESS ROAD TYPICAL SECTIONS
C-420	PUMP STATION INTAKE BASIN SITE PLAN
	STRUCTURAL
S-001	PUMP STATION GENERAL NOTES
S-101	PUMP STATION PLANS
S-102	PUMP STATION AND WING WALL PILE LAYOUT PLAN
S-103	PUMP STATION REINFORCEMENT IN TOP DECK
S-103A	PUMP STATION SURGE BASIN WALLS REINFORCEMENT
S-104	PUMP STATION REINFORCEMENT IN WALLS AND BASE SLAB
S-105	PUMP STATION REINFORCEMENT IN WING WALLS AND BASE SLAB
S-106	DISCHARGE STRUCTURE AND CULVERT PLAN
S-107	CONTROL BUILDING PLAN
S-108	OUTLET STRUCTURE PLAN
S-109	OUTLET STRUCTURE CONCRETE REINFORCEMENT PLAN

Sheet ID	TITLE OF DRAWING
	STRUCTURAL
S-201	PUMP STATION WING WALL ELEVATIONS
S-202	DISCHARGE STRUCTURE AND CULVERT ELEVATION
S-203	CONTROL BUILDING ELEVATIONS AND SECTION
S-204	OUTLET STRUCTURE END ELEVATIONS
S-301	PUMP STATION SECTIONS
S-302	PUMP STATION REINFORCEMENT
S-303	PUMP STATION REINFORCEMENT IN WALLS
S-304	PUMP STATION REINFORCEMENT IN BEAMS
S-305	PUMP STATION WING WALL REINFORCEMENT
S-306	DISCHARGE STRUCTURE REINFORCEMENT
S-307	CULVERT REINFORCEMENT
S-308	CONTROL BUILDING ROOF FRAMING
S-309	OUTLET STRUCTURE SECTIONS
S-310	OUTLET STRUCTURE CONCRETE REINFORCEMENT DETAILS SHEET 1 OF 2
S-311	OUTLET STRUCTURE CONCRETE REINFORCEMENT DETAILS SHEET 2 OF 2
S-501	PUMP STATION TRASH RACK DETAILS SHEET 1 OF 2
S-502	PUMP STATION TRASH RACK DETAILS SHEET 2 OF 2
S-503	BULKHEAD
S-504	PUMP STATION BULKHEAD OPENINGS
S-505	PUMP STATION GRATED HATCH OPENINGS
S-506	CONTROL BUILDING FOUNDATION REINFORCEMENT & PILE CONNECTION DETAILS
S-507	PUMP STATION HANDRAIL DETAILS
S-508	PUMP STATION SIPHON OPENING DETAILS
S-509	CONTROL BUILDING DETAILS SHEET 1 0F 2
S-510	CONTROL BUILDING DETAILS SHEET 2 0F 2
S-511	OUTLET STRUCTURE HANDRAIL DETAIL
S-512	PUMP STATION NEW JUNCTION BOX DETAILS
S-519	SLIDE GATE TO STOPLOG CONVERSION DETAILS
S-520	WATER CONTROL STRUCTURES DETAILS SHEET 1 OF 2
S-521	WATER CONTROL STRUCTURES DETAILS SHEET 2 OF 2
	MECHANICAL
M-101	PUMP STATION SECTIONAL PLAN
M-102	PUMP STATION TOP PLAN
M-201	PUMP STATION SECTION
M-501	PUMP STATION DETAILS
M-502	CONTROL BUILDING DETAILS
	ELECTRICAL
E-001	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E-101	ELECTRICAL SITE PLAN
E-102	PUMP STATION ELECTRICAL PLAN
E-103	CONTROL BUILDING POWER AND LIGHTING PLANS
E-104	CONTROL BUILDING GROUNDING AND LIGHTNING PROTECTION PLAN
E-105	CONTROL BUILDING INSTRUMENTATION PLAN
E-106	PUMP STATION NEW JUNCTION BOX PLAN
E-301	PUMP STATION NEW JUNCTION BOX ELEVATION
E-302	PUMP STATION NEW JUNCTION BOX ELEVATION
E-501	MANHOLE DETAILS
E-502	DUCT BANK AND MISCELLANEOUS ELECTRICAL DETAILS
E-503	PUMP STATION NEW JUNCTION BOX DETAILS
E-601	SINGLE-LINE DIAGRAM
E-602	ELECTRICAL SCHEDULES
E-603	ELEMENTARY WIRING DIAGRAMS

2

ABBREVIATIONS:

APPROX	APPROXIMATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
BOT	BOTTOM
C/C	CENTER TO CENTER
C/L	CENTERLINE
CJ	CONSTRUCTION JOINT
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
DET	DETAILS
DIA	DIAMETER
DWG	DRAWING
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELEV	ELEVATION
EOP	END OF PIPE
EQ	EQUAL
EW	EACH WAY
FB	FRAME BEAM
HSS	HOLLOW STEEL SECTION
GALV	GALVANIZED
GR	GRADE
HOR	HORIZONTAL
IN	INCH
LONG	LONGITUDINAL
MFG	MANUFACTURER
MAX	MAXIMUM
MIN	MINIMUM
NPS	NOMINAL PIPE SIZE
OC	ON CENTER
OPP	OPPOSITE
PL	PLATE
PsI	POUNDS PER SQUARE INCH
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
REINF	REINFORCEMENT
REQ	REQUIRED
SEC	SECTION
SIM	SIMILAR
SS	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
SYMM	SYMMETRIC
THK	THICK
TOC	TOP OF CONCRETE
TYP	TYPICAL
T&B	TOP AND BOTTOM
UHMWPE	ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH

GENERAL NOTES

1. THE PROJECT IS LOCATED AT RICE LAKE STATE FISH AND WILDLIFE AREA, LOCATED IN FULTON COUNTY. THE PROPERTY IS OWNED BY THE ILLINOIS DNR. THE BANNER DYKE ROAD IS MAINTAINED BY BANNER TOWNSHIP.
2. THE CONTRACTOR SHALL STAGE AND STORE EQUIPMENT WITHIN THE STAGING AREAS AS SHOWN ON SHEET C-101 AND C-120 OR OTHERWISE DIRECTED BY THE CONTRACTING OFFICER.
3. THE PUBLIC WILL HAVE ACCESS TO THE BANNER DYKE ROAD, BOAT RAMP, AND PUBLIC PARKING AREAS AT THE UPSTREAM END DURING THE CONSTRUCTION OF THIS PROJECT.
   a. THE CONTRACTOR SHALL SECURE WITH PORTABLE CHAIN LINK FENCING ANY EQUIPMENT OR SUPPLIES STORED IN THE PUBLIC ACCESS STAGING AREAS.
   b. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER FOR MAINTAINED PUBLIC ACCESS AREAS AND REQUIREMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING UTILITIES ON SITE PRIOR TO BEGINNING THE WORK AND SHALL BE RESPONSIBLE FOR REPAIRING ANY UTILITIES DAMAGED DURING CONSTRUCTION. UTILITY LOCATIONS SHOWN ARE APPROXIMATE.
5. THE CONTRACTOR MUST MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES ALONG THE BANNER DYKE ROAD.
   a. THE CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC BARRICADES AND SIGNAGE FOR ANY LANE CLOSURES DURING NON-WORKING CONTRACTOR HOURS. LANE CLOSURES WILL NOT BE ALLOWED OVER THE WEEKENDS.
   b. FLAGGERS WITH APPROPRIATE BARRICADES AND SIGNAGE MAY BE UTILIZED DURING CONTRACTOR WORKING HOURS.
   c. PROPER TRAFFIC CONTROL SHALL BE PROVIDED BY CONTRACTOR IN ACCORDANCE WITH EM 385-1-1.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/REPLACEMENT OF ANY ROADWAYS DAMAGED DUE TO CONSTRUCTION ACTIVITY.
7. ALL EXISTING DIMENSIONS SHOWN ON THESE PLANS SHALL BE FIELD-VERIFIED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER.
8. CONTRACTOR SHALL COORDINATE, DETERMINE AND BE RESPONSIBLE FOR ADHERENCE TO AND COMPLIANCE WITH ALL NATIONAL, STATE, AND LOCAL CONSTRUCTION AND INSTALLATION CODES FOR THE PROJECT.
9. REFER TO SPECIFICATION SECTION 00 73 05 "ADDITIONAL PHYSICAL DATA CLAUSE INFORMATION" FOR HYDRAULIC DATA. LOCAL FLAT POOL IS EL. 429 NGVD 29. NAVD 88 EQUALS NGVD 29 LESS 0.34 FEET.
10. SURVEY:
    a. COORDINATES ARE IN STATE PLANE NAD83, ILLINOIS WEST, US SURVEY FEET. VERTICAL DATUM IS IN NAVD 88 FEET, GEOID 09.
11. CONTRACTOR SHALL INSTALL AND MAINTAIN SILT FENCES WHERE REQUIRED.

SCOPE OF WORK

THE SCOPE OF WORK FOR THIS PROJECT GENERALLY CONSISTS OF BUT SHALL NOT BE LIMITED TO THE FOLLOWING:

1. PUMP STATION:
   a. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING 24" WATER MAIN PRIOR TO CONSTRUCTION.
   b. CONSTRUCT NEW CONCRETE CULVERT BETWEEN PUMP STATION AND DISCHARGE STRUCTURE.
   c. CONSTRUCT NEW DISCHARGE STRUCTURE.
   d. CONSTRUCT NEW PUMP STATION AND WING WALLS ON PILES WITH 3 SUBMERSIBLE PUMPS.
   e. CONSTRUCT NEW PUMP STATION CONTROL BUILDING WITH MOTOR CONTROL CENTER.
   f. PLACE ADDITIONAL EMBANKMENT FILL ON THE WEST SIDE OF THE BANNER DYKE ROAD FOR PUMP STATION CONTROL BUILDING PARKING.
   g. COORDINATE WITH THE UTILITY FOR INSTALLATION OF UTILITY TRANSFORMER, METER, CONDUITS, AND UTILITY CONNECTIONS.
   h. CONSTRUCT A NEW GRANULAR ACCESS ROAD OFF THE BANNER DYKE ROAD WITH SWING GATE.
   i. PLACE RIPRAP WHERE SHOWN.
   j. (1) INSTALL JERSEY BARRIERS ALONG PUMP STATION PARKING AREA.
   k. THE CONTRACTOR SHALL GRADE AND SEED ALL DISTURBED OR NEWLY CONSTRUCTED AREAS.
   l. DREDGE PUMP STATION INTAKE BASIN.
2. DISCHARGE CHANNEL:
   a. CONSTRUCT DISCHARGE CHANNEL FROM PUMP STATION DISCHARGE STRUCTURE TO EXISTING CHANNEL ALONG BANNER DYKE ROAD AND EXISTING BERM.
   b. CONSTRUCT FOUR 24" AND SIX 48" WATER CONTROL STRUCTURES.
3. OVERFLOW SPILLWAY
   a. THE CONTRACTOR SHALL CONSTRUCT THE PORTION OF THE OVERFLOW SPILLWAY THAT IS LOCATED ACROSS GOOSE LAKE WITH MATERIAL EXCAVATED FROM WITHIN GOOSE LAKE ADJACENT TO THE SPILLWAY ALIGNMENT.
   b. THE REMAINDER OF THE OVERFLOW SPILLWAY SHALL BE CONSTRUCTED WITH MATERIAL EXCAVATED FROM THE DISCHARGE CHANNEL.
4. NATURAL SPILLWAY
   a. CONSTRUCT NEW OUTLET STRUCTURE AND REGRADE CHANNEL.
   b. REPAIR NATURAL SPILLWAY AT THREE LOCATIONS TO FILL IN LOW AREAS.
   c. REMOVE THREE EXISTING STOPLOG STRUCTURES.

INDEX AND GENERAL NOTES

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	AMD 0001 REVISE NOTE	8/17/2011	RCF
2	MOD EA017 ADD SHEET	8/06/2014	RCF
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: N.T.S.	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102G-003.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

INDEX, ABBREVIATIONS, GENERAL NOTES AND SCOPE OF WORK

Sheet ID
G-003

AS-BUILT

SITE CONTROL POINTS - GRID COORDINATES

NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP 1	1387111.6790	2373762.7310	446.37	IRON ROD
CP 2	1387252.1940	2373627.4360	451.85	IRON ROD
CP 20	1387462.6475	2373825.4299	444.18	IRON ROD
CP 21	1387527.2129	2373695.3674	451.56	LANDSCAPE NAIL
USACE 1	1388977.082	2373798.561	450.76	MONUMENT
USACE 2	1387399.247	2373682.175	451.47	MONUMENT
USACE 3	1372787.020	2360714.173	441.12	MONUMENT
USACE 4	1372821.220	2358408.814	440.70	MONUMENT

BANNER DYKE ROAD
ILLINOIS RIVER
COPPERAS CREEK
VOORHEES UNIT
USACE 1
CP 20
CP 21
CP 1
CP 2
USACE 2
RM 137
FLOW
RM 136
ILLINOIS RIVER
POND LILY LAKE
RM 135
SENATE ISLAND
WEST RIVER
RM 134
SLIM LAKE
BIG LAKE
HOXIE RIDGE
GOOSE LAKE
RM 133
USACE 3
DUCK ISLAND
BEEBE LAKE
MISERABLE ISLAND
QUARRY PIT
USACE 4
RICE LAKE
EXISTING ACCESS ROAD
DUCK CREEK
U.S. HIGHWAY 24

N

SURVEY CONTROL DIAGRAM

0 1000' 2000'
SCALE:1" =1000'

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION
			USACE 7 AS OF 29 SEPTEMBER 2017

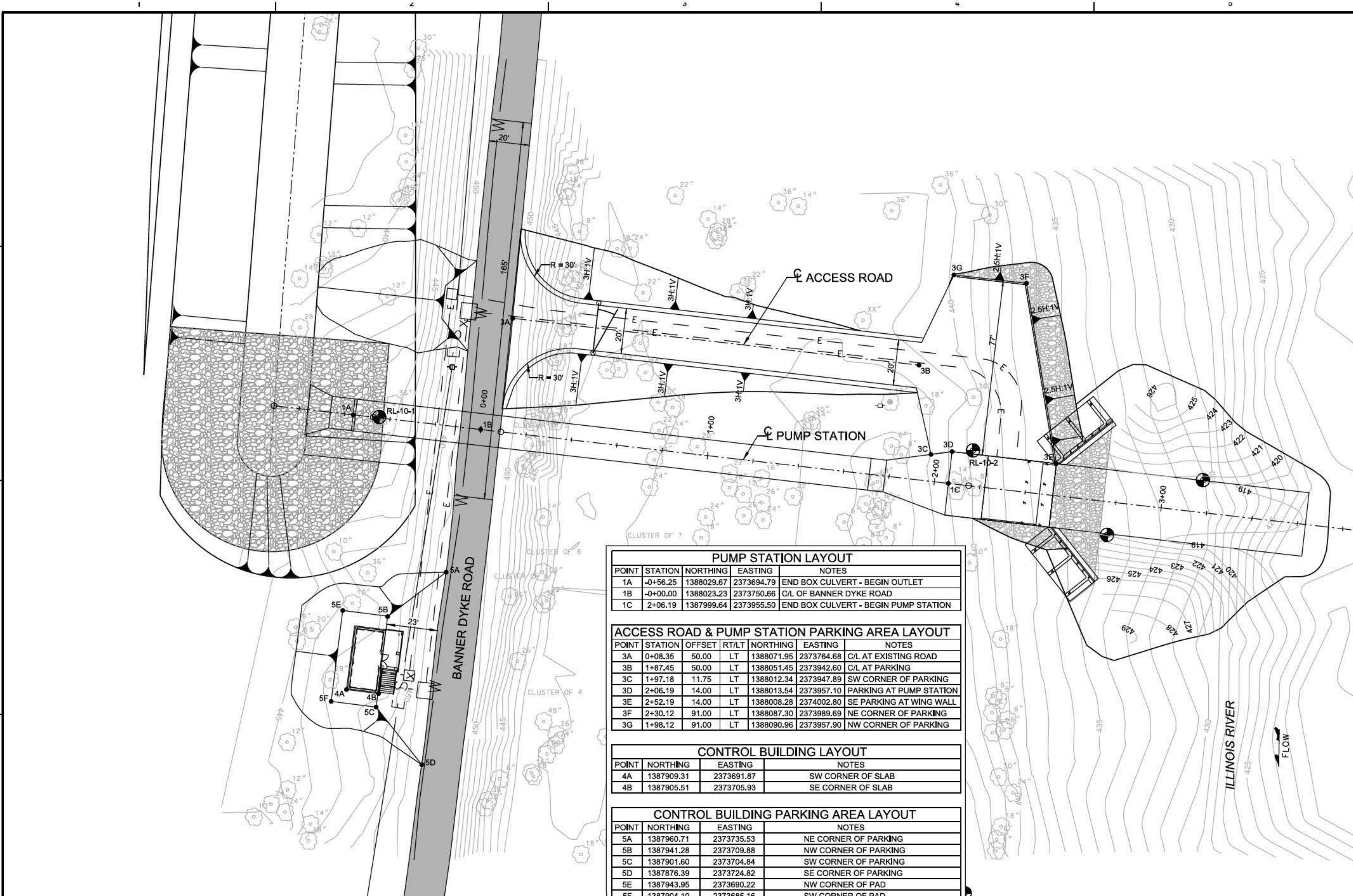
DESIGNED BY: RCF
DWN BY: LLH
SUBMITTED BY: HLA
AS-SHOWN
SIZE: ANSI D
DATE: 2011/06/30
CKD BY: PJV
PLOT SCALE: 1:1
PLOT DATE:
FILE NAME: EP100v101.dgn
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-14-C-0090
PROJECT CODE: EP102

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
SURVEY CONTROL DIAGRAM

Sheet ID
V-101

AS-BUILT
A-4



PUMP STATION LAYOUT				
POINT	STATION	NORTHING	EASTING	NOTES
1A	-0+56.25	1388029.67	2373694.79	END BOX CULVERT - BEGIN OUTLET
1B	-0+00.00	1388023.23	2373750.66	C/L OF BANNER DYKE ROAD
1C	2+06.19	1387999.64	2373955.50	END BOX CULVERT - BEGIN PUMP STATION

ACCESS ROAD & PUMP STATION PARKING AREA LAYOUT						
POINT	STATION	OFFSET	RT/LT	NORTHING	EASTING	NOTES
3A	0+08.35	50.00	LT	1388071.95	2373764.68	C/L AT EXISTING ROAD
3B	1+87.45	50.00	LT	1388051.45	2373942.60	C/L AT PARKING
3C	1+97.18	11.75	LT	1388012.34	2373947.89	SW CORNER OF PARKING
3D	2+06.19	14.00	LT	1388013.54	2373957.10	PARKING AT PUMP STATION
3E	2+52.19	14.00	LT	1388008.28	2374002.80	SE PARKING AT WING WALL
3F	2+30.12	91.00	LT	1388087.30	2373989.69	NE CORNER OF PARKING
3G	1+98.12	91.00	LT	1388090.96	2373957.90	NW CORNER OF PARKING

CONTROL BUILDING LAYOUT			
POINT	NORTHING	EASTING	NOTES
4A	1387909.31	2373691.87	SW CORNER OF SLAB
4B	1387905.51	2373705.93	SE CORNER OF SLAB

CONTROL BUILDING PARKING AREA LAYOUT			
POINT	NORTHING	EASTING	NOTES
5A	1387960.71	2373735.53	NE CORNER OF PARKING
5B	1387941.28	2373709.88	NW CORNER OF PARKING
5C	1387901.60	2373704.84	SW CORNER OF PARKING
5D	1387876.39	2373724.82	SE CORNER OF PARKING
5E	1387943.95	2373690.22	NW CORNER OF PAD
5F	1387904.10	2373685.16	SW CORNER OF PAD

PUMP STATION LAYOUT

SCALE IN FEET (0 – 20' – 40')

US Army Corps of Engineers

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
LAYOUT

Sheet ID
V-102

AS-BUILT
A-5

BORING LOCATIONS

SCALE: 1"=1000'

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

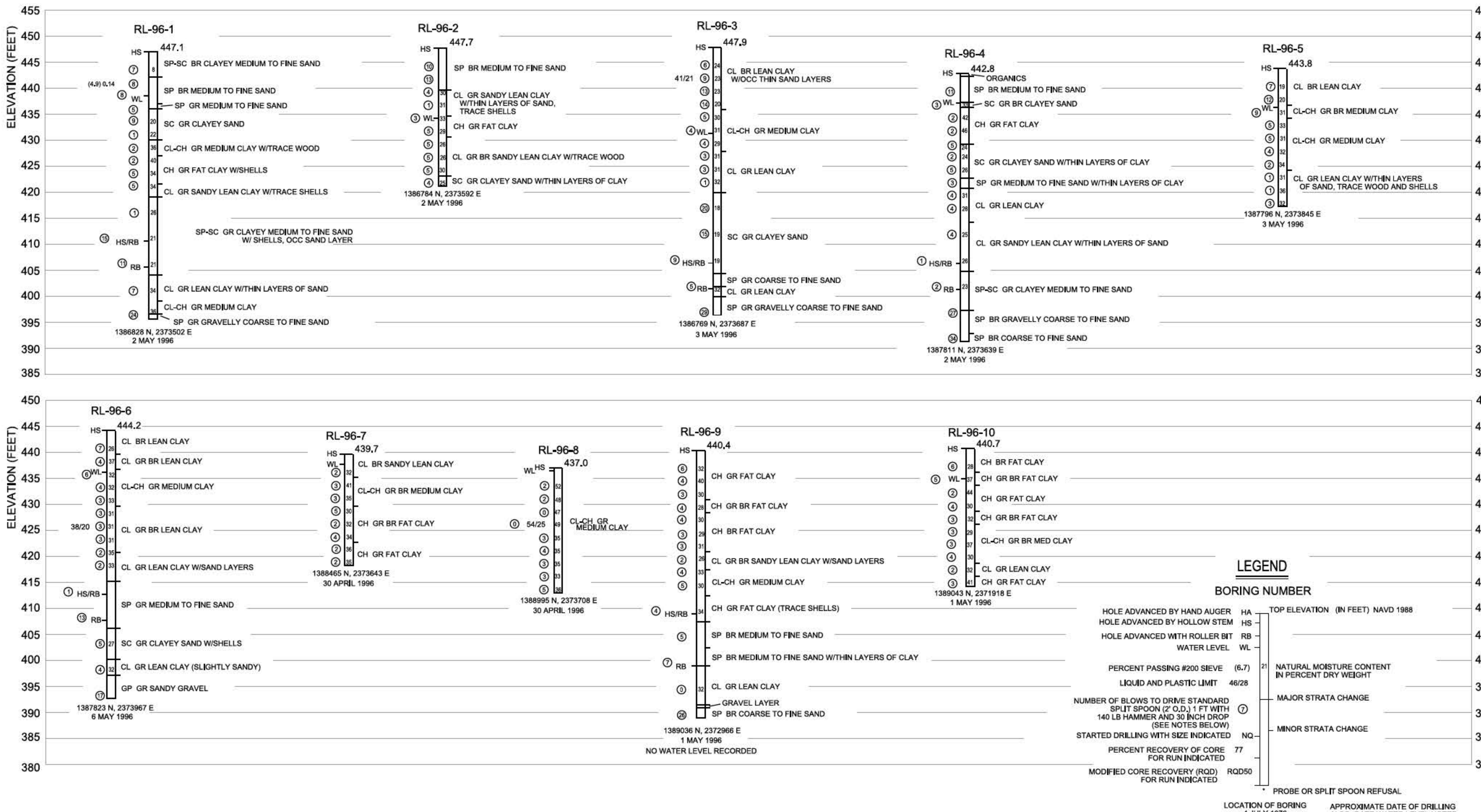
DESIGNED BY: PS		DATE: 2011/06/30
DWN BY: WT	CKD BY: RSK	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: TEM		CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102B-101.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
BORING LOCATIONS

US Army Corps of Engineers®

Sheet ID
B-101

AS-BUILT
A-6



NOTES:
1. - BLOW COUNTS ARE FOR 1 FT DRIVE UNLESS OTHERWISE INDICATED BY /.

2. - A BLOW COUNT OF 0 INDICATES SPLIT SPOON ADVANCED BY WEIGHT OF DRILL TOOLING ONLY.

3. - IF BLOW COUNTS WERE OBTAINED USING CME AUTO HAMMER. EFFICIENCY IS ASSUMED TO BE 90%. N VALUE DATA SHOULD BE NORMALIZED TO 60% AS PER ETL 1110-1-138.

4. - ALL BORINGS REPRESNT THE CONDITIONS ON THE DAY THEY WERE BORED. WATER LEVELS ARE SUBJECT TO CHANGE.

RQD (ROCK QUALITY DESIGNATION)

RQD (%)	ROCK QUALITY
0-25	VERY POOR
25-50	POOR
50-75	FAIR
75-90	GOOD
90-100	EXCELLENT

US Army Corps of Engineers

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
BORING LOGS I

AS-BUILT AS OF 29 SEPTEMBER 2017

DESIGNED BY: PS | DWN BY: WT | CKD BY: RBK | SUBMITTED BY: TEW | SIZE: ANSI D | PLOT SCALE: N.T.S. | PLOT DATE: | FILE NAME: EP102B-301.dgn

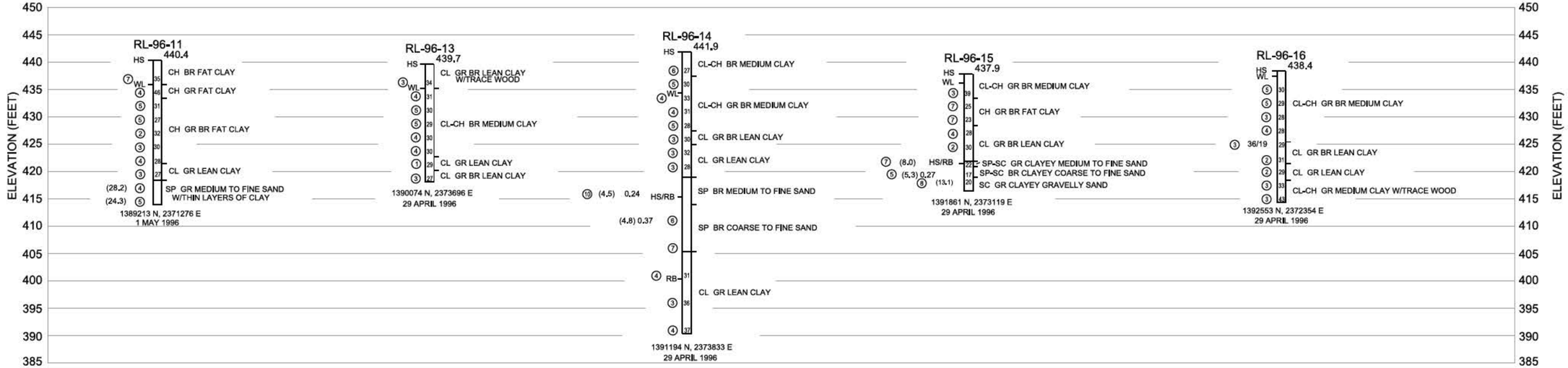
DATE: 2018/09/20 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-12-C-0060 | PROJECT CODE: EP102

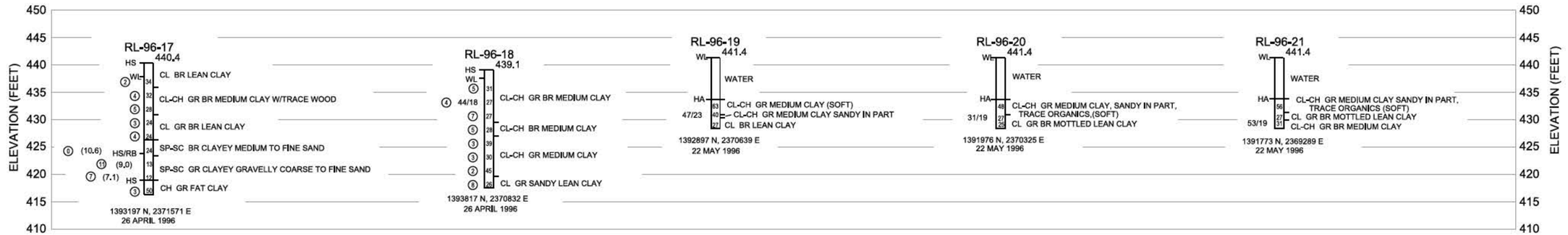
BORING LOGS I

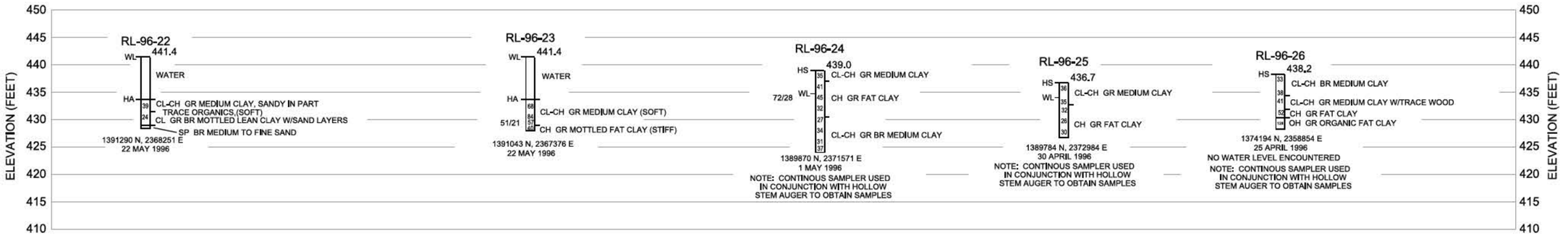
NO SCALE

Sheet ID B-301

AS-BUILT







NOTE:
1. FOR LEGEND SEE B-301

BORING LOGS II

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

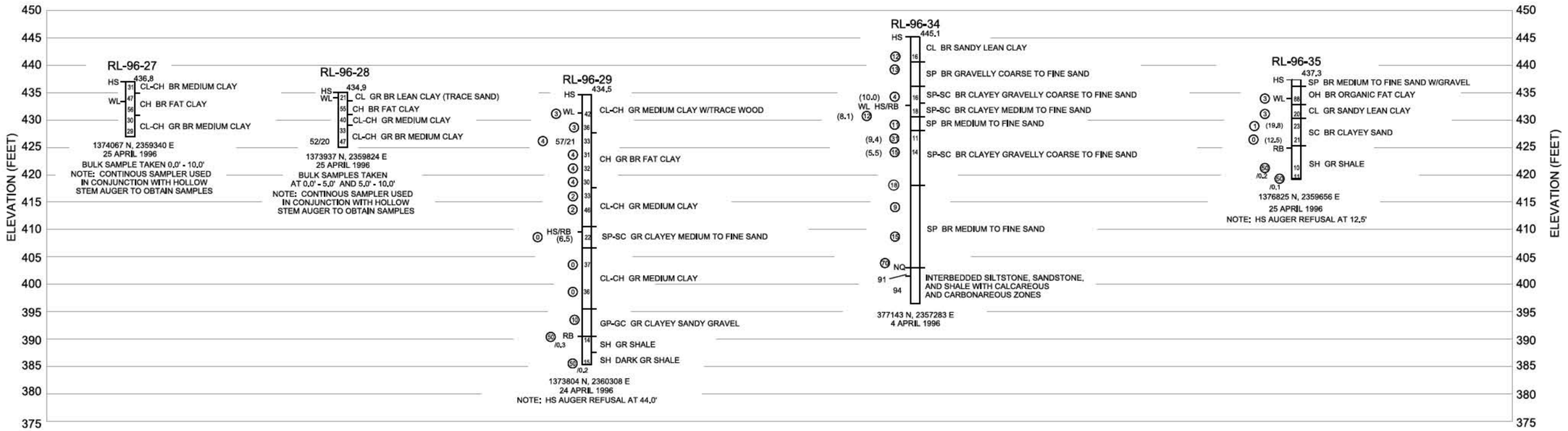
DESIGNED BY: PS
DRN BY: WT
CKD BY: RBK
SUBMITTED BY: TEM
DATE: 20171005030
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-14-C-0060
PROJECT CODE: DP102
PLOT SCALE:
PLOT DATE:
FILE NAME: EP1028-302.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

BORING LOGS II

Sheet ID
B-302

AS-BUILT
A-8



NOTE:
1. FOR LEGEND SEE B-301.

BORING LOGS III

NO SCALE

US Army Corps of Engineers®

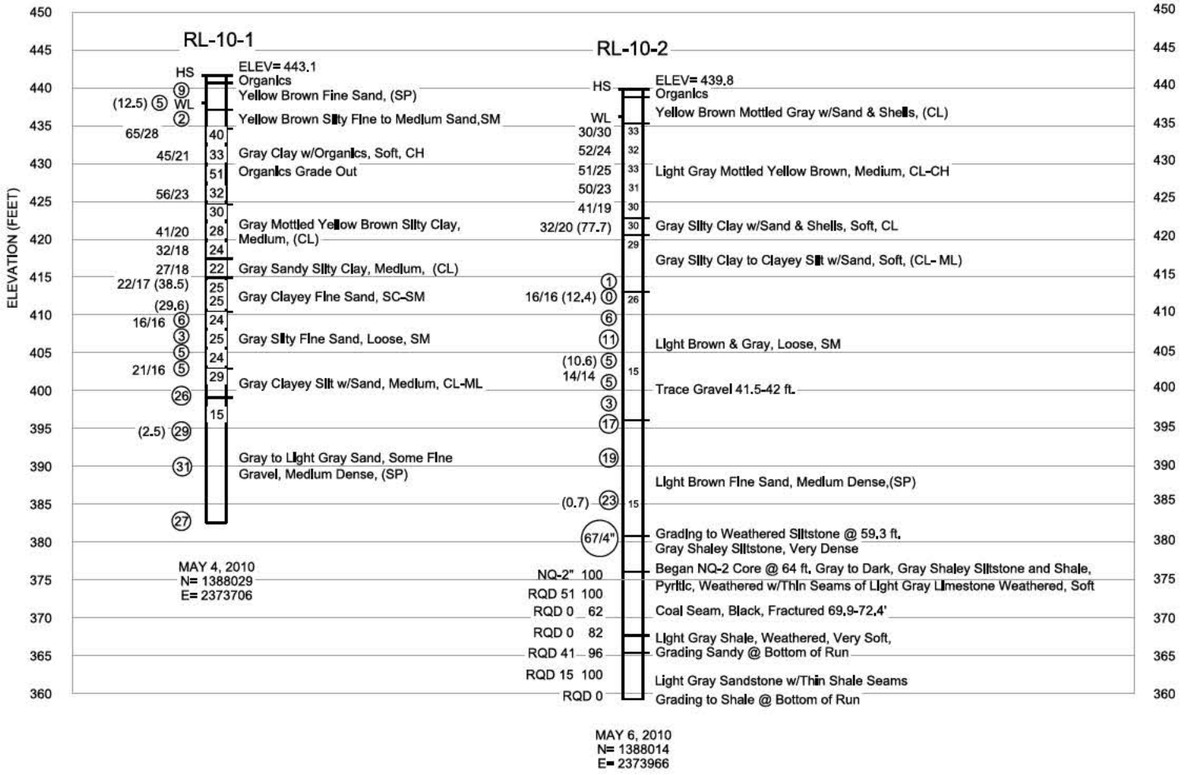
MARK	DESCRIPTION	DATE	APPR.
	USACE 7 AS OF 29 SEPTEMBER 2017		

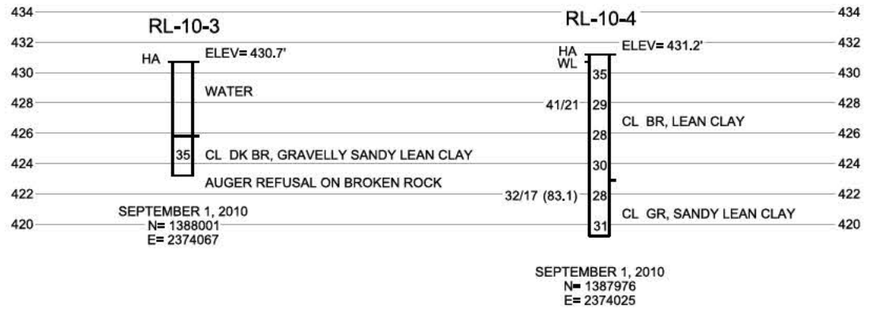
DESIGNED BY: PS
DRWN BY: WT
SUBMITTED BY: TEM
U.S. ARMY CORPS OF ENGINEERS ROCK ISLAND DISTRICT ROCK ISLAND, ILLINOIS
DATE: 20110630
CKD BY: RBK
PLOT SCALE: 1=1
PLOT DATE:
SIZE: ANSI D
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0060
PROJECT CODE: EP1102
FILE NAME: EP1102B-303.dgn

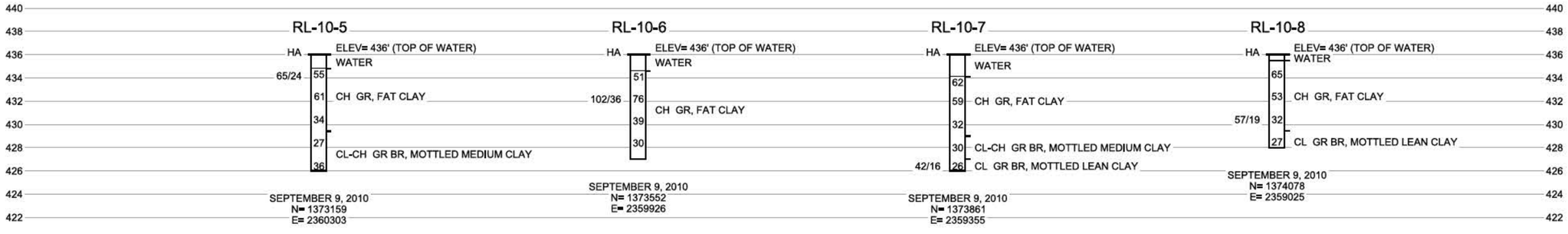
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
BORING LOGS III

Sheet ID
B-303

AS-BUILT
A-9







NOTE:
1. FOR LEGEND SEE B-301.

BORING LOGS IV

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	USACE 7 AS OF 29 SEPTEMBER 2017		

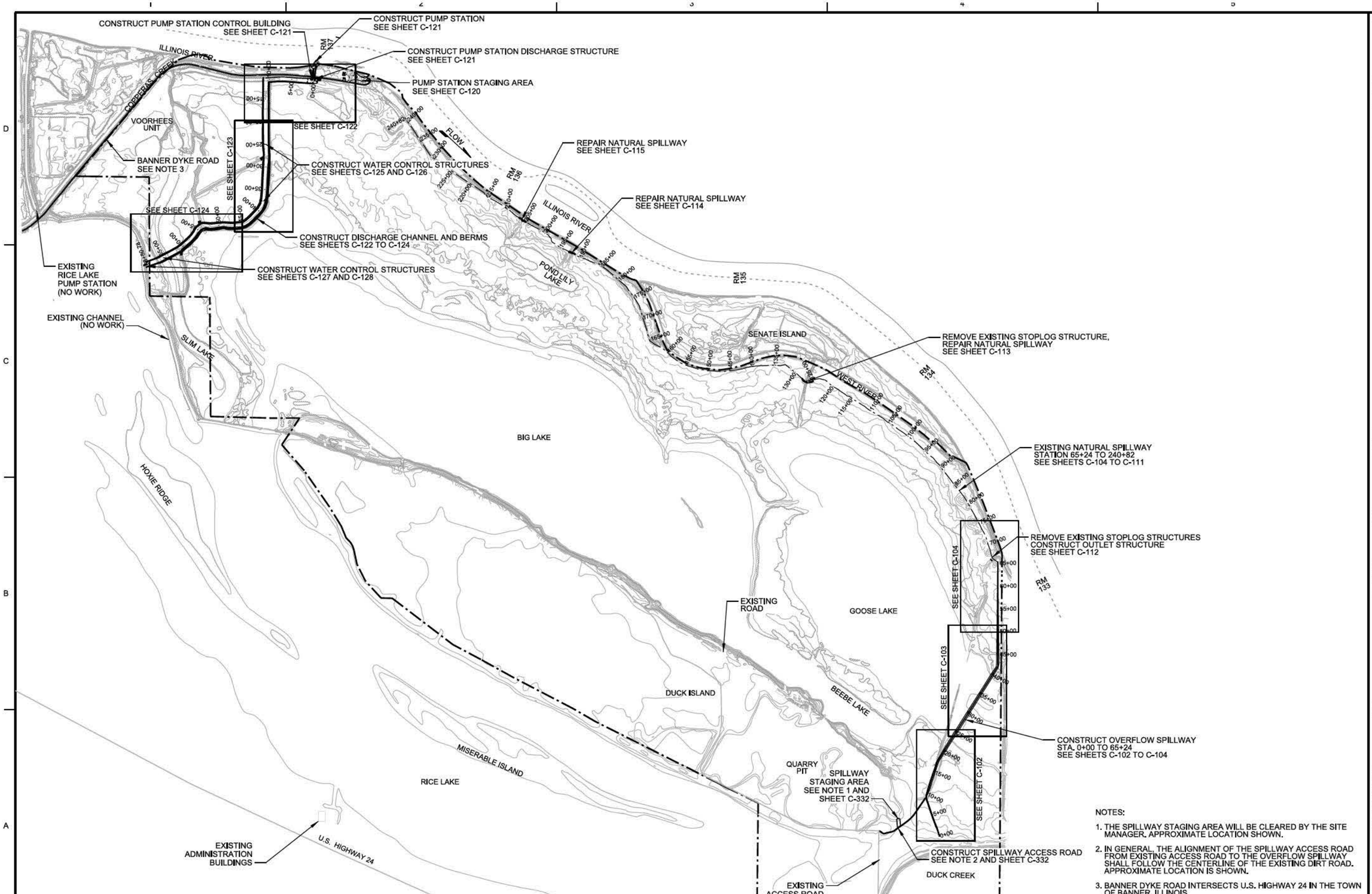
DESIGNED BY: PS
DRAWN BY: WT
SUBMITTED BY: ITEM
CHD BY: RBK
DATE: 2011/06/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-14-C-0090
PROJECT CODE: EP182
PLOT SCALE:
PLOT DATE:
FILE NAME: EP182B-304.dgn
TASK:
SIZE: ANSI D

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
BORING LOGS IV

Sheet ID
B-304

AS-BUILT
A-10



SITE PLAN

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION
			SCALE: 1" AS OF 29 SEPTEMBER 2017

DESIGNED BY: RCF
DRN BY: LLH
CKD BY: PJV
SUBMITTED BY: HLA
PLOT SCALE: AS SHOWN
PLOT DATE:
R.E. NAME: ANSI D
DATE: 2011/09/30
SOLICITATION NO.: W912EK-11-B-0029
CONTRACT NO.: W912EK-15-C-2090
PROJECT CODE: EP102
EP102C101.dgn

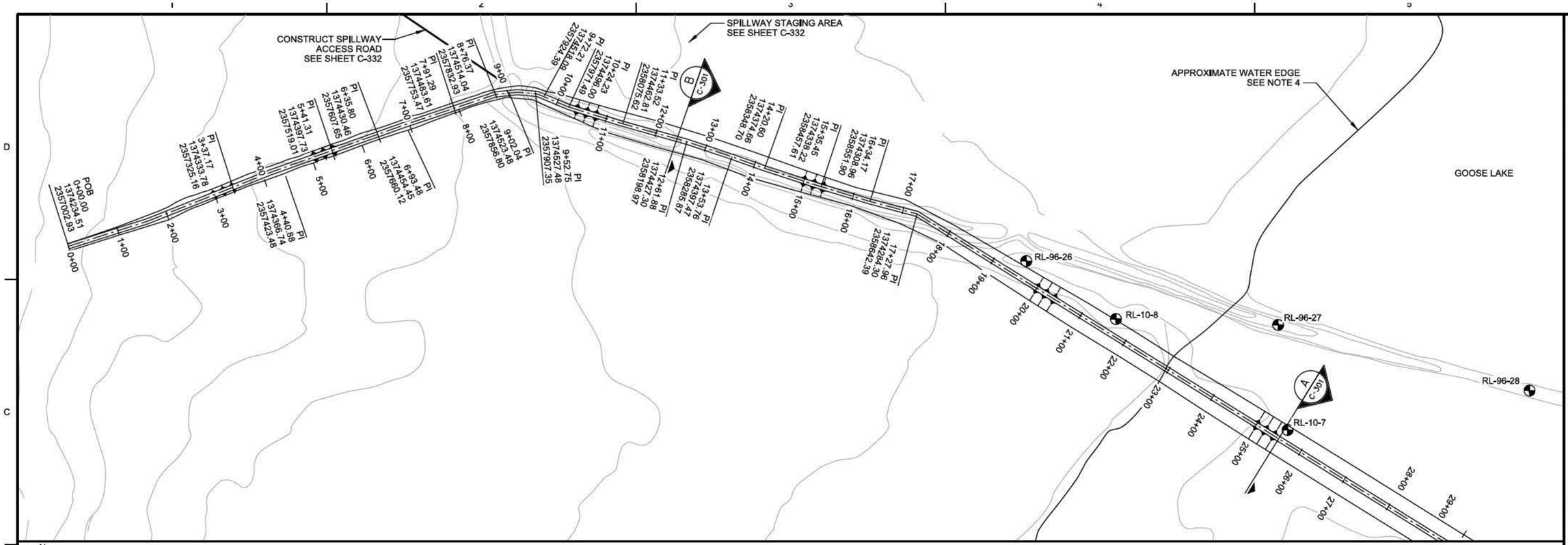
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

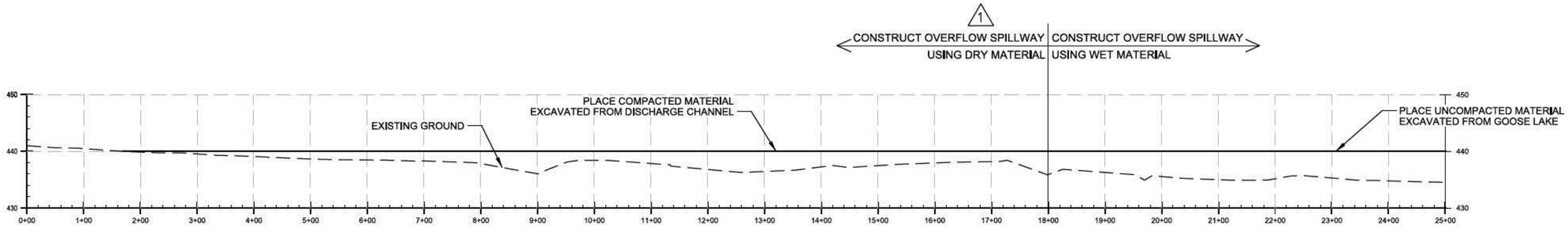
OVERALL SITE PLAN

Sheet ID
C-101

AS-BUILT
A-11



OVERFLOW SPILLWAY PLAN



NOTES:

1. THE LIMITS OF OVERFLOW SPILLWAY CONSTRUCTION USING WET MATERIAL AND USING DRY MATERIAL SHALL BE FIELD DETERMINED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER. APPROXIMATE LOCATIONS ARE SHOWN.
2. WATER ELEVATIONS WITHIN GOOSE LAKE FLUCTUATE WITH THE ILLINOIS RIVER. REFER TO SPEC SECTION 00 73 05 "ADDITIONAL PHYSICAL DATA CLAUSE INFORMATION" FOR HYDRAULIC DATA.
3. IN GENERAL, THE ALIGNMENT OF THE OVERFLOW SPILLWAY FROM STATION 0+00 TO 17+28 SHALL FOLLOW THE CENTERLINE OF THE EXISTING BERM.
4. WATER EDGE WAS DRAWN USING AERIAL PHOTO. WATER ELEVATION VARIES.

OVERFLOW SPILLWAY PROFILE STA. 0+00 TO 25+00

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	UNDER-1 ADJUST LIMITS OF WET & DRY SPILLWAY AS-BUILT AS OF 29 SEPTEMBER 2017	29 MAR '18	RCF

DESIGNED BY: RCF
DWN BY: LLH
SUBMITTED BY: H.A.
CKD BY: PJV
PLOT SCALE: AS SHOWN
SIZE: ANSI D
DATE: 20110930
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-15-C-2090
PROJECT CODE: EP102
PLOT DATE:
FILE NAME: EP102C-102.dgn

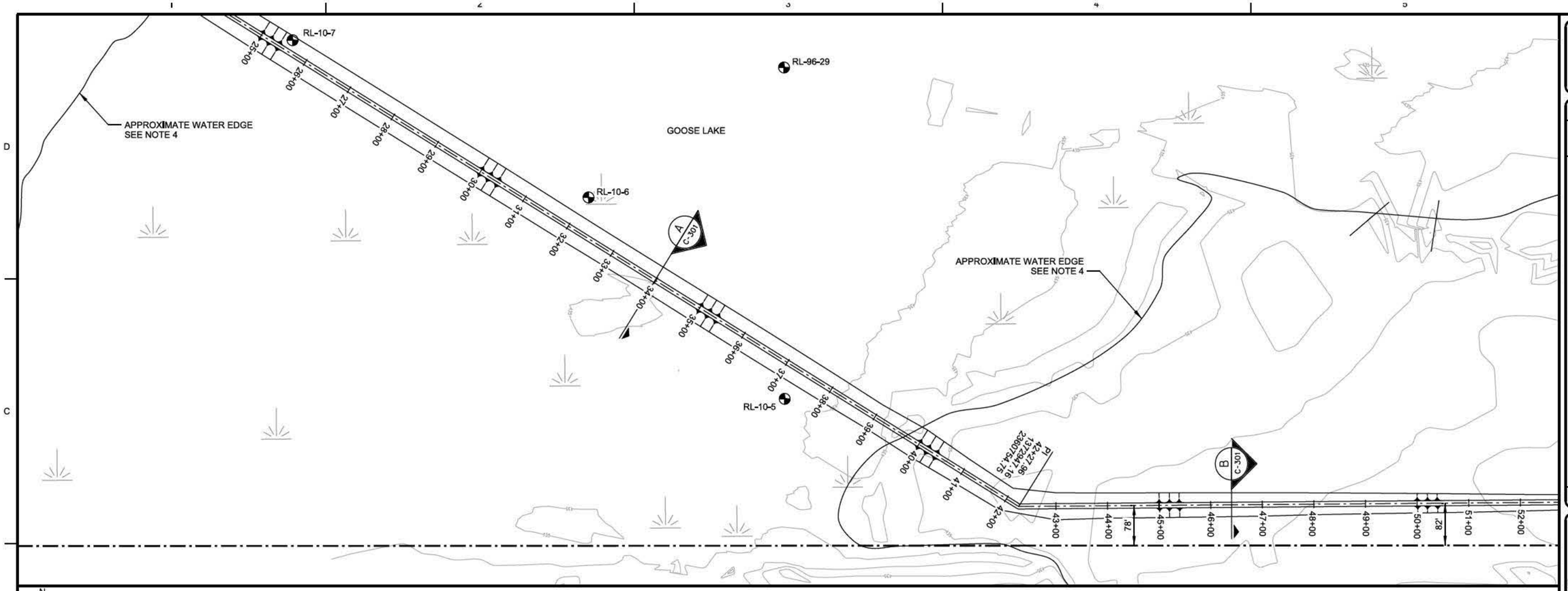
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

OVERFLOW SPILLWAY
PLAN AND PROFILE
STA. 0+00 TO 25+00

Sheet ID
C-102

AS-BUILT
A-12

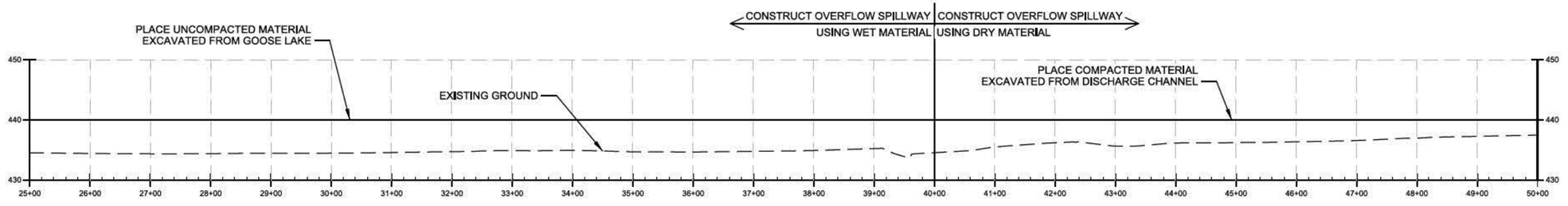


N

OVERFLOW SPILLWAY PLAN

0 100' 200'

SCALE:1"=100'



NOTES:

1. THE LIMITS OF OVERFLOW SPILLWAY CONSTRUCTION USING WET MATERIAL AND USING DRY MATERIAL SHALL BE FIELD DETERMINED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER. APPROXIMATE LOCATIONS ARE SHOWN.
2. WATER ELEVATIONS WITHIN GOOSE LAKE FLUCTUATE WITH THE ILLINOIS RIVER. REFER TO SPEC SECTION 00 73 05 "ADDITIONAL PHYSICAL DATA CLAUSE INFORMATION" FOR HYDRAULIC DATA.
3. CONTRACTOR MUST WORK WITHIN PROJECT BOUNDARY. DIMENSIONS TO CENTERLINE OF OVERFLOW SPILLWAY ARE PROVIDED.
4. WATER EDGE WAS DRAWN USING AERIAL PHOTO. WATER ELEVATION VARIES.

OVERFLOW SPILLWAY PROFILE STA. 25+00 TO 50+00

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	SCALE: 1" AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

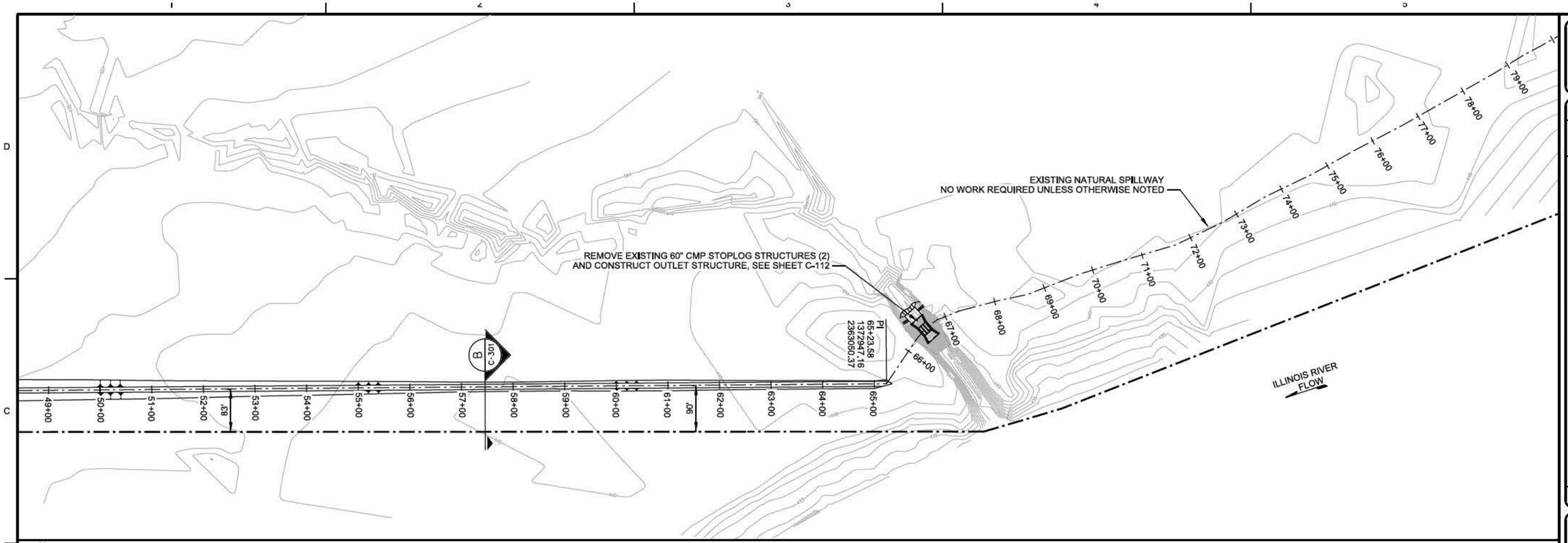
DESIGNED BY: RCF
DWN BY: LLH
CKD BY: PJV
SUBMITTED BY: HLA
PLOT SCALE: AS SHOWN
SIZE: ANSI D
DATE: 20110930
SOLICITATION NO.: W912EK-11-B-0029
CONTRACT NO.: W912EK-15-C-0090
PROJECT CODE: EP102
PLOT DATE:
FILE NAME: EP102C-103.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

OVERFLOW SPILLWAY
PLAN AND PROFILE
STA. 25+00 TO 50+00

Sheet ID
C-103

AS-BUILT
A-13

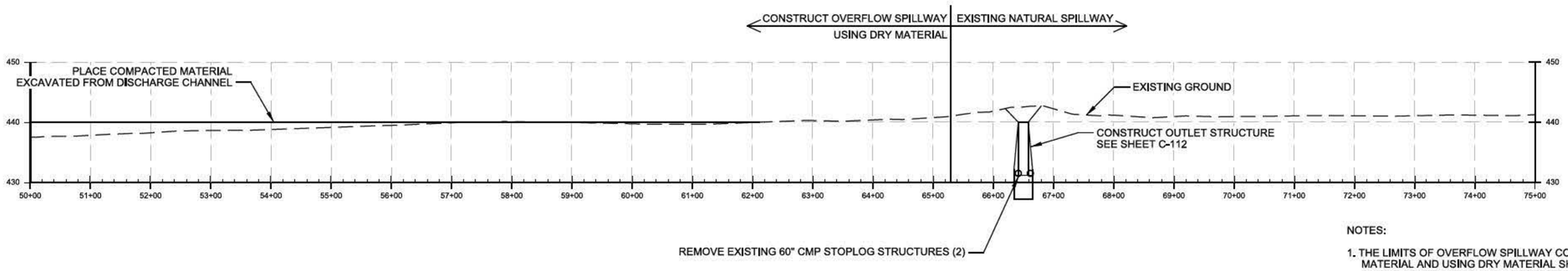


N

OVERFLOW AND NATURAL SPILLWAY PLAN

0 100' 200'

SCALE:1"=100'



NOTES:

1. THE LIMITS OF OVERFLOW SPILLWAY CONSTRUCTION USING WET MATERIAL AND USING DRY MATERIAL SHALL BE FIELD DETERMINED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER. APPROXIMATE LOCATIONS ARE SHOWN.
2. WATER ELEVATIONS WITHIN GOOSE LAKE FLUCTUATE WITH THE ILLINOIS RIVER. REFER TO SPEC SECTION 00 73 05 "ADDITIONAL PHYSICAL DATA CLAUSE INFORMATION" FOR HYDRAULIC DATA.
3. IN GENERAL, THE ALIGNMENT OF THE NATURAL SPILLWAY FOLLOWS THE CENTERLINE OF THE EXISTING DIRT ROAD.
4. CONTRACTOR MUST WORK WITHIN PROJECT BOUNDARY. DIMENSIONS TO CENTERLINE OF OVERFLOW SPILLWAY ARE PROVIDED.

OVERFLOW AND NATURAL SPILLWAY PROFILE STA. 50+00 TO 75+00

NO SCALE

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION
			SCALE: 1 AS OF 29 SEPTEMBER 2017

DESIGNED BY: RCF
DWN BY: LLH
SUBMITTED BY: HLA
CKD BY: PJV
DATE: 20110503
SOLICITATION NO.: W912EK-11-R-2029
CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN
PLOT DATE: SEE ABOVE
PROJECT CODE: EP102
FILE NAME: EP102-C104.dgn

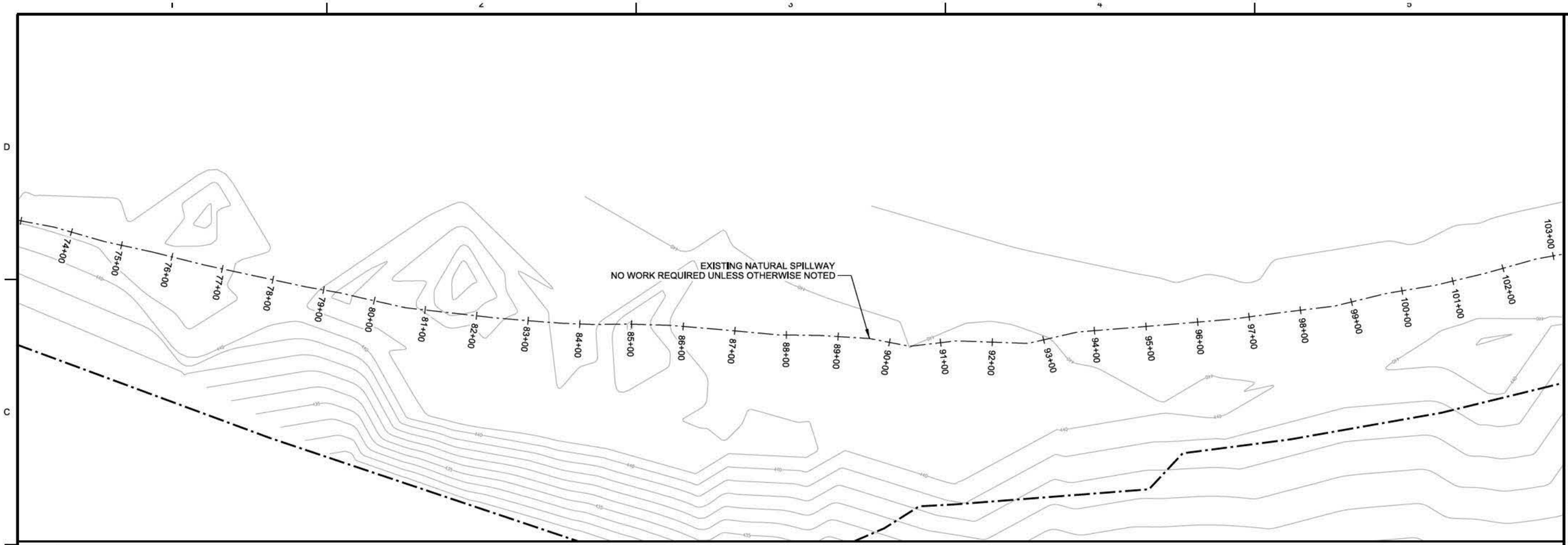
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

OVERFLOW AND NATURAL SPILLWAY PLAN AND PROFILE STA. 50+00 TO 75+00

Sheet ID
C-104

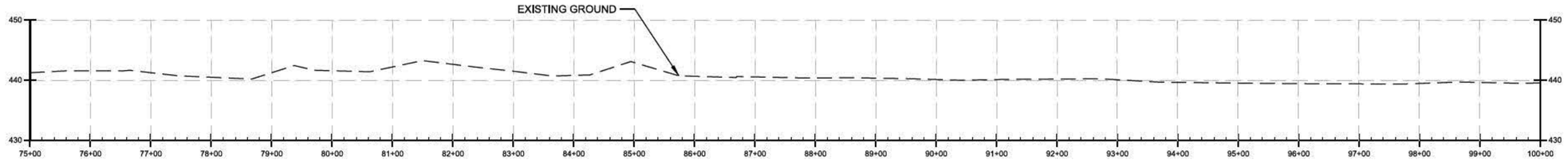
AS-BUILT
A-14



NATURAL SPILLWAY PLAN

0 100' 200'

SCALE:1"=100'



NOTE:

1. IN GENERAL, THE ALIGNMENT OF THE NATURAL SPILLWAY FOLLOWS THE CENTERLINE OF THE EXISTING DIRT ROAD.

NATURAL SPILLWAY PROFILE STA. 75+00 TO 100+00

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	USACE 7 AS OF 29 SEPTEMBER 2017		

DESIGNED BY: RDF
DWN BY: LLH
SUBMITTED BY: HLA
PLOT SCALE: AS SHOWN
SIZE: ANSI D
DATE: 20110930
CHD BY: PJV
PLOT DATE:
FILE NAME: EP102C156.dgn
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-15-C-2090
PROJECT CODE: EP102

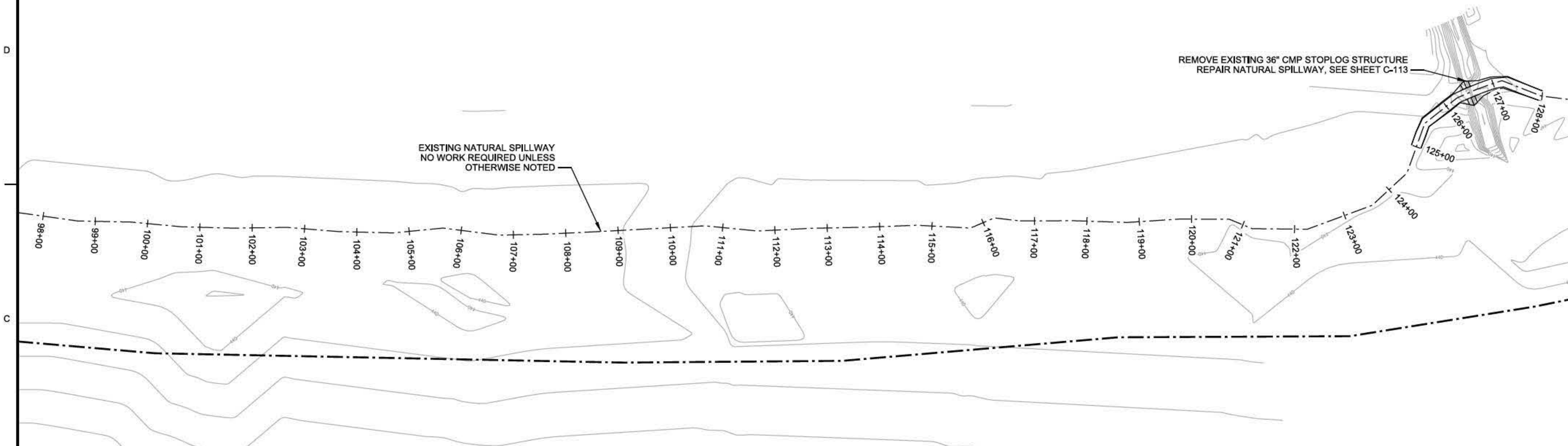
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

NATURAL SPILLWAY
PLAN AND PROFILE
STA. 75+00 TO 100+00

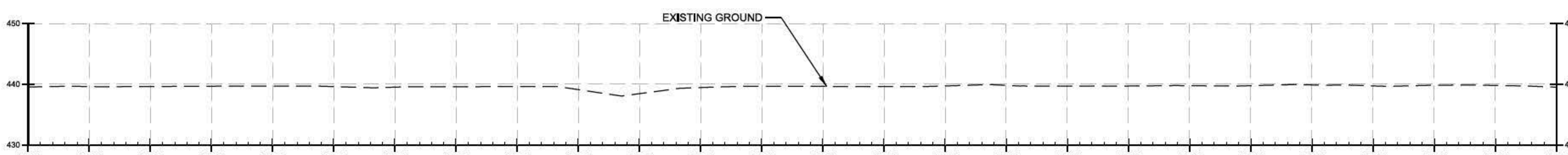
Sheet ID
C-105

AS-BUILT
A-15



NATURAL SPILLWAY PLAN

0 100' 200'
SCALE:1"=100'



NOTE:

1. IN GENERAL, THE ALIGNMENT OF THE NATURAL SPILLWAY FOLLOWS THE CENTERLINE OF THE EXISTING DIRT ROAD.

NATURAL SPILLWAY PROFILE STA. 100+00 TO 125+00

NO SCALE

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

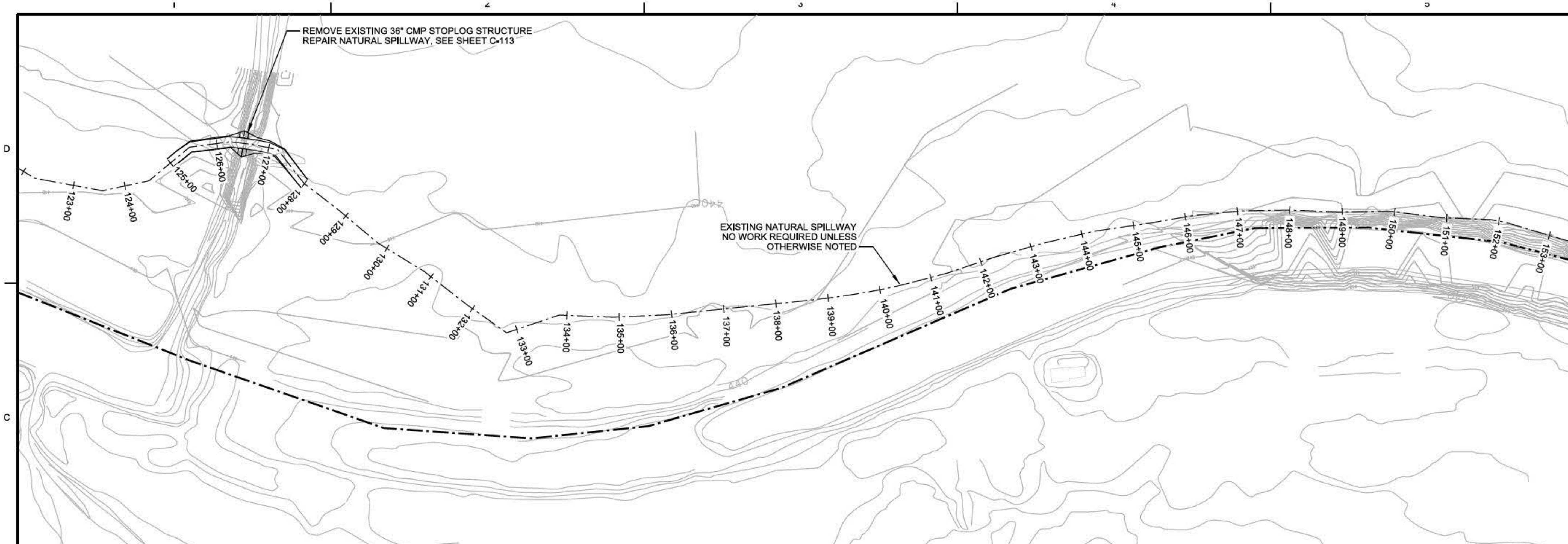
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-106.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

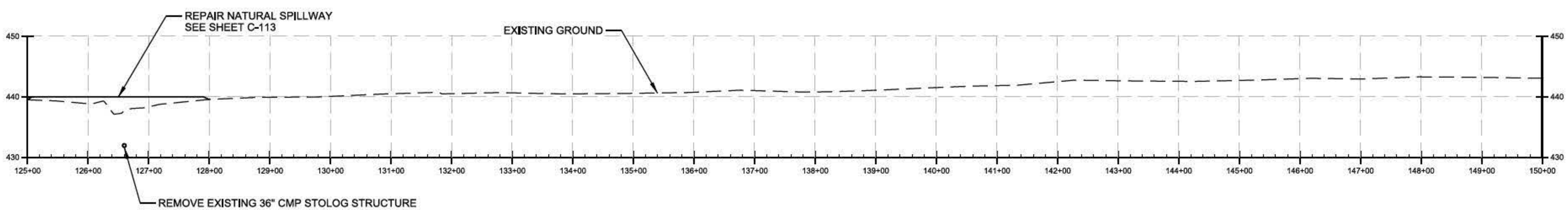
NATURAL SPILLWAY
PLAN AND PROFILE
STA. 100+00 TO 125+00

Sheet ID
C-106



NATURAL SPILLWAY PLAN

SCALE: 1"=100'



NOTE:

1. IN GENERAL, THE ALIGNMENT OF THE NATURAL SPILLWAY FOLLOWS THE CENTERLINE OF THE EXISTING DIRT ROAD.

NATURAL SPILLWAY PROFILE STA. 125+00 TO 150+00

NO SCALE

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

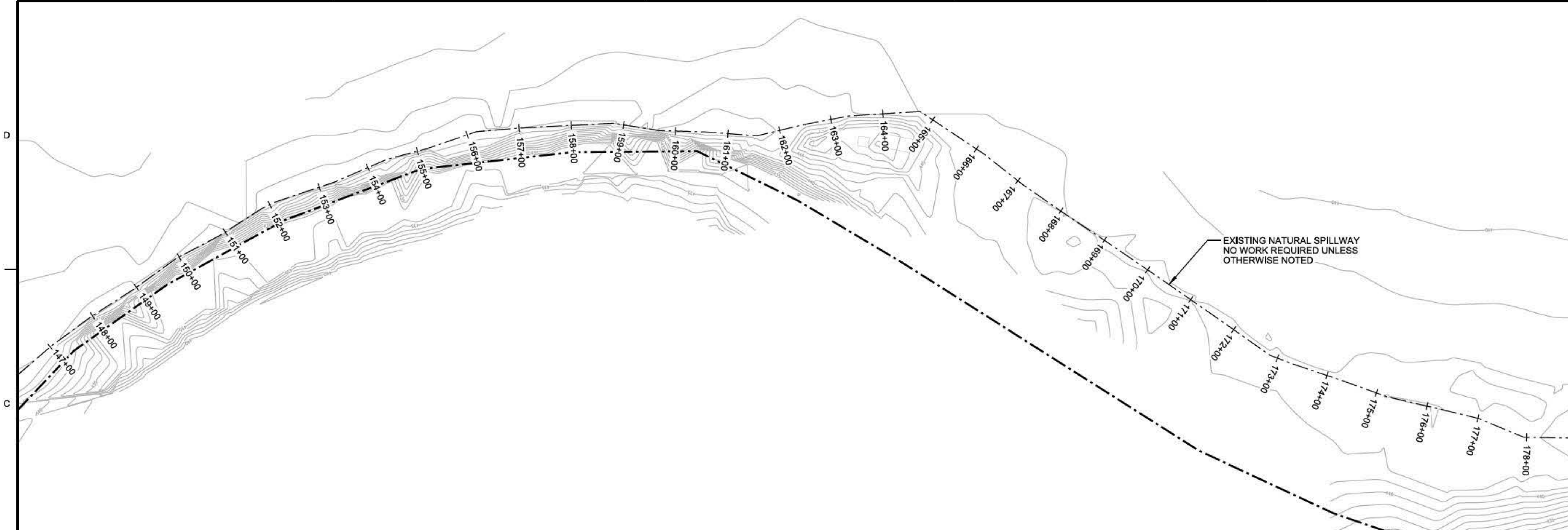
DESIGNED BY: RCF | DWN BY: LLH | CKD BY: PJV | SUBMITTED BY: HLA | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102C-107.dgn | DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-11-C-0090 | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

NATURAL SPILLWAY
PLAN AND PROFILE
STA. 125+00 TO 150+00

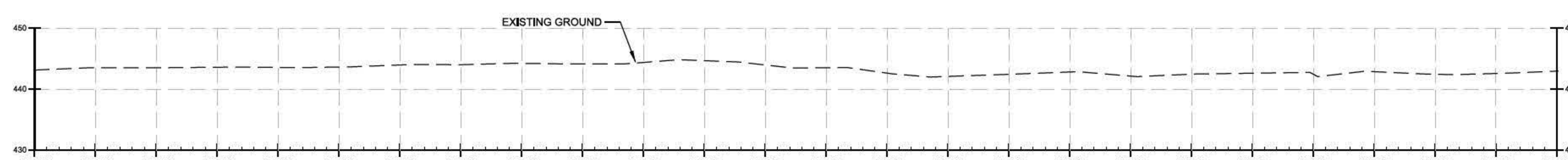
Sheet ID
C-107

AS-BUILT
A-17



NATURAL SPILLWAY PLAN

SCALE:1"=100'



NOTE:

1. IN GENERAL, THE ALIGNMENT OF THE NATURAL SPILLWAY FOLLOWS THE CENTERLINE OF THE EXISTING DIRT ROAD.

NATURAL SPILLWAY PROFILE STA. 150+00 TO 175+00

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

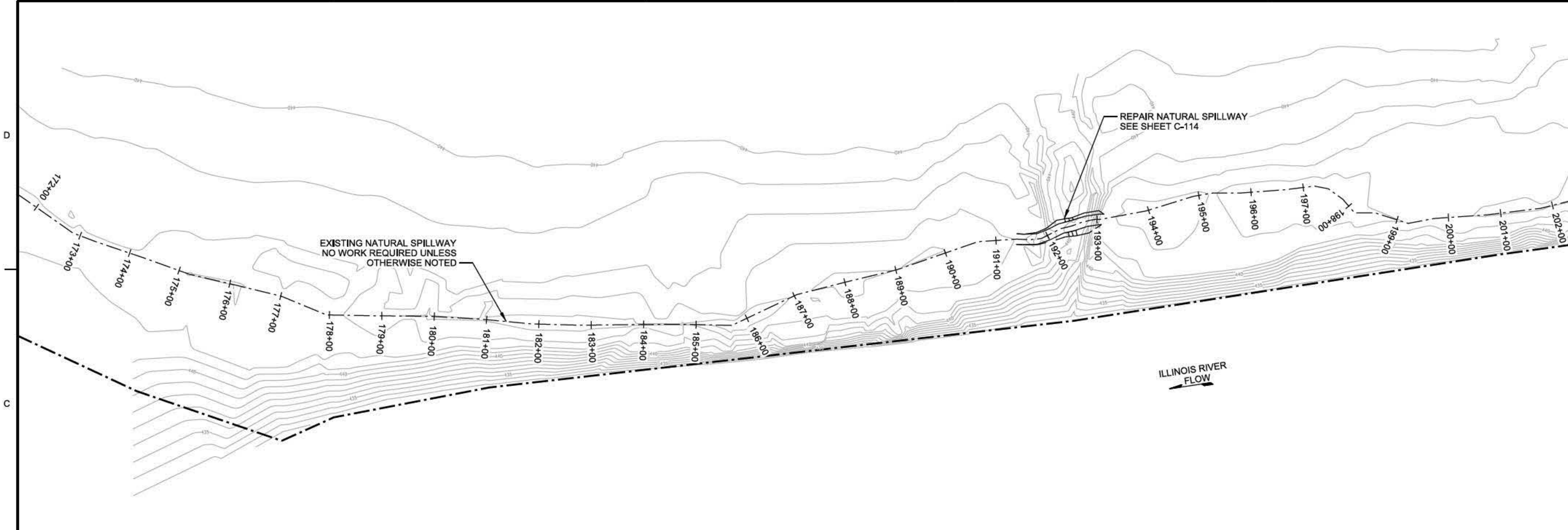
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF
DWN BY: LLH
CKD BY: PJV
SUBMITTED BY: HLA
PLOT SCALE: AS SHOWN
PLOT DATE:
SIZE: ANSI D
FILE NAME: EP102C-108.dgn
DATE: 2011/06/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0060
PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
NATURAL SPILLWAY
PLAN AND PROFILE
STA. 150+00 TO 175+00

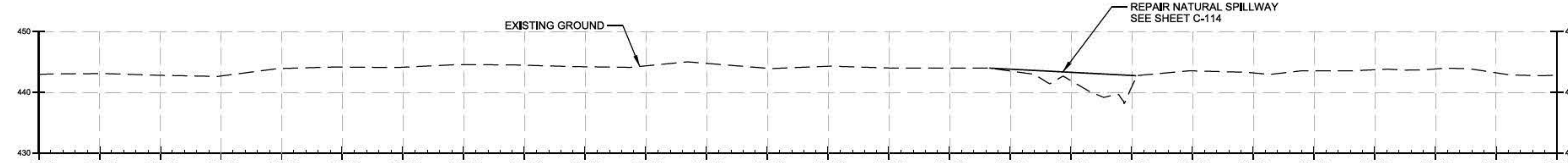
Sheet ID
C-108

AS-BUILT
A-18



NATURAL SPILLWAY PLAN

0 100' 200'
SCALE:1"=100'



NOTE:

1. IN GENERAL, THE ALIGNMENT OF THE NATURAL SPILLWAY FOLLOWS THE CENTERLINE OF THE EXISTING DIRT ROAD.

NATURAL SPILLWAY PROFILE STA. 175+00 TO 200+00

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

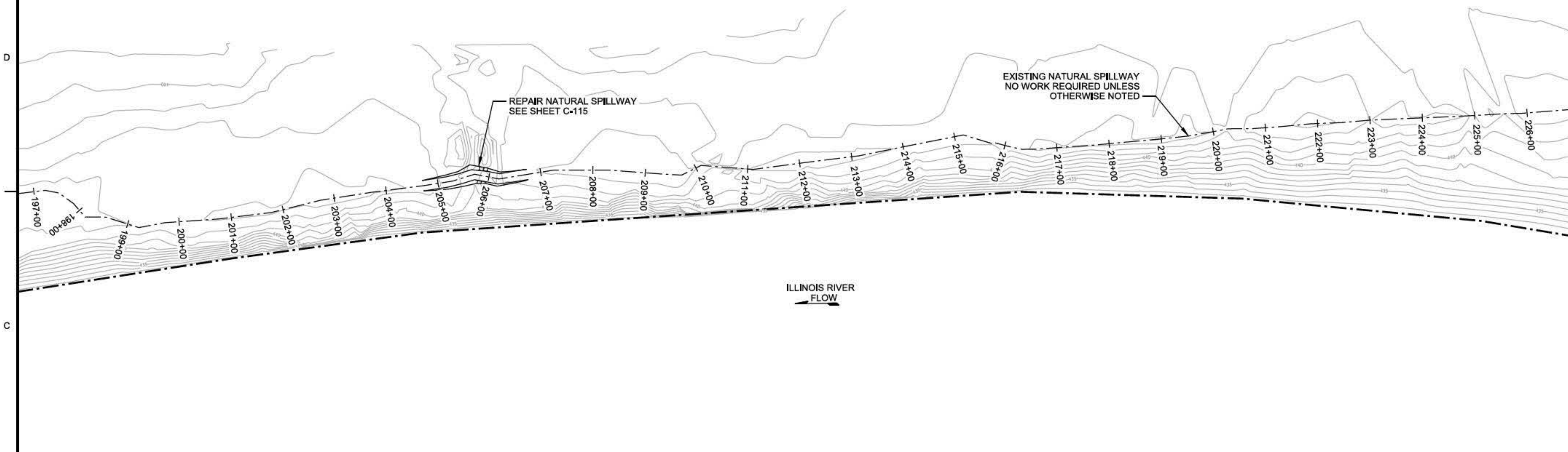
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF
DWN BY: LLH
CKD BY: PJV
SUBMITTED BY: HLA
PLOT SCALE: AS SHOWN
PLOT DATE:
SIZE: ANSI D
FILE NAME: EP102C-109.dgn
DATE: 2011/06/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

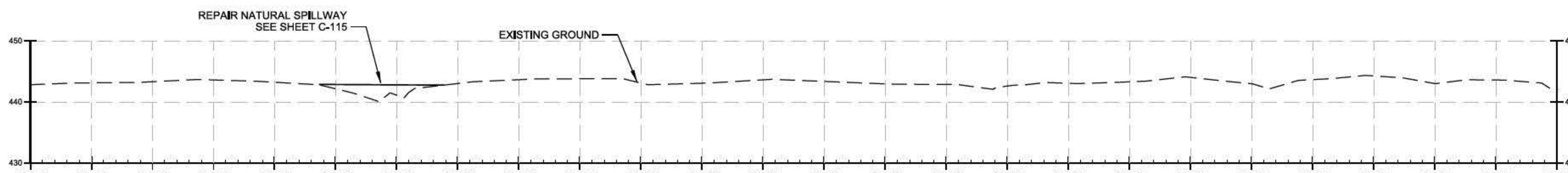
NATURAL SPILLWAY
PLAN AND PROFILE
STA. 175+00 TO 200+00

Sheet ID
C-109



NATURAL SPILLWAY PLAN

SCALE:1"=100'



NOTE:

1. IN GENERAL, THE ALIGNMENT OF THE NATURAL SPILLWAY FOLLOWS THE CENTERLINE OF THE EXISTING DIRT ROAD.

NATURAL SPILLWAY PROFILE STA. 200+00 TO 225+00

NO SCALE

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

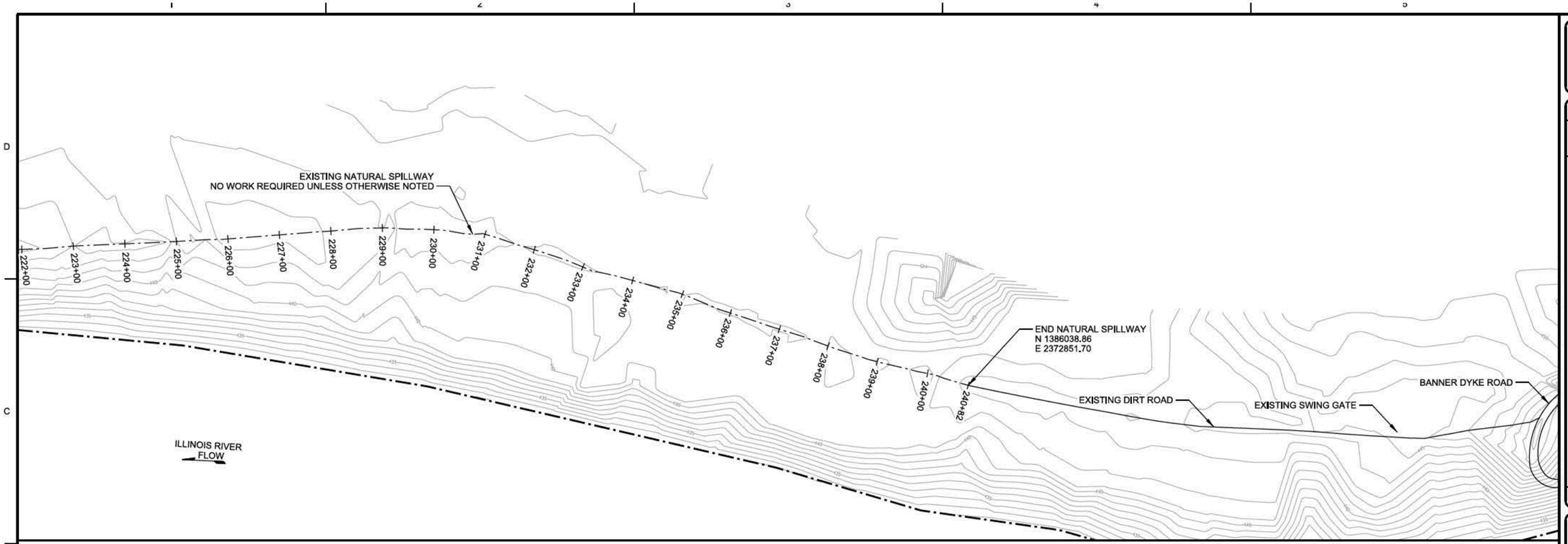
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF | DWN BY: LLH | CKD BY: PJV | SUBMITTED BY: HLA | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102C-110.dgn | DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-11-C-0060 | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
NATURAL SPILLWAY
PLAN AND PROFILE
STA. 200+00 TO 225+00

Sheet ID
C-110

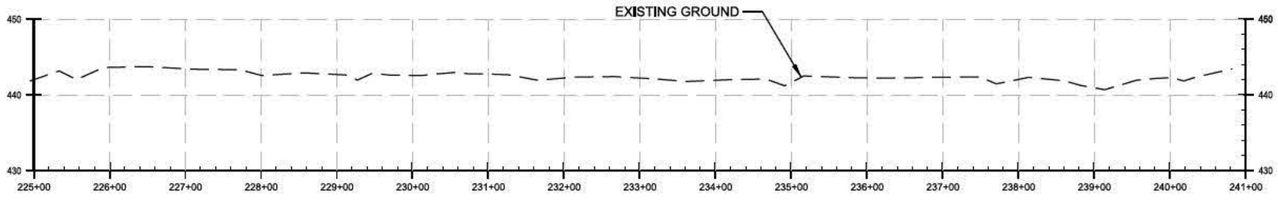
AS-BUILT
A-20



NATURAL SPILLWAY PLAN

0 100' 200'

SCALE:1"=100'



NOTE:

1. IN GENERAL, THE ALIGNMENT OF THE NATURAL SPILLWAY FOLLOWS THE CENTERLINE OF THE EXISTING DIRT ROAD.

NATURAL SPILLWAY PROFILE STA. 225+00 TO 240+82

NO SCALE

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION
			USACE 7 AS OF 29 SEPTEMBER 2017

DESIGNED BY: RDF
DWN BY: LLH
SUBMITTED BY: HLA
PLOT SCALE: AS SHOWN
SIZE: ANSI D
DATE: 20110930
CKD BY: PJV
PLOT DATE:
FILE NAME: EP102C111.dgn
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-15-C-2090
PROJECT CODE: EP102

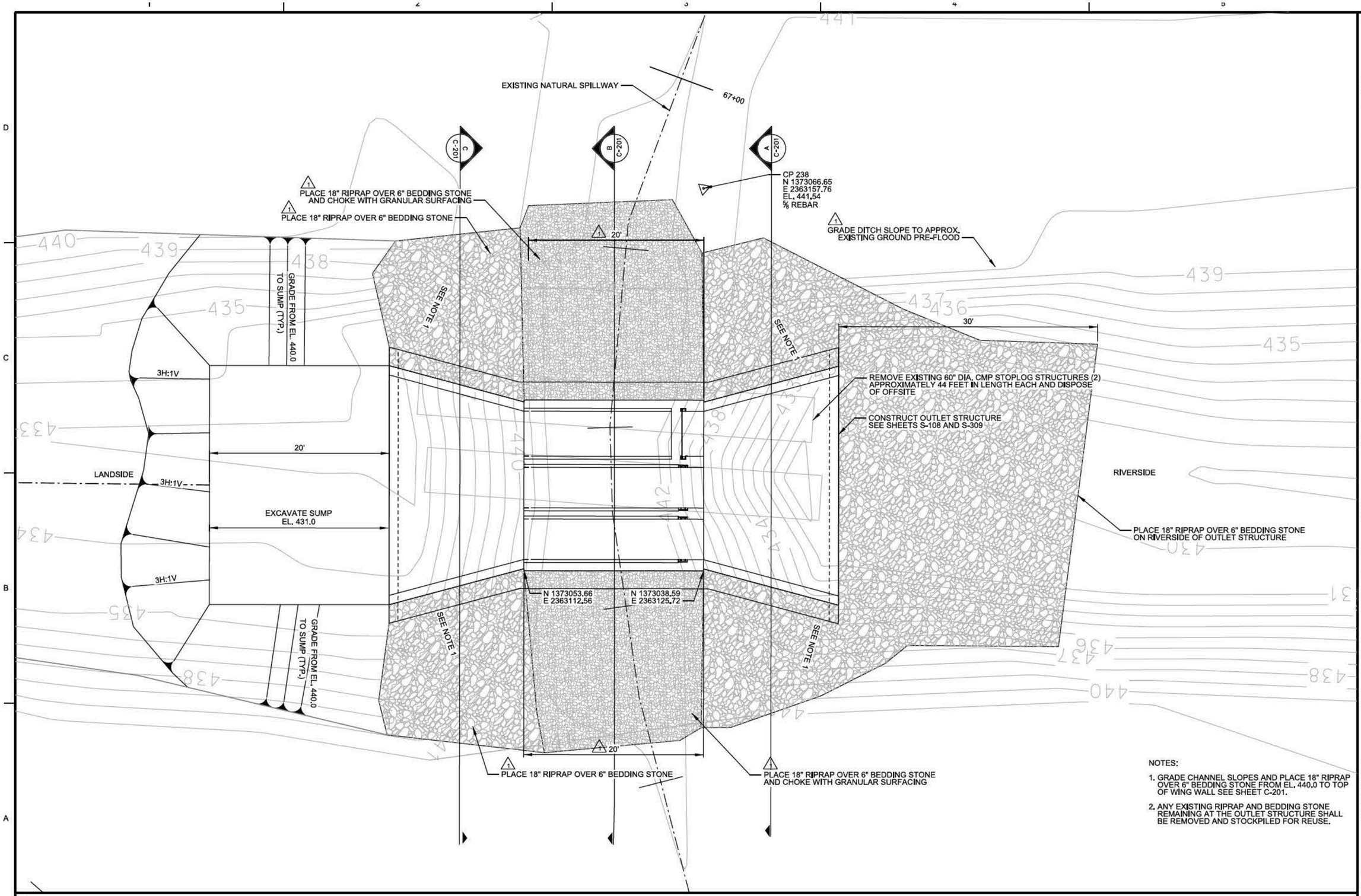
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

NATURAL SPILLWAY
PLAN AND PROFILE
STA. 225+00 TO 240+82

Sheet ID
C-111

AS-BUILT
A-21



OUTLET STRUCTURE SITE PLAN

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD 84912 REPAIR OUTLET STRUCTURE AS-BUILT AS OF 29 SEPTEMBER 2017	9/27/2019	ROF

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

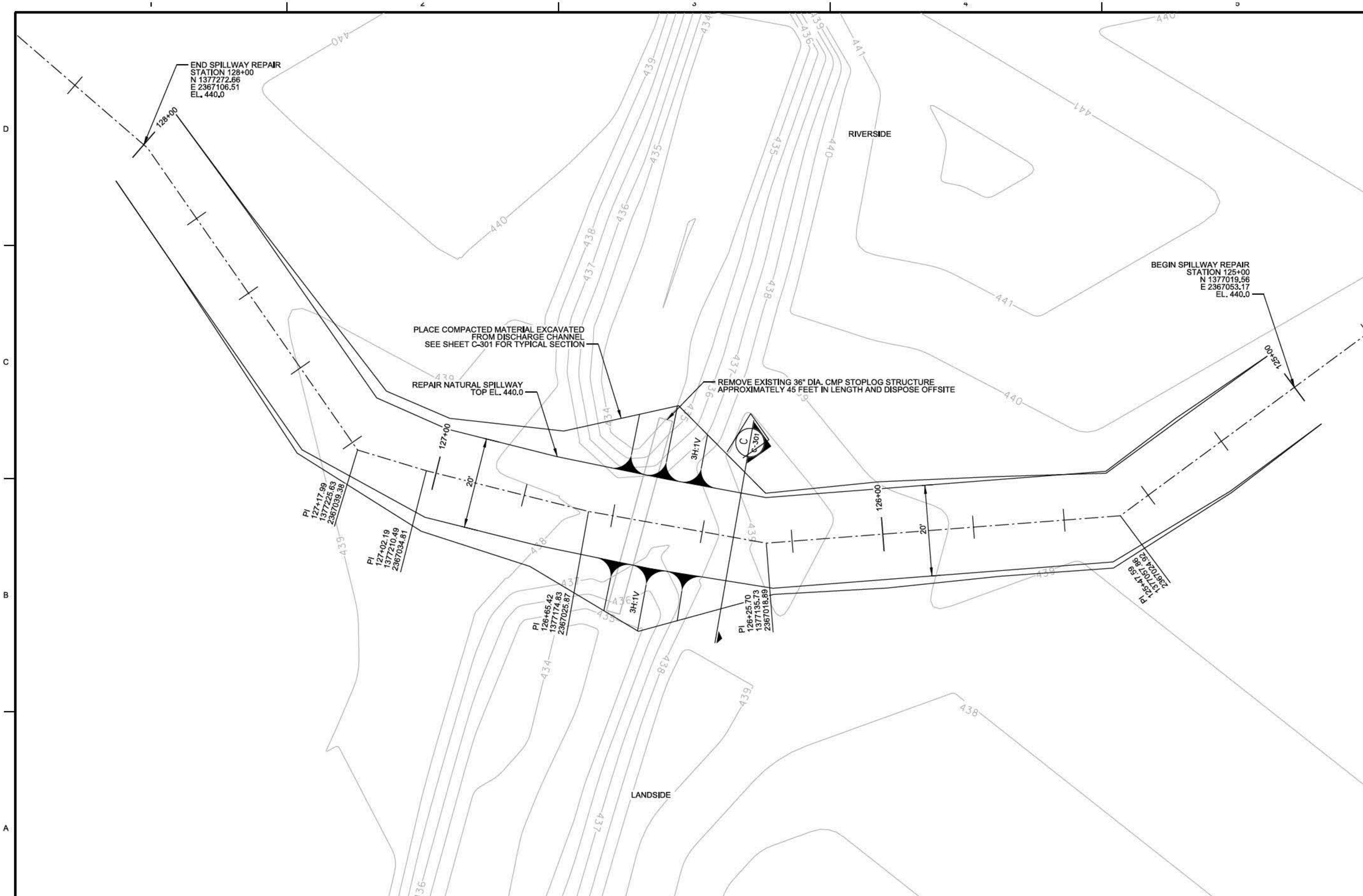
DESIGNED BY: RDF
DWN BY: LLH
SUBMITTED BY: HLA
CKD BY: PJV
PLOT SCALE: AS SHOWN
PLOT DATE: AS SIZED AND FED
DATE: 2011/05/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODE: EP102
FILE NAME: EP102C-112.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

OUTLET STRUCTURE
SITE PLAN

Sheet ID
C-112

AS-BUILT
A-22



NATURAL SPILLWAY REPAIR AREA 1 SITE PLAN

SCALE: 1" = 10'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

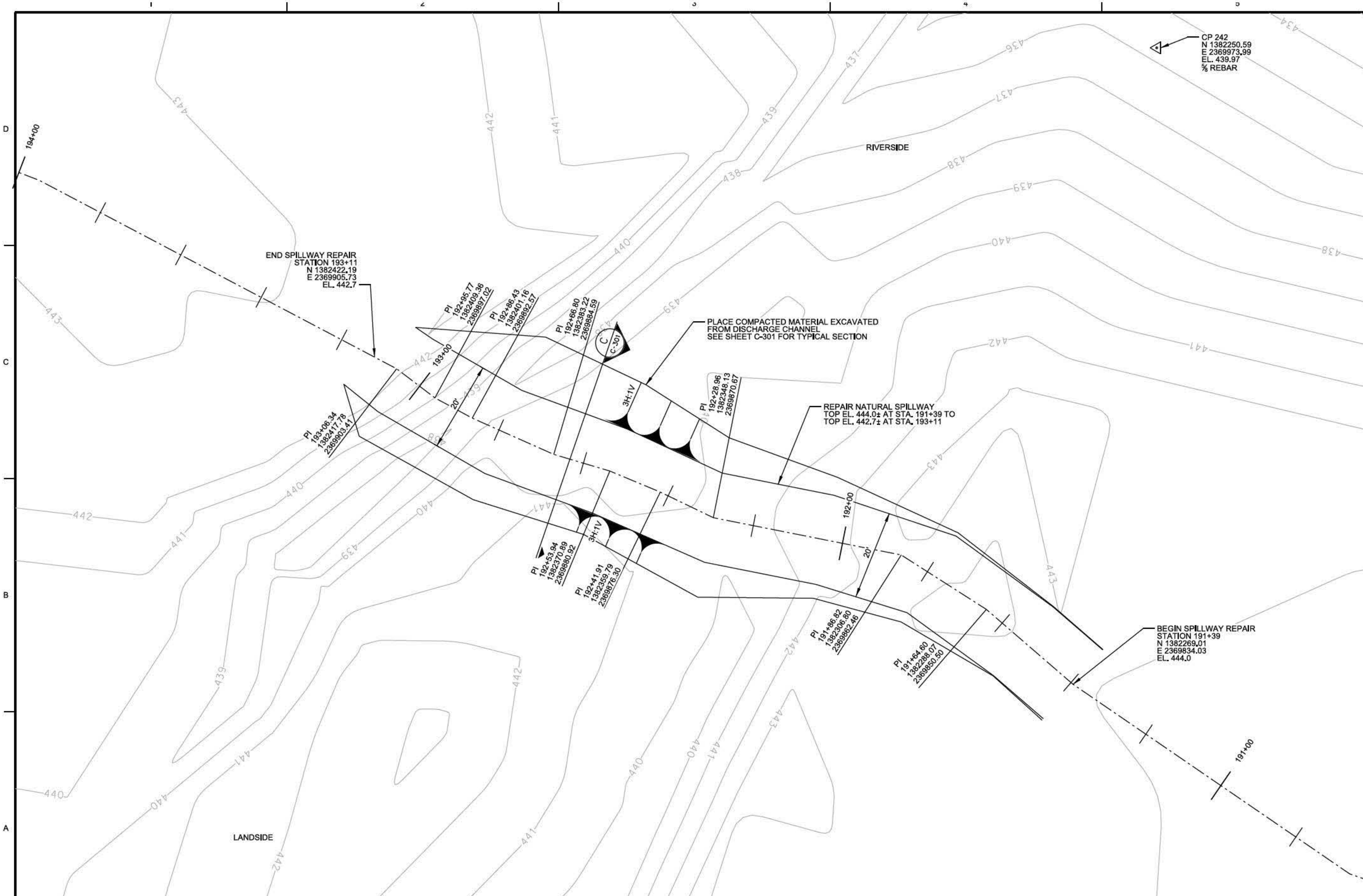
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HJL		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-113.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
NATURAL SPILLWAY
REPAIR AREA 1
SITE PLAN

Sheet ID
C-113

AS-BUILT
A-23



NATURAL SPILLWAY REPAIR AREA 2 SITE PLAN

SCALE:1''-10'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

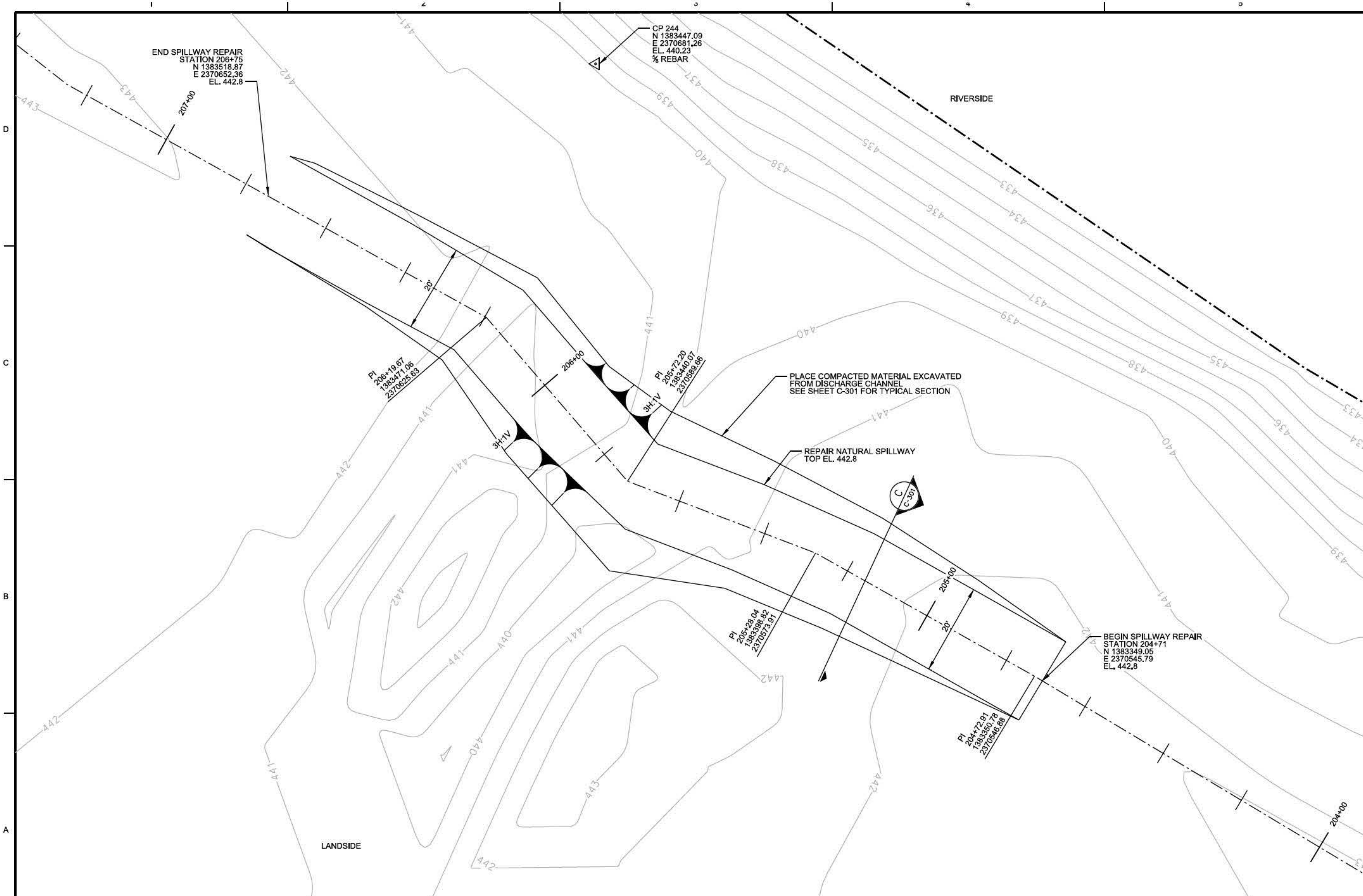
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-114.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
NATURAL SPILLWAY
REPAIR AREA 2
SITE PLAN

Sheet ID
C-114

AS-BUILT
A-24



NATURAL SPILLWAY REPAIR AREA 3 SITE PLAN

SCALE: 1"-10'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

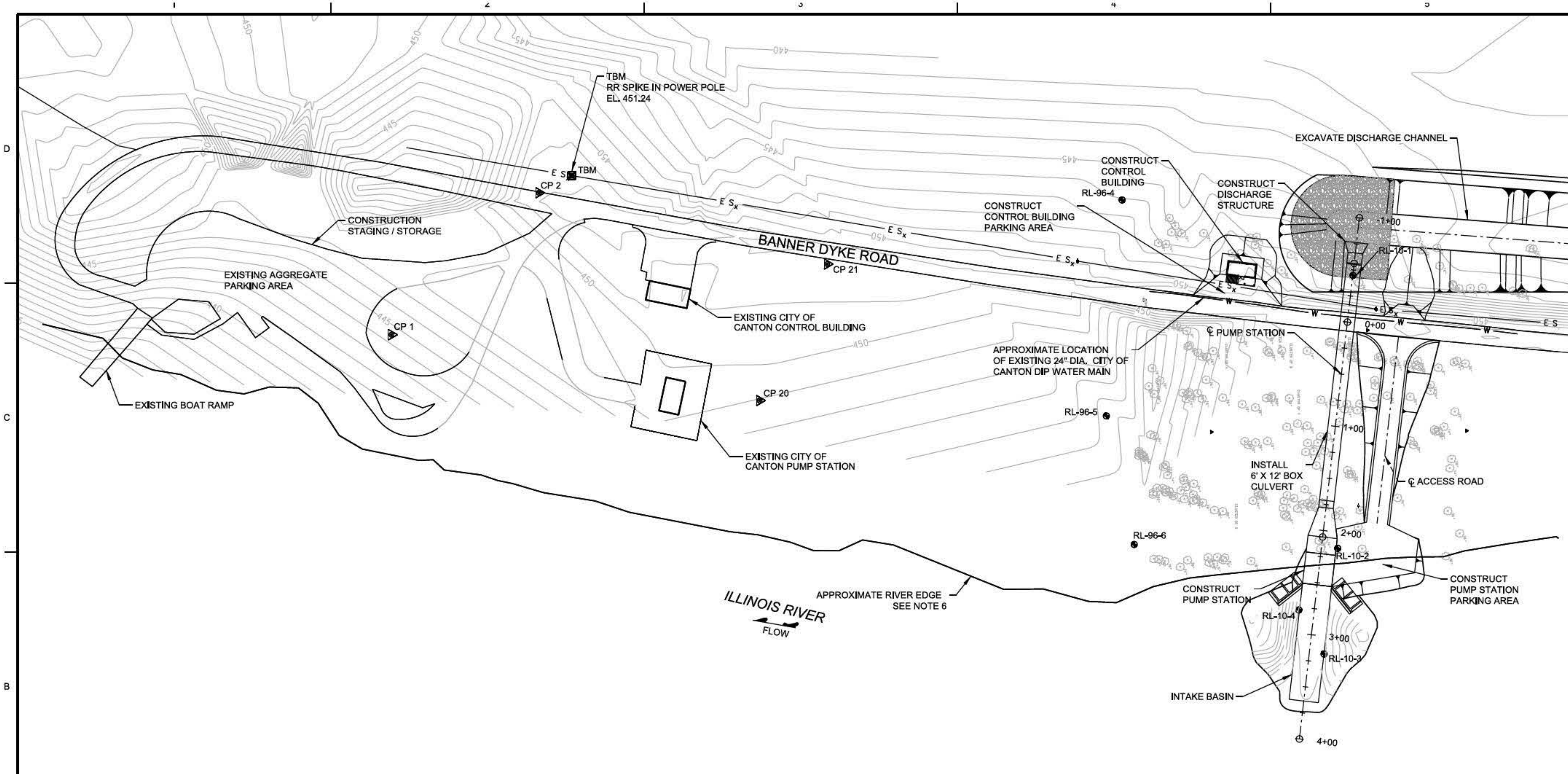
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0050
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C115.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
NATURAL SPILLWAY
REPAIR AREA 3
SITE PLAN

Sheet ID
C-115

AS-BUILT
A-25



NOTES:

1. THE PUMP STATION TO BE CONSTRUCTED IS LOCATED 3.2 MILES SOUTH OF U.S. HIGHWAY 24 ALONG COUNTY ROAD 7 (FULTON ST / BANNER DYKE ROAD).
2. CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND MUST STAGE WORK TO MAINTAIN ACCESS ALONG BANNER DYKE ROAD AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL ALSO MAINTAIN ACCESS TO BOAT RAMP.
3. CONTRACTOR MAY USE THE AGGREGATE PARKING AREA FOR CONSTRUCTION STAGING. PARKING AREA SHALL BE REPAIRED BACK TO PRECONSTRUCTION CONDITIONS UPON COMPLETION OF CONSTRUCTION. PARKING AREA SUBJSECT TO VARYING RIVER ELEVATIONS. SEE CP1 FOR ELEVATION REFERENCE.
4. COORDINATES FOR THE LAYOUT OF THE PUMP STATION AND ASSOCIATED FEATURES ARE PROVIDED ON SHEET V-102.
5. LOCATION OF EXISTING WATER MAIN IS APPROXIMATE. CONTRACTOR SHALL ALSO BE AWARE OF A POTENTIAL UNDERGROUND TELEPHONE LINE LOCATED ON THE EAST SIDE OF BANNER DYKE ROAD. CONTRACTOR SHALL LOCATE UTILITIES PRIOR TO CONSTRUCTION.
6. RIVER EDGE SHOWN WAS SURVEYED ON APRIL 22, 2010 AT APPROXIMATE EL. 438. RIVER ELEVATION VARIES.

PUMP STATION GENERAL PLAN

0 50' 100'
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
GENERAL PLAN

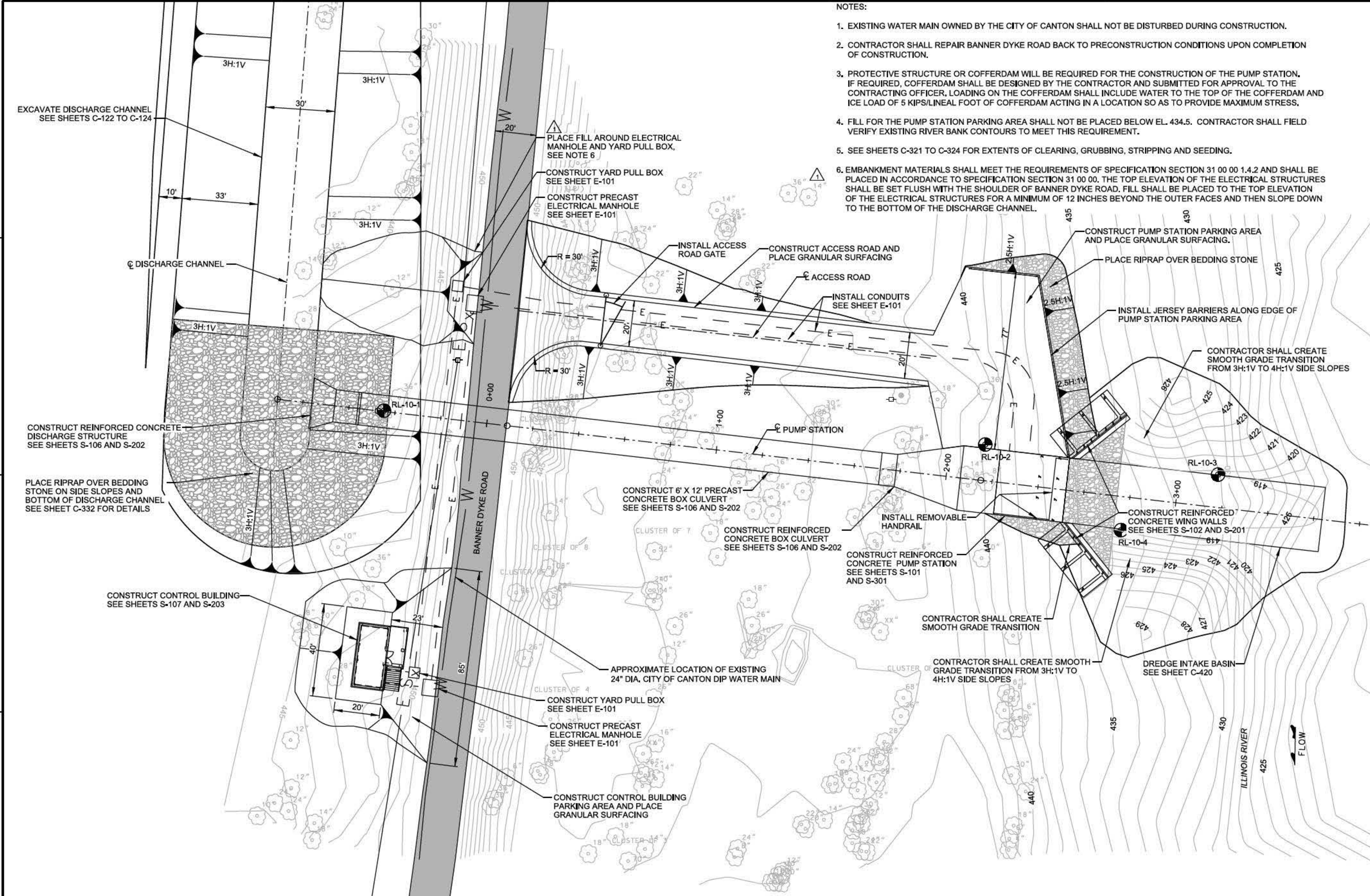
Sheet ID
C-120

AS-BUILT
A-26

c:\pw_working\mvrb5edd\lhd0153728\EP102C-120.dgn
8/28/2018 3:11:18 PM
B5EDDLLH

NOTES:

1. EXISTING WATER MAIN OWNED BY THE CITY OF CANTON SHALL NOT BE DISTURBED DURING CONSTRUCTION.
2. CONTRACTOR SHALL REPAIR BANNER DYKE ROAD BACK TO PRECONSTRUCTION CONDITIONS UPON COMPLETION OF CONSTRUCTION.
3. PROTECTIVE STRUCTURE OR COFFERDAM WILL BE REQUIRED FOR THE CONSTRUCTION OF THE PUMP STATION. IF REQUIRED, COFFERDAM SHALL BE DESIGNED BY THE CONTRACTOR AND SUBMITTED FOR APPROVAL TO THE CONTRACTING OFFICER. LOADING ON THE COFFERDAM SHALL INCLUDE WATER TO THE TOP OF THE COFFERDAM AND ICE LOAD OF 5 KIPS/LINEAL FOOT OF COFFERDAM ACTING IN A LOCATION SO AS TO PROVIDE MAXIMUM STRESS.
4. FILL FOR THE PUMP STATION PARKING AREA SHALL NOT BE PLACED BELOW EL. 434.5. CONTRACTOR SHALL FIELD VERIFY EXISTING RIVER BANK CONTOURS TO MEET THIS REQUIREMENT.
5. SEE SHEETS C-321 TO C-324 FOR EXTENTS OF CLEARING, GRUBBING, STRIPPING AND SEEDING.
6. EMBANKMENT MATERIALS SHALL MEET THE REQUIREMENTS OF SPECIFICATION SECTION 31 00 00 1.4.2 AND SHALL BE PLACED IN ACCORDANCE TO SPECIFICATION SECTION 31 00 00. THE TOP ELEVATION OF THE ELECTRICAL STRUCTURES SHALL BE SET FLUSH WITH THE SHOULDER OF BANNER DYKE ROAD. FILL SHALL BE PLACED TO THE TOP ELEVATION OF THE ELECTRICAL STRUCTURES FOR A MINIMUM OF 12 INCHES BEYOND THE OUTER FACES AND THEN SLOPE DOWN TO THE BOTTOM OF THE DISCHARGE CHANNEL.



PUMP STATION SITE PLAN

0 20' 40'
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD5-A008 - ADDED NOTE / AS-BUILT AS OF 29 SEPTEMBER 2017	14 NOV 12	RCF

DESIGNED BY: RCF	DATE: 2011/06/30	
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY:		CONTRACT NO.: W912EK-11-C-0050
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-121.dgn	

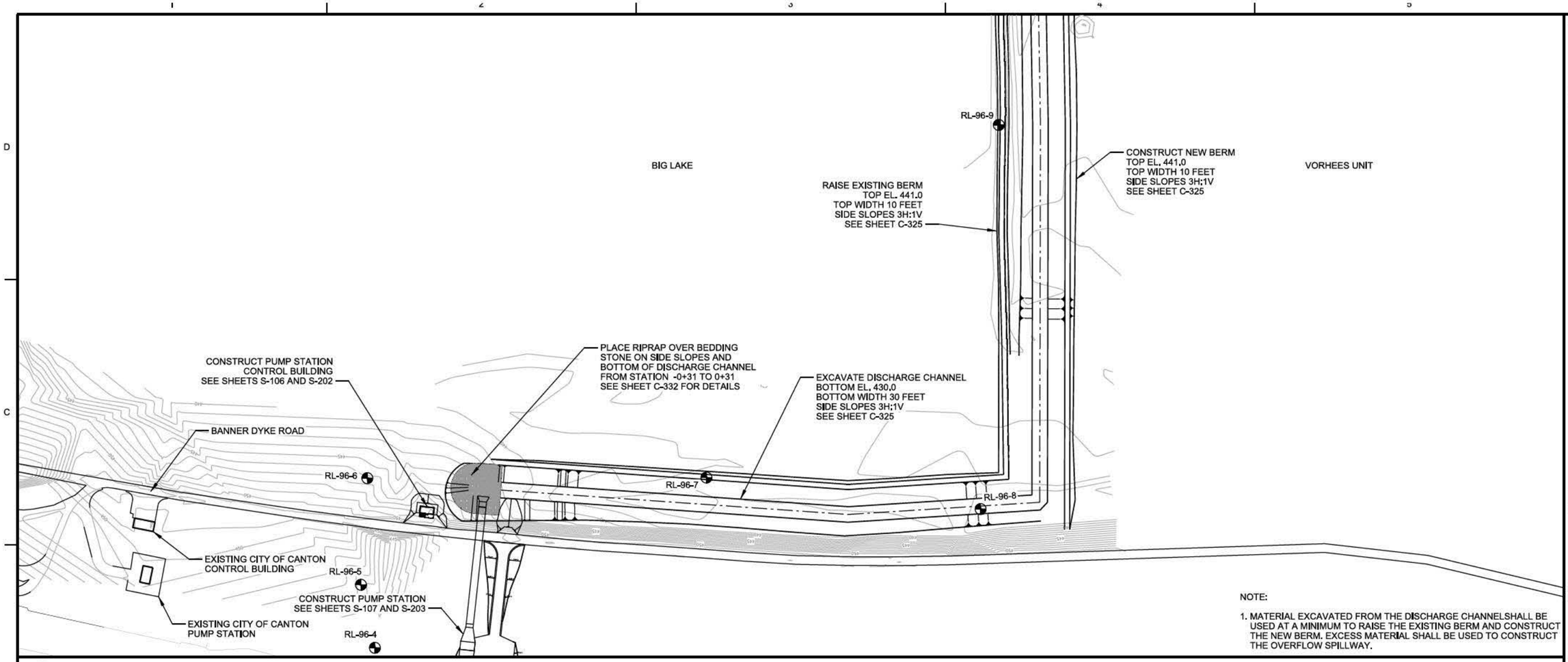
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
SITE PLAN

Sheet ID
C-121

AS-BUILT
A-27

c:\pw_working\mvr\b5eddlh\d0153728\EP102C-121.dgn
8/28/2018 3:11:23 PM
B5EDDLLH



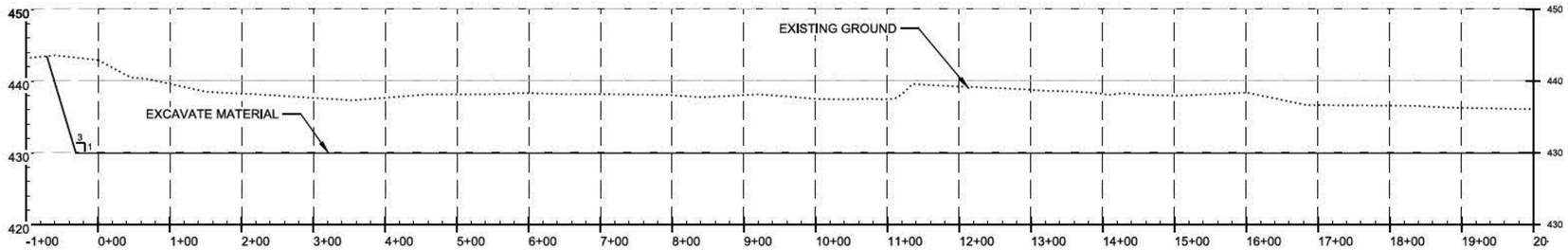
NOTE:

1. MATERIAL EXCAVATED FROM THE DISCHARGE CHANNELSHALL BE USED AT A MINIMUM TO RAISE THE EXISTING BERM AND CONSTRUCT THE NEW BERM. EXCESS MATERIAL SHALL BE USED TO CONSTRUCT THE OVERFLOW SPILLWAY.

DISCHARGE CHANNEL PLAN

0 100' 200'

SCALE:1"=100'



DISCHARGE CHANNEL PROFILE STA. 0+00 TO 20+00

NO SCALE

US Army Corps of Engineers®

APPR. | DATE | DESCRIPTION | MARK

USACE 7 AS OF 29 SEPTEMBER 2017

DATE: 2011/06/30
SOLICITATION NO.: W912EK-11-B-0029
CONTRACT NO.: W912EK-15-C-2090
PROJECT CODE: EP102

DESIGNED BY: RCF
DWN BY: LLH
SUBMITTED BY: HLA
CKD BY: JVV
PLOT SCALE: AS SHOWN
PLOT DATE:
FILE NAME: EP102C-222.dgn
SIZED AND D

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

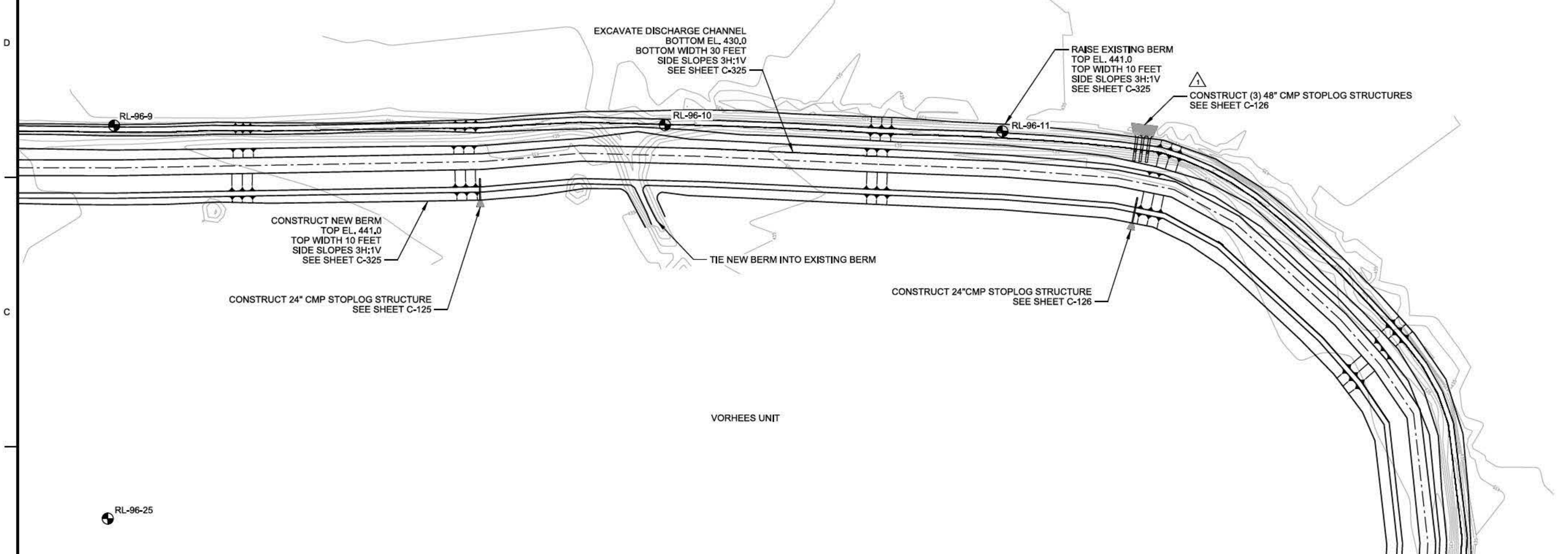
DISCHARGE CHANNEL
PLAN AND PROFILE
STA. 0+00 TO 20+00

Sheet ID
C-122

AS-BUILT
A-28

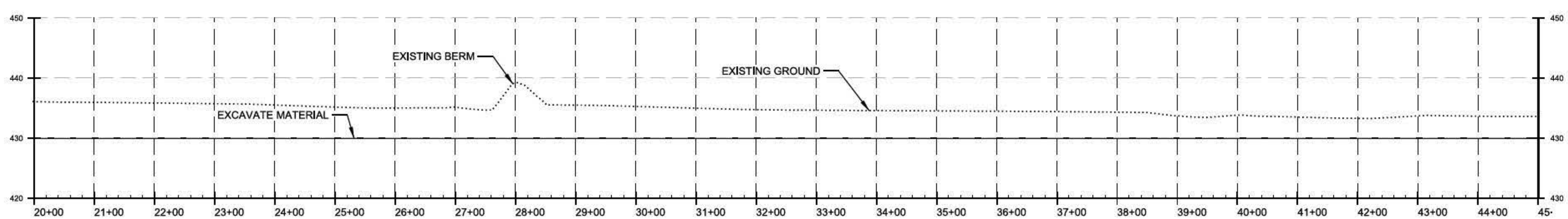
NOTE:

1. MATERIAL EXCAVATED FROM THE DISCHARGE CHANNELSHALL BE USED AT A MINIMUM TO RAISE THE EXISTING BERM AND CONSTRUCT THE NEW BERM. EXCESS MATERIAL SHALL BE USED TO CONSTRUCT THE OVERFLOW SPILLWAY.



DISCHARGE CHANNEL PLAN

0 100' 200'
SCALE:1"-100'



DISCHARGE CHANNEL PROFILE STA. 20+00 TO 45+00

NO SCALE

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA017 - CONVERT GATE STRUCTURE TO STOPLOG STRUCTURE	18 JUL 14	RCF
	AS-BUILT AS OF 29 SEPTEMBER 2017		

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-123.dgn	

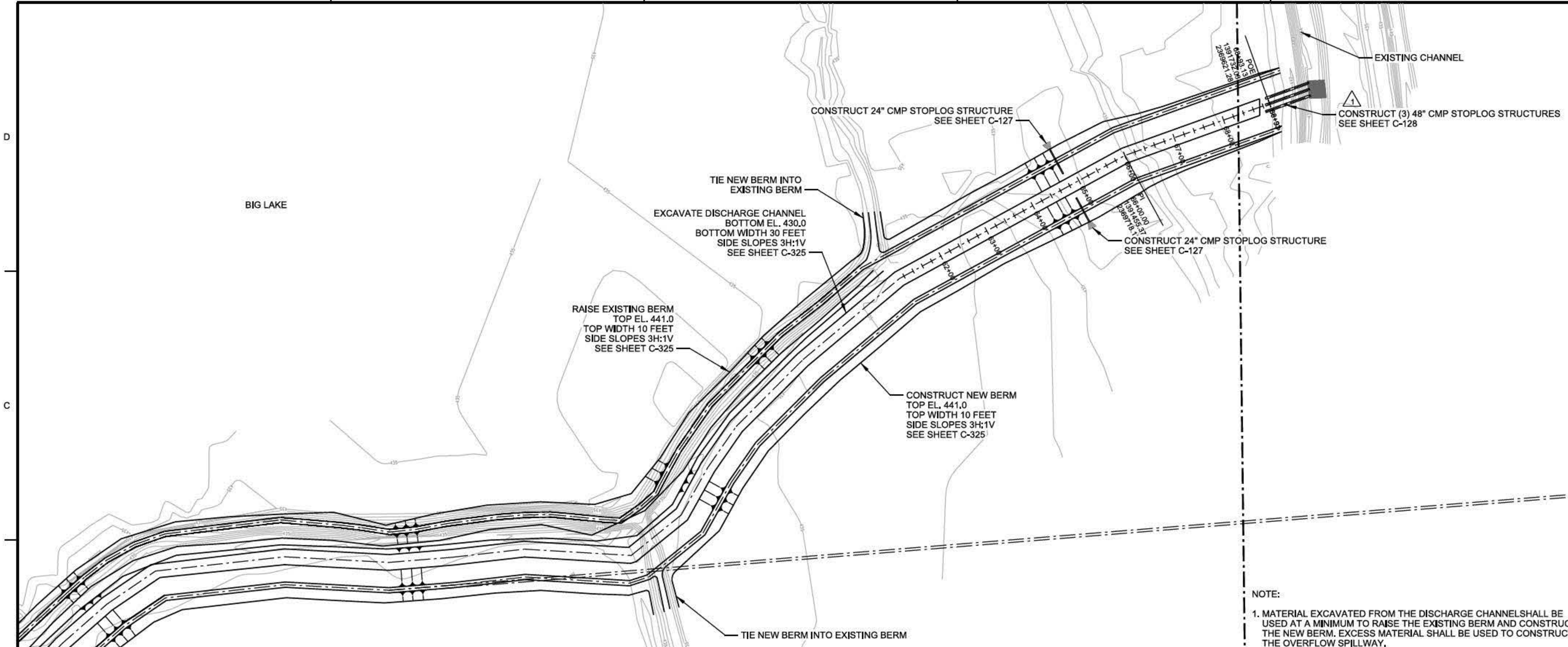
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DISCHARGE CHANNEL
PLAN AND PROFILE
STA. 20+00 TO 45+00

Sheet ID
C-123

AS-BUILT



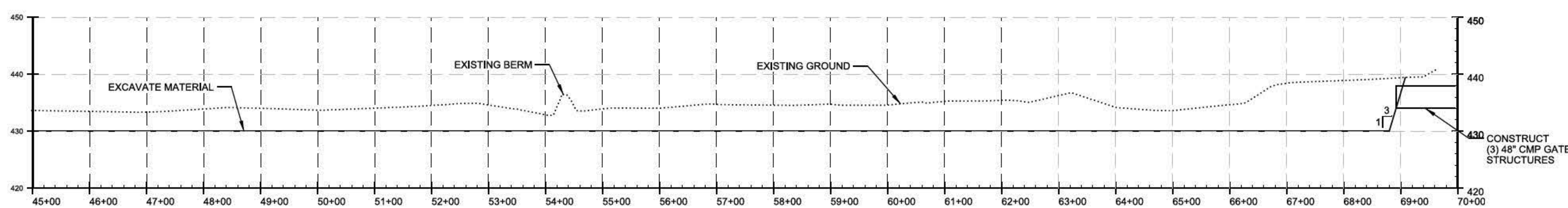
NOTE:

1. MATERIAL EXCAVATED FROM THE DISCHARGE CHANNELSHALL BE USED AT A MINIMUM TO RAISE THE EXISTING BERM AND CONSTRUCT THE NEW BERM. EXCESS MATERIAL SHALL BE USED TO CONSTRUCT THE OVERFLOW SPILLWAY.

DISCHARGE CHANNEL PLAN

0 100' 200'

SCALE:1"=100'



DISCHARGE CHANNEL PROFILE STA. 45+00 TO 69+64

NO SCALE

US Army Corps of Engineers

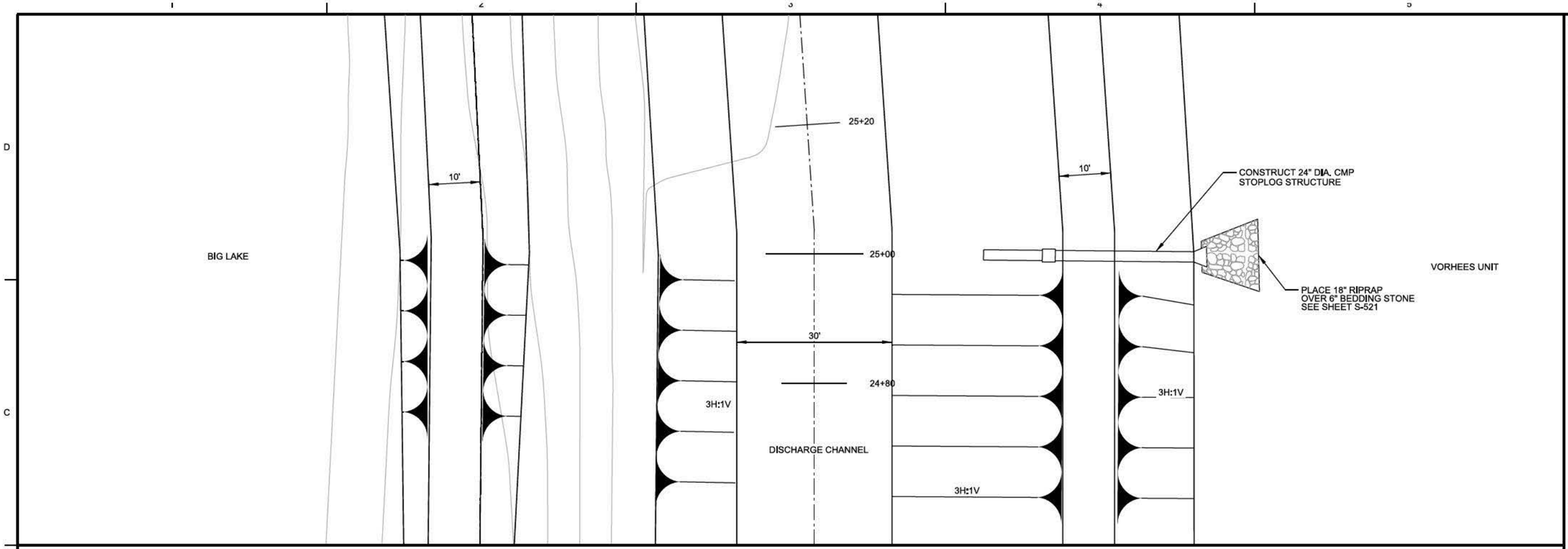
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DISCHARGE CHANNEL
PLAN AND PROFILE
STA. 45+00 TO 69+64

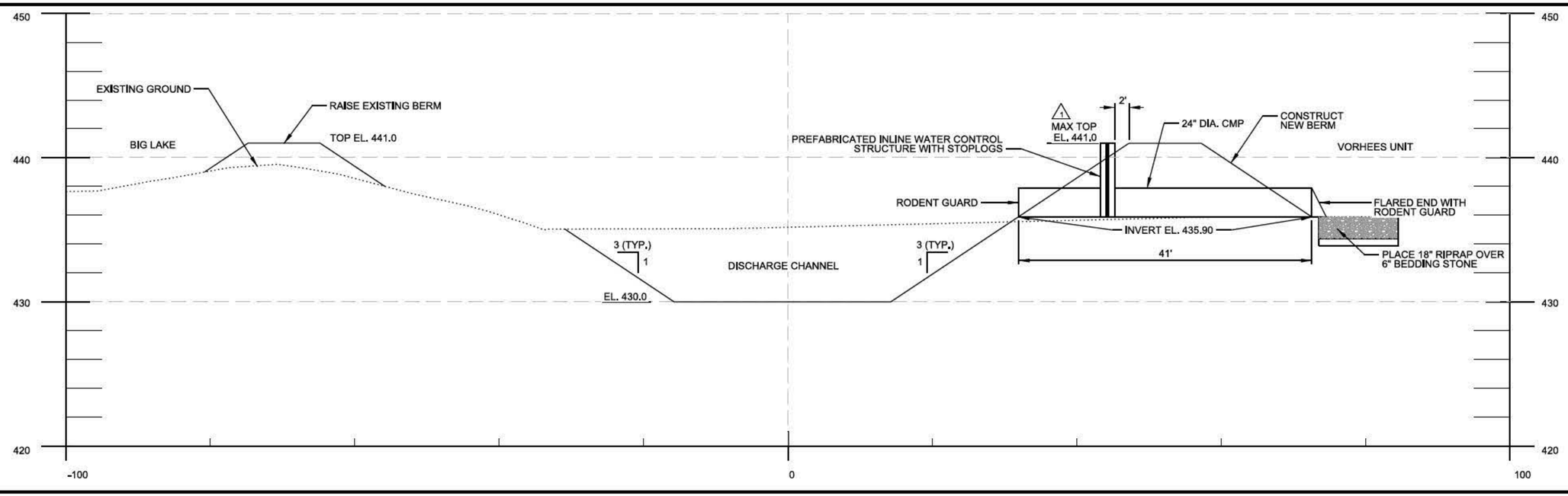
Sheet ID
C-124

AS-BUILT
A-30



N WATER CONTROL STRUCTURE PLAN STA. 25+00

SCALE: 1"=10'



WATER CONTROL STRUCTURE SECTION STA. 25+00

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA#17 - LOWER TOP EL OF PREFABRICATED INLINE WATER CONTROL STRUCTURE AS-BUILT AS OF 29 SEPTEMBER 2017	18 JUL 14	ROF

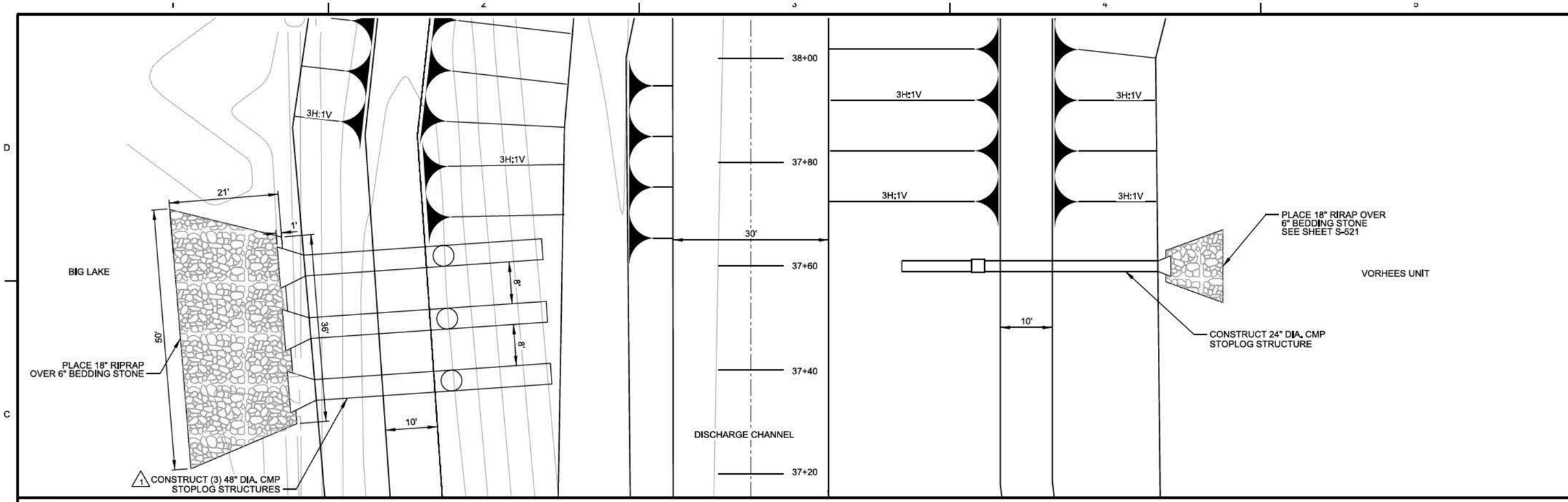
DESIGNED BY: ROF
DWN BY: LLH
CHD. BY: PJV
SUBMITTED BY: HLA
PLOT SCALE: AS SHOWN
PLOT DATE:
SIZE: ANSI D
DATE: 2011/05/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-14-C-0090
PROJECT CODES: EP192
FILE NAME: EP192C-125.dgn

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
WATER CONTROL STRUCURE
PLAN AND SECTION
STA. 25+00

Sheet ID
C-125

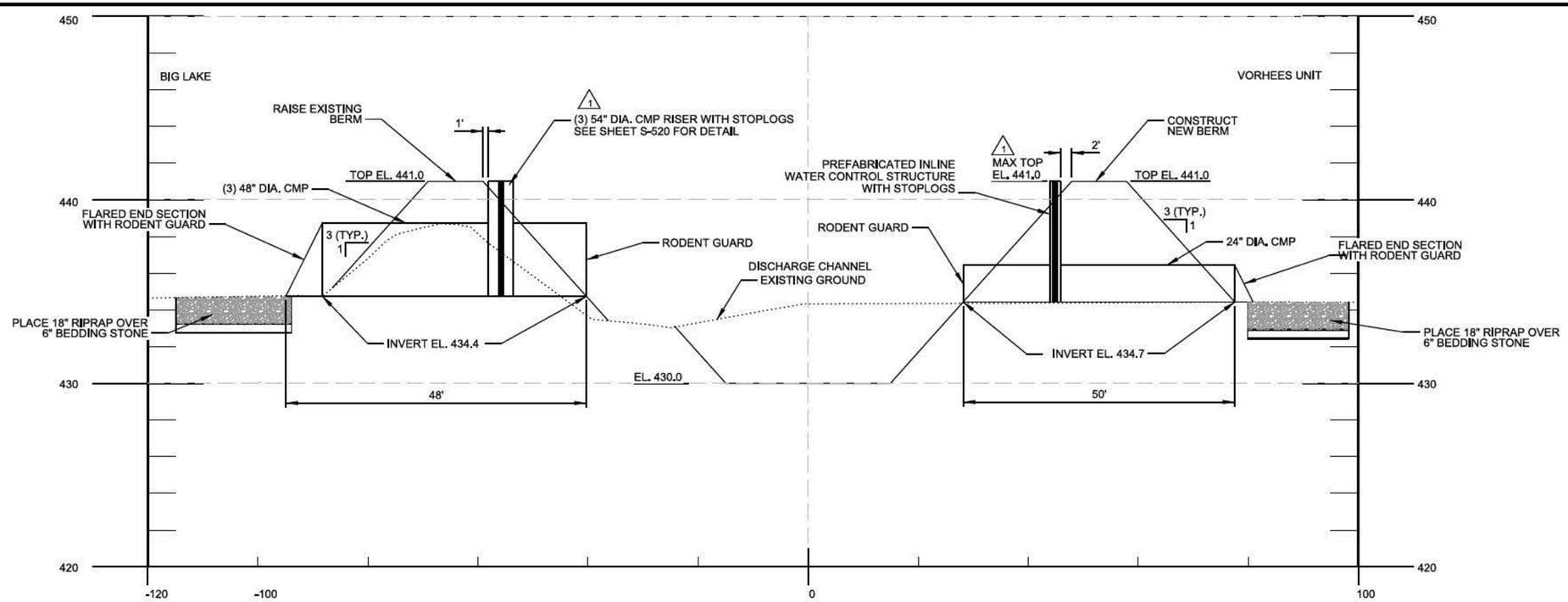
AS-BUILT
A-31



WATER CONTROL STRUCTURES PLAN STA. 37+60

0 10' 20'

SCALE:1"=10'



WATER CONTROL STRUCTURES SECTION STA. 37+60

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD PART - CONVERT TO STOPLOG STRUCTURE & LOWER TOP EL OF PREFAB INLINE WATER CONTROL STRUCTURE AS-BUILT AS OF 29 SEPTEMBER 2017	01 JUL 14	ROF

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

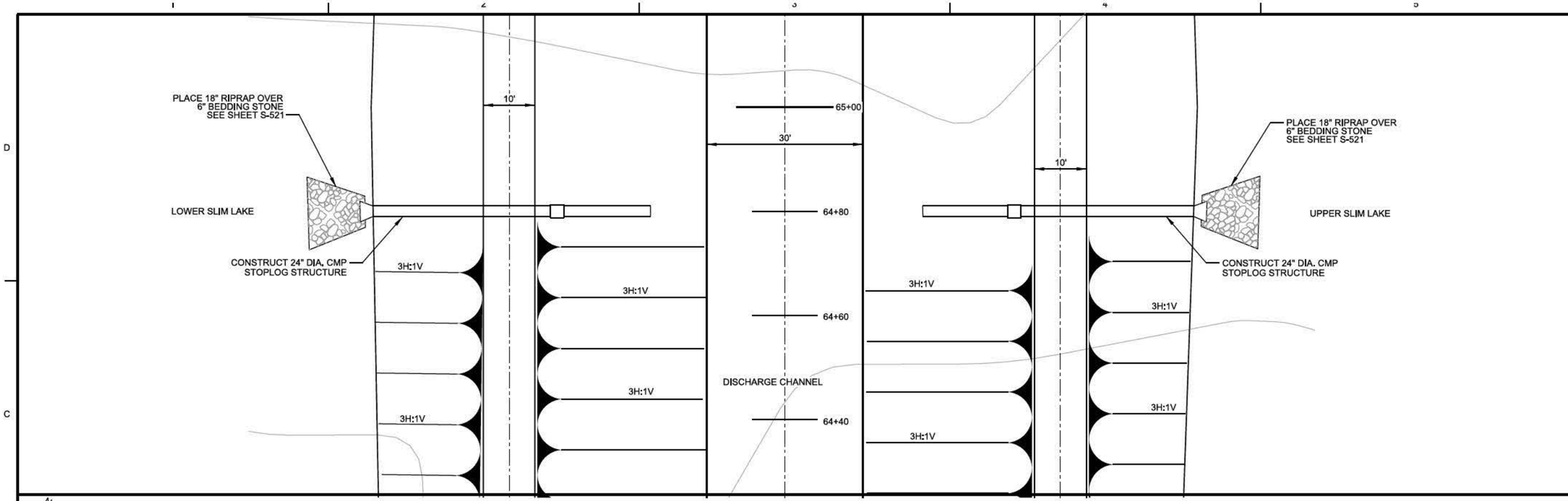
DESIGNED BY: RDF
DWN BY: LLH
SUBMITTED BY: HLA
CKD BY: PJV
PLOT SCALE: AS SHOWN
PLOT DATE:
FILE NAME: EP102C-26.dgn
DATE: 2011/05/30
SOLICITATION NO.: W912EK-11-S-0029
CONTRACT NO.: W912EK-14-C-0090
PROJECT CODE: EP102
SEE ID AND ID

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

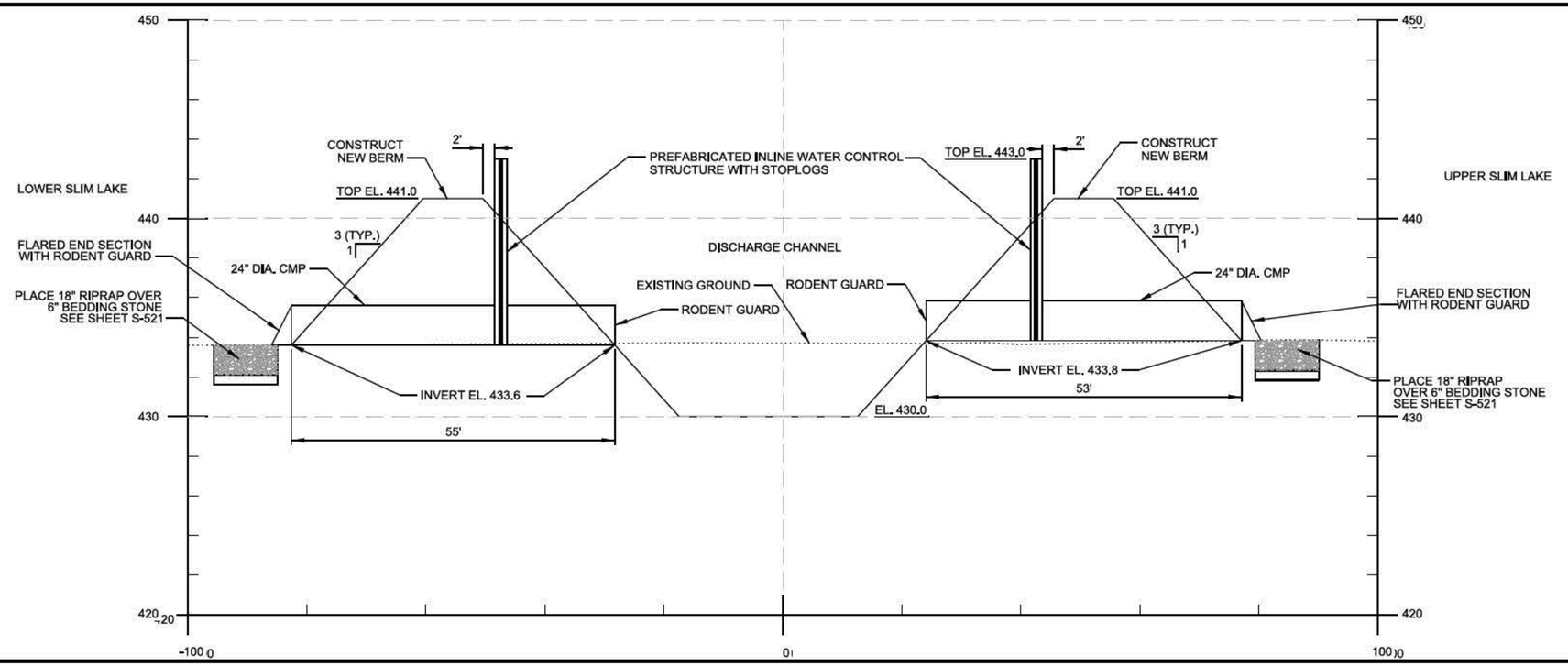
WATER CONTROL STRUCURES
PLAN AND SECTION
STA. 37+60

Sheet ID
C-126

AS-BUILT
A-32



WATER CONTROL STRUCTURES PLAN STA. 64+80



WATER CONTROL STRUCTURES SECTION STA. 64+80

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	USACE 7 AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

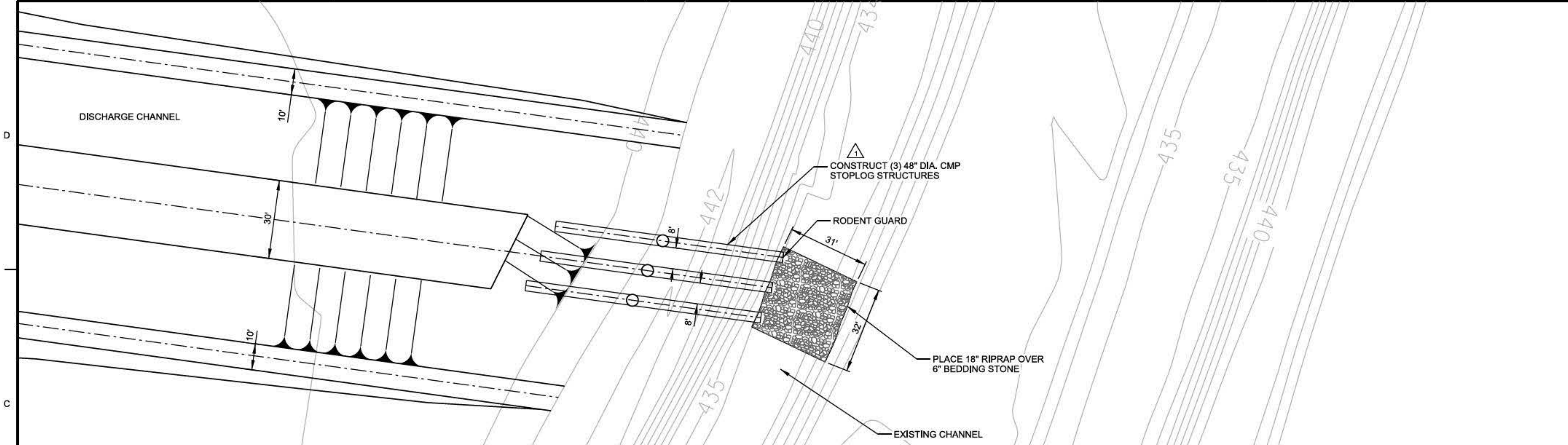
DESIGNED BY: RCF	DWN BY: LLH	SUBMITTED BY: HLA	DATE: 20111005/30
CHD. BY: PJV			SOLICITATION NO.: W912EK-11-R-0029
			CONTRACT NO.: W912EK-14-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE: ANSI D		PROJECT CODES EP192
FILE NAME: EP192C-127.dgn			

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

WATER CONTROL
STRUCURES
PLAN AND SECTION
STA. 64+80

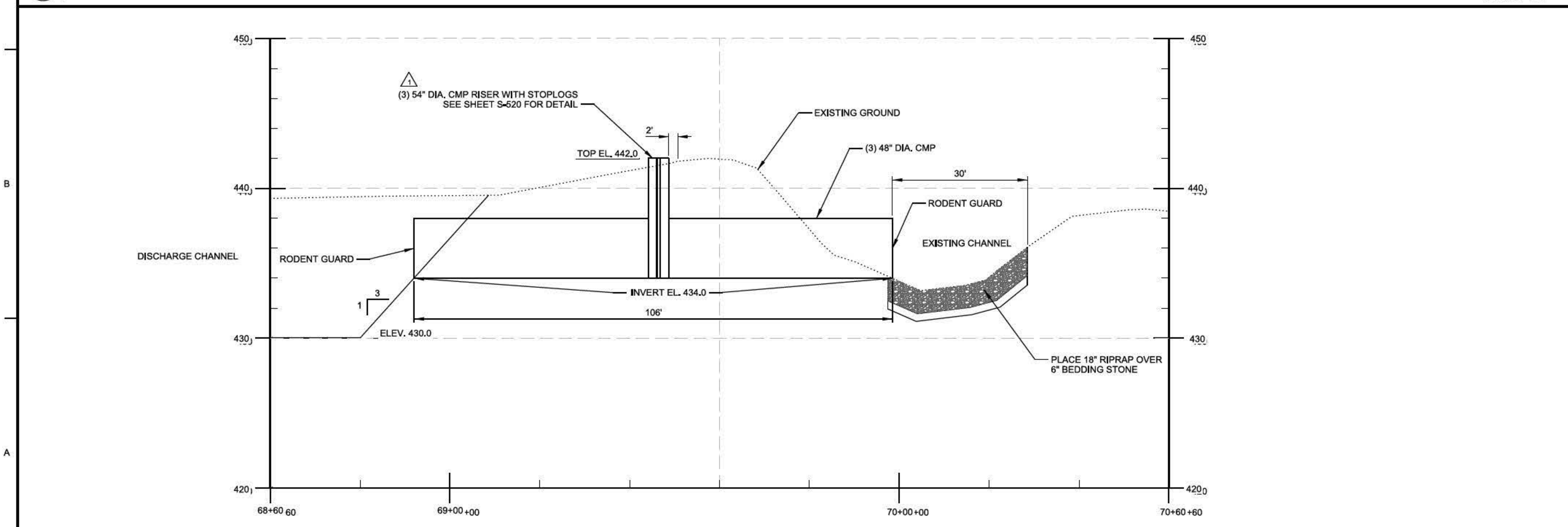
Sheet ID
C-127

AS-BUILT
A-33



WATER CONTROL STRUCTURES PLAN STA. 69+00

0 20' 40'
SCALE:1"-20'



WATER CONTROL STRUCTURES SECTION STA. 69+00

NO SCALE

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA017 - CONVERT GATE STRUCTURE TO STOPLOG STRUCTURE	18 JUL 14	RCF
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

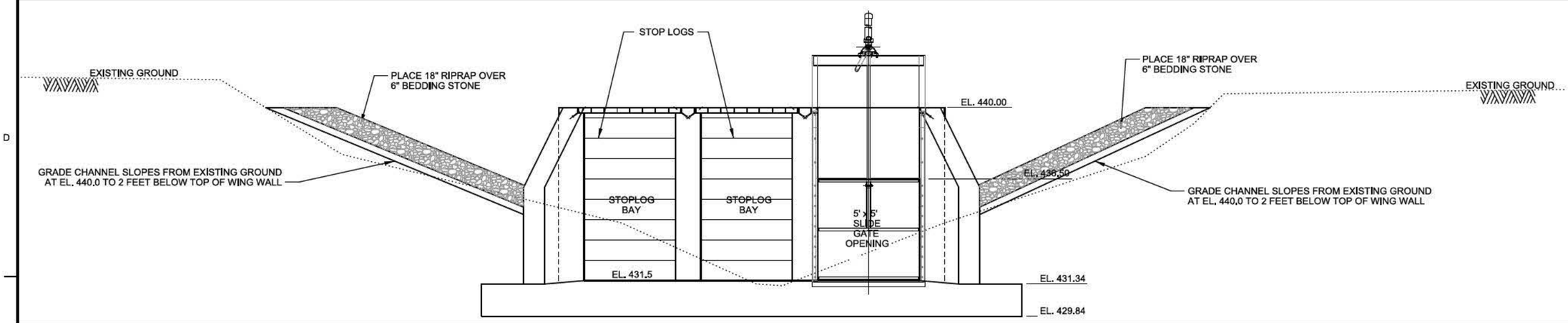
DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-128.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

WATER CONTROL STRUCURES PLAN AND SECTION STA. 69+00

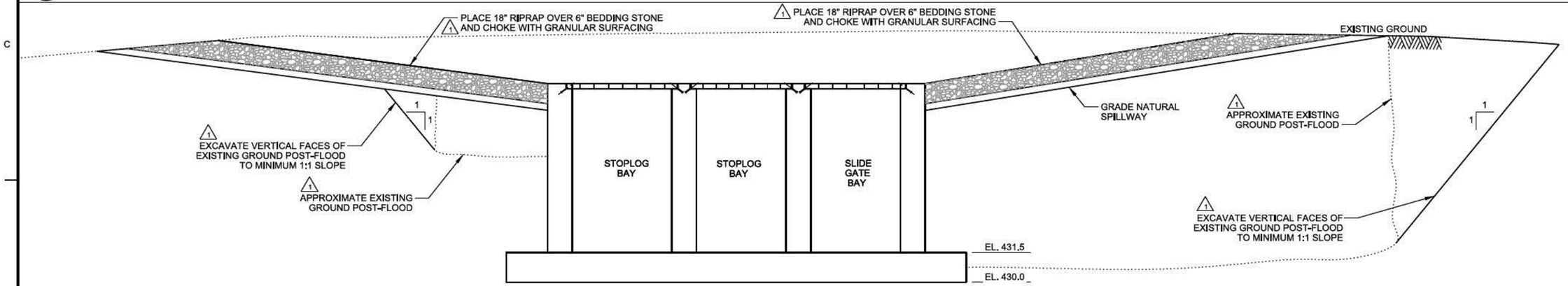
Sheet ID
C-128

AS-BUILT
A-34



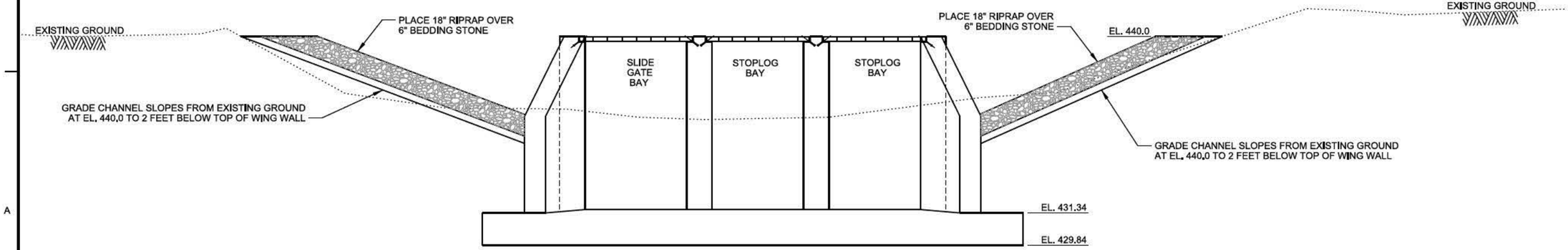
A C-112 **OUTLET STRUCTURE RIVERSIDE PROFILE**

NO SCALE



B C-112 **OUTLET STRUCTURE CENTERLINE PROFILE**

NO SCALE



C C-112 **OUTLET STRUCTURE LANDSIDE PROFILE**

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD BAR12 REPAIR OUTLET STRUCTURE AS-BUILT AS OF 29 SEPTEMBER 2017	20170913	RCF

DESIGNED BY: RCF
DWN BY: LLH
CKD BY: PJV
SUBMITTED BY: RLA
PLOT SCALE: AS SHOWN
PLOT DATE:
SIZE: ANSI D
DATE: 20111006
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-14-C-0090
PROJECT CODE: EP102
FILE NAME: EP102C-201.dgn

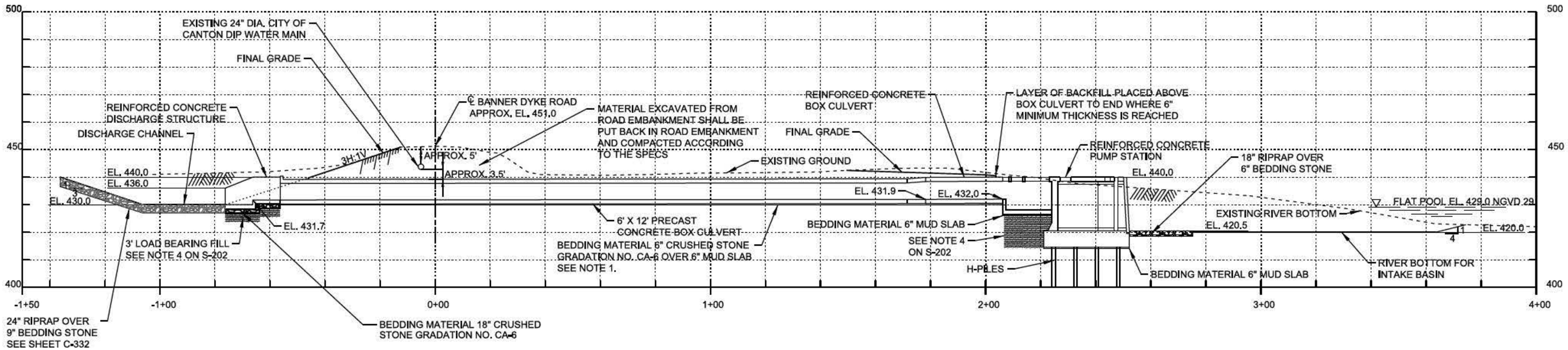
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

OUTLET STRUCTURE
SITE PROFILE

Sheet ID
C-201

AS-BUILT
A-35



NOTES:

1. THE 6" CRUSHED STONE OVER 6" MUD SLAB BEDDING LAYER EXTENDS FROM STA. -0+56.25 TO STA. 2+06.19 AND SHALL BE CAST DIRECTLY ON NATIVE MATERIAL.
2. PRECAST CONCRETE BOX CULVERT SHALL BE WATER TIGHT.
3. SEE SHEET C-320 FOR TYPICAL SECTIONS.
4. SEE SHEET C-420 FOR INTAKE BASIN PLAN.
5. SEE SHEETS S-101 AND S-301 FOR PUMP STATION CONSTRUCTION.
6. SEE SHEETS S-106 AND S-202 FOR BOX CULVERT AND OUTLET STRUCTURE CONSTRUCTION.
7. SEE SHEET S-506 FOR PILE TIP ELEVATIONS.

PUMP STATION PROFILE

STATIONING ALONG CENTERLINE PUMP STATION

0 20' 40'
SCALE: 1"=20'

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

DESIGNED BY: RCF | DWN BY: LLH | CKD BY: PJV | SUBMITTED BY: HLA | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102C-220.dgn | DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-11-C-0099 | PROJECT CODE: EP102

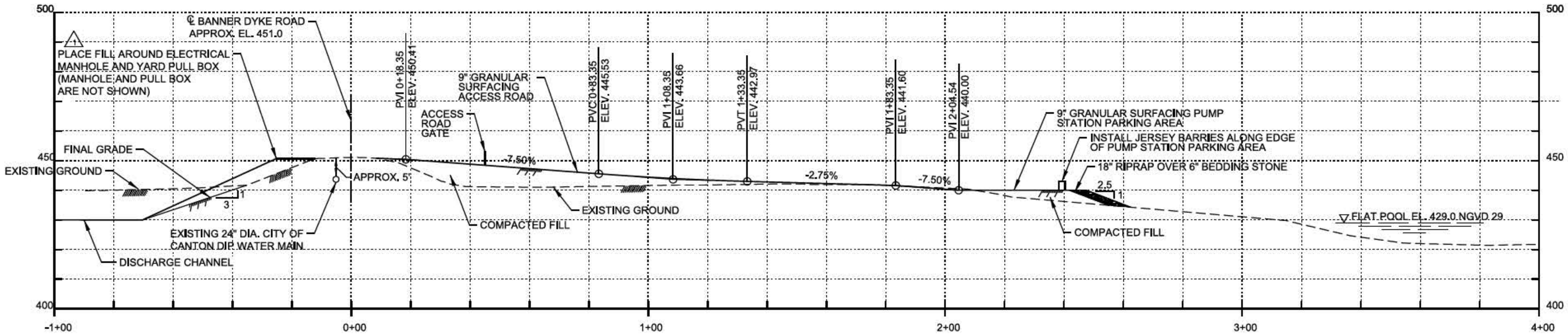
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
PROFILE

Sheet ID
C-220

AS-BUILT
A-36

c:\pw_working\mvrb5edd\llh\d0153728\EP102C-220.dgn
8/28/2018
3:12:42 PM
B9EDDLLH



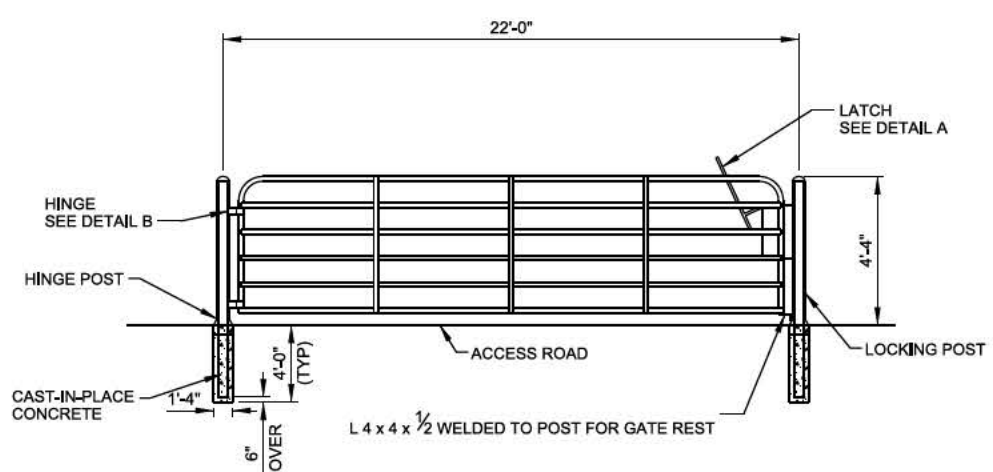
NOTES:

1. ACCESS ROAD GATE SHALL BE CONSTRUCTED AT STA. 0+45.00.
2. SEE SHEET C-320 FOR TYPICAL SECTIONS.

PUMP STATION ACCESS ROAD PROFILE

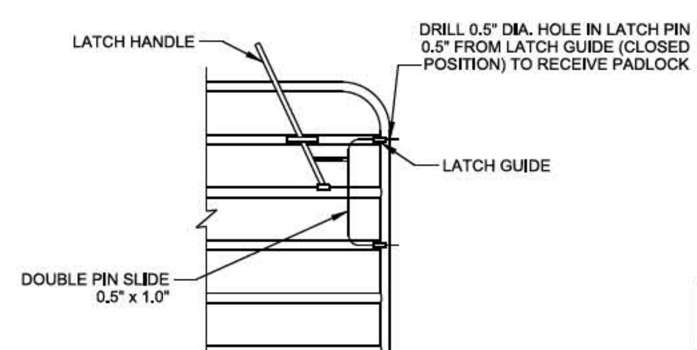
STATIONING ALONG CENTERLINE ACCESS ROAD

SCALE: 1"=20'



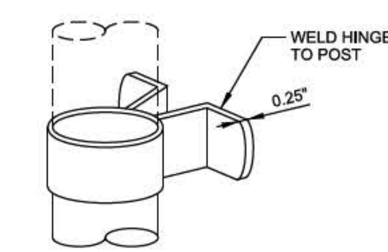
STANDARD DETAIL FOR ACCESS ROAD GATE

NOT TO SCALE



LATCH DETAIL A

NOT TO SCALE



HINGE DETAIL B

NOT TO SCALE

GATE NOTES:

1. GATE IS CONSTRUCTED OF 1-1/2" SCHEDULE 40 PIPE.
2. ALL METAL PARTS SHALL BE HOT DIPPED GALVANIZED.
3. ALL POSTS SHALL BE 5" INNER DIAMETER STEEL PIPE. CAP ALL POSTS BY WELDING A 5.5" DIAMETER BY 0.1875" THICK STEEL PLATE TO TOP OF POST.

PUMP STATION ACCESS ROAD GATE DETAILS

NO SCALE

US Army Corps of Engineers

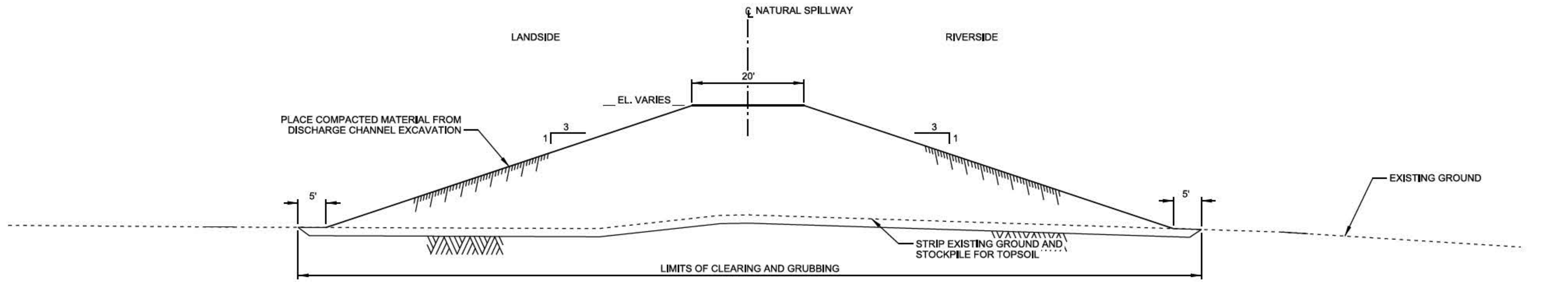
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
ACCESS ROAD PROFILE
AND GATE DETAILS

Sheet ID
C-221

AS-BUILT
A-37

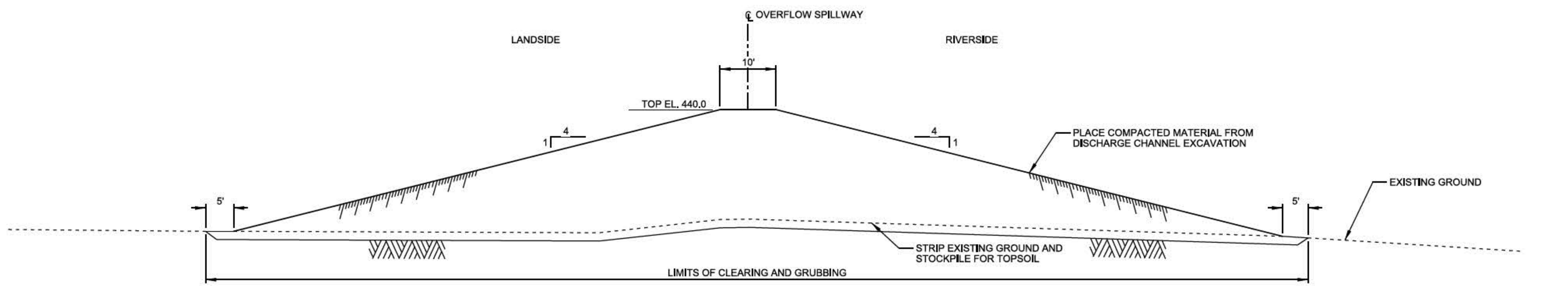
c:\pw_working\mvr\b5edd\lhd0153728\EP102C-221.dgn
8/28/2018 3:13:45 PM
B5EDDLLH



C — NATURAL SPILLWAY REPAIR AREA TYPICAL SECTION - STA. 125+00 TO STA. 128+00, STA. 191+39 TO STA. 193+11, AND STA. 204+71 TO STA. 206+75

C-113, C-114, C-115

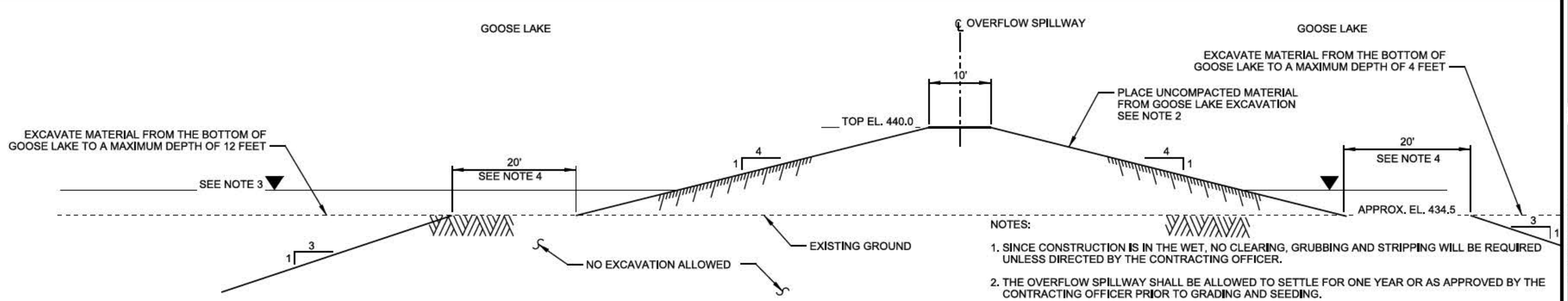
NO SCALE



B — OVERFLOW SPILLWAY TYPICAL SECTION - STA. 0+00 TO APPROX. STA. 22+00 AND APPROX. STA. 40+00 TO STA. 65+24 (CONSTRUCT USING DRY MATERIAL)

C-102, C-103, C-104

NO SCALE



NOTES:

1. SINCE CONSTRUCTION IS IN THE WET, NO CLEARING, GRUBBING AND STRIPPING WILL BE REQUIRED UNLESS DIRECTED BY THE CONTRACTING OFFICER.
2. THE OVERFLOW SPILLWAY SHALL BE ALLOWED TO SETTLE FOR ONE YEAR OR AS APPROVED BY THE CONTRACTING OFFICER PRIOR TO GRADING AND SEEDING.
3. WATER ELEVATIONS WITHIN GOOSE LAKE FLUCTUATE WITH THE ILLINOIS RIVER. REFER TO SPEC SECTION 00 73 05 "ADDITIONAL PHYSICAL DATA CLAUSE INFORMATION" FOR HYDRAULIC DATA.
4. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE OF 20 FEET FROM THE CONSTRUCTED TOE OF THE OVERFLOW SPILLWAY TO THE LIMIT OF LAKE EXCAVATION.

A — OVERFLOW SPILLWAY TYPICAL SECTION - APPROX. STA. 22+00 TO APPROX. STA. 40+00 (CONSTRUCT USING WET MATERIAL)

C-102, C-103

NO SCALE

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-301.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

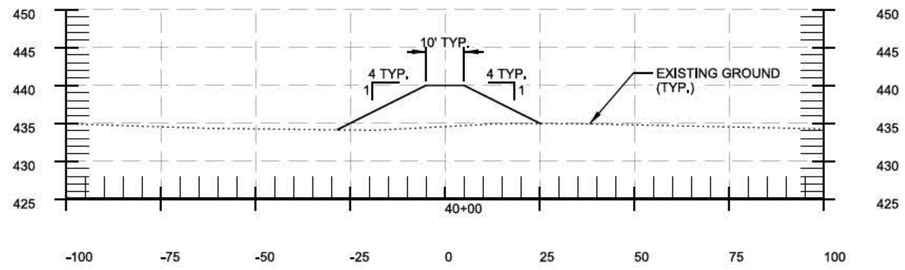
OVERFLOW AND NATURAL SPILLWAY TYPICAL SECTIONS

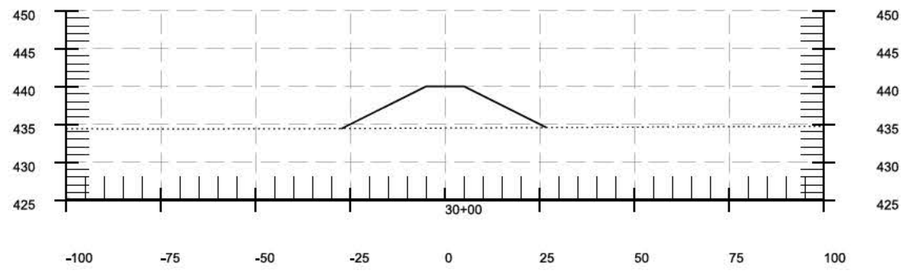
Sheet ID
C-301

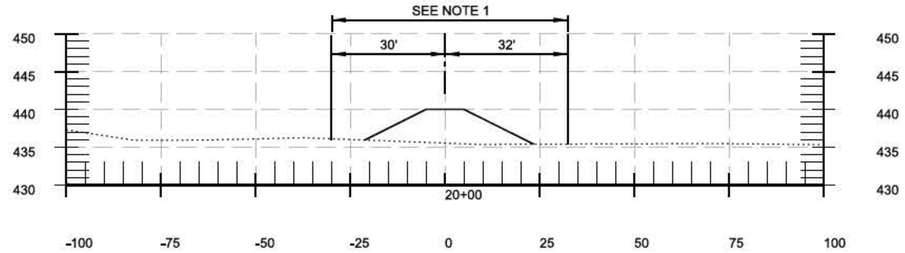
AS-BUILT

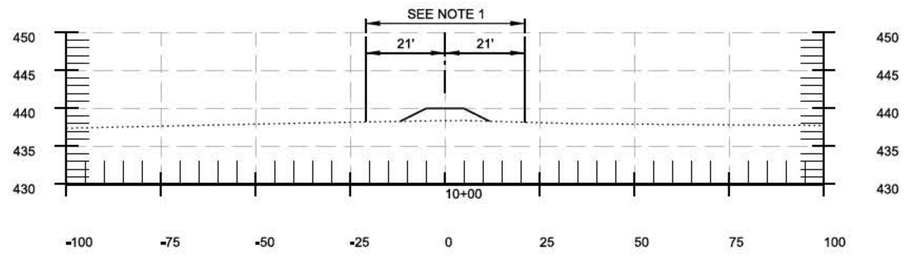
NOTES:

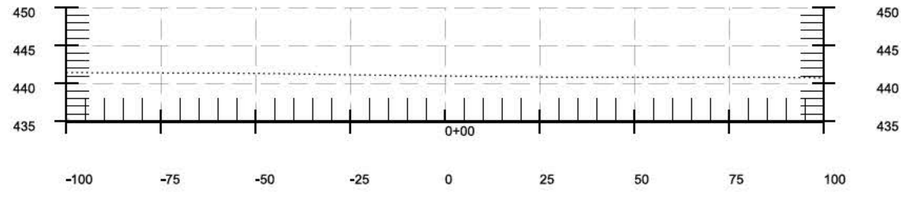
1. LIMITS OF CLEARING, GRUBBING, AND STRIPPING.
2. SINCE CONSTRUCTION IS IN THE WET FROM APPROX. STA. 22+00 TO APPROX. STA. 40+00, NO CLEARING, GRUBBING, AND STRIPPING WILL BE REQUIRED UNLESS DIRECTED BY THE CONTRACTING OFFICER.

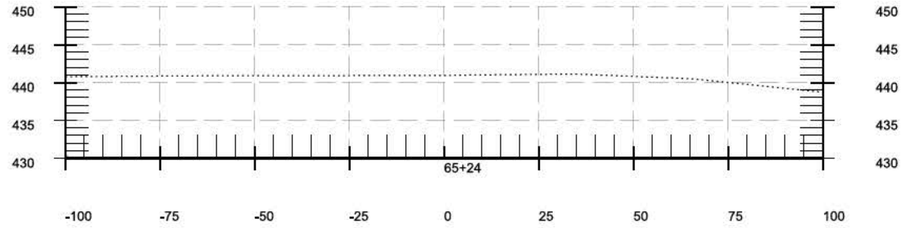


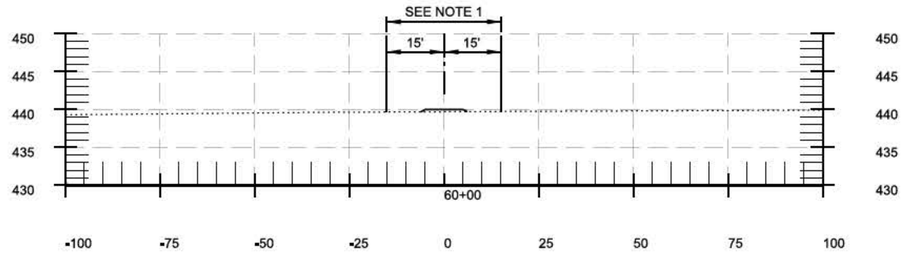


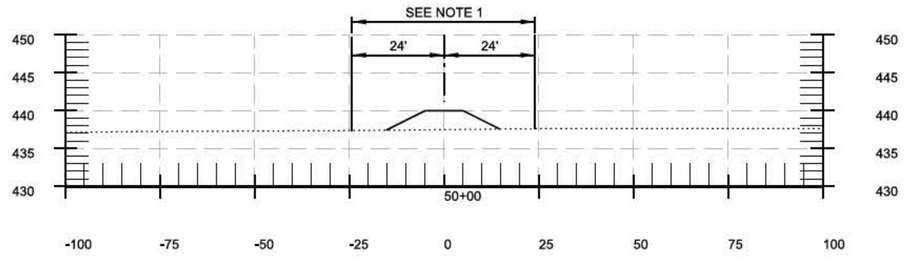












US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	SCALE: 7 AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RDF
DWN BY: LLH
CKD BY: PJV
SUBMITTED BY: HLA
DATE: 20110509
SOLICITATION NO.: W912EK-11-S-2029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODE: 57102
PLOT SCALE: AS SHOWN
PLOT DATE: AS SHOWN
FILE NAME: RP100-0402.dgn

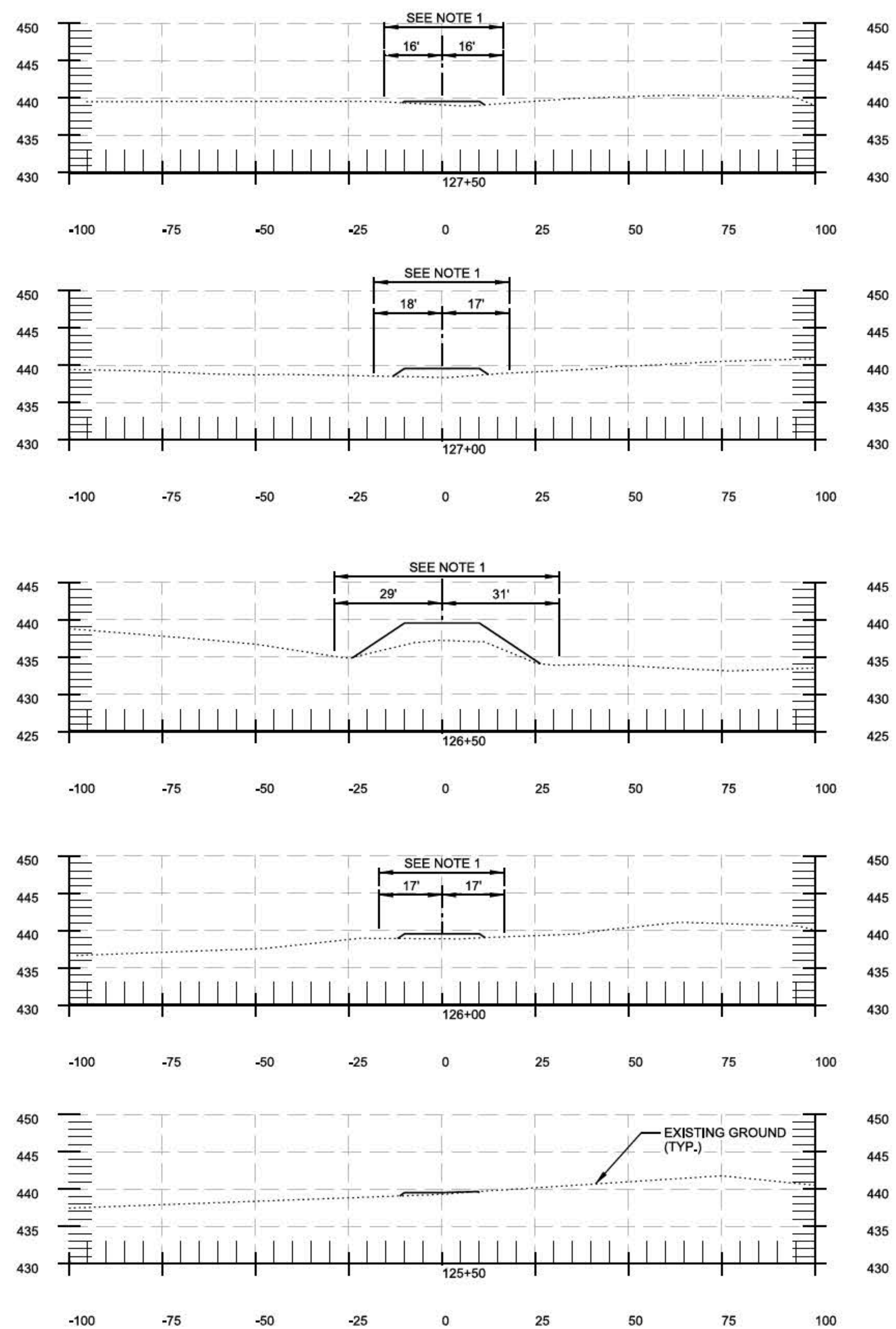
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
OVERFLOW
SPILLWAY SECTIONS

Sheet ID
C-302

OVERFLOW SPILLWAY SECTIONS

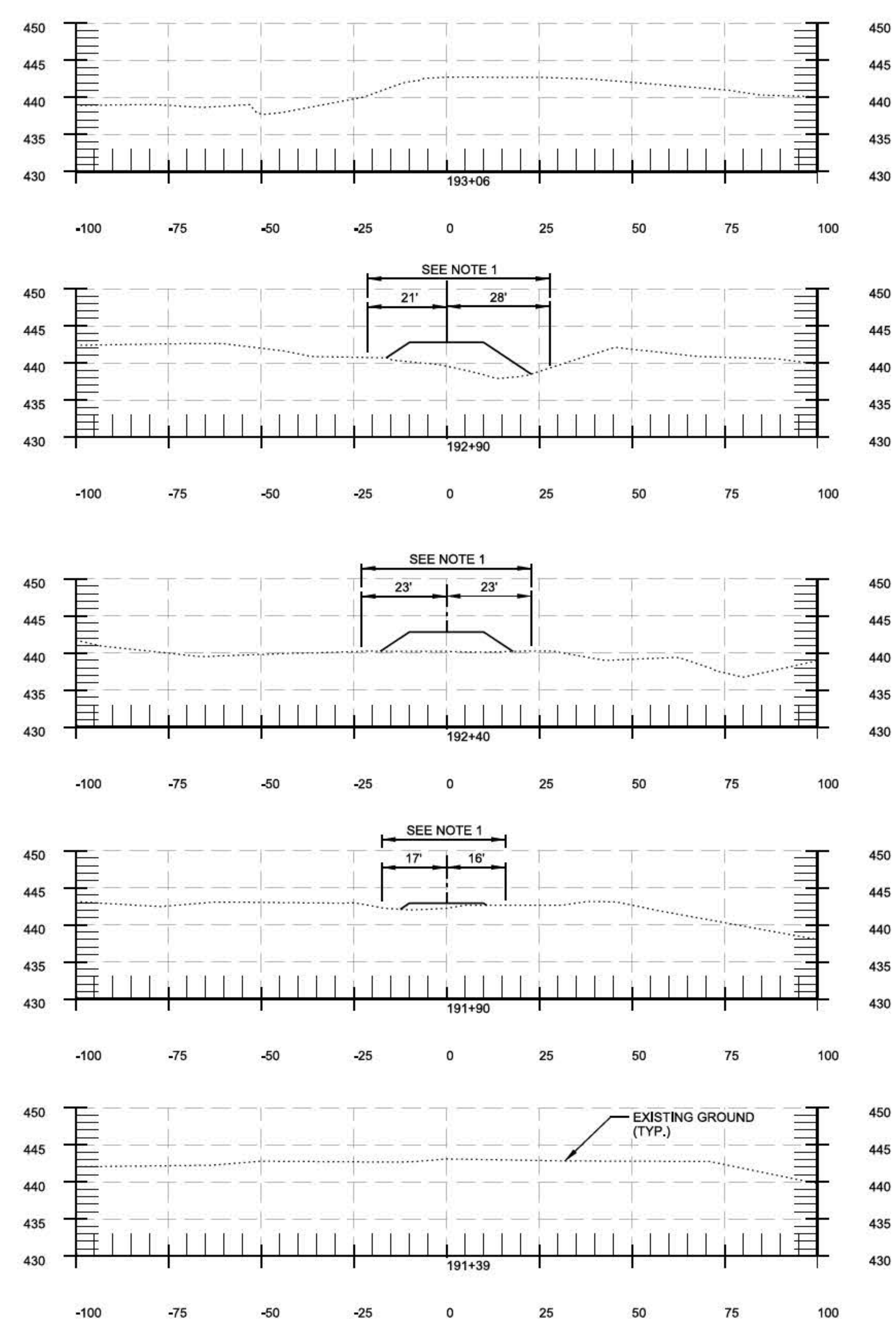
NO SCALE

AS-BUILT
A-39



NATURAL SPILLWAY REPAIR AREA 1 SECTIONS

NO SCALE



NOTE:

1. LIMITS OF CLEARING, GRUBBING, AND STRIPPING.

NATURAL SPILLWAY REPAIR AREA 2 SECTIONS

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-303.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
NATURAL
SPILLWAY SECTIONS

Sheet ID
C-303

AS-BUILT
A-40

NOTE:

1. LIMITS OF CLEARING, GRUBBING, AND STRIPPING.

NATURAL SPILLWAY REPAIR AREA 3 SECTIONS

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	SCALE: 7 AS OF 29 SEPTEMBER 2017		

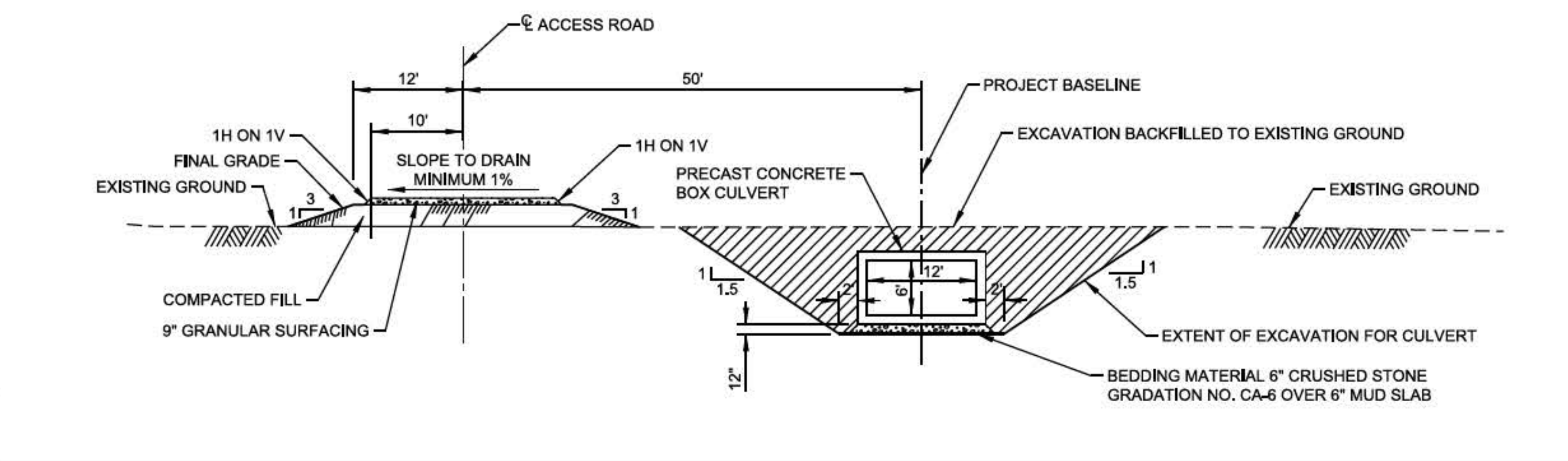
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RDF
DWN BY: LUH
SUBMITTED BY: HLA
CKD BY: PJV
PLOT SCALE: AS SHOWN
PLOT DATE: SIZE: ANSI D
DATE: 20110630
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0080
PROJECT CODE: EP102
FILE NAME: EP102C-004.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
NATURAL
SPILLWAY SECTIONS

Sheet ID
C-304

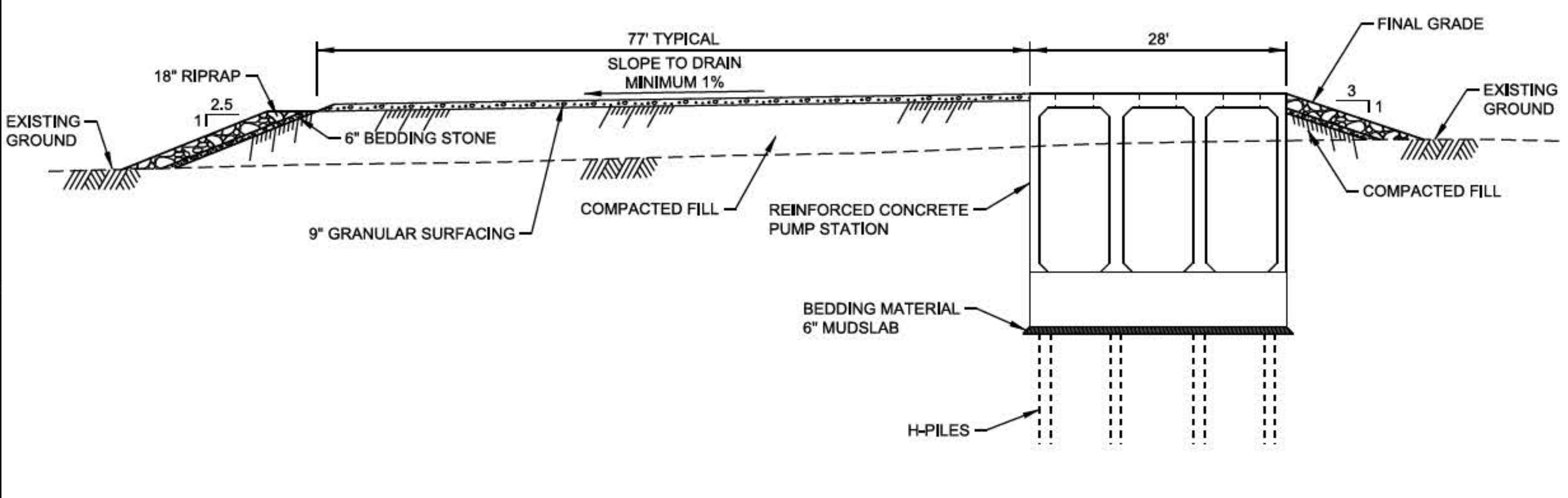
AS-BUILT
A-41



BOX CULVERT AND PUMP STATION ACCESS ROAD

STA. 0+68.00 TO STA. 2+06.19

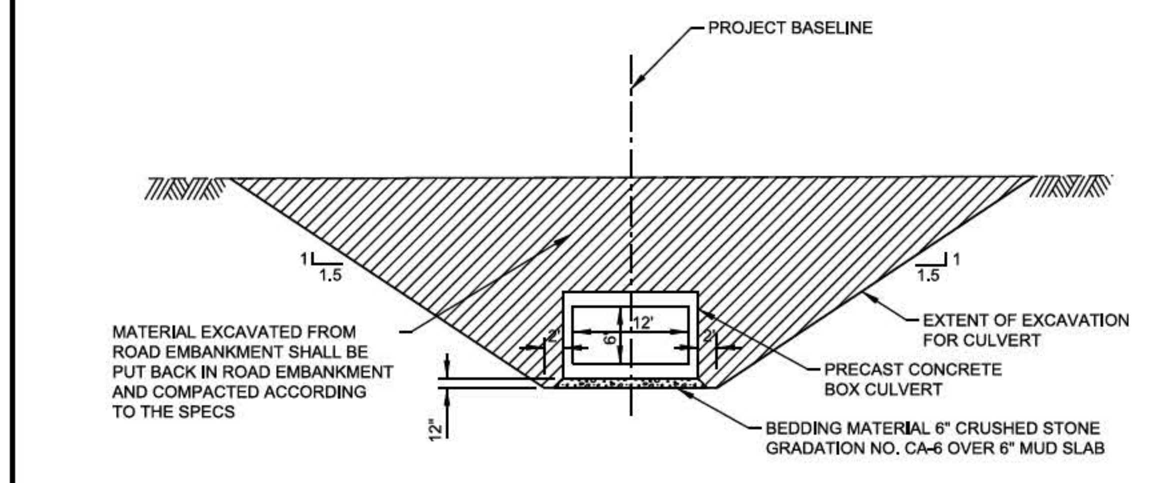
NO SCALE



PUMP STATION AND PUMP STATION PARKING AREA

STA. 2+18.48 TO STA. 2+52.19

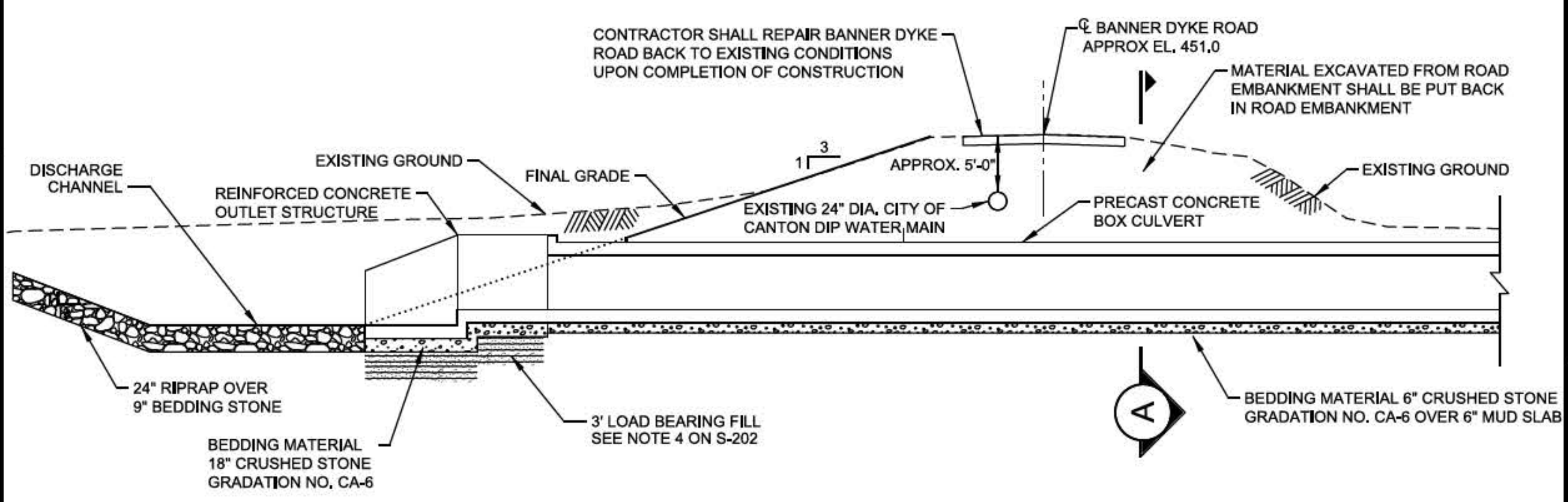
NO SCALE



(A) BOX CULVERT THROUGH LEVEE EMBANKMENT

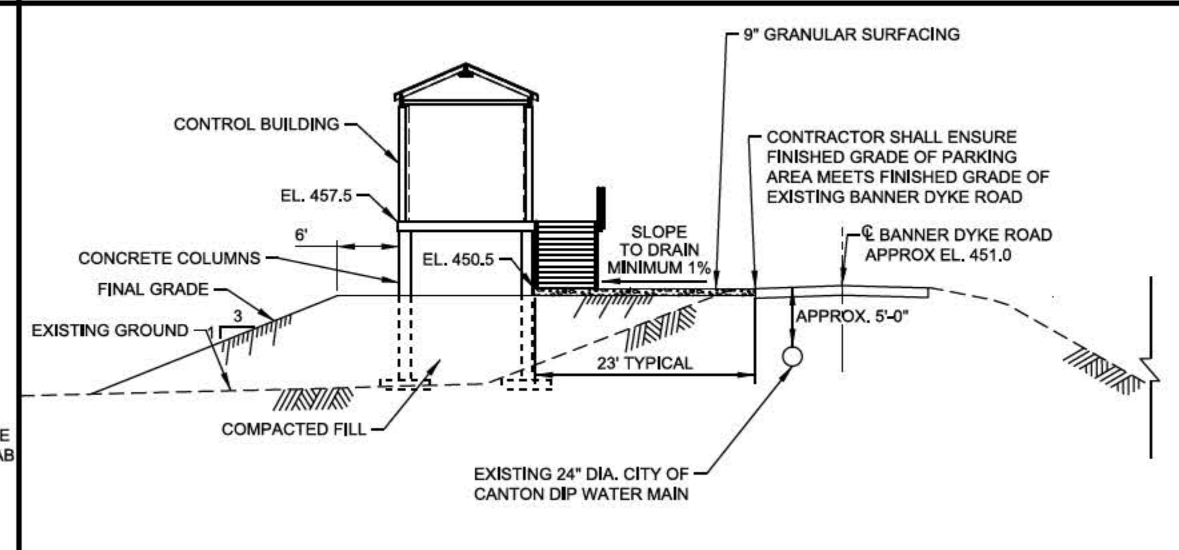
STA. -0+56.25 TO STA. 0+68.00

NO SCALE



BOX CULVERT PROFILE THROUGH BANNER DYKE ROAD EMBANKMENT

NO SCALE



CONTROL BUILDING PARKING AREA

NO SCALE

US Army Corps of Engineers®

AS-BUILT AS OF 29 SEPTEMBER 2017

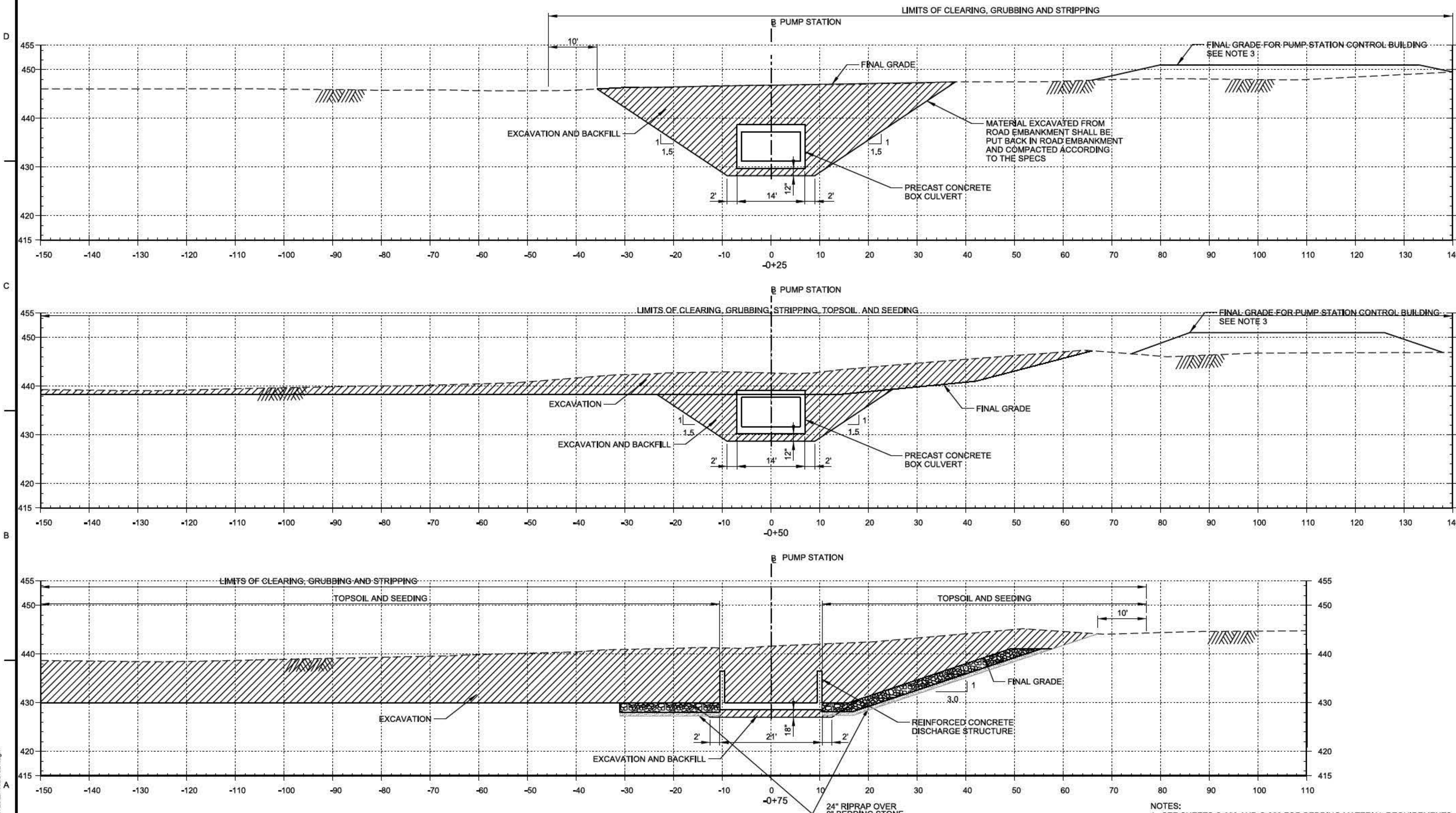
U.S. ARMY CORPS OF ENGINEERS ROCK ISLAND DISTRICT ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY LAGRANGE POOL FULTON COUNTY, IL RICE LAKE HABITAT REHAB & ENHANCEMENT STAGE I

PUMP STATION TYPICAL SECTIONS

Sheet ID C-320

AS-BUILT



NOTES:
1. SEE SHEETS C-220 AND C-320 FOR BEDDING MATERIAL REQUIREMENTS
2. SEE SHEET C-320 FOR CONTROL BUILDING PARKING AREA REQUIREMENTS.
3. LIMITS OF CLEARING, GRUBBING, STRIPPING, TOPSOIL AND SEEDING FOR THE FINAL GRADE OF THE PUMP STATION CONTROL BUILDING SHALL EXTEND 10' BEYOND LIMITS OF GRADING.

PUMP STATION CROSS SECTIONS SHEET 1 OF 4

NO SCALE

US Army Corps of Engineers

AS-BUILT AS OF 29 SEPTEMBER 2017

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

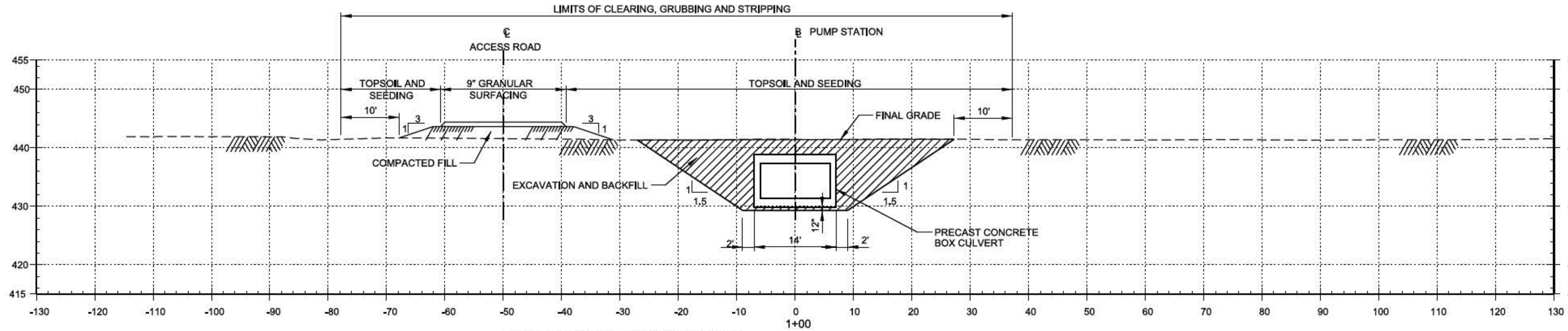
DESIGNED BY: RCF		DATE: 2011/06/30	
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029	
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0090	
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102	
SIZE: ANSI D	FILE NAME: EP102C-321.dgn		

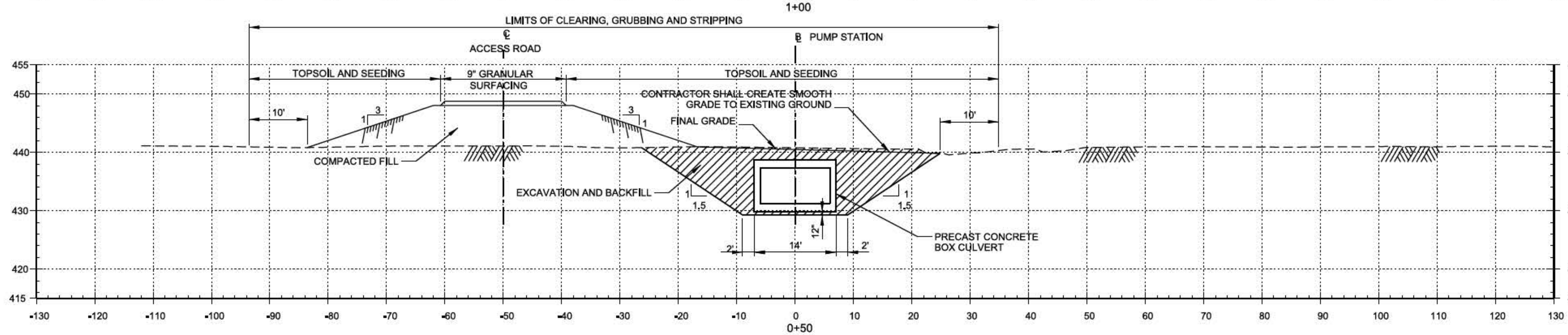
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
CROSS SECTIONS
SHEET 1 OF 4

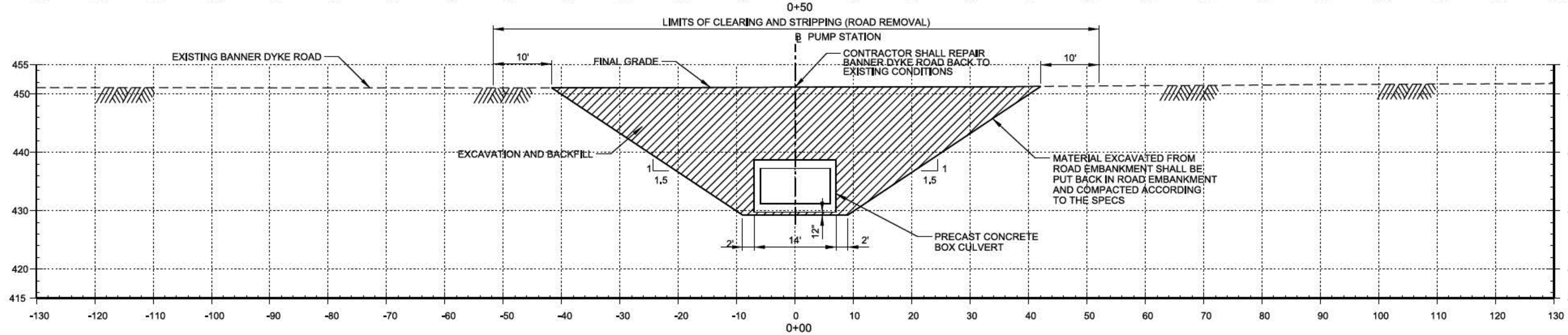
Sheet ID
C-321

AS-BUILT
A-43

c:\pw_working\mvr\b5eddlh\d0153728\EP102C-321.dgn
8/28/2018 3:14:21 PM
B5EDDLLH







NOTES:

1. SEE SHEETS C-220 AND C-320 FOR BEDDING MATERIAL REQUIREMENTS.
2. SEE SHEET C-320 FOR PUMP STATION ACCESS ROAD REQUIREMENTS.

PUMP STATION CROSS SECTIONS SHEET 2 OF 4

NO SCALE

US Army Corps of Engineers

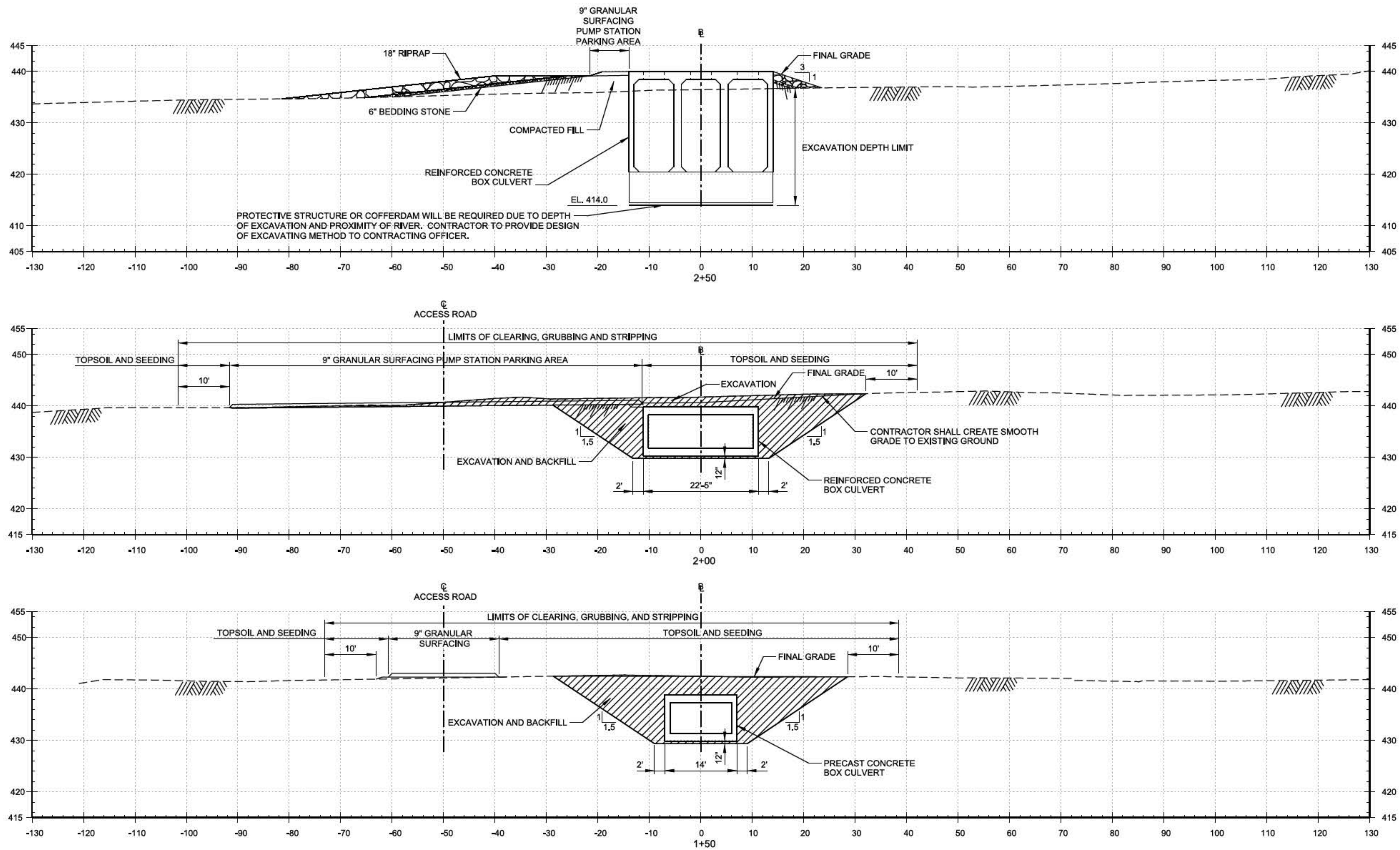
AS-BUILT AS OF 29 SEPTEMBER 2017

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
CROSS SECTIONS
SHEET 2 OF 4

Sheet ID
C-322

AS-BUILT
A-44



NOTES:

1. SEE SHEETS C-220 AND C-320 FOR BEDDING MATERIAL REQUIREMENTS.
2. SEE SHEET C-320 FOR PUMP STATION ACCESS ROAD AND PARKING AREA REQUIREMENTS.

PUMP STATION CROSS SECTIONS SHEET 3 OF 4

NO SCALE

US Army Corps of Engineers

AS-BUILT AS OF 29 SEPTEMBER 2017

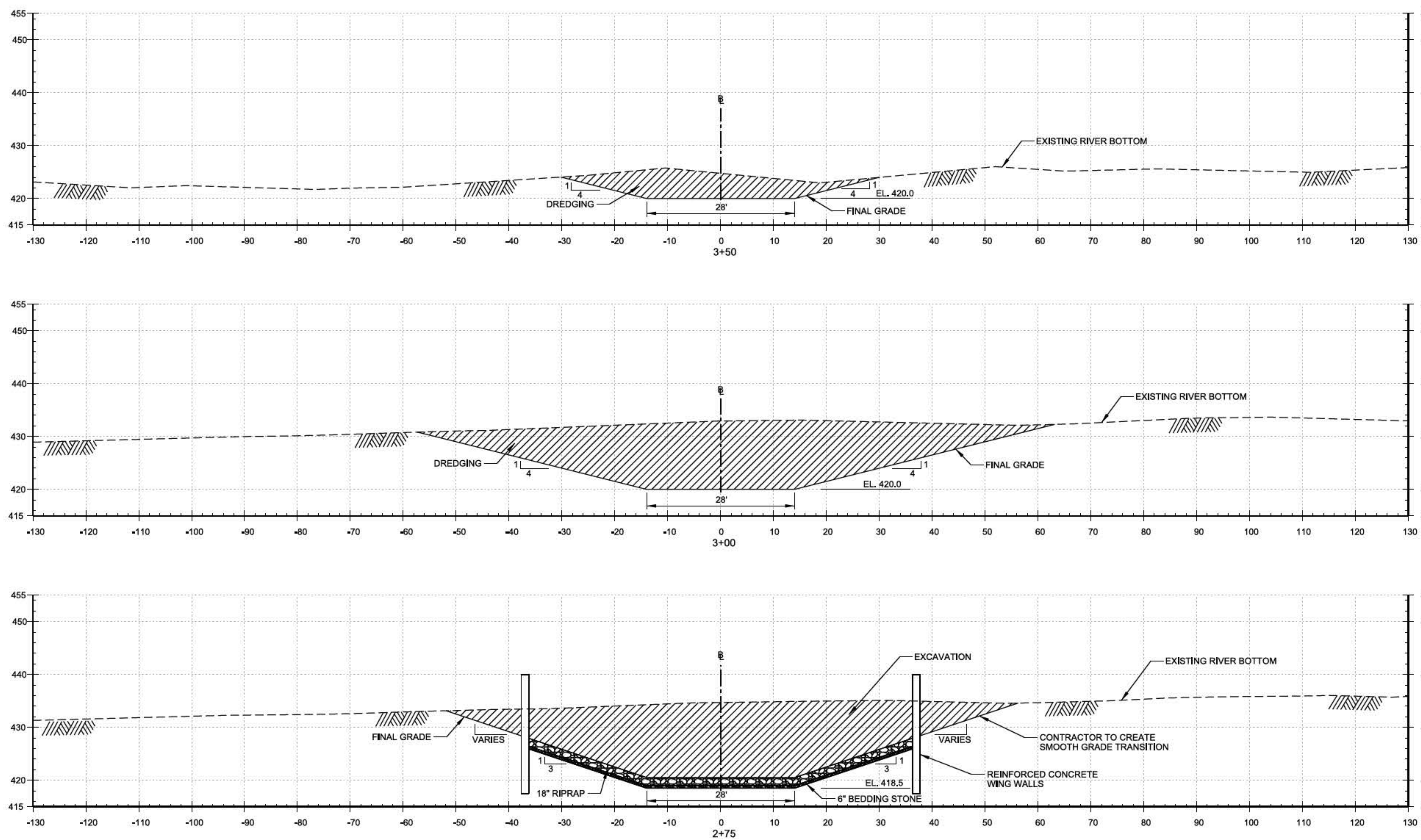
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
CROSS SECTIONS
SHEET 3 OF 4

Sheet ID
C-323

AS-BUILT
A-45

c:\pw_working\mvr\b5edolllh\d0153728\EP102C-323.dgn
8/28/2018 3:14:37 PM
B5EDOLLH



NOTES:

1. SEE SHEET C-420 FOR RIPRAP AND BEDDING MATERIAL REQUIREMENTS.
2. LOCAL FLAT POOL IS EL. 429. LOCAL NORMAL POOL IS EL. 434.5.

PUMP STATION CROSS SECTIONS SHEET 4 OF 4

NO SCALE

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF | DATE: 2011/06/30
DWN BY: LLH | CKD BY: PJV | SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA | CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN | PLOT DATE: | PROJECT CODE: EP102
SIZE: ANSI D | FILE NAME: EP102C-324.dgn

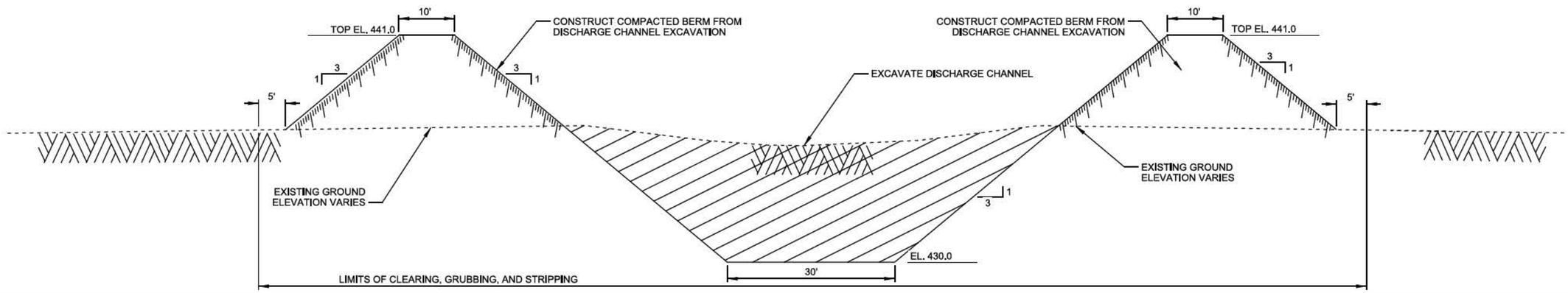
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
CROSS SECTIONS
SHEET 4 OF 4

Sheet ID
C-324

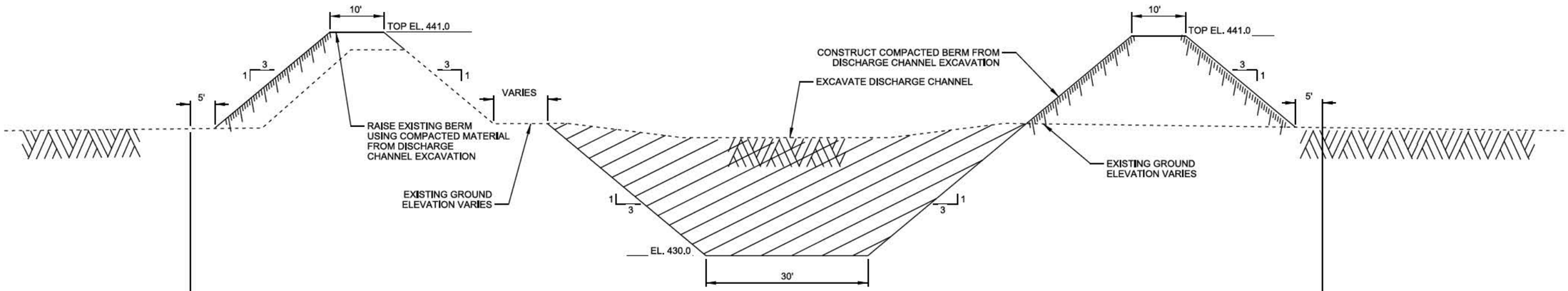
AS-BUILT
A-46

c:\pw_working\mvrb5edd\lhd0153728\EP102C-324.dgn
8/28/2018 3:14:41 PM
B5EDDLLH



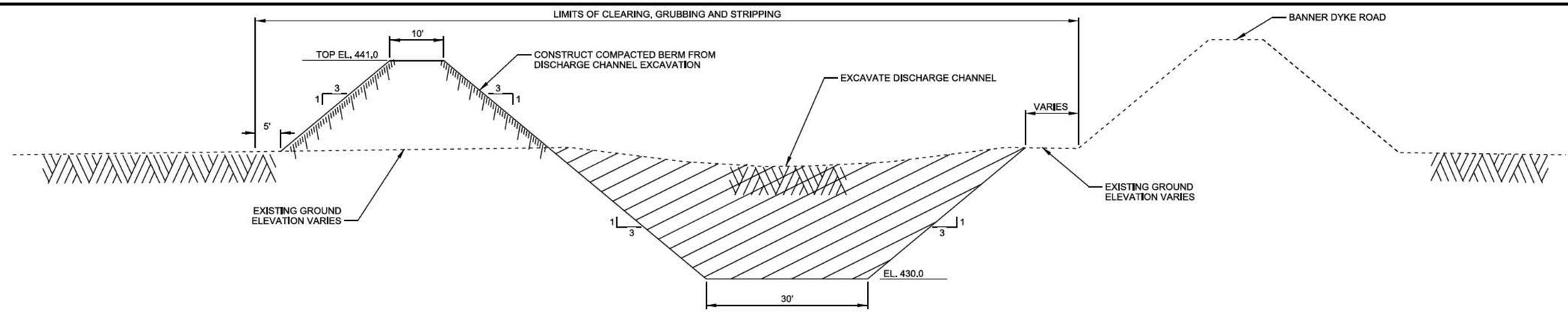
DISCHARGE CHANNEL TYPICAL SECTION - STA. 10+75 TO STA. 13+60 AND STA. 61+10 TO END

NO SCALE



DISCHARGE CHANNEL TYPICAL SECTION - STA. 13+60 TO STA. 61+10

NO SCALE



DISCHARGE CHANNEL TYPICAL SECTION - STA. 0+00 TO STA.10+75

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	SCALE: 1" AS OF 29 SEPTEMBER 2017		

DESIGNED BY: RCF		DATE: 20111006/30	
DWN BY: LLH	CHD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029	
SUBMITTED BY:		CONTRACT NO.: W912EK-14-C-0080	
FILE SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102	
SIZE: ANSI D	FILE NAME: EP102C-325.dgn		

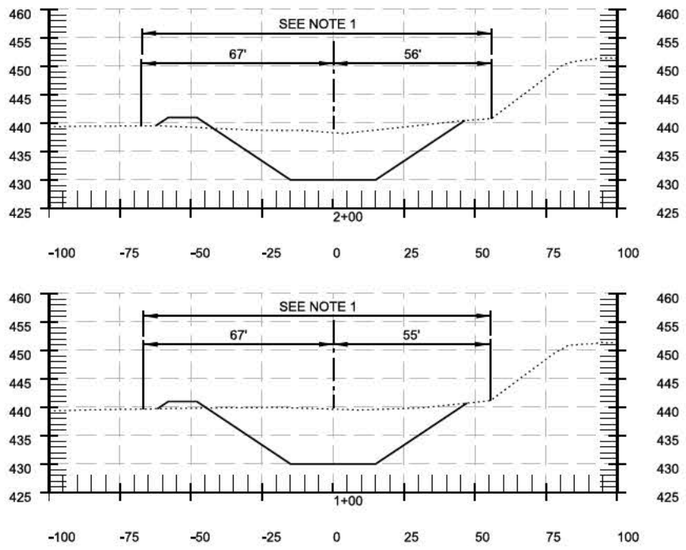
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

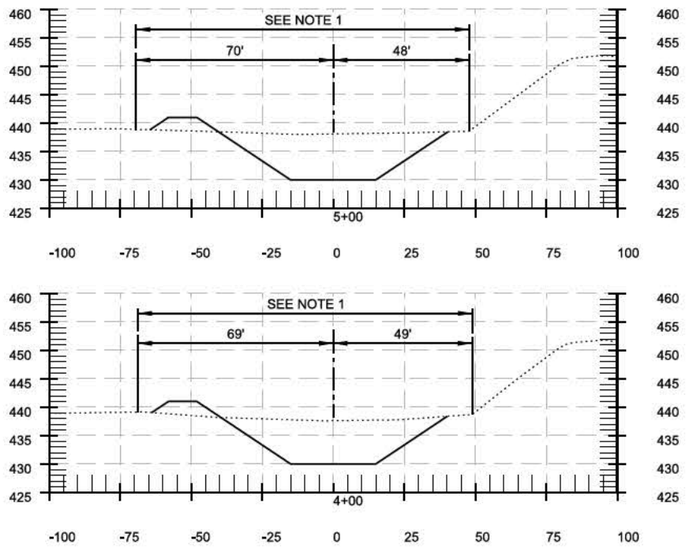
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

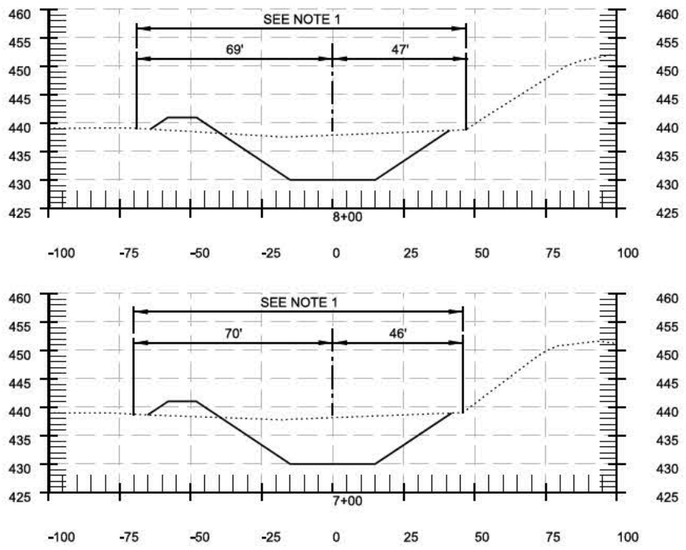
DISCHARGE CHANNEL
TYPICAL SECTIONS

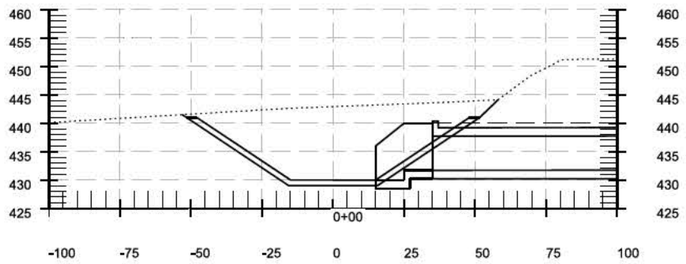
Sheet ID
C-325

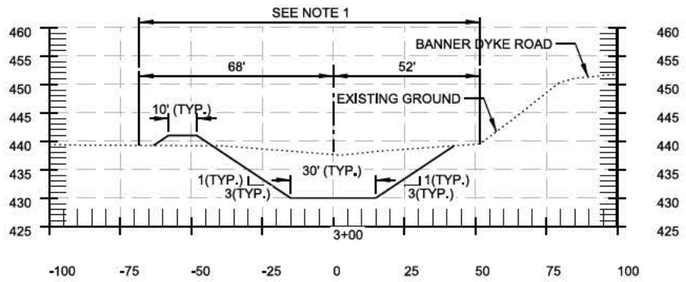
AS-BUILT
A-47

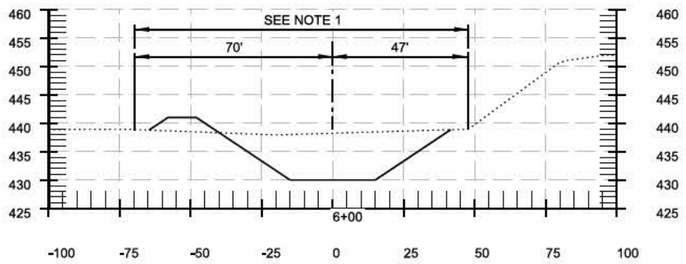












NOTE:

1. LIMITS OF CLEARING, GRUBBING AND STRIPPING.

DISCHARGE CHANNEL CROSS SECTIONS

NO SCALE

US Army Corps of Engineers®

APPR. | DATE | DESCRIPTION

MARK | SCALE: 1" AS OF 29 SEPTEMBER 2017

DESIGNED BY: RDF | DWN BY: LUH | CKD BY: PJV | SUBMITTED BY: HLA

DATE: 20110630 | SOLICITATION NO.: W912EK-11-B-0029 | CONTRACT NO.: W912EK-11-C-0080 | PROJECT CODE: EP102

PLOT SCALE: AS SHOWN | PLOT DATE: | FILE NAME: EP102C-A2K.dgn

SIZE: ANSI D

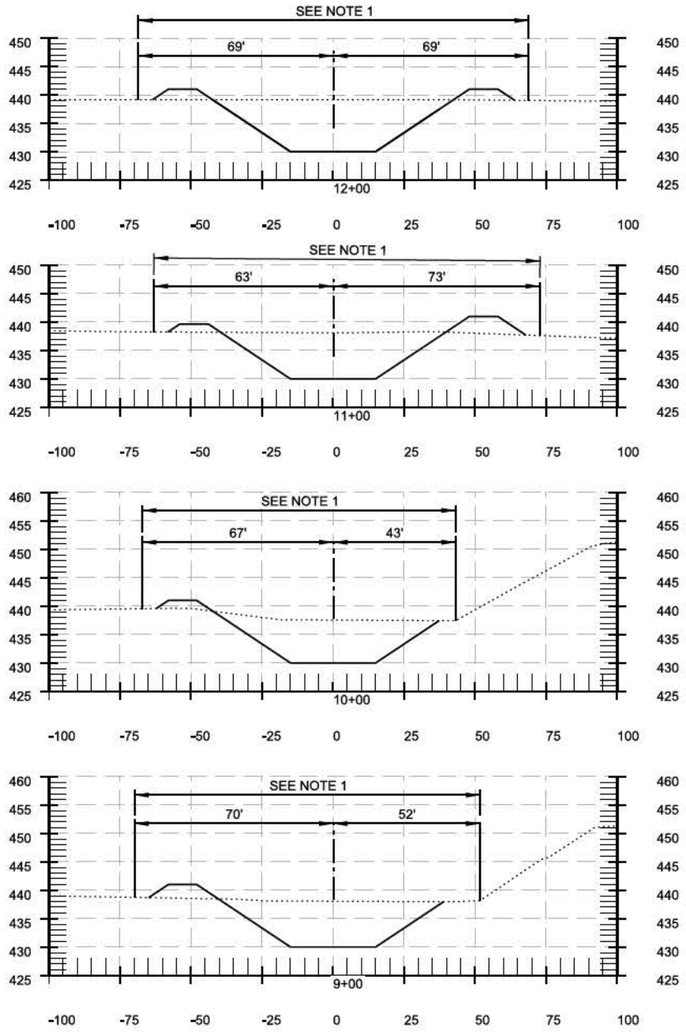
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

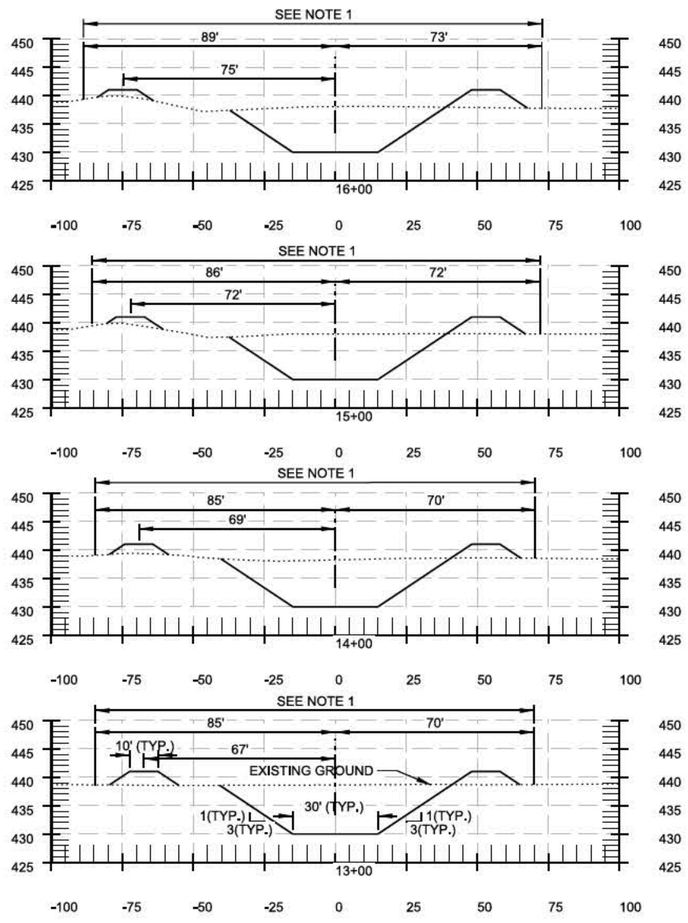
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

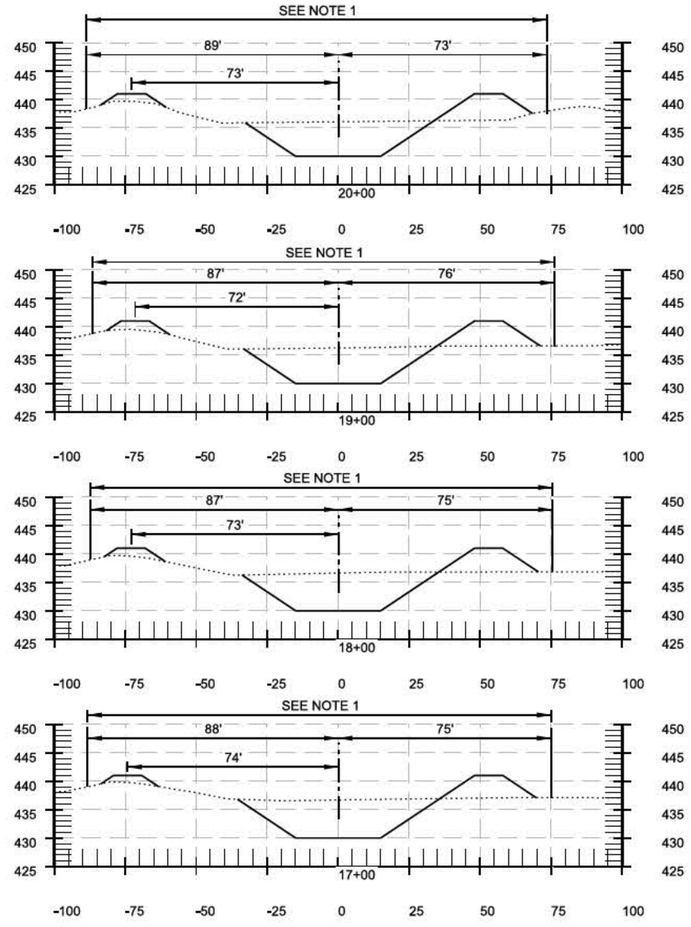
DISCHARGE CHANNEL
CROSS SECTIONS
SHEET 1 OF 6

Sheet ID
C-326

AS-BUILT
A-48







NOTE:

1. LIMITS OF CLEARING, GRUBBING AND STRIPPING.

DISCHARGE CHANNEL CROSS SECTIONS

NO SCALE

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION
			SCALE: 1" AS OF 29 SEPTEMBER 2017

DESIGNED BY: RDF	DWN BY: LLH	CHD BY: PJV	SUBMITTED BY: HLA
DATE: 20110930	SOLICITATION NO.: W912EK-11-R-0029	CONTRACT NO.: W912EK-11-C-0090	PROJECT CODE: EP102
PLOT DATE:	PLOT SCALE:	PLOT SCALE:	FILE NAME: EP102C-027.dgn

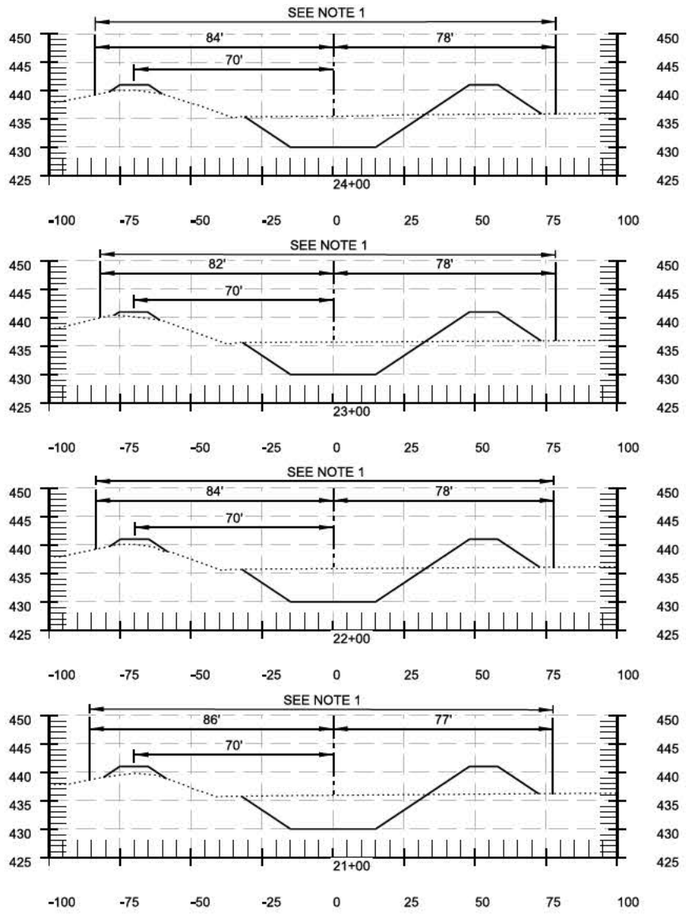
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DISCHARGE CHANNEL
CROSS SECTIONS
SHEET 2 OF 6

Sheet ID
C-327

AS-BUILT
A-49



NOTE:

1. LIMITS OF CLEARING, GRUBBING, AND STRIPPING.

DISCHARGE CHANNEL CROSS SECTIONS

NO SCALE

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION
			SCALE: 1" AS OF 29 SEPTEMBER 2017

DESIGNED BY: RDF	DWN BY: LLH	CHD BY: PJV	SUBMITTED BY: HLA
DATE: 20110930	SOLICITATION NO.: W912EK-11-R-0029	CONTRACT NO.: W912EK-11-C-0090	PROJECT CODE: DP102
PLOT SCALE:	PLOT DATE:	FILE NAME: EP102C-028.dgn	
AS SHOWN			
SIZE: ANSI D			

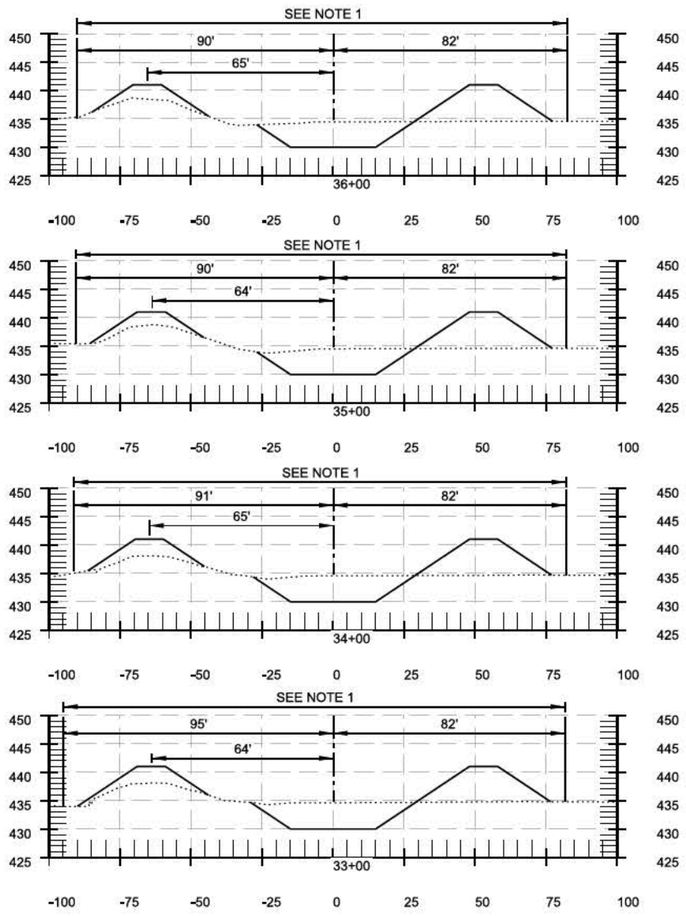
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

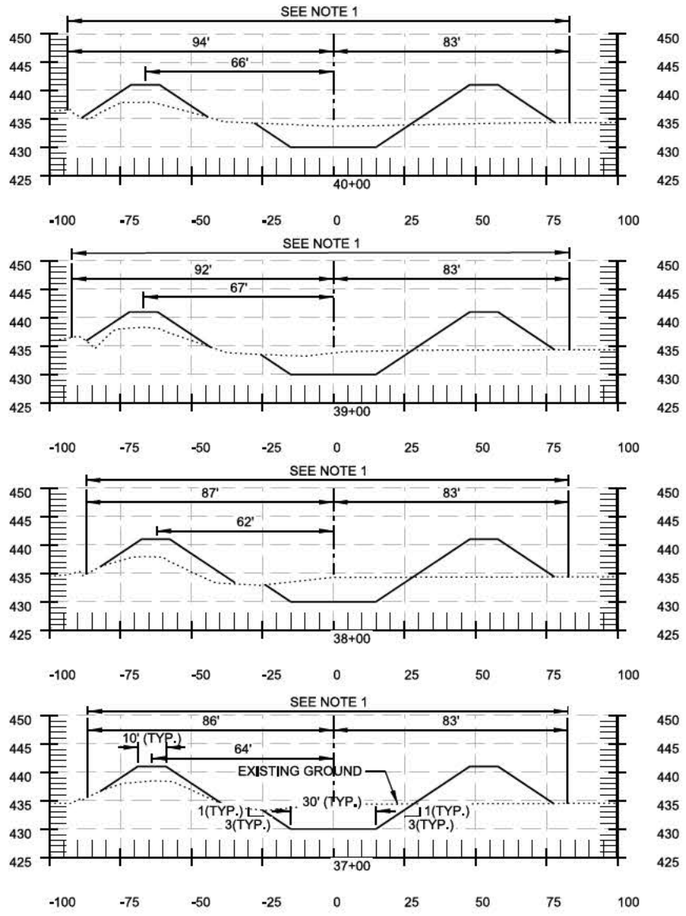
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

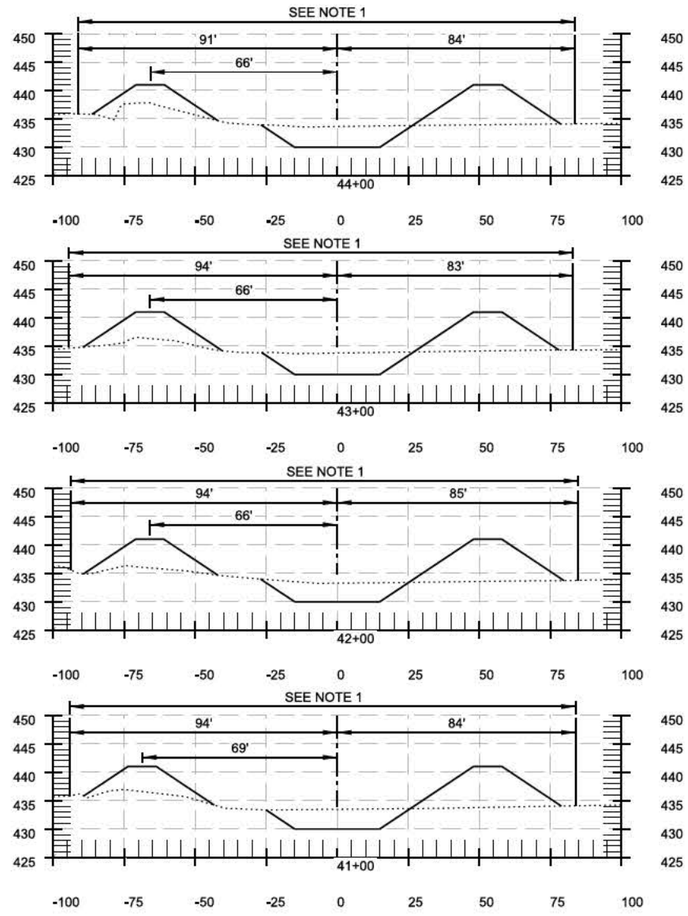
DISCHARGE CHANNEL
CROSS SECTIONS
SHEET 3 OF 6

Sheet ID
C-328

AS-BUILT
A-50







NOTE:

1. LIMITS OF CLEARING, GRUBBING, AND STRIPPING.

DISCHARGE CHANNEL CROSS SECTIONS

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	SCALE: 1" AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

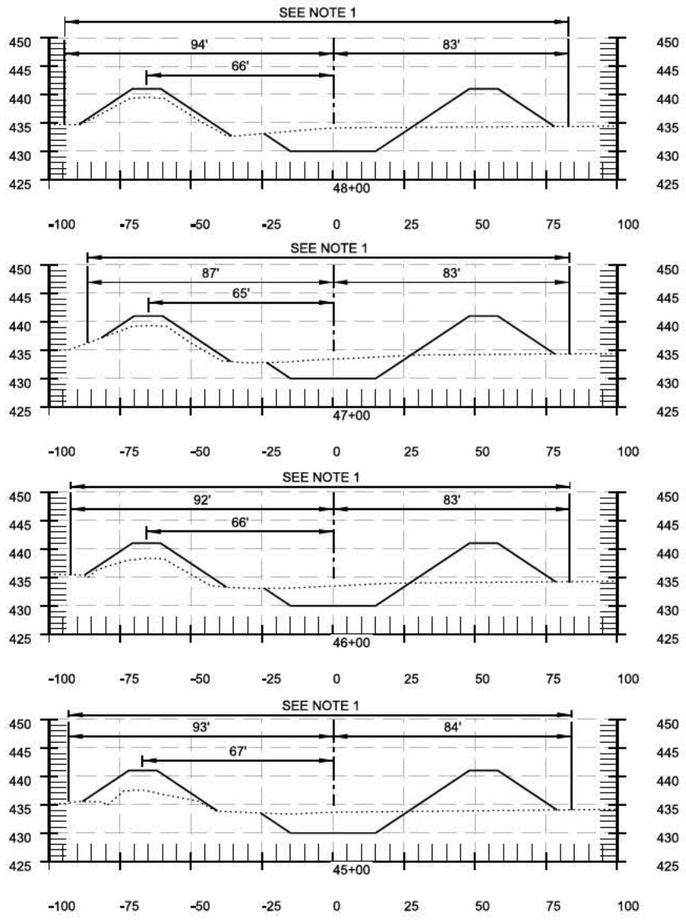
DESIGNED BY: RDF
DWN BY: LLH
CHD BY: PJV
SUBMITTED BY: HLA
DATE: 20171005030
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODE: EP102
PLOT SCALE:
PLOT DATE:
AS SHOWN
FILE NAME: EP102C429.dgn

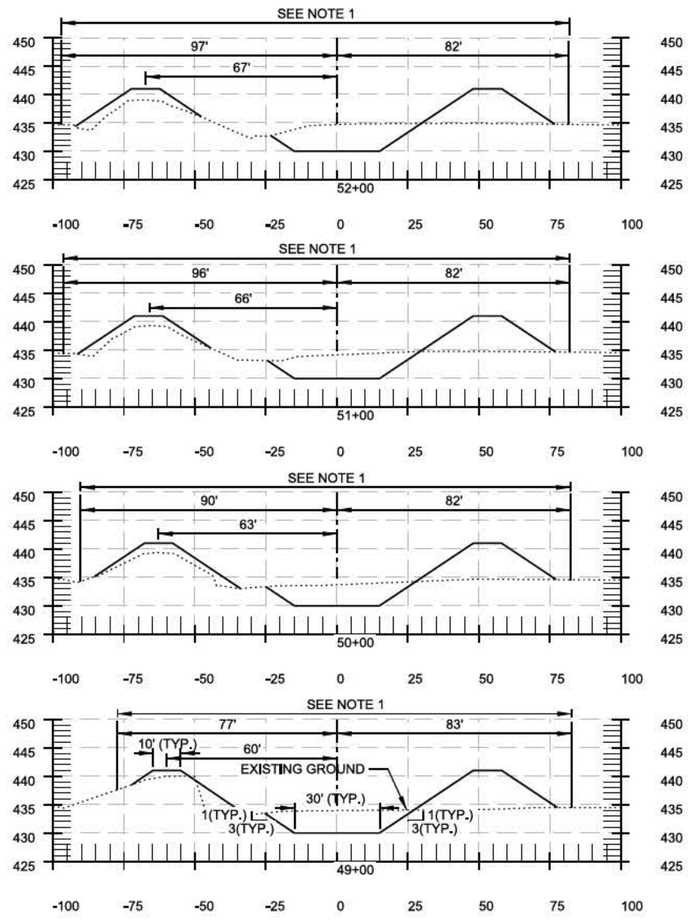
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

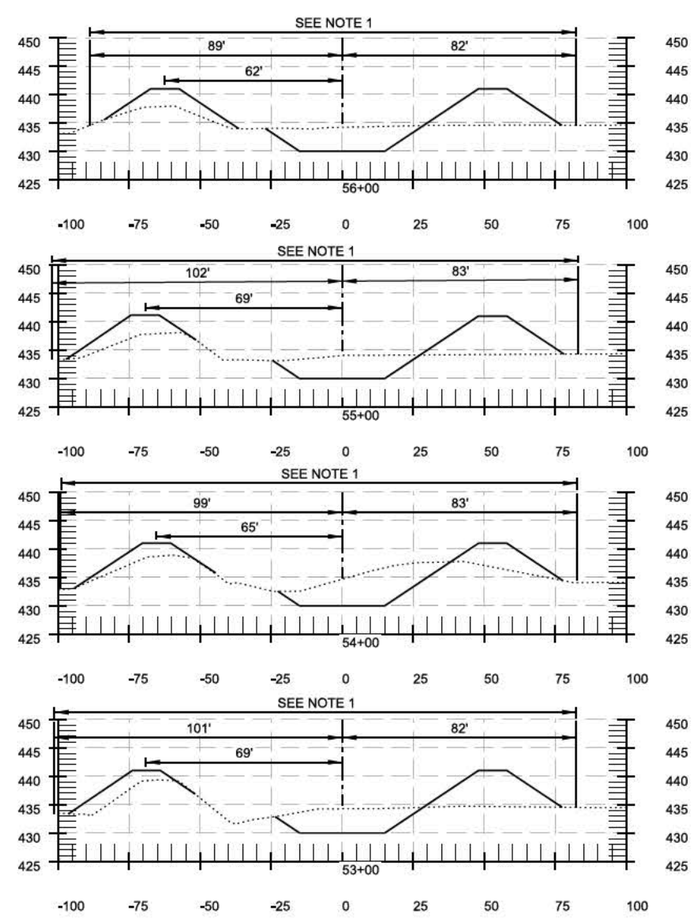
DISCHARGE CHANNEL
CROSS SECTIONS
SHEET 4 OF 6

Sheet ID
C-329

AS-BUILT
A-51







NOTE:

1. LIMITS OF CLEARING, GRUBBING, AND STRIPPING.

DISCHARGE CHANNEL CROSS SECTIONS

NO SCALE

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION
			SCALE: 1" AS OF 29 SEPTEMBER 2017

DESIGNED BY: RDF	DWN BY: LLH	CHD BY: PJV	SUBMITTED BY: HLA
DATE: 20171005	SOLICITATION NO.: W912EK-11-R-0029	CONTRACT NO.: W912EK-11-C-0090	PROJECT CODE: EP102
PLOT SCALE:	PLOT DATE:		
AS SHOWN			
USER: ANED	FILE NAME: EP102-C330.dgn		

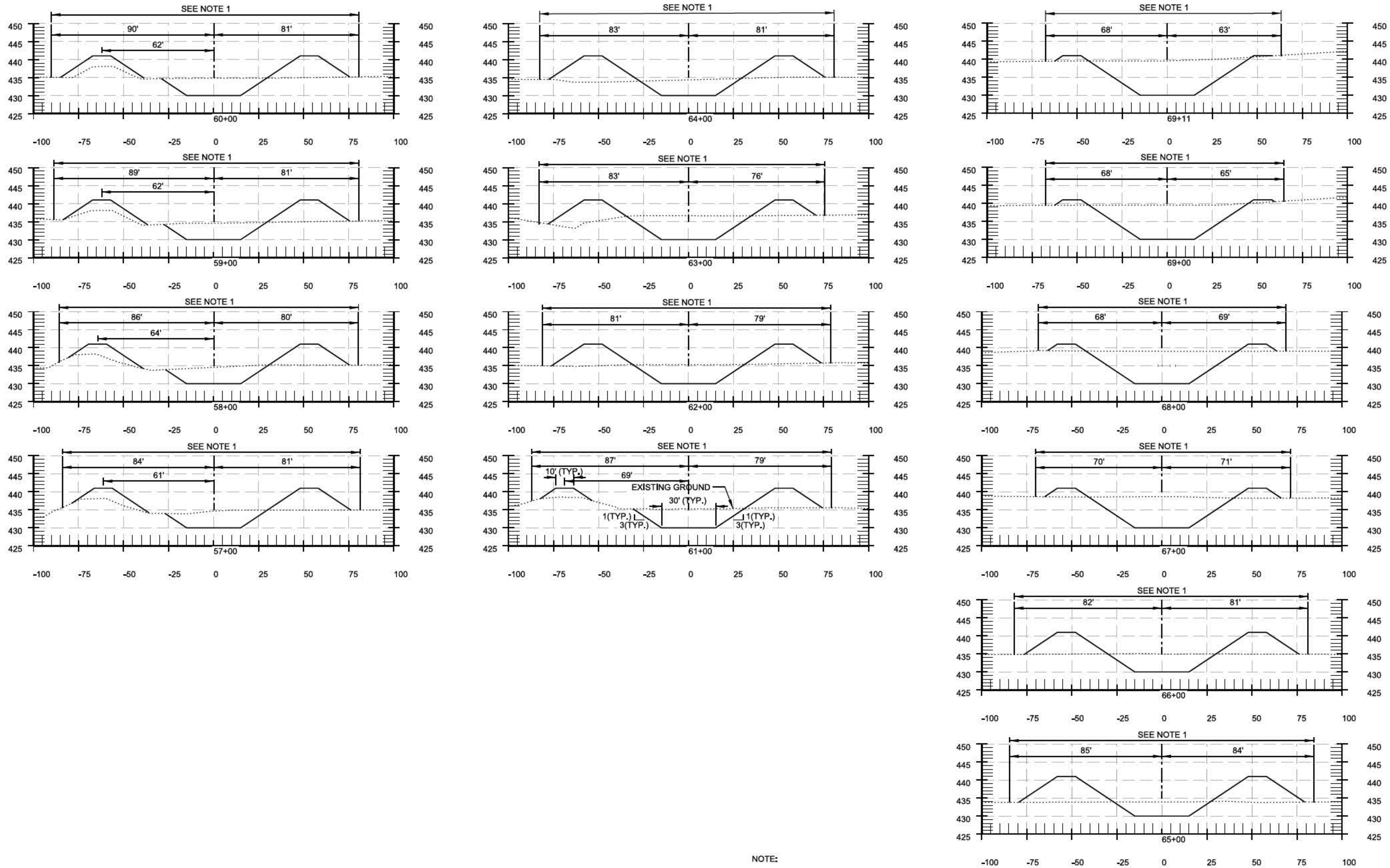
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DISCHARGE CHANNEL
CROSS SECTIONS
SHEET 5 OF 6

Sheet ID
C-330

AS-BUILT
A-52



NOTE:

1. LIMITS OF CLEARING, GRUBBING AND STRIPPING.

DISCHARGE CHANNEL CROSS SECTIONS

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

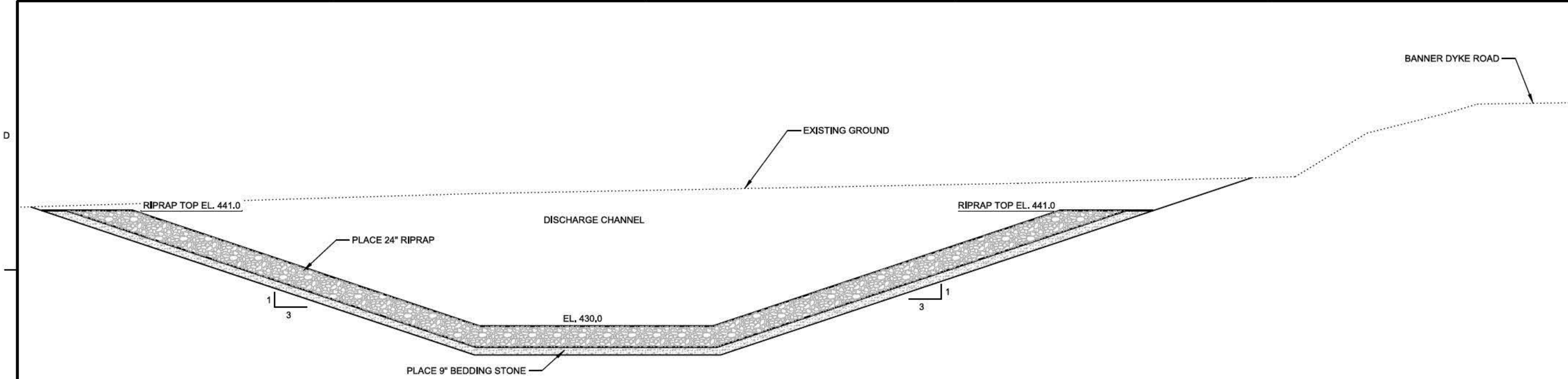
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF | DWN BY: LLH | CKD BY: PJV | SUBMITTED BY: | DATE: 2017/09/30 | SOLICITATION NO.: W912EK-11-R-2029 | CONTRACT NO.: W912EK-12-C-0080 | PROJECT CODE: EP102 | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102C-331.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
DISCHARGE CHANNEL
CROSS SECTIONS
SHEET 6 OF 6

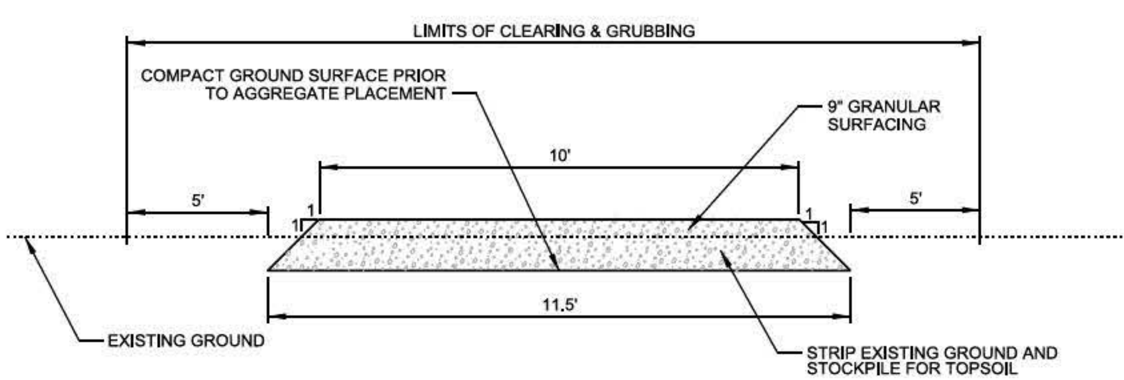
Sheet ID
C-331

AS-BUILT
A-53



DISCHARGE CHANNEL RIPRAP TYPICAL SECTION STA. -0+31 TO 0+31

NO SCALE

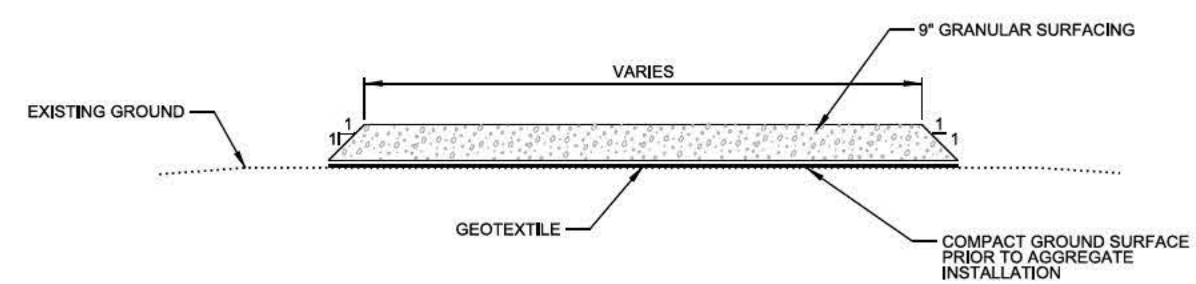


NOTES:

1. CONTRACTOR SHALL MAINTAIN DIMENSIONS OF SPILLWAY ACCESS ROAD THROUGHOUT CONSTRUCTION.
2. IN GENERAL, THE ALIGNMENT OF THE SPILLWAY ACCESS ROAD FROM EXISTING ACCESS ROAD TO THE OVERFLOW SPILLWAY SHALL FOLLOW THE CENTERLINE OF THE EXISTING DIRT ROAD. THE EXISTING DIRT ROAD IS DRIVABLE BUT IS OVERGROWN WITH VEGETATION. APPROXIMATE LOCATION IS SHOWN ON SHEET C-101.
3. SPILLWAY ACCESS ROAD SHALL REMAIN FOLLOWING CONSTRUCTION.

SPILLWAY ACCESS ROAD TYPICAL SECTION

NO SCALE



NOTES:

1. THE SPILLWAY STAGING AREA WILL BE CLEARED BY THE SITE MANAGER. APPROXIMATE LOCATION IS SHOWN ON SHEET C-101.
2. SPILLWAY STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION.

SPILLWAY STAGING AREA TYPICAL SECTION

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

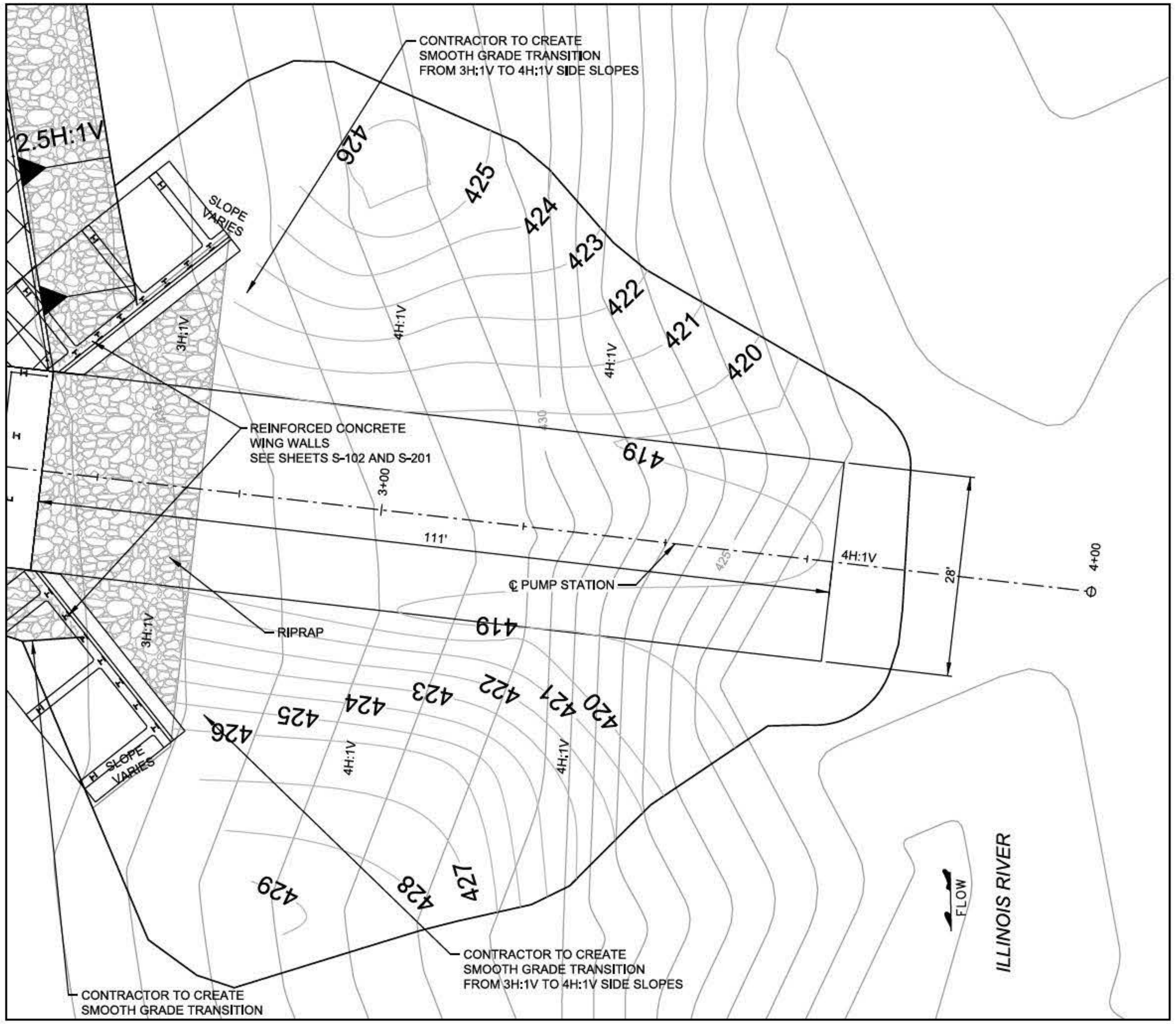
DESIGNED BY: RCF | DWN BY: LLH | CKD BY: PJV | SUBMITTED BY: | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102C-332.dgn | DATE: 2011/09/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DISCHARGE CHANNEL RIPRAP
AND SPILLWAY
ACCESS ROAD
TYPICAL SECTIONS

Sheet ID
C-332

AS-BUILT
A-54

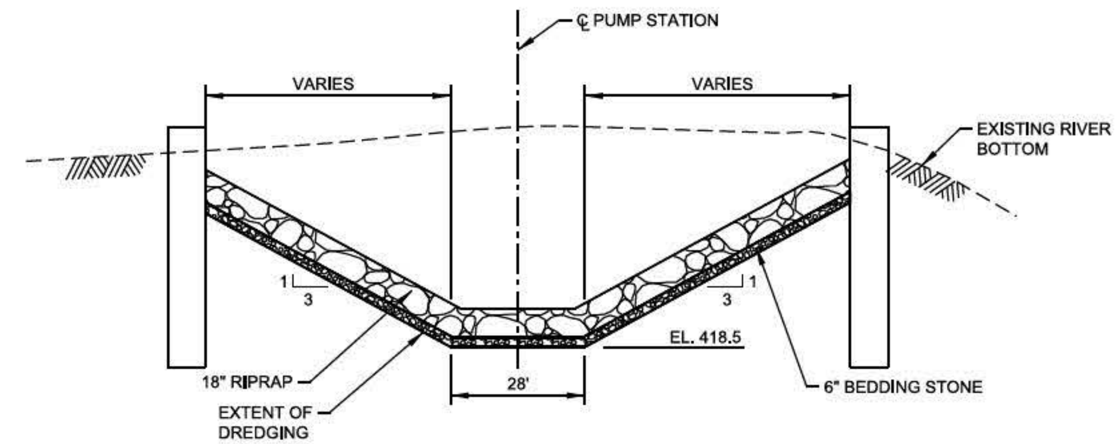


NOTES:

1. SEE SHEET C-220 FOR INTAKE BASIN PROFILE.
2. CONTRACTOR SHALL USE THE DREDGED MATERIAL FOR CONSTRUCTION OF THE PUMP STATION ACCESS ROAD/PARKING AREA AND CONTROL BUILDING PARKING AREA. IF ADDITIONAL MATERIAL IS NEEDED, CONTRACTOR SHALL OVEREXCAVATE THE INTAKE BASIN OUTSIDE THE LIMITS OF RIPRAP PLACEMENT.

INTAKE BASIN PLAN

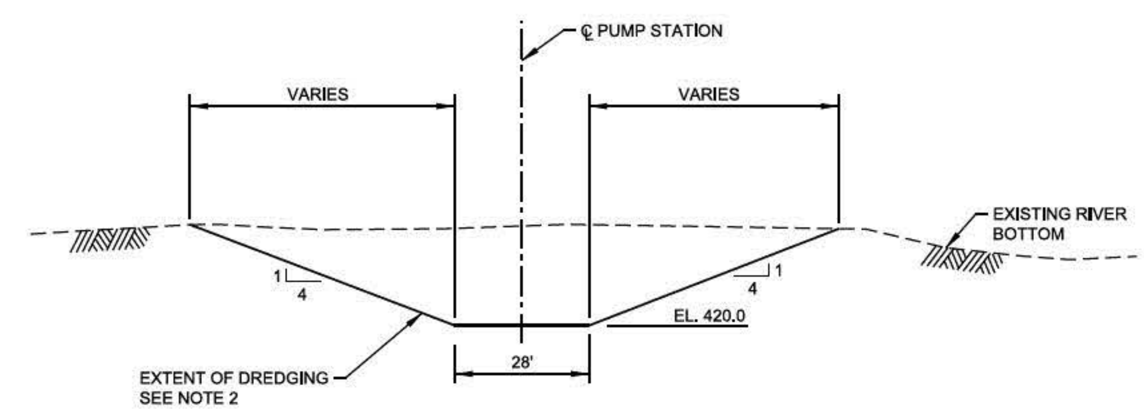
0 10' 20'
SCALE IN FEET



INTAKE BASIN RIPRAP TYPICAL SECTION

STA. 2+52.19 TO STA. 2+75

NO SCALE



INTAKE BASIN TYPICAL SECTION

STA. 2+75 TO STA. 3+63.59

NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/06/30
DWN BY: LLH	CKD BY: PJV	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.:
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102C-420.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION INTAKE
BASIN SITE PLAN

Sheet ID
C-420

c:\pw_working\mvrb5edd\lhd0153728\EP102C-420.dgn
8/28/2018 3:15:33 PM
B5EDDLLH

GENERAL STRUCTURAL NOTES

THE FOLLOWING NOTES APPLY UNLESS NOTED OTHERWISE.

A. GENERAL REFERENCES

1. CONTRACT SPECIFICATIONS
2. EM 1110-2-2104, STRENGTH DESIGN FOR REINFORCED-CONCRETE HYDRAULIC STRUCTURES, AUGUST 2003.
3. ACI 318-08, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND COMMENTARY.
4. EM 1110-2-2105, DESIGN OF HYDRAULIC STEEL STRUCTURES, MAY 1994.
5. AISC, ALLOWABLE STRESS DESIGN, 13TH EDITION.
6. ASCE 7-05 AMERICAN SOCIETY OF CIVIL ENGINEERS. MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURE, 2005.
7. EM 1110-2-2502, RETAINING AND FLOOD WALLS, SEPTEMBER 1999.
8. EM 1110-2-3104, STRUCTURAL AND ARCHITECTURAL DESIGN OF PUMP STATION, JUNE 1989.
9. ETL 1110-2-563, GENERAL PRINCIPLES OF PUMP STATION DESIGN AND LAYOUT, FEBRUARY 1995.
10. AWS D1.1, STRUCTURAL WELDING CODE - STEEL
11. AWS D1.2 STRUCTURAL WELDING CODE - ALUMINUM
12. AWS D1.5 BRIDGE WELDING CODE.

B. REINFORCED CONCRETE

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE OF f'c=4000 psi AT 28 DAYS UNLESS NOTED OTHERWISE.
2. ALL REINFORCEMENT PLACEMENT AND DETAILING SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE (ACI) 318-08, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND COMMENTARY", UNO. THE WORDS "CONTRACTING OFFICER" SHALL BE SUBSTITUTED FOR THE WORD "ENGINEER" AND/OR "BUILDING OFFICIAL".
3. REINFORCEMENT REQUIREMENTS, EXCEPT AS OTHERWISE INDICATED:
   A. REINFORCEMENT SHALL BE ASTM A615, GRADE 60 (FY = 60,000 PSI). DEFORMED BARS SHALL MEET THE REQUIREMENTS OF PARAGRAPH 3.5.3 OF ACI STANDARD 318-08.
   B. WELDED OR FIELD BENT REINFORCING STEEL BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706. BAR SIZE NUMBERS ARE RECOGNIZED IN ASTM A615.
4. MINIMUM CLEAR COVER TO THE NEAREST SURFACE FOR REINFORCEMENT EXCEPT AS OTHERWISE INDICATED SHALL BE:
   A. SURFACES PERMANENTLY EXPOSED TO WEATHER: 3".
   B. 2-INCH MINIMUM FOR CONCRETE SECTIONS EQUAL TO OR LESS THAN 12 INCHES IN THICKNESS.
   C. 3-INCH MINIMUM FOR CONCRETE SECTIONS GREATER THAN 12 INCHES AND LESS THAN 24 INCHES.

   IN NO CASE SHALL THE COVER BE LESS THAN 1.5 TIMES THE NOMINAL MAXIMUM SIZE OF AGGREGATE. REINFORCEMENT SHALL HAVE A MINIMUM CLEARANCE ABOVE THE EXISTING LIFT OF CONCRETE EQUAL TO THE MAXIMUM AGGREGATE SIZE MULTIPLIED BY 1.5.
5. MINIMUM REINFORCEMENT EMBEDMENT LENGTH (CLASS A) AND TENSION LAP SPLICE LENGTH (CLASS B) FOR UNCOATED BARS SHALL BE AS FOLLOWS UNO.

BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
CLASS A	TOP BARS	19"	25"	31"	37"	54"	62"	69"	78"	87"
	OTHERS	15"	19"	24"	29"	42"	47"	53"	60"	67"
CLASS B	TOP BARS	24"	33"	41"	49"	70"	80"	90"	101"	112"
	OTHERS	19"	25"	31"	37"	54"	62"	69"	78"	87"

A. LENGTHS SHOWN IN THE TABLE (INCHES) ARE FOR 4000 PSI NORMAL WEIGHT CONCRETE.

B. TOP BARS ARE SO PLACED THAT MORE 12" OF CONCRETE IS CAST BELOW THE REINFORCEMENT.

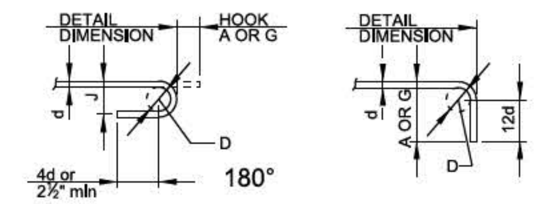
C. WHEN SPLICING SMALLER BARS TO LARGE BARS, THE LAP SPLICE SHALL BE THE MINIMUM TENSION. LAP SPLICE OR DEVELOPMENT LENGTH OF THE SMALLER BAR IN TENSION.

D. ALL LENGTHS SHOWN IN THE TABLE SHALL BE MULTIPLIED BY 1.5 UNLESS THE FOLLOWING CONDITIONS ARE SATISFIED.
- CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THE BAR DIAMETER.
- CLEAR COVER NOT LESS THAN THE BAR DIAMETER.

7. STANDARD HOOK REINFORCEMENT EMBEDMENT LENGTHS NOT DETAILED OR INDICATED ON THE DRAWINGS SHALL BE AS FOLLOWS:

D = Finished inside bend diameter
d = Bar diameter

D = 6d for #3 through #8
D = 8d for #9, #10 and #11



BAR SIZE	D	180 HOOKS		90 HOOKS
		A OR G	J	A OR G
#3	2¼"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3¾"	7"	5"	10"
#6	4⅕"	8"	6"	1'-0"
#7	5¼"	10"	7"	1'-2"
#8	6"	11"	8"	1'-4"
#9	9½"	1'-3"	11¾"	1'-7"
#10	10¾"	1'-5"	1'-1¼"	1'-10"
#11	12"	1'-7"	1'-2¾"	2'-0"

8. ALL REINFORCEMENT SHALL BE DISCONTINUED AT CONTRACTION, EXPANSION OR MONOLITH JOINTS, UNO.
9. SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER, REINFORCING BARS MAY BE SHIFTED OR BENT IN THE FIELD TO MISS SECOND PLACEMENTS, OPENINGS, EMBEDDED ITEMS AND OTHER OBSTRUCTIONS.
10. NO WELDING SHALL BE PERMITTED ON ANY REINFORCEMENT UNO.
11. BAR SPACING INDICATED ON REINFORCING DRAWINGS IS A MAXIMUM. ACTUAL SPACING OF REINFORCEMENT WILL BE DICTATED BY THE CONCRETE GEOMETRY AND THE DIMENSIONS INDICATED ON THE DRAWINGS.
    CONCRETE FORMED SURFACE FINISH FOR ALL CAST-IN-PLACE CONCRETE FORMWORK
12. TOLERANCES SHALL NOT EXCEED CLASS B REQUIREMENTS.

C. STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL MEET THE FOLLOWING REQUIREMENTS UNO:

W AND HP SHAPES ——— ASTM A992 OR ASTM A572 GRADE 50
OTHER ROLLED STRUCTURAL SHAPES
CHANNELS, ANGLES AND PLATES ——— ASTM A36
BOLTS, NUTS, WASHERS ——— ASTM A325
STUDS ——— ASTM A325
GALVANIZED STEEL ——— ASTM A123
GRATING ——— ASTM A653
TENSION BAR BAND ——— ASTM F626
CHAIN LINK FABRIC ——— ASTM A392 CLASS1 OR ASTM A491 TYPE I
POST ——— ASTM F1083
TUBE ——— ASTM A500 GRADE B
TRUSS ROD ——— ASTM F626

2. WELDING PER AWS D1.1. USE E70XX ELECTRODES.

D. ALUMINUM ALLOY

1. ALUMINUM PLATE SHALL CONFORM TO ASTM B209 6061-T6.
2. ALUMINUM SHAPES SHALL CONFORM TO ASTM B221, 6061-T6.
3. BOLTS SHALL CONFORM TO ASTM F468, ALLOY 6061-T6. NUTS SHALL CONFORM TO ASTM F467, ALLOY 6262-T9 OR 6061-T6. FLAT WASHERS SHALL BE ALCAD 2024-T4.
4. WELDING OF ALUMINUM PER AWS D1.2.

F. STEEL DECK

1. ROOF DECKS AS NOTED ON DRAWINGS.
2. DECK SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
3. THE AMERICAN IRON AND STEEL INSTITUTE "SPECIFICATIONS FOR THE DESIGN OF LIGHT GAUGE STEEL STRUCTURAL MEMBERS" SHALL GOVERN THE DESIGN OF ALL DECK UNITS, STEEL DECK AND ALL OF ITS CLOSURES AND FLASHING SHALL CONFORM TO ASTM A653, GRADE B, FY 38,000 PSI MIN.
4. UNITS SHALL BE CONTINUOUS OVER THREE OR MORE SPANS, EXCEPT WHERE THE FRAMING DOES NOT PERMIT, SHORING MAY BE REQUIRED AT NON-CONTINUOUS SPANS. DECK SHOP DRAWINGS SHALL INDICATE WHERE SHORING WILL BE REQUIRED. DECK SHALL BEAR 2" MINIMUM AT ALL SUPPORTS.
5. ALL WELDING OF STEEL DECK SHALL BE DONE BY CERTIFIED LIGHT GAGE WELDERS IN ACCORDANCE WITH AWS "SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES", AWS D1.3-2008.
6. UNITS SHALL BE FASTENED TO THE STEEL SUPPORTS AT THE END OF THE UNITS AND AT INTERMEDIATE SUPPORTS AND TO THE STEEL SUPPORTS AT THE SIDE BOUNDARIES BY ¾" DIAMETER PUDDLE WELDS AT 1'-0" O.C.
7. THE SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BETWEEN SUPPORTS BY BUTTON PUNCHING AT 1'-0" O.C. MAX. CONTRACTOR MAY DECREASE SPACING OF SIDE LAP ATTACHMENTS TO ACCOMMODATE CONSTRUCTION LOADING AS REQUIRED.
8. PROVIDE FLASHING AND CLOSURE PLATES AT ENDS OF ALL UNITS, AROUND COLUMNS, AND AT ALL PERIMETER LOCATIONS REQUIRING CONCRETE.

G. MASONRY

1. CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C-90, GRADE N, NORMAL WEIGHT UNITS.
2. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
3. REINFORCING BARS - SEE NOTES UNDER " REINFORCED CONCRETE" FOR REQUIREMENTS.
4. MORTAR SHALL BE TYPE N WITH PROPORTIONS OF 4-1/2 PARTS SAND, ½ PART HYDRATED LIME, 1 PART PORTLAND CEMENT AND SHALL COMPLY WITH SPECS SECTION 04 20 00. MORTAR SHALL HAVE A 28 DAY STRENGTH OF 1500PSI MINIMUM. MORTAR COMPONENT TESTS ARE NOT REQUIRED.
5. GROUT SHALL CONSIST OF 3 PARTS SAND, 2 PARTS PEA GRAVEL, AND 1 PART PORTLAND CEMENT, AND SHALL COMPLY WITH SPECS SECTION 04-20-00. GROUT COMPONENT TESTS ARE NOT REQUIRED.
6. PROVIDE A MINIMUM OF ½" CLEAR BETWEEN MAIN REINFORCING AND MASONRY UNITS.
7. ALL CELLS SHALL BE GROUTED SOLID.
8. DESIGN f'm=1500 PSI FOR CMU CONSTRUCTION, PRISM TESTING SHALL BE PERFORMED AS PER THE REQUIREMENTS OF THE SPECS SECTION 04-20-00.
9. MASONRY TO BE LOW LIFT GROUTING METHOD AND RUNNING BOND.

H. PLASTICS

1. WATERSTOPS ARE REQUIRED ACROSS ALL CONSTRUCTION JOINTS SUBJECT TO DIFFERENTIAL HYDROSTATIC HEAD. WATERSTOP SHALL BE PER SPECIFICATION.

I. VERTICAL DATUM

1. THE PROJECT VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM (NAVD 88-2044.65). HORIZONTAL COORDINATES ARE BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

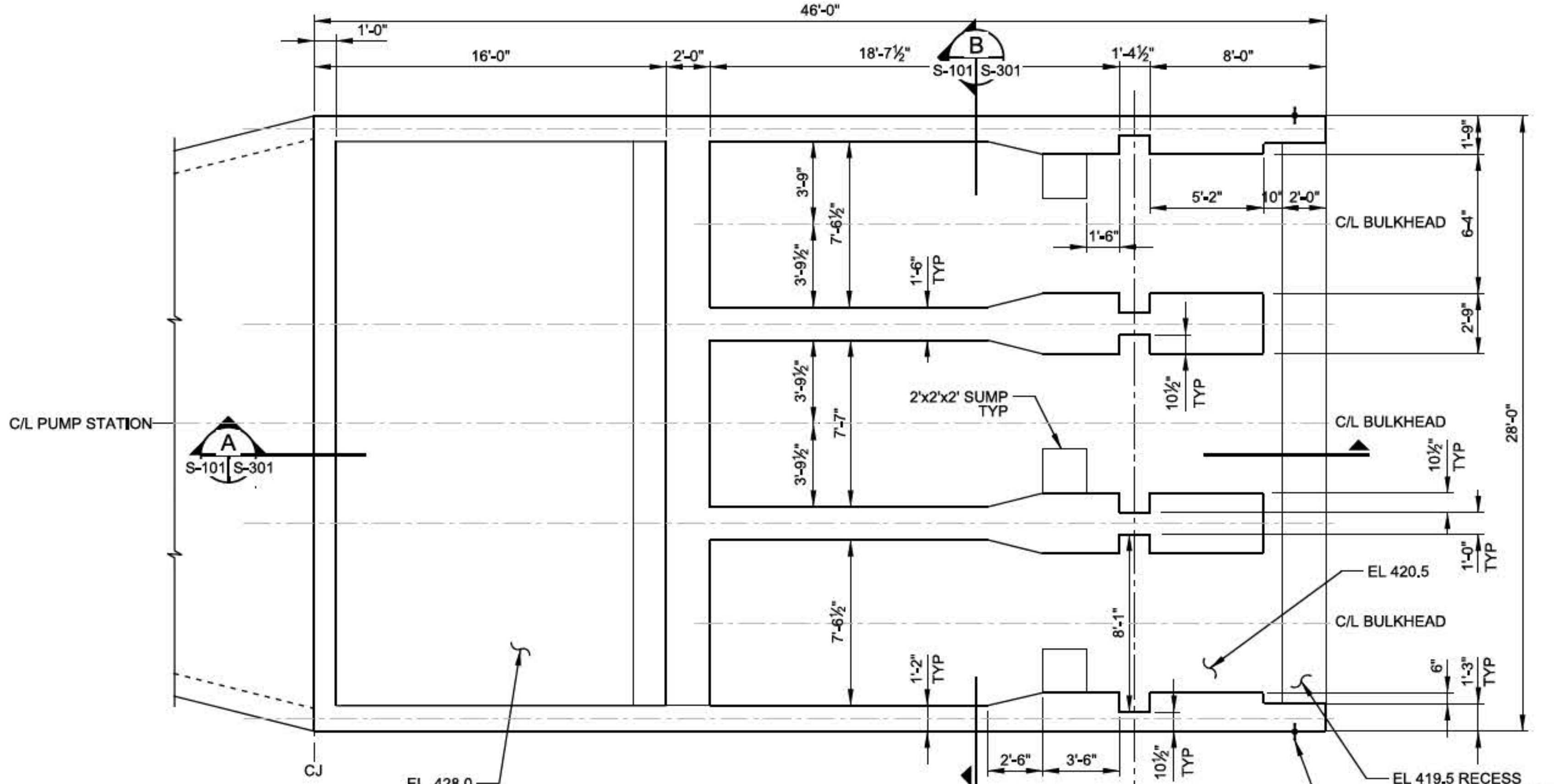
DESIGNED BY: KCP | DATE: 2011/06/30
DWN BY: NPP | CKD BY: | SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ | CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: 12"=1'-0" | PLOT DATE: | PROJECT CODE: EP102
SIZE: ANSI D | FILE NAME: EP102_S-001.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
GENERAL NOTES

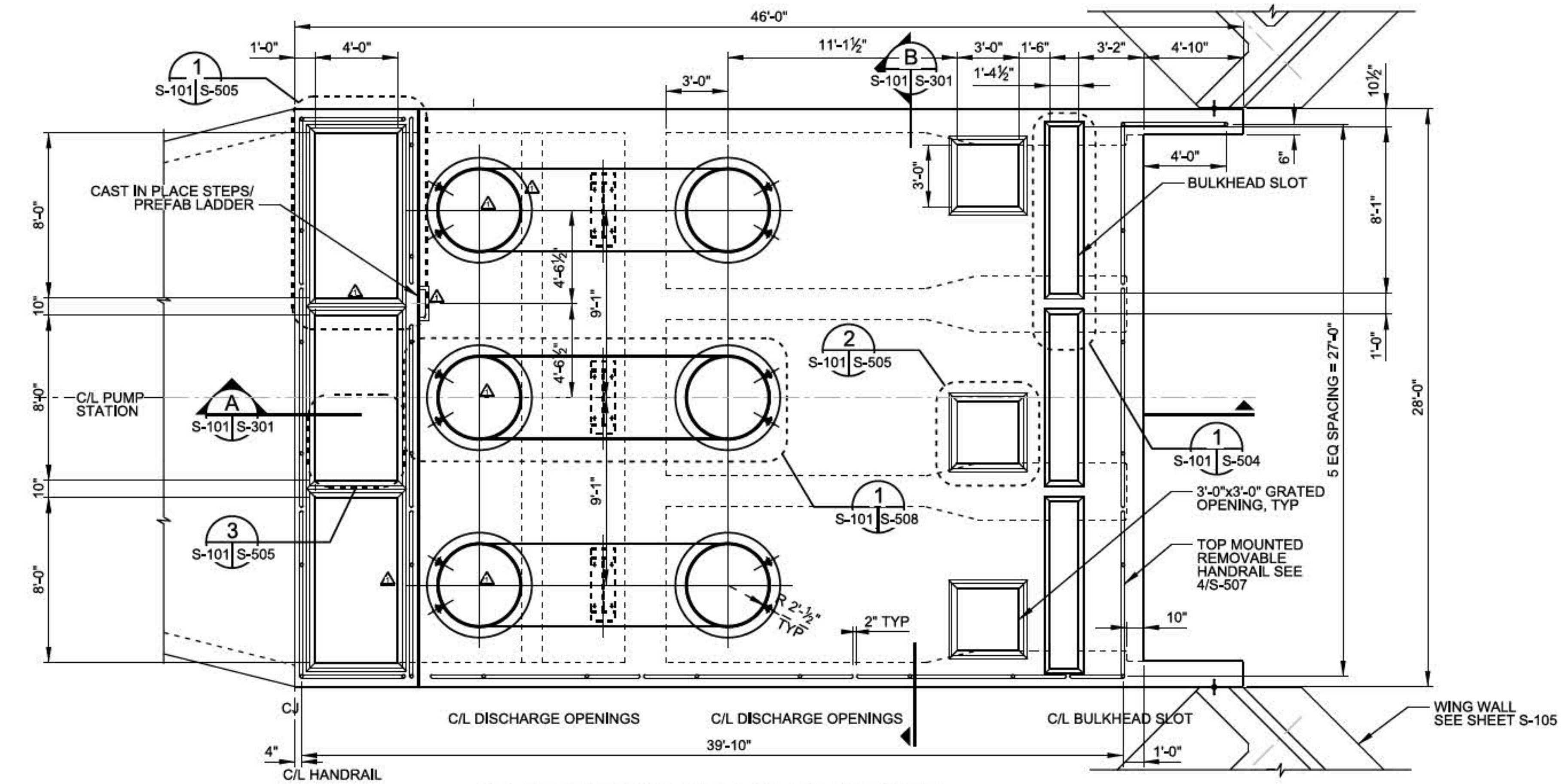
Sheet ID
S-001

c:\pw_working\mvrb5edolll\hd0153734\EP102_S-001.dgn
8/28/2018 3:15:37 PM
B5EDOLLH

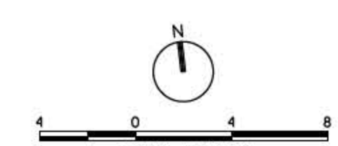
AS-BUILT



1 PUMP STATION PLAN AT BASE
¼" = 1'-0"



2 PUMP STATION PLAN AT TOP
¼" = 1'-0"



c:\pw_working\mvrb5eddlh\d0153734\EP102_S-101.dgn
8/28/2018 3:15:49 PM
B5EDDLLH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA005 - ADD SURGE BASIN WALLS, LADDER AND HANDRAIL, MODIFY PIPE OPENINGS, ADD SLAB BEAM.	8/21/2012	CDD
	AS-BUILT AS OF 29 SEPTEMBER 2017		

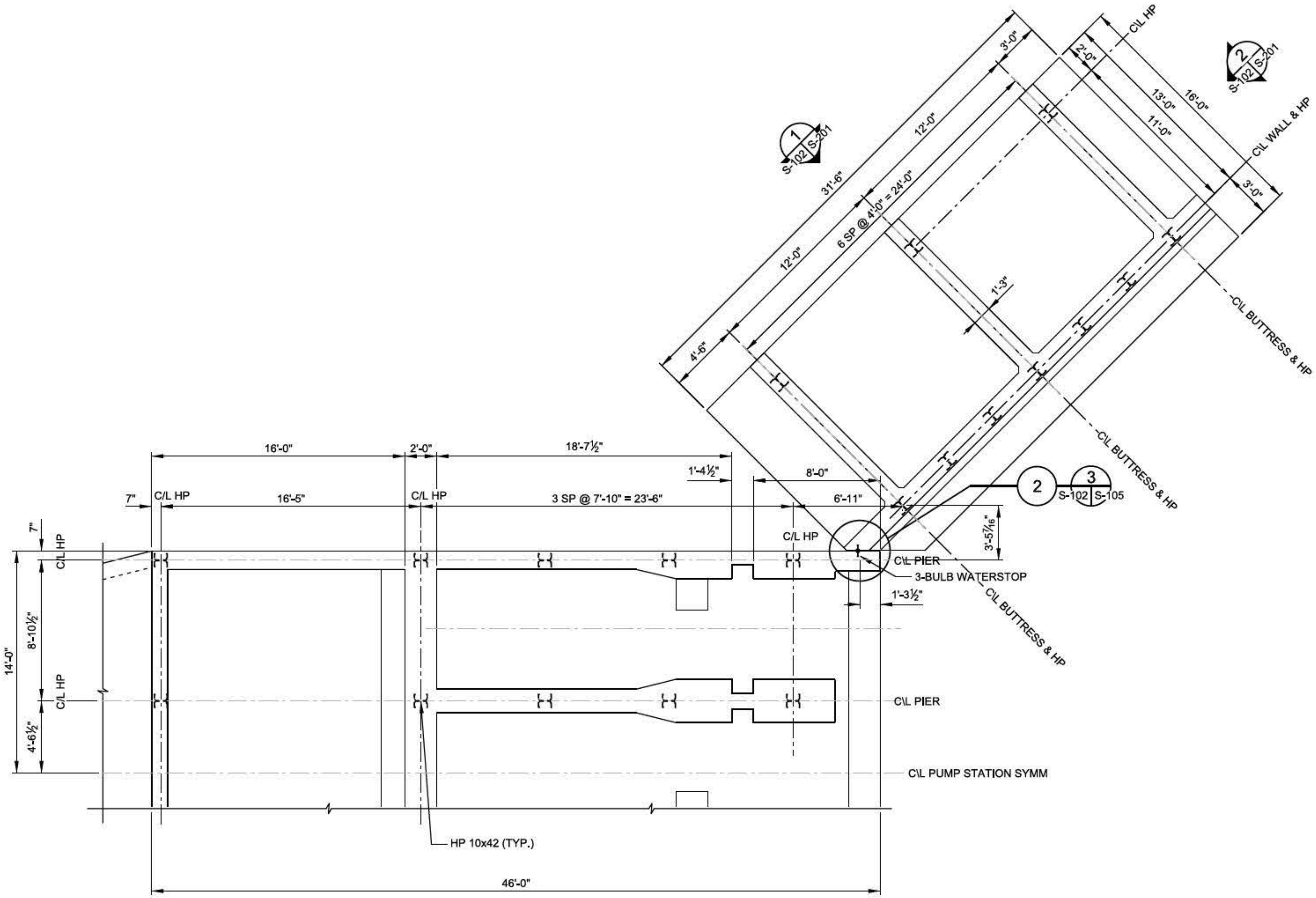
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP		DATE: 2011/06/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-101.dgn	

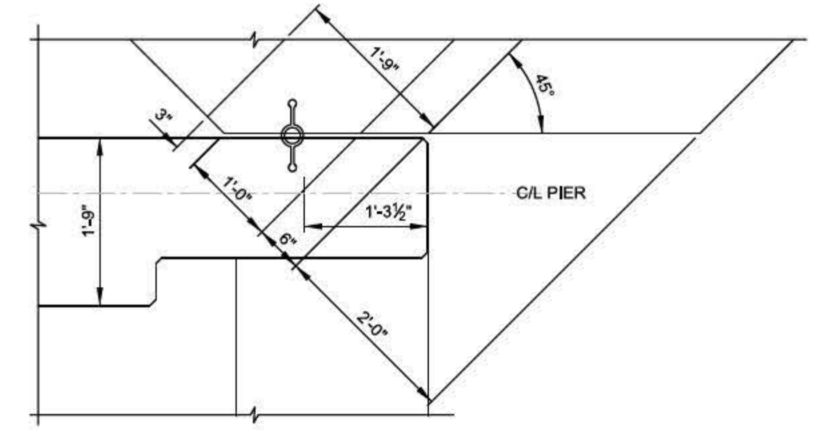
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION PLANS

Sheet ID
S-101

AS-BUILT
A-57



1 BASE SLAB LAYOUT PLAN
¼"=1'-0"



2 DETAIL
1"=1'-0"

HP = H-PILE

NOTES ON H-PILES:

1. ALL H-PILES ARE HP 10x42 AND SHALL CONFORM TO THE ASTM A572, GRADE 50, STEEL SPECIFICATIONS.
2. DESIGN CAPACITY COMPRESSION WORKING LOAD 142 KIPS.
3. A PILE TIP ELEVATION OF 375 FEET SHALL BE USED FOR BID PREPERATION ONLY. THE FINAL PILE TIP ELEVATION WILL BE DETERMINED BY THE CONTRACTING OFFICER AFTER REVIEWING THE INDICATOR PILE TEST RESULTS AND REFUSAL DATA, AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
4. ADJUST PLACEMENT OF INDIVIDUAL BASE REINF. BARS TO MISS THE H-PILES.
5. H-PILE SPLICES IF REQUIRED ARE PROHIBITED IN THE UPPER THIRD OF PILE.

N

4 0 4 8
SCALE IN FEET

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP		DATE: 2011/06/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: 12" = 1'-0"	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-102.dgn	

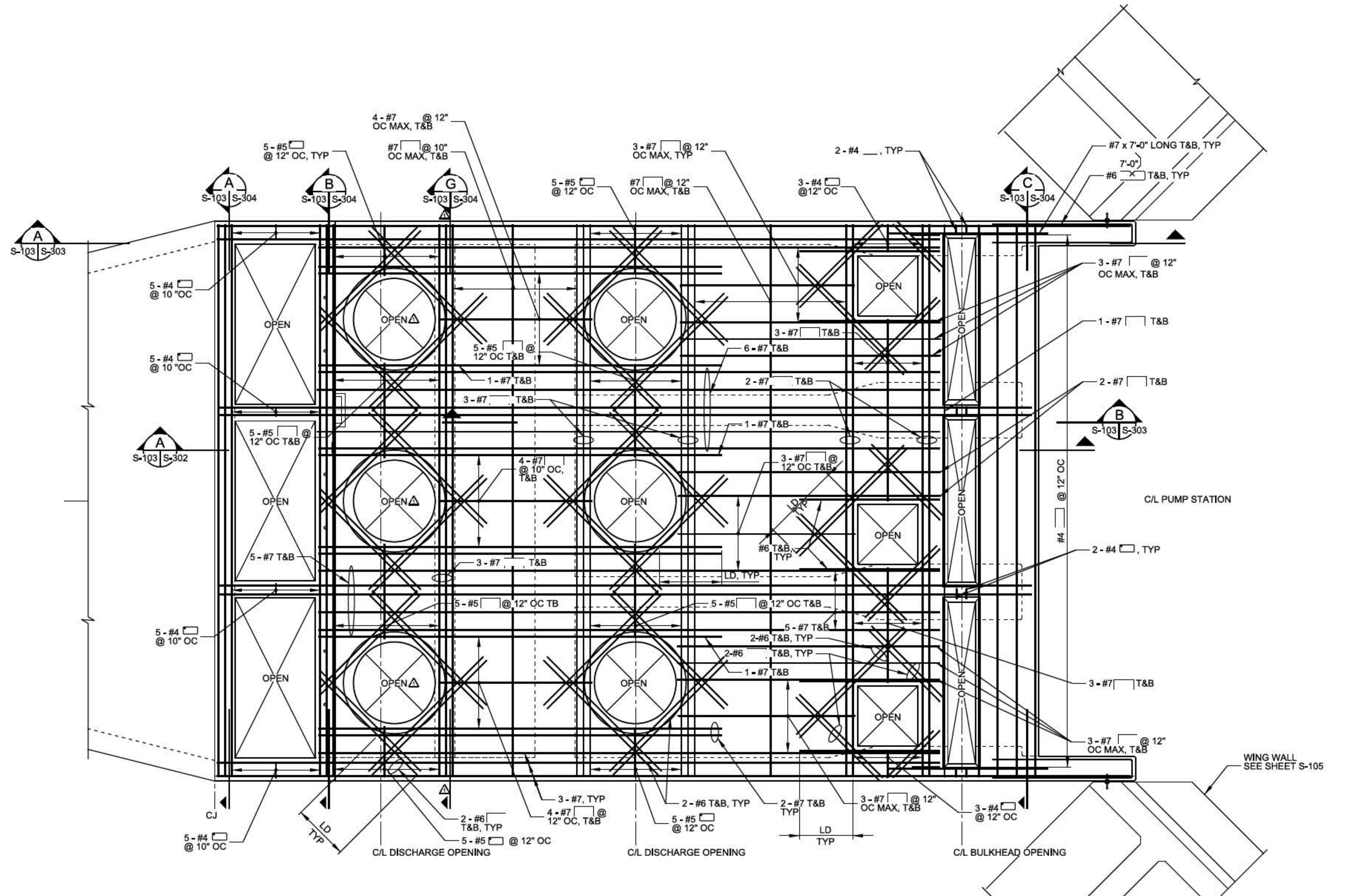
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
AND WING WALL PILE
LAYOUT PLAN

Sheet ID
S-102

c:\pw_working\mvrb5eddlh\d0153734\EP102_S-102.dgn
8/28/2018 3:15:53 PM
B5EDDLLH

AS-BUILT



1 PLAN - REINFORCEMENT IN TOP DECK EL 440.0

⅜" = 1'-0"

N

4 0 4
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA005 - MODIFY PIPE OPENINGS, ADD SLAB BEAM,	5/22/2012	CDD
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP	CKD BY:	DATE: 2011/09/30
DWN BY: NPP		SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-103.dgn	

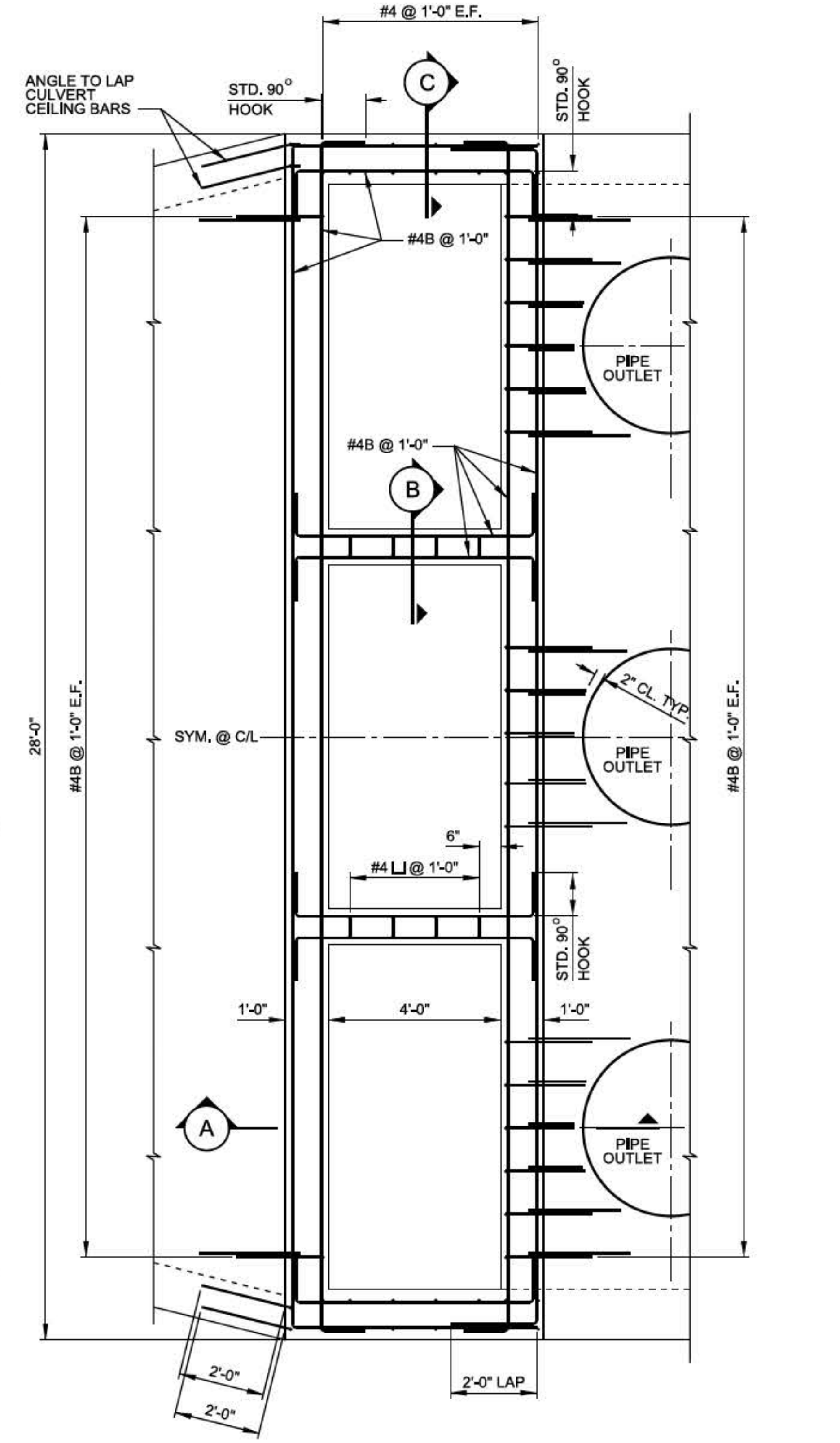
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
REINFORCEMENT
IN TOP DECK

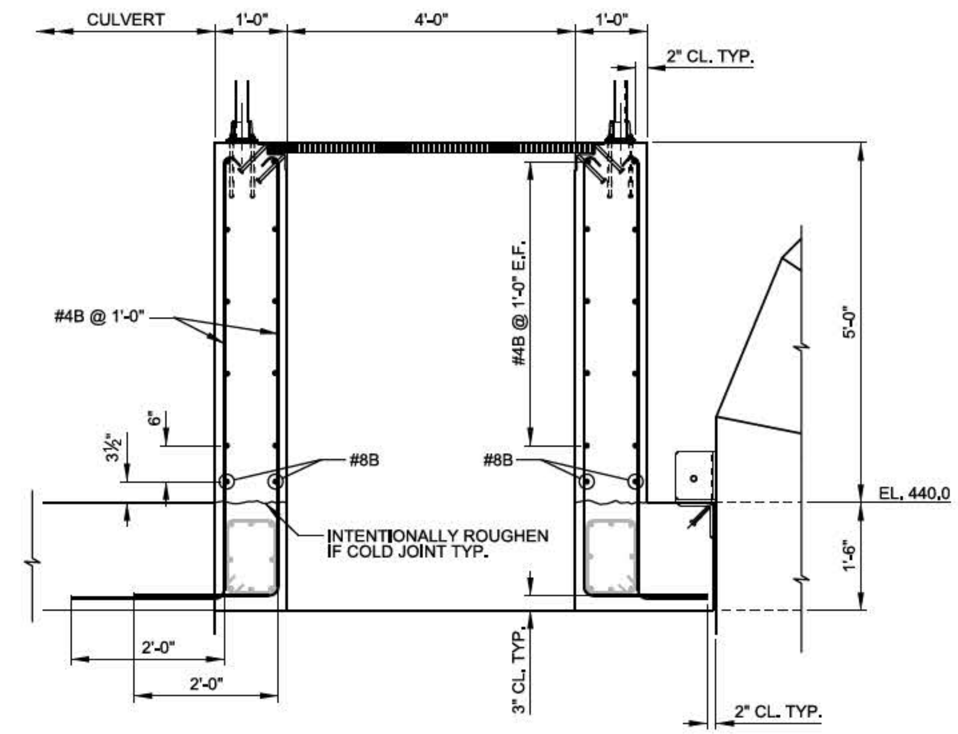
Sheet ID
S-103

AS-BUILT

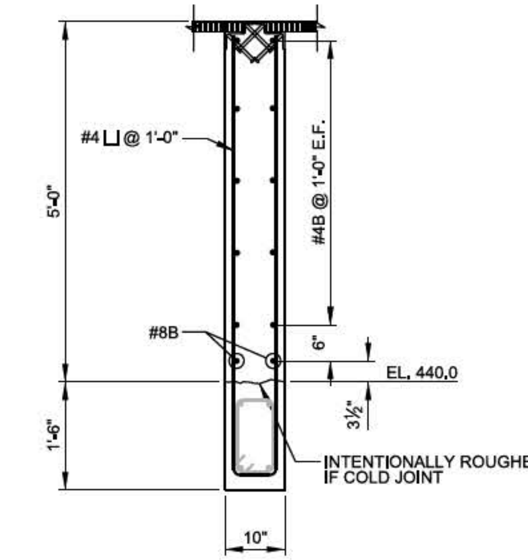
c:\pw_working\mvrb5edd\lhd0153734\EP102_S-103.dgn
8/28/2018 3:15:57 PM
B5EDDLLH



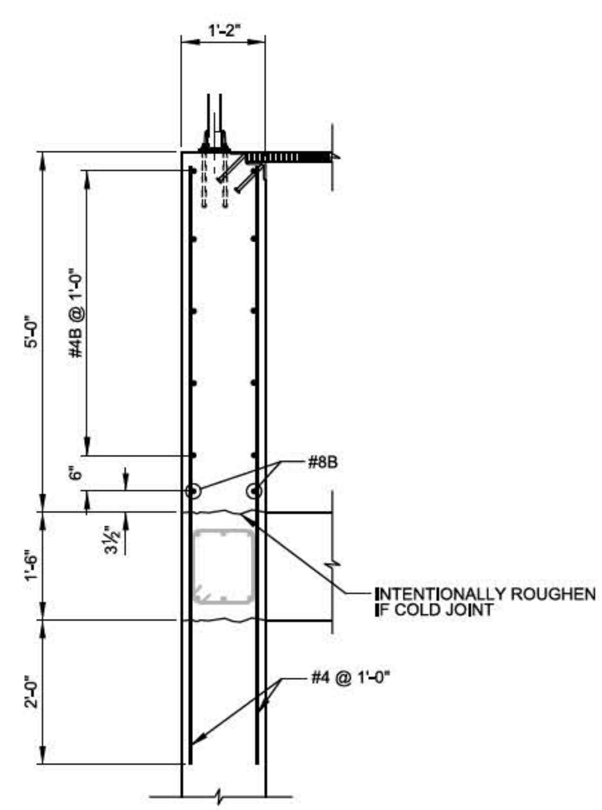
PLAN - SURGE BASIN WALLS △
½" = 1'-0"



SECTION △ (A)
3/4" = 1'-0"



SECTION △ (B)
3/4" = 1'-0"



SECTION △ (C)
3/4" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA005 - NEW SHEET ADDED, ADD SURGE BASIN WALLS, MODIFY PIPE OPENINGS. AS-BUILT AS OF 29 SEPTEMBER 2017	5/22/2012	CDD

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

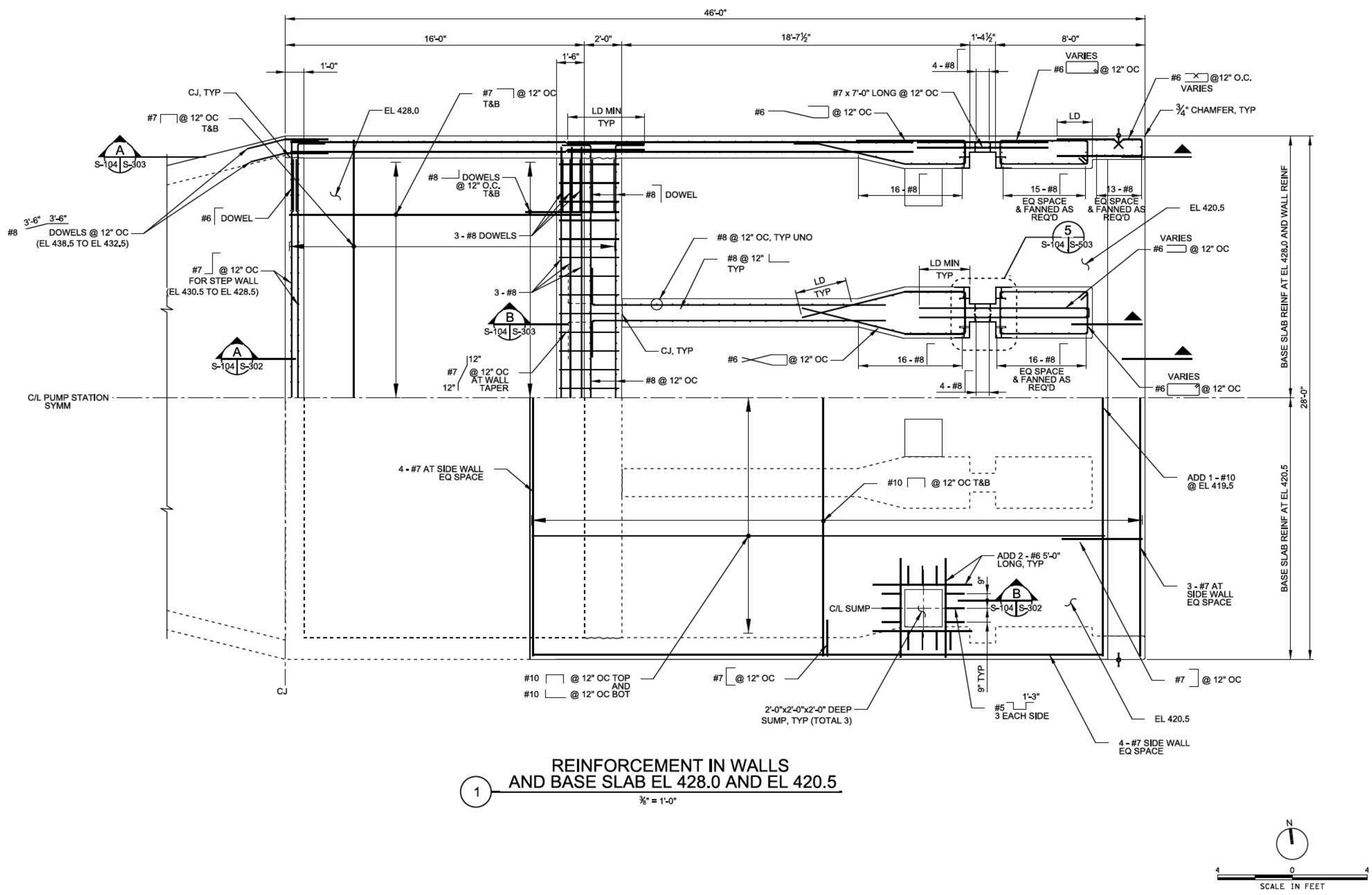
DESIGNED BY: KCP		DATE: 2011/06/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-103A.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
SURGE BASIN WALLS
REINFORCEMENT

Sheet ID
S-103A

c:\pw_working\mvr\b5edd\hd0153734\EP102_S-103A.dgn
8/28/2018 3:16:02 PM
B5EDDLLH

AS-BUILT



1 REINFORCEMENT IN WALLS AND BASE SLAB EL 428.0 AND EL 420.5

⅜" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: | DATE: 2017/09/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-14-C-0050 | PROJECT CODE: EP102 | PLOT SCALE: 3/8" = 1'-0" | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-104.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

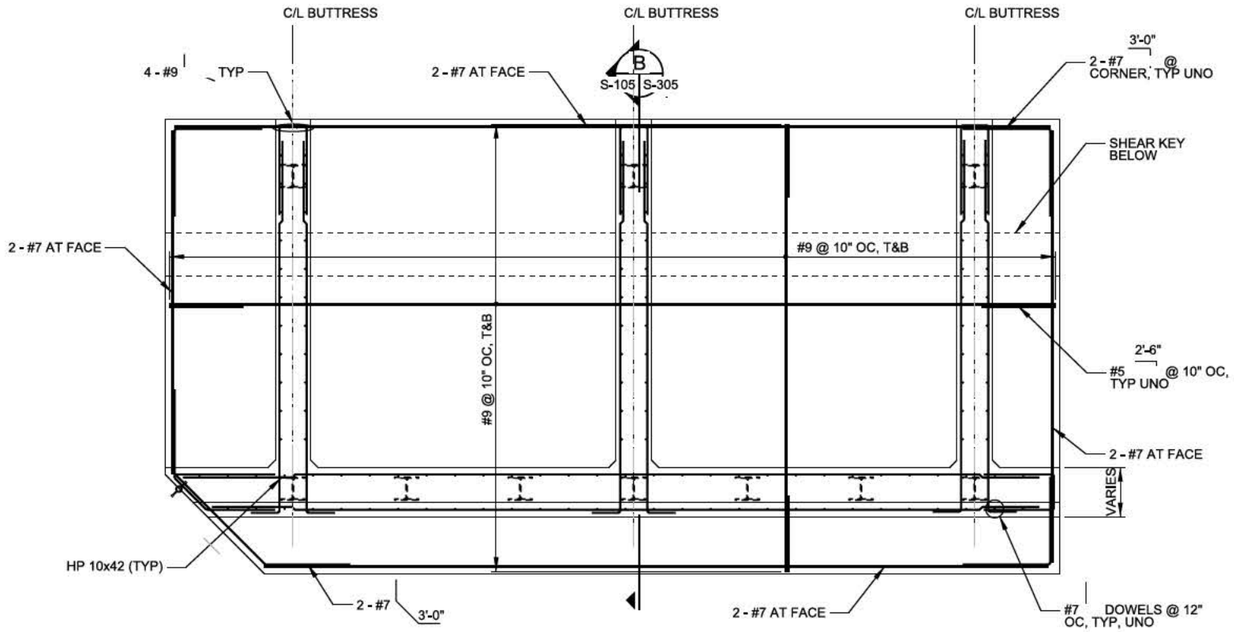
PUMP STATION
REINFORCEMENT
IN WALLS
AND BASE SLAB

Sheet ID
S-104

AS-BUILT

A-61

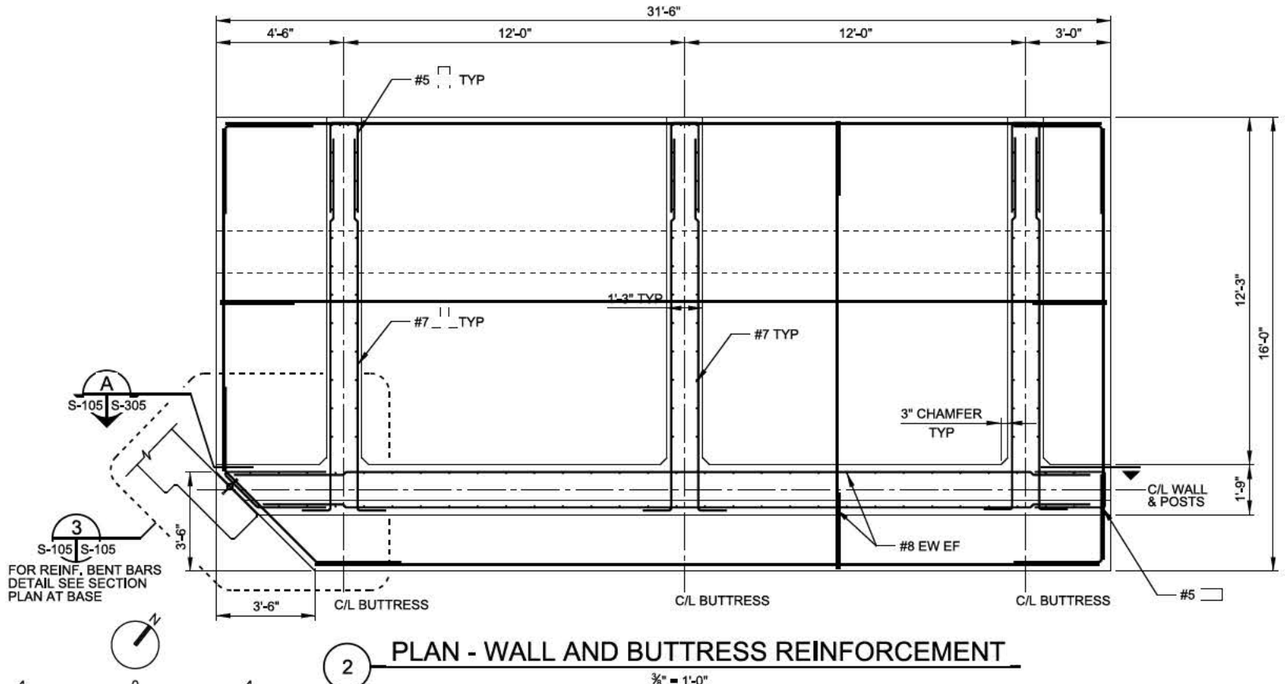
c:\pw_working\mvrb5edd\hld0153734\EP102_S-104.dgn
8/28/2018 3:16:15 PM
B5EDDLLH



1 PLAN - BASE SLAB REINFORCEMENT

3/8" = 1'-0"

NOTE: EAST WING WALL AS SHOWN, WEST WING WALL OPPOSITE.

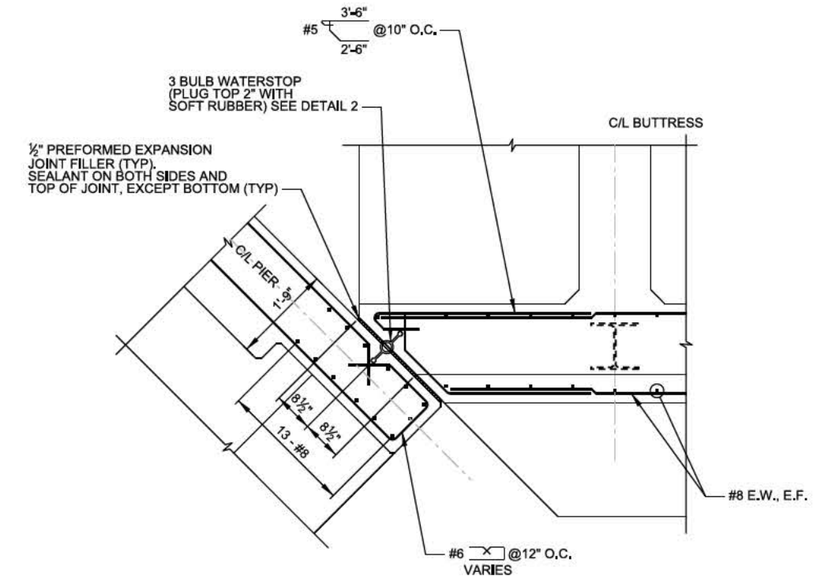


2 PLAN - WALL AND BUTTRESS REINFORCEMENT

3/8" = 1'-0"

NOTE: EAST WING WALL AS SHOWN, WEST WING WALL OPPOSITE.

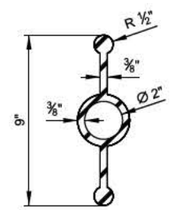
H-PILES NOT SHOWN FOR CLARITY.



3 SECTION PLAN AT BASE

S-105 S-105

3/4" = 1'-0"



DETAIL-3 BULB WATERSTOP

3" = 1'-0"

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION
			USACE 7 AS OF 29 SEPTEMBER 2017

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

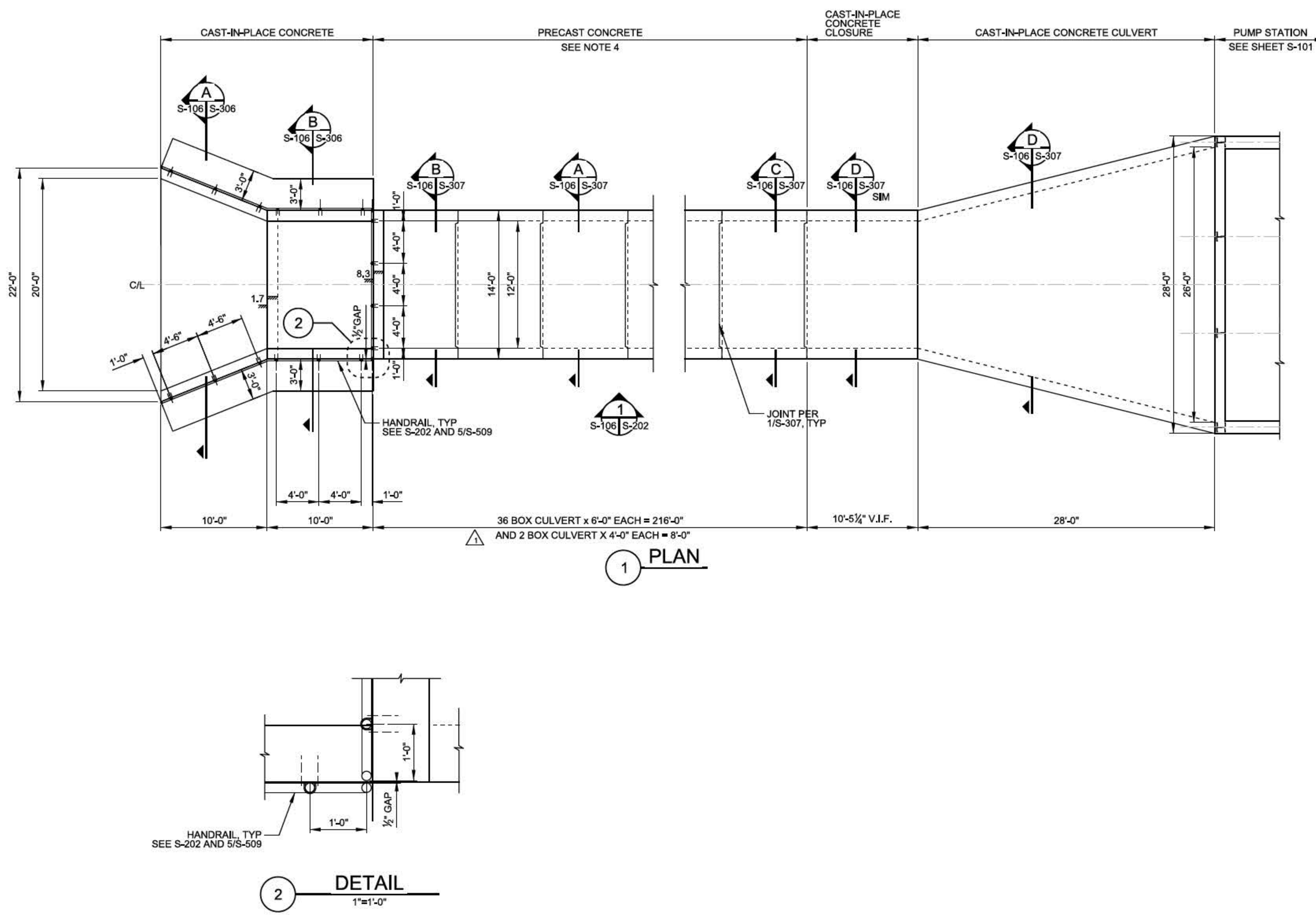
DESIGNED BY: KDP
DWN BY: NPP
CKD BY:
SUBMITTED BY: FRJ
DATE: 20170630
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-14-C-0080
PROJECT CODE: EP102
PLOT SCALE: 1.40"
PLOT DATE:
SIZE: ANSI D
FILE NAME: EP102_S-105.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
REINFORCEMENT
IN WING WALLS
AND BASE SLAB

Sheet ID
S-105

AS-BUILT
A-62



NOTES:

1. REFER TO C-220 FOR ALL ELEVATIONS.
2. # INDICATES DROP IN ELEVATIONS, WITH DIMENSIONS IN FEET.
3. ○ DENOTES BEND OR ELBOW OF HANDRAIL
   DENOTES HANDRAIL POST WITH ATTACHMENT TO SLAB/STAIR
4. CONTRACTOR MAY SUBMIT PRECAST CONCRETE CULVERT IN ACCORDANCE WITH ASTM C1433 FOR GOVERNMENT APPROVAL.

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: FRJ | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-106.dgn
DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-11-C-0060 | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DISCHARGE STRUCTURE AND CULVERT PLAN

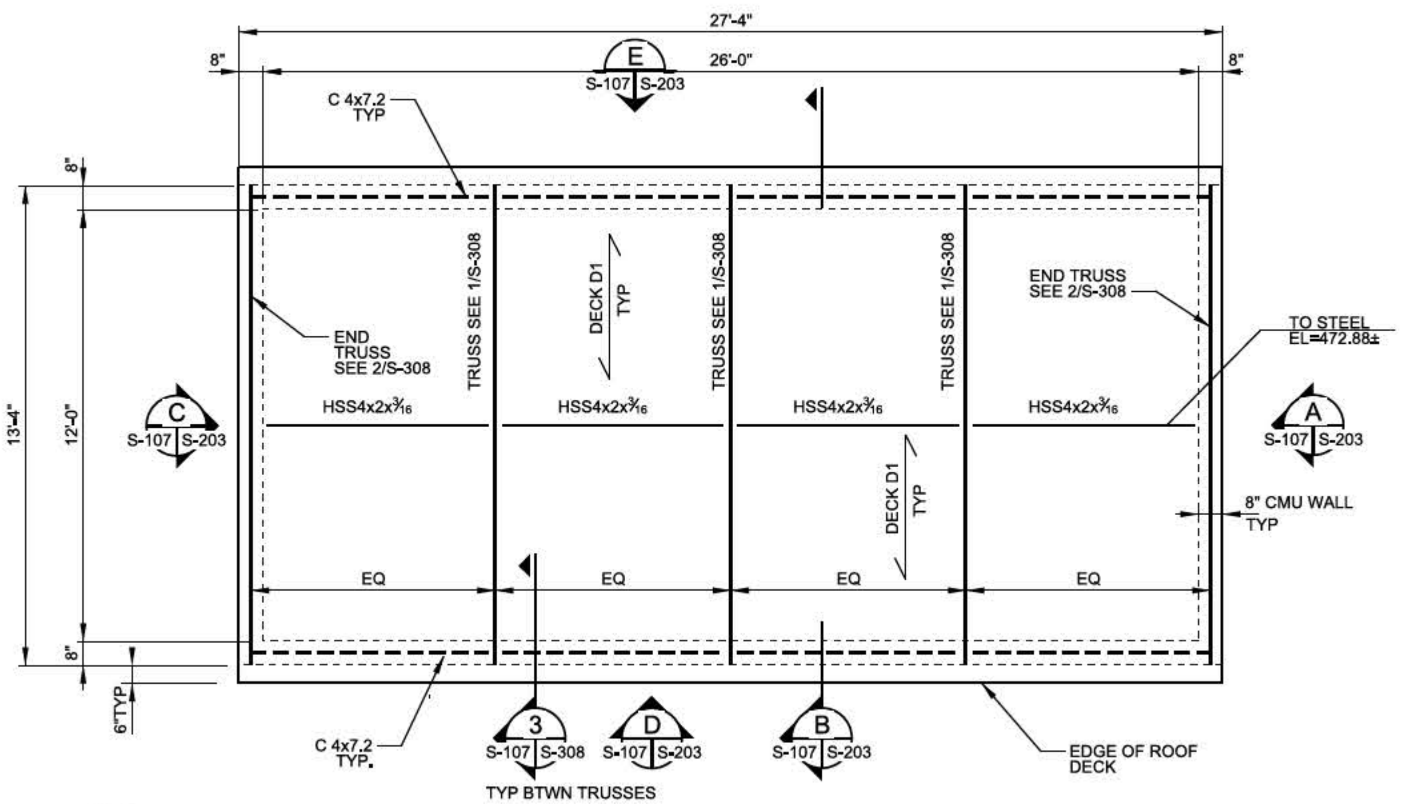
Sheet ID
S-106

c:\pw_working\mvrb5eddl\hd0153734\EP102_S-106.dgn
8/28/2018 3:16:24 PM
B5EDDLLH

AS-BUILT

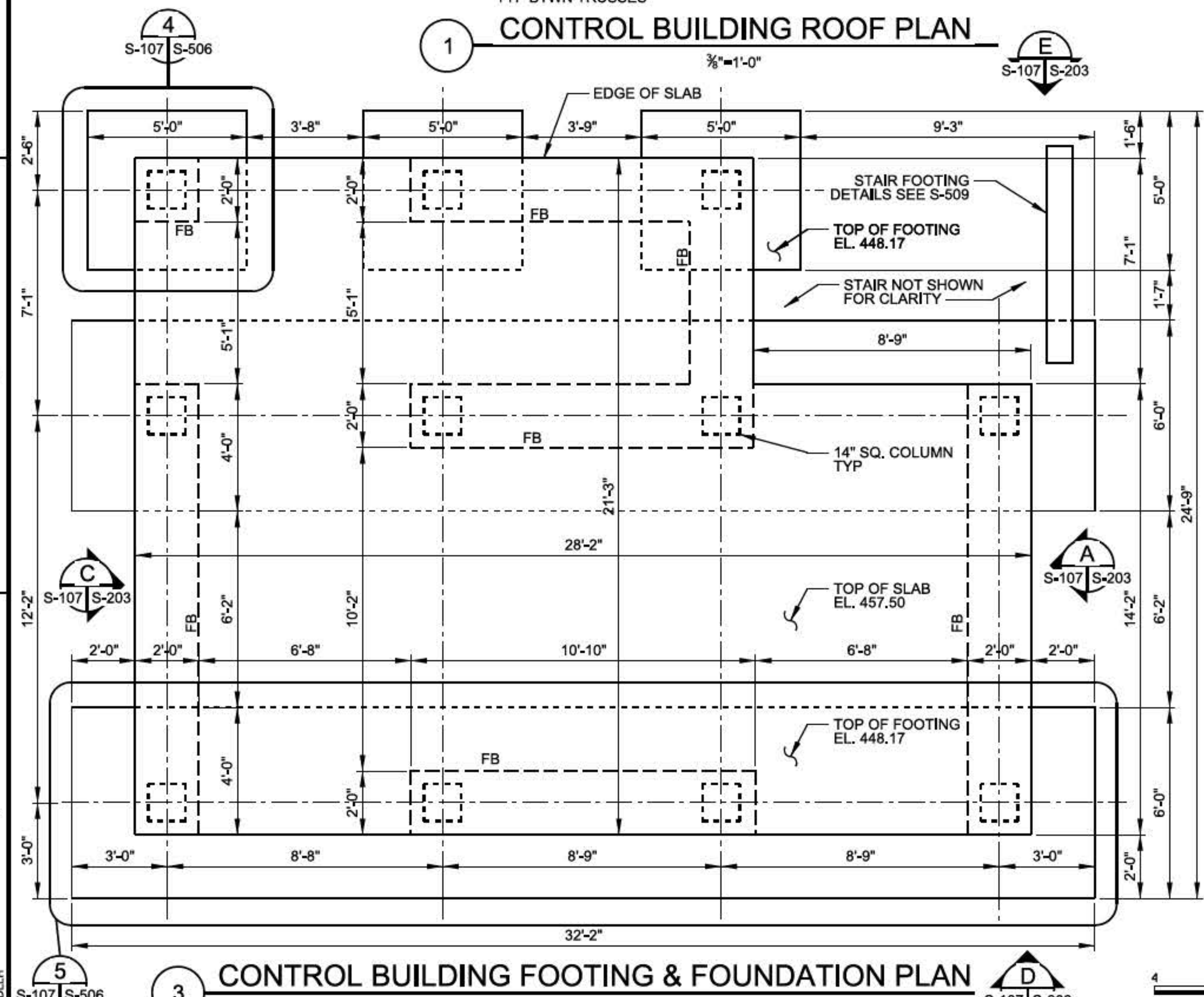
NOTES;

1. SEE SHEET S-001 FOR GENERAL NOTES.
2. D1 INDICATE METAL DECK TYPE, SEE SHEET S-308.
3. FB DENOTES FRAME BEAM, SEE SHEET S-510.
4. FOR TRUSS PROFILE, SEE SHEET S-308.
5. MAXIMUM SPACING FOR HANDRAIL POSTS NOT TO EXCEED 5'-0".
6. PROVIDE (2) #8 TOP AND BOTTOM AT ALL EDGES OF FLOOR SLAB.
7. o DENOTES BEND OR ELBOW OF HANDRAIL
   DENOTES HANDRAIL POST WITH ATTACHMENT TO SLAB/STAIR.



1 CONTROL BUILDING ROOF PLAN

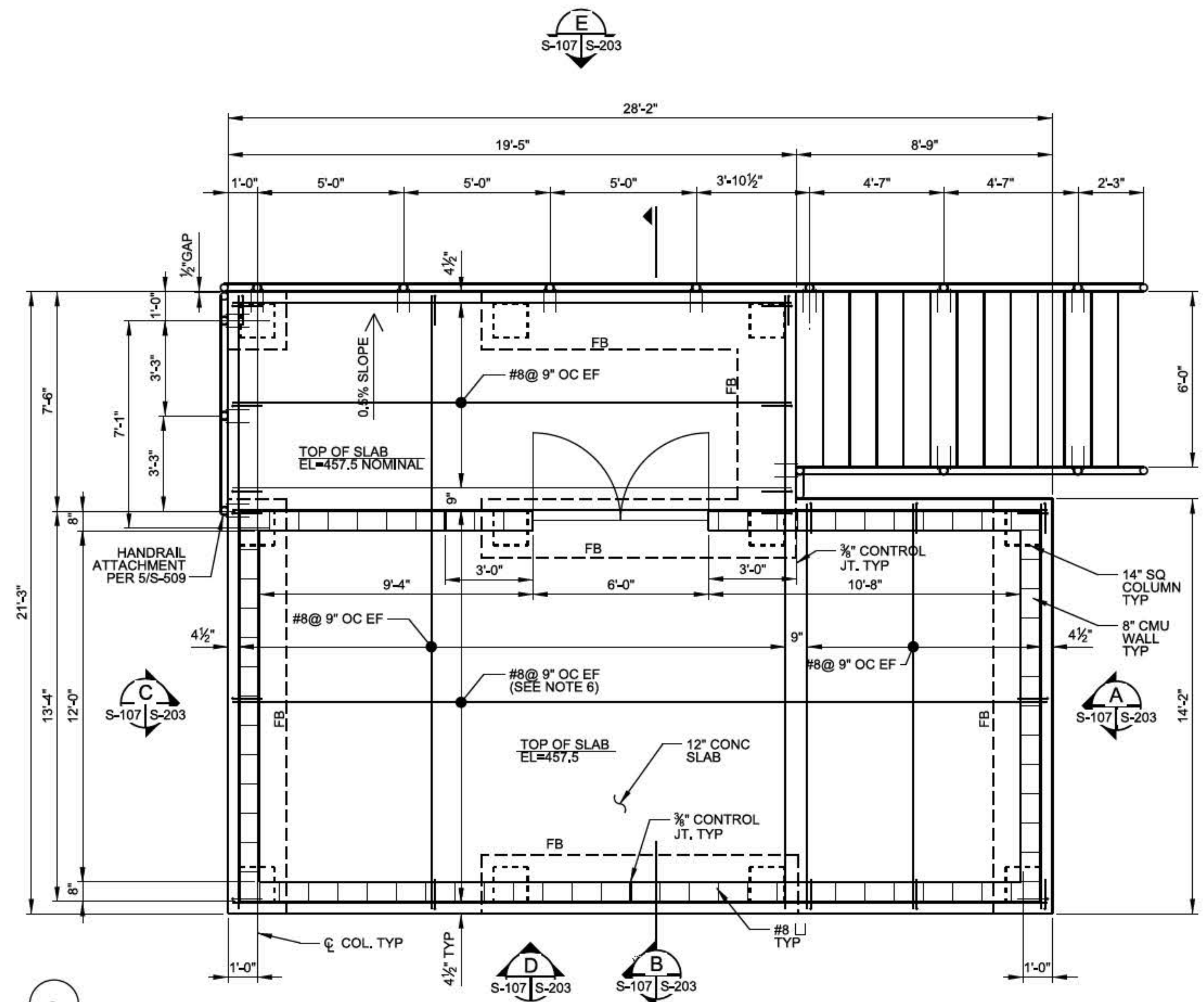
3/8"=1'-0"



3 CONTROL BUILDING FOOTING & FOUNDATION PLAN

3/8"=1'-0"

SCALE IN FEET



2 CONTROL BUILDING FOUNDATION PLAN

3/8"=1'-0"

US Army Corps of Engineers

MARK | DESCRIPTION | DATE | APPR.

AS-BUILT AS OF 29 SEPTEMBER 2017

DESIGNED BY: KCP | DATE: 2017/09/20 | SOLICITATION NO.: W912EK-11-R-2029
DWN BY: NPP | CKD BY: | CONTRACT NO.: W912EK-11-C-0026
SUBMITTED BY: | PROJECT CODE: EP102
PLOT SCALE: 3/8"=1'-0" | PLOT DATE: | FILE NAME: EP102_S-107
SIZE: ANSI D

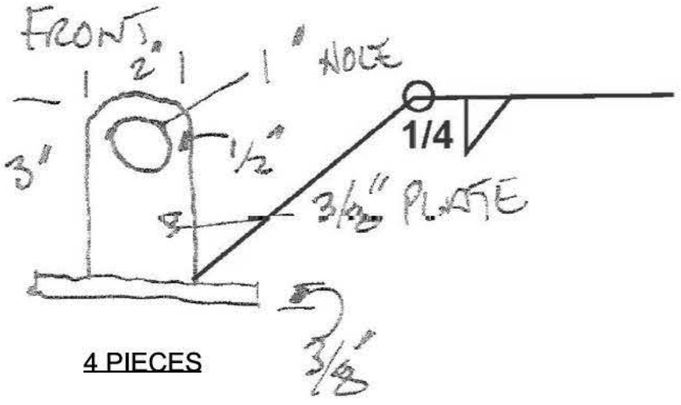
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
CONTROL BUILDING PLAN

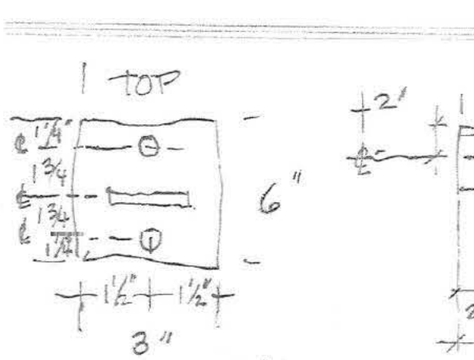
Sheet ID
S-107

c:\pw_working\mvrb5edd\lhd01537340\EP102_S-107.dgn
8/28/2018
3:16:28 PM
B5EDDLLH

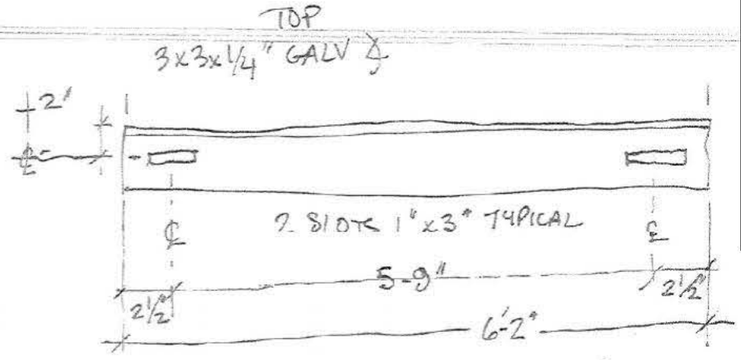
AS-BUILT
A-64



4 PIECES

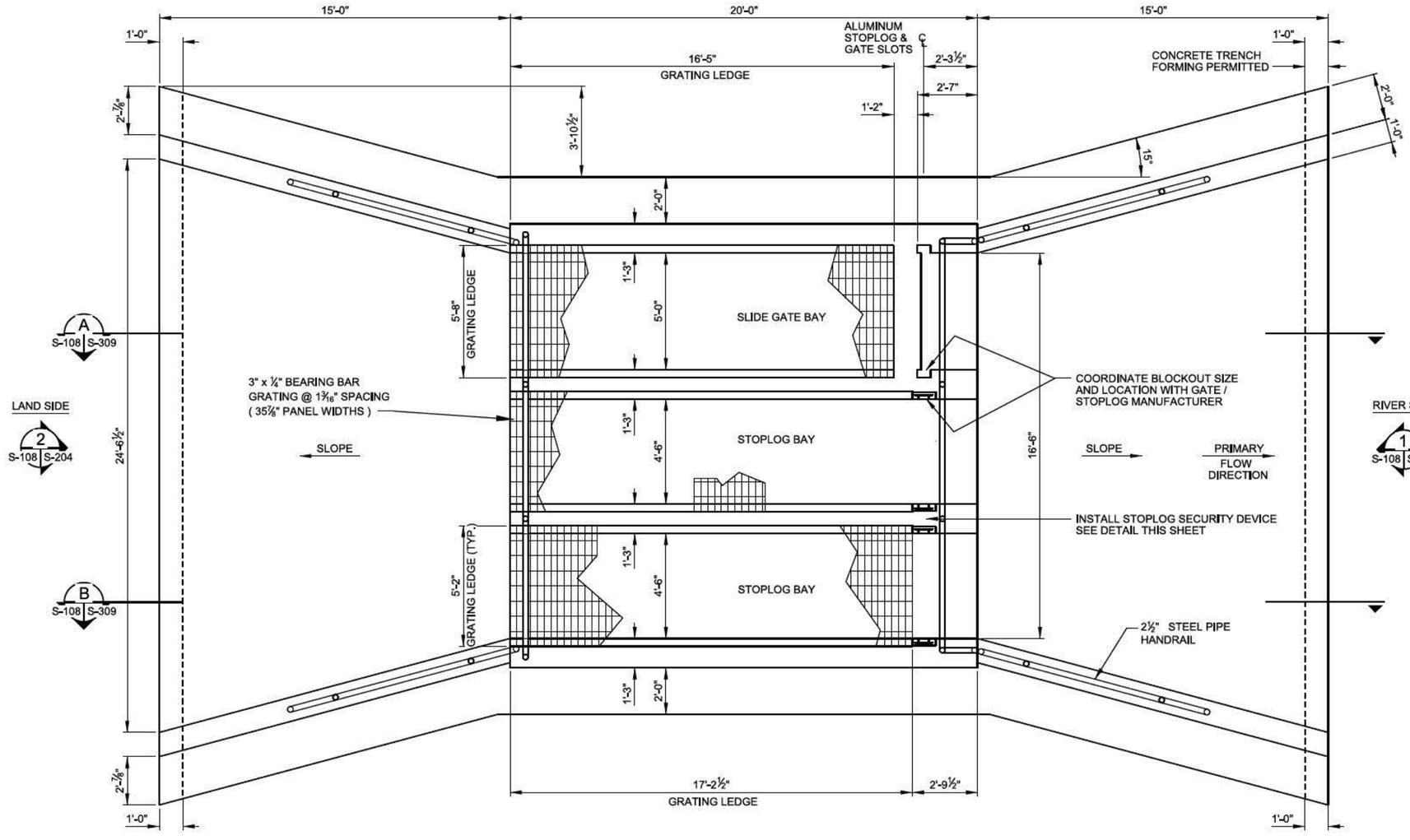


TWO 7/8" ø HOLES
TWO 3/4x4 EXPANSION BOLTS



2 PIECES

STOPLOG SECURITY DEVICE DETAIL



PLAN

SCALE IN FEET 4 0 4

GENERAL NOTES

1. THE STOPLOG SECURITY DEVICE SHALL BE FABRICATED FROM GALVANIZED ASTM A36 STEEL CONFORMING TO SPECIFICATION SECTION 05 12 00.
2. THE ANCHOR BOLT HOLES IN THE CONCRETE FOR THE STOPLOG SECURITY DEVICE SHALL BE FILLED WITH EPOXY PRIOR TO INSTALLATION OF THE BOLTS.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	SCALE: 1 AS OF 29 SEPTEMBER 2017		

DESIGNED BY: CDO
DWN BY: DGP
SUBMITTED BY: FRJ
CKD BY:
PLOT SCALE: AS SHOWN
PLOT DATE:
FILE NAME: EP102_S-108.dgn
DATE: 2011/05/30
SOLICITATION NO.: W912EK-11-S-0029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODE: EP102

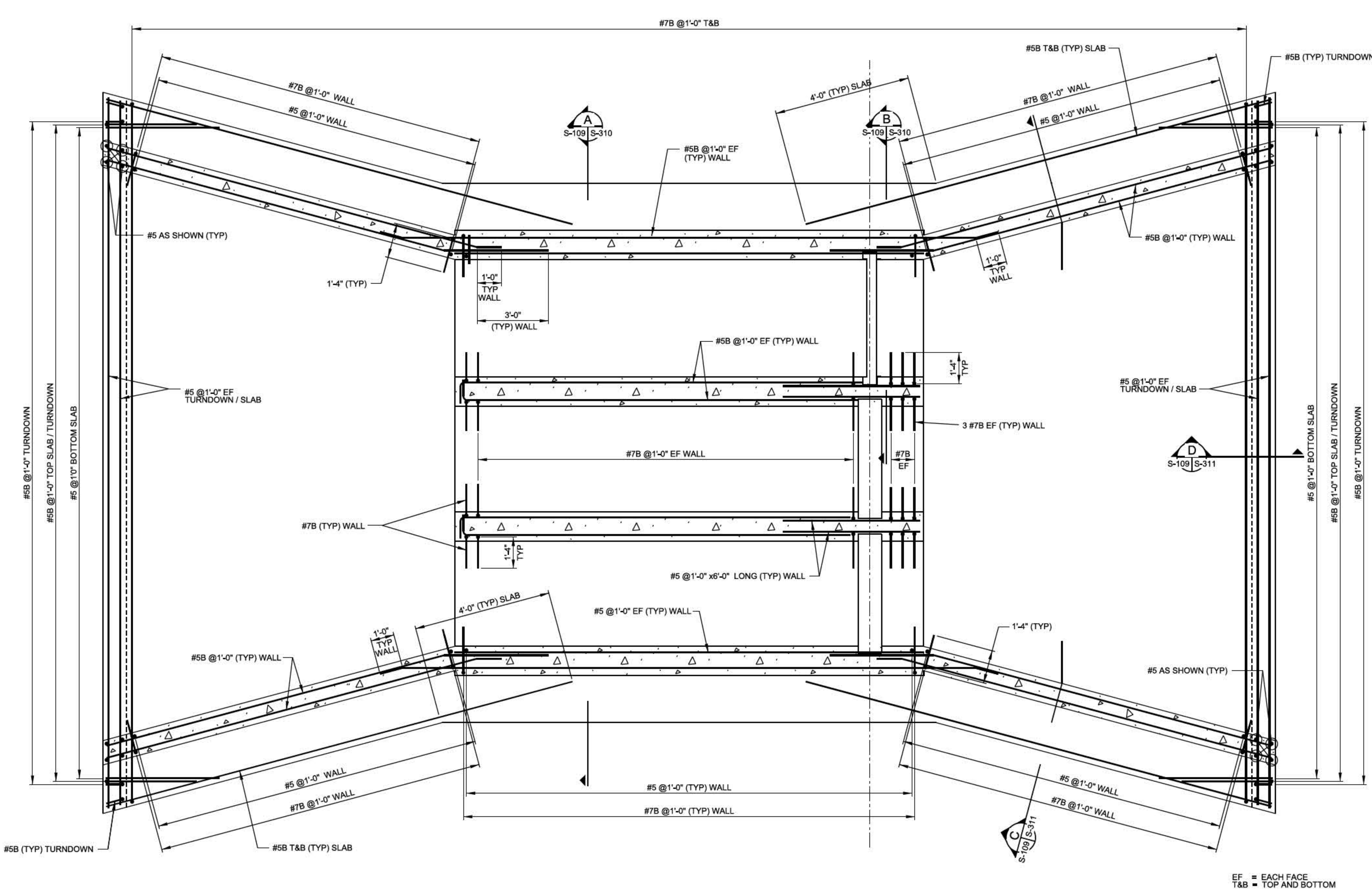
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

OUTLET STRUCTURE
PLAN

Sheet ID
S-108

AS-BUILT
A-65



SECTION @ EL 432.0 FT

SCALE IN FEET 4 0 4

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

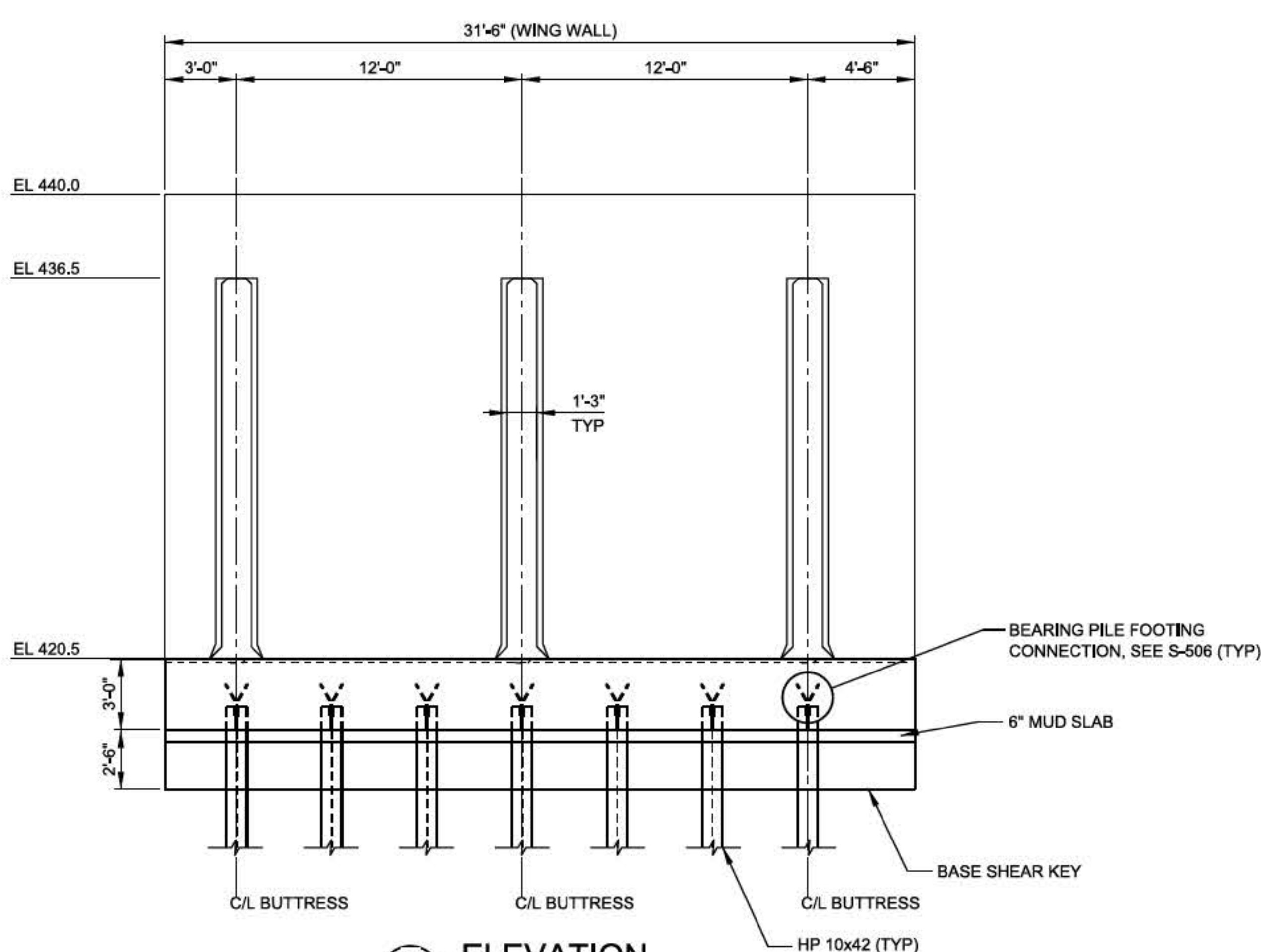
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: CDD		DATE: 2011/06/30
DWN BY: DGP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-109.dgn	

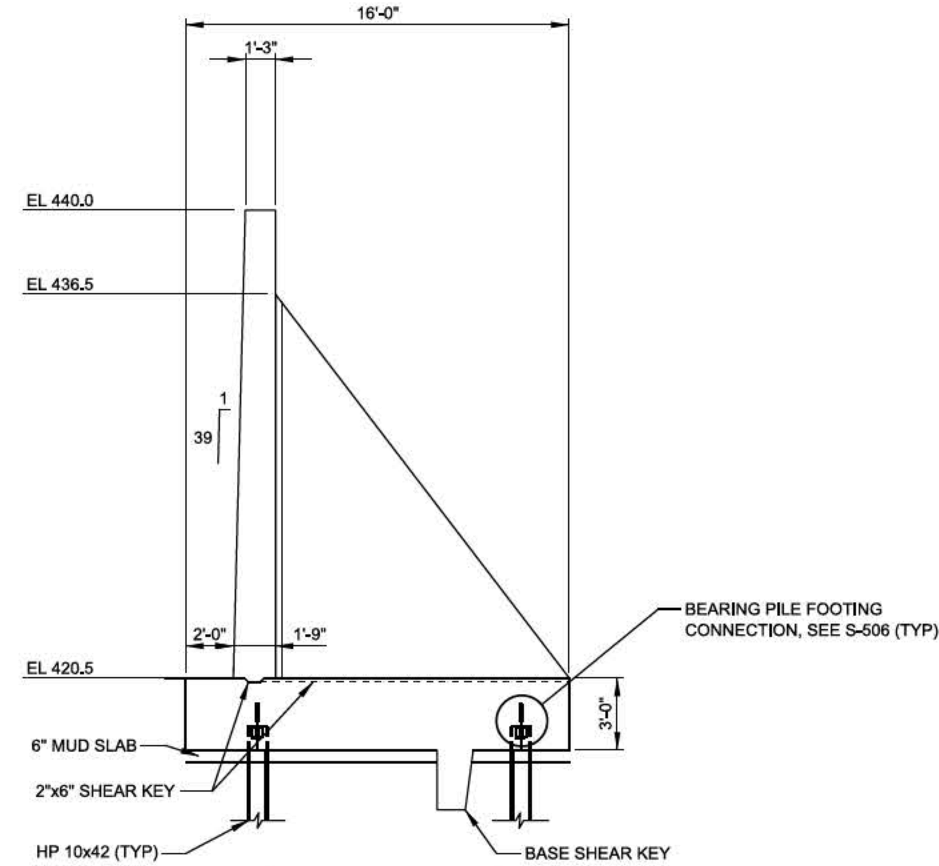
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
OUTLET STRUCTURE
CONCRETE
REINFORCEMENT
PLAN

Sheet ID
S-109

AS-BUILT
A-66



1 ELEVATION
S-102 | S-201 ¼" = 1'-0"



2 SIDE ELEVATION
S-102 | S-201 ¼" = 1'-0"

4 0 4 8
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

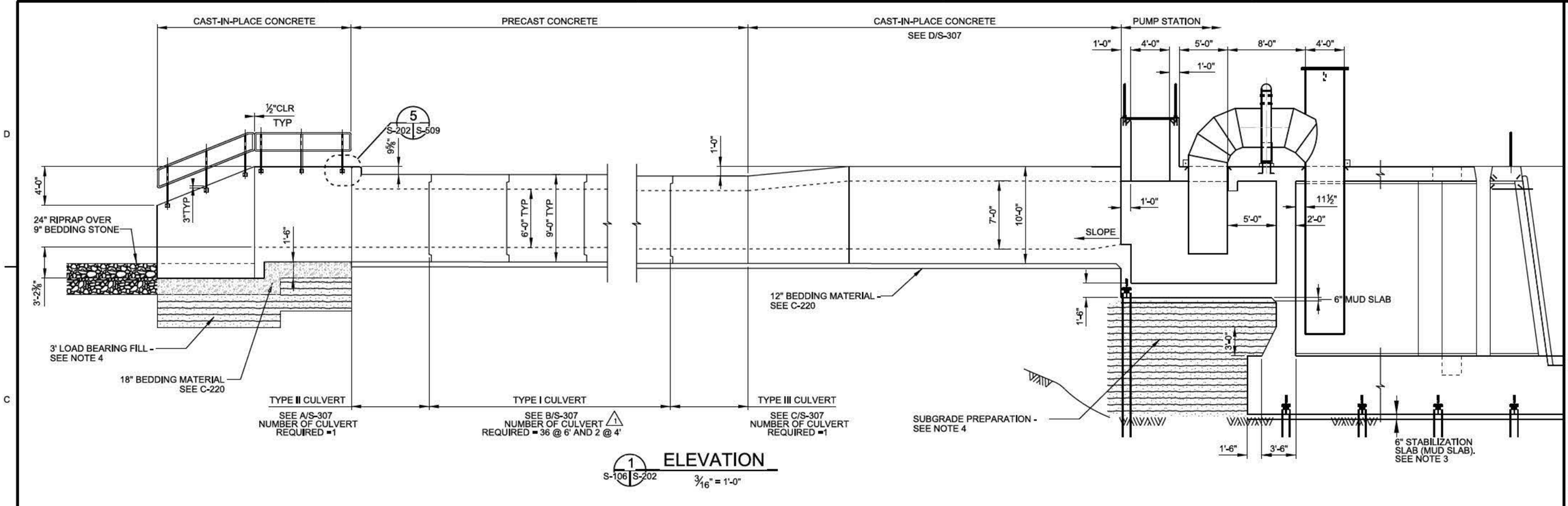
DESIGNED BY: KCP		DATE: 2011/09/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0080
PLOT SCALE: 1/4" = 1'-0"	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-201.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
WING WALL ELEVATIONS

Sheet ID
S-201

AS-BUILT
A-67

c:\pw_working\mvrb5eddlh\d0153734\EP102_S-201.dgn
8/28/2018 3:16:59 PM
B5EDDLLH



1 S-106 | S-202 **ELEVATION**

3/16" = 1'-0"

NOTES:

1. REFER TO C-220 FOR ELEVATIONS.
2. REFER TO C-220 FOR BEDDING REQUIREMENTS.
3. STABILIZATION SLAB OR MUD SLAB CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 2500 PSI AT 28 DAYS OR 90 DAYS IF POZZOLAN IS USED. THE MUD SLAB SHALL HAVE WATER CEMENT (W/C) RATIO OF 0.60.
4. FOR COMPACTION AND LOAD BEARING SUBGRADE PREPARATION SEE SPEC. SECTION 31-00-3.6.

6 0 6 12
SCALE IN FEET

US Army Corps of Engineers®

APPR. | DATE | DESCRIPTION | MARK

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KDP
DWN BY: NPP
SUBMITTED BY: FRJ
CKD BY:
PLOT SCALE: 1'=2"
PLOT DATE:
DATE: 20110630
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-14-C-0066
PROJECT CODE: EP102
P.E. NAME: EP102_S-202.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DISCHARGE STRUCTURE AND CULVERT ELEVATION

Sheet ID
S-202

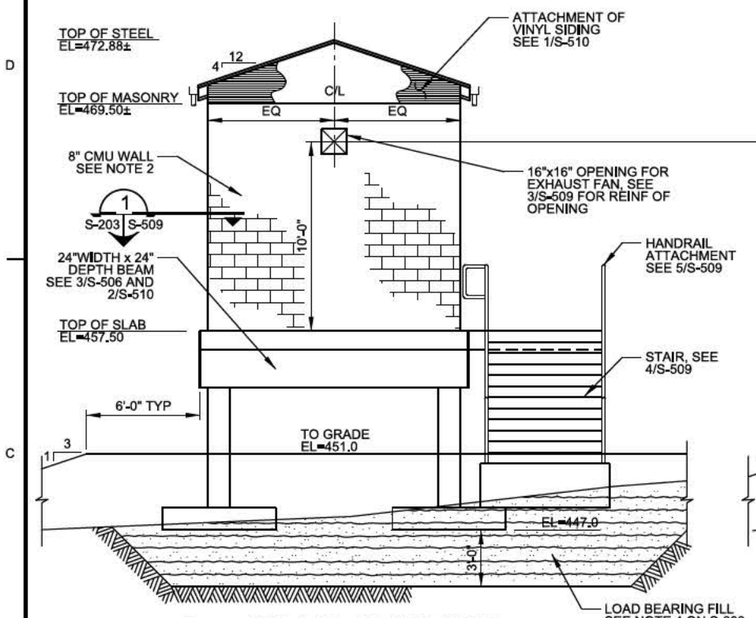
AS-BUILT
A-68

NOTES:

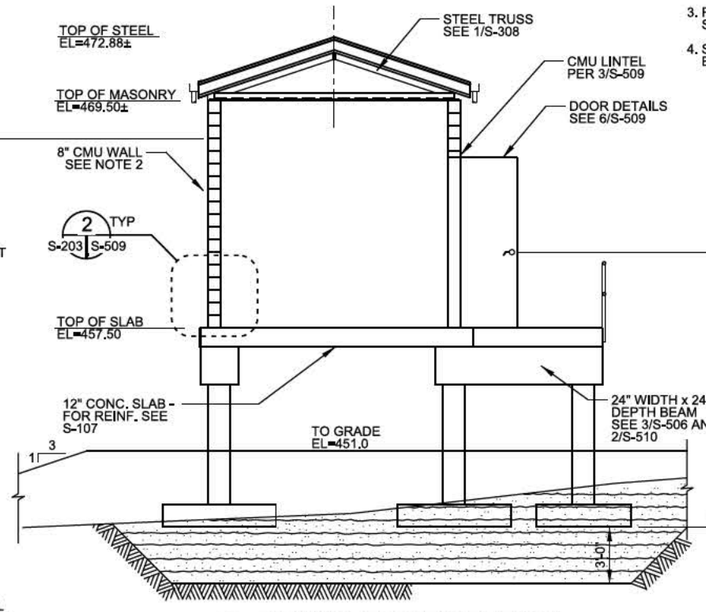
1. ALL CMU WALLS HAVE 8" THICKNESS TYPICAL. SEE SHEET S-509 FOR TYPICAL DETAILS.
2. TYPICAL WALL REINFORCEMENT : FOR HORIZONTAL USE STANDARD (W 1.7) WEIGHT TRUSS TYPE JOINT REINFORCEMENT AT 16" O.C AND FOR VERTICAL USE #5 @ 16" O.C (TYP)
3. FOR REINFORCEMENT AT WALL OPENINGS, SEE 3/S-509.
4. SEE MECHANICAL/ELECTRICAL DWGS FOR EQUIPMENT.

NOTES CONT:

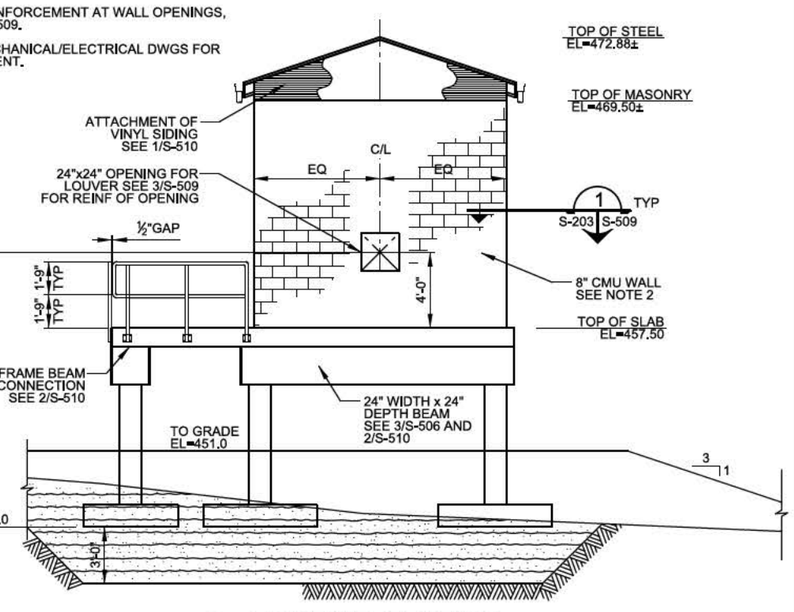
5. ATTACHMENTS OF DOOR LOUVER AND EXHAUST FAN ARE PER MANUFACTURERS, CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL.
6. ALL HANDRAIL MEMBERS ARE 2" NPS ALUMINUM SCHEDULE 40, UNO.



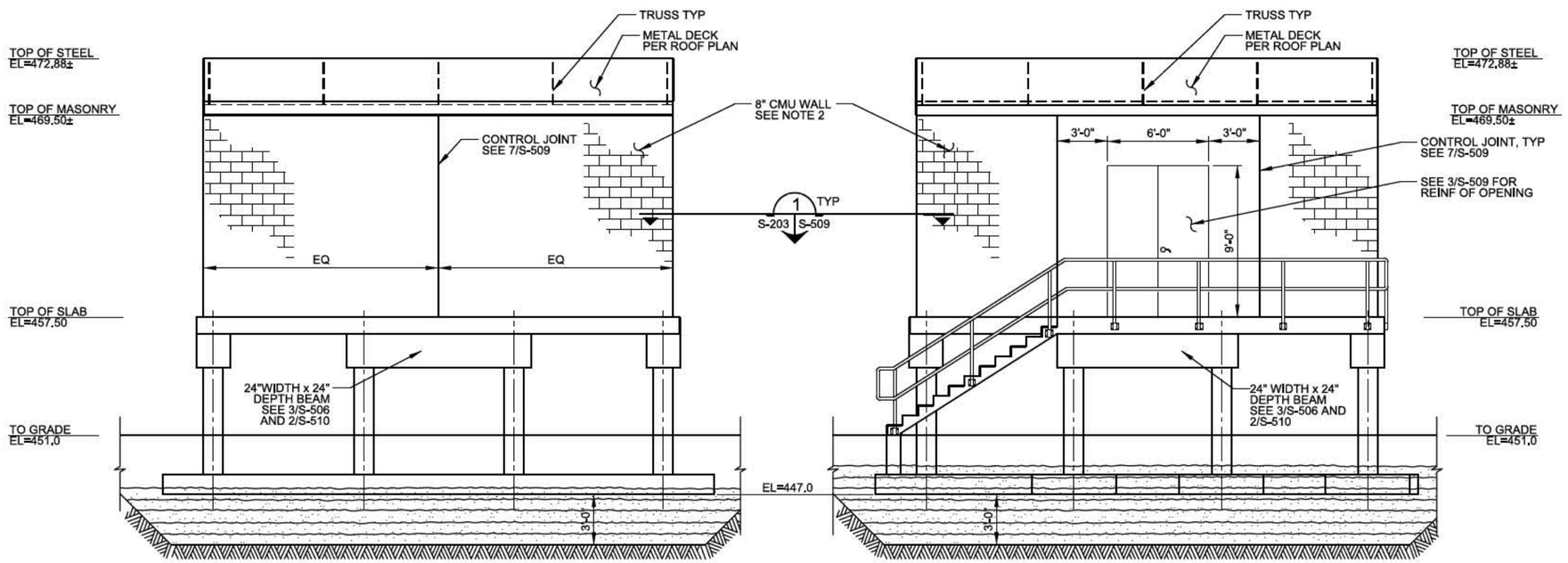
A SOUTH ELEVATION
S-107 S-203 ¼"=1'-0"



B TRANSVERSE SECTION
S-107 S-203 ¼"=1'-0"



C NORTH ELEVATION
S-107 S-203 ¼"=1'-0"



D WEST ELEVATION
S-107 S-203 ¼"=1'-0"

E EAST ELEVATION
S-107 S-203 ¼"=1'-0"

4 0 4 8
SCALE IN FEET

US Army Corps of Engineers®

APPR.
DATE
DESCRIPTION
MARK

DESIGNED BY: KDP
DRN BY: NPP
SUBMITTED BY: FRJ
DATE: 2011/09/30
CKD BY:
PLOT SCALE: 1/2" = 1'-0" ANSI D
PLOT DATE:
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-14-C-0080
PROJECT CODE: EP102
FILE NAME: EP102_S-203.dgn

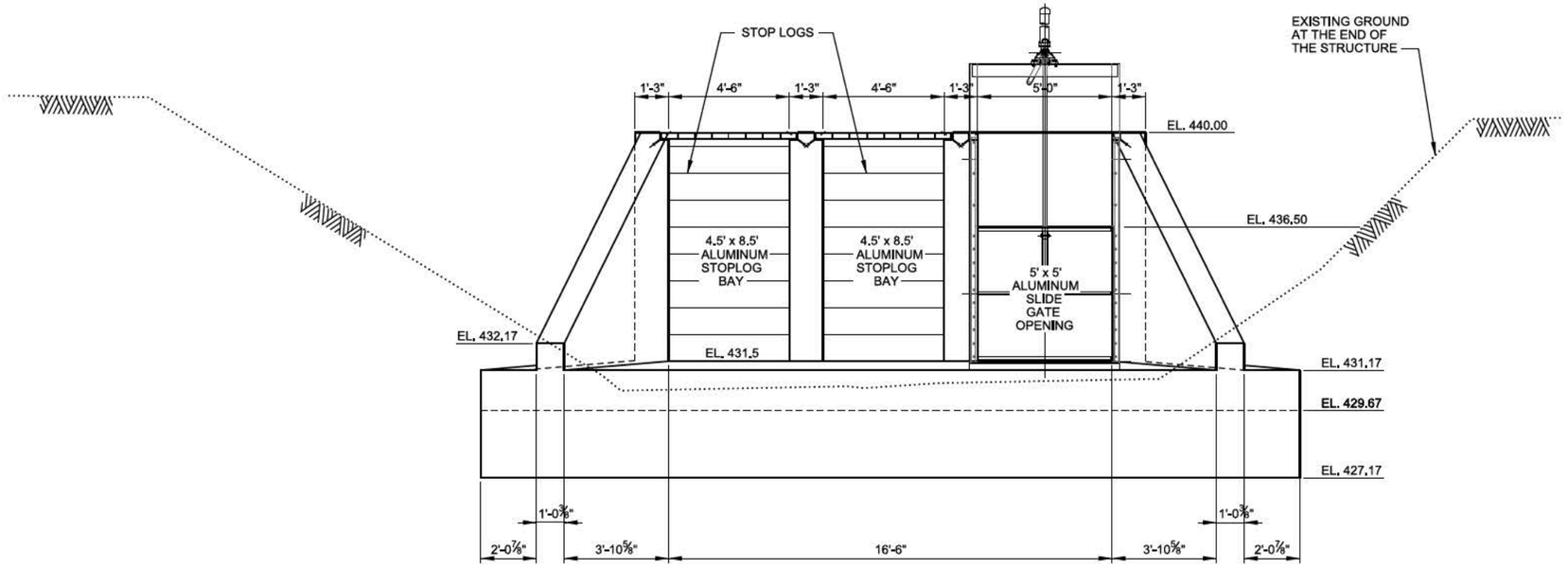
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

CONTROL BUILDING
ELEVATIONS
AND SECTION

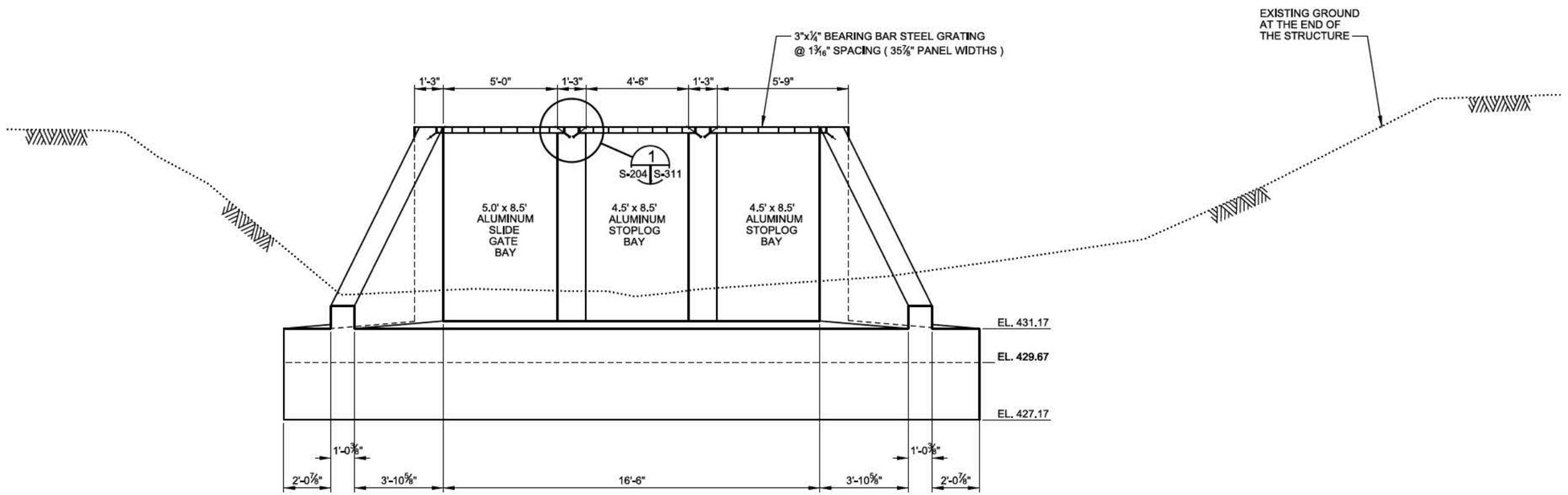
Sheet ID
S-203

AS-BUILT
A-69



1 S-108 S-204 **ELEVATION - RIVER SIDE**

4 0 4
SCALE IN FEET



2 S-108 S-204 **ELEVATION - LAND SIDE**

4 0 4
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	USACE 7 AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

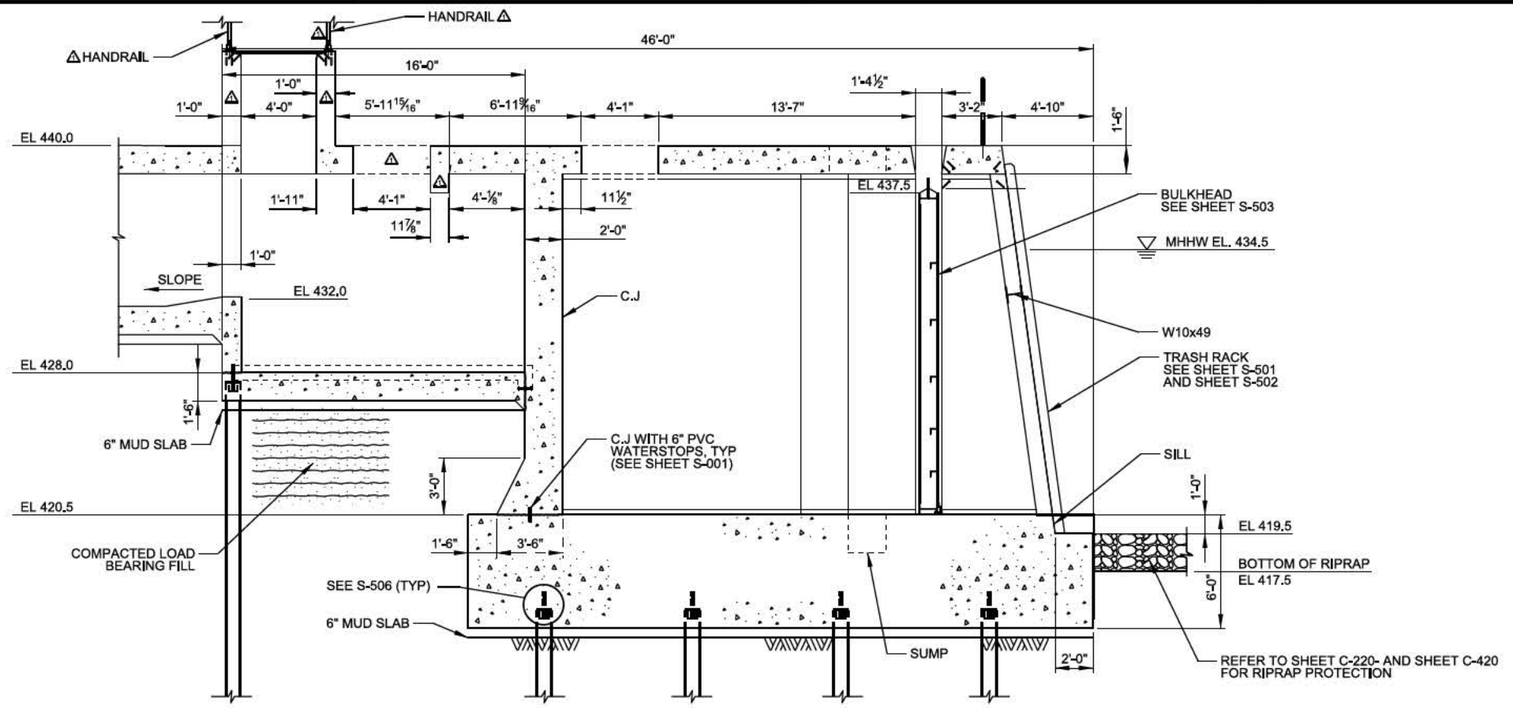
DESIGNED BY: CDD
DWN BY: DGP
CKD BY:
SUBMITTED BY: FRJ
PLOT SCALE: AS SHOWN
PLOT DATE: AS SIZED
DATE: 20110630
SOLICITATION NO.: W912EK-11-B-0029
CONTRACT NO.: W912EK-11-C-0080
PROJECT CODE: EP1102
FILE NAME: EP1102_S-204.dgn
ANSI D

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

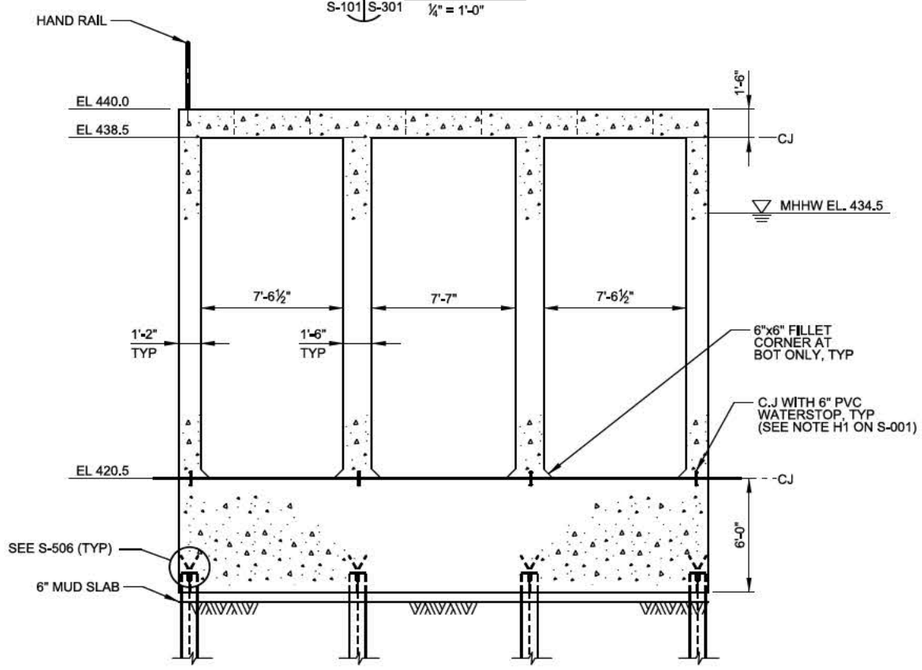
OUTLET STRUCTURE
ELEVATIONS

Sheet ID
S-204

AS-BUILT
A-70



A SECTION
S-101 S-301 ¼" = 1'-0"



B SECTION
S-101 S-301 ¼" = 1'-0"

4 0 4 8
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD BASIN - ADD SURGE BASIN WALLS AND HANDRAIL, MODIFY PIPE OPENINGS, ADD SLAB BEAM, AS-BUILT AS OF 29 SEPTEMBER 2017	9/22/2017	CDO

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KDP
DWN BY: NPP
CKD BY:
SUBMITTED BY: FRJ
PLOT SCALE: AS SHOWN
PLOT DATE:
SIZE: ANSI D
F.E. NAME: EP102_S-301.dgn

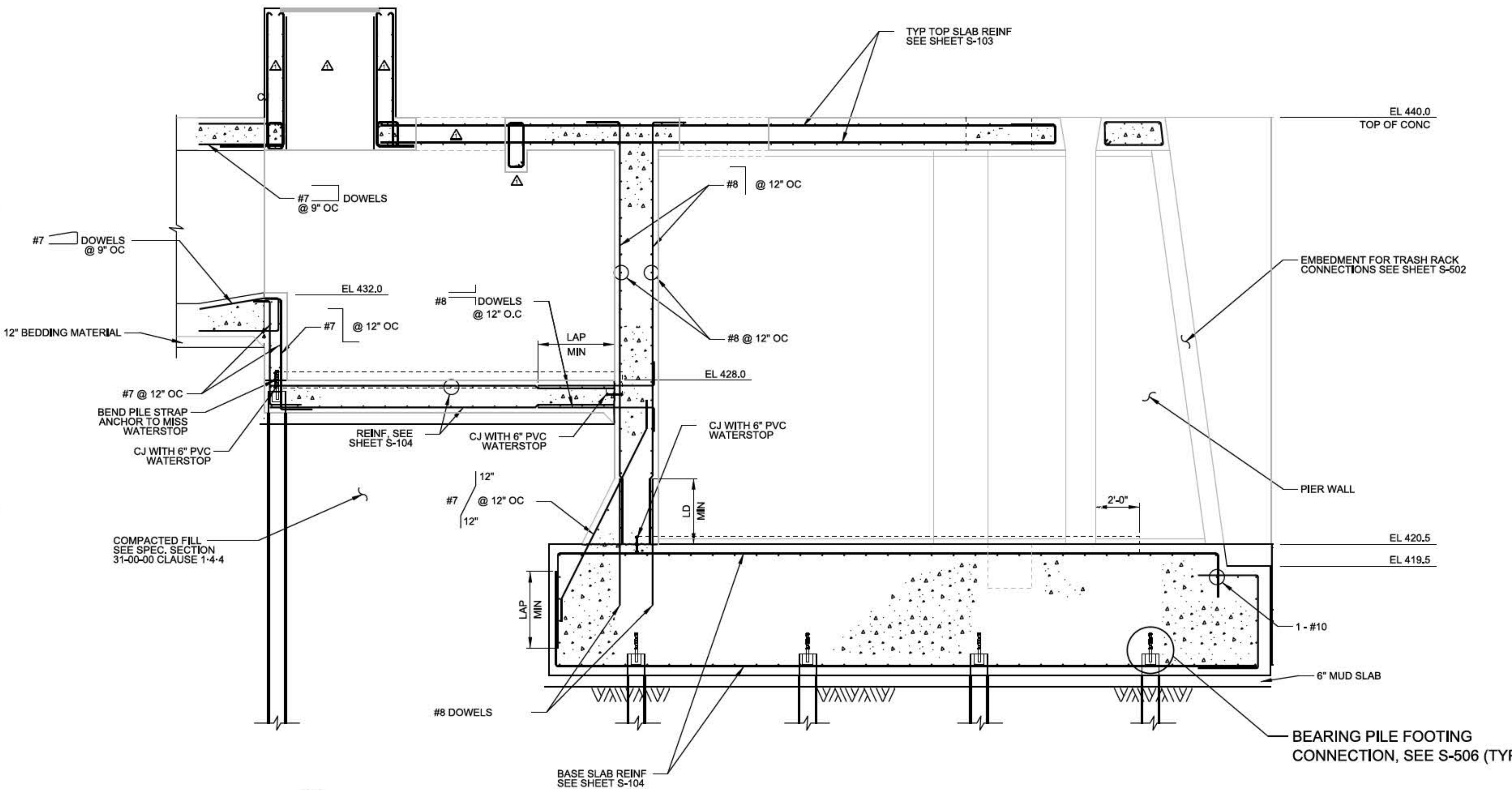
DATE: 20110630
SOLICITATION NO.: W912ER-11-R-0029
CONTRACT NO.: W912ER-14-C-0060
PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

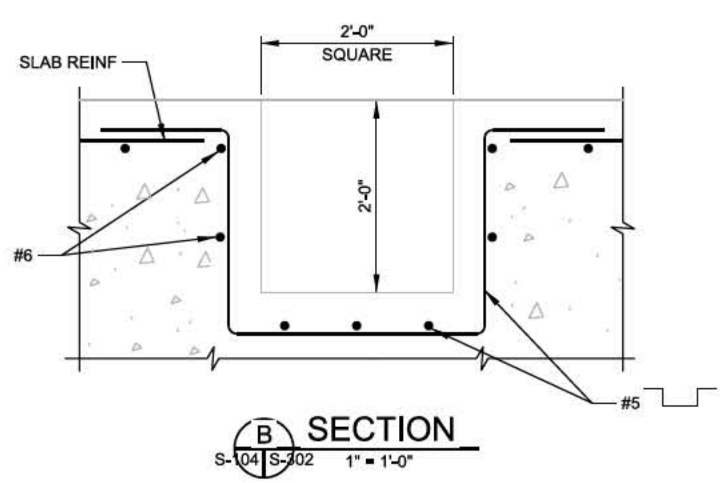
PUMP STATION
SECTIONS

Sheet ID
S-301

AS-BUILT
A-71



A SECTION
S-103, S-104 S-302 ¼" = 1'-0"



B SECTION
S-104 S-302 1" = 1'-0"

SCALE IN FEET (1 0 1 2)

SCALE IN FEET (4 0 4 8)

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA005 - ADD SURGE BASIN WALLS, MODIFY PIPE OPENINGS, ADD SLAB BEAM.	5/22/2012	CDD
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP		DATE: 2011/06/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-302.dgn	

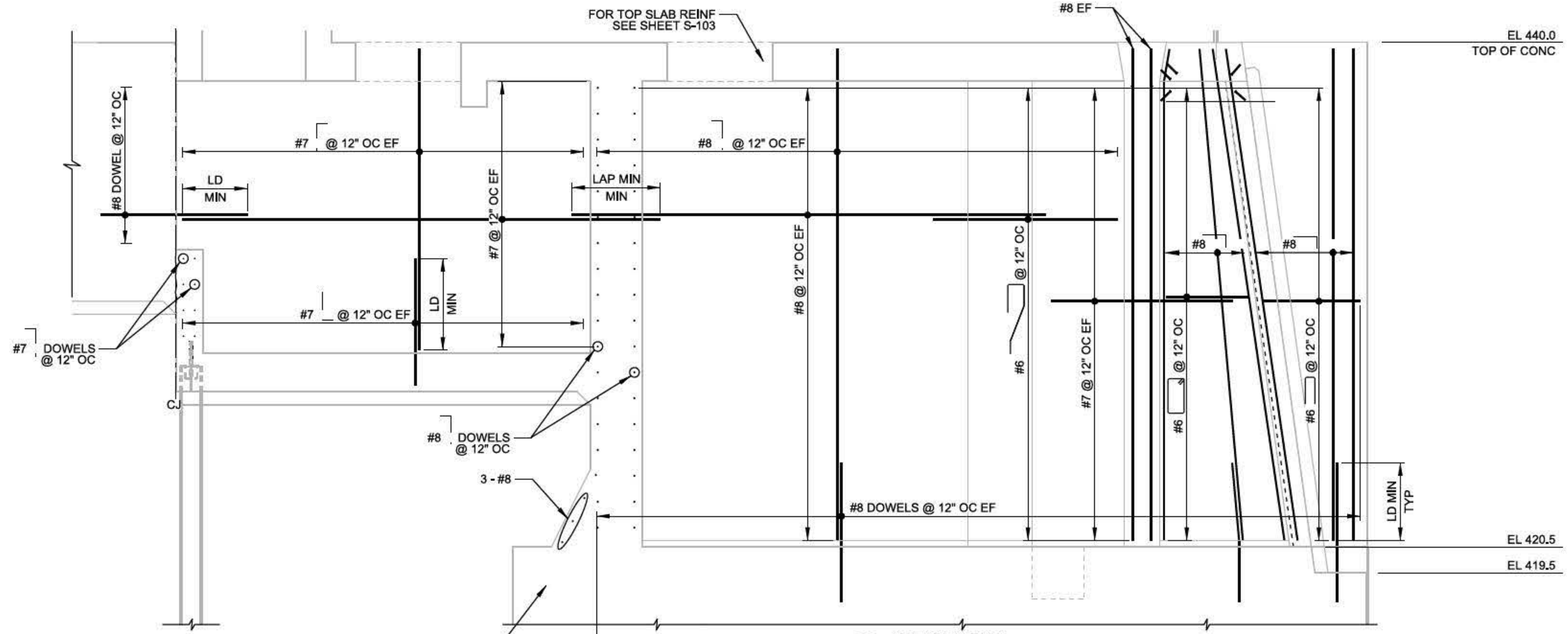
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
REINFORCEMENT

Sheet ID
S-302

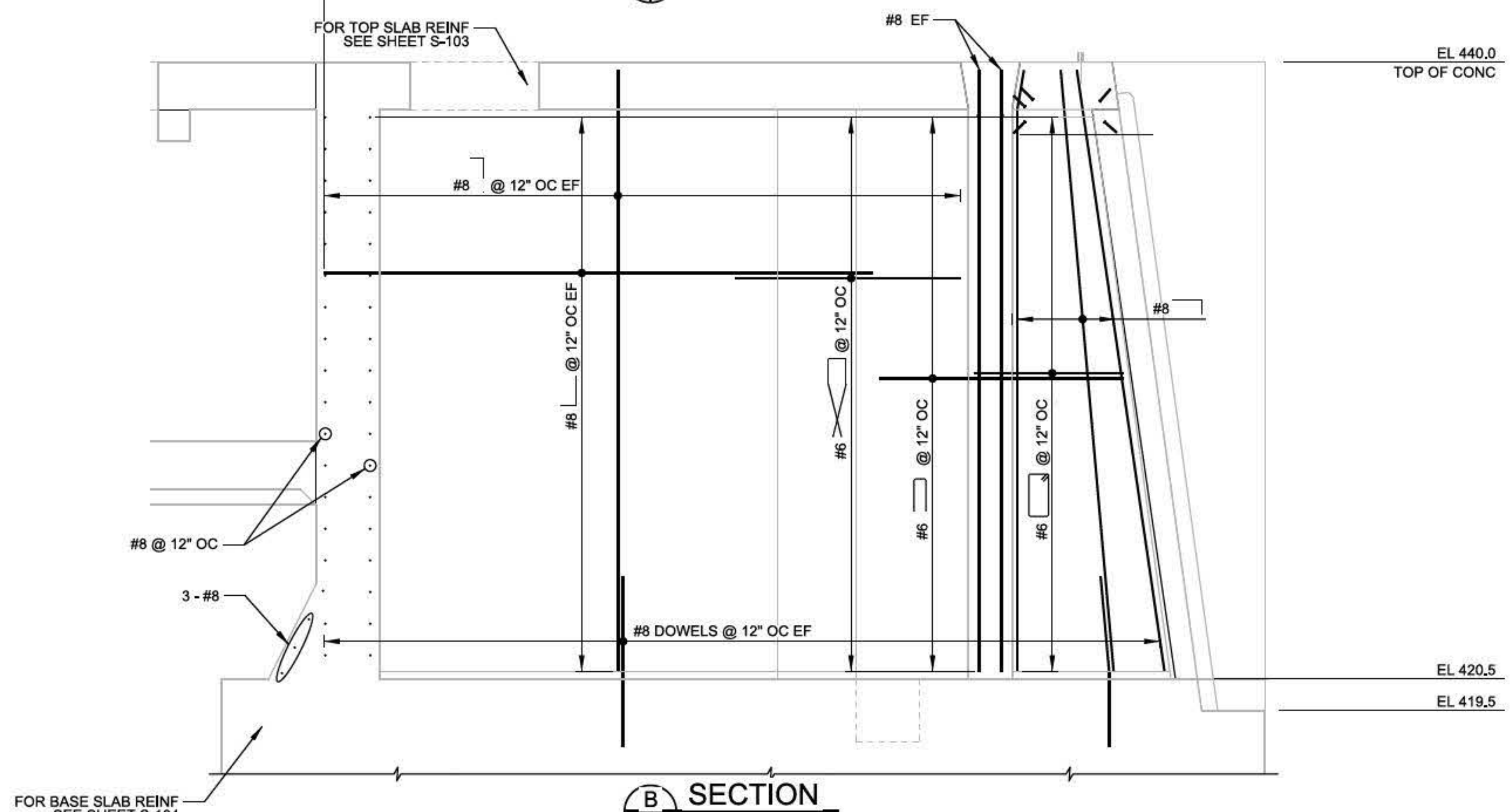
c:\pw_working\mvr\b5eddlh\d0153734\EP102_S-302.dgn
8/28/2018 3:17:29 PM
B5EDDLLH

AS-BUILT



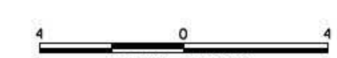
A SECTION

S-103, S-104 | S-303 ⅜" = 1'-0"



B SECTION

S-103, S-104 | S-303 ⅜" = 1'-0"



c:\pw_working\mvr\b5eddlhld0153734\EP102_S-303.dgn
8/28/2018
3:17:42 PM
B5EDDLLH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

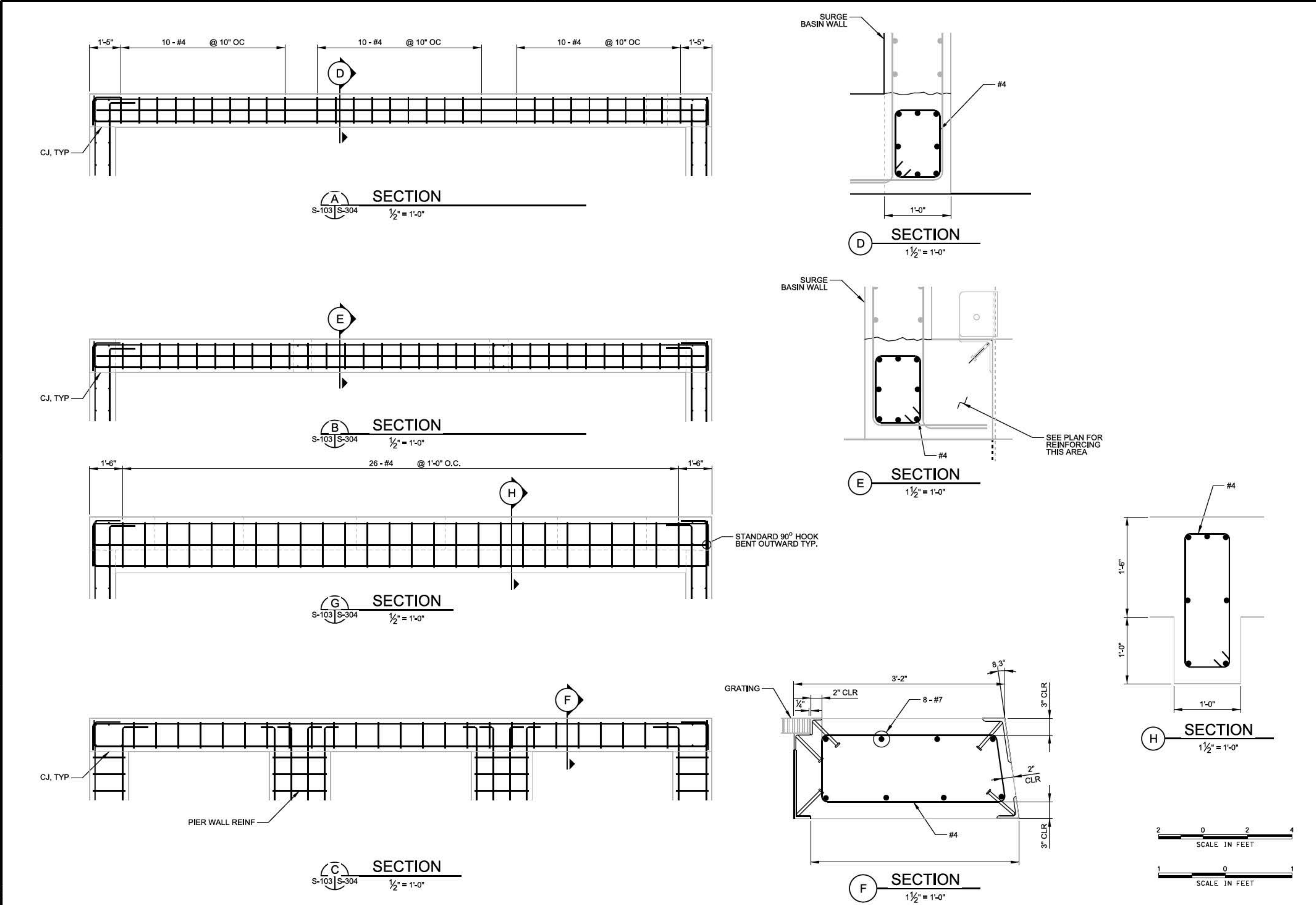
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP		DATE: 2011/06/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: 3/8" = 1'-0"	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-303.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
REINFORCEMENT
IN WALLS

Sheet ID
S-303

AS-BUILT
A-73



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA005 - ADD SLAB BEAM. AS-BUILT AS OF 29 SEPTEMBER 2017	5/22/2012	CDD

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

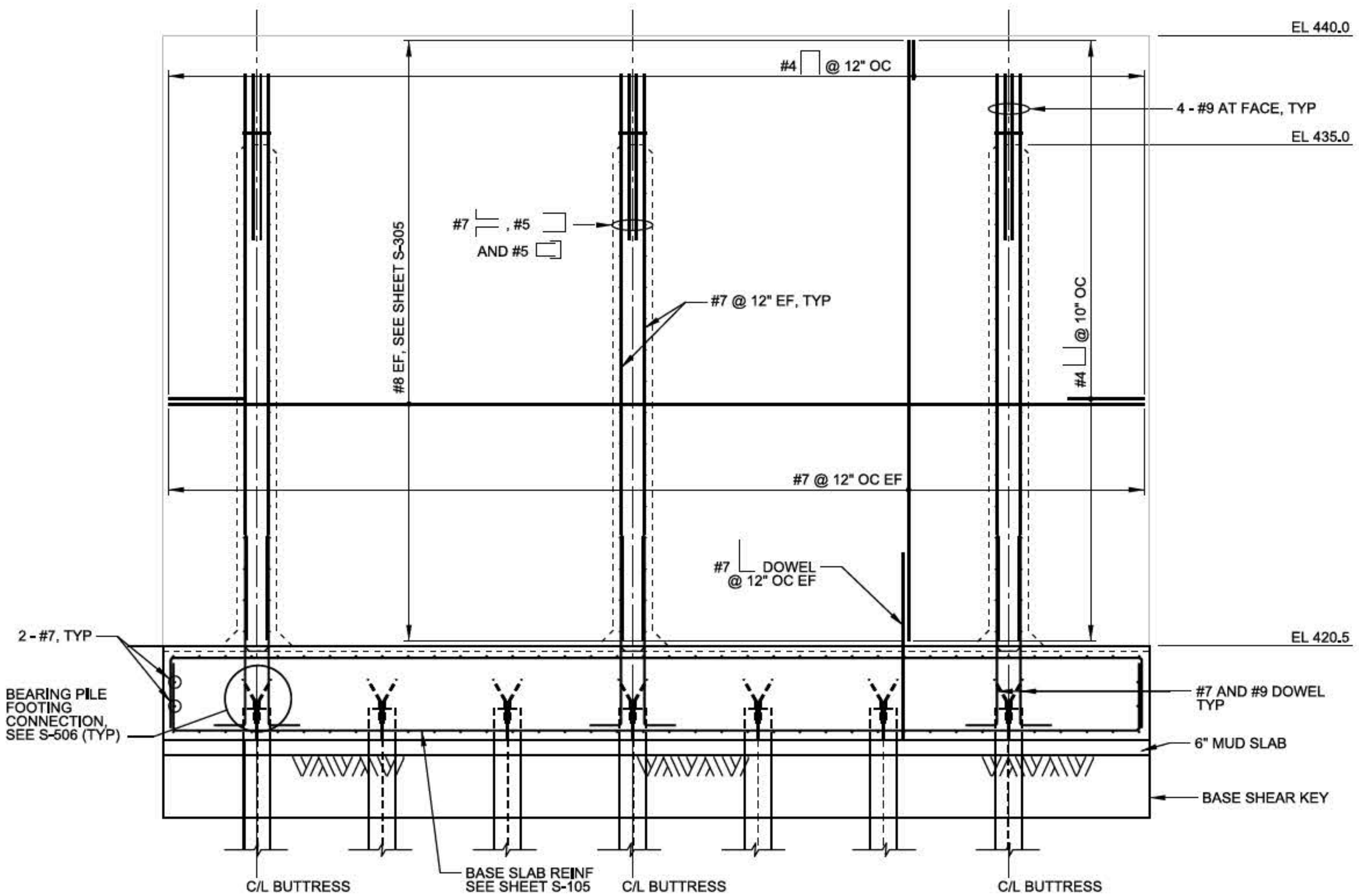
DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: FRU | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-304.dgn | DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-11-C-0060 | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
REINFORCEMENT
IN BEAMS

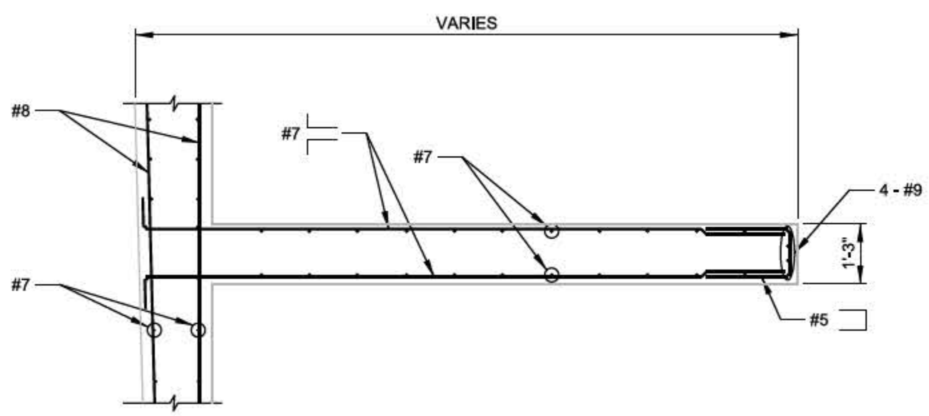
Sheet ID
S-304

AS-BUILT
A-74

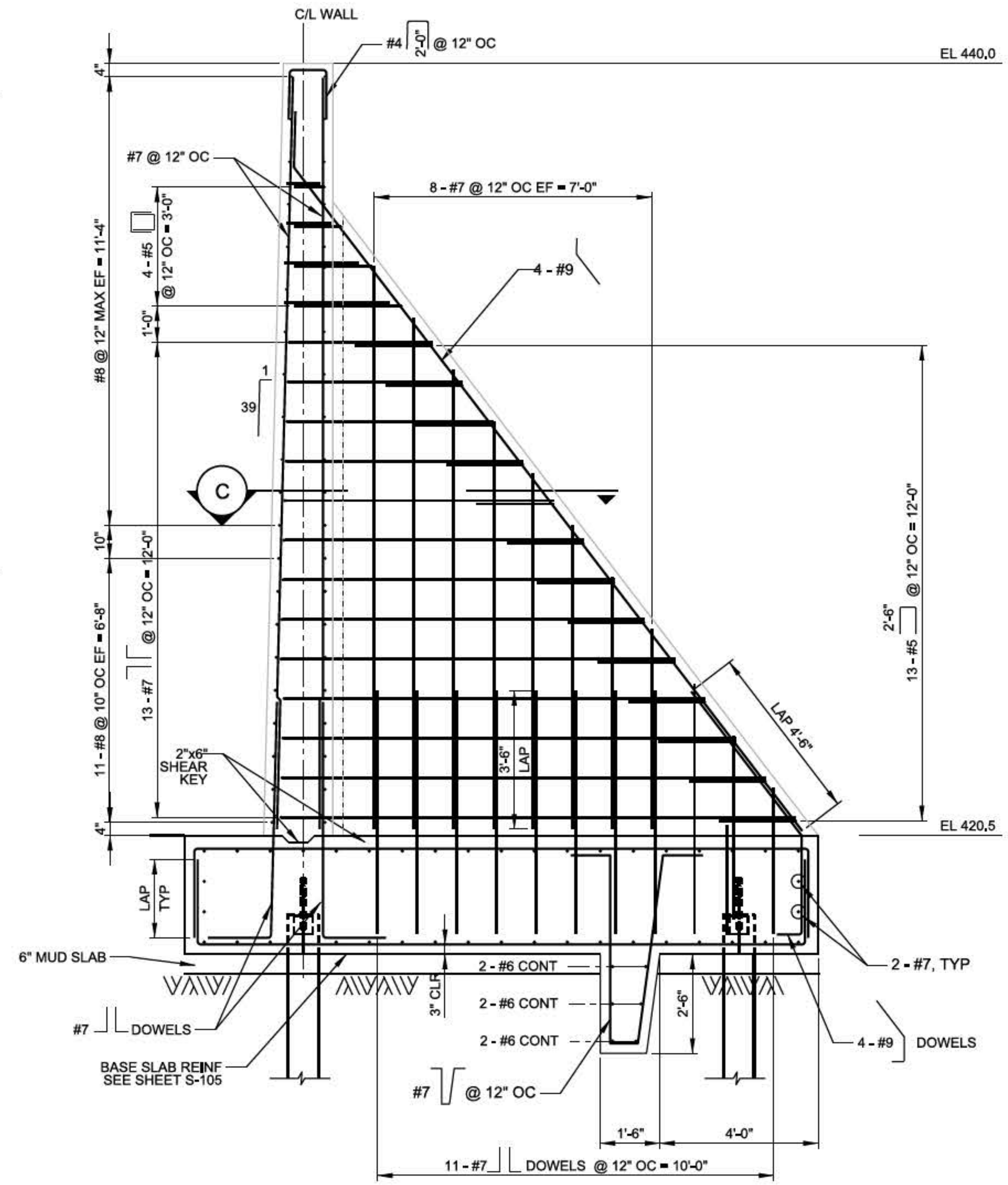
c:\pw_working\mvr\b5edd\h\d0153734\EP102_S-304.dgn
8/28/2018 3:17:47 PM
B5EDDLLH



A SECTION
S-105 S-305 3/8" = 1'-0"



C SECTION TYPICAL AT MID HEIGHT
1/2" = 1'-0"



B SECTION
S-105 S-305 1/2" = 1'-0"

SCALE IN FEET 4 0 4
SCALE IN FEET 2 0 2 4

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-305.dgn | DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
WING WALL REINFORCEMENT

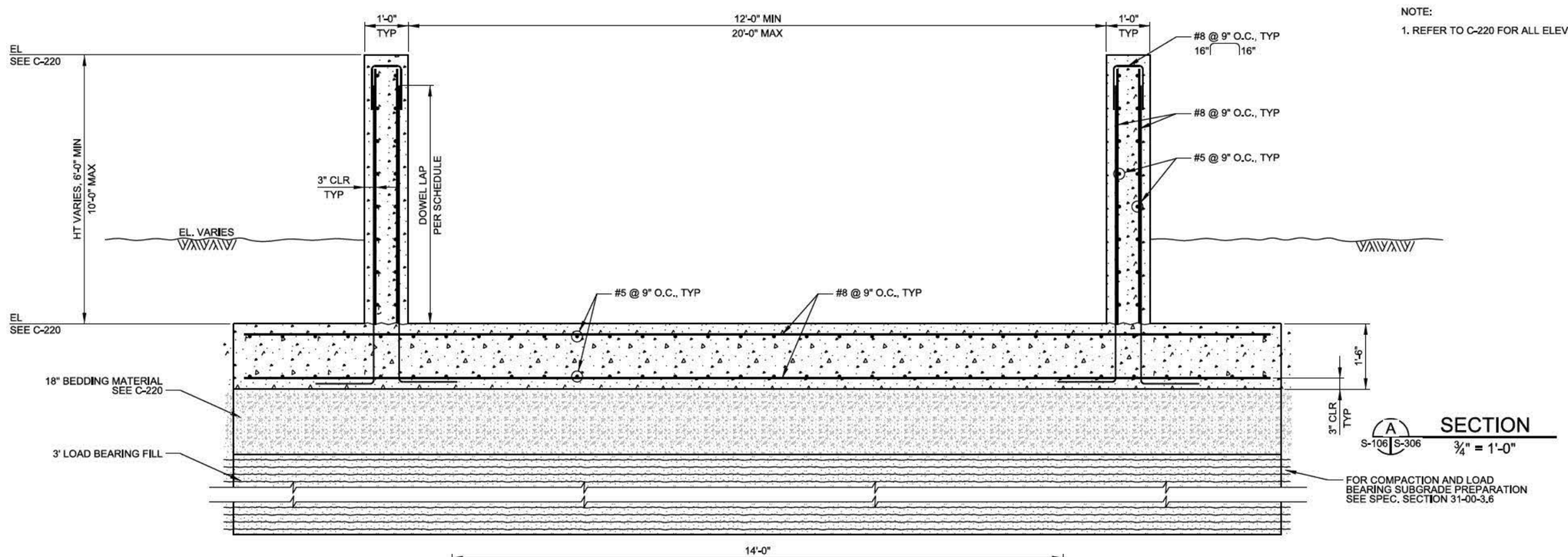
Sheet ID
S-305

AS-BUILT
A-75

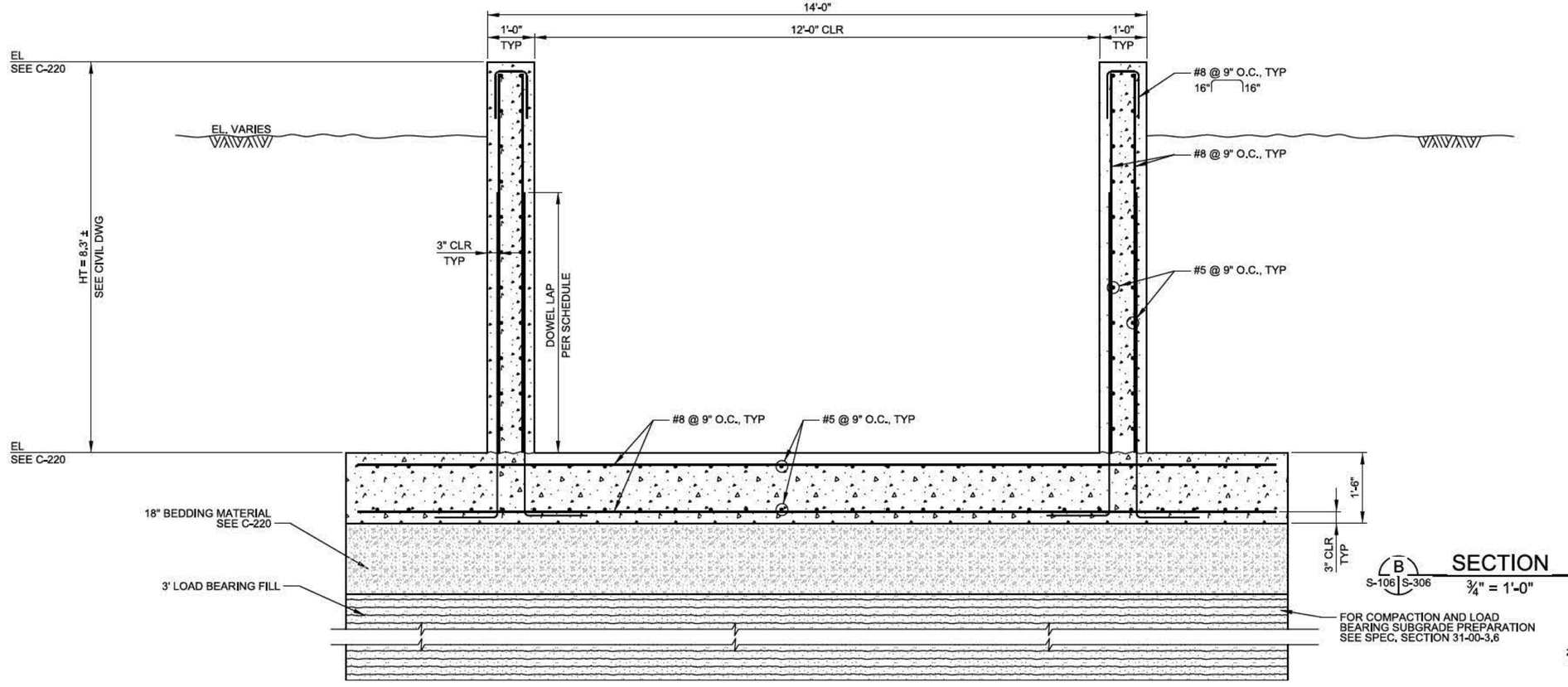
c:\pw_working\mvrb5edd\lh\d0153734\EP102_S-305.dgn
8/28/2018 3:17:52 PM
B5EDDLLH

NOTE:

1. REFER TO C-220 FOR ALL ELEVATIONS.



A S-106 S-306 **SECTION** 3/4" = 1'-0"



B S-106 S-306 **SECTION** 3/4" = 1'-0"

2 0 2
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: KDP
DWN BY: NPP
CKD BY:
SUBMITTED BY: FRJ
DATE: 2011/05/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: 1=1
PLOT DATE: PROJECT CODE: EP102
SIZE: ANSI D
FILE NAME: EP102_S-306.dgn

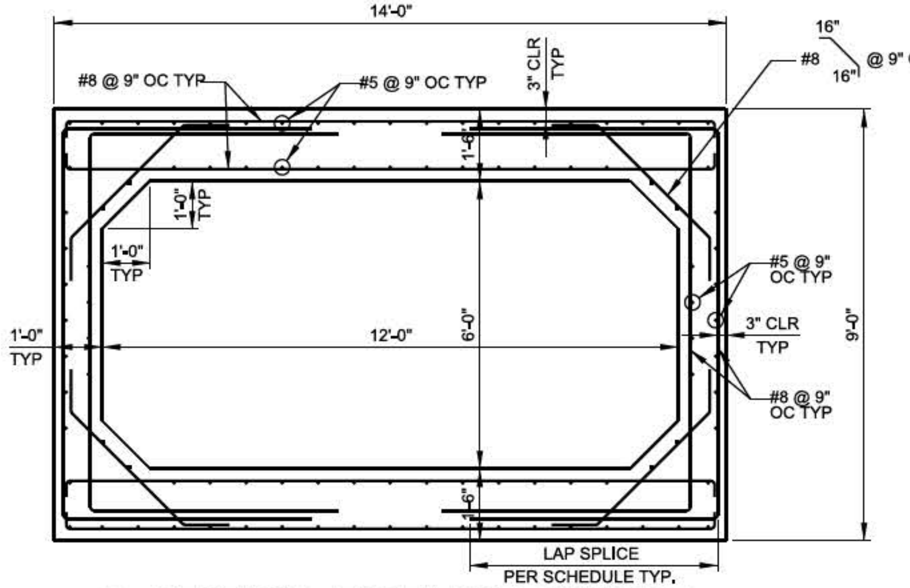
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DISCHARGE STRUCTURE
REINFORCEMENT

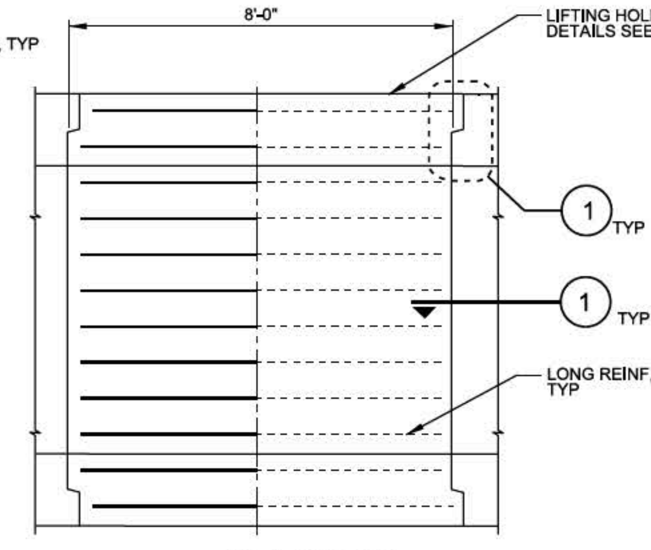
Sheet ID
S-306

AS-BUILT



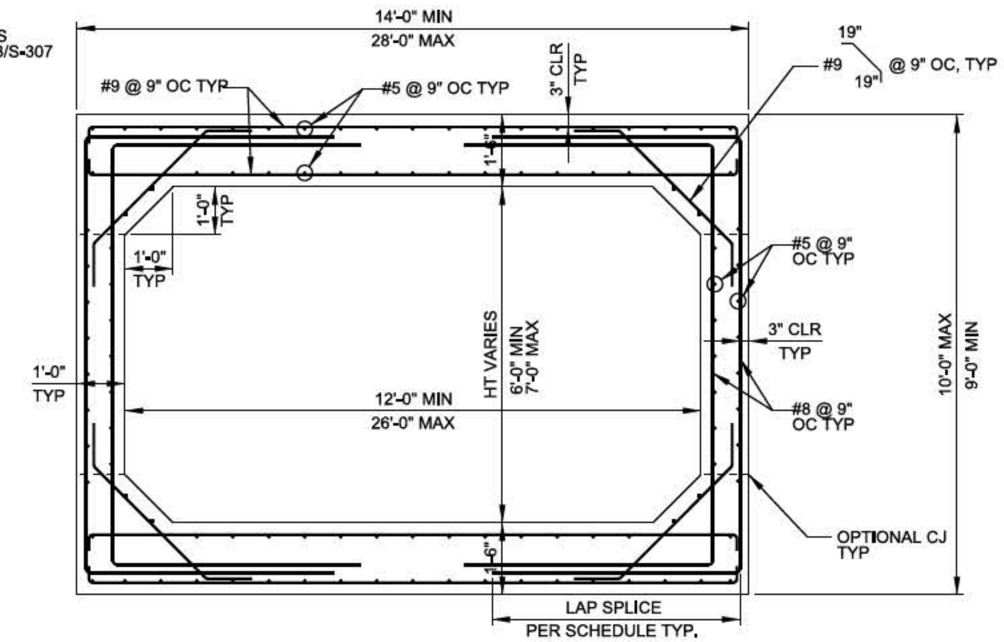
A SECTION - TYPE I BOX CULVERT

S106, S-202 | S-307 ½" = 1'-0"



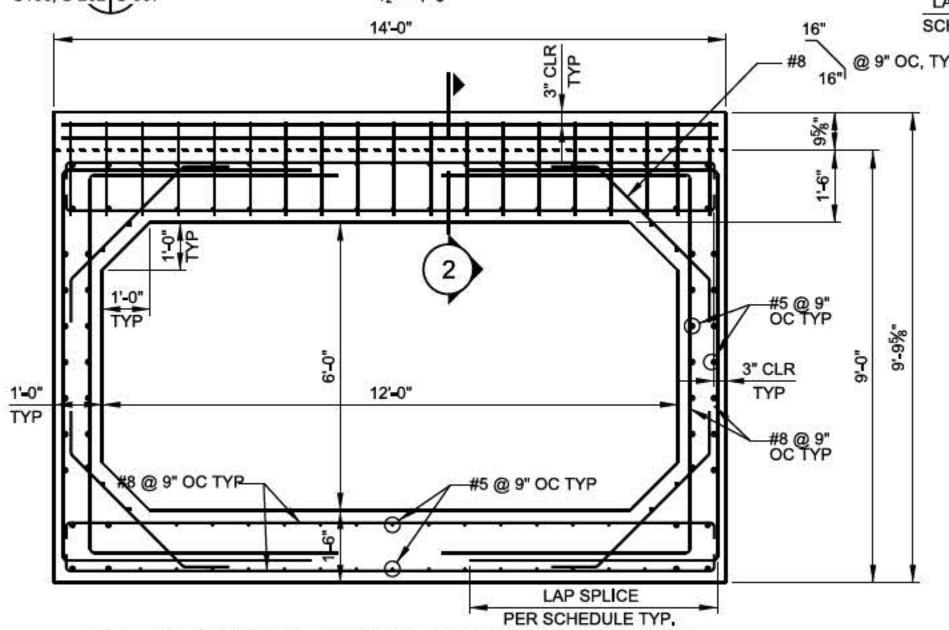
SIDE VIEW

½" = 1'-0"



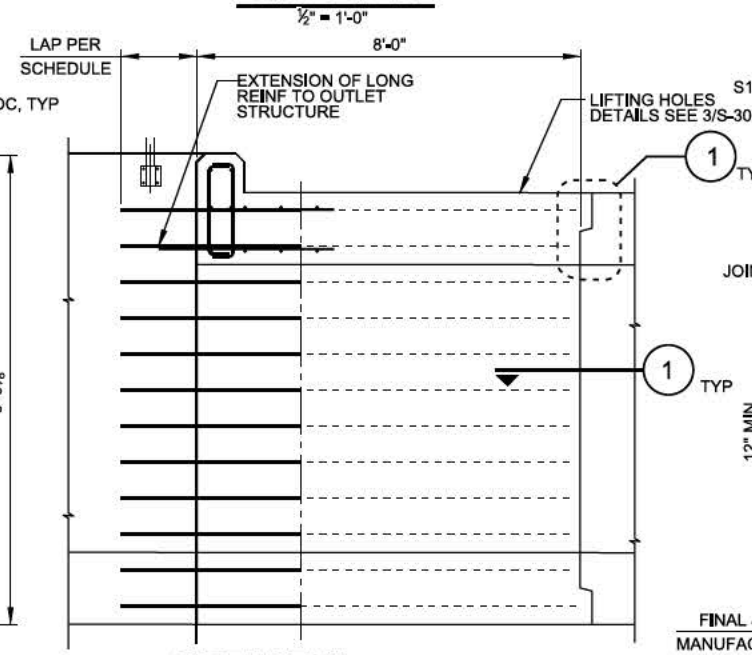
D SECTION - CIP BOX CULVERT

S106, S-202 | S-307 ½" = 1'-0"



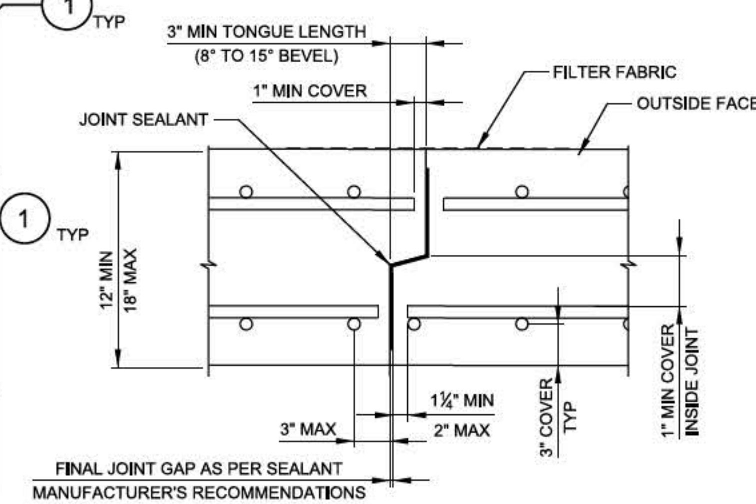
B SECTION - TYPE II BOX CULVERT

S106, S-202 | S-307 ½" = 1'-0"



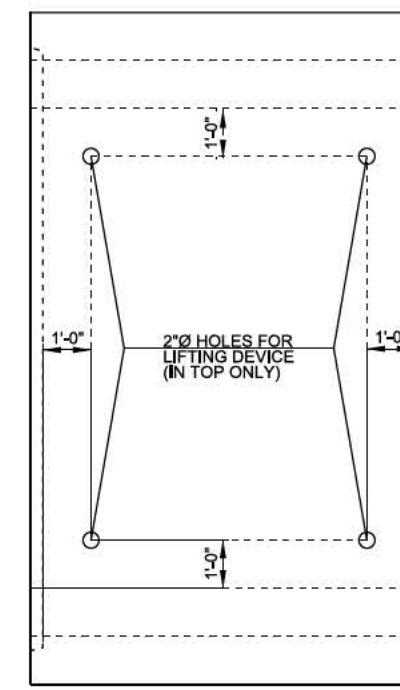
SIDE VIEW

½" = 1'-0"



1 JOINT DETAIL

1½" = 1'-0"



3 LIFTING HOLE DETAIL

½" = 1'-0"

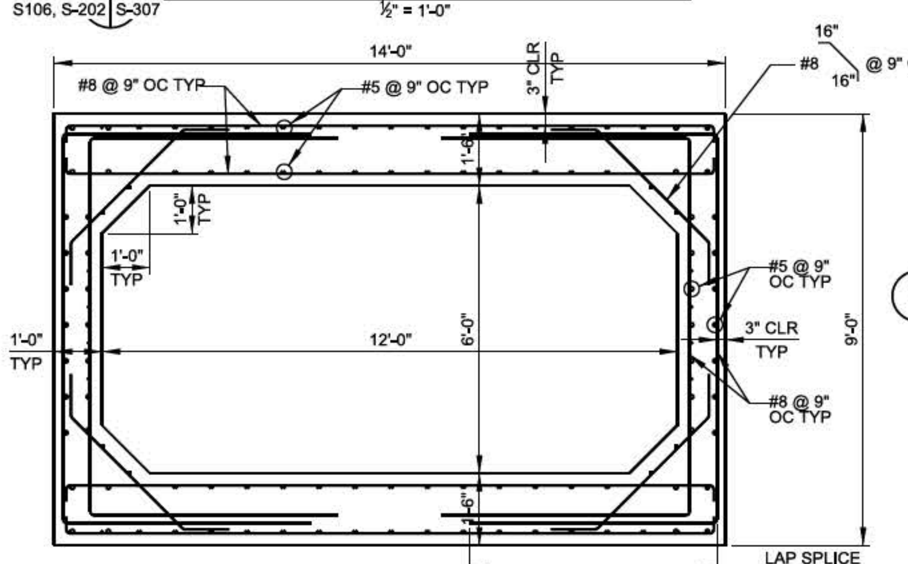
NOTE:

1. LOCATION OF LIFTING HOLES MAY BE VARIED AS NEEDED TO CLEAR REINFORCEMENT.
2. LIFTING HOLES SHALL BE FILLED WITH CONCRETE PLUGS AND MASTIC AFTER THE BOX SECTIONS ARE IN PLACE.

2 0 2 4 SCALE IN FEET

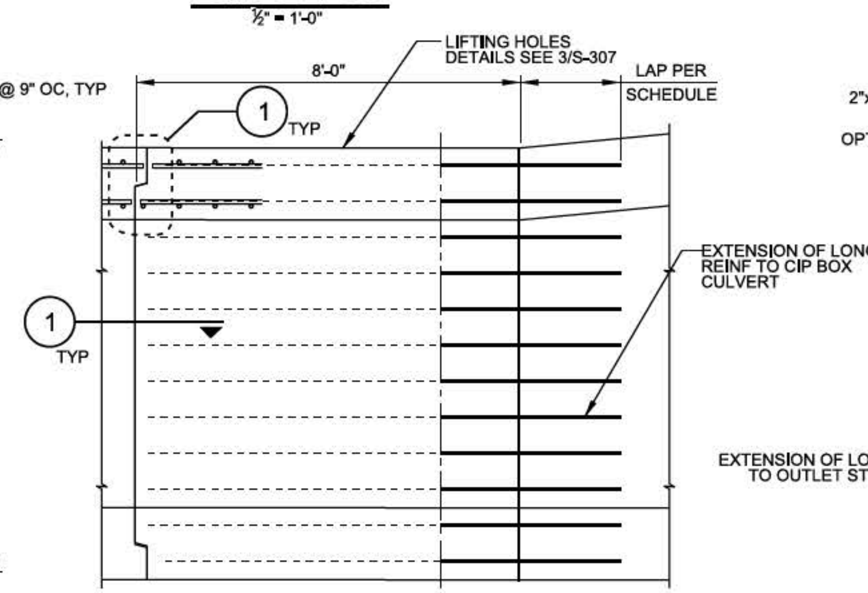
1 0 1 2 SCALE IN FEET

1 0 1 SCALE IN FEET



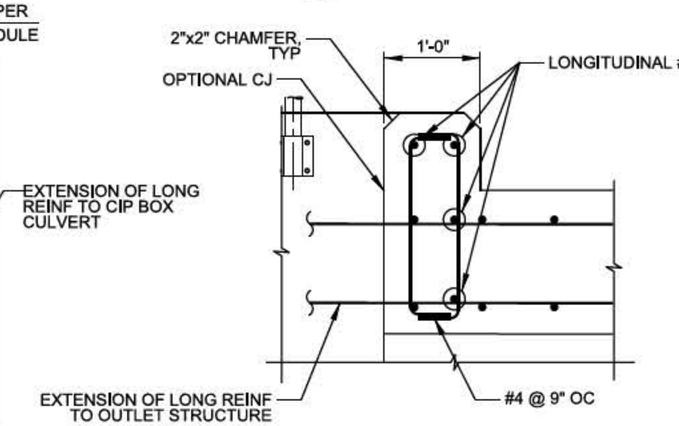
C SECTION - TYPE III BOX CULVERT

S106, S-202 | S-307 ½" = 1'-0"



SIDE VIEW

½" = 1'-0"



2 DETAIL

1" = 1'-0"

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-307.dgn

DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: | PROJECT CODE: EP102

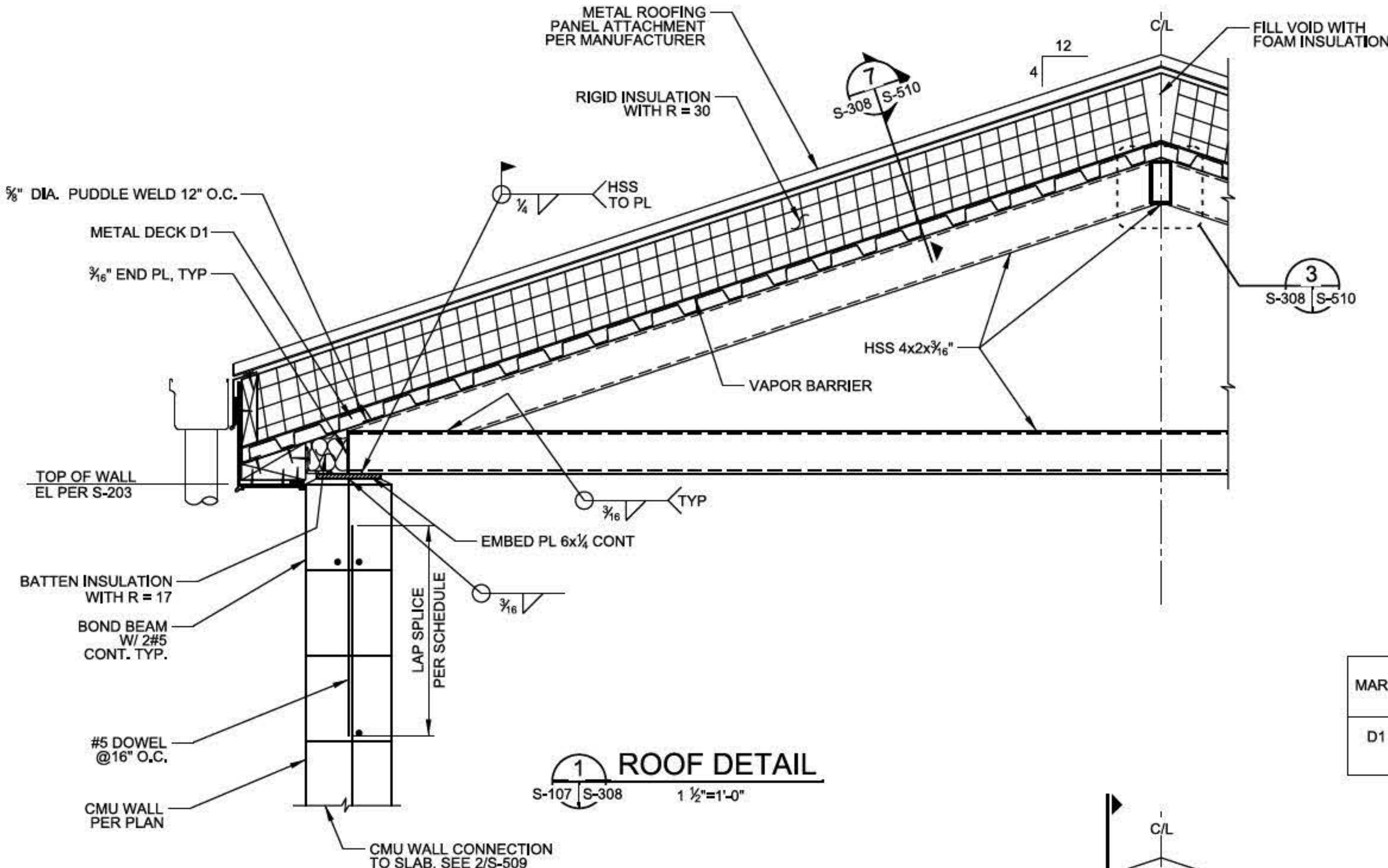
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT STAGE I

CULVERT REINFORCEMENT

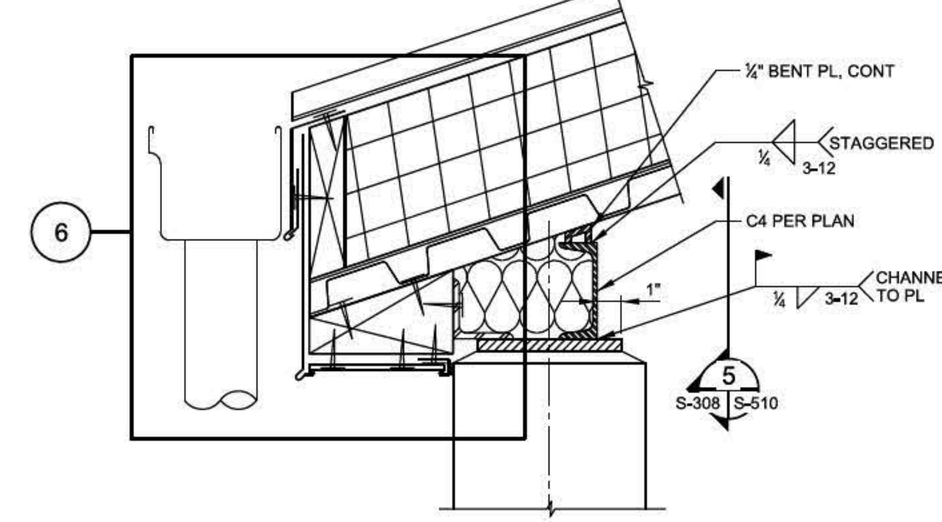
Sheet ID
S-307

AS-BUILT
A-77

c:\pw_working\mvrb5edd\lhd0153734\EP102_S-307.dgn
8/28/2018
3:19:04 PM
BSEDOLLH



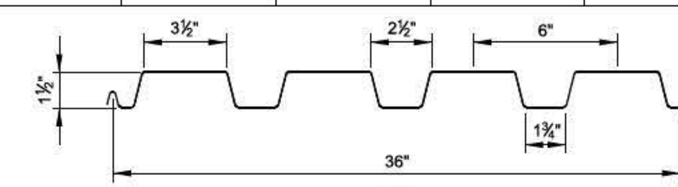
1 ROOF DETAIL
S-107 | S-308
1 ½"=1'-0"



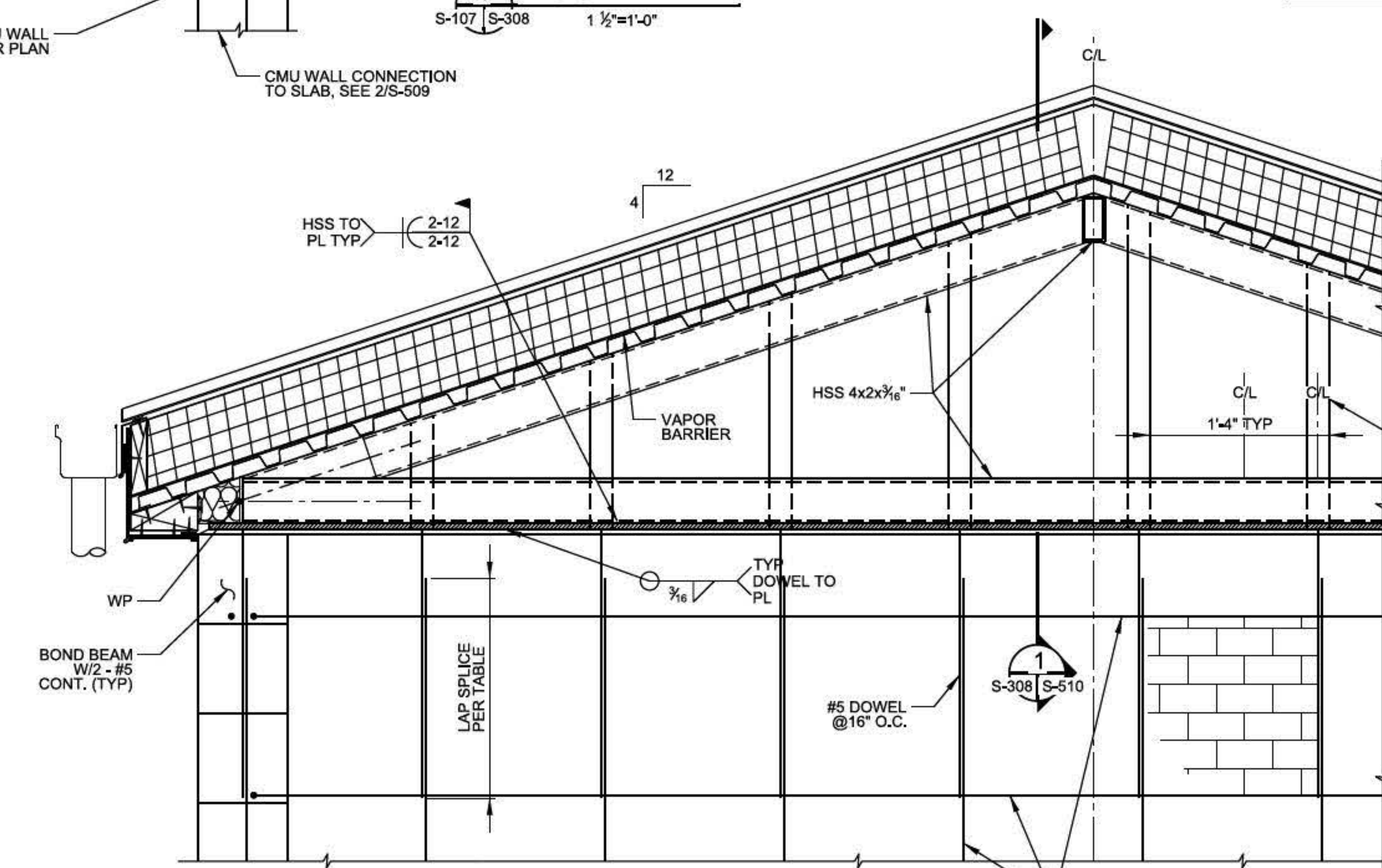
3 SECTION BETWEEN TRUSSES
S-107 | S-308
3" = 1'-0"

NOTE: SEE 1/S-308 FOR INFORMATION NOT NOTED.

MARK	STEEL DECK TYPE	GAUGE	STEEL DECK PATTERN				SECTION PROPERTIES PER FT OF WIDTH		
			END	INT	SEAM	MARGINAL	I, IN^4	+S, IN^3	-S, IN^3
D1	VERCO HSB-36 OR EQUIVALENT	20	¾"Ø PUDDLE WELD @ 12" OC	¾"Ø PUDDLE WELD @ 12" OC	BUTTON PUNCH @ 12" OC	¾"Ø PUDDLE WELD @ 12" OC	0.216	0.235	0.248

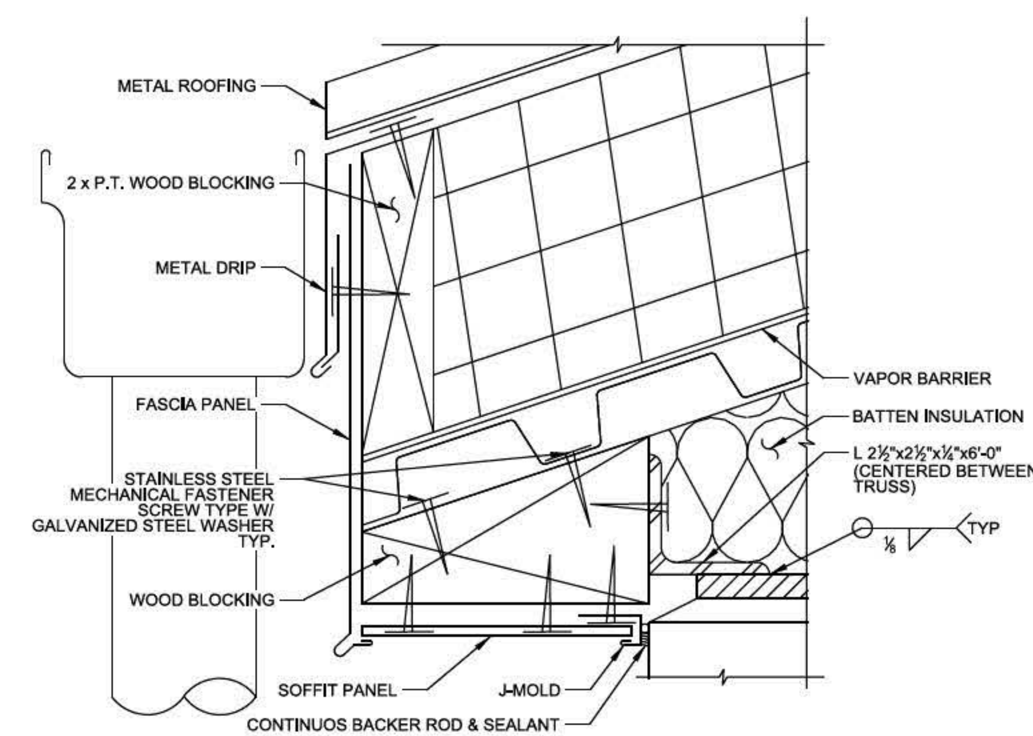


D1



NOTE: SEE 1/S-308 FOR INFO NOT NOTED.

2 TYPICAL END TRUSS
S-107 | S-308
1½"=1'-0"



6 FASCIA/SOFFIT DETAIL
6"=1'-0"

SCALE IN FEET

c:\pw_working\mvrb5edd\lhd0153734\EP102_S-308.dgn
8/28/2018
3:19:12 PM
B5EDDLLH

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

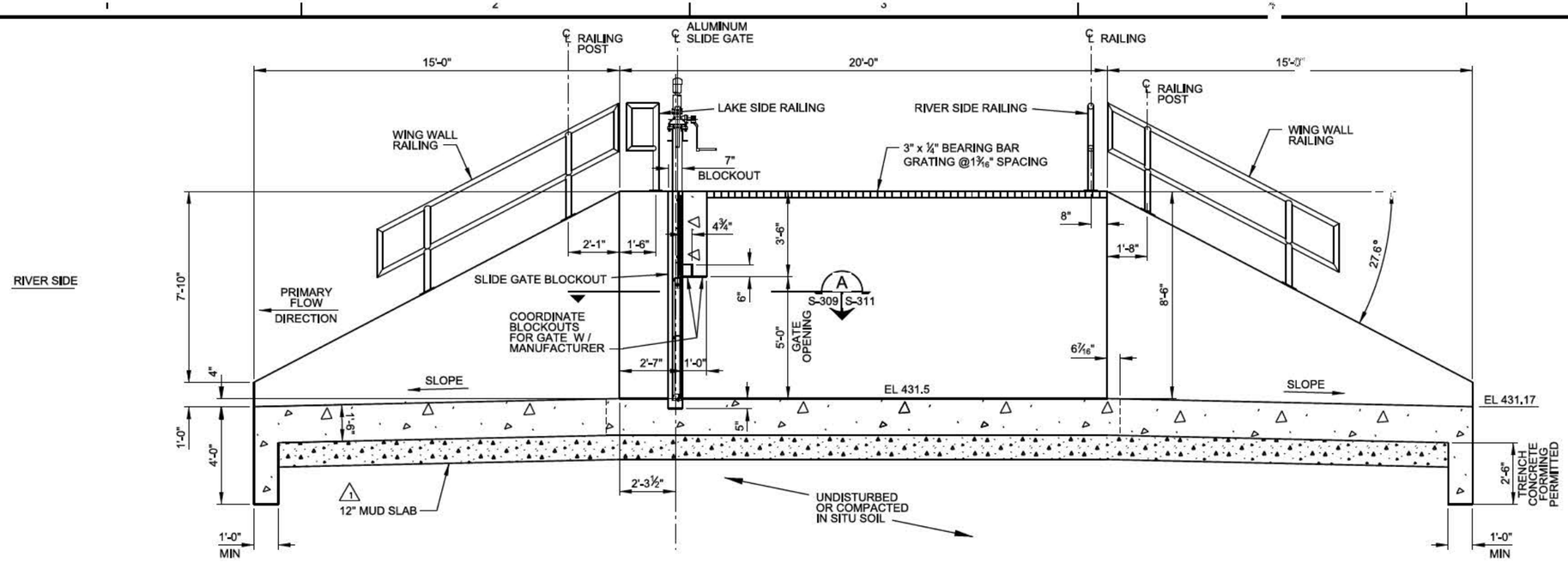
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP
DWN BY: NPP
CKD BY:
SUBMITTED BY: FRJ
PLOT SCALE: AS SHOWN
PLOT DATE:
SIZE: ANSI D
FILE NAME: EP102_S-308.dgn
DATE: 2011/06/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
CONTROL BUILDING
ROOF FRAMING

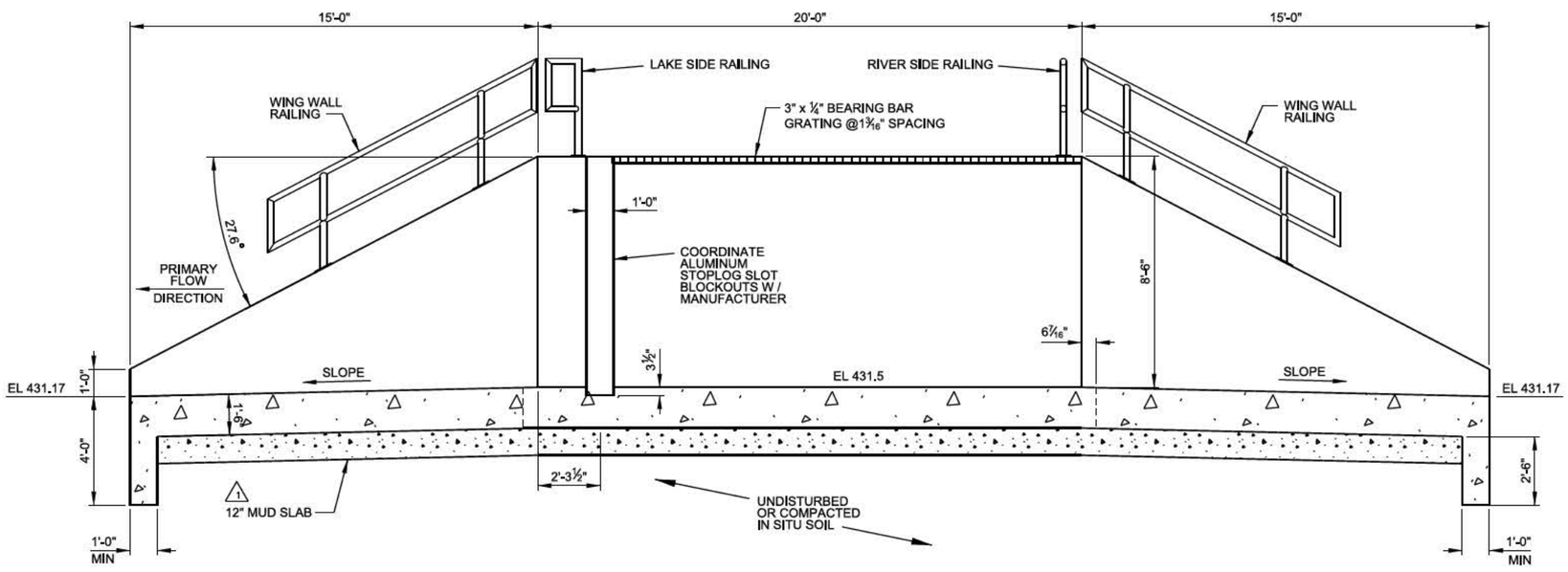
Sheet ID
S-308

AS-BUILT
A-78



A SECTION
S-108 S-309

4 0 4
SCALE IN FEET



B SECTION
S-108 S-309

4 0 4
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	MOD EA#33 - ADD MUD SLAB AS-BUILT AS OF 29 SEPTEMBER 2017		

DESIGNED BY: CDD
DWN BY: DGP
SUBMITTED BY: FRJ
CKD BY:
PLOT SCALE: AS SHOWN
PLOT DATE: SEE ANGLE
DATE: 20110503
SOLICITATION NO.: W912EK-11-R-2029
CONTRACT NO.: W912EK-11-C-0060
PROJECT CODE: EP102
FILE NAME: EP102_S-309.dgn

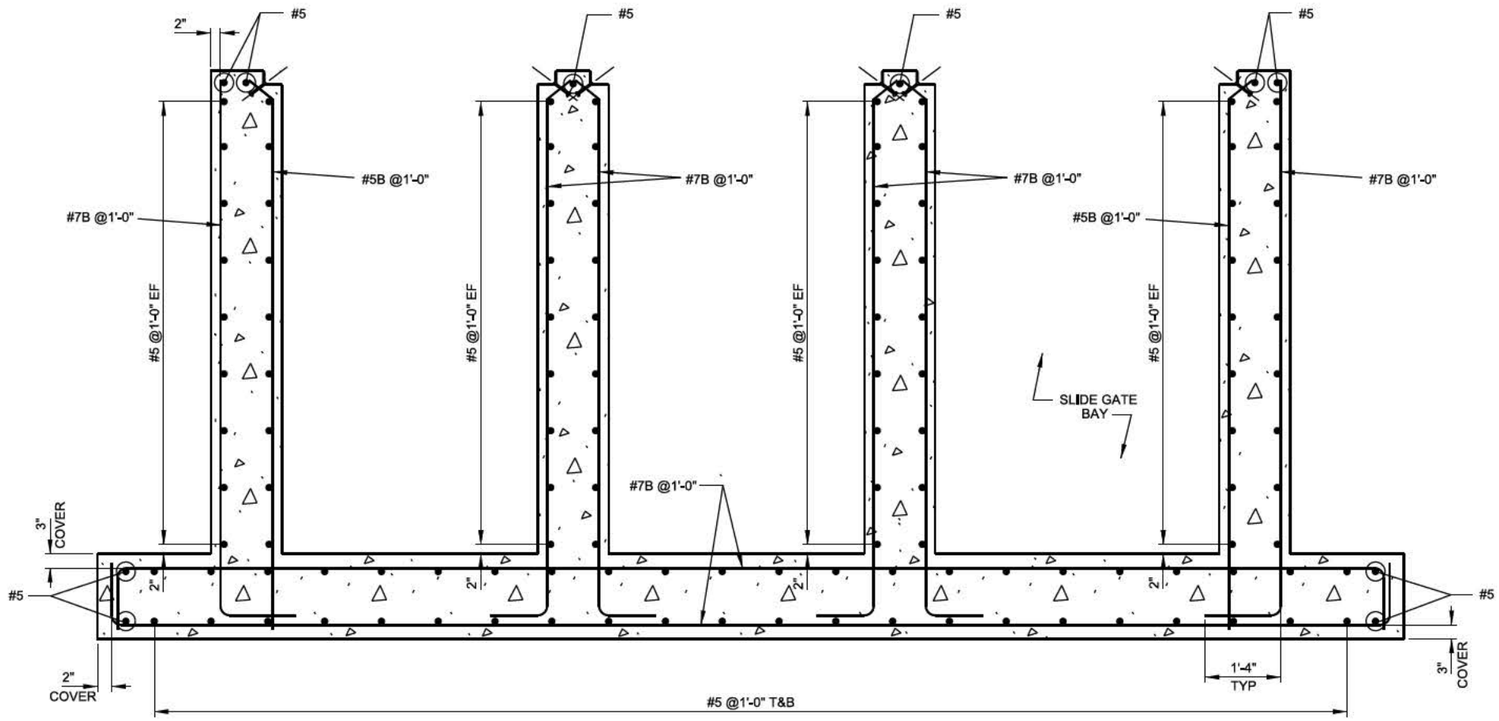
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

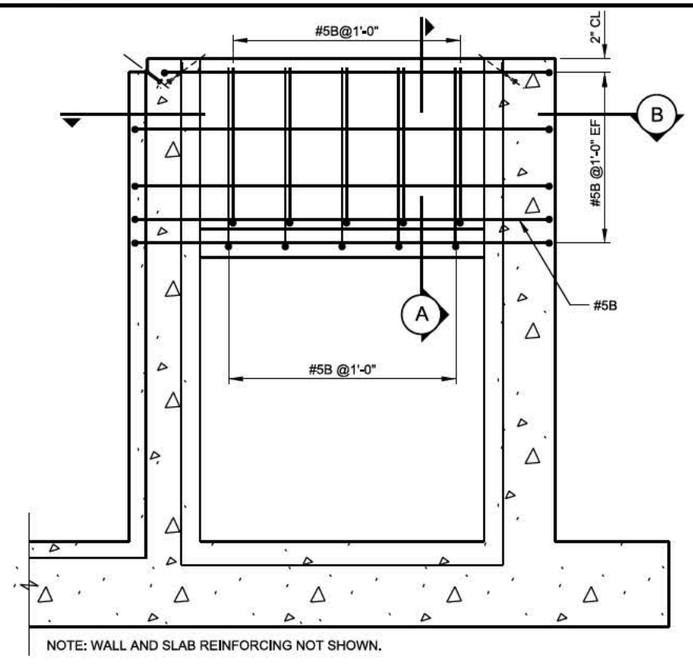
OUTLET STRUCTURE
SECTIONS

Sheet ID
S-309

AS-BUILT
A-79



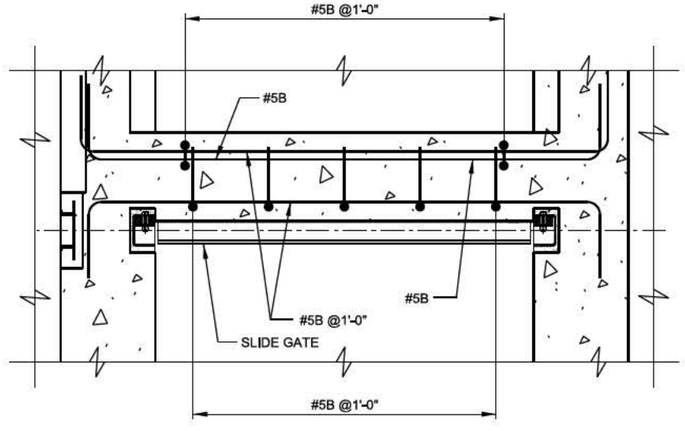
A SECTION
S-109 | S-310



NOTE: WALL AND SLAB REINFORCING NOT SHOWN.

B SECTION
S-109 | S-310

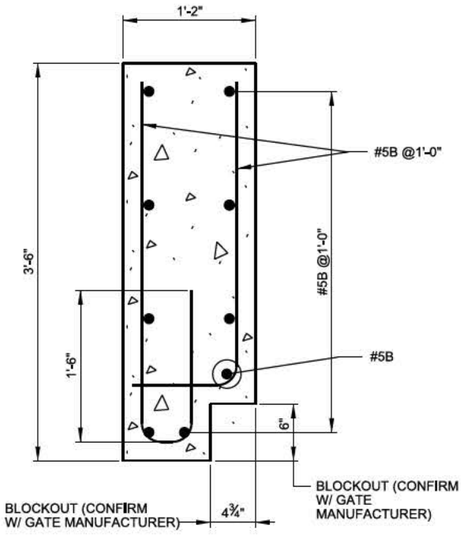
SCALE IN FEET 2 0 2



NOTE: WALL REINFORCING NOT SHOWN.

B SECTION

SCALE IN FEET 1 0 1



A SECTION

SCALE IN FEET 4 0 4

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	USACE 7 AS OF 29 SEPTEMBER 2017		

DESIGNED BY: CDD
DWN BY: DIDP
SUBMITTED BY: RU
CKD BY:
PLOT SCALE: AS SHOWN
PLOT DATE:
DATE: 2011/06/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-13-C-0080
PROJECT CODE: CP102
FILE NAME: EP102_S-310.dgn

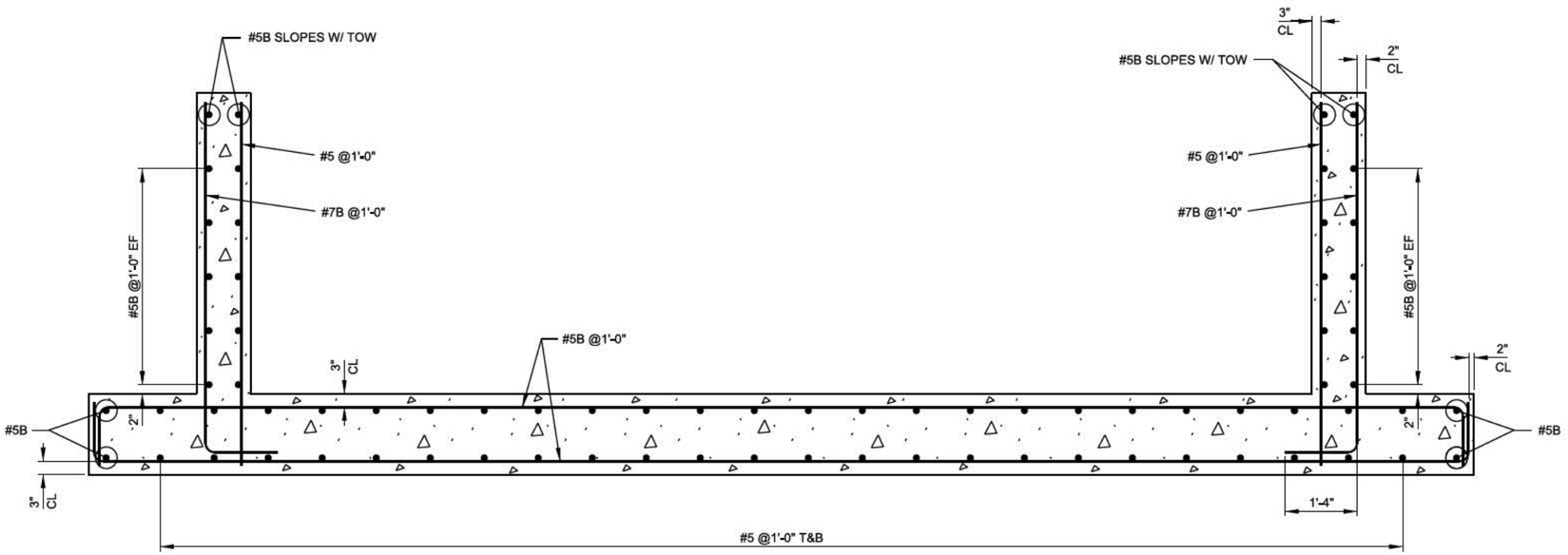
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

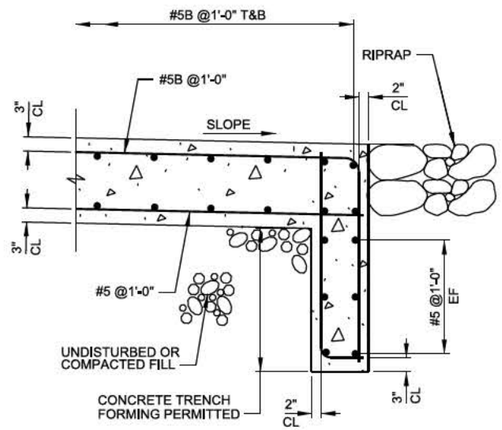
OUTLET STRUCTURE
CONCRETE
REINFORCEMENT
DETAILS SHEET 1 OF 2

Sheet ID
S-310

AS-BUILT
A-80

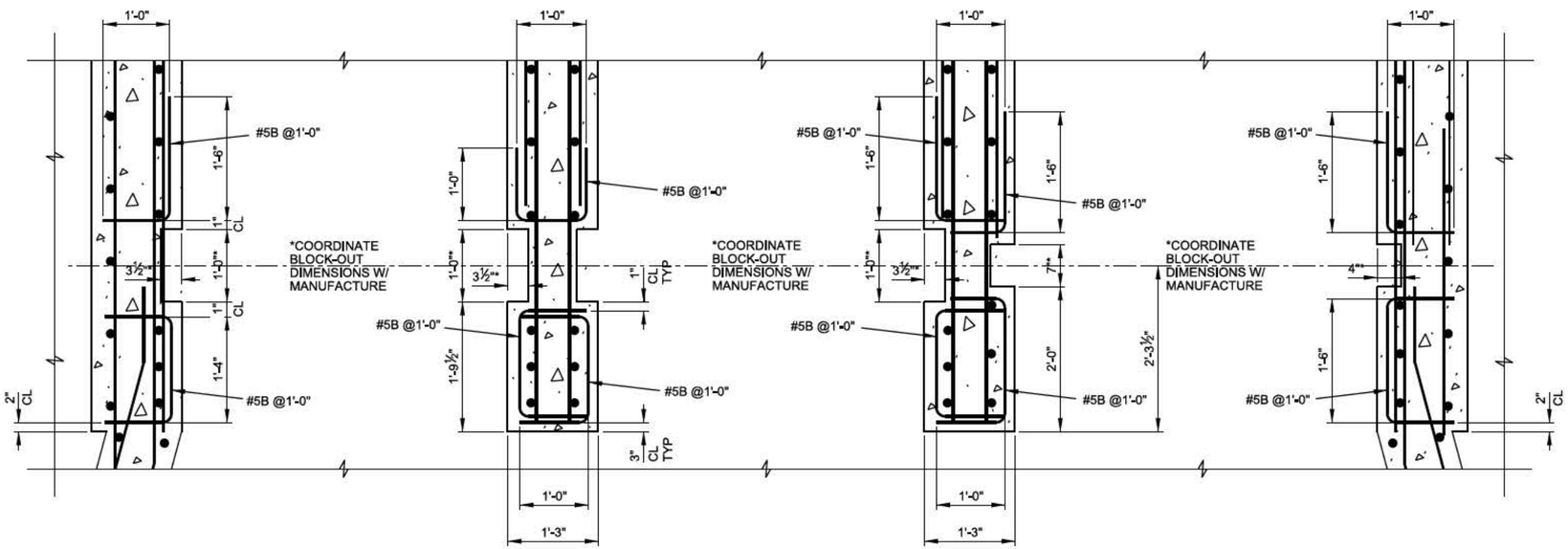


(C) SECTION - WINGWALL
S-109 | S-311



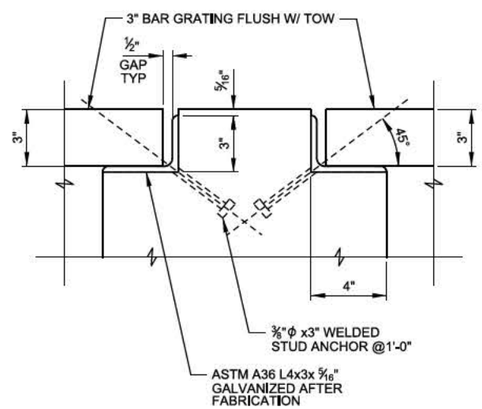
SCALE IN FEET

(D) SECTION - SLAB TURNDOWN
S-109 | S-311



SCALE IN FEET

(A) SECTION - SPECIAL BENT BARS AT CLOSURE BLOCKOUTS
S-309 | S-311



SCALE IN INCHES

(1) DETAIL - EMBEDDED ANGLE GRATING SEAT
S-204 | S-311

US Army Corps of Engineers®

MARK	DATE	DESCRIPTION	APPR.
		USACE 7 AS OF 29 SEPTEMBER 2017	

DESIGNED BY: CDD
DWN BY: DGP
SUBMITTED BY: FRJ
CKD BY:
PLOT SCALE: AS SHOWN
PLOT DATE: AS NOTED
DATE: 20110930
SOLICITATION NO.: W912EK-11-B-0029
CONTRACT NO.: W912EK-11-C-0080
PROJECT CODE: EP102
F.E. NAME: EP102_S-311.dgn

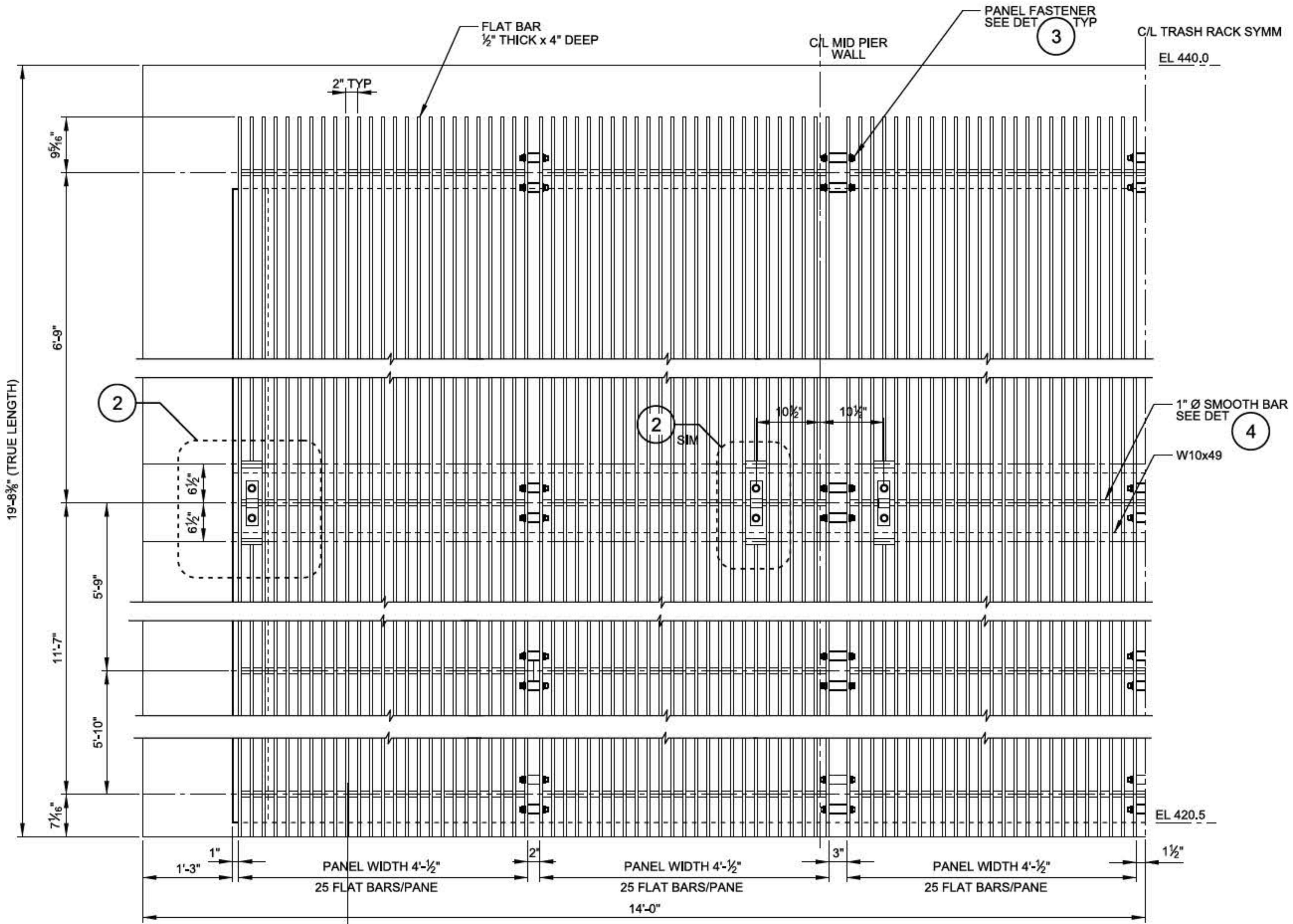
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

OUTLET STRUCTURE
CONCRETE
REINFORCEMENT
DETAILS SHEET 2 OF 2

Sheet ID
S-311

AS-BUILT
A-81

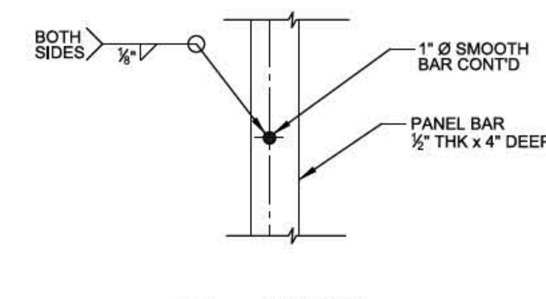


1 DETAIL-TRASH RACK FRONT VIEW
S-301, S-302 | S-501
1"=1'-0"

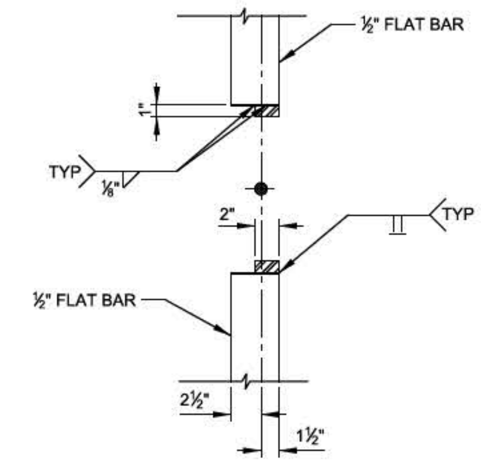
NOTE:

1. THE EMBEDMENT FOR THE TRASH RACK'S ANCHOR BOLT LOCATIONS SHALL BE IDENTIFIED PER TRASH RACK MANUFACTURER'S SPECIFICATION AND INCLUDED IN SHOP DRAWINGS.

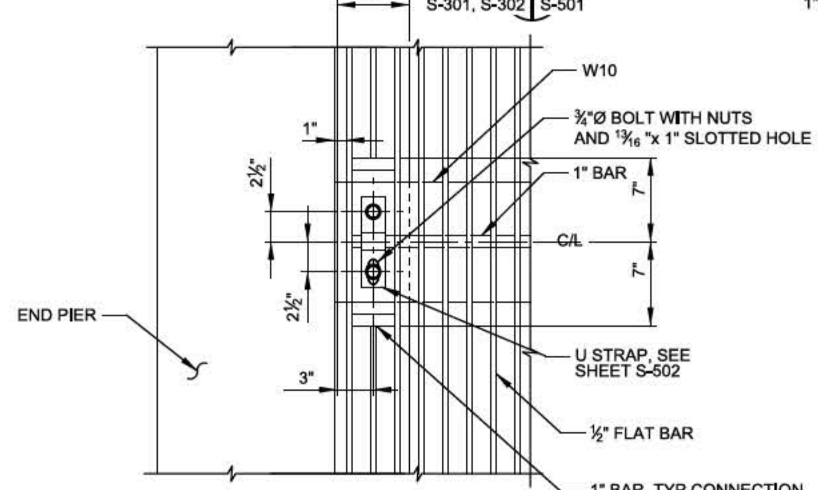
2. TRASH RACK PANEL SHALL BE PAINTED WITH SYSTEM NO. 5-E-Z. SEE CONTRACT SPECIFICATION FOR DETAILED REQUIREMENTS.



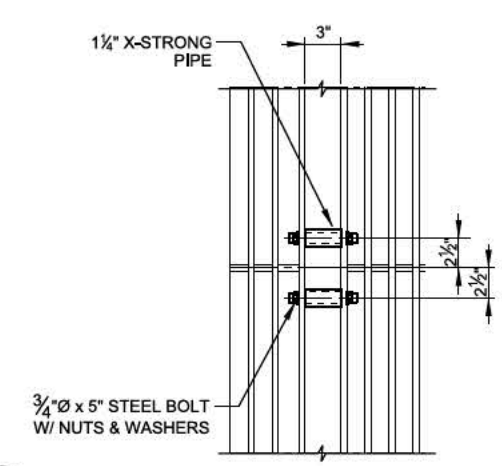
4 DETAIL
1½"=1'-0"



5 DETAIL
1½"=1'-0"



2 DETAIL
1½"=1'-0"



3 DETAIL
1½"=1'-0"

0 1 2
SCALE IN FEET

0 1
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP		DATE: 2011/06/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-501.dgn	

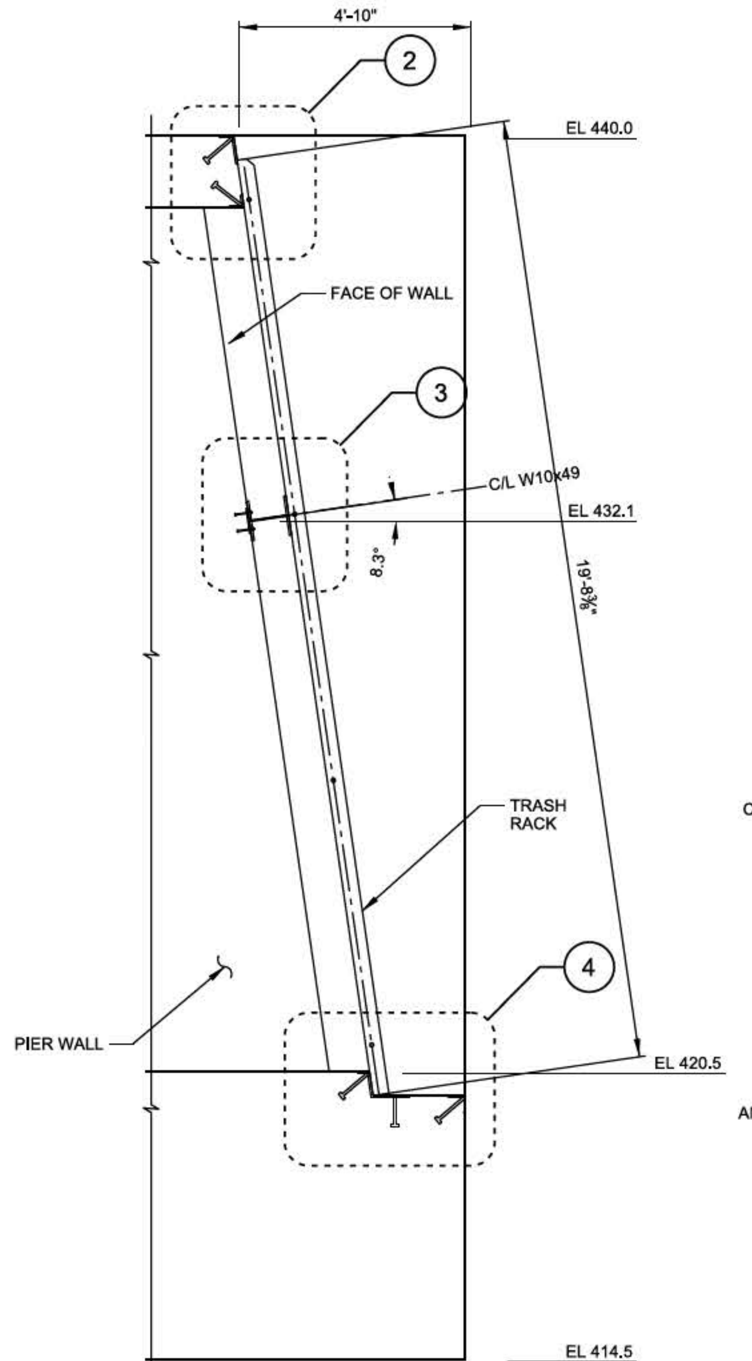
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
TRASH RACK DETAILS
SHEET 1 OF 2

Sheet ID
S-501

c:\pw_working\mvrb5edd\lhd0153734\EP102_S-501.dgn
8/28/2018
3:19:39 PM
B5EDDLLH

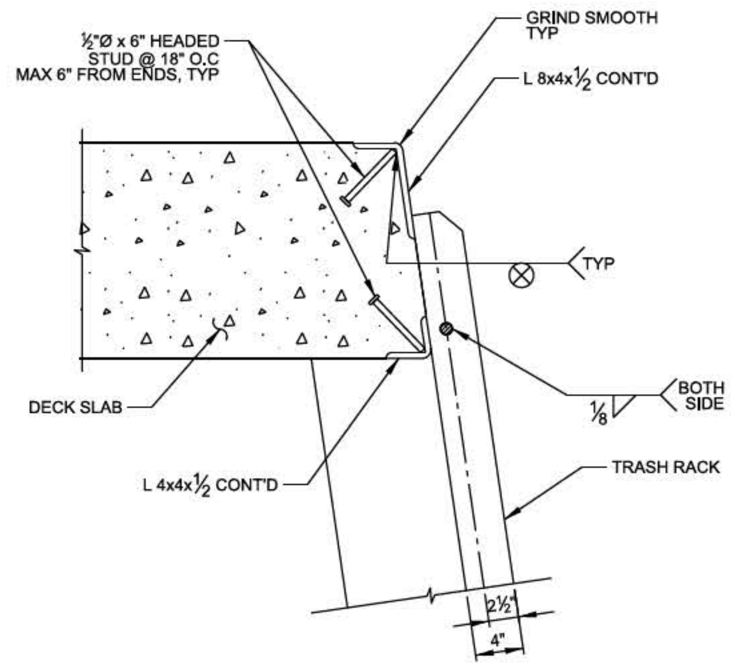
AS-BUILT



DETAIL - EMBEDMENT IN PIER WALL FOR TRASH RACK RAIL CONNECTIONS

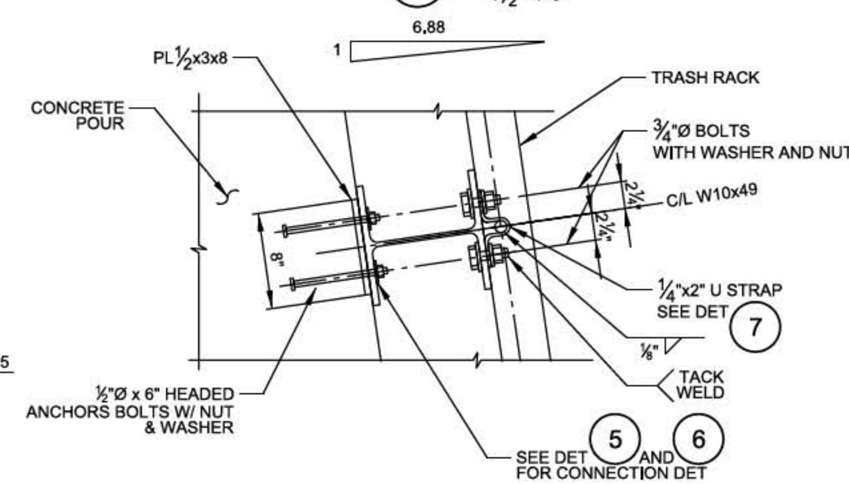
1 S-302 | S-502

½"=1'-0"



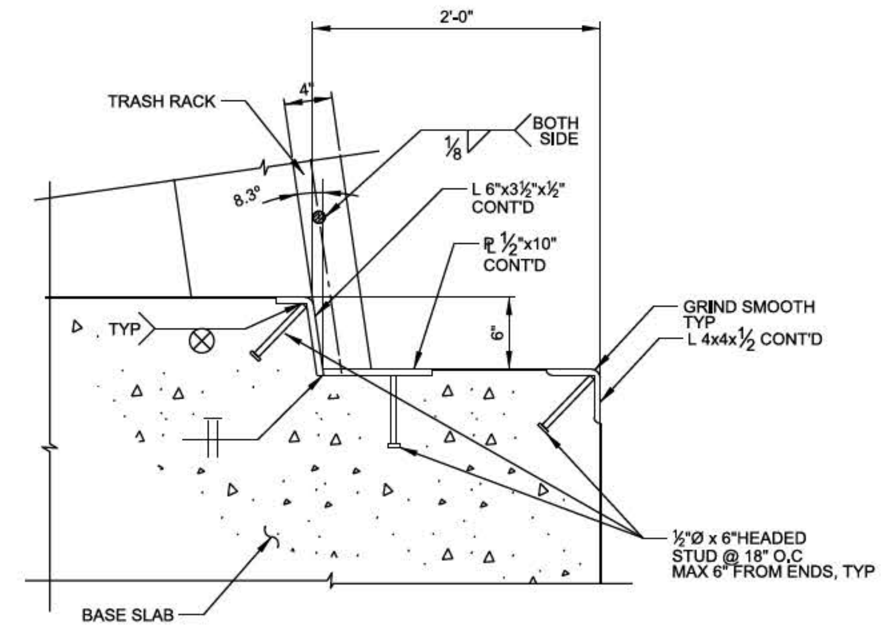
2 DETAIL

1½"=1'-0"



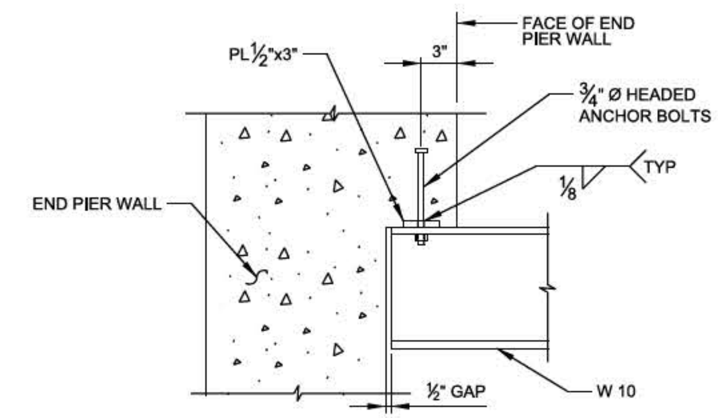
3 DETAIL

1½"=1'-0"



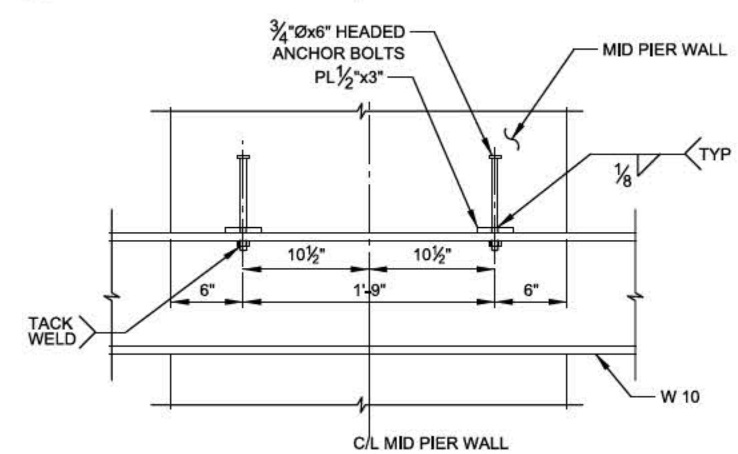
4 DETAIL

1½"=1'-0"



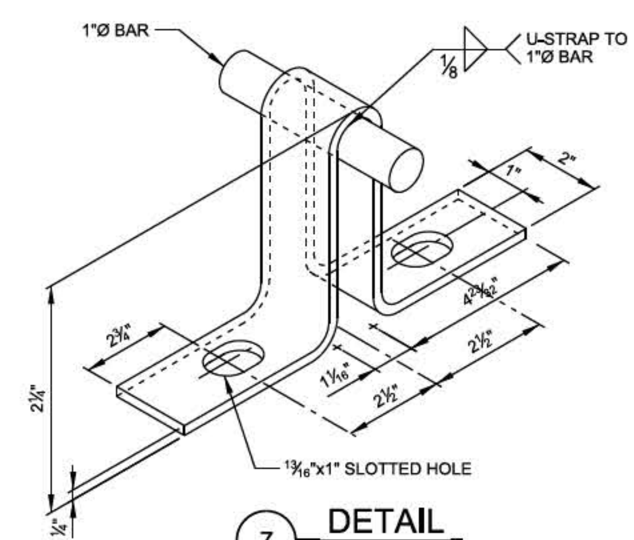
5 DETAIL - CONNECTION AT END PIER

1½"=1'-0"



6 DETAIL - CONNECTION AT MIDDLE PIER

1½"=1'-0"



7 DETAIL

NOT TO SCALE

SCALE IN FEET (2 0 2 4)

SCALE IN FEET (1 0 1)

US Army Corps of Engineers®

MARK | DESCRIPTION | DATE | APPR.

AS-BUILT AS OF 29 SEPTEMBER 2017

DESIGNED BY: KCP | DATE: 2011/06/30
DWN BY: NPP | CKD BY: | SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ | CONTRACT NO.: W912EK-11-C-0050
PLOT SCALE: AS SHOWN | PLOT DATE: | PROJECT CODE: EP102
SIZE: ANSI D | FILE NAME: EP102_S-502.dgn

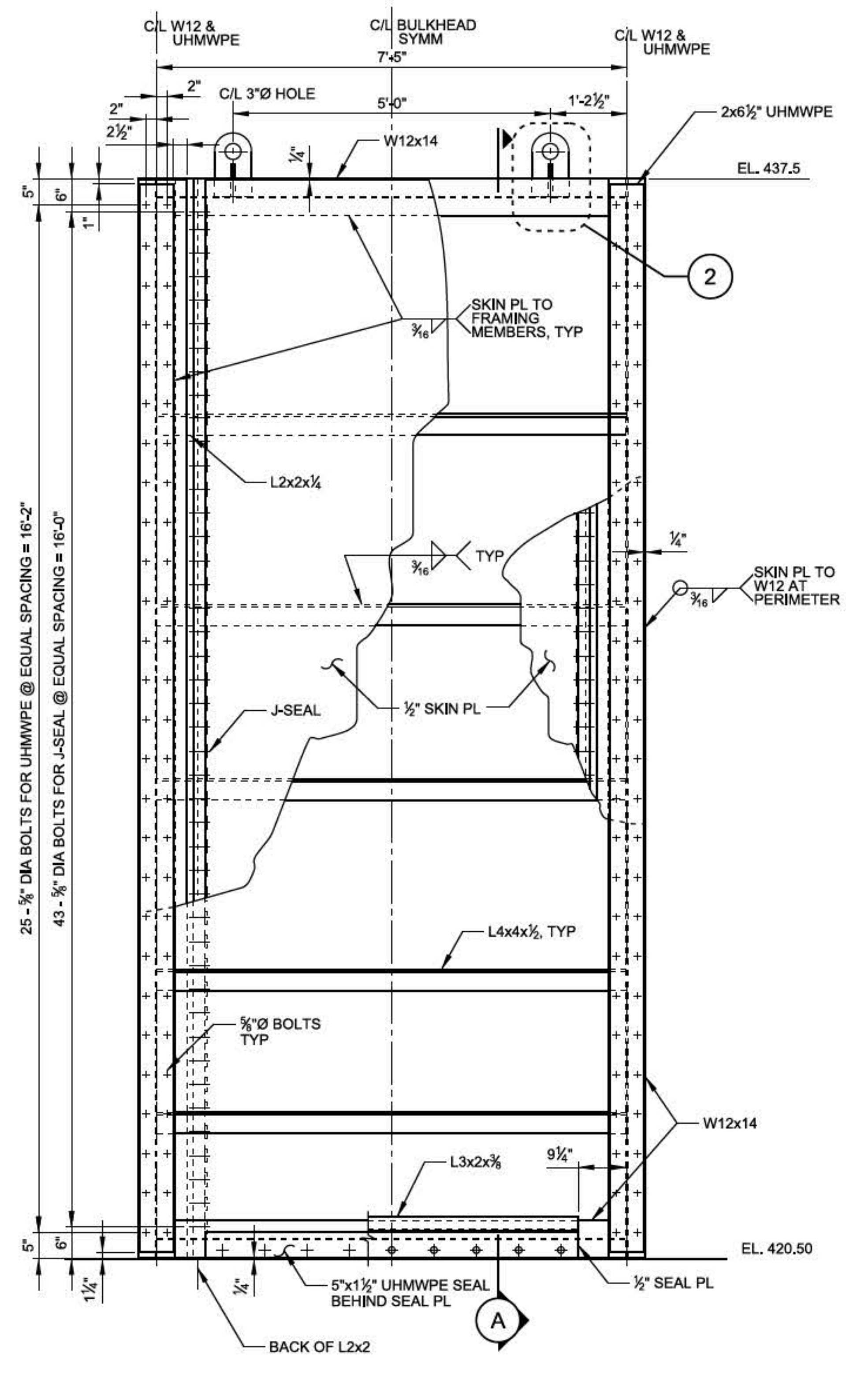
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE 1
PUMP STATION
TRASH RACK DETAILS
SHEET 2 OF 2

Sheet ID
S-502

c:\pw_working\mvr\b5edd\d0153734\EP102_S-502.dgn
8/28/2018 3:19:42 PM
B5EDDLLH

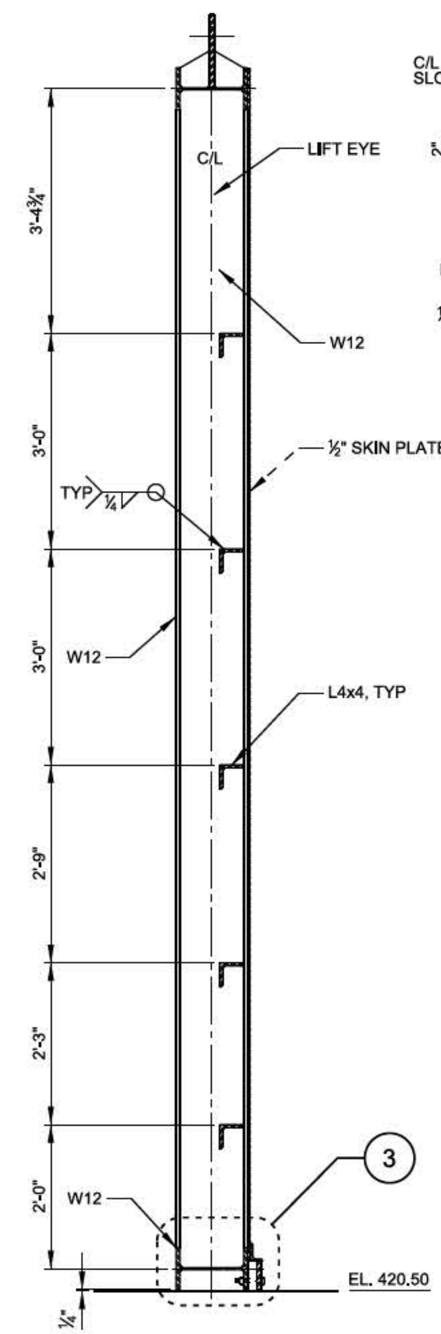
AS-BUILT
A-83



1 DETAIL-BULKHEAD PANEL

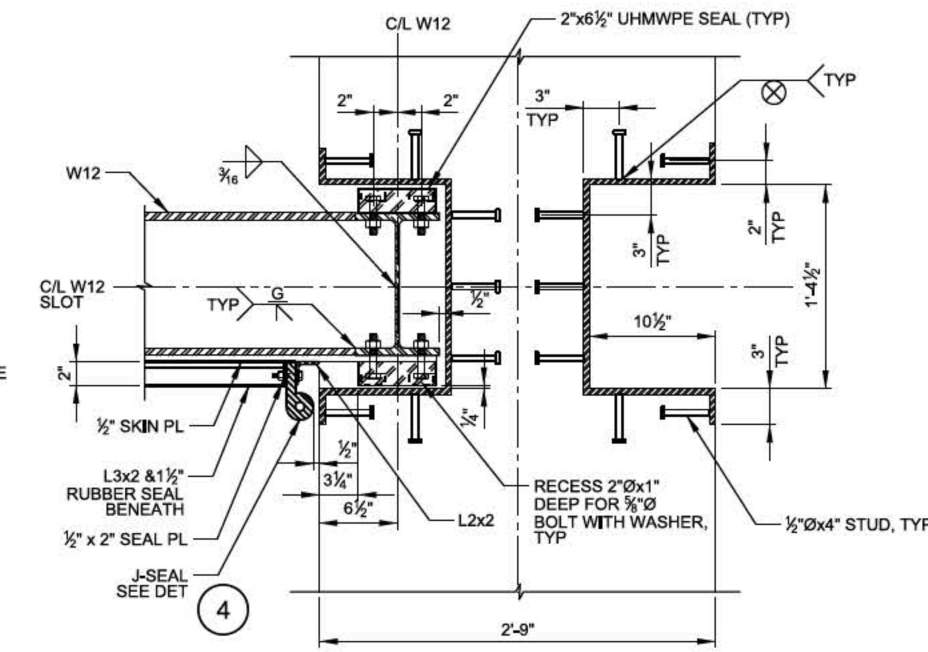
S-301 | S-503

¾"=1'-0



A SECTION

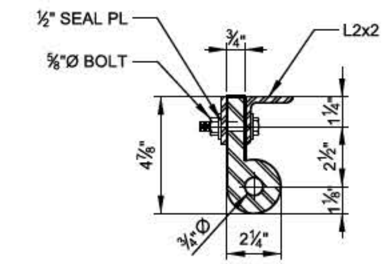
¾"=1'-0



5 DETAIL - BULKHEAD ARMOR PLATE

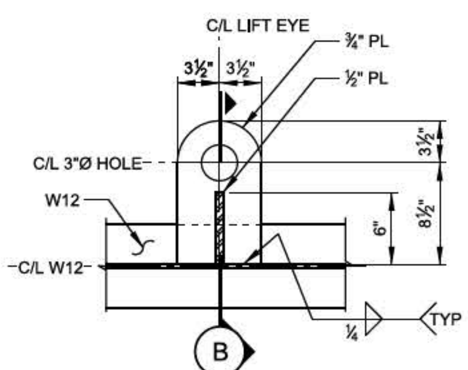
S-104 | S-503

1½"=1'-0



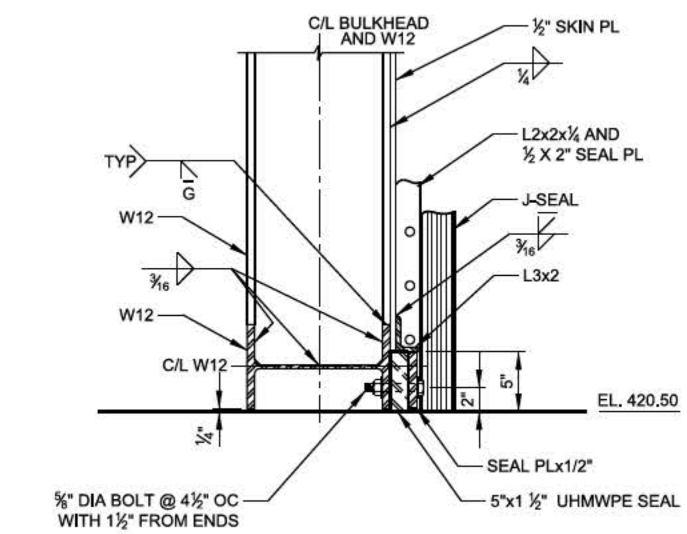
4 J-SEAL DETAIL

3"=1'-0



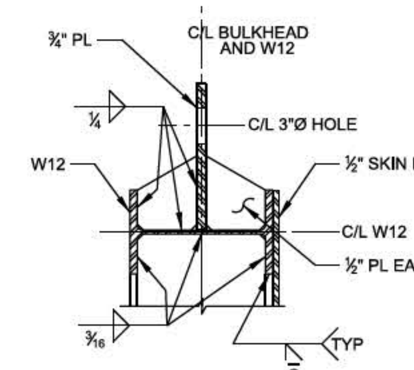
2 LIFT EYE DETAIL

1½"=1'-0



3 DETAIL

1½"=1'-0



B SECTION

1½"=1'-0

NOTE:

1 THE CONTRACTOR WILL HAVE THE OPTION TO SUBMIT A MANUFACTURER'S (HYDROGATE OR EQUAL) DESIGN FOR A PREFABRICATED BULKHEAD. THE MANUFACTURER'S ALTERNATE DESIGN SHALL INCLUDE COMPUTATIONS AND SHOP DRAWINGS FOR THE PREFABRICATED BULKHEAD. THE ALTERNATE DESIGN SHALL SATISFY ALL US ARMY CORPS OF ENGINEERS' ENGINEERING CRITERIA. THE DESIGN AND DRAWINGS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF ILLINOIS AND SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL.

SCALE IN FEET (1 0 1)

SCALE IN FEET (2 0 2)

SCALE IN INCHES (4 0 4 8)

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	AMD 0001 REVISE NOTE AS-BUILT AS OF 29 SEPTEMBER 2017	8-17-11	RCF

DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: FRJ | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-503.dgn | DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-2029 | CONTRACT NO.: W912EK-11-C-0050 | PROJECT CODE: EP102

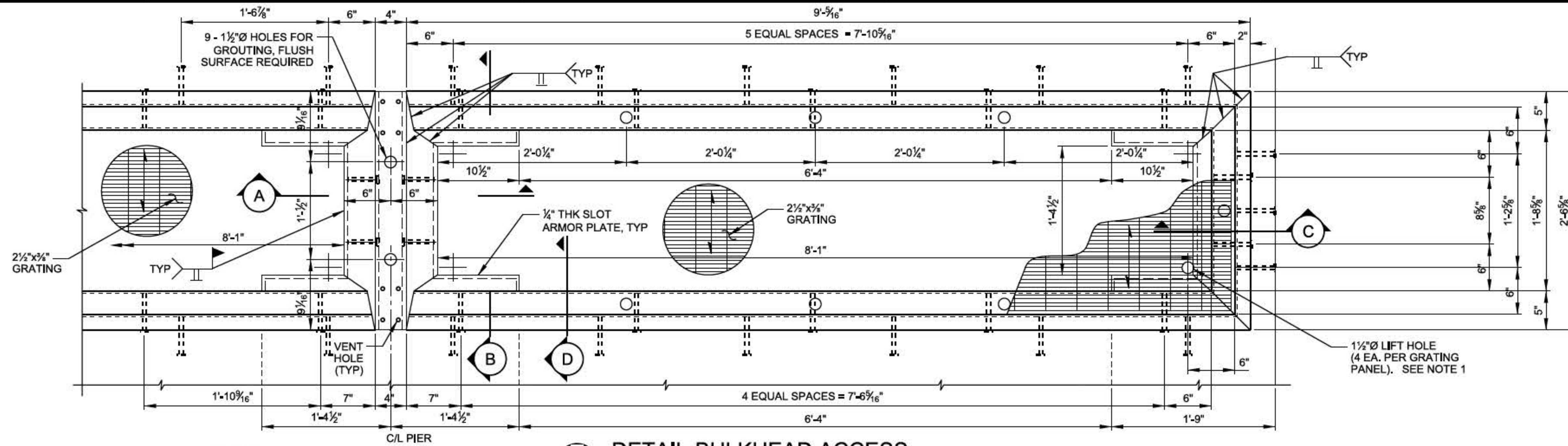
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

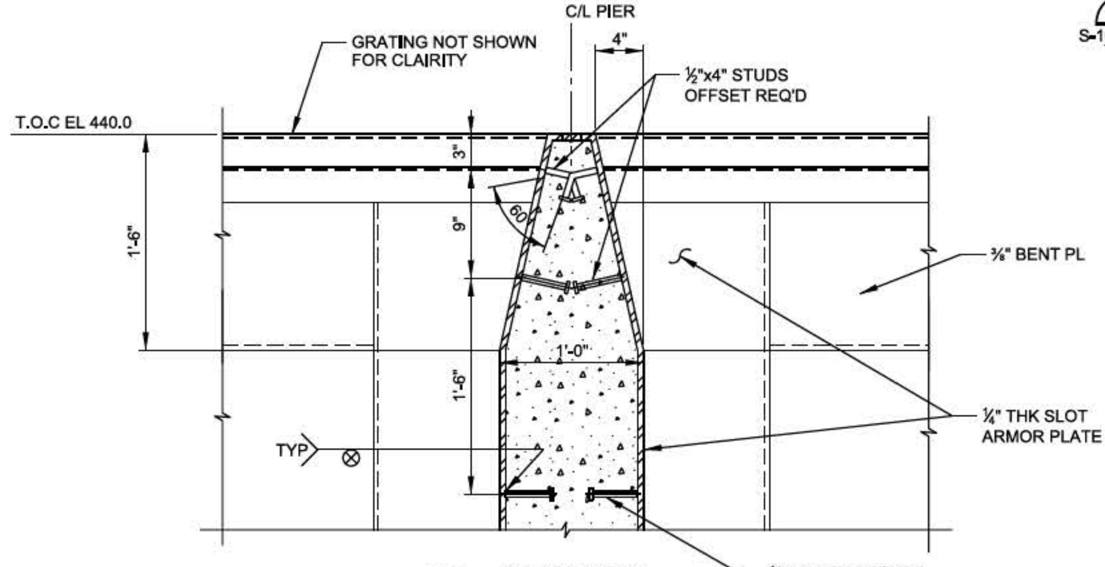
PUMP STATION
BULKHEAD

Sheet ID
S-503

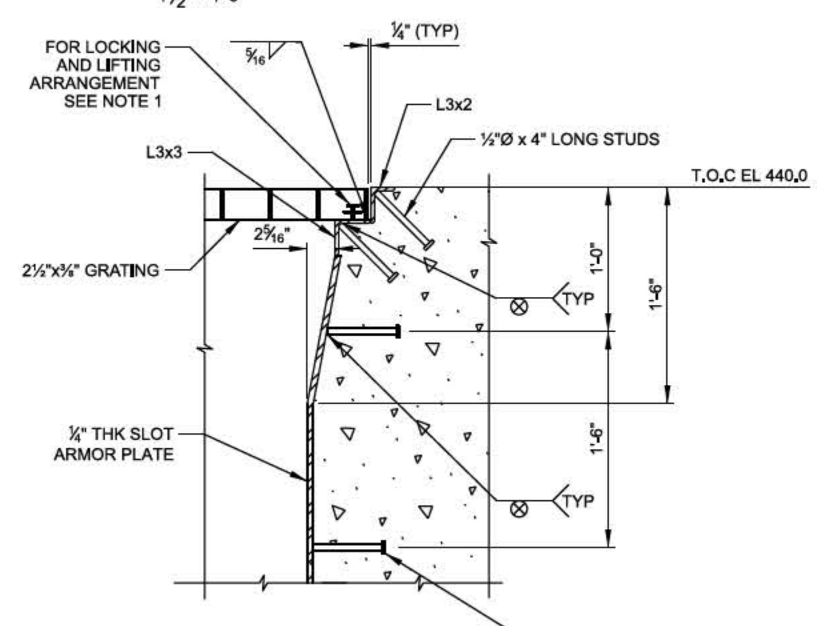
AS-BUILT
A-84



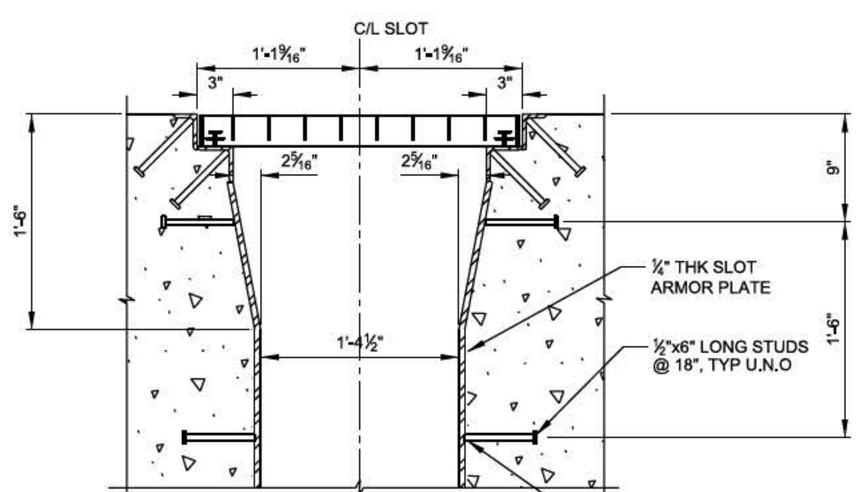
1 S-101 S-504 DETAIL-BULKHEAD ACCESS
1½" = 1'-0"



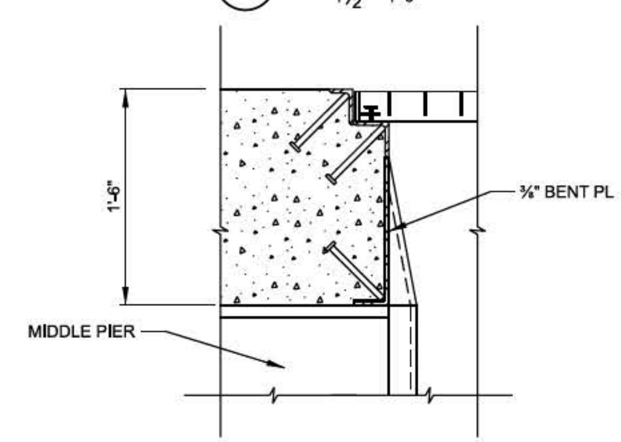
A SECTION
1½" = 1'-0"



C SECTION
1½" = 1'-0"



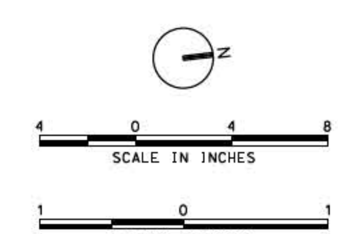
B SECTION
1½" = 1'-0"



D SECTION
1½" = 1'-0"

NOTE:

1. MANUACTURER SHALL PROVIDE LOCKING AND LIFTING ARRANGEMENT FOR GRATING OVER OPENINGS AND OBTAIN APPROVAL FROM CONTRACTING OFFICER.



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: MAK | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-504.dgn | DATE: 2017/09/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
BULKHEAD OPENINGS

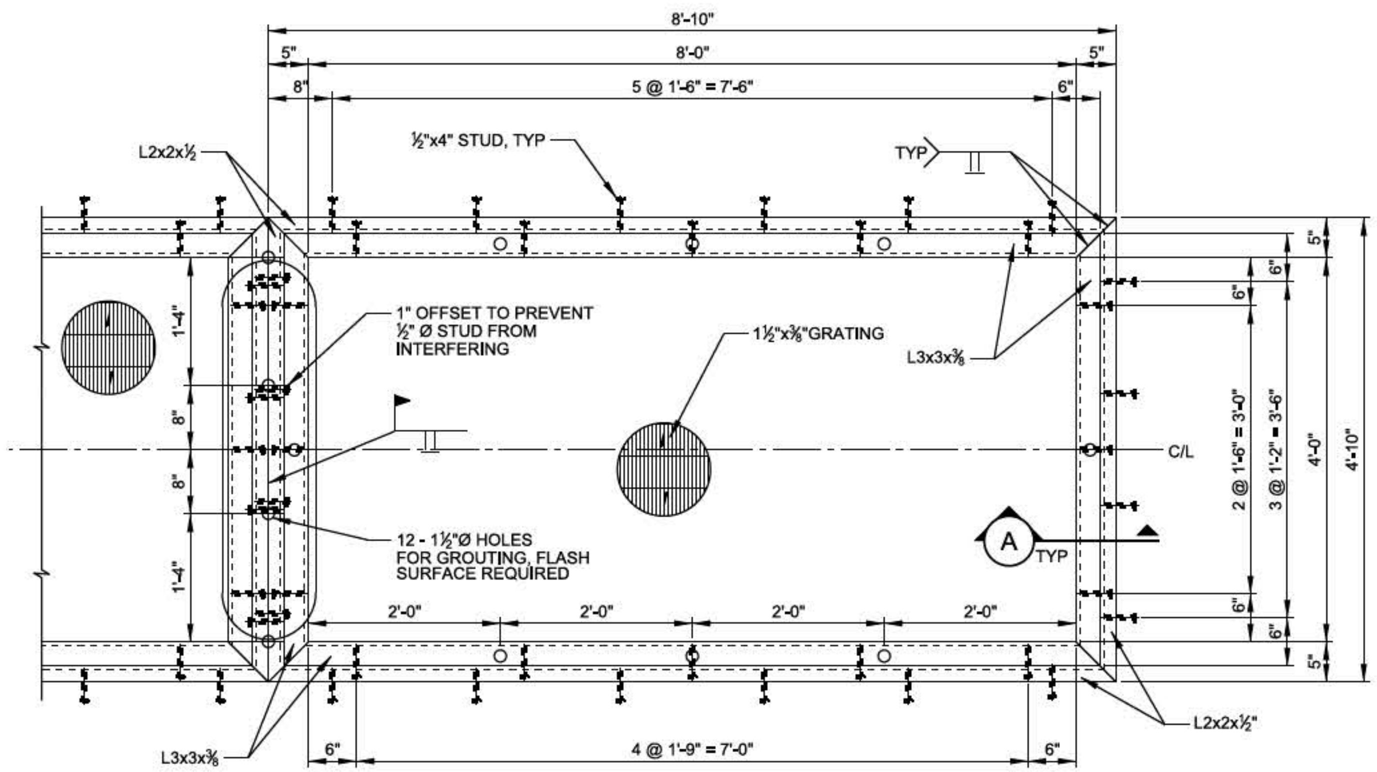
Sheet ID
S-504

AS-BUILT
A-85

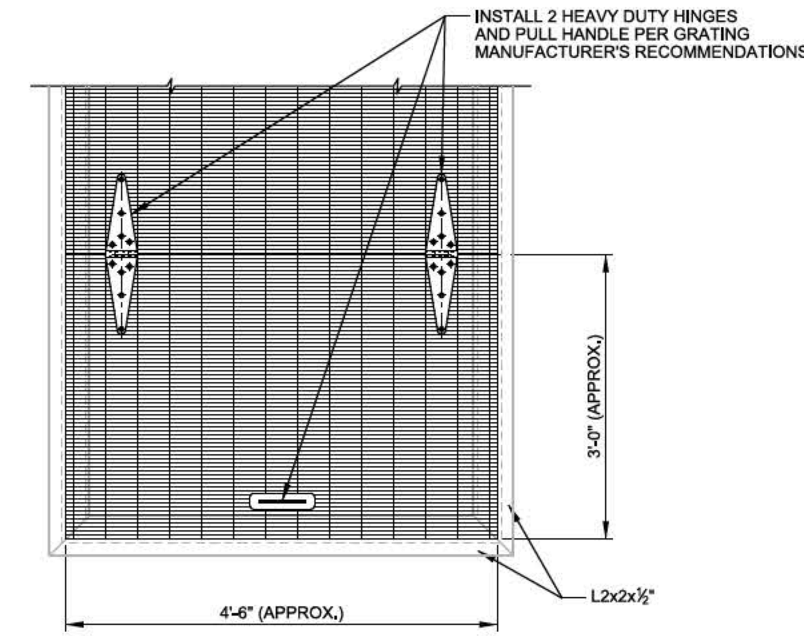
c:\pw_working\mvr\b5eddlh\d0153734\EP102_S-504.dgn
8/28/2018
3:20:02 PM
B5EDDLLH

NOTE:

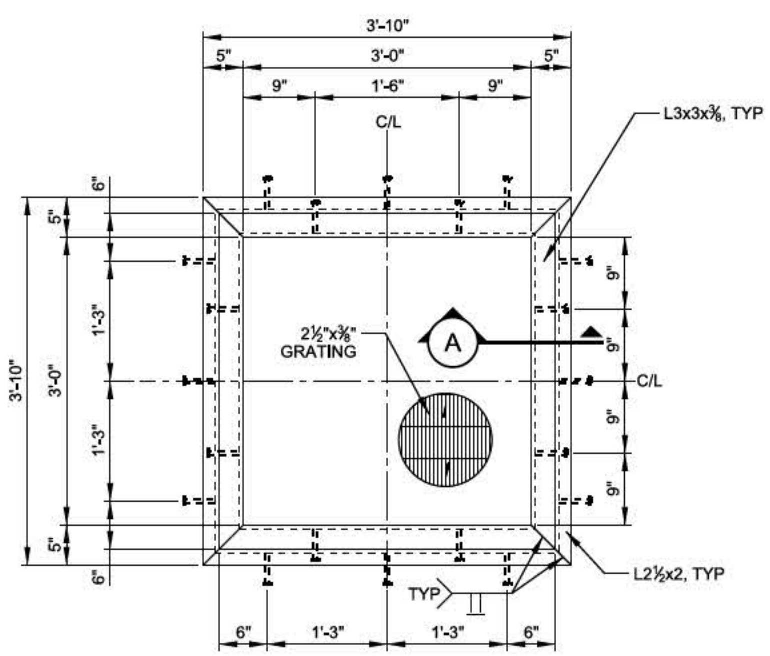
1. MANUFACTURER SHALL PROVIDE LOCKING ARRANGEMENT FOR GRATINGS OVER SUMP OPENINGS AND OBTAIN APPROVAL FROM CONTRACTING OFFICER.



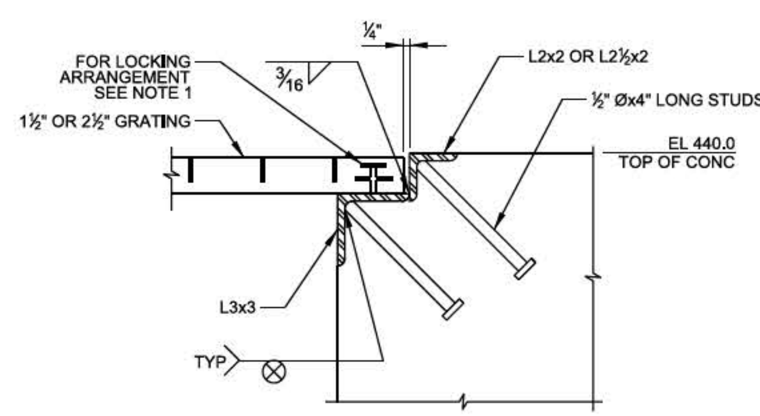
1 DETAIL - GRATED HATCH OPENING
S-101 | S-505
1" = 1'-0"



3 DETAIL - GRATED OPERABLE HATCH ⚠1
S-101 | S-505
1" = 1'-0"



2 DETAIL - GRATED SUMP OPENING
S-101 | S-505
1" = 1'-0"



A SECTION
3" = 1'-0"

SCALE IN FEET: 1 0 1 2

SCALE IN INCHES: 4 0 4 8

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA005 – ADD GRATED OPERABLE HATCH AS-BUILT AS OF 29 SEPTEMBER 2017	9/22/2012	CDD

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

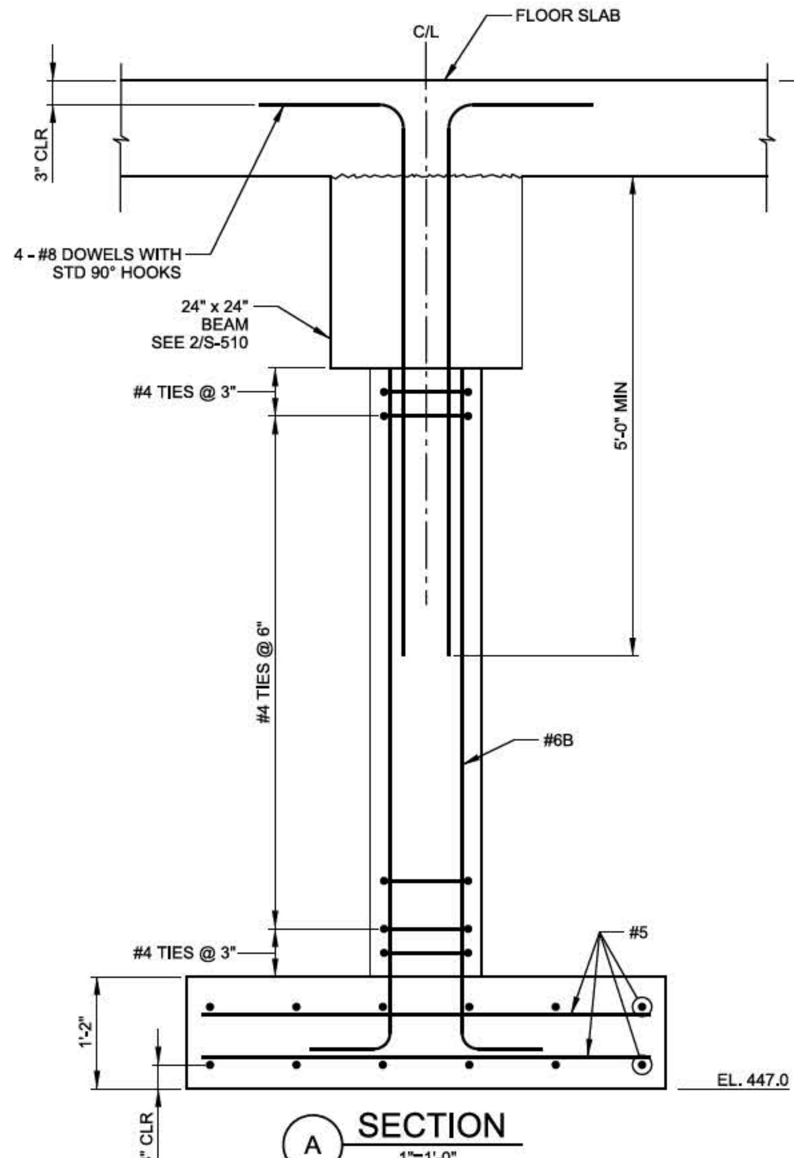
DESIGNED BY: KCP	DATE: 2011/09/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ	CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-505.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
GRATED HATCH OPENINGS

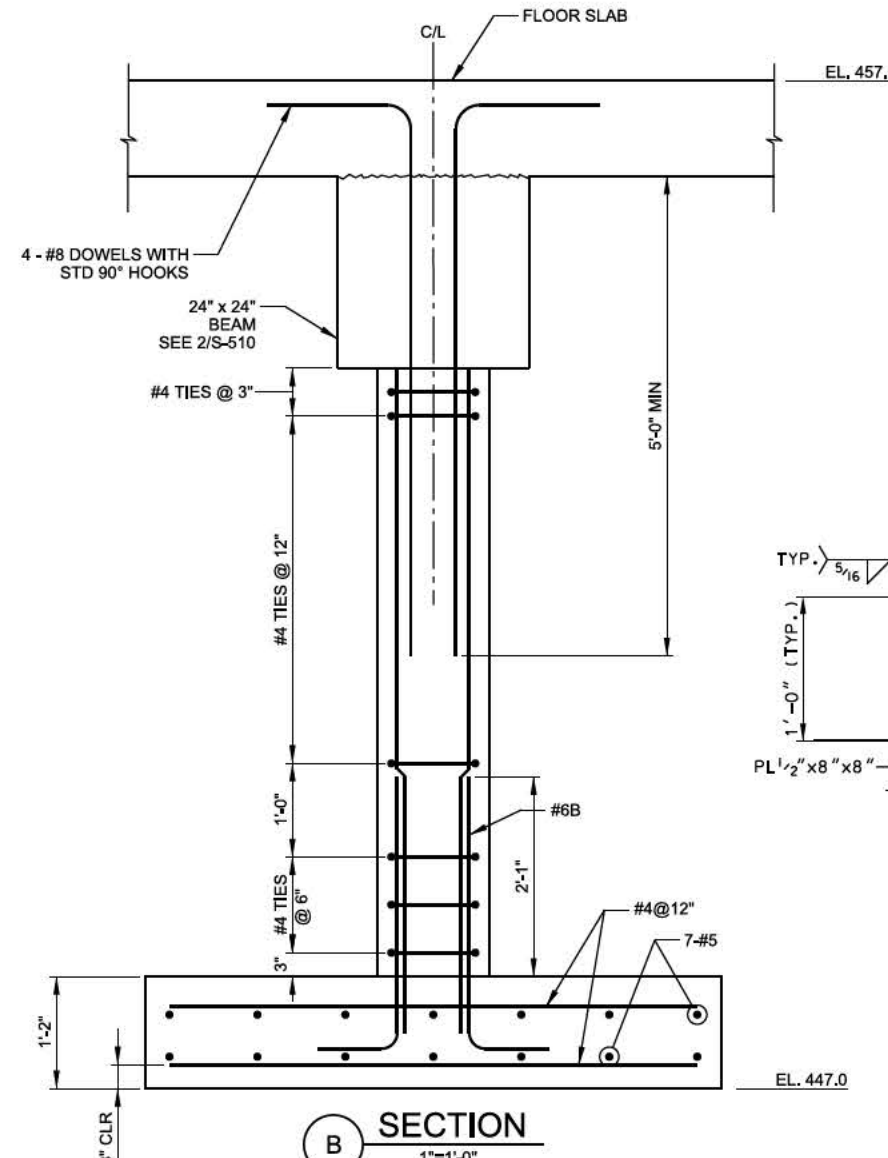
Sheet ID
S-505

c:\pw_working\mvr\b5edd\hd0153734\EP102_S-505.dgn
8/28/2018 3:20:07 PM
B5EDDLLH

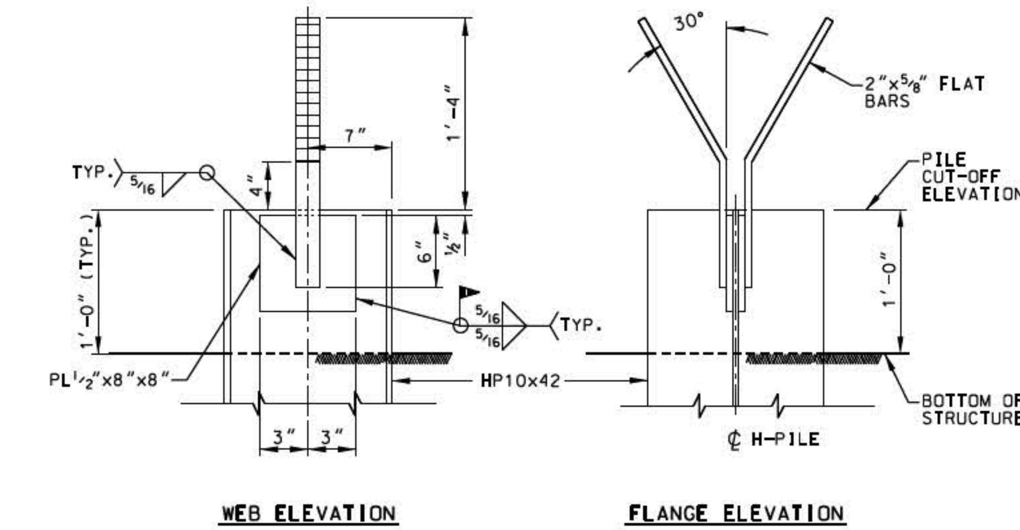
AS-BUILT
A-86



A SECTION
1"=1'-0"



B SECTION
1"=1'-0"

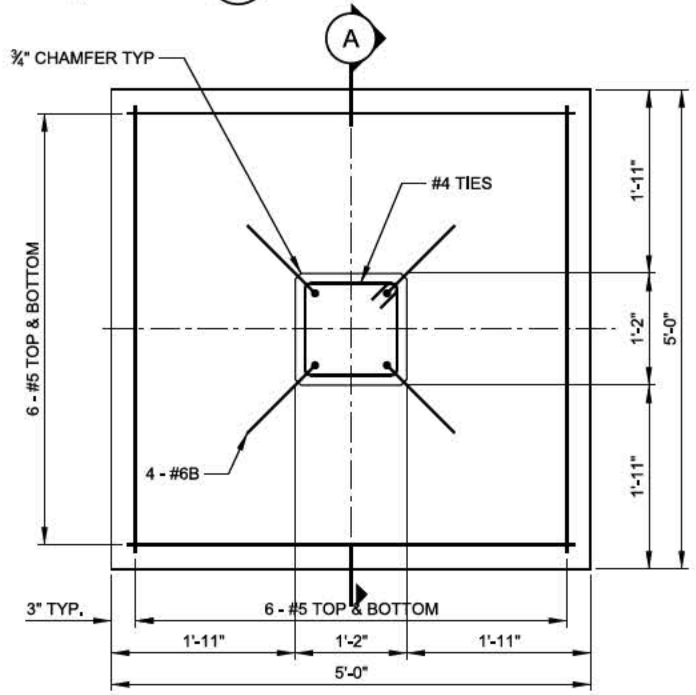


WEB ELEVATION

FLANGE ELEVATION

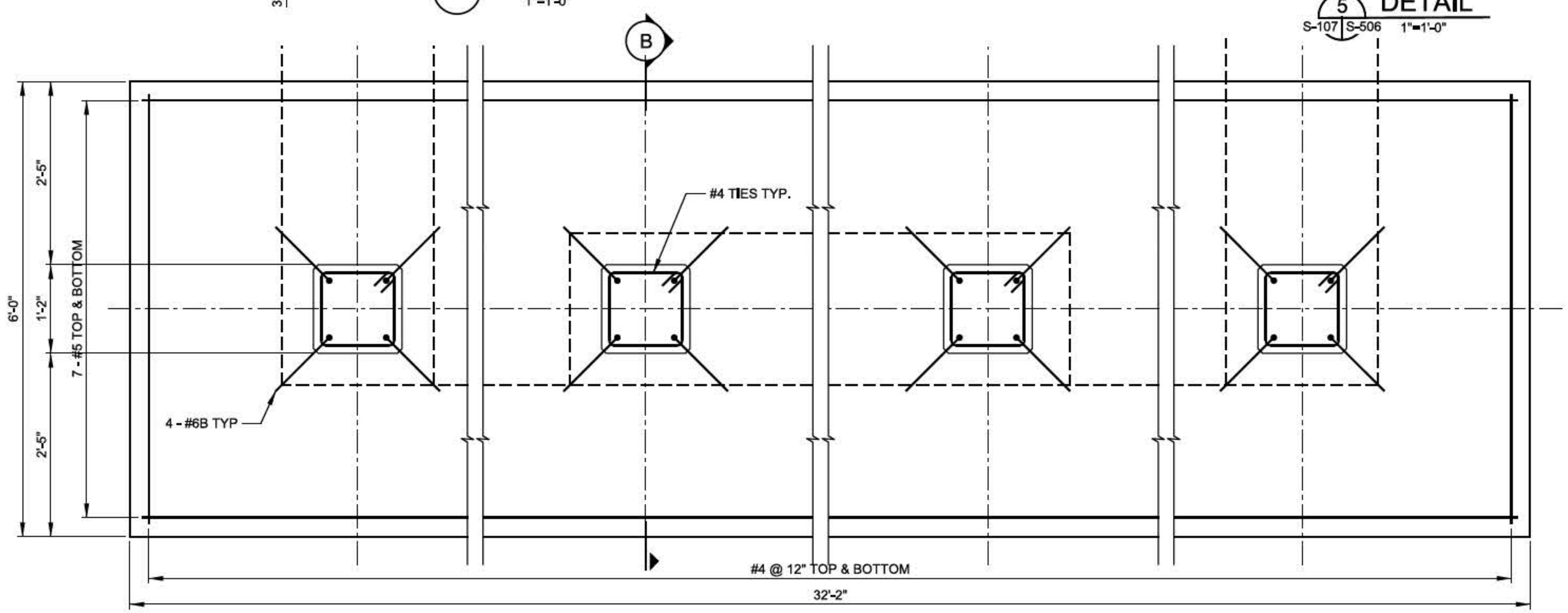
BEARING PILE FOOTING CONNECTION

SCALE IN FEET



4 DETAIL
S-107 S-506 1"=1'-0"

5 DETAIL
S-107 S-506 1"=1'-0"



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

DESIGNED BY: KCP		DATE: 2011/06/30
DWN BY: NPP	CKD BY:	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: 12" = 1'-0"	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102_S-506.dgn	

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

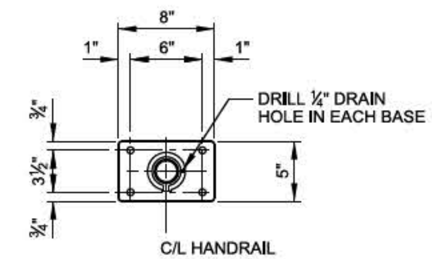
CONTROL BUILDING FOUNDATION REINFORCEMENT & PILE CONNECTION DETAILS

Sheet ID
S-506

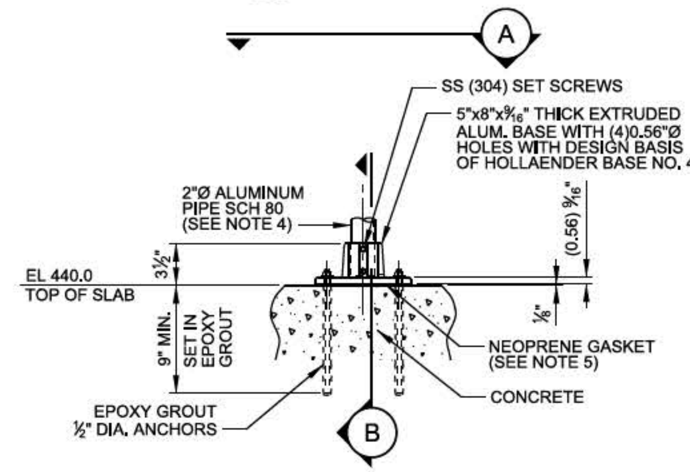
c:\pw_working\mvrb5edd\lhd01537344\EP102_S-506.dgn
8/28/2018 3:20:14 PM
B5EDDLLH

NOTES:

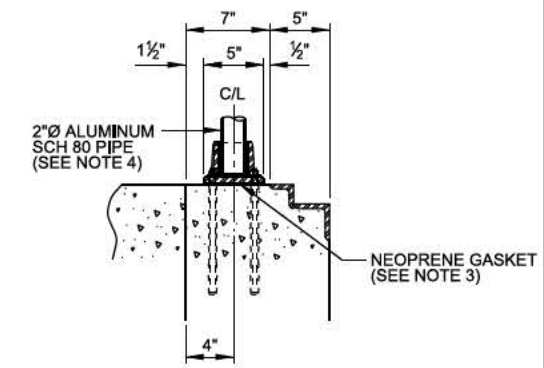
1. RAILING SHALL CONFORM TO HORIZONTAL AND VERTICAL ALIGNMENT. POSTS SHALL BE VERTICAL.
2. ALL HANDRAIL PIPE SHALL BE 2"Ø NPS ALUMINUM, SCHEDULE 80, FOR RAILS AND POSTS, UNO. ALUMINUM SHALL BE ALLOY 6061-T6, CONFORMING TO ASTM B221 OR B209.
3. IN ALL AREAS WHERE ALUMINUM AND CONCRETE CAN COME INTO CONTACT USE A 1/8" NEOPRENE GASKET BETWEEN THEM.
4. ALL DIMENSIONS SHALL BE CHECKED AGAINST FIELD SURVEY AND BE ADJUSTED TO FIT.



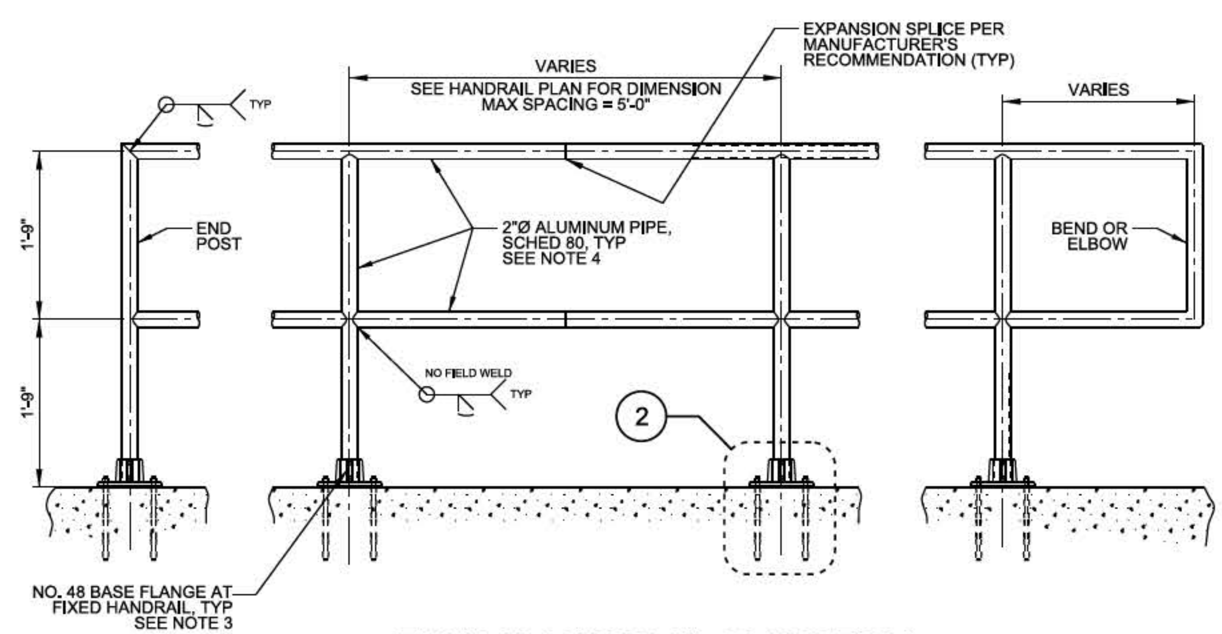
A SECTION
1½" = 1'-0"



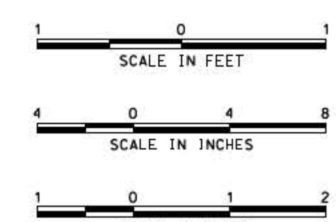
2 DETAIL TYPICAL
1½" = 1'-0"



B SECTION
1½" = 1'-0"



4 TYPICAL HANDRAIL ELEVATION
S-101 S-507
1" = 1'-0"



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
-	AS-BUILT AS OF 29 SEPTEMBER 2017	-	-

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

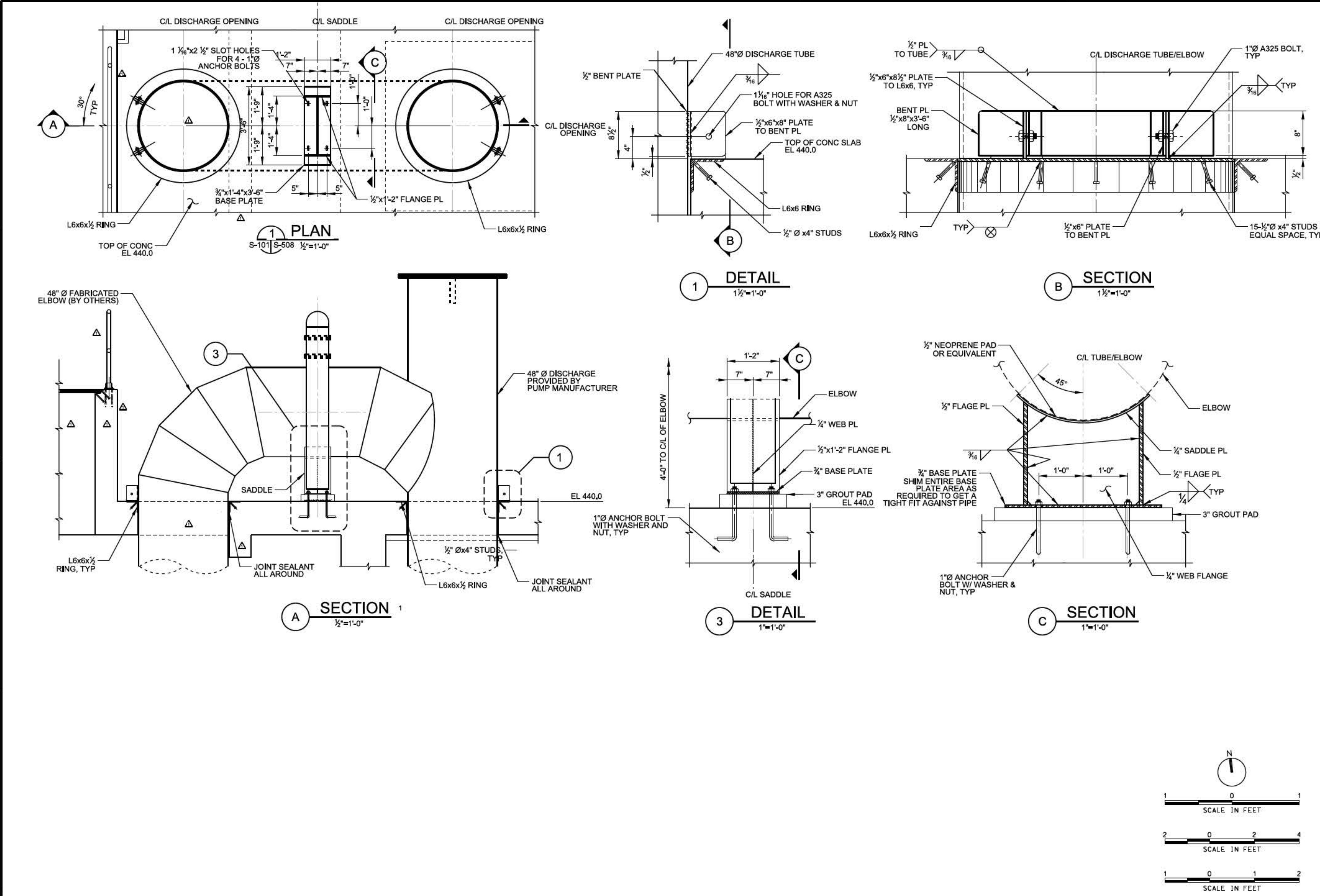
DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-507.dgn | DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
HANDRAIL DETAILS

Sheet ID
S-507

c:\pw_working\mvrb5edd\lhd0153734\EP102_S-507.dgn
8/28/2018 3:20:19 PM
B5EDDLLH

AS-BUILT



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA005 - ADD SURGE BASIN WALLS, LADDER AND HANDRAIL, MODIFY PIPE OPENINGS, ADD SLAB BEAM,	8/21/2012	CDD
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP
DWN BY: NPP
CKD BY:
SUBMITTED BY: FRJ
PLOT SCALE:
PLOT DATE:
SIZE: ANSI D
DATE: 2011/06/30
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0080
PROJECT CODE: EP102
FILE NAME: EP102_S-508.dgn

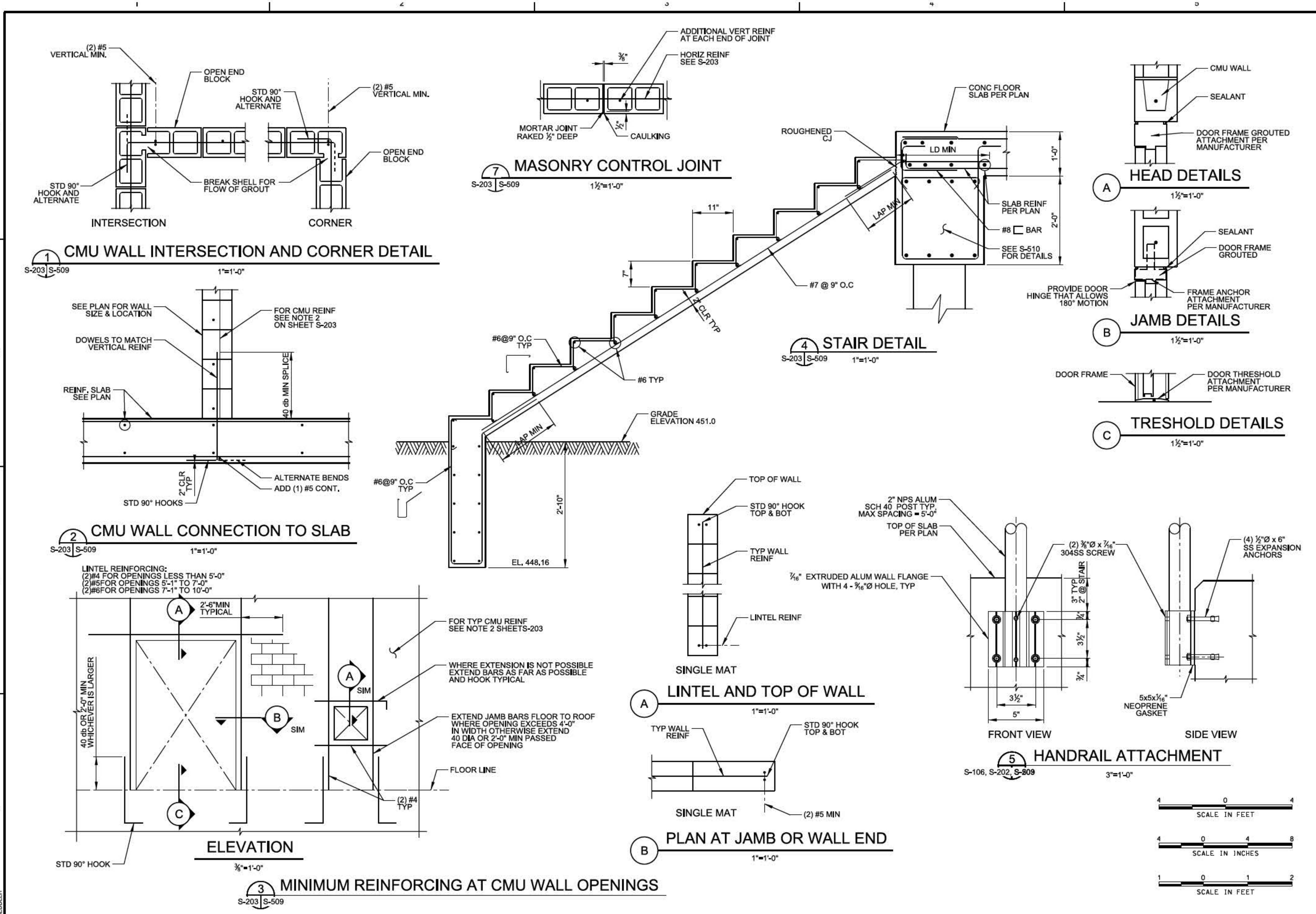
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
SIPHON OPENING
DETAILS

Sheet ID
S-508

AS-BUILT
A-89

c:\pw_working\mvrb5edollh\d0153734\EP102_S-508.dgn
8/28/2018 3:20:37 PM
B5EDOLLH



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
-	AS-BUILT AS OF 29 SEPTEMBER 2017	-	-

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

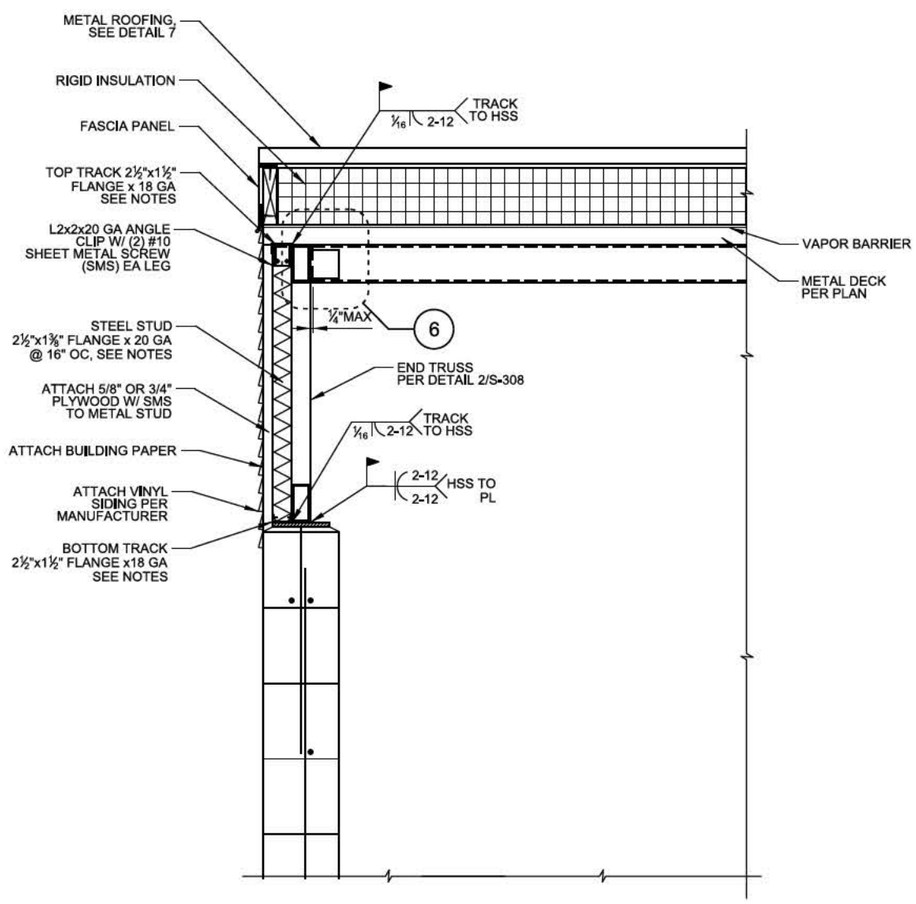
DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-509.dgn | DATE: 2017/09/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-11-C-0060 | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
CONTROL BUILDING
DETAILS
SHEET 1 OF 2

Sheet ID
S-509

c:\pw_working\mvrb5eddlh\d0153734\EP102_S-509.dgn
8/28/2018 3:20:42 PM
B5EDDLLH

AS-BUILT
A-90



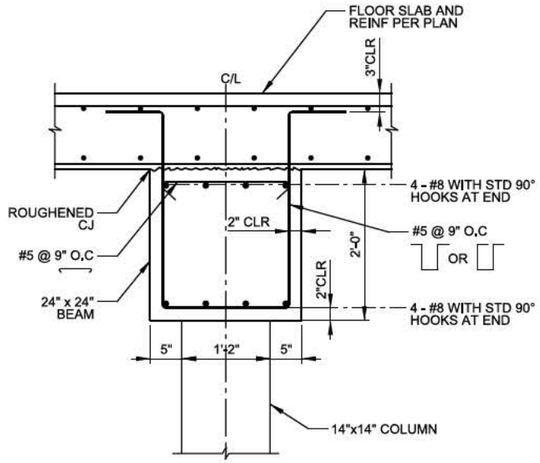
1 DETAIL
S-308 S-510 1½"=1'-0"

NOTES:

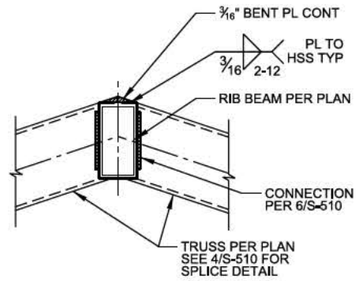
1. SEE SPECIFICATION SECTION 05 40 00 FOR METAL STUDS REQUIREMENTS.

2. MINIMUM STUD/TRACK PROPERTIES AS FOLLOWS:

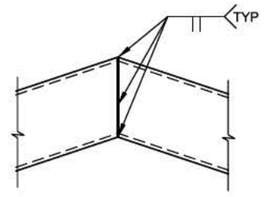
SECTION	AREA (IN^2)	EFFECTIVE Ixx (IN^4)	EFFECTIVE Sxx (IN^3)
- 2½ x 1⅜""FLANGE x20 GA STUD	0.197	0.203	0.156
- 2½ x 1½"FLANGE x18 GA TRACK	0.225	0.231	0.147



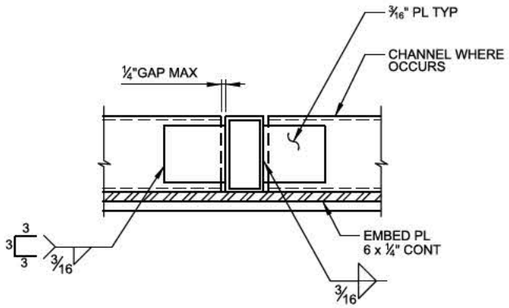
2 FRAME BEAM DETAIL
S-203 S-510 1"=1'-0"



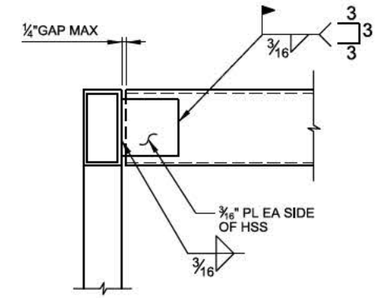
3 ROOF DETAIL
S-308 S-510 3"=1'-0"



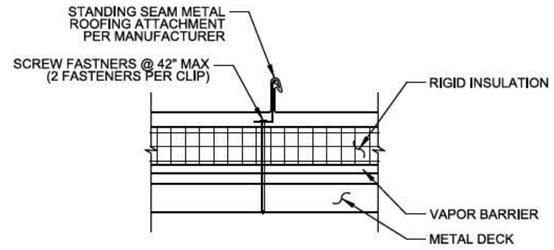
4 ROOF TRUSS SPLICE DETAIL
3"=1'-0"



5 CONNECTION DETAIL
S-308 S-510 3"=1'-0"



6 CONNECTION DETAIL
3"=1'-0"



7 METAL ROOFING INSTALLATION OVER INSULATION
S-308 S-510 3"=1'-0"

4 0 4 8
SCALE IN INCHES

1 0 1 2
SCALE IN FEET

1 0 1
SCALE IN FEET

US Army Corps of Engineers®

MARK	DATE	APPR.	DESCRIPTION

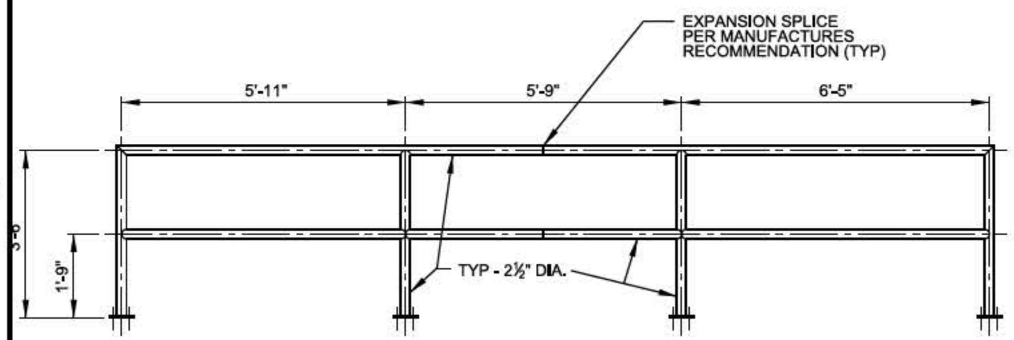
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KDP
DWN BY: NPP
SUBMITTED BY: FRJ
CKD BY:
PLOT SCALE: AS SHOWN
PLOT DATE: AS SIZED
DATE: 20110630
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.: W912EK-11-C-0080
PROJECT CODES EP102
FILE NAME: EP102_S-510.dgn
ANSI D

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
CONTROL BUILDING
DETAILS
SHEET 2 OF 2

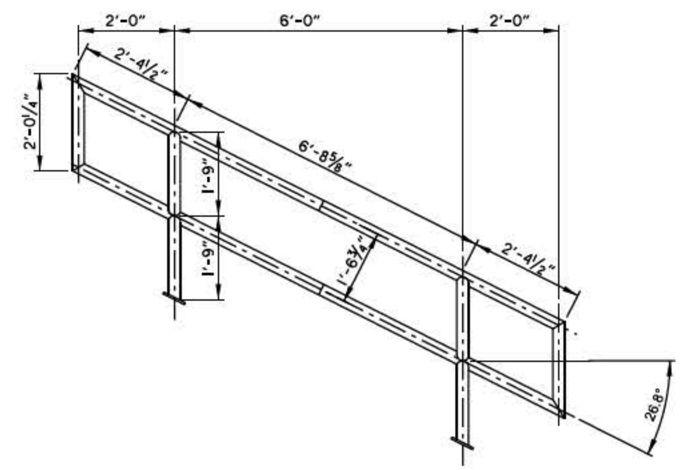
Sheet ID
S-510

AS-BUILT
A-91



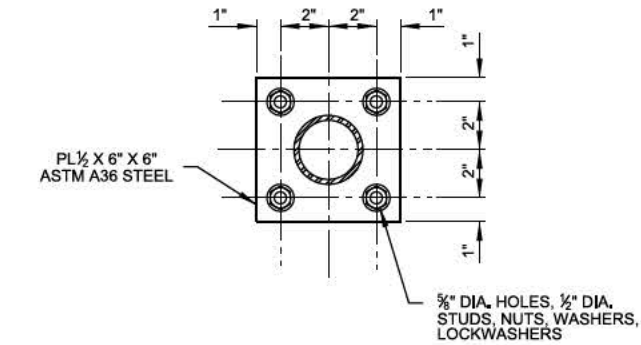
RIVER SIDE RAILING ELEVATION

(MAKE 1 EA - PAINT GRAY)

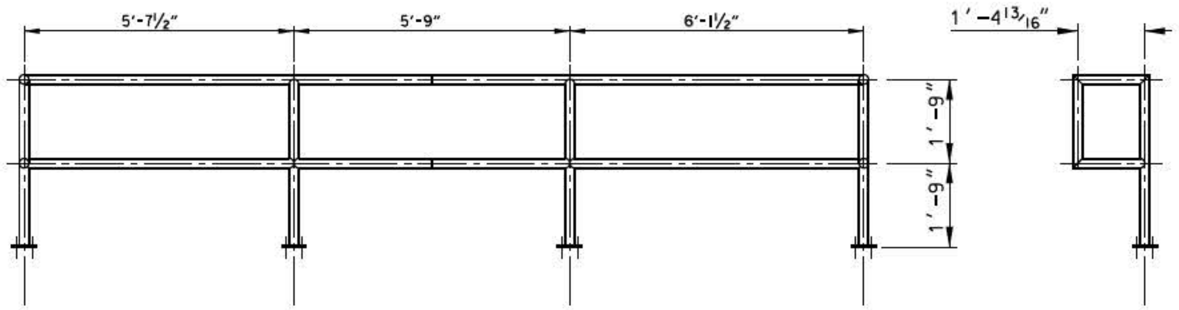


TYPICAL WINGWALL RAILING ELEVATION

(MAKE 4 EA - PAINT GRAY)

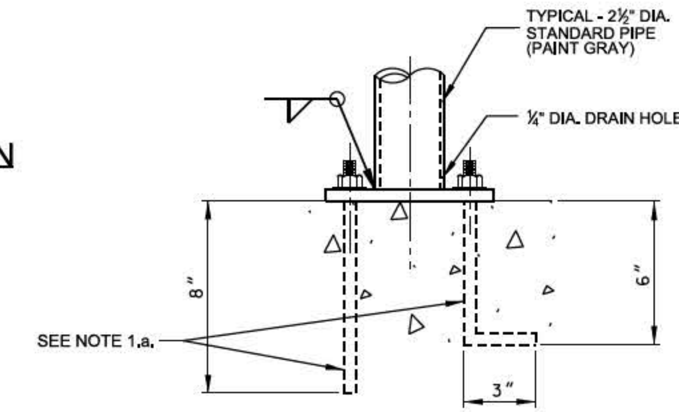


RAILING BASE PLATE - DETAIL PLAN

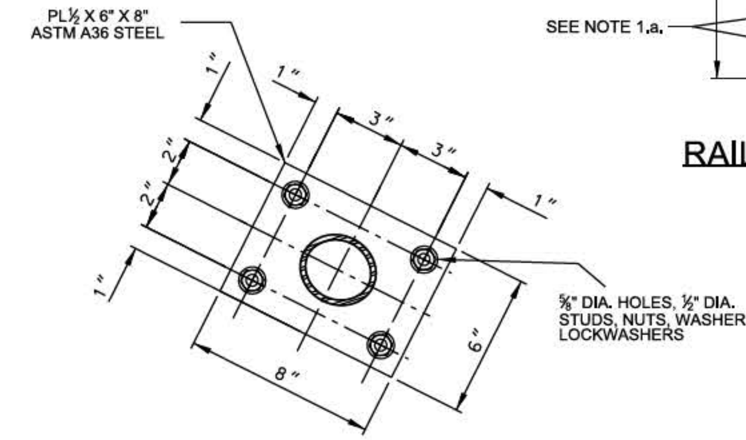


LAKE SIDE RAILING ELEVATION

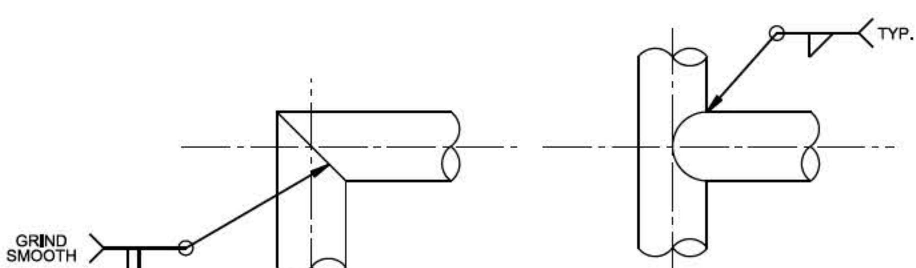
(MAKE 1 EA - PAINT GRAY)



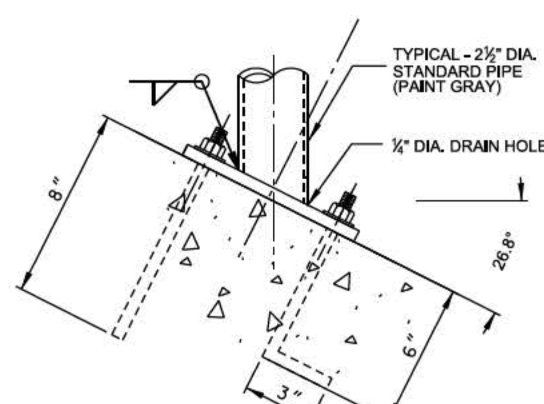
RAILING BASE PLATE - SECTION



WING WALL RAILING BASE PLATE - DETAIL PLAN



TYPICAL RAILING PIPE CONNECTIONS



WING WALL RAILING BASE PLATE - SECTION

NOTES:

1. ANCHORS SHALL CONSIST OF THE FOLLOWING;
   a. ANCHOR RODS, NUTS AND WASHERS SHALL BE GALVANIZED STEEL. ANCHOR RODS SHALL BE ASTM A307 (OR BETTER) 1/2 " DIA. WITH 8" MIN. EMBEDMENT OR WITH 6" MIN. EMBEDDMENT W/HOOK.
   b. EPOXY ADHESIVE SHALL PROVIDE A MIN. ALLOWABLE TENSILE STRENGTH EQUAL TO OR GREATER THAN THE TENSILE STRENGTH OF THE ANCHOR ROD.
2. ALL RAILING SHALL BE FABRICATED FROM 2 1/2 " DIA. ASTM A53 STEEL, GRADE B, STANDARD WEIGHT PIPE. BASE PLATES SHALL BE FABRICATED FROM 1/2" ASTM A36 STEEL PLATE.
3. RAILING ASSEMBLIES SHALL BE PAINTED GRAY WITH AN APPROVED PAINT AFTER FABRICATION.

TYPICAL RAILING DETAILS

NOT TO SCALE

US Army Corps of Engineers

AS-BUILT AS OF 29 SEPTEMBER 2017

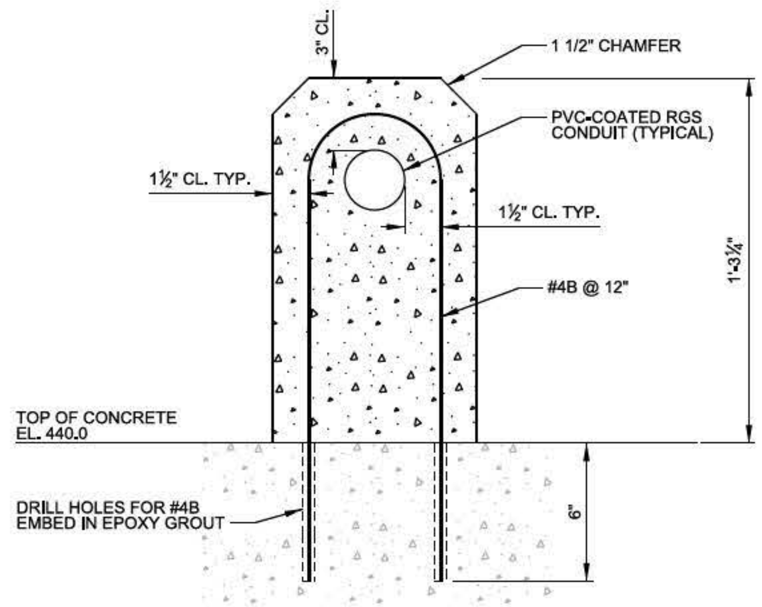
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

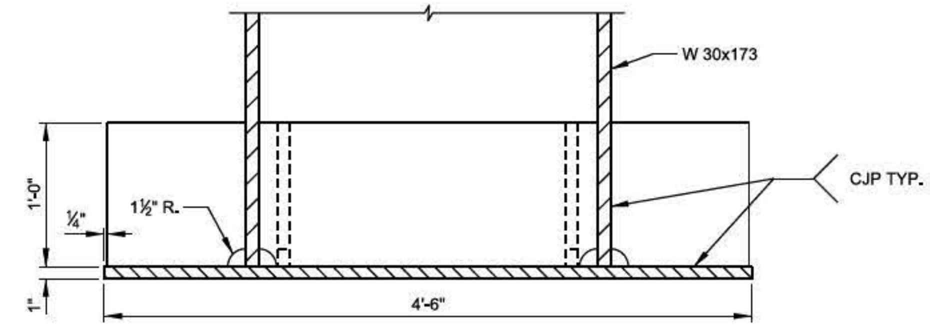
OUTLET STRUCTURE
HANDRAIL DETAIL

Sheet ID
S-511

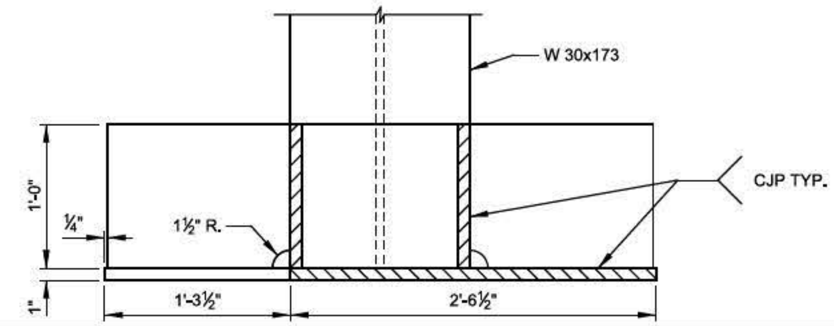
AS-BUILT



C1 SECTION
SCALE : 3"=1'-0"



D3 BASE PLATE SECTION
SCALE : 1 1/2"=1'-0"



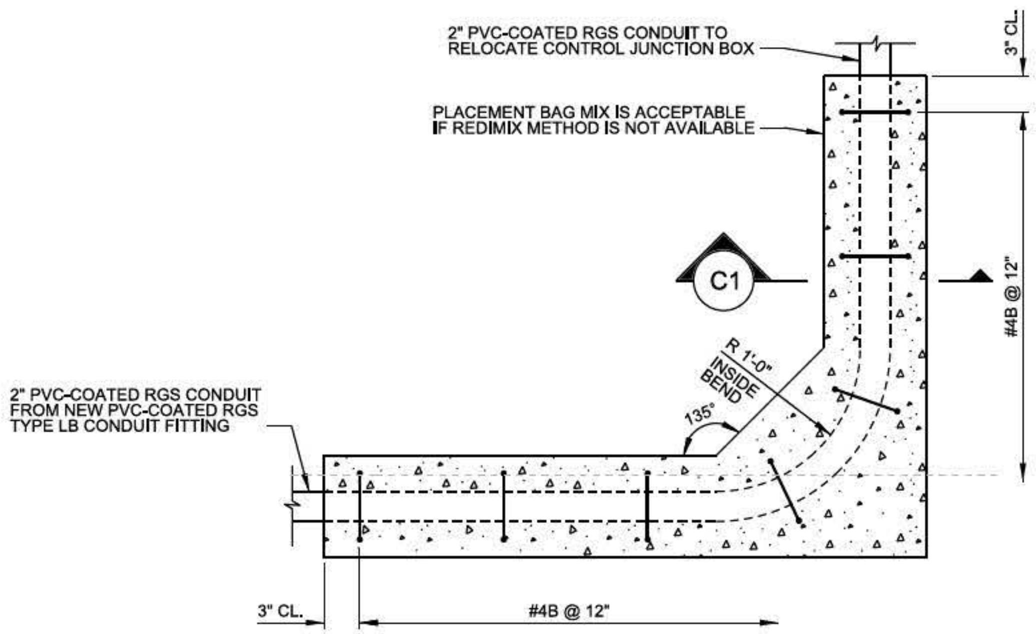
C3 BASE PLATE SECTION
SCALE : 1 1/2"=1'-0"

STRUCTURAL NOTES

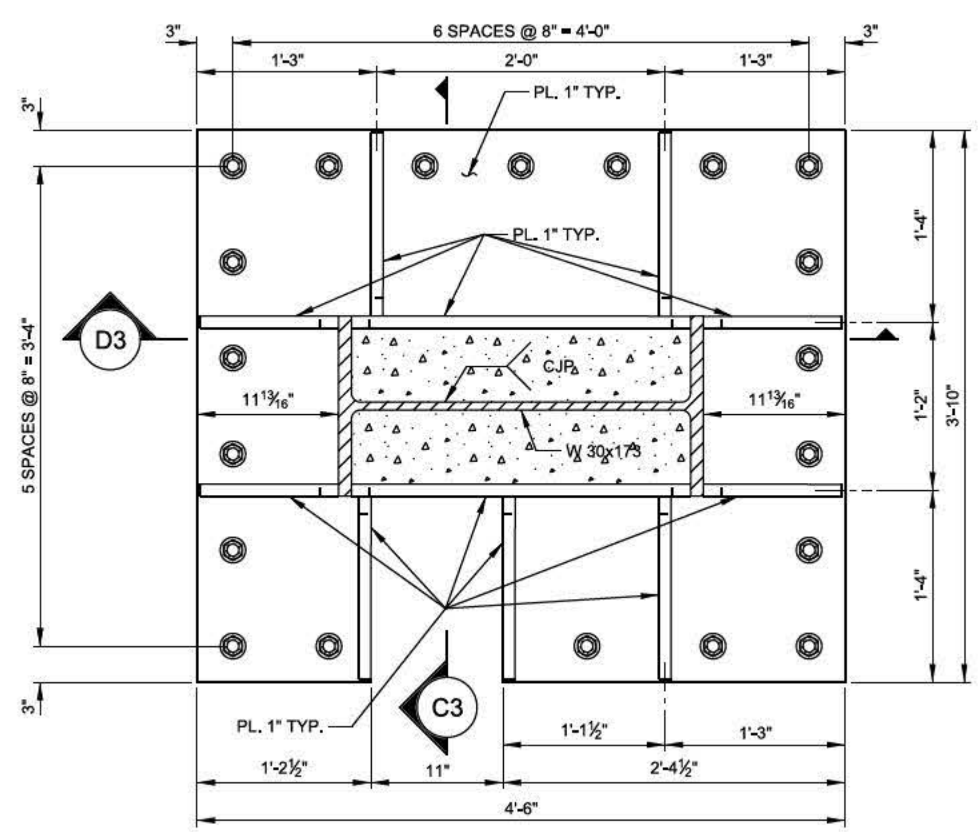
1. GALVANIZE EACH BASE PLATE AND BEAM ASSEMBLY, IF PAINTING IS CHOSEN OVER GALVANIZING USE A VINYL PAINT SYSTEM TO PROTECT EACH ASSEMBLY.
2. IT IS PERMITTED TO DRILL A HOLE NEAR THE TOP OF THE BEAM ASSEMBLY FOR INSTALLATION.
3. INSTALL THREADED ROD WITH HILTI HIT-RE 500-SD EPOXY SYSTEM
4. USE ¼" NEOPRENE PAD TO ISOLATE THE BASE PLATE AND CONCRETE, MATCH THE BASE PLATE DIMENSIONS.
5. ALL HOLES DRILLED TO ATTACH ELECTRICAL COMPONENTS SHALL BE DRILL NOT TORCHED.

STRUCTURAL QUANTITIES

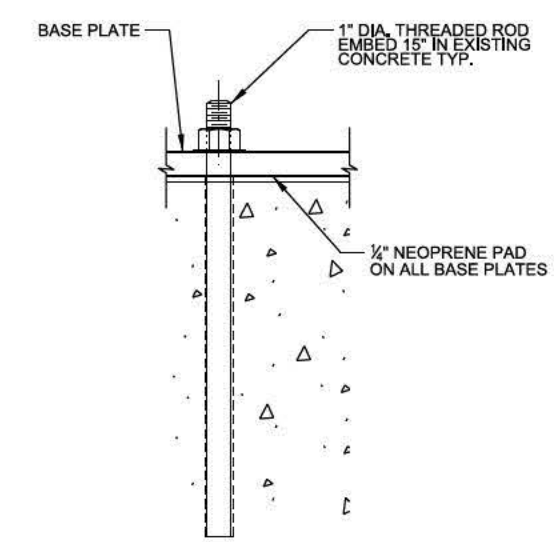
ITEM	TYPE	QTY	UOM
1" BASE PLATE	ASTM A36	84	SF
1/8" STEEL PLATE	ASTM A36	1	SF
BEAMS	W30x173, A992	3	EA
THREADED ROD	ASTM A 193 B8	60	EA
NUTS	ASTM A 194 GRADE 8	60	EA
WASHERS	ASTM SS304	60	EA



A1 DETAIL
SCALE : 1 1/2"=1'-0"



A3 BASE PLATE DETAIL
SCALE : 1 1/2"=1'-0"



A5 ANCHOR DETAIL
SCALE : 3"=1'-0"

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

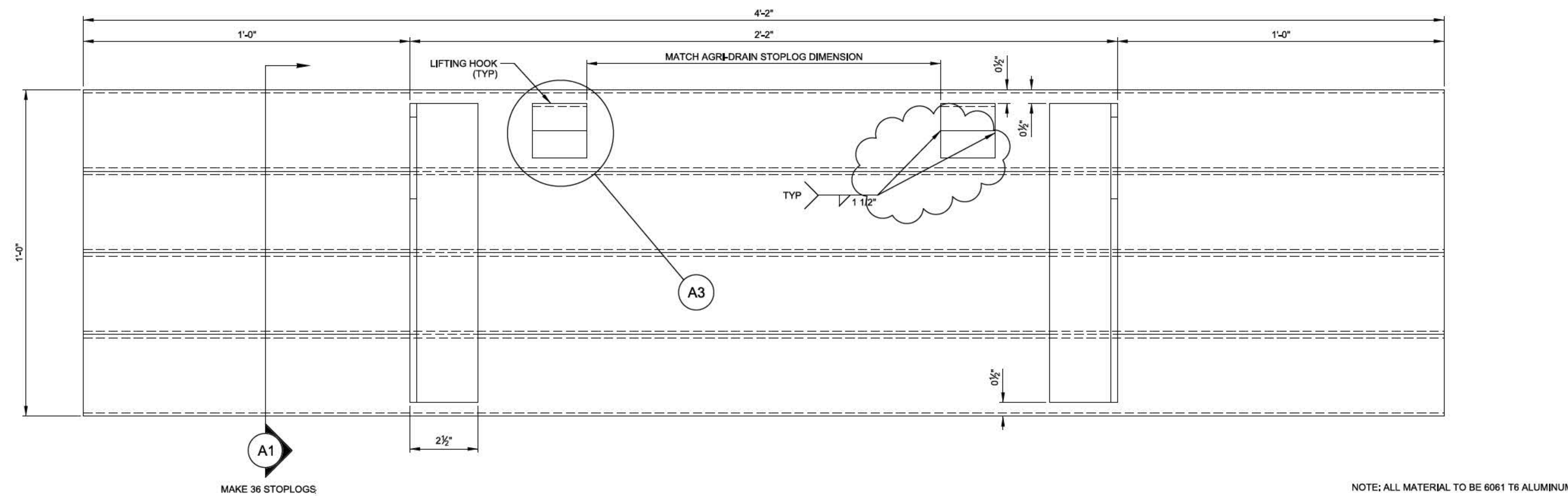
DESIGNED BY: JET | DWN BY: GLW | CKD BY: CDO | SUBMITTED BY: | DATE: 2018/06/17 | SOLICITATION NO.: W912EK-17-R-0029 | CONTRACT NO.: | PLOT SCALE: AS SHOWN | PLOT DATE: | PROJECT CODE: EP102 | SIZE: ANSI D | FILE NAME: EP102_S-512.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION NEW JUNCTION BOX DETAILS

Sheet ID
S-512

AS-BUILT
A-93

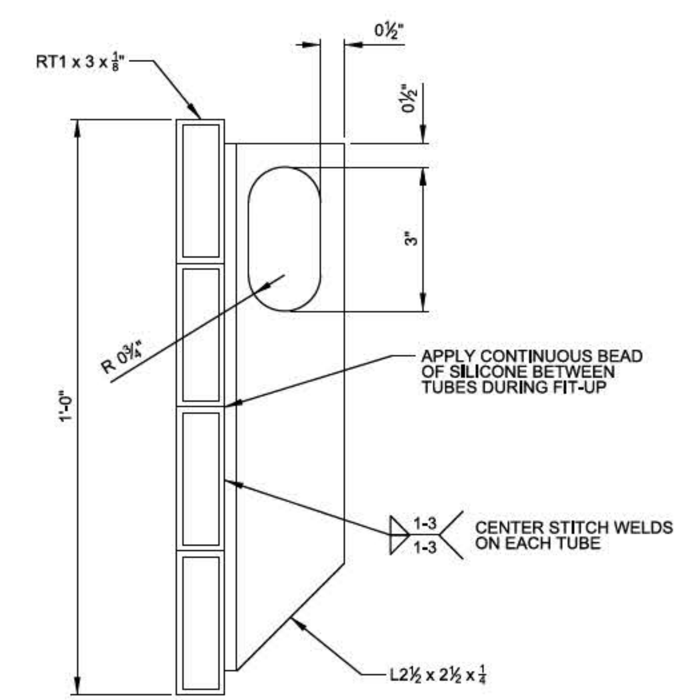
c:\pw_working\mvr\b5eddllh\d0153734\EP102_S-512.dgn
8/28/2018 3:21:08 PM
B5EDDLLH



NOTE: ALL MATERIAL TO BE 6061 T6 ALUMINUM

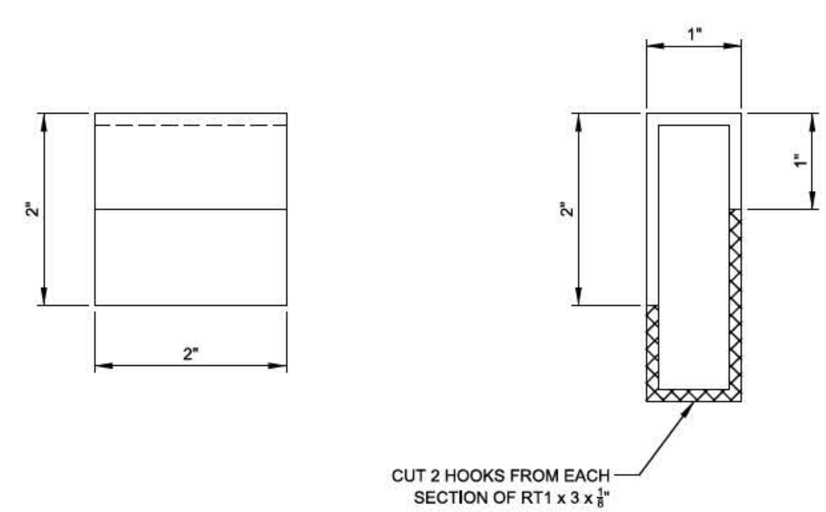
C1 STOPLOG ELEVATION

SCALE : 6"=1'-0"



A1 STOPLOG SECTION

SCALE : 6"=1'-0"



A3 LIFTING HOOK DETAIL

SCALE : 1"=1"

MARK	DESCRIPTION	DATE	APPR.
1	MOD EA0017 - CONVERT SLIDE GATE TO STOPLOG NEW SHEET AS-BUILT AS OF 29 SEPTEMBER 2017	08/05/2014	-

US Army Corps of Engineers®

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP/BCH | DATE: 2011/09/30
DWN BY: NPP | CKD BY: | SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: FRJ | CONTRACT NO.: W912EK-11-C-0086
PLOT SCALE: AS SHOWN | PLOT DATE: | PROJECT CODE: EP102
SIZE: ANSI D | FILE NAME: EP102_S-519.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
SLIDE GATE TO STOPLOG CONVERSION DETAILS

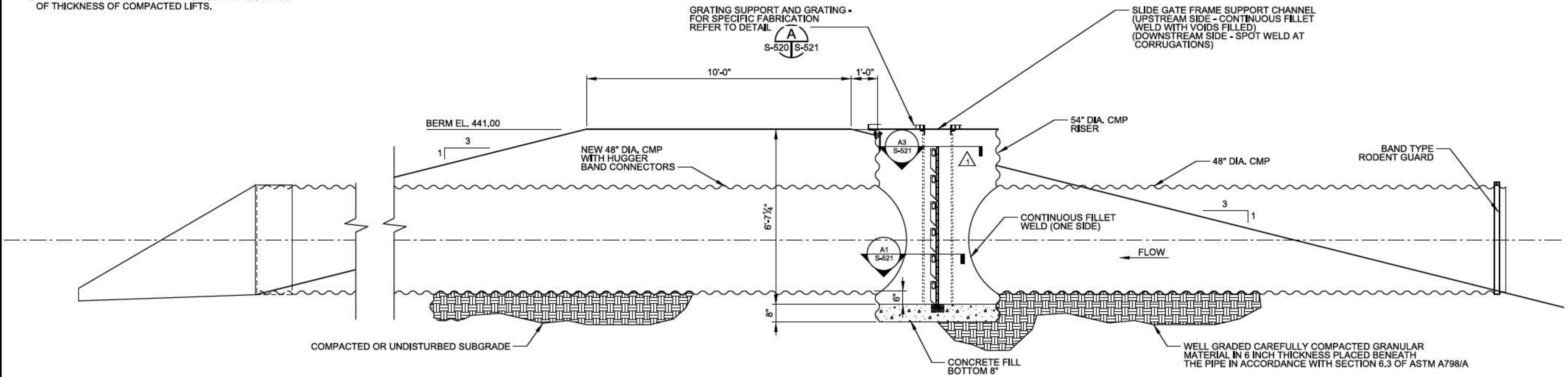
Sheet ID
S-519

AS-BUILT
A-94

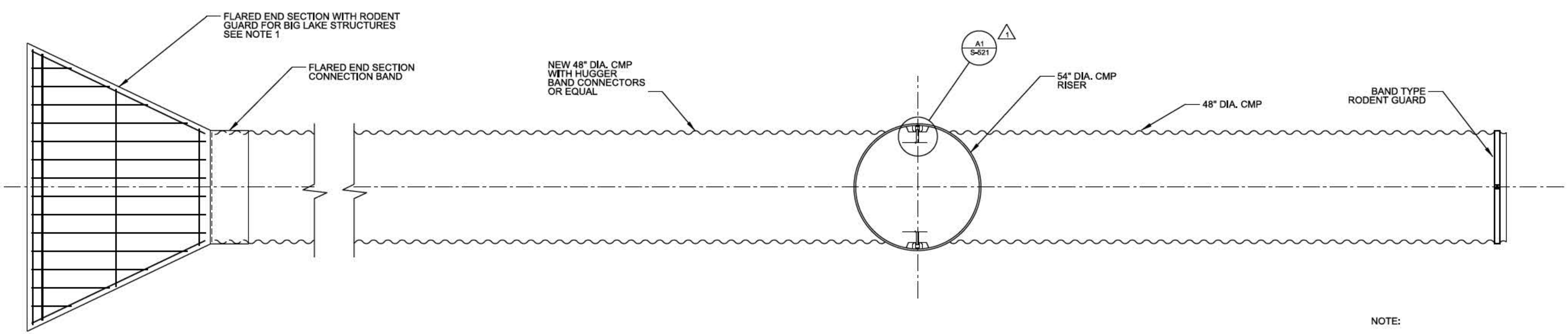
c:\pw_working\mvrb5edd\lhd0153734\EP102_S-519.dgn
8/28/2018
3:21:13 PM
B5EDDLLH

NOTES:

1. INSTALL SLIDE GATE AND STEM SUPPORTS PER MANUFACTURER'S SPECIFICATIONS.
2. 48" AND 54" CMP SHALL CONFIRM TO ASHTO M190 TYPE A AND ASTM A760/A AND ASTM A798/A.
3. PLACE AND COMPACT THE BACKFILL IN 6 TO 12 INCHES OF THICKNESS OF COMPACTED LIFTS.



48" CMP GATE STRUCTURE - PROFILE



NOTE:

1. FOR RICE LAKE STRUCTURES, INSTALL BAND TYPE RODENT GUARD.

SCALE IN FEET (2 0 2 4)

48" CMP GATE STRUCTURE - PLAN

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
1	5/8/2017 CONVERT SLIDE GATE TO STOPLOG; AS-BUILT AS OF 29 SEPTEMBER 2017	08/09/2014	-

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: FRJ | DATE: 2011/09/30 | SOLICITATION NO.: W912EK-11-R-2029 | CONTRACT NO.: W912EK-11-C-0060 | PLOT SCALE: AS SHOWN | PLOT DATE: | PROJECT CODE: EP102 | SIZE: ANSI D | FILE NAME: EP102_S-520.dgn

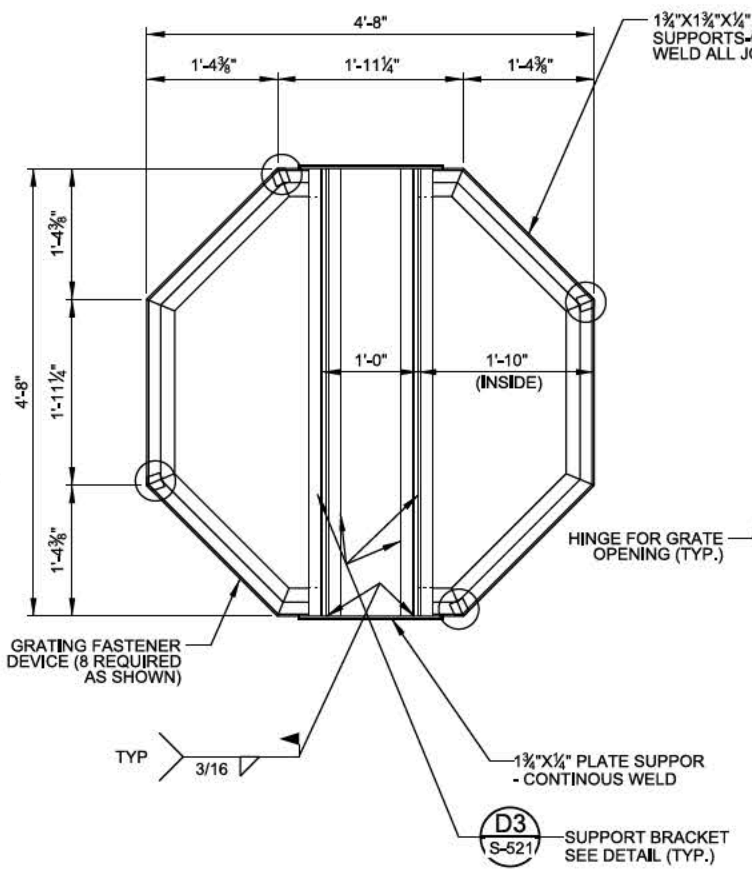
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

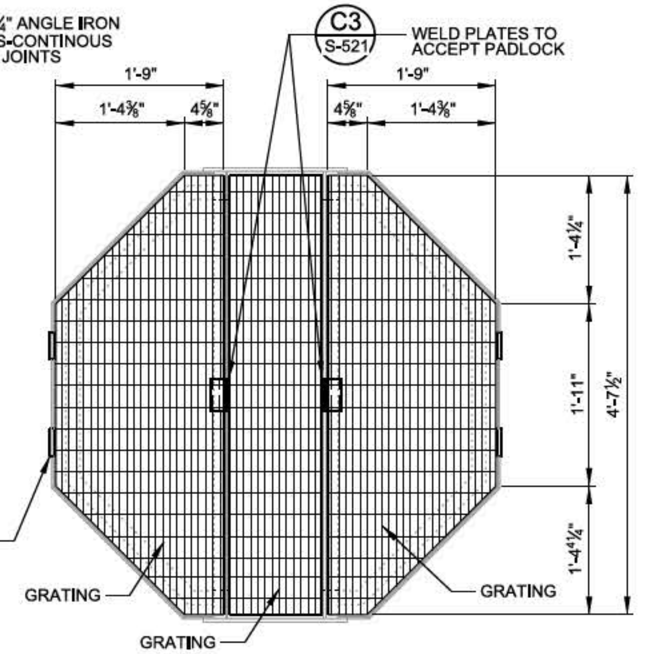
WATER CONTROL STRUCTURES DETAILS SHEET 1 OF 2

Sheet ID S-520

c:\pw_working\mvr\b5edollh\d0153734\EP102_S-520.dgn 8/28/2018 3:21:16 PM B5EDOLLH

AS-BUILT
A-95





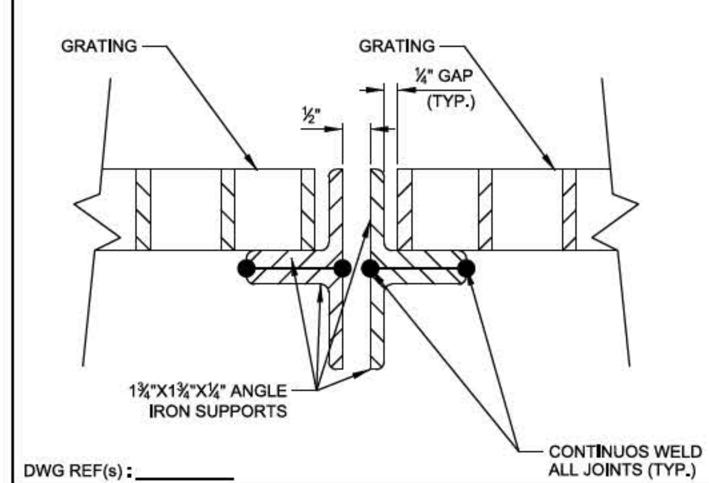
GENERAL GRATING NOTES:

1. BAND ALL EDGES OF GRATING.
2. DIMENSIONS SHOWN ON DETAIL SHALL BE VERIFIED PRIOR TO FABRICATION. DIMENSIONS SHALL BE ADJUSTED AS REQUIRED TO MATCH GRATING SUPPORT BRACKET DEMENSIONS.
3. HINGES SHALL ALLOW MINUM 270° MOTION OF HATCHES.

A GRATING SUPPORT BRACKET & GRATING (1)

S-520 | S-521

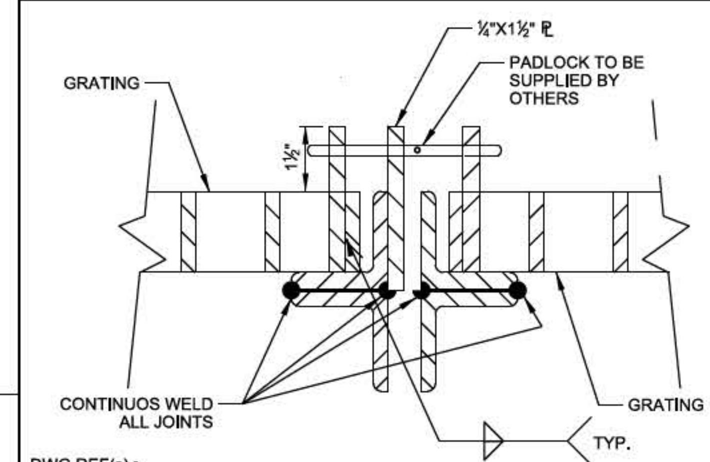
NO SCALE



DWG REF(s) : ________

D3 SUPPORT BRACKET STIFFENER (1)

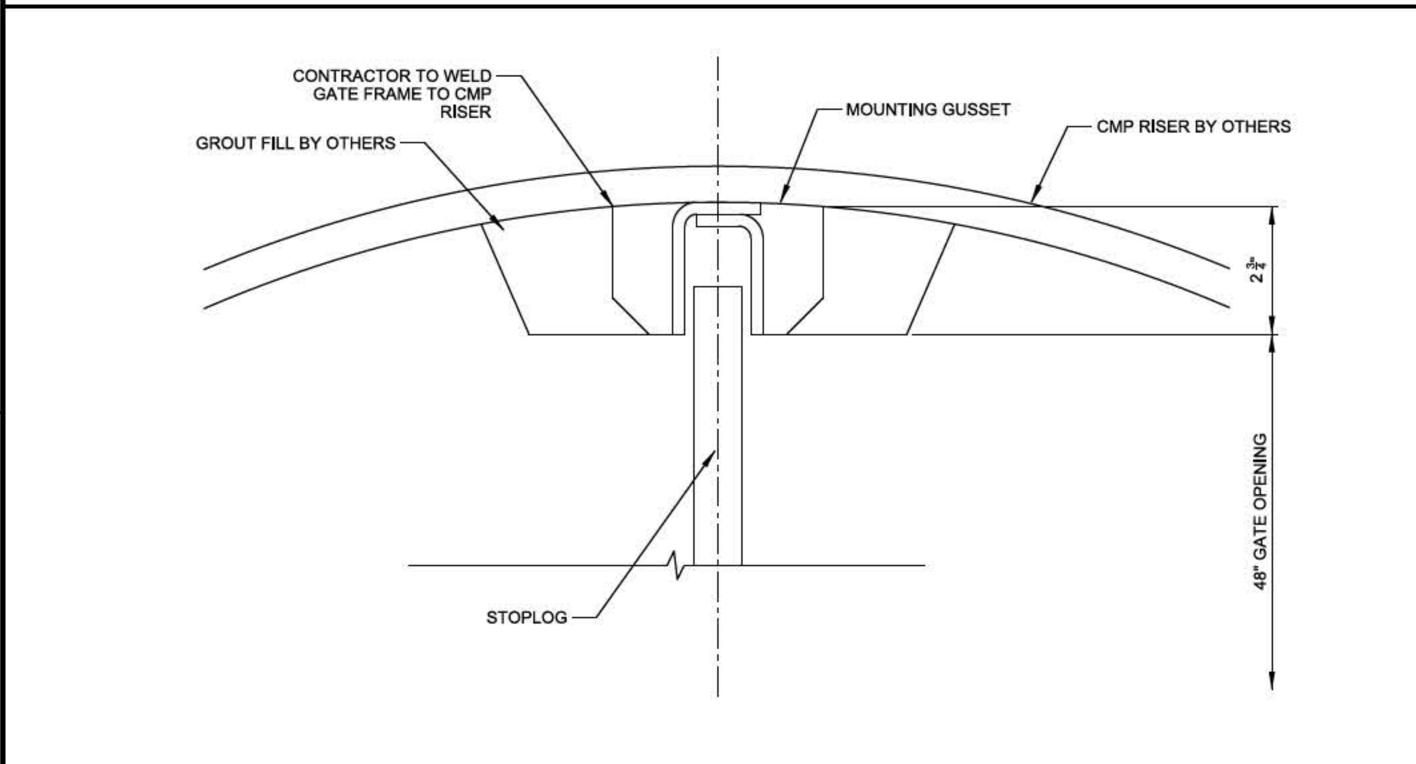
SCALE : NO SCALE



DWG REF(s) : ________

C3 LOCKING (1)

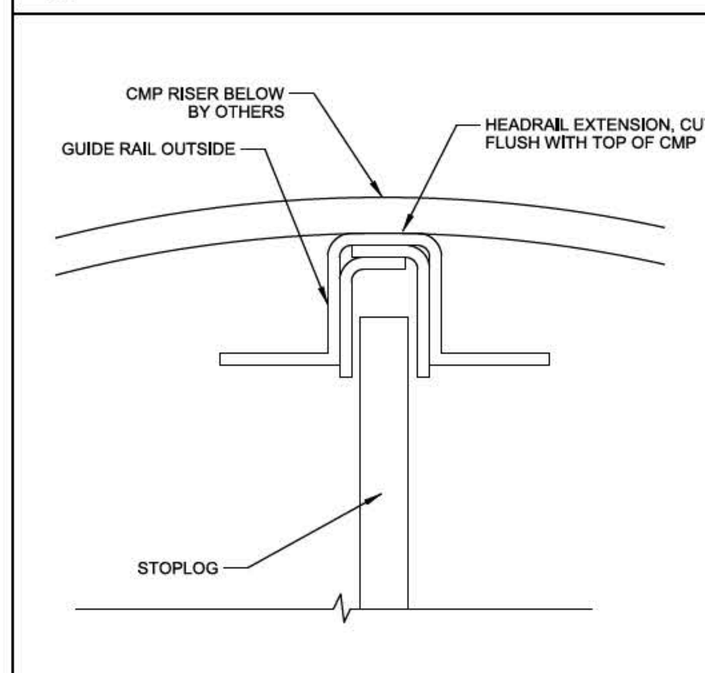
SCALE : NO SCALE



DWG REF(s) : ________

A1 GATE CHANNEL (1)

SCALE : NO SCALE



DWG REF(s) : ________

A3 GATE CHANNEL (1)

SCALE : NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		
1	10/2017 REVISED TO CONVERT SLIDE GATE TO STOPLOGS, GRATING AND ANGLE ADDED		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: KCP | DWN BY: NPP | CKD BY: | SUBMITTED BY: FRJ | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102_S-521.dgn

DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-2029 | CONTRACT NO.: | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

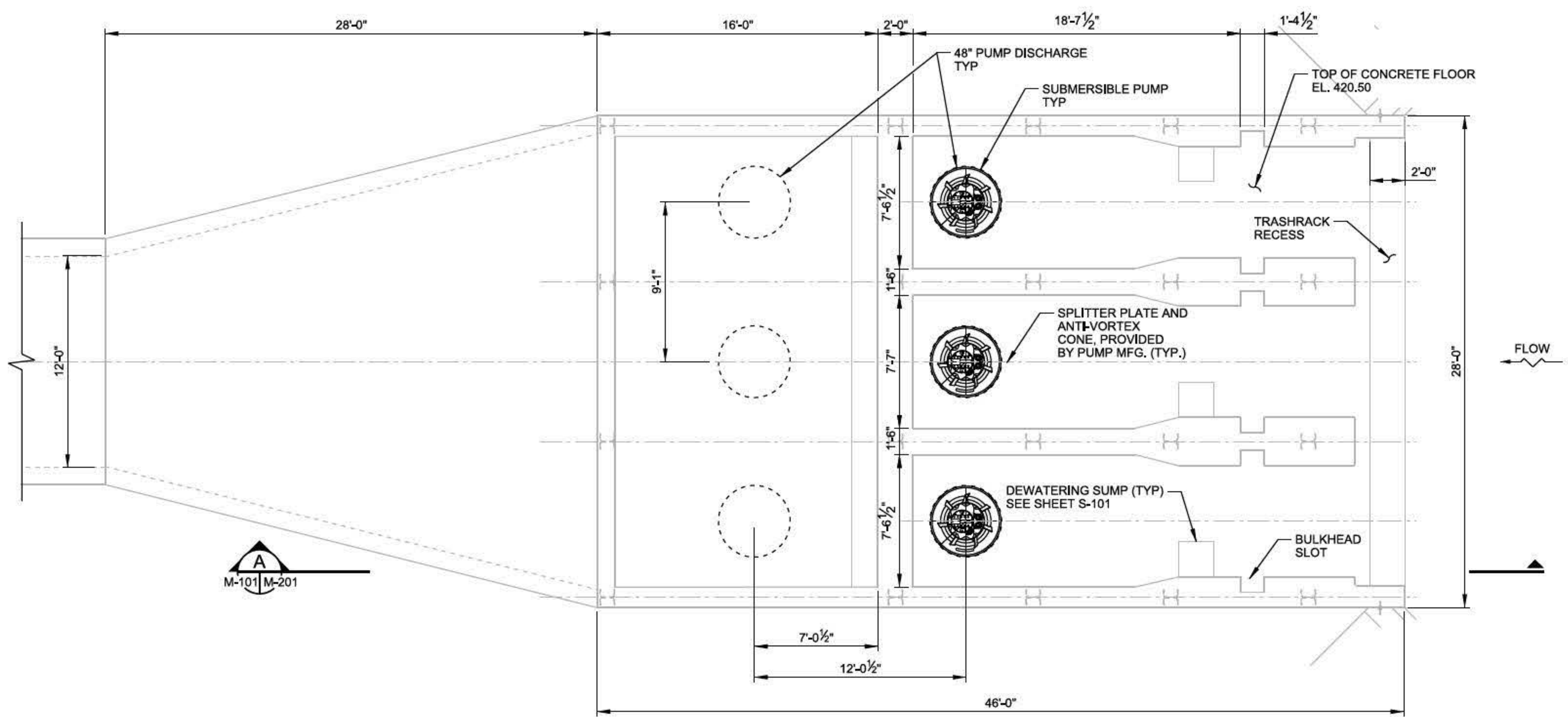
WATER CONTROL STRUCTURES DETAILS

SHEET 2 OF 2

Sheet ID
S-521

c:\pw_working\mvr\b5edd\lhd0153734\EP102_S-521.dgn
8/28/2018 3:21:21 PM
B5EDDLLH

AS-BUILT



PUMP STATION SECTIONAL PLAN - EL. 432.0

0 2' 4' 8'
SCALE IN FEET

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

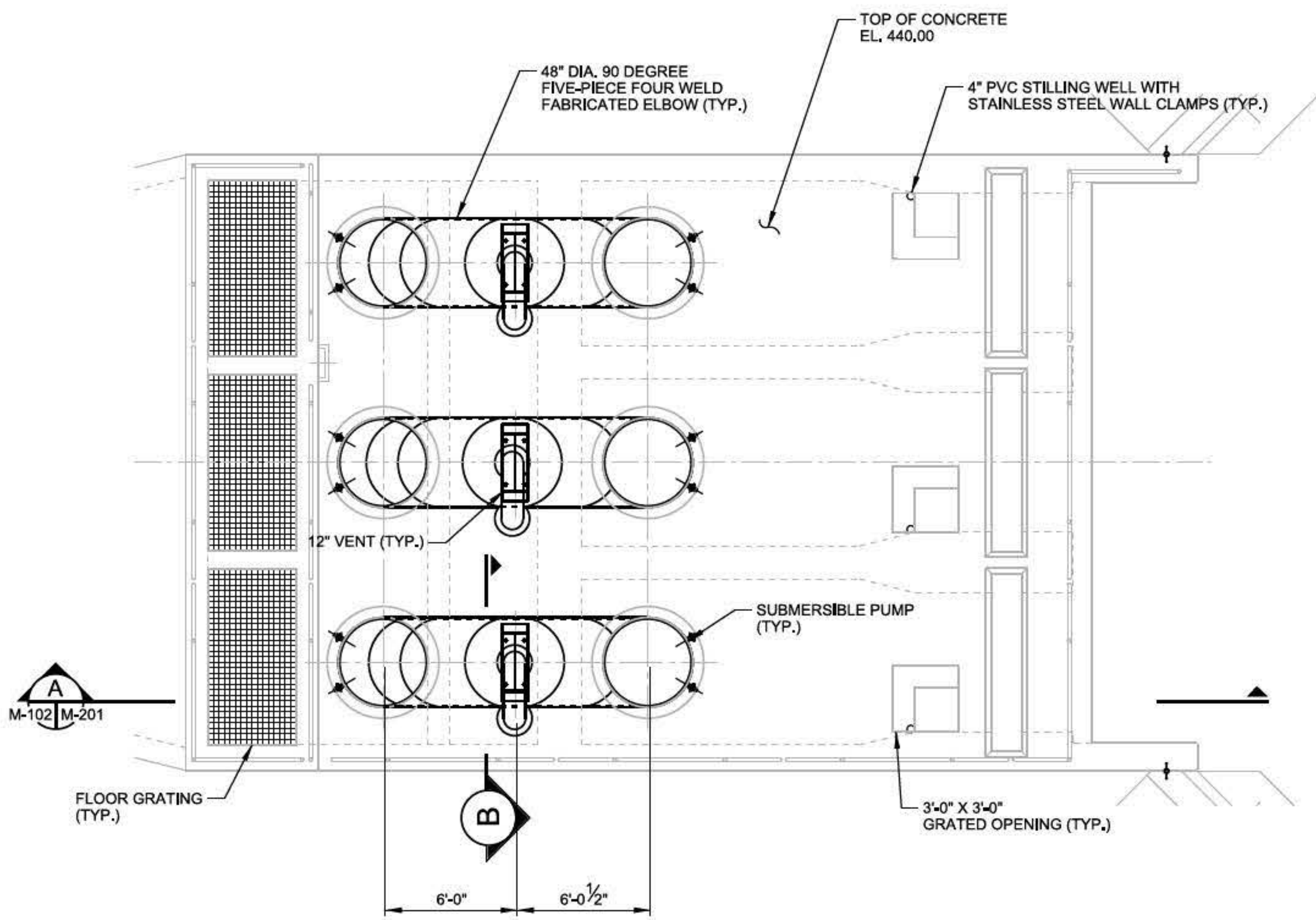
DESIGNED BY: JWB		DATE: 2011/06/30
DWN BY: DED	CKD BY: MKS	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HJL		CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102M-101.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
SECTIONAL PLAN

Sheet ID
M-101

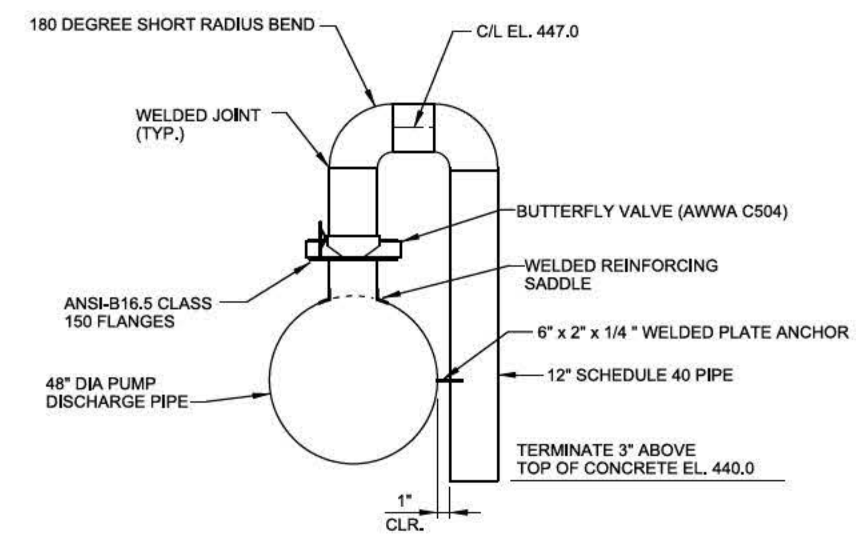
AS-BUILT
A-97

c:\pw_working\mvr\b5eddlh\d0153755\EP102M-101.dgn
3:21:33 PM
B5EDDLLH



PUMP STATION TOP PLAN

0 2' 4' 8'
SCALE IN FEET



NOTE:
ALL WELDS SHALL BE FULL PENETRATION GROOVE WELDS.

(B) VENT DETAIL (TYP)

NOT TO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

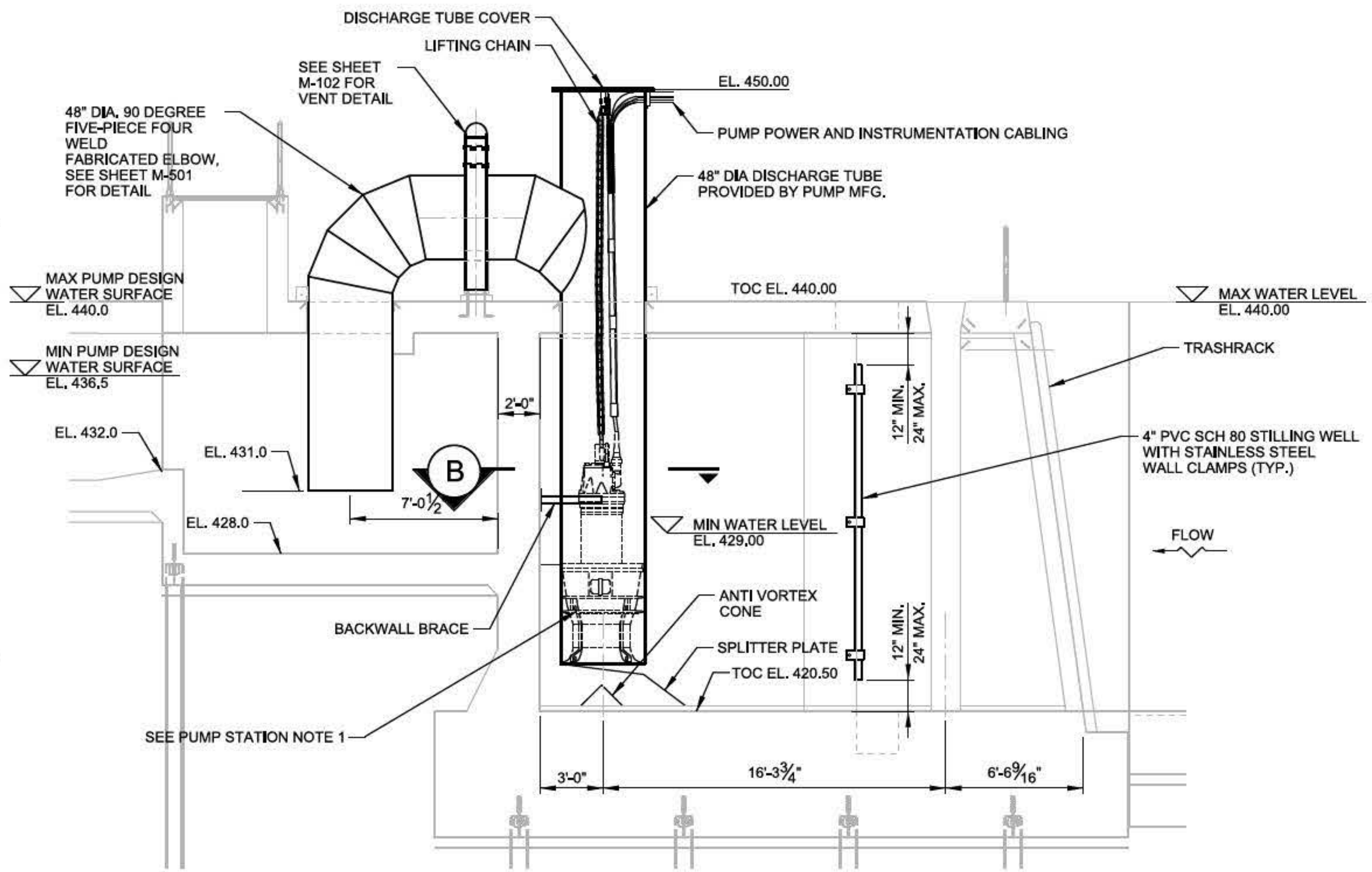
DESIGNED BY: JWB		DATE: 2011/06/30
DWN BY: DED	CKD BY: MKS	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102M-102.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
TOP PLAN

Sheet ID
M-102

c:\pw_working\mvr\b5edd\lh\d0153755\EP102M-102.dgn
3:21:37 PM
B5EDDLLH

AS-BUILT
A-98



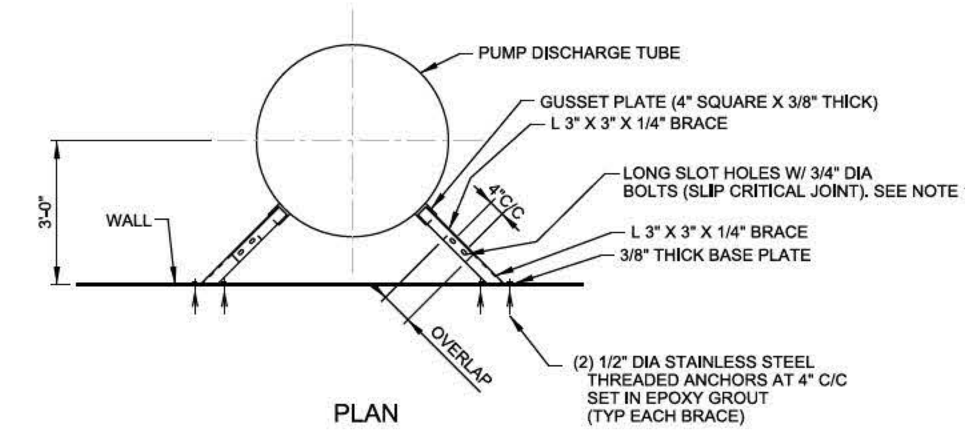
PUMP STATION NOTES:

1. THE BASIS OF DESIGN IS PROVIDED FOR EACH PUMP'S HORSEPOWER (HP) AND FULL LOAD AMPS (FLA). ALSO SEE DIAGRAM AND GENERAL NOTE 1 ON SHEET E-601. THE CONTRACTOR SHALL BE RESPONSIBLE TO RE-SIZE AND PROVIDE LARGER ELECTRICAL EQUIPMENT TO ACCOMMODATE LARGER PUMPS IF THE ACTUAL PUMPS PROVIDED ARE DIFFERENT THAN THE BASIS OF DESIGN.

(A) PUMP STATION SECTION

M-101 M-102 M-201

0 2' 4' 8' SCALE IN FEET



BACKWALL BRACE NOTES:

1. NO PAINT OR PRIMER WITHIN 1" OF EDGE OF HOLES PRIOR TO BOLT TENSIONING.
2. PROVIDE SLOTS IN PLY(ANGLE), NOT BOTH L 3" X 3" X 1/4"
3. PRE-TENSION BOLTS AT SLOTS.

(B) PUMP DISCHARGE TUBE BACKWALL BRACE DETAIL (TYP)

0 1' 2' 4' SCALE IN FEET

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

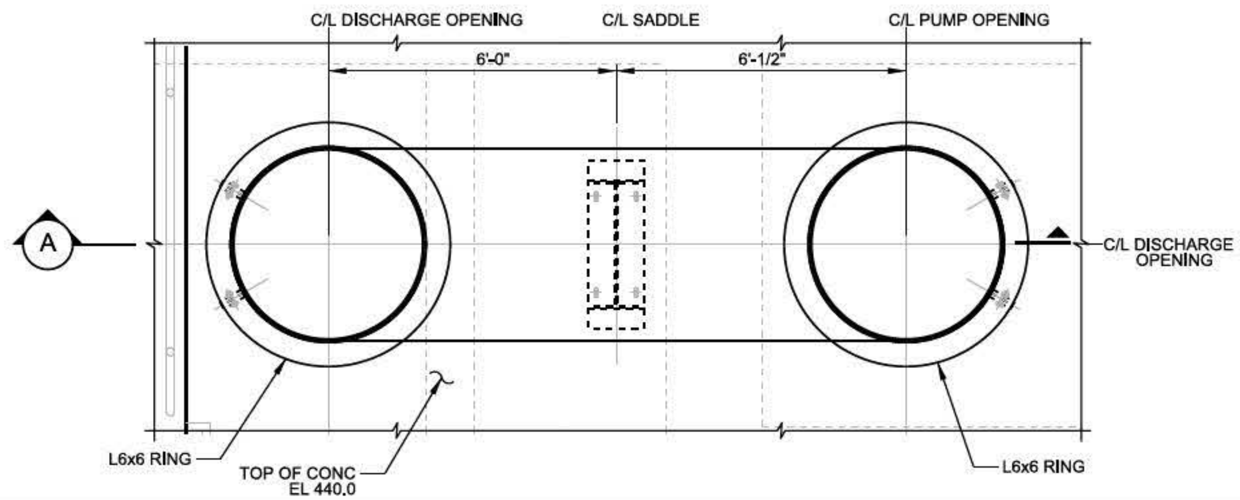
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: JWB | DATE: 2011/06/30
DWN BY: DED | CKD BY: MKS | SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: HLA | CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN | PLOT DATE: | PROJECT CODE: EP102
SIZE: ANSI D | FILE NAME: EP102M-201.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
SECTION

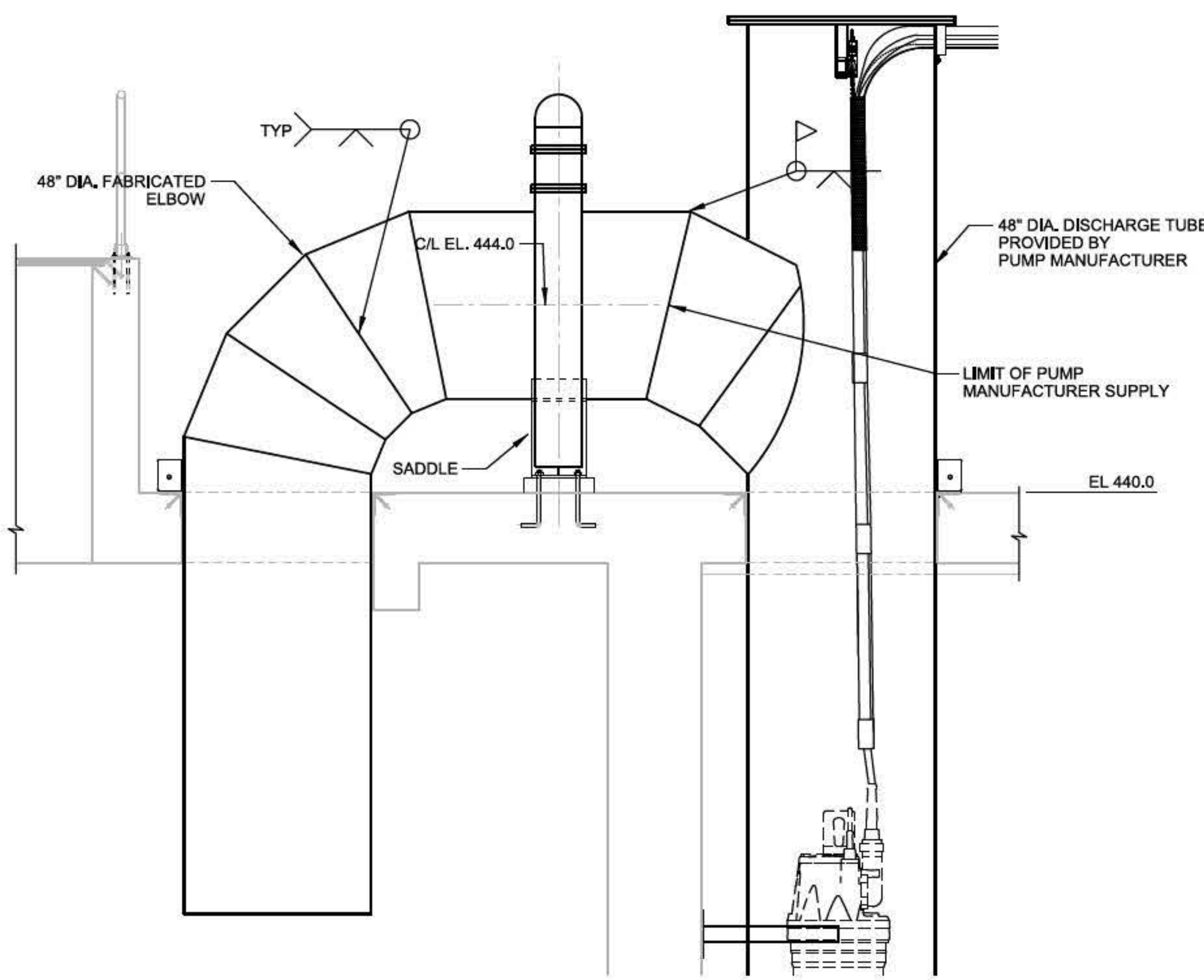
Sheet ID
M-201

AS-BUILT
A-99



DISCHARGE PIPE - PLAN

SCALE IN FEET 0 1' 2' 4'



NOTES:

1. SEE SHEET S-508 FOR SUPPORT DETAILS.
2. ALL WELDS SHALL BE FULL PENETRATION GROOVE WELDS.

(A) SECTION

SCALE IN FEET 0 1' 2' 4'

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

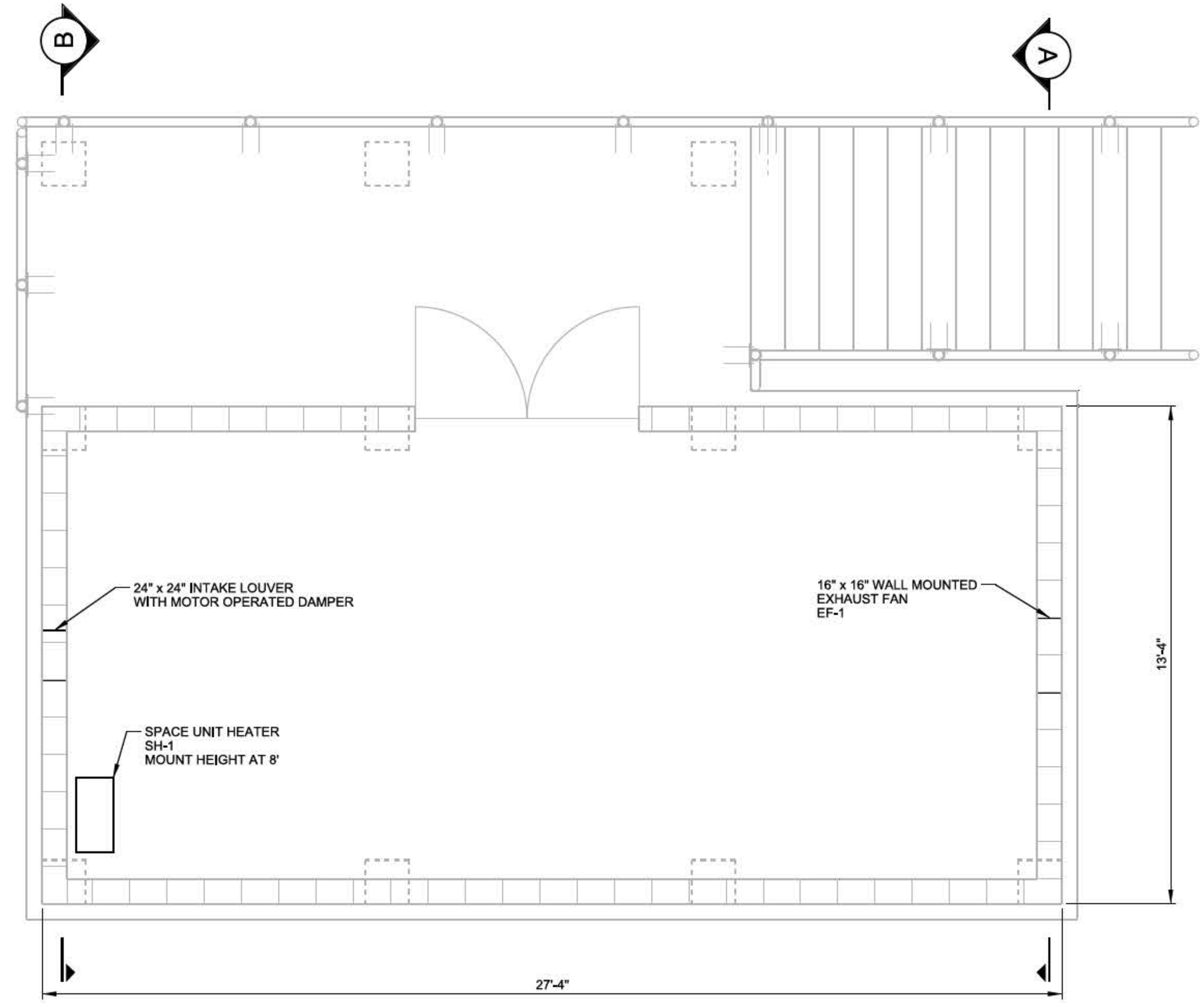
DESIGNED BY: JWB | DATE: 2011/06/30
DWN BY: DED | CKD BY: MKS | SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: | CONTRACT NO.: W912EK-11-C-0060
PLOT SCALE: AS SHOWN | PLOT DATE: | PROJECT CODE: EP102
SIZE: ANSI D | FILE NAME: EP102M-501.dgn

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
DETAILS

Sheet ID
M-501

AS-BUILT
A-100

c:\pw_working\mvr\b5eddlh\d0153755\EP102M-501.dgn
3:21:44 PM
B5EDDLLH



CONTROL BUILDING HVAC EQUIPMENT						
	FLOW (CFM)	STATIC PRESSURE (INCW)	FAN RPM	BTU / HR	POWER (HP)	# REQ'D
EF-1	1760	0.50	1075	—	0.265	1
SH-1	350	—	1600	10,200	0.010	1

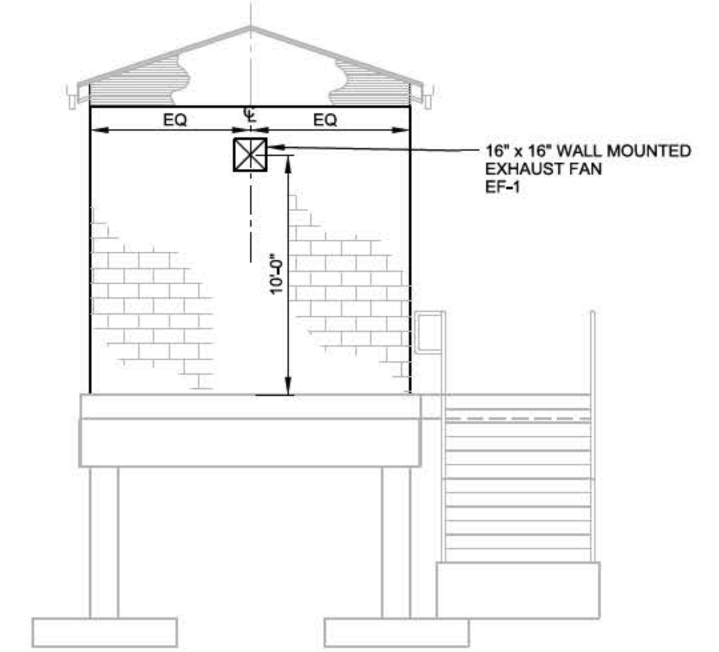
LOUVER SCHEDULE					
NO.	SIZE	TYPE	POWER REQUIREMENTS	INPUT SIGNAL	# REQ'D
1	24"x24"	INTAKE LOUVER WITH MOTOR OPERATED CONTROL DAMPER	AC 120 V @ 60 Hz	AC 108 TO 132 V @ 60 Hz	1

NOTES:

1. SEE SHEET S-509 FOR REINFORCEMENT OF OPENINGS.

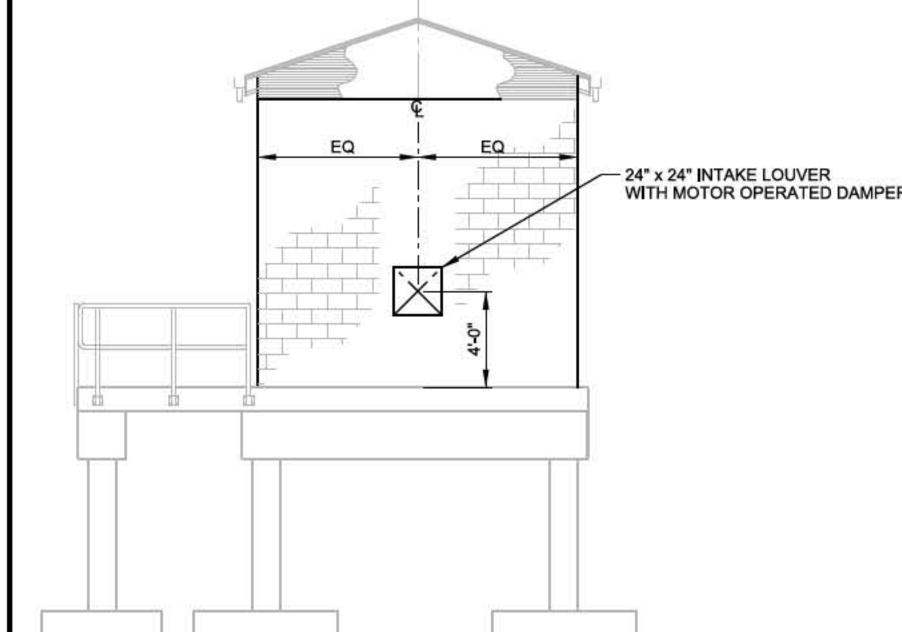
PLAN - CONTROL BUILDING

0 1' 2' 4'
SCALE IN FEET



(A) TRANSVERSE SECTION

0 2' 4' 8'
SCALE IN FEET



(B) TRANSVERSE SECTION

0 2' 4' 8'
SCALE IN FEET

US Army Corps of Engineers®

MARK | DESCRIPTION | DATE | APPR.

AS-BUILT AS OF 29 SEPTEMBER 2017

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: JWB | DWN BY: DED | CKD BY: MKS | SUBMITTED BY: HJL | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102M-502.dgn

DATE: 2017/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-11-C-0060 | PROJECT CODE: EP102

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
CONTROL BUILDING
DETAILS

Sheet ID
M-502

AS-BUILT
A-101

c:\pw_working\mvr\b5edd\lhd0153755\EP102M-502.dgn
3:21:56 PM
B5EDDLLH

PANELBOARDS, DISCONNECTS & RELATED EQUIPMENT

- PANELBOARD - POWER
- PANELBOARD - CONTROL/INSTRUMENTATION

LIGHTING FIXTURES

- A 4 — FLUORESCENT LIGHT FIXTURE — FIXTURE TYPE A, FIXTURE CIRCUIT NO. 4
- FLUORESCENT FIXTURE WITH EMERGENCY BALLAST
- 4 B — WALL MOUNTED H.I.D. LIGHT FIXTURE — FIXTURE TYPE B, FIXTURE CIRCUIT NO. 4
- EXIT LIGHT FIXTURE

RECEPTACLES

- 2 WP — DUPLEX RECEPTACLE OUTLET NEMA 5-20R — CIRCUIT NO. 2; WP = WEATHERPROOF TYPE; GFI = GROUND FAULT INTERRUPTING TYPE; MOUNT +48" AFF (UNO)

SWITCHING DEVICES

- $ — SINGLE POLE SWITCH — 20A., 120/277 VOLT (UNO) MOUNT +48" AFF (UNO)

CONDUIT AND WIRE

- 101 — CONDUIT #101
- LP1-6 — CONDUIT HOME RUN TO PANEL "LP1" - CIRCUIT NO. 6
- CONDUIT EXPOSED
- OPEN CONDUIT CONCEALED BEHIND OR UNDER CONCRETE SLAB
- — E — CONDUIT CONCEALED IN EARTH (DIRECT BURIED OR DUCTBANK)
- — ESx — OVERHEAD UTILITY ELECTRIC SERVICE WIRES
- OPEN CIRCLE = CONDUIT TURNING UP
- CLOSED CIRCLE = CONDUIT TURNING DOWN
- CAPPED CONDUIT

REMOTE CONTROL STATIONS FOR MOTORS & EQUIP.

- T — THERMOSTAT
- LSH 20 — INSTRUMENTATION BALLOON / EQUIPMENT TAG NUMBER

MISCELLANEOUS

- 5 — MOTOR (5-HP)
- MOD — MOTORIZED DAMPER
- GROUND ROD
- — G — GROUNDING ELECTRODE CONDUCTOR
- LIGHTNING PROTECTION AIR TERMINAL
- EQUIPMENT CONNECTION
- WEATHERHEAD

SCHEMATIC SYMBOLS

- 100A — CIRCUIT BREAKER
- 2 FVNR — 3-PHASE MOTOR STARTER - NUMBER INDICATES NEMA SIZE #2; LETTERS INDICATES STARTER TYPE; FVNR=FULL VOLTAGE NON-REVERSING
- POWER TRANSFORMER
- CONTROL POWER TRANSFORMER
- POTENTIAL TRANSFORMER
- CURRENT TRANSFORMER
- FUSE
- GROUND
- POWER METER 3E — MCC POWER METER ACCESSORY: THIS METER IS FOR FACILITY USE AND IS NOT THE UTILITY METER WHICH IS SEPARATELY LOCATED. LOCATE MCC POWER METER IN MAIN CIRCUIT BREAKER SECTION 2A, SYSTEM: 3 PHASE WITH NEUTRAL & GROUND: "3E" INDICATES THREE (3) INSTRUMENT TRANSFORMERS TYPE

OPERATORS

- NORMALLY OPEN (N.O.) PUSHBUTTON
- NORMALLY CLOSED (N.C.) PUSHBUTTON

RELAYS AND COILS

- ETM — ETM - ELAPSED TIME METER
- CR1 — DEVICE COIL OR RELAY: IC - CONTROL RELAY; CR - CONTROL RELAY; TR - TIME DELAY RELAY
- A, PUSH-TO TEST — PILOT LIGHT: A - AMBER; B - BLUE; G - GREEN; R - R E D; W - WHITE; F - FLASHING

INSTANTANEOUS CONTACTS

- N.O. CONTACT
- N.C. CONTACT

TIMED CONTACTS

- N.O. - TIME DELAY CLOSING
- N.C. - TIME DELAY OPENING
- N.O. - TIME DELAY OPENING
- N.C. - TIME DELAY CLOSING

PILOT DEVICES

- TEMPERATURE SWITCH (TS)

CONTACT SYMBOLS TYPICAL FOR ALL PILOT DEVICES

- SINGLE POLE SINGLE THROW (SPST) N.O. (CLOSES ON RISING PROCESS VARIABLE)
- (SPST) N.C. (OPENS ON RISING PROCESS VARIABLE)

WIRING AND OTHER SYMBOLS

- CONDUCTORS NOT CONNECTED
- CONDUCTORS CONNECTED
- TERMINATIONS FOR (EXTERNAL) WIRING TO BE PROVIDED
- MECHANICALLY CONNECTED

ELECTRICAL ABBREVIATIONS

A	AMPERE(S)
AC	AIR CONDITIONING
AF	AMP FRAME
AFF	ABOVE FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
A.I.C.	AMPERE INTERRUPTING CURRENT
AMP	AMPERE(S)
ASS'Y	ASSEMBLY
AWG	AMERICAN WIRE GAUGE
CFR	CODE OF FEDERAL REGULATIONS
DIA.	DIAMETER
EF	EXHAUST FAN
EMH	ELECTRICAL MANHOLE
ETM	ELAPSED TIME METER
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
H.I.D.	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
I & C	INSTRUMENTATION AND CONTROLS
J.B.	JUNCTION BOX
KVA	KILOVOLT-AMPS
KW	KILOWATTS
LI	LEVEL INDICATOR
LP	LIGHTING PANEL
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND FAULT
LT	LEVEL TRANSMITTER
M	MAGNETIC MOTOR STARTER COIL OR MOTOR (AS APPLICABLE)
MAS	MONITORING AND STATUS
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CONTROL PANEL
MOD	MOTOR OPERATED DAMPER
N	NEUTRAL
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO.	NUMBER
NPB	INSTRUMENTATION PULL BOX
NTS	NOT TO SCALE
O.C.	ON CENTER
PF	POWER FACTOR
PNL	PANEL
PNL	PANEL
P.S.I.	POUNDS PER SQUARE INCH
P.V.C.	POLYVINYL CHLORIDE
REQ.	REQUIRED
RGS	RIGID GALVANIZED STEEL
SEC	SECONDS IN TIME
SHLD	SHIELDED
SPD	SURGE PROTECTION DEVICE
SPEC	SPECIFICATION
SSRV	SOFT STARTER REDUCED VOLTAGE
TR	TRANSFORMER
TSP	TWISTED SHIELDED PAIR
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
V	VOLTS ALTERNATING CURRENT (AC)
VAC	VOLTS ALTERNATING CURRENT (AC)
VDC	VOLTS DIRECT CURRENT (DC)
W/	WITH
WP	WEATHERPROOF
YPB	YARD PULL BOX

GENERAL NOTES:

1. ALL ELECTRICAL EQUIPMENT APPLICATIONS AND INSTALLATIONS SHALL COMPLY WITH 2011 NFPA 70, THE NATIONAL ELECTRICAL CODE ("THE NEC").
2. SEE SPECIFICATIONS FOR IDENTIFICATION OF REFERENCES TO INDUSTRY STANDARDS INCLUDING, BUT NOT LIMITED TO AASHTO, ACI, ANSI, ASTM, NEMA, NFPA, SCTE, CSA, AND UL.

US Army Corps of Engineers

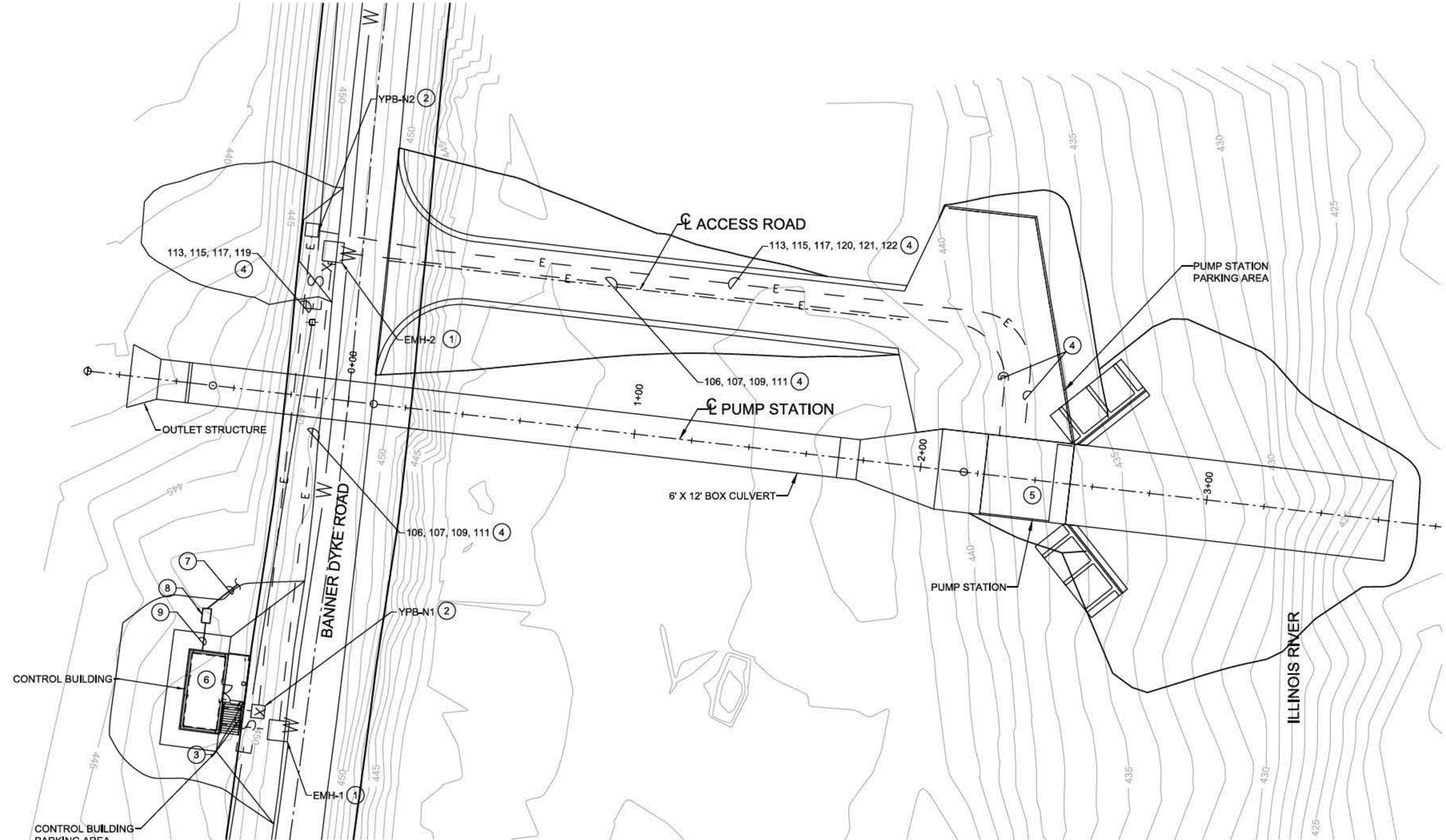
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

ELECTRICAL SYMBOLS AND ABBREVIATIONS

Sheet ID
E-001

AS-BUILT
A-102



KEYED NOTES:

1. 6' X 6' X 7' HIGH PRECAST ELECTRICAL MANHOLE. REFER TO THE PLAN VIEW ON SHEET E-501.
2. YARD PULL BOX PER DETAIL 3 ON SHEET E-105. PROVIDE 36" MINIMUM (1 LOOP) OF CABLE WITHIN THE PULL BOX FOR FUTURE ADJUSTMENTS OR OTHER CHANGES AS REQUIRED.
3. CONDUITS ROUTED FROM EMH-1 INTO CONTROL BUILDING AND FROM YPB-N1 INTO CONTROL BUILDING SHALL BE PVC COATED RIGID STEEL CONDUIT TYPE.
4. CONDUITS SHALL BE CONCRETE ENCASED. SEE DETAIL 1 ON SHEET E-502 AND KEYED NOTE 8 ON SHEET E-102.
5. SEE SHEET E-102 FOR ENLARGED PLAN AND ADDITIONAL DETAILS FOR WORK REQUIRED AT PUMP STATION.
6. SEE SHEETS E-103, E-104, AND E-105 FOR ENLARGED PLANS AND ADDITIONAL DETAILS FOR WORK REQUIRED AT THE CONTROL BUILDING.

KEYED NOTES:

7. PRIMARY OVERHEAD LINE TO BE RECONSTRUCTED BY AMEREN, INCLUDING THE PRIMARY OVERHEAD SERVICE TO THE TRANSFORMER.
8. OVERHEAD TRANSFORMER STRUCTURE INCLUDING TRANSFORMER TO BE CONSTRUCTED BY AMEREN. STRUCTURE TO BE LOCATED APPROXIMATELY 15' NORTH OF THE CONTROL BUILDING. COORDINATE FINAL LOCATION WITH AMEREN.
9. OVERHEAD SECONDARY CONDUCTORS BETWEEN THE TRANSFORMER AND THE CONTROL BUILDING TO BE INSTALLED BY AMEREN. CONTRACTOR SHALL COORDINATE WITH AMEREN AND INSTALL ANY ATTACHMENT HARDWARE THAT AMEREN REQUIRES FOR ATTACHMENT OF THEIR SECONDARY LINES TO THE BUILDING. AMEREN SHALL MAKE ALL SECONDARY CONDUCTOR SPLICES AT THE BUILDING. REFER TO SHEET E-103, KEYED NOTES #1 - #3 AND SHEET E-601, KEYED NOTES #4 AND #5 FOR INTERFACE REQUIREMENTS AT THIS LOCATION.

GENERAL NOTES:

A. THE CONSTRUCTION CONTRACTOR SHALL COORDINATE ALL ELECTRIC UTILITY CONSIDERATIONS WITH THE LOCAL UTILITY COMPANY (AMEREN ILLINOIS POWER COMPANY) TO PROVIDE ELECTRICAL SERVICE TO THIS SITE. THE AMEREN ILLINOIS POWER COMPANY (AMEREN ILLINOIS) CONTACT PERSON IS:

MR. LENNIE MOORE
OFFICE: (217) 479-5234
CELL: (217) 741-6548

CONTRACTOR SHALL PERFORM COORDINATION IN A TIMELY MANNER TO FACILITATE EQUIPMENT DELIVERY LEAD TIMES. (e.g. THE POWER COMPANY PROVIDED POWER FACTOR (PF) CORRECTION CAPACITORS REQUIRE THE ELECTRICAL INFORMATION OF THE ACTUAL PUMPS THAT WILL BE PROVIDED). AMEREN ILLINOIS WILL RECONSTRUCT THE PRIMARY LINE, CONSTRUCT THE SERVICE TRANSFORMER STRUCTURE AND THE TRANSFORMER, PROVIDE AND INSTALL POLES, WIRES, PF CORRECTION CAPACITORS, AND INSTALL THE SECONDARY CONDUCTORS BETWEEN THE TRANSFORMER AND THE NEW CONTROL BUILDING. THE CONSTRUCTION CONTRACTOR SHALL PAY ALL COSTS INCURRED FOR ALL WORK PERFORMED AND PROVIDED BY AMEREN ILLINOIS AS A PART OF THIS CONTRACT.

ELECTRICAL SITE PLAN

0 20' 40'
SCALE IN FEET

US Army Corps of Engineers

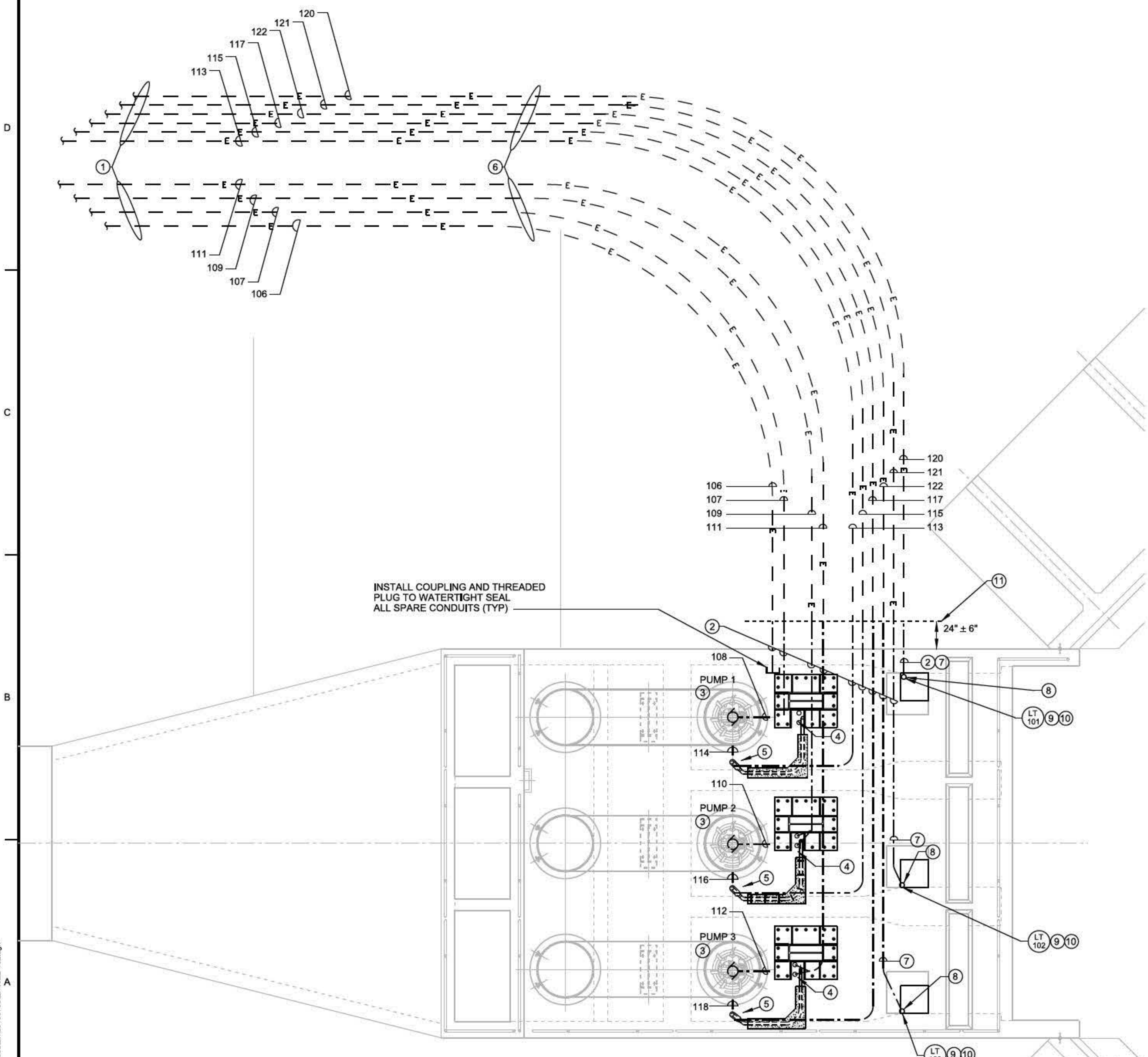
AS-BUILT AS OF 29 SEPTEMBER 2017

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
ELECTRICAL
SITE PLAN

Sheet ID
E-101

AS-BUILT
A-103



GENERAL NOTES:

A. CONDUITS FROM EMH-2 TO EMH-1 SHALL BE SCHEDULE 40 PVC. CONDUITS FROM EMH-2 INTO THE PUMP STATION SHALL BE PVC COATED RIGID STEEL. A PULL STRING SHALL BE INSTALLED IN EACH SPARE CONDUIT AND A PLUG SHALL BE INSTALLED ON BOTH ENDS OF EACH SPARE CONDUIT.

B. CONDUIT PENETRATIONS THROUGH EXTERIOR WALLS OF THE PUMP STATION SHALL BE MADE USING CONDUIT SLEEVES CAST INTO THE WALLS, WITH LINK-SEAL FITTINGS SEALING BETWEEN THE CONDUIT AND THE INSIDE OF THE WALL SLEEVES. SEAL THE INSIDE OF CONDUITS WATERTIGHT TO PREVENT THE TRANSFER OF MOISTURE/AIR FROM OUTDOORS TO INDOORS.

C. CONDUIT PENETRATIONS THROUGH INTERIOR DIVIDER WALLS WITHIN THE PUMP STATION SHALL BE MADE USING CONDUIT SLEEVES CAST INTO THE WALLS. LINK-SEAL FITTINGS ARE NOT REQUIRED IN THESE SLEEVES.

D. INSTALL A 1" STAINLESS STEEL EYE-BOLT INTO THE UNDERSIDE OF THE TOP SLAB FOR EACH PUMP, WITH STAINLESS STEEL WIRE MESH CABLE GRIPS (AN EXAMPLE IS KELLEMS CABLE GRIPS) FOR VERTICAL SUPPORT OF ALL PUMP CABLES INSIDE THE INTAKE CHANNELS.

E. CONDUITS FROM YPB-N1 TO YPB-N2 SHALL BE SCHEDULE 40 PVC. CONDUITS FROM YPB-N2 INTO THE PUMP STATION SHALL BE PVC COATED RIGID STEEL. A PULL STRING SHALL BE INSTALLED IN EACH SPARE CONDUIT AND A PLUG SHALL BE INSTALLED ON BOTH ENDS OF EACH SPARE CONDUIT.

(#) KEYED NOTES:

(1) CONDUITS CONTINUE BACK TO THE CONTROL BUILDING. REFER TO ELECTRICAL SITE PLAN ON SHEET E-101 FOR CONTINUATION OF THE CONDUITS.

(2) INSTALL PVC-COATED RIGID STEEL CONDUITS BELOW THE TOP SLAB (ALSO SEE GENERAL NOTES A AND E). SECURE CONDUITS WITHIN THE INTAKE CHANNELS USING STAINLESS STEEL HARDWARE. EXTEND CONDUITS TO A POINT ADJACENT TO THE PUMPS, THEN RISE VERTICALLY UP THROUGH THE TOP SLAB TO THE PULL/JUNCTION BOX, TO ALLOW FOR REMOVAL AND RE-INSTALLATION OF PUMP CABLES WITHOUT ENTERING THE INTAKE CHANNELS.

(3) PUMP CABLES SHALL BE PROVIDED WITH THE PUMPS.

(4) PROVIDE 36"H x 24" W x 24" D STAINLESS STEEL NEMA 4X JUNCTION BOX TO CONTAIN WATERTIGHT SPLICES OF THE PUMP POWER CABLES WITH THE POWER CIRCUIT WIRING FROM THE MCC STARTERS (TYP. OF 3). PROVIDE BRASS LABELS, "PUMP NO. #" (WHERE #= 1,2,3) ON EACH RESPECTIVE ENCLOSURE. PROVIDE THREE NEMA 4X DRAINS IN THE BOTTOM OF EACH ENCLOSURE TO DRAIN THE ENCLOSURE. PROVIDE A STAINLESS STEEL HASP AND PADLOCK INTEGRAL TO EACH ENCLOSURE TO RESTRICT LOCKOUT / TAGOUT TO AUTHORIZED ACCESS ONLY. PADLOCKS SHALL REQUIRE THE SAME KEY. A KEY-LOCKABLE ENCLOSURE DOOR DOES NOT SATISFY THIS REQUIREMENT. PROVIDE SUPPORT STRUCTURE PER DETAIL 1 ON SHEET E-503.

(5) PROVIDE STAINLESS STEEL NEMA 4X PULL BOX, NOMINAL 16"x16"x10" FOR EACH PUMP. PROVIDE MINIMUM OF 12" OF SLACK CABLE WITHIN THE BOX, PROVIDE BRASS LABELS, "PUMP NO. #" (WHERE #= 1,2,3) ON EACH RESPECTIVE ENCLOSURE. PROVIDE THREE NEMA 4X DRAINS IN THE BOTTOM OF EACH ENCLOSURE TO DRAIN THE ENCLOSURE. PROVIDE A STAINLESS STEEL HASP AND PADLOCK INTEGRAL TO EACH ENCLOSURE TO RESTRICT LOCKOUT / TAGOUT TO AUTHORIZED ACCESS ONLY. PADLOCKS SHALL REQUIRE SAME KEY AS KEYED NOTE 5 ABOVE. A KEY-LOCKABLE ENCLOSURE DOOR DOES NOT SATISFY THIS REQUIREMENT. PROVIDE SUPPORT STRUCTURE AS INDICATED PER DETAIL 2 ON SHEET E-503.

(6) MAINTAIN NOT LESS THAN 24" SEPARATION FOR CONTROL, INSTRUMENTATION, AND SIGNAL CABLES FROM POWER CONDUITS.

(7) PROVIDE CONDUIT END BUSHING TO PROTECT CABLE. EXTEND TO EACH LEVEL SENSOR STILLING WELL.

(8) PVC STILLING WELL FOR LEVEL SENSORS AS SHOWN ON MECHANICAL DRAWING SHEET M-201.

(9) SUBMERSIBLE TYPE LEVEL SENSOR (TYPICAL OF THREE). PROVIDE ONE SUBMERSIBLE TYPE LEVEL SENSOR FOR EACH PUMP INTAKE BAY INSTALLED WITHIN STILLING WELL. SEE SPECIFICATIONS FOR SALIENT CHARACTERISTICS. TWO BASIS OF DESIGN MODELS FOR THE LEVEL SENSOR ARE VIATRAN MODEL WW517 WITH LARGE SENSING DIAPHRAGM AND SIGMA CONTROLS MODEL 6100. THE CABLE FROM EACH OF THE LEVEL SENSORS SHALL BE CONTINUOUSLY ROUTED BACK TO THE ELECTRICAL CONTROL BUILDING WITHOUT SPLICING. CABLES SHALL CONTAIN NO SPLICES.

(10) PROVIDE 1" STAINLESS STEEL EYEBOLT AND STAINLESS STEEL WIRE MESH CABLE GRIP TO SUPPORT LEVEL SENSOR.

(11) CHANGE (TRANSITION) FROM PVC SCHEDULE 40 IN CONCRETE DUCT BANK TO PVC-COATED RIGID METAL CONDUIT IN CONCRETE DUCT BANK. TRANSITION WILL ALLOW CONDUIT BREAKOUT AND ROUTING WITHIN PUMPING STATION.

PUMP STATION ELECTRICAL PLAN

0 2' 4' 8'
SCALE IN FEET

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

DESIGNED BY: BGR		DATE: 2011/06/30	SOLICITATION NO.: W912EK-11-R-0029
DWN BY: DED	CKD BY: KRR	CONTRACT NO.: W912EK-11-C-0090	
SUBMITTED BY: JWB		PROJECT CODE: EP102	
PLOT SCALE: AS SHOWN	PLOT DATE:		
SIZE: ANSI D	FILE NAME: EP102E-102.dgn		

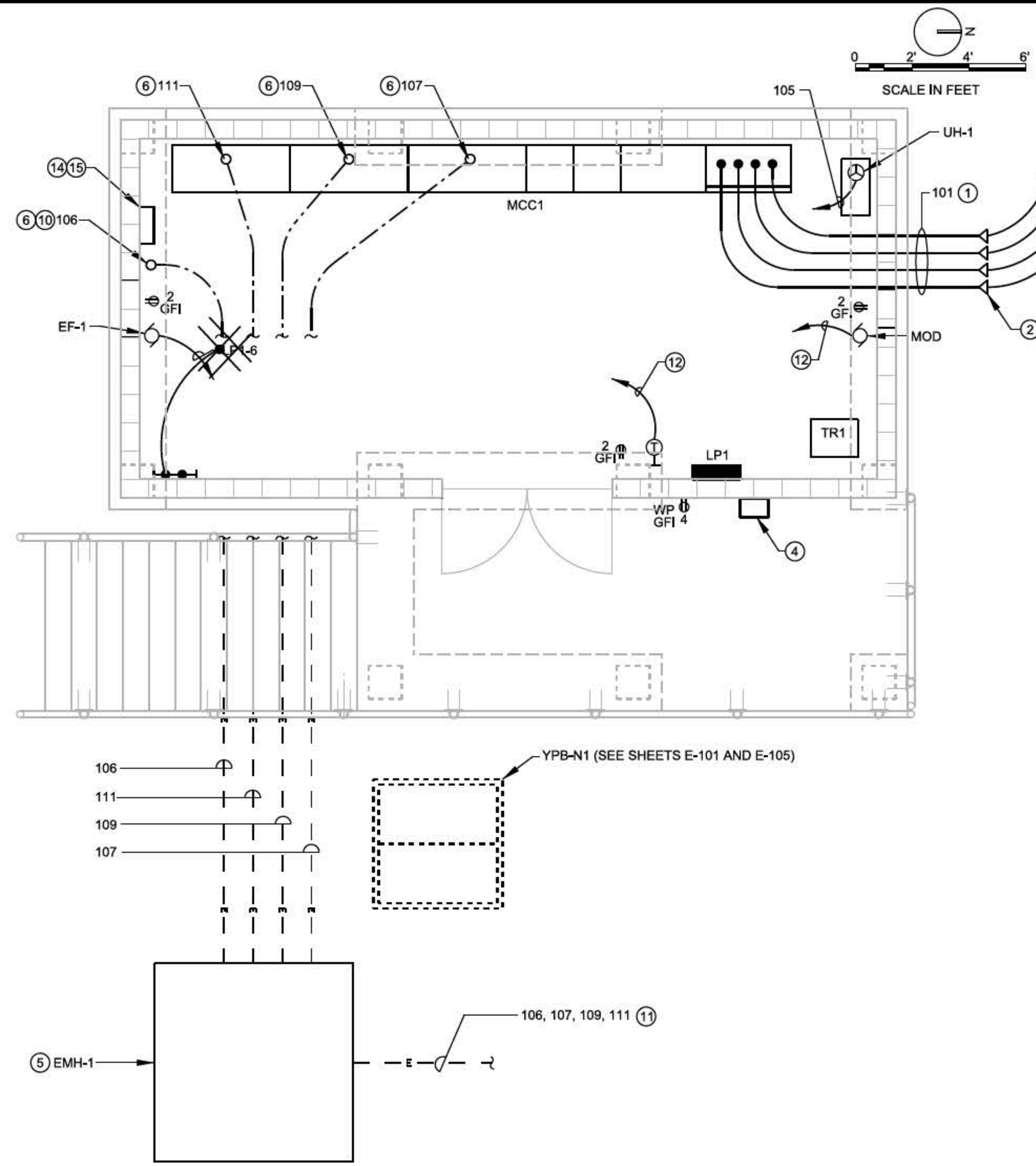
U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
ELECTRICAL
PLAN

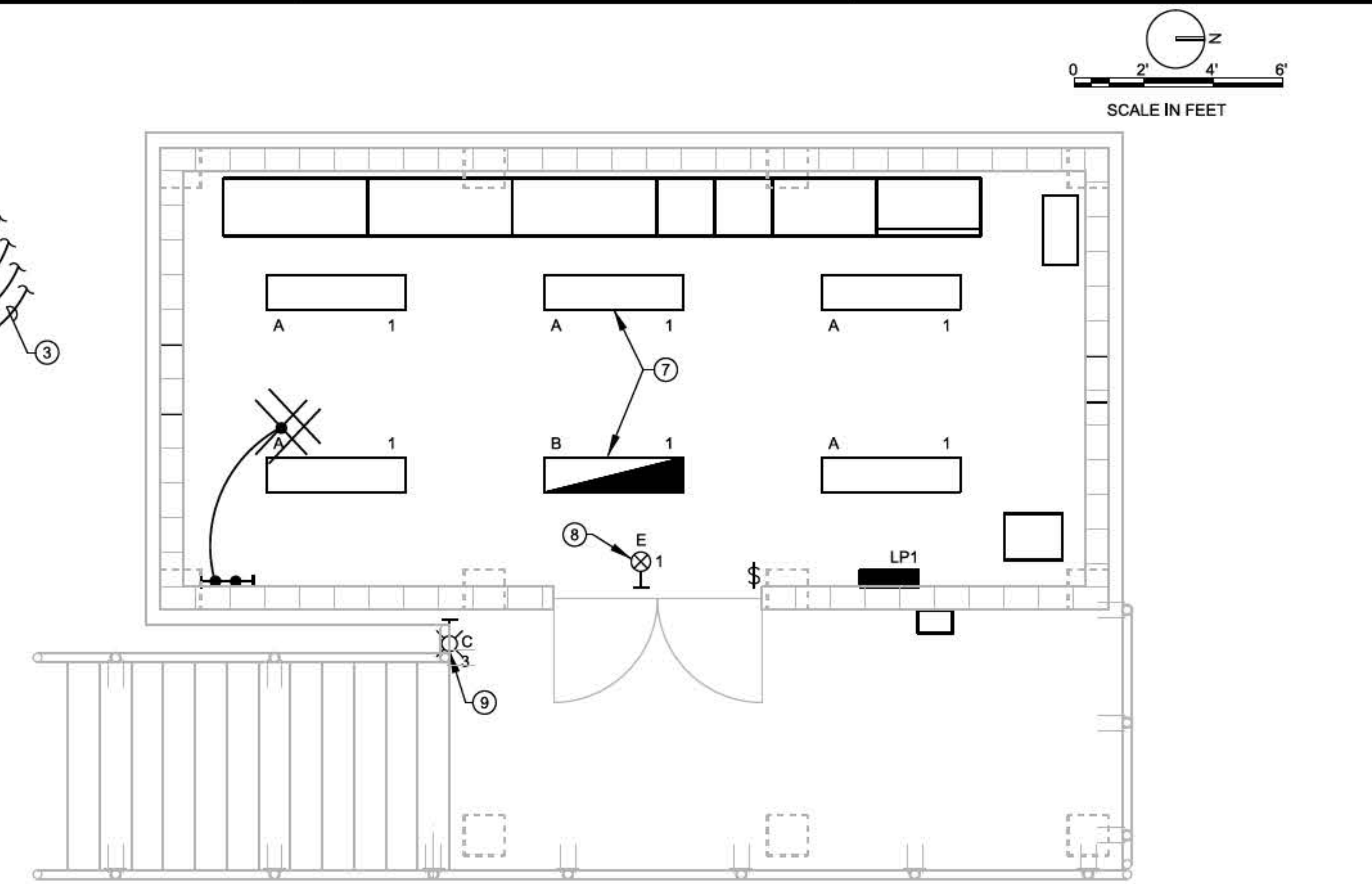
Sheet ID
E-102

AS-BUILT
A-104

c:\pw_working\mvr\b5eddlh\d0153758\EP102E-102.dgn
3/22/08 PM
B5EDDLH



1 POWER PLAN



2 LIGHTING PLAN

GENERAL NOTES:

A. NOT ALL CONDUITS ARE SHOWN (FOR CLARITY). ALL CONDUITS INSTALLED INDOORS SHALL BE SURFACE MOUNTED RIGID GALVANIZED STEEL (RGS) CONDUIT WITH ONE HOLE STRAPS AND CLAMP BACKS UNLESS NOTED OTHERWISE. REFER TO SINGLE-LINE DIAGRAM ON SHEET E-601, CONDUIT & CABLE SCHEDULE ON SHEET E-602, AND PANELBOARD SCHEDULE ON SHEET E-602.

B. ALL LIGHTING AND RECEPTACLE CIRCUITS SHALL BE FED FROM PANEL "LP1", TO THE CIRCUIT INDICATED.

C. ALL LIGHT SWITCHES AND INTERIOR RECEPTACLES SHALL BE MOUNTED AT A HEIGHT OF 48" A.F.F., UNLESS NOTED OTHERWISE.

D. ALL EXTERIOR RECEPTACLES SHALL BE MOUNTED AT A HEIGHT OF 18" A.F.F., UNLESS NOTED OTHERWISE.

GENERAL NOTES (CONTINUED):

E. ALL CONDUITS WHICH ENTER OR EXIT THE CONTROL BUILDING SHALL BE SEALED WITH 2-PART NON-HARDENING SILICONE EXPANDING FOAM TO PREVENT ENTRANCE OF MOISTURE INTO BUILDING. INSTALL FOAM SO CONDUIT IS RE-ENTERABLE.

F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER UTILITY COORDINATION.

KEYED NOTES:

1. CONTRACTOR SHALL INSTALL THE (4) 4" RGS CONDUITS OUT OF THE TOP OF THE MCC, THEN TURN HORIZONTALLY AT AN ELEVATION OF 11'-0" A.F.F. TO THE BOTTOM OF THE CONDUITS, AND EXIT THROUGH THE WALL STOPPING 2' PAST THE WALL. CORE DRILL THROUGH THE WALL WITH A MINIMUM OF 6" SEPARATION BETWEEN CONDUITS, AND SEAL AROUND THE CONDUITS TO MAKE THE PENETRATIONS WATERTIGHT. SUPPORT CONDUITS FROM THE CEILING INSIDE THE BUILDING TO PREVENT HORIZONTAL OR VERTICAL MOVEMENT OF THE CONDUITS.
2. CONTRACTOR SHALL INSTALL WEATHERHEADS ON THE ENDS OF THE (4) 4" CONDUITS.
3. CONTRACTOR SHALL INSTALL THE WIRING FROM THE MCC, LEAVING A MINIMUM OF 3 FEET OF EXTRA WIRING OUT OF THE ENDS OF EACH OF THE WEATHERHEADS FOR CONNECTION BY THE LOCAL UTILITY COMPANY, AMEREN ILLINOIS. TYPICAL.
4. METER SOCKET SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR, AT A HEIGHT OF 5'-0" ABOVE THE WALKWAY TO THE TOP OF THE METER SOCKET. CONTRACTOR SHALL COORDINATE WITH AMEREN TO ENSURE METER SOCKET MEETS AMEREN'S REQUIREMENTS. CONTRACTOR SHALL INSTALL AN EMPTY 1 1/2" SCHEDULE 40 PVC CONDUIT FROM THE METER SOCKET TO THE UTILITY METERING SECTION OF THE MCC. AMEREN ILLINOIS POWER COMPANY SHALL PROVIDE, INSTALL, AND TERMINATE ALL METERING CONDUCTORS.
5. 6' X 6' X 7' HIGH PRECAST ELECTRICAL MANHOLE. LOCATE APPROXIMATELY 10 FEET FROM CONTROL BUILDING WALL. REFER TO PLAN VIEW ON SHEET E-501.
6. INSTALL PVC-COATED RGS CONDUITS THROUGH THE FLOOR, DOWN INTO THE GROUND, THEN TURN HORIZONTALLY AND ROUTE INTO THE ELECTRICAL MANHOLE. CONTRACTOR TO INSTALL GALVANIZED STEEL HORIZONTAL SUPPORT CHANNELS BETWEEN THE FOUNDATION PILES TO SUPPORT THE VERTICAL SECTIONS OF CONDUITS. THE HORIZONTAL SUPPORTS MUST BE SPACED NO GREATER THAT 10' APART.

KEYED NOTES (CONTINUED):

7. INSTALL TYPES "A" AND "B" LIGHT FIXTURES CHAIN HUNG FROM CEILING AT A HEIGHT OF 10'-0" A.F.F., TO THE BOTTOM OF THE FIXTURE.
8. INSTALL TYPE "E" EXIT LIGHT FIXTURE ABOVE THE DOOR OPENINGS, AT A HEIGHT OF 10'-0" A.F.F., TO THE BOTTOM OF THE FIXTURE. CONNECT TO "UNSWITCHED" CIRCUIT AS INDICATED.
9. INSTALL TYPE "C" EXTERIOR WALLPACK FIXTURE AT A HEIGHT OF 10'0" A.F.F., USING STAINLESS STEEL HARDWARE.
10. STUB UP SPARE CONDUITS IN THIS LOCATION NOT LESS THAN 2" AFF AND TERMINATE WITH CONDUIT COUPLING AND PLUG.
11. REFER TO ELECTRICAL SITE PLAN ON SHEET E-101 FOR CONTINUATION.
12. 3/4" CONDUIT WITH 2 #12 AND 1 #12 GROUND TO EF-1. REFER TO CONTROL DIAGRAM ON SHEET E-603.
13. NOT USED
14. PROVIDE AND INSTALL A LOCKOUT AND TAGOUT WALL STATION. THE LOCATION OF THE WALL STATION SHALL BE AS SHOWN AT APPROXIMATELY 6 FEET AFF UNLESS OTHERWISE COORDINATED. THIS WALL STATION SHALL HAVE NOT LESS THAN THREE AND NOT MORE THAN SIX PADLOCKS, SHALL BE PROVIDED WITH AND HOLD UP TO 3" WIDE HEAVY DUTY TAGS AND LOCKABLE METAL HASPS AS COORDINATED. LOCKOUT STATION FEATURES SHALL MEET THE INTENTIONS OF OSHA AND NFPA 70E AND SHALL BE COORDINATED BY CONTRACTOR FOR PADLOCKS TO BE SIZED COMPATIBLE WITH THE ACTUAL MCC PROVIDED. LOCKOUT AND TAGOUT WALL STATION SHALL BE SUBMITTED FOR APPROVAL.
15. PROVIDE AND INSTALL A HEAVY-DUTY, FRAMED, LAMINATED COPY OF LOCKOUT/TAGOUT PROCEDURE. THE CONTRACTOR SHALL FINALIZE THE LOCKOUT & TAGOUT PROCEDURE BASED ON THE SAMPLE PROCEDURE DERIVED FROM NFPA 70E ANNEX G AS PROVIDED IN THE SPECIFICATIONS.

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

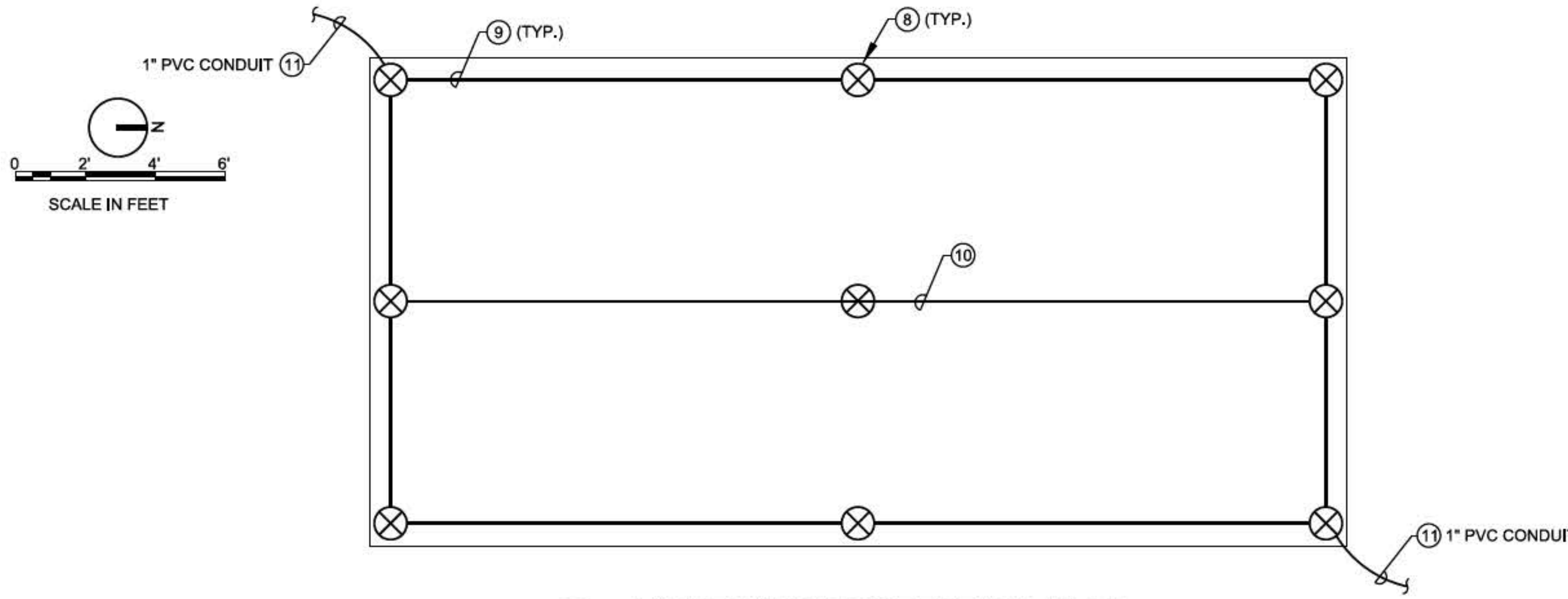
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

CONTROL BUILDING
POWER AND
LIGHTING PLANS

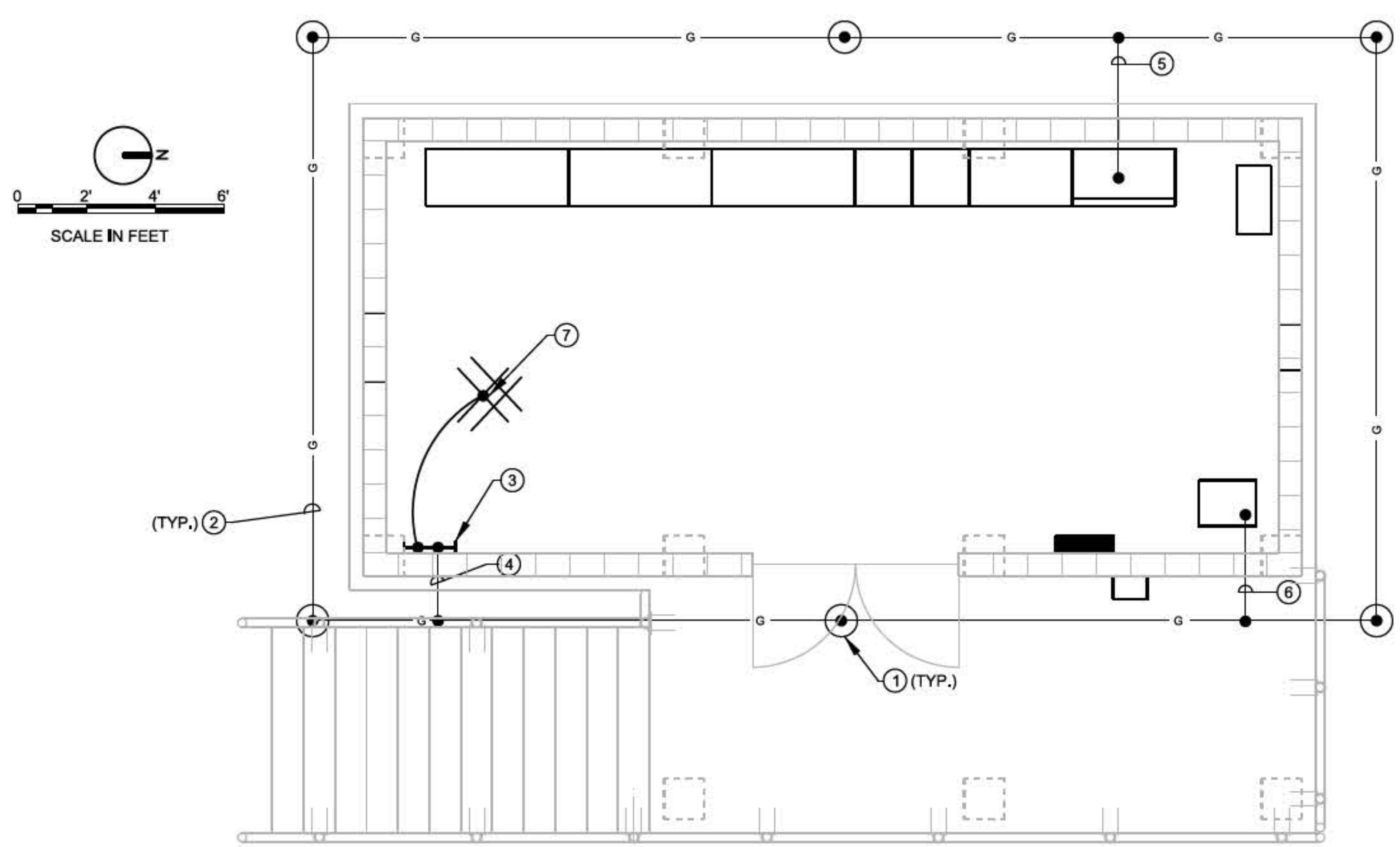
Sheet ID
E-103

AS-BUILT
A-105

c:\pw_working\mvr\b5edd\lhd0153758\EP102E-103.dgn
3:22:54 PM
B5EDDLLH



1 LIGHTNING PROTECTION PLAN



2 GROUNDING PLAN

GENERAL NOTES:

A. REFER TO SPEC. SECTION 26 20 00 FOR GROUNDING REQUIREMENTS.

B. REFER TO SPEC. SECTION 26 41 01.00 10 FOR LIGHTNING PROTECTION SYSTEM REQUIREMENTS.

C. THE LIGHTNING PROTECTION SYSTEM DESIGN AND INSTALLATION MUST COMPLY WITH NFPA 780, USING CLASS I MATERIALS, FOR A BUILDING HEIGHT OF LESS THAN 75 FEET.

D. ALL UNDERGROUND GROUNDING CONNECTIONS MUST BE EXOTHERMIC-WELD CONNECTIONS.

E. ALL CONDUITS WHICH ENTER OR EXIT THE CONTROL BUILDING SHALL BE SEALED WITH 2-PART NON-HARDENING SILICONE EXPANDING FOAM TO PREVENT ENTRANCE OF MOISTURE INTO BUILDING. INSTALL FOAM SO CONDUIT IS RE-ENTERABLE.

F. COORDINATE LOCATION OF GROUNDING BONDS TO STRUCTURAL STEEL, GROUND CABLE ROUTING, AND GROUND ROD LOCATIONS WITH THE FOUNDATION WORK TO ENSURE BEST LOCATION OF GROUNDING EQUIPMENT AND TO AVOID INTERFERENCE OF EQUIPMENT.

(#) KEYED NOTES:

(1) 3/4" X 10'-0" COPPER CLAD GROUND ROD. (TYPICAL OF 6)

(2) #4/0 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR FORMING A COUNTERPOISE RING. (TYPICAL)

(3) 2" HIGH X 1/4" THICK X 24" LONG BARE COPPER GROUND BUS. ATTACH TO WALL WITH STAND-OFF INSULATORS, AT A HEIGHT OF 24" A.F.F.

(4) 1" SCHEDULE 80 PVC CONDUIT WITH (1) #4/0 BARE COPPER GROUNDING CONDUCTOR FROM THE GROUND COUNTERPOISE RING TO THE GROUND BUS INSIDE THE CONTROL BUILDING.

(5) 1" SCHEDULE 80 PVC CONDUIT WITH (1) #4/0 BARE COPPER GROUNDING CONDUCTOR FROM THE GROUND COUNTERPOISE RING TO THE MOTOR CONTROL CENTER GROUND BUS.

(6) 1" SCHEDULE 80 PVC CONDUIT WITH (1) #6 BARE COPPER GROUNDING CONDUCTOR FROM THE GROUND COUNTERPOISE RING TO THE LIGHTING TRANSFORMER.

(7) BOND GROUNDING SYSTEM TO BUILDING STEEL IN NOT LESS THAN FOUR LOCATIONS AT OR NEAR EACH CORNER OF THE BUILDING.

(8) CLASS I AIR TERMINAL, ATTACHED TO ROOF. MAKE ALL ROOF PENETRATIONS WATERTIGHT (TYPICAL OF 8), 3/8"X18" AT AND SADDLE BASE.

(9) CLASS I BARE COPPER LIGHTNING PROTECTION LOOP CONDUCTOR. CONDUCTOR SHALL BE CLASS I MATERIALS PER NFPA 780, 57,400 CIRCULAR MIL CROSS SECTION AREA, 187 LB/1000 FT, WITH 17 AWG MINIMUM STRAND SIZE.

(10) CLASS I BARE COPPER LIGHTNING PROTECTION CROSS CONDUCTOR. CONDUCTOR SHALL BE CLASS I MATERIALS PER NFPA 780, 57,400 CIRCULAR MIL CROSS SECTION AREA, 187 LB/1000 FT, WITH 17 AWG MINIMUM STRAND SIZE. TYPICAL MAIN CONDUCTTOR IS #CCHB-29-17.

(11) CLASS I BARE COPPER LIGHTNING PROTECTION DOWN CONDUCTOR EXTENDING VERTICALLY DOWN FROM THE AIR TERMINALS ON THE ROOF TO THE GROUND COUNTERPOISE RING. EXOTHERMIC-WELD CONNECTIONS AT THE GROUND RING. CONDUCTOR SHALL BE CLASS I MATERIALS PER NFPA 780, 57,400 CIRCULAR MIL CROSS SECTION AREA, 187 LB/1000 FT, WITH 17 AWG MINIMUM STRAND SIZE.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: BGR		DATE: 2011/06/30
DWN BY: DED	CKD BY: KRR	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: JWB		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102E-104.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

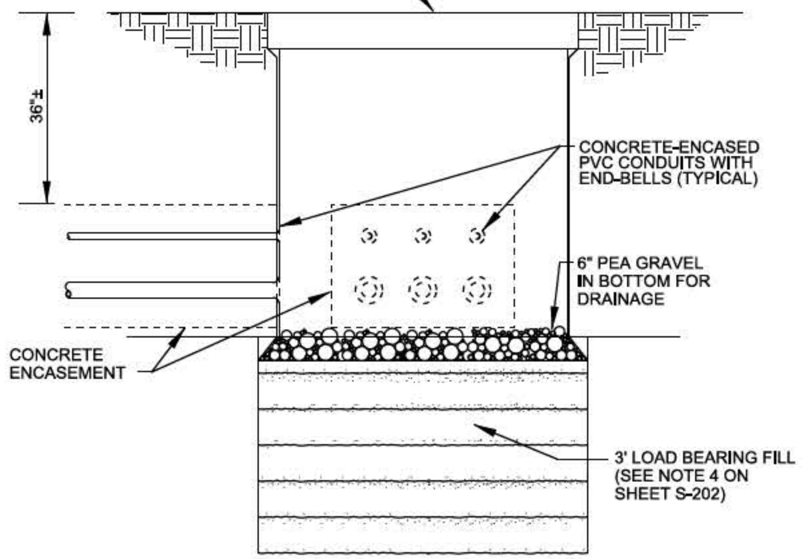
CONTROL BUILDING GROUNDING AND LIGHTNING PROTECTION PLAN

Sheet ID
E-104

c:\pw_working\mvr\b5edd\lh\d0153758\EP102E-104.dgn
3:22:28 PM
B5EDDLLH

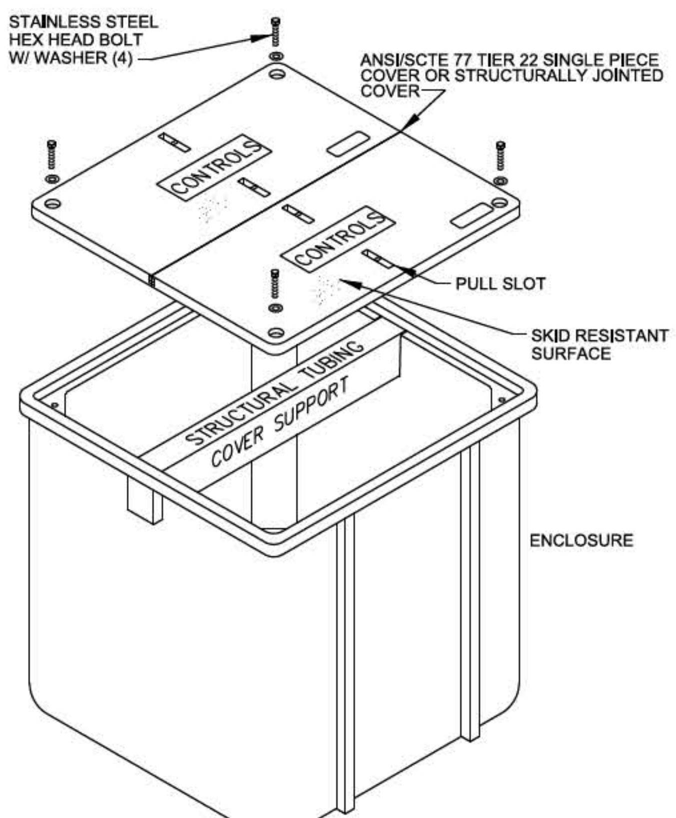
AS-BUILT
A-106

POLYMER PREFABRICATED CONCRETE PULL BOX NOMINAL SIZE SHALL BE 48"x48"x48". UNDERGROUND ENCLOSURE SHALL MEET OR EXCEED THE REQUIREMENTS OF ANSI/SCTE 77 AND SHALL BE PROVIDED WITH ANSI TIER 22 EXTRA HEAVY DUTY COVER WITH "CONTROLS" LOGO. THE BASIS OF DESIGN IS QUAZITE PG STYLE



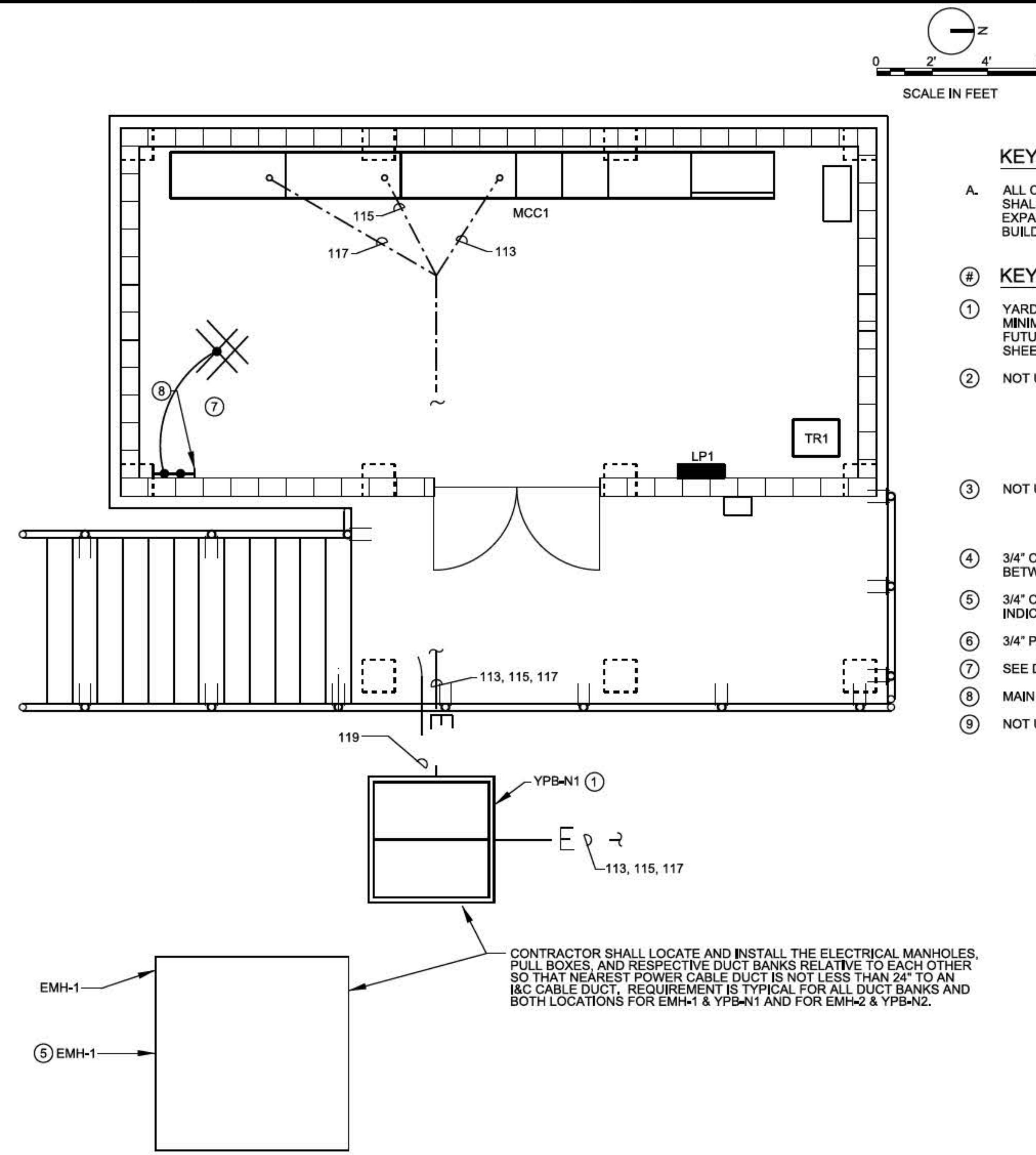
YARD PULL BOX ELEVATION

NOT TO SCALE



3 YARD PULL BOX DETAILS

NOT TO SCALE



CONTRACTOR SHALL LOCATE AND INSTALL THE ELECTRICAL MANHOLES, PULL BOXES, AND RESPECTIVE DUCT BANKS RELATIVE TO EACH OTHER SO THAT NEAREST POWER CABLE DUCT IS NOT LESS THAN 24" TO AN I&C CABLE DUCT. REQUIREMENT IS TYPICAL FOR ALL DUCT BANKS AND BOTH LOCATIONS FOR EMH-1 & YPB-N1 AND FOR EMH-2 & YPB-N2.

1 INSTRUMENTATION & CONTROLS PLAN

KEYED NOTES:

A. ALL CONDUITS WHICH ENTER OR EXIT THE CONTROL BUILDING SHALL BE SEALED WITH 2-PART NON-HARDENING SILICONE EXPANDING FOAM TO PREVENT ENTRANCE OF MOISTURE INTO BUILDING. INSTALL FOAM SO CONDUIT IS RE-ENTERABLE.

KEYED NOTES:

1. YARD PULL BOX PER DETAIL THIS SHEET. PROVIDE 36 INCHES MINIMUM (1 LOOP) OF EACH CABLE WITHIN PULL BOX FOR FUTURE ADJUSTMENTS OR OTHER CHANGES AS REQUIRED. SEE SHEETS #E-101 AND #C-121 FOR LOCATION.
2. NOT USED
3. NOT USED
4. 3/4" CONDUIT WITH 1 #18 TSP ANALOG (4-20 MA DC) SIGNAL CABLE BETWEEN LEVEL INDICATOR AND JUNCTION BOX.
5. 3/4" CONDUIT WITH 4 #18, 1 #18 GROUND BETWEEN LEVEL INDICATORS OUTPUT RELAYS AND RESPECTIVE PUMP STARTER.
6. 3/4" PVC CONDUIT, 1 #4 TO MAIN GROUNDING BUS.
7. SEE DETAIL 2, LEVEL INDICATOR RISER DIAGRAM, ON THIS SHEET.
8. MAIN GROUNDING BUS. SEE SHEET E-104.
9. NOT USED

US Army Corps of Engineers®

MARK	DATE	DESCRIPTION	APPR.
		AS-BUILT AS OF 29 SEPTEMBER 2017	

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: BGR		DATE: 2011/06/30
DWN BY: DED	CKD BY: KRR	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: JWB		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102E-105.dgn	

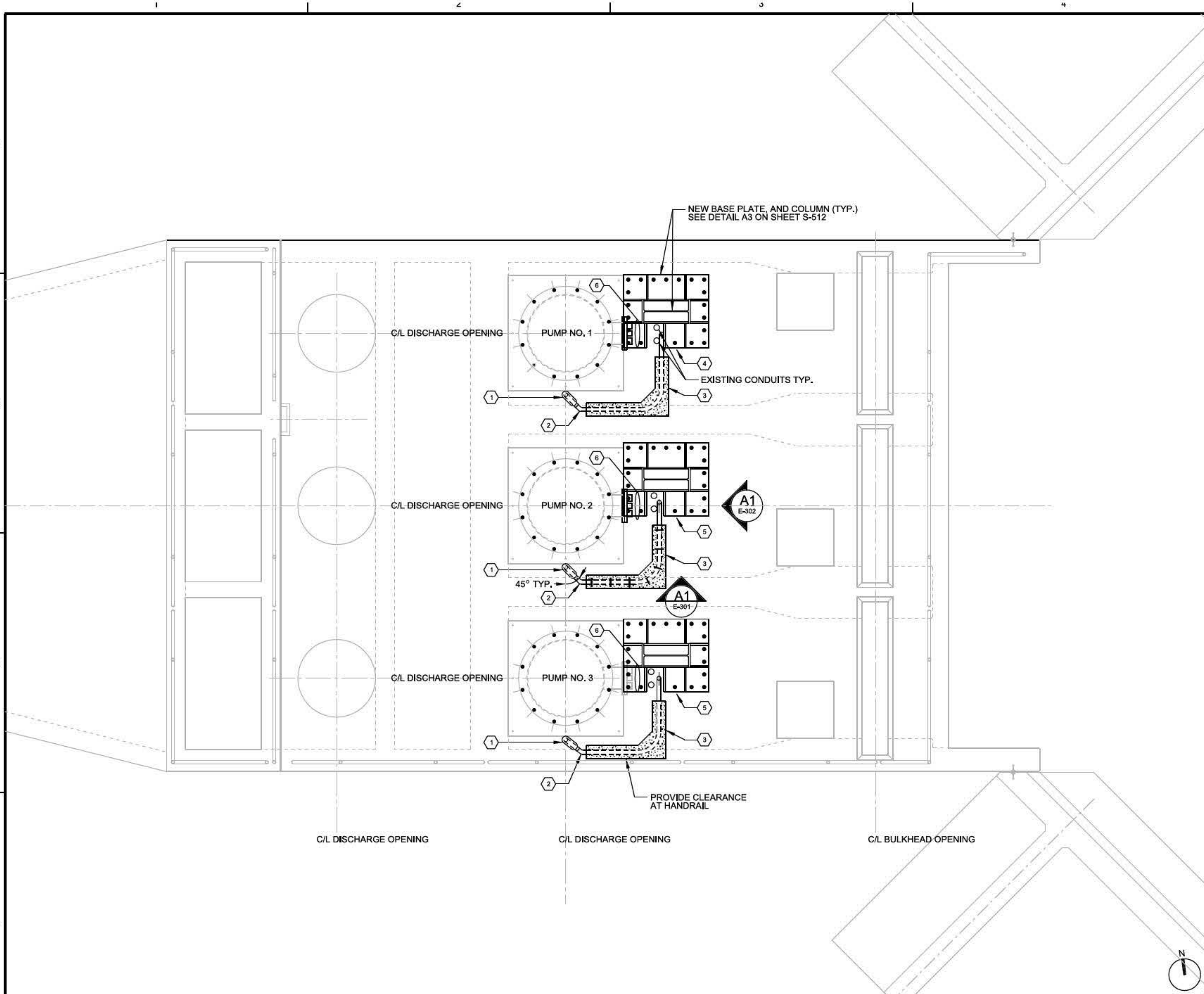
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

CONTROL BUILDING
INSTRUMENTATION
PLAN

Sheet ID
E-105

c:\pw_working\mvr\b5eddlll\d0153758\EP102E-105.dgn
3:22:32 PM
B5EDDLLH

AS-BUILT
A-107



A1 NEW JUNCTION BOX PLAN

SCALE : 3/8"=1'-0"

SHEET KEY NOTES

1. PROVIDE AND INSTALL NEW 2" PVC-COATED TYPE LB CONDUIT FITTING. DIRECT FITTING TO ALLOW NEW CONTROL CONDUIT ROUTING AT LOW ELEVATION.
2. PROVIDE AND INSTALL NEW 2" PVC-COATED RIGID GALVANIZED STEEL (RGS) CONDUITS, PVC-COATED RGS CONDUIT COUPLINGS, AND PVC-COATED RGS JUNCTION BOX CONDUIT HUBS ROUTED AS SHOWN FROM EACH NEW TYPE LB CONDUIT FITTING TO ITS RESPECTIVE RELOCATED CONTROL JUNCTION BOX.
3. SECURE CONDUIT TO CONCRETE. SEE STRUCTURAL SHEET S-512. THESE CONDUITS MUST BE CONCRETE ENCASED.
4. ELECTRICAL JUNCTION BOXES SHALL BE INSTALLED ON PUMP NO. 1 NEW SUPPORT COLUMN. EXISTING RELOCATED CONTROL JUNCTION BOX AT LOWER ELEVATION, NEW POWER JUNCTION BOX IN THE MIDDLE, AND NEW POWER AND CONTROL SPLICE JUNCTION BOX AT TOP ELEVATION.
5. ELECTRICAL JUNCTION BOXES SHALL BE INSTALLED ON EACH RESPECTIVE SUPPORT COLUMN. EXISTING RELOCATED CONTROL JUNCTION BOX AT LOWER ELEVATION, EXISTING RELOCATED POWER JUNCTION BOX IN THE MIDDLE, AND NEW POWER AND CONTROL SPLICE JUNCTION BOX AT TOP ELEVATION.
6. PROVIDE TWO (2) NEW POWER 3" PVC-COATED RGS CONDUITS AND ONE (1) NEW 1½" PVC-COATED RGS CONDUIT FROM THE THREE PIPE STUBS ON THE PUMP CAN FLANGE TO THE MIDDLE JUNCTION BOX (36"H x 24"W x 24"D), SEE SECTION DETAIL A3 AND REQUIREMENTS ON SHEET E-301.

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

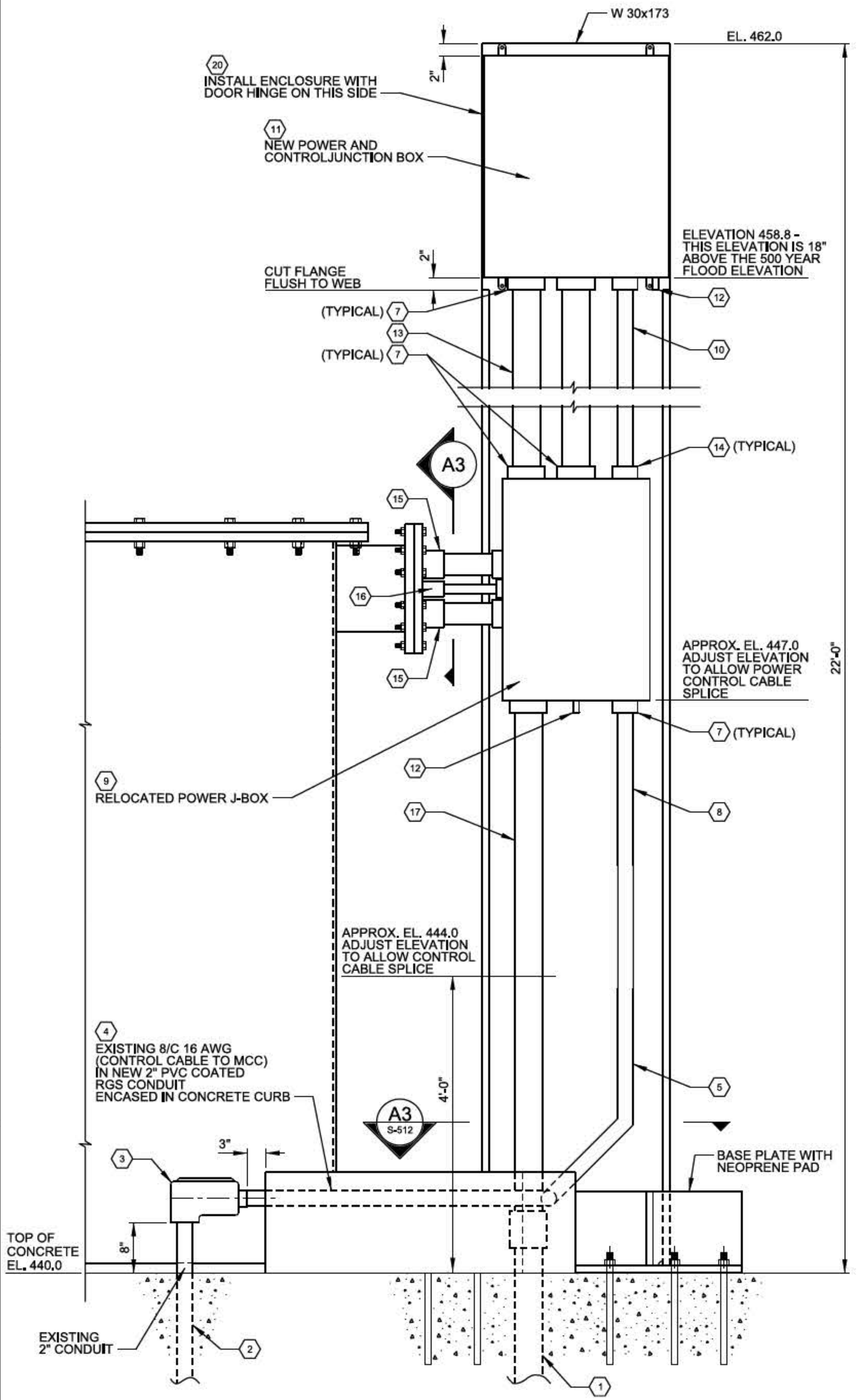
DESIGNED BY: BGR		DATE: 2016/06/17	
DWN BY: GLW	CKD BY: RJW	SOLICITATION NO.: W912EK-11-R-0029	
SUBMITTED BY: JWB		CONTRACT NO.:	
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102	
SIZE: ANSI D	FILE NAME: EP102E-106.dgn		

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION NEW JUNCTION BOX PLAN

Sheet ID
E-106

AS-BUILT

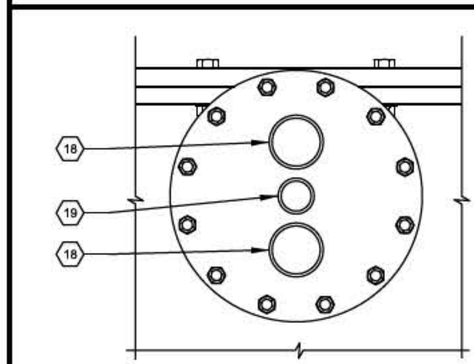


(A1) NEW JUNCTION BOX ELEVATION

SCALE : 1"=1'-0"

SHEET KEY NOTES

1. MAINTAIN AND PROTECT TWO (2) EXISTING PARALLEL 4" PVC-COATED RIGID GALVANIZED STEEL (RGS) POWER CONDUIT AND SINGLE POWER CONDUCTORS WITHIN (3 – 250 KCMIL AND 1- 1/0 AWG GND) ROUTED FROM THE MCC CONTROL BUILDING.
2. MAINTAIN AND PROTECT ONE (1) EXISTING 2" PVC-COATED (RGS) CONTROL CONDUIT AND THE MULTICONDUCTOR CABLE WITHIN (8/C 16 AWG) ROUTED FROM THE MCC CONTROL BUILDING.
3. PROVIDE AND INSTALL NEW 2" PVC-COATED TYPE LB CONDUIT FITTING. DIRECT FITTING TO ALLOW NEW CONTROL CONDUIT ROUTING AT LOW ELEVATION.
4. PROVIDE AND INSTALL NEW 2" PVC-COATED RGS CONDUITS, PVC-COATED RGS CONDUIT COUPLINGS, AND PVC-COATED RGS JUNCTION BOX CONDUIT HUBS ROUTED AS SHOWN FROM EACH NEW LB CONDUIT FITTING TO ITS RESPECTIVE RELOCATED CONTROL JUNCTION BOX. SEE STRUCTURAL SHEET S-512.
5. NEW 2" PVC-COATED RGS CONDUIT ROUTED TO THE RELOCATED CONTROL JUNCTION BOX. ROUTE CONDUIT DOWNSTREAM OF STRUCTURAL SUPPORT COLUMN FOR PROTECTION. INSTALL CONDUITS SO STRUCTURAL ANCHOR BOLT HARDWARE ARE ACCESSIBLE ABLE TO BE REMOVED IN THE FUTURE FOR MAINTENANCE, REPAIR, OR REPLACEMENT.
7. PROVIDE NEW 4" PVC-COATED RGS CONDUIT BOX HUBS (MYERS HUBS). PROVIDE MYERS HUBS AS TYPICAL CONNECTION OF ALL NEW CONDUITS TO JUNCTION BOXES.
8. ONE (1) NEW 2" PVC-COATED RGS CONTROL CONDUIT.
9. RELOCATE NEW (FOR PUMP 1) AND EXISTING (FOR PUMPS 2 & 3) 36"H X 24"W X 24"D JUNCTION BOX TO THIS APPROXIMATE LOCATION. BOLT ENCLOSURE TO CHANNEL WEB WITH 2" LONG X 7/16"Φ STAINLESS STEEL BOLTS AND HARDWARE. PROVIDE AND INSTALL NEMA 4X CLOSURE PLATES IN EXISTING BOX TO SEAL EXISTING CONDUIT HOLES. PROVIDE AND INSTALL SIX NEW 250 KCMIL SINGLE CONDUCTOR CABLES (COPPER TYPE XHHW, 90 DEG CELSIUS) AND PROVIDE TWO NEW 1/0 AWG GREEN GROUNDING CONDUCTORS TO EXTEND EXISTING PARALLEL POWER CABLES UP TO THE NEW POWER AND CONTROL JUNCTION BOX AT HIGHEST ELEVATION. SPLICE THE SIX NEW 250 KCMIL AND TWO NEW 1/0 AWG SINGLE CONDUCTORS TO THE EXISTING SINGLE CONDUCTORS FROM MCC CONTROL BUILDING USING COPPER CABLE SPLICE CONNECTORS AND PROVIDE ELECTRIC CABLE HEAT SHRINK TUBES FOR EACH PHASE CONDUCTOR AND EACH GROUNDING CONDUCTOR. BASIS OF DESIGN IS "TE'S RAYCHEM" HEAT SHRINK TUBING OR "3M" HEAT SHRINK TUBING. INSTALL HEAT SHRINK TUBING IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROPERLY COLOR CODE ALL CONDUCTORS WITH COLOR TAPE. ALSO SEE KEYNOTE 6.
10. TWO (2) NEW 2" PVC-COATED RGS CONDUITS. THE CONTROL CABLE EXTENDED FROM THE MCC CONTROL BUILDING MUST BE ROUTED IN ONE CONDUIT AND THE PUMP CONTROL LEAD CABLE FROM THE PUMP MUST BE ROUTED IN THE OTHER 2" CONDUIT.
11. PROVIDE AND INSTALL NEW POWER AND CONTROL NEMA 4X STAINLESS STEEL JUNCTION BOX (36"H X 30"W X 16"D) ON EACH RESPECTIVE SUPPORT COLUMN. PROVIDE INTERNAL PANEL FOR EACH NEW JUNCTION BOX ON WHICH POWER BLOCKS AND TERMINAL STRIPS WILL BE INSTALLED. BOLT ENCLOSURE TO THE CHANNEL WEB WITH 2" LONG X 7/16"Φ STAINLESS STEEL BOLTS AND HARDWARE. PROVIDE AND INSTALL FOUR NEW POWER DISTRIBUTION BLOCKS: THREE OF THE BLOCKS MUST BE RATED 480 VOLTS, COPPER, 75 DEG C, SUITABLE TO CONNECT TWO 250 KCMIL CONDUCTORS FROM MCC TO ONE 250KCMIL FROM PUMP AND ONE BLOCK MUST BE ELECTRICALLY RATED THE SAME EXCEPT FOR 1/0 AWG GROUNDING CONDUCTORS. ALSO PROVIDE AN 8-TERMIAL STRIP, RATED FOR 75 DEG, C, COPPER WIRES UP TO 12 AWG. TO ACCEPT THE CONTROL CABLE WIRES FROM THE MCC ON ONE SIDE AND THE CONTROL CABLE WIRES FROM THE PUMP ON THE OTHER SIDE. THIS NEW JUNCTION BOX WILL PROVIDE AN AIR GAP SPLICE BETWEEN THE CABLES FROM THE PUMP AND THE CABLES FROM THE MCC.
12. PROVIDE AND INSTALL ONE NEMA 4X ENCLOSURE DRAIN IN THE BOTTOM OF EACH NEW AND EXISTING JUNCTION BOX.
13. FOUR (4) NEW 4" PVC-COATED RGS CONDUITS. THE POWER CABLES EXTENDED FROM THE MCC CONTROL BUILDING MUST BE ROUTED IN TWO CONDUITS (FRONT AND BACK) AND THE PUMP POWER LEAD CABLES FROM THE PUMP MUST BE ROUTED IN THE OTHER TWO 4" CONDUITS (FRONT AND BACK).
14. PROVIDE NEW 2" PVC-COATED RGS CONDUIT BOX HUBS (MYERS HUBS). PROVIDE MYERS HUBS AS TYPICAL CONNECTION OF ALL NEW CONDUITS TO JUNCTION BOXES.
15. NEW 3" PVC-COATED RGS CONDUITS AND NEW THREADED CONNECTIONS TO TWO EXISTING 4" PIPE STUBS ON PUMP CAN FLANGE. CONNECT TO JUNCTION BOX WITH MYERS HUBS. SEE DETAIL A3.
16. ONE NEW 1 1/2" PVC-COATED RGS CONDUITS AND NEW THREADED CONNECTIONS TO ONE 2" PIPE STUB ON PUMP CAN FLANGE. SEE DETAIL A3.
17. TWO (2) NEW 4" PVC-COATED RGS CONDUITS (OR REUSE EXISTING). THESE PARALLEL CONDUITS WILL CONTAIN THE EXISITNG PARALLEL POWER CABLES ROUTED FROM THE MCC CONTROL BUILDING.
18. THE EXISTING 4" PIPE STUBS MUST BE MODIFIED TO ALLOW 3" PVC-COATED RGS CONDUITS TO BE THREAD CONNECTED TO THEM. THE EXISTING PIPE STUBS ARE TOO CLOSE TO ALLOW THREADING OR CONDUIT FITTINGS TO BE INSTALLED ON THEM. WELD A 1" THICK STEEL "PLUG" INTO BOTH EXISTING 4" PIPE STUBS FOR EACH PUMP CAN. DRILL AND TAP 3" NPT INTO THE NEW "PLUG" FOR 3" PVC-COATED RGS CONDUIT. APPLY COAL TAR EPOXY ON BOTH SIDES OF THE "PLUG" AFTER INSTALLATION TO PROTECT EACH "PLUG".
19. THE EXISTING 2" PIPE STUBS MUST BE MODIFIED TO ALLOW NEW 1 ½" PVC-COATED RGS CONDUITS TO BE THREAD CONNECTED TO THEM. THE EXISTING PIPE STUBS ARE TOO CLOSE TOGETHER TO ALLOW THREADING OR CONDUIT FITTINGS TO BE INSTALLED ON THEM. WELD A 1" THICK STEEL "PLUG" INTO BOTH EXISTING 2" PIPE STUBS FOR EACH PUMP CAN. DRILL AND TAP 1 ½" NPT INTO THE NEW "PLUG" AND INSTALL NEW THREADED 1 ½" PVC-COATED RGS CONDUIT FROM PLUG TO JUNCTION BOX. APPLY COAL TAR EPOXY ON BOTH SIDES OF THE "PLUG" AFTER INSTALLATION TO PROTECT EACH "PLUG".
20. INSTALL JUNCTION BOX TO ENSURE THAT THE DOOR HINGE IS LOCATED ON THE LANDWARD SIDE OF THE ENCLOSURE.



(A3) SECTION

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

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: BGR		DATE: 2016/06/17
DWN BY: GLW	CKD BY: RJW	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: JWB		CONTRACT NO.:
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102E-301.dgn	

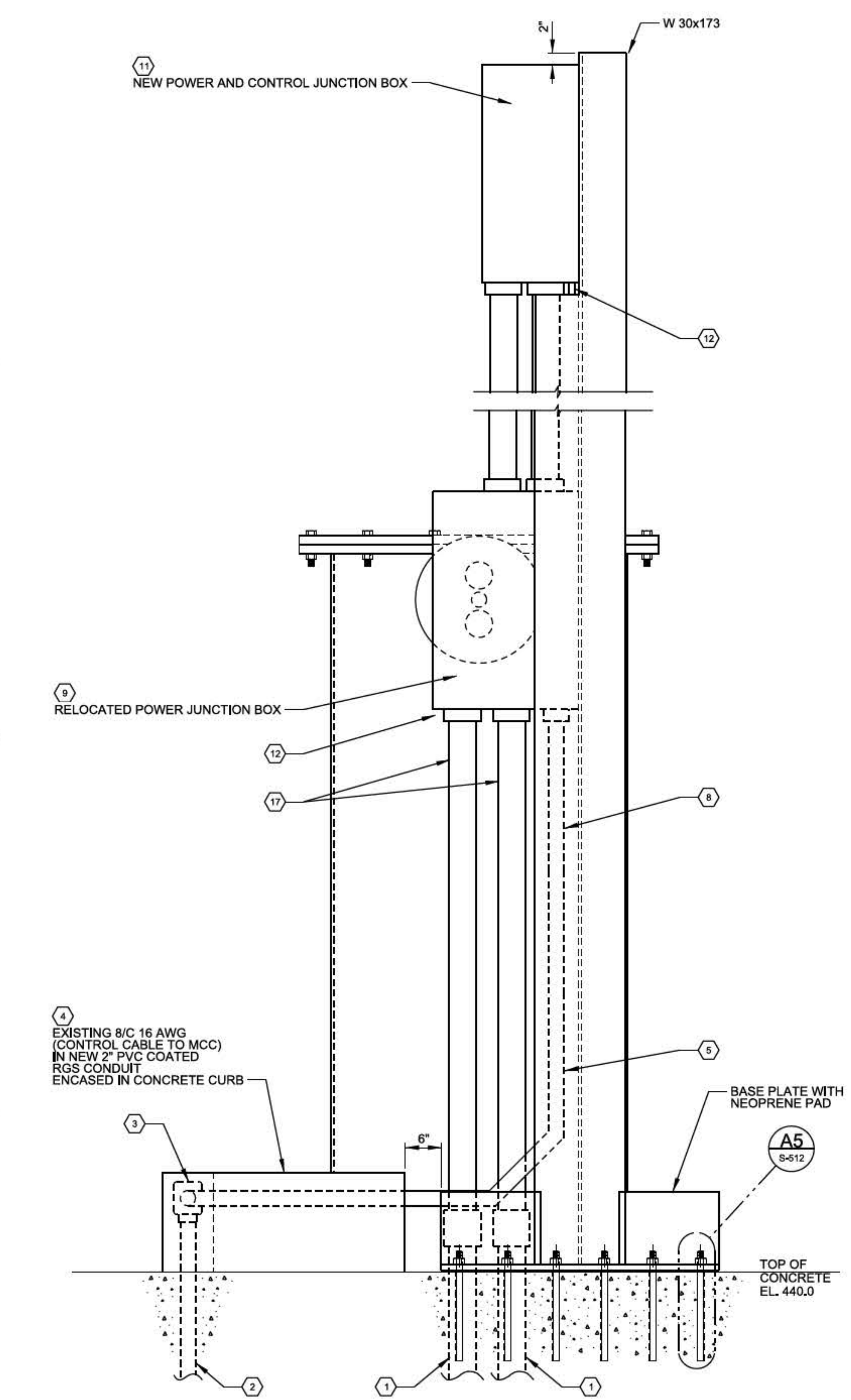
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

PUMP STATION
NEW JUNCTION BOX ELEVATION

Sheet ID
E-301

AS-BUILT
A-109

c:\pw_working\mvr\b5eddlhd0153758\EP102E-301.dgn
8/28/2018 3:22:50 PM
B5EDDLLH



A1 NEW JUNCTION BOX ELEVATION (TYPICAL FOR ALL 3 PUMPS)

SCALE : 1"=1'-0"

SHEET GENERAL NOTES

1. SEE SHEET KEY NOTES ON SHEET E-301.

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

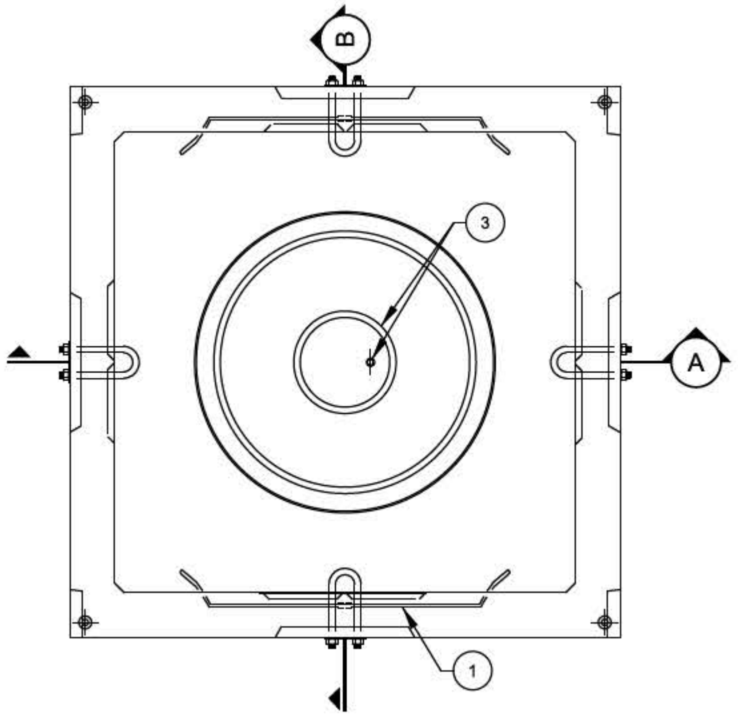
DESIGNED BY: BGR		DATE: 2016/06/17
DWN BY: GLW	CKD BY: RJW	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: JWB		CONTRACT NO.:
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102E-302.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
NEW JUNCTION BOX ELEVATION

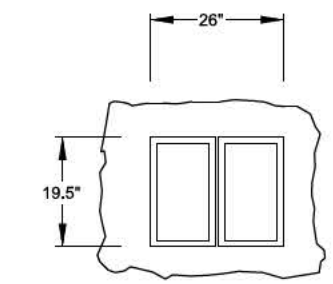
Sheet ID
E-302

AS-BUILT
A-110

c:\pw_working\mvr\b5eddllh\d0153758\EP102E-302.dgn
8/28/2018 3:22:54 PM
B5EDDLLH



PLAN VIEW
NOT TO SCALE



C INSIDE CASTING KNOCKOUT DETAIL
NOT TO SCALE

DESIGN CRITERIA:

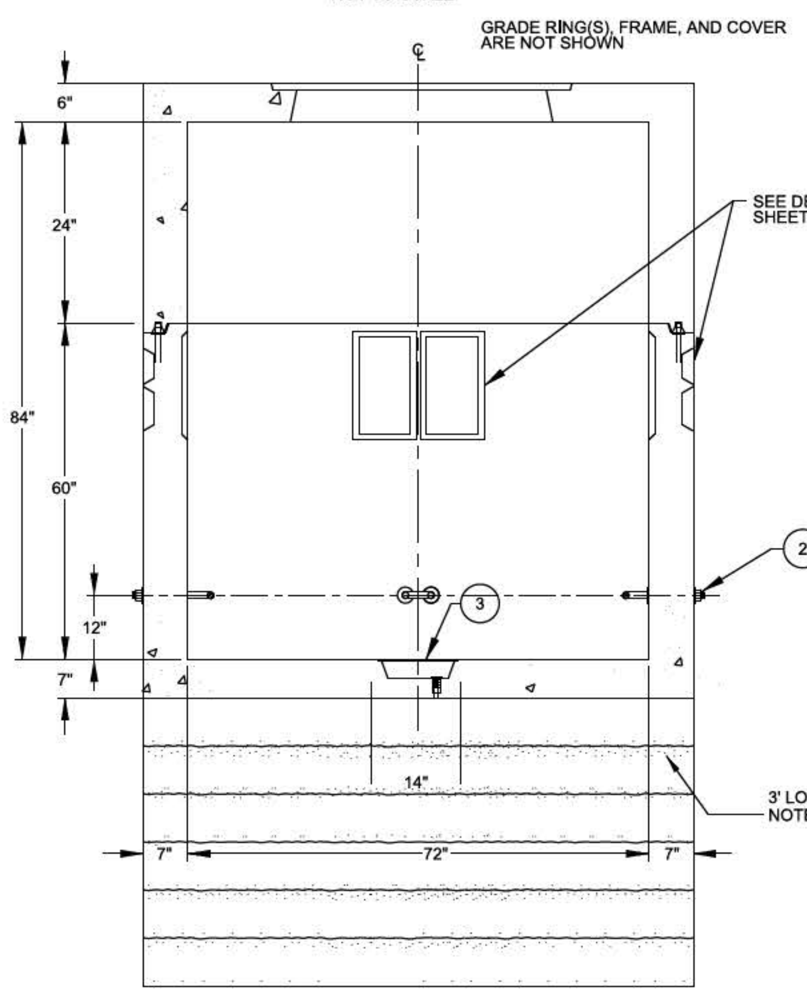
1.) CONCRETE MINIMUM COMPRESSIVE STRENGTH F'c = 4,500 P.S.I. @ 28 DAYS
2.) REINFORCING STEEL: ASTM A706, Fy = 60,000 P.S.I.
3.) DESIGN SPECIFICATIONS: ACI 318, AASHTO LOAD FACTOR DESIGN
4.) DESIGN LOADING: AASHTO HS20

DESIGN ASSUMPTIONS:

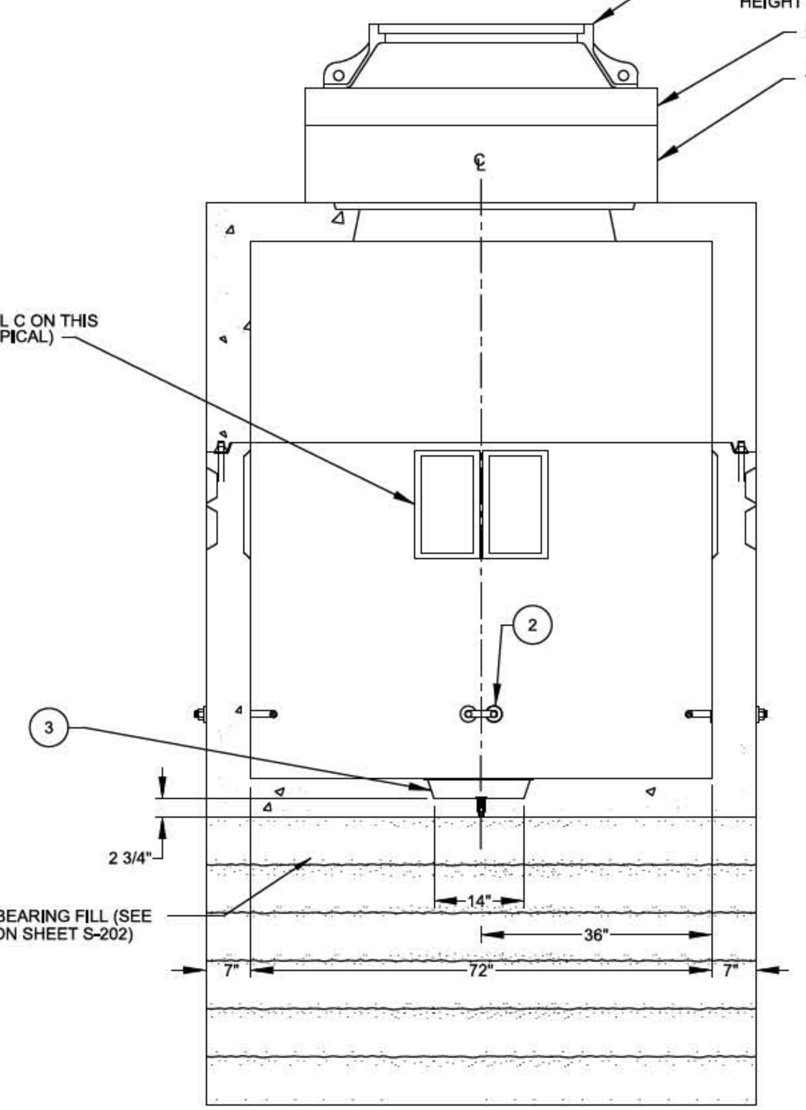
1.) GROUND WATER LEVEL: 3'-6"
2.) EARTH COVER: 2'-0" MIN. TO 5'-0" MAX.
3.) LIVE LOAD IMPACT: 2'-0" I = 20%
2'-1" TO 2'-11" I = 10%
3'-0" TO 5'-0" I = 0%

CASTING DATA:

1.) TOP CASTING WEIGHT:.........7,750 LBS. (INCLUDES WEIGHT OF REINFORCING STEEL)
2.) BOTTOM CASTING WEIGHT:..15,850 LBS. (INCLUDES WEIGHT OF REINFORCING STEEL)
3.) TOTAL CASTING WEIGHT:......23,600 LBS.



A SECTION VIEW "A"-"A"
NOT TO SCALE



B SECTION VIEW "B"-"B"
NOT TO SCALE

CIRCLED ITEM		REQ.	DESCRIPTION
①		4	GROUND WELD CONNECTION (SILICON BRONZE)
②		4	PULL-IN IRON ASS'Y
③		1	14 DIA. SUMP W/ 3/4 DIA. P.V.C. WEEP HOLE

NOTE:

THE DIMENSIONS SHOWN INDICATE THE GENERAL INTENTION FOR THE MANHOLE CONSTRUCTION. THE ACTUAL FINAL REQUIRED DIMENSIONS SHALL BE DETERMINED AND SUBMITTED BY THE MANUFACTURER AS REQUIRED TO FABRICATE THE MANHOLE AND IT'S FEATURES TO MEET AASHTO STANDARDS. HARTFORD CONCRETE PRODUCTS (OLDCASTLE PRECAST) IS THE BASIS OF DESIGN. OTHER MANUFACTURERS THAT MEET THE DESIGN INTENT WILL BE ACCEPTABLE.

6' x 6' x 7' HIGH PRECAST MANHOLE DETAILS

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: BGR
DWN BY: SED
CKD BY: KRR
SUBMITTED BY: JWB
PLOT SCALE: AS SHOWN
PLOT DATE:
SIZE: ANSI D
FILE NAME: EP102E-501.dgn
DATE: 2011/06/30
SOLICITATION NO.: W912EK-11-B-0029
CONTRACT NO.: W912EK-11-C-0090
PROJECT CODE: EP102

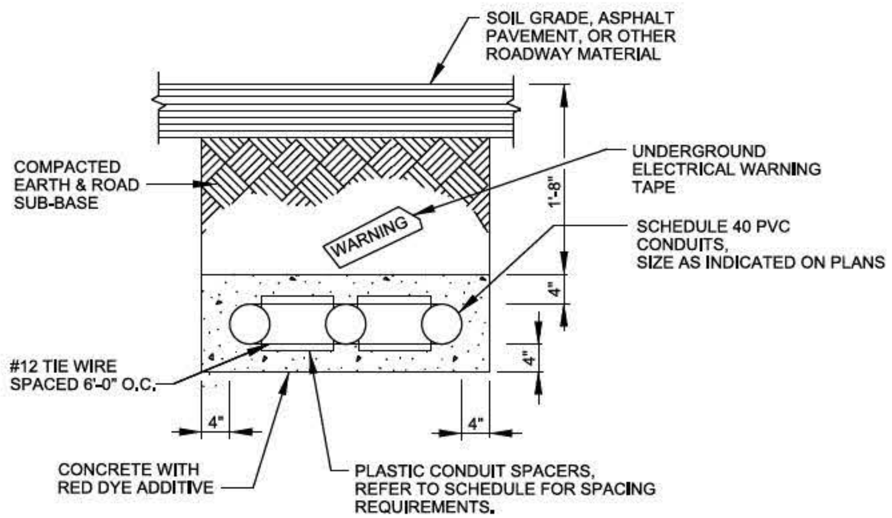
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
MANHOLE DETAILS

Sheet ID
E-501

AS-BUILT
A-111

c:\pw_working\mvr\b5eddlh\d0153758\EP102E-501.dgn
3:22:58 PM
B5EDDLLH

CONDUIT SPACER SCHEDULE	
CONDUIT SIZE	SPACER
3/4" - 2"	1 1/2"
2-1/2"- 3"	2"
4" - 6"	3"



NOTES:

1. THIS DETAIL INDICATES THE MINIMUM CRITERIA REQUIREMENTS FOR ALL DUCT BANKS AND DOES NOT DEPICT A SPECIFIC DUCT BANK. THE CONTRACTOR SHALL CONSTRUCT EACH REQUIRED DUCT BANK IN ACCORDANCE WITH THIS CRITERIA.
2. CONCRETE DUCT BANKS SHALL RUN FROM MANHOLE,TO MANHOLE.
3. THE CONCRETE ENCASED DUCTS TRAVERSING THE PAVEMENT SHALL HAVE 1'-8" MINIMUM COVER FROM THE TOP OF THE PROPOSED CONCRETE PAVEMENT. BACKFILL SHALL BE PER SPECIFICATION.

1 CONCRETE ENVELOPE DUCT BANK

NOT TO SCALE

(TYPICAL OF 1 SIGN INSTALLED ON EACH PUMP STARTER COMPARTMENT / 3 TOTAL)

NOTES:

1. CUSTOM LOCKOUT SIGNS SHALL BE 7" HIGH X 10" WIDE WITH LABEL AS SHOWN. SIGNS SHALL BE THE SELF-ADHESIVE, LAMINATED-VINYL MATERIAL TYPE WITH ESTIMATED EXPECTED OUTDOOR LIFE OF NOT LESS THAN FIVE YEARS, SMOOTHLY ADHERED TO THE DOOR OF EACH PUMP STARTER MCC COMPARTMENT FOR PUMP NO. 1, PUMP NO. 2, AND PUMP NO. 3 - (3 SIGNS TOTAL). THE BASIS OF DESIGN IS "MY LOCKOUT TAGS PART # S-3057. CUSTOM SIGNS THAT MEET OR EXCEED THE STATED INTENTION, CONTAIN SPECIFIC LABEL TEXT, MATERIAL, AND HAVE EXPECTED LIFE WILL BE ACCEPTABLE.
2. LABELS ON POWER JUNCTION BOXES AND CONTROL PULL BOXES AT PUMPING STATION ARE SHOWN IN DETAIL 3 ON SHEET E-503. THE LABEL TEXT REQUIRED FOR THE PUMPING STATION ELECTRICAL ENCLOSURES DIFFER THAN THE SIGN SHOWN HERE.

2 MCC LOCKOUT & TAGOUT SIGN DETAIL

NOT TO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: BGR		DATE: 2011/06/30
DWN BY: DED	CKD BY: KRR	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: JWB		CONTRACT NO.: W912EK-11-C-0090
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102E-502.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

DUCT BANK AND MISCELLANEOUS ELECTRICAL DETAILS

Sheet ID
E-502

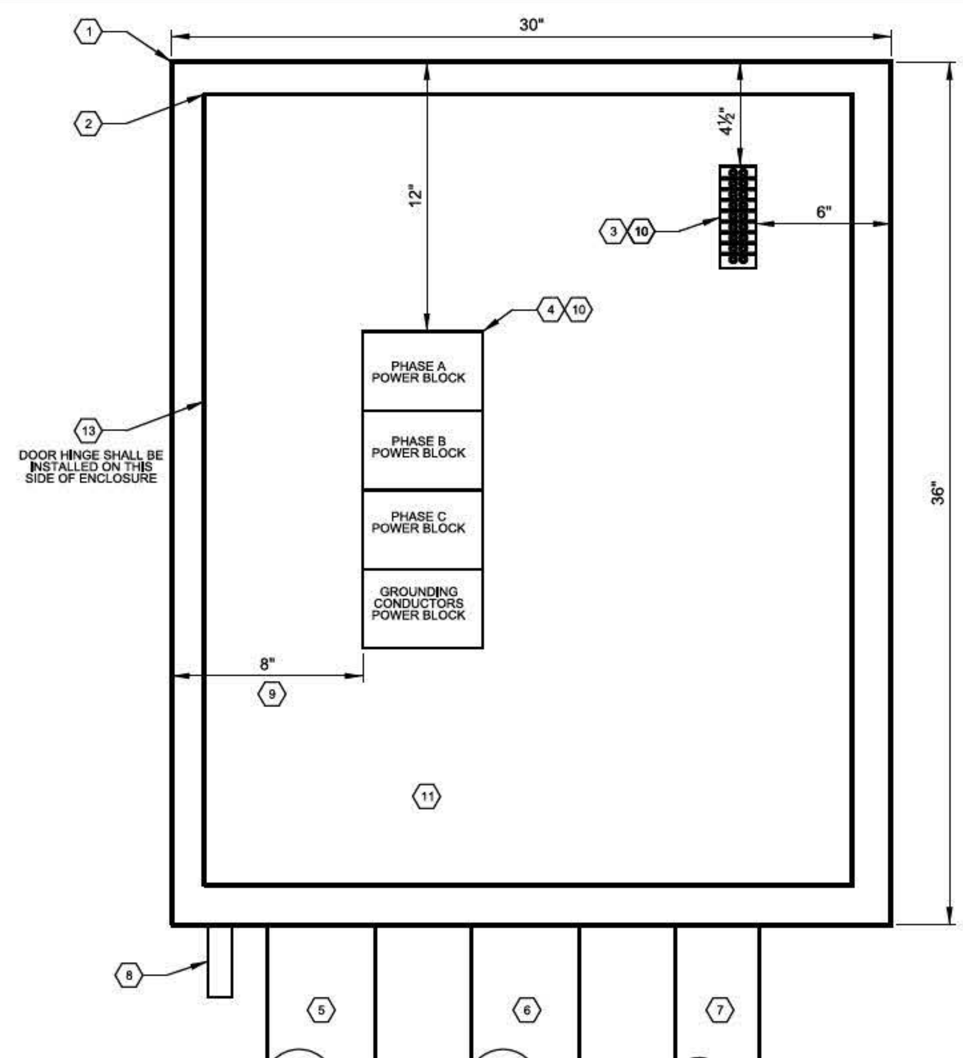
c:\pw_working\mvr\b5eddllh\d0153758\EP102E-502.dgn
3:23:02 PM
B5EDDLLH

AS-BUILT
A-112

C1 JUNCTION BOX LOCKOUT & TAGOUT SIGNS DETAILS

SCALE : NO SCALE

(TYPICAL OF 1 SIGN INSTALLED ON EACH ENCLOSURE / 6 TOTAL)



A1 NEW POWER & CONTROL JUNCTION BOX (36"H x 30"W x16"D)

SCALE : NO SCALE

ELECTRICAL QUANTITIES

ITEM	TYPE	QTY	UOM
4" PVC-COATED RGS CONDUIT	PVC-COATED RGS	120	LF
4" PVC-COATED RGS CONDUIT COUPLING	PVC-COATED RGS	10	EA
4" PVC-COATED BOX HUB (MYERS HUB)	PVC-COATED RGS	24	EA
REGASKET EXISTING JUNCTION BOXES	NEOPRENE GASKET	5	EA
DANGER ADHESIVE WARNING LABELS	CUSTOM	4	EA
16 AWG BUTT SPLICE FITTING	CU/AL LISTED	48	EA
1/C - 16 AWG HEAT SHRINK TUBES (CONTROL WIRES)	TUBES	24	EA
1" HEAT SHRINK KIT (CONTROL CABLE (8/C -16 AWG)	TUBES	3	EA
1/C - 250 KCMIL COMPRESSION BARREL SPLICE FITTING	CU/AL UL LISTED	24	EA
1/C - 250 KCMIL HEAT SHRINK KITS (POWER WIRES)	TUBES	6	EA
2-1/2" HEAT SHRINK KIT (4/C - 250 KCMIL POWER CABLE)	TUBES	6	EA
4/C MOLDED CABLE TERMINATION HEAT SHRINK KIT	MOLDED UNIT	6	EA
1/C - 250 KCMIL, 600 VOLT, TYPE XHHW, 90 DEG. CELSIUS, CU CABLE	SINGLE CONDUCTOR	400	LF
1/C - 1/0 AWG, 600 VOLT, TYPE XHHW, CU, GREEN GROUND CABLE	SINGLE CONDUCTOR	120	LF
1/C - 1/0 AWG COMPRESSION BARREL SPLICE FITTING	600 VOLT	6	EA
1/C - 1/0 AWG HEAT SHRINK KITS (GREEN GROUNDING WIRES)	TUBES	6	EA
8/C - 16 AWG, 600 VOLT, CABLE TRAY RATED, 90 DEG. CELSIUS, CU CABLE	MULTICONDUCTOR	60	LF
36"H X 24"W X 24"D, NEMA 4X, TYPE 304 STAINLESS STEEL JUNCTION BOX	TYPE 304	1	EA
36"H X 30"W X 16"D, NEMA 4X, TYPE 304 STAINLESS STEEL JUNCTION BOX (WITH BACK PANEL AND NEMA 4X DRAIN)	TYPE 304	3	EA
3-POLE POWER DISTRIBUTION BLOCKS (PHASES)	600 VOLT	9	EA
1-POLE POWER DISTRIBUTION BLOCKS (GROUNDING)	600 VOLT	3	EA
TERMINAL STRIPS	600 VOLT	3	EA
3" PVC-COATED RGS CONDUIT	PVC-COATED	30	LF
3" PVC-COATED RGS CONDUIT BOX HUB (MYERS HUB)	PVC-COATED	12	EA
1" THICK STEEL PLATE / PLUGS (FOR PIPE STUBS)	STEEL	1	EA
2" PVC-COATED RGS CONDUIT	PVC-COATED	90	LF
2" PVC-COATED RGS MOGUL LB CONDUIT FITTING	PVC-COATED	3	EA
2" PVC-COATED RGS CONDUIT 45 ELBOW	PVC-COATED	9	EA
2" PVC-COATED RGS CONDUIT 90 ELBOW	PVC-COATED	6	EA
2" PVC-COATED RGS CONDUIT BOX HUB (MYERS HUB)	PVC-COATED	15	EA
2" PVC-COATED RGS CONDUIT COUPLINGS	PVC-COATED	18	EA
1-1/2" PVC-COATED RGS CONDUIT	PVC-COATED	20	LF
1-1/2" PVC-COATED RGS CONDUIT BOX HUB (MYERS HUB)	PVC-COATED	3	EA
16 AWG WIRE LABELS		50	EA
COLOR PHASE ELECTRICAL TAPE (B-O-Y)		4	ROLL
NO-OXIDATION SPRAY - CORROSION INHIBITOR		2	CAN
1.25 CABLE CLAMPS (INSIDE NEW UPPER JBOXES)		12	EA
2" CABLE CLAMPS (INSIDE NEW UPPER JBOXES)		6	EA

SHEET KEY NOTES

1. NEW UPPERMOST ELEVATION JUNCTION BOXES, 36"H X 30"W X 16"D, NEMA 4X, TYPE 304 STAINLESS STEEL WITH CONTINUOUSLY HINGED DOOR (SEE KEYNOTE 13) , BOLTED COVER CLAMPS, AND PADLOCKABLE HASP. ALL MOUNTING HARDWARE MUST BE STAINLESS STEEL.
2. PROVIDE STAINLESS STEEL 33"H X 27"W INTERIOR BACK PANEL AS STANDARD OPTION WITH JUNCTION BOX.
3. PROVIDE 8 POLE TERMINAL STRIP. TERMINAL STRIP MUST BE 20 AMPS, 600 VOLTS, ACCEPTING 16 AWG SIZE CONDUCTORS ON BOTH SIDES. TERMINAL STRIP MUST BOLT DIRECTLY TO JUNCTION BOX INTERIOR BACK PANEL. BASIS OF DESIGN IS MARATHON SPECIAL PRODUCTS CATALOG NO. 621 RZ 08.
4. PROVIDE FOUR (4) POWER DISTRIBUTION BLOCKS. BLOCKS SHALL BE RATED 620 AMPERES, 600 VOLTS, ACCEPTING TWO (2) EACH 250 KCMIL PER PHASE ON THE LOAD SIDE AND ALSO ON THE LINE SIDE. BASIS OF DESIGN IS MARATHON SPECIAL PRODUCTS CATALOG NO. 1453129 FOR PHASE A, B, & C AND CATALOG NO. 1451129 FOR THE GROUNDING BLOCK. ALTERNATE BASIS OF DESIGN IS BURNDY VERSI-POLE CATALOG NO. BDBLHC223503 FOR PHASE A, B, & C AND CAT. NO. BDALHC22350 ADDER FOR GROUNDING BLOCK. PLASTIC COVERS SHALL BE PROVIDED AND INSTALLED ON POWER DISTRIBUTION BLOCKS SHALL BE PROVIDED WITH COVER.
5. TWO (2) EACH - 4" PVC-COATED RGS CONDUIT BOX HUB (MYERS HUB) AND CONDUITS CONTAINING POWER CONDUCTORS EXTENDED UP FROM MCC CONTROL BUILDING. INSTALL CONDUITS FRONT AND BACK.
6. TWO (2) EACH - 4" PVC-COATED RGS CONDUIT BOX HUB (MYERS HUB) AND CONDUITS CONTAINING PUMP LEAD MULTICONDUCTOR POWER CABLES FROM RESPECTIVE SUBMERSIBLE PUMP. INSTALL CONDUITS FRONT AND BACK.
7. TWO (2) EACH - 2" PVC-COATED RGS CONDUIT BOX HUB (MYERS HUB) AND CONDUIT, ONE CONDUIT MUST CONTAIN THE EXTENDED MULTICONDUCTOR CONTROL CABLE ROUTED FROM THE MCC CONTROL BUILIDNG AND THE OTHER CONDUIT MUST CONTAIN THE PUMP LEAD CONTROL MULTICONDUCTOR CABLE FROM RESPECTIVE SUBMERSIBLE PUMP. INSTALL CONDUITS FRONT AND BACK.
8. PROVIDE AND INSTALL ONE NEMA 4X STAINLESS STEEL ELECTRICAL ENCLOSURE DRAIN FITTING IN LEFT CENTER BOTTOM OF NEW JUNCTION BOXES. BASIS OF DESIGN IS PENTAIR – HOFFMAN CAT. NO. AVDR4554.
9. GUTTER SPACE. THIS DRAWING SHOWS 8" DISTANCE FROM POWER DISTRIBUTION BLOCKS TO INSIDE WALL OF JUNCTION BOX. THE MINIMUM DISTANCE FOR THE GUTTER SPACE TO ALLOW THE 250 KCMIL WIRES TO BEND INTO THE BLOCKS IS 6". THE POWER BLOCKS LOCATION MAY BE CHANGED AS DEEMED APPROPRIATE AS LONG AS ADEQUATE SPACE IS LEFT TO MANAGE THE 250 KCMIL BENDS AND ADEQUATE SPACE MANAGEMENT IS PROVIDED FOR THE 16 AWG TERMINAL STRIP AND THE CONTROL CABLES THAT TERMINATE ON IT.
10. ALL TERMINAL STRIPS AND POWER DISTRIBUTION BLOCKS MUST BE SPRAYED WITH ELECTRICAL NO-OXIDATION COMPOUND WHEN ELECTRICAL INSTALLATION IS NEARLY COMPLETED.
11. PROVIDE CABLE CLAMPS OR OTHER PHYSICAL SUPPORT TO KEEP HANGING WEIGHT OFF OF CABLES AND CONDUCTORS AS THEY ROUTE TO LOWER BOXES AND PUMPS.
12. CUSTOM LOCKOUT SIGNS SHALL BE 7" HIGH X 10" WIDE SUITABLE FOR INSTALLATION OUTDOORS WITH LABEL AS SHOWN. OUTDOOR SIGNS SHALL BE THE SELF-ADHESIVE, LAMINATED-VINYL MATERIAL TYPE WITH ESTIMATED EXPECTED OUTDOOR LIFE OF NOT LESS THAN FIVE YEARS, SMOOTHLY ADHERED TO THE COVER OF EACH ENCLOSURE. ONE CUSTOM "DANGER" SIGN SHALL BE INSTALLED ON EACH POWER JUNCTION BOX ENCLOSURE AND ON EACH I&C PULL BOX ENCLOSURE. THE BASIS OF DESIGN IS "MY LOCKOUT TAGS PART # S-3057". CUSTOM SIGNS THAT MEET OR EXCEED THE STATED INTENTION, CONTAIN SPECIFIC LABEL TEXT, MATERIAL, AND HAVE EXPECTED LIFE WILL BE ACCEPTABLE.
13. INSTALL NEW JUNCTION BOXES SO THAT HINGES ARE INSTALLED ON LANDWARD SIDE AS INDICATED.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

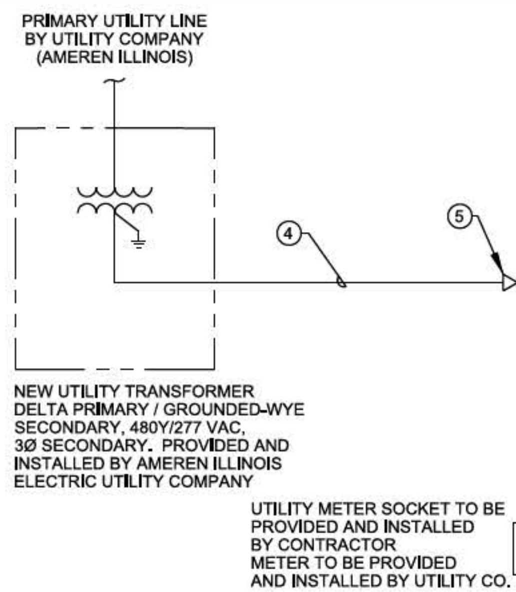
DESIGNED BY: BGR		DATE: 2016/06/17
DWN BY: GLW	CKD BY: RJW	SOLICITATION NO.: W912EK-11-R-0029
SUBMITTED BY: JWB		CONTRACT NO.:
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102E-503.dgn	

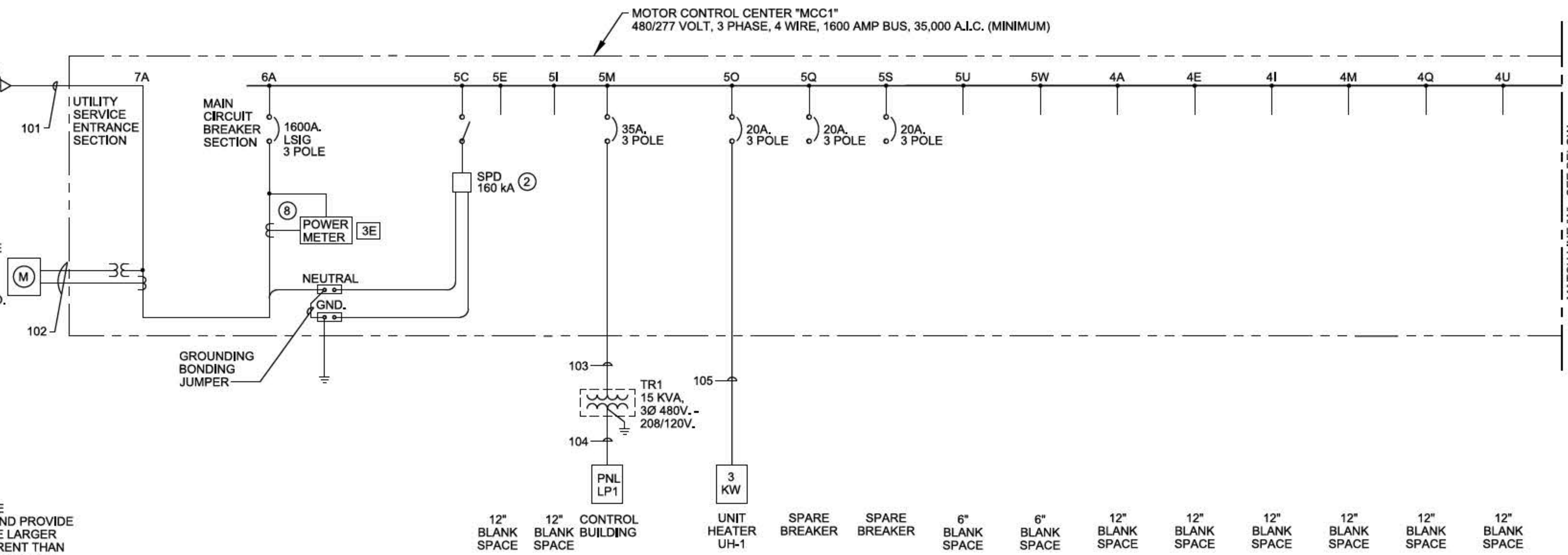
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
PUMP STATION
NEW JUNCTION BOX DETAILS

Sheet ID
E-503

AS-BUILT
A-113

c:\pw_working\mvrb5edd\lh\d0153758\EP102E-503.dgn
8/28/2018 3:23:16 PM
B5EDDLLH



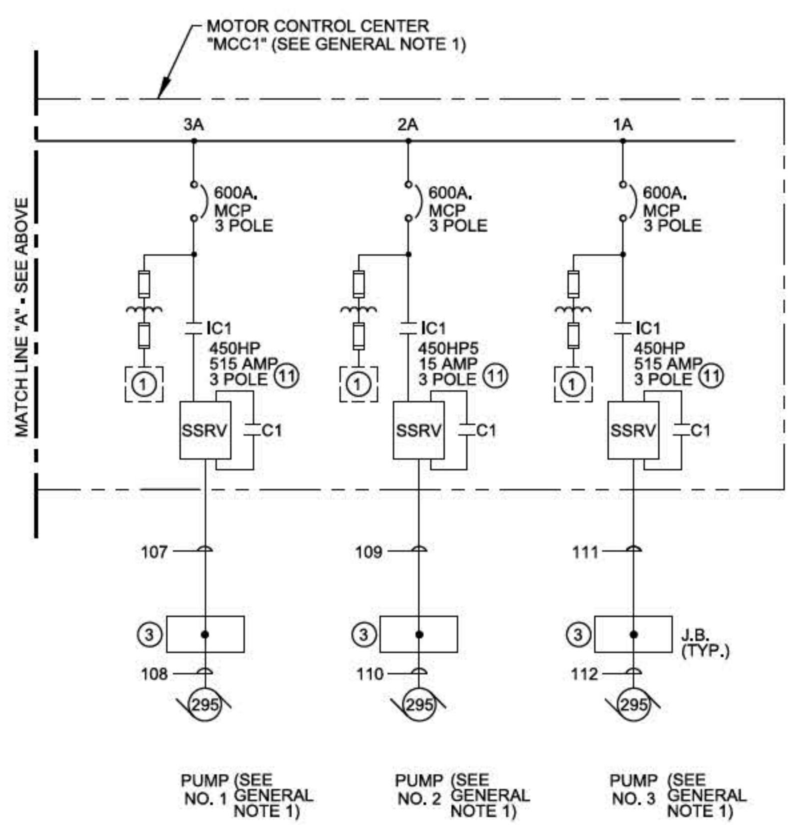


ONE-LINE DIAGRAM - MOTOR CONTROL CENTER "MCC1"

NOT TO SCALE

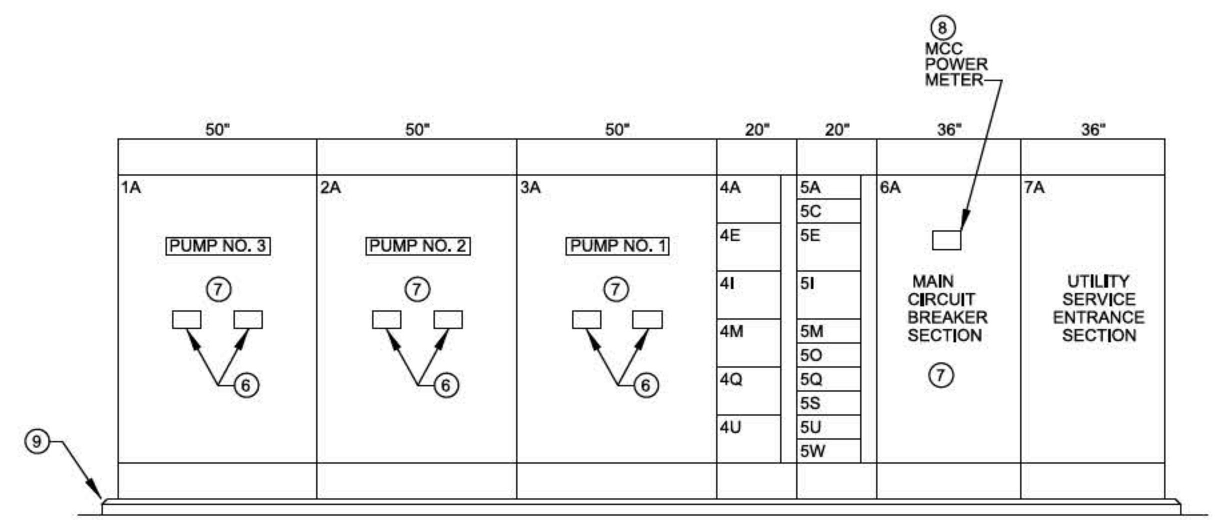
GENERAL NOTES:

1. THE BASIS OF DESIGN IS SHOWN FOR EACH PUMP'S HORSEPOWER (HP) AND FULL LOAD AMPS (FLA). THE CONTRACTOR SHALL BE RESPONSIBLE TO RE-SIZE AND PROVIDE LARGER ELECTRICAL EQUIPMENT TO ACCOMMODATE LARGER PUMPS IF THE ACTUAL PUMPS PROVIDED ARE DIFFERENT THAN THE BASIS OF DESIGN. FINALLY APPROVED ELECTRIC MOTOR SPECIFICATION DATA IS CRITICAL INFORMATION THAT SHALL BE PROVIDED BY THE CONTRACTOR TO BOTH AMEREN ILLINOIS POWER COMPANY AND TO THE CONTRACTING OFFICER'S REPRESENTATIVE.



KEYED NOTES:

1. REFER TO CONTROL WIRING DIAGRAMS ON SHEET E-603.
2. INTERNAL SURGE PROTECTION DEVICE (SPD) UNIT. REFER TO SPEC. SECTION 26 20 00 FOR RATINGS.
3. WATERTIGHT SPLICE PUMP CABLES TO ITS FIELD CABLES INSIDE ITS RESPECTIVE ELECTRICAL JUNCTION BOX LOCATED AT EACH PUMP.
4. OVERHEAD CONDUCTORS SHALL BE INSTALLED BY THE UTILITY COMPANY. UTILITY COMPANY TO MAKE FINAL TERMINATIONS AT THE WEATHERHEADS AT THE EXTERIOR OF THE BUILDING.
5. WEATHERHEADS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR SHALL INSTALL CONDUCTORS FROM MCC1 TO THE WEATHERHEADS, LEAVING A MINIMUM OF 3 FEET OF EXTRA CABLES OUT THE END OF THE WEATHERHEADS FOR CONNECTION BY THE UTILITY COMPANY.
6. PUMP MAS UNIT AND DISPLAY PANEL MOUNTED INSIDE STARTER.
7. CIRCUIT BREAKERS SHALL BE PROVIDED WITH PERMANENT ELECTRICAL SAFETY DISCONNECT LOCKOUT ATTACHMENT EQUIPMENT ACCESSORIES WHICH COMPLY WITH LOCKOUT EQUIPMENT AS STATED IN NFPA 70, NFPA 70E, AND OSHA REGULATION 29 CFR PART 1910147. PUMP STARTER AND MAIN BREAKER COMPARTMENTS SHALL BE PROVIDED WITH SELF-ADHERING "DANGER" LOCKOUT SIGNS (4 TOTAL). SEE DETAIL 2 ON SHEET E-502 FOR MCC "DANGER" SIGN REQUIREMENTS.
8. THE POWER METER IDENTIFIED IN SECTION 2A IS A MCC ACCESSORY FOR THE PUMP STATION FACILITY USE. THIS METER IS NOT A UTILITY METER. THE UTILITY METER IS SEPARATE EQUIPMENT AND HAS SEPARATE REQUIREMENTS. THE DESIGNATION "3E" IDENTIFIES THAT THIS IS A THREE INSTRUMENT TRANSFORMER TYPE POWER METER. ALSO SEE THE DESCRIPTION OF THIS SYMBOL IDENTIFIED ON SHEET E-001.
9. 3-INCH HIGH (MINIMUM HEIGHT) CONCRETE HOUSE- KEEPING PAD WITH 1" CHAMFERED EDGE. PROVIDE PAD WIDTH AS REQUIRED TO SUPPORT THE MCC ENCLOSURE PROVIDED.
10. MCC SHALL BE PROVIDED WITH APPROPRIATELY SIZED, THERMOSTAT CONTROLLED, ENCLOSURE HEATERS IN EACH COMPARTMENT. HEATERS AND THERMOSTAT SHALL BE SIZED, PROVIDED, AND INSTALLED BY THE MCC MANUFACTURER.
11. SSRV IS BRENSHAW MODEL NO. RB2-1-5-590A-18C.



ELEVATION - MOTOR CONTROL CENTER "MCC1"

ATTENTION: THIS DRAWING HAS NOT BEEN VERIFIED TO BE CORRECT. SEE THE OPERATION AND MAINTENANCE (O&M) MANUAL 40.95 00 1.2 REGARDING AS-BUILT DRAWINGS DATED 6/15/2013 FOR MOTOR CONTROL CENTER (MCC).

0 1' 2' 4'
SCALE IN FEET

US Army Corps of Engineers®

AS-BUILT AS OF 29 SEPTEMBER 2017

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

SINGLE-LINE DIAGRAM

Sheet ID
E-601

AS-BUILT
A-114

CONDUIT AND CABLE SCHEDULE

CONDUIT NUMBER	ORIGIN	DESTINATION	ELECTRICAL LOAD DATA: KW/KVA	HP	AMPS	VOLTS	PHASE	FEEDERS CONDUCTORS: PHASE QTY.	PHASE SIZE	NEUTRAL QTY.	NEUTRAL SIZE	GROUND QTY.	GROUND SIZE	CONTROL CONDUCTORS: QTY.	SIZE	CONDUIT SIZE	REMARKS	CONDUIT NUMBER
101	UTILITY TRANSFORMER	MOTOR CONTROL CENTER MCC1 (UTILITY METERING SECT.)			1600	480Y/277	3	12	600 KCMIL	4	600 KCMIL					4 - 4"		101
102	MOTOR CONTROL CENTER MCC1 (UTILITY METERING SECT.)	UTILITY METER SOCKET														1 1/2"	EMPTY CONDUIT FOR UTILITY COMPANY USE.	102
103	MOTOR CONTROL CENTER MCC1	LIGHTING TRANSFORMER TR1	15		35	480	3	3	#8			1	#10			1"		103
104	LIGHTING TRANSFORMER TR1	LIGHTING PANEL LP1			60	208Y/120	3	3	#6	1	#6	1	#8			1 1/4"		104
105	MOTOR CONTROL CENTER MCC1	UNIT HEATER			20	480	3	3	#12			1	#12			3/4"		105
106	CONTROL BUILDING (SOUTH WALL)	ELECTRICAL MANHOLE EMH-2														3 - 2"	SPARE CONDUITS	106
107	MOTOR CONTROL CENTER MCC1	PUMP 1 POWER JUNCTION BOX		240	375	480	3	6	250 KCMIL			2	#1/0			2 - 3"		107
108	PUMP 1 POWER JUNCTION BOX	PUMP 1		240	375	480	3	(2) PUMP POWER CABLES BY PUMP MANUFACTURER (NOTE 1)								2 - 4"	(250 KCMIL) POWER CABLE IS OZOFLEX (PLUS) H07RN8-F 4G120	108
109	MOTOR CONTROL CENTER MCC1	PUMP 2 POWER JUNCTION BOX		240	375	480	3	6	250 KCMIL			2	#1/0			2 - 3"		109
110	PUMP 2 POWER JUNCTION BOX	PUMP 2		240	375	480	3	(2) PUMP POWER CABLES BY PUMP MANUFACTURER (NOTE 1)								2 - 4"	(250 KCMIL) POWER CABLE IS OZOFLEX (PLUS) H07RN8-F 4G120	110
111	MOTOR CONTROL CENTER MCC1	PUMP 3 POWER JUNCTION BOX		240	375	480	3	6	250 KCMIL			2	#1/0			2 - 3"		111
112	PUMP 3 POWER JUNCTION BOX	PUMP 3		240	375	480	3	(2) PUMP POWER CABLES BY PUMP MANUFACTURER (NOTE 1)								2 - 4"	(250 KCMIL) POWER CABLE IS OZOFLEX (PLUS) H07RN8-F 4G120	112
113	MOTOR CONTROL CENTER MCC1	PUMP 1 SENSOR PULL BOX						8 COND./ ONE (1) PUMP SENSOR CABLE BY PUMP MANUFACTURER (NOTE 1)								2"	CONNECT TO PLC UNIT IN STARTER	113
114	PUMP 1 SENSOR PULL BOX	PUMP 1						8 COND./ ONE (1) PUMP SENSOR CABLE BY PUMP MANUFACTURER (NOTE 1)								2"	CABLE SPLICING NOT PERMITTED. 16 AWG OZOFLEX (PLUS) H07RN8-F 8G1.5	114
115	MOTOR CONTROL CENTER MCC1	PUMP 2 SENSOR PULL BOX						8 COND./ ONE (1) PUMP SENSOR CABLE BY PUMP MANUFACTURER (NOTE 1)								2"	CONNECT TO PLC UNIT IN STARTER	115
116	PUMP 2 SENSOR PULL BOX	PUMP 2						8 COND./ ONE (1) PUMP SENSOR CABLE BY PUMP MANUFACTURER (NOTE 1)								2"	CABLE SPLICING NOT PERMITTED. 16 AWG OZOFLEX (PLUS) H07RN8-F 8G1.5	116
117	MOTOR CONTROL CENTER MCC1	PUMP 3 SENSOR PULL BOX						8 COND./ ONE (1) PUMP SENSOR CABLE BY PUMP MANUFACTURER (NOTE 1)								2"	CONNECT TO PLC UNIT IN STARTER	117
118	PUMP 3 SENSOR PULL BOX	PUMP 3						8 COND./ ONE (1) PUMP SENSOR CABLE BY PUMP MANUFACTURER (NOTE 1)								2"	CABLE SPLICING NOT PERMITTED. 16 AWG OZOFLEX (PLUS) H07RN8-F 8G1.5	118

NOTE 1: CONTRACTOR SHALL VERIFY THE DIAMETERS OF CABLES PROVIDED BY THE EQUIPMENT MANUFACTURERS AND SHALL PROVIDE AND INSTALL THE CORRECTLY-SIZED CONDUITS AS REQUIRED BY NFPA 70 TO ACCOMMODATE THE ACTUAL CABLES PROVIDED. MINIMUM RACEWAY SIZES ARE INDICATED.

PANELBOARD SCHEDULE

DESIGNATION: PANEL "LP1"
LOCATION: CONTROL BUILDING
VOLTAGE: 208Y/120 VOLT
PHASE: 3 PHASE, 4 WIRE

MAINS: 60 AMP MAIN CIRCUIT BREAKER
BUS SIZE: 100 AMP BUS; GND. BUS; SOLID NEUTRAL
PANEL MOUNTING: SURFACE
ALL BREAKERS: 10,000 A.I.C. (MINIMUM)

CKT. NO.	LOAD DESCRIPTION	#	KVA	CKT. BKR. AMPS	CKT. BKR. POLE	KVA A	KVA B	KVA C	CKT. BKR. AMPS	CKT. BKR. POLE	KVA	#	LOAD DESCRIPTION	CKT. NO.
1	LTG - BLDG INTERIOR	1	0.44	20	1	0.98			20	1	0.54	1	RECEPT - BLDG INTERIOR	2
3	LTG - BLDG EXTERIOR	1	0.18	20	1		0.36		20	1	0.18	1	RECEPT - BLDG EXTERIOR	4
5	SPARE BREAKER			20	1			0.88	20	1	0.88	1	EXHAUST FAN EF-1 AND MOD	6
7	SPARE BREAKER			20	1				20	1	0.36	1	MCC PANEL COMPART HEATERS	8
9	SPARE BREAKER			20	1		0.00		20	1			SPARE BREAKER	10
11	SPARE BREAKER			20	1			0.00	20	1			SPARE BREAKER	12
13	SPARE BREAKER			20	1	0.00			20	1			SPARE BREAKER	14
15	SPARE BREAKER			20	1		0.00		20	1			SPARE BREAKER	16
17	SPARE BREAKER			20	1			0.00	20	1			SPARE BREAKER	18
19	SPARE BREAKER			20	1	0.00			60	3	0.00	7	TVSS UNIT	20
21	SPARE BREAKER			20	1		0.00		--	--	0.00	--	"	--
23	SPARE BREAKER			20	1			0.00	--	--	0.00	--	"	--
25	SPARE BREAKER			20	1	0.00				1			BLANK SPACE	26
27	SPARE BREAKER			20	1		0.00			1			BLANK SPACE	--
29	SPARE BREAKER			20	1			0.00		1			BLANK SPACE	--
	TOTAL CONNECTED LOAD:					0.98	0.36	0.88	TOTAL =		2.22	KVA		

\# ONE (1) OR TWO (2) DIGIT NUMBERS REFER TO PANELBOARD BRANCH CIRCUIT CONDUIT AND CABLE SCHEDULE LOCATED BELOW ON THIS SHEET. SEPARATE CONSIDERATION, BUT NOTE THAT THREE (3) DIGIT CONDUIT NUMBERS REFER TO CONDUIT AND CABLE SCHEDULES LOCATED ABOVE ON THIS SHEET.

PANELBOARD BRANCH CIRCUIT CONDUIT & CABLE SCHEDULE

#	DESCRIPTION
1	3/4" CONDUIT WITH 2 #12 CONDUCTORS AND 1 #12 GROUND CONDUCTOR.
2	3/4" CONDUIT WITH 3 #12 CONDUCTORS AND 1 #12 GROUND CONDUCTOR.
3	3/4" CONDUIT WITH 4 #12 CONDUCTORS AND 1 #12 GROUND CONDUCTOR.
4	3/4" CONDUIT WITH 2 #10 CONDUCTORS AND 1 #10 GROUND CONDUCTOR.
5	3/4" CONDUIT WITH 3 #10 CONDUCTORS AND 1 #10 GROUND CONDUCTOR.
6	3/4" CONDUIT WITH 4 #10 CONDUCTORS AND 1 #10 GROUND CONDUCTOR.
7	1 1/4" CONDUIT WITH 4 #6 CONDUCTORS AND 1 #6 GROUND CONDUCTOR.

US Army Corps of Engineers

MARK	DESCRIPTION	DATE	APPR.
	AS-BUILT AS OF 29 SEPTEMBER 2017		

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

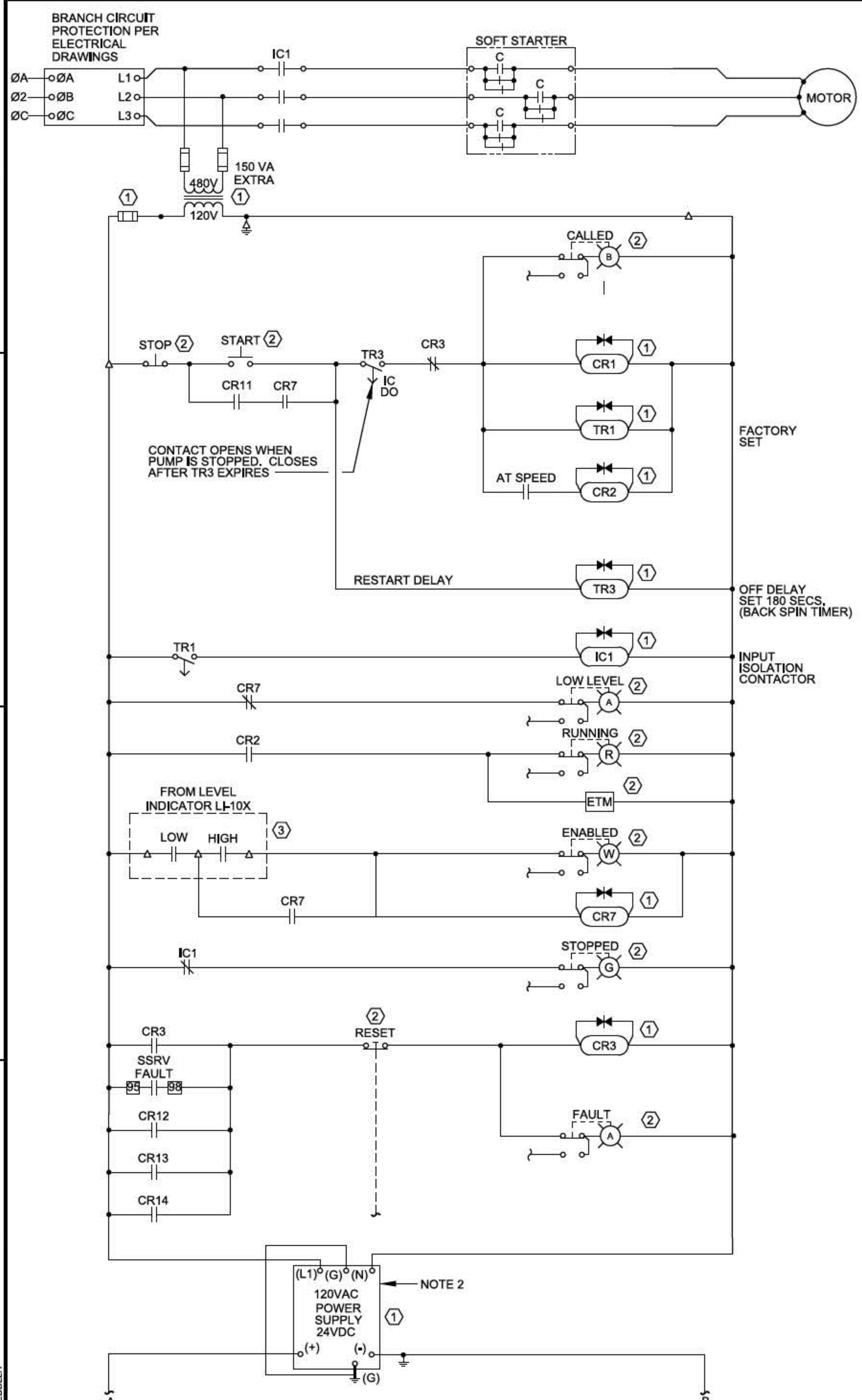
DESIGNED BY: BGR | DWN BY: DED | CKD BY: KRR | SUBMITTED BY: JWB | PLOT SCALE: AS SHOWN | PLOT DATE: | SIZE: ANSI D | FILE NAME: EP102E-602.dgn
DATE: 2011/06/30 | SOLICITATION NO.: W912EK-11-R-0029 | CONTRACT NO.: W912EK-11-C-0090 | PROJECT CODE: EP102

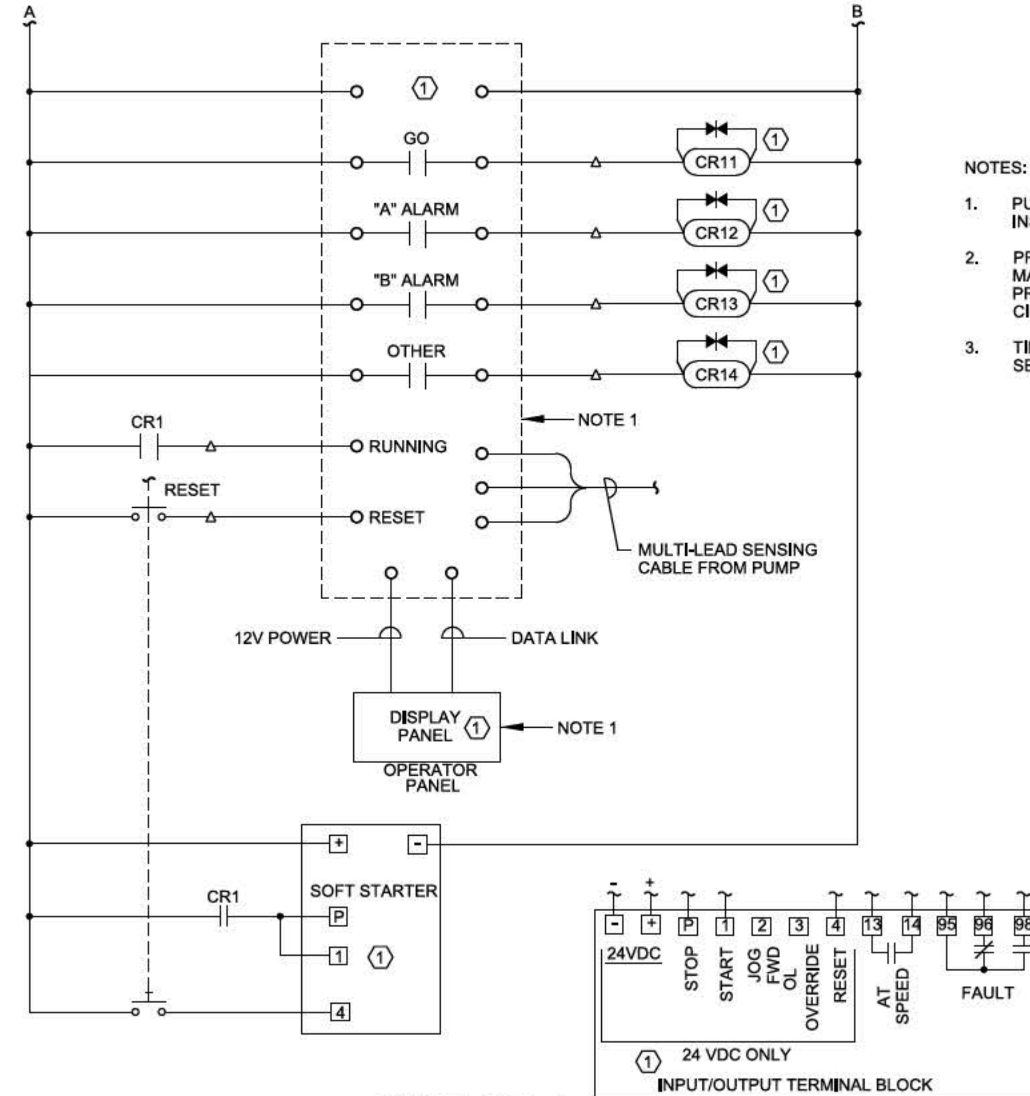
ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I
ELECTRICAL SCHEDULES

Sheet ID
E-602

AS-BUILT
A-115

c:\pw_working\mvr\b5eddllh\d0153758\EP102E-602.dgn
3:23:31 PM
B5EDDLLH



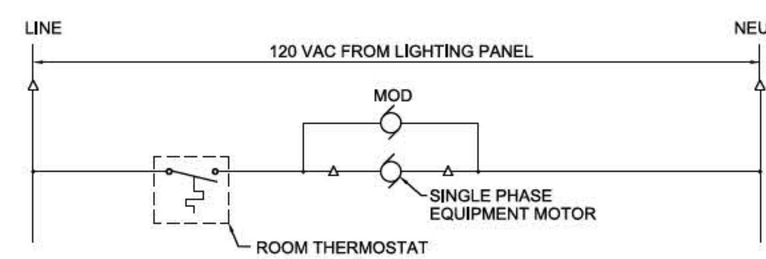


PUMP NO. 1
(TYPICAL FOR PUMPS NO. 2 & NO. 3)

NOT TO SCALE

NOTES:

1. PUMP MONITORING AND STATUS (MAS) UNIT SHALL BE INSTALLED IN MCC STARTER SECTION ENCLOSURE.
2. PROVIDE 0.5 AMP EXTRA CAPACITY FOR THE PUMP MAS UNIT (BASIS OF DESIGN IS FLYGT MAS UNIT). PROVIDE EITHER INTEGRAL OR SEPARATE SHORT CIRCUIT PROTECTION FOR THE DC CONTROL CIRCUIT.
3. TIMER AND CONTROL RELAY NUMBERING IS OUT OF SEQUENCE.



CONTROL BUILDING EXHAUST FAN EF-1

NOT TO SCALE

LOCATION CODE

KEY	DESCRIPTION
1	STARTER INTERIOR
2	STARTER EXTERIOR
3	FIELD DEVICE

TERMINAL LEGEND

KEY	DESCRIPTION
△	STARTER
⊠	CONTROL PANEL
◇	OTHER PANEL AS INDICATED

US Army Corps of Engineers

AS-BUILT AS OF 29 SEPTEMBER 2017

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT STAGE I

ELEMENTARY WIRING DIAGRAMS

Sheet ID
E-603

AS-BUILT

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

MAURER-STUTZ
ENGINEERS SURVEYORS

MS PROJECT NUMBER:
242-I2001.01 (FISCHER EXC.)
242-I1012.02 (LEANDER CONST.)

PLOT DATE = 11 DEC 2014

SURVEYED	-
DRAWN	- MAF/SNP
CHECKED	- SNP
DATE	- 11 DEC 2014

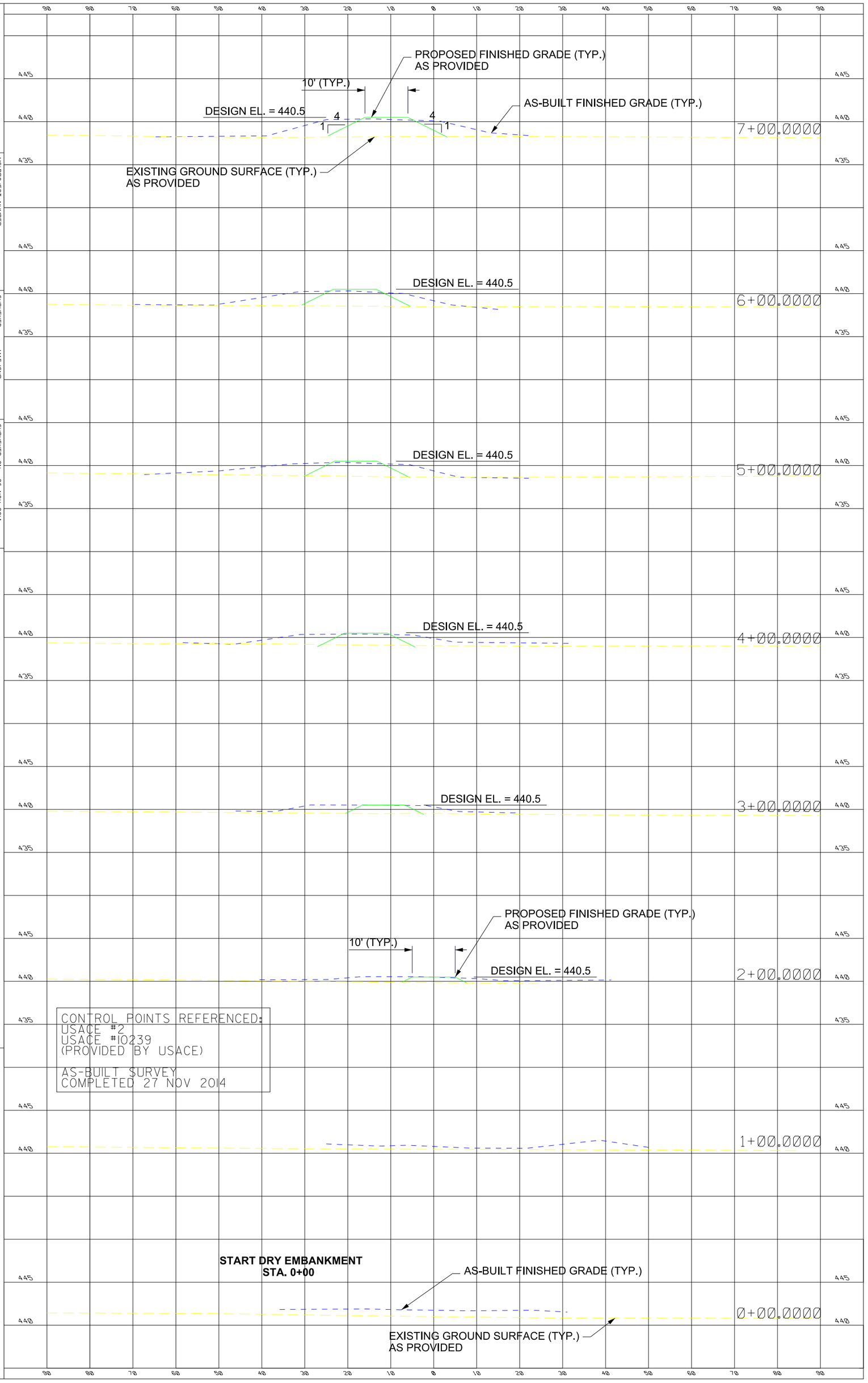
SURVEYED ON: 26 NOV 2014
HORIZ. DATUM: NAD 83
VERT. DATUM: AS PROVIDED

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

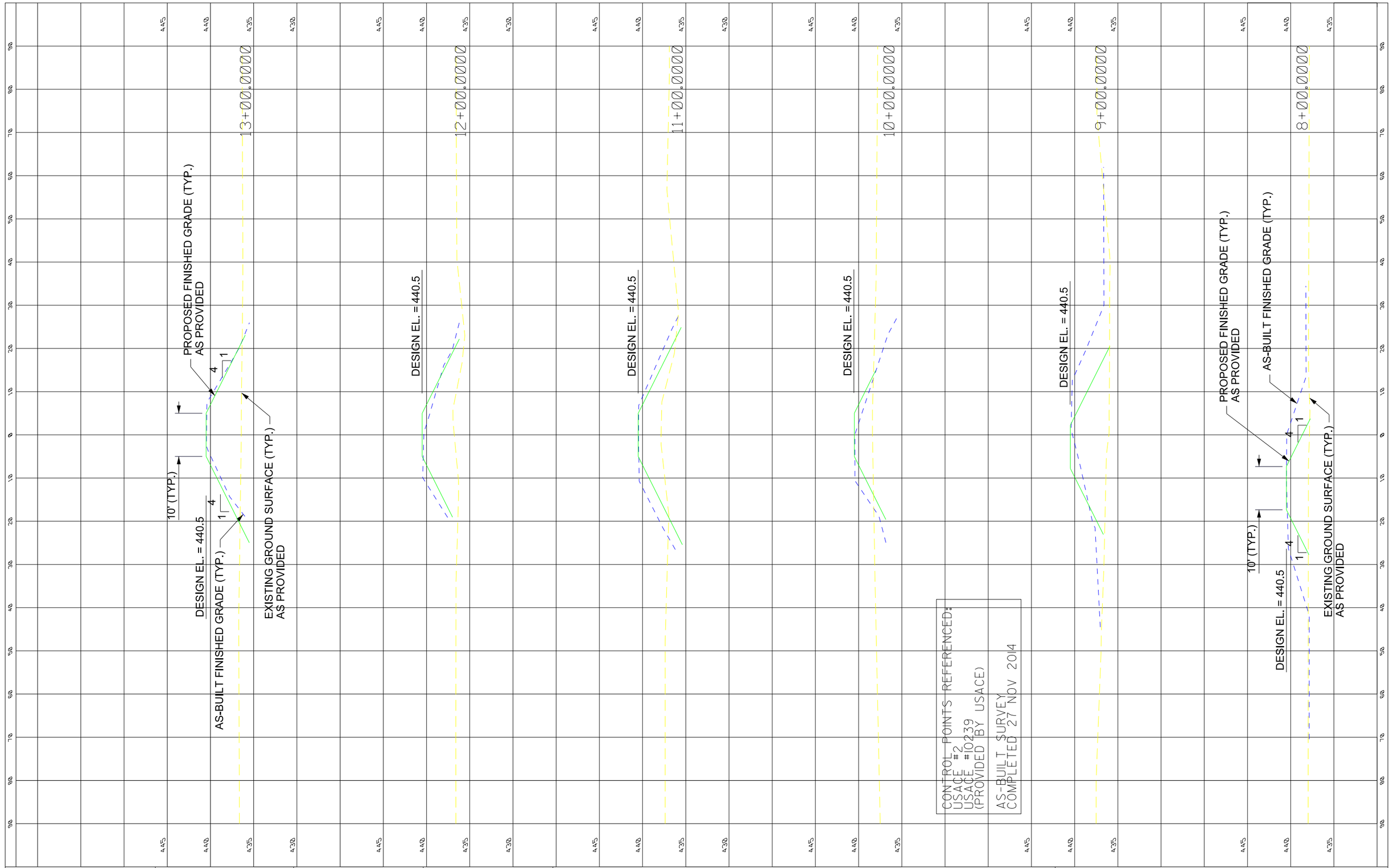
SCALE: AS SHOWN | SHEET 1 OF 10 SHEETS | STA. 0+00.0000 TO STA. 7+00.0000

A-117



FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



CONTROL POINTS REFERENCED:
USACE #2
USACE #10239
(PROVIDED BY USACE)

AS-BUILT SURVEY
COMPLETED 27 NOV 2014

MAURER-STUTZ
ENGINEERS SURVEYORS

MSI PROJECT NUMBER:	SURVEYED - MAF/SNP	SURVEYED ON: 26 NOV 2014	
242-12001.01 (FISCHER EXC.)	DRAWN - SNP	HORIZ. DATUM: NAD 83	
242-11012.02 (LEANDER CONST.)	CHECKED - SPF	VERT. DATUM: AS PROVIDED	
PLOT DATE = 11 DEC 2014	DATE - 11DEC 2014		

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

SCALE: AS SHOWN	SHEET 2 OF 10 SHEETS	STA. 8+00.0000 TO STA.13+00.0000

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

MAURER-STUTZ ENGINEERS SURVEYORS

MSI PROJECT NUMBER:
242-I20010 (FISCHER EXC.)
242-I0102.02 (LEANDER CONST.)

PLOT DATE - 11 DEC 2014

SURVEYED	-
DRAWN	- MAF/SNP
CHECKED	- SNP
DATE	- SPF
	11 DEC 2014

SURVEYED ON: 26 NOV 2014
HORIZ. DATUM: NAD 83
VERT. DATUM: AS PROVIDED

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

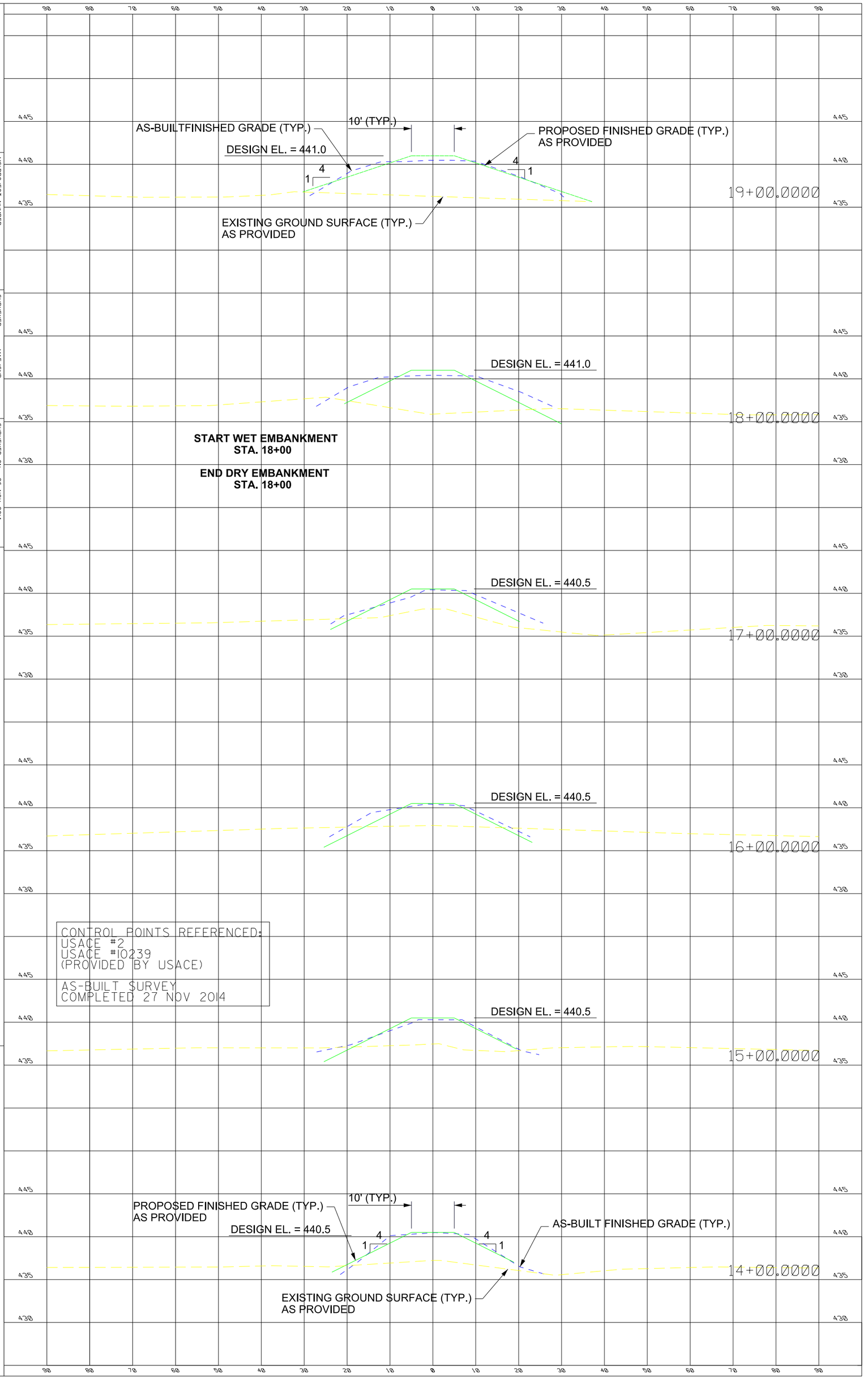
CONTROL POINTS REFERENCED:
USACE #2
USACE #10239
(PROVIDED BY USACE)

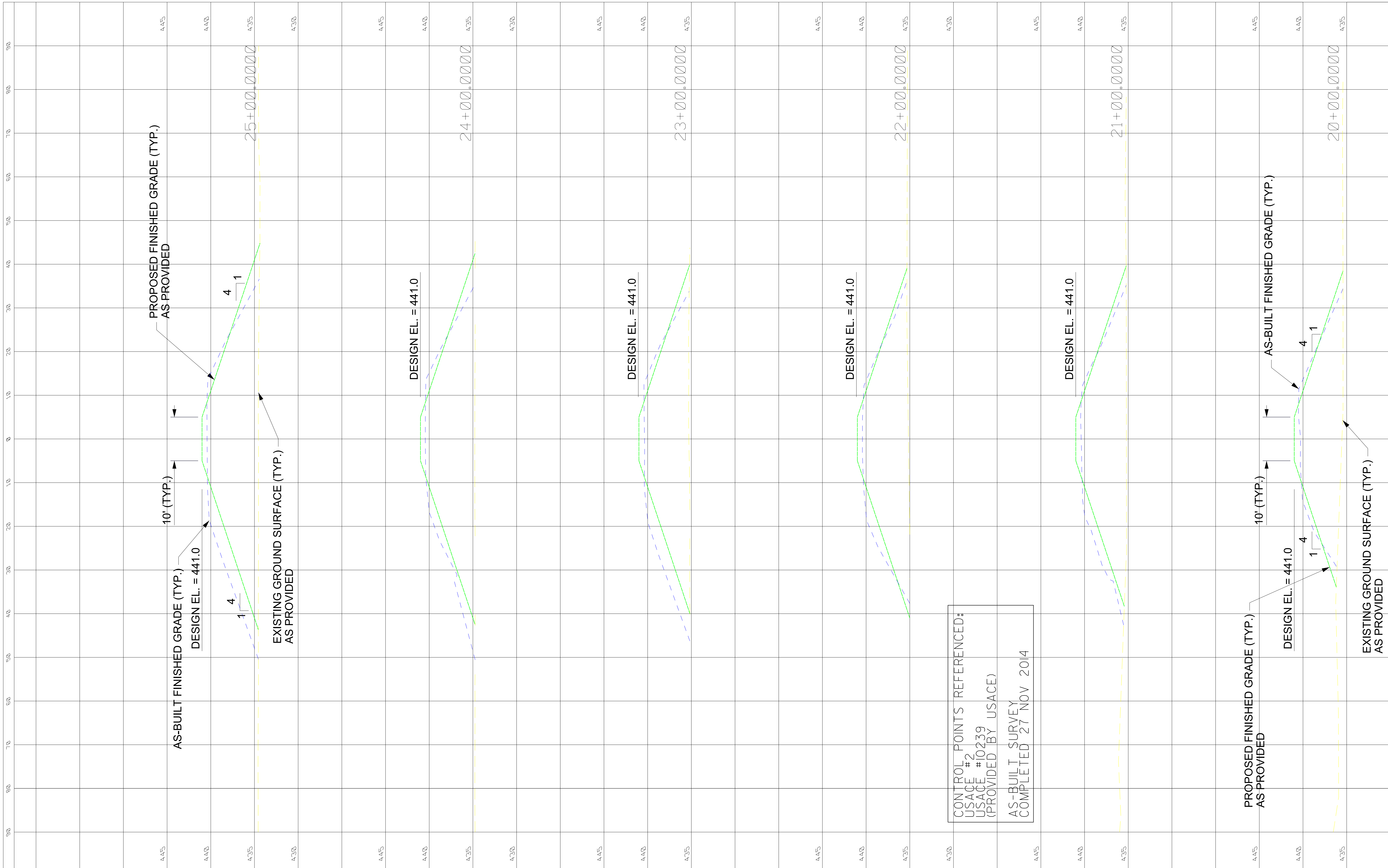
AS-BUILT SURVEY
COMPLETED 27 NOV 2014

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

SCALE: AS SHOWN | SHEET 3 OF 10 SHEETS | STA. 14+00.0000 TO STA. 19+00.0000

A-119





MAURER-STUTZ ENGINEERS SURVEYORS	MSI PROJECT NUMBER: 242-12001.01 (FISCHER EXC.) 242-11012.02 (LEANDER CONST.)	SURVEYED - MAF/SNP	SURVEYED ON: 26 NOV 2014
		DRAWN - SNP	HORIZ. DATUM: NAD 83
		CHECKED - SPF	VERT. DATUM: AS PROVIDED
	PLOT DATE = 11 DEC 2014	DATE - 11 DEC 2014	

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

SCALE: AS SHOWN | SHEET 4 OF 10 SHEETS | STA. 20+00.0000 TO STA. 25+00.0000

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

MAURER-STUTZ ENGINEERS SURVEYORS

MSI PROJECT NUMBER:
242-I200L01(FISCHER EXC.)
242-II02.02 (LEANDER CONST.)

PLOT DATE = 11 DEC 2014

SURVEYED	-
DRAWN	- MAF/SNP
CHECKED	- SNP
DATE	- SPF
	11 DEC 2014

SURVEYED ON: 26 NOV 2014
HORIZ. DATUM: NAD 83
VERT. DATUM: AS PROVIDED

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

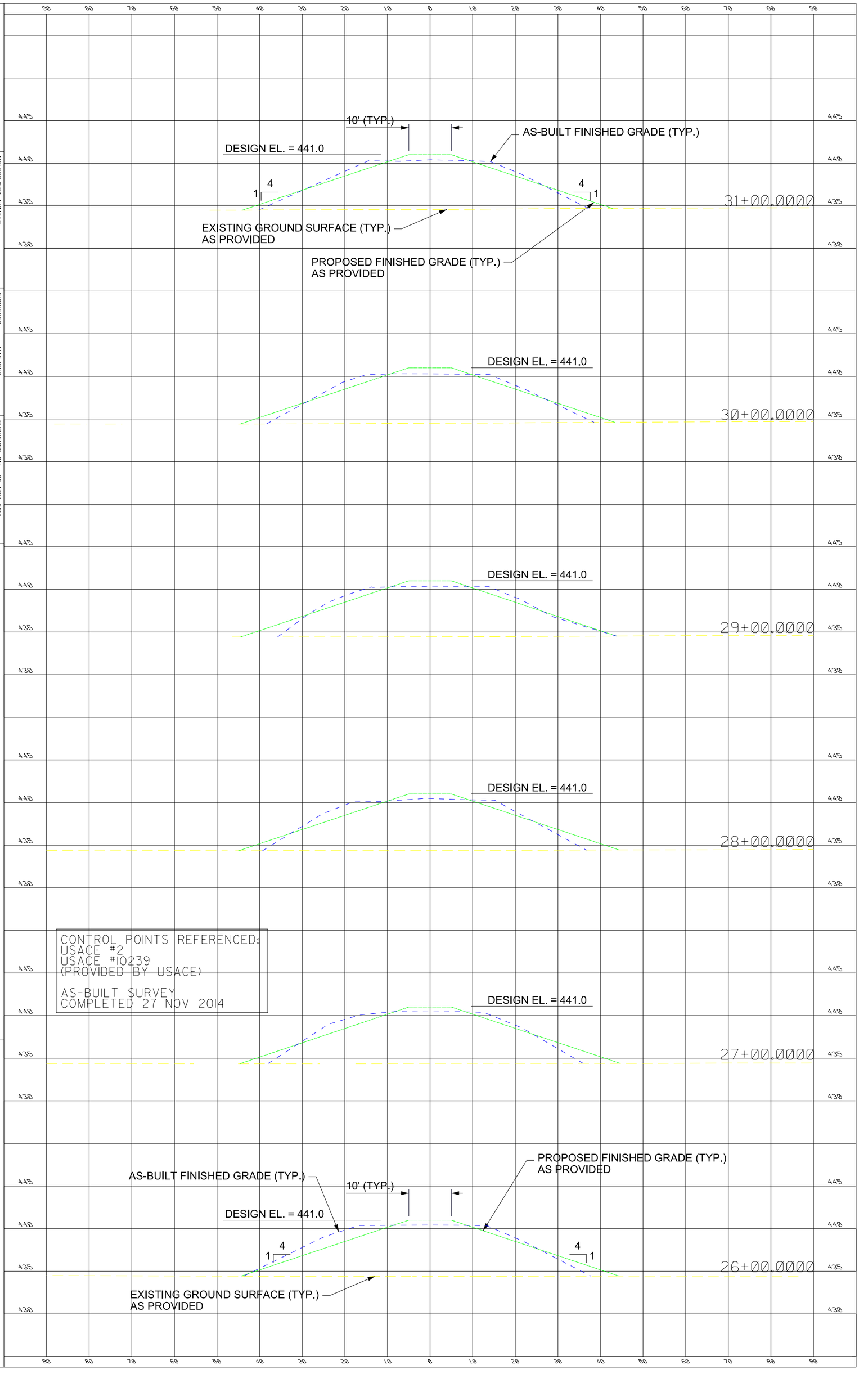
CONTROL POINTS REFERENCED:
USACE #2
USACE #10239
(PROVIDED BY USACE)

AS-BUILT SURVEY
COMPLETED 27 NOV 2014

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

SCALE: AS SHOWN | SHEET 5 OF 10 SHEETS | STA. 26+00.0000 TO STA. 31+00.0000

A-121



MAURER-STUTZ
ENGINEERS SURVEYORS

MSI PROJECT NUMBER:	SURVEYED - MAF/SNP	SURVEYED ON: 26 NOV 2014	
242-12001.01 (FISCHER EXC.)	DRAWN - SNP	HORIZ. DATUM: NAD 83	
242-11012.02 (LEANDER CONST.)	CHECKED - SPF	VERT. DATUM: AS PROVIDED	
PLOT DATE = 11 DEC 2014	DATE - 11 DEC 2014		

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

SCALE: AS SHOWN | SHEET 6 OF 10 SHEETS | STA. 32+00.0000 TO STA. 37+00.0000

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

MAURER-STUTZ ENGINEERS SURVEYORS

MS PROJECT NUMBER: 242-I200L01(FISCHER EXC.) 242-H102.02 (LEANDER CONST.)

PLOT DATE = 11 DEC 2014

SURVEYED	-
DRAWN	- SNP
CHECKED	- SPF
DATE	- 11 DEC 2014

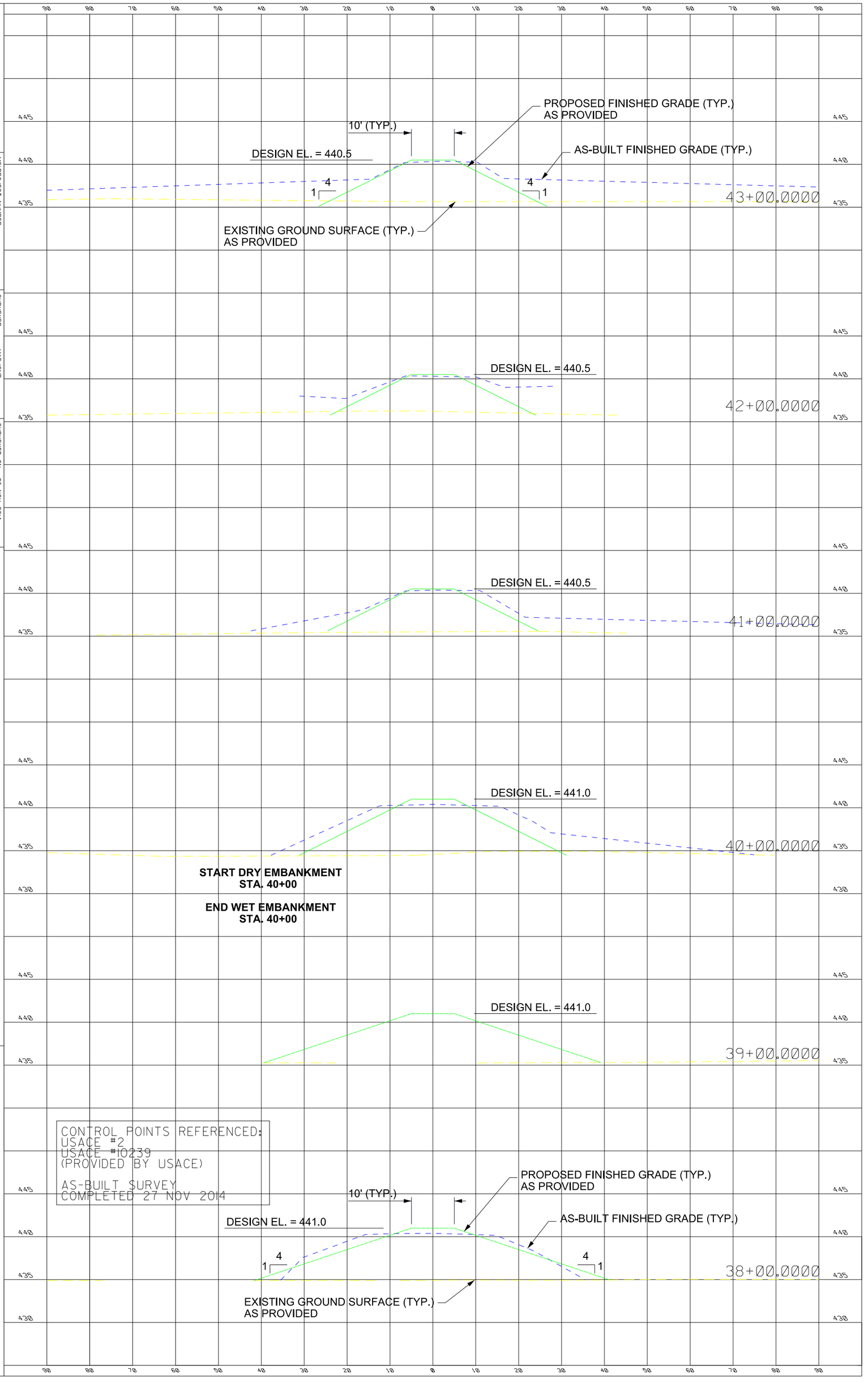
SURVEYED ON: 26 NOV 2014
HORIZ. DATUM: NAD 83
VERT. DATUM: AS PROVIDED

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS STA. 0+00 TO 65+00 AT RICE LAKE

SCALE: AS SHOWN | SHEET 7 OF 10 SHEETS | STA. 38+00.0000 TO STA. 43+00.0000

A-123



ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

MAURER-STUTZ ENGINEERS SURVEYORS

MSI PROJECT NUMBER:
242-1200L01 (FISCHER EXC.)
242-1102.02 (LEANDER CONST.)

PLOT DATE = 11 DEC 2014

SURVEYED - MAF/SNP
DRAWN - SNP
CHECKED - SPF
DATE - 11 DEC 2014

SURVEYED ON: 26 NOV 2014
HORIZ. DATUM: NAD 83
VERT. DATUM: AS PROVIDED

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

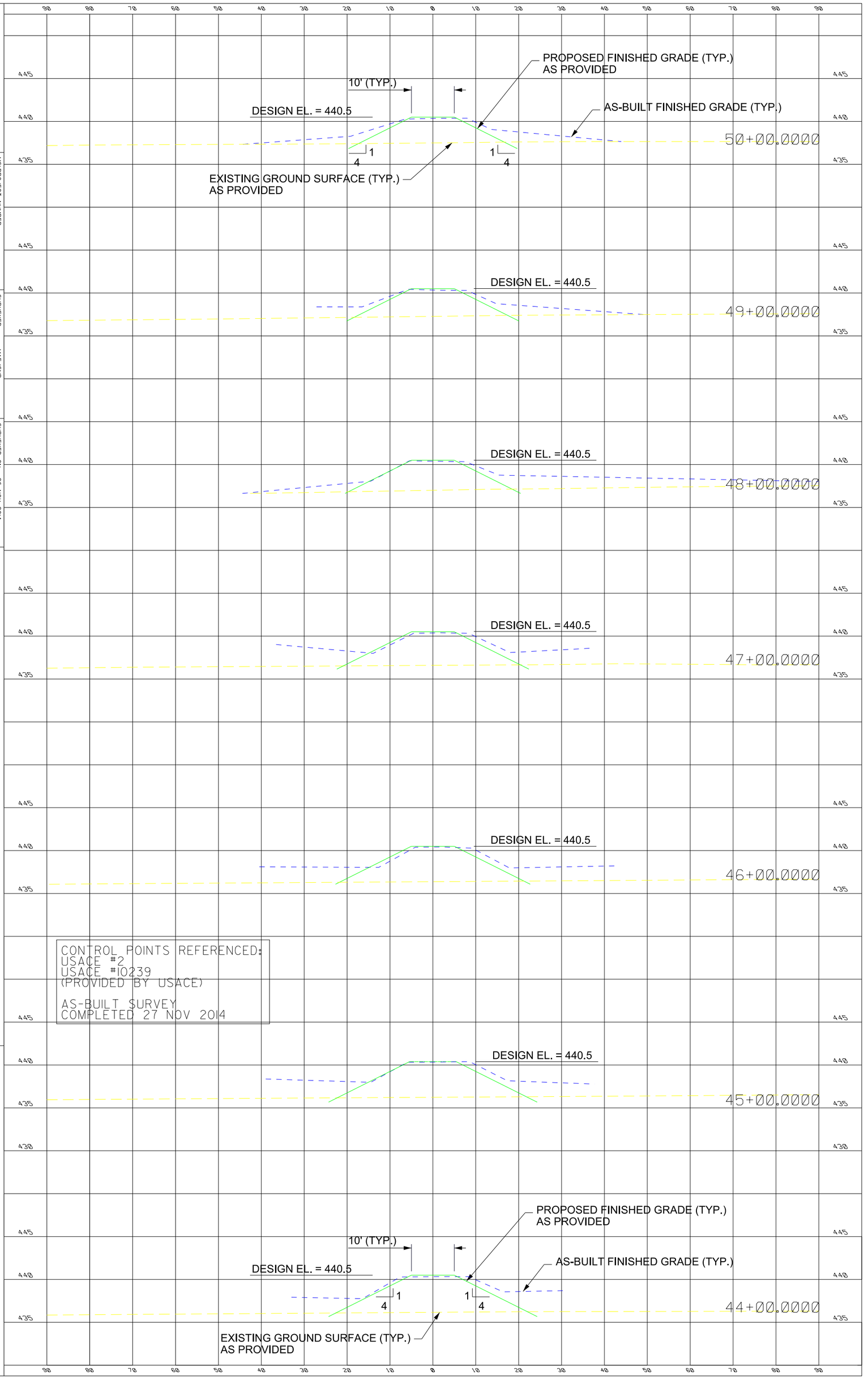
CONTROL POINTS REFERENCED:
USACE #2
USACE #0239
(PROVIDED BY USACE)

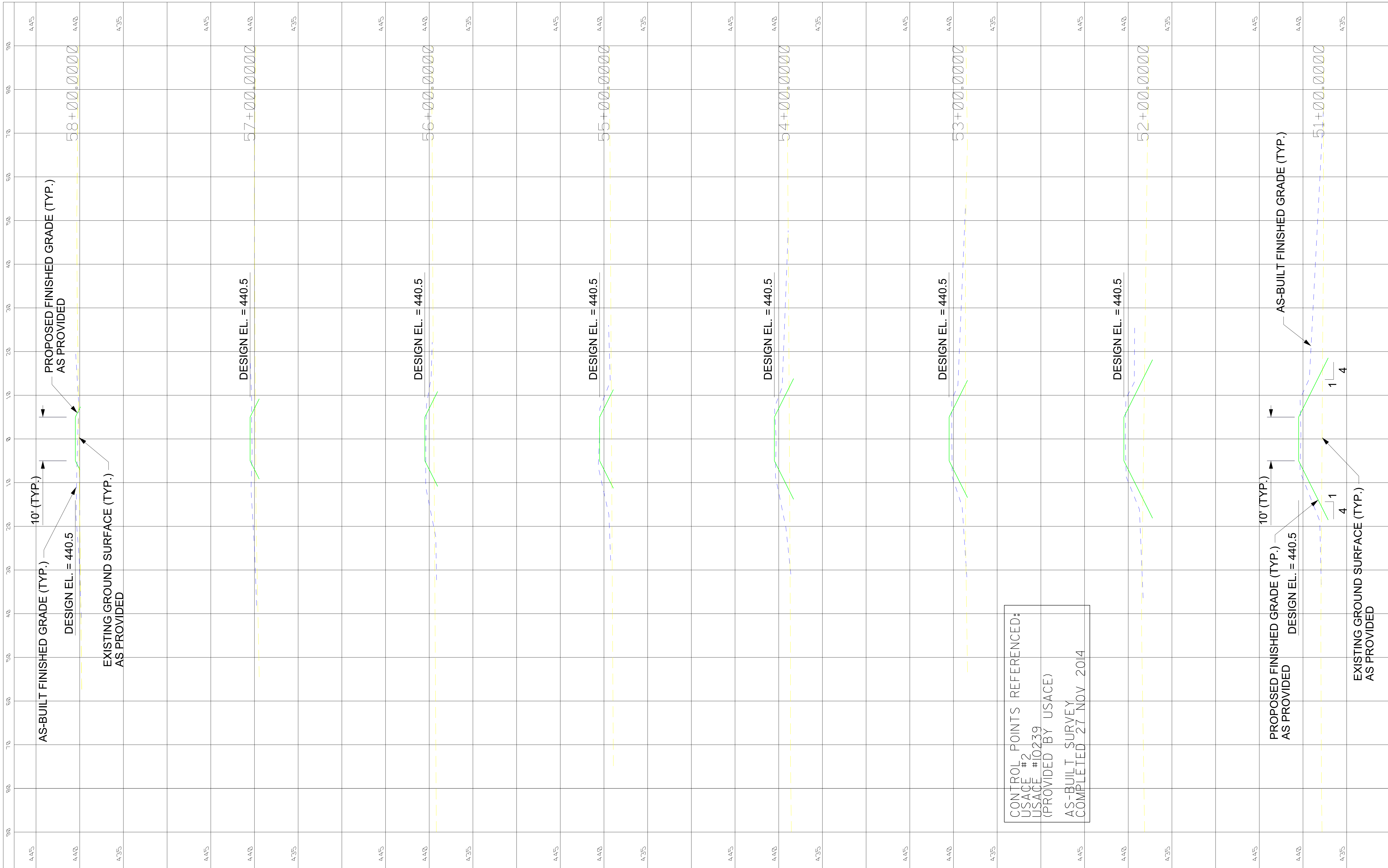
AS-BUILT SURVEY
COMPLETED 27 NOV 2014

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

SCALE: AS SHOWN | SHEET 8 OF 10 SHEETS | STA. 44+00.0000 TO STA. 50+00.0000

A-124





FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

MAURER-STUTZ
ENGINEERS SURVEYORS

MSI PROJECT NUMBER:	SURVEYED - MAF/SNP	SURVEYED ON: 26 NOV 2014	
242-12001.01 (FISCHER EXC.)	DRAWN - SNP	HORIZ. DATUM: NAD 83	
242-11012.02 (LEANDER CONST.)	CHECKED - SPF	VERT. DATUM: AS PROVIDED	
PLOT DATE = 11 DEC 2014	DATE - 11 DEC 2014		

UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

SCALE: AS SHOWN | SHEET 9 OF 10 SHEETS | STA. 51+00.0000 TO STA. 58+00.0000

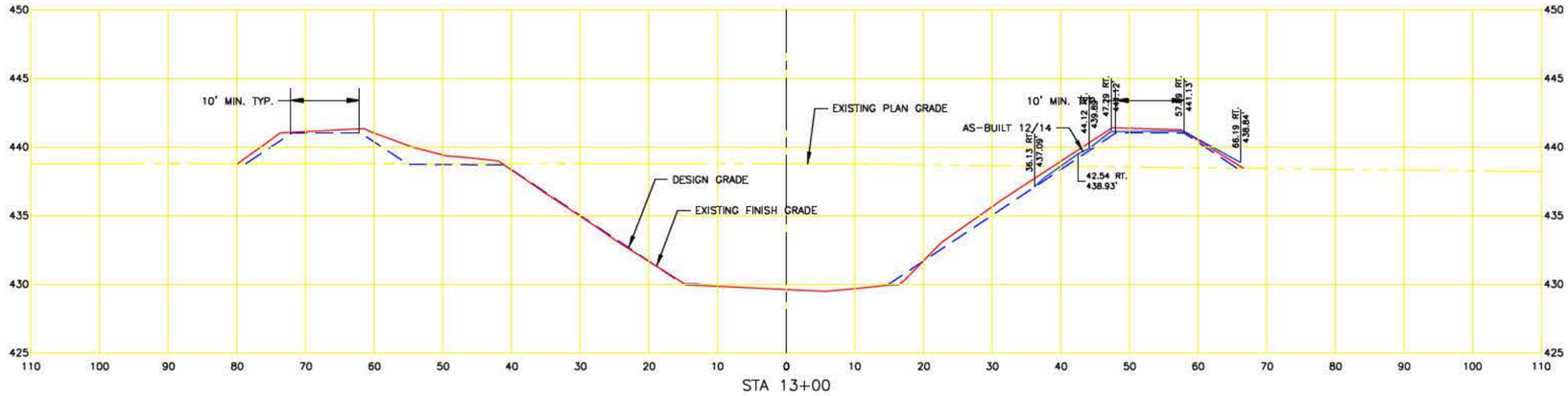
MAURER-STUTZ
ENGINEERS SURVEYORS

MSI PROJECT NUMBER: 242-12001.01 (FISCHER EXC.) 242-11012.02 (LEANDER CONST.)	SURVEYED - MAF/SNP	SURVEYED ON: 26 NOV 2014
	DRAWN - SNP	HORIZ. DATUM: NAD 83
	CHECKED - SPF	VERT. DATUM: AS PROVIDED
PLOT DATE = 11 DEC 2014	DATE - 11 DEC 2014	

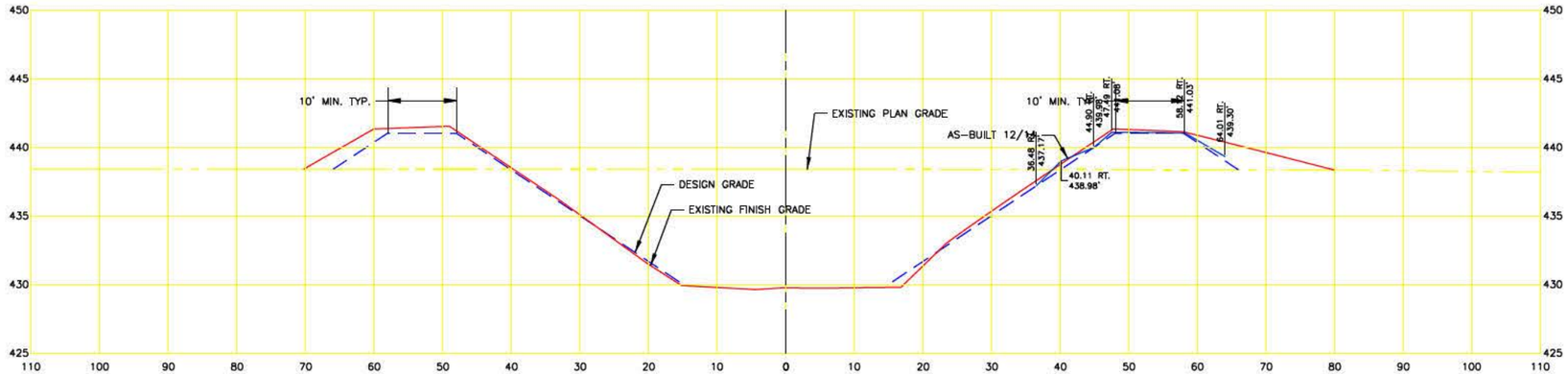
UNITED STATES ARMY CORPS OF ENGINEERS
RICE LAKE HABITAT REHAB & ENHANCEMENT
FULTON CO., ILLINOIS

OVERFLOW SPILLWAY AS-BUILT CROSS SECTIONS
STA. 0+00 TO 65+00 AT RICE LAKE

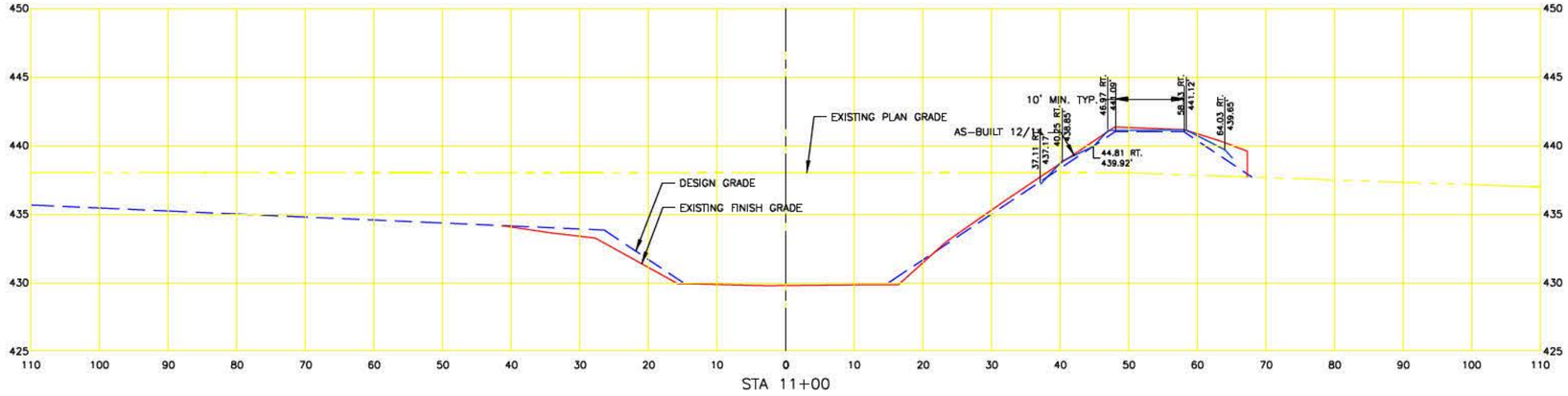
SCALE: AS SHOWN | SHEET 10 OF 10 SHEETS | STA. 59+00.0000 TO STA. 65+00.0000



STA 13+00



STA 12+00



STA 11+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
SECTION SHEET - (1)

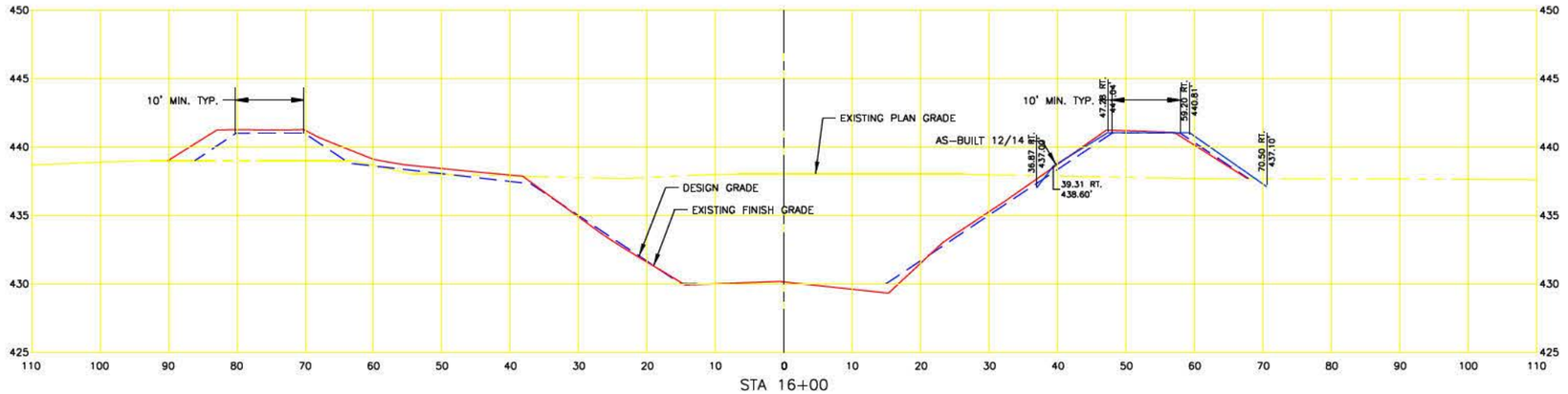
D:\fischer excavating, inc\14-1066\sent\14-1066 survey.dgn, Section Sheet - (1)

JOB NUMBER:
14-1066

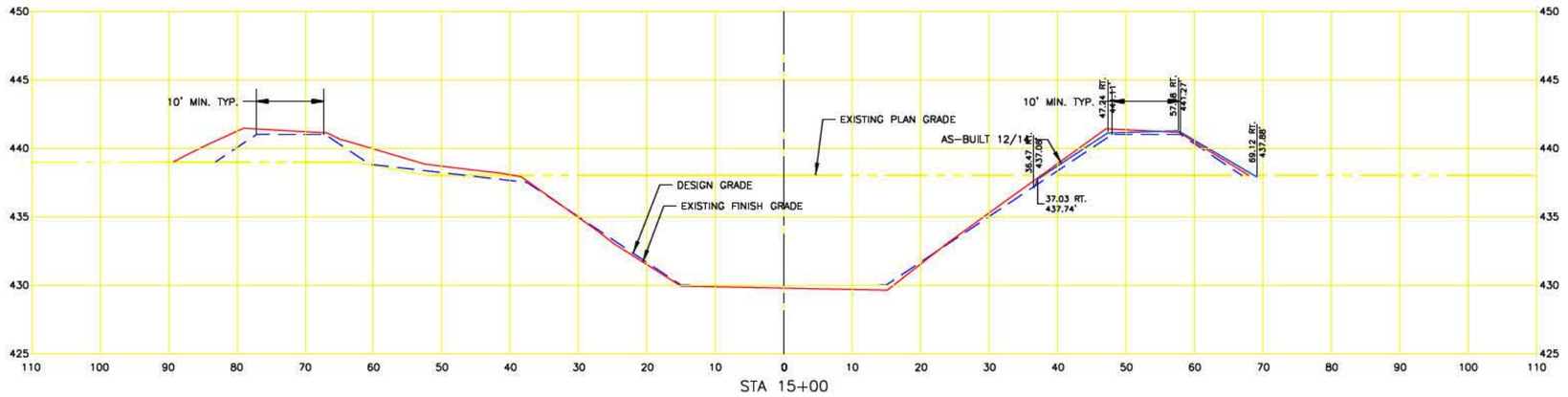
SHEET NUMBER:
1 of 20

A-127

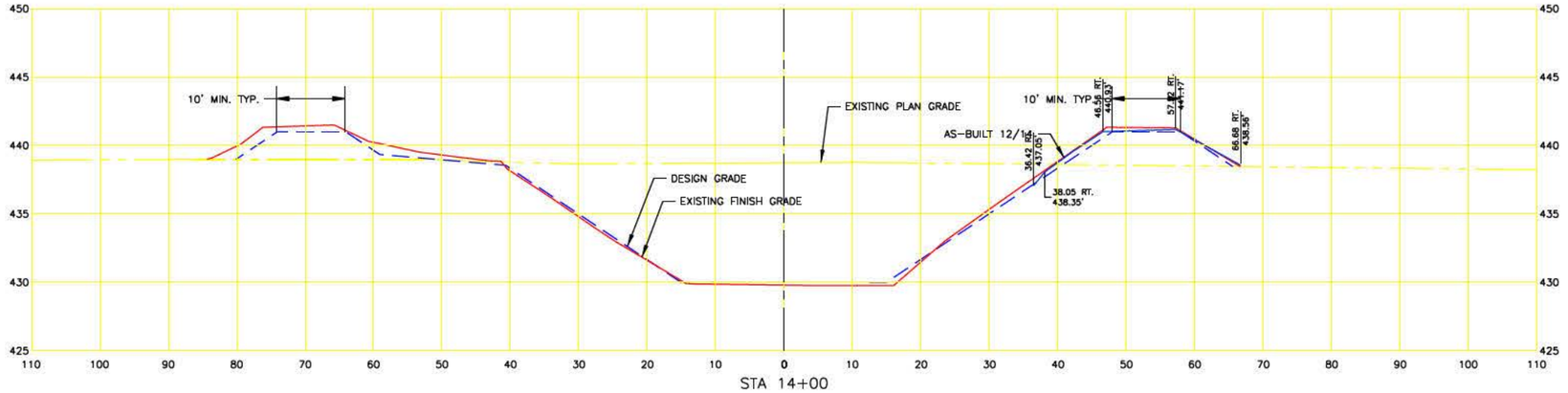
PLOT DATE: 1/20/15



STA 16+00



STA 15+00



STA 14+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 1/20/15

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

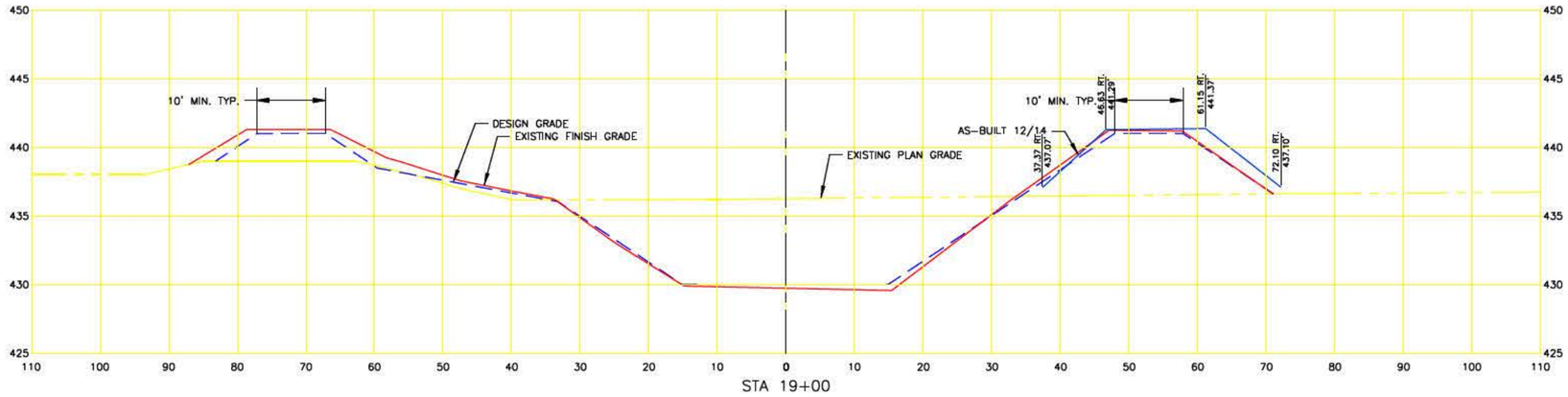
REV. NO.	DESCRIPTION	DATE

DRAWING:
SECTION SHEET - (2)

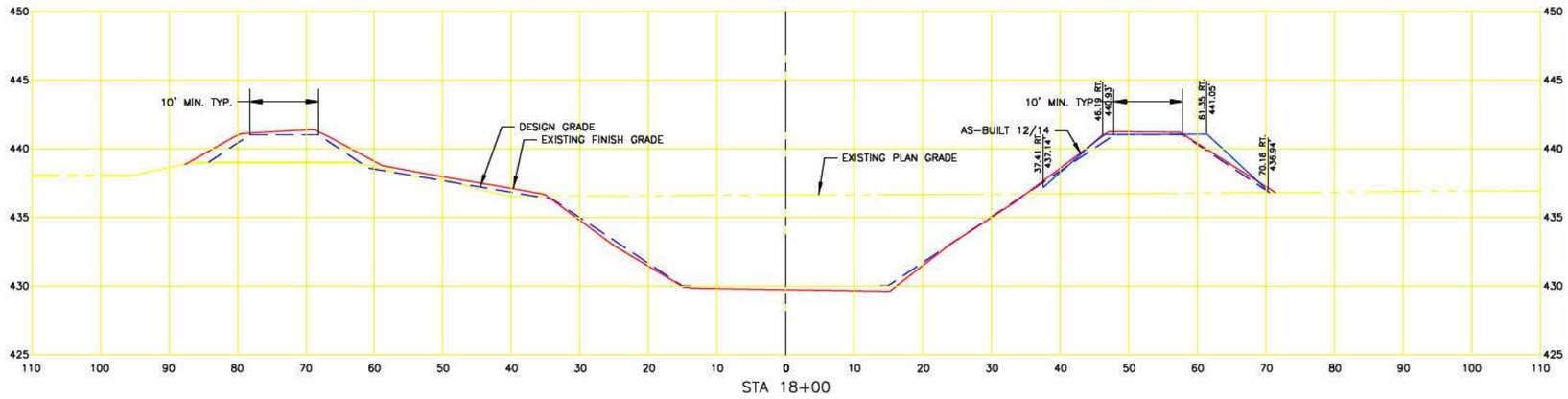
O:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

JOB NUMBER:
14-1066

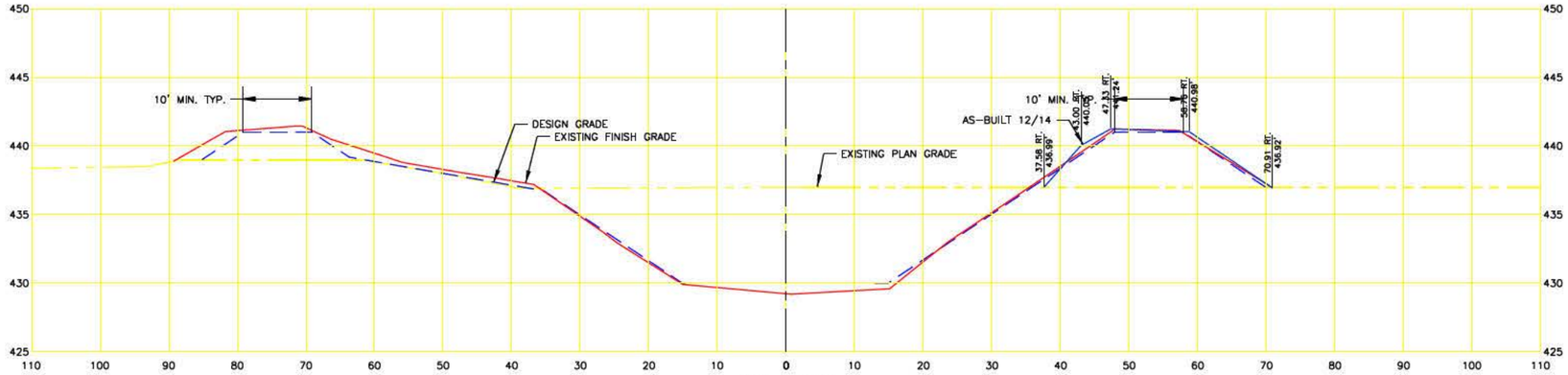
SHEET NUMBER:
2 of 20



STA 19+00



STA 18+00



STA 17+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

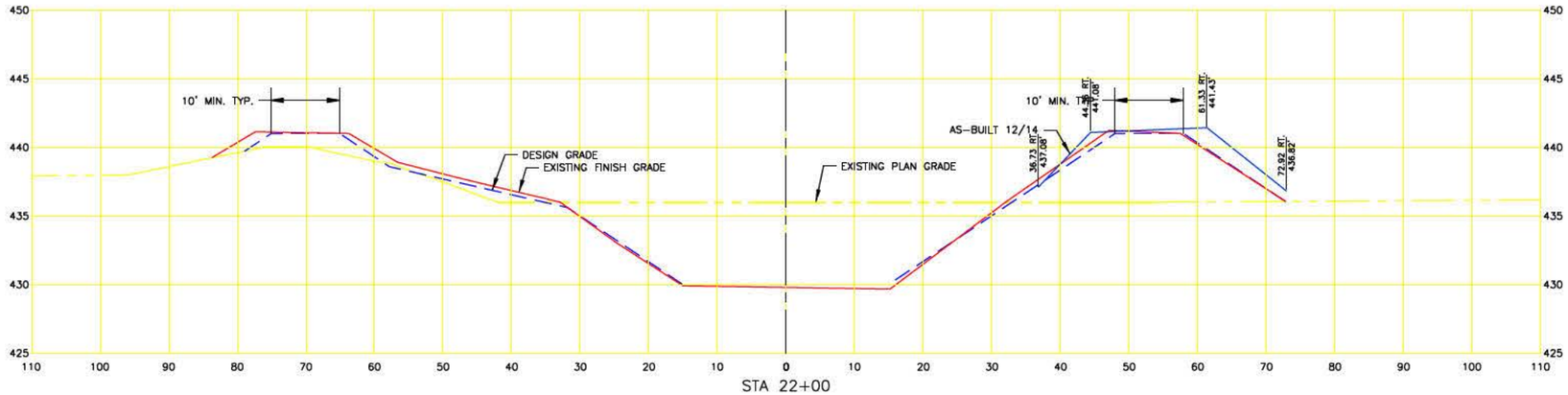
DRAWING:
SECTION SHEET - (3)

O:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

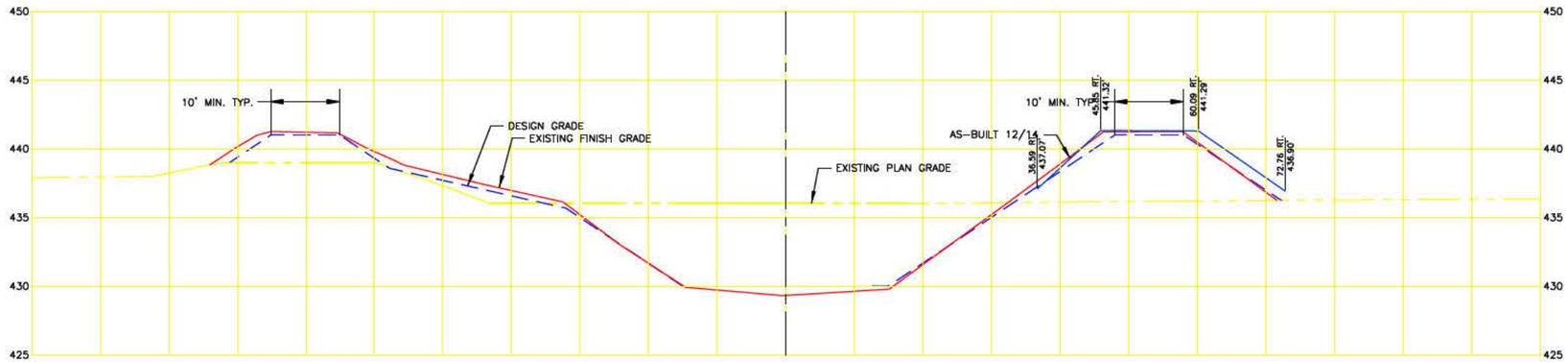
JOB NUMBER:
14-1066

SHEET NUMBER:
3 of 20

PLOT DATE: 1/20/15



STA 22+00



STA 21+00

STA 20+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

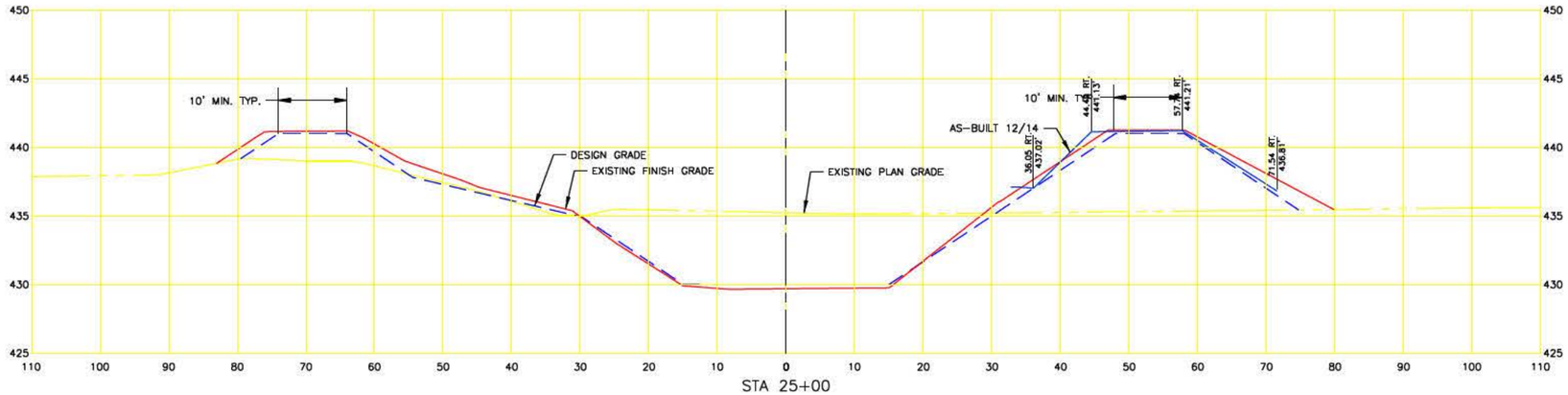
DRAWING:
SECTION SHEET - (4)

O:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

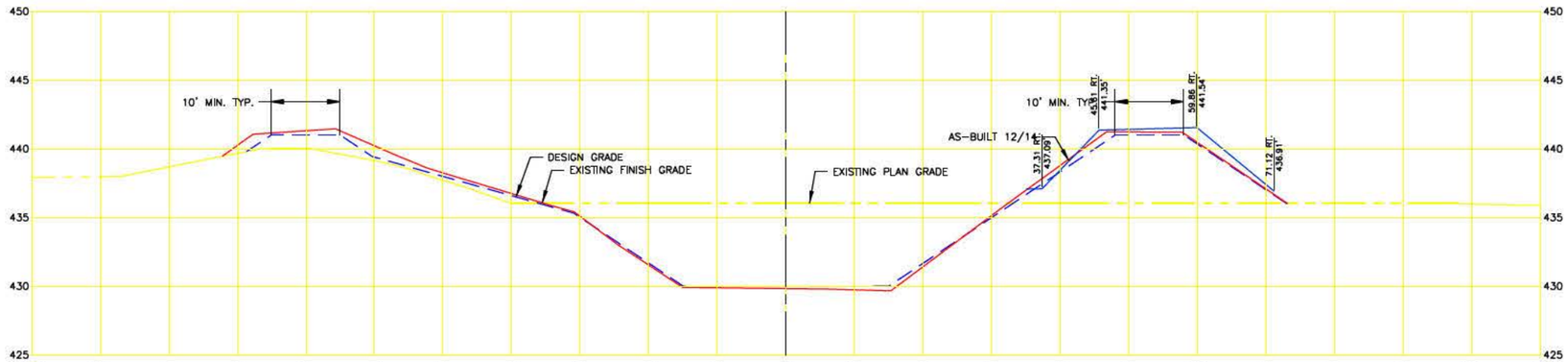
JOB NUMBER:
14-1066

SHEET NUMBER:
4 of 20

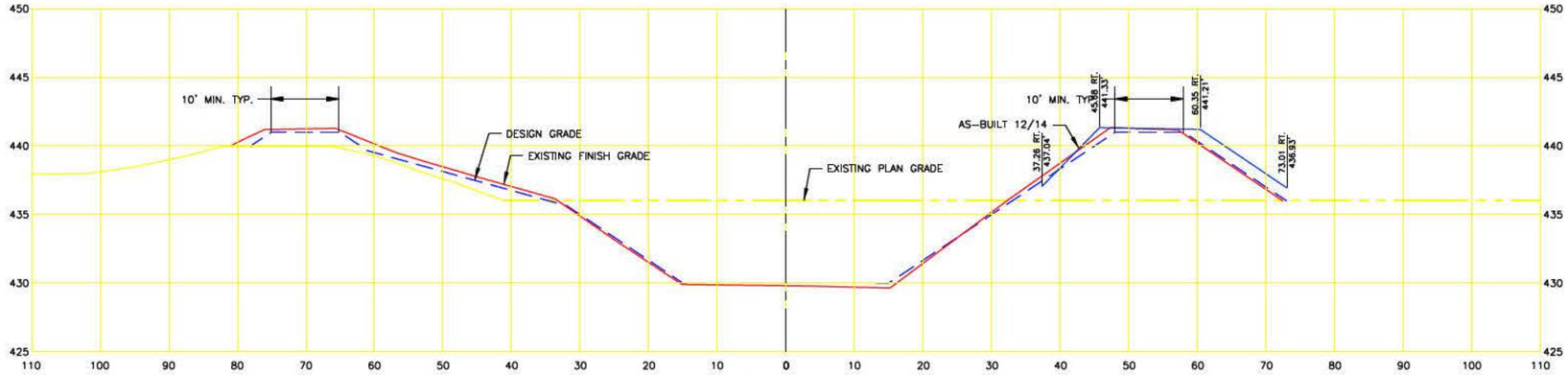
PLOT DATE: 1/20/15



STA 25+00



STA 24+00



STA 23+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

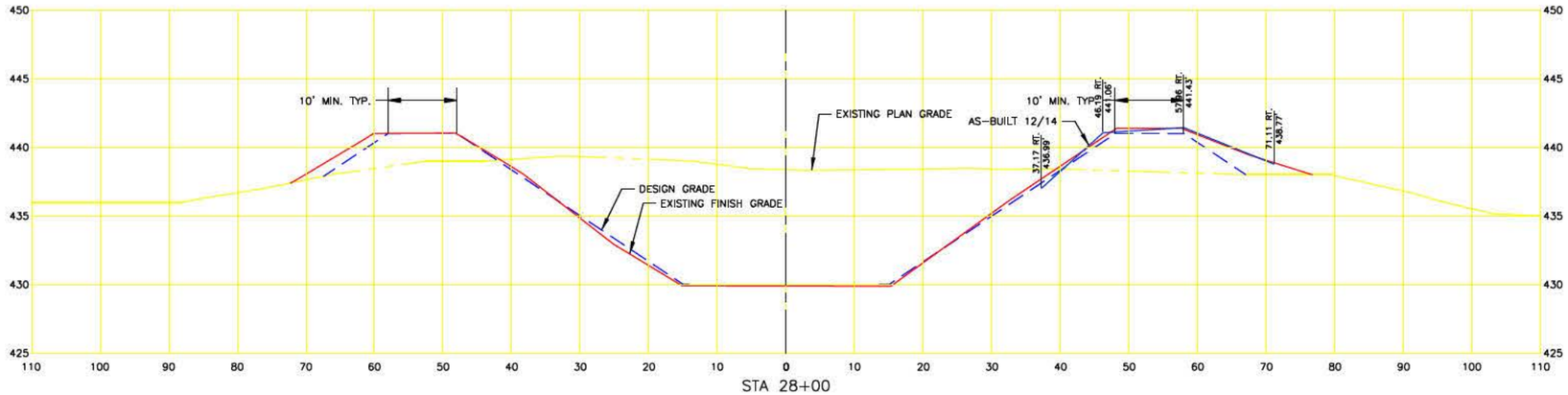
DRAWING:
SECTION SHEET - (5)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

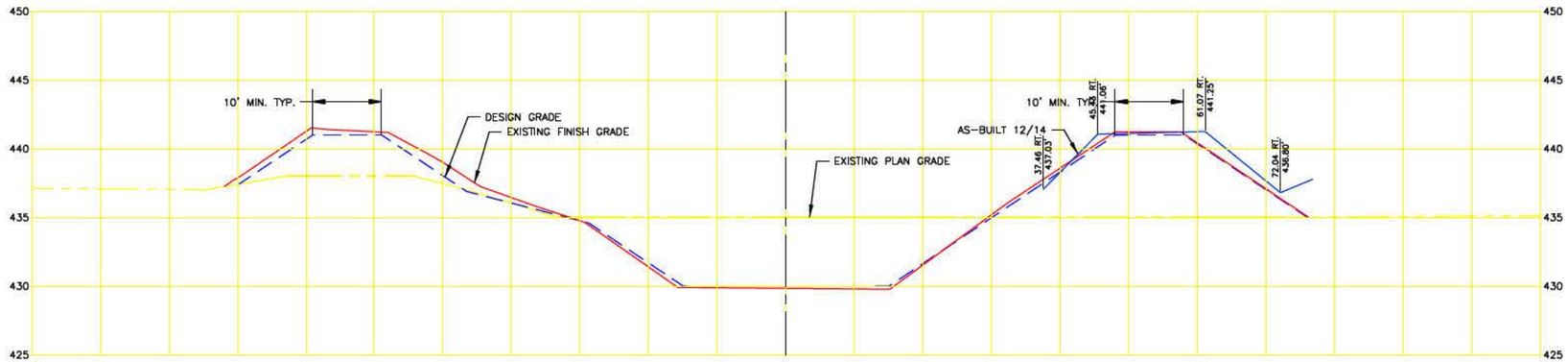
JOB NUMBER:
14-1066

SHEET NUMBER:
5 of 20

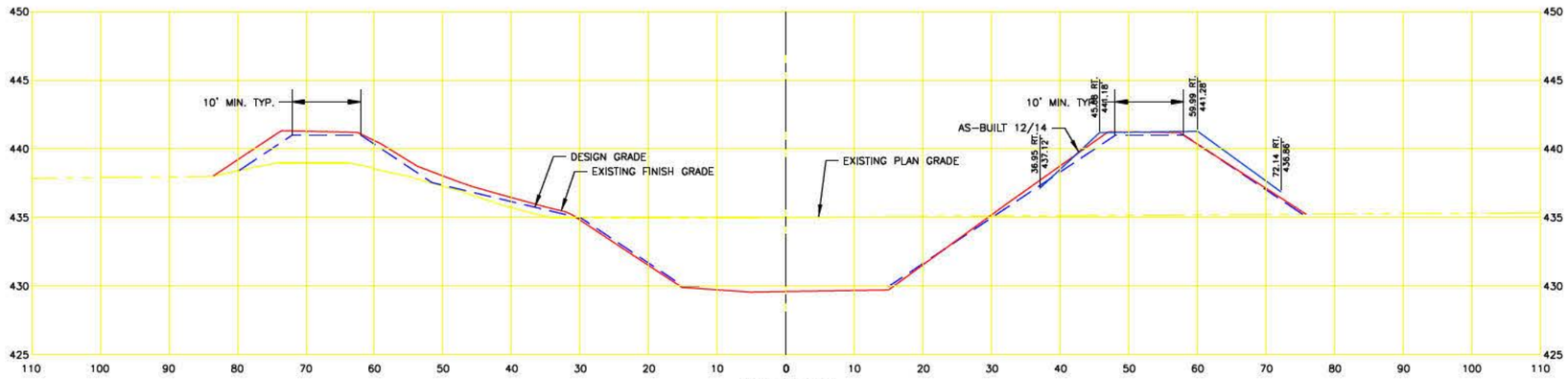
PLOT DATE: 1/20/15



STA 28+00



STA 27+00



STA 26+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

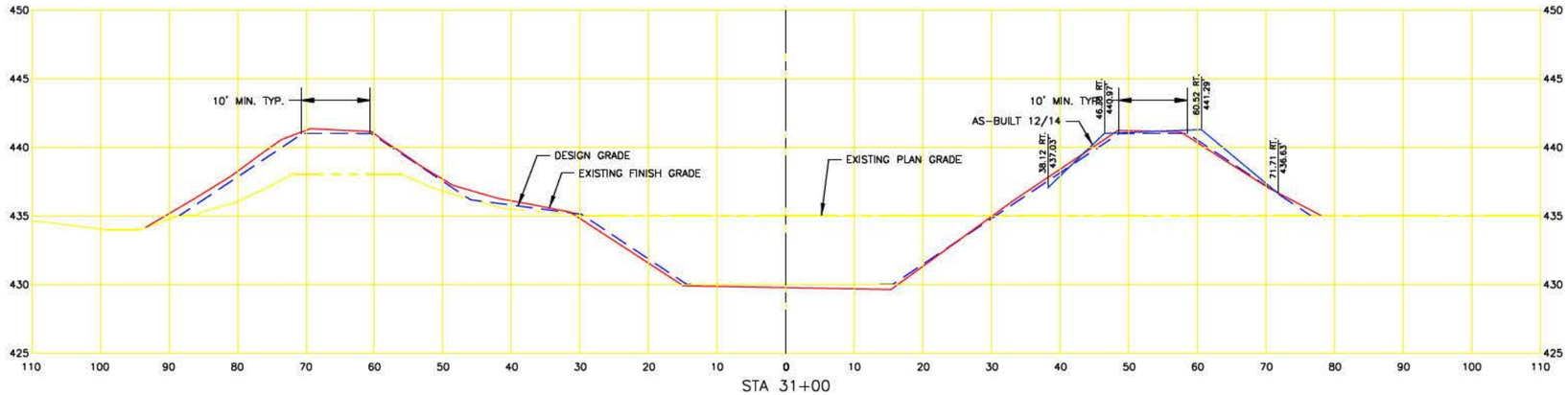
DRAWING:
SECTION SHEET - (6)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

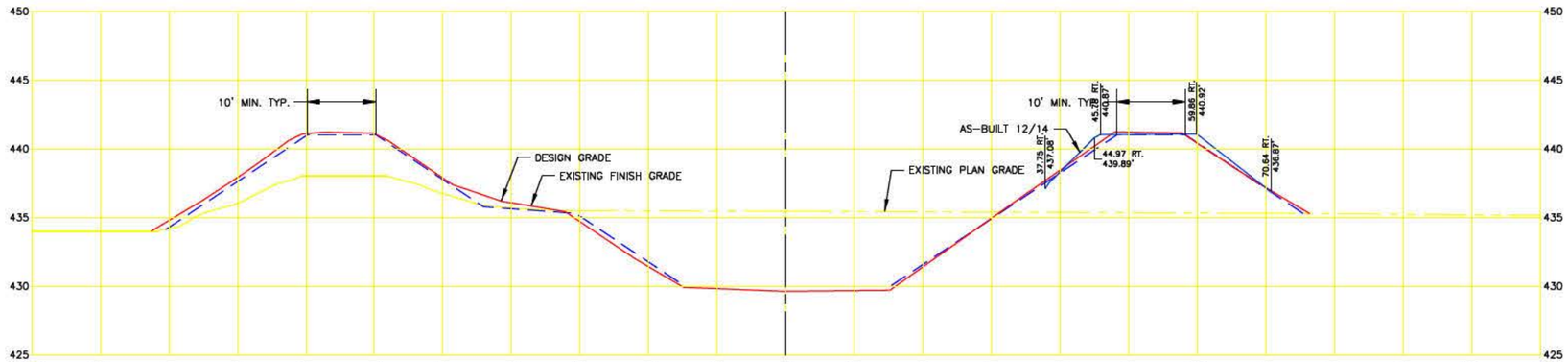
JOB NUMBER:
14-1066

SHEET NUMBER:
6 of 20

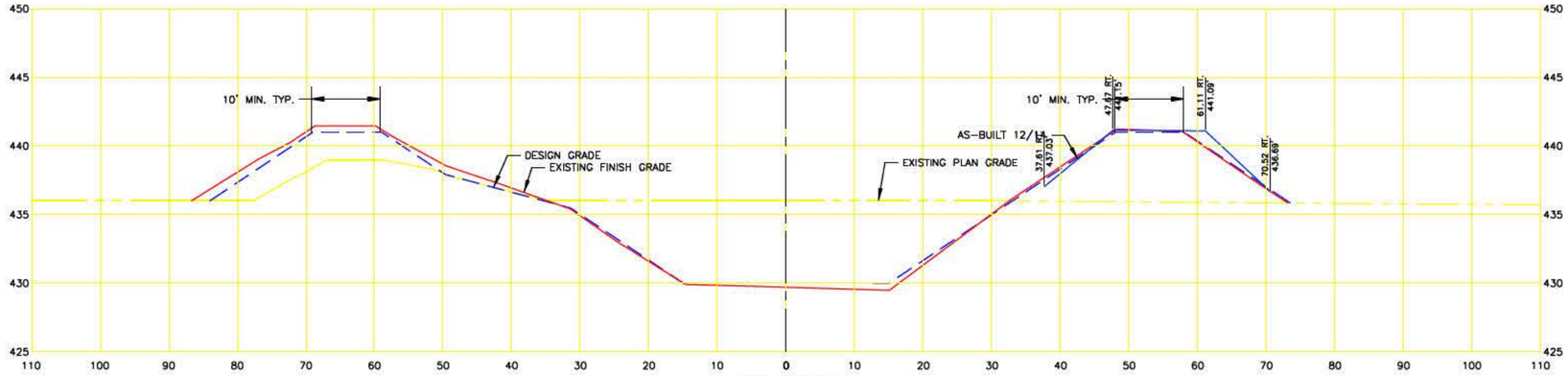
PLOT DATE: 1/20/15



STA 31+00



STA 30+00



STA 29+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

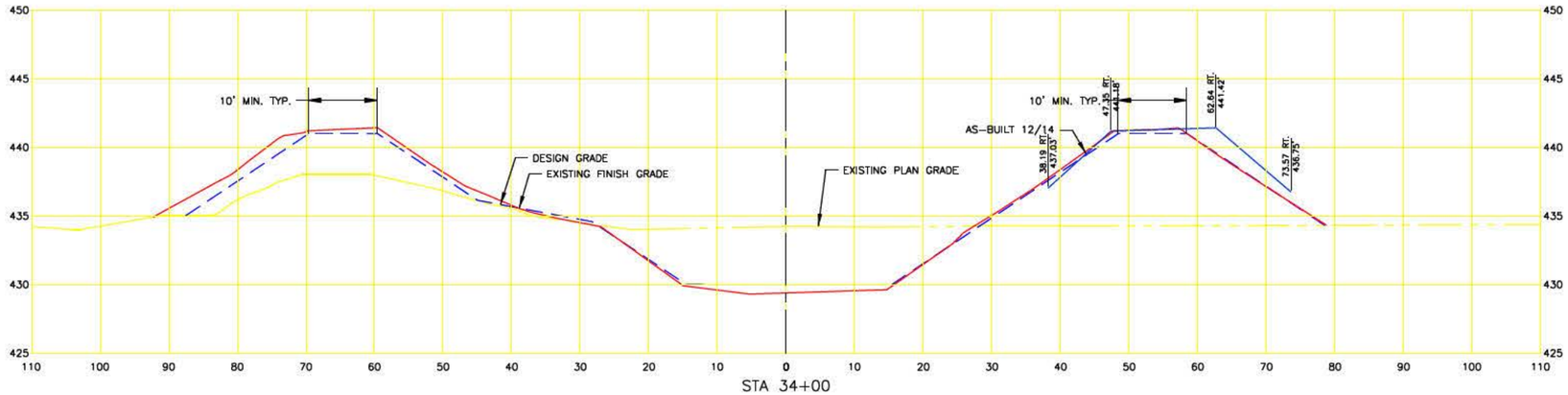
DRAWING:
SECTION SHEET - (7)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

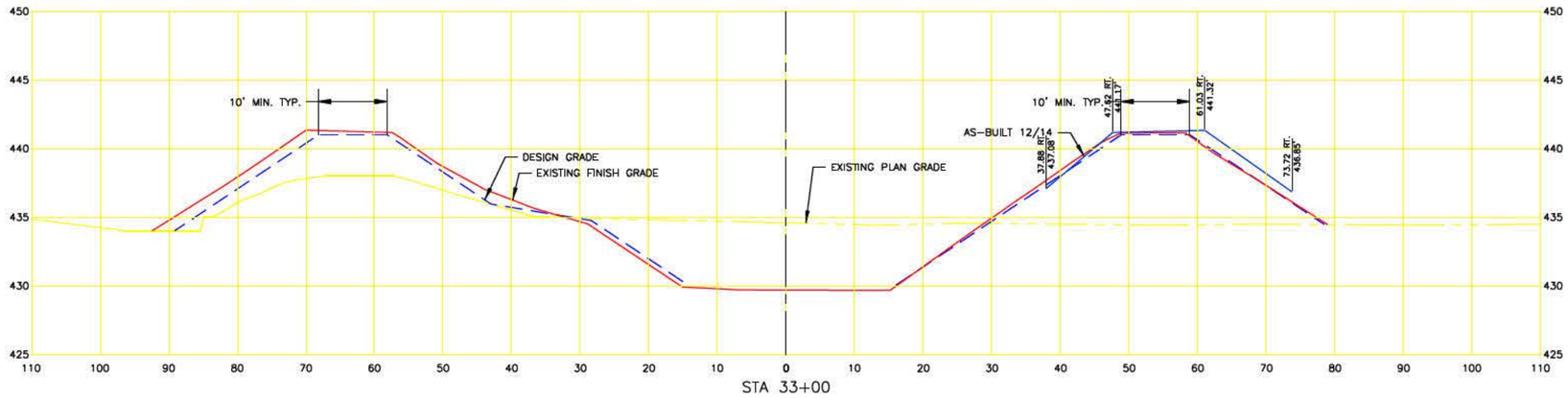
JOB NUMBER:
14-1066

SHEET NUMBER:
7 of 20

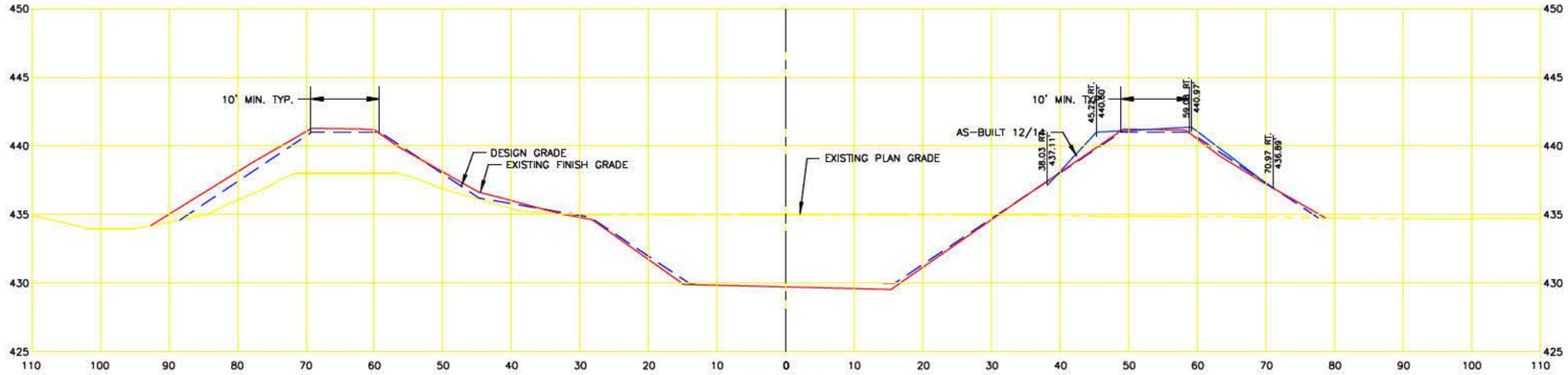
PLOT DATE: 1/20/15



STA 34+00



STA 33+00



STA 32+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

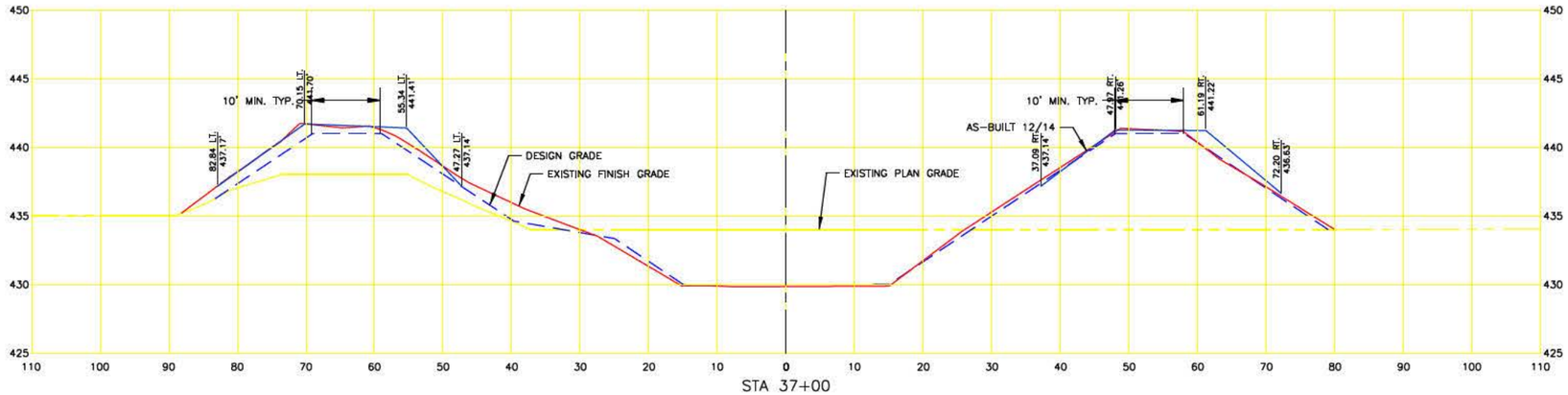
DRAWING:
SECTION SHEET - (8)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

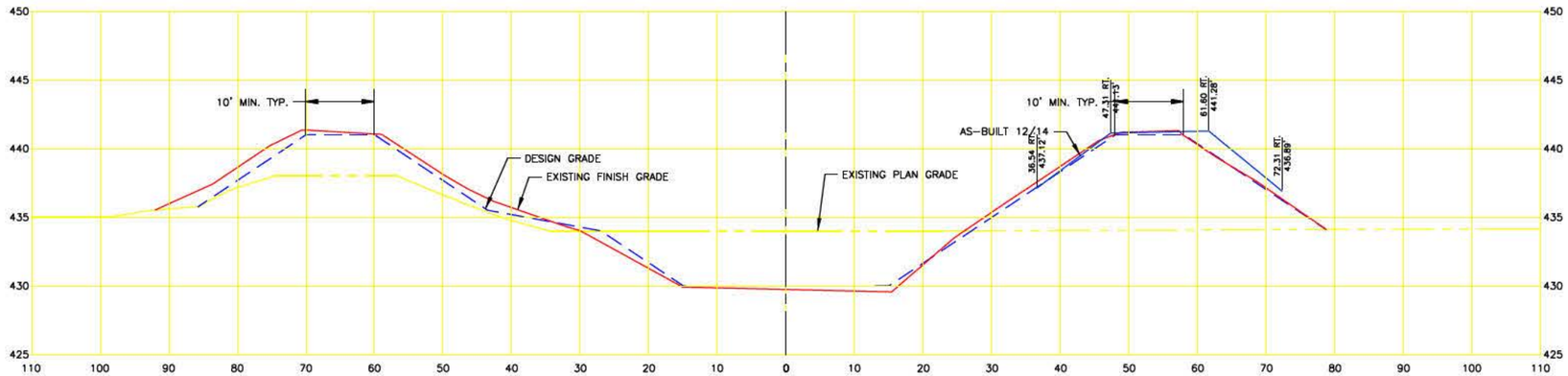
JOB NUMBER:
14-1066

SHEET NUMBER:
8 of 20

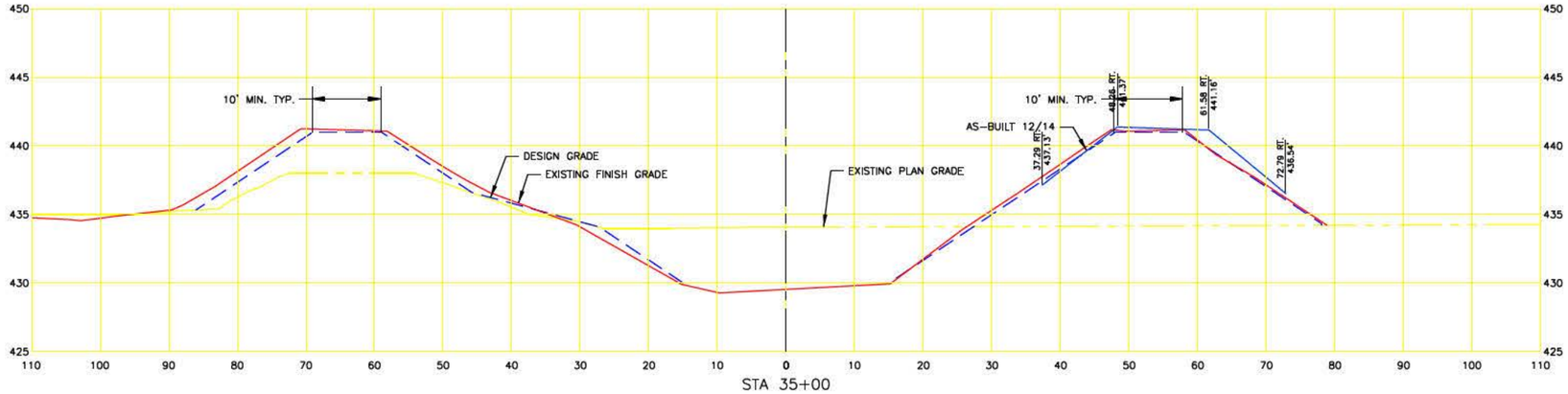
PLOT DATE: 1/20/15



STA 37+00



STA 36+00



STA 35+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

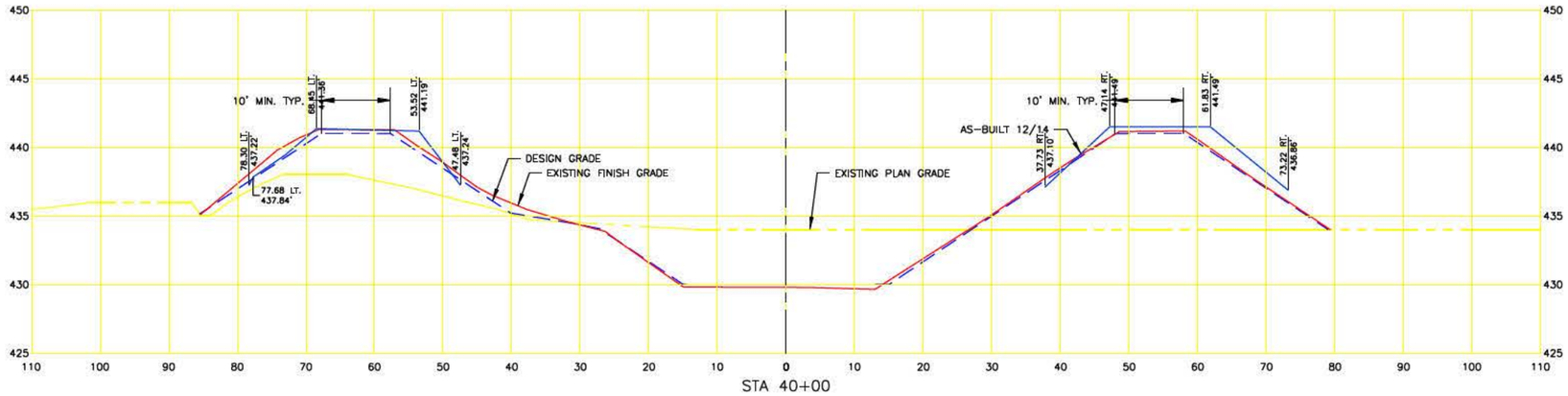
DRAWING:
SECTION SHEET - (9)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

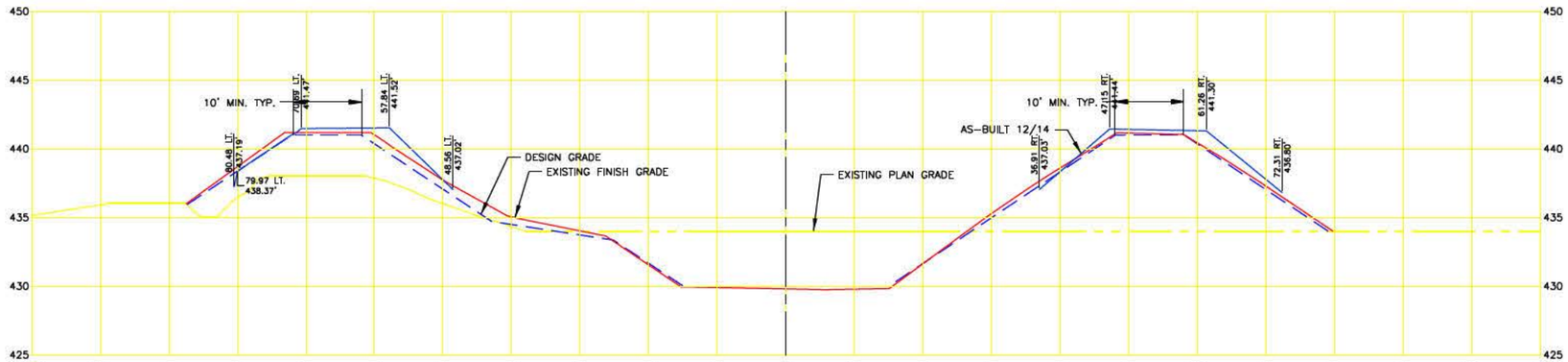
JOB NUMBER:
14-1066

SHEET NUMBER:
9 of 20

PLOT DATE: 1/20/15



STA 40+00



STA 39+00

STA 38+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

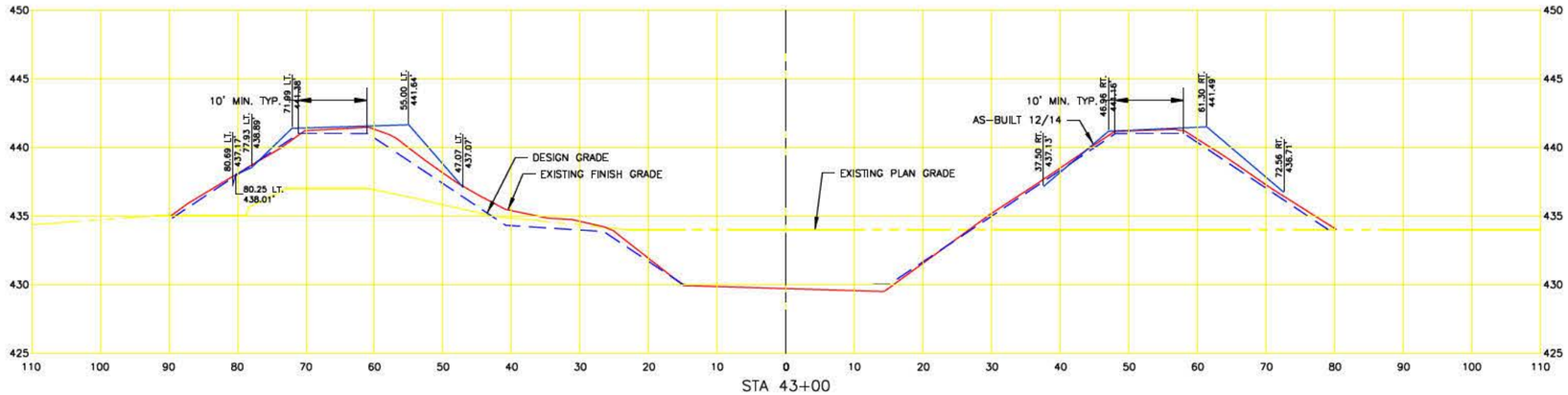
DRAWING:
SECTION SHEET - (10)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

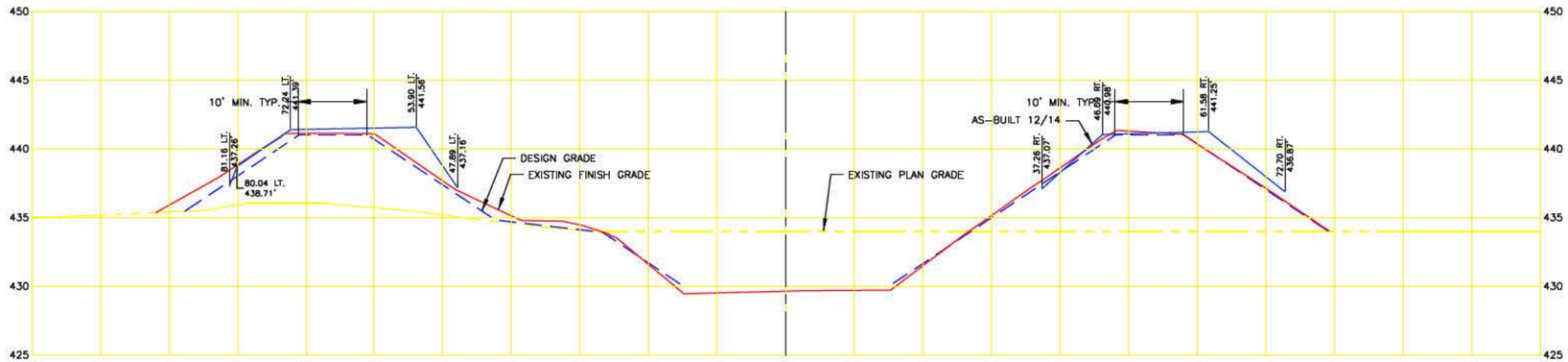
JOB NUMBER:
14-1066

SHEET NUMBER:
10 of 20

PLOT DATE: 1/20/15



STA 43+00



STA 42+00

STA 41+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

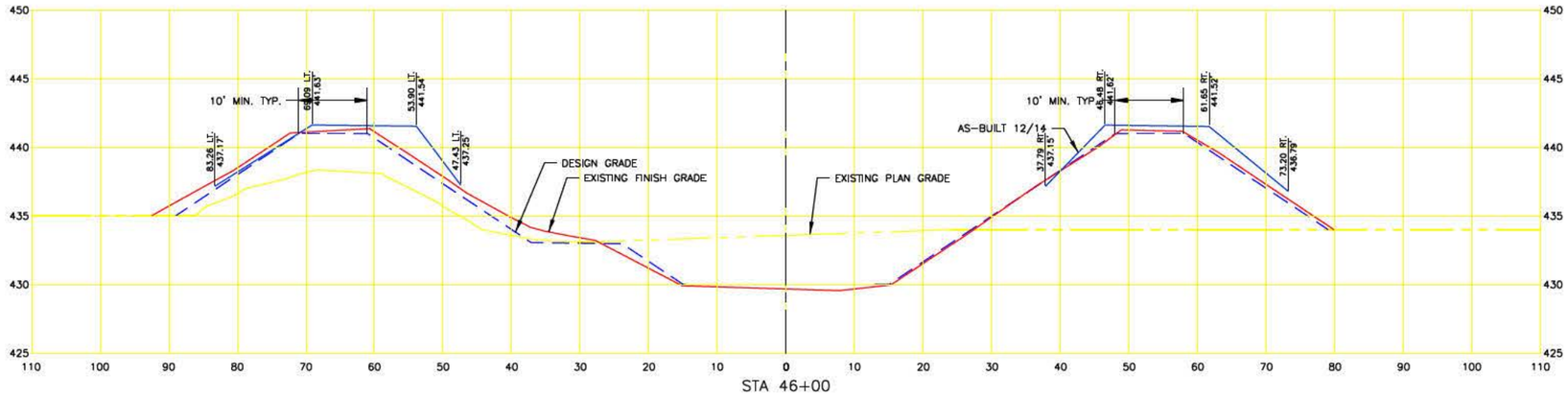
DRAWING:
SECTION SHEET - (11)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (11)

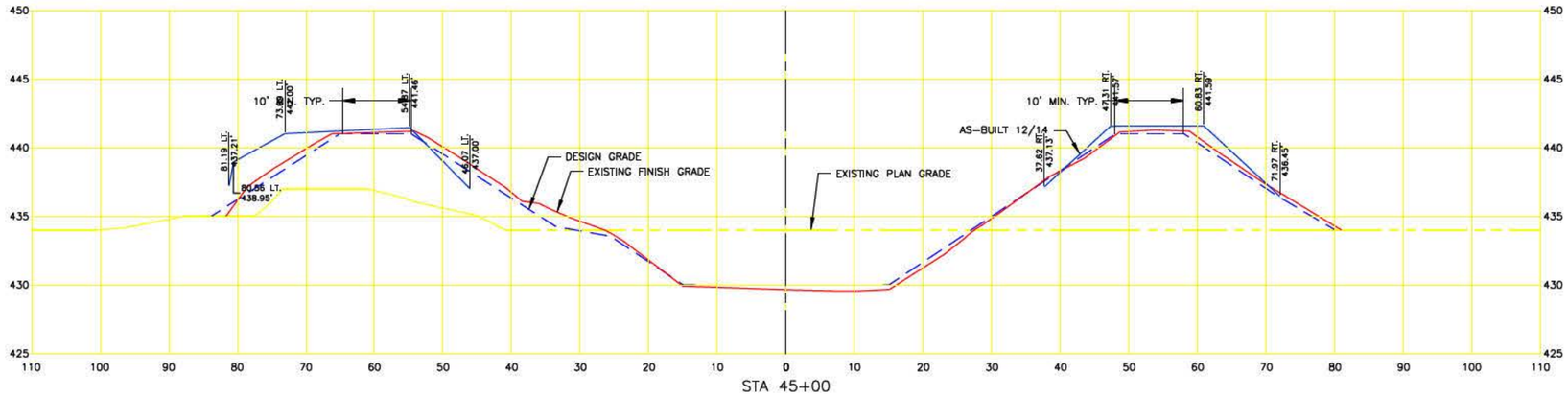
JOB NUMBER:
14-1066

SHEET NUMBER:
11 of 20

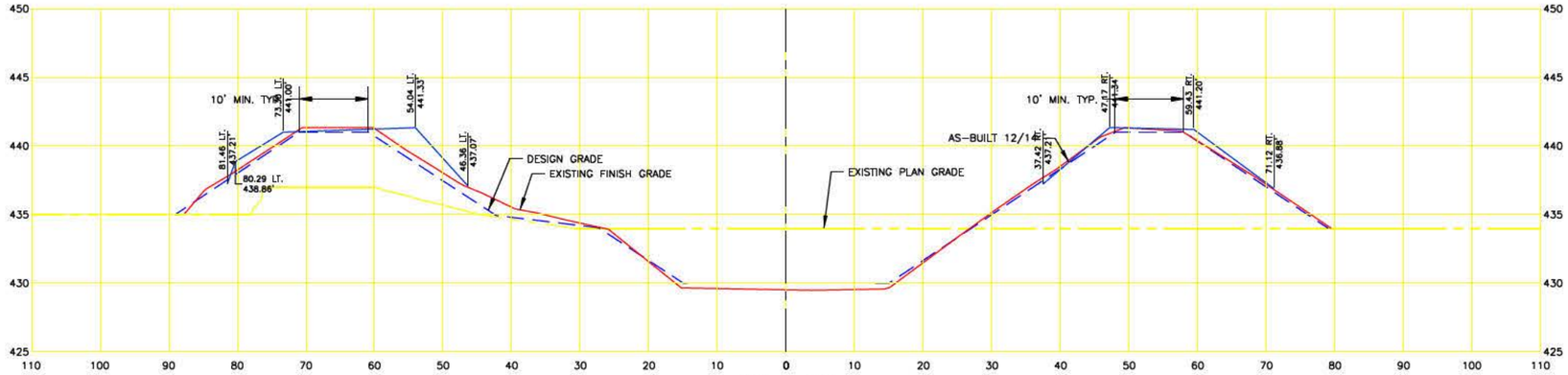
PLOT DATE: 1/20/15



STA 46+00



STA 45+00



STA 44+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

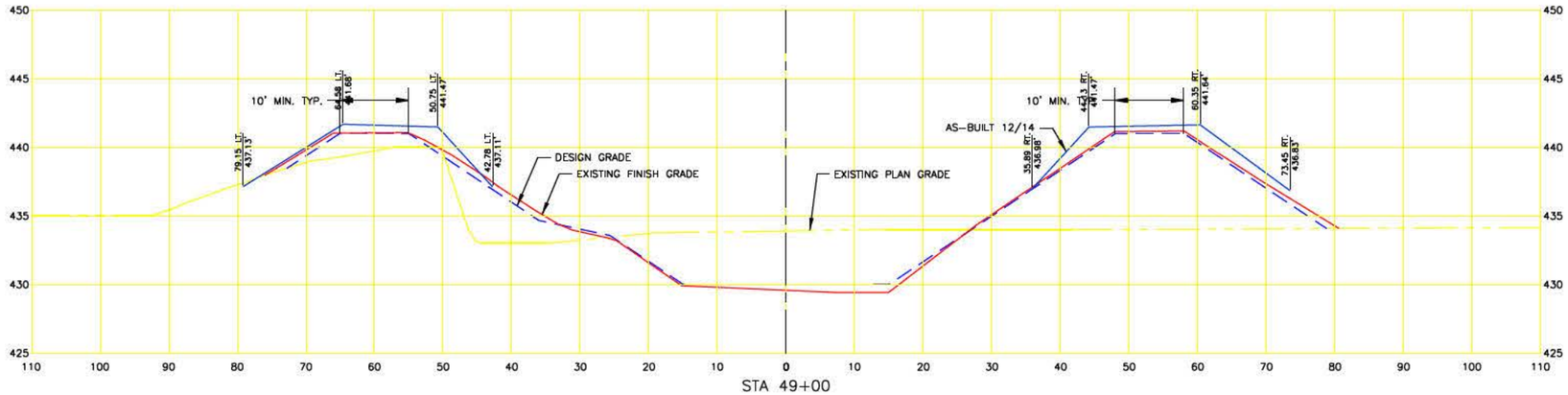
DRAWING:
SECTION SHEET - (12)

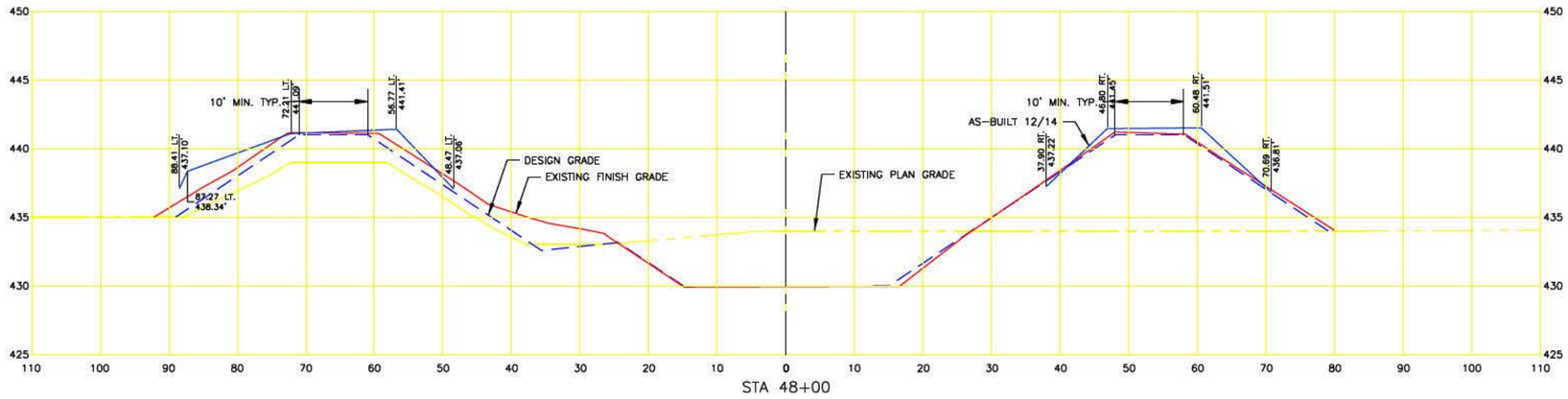
Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

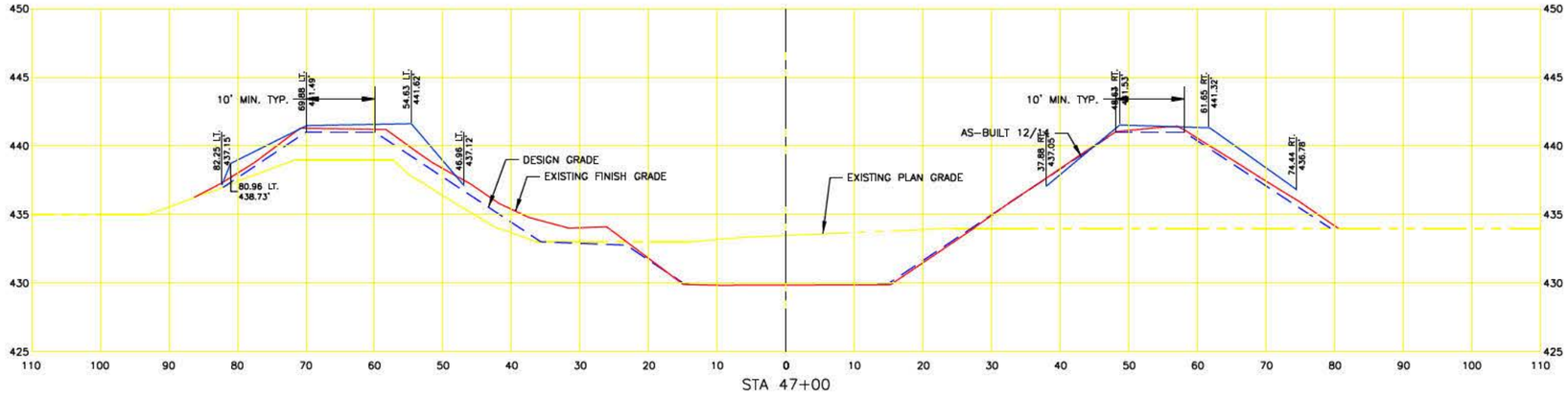
JOB NUMBER:
14-1066

SHEET NUMBER:
12 of 20

PLOT DATE: 1/20/15







SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

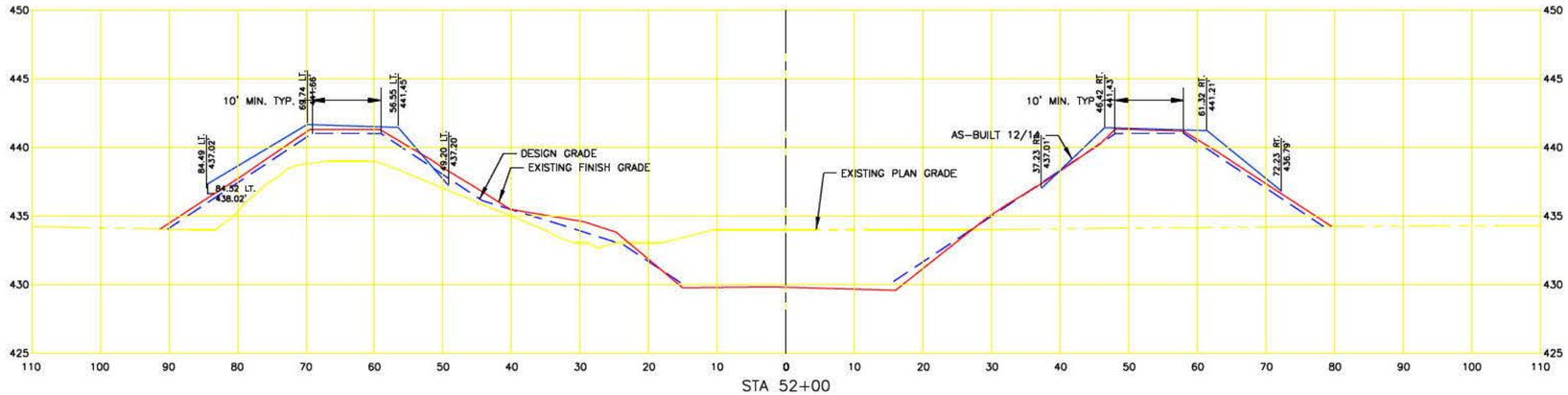
DRAWING:
SECTION SHEET - (13)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

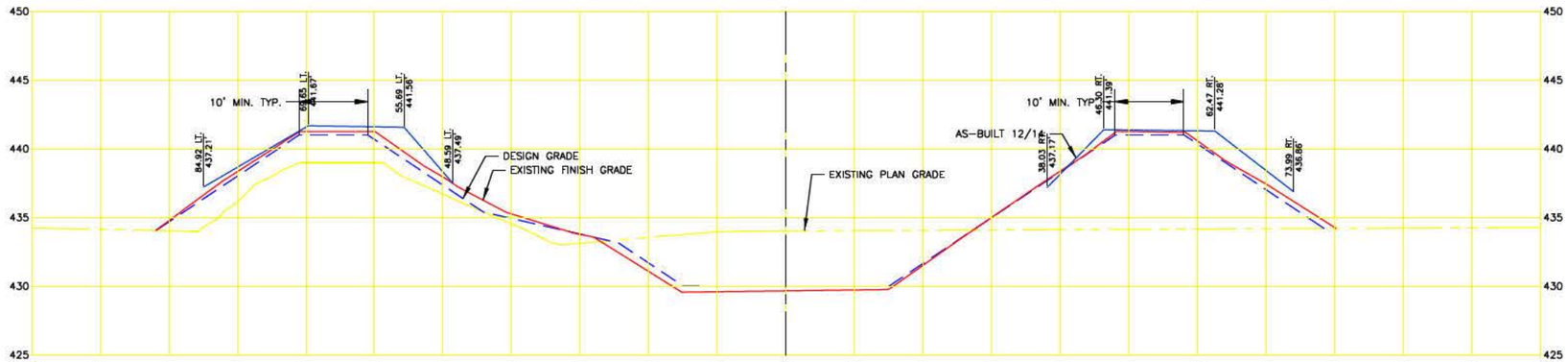
JOB NUMBER:
14-1066

SHEET NUMBER:
13 of 20

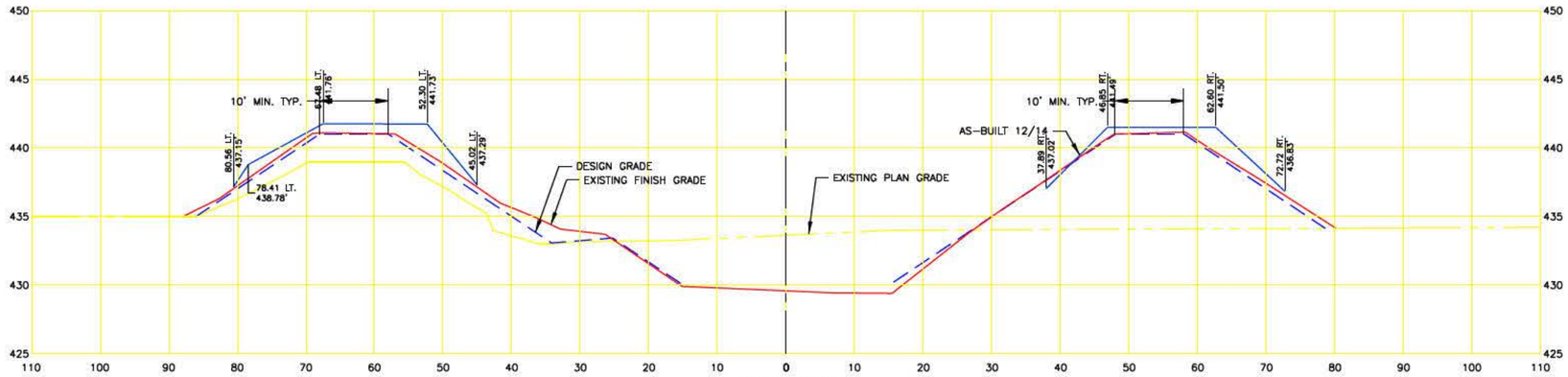
PLOT DATE: 1/20/15



STA 52+00



STA 51+00



STA 50+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 1/20/15

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

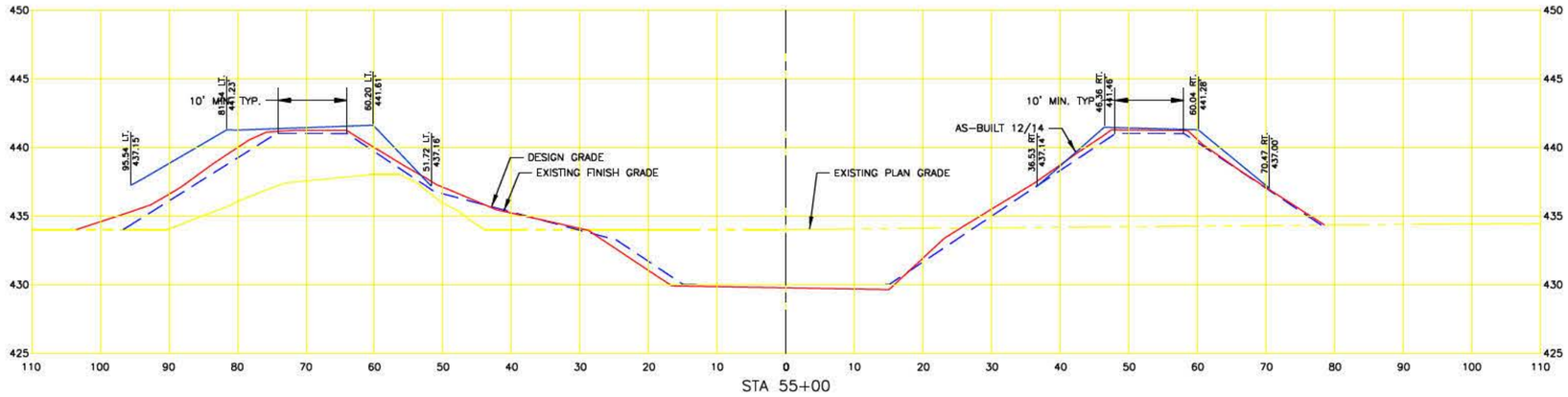
REV. NO.	DESCRIPTION	DATE

DRAWING:
SECTION SHEET - (14)

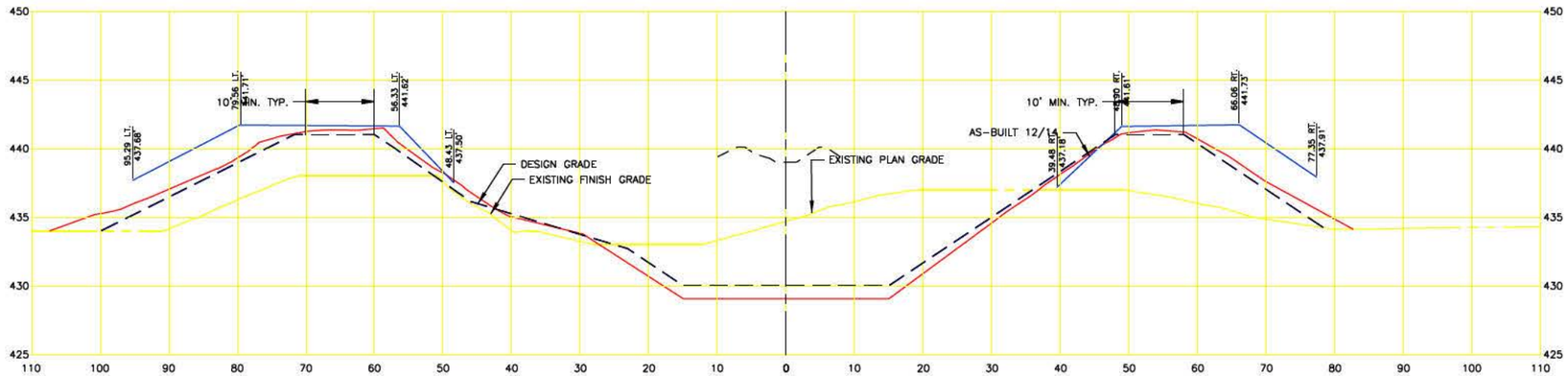
O:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

JOB NUMBER:
14-1066

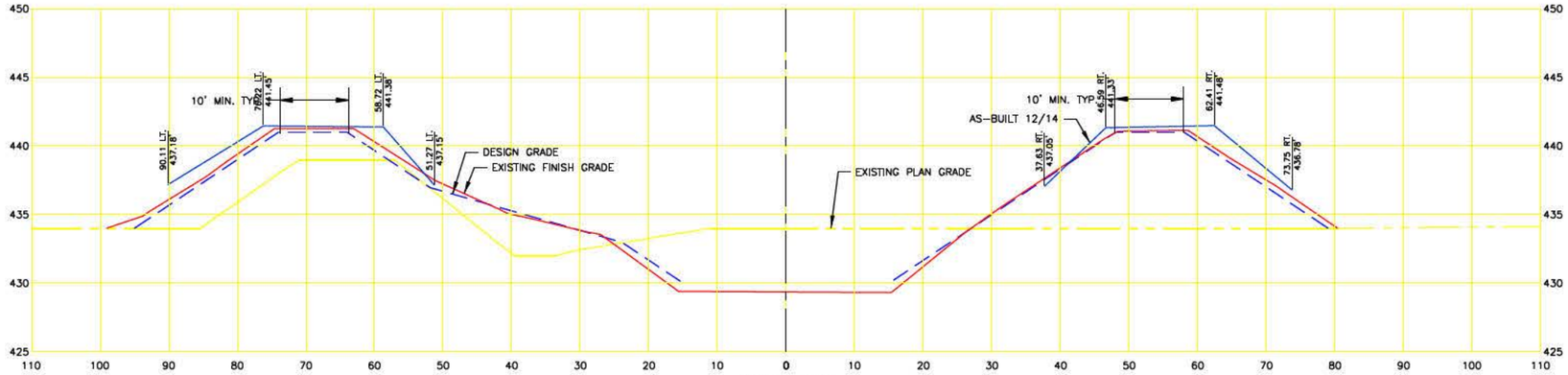
SHEET NUMBER:
14 of 20



STA 55+00



STA 54+00



STA 53+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

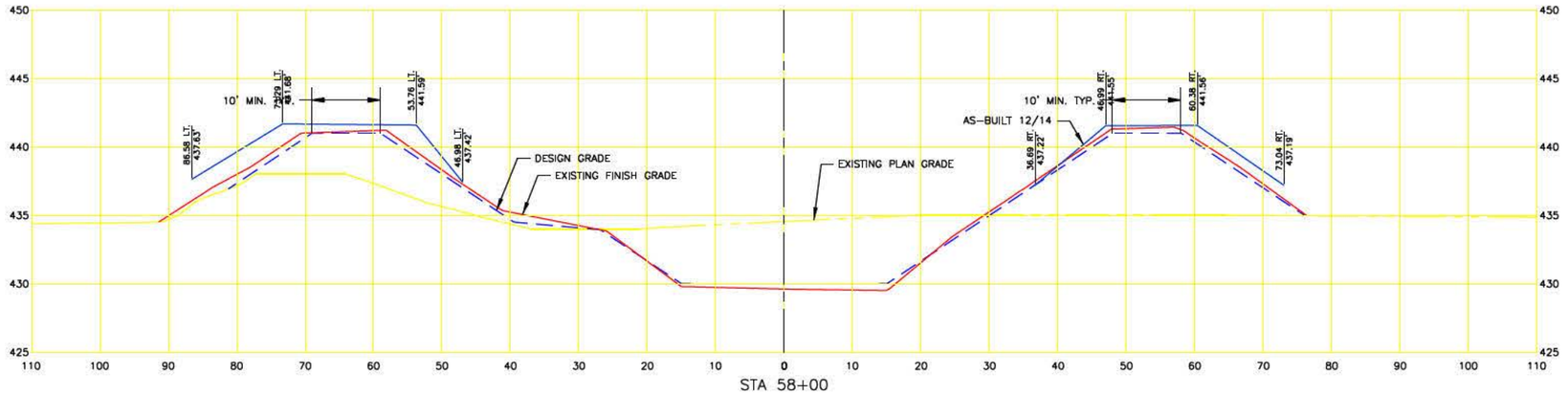
DRAWING:
SECTION SHEET - (15)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

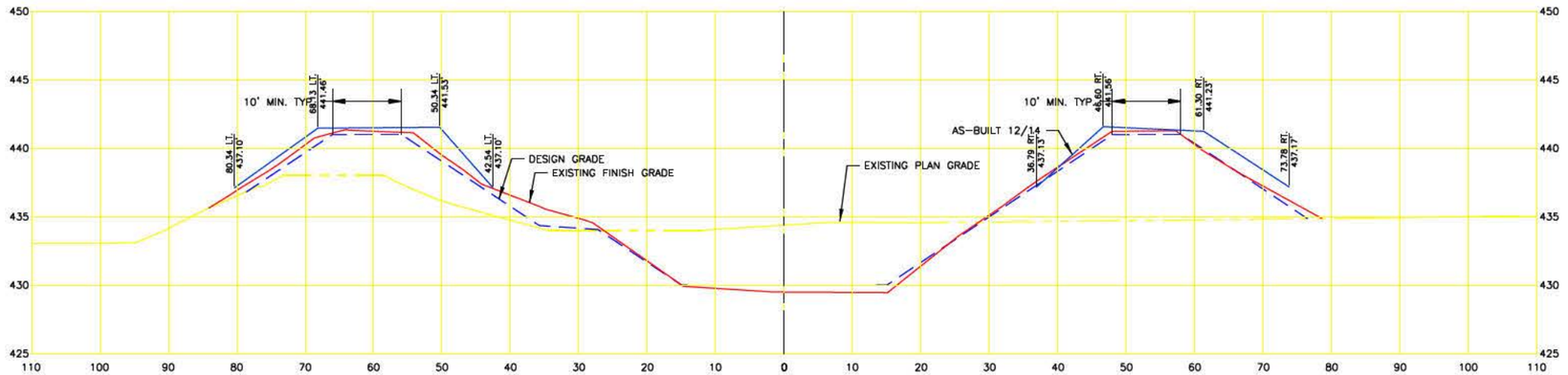
JOB NUMBER:
14-1066

SHEET NUMBER:
15 of 20

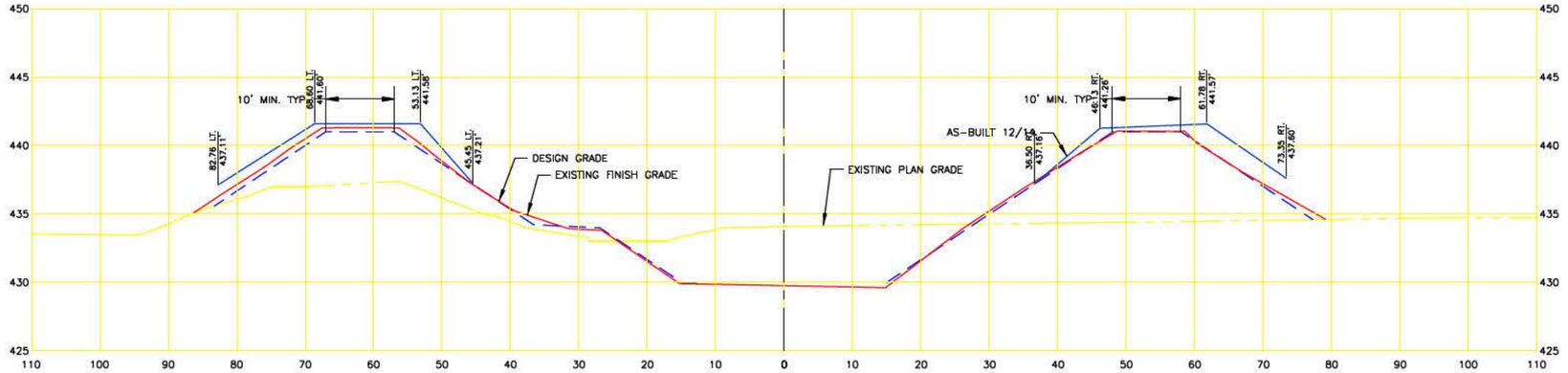
PLOT DATE: 1/20/15



STA 58+00



STA 57+00



STA 56+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

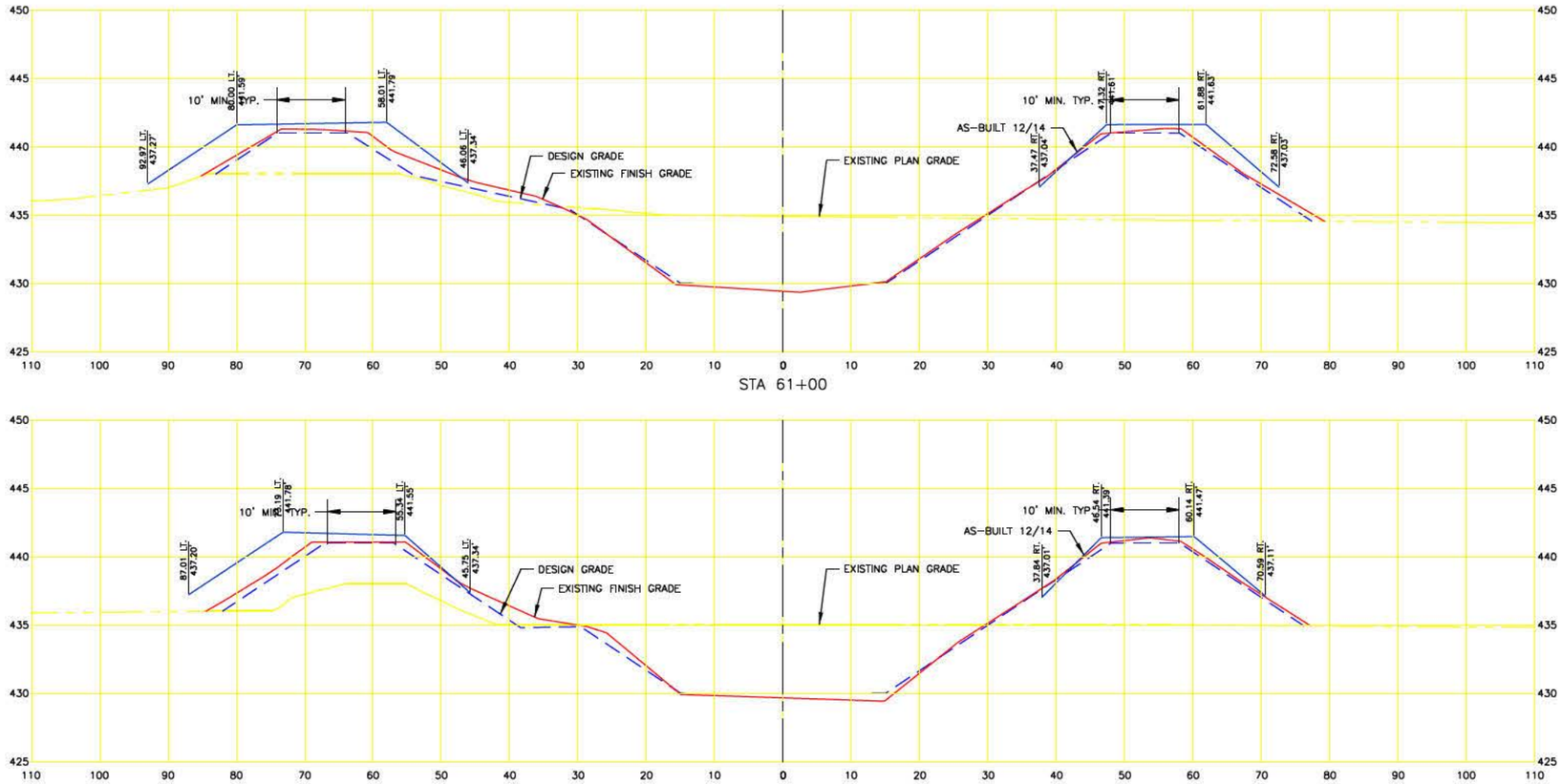
DRAWING:
SECTION SHEET – (16)

O:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey – DGN.dwg, Section Sheet – (1)

JOB NUMBER:
14-1066

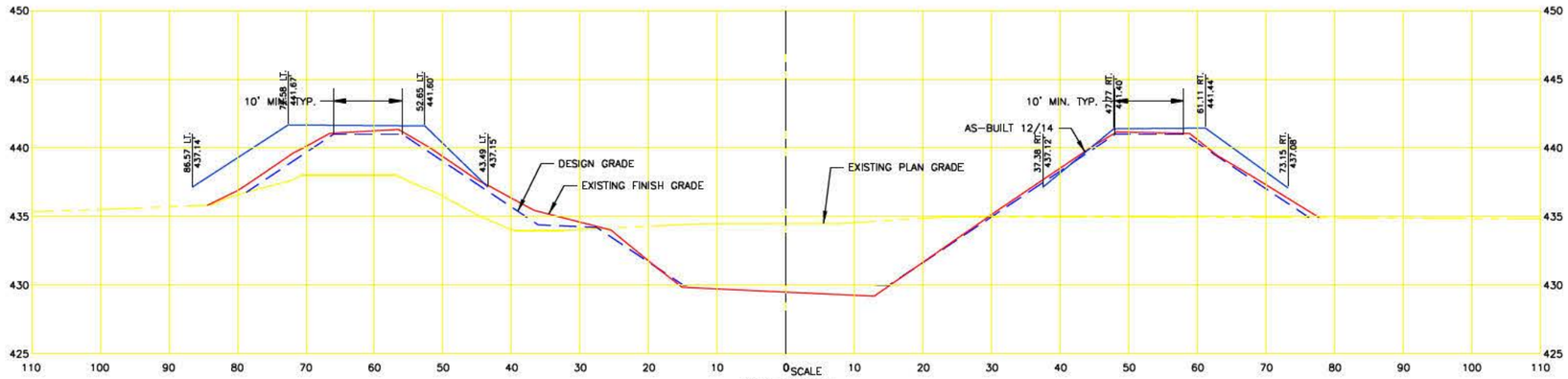
SHEET NUMBER:
16 of 20

PLOT DATE: 1/20/15



STA 61+00

STA 60+00



STA 59+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

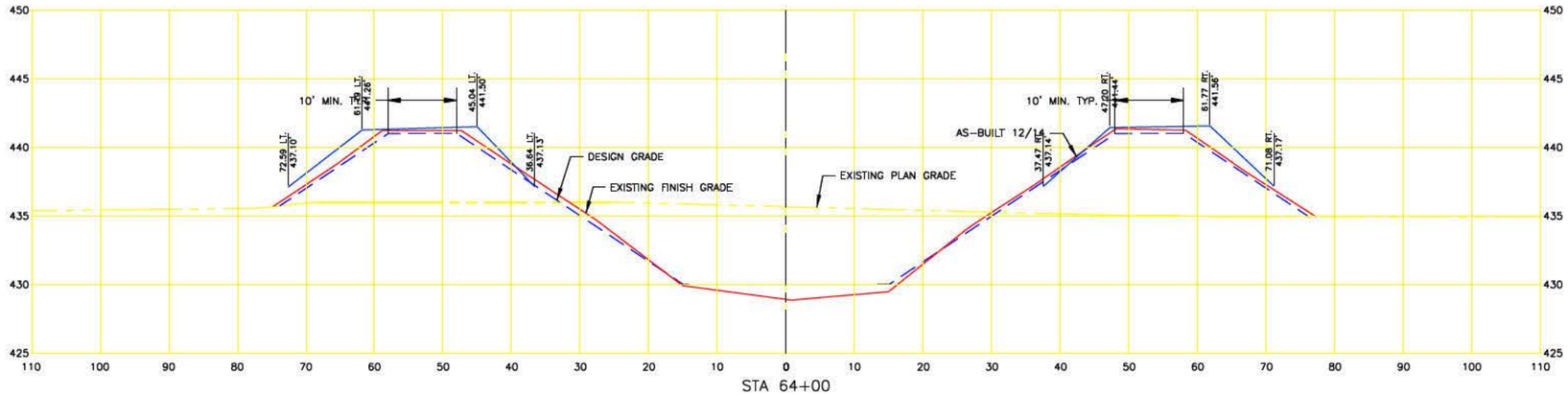
DRAWING:
SECTION SHEET - (17)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

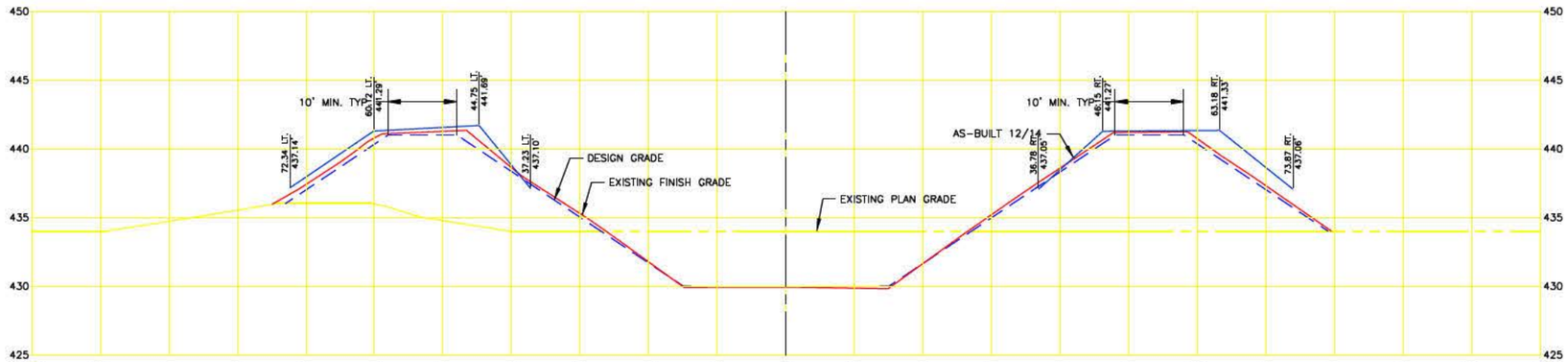
JOB NUMBER:
14-1066

SHEET NUMBER:
17 of 20

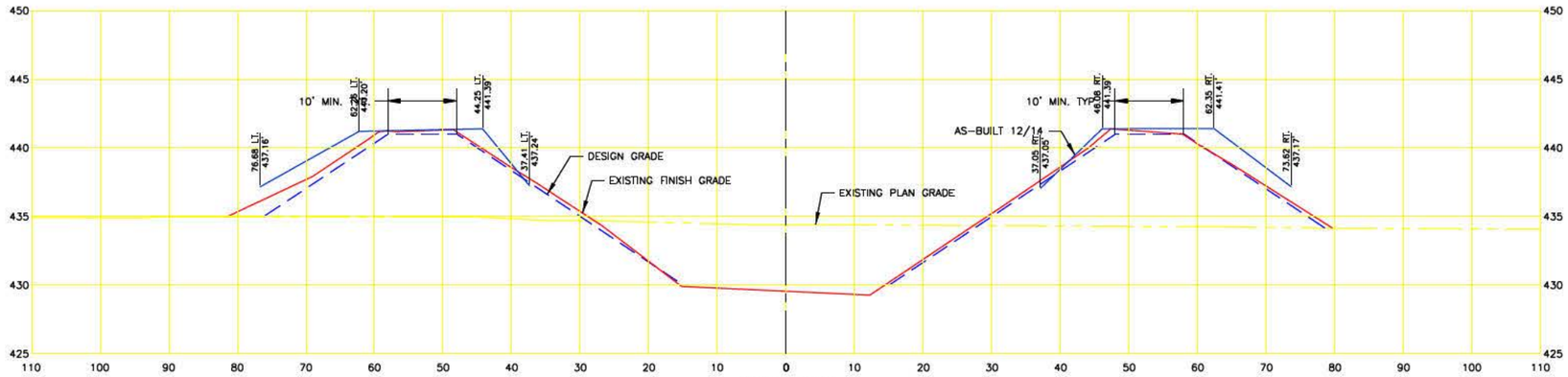
PLOT DATE: 1/20/15



STA 64+00



STA 63+00



STA 62+00

SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

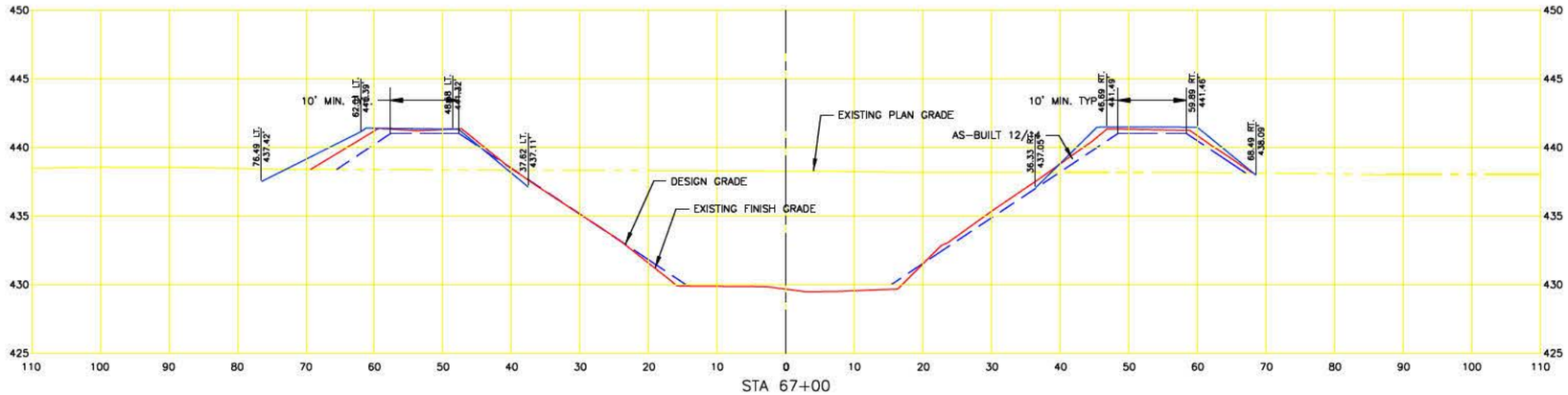
DRAWING:
SECTION SHEET - (18)

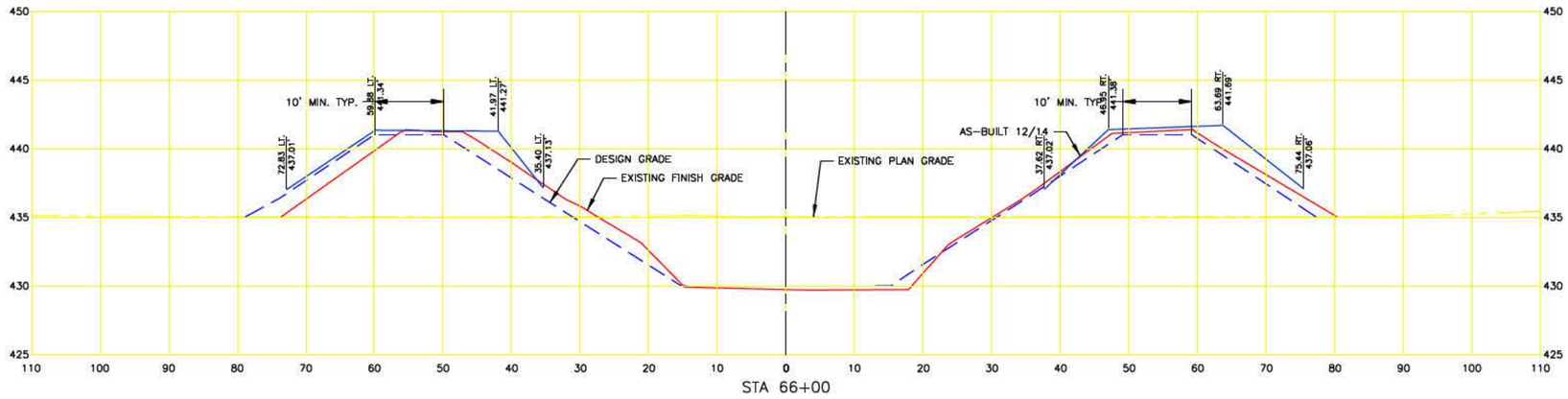
O:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

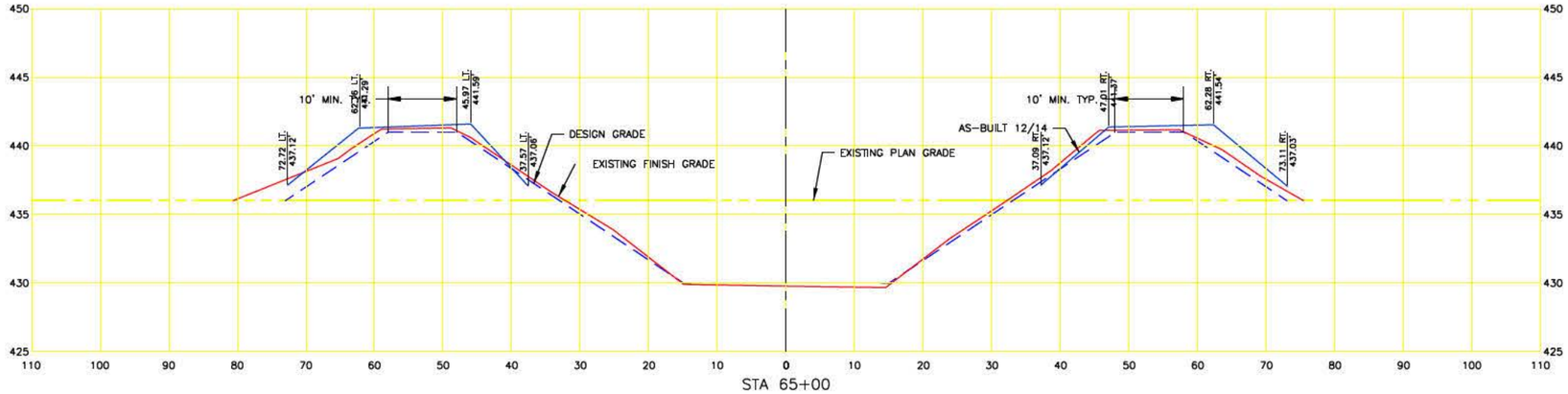
JOB NUMBER:
14-1066

SHEET NUMBER:
18 of 20

PLOT DATE: 1/20/15







SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

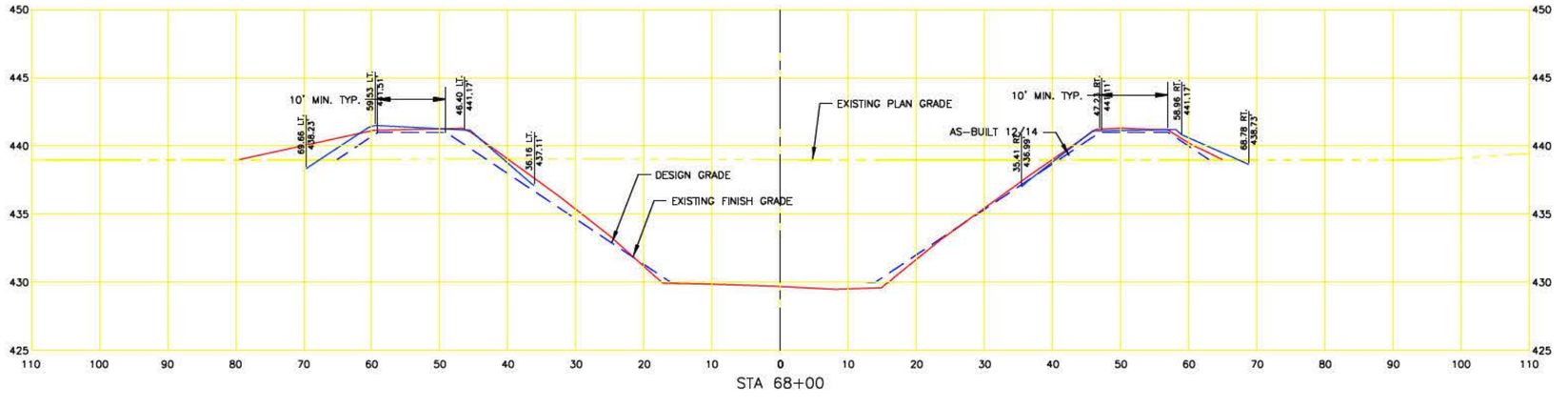
DRAWING:
SECTION SHEET - (19)

O:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey - DGN.dwg, Section Sheet - (1)

JOB NUMBER:
14-1066

SHEET NUMBER:
19 of 20

PLOT DATE: 1/20/15



SURVEY DATA REFERENCES GEOID 09.

CONTROL POINTS REFERENCED FOR THIS SURVEY:

CP 1, CP 2, CP 20 AND CP 21

(AS SUPPLIED BY FISCHER EXCAVATING)

SCALE
HOR 10 0 10 20
VER 5 0 5 10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 1/20/15

OWNER/DEVELOPER:
FISCHER EXCAVATING
1567 HEINE ROAD
FREEPORT, IL 61032

PROJECT AND LOCATION:
RICE LAKE
DISCHARGE CHANNEL
FINAL CROSS SECTIONS

DRAWN BY: JJS
APPROVED BY: NAG
DATE: 1/20/15
SCALE: 1" = 10'
1" = 5'

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
SECTION SHEET – (20)

Q:\Fischer Excavating, Inc\14-1066\Sent\14-1066 Survey\14-1066 Survey – DCN.dwg, Section Sheet – (1)

JOB NUMBER:
14-1066

SHEET NUMBER:
20 of 20

OPERATION AND MAINTENANCE MANUAL

RICE LAKE STATE FISH AND WILDLIFE AREA
UPPER MISSISSIPPI RIVER RESTORATION
HABITAT REHABILITATION AND ENHANCEMENT PROJECT
FULTON COUNTY, ILLINOIS

SEPTEMBER 2021

APPENDIX B

PROJECT PARTNERSHIP AGREEMENT
AND
RIGHT OF WAY DRAWINGS

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

JUL 2 0 2011

MEMORANDUM FOR THE DIRECTOR OF CIVIL WORKS

SUBJECT: Rice Lake, Illinois, Upper Mississippi River Restoration - Environmental Management Program, Project Partnership Agreement

This responds to a memorandum from the Chief of the Mississippi Valley Division Regional Integration Team dated July 6, 2011, requesting approval of subject draft agreement.

The draft agreement is approved. Authority to sign the final agreement on behalf of the Department of the Army is hereby delegated to the district commander.

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

PROJECT PARTNERSHIP AGREEMENT
BETWEEN
THE DEPARTMENT OF THE ARMY
AND
ILLINOIS DEPARTMENT OF NATURAL RESOURCES
FOR
DESIGN AND CONSTRUCTION
OF THE
RICE LAKE STATE FISH AND WILDLIFE AREA HABITAT REHABILITATION AND ENHANCEMENT PROJECT, FULTON COUNTY, ILLINOIS

THIS AGREEMENT is entered into this 27th day of July, 2011, by and between the Department of the Army (hereinafter the "Government"), represented by the Assistant Secretary of the Army (Civil Works) and Illinois Department of Natural Resources (hereinafter the "Non-Federal Sponsor"), represented by the Director.

WITNESSETH, THAT:

WHEREAS, design and construction of the Rice Lake State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project for fish and wildlife habitat rehabilitation and enhancement (hereinafter the "*Project*", as defined in Article I.A. of this Agreement) in Fulton County, Illinois, along the Illinois Waterway between river miles 132.0 and 138.0 was approved by the Commander, Mississippi Valley Division on April 10, 2011, pursuant to the authority contained in Section 1103(e)(1)(A)(i) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 652(e)(1)(A)(i); hereinafter "Section 1103 HREP");

WHEREAS, Section 1103(e)(3) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 652(e)(3)), provides that $22,750,000 in Federal funds are authorized to be appropriated for Fiscal Year 1999 and each *fiscal year* thereafter for the purposes of carrying the Section 1103 HREP program for the planning, construction, and evaluation of measures for fish and wildlife habitat rehabilitation and enhancement;

WHEREAS, the Government and the Non-Federal Sponsor desire to enter into a Project Partnership Agreement (hereinafter the "Agreement") for design and construction of the *Project*;

WHEREAS, Section 1103(e)(7)(A) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 652(e)(7)(A)), specifies the cost-sharing requirements applicable to the *Project*;

WHEREAS, performance of *monitoring* (as defined in Article I.M. of this Agreement) of the *Project* will be conducted at Federal expense through the Upper Mississippi River Restoration-Environmental Management Program-Long Term Resource Monitoring Program pursuant to Section 1103(e)(1)(A)(ii) of the Water

Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 652(e)(1)(A)(ii));

WHEREAS, Section 221 of the Flood Control Act of 1970, Public Law 91-611, as amended (42 U.S.C. 1962d-5b), and Section 103(j) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213(j)), provide, *inter alia*, that the Secretary of the Army shall not commence construction of any water resources project, or separable element thereof, until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project or separable element;

WHEREAS, the Government and Non-Federal Sponsor have the full authority and capability to perform as hereinafter set forth and intend to cooperate in cost-sharing and financing of the *Project* in accordance with the terms of this Agreement; and

WHEREAS, the Government and the Non-Federal Sponsor, in connection with this Agreement, desire to foster a partnering strategy and a working relationship between the Government and the Non-Federal Sponsor through a mutually developed formal strategy of commitment and communication embodied herein, which creates an environment where trust and teamwork prevent disputes, foster a cooperative bond between the Government and the Non-Federal Sponsor, and facilitate the successful implementation of the *Project*.

NOW, THEREFORE, the Government and the Non-Federal Sponsor agree as follows:

ARTICLE I - DEFINITIONS

A. The term "*Project*" shall mean a perimeter water control spillway and installing one gatewell structure, providing water control capability by constructing a pump station and excavating a discharge channel, installing two reinforced concrete fish egress structures, and enhancing floodplain habitat by planting 352 acres of mast producing trees and 57 acres of wet-mesic herbaceous plants on Duck Island on the right descending bank of the Illinois Waterway between river miles 132.0 and 138.0 in Fulton County, Illinois, as generally described in the Upper Mississippi River System Environmental Management Program Definite Project Report With Integrated Environmental Assessment (R-17F) for the Rice Lake State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project, dated March 2011, and approved by the Commander, Mississippi Valley Division on April 10, 2011.

B. The term "*total project costs*" shall mean the sum of all costs incurred by the Non-Federal Sponsor and the Government in accordance with the terms of this Agreement directly related to design and construction of the *Project* and the *pre-Agreement planning and design costs* incurred by the Government. Subject to the provisions of this Agreement, the term shall include, but is not necessarily limited to: the Government's *pre-Agreement planning and design costs* and the Government's design costs incurred after the effective date of this Agreement; the Government's costs of preparation of environmental

compliance documentation in accordance with Article II.A.2. of this Agreement; the Government's engineering and design costs during construction; the Non-Federal Sponsor's and the Government's costs of investigations to identify the existence and extent of hazardous substances in accordance with Article XIV.A. of this Agreement; the Government's costs of historic preservation activities in accordance with Article XVII.A. and Article XVII.B.1. of this Agreement; the Government's actual construction costs; the Government's supervision and administration costs; the Non-Federal Sponsor's and the Government's costs of participation in the Project Coordination Team in accordance with Article V of this Agreement; the Government's costs of contract dispute settlements or awards; the value of lands, easements, rights-of-way, *relocations*, and improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material for which the Government affords credit in accordance with Article IV of this Agreement or for which reimbursement by the Government is required pursuant to Article II.B.3. of this Agreement; and the Non-Federal Sponsor's and the Government's costs of audit in accordance with Article X.B. and Article X.C. of this Agreement. The term does not include any costs of *monitoring*; any costs for operation, maintenance, repair, rehabilitation, or replacement of the *Project*; any costs of *betterments* under Article II.H.2. of this Agreement; any costs of dispute resolution under Article VII of this Agreement; the Government's costs for data recovery activities associated with historic preservation in accordance with Article XVII.B.2. and Article XVII.B.3. of this Agreement; or the Non-Federal Sponsor's costs of negotiating this Agreement.

C. The term "*period of design and construction*" shall mean the time from the effective date of this Agreement to the date that construction of the *Project* is complete, as determined by the Government, or the date that this Agreement is terminated in accordance with Article XIII or Article XIV.C. of this Agreement, whichever is earlier.

D. The term "*financial obligations for design and construction*" shall mean the financial obligations of the Government that result or would result in costs that are or would be included in *total project costs* except for obligations pertaining to the provision of lands, easements, and rights-of-way, the performance of *relocations*, and the construction of improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material.

E. The term "*non-Federal proportionate share*" shall mean the ratio of the Non-Federal Sponsor's total contribution of funds required by Article II.B.2. of this Agreement to *financial obligations for design and construction*, as projected by the Government.

F. The term "*highway*" shall mean any highway, roadway, street, or way, including any bridge thereof, that is owned by a public entity.

G. The term "*relocation*" shall mean providing a functionally equivalent facility to the owner of a utility, cemetery, *highway*, railroad, or public facility when such action is authorized in accordance with applicable legal principles of just compensation. Providing a functionally equivalent facility may take the form of alteration, lowering, raising, or replacement and attendant demolition of the affected facility or part thereof.

H. The term "*functional portion of the Project*" shall mean a portion of the *Project* for which construction has been completed and that can function independently, as determined by the U.S. Army Engineer, Rock Island District (hereinafter the "District Engineer") in writing, although the remainder of the *Project* is not complete.

I. The term "*betterment*" shall mean a difference in the design or construction of an element of the *Project* that results from the application of standards that the Government determines exceed those that the Government would otherwise apply to the design or construction of that element. The term does not include any design or construction for features not included in the *Project* as defined in paragraph A. of this Article.

J. The term "*Federal program funds*" shall mean funds provided by a Federal agency, other than the Department of the Army, plus any non-Federal contribution required as a matching share therefor.

K. The term "*fiscal year*" shall mean one year beginning on October 1 and ending on September 30.

L. The term "*pre-Agreement planning and design costs*" shall mean all costs that were incurred by the Government prior to the effective date of this Agreement for planning and design of the *Project*.

M. The term "*monitoring*" shall mean activities, including the collection and analysis of data, that are necessary to determine if predicted outputs of the *Project* are being achieved.

N. The term "*Section 1103 HREP Annual Program Limit*" shall mean the statutory limitation on the Government's annual appropriations for planning, design, and construction of all projects implemented pursuant to Section 1103(e)(1)(A)(i) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 652(e)(1)(A)(i)). As of the effective date of this Agreement, such limitation is $22,750,000.

ARTICLE II - OBLIGATIONS OF THE GOVERNMENT AND THE NON-FEDERAL SPONSOR

A. The Government, subject to receiving funds appropriated by the Congress of the United States (hereinafter the "Congress") and using those funds and funds provided by the Non-Federal Sponsor, expeditiously shall design and construct the *Project*, applying those procedures usually applied to Federal projects, in accordance with Federal laws, regulations, and policies.

1. The Government shall not issue the solicitation for the first contract for design of the *Project* or commence design of the *Project* using the Government's own

forces until the Non-Federal Sponsor has confirmed in writing its willingness to proceed with the *Project*.

2. The Government shall develop and coordinate as required, an Environmental Assessment and Finding of No Significant Impact or an Environmental Impact Statement and Record of Decision, as necessary, to inform the public regarding the environmental impacts of the *Project* in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. 4321–4347; hereinafter "NEPA"). However, the Government shall not issue the solicitation for the first construction contract for the *Project* or commence construction of the *Project* using the Government's own forces until all applicable environmental laws and regulations have been complied with, including, but not limited to NEPA and Section 401 of the Federal Water Pollution Control Act (33 U.S.C. 1341).

3. The Government shall afford the Non-Federal Sponsor the opportunity to review and comment on the solicitations for all contracts, including relevant plans and specifications, prior to the Government's issuance of such solicitations. To the extent possible, the Government shall afford the Non-Federal Sponsor the opportunity to review and comment on all proposed contract modifications, including change orders. In any instance where providing the Non-Federal Sponsor with notification of a contract modification is not possible prior to execution of the contract modification, the Government shall provide such notification in writing at the earliest date possible. To the extent possible, the Government also shall afford the Non-Federal Sponsor the opportunity to review and comment on all contract claims prior to resolution thereof. The Government shall consider in good faith the comments of the Non-Federal Sponsor, but the contents of solicitations, award of contracts or commencement of design or construction using the Government's own forces, execution of contract modifications, resolution of contract claims, and performance of all work on the *Project* shall be exclusively within the control of the Government.

4. At the time the District Engineer furnishes the contractor with the Government's Written Notice of Acceptance of Completed Work for each contract awarded by the Government for the *Project*, the District Engineer shall furnish a copy thereof to the Non-Federal Sponsor.

B. The Non-Federal Sponsor shall contribute 35 percent of *total project costs* in accordance with the provisions of this paragraph.

1. In accordance with Article III of this Agreement, the Non-Federal Sponsor shall provide all lands, easements, and rights-of-way, including those required for *relocations*, the borrowing of material, and the disposal of dredged or excavated material, shall perform or ensure performance of all *relocations*, and shall construct improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material that the Government determines to be required or to be necessary for construction, operation, and maintenance of the *Project*.

2. The Non-Federal Sponsor shall provide funds in accordance with Article VI.B. of this Agreement in the amount necessary to meet the Non-Federal Sponsor's required share of 35 percent of *total project costs* if the Government projects at any time that the collective value of the following contributions will be less than such required share: (a) the value of the Non-Federal Sponsor's contributions under paragraph B.1. of this Article as determined in accordance with Article IV of this Agreement; and (b) the value of the Non-Federal Sponsor's contributions under Article V, Article X, and Article XIV.A. of this Agreement.

3. The Government, subject to the availability of funds and as limited by the *Section 1103 HREP Annual Program Limit*, shall refund or reimburse to the Non-Federal Sponsor any contributions in excess of 35 percent of *total project costs* if the Government determines at any time that the collective value of the following contributions has exceeded 35 percent of *total project costs*: (a) the value of the Non-Federal Sponsor's contributions under paragraph B.1. of this Article as determined in accordance with Article IV of this Agreement; (b) the value of the Non-Federal Sponsor's contributions under paragraph B.2. of this Article; and (c) the value of the Non-Federal Sponsor's contributions under Article V, Article X, and Article XIV.A. of this Agreement. After such a determination, the Government, in its sole discretion, may acquire any remaining lands, easements, and rights-of-way required for the *Project*, perform any remaining *relocations* necessary for the *Project*, or construct any remaining improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material required for the *Project* on behalf of the Non-Federal Sponsor. Notwithstanding the acquisition of lands, easements, and rights-of-way, performance of *relocations*, or construction of improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material by the Government under this paragraph, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for any costs of cleanup and response in accordance with Article XIV.C. of this Agreement.

C. Notwithstanding any other provision of this Agreement, Federal financial participation in the *Project* is limited by the following provisions of this paragraph.

1. In the event the Government projects that the amount of Federal funds the Government will make available to the *Project* through the then-current *fiscal year*, or the amount of Federal funds the Government will make available for the *Project* through the upcoming *fiscal year*, is not sufficient to meet the Federal share of *total project costs* and the Federal share of costs for data recovery activities associated with historic preservation in accordance with Article XVII.B.2. and Article XVII.B.3. of this Agreement that the Government projects to be incurred through the then-current or upcoming *fiscal year*, as applicable, the Government shall notify the Non-Federal Sponsor in writing of such insufficiency of funds and of the date the Government projects that the Federal funds that will have been made available to the *Project* will be exhausted. Upon the exhaustion of Federal funds made available by the Government to the *Project*, future performance under this Agreement shall be suspended and the parties shall proceed in accordance with Article XIII.B. of this Agreement.

2. As of the effective date of this Agreement, $13,495,099 is currently projected to be available for the *Project*. The Government makes no commitment to request Congress to provide additional Federal funds for the *Project*. Further, the Government's financial participation in the *Project* is limited to the Federal funds that the Government makes available to the *Project*.

D. When the District Engineer determines that the entire *Project*, or a *functional portion of the Project*, is complete, the District Engineer shall so notify the Non-Federal Sponsor in writing and furnish the Non-Federal Sponsor with a final Operation, Maintenance, Repair, Rehabilitation, and Replacement Manual (hereinafter the "OMRR&R Manual") or, if the final OMRR&R Manual is not available, an interim OMRR&R Manual for the entire *Project* or such completed portion. Upon such notification, the Government also shall furnish to the Non-Federal Sponsor a copy of all final as-built drawings for the entire *Project* or such completed portion if such drawings are available. Not later than 6 months after such notification by the Government that the entire *Project* is complete, the Government shall furnish the Non-Federal Sponsor with the final OMRR&R Manual and all final as-built drawings for the entire *Project*. In the event the final OMRR&R Manual or all final as-built drawings for the entire *Project* cannot be completed within the 6 month period, the Government shall provide written notice to the Non-Federal Sponsor, and the Government and the Non-Federal Sponsor shall negotiate an acceptable completion date for furnishing such documents. Further, after completion of all contracts for the *Project*, copies of all of the Government's Written Notices of Acceptance of Completed Work for all contracts for the *Project* that have not been provided previously shall be provided to the Non-Federal Sponsor.

E. Upon notification from the District Engineer in accordance with paragraph D. of this Article, the Non-Federal Sponsor shall operate, maintain, repair, rehabilitate, and replace the entire *Project*, or the *functional portion of the Project* as the case may be, in accordance with Article VIII of this Agreement.

F. Upon conclusion of the *period of design and construction*, the Government shall conduct an accounting, in accordance with Article VI.C. of this Agreement, and furnish the results to the Non-Federal Sponsor.

G. The Non-Federal Sponsor shall not use *Federal program funds* to meet any of its obligations for the *Project* under this Agreement unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is expressly authorized by Federal law.

H. The Non-Federal Sponsor may request the Government to perform or provide, on behalf of the Non-Federal Sponsor, one or more of the services (hereinafter the "additional work") described in this paragraph. Such requests shall be in writing and shall describe the additional work requested to be performed or provided. If in its sole discretion the Government elects to perform or provide the requested additional work or any portion thereof, it shall so notify the Non-Federal Sponsor in a writing that sets forth any applicable terms and conditions, which must be consistent with this Agreement. In

the event of conflict between such a writing and this Agreement, this Agreement shall control. The Non-Federal Sponsor shall be solely responsible for all costs of the additional work performed or provided by the Government under this paragraph and shall pay all such costs in accordance with Article VI.D. of this Agreement.

1. Acquisition of lands, easements, and rights-of-way; performance of *relocations*; or construction of improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material for the *Project*. Notwithstanding acquisition of lands, easements, and rights-of-way, performance of *relocations*, or construction of improvements by the Government, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for any costs of cleanup and response in accordance with Article XIV.C. of this Agreement.

2. Inclusion of *betterments* in the design or construction of the *Project*. In the event the Government elects to include any such *betterments*, the Government shall allocate the costs of the *Project* features that include *betterments* between *total project costs* and the costs of the *betterments*.

I. The Non-Federal Sponsor shall prevent obstructions or encroachments on the *Project* (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on *Project* lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the *Project*, hinder operation and maintenance of the *Project*, or interfere with the *Project's* proper function.

J. The Non-Federal Sponsor shall not use the *Project*, or the lands, easements, and rights-of-way required pursuant to Article III of this Agreement, as a wetlands bank or mitigation credit for any other project.

ARTICLE III - LANDS, EASEMENTS, RIGHTS-OF-WAY, RELOCATIONS, DISPOSAL AREA IMPROVEMENTS, AND COMPLIANCE WITH PUBLIC LAW 91-646, AS AMENDED

A. The Government, after consultation with the Non-Federal Sponsor, shall determine the lands, easements, and rights-of-way required for construction, operation, and maintenance of the *Project*, including those required for *relocations*, the borrowing of material, and the disposal of dredged or excavated material. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of the lands, easements, and rights-of-way that the Government determines the Non-Federal Sponsor must provide, in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with acquisition of such lands, easements, and rights-of-way. Prior to the issuance of the solicitation for each Government contract for construction of the *Project*, or prior to the Government initiating construction of a

portion of the *Project* using the Government's own forces, the Non-Federal Sponsor shall acquire all lands, easements, and rights-of-way the Government determines the Non-Federal Sponsor must provide for that work and shall provide the Government with authorization for entry thereto. Furthermore, prior to the end of the *period of design and construction*, the Non-Federal Sponsor shall acquire all lands, easements, and rights-of-way required for construction, operation, and maintenance of the *Project*, as set forth in such descriptions, and shall provide the Government with authorization for entry thereto. The Non-Federal Sponsor shall ensure that lands, easements, and rights-of-way that the Government determines to be required for the *Project* and that were provided by the Non-Federal Sponsor are retained in public ownership for uses compatible with the authorized purposes of the *Project*.

B. The Government, after consultation with the Non-Federal Sponsor, shall determine the *relocations* necessary for construction, operation, and maintenance of the *Project*, including those necessary to enable the borrowing of material or the disposal of dredged or excavated material. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such *relocations* in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with such *relocations*. Prior to the issuance of the solicitation for each Government contract for construction of the *Project*, or prior to the Government initiating construction of a portion of the *Project* using the Government's own forces, the Non-Federal Sponsor shall prepare or ensure the preparation of plans and specifications for, and perform or ensure the performance of, all *relocations* the Government determines to be necessary for that work. Furthermore, prior to the end of the *period of design and construction*, the Non-Federal Sponsor shall perform or ensure performance of all *relocations* as set forth in such descriptions.

C. The Government, after consultation with the Non-Federal Sponsor, shall determine the improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material associated with construction, operation, and maintenance of the *Project*. Such improvements may include, but are not necessarily limited to, retaining dikes, wasteweirs, bulkheads, embankments, monitoring features, stilling basins, and de-watering pumps and pipes. The Government in a timely manner shall provide the Non-Federal Sponsor with general written descriptions, including maps as appropriate, of such improvements in detail sufficient to enable the Non-Federal Sponsor to fulfill its obligations under this paragraph, and shall provide the Non-Federal Sponsor with a written notice to proceed with construction of such improvements. Prior to the issuance of the solicitation for each Government contract for construction of the *Project*, or prior to the Government initiating construction of a portion of the *Project* using the Government's own forces, the Non-Federal Sponsor shall prepare plans and specifications for all improvements the Government determines to be required for the disposal of dredged or excavated material under that contract, submit such plans and specifications to the Government for approval, and provide such improvements in accordance with the approved plans and specifications. Furthermore, prior to the end of the *period of design and*

construction, the Non-Federal Sponsor shall provide all improvements set forth in such descriptions.

D. The Non-Federal Sponsor shall comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 C.F.R. Part 24, in acquiring lands, easements, and rights-of-way required for construction, operation, and maintenance of the *Project*, including those required for *relocations*, the borrowing of material, or the disposal of dredged or excavated material, and shall inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

ARTICLE IV - CREDIT FOR VALUE OF LANDS, EASEMENTS, RIGHTS-OF-WAY, RELOCATIONS, AND DISPOSAL AREA IMPROVEMENTS

A. The Government shall include in *total project costs* and afford credit toward the Non-Federal Sponsor's share of *total project costs* for the value of the lands, easements, and rights-of-way that the Non-Federal Sponsor must provide pursuant to Article III.A. of this Agreement; for the value of the *relocations* that the Non-Federal Sponsor must perform or for which it must ensure performance pursuant to Article III.B. of this Agreement; and for the value of the improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material that the Non-Federal Sponsor must provide pursuant to Article III.C. of this Agreement. However, no amount shall be included in *total project costs*, no credit shall be afforded, and no reimbursement shall be provided for the value of any lands, easements, rights-of-way, *relocations*, or improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material that have been provided previously as an item of cooperation for another Federal project. In addition, no amount shall be included in *total project costs*, no credit shall be afforded, and no reimbursement shall be provided for the value of lands, easements, rights-of-way, *relocations*, or improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material that were acquired or performed using *Federal program funds* unless the Federal agency providing the Federal portion of such funds verifies in writing that affording credit for the value of such items is expressly authorized by Federal law.

B. The Non-Federal Sponsor in a timely manner shall provide the Government with such documents as are sufficient to enable the Government to determine the value of any contribution provided pursuant to Article III.A., Article III.B., or Article III.C. of this Agreement. Upon receipt of such documents, the Government in a timely manner shall determine the value of such contributions for the purpose of including such value in *total project costs* and for determining the amount of credit to be afforded or reimbursement to be provided in accordance with the provisions of this Agreement.

C. For the purposes of determining the value to be included in *total project costs* and the amount of credit to be afforded or reimbursement to be provided in accordance

with this Agreement and except as otherwise provided in paragraph G. of this Article, the value of lands, easements, and rights-of-way, including those required for *relocations*, the borrowing of material, and the disposal of dredged or excavated material, shall be the fair market value of the real property interests, plus certain incidental costs of acquiring those interests, as determined in accordance with the provisions of this paragraph.

1. Date of Valuation.

a. The fair market value of lands, easements, or rights-of-way owned by the Non-Federal Sponsor on the effective date of this Agreement shall be the fair market value of such real property interests as of the date the Non-Federal Sponsor provides the Government with authorization for entry thereto.

b. The fair market value of lands, easements, or rights-of-way acquired by the Non-Federal Sponsor after the effective date of this Agreement shall be the fair market value of such real property interests at the time the interests are acquired.

2. General Valuation Procedure. Except as provided in paragraph C.3. or paragraph C.5. of this Article, the fair market value of lands, easements, or rights-of-way shall be determined in accordance with the provisions of this paragraph.

a. The Non-Federal Sponsor shall obtain, for each real property interest, an appraisal that is prepared by a qualified appraiser who is acceptable to the Non-Federal Sponsor and the Government. The Non-Federal Sponsor shall provide the Government with the appraisal no later than 6 months after the Non-Federal Sponsor provides the Government with an authorization for entry for such real property interest. The appraisal must be prepared in accordance with the applicable rules of just compensation, as specified by the Government. The fair market value shall be the amount set forth in the Non-Federal Sponsor's appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's appraisal, the Non-Federal Sponsor may obtain a second appraisal, and the fair market value shall be the amount set forth in the Non-Federal Sponsor's second appraisal, if such appraisal is approved by the Government. In the event the Government does not approve the Non-Federal Sponsor's second appraisal, the Non-Federal Sponsor chooses not to obtain a second appraisal, or the Non-Federal Sponsor does not provide the first appraisal as required in this paragraph, the Government shall obtain an appraisal, and the fair market value shall be the amount set forth in the Government's appraisal, if such appraisal is approved by the Non-Federal Sponsor. In the event the Non-Federal Sponsor does not approve the Government's appraisal, the Government, after consultation with the Non-Federal Sponsor, shall consider the Government's and the Non-Federal Sponsor's appraisals and determine an amount based thereon, which shall be deemed to be the fair market value.

b. Where the amount paid or proposed to be paid by the Non-Federal Sponsor for the real property interest exceeds the amount determined pursuant to paragraph C.2.a. of this Article, the Government, at the request of the Non-Federal Sponsor, shall consider all factors relevant to determining fair market value and, in its sole discretion, after

consultation with the Non-Federal Sponsor, may approve in writing an amount greater than the amount determined pursuant to paragraph C.2.a. of this Article, but not to exceed the amount actually paid or proposed to be paid. If the Government approves such an amount, the fair market value shall be the lesser of the approved amount or the amount paid by the Non-Federal Sponsor, but no less than the amount determined pursuant to paragraph C.2.a. of this Article.

3. Eminent Domain Valuation Procedure. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted after the effective date of this Agreement, the Non-Federal Sponsor, prior to instituting such proceedings, shall submit to the Government notification in writing of its intent to institute such proceedings and an appraisal of the specific real property interests to be acquired in such proceedings. The Government shall have 60 calendar days after receipt of such a notice and appraisal within which to review the appraisal, if not previously approved by the Government in writing.

a. If the Government previously has approved the appraisal in writing, or if the Government provides written approval of, or takes no action on, the appraisal within such 60 day period, the Non-Federal Sponsor shall use the amount set forth in such appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

b. If the Government provides written disapproval of the appraisal, including the reasons for disapproval, within such 60 day period, the Government and the Non-Federal Sponsor shall consult in good faith to promptly resolve the issues or areas of disagreement that are identified in the Government's written disapproval. If, after such good faith consultation, the Government and the Non-Federal Sponsor agree as to an appropriate amount, then the Non-Federal Sponsor shall use that amount as the estimate of just compensation for the purpose of instituting the eminent domain proceeding. If, after such good faith consultation, the Government and the Non-Federal Sponsor cannot agree as to an appropriate amount, then the Non-Federal Sponsor may use the amount set forth in its appraisal as the estimate of just compensation for the purpose of instituting the eminent domain proceeding.

c. For lands, easements, or rights-of-way acquired by eminent domain proceedings instituted in accordance with paragraph C.3. of this Article, fair market value shall be either the amount of the court award for the real property interests taken, to the extent the Government determined such interests are required for construction, operation, and maintenance of the *Project*, or the amount of any stipulated settlement or portion thereof that the Government approves in writing.

4. Incidental Costs. For lands, easements, or rights-of-way acquired by the Non-Federal Sponsor within a five year period preceding the effective date of this Agreement, or at any time after the effective date of this Agreement, the value of the interest shall include the documented incidental costs of acquiring the interest, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs. In the event the

Government modifies its determination made pursuant to Article III.A. of this Agreement, the Government shall afford credit for the documented incidental costs associated with preparing to acquire the lands, easements, or rights-of-way identified in the original determination, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs. Such incidental costs shall include, but not necessarily be limited to, closing and title costs, appraisal costs, survey costs, attorney's fees, plat maps, mapping costs, actual amounts expended for payment of any relocation assistance benefits provided in accordance with Article III.D. of this Agreement, and other payments by the Non-Federal Sponsor for items that are generally recognized as compensable, and required to be paid, by applicable state law due to the acquisition of a real property interest in accordance with Article III of this Agreement. The value of the interests provided by the Non-Federal Sponsor in accordance with Article III.A. of this Agreement also shall include the documented costs of obtaining appraisals pursuant to paragraph C.2. of this Article, as determined by the Government, and subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs.

5. Waiver of Appraisal. Except as required by paragraph C.3. of this Article, the Government may waive the requirement for an appraisal pursuant to this paragraph if it determines that an appraisal is unnecessary because the valuation is uncomplicated and that the estimated fair market value of the real property interest is $10,000 or less based upon a review of available data. In such event, the Government and the Non-Federal Sponsor must agree in writing to the value of such real property interest in an amount not in excess of $10,000.

D. After consultation with the Non-Federal Sponsor, the Government shall determine the value of *relocations* in accordance with the provisions of this paragraph.

1. For a *relocation* other than a *highway*, the value shall be only that portion of *relocation* costs that the Government determines is necessary to provide a functionally equivalent facility, reduced by depreciation, as applicable, and by the salvage value of any removed items.

2. For a *relocation* of a *highway*, the value shall be only that portion of *relocation* costs that would be necessary to accomplish the *relocation* in accordance with the design standard that the State of Illinois would apply under similar conditions of geography and traffic load, reduced by the salvage value of any removed items.

3. *Relocation* costs shall include, but not necessarily be limited to, actual costs of performing the *relocation*; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with performance of the *relocation*, as determined by the Government. *Relocation* costs shall not include any costs due to *betterments*, as determined by the Government, nor any additional cost of using new material when suitable used material is available. *Relocation* costs shall be subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs.

E. The value of the improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material shall be the costs of the improvements, as determined by the Government, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs. Such costs shall include, but not necessarily be limited to, actual costs of providing the improvements; planning, engineering and design costs; supervision and administration costs; and documented incidental costs associated with providing the improvements, but shall not include any costs due to *betterments*, as determined by the Government.

F. Any credit afforded or reimbursement provided under the terms of this Agreement for the value of *relocations*, or improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material, performed within the *Project* boundaries is subject to satisfactory compliance with applicable Federal labor laws covering non-Federal construction, including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)). Notwithstanding any other provision of this Agreement, credit or reimbursement may be withheld, in whole or in part, as a result of the Non-Federal Sponsor's failure to comply with its obligations under these laws.

G. Where the Government, on behalf of the Non-Federal Sponsor pursuant to Article II.H.1. of this Agreement, acquires lands, easements, or rights-of-way, performs *relocations*, or constructs improvements required on lands, easements, or rights-of-way to enable the disposal of dredged or excavated material, the value to be included in *total project costs* and the amount of credit to be afforded or the amount of reimbursement provided in accordance with this Agreement shall be the costs of such work performed or provided by the Government that are paid by the Non-Federal Sponsor in accordance with Article VI.D. of this Agreement. In addition, the value to be included in *total project costs* and the amount of such credit to be afforded or the amount of reimbursement provided in accordance with this Agreement shall include the documented costs incurred by the Non-Federal Sponsor in accordance with the terms and conditions agreed upon in writing pursuant to Article II.H.1. of this Agreement subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs.

ARTICLE V - PROJECT COORDINATION TEAM

A. To provide for consistent and effective communication, the Non-Federal Sponsor and the Government, not later than 30 calendar days after the effective date of this Agreement, shall appoint named senior representatives to a Project Coordination Team. Thereafter, the Project Coordination Team shall meet regularly until the end of the *period of*

design and construction. The Government's Project Manager and a counterpart named by the Non-Federal Sponsor shall co-chair the Project Coordination Team.

B. The Government's Project Manager and the Non-Federal Sponsor's counterpart shall keep the Project Coordination Team informed of the progress of design and construction and of significant pending issues and actions, and shall seek the views of the Project Coordination Team on matters that the Project Coordination Team generally oversees.

C. Until the end of the *period of design and construction*, the Project Coordination Team shall generally oversee the *Project*, including matters related to: design; completion of all necessary environmental coordination and documentation; plans and specifications; scheduling; real property and *relocation* requirements; real property acquisition; contract awards and modifications; contract costs; the application of and compliance with 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)) for *relocations* and improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material; the investigations to identify the existence and extent of hazardous substances in accordance with Article XIV.A. of this Agreement; historic preservation activities in accordance with Article XVII of this Agreement; the Government's cost projections; final inspection of the entire *Project* or *functional portions of the Project*; preparation of the proposed OMRR&R Manual; anticipated requirements and needed capabilities for performance of operation, maintenance, repair, rehabilitation, and replacement of the *Project* including issuance of permits; and other matters related to the *Project*. This oversight of the *Project* shall be consistent with a project management plan developed by the Government after consultation with the Non-Federal Sponsor.

D. The Project Coordination Team may make recommendations to the District Engineer on matters related to the *Project* that the Project Coordination Team generally oversees, including suggestions to avoid potential sources of dispute. The Government in good faith shall consider the recommendations of the Project Coordination Team. The Government, having the legal authority and responsibility for design and construction of the *Project*, has the discretion to accept or reject, in whole or in part, the Project Coordination Team's recommendations.

E. The Non-Federal Sponsor's costs of participation in the Project Coordination Team shall be included in *total project costs* and shared in accordance with the provisions of this Agreement, subject to an audit in accordance with Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs. The Government's costs of participation in the Project Coordination Team shall be included in *total project costs* and shared in accordance with the provisions of this Agreement.

ARTICLE VI - METHOD OF PAYMENT

A. In accordance with the provisions of this paragraph, the Government shall maintain current records and provide to the Non-Federal Sponsor current projections of costs, financial obligations, contributions provided by the parties, the value included in *total project costs* for lands, easements, rights-of-way, *relocations*, and improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material determined in accordance with Article IV of this Agreement.

1. As of the effective date of this Agreement, *total project costs* are projected to be $20,763,000; the Non-Federal Sponsor's contribution of funds required by Article II.B.2. of this Agreement is projected to be $0; the *non-Federal proportionate share* is projected to be 0.0 percent; the Non-Federal Sponsor's contribution of funds required by Article XVII.B.3. of this Agreement is projected to be $0; the value included in *total project costs* for lands, easements, rights-of-way, *relocations*, and improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material determined in accordance with Article IV of this Agreement is projected to be $7,573,000; and the Government's total financial obligations for the additional work to be incurred and the Non-Federal Sponsor's contribution of funds for such costs required by Article II.H. of this Agreement are projected to be $0. These amounts and percentage are estimates subject to adjustment by the Government, after consultation with the Non-Federal Sponsor, and are not to be construed as the total financial responsibilities of the Government and the Non-Federal Sponsor.

2. By November 1, 2011 and by each quarterly anniversary thereof until the conclusion of the *period of design and construction* and resolution of all relevant claims and appeals and eminent domain proceedings, the Government shall provide the Non-Federal Sponsor with a report setting forth all contributions provided to date and the current projections of the following: *total project costs*; the Non-Federal Sponsor's total contribution of funds required by Article II.B.2. of this Agreement; the *non-Federal proportionate share*; the Non-Federal Sponsor's total contribution of funds required by Article XVII.B.3. of this Agreement; the value included in *total project costs* for lands, easements, rights-of-way, *relocations*, and improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material determined in accordance with Article IV of this Agreement; and the Government's total financial obligations for additional work incurred and the Non-Federal Sponsor's contribution of funds for such costs required by Article II.H. of this Agreement.

B. The Non-Federal Sponsor shall provide the contributions of funds required by Article II.B.2. and Article XVII.B.3. of this Agreement in accordance with the provisions of this paragraph.

1. Not less than 60 calendar days prior to the scheduled date for issuance of the solicitation for the first contract for design of the *Project* or commencement of design of the *Project* using the Government's own forces, the Government shall notify the Non-Federal Sponsor in writing of such scheduled date and the funds the Government

determines to be required from the Non-Federal Sponsor to meet its projected share under Article II.B.2. and Article XVII.B.3. of this Agreement. Not later than such scheduled date, the Non-Federal Sponsor shall provide the Government with the full amount of such required funds by delivering a check payable to "FAO, USAED, Rock Island (B5)" to the District Engineer, or verifying to the satisfaction of the Government that the Non-Federal Sponsor has deposited such required funds in an escrow or other account acceptable to the Government, with interest accruing to the Non-Federal Sponsor, or by presenting the Government with an irrevocable letter of credit acceptable to the Government for such required funds, or by providing an Electronic Funds Transfer of such required funds in accordance with procedures established by the Government.

2. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover: (a) the *non-Federal proportionate share* of *financial obligations for design and construction* incurred prior to the commencement of the *period of design and construction*; (b) the *non-Federal proportionate share* of *financial obligations for design and construction* as *financial obligations for design and construction* are incurred; and (c) the Non-Federal Sponsor's share of financial obligations for data recovery activities associated with historic preservation pursuant to Article XVII.B.3. of this Agreement as those financial obligations are incurred. If at any time the Government determines that additional funds will be needed from the Non-Federal Sponsor to cover the Non-Federal Sponsor's share of such financial obligations, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required and provide an explanation of why additional funds are required. Within 60 calendar days from receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such additional required funds through any of the payment mechanisms specified in paragraph B.1. of this Article.

C. Upon conclusion of the *period of design and construction* and resolution of all relevant claims and appeals and eminent domain proceedings, the Government shall conduct a final accounting and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. If outstanding relevant claims and appeals or eminent domain proceedings prevent a final accounting from being conducted in a timely manner, the Government shall conduct an interim accounting and furnish the Non-Federal Sponsor with written notice of the results of such interim accounting. Once all outstanding relevant claims and appeals and eminent domain proceedings are resolved, the Government shall amend the interim accounting to complete the final accounting and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. The interim or final accounting, as applicable, shall determine *total project costs* and the costs of any data recovery activities associated with historic preservation. In addition, for each set of costs, the interim or final accounting, as applicable, shall determine each party's required share thereof and each party's total contributions thereto as of the date of such accounting.

1. Should the interim or final accounting, as applicable, show that the Non-Federal Sponsor's total required shares of *total project costs* and the costs of any data recovery activities associated with historic preservation exceed the Non-Federal

Sponsor's total contributions provided thereto, the Non-Federal Sponsor, no later than 90 calendar days after receipt of written notice from the Government, shall make a payment to the Government in an amount equal to the difference by delivering a check payable to "FAO, USAED, Rock Island (B5)" to the District Engineer or by providing an Electronic Funds Transfer in accordance with procedures established by the Government.

2. Should the interim or final accounting, as applicable, show that the total contributions provided by the Non-Federal Sponsor for *total project costs* and the costs of any data recovery activities associated with historic preservation exceed the Non-Federal Sponsor's total required shares thereof, the Government, subject to the availability of funds and as limited by the *Section 1103 HREP Annual Program Limit*, shall refund or reimburse the excess amount to the Non-Federal Sponsor within 90 calendar days of the date of completion of such accounting. In the event the Non-Federal Sponsor is due a refund or reimbursement and funds are not available to refund or reimburse the excess amount to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund or reimbursement.

D. The Non-Federal Sponsor shall provide the contribution of funds required by Article II.H. of this Agreement for additional work in accordance with the provisions of this paragraph.

1. Not less than 60 calendar days prior to the scheduled date for the first financial obligation for additional work, the Government shall notify the Non-Federal Sponsor in writing of such scheduled date and of the full amount of funds the Government determines to be required from the Non-Federal Sponsor to cover the costs of the additional work. No later than 30 calendar days prior to the Government incurring any financial obligation for additional work, the Non-Federal Sponsor shall provide the Government with the full amount of the funds required to cover the costs of such additional work through any of the payment mechanisms specified in paragraph B.1. of this Article.

2. The Government shall draw from the funds provided by the Non-Federal Sponsor such sums as the Government deems necessary to cover the Government's financial obligations for such additional work as they are incurred. If at any time the Government determines that the Non-Federal Sponsor must provide additional funds to pay for such additional work, the Government shall notify the Non-Federal Sponsor in writing of the additional funds required and provide an explanation of why additional funds are required. Within 30 calendar days from receipt of such notice, the Non-Federal Sponsor shall provide the Government with the full amount of such additional required funds through any of the payment mechanisms specified in paragraph B.1. of this Article.

3. At the time the Government conducts the interim or final accounting, as applicable, the Government shall conduct an accounting of the Government's financial obligations incurred for additional work and furnish the Non-Federal Sponsor with written notice of the results of such accounting. If outstanding relevant claims and

appeals or eminent domain proceedings prevent a final accounting of such financial obligations for additional work from being conducted in a timely manner, the Government shall conduct an interim accounting of such financial obligations for additional work and furnish the Non-Federal Sponsor with written notice of the results of such interim accounting. Once all outstanding relevant claims and appeals and eminent domain proceedings are resolved, the Government shall amend the interim accounting of such financial obligations for additional work to complete the final accounting of such financial obligations for additional work and furnish the Non-Federal Sponsor with written notice of the results of such final accounting. Such interim or final accounting, as applicable, shall determine the Government's total financial obligations for additional work and the Non-Federal Sponsor's contribution of funds provided thereto as of the date of such accounting.

a. Should the interim or final accounting, as applicable, show that the Government's total financial obligations for additional work exceed the total contribution of funds provided by the Non-Federal Sponsor for such additional work, the Non-Federal Sponsor, no later than 90 calendar days after receipt of written notice from the Government, shall make a payment to the Government in an amount equal to the difference by delivering a check payable to "FAO, USAED, Rock Island (B5)" to the District Engineer or by providing an Electronic Funds Transfer in accordance with procedures established by the Government.

b. Should the interim or final accounting, as applicable, show that the total contribution of funds provided by the Non-Federal Sponsor for additional work exceeds the Government's total financial obligations for such additional work, the Government, subject to the availability of funds, shall refund the excess amount to the Non-Federal Sponsor within 90 calendar days of the date of completion of such accounting. In the event the Non-Federal Sponsor is due a refund and funds are not available to refund the excess amount to the Non-Federal Sponsor, the Government shall seek such appropriations as are necessary to make the refund.

ARTICLE VII - DISPUTE RESOLUTION

As a condition precedent to a party bringing any suit for breach of this Agreement, that party must first notify the other party in writing of the nature of the purported breach and seek in good faith to resolve the dispute through negotiation. If the parties cannot resolve the dispute through negotiation, they may agree to a mutually acceptable method of non-binding alternative dispute resolution with a qualified third party acceptable to both parties. Each party shall pay an equal share of any costs for the services provided by such a third party as such costs are incurred. The existence of a dispute shall not excuse the parties from performance pursuant to this Agreement.

ARTICLE VIII - OPERATION, MAINTENANCE, REPAIR, REHABILITATION, AND REPLACEMENT (OMRR&R)

A. Upon receipt of the notification from the District Engineer in accordance with Article II.D. of this Agreement and for so long as the *Project* remains authorized, the Non-Federal Sponsor, pursuant to Article II.E. of this Agreement, shall operate, maintain, repair, rehabilitate, and replace the entire *Project* or *functional portion of the Project*, at no cost to the Government. The Non-Federal Sponsor shall conduct its operation, maintenance, repair, rehabilitation, and replacement responsibilities in a manner compatible with the *Project's* authorized purposes and in accordance with applicable Federal and State laws as provided in Article XI of this Agreement and specific directions prescribed by the Government in the interim or final OMRR&R Manual and any subsequent amendments thereto.

B. The Non-Federal Sponsor hereby gives the Government a right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor now or hereafter owns or controls for access to the *Project* for the purpose of inspection and, if necessary, for the purpose of completing, operating, maintaining, repairing, rehabilitating, or replacing the *Project*. If an inspection shows that the Non-Federal Sponsor for any reason is failing to perform its obligations under this Agreement, the Government shall send a written notice describing the non-performance to the Non-Federal Sponsor. If, after 30 calendar days from receipt of such written notice by the Government, the Non-Federal Sponsor continues to fail to perform, then the Government shall have the right to enter, at reasonable times and in a reasonable manner, upon property that the Non-Federal Sponsor now or hereafter owns or controls for the purpose of completing, operating, maintaining, repairing, rehabilitating, or replacing the *Project*. No completion, operation, maintenance, repair, rehabilitation, or replacement by the Government shall relieve the Non-Federal Sponsor of responsibility to meet the Non-Federal Sponsor's obligations as set forth in this Agreement, or to preclude the Government from pursuing any other remedy at law or equity to ensure faithful performance pursuant to this Agreement.

ARTICLE IX – HOLD AND SAVE

Subject to the provisions of Article XIX of this Agreement, the Non-Federal Sponsor shall hold and save the Government free from all damages arising from design, construction, operation, maintenance, repair, rehabilitation, and replacement of the *Project* and any *betterments*, except for damages due to the fault or negligence of the Government or its contractors.

ARTICLE X - MAINTENANCE OF RECORDS AND AUDIT

A. Not later than 60 calendar days after the effective date of this Agreement, the Government and the Non-Federal Sponsor shall develop procedures for keeping books, records, documents, or other evidence pertaining to costs and expenses incurred pursuant to

this Agreement. These procedures shall incorporate, and apply as appropriate, the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 C.F.R. Section 33.20. The Government and the Non-Federal Sponsor shall maintain such books, records, documents, or other evidence in accordance with these procedures and for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence were required. To the extent permitted under applicable Federal laws and regulations, the Government and the Non-Federal Sponsor shall each allow the other to inspect such books, records, documents, or other evidence.

B. In accordance with 32 C.F.R. Section 33.26, the Non-Federal Sponsor is responsible for complying with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507), as implemented by Office of Management and Budget (OMB) Circular No. A-133 and Department of Defense Directive 7600.10. Upon request of the Non-Federal Sponsor and to the extent permitted under applicable Federal laws and regulations, the Government shall provide to the Non-Federal Sponsor and independent auditors any information necessary to enable an audit of the Non-Federal Sponsor's activities under this Agreement. The costs of any non-Federal audits performed in accordance with this paragraph shall be allocated in accordance with the provisions of OMB Circulars A-87 and A-133, and such costs as are allocated to the *Project* shall be included in *total project costs* and shared in accordance with the provisions of this Agreement.

C. In accordance with 31 U.S.C. 7503, the Government may conduct audits in addition to any audit that the Non-Federal Sponsor is required to conduct under the Single Audit Act Amendments of 1996. Any such Government audits shall be conducted in accordance with Government Auditing Standards and the cost principles in OMB Circular No. A-87 and other applicable cost principles and regulations. The costs of Government audits performed in accordance with this paragraph shall be included in *total project costs* and shared in accordance with the provisions of this Agreement.

ARTICLE XI - FEDERAL AND STATE LAWS

In the exercise of their respective rights and obligations under this Agreement, the Non-Federal Sponsor and the Government shall comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)).

ARTICLE XII - RELATIONSHIP OF PARTIES

A. In the exercise of their respective rights and obligations under this Agreement, the Government and the Non-Federal Sponsor each act in an independent capacity, and neither is to be considered the officer, agent, or employee of the other.

B. In the exercise of its rights and obligations under this Agreement, neither party shall provide, without the consent of the other party, any contractor with a release that waives or purports to waive any rights the other party may have to seek relief or redress against that contractor either pursuant to any cause of action that the other party may have or for violation of any law.

ARTICLE XIII - TERMINATION OR SUSPENSION

A. If at any time the Non-Federal Sponsor fails to fulfill its obligations under this Agreement, the Assistant Secretary of the Army (Civil Works) shall terminate this Agreement or suspend future performance under this Agreement unless he determines that continuation of work on the *Project* is in the interest of the United States or is necessary in order to satisfy agreements with any other non-Federal interests in connection with the *Project.*

B. In the event future performance under this Agreement is suspended pursuant to Article II.C. of this Agreement, such suspension shall remain in effect until such time that the Government notifies the Non-Federal Sponsor in writing that sufficient Federal funds are available to meet the Federal share of *total project costs* and the Federal share of costs for data recovery activities associated with historic preservation in accordance with Article XVII.B.2. and Article XVII.B.3. of this Agreement the Government projects to be incurred through the then-current or upcoming *fiscal year*, or the Government or the Non-Federal Sponsor elects to terminate this Agreement.

C. In the event that the Government and the Non-Federal Sponsor determine to suspend future performance under this Agreement in accordance with Article XIV.C. of this Agreement, such suspension shall remain in effect until the Government and the Non-Federal Sponsor agree to proceed or to terminate this Agreement. In the event that the Government suspends future performance under this Agreement in accordance with Article XIV.C. of this Agreement due to failure to reach agreement with the Non-Federal Sponsor on whether to proceed or to terminate this Agreement, or the failure of the Non-Federal Sponsor to provide funds to pay for cleanup and response costs or to otherwise discharge the Non-Federal Sponsor's responsibilities under Article XIV.C. of this Agreement, such suspension shall remain in effect until: 1) the Government and Non-Federal Sponsor reach agreement on how to proceed or to terminate this Agreement; 2) the Non-Federal Sponsor provides funds necessary to pay for cleanup and response costs and otherwise discharges its responsibilities under Article XIV.C. of this Agreement; 3)

the Government continues work on the *Project*; or 4) the Government terminates this Agreement in accordance with the provisions of Article XIV.C. of this Agreement.

D. If after completion of the design portion of the *Project* the parties mutually agree in writing not to proceed with construction of the *Project*, the parties shall conclude their activities relating to the *Project* and conduct an accounting in accordance with Article VI.C. of this Agreement.

E. In the event that this Agreement is terminated pursuant to this Article or Article XIV.C. of this Agreement, both parties shall conclude their activities relating to the *Project* and conduct an accounting in accordance with Article VI.C. of this Agreement. To provide for this eventuality, the Government may reserve a percentage of total Federal funds made available for the *Project* and an equal percentage of the total funds contributed by the Non-Federal Sponsor in accordance with Article II.B.2. and Article XVII.B.3. of this Agreement as a contingency to pay costs of termination, including any costs of resolution of contract claims and contract modifications.

F. Any termination of this Agreement or suspension of future performance under this Agreement in accordance with this Article or Article II.C. or Article XIV.C. of this Agreement shall not relieve the parties of liability for any obligation previously incurred. Any delinquent payment owed by the Non-Federal Sponsor shall be charged interest at a rate, to be determined by the Secretary of the Treasury, equal to 150 per centum of the average bond equivalent rate of the 13 week Treasury bills auctioned immediately prior to the date on which such payment became delinquent, or auctioned immediately prior to the beginning of each additional 3 month period if the period of delinquency exceeds 3 months.

ARTICLE XIV - HAZARDOUS SUBSTANCES

A. After execution of this Agreement and upon direction by the District Engineer, the Non-Federal Sponsor shall perform, or ensure performance of, any investigations for hazardous substances that the Government or the Non-Federal Sponsor determines to be necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601-9675; hereinafter "CERCLA"), that may exist in, on, or under lands, easements, and rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for construction, operation, and maintenance of the *Project*. However, for lands, easements, and rights-of-way that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigations unless the District Engineer provides the Non-Federal Sponsor with prior specific written direction, in which case the Non-Federal Sponsor shall perform such investigations in accordance with such written direction.

1. All actual costs incurred by the Non-Federal Sponsor for such investigations for hazardous substances shall be included in *total project costs* and shared in accordance with the provisions of this Agreement, subject to an audit in accordance with

Article X.C. of this Agreement to determine reasonableness, allocability, and allowability of such costs.

2. All actual costs incurred by the Government for such investigations for hazardous substances shall be included in *total project costs* and shared in accordance with the provisions of this Agreement.

B. In the event it is discovered through any investigation for hazardous substances or other means that hazardous substances regulated under CERCLA exist in, on, or under any lands, easements, or rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for construction, operation, and maintenance of the *Project*, the Non-Federal Sponsor and the Government, in addition to providing any other notice required by applicable law, shall provide prompt written notice to each other, and the Non-Federal Sponsor shall not proceed with the acquisition of the real property interests until the parties agree that the Non-Federal Sponsor should proceed.

C. The Government and the Non-Federal Sponsor shall determine whether to initiate construction of the *Project*, or, if already in construction, whether to continue with construction of the *Project*, suspend future performance under this Agreement, or terminate this Agreement for the convenience of the Government, in any case where hazardous substances regulated under CERCLA are found to exist in, on, or under any lands, easements, or rights-of-way that the Government determines, pursuant to Article III of this Agreement, to be required for construction, operation, and maintenance of the *Project*. Should the Government and the Non-Federal Sponsor determine to initiate or continue with construction of the *Project* after considering any liability that may arise under CERCLA, the Non-Federal Sponsor shall be responsible, as between the Government and the Non-Federal Sponsor, for the costs of cleanup and response, including the costs of any studies and investigations necessary to determine an appropriate response to the contamination. Such costs shall not be considered a part of *total project costs*. In the event the Non-Federal Sponsor does not reach agreement with the Government on whether to proceed or to terminate this Agreement under this paragraph, or fails to provide any funds necessary to pay for cleanup and response costs or to otherwise discharge the Non-Federal Sponsor's responsibilities under this paragraph upon direction by the Government, the Government, in its sole discretion, may either terminate this Agreement for the convenience of the Government, suspend future performance under this Agreement, or continue work on the *Project*.

D. The Non-Federal Sponsor and the Government shall consult with each other in accordance with Article V of this Agreement in an effort to ensure that responsible parties bear any necessary cleanup and response costs as defined in CERCLA. Any decision made pursuant to paragraph C. of this Article shall not relieve any third party from any liability that may arise under CERCLA.

E. As between the Government and the Non-Federal Sponsor, the Non-Federal Sponsor shall be considered the operator of the *Project* for purposes of CERCLA liability. To the maximum extent practicable, the Non-Federal Sponsor shall operate, maintain,

repair, rehabilitate, and replace the *Project* in a manner that will not cause liability to arise under CERCLA.

ARTICLE XV - NOTICES

A. Any notice, request, demand, or other communication required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally or sent by telegram or mailed by first-class, registered, or certified mail, as follows:

If to the Non-Federal Sponsor:
Director
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702-1271

If to the Government:
District Engineer
United States Army Corps of Engineers
Clock Tower Building
P.O. Box 2004
Rock Island, IL 62104

B. A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

C. Any notice, request, demand, or other communication made pursuant to this Article shall be deemed to have been received by the addressee at the earlier of such time as it is actually received or seven calendar days after it is mailed.

ARTICLE XVI - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

ARTICLE XVII - HISTORIC PRESERVATION

A. The Government, as it determines necessary for the *Project*, shall perform any identification, survey, or evaluation of historic properties. Any costs incurred by the Government for such work shall be included in *total project costs* and shared in accordance with the provisions of this Agreement.

B. The Government, as it determines necessary for the *Project*, shall perform or ensure the performance of any mitigation activities or actions for historic properties or that are otherwise associated with historic preservation including data recovery activities.

1. Any costs incurred by the Government for such mitigation activities, except for data recovery activities associated with historic preservation, shall be included in *total project costs* and shared in accordance with the provisions of this Agreement.

2. As specified in Section 7(a) of Public Law 86-523, as amended by Public Law 93-291 (16 U.S.C. 469c(a)), the costs of data recovery activities associated with historic preservation shall be borne entirely by the Government and shall not be included in *total project costs*, up to the statutory limit of one percent of *total project costs* for the *Project*.

3. The Government shall not incur costs for data recovery activities associated with historic preservation that exceed the statutory one percent limit specified in paragraph B.2. of this Article unless and until the Assistant Secretary of the Army (Civil Works) has waived that limit and the Secretary of the Interior has concurred in the waiver in accordance with Section 208(3) of Public Law 96-515, as amended (16 U.S.C. 469c-2(3)). Any costs of data recovery activities associated with historic preservation that exceed the one percent limit shall not be included in *total project costs* but shall be shared between the Non-Federal Sponsor and the Government consistent with the cost sharing requirements for the Section 1103 HREP Program, as follows: 35 percent will be borne by the Non-Federal Sponsor and 65 percent will be borne by the Government.

C. If, during its performance of *relocations* or construction of improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material in accordance with Article III of this Agreement, the Non-Federal Sponsor discovers historic properties or other cultural resources that have not been evaluated by the Government pursuant to this Article, the Non-Federal Sponsor shall provide prompt written notice to the Government of such discovery. The Non-Federal Sponsor shall not proceed with performance of the *relocation* or construction of the improvement that is related to such discovery until the Government provides written notice to the Non-Federal Sponsor that it should proceed with such work.

ARTICLE XVIII - THIRD PARTY RIGHTS, BENEFITS, OR LIABILITIES

Nothing in this Agreement is intended, nor may be construed, to create any rights, confer any benefits, or relieve any liability, of any kind whatsoever in any third person not party to this Agreement.

ARTICLE XIX - OBLIGATIONS OF FUTURE APPROPRIATIONS

A. Nothing herein shall constitute, nor be deemed to constitute, an obligation of future appropriations by the Department of Natural Resources of the State of Illinois, where creating such an obligation would be inconsistent with Illinois statutes, including but not limited to 30 ILCS 105/30, or Article VIII, Section 2 of the Constitution of the State of Illinois.

B. The Non-Federal Sponsor intends to fulfill its obligations under this Agreement. The Non-Federal Sponsor shall include in its budget request or otherwise propose appropriations of funds in amounts sufficient to fulfill these obligations for that year, and shall use all reasonable and lawful means to secure those appropriations. The Non-Federal Sponsor reasonably believes that funds in amounts sufficient to fulfill these obligations lawfully can and will be appropriated and made available for this purpose. In the event funds are not appropriated in amounts sufficient to fulfill these obligations, the Non-Federal Sponsor shall use its best efforts to satisfy any requirements for payments or contributions of funds under this Agreement from any other source of funds legally available for this purpose. Further, if the Non-Federal Sponsor is unable to fulfill these obligations, the Government may exercise any legal rights it has to protect the Government's interests related to this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, which shall become effective upon the date it is signed by the Assistant Secretary of the Army (Civil Works).

DEPARTMENT OF THE ARMY

BY: _____ COL, EN
FOR JO-ELLEN DARCY
Assistant Secretary of the Army
(Civil Works)

DATE: 27 JUL 2011

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

BY: _____
MARC MILLER
Director

DATE: 07-25-2011

(20 ILCS 805/805-125) (was 20 ILCS 805/63b1)

Sec. 805-125. Agreements with federal agencies. The Department has the power and authority to enter into agreements with appropriate federal agencies in order to better effect cooperative undertakings in the conservation, preservation, distribution, and propagation of fish, mussels, frogs, turtles, game, wild animals, wild fowls, birds, trees, plants, and forests. The Department's agreements with the United States government may include general indemnification provisions.
(Source: P.A. 96-45, eff. 7-15-09.)

CERTIFICATION REGARDING LOBBYING

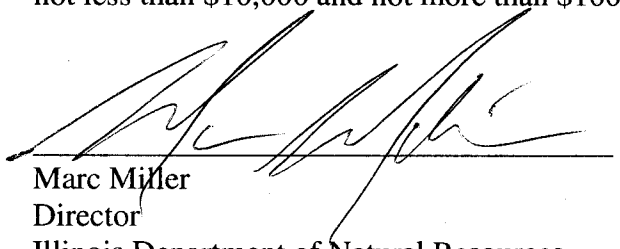
The undersigned certifies, to the best of his or her knowledge and belief that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.



Marc Miller
Director
Illinois Department of Natural Resources

DATE: 07-25-2011

US Army Corps
of Engineers®

ILLINOIS WATERWAY

LAGRANGE POOL

FULTON COUNTY, IL

RICE LAKE HREP RIGHT OF WAY

STAGE I

Solicitation: W912EK-11-B-0011

Contract:

June 2011

APPROVED BY:

XX
COL, EN, District Engineer

APPROVAL RECOMMENDED BY:

Scott D. Kool P.L.S.
Chief, Survey Section

P.E.
Chief, Engineering & Construction Division

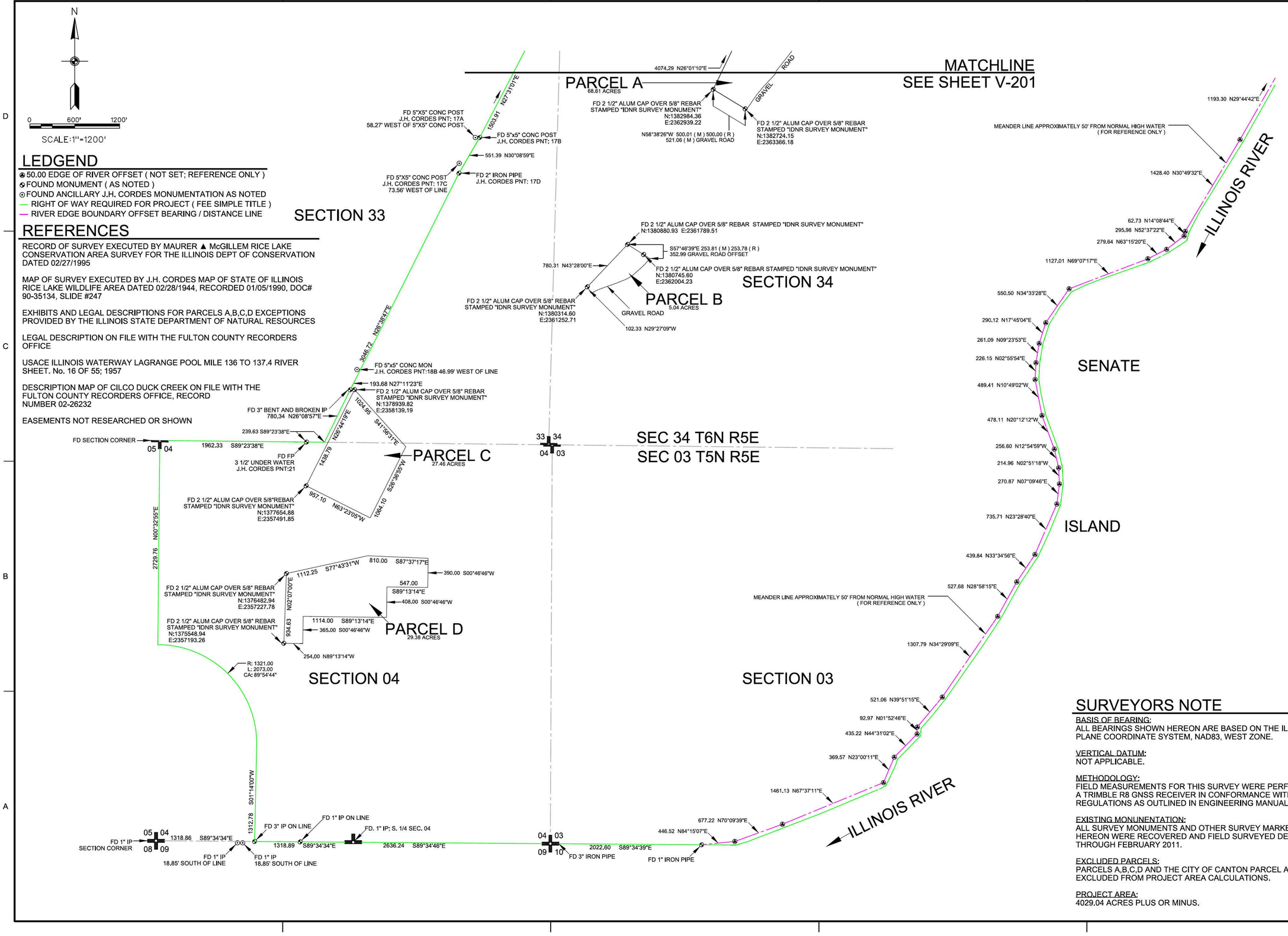
MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY: RCF		DATE: 2011/07/15
DWN BY: AWBG	CKD BY:	SOLICITATION NO.: W912EK-11-B-0011
SUBMITTED BY:		CONTRACT NO.:
PLOT SCALE: AS SHOWN	PLOT DATE:	PROJECT CODE: EP102
SIZE: ANSI D	FILE NAME: EP102V-001.dgn	

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HREP RIGHT OF WAY
STAGE I
COVER SHEET

Sheet ID
V-001



LEDGEND

- 50.00 EDGE OF RIVER OFFSET (NOT SET; REFERENCE ONLY)
- FOUND MONUMENT (AS NOTED)
- FOUND ANCILLARY J.H. CORDES MONUMENTATION AS NOTED
- RIGHT OF WAY REQUIRED FOR PROJECT (FEE SIMPLE TITLE)
- RIVER EDGE BOUNDARY OFFSET BEARING / DISTANCE LINE

REFERENCES

RECORD OF SURVEY EXECUTED BY MAURER ▲ McGILLEM RICE LAKE CONSERVATION AREA SURVEY FOR THE ILLINOIS DEPT OF CONSERVATION DATED 02/27/1995

MAP OF SURVEY EXECUTED BY J.H. CORDES MAP OF STATE OF ILLINOIS RICE LAKE WILDLIFE AREA DATED 02/28/1944, RECORDED 01/05/1990, DOC# 90-35134, SLIDE #247

EXHIBITS AND LEGAL DESCRIPTIONS FOR PARCELS A,B,C,D EXCEPTIONS PROVIDED BY THE ILLINOIS STATE DEPARTMENT OF NATURAL RESOURCES

LEGAL DESCRIPTION ON FILE WITH THE FULTON COUNTY RECORDERS OFFICE

USACE ILLINOIS WATERWAY LAGRANGE POOL MILE 136 TO 137.4 RIVER SHEET. No. 16 OF 55; 1957

DESCRIPTION MAP OF CILCO DUCK CREEK ON FILE WITH THE FULTON COUNTY RECORDERS OFFICE, RECORD NUMBER 02-26232

EASEMENTS NOT RESEARCHED OR SHOWN

SURVEYORS NOTE

BASIS OF BEARING:
ALL BEARINGS SHOWN HEREON ARE BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, NAD83, WEST ZONE.

VERTICAL DATUM:
NOT APPLICABLE.

METHODOLOGY:
FIELD MEASUREMENTS FOR THIS SURVEY WERE PERFORMED WITH A TRIMBLE R8 GNSS RECEIVER IN CONFORMANCE WITH USACE REGULATIONS AS OUTLINED IN ENGINEERING MANUAL 1110-1-1005.

EXISTING MONUNENTATION:
ALL SURVEY MONUMENTS AND OTHER SURVEY MARKERS SHOWN HEREON WERE RECOVERED AND FIELD SURVEYED DECEMBER 2010 THROUGH FEBRUARY 2011.

EXCLUDED PARCELS:
PARCELS A,B,C,D AND THE CITY OF CANTON PARCEL ARE EXCLUDED FROM PROJECT AREA CALCULATIONS.

PROJECT AREA:
4029.04 ACRES PLUS OR MINUS.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
ROCK ISLAND DISTRICT
ROCK ISLAND, ILLINOIS

DESIGNED BY:
DWN BY: AWBG
CKD BY:
SUBMITTED BY: JOHNSON, D.
DATE:
SOLICITATION NO.: W912EK-11-R-0029
CONTRACT NO.:
PROJECT CODE: EP102
PLOT DATE:
PLOT SCALE: AS SHOWN
FILE NAMES: EP102_V-200.dgn
SIZE: ANSI D

ILLINOIS WATERWAY
LAGRANGE POOL
FULTON COUNTY, IL
RICE LAKE HABITAT REHAB & ENHANCEMENT
STAGE I

RIGHT OF WAY

Sheet ID
V-200

N
0 600' 1200'
SCALE:1"=1200'
LEDGEND
50.00 EDGE OF RIVER OFFSET (NOT SET; REFERENCE ONLY)
FOUND MONUMENT (AS NOTED)
FOUND ANCILLARY J.H. CORDES MONUMENTATION AS NOTED
RIGHT OF WAY REQUIRED FOR PROJECT (FEE SIMPLE TITLE)
RIVER EDGE BOUNDARY OFFSET BEARING / DISTANCE LINE
SECTION 22
SECTION 23
SECTION 27
SECTION 26
ILLINOIS RIVER
ILLINOIS RIVER
CITY OF CANTON PARCEL
+/- 8.03 ACRES
PARCEL A
+/- 68.61 ACRES
MATCHLINE
SEE SHEET V-200
FD 2" IRON PIPE J.H. CORDES PNT: 3C
350.11 N89°44'27"E
FD 5"x5" CONC MON J.H. CORDES PNT: 3D
2237.76 S50°06'00"E
FD 2" IRON PIPE J.H. CORDES PNT: 4C
FD 5"x5" CONC MON WEST 1/4 CORNER SEC 23
591.39 N89°45'26"E
2033.96
N89°44'53"E
FD 5"x5" CONC MON J.H. CORDES 4B
725.33 S43°31'19"E
FD BROKEN CONC POST J.H. CHORDES PNT: 06
1326.85 N00°55'36"E
2635.42 N89°36'24"E
MEANDER LINE APPROXIMATELY 50' FROM NORMAL HIGH WATER (FOR REFERENCE ONLY)
1286.38 S08°24'01"W
681.86 S00°36'19"W
562.77 S08°06'02"E
140.22 S12°08'04"W
24.65 N23°44'30"W (TIE 1" IP)
61.97 S89°40'08"W
238.50 S89°40'08"W
955.88 S12°08'04"W
1395.00 S09°47'00"W
480.85 S23°28'00"W
326.36 S39°49'51"W
89.52 S80°21'01"W
420.07 S48°59'06"W
1228.39 S51°27'56"W
1126.11 S43°08'58"W
1151.06 S34°21'52"W
1193.30 S29°44'42"W
DETAIL NOT TO SCALE
FD FENCE POST J.H. CORDES PNT: 07D
923.42 N01°30'48"E
406.42 N01°30'48"E
230.77 N00°09'44"W
FD 5"x5" CONC MON J.H. CORDES PNT: 08A
404.62 N00°09'44"W
FD STEEL WAGON TONGUE N 1/4 CORNER SECTON 27
FD FENCE POST J.H. CORDES PNT: 08D
921.70 N89°44'55"E
1689.12 N89°44'55"E
89.14 S00°27'25"E
100.70 S00°09'07"E
FD 2" IRON PIPE J.H. CORDES PNT: 08E
753.83 N49°00'41"E
709.64 S56°21'23"E
953.71 N55°09'40"E
519.00 N58°21'00"E
1332.83 N01°12'15"E
FD BROKEN 5"x5" CONC MON J.H. CORDES PNT: 10
318.93 N00°59'06"E
FD 3" IRON PIPE FILLED 1' ABOVE SURFACE J.H. CORDES PNT: 10A
283.53 N67°23'01"E
141.16 N45°33'05"E
98.30 N61°20'45"E
303.27 N78°08'45"E
99.51 N72°41'10"E
417.69 N63°11'33"E
507.47 N47°21'31"E
FD 3" BENT IRON PIPE J.H. CORDES PNT: 11B
266.66 N89°27'41"E
247.90 N01°27'20"E
FD 5"x5" BROKEN CONC MON J.H. CORDES PNT: 12B
1679.90 N37°22'42"E
140.75 N89°21'32"E
FD 3" IRON PIPE J.H. CORDES PNT: 14B
FD BROKEN CONC POST J.H. CORDES PNT: 14A
703.36 N27°58'15"E
FD 3" STEEL FENCE POST J.H. CORDES PNT: 14D
816.70 N28°59'08"E
95.90 N89°30'28"E
FD 3/8" SQUARE ROD
FD 2" IRON PIPE J.H. CORDES PNT:16A
381.88 N89°32'11"E
1503.91 N27°37'01"E
FD 2" IRON PIPE J.H. CORDES PNT:16B
S58°22'31"E 499.77 (M) 500.00 (R) 508.92 (M) GRAVEL ROAD
FD 2 1/2" ALUM CAP OVER 5/8" REBAR STAMPED "IDNR SURVEY MONUMENT" N:1386645.70 E:2364726.51
FD 2 1/2" ALUM CAP OVER 5/8" REBAR STAMPED "IDNR SURVEY MONUMENT" N:1386383.64 E:2365152.07
4074.29 N26°01'10"E
GRAVEL ROAD
GRAVEL ROAD
FD 2 1/2" ALUM CAP OVER 5/8" REBAR STAMPED "IDNR SURVEY MONUMENT" N:1382984.36 E:2362939.22
N58°38'26"W 500.01 (M) 500.00 (R) 521.06 (M) GRAVEL ROAD
FD 2 1/2" ALUM CAP OVER 5/8" REBAR STAMPED "IDNR SURVEY MONUMENT" N:1382724.15 E:2363366.18
US Army Corps of Engineers
U.S. ARMY CORPS OF ENGINEERS ROCK ISLAND DISTRICT ROCK ISLAND, ILLINOIS
SOLICITATION NO.: W912EK-11-R-0029
PROJECT CODE: EP102
FILE NAME: EP102_V-201.dgn
SIZE: ANSI D
PLOT SCALE: AS SHOWN
ILLINOIS WATERWAY LAGRANGE POOL FULTON COUNTY, IL RICE LAKE HABITAT REHAB & ENHANCEMENT STAGE I
RIGHT OF WAY
Sheet ID
V-201

OPERATION AND MAINTENANCE MANUAL

RICE LAKE STATE FISH AND WILDLIFE AREA
UPPER MISSISSIPPI RIVER RESTORATION
HABITAT REHABILITATION AND ENHANCEMENT PROJECT
FULTON COUNTY, ILLINOIS

SEPTEMBER 2021

APPENDIX C

PROJECT REFERENCES AND REGULATIONS

APPENDIX C

PROJECT REFERENCES AND REGULATIONS

TABLE OF CONTENTS

1. Engineering Regulation (ER) 500-1-1, Natural Disaster Procedures. US Army Corps of Engineers, CECW-OE, 30 September 2001. This regulation prescribes policies for the Civil Emergency Management Program of the US Army Corps of Engineers under the authorities of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (The Stafford Act; 42 U.S.C. 5121 et seq.); Army Regulation 500-60, Disaster Relief; and Engineer Regulation 1130-2-530, Flood Control Operation and Maintenance Policies. ER 500-1-1 can be found online at the following address:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_500-1-1.pdf?ver=2013-09-08-233252-360

2. Engineering Pamphlet (EP) 500-1-1, Civil Emergency Management Program Procedure. US Army Corps of Engineers, CECW-OE, 30 September 2001. This pamphlet prescribes processes and procedures for the management and execution of the Civil Emergency Management Program of the US Army Corps of Engineers under the authorities of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (The Stafford Act; 42 U.S.C. 5121 et seq.); Army Regulation 500-60, Disaster Relief; Engineer Regulation 1130-2-530, Flood Control Operations and Maintenance Policies; and Engineering Regulation 500-1-1, Natural Disaster Procedures. This pamphlet is a companion document to, and must be used in conjunction with, ER 500-1-1. In case of a discrepancy between this pamphlet and ER 500-1-1, ER 500-1-1 governs. EP 500-1-1 can be found online at the following address:
http://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_500-1-1.pdf

3. 33 USC 408 Section 408. *March 3, 1899.* It shall not be lawful for any person or persons to take possession of or make use of for any purpose, or build upon, alter, deface, destroy, move, injure, obstruct by fastening vessels thereto or otherwise, or in any manner whatever impair the usefulness of any sea wall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the United States, or any piece of plant, floating or otherwise, used in the construction of such work under the control of the United States, in whole or in part, for the preservation and improvement of any of its navigable waters or to prevent floods, or as boundary marks, tide gauges, surveying stations, buoys, or other established marks, nor remove for ballast or other purposes any stone or other material composing such works: Provided, That the Secretary of the Army may, on the recommendation of the Chief of Engineers, grant permission for the temporary occupation or use of any of the aforementioned public works when in his judgment such occupation or use will not be injurious to the public interest: Provided further, That the Secretary may, on the recommendation of the Chief of Engineers, grant permission for the alteration or permanent occupation or use of any of the aforementioned public works when in the judgment of the Secretary such occupation or use will not be injurious to the public interest and will not impair the usefulness of such work.

4. Definite Project Report. *Upper Mississippi River System Environmental Management Program, Definite Project Report with Integrated Environmental Assessment (R-19F), Pool 12 Overwintering Habitat Rehabilitation and Enhancement, U.S. Army Corps of Engineers, Rock Island District, March 2013*. The DPR can be accessed through the UMRR database at the followings links:
DPR Main Report: http://mvr-ap06roc.mvr.ds.usace.army.mil/pls/apex/UMRRDB.get_project_doc?p_project_doc_id=465
DPR Plates: http://mvr-ap06roc.mvr.ds.usace.army.mil/pls/apex/UMRRDB.get_project_doc?p_project_doc_id=697

5. Water Resources Development Act of 1992, Section 107, Upper Mississippi River Plan.

(a) EXTENSION OF AUTHORIZATION- Section 1103(e) of the Water Resources Development Act of 1986 (33 U.S.C. 652(e)) is amended—

(1) in paragraph (2) by striking “ten” each place it appears and inserting “15”;

(2) by redesignating paragraphs (6) and (7) as paragraphs (7) and (8), respectively; and

(3) by inserting after paragraph (5) the following new paragraph:

“(6) TRANSFER OF AMOUNTS-

“(A) GENERAL RULE- Subject to subparagraph (B), for each fiscal year beginning after September 30, 1992, the Secretary, in consultation with the Secretary of the Interior, and the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, may transfer not to exceed 20 percent of the amount appropriated to carry out each of subparagraphs (A), (B), and (C) of paragraph (1) to carry out any other of such subparagraphs.

“(B) LIMITATION- The aggregate amounts obligated in fiscal years 1988 through 2002--

“(i) to carry out paragraph (1)(A) may not exceed $189,600,000;

“(ii) to carry out paragraph (1)(B) may not exceed $78,800,000; and

“(iii) to carry out paragraph (1)(C) may not exceed $12,040,000.”.

(b) FISH AND WILDLIFE HABITAT REHABILITATION AND ENHANCEMENT PROJECTS- Section 1103(e) of such Act is amended by striking paragraph (7)(A), as redesignated by subsection (a)(2), and inserting the following new paragraph:

“(7)(A) Notwithstanding the provisions of subsection (a)(2) of this section, the costs of each project carried out pursuant to paragraph (1)(A) of this subsection shall be allocated between the Secretary and the appropriate non-Federal sponsor in accordance with the provisions of section 906(e) of this Act; except that the costs of operation and maintenance of projects located on Federal lands or lands owned or operated by a State or local government shall be borne by the Federal, State, or local agency that is responsible for management activities for fish and wildlife on such lands.”.

OPERATION AND MAINTENANCE MANUAL

RICE LAKE STATE FISH AND WILDLIFE AREA
UPPER MISSISSIPPI RIVER RESTORATION
HABITAT REHABILITATION AND ENHANCEMENT PROJECT
FULTON COUNTY, ILLINOIS

SEPTEMBER 2021

APPENDIX D

SITE MANAGER'S PROJECT INSPECTION AND MONITORING RESULTS

SITE MANAGER'S PROJECT INSPECTION AND MONITORING RESULTS

Inspected By: _____ Date: _____

Type of Inspection: ( ) annual ( ) emergency-disaster ( ) other

River EL: _____ Interior EL: _____

RATING SCALE: **A**-ACCEPTABLE **M**-MINIMULY ACCEPTABLE **U**-UNACCEPTABLE

1. PROJECT INSPECTION

Item	Condition	Rating
Overflow & Natural Spillway		
( ) Settlement, slough or loss of section	_____	_____
( ) Wavewash, scouring	_____	_____
( ) Overtopping erosion	_____	_____
( ) Sufficient vegetative cover	_____	_____
( ) Unauthorized grazing or traffic	_____	_____
( ) Encroachments	_____	_____
( ) Unfavorable tree/shrub growth	_____	_____
( ) Seepage distress	_____	_____
Spillway Access Road		
( ) Displaced granular surfacing	_____	_____
( ) Ruts	_____	_____
Outlet Structure		
( ) Slide gate/stop log condition	_____	_____
( ) Unfavorable tree/shrub growth	_____	_____
( ) Displaced/missing riprap	_____	_____
( ) Blocked inlets/outlets	_____	_____
( ) Debris/trash accumulation	_____	_____
( ) Erosion adjacent to structure	_____	_____
Pump Station		
( ) Structure-steel condition	_____	_____
( ) Structure-concrete condition	_____	_____
( ) Displaced/missing riprap	_____	_____
( ) Sump sedimentation	_____	_____
( ) Submersible pumps operation	_____	_____
( ) Submersible pumps maintenance	_____	_____
( ) Vent/butterfly valves condition	_____	_____
( ) Electrical conduits/connections	_____	_____
( ) Bulkhead storage	_____	_____
( ) Trash rack debris accumulation	_____	_____

Pump Station Control Building

( ) Structure-steel condition _____ _____
( ) Structure-concrete condition _____ _____
( ) Electrical lighting condition _____ _____
( ) Pump control system _____ _____
( ) Ventilation-exhaust fan/louver _____ _____
( ) Heaters-wall unit/MCC enclosures _____ _____

Discharge Structure

( ) Unfavorable tree/shrub growth _____ _____
( ) Displaced/missing riprap _____ _____
( ) Blocked culvert outlet _____ _____
( ) Debris/trash accumulation _____ _____
( ) Erosion adjacent to structure _____ _____

Discharge Channel

( ) Significant sedimentation _____ _____
( ) Undesirable Debris _____ _____

Discharge Channel Berms

( ) Settlement, slough or loss of section _____ _____
( ) Wavewash, scouring _____ _____
( ) Overtopping erosion _____ _____
( ) Sufficient vegetative cover _____ _____
( ) Unauthorized grazing or traffic _____ _____
( ) Encroachments _____ _____
( ) Unfavorable tree/shrub growth _____ _____
( ) Seepage distress _____ _____

Water Control Structures

( ) Stoplog condition _____ _____
( ) Blocked inlets/outlets _____ _____
( ) Debris/trash accumulation _____ _____
( ) Erosion adjacent to structure _____ _____

2. COMMENTS

_____
Site Manager