



US Army Corps  
of Engineers®  
Little Rock District

# JOINT PUBLIC NOTICE

CORPS OF ENGINEERS – STATE OF ARKANSAS

Application Number: 2014-00033-2

Date: April 26, 2019

Comments Due: May 21, 2019

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TO WHOM IT MAY CONCERN: **Comments are invited on the work described below. Please see the Public Involvement section for details on submitting comments.**

Point of Contact. If additional information is desired, please contact regulators, Jim Ellis or Chris Joyner, telephone number: (501) 324-5295, mailing address: Little Rock District Corps of Engineers, Regulatory Division, PO Box 867, Little Rock, Arkansas 72203-0867, email address: [Jim.D.Ellis@usace.army.mil](mailto:Jim.D.Ellis@usace.army.mil) or [Christopher.J.Joyner@usace.army.mil](mailto:Christopher.J.Joyner@usace.army.mil)

Project Information. Pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S. Code 403) and Section 404 of the Clean Water Act (33 U.S. Code 1344), notice is hereby given that

**Mr. John R. Anderson  
Energy Security Partners, LLC  
116 Ottenheimer Plaza  
Little Rock, Arkansas 72201**

has requested authorization for the placement of dredged and fill material in waters of the United States (WOUS) associated with the construction and operation of a gas-to-liquids (GTL) facility consisting of an industrial facility involving multiple structures and process areas. The project site will include process areas, office buildings, storage facilities, parking lots, storage tanks, roads, laydown areas, a dock area, a 16-inch-diameter product pipe, wastewater outfall consisting of a 16-inch-diameter wastewater pipe, and a water intake structure consisting of a 24-inch-diameter cooling pipe. Leveling and grading will be required, resulting in the fill of multiple wetland and stream features. A reservoir will be created by construction of a dam along a portion of the eastern boundary of the main site. This reservoir will result in the inundation of some wetland and stream features. The dock area will include a stationary dock for equipment unloading and a floating dock on the west side of the Arkansas River for the loading of fuel products. The proposed project is located in multiple wetlands and streams directly or indirectly associated with the Arkansas River at Navigation Mile 82.7 on the right descending bank (see Attachments 1 and 2 for lists of aquatic resources (wetlands and streams) located within the project area). The navigation pool elevation at this location is approximately 196 feet above mean sea level and the ordinary high water mark (OHWM) elevation is approximately 200 feet above mean sea level. The project site encompasses parts of sections 7, 8, 9, and 10, Township 4 South, Range 10 West; and parts of sections 12, 13, 14, and 24, Township 4 South, Range 11 West, in Jefferson County, Arkansas.

The purpose of the project is to provide a large-scale industrial project that will produce liquid fuels (diesel and naphtha) from natural gas to service local and global markets. The project is water dependent.

The main site for the GTL project is located on approximately 1,139 contiguous acres situated immediately west and north of the Pine Bluff Arsenal in Jefferson County, Arkansas. The project will include dock facilities and a laydown area that will require approximately 35 acres on the Arkansas River (approximately 3.75 miles east of the main site). An approximately 4.0-mile-long by approximately 50-foot-wide dock access road will require a 132-foot-wide ROW and will be constructed between the main site and the dock areas. The entire project will include approximately 1,306 acres. The two dock facilities include a materials offloading facility and a separate fuel barge loading facility. The two dock facilities are expected to require construction-related dredging activity, periodic maintenance dredging to operate the docks, mooring piles, and periodic maintenance dredging for safe transit of project-related barges or other vessels. The project will be constructed in four phases. Phase 1 construction is scheduled to begin in 2020. Phases 2-4 are tentatively set to follow the completion and full operation of Phase I and are scheduled to encompass a 3-year construction window after the start of their construction.

The dock area will consist of an approximately 130-foot-long by 26-foot-wide floating fuel loading facility and be anchored by approximately 120-foot-long by 5-foot-wide monopoles. There will also be a materials offloading facility that will measure approximately 467-foot-long by 80-foot-wide. The offloading facility will include an approximately 260-foot-long by 72-foot-wide work barge and will require the dredging of approximately 6,000 cubic yards of material.

The total project impacts from all phases of the proposed project will be the filling of approximately 75,396 linear feet of streams with approximately 13,378 cubic yards of fill material and approximately 18.66 acres of forested wetlands with approximately 29,491 cubic yards of fill material. Construction of an approximately 100-acre water reservoir for the operational needs of the facility will inundate approximately 13,848 linear feet of streams and 0.38 acres of wetlands. The remaining aquatic resources located on the property that will not be impacted would be maintained by protecting the wetland hydrology that currently exists. Typical best management practices such as silt fencing and other construction methods would be used to mitigate impacts to water quality and other resources.

The applicant has investigated alternative project sites located in various locations in the southern United States. The applicant stated that outside several counties investigated within the state of Arkansas, the applicant could not locate other sites that satisfy the principle site selection criteria such as property consisting of approximately 800 acres or more, access to a navigable waterway, major roadways, railways, adequate water supply, abundant natural gas supply, liquid product pipelines, and the ability to interconnect with a regional electric power system.

The applicant has avoided potential impacts to the environment and natural resources from the project through careful selection of the proposed project site. The applicant has further avoided potential impacts through the proposed project layout and design.

Compensatory mitigation requirements for impacts to the wetlands would be assessed utilizing the 2002 Charleston Method with Little Rock District Addendum and the 2011 Little Rock Stream Method for impacts to streams. The applicant proposes to mitigate for unavoidable

impacts by purchasing credits from approved mitigation banks that service the area and by off-site permittee responsible mitigation.

The location and general plan for the proposed work are shown on the enclosed sheets (Sheets 1-15 of 15).

Water Quality Certification. By copy of this public notice, the applicant is requesting water quality certification from the Arkansas Department of Environmental Quality (ADEQ) in accordance with Section 401(a)(1) of the Clean Water Act. Upon completion of the comment period and a public hearing, if held, a determination relative to water quality certification will be made. Evidence of this water quality certification or waiver of the right to certify must be submitted prior to the issuance of a Corps of Engineers permit.

Cultural Resources. A Corps staff archeologist will review topographic maps, the National Register of Historic Places, and other data on reported sites in the area. The District Engineer invites responses to this public notice from Native American Nations or tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns with historic properties in the area.

Endangered Species. Our preliminary determination is that the proposed activity will not affect listed Endangered Species or their critical habitat. A copy of this notice is being furnished to the U.S. Fish and Wildlife Service and appropriate state agencies and constitutes a request to those agencies for information on whether any listed or proposed-to-be-listed endangered or threatened species may be present in the area which would be affected by the proposed activity.

Floodplain. We are providing copies of this notice to appropriate floodplain officials in accordance with 44 Code of Federal Regulations (CFR) Part 60 (Floodplain Management Regulations Criteria for Land Management and Use) and Executive Order 11988 on Floodplain Management.

Section 404(b)(1) Guidelines. The evaluation of activities to be authorized under this permit, which involves the discharge of dredged or fill material will include application of guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act. These guidelines are contained in 40 Code of Federal CFR 230.

Public Involvement. Any interested party is invited to submit to the above-listed POC written comments or objections relative to the proposed work on or before **May 21, 2019**. Substantive comments, both favorable and unfavorable, will be accepted and made a part of the record and will receive full consideration in determining whether this work would be in the public interest. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and

wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request in writing within the comment period specified in this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. The District Engineer will determine if the issues raised are substantial and whether a hearing is needed for making a decision.

**NOTE:** The mailing list for this Public Notice is arranged by state and county(s) where the project is located, and includes any addressees who have asked to receive copies of all public notices. Please discard notices that are not of interest to you. If you have no need for any of these notices, please advise us so that your name can be removed from the mailing list.

Enclosures

Approximate Coordinates of Project Center

Latitude: **34.3660**

Longitude: **-92.1485**

UTM Zone: **15**

North: **3803098**

East: **578227**

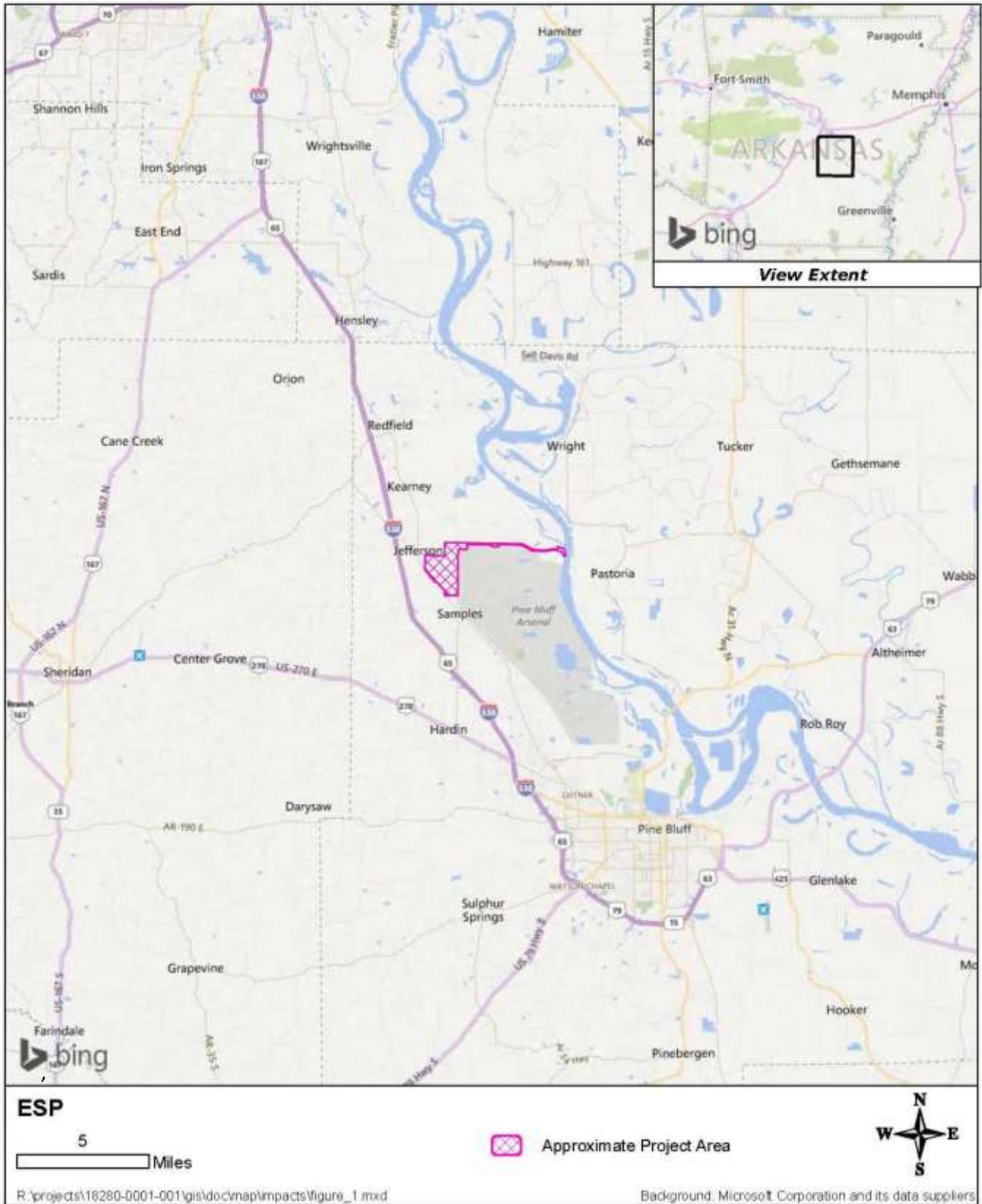


Figure 1. Vicinity Map

**ACTION NO.: SWL-2014-00033-2**

Mr. John Anderson (Energy Security Partners, LLC)  
**COMMERCIAL DEVELOPMENT**

Multiple Wetland and Streams Associated with the  
 Arkansas River, Jefferson County, Arkansas  
 Sections 7, 8, 9, 10, T. 4 S., R. 10 W., and parts of  
 Sections 12, 13, 14, 24, T. 4 S., R. 11 W.  
 April 2019 Sheet 1 of 15

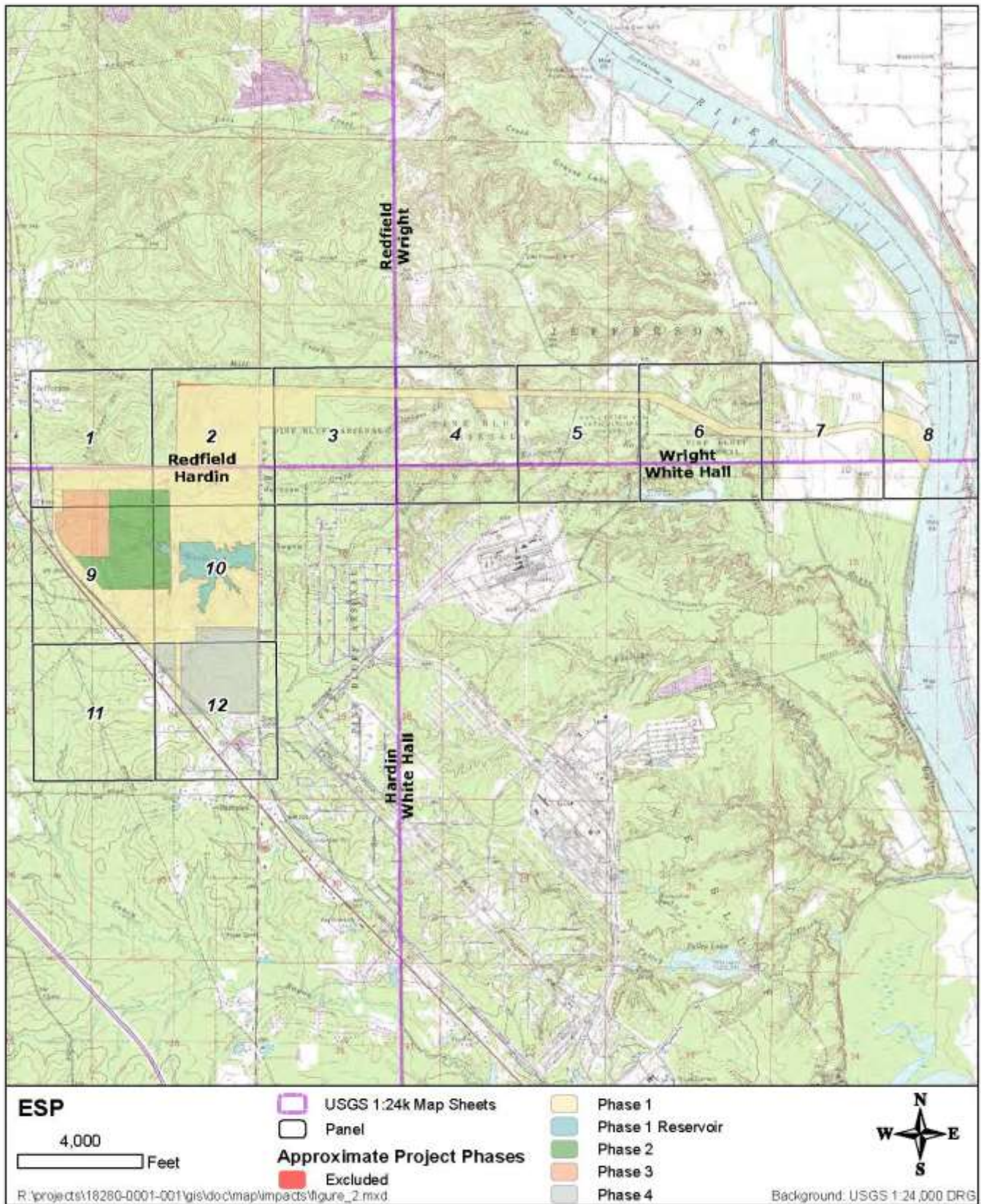
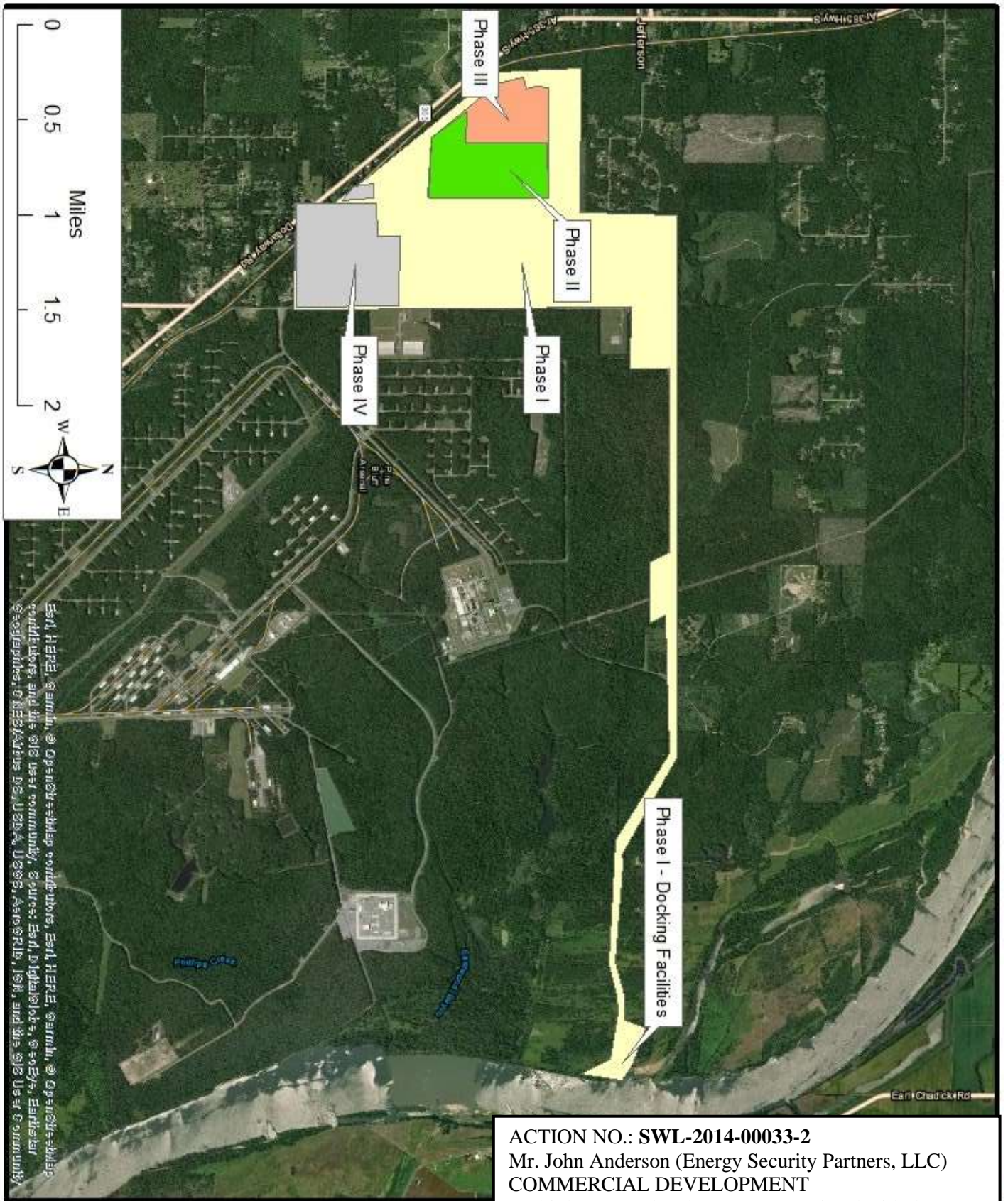


Figure 2. Map showing overview of approximate project phase impact areas and panels based on the USGS topographic quadrangles Redfield, Wright, Hardin, and White Hall, AR (7.5-minute series).

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 April 2019 Sheet 3 of 15



**OVERALL SITE PLAN**

1" = 300'

PURPOSE: MATERIALS OFFLOADING FACILITY AND FUEL LOADING FACILITY  
 DATUM: NAVD 88  
 ADJACENT PROPERTY OWNERS:

OVERALL SITE PLAN  
 ARKANSAS RIVER RDB RM 82.7  
 AS NOTED  
 ENERGY SECURITY PARTNERS  
 116 Ottenheimer Plaza  
 Little Rock, Arkansas 72201

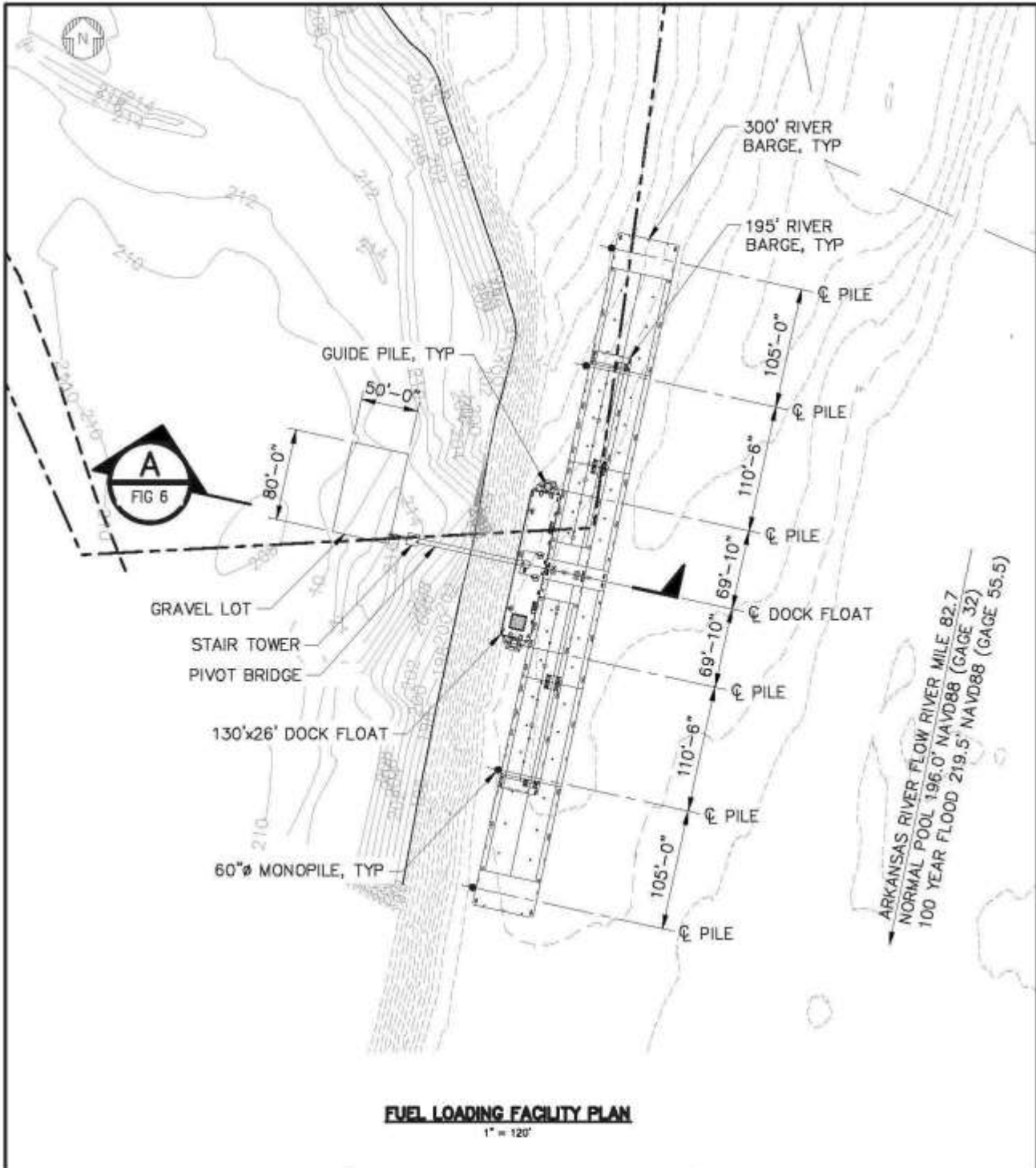
ESP/GTL  
 JEFFERSON, ARKANSAS  
 PRE-FEED  
 APPLICATION BY:  
 ENERGY SECURITY PARTNERS  
 SHEET 3 OF 8 DATE: 08/14

**ACTION NO.: SWL-2014-00033-2**  
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 April 2019 Sheet 4 of 15







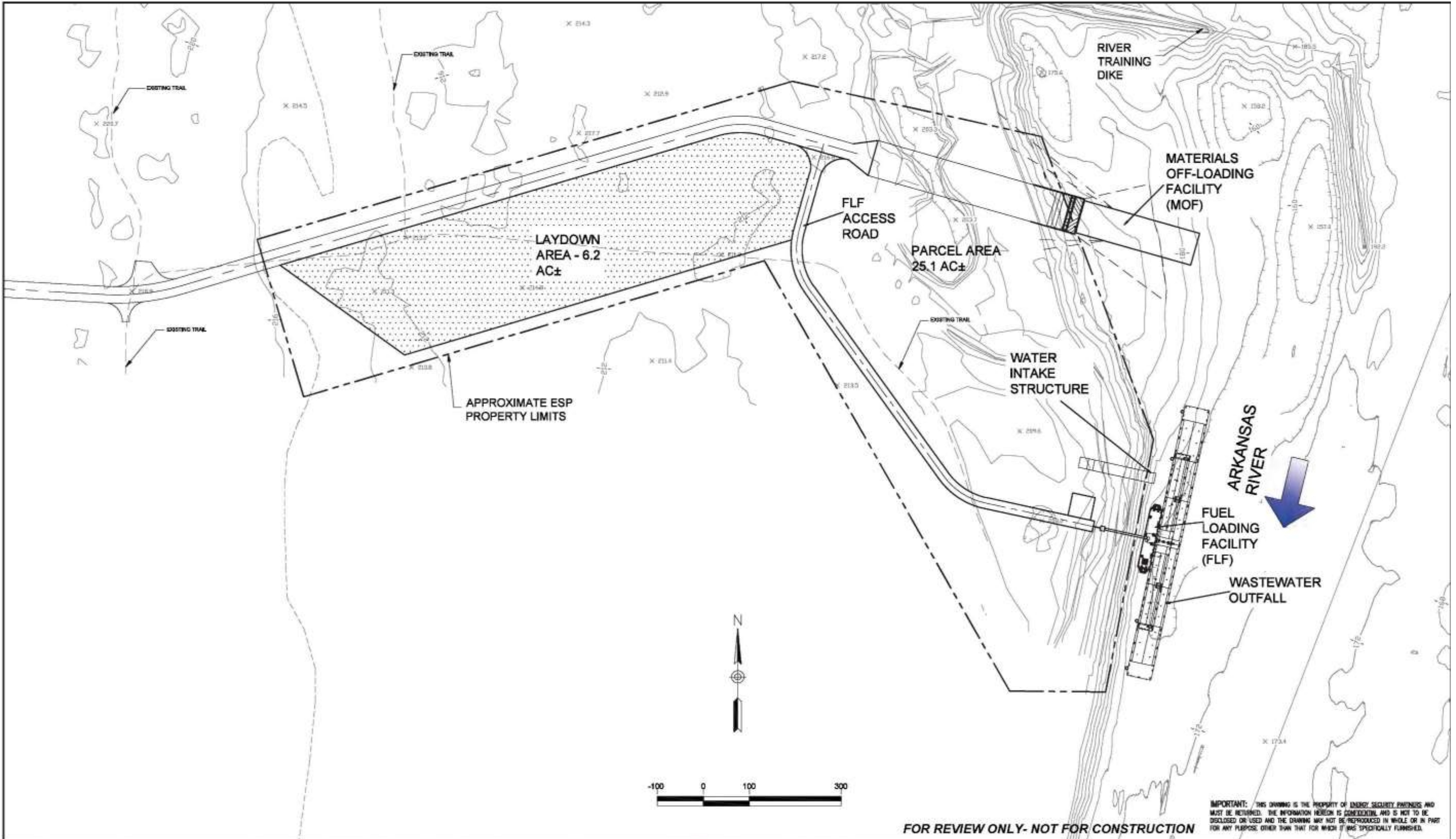


PURPOSE: MATERIALS OFFLOADING FACILITY AND FUEL LOADING FACILITY DATUM: NAVD 88 ADJACENT PROPERTY OWNERS:	<b>FUEL LOADING FACILITY PLAN</b> ARKANSAS RIVER RDB RM 82.7 AS NOTED ENERGY SECURITY PARTNERS 116 Ottenheimer Plaza Little Rock, Arkansas 72201	ESP/GTL JEFFERSON, ARKANSAS PRE-FEED APPLICATION BY: ENERGY SECURITY PARTNERS SHEET 6 OF 8    DATE: 08/14
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 April 2019 Sheet 7 of 15







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 April 2019 Sheet 10 of 15

NO.	REVISIONS	BY	DATE	APP'D	APPROVALS	BY	DATE
					PROCESS		
					PROJECT		
					OPERATIONS		
					SPONSOR		
					ECCI		

SEAL	SCALE	AS SHOWN
	APP'D	KDV
	DATE	11/05/2014
	DESIGNED	KDV
	DRAFTED	JDR
CHECKED		

**ECCI**  
 13200 CANTRILL ROAD  
 LITTLE ROCK, AR 72223  
 PHONE: 501-975-6100  
 FAX: 501-975-6788  
 www.ecci.com

*In Association With:*

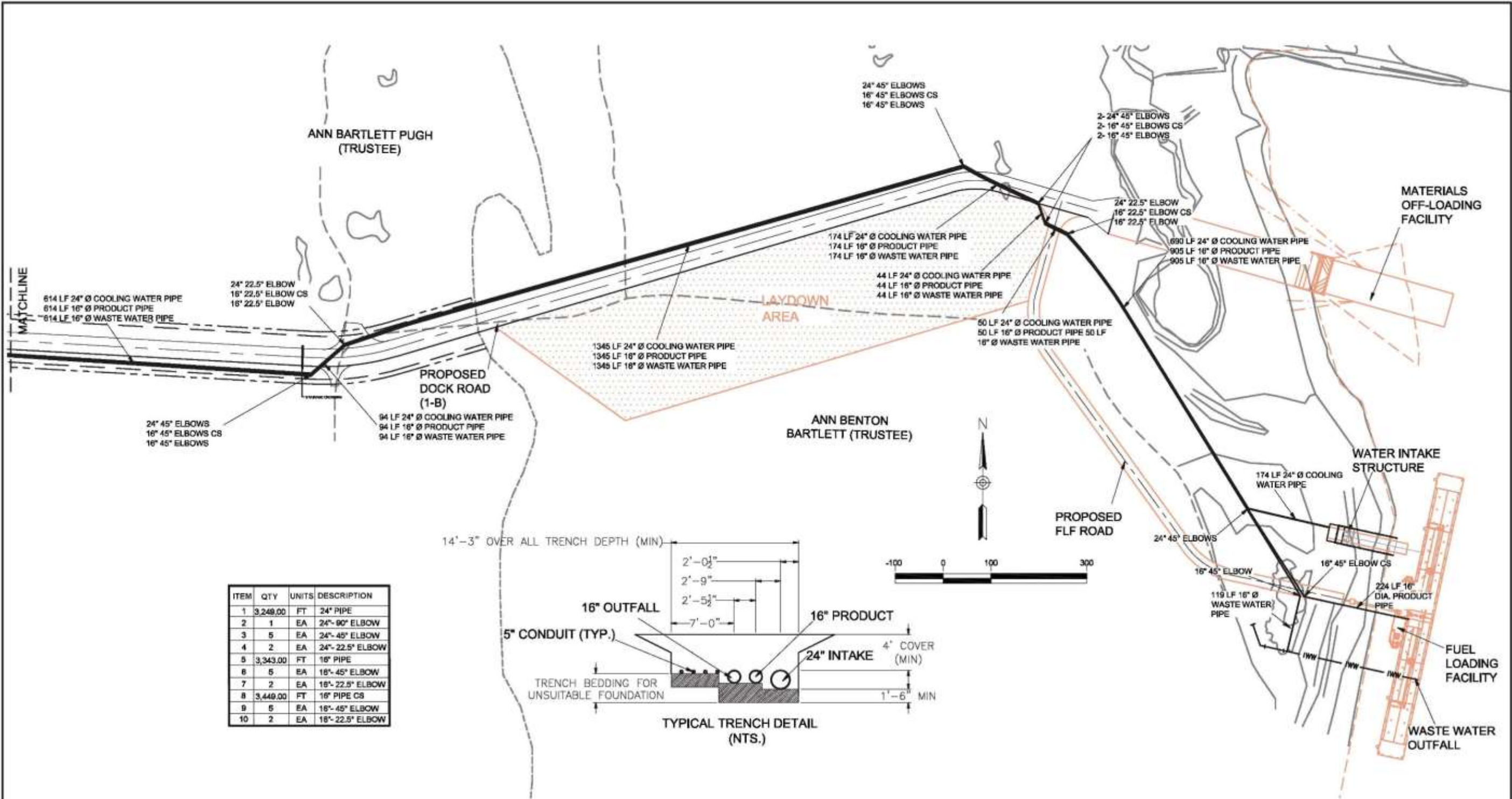
- Smith and Goodson, PLLC
- Moffat & Nichol Engineers
- Cnst Engineers, Inc.
- FTN Associates, Ltd.
- Grubbs, Hoskyn, Barton, & Wyatt Inc.
- Barton Inc. Engineering Solutions

ESP/GTL  
 JEFFERSON, ARKANSAS  
 PRE-FEED  
 DOCK AREA  
 LAYOUT

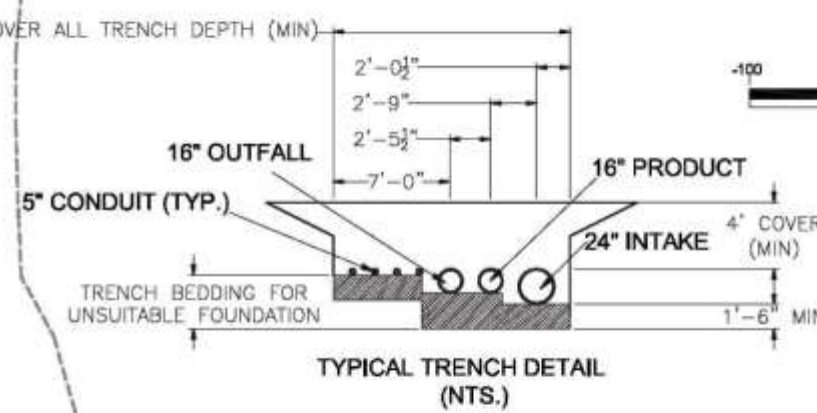
ENERGY SECURITY PARTNERS

**ESP**  
 ENERGY SECURITY PARTNERS

DRAWING NO.  
 J005C01-1040-CM-DW-0007-RA



ITEM	QTY	UNITS	DESCRIPTION
1	3,249.00	FT	24" PIPE
2	1	EA	24"-90° ELBOW
3	5	EA	24"-45° ELBOW
4	2	EA	24"-22.5° ELBOW
5	3,343.00	FT	16" PIPE
6	5	EA	16"-45° ELBOW
7	2	EA	16"-22.5° ELBOW
8	3,449.00	FT	16" PIPE CS
9	5	EA	16"-45° ELBOW
10	2	EA	16"-22.5° ELBOW



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					PROJECT		
					OPERATIONS		
					SPONSOR		
					ECCI		

SCALE **1"=100'**

APP'D DATE **10/20/14**

**ECCI**

1005 GANTRELL ROAD  
 LITTLE ROCK, AR 72223  
 PHONE 501-975-8100  
 FAX 501-975-8789  
 www.ecci.com

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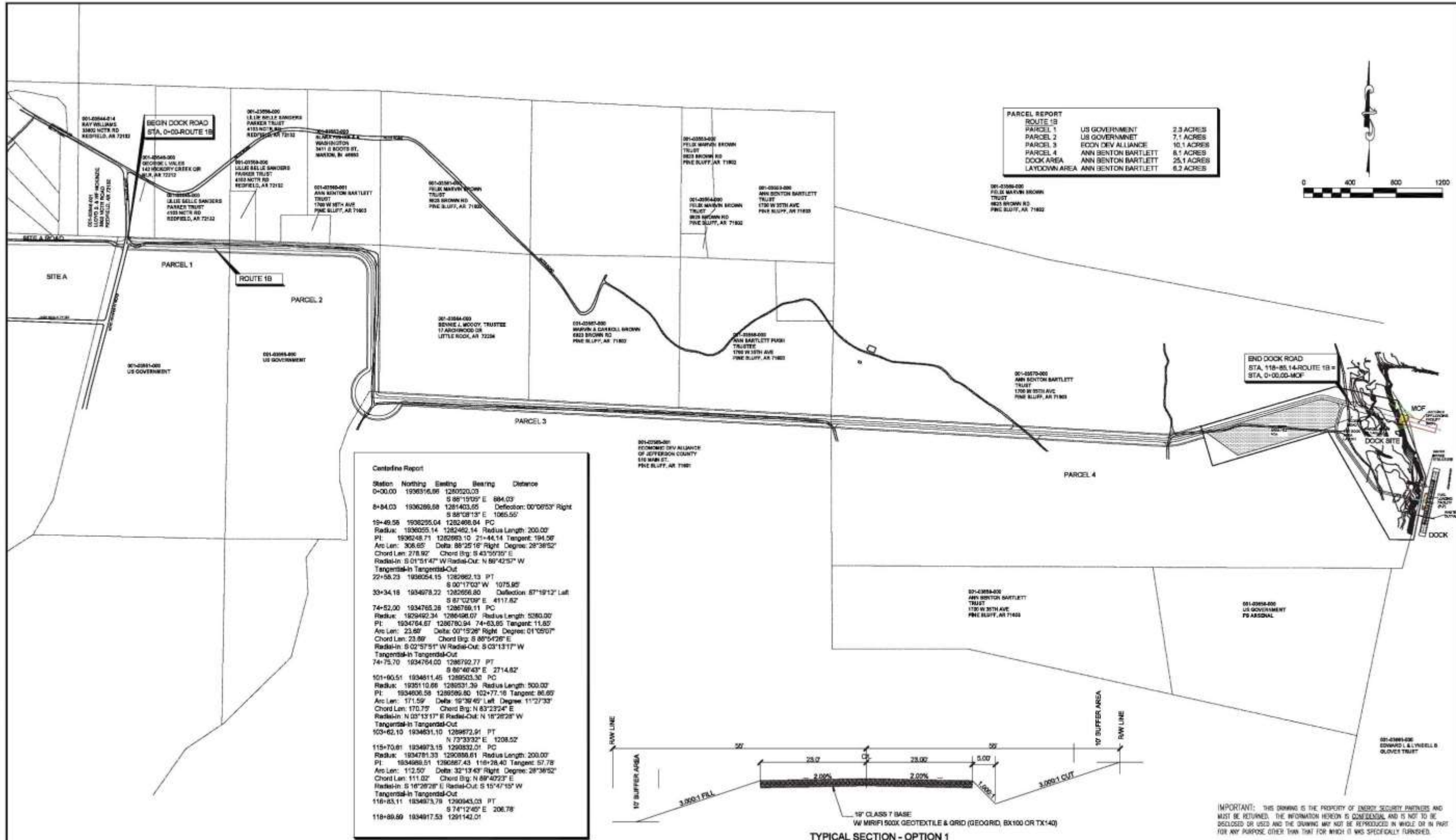
- Smith and Goodson, PLLC
- Moffatt & Nichol Engineers
- Crist Engineers, Inc.
- FTN Associates, Ltd.
- Grabbs, Hoskyn, Barton, & Wyatt Inc.
- Boston Inc. Engineering Solutions

**ESP/GTL**  
**JEFFERSON, ARKANSAS**  
**PRE-FEED**  
**PIPELINES TO DOCK AREA**  
**LAYOUT**

**ENERGY SECURITY PARTNERS**

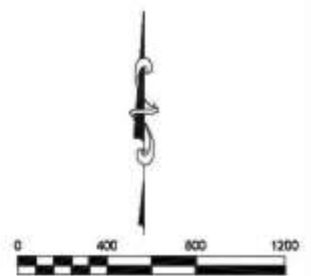
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 ENERGY SECURITY PARTNERS

DRAWING NO.  
**J005C01-1840-PIPE-DW-0004-RA**



**PARCEL REPORT**

ROUTE 1B		
PARCEL 1	US GOVERNMENT	2.3 ACRES
PARCEL 2	US GOVERNMENT	7.1 ACRES
PARCEL 3	EGON DEV ALLIANCE	10.1 ACRES
PARCEL 4	ANN BENTON BARTLETT TRUST	8.1 ACRES
DOCK AREA	ANN BENTON BARTLETT	25.1 ACRES
LAYDOWN AREA	ANN BENTON BARTLETT	6.2 ACRES



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					SPONSOR		
					ECCI		

SCALE 1"=400'

APP'D \_\_\_\_\_

DATE \_\_\_\_\_

**ECCI**  
 1900 CANTRELL ROAD  
 LITTLE ROCK, AR 72225  
 PHONE 501-475-8100  
 FAX 501-375-8788  
 WWW.ECCI.COM

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 • Moffatt & Nichol Engineers  
 • Cret Engineers, Inc.  
 • FTN Associates, LPA  
 • Grubbs, Hoakyn, Barton, & Wyatt Inc.  
 • Baston Inc. Engineering Solutions

ESP/GTL  
 JEFFERSON, ARKANSAS  
 PRE-FEED  
 DOCK ROAD ROUTE 1B  
 OVERALL MAP

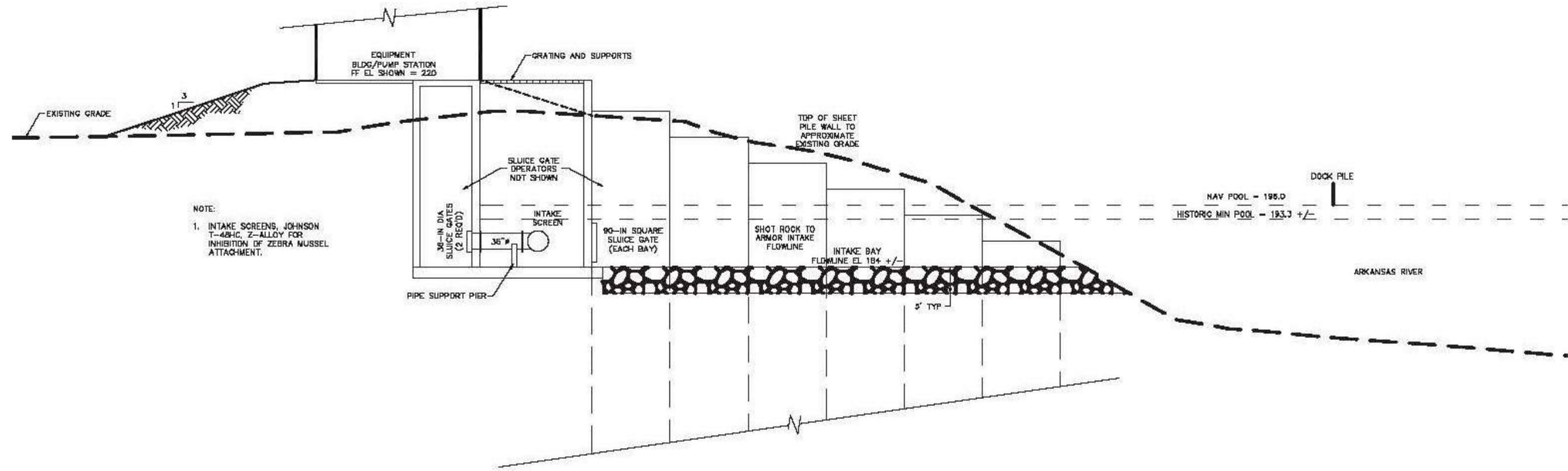
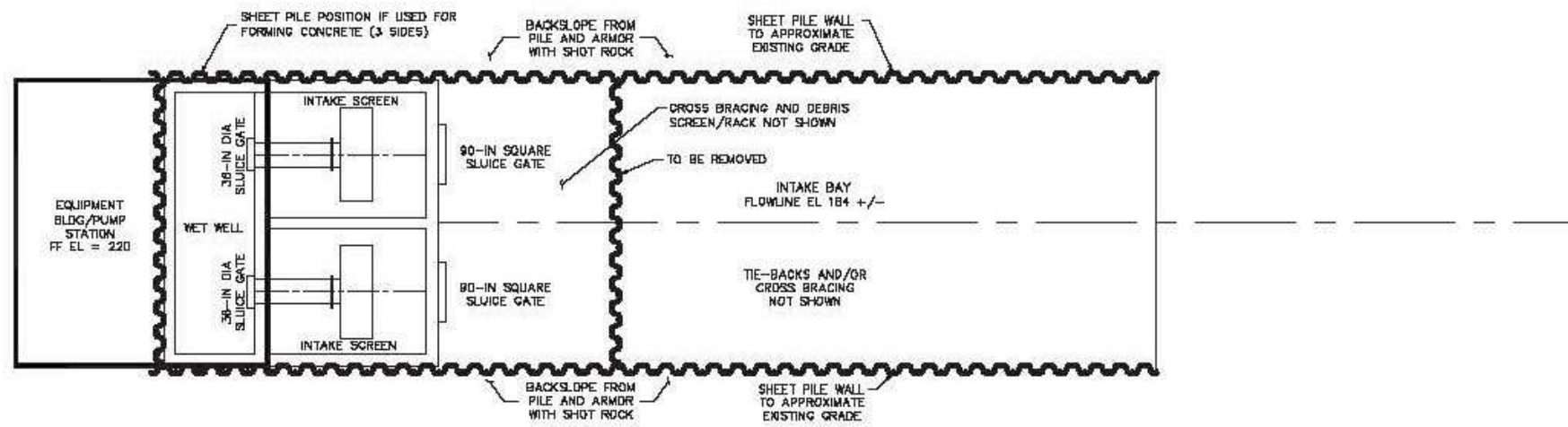
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NOTE:  
 1. INTAKE SCREENS, JOHNSON T-484C, Z-ALLOY FOR INHIBITION OF ZEBRA MUSSEL ATTACHMENT.

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DATE	
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- McCarthy-Schwarz Engineers
- Ch2 Engineers, Inc.
- FRM Associates, Ltd.
- Grubb-Hobbs, Barton, & Wyatt Inc.
- Barton Inc. Engineering Solutions

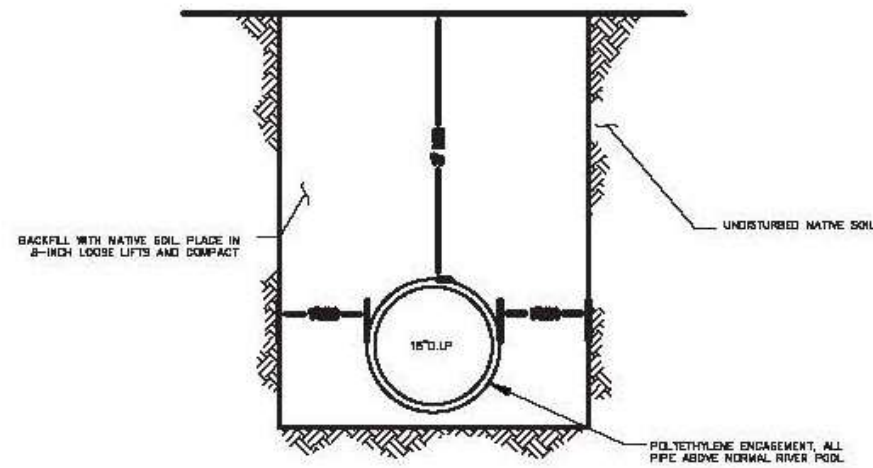
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**JEFFERSON, ARKANSAS**  
**PRE-FEED**  
**CML**  
**RAW WATER INTAKE - TYPICAL SECTION**

**ENERGY SECURITY PARTNERS**

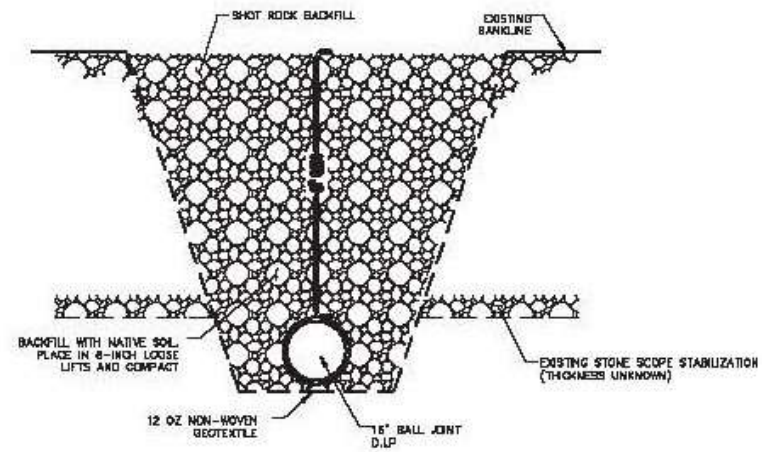
**ESP**  
 ENERGY SECURITY PARTNERS

DRAWING NO.  
**AR0001-010-CML-02-000-00**

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 Sheet 13 of 15



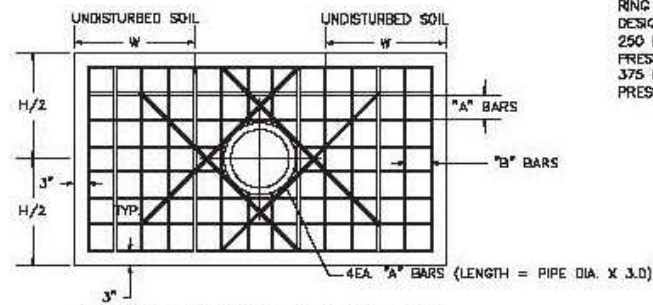
**WASTEWATER DISCHARGE PIPELINE  
DETAIL-TYPICAL BACKFILL**  
SCALE 1/4" = 1'-0"



**WASTEWATER DISCHARGE PIPELINE  
SECTION RIVER BANK BACKFILL**  
SCALE 1/4" = 1'-0"

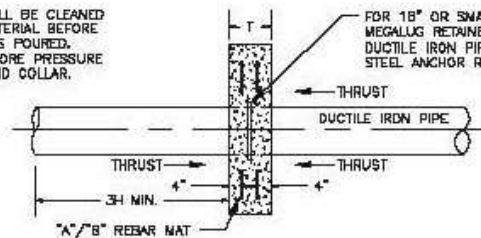
ANCHOR COLLAR SCHEDULE						
PIPE SIZE	* MINIMUM DIMENSIONS *			REINFORCING BARS		WELD-ON THRUST RING SHALL BE STEEL
	W	H	T	THRUST COLLAR	"A" BARS	
16"	3.0'	4.5'	1.5'	M.L. RETAINER GLAND	#6 @ 6"	#6 @ 10"

ALL RETAINER GLANDS SHALL BE MEGA-LUG  
WELD-ON THRUST RING SHALL BE STEEL  
WELD ON THRUST RING SHALL BE DESIGNED FOR 250 PSI WORKING PRESSURE AND 375 PSI TEST PRESSURE.



**THRUST COLLAR (ELEVATION)**  
NOTES

NOTE:  
PIPE SURFACES SHALL BE CLEANED OF ALL FOREIGN MATERIAL BEFORE CONCRETE COLLAR IS POURED. 72 HOUR CURE BEFORE PRESSURE APPLIED TO PIPE AND COLLAR.



**DUCTILE IRON PIPE (TOP)**

FOR 16" OR SMALLER DUCTILE IRON PIPE, USE TWO (2) MEGALUG RETAINER GLANDS PLACED BACK TO BACK. FOR DUCTILE IRON PIPE LARGER THAN 16", DUCTILE IRON OR STEEL ANCHOR RING TO BE SHOP WELDED TO PIPE.  
ANCHOR COLLAR WITH TWO-WAY THRUST (I.E. NOT END OF MAIN). PLACE SECOND REBAR MAT SAME AS FIRST MAT.

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					ECCI		

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CHECKED	

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- McNeill & Nichol Engineers
- Ortiz Engineers, Inc.
- FBI Associates, Ltd.
- Grubbs, Haskin, Balfour, & Wyatt Inc.
- Boston Inc. Engineering Solutions

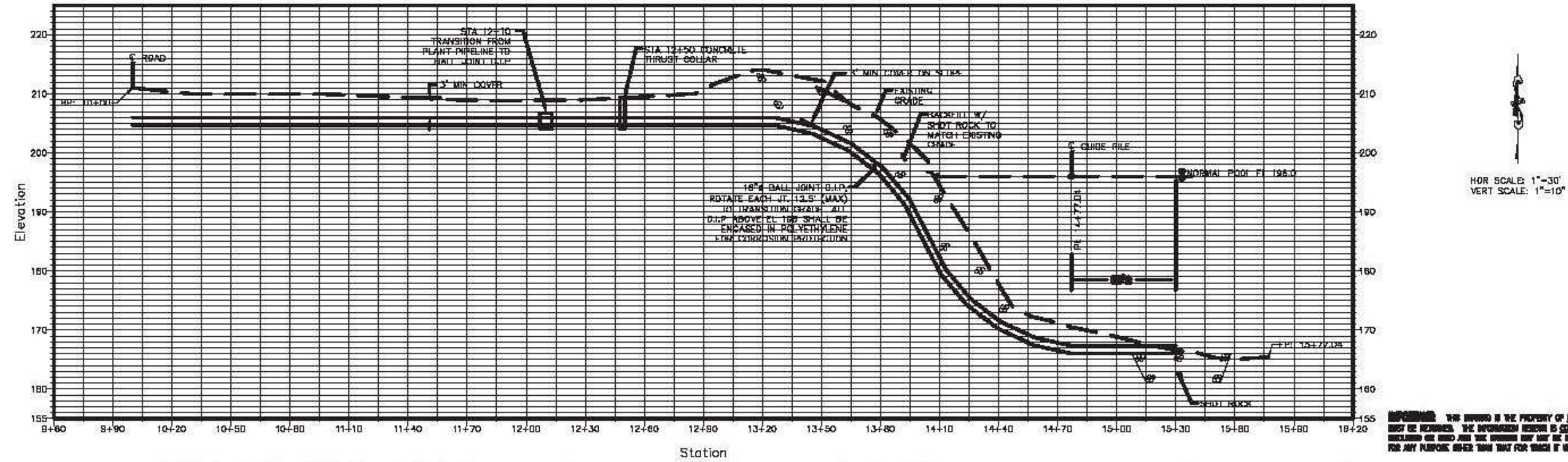
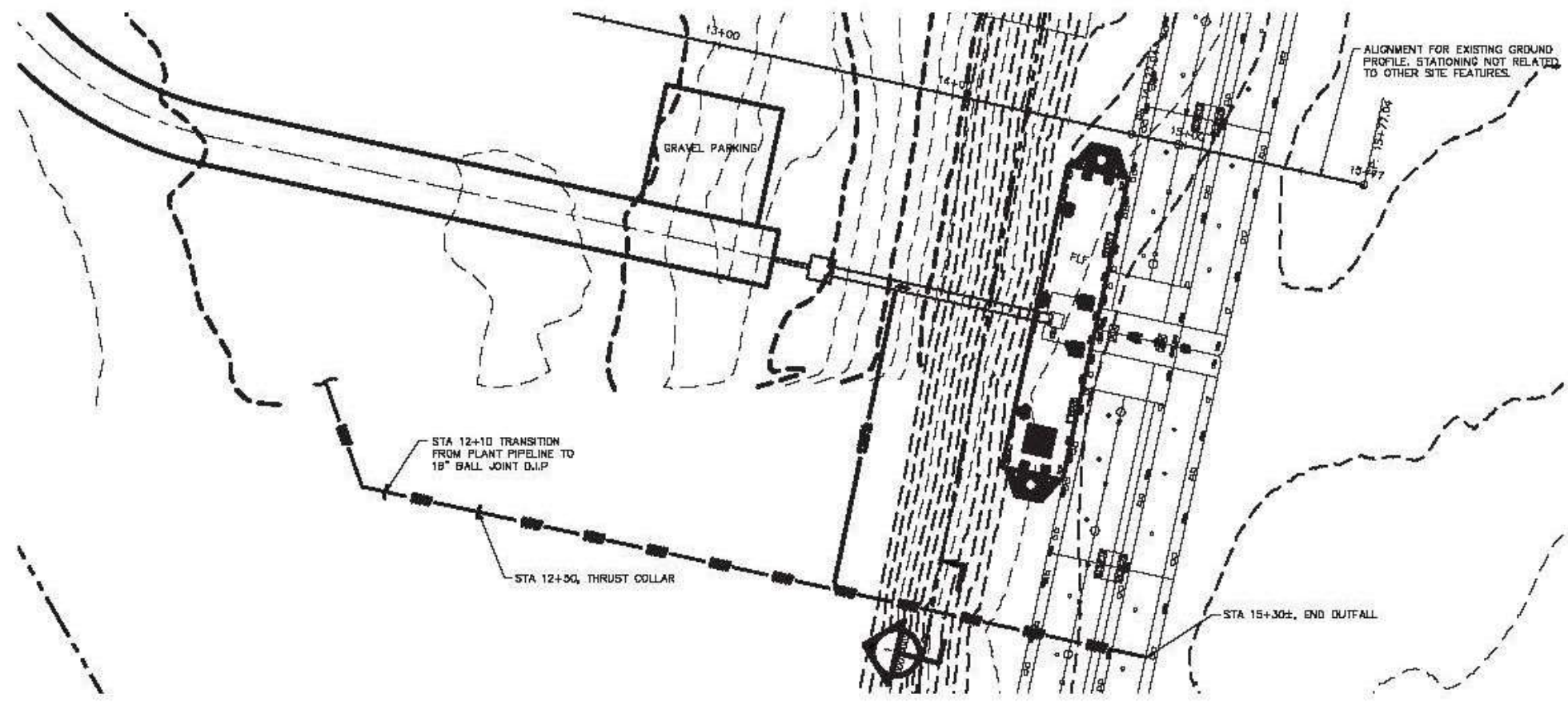
**ESP/GTL  
JEFFERSON, ARKANSAS  
PRE-FEED  
CML  
WASTEWATER OUTFALL DETAILS**

**ENERGY SECURITY PARTNERS**

**ESP**  
ENERGY SECURITY PARTNERS

DRAWING NO.  
**2019-0710-CM-00-000-00**

**ACTION NO.: SWL-2014-00033-2**  
Mr. John Anderson (Energy Security Partners, LLC)  
**COMMERCIAL DEVELOPMENT**  
Multiple Wetland and Streams Associated with the  
Arkansas River, Jefferson County, Arkansas  
Sections 7, 8, 9, 10, T. 4 S., R. 10 W., and parts of  
Sections 12, 13, 14, 24, T. 4 S., R. 11 W.  
April 2019 Sheet 14 of 15



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NO.	REVISIONS	BY	DATE	APP'D	APPROVALS	BY	DATE
					PROCESS		
					PROJECT		
					OPERATIONS		
					SPONSOR		
					ECCI		

SCALE	AS SHOWN
APP'D	
DATE	
DESIGNED	
DRAFTED	
CHECKED	

**ECCI**  
 13000 GANTRELL ROAD  
 LITTLE ROCK, AR 72223  
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In Association With:

- Smith and Gordon, PLLC
- Moffitt & Nichol Engineers
- Orat Engineers, Inc.
- F7M Associates, Ltd.
- Gubbs, Hoskins, Estey, & Wyatt Inc.
- Boston Inc. Engineering Solutions

**ESP/GTL**  
**JEFFERSON, ARKANSAS**  
**PRE-FEED**  
**CML**  
**WASTEWATER OUTFALL PLAN & PROFILE**

**ENERGY SECURITY PARTNERS**

**ESP**  
 ENERGY SECURITY PARTNERS

DRAWING NO.  
**ESP-0710-CML-PP-000-01**

ACTION NO.: **SWL-2014-00033-2**  
 Mr. John Anderson (Energy Security Partners, LLC)  
**COMMERCIAL DEVELOPMENT**  
 Multiple Wetland and Streams Associated with the  
 Arkansas River, Jefferson County, Arkansas  
 Sections 7, 8, 9, 10, T. 4 S., R. 10 W., and parts of  
 Sections 12, 13, 14, 24, T. 4 S., R. 11 W.  
 April 2019

## Wetland areas within the project area

Wetland ID	Area of Wetland Within Project Area (acres)	Wetland Type (primary vegetative type)
A	0.25	Forested (planted)
B	0.08	Forested
C	0.25	Forested
D	0.25	Sparsely Forested (recent tree harvest)
E	0.67	Forested
F	0.35	Herbaceous
G	0.74	Scrub/Shrub (sparsely vegetated)
H	0.24	Herbaceous (some tree/shrub cover)
I	0.08	Herbaceous (some tree/shrub cover)
J	0.05	Herbaceous
K	0.19	Sparsely forested/scrub/shrub - (recent tree harvest)
L	0.07	Forested
M	0.17	Herbaceous
N	0.1	Herbaceous
O	0.21	Herbaceous
P	0.24	Herbaceous
Q	0.03	Herbaceous
R	0.04	Herbaceous
S	0.04	Sparsely forested/scrub/shrub - (recent tree harvest)
T	0.11	Scrub/Shrub / Herbaceous
U	0.14	Herbaceous
V	0.19	Herbaceous
W	0.2	Forested
X	0.1	Herbaceous
Y	1.8	Herbaceous
Z	0.21	Herbaceous
AA	0.04	Herbaceous
AB	0.95	Herbaceous
AC	0.07	Scrub/Shrub
AD	0.4	Scrub/Shrub
AE	0.23	Scrub/Shrub
AF	4.41	Scrub/Shrub
AG	0.05	Herbaceous
AH	0.06	Forested
AK	0.08	Herbaceous
AO	0.02	Scrub/Shrub
AP	0.13	Forested
AQ	4.45	Scrub/Shrub
AR	0.01	Herbaceous
AS	0.35	Herbaceous
AT	0.15	Herbaceous
AU	0.14	Herbaceous
AV	0.06	Forested
AW	0.26	Herbaceous

### Stream channels within the project area.

Stream ID	Length of Channel (linear feet)	Estimated Average Width (ft)	Estimated Average Depth (ft)	Dominant Substrate	Immediate Receiving Water
EPHH-01	62	1.5	0.25	Silt	Offsite Wetland
EPHH-02	143	1.5	0.25	Silt	Wetland D
EPHH-03	121	1.5	0.25	Silt	Wetland D
EPHH-04	219	1	0.5	Silt	Wetland D
EPHH-05	187	1	0.25	Silt	Eastwood Bayou
EPHH-06	167	2	0.25	Silt	EPHH-05
EPHH-07	172	2	0.25	Silt	EPHH-06
EPHH-08	76	1.5	0.5	Silt/Clay	EPHH-09
EPHH-09	183	1	0.5	Silt	Eastwood Bayou
EPHH-11	165	3	1	Silt/Gravel	INT-05
EPHH-12	174	4	2	Silt/Gravel/ Bedrock	INT-05
EPHH-13	192	1.5	0.5	Silt	Carver Mill Creek
EPHH-14	2,898	1.5	0.25	Silt	Carver Mill Creek
EPHH-15	922	2	0.5	Silt	Carver Mill Creek
EPHH-16	1,655	3	1.5	Silt/Sand/ Gravel	INT-7
EPHH-17	366	1	0.5	Silt/Sand	EPHH-16
EPHH-18	1,562	3	2	Sand/Gravel	INT-7
EPHH-19	427	1.5	0.5	Silt/Gravel	Jackson Creek
EPHH-20	181	1	0.25	Silt	EPHH-21
EPHH-21	1,312	1.5	0.25	Silt	Carver Mill Creek
EPHH-22	229	1	0.5	Silt	INT-09 (Eastwood Bayou Reach C)
EPHH-23	2,033	1.5	0.5	Silt	INT-09 (Eastwood Bayou Reach C)
EPHH-24	2,921	3	1	Silt/Sand	INT-09 (Eastwood Bayou Reach C)
EPHH-25	228	1	0.25	Silt	EPHH-24
EPHH-26	1,072	3	1	Silt/Gravel	INT-10
EPHH-27	541	1.5	0.5	Silt/Gravel/ Bedrock	EPH-26
EPHH-28	72	2	1.5	Silt	INT-09 (Eastwood Bayou Reach C)
EPHH-29	3,744	3	1	Silt/Sand/ Gravel	INT-09 (Eastwood Bayou Reach C)
EPHH-30	862	2	0.5	Silt	EPHH-29
EPHH-31	2,637	2.5	0.5	Silt/Sand/ Gravel	EPHH-29
EPHH-32	491	1	0.5	Silt/Gravel	EPHH-31
EPHH-33	1,424	1	0.25	Silt/Gravel	EPHH-29
EPHH-34	232	1	0.25	Silt	INT-09 (Eastwood Bayou Reach C)
EPHH-35	269	3	1	Silt/Clay	INT-09 (Eastwood Bayou Reach C)
EPHH-36	71	1	0.25	Silt	EPHH-35
					<b>ATTACHMENT 2</b>

Stream ID	Length of Channel (linear feet)	Estimated Average Width (ft)	Estimated Average Depth (ft)	Dominant Substrate	Immediate Receiving Water
EPHH-37	73	1	1	Silt	EPHH-35
EPHH-38	857	1.5	0.5	Sand	INT-09 (Eastwood Bayou Reach C)
EPHH-39	139	1	0.25	Silt	INT-12
EPHH-40	160	1	0.25	Silt	EPHH-42
EPHH-41	446	1	0.25	Silt	EPHH-42
EPHH-42	1,124	2.5	1	Silt/Gravel	INT-12
EPHH-43	1,593	1.5	1	Silt	INT-09 (Eastwood Bayou Reach B)
EPHH-44	543	1.5	0.5	Silt	INT-09 (Eastwood Bayou Reach B)
EPHH-45	909	1	0.25	Silt	INT-09 (Eastwood Bayou Reach B)
EPHH-46	420	1.5	0.5	Silt	INT-09 (Eastwood Bayou Reach A)
EPHH-47	699	1.5	0.25	Silt	INT-09 (Eastwood Bayou Reach A)
EPHH-48	591	1	0.25	Silt	INT-09 (Eastwood Bayou Reach A)
EPHH-49	98	1	0.25	Silt/Gravel	INT-09 (Eastwood Bayou Reach A)
EPHH-50	83	1	0.25	Silt	INT-09 (Eastwood Bayou Reach A)
EPHH-51	191	1.5	0.25	Silt	INT-09 (Eastwood Bayou Reach A)
EPHH-52	808	1.5	0.25	Silt	INT-09 (Eastwood Bayou Reach A)
EPHH-53	1,215	1.5	0.5	Silt	INT-09 (Eastwood Bayou Reach A)
EPHH-54	353	1	1.25	Silt	EPHH-53
EPHH-55	167	2	2	Silt	INT-11
EPHH-56	486	1	1	Silt	INT-11
EPHH-57	246	1.5	1	Silt	INT-11
EPHH-58	702	1	1	Silt	INT-11
EPHH-59	116	1	1	Silt	INT-11
EPHH-60	199	2	0.25	Silt	EPHH-58
EPHH-61	1,391	2	0.5	Silt	INT-11
EPHH-62	468	1	0.25	Silt	EPHH-61
EPHH-63	470	3	0.5	Silt w/debris	Phillips Creek
EPHH-64	1,255	2	1	Silt	INT-11
EPHH-65	521	2.5	0.25	Silt	EPHH-64
EPHH-66	250	1.5	0.25	Silt	EPHH-64
EPHH-67	120	1	0.25	Silt	INT-11
EPHH-68	191	1.5	0.25	Silt	INT-11
EPHH-69	229	1	0.25	Silt w/debris	INT-13
EPHH-70	112	1.5	0.25	Silt	INT-04
EPHH-71	158	1.5	0.25	Silt w/debris	INT-04

Stream ID	Length of Channel (linear feet)	Estimated Average Width (ft)	Estimated Average Depth (ft)	Dominant Substrate	Immediate Receiving Water
EPHH-73	362	1.5	0.5	Silt w/debris	Eastwood Bayou
EPHH-75	310	3	1.5	Silt/Clay	INT-11
EPHH-76	422	5	1	Silt	EPHH-26
EPHH-77	154	1	0.25	Silt	EPHH-26
EPHH-101	1,054	3	1	Silt w/debris	INT-06
EPHH-102	762	2.5	1	Silt w/debris	INT-06
EPHH-103	597	1.5	0.5	Silt w/debris	EPHH-102
EPHH-104	131	1.5	0.5	Silt w/debris	EPHH-103
EPHH-105	278	1.5	0.5	Silt w/debris	INT-06
EPHH-106	133	2	0.5	Silt w/debris	EPHH-101
EPHH-131	125	1.5	0.5	Silt/Clay	Jackson Creek
EPHH-145	336	2	0.5	Silt/Clay	Eastwood Bayou
INT-01	209	4	1	Silt	Eastwood Bayou
INT-02	222	2	0.5	Silt/Clay	Eastwood Bayou
INT-03	396	3	1	Silt	Eastwood Bayou
INT-04	696	5	1	Silt	Wetland D
INT-05	530	6	2	Silt/Clay/ Gravel	Eastwood Bayou
INT-06	825	6	2	Sand	Carver Mill Creek
INT-07	1,024	10	3	Gravel	Carver Mill Creek
INT-08 (Jackson Creek)	3,069	3	1	Silt/Gravel	Carver Mill Creek
INT-09 (Eastwood Bayou Reach A)(f)	1,924	5	2	Silt/Sand/ Gravel	INT-09 (Eastwood Bayou Reach B)
INT-09 (Eastwood Bayou Reach B)(f)	4,046	8	6	Silt/Gravel/ Sand/Bedrock	INT-09 (Eastwood Bayou Reach C)
INT-09 (Eastwood Bayou Reach C)(f)	4,818	10	3	Clay/Gravel/ Bedrock	Arkansas River
INT-10	363	5	1	Sand/Gravel/ Silt	INT-09 (Eastwood Bayou Reach C)
INT-11	6,633	6	2	Sand/Silt/ Clay/Gravel/ Bedrock	INT-09 (Eastwood Bayou Reach C)
INT-12	542	4	0.5	Silt/Gravel/ Bedrock	INT-09 (Eastwood Bayou Reach B)
INT-13 (Tully Creek)	706	3	1	Silt/Clay/San	Arkansas River
PER-01 (Carver Mill Creek)	444	15	4	Sand/Silt	INT-09 (Eastwood Bayou Reach B)

**Notes: EPHH – ephemeral channel with an OHWM; INT – intermittent channel; PER – perennial channel**