Little Rock South Port
152 Acres

SELECT SITE
CERTIFIED BY
Entergy
Arkansas

Certified October 2018

LITTLE ROCK
PORT AUTHORITY

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General Information

Site Name:	South Port Site
Site Address:	Zeuber and Fletcher Road
Owner Contact Name:	City of Little Rock
Economic Development Organization Contact Information:	Ben France Little Rock Regional Chamber (501) 377-6004 bfrance@littlerockchamber.com
Site Size:	152 acres
Site Control Document:	Owned by the City of Little Rock
Aerial Site Location Map	See attachment labeled G-1.

Entergy BUSINESS DEVELOPMENT ARKANSAS

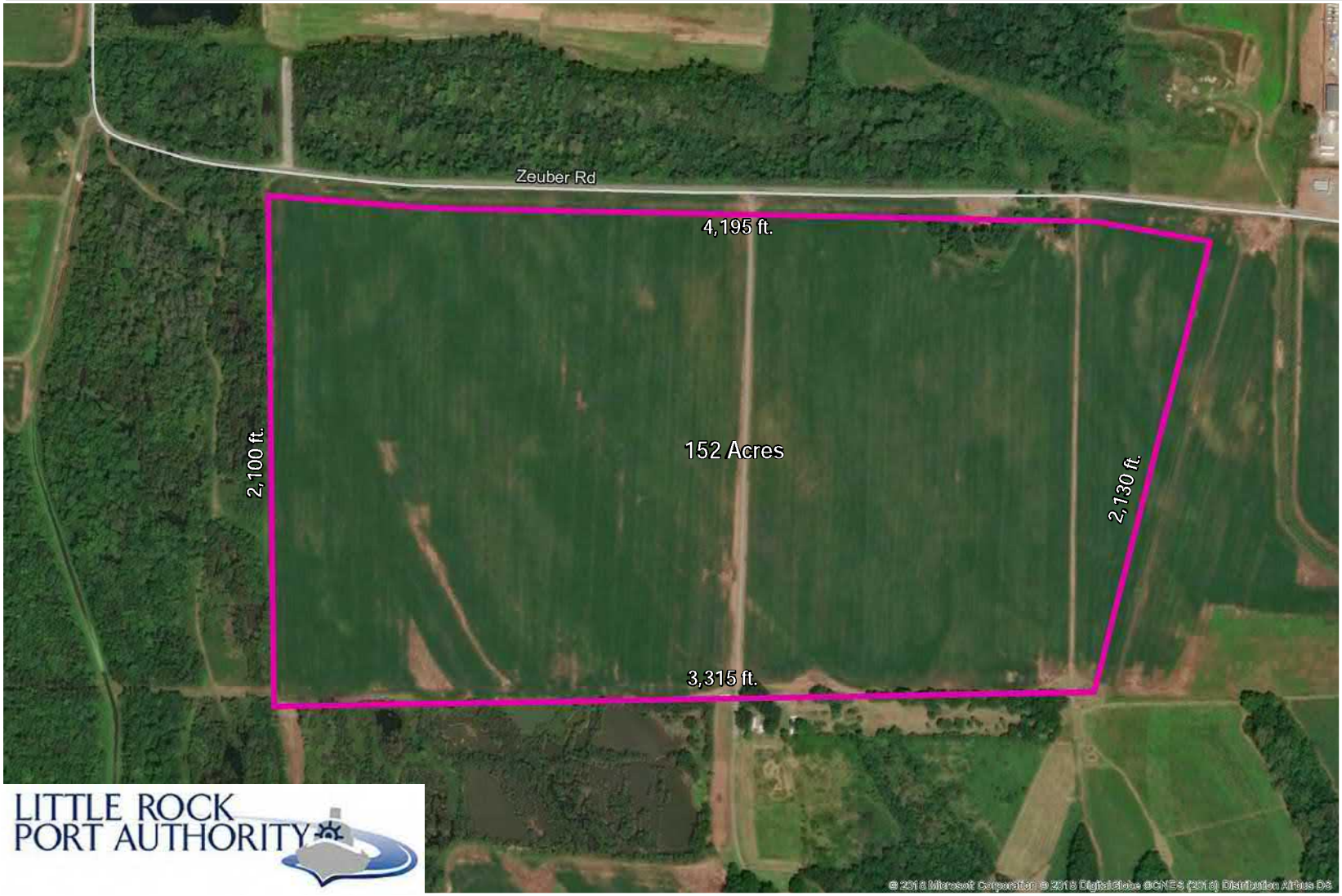
Little Rock South Port Site

Aerial Site Map

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

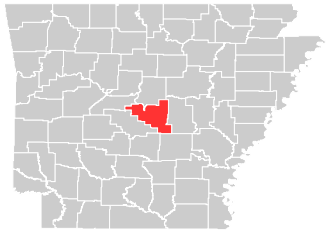
Phone: 1-888-301-5861

goentergy.com/ar

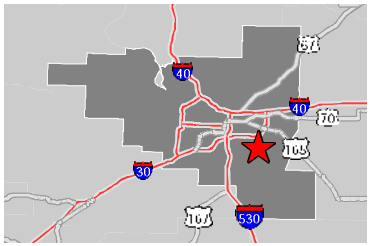


LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



VICINITY



LEGEND

PropertyBoundary

NOTE

These drawings are provided merely to assist in economic development efforts. The Entergy Companies make no representations or warranties whatsoever regarding the accuracy or completeness of any information contained herein nor the condition or suitability of any properties. Users should direct inquiries about any property to the listing broker for that property.

SOURCE

Source:
- Aerial Imagery by Bing Maps

Date: 10/2/2018

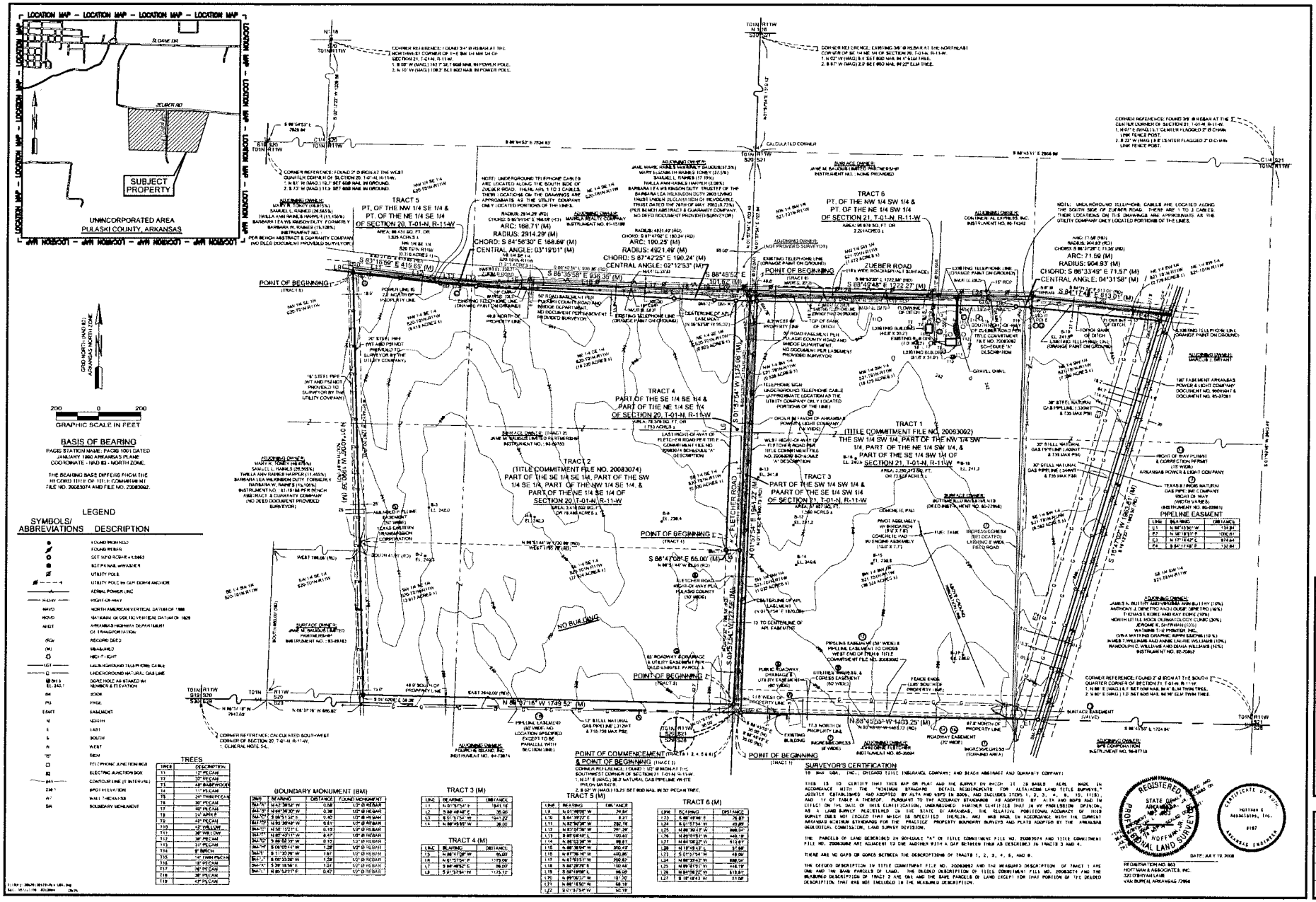
0 700 400 800
Feet
0 40 96 192
Meters

N

Site Characteristics

Acreage:	152
Dimensions:	1,960 feet along the east boundary; 3,680 feet along the northern boundary (Zeuber Road); 1,910 along the west boundary; 3,190 feet along the south boundary
Previous Use:	Agricultural
Fire Rating:	1
Distance to Fire Station:	1 mile
Distance to Nearest Interstate:	1.40 miles – Interstate 440 3.8 miles – Interstate 530 5 miles – Interstate 40 5 miles – Interstate 30
Distance to Nearest 4-lane Hwy:	See above nearest interstate
Access Points to Hwy/Interstate:	2 access points to Interstate 440
Road Frontage, Type and Weight Capacities:	Yes, 3,680 feet along Zeuber Road (county road and northern border of site). No weight capacity in the industrial park.
Distance to Nearest Rail:	1,000 feet to Little Rock Port Authority Railroad (connects to UP & BNSF). Rail can be brought to the site.
Distance to Nearest Commercial Airport:	2 miles– Bill & Hillary Clinton National Airport
Distance to Nearest Port Facility:	1.5 miles – Little Rock Port Authority Docks on the McClellan Kerr Navigation System
Distance from Retail or Central Business District:	4.75 miles to downtown Little Rock CBD 10 miles to Park Plaza Mall/Midtown Shops 12 miles to McCain Mall area
Site Type:	Little Rock Port Authority Industrial Park
Site Survey:	See attached site survey.

SELECT SITE
CERTIFIED BY Entergy Arkansas



ALTA/ACSM LAND TITLE SURVEY

THE SW 1/4 SW 1/4, PT. NW 1/4 SW 1/4, PT. NE 1/4 SW 1/4, & PT. SE 1/4 SW 1/4 OF SECTION 21 AND PART OF THE SE 1/4 SE 1/4, PT. SW 1/4 SE 1/4, PT. NW 1/4 SE 1/4, & PT. NE 1/4 SE 1/4 OF SECTION 20, ALL IN TOWNSHIP 01 NORTH, RANGE 11 WEST OF THE FIFTH PRINCIPAL MERIDIAN, PULASKI COUNTY, ARKANSAS.

REVISIONS	BY	DATE

HOFFMAN & ASSOCIATES, INC.
LAND SURVEYORS · CONSULTING ENGINEERS
320 OBRYAN LANE · VAN BUREN, AR 72956
TEL: (479) 474-7916 · FAX: (479) 474-2450
WEB ADDRESS · HANDAINC.COM

DATE:	07-19-2008
SCALE:	1" = 200'
DRAWN BY:	PHILLIPS
JOB NO.:	39529
SHEET:	1 OF 2

METES AND BOUNDS DESCRIPTION FROM COMMITMENT FOR TITLE INSURANCE FILE NO: 20083074, SCHEDULE A:

A PARCEL OF LAND SITUATED IN THE SE1/4 OF SECTION 20, TOWNSHIP 1 NORTH, RANGE 11 WEST, PULASKI COUNTY, ARKANSAS, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 20; THENCE NORTH 765.56 FEET ALONG THE EAST LINE OF SAID SECTION 20 TO THE POINT OF BEGINNING; THENCE WEST 1795.70 FEET TO THE CENTERLINE OF A 50 FOOT WIDE PIPELINE EASEMENT AND CENTERLINE OF A 24 INCH PIPELINE; THENCE SOUTH 44.01 FEET ALONG SAID CENTERLINE OF THE 50 FOOT WIDE PIPELINE EASEMENT; THENCE WEST 788.66 FEET TO THE WEST LINE OF THE SE1/4 OF SECTION 20; THENCE SOUTH ALONG THE WEST LINE OF THE SE1/4 OF SECTION 20 A DISTANCE OF 660 FEET TO A POINT WHICH IS 38 FEET NORTH OF THE SOUTH LINE OF THE S1/2 OF THE SE1/4, SECTION 20; THENCE EASTERLY PARALLEL TO THE SOUTH LINE OF THE S1/2 OF THE SE1/4, SECTION 20, A DISTANCE OF 2640 FEET TO THE EAST LINE OF THE SE1/4 OF SECTION 20; THENCE NORTHERLY ALONG THE EAST LINE OF THE SE1/4, SECTION 20 A DISTANCE OF 727.56 FEET TO THE POINT OF BEGINNING. SUBJECT TO AN EASEMENT OVER THE EAST 65 FEET OF THE PROPERTY FOR USE AS A ROADWAY, DRAINAGE AND UTILITY EASEMENT.

AND

A PARCEL OF LAND SITUATED IN THE SE1/4 OF SECTION 20, TOWNSHIP 1 NORTH, RANGE 11 WEST, PULASKI COUNTY, ARKANSAS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 20; THENCE NORTH 01 DEGREE 54 MINUTES 32 SECONDS EAST, 765.56 FEET ALONG THE EAST LINE OF SAID SECTION 20; THENCE NORTH 88 DEGREES 51 MINUTES 44 SECONDS WEST 65.01 FEET; THENCE NORTH 88 DEGREES 51 MINUTES 44 SECONDS WEST, 1730.69 FEET TO THE CENTERLINE OF A 50 FOOT WIDE PIPELINE EASEMENT AND THE CENTERLINE OF A 24 INCH PIPELINE; THENCE NORTH 01 DEGREE 44 MINUTES 42 SECONDS WEST, 1267.00 FEET ALONG SAID CENTERLINE OF 50 FOOT WIDE PIPELINE EASEMENT; THENCE SOUTH 83 DEGREES 21 MINUTES 35 SECONDS EAST, 415.65 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 2914.29 FEET AND A CHORD BEARING SOUTH 85 DEGREES 01 MINUTES 04 SECONDS EAST, 168.69 FEET; THENCE SOUTH 86 DEGREES 40 MINUTES 34 SECONDS EAST, 938.35 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 4921.49 FEET AND A CHORD BEARING SOUTH 87 DEGREES 47 MINUTES 02 SECONDS EAST; THENCE SOUTH 88 DEGREES 53 MINUTES 28 SECONDS EAST, 102.21 FEET TO A POINT LOCATED 65 FEET WEST OF THE EAST LINE OF SAID SECTION 20; THENCE SOUTH 01 DEGREE 54 MINUTES 32 SECONDS WEST, 1175.09 FEET ALONG A LINE LOCATED 65 FEET WEST OF AND PARALLEL TO THE EAST LINE OF SAID SECTION 20 TO THE POINT OF BEGINNING.

METES AND BOUNDS DESCRIPTION FROM COMMITMENT FOR TITLE INSURANCE FILE NO: 20083092, SCHEDULE A:

PART OF THE SW1/4 OF SECTION 21, TOWNSHIP 1 NORTH, RANGE 11 EST, IN PULASKI COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 21; THENCE SOUTH 88 DEGREES 48 MINUTES 49 SECONDS EAST ALONG THE SOUTH LINE OF SAID SECTION 21 A DISTANCE OF 35 FEET TO THE EAST RIGHT-OF-WAY LINE OF FLETCHER ROAD AND THE POINT OF BEGINNING; THENCE NORTH 01 DEGREE 54 MINUTES 32 SECONDS EAST PARALLEL TO AND 35 FEET EAST OF THE WEST LINE OF SAID SECTION 21 AND ALONG THE EAST LINE OF SAID FLETCHER ROAD A DISTANCE OF 1,940.73 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF ZEUBER ROAD; THENCE SOUTH 88 DEGREES 53 MINUTES 28 SECONDS EAST ALONG SAID RIGHT-OF-WAY 1,222.58 FEET; THENCE 71.59 FEET ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 904.93 FEET AND A CHORD BEARING SOUTH 86 DEGREES 37 MINUTES 28 SECONDS EAST, 71.58 FEET; THENCE SOUTH 84 DEGREES 21 MINUTES 28 SECONDS EAST ALONG SAID RIGHT-OF-WAY 613.01 FEET TO THE EAST LINE OF A NATURAL GAS PIPELINE EASEMENT; THENCE SOUTH 16 DEGREES 43 MINUTES 22 SECONDS WEST, 1,963.50 FEET ALONG SAID EAST LINE OF PIPELINE EASEMENT TO THE SOUTH LINE OF SAID SECTION 21; THENCE NORTH 88 DEGREES 48 MINUTES 48 SECONDS WEST ALONG THE SOUTH LINE OF SAID SECTION 21 A DISTANCE OF 1,403.72 FEET TO THE POINT OF BEGINNING, SUBJECT TO THE SOUTH 60 FEET OF THE PROPERTY THAT SHALL BE RESERVED FOR A PUBLIC ROADWAY, DRAINAGE AND UTILITY EASEMENT.

METES AND BOUNDS DESCRIPTION AS MEASURED FOR TITLE INSURANCE FILE NO: 20083092 (TRACT 1):

THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4), PART OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4), PART OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4), AND PART OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 21, TOWNSHIP 1 NORTH, RANGE 11 WEST OF THE FIFTH PRINCIPAL MERIDIAN, PULASKI COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCING AT A FOUND ONE AND ONE-HALF INCH DIAMETER IRON PIPE AT THE SOUTHWEST CORNER OF SAID SECTION 21; THENCE SOUTH 88 DEGREES 45 MINUTES 55 SECONDS EAST (BEARINGS BASED ON GRID MERIDIAN OF THE ARKANSAS COORDINATE SYSTEM 1983, NORTH ZONE), 35.00 FEET ALONG THE SOUTH LINE OF SAID SECTION 20 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AND THE POINT OF BEGINNING; THENCE NORTH 01 DEGREES 57 MINUTES 54 SECONDS EAST, 1,941.22 FEET PARALLEL TO THE WEST LINE OF SAID SECTION 21 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 88 DEGREES 49 MINUTES 48 SECONDS EAST, 1,222.27 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AT A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 904.93 FEET; THENCE SOUTHEASTERLY, 71.59 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 04 DEGREES 31 MINUTES 58 SECONDS AND A CHORD BEARING SOUTH 86 DEGREES 33 MINUTES 49 SECONDS EAST 71.57 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 84 DEGREES 17 MINUTES 48 SECONDS EAST, 613.01 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AT THE EASTERLY RIGHT-OF-WAY OF AN AMENDMENT RIGHT-OF-WAY AGREEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA RECORDED IN INSTRUMENT 80-22881 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 16 DEGREES 47 MINUTES 02 SECONDS WEST, 1,963.81 FEET ALONG THE EASTERLY RIGHT-OF-WAY OF SAID AMENDMENT RIGHT-OF-WAY AGREEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA RECORDED IN INSTRUMENT 80-22881 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AT THE SOUTH LINE OF SAID SECTION 21; THENCE NORTH 88 DEGREES 45 MINUTES 55 SECONDS WEST, 1,403.25 FEET ALONG THE SOUTH LINE OF SAID SECTION 21 TO THE POINT OF BEGINNING.

CONTAINED WITHIN SAID BOUNDS, 3,290,373 SQUARE FEET OR 73.870 ACRES, MORE OR LESS.

METES AND BOUNDS DESCRIPTION AS MEASURED FOR TITLE INSURANCE FILE NO: 20083074 (TRACT 2):

PART OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4), PART OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4), PART OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4), AND PART OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 20, TOWNSHIP 1 NORTH, RANGE 11 WEST OF THE FIFTH PRINCIPAL MERIDIAN, PULASKI COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND ONE AND ONE-HALF INCH DIAMETER IRON PIPE AT THE SOUTHEAST CORNER OF SAID SECTION 20; THENCE NORTH 01 DEGREES 57 MINUTES 54 SECONDS EAST (BEARINGS BASED ON GRID MERIDIAN OF THE ARKANSAS COORDINATE SYSTEM 1983, NORTH ZONE), 38.00 FEET ALONG THE EAST LINE OF SAID SECTION 20 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AND THE POINT OF BEGINNING; THENCE NORTH 88 DEGREES 37 MINUTES 16 SECONDS WEST, 1,749.52 FEET PARALLEL WITH THE SOUTH LINE OF SAID SECTION 20 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AT THE CENTERLINE OF AN AMENDED PIPELINE EASEMENT RIGHT-OF-WAY IN FAVOR OF TEXAS EASTERN TRANSMISSION CORPORATION RECORDED IN BOOK 804 AT PAGE 162-172; THENCE NORTH 01 DEGREES 40 MINUTES 06 SECONDS WEST, 1,990.39 FEET ALONG THE CENTERLINE OF AN AMENDED PIPELINE EASEMENT RIGHT-OF-WAY IN FAVOR OF TEXAS EASTERN TRANSMISSION CORPORATION RECORDED IN BOOK 804 AT PAGE 162-172 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 83 DEGREES 18 MINUTES 59 SECONDS EAST, 415.65 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 TO A CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 2,914.29 FEET; THENCE SOUTHEASTERLY, 168.71 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 03 DEGREES 19 MINUTES 01 SECONDS AND A CHORD BEARING SOUTH 84 DEGREES 56 MINUTES 30 SECONDS EAST 168.69 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 86 DEGREES 35 MINUTES 58 SECONDS EAST, 936.35 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 TO A CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 4,921.49 FEET; THENCE SOUTHEASTERLY, 190.25 FEET ALONG SAID CURVE HAVING A CENTRAL ANGLE OF 02 DEGREES 12 MINUTES 53 SECONDS AND A CHORD BEARING SOUTH 87 DEGREES 42 MINUTES 25 SECONDS EAST 190.24 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 88 DEGREES 48 MINUTES 52 SECONDS EAST, 101.62 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 LOCATED 65.00 FEET WEST OF AND PERPENDICULAR TO THE EAST LINE OF SAID SECTION 20; THENCE SOUTH 01 DEGREES 57 MINUTES 54 SECONDS WEST, 1,175.08 FEET PARALLEL WITH THE EAST LINE OF SAID SECTION 20 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 88 DEGREES 47 MINUTES 08 SECONDS EAST, 65.01 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AT THE EAST LINE OF SAID SECTION 20; THENCE SOUTH 01 DEGREES 57 MINUTES 54 SECONDS WEST, 727.56 FEET ALONG THE EAST LINE OF SAID SECTION 20 TO THE POINT OF BEGINNING.

CONTAINED WITHIN SAID BOUNDS, 3,418,602 SQUARE FEET OR 78.480 ACRES, MORE OR LESS.

METES AND BOUNDS DESCRIPTION AS MEASURED FOR (TRACT 3):

PART OF THE SOUTHWEST QUARTER (SW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) AND PART OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 21, TOWNSHIP 1 NORTH, RANGE 11 WEST OF THE FIFTH PRINCIPAL MERIDIAN, PULASKI COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND ONE AND ONE-HALF INCH DIAMETER IRON PIPE AT THE SOUTHWEST CORNER OF SAID SECTION 21; THENCE NORTH 01 DEGREES 57 MINUTES 54 SECONDS EAST (BEARINGS BASED ON GRID MERIDIAN OF THE ARKANSAS COORDINATE SYSTEM 1983, NORTH ZONE), 1,941.18 FEET ALONG THE WEST LINE OF SAID SECTION 21; THENCE SOUTH 88 DEGREES 49 MINUTES 48 SECONDS EAST, 35.00 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 01 DEGREES 57 MINUTES 54 SECONDS WEST, 1,941.22 FEET PARALLEL WITH THE WEST LINE OF SAID SECTION 21 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AT THE SOUTH LINE OF SAID SECTION 21; THENCE NORTH 88 DEGREES 45 MINUTES 55 SECONDS WEST, 35.00 FEET ALONG THE SOUTH LINE OF SAID SECTION 21 TO THE POINT OF BEGINNING.

CONTAINED WITHIN SAID BOUNDS, 67,937 SQUARE FEET OR 1.560 ACRES, MORE OR LESS.

METES AND BOUNDS DESCRIPTION AS MEASURED FOR (TRACT 4):

PART OF THE SOUTHEAST QUARTER (SE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) AND PART OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 20, TOWNSHIP 1 NORTH, RANGE 11 WEST OF THE FIFTH PRINCIPAL MERIDIAN, PULASKI COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND ONE AND ONE-HALF INCH DIAMETER IRON PIPE AT THE SOUTHEAST CORNER OF SAID SECTION 20; THENCE NORTH 01 DEGREES 57 MINUTES 54 SECONDS EAST (BEARINGS BASED ON GRID MERIDIAN OF THE ARKANSAS COORDINATE SYSTEM 1983, NORTH ZONE), 765.56 FEET ALONG THE EAST LINE OF SAID SECTION 20 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AND THE POINT OF BEGINNING; THENCE NORTH 88 DEGREES 47 MINUTES 08 SECONDS WEST, 65.00 FEET TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE NORTH 01 DEGREES 57 MINUTES 54 SECONDS EAST, 1,175.08 FEET PARALLEL WITH THE EAST LINE OF SAID SECTION 20 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE SOUTH 88 DEGREES 48 MINUTES 52 SECONDS EAST, 65.00 FEET TO THE EAST LINE OF SAID SECTION 20; THENCE SOUTH 01 DEGREES 57 MINUTES 54 SECONDS WEST, 1,175.12 FEET ALONG THE EAST LINE OF SAID SECTION 20 TO THE POINT OF BEGINNING.

CONTAINED WITHIN SAID BOUNDS, 76,378 SQUARE FEET OR 1.753 ACRES, MORE OR LESS.

METES AND BOUNDS DESCRIPTION AS MEASURED FOR (TRACT 5):

PART OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) AND PART OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 20, TOWNSHIP 1 NORTH, RANGE 11 WEST OF THE FIFTH PRINCIPAL MERIDIAN, PULASKI COUNTY, ARKANSAS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND ONE AND ONE-HALF INCH DIAMETER IRON PIPE AT THE SOUTHEAST CORNER OF SAID SECTION 20; THENCE NORTH 01 DEGREES 57 MINUTES 54 SECONDS EAST (BEARINGS BASED ON GRID MERIDIAN OF THE ARKANSAS COORDINATE SYSTEM 1983, NORTH ZONE), 38.00 FEET ALONG THE EAST LINE OF SAID SECTION 20 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE NORTH 88 DEGREES 37 MINUTES 16 SECONDS WEST, 1,749.52 FEET PARALLEL WITH THE SOUTH LINE OF SAID SECTION 20 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AT THE CENTERLINE OF AN AMENDED PIPELINE EASEMENT RIGHT-OF-WAY IN FAVOR OF TEXAS EASTERN TRANSMISSION CORPORATION RECORDED IN BOOK 804 AT PAGE 162-172; THENCE NORTH 01 DEGREES 40 MINUTES 06 SECONDS WEST, 1,990.39 FEET ALONG THE CENTERLINE OF SAID AMENDED PIPELINE EASEMENT RIGHT-OF-WAY IN FAVOR OF TEXAS EASTERN TRANSMISSION CORPORATION RECORDED IN BOOK 804 AT PAGE 162-172 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AND THE POINT OF BEGINNING; THENCE NORTH 01 DEGREES 40 MINUTES 06 SECONDS WEST, 24.64 FEET ALONG THE CENTERLINE OF SAID AMENDED PIPELINE EASEMENT RIGHT-OF-WAY IN FAVOR OF TEXAS EASTERN TRANSMISSION CORPORATION RECORDED IN BOOK 804 AT PAGE 162-172 TO THE CENTERLINE OF EXISTING ZUEBER ROAD; THENCE SOUTHEASTERLY ALONG THE CENTERLINE OF SAID ZUEBER ROAD THE FOLLOWING COURSES (BEARING AND DISTANCE): SOUTH 84 DEGREES 35 MINUTES 22 SECONDS EAST 8.21 FEET, SOUTH 82 DEGREES 58 MINUTES 38 SECONDS EAST 202.69 FEET, SOUTH 83 DEGREES 07 MINUTES 39 SECONDS EAST 201.27 FEET, SOUTH 85 DEGREES 09 MINUTES 45 SECONDS EAST 100.82 FEET, SOUTH 86 DEGREES 03 MINUTES 38 SECONDS EAST 98.80 FEET, SOUTH 88 DEGREES 38 MINUTES 04 SECONDS EAST 300.48 FEET, SOUTH 87 DEGREES 36 MINUTES 19 SECONDS EAST 400.84 FEET, SOUTH 87 DEGREES 53 MINUTES 51 SECONDS EAST 200.91 FEET, SOUTH 88 DEGREES 20 MINUTES 29 SECONDS EAST 100.46 FEET, SOUTH 89 DEGREES 49 MINUTES 08 SECONDS EAST 98.04 FEET, SOUTH 89 DEGREES 09 MINUTES 37 SECONDS EAST 101.20 FEET, SOUTH 88 DEGREES 16 MINUTES 50 SECONDS EAST 65.18 FEET TO A FOUND REBAR AT THE EAST LINE OF SAID SECTION 20; THENCE SOUTH 01 DEGREES 57 MINUTES 54 SECONDS WEST, 50.19 FEET ALONG THE EAST LINE OF SAID SECTION 20; THENCE NORTH 88 DEGREES 48 MINUTES 52 SECONDS WEST, 168.62 FEET TO A CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 4921.49 FEET; THENCE NORTHWESTERLY, 190.25 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 02 DEGREES 12 MINUTES 53 SECONDS AND A CHORD BEARING NORTH 87 DEGREES 42 MINUTES 25 SECONDS WEST 190.24 FEET; THENCE NORTH 86 DEGREES 35 MINUTES 58 SECONDS WEST, 936.35 FEET TO A CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 2914.29 FEET; THENCE NORTHWESTERLY, 168.71 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 03 DEGREES 19 MINUTES 01 SECONDS AND A CHORD BEARING NORTH 84 DEGREES 56 MINUTES 30 SECONDS WEST, 168.69 FEET; THENCE NORTH 83 DEGREES 18 MINUTES 59 SECONDS WEST, 415.65 FEET TO THE POINT OF BEGINNING.

CONTAINED WITHIN SAID BOUNDS, 66,431 SQUARE FEET OR 1.525 ACRES, MORE OR LESS.

METES AND BOUNDS DESCRIPTION AS MEASURED FOR (TRACT 6):

PART OF THE NORTHWEST QUARTER (NW 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) AND PART OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4), OF SECTION 21, TOWNSHIP 1 NORTH, RANGE 11 WEST OF THE FIFTH PRINCIPAL MERIDIAN, PULASKI COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A FOUND ONE AND ONE-HALF INCH DIAMETER IRON PIPE AT THE SOUTHWEST CORNER OF SAID SECTION 21; THENCE SOUTH 88 DEGREES 45 MINUTES 55 SECONDS EAST (BEARINGS BASED ON GRID MERIDIAN OF THE ARKANSAS COORDINATE SYSTEM 1983, NORTH ZONE), 35.00 FEET ALONG THE SOUTH LINE OF SAID SECTION 21 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663; THENCE NORTH 01 DEGREES 57 MINUTES 54 SECONDS EAST, 1,941.22 FEET PARALLEL WITH THE WEST LINE OF SAID SECTION 21 TO A SET ONE-HALF INCH DIAMETER REBAR WITH YELLOW CAP STAMPED PS 663 AND THE POINT OF BEGINNING; THENCE NORTH 88 DEGREES 49 MINUTES 48 SECONDS WEST, 35.00 FEET TO THE WEST LINE OF SAID SECTION 21; THENCE NORTH 01 DEGREES 57 MINUTES 54 SECONDS EAST, 49.68 FEET ALONG THE WEST LINE OF SAID SECTION 21 TO A FOUND REBAR AT THE CENTERLINE OF EXISTING ZUEBER ROAD; THENCE SOUTH 88 DEGREES 39 MINUTES 43 SECONDS EAST, 869.00 FEET TO A FOUND REBAR AT THE CENTERLINE OF SAID EXISTING ZUEBER ROAD AND AT THE SOUTHWEST CORNER OF THE LAND AS DESCRIBED IN WARRANTY DEED RECORDED IN INSTRUMENT NO. 86-74342; THENCE SOUTH 89 DEGREES 01 MINUTES 51 SECONDS EAST, 448.17 FEET ALONG THE SOUTH LINE OF SAID LAND AS DESCRIBED IN WARRANTY DEED RECORDED IN INSTRUMENT NO. 86-74342 TO A FOUND REBAR AT THE CENTERLINE OF SAID EXISTING ZUEBER ROAD; THENCE SOUTH 84 DEGREES 08 MINUTES 22 SECONDS EAST, 618.78 FEET ALONG THE SOUTH LINE OF SAID LAND AS DESCRIBED IN WARRANTY DEED RECORDED IN INSTRUMENT NO. 86-74342 TO THE CENTERLINE OF SAID EXISTING ZUEBER ROAD AND AT THE EASTERLY RIGHT-OF-WAY OF AN AMENDMENT RIGHT-OF-WAY AGREEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA RECORDED IN INSTRUMENT 80-22881; THENCE SOUTH 18 DEGREES 49 MINUTES 43 SECONDS WEST, 51.67 FEET ALONG THE EASTERLY RIGHT-OF-WAY OF SAID AMENDMENT RIGHT-OF-WAY AGREEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA RECORDED IN INSTRUMENT 80-22881; THENCE NORTH 84 DEGREES 17 MINUTES 48 SECONDS WEST, 613.01 FEET TO A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 904.93 FEET; THENCE NORTHWESTERLY, 71.59 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 04 DEGREES 31 MINUTES 58 SECONDS AND A CHORD BEARING NORTH 86 DEGREES 33 MINUTES 49 SECONDS WEST 71.57 FEET; THENCE NORTH 88 DEGREES 49 MINUTES 48 SECONDS WEST, 1222.27 FEET TO THE POINT OF BEGINNING.

CONTAINED WITHIN SAID BOUNDS, 95,879 SQUARE FEET OR 2.201 ACRES, MORE OR LESS.

STATEMENT OF APPARENT ENCROACHMENTS TITLE COMMITMENT FILE NO. 20083074

(A) PIPELINE IS NOT PARALLEL WITH THE SECTION PER RECORD DOCUMENT.

(B) UNDERGROUND TELEPHONE CABLE IS LOCATED ON THE SUBJECT PROPERTY NEAR THE NORTHWEST CORNER UPTO 5.2 FEET SOUTH OF THE NORTH LINE OF SUBJECT PROPERTY AS DEPICTED ON SHEET 1 OF 2 HEREON.

(C) GUY ANCHOR FROM UTILITY POLE EXTENDS UPTO 23.0 FEET SOUTH OF THE NORTH LINE OF SUBJECT PROPERTY.

STATEMENT OF APPARENT ENCROACHMENTS TITLE COMMITMENT FILE NO. 20083092

(D) UTILITY POLE AND AERIAL LINES EXTEND TO BUILDING AT NORTH SIDE OF THE SUBJECT PROPERTY.

(E) UTILITY POLE WITH NIGHT LIGHT AND AERIAL POWER LINE EXTEND UP TO 33.4 FEET SOUTH OF THE NORTH LINE OF SUBJECT PROPERTY.

(F) UTILITY POLE WITH NIGHT LIGHT AND AERIAL POWER LINE EXTEND UP TO 26.2 FEET SOUTH OF THE NORTH LINE OF SUBJECT PROPERTY.

(G) UNDERGROUND TELEPHONE CABLE EXTENDS UPTO 33 FEET SOUTH OF THE NORTH LINE OF THE SUBJECT PROPERTY.

NOTES CORRESPONDING TO CHICAGO TITLE INSURANCE COMPANY SCHEDULE B-II ADDITIONAL EXCEPTIONS COMMITTMENT FILE NO. 20083074 EFFECTIVE DATE FEBRUARY 26, 2008 AT 07:00 A.M. AND ISSUE DATE, MARCH 21, 2008 AT 9:56 A.M.

(4) RESERVATION OF MINERALS AND/OR MINERAL RIGHTS IN DEED FILED FOR RECORD JANUARY 16, 1932 AND RECORDED IN DEED BOOK 218, PAGE 315, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND INCLUDES THE MEASURED DESCRIPTIONS FOR TRACTS 2, 4, AND 5 AS PLOTTED HEREON.

(5) RIGHT OF WAY EASEMENT EXECUTED BY MARY J. RAINES TO DEFENSE PLANT CORPORATION, FILED FOR RECORD AUGUST 24, 1943 AND RECORDED IN BOOK 299, PAGE 191, AND AS AMENDED IN DEED BOOK 804, PAGE 169, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(6) RIGHT OF WAY EASEMENT IN FAVOR OF FOURCHE ISLAND DRAINAGE DISTRICT NO. 2 OF PULASKI COUNTY, ARKANSAS, FILED FOR RECORD APRIL 13, 1962 AND RECORDED IN BOOK 703, PAGE 149, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND INCLUDES THE MEASURED DESCRIPTIONS FOR TRACTS 2, 4, AND 5 AS PLOTTED HEREON.

(7) ORDINANCE NO. 12,097, PERTAINING TO COMMUNITY FACILITIES PLAN, RELATING TO PARKS, PLAYGROUNDS, AND RECREATIONAL AREAS, OF RECORD IN BOOK 1039, PAGE 355, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THE DOCUMENT PROVIDED SURVEYOR IS NOT READABLE.

(8) ANY PART OF SUBJECT PROPERTY LYING WITHIN ROAD RIGHTS OF WAY.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON. PER A PHONE CONVERSATION WITH MIKE DAVID AT THE PULASKI COUNTY ROAD AND BRIDGE DEPARTMENT, THEY CLAIM A 50-FOOT EASEMENT FOR ZEUBER ROAD AND FLETCHER ROAD. NO DOCUMENTS PROVIDED SURVEYOR.

(9) SUBJECT TO AN EASEMENT OVER THE EAST 65 FEET OF THE PROPERTY FOR USE AS A ROADWAY, DRAINAGE AND UTILITY EASEMENT, AND THE RIGHTS OF OTHERS TO USE SAID EASEMENT.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON AS DESCRIBED IN PARAGRAPH TWO OF THE DESCRIPTION PROVIDED IN SCHEDULE A OF TITLE COMMITMENT.

(10) PIPELINE EASEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA, FILED FOR RECORD MAY 23, 1995, OF RECORD AS INSTRUMENT NO. 95-29474, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES NOT AFFECT THE SUBJECT PROPERTY.

(11) QUITCLAIM DEED FROM WATER IMPROVEMENT DISTRICT NO. 89 OF PULASKI COUNTY, ARKANSAS, TO ARKANSAS SOIL AND WATER CONSERVATION COMMISSION, OF RECORD AS INSTRUMENT NO. 94-14218, AND LEASE-PURCHASE AGREEMENT DATED FEBRUARY 10, 1994 OF RECORD AS INSTRUMENT NO. 94-14218, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND DESCRIBES ALL OF THE PROPERTY LOCATED IN TOWNSHIP 1 NORTH, RANGE 11 WEST. THE DOCUMENT PROVIDED SURVEYOR FOR THE QUITCLAIM DEED IS INSTRUMENT NO. 94-14217 NOT 94-14218.

NOTES CORRESPONDING TO CHICAGO TITLE INSURANCE COMPANY, SCHEDULE B-II ADDITIONAL EXCEPTIONS COMMITTMENT FILE NO. 20083092 EFFECTIVE DATE MARCH 2, 2008 AT 08:00 A.M. AND ISSUE DATE: MARCH 26, 2008 AT 03:12 P.M.

(3) RIGHT OF WAY DEED TO TEXAS ILLINOIS NATURAL GAS PIPELINE CO., FILED FOR RECORD MAY 31, 1951 AND RECORDED IN DEED BOOK 461, PAGE 553 AND AMENDMENT(S) THERETO RECORDED IN BOOK 806, PAGE 553 AND INSTRUMENT NO. 80-228881, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM IS PLOTTED HEREON AND DOES AFFECT THE SUBJECT PROPERTY.

(4) RIGHT OF WAY TO ARKANSAS POWER & LIGHT COMPANY AS DESCRIBED IN ORDER OF PULASKI COUNTY CIRCUIT COURT FILED SEPTEMBER 9, 1958 AND RECORDED IN BOOK 33, PAGE 268, IN CASE NO. 46195, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM IS PLOTTED HEREON AND DOES AFFECT THE SUBJECT PROPERTY.

(5) RIGHT OF WAY DEED IN FAVOR OF PULASKI COUNTY, ARKANSAS, FILED FOR RECORD APRIL 17, 1968 AND RECORDED IN DEED BOOK 1031, PAGE 119, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES NOT AFFECT THE SUBJECT PROPERTY.

(6) RIGHT OF WAY AGREEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA, A DELAWARE CORPORATION, FILED FOR RECORD JULY 23, 1968 AND RECORDED IN DEED BOOK 1041, PAGE 549, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY, HOWEVER IT WAS AMENDED BY ITEM 3 WHICH IS PLOTTED HEREON.

(7) SURFACE EASEMENT (VALVE) IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA, A CORPORATION, FILED FOR RECORD JULY 14, 1969 AND RECORDED IN DEED BOOK 1079, PAGE 151, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THE VALVE SITE DOES NOT AFFECT THE SUBJECT PROPERTY, HOWEVER THE ROADWAY DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(8) RESERVATION OF SOUTH 60 FEET OF SUBJECT PROPERTY TO BE USED AS PUBLIC ROADWAY, DRAINAGE AND UTILITY EASEMENT CONTAINED IN WARRANTY DEED FILED FOR RECORD MAY 28, 1980 AND RECORDED AS INSTRUMENT NO. 80-22858, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(9) EASEMENT IN FAVOR OF THE SFS CORPORATION, FILED FOR RECORD JUNE 12, 1984 AND RECORDED AS INSTRUMENT NO. 84-35806, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AS IS PLOTTED HEREON.

(10) RIGHT OF WAY PERMIT IN FAVOR OF ARKANSAS POWER & LIGHT COMPANY, AN ARKANSAS CORPORATION, FILED FOR RECORD FEBRUARY 15, 1985 AND RECORDED AS INSTRUMENT NO. 85-08330 AND CORRECTION THERETO FILED FOR RECORD JULY 9, 1985 AND RECORDED AS INSTRUMENT NO. 85-37081, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AS IS PLOTTED HEREON.

(11) QUITCLAIM DEED FROM WATER IMPROVEMENT DISTRICT NO. 89 OF PULASKI COUNTY, ARKANSAS, TO ARKANSAS SOIL AND WATER CONSERVATION COMMISSION, AN AGENCY OF THE STATE OF ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND COVERS ALL OF TOWNSHIP 1 NORTH, RANGE 11 WEST. THE DOCUMENT PROVIDED SURVEYOR IS INSTRUMENT NO. 94-14217.

(12) PIPELINE EASEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA, A DELAWARE CORPORATION, FILED FOR RECORD MAY 23, 1995 AND RECORDED AS INSTRUMENT NO. 95-29473, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(13) SURFACE EASEMENT (VALVE) IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA, A CORPORATION, FILED FOR RECORD JULY 10, 1995 AND RECORDED AS INSTRUMENT NO. 95-38823, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON AT WHAT APPEARS TO BE A BLOW OFF VALVE. THE VALVE LOCATION IS NOT SPECIFIED, EXCEPT AS NEAR THE EAST BOUNDARY LINE.

(14) ROADWAY AGREEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA, A DELAWARE CORPORATION, FILED FOR RECORD OCTOBER 18, 2001 AND RECORDED AS INSTRUMENT NO. 2001081715, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

(15) ROADWAY AGREEMENT IN FAVOR OF NATURAL GAS PIPELINE COMPANY OF AMERICA, A DELAWARE CORPORATION, FILED FOR RECORD MARCH 3, 2003 AND RECORDED AS INSTRUMENT NO. 2003010477, RECORDS OF PULASKI COUNTY, ARKANSAS.

COMMENT: THIS ITEM DOES AFFECT THE SUBJECT PROPERTY AND IS PLOTTED HEREON.

CERTIFICATE OF AUTH. Hoffman & Associates, Inc. #197 ARKANSAS ENGINEER

REGISTERED PROFESSIONAL LAND SURVEYOR STATE OF ARKANSAS NO. 663

DATE: JULY 19 2008

REGISTRATION NO. 663
HOFFMAN & ASSOCIATES, INC.
320 O'BRYAN LANE
VAN BUREN, ARKANSAS 72956

GENERAL NOTES:

1. COORDINATE SYSTEM AND BASIS FOR ELEVATIONS:

   HORIZONTAL DATUM: ARKANSAS PLANE COORDINATES, NAD 83, NORTH ZONE, CODE 0301.

   VERTICAL DATUM: NGVD 29.

   BASIS OF COORDINATES
   PULASKI AREA GEOGRAPHIC INFORMATION SYSTEM (PAGIS), CITY OF LITTLE ROCK, ARKANSAS; STATION NAME: PAGIS 1001, DATE: JANUARY, 1998.

2. THE ELECTRONIC DRAWING OF THIS SURVEY IS BASED UPON THE COORDINATE SYSTEM OF GENERAL NOTE, ITEM 1, AND THE DISTANCES DEPICTED ARE GROUND DISTANCES.

3. THE RECORD DESCRIPTION OF PARAGRAPH ONE IN SCHEDULE A OF TITLE COMMITMENT FILE NO. 20083074 FAILS TO FORM A MATHEMATICALLY CLOSED FIGURE.

   ALSO, ONLY THAT PORTION OF THIS DESCRIPTION LYING EAST OF THE CENTERLINE OF THE PIPELINE EASEMENT IDENTIFIED IN SCHEDULE B II ADDITIONAL EXCEPTIONS, ITEM 5, WAS SURVEYED.

4. PUBLIC STREET RIGHT-OF-WAYS.

   ACCESS TO THE SUBJECT PROPERTY IS PROVIDED BY ZUEBER ROAD AN EXISTING EAST-WEST ROAD ALONG THE NORTH LINE OF SUBJECT PROPERTY AND FLETCHER ROAD AN EXISTING NORTH-SOUTH ROAD ABOUT MIDWAY THROUGH THE SUBJECT PROPERTY. HOWEVER, THERE IS A GAP BETWEEN THE BOUNDARY LINES OF TRACT 1 AND 2 AND THE PHYSICAL ROAD BED OF ZUEBER ROAD AND THE RIGHT-OF-WAY CLAIMED BY PULASKI COUNTY. FLETCHER ROAD IS WITHIN THE SOUTHEAST CORNER OF TRACT 1.

   THE PULASKI COUNTY ROAD AND BRIDGE DEPARTMENT CLAIMS A 50-FOOT WIDE RIGHT-OF-WAY FOR ZUEBER ROAD AND FLETCHER ROAD. NO RIGHT-OF-WAY DOCUMENTS PROVIDED SURVEYOR.

   THE PULASKI COUNTY ROAD AND BRIDGE DEPARTMENT IS CURRENTLY PLANNING A MAJOR IMPROVEMENT FOR ZUEBER ROAD. THE PLANNED RIGHT-OF-WAY IS 100 TO 110 FEET IN WIDTH. THEY ARE PLANNING A POSSIBLE ABANDONMENT OF FLETCHER ROAD.

   CONTACT PERSON IS MIKE DAVIS PHONE NUMBER 501-340-6800 FOR ADDITIONAL INFORMATION.

   PULASKI COUNTY HAS A PROPOSED MASTER ROAD PLAN MAP AND ZUEBER ROAD IS DEPICTED AS AN EXISTING CLASS V COLLECTOR. FLETCHER ROAD HAS NO DESIGNATION.

5. RECORD DOCUMENTS

   A. CHICAGO TITLE INSURANCE COMPANY
      TITLE COMMITMENT FILE NO. 20083074
      ISSUED BY BEACH ABSTRACT & GUARANTY COMPANY
      ISSUE DATE AND TIME: MARCH 21, 2008, 9:56 AM
      ALSO REFERENCE DOCUMENTS FOR SCHEDULE B II, ADDITIONAL EXCEPTIONS.

   B. CHICAGO TITLE INSURANCE COMPANY
      TITLE COMMITMENT FILE NO. 20083092
      ISSUED BY BEACH ABSTRACT & GUARANTY COMPANY
      ISSUE DATE AND TIME: MARCH 26, 2008, 3:12 PM
      ALSO REFERENCE DOCUMENTS FOR SCHEDULE B II, ADDITIONAL EXCEPTIONS.

   C. PULASKI AREA GEOGRAPHIC INFORMATION SYSTEM (PAGIS) CONTROL DATA FORM FOR STATION NAMES, 1001, 2001 AND 2002.
   D. PLAT OF SURVEY FOR NADFOLZ PORT INDUSTRIAL PARK DATED 6-10-02, PROJECT NO. 702-144 BY PS 957.
   E. PLAT OF SURVEY OF THE SOUTH LINE NW/4 SE/4 AND THE WEST LINE OF THE SE/4 SE/4 OF SECTION 19, T-1-N, R-11-W, PULASKI COUNTY, ARKANSAS DATED 9-13-84 BY PS 9.
   F. FIRM, FLOOD INSURANCE RATE MAP, PULASKI COUNTY, ARKANSAS (UNINCORPORATED AREAS) PANEL 429 OF 585, COMMUNITY PANEL NUMBER 05179 0429C, MAP REVISED MAY 16, 1983.
   G. CENTRAL ARKANSAS WATER, PAGIS MAP OF WATER SYSTEMS IN AREA OF SUBJECT PROPERTY.
   H. PLAT OF SURVEY OF TRACT B AND TRACT B1 ARLA 102, LITTLE ROCK INDUSTRIAL PARK DATED APRIL 23, 1992 BY PS 865.
   I. PLAT OF SURVEY FOR DANIEL HALE DATED 8-3-1988 BY PS 128.
   J. PLAT OF SURVEY FOR ARTHUR BEACH DATED 12-28-84 BY PS 3.
   K. PLAT OF SURVEY FOR NALLEY ALLEN DATED OCTOBER 16, 1986 BY PS 1026.
   L. PLAT OF SURVEY DATED 3-25-87 BY PS 1281.

6. NO LOCATIONS OF CEMETERIES AND BURIAL GROUNDS WERE OBSERVED DURING THE SURVEY OF THE SUBJECT PROPERTY.

FLOOD INFORMATION:

BY GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE C (NO SHADING) OF THE NATIONAL FLOOD INSURANCE PROGRAM, FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP, PULASKI COUNTY, ARKANSAS, UNINCORPORATED AREAS, PANEL 429 OF 585, COMMUNITY PANEL NUMBER 050179 0429 C, MAP REVISED: MAY 16, 1983.

ZONE C (NO SHADING) DENOTES AREAS DETERMINED TO HAVE MINIMAL FLOODING.

UTILITY INFORMATION:

UTILITIES SHOWN ARE AS MARKED WITH PAINT BY ITS UTILITY IN RESPONSE TO A REQUEST TO ARKANSAS ONE CALL, TICKET NUMBER 070530-0897. ANY PIPE SIZES SHOWN ARE PER RECORD SET PLANS OR AS PROVIDED BY ITS UTILITY.

WATER SYSTEM
CONTACT PERSON: MARIE DUGAN, PHONE NUMBER: 501-377-1225
OPERATING AUTHORITY: CENTRAL ARKANSAS WATER

SANITARY SEWER SYSTEM
CONTACT PERSON: ENGINEERING DEPARTMENT, PHONE NUMBER: 501-688-1400
OPERATING AUTHORITY: LITTLE ROCK WASTE WATER

POWER
CONTACT PERSON: CUSTOMER SERVICE, PHONE NUMBER: 800-368-3749
OPERATING AUTHORITY: ENTERGY

NATURAL GAS
CONTACT PERSON: JONI BATES, PHONE NUMBER: 501-377-4506
OPERATING AUTHORITY: CENTERPOINT ENERGY

NATURAL GAS TRANSMISSION LINE
CONTACT PERSON: TIM EIFORD, PHONE NUMBER: 501-337-5581
OPERATING AUTHORITY: NATURAL GAS PIPELINE OF AMERICA

NATURAL GAS TRANSMISSION LINE
CONTACT PERSON: TOM CAMERON, PHONE NUMBER: 501-230-7014
OPERATING AUTHORITY: TEXAS EASTERN

TELEPHONE
CONTACT PERSON: TROY CAPPS, PHONE NUMBER: 501-373-3713
OPERATING AUTHORITY: AT&T

CABLE TELEVISION
CONTACT PERSON: CUSTOMER SERVICE PHONE NUMBER: 501-375-5750
OPERATING AUTHORITY: COMCAST

STREET MAINTENANCE (ZUEBER ROAD) & (FLETCHER ROAD)
CONTACT PERSON: MIKE DAVIS, PHONE NUMBER: 501-340-6800
OPERATING AUTHORITY: PULASKI COUNTY ROAD & BRIDGE DEPARTMENT

SURVEYOR'S CERTIFICATION

TO MAN USA, INC.; CHICAGO TITLE INSURANCE COMPANY; AND BEACH ABSTRACT AND GUARANTY COMPANY;

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS," JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2005, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 10, 11(B), AND 17 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSION OPINION, AS A LAND SURVEY REGISTERED IN THE STATE OF ARKANSAS, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN, AND WAS MADE IN ACCORDANCE WITH THE CURRENT ARKANSAS MINIMUM STANDARDS FOR THE PRACTICE PROPERTY BOUNDARY SURVEYS AND PLATS ADOPTED BY THE ARKANSAS GEOLOGICAL COMMISSION, LAND SURVEY DIVISION.

THE PARCELS OF LAND DESCRIBED IN SCHEDULE "A" OF TITLE COMMITMENT FILE NO. 20083074 AND TITLE COMMITMENT FILE NO. 20083092 ARE ADJACENT TO ONE ANOTHER WITH A GAP BETWEEN THEM AS DESCRIBED IN TRACTS 3 AND 4.

THERE ARE NO GAPS OR GORES BETWEEN THE DESCRIPTIONS OF TRACTS 1, 2, 3, 4, 5, AND 6.

THE DEEDED DESCRIPTION IN TITLE COMMITMENT FILE NO. 20083092 AND THE MEASURED DESCRIPTION OF TRACT 1 ARE ONE AND THE SAME PARCELS OF LAND. THE DEEDED DESCRIPTION OF TITLE COMMITMENT FILE NO. 20083074 AND THE MEASURED DESCRIPTION OF TRACT 2 ARE ONE AND THE SAME PARCELS OF LAND EXCEPT FOR THAT PORTION OF THE DEEDED DESCRIPTION THAT WAS NOT INCLUDED IN THE MEASURED DESCRIPTION.

REVISIONS	BY	DATE

HOFFMAN & ASSOCIATES, INC.
LAND SURVEYORS · CONSULTING ENGINEERS
320 O'BRYAN LANE · VAN BUREN, AR 72956
TEL: (479) 474-7916 · FAX: (479) 474-2450
WEB ADDRESS · HANDA-INC.COM

HAI

ALTA/ACSM LAND TITLE SURVEY

THE SW 1/4 SW 1/4, PT. NW 1/4 SW 1/4, PT. NE 1/4 SW 1/4 & PT. SE 1/4 SW 1/4 OF SECTION 21 AND PART OF THE SE 1/4 SE 1/4, PT. SW 1/4 SE 14, PT. NW 1/4 SE 1/4, & PT. NE 1/4 SE 1/4 OF SECTION 20, ALL IN TOWNSHIP 01 NORTH, RANGE 11 WEST OF THE FIFTH PRINCIPAL MERIDIAN, PULASKI COUNTY, ARKANSAS.

DATE:	07-19-2008
SCALE:	1" = 200'
DRAWN BY:	PHILLIPS
JOB NO.:	39529
SHEET	2 OF 2

C:\Surv\39529\39529-Rev L&L.dwg

Cost Estimates and Timing

Cost per Acre: $40,000/acre (purchase)
$4,000/acre (lease)

Special Timing Considerations: None; Site is ready for consideration.

Clearing Cost: None; Site is cleared.

Grading Cost: None; Site is ready for construction.

Cut/Fill Cost: None; There are no extraordinary costs for land and site preparation beyond normal construction practices. The site is readily buildable.

Utility Extension or Upgrade Costs:

- Electric – Service at site – no upgrades necessary
- Gas – There is an 8-inch line at 150 PSI that terminates 1,000 feet north of the site. To extend the line to the site would cost $800,000 which doesn't include meters, system upgrades, easements, environmental. The cost to tap the interstate pipeline at the western border of the site is $500,000 plus the cost of the meter. A customer would be required to pay for extensions, but depending on the company's gas volumes, CenterPoint Energy could run financials to determine a shared arrangement of costs. Standard timeline is 180 days from the execution of Facilities Agreement to completion, with provisions for permitting/ROW/force majeure, etc. delays.
- Sewer – Service at site – no upgrades necessary
- Water – Service at site – no upgrades necessary
- Telecom/Fiber – Service at site – no upgrades necessary
- Rail – See attached letter and cost estimates from Garver Engineers. The cost estimates are negotiable.

GARVER

4701 Northshore Drive
North Little Rock, AR 72118

TEL 501.376.3633
FAX 501.372.8042

www.GarverUSA.com

August 7, 2018

Ben France
Vice President of Economic Development
1 Chamber Plaza
Little Rock, AR 72201

Re: Rail Access to South Port Site

Dear Mr. France:

As per your request, this letter details the status of the plans for bringing the Little Rock Port Authority Railroad to the South Port Site. In general, the South Port Site is on the south side of Zeuber Road near the intersection with Fletcher Road in Pulaski County, Arkansas. The railroad would access the site from the northeast corner of the site and would require the construction of approximately 3,000 linear feet of railroad track. The environmental clearance and preliminary plans have been completed and a planning schedule consists of approximately 10 months to complete final design and construction of the railroad to the site. The opinion of probable construction cost to extend the rail to the site is approximately $1.8 Million according to budgeting estimates.

The following paragraph details the development of the environmental work, preliminary plans, and easements that have been completed in preparation for extending the rail to the South Port Site. In 2008, Garver was asked to perform preliminary design on approximately 3000 linear feet of railroad extension to the South Port Site. Garver completed the preliminary design and detailed the design that was necessary for easement documentation. During the design, railroad easements were obtained from Entergy and Markla Realty & Development Co. In addition, a US Corps of Engineers Section 404 Nationwide 14 permit to mitigate and fill the wetlands on the north side of Zeuber Road was also obtained. In 2010, the earthwork and rail bed for the portion of the project that crossed the wetlands was constructed in order to expedite future construction of the full extension to the site.

Please let us know if you need any additional information on the railroad access to the South Port Site.

Sincerely,

GARVER

Todd Mueller, P.E.
Project Manager

GARVER

4701 Northshore Drive
North Little Rock , AR 72118

TEL 501.376.3633
FAX 501.372.8042

www.GarverUSA.com

OPINION OF PROBABLE CONSTRUCTION COSTS

Southport Site Railroad Access
Little Rock Port Authority
July 20, 2018

Construction Costs

	Quantity	Unit	Unit Cost	Total Cost
Construct New Track =	3,000	L.F.	$450	$1,350,000

Subtotal Construction Costs =	$1,350,000
Contingency (20%) =	$270,000
Planning and Engineering (5%) =	$67,500
Construction Engineering and Inspection (10%) =	$135,000
Total Opinion of Probable Construction Costs (2018) =	**$1,820,000**

Note: This estimate assumes minor updates and revisions to the existing 90% plans and the creation of the bid documents. This estimate does not include any redesign, environmental, utility, or ROW engineering costs.

Environmental

Wetlands Screening:	See attachment E-1 for detail. There are no wetland issues involving the site.
Floodplain Delineation:	See attachment E-2 for detail. There are no floodplain issues involving this site.
Historical Survey:	See attachment E-3 for detail.
Endangered Species Survey:	See attachment E-4 for detail.
Environmental Phase I (and Phase II if required):	See attachment E-5 for detail. The attached Phase I was done in 2018.
Stormwater Retention Plan:	Not Applicable. All sites in the Port of Little Rock are exempt from Stormwater Retention Requirements.

White, Tandee M

From: Cullen, Charles M. <CMCullen@GarverUSA.com>
Sent: Thursday, September 27, 2018 9:28 AM
To: bday@lrportauthority.com
Cc: Mueller, Todd, E.; France, Ben; Bailey, Joseph
Subject: RE: Site Certification for South Port

Bryan:

When referring to the South Port site, are you referring to the location shown below? If so, then based upon a desktop review of the National Wetland Inventory and historic aerial photography, it does not appear that there has been any changes to the area that would alter the wetland delineation.

Charles Cullen, PE
Garver
501-376-3633

From: Bryan Day <bday@lrportauthority.com>
Sent: Wednesday, September 26, 2018 5:55 PM
To: Ben France <BFrance@littlerockchamber.com>; Cullen, Charles M. <CMCullen@GarverUSA.com>; Mueller, Todd, E. <TEMueller@GarverUSA.com>
Cc: Bailey, Joseph <jbail12@entergy.com>
Subject: Re: Site Certification for South Port

Charles - can you answer the wetlands question? Thanks

Bryan

Entergy | BUSINESS DEVELOPMENT | ARKANSAS

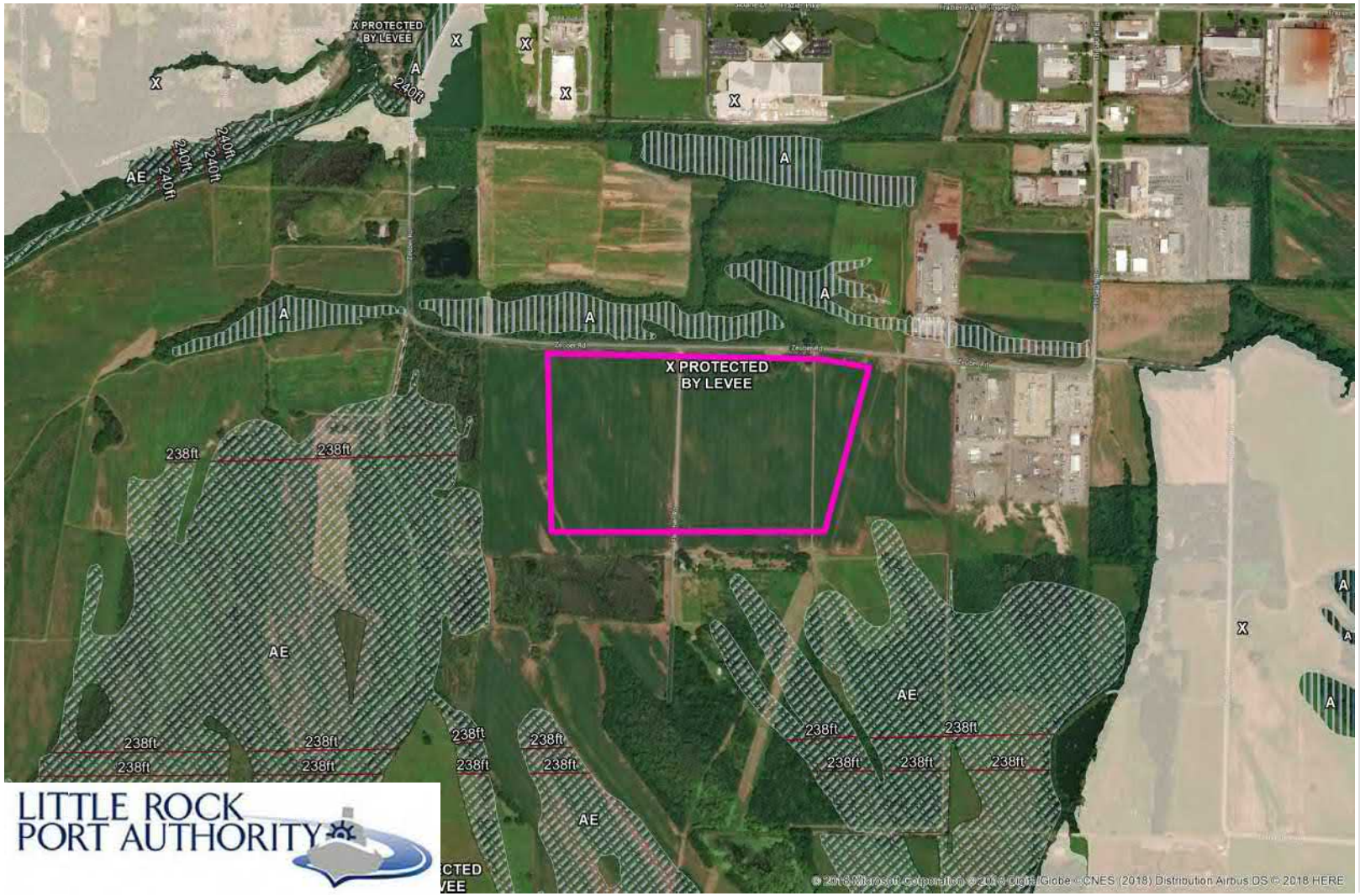
Little Rock South Port Site

FEMA Flood Hazard

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

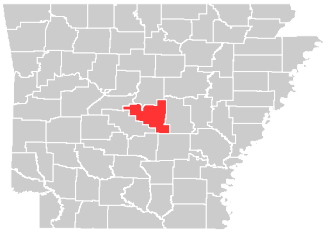
Phone: 1-888-301-5861

goentergy.com/ar

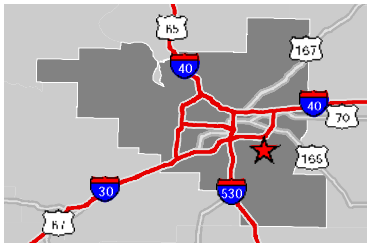


LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



VICINITY



LEGEND

- Property Boundary
- Base Flood Elev

Flood Hazard

- A
- AE
- X
- X Protected by Levee

NOTE

These drawings are provided merely to assist in economic development efforts. The Entergy Companies make no representations or warranties whatsoever regarding the accuracy or completeness of any information contained herein nor the condition or suitability of any properties. Users should direct inquiries about any property to the listing broker for that property.

SOURCE

Source: Federal Emergency Management Agency, Published Date: 07/2014

Created by: RPG
Date: 5/2017

0 500 1,000 2,000 Feet

0 240 400 Meters

N

DEPARTMENT OF ARKANSAS
HERITAGE

Asa Hutchinson
Governor

Stacy Hurst
Director

Arkansas Arts Council
•
Arkansas Natural Heritage Commission
•
Arkansas State Archives
•
Delta Cultural Center
•
Historic Arkansas Museum
•
Mosaic Templars Cultural Center
•
Old State House Museum

ARKANSAS HISTORIC PRESERVATION PROGRAM

1100 North Street
Little Rock, AR 72201

(501) 324-9880
fax: (501) 324-9184
tdd: 711

e-mail:
info@arkansaspreservation.org
website:
www.arkansaspreservation.com

An Equal Opportunity Employer

May 30, 2018

Mr. Ben France
Little Rock Regional Chamber of Commerce
One Camber Plaza
Little Rock, AR 72201

RE: Pulaski County – Little Rock
Section 106 Review – HUD
Proposed Undertaking: Proposed Industrial Site
AHPP Tracking Number: 65661.01

Dear Mr. France:

This letter is in response to your inquiry regarding properties of archeological, historical, or architectural significance in the area of the proposed referenced project. The staff of the Arkansas Historic Preservation Program (AHPP) has reviewed records pertaining to the area of potential effect (APE).

Based on our phone conversation on May 29, 2018 and the previous correspondence dated February 11, 2008, the AHPP recommends that cultural resource survey be conducted prior to any ground disturbance.

Thank you for the opportunity to review this undertaking. Please refer to the AHPP Tracking Number listed above in all correspondence. If you have any questions, please call Tim Dodson of my staff at 501-324-9784.

Sincerely,

Scott Kaufman
Director, AHPP

cc: Mr. Clinton Johnson, HUD
Dr. Ann Early, Arkansas Archeological Survey

The Department of
Arkansas Heritage

Mike Beebe
Governor

Cathie Matthews
Director

Arkansas Arts Council
•
Arkansas Natural Heritage Commission
•
Delta Cultural Center
•
Historic Arkansas Museum
•
Mosaic Templars Cultural Center
•
Old State House Museum

Arkansas Historic Preservation Program

1500 Tower Building
323 Center Street
Little Rock, AR 72201
(501) 324-9880
fax: (501) 324-9184
tdd: (501) 324-9811
e-mail:
info@arkansaspreservation.org
website:
www.arkansaspreservation.com

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February 11, 2008

Mr. Joey Dean
Little Rock Regional Chamber of Commerce
Metro Little Rock Alliance
One Chamber Plaza
Little Rock, Arkansas 72201

RE: Pulaski County - Little Rock
Section 106 Review - HUD
Proposed Industrial Site
AHPP Tracking No: 65661

Dear Mr. Dean:

This letter is written in response to your inquiry regarding properties of architectural, historical, or archeological significance in the area of the referenced project. My staff has reviewed the documentation regarding the above-referenced undertaking. Our records show that one prehistoric archeological site (3PU103) is located on the western tract. In addition, we have reviewed your photographs of the abandoned farm complex on the eastern tract and determined that none of the structures are eligible for inclusion in the National Register of Historic Places (NRHP).

If this project proceeds as a federal undertaking, we recommend that a cultural resources survey be conducted because of the high probability that undiscovered archeological sites may be present in the area. If the western tract is selected, site 3PU103 should be avoided and protected or it will require further evaluation to assess its eligibility for inclusion in the NRHP.

Thank you for the opportunity to comment on this undertaking. If you have any questions, please contact George McCluskey or Steve Imhoff of my staff at (501) 324-9880.

Sincerely,

Frances McSwain

Frances McSwain
Deputy State Historic Preservation Officer

cc: Mr. Tim Allen, Arkansas Economic Development Commission

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Pulaski County, Arkansas

Local office

Arkansas Ecological Services Field Office

(501) 513-4470
(501) 513-4480

110 South Amity Suite 300
Conway, AR 72032-8975

http://www.fws.gov/arkansas-es

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Piping Plover Charadrius melodus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened

Flowering Plants

NAME	STATUS
Running Buffalo Clover Trifolium stoloniferum No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2529	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE

TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

American Golden-plover Pluvialis dominica — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Bald Eagle Haliaeetus leucocephalus — Breeds Sep 1 to Jul 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Prothonotary Warbler Protonotaria citrea — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rusty Blackbird Euphagus carolinus — Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )

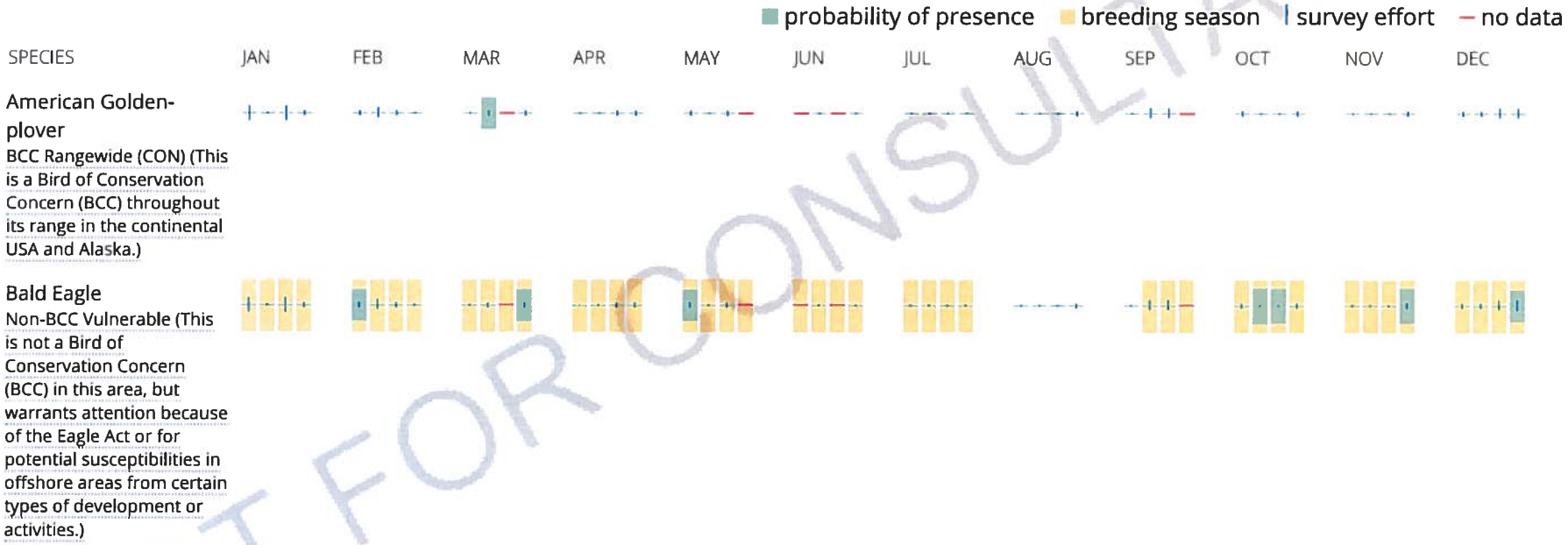
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

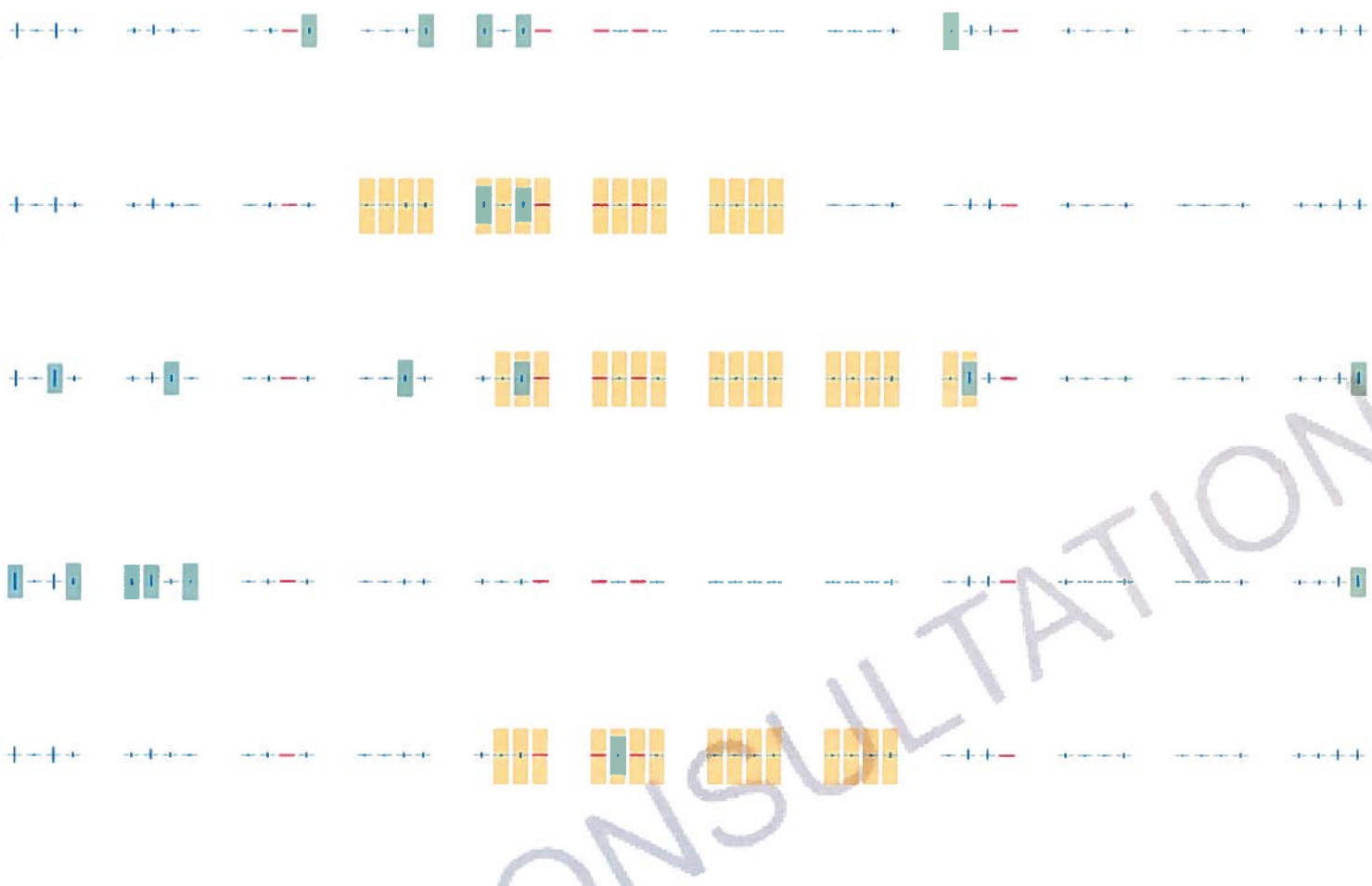
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Lesser Yellowlegs
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Prothonotary Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Red-headed Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rusty Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wood Thrush
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R4SBCx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Ben France

From: Lombardi, Melissa <melissa_lombardi@fws.gov>
Sent: Wednesday, May 30, 2018 2:17 PM
To: Ben France
Subject: Re: [EXTERNAL] RE: Fish-Wildlife South Port Site.pdf

Thanks, Ben. The official species list from IPaC serves as technical assistance for projects with no federal nexus (federal agency authorizing, funding, or carrying out a project) in lieu of the 2008 letter from the Service.
The two species with potential to occur in the area are Piping Plover and Running Buffalo Clover. The site does not have suitable habitat for Piping Plover (sand or gravel shorelines) and Running Buffalo Clover is considered extirpated in the state; therefore, neither would be expected to occur on the project site.
Thank you for coordinating with the Service. Let me know if I can do anything else for you. Melissa L

Melissa Lombardi
Biologist-U.S. Fish and Wildlife Service
Arkansas Ecological Services Field Office
110 S. Amity, Suite 300
Conway, AR 72032
O:501-513-4488
C:501-733-2056

Southeast Region Vision: Together, we will connect lands and waters to sustain fish, wildlife and plants by being visionary leaders, bold innovators and trusted partners, working with and for people.

On Wed, May 30, 2018 at 2:05 PM, Ben France <BFrance@littlerockchamber.com> wrote:

Here you go!

5537-4801 Fletcher Rd

Little Rock, AR 72206

34.695507, -92.203829

From: Lombardi, Melissa <melissa_lombardi@fws.gov>
Sent: Wednesday, May 30, 2018 2:00 PM
To: Ben France <BFrance@littlerockchamber.com>
Subject: Re: [EXTERNAL] RE: Fish-Wildlife South Port Site.pdf

I didn't see a location (address or latitude/longitude) on either attachment. That's the only other thing I need to review and respond. Thanks. Melissa

United States Department of the Interior

FISH AND WILDLIFE SERVICE
110 South Amity Road, Suite 300
Conway, Arkansas 72032
IN REPLY REFER TO: Tel.: 501/513-4470 Fax: 501/513-4480

October 14, 2008

Reference: TA 0047 FA 0048

Walter Spaul
Garver Engineers
1010 Battery Street
P.O. Box 50
Little Rock, Arkansas 72203

Dear Mr. Spaul:

The U.S. Fish and Wildlife Service (Service) has reviewed the information supplied in your letter dated August 21, 2008, regarding the proposed development of Man Industries Pipe Manufacturing Facility in Pulaski County Arkansas. Our comments are submitted in accordance with the Endangered Species Act (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.).

The following endangered species are known to occur in Pulaski County: Red cockaded woodpecker (*Picoides borealis*), interior least tern (*Sterna antillarum athalassos*), and the running buffalo clover (*Trifolium stonoiferum*).

The Service concludes that no significant adverse effects on fish and wildlife, their habitat, or the human uses thereof are expected to result from the proposed project. However, to minimize impacts the applicant should implement effective and appropriate erosion control before, during, and after the stream work by using erosion control techniques such as stacking hay bales, installing sediment screens and filters, constructing water diversion devices (i.e. rip rap breaks, log breaks, natural vegetation, sediment basins), and/or by implementing other appropriate sediment control measures.

We recommend that standard Best Management Practices be incorporated into the construction occurring in riparian zones. These streams may be considered Waters of the United States and may have adjacent wetlands that would require a Clean Water Act Section 404 permits prior to being altered. Therefore, we recommend that you contact the US Army Corps of Engineers Little Rock District office for additional information. They can be contacted at (501) 324-5295.

We appreciate your interest in the conservation of endangered species. If you have any questions, please contact Lindsey Lewis at (501)513-4481 or Patrick Reynolds at (501) 513-4487.

Sincerely,

Margaret Harney

Margaret Harney
Acting Field Supervisor

PHASE I ENVIRONMENTAL SITE ASSESSMENT

LITTLE ROCK PORT AUTHORITY
SOUTH PORT SITE
ZEUBER ROAD
LITTLE ROCK, ARKANSAS 72206

JULY 2018

Prepared for:
LITTLE ROCK PORT AUTHORITY
10600 INDUSTRIAL HARBOR ROAD
LITTLE ROCK, ARKANSAS 72206

Prepared by:

13000 Cantrell Road
Little Rock, Arkansas 72201
Telephone (501) 975-8100

PHASE I ENVIRONMENTAL SITE ASSESSMENT

LITTLE ROCK PORT AUTHORITY
SOUTH PORT SITE
LITTLE ROCK, ARKANSAS 72206

ECCI Project Number: 4446-3015

July 2018

Prepared for:
LITTLE ROCK PORT AUTHORITY

We declare to the best of our professional knowledge and belief, we meet the definition of *environmental professionals* as defined in §312.10 of 40 CFR 312.

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the *subject property*. We have developed and performed all appropriate inquiries in conformance with the standard and practices set forth in 40 CFR Part 312.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information (Regulation 32.607).

PREPARED BY: Jeremy Stehle

JEREMY STEHLE
SENIOR ENVIRONMENTAL SCIENTIST

REVIEWED BY: Rod Breuer

ROD BREUER
PRINCIPAL

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1.0 Executive Summary

ECCI has performed a Phase I Environmental Site Assessment (ESA) for the Little Rock Port Authority. This Phase I ESA was performed on a 152 acre tract located on the south side of Zeuber Road. This Phase I ESA was performed in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E 1527 - 13, "*Environmental Site Assessments: Phase I Environmental Site Assessment,*" hereinafter referred to as the Standard. Any exceptions to, or deletions from, the Standard are discussed in Section 9.0 of this report. This report will serve to summarize the work performed by ECCI professionals as part of this project.

The purpose of this Phase I ESA on this parcel of commercial real estate is to investigate the presence of the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)(42 U.S.C. §9601) and petroleum products. This report is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability: that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice.

While use of this Phase I ESA is intended to constitute all appropriate inquiries, it is not intended that its use be limited to that purpose. This report is intended primarily as an approach to conducting an inquiry designed to identify recognized environmental conditions (RECs) in connection with a property. This practice is intended to reflect a commercially prudent and reasonable inquiry.

The subject property is located on the south side of Zeuber Road in Pulaski County, southeast of the city of Little Rock, Arkansas and is comprised of approximately 152 acres.

During the course of this project, ECCI performed a site reconnaissance, reviewed federal, state, and local records, and interviewed persons familiar with the

property to ascertain historical use of the property and surrounding areas. ECCI did not observe any recognized environmental condition, controlled environmental conditions, historical recognized environmental conditions, or de minimis conditions on the subject property. Information on the findings and conclusions can be found in Table 1.1 below. Further descriptions and a summary of the site characteristics can be found in section 6.0.

Table 1.1 – Summary of Findings, Opinion and Conclusions

FINDINGS	SUMMARY
Residential Property	There were residential homes and trailers onsite that were not inspected.
	OPINION AND CONCLUSION: ECCI did not observe anything visually on the property; however, we did not enter into any of the dwellings onsite to confirm the presence of petroleum or hazardous materials.

ECCI assumes that information provided by persons interviewed for this project is correct. The investigation is limited to visually observable environmental conditions present on the property at the time of the site inspection. Whenever possible, adjoining properties were visually inspected. This report and all work performed in conjunction with this report is for the exclusive use of the Little Rock Port Authority and their agents or assigns. Other entities or individuals may only rely on this report with the express written consent of the Little Rock Port Authority and ECCI.

2.0 Introduction

2.1 Purpose of the Phase I Environmental Site Assessment

ECCI was authorized by the Little Rock Port Authority to perform a Phase I ESA on the 152 acre tract of property located on the south side of Zeuber Road in Pulaski County southeast of the city Little Rock, Arkansas. The subject property is comprised of approximately 152 acres and is currently utilized primarily for row crop agriculture.

The purpose of this Phase I ESA is to identify and describe past uses of the property which involved hazardous substances or petroleum products and existing or potential recognized environmental conditions, controlled recognized environmental condition, or historical recognized environmental conditions (as defined by ASTM Practice E 1527-13) in connection with the Property. A **Recognized Environmental Condition** (REC) is defined in the Standard as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. A **controlled recognized environmental condition** is defined as a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. A **historical recognized environmental condition** is defined as a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meet unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. A ***de minimis* condition** is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. *De minimis* conditions are not Recognized Environmental Conditions.

2.2 Detailed Scope of Services

The Standard identifies four (4) component parts of a Phase I ESA. The components are site reconnaissance, records review, interviews, and evaluation and report preparation. The scope of work developed for this project as defined by the four (4) components is as follows:

2.2.1 Site Reconnaissance

Mrs. Julie McCallister and Ms. Shannon Hughes with ECCI conducted a site visit on the subject property located in Little Rock, Arkansas on May 24, 2017. The purpose of the visit was to visually and physically observe the property and any structures located on the subject property. During the visit, the environmental professionals noted information about the general conditions and site setting of the subject property. The objective of the site visit was to obtain information to identify and describe past uses of the property which involved hazardous substances or petroleum products and to identify potential RECs associated with the property.

2.2.2 Records Review

A review of reasonably ascertainable federal and state records was performed to help identify RECs in connection with the property. ECCI obtains federal and state records from Environmental Data Resources (EDR) in Southport, Connecticut. Standard environmental record sources reviewed included:

- National Priorities List (NPL);
- CERCLIS List;
- CERCLIS NFRAP Site List;
- RCRA CORRACTS;
- RCRA Transportation, Storage, and Disposal Facilities;
- RCRA Generators List;
- Federal institutional control/engineering control registries;
- Federal ERNS List;
- State and tribal lists of hazardous waste sites identified for investigation or remediation;
- Emergency Response Notification System List;
- State Remedial Action Site List;
- State and Tribal Landfill List;
- State and Tribal Voluntary Cleanup Sites;
- State and Tribal Brownfields Sites;
- State and Tribal Registered and Leaking Storage Tank Lists;
- Local Brownfields Lists;
- Local Lists of Landfills/SWDS; and
- Registered Storage Tanks.

ECCI also reviewed the current United States Geological Survey (USGS) 7.5 Minute Topographic Maps. This is a standard source for information regarding the physical setting of the property. Historical use information was obtained by reviewing available standard historical sources, which included aerial photographs. Sanborn Fire Insurance Maps and City Directories were accessed for review through EDR.

2.2.3 Interviews

In order to obtain information about current and historical use of the property and to attempt to identify any recognized environmental conditions, ECCI interviewed the following personnel.

Table 2.1 - Interviews

	Name and Number	Duration of Occupancy
Current Owner Representative	Bryan Day 501-542-9867	Approximately 7 years
Key Site Manager	Same	Same
Current Occupants	Farmland	NA
Historical Owner/Occupants	Unavailable	Unavailable

Information from these interviews is summarized in Section 7.0 of this report.

2.2.4 Evaluation and Report Preparation

The final report for this project was prepared by Environmental Professionals and reviewed for technical quality by an Environmental Professional as defined by the Standard. The report includes all documentation to support the analysis, opinions, and conclusions found herein. The documentation is of sufficient detail to reconstruct all research at a later date, if necessary, as required by the Standard.

2.3 Significant Assumptions

This Phase I ESA was conducted in accordance with ASTM Standard Practice ASTM E 1527-13 to insure that methodologies used constitute appropriate inquiry into the prior uses of the property consistent with good commercial and customary practice in order to identify and analyze environmental conditions that constitute existing, past, or potential environmental risks associated with a property. Performance, in accord with these standards is intended to reduce, but not eliminate uncertainty with respect to the potential for RECs associated with a property. This report is designed to satisfy the requirements for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability as defined in 42 USC 9601(35) B. ECCI assumes that information provided by persons interviewed for this project is correct.

2.4 Limitations and Exceptions

The information presented and conclusions made in this report are based upon the site inspection, interviews and records review performed by ECCI. The assessment is limited to visually observable environmental conditions present on the properties at the time of the site inspection. Specific assessments of the following potential environmental conditions are *excluded* from this project: asbestos, lead-based paint, potential radon gas hazards, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, biological agents and mold.

2.5 Special Terms and Conditions

The scope of work provided by ECCI and approved by the client contained no special terms and conditions to the investigation.

2.6 User Reliance

The report may be distributed and relied upon by Little Rock Port Authority and their successors and assigns. Reliance on the information and conclusions presented in this report by any other party(ies) is not authorized by ECCI.

3.0 Site Description

3.1 Location and Legal Description

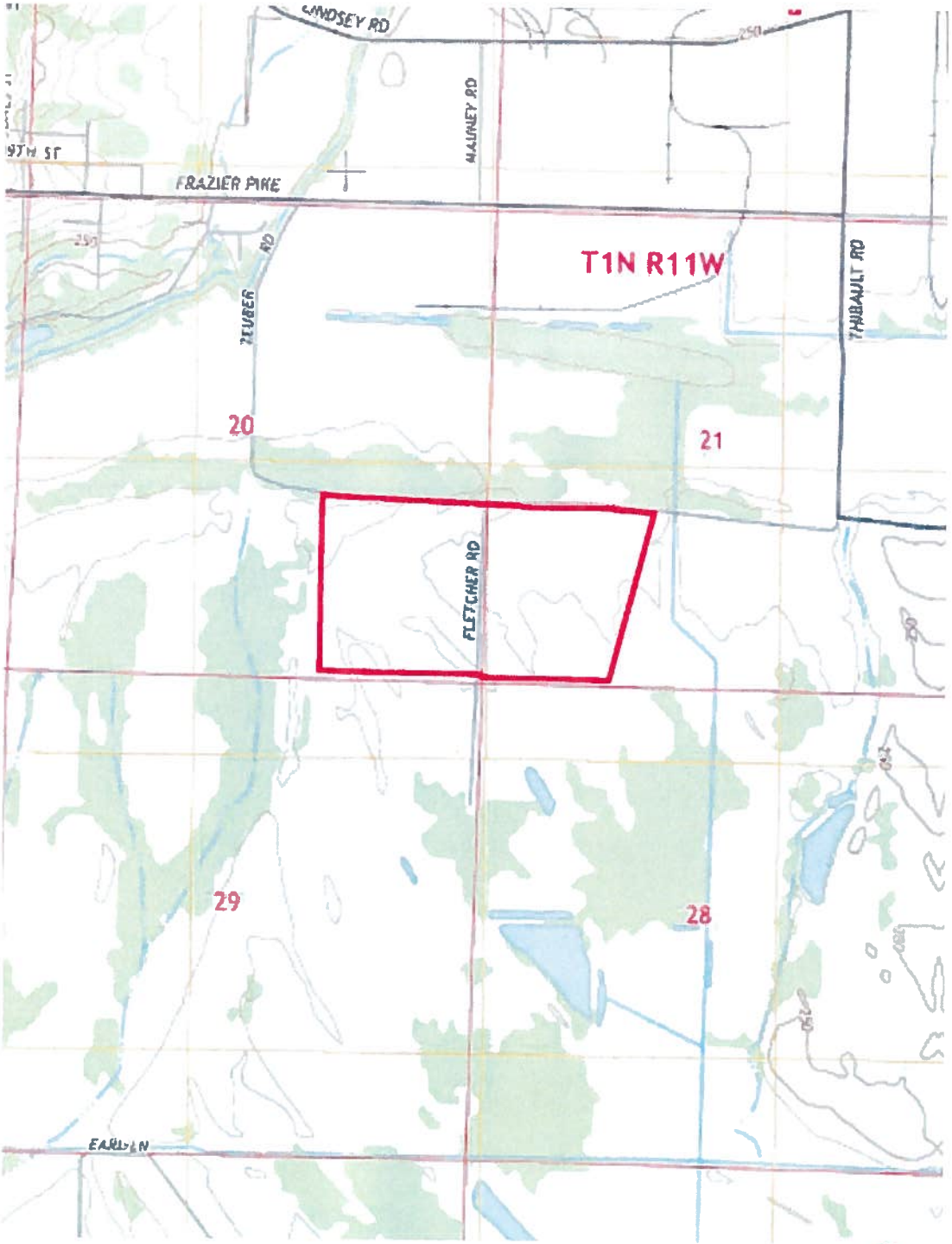
The subject property is located on the south side of Zeuber Road in Little Rock, Arkansas. The property is comprised of approximately 152 acres and primarily being used for agricultural purposes. The southern portion of the property has a residential homesite. To the west of the property consists of wooded areas. South of the property is primarily utilized for residential purposes and includes what appears to be a wetland area. A legal description was not obtained. The general location of the property is depicted in Figure 3-1, Topographic General Location Map and the site layout can be seen in Figure 3-3, Aerial Photograph of General Site Layout with Adjoining Properties.

Figure 3-1 – Topographic General Location Map

7.5 Minute Topographic Map
Sweet Home, Arkansas
Source: USGS/ Environmental Data Resources, Inc.
Approximate Location - Not to Scale

North

Figure 3-2 –Aerial Photograph of General Site Layout with Adjoining Properties



Subject Property
Little Rock, Arkansas
Source: USDA/Environmental Data Resources, Inc.
Approximate Boundaries - Not to Scale

North

3.2 Site and Vicinity General Characteristics

This 152 acre tract is located in Pulaski County southeast of the city of Little Rock, Arkansas. The property lies just south of The Little Rock Port Authority. The Port Authority houses several active industrial manufacturing and industrial properties. A residential area is located on the southern perimeter of the Industrial Park. Agricultural land surrounds the Port on the east and south.

3.3 Current Use of the Property

The subject property currently exists for agricultural purposes. The property appears relatively flat but drains to the south.

3.4 Descriptions of Structures, Roads, Other Improvements on the Site

The property lies directly south to Zeuber Road, while Fletcher Road intersects the property. Past Fletcher Road, the property is currently being used for farming purposes. In the southwest corner, there are petroleum pipeline markers, as well as multiple stations around the property. Photographs of the subject property are included in Appendix B.

3.5 Site Utilities

Utilities are available in the area.

3.6 Current Use of the Adjoining Properties

The subject property is bordered to the north by vacant agricultural property and an industrial property. There are two adjacent properties to the south, one is a residential home and the other is a wetland area. Adjoining the subject property to the west is a wooded area. To the east of the property is an industrial area (Central Freight Lines, Inc.). Industrial properties are located further to the northeast.

4.0 User Provided Information

4.1 Title Records

ECCI was not provided with documentation of the title history of the subject property for this Phase I ESA.

4.2 Environmental Liens or Activity and Use Limitations

No records of environmental liens or activity and use limitations were identified as being associated with the property or were provided to ECCI by the user.

4.3 Specialized Knowledge

The client did not provide ECCI with any information related to specialized knowledge of the subject property beyond that information discussed in the previous Phase I ESAs.

4.4 Commonly Known or Reasonably Ascertainable Information

ECCI does not have any commonly known or reasonably ascertainable information about the subject property that is material to recognized environmental conditions in connection with the subject property.

4.5 Owner, Property Manager, and Occupant Information

The current owner indicated that the property has been owned by the Little Rock Port Authority for approximately 7 years. It appears that the property has been used primarily for agricultural uses during that time.

4.6 Reason for Performing Phase I

ESAs are generally requested to qualify for a landowner liability protection under CERCLA. These protections include the following:

- **Bona Fide Prospective Purchase Liability Protection** a person may qualify as a bona fide prospective purchaser if, among other requirements, such person made "all appropriate inquiries into the previous ownership and uses of the facility in accordance with generally accepted good commercial

and customary standards and practices." Knowledge of contamination resulting from all appropriate inquiries would not generally preclude this liability protection. A person must make all appropriate inquiries on or before the date of purchase. The facility must have been purchased after April 11, 2002.

- **Contiguous Property Owner Liability Protection** - a person may qualify for the contiguous property owner liability protection if, among other requirements, such person owns real property that is contiguous to, and that is or may be contaminated by hazardous substances from other real property that is not owned by that person. Furthermore, such person conducted all appropriate inquiries at the time of acquisition of the property and did not know or have reason to know that the property was or could be contaminated by a release or threatened release from the contiguous property. The all appropriate inquiries must not result in knowledge of contamination. If it does, then such person did "know" or "had reason to know" of contamination and would not be eligible for the contiguous property owner liability protection.

- **Innocent Land Owner Defense** – a person may qualify as one of three types of innocent landowners: (i) a person who "did not know and had no reason to know" that contamination existed on the property at the time the purchaser acquired the property; (ii) a government entity which acquired the property by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation; and (iii) a person who "acquired the facility by inheritance or bequest." To qualify for the innocent landowner defense, such person must have made all appropriate inquiries on or before the date of purchase. Furthermore, the all appropriate inquiries must not have resulted in knowledge of the contamination. If it does, then such person did "know" or "had reason to know" of contamination and would not be eligible for the innocent landowner defense.

This Phase I ESA and report was prepared by ECCI at the request of Little Rock Port Authority to qualify as a bona fide prospective purchaser for liability protection.

5.0 Records Review

5.1 Standard Environmental Record Sources

ECCI obtains information regarding federal environmental databases from EDR in Southport, Connecticut. These databases contain site-specific information regarding a variety of potential environmental concerns including hazardous waste activities, the operation of aboveground and underground storage tanks, remediation investigations performed by the EPA, and other items. During this search, numerous databases are reviewed to identify sites which are in close proximity to the property and which may present a potential environmental risk to the property. The databases searched are detailed in the EDR Radius Map Report that presents information identifying any

facilities found in the ASTM search radius, including the subject property. For this Phase I ESA, the EDR Radius Map Report identified five sites located within the appropriate search distances for the specific records types searched. Information for this site is included in Table 5.1.

The EDR Zip Code Scan Report identifies sites in three ways; mapped sites, orphan sites, and zip code scan sites. The EDR Zip Code Scan Report identified other sites that were not mapped due to poor, duplicate, or inadequate addresses. Two of the surrounding sites (within 1.0 miles) were identified in the Zip Code Scan Report. ECCI has made a reasonable effort to reconcile this information utilizing resources which ECCI currently has available to determine if any of the sites located in Zip Code Scan Report were located within the approximate minimum search distances. Information on these sites is included below.

A copy of the EDR Radius Map Report detailing all databases searched is included in Appendix C.

The sites identified in the EDR Radius Map database report within the ASTM search distances from the subject property are summarized in Table 5.1 below.

Table 5.1 – Sites Identified in Records Review

Map and Zip Code Identified Sites	Database Information
Man USA, INC Zeuber & Fletcher RDS Little Rock, AR 72206 AIRS PERMITS	1. AIRS - Turned in application but withdrew prior to permit becoming final. 2. PERMITS – This site is listed in the PERMITS database.
Southern Gulf Truck 7325 Zeuber Rd Northeast 8 feet Higher Elevation 204 feet EDR Hist Auto	1. EDR Hist Auto - This site is listed in the EDR database as a historical gasoline station. No other data was found.
Thompson Transportation Inc. 7821 B Zeuber Road Little Rock, AR 72206 East 0.197 miles Higher Elevation AST Pro Transportation was identified in the Zip Code search for SPILLS. No other information is available.	1. AST- This facility is listed as having two 10,000 gallon diesel tanks in use and two 15,000 gallon diesel tanks permanently out of service. No violations were found.
Continental Express 7826 Zeuber Road Little Rock, AR 72206 East Northeast 0.082 miles Higher Elevation LTANKS	1. LTANKS - This facility is listed as having two fuel leaks. The first leak occurred in August 2002. Method of discovery was a tightness test failure. Soils were removed and letter of No Further Action was issued on September 5, 2002. The second leak was a surface leak in April 2004. Soils were remediated, and a letter of No Further Action was issued on May 14, 2004.
STT, INC 7820 Zeuber Road Little Rock, AR 72206 East Northeast 0.081 miles Higher Elevation PERMITS UST Financial Assurance	1. UST – Four tanks listed as out of service as of July 2013. The tanks contained new oil, used oil, and diesel fuel. 2. Financial Assurance – This site has Financial Assurance on file. 3. PERMITS – This site is listed on the PERMITS database.

5.2 Agency File Review/Other Available Records

No other records or reports were reviewed.

5.3 Fire Department

ECCI did not interview the Little Rock Fire Department to see if they have been to the subject property for any fires or chemical releases. The subject property has been used historically for agricultural and residential uses.

5.4 Health Department

ECCI did not contact the Pulaski Health Unit of the Arkansas Department of Health regarding any responses the department has had at the property.

5.5 Specialized Information, Prior Reports and Other Documentation

ECCI did not use any specialized information, prior reports or other documentation in the preparation of this report.

5.6 Physical Setting Source(s)

The ASTM Standard requires that the USGS Topographic Map for the facility be reviewed as standard practice. The target property address is located in the Sweet Home Arkansas Quadrangle. The map is shown as Figure 3-1 of this report. The property is located at roughly 240 feet above mean sea level.

5.6.1 Surface Water Characteristics

The site investigation and review of the USGS topographic maps found that the property gradient is generally to the west northwest.

5.6.2 Groundwater and Soil Characteristics

Groundwater flow direction and velocity is determined by using site-specific geologic and soil strata data. Other information, such as geologic age identification, rock stratigraphic unit, and soil characteristic data is also used to determine groundwater characteristics. General groundwater flow for the site is not reported.

Information provided by EDR detailed one Rock Stratigraphic Unit for the area. Geologic information in the general area of the subject property is reported as being of the Mesozoic Era within the Cretaceous System and Series. The Geologic Age Identification category is plutonic and intrusive rocks.

According to the U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) surveys, there are two primary soil components occurring on the subject property. The soils types are identified as Rilla and Norwood Soils. The surface soil texture of the Rilla soils is that of silt loam. These soils are classified within Hydrological Group B silt loam which have moderate infiltration rates. These soils are well drained and the corrosion potential for uncoated steel in this type of soil is moderate. The surface soil texture of the Norwood soils is silty clay loam. These soils are also classified within Hydrological Group B. These soils are well drained and the corrosion potential for uncoated steel in this type of soil is high. Two additional soil types are identified for the surrounding properties. Detailed information on soils data is presented in the EDR Radius Map Report included in Appendix C.

5.6.3 Flood Zone Map

ECCI reviewed the EDR GeoCheck report, and according to the EDR Detail Map, the property is not located within the 100-year or 500-year floodplains.

5.7 Historical Use Information on the Property

The subject property is located in Pulaski County southeast of the city of Little Rock, Arkansas. Based upon resources reviewed, trailers appeared to be on the property beginning in 1970 and removed by 2006. There were no structures shown in the photographs after 2006. For this report, ECCI utilized historical topographic maps, aerial photos, and other information from EDR and ADEQ.

5.7.1 Aerial Photographs

Historical aerial photos dating back to 1937 depict the character of the site and surrounding areas. Copies of the aerial photographs received from EDR are included in Appendix D. A brief description of each aerial photograph is presented in Table 5.2 below.

Table 5.2 – Aerial Photograph Descriptions

Year	Description
1937, 1940, 1943, and 1950	These aerial photographs depict the subject property with buildings and roads. The subject and surrounding properties appear as agricultural properties. There is an area containing trailers on the subject property towards the northeast corner.
1960	There is little change from the previous photographs.
1970	The subject property and the rest of the surrounding properties are similar to the previous photograph.
1974	The subject property is void of any structures but still appears to be in agriculture productions. The trailer area remains in this photograph.
1983	There is little change from the previous photographs.
1989, 1994, and 2001	The subject property remains the same as the previous photographs. The property to the northeast of the subject property has been developed as a trucking facility. There has been more development to the far north of the photograph.
2006, 2010, and 2015	The trailers have been removed on the subject property. The surrounding properties appear much the same as they do today.

5.7.2 Topographic Map

Historical topographic maps dated back to 1891 were available and were reviewed for this Phase I ESA. Copies of the topographic maps produced by the USGS were received from EDR. These maps can be found in Appendix D. A brief description of these maps is presented in Table 5.3 below.

Table 5.3 – Topographic Map Description

Year	Description
1891 and 1893	These maps are 30 minute maps. EDR has tried to locate the subject property on these maps. A trail is depicted in the area of the subject property on both maps. The subject property and surrounding properties appear as vacant.
1935	This is a 7.5 minute map. The subject property and Zeuber Rd are visible. There is no development on the subject or the immediately surrounding properties depicted.
1945 and 1946	This is a 7.5 minute map. The subject and surrounding properties are still shown as vacant. Some development has occurred to the northwest on this map.

Year	Description
1954, 1961, 1970, and 1986	This is a 7.5 minute map. The subject and surrounding properties are still shown as vacant.
1994	This is a 7.5 minute map. The subject property is still shown as vacant. The property to the north shows development in the Little Rock Industrial Park.
2014	This is a 7.5 minute map. This map does not depict any structures only roads, water, and contours.

5.7.3 Sanborn Fire Insurance Maps

Fire Insurance Maps were produced for urban areas since the late 1800s and were utilized for determining fire hazards. When available, these maps are reviewed for further documentation concerning the historical use of the Property and surrounding area. Sanborn fire insurance maps were unavailable for the subject property. A copy of the Sanborn Fire Insurance Map report from EDR is presented in Appendix D.

5.8 City Directories

City Directories are a screening tool designed to evaluate potential liability on a target property resulting from past activities at their facility and nearby sites. The City Directory Report includes a search of available city directory data at five year intervals. The City Directories Report on Fletcher Road and Zeuber Road listed Fletcher & Fletcher Co., Fletcher & Co., and residential areas in the surrounding area. A copy of the City Directory Report for that property is presented in Appendix D.

5.9 Historical Use Information on Adjoining Properties

It appears that the subject property and immediately adjacent (south) properties were developed for residential uses during the period between 1960 and 1970. The industrial area to the north began increasing development in the 1980s. While the Little Rock Industrial Park to the extreme north began increasing development in the 1990s.

6.0 Site Reconnaissance

6.1 Methodology and Limiting Conditions

Archival research, staff interviews, and visual site inspections were used to obtain the necessary information for preparation of this Phase I ESA. During the visual inspection, ECCI personnel used information gathered from the archival research to identify possible recognized environmental conditions. Features inspected included: ditches, drains, soils, and vegetation. The visual inspection also observed adjoining properties to identify potential sources of contamination that might have migrated or could migrate onto the subject property.

6.2 General Site Setting

On May 24, 2018 Julie McCallister and Shannon Hughes visited the subject property located in Little Rock, Arkansas. The purpose of the site visit was to visually and physically observe the property and any structures located on the subject property. During the site reconnaissance, ECCI observed the current condition of the property. The observed conditions are described below.

The subject property currently exists as agricultural land. The area is maintained and is being used for farming purposes. Zeuber Road borders the property to the north. Residential and agricultural land borders the property to the north and south. There are wooded areas to the west. To the east of the property exists more agricultural land, as well as an industrial area. There were utility easements onsite including natural gas, electrical and water. There were residential structures that were located on the southern portion of the property. These were not inspected by ECCI personnel.

The observations and findings are further noted below. Photographs of the subject property are included in Appendix B.

6.3 Site Reconnaissance Observations

Table 6.1 identifies potential environmental concerns noted during the site reconnaissance. Discussion of these items is presented in the following sections.

Table 6.1 – Site Reconnaissance Observations

Description	Observation		Additional Information
	Yes	No	
Hazardous Substances/Petroleum Products		X	
Storage Tanks (AST and UST)/Boilers		X	
Odors		X	
Pools of Liquid		X	
Drums		X	
Landfills		X	
Unidentified Substances Containers		X	
Potential PCB Equipment		X	
Pits, Ponds, Lagoons, and Surface Impoundments		X	
Stained Concrete, Soil or Pavement		X	
Stressed Vegetation		X	
Solid Waste		X	
Wastewater		X	
Wells		X	
Septic Systems		X	
Trenches and Sumps		X	
Drains and Pipes		X	
Hydraulic Equipment		X	
Other	X		6.3.1

6.3.1 Other

There were residential structures that were not inspected by ECCI personnel. ECCI did not note any signs of petroleum or hazardous materials around the property. The property could have septic tanks onsite associated with the residential homes.

7.0 Interviews

The purpose of the interviews conducted during the development of the ESA is primarily to support information obtained during this project.

7.1 Interview with Historical Owner's Representative, Site Manager, Occupant

For this Phase I ESA, ECCI interviewed Mr. Bryan Day, owner representative of the property. Mr. Day provided a timeline for the property ownership. The

information provided by Mr. Day was used throughout this report. The site owner completed the Phase I questionnaire contained within Appendix D.

7.2 Interviews with Local Government Officials

ECCI did not contact the Little Rock Fire Department to determine if they have responded to any fires or spills onsite. ECCI did not contact the local health department officials.

7.3 Interviews with Local Utilities

The local utilities were not contacted by ECCI for this property.

8.0 Findings, Opinions, and Conclusions

This ESA has been performed in accordance with ASTM "*Phase I Environmental Site Assessment Standards*" (ASTM E1527-13) on the South Port Site, 152 acre tract, located on Zeuber Road in Little Rock, Arkansas. Any exceptions to, or deletions from, this practice are described in Section 9.0 of this report.

During the course of this project, ECCI performed a site reconnaissance, reviewed federal, state, and local records, and interviewed persons familiar with the property to ascertain historical use of the property and surrounding areas. ECCI did not observe any recognized environmental condition, controlled environmental conditions, historical recognized environmental conditions, or de minimis conditions on the subject property. Information on the findings and conclusions can be found in Table 8.1 below. Further descriptions and a summary of the site characteristics can be found in section 6.0.

Table 8.1 – Summary of Findings, Opinion and Conclusions

FINDINGS	SUMMARY
Residential Property	There were residential homes and trailers onsite that were not inspected.
	OPINION AND CONCLUSION: **ECCI did not observe anything visually on the property; however, we did not enter into any of the dwellings onsite to confirm the presence of petroleum or hazardous materials.**

8.1 Data Gaps

Data gaps were encountered for multiple years. ECCI has no reason to suspect that site land use was significantly different during the missing years, from that already described, that would have contributed to knowledge of any RECs.

8.2 Additional Investigation

ECCI was not contracted to complete any additional investigations.

9.0 Deviations

This Phase I ESA was performed in general conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E 1527 - 13, "*Environmental Site Assessments: Phase I Environmental Site Assessment*".

10.0 Additional Services

ECCI was not contracted to perform any additional investigation or services regarding the subject property.

11.0 References

The following people, documents, maps or other publications may have been utilized specifically in the preparation of this Phase I ESA Report or generally in the development of the report format. References to specific documents are also provided in appropriate sections of the report.

Persons Contacted:

- Mr. Bryan Day, Owner Representative, 501-490-1468

Resources Consulted:

- Federal and State Databases reviewed are listed in the text of the report and in the Environmental Data Resources report.
- www.adeq.state.ar.us
- Little Rock Reclamation Authority, www.lrwu.com

Documents:

- Environmental Data Resources. Radius Map Report, Little Rock Port, Little Rock, Arkansas, May 25, 2018.
- American Society of Testing and Materials, E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, 2013.

12.0 Environmental Professional Statement

Mr. Jeremy Stehle and Mr. Rod Breuer have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all of the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

We declare that, to the best of our knowledge, we meet the definition of environmental *professional* as defined in §312.10 of 40 CFR Part 312. Résumés for these individuals may be found in Appendix A

APPENDIX A
Qualifications of Environmental Professionals

JULIE C. MCCALLISTER
Vice President/Sr. Project Manager

EDUCATION
University of Central Arkansas, BS Environmental Science, 2003
University of Arkansas at Little Rock, MS Integrated Science and Mathematics, 2007
University of Arkansas at Little Rock, Graduate Geospatial Technology Certificate, 2007

REGISTRATION/TRAINING
OSHA 24-Hour HAZWOPER Trained

PROFESSIONAL HISTORY
ECCI, 2004 to Present
Jay Hall and Associates, Inc., 2000-2004

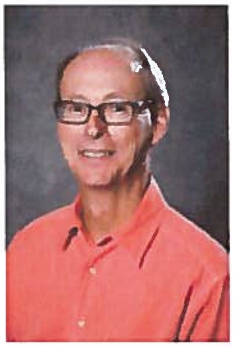
EXPERIENCE

Ms. McCallister has almost twenty years of experience delivering quality performance work, as well as successfully managing clients and projects on time and within budget. Her tasks include managing multiple clients and their environmental programs, developing and maintaining project budgets, regulatory review, and building relationships with clients and state agencies, as well as marketing to new clients. She is a critical thinker and strong leader with effective people-management, communication, and negotiation skills.

Ms. McCallister brings fresh ideas and current environmental science knowledge to ECCI. Ms. McCallister is provided challenging project responsibilities, and has demonstrated an ability to redefine project approaches to be more efficient and effective. Her experience with systems at industrial and manufacturing facilities includes preparation of annual hazardous waste reports, air permit recordkeeping systems and spreadsheets, EPA Toxic Release Inventory (TRI) reports, and other compliance-related recordkeeping system and incident documentation.

Ms. McCallister also has experience in the real estate appraisal and building inspection area. That process experience has been beneficial and allowed lessons learned from those projects to be applied to investigations and evaluations undertaken as an environmental professional. The technical writing, research, and field inspection experience directly adds understanding and insight to environmental investigation and assessment procedures.

AFFILIATIONS:
Arkansas Environmental Federation
Leadership Arkansas, Class IV
Randal Mathis Scholarship Winner
Dale Carnegie Leadership Training



RODNEY K. BREUER, P.E.

Principal

EDUCATION

University of Missouri at Rolla, BS Civil Engineering, 1979

University of Missouri at Rolla, MS Civil Engineering, 1980

REGISTRATION

Registered Professional Civil Engineer (Arkansas, Kansas, Missouri and Oklahoma)

PROFESSIONAL HISTORY

ECCI, Principal, Vice President, 1993 to Present

ENSCO, Senior Environmental Engineer, 1987 - 1993

Missouri Department of Natural Resources, Environmental Engineer 1980 – 1987

EXPERIENCE

Mr. Breuer has over 35 years of experience in all areas of environmental engineering. He served as an environmental regulatory official in wastewater treatment, mining, and hazardous waste management. He managed all regulatory permitting for a national hazardous waste management company for six years including NPDES, solid waste, hazardous waste, stormwater, air pollution, and toxic substances.

His strong civil engineering background has been helpful in hundreds of environmental and design engineering projects as ECCI's principal civil engineer since 1993. In 1994, he was awarded Whirlpool Corporation's Silver Medal for leadership for his role in developing Clean Air Act procedures, which demonstrated compliance while providing broad operational flexibility for the manufacturing facility (30 acres under roof).

Mr. Breuer is experienced in complicated projects related to Clean Air Act requirements. Projects have included evaluation and selection of air pollution control technology systems, modeling of air toxics to demonstrate compliance with ambient concentration standards, and defining operational scenarios to achieve maximum flexibility while minimizing reporting and recordkeeping costs. Mr. Breuer's combined industry and government experience allows him to quickly identify the key issues related to margins and allow industry to work with regulatory programs to support the business goals. Mr. Breuer has provided engineering assistance for several large and complicated industrial sales and acquisitions.

US Army Pine Bluff Arsenal, Construction Certification, Pine Bluff, Arkansas: Certifying Professional Engineer for RCRA hazardous waste permitted systems. The Professional Engineer certifications assure systems have been constructed according to design specifications and permit requirements. Mr. Breuer also served as the lead professional engineer for hazardous waste P.E. Certifications of Closure of those hazardous waste handling and treatment systems used to eliminate historical stockpiles of chemical weapons.

Wastewater Treatment System Design, multiple locations: Mr. Breuer has served as the lead design engineer for multiple community waste treatment systems and multiple specialized industrial pretreatment, and treatment processes.

Clean Air Act Permitting and Compliance: Mr. Breuer has served as the lead engineer on over 300 Clean Air Act permitting and compliance projects, including surface coating processes, wood products industries from large commercial mills to production of specialty wall boards, mineral processing facilities, metal parts manufacturers, appliance manufacturers, chemical process facilities, boat and other fiberglass products manufacturing, wind turbine and wind tower manufacturing, food processing, proppant manufacturing, and steel pipe manufacturers.

Stormwater Pollution Prevention Plans and compliance systems for a broad range of manufacturers, including wood products manufacturing, food products and processing, hazardous waste management facilities, mining, fuel storage and distribution, oil and gas related field services, metal products manufacturing (electric motors, wind turbines, trailers, boat and fiberglass products), consumer product manufacturers, major medical facilities and metal piping manufacturers, and rocket fuel handling and loading facilities.

Cargill, Spill Prevention, Control & Countermeasure (SPCC) Plans, USA: Certifying Professional Engineer on SPCC Plans for 53 animal feed processing facilities in 30 states.

Clean Harbors El Dorado, LLC, Environmental Engineering Assistance, El Dorado, Arkansas: Certifying Professional Engineer for multiple hazardous waste storage tank closures and on multiple RCRA Part B hazardous waste permit application, and manager of air permitting assistance.

AFFILIATIONS

Arkansas Environmental Federation
Society of Professional Engineers (National and Arkansas)
University of Missouri Rolla Academy of Civil Engineers
Water Environment Federation

APPENDIX B
Site Photographs

Photograph 1: View of the subject property.

Photograph 2: View of the subject property.

Photograph 3: View of the subject property.

Photograph 4: View of the subject property with Fletcher Road.

Photograph 5: View of the subject property.

Photograph 6: 18 wheeler along the subject property.

Photograph 7: Residential portion of the property.

Photograph 8: Residential portion of the property.

Photograph 9: Adjacent property.

Photograph 10: Adjacent property.

APPENDIX C
Regulatory Records Documentation

APPENDIX D
Historic Documentation

Geotechnical

Soils Report: See attachment GT-1 for detail.

Water Table Depth: 8 – 11 feet.

Seismic Rating: Zone 1

Grubbs, Hoskyn, Barton & Wyatt, INC.
CONSULTING ENGINEERS

P. O. Box 55105
Little Rock, Arkansas 72215-5105
#1 Trigon Place 72209
(501) 455-2536
FAX (501) 455-4137

June 9, 2008
Job No. 08-130

Garver Engineers, LLC
1010 Battery Street
Little Rock, Arkansas 72202

Attn: Mr. John T. Watkins III, P.E., S.E.

RE: PRELIMINARY RESULTS of GEOTECHNICAL INVESTIGATION
PROPOSED MAN INDUSTRIES FACILITY
LITTLE ROCK PORT INDUSTRIAL PARK
LITTLE ROCK, ARKANSAS

INTRODUCTION

Submitted herein are the preliminary results of the geotechnical investigation performed for the proposed Man Industries facility planned in the Little Rock Port Industrial Park in Little Rock, Arkansas. These services were verbally authorized by Garver Engineers on April 28, 2008. The geotechnical investigation has been performed in general accordance with our May 12, 2008 proposal and as modified by subsequent discussions. Notice to proceed with the preliminary field studies was received on May 13, 2008.

We understand the new facility will be constructed on an approximately 161-acre site. The facility will include a pipe mill covering approximately 258,600 sq ft and a coating plant encompassing approximately 85,200 sq ft. The structures are expected to be single-story pre-engineered metal buildings. Floor loads are anticipated to be moderate to heavy. The facility will also include two (2) 50-ton cranes and four (4) 25-ton cranes. Foundation loads are anticipated to range from light to heavy. A 7000 sq ft single-story office building will be constructed independently of the manufacturing building. Foundation loads of the office building are expected to be light.

In addition, the project will include rail spurs with three (3) rail lines extending east-west across the site. The four (4) 25-ton cranes will be associated with product loading areas on the rail spurs. Open storage areas for completed pipe will also be included. We understand that aggregate-surfaced pavements are planned for the heavy pipe storage loads. Paved drives are planned for both trucks and light vehicles. Some parking areas for vehicles will also be included. Site grading information is not currently available.

The purpose of this geotechnical study is to explore subsurface conditions at the site and to develop recommendations to guide design and construction. The preliminary results and conclusions discussed in this report have been developed based on our current understanding of the project and the limited data developed from the preliminary borings that have been drilled at offset locations. The results of the field and laboratory studies are discussed in the following report sections. Subsequent report sections present recommendations for design and construction.

SUMMARY

The conclusions and recommendations of the preliminary geotechnical investigation are summarized below.

- Subsurface conditions have been initially explored by drilling nine (9) sample borings to depths of 10 to 70 ft.
- Laboratory testing was performed on representative soil samples.
- The geology of the project area is Recent Alluvium. These are a mixture of clastic materials including gravel, sandy gravel, sand, silty sand, silt, clayey silt, and clay. The soils on the subject site are comprised of a variable mixture of these alluvial materials, typically grading to sand at depth.
- Based on IBC 2000 and 2006 criteria, a Seismic Site Class D (stiff soil profile) is considered applicable.
- Shallow groundwater is present in May 2008 and depths vary locally, with groundwater depths on the order of 4 to 9 ft below existing grades.
- Based on the limited subsurface information available at this time, the upper zones of the on-site soils vary from weak and highly compressible to stable with moderate shear strength. It is expected that weak surface and near-surface soils will be common across the site, while there are some areas of relatively strong surface soils.
- Light foundation loads up to about 100 kips can likely be supported on shallow footings bearing in natural stiff silty clay or imported select fill. Net allowable bearing pressures of 1500 to 2000 lbs per sq ft are anticipated for shallow footings.
- Moderate to heavy foundation loads and loads of units sensitive to settlement may be supported on auger cast piles bearing in the dense granular soils below about 20- to 25-ft depth.
- Alternatively, moderate to heavy foundation loads may be supported on footings bearing on a foundation stratum improved by an intermediate foundation system of rammed aggregate piers. In this case, a net allowable bearing pressure on the order of 5500 lbs per sq ft is anticipated.
- Localized undercuts of 2 to 4 ft, more or less, are expected for subgrade preparation. The potential for mass undercuts may be reduced by performing the work in dry months.
- Raising grades has been highly beneficial in the project area in reducing undercut requirements, construction of shallow foundations, and generally facilitating site work.

Based on the initial results of the geotechnical investigation, site and subsurface conditions on this site are relatively typical of the area. Because of the presence of moisture sensitive and weak surface soils, raising grades is recommended to provide improved subgrade support for pavements, open storage areas, and rail lines. The presence of dense granular soils at relatively shallow depth will reduce the potential for deep settlement as well as provide high bearing capacity at relatively shallow depth for intermediate and deep foundation systems. Preliminary conclusions and recommendations are discussed in more detail in the following report sections.

SUBSURFACE EXPLORATION

Subsurface conditions have been initially explored by drilling nine (9) sample borings to depths ranging from 10 to 70 ft below existing grades. The project vicinity is shown on Plate 1. Due to right of entry limitations associated with the crops currently on the site, the boring locations were generally offset to locations around the perimeter that were accessible to drilling equipment. The approximate boring locations are shown on the Plan of Borings, Plate 2. Preliminary boring logs, presenting descriptions of the soils encountered and results of the field and laboratory tests, are provided as Plates 3 through 11. A key to the terms and symbols used on the boring logs is presented as Plate 12.

The borings were drilled with an all-terrain buggy-mounted Hilyard Super rig and a truck-mounted SIMCO 2400 rotary-drilling rig. The deeper borings were drilled using a combination of dry-auger and rotary-wash drilling procedures and shallow borings (i.e., less than about 20-ft depth) were drilled using continuous-flight augers. Soil samples were obtained at approximately 2-ft intervals to a depth of 10 ft and at 5-ft intervals thereafter.

Samples were typically obtained using a 2-inch-diameter split-barrel sampler driven into the strata by the blows of a 140-lb hammer dropped 30 inches, in accordance with Standard Penetration Test (SPT) procedures. The number of blows required to drive the standard split-barrel sampler the final 12 inches of an 18-inch total drive, or portion thereof, is defined as the Standard Penetration Number (N). Recorded N-values are shown on the boring logs in the "Blows Per Ft" column.

All samples were removed from sampling tools in the field, examined, and visually classified. Samples were then placed in appropriate containers to prevent moisture loss and/or change in condition during transfer to our laboratory for further examination and testing.

The borings were advanced using dry-auger drilling procedures to the extent possible in order to facilitate groundwater observations. Observations regarding groundwater are noted in the lower-right portion of each log and are discussed in subsequent sections of this report.

LABORATORY TESTING

To evaluate pertinent soil properties, laboratory tests consisting of natural water content determinations and classification tests were performed. Natural water content determinations were performed to complete a profile of cohesive soil water contents. Water content results are plotted on the boring logs as solid black dots.

To verify field classification and to evaluate soil plasticity Atterberg (liquid and plastic) limit determinations and sieve analyses were performed on selected, representative soil samples. The Atterberg limits are plotted on the boring logs as plus signs connected with a dashed line. The percentage by weight of soil passing the No. 200 sieve is noted in the "- No. 200%" column on the far right side of the log forms. In addition, a summary of laboratory test results with classification by the Unified system is presented in Appendix A. Grain-size distribution curves are also included in Appendix A.

GENERAL SITE AND SUBSURFACE CONDITIONS

Site Conditions

The project site is located on the south side of Zeuber Road in the Little Rock Industrial Port in Little Rock, Arkansas. Fletcher Road extends north to south through the site from Zeuber

Road. At the time of the field studies, the site was being utilized for cultivation. The 87 acres on the west side of Fletcher Road was cultivated in winter wheat and the 74 acres east of Fletcher Road had a sparse crop of grass. An abandoned house with barn and outbuildings is located on the eastern half of the site. A water well is also located in this area. The site terrain is flat with minor, localized undulations. Site drainage is considered poor. There are some low-lying areas which are very poorly drained and contained standing water in May 2008. A body of surface water is on the south side of the property line, with some ditching extending to low-lying areas in the subject site. A shallow swale is located along Fletcher Road as well as along Zeuber Road.

Site Geology

The site locale is in the mapped exposure of Recent Alluvium Deposits of the Arkansas River flood plain. The Alluvial Deposits are comprised of a mixture of clastic materials including gravel, sandy gravel, sand, silty sand, silt, clayey silt, and clay. Variations in stratigraphy can be significant over short distances, both vertically and horizontally. The thickness of the Alluvial Deposits can vary greatly.

Seismic Conditions

According to Arkansas State criteria, the Pulaski County site is located in Seismic Zone 1, i.e., the area of low anticipated seismic damage. Based on the results of the borings and our knowledge of the local geology, a Seismic Site Class D (stiff soil profile) is considered applicable in accordance with the criteria of IBC 2000 and 2006. The liquefaction potential of the silt and sand strata is considered low to moderate and the liquefaction potential of the silty clay and clay strata is considered negligible.

Subsurface Conditions

The results of the preliminary borings indicate the natural surface and near-surface soils are comprised of very soft to stiff brown to reddish brown silty clay (CL), very soft to soft brown sandy, clayey silt (CL-ML), loose to medium dense brown to tan silty fine sand (SM), and very loose to medium dense brown fine sandy silt (ML) and silt (ML). These highly variable surface soils extend to 4- to 14.5-ft depth. These soils typically exhibit low to moderate shear strength and moderate to high compressibility. The clayey silt and silt are highly moisture sensitive and will be subject to significant strength reduction when saturated and/or disturbed.

Below the predominantly fine-grained soils, loose to dense brown to tan silty fine sand (SM) and fine sand (SP and SP-SM) are predominant. The sands exhibit low to medium relatively density and moderate to low compressibility. Strength of the near-surface soils appear to increase below about 6- to 12-ft depth. The sands are generally dense to very dense with moderate to high shear strength below 18- to 24-ft depth. The sands become coarser with some fine to coarse gravel at depth.

Groundwater Conditions

Groundwater was encountered in the borings between 4- and 9-ft depths in May 2008, with an average groundwater depth of about 6.5 ft below existing grades. Groundwater levels will vary, depending on seasonal precipitation, surface runoff and infiltration, and stream levels in the nearby Arkansas River. Normal pool of the Arkansas River at this location is about El 231. Surface elevations of the site are around El 241.

Significant Conditions

The significant site and subsurface conditions considered pertinent to design and construction of the Man Industries project are:

a) The nearly flat site terrain with very poor to poor surface drainage;

b) The moisture-sensitive nature of the surface and near-surface clayey silt, silt and fine sandy silt with the potential for significant strength reduction with increases in soil water content;

c) The predominantly low shear strength and moderate to high compressibility of the surface and near-surface soils to approximately 4- to 12-ft depth;

d) The increase in shear strength and decrease in compressibility of the sand and silty sand (Stratum III) below 12- to 29-ft depth; and

e) Groundwater at 4- to 9-ft depth in May 2008 and the potential for seasonal variations in groundwater levels. It is opined that groundwater levels are unusually high due to a recent period of heavy rain with abundant flooding and stormwaters in the region.

The significant conditions above have been considered in developing the preliminary conclusions and recommendations discussed in the following report sections.

PRELIMINARY CONCLUSIONS and RECOMMENDATIONS

Foundation Design

Foundations for structures at the new facility must satisfy two (2) basic and independent design criteria. First, the maximum bearing pressure transmitted to the bearing strata should not exceed the allowable bearing pressure based on an adequate factor of safety with respect to shear strength. Secondly, foundation movements resulting from consolidation, shrinking, or swelling of the supporting soils should be within tolerable limits for structures. Construction factors such as installation of foundation units, excavation procedures, and surface and groundwater conditions must also be considered.

In light of the results of the borings and the site conditions, light structural loads could be supported on shallow footings in conjunction with some undercut and replacement of weak foundation soils with granular fill. For moderate to heavy foundation loads, or for structures or units sensitive to settlement, a deep foundation system of auger-cast piles would be warranted. Other types of piling could also be considered. Alternatively, an intermediate foundation system of rammed aggregate piers could be utilized with footings to improve bearing capacity and reduce settlement potential for heavier loads. Preliminary recommendations for foundation alternatives are discussed in the following report sections.

Shallow Footings

As noted, the surface and near-surface soils are predominantly weak and moderately to highly compressible. Because of the predominant low shear strength and high compressibility exhibited by the surface and near-surface soils, the use of shallow footings should be limited to light foundation loads. Where loads exceed about 100 kips or where structures are sensitive to

settlement, the structural loads should be supported on a deep foundation system of piling or an intermediate foundation system of rammed aggregate piers.

Shallow footings should be founded in compacted granular fill. At this time only limited subsurface information is available. However, the results of the borings indicate that stiff silty clay is locally present at shallow depths. Where the stiff silty clay is encountered at the plan footing bottom elevation, and this is field verified by the Geotechnical Engineer, it is possible that the undercut and granular fill can be eliminated.

Perimeter footings should be founded at a minimum depth of 1.5 ft below lowest adjacent grade for frost protection and to preclude local shear. Interior footings and thickened sections may be supported in compacted granular fill or suitable stiff silty clay at shallower depths consistent with structural requirements for thickness.

Locally available syenite fines, including "Donna-fill" and Granite Mountain industrial sand or approved alternate select materials, are suitable for select granular fill under footings and are commonly used in the Little Rock Port area. Typical gradation curves for Donna-fill and industrial sand, both syenite quarry products, are attached in Appendix B. Donna-fill is suitable for structural fill in dry conditions. Where minor seepage is encountered, industrial sand can more effectively be compacted in footing undercut bottoms. Once in the dry, the more economical Donna-fill can be substituted for industrial sand. Where the undercut bottom becomes unstable it may be necessary to utilize a geogrid or heavy geotextile to achieve compaction of the initial lift of backfill. Where a fabric is used, we recommend a nonwoven geotextile such as Mirafi 180N or an approved equal.

The required thickness of engineered fill below footings may be achieved by raising grade, undercutting, or a combination of both. As noted, no site grading information is presently available for this project. Groundwater was encountered at 4 to 9 ft below existing grades in May 2008. Given the potential for shallow groundwater, raising grades would reduce the potential for encountering water and facilitate footing undercut. Footing undercuts should extend laterally to a width determined by a 1-horizontal to 2-vertical projection from the footing edge to the required undercut depth. Foundation undercut backfill should be compacted to a minimum of 95 percent of the Modified Proctor (ASTM D-1557) maximum dry density at a water content near the optimum value. Prior to placing fill, the subgrade should be prepared as recommended in the Site Grading section of this report.

The required amount of select granular fill will vary with the footing size and bearing pressure. Recommendations for granular fill thickness and maximum net allowable bearing pressure are summarized in Table 1 below.

Table 1: Recommendations for Footing Undercut and Allowable Bearing

Maximum compression load, kips	Maximum net allowable bearing pressure, lbs per sq ft	Minimum granular fill thickness below footing, ft
40	1750	4
75	2000	6
100	1500	6

A sketch showing the concept for fill-supported footings is provided in Appendix C. The allowable maximum soil bearing pressures above include a factor of safety of at least 2.5 with

respect to anticipated shear strength of properly-compacted fill and shear strength of the underlying strata. The allowable bearing values may be increased by 33 percent for short-term transient and seismic loads. The allowable bearing capacity should be reduced by at least 50 percent for sustained dynamic loads. Long-term post-construction settlement of footings founded on properly-compacted fill or the stiff silty clay as recommended above is estimated to be less than 1.0 inch. Differential settlement may be estimated as about one-half of the total value.

Foundation uplift resistance will be provided by structural dead loads and the weight of the foundation units. Resistance to lateral forces will be provided by the passive resistance of the foundation soils and sliding resistance at the footing bottom. The passive resistance of the soil within the upper 2 ft should be neglected. Below 2-ft depth, an ultimate passive resistance value of 300 lbs per sq ft per ft depth may be assumed for the on-site granular soils and/or silty clay. Resistance to footing sliding may be evaluated using an ultimate friction value of 0.35 for concrete on the granular fill or stiff silty clay. An appropriate factor of safety must be included in a sliding analysis.

Individual footings should have a minimum dimension of 24 inches and continuous footings a minimum width of 18 inches. All footing excavations and footing undercuts should be observed by the Geotechnical Engineer to verify suitable bearing and adequate undercut.

Deep Foundations

To develop adequate bearing and minimize foundation settlement, moderate to heavy foundation loads and the loads of structures or units sensitive to settlement may be supported on a deep foundation system. Deep foundations should extend to the medium dense to dense silty sand and sand strata below about 20-ft depth. Typically, auger-cast piles are economical foundation systems in the Little Rock Port area.

Preliminary allowable pile capacity curves for 12-, 18-, 24-, and 30-inch-diameter auger cast piles are provided in Appendix D. Pile capacities have been determined with respect to the inferred stratigraphy revealed by the borings and the assumption of a pile cap bottom at about 2 ft below existing grade (as of May 2008). Pile lengths will vary with the site conditions and the desired capacity. However, pile lengths on the order of 25 to 40 ft are expected. Other pile types and sizes can also be evaluated, if desired. Settlement of properly installed piles installed to the dense sand strata below about 20- to 25-ft depth is expected to be less than 1.0 inch.

Ultimate pile capacities have been developed using static pile capacity formulae. The allowable pile capacities provided in Appendix D include a minimum factor of safety of 2.0 for compression and 3.0 for uplift. The allowable capacities are based on single, isolated foundations. Piles spaced closer than three (3) pile diameters may develop lower individual capacity due to group effects, and further analysis is recommended for a closely-spaced pile layout.

Resistance to lateral forces will be provided by the passive resistance of the foundation strata. Preliminary lateral load analyses have been performed for 12-, 18-, 24-, and 30-inch-diameter auger cast piles using the computer program LPILE[1]. These results are provided graphically in Appendix E. The analyses were performed utilizing the results of the preliminary borings and the assumption that piles are installed from approximately 2 ft below existing grade. A

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[1] LPILE Plus, Version 5.0; Lymon C. Reese and Shin Tower Wang; Ensoft, 2004.

total pile length of 25 ft was assumed with the axial load assumed to be the calculated maximum compression load for the respective pile size and length.

The results of these preliminary analyses have been provided for information only and may be superseded by final design analyses. Where lateral loads control design or significantly impact design, performing detailed lateral load analyses will be warranted. We are available to assist with these analyses if desired.

It should be noted that because of the high compressibility of the near-surface soils, if site grades are raised more than about 5 ft, some settlement with attendant negative skin friction (downdrag) on piling could develop. Grading information should be considered for calculated pile capacity to be used in final design. Where fill is placed early in the construction phase, and time for settlement is allowed, downdrag loads will be reduced.

Because of the limited number of borings performed on this site, as well as the variability often encountered in subsurface conditions, we recommend that calculated pile capacities be verified for construction by a load test program that includes at least two (2) pile load tests. The load tests should be performed in general accordance with ASTM D-1143 procedures. The load test locations should be selected by the Geotechnical Engineer based on the available subsurface information.

Rammed Aggregate Piers

Increased foundation bearing capacity and reduced settlement potential are expected to be required for heavier project facets and for structures and units that will be sensitive to settlement. Bearing capacity of the weak near-surface soils could be improved and the settlement potential reduced by use of rammed aggregate piers in conjunction with conventional footings. The Geopier™ system would be effective for this use. With the use of rammed aggregate piers, the foundation soils are reinforced by installing geopier elements below load-bearing foundations.

Geopier elements are constructed by drilling 30-in.-diameter holes and ramming thin lifts of well-graded aggregate (typically crushed stone aggregate base) within the holes to form very stiff, high-density aggregate piers. It is likely that casing will be required to stabilize the drill holes on this site. The first lift of aggregate backfill forms a bulb below the bottoms of the geopier elements, thereby prestressing and prestraining the soils to an approximate depth equal to one (1) pier diameter. Subsequent lifts of aggregate backfill are typically about 12 inches thick. Ramming takes place with a high-energy beveled tamper that both densifies the aggregate and forces the aggregate laterally into the sidewalls of the hole. This action increases the lateral stress in the surrounding soil, further stiffening the stabilized composite soil mass. Information on the Geopier system is provided in Appendix G.

The result of Geopier installation is a strengthening and stiffening of foundation soils that may then support relatively high bearing pressure spread footings. The replacement of a portion of the subsurface soils with high-stiffness non-liquefiable aggregate elements also significantly reduces the potential for, and effects of, liquefaction due to seismic or other dynamic loads.

Depending on the magnitude of loads, the drilled holes would be expected to extend 12 to 20 ft below footing bottoms, more or less. Casing is likely to be required for geopier construction. Based on the subsurface conditions revealed by the borings, a preliminary net allowable composite bearing pressure of 5500 lbs per sq ft would be expected for the soil conditions on the Man Industries site. Design is typically based on total settlement of about 1.0 inch and differential

settlement less than 0.5 inch. A minimum footing depth of 2 ft below final grade is recommended. An ultimate coefficient of sliding value of 0.5 may be assumed for concrete on the composite soil/geopier bearing stratum.

Uplift resistance can be provided by designing the Geopiers with embedded anchors. Our experience has been that individual geopiers can resist 40 to 60 kips of tensile load, depending on the length of the Geopier.

Geopier™ design and construction is proprietary and provided by Designers and Contractors licensed by Geopier Foundation Company, Inc. Specific design, construction and cost information can be obtained from Geopier Foundation Company. A modulus load test program should be performed to verify design assumptions and foundation element performance.

Floor Slabs

Slab-on-ground construction is considered appropriate for building floor slabs. We recommend that all slabs be placed on a properly-prepared subgrade of a minimum of 24 inches of compacted Donna-fill, Granite Mountain industrial sand, or an approved alternate structural fill. The preliminary maximum net allowable bearing pressure for rigid floor slabs so constructed is 1750 lbs per sq ft. For design of slabs underlain by at least 24 inches of compacted Donna-fill, a subgrade modulus (k) value of 150 lbs per cubic inch is recommended for preliminary design.

An increased value of subgrade modulus may be developed by placing compacted crushed stone aggregate base below floor slabs. For slabs underlain by a minimum 12 inches of compacted crushed stone base (AHTD Class 7) over at least 24 inches of compacted granular structural fill, a k of 200 lbs per cubic inch may be used in design. If slabs are underlain by a minimum 18 inches of compacted crushed stone base (AHTD Class 7) over at least 24 in. of compacted granular fill, an increased subgrade modulus value on the order of 250 lbs per cubic inch is considered suitable.

Where moisture transmission through floor slabs could be a potential problem, we recommend that floor slabs be underlain by 4 to 6 inches of clean crushed stone or gravel. For the offices and administrative buildings, a 4- to 6-inch layer of clean crushed stone ("C"-ballast) below the floor slabs is recommended. Impervious sheeting should be placed between the slabs and the granular course to act as a vapor retarder. The granular layers should be densified with vibrating equipment prior to slab construction. If a crushed stone aggregate base is used to increase the subgrade modulus, it should be placed below the clean stone layer.

If a tight, relatively smooth surface is needed for the granular layer, the bottom 4 inches of crushed stone should be coarse aggregate complying with the gradation of locally available "C"-ballast or an approved equal. The top 2 inches of stone below the floor should be fine aggregate complying with ASTM D-448 Size 10 with 6 to 12 percent passing the No. 200 sieve size.

Recommended gradations for "C"-ballast and fine aggregate complying with ASTM D-448 Size 10 are summarized in Tables 2 and 3, below.

Table 2: Recommended gradation of clean crushed stone ("C"-ballast)

Sieve Size	Percent Finer
1-½ in.	100

Sieve Size	Percent Finer
1 in.	90 – 100
¾ in.	40 – 75
½ in.	15 – 35
⅜ in.	0 – 15
No. 4	0 – 5

Table 3: Granular fill - ASTM D 448, Size 10 – No. 4 to 0

Sieve Size	Percent Finer
⅜ in.	100
No. 4	85 – 100
No. 8	25 – 60
No. 100	10-30
No. 200	6-12

Pavements

Parking areas and drives are included in the project. Traffic is expected to be primarily automobile, light utility vehicle traffic, and heavy delivery truck traffic. Open storage areas may consist of aggregate-surfaced areas.

Based on the results of the preliminary borings, the natural subgrade typically offers poor support for pavements. Where grades are raised, including raising grades with syenite fines, the pavement subgrade is expected to be composed of primarily compacted granular fill. Compacted fill is expected to offer good subgrade support for pavements in conjunction with positive surface drainage.

Preliminary alternatives for pavement sections are summarized below. Should traffic volumes or loads exceed the conditions outlined previously, or if subgrade conditions vary from those assumed, pavement sections should be re-evaluated.

Heavy-Duty Drives

Alternative 1:

1.5 in. Asphalt Concrete Hot Mix Surface Course (1996 AHTD Standard Specifications Section 407, Type 2)

2.5 in. Asphalt Concrete Hot Mix Binder Course (1996 AHTD Standard Specifications Section 406)

8 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)

18 in. Select granular fill subgrade compacted to a minimum 95 percent Modified Proctor (ASTM D-1557) maximum density

Alternative 2:

9 in. Portland Cement Concrete (f'_c=4000 psi @ 28 days with doweled joints)

6 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)

Alternative 3:

8 in. Portland Cement Concrete (f'_c=3500 psi @ 28 days with doweled joints)

4 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)

18 in. Select granular fill subgrade compacted to a minimum 95 percent Modified Proctor (ASTM D-1557) maximum density

Alternative 4:

1.5 in. Asphalt Concrete Hot Mix Surface Course (1996 AHTD Standard Specifications Section 407, Type 2)

2.5 in. Asphalt Concrete Hot Mix Binder Course (1996 AHTD Standard Specifications Section 406)

8 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)

8 in. Cement Modified Subgrade

Light Duty Drives (Automobiles and light utility vehicles)

Alternative 1:

3 in. Asphalt Concrete Hot Mix Surface Course (1996 AHTD Standard Specifications Section 407, Type 2)

8 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)

18 in. Select granular fill subgrade compacted to a minimum 95 percent Modified Proctor (ASTM D-1557) maximum density

Alternative 2:

6 in. Portland Cement Concrete (f_c' = 4000 psi @ 28 days)

4 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)

Alternative 3:

3 in. Portland Cement Concrete (f'_c=4000 psi @ 28 days)

5 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)

8 in. Cement Modified Subgrade

Light Duty Parking (Automobiles and light utility vehicles)

Alternative 1:

2 in. Asphalt Concrete Hot Mix Surface Course (1996 AHTD Standard Specifications Section 407, Type 2)
7 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)
12 in. Select granular fill subgrade compacted to a minimum 95 percent Modified Proctor (ASTM D-1557) maximum density

Alternative 2:

5 in. Portland Cement Concrete (f'_c=4000 psi @ 28 days)
4 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)

Alternative 3:

2 in. Asphalt Concrete Hot Mix Surface Course (1996 AHTD Standard Specifications Section 407, Type 2)
5 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)
8 in. Cement Modified Subgrade

Aggregate-Paved Areas (Open storage areas)

12 in. Crushed Stone Base (AHTD Standard Specifications Section 303, Class 7)
30 in. Select granular fill subgrade compacted to a minimum 95 percent Modified Proctor (ASTM D-1557) maximum density

We recommend that pavement in entry aprons, loading docks and refuse dumpster areas be a minimum 8-inch-thick Portland cement concrete underlain by 6 inches of compacted aggregate base and 18 in. of select granular fill. The concrete area at loading docks and dumpster pads should be large enough to accommodate both the dumpster and the truck turning radii.

The pavement subgrade should be prepared in accordance with the recommendations of the Site Grading section of this report. Particular attention should be given to maintaining subgrade moisture and density until pavements are constructed. Immediately prior to pavement construction, weak, soft or wet areas should be excavated, processed, and re-compacted or replaced with select fill. We recommend that all subgrade be proof-rolled immediately prior to placing base course. Aggregate base should be compacted to a minimum of 98 percent of the AASHTO T-180 maximum dry density as per AHTD criteria.

For load transfer at joints in heavily-loaded concrete pavements, consideration may be given to the use of dowels. Based on information published by ACI[2], 1-⅛-inch-diameter dowels embedded at least 7 inches and with a total length of 16 inches are recommended for the 9-inch pavement section. The dowels should be spaced on 12-inch centers. One side of dowels should be lubricated to allow movement. Joint spacing for concrete pavements should be based on specific design. However, a maximum joint spacing on the order of 15 ft is anticipated. Good subgrade

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[2] Guide for Design and Construction of Concrete Parking Lots; American Concrete Institute; ACI Committee 330; 1987.

support and appropriate joint spacing are mandatory for suitable performance of concrete pavements.

Consideration may be given to the use of cement modified subgrade to improve subgrade support of the on-site soils. This would consist of mixing the on-site silt or fine sandy silt with Portland cement. The specific amount of cement required to achieve stabilization must be determined by laboratory testing on the subgrade soils. The silt and fine sandy silt subgrade soils typically classify as A-4 or A-5 by the AASHTO soil classification system. Based on the soil classification and our experience with similar materials, an application rate of 5 to 6 percent cement by soil dry weight may be used for estimation purposes for the A-4/A-5 subgrade soil. For 6 percent cement by dry weight, an application quantity on the order of 4 lbs per sq yd per inch treatment depth would be anticipated. For the recommended minimum 8-in.-treatment depth, a cement application rate of 32 lbs per sq yard may be used for preliminary estimation purposes. As noted, the required design application rate must be determined by specific laboratory testing.

The importance of positive surface drainage for acceptable pavement performance cannot be overstated. Grades should direct water away from pavement edges.

Railbed Support

Based on the results of the preliminary borings and recent projects in the area, a properly-prepared subgrade of the on-site stiff silty clay or imported select granular fill will provide good support for new rail lines. The upper zones of the on-site soils are often weak and compressible. Given the characteristics and classification of the surface soils, a California Bearing Ratio (CBR) value of 3 is considered fitting for design based on the existing subgrade. Because of the moisture sensitive character of the predominant surface silt, reduced stability should be anticipated during wet seasons and in areas of poor drainage.

To improve subgrade support for new rail beds, we recommend that the subballast be supported on at least 3 ft of select granular fill. The subballast should extend at least 6 ft beyond the rail ties to the extent possible. Syenite fines (Donna-fill or Granite Mountain industrial sand) or an alternate approved by the Engineer will be suitable for select fill. The select granular fill thickness may be attained by undercutting, raising grades, or a combination of these. With the use of a minimum 3 ft of select granular fill below the subballast, a design CBR value of 10 is considered appropriate. Recommendations for subgrade preparation, including select fill properties, are discussed in the Site Grading section of this preliminary report.

Site Grading

Site preparation should begin with light stripping of the organic-containing surface soils. Based on the results of the preliminary borings, a stripping depth on the order of 6 inches is expected. As noted, the surface soils are locally moisture sensitive and relatively weak. In addition, there are some areas of very poor drainage and standing water. Consequently, there is some potential for undercutting. Depending on seasonal site conditions, undercuts of 2 to 4 ft, more or less, could be warranted for areas of unstable subgrade. Soil strength is expected to decrease with depth in the upper soil zones, and undercuts should generally be limited to the depths required to develop adequate thickness of stable backfill. Where undercut bottoms are unstable, the use of geotextiles or geogrids may be considered to facilitate backfilling. Where needed, we recommend a nonwoven geotextile such as Mirafi 180N or an approved equal. In areas of highly unstable subgrade, use of a heavy geotextile such as Mirafi Geolon® HP370 or an approved equal may be

effective in reducing undercut requirements. Information on geotextiles is provided in Appendix H. Performing the work during dry seasons of the year may significantly reduce undercut requirements and facilitate earthwork.

Following stripping and any cut, and prior to any fill placement, the subgrade should be evaluated by the Geotechnical Engineer to evaluate subgrade stability. Any soft or loose soils encountered in the construction area should be undercut and replaced with select material as required to develop a stable subgrade. Site grading operations performed during wet seasons will warrant more extensive site preparation. Subgrade preparation should extend at least 10 ft outside structure limits and 3 ft outside pavement limits to the extent possible.

The on-site soils are not suitable for use as structural fill in building or pavement areas. They may, however, be utilized as general fill for roadway or railway embankments or in landscape areas. The soil water content is likely to require adjustment for compaction. The moisture-sensitive nature of the on-site soils will make them difficult to use for fill, particularly during wet seasons of the year.

Structural fill and backfill may consist of locally available Donna-fill or Granite Mountain industrial sand. Information on these materials is provided in Appendix B. The industrial sand will be suitable for use where the subgrade is wet, where seepage into undercuts is a concern, or where the subgrade has a tendency to pump. Where significant seepage into excavations is a problem, the use of clean stone backfill encapsulated sealed with crushed stone base and/or filter fabric may be required. Stone backfill must be vented to positive discharge to prevent accumulation of seepage water. More economical Donna-fill is suitable for use after initial bridging of wet soils has been achieved with industrial sand or where seepage into excavations is not a problem. The Donna-fill typically is suitable for use as a bridge lift on the natural silty soils. Alternative materials for use as imported borrow for fill or backfill include select clayey sand (SC), sandy clay (CL), or clayey gravel (GC) having a liquid limit less than 40 or an approved alternate.

Erosion protection must be provided for granular soils, particularly for the highly erodable Donna-fill. All utility lines that extend through Donna fill should be bedded in crushed stone aggregate base and trenches completely backfilled with crushed stone aggregate base. Fill should be placed as early in the construction sequence as possible to allow consolidation of fill and natural soils prior to construction of structures and pavements. Low ground pressure equipment should be used to minimize subgrade disturbance to the extent possible.

All fill and backfill should be free of organic materials and rock fragments in excess of about 6-inch dimension. Fill and backfill should be approved by the Geotechnical Engineer. As noted, fill should be placed as early in the construction sequence as possible to allow consolidation of fill and natural soils prior to the construction of structures and pavements.

Fill, backfill and recompacted soils should be compacted to a minimum of 95 percent of the maximum Modified Proctor (ASTM D-1557) dry density within a water content range of 2 percent below to 3 percent above optimum. Approved bridge lifts should be compacted to a density consistent with stability under compaction equipment. Bridging techniques should not be used without the approval of the Engineer and/or Geotechnical Engineer. With the exception of approved bridge lifts, fill and backfill should typically be placed in nominal 6- to 8-inch-thick loose lifts. Our experience has been that Donna-fill and industrial sand can effectively be placed and compacted in

10- to 12-inch loose lifts. Each lift of backfill and fill should be tested and approved prior to placing subsequent lifts.

CONSTRUCTION CONSIDERATIONS

Positive surface drainage should be established at the start of construction, be maintained during the work, and incorporated into final design to prevent surface water ponding and subsequent saturation of subgrade soils. Because the surface soils are moisture sensitive, establishing positive surface drainage at the start of the work will be particularly important. Foundation or subgrade soils which become saturated should be excavated and replaced with suitable materials.

Groundwater was encountered between 4 and 9 ft in May 2008. Groundwater seepage into shallow excavations advanced less than about 4 to 6 ft below existing grades is expected to be minor. However, water levels will vary. Seepage of shallow groundwater, if encountered, should be limited and controllable via sump-and-pump methods or ditching. Excavations that extend more than 4 to 6 ft below existing grades are more likely to encounter groundwater. Deep excavations that extend into the static groundwater level are likely to require dewatering systems.

All footing excavations should be observed by the Geotechnical Engineer. Footing excavations should be clean, with all loose spoil and debris removed from the footing excavation bottoms. All loose materials should be removed from the tops of rammed aggregate piers. Steel and concrete should be placed in footing excavations expeditiously following completion of final cleanup and inspection. Where footing excavations will remain open for extended periods the bearing stratum should be protected with a thin layer of seal concrete.

Pile load tests should be observed by the Geotechnical Engineer. The load test results should be reviewed by the Geotechnical Engineer prior to final selection of production pile lengths.

For auger cast piles, it is important that the Piling Contractor have demonstrable experience in installing auger cast piles in subsurface conditions similar to those at this site. The Piling Contractor should have appropriate equipment with sufficient torque rating and hydraulic down pressure capabilities to install piles to the plan tip elevation.

When constructing auger cast piles, grout pressure at the pump should be maintained near 300 lbs per sq inch during installation. A positive grout head must be maintained at the tip of the auger at all times during auger extraction. Failure to maintain proper grout head could result in a break in continuity of the piles. Where head is lost, piles should be drilled out and re-installed.

Pile installation should be monitored by qualified personnel to maintain specific and complete pile installation procedures. Installation records should be available for review by the Engineer during pile installation.

As noted, a water well is located at the abandoned house on the east side of the site. Other wells may also be located on the site. Abandoned wells must be plugged and abandoned according to Arkansas Water Well Construction Commission (AWWCC) criteria. Plugging requirements should be developed specifically based on site conditions. In general, wells on this site will likely have been excavated in a "consolidated" formation (as defined by AWWCC). Therefore, abandonment should include removal of any debris and backfilling with granular material to above the groundwater level. The surface of the granular layer should be plugged with

about 18 in. of compacted clay. A concrete or bentonite cap should be placed over the wells, about 4 ft below existing or final grade, whichever is deeper.

CLOSING

The conclusions and recommendations presented herein are offered for use in preliminary design and planning. The final report will be prepared following completion of the field studies and all laboratory testing. Final engineering analyses will be performed at that time. We will require information on grading and foundation loads to complete final analyses. Depending on final building plans and site grading plans, as well as the results of additional borings, revision of the preliminary conclusions and recommendations discussed herein could be warranted.

The following illustrations are attached and complete this preliminary report.

Plate 1	Site Vicinity Map
Plate 2	Plan of Borings
Plates 3 through 11	Preliminary Boring Logs
Plate 12	Key to Terms and Symbols
Appendix A	Laboratory Test Results
Appendix B	Syenite Fines Gradation Curves
Appendix C	Concept for Fill-Supported Footings
Appendix D	Allowable Pile Capacity
Appendix E	Preliminary Lateral Load Analysis Results
Appendix F	Rammed Aggregate Pier Foundations
Appendix G	Geotextile Information

We appreciate the opportunity to provide the preliminary geotechnical report for this project. If you have any questions regarding this information, or when we may be of additional service, please call on us.

Sincerely,

GRUBBS, HOSKYN,
BARTON &WYATT, INC.

Mark E. Wyatt, P.E.
Vice President, Engineering

MEW:jw

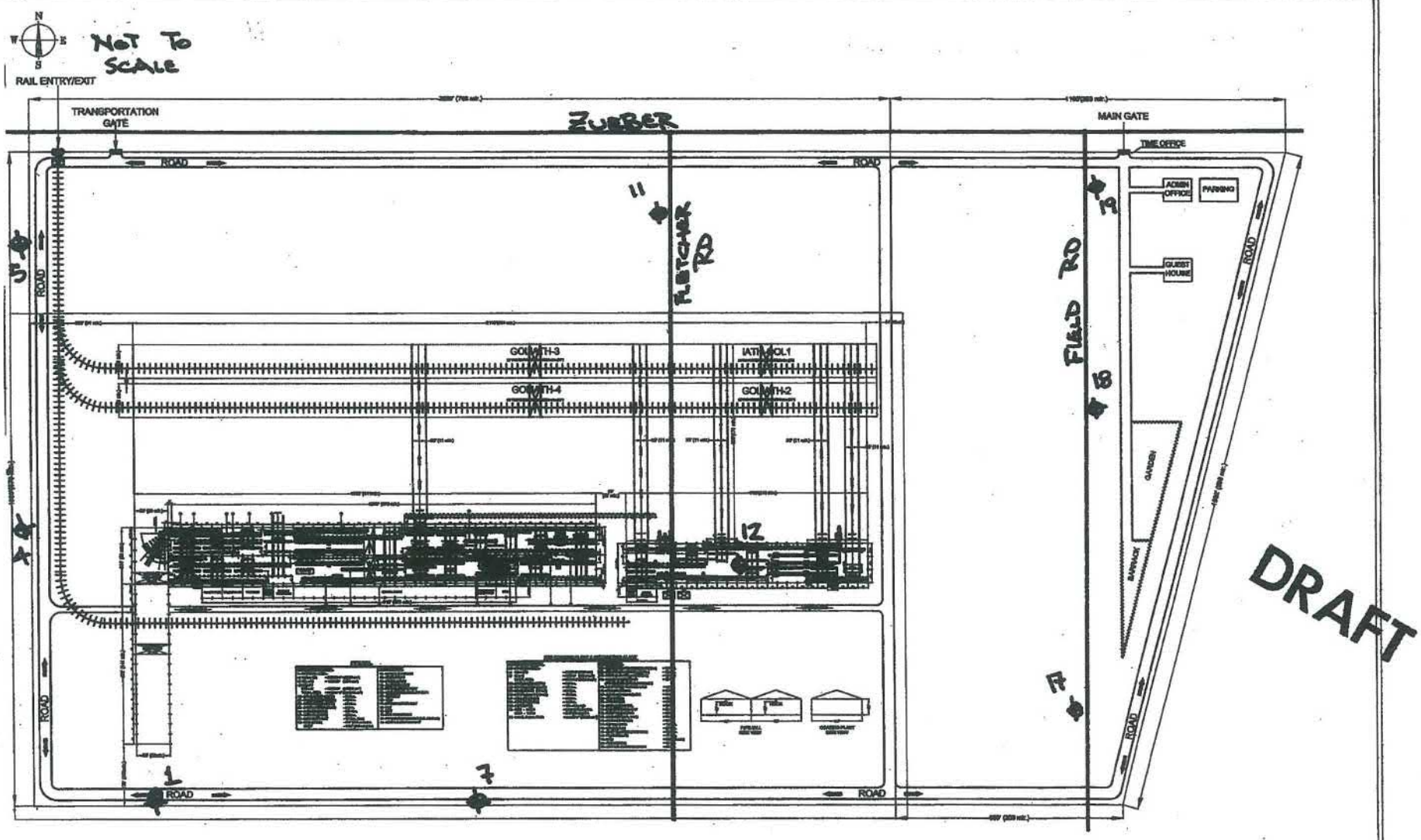
Copies submitted: Garver Engineers, LLC
Attn: Mr. John T. Watkins III, P.E., S.E. (3+email)
Attn: Mr. William E. Ruck, P.E., P.L.S. (1-email)

Man Industries (India) Ltd
Attn: Mr. Ashok Balwani (1-email)

Grubbs, Hoskyn, Barton & Wyatt, Inc.
Consulting Engineers

SITE VICINITY
MAN INDUSTRIES
LR PORT – LITTLE ROCK, ARKANSAS

SCALE: None	Job No.: 08-130	PLATE 1



	Grubbs, Hoskyn, Barton & Wyatt, Inc. Consulting Engineers	**PLAN OF BORINGS** **Man Industries** **Little Rock Port - Little Rock, Arkansas**	Job No.: 08-130 May, 2008	Scale: NTS Plate 2

Grubbs, Hoskyn, Barton & Wyatt, Inc.
Consulting Engineers

LOG OF BORING NO. 1

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger to 4 ft /Wash

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	- No. 200 %
			SURF. EL:			
			Stiff brown silty clay w/silt pockets	14 14		56
5			Loose tan silty fine sand	8 8		42
10				7		
15			- medium dense below 14 ft	26		
20			Dense tan silty fine sand	32		29
25				44		
30				50		
35			Dense tan fine to medium sand w/trace fine gravel	42		4
40				45		
45			Dense grayish brown fine to coarse sand w/some fine to coarse gravel	40		
50				38		
55			- with more coarse gravel below 53 ft - very dense at 55-59 ft	50/9"		
60				41		
65			- very dense below 64 ft	50/6"		
70				50/7"		

COHESION, TON/SQ FT
0.2 0.4 0.6 0.8 1.0 1.2 1.4

PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT
10 20 30 40 50 60 70

PRELIMINARY

COMPLETION DEPTH: 70.0 ft
DATE: 5-22-08

DEPTH TO WATER IN BORING: 4 ft

DATE: 05/22/08

LGBNEW 08-130.GPJ 6-3-08

08-130

Grubbs, Hoskyn, Barton & Wyatt, Inc.
Consulting Engineers

LOG OF BORING NO. 4

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT (10 20 30 40 50 60 70)	- No. 200 %
			SURF. EL:				
			Loose brown silt w/organics				
			Firm brown silty clay, slightly sandy	8			94
				8			
5			Very soft brown clayey silt, sandy	2			69
			- water at 6.5 ft				
			Loose tan silty fine sand	5			
10			Firm gray and reddish brown silty clay w/organic stains	7			
15							
20							
25							

PRELIMINARY

COMPLETION DEPTH: 10.0 ft
DATE: 5-22-08

DEPTH TO WATER IN BORING: 6.5 ft

DATE: 05/22/08

LGBNEW 08-130.GPJ 6-3-08

PLATE 4

08-130

Grubbs, Hoskyn, Barton & Wyatt, Inc.
Consulting Engineers

LOG OF BORING NO. 5

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT (10 20 30 40 50 60 70)	- No. 200 %
			SURF. EL:				
			Loose brown fine sandy silt w/organics	6			79
			- with less sand below 1.5 ft	6			
			Firm brown silty clay, slightly sandy	7			86
5			Loose brown fine sandy silt - water at 6 ft	6			53
			- tan below 8 ft	5			
10							
15							
20							
25							

PRELIMINARY

COMPLETION DEPTH: 10.0 ft
DATE: 5-22-08

DEPTH TO WATER IN BORING: 6 ft

DATE: 05/22/08

LGBNEW 08-130.GPJ 6-3-08

PLATE 5

08-130

Grubbs, Hoskyn, Barton & Wyatt, Inc.
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LOG OF BORING NO. 7

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT (10 20 30 40 50 60 70)	- No. 200 %
			SURF. EL:				
			Stiff brown silty clay, slightly sandy	13			97
			- soft at 2 - 6 ft	4			
5				4			
			- stiff below 6 ft	12			
			- water at 9 ft	14			9
10			Medium dense tan silty fine sand				
						PRELIMINARY	
15				29			
			- dense below 18 ft				
				46			
20			NOTE: Caving at 12 ft during drilling				
25							

COMPLETION DEPTH: 20.0 ft
DATE: 5-22-08

DEPTH TO WATER IN BORING: 9 ft

DATE: 05/22/08

LGBNEW 08-130.GPJ 6-3-08

PLATE 6

08-130

Grubbs, Hoskyn, Barton & Wyatt, Inc.
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LOG OF BORING NO. 11

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT (10 20 30 40 50 60 70)	- No. 200 %
			SURF. EL:				
			Loose brown fine sandy silt w/organics	8			
			Loose grayish brown silty fine sand	2			
			Very soft reddish brown silty clay, slightly sandy - soft below 4 ft	5			92
5			Loose reddish tan silt, sandy				
			- water at 7 ft	8			84
			- with reddish tan silty clay layer at 9 ft	5			
10			Loose tan silty fine sand				
				7			41
15							
			- medium dense below 18 ft	15			
20							
25							

PRELIMINARY

COMPLETION DEPTH: 20.0 ft
DATE: 5-22-08

DEPTH TO WATER IN BORING: 7 ft

DATE: 05/22/08

LGBNEW 08-130.GPJ 6-3-08

PLATE 7

08-130

Grubbs, Hoskyn, Barton & Wyatt, Inc.
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LOG OF BORING NO. 12

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger to 8 ft /Wash

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT (10 20 30 40 50 60 70)	- No. 200 %
			SURF. EL:				
			Stiff brown fine sandy clay	13			76
			Medium dense brownish gray silty fine sand w/fine sandy silt pockets	14			42
5			Stiff brownish gray silty clay	16			
				22			97
			- water at 8 ft				
10			Firm brown silty clay	8			
15			Medium dense tan fine sand, slightly silty w/silty clay pockets and seams	14			
20				23			
25			- dense, coarser below 24 ft	46			5
30			- dense to very dense below 28 ft	50/10"			
35			Dense tan fine to medium sand w/a little fine gravel	47			2
40				27			
45				37			
50			Medium dense tan fine to medium sand, slightly silty w/a little fine to coarse gravel	27			
55			- dense to very dense below 54 ft	50/10"			9
60			- with more fine to coarse gravel below 59 ft	50/11"			
65				50/11"			
70				50/9"			

PRELIMINARY

COMPLETION DEPTH: 70.0 ft
DATE: 6-2-08

DEPTH TO WATER IN BORING: 8 ft
DATE: 06/02/08

LGBNEW 08-130.GPJ 6-5-08

PLATE 8

08-130

Grubbs, Hoskyn, Barton & Wyatt, Inc.
Consulting Engineers

LOG OF BORING NO. 17

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT (10 20 30 40 50 60 70)	- No. 200 %
			SURF. EL:				
			Stiff grayish brown silty clay w/occasional organics	14			94
			Very loose grayish brown fine sandy silt	3			58
			Soft grayish brown silty clay	6			
5			- water at 5 ft				
			- firm with silt layers below 6 ft	8			89
			- firm to stiff below 8 ft	10			
10							
			Medium dense tan fine sand	12			2
15							
			- dense to very dense below 18 ft	50/10'			
20							
25							

PRELIMINARY

COMPLETION DEPTH: 20.0 ft
DATE: 5-22-08

DEPTH TO WATER IN BORING: 5 ft

DATE: 05/22/08

LGBNEW 08-130.GPJ 6-5-08

PLATE 9

08-130

Grubbs, Hoskyn, Barton & Wyatt, Inc.
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LOG OF BORING NO. 18

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT (10 20 30 40 50 60 70)	- No. 200 %
			SURF. EL:				
			Loose brown silt w/organics				
			Stiff brown silty clay	11			
			Loose grayish brown silty fine sand	4			
			Very soft brown clayey silt, sandy	2			61
5			Soft reddish brown silty clay, slightly sandy	4			87
			Loose tan fine sand, slightly silty - water at 8 ft	8			8
10							
				9			
15							
			- medium dense below 18 ft				
				14			
20							
25							

PRELIMINARY

COMPLETION DEPTH: 20.0 ft
DATE: 5-22-08

DEPTH TO WATER IN BORING: 8 ft

DATE: 05/22/08

LGBNEW 08-130.GPJ 6-3-08

PLATE 10

08-130

Grubbs, Hoskyn, Barton & Wyatt, Inc.
Consulting Engineers

LOG OF BORING NO. 19

Man Industries - Little Rock Port
Little Rock, Arkansas

TYPE: Auger

LOCATION: See Plate 2

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT LB/CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT — LIQUID LIMIT (10 20 30 40 50 60 70)	- No. 200 %
			SURF. EL:				
			Loose brown fine sandy silt w/organics	8			45
			Loose brown silty fine sand w/silty clay pockets				
			Loose reddish tan silty fine sand	4			
5				5			22
			- dark brown with more silt below 5.5 ft - water at 6 ft	4			
			Stiff reddish brown and grayish brown silty clay w/silty fine sand pockets and organic stains	6			96
10			- with more sand below 11 ft			PRELIMINARY	
				10			
15			Loose tan fine sand, wet				
			- medium dense below 19 ft	15			4
20							
				27			
25			NOTE: Caving at 16 ft during drilling				

COMPLETION DEPTH: 25.0 ft
DATE: 5-22-08

DEPTH TO WATER IN BORING: 6 ft

DATE: 05/22/08

LGBNEW 08-130.GPJ 6-3-08

PLATE 11

Grubbs, Hoskyn, Barton & Wyatt, Inc.
Consulting Engineers

SYMBOLS AND TERMS USED ON BORING LOGS

SOIL TYPES

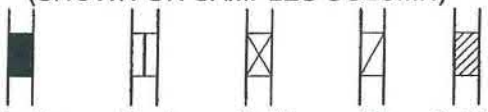
(SHOWN IN SYMBOLS COLUMN)

Gravel Sand Silt Clay

Predominant type shown heavy

SAMPLER TYPES

(SHOWN ON SAMPLES COLUMN)



Shelby Tube | Rock Core | Split Spoon | No Recovery | Cutting

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on No. 200 sieve): Includes (I) Clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests.

DESCRIPTIVE TERM	N-VALUE	RELATIVE DENSITY
VERY LOOSE	0-4	0-15%
LOOSE	4-10	15-35%
MEDIUM DENSE	10-30	35-65%
DENSE	30-50	65-85%
VERY DENSE	50 and above	85-100%

FINE GRAINED SOILS (major portion passing No. 200 sieve): Includes (1) Inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests.

DESCRIPTIVE TERM	UNCONFINED COMPRESSIVE STRENGTH TON/SQ. FT.
VERY SOFT	Less than 0.25
SOFT	0.25-0.50
FIRM	0.50-1.00
STIFF	1.00-2.00
VERY STIFF	2.00-4.00
HARD	4.00 and higher

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil. The consistency ratings of such soils are based on penetrometer readings.

TERMS CHARACTERIZING SOIL STRUCTURE

SLICKENSIDED - having inclined planes of weakness that are slick and glossy in appearance.
FISSURED - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
LAMINATED - composed of thin layers of varying color and texture.
INTERBEDDED - composed of alternate layers of different soil types.
CALCAREOUS - containing appreciable quantities of calcium carbonate.
WELL GRADED - having a wide range in grain sizes and substantial amounts of all intermediate particle sizes.
POORLY GRADED - predominantly of one grain size, or having a range of sizes with some intermediate sizes missing.

Terms used on this report for describing soils according to their texture or grain size distribution are in accordance with the UNIFIED SOIL CLASSIFICATION SYSTEM, as described in Technical Memorandum No.3-357, Waterways Experiment Station, March 1953

KEY 3-4-03

APPENDIX A

PRELIMINARY

SUMMARY OF CLASSIFICATION TEST RESULTS

PROJECT: Man Industries - Little Rock Port
LOCATION: Little Rock, Arkansas
JOB NUMBER: 08-130

BORING No.	SAMPLE DEPTH (ft)	WATER CONTENT (%)	ATTERBERG LIMITS			SIEVE ANALYSIS PERCENT PASSING						UNIFIED CLASS.
			LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	3/4 in.	3/8 in.	#4	#10	#40	#200	
1	0.5-1.5	10	----	----	----	----	----	----	----	----	----	----
1	2.5-3.5	11	23	16	7	----	----	----	----	----	56	CL-ML
1	9-10	26	----	----	----	100	100	100	100	100	42	SM
1	19-20	21	----	----	----	100	100	100	100	99	29	SM
1	34-35	20	----	----	----	100	97	96	95	52	4	SP
4	0.5-1.5	20	31	18	13	----	----	----	----	----	94	CL
4	4-5	26	25	18	7	----	----	----	----	----	69	CL-ML
5	0.5-1.5	17	24	20	4	----	----	----	----	----	79	CL-ML
5	4-5	22	29	19	10	----	----	----	----	----	86	CL
7	0.5-1.5	18	44	22	22	----	----	----	----	----	97	CL
7	9-10	24	----	----	----	----	----	----	----	----	9	SP-SM
11	4-5	24	30	21	9	----	----	----	----	----	92	CL
11	6.5-7.5	26	----	----	----	----	----	----	----	----	84	ML
11	14-15	26	----	----	----	100	100	100	100	100	41	SM

GRUBBS, HOSKYN, BARTON & WYATT, INC.
Consulting Engineers

PRELIMINARY

SUMMARY OF CLASSIFICATION TEST RESULTS

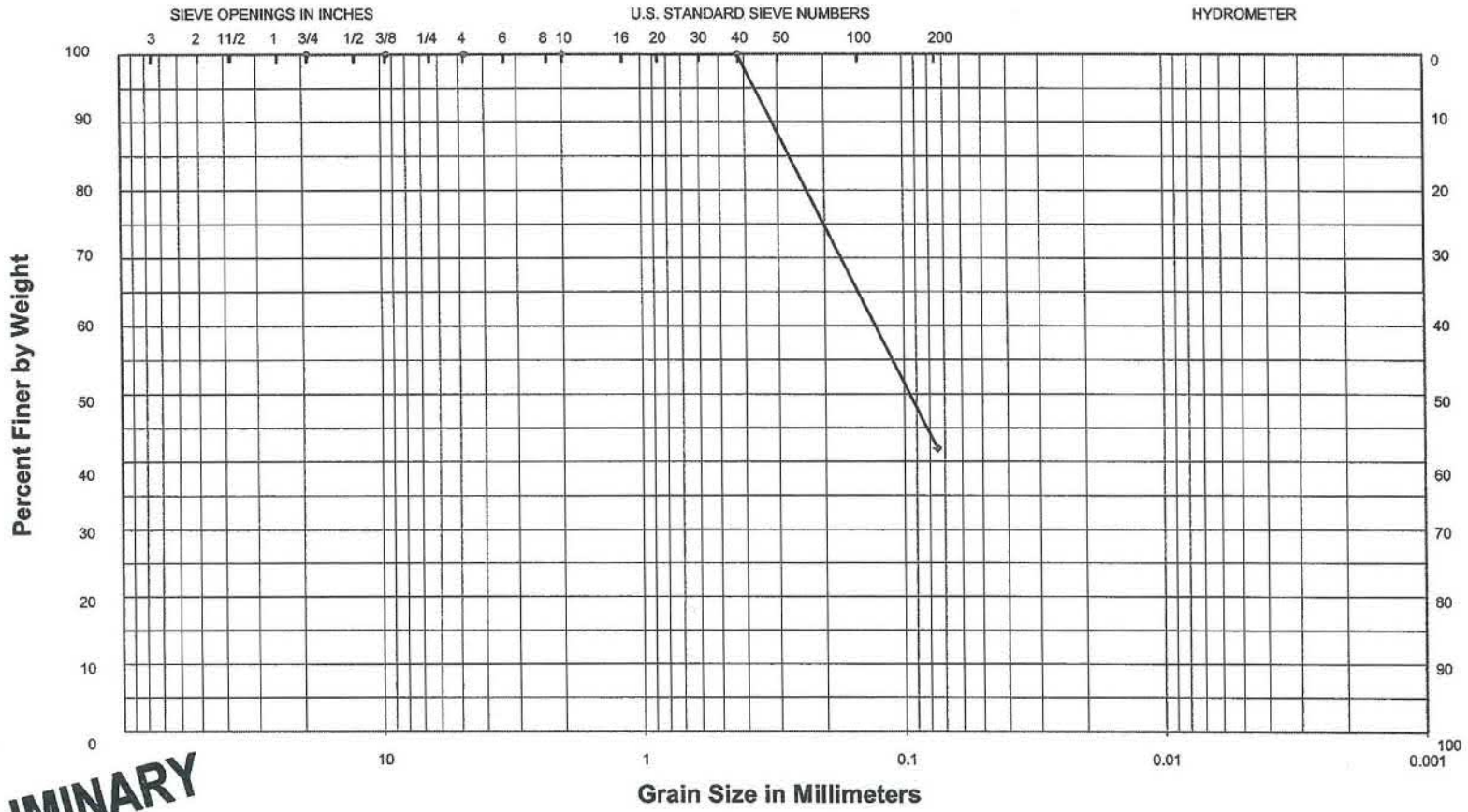
PROJECT: Man Industries - Little Rock Port
LOCATION: Little Rock, Arkansas
JOB NUMBER: 08-130

BORING No.	SAMPLE DEPTH (ft)	WATER CONTENT (%)	ATTERBERG LIMITS			SIEVE ANALYSIS						UNIFIED CLASS.
			LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	PERCENT PASSING						
						3/4 in.	3/8 in.	#4	#10	#40	#200	
12	0.5-1.5	21	40	20	20	----	----	----	----	----	76	CL
12	2.5-3.5	16	----	----	----	----	----	----	----	----	42	SM
12	4.5-5.5	26	----	----	----	----	----	----	----	----	----	----
12	6.5-7.5	25	45	19	26	----	----	----	----	----	97	CL
12	24-25	22	----	----	----	100	100	100	100	86	5	SP-SM
12	34-35	14	----	----	----	100	95	88	77	44	2	SP
12	54-55	17	----	----	----	100	88	79	70	39	9	SP-SM
17	0.5-1.5	23	48	23	25	----	----	----	----	----	94	CL
17	2.5-3.5	24	----	----	----	----	----	----	----	----	58	ML
17	6.5-7.5	27	31	22	9	----	----	----	----	----	89	CL
17	14-15	22	----	----	----	100	100	100	100	92	2	SP
18	4-5	23	22	16	6	----	----	----	----	----	61	CL-ML
18	6.5-7.5	26	35	20	15	----	----	----	----	----	87	CL
18	9-10	25	----	----	----	100	100	100	100	99	8	SP-SM
19	0.5-1.5	12	19	15	4	----	----	----	----	----	45	SC-SM
19	4-5	20	----	----	----	----	----	----	----	----	22	SM
19	9-10	28	44	22	22	----	----	----	----	----	96	CL
19	19-20	24	----	----	----	100	100	100	100	100	4	SP

GRUBBS, HOSKYN, BARTON & WYATT, INC.
Consulting Engineers

08-130

GRAIN SIZE CURVE



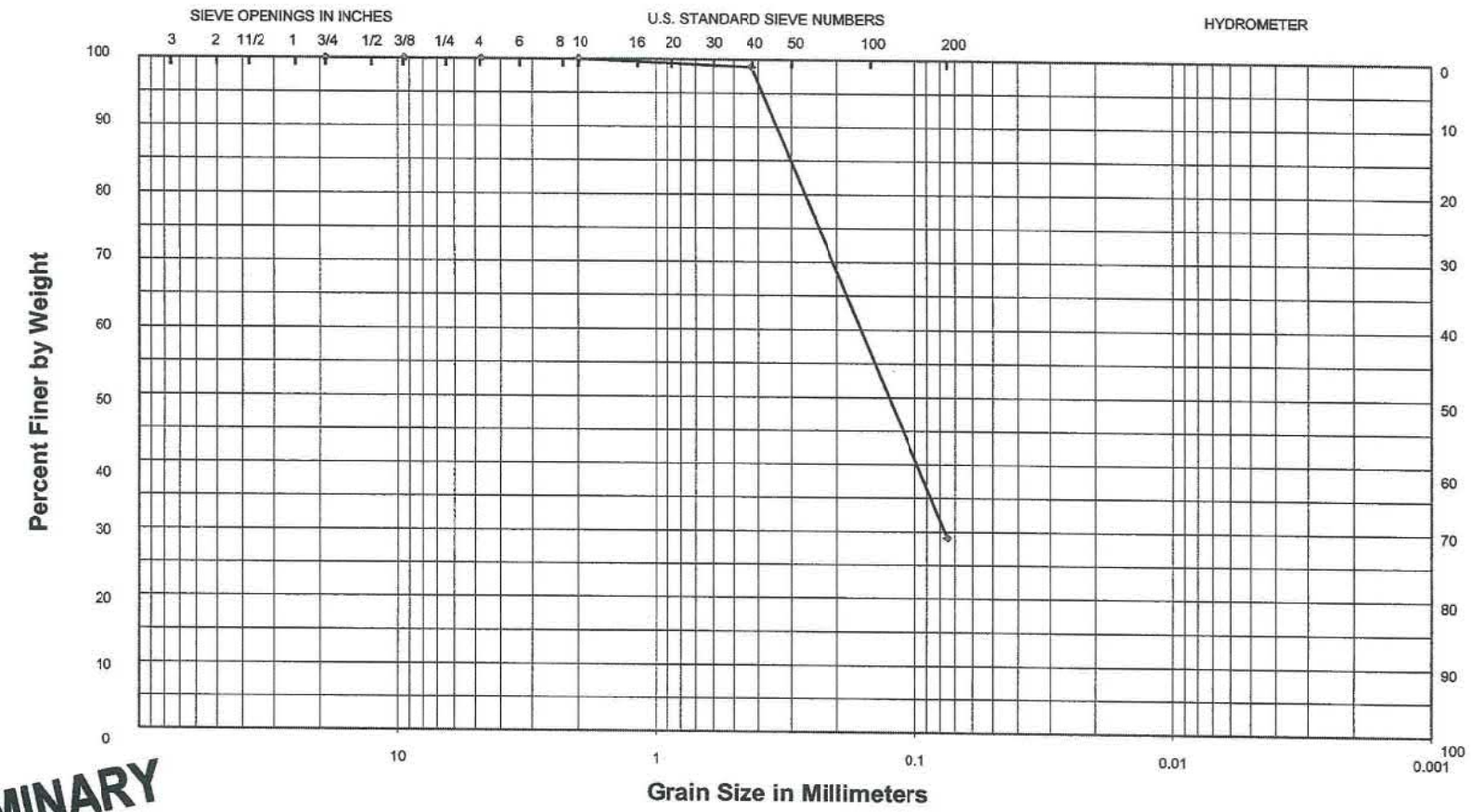
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 1, 9-10 ft; Nonplastic
Description: Tan silty fine sand; USCS = SM

08-130

GRAIN SIZE CURVE



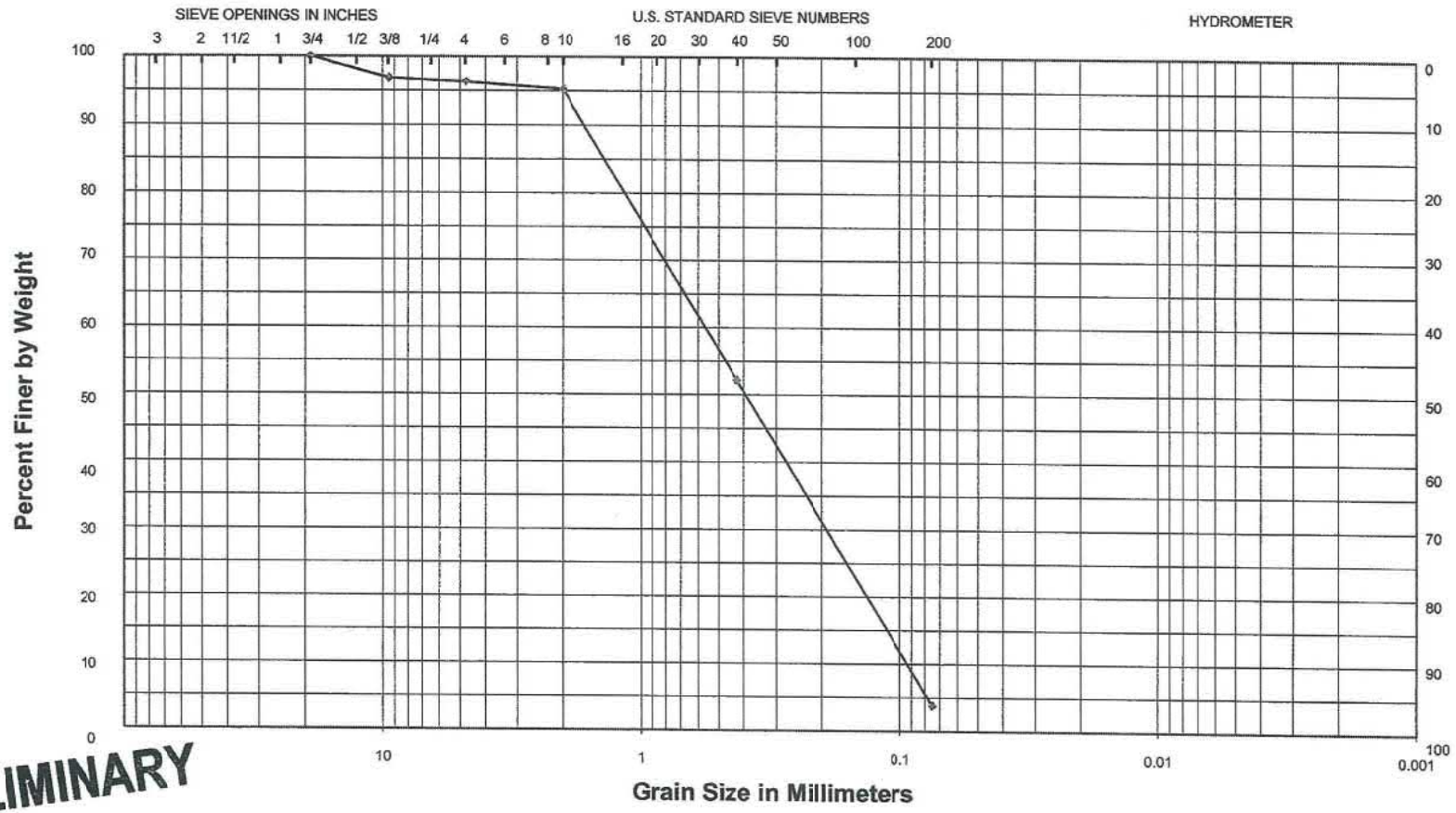
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 1, 19-20 ft; Nonplastic
Description: Tan fine sand, slightly silty; USCS = SM

08-130

GRAIN SIZE CURVE



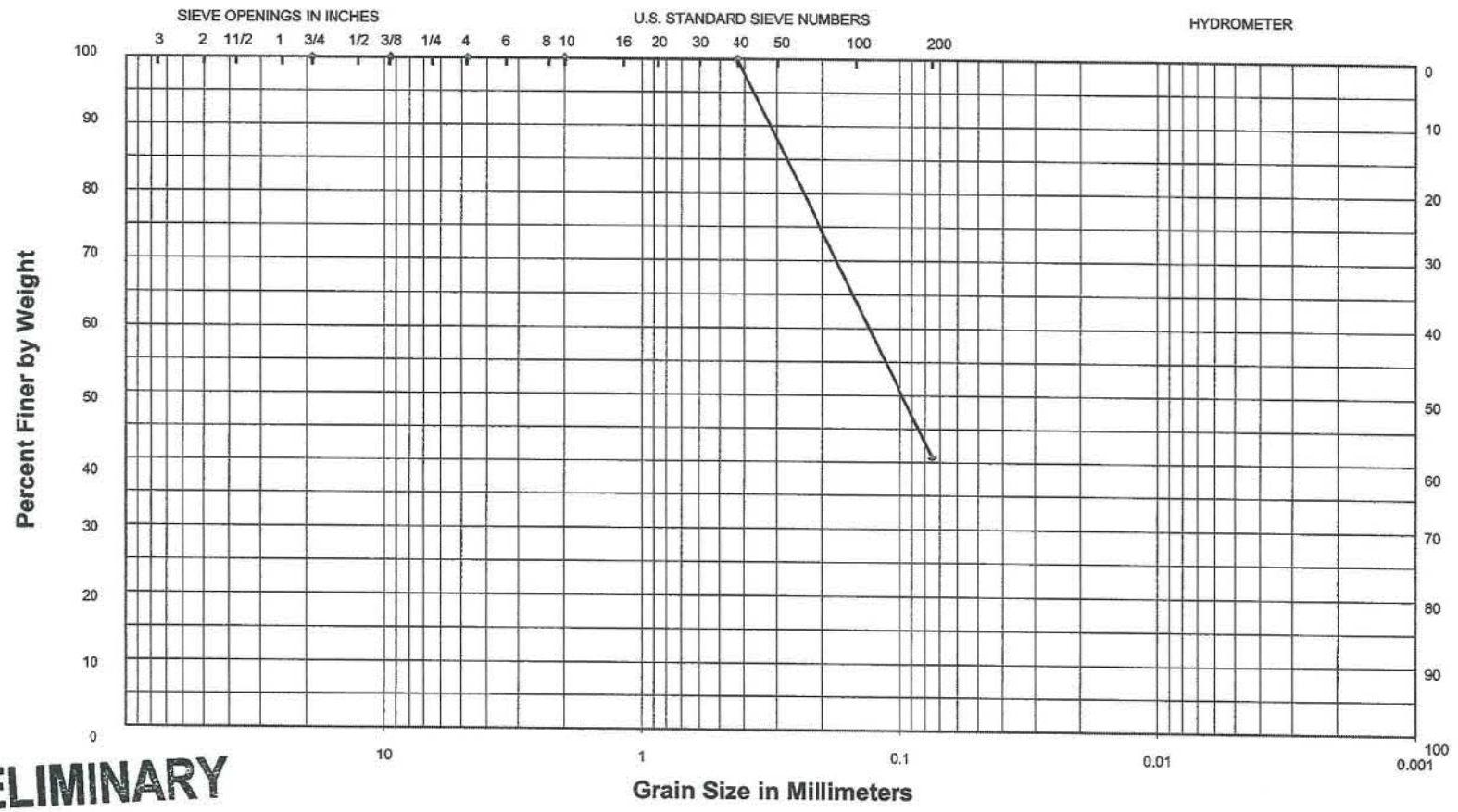
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 1, 34-35 ft; Nonplastic
Description: Tan fine to medium sand w/trace fine gravel; USCS = SP

08-130

GRAIN SIZE CURVE



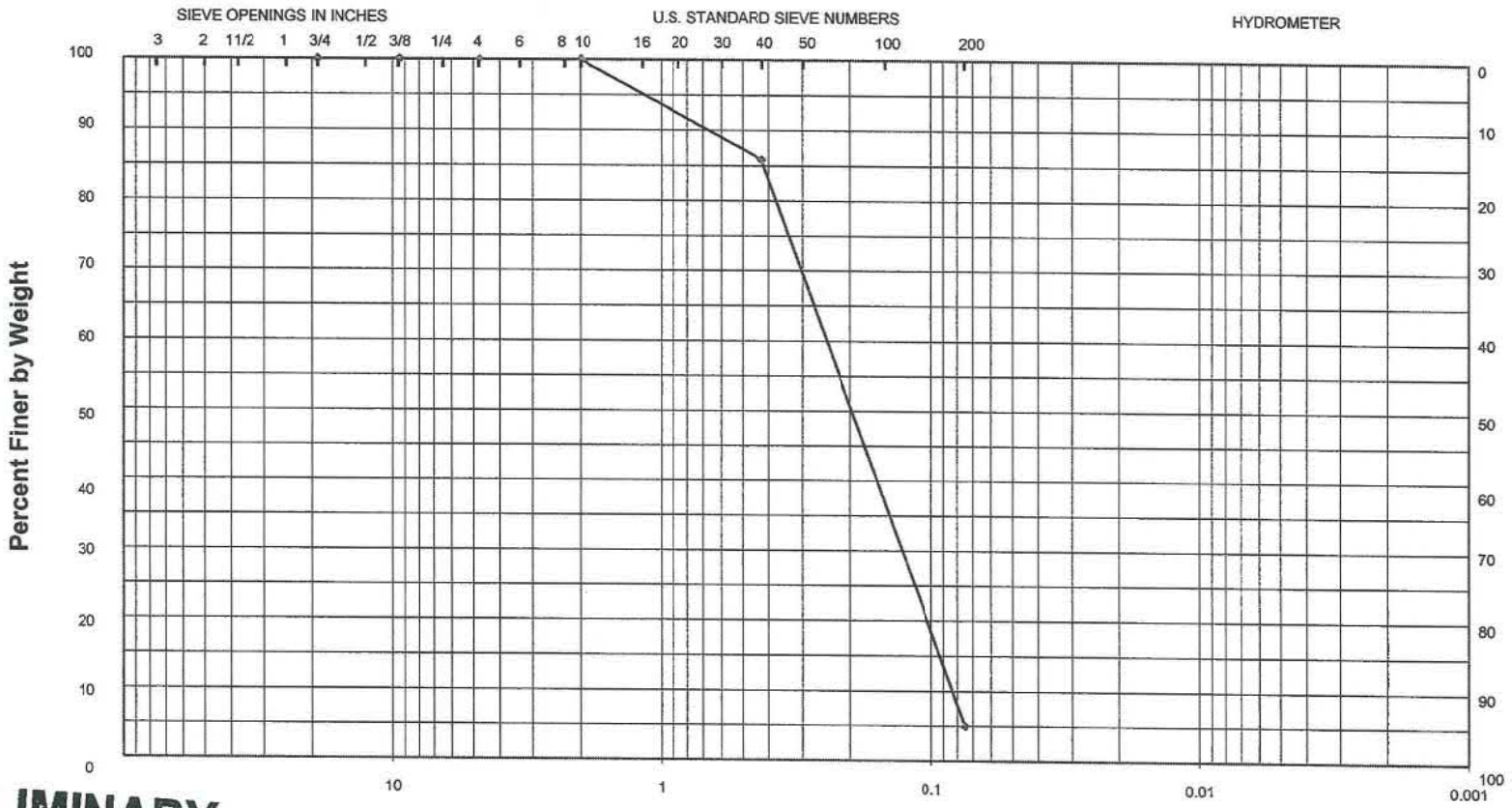
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 11, 14-15 ft; Nonplastic
Description: Tan silty fine sand; USCS = SM

08-130

GRAIN SIZE CURVE



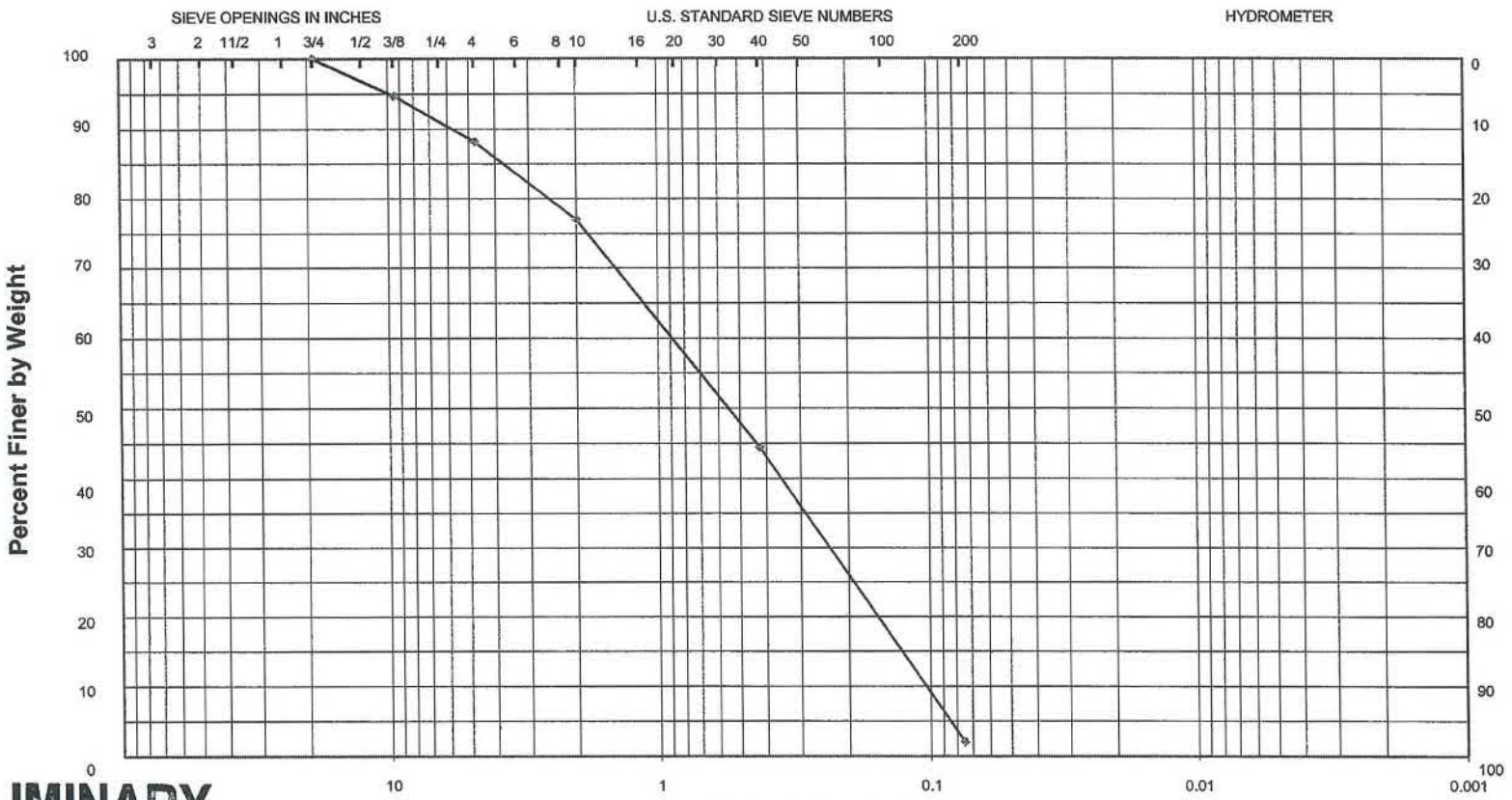
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 12, 24-25 ft; Nonplastic
Description: Tan fine sand, slightly silty w/silty clay pockets and seams; USCS = SP-SM

08-130

GRAIN SIZE CURVE



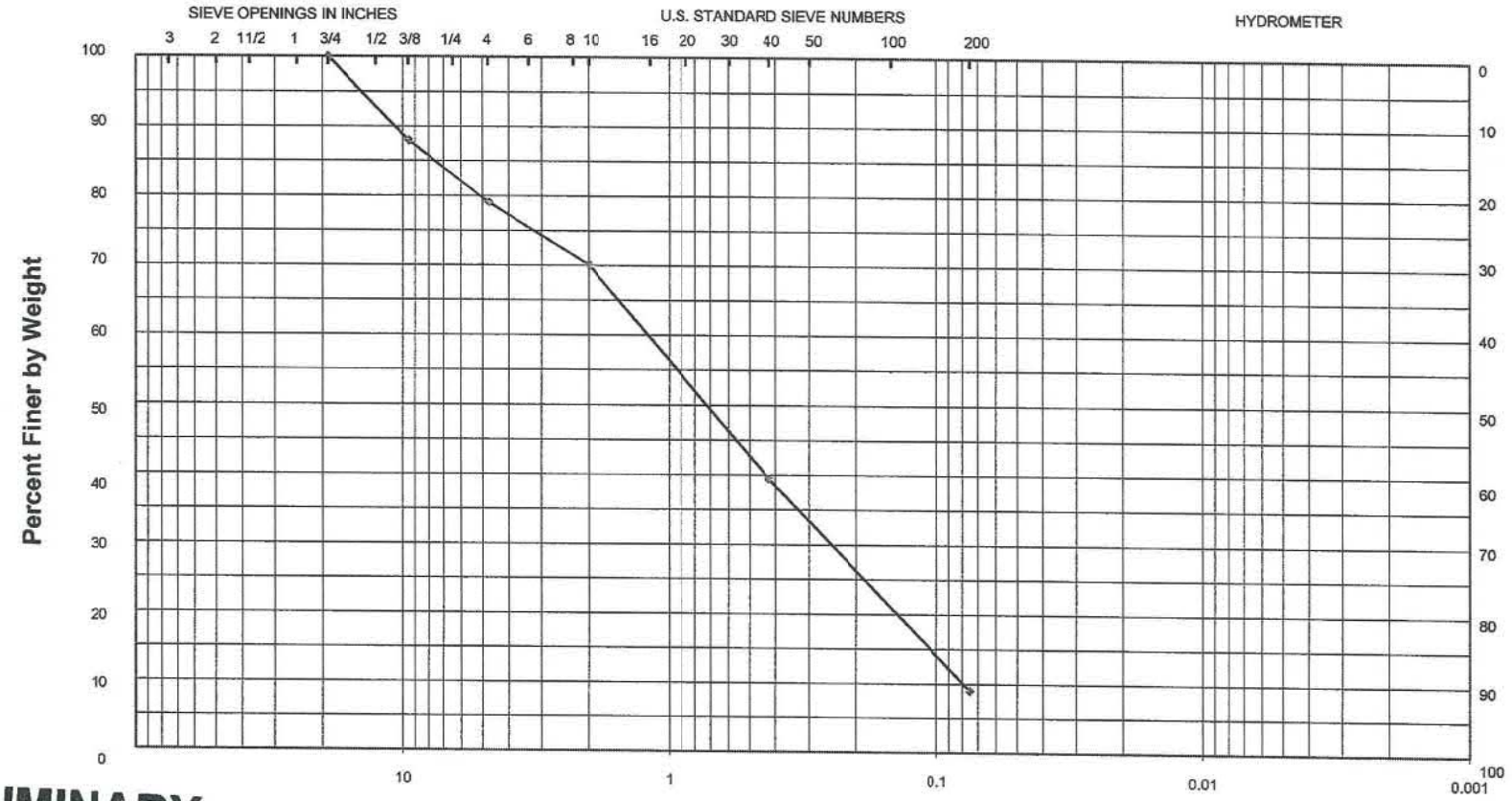
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 12, 34-35 ft; Nonplastic
Description: Tan fine to medium sand w/a little fine gravel; USCS = SP

08-130

GRAIN SIZE CURVE



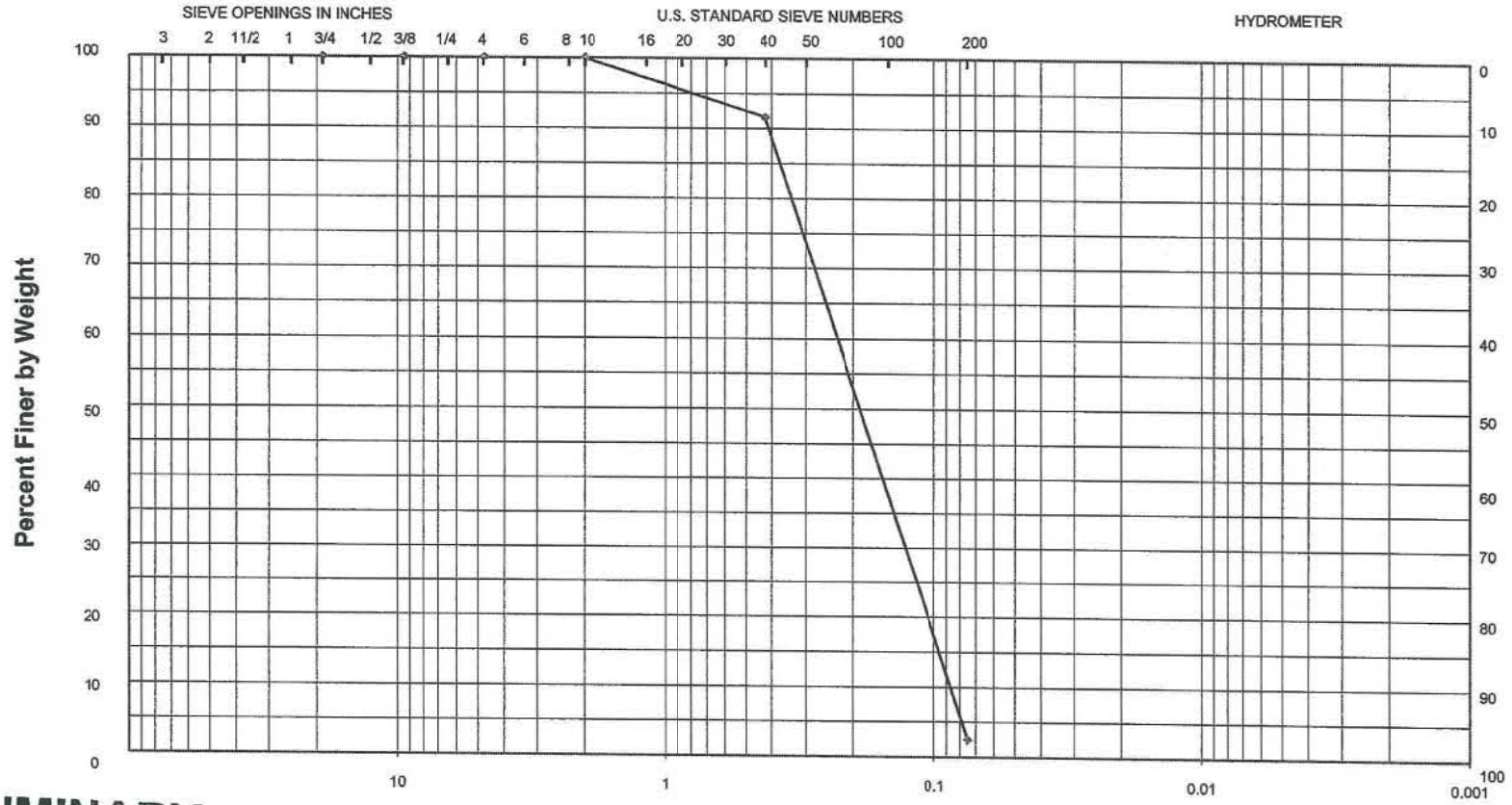
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 12, 54-55 ft; Nonplastic
Description: Tan fine to medium sand w/a little fine to coarse gravel; USCS = SP-SM

08-130

GRAIN SIZE CURVE



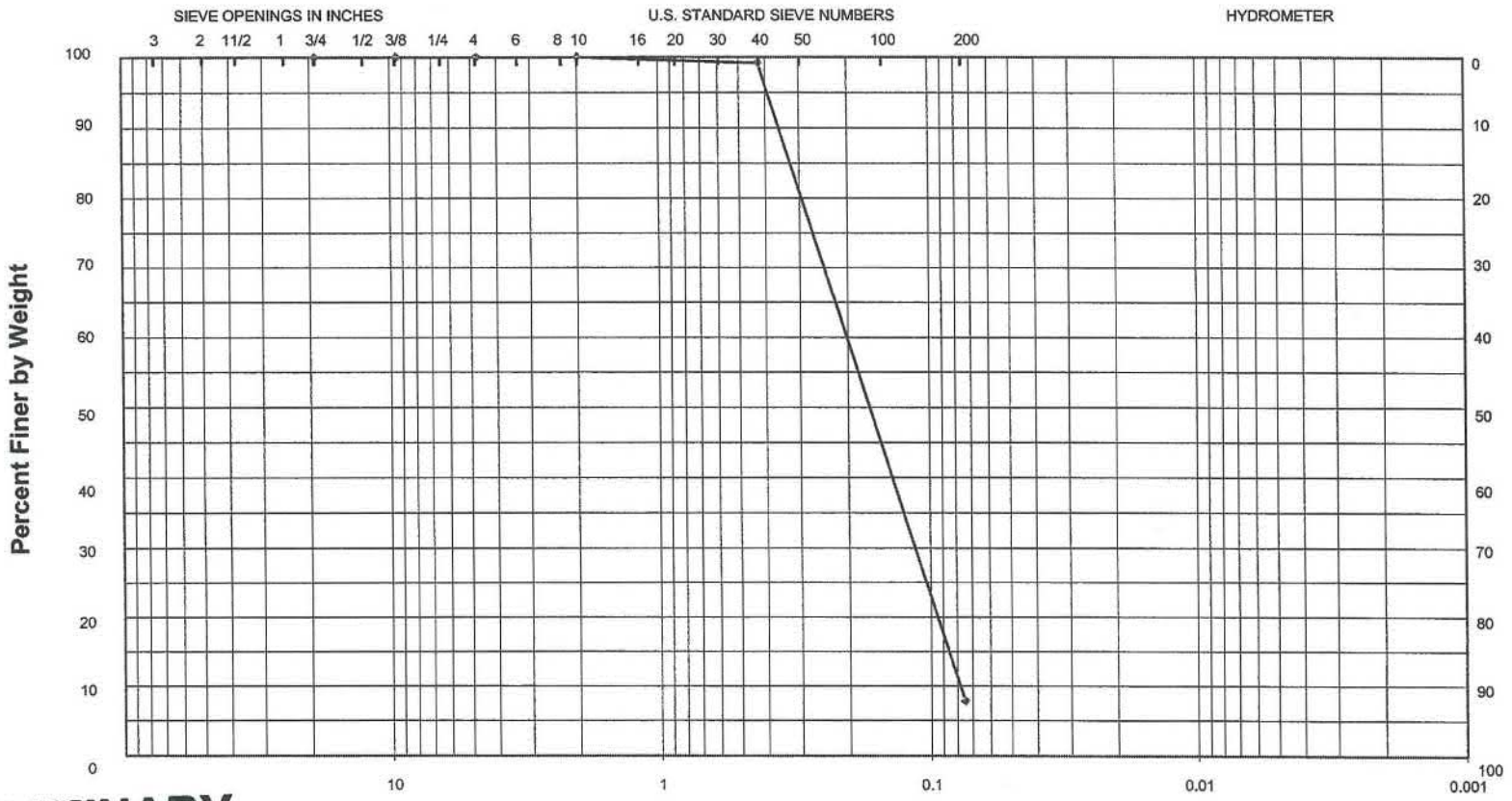
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 17, 14-15 ft; Nonplastic
Description: Tan fine sand; USCS = SP

08-130

GRAIN SIZE CURVE



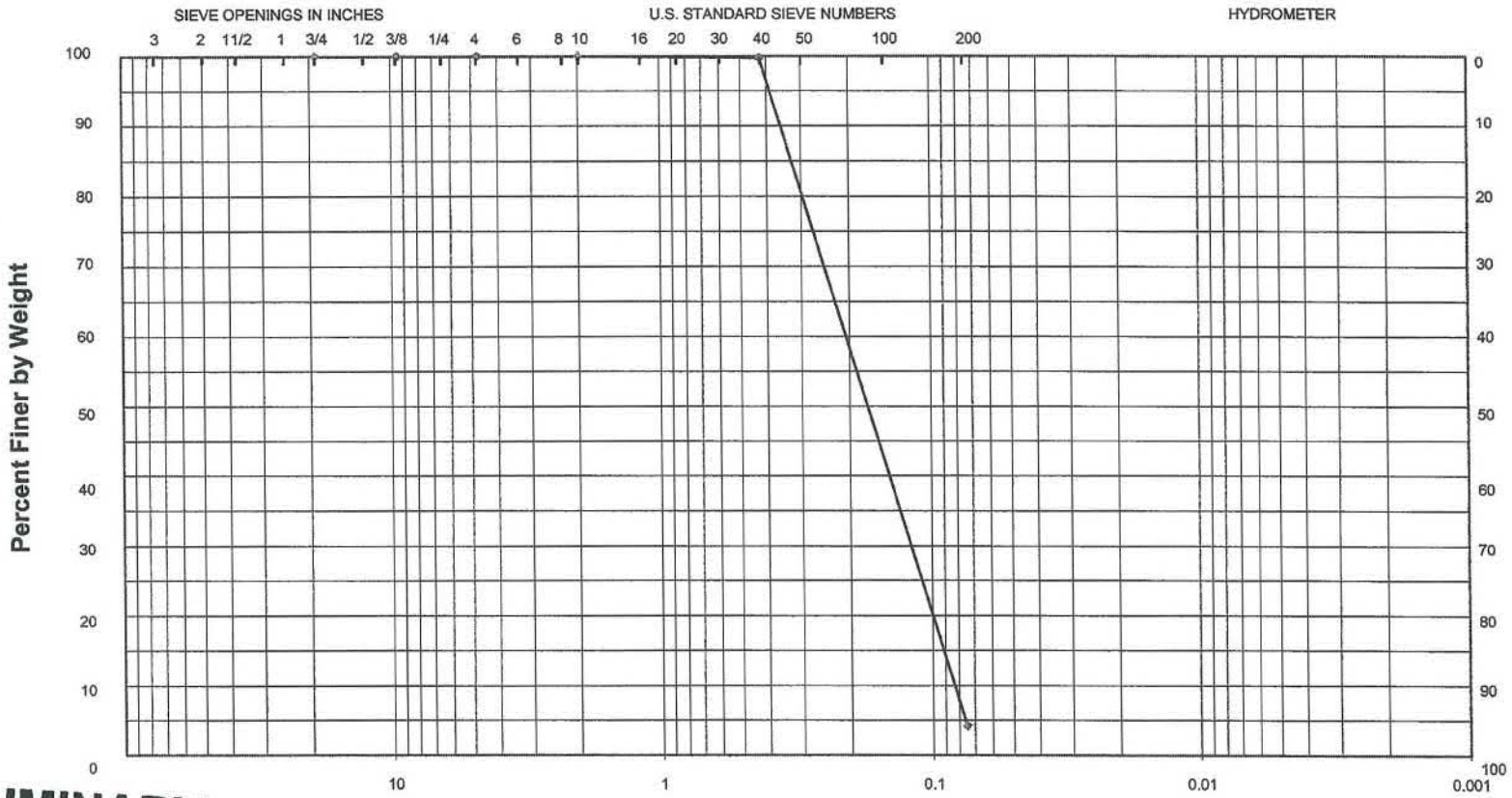
PRELIMINARY

GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 18, 9-10 ft; Nonplastic
Description: Tan silty fine sand; USCS = SP-SM

08-130

GRAIN SIZE CURVE



PRELIMINARY

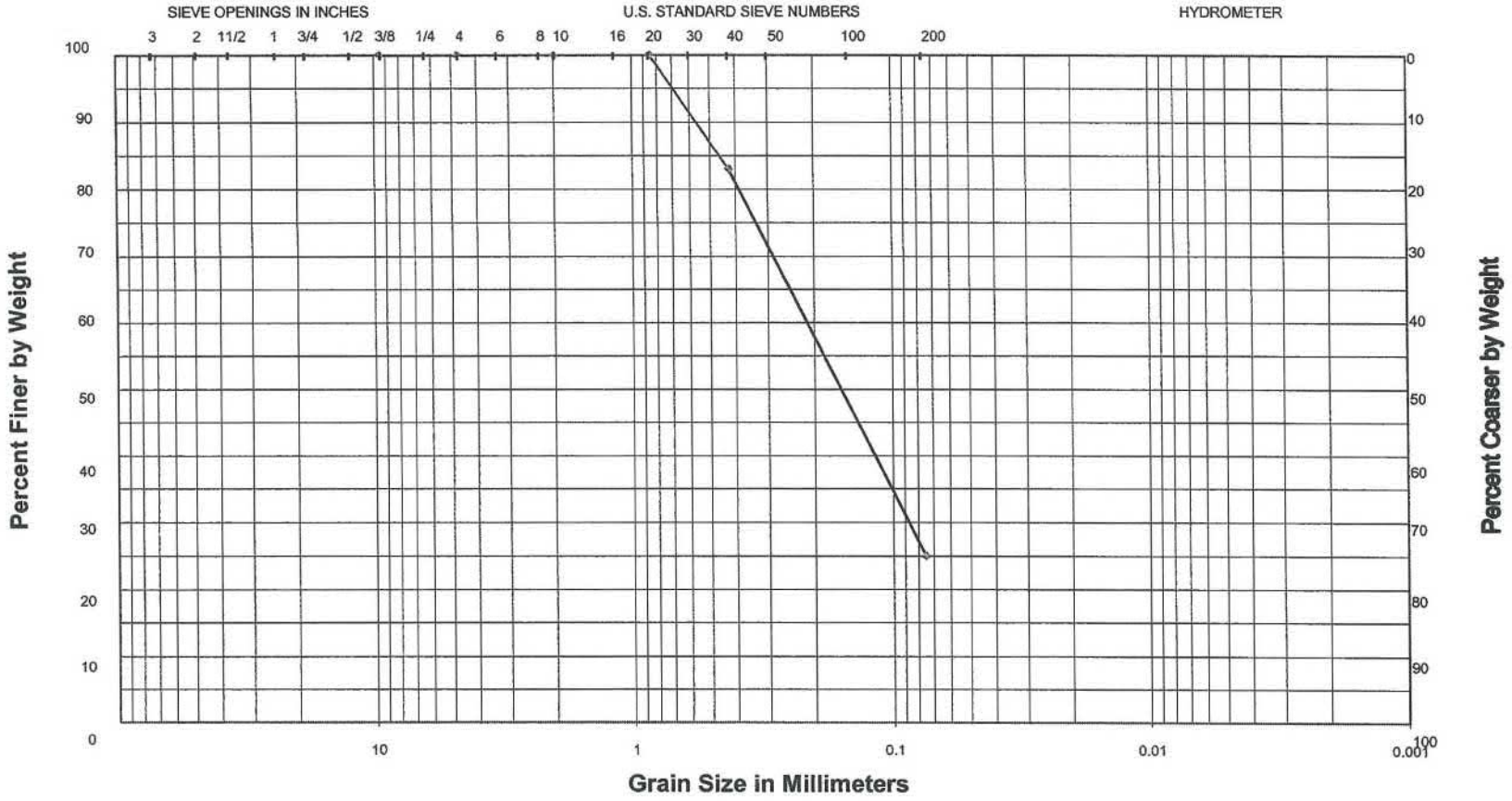
GRAVEL		SAND			SILT	CLAY
COARSE	FINE	COARSE	MEDIUM	FINE		

Sample: Boring 19, 19-20 ft; Nonplastic
Description: Tan fine sand; USCS = SP

APPENDIX B

Grubbs, Hoskyn, Barton & Wyatt, Inc.
CONSULTING ENGINEERS

GRAIN SIZE CURVE



GRAVEL		SAND			SILT OR CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	

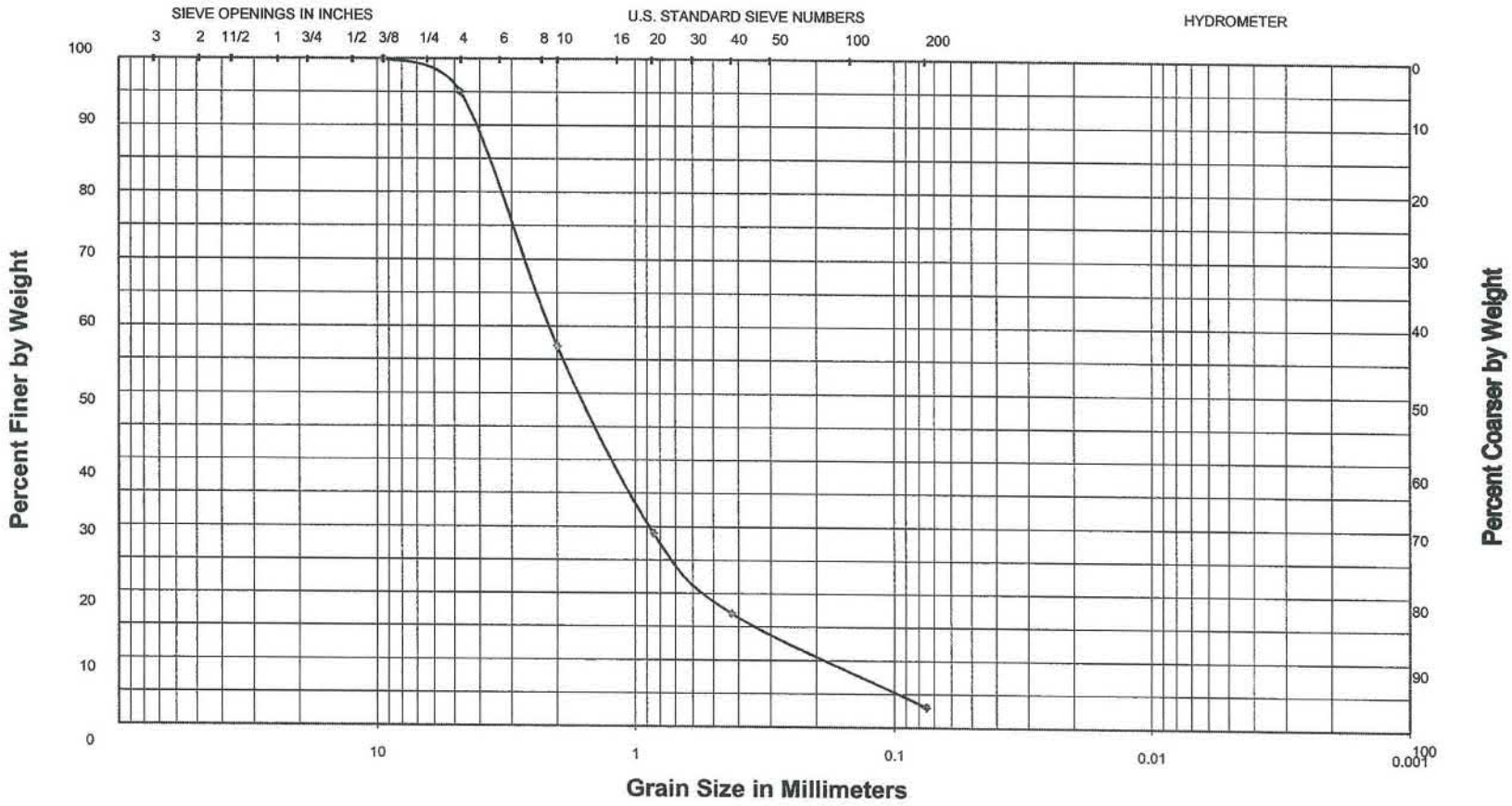
Material: Donna-Fill

ATTERBERG LIMITS
--Non-Plastic--

Note: Curve based on average properties.

Grubbs, Hoskyn, Barton & Wyatt, Inc.
CONSULTING ENGINEERS

GRAIN SIZE CURVE



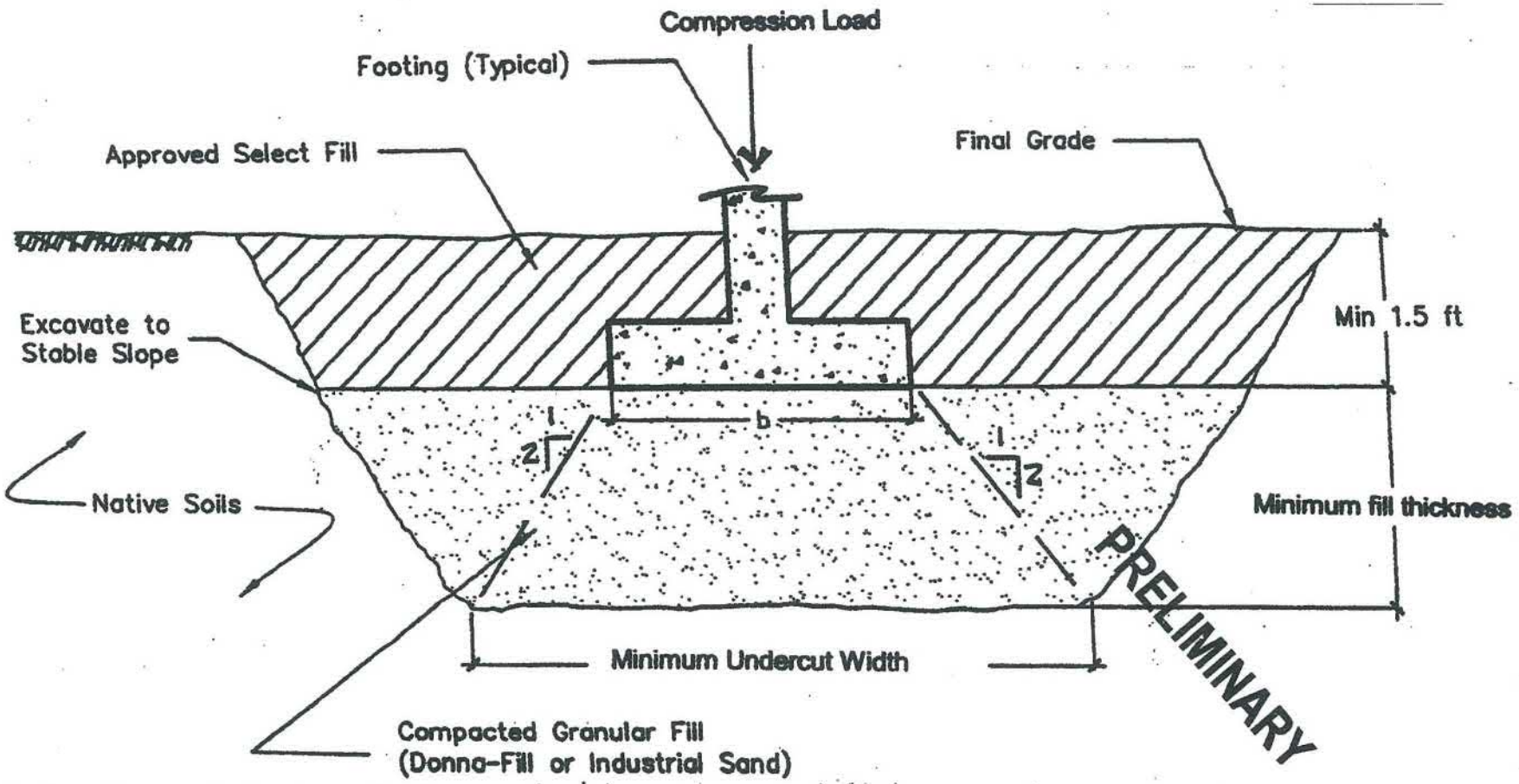
GRAVEL		SAND			SILT OR CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	

Material: Industrial Sand (Granite Mountain)

ATTERBERG LIMITS
--Non-Plastic--

Note: Curve based on average properties.

APPENDIX C



Maximum Compression Load, kips	Maximum net allowable bearing pressure, psf	Minimum granular fill thickness below footing, ft
40	1750	4
75	2000	6
100	1500	6

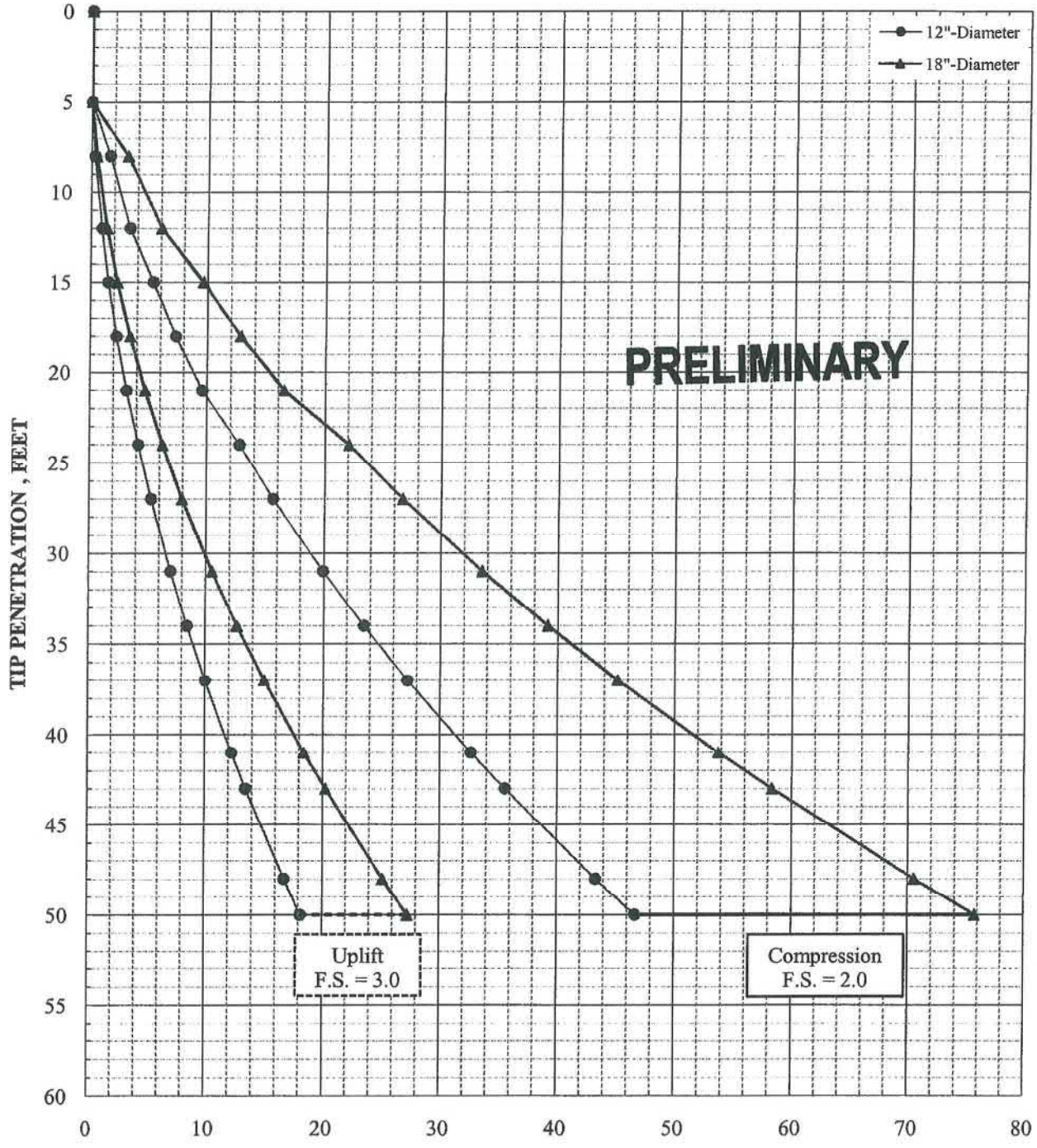
Grubbs, Hoskyn, Barton & Wyatt, Inc.
Consulting Engineers

CONCEPT FOR FILL-SUPPORTED FOOTINGS
MAN INDUSTRIES – LR PORT
LITTLE ROCK, ARKANSAS

SCALE: none	Job No.: 08-130	PLATE

APPENDIX D

ALLOWABLE SINGLE PILE CAPACITY , TONS



ALLOWABLE SINGLE PILE CAPACITY, TONS

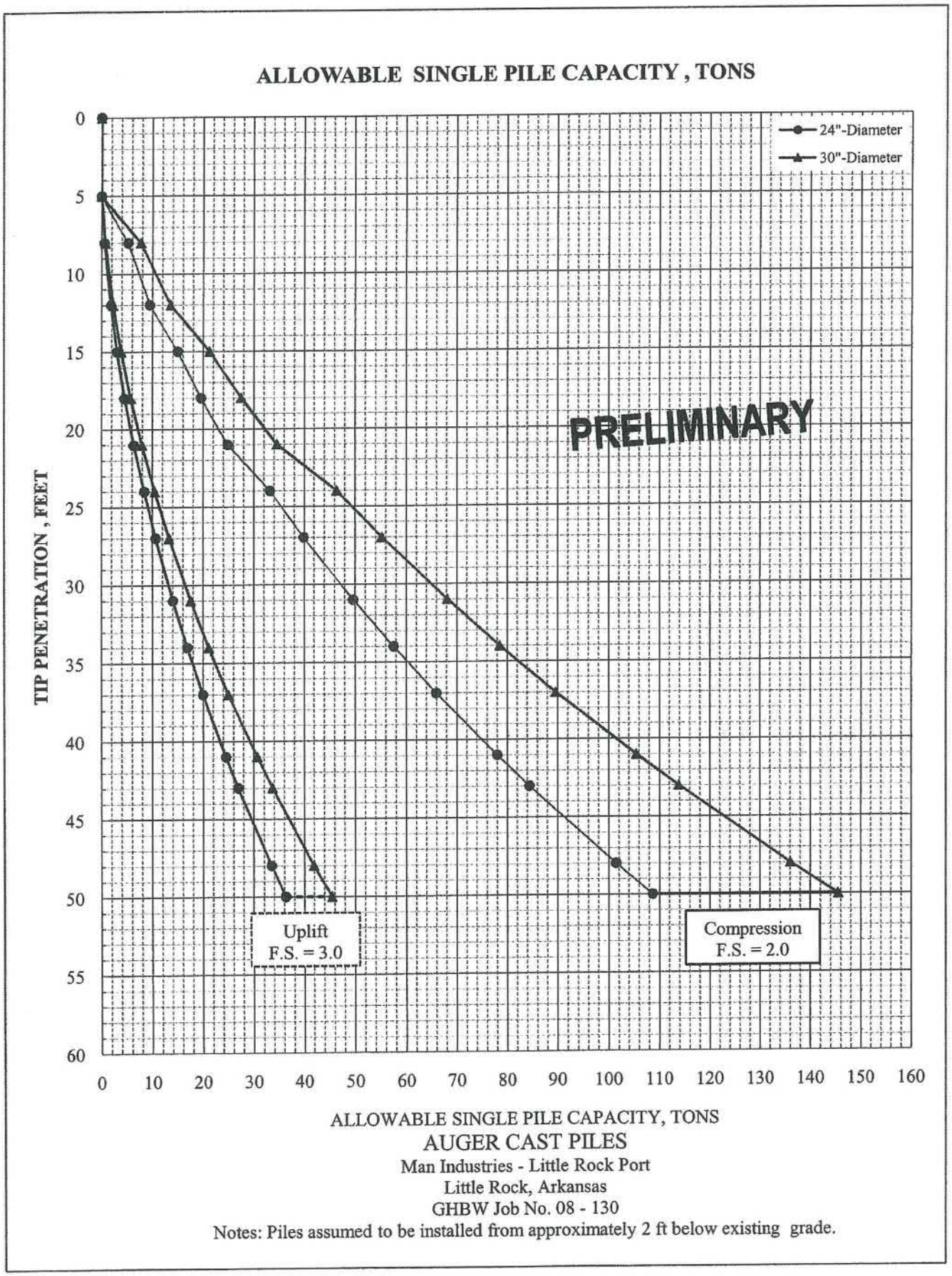
AUGER CAST PILES

Man Industries - Little Rock Port

Little Rock, Arkansas

GHBW Job No. 08 - 130

Notes: Piles assumed to be installed from approximately 2 ft below existing grade.



AUGER CAST PILES

Man Industries - Little Rock Port

Little Rock, Arkansas

GHBW Job No. 08 - 130

Notes: Piles assumed to be installed from approximately 2 ft below existing grade.

APPENDIX E

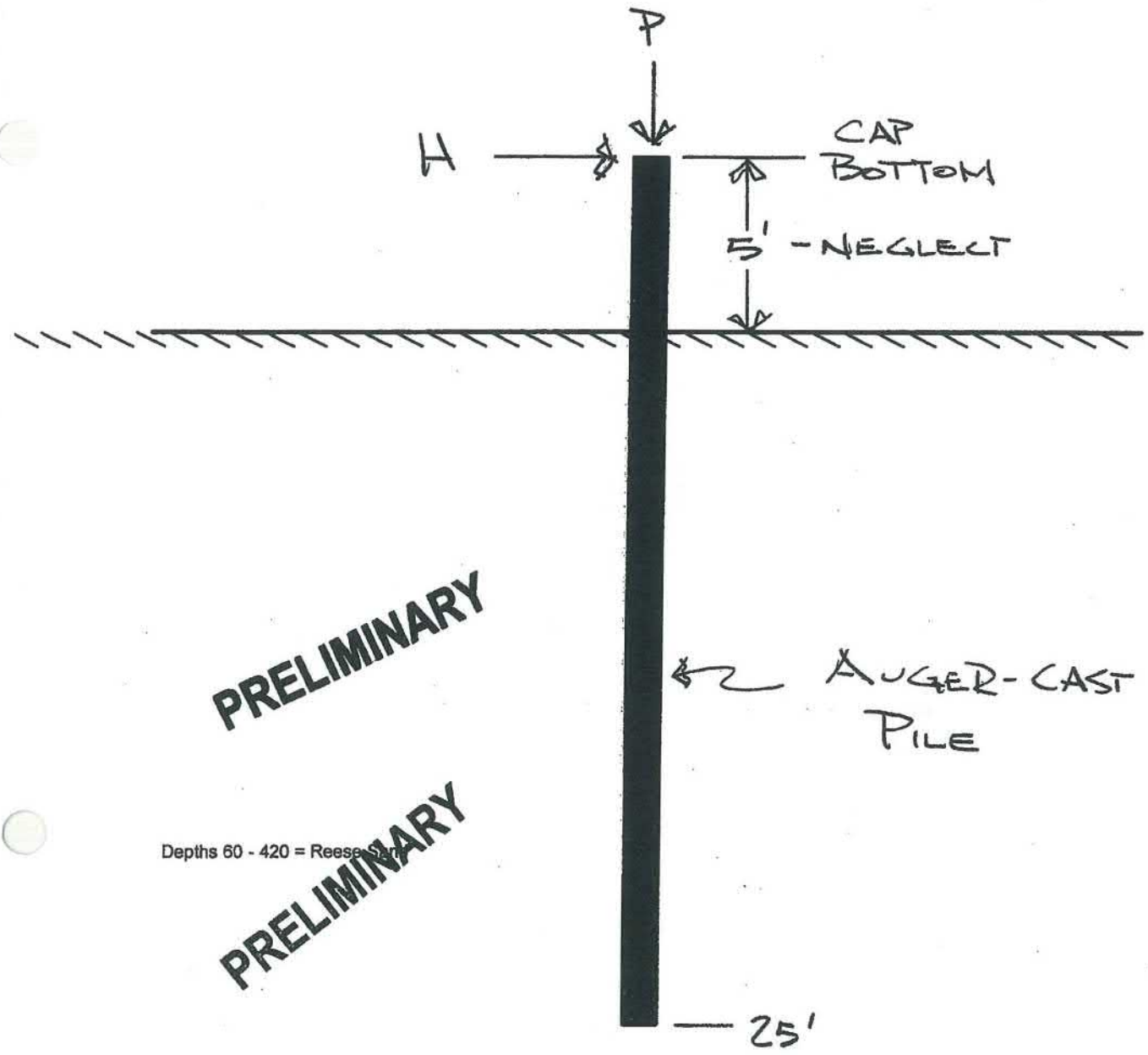
SUMMARY of LATERAL LOAD ANALYSIS RESULTS

Project: Man Industries - Little Rock Port
Location: Little Rock, Arkansas
Job No.: 08-130

Note: All piles assumed to be auger cast piles, 4000 psi grout, minimum length of 25 ft, fixed head boundary condition

Pile Diameter, in.	Axial load, kips	Horizontal load, kips	Calculated maxium deflection, in.	Calculated maxium moment, kip-ft
12	28	2	0.12	11.11
12	28	5	0.41	30.65
12	28	10	0.97	65.24
12	28	15	1.66	102.74
18	48	2	0.04	12.61
18	48	5	0.09	32.07
18	48	10	0.26	70.41
18	48	15	0.45	111.13
24	72	2	0.02	14.57
24	72	5	0.05	36.42
24	72	10	0.10	73.21
24	72	15	0.17	116.30
30	96	2	0.01	16.70
30	96	5	0.03	41.75
30	96	10	0.06	83.50
30	96	15	0.09	125.35

PRELIMINARY



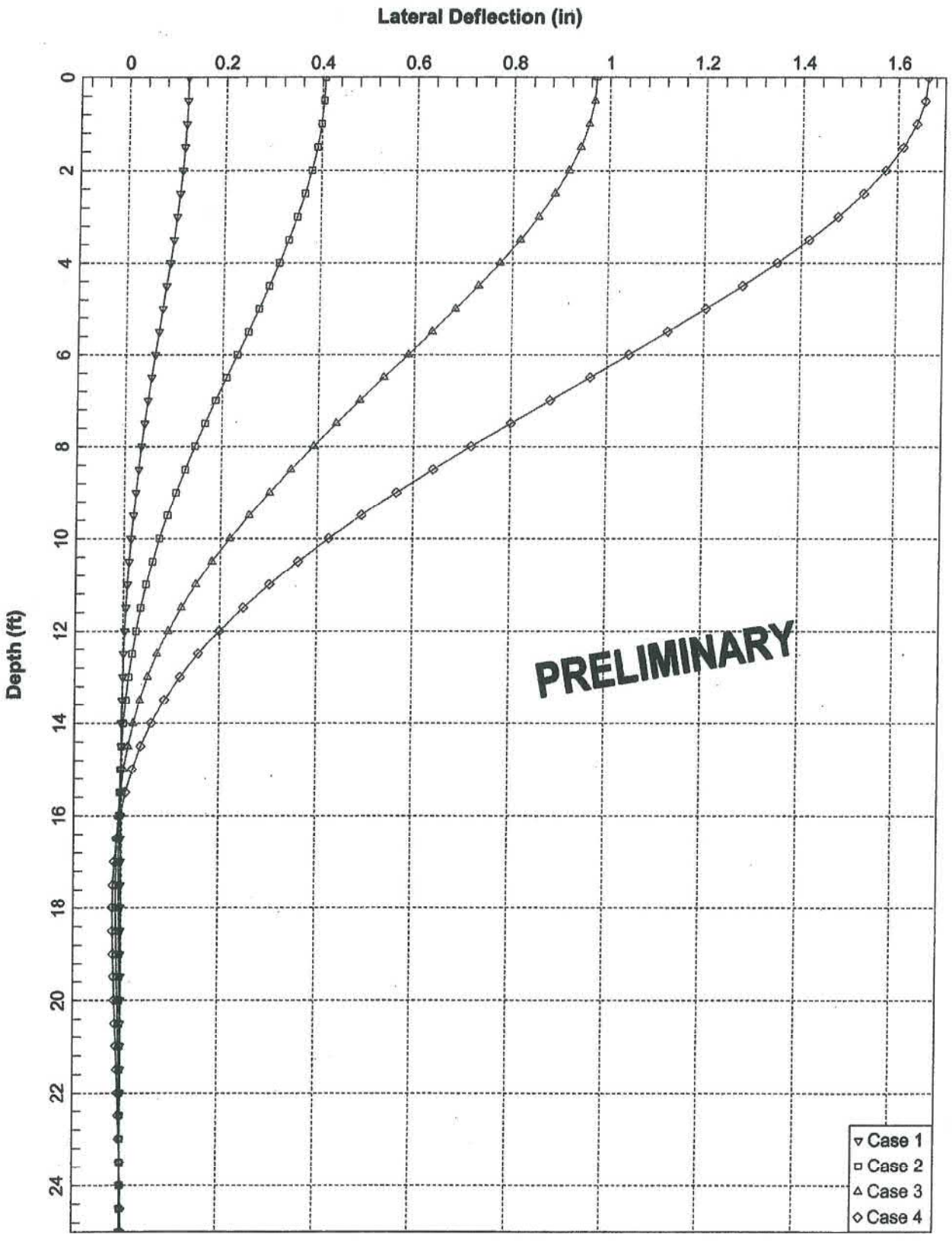
PRELIMINARY

PRELIMINARY

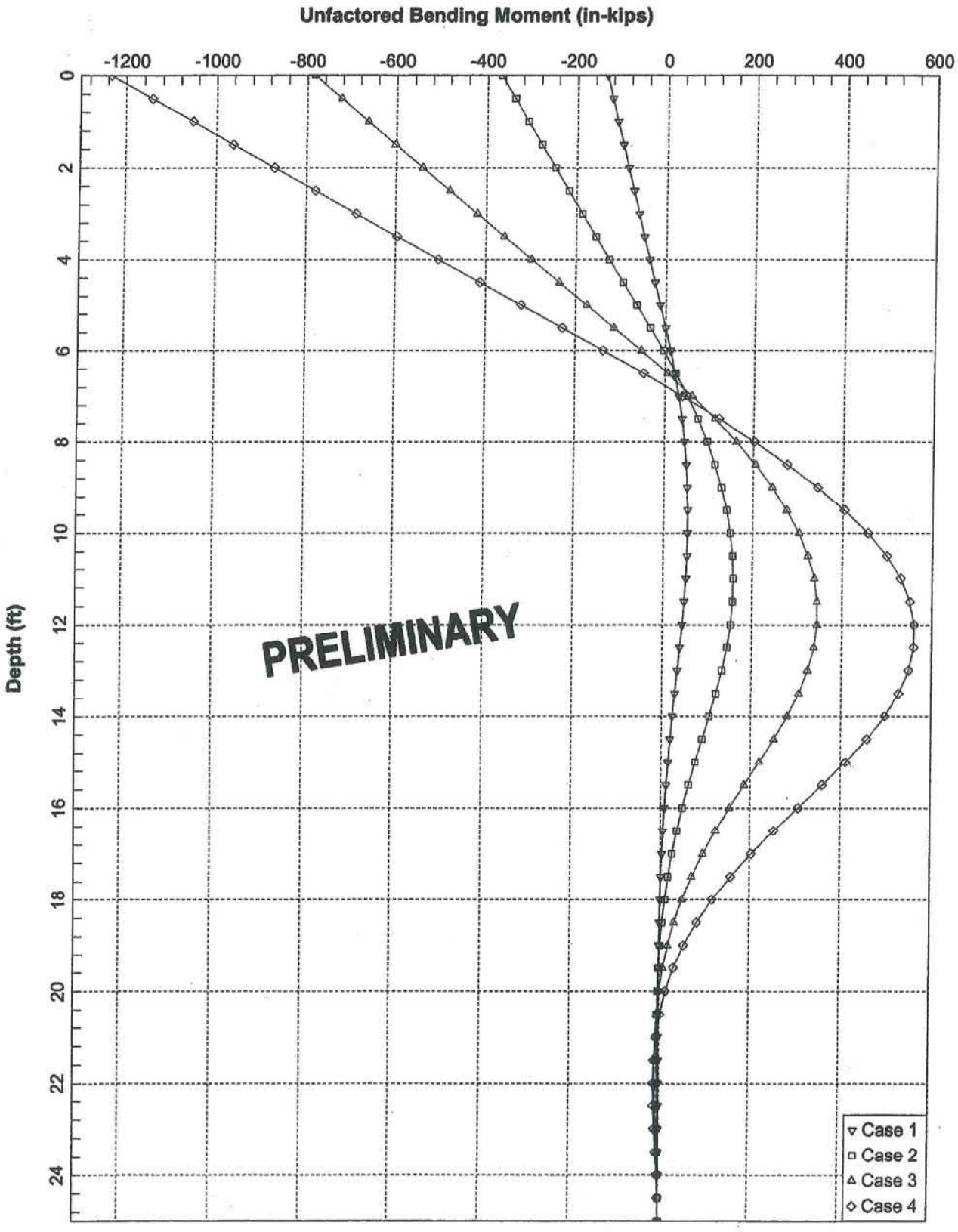
Depths 60 - 420 = Reese Sand

CASE #	SHEAR, KIPS	PILE DIA, in.	P, KIPS
1	2	12	28
2	5	18	48
3	10	24	72
4	15	30	96

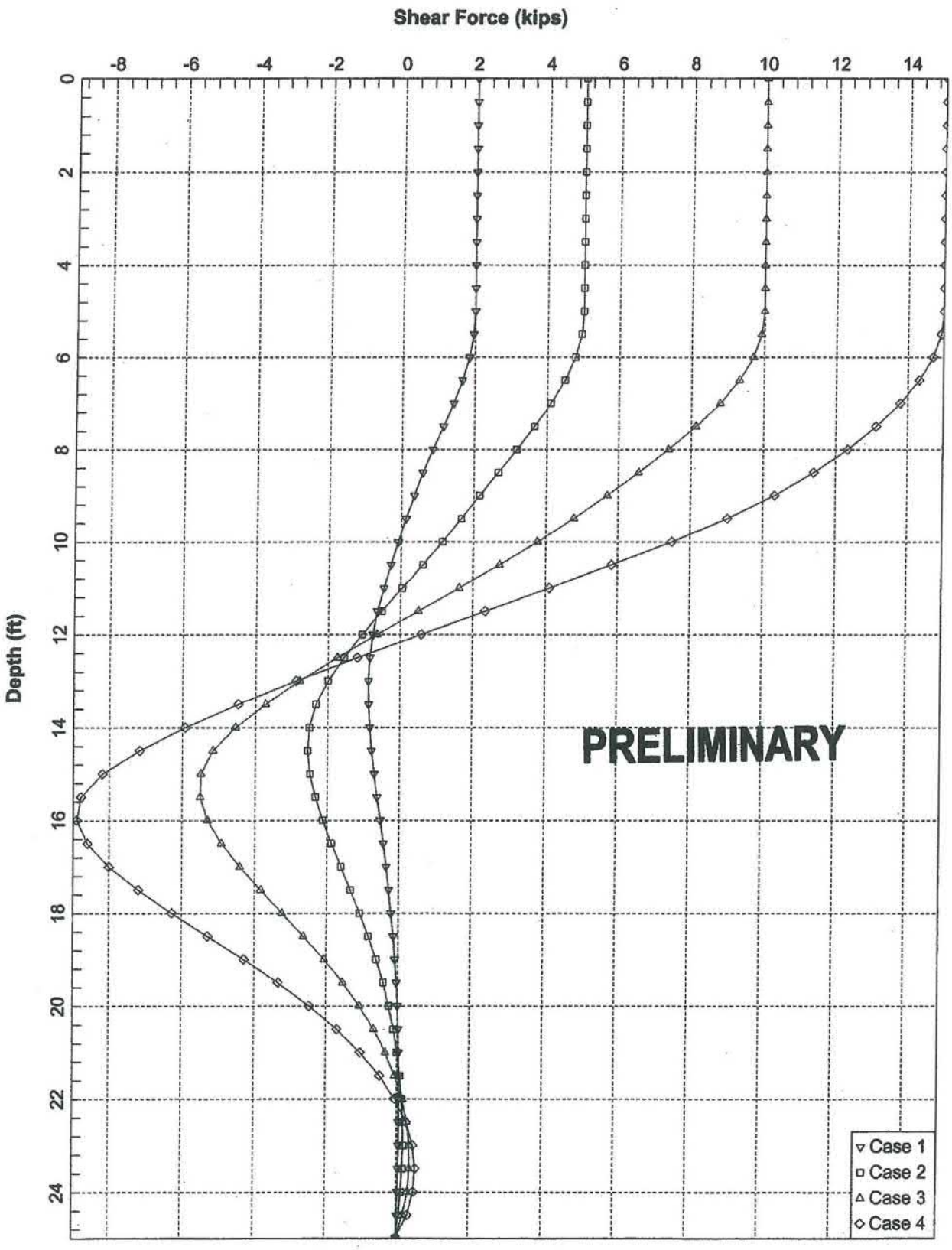
HAN INDUSTRIES
LR PORT



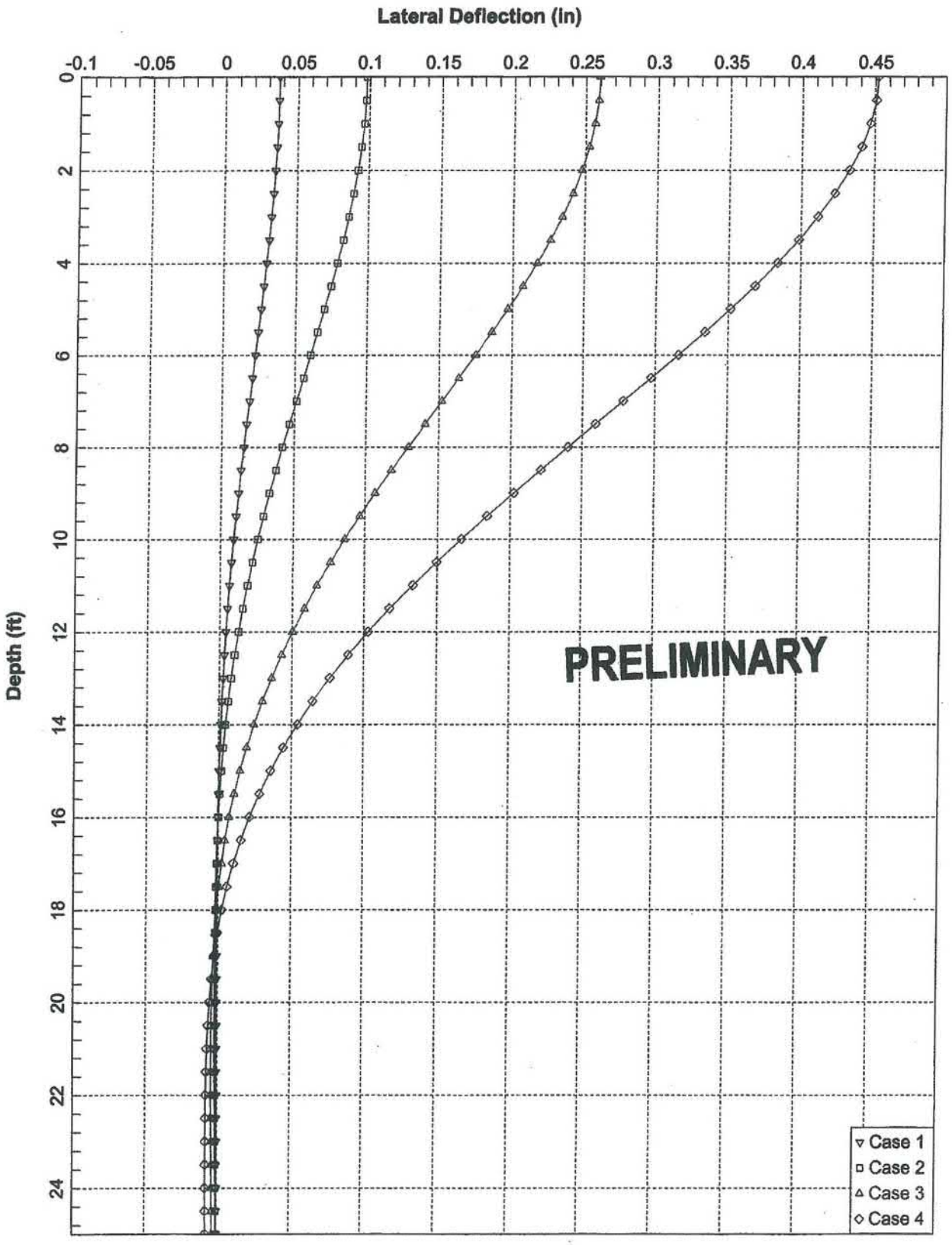
12-in.-dia Auger-Cast Pile, fixed head



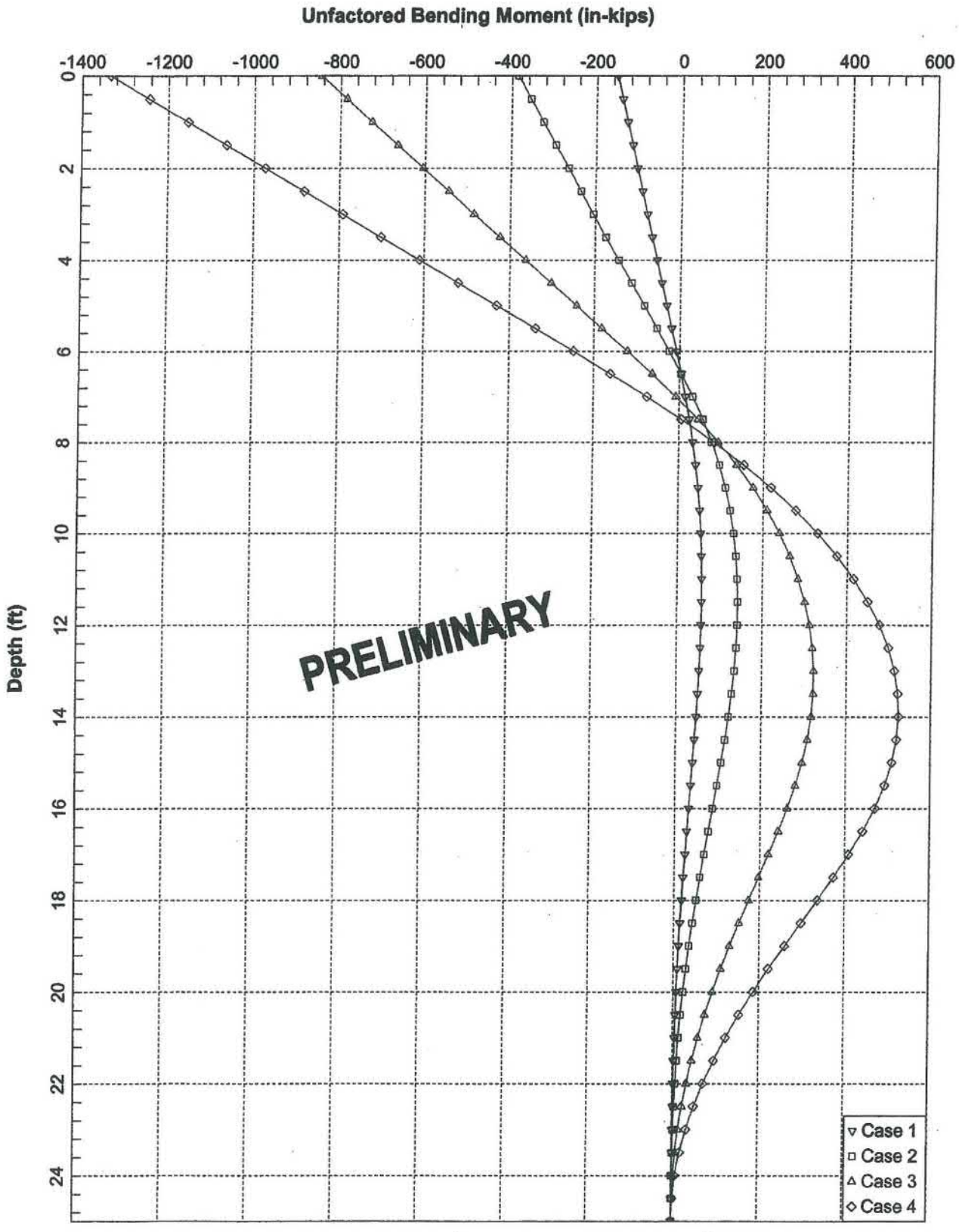
12-in.-dia Auger-Cast Pile, fixed head



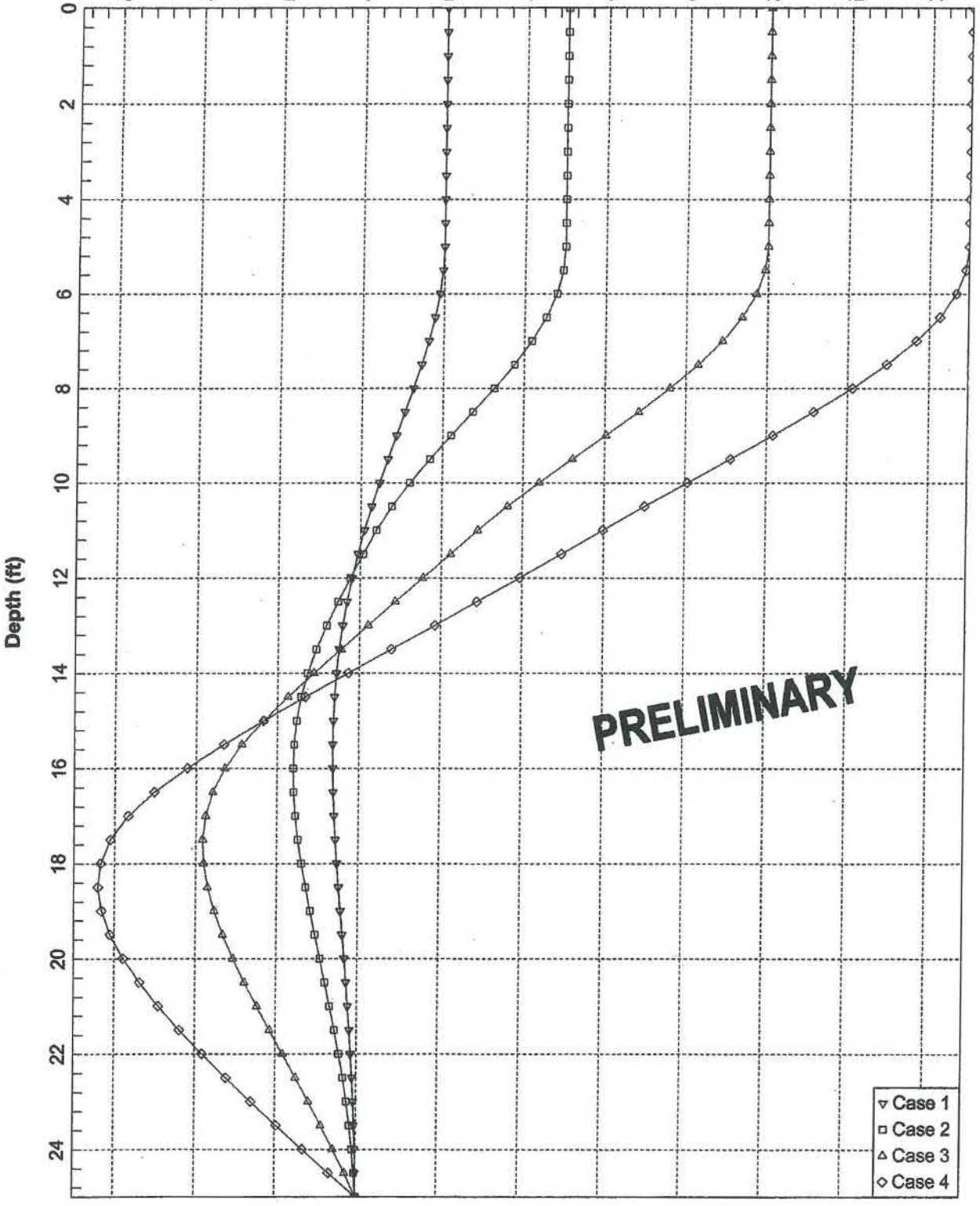
12-in.-dia Auger-Cast Pile, fixed head



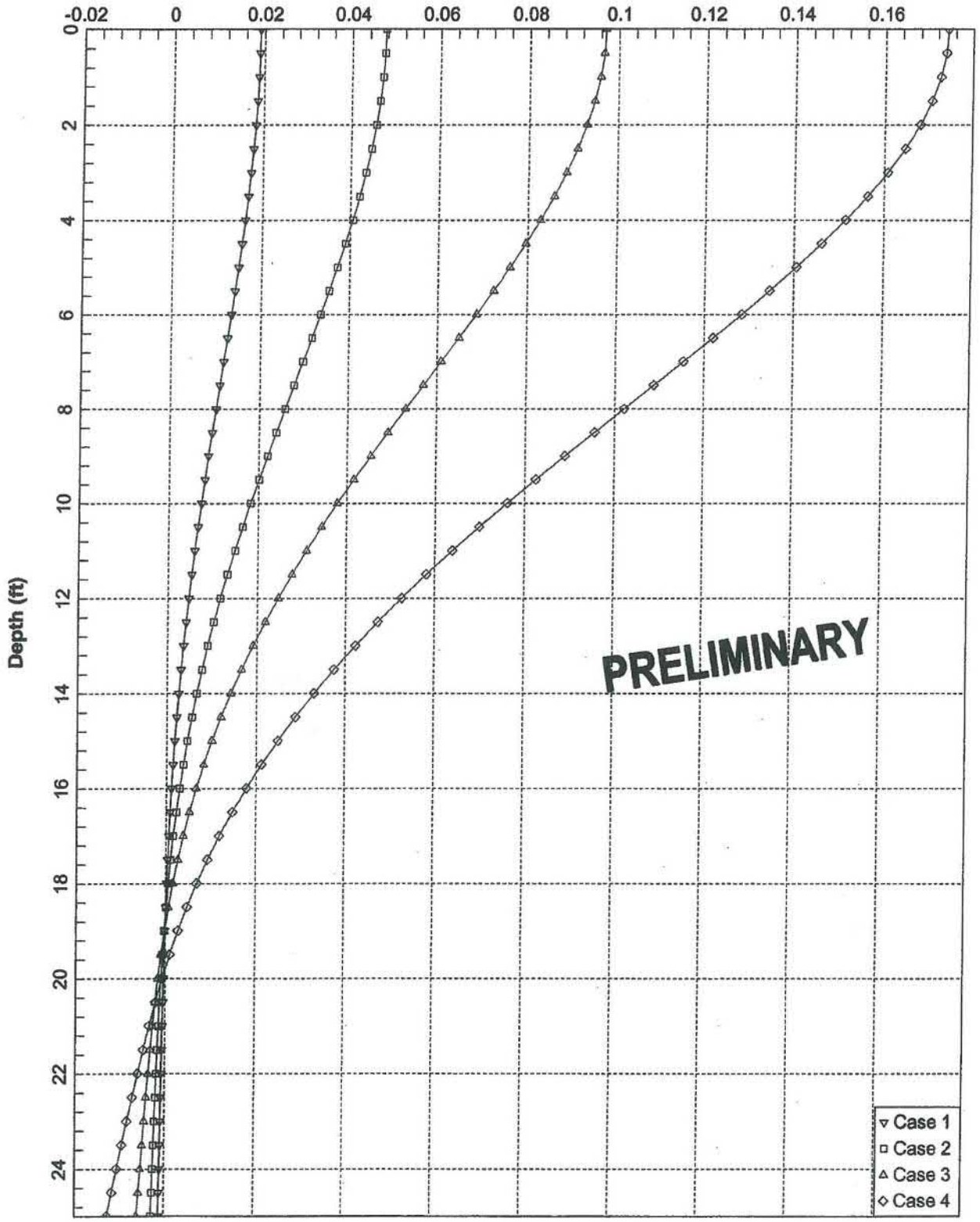
18-in.-dia Auger-Cast Pile, fixed head



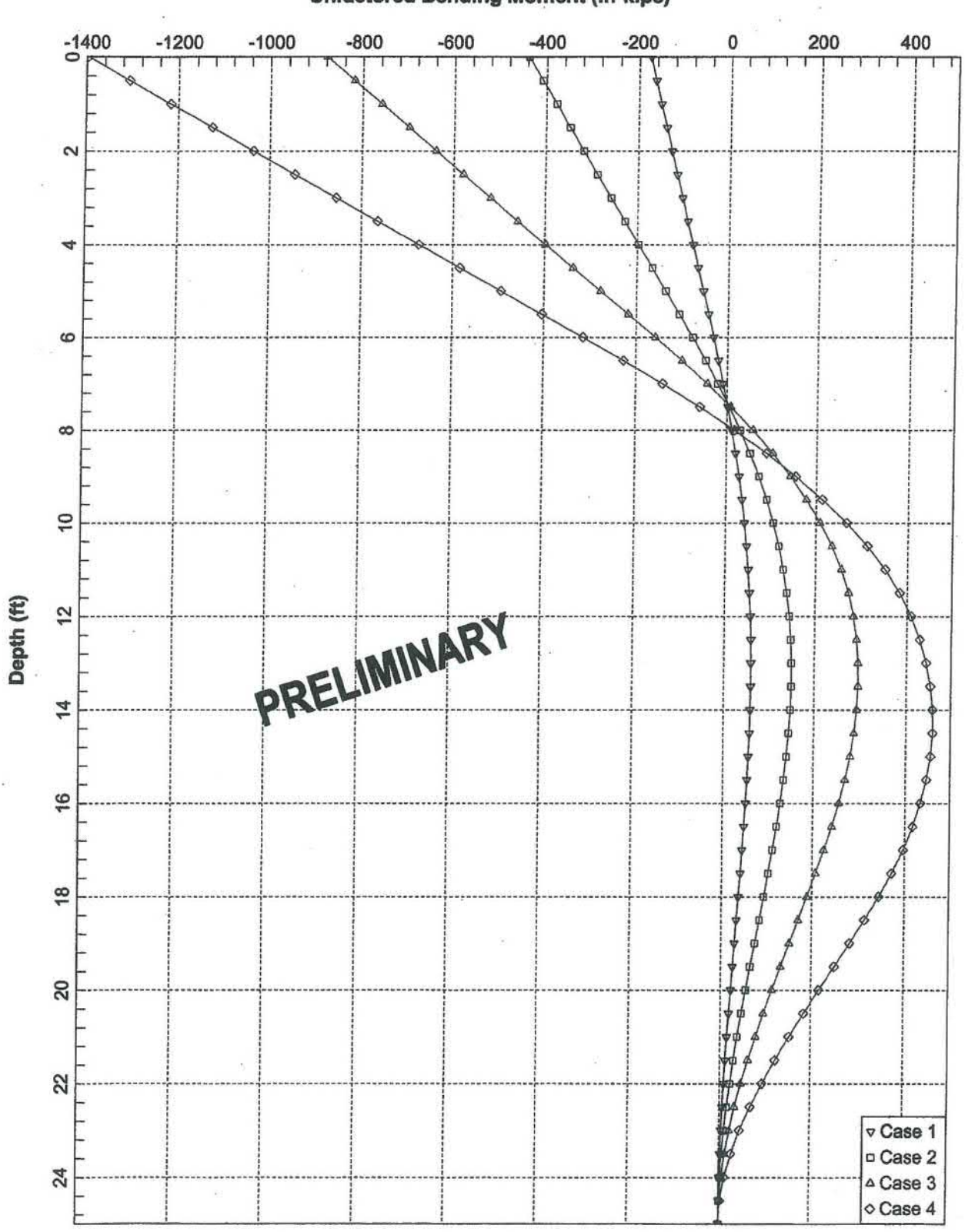
18-in.-dia Auger-Cast Pile, fixed head



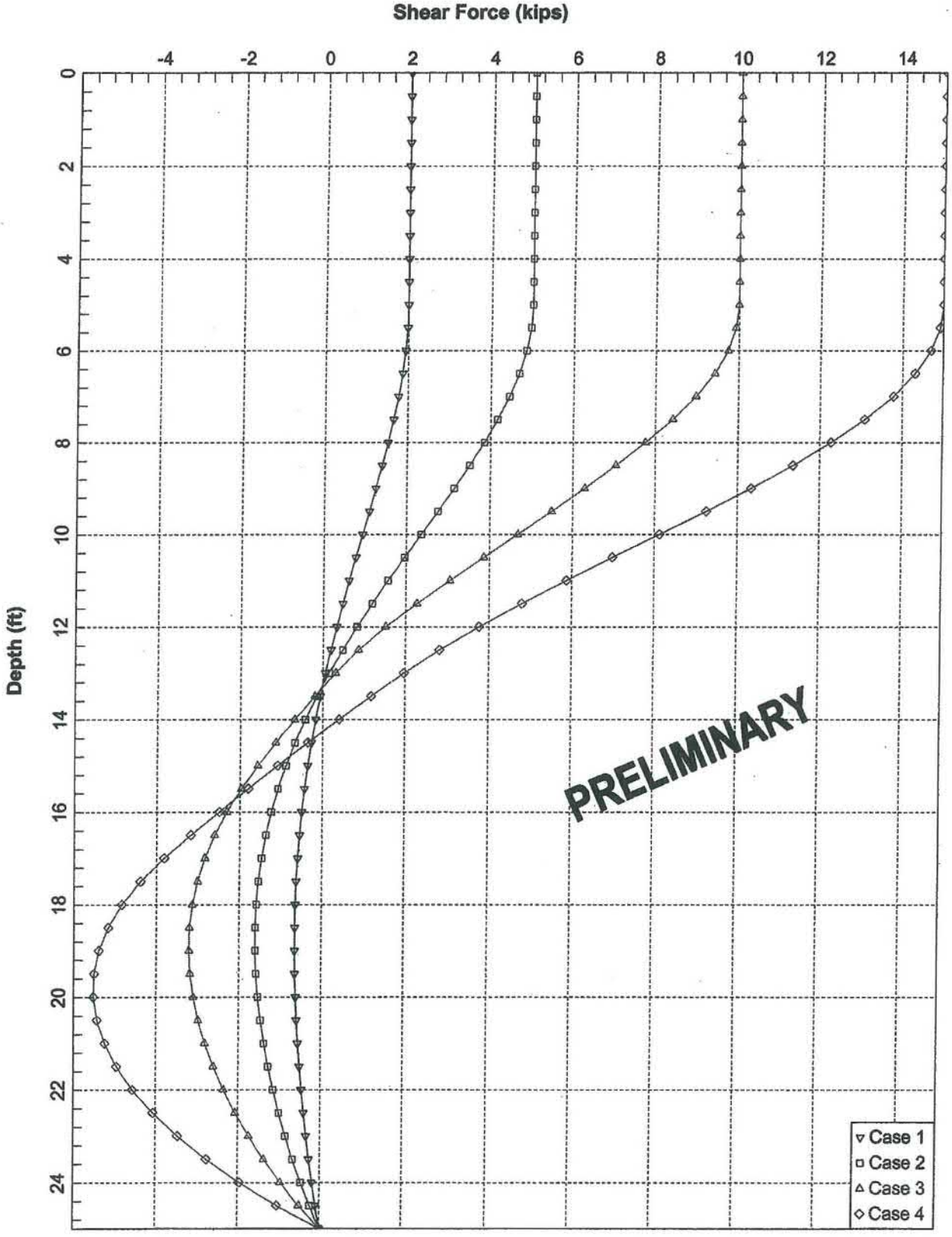
18-in.-dia Auger-Cast Pile, fixed head



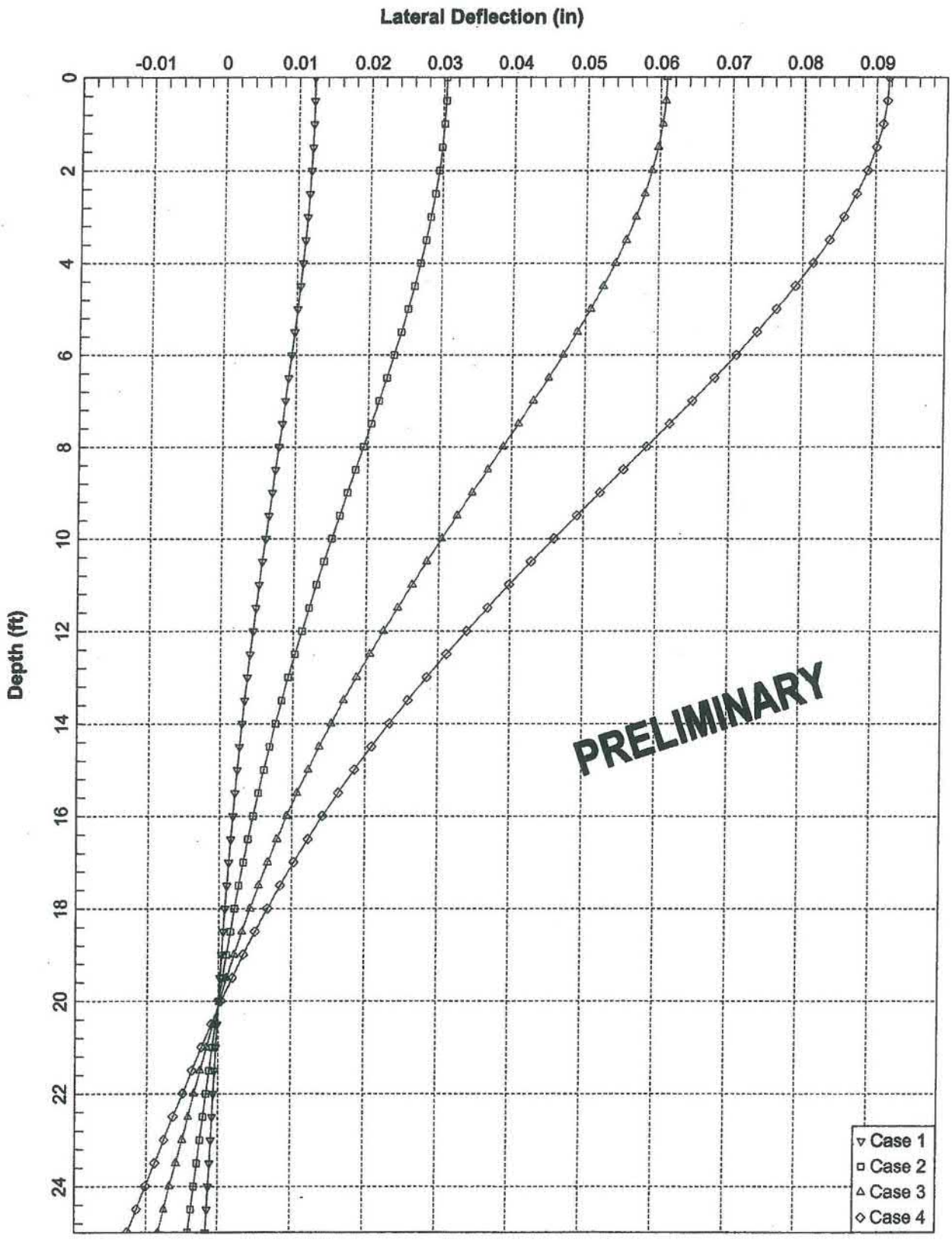
24-in.-dia Auger-Cast Pile, fixed head



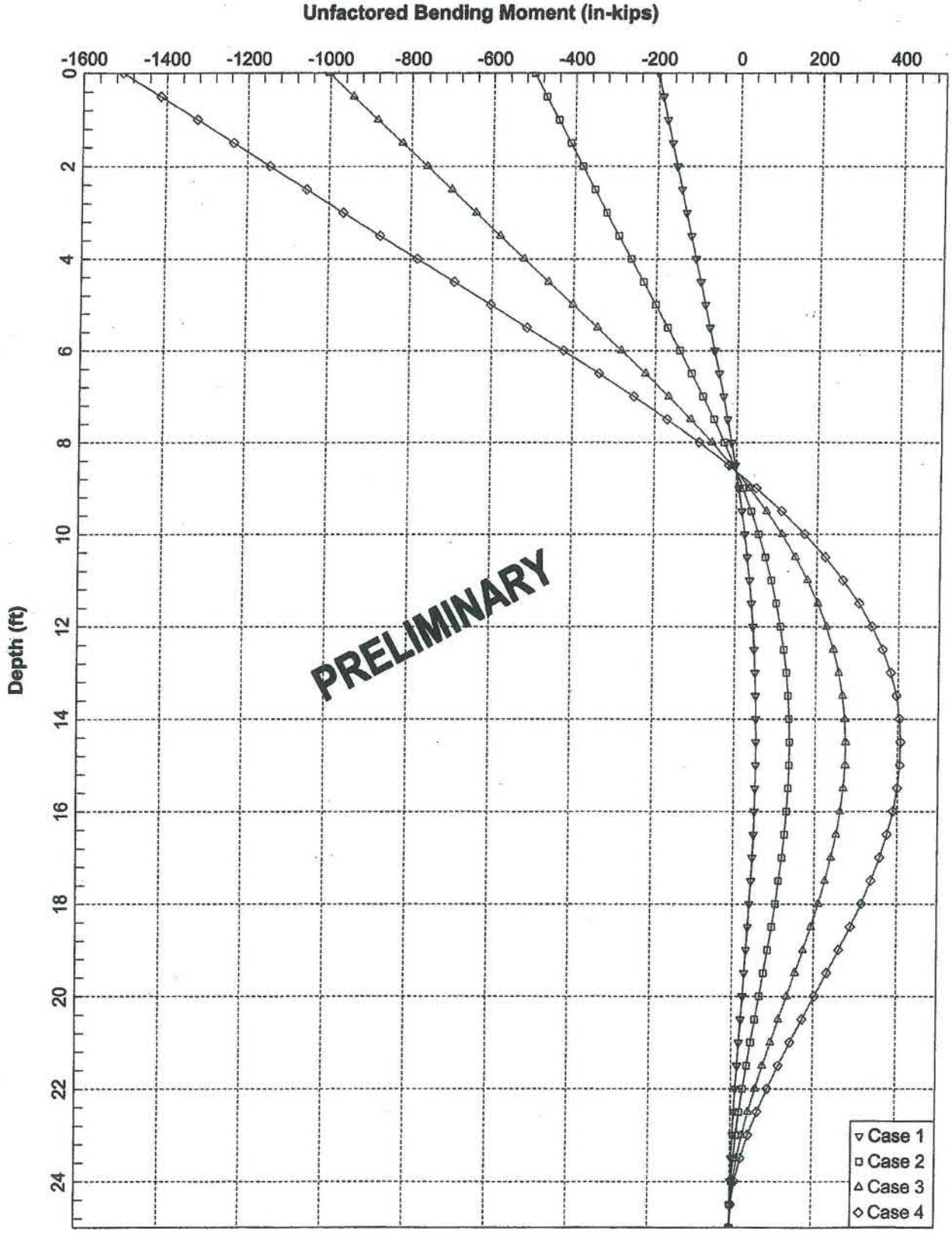
24-in.-dia Auger-Cast Pile, fixed head



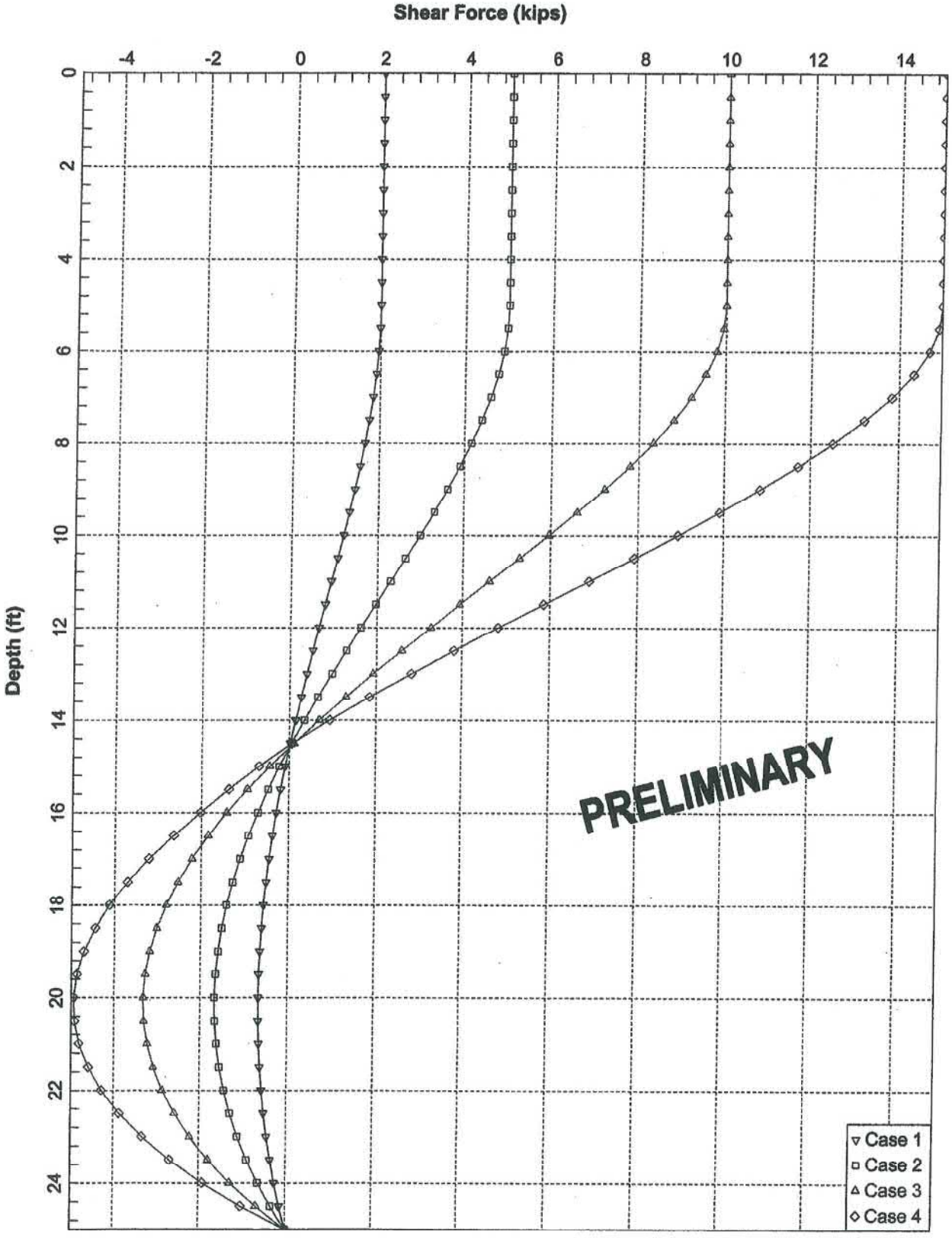
24-in.-dia Auger-Cast Pile, fixed head



30-in.-dia Auger-Cast Pile, fixed head



30-in.-dia Auger-Cast Pile, fixed head



30-in.-dia Auger-Cast Pile, fixed head

APPENDIX G

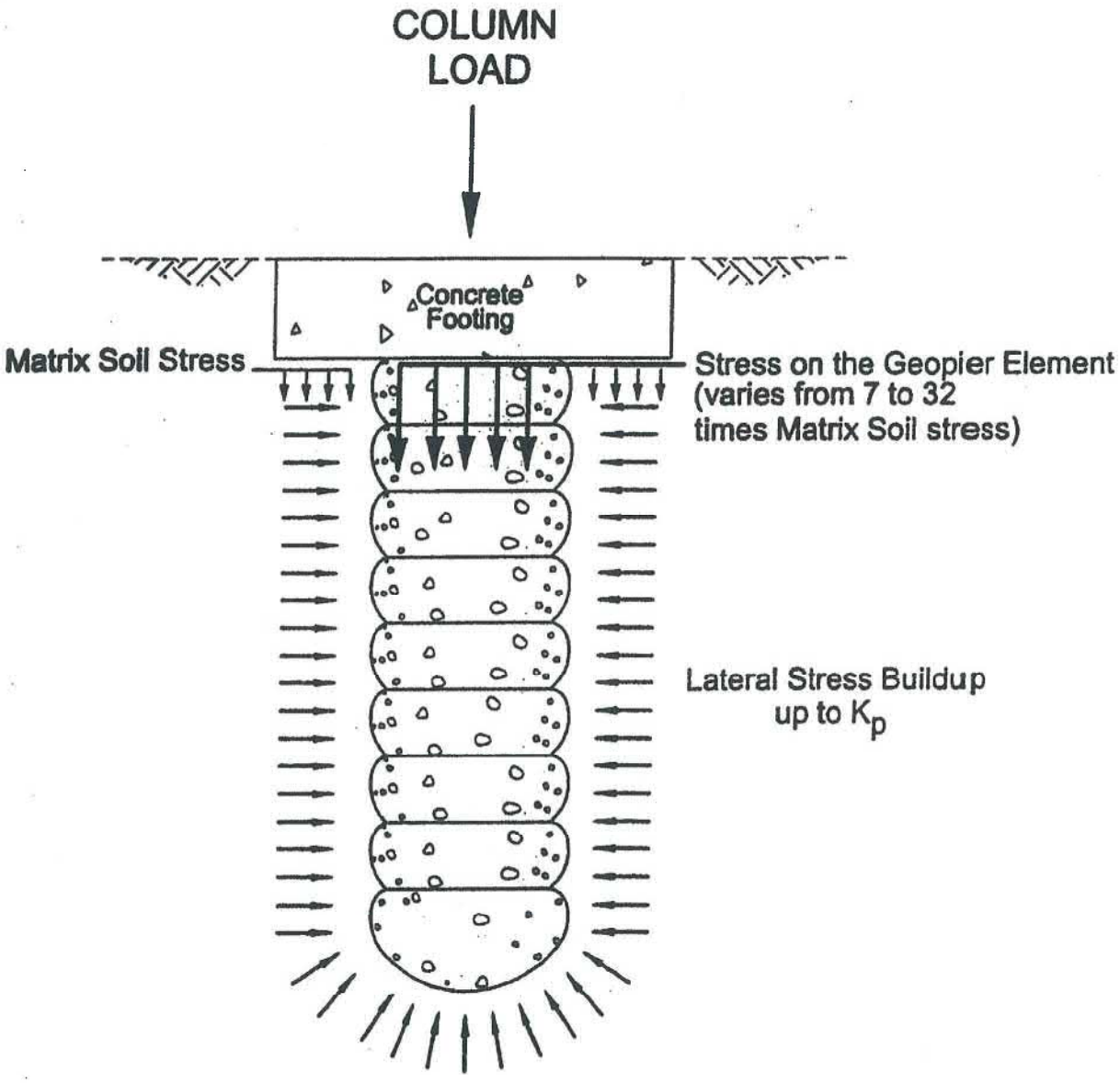


Figure 2.1.1. Geopier Load Support

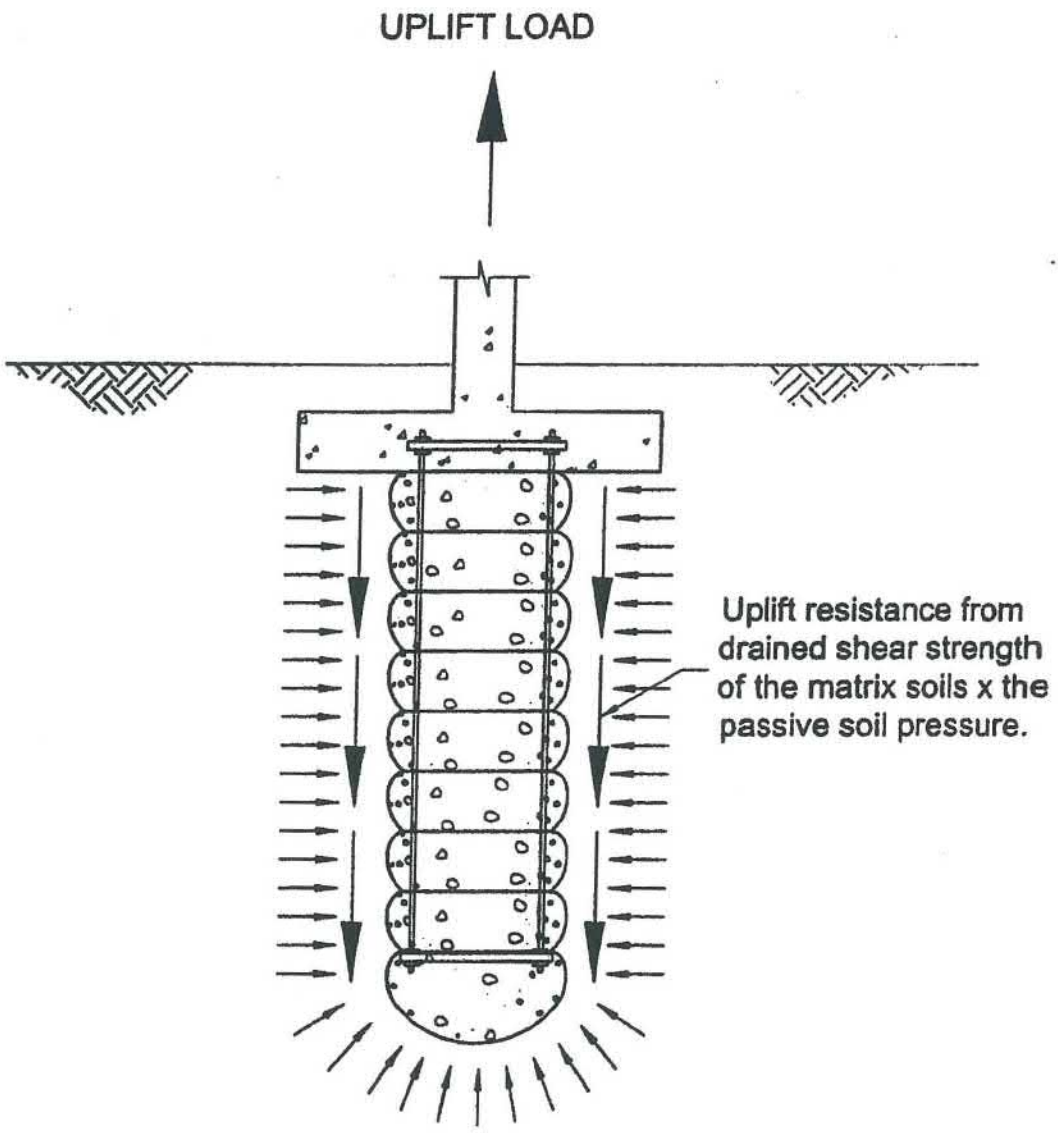
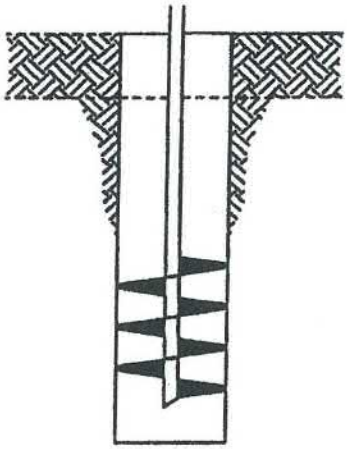


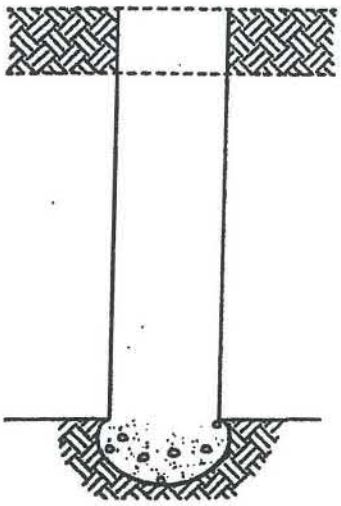
Figure 4.4.1. Uplift Load Resistance

CONSTRUCTION

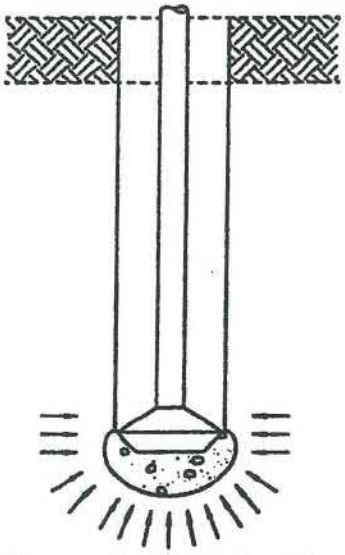
Construction Process (without casing):



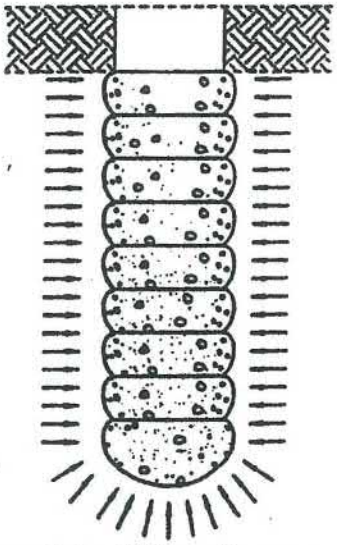
1. Excavate Cavity



2. Place single lift well-graded stone



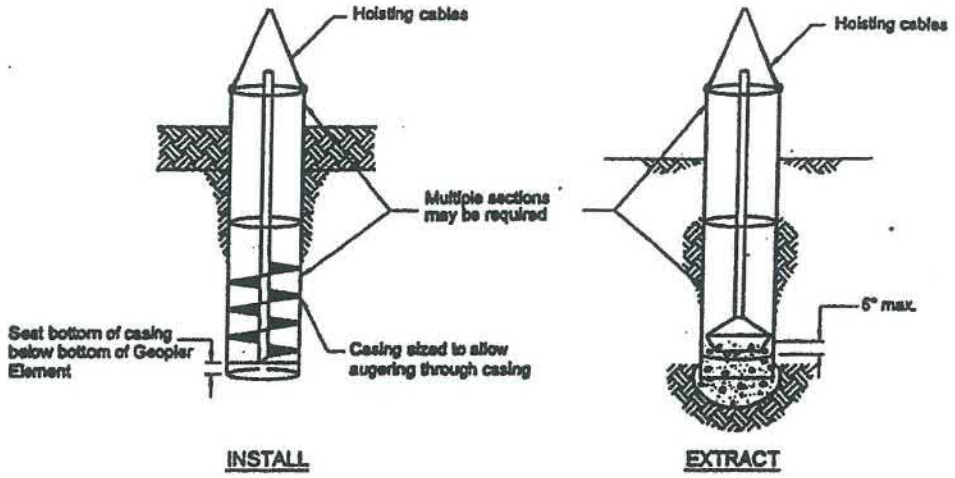
3. Form bottom bulb



4. Place thin lifts of aggregate and Ram with Beveled Tamper

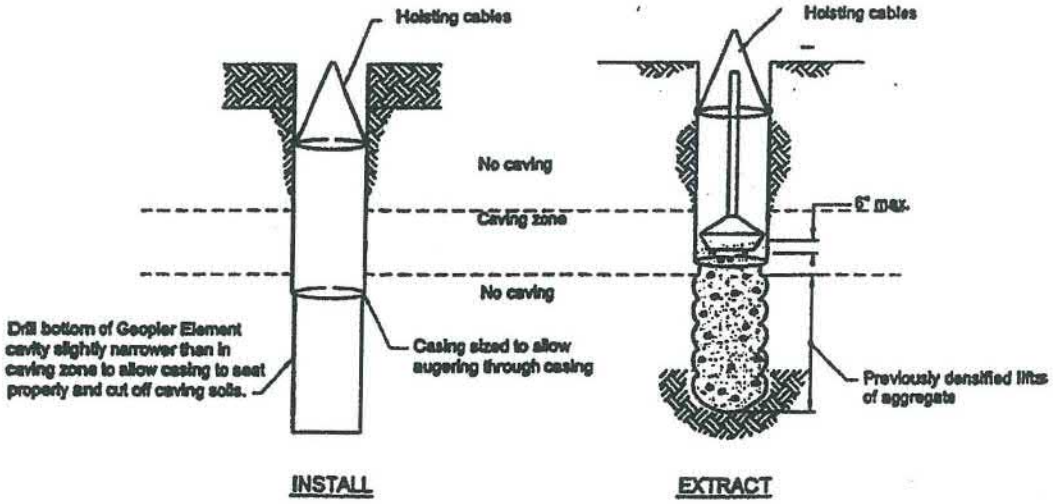
CONSTRUCTION

Construction Process (with casing):



a) Caving soils present for full depth of Geopier Element.

NOTE: Place loose aggregate and extract casing such that bottom of casing is within 6 inches of top of loose lift of aggregate. Compact aggregate as with non-cased Geopier Elements. Repeat aggregate placement, casing extraction, and tamping on successive lifts. .



b) Caving soils confined by layers of stable soils.

Geopier Foundation Company
Contact Information

Geopier Foundation Company
GFC MidSouth
9160 Highway 64, Suite 12
Lakeland, Tennessee 38002
Attn: Mr. Matt Caskey, P.E.
Telephone: (901)309-3363
Email: mcaskey@geopiers.com

APPENDIX H

MIRAFI®

TECHNICAL DATA SHEET

Mirafi® 180N

Mirafi® 180N is a nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. 180N is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D 4632	kN (lbs)	0.9 (205)	0.9 (205)
Grab Tensile Elongation	ASTM D 4632	%	50	50
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.36 (80)	0.36 (80)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2618 (380)	
Puncture Strength	ASTM D 4833	kN (lbs)	0.58 (130)	
Apparent Opening Size (AOS)	ASTM D 4751	mm (U.S. Sieve)	0.180 (80)	
Permittivity	ASTM D 4491	sec^{-1}	1.2	
Permeability	ASTM D 4491	cm/sec	0.21	
Flow Rate	ASTM D 4491	$l/min/m^2$ ($gal/min/ft^2$)	3866 (95)	
UV Resistance (at 500 hours)	ASTM D 4355	% strength retained	70	

Physical Properties	Test Method	Unit	Typical Value
Weight	ASTM D 5261	g/m^2 (oz/yd^2)	278 (8.2)
Thickness	ASTM D 5199	mm (mils)	2.3 (90)
Roll Dimensions (width x length)	--	m (ft)	4.5 x 91 (15 x 300)
Roll Area	--	m^2 (yd^2)	418 (500)
Estimated Roll Weight	--	kg (lb)	124 (273)

Ten Cate Nicolon

MIRAFI® _____ *TECHNICAL DATA SHEET*

Geolon® HP370

Geolon® HP370 is composed of high-tenacity polypropylene yarns, which are woven into a network such that the yarns retain their relative position. HP370 is inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Tensile Strength (at ultimate)	ASTM D 4595	kN/m (lbs/ft)	47.3 (3240)	39.4 (2700)
Tensile Strength (at 2% strain)	ASTM D 4595	kN/m (lbs/ft)	7.9 (540)	7.9 (540)
Tensile Strength (at 5% strain)	ASTM D 4595	kN/m (lbs/ft)	19.8 (1356)	19.8 (1356)
Tensile Strength (at 10% strain)	ASTM D 4595	kN/m (lbs/ft)	35.0 (2400)	35.0 (2400)
Factory Seam Strength	ASTM D 4884	kN/m (lbs/ft)	24.6 (1688)	
Flow Rate	ASTM D 4491	l/min/m² (gal/min/ft²)	1629 (40)	
Permeability	ASTM D 4491	cm/sec	0.050	
Permittivity	ASTM D 4491	sec^{-1}	0.52	
Apparent Opening Size (AOS)	ASTM D 4751	mm (U.S. Sieve)	0.600 (30)	
UV Resistance (at 500 hours)	ASTM D 4355	% strength retained	70	

NOTE: To obtain Secant Modulus, divide tensile strength by the appropriate strain level (i.e. Secant Modulus at 5% = 1,356/0.05 = 27,120 lbs/ft)

Physical Properties	Test Method	Unit	Typical Value
Mass/Unit Area	ASTM D 5261	g/m² (oz/yd²)	284 (8.5)
Roll Dimensions (width x length)	--	m (ft)	4.5 (15) x 91 (300)
Roll Area	--	m² (yd²)	418 (500)
Estimated Roll Weight	---	kg (lbs)	121 (266)

Ten Cate Nicolon

Zoning/Permitting

Copy of Restrictive Covenants:	See attachment Z-1 for detail. The Port of Little Rock has a Bill of Assurance.
Current Classification and Proposed Zoning (if different) to Conform with Intended Use:	The site is currently in Pulaski County, outside the city limits and there is no zoning. The site is classified as "Agricultural/Industrial." Upon being annexed into the City of Little Rock, I-3, Heavy Industrial Zoning will apply as currently exists in the Port Industrial Park. Thus, no zoning changes are required.
Copy of Zoning Ordinance:	See attachment Z-2 for detail.
Explanation of Process to Change Zoning:	The property owner or agent will apply for a rezoning. It will be put on the planning commission agenda based on approved submittal dates and corresponding hearing dates. After commission action it will go to the board for final action.

BILL OF ASSURANCE (as amended)

CITY OF LITTLE ROCK, ARKANSAS

TO THE PUBLIC:

THAT WHEREAS, the City of Little Rock, Arkansas, a municipal corporation organized pursuant to the laws of the state of Arkansas, herein called Grantor, is the sole owner of the following described property located in the state of Arkansas, County of Pulaski, and more particularly described as follows, to-wit:

A parcel of land situated in Sections 9, 10, 15, 16, 17, 20, 21, 22 and 23, Township 1 North, Range 11 West, all lying south of the Arkansas River in Pulaski County, Arkansas, more particularly described as follows:

Commencing at the southwest corner of the SE ¼ said Section 15; thence N01degrees41'50"E along the West line of said SE ¼, Section 15, for a distance of 1,808.12 feet to a point being on the centerline of Old Fourche Creek; thence N38degrees20'50"E approximately 2,356 feet to the Ordinary High Water Mark of the Arkansas River being the Point of Beginning; thence northwesterly along the Ordinary High Water Mark of the Arkansas River to the intersection of the west line of the SE ¼, Section 9; thence southerly along said west line of the SE ¼, Section 9 to the intersection of Old Fourche Creek, being approximately 2,400 feet north of the southwest corner of said SE ¼, Section 9; thence southeasterly along the centerline of Old Fourche Creek to a point which is the intersection of Old Fourche Creek and the south line of Hermitage Home Sites Subdivision extended; thence N89degrees34'51"W along the said south line 137.12 feet to the southeast corner of Lot 99, Hermitage Home Sites Subdivision; thence S11degrees28'14"E, 202.85 feet to a point; thence S36degrees44'33"E, 134.3 feet to a point on the South Right of Way of East Belt Freeway; thence along said south Right of Way the following Bearings and Distances: S59degrees21'26"W, 319.16 feet to a point; thence S66degrees52'W, 426.1 feet to a point; thence N74degrees09'E, 516.6 feet to a point; thence N64degrees50'E, 204.0 feet to a point; thence S58degrees41'W, 366.9 feet to a point, thence S63degrees00'11"W, 3308.0 feet to a point; thence S70degrees25'35"W, 100.5 feet to a point; thence S55degrees35'W, 85.4 feet to a point; thence S08degrees56'W, 144.4 feet to a point on the East Right of Way of Fourche Dam Pike; thence leaving said South Right of Way of East Belt of Freeway N01degrees30'32"E, along said East Right of Way of Fourche Dam Pike 217.2 feet to a point; thence S81degrees06'14"W, 122.12 feet to the intersection of the West Right of Way of East Belt Freeway; thence N89degrees46'32"W, 670.15 feet along said South Right of Way the following Bearings and Distances: thence S84degrees40'W, 202.2 feet to a point; thence S75degrees09'W, 1118.1 feet to a point; thence S89degrees35'W, 421.1 feet to a point; thence N87degrees53'W, 703.2 feet to a point; thence N89degrees43'W, 900.5 feet to a point; thence N87degrees48'47"W, 491.6 feet to a point; thence N87degrees04'32"W, 270.0 more or less to a point on the Centerline of Fourche Bayou; thence, leaving said South Right of Way of East Belt Freeway,

southwesterly along the centerline of Fourche Bayou approximately 900 feet to the intersection of the North Right of Way line of Lindsey Road; thence N87degrees17'02"W along said North Right of Way line approximately 5 feet to a point; thence N87degrees54'02"W, 93.68 feet to a point; thence N75degrees01'45"W, 117.33 feet to a point; thence N71degrees16'09"W, 650.10 feet to a point; thence northwesterly along a curve to the right whose radius is 703.94 feet, a distance of 707.17 feet to a point; thence N13degrees43'08"W, 1091.00 feet to a point; thence northwesterly along a curve to the left whose radius is 1969.86 feet, a distance of 339.32 feet to a point; thence N23degrees35'08"W, 119.50 feet to a point; thence N20degrees43'23"W, 200.25 feet to a point; thence N23degrees35'08"W, 200.00 feet to a point; thence N26degrees17'43"W, 211.54 feet to a point; thence N23degrees35'08"W, 275.00 feet to a point; thence N31degrees50'16"E, 54.15 to a point, said point being the intersection of the East Right of Way line of Lindsey Road and the South Right of Way line of East Roosevelt Road; thence N88degrees03'39"W along the South Right of Way line of East Roosevelt Road 215.00 feet, said point being the intersection of the West Right of Way line of Lindsey Road and the South Right of Way line of East Roosevelt Road; thence S45degrees26'23"E along said west right of way line of Lindsey Road 79.06 feet to a point; thence S23degrees35'08"E, 1055.80 feet to a point; thence southeasterly along a curve to the right whose radius is 1849.86 feet, a distance of 318.64 feet to a point; thence S13degrees43'08"E, 1091.00 feet to a point; thence southeasterly along a curve to the left whose radius is 823.94 feet, a distance of 827.70 feet to a point; thence S71degrees16'09"E, 650.10 feet to a point; thence S68degrees39'23"E, 134.87 feet to a point; thence S81degrees46'54"E approximately 90 feet said point being the intersection of the South Right of Way line of Lindsey Road and the centerline of Fourche Bayou; thence southwesterly along the centerline of Fourche Bayou approximately 2800 feet to the intersection of the centerline of Fourche Bayou and the west line of the NW ¼, NE ¼, Section 20; thence S01degrees16'34"W along the west line of the NW ¼, NE ¼, Section 20, approximately 520 feet to the southwest corner of the NW ¼, NE ¼, Section 20; thence S88degrees48'45"E, 2619.66 feet along the south line of the N ½, NE ¼, Section 20 to the southwest corner of the NW ¼, NW ¼, Section 21; thence S88degrees47'55"E, 5275.91 feet along the south line of the N ½ of the NW ¼ and the N ½ of the NE ¼ of Section 21 to the southwest corner of the NW ¼, NW ¼, Section 22; thence S87degrees48'31"E, 2603.87 feet along the south line of the N ½ of the NW ¼, Section 22 to the southwest corner of the NW ¼, NE ¼, Section 22; thence S87degrees50'37"E, 1647.39 feet along the south line of the N ½, NE ¼, Section 22 to a point on said south line, said point being on centerline Fourche Island Drainage District No. 2 Levee; thence N29degrees14'21"W, 1550.80 feet along the centerline of the Fourche Island Drainage District No. 2 Levee to a point on the north line of Section 22; thence S87degrees54'21"E, 774.2 feet along the north line of Section 22 to a point of intersection between said north line and the centerline of Old Fourche Creek; thence

continue S87degrees54'21"E, along the North line of Section 22 for a distance of 1024.87 feet to the NW Corner of Section 23; thence continue S87degrees54'21"E, along the North Line of Section 23; 1857.24 feet; thence S02degrees05'39"W, 31.0 feet to a point; thence S87degrees54'21"E, 385.0 feet to a point; thence S73degrees24'21"E, 1610.0 feet to a point; thence S86degrees00'E, 300 feet more or less to the Ordinary High Watermark of the Arkansas River, Right Bank; thence Northwesterly along said Ordinary High Watermark, 7500 feet more or less to the Point of Beginning; containing 1558 Acres more or less.

NOW, THEREFORE, WITNESS:

That the City of Little Rock, Arkansas hereinafter termed Grantor has caused said tract of land to be surveyed by Garver and Garver, Inc., registered professional engineers, and a plat thereof made, certified to on July 3, 1971, which plat is identified as Little Rock Port Industrial Park and consisting of the lands hereinabove described, and by the signature of the said engineers and by the signatures of the proper officials of the Grantor and bears the Certificate of Approval executed by the Little Rock Planning Commission and is of record in the office of the Circuit Clerk and Ex-officio records of Pulaski County, Arkansas in Plat Book 27, page, 86, and the Grantors do hereby made this Bill of Assurance.

The Grantor hereby certifies that it has platted said real estate in accordance with said plat. The lands embraced in said plat shall be forever known as designated on said plat and description of said tracts or plots or areas with reference to said plat shall be a valid and complete description thereof for all purposes.

The filing of this Bill of Assurance and plat is recorded in the office of the Circuit Clerk and Ex-officio Recorder of Pulaski County, Arkansas shall be a valid and complete delivery and dedication of streets and easements shown on said plat except such prior easement held by others than the Grantor and except that easement designated on the plat as the Little Rock Port Railroad spur Easement.

The tracts, plots and areas designated in this subdivision shall be sold by the grantor and shall be purchased by the buyers thereof subject to the following covenants and restrictions, to-wit:

(1) TYPE OF BUSINESS ALLOWED

The property in Areas 101, 102, 103, 104, 300, 301, and 302 herein conveyed shall be used only for industrial, manufacturing, warehousing or distribution purposes. It shall not be used for residential purposes, nor for the retail sale of any merchandise or services, except that any occupant of the property, either owner or tenant, may sell at retail those products which are manufactured or handled at wholesale by the occupant. The financing of the sale of such merchandise is expressly permitted, as is the retail sale of food, beverage and other such convenience items to occupant's employees so long as these items are not offered for sale to the general public. The purpose of this restriction is to prohibit the operation on this property of any business devoted primarily to the retail sale of merchandise or to the furnishing of services to the general public.

The property in Areas 201, 202, 203, and 204 is zoned "I" - Light Industrial and may be used for any purpose that qualifies under this zoning classification.

(2) PERMITS REQUIRED

The Grantee agrees that it will use the property conveyed in compliance with all ordinances of the City of Little Rock applicable to the use of property including, but not limited to; building permits, building codes, health codes, subdivision regulations, fire zoning, etc., and in compliance with all laws of the state of Arkansas and the United States of America.

(3) INSURANCE RATES

The Grantee shall not use any of the land or premises for the manufacture, storage, distribution, or sale of any materials or products which shall increase the insurance rates of the adjoining property or for any purposes which constitute a menace in the generally accepted definition of that term.

(4) POLLUTION

No industry or other business shall be established, maintained, or permitted on this property which produces and discharges objectionable effluent, smoke, dust, noise, odor, glare or vibration. Determination of whether the above is objectionable will be made by reference to applicable City, State and Federal laws and regulations.

(5) SETBACK REQUIREMENTS

Buildings erected within the Little Rock Port Industrial Park shall have building lines which shall be a minimum of 75 feet from the right-of-way of Fourche Dam Pike and Frazier Pike, 70 feet from the right of way of all other major streets and 50 feet from the right of way of all minor streets. The building line shall be a minimum of 30 feet from all other property lines except that one-half of any adjacent permanent open space or easement except public road retained by the Grantor for utility or other purposes or dedicated to the public shall be allowed as part of the required 30 foot building line requirements, however, truck docks must be so situated that trucks, tractors, or trailers, or any combination thereof may not, while being either loaded, unloaded or maneuvering, project on to the right-of-way of any street, alley, or open space bordering the property.

(6) SIGNS

Billboard posters and other advertising signs are prohibited except, however, signs which advertise the property owner's business or products may be erected with prior approval of the Grantor. Prior to the erection of such a sign as herein permitted, Grantor may erect a sign on the conveyed property identifying the purchased property as belonging to the Grantee.

(7) OUTSIDE STORAGE

In all areas, except area 300, of the Little Rock Industrial Park, as originally platted or subsequently replatted, no goods, equipment, supplies or other material shall be stored in the open except on the rear three-fourths (3/4) of said property.

(8) PARKING

It shall be the responsibility of the property owner to provide parking space for employees, customers, and visitors, and the public streets shall not be used for parking. The surface of all driveways and permanent parking areas shall be of concrete, asphalt or other bituminous material. It shall be Grantee's responsibility to extend driveways to existing or projected streets at no expense to Grantor, even though part of this construction is within the

street right-of-way. Construction of driveways connecting with existing or later developed streets in such a manner as to interfere with the normal drainage in the street to which the driveway is being connected is prohibited.

(9) LANDSCAPING AND UPKEEP OF PREMISES

Grantee agrees to landscape the portion of the property between the building or buildings and the curb line of any abutting streets, including any such property which may be in a street or utility right-of-way, and to remove undergrowth, weeds, debris, rubbish, trash, excess dirt and any other unsightly material from the remainder of the property at no expense to Grantor. The owner of said property shall keep the premises, buildings, and improvements in a safe, clean, healthful and presentable condition at all times and shall comply in all respects with all government health and police requirements pertaining thereto.

(10) SIZE OF BUILDINGS

No building or other structure shall be constructed or maintained which covers more than fifty percent (50%) of the total land area within the lot on which the structure is located.

(11) UTILITIES

Grantor agrees to provide in the easements or right-of-way adjoining Grantee's property paved street (s), water, power, gas, telephone and sanitary sewer services as approved in the original development plan for the property herein conveyed.

(12) DRAINAGE

Grantor agrees to provide drainage in the easement or streets adjoining Grantee's property.

(13) ENFORCEMENT OF RESTRICTIONS

The Grantor herein, its successors and assigns, or other property owners in the Little Rock Port Industrial Park subject to these covenants, may enforce these restrictions either by restraining order or may prosecute at law or in equity a suit for damages or any other remedy which they may have. Invalidation of any of the foregoing conditions, restrictions or covenants by a court of competent jurisdiction in no way affects any of the other provisions which shall remain in full force and affect.

(14) TERM AND AMENDMENT

(a) The restrictions, conditions, covenants, and provisions set forth herein shall be deemed covenants running with the land and shall remain in full force and effect as herein expressed until December 31, 1996 (the "initial term").

(b) After the initial term, the restrictions, conditions, covenants and provisions set forth in this Bill of Assurance shall automatically renew for successive periods of twenty-five (25) years each (the "renewal terms"), unless an instrument signed by the owners of at least fifty-one percent (51%) of the area of the land in the Little Rock Port Industrial Park (excluding any portions of the Port dedicated to the public) has been recorded which modifies or cancels said restrictions, conditions, covenants and provisions, in whole or in part, and such instrument is approved by the Little Rock Board of Directors.

LITTLE ROCK
PORT AUTHORITY

The Following Document is excerpted from the City of Little Rock Zoning Ordinance and Details I-3/Heavy Industrial Zoning Applicable in the Port of Little Rock.

7500 Lindsey Road • Little Rock, Arkansas 72206
(501) 490-1468 • Fax: (501) 490-1800 • E-mail: lrpa@gte.net

Sec. 36-321. **I-3 industrial district.**

(a) *Purpose and intent.* The I-3 heavy industrial district is designed to accommodate industrial uses which involve potentially objectionable uses and hazards, and which, therefor, cannot be reasonably expected to conform to a high level of performance standards, but which are essential to the economic viability of the city. This section applies to such district. It is the expressed purpose of this district on other uses by locating them in areas where the negative influences have least impact. The side and rear yard setbacks will be adjusted to accommodate those tracts of land provided with rail service.

(b) *Development criteria.* Unless otherwise specifically provided for in this section, the following development criteria shall apply to this district:

(1) Every use that is devoted to the collection storage, salvage, or scrapping of automobiles, trucks, buses, or other self-propelled vehicles shall provide on all sides of such operations an eight (8) foot opaque wall or fence. The fence or wall shall be constructed of wood or metal so as to preclude the passage of light or air.

(2) In addition to the screening requirements of (b)(1) of this section, all uses that stack or pile the chassis or bodies of vehicles shall be limited to a maximum stacking height of fifteen (15) feet at any point on the property. This measurement shall be from the uppermost point of the stack to ground elevation on any side.

(c) *Use regulations.*

(1) *Permitted uses.* The permitted uses in the I-3 heavy industrial district include (except for hotel or motel) those permitted uses found in the I-1 industrial park district or the I-2 light industrial district together with the following:

a. Agricultural products processing.
b. Bulk storage of highly flammable and/or hazardous materials. This use shall be permitted to be located by right on tracts of land larger than five (5) acres in area separated from residential zoned or used property by at least one thousand (1,000) feet, property line to property line, and providing a minimum of two hundred (200) feet of setback for storage facilities from all property lines.
c. Foundry and metalwork.
d. Grain elevator or feed mill.
e. Junk or salvage yard.
f. Railroad freight terminal.
g. Sand, gravel or earth sales and storage.
h. Recycling and reclamation.
i. Recycling facility (MRF) outside.
j. Sanitary landfill.
k. Sawmill.
l. Stable, commercial.
m. Tire retreading or recapping.

(2) *Conditional uses.* Conditional uses are as follows:

a. Bulk storage of highly flammable and/or hazardous materials that does not conform to the standards set forth within subsection (c)(1) of this section.
b. Day nursery or day care center.
c. Day care center, adult.
d. Hotel or motel.

e. Racetrack.
f. Rendering plant.
g. Slaughterhouse, open facility.
h. Stone, sand or gravel extraction.
i. Tannery.
j. Water or sewage treatment plant.
k. Other industrial uses not expressly provided for in the I-1 or I-2 districts unless otherwise prohibited by other city ordinance.
l. Hazardous or medical waste disposal facility.
m. Other conditional uses listed in the I-2 district.

(3) *Accessory uses.* Accessory uses are as follows:

a. Sleeping quarters for drivers or crew.
b. Vehicle maintenance or repair.

(d) *Height regulations.* No building hereafter erected or structurally altered shall exceed a height of sixty (60) feet.

(e) *Area regulations.*

(1) *Front yard.* There shall be a front yard having a depth of not less than fifty (50) feet to the front line of the building.

(2) *Side yard.* There shall be a side yard on each side of the building having a width of not less than thirty (30) feet.

(3) *Rear yard.* There shall be a rear yard having a depth of not less than twenty-five (25) feet from the lot line to the building.

(4) *Lot area regulations.* there shall be a lot area of not less than one (1) acre. In addition, there shall be a lot width of not less than one hundred fifty (150) feet and a lot depth of not less than two hundred fifty (250) feet.

(Code 1961, Ch. 43, § 7.104.3; Ord. No. 15,247, § 1, 2-17-87; Ord. No. 15,553, § 1p, 9-20-88; Ord. No. 15,832, § 1a, 4-3-90; Ord. No. 15,835, § 1a, c, 4-3-90; Ord. No. 16,116, § 1(oo), 11-19-91; Ord. No. 16,157, § 2, 1-21-92; Ord. No. 16,861, § 1(aa), 3-21-95; Ord. No. 17,305, § 1(i), (j), (cc), 11-7-96; Ord. No. 18,324, § 1(q), 8-1-00)

Entergy BUSINESS DEVELOPMENT ARKANSAS

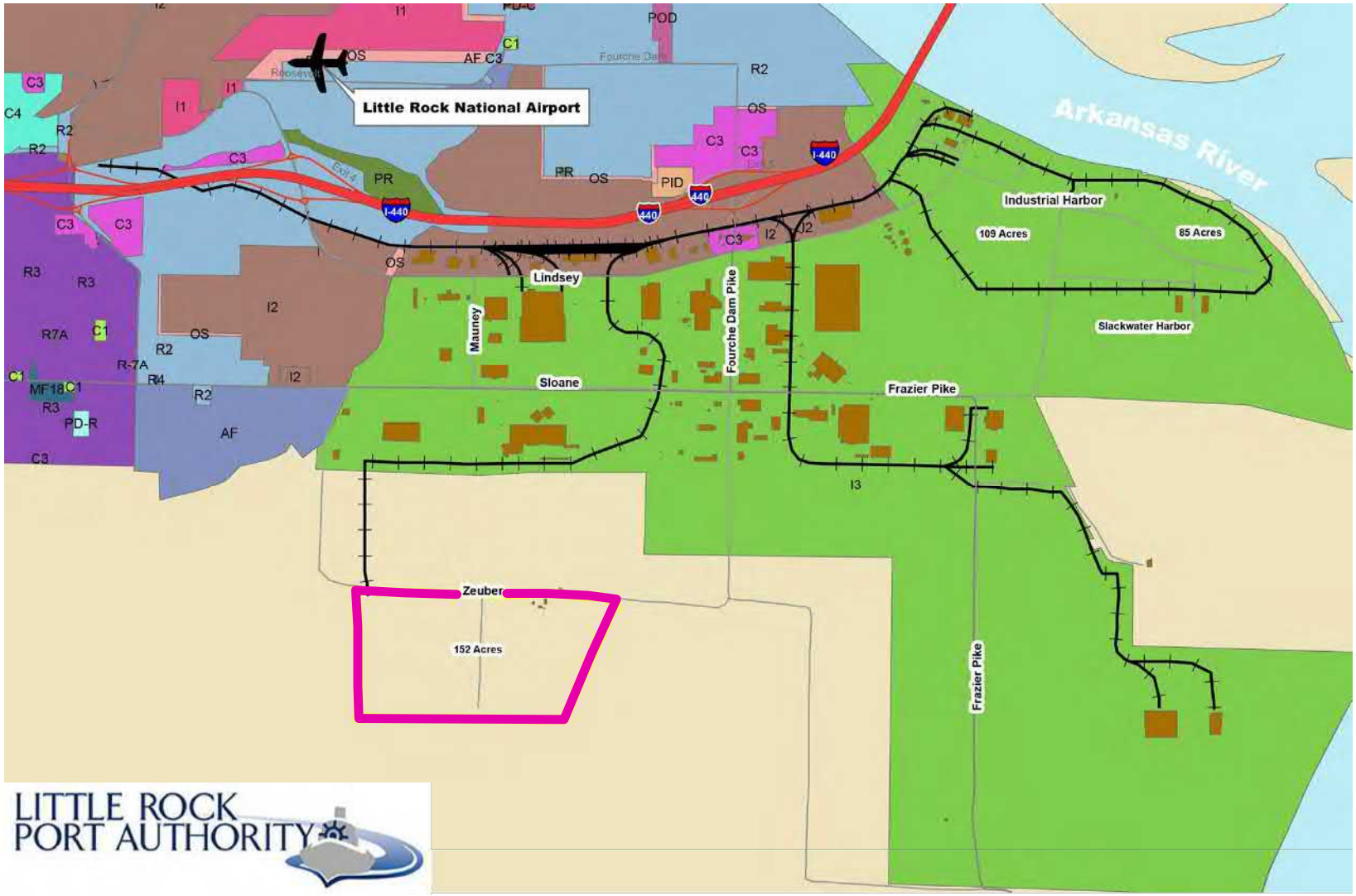
South Port Site

Zoning Map

425 West Capitol Avenue
P.O. Box 551
Little Rock, AR 72203

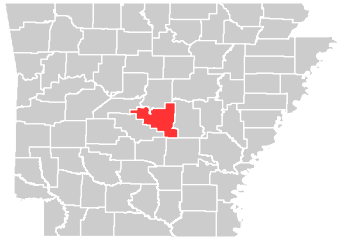
Phone: 1-800-729-7483
ared@entergy.com

goentergy.com/ark

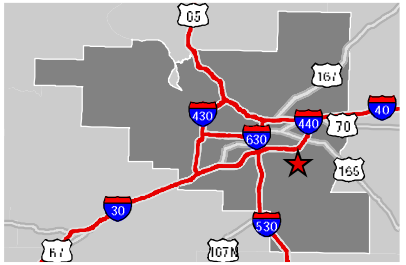


LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



VICINITY



LEGEND

Property Boundary

Existing Zoning
ZONING
AF, C1, C2, C3, C4, CAPA1, CAPA2, CAPB, CAPC, CAPD, CAPE, CAPM, CAPN, CAPO, I1, I2, I3, M, MF12, MF18, MF24, MF5, NC1, O1, O2, O3, OS, POD, PR, PRD, R-7A, R2, PD-C, PD-I, PD-O, PD-R, PID, POD, R3, R4, R4A, R5, R6, R7, R7A, UU, County: Heavy Industrial

NOTE

These drawings are provided merely to assist in economic development efforts. The Entergy Companies make no representations or warranties whatsoever regarding the accuracy or completeness of any information contained herein nor the condition or suitability of any properties. Users should direct inquiries about any property to the selling broker for that property.

SOURCE

Zoning Map from Little Rock Port Authority map of existing zoning for project submission. 3/2018.

N

Created by: RPG
Date: 3/2018

Utilities

Electric Utility:

Name of Utility:	Entergy Arkansas
Contact Person(s):	Joe Bailey or Chris Murphy
Address:	425 West Capitol Ave., Suite 2700
City, State, Zip:	Little Rock, AR 72201
Phone:	501-377-4089 or 501-377-4467
Fax:	501-377-4448
Email:	jbail12@entergy.com or cmurph4@entergy.com
Service and Proximity to Site:	A 115-kV transmission line is located along the eastern boundary of the site. In addition, a 50 MVA substation is located less than a mile from the site. Approximately 100 MW is available at the site.

Natural Gas Utility:

Name of Utility:	CenterPoint
Contact Person(s):	Chauncey Taylor
Address:	P.O. Box 751
City, State, Zip:	Little Rock, AR 72203
Phone:	501-377-4557
Fax:	501-377-4630
Email:	chauncey.taylor@centerpointenergy.com
Service and Proximity to Site:	A LDC main, 8-inch Steel pipeline is 1,000 feet north of the site with 150 psi and significant capacity. Additionally, there is an NGPL interstate pipeline along western edge that could be tapped.

Water Utility:

Name of Utility:	Central Arkansas Water
Contact Person(s):	Mr. Jim Ferguson
Address:	221 East Capitol
City, State, Zip:	Little Rock, AR, 72202
Phone:	501-377-1298
Fax:	501-376-3541
Email:	jim.ferguson@carkw.com
Service and Proximity to Site:	There is a 16-inch water line along northern boundary of the site. Average Static Pressure: 85 psi Maximum Pressure: 107 psi Available Consumption: 2 MGD with a minimum residual pressure of 73 psi at this demand

Utilities

Sewer:

Name of Utility:	Little Rock Water Reclamation Authority
Contact Person(s):	Ms. Jamie Wig
Address:	11 Clearwater Drive
City, State, Zip:	Little Rock, AR 72204
Phone:	501 – 688-1486
Fax:	501-376-3571
Email:	Jamie.Ewing@lrwra.com
Service and Proximity to Site:	There is a 30-inch force main along the entire north boundary of the site. The total design flow at the Fourche Water Reclamation Facility is 16 MGD and based on the system capacity and infrastructure, up to 1.0 MGD would be available for the South Port Site.

Telecommunications:

Name of Utility:	AT&T
Contact Person(s):	Ms. Melinda Faubel
Address:	1111 W. Capitol, Room 1070
City, State, Zip:	Little Rock, AR, 72201
Phone:	501-373-3330
Fax:	
Email:	melinda.faubel@att.com
Service and Proximity to Site:	AT&T's existing network in the area of the subject property consists of fiber and copper facilities. AT&T network in this area can be expanded to provide a full range of AT&T Voice and Data products via fiber or copper solutions. The site is served by a fiber optic ring.

Rail:

Name of Utility:	Little Rock Port Authority Railroad
Contact Person(s):	Mr. Bryan Day
Address:	10600 Industrial Harbor Drive
City, State, Zip:	Little Rock, AR, 72206
Phone:	501-490-1468
Fax:	
Email:	bday@lrportauthority.com
Service and Proximity to Site:	The Little Rock Port Authority railroad is 1,000 feet north of the site. The railroad connects to two Class I railroads: UP & BNSF.

Taxes

Local Sales Tax Rates: City of Little Rock sales tax is 1.5%; Pulaski County sales tax is 1%. Site is currently outside of the city limits.

Property Tax Rates (Real, Personal) and Methods of Assessment: Current tax millage rate in the county is 0.0508 or 50.8 mills. Property tax rate on both real and personal property is $50.8 per 1,000 value. The assessed value in Arkansas is equal to 20% of appraised value.

Upon annexation to the city, tax millage is 0.07 or 70 mills. Property tax rate on both real and personal property is $70 per 1,000 value. The assessed value in Arkansas is equal to 20% of appraised value.

State Taxation Summary: See attachment T-1 for detail.

as of August 2018

State of Arkansas Taxation Summary

Corporate Income Tax

Taxable income is apportioned according to a three-factor formula (property (25%), payrolls (25%) and sales (50%) attributed to Arkansas with a double-weighted sales factor. Corporate income tax is levied statewide only; not on the local level.

Taxable Income	Tax Rate
First $3,000	1%
Next $3,000	2%
Next $5,000	3%
Next $14,000	5%
Next $75,000	6%
Over $100,000	6.5%

Personal Income Tax

2018 (Personal income tax is levied statewide only; not on the local level)

For Incomes less than $21,000 per year

Taxable Income	Tax Rate
$0 - $4,299	0.9%
$4,300 – $8,399	2.4%
$8,400 - $ 12,599	3.4%
$12,600 - $20,999	4.4%

For incomes between $21,000 and $75,000

Taxable Income	Tax Rate
$0 - $4,299	0.9%
$4,300 - $8,399	2.5%

$8,400 - $12,599	3.5%
$12,600 - $20,999	4.5%
$21,000 - $35,099	5.0%
$35,100 - $75,000	6.0%

For incomes more than $75,000

Taxable Income	Tax Rate
$0 - $4,299	0.9%
$4,300 - $8,399	2.5%
$8,400 - $12,599	3.5%
$12,600 - $20,999	4.5%
$21,000 - $35,099	5.0%
$35,100 - $75,000	6.0%
$35,100 and above	6.9%

Incomes between $75,000 and $80,000 shall reduce the amount of income tax due by deducting bracket adjustment as set forth below

Taxable Income	Tax Rate
$75,001 - $76,000	$440
$76,001 - $77,000	$340
$77,001 - $78,000	$240
$78,001 - $79,000	$140
$79,001 - $80,000	$ 40
$80,001and above	$ 0

Federal Insurance Contributions Act (FICA)

The Federal Insurance Contributions Act (FICA) tax includes two separate taxes. One is social security tax and the other is Medicare tax. Different rates apply for each of these taxes.

The current tax rate for social security is 6.2% for the employer and 6.2% for the employee, or 12.4% total. The current rate for Medicare is 1.45% for the employer and 1.45% for the employee, or 2.9% total.

Only the social security tax has a wage base limit. The wage base limit is the maximum wage that is subject to the tax for that year. For earnings in 2018, this base is $128,400. There is no wage base limit for Medicare tax. All covered wages are subject to Medicare tax.

Additional Medicare Tax are applied to an individual's Medicare wages that exceed a threshold amount based on the taxpayer's filing status. Employers are responsible for withholding the 0.9% Additional Medicare Tax on an individual's wages paid in excess of $200,000 in a calendar year, without regard to filing status. An employer is required to begin withholding Additional Medicare Tax in the pay period in which it pays wages in excess of $200,000 to an employee and continue to withhold it each pay period until the end of the calendar year. There is no employer match for Additional Medicare Tax.

Corporate Franchise Tax

The chart below lists the franchise tax rates for various entities under Arkansas Code 26-54-104.

Franchise Tax Type	Current Rate
Corporation/Bank with Stock	0.3% of the outstanding capital stock; $150 minimum
Corporation/Bank without Stock	$300
Limited Liability Company	$150
Insurance Corporation Legal Reserve Mutual, Assets Less Than $100 million	$300
Insurance Corporation Legal Reserve Mutual, Assets Greater Than $100 million	$400
Insurance Company Outstanding Capital Stock Less Than $500,000	$300
Insurance Company Outstanding Capital Stock Greater Than $500,000	$400
Mortgage Loan Corporation	0.3% of the outstanding capital stock; $300 minimum
Mutual Assessment Insurance Corporation	$300

Sales Tax

The Arkansas sales tax is 6.5% of the gross receipts from the sales of tangible personal property and certain selected services. “Sale” includes the lease or rental of tangible personal property. In addition to the state sales and use tax, local sales and use taxes may be levied by each city or county. However, businesses may apply to the Arkansas Department of Finance and Administration for a refund of local taxes. “Single transaction” means any sale of tangible personal property or taxable service reflected in a single invoice, receipt or statement for which an aggregate sales or use tax amount has been reported or remitted to the state for a single, local taxing jurisdiction. These taxes are collected by the state and distributed to the cities and counties each month.

Sales Tax Exemptions – Sales Tax Savings

Exemptions from sales and use taxes for manufacturers are as follows:

- Property which becomes a recognizable, integral part of property manufactured, compounded, processed, or assembled for resale.
- Machinery and equipment used directly in manufacturing which are purchased for a new or expanding manufacturing facility or to replace existing machinery or equipment
- Machinery and equipment required by Arkansas law to be purchased for air or water pollution control

The value of this statutory exemption depends on the amount of eligible expenditures as determined by the Arkansas Department of Finance and Administration.

Sales and Use Tax Reduction on Electricity and Natural Gas

The State of Arkansas has a reduced 0.625% on electricity and natural gas used directly in the manufacturing process. For purposes of determining what utility usage is subject to this reduced rate, the manufacturing process includes processes beginning at the point where raw materials are first moved from raw material storage to the beginning of manufacturing or processing of those raw materials into items of tangible personal property and ends when the finished manufactured goods are packaged and ready for shipment or storage.

Sales and Use Tax Refund – Replacement and Repair

Effective July 1, 2014, state sales and use taxes relating to the partial replacement and repair of machinery and equipment used directly in manufacturing process may be refunded. Manufacturers may utilize one of two of the options presented below:

Option One:

- Provides a refund of one percent (1%) of the total sales and use taxes (5.875* percent) levied for the purchase and installation of machinery and equipment to modify, replace or repair, either in whole or part, existing machinery or equipment used directly in the manufacturing process.

Effective Date	Option 1 Percentage
July 1, 2014	1%
July 1, 2018	2%
July 1, 2019	3%
July 1, 2020	4%
July 1, 2021	5%
July 1, 2022	Full exemption of state sales and use taxes

Option Two:

- Provides for an increased refund of the total sales and use taxes (5.875* percent) levied. It is discretionary and may be offered by the Executive Director of AEDC to those manufacturers who have a major maintenance and improvement project totaling at least $3 million to purchase and install machinery or equipment used directly in the manufacturing process. The project is subject to approval and the Company must enter into a financial incentive agreement with AEDC for the project prior to incurring project expenditures.

*The excise tax of one-eighth of one percent (1/8 of 1%) levied in Arkansas Constitution, Amendment 75, and the temporary excise tax of one-half percent (0.5%) levied in Arkansas Constitution Amendment 91, are not subject to refund under this section.

Unemployment Insurance Tax

New Businesses

A business with no previous employment record in Arkansas is taxed at 3.2% on the first $10,000 of each employee's earnings until an employment record is established, usually within three years.

Existing Arkansas Businesses

2018 Experience-Based Rate range between 0.4% - 14.3% and averages 3.1%. Each business' employment record is determined primarily by its taxable payroll and history of employee voluntary termination. The tax is determined by past experience and the amount of the reserve-ratio. The reserve-ratio is the excess of contributions paid over benefits charged as related to payroll. The higher the reserve-ratio, the lower the tax rate. Currently, the maximum weekly benefit in Arkansas is $451.

Federal Unemployment Tax (FUTA)

Aside from state unemployment insurance taxes, employers pay a federal unemployment or FUTA tax. The FUTA tax rate is 6.0% with a taxable wage base of $7,000. However, if states operate their unemployment insurance programs in compliance with federal law then the FUTA tax is reduced (credit) by 5.4% to 0.6%.

Property Tax

The State of Arkansas does not have a property tax; however, Arkansas cities and counties do collect a property tax, which is the principal source of revenue for funding local public schools.

The tax is calculated based on 20 percent of the true market value of real and to the usual selling price of personal property (vehicles, boats, etc.) and the average annual value of merchants' stocks and/or manufacturers' inventories based on millage rates in individual school districts. Business firms and individuals are subject to annual property tax on all real and personal property.

Local county tax assessors and collectors calculate and collect all personal and real property taxes. Revenue derived from personal property taxes supports your local government agencies. Personal property must be assessed each year before May 31. Any personal property taxes assessed after the deadline will include a monetary penalty determined by the respective county. These taxes are due on or before October 15 of the following year.

Real Property Option (Using Arkansas Average Millage Rate as an Example):

Total Market Value		*Assessment Level*		*Assessed Value*
$4,000,000	x	20%	=	$800,000

Assessed Value		*Millage Rate*		*Annual Property Tax Due*
$800,000	x	.04748	=	$37,984

Please note: Corporate personal property taxes (equipment, office furniture, etc.) follow a depreciation schedule for each type of property. The schedule below (with exceptions dependent on the area) is issued by each County Assessor's Office in Arkansas.

COMMERCIAL PERSONAL PROPERTY
Depreciation Schedule

Remaining Life Percent

Schedule Age	3	5	6	8	10	12	16	20	25	30	Schedule Age
1	.55	.73	.78	.87	.89	.91	.93	.94	.96	.96	**1**
2	.30	.53	.60	.71	.82	.85	.88	.88	.91	.93	**2**
3	.10	.39	.48	.59	.75	.79	.84	.85	.87	.89	**3**
4		.24	.35	.50	.68	.73	.79	.81	.84	.87	**4**
5		.10	.23	.42	.61	.67	.75	.78	.81	.84	**5**
6			.10	.33	.53	.61	.70	.74	.79	.82	**6**
7				.24	.46	.55	.66	.71	.76	.80	**7**
8				.15	.39	.49	.61	.67	.73	.77	**8**
9					.32	.43	.57	.64	.70	.75	**9**
10					.25	.37	.52	.60	.67	.73	**10**
11						.31	.48	.57	.64	.70	**11**
12						.25	.43	.53	.62	.68	**12**
13							.39	.50	.59	.65	**13**
14							.34	.46	.56	.63	**14**
15							.30	.43	.53	.61	**15**
16							.25	.39	.50	.58	**16**
17								.36	.48	.56	**17**
18								.32	.45	.53	**18**
19								.29	.42	.51	**19**
20								.25	.39	.49	**20**
21									.36	.46	**21**
22									.33	.44	**22**
23									.31	.42	**23**
24									.28	.39	**24**
25									.25	.37	**25**
26										.34	**26**
27										.32	**27**
28										.30	**28**
29										.27	**29**
30										.25	**30**

Industrial revenue bond financing is available to a company in Arkansas for land acquisition, building acquisition, construction and equipment. Bonds can be issued either taxable or tax exempt, depending on certain IRS qualifications and restrictions.

The Arkansas Economic Development Commission Bond Guaranty Program was created to provide long-term, tax exempt and taxable financing for businesses expanding or locating in Arkansas. Although the city or county may issue the revenue bond, the company is still responsible for paying the principal and interest.

Under this program, the Commission can guarantee timely payment of principal and interest, up to $5,000,000 principal per bond issue, to the bondholders. This guaranty gives the bonds a better rating, thereby making the bond more attractive to investors and reducing the company's cost to borrow money.

An additional benefit of bond financing is:

Cities and counties are authorized to enter into a Payment in Lieu of Tax (PILOT) Agreement with industrial projects resulting in a reduction of property taxes that would otherwise be due. Industrial Revenue Bonds are issued by the city or county on behalf of the project. Under PILOT agreements, title to the property is held in name only by the public issuer for the term of the bond issue. At the end of the bond term, title will transfer to the company. The amount of the payment in lieu of taxes must not be not less than 35% of what normal taxes would have been. The PILOT Agreement may not last longer than the term of the bond.

Inventory Tax

All real estate and tangible personal property (inventory) shall be assessed for taxation in the taxing district in which the property is located and kept in use.

If destination of a company's tangible personal property (inventory) is within the state, taxes will be assessed at its prior year's value only in the county/city of its destination.

Freeport Law

If destination of a company's tangible personal property (inventory) is out of state, the following statement applies:

Arkansas' Freeport Law exempts from property tax those finished goods and raw materials in transit or awaiting shipment to out-of-state customers.

Workers' Compensation Rate for the Manufacturing Sector

2018

Type of Rate	Rate per $100 payroll
Assigned Risk	$2.06
Advisory Loss Cost	$1.02

Source: NCCI July 2018 Arkansas Manufacturing Rates

The assigned risk rate is based on the inability for companies to obtain their own insurance, while the loss cost is for companies which are self-insured.

Maps

The following maps are provided:

- Regional Map
- Transportation, Regional
- City Boundaries
- Transportation, Immediate
- Aerial
- Topographic
- Elevation Contours
- FEMA Flood Hazard
- USDA Soils
- National Wetlands Inventory
- Pipeline Infrastructure
- Electrical Infrastructure
- Surrounding Uses
- Zoning

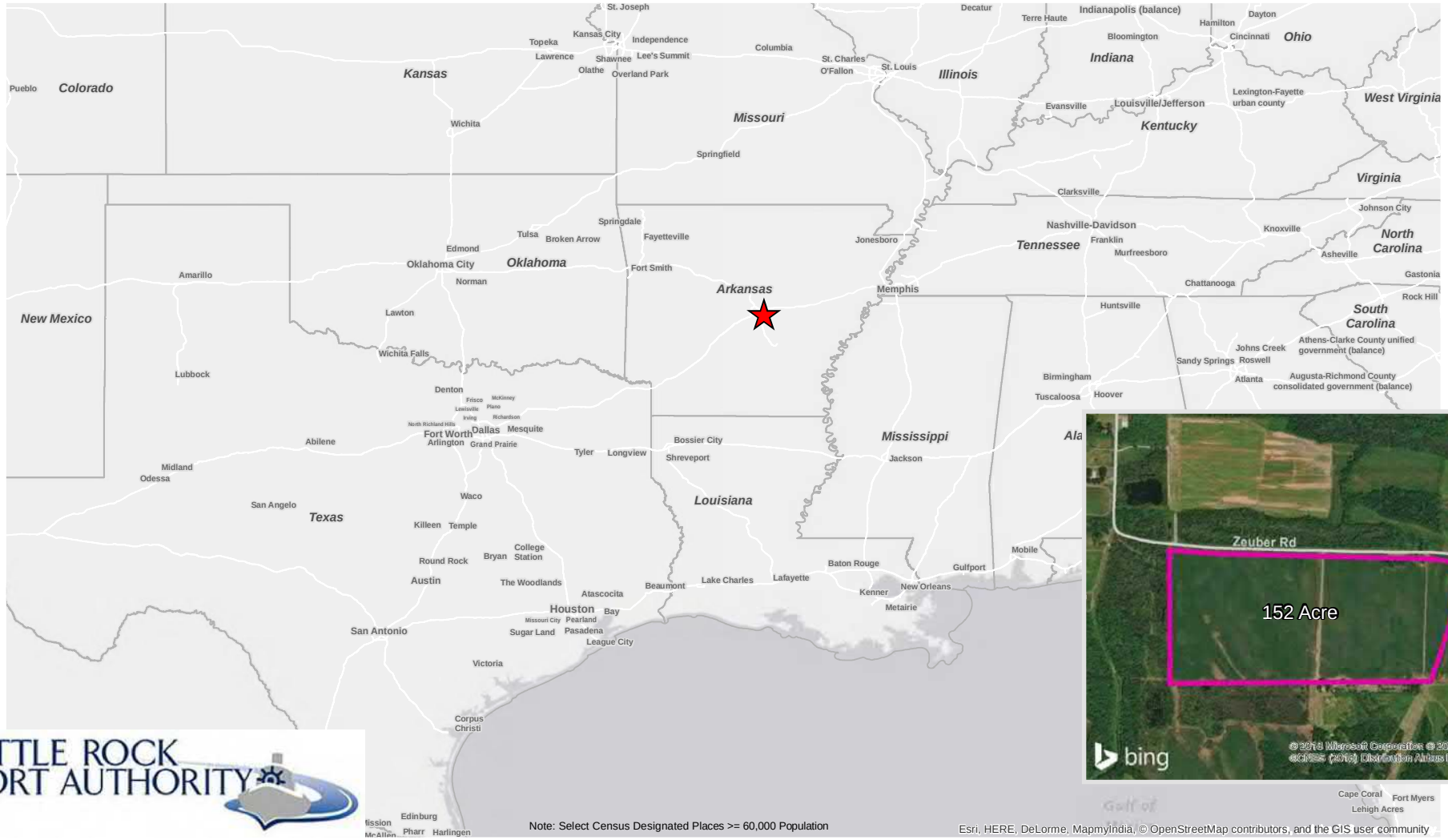
Little Rock South Port Site

Pulaski County, AR

425 West Capital Ave Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

goentergy.com/ar



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Little Rock South Port Site

Transportation, Regional

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

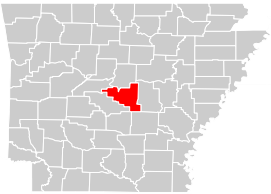
Phone: 1-888-301-5861

goentergy.com/ar

LITTLE ROCK PORT AUTHORITY

The Port of Little Rock is a unique intermodal transportation center. It is located approximately seven miles east of downtown Little Rock along the banks of the Arkansas River. The Port is adjacent to I-440 which connects I-30 and I-40. The Port is also less than one mile from the Bill and Hillary Clinton National Airport.

PULASKI COUNTY



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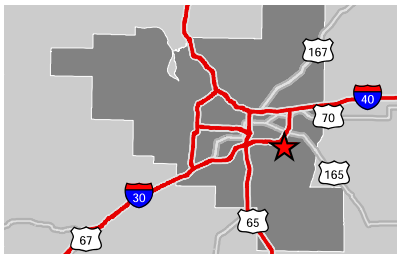

LEGEND

- Site
- Port
- Airports
- Railroads

Highways

- Interstate
- U.S.

NOTE

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SOURCE

Source:
- ESRI Basemaps; ESRI Datamaps 10.2; Census Tiger, 2014

Date: 10/9/2018

0 10 20 Miles

0 12.5 25 Kilometers

N

Entergy | BUSINESS DEVELOPMENT | ARKANSAS

Little Rock South Port Site

City Boundaries

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

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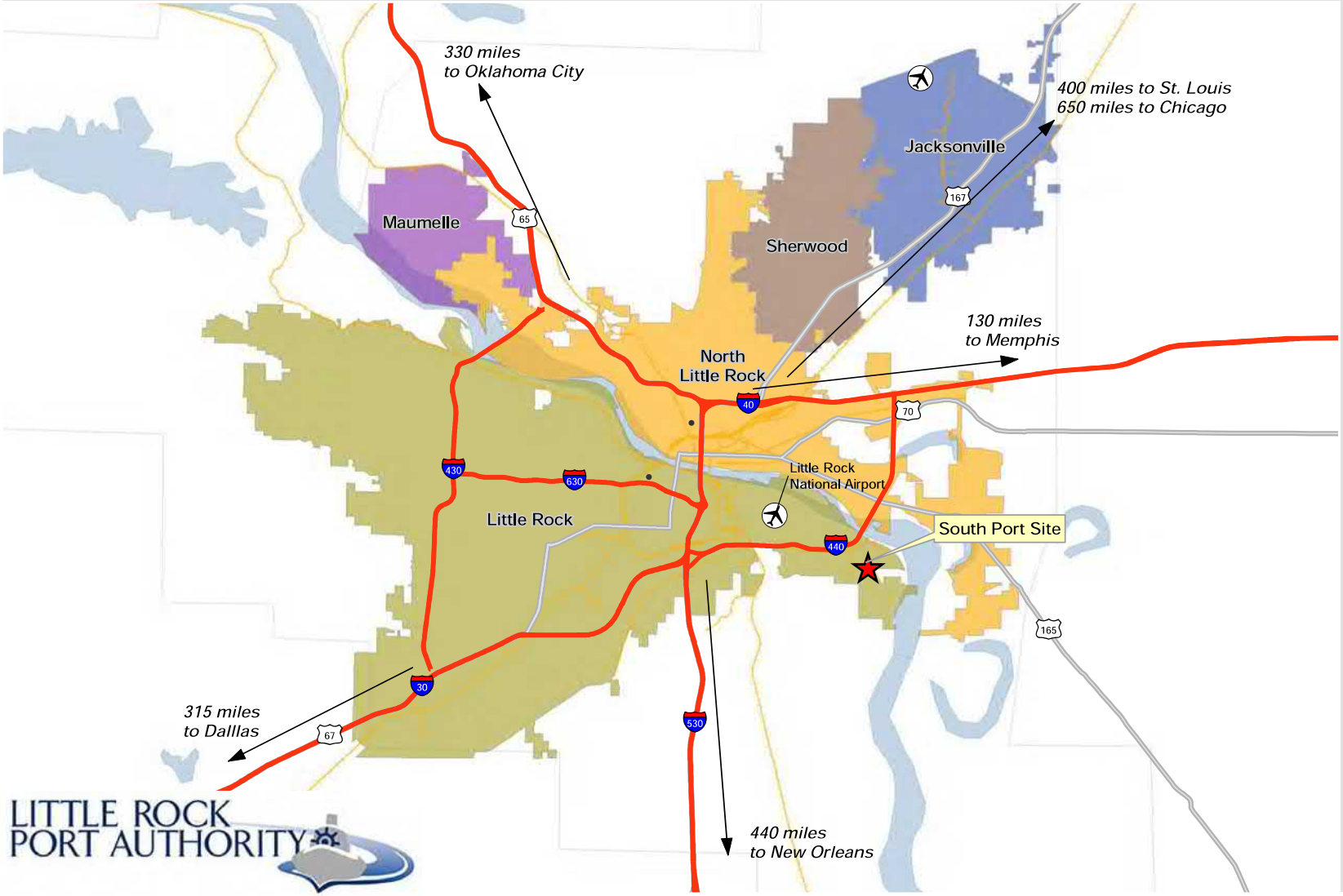
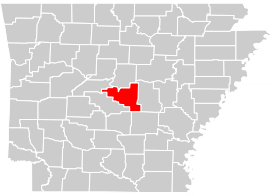


LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



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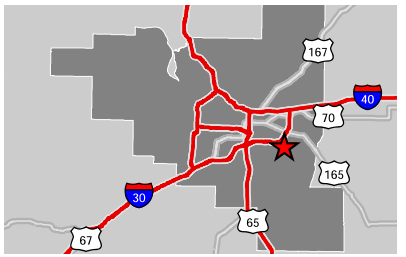

LEGEND

- Airports
- Highways
  - Interstate
  - U.S.
- Site
- Railroads

City Boundaries
- Jacksonville
- Little Rock
- Maumelle
- North Little Rock
- Sherwood

NOTE

SOURCE

Source:
- ESRI Basemaps; ESRI Datamaps 10.2; Census Tiger, 2014

Created by: RPG
Date 3/2018

0 3 6 Miles

0 3.8 7.6 Kilometers

N

Entergy | BUSINESS DEVELOPMENT | ARKANSAS

Little Rock South Port Site

Transportation, Immediate Vicinity

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

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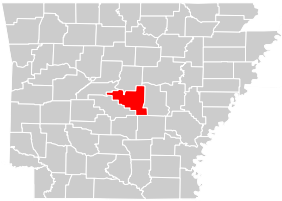
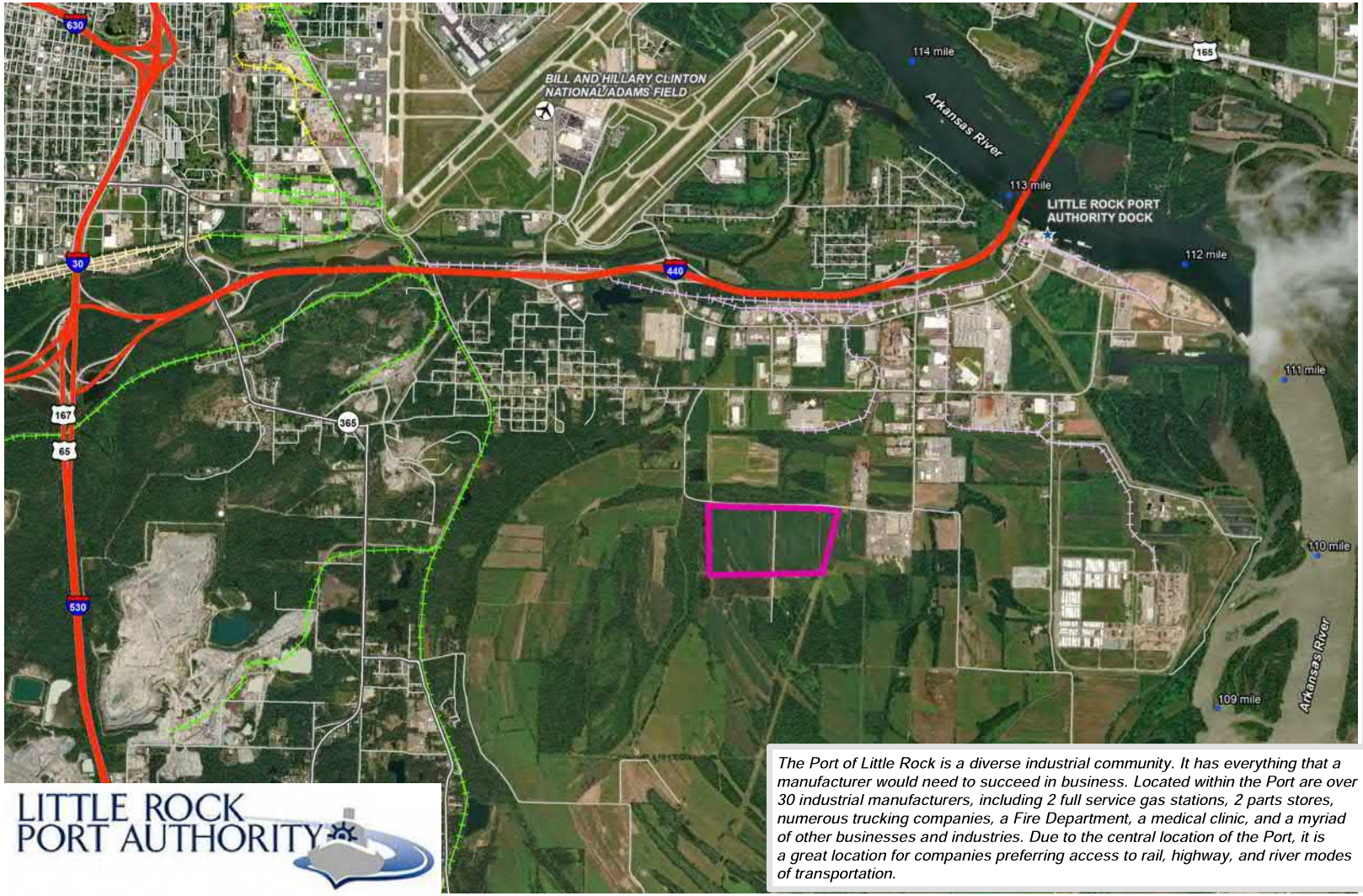
PULASKI COUNTY

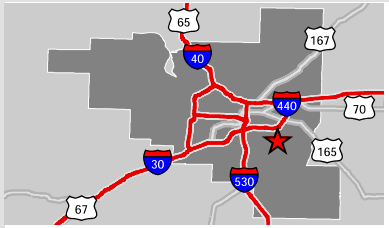




LITTLE ROCK PORT AUTHORITY

The Port of Little Rock is a diverse industrial community. It has everything that a manufacturer would need to succeed in business. Located within the Port are over 30 industrial manufacturers, including 2 full service gas stations, 2 parts stores, numerous trucking companies, a Fire Department, a medical clinic, and a myriad of other businesses and industries. Due to the central location of the Port, it is a great location for companies preferring access to rail, highway, and river modes of transportation.

VICINITY



LEGEND

- Property Boundary
- Commercial & Public Airports
- Ports
- River Mile Markers

Railroads

- Arkansas Midland RR - AKMD
- Little Rock & Western Rwy - LRWN
- Little Rock Port RR - LRPA
- Union Pacific RR - UP

NOTE

SOURCE

Source: Census Tiger Data, 2014; LOSCO Environmental Baseline Inventory Dataset 'U.S. Navigated Waterway Mile Marker Locations from USCOE source data, Geographic NAD83, LOSCO (2000); Bureau of Transportation Statistics, 2014; US Army Corps of Engineers

Created by: PW/RPG
Date: 05/2017

0 1,500 3,000 6,000 Feet

0 720 1,440 Meters

N

Entergy | BUSINESS DEVELOPMENT ARKANSAS

Little Rock South Port Site

Aerial Site Map

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

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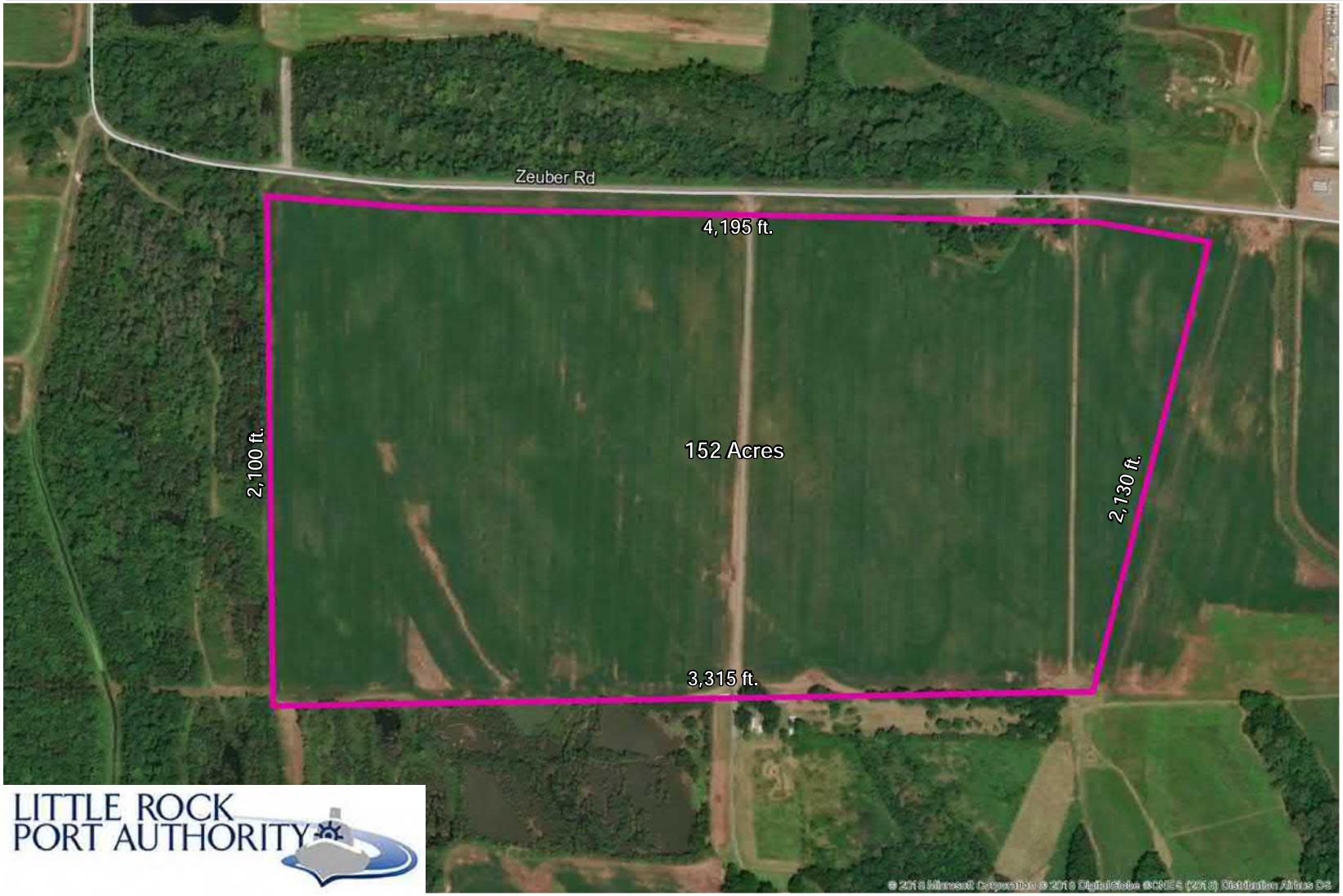
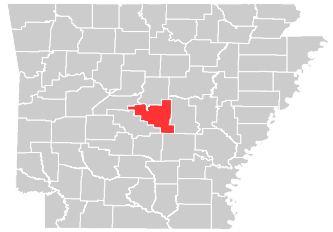


LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



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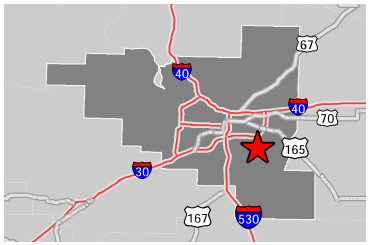

LEGEND

PropertyBoundary

NOTE

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SOURCE

Source:
- Aerial Imagery by Bing Maps

Date: 10/9/2018

0 200 400 800 Feet

0 48 96 192 Meters

N

Entergy | BUSINESS DEVELOPMENT | ARKANSAS

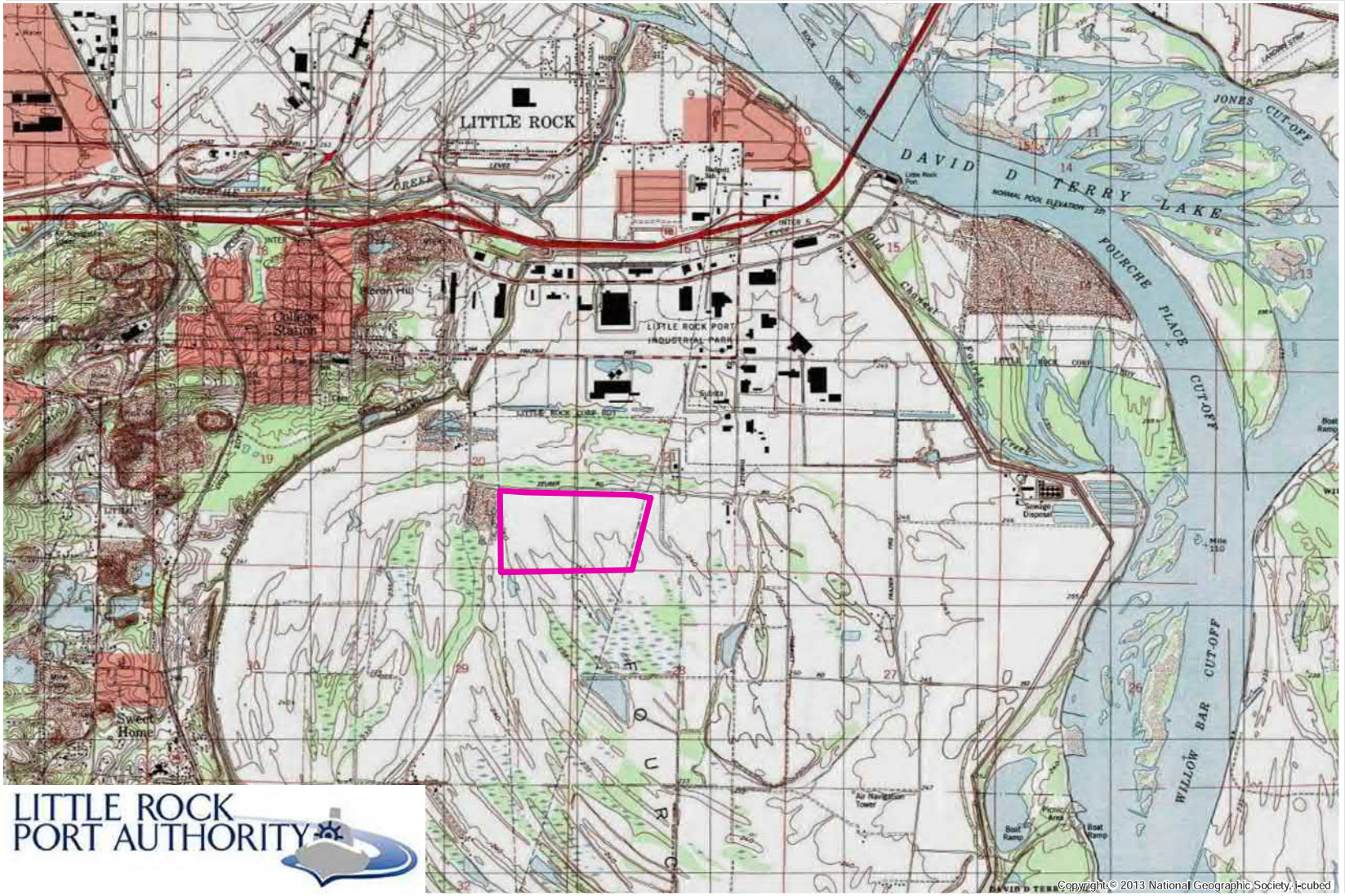
Little Rock South Port Site

Topographic Image

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

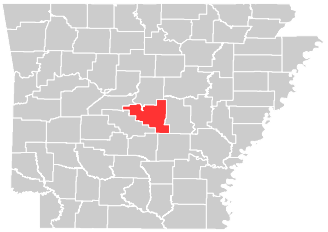
Phone: 1-888-301-5861

goentergy.com/ar



LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



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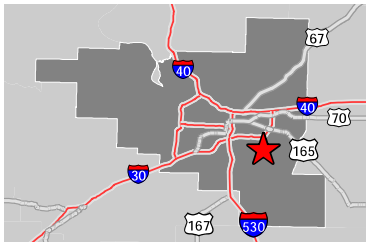


LEGEND

Property Boundary

NOTE

These drawings are provided merely to assist in economic development efforts. The Entergy Companies make no representations or warranties whatsoever regarding the accuracy or completeness of any information contained herein nor the condition or suitability of any properties. Users should direct inquiries about any property to the listing broker for that property.

SOURCE

Source:
- Aerial Imagery by USGS/USA Topo Maps

Date: 10/9/2018

0 2,500 5,000 Feet

0 600 1,200 Meters

N

Entergy | BUSINESS DEVELOPMENT | ARKANSAS

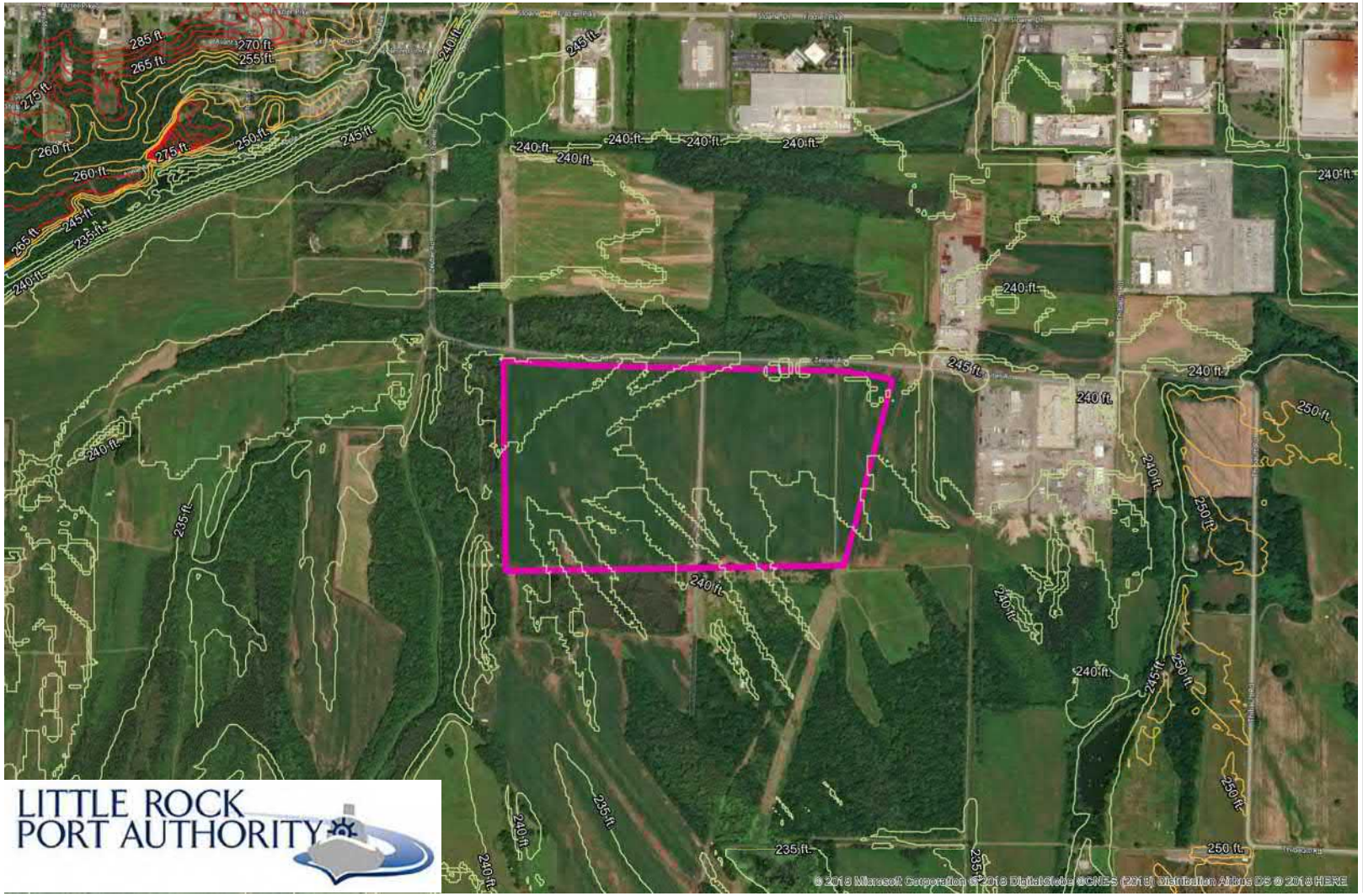
Little Rock South Port Site

Elevation Contours

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

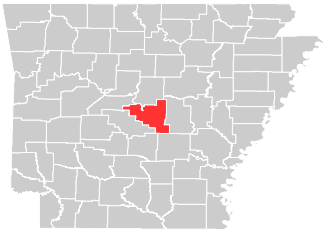
Phone: 1-888-301-5861

goentergy.com/ar



LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



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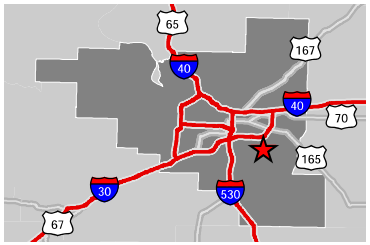


LEGEND

Property Boundary

Elevation (ft.)

231 - 245

246 - 260

261 - 285

NOTE

These drawings are provided merely to assist in economic development efforts. The Entergy Companies make no representations or warranties whatsoever regarding the accuracy or completeness of any information contained herein nor the condition or suitability of any properties. Users should direct inquiries about any property to the listing broker for that property.

SOURCE

Source: Elevation contours derived from DEM data from USDA/NRCS - National Geospatial Center of Excellence

Created by: RPG
Date: 5/2017

0 1,000 2,000 Feet

0 240 480 Meters

N

Entergy | BUSINESS DEVELOPMENT ARKANSAS

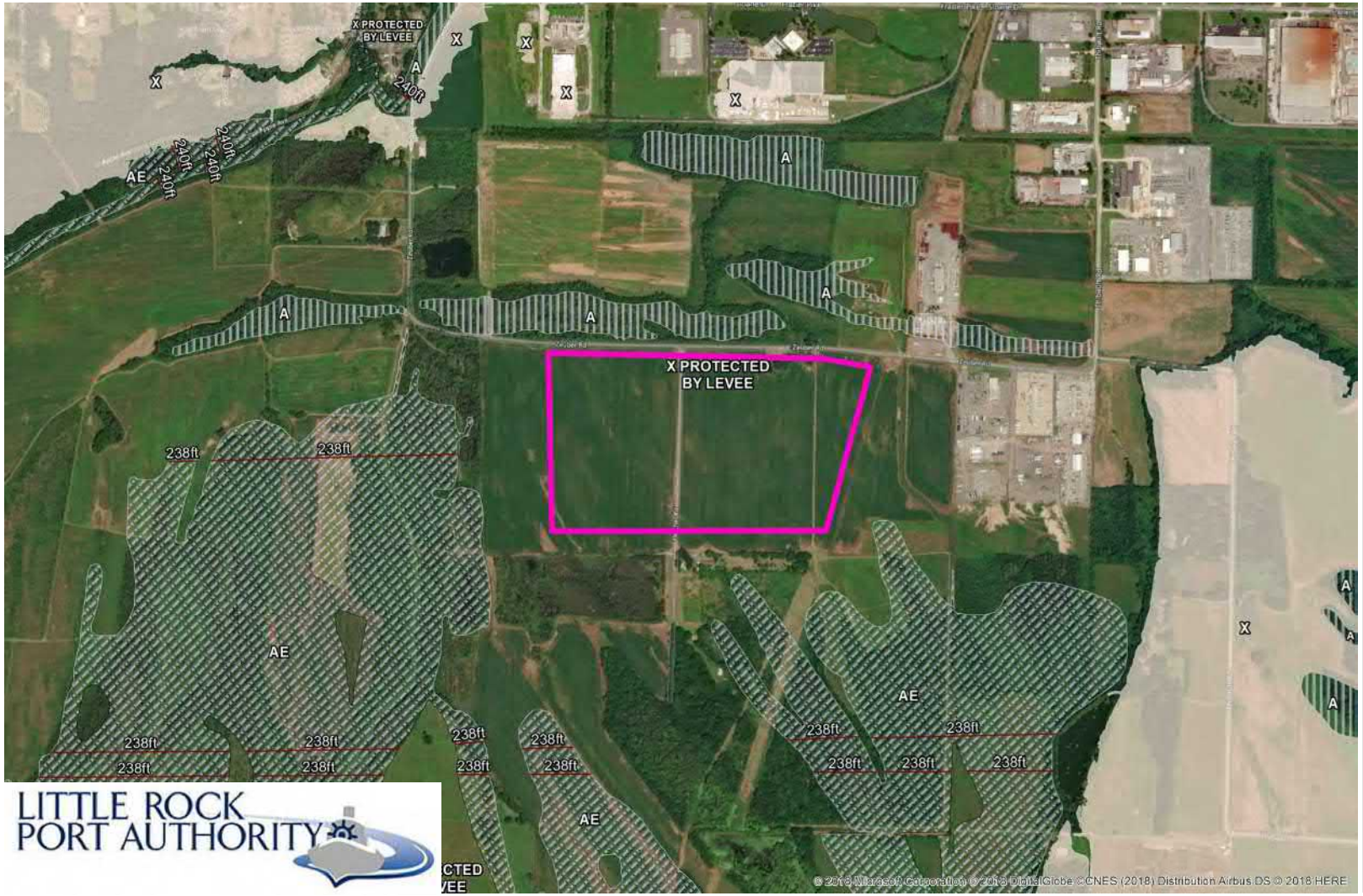
Little Rock South Port Site

FEMA Flood Hazard

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

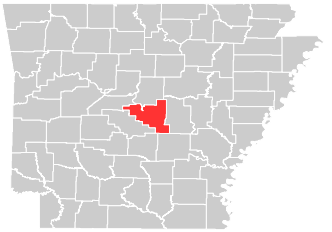
Phone: 1-888-301-5861

goentergy.com/ar



LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



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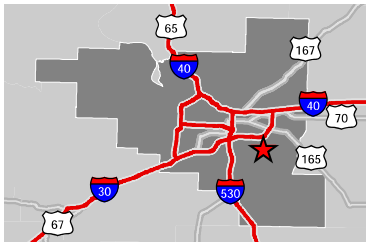


LEGEND

- Property Boundary
- Base Flood Elev

Flood Hazard

- A
- AE
- X
- X Protected by Levee

NOTE

These drawings are provided merely to assist in economic development efforts. The Entergy Companies make no representations or warranties whatsoever regarding the accuracy or completeness of any information contained herein nor the condition or suitability of any properties. Users should direct inquiries about any property to the listing broker for that property.

SOURCE

Source: Federal Emergency Management Agency, Published Date: 07/2014

Created by: RPG
Date: 5/2017

0 500 1,000 2,000 Feet

0 240 480 Meters

N

Entergy BUSINESS DEVELOPMENT ARKANSAS

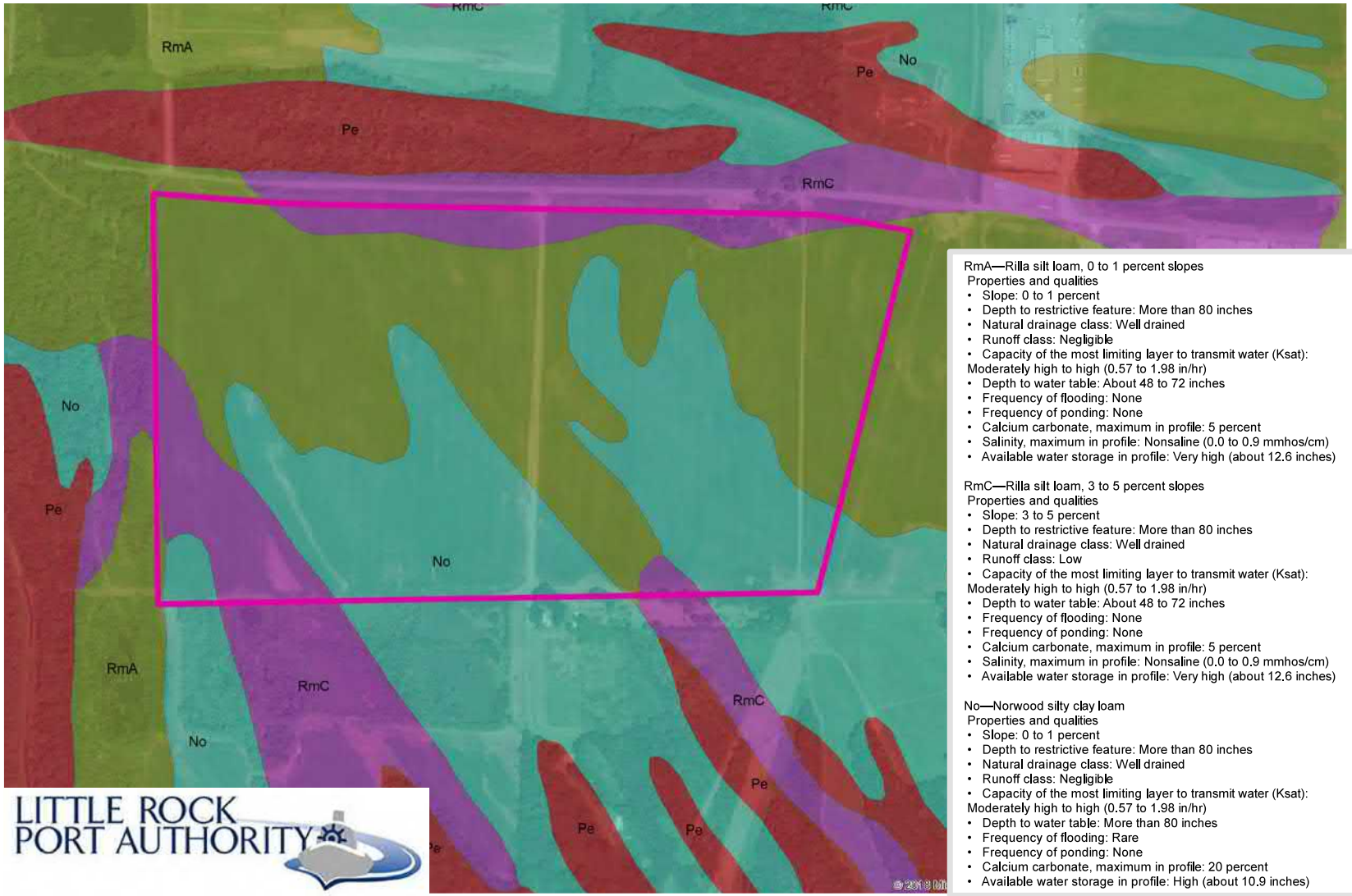
Little Rock South Port Site

USDA Soils Survey

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

goentergy.com/ar



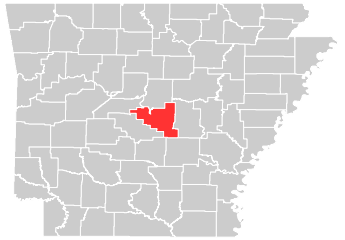
RmA—Rilla silt loam, 0 to 1 percent slopes
Properties and qualities
- Slope: 0 to 1 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Well drained
- Runoff class: Negligible
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: About 48 to 72 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum in profile: 5 percent
- Salinity, maximum in profile: Nonsaline (0.0 to 0.9 mmhos/cm)
- Available water storage in profile: Very high (about 12.6 inches)

RmC—Rilla silt loam, 3 to 5 percent slopes
Properties and qualities
- Slope: 3 to 5 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Well drained
- Runoff class: Low
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: About 48 to 72 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum in profile: 5 percent
- Salinity, maximum in profile: Nonsaline (0.0 to 0.9 mmhos/cm)
- Available water storage in profile: Very high (about 12.6 inches)

No—Norwood silty clay loam
Properties and qualities
- Slope: 0 to 1 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Well drained
- Runoff class: Negligible
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: Rare
- Frequency of ponding: None
- Calcium carbonate, maximum in profile: 20 percent
- Available water storage in profile: High (about 10.9 inches)

LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



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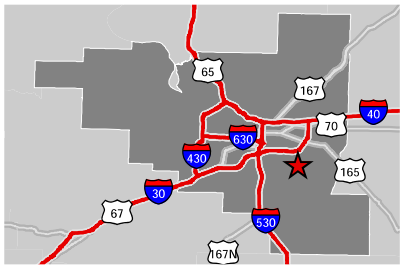


LEGEND

- Property Boundary

Soil Classification
- No
- Pe
- RmA
- RmC
- W

NOTE

These drawings are provided merely to assist in economic development efforts. The Entergy Companies make no representations or warranties whatsoever regarding the accuracy or completeness of any information contained herein nor the condition or suitability of any properties. Users should direct inquiries about any property to the listing broker for that property.

SOURCE

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at https://websoilsurvey.nrcs.usda.gov/. Accessed 3/13/2018.

N

Created by: RPG
Date: 3/2018

1:6,000

0 500 1,000 Feet

0 60 120 240 Meters

Entergy BUSINESS DEVELOPMENT ARKANSAS

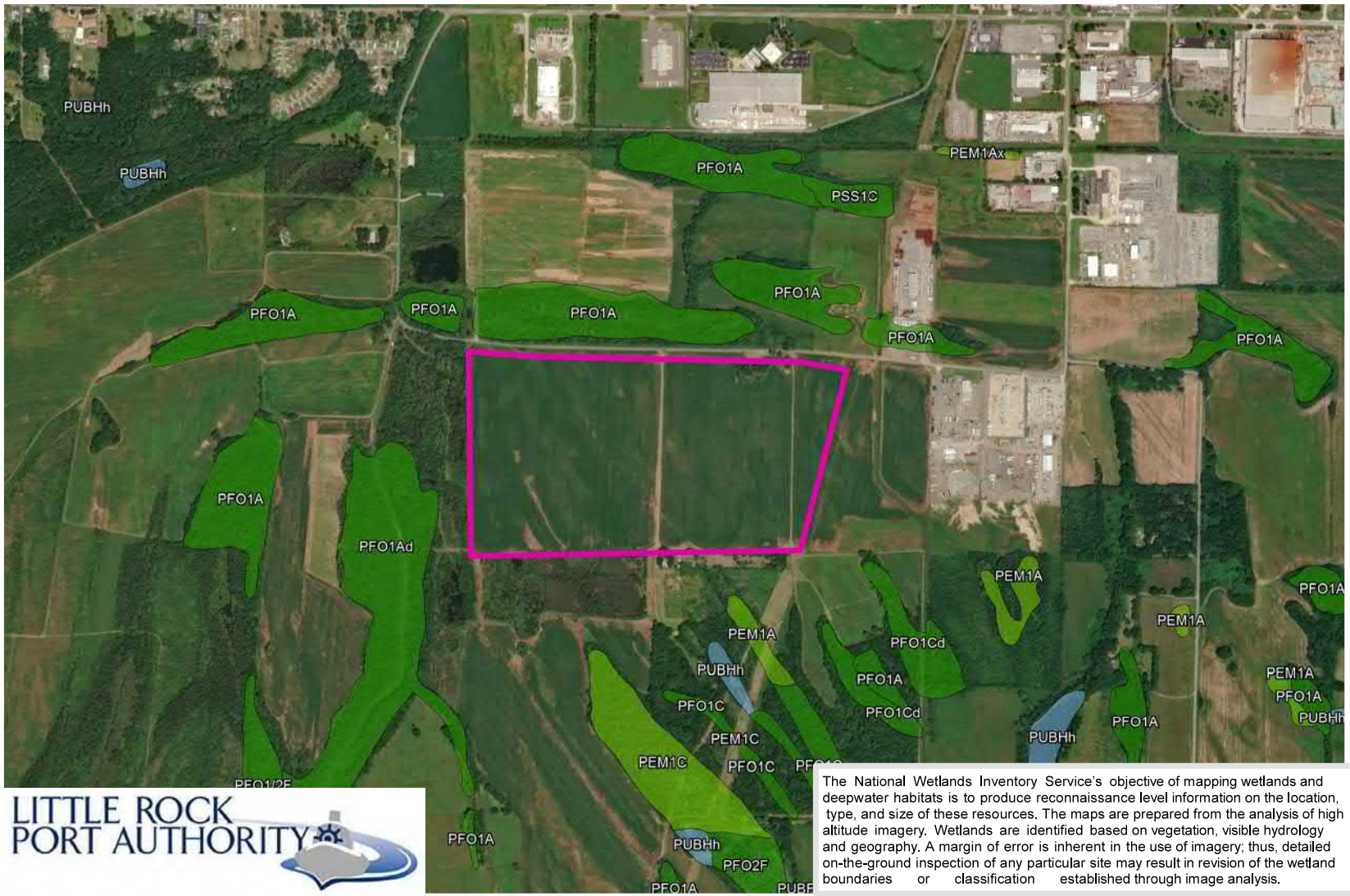
Little Rock South Port Site

National Wetland Inventory

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

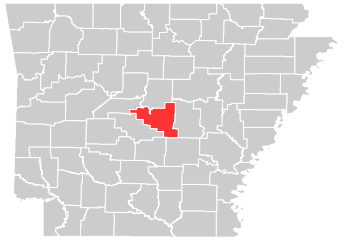
goentergy.com/ar



LITTLE ROCK PORT AUTHORITY

The National Wetlands Inventory Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type, and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

PULASKI COUNTY



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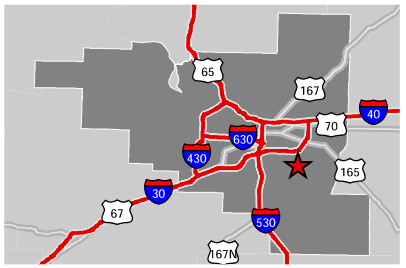

LEGEND

Property Boundary

WETLANDS

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

NOTE

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SOURCE

National Wetlands Inventory. U.S. Fish and Wildlife Service, 9/2014

N

Created by: RPG
Date: 5/2017

1:12,000

0 1,000 2,000 Feet

0 240 480 Meters

Entergy | BUSINESS DEVELOPMENT ARKANSAS

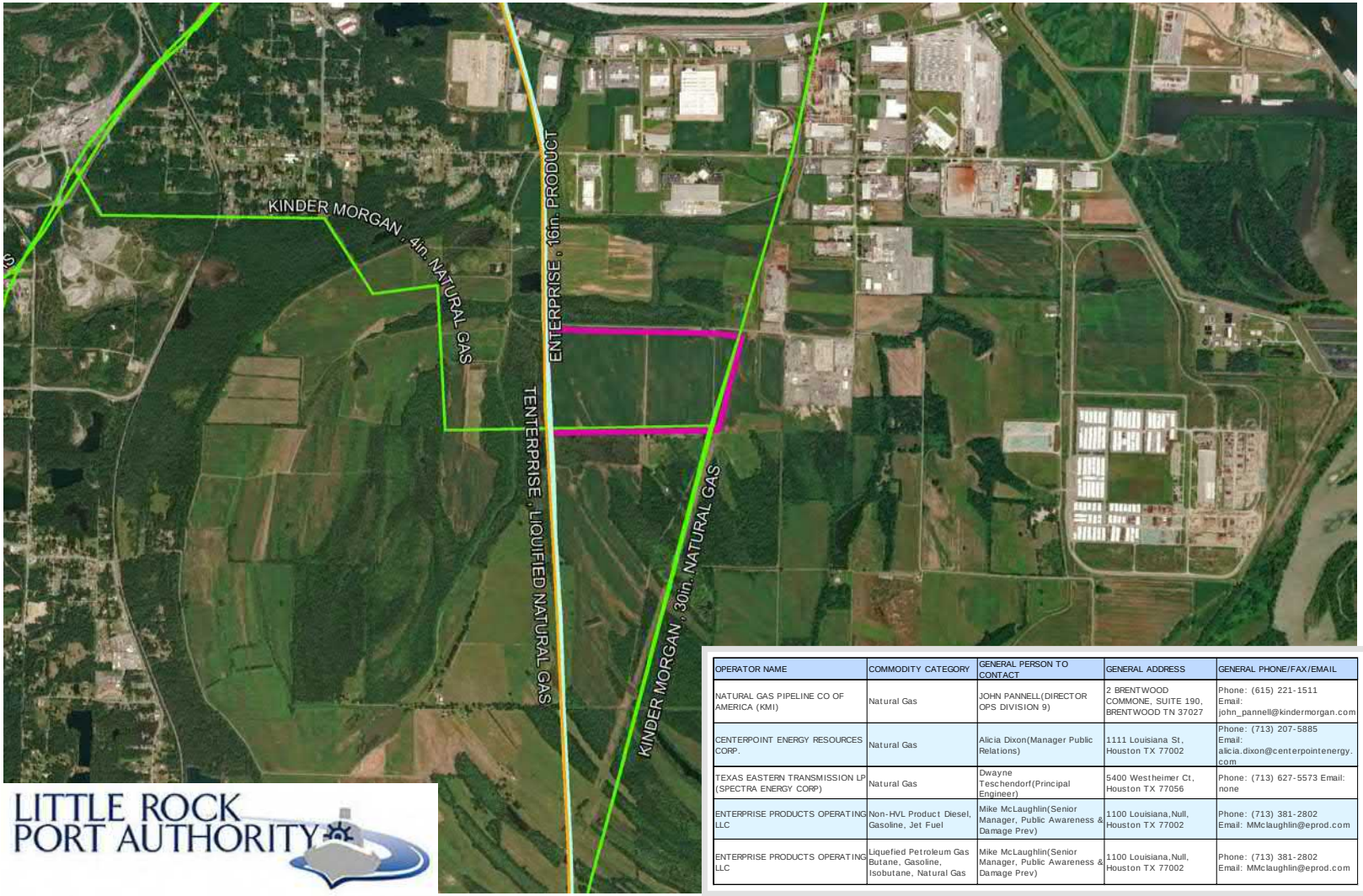
Little Rock South Port Site

Transmission Pipeline Infrastructure

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

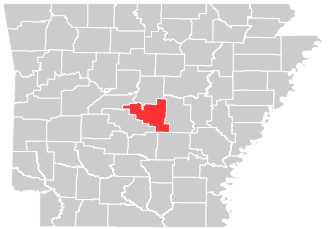
goentergy.com/ar



LITTLE ROCK PORT AUTHORITY

OPERATOR NAME	COMMODITY CATEGORY	GENERAL PERSON TO CONTACT	GENERAL ADDRESS	GENERAL PHONE/FAX/EMAIL
NATURAL GAS PIPELINE CO OF AMERICA (KMI)	Natural Gas	JOHN PANNELL(DIRECTOR OPS DIVISION 9)	2 BRENTWOOD COMMONE, SUITE 190, BRENTWOOD TN 37027	Phone: (615) 221-1511 Email: john_pannell@kindermorgan.com
CENTERPOINT ENERGY RESOURCES CORP.	Natural Gas	Alicia Dixon(Manager Public Relations)	1111 Louisiana St, Houston TX 77002	Phone: (713) 207-5885 Email: alicia.dixon@centerpointenergy.com
TEXAS EASTERN TRANSMISSION LP (SPECTRA ENERGY CORP)	Natural Gas	Dwayne Teschendorf(Principal Engineer)	5400 Westheimer Ct, Houston TX 77056	Phone: (713) 627-5573 Email: none
ENTERPRISE PRODUCTS OPERATING LLC	Non-HVL Product Diesel, Gasoline, Jet Fuel	Mike McLaughlin(Senior Manager, Public Awareness & Damage Prev)	1100 Louisiana,Null, Houston TX 77002	Phone: (713) 381-2802 Email: MMclaughlin@eprod.com
ENTERPRISE PRODUCTS OPERATING LLC	Liquefied Petroleum Gas Butane, Gasoline, Isobutane, Natural Gas	Mike McLaughlin(Senior Manager, Public Awareness & Damage Prev)	1100 Louisiana,Null, Houston TX 77002	Phone: (713) 381-2802 Email: MMclaughlin@eprod.com

PULASKI COUNTY



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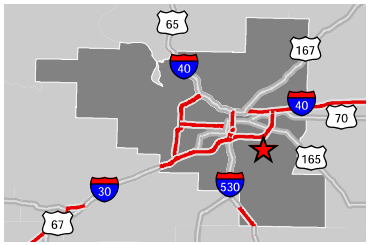

LEGEND

Property Boundary

Pipeline

LIQUIFIED NATURAL

NATURAL GAS

PRODUCT

NOTE

SOURCE

Source: HTSI, Downloaded 6/2015, NPMS Viewer, Donloaded 7/2015

Created by: RPG
Date: 5/2017

0 1,000 2,000 4,000 Feet

0 240 480 960 Meters

N

Entergy BUSINESS DEVELOPMENT ARKANSAS

Little Rock South Port Site

Utility Map

425 West Capitol Ave, Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

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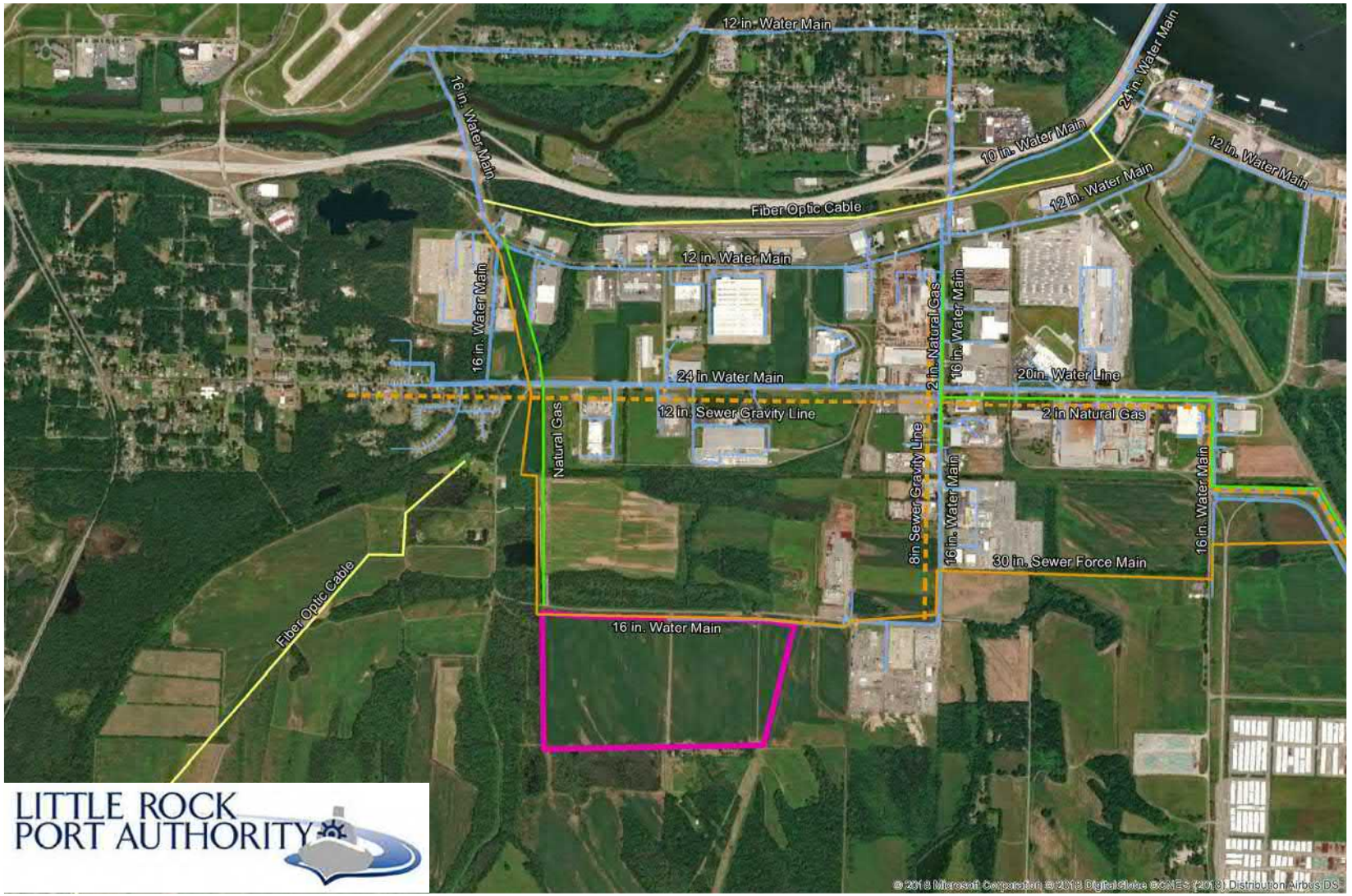
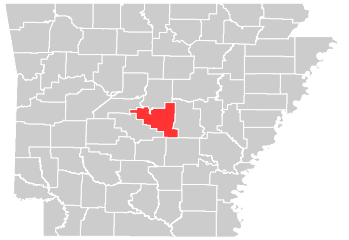


LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



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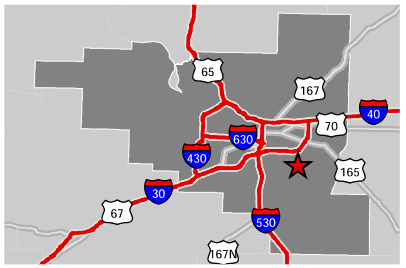

LEGEND

Property Boundary

Utilities
- Fiber Optic Cable
- Natural Gas Distribtion
- Sewer Gravity Line
- Sewer Force Main

Waterlines
- 2-3 in.
- 4-6 in.
- 8-10 in.
- 12 in.
- 16-20 in.
- 24 in.

NOTE

These drawings are provided merely to assist in economic development efforts. The Entergy Companies make no representations or warranties whatsoever regarding the accuracy or completeness of any information contained herein nor the condition or suitability of any properties. Users should direct inquiries about any property to the listing broker for that property.

SOURCE

Water Line: Little Rock Port Authority
Wastewater: Little Rock Wastewater, Project Silent Noise

N

Created by: RPG
Date: 5/2017

1:18,000

0 1,000 2,000 Feet

0 120 240 480 Meters

Entergy | BUSINESS DEVELOPMENT ARKANSAS

Little Rock South Port Site

Entergy's Electrical Infrastructure

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Little Rock, AR 72201

Phone: 1-888-301-5861

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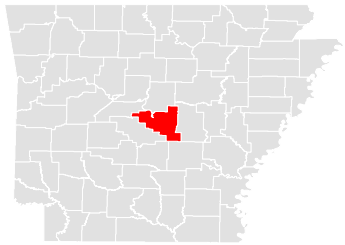
PULASKI COUNTY



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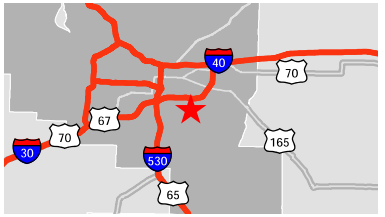

LEGEND

Property Boundary

Transmission

Substations

115 kV

Distribution

Phase, Voltage

Three Phase, 13.8 kV

Single Phase, 13.8 kV

NOTE

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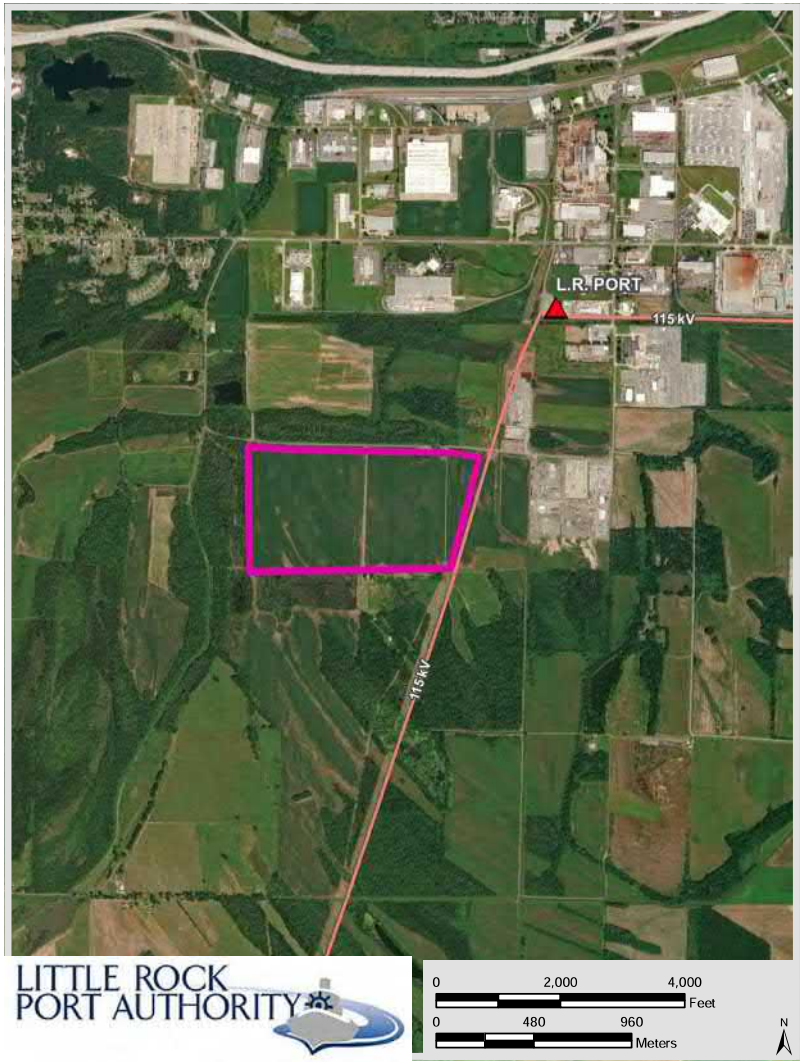
SOURCE

Service Layer Credits: © 2018 Microsoft Corporation © 2018 DigitalGlobe ©CNES (2018) Distribution Airbus DS

Source: Transmission-Entergy, 2014; Distribution-Entergy, 2015

Created by: PCW
Date: 05/2017

TRANSMISSION



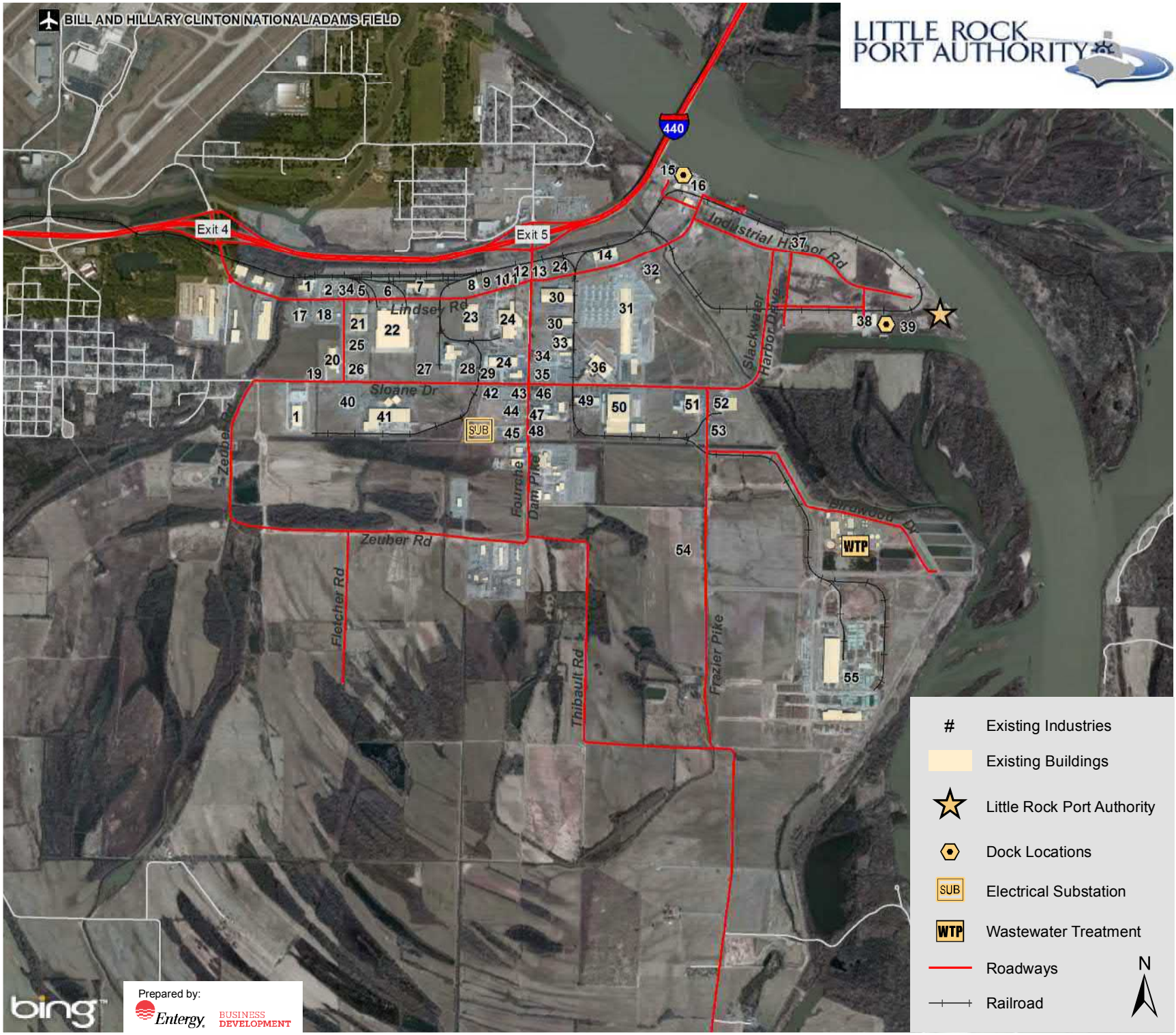
LITTLE ROCK PORT AUTHORITY

0 2,000 4,000 Feet
0 480 960 Meters
N

DISTRIBUTION

Electric line locations are for illustrative purposes only and may not depict the actual physical location.

0 1,000 2,000 Feet
0 240 480 Meters
N



Existing Industries

1. Sage V Foods
2. Cap Fleet Upfitters
3. Central Pipe Supply
4. BNSF
5. Baptist Health
6. Hi Speed
7. US Postal Service
8. Admiral Moving Services
9. Orbit Fluid Power/ Access Control Devices
10. Fire Station
11. Fastenal
12. Phillips 66 (Gas Station)
13. Valero (Gas Station)
14. LRPA Foreign Trade Zone 14
15. Buzzi Unicem
16. SSA Logistic Services
17. Southern Freight Lines
18. Con-way Southern Express
19. Frito Lay
20. Boyd Metals
21. Democrat Printing & Lithographing
22. Available Building
23. Interstate Signways
24. Lexicon
25. LR Central Laundry Service
26. Available Building
27. Novus
28. Waste Management
29. Available Building
30. Ryerson
31. LM Windpower / GE
32. Safety Kleen
33. TY Garment
34. REW Materials
35. Entergy Arkansas
36. Hormel Foods / Skippy Peanut Butter
37. Schiabo-Larovo
38. LRPA Warehouses
39. LRPA Dock
40. Central Transport
41. George Fischer Harvel
42. Bulk Transport Company
43. Yourga
44. AAA Cooper
45. Tri State Truck Center
46. Available Building
47. Natural State Recycling
48. Dar Pro Solutions
49. O'Neal Steel
50. Welspun (Small Pipe)
51. Delta Plastics
52. Ring Container
53. J&M Food Products
54. Raj Mahal Temple
55. Welspun (Large Pipe)

Little Rock Port Authority Industrial Park

BUSINESS DEVELOPMENT
ARKANSAS

Little Rock South Port Site

Zoning Map

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Suite 2700
Little Rock, AR 72201

Phone: 1-888-301-5861

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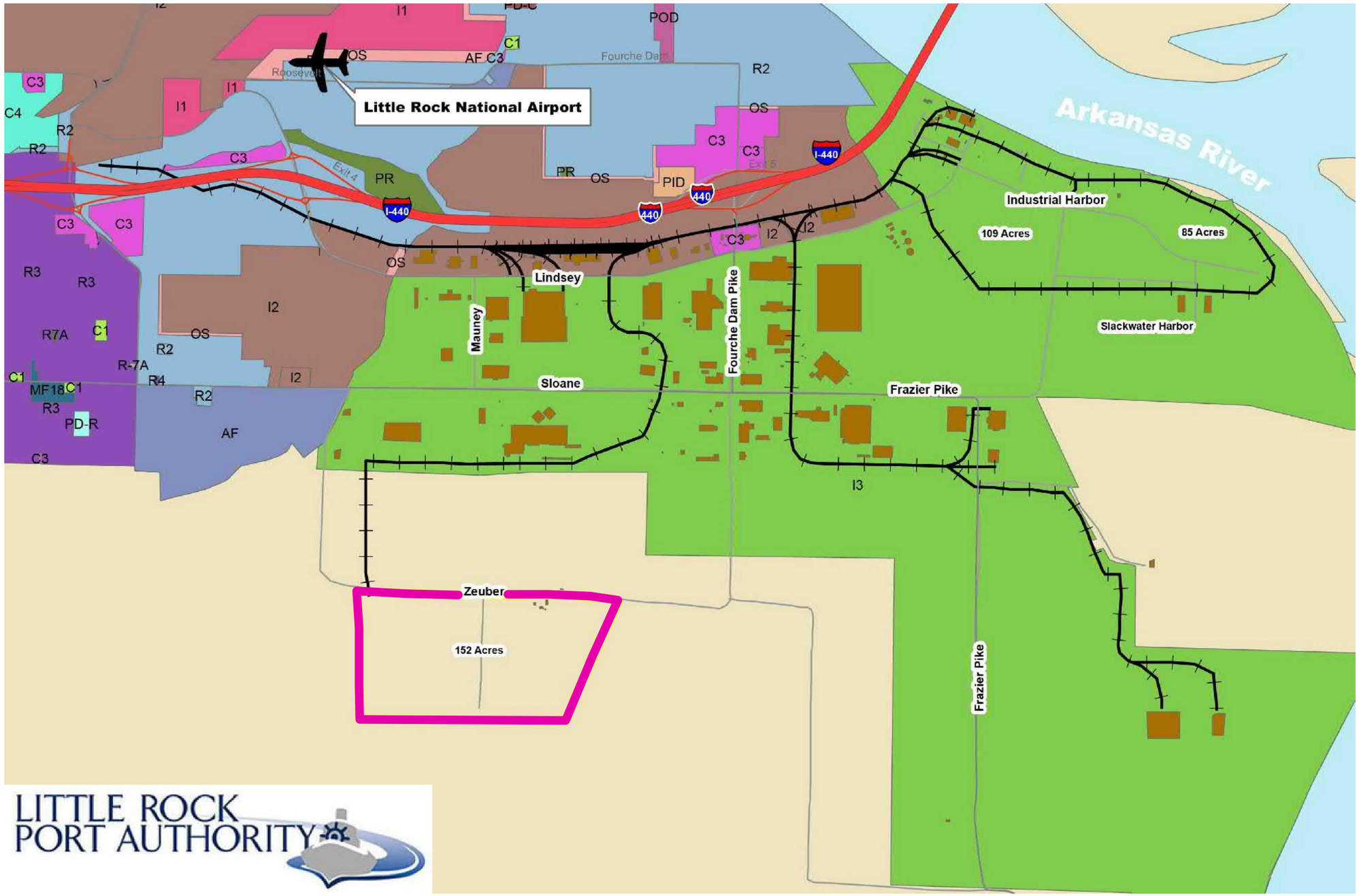
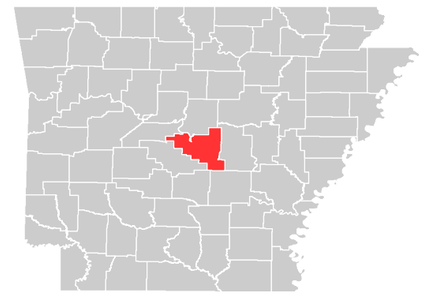


LITTLE ROCK PORT AUTHORITY

PULASKI COUNTY



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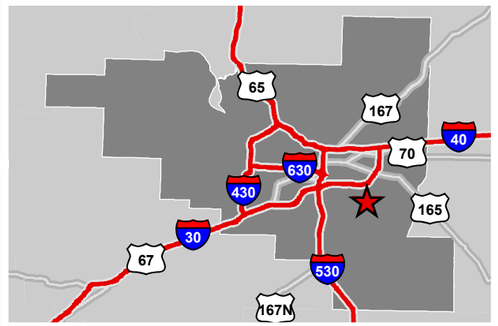

LEGEND

Property Boundary

Existing Zoning ZONING					
AF	CAPC	MF12	PD-C	R3	
C1	CAPD	MF18	PD-I	R4	
C2	CAPE	MF24	PD-O	R4A	
C3	CAPM	MF6	PD-R	R5	
C4	CAPN	NOT	PID	R6	
CAPA1	CAPO	O1	POD	R7	
CAPA2	I1	O2	PR	R7A	
CAPB	I2	O3	PRD	UU	
	I3	OS	R-7A	County: Heavy Industrial	
	M	PCD	R2		

NOTE

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SOURCE

Zoning Map from Little Rock Port Aurthority map of existing zoning for project submission. 3/2018.

N

Created by: RPG
Date: 3/2018

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Recipients of these materials must perform their own investigation and due diligence concerning all aspects of the site and/or improvements, financial, tax, and business matters associated therewith so as to enable them to evaluate the merits and risks of the site and to make any informed decision with respect thereto.