KLINGNER & ASSOCIATES, P. C.
Engineers • Architects • Surveyors

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April 23, 2021

Central Missouri AGRIService
John Fletcher
Waverly, MO

BIDDING ADDENDUM 02

For work titled:
New Barge Loadout Facility

Waverly, MO
Project Number: 18-0223

TO ALL BIDDERS

GENERAL NOTES

This addendum is issued for the purpose of clarifying the intent of the contract documents or for making necessary corrections, deletions, and/or additions to the documents on all items of discrepancy raised up to the time of the issuance of this addendum.

Each bidder is hereby instructed and authorized to incorporate into his proposal the instructions contained in this addendum. This addendum forms a part of the bidding and contract documents and modifies the original bidding documents, dated April 2, 2021 . Acknowledge receipt of this addendum in space provided on Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

This addendum consists of twenty-nine (29) – 8 1/2” x 11” pages including this cover sheet.

PROJECT MANUAL

1. 005100 Notice of Award	**CLARIFICATION:** The number of selected alternatives (i.e. option cells) will be awarded with the base bid.
2. 352024 Electric Winch System	**CLARIFICATION:** The winch shall be included with the base bid.
3. 352024 Electric Winch System, 3.1, B., C.	**DELETE:** Remove these sections of the specifications. **CLARIFICATION:** The bid only needs to include the purchase of the winch system and fastening the system to the dead men. No electrical hookup shall be included in the bid.
4. Appendix B, Job Special Provisions, A. Project Dates	**CLARIFICATION:** The Base Bid and all selected Alternatives shall be completed by August 31, 2021 unless additional time is granted by the Owner.
5. Appendix B, Job Special Provisions, B. Buy America Requirements	**ADD:** Add this section to the Job Special Provisions.

6. Appendix C, Geotechnical Memorandum Report	**ADD:** Add this Appendix to the Project Specifications.

DRAWINGS

7. S101 General Structural Site Layout	**CLARIFICATION:** Existing dolphins to remain and existing W-shapes will need to be removed for the installation of the new cells. The circular cell receiving the 14' x 14' tower will likely be installed encompassing the existing mooring structure at that location.
8. S302 Concrete Dead Man Plan & Details	**CLARIFICATION:** HP piles are intended to be driven to refusal in the shale, no drilled hole is anticipated to be necessary. Geotechnical Report indicates refusal near elevation 619.

ATTACHMENTS

Section 352024 Electric Winch System – (3 pgs., 8.5x11)
Appendix B Job Special Provisions – (3 pgs., 8.5 x 11)
Appendix C Geotechnical Memorandum Report – (21 pgs., 8.5 x 11)

END OF ADDENDUM 02

SECTION 352024
ELECTRIC WINCH SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. Provide and install an electric barge winch system as shown on the drawings as specified herein, and as needed for a complete and proper installation.

1.2 SUBMITTALS

A. Shop Drawings: Indicate barge winch system to be provided including specifications for drum, winch, gearbox, controls, consolet, brake, etc. The submittal shall also contain performance information on system and model/manufacturer information.

1.3 DELIVERY, STORAGE AND HANDLING

A. Protection:

1. Deliver products to site.
2. Store winch system at the project site.
3. Store winch system in a manner that will not distort the final condition.
4. Store winch system in a weather-tight and dry place, until ready for use in the work.
5. Store packaged materials in their original unbroken package or container.

PART 2 - PRODUCTS

2.1 Barge Winch System

A. The system shall be a Model CPK35000-25-24-DB-BMS from Wintech Winches & Fairleads or any approved equivalent.

B. The system shall meet the following performance specifications at a minimum:

1. 35,000 lbs continuous linepull on 1st layer at 23 fpm linespeed
2. 32,000 lbs continuous linepull on 3rd layer at 25 fpm linespeed
3. 28,000 lbs continuous linepull on 6th layer at 29 fpm linespeed

C. The system shall contain the necessary winches, electrical enclosures, and operator control consolet.

D. The system shall contain the following equipment:

1. Drum

a. Ø18” smooth drum core for use with 1” rope
b. 24” long between flanges

c. 34” diameter flanges
d. Storage capacity of 700’ of 1” cable on 6 layers
e. Drum conforms to ASME B30.7.94 specification with a minimum drum to rope ratio of 15:1
f. Drum cable clamps for use with 1” cable for cable connection to drum

2. Winch

a. Helical Bevel Gear Reducer with final chain reduction
b. Drum supported by spherical bearings in machined housing
c. One-way clutch and dual over spin brake assembly for controlled back tension
d. Heavy duty welded frame construction
e. Flange guards keep cable spooling on drum in slack conditions
f. Spring applied pressure roller to minimize spooling issues and bird nesting
g. Exit rollers to reduce wear on cable when pulling in under slack conditions
h. Removable winch guards (powder coated safety yellow)
i. Bolt pattern in frame for anchor bolt mounting (can be welded)
j. Winch painted with Marine duty paint
k. Winch requires 38’ fleeting distance from first sheave to ensure proper spooling

3. Gearbox

a. Fully enclosed helical bevel gear reducer
b. 25 HP High Efficiency TEFC Motor Directly connected to the reducer system
c. 460/3/60 Supply Power
d. Electromagnetic disc type brake that activates automatically in the event of a power interruption. Brake will stop the winch and hold the load securely.
e. Designed for long life, low noise, and high output torque
f. Designed and Built to AGMA Standards

4. Controls

a. Main electrical enclosure NEMA 4 (48” x 36” x 12”)
b. (2) 25HP VFD Controllers
c. 24VDC Power Supply
d. Transformer from 460V to 115V
e. PLC to control operation functions
f. Brake contactors for each winch
g. DB resistor for power dissipation
h. Main fusing
i. Brake fusing

5. Operator Control Consolet

a. Auto/Manual Control Selector Switch
b. Right Winch Pull In/Hold/Pay Out spring centering switch
c. Left Winch Pull In/Hold/Pay Out spring centering switch
d. Auto Left /Hold/Auto Right spring centering joystick
e. Adjustable speed control potentiometer
f. E-Stop mushroom type button

6. Wireless Remote-Control System

a. Wireless remote-control system with handheld transmitter for control from within 300ft of main control panel

1) (2) Transmitters
2) (1) Receiver (installed in main panel)
3) On/Off Pushbutton
4) Auto Move Up/Down Pushbuttons
5) Downstream Pull In/Pay Out Pushbuttons
6) Upstream Pull In/Pay Out Pushbuttons
7) Breasting Pull In/Pay Out Pushbuttons
8) Auto Move/Downstream/Upstream pushbuttons are two speed buttons
9) Half press winch operates at half speed
10) Full press winch operates at full speed
11) Speed settings can be adjusted at VFD in main control panel above
12) Belt clip on back of remote and safety lanyard provided

PART 3 - EXECUTION

3.1 INSTALLATION

A. The system shall be installed on the dead man locations specified by the Owner.

B. The system shall be installed to operate as follows:

1. The winches can be operated individually for pulling the barges into the dock using the Manual Operation switches for each winch. The winches work in conjunction with each other in Auto mode when moving the barge. Each winch is equipped with a one-way clutch and a bronze drag brake to provide drag on the opposing winch during the moving operation. The drag brake is fully adjustable as may be required in varying current conditions.
2. To move the barge upstream in Auto Mode, pushing the Auto joystick to the upstream direction will pull-in on the upstream winch and at the same time release the holding brake on the downstream winch. The drag brake on the downstream winch provides the back tension in the barge moving line to eliminate sag and keep the barge breasted.
3. To move the barge downstream in Auto Mode, pushing the Auto joystick to the downstream direction will pull-in on the downstream winch and at the same time release the holding brake on the upstream winch. The drag brake on the upstream winch provides the back tension in the barge moving line to eliminate sag and keep the barge breasted.
4. Back tension is variable using the manual adjustment handles on the drag brake calipers Moving speed is infinitely variable from 0-40 feet per minute in either direction using a speed potentiometer. The control system is designed so that the winch accelerates and decelerates over a controlled rate and the brake application timing is determined by the drive to allow smooth starting and stopping of the barge movement and to allow settling of the barges before the holding brakes are set. All the controls will be located in a central control panel.

END OF SECTION 352024

JOB SPECIAL PROVISIONS TABLE OF CONTENTS

(Job Special Provisions shall prevail over General Provisions whenever in conflict therewith.)

	**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION** 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	CONSULTANT NAME *Klingner & Associates, P.C.* *616 N. 24th St., Quincy, IL 62301* Certificate of Authority: E-000866 Consultant Phone:217.223.3670
	JOB NUMBER: 18-0223 LAFAYETTE COUNTY, MO DATE PREPARED: 04/20/2021 & 04/23/2021
Date: 04/23/2021	ADDENDUM DATE: ***04/20/2021 & 04/23/2021***
Only the following items of the Job Special Provisions are authenticated by this seal: All	

JOB
SPECIAL PROVISIONS

A. PROJECT DATES

1.0 Description. The project specifications indicate a substantial completion date of June 15, 2021. However, the June 15, 2021 date is applicable only to procurement of all project materials with the proof of purchase (i.e. purchase order / invoice) submitted to the Owner by that date. The construction of the circular cells, concrete dead men, and winch system shall be completed by August 31, 2021 (*which includes all selected alternatives*). No additional construction time will be alotted to the contractor unless agreed upon with the Owner.

2.0 Basis of Payment. Payment for the procurement of all project materials is intended to be made by June 15, 2021 and shall be based upon the invoices/receipts submitted to the Owner. Payment for the construction of the circular cell and concrete dead men construction shall be made based upon progress with substantial completion by August 31, 2021.

B. BUY AMERICA REQUIREMENTS

1.0 Description. Title IV MO Revised Statute Chapter 34 State Puchasing and Printing, Section 34.353 shall be followed by the Contractor, which is provided below for reference.

2.0 Title IV Executive Branch, Chapter 34 State Purchasing and Printing, Section 34.353 All public agencies and political subdivisions to purchase or lease only goods or commodities produced in the United States, exceptions, procedure. —

1. Each contract for the purchase or lease of manufactured goods or commodities by any public agency, and each contract made by a public agency for construction, alteration, repair, or maintenance of any public works shall contain a provision that any manufactured goods or commodities used or supplied in the performance of that contract or any subcontract thereto shall be manufactured or produced in the United States.
2. This section shall not apply where the purchase, lease, or contract involves an expenditure of less than twenty-five thousand dollars. This section shall not apply when only one line of a particular good or product is manufactured or produced in the United States.
3. This section shall not apply where the executive head of the public agency certifies in writing that:

    (1) The specified products are not manufactured or produced in the United States in sufficient quantities to meet the agency's requirements or cannot be

manufactured or produced in the United States within the necessary time in sufficient quantities to meet the agency's requirements;

(2) Obtaining the specified products manufactured or produced in the United States would increase the cost of the contract by more than ten percent;

(3) The specified products are to be purchased or leased by a state-supported four-year institute of higher education and such certification as required by subdivision (1) or (2) of this subsection has been made within the last three years;

(4) The specified products are to be purchased or leased by a publicly supported institution and such certification as required by subdivision (1) or (2) of this subsection has been made within the last three years; or

(5) The political subdivision has adopted a formal written policy to encourage the purchase of products manufactured or produced in the United States.

4. The certificate required by this section shall specify the nature of the contract, the product being purchased or leased, the names and addresses of the United States manufacturers and producers contacted by the public agency or the project architect or engineer, and an indication that such manufacturers or producers could not supply sufficient quantities or that the price of the products would increase the cost of the contract by more than ten percent.

5. Certificates required by this section shall be maintained by the public agency for a period of three years.

GEOTECHNICS
Soil & Material Testing
A Division of Klingner

Memorandum

To:	Alan Balzer	***Of:***	Klingner and Associates
Copy to:	Gavin Risley		
From:	B. Joseph Sick		
RE:	Waverly Facility Borings		
Project Name:	Missouri River Loadout – Waverly Facility		
Project No:	18-0223		
Date:	9/18/2020 (Original 11/13/2018)		

Alan,

We have revised the original geotechnical memo dated 11/13/2018. With this revision, we have conducted a review of the Route 65 Missouri River Bridge boring logs from Harrington & Cortelyou (project no. FAF-65-4(33)). The purpose of the review was to identify the properties of the shale in the vicinity of the project site to assist in the design of the river foundations and mooring cells. In addition to the review, we have revised the memo and boring logs to reflect ground surface elevations obtained during the topographic survey.

In accordance with your request we have conducted a limited geotechnical investigation for the Missouri River Loadout Facility near Waverly, MO. The intent of this investigation was to identify the properties of the soils at the site to assist in the design of the sheet pile walls and foundations. The desired general location of the borings was reported to us and staking and elevations of the borings on site was performed by our drill crew. The elevations were determined by referencing the easternmost silo concrete foundation at the reported elevation of 654.6 (this reported elevation was discovered to be in error and revised to 673.8). Following are our findings and recommendations based on the subsurface conditions that were revealed at the boring locations we performed and in conjunction with nearby boring data from the upstream bridge location; please reference the soil boring logs for the particular subsurface conditions at each boring location.

Subsurface Conditions

The results of the geotechnical investigation indicate that the site is covered by natural soil deposits of Missouri River alluvium and Pennsylvanian Age shale bedrock. The alluvium was composed of both fine and coarse grained soils. The fine-grained alluvium strata extended to depths of approximately 36 to 37 feet (elev. ±634½) beneath the existing surface. The fine grained alluvium was commonly interspersed with various sandy seams of variable thickness and was composed of very soft to stiff and very loose to medium dense, gray, light gray, brown and yellow brown fat clay (CH) and lean clay (CL) with various amounts of sand, and silts (ML) with various amounts of clay and sand, interspersed with silty sand (SM) seams. The strata seams were not of uniform thickness or elevation and predominantly this upper portion was proportioned with thin, alternating seams of all the above soil types in a non-delineated and highly variable sequence. Unconfined compressive strengths on suitable samples in the cohesive alluvium ranged from 0.44 T.S.F. to 1.30 T.S.F. while N values varied from 0 to 10 blows per foot.

Memorandum

Measured dry densities were between 59.1 and 101.0 P.C.F. Atterberg Limits testing was conducted on select samples from the fine grained alluvium indicated liquid limits of 34% and 100% and plasticity indices of 11% and 71%.

Beneath the predominantly cohesive fine grained alluvium strata, the coarse-grained portion of the alluvium extended to Pennsylvanian Age shale bedrock. The coarse grained alluvium and shale bedrock was sampled in boring 1 and the coarse grained glaciofluvial soils are predominantly composed of very loose to medium dense, gray, poorly graded sand (SP). An SPT test in the sand revealed an N value of 16 blows per foot. Pennsylvanian Age bedrock was encountered between approximately 43 and 43½ feet (elev. ±627 to 628½) beneath the surface.

The borings were terminated at 45.8 and 50 feet (elev. 624.9 and 621.8) below the surface. The bedrock was composed of weathered gray and reddish brown shale with an N value of 50 blows for 4 inch in B-1 at approximately 2 feet below the surface of the weathered bedrock.

Geotechnical Engineering Analyses Recommendations

Estimates of the soil parameters for the proposed sheet pile with the pertinent soil parameters listed below are recommendations for use as ultimate values and contain a factor of safety of 1.0. We recommend that these values may be utilized if the structure is within a reasonable distance (i.e. 50 to 100 ft.) of the boring location and located outside the river bed. The borings revealed a lack of strata uniformity therefore we have estimated values for each boring location:

Boring 1				
Elevation	**Cohesion P.S.F.**	**Total Density, P.C.F.**	**Φ˚**	**Soil Type**
670½-665½	100	120	25	ML
665½-663	500	123	20	CL/ML
663-660½	100	120	27	ML
660½-655½	100	120	24	ML
655½-650½	50	120	29	SM
650½-640½	500	124	22	CL/ML
640½-634½	250	110	13	CH
634½-627½	0	120	32	SP

Memorandum

Boring 2				
Elevation	**Cohesion P.S.F.**	**Total Density, P.C.F.**	**Φ˚**	**Soil Type**
671½-664½	250	115	17	CL/ML
664½-659½	100	117	24	ML
659½-657	250	115	15	CH
657-647	250	110	16	CL/ML
647-635	250	105	13	CH
635-628½	0	120	32	SP

The soil layers are classified according to the primary material within the zone identified, as most apparent in the retrieved samples. The two borings performed at the site revealed a variety of non-uniform conditions and the values above have been assigned accordingly.

We believe, based on the findings at the borehole locations, it should be possible to drive sheet piling to an approximate elevation of 628 (±top of shale) without sustaining consistent damage to the sheet piling. Note the thin intermittent gravel layers that were encountered in the borings near elevation 661 and 665; please reference the boring logs.

Driven H-Piles (End-Bearing Piles)

The borings encountered shale bedrock at approximately 43 to 43½ feet in depth (elev. ±627½ to 628½). The recommendation for end bearing H-piles driven to refusal into the shale bedrock to attain the desired capacities is considered a viable option for foundation support of the conveyor system.

Using an allowable steel stress of 12 ksi (1/3 x Fy) for A-36 piles with driving shoes, HP 12x53 piles may be assigned a maximum design load of 185 kips per pile. We recommend H-piling be ASTM A709 (Grade 36) or better and piling should utilize cast steel point protection similar to APF Hard-Bite Point HP-77550-B to help prevent damage to the piling due to the hard driving to be encountered near and at refusal. The pile refusal elevations are expected to be in the upper 5 feet to 10 feet of the shale formation in the range of elevation 619± near the borings area.

The locations of the piling in relation to the test borings and the extent and degree of weathering to the surface of the shale bedrock will influence the depth at which the piles will refuse, therefore, some variations in depth should be expected to reach practical pile refusal. Shale depth may vary from our boring locations. Prior to the start of production piles, the ability of the pile-hammer system to attain the desired allowable capacity should be verified. Unless the piles are being overstressed by hard driving, we recommend a continuation of driving to get as much of the H-pile into the bearing stratum as possible. We recommend driving the piles to practical refusal (20 blows per inch) into the shale bedrock.

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Vertical Cased Concrete Pile Recommendations (River Structures)

The most efficient means of support is considered to be permanently cased, drilled, cast-in-place concrete piers. We recommend the pier drilling process be continuously inspected by our geotechnical engineers and/or engineering technicians in order to confirm the expected presence of the bearing stratum and for documentation of shale removal, casing requirements and installation procedures.

If coal is encountered the piers should be extended below the coal seam a minimum of 3 feet. We believe the use of rock augers and/or coring will be necessary to reach the more intact, less weathered and more competent layers of shale. Unit prices for shallower and deeper pier length and for rock auger removal should be obtained prior to construction to allow for variations in the weathered shale surface and shale competency as is anticipated.

For end bearing, we recommend utilizing a factor of safety of 3 be applied to the ultimate values, but the minimum factor of safety under the highest transient loading condition should not be less than 2. For skin friction, we recommend utilizing a factor of safety of 2 be applied to the ultimate values. Uplift resistance may be calculated by considering the bouyant weight of the pier and by using the ultimate skin friction values as given below along the pier shaft with the appropriate factor of safety considered. The minimum recommended pier diameter is 24".

Pile unit ultimate capacities as reported below are considering long term scour to be approximately to a depth of 15 feet above the shale bedrock surface. Due to possible shale depth variance from the boring locations to the proposed structure locations, adjustments in length may be required. For the purpose of the pile analysis, the pile/soil interface was estimated at approximately elevation ±643. The estimated depths and values for the ultimate capacities are as follows:

River Structures and Mooring Cells				
Depth	**Soil Type**	**Ultimate Downward Skin Friction (psf)**	**Ultimate Upward Skin Friction (psf)**	**Ultimate End Bearing (psf)**
15 ft. to 7 ft. above shale	CH	250	250	-
7 ft. above shale	SP	250	175	-
Weathered Shale (top 4 ft.)	Shale	500	500	-
Shale (below top 4 ft.)	Shale	1,300	1,300	25,000*
Shale (below top 35 ft.)	Shale	3,500	3,500	75,000

*Considering minimum embedment length into shale of 15 feet.

Total settlements of pile foundations should be within the range of elastic compression of the pile material (approximately ¼" or less). The above values are ultimate values; appropriate factors of safety should be applied during analyses.

Lateral Parameters-Soil Recommendations

Based on the soils encountered and interpolated from the test borings and bridge borings, the following recommended soil parameters may be used:

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Memorandum

River Structures and Mooring Cells						
Depth	**Soil Type**	**Compressive Strength Estimate, (psi)**	**Ø**	**Static Soil Modulus, k (pci)**	**Soil Strain E_{50}**	**Total Unit Weight, (pcf)**
15 ft. to 7 ft. above shale	CH	-	-	30	.02	105
7 ft. above shale	SP	-	32	60	-	120
Weathered Shale (top 4 ft.)	Shale	-	-	2000	.004	135
Shale (below top 4 ft.)	Shale	180	-	-	.003	140
Shale (below top 35 ft.)	Shale	490	-	-	.0025	140

The above values are ultimate values; appropriate factors of safety should be applied during analyses.

Please let us know if we can be of further assistance.

Sincerely,

GEOTECHNICS

Brian Joseph Sick

Brian Joseph Sick, P.E.

A P P E N D I X

TEST BORING LOCATION SKETCH

FIELD INVESTIGATION

LABORATORY INVESTIGATION

BORING LOGS - GENERAL INFORMATION

ATTERBERG LIMIT DETERMINATIONS

GRAIN SIZE DETERMINATIONS

BORING LOGS


Central Missouri Agriservice
Missouri River Loadout - Waverly Facility 18-0223
503 E Thomas Drive
Legend
503 E Thomas Dr
Waverly
Rabbit Island
503 E Thomas Dr
24
W 3rd St
Old Bridge St
Waverly
Waverly
W 4th St
W Kelling Ave
W 6th
W Commercial St
Jefferson
7th St
Pine St
E Pine St
W Frances Ave
E Walnut St
Hwy 24
Washington
Main St
Broad St
276
Hwy 65
271
City Limit Rd
Boland Rd
Salt Fork Rd
Google Earth
© 2018 Europa Technologies
© 2018 Google
N
5000 ft


Central Missouri AGRIservice, LLC
18-0223 Missouri River Loadout - Waverly Facility
B1: N39 12 53.5, W93 30 23.0
B2: N39 12 53.0, W93 30 26.1
Legend
Soil Borings
B1
B2
E Thomas Dr
W Thomas Dr
Google Earth
© 2018 Europa Technologies
© 2018 Google
N
600 ft

FIELD INVESTIGATION

The field investigation consisted of a site inspection, subsurface exploration and sampling, as well as field testing and visual classification of the soils encountered in accordance with ASTM specifications. The site inspection provided information concerning existing topography and recent manmade alterations, if any were observed. During the investigation the locations and ground elevations for each of the borings were determined. Subsurface exploration and sampling was conducted in an effort to define the soil profile and to obtain disturbed and/or undisturbed representative samples of the various soils encountered for the purpose of the laboratory investigation.

Dependent upon the field conditions and project requirements, test borings were completed with a CME 75 truck mounted or CME 55 track mounted drill rig equipped with either 3¼ or 4¼ inch I.D. hollow stem augers in accordance with ASTM D6151, 5 inch solid stem augers in accordance with ASTM D1452, or rotary drilling equipment in accordance with ASTM D5783. The hollow stem augers permit convenient access to the undisturbed soil below the auger bit which allows the driller to obtain a soil sample at the desired depth. The boreholes upon completion were backfilled with auger cuttings (soil) and boring plug (if requested). Periodic observation and maintenance of the backfilled boreholes should be performed to monitor for subsidence at the ground surface as the borehole backfill could settle over time.

As the test borings were advanced, methods of sampling were employed to recover soils from the undisturbed strata below the auger bit. Representative disturbed samples were obtained from a standard Split Spoon and the samples were recovered by driving a 2 inch O.D. (1 3/8 inch I.D.) Split Spoon sampler in accordance with ASTM D1586. Relatively undisturbed samples were obtained in cohesive soils by hydraulically pushing a thin walled seamless tube sampler into the soil in accordance with ASTM D1587. The Shelby Tubes were 2 or 3 inches in outside diameter depending upon the project requirements. One or both of these methods may have been utilized based on site conditions and/or job specific requirements. Additionally, disturbed samples collected from auger cuttings in accordance with ASTM D1452 may have been obtained as needed to further facilitate identification of the subsurface conditions.

The recovered samples were described in the field according to color, texture, grain size, plasticity and consistency, as recommended by ASTM D2488, "Description and Identification of Soils (Visual-Manual Procedure)". Split Spoon samples when obtained were sealed/preserved in glass jars and labeled while Shelby Tube samples when obtained were sealed/preserved within the tubes and also labeled prior to transporting to our laboratory. Auger cuttings when obtained were sealed in an air tight container to preserve the natural moisture content. The samples were all carefully stored, preserved and transported for later use in the laboratory testing program in general accordance with ASTM D4220.

Field tests were conducted in an effort to estimate the shearing strength of the soil. Though the results of these tests were not used alone as a basis for shearing strength determination, they were helpful in predicting the behavior of the soil mass and should only be considered an approximate estimation. Where applicable, further laboratory testing and evaluation in conjunction with the field testing program was essential in determining the soil conditions.

The field testing program included the Standard Penetration Test conducted in accordance with ASTM D 15868. In this test, administered during the Split Spoon sampling procedure, a 2 inch O.D. (1 3/8 inch I.D.) 24 inch long standard Split Spoon was driven into the soil through a depth of 18 inches by a 140 pound weight dropped a distance of 30 inches. The penetration resistance, "N", was recorded as the number of blows, from the falling weight, required to drive the sampler through the final 12 inches. This penetration resistance provided a measure of the relative density of cohesionless soils and an estimate of the consistency of cohesive materials.

Recovered cohesive samples were tested, when possible, by the use of a calibrated pocket penetrometer. The values from this test were considered an approximate measure of the consistency of the cohesive soils. The penetrometer values as well as the measures of penetration resistance were later correlated with the results of the laboratory tests conducted on cohesive soil samples obtained from the Split Spoon and/or Shelby Tube samples.

The results of the field tests on each soil sample, as well as the soil descriptions, were recorded on field boring logs in accordance with ASTM D 5434 as the subsurface exploration progressed. These field boring logs were later modified to reflect the more elaborate analysis provided by the laboratory testing program. These modified field boring logs are the final boring logs that are attached to this report.

LABORATORY INVESTIGATION

The laboratory investigation involved the completion of classification tests on select undisturbed samples as well as select disturbed samples of the soils that were obtained from the various soil layers encountered beneath the site. Based on the field logs/records and our examination of the samples in the laboratory, a soil testing program was developed to acquire more precise estimations and detailed information about the soil conditions at the site.

Representative samples from the various soil strata were tested (site specific determination) in accordance with ASTM specifications. Dependent upon the sample availability and project requirements the laboratory testing on select representative samples included such soil index testing as natural moisture content (ASTM D2216), atterberg limits testing (ASTM D4318) and grain size analysis (ASTM D422). These parameters were used in identifying the soils through the Unified Soil Classification System in accordance with ASTM D 2487. This System, which is standardized and widely accepted, enables the Geotechnical Engineer to classify a soil using quantitative test results. A brief description of this classification system is contained in this report. Estimated predictions of the soil behavior during and after construction may readily be made through the use of this comparative type of classification.

Disturbed Split Spoon and/or relatively undisturbed Shelby Tube samples of cohesive soils were tested to determine unit weight and an approximation of the unconfined compressive strength. These tests were conducted with controlled strain by the use of a hand-operated compression apparatus with a double proving ring in accordance with ASTM D 2166. The results of some of the tests must be considered cautiously, recognizing that Split Spoon samples are disturbed and when tested, will provide slightly conservative values in relation to the probable conditions in the field. The relatively undisturbed Shelby Tube samples, however, should approach more closely the condition of the soils in-situ and the results of unconfined compression tests on these samples should be fairly accurate. When indicated, the undrained shear strength of saturated fine grained soils was estimated utilizing the miniature vane shear test in accordance with ASTM D4648.

Additional laboratory testing in accordance with ASTM standards such as specific gravity, moisture-density relationship, relative density, hydraulic conductivity, consolidation, direct shear, triaxial compression, among others, are utilized when applicable for project specific requirements. Upon completion of the laboratory testing program the final boring logs were prepared utilizing the data obtained from the laboratory testing and the initial data/records contained on the field boring logs. The remaining soil samples after the project testing is completed will be held for a minimum period of one month. After one month, the samples are typically discarded unless prior notification is provided to us.

B O R I N G L O G S

GENERAL INFORMATION

I. DRILLING AND SAMPLING SYMBOLS:

HA - Hollow or Solid Stem Continuous Flight Auger Disturbed Samples
SS - Split Spoon Sample (2" O.D. - 1 3/8" I.D.) Obtained Following the Standard Penetration Test
2ST - Shelby Tube Sample (2" O.D.)
3ST - Shelby Tube Sample (3" O.D.)

II. SOIL IDENTIFICATION:

The soils have been identified by Visual-Manual procedures in accordance with ASTM Standards (ASTM D 2488). Where specifically noted, the soils have been classified using the Unified Soil Classification System (ASTM D 2487). Classification estimates are in parentheses when applicable.

RELATIVE PROPORTIONS OF SAND AND GRAVEL
Descriptive Term(s) of Components Present in Sample by Percent of Dry Weight

Trace	< 15
With	15-29
Modifier	> 30

RELATIVE PROPORTIONS OF FINES
Descriptive Term(s) of Components Present in Sample by Percent of Dry Weight

Trace	< 5
With	5-12
Modifier	> 12

GRAIN SIZE TERMINOLOGY

Major Component of Sample and Size Range

Boulders	Over 12 in.
Cobbles	12 in. to 3 in.
Gravel	3 in. to #4 sieve
Sand	#4 sieve to #200 sieve
Silt or Clay	Passing #200 sieve

SOIL STRUCTURE TERMINOLOGY

Parting:	Paper Thin in Size
Seam:	1/8" to 3" in Thickness
Layer:	Greater than 3" in Thickness
Interbedded:	Alternating Soil Type Layers
Laminated:	Thin Layers of Varying Color and Texture, or Composition
Slickensided:	Having Inclined Planes of Weakness that are Slick and Glossy in Appearance
Fissured:	Containing Shrinkage Cracking, Frequently Filled with Fine Sand or Silt, Usually Vertical
Ferrous:	Containing Appreciable Iron
Desiccated:	Soil that has been Subjected to a Thorough Drying Process

III. SOIL PROPERTY SYMBOLS:

MC - Natural Moisture Content in %.
DRY WT.- Unit Dry Weight in Pounds per Cubic Foot.
LL - Liquid Limit in %.
PL - Plastic Limit in %.
PI - Plasticity Index in %
Qp - Unconfined Compressive Strength in Tons per Square Foot Calibrated Penetrometer Value
Qu - Unconfined Compressive Strength in Tons per Square Foot Obtained in Laboratory at Controlled Rate of Strain

BLOWS - The "blows" are the recorded results of the Standard Penetration Test (SPT). In this field test, a standard Split Spoon Sampler (2" O.D.- 1 3/8" I.D.) is driven into the soil for a total penetration of 18 inches by a 140-pound hammer which is repeatedly dropped freely for a distance of 30 inches.

The number of blows are recorded (field logs) for each 6 inches of penetration, and the penetration resistance, "N", is considered as the number of blows required for the last 12 inches of penetration.

EXAMPLE: 3-8-6 "N" = 14 blows/foot

The SPT "N" value for split-spoon refusal conditions is typically estimated as greater than 100 blows per foot. When split-spoon refusal occurs, often little or no sample is recovered. For our own in-house purposes, refusal is estimated at 50 blows per 6 inches. Where the sampler is observed not to penetrate after 50 blows, the "N" value is reported as 50/0". Otherwise, the depth of penetration after 50 blows is reported in inches (i.e. 50/5", 50/2"). Should the sampler not penetrate the full 18 inches, the results are recorded as follows:

EXAMPLE: 6-21-50/3"

This means that 6 blows were required for the first 6 inches of penetration, 21 blows were required for the second 6 inches of penetration, and 50 blows were required for the last 3 inches of penetration.

$\underline{\nabla}$ - Groundwater Level During Drilling

$\underline{\blacktriangledown}$ - Groundwater Level at Indicated Hours Following Boring Completion

IV. APPROXIMATE RELATIVE DENSITY AND CONSISTENCY OF SOILS ON THE BASIS OF THE STANDARD PENETRATION TEST:

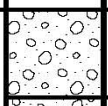
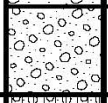
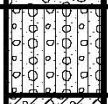
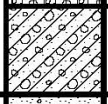
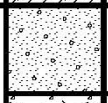
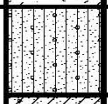
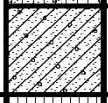
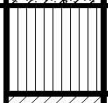
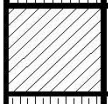
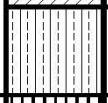
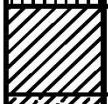
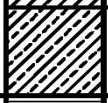
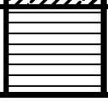
NONCOHESIVE SOILS		COHESIVE SOILS*	
BLOWS/FT.**	RELATIVE DENSITY	BLOWS/FT **	CONSISTENCY
0 - 4	Very Loose	0 - 2	Very Soft
4 - 10	Loose	2 - 4	Soft
10 - 30	Medium Dense	4 - 8	Medium
30 - 50	Dense	8 - 15	Stiff
50+	Very Dense	15 - 30	Very Stiff
		30+	Hard

* Use with caution

**Penetration Resistance "N"

V. QUANTITATIVE EXPRESSIONS FOR THE CONSISTENCY OF CLAYS:

CONSISTENCY	UNCONFINED COMPRESSIVE STRENGTH T.S.F.	FIELD IDENTIFICATION
Very Soft	0.0 - 0.25	Easily penetrated several inches by fist.
Soft	0.25 - 0.5	Easily penetrated several inches by thumb.
Medium	0.5 - 1.0	Penetrated by thumb with moderate effort.
Stiff	1.0 - 2.0	Readily indented by thumb but penetrated only with great effort.
Very Stiff	2.0 - 4.0	Readily indented by thumbnail.
Hard	4.0+	Indented with difficulty by thumbnail.

MAJOR DIVISIONS			GRAPH SYMBOL	GROUP SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS More than 50% of Material is LARGER than No. 200 Sieve Size	GRAVEL AND GRAVELY SOILS More than 50% of Coarse Fraction RETAINED on No. 4 Sieve	CLEAN GRAVELS (Little or No Fines)		GW	Well-Graded Gravel, Gravel-Sand Mixture, Little or No Fines
				GP	Poorly-Graded Gravel, Gravel-Sand Mixtures, Little or No Fines
		GRAVELS WITH FINES (Appreciable Amount of Fines)		GM	Silty Gravel, Gravel-Sand-Silt Mixtures
				GC	Clayey Gravel, Gravel-Sand-Clay Mixtures
	SAND AND SANDY SOILS More than 50% of Coarse Fraction PASSING on No. 4 Sieve	CLEAN SAND (Little or No Fines)		SW	Well-Graded Sand, Gravely Sands, Little or No Fines
				SP	Poorly-Graded Sand, Gravely Sands, Little or No Fines
		SANDS WITH FINES (Appreciable Amount of Fines)		SM	Silty Sand, Sand-Silt Mixtures
				SC	Clayey Sand, Sand-Clay Mixtures
FINE GRAINED SOILS More than 50% of Material is SMALLER than No. 200 Sieve Size	SILTS AND CLAYS	Liquid Limit LESS than 50%		ML	Inorganic Silt and Very Fine Sand, Rock Flour, Silty or Clayey Fine Sand or Clayey Silt with Slight Plasticity
				CL	Inorganic Clay of Low to Medium Plasticity, Gravely Clay, Sandy Clay, Silty Clay, Lean Clay
				OL	Organic Silt and Organic Silty Clay of Low Plasticity
	SILTS AND CLAYS	Liquid Limit GREATER than 50%		MH	Inorganic Silt, Micaceous or Diatomaceous Fine Sand or Silty Soil, Elastic Silt
				CH	Inorganic Clay of High Plasticity, Fat Clay
				OH	Organic Clay of Medium to High Plasticity, Organic Silt
HIGHLY ORGANIC SOILS				PT	Peat, Humus, Swamp Soils with High Organic Contents

SOIL CLASSIFICATION CHART

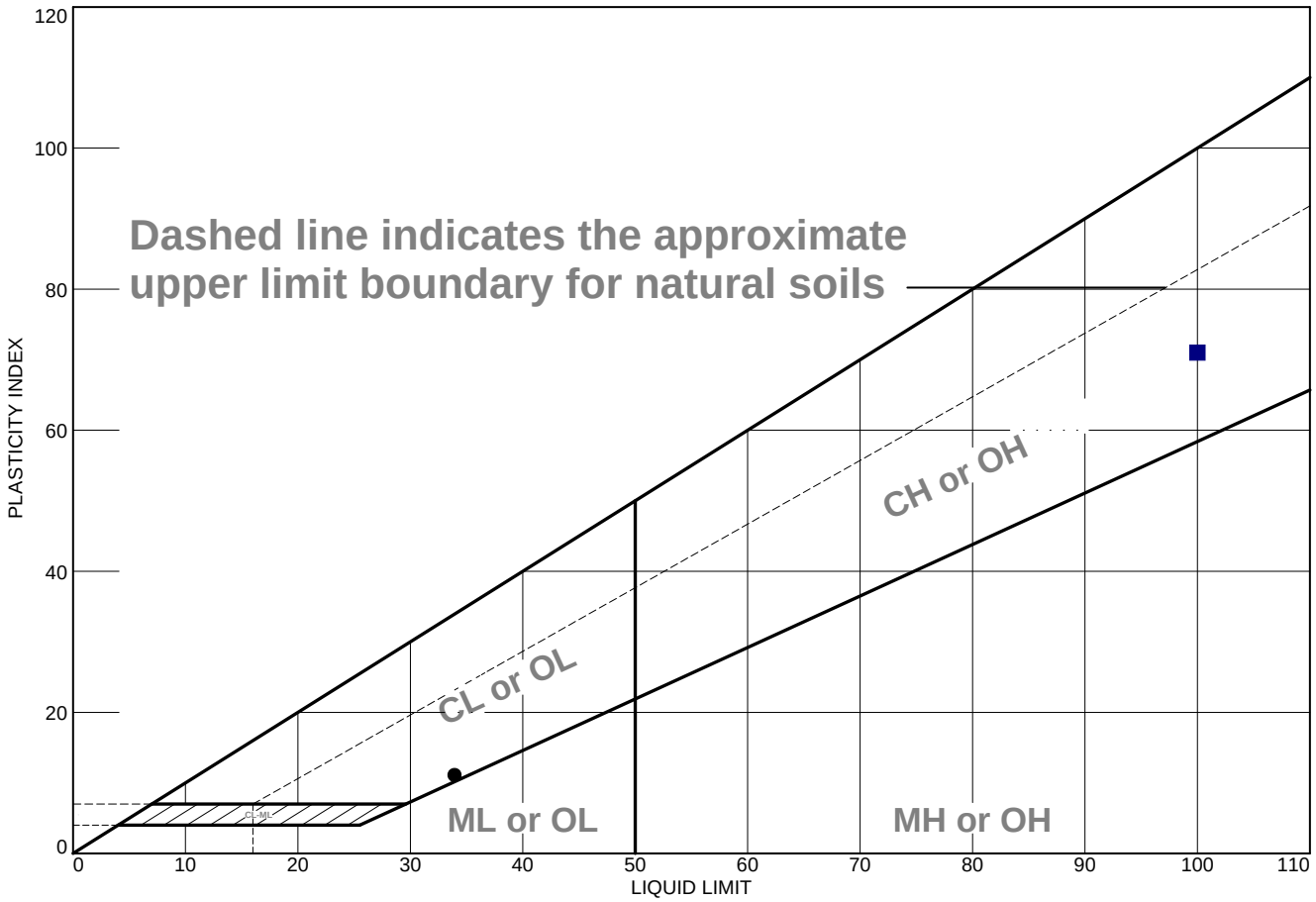
NOTES:

1) DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.
2) IN THE CASE OF COMBINATIONS, THE PREDOMINANT MATERIAL WILL BE IN HEAVY SYMBOL.

GEOTECHNICS
Soil & Material Testing
□ 816 North 24th Street, Quincy, IL Ph (217)223-3870 - Fax (217)223-3905
■ 4510 Paris Gravel Rd, Hannibal, MO Ph (573)221-0030 - Fax (573)221-0912
□ 810 N. Third Street, Suite 100, Burlington, IA Ph (319)753-1696 - Fax (319)753-3905
Internet Address: www.kdinamer.com

UNIFIED SOIL CLASSIFICATION SYSTEM
- ASTM D 2487 -

ATTERBERG LIMITS TEST REPORT (ASTM D4318)



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Lean Clay with Sand (CL/ML), Brown, With Sandy Silt Seams, Trace Organics, Stiff, Moist	34	23	11			CL
■	Fat Clay (CH), Gray, With Organics and Lean Clay Seams, Soft, Moist	100	29	71			CH

Project No. 18-0223 **Client:** Central Missouri AGRIservice, LLC

Project: Missouri River Loadout - Waverly Facility

●**Location:** Boring 1 **Depth:** 5-7 ft. **Sample Number:** 2

■**Location:** Boring 2 **Depth:** 25-26½ ft. **Sample Number:** 8

Remarks:

●Natural Moisture = 23.5%

■Natural Moisture = 66.3%

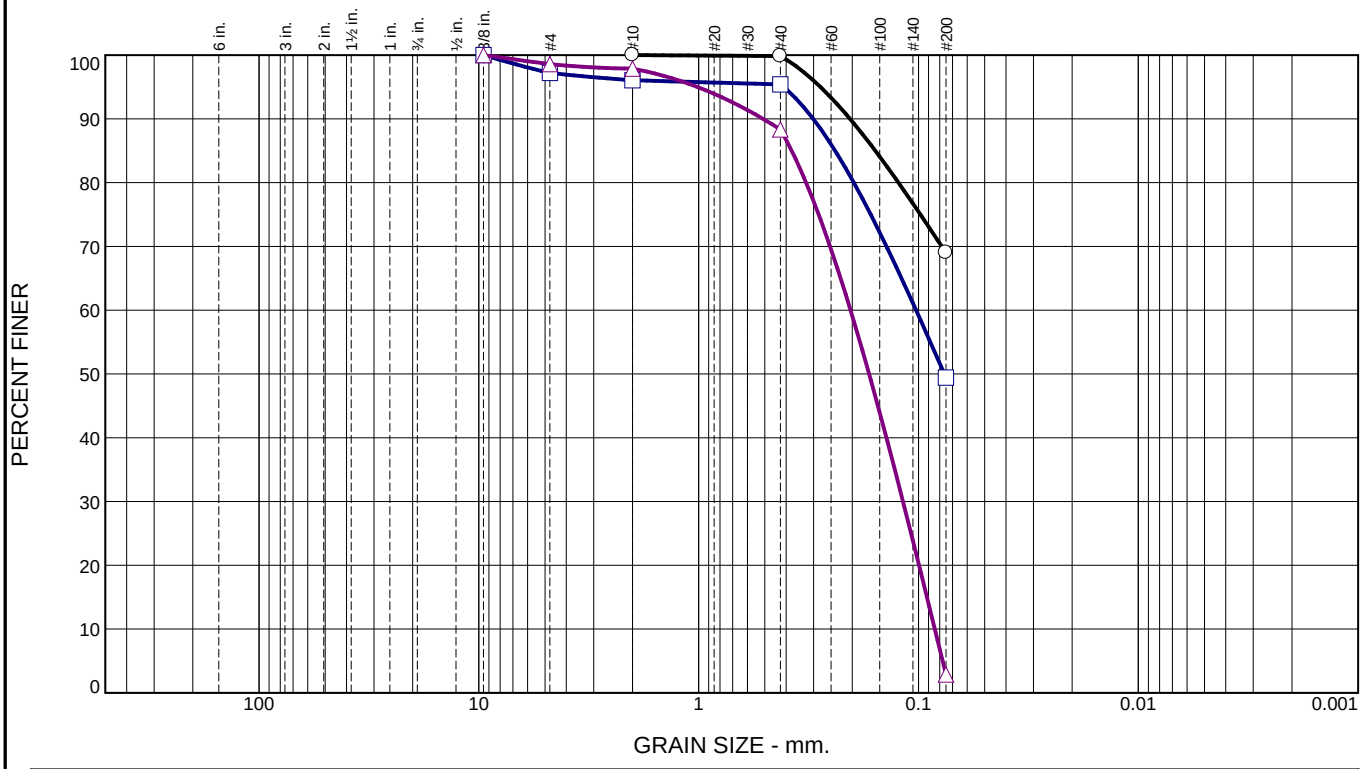
Oven Dry Liquid Limit = 83%

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Figure

Tested By: BJJ **Checked By:** BJS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○	0	0	31	69		(ML)			
□	0	3	48	49		(SM)			
△	0	1	96	3		SP			

SIEVE inches size	PERCENT FINER ○	□	△
3/8		100	100
GRAIN SIZE			
D_{60}		0.1026	0.2037
D_{30}			0.1176
D_{10}			0.0843
COEFFICIENTS			
C_c			0.81
C_u			2.42

SIEVE number size	PERCENT FINER ○	□	△
#4		97	99
#10	100	96	98
#40	100	95	88
#200	69	49	2.9

Material Description

○ Sandy Silt (ML), Brown, Very Soft/Very Loose, Moist

□ Silty Sand (SM), Gray, With Lean Clay and Silt Seams, Loose/Stiff, Wet

△ Poorly Graded Sand (SP), Gray, Fine, Medium Dense, Wet

REMARKS:

○ Natural Moisture = 28.6%

□ Natural Moisture = 23.3%

△

○ Location: Boring 1 Depth: 2½-4 ft. Sample Number: 1

□ Location: Boring 1 Depth: 15-16½ ft. Sample Number: 6

△ Location: Boring 1 Depth: 40-41½ ft. Sample Number: 11

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

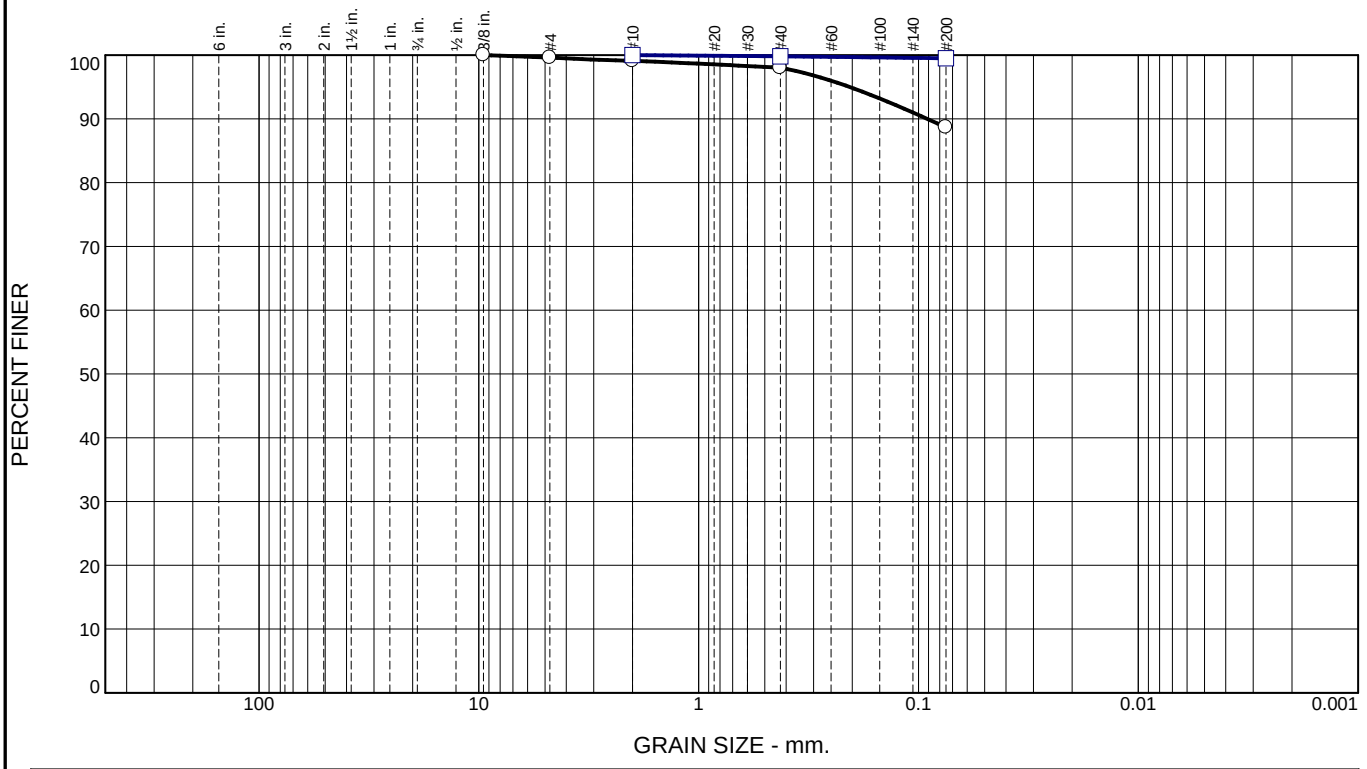
Client: Central Missouri AGRIservice, LLC

Project: Missouri River Loadout - Waverly Facility

Project No.: 18-0223 Figure

Tested By: BJS **Checked By:** BJS

Particle Size Distribution Report



	+3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	AASHTO	PL	LL
○	0	0	11	89		(CL)			
□	0	0	1	99		(CL)			

SIEVE inches size	PERCENT FINER ○	□	
3/8	100		
	GRAIN SIZE		
D_{60}			
D_{30}			
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ○	□
#4	100	
#10	99	100
#40	98	100
#200	89	99

Material Description

○ Lean Clay (CL), Gray, Silty, With Silt Seams, Trace Sand, Soft, Moist

□ Lean Clay (CL), Gray mottled Yellow Brown, Silty, With Silt Seams, Very Soft/Very Loose, Moist

REMARKS:

○ Natural Moisture = 25.4%

□ Natural Moisture = 35.9%

○ Location: Boring 2 Depth: 5-6½ ft. Sample Number: 2

□ Location: Boring 2 Depth: 20-21½ Sample Number: 7

GEOTECHNICS
Soil & Material Testing
4510 Paris Gravel Road - Hannibal, MO

Client: Central Missouri AGRIservice, LLC

Project: Missouri River Loadout - Waverly Facility

Project No.: 18-0223 Figure

Tested By: BJS **Checked By:** BJS

Project No.: 18-0223
Project: Missouri River Loadout - Waverly Facility
Client: Central Missouri AGRIservice, LLC
Boring No.: 1

Boring Log

Rig: Morooka CME 55 (B-55)
Location: Waverly, MO
Driller: MAS

Depth (ft.)	Description	Qp, t.s.f.	Dry Density, P.C.F.	Depth/Elev.	Number	Type	Blows/ft.	Qu, T.S.F.
0	Ground Surface			670.7				
	Sandy Silt (ML), Brown, Moist				0	HA		
	(ML), Very Soft/Very Loose, Moist	0.00			1	SS	0	
5	Lean Clay with Sand (CL/ML), Brown, With Sandy Silt Seams, Trace Organics, Stiff, Moist		100.0	665.7 5.0	2	ST		1.06
	Silt (ML), Gray, Stiff/Medium Dense, Moist Medium Gravel (9 to 10 ft.)			663.2 7.5	3	SS	10	
10	Silt (ML),Gray, With Sandy Silt, Fat Clay and Lean Clay Seams, Medium/Loose, Wet			660.7 10.0	4	SS	6	
	Silt (ML), Gray, With Sandy Silt and Silty Lean Clay Seams, Soft/Very Loose, Wet	0.50		658.2 12.5	5	SS	3	
15	Silty Sand (SM), Gray, With Lean Clay and Silt Seams, Loose/Stiff, Wet			655.7 15.0	6	SS	8	
20	Silt with Sand (ML), Gray, With Lean Clay Seams, Loose/Stiff, Wet		101.0	650.7 20.0	7	SS	8	1.30
25	Lean Clay (CL), Gray, Silty, With Sandy Silt Seams, Stiff, Moist			645.7 25.0	8	SS	8	
30	Fat Clay (CH), Gray, With Lean Clay and Silt Seams, Medium, Moist	0.25	72.9	640.7 30.0	9	SS	0	0.50
				638.2				

Standard Penetration Test blows/ft. (10 20 30 40)

Water Content % (Wp — Wl; 10 20 30 40)

28.5
28.6
23.5
20.9
30.1
28.2
23.3
23.3
24.9
51.0

Drill Method: 3 1/4" HSA and AW Rod
Boring Started: 11/7/2018
Boring Completed: 11/7/2018
Tested By: BJJ
Logging By: NAS

GEOTECHNICS
Soil & Material Testing

Groundwater Elev. During Drilling: 660.7
Groundwater Elev. @ Comp.: 661.7
Groundwater Elev. @ 5 **Hrs.:** 662.7
Boring Location: See Location Image

Project No.: 18-0223

Project: Missouri River Loadout - Waverly Facility

Client: Central Missouri AGRIservice, LLC

Boring No.: 1

Boring Log

Rig: Morooka CME 55 (B-55)

Location: Waverly, MO

Driller: MAS

Depth (ft.)	Symbol	Description	Qp, t.s.f.	Dry Density, P.C.F.	Depth/Elev.	Number	Type	Blows/ft.	Qu, T.S.F.
					638.2				
					635.7				
35		Fat Clay (CH), Gray, Very Soft, Moist			35.0				
			0.25		634.7	10	S	2	
		Poorly Graded Sand (SP), Gray, Fine, Very Loose, Wet			36.0				
40		(SP), Fine, Medium Dense, Wet				11	SS	16	
					627.7				
					43.0				
45		Shale, Gray mottled Reddish Brown, Weathered, Hard			624.9	12	SS	50/4"	
		End of Boring @ 45.8 Ft.			45.8				
50									
55									
60									
65									

Standard Penetration Test blows/ft.

10 20 30 40

50/4"

Water Content %

Wp WI

10 20 30 40

47.2

23.0

8.9

Drill Method: 3 1/4" HSA and AW Rod

Boring Started: 11/7/2018

Boring Completed: 11/7/2018

Tested By: BJJ

Logging By: NAS

GEOTECHNICS

Soil & Material Testing

Groundwater Elev. During Drilling: ▽ 660.7

Groundwater Elev. @ Comp.: ▽ 661.7

Groundwater Elev. @ 5 Hrs.: ▽ 662.7

Boring Location: See Location Image

Project No.: 18-0223

Project: Missouri River Loadout - Waverly Facility

Client: Central Missouri AGRIservice, LLC

Boring No.: 2

Boring Log

Rig: Morooka CME 55 (B-55)

Location: Waverly, MO

Driller: MAS

Depth (ft.)	Symbol	Description	Qp, t.s.f.	Dry Density, P.C.F.	Depth/Elev.	Number	Type	Blows/ft.	Qu, T.S.F.
		SUBSURFACE PROFILE				**SAMPLE**			
0		Ground Surface			671.8				
		Lean Clay with Sand (CL), Brown, Silty, With Silt Seams, Moist			669.3	0	HA		
		Lean Clay (CL), Brown, Silty, Trace Sand, With Organics and Silt with Sand Seams, Very Soft/ Very Loose, Moist	0.25		2.5	1	SS	1	
5		Lean Clay (CL), Gray, Silty, With Silt Seams, Trace Sand, Soft, Moist	1.50		666.8 5.0	2	SS	3	
		Heavy Gravel (7 to 7½ ft.)			664.3				
		Silt (ML), Light Gray mottled Yellow Brown, Clayey, Very Soft, Moist			7.5	3	SS	0	
10		(ML), Clayey, With Silt Seams, Very Soft/Very Loose, Wet				4	SS	0	
		Fat Clay (CH), Light Gray mottled Yellow Brown, With Lean Clay Seam, Soft, Wet	0.25		659.3 12.5	5	SS	3	
15		Lean Clay (CL), Gray mottled Yellow Brown, Silty, With Silt Seams, Very Soft/Very Loose, Moist	0.25		656.8 15.0	6	SS	0	
20		Silt (ML), Gray, With Seams of Lean Clay, Very Loose/Medium, Moist	0.25	82.1	651.8 20.0	7	SS	1	0.50
25		Fat Clay (CH), Gray, With Organics and Lean Clay Seams, Soft, Moist	0.25	66.3	646.8 25.0	8	SS	0	0.44
30		Fat Clay (CH), Gray, Soft, Moist	0.25	67.1	641.8 30.0	9	SS	0	0.49
					639.3				

Standard Penetration Test blows/ft.

10 20 30 40

Water Content %

Wp — Wl

10 20 30 40

17.3 30.4 25.4 30.6 33.4 40.3 33.0 35.9 100 66.3 67.1

Drill Method: 3 1/4" HSA and AW Rod

Boring Started: 11/7/2018

Boring Completed: 11/7/2018

Tested By: BJJ

Logging By: NAS

GEOTECHNICS
Soil & Material Testing

Groundwater Elev. During Drilling: ▽ 661.8

Groundwater Elev. @ Comp.: ▽

Groundwater Elev. @ **Hrs.:** ▽

Boring Location: See Location Image

Project No.: 18-0223

Project: Missouri River Loadout - Waverly Facility

Client: Central Missouri AGRIservice, LLC

Boring No.: 2

Boring Log

Rig: Morooka CME 55 (B-55)

Location: Waverly, MO

Driller: MAS

Depth (ft.)	Symbol	Description	Qp, t.s.f.	Dry Density, P.C.F.	Depth/Elev.	Number	Type	Blows/ft.	Qu, T.S.F.	Standard Penetration Test blows/ft. (10 20 30 40)	Water Content % (Wp — WI; 10 20 30 40)
					639.3						
35		(CH), Medium, Moist	0.25	59.1		10	S	0	0.57		64.4
					634.8						
		Poorly Graded Sand (SP), Gray, Fine (±37 ft.)			37.0						
40											
					628.3						
		Shale, Weathered			43.5						
45		Medium Hard Drilling (43½ to 45 ft.)									
		Very Hard Drilling (45 to 46½ ft.)									
		Medium Hard Drilling (46½ to 48 ft.)									
		Very Hard Drilling (48 to 50 ft.)									
50					621.8						
		End of Boring @ 50 Ft.			50.0						
55											
60											
65											

Drill Method: 3 1/4" HSA and AW Rod

Boring Started: 11/7/2018

Boring Completed: 11/7/2018

Tested By: BJJ

Logging By: NAS

GEOTECHNICS
Soil & Material Testing

Groundwater Elev. During Drilling: 661.8

Groundwater Elev. @ Comp.:

Groundwater Elev. @ Hrs.:

Boring Location: See Location Image