2023/07/13

ADDENDUM NO. 1
TO CONTRACT DOCUMENT PLANS AND SPECIFICATIONS

PROJECT: PUBLIC POWER GENERATION AGENCY
WEC2 ASH POND LINER PROJECT
FORMAL CONTRACT NO. PPGA 2023-05

TO: PROSPECTIVE BIDDERS AND OTHER INTERESTED PARTIES

The Contract Documents and Specifications, including the Contract Drawings, are hereby modified by the following items:

CHANGES TO DRAWINGS

AD-1 Item 1 SHEET G001

A. REMOVE Sheet G001 and replace with attached Sheet G001 Issue B.

AD-1 Item 2 SHEET G002

A. REMOVE Sheet G002 and replace with attached Sheet G002 Issue B.

AD-1 Item 3 SHEETS C101 THROUGH C105

A. ADD the updated existing utilities along the north and northeast sides of the project, as shown on Sheet G002 Issue B, onto these sheets.

CHANGES TO SPECIFICATIONS

AD-1 Item 4 SECTION 1 – GENERAL CONDITIONS

A. ADD the following to GC.18 after the 2nd paragraph:

Weather-Related Delays

If "unfavorable weather" as set forth in Paragraph GC.22.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: (1) that weather conditions were abnormal for the period of time in which the delay occurred, (2) that such weather conditions could not have been reasonably anticipated, and (3) that such weather conditions had an adverse effect on the Work on the critical path at the time of the delay.

The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:

a. Every workday on which one or more of the following conditions exist will be considered a "bad weather day":

   i. Number of days in a month with rain totals equal to or greater than 0.5" that exceed the monthly Normal value from the Climate Normal Period 1991 to 2020.

b. Determination of actual bad weather days during performance of the Work will be based on the weather records measured and recorded by the National Weather Service Weather Station at the Hastings Municipal Airport (KHSI).

c. Contractor shall anticipate the number of foreseeable bad weather days per month indicated in the table below summarizing the Normal Climate Data values during the Contract.

Month	Number of Days with > = 0.5" from Normal Climate Data (inches)[1]
July	3.1
August	3.4
September	1.3
October	1.6
November	0.8
December	0.6

Notes:
[1]Source: National Weather Service Station for Hastings, Nebraska.
Link: Text Products for CLM Issued by HSI (weather.gov)

d. In each month, every bad weather day exceeding the number of foreseeable bad weather days in the table above, will be considered as "abnormal weather conditions." The existence of abnormal weather conditions will not relieve Contractor of the obligation to demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus delayed were on Contractor's then-current Progress Schedule's critical path for the Project.

AD-1 Item 5 SECTION 31 05 19 GEOSYNTHETIC CLAY LINER (GCL)

A. ADD to specification set, Specification Section 31 05 19 – Geosynthetic Clay Liner as attached to this Addendum No. 1 and as described in Bid Alternate B.

AD-1 Item 6 SECTION 01 11 00 SUMMARY OF WORK

A. ADJUST Specification Section 01 11 00 – Summary of Work, Article 1.4.B to read:

a. The Work of this Contract under the Base Bid and Alternate A, generally includes, but is not limited to the following:

B. ADD to Specification Section 01 11 00 – Summary of Work, Article 1.4.C:

a. The Work of this Contract under the Base Bid and Alternate B includes the items listed above for Base Bid and Alternate A but replaces all 2-FT thick Recompacted Clay Liner (RCL) with 1-FT thick Structural Fill over Base Grade elevations at all locations and includes installation of a geosynthetic clay liner (GCL) over the Structural Fill elevations 1-FT above the Base Grade to the same grading tolerances identified for the RCL.

AD-1 Item 7 SECTION 01 29 01 PAYMENT PROCEDURES

A. REPLACE following Bid Item No. 1 – Mobilization/Demobilization description in Article 1.4C.2.a.:

   a. This item includes, but not necessarily limited to work necessary for mobilizing to site and demobilizing from the site for the duration of the project, and inclusive of all other costs not included in Bid Items No. 2-10; installation of access haul road on completed liner including fill, compacted soil base, geotextile, and aggregate; incidental to this item are clearing and grubbing, protection of existing structures, erosion and sediment controls, dust control, temporary facilities and controls, dewatering, stormwater and leachate management for the duration of the project.

B. REPLACE following Bid Item No. 2 – CCR Removal description in Article 1.4D.2.a.:

   a. All work associated with excavation of CCR materials by type (scrubber ash, bottom ash, pond ash, and non-spec scrubber ash) and CCR Impacted Soils within the Limits of Construction and other areas as may be needed for the Project; excavating, loading, segregating, hauling, and stockpiling each CCR material type to stockpile locations as shown on the Drawings or directed by Purchaser; and protecting the in-situ soils as required. This item includes additional excavation required in areas with existing elevations below 1887.00 and proposed side slope grades, where the estimated excavation is 1 FT below current grades. This item also includes any additional excavation of CCR and CCR Impacted Soils required by the Purchaser's visual observation and chemical soils verification quality assurance testing activities. Temporary stockpiling, stockpile grading and management, and haul route maintenance are incidental to this item.

C. REPLACE following Bid Item No. 3 – Unsuitable Soils Removal description in Article 1.4.D.3.a:

   a. After CCR Removal is verified complete, all work associated with excavation below Base Grade to remove unsuitable soils; haul and stockpile unsuitable soils to on-site location(s) identified by Purchaser. Stockpile and haul route maintenance is incidental to this item.

D. REPLACE following Bid Item No. 5 – Bulk Excavation descriptions in Article 1.4.D.5:

   a. Occurs after completion of Bid Item No. 2.
   b. All work associated with excavation of clean soils (non-impacted soils), segregating soils by type as needed, and stockpiling of soils for use in Work in accordance with design drawings, specifications, and CQA Plan. Loading, hauling and temporary stockpiling efforts are incidental to this item.
   c. Measurement shall be by excavated area of in-place cubic yards.

E. ADD Bid Item No. 10 to Article 1.4.D:

   10. **Bid Item No. 10 – Demolition-Pipe and Concrete:**

      a. This item includes but not necessarily limited to all work to cut and remove 20 feet of a concrete sluice trench drain and 12-inch diameter ductile iron pipe including concrete support piers; haul off site and dispose of at permitted landfill or recycling facility.
      b. Measurement shall be by estimated percent complete of demolition activities. No additional payment shall be made.

F. ADD the following Alternate Bid Items descriptions after Article 1.4.D:

E. Alternate Bid Items:

1. **Bid Alternate A – Accelerated Substantial Completion**:

c. This item includes but not necessarily limited to all work necessary to accelerate the schedule and substantially complete all construction that allows use of the retrofit liner and leachate pond by new Substantial Completion date of October 17, 2023. Overtime, expedited deliveries, etc. are incidental to this item.

d. Measurement shall be by estimated percent complete of total Bid Items 2-8. No additional payment shall be made.

2. **Bid Alternate B** – **Geosynthetic Clay Liner:**

e. This item includes but not necessarily limited to all work necessary to replace 2-FT-thick clay liner with 1-FT Structural Fill over Base Grades and a geosynthetic clay liner placed over the Structural Fill: furnishing, transportation, storing, installing, and quality control for the geosynthetic clay liner in accordance with Specifications. Lump sum item to include cost reductions for deletion of Bid Item No. 4 Clay Soils Off-Site Borrow Source and other clay liner field quality control and quality assurance testing.

f. Measurement shall be by estimated percent complete of installed geosynthetic clay liner within design boundaries. No additional payment shall be made for extra material installed.

AD-1 Item 8 SECTION 31 11 00 SITE CLEARING

A. REPLACE the language in Article 3.6.A with:

a. CCR material shall be excavated to grades shown in the Contract Drawings so that visual observation and soils chemical verification testing can be conducted to confirm the removal of CCR. Additional excavation shall occur, if initial testing is above threshold values, until the removal of CCR-affected soils is confirmed by Purchaser with additional testing. Measurement will be made, and additional payment will be made at the CCR Removal unit price provided in the Bidding Documents.

b. Contractor shall be responsible for excavating CCR materials separately by type and maintaining stockpiles of the different CCR materials. The locations of these stockpiles are indicated in the Contract Drawings. The different CCR materials (ash) are identified in the CCR Removal Workplan that is made available following Specification Section 01 11 00.

ALL ITEMS IN CONFLICT WITH THIS ADDENDUM ARE HEREBY DELETED.

THIS ADDENDUM IS MADE PART OF THE CONTRACT DOCUMENTS AND SHALL BE INCLUDED WITH THE PROPOSAL SUBMITTAL.

ADDITIONAL CLARIFICATIONS & INFORMATION
(DOES NOT MODIFY CONTRACT DOCUMENTS)

AD-1 Item 9 PROSPECTIVE BIDDER QUESTIONS AND RESPONSES NOT INCLUDED IN ABOVE ADDENDUM ITEMS

Question: Is there soil boring data available for the area to be lined?
Answer: Although there are none within the lined area, there are soil boring logs for the hydrogeological reports and for the Unit 1 soil profiles adjacent to the site. This information can be made available by the Purchaser upon request.

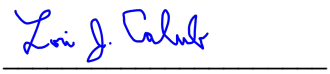
Question: What degree of erosion control is required during construction?
Answer: There is not a formal Erosion Control Plan, however, the Contractor will need to take measures to protect their work from erosion and repair any damages due to erosion and rain events.

Question: What is required by the Contractor for the leak location testing?
Answer: See Specification Section 01 71 24. The testing itself will be coordinated by the Purchaser and the Engineer. The Contractor will be responsible to provide access, i.e., remove cover materials to be able to make any repairs necessary as well as making the repairs. Contractor will also need to provide a power source to conduct the testing.

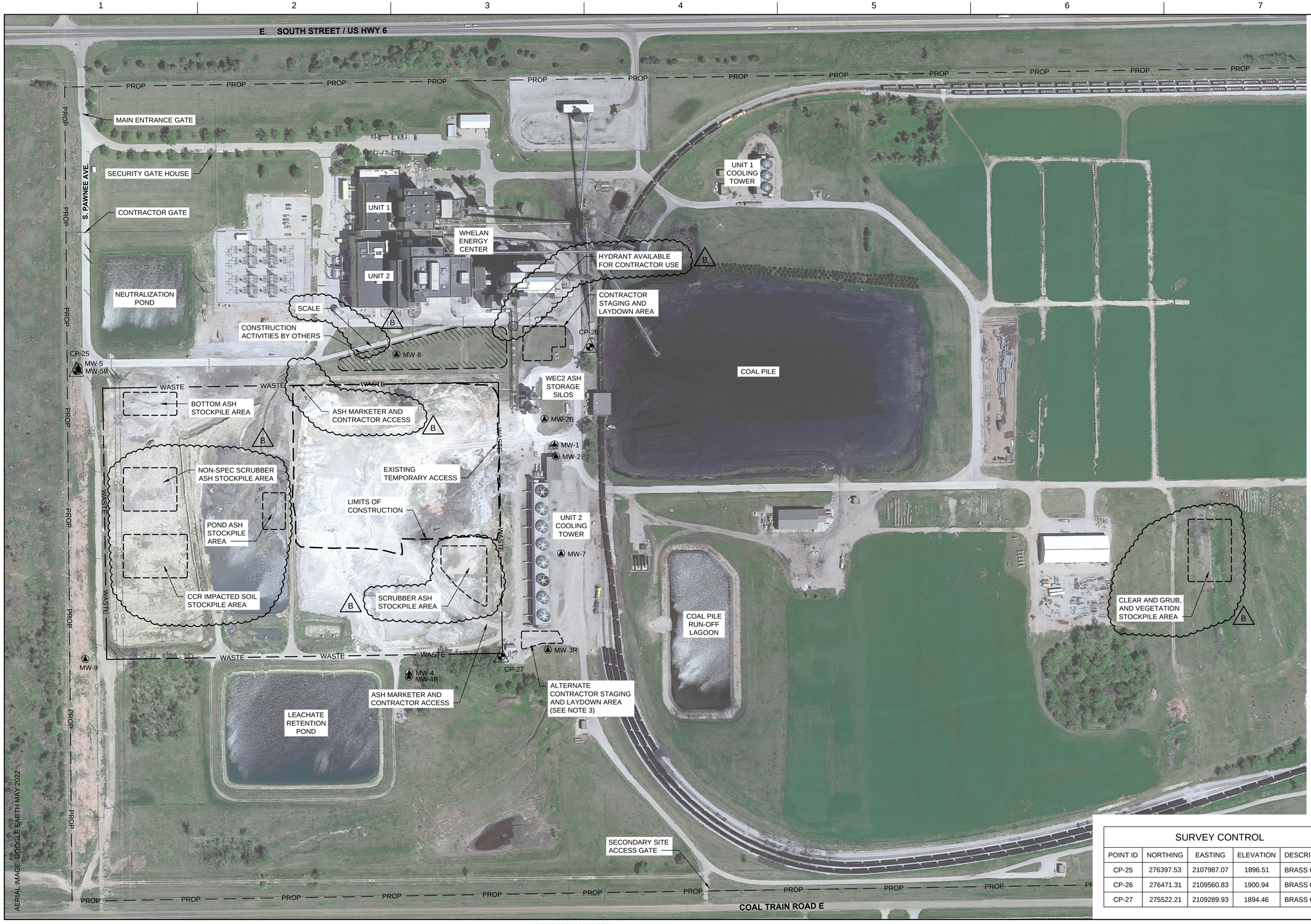
Question: What other traffic is anticipated during construction?
Answer: See Specification Section 01 11 00. The Contractor will need to coordinate with the Purchaser so that all site access roads are not obstructed, and that no interference occurs with other on-site work. Initial coordination will take place during the pre-construction meeting and ongoing during construction.

AD-1 Item 10 PRE-BID MEETING NOTES AND ATTENDANCE SHEET ATTACHED AND DOES NOT MODIFY CONTRACT DOCUMENTS

HDR Engineering, Inc.



Lori J. Calub, P.E.
Certified copy provided to Owner on July 13, 2023



NOTES

1. EXISTING SURVEY PERFORMED BY GRUMMERT PROFESSIONAL SERVICES, LLC, DATED MARCH 7, 2023. AERIAL FROM GOOGLE EARTH, DATED MAY 2022.
2. CCR STOCKPILE LOCATIONS TO BE CONFIRMED DURING PRE-CONSTRUCTION MEETING AND MAY VARY FROM SHOWN AS DIRECTED BY PURCHASER.
3. FOR ALTERNATE STAGING AND LAYDOWN AREA, CONTRACTOR SHALL COORDINATE WITH PURCHASER TO AVOID PURCHASER ROUTING INTERFERENCE.

LEGEND

- PROP — PROPERTY BOUNDARY
- WASTE — ASH DISPOSAL BOUNDARY
- SURVEY CONTROL POINT
- CONIFEROUS TREE
- TREE DRIP LINE
- SD — STORM SEWER LINE
- SS — SANITARY SEWER LINE
- OHE — OVERHEAD ELECTRIC
- DISCHARGE PIPE
- POWER POLE
- LIGHT POLE
- GUY WIRE
- WATER VALVE
- FIRE HYDRANT
- MONITORING WELL
- CCR MONITORING NETWORK WELL
- STEEL POST
- BOLLARD
- STORM DRAIN MANHOLE
- GATE INLET

LEGEND NOTES

1. THIS IS A STANDARD LEGEND SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

SURVEY CONTROL

POINT ID	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-25	276397.53	2107987.07	1896.51	BRASS CAP
CP-26	276471.31	2109560.83	1900.94	BRASS CAP
CP-27	275522.21	2109289.93	1894.46	BRASS CAP

ABBREVIATIONS

CMP	CORRUGATED METAL PIPE
CP	CONTROL POINT
DIP	DUCTILE IRON PIPE
EL	ELEVATION
FL	FLOWLINE
MW	MONITORING WELL
RCL	RECOMPACTED CLAY LINER
GCL	GEOSYNTHETIC CLAY LINER

ISSUE	DATE	DESCRIPTION
B	07/13/2023	ADDENDUM 1
A	06/28/2023	ISSUED FOR BID

PROJECT MANAGER	L. CALUB
CIVIL	L. CALUB
CIVIL	K. KINLEY
DRAWN BY	M. BICKFORD
QC BY	G. SHAFER
QC BY	G. WILLIAMS
PROJECT NUMBER	10167167

public power generation agency

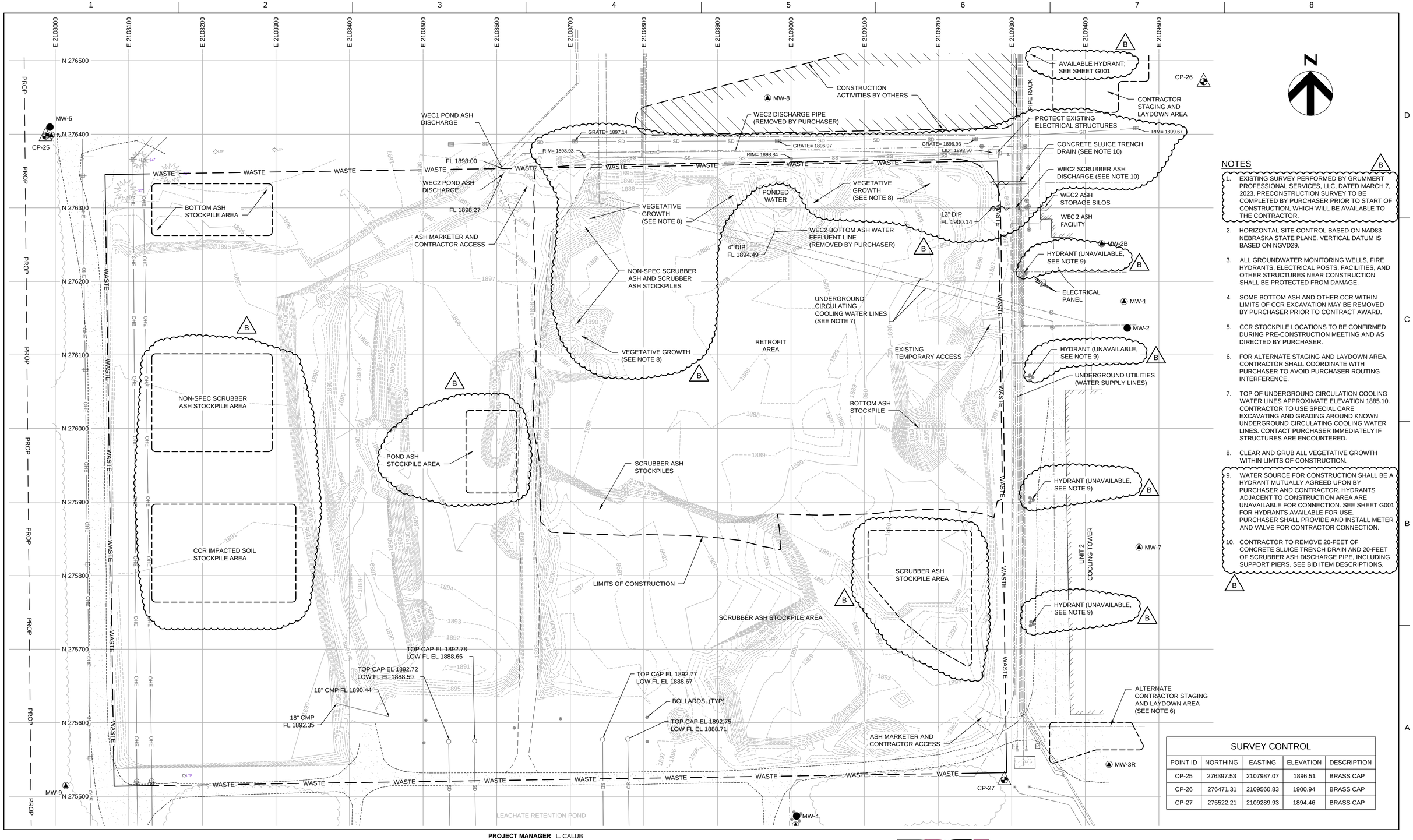
GERALD T. WHELAN ENERGY CENTER WEC2 ASH POND LINER PROJECT

GENERAL SITE PLAN

0 1" 2"

FILENAME G001.dwg
SCALE 1" = 150'

SHEET G001



NOTES

1. EXISTING SURVEY PERFORMED BY GRUMMERT PROFESSIONAL SERVICES, LLC, DATED MARCH 7, 2023. PRECONSTRUCTION SURVEY TO BE COMPLETED BY PURCHASER PRIOR TO START OF CONSTRUCTION, WHICH WILL BE AVAILABLE TO THE CONTRACTOR.
2. HORIZONTAL SITE CONTROL BASED ON NAD83 NEBRASKA STATE PLANE. VERTICAL DATUM IS BASED ON NGVD29.
3. ALL GROUNDWATER MONITORING WELLS, FIRE HYDRANTS, ELECTRICAL POSTS, FACILITIES, AND OTHER STRUCTURES NEAR CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE.
4. SOME BOTTOM ASH AND OTHER CCR WITHIN LIMITS OF CCR EXCAVATION MAY BE REMOVED BY PURCHASER PRIOR TO CONTRACT AWARD.
5. CCR STOCKPILE LOCATIONS TO BE CONFIRMED DURING PRE-CONSTRUCTION MEETING AND AS DIRECTED BY PURCHASER.
6. FOR ALTERNATE STAGING AND LAYDOWN AREA, CONTRACTOR SHALL COORDINATE WITH PURCHASER TO AVOID PURCHASER ROUTING INTERFERENCE.
7. TOP OF UNDERGROUND CIRCULATION COOLING WATER LINES APPROXIMATE ELEVATION 1885.10. CONTRACTOR TO USE SPECIAL CARE EXCAVATING AND GRADING AROUND KNOWN UNDERGROUND CIRCULATING COOLING WATER LINES. CONTACT PURCHASER IMMEDIATELY IF STRUCTURES ARE ENCOUNTERED.
8. CLEAR AND GRUB ALL VEGETATIVE GROWTH WITHIN LIMITS OF CONSTRUCTION.
9. WATER SOURCE FOR CONSTRUCTION SHALL BE A HYDRANT MUTUALLY AGREED UPON BY PURCHASER AND CONTRACTOR. HYDRANTS ADJACENT TO CONSTRUCTION AREA ARE UNAVAILABLE FOR CONNECTION. SEE SHEET G001 FOR HYDRANTS AVAILABLE FOR USE. PURCHASER SHALL PROVIDE AND INSTALL METER AND VALVE FOR CONTRACTOR CONNECTION.
10. CONTRACTOR TO REMOVE 20-FEET OF CONCRETE SLUICE TRENCH DRAIN AND 20-FEET OF SCRUBBER ASH DISCHARGE PIPE, INCLUDING SUPPORT PIERS. SEE BID ITEM DESCRIPTIONS.

SURVEY CONTROL

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CIVIL	L. CALUB
CIVIL	K. KINLEY
DRAWN BY	M. BICKFORD
QC BY	G. SHAFER
QC BY	G. WILLIAMS
PROJECT NUMBER	10167167

public power generation agency

GERALD T. WHELAN ENERGY CENTER
WEC2 ASH POND
LINER PROJECT

EXISTING CONDITIONS PLAN

0 1" 2"

FILENAME G002.dwg

SCALE 1" = 60'

SHEET G002

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TABLE OF CONTENTSAD1

All Work is to be in conformance with Public Power Generation Agency Contract Requirements, General Conditions, and Special Conditions, which precede this Project Manual.

SECTION 31 05 19AD1
GEOSYNTHETIC CLAY LINER (GCL)

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Geosynthetic Clay Liner (GCL).

B. Related Sections include but are not necessarily limited to:
   1. Division 01 - General Requirements.
   2. Section 31 23 00 - Earthwork.
   3. Section 31 35 26.17 – Geomembrane Containment Barriers for Landfills.

1.2 QUALITY ASSURANCE

A. Referenced Standards:
   1. ASTM International (ASTM):
      a. D2216, Moisture Content of Soil.
      b. D4632, Test Method for Breaking Load and Elongation of Geotextiles (Grab Method).
      c. D4873, Identification, Storage and Handling of Geosynthetic Rolls.
      d. D5887, Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter.
      e. D5888, Guide for Storage and Handling of Geosynthetic Clay Liners.
      f. D5890, Swell Index of Clay Mineral Component of Geosynthetic Clay Liners.
      g. D5891, Fluid Loss of Clay Component of Geosynthetic Clay Liners.
      h. D5993, Test Method for Measuring Mass Per Unit Area of Geosynthetic Clay Liners.
      i. D6102, Guide for Installation of Geosynthetic Clay Liners.

B. Quality Assurance:
   1. The Engineer's representative may conduct independent testing to support construction quality assurance program and to provide documentation of such to appropriate regulatory agencies. Facilitate and provide opportunities as Engineer’s representative require.
   2. Manufacture, store, place, seam, test and protect GCL as described in ASTM D4873, ASTM D5888 and ASTM D6102.

C. Qualifications:
   1. Each manufacturing firm shall demonstrate 5 years continuous experience, including a minimum of 5,000,000 SF of manufacture/fabrication in geosynthetic clay lining systems. Aggregate experience shall not apply.
   2. Installer shall attend pre-installation conference.

D. Test Sections:
   1. Prior to production placement of the GCL, demonstrate, with the use of test section(s), that the proposed placement techniques will not damage the geosynthetic materials.

E. Certifications:
   1. Certifications are required for various aspects of the project related to the GCL liner system construction. Unless alternately approved, the certificates provided at the end of Section 31 35 26.17 shall be used and no alterations, additions, deletions, or exception shall be made to the specified language.

1.3 DEFINITIONS

A. Manufacturer: Manufacturer produces geosynthetic clay liner panels from first quality geotextiles and sodium bentonite. The manufacturer is responsible for producing panels which comply with this Specification.

B. Installer: Installers of GCLs are responsible for storing, handling, fitting, seaming, and testing of GCL panels in the field. Installer and manufacturer may be the same firm.

C. Hydrated GCL is defined as material which has become soft as determined by squeezing the material with finger pressure, material which has exhibited swelling, or material which as a moisture content greater than 100% as determined by ASTM D2216.

1.4 SUBMITTALS

A. Shop Drawings:
   1. See Section 01 33 00.
   2. Manufacturer's documentation that bentonite, geotextiles and fabricated GCL comply with required material properties. No faxed copies.
   3. Bentonite, geotextile and GCL tests at frequency specified in respective quality control manuals. Results shall include all rolls or bracket the rolls delivered for use in the Work.
   4. Manufacturer and Installer quality control manuals.
   5. GCL layout plan with proposed size, number, position and sequencing of panels and showing the location and direction of all field seams.
      a. Proposed details for connecting the GCL materials to appurtenances.
      b. Proposed methods of seaming (overlapping) GCL panels.
      c. Proposed method and sequencing for placement of subsequent layers on top of the GCL.
   6. Qualification documentation specified in Article 1.2.

B. Miscellaneous Submittals:
   1. Submit written certifications that:
      a. Utilize certification forms from Section 31 35 26.17 unless alternately approved. Make appropriate number of copies, as required. Complete and sign appropriate form daily.
      b. The GCL delivered to site meets the requirements of this Specification.
      c. The GCL was received and accepted in undamaged condition from shipper.
      d. The subgrade has been properly prepared and acceptable for the placement of the GCL.
      e. The GCL was installed in accordance with this Specification and with approved Shop Drawings.
      f. The HDPE geomembrane and protective soil cover on top of the GCL was placed properly and carefully.

1.5 DELIVERY, STORAGE, AND HANDLING

A. See Section 01 65 50.

B. Do not place GCL rolls directly on the ground.

C. Store and protect GCL from dirt, water, ultraviolet light and other sources of damage.

D. Label, handle, and store GCL in accordance with ASTM D4873 and as specified herein.
   1. Wrap each roll in an opaque and waterproof layer of plastic during shipment and storage.
   2. Do not remove the plastic wrapping until deployment.

E. Label each roll with the manufacturers name, lot number, roll number, and roll dimensions (length, width, gross weight).
   1. Repair or replace GCL or plastic wrapping damaged as a result of storage or handling, as directed.
   2. Do not expose GCL to temperatures in excess of 71 DEGC (160 DEGF) or less than 0 DEGC (32 DEGF) unless recommended by the Manufacturer.

F. Do not use hooks, tongs or other sharp instruments for handling the GCL. Do not lift rolls by use of cables or chains in contact with the GCL. Do not drag GCL along the ground.

1.6 WARRANTY

A. The Manufacturer shall provide a 5-year warranty to the City against manufacturing defects. The warranty shall include defective product found to be not in compliance with the requirements of this Specification.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Subject to compliance with the Contract Documents, the following Manufacturers are acceptable:
   1. Geosynthetic Clay Liners:
      a. CETCO, 1500 W. Shore Drive, Arlington Heights, Illinois 60004.
      b. Solmax, 2801 Marie Victorin Boulevard, Varennes, QC, Canada.
      c. Or other approved by the Engineer.

2.2 MATERIALS

A. Geosynthetic Clay Liner:
   1. Solmax BentoLiner NS or approved equivalent.
   2. The active ingredient of the GCL shall be natural sodium bentonite. Encapsulate bentonite between two geotextiles.
      a. Minimum swell index of the bentonite component: 24 mL/2G when tested in accordance with ASTM D5890.
      b. Maximum bentonite fluid loss: 18 mL when tested in accordance with ASTM D5891.
      c. Minimum bentonite mass per unit area: 0.75 LB/SF, minimum average roll value (MARV), at a moisture content of 25% when tested in accordance with ASTM D5993. This minimum value is exclusive of glues added to the bentonite.
      d. GCL flow rate per unit area (flux): Less than 1×10^{-8} $m^3/m^2/sec$, when tested in accordance with ASTM D5887.
      e. Minimum tensile strength of 30 LB/IN when tested in machine direction in accordance with ASTM D6768.
      f. Minimum peel strength of the GCL: 21 LBS MARV when tested in the machine direction in accordance with ASTM D4632.
   3. Lock-stitch or heat-seal needle punched geotextile backed GCL with high strength polypropylene thread to provide internal shear strength reinforcing. The internal shear reinforcing mechanism shall resist failure due to thread pull-out over long-term creep situations.
   4. Continuously adhere the bentonite to both geotextiles to ensure that the bentonite will not be displaced during handling, transportation, storage and installation, including cutting, patching and fitting around penetrations. The bentonite sealing compound or bentonite granules used to seal penetrations and make repairs shall be made of the same natural sodium bentonite as the GCL and shall be as recommended by the GCL manufacturer. The permeability of the GCL overlap seams shall be equal to or less than the permeability of the body of the GCL sheet.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Construct, inspect and test geosynthetic clay liner in accordance with manufacturer's recommendations, this specification, and ASTM D6102.

B. Halt installation when the weather is of such a nature as to endanger the integrity and quality of the installation.

C. Assure adequate dust control methods are in effect to prevent the unnecessary accumulation of dust and dirt.

D. Maintain natural surface water drainage diversions around the work area and provide for the disposal of water which may collect in the work area directly from precipitation falling within the area or from inadequate diversion structures or practices.

E. Do not allow vehicles in direct contact with the deployed GCL.

F. Subgrade Preparation:
   1. See Section 31 23 00.
   2. Prepare subgrade in a manner consistent with proper subgrade preparation techniques for the installation of GCL.
   3. Properly compact the subgrade so as not to settle and cause excessive strains in the GCL or other synthetic liner materials.
   4. Prior to installation, ensure a surface free of debris, roots, or angular stones larger than 1/2 IN.
   5. Ensure subgrade has been rolled to provide a uniform surface.
   6. Ensure rutting or raveling is not caused by installation equipment or weather.

G. Construct and backfill anchor trenches.

H. Deploy GCL in a manner to ensure it is not damaged. Dragging the GCL over the ground surface shall be minimized. Use a slip sheet if required by the Engineer or the manufacturer's installation guide.

I. On slopes, anchor the GCL securely and deploy it down the slope in a controlled manner.

J. Weight the GCL with sandbags or equivalent in the presence of wind.

K. Cut GCL with a cutter (hook blade), scissors, or other approved device. Seal all cut edges, as recommended by Manufacturer, to prevent loss of bentonite. Protect adjacent materials from potential damage due to cutting of GCL.

L. During GCL deployment, do not entrap in or beneath GCL, stones, trash, or moisture that could damage GCL.

M. Visually examine entire GCL surface. Ensure no potentially harmful foreign objects, such as needles, are present.

N. Do not place GCL in the rain or at times of impending rain.

O. Do not place GCL in areas of ponded water.

P. Remove and replace GCL which has been hydrated prior to being covered.

Q. In general, only deploy GCL that can be covered during that day.

R. Face the woven carrier geotextile against soil of prepared subgrade.

S. Overlaps:
   1. Overlap GCL to the manufacturer's requirements which will vary according to seam location and climatic conditions.
   2. No horizontal seams are allowed on side slopes.
   3. For needle-punched GCLs, add additional granular bentonite to overlapped area at a rate specified by the manufacturer.

T. Defects and Repairs:
   1. Repair all flaws or damaged areas by placing a patch of the same material extending at least 1 FT beyond the flaw or damaged area. For needle-punched GCLs, add granular bentonite to the overlapped edges of the patch at the manufacturer's recommended rate.

3.2 FIELD QUALITY CONTROL

A. Provide As-Constructed Drawings showing roll numbers; layout; joint locations; dates; and repair and patch locations. The Agency will accept the geosynthetic liner system installation when the installation is finished and all required warranties, test results, and documentation from the Contractor, Manufacturer, and Installer has been received and approved, and verification of the adequacy of all field seams and repairs, including associated testing, is complete.

B. Submittal of such documentation shall be a condition precedent to Substantial Completion.

END OF SECTION

PROPOSAL
WEC2 ASH POND LINER PROJECT
FOR WHELAN ENERGY CENTER UNIT 2
PUBLIC POWER GENERATION AGENGY
HASTINGS, NEBRASKA
Formal Contract No. PPGA 2023-05

Public Power Generation Agency
1228 N. Denver Ave. *(68901)*
PO Box 398
Hastings, NE 68902

Issue Date: 6/28/2023 Return Date on or Before: 7/20/2023 Thursday @ 1:30 p.m.

The undersigned Bidder, having read and examined the specifications and associated contract documents for the above designated equipment, does hereby propose to furnish the equipment and provide the services set forth in this Proposal.

We, the undersigned, being familiar with all parts of this document, do hereby agree to complete the WEC2 Ash Pond Liner Installation Project for WEC Unit II for the Public Power Generation Agency, Hastings, Nebraska as specified to Purchaser for the following firm prices.

WEC2 ASH POND LINER PROJECT

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Mobilization/Demobilization and all other costs not included in Items 2 - 11	1	LUMP SUM	$	$
2	CCR Removal	35,000	CUBIC YARD	$	$
3	Unsuitable Soils Removal	3,000	CUBIC YARD	$	$
4	Clay Soils for Recompacted Clay Liner from Off-Site Borrow Source	15,000	TON	$	$
5	Bulk Excavation	25,000	CUBIC YARD	$	$

6	Structural Fill to Base Grade with On-Site Excavated Soils	5,000	CUBIC YARD	$	$
7	Construct Retrofit Liner	1	LUMP SUM	$	$
8	Construct Leachate Pond	1	LUMP SUM	$	$
9	Seeding and Fertilizing	1.5	ACRE	$	$
10	Demolition – Pipe and Concrete	1	LUMP SUM	$	$
11	Sales Tax		*(For Option 1 Contractors only) Sales Tax on materials of the above items.	$	$

Base Bid	**TOTAL PRICE** _____ _____ $ _____ _____ _____ ***(Price In Words)***

Alternate A	Price adjustment to substantially complete all construction to allow use of lined cell for scrubber ash disposal by 10/17/2023	$

	TOTAL PRICE FOR ALTERNATIVE SUBSTANTIAL COMPLETION _____ _____ $ _____ _____ _____ ***(Price In Words)***

Alternate B	Price adjustment to replace Recompacted Clay Liner with Structural Fill and GCL: 1) Replace 2-foot thick Recompacted Clay Liner (RCL) with 1-foot thick Structural Fill over Base Grade elevations at all locations. Structural Fill shall consist of On-site materials. 2) Install a geosynthetic clay liner (GCL) over the Structural Fill to elevations 1 foot above the Base Grade to the same grading tolerances identified for the RCL. 3) Adjustment to Total Price shall include cost reduction for deletion of Bid Item 4 Clay Soils Off-Site Borrow Source. 4) Substantial Completion date same as Base Bid.	$

TOTAL PRICE FOR ALTERNATIVE WITH GEOSYNTHETIC CLAY LINER

_____ $ _____

_____

_____

_____

(Price In Words)

For purposes of sales/use tax, this project falls under Nebraska Sales and Use Tax Regulation 1-017 for Contractors. By definition, a contractor is "any person who repairs property annexed to, or who annexes property to, real estate, including leased property, by attaching building materials to the annexed property or improvement being built or repaired, or who arranges for annexation of property." Please refer to www.revenue.nebraska.gov/salestax.html for additional information.

For calculating this proposal:

- All contractors are to include sales/use tax on materials in the bidder's prices.
- **Option 1 contractors must separately state materials, sales tax, labor, and other charges on all invoices for the project. Any invoices submitted that do not include this required breakdown of the charges will not be accepted for payment. (This requirement does not apply to Option 2 or 3 contractors.)**
- The sales/use tax rate on building materials is 7.0% for projects within Hastings' city limits and 5.5% for projects outside of city limits.
- Contractor labor charges for this proposal are not subject to sales/use tax per the Nebraska Department of Revenue Notice to Contractors effective October 1, 2007.
- In submitting this bid, the bidder certifies that he will comply with all applicable laws, ordinances, and codes of the City of Hastings and the Sate of Nebraska.

This project is located **OUTSIDE OF CITY LIMITS.**

All contractors are to include the price of freight of materials delivered to site.

What contractor option have you registered with the Nebraska Department of Labor (must select one)?
Please refer to https://dol.nebraska.gov for additional information.

Option 1 _____
Option 2 _____
Option 3 _____

Is Nebraska Sales/Use Tax included in the above prices (must select one)?

Yes _____ No _____

Notice to Proceed date: 08/02/2023
Substantial Completion date: 11/15/2023 (Unless revised as noted in bid item Alternate A)
Completion date: 12/31/2023

In submitting this proposal, it is understood that the right is reserved by the PPGA to reject any or all proposals and it is further understood that this proposal may not be withdrawn for a period of sixty (60) days after proposals are opened. It is further understood that the PPGA reserves the right to select any or all of the items above, as they deem appropriate.

All bid documents, including proposals, etc., must be submitted with original signatures. No copies will be accepted.

OFFICIAL NAME & ADDRESS

Firm Name	Signature
Address	Typed or Printed Name
City, State, Zip	Title
Phone No.	Date
Fax No.	Email Address

Pre-Bid Meeting Notes

Project:	WEC2 Ash Pond Liner Project, PPGA 2023-05
Subject:	Pre-Bid Meeting
Date:	Monday, July 10, 2023
Location:	Whelan Energy Center – 4520 East South Street, Hastings, NE 68901

- ***Meeting notes are indicated with bold italics below.***

INTRODUCTIONS/SIGN-IN SHEET

- ***Brief introductions from everyone at the meeting. Copy of sign-in sheet attached.***

SAFETY MOMENT

- ***The location of the exits were provided and a plan of going downstairs to the shelter was discussed. It was noted that the plant stores anhydrous ammonia and if there was an emergency regarding that material, all would be told to shelter in place. If there was another type of emergency, the rally point would be the parking lot downstairs and outside.***
- ***An overview of the plant history (Unit 1 and 2) was discussed with distinction of ownership by City of Hastings and Public Power Generation Agency (PPGA) and operating agent of the City of Hastings.***

SUMMARY OF WORK

a. Coal Combustion Residuals Removal
    i. CCR and CCR Impacted Soils excavation
    ii. CCR and CCR Impacted Soils removal from quality assurance activities
    iii. Haul and stockpile excavated material
b. Liner Development – Liner System
    i. Site preparation
    ii. General Earthwork & Leachate Pond Earthwork
    iii. Soil Excavation, Placement, Testing
    iv. Recompacted Clay Liner
    v. HDPE Textured Geomembrane
    vi. Geotextiles
    vii. Liner System Anchoring
    viii. Drainage Layer, Drainage Stone, Perforated & Solid HDPE Pipe
    ix. Perforated HDPE Inlets & Emergency Spillways
    x. Protective Cover Loading, Hauling, Placement, Grading
    xi. Materials Testing
    xii. Construction Surveying and As-Built Documentation
    xiii. Closeout Documentation
c. Liner Development – Miscellaneous
    i. Access Road
    ii. Erosion Controls & Stormwater Pollution Prevention

iii. Temporary, Permanent Stockpiling
iv. Miscellaneous Structures & Appurtenances
v. Contractor's Health and Safety Plan Development, Implementation
vi. Traffic & Access Controls

d. See Specification Section 01 11 00 and the Drawings and Specifications for work to be performed.

DISCUSSION:

- ***A question was asked about the need for traffic control. The Contractor will need to coordinate with the lime truck traffic on site and CCR traffic. There should not be a need for a flagman. This will be discussed during the pre-construction meeting, scheduled for August 7th.***
- ***All personnel will need to check in at the gate. This is also true for all deliveries.***
- ***All soil testing is to be completed by the Contractor, i.e., permeability testing to determine $1x10^{-7}$ cm/sec requirements, moisture-density testing, and index testing. Contractors should review the Contract Documents, specifically Section 02 65 00 SOILS TESTING and other referenced Sections. Purchaser (PPGA) will also do some quality assurance testing to provide a comfort level with the Contractor testing.***
- ***Purchaser will conduct the visual observation and chemical verification testing at the bottom of the CCR excavation. This is similar to previous Ash Pond projects. Additional excavation may be required in order to pass the testing requirements. Measurement will be made, and additional payment will be made at the unit cost provided in the bidding documents. The Contractor is responsible for all other quality control and quality assurance testing. These need to be kept up to date for quick turnaround for approval from Nebraska Department of Environment and Energy (NDEE). It was noted that the NDEE will need to provide approval based on the existing permit.***
- ***Care must be taken to determine the location and elevation of the water lines shown on Sheet C101. Contractor to review notes on the Drawing.***
- ***The different CCR materials should be kept separated during excavation and stockpiled as indicated on Sheets G001 and G002.***
- ***A question was asked about the erosion control needed for the site. There is no Erosion Control Plan, but the Contractor will need to take measures to protect their work from erosion and repair any damages due to erosion and rain events. Silt fence may be utilized around stockpiles if needed.***
- ***An addendum will be provided this week and will include notes from this meeting and any other clarifications from questions.***
- ***It is anticipated that HDR will be the construction contract administrator with personnel on site during key activities of construction. A shared website will be set up to transfer shop drawings, which will be reviewed by HDR and Hastings.***
- ***Contractors that have worked with Hastings or HDR doing similar projects will be qualified to do this work.***

- ***Liquidated Damages are listed in the Contract Documents. However, Hastings would be willing to discuss a potential cap if requested.***
- ***The contractor is responsible for all surveying for layout and layer thickness verifications.***

COORDINATION WITH EXISTING OPERATIONS

a. Site Access shown on Drawings
    i. Designated employees identified prior to starting Work on-site. Badges may be issued or daily call control room when entering site.
    ii. Designated employees attend required site safety training.
b. Drainage patterns maintained
c. Vegetation – restore disturbed areas

DISCUSSION:

- ***The proposed contractor entrance shown on Sheet G001 (west side) is currently blocked with cones due to some work being done. This work is scheduled to be completed prior to the time of the Notice to Proceed.***
- ***Drainage patterns are generally towards and within the limits of construction. Whelan Energy Center site is mostly flat.***
- ***All vehicles, including deliveries, will need to check in at the gate (to the control room). Personnel will be able to remain inside their vehicles.***
- ***Safety training (orientation) will take approximately 1 hour and will need to be done on site and in groups. Delivery personnel will not be required to take safety training.***
- ***Any areas that are disturbed will need to be restored with 6" topsoil and vegetated.***
- ***It is crucial that communication and coordination are maintained during the project.***
- ***The "CONSTRUCTION ACTIVITIES BY OTHERS" shown on Sheets G001 and G002, directly north of the project, will be a concrete pad and bunker and is currently scheduled to be completed by October 15th. This may impact access along the north.***
- ***There will be dump trucks hauling scrubber ash along the east side of the construction area by the silos. This will be further discussed and coordinated at the preconstruction meeting.***
- ***On site activities will increase during the fall months due to the customers (farmers) purchasing scrubber ash.***

WORK BY OTHERS

a. Ongoing CCR Hauling & Stockpiling
b. CCR Excavation, Stockpiling, Loading, and Hauling Off-Site
c. Plant outages
    i. WEC2 scheduled fall outage October 6 to November 17, 2023
d. Construction of Bottom Ash Storage Facility

DISCUSSION:

- ***Unit 1 is scheduled for an outage from October 5th or 6th through November 3rd.***

EXISTING CONDITIONS

a. Project Site is adjacent to an active CCR disposal area regulated by State of Nebraska.
b. Bidders shall be aware of existing infrastructure such as Underground Circulating Cooling Water Lines, groundwater monitoring wells, and other utilities shown within the Drawings and present at the site.

DISCUSSION:

- ***The notes on Sheet C101 were reviewed regarding the controlled excavation for the underground circulating cooling water lines. These lines are pressurized concrete pipe.***
- ***Unit 2 currently has a small amount of bottom ash discharge water into the north end of project, which Purchaser will intercept prior to start of construction.***
- ***Any water in contact with CCR will need to be treated as leachate. Contractor to manage this water on site. Dewatering should be either hauled to the existing leachate retention pond (south) or pumped somewhere within the limits of construction and coordinated with Purchaser. Water can also be used for dust control within the disposal area.***
- ***This contract is the first phase in making changes to the existing disposal area.***
- ***Fine dust at the site could cause issues in seaming the HDPE for the liner subcontractor. Contractor should be aware and take precautions to clean areas to be seamed.***
- ***Contractor to take precautions and measures to protect all existing utilities and monitoring wells. All damage will need to be repaired by the Contractor.***

BORROW SOURCE

a. On-site soil borrow area within limits of construction on drawings and include native soils below CCR excavation grades for proposed liner construction.
b. Contractor to use off-site soil borrow area of suitable soils if needed to complete construction. See Specification Sections 31 23 00 and 31 38 10.
c. No topsoil available on site.

DISCUSSION:

- ***Borrow soils will need to be prequalified and confirmed for permeability of less than $1x10^{-7}$ cm/sec for Clay Liner. Peoria loess is prevalent in the area and usually qualifies for permeability.***
- ***Structural fill is also required.***
- ***A question was asked about any soil borings done within the area to be lined. Although there are none within the lined area, there are soil boring logs for the hydrogeological reports and for the Unit 1 soil profiles. They consistently show***

Peoria loess overlying Loveland geological formations. This information can be provided by the Purchaser.

- ***Any unsuitable soils encountered during excavation will be left on site and not need to be hauled away. Purchaser to identify location on site.***
- ***Topsoil will need to be brought in for disturbed areas. Provide a minimum of 6".***
- ***There is a topsoil stockpile west of the site. Contractor may negotiate with that contractor to use that topsoil. There may be some tree roots within that topsoil. Hastings would allow some minimal tree roots within the imported topsoil.***
- ***It is important to provide shop drawings quickly so they can be reviewed and reduce any lead time. This is especially true for the soils and geosynthetics.***

TESTING AND SURVEYING

a. Contractor is responsible for testing. See Specification Sections 02 65 00, 31 23 00, and other specification sections for testing requirements.
b. Contractor is responsible for surveying per the Contract Documents. See Specification Section 01 71 23 for additional information.
c. Purchaser will conduct electrostatic leak location testing through CQA Consultant. Contractor is responsible for drainage layer wetting/grading, power generator, and fuel. See full list of requirements in Specification Section 01 71 24.
d. CAD linework (.dwg) and grading files (.xml) are available to interested bidders, if desired. Submit requests to Lori Calub, HDR at lori.calub@hdrinc.com to obtain the CAD files. Contractor must fill out an "Agreement with Contractor for Delivery of Electronic Media" in order to obtain CAD files.

DISCUSSION:

- ***The electrostatic leak location testing was discussed. HDR and Hastings will coordinate the testing. The testing will likely require a power source (generators) which will need to be provided by the Contractor. Section 01 71 24 should be reviewed. Electrostatic leak testing will be done after installation of the Drainage Layer to verify no damage to the HDPE geomembrane. The Contractor will be responsible to provide access, i.e., removal of cover materials to be able to make any repairs necessary.***
- ***It is anticipated that the electrostatic leak location testing firm will be known by the time of award of this contract.***

SCHEDULE

a. Questions regarding the Specifications and Contract Documents shall be submitted no later than business close on Thursday, July 13th, 2023.
b. Bids are due Thursday, July 20th, 2023 by 1:30 PM.
    i. Submit Bids to PPGA, 1228 North Denver Avenue, PO Box 398, Hastings, NE 68902 with attention to Renae Griess. See Mailing Instructions in Bidding Documents.
    ii. The bid opening will be conducted in person at the North Denver Avenue Office at 1:30 PM on July 20, 2023.

c. Notice to Proceed – currently listed as August 14th, 2023 on Proposal Form; May be as early as August 2. Addenda to come.
d. Substantial Completion – November 15th, 2023
e. Final Completion – December 31st, 2023
f. Bid Alternate A schedule: Accelerate project for early Substantial Completion date October 17th, 2023

DISCUSSION:

- ***The final approval for award will need to be provided by the PPGA board on August 1st or August 8th meetings. It is anticipated that NTP will be given on August 2nd after the board meeting on August 1st.***
- ***Insurance will need to be approved prior to start of construction.***

BIDDING:

a. **Send Sealed Proposal to PPGA, 1228 North Denver Avenue, PO Box 398, Hastings, NE 68902.**
b. Use Proposal Form in the PPGA Bidding Documents.
c. See PPGA Bidding Documents for specific protocols.
d. Include: Bid Security, Statement of Bidder's Qualifications, and other required documents.
    i. **Bid Bond and/or cashier's check important to be done correctly.**
    ii. **Bid Bond should be in separate envelope.**
e. Basis of Bid: Lump Sum and Select Unit Pricing. Alternate Bid Pricing.

DISCUSSION:

- ***As discussed earlier, Contractors must be prequalified by either doing similar work for the Purchaser, Hastings or HDR.***
- ***Contractors should review Section 01 29 01 Payment Procedures and the descriptions. Off-site soils will be paid for by the ton as described in that Section.***
- ***Provide any further questions in writing by end of day Thursday July 13, 2023 for clarification.***
- ***It was noted that the on-site scale to the north of project area can be used by the Contractor at no charge.***
- ***It was emphasized that the bid bond check be provided in a separate envelope. It was also noted that if UPS or FedEx is used for an "overnight" delivery, it may not be delivered on time, based on previous attempts. In-person delivery is acceptable. Go into the main entrance at the North Denver Avenue site and you will be directed to the east 2nd floor.***
- ***Bids will be opened at the North Denver Avenue site.***

INTERPRETATIONS:

a. No addenda have been issued to date. An addendum will be issued follow the pre-bid meeting to include meeting notes, attendance list, and any potential changes to the Bidding Documents.
b. Only addenda can modify documents (See Specification Section 00 20 00).

DISCUSSION:

- ***Contractors should continue to check to see if any addenda are issued for clarifications. HDR anticipates sending out at least 1 addendum by end of this week. There may be another sent out on July 17th, at the latest. Stockpile locations are likely to be adjusted based on volume of materials and current conditions.***

OTHER QUESTIONS AND DISCUSSION:

- ***Liquidated damages were discussed by the Purchaser. They would be willing to consider capping them if the Contractor requests it or discussing any exceptions the Contractor might have.***
- ***The alternate accelerated schedule was discussed. It is not required but Bidders are encouraged to provide price proposal and necessary resources to complete the work by October 17th.***
- ***It is important to the Purchaser to get to substantial completion by November 15, 2023, which includes all of the quality control and quality assurance paperwork. This needs to be sent to NDEE for approval prior to placing CCR in the lined area.***

PROJECT SITE VISIT TO FOLLOW

DISCUSSION:

- ***The existing scale was pointed out.***
- ***The contractor access entry was pointed out on the west and south.***
- ***The different ash materials were identified. Dark grey/black material is bottom ash. Pond Ash is brown in color. White colored material is scrubber ash. Non-spec scrubber ash is mixture of scrubber ash and Pond Ash and light tan in color. Contractor is responsible for keeping stockpiles of different materials separate. See Drawings and any revisions in Addenda.***
- ***Grubbed scrub material will be placed further east of the project site. This will be shown on an addendum.***
- ***The Purchaser will conduct a pre-construction survey prior to start of work.***
- ***A portion of the concrete sluice trench and existing piping on the east side of the project site will need to be cut and removed. To be clarified with an addendum.***
- ***Haul ponded water to the existing leachate retention pond if needed to dewater.***
- ***The location of the Contractor staging area was shown and noted that vegetation will need to be re-established when project complete.***
- ***The electrical panel to the northeast will not be removed by others. This will be revised on Sheet G002 and C101.***
- ***Groundwater monitoring wells were pointed out and protection was discussed.***
- ***Hydrants for water were pointed out. A meter will be provided to track the amount of water used. There may be a deposit required by the Contractor which will be returned if the meter is not damaged at the end of the project. The fire pump hydrants along the east side of project site will not be available for use.***

Meeting Attendance

Project: Public Power Generation Agency- WEC2 Ash Pond Liner Project

Subject: Pre-Bid Meeting

Date: Monday, July 10, 2023

Location: Whelan Energy Center

Attendee	Organization	Email	Phone #
Lori Calub	HDR	lori.calub@hdrinc.com	402-399-4904
Greg Shafer	HDR	greg.shafer@hdrinc.com	402 399 1303
Keith Leonhardt	PP&A	Kleonhardt@cityofhastings.org	402-462-3650
Micah McCaffery	HU	MMCCAFFERY@CITYOFHASTINGS.ORG	402-462-3550
Marina Richards	HU	mrichards@cityofhastings.org	402-462-3669
Marty Stange	HU/MGR	mstange@cityofhastings.org	402-462-3651
Mike Newman	Van Kirk	mike@vkbros.net	402-984-2387
Phil Dillon	Nextex	Phil@nextexdistricts.com	308 627-1840
Rob Wemhoff	Perrett	rwemhoff@perrettltd.com	308-850-9254
Alec	Myers	myerco@kds.net	308-643-7190