



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT  
7400 LEAKE AVE  
NEW ORLEANS, LA 70118-3651

March 28, 2023

Regulatory Division  
Western Evaluation Branch

SUBJECT: MVN-2021-01265-WQQ

Michael Taylor  
Hackberry Carbon Sequestration, LLC  
1500 Post Oak Blvd. Suite 100  
Houston, TX 77056

Dear Mr. Taylor:

Enclosed is a permit dated this date, subject as above, authorizing work under the Department of the Army permit program.

You are again reminded that any work not in accordance with the approved plans is subject to removal regardless of the expense and the inconvenience that such removal may involve and regardless of the date when the discrepancy is discovered.

Your attention is directed to all the terms and conditions of the approval. In order to have the work approved in accordance with the issued permit, all terms and conditions of the permit and plans shown on the drawings attached thereto must be rigidly adhered to.

It is necessary that you notify the District Engineer, Attention: Western Evaluation Branch, in writing, prior to commencement of work and also upon its completion. The notification must include the permittee's name, as shown on the permit, and the permit number. Please note the expiration date on the permit. Should the project not be completed by that date, you may request a permit time extension. Such requests must be received before, but no sooner than six months before, the permit expiration date and must show the work completed and the reason the project was not finished within the time period granted by the permit.

**In addition, please find enclosed this District's decision pursuant to 33 USC 408 (Section 408) concerning your request to alter or occupy an existing U.S. Army Corps of Engineers Civil Works Project. Questions concerning the enclosed permission should be directed to the point of contact provided in the Section 408 permission letter.**

A copy of Page 1 of the permit (ENG Form 1721) must be conspicuously displayed at the project site. Also, you must keep a copy of the signed permit at the project site until the work is completed.

Sincerely,

Darrell S. Barbara  
Chief, Western Evaluation Branch

Enclosure

## DEPARTMENT OF THE ARMY PERMIT

Permittee: Hackberry Carbon Sequestration, LLC

Permit No.: MVN-2021-01265 WQQ

Issuing Office: New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Clear, grade and fill for the installation and maintenance of the Hackberry Carbon Sequestration well, pipelines and appurtenant facilities, located in Hackberry, Louisiana, in Cameron Parish, in accordance with the drawings attached in 59 sheets, dated May 16, 2022.

Project Location: In Hackberry, Louisiana, in Cameron Parish, T12S-R10W, sections 1-3, 7-11, 14-18 & 19-20, T12S-R11W, sections 12 & 13.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **April 30, 2028**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions: See pages 4, 5, 6, 7 and 8.**

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

x Michael Taylor x 3/27/2023  
(PERMITTEE) (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Darrell S.  
Barbara

Digitally signed by Darrell S.  
Barbara  
Date: 2023.03.28 19:27:42  
-05'00'

March 28, 2023

(DATE)

Darrell Barbara, Chief, Western Evaluation Branch  
for CULLEN A. JONES, P.E., PMP, District Commander

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(TRANSFeree) (DATE)

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7. All work shall be done in accordance with the approved plans and shall be confined to the permitted work area(s) represented within the attached drawings. If the project requires modifications to the authorized plans, the permittee shall contact this office to obtain a permit amendment and/or review and decision on the plans, prior to commencement of those alterations. The permittee is responsible for ensuring that any contractors and/or workers associated with project construction and implementation, are equally aware of the authorized plans, conditions, and/or restrictions associated with this approval.
8. The permittee shall properly install adequate erosion/siltation control measures around construction areas that require land-based earthwork (i.e., excavation and/or deposition of fill materials, land contouring, machinery rutting, fill maneuvering and redistribution, etc.), to aid in preventing project-related sediments, debris and other pollutants from entering adjacent wetlands or waters. Acceptable measures include but are not limited to the proper use and positioning of temporary silt fences, straw bales, fiber/core logs, wooden barriers, seeding or sodding of exposed soils, or other approved EPA construction site storm-water runoff control and best management practices. Control techniques shall be installed prior to the commencement of earthwork activities and maintained until the project is complete and/or the subject areas are stabilized. Upon the completion of construction activities or if at any time construction activities cease for more than 14 days, all disturbed soils shall be re-vegetated by sod, seed, or another acceptable method, as necessary, to restore cover and prevent erosion.
9. Many local governing bodies have instituted laws and/or ordinances in order to regulate dredge and/or fill activities in floodplains to assure maintenance of floodwater storage capacity and avoid disruption of drainage patterns that may affect surrounding properties. Your project involves dredging and/or placement of fill; therefore, you must contact the local municipal and/or parish governing body regarding potential impacts to floodplains and compliance of your activities with local floodplain ordinances, regulations or permits. Work activities and/or other related drainage plans associated with the project shall comply with the local Parish Government, Drainage Authority, Flood Plain Administration, and/or other applicable agency requirements. Should it be determined by any of these agencies that the project is creating unnatural inundation conditions on adjacent properties, the permittee will be required to remediate the situation as directed by notifying agency or agencies. Should there be any changes required in the project design and/or drainage infrastructure by these governing agencies, the permittee shall coordinate with this office to obtain a permit amendment and/or review and decision on the plans, prior to commencement of those alterations.
10. Issuance of this permit confirms that the US Army Corps of Engineers, New Orleans District, Regulatory Division (CEMVN) has been provided with written notification from Rockefeller Refuge Mitigation Bank, that the permittee has contracted for 0.2 acre of brackish marsh at Rockefeller Refuge Mitigation Bank. Rockefeller Refuge Mitigation Bank has assumed responsibility for completing the mitigation in accordance with the Rockefeller Refuge Mitigation Bank Banking Instrument and has recorded the allocation of the mitigation required by this permit in the Regulatory In-lieu Fee & Bank Information Tracking System (RIBITS).
11. Issuance of this permit confirms that CEMVN has been provided with written notification from Petite Bois Mitigation Bank, that the permittee has contracted for 0.7 acre of cypress tupelo swamp at Petite Bois Mitigation Bank. Petite Bois Mitigation Bank has assumed responsibility for completing the mitigation in accordance with the Petite Bois Mitigation Bank Banking Instrument and has recorded the allocation of the mitigation required by this permit in RIBITS.
12. The permittee shall restore all temporary work areas, construction rights-of-ways (ROWs), and access paths by removing all boards and other extraneous construction materials used, and by reestablishing pre-existing wetland contours and conditions as soon as possible and/or immediately following project construction. Re-planting of desirable native tree species, erosion control, re-grading, on-going site management, and/or control of unnatural exotic species within these areas may be necessary, if natural regeneration of the pre-existing wetland habitat(s)

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does not occur or ensue within an adequate timeframe. The permittee shall monitor these areas on a regular basis and as necessary, to verify site condition reestablishment. Clear descriptive photographic evidence of the temporary work areas and access routes in wetland areas shall be acquired: (1) immediately following contour and site re-establishment, and (2) one complete growing season following site reestablishment. This information, along with verification of restoration achievement and site conditions, shall be forwarded to this office with reference to your Department of the Army (DA) permit number, immediately following monitoring after the first complete growing season. Information shall be forwarded to the CEMVN Regulatory project manager with this office either by mail at: U.S. Army Corps of Engineers, New Orleans District, Attn: CEMVN-RGW, 7400 Leake Avenue, New Orleans, Louisiana 70118-3651 or preferably by email. The permittee is aware that the requirement of further remediation actions, compensatory mitigation and relevant permit approval for unrecoverable wetland areas, and/or further monitoring will be assessed by this office in coordination with pertinent resource agencies upon review of the monitoring results.

13. Unless specifically authorized by this permit, the work shall not drain, diminish, impound, or otherwise impact natural hydrologic conditions of the adjacent wetlands.

14. The permittee shall provide the CEMVN Regulatory project manager with this office a Notification of Commencement, and Completion within five days of project construction being finalized. Notification shall reference your subject MVN permit # and may be submitted preferably via email, or hard copy mail to: U.S. Army Corps of Engineers, New Orleans District, CEMVN-RGW, 7400 Leake Ave., New Orleans, LA 70118-3651.

15. The permittee is aware that the wetland impacts associated with the installation of the pipelines may not commence until the EPA Class VI permit to inject carbon for sequestration has been authorized. Written notification and a copy of the Class VI authorization shall be provided to this office prior to commencement of these jurisdictional activities.

16. As to avoid potential disruption and impediment to natural watercourses or hydrologic exchange along the authorized pipeline route during construction, to the greatest extent practicable, the permittee shall maintain an approximate 50-foot gap for approximately every 500 feet of temporary side cast material resulting from pipeline trench activities. Gap locations and intervals can be modified, added, or substituted by the permittee, so as to account for natural topographic conditions, low-lying areas and natural water exchange, and provided that the permittee ensures that the altered locations or dimensions still suitably maintain normal hydrologic flows.

17. If abandoned cemeteries, unmarked graves, or human remains are discovered during the permitted activity, the permittee will stop work immediately and comply with the Louisiana Unmarked Human Burial Sites Preservation Act (La. R.S. 8:671 et seq.). The permittee will notify local law enforcement, CEMVN, and the Louisiana Division of Archaeology (LDOA), within the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, by telephone at 225-342-8170 to assess the nature and age of the human skeletal remains within twenty-four (24) hours of the discovery of unmarked human remains and will accompany local law enforcement personnel during all field investigations. If the appropriate local law enforcement official determines that the remains are not a crime scene, and the remains are more than 50 years old, LDOA has jurisdiction over the remains. In no instance will human remains be removed from the discovery site until jurisdiction is established. In cases where the LDOA assumes jurisdiction and the remains are determined to be American Indian, LDOA will consult with Tribes, CEMVN, and the permittee to determine the appropriate course of action.

18. If any any previously unknown historic, cultural, or archeological remains and artifacts are discovered while accomplishing the permitted activity, the permittee must immediately notify CEMVN, halt all construction activity at

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the location of discovery, and avoid construction activities within a fifty (50) foot buffer zone of the location of discovery until the required coordination has been completed. CEMVN will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

19. The attached Standard Manatee Conditions For In-Water Activities are hereby made a part of this authorization.

20. Culverts and relevant drainage infrastructure shall comply with local Drainage Authority requirements. Road culverts shall be installed at suitable spacings at the crossing of any bisected wetlands, and at the crossing of any existing waterways, ditches, sloughs, canals, etc. Culverts shall be of sufficient size and set to an elevation which maintains natural pre-project flow conditions within the area and shall not causes unnatural inundation or depletion of adjacent wetlands. Culvert openings shall be maintained free of debris to the maximum extent possible, as to allow for unrestricted flow of water.

21. For areas associated with the Beneficial Use of Dredged Material (BUDM), material shall not be placed in a manner that permanently converts jurisdictional wetlands or waters to uplands, and/or converts tidal wetlands or waters to non-tidal environments. Compaction rates and material density shall be taken into consideration for adhering to these requirements. Upon suitable stabilization and vegetataive attainment in the BUDM areas, containment berms shall be degraded to adjacent land contours, or breached in appropriate locations to ensure natural hydrologic exchange and/or tidal ingress and egress is achieved in these locations. The permittee shall ensure the discharge points of the hydraulic dredge pipeline(s) are monitored as to not allow an overburden of spoil placement. Spoil should be placed in a manner that will nourish wetland areas. Marsh nourishment should entail the placement of thin layers of spoil (i.e., less than 12 inches in elevation) to be spread evenly.

22. The permittee shall adhere to all state statutes (R.S. 56:2011 et seq.) and department regulations (LAC 76:XIII.101 et seq.) concerning dredging of fill sand and fill material from water bottoms of the state of Louisiana and severance royalties. For more information, contact Mr. Dave Butler at 504-286-4173. Waters in the proposed work area are shallow and subject to forced drainage after rain events in an effort to control water and salinity levels. Given this, the Louisiana Department of Wildlife and Fisheries recommends that the applicant take caution in the stacking of any dredged material to ensure that it is not impeding water movement in Black Lake.

23. The permittee must install and maintain, at his expense, any safety lights, signs and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on the authorized facilities. Any inquiries concerning a U.S. Coast Guard Private Aids to Navigation marking determination may be directed to the Eighth Coast Guard District (dpw), Hale Boggs Federal Building, 500 Poydras St., Suite 1230, New Orleans, Louisiana 70130, at (504) 671-2330 or via email to: D8oanPATON@uscg.mil. For general information related to Private Aids to Navigation, you may visit the Eighth CG District web site at: <http://www.atlanticarea.uscg.mil/district-8/district-divisions/waterways/PATON>

24. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

25. If the project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.,) in the waterway, you are advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be

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prepared. Notification with a copy of your permit approval and drawings should be mailed to the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, about 1 month before you plan to start work. Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2107.

26. The use of board mats for project construction within your authorized work areas and access footprints is authorized herein and shall be utilized as deemed essential and practicable for minimizing substate disturbance and rutting in wetland areas.

27. To the greatest extent practicable, ongoing maintenance clearing of the authorized permanent pipeline ROW in wetland areas should be done within a 0 to 5 year rotation and/or prior to any emergent tree stratum exceeding an overall diameter at breast height of approximately 3 to 4 inches, or to a point in which mechanized land clearing would be required to re-establish the ROW. Failure to comply with this schedule may require this office to re-evaluate the need for you to obtain additional DA authorization for such work.

28. The permittee shall limit mechanized clearing, grading, dredging and filling to those areas shown within specified pipeline construction ROW(s) and project's authorized workspaces. Timber and other woody vegetation associated with ROW and project construction shall either be cut and hauled to a non-wetland location, or if not achievable, cut, chipped and broadcast to the greatest extent within the pipeline ROW at a height not to exceed approximately 4 inches in jurisdictional wetlands and/or placed at lower elevations to ensure prolonged detriments to jurisdictional wetlands do not occur. There shall be no stacking of chips, stockpiling, windrowing, and/or burning of woody vegetation within jurisdictional wetlands inside or outside of the permitted ROW.

29. This permit does not obviate you from obtaining any required permits or approvals from the Office of Pipeline Safety or other state, federal or local agencies, for the subject pipeline or well.

30. The permittee shall restore the permanent pipeline ROWs by removing all boards and other extraneous construction materials used, and by re-establishing pre-project wetland contours as soon as possible and/or immediately following construction. Temporary stockpiled dredged material shall be returned to its previous borrow areas and/or pipeline trenches, and the areas graded to pre-project elevation. The use of appropriate imported fill material and/or the removal of any surplus fill may be necessary to accomplish the restoration. A description of your restoration achievement results along with clear descriptive photographic evidence with photo location key or drone footage of the permanent ROW in wetland areas shall be acquired immediately following contour re-establishment and shall be forwarded to the CEMVN Regulatory project manager with this office preferably by email or by mail at: U.S. Army Corps of Engineers, New Orleans District, Attn: CEMVN-RGW, 7400 Leake Avenue, New Orleans, Louisiana 70118-3651, and shall reference your subject DA permit number. The permittee is aware that the requirement of further grading and/or remediation actions along with further monitoring will be assessed by this office in coordination with pertinent resource agencies, upon review of your monitoring results. Failure by the permittee to adhere to these requirements is considered grounds for permit suspension or revocation.

31. The permittee shall at all times exercise due caution as not to allow contaminants from the construction process and machinery to enter waters of the U.S., and with the transportation of oil, gas, or other pollutive, noxious, or lethal substances, to prevent conditions deleterious to the environment, wildlife and fisheries, health or seafood, or hazardous to navigation, in accordance with rules and regulations prescribed by the Pipeline and Hazardous Material and Safety Administration, the Office of Pipeline Safety, the Louisiana Department of Environmental Quality, the Environmental Protection Agency, and/or any other applicable agencies or governing bodies.

32. There shall be no mechanized clearing of forested wetlands between Horizontal Directional Drilling entry and exit points for the pipelines, unless specifically reviewed, considered and approved by this office, and represented within

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the permit plans. However, hand clearing to provide a path for guidance cables used to aid in the drilling process may be performed, to the extent necessary.

33. The permittee is advised of the requirements set forth in the attached Memorandum for Record and the associated special conditions. All responsibilities and compliance related to the subject conditions are hereby directed to and have oversight by the USACE Operations Manager for ODC, Mrs. Tracy Falk 504-862-2971 or [tracy.a.falk@usace.army.mil](mailto:tracy.a.falk@usace.army.mil), with this District. Should you have any questions on the requirements and restrictions stipulated, you shall contact Mrs. Falk, who may be reached at 504-862-2971 or [tracy.a.falk@usace.army.mil](mailto:tracy.a.falk@usace.army.mil).

## **STANDARD MANATEE CONDITIONS FOR IN-WATER ACTIVITIES**

During in-water work in areas that potentially support manatees, all personnel associated with the project shall be instructed and aware of the potential presence of manatees, manatee speed zones, and the need to avoid collisions with, and injury to, manatee. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel shall be instructed not to attempt to feed or otherwise interact with the animal.

All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). To minimize potential impacts to manatees in areas of their potential presence, the permittee shall insure the following are adhered to:

- All work, equipment, and vessel operation shall cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once the manatee has left the buffer zone on its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in-water work can resume under careful observation for manatee(s).
- If a manatee(s) is sighted in or near the project area, all vessels associated with the project shall operate at "no wake/idle" speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels shall follow routes of deep water whenever possible.
- If used, siltation or turbidity barriers shall be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.
- Temporary signs concerning manatees shall be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities shall display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8½" X 11" reading language similar to the following: "CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT". A second temporary sign measuring 8½" X 11" shall be posted at a location prominently visible to all personnel engaged in water-related activities and shall read language similar to the following: "CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION".
- Collisions with, injury to, or sightings of manatees shall be immediately reported to the U.S. Fish and Wildlife Service's, Louisiana Ecological Services Office (337/291-3100) and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225/765-2821). Please provide the nature of the call (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.

MEMORANDUM FOR RECORD: Chief, Regulatory Division ATTN: Amy Oestringer

SUBJECT: MFR IN ACCORDANCE WITH EC 1165-2-220, APPENDIX G – Hackberry Carbon Sequestration, LLC, MVN-2021-01265-WQQ

1. The Operations Manager for the Calcasieu River navigation project has reviewed the application from T. Baker Smith, LLC on behalf of the Hackberry Carbon Sequestration, LLC proposed project to bore in place a 16" suction pipeline, 12" injection pipeline for a carbon sequestration well and trench dredging to be pumped to (2) spoil placement areas in Back Lake on the west side of the Calcasieu River near Mi.19 in Cameron Parish, of Louisiana.
2. It has been determined that the subject application is outside the Calcasieu River navigation servitude and fairway limits by meeting the required minimum burial depth. Therefore, this request has no impact to the usefulness of the project and will not be injurious to the public interest.

The scope of this analysis for Section 408 evaluation is limited to the federal limits of the Federal Navigation Channel.

3. CEMVN-OD-C has no objection to the subject request provided the following navigation conditions are included as part of the Section 10 permit documents as well as the standard Section 408 permit conditions as per EC 1165-2-220, APPENDIX K (enclosed):

PROJECT- SPECIFIC CONDITIONS:

- a. The proposed 16" suction pipeline and 12" injection pipeline crosses Black Lake on the west side of the Calcasieu River at approximately Mi.19 in Cameron Parish, LA Referencing the proposed permit drawings -21.0228\_S4-28\_REV8.DWG revised on April 20, 2022, the pipeline will be placed in the dredged trench and be no higher than the existing elevation, ensuring no points along the line have mounds or potential hazards. Additionally, any covered material of the pipeline should be placed back so that the top of cover is at it's original elevation prior to construction. The proposed pipeline placement plan adhering to specific conditions meets the general criteria for Pipeline and Utility Line Burial Depth outlines in the Pipeline Burial Depth document dated May 31, 2010 due to the pipeline layout not crossing any federal waterways.
- b. The proposed northern BU site at points 1 and 5 is near the Black Lake BU site that has been used by USACE in the past, atleast 30 days prior to construction, email coordination with USACE should be done to [Michael.D.Sullivan@usace.army.mil](mailto:Michael.D.Sullivan@usace.army.mil) and [Jason.A.Binet@usace.army.mil](mailto:Jason.A.Binet@usace.army.mil) to ensure no construction work is occurring at that time.
- c. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein.
- d. The applicant will, at his or her expense, install and maintain any safety light, signals, and signs prescribed by the United States Coast Guard, through regulations or otherwise, on authorized facilities or on equipment used in performing work under the authorization.
- e. If the authorized project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.,) in the waterway, the applicant is advised to notify

the appropriate Captain of the Port so that a Notice to Mariners, if required, may be provided about one month before you plan to start work. Contact information for the local Captain of the Port's offices may be located at <https://homeport.uscg.mil> under "port directory". In addition, a copy of your permit approval and drawings should be mailed to LT Mache Mason, Waterways Management Division, Marine Safety Unit, Lake Charles, LA 70601, or emailed to [mache.o.mason@uscg.mil](mailto:mache.o.mason@uscg.mil). Telephone inquiries can be directed to Mache Mason- 337-912-0073.

- f. All planned or unplanned channel closures must be coordinated with the US Coast Guard.
- g. The applicant understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said work shall cause unreasonable obstruction to the free navigation of the navigable waters, the applicant will be required upon due notice from the Corps of Engineers, to remove, relocate or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

#### PLOVER/AS BUILTS

Within 60 days of construction completion, the Requester is required to provide to the USACE current controlled as-built plan and profile surveys of the pipelines as they cross any federal navigation channel or levee. As-built documents shall consist of the following:

- (1) Electronic as-built drawing file(s), that include plan and profile views of each installed utility line. Portable Document Format (PDF) renderings are preferred.
- (2) Comma-separated text file(s) in Engineering Manual (EM) 15-P: Pipeline Specification format that include eastings, northings, and top of pipe elevations, which accurately define the location and elevation of each installed utility line.

Email the required information along with the respective USACE Department of the Army (DA) permit reference number(s) in the subject line to [MVN-Plover.\\_ED-SE@usace.army.mil](mailto:MVN-Plover._ED-SE@usace.army.mil). For more information on EM15-P format and data requirements, refer to the Overview on the Regulatory website at <http://www.mvn.usace.army.mil/Missions/Regulatory/Permits/EMPipelineSpecification.aspx>.

- 4. The above Section 408 special conditions and standard conditions enclosed are enforceable by the USACE Navigation Manager for the Calcasieu River as per Appendix G, EC 1165-2-220. The point of contact for enforcing such Section 408 conditions in the Section 10 permit for Calcasieu River is Michael Sullivan at 504-862-2373 or [Michael.D.Sullivan@usace.army.mil](mailto:Michael.D.Sullivan@usace.army.mil).

SULLIVAN.MI  
CHAEL.DAVID  
.1249725729

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SULLIVAN.MICHAEL  
.DAVID.1249725729  
Date: 2023.03.03  
11:13:32 -06'00'

for Tracy Falk  
Operations Manager  
Operations Division

Enclosure (Standard 408 conditions)

U.S. Army Corps of Engineers  
New Orleans District  
Section 408  
EC-1165-2-220 Appendix K  
Standard Terms and Conditions

LIMITS OF THE AUTHORIZATION

1. This permission only authorizes you, the requester, to undertake the activity described herein under the authority provided in Section 14 of the Rivers and Harbors Act of 1899, as amended (33 USC 408). This permission does not obviate the need to obtain other federal, state, or local authorizations required by law. This permission does not grant any property rights or exclusive privileges, and you must have appropriate real estate instruments in place prior to construction and/or installation.
2. The time limit for completing the work authorized end on 5 years for the date of 408 permission or 5 years from the date of the Regulatory permit if a Regulatory permit is required. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
3. Without prior written approval of the USACE, you must neither transfer nor assign this permission nor sublet the premises or any part thereof, nor grant any interest, privilege or license whatsoever in connection with this permission. Failure to comply with this condition will constitute noncompliance for which the permission may be revoked immediately by USACE.
4. The requester understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration of the work herein authorized, or if, in the opinion of the Secretary of the Army or an authorized representative, said work will cause unreasonable conditions and/or obstruction of USACE project authorized design, the requester will be required upon due notice from the USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim can be made against the United States on account of any such removal or alteration.

INDEMNIFICATION AND HOLD HARMLESS

5. The United States will in no case be liable for:
  - a. Any damage or injury to the structures or work authorized by this permission that may be caused or result from future operations undertaken by the United States, and no claim or right to compensation will accrue from any damage; or
  - b. Damage claims associated with any future modification, suspension, or revocation of this permission.
6. The United States will not be responsible for damages or injuries which may arise from or be incident to the construction, maintenance, and use of the project requested by you, nor for damages to the property or injuries to your officers, agents, servants, or employees, or others who may be on your premises or project work areas of the federal project(s) rights-of-way. By accepting this permission, you hereby agree to fully defend, **indemnify** and **hold harmless** the United States and USACE from any and all such claims, subject to any limitations in law.
7. Any damage to the water resources development project or other portions of any federal project(s) resulting from your activities must be repaired at your expense.

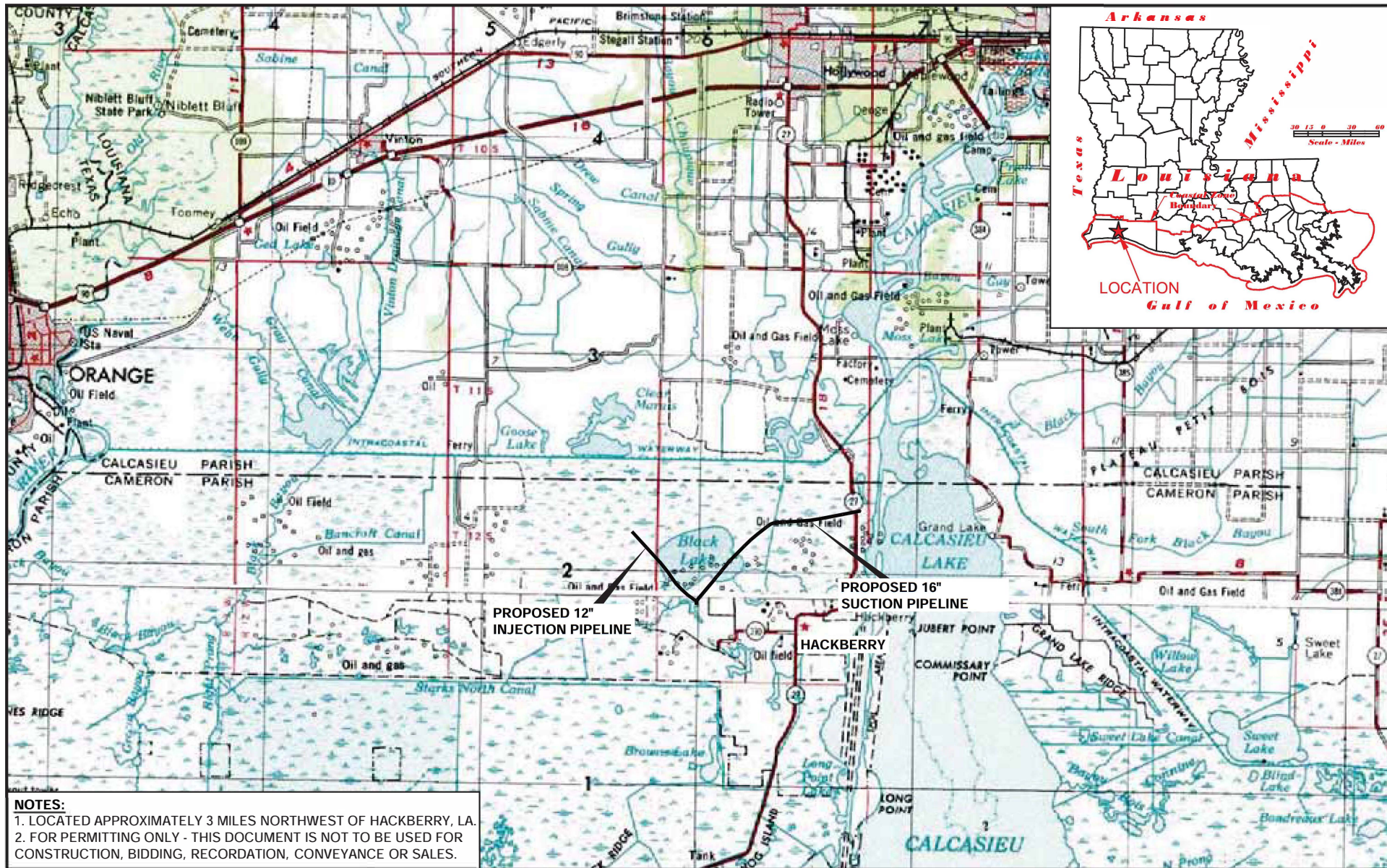
## REEVALUATION OF PERMISSION



8. The determination that the activity authorized by this permission would not impair the usefulness of the federal project and would not be injurious to the public interest was made in reliance on the information you provided.
9. This office, at its sole discretion, may reevaluate its decision to issue this permission at any time circumstances warrant, which may result in a determination that it is appropriate or necessary to modify or revoke this permission. Circumstances that could require a reevaluation include, but are not limited to, the following:
  - a. You fail to comply with the terms and conditions of this permission;
  - b. The information provided in support of your application for permission proves to have been inaccurate or incomplete; or
  - c. Significant new information surfaces which this office did not consider in reaching the original decision that the activity would not impair the usefulness of the water resources development project and would not be injurious to the public interest.

## CONDUCT OF WORK UNDER THIS PERMISSION

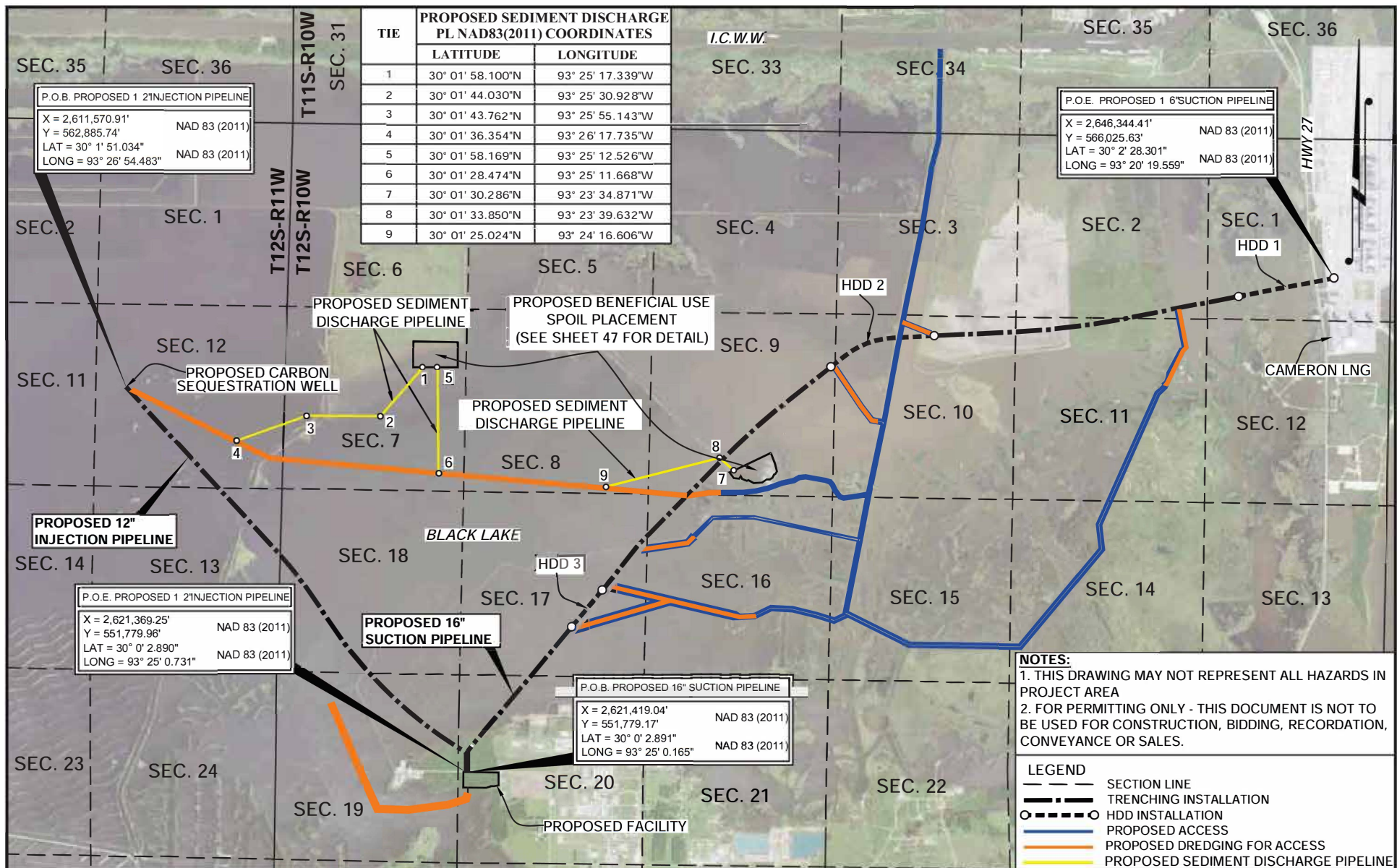
10. You are responsible for implementing any requirements for mitigation, reasonable and prudent alternatives, or other conditions or requirements imposed as a result of environmental compliance.
11. Work/usage allowed under this permission must proceed in a manner that avoids interference with inspection, operation, and maintenance of the federal project.
12. In the event of any deficiency in the design or construction of the requested activity, you are solely responsible for taking remedial action to correct the deficiency.
13. The right is reserved to the USACE to enter upon the premises at any time and for any purpose necessary or convenient in connection with government purpose, to make inspections, to operate and/or to make any other use of the lands as may be necessary in connection with government purposes, and you will have no claim for damages on account thereof against the United States or any officer, agent or employee thereof.
14. You must provide copies of pertinent design, construction, and/or usage submittal/documents. USACE may request that survey and photographic documentation of the alteration work and the impacted project area be provided before, during, and after construction and/or installation.
15. You may be required to perform an inspection of the federal project with the USACE, prior to your use of the structure, to document existing conditions.
16. USACE shall not be responsible for the technical sufficiency of the alteration design nor for the construction and/or installation work.

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<p>SCALE IN FEET</p>  <p>4 Miles 2 Miles 0 4 Miles</p>			<p><b>PRELIMINARY</b> <b>VICINITY MAP</b></p> <p><b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION &amp; 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 &amp; 19-20 T12S-R11W, SECTIONS 12 &amp; 13 CAMERON PARISH, LOUISIANA</p> <p>May 16, 2022</p>	
 <p><b>T. BAKER SMITH</b> A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337)735-2800 - tbsmith.com</p>	DRAWN BY: JPD    APPROVED BY: ADM			
	DATE: 06/28/2021    JOB NO: 2021.0228			
	DRAWING NAME: 21.0228_S1_REV8.DWG			
REV. NO: 8    REV. DATE: 04/20/2022    REV. BY: RBT	SHEET NO: 1 OF 59			
	PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VEERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET			
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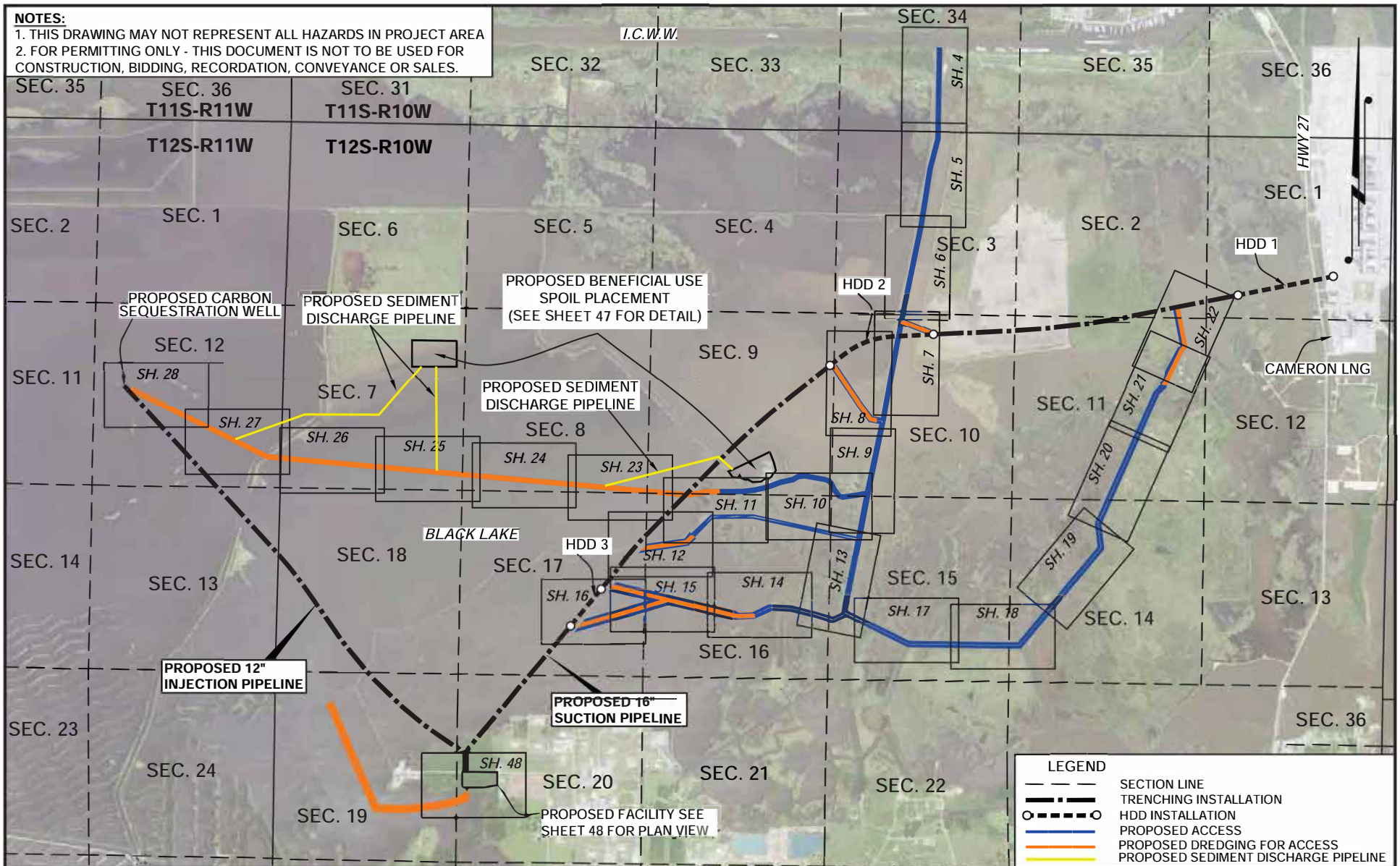
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SCALE IN FEET			DRAWN BY: JPD		APPROVED BY: ADM		PRELIMINARY		PROJECT OVERVIEW	
4000' 2000' 0' 4000'			DATE: 06/28/2021		JOB NO: 2021.0228		HACKBERRY CARBON SEQUESTRATION, LLC		HACKBERRY CARBON SEQUESTRATION PROJECT	
T.B. BAKER SMITH A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337)735-2800 - tbsmith.com			DRAWING NAME: 21.0228_S2_REV8.DWG		SHEET NO: 2 OF 59		PROPOSED 16" SUCTION & 12" INJECTION PIPELINES		LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20	
REV. NO: 8 REV. DATE: 04/20/2022 REV. BY: RBT			PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET		REVISION DESCRIPTION: REVISED AS PER REQUEST.		T12S-R11W, SECTIONS 12 & 13		CAMERON PARISH, LOUISIANA	
							May 16, 2022			

**NOTES:**

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LEGEND	
	SECTION LINE
	TRENCHING INSTALLATION
	HDD INSTALLATION
	PROPOSED ACCESS
	PROPOSED DREDGING FOR ACCESS
	PROPOSED SEDIMENT DISCHARGE PIPELINE

SCALE IN FEET



**T. BAKER SMITH**  
A CENTURY OF SOLUTIONS  
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DRAWN BY: JPD APPROVED BY: ADM

DATE: 06/28/2021 JOB NO: 2021.0228

DRAWING NAME: 21.0228\_S3\_REV8.DWG

SHEET NO: 3 OF 59

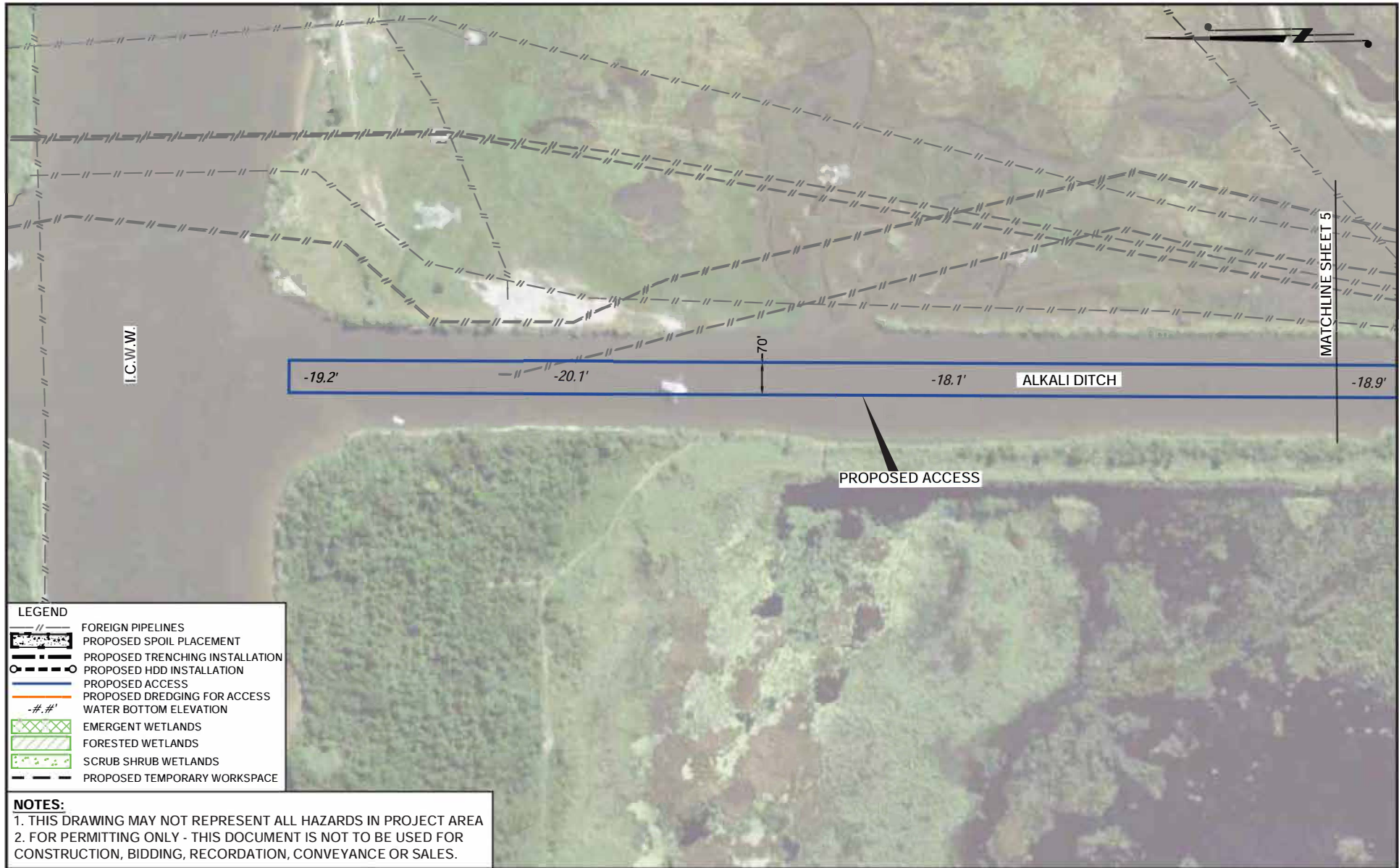
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GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
GRID UNITS: US SURVEY FEET

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REVISED AS PER REQUEST.

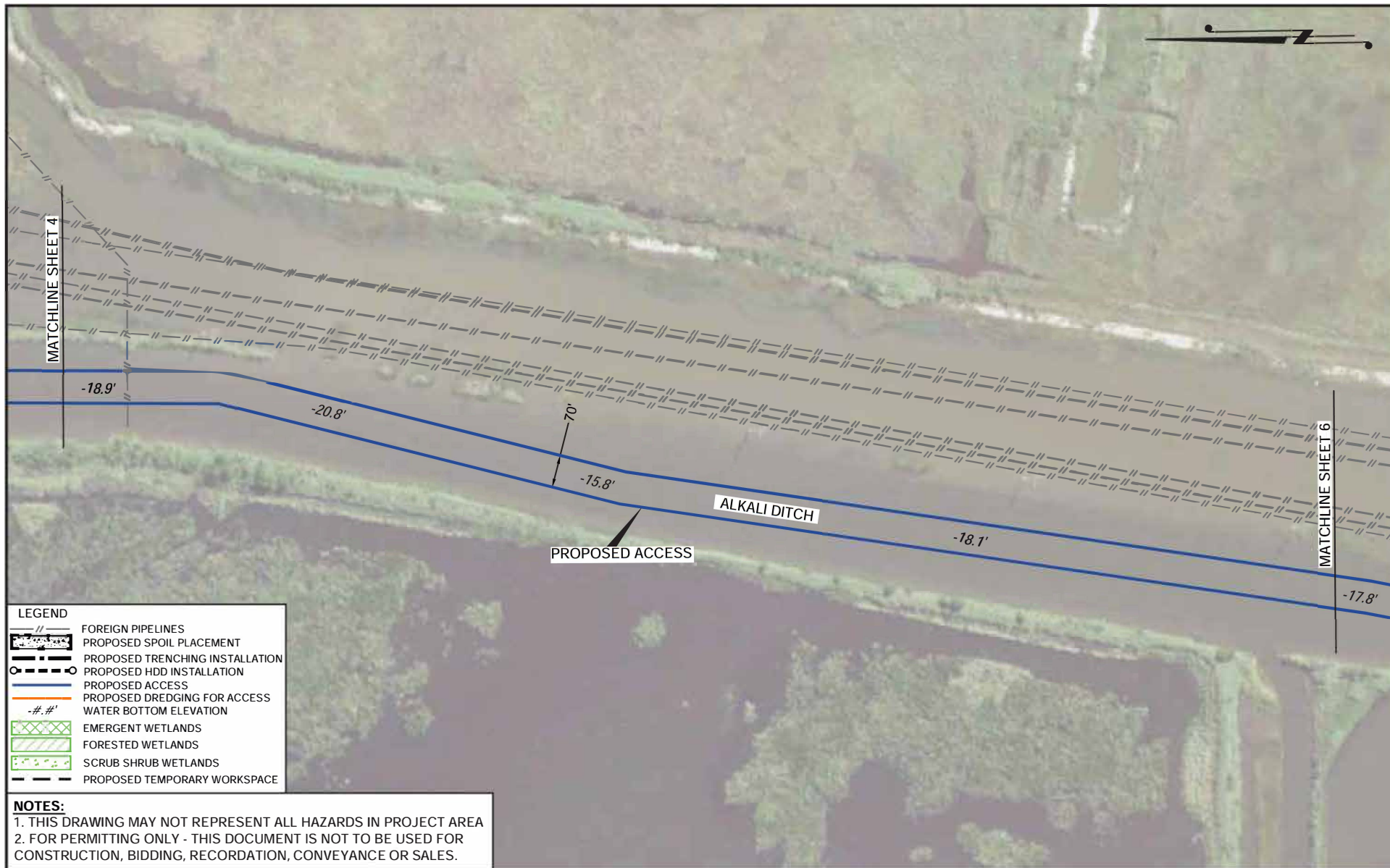
**PRELIMINARY ACCESS ROUTE SHEET INDEX**

**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA  
May 16, 2022

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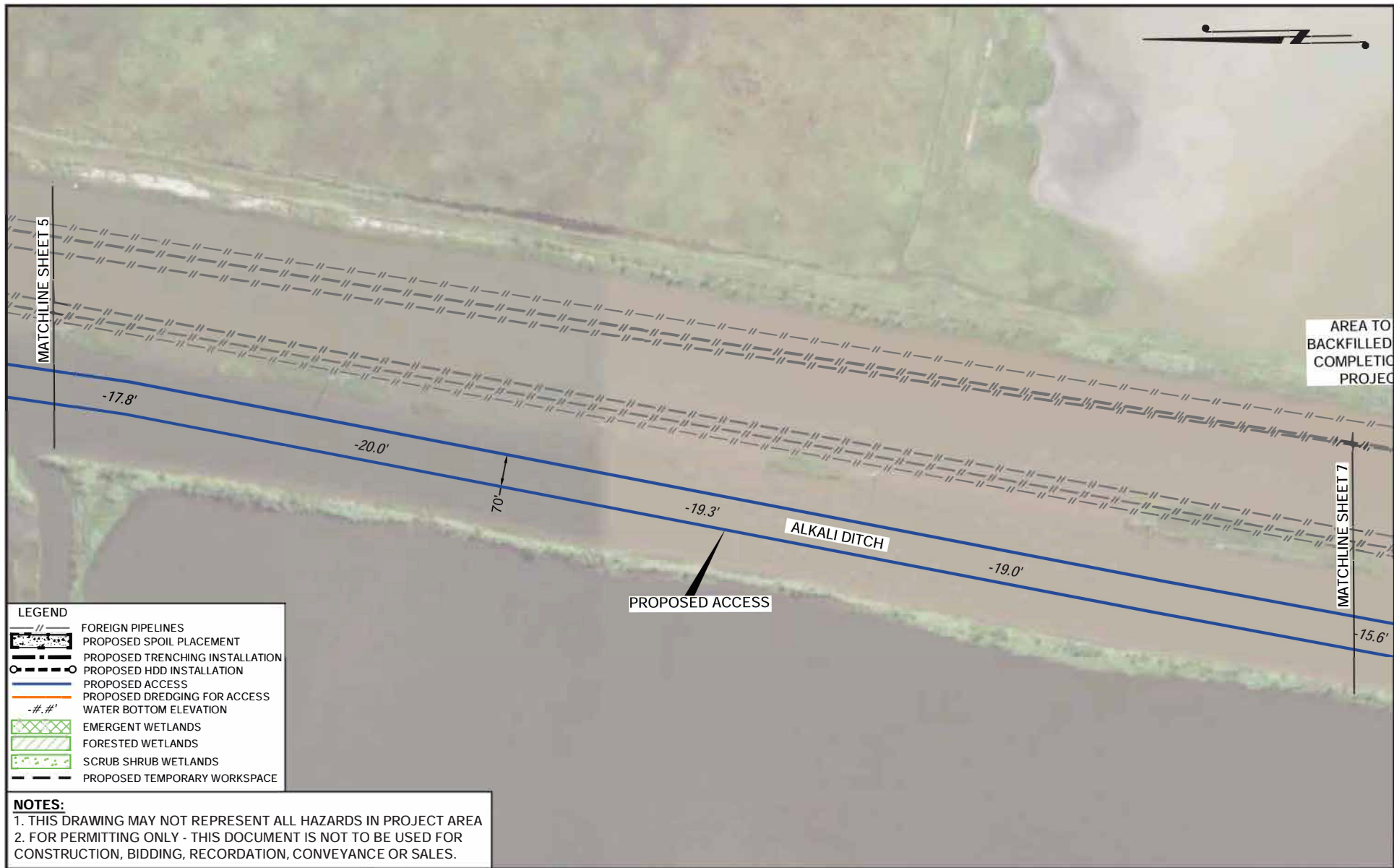
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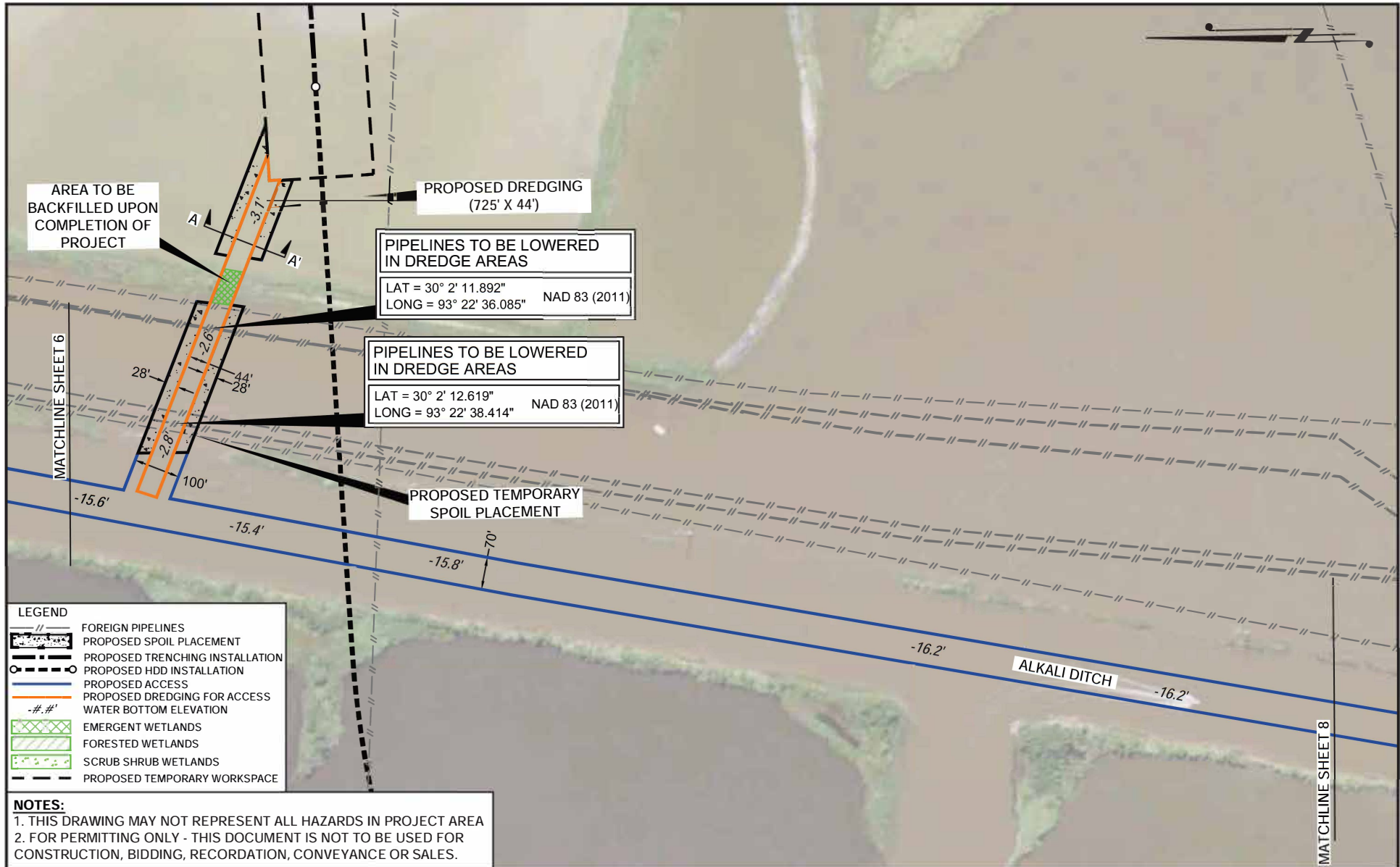
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May 16, 2022

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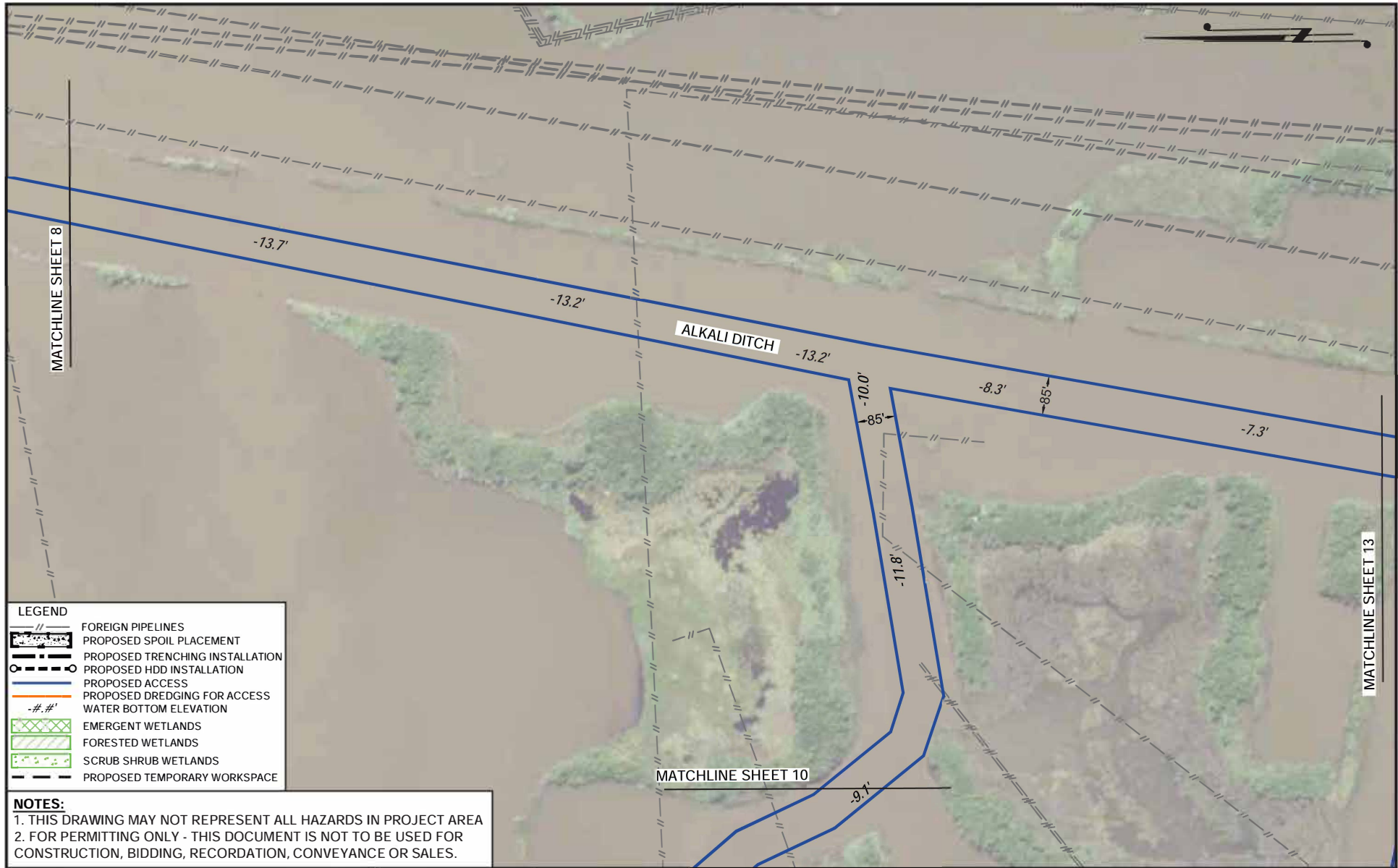
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SCALE IN FEET 300' 150' 0' 300'			DRAWN BY: JPD	APPROVED BY: ADM	<b>PRELIMINARY</b> <b>ACCESS</b> <b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA May 16, 2022
 <b>T. BAKER SMITH</b> A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337)735-2800 - tbsmith.com			DATE: 06/28/2021	JOB NO: 2021.0228	
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			SHEET NO:	7 OF 59	
			PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET		
REV. NO: 8	REV. DATE: 04/20/2022	REV. BY: RBT	REVISION DESCRIPTION: REVISED AS PER REQUEST.		

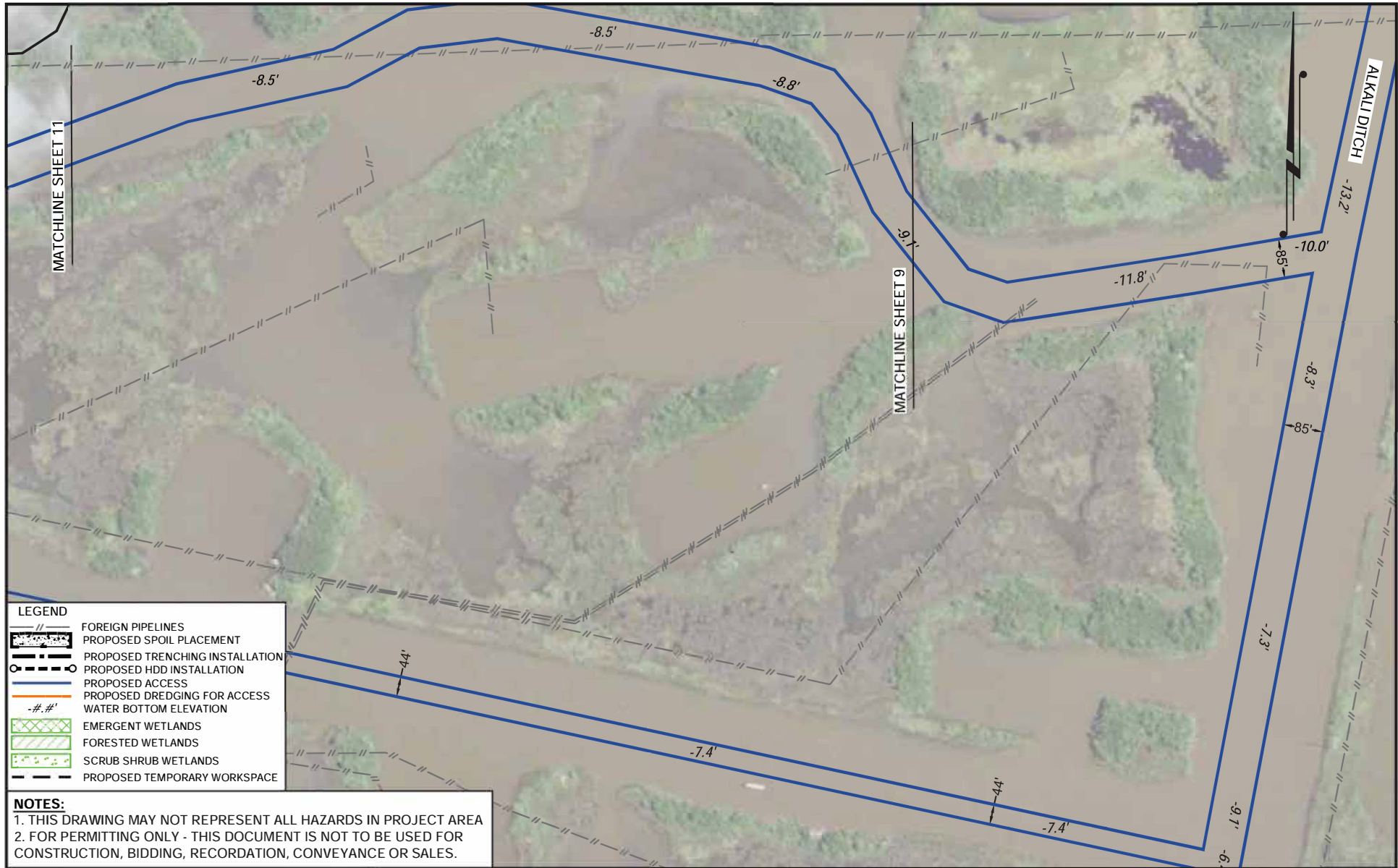


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<div>SCALE IN FEET</div> <div><div></div><div>300'150'0'300'</div></div>			DRAWN BY: JPD		APPROVED BY: ADM		<div>PRELIMINARY</div> <div>ACCESS</div>	
			DATE: 06/28/2021		JOB NO: 2021.0228		<div>HACKBERRY CARBON SEQUESTRATION, LLC</div> <div>HACKBERRY CARBON SEQUESTRATION PROJECT</div> <div>PROPOSED 16" SUCTION &amp; 12" INJECTION PIPELINES</div> <div>LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 &amp; 19-20</div> <div>T12S-R11W, SECTIONS 12 &amp; 13</div> <div>CAMERON PARISH, LOUISIANA</div> <div>May 16, 2022</div>	
			DRAWING NAME: 21.0228_S4-28_REV8.DWG					
			SHEET NO: 9		OF 59			
<div><div>TBS</div><div>T. BAKER SMITH</div><div>A CENTURY OF SOLUTIONS</div><div>107 Global Circle, Lafayette, LA 70503</div><div>(337)735-2800 - tbsmith.com</div></div>			PROJECTION: LOUISIANA SOUTH ZONE					
			GEO. DATUM: NAD83   VERT. DATUM: NAVD88					
			GRID UNITS: US SURVEY FEET					
REV. NO: 8		REV. DATE: 04/20/2022		REV. BY: RBT		REVISION DESCRIPTION: REVIESED AS PER REQUEST.		

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**LEGEND**

- FOREIGN PIPELINES
- PROPOSED SPOIL PLACEMENT
- PROPOSED TRENCHING INSTALLATION
- PROPOSED HDD INSTALLATION
- PROPOSED ACCESS
- PROPOSED DREDGING FOR ACCESS
- WATER BOTTOM ELEVATION
- EMERGENT WETLANDS
- FORESTED WETLANDS
- SCRUB SHRUB WETLANDS
- PROPOSED TEMPORARY WORKSPACE

**NOTES:**  
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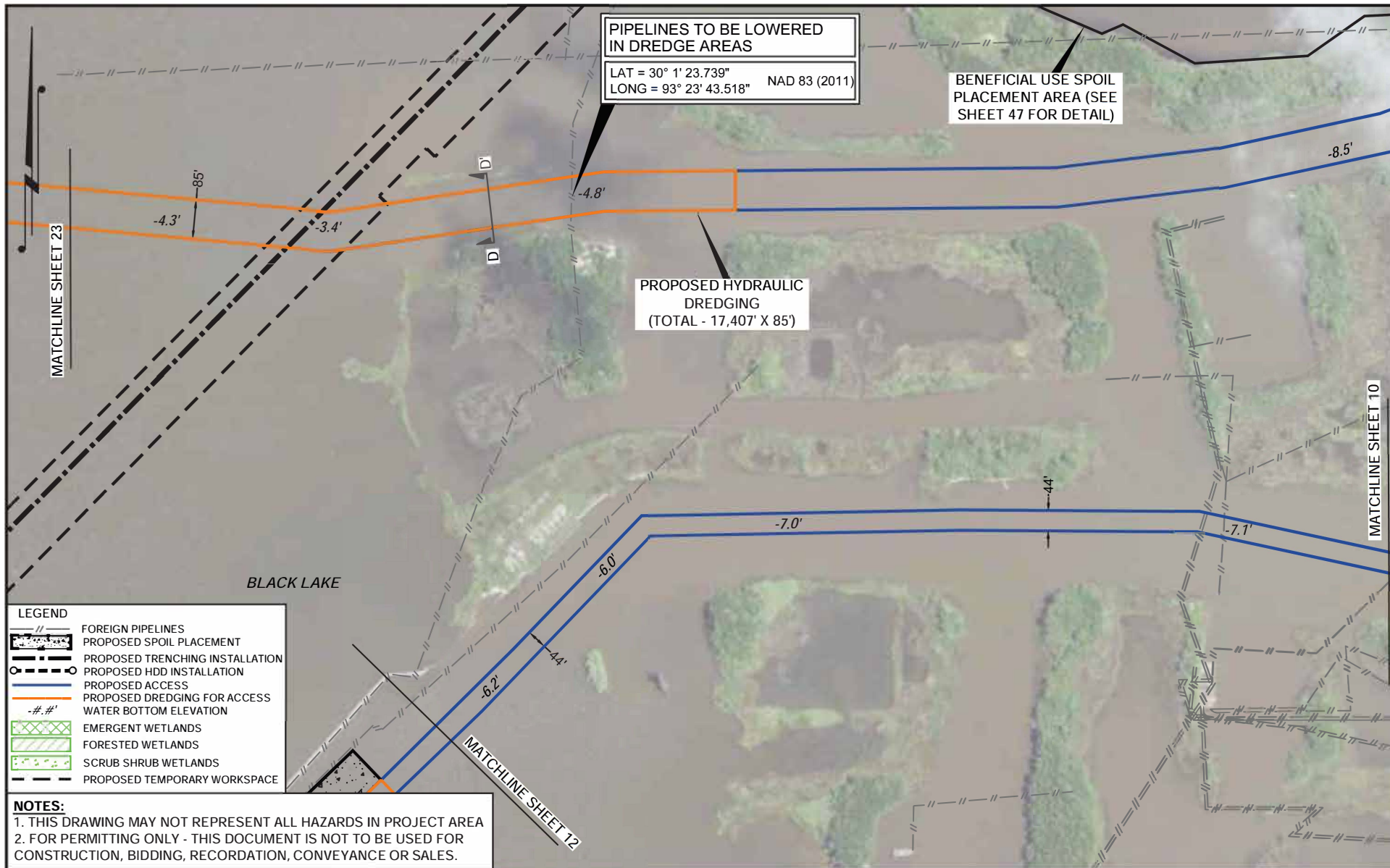
**T. BAKER SMITH**  
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107 Global Circle, Lafayette, LA 70503  
(337)735-2800 - tbsmith.com

REV. NO:	8	REV. DATE:	04/20/2022	REV. BY:	RBT
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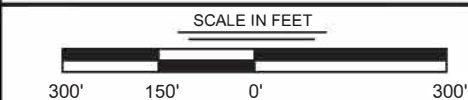
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HACKBERRY CARBON SEQUESTRATION PROJECT	
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES	
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20	
T12S-R11W, SECTIONS 12 & 13	
CAMERON PARISH, LOUISIANA	
May 16, 2022	

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LEGEND	
	FOREIGN PIPELINES
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	PROPOSED TRENCHING INSTALLATION
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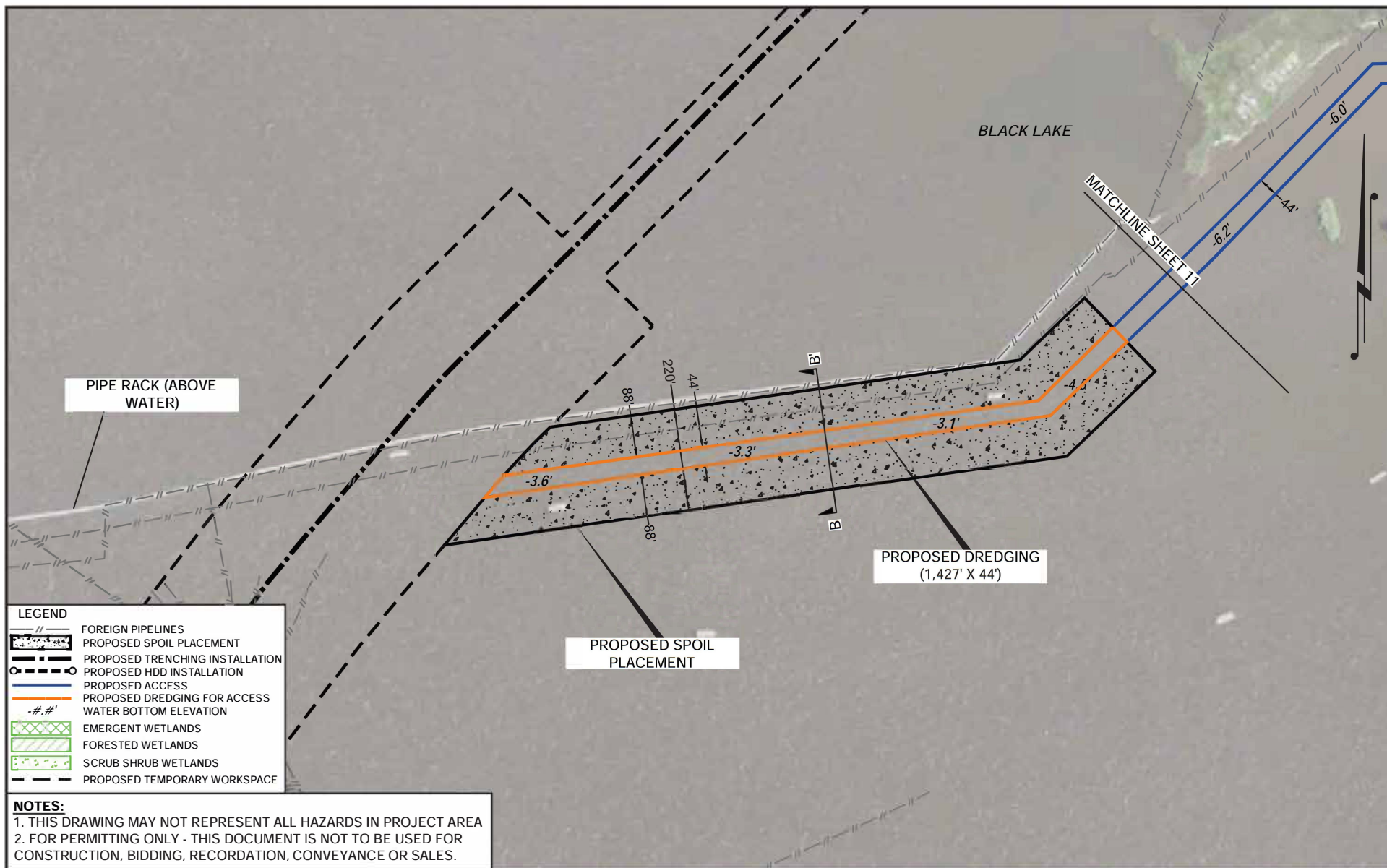


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SHEET NO:	11	OF	59
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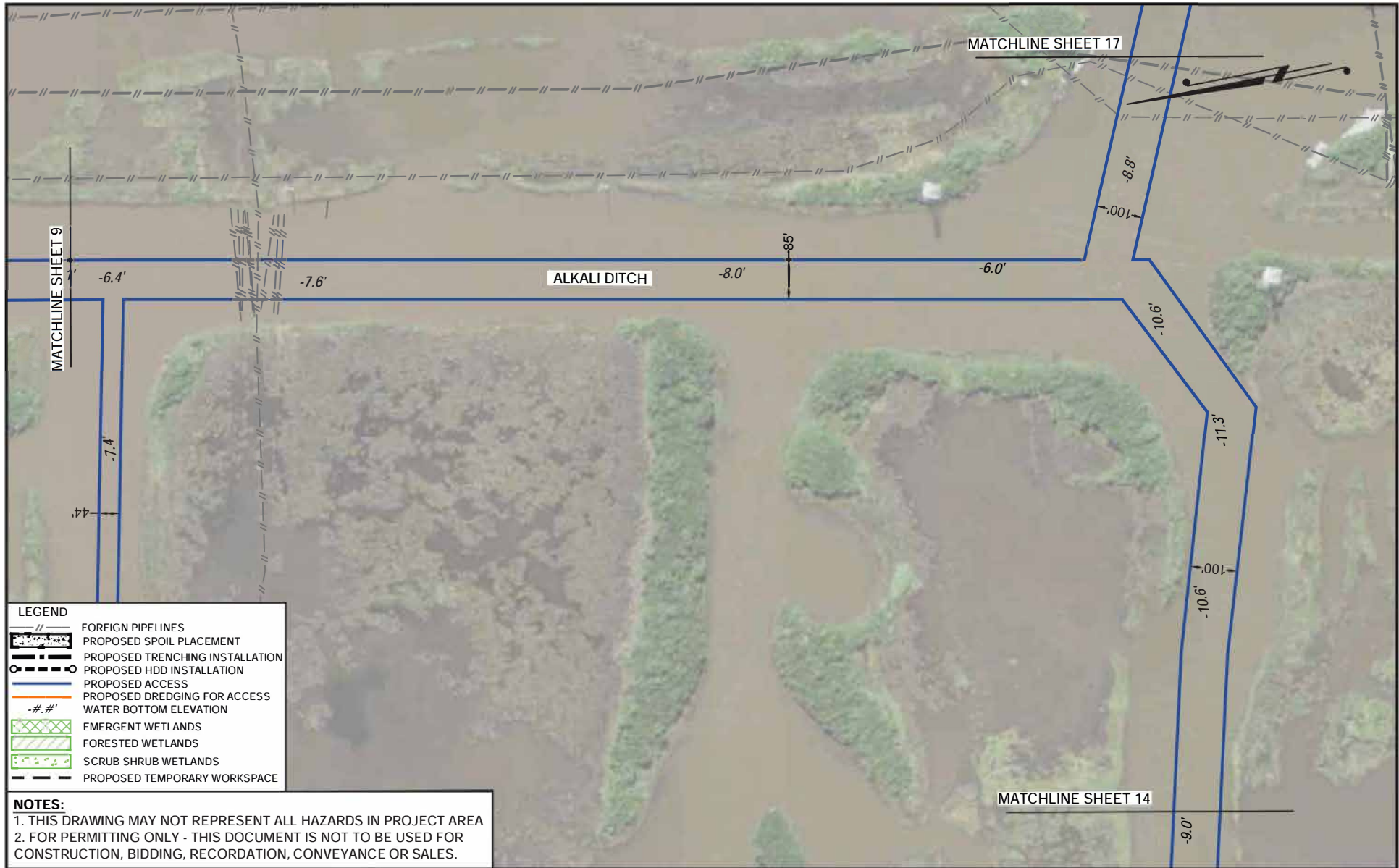
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<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA	
May 16, 2022	

4/20/2022 - PLY-2021\2021.0228\DWG\COE\REV8\21.0228\_S4-28\_REV8.DWG



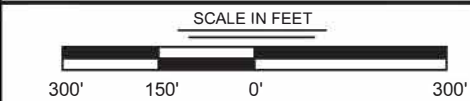
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			DATE: 06/28/2021	JOB NO: 2021.0228				
<div><div>TBS</div><div>T. BAKER SMITH</div><div>A CENTURY OF SOLUTIONS</div><div>107 Global Circle, Lafayette, LA 70503</div><div>(337)735-2800 - tbsmith.com</div></div>			DRAWING NAME: 21.0228_S4-28_REV8.DWG				HACKBERRY CARBON SEQUESTRATION, LLC HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA May 16, 2022	
			SHEET NO: 12 OF 59					
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REV. NO: 8	REV. DATE: 04/20/2022	REV. BY: RBT	REVISION DESCRIPTION: REVIESED AS PER REQUEST.					

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- LEGEND**
- FOREIGN PIPELINES
  - PROPOSED SPOIL PLACEMENT
  - PROPOSED TRENCHING INSTALLATION
  - PROPOSED HDD INSTALLATION
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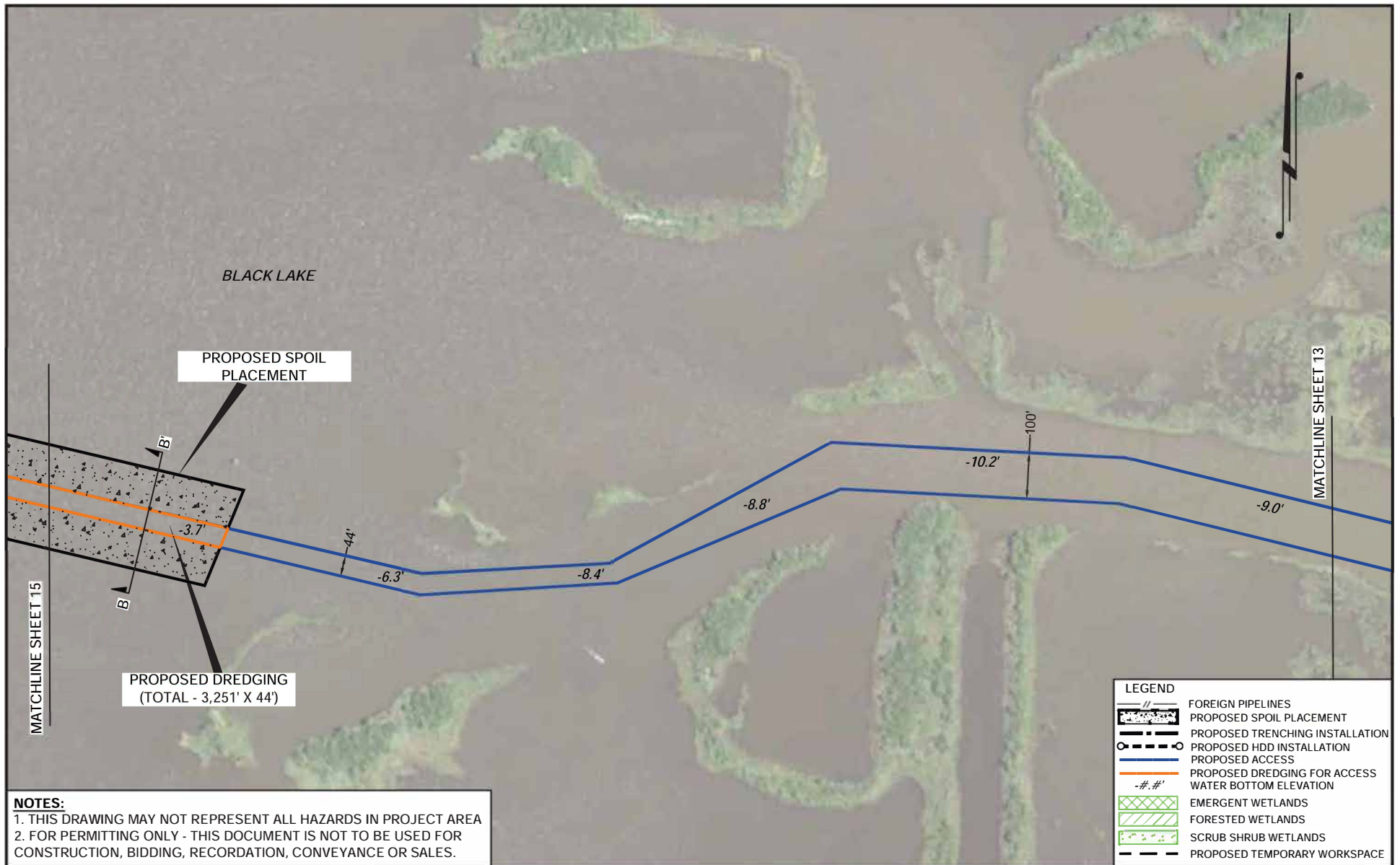
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**PRELIMINARY ACCESS**

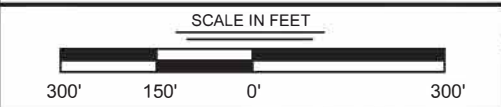
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May 16, 2022

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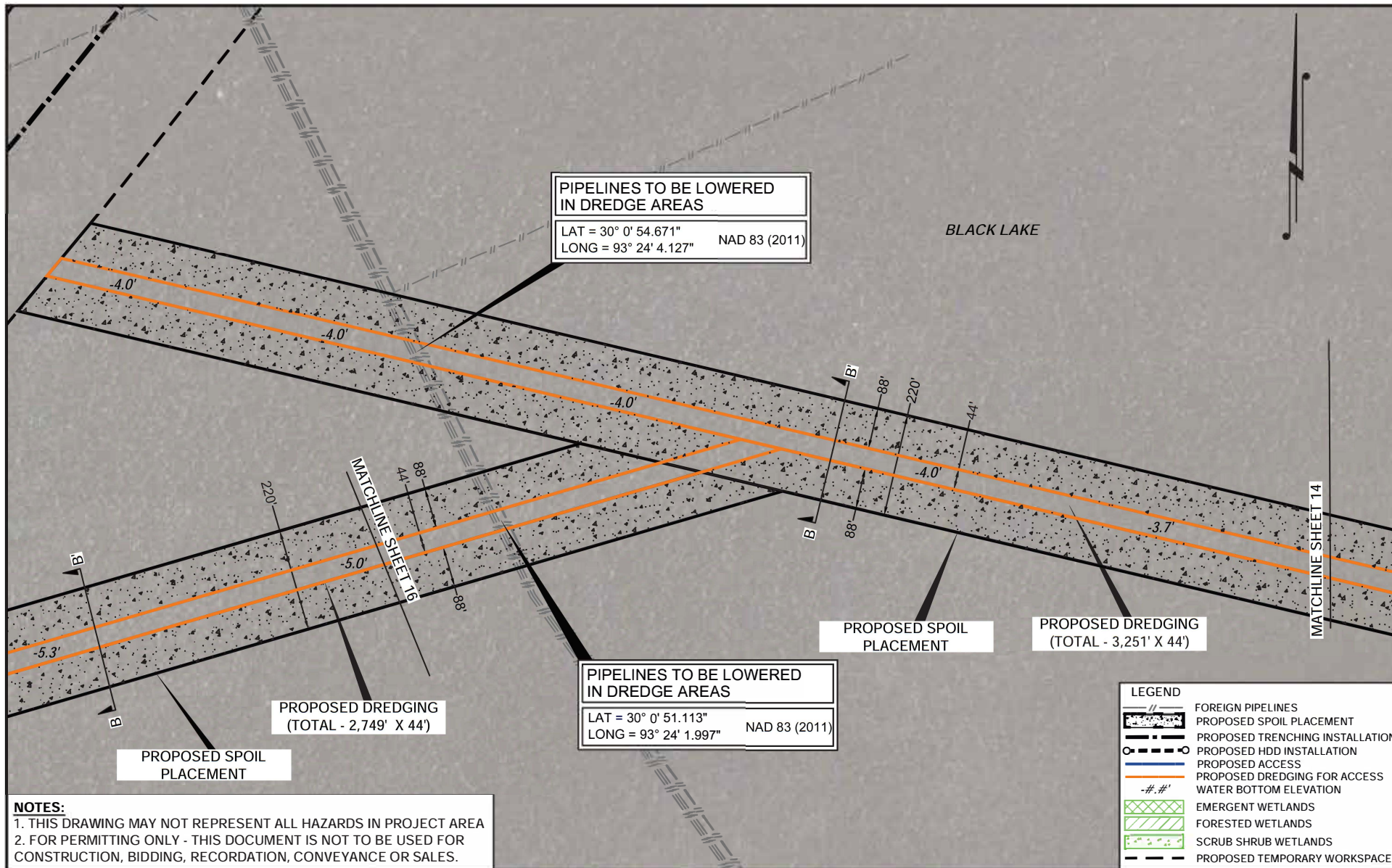
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SHEET NO: 14 OF 59  
PROJECTION: LOUISIANA SOUTH ZONE  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
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REVISION DESCRIPTION:  
REVISED AS PER REQUEST.

**PRELIMINARY ACCESS**

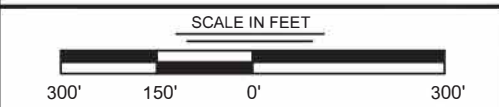
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HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA

May 16, 2022

4/20/2022 - P:\Y-2021\2021-0228\DWG\COE\REV8\21.0228\_S4-28\_REV8.DWG



**NOTES:**  
1. THIS DRAWING MAY NOT REPRESENT ALL HAZARDS IN PROJECT AREA  
2. FOR PERMITTING ONLY - THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE OR SALES.



REV. NO: 8 REV. DATE: 04/20/2022 REV. BY: RBT

DRAWN BY: JPD	APPROVED BY: ADM
DATE: 06/28/2021	JOB NO: 2021.0228
DRAWING NAME: 21.0228_S4-28_REV8.DWG	
SHEET NO: 15 OF 59	
PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET	
REVISION DESCRIPTION: REVISED AS PER REQUEST.	

**PRELIMINARY ACCESS**

**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA

May 16, 2022

BLACK LAKE

PIPELINES TO BE LOWERED  
IN DREDGE AREAS

LAT = 30° 0' 46.155" NAD 83 (2011)  
LONG = 93° 24' 20.662"

PROPOSED DREDGING  
(TOTAL - 2,749' X 44')

PROPOSED SPOIL  
PLACEMENT

MATCHLINE SHEET 15

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LEGEND	
	FOREIGN PIPELINES
	PROPOSED SPOIL PLACEMENT
	PROPOSED TRENCHING INSTALLATION
	PROPOSED HDD INSTALLATION
	PROPOSED ACCESS
	PROPOSED DREDGING FOR ACCESS
	WATER BOTTOM ELEVATION
	EMERGENT WETLANDS
	FORESTED WETLANDS
	SCRUB SHRUB WETLANDS
	PROPOSED TEMPORARY WORKSPACE

SCALE IN FEET



REV. NO: 8 REV. DATE: 04/20/2022 REV. BY: RBT

DRAWN BY: JPD APPROVED BY: ADM

DATE: 06/28/2021 JOB NO: 2021.0228

DRAWING NAME: 21.0228\_S4-28\_REV8.DWG

SHEET NO: 16 OF 59

PROJECTION: LOUISIANA SOUTH ZONE  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
GRID UNITS: US SURVEY FEET

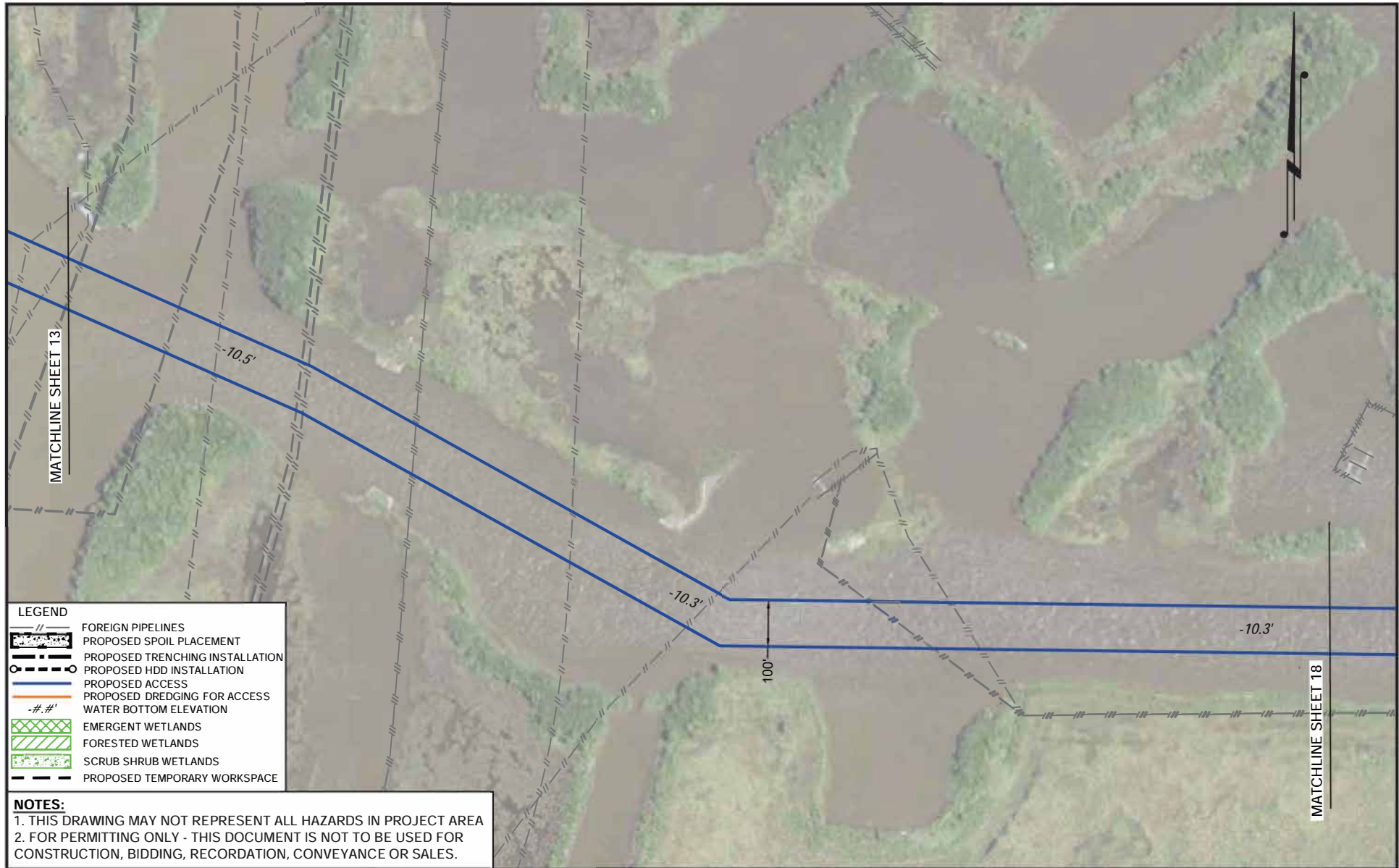
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REVISED AS PER REQUEST.

**PRELIMINARY**

**ACCESS**

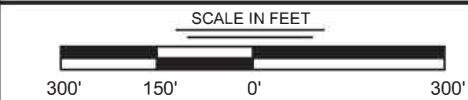
**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA  
May 16, 2022

4/20/2022 - P:\Y-2021\2021.0228\DWG\COE\REV8\21.0228\_S4-28\_REV8.DWG



LEGEND	
	FOREIGN PIPELINES
	PROPOSED SPOIL PLACEMENT
	PROPOSED TRENCHING INSTALLATION
	PROPOSED HDD INSTALLATION
	PROPOSED ACCESS
	PROPOSED DREDGING FOR ACCESS
	WATER BOTTOM ELEVATION
	EMERGENT WETLANDS
	FORESTED WETLANDS
	SCRUB SHRUB WETLANDS
	PROPOSED TEMPORARY WORKSPACE

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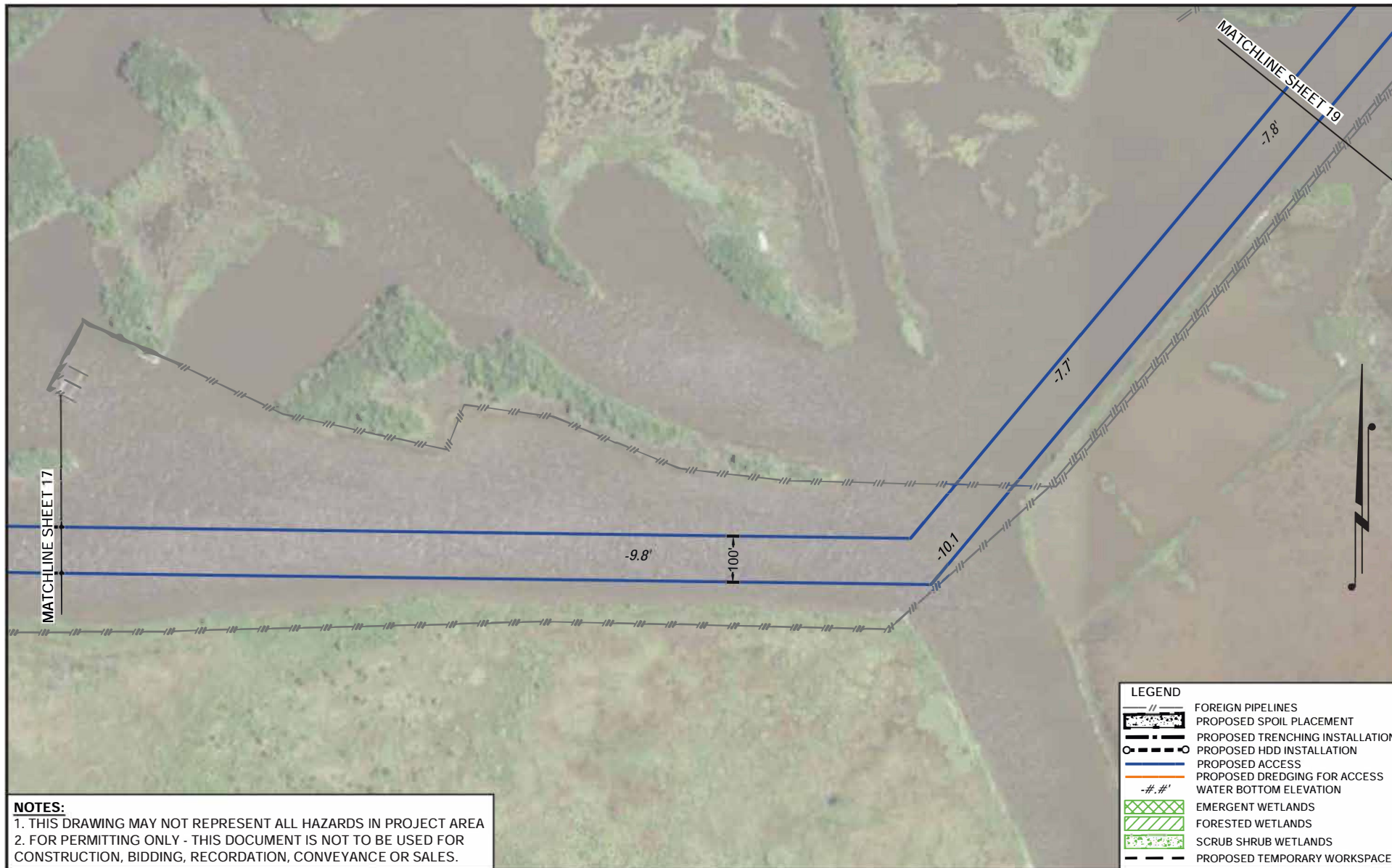


REV. NO: 8    REV. DATE: 04/20/2022    REV. BY: RBT

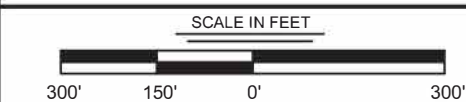
DRAWN BY: JPD	APPROVED BY: ADM
DATE: 06/28/2021	JOB NO: 2021.0228
DRAWING NAME: 21.0228_S4-28_REV8.DWG	
SHEET NO: 17	OF 59
PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET	
REVISION DESCRIPTION: REVISED AS PER REQUEST.	

<b>PRELIMINARY</b>	<b>ACCESS</b>
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA	
May 16, 2022	

4/20/2022 - P:\Y-2021\2021-0228\DWG\COE\REV8\21-0228\_S4-28\_REV8.DWG



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REV. NO: 8 REV. DATE: 04/20/2022 REV. BY: RBT

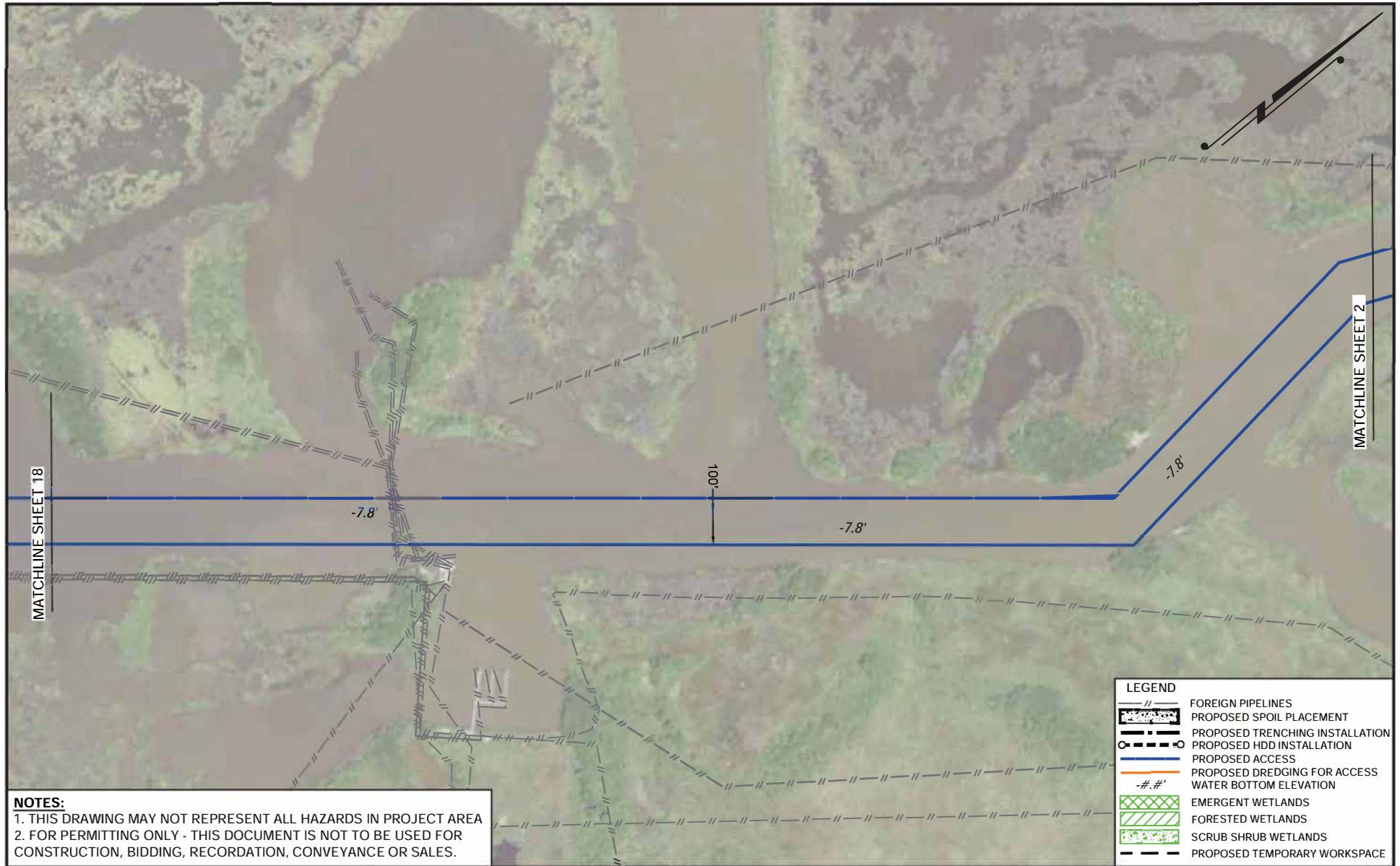
DRAWN BY: JPD APPROVED BY: ADM  
DATE: 06/28/2021 JOB NO: 2021.0228  
DRAWING NAME: 21.0228\_S4-28\_REV8.DWG  
SHEET NO: 18 OF 59  
PROJECTION: LOUISIANA SOUTH ZONE  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
GRID UNITS: US SURVEY FEET  
REVISION DESCRIPTION:  
REVISED AS PER REQUEST.

**PRELIMINARY ACCESS**

**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA

May 16, 2022

4/20/2022 - P:\Y-2021\2021.0228\DWG\COE\REV8\21.0228\_S4-28\_REV8.DWG



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LEGEND	
	FOREIGN PIPELINES
	PROPOSED SPOIL PLACEMENT
	PROPOSED TRENCHING INSTALLATION
	PROPOSED HDD INSTALLATION
	PROPOSED ACCESS
	PROPOSED DREDGING FOR ACCESS
	WATER BOTTOM ELEVATION
	EMERGENT WETLANDS
	FORESTED WETLANDS
	SCRUB SHRUB WETLANDS
	PROPOSED TEMPORARY WORKSPACE

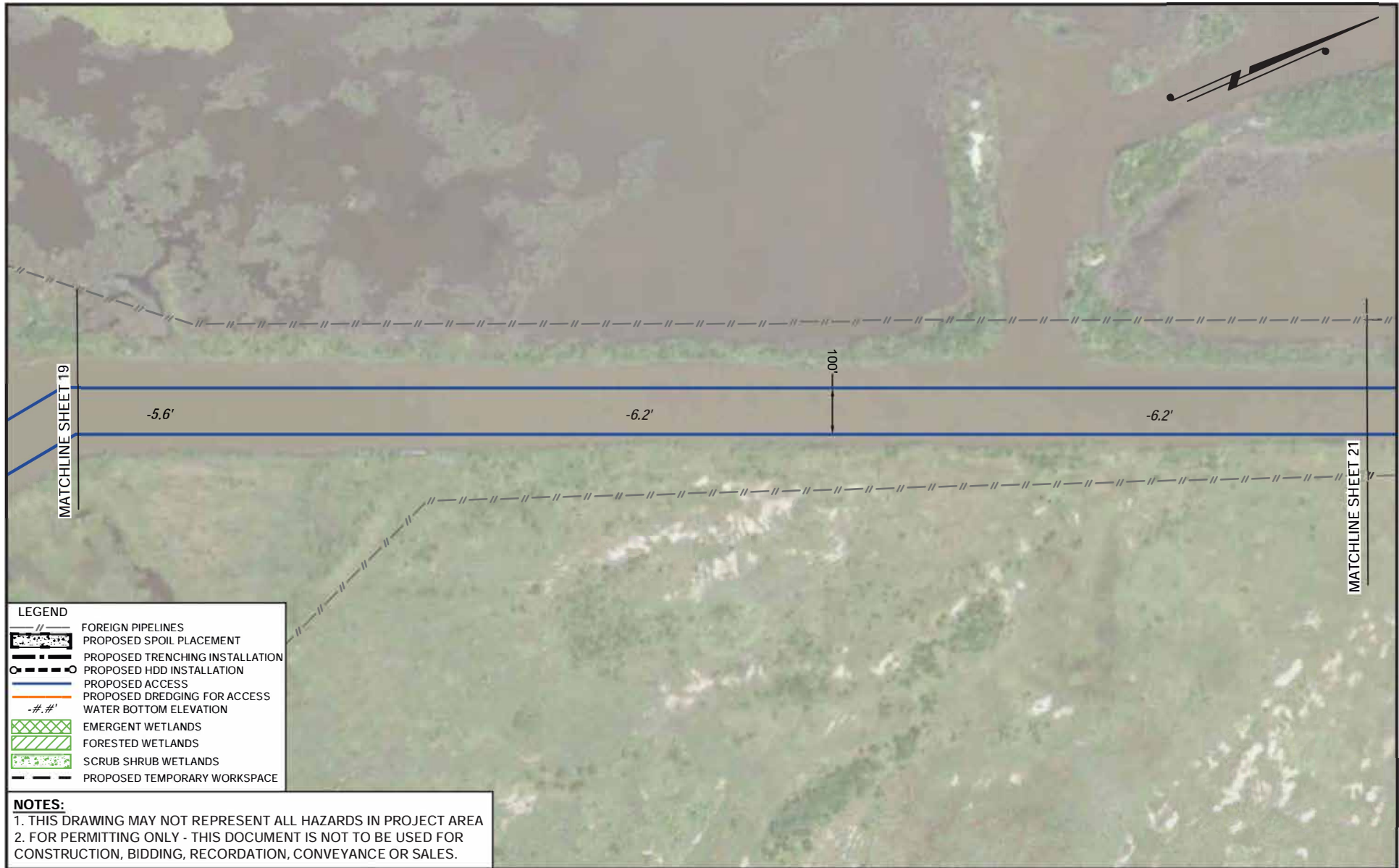


REV. NO:	8	REV. DATE:	04/20/2022	REV. BY:	RBT
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DRAWN BY:	JPD	APPROVED BY:	ADM
DATE:	06/28/2021	JOB NO:	2021.0228
DRAWING NAME:	21.0228_S4-28_REV8.DWG		
SHEET NO:	1	OF	59
PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET			
REVISION DESCRIPTION: REVISED AS PER REQUEST.			

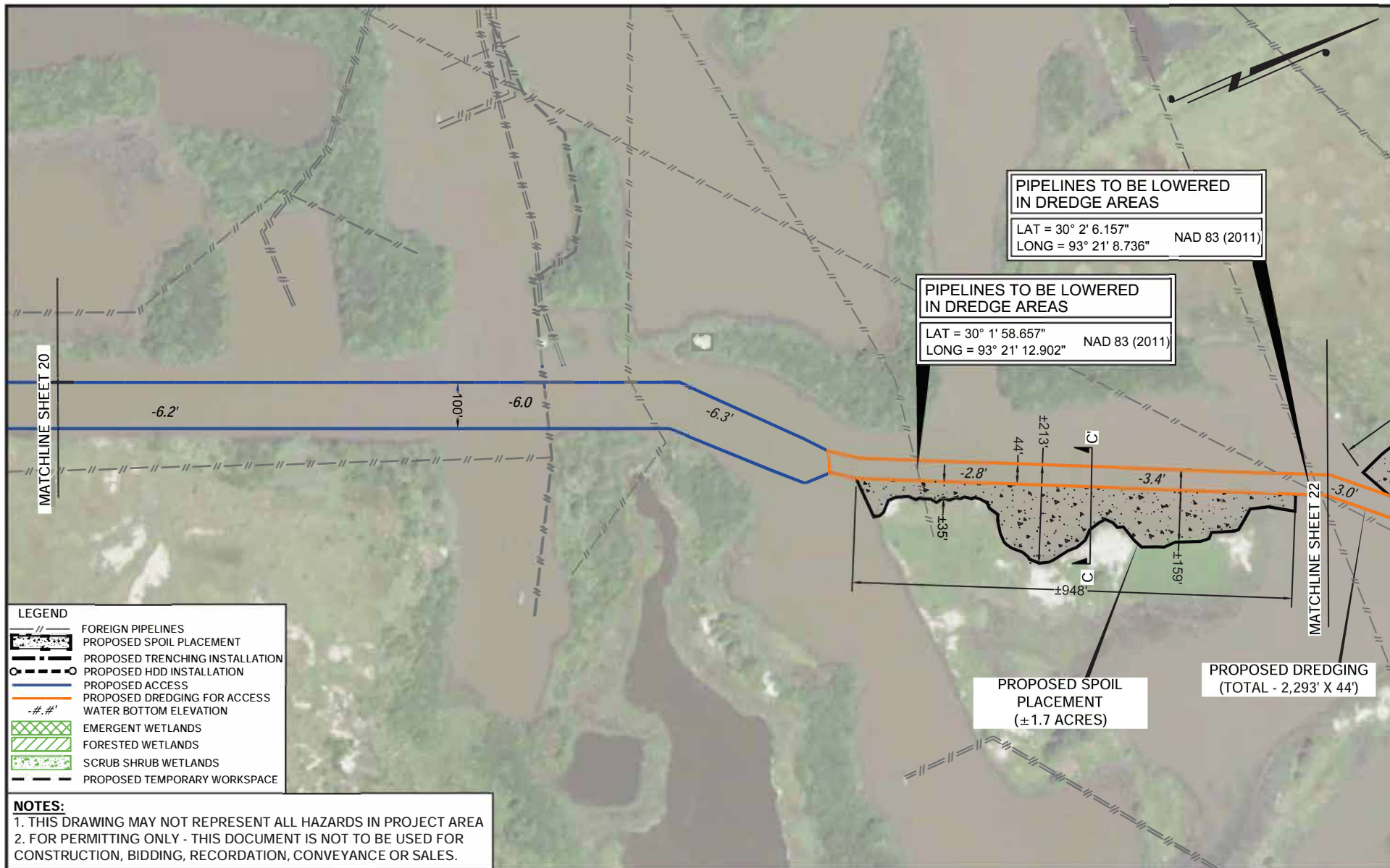
<b>PRELIMINARY</b>	<b>ACCESS</b>
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA	
May 16, 2022	

4/20/2022 - P:\Y-2021\2021.0228\DWG\COE\REV8\21.0228\_S4-28\_REV8.DWG



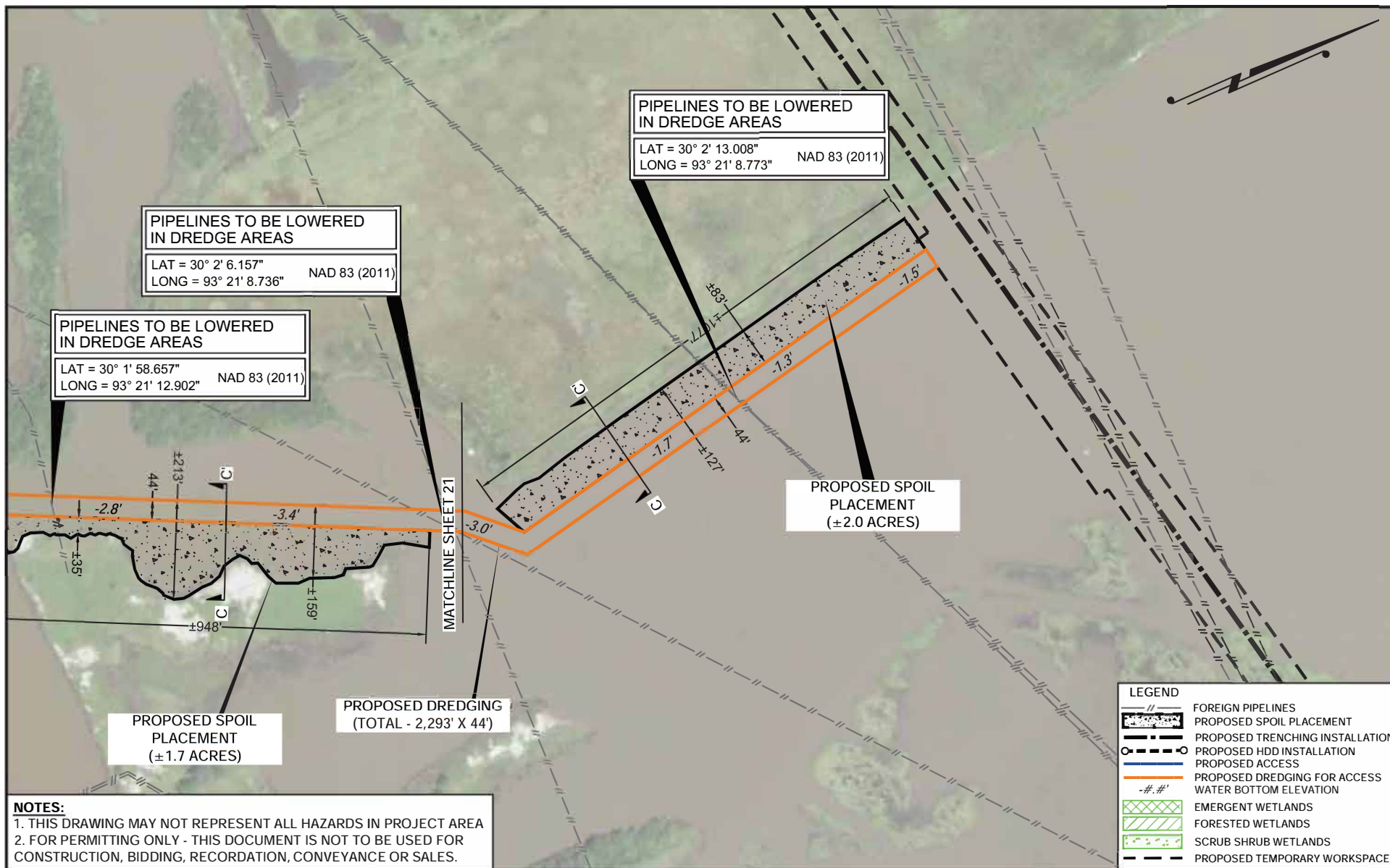
<p>SCALE IN FEET</p> <p>300' 150' 0' 300'</p> <p><b>T. BAKER SMITH</b> A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337)735-2800 - tbsmith.com</p>			<p>DRAWN BY: JPD    APPROVED BY: ADM</p> <p>DATE: 06/28/2021    JOB NO: 2021.0228</p> <p>DRAWING NAME: 21.0228_S4-28_REV8.DWG</p> <p>SHEET NO: 20 OF 59</p> <p>PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET</p> <p>REVISION DESCRIPTION: REVISED AS PER REQUEST.</p>	<p><b>PRELIMINARY</b>      <b>ACCESS</b></p> <p><b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION &amp; 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 &amp; 19-20 T12S-R11W, SECTIONS 12 &amp; 13 CAMERON PARISH, LOUISIANA      May 16, 2022</p>
REV. NO: 8	REV. DATE: 04/20/2022	REV. BY: RBT		

4/20/2022 - P:\Y-2021\2021.0228\DWG\COE\REV8\21.0228\_S4-28\_REV8.DWG

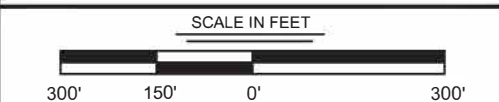


<p>SCALE IN FEET</p> <p>300' 150' 0' 300'</p>			<p><b>PRELIMINARY</b></p> <p><b>ACCESS</b></p>	
<p><b>T. BAKER SMITH</b> A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337)735-2800 - tbsmith.com</p>			<p><b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION &amp; 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 &amp; 19-20 T12S-R11W, SECTIONS 12 &amp; 13 CAMERON PARISH, LOUISIANA</p>	
<p>REV. NO: 8    REV. DATE: 04/20/2022    REV. BY: RBT</p>			<p>May 16, 2022</p>	

4/20/2022 - P:\Y-2021\2021.0228\DWG\COE\REV8\21.0228\_S4-28\_REV8.DWG



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REV. NO: 8 REV. DATE: 04/20/2022 REV. BY: RBT

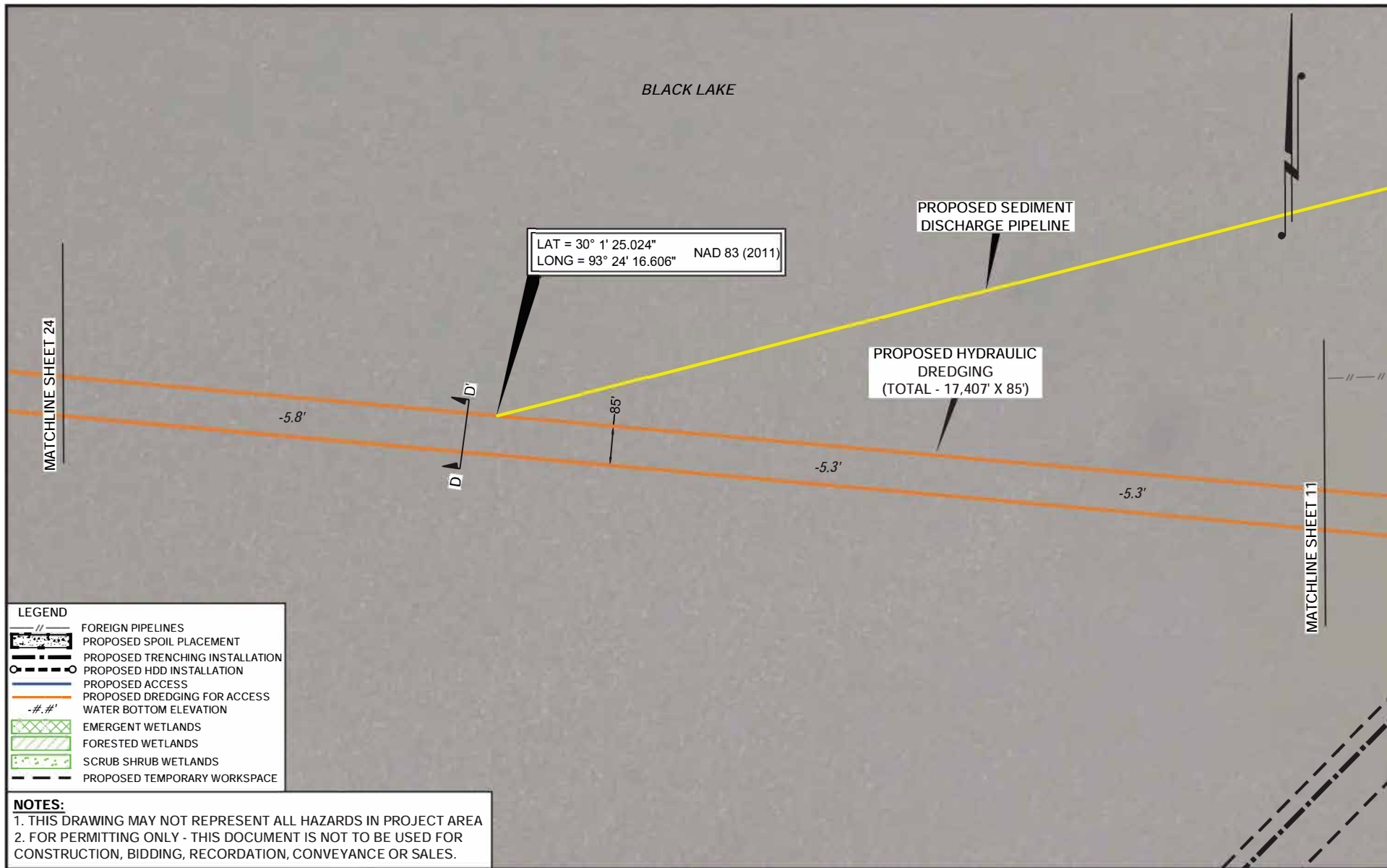
DRAWN BY: JPD APPROVED BY: ADM  
DATE: 06/28/2021 JOB NO: 2021.0228  
DRAWING NAME: 21.0228\_S4-28\_REV8.DWG  
SHEET NO: 22 OF 59  
PROJECTION: LOUISIANA SOUTH ZONE  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
GRID UNITS: US SURVEY FEET  
REVISION DESCRIPTION:  
REVISED AS PER REQUEST.

**PRELIMINARY ACCESS**

**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA

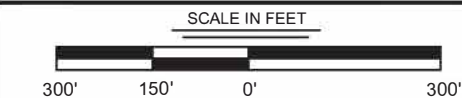
May 16, 2022

4/20/2022 - P:\Y-2021\2021.0228\DWG\COE\REV8\21.0228\_S4-28\_REV8.DWG



LEGEND	
	FOREIGN PIPELINES
	PROPOSED SPOIL PLACEMENT
	PROPOSED TRENCHING INSTALLATION
	PROPOSED HDD INSTALLATION
	PROPOSED ACCESS
	PROPOSED DREDGING FOR ACCESS
	WATER BOTTOM ELEVATION
	EMERGENT WETLANDS
	FORESTED WETLANDS
	SCRUB SHRUB WETLANDS
	PROPOSED TEMPORARY WORKSPACE

**NOTES:**  
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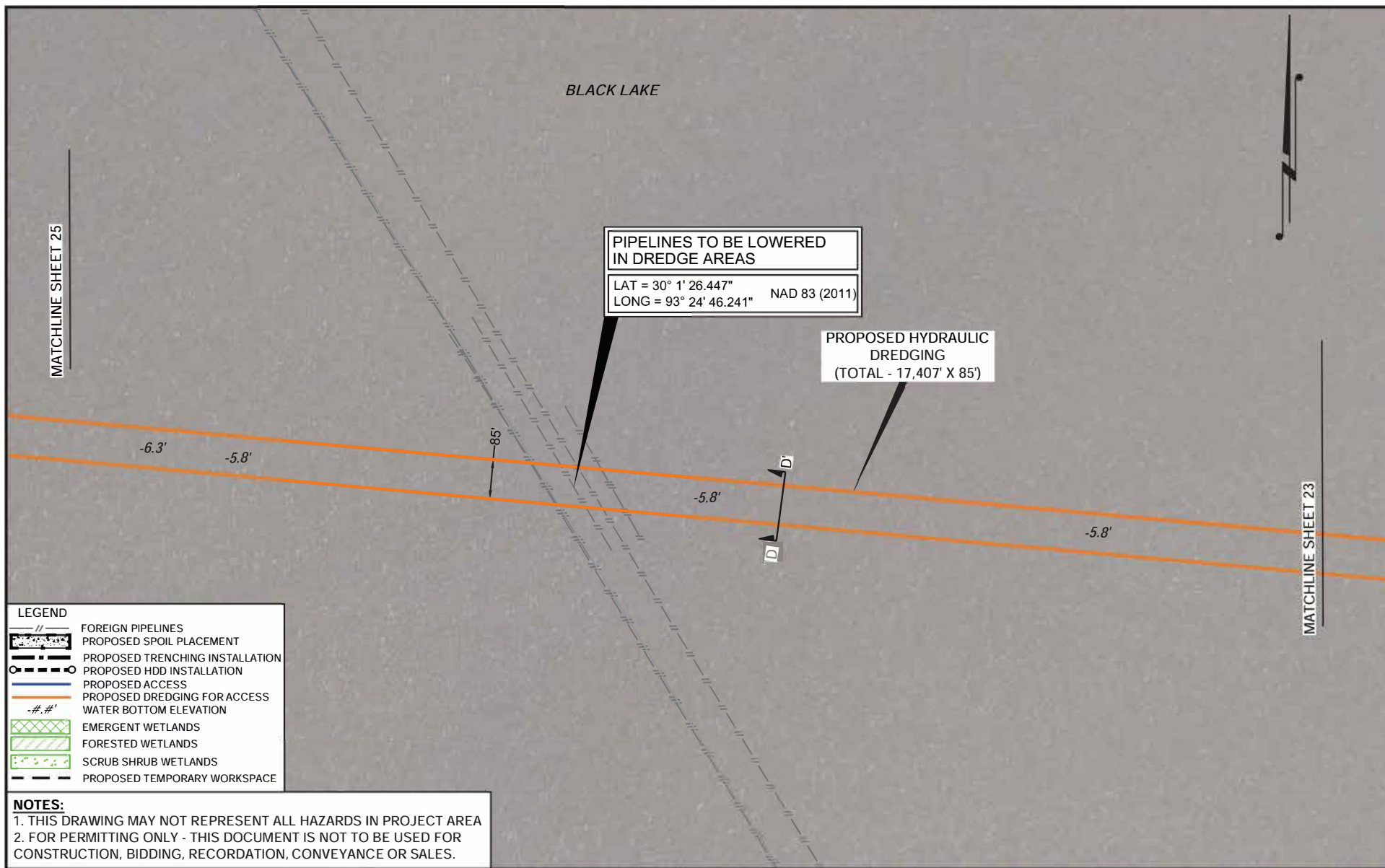


REV. NO:	8	REV. DATE:	04/20/2022	REV. BY:	RBT
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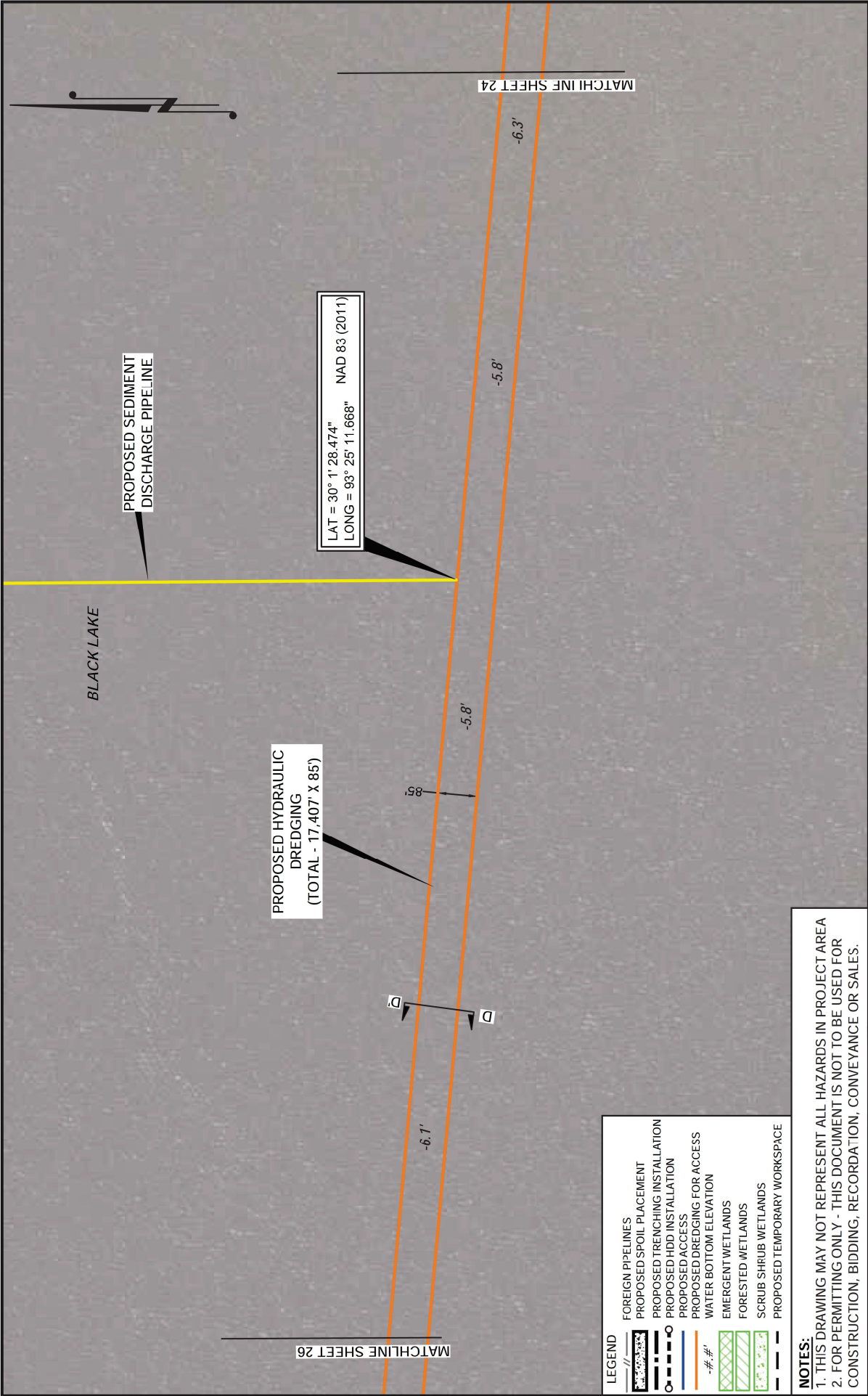
DRAWN BY:	JPD	APPROVED BY:	ADM
DATE:	06/28/2021	JOB NO:	2021.0228
DRAWING NAME:	21.0228_S4-28_REV8.DWG		
SHEET NO:	23	OF	59
PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET			
REVISION DESCRIPTION: REVISED AS PER REQUEST.			

<b>PRELIMINARY</b>	<b>ACCESS</b>
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA	
May 16, 2022	

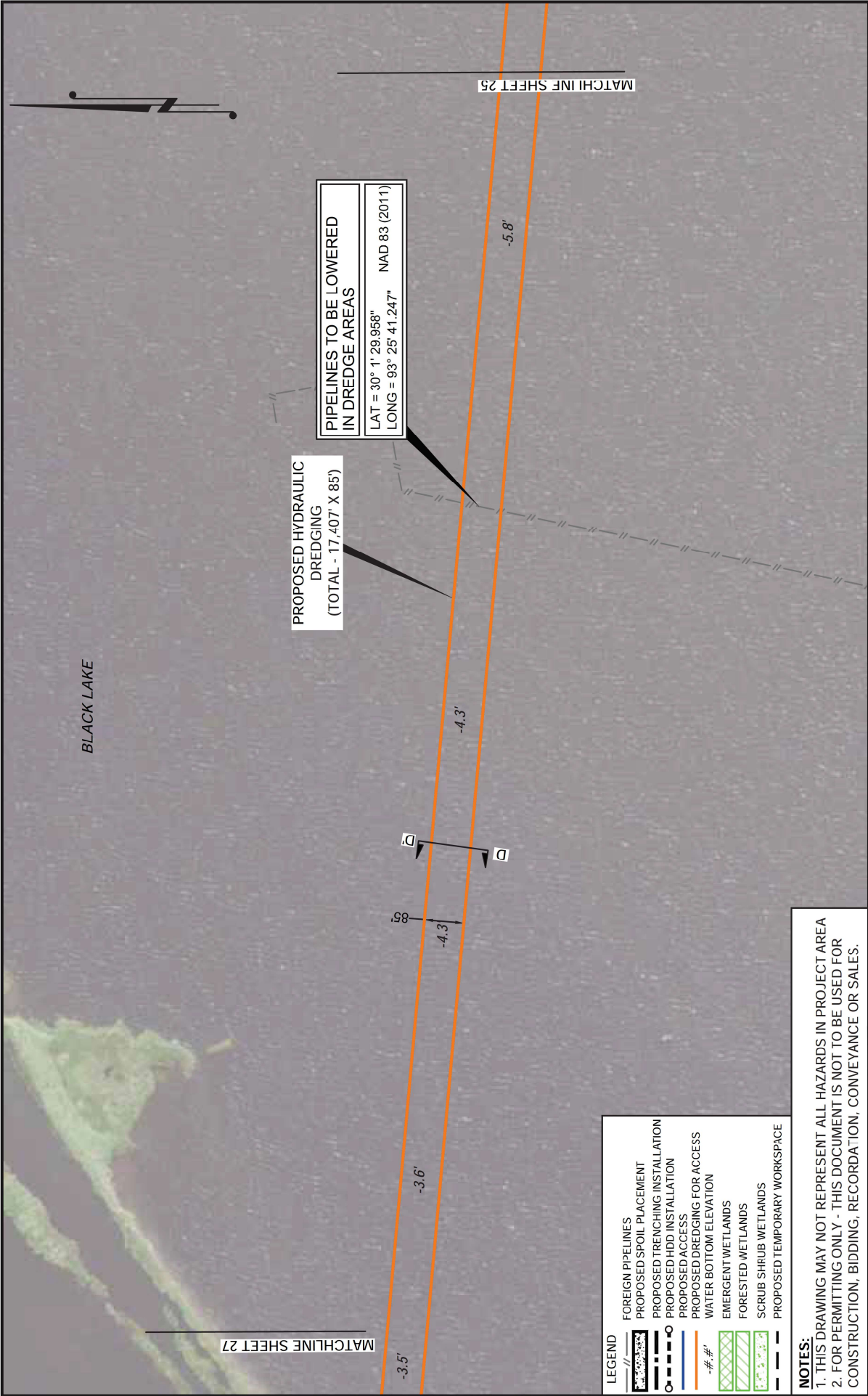
4/20/2022 - P:\Y-2021\2021 0228\DWG\COE\REV8\21 0228\_S4-28\_REV8.DWG



<p>SCALE IN FEET</p> <p>300' 150' 0' 300'</p>		<p>DRAWN BY: JPD</p> <p>DATE: 06/28/2021</p> <p>DRAWING NAME: 21.0228_S4-28_REV8.DWG</p>	<p>APPROVED BY: ADM</p> <p>JOB NO: 2021.0228</p> <p>SHEET NO: 24 OF 59</p>	<p><b>PRELIMINARY</b></p> <p><b>ACCESS</b></p> <p><b>HACKBERRY CARBON SEQUESTRATION, LLC</b></p> <p>HACKBERRY CARBON SEQUESTRATION PROJECT</p> <p>PROPOSED 16" SUCTION &amp; 12" INJECTION PIPELINES</p> <p>LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 &amp; 19-20</p> <p>T12S-R11W, SECTIONS 12 &amp; 13</p> <p>CAMERON PARISH, LOUISIANA</p> <p>May 16, 2022</p>
<p><b>T. BAKER SMITH</b></p> <p>A CENTURY OF SOLUTIONS</p> <p>107 Global Circle, Lafayette, LA 70503</p> <p>(337)735-2800 - tbsmith.com</p>		<p>PROJECTION: LOUISIANA SOUTH ZONE</p> <p>GEO. DATUM: NAD83   VERT. DATUM: NAVD88</p> <p>GRID UNITS: US SURVEY FEET</p>		
<p>REV. NO: 8</p>	<p>REV. DATE: 04/20/2022</p>	<p>REV. BY: RBT</p>	<p>REVISION DESCRIPTION:</p> <p>REVISED AS PER REQUEST.</p>	



<b>PRELIMINARY</b>		<b>ACCESS</b>	
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA May 16, 2022			
DRAWN BY: JPD	APPROVED BY: ADM	JOB NO: 2021.0228	
DATE: 06/28/2021		DRAWING NAME: 21.0228_S4-28_REV8.DWG	
		SHEET NO: 25 OF 59	
PROJECTION: LOUISIANA SOUTH ZONE		GEO. DATUM: NAD83   VERT. DATUM: NAVD88	
GRID UNITS: US SURVEY FEET		REVISION DESCRIPTION:	
REV. NO: 8		REV. DATE: 04/20/2022	REV. BY: RBT



**LEGEND**

- FOREIGN PIPELINES
- PROPOSED SPOIL PLACEMENT
- PROPOSED TRENCHING INSTALLATION
- PROPOSED HDD INSTALLATION
- PROPOSED ACCESS
- PROPOSED DREDGING FOR ACCESS
- WATER BOTTOM ELEVATION
- EMERGENT WETLANDS
- FORESTED WETLANDS
- SCRUB SHRUB WETLANDS
- PROPOSED TEMPORARY WORKSPACE

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<b>PRELIMINARY</b>		<b>ACCESS</b>	
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA May 16, 2022			
DRAWN BY: JPD	APPROVED BY: ADM	DATE: 06/28/2021	JOB NO: 2021.0228
DRAWING NAME: 21.0228_S4-28_REV8.DWG		SHEET NO: 26	OF 59
PROJECTION: LOUISIANA SOUTH ZONE		GEO. DATUM: NAD83   VERT. DATUM: NAVD88	
GRID UNITS: US SURVEY FEET		REVISION DESCRIPTION:	
REV. NO: 8		REV. DATE: 04/20/2022	REV. BY: RBT



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REV. NO:	8	REV. DATE: 04/20/2022	REV. BY: RBT
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DRAWING NAME: 21.0228\_S4-28\_REV8.DWG

PROJECTION: LOUISIANA SOUTH ZONE  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
GRID UNITS: US SURVEY FEET

**REVISION DESCRIPTION:**  
**REVIESED AS PER REQUEST.**

3 NO: 2021.0228

8\_S4-28\_REV8.DWG

OF 59

H ZONE  
 ATUM: NAVD88

**REVISION DESCRIPTION:**  
**REVIESED AS PER REQUEST.**

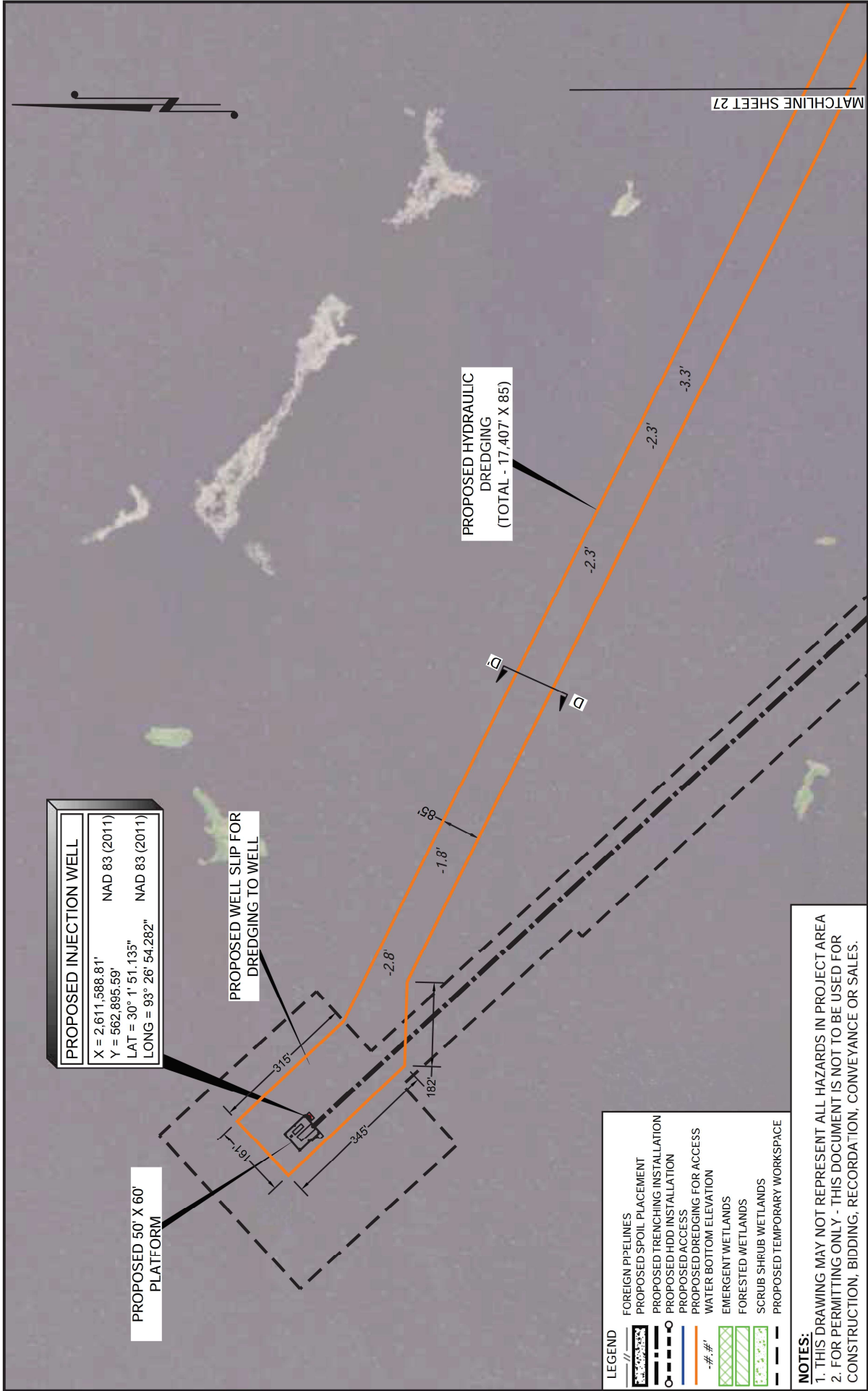
## ACCESS

# HACKBERRY CARBON SEQUESTRATION PROJECT

PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

T12S-R11W, SECTIONS 12 &amp; 13

May 16, 2022



PROPOSED INJECTION WELL

X = 2,611,588.81' NAD 83 (2011)  
Y = 562,895.59' NAD 83 (2011)  
LAT = 30° 1' 51.135" NAD 83 (2011)  
LONG = 93° 26' 54.282" NAD 83 (2011)

PROPOSED 50' X 60' PLATFORM

PROPOSED WELL SLIP FOR DREDGING TO WELL

PROPOSED HYDRAULIC DREDGING (TOTAL - 17,407' X 85')

MATCHLINE SHEET 27

LEGEND

FOREIGN PIPELINES

PROPOSED SPOIL PLACEMENT

PROPOSED TRENCHING INSTALLATION

PROPOSED HDD INSTALLATION

PROPOSED ACCESS

PROPOSED DREDGING FOR ACCESS

WATER BOTTOM ELEVATION

EMERGENT WETLANDS

FORESTED WETLANDS

SCRUB SHRUB WETLANDS

PROPOSED TEMPORARY WORKSPACE

NOTES:

1. THIS DRAWING MAY NOT REPRESENT ALL HAZARDS IN PROJECT AREA

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SCALE IN FEET

300' 150' 0'

T. BAKER SMITH

AGENCY OF SOLUTIONS

107 Global Circle, Lafayette, LA 70503

(337) 335-2800 - tbsmith.com

REV. NO: 8

REV. DATE: 04/20/2022

REV. BY: RBT

PRELIMINARY

ACCESS

DRAWN BY: JPD

APPROVED BY: ADM

DATE: 06/28/2021

JOB NO: 2021.0228

DRAWING NAME: 21.0228\_S4-28\_REV8.DWG

SHEET NO: 28 OF 59

PROJECTION: LOUISIANA SOUTH ZONE

GEO. DATUM: NAD83 | VERT. DATUM: NAVD88

GRID UNITS: US SURVEY FEET

REVISION DESCRIPTION: REVISED AS PER REQUEST.

HACKBERRY CARBON SEQUESTRATION, LLC

HACKBERRY CARBON SEQUESTRATION PROJECT

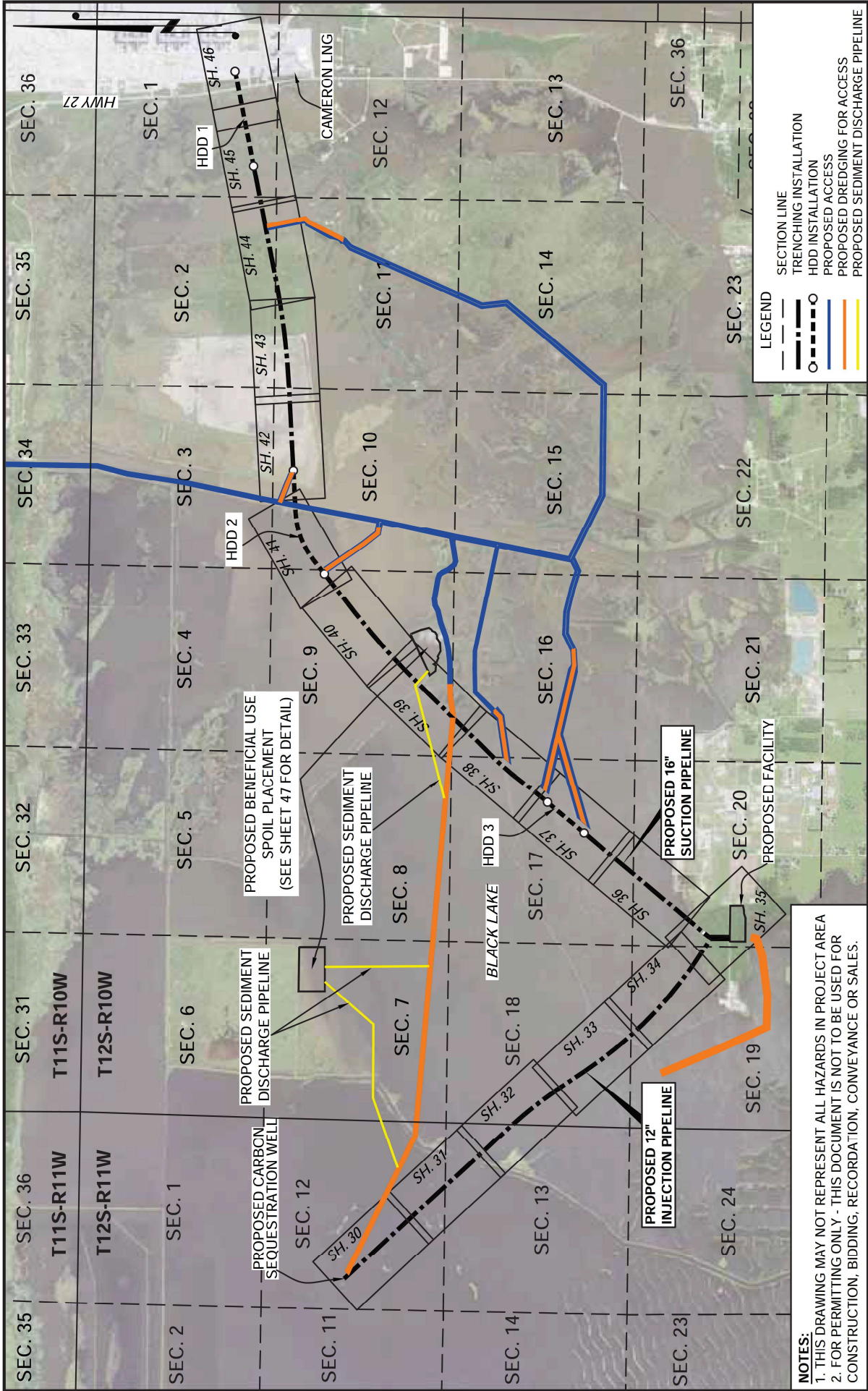
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES

LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

T12S-R11W, SECTIONS 12 & 13

CAMERON PARISH, LOUISIANA

May 16, 2022



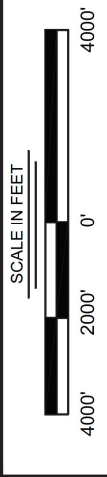
**LEGEND**

- SECTION LINE
- TRENCHING INSTALLATION
- HDD INSTALLATION
- PROPOSED ACCESS
- PROPOSED DREDGING FOR ACCESS
- PROPOSED SEDIMENT DISCHARGE PIPELINE

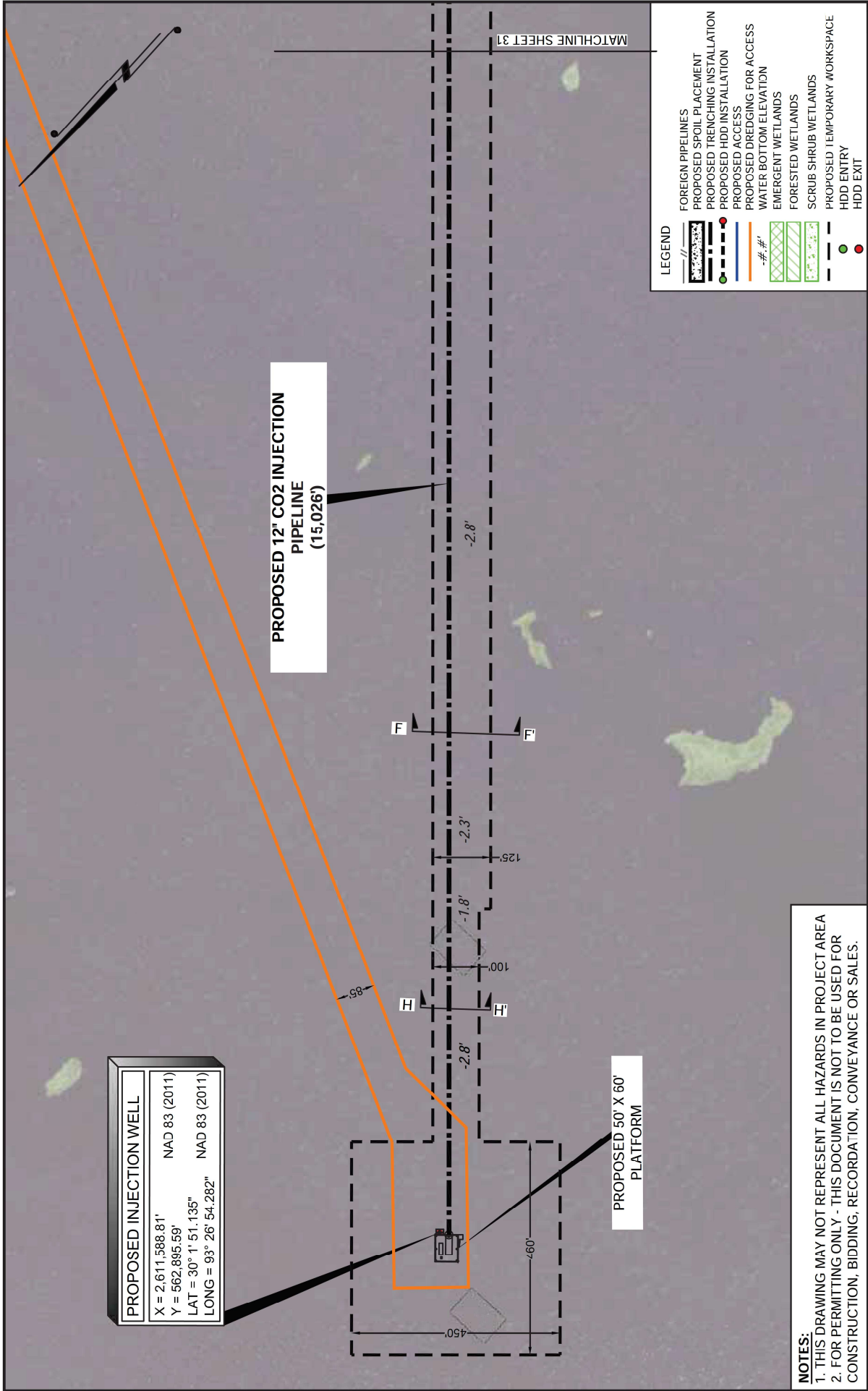
<b>PRELIMINARY PIPELINE ROUTE SHEET INDEX</b>			
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA			
DRAWN BY: JPD DATE: 06/28/2021 DRAWING NAME: 21.0228_S29_REV8.DWG		APPROVED BY: ADM JOB NO: 2021.0228 SHEET NO: 29 OF 59	
PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET		REVISION DESCRIPTION: REVISED AS PER REQUEST.	
REV. NO: 8	REV. DATE: 04/20/2022	REV. BY: RBT	May 16, 2022

**NOTES:**

- THIS DRAWING MAY NOT REPRESENT ALL HAZARDS IN PROJECT AREA
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**T. BAKER SMITH**  
 A CENTURY OF SOLUTIONS  
 107 Global Circle, Lafayette, LA 70503  
 (337) 735-2800 • tbsmith.com



PROPOSED INJECTION WELL

X = 2,611,588.81'  
Y = 562,895.59'  
LAT = 30° 1' 51.135"  
LONG = 93° 26' 54.282"

PROPOSED 12" CO2 INJECTION PIPELINE (15,026')

PROPOSED 50' X 60' PLATFORM

LEGEND

FOREIGN PIPELINES  
PROPOSED SPOIL PLACEMENT  
PROPOSED TRENCHING INSTALLATION  
PROPOSED HDD INSTALLATION  
PROPOSED ACCESS  
PROPOSED DREDGING FOR ACCESS  
WATER BOTTOM ELEVATION  
EMERGENT WETLANDS  
FORESTED WETLANDS  
SCRUB SHRUB WETLANDS  
PROPOSED TEMPORARY WORKSPACE  
HDD ENTRY  
HDD EXIT

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SCALE IN FEET

300' 150' 0'

PIPELINE ROUTE

PRELIMINARY

HACKBERRY CARBON SEQUESTRATION, LLC

HACKBERRY CARBON SEQUESTRATION PROJECT

PROPOSED 16" SUCTION & 12" INJECTION PIPELINES

LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

T12S-R11W, SECTIONS 12 & 13

CAMERON PARISH, LOUISIANA

May 16, 2022

DRAWN BY: JPD

APPROVED BY: ADM

DATE: 06/28/2021

JOB NO: 2021.0228

DRAWING NAME: 21.0228\_S30-46\_REV8.DWG

SHEET NO: 30 OF 59

PROJECTION: LOUISIANA SOUTH ZONE

GEO. DATUM: NAD83 | VERT. DATUM: NAVD88

GRID UNITS: US SURVEY FEET

REVISION DESCRIPTION:

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REV. NO: 8

REV. DATE: 04/20/2022

REV. BY: RBT

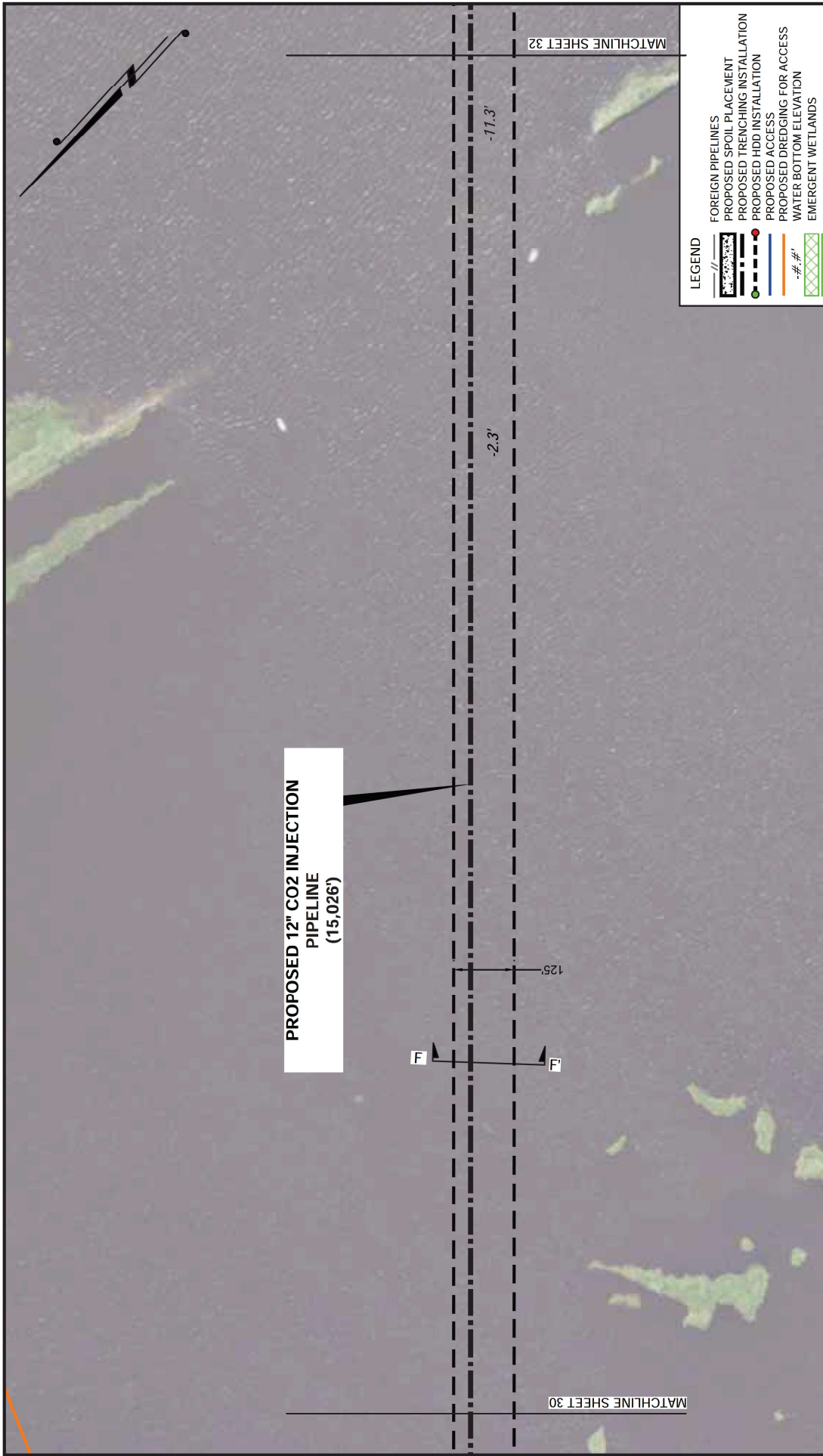
TBS

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REV. NO:	8	REV. DATE:	04/20/2022	REV. BY:	RBT
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DRAWN BY:	JPD	APPROVED BY:	ADM
DATE:	06/28/2021	JOB NO:	2021.0228
DRAWING NAME:	21.0228_S30-46_REV8.DWG		
SHEET NO:	31	OF	59
PROJECTION: LOUISIANA SOUTH ZONE			
GEO. DATUM: NAD83   VERT. DATUM: NAVD88			
GRID UNITS: US SURVEY FEET			
REVISION DESCRIPTION:			
REVISED AS PER REQUEST.			

**PRELIMINARY**

## PIPELINE ROUTE

**HACKBERRY CARBON SEQUESTRATION, LLC**

HACKBERRY CARBON SEQUESTRATION PROJECT

PROPOSED 16" SUCTION & 12" INJECTION PIPELINES

LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

T12S-R11W, SECTIONS 12 & 13

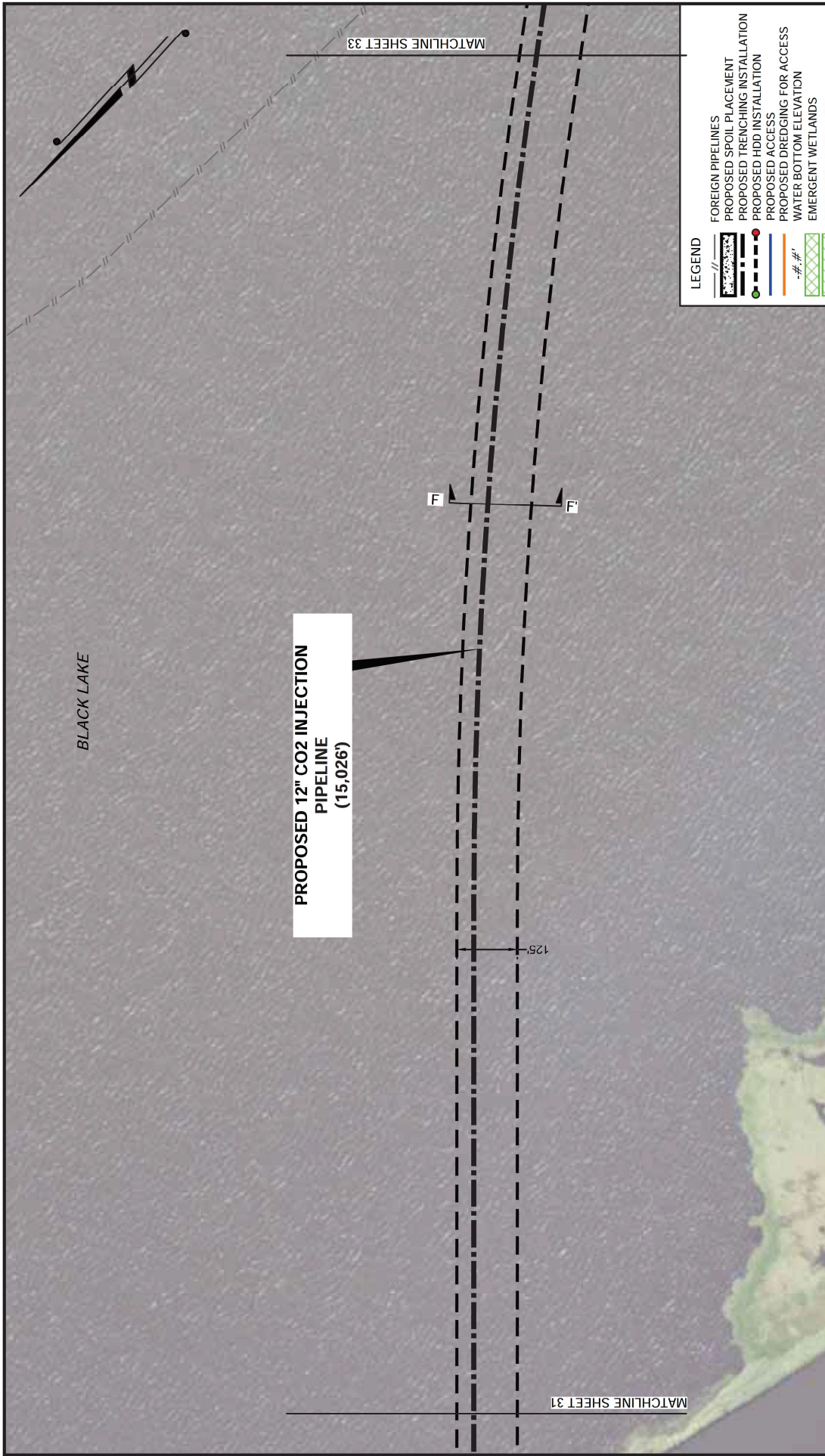
CAMERON PARISH, LOUISIANA

May 16, 2022

LEGEND	
	FOREIGN PIPELINES
	PROPOSED SPOIL PLACEMENT
	PROPOSED TRENCHING INSTALLATION
	PROPOSED HDD INSTALLATION
	PROPOSED ACCESS
	PROPOSED DREDGING FOR ACCESS
	WATER BOTTOM ELEVATION
	EMERGENT WETLANDS
	FORESTED WETLANDS
	SCRUB SHRUB WETLANDS
	PROPOSED TEMPORARY WORKSPACE
	HDD ENTRY
	HDD EXIT

MATCHLINE SHEET 32

MATCHLINE SHEET 30



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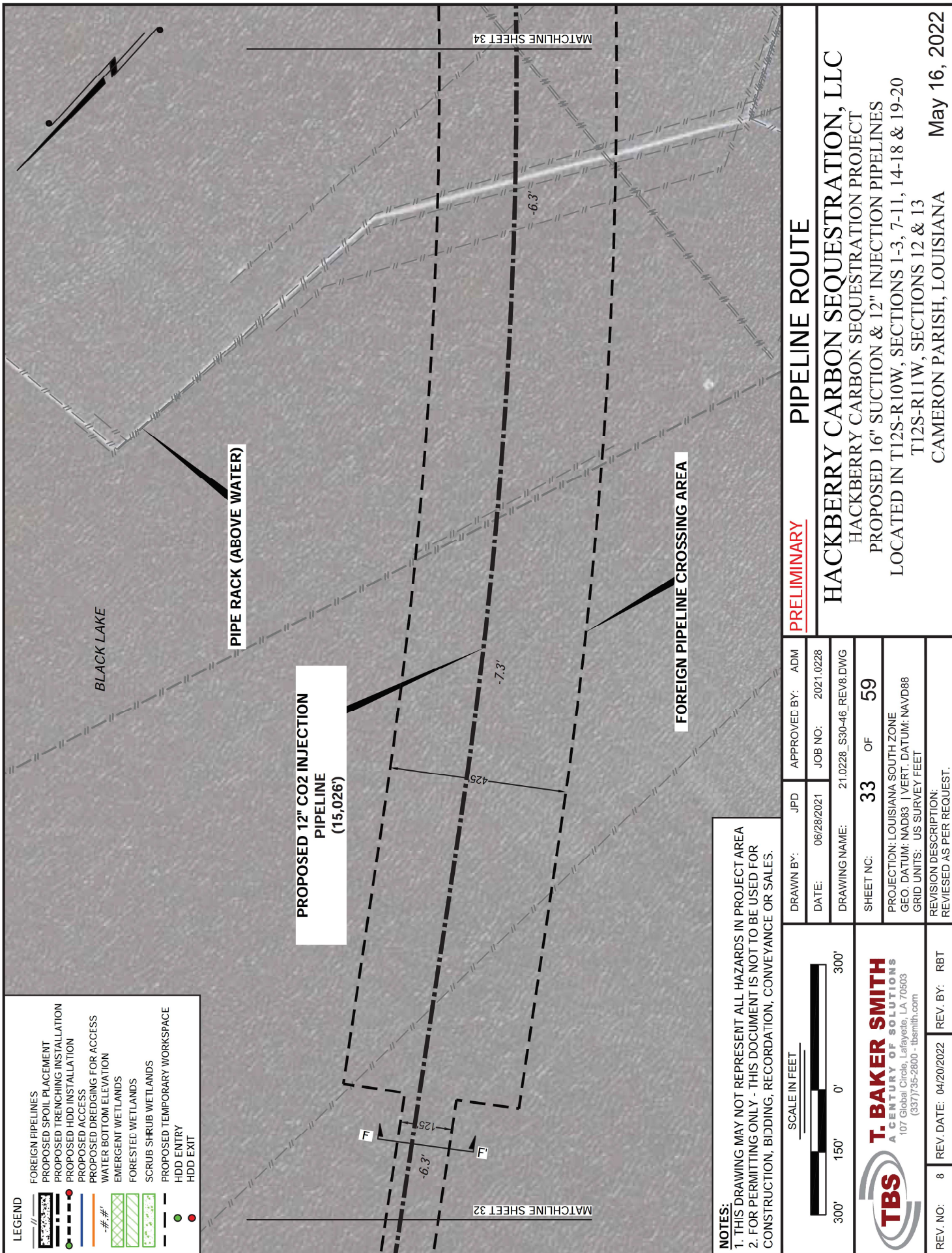
REV. NO:	8	REV. DATE:	04/20/2022	REV. BY:	RBT
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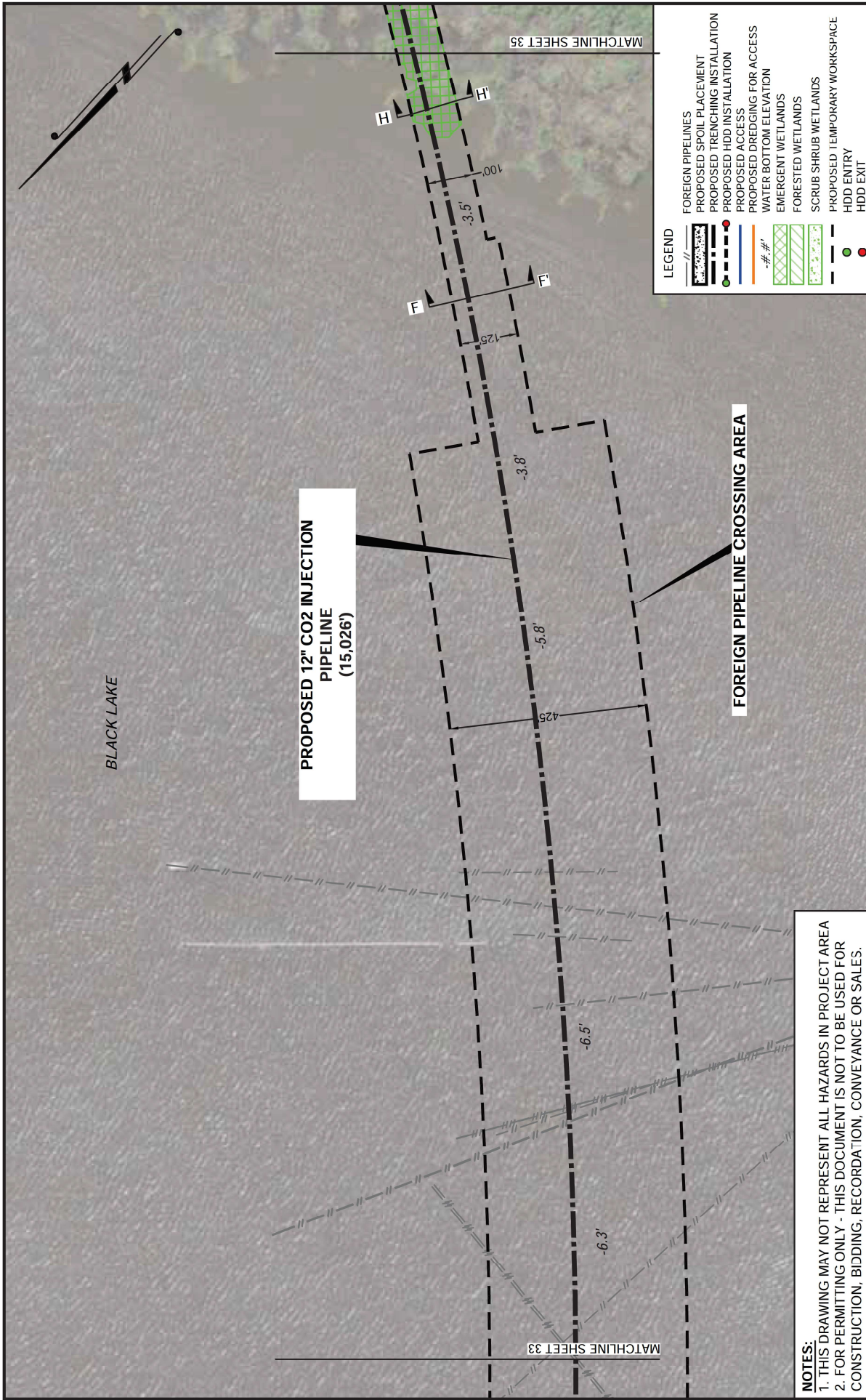
DRAWN BY:	JPD	APPROVED BY:	ADM
DATE:	06/28/2021	JOB NO:	2021.0228
DRAWING NAME:	21.0228_S30-46_REV8.DWG		
SHEET NO:	32	OF	59
PROJECTION: LOUISIANA SOUTH ZONE			
GEO. DATUM: NAD83   VERT. DATUM: NAVD88			
GRID UNITS: US SURVEY FEET			
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**PRELIMINARY**

**PIPELINE ROUTE**

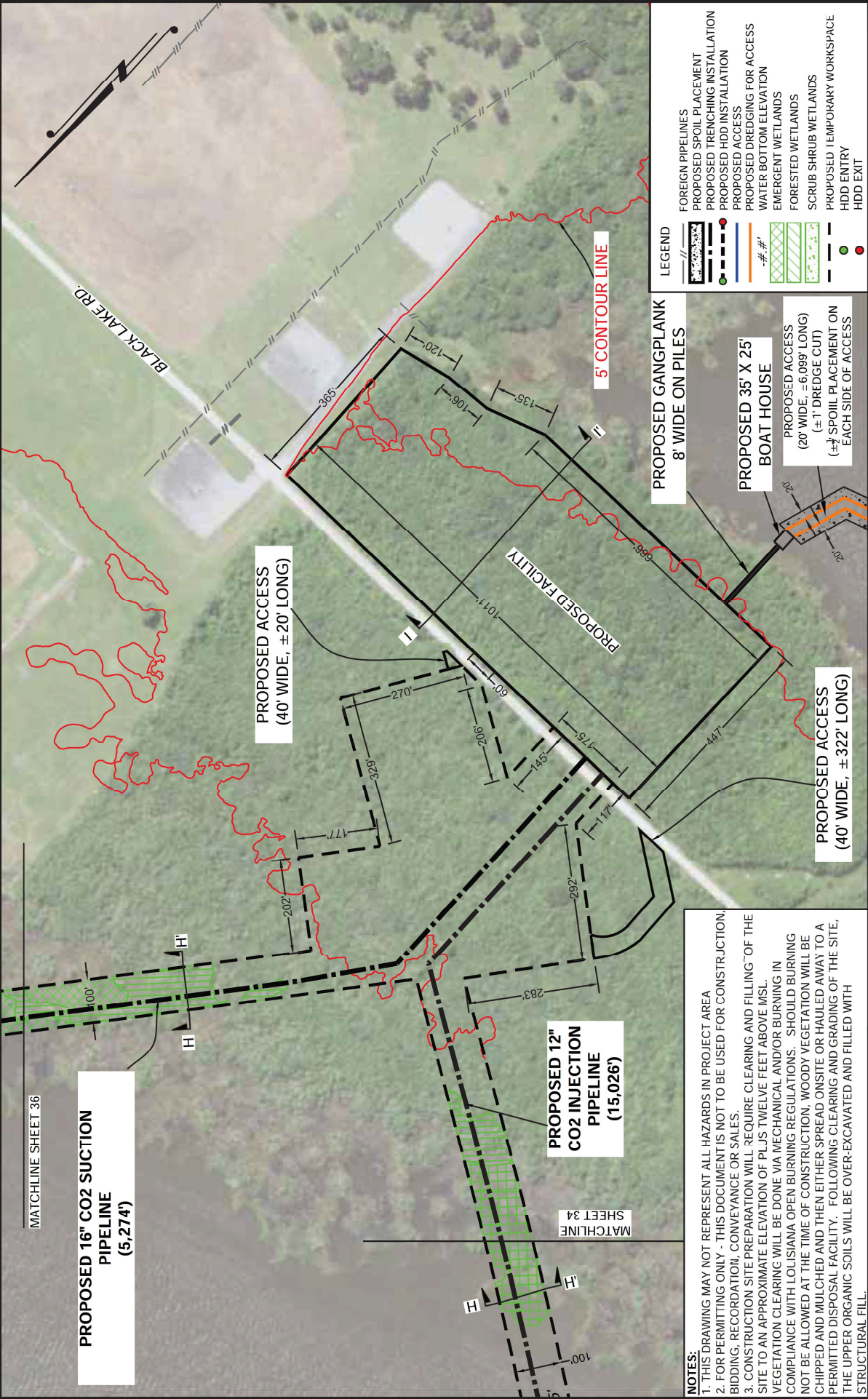
**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA  
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		<b>PIPELINE ROUTE</b>	
<b>T. BAKER SMITH</b> A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337) 335-2800 - tbsmith.com		<b>PRELIMINARY</b>	
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA		<b>PIPELINE ROUTE</b>	
<b>REV. NO: 8</b>		<b>REV. DATE: 04/20/2022</b>	
<b>REV. BY: RBT</b>		<b>REVISION DESCRIPTION:</b> REVISED AS PER REQUEST.	
<b>DRAWN BY: JPD</b>		<b>APPROVED BY: ADM</b>	
<b>DATE: 06/28/2021</b>		<b>JOB NO: 2021.0228</b>	
<b>DRAWING NAME: 21.0228_S30-46_REV8.DWG</b>		<b>SHEET NO: 34 OF 59</b>	
<b>PROJECTION: LOUISIANA SOUTH ZONE</b>		<b>GEO. DATUM: NAD83   VERT. DATUM: NAVD88</b>	
<b>GRID UNITS: US SURVEY FEET</b>		<b>REVISION DESCRIPTION:</b> REVISED AS PER REQUEST.	



- LEGEND**
- FOREIGN PIPELINES
  - PROPOSED SPOIL PLACEMENT
  - PROPOSED TRENCHING INSTALLATION
  - PROPOSED HDD INSTALLATION
  - PROPOSED ACCESS
  - PROPOSED DREDGING FOR ACCESS
  - WATER BOTTOM ELEVATION
  - EMERGENT WETLANDS
  - FORESTED WETLANDS
  - SCRUB SHRUB WETLANDS
  - PROPOSED TEMPORARY WORKSPACE
  - HDD ENTRY
  - HDD EXIT

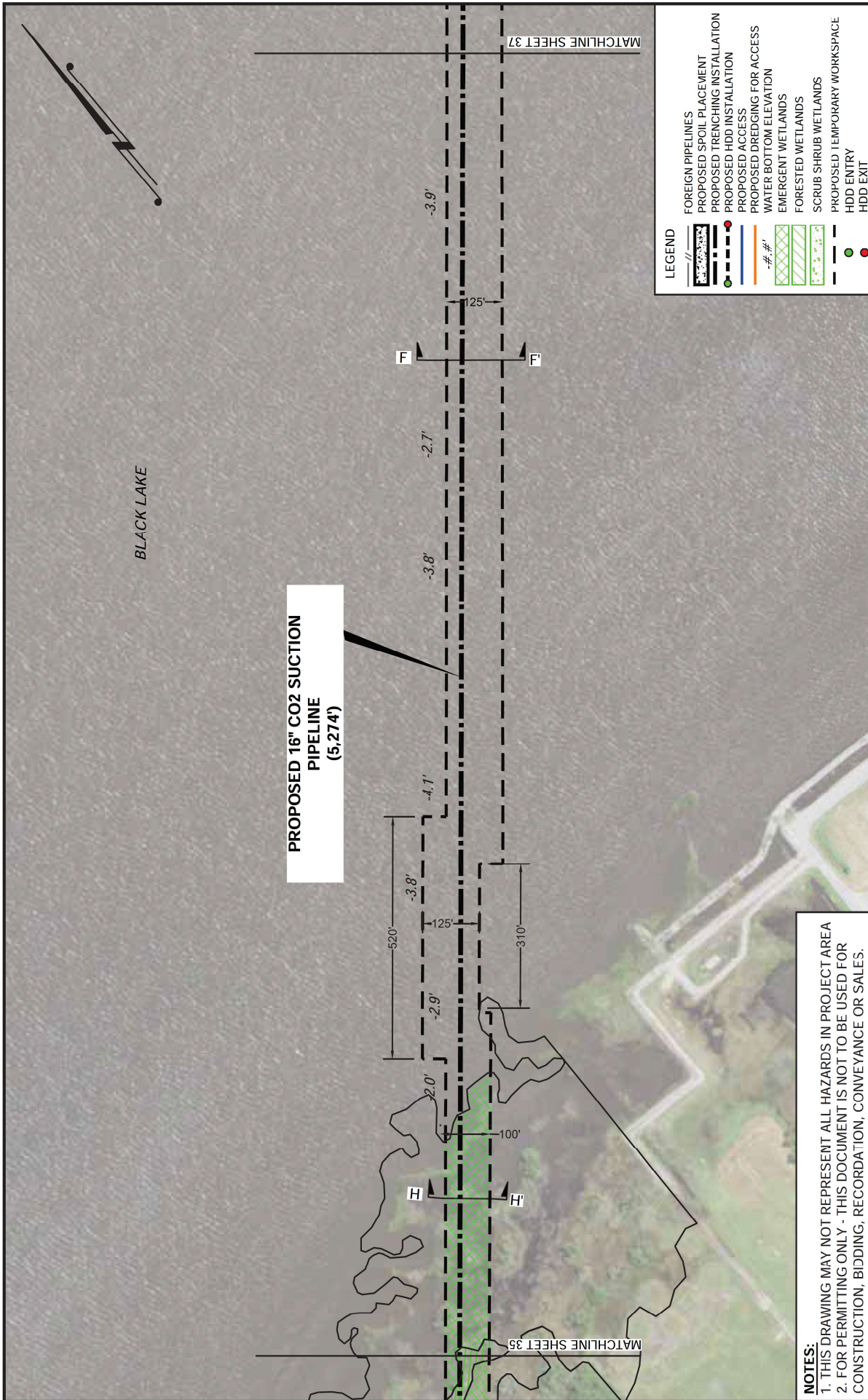
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3. CONSTRUCTION SITE PREPARATION WILL REQUIRE CLEARING AND FILLING OF THE SITE TO AN APPROXIMATE ELEVATION OF PLUS TWELVE FEET ABOVE MSL.
- VEGETATION CLEARING WILL BE DONE VIA MECHANICAL AND/OR BURNING IN COMPLIANCE WITH LOUISIANA OPEN BURNING REGULATIONS. SHOULD BURNING NOT BE ALLOWED AT THE TIME OF CONSTRUCTION, WOODY VEGETATION WILL BE CHIPPED AND MULCHED AND THEN EITHER SPREAD, ONSITE OR HAULED AWAY TO A PERMITTED DISPOSAL FACILITY. FOLLOWING CLEARING AND GRADING OF THE SITE, THE UPPER ORGANIC SOILS WILL BE OVER-EXCAVATED AND FILLED WITH STRUCTURAL FILL.

PIPELINE ROUTE			
<b>PRELIMINARY</b>			
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA May 16, 2022			
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DRAWING NAME: 21.0228_S30-46_REV8.DWG		SHEET NO: 35 OF 59	
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GRID UNITS: US SURVEY FEET		REVISION DESCRIPTION:	
REV. NO: 8		REV. DATE: 04/20/2022	
REV. BY: RBT		REV. BY: RBT	

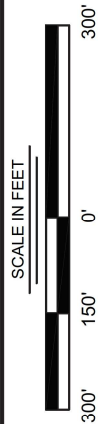
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**T. BAKER SMITH**  
A CENTURY OF SOLUTIONS  
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DRAWN BY:

JPD

APPROVED BY: ADM

DATE:	06/28/2021	JOB NO:	2021.0228
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DRAWING NAME: 21 0228 S30-46 REV8 DWG

SHEET NO: 36 OF 59

PROJECTION: LOUISIANA SOUTH ZONE

GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
GRID UNITS: U.S. SURVEY FEET

REVISION DESCRIPTION:  
REVISED AS PER REQUEST.

PRELIMINARY

## PIPELINE ROUTE

HACKBERRY CARBON SEQUESTRATION, LLC

# HACKBERRY CARBON SEQUESTRATION PROJECT

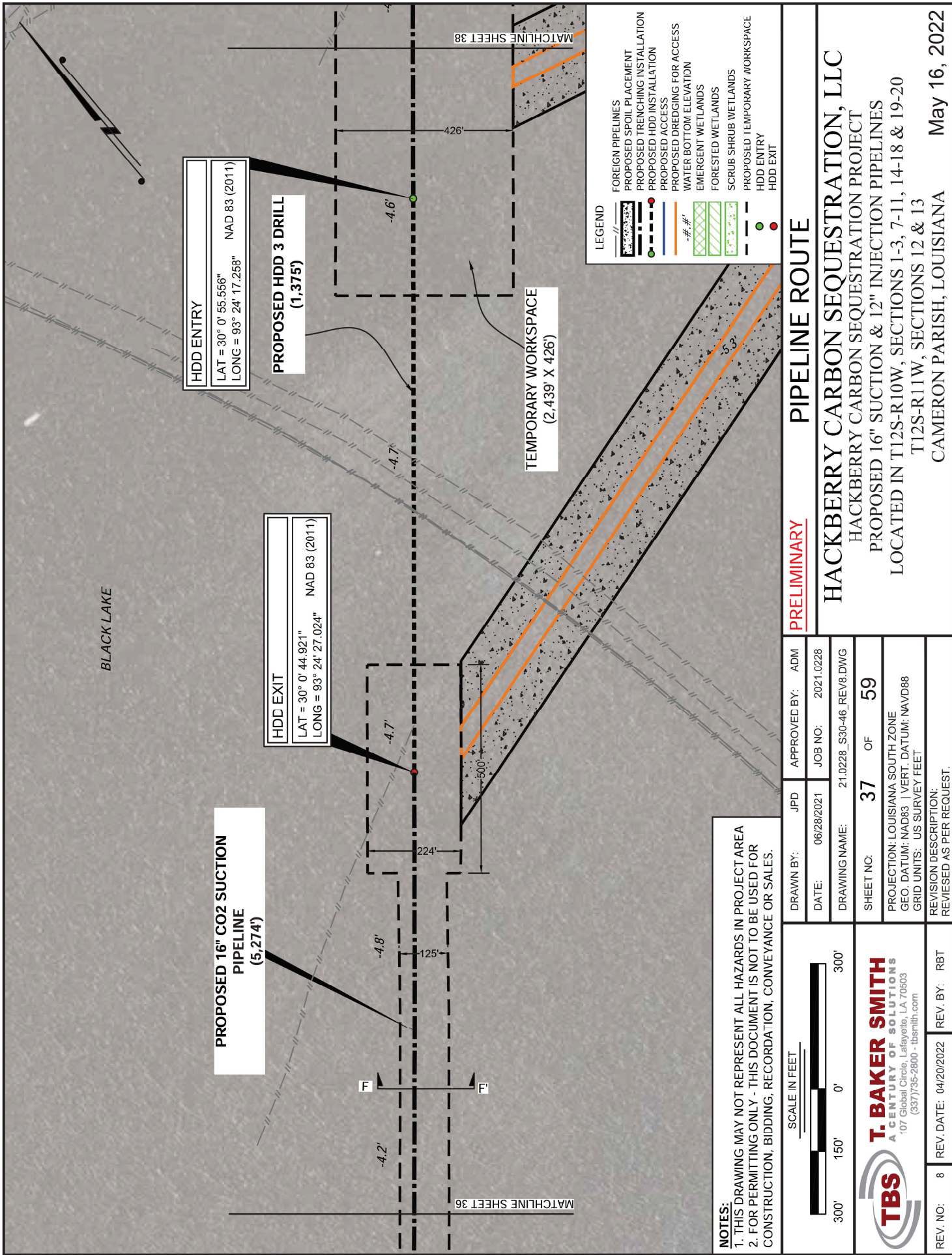
# PROPOSED 16" SUCTION & 12" INJECTION PIPELINES

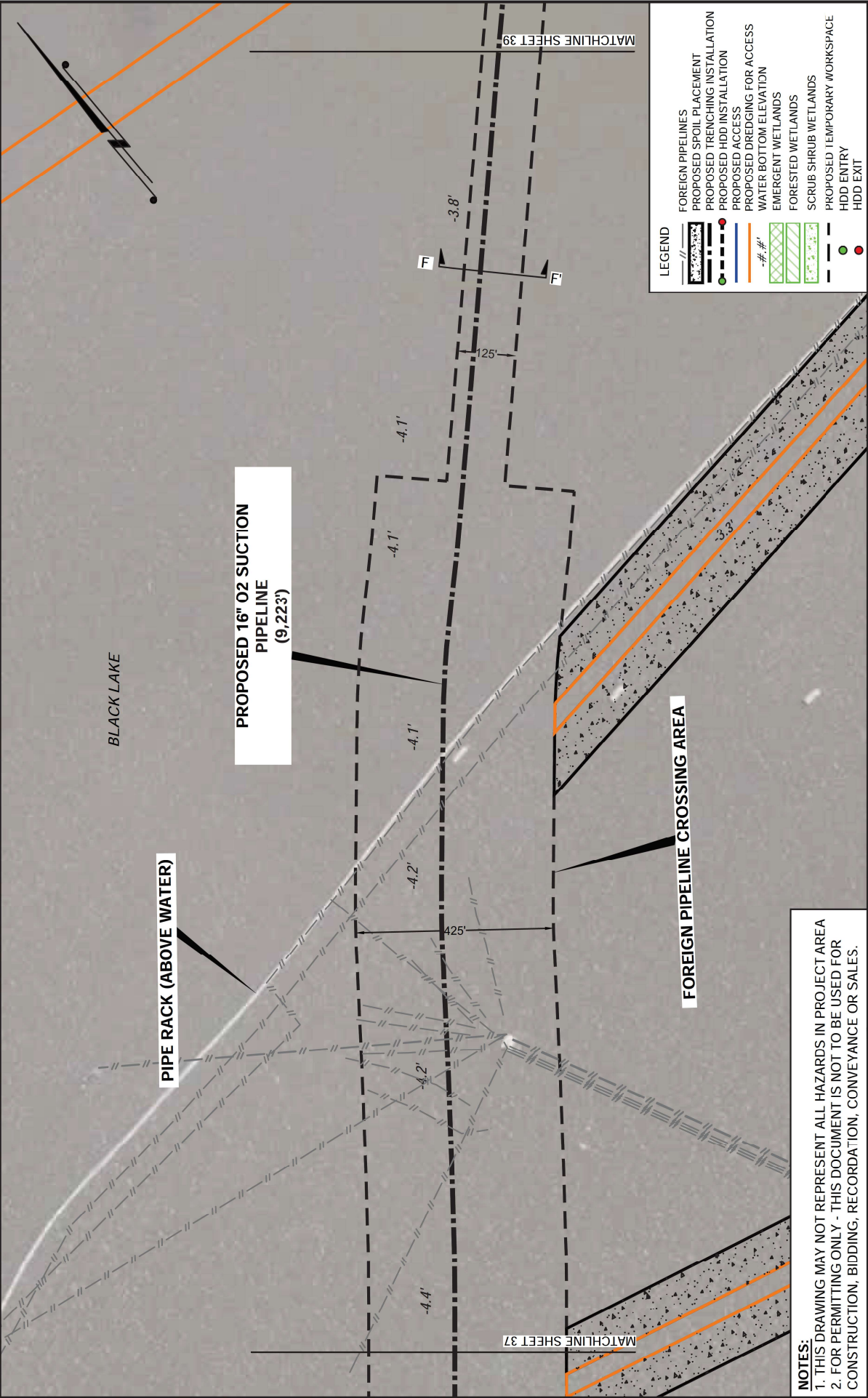
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

T12S-R11W, SECTIONS 12 &amp; 13

CAMERON PARISH, LOUISIANA

May 16, 2022

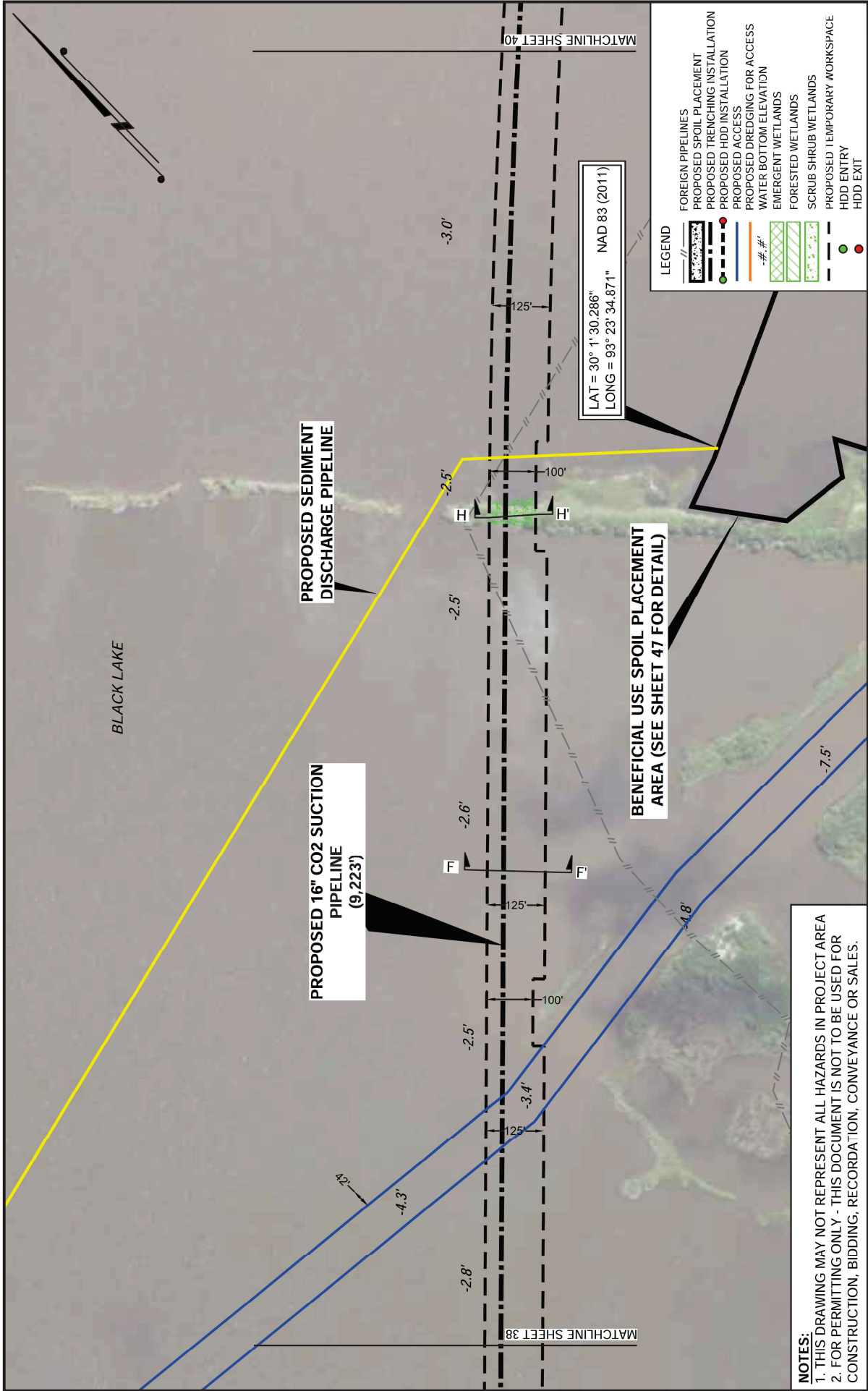




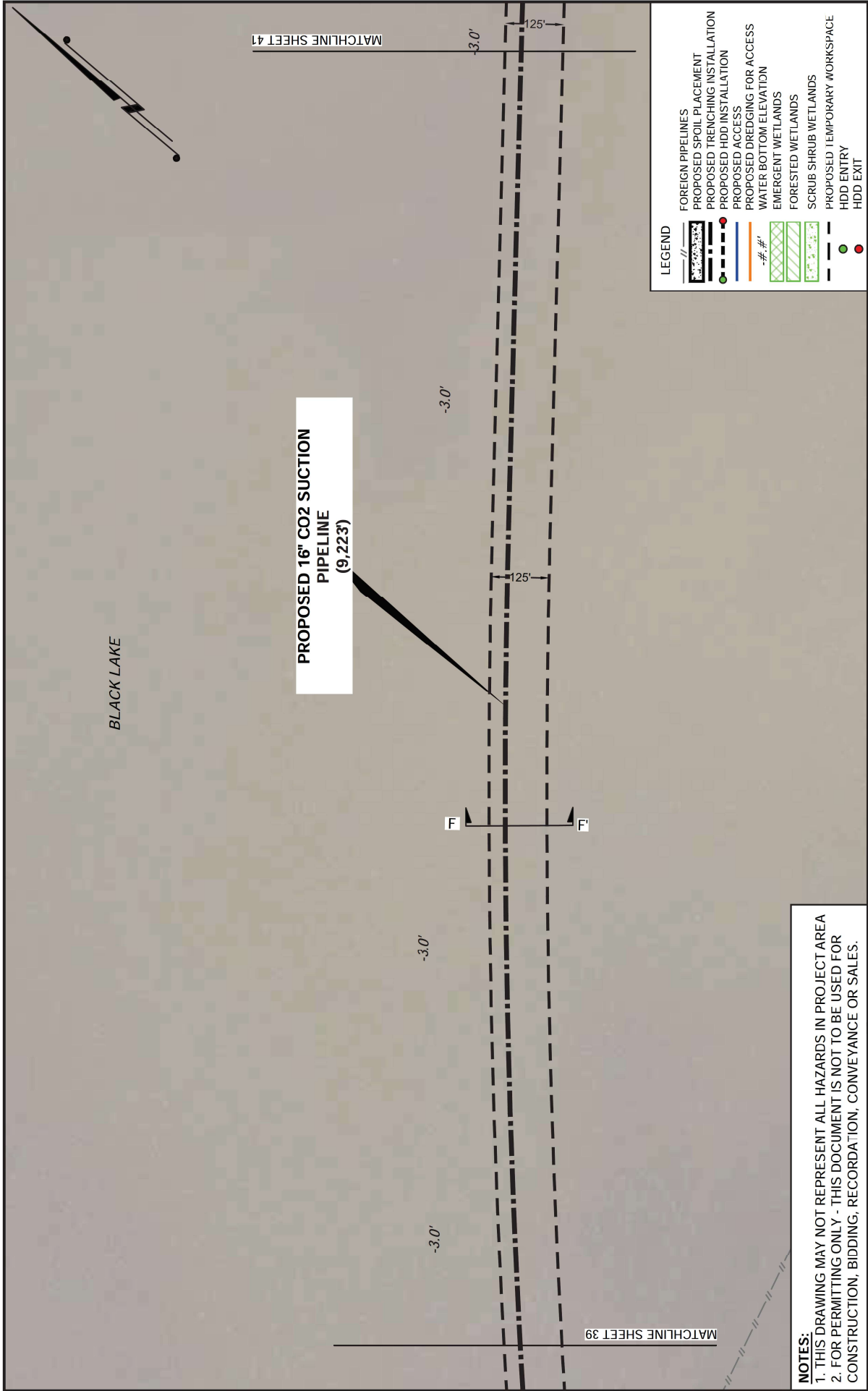
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  - PROPOSED SPOIL PLACEMENT
  - PROPOSED TRENCHING INSTALLATION
  - PROPOSED HDD INSTALLATION
  - PROPOSED ACCESS
  - PROPOSED DREDGING FOR ACCESS
  - WATER BOTTOM ELEVATION
  - EMERGENT WETLANDS
  - FORESTED WETLANDS
  - SCRUB SHRUB WETLANDS
  - PROPOSED TEMPORARY WORKSPACE
  - HDD ENTRY
  - HDD EXIT

<div>SCALE IN FEET</div> <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><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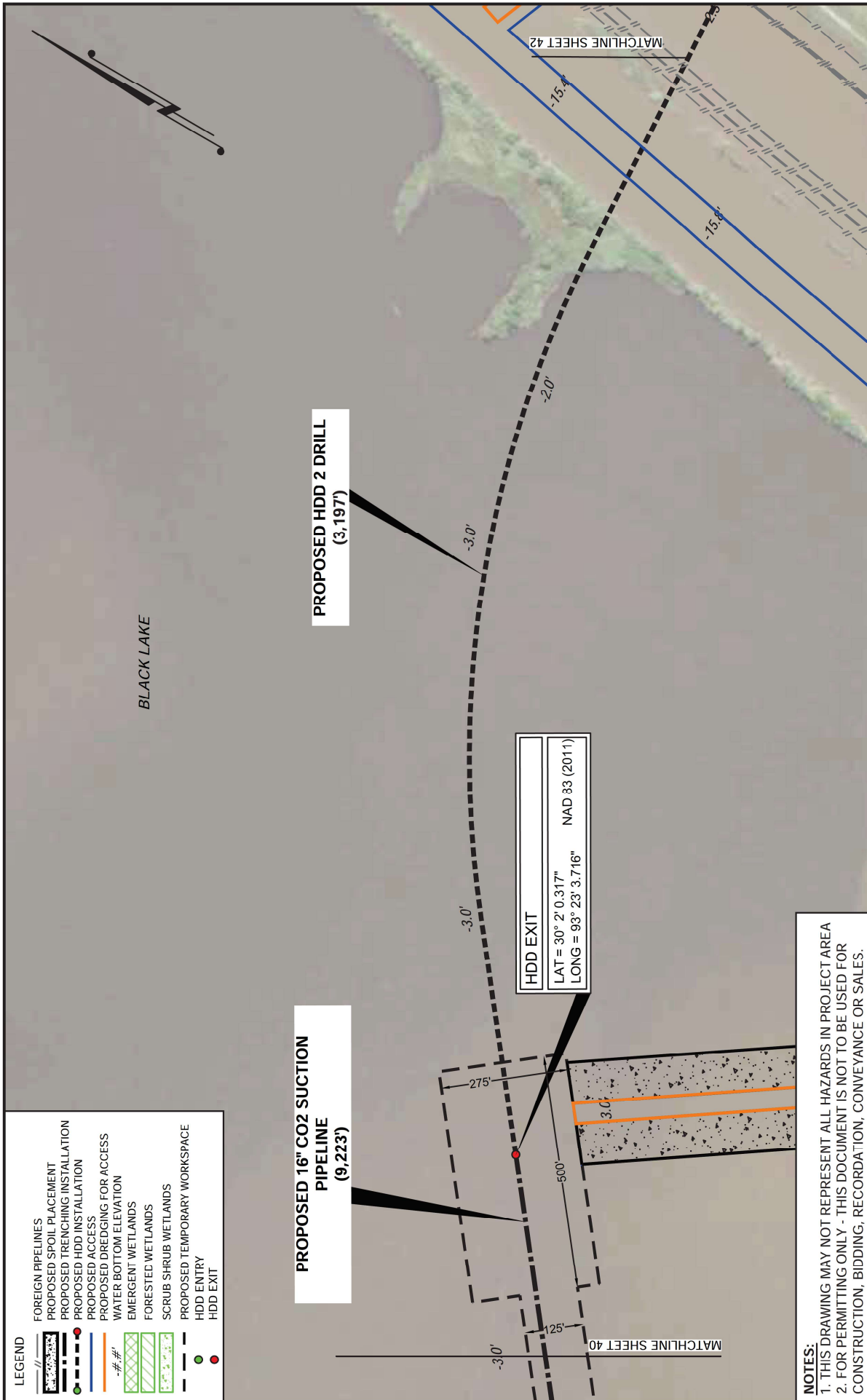
<b>PIPELINE ROUTE</b>	
<b>PRELIMINARY</b>	
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA May 16, 2022	
<b>NOTES:</b> 1. THIS DRAWING MAY NOT REPRESENT ALL HAZARDS IN PROJECT AREA 2. FOR PERMITTING ONLY - THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE OR SALES.	<b>SCALE IN FEET</b> 300' 150' 0' 300'
<b>T. BAKER SMITH</b> A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337) 335-2800 - tbsmith.com	<b>REV. NO:</b> 8 <b>REV. DATE:</b> 04/20/2022 <b>REV. BY:</b> RBT
<b>DRAWN BY:</b> JPD <b>APPROVED BY:</b> ADM <b>DATE:</b> 06/28/2021 <b>JOB NO:</b> 2021.0228 <b>DRAWING NAME:</b> 21.0228_S30-46_REV8.DWG <b>SHEET NO:</b> 39 OF 59 <b>PROJECTION:</b> LOUISIANA SOUTH ZONE <b>GEO. DATUM:</b> NAD83   <b>VERT. DATUM:</b> NAVD88 <b>GRID UNITS:</b> US SURVEY FEET <b>REVISION DESCRIPTION:</b> REVISED AS PER REQUEST.	



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<b>SCALE IN FEET</b> 300' 150' 0' 300'		<b>PIPELINE ROUTE</b>	
<b>T. BAKER SMITH</b> A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337) 335-2800 • tbsmith.com		<b>PRELIMINARY</b>	
<b>REVISION</b> REV. NO: 8    REV. DATE: 04/20/2022    REV. BY: RBT		<b>PROPOSED 16" CO2 SUCTION PIPELINE (9,223')</b>	
<b>DATE:</b> 06/28/2021 <b>APPROVED BY:</b> ADM <b>JOB NO:</b> 2021.0228		<b>HACKBERRY CARBON SEQUESTRATION, LLC</b>	
<b>DRAWING NAME:</b> 21.0228_S30-46_REV8.DWG		<b>HACKBERRY CARBON SEQUESTRATION PROJECT</b>	
<b>SHEET NO:</b> 40 OF 59		<b>PROPOSED 16" SUCTION &amp; 12" INJECTION PIPELINES</b>	
<b>PROJECTION:</b> LOUISIANA SOUTH ZONE <b>GEO. DATUM:</b> NAD83 <b>VERT. DATUM:</b> NAVD88		<b>LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 &amp; 19-20</b>	
<b>GRID UNITS:</b> US SURVEY FEET		<b>T12S-R11W, SECTIONS 12 &amp; 13</b>	
<b>REVISION DESCRIPTION:</b> REVISED AS PER REQUEST.		<b>CAMERON PARISH, LOUISIANA</b>	
		<b>May 16, 2022</b>	

- LEGEND**
- FOREIGN PIPELINES
  - PROPOSED SPOIL PLACEMENT
  - PROPOSED TRENCHING INSTALLATION
  - PROPOSED HDD INSTALLATION
  - PROPOSED ACCESS
  - PROPOSED DREDGING FOR ACCESS
  - WATER BOTTOM ELEVATION
  - EMERGENT WETLANDS
  - FORESTED WETLANDS
  - SCRUB SHRUB WETLANDS
  - PROPOSED TEMPORARY WORKSPACE
  - HDD ENTRY
  - HDD EXIT



## NOTES:

- NOTES:**
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SCALE IN FEET



**TBS**  
**T. BAKER SMITH**  
**A CENTURY OF SOLUTIONS**  
107 Global Circle, Lafayette, LA 70503  
(337)735-2800 • tbsmith.com

REV. NO:	8	REV. DATE: 04/20/2022	REV. BY: RBT
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DRAWN BY:

DATE: \_\_\_\_\_

DRAWING NAME: 21.0228\_S30-46\_REV8.DWG

SHEET NO: 41 OF 59

PROJECTION: LOUISIANA SOUTH ZONE  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88

REVISION DESCRIPTION:  
REVISED AS PER REQUEST.

PRELIMINARY

## PIPELINE ROUTE

HACKBERRY CARBON SEQUESTRATION, LLC

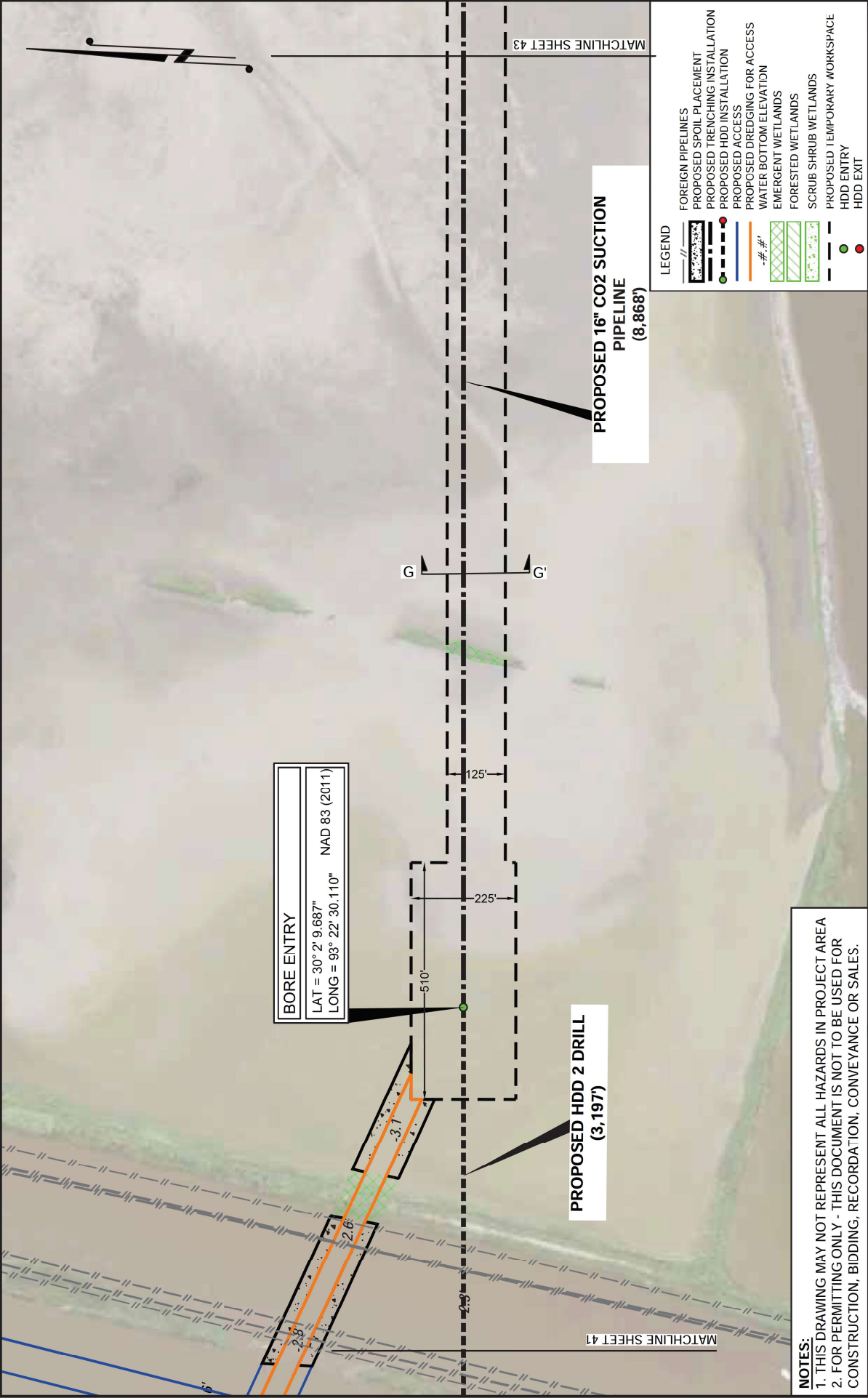
# HACKBERRY CARBON SEQUESTRATION PROJECT

PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

T12S-R11W, SECTIONS 12 &amp; 13

CAMERON PARISH, LOUISIANA

May 16, 2022



NOTES:

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SCALE IN FEET

300'

150'

0'

300'

DRWN BY: JPD

DATE: 06/28/2021

DRAWING NAME: 21.0228\_S30-46\_REV8.DWG

SHEET NO: 42 OF 59

PROJECTION: LOUISIANA SOUTH ZONE

GEO. DATUM: NAD83 | VERT. DATUM: NAVD88

GRID UNITS: US SURVEY FEET

REVISION DESCRIPTION: REVISED AS PER REQUEST.

APPROVED BY: ADM

JOB NO: 2021.0228

REV. NO: 8

REV. DATE: 04/20/2022

REV. BY: RBT

PIPELINE ROUTE

HACKBERRY CARBON SEQUESTRATION, LLC

HACKBERRY CARBON SEQUESTRATION PROJECT

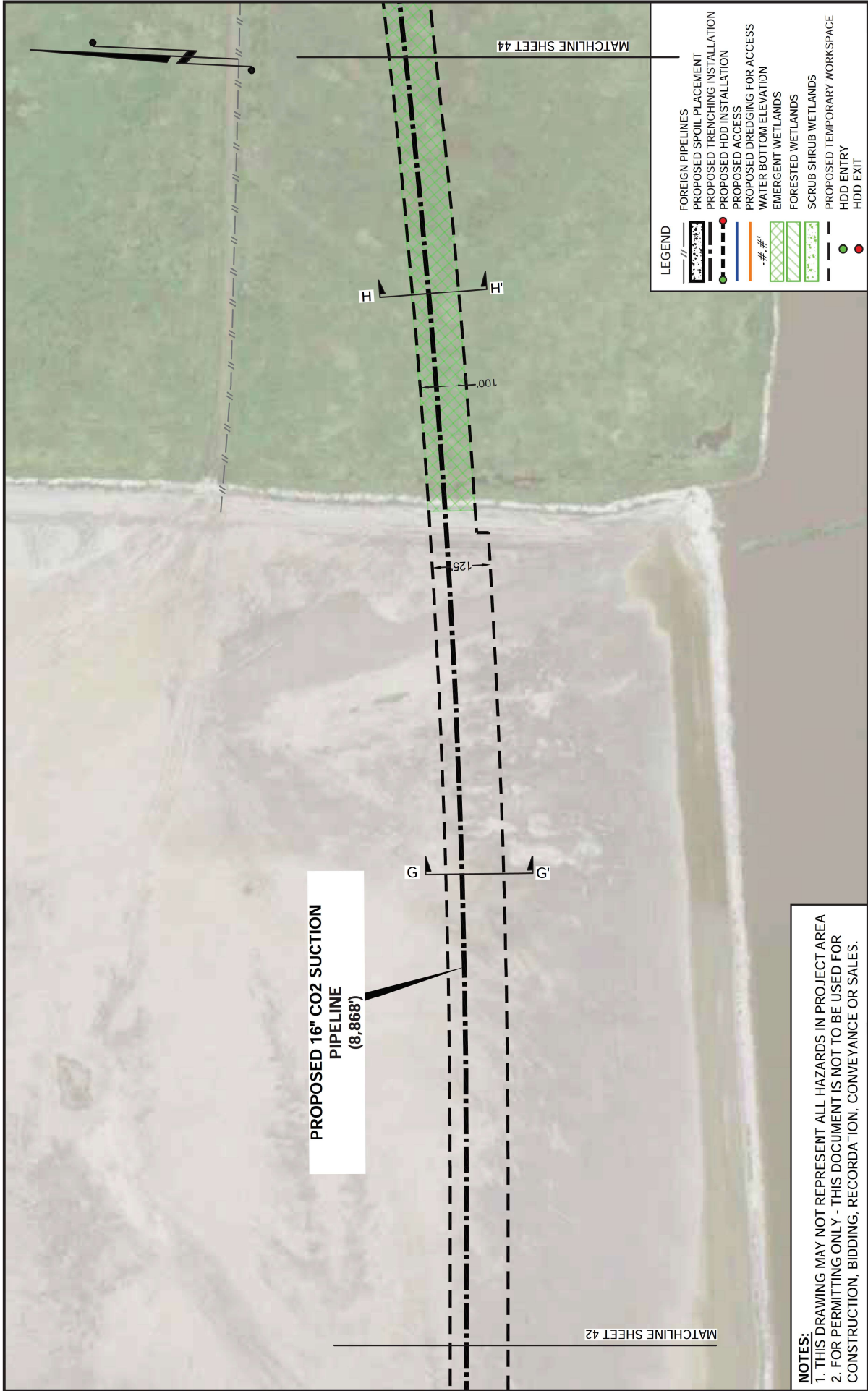
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES

LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

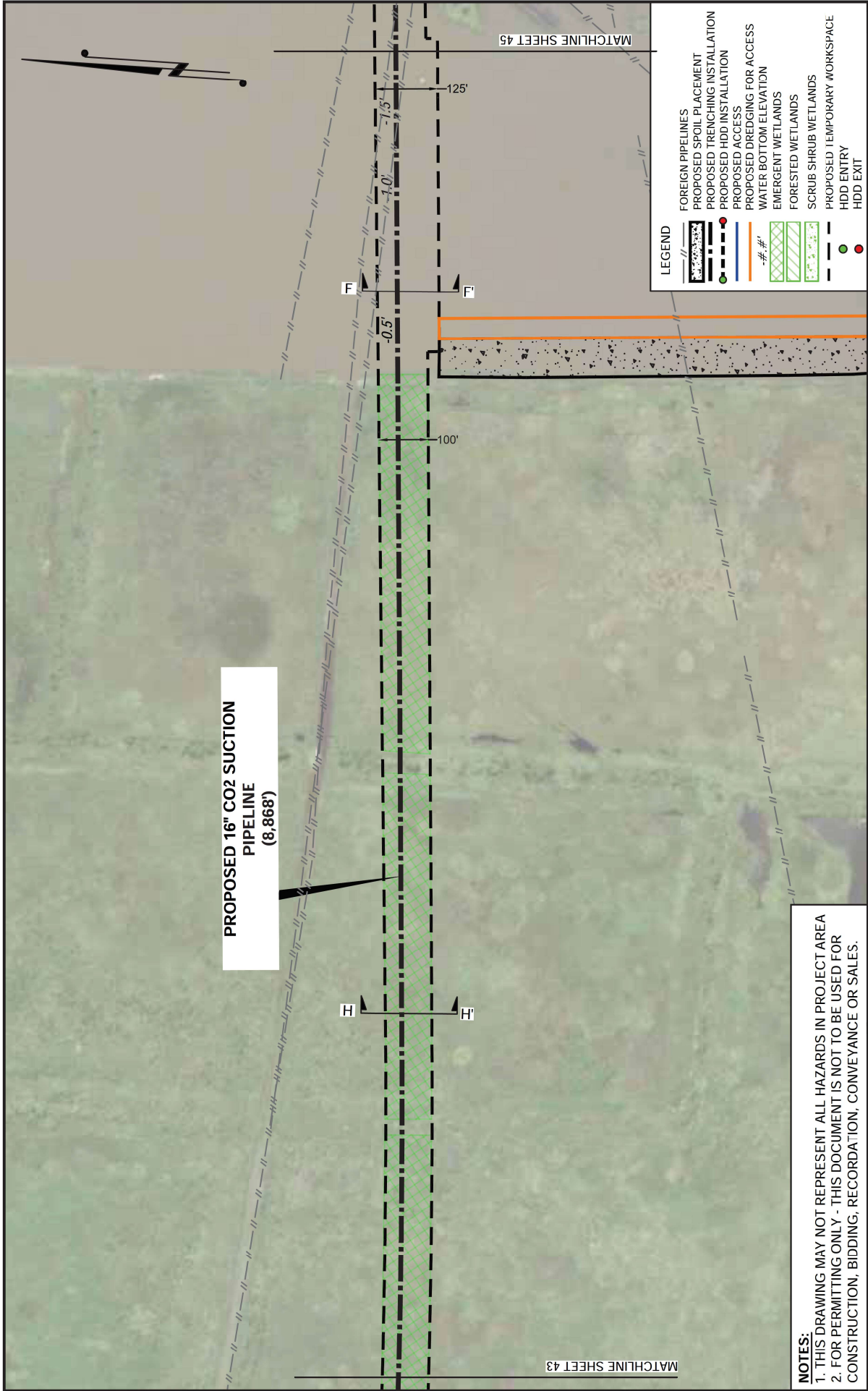
T12S-R11W, SECTIONS 12 & 13

CAMERON PARISH, LOUISIANA

May 16, 2022



<b>PRELIMINARY</b>		<b>PIPELINE ROUTE</b>	
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA May 16, 2022			
DRAWN BY: JPD		APPROVED BY: ADM	DATE: 06/28/2021
JOB NO: 2021.0228		DRAWING NAME: 21.0228_S30-46_REV8.DWG	
SHEET NO: 43		OF 59	
PROJECTION: LOUISIANA SOUTH ZONE		GEO. DATUM: NAD83   VERT. DATUM: NAVD88	
GRID UNITS: US SURVEY FEET		REVISION DESCRIPTION:	
REV. NO: 8		REV. DATE: 04/20/2022	REV. BY: RBT

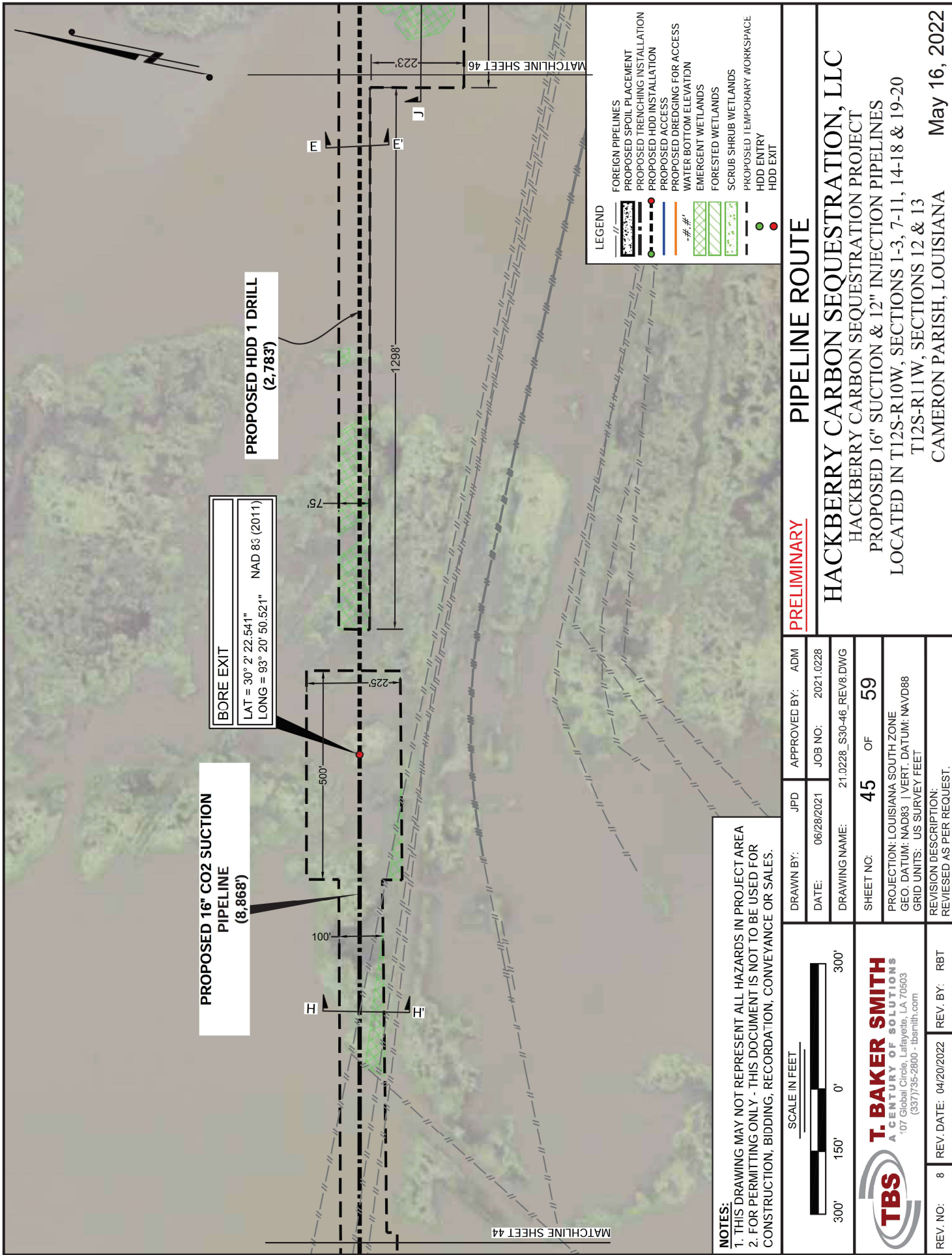


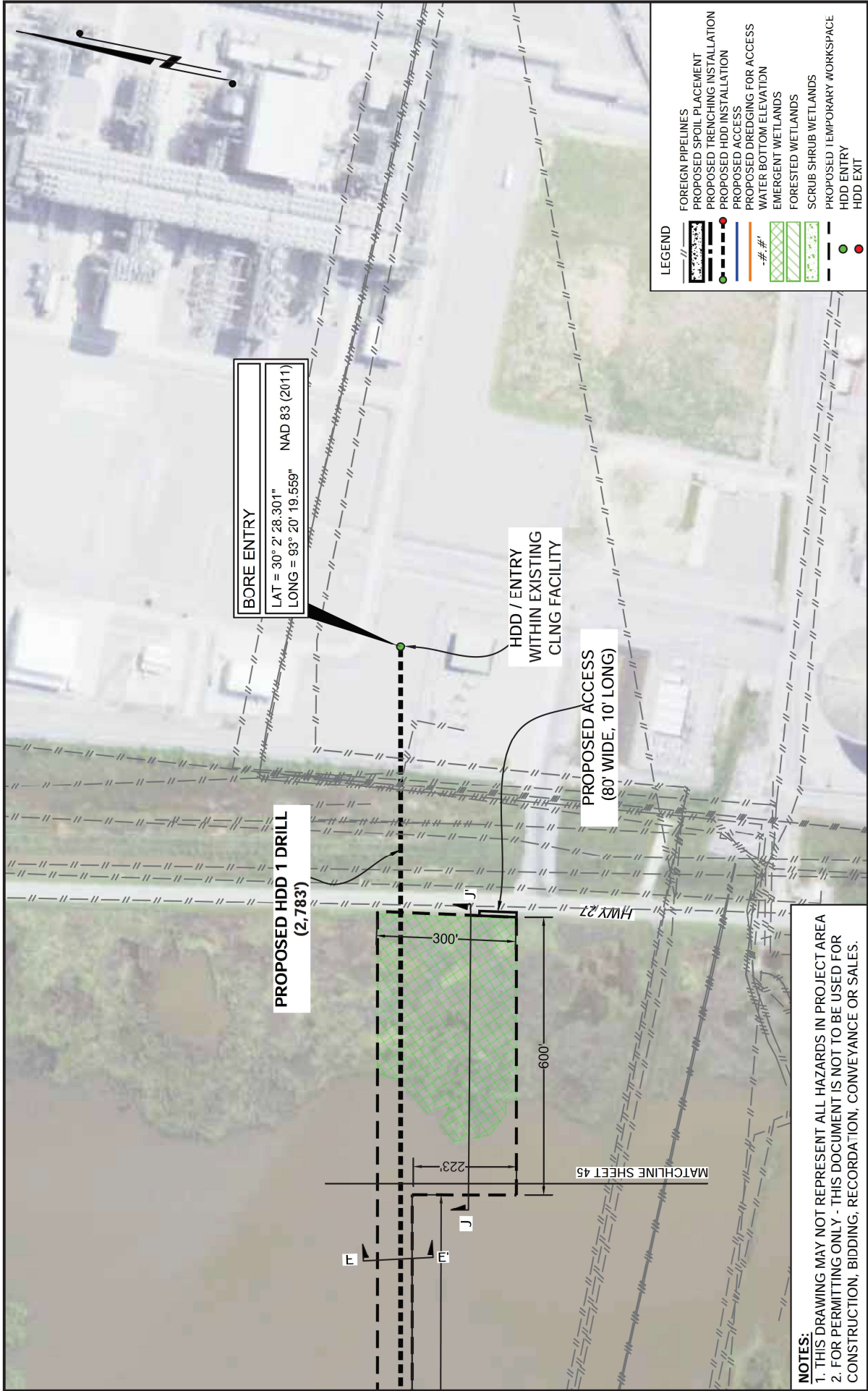
PROPOSED 16" CO2 SUCTION  
PIPELINE  
(8,868')

**NOTES:**  
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CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE OR SALES.

SCALE IN FEET		DRAWN BY: JPD		APPROVED BY: ADM		<b>PRELIMINARY</b>		PIPELINE ROUTE	
300' 150' 0' 300'		DATE: 06/28/2021		JOB NO: 2021.0228		HACKBERRY CARBON SEQUESTRATION, LLC		HACKBERRY CARBON SEQUESTRATION PROJECT	
		DRAWING NAME: 21.0228_S30-46_REV8.DWG		SHEET NO: 44 OF 59		PROPOSED 16" SUCTION & 12" INJECTION PIPELINES		LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20	
		PROJECTION: LOUISIANA SOUTH ZONE		GEO. DATUM: NAD83   VERT. DATUM: NAVD88		T12S-R11W, SECTIONS 12 & 13		CAMERON PARISH, LOUISIANA	
		GRID UNITS: US SURVEY FEET		REVISION DESCRIPTION:		May 16, 2022			
		REV. NO: 8		REV. DATE: 04/20/2022		REV. BY: RBT			

**TBS**  
**T. BAKER SMITH**  
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107 Global Circle, Lafayette, LA 70503  
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PIPELINE ROUTE

PRELIMINARY

BORE ENTRY

LAT = 30° 2' 28.301"

LONG = 93° 20' 19.559"

NAD 83 (2011)

PROPOSED HDD 1 DRILL

(2,783')

HDD / ENTRY

WITHIN EXISTING

CLNG FACILITY

PROPOSED ACCESS

(80' WIDE, 10' LONG)

LEGEND

FOREIGN PIPELINES

PROPOSED SPOIL PLACEMENT

PROPOSED TRENCHING INSTALLATION

PROPOSED HDD INSTALLATION

PROPOSED ACCESS

PROPOSED DREDGING FOR ACCESS

WATER BOTTOM ELEVATION

EMERGENT WETLANDS

FORESTED WETLANDS

SCRUB SHRUB WETLANDS

PROPOSED TEMPORARY WORKSPACE

HDD ENTRY

HDD EXIT

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SCALE IN FEET

300'

150'

0'

300'

TBS

T. BAKER SMITH

A CENTURY OF SOLUTIONS

107 Global Circle, Lafayette, LA 70503

(337) 335-2800 • tbsmith.com

REV. NO: 8

REV. DATE: 04/20/2022

REV. BY: RBT

DRAWN BY: JPD

DATE: 06/28/2021

DRAWING NAME: 21.0228\_S30-46\_REV8.DWG

SHEET NO: 46 OF 59

PROJECTION: LOUISIANA SOUTH ZONE

GEO. DATUM: NAD83 | VERT. DATUM: NAVD88

GRID UNITS: US SURVEY FEET

REVISION DESCRIPTION: REVISED AS PER REQUEST.

APPROVED BY: ADM

JOB NO: 2021.0228

HACKBERRY CARBON SEQUESTRATION, LLC

HACKBERRY CARBON SEQUESTRATION PROJECT

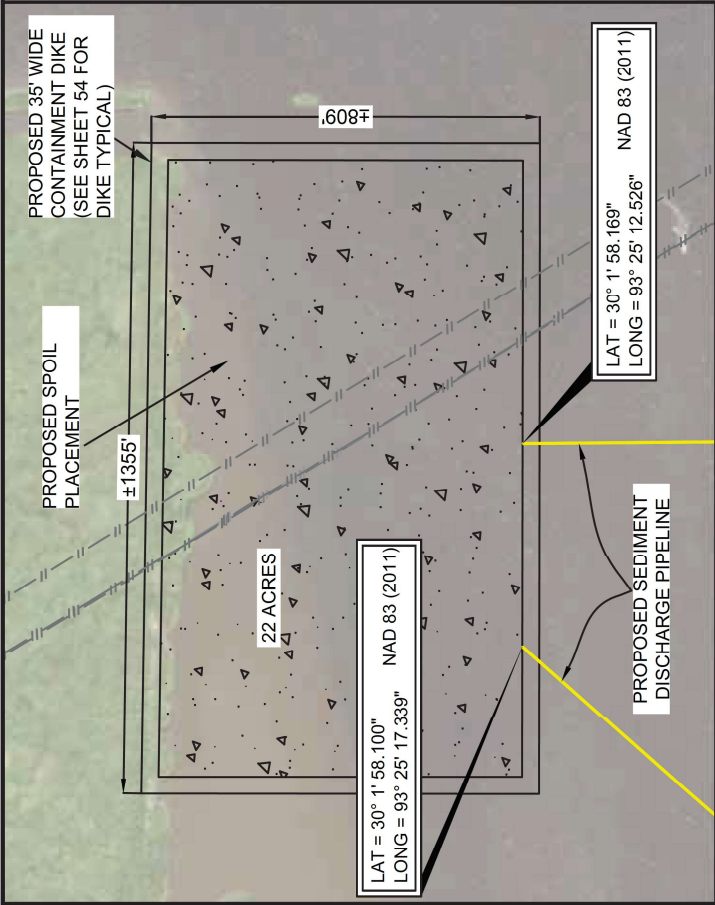
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES

LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

T12S-R11W, SECTIONS 12 & 13

CAMERON PARISH, LOUISIANA

May 16, 2022



LEGEND	
—	FOREIGN PIPELINES
—	PROPOSED SPOIL PLACEMENT
—	PROPOSED TRENCHING INSTALLATION
—	PROPOSED ACCESS
—	PROPOSED TEMPORARY WORKSPACE
—	PROPOSED SEDIMENT DISCHARGE PIPELINE

**NOTES:**

1. THIS DRAWING MAY NOT REPRESENT ALL HAZARDS IN PROJECT AREA
2. FOR PERMITTING ONLY - THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, CONVEYANCE OR SALES.
3. INTERIOR CONTAINMENT DIKES WILL BE CONSTRUCTED AS NEEDED.

SCALE IN FEET

400'

200'

0'

400'

TBS

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REV. NO: 8    REV. DATE: 04/20/2022    REV. BY: RBT

DRAWN BY:	JPD	APPROVED BY:	ADM
DATE:	06/28/2021	JOB NO:	2021.0228
DRAWING NAME:	21.0228_S47-57_REV8.DWG		
SHEET NO:	47	OF	59
PROJECTION: LOUISIANA SOUTH ZONE			
GEO. DATUM: NAD83   VERT. DATUM: NAVD88			
GRID UNITS: US SURVEY FEET			
REVISION DESCRIPTION:			
REVISED AS PER REQUEST.			

PRELIMINARY

SPOIL PLACEMENT DETAILS

HACKBERRY CARBON SEQUESTRATION, LLC

HACKBERRY CARBON SEQUESTRATION PROJECT

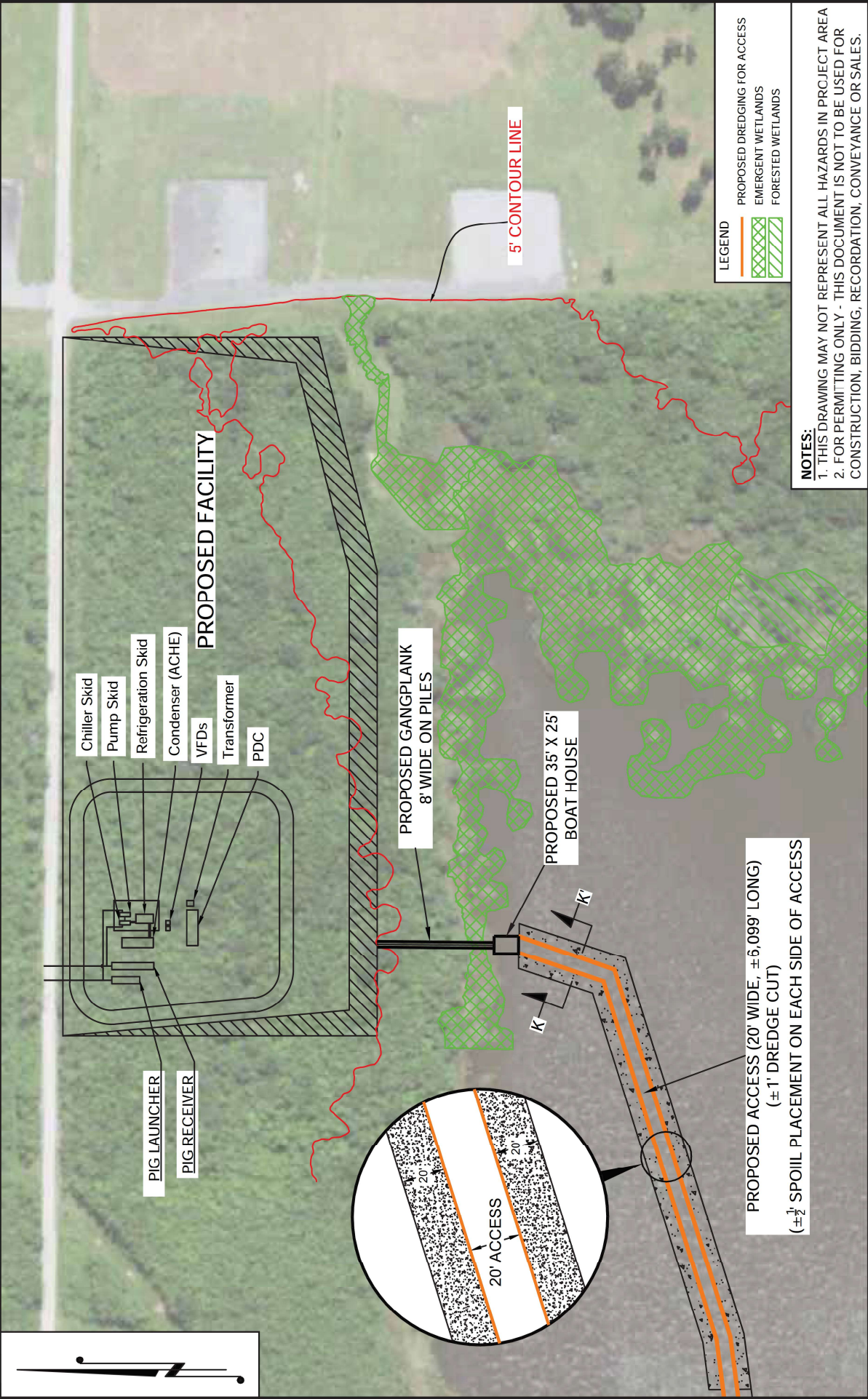
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES

LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

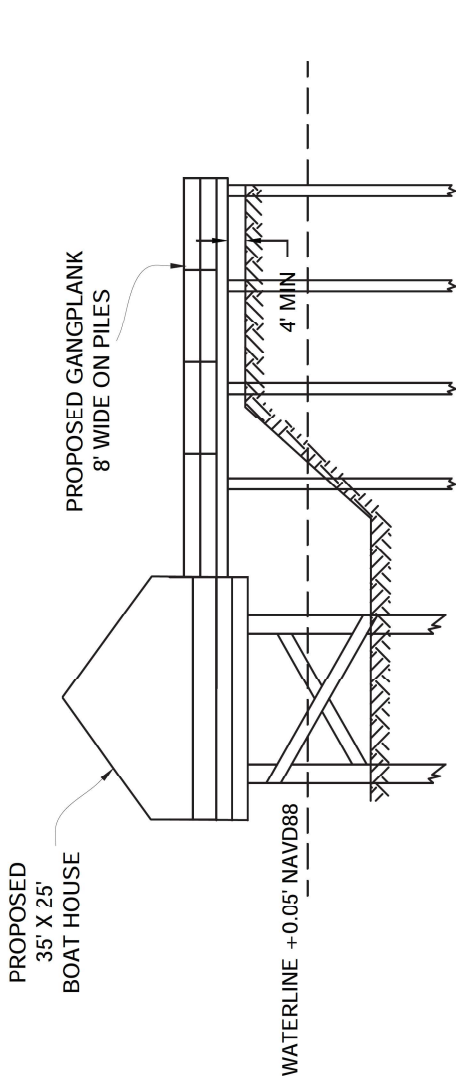
T12S-R11W, SECTIONS 12 & 13

CAMERON PARISH, LOUISIANA

May 16, 2022

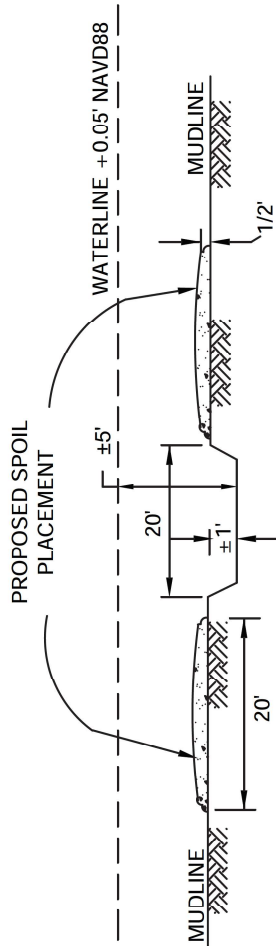


SCALE IN FEET		DRAWN BY: JPD	APPROVED BY: ADM	<b>PRELIMINARY</b> PLAN VIEW FOR FACILITY	
300' 150' 0' 300'		DATE: 06/28/2021	JOB NO: 2021.0228	<b>HACKBERRY CARBON SEQUESTRATION, LLC</b>	
		DRAWING NAME: 21.0228_S47-57_REV8.DWG		HACKBERRY CARBON SEQUESTRATION PROJECT	
		SHEET NO: 48	OF 59	PROPOSED 16" SUCTION & 12" INJECTION PIPELINES	
		PROJECTION: LOUISIANA SOUTH ZONE		LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20	
		GEO. DATUM: NAD83   VERT. DATUM: NAVD88		T12S-R11W, SECTIONS 12 & 13	
		GRID UNITS: US SURVEY FEET		CAMERON PARISH, LOUISIANA	
		REVISION DESCRIPTION:		May 16, 2022	
		REVISED AS PER REQUEST.			
REV. NO: 8	REV. DATE: 04/20/2022	REV. BY: RBT			



+1.70 MHHW  
+0.05 MLLW  
NAVD88

TYPICAL BOATHOUSE & GANGPLANK  
SCALE: N.T.S.



CROSS-SECTION K-K':  
PROPOSED BOATHOUSE ACCESS  
SCALE: N.T.S.

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<div><div><div><div><div></div><div>TBS</div></div><div><div></div></div></div><div><div><div>T. BAKER SMITH</div><div>A CENTURY OF SOLUTIONS</div><div>107 Global Circle, Lafayette, LA 70503</div><div>(337)735-2800 - tbsmith.com</div></div></div></div></div>		REV. NO: 8	REV. DATE: 04/20/2022	REV. BY: RBT
DRAWN BY: JPD	APPROVED BY: ADM	<div><div><div><div><div></div><div>PRELIMINARY</div></div><div>BOATHOUSE &amp; GANGPLANK TYPICAL</div></div><div><div><div>HACKBERRY CARBON SEQUESTRATION, LLC</div><div>HACKBERRY CARBON SEQUESTRATION PROJECT</div><div>PROPOSED 16" SUCTION &amp; 12" INJECTION PIPELINES</div><div>LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 &amp; 19-20</div><div>T12S-R11W, SECTIONS 12 &amp; 13</div><div>CAMERON PARISH, LOUISIANA</div></div><div><div>May 16, 2022</div></div></div></div></div>		
DATE: 06/28/2021	JOB NO: 2021.0228			
DRAWING NAME: 21.0228_S47-57_REV8.DWG				
SHEET NO: 49	OF 59			
PROJECTION: LOUISIANA SOUTH ZONE		REVISION DESCRIPTION: REVISED AS PER REQUEST.		
GEO. DATUM: NAD83   VERT. DATUM: NAVD88				
GRID UNITS: US SURVEY FEET				

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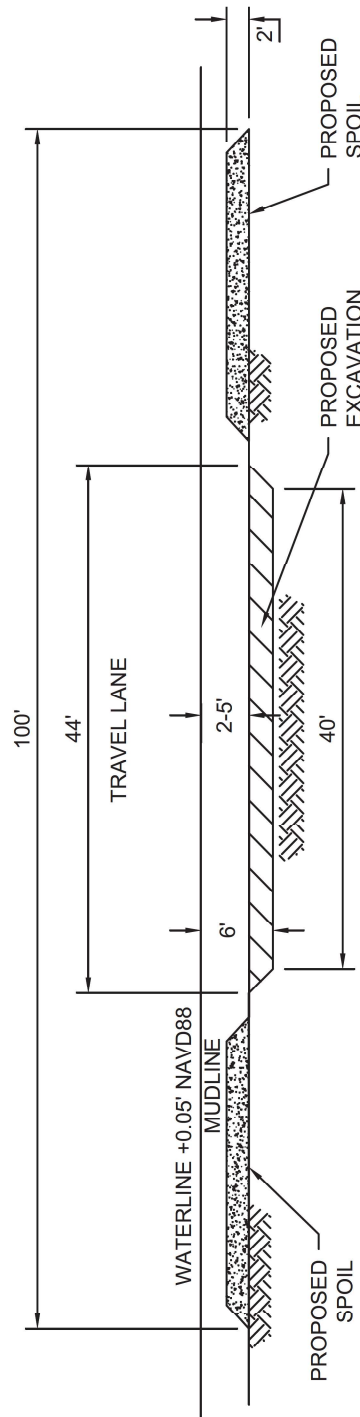
REV. NO:	8	REV. DATE:	04/20/2022	REV. BY:	RBT
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DATE:	06/28/2021	JOB NO:	2021.0228
DRAWING NAME:	21.0228_S47-57_REV8.DWG		
SHEET NO:	50	OF	59
PROJECTION: LOUISIANA SOUTH ZONE			
GEO. DATUM: NAD83   VERT. DATUM: NAVD88			
GRID UNITS: US SURVEY FEET			
REVISION DESCRIPTION:			
REVISED AS PER REQUEST.			

**PRELIMINARY**

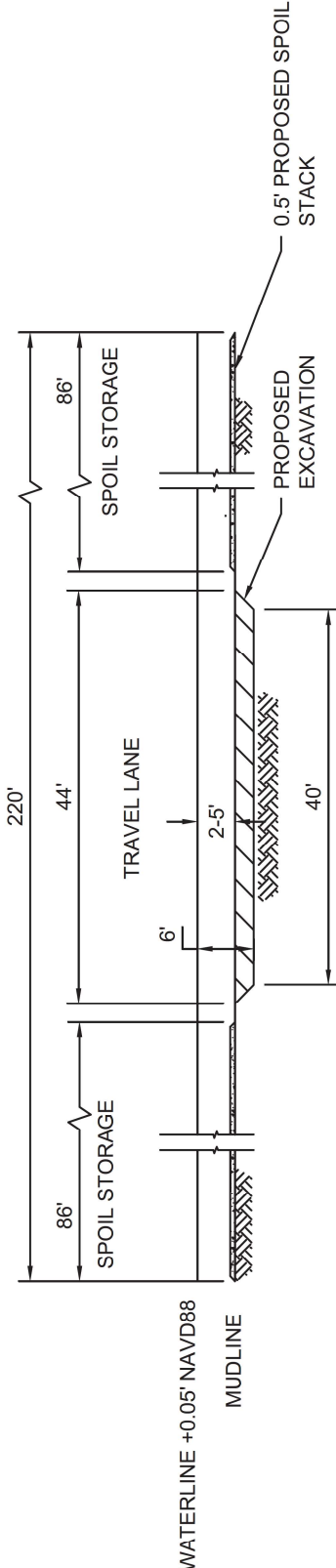
**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA  
May 16, 2022

**TYPICALS**



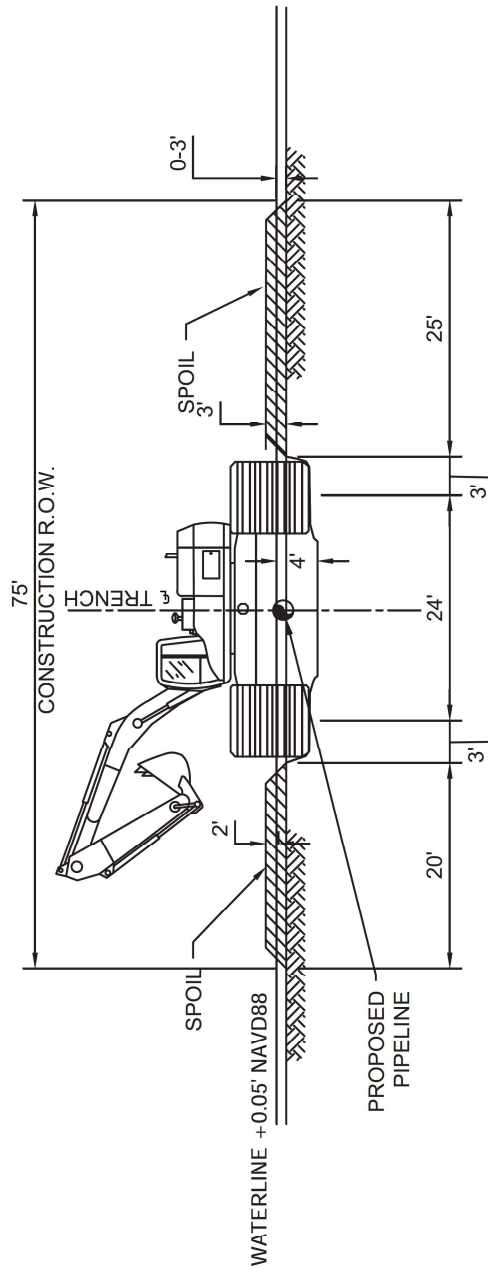
**CROSS-SECTION A-A':**  
**WATER ACCESS CHANNEL**  
SCALE: N.T.S.

+1.70 MHHW  
+0.05 MLLW  
NAVD88



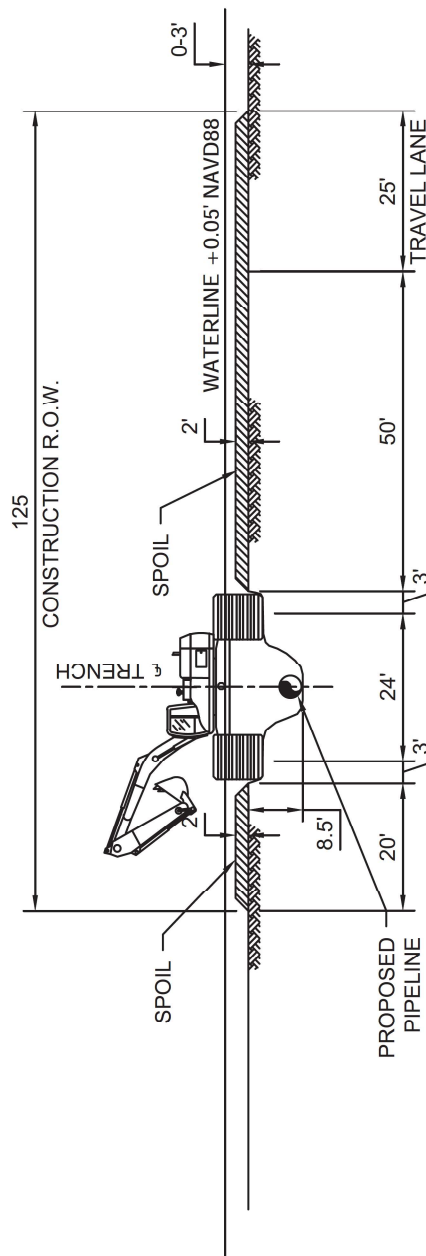
**CROSS-SECTION B-B':**  
**WATER ACCESS CHANNEL**  
SCALE: N.T.S.





SECTION E-E':  
FLOATATION DITCH  
SCALE: N.T.S.

+1.70 MHHW  
+0.05 MLLW  
NAVD88



SECTION F-F':  
AMPHIBIOUS EXCAVATOR INSTALLATION  
SCALE: N.T.S.

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**PRELIMINARY**

**TYPICALS**

**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
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May 16, 2022

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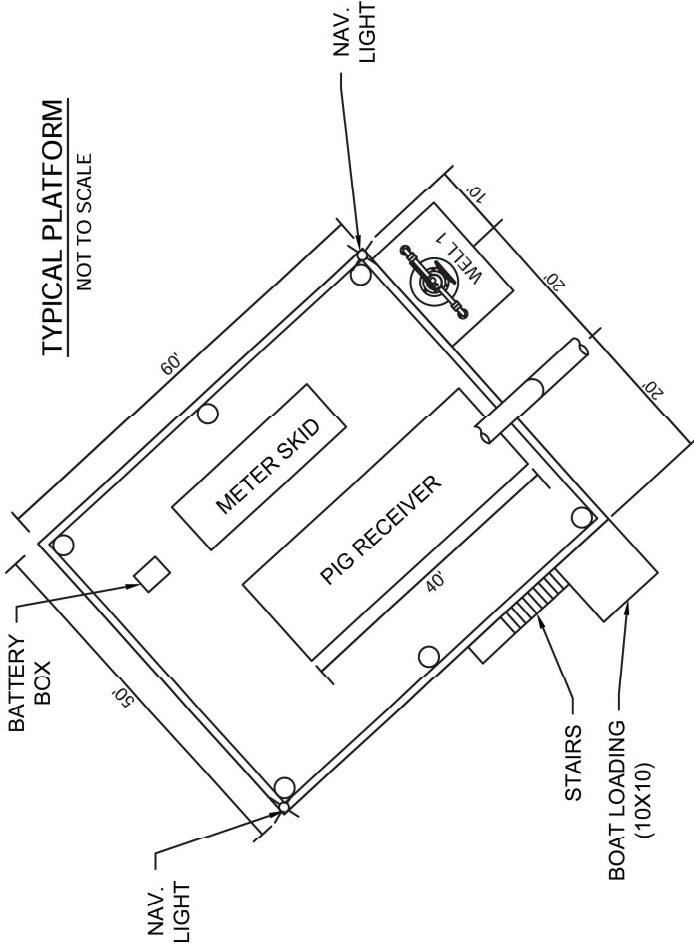
REV. NO: 8 REV. DATE: 04/20/2022 REV. BY: RBT

DRAWN BY: JPD APPROVED BY: ADM  
DATE: 06/28/2021 JOB NO: 2021.0228  
DRAWING NAME: 21.0228\_S47-57\_REV8.DWG  
SHEET NO: 52 OF 59  
PROJECTION: LOUISIANA SOUTH ZONE  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
GRID UNITS: US SURVEY FEET  
REVISION DESCRIPTION:  
REVISED AS PER REQUEST.

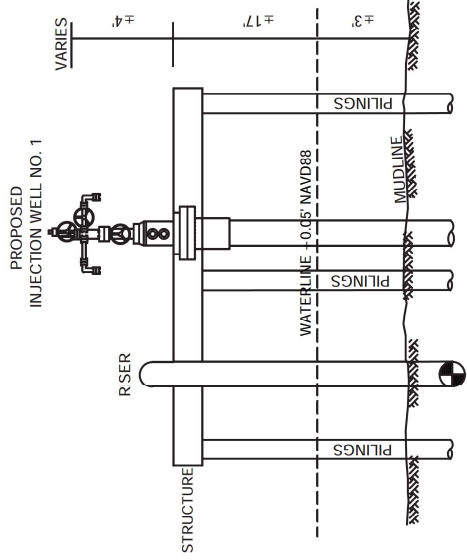


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DATE:	06/28/2021	JOB NO:	2021.0228
DRAWING NAME:		21.0228_S47-57_REV8.DWG	
SHEET NO:		54	OF 59
PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET			
REVISION DESCRIPTION: REVISED AS PER REQUEST.			

**TYPICAL PLATFORM**  
NOT TO SCALE

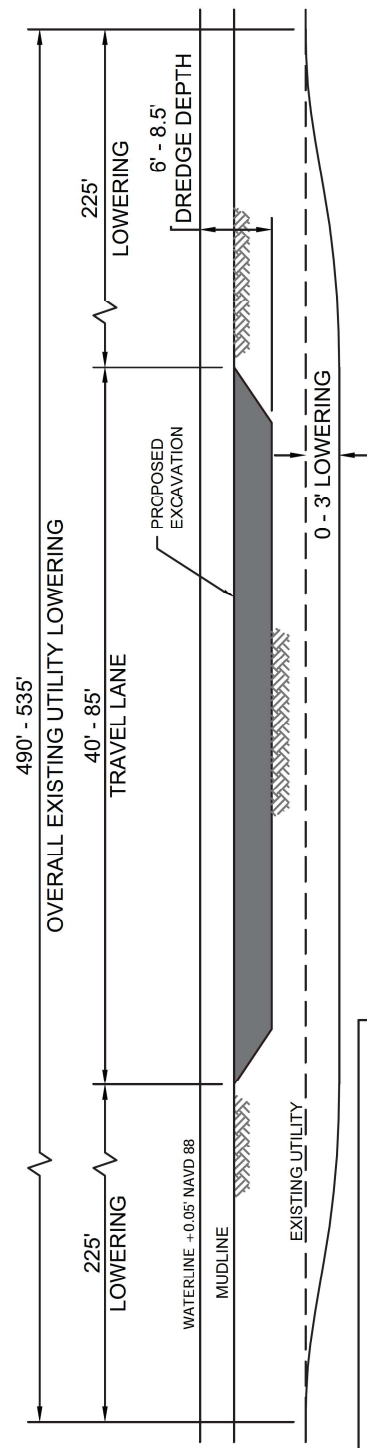


+1.70 MHHW  
+0.05 MLLW  
NAVD88



**SIDE VIEW**

**TYPICAL WELL HEAD PROTECTOR**  
NOT TO SCALE

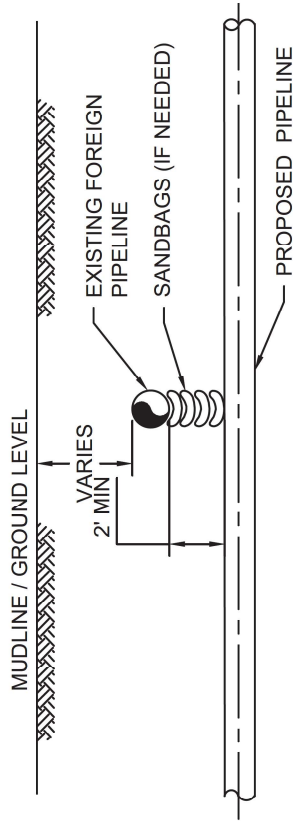


**DREDGE CROSSING FOREIGN UTILITIES**  
NOT TO SCALE

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TYPICALS			
PRELIMINARY			
<b>HACKBERRY CARBON SEQUESTRATION, LLC</b> HACKBERRY CARBON SEQUESTRATION PROJECT PROPOSED 16" SUCTION & 12" INJECTION PIPELINES LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20 T12S-R11W, SECTIONS 12 & 13 CAMERON PARISH, LOUISIANA			
DRAWN BY: JPD DATE: 06/28/2021 APPROVED BY: ADM JOB NO: 2021.0228 DRAWING NAME: 21.0228_S47-57_REV8.DWG		SHEET NO: 55 OF 59 PROJECTION: LOUISIANA SOUTH ZONE GEO. DATUM: NAD83   VERT. DATUM: NAVD88 GRID UNITS: US SURVEY FEET	
<b>T. BAKER SMITH</b> A CENTURY OF SOLUTIONS 107 Global Circle, Lafayette, LA 70503 (337) 335-2800 - tbsmith.com		REVISION DESCRIPTION: REVISED AS PER REQUEST.	
REV. NO: 8	REV. DATE: 04/20/2022	REV. BY: RBT	May 16, 2022

+1.70 MHHW  
+0.05 MLLW  
NAVD88



### TYPICAL FOREIGN PIPELINE CROSSING DETAIL

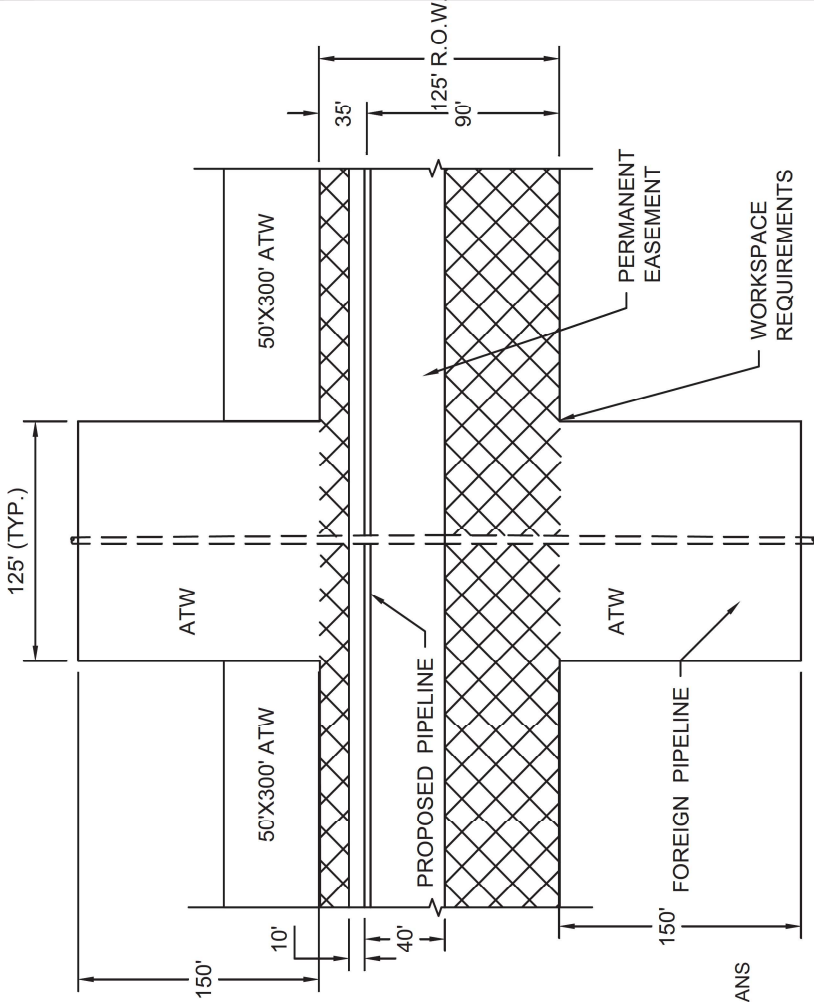
SCALE: N.T.S.

#### NOTES:

1. FOREIGN PIPELINE LOCATIONS AND DEPTHS TO BE DETERMINED BY ELECTRONIC MEANS IN ADVANCE OF PIPELINE CONSTRUCTION AND CONFIRMED BY OWNER APPROVED EXCAVATION METHOD.
2. OWNER OF FOREIGN PIPELINES SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF EXCAVATION OF CROSSING.
3. C.P. TEST STATION TO BE INSTALLED WHERE PRACTICAL AT THE NEAREST FENCE, HEDGE ROW OR FIELD EDGE, AND READILY ACCESSIBLE.
4. PROPOSED PIPELINE MAY ONLY CROSS ABOVE THE FOREIGN PIPELINES WHERE REQUESTED BY OR APPROVED BY FOREIGN PIPELINE OWNER IN WRITING.
5. NO VERTICAL OR HORIZONTAL BENDS WILL BE USED WITHIN FOREIGN PIPELINE R.O.W.
6. PRIOR TO EXCAVATION, STATES "ONE CALL" SYSTEM WILL BE UTILIZED.
7. PIPELINE SHALL BE INSTALLED IN COMPLIANCE WITH 49 CFR, PART 192 - TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE.

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### TYPICAL FOREIGN PIPELINE CROSSING PLAN

SCALE: N.T.S.

**PRELIMINARY**

### TYPICALS

**HACKBERRY CARBON SEQUESTRATION, LLC**

HACKBERRY CARBON SEQUESTRATION PROJECT

PROPOSED 16" SUCTION & 12" INJECTION PIPELINES

LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20

T12S-R11W, SECTIONS 12 & 13

CAMERON PARISH, LOUISIANA

May 16, 2022



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REV. NO: 8 REV. DATE: 04/20/2022 REV. BY: RBT

REVISION DESCRIPTION:  
REVISED AS PER REQUEST.

SHEET NO: 56 OF 59

PROJECTION: LOUISIANA SOUTH ZONE

GEO. DATUM: NAD83 | VERT. DATUM: NAVD88

GRID UNITS: US SURVEY FEET

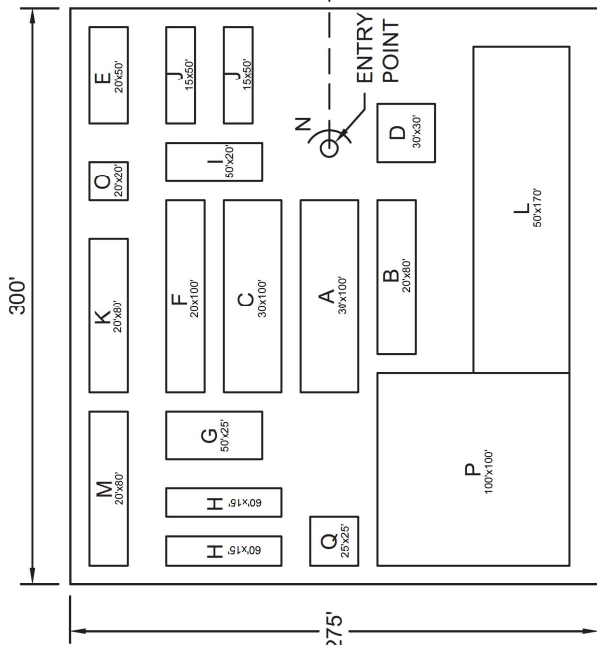
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DRAWING NAME: 21.0228\_S47-57\_REV8.DWG

+1.70 MHHW  
+0.05 MLLW  
NAVD88

HDD ENTRY SITE - TYPICAL LAYOUT

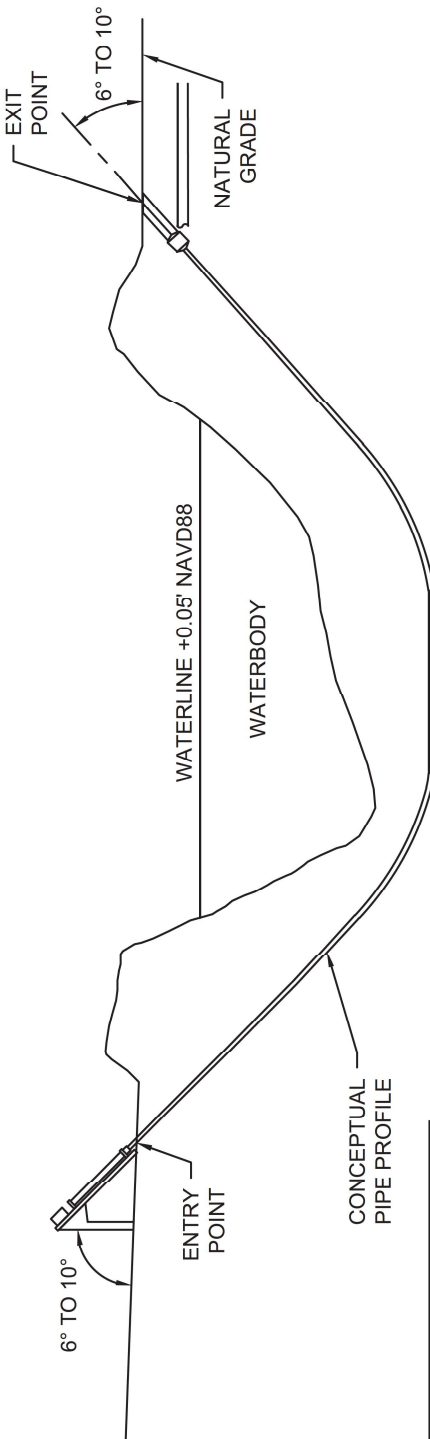


- A- DRILL RIG
- B- DRILLERS CONSOLE GEN.
- C- DRILL PIPE
- D-CRANE
- E- PARTS VAN
- F- MUD CLEANING UNIT
- G- MUD MIXING TANK
- H- MUD PUMPS
- I- MUD PIT
- J- FRAC TANK
- K- DRILLING MUD (PALLETTS)
- L- PARKING
- M- OFFICE TRAILER
- N- CONTAINMENT BERM
- O- FUEL STORAGE
- P- TRUCK TURNAROUND
- Q- SANITARY AREA
- R- EXIT PIT
- S- LIFT EQUIPMENT
- T- WELDING AREA
- U- MUD PIT
- V- MUD CLEANING
- W- GENERATOR
- X- FRAC TANKS
- Y- CONTAINMENT BERM
- Z- PARKING
- AA- TRUCK TURNAROUND
- BB- SANITARY AREA
- CC- OFFICE TRAILER

PLAN VIEW  
SCALE: N.T.S.

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HDD PROFILE  
SCALE: N.T.S.

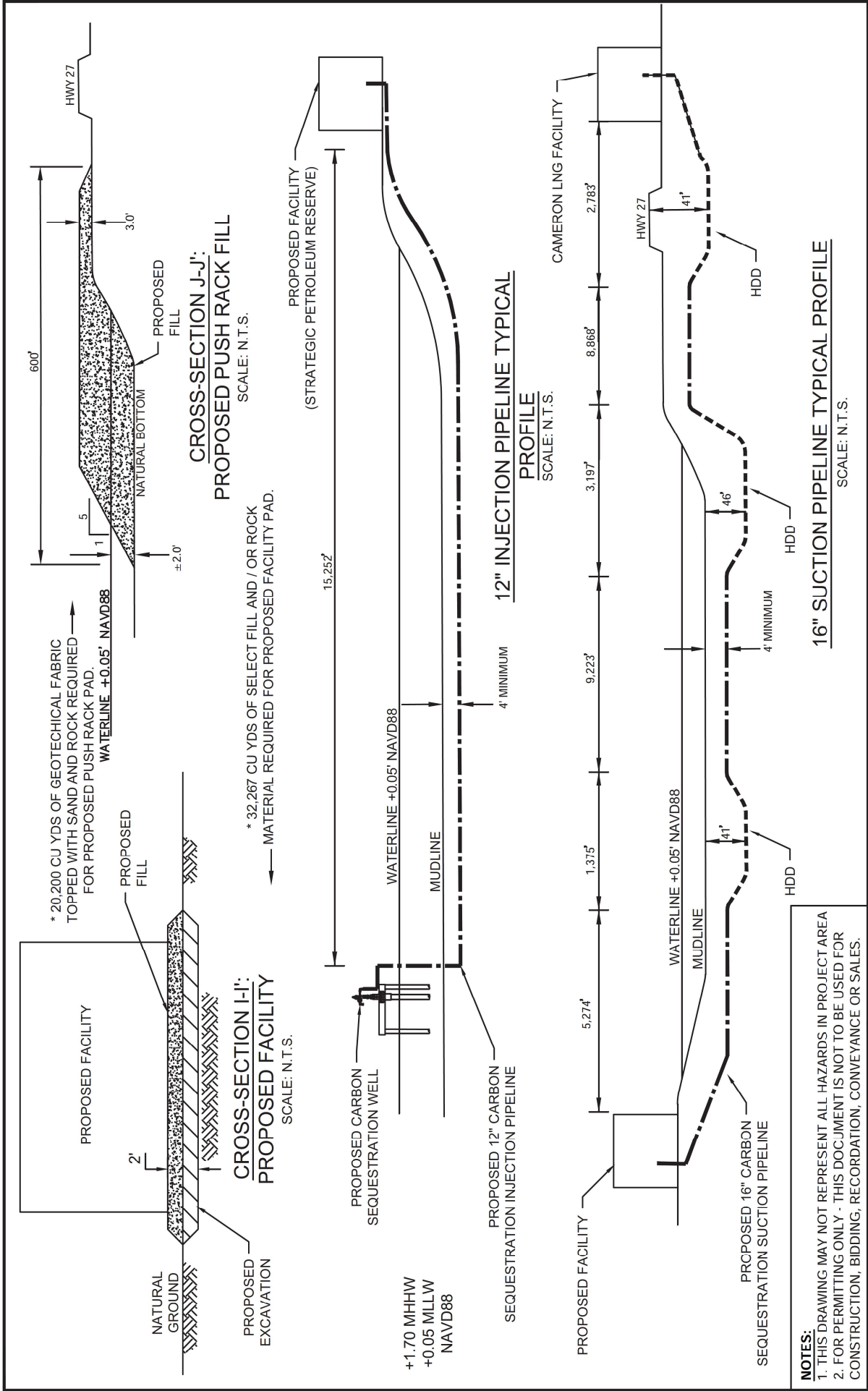


PRELIMINARY

TYPICALS

**HACKBERRY CARBON SEQUESTRATION, LLC**  
HACKBERRY CARBON SEQUESTRATION PROJECT  
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
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					DATE:	06/28/2021	JOB NO:	2021.0228
					DRAWING NAME: 21.0228_S47-57_REV8.DWG			
				SHEET NO: 57	OF 59			
				PROJECTION: LOUISIANA SOUTH ZONE				
				GEO. DATUM: NAD83   VERT. DATUM: NAVD88				
				GRID UNITS: US SURVEY FEET				
				REVISION DESCRIPTION: REVISED AS PER REQUEST.				



<b>PRELIMINARY</b> TYPICALS & PIPELINE PROFILES		DRAWN BY: JPD	APPROVED BY: ADM
HACKBERRY CARBON SEQUESTRATION, LLC		DATE: 06/28/2021	JOB NO: 2021.0228
HACKBERRY CARBON SEQUESTRATION PROJECT		DRAWING NAME: 21.0228_S47-57_REV8.DWG	
PROPOSED 16" SUCTION & 12" INJECTION PIPELINES		SHEET NO: 58	OF 59
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20		PROJECTION: LOUISIANA SOUTH ZONE	
T12S-R11W, SECTIONS 12 & 13		GEO. DATUM: NAD83   VERT. DATUM: NAVD88	
CAMERON PARISH, LOUISIANA		GRID UNITS: US SURVEY FEET	
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107 Global Circle, Lafayette, LA 70503			
(337) 335-2800 - tbsmith.com			

COASTAL NOTES:

ALL STRUCTURES, FACILITIES, WELLS AND PIPELINES/FLOWLINES OCCURRING IN OPEN WATER AREAS, OR IN OILFIELD CANALS, OR SLIPS SHALL BE REMOVED WITHIN 120 DAYS OF ABANDONMENT OF THE FACILITIES FOR THE HEREIN PERMITTED USE, UNLESS PRIOR WRITTEN APPROVAL TO LEAVE SUCH STRUCTURES IN PLACE IS RECEIVED FROM THE COASTAL MANAGEMENT DIVISION. THIS CONDITION DOES NOT PRECLUDE THE NECESSITY FOR REVISING THE CURRENT PERMIT OR OBTAINING A SEPARATE COASTAL USE PERMIT, SHOULD ONE BE REQUIRED FOR SUCH ACTIVITIES.

AS-BUILT DRAWINGS SHALL BE SUBMITTED WITHIN 30 DAYS OF COMPLETION OF THIS PROJECT TO THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, COASTAL MANAGEMENT DIVISION AND OFFICE OF CONSERVATION, PIPELINE SAFETY DIVISION, POST OFFICE BOX 44487, BATON ROUGE, LA 70804-4487.

IN ORDER TO ENSURE THE SAFETY OF ALL PARTIES, THE PERMITEE SHALL CONTACT THE LOUISIANA ONE CALL SYSTEM (1-800-272-3020) A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION (DIGGING, DREDGING, JETTING, ETC.) OR DEMOLITION ACTIVITY.

THE PERMITEE SHALL ALSO CONTACT OTHER GOVERNMENTAL ENTITIES THAT MAY HAVE OPTED OUT OF THE ONE CALL PROGRAM. THESE GOVERNMENTAL ENTITIES MAY HAVE OPERATIONS LOCATED IN THE AREA OF THIS PROJECT.

ALL STRUCTURES WILL BE MARKED AND LIGHTED IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS.


CALCULATIONS:

TOTAL HYDRAULIC DREDGING = 222,718 CU YDS  
TOTAL DREDGING BY BUCKET EXCAVATION = 57,614 CU YDS  
TOTAL EXCAVATION FOR PIPELINE INSTALLATION = 196,836 CU YDS

Acres Affected by the Carbon Sequestration Project			
	Impact Type (Acres)		Total Impacted Acreage
	Temporary	Permanent	PFO/PSS Conversion
Brackish Marsh (E2EM)	15.57	0.12	0.00
Scrub/Shrub Wetlands (PSS)	0.12	0.00	0.00
Bottomland Hardwood Forest (PFO)	0.52	0.00	0.46
Wetland Subtotal	16.21	0.12	0.46
Open Water	290.14	0.00	0.00
Upland - below 5 ft contour	5.46	1.77	0.00
Upland - above 5 ft contour	7.43	8.23	0.00
Total	319.24	10.12	0.46

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PRELIMINARY NOTES AND CALCULATIONS



**T. BAKER SMITH**  
A CENTURY OF SOLUTIONS  
107 Global Circle, Lafayette, LA 70503  
(337) 335-2800 - tbsmith.com

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DRAWN BY: JPD    APPROVED BY: ADM  
DATE: 06/28/2021    JOB NO: 2021.0228  
DRAWING NAME: 21.0228\_S47-57\_REV8.DWG

SHEET NO: 59 OF 59  
PROJECTION: LOUISIANA SOUTH ZONE  
GEO. DATUM: NAD83 | VERT. DATUM: NAVD88  
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REVISION DESCRIPTION:  
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**HACKBERRY CARBON SEQUESTRATION, LLC**  
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PROPOSED 16" SUCTION & 12" INJECTION PIPELINES  
LOCATED IN T12S-R10W, SECTIONS 1-3, 7-11, 14-18 & 19-20  
T12S-R11W, SECTIONS 12 & 13  
CAMERON PARISH, LOUISIANA    May 16, 2022