Addendum #8

Project #2767A

Brown County Port Development Project

Port & Resource Recovery

November 10, 2025

Request for Bid

See original specification packet for addresses

THIS ADDENDUM IS ISSUED TO MODIFY, EXPLAIN OR CORRECT THE ORIGINAL DRAWINGS AND SPECIFICATIONS AND IS HEREBY MADE PART OF THE CONTRACT DOCUMENTS. THIS ADDENDUM MUST BE ACKNOWLEDGED ON THE ADDENDUM RECEIPT SCHEDULE, WHICH WAS INCLUDED IN THE ORIGINAL DOCUMENT PACKAGE.

Vendors are required to read entire addendum to determine requirements affecting their contract.

Addendum #8

This addendum is for the following:

- To answer questions received for project

Attachments follow this page that answer the questions received and to provide documents that support the answers.

RFB DUE DATE

11/18/25 BY 11:00 A.M. CST

TO: Responsive Bidders

FROM: Dean Haen, Brown County Port & Resource Recovery Director
Mark Vannieuwenhoven, GEI Consultants

RE: Responses to Bidders' Questions – Round 2
Brown County Port Development Project #2767A

DATE: November 10, 2025

1. **QUESTION:** Are there any fees for dumping at the Bay Port facility.

   RESPONSE: As a Port project, the fees would be waived at Bay Port.

2. **QUESTION:** Imported Crushed Concrete or Recycled concrete. Would this be acceptable for Marine Stone Fill.

   RESPONSE: Yes, provided the concrete is crushed to match gradation required by the spec, i.e., no large slabs, etc.

3. **QUESTION**: Marine Stone fill. We understand 12" is max size. What is the minimum particle (fines) context.

   RESPONSE: Fines should be kept to a maximum of 5% to limit siltation of the waterways.

4. **QUESTION**: Details for C-130 do not match the actual details on SR301 & 302. Also there is no C302 drawing.

   RESPONSE: The cross-sections on Sheet C-130 that reference C-302 have been revised to reference sheet C-303.

5. **QUESTION:** There are no coating specs for the combi wall, please confirm there will not be any coating requirements for pipe or sheets.

   RESPONSE: No coating is required on pipe or sheets. There is a coating requirement for the tie rods, wales, and other hardware.

6. **QUESTION:** Mechanical dredging is specifically called for in the plans and specs, please confirm that hydraulic dredging will not be allowed for any work on the project.

   RESPONSE: The Owner will consider hydraulic dredging for the organic sediments destined for Bay Port but the contractor must provide details on how it would be piped, collected, and dewatered. Water management at Bay Port will be the largest concern. The contractor will be responsible for obtaining any permits required for discharge of dewatering effluent including any additional fees or testing costs. Please provide a price for mechanical dredging as part of the base bid and provide alternative pricing for hydraulic dredging as a value engineering option if you feel this is more cost effective.

7. **QUESTION:** North sheeting wall length: No dimension is shown for the north wall – appears to be approximately 98'. Please confirm dimensions.
    a. South wall – 14.12'
    b. East wall – 1703.2'
    c. North wall – 97.72'

    Total of 1815 LF, plan quantity length is 1835 LF

    RESPONSE: North wall = 102.35', but last 18.4' is sheetpile only, no king piles.
    East wall = 1717.06'
    South wall – 14.12'
    Total = 1833.53'

8. **QUESTION:** Truck scale: Per note on C-501 the truck scale is to be provided by others. Measurement and payment in the spec item 8.2 states to supply and install truck scale. Does this item include the truck scale or just the foundation and the scale is to be by others as noted in plans?

    RESPONSE: Please provide a price to supply and install the truck scale as well as the foundation.

9. **QUESTION:** Flint Hill Resources Dock Wall Repair – Item 8.3: Specs to investigate dockwall and repair. What should be bid for repair since this will be dependent on the investigation?

    RESPONSE: See response to Question 12 in comments posted on October 31, 2025.

10. **QUESTION:** Confirm coatings for the dockwall:
    Combi-wall system – no coatings, bare steel
    Waler system – galvanized
    Tiebacks – no coatings, bare steel

    RESPONSE: Combi-wall system and anchor walls – king piles and sheet piles do not require any coating
    Wale system – wale, washer plates, splice plates, fasteners and all associated hardware shall be hot dip galvanized
    Tie rods – All tie rods shall be epoxy coated to ASTM A775 or hot dip galvanized to ASTM A153

11. **QUESTION:** Item 3.2 CB60 sheetpile support wall: Measurement and payments section in the spec says this is Lump Sum but bid form is by the LF. What are the specs for this wall? Sheeting specifications and sheet pile depth?

    RESPONSE: Bid per lineal foot as outlined in the Bid Form. Base bid on NZ19 sheets, or equivalent (same as anchor wall) that are 25 feet long.

12. **QUESTION:** Note on SM303 pile tip elevations may change following exploration program: What is this?

RESPONSE: Drawing is revised to delete note.

13. **QUESTION:** Item 3.4 timber fenders: Bid form is the each. Should be by the LF as called out in the measurement and payment section of the spec. Is the 3,470 LF for the 12x12 rub rail and the 8x12 curb? Looks like 1,703 LF of each for a total of 3,406 LF.

    RESPONSE: The bid quantity of 3,470 feet was intended to include both the timber fender and rub rail. A separate bid item has now been included to separate the two items.

14. **QUESTION: PVC Sleeve Coverage of Articulated Couplers (SM501 Detail A)**
    Please confirm whether the 12" SCH80 PVC sleeves shown in SM501 Detail A are intended to fully cover the articulated couplers. The current detail appears to show the sleeve enclosing the coupler assembly, which may not be feasible given the actual component dimensions.
    Specifically:
    - The 3.5"Ø pins used to fasten the link plates to the articulated couplers are approximately 12" long and will not fit within the sleeve.
    - The link plates themselves are nearly 8" tall, which would significantly restrict movement within the sleeve if enclosed.
    - SM501 Detail D appears to acknowledge this issue by depicting a larger diameter pipe over the coupler assembly.

    Please clarify whether the sleeve is intended to terminate before the coupler or if a larger sleeve diameter should be used to accommodate the full assembly and maintain articulation.

    RESPONSE: A larger sleeve shall be provided around the coupler to provide the same clearance as the 12” sleeve over the tie rod.

15. **QUESTION: Lacing Plate Detail Clarification (SM502 Detail J)**
    Please confirm the intent of the lacing plate shown in SM502 Detail J. As currently detailed, the lacing plates appear to be welded to each individual wale beam rather than connecting the two beams together as a built-up member.
    Additionally, please confirm that the lacing plate spacing accounts for the tierod and deadman connection layout. We recommend that lacing intervals be coordinated with the tierod spacing to avoid interference with tieback hardware and ensure constructability.

    RESPONSE: Detail is revised to show intent connecting two wale beams.

16. **QUESTION: Splice Plate Orientation Clarification (SM502 Detail F)**
    Please confirm the intended orientation of the splice plate shown in SM502 Detail F. The drawing currently illustrates the splice plate running longitudinally along the beam, parallel to its span. However, the calculation package included in Addendum 3 (page 347) appears to suggest that the splice plate was intended to run laterally across the beam, perpendicular to its span.

    RESPONSE: Splice plate is correctly oriented

17. **QUESTION: Sheet Pile Support Wall (Sheet SR-302)**
    Detail 2 SR302 illustrates a sheetpile support wall extending up to the top of the CB60 sediment cap. What is the length of the sheeting, and required section modulus?

    RESPONSE: Sheeting is designed to be 25 feet long. Provide NZ19 or equivalent sheets.

18. **QUESTION: Bay Port Disposal Fee**
    Will Bay Port charge the contractor a fee for the disposal of the dredge spoils?

    RESPONSE: No fee for disposal at Bay Port.

19. **QUESTION: Geotextile Below Water (SR-301, 302)**
    The current design on drawing SR301 and SR302 requires placement of geotextile fabric below water level. Installing geotextile underwater is extremely challenging due to difficulties in maintaining proper alignment, overlap, and anchorage, especially in areas with current, wave action, or limited visibility. This can compromise both constructability and long-term performance. Would the design team consider an alternative solution, such as substituting the underwater geotextile with a layer of smaller gradation stone (e.g., a filter stone or graded aggregate) to achieve the same filtration and separation objectives? This approach may be more practical and reliable under submerged conditions. Please advise if this alternative would be acceptable, or if there are specific performance requirements that necessitate the use of geotextile below water.

    RESPONSE: Details are revised to eliminate the geotextile. Note that a 2-foot-thick layer of smaller crushed stone is required over the CB60 cap prior to placing the larger stone.

20. **QUESTION:** Can Marine Aggregate Backfill be 1 ¼" base aggregate?

    RESPONSE: The spec has been revised to clarify this is 1 ¼" crushed stone. This could be 1 ¼" open graded base, but not dense graded base.

    QUESTION: Are FOD's required to be used for tracking pad in addition to the typical clear stone? States in plan "if required".

    RESPONSE: The tracking pad has been removed from the design since a long gravel road already exists to knock debris off of truck tires.

21. **QUESTION:** On plan pages C-501 and SM301 it is showing 12" of Subbase material under the 1 ¼" base aggregate. What is the spec for Subbase as there is nothing shown in spec 31 20 00? Is this is required? If so, how is this item being paid, I do not see an item in the bid schedule for Subbase?

    RESPONSE: Subbase material has been replaced with 12" layer of 3" breaker run material.

22. **QUESTION:** Where is the 1450 tons of 3" Breaker Run being used?

RESPONSE: This was the original quantity of breaker run for the access road only in the 90% plans. This quantity has been updated on the bid form in the 100% bid documents to be 89,165 tons.

23. **QUESTION:** Debris in dredging material. In specs it states to separate timber, cobbles, concrete, trash, etc. and take to landfill. But in recent question it asked to make a separate item for handling debris and response states to assume all debris encountered during dredging can be taken to Bay Port disposal facility. Please verify what are we to follow for bid and what happens when something is found in dredging material that isn't wanted at Bay Port?

    RESPONSE: Small dredged debris (garbage, logs, branches, etc.) can remain in the sediment and be taken to Bay Port. Items such as full trees, a car, a boat, etc. should be separated and hauled to Brown County South Landfill.

24. **QUESTION:** Please verify that ASTM No. 4 open graded aggregate (3/4" clear stone) is wanted for the stone drainage swale. What type of fabric is needed for the swale?

    RESPONSE: Yes, that is the intent. However, ASTM C-33, No. 4 stone has a maximum particle size of 2 inches as outlined below. Assume an 8 oz/sy nonwoven geotextile.

Sieve Size	Percent Finer
2-inch	100%
1.5-inch	90-100%
1-inch	20-55%
¾-inch	0-15%
3/8-inch	0-5%

25. **QUESTION:** Please add a bid item for geotextile fabric as shown on plan page SM301 for behind dock wall. Also, state what type of fabric is needed for this.

    RESPONSE: Geotextile required below tie rods material requirements have been added to Drawing SM001. A bid item has been added and accounts for this geotextile, as well as the geotextile placed across the site below the breaker run.

26. **QUESTION:** Will you allow stone placement on west end of boat slip (above water level, up to existing ground) to gain access to site before filling the remaining majority of the boat slip?

    RESPONSE: The boat slip will need to be filled up to the water line in uniform lifts to prevent mudwaving of the underlying sediments. Once filled all the way across with stone to the waterline, fill may be placed on the western end to grade to gain site access.

27. **QUESTION:** Please confirm that the storm sewer pipe that goes from the concrete swale north to berm gets an apron end wall on each end? Does this pipe also need a check valve in it?

    RESPONSE: Yes, plan to put an apron on each end. Each pipe will get a Tideflex check valve, or equivalent, on the end as well.

28. **QUESTION:** Detention basin 2 also has an outlet structure with pipe. Does this need a check valve also? There are no notes on plan. Looks like the pipe goes through the dock wall? Is there a detail to show how this is going to work?

    RESPONSE: Yes, due to the elevation of the pipe, please plan to install a check valve on the end of the Detention Pond 2 outlet pipe as well.

29. **QUESTION:** Please confirm 24" concrete pipe qty in bid schedule is correct. Shows 950 LF, per take off coming up with around 1020 LF.

    RESPONSE: Correct. Revised length is 1025 lf of 24" pipe. There is also 40 feet of 18" pipe and 45 feet of 12" pipe.

30. **QUESTION:** Confirm that any & ALL workers must have the OSHA 40 hour training to work on the project?

    RESPONSE: OSHA 40 hour training is not required. Please disregard.

31. **QUESTION:** All dredged organics will go to the Bay Port Rehandling Facility. Can an aerial be provided marking out which cell the owner wants the material deposited into?

    RESPONSE: Dredged materials will be placed in Cells 2 or 4.

32. **QUESTION:** For the aggregate fill below the water line will shot rock be allowed?

    RESPONSE: Yes, as long as fill materials comply with specified gradation.

33. **QUESTION:** Confirm that the City is responsible for all moisture and density testing for any of the materials onsite? Including base aggregate, clay liner for ponds, dredged clay to be reused for fill, etc.

    RESPONSE: Yes, the County will retain the services of an engineer to complete density testing of materials.

34. **QUESTION:** Where is Marine Structural Fill needed? By the spec it looks like this material could be base aggregate, please confirm? I do not see a Marine Structural Fill item in the bid schedule. Please expand on how this item gets paid.

    RESPONSE: Marine Structural fill is shown on the Dock Wall sections as fill above the tie rods. Bid item 5.11 has been added to quantify this material separately from the marine stone fill.

35. **QUESTION:** If any waste materials found within site limits / dredge limits need to be taken to the Brown Co. South Landfill will the owner pay for all disposal and tipping fees?

    RESPONSE: No, tipping fees apply at Brown County South Landfill. $46/ton for misc. debris and solid waste. $5/ton for separated brush and/or concrete.

36. **QUESTION:** The following multiple questions deal with plan pages SR301 & SR302 (Revetment Sections)
    a. What is the material difference between the Marine Stone Fill Core vs. the Marine Stone Fill Base vs. the Marine Stone Fill? Assuming this is all the same material?
    b. Geotextile is shown to be encompassed around the Marine Stone Fill Base. What type of geotextile is required? What is the reason for the geotextile?
    c. Please explain how this revetment berm area gets built under +/- 8 feet of water?
    d. Where are all the above items being paid (marine stone, core, base) for in the bid schedule? All I see shown is the riprap quantity.

    RESPONSE:

    a. Marine Stone Fill Core, Marine Stone Fill Base, Marine Stone Fill is all the same material
    b. Geotextile around the Marine Stone Fill Base has been eliminated.
    c. Place stone fill on to lake bottom
    d. The quantities of these materials are included bid item 5.2 – Marine Stone Fill in Bay.

37. **QUESTION:** Can bidders assume that Brown County will get permission for a temporary easement with WI Public Service Corp. to get access into the project? This seems to be a must to be able to get started as the GLC Minerals property is very close also (southwest).

    RESPONSE: Brown County is currently working on establishing a construction easement with WPS and should be secured by year end.

38. **QUESTION:** It was stated that it is believed that there is enough fill onsite for the project. What happens if there is not enough fill onsite? Would the additional compensation needed for import of fill (if needed) be taken care of with a change order?

    RESPONSE: Alternate bid item added to import fill as needed.

39. **QUESTION:** Are in water disturbances dates (March 1st – June 15th & Oct. 15th – Nov. 30th) also to be considered for filling in the boat slip, discharge slip and ponds (north & south of boat slip)?

    RESPONSE: A fisheries waiver for certain in-water activities has been provided by the WDNR. See that document for more information and restrictions on activities and work hours.

40. **QUESTION:** It is stated that land disturbances at the site are to be minimized during annual spring and fall migration seasons (March 15th – May 31st & August 1 – October 31st). What is considered minimized land disturbance activities? This only gives 2 months a year for excavation / fill placement / drying material on the site?

RESPONSE: A fisheries waiver for certain in-water activities has been provided by the WDNR. See that document for more information and restrictions on activities and work hours.

41. **QUESTION:** On plan page SM301 the sheet pile anchor wall is embedded in crushed stone, does this material fall under the Marine Aggregate Backfill (2.03) spec? Where is this material getting paid for in the bid schedule?

    RESPONSE: The Earthwork spec has been revised to identify this material as 1 ¼" Crushed Stone, and bid item 5.10 has been added to the Bid Form.

42. **QUESTION:** What is the Great Lakes Floating Agreement for this project? Are you going to post an addendum for the agreement / wages as nothing is stated in bid documents for the G.L.F.A.?

    RESPONSE: IL18 has been added to Davis-Bacon Water Determination for the dredging and in-water work.

43. **QUESTION:** Can you provide clarification between the specifications of materials in earthwork spec vs. the materials legend on plan page SM301as they don't correlate between them in some instances?

    RESPONSE: See revised Earthwork specification.

44. **QUESTION:** Please confirm that the riprap / extra heavy riprap can be quarried rock?

    RESPONSE: Yes, quarried rock is acceptable.

45. **QUESTION:** There is proposed stone swales shown on the site plan page (detail on C-503). Is a bid item on the bid schedule going to be added for this work?

    RESPONSE: A bid item has been added.

46. **QUESTION:** What gradation and material is required for each of the following: Marine Stone Fill, Marine Aggregate Backfill, and Marine Structural Fill?

    RESPONSE: See revised Earthwork specification

47. **QUESTION:** Can WisDOT 1-1/4" aggregate be used everywhere "Marine Stone Fill" is called out, or are there locations where larger stone is required?

    RESPONSE: See revised Earthwork specification. For the most part, the 1 ¼" stone could be used for marine stone fill. The one place that larger stone is required is the tie in to the Flint Hills Resources dockwall. Large stone is required to fill the gap in the sheets and prevent aggregate from spilling out from behind the wall.

48. **QUESTION:** Are "Aggregate Backfill" and "Marine Stone Fill" intended to be the same material?

RESPONSE: See revised Earthwork specification. Aggregate backfill was replaced with 1 ¼" crushed stone for back fill of the sheetpile anchor wall in certain areas. Marine stone fill is for the primary dock wall backfill, and filling of all areas under water.

49. **QUESTION:** Drawing C-120 Shows a proposed stone swale. The contractor bid form shows an item 6.4 concrete lined ditch (Swale). What item should the stone lined swale go.

    RESPONSE: It was incidental to site filling and grading. Bid Item 6.7 added for clarity.

50. **QUESTION:** Within the dredge permit, specific dredging conditions line 20 requires dredging from banks. Considering the distance from the banks to the limits of dredging, is dredging from barge acceptable?

    RESPONSE: Yes, assume that dredging from a barge is acceptable in all areas except on or over sediment caps. No spudding is allowed through the caps.

51. **QUESTION:** Within the dredge permit, specific dredging conditions line 21 details that no more than 184,500 CY of material can be removed by dredging. Please confirm the dredging quantities, as they are much greater than 184,500 CY.

    RESPONSE: Bid the dredging quantities in the Bid Form. A revised dredging permit application has been submitted to the WDNR and USACE for the additional volume and expect approval.

52. **QUESTION:** The specifications detail trucking restrictions associated with disposal of material at the Bay Port facility. As the site is in close proximity to the facility, would be acceptable to hydraulically pump materials from site directly into the Bay Port disposal facility? This would remove risks of spill during trucking operations and allow for no material stockpiling onsite.

    RESPONSE: Yes, but see response to question 6.

53. **QUESTION:** Please confirm the working hours for dredge work specifically. Specification section 02 10 00 3.04.A details that the contractor will be allowed to work 24 hours per day, 7 days per week however notes that the contractor must follow applicable permits outside of working hours. General Notes G-110 traffic control states that the hours of construction operation will follow the noise restrictions in the Green Bay Nuisance Code, which limits working hours to 7AM-10PM, Monday-Friday.

    RESPONSE: Dredging work shall be limited to 7:00 AM to 5:00 PM during time-out periods identified in the WDNR Fisheries Waiver. Assume no night work at this time.

54. **QUESTION:** Specification section 35 20 23 3.06.E states that temporary dumping or placement of materials outside of the disposal area is prohibited. Do the specifications allow for temporary offload of organic materials (soft sediments) within the Pulliam site into a contained area prior to loading into trucks, or does material need to be loaded directly from barge into trucks for disposal at the Bay Port facility?

RESPONSE: The Owner will consider temporary material handling within the Pulliam site but the proposed material handling will need to include full containment of all materials, management of dewatering effluent and full clean up after the material handling facility is no longer required by the contractor. The contractor will be responsible for preparing a submittal for review by the Owner and will be responsible for obtaining any permits required for discharge of dewatering effluent.

55. **QUESTION:** Can you clarify the methodology and data sources used to determine the estimated volumes of organic sediment versus clay sediment?
Were these volumes extrapolated solely from the three borings provided in the geotechnical appendix, or were other sources—such as the 2.4.3 Fox River PCB Dredging Final Analysis Design Reports, historical dredging records, geophysical surveys, or bathymetric profiles—used to delineate the boundaries and thicknesses of each material type? If so, can you provide those additional reports or data?

    RESPONSE: Estimated volumes were based on the three borings in the Geotechnical Data Report. We anticipate that there may be some variation to what is observed in the field. Quantities will be based on relative amounts dredged and paid accordingly.

56. **QUESTION:** There is concern that the actual in-situ volumes of organic sediment and clay may differ significantly from the estimates.
If the actual volume of organic sediment is greater than estimated, this could result in a surplus of organic material requiring disposal at Bay Port, which is a higher-cost management option. Conversely, if the dredge profiles in the contract drawings require us to remove material labeled as clay (to be reused onsite), but that material is actually soft organic sediment, it may not be suitable for reuse as fill onsite.

    RESPONSE: Relative quantities of organic sediment and clay have been estimated from the available boring data. We recognized that the volumes may vary somewhat from these estimates and payment will be made accordingly based on the actual volume of materials encountered. You do not need to follow the exact dredging profiles shown on the cross-sections. They are for informational purposes and all organic material encountered will go to Bay Port while clay soils will be reused as fill on site.

57. **QUESTION:** Will the Owner provide additional information or clarification on how to address discrepancies between the estimated and actual material types encountered during dredging?
For example, if material classified as clay in the drawings is dredged and later found to be too soft or organic for onsite reuse, will there be a mechanism for reclassification and adjustment of disposal location and payment for re-handling?

    RESPONSE: See response to Question 56.

58. **QUESTION:** Given the uncertainty and potential cost impacts, would the Owner consider specifying a pre-dredging soil boring and sampling program (to be performed prior to construction) to better define the volume and boundaries of organic sediment and clay? This would help all parties more accurately estimate quantities, reduce risk, and ensure

that material management and reuse/disposal plans are appropriate for the actual site conditions.

RESPONSE: This will not happen prior to bidding, so please bid based on the quantities provided and based on available data at this time. If you would like to add a pre-dredge boring program to better quantify these volumes prior to dredging, that should be incorporated into the cost of dredging.

59. **QUESTION:** Under section 01 20 00 Measurement and Payment Marine Stone Fill Behind Dock wall it's asking for supply and payment for 1-1/4-IN aggregate behind the dock wall but on plan sheet SM303 the Marine Stone Fill requirements are 6-12 Inch stone. In section 31 20 00 Earthwork Marine Stone Fill is also clean aggregate 12-IN minus. Question is should the contractor plan to supply 1-1/4" stone or 6-12" aggregate stone? Will there be a expectation that 1-1/4" will be placed directly behind the dock wall with the larger stone butting up to that?

    RESPONSE: The different materials required with placement limits are shown on the Dock Wall cross sections on Drawings SM301 to SM303.

60. **QUESTION:** Are all wale assembly items on SM502 required to be HDG? (S05 50 00 2.01D)

    RESPONSE: All wale assembly items on Drawing SM502 shall be hot dip galvanized. Please refer to Drawing SM001 Steel Sheet Pile Dockwall Note 3. The wale seat and the sheetpiles shown on Drawing SM001 are not required to be hot dip galvanized.

61. **QUESTION:** Are all timber rub rail connection brackets on SM503 required to be HDG? If so, can the HDG requirement be eliminated because of the OSHA respiratory protection requirements to weld on HDG steel? (S05 50 00 2.01D)?

    RESPONSE: The plates welded to the pipe piles and sheet piles are not required to be galvanized but all fasteners and washers needed for assembly and connections shall be hot dip galvanized.

62. **QUESTION:** Who is paying for the vibration monitoring that "may be required"? (S31 41 16 1.06D3)?

    RESPONSE: If vibration monitoring is required, it will be under the scope of the Contractor. An optional bid item has been added to provide an allowance for this.

63. **QUESTION:** Do the piles have a "coating"? (S31 41 16 1.07B)

    RESPONSE: No, the piles are not coated.

64. **QUESTION:** What are the engineer's working hours? (S31 41 16 1.10A)

RESPONSE: Engineer plans to staff the project to meet the contractor's schedule. While specific instances may come up (holidays, etc.), no adjustment is required in your planning at this time.

65. **QUESTION:** Are absorbent booms required to be installed along with the turbidity curtain? (S35 20 20 2.4)

    RESPONSE: No, absorbent booms are not required.

66. **QUESTION:** Who is paying for disposal of the dredged "debris and other unsuitable material" disposal? (S35 20 23-10 3.05B)

    RESPONSE: Contractor shall pay for disposal at Brown County South Landfill. Provide allowance of 50 tons under Bid Item 1.3.

67. **QUESTION:** Attached is the WDNR remediation map. Please outline the areas that anchoring and spudding of marine equipment is not permitted. (S35 20 23 3.03I)

    RESPONSE: No anchoring or spudding within the CA94 or CB60 sediment caps.

68. **QUESTION:** What is the desired sheet section, the top and bottom elevation for the sheet pile support wall? (Plan Sheet SR302)

    RESPONSE: NZ19 or equivalent. Assume same sheets as anchor wall. Sheets are 25 feet long.

69. **QUESTION:** What is the required steel grade for the king pile pipe?

    RESPONSE: Sheet SM001 states all steel for steel sheet pile dockwall shall conform to ASTM A572 Grade 60, minimum yield stress of 60 ksi.

70. **QUESTION:** Is spiral welded pipe for the king pile permitted?

    RESPONSE: Pipe piles must be double submerged arc butt welded pipe with straight or spiral butt seams welded from inside and outside. For spiral welding, multi arc welding which includes triple arc weld inside and tandem arc welding outside is acceptable and preferred.

71. **QUESTION:** When will notice to proceed be issued?

    RESPONSE: Planning for February 1, 2026.

72. **QUESTION:** Is there a required format to submit the contractor value engineered alternates with our base bid?

    RESPONSE: Section 10 has been added to bid form for contractor value engineered alternates.

73. QUESTION: What will be the basis for review of the contractor VE options?

RESPONSE: Basis for review will be feasibility, cost, and schedule implications. County will consider the options and apply to base bid cost to the extent that the options are technically sound and economically favorable.

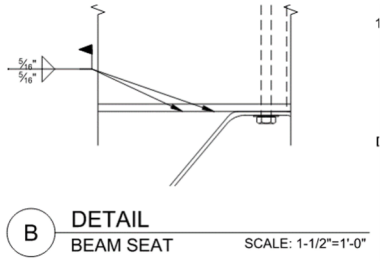
74. QUESTION: Will the contract be awarded on lowest base bid or lowest accepted VE options?

RESPONSE: County will consider the options and apply to base bid cost to the extent that the options are technically sound and economically favorable. Acceptable VE options will factor into bid price for award of project.

75. QUESTION: What is the purpose of horizontal lacing plates? Should the lacing plates be vertical to connect the W21 beams? Can the max spacing for the lacing plates be changed to match the width of the SSP, either 4'7" or 9'4"? (SM502A&J)

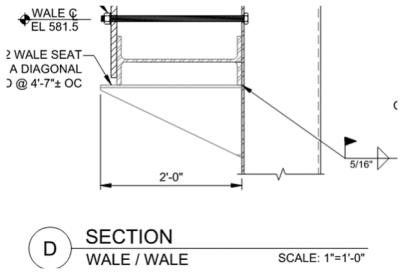
RESPONSE: See revised detail.

76. QUESTION: What is being welded on SM502B? Can the welding be eliminated because of the bolted connection?



RESPONSE: See revised detail

77. QUESTION: What is being welded on SM502D? Can the welding be eliminated because of the bolted connection?



RESPONSE: The weld is to connect the wale seat to the sheet pile. See revised detail.

78. QUESTION: If PZC26 are used between king pile, will the increased spacing of the king pile to accommodate the wider sheet be allowed? (Addendum 4 question 7)

RESPONSE: Yes. The maximum tie rod spacing will allow for up to 9.4 feet tie rod spacing (center to center of king piles)

79. **QUESTION:** Does the answer of addendum 4 question 9 mean that we can provide plan length of steel sheet pile for both the bulkhead and anchor wall, including the plan length of king pile and not need to include longer pipe and sheets to account for jaw marks and handling holes that will need to be removed?

    RESPONSE: Maximum reduction in any of the pile lengths shown after cut off to achieve a straight horizontal top alignment is 4 inches.

80. **QUESTION:** What is the depth of excavation required to remove obstructions to include in our bid, -5' or -10'? (S31 41 16 3.02A & 3.06D)

    RESPONSE: 10 feet

81. **QUESTION:** In Addendum #4 Question 16 the response to the question states "The revetment berm is planned to be placed directly on the lake bed." Question is, does this answer remove the requirements for the geotextile fabric on Sheet SR 301to be used to create the Marine Stone Base? If required will a spec for the fabric be provided? With the base of the Marine Stone Base expected to be roughly 85 feet wide will the fabric be required to be sewn together to guarantee correct overlap? Please provide more detail as this could be a significant cost and challenge for the project.

    RESPONSE: Geotextile has been removed from the design. A 2-foot layer of 1 ¼" aggregate should be placed over the CB60 cap prior to larger marine stone fill to protect against puncture through the cap.

82. **QUESTION:** Clarification of Timber Rub Rail Elevation (SM503)
    Sheet SM503 provides conflicting information regarding the elevation of the timber rub rail and top of dockwall election.
    a. Detail B and Detail D show the timber rub rail at elevation 590.0 and the top of dockwall at 591.
    b. Detail C shows the timber rub rail at elevation 588.5 and top of dockwall at 590.

    Please confirm which elevation is correct for the timber rub rail and top of dockwall and clarify if there are any locations along the dockwall where the elevation should differ. If the intent is for the rub rail elevation to vary, please provide the rationale and specify the transition points along the wall.

    RESPONSE: Detail C is correct. The top of the dockwall is elevation 590.0, so the rub rail is at elevation 588.5'

83. **QUESTION:** Sheet Pile Deadman Tip Elevation at Discharge Slip (SM302)
    Sheet SM302, Section D, indicates a sheet pile deadman tip elevation of 560.0 at the discharge slip, while the remainder of the wall details a sheet pile tip elevation of 555.0. Please confirm the following:
    a. Is it the design intent to have a reduced deadman length (higher tip elevation) specifically at the discharge channel?

b. If so, what is the basis for this change in deadman length at this location (e.g., subsurface conditions)?
c. Should bidders assume the shorter deadman length (tip elevation 560.0) only at the discharge slip, and the standard tip elevation of 555.0 elsewhere along the wall?

RESPONSE: There is no basis for the sheets being shorter at this location. Assume the tip of the deadman sheeting is 555.0 at all locations. This detail has been revised accordingly.

84. QUESTION: Dredging CA94 Buttress Stone at Former Boat Slip (SM402, SM301)
Detail A on SM402 and Section B on SM301 illustrate the existing CA94 cap (D50=14") extending through the proposed alignment of the combination wall and into the proposed channel.

a. The size and thickness of the existing CA94 cap may inhibit the ability to drive king piles and sheeting through the cap and may damage the piles.
    i. Should the contractor anticipate clearing or partially removing the CA94 cap along the proposed dockwall alignment prior to pile installation?
    ii. Should the contractor plan for additional effort and materials to install the king piles and sheet piles through the cap, such as the use of driving shoes/tips, pre-drilling, or additional falsework to maintain alignment?
    iii. Will the OWNER provide any allowance or compensation for the additional effort, equipment, or materials required to install this ±180' section of wall through the existing cap, or should bidders include these costs in their base bid?
b. Please confirm the following regarding dredging operations near the CA94 cap:
    i. Is it correct that no removal or disturbance of the CA94 cap is anticipated during dredging, and that the dredging contractor will not be held liable for any post-dredge elevations exceeding elevation 554' within the existing cap area?
    ii. Given the sensitivity of the cap and the difficulty of working adjacent to it, please confirm that the contractor will not be required to perform any dredging or grading within the CA94 cap area itself, and that a 10' wide buffer is sufficient to meet project and regulatory requirements.

RESPONSE:

a. Yes, plan to clear the stone from the drive line as necessary at the toe of the CA94 buttress. Assume additional effort at necessary to install sheet pile within this section of the dock wall as incidental to dock wall construction.
b. No dredging or grading is required, or allowed, within the CA94 cap area. The portion of the cap that crosses the dock wall is the toe of a rip rap buttress along the outer slope of the cap. There is no contaminated sediment under this portion of the cap; therefore, once with wall is in place, the rock at the toe of the buttress, outside the wall, can be removed by dredging.

85. QUESTION: The bid package does not include any sample contract or supplementary contract conditions, leading to the following questions:

a. Is the Nov 15, 2027 project completion the substantial completion date?
b. Can this date be extended, since DNR permits only allow a total of 8 good months to perform "in water disturbing activities"?

c. Define substantial completion vs final completion
d. Are there liquidated damages for not meeting the substantial/final completion dates?
e. What are the insurance requirements?
f. Is Builders Risk required? Recommend against as underwater coverage is always excluded, but they will gladly collect a premium anyway.

RESPONSE: Please refer to the copy of the Brown County Non-Professional Standard Contract is included in Attachment H of the Request for Bid (RFB). November 15, 2027, is date of substantial completion. Remaining items for final completion would include such items as final site cleanup, demobilization, and supply of final submittals. Builders Risk is not required and liquidated damages are not included for this project.

86. QUESTION: Addendum 6 does not contain revised bid quantities. Addendum 5 contained bid quantities that do not match the bid form spreadsheet provided. Please clarify the correct bid quantities.

RESPONSE: Addendum 5 was a copy of the 90% specifications posted by mistake. Please disregard. Addendum 6 are the correct specs but does not contain a bid form. The Excel spreadsheet in Addendum 2 is the most current Bid Form.

87. QUESTION: Please clarify the specs of the marine stone fill. Sheet SM302 states 6”-12”, which does not seem appropriate for general seawall backfill. Spec section 31 20 00 only states a maximum size. Is there a max % fines? Is there a gradation range? Can breaker run be used?

RESPONSE: See revised Earthworks specification

88. QUESTION: The list of materials in the legend on sheet SM302 does not have explicit bid items associated (crushed stone, dense-grade crushed stone, sub base). Please list the associated bid items with these materials.

RESPONSE: See revised Earthwork Spec and Bid Form.

89. QUESTION: Can bidders assume that truck access will be granted through the WPS property for delivery of materials and transport of dredge sediment to Bayport?

RESPONSE: Brown County is currently working on establishing a construction easement with WPS and should be secured by year end.

90. QUESTION: Is the clay liner planned to be made of reused dredged clay or imported clay? The quantities of reused clay (114,225 CY) plus clay liner (10,340 CY) add up to a greater quantity than dredged clay (101,530 CY).

RESPONSE: See revised bid quantities.

91. QUESTION: Prebid Question: Bid Tabulation, Alternates, and VE Deducts

At the prebid meeting, alternates for the bid were discussed, but it is unclear how these will be handled in the bid evaluation. Please clarify the following:

a. Should bidders submit their base bid strictly as designed, and provide any deducts for approved alternates or value engineering (VE) options in a separate letter or attachment?
b. Will Brown County determine the low bidder solely based on the base bid total at the bottom of the bid form, or will approved alternates/VE deducts submitted with the bid be considered in determining the apparent low bidder?
c. If a bidder is not the lowest on the base bid, but would be the lowest with approved alternates or VE deducts, will Brown County consider those alternates/deducts in the award decision, or will only the base bid be used to determine the low bidder?
d. Please confirm the correct procedure for submitting alternates and deducts, and how these will be factored into the bid evaluation and award.

RESPONSE: Provide your base bid as outlined in the bid form and provide VE options separately in the section provided. Section 10 has been added to the bottom of the Bid Form for providing VE alternatives/deducts. Bidders may also want to submit a separate write up describing the VE options, reasoning for the alternative, and logistics of how it would be provided in order for the County to adequately review the options. The county will evaluate VE options and take into consideration on final bid price if the VE options are considered feasible. The lowest bid price, including accepted VE options, will be considered the lowest bid. Provide your base bid as outlined in the bid form and provide VE options separately in the section provided.

92. **QUESTION:** Technical specifications section 35 20 20 section 2.2/2.3 requires both a fixed turbidity screen around the site perimeter as well as a moveable dredging curtain around the dredging area. Please confirm that the fixed turbidity screen is meant to be utilized around the dredge perimeter while the moveable dredge curtain is being used or if this is meant to be used along the combi-wall. Experience on the Fox River in this area shows that a fixed turbidity screen around the dredge perimeter would be greatly affected by weather conditions as well as ships moving in and out of the area.

    RESPONSE: Turbidity controls shall be provided to meet the requirements of the regulatory approvals for the project.

93. **QUESTION:** Technical specifications section 35 20 23 section 1.07G requires surveys to be stamped by a licensed professional land surveyor. Is this surveyor required to be a third-party surveyor?

    RESPONSE: Surveys can be certified by a licensed surveyor or engineer. Does not have to be third party.

94. **QUESTION:** Sheet SR301 shows a layer of geotextile laid on the lake bottom, placing 2 FT of marine stone fill, then another layer of geotextile. What type of Geotextile fabric is this? Please clarify how this will be measured and paid.

    RESPONSE: Geotextile is deleted. See revised details.

95. QUESTION: BI 5.1 Marine Stone Fill Behind Dock Wall reads "Supply and placement of 1-1/4 Inch aggregate backfill material behind dock wall." Several plan sheets show a hatched area designated as Marine Stone Fill (6-12") behind the dock wall. This work may likely require both 1-1/4" and Marine Stone Fill (6-12"). Please clarify how this will be measured and paid.

RESPONSE: See revised specifications

96. QUESTION: Summary of Work 15 Marine Stone Fill in Boat Slip reads "placement in controlled lifts across site will be monitored by Owner and Engineer using vibrating wire piezometers. What placement rate should we assume is acceptable as a baseline or bidding standpoint?

RESPONSE: Assume 1 foot per day across the area of the boat slip. This would equate to approximately 4,000 cy per day or 20,000 cy per week.

97. QUESTION: Sheet SM303 shows a hatch area for "Marine Structural Fill" and a different hatch for "Engineered Fill (Processed Clay)". What is the difference? Are they both paid under BI 5.5 Site Structural Fill (Clay reused from Dredging)?

RESPONSE: See revised Earthworks specification. Engineered Fill and Marine Structural Fill are not the same material.

98. QUESTION: 2.04 Marine Stone Fill, Reads "Placed in boat slip or bay north of site shall consist of clean aggregate..." What do you mean by Clean?

RESPONSE: Non-contaminated and less than 5% passing the #200 sieve.

99. QUESTION: Is dredging behind the wall incidental. Some of the cross sections show it and some don't (see sheet C141)

RESPONSE: Small amounts of dredging behind wall or removal of minor obstruction is incidental. The large dredging prism between the dock wall and the deadman wall at the north end of the wall is included in the dredging quantities.

100. QUESTION: Sheet 303 is incomplete (Section B-B) and title says draft - is there anything to be changed on that sheet?

RESPONSE: See revised drawings.

101. QUESTION: Sheet SM 402

a. Need more details / info for Boat Slip; Temp diversion
b. Where is dredging plan for caps protecting contaminated sediments

RESPONSE: Temporary diversion is a berm at elevation 590 to match existing berm height. There is no dredging of the caps protecting the sediments. A small section of stone at the toe of the buttress at the eastern end of the CA94 cap in the boat slip may need to be cleared from the drive line of the dock wall. The toe of the buttress is outside the limit of the sediments.

102. **QUESTION:** What are tipping fees at BCLF?

RESPONSE: $5/ton for separated brush and/or concrete and brush. $46/ton for misc. debris.

103. **QUESTION:** Expectations at Boat Slip 5 to 10' settlement. Is there anymore information on the existing material that is expected to settled that much?

RESPONSE: Existing materials are approximately 15 feet of soft organic sediments under sand and gravel cap. That is long-term settlement, not all during construction.

104. **QUESTION:** When can work on project begin? Specifically backfilling boat slip?

RESPONSE: Work can begin anytime after finalizing contract. Boat slip cannot be filled in until dock wall is constructed across east end.

105. **QUESTION:** Has BC discussed with WPS taking down fence for access?

RESPONSE: Brown County is currently working on establishing a construction easement with WPS and should be secured by year end.

106. **QUESTION:** Does Health & Safety Officer need to be onsite full time

RESPONSE: Yes, there should be a person identified as the Health & Safety Office on site on a full time basis.

107. **QUESTION:** Field Engineering- Will BC provide a table of points that need to be surveyed?

RESPONSE: There is not a specific table of points. As-built surveys should contain enough points to evaluate material volumes and create accurate contour maps. Include items such as final structures, pipe lines and grades, and invert elevations.

108. **QUESTION:** What warranties are required?

RESPONSE: Assume there will be a one year warranty from the date of completion on workmanship related to the dock wall and other constructed site features. There is also likely a manufacturer's warranty on the truck scale. No other warranties required.

109. **QUESTION:** Demo C.3.I What permits are required?

RESPONSE: Demo permit will be covered in Site Plan submittal to City.

110. **QUESTION:** Are there any other permits required?

RESPONSE: Not under the contractor's responsibility.

111. **QUESTION:** Are there any known hazardous materials on site?

RESPONSE: No, there are no known hazardous materials on site, with the exception of the PCB sediments under the CB60 and CA94 caps in the waterways. There were historic coal piles on site during operation of the Pulliam Power Plant. The coal was removed and capped with topsoil, but trace amounts of coal may be encountered during excavation of the south detention pond. This can be spread out as fill on upland areas or placed in the boat slip above the water line.

112. **QUESTION:** Demo 3.04 says demo below grade. At prebid it was mentioned that structures below subgrade could remain. Please clarify

RESPONSE: Structures below grade and not in conflict with utilities can remain. Existing sheetpile should be cut to 2' below final grade.

113. **QUESTION:** Which Cells Organic Dredge Materials to be dumped in?

RESPONSE: Cells 2 and 4 is the current plan.

114. **QUESTION:** Is hydraulic dredging allowed? (S35 20 23 3.04C)

RESPONSE: See response to Question 6.

115. **QUESTION:** What are the time restrictions for working in discharge slip?

RESPONSE: See fisheries waiver.

116. **QUESTION:** Do we know what the railroad will or will not allow or for that matter REQUIRE? Are we to provide Railroad insurance, railroad flaggers etc?

RESPONSE: Not an active line and considered private rail. No railroad insurance or flaggers are required at this time.

117. **QUESTION:** Can a clear stone be used for the sanitary and the water line for bedding, versus the sand being called out in the specifications?

RESPONSE: Yes. Please follow City of Green Bay standard specifications.

118. **QUESTION:** There shows a 12" RCP with end walls at station 11+25, is this existing? Or should there be an item added?

RESPONSE: Not an existing pipe. 12" culvert added to bid form.

119. **QUESTION:** Is there more information available for the pond outlet grates?

RESPONSE: There are no grates. There are two orifice outlets and an access hatch on the top.

120. **QUESTION:** It states in notes that the city of Green Bay is to do all sanitary and water taps to mains, is this correct?

RESPONSE: City must be contacted prior to making water and sanitary connections. Work is responsibility of contractor.

121. **QUESTION:** Supplier states it cannot build SMH-160 Sanitary manhole due to it being so shallow, can this be addressed?

RESPONSE: Noted. The final design of the sanitary sewer system will be completed if pricing makes it a feasible part of the project. Please provide an allowance for a manhole in your cost and it will be addressed at a later date by raising the road up, etc.

122. **QUESTION:** Does existing riverbank rip rap have to be removed in front of the new wall?

RESPONSE: No, unless required to drive the piling, the existing rip rap does not need to be removed.

123. **QUESTION:** Just to confirm. Crane pads and the support pilings are to go under bid schedule item 3.0 Dockwall Construction. There is not an item listed for the crane pads.

RESPONSE: Crane pads and support piles should be included in Alternate Bid item B1.

124. **QUESTION:** For bid purposes. For the crane pad piles. We request the EOR give pile tip elevations for the crane pad H-Piles.

RESPONSE: Bidders shall assume HP tip elevation is +460.0.

125. **QUESTION:** Will there be a bid item for all the geotextile fabric they are requiring, and what type?

RESPONSE: Bid Item 5.12 added.

126. **QUESTION:** Also, the soft sediment is to be hauled to the Bay Port Re-handling facility. Which cells are being used for the project? Moreover, what are the expectations of the soft sediment after it is dumped into the containment cells? Will additional handling be required?

RESPONSE: Cells 2 or 4.

Material shall be placed as directed by the Owner. Bidders shall assume that materials shall be placed such that upon completion of placement under this contract the placement

area is crowned near the center and shaped to drain toward the perimeter of each area used. The maximum allowable elevation for materials within twenty-five 25 feet of the perimeter of each area is 2.0 feet below the top of the berms.

127. **QUESTION:** Can the Marine Stone for the Boat Slip be sized to 6-8 inch material? Conveyors will not place material sized over 8 inches.

RESPONSE: Yes, 6-8 inch stone is acceptable for the boat slip fill.

128. **QUESTION:** On page SR302, detail 2 & 3 have a dashed line just above the second layer of geotextile. What does that dashed line represent?

RESPONSE: Approximate mudline. See revised details.

129. **QUESTION:** What is the purpose of the double layer of geotextile fabric for the revetment wall? It is also shown on page SM403, details C&D. It is not required for filling in the water elsewhere. Is this fabric necessary?

RESPONSE: Geotextile is deleted. See revised details.

130. **QUESTION:** Are bidders to assume any areas not hatched on sheet C130 are to be topsoiled? Will a landscaping item be added to the bid form? Section 32 90 00

RESPONSE: There will be very little landscaping required on the project. Hatched area has been revised on sheets C-120 and C-130 to reflect the extent of gravel placement.

131. **QUESTION:** Is the need for lime stabilization anticipated for this project? Can an allowance for lime stabilization be added in the interest of keeping bids competitive? 31 20 00 3.03C

RESPONSE: Not anticipated. If you feel it is warranted, please include within your cost for clay placement.

132. **QUESTION:** It appears there is a substantial amount of excavation outside of the detention basins - Which item will this work be paid under?

RESPONSE: General site grading should be included in bid item 5.13 – Cut/Fill Existing Site Grades.

133. **QUESTION:** The Demobilization item includes 'materials' - Does this include excess soils if the project is long on dirt or will a unit price item be set up for haul off of excess soils? 01 20 00 9.2

RESPONSE: Not at this time. Materials would be excess geotextile, piping, dockwall fittings, misc. construction equipment.

134. **QUESTION:** Can bidders assume the actual turbidity curtain will only contain the active sheet pile driving area? Rather than the 100 ft offset around the entire site shown on sheet C-110, which will interfere with barge movements.

RESPONSE: The contractor must comply with turbidity controls and all other conditions required by the Regulatory Approvals. Provided the proposed turbidity control plan complies with all such conditions, enclosing only the active work area will be acceptable.

135. **QUESTION:** What length H-piles should bidders assume are required to reach bedrock for the crane pad?

RESPONSE: See response to Question 125.

136. **QUESTION:** Is type 1L cement acceptable? 03 31 30 2.01.B

RESPONSE: Type 1L cement is acceptable provided the concrete meets the performance requirements of the specifications. Test mix data shall be for the proposed cement for this project.

137. **QUESTION:** Specification 00 73 19 3.01.A.2 – The specifications require all employees to have an OSHA 40 hour training course. Can you please confirm what course is required (hazwoper)? If this a mandatory requirement?

RESPONSE: No, 40-hour HAZWOPER training is not required for this project. Please disregard.

138. **QUESTION:** Specification 00 73 19/01 30 00 The specifications reference a designated SSHO, is this to be considered a non-working full time onsite safety representative, or can this be managed through our corporate safety program?

RESPONSE: It must be a person on site on a full-time basis. This person may be part of the site management team, but not an operator that has other full-time duties.

139. **QUESTION:** Specification 01 11 00 1.02A.6 – "Owner may directly purchase steel if a financial benefit is determined" What is the plan to administer the Owner purchase of steel?

RESPONSE: This will be discussed during contract negotiations but Owner may direct Contractor to purchase steel and have the county billed directly for it. Keep cost of steel supply in the bid at this time.

140. **QUESTION:** Is this project tax exempt?

RESPONSE: Yes, all government projects in WI are tax exempt.

141. **QUESTION:** Specification 01 15 00 1.08F Noise control – Are there specific noise plans for this project? How are the working hours defined for pile driving.

RESPONSE: No specific noise control plan at this time, but Best Management Practices and maintenance shall be used to control noise per industry standards. Assume pile driving is permitted from 7:00 AM to 5:00 PM per WDNR fisheries waiver.

142. **QUESTION:** 31 20 00 2.05 A & B – Part A specifically references a quarry stone material, Part B references both quarry stone and processed concrete. Will processed concrete be an acceptable material for the breaker run?

RESPONSE: Crushed concrete may be used for the breaker run as long as it is free of rebar and wire. Concrete is not acceptable for the dense graded aggregate crushed stone for the surface.

143. **QUESTION:** 31 41 16 1.06D The specifications are unclear on if vibration monitoring will or will not be required for the existing sewer. Given the uncertainty it is impossible to bid appropriately. Suggest there be an allowance in the contract made to cover the vibration monitoring if it is determined to be needed. If no allowance is made, please provide clearer instruction on how to bid this.

RESPONSE: If vibration monitoring is required, it will be under the scope of the Contractor. An optional bid item has been added to provide an allowance for this.

144. **QUESTION:** 35 20 20 The erosion control drawings only show Turbidity curtain yet the specification reference absorbent booms attached to the inboard side of the turbidity curtain. Are the absorbent booms necessary? Can an updated turbidity curtain detail be provided?

RESPONSE: Absorbent booms are not necessary. We do not anticipate presence of hydrocarbons in the sediment.

145. **QUESTION:** Who is responsible for obtaining the WPDES LOI?

RESPONSE: Contractor is responsible for the WDPES permit associated with dredging. Engineer will secure WPDES permit for land disturbance activities (construction site stormwater permit).

146. **QUESTION:** What is the mooring load that was considered in the dock wall design?

RESPONSE: The maximum mooring load is the rated load of the bollards specified.

147. **QUESTION:** Are there performance criteria for the dockwall design (i.e. max deflection)?

RESPONSE: There are performance criteria for the Dockwall design. Wall loading and wall stiffness are provided on Drawing SM001.

148. **QUESTION:** Addendum # 5 had a bid form in the specifications with a bid schedule, items & quantities. Now Addendum # 6 does not have the bid form in the specifications.

What are contractors to use for the bid schedule? The excel sheet or the bid form sheet? The excel sheet quantities do not match the bid form sheet.

RESPONSE: The bid for in Addendum #5 was from the 90% design issued at the prebid walkthrough. The Excel bid form is the final version that should be used for the project.

149. **QUESTION:** Is all of the site cut excavation included in the item excavation of detention ponds? This would include west side concrete ditch, other swales, etc.

RESPONSE: The excavation and grading of the west side concrete ditch and stone drainage swale are included within those bid items. The remainder of the site excavation and grading should be included in 5.13 – Cut/Fill Existing Site Grades.

150. **QUESTION:** On plan sheet C-210 it is showing an access road typical cross section with 3/4" base aggregate for the road top. Where is the ¾" base aggregate actually needed and where is the item and quantity in the bid schedule?

RESPONSE: Please use 1 ¼" aggregate base course in item 5.7 of the bid schedule.

Activity	Start Date	End Date	Time Out Period?	Fish Biologist Response
1. Site Clearance and sheet pile driveline clearing/access road	April 2026	June 2026	Yes March 1 – June 15	In water work for this part of the project can take place from March 1/ice out through April 30 from 7:00 AM – 5:00 PM. In water work must stop at 5:00 PM and cannot resume until 7:00 AM the next morning. This is to allow for night migration of walleye and other species up the Fox River with minimal noise and disturbance. In water work completed from 7:00 AM – 5:00 PM should use a dredging curtain or bubble curtain to keep fish out of the active work area. This in water work should have minimal impact on drift of larval lake whitefish and walleye, so work can continue during the month of April from 7:00 AM – 5:00 PM. In water work cannot take place from May 1 through June 15 to protect rare and sensitive species that are known to spawn in this area. These species include Centrarchids and muskies (a species with an active restoration program that is currently in place).
2. Shoreline Bulkhead sheet pile installation	April 2026	August 2026	Yes March 1 – June 15	Sheet pile installation can take place from March 1/ice out through April 30 from 7:00 AM – 5:00 PM. In water work must stop at 5:00 PM and cannot resume

				until 7:00 AM the next morning. This is to allow for night migration of walleye and other species up the Fox River with minimal noise and disturbance. In water work completed during 7:00 AM – 5:00 PM should use a dredging curtain or bubble curtain to keep fish out of the active work area. This in water work should have minimal impact on drift of larval lake whitefish and walleye, so work can continue during the month of April from 7:00 AM – 5:00 PM. In water work cannot take place from May 1 through June 15 to protect rare and sensitive species that are known to spawn in this area. These species include Centrarchids and muskies (a species with an active restoration program that is currently in place).
3. Partial filling behind bulkhead	June 2026	September 2026	Yes, June 1-15	Filling behind sheet piling that is closed off from the Fox River or Green Bay, meaning fish cannot get to the area being filled, can occur any time. Filling behind sheet piling that is still directly connected to Green Bay or the Fox River, meaning fish could access the area being filled, can occur at any time as long as dredging curtains or bubble curtains are used to

				keep fish out from behind sheet pilings that still have an active connection to the bay or river.
4. Bulkhead anchor wall construction	July 2026	February 2027	Possibly on North End of Wall Oct. 15-Nov. 30th	In water work on Green Bay proper can continue 24 hours a day during the fall time out period as lake whitefish are not known to use the bay of Green Bay just west of the mouth of the Fox River during fall. In water work in the Fox River can occur during the fall time out period from 7:00 AM – 5:00 PM. In water work must stop at 5:00 PM and cannot resume until 7:00 AM the next morning. This is to allow for night migration of lake whitefish up the Fox River with minimal noise and disturbance. In water work completed during 7:00 AM – 5:00 PM must use a dredging curtain or bubble curtain to keep fish out of the active work area.
5. Completion of filling behind bulkhead	March 2027	July 2027	Yes March 1 – June 15	Filling behind sheet piling that is closed off from the Fox River or Green Bay, meaning fish cannot get to the area being filled, can occur any time. Filling behind sheet piling that is still directly connected to Green Bay or the Fox River, meaning fish could access the area being filled, can occur at any time as long as dredging curtains or bubble curtains are used to

				keep fish out from behind sheet pilings that still have an active connection to the bay or river.
6. North Shoreline Rip Rap Seawall (Anticipated duration of rip rap construction will be approximately 4 to 6 months.)	August 2026	March 2027	Yes Oct. 15-Nov. 30th	Since this part of the project is considered to take place in Green Bay proper, in water work can continue through the fall time out period as lake whitefish are not known to use the bay of Green Bay just west of the mouth of the Fox River.
7. Dredging/Soft	November 2026	February 2027	Yes Oct. 15-Nov. 30th	Dredging in the Fox River can occur during the fall time out period from 7:00 AM – 5:00 PM. In water work must stop at 5:00 PM and cannot resume until 7:00 AM the next morning. This is to allow for night migration of lake whitefish up the Fox River with minimal noise and disturbance. In water work completed during 7:00 AM – 5:00 PM should use a dredging curtain or bubble curtain to keep fish out of the active work area.
8. Dredging/Clay	March 2027	June 2027	Yes March 1 – June 15	Dredging in the Fox River can occur from March 1/ice out until March 31 from 7:00 AM – 5:00 PM. In water work must stop at 5:00 PM and cannot resume until 7:00 AM the next morning. This is to allow for night migration of walleye and other species up the Fox River with minimal noise and

				disturbance. In water work completed during 7:00 AM – 5:00 PM should use a dredging curtain or bubble curtain to keep fish out of the active work area. Dredging cannot take place from April 1 through June 15 to allow for drift of larval lake whitefish and walleye and to protect rare and sensitive species that are known to spawn in this area. These species include Centrarchids and muskies (a species with an active restoration program that is currently in place). Dredging from shore to the river channel could block nearly half the width of the river from larval drift, meaning dredging could have a significant negative impact on larval drift. This is the reason for the in water work restriction for the month of April for the dredging portion of the project.

SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Work covered by CONTRACT DOCUMENTS

B. Work by OWNER and others.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

A. The work to be done under this CONTRACT DOCUMENT includes, but is not necessarily limited to, furnishing all labor, tools, equipment, materials, supplies, supervision, and administration for performing the following work:

1. Mobilization of equipment, materials, and personnel.

2. General Conditions and Project Administration - CONTRACTOR's project management, coordination with OWNER and ENGINEER, meetings, CONTRACTOR's quality control testing and surveying, and general conditions including but not limited to: phone, fax, computer, utilities, water, toilets, and waste disposal.

3. Site preparation, Clearing, and Demolition – Preparation of work area, including: tree clearing; fence removal; demolition and disposal of existing structures, topsoil stripping and stockpiling; supplying, installing, and maintaining erosion control measures until construction is completed; construction and maintenance of temporary access roads; dust control and dewatering of work areas until completion of construction; and protection of existing railroad tracks and site utilities.

4. Bathymetric Surveys – Completion of pre-dredging, post-organic material dredging, and post-dredging surveys for verification of work and calculation of quantities.

5. Install, maintain, and remove turbidity controls for in-water work.

6. Sheetpile Dockwall Installation – Installation of sheetpile dockwall along the approved bulkhead line, including deadman support wall and sheetpile wall across CB60 sediment cap. OWNER may directly purchase the steel sheet piling if a financial benefit is determined. If OWNER does purchase sheet piling, Contractor shall be responsible for accuracy of order and the return of extra material for a credit to Brown County.

7. CB60 Sheetpile Support Wall – Installation of sheetpile wall to support toe of revetment berm across CB60 sediment cap. OWNER may directly purchase the steel sheet piling if a financial benefit is determined. If OWNER does purchase sheet piling, Contractor shall be responsible for accuracy of order for all accurate order and the return of extra material for a credit to Brown County.

© GEI 2025

8. Mooring Bollards – Supply and installation of 17 mooring bollards along dockwall as indicated on Drawings.

9. Timber Curb and Rub Rail – Supply and installation of timber curb and rub rails along top and front side of the dockwall as indicated on Drawings.

10. Dredging of Organic Sediments – Dredging of soft organic sediments from upper portion of the Fox River and Bay of Green Bay and hauling and placement of sediments within the Bay Port Dredged Material Re-Handling Facility.

11. Dredging of Clay – Dredging of native clay within the Fox River and Bay of Green Bay to be reused to the extent possible for site filling and grading.

12. Marine Stone Fill Behind Dockwall – Supply and placement of aggregate fill as backfill behind dockwall.

13. Marine Stone Fill in Bay - Supply and placement of aggregate fill below the water line within the Bay north of the site behind the site bulkhead line.

14. Marine Stone Fill in Discharge Channel - Supply and placement of aggregate fill below the water line within the former discharge channel.

15. Marine Stone Fill in Boat Slip - Supply and placement of aggregate fill below the water line within the former boat slip. This fill will require placement in controlled lifts across the boat slip, by conveyor or other equivalent means. This filling will also be monitored by OWNER and ENGINEER using vibrating wire piezometers to monitor pore water pressure within the soft sediment. Filling may need to be slowed or temporarily stopped to allow pore pressures to dissipate and prevent mudwaving.

16. Marine Structural Fill – Supply and placement of granular fill above tie rods behind dock wall.

17. Site Structural Fill (Clay Reused from Dredging) – Conditioning, placement, and compaction of clay fill for raising site grades and filling the boat slip, bay, and discharge channel above the water line.

18. Supply and installation of woven geotextile between site grades and breaker run.

19. 3” Breaker Run – Supply and placement of breaker run for support under the aggregate base course.

20. 1 ¼” Aggregate Base Course – Supply and placement of aggregate base course for final surface of the site and below asphalt pad.

21. Revetment Berm Riprap – Supply and placement of extra heavy riprap for face of northern revetment berm along the Bay.

22. Remove Existing Topsoil Stockpile - Removal of existing 3,350 cubic yards topsoil stockpile from the site.

23. Cutting and filling existing site grades to design subgrade elevations.

© GEI 2025

24. Excavation of Detention Ponds – Excavation of two detention ponds to grades indicated on Drawings. Reuse of material for site fill.

25. Detention Ponds Clay Liner – Reuse of dredged clay for installation of a 2-foot-thick compacted clay liner within each of the two detention ponds.

26. Detention Pond Outlet Structures – Supply and installation of manhole outlet structures for the two detention ponds.

27. West Side Concrete Lined Ditch – Grading and concrete lining for a stormwater diversion ditch along the western edge of the site in accordance with the Drawings.

28. 24-inch Diameter Concrete Stormwater Pipe – Supply and installation of concrete pipe for outlet of detention ponds and western stormwater ditch.

29. 12-inch Diameter Concrete Stormwater Pipe – Supply and installation of concrete pipe for access road.

30. Artesian Well Drain Tile – Supply and installation of 500 feet of perforated piping and aggregate backfill for collection of water from artesian well. Pipe shall be 6” diameter, perforated. HDPE SDR 17 pipe and discharge to western ditch as indicated on the Drawings.

31. Electrical Distribution and Transformers – Installation of electrical service from meter location near truck scale to disconnect locations on the northern and southern portions of the site. Installation of metering station near Truck Scale A. Power supply from source up to metering station will be by power utility.

32. Asphalt Pad – Installation of an 38,720-square yard asphalt pad on northern portion of the site.

33. Truck Scale – Supply and install a truck scale as indicated on the Drawings. Truck scale shall be Rice Lake Survivor Steel Deck Truck Scale, or equivalent.

34. Flint Hills Resources Dockwall Repair - Investigate and repair damaged section of Flint Hills Resources dockwall. For purpose of bid, assume investigation and probable repair using grout bags behind wall to stop gravel loss.

35. Post-Construction Site Restoration - final site restoration, including trash removal, repair of access roadways, seeding of disturbed vegetated areas, and removal of temporary utilities and facilities.

36. Demobilization of equipment, excess materials, and personnel.

BID SCHEDULE B - OPTIONAL BID ITEMS

B1. Crane Pad (Optional Bid Item B1) – Install up to two crane pads on the site near the dockwall as indicated on the Drawings, including HP12x53 piles to bedrock and a 45-inch-thick reinforced concrete slab. Price per each.

B2. Additional Scale (Optional Bid Item B2) – Install a second scale equivalent to the scale provided under Bid Item 23.

© GEI 2025

B3. Sanitary Sewer Installation (Optional Bid Item B3) – Install approximately 1,240 feet of 8-inch diameter PVC sanitary sewer from Bylsby Avenue and terminating in a manhole at the eastern end of the access road.

B4. Water Line Installation (Optional Bid Item B4) – Install approximately 1,200 feet of 6-inch diameter PVC water line from Bylsby Avenue and terminating in a manhole at the eastern end of the access road.

B5. Security Lighting and Poles (Optional Bid Item B5) – Price to supply and install 10 security lights on poles around the perimeter of the site. Electrical feed is assumed to be 360 feet per pole.

B6. Access Road Paving (Optional Bid Item B6) – Price to pave main access road from Bylsby Avenue to south edge of northern asphalt pad, 5,750 square yards.

B7. Asphalt Pad Additional 4 Acres (Optional Bid Item B7) – Price to pave an additional 4 aces of asphalt storage pad area, bringing the total pad area to 12 acres.

B8. Import Structural Fill from Offsite Source (Optional Bid Item B8) – Price per cubic yard to import, place, and compact structural fill soils from an offsite source if needed. This can be clay from Brown County South Landfill or from another contractor's source.

B9. Vibration Monitoring – (Optional Bid Item B9) – Lump sum price to provide vibration monitoring of Flint Hills Resources dock wall and sanitary sewer pipe during dockwall installation. Vibration monitoring of sanitary sewer pipe would include installation of vibration monitoring equipment down a borehole approximately 100 feet deep.

B. Project Schedule:

1. The project is required to be completed by November 15, 2027.

C. The summary of work described above is an overall summary of the work to be performed and the responsibilities of the CONTRACTOR. It does not supersede the specific requirements of the other CONTRACT DOCUMENTS.

D. These specifications are in many instances written in imperative and streamlined form. This imperative language is directed to the CONTRACTOR, unless specifically noted otherwise.

1.03 WORK BY OTHERS

A. The work to be performed by OWNER or OWNER's designated representatives is as follows:

1. General observation of work for conformance to specifications.

2. Construction documentation and construction quality assurance testing including material and soil testing except where specific submittals are required.

© GEI 2025

1.04 SEQUENCE OF WORK

A. The work is to be coordinated with any subcontractors and with current adjacent WPS and GLC operations so as not to interfere with these activities.

PART 2 - PRODUCTS

A. Not Used.

PART 3 - EXECUTION

A. Not Used.

END OF SECTION

© GEI 2025

SECTION 01 20 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Measurement and payment criteria applicable to the WORK.

B. Defect assessment and non-payment for rejected WORK.

1.02 AUTHORITY AND PAYMENT

A. Measurement methods for the WORK are delineated in this section.

B. All elements of WORK required to complete the specified WORK in the CONTRACT DOCUMENTS will be paid for under the lump-sum and unit prices price stated in the CONTRACT. The lump sum or unit price will include compensation for all labor, equipment, materials, field engineering, construction surveying, quality control, and incidental items required to complete the WORK as specified.

C. The ENGINEER will take the appropriate measurements for excavation and grading and compute the quantities of materials accordingly.

D. The OWNER shall make payments to the CONTRACTOR in accordance with the terms specified in the Agreement and CONTRACT.

E. Percentages of progress on payment of the lump sum shall be coordinated between the CONTRACTOR and ENGINEER at the end of the billing period. Invoices shall be rendered on the basis of the agreed upon percentage.

F. CONTRACTOR shall prepare and submit invoices in accordance with OWNER'S invoice preparation guidelines.

G. OWNER shall release progress payments based on recommendations of ENGINEER. Payment of invoices shall be withheld if CONTRACTOR has not transmitted all required submittals, survey data, and as-built drawings applicable to WORK completed for the billing period in question.

1.03 UNIT QUANTITIES SPECIFIED

A Quantities and measurements indicated in the Bid Form and shown on the Drawings are for bidding and CONTRACT purposes only.

1.04 MEASUREMENT OF QUANTITIES

A. The CONTRACTOR, upon mobilizing to the site, may perform an initial site survey for confirmation of the ENGINEER's survey. The ENGINEER's survey will be used to calculate the volumes of material excavated and filled for each of the bid items.

© GEI 2025

1.05 DEFECT ASSESSMENT

A. If the CONTRACTOR exceeds the tolerance for filling or excavation without written authority from the OWNER or ENGINEER, the surface must be regraded to be within the tolerance limits at no cost to the OWNER. CONTRACTOR may be responsible for the cost incurred by the OWNER in resurveying final surfaces.

B. The authority of the OWNER to assess the defect and identify payment adjustment is final.

1.06 PROJECT OPERATION AND IMPLEMENTATION

A. Bid Schedule A:

1.1 Mobilization (Bid Item 1.1) – LUMP SUM price for mobilizing equipment, people, and materials to the project site. Payments will be made once WORK is completed as determined by the OWNER and ENGINEER.

1.2 Project Support and Project Administration (Bid Item 1.2) – LUMP SUM price for CONTRACTOR's project management, coordination with OWNER and ENGINEER, meetings, CONTRACTOR's quality control testing and surveying, and general conditions including but not limited to: phone, fax, computer, utilities, water, toilets, and waste disposal. Payments will be made once WORK is completed as determined by the OWNER and ENGINEER.

1.3 Site Preparation, Clearing, and Demolition (Bid Item 1.3) – LUMP SUM price for tree clearing; fence removal; demolition and disposal of existing structures, topsoil stripping and stockpiling; supplying, installing, and maintaining erosion control measures until construction is completed; construction and maintenance of temporary access roads; dust control and dewatering of work areas until completion of construction; and protection of existing railroad tracks and site utilities. Payment will be made on a LUMP SUM basis once work is completed as determined by the OWNER and ENGINEER.

2.1 Bathymetric Surveys (Bid Item 2.1) – LUMP SUM price to complete pre-dredge, post-organic material dredging, and post-dredging surveys for grade documentation and quantity verification. Payment will be made on a LUMP SUM basis once the WORK is completed, surveyed, and approved by the OWNER and ENGINEER.

2.2 Install/Maintain Turbidity Controls (Bid Item 2.2) – LUMP SUM price to install turbidity controls around the dockwall and dredging work areas, and to maintain turbidity controls throughout the duration of work. Payment will be made on a LUMP SUM basis once work is completed as determined by the OWNER and ENGINEER.

2.3 Remove and Dispose of Turbidity Controls (Bid Item 2.3) - LUMP SUM price to remove and property dispose of turbidity controls upon the completion of work. Payment will be made on a LUMP SUM basis once work is completed as determined by the OWNER and ENGINEER.

3.1 Sheetpile Dockwall Installation (Bid Item 3.1) – LUMP SUM price to install sheetpile dockwall along the approved bulkhead line, including deadman support wall and tie rods. OWNER may directly purchase the steel sheet piling if a

© GEI 2025

financial benefit is determined. If OWNER does purchase sheet piling, Contractor shall be responsible for accuracy of order and the return of extra material for a credit to Brown County. Payment will be made on a LUMP SUM basis once the WORK is completed, surveyed, and approved by the OWNER and ENGINEER.

3.2 CB60 Sheetpile Support Wall (Bid Item 3.2) – LUMP SUM price to install sheetpile support wall across the CB60 sediment cap as toe support for the northern revetment berm as indicated on the Drawings. OWNER may directly purchase the steel sheet piling if a financial benefit is determined. If OWNER does purchase sheet piling, Contractor shall be responsible for accuracy of order and the return of extra material for a credit to Brown County. Payment will be made on a LUMP SUM basis once the WORK is completed, surveyed, and approved by the OWNER and ENGINEER.

3.3 Mooring Bollards (Bid Item 3.3) – UNIT PRICE to supply and install seventeen mooring bollards as indicated on the Drawings. Payment will be made on a per EACH basis once the WORK is completed and approved by OWNER and ENGINEER.

3.4 Timber Rub Rail (Bid Item 3.4) – UNIT PRICE to supply and install timber rub rails along the front side of the dockwall as indicated on the Drawings. Payment will be made on a per LINEAL FOOT basis once the WORK is completed, surveyed, approved by the OWNER and ENGINEER.

3.5 Timber Curb (Bid Item 3.5) – UNIT PRICE to supply and install timber curb along the top of the dockwall as indicated on the Drawings. Payment will be made on a per LINEAL FOOT basis once the WORK is completed, surveyed, approved by the OWNER and ENGINEER.

4.1 Dredging of Organic Sediments (Bid Item 4.1) – UNIT PRICE to dredge upper layer of soft, organic sediments from the Fox River and Bay of Green Bay. Includes dredging, loading, hauling, and placement of sediments within the Bay Port Dredged Material Re-Handling Facility as directed by OWNER. Payment will be made on a CUBIC YARD basis once the work is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

4.2 Dredging of Clay (Bid Item 4.2) – UNIT PRICE to dredge native clay material from within the Fox River and Bay of Green Bay. Includes dredging, loading, hauling, and placement of clay on the site for reuse as engineered fill material. Payment will be made on a CUBIC YARD basis once the work is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

5.1 Marine Stone Fill Behind Dockwall (Bid Item 5.1) – UNIT PRICE for supply and placement of marine stone fill material behind dockwall. Payment will be made on a per TON basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

5.2 Marine Stone Fill in Bay (Bid Item 5.2) – UNIT PRICE for supply and placement of aggregated fill material below the water line within the Bay north of the site. Payment will be made on a per TON basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

© GEI 2025

5.3 Marine Stone Fill in Discharge Channel (Bid Item 5.3) – UNIT PRICE for supply and placement of aggregated fill material below the water line within the former discharge channel. Payment will be made on a per TON basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

5.4 Marine Stone Fill in Boat Slip (Bid Item 5.4) – UNIT PRICE for supply and placement of aggregated fill material below the water line within the former boat slip. Placement of marine stone fill in the boat slip will need to be done in a controlled manner to prevent mudwaving of the existing soft sediments within the slip. Placement of marine stone fill is anticipated to be done by conveyor or equivalent means to achieve controlled lift thicknesses. Vibrating wire piezometers will be installed by OWNER and actively monitored by ENGINEER during filling. ENGINEER may require slowing or temporarily stopping placement of fill within the slip to allow pore pressures to dissipate and prevent mudwaving. Payment will be made on a per TON basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

5.5 Site Structural Fill (Bid Item 5.5) – UNIT PRICE for moisture conditioning, placement, grading, and compaction of clay from dredging operations for using in raising site grades and filling the boat slip, bay, and discharge channel above the water line. Payment will be made on a CUBIC YARD basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

5.6 3” Breaker Run (Bid Item 5.6) – UNIT PRICE for supply and installation of breaker run for support under the aggregate base course under the access roads, stockpile areas, and asphalt pad as indicated in the Contract Documents. Conversion rate of 1.75 tons per cubic yard assumed based on WisDOT Section 311.4. Payment will be made on a per TON basis once the WORK is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

5.7 1 ¼” Dense Graded Aggregate Base (Bid Item 5.7) – UNIT PRICE for supply and installation of 1 ¼” dense graded aggregate base for the asphalt pad subgrade and access roadways, and the upper surface of the nonpaved areas of the site as indicated in the Contract Documents. Conversion rate of 1.85 tons per cubic yard assumed based on WisDOT Section 305.4. Payment will be made on a per TON basis once the WORK is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

5.8 Revetment Berm Riprap (Bid Item 5.8) – UNIT PRICE for supply and installation of extra heavy riprap for the face of the northern revetment berm as indicated in the Contract Documents. Payment will be made on a CUBIC YARD basis once the WORK is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

5.9 Remove Existing Topsoil Stockpile from Site (Bid Item 5.9) – UNIT PRICE to find an appropriate end use and remove existing topsoil stockpile from the site. Payment will be made on a CUBIC YARD basis once the WORK is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

5.10 1 ¼” Crushed Stone (Bid Item 5.10) – UNIT PRICE for supply and installation of 1 ¼-inch crushed stone for backfill around the sheetpile anchor wall in the boat slip and Bay as indicated on the Drawings. Payment will be made on a per TON

© GEI 2025

basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

5.11 Marine Structural Fill (Bid Item 5.11) – UNIT PRICE for supply and placement of granular fill above tie rods behind dock wall. Payment will be made on a per TON basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

5.12 Geotextile (Bid Item 5.12) - UNIT PRICE for supply and installation of woven geotextile below tie rods and across site below breaker run. Payment will be made on a per SQUARE YARD basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

5.13 Cut/Fill Existing Site Grades (Bid Item 5.13) – UNIT PRICE for excavation, filling and grading existing site soils to establish subgrade elevations (bottom of breaker run) on upland portions of the site. Payment will be made on a per CUBIC YARD basis once the WORK is completed, surveyed, approved, and the volume of material determined by the ENGINEER.

6.1 Excavation of Detention Ponds (Bid Item 6.1) – UNIT PRICE to excavate two detention ponds on site as outlined in the Drawings. The soil from the excavation shall be reused as compacted fill materials on site. Payment will be made on a CUBIC YARD basis once the WORK is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

6.2 Detention Ponds Clay Liner (Bid Item 6.2) – UNIT PRICE place, grade, and compact a 2-foot-thick clay liner in each of the two detention ponds as indicated on the Drawings. Payment will be made on CUBIC YARD basis once the work is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

6.3 Detention Pond Outlet Structures (Bid Item 6.3) – UNIT PRICE to install two concrete outlet structures in the detention ponds as indicated on the Drawings. Payment will be made on a per EACH basis once the work is completed as determined by the OWNER and ENGINEER.

6.4 West Side Concrete Lined Ditch (Bid Item 6.4) – UNIT PRICE to install approximately 575 feet of concrete lined ditch along the western perimeter of the site as indicated on the Drawings. Payment will be made on a LINEAL FOOT basis once the work is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

6.5 24” Diameter Concrete Stormwater Pipe (Bid Item 6.5) – UNIT PRICE to supply and install 24-inch diameter reinforced concrete pipe at the downstream end of the west side concrete lined ditch and from each of the two detention ponds as indicated on the Drawings. Price per foot of pipe includes excavation and backfill of pipe. Payment will be made on a LINEAL FOOT basis once the work is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

6.6 Artesian Well Drain Tile (Bid Item 6.6) – LUMP SUM price to supply and install approximately 500 feet of 6” diameter, perforated. HDPE SDR 17 pipe and discharge to western ditch as indicated on the Drawings. The drain tile pipe will be bedded and backfilled within a minimum 12” layer of clean stone. Payment

© GEI 2025

will be made on a LUMP SUM basis once WORK is completed as determined by the OWNER and ENGINEER.

6.7 Stone Drainage Swale (Bid Item 6.7) – UNIT PRICE to construct approximately 715 feet of drainage swale along the south side of the asphalt pad as indicated on the Drawings. Payment will be made on a LINEAL FOOT basis once the work is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

6.8 12" Diameter Concrete Stormwater Pipe (Bid Item 6.8) – UNIT PRICE to supply and install 12-inch diameter reinforced concrete pipe across the access roads as indicated on the Drawings. Price per foot of pipe includes excavation and backfill of pipe. Payment will be made on a LINEAL FOOT basis once the work is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

7.1 Electrical Distribution and Transformers (Bid Item 25) – LUMP SUM price to install electrical service from the metering station to the disconnect locations on the northern and southern portions of the site as indicated on the Drawings. Power will be run from Bylsby Avenue to a metering station near the truck scale by the power utility. Payment will be made on a LUMP SUM basis once work is completed as determined by the OWNER and ENGINEER.

8.1 Asphalt Pad (Bid Item 8.1) – UNIT PRICE for supply and installation of a 38,720-square yard asphalt pad on the northern portion of the site as indicated on the Drawings. Payment will be made on a per ACRE basis once the WORK is completed, surveyed, approved, and the quantity of material determined by the ENGINEER.

8.2 Truck Scale A (Bid Item 8.2) – LUMP SUM price to supply and install a bi-directional truck scale as indicated on the Drawings. The scale shall be a Rice Lake Survivor OTR Steel Deck truck scale, or equivalent. WORK includes installation of concrete approach ramps, kiosks on each end of scale, and installation of AWS software system.

8.3 Flint Hills Resources Dockwall Repair (Bid Item 8.3) – LUMP SUM price to investigate section of dockwall experiencing loss of gravel between sheets and repair using grout bags or another method approved by OWNER and ENGINEER. Payment will be made on a LUMP SUM basis once work is completed as determined by the OWNER and ENGINEER.

9.1 Post-Construction Restoration (Bid Item 9.1) – LUMP SUM price for final site restoration, including trash removal, repair of access roadways, seeding of disturbed vegetated areas, and removal of temporary utilities and facilities. Payment will be made on a LUMP SUM basis once work is completed as determined by the OWNER and ENGINEER.

9.2 Equipment and Material Demobilization (Bid Item 9.2) – LUMP SUM price to demobilize construction equipment, excess materials, and personnel from the site. Payment will be made on a LUMP SUM basis once work is completed as determined by the OWNER and ENGINEER.

© GEI 2025

PART 2 - PRODUCTS

A. Not Used.

PART 3 - EXECUTION

A. Not Used.

END OF SECTION

© GEI 2025

SECTION 31 20 00

EARTHWORK

PART 1 - GENERAL

1.01 WORK INCLUDES

A. Excavating, separating, hauling, stockpiling, backfilling, compacting, and grading of soils. The WORK of this Section may pertain in whole or in part to site filling and grading and construction of site access roads. The section also includes dewatering.

1.02 RELATED SECTIONS

A. Section 02 10 00 – Site Preparation.

B. Section 32 90 00 - Final Landscaping.

1.03 REFERENCES

A. Latest version of American Society for Testing and Materials (ASTM) standards:

1. ASTM D 698, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3)).

2. ASTM D 1556, Standard Test Method for Density and Unit Weight of Soil in-Place by the Sand-Cone Method.

3. ASTM D 1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 [2,700 kN-m/m^3]).

4. ASTM D 2216, Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock.

5. ASTM D 2487, Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).

6. ASTM D 4220, Standard Practices for Preserving and Transporting Soil Samples.

7. ASTM D 4318, Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

8. ASTM D 6913, Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis

9. ASTM D 6938, Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).

10. ASTM D 7928, Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis

B. Latest edition of the Wisconsin Department of Transportation Standard Specification for Construction.

© GEI 2025

B. OSHA 29 CFR Part 1926, Occupational Safety and Health Standards - Excavations.

1.04 SUBMITTALS

A. Not used.

1.05 DUST & MUD CONTROL

A. Control dust at the Site by moistening exposed surfaces of dry soil or other approved methods in accordance with the perimeter air monitoring work plan or as directed by the Owners Representative.

B. Do not track mud off the Site or onto temporary access roads. Immediately remove mud from any/all public roadways and temporary access roads at no cost to the Owner.

PART 2 - PRODUCTS

2.01 CLAY

A. Clay soils consist of natural soil classified as CL or CH, and free from wood, peat, rocks larger than 4 inches, or other unsuitable material, obtained from on-site dredging activities or from off-site sources.

B. Clay for use in detention basin clay liners shall be managed to keep it clean at all times. CONTRACTOR shall not mix with other site soils.

2.02 MARINE STRUCTURAL FILL

A. Clean soils consisting of well-graded sand, well-graded sand and gravel, well-graded crushed stone or gravel, or other approved granular material, of 2 in. maximum size, free from organic and deleterious materials. Classified as GW, GP, SW, or SP in Unified Soil Classification System.

B. For granular fill, maximum fines content shall be 10% passing No. 200 sieve.

2.03 1 ¼ CRUSHED STONE

A. Crushed stone placed as backfill around the sheetpile anchor wall shall consist of a crushed stone, crushed concrete, reprocessed material, or blended material in with a gradation conforming to a nominal diameter ranging from ¾ inch to 1-1/4 inches and having a maximum fines (P200) content of 5%.

2.04 MARINE STONE FILL

A. Marine stone fill placed in boat slip or bay north of site shall consist of clean aggregate material obtained from a local borrow source approved by ENGINEER. Maximum rock or stone size not to exceed 12 inches in diameter and P200 less than 5%.

B. Broken concrete from on site may be used for marine stone fill provided pieces do not exceed 24 inches in largest dimension.

© GEI 2025

2.05 BREAKER RUN

A. Material shall be clean, sound, hard, dense, durable, field or quarry stone which is free from seams, cracks, or other structural defects. It shall be angular material from shot rock (blasted) or crushed rock having substantially all face of which have resulted from artificial crushing.

B. Gradation: Furnish stone or concrete processed through a primary crusher set to produce material predominantly 6 inches or less in at least one dimension, and which is not further screened or crushed.

2.06 DENSE GRADE CRUSHED STONE

A. Material shall be clean, sound, hard, dense, durable, field or quarry stone which is free from seams, cracks, or other structural defects. It shall be angular material from shot rock (blasted) or crushed rock having substantially all face of which have resulted from artificial crushing. Material shall conform to WisDOT Section 305.

B. Only acceptable material is crushed limestone, crushed concrete is not allowed.

C. Aggregate Gradation Requirements

D. Gradation: 1 ¼ inch material – WisDOT Section 305.

2.07 TOPSOIL

A. In accordance with Section 32 90 00.

PART 3 - EXECUTION

3.01 PREPARATION

A. Preparation in accordance with Section 01 89 00.

3.02 STOCKPILING

A. Imported and/or excavated material shall be stockpiled in designated areas. CONTRACTOR shall coordinate stockpile and access locations with OWNER's use. CONTRACTOR will maintain all access roads to the stockpile in good driving condition.

B. Excavated or imported materials shall be stockpiled free of incompatible soil, clearing debris, or other objectionable materials.

C. Stockpiles shall be graded to drain and a temporary seeding applied as slope achieve final grades. Any area idle for a period of 30 days shall be seeded or protected from erosion in suitable fashion.

3.03 PLACEMENT AND GRADING

A. Place general fill and structural fill to the lines and grades, to required levels, profiles, contours, and elevations.

© GEI 2025

B. Structural fill for subgrade shall be placed and compacted in uniform lifts not exceeding 8-inches in thickness and compacted to 95% of modified Proctor.

C. Soils obtained from dredging activities shall be moisture conditioned as necessary to meet compaction requirements. This may include spreading and discing soils to allow soils to dry or by adding lime or cement at CONTRACTOR'S discretion. No additional compensation will be made for moisture conditioning soils.

D. Clay liner for detention ponds shall be placed in lifts not exceeding 6-inches in thickness and compacted to 95% of standard Proctor at a moisture content at or above optimum.

E. General fill shall be placed in uniform lifts and compacted to support the construction equipment being used to move and place the fill. This applies to green space areas and diversion berms for surface water control.

F. Breaker run shall be placed in lifts no greater than 16 inches and compacted with a vibratory drum roller.

3.04 GRADE DOCUMENTATION

A. In accordance with Section 01 71 23 – Field Engineering and Surveying.

3.05 PUMPING AND DRAINAGE

A. At all times during construction, maintain and operate proper equipment and facilities to remove all water entering excavations and keep such excavations dry so as to obtain a satisfactory subgrade allowing construction.

B. CONTRACTOR shall grade excavations and surrounding areas to minimize ponding and direct drainage to common extraction location. Diversions shall be used to minimize surface water flow into the construction area.

3.06 CLEANUP AND DISPOSAL OF DEBRIS

A. Remove and dispose of surplus materials and debris from site as instructed by the OWNER.

3.07 FIELD QUALITY CONTROL

A. Field quality assurance inspection and testing will be performed by the CQA technician.

B. Where compaction of a material is required, provide access and time for CQA technician to complete testing.

C. If tests indicate WORK does not meet specified requirements, remove WORK, replace, and retest at CONTRACTOR's expense.

D. Testing frequencies for construction quality assurance are defined in Table 1 below. Test locations shall be selected at random by the Engineer's representatives.

© GEI 2025

Table 1 - Testing Frequency for Construction Quality Assurance

Test	ASTM Standard	Frequency
Grain Size	D 6913	1 sample for every 5,000 cyd or less
Moisture Density Curve	D 1557	5 pt curve for every 5,000 cyd or less of material placed
In-Place Density and Water Content	D 6938	1 test for every 1,000 cyd placed

END OF SECTION

© GEI 2025

SECTION 31 32 19

GEOTEXTILE

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Geotextile for separation and filtering application between subgrade soils and aggregate materials.

1.2 REFERENCES

A. ASTM D3786 - Standard Test Method for Hydraulic Bursting Strength of Knitted Goods and Non-woven Fabric - Diaphragm Bursting Strength Test Method (Mullen Burst).

B. ASTM D4355 - Standard Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus).

C. ASTM D4533 - Standard Test Method for Trapezoid Tearing Strength of Geotextiles.

D. ASTM D4632 - Standard Test Method for Break Load and Elongation of Geotextiles (Grab Method).

E. ASTM D4751 - Standard Test Method for Determining Apparent Opening Size of a Geotextile.

F. ASTM D5261 - Standard Test Method for Measuring Mass Per Unit Area of Geotextile.

G. ASTM D6241 - Standard Test Method for the Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe.

1.3 SUBMITTALS

A. Pre-installation: Submit prior to geotextile deployment:

1. Origin (supplier’s name and production plant) and identification (brand name and number) of resin.

2. Statement from geotextile manufacturer certifying that the geotextile meets the requirements of this Section.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping:

1. Manufacturer shall identify rolls of geotextiles with following:

a. Manufacturer’s name.

b. Product identification.

c. Roll number.

© GEI 2025

d. Roll dimensions.

B. Storage and Protection:

1. Contractor will provide on-site storage area for geotextile rolls from time of deliver until the material is installed.

2. Contractor shall protect geotextile from dirt, water, ultraviolet light exposure, and other sources of damage.

3. Preserve integrity and readability of geotextile roll labels.

4. Rolls which do not have proper identification at delivery will not be accepted and will not be allowed on site.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Geotextile for subgrade separation shall be a geotextile made from woven polypropylene fibers, and meeting the properties defined in Section 2.2.

2.2 SOURCE QUALITY CONTROL

A. Geotextile Properties:

Property	Test Method	Frequency	Minimum Site Value
CBR Puncture Strength, lb	ASTM D6241	90,000 ft^2	500
Grab Tensile Strength, lb	ASTM D4632	90,000 ft^2	248
Trapezoidal Tear Strength, lb	ASTM D4533	90,000 ft^2	90
Apparent Opening Size, US Sieve	ASTM D4751	90,000 ft^2	30
UV Resistance, % (after 500 hours)	ASTM D4355	per formulation	70

B. Geotextile shall be stock products.

C. Geotextile shall be comprised of polymeric yarns, or fibers, oriented into stable network which retains its structure during handling, placement, and design loads.

D. At geotextile manufacturer’s discretion and expense, additional testing of individual rolls may be performed to more closely identify noncomplying rolls and to qualify individual rolls.

PART 3 - EXECUTION

3.1 PREPARATION

© GEI 2025

A. Manufacturer Certification

1. Manufacturer shall provide the ENGINEER with documentation certifying materials supplied are in conformance with the Specifications listed above.

3.2 INSTALLATION

A. Preparation:

1. During placement of geotextiles, care shall be taken not to entrap in or beneath geotextiles stones, depressions, or moisture that could damage geotextile, cause clogging of drains or filters, or hamper subsequent seaming.

B Geotextile Deployment:

1. On slopes, anchor geotextile securely and deploy geotextile down slope in controlled manner to continually keep geotextile in tension.

2. Secure geotextile with sandbags or equivalent in presence of wind. Do not remove weight until replaced with cover material.

3. Cut geotextiles with geotextile cutter (hook blade). Protect adjacent materials from potential damage during cutting of geotextile.

4. Prevent damage to underlying materials and minimize slippage during placement of geotextile.

5. Visually examine entire geotextile surface before seaming for potentially harmful foreign objects, such as needles. Remove foreign objects encountered or replace geotextile.

6. No excess tensile stresses should occur in geotextile during placement.

7. CONTRACTOR shall protect geotextile from damage due to equipment, runoff and erosion, or other events until covered with gravel and filter sand. Any damaged areas in the judgement of the CQA technician shall be repaired by CONTRACTOR at no cost.

C. Seaming Procedures:

1. Overlap geotextile a minimum of 24 inches along edge seams and 36 inches on butt end seams and secure with sand bags or gravel. CONTRACTOR may sew seams at their convenience.

2. Allow no excess material to be present beneath geotextile.

3.3 FIELD REPAIR PROCEDURES

A. Cover tears, holes, or rips in the geotextile with a patch of geotextile overlapping the defect 36 inches in all directions.

END OF SECTION

© GEI 2025

SECTION 31 62 23

DRIVEN STEEL PILES

PART 1 GENERAL

1.01 SCOPE OF WORK

A. Work Included: Provide all plant, labor, materials, equipment, and services for the complete installation of steel HP piles as specified here and on the Contract Documents. Drive the piles into glacial till and bedrock. Piles covered under this specification include the following (indicated pile capacities are un-factored service loads):

1. Crane Pad Piles: Pile driven to refusal in the glacial till or bedrock. Working Load capacity as specified on Drawings.

B. The Contractor is responsible for furnishing piles of sufficient length to obtain the required capacities. The work includes, but is not limited to, the following:

1. Fabricating and delivering piles, with tip reinforcement.
2. Driving piles in accordance with the latest requirements of the Wisconsin State Building Code.
3. Cutting off piles at the required elevations and disposing of cutoff portions.
4. Splicing piles as needed.
5. Driving indicator piles.
6. Performing wave equation analyses and performing dynamic load tests with restrikes on all indicator piles.
7. Contractor will be responsible for protection and safety of buildings and other structures during pile driving operations near and over buildings or other structures.

1.02 RELATED WORK SPECIFIED IN OTHER SECTIONS

A. The following items of related work are specified and included in other Sections of the Specifications:

1. Demolition under DEMOLITION, SECTION 02 41 00.
2. Steel dockwall under STEEL COMBINATION DOCKWALL, SECTION 31 41 16.
3. Concrete under REINFORCED CONCRETE, SECTION 03 31 30.

B. Examine all Drawings and all Sections of the Specifications for requirements and provisions affecting the work of this Section.

1.03 QUALITY ASSURANCE

A. Except as noted, work shall conform to the latest editions of the following codes specifications and standards

1. American Society for Testing and Materials (ASTM)
2. American Welding Society (AWS)
3. American Institute of Steel Construction (AISC)

© GEI 2025

4. The State of Wisconsin, Department of Transportation "Standard Specifications " (latest edition).

5. The Wisconsin State Building Code

B. Comply with all rules, regulations, laws and ordinances of the State of Wisconsin and all other federal, state, and local authorities having jurisdiction. All labor, materials, equipment and services necessary to make work comply with such requirements shall be provided without additional cost to the Owner.

C. Compliance with all conditions within the Regulatory Approvals as attached to the Contract Documents.

D. All welding shall be performed by operators who have been previously qualified by tests as prescribed in the "ANSI/AASHTO/AWS Bridge Welding Code D1.5-88". Evidence that welders meet qualification requirements shall be submitted to the Engineer before welding is begun.

1.04 SUBMITTALS

A. Contractor Qualifications – Submit:

1. List of at least 5 previous projects (with year completed) involving pile driving of steel HP piles.

2. Resumes of pile driving subcontractor’s project manager and superintendent, demonstrating at least 10 years of relevant experience.

3. Qualifications and experience of Subcontractor's Professional Engineer performing the wave equation analyses.

4. Submit documentation of experience for Contractor prequalification in accordance with this section at the time of the bid.

B. Shop Drawings – Submit:

1. Shop drawings showing design details of piles including, but not limited to, sizes, reinforcing, tip details, splice details, welding procedures for both shop and field welds, and other items pertinent to pile fabrication and installation.

C. Pile Installation Plan – Submit a description of the pile driving procedures, including:

1. Equipment.

2. Method of lifting and aligning piles at the correct location including the use of false work and templates.

3. Methods to remove obstructions.

D. Manufacturer's Literature – Submit technical and performance literature for:

1. Pile driving hammer and related equipment, including cap block and cushion.

2. Pile splicing system.

3. Pile tip reinforcement and cutting shoes.

E. Wave Equation Analysis – Submit:

1. A complete wave equation analysis for each pile type, size, load, pile orientation, and pile driving system. The wave equation analyses shall compute the required driving resistance to achieve the required capacities and the pile stresses during driving using data for the proposed piles, driving equipment, and procedures. The wave equation analyses shall be performed and stamped by a Wisconsin Registered Professional Engineer engaged by the Contractor. For each

© GEI 2025

proposed driving system, the required pile ultimate capacity shall be on the rising portion of the capacity versus blow count curve. Evaluate the driving requirements necessary to obtain a factor of safety of 2.5 for sustained compression loads and 2.0 for transient compression loads based on dynamic load tests. Provide analyses using toe quakes of both 0.2 and 0.4 inches and additional toe quakes as deemed appropriate by the contractor's engineer. Demonstrate that the predicted driving stresses are within appropriate limits for preventing damage during pile driving.

2. Preliminary final pile driving resistance will be determined based on wave equation analyses of the actual hammer/cap block/cushion/pile system proposed by the Contractor and verified by dynamic load test.

F. Indicator Piles – Submit:

1. Prior to installing indicator piles, submit a tabular summary of anticipated pile lengths at each pile location. The tabular summary shall include pile designation and estimated length as determined from the anticipated tip elevation and cutoff elevation, including necessary stickup above ground surface for dynamic testing. The tabular summary shall be submitted at least seven (7) days prior to driving indicator piles and shall be revised and resubmitted within five (5) days after completion of driving indicator piles. The Subcontractor shall furnish indicator piles at least ten (10) feet longer than anticipated production pile lengths.

2. Indicator Pile Location Plan. At a minimum, drive two indicator piles per crane pad distributed in two separate quadrants of the crane pad. Submit indicator pile location plan for review and approval by the Engineer.

G. PDA Dynamic Load Testing – Submit test reports containing:

1. Description of the pile driving equipment and testing procedures.

2. CAPWAP analysis for end of driving and restrike.

3. Hammer energy and maximum pile stresses.

4. Recommended driving criteria based on the dynamic testing.

H. Installed Pile Data - Submit during the work:

1. Weekly drawings of as-driven/as-installed pile locations.

2. Final pile location plan, certified by Registered Land Surveyor or by a Registered Professional Engineer.

3. Pile installation records for each pile as the work progresses.

4. The Subcontractor shall provide at the completion of pile installation operations and at least five days prior to removal of pile installation equipment from the site, a final As-Installed pile location plan, indicating surveyed location, pile designation, tip elevation, and cutoff elevation, certified by a registered Land Surveyor in the State of Wisconsin.

I. Data for piles – Submit during the work:

1. Mill certificates for all steel piles provided for piling. Provide certificates, prior to driving, that provide the chemical composition, yield point, and ultimate strength of the steel proposed for use.

2. Mill certificates for steel driving shoes.

© GEI 2025

1.05 PRODUCT HANDLING

A. Piles shall be handled with care to prevent damage to piles. Damaged piles will be rejected and replaced at no additional cost to the Owner. Piles shall be stored with a space beneath the piles and situated to prevent being exposed to standing water.

1.06 EXAMINATION OF SITE

A. Inspect the site personally to evaluate the conditions affecting the work. No claim for additional costs will be allowed because of lack of knowledge of any existing conditions discernible from observation at the site, adjoining properties, and available sources of information. Copies of available drawings of existing on-site structures may be inspected at the office of the Owner.

1.07 SUBSURFACE CONDITIONS

A. The results of a subsurface exploration program are presented in the geotechnical report. The subsurface information was obtained primarily for use in preparing the foundation design and is included in the Contract Documents for the Contractor's information. Interpretation of the subsurface data for purposes of the work of the Contract shall be the sole responsibility of the Contractor. The Contractor should note that the subsurface data pertains only to the conditions at the boring locations at the time of the investigations.

1.08 LINES AND GRADES

A. Lay out pile locations and establish all elevations required. Provide and maintain an approved baseline and benchmark located on or close to the work.

B. Employ, within the Contract Price, a licensed Registered Land Surveyor or a Registered Professional Engineer, familiar with this type of work, who shall establish lines and levels.

C. Determine the correct location of piles. Keep up-to-date records for the amount of heave of individual piles. Establish actual pile locations. Show locations of the centers of as-driven piles on a drawing in relation to the design location and submit to the Owner within five days after the pile is driven. Include the following on the drawings:

1. Column lines and north arrow.
2. Each pile identified by a separate number.
3. Elevation of top of each pile, prior to cutting, to nearest 0.1 foot.
4. Elevation of tip of each pile to nearest 0.1 foot.
5. Deviation from plan location in inches, measured to nearest ¼ inch.

D. Submit to the Owner within two weeks after the completion of installation of all piles, a plan, certified by the Surveyor, showing the as-installed location of all piles to the nearest ¼ inch.

1.09 OBSERVATION AND TESTING

A. Full-time inspection of pile installation operations will be performed by the Engineer. Drive no piles except in the presence of the Engineer.

B. Cooperate with the engineer to document all pertinent data relative to the installation of piles. The record for each pile shall include:

1. The date and time of installation.
2. Type and size of hammer; pressure and stroke at which operated.

© GEI 2025

3. Total penetration, shown by point elevation and cutoff elevation.
4. Number of blows for each foot of penetration.
5. Depth of changes in hammer stroke or driving energy during driving.
6. Rate of penetration in blows per inch for the final six (6) inches.
7. Pertinent notes as to unusual behavior of a pile.

C. Inspection: Engineer shall have access to work. Contractor shall make available all materials and equipment necessary at all times for purposes of inspection. Contractor shall cooperate with and assist the Engineer's inspection. Inspection by the Engineer may include, but is not necessarily limited to:

1. Condition of piles prior to installation.
2. Condition of the hammer prior to driving including:
3. Inspection and verification of cap block alignment and thickness.
4. Inspection of pile cushion material, thickness and condition.
5. Inspection and verification of trip valves and wedge locations and condition of hammer.
6. Location of piles prior to installation.
7. Measurement of penetration resistance.
8. Verification of hammer performance and energy.
9. Location of piles after installation.
10. Condition of piles after installation.

D. Approvals given by the Owner or their Engineer shall not relieve the Contractor of responsibility for performing the work in accordance with the plans and specifications.

E. Drive indicator piles at locations approved by the Engineer.

F. Perform dynamic load testing, including CAPWAP analysis, on the indicator piles for each construction phase. Do not drive any production piles until the load tests for each construction phase have been completed and evaluated to the satisfaction of the Engineer. The PDA testing shall include both end-of-driving testing and restrike testing (at least 24 hours after end-of-driving).

G. Within 3 days of completion of testing, prepare and submit a dynamic pile load test report stamped by a Professional Engineer registered in the State of Wisconsin. Include in the report a discussion of hammer performance (transferred energies and efficiency), pile integrity (driving stresses and damage), pile capacity, CAPWAP analysis results, and recommended final pile driving criteria for each pile type based on the dynamic load testing. Perform CAPWAP analyses for all indicator piles, both at end of driving and at restrike.

H. Based on the results of dynamic testing, if the Engineer determines the hammer is not working adequately, the hammer will be rejected, and the Contractor shall supply a replacement hammer. In this instance, the Contractor shall drive new indicator piles and perform dynamic testing on the new indicator piles at no additional cost to the Owner. Piles driven with the rejected hammer shall be re-driven with the new hammer.

I. If, at any time during production pile driving, the Contractor proposes to change the pile installation equipment, which is different from the equipment used to install the indicator and dynamic load test piles, additional dynamic pile testing shall be performed by the Contractor using the new equipment at the Contractor's expense.

© GEI 2025

PART 2 PRODUCTS

2.01 MATERIALS

A. Steel Piles:

1. Crane Pad piles: Piles shall be of the size indicated on the Contract Drawings. HP piles are to consist of new ASTM A992 Grade 50 steel.

B. Piles Splices:

1. Piles may have up to 1 splice located at least 20 feet below the underside of concrete cap.

PART 3 EXECUTION

3.01 SEQUENCE OF OPERATIONS AND EQUIPMENT REQUIREMENTS

A. Provide at least one fully equipped pile driving rig at the site during the work, and mobilize additional rigs as needed to complete the work on schedule.

B. Provide all special pile driving required to work in restricted areas

C. Drive indicator piles at locations approved by the Engineer.

D. Perform dynamic load testing, including CAPWAP, on all the indicator piles. Do not drive any production piles until the dynamic load tests have been completed and the load test report submitted and evaluated to the satisfaction of the Engineer.

E. The use of followers will not be permitted.

3.02 DRIVING AND DRILLING EQUIPMENT

A. Install piles with approved modern equipment.

B. Fix the leads of the pile driving rig at two points. The points shall be at least half the length of the pile apart to maintain the pile and hammer in axial alignment at the correct plan location during the entire driving operation. The leads shall extend down to the lowest point at which the hammer must operate.

C. When the determination of the final penetration resistance is being made, operate the pile driving hammer in accordance with the approved final driving criteria confirmed by the dynamic load testing. Maintain the boiler or air pressure recommended by the manufacturer and employ proper size hose and connections. For double-acting diesel hammers, provide a means to measure the bounce chamber pressure, and operate the hammer to achieve the appropriate bounce chamber pressure. Boilers and compressors shall be equipped with pressure gauges or other devices, calibrated against the rated hammer energy. When directed by the Engineer, a gauge readable from the ground surface shall be provided to determine the actual pressure delivered to the hammer. For variable stroke hammers provide means of visual verification of the operating stroke.

D. Provide a cap block in the hammer as recommended by the manufacturer and modeled in the wave equation analyses. Replace the cap block when worn or as directed by the Engineer.

E. Hammers used to drive production piles shall be of the same type and have the same rated energy as the hammer used to drive the indicator piles for the pile load test program. If the Contractor proposes to change the hammer, the Engineer will be the sole judge of whether the Contractor will be required to perform additional wave equation analyses and dynamic load tests with the new hammer. The wave equation analyses

© GEI 2025

shall be performed and stamped by a Wisconsin Registered Professional Engineer engaged by the Contractor.

1. Vibratory Hammers: Vibratory hammers will be allowed when pile capacity determination by blow count or driving energy is not required and for initial seating of piles.

3.03 HANDLING

A. Inspect piles, and where the pile is impaired, the piles shall be repaired unless the pile is damaged to such extent that it is rejected. Rejected piles will be replaced at no additional cost to the Owner. Support pile laterally during lifting and driving, but not unduly restrained from rotation in the leads. Where pile orientation is essential, take special care to maintain the orientation during driving and drilling.

3.04 PILE INSTALLATION

A. Before installation, mark and number each pile in 5-foot intervals along its entire length. In addition, provide marks at 1-foot intervals for the top 40 feet of the pile.

B. Install all piles at the proper locations shown on the Drawings. Check pile locations during installation and take appropriate corrective measures if the pile moves off location during installation as specified below. Advise the Owner immediately when this becomes necessary.

C. Pile driving shall be performed using a vibratory hammer where practicable.

D. Drive piles continuously and without interruption for at least the final 10 feet of penetration. If driving should be interrupted before final penetration is reached, the record of the penetration shall not be considered representative until after at least a 12-inch penetration has been obtained after the resumption of driving, except as otherwise directed by the Owner.

E. Pile support: All piles shall be supported by using either a two-level template with the top level and the lower level approximately 15 feet apart or by the use of fixed lead or by a method approved by the Engineer.

F. Contractor shall notify Engineer 48 hours prior to pile installation, and no piles shall be installed to final position without the presence of the Engineer's Representative.

G. Provide a vertical reference stake, at least 2 feet long and marked clearly in inches, which can be used to measure the penetration of the pile with each blow as the pile is driven. Support the stake firmly against a fixed object no more than 5 feet away from the pile.

H. Drive the piles to a final penetration resistance determined by the PDA dynamic load testing. Required penetration resistance of piles may be revised by The Owner based on review of Contractor submittals.

I. Maximum permissible driving resistance limits to avoid pile damage will be determined based on wave equation analysis of the actual hammer/cap block/cushion/pile system proposed by the Contractor. Stop pile driving if the driving resistance exceeds these limits.

J. Immediately after a pile is installed, establish a reference point on the pile and measure its elevation on the pile for the purpose of checking heave of the pile tip. After all piles within a radius of 20 feet have been installed, determine the elevation of the reference point on the pile. If uplift of ½ inch or more has occurred, redrive the pile to its original elevation, and deeper, if necessary, to the required final driving resistance. After

© GEI 2025

redriving each pile, reestablish the elevation of the reference point. Redrive as often as necessary until the measured uplift on any pile is less than ½ inch.

K. Drive no piles within 20 feet of concrete filled piles or concrete structures less than three days old.

3.05 OBSTRUCTIONS

A. If pile driving is stopped due to an obstruction above the glacial till, notify the Engineer immediately. If a pile encounters a deep obstruction or excessive driving resistance above the glacial till, the pile shall be relocated as directed by the Engineer and additional piles may be required.

B. Refer to the test boring logs and available plans showing the site conditions. The Contractor is advised that obstructions may be encountered buried within the fill and soil materials.

C. Where obstructions make it impossible to install certain piles to the required depth at the correct location, attempt to remove or clear the obstruction by excavation. Excavation to a depth of 10 feet below existing ground surface to remove obstructions shall be at the Contractor's expense. If the Engineer determines that obstructions should be removed by excavation to a depth greater than 10 feet, the Contractor will be reimbursed for the additional work. If the Engineer determines that additional piles are required, in lieu of excavation, the Contractor will be reimbursed for the additional piles with predrilling (if any) ordered by the Engineer.

D. Fill any holes left by pulled piles with sand.

3.06 RECORDS

A. Keep a record, independent of that which may be made by the Owner, of all pertinent data relative to the installation of piles. This record shall be available for the Owner's inspection, being transmitted to them as they may direct. The record for each pile shall include:

1. The date and time of installation.
2. Kind and size of hammer; pressure and speed at which operated.
3. Total penetration, shown by point elevation and cutoff elevation.
4. Number of blows for each foot of penetration.
5. Rate of penetration in blows per inch for the final 6 inches.
6. Pertinent notes as to unusual behavior of a pile.

3.07 DEFECTIVE, DAMAGED, AND MIS-DRIVEN PILES

A. Piles damaged due to internal defects or improper driving or lack of strength will not be accepted. Such defective and damaged piles, as well as piles driven out of proper location or in excess of the tolerances specified, shall be replaced at no additional cost to the Owner.

B. At the option of the Owner, measures for correcting any deficient pile shall consist of one of the following without any additional compensation.

1. Completely removing the defective pile and installing a new pile.
2. Abandoning the defective pile and installing additional piles. The abandoned piles shall be cut a minimum of 2 feet below the mudline.

© GEI 2025

3. Modification of pile caps.

4. Load redistribution.

3.08 PILE SPLICES

A. When required, splice piles by full penetration butt-joint arc weld to produce joints developing 100% of the pile strength in tension and compression and bending. All welds shall conform to AWS D1.1 Structural Welding Code and all electrodes shall be E70XX.

B. Piles may be spliced in the leads. Secure the sections of piles to be spliced in proper alignment such that there is no eccentricity between the axes of the two spliced lengths, or angle between them, after the splice has been completed.

C. Mechanical drive-fit splices will not be accepted.

3.09 TOLERANCES AND CRITERIA FOR ACCEPTANCE

A. HP Piles:

1. Install piles as close as practicable to the plan location.

2. A maximum horizontal deviation from the correct location at cutoff elevation equal to 3 inches will be permitted.

3. A maximum deviation from design cutoff elevation equal to 1.0 inch will be permitted.

4. Pulling piles into position will not be permitted.

5. When otherwise acceptably installed piles exceed the specified tolerances and are subject to eccentric loading, the Owner will then analytically determine the total loads on individual piles. If the load on any pile exceeds 110% of the specified load capacity, make corrections in accordance with a design provided by the Owner at no additional cost to the Owner. The cost of analysis and redesign of the pile cap, and if needed, the addition of any additional piles shall be charged to the Contractor.

3.10 CUTTING OFF PILES

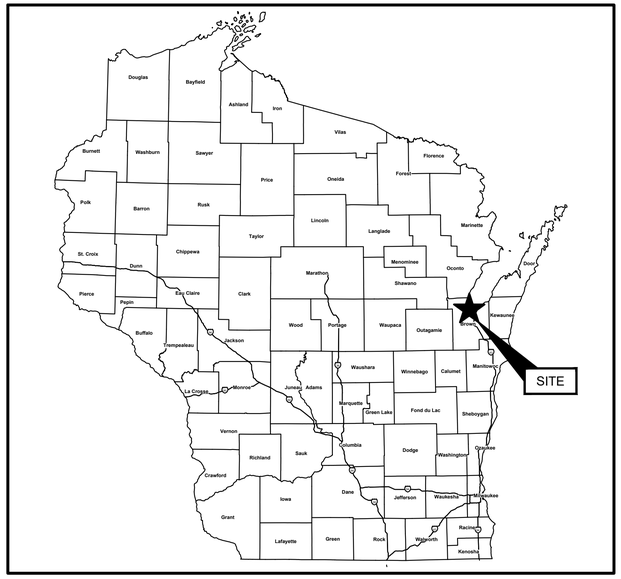
A. Cut off the tops of all piles square within 1 inch of the elevations shown on the Drawings. The pile cutoffs shall become the property of the Contractor and shall be removed from the site.

END OF SECTION

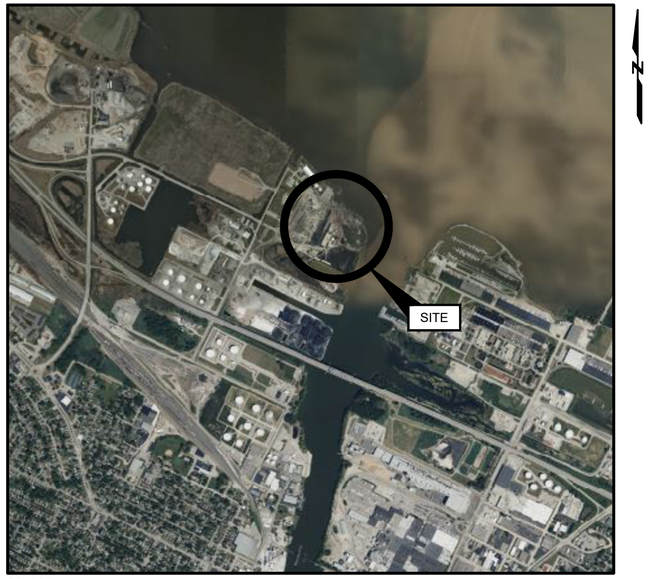
© GEI 2025

BROWN COUNTY PORT DEVELOPMENT PROJECT

1530 BYLSBY AVENUE
GREEN BAY, WISCONSIN



STATE MAP
(NOT TO SCALE)



SOURCE:
© 2023 MICROSOFT CORPORATION © 2022 MAXAR © CNES (2022) DISTRIBUTION AIRBUS DS

SITE LOCATION MAP
(NOT TO SCALE)

SHEET INDEX

DRAWING NO.	SHEET NO.	TITLE
G-100	G-100	COVER
G-110	G-110	GENERAL NOTES
G-120	G-120	LEGEND
C-100	C-100	EXISTING CONDITIONS
C-110	C-110	SOIL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN
C-120	C-120	PROPOSED SITE PLAN
C-130	C-130	GRADING PLAN
C-140	C-140	PROPOSED DREDGING PLAN
C-141	C-141	PROPOSED DREDGING SECTIONS
C-200	C-200	ACCESS ROAD UTILITY PLAN 0+00 TO 10+00
C-210	C-210	ACCESS ROAD UTILITY PLAN 10+00 TO 13+00
C-303	C-303	PROPOSED SECTIONS
C-500	C-500	SITE DETAILS
C-501	C-501	SITE DETAILS
C-503	C-503	WATER DETAILS
C-504	C-504	STORM DETAILS
C-505	C-505	SANITARY DETAILS
SM001	SM001	DOCKWALL GENERAL NOTES
SM002	SM002	DOCKWALL SEQUENCING CONSTRAINTS
SM101	SM101	DOCKWALL PLAN & ELEVATION
SM301	SM301	DOCKWALL SECTIONS - SHEET 1 OF 3
SM302	SM302	DOCKWALL SECTIONS - SHEET 2 OF 3
SM303	SM303	DOCKWALL SECTIONS - SHEET 3 OF 3
SM311	SM311	SECTIONS - SHEET 1 OF 4
SM312	SM312	SECTIONS - SHEET 2 OF 4
SM313	SM313	SECTIONS - SHEET 3 OF 4
SM314	SM314	SECTIONS - SHEET 4 OF 4
SM401	SM401	PLAN - SOUTH END
SM402	SM402	PLAN - DOCKWALL DETAILS
SM403	SM403	PLAN - NORTH END
SM501	SM501	DOCKWALL DETAILS - SHEET 1 OF 3
SM502	SM502	DOCKWALL DETAILS - SHEET 2 OF 3
SM503	SM503	DOCKWALL DETAILS - SHEET 3 OF 3
SM504	SM504	MARINE BOLLARD DETAILS
SM505	SM505	CRANE PAD DETAIL
SR301	SR301	REVETMENT SECTIONS 1
SR302	SR302	REVETMENT SECTIONS 2

UTILITIES AND INTERESTED PARTIES:

GREEN BAY WATER UTILITY 631 SOUTH ADAMS STREET, GREEN BAY, WI 54301 920-448-3480	WATER
NEW WATER 2231 N QUINCY STREET, GREEN BAY, WI 54302 920-432-4893	WASTEWATER
WISCONSIN PUBLIC SERVICE (WPS) 700 NORTH ADAMS STREET, GREEN BAY, WI 54307 800-450-7260	NATURAL GAS
WISCONSIN PUBLIC SERVICE (WPS) 700 NORTH ADAMS STREET, GREEN BAY, WI 54307 800-450-7260	ELECTRIC
AMERICAN TRANSMISSION CO 801 O KEEFE RD, DE PERE, WI 54115 (920) 338-6500	ELECTRIC
SPECTRUM 2350 S ONEIDA ST, GREEN BAY, WI 54304 833-949-0036	COMMUNICATIONS
AT&T 615 S MILITARY AVE, GREEN BAY, WI 54303 844-535-6390	COMMUNICATIONS
TDS TELECOM 789 S ONEIDA ST, ASHWAUBENON, WI 54304 866-571-6662	COMMUNICATIONS

GENERAL NOTES

IMPROVEMENTS COVERED IN THESE PLANS SHALL BE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION 2025 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

THE PLACEMENT OF PAVEMENT MARKINGS SHALL BE DONE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2011 EDITION, AS AMENDED.

IMPROVEMENTS COVERED SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS: ACI 318, USS STEEL SHEET PILE DESIGN, AISC 14TH EDITION, FHWA GEC NO. 7, AND FHWA GEC NO. 4.

PREPARED FOR:

BROWN COUNTY, WI
PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI
(920)492-4950

PREPARED BY:

GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

GEI PROJECT NO. 2201593

FOR BID

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	ISSUED FOR BID	MJV

NOT FOR CONSTRUCTION

DWG. NO. G-100

SHEET NO. 1 OF 37

THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, IS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF GEI CONSULTANTS AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF GEI CONSULTANTS.

GENERAL NOTES:

1. EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED THEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT VERSION, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE BROWN COUNTY STANDARD SPECIFICATIONS.

2. PROJECT COORDINATE SYSTEM: HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 HIGH ACCURACY REFERENCE NETWORK (HARN). WISCONSIN COUNTY SYSTEMS: BROWN COUNTY, US FOOT (HARN/WI.BROWNWI-F). VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD88) NOTE: TO CONVERT FROM THE CHART DATUM (INTERNATIONAL GREAT LAKES DATUM OF 1985(IGLD85)) TO NAV88: IGLD85 + 0.44'+ NAVD88.

3. THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH THE AASHTO; A POLICY ON GEOMETRIC DESIGN OF ROADS AND STREETS, CURRENT VERSION OR PER THE CITY OF GREEN BAY STANDARD SPECIFICATION & CONSTRUCTION STANDARDS.

4. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

5. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS AS APPROPRIATE. PLAN REVISIONS MAY NEED CITY COUNTY APPROVAL.

6. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION PER WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAILS.

7. ALL AREAS DISTURBED OR THOSE EXPOSED DURING CONSTRUCTION SHALL BE RE-VEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. RE-VEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, CONSISTENT WITH THE LANDSCAPING PLANS, AND APPROVED BY THE LANDSCAPE ARCHITECT. HOWEVER, THE TYPE OF RE-VEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.

8. PRIOR TO ANY CONSTRUCTION, A PRE-CONSTRUCTION CONFERENCE BETWEEN THE CITY OF GREEN BAY, THE DEVELOPER, THE CONTRACTOR, UTILITY COMPANIES, ANY AFFECTED PARTIES, AND ANY OTHER ENTITY THE CITY OR DEVELOPER MAY REQUIRE SHALL CONVENE.

9. THE DEVELOPER OR HIS/HER DESIGNATED AGENT SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE DEVELOPER OR HIS/HER DESIGNATED AGENT SHALL FURNISH THE CITY OF GREEN BAY, AND OWNER, ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE OWNER, PRIOR TO FINAL ACCEPTANCE. FINAL “AS- BUILTS” DRAWINGS SHALL BE DELIVERED TO THE COUNTY IN PAPER FORM AND IN CAD .DWG FORM.

10. THE CITY OF GREEN BAY CITY COMMISSION SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT AND/OR RIGHT OF WAY DEED DOCUMENTS HAVE BEEN SIGNED AND RECORDED, AND ALL MATERIALS, PIPING, STRUCTURES HAVE BEEN INSPECTED AND TESTED TO THE CITY ENGINEER'S APPROVAL.

11. ALL UTILITY CONSTRUCTION WORK TO BE ACCEPTED BY THE CITY OF GREEN BAY INTO THEIR UTILITY SYSTEM AND ALL WORK IN PUBLIC RIGHTS OF WAY OR EASEMENTS MUST BE DONE IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION AND CITY OF GREEN BAY STANDARDS AND SPECIFICATIONS.

12. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS/HER WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE ENGINEER.

13. PRIOR TO ANY CONSTRUCTION, THE OWNER OR HIS/HER DESIGNATED AGENT SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES, SUCH AS, BUT NOT LIMITED TO, THE CITY OF GREEN BAY, WISCONSIN DEPARTMENT OF NATURAL RESOURCES, BROWN COUNTY, ETC. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS, SUCH AS, BUT NOT LIMITED TO, RIGHT-OF-WAY CONSTRUCTION ACCESS, SOIL EROSION AND SEDIMENT CONTROL, AND ANY ADDITIONAL PERMITS NECESSARY TO COMPLETE THE PROJECT IN ITS ENTIRETY.

PROJECT SAFETY NOTES:

1. PROJECT SAFETY SHALL BE IN ACCORDANCE WITH THE LAWS OF THE STATE OF WISCONSIN AND THE WISCONSIN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S CURRENT REGULATIONS.

WATER AND WASTEWATER NOTES:

1. THE CONTRACTOR SHALL CONTACT THE CITY ENGINEER TO COORDINATE UTILITY MAIN, STRUCTURE, AND UTILITY TIE-INS AND NOTIFY HIM/HER AT LEAST 48 HOURS PRIOR FOR INSPECTION SERVICES.

2. ALL WATER AND WASTEWATER TAPS INTO THE CITY OF GREEN BAY PUBLIC SYSTEM SHALL BE DONE BY THE CITY OF GREEN BAY PUBLIC WORKS DEPARTMENT. A MINIMUM OF 72 HOURS NOTICE WILL BE GIVEN TO THE DEPARTMENT FOR WORK REQUIRED FOR TAPPING ACTIVITIES. PERMITS ARE REQUIRED FROM THE CITY OF GREEN BAY ENGINEERING DEPARTMENT FOR WATER, WASTEWATER, AND STORM WATER TAPS INTO THE PUBLIC SYSTEM.

3. THE CONTRACTOR MUST OBTAIN A WATER METER FROM THE CITY OF GREEN BAY PUBLIC WORKS DEPARTMENT FOR ALL PUBLIC WATER USED DURING CONSTRUCTION.

4. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS PER CITY OF GREEN BAY SPECIFICATION REQUIREMENTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY THE INSPECTOR FROM THE CITY OF GREEN BAY ENGINEERING DEPARTMENT.

5. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING DISINFECTION, QUALITY TESTING OR PRESSURE TESTING.

6. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES ON THE PUBLIC SYSTEM. VALVE OPERATION MUST BE COORDINATED WITH THE CITY OF GREEN BAY PUBLIC WORKS DEPARTMENT.

7. FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, THE CONTRACTOR SHALL NOTIFY MISS DIG A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ADJOINING PROPERTY OWNER TO LOCATE PRIVATE UTILITIES THAT MAY BE PLACED NOT ONLY ON PRIVATE PROPERTY BUT ON PUBLIC PROPERTY.

TRAFFIC CONTROL NOTES:

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.

2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR FOR HIGHWAY AND STRUCTURE CONSTRUCTION, AND,THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

3. ALL PUBLIC STREETS THAT ARE TO BE CLOSED OR INTERRUPTED DUE TO THE CONSTRUCTION ACTIVITIES WILL REQUIRE ORDINATION WITH THE CITY OF GREEN BAY ENGINEERING DEPARTMENT FOR A PUBLIC SERVICE ANNOUNCEMENT. A MINIMUM OF 72 HOURS NOTICE WILL BE GIVEN TO THE CITY ENGINEERING DEPARTMENT FOR SAID CLOSURES OR INTERRUPTIONS.

4. PARKING RESTRICTIONS MUST BE POSTED 24 HOURS BEFORE WORK STARTS AND WILL BE AT THE EXPENSE OF THE CONTRACTOR. CONTACT THE POLICE DEPARTMENT AND PUBLIC WORKS DEPARTMENT WHEN RESTRICTIONS ARE PLACED.

5. THE HOURS OF CONSTRUCTION OPERATIONS WILL FOLLOW THE NOISE RESTRICTIONS AS BE PER THE CITY OF GREEN BAY NUISANCE CODE AND AS SPECIFIED IN THE CITY OF GREEN BAY STANDARD CONSTRUCTION SPECIFICATIONS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION BEST MANAGEMENT PRACTICES.

2. ALL SLOPES SHALL BE SODDED OR SEEDED PER LANDSCAPE PLAN WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.

3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CONTRACTORS CERTIFIED STORM WATER OPERATOR FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY OF GREEN BAY'S HYDROLOGY ENGINEER OR FIELD REPRESENTATIVE, THEY ARE WARRANTED.

4. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

STREET AND DRAINAGE NOTES:

1. ALL FIELD TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS OF ITEMS TO BE INCORPORATED INTO THE CITY UTILITY SYSTEMS. TESTING SHALL BE COORDINATED WITH THE CITY'S INSPECTOR AND HE/SHE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING.

2. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT FOR GAS, ELECTRIC, TELEPHONE, AND CABLE TV, SHALL BE A MINIMUM OF 30".

3. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE TO PROVIDE POSITIVE DRAINAGE TOWARD THE CURB UNLESS OTHERWISE INDICATED DUE TO SPECIAL CIRCUMSTANCES.

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

GENERAL NOTES

SHEET NO.

G-110

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\GENERAL NOTES_LEGEND.dwg - 11/10/2025

SYMBOLS

WATER SUPPLY SYSTEM

EXISTING	PROPOSED	DESCRIPTION
		FIRE HYDRANT
		U.G. WATER VALVE
CS&B	CS&B	CURB STOP & BOX

COMMUNICATION

EXISTING	PROPOSED	DESCRIPTION
C	C	CABLE PEDESTAL
F	F	FIBER PEDESTAL
T	T	TELEPHONE PEDESTAL
F	F	MANHOLE FIBER
T	T	MANHOLE TELEPHONE

SANITARY SEWER SYSTEM

EXISTING	PROPOSED	DESCRIPTION
CO	CO	MANHOLE CLEANOUT
S	S	MANHOLE SANITARY

NATURAL GAS

EXISTING	PROPOSED	DESCRIPTION
		NATURAL GAS METER
		UG NATURAL GAS VALVE

DRAINAGE UTILITIES

EXISTING	PROPOSED	DESCRIPTION
		CATCH BASIN (BEEHIVE)
CB	CB	CATCH BASIN (ROUND)
		CATCH BASIN (CURB INLET)
D	D	MANHOLE STORM
		END SECTION
IE	IE	INVERT ELEVATION

MISCELLANEOUS

EXISTING	PROPOSED	DESCRIPTION
		GUARD POST/BOLLARD
		SIGN POST
		EROSION BALES
		ACCESSIBLE PARKING
		PK NAIL
		PROPERTY CORNER
		MONITORING WELL
		SOIL BORING
		DECIDUOUS TREE
		CONIFEROUS TREE

ELECTRICAL POWER

EXISTING	PROPOSED	DESCRIPTION
E	E	ELECTICAL PEDESTAL
		GUY POLE
		GUY ANCHOR
		LIGHT POLE
E	E	MANHOLE ELECTRIC
		POWER-LIGHT POLE
		POWER POLE
		LIGHT
		POWER TRANSFORMER

HATCH LEGEND

MATERIAL DESCRIPTION	EXISTING PATTERN	NEW PROPOSED PATTERN	MATERIAL DESCRIPTION	EXISTING PATTERN	NEW PROPOSED PATTERN
WETLAND			DEMOLITION		
CONCRETE			HMA, HEAVY DUTY		
BUILDING OUTLINE			HMA, STANDARD DUTY		
GRAVEL/UNPAVED			GRASS/SOD		
SAND			RIPRAP		
SEDIMENT CAP					

LINE TYPES

WATER SUPPLY SYSTEM

EXISTING	PROPOSED	DESCRIPTION
WS	WS	UG WATER SERVICE
WM	WM	UG WATERMAIN

SANITARY SEWER SYSTEM

EXISTING	PROPOSED	DESCRIPTION
SAN	SAN	UG SANITARY SEWER MAIN

DRAINAGE UTILITIES

EXISTING	PROPOSED	DESCRIPTION
STM	STM	UG STORM MAIN
		DRAINAGE AREA BOUNDARY

EROSION CONTROL

EXISTING	PROPOSED	DESCRIPTION
	SF	SILT FENCE

ELECTRICAL POWER

EXISTING	PROPOSED	DESCRIPTION
U/E	U/E	UG ELECTRICAL
O/E	O/E	OVERHEAD ELECTRICAL

NATURAL GAS

EXISTING	PROPOSED	DESCRIPTION
U/G	U/G	UG NATURAL GAS

COMMUNICATION

EXISTING	PROPOSED	DESCRIPTION
COMM	COMM	UG COMMUNICATIONS
	OHL	OVERHEAD COMMUNICATIONS
CATV	CATV	UG CABLE TV
CATV	OHL	OVERHEAD CABLE TV
FIBR	FIBR	UG FIBER OPTIC

TOPOGRAPHY

EXISTING	PROPOSED	DESCRIPTION
		MAJOR CONTOUR
		MINOR CONTOUR

MISCELLANEOUS

EXISTING	PROPOSED	DESCRIPTION
		UNDERGROUND STRUCTURE
		UTILITY REMOVAL
X	X	FENCE LINE
		TREE LINE
		LIMITS OF CONSTRUCTION
ROW	ROW	RIGHT-OF-WAY
		PARCEL LINE
		PROPERTY LINE
		PROPERTY SETBACK
		CONTAMINATION PLUME
		SHORELINE
		CONTAMINATION PLUME BUFFER
LOW	LOW	LIMIT OF WORK

DRAWING NUMBER DESIGNATION

C-01

DISCIPLINE IDENTIFIER

SHEET REFERENCE NUMBER

DISCIPLINE	DISCIPLINE IDENTIFIER
GENERAL	G
KEY PLAN	K
INSTRUMENTATION	I
REMOVAL	R
CIVIL	C
STRUCTURAL	S
STRUCTURAL MARINE	SM
ARCHITECTURAL	A
MECHANICAL/PROCESS	M
ELECTRICAL	E
PLUMBING	P
DETAILS	D

SECTION LEGEND

A / C-01 — INDICATES SECTION DESIGNATION

INDICATES DRAWING NUMBER ON WHICH SECTION IS DRAWN

DETAIL

1 / C-01 — INDICATES DETAIL NUMBER

INDICATES DRAWING NUMBER ON WHICH DETAIL IS DRAWN

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

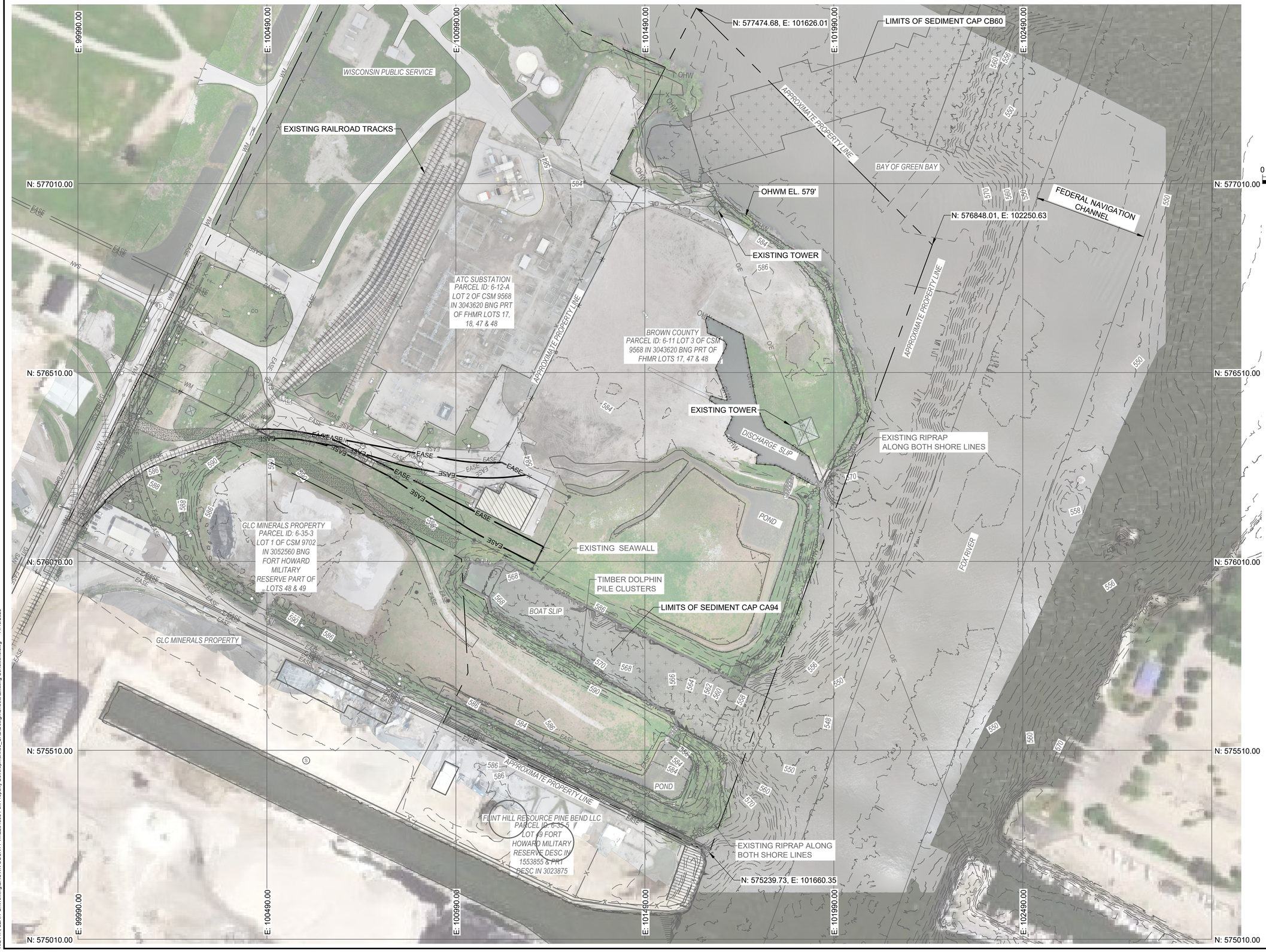
LEGEND

SHEET NO.

G-120

FOR BID

RIUTTA_LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\GENERAL NOTES_LEGEND.dwg - 11/10/2025



GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

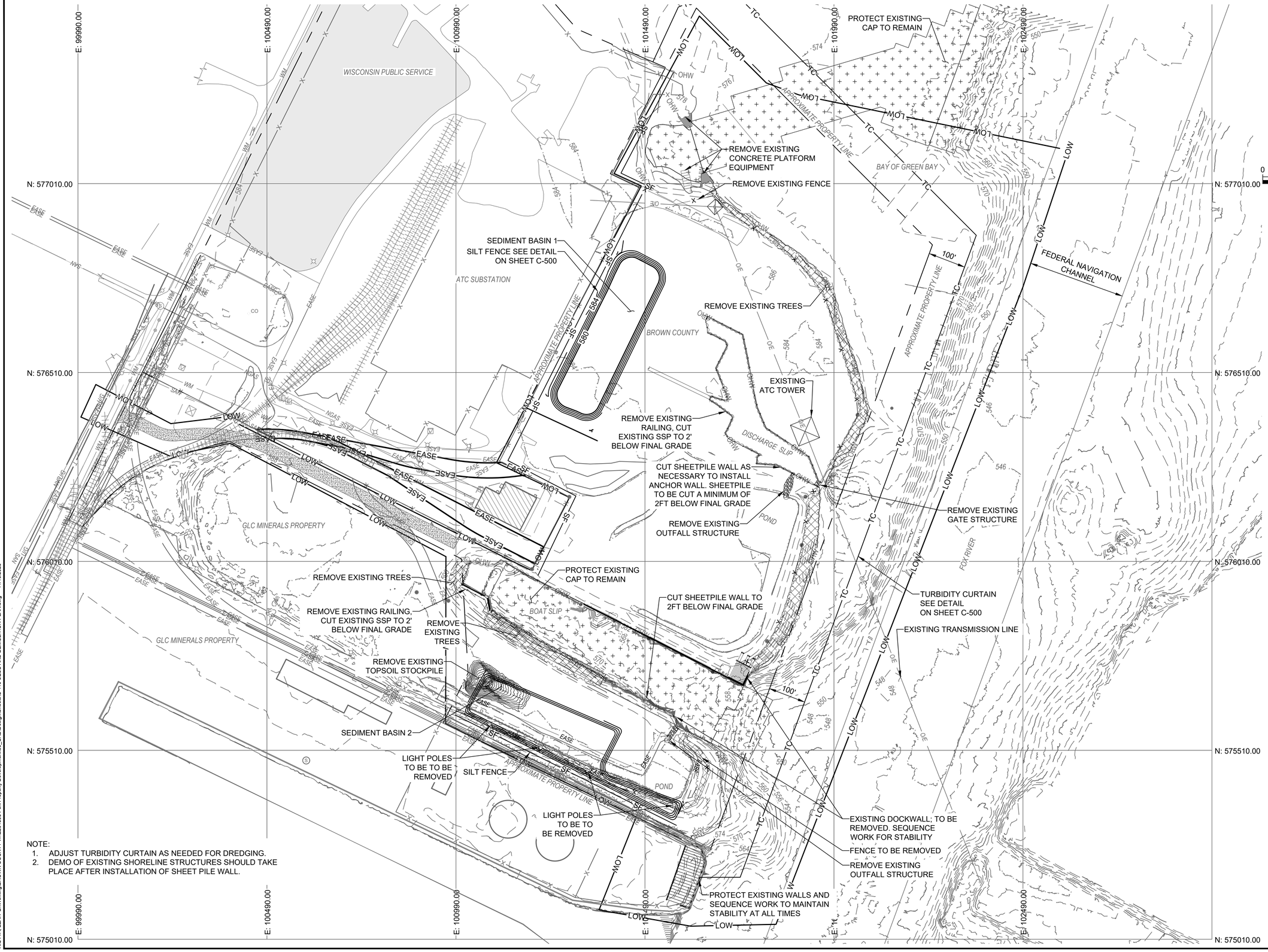
EXISTING CONDITIONS

SHEET NO.

C-100

FOR BID

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Existing Conditions.dwg - 11/10/2025



NOTE:
1. ADJUST TURBIDITY CURTAIN AS NEEDED FOR DREDGING.
2. DEMO OF EXISTING SHORELINE STRUCTURES SHOULD TAKE PLACE AFTER INSTALLATION OF SHEET PILE WALL.

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

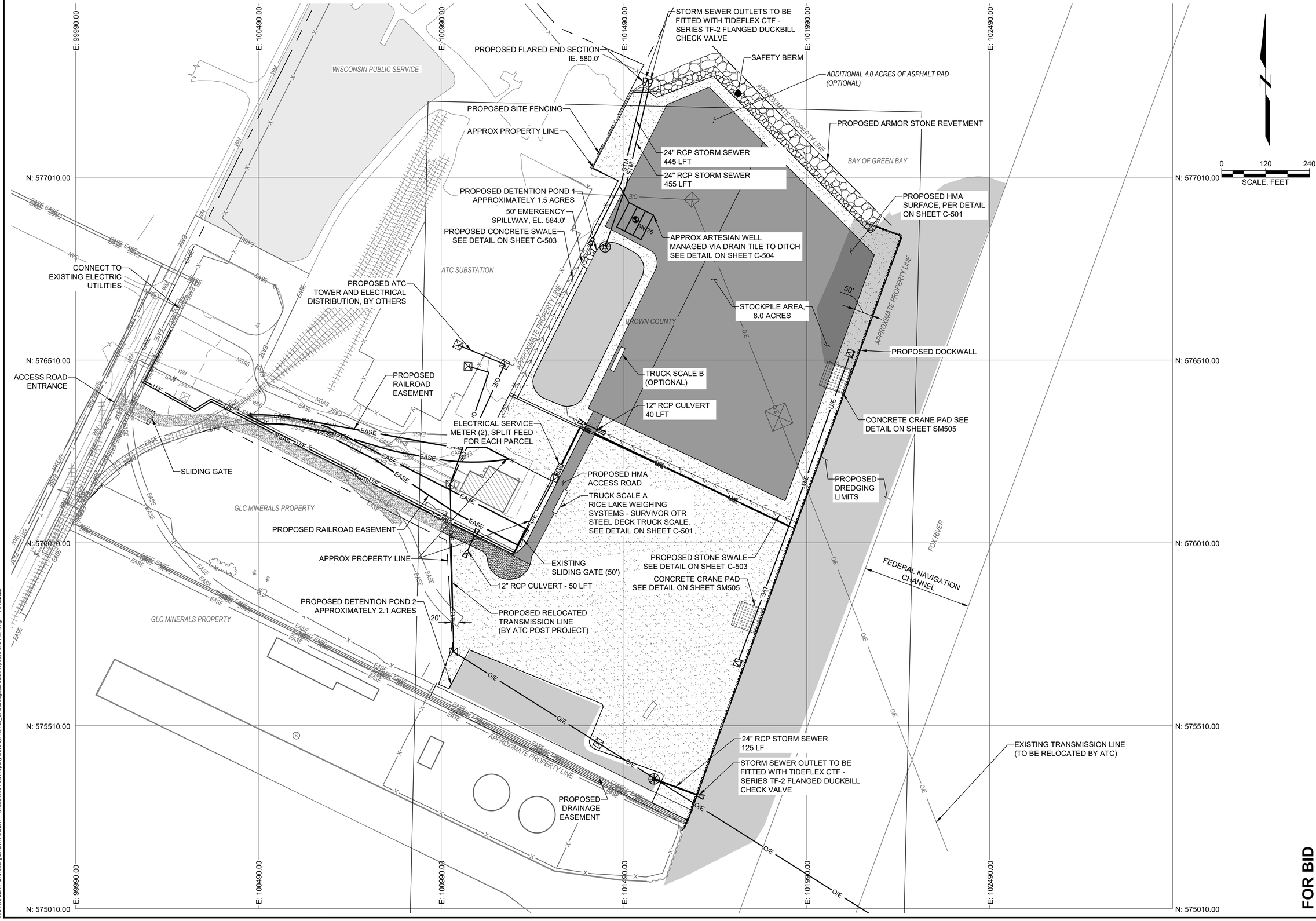
SOIL EROSION AND SEDIMENT CONTROL AND DEMOLITION PLAN

SHEET NO.

C-110

FOR BID

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\C-110 SESC AND DEMOLITION PLAN.dwg - 11/10/2025



RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Proposed Site Plan.dwg - 11/10/2025

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

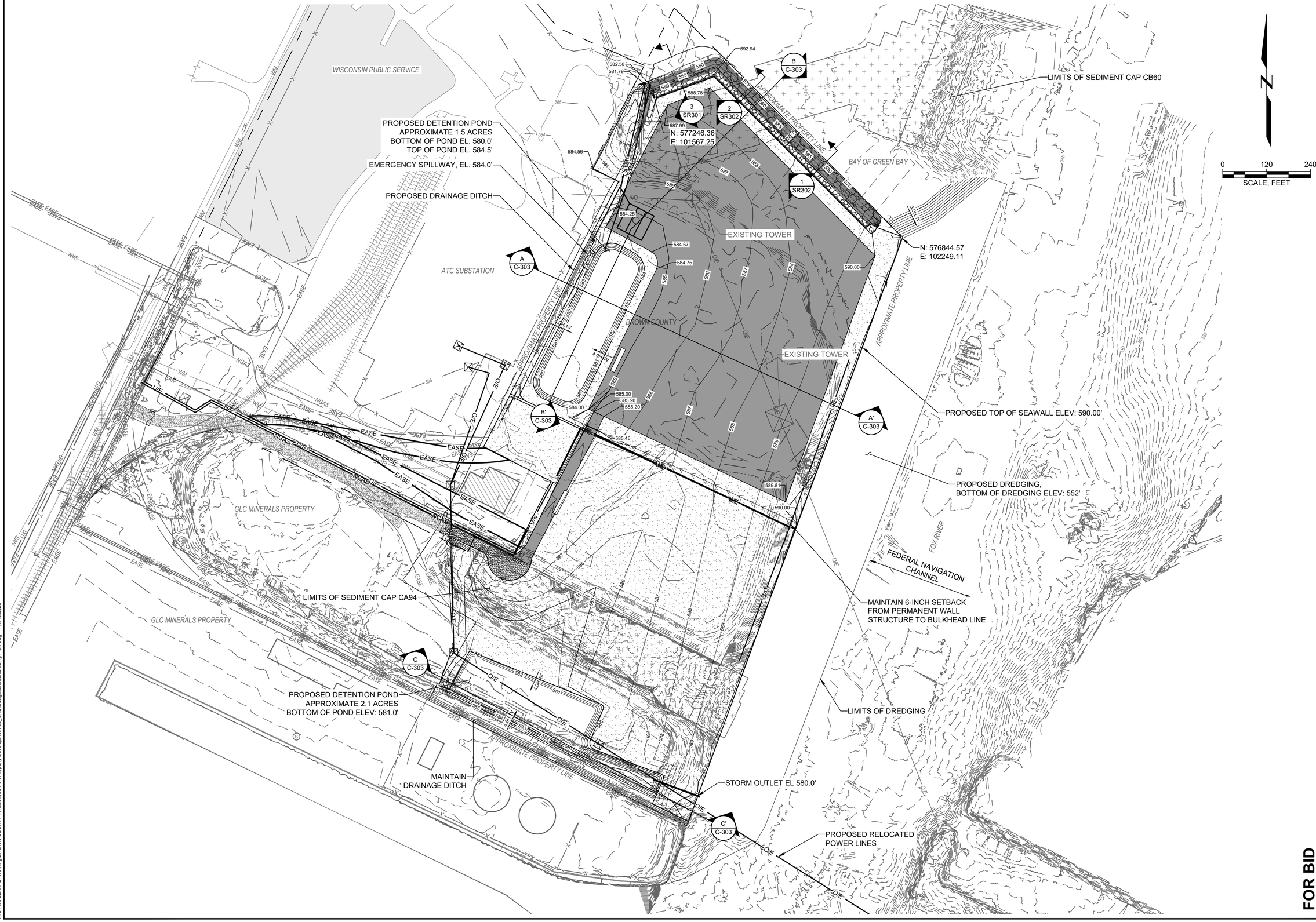
SHEET NAME

PROPOSED SITE PLAN

SHEET NO.

C-120

FOR BID



GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

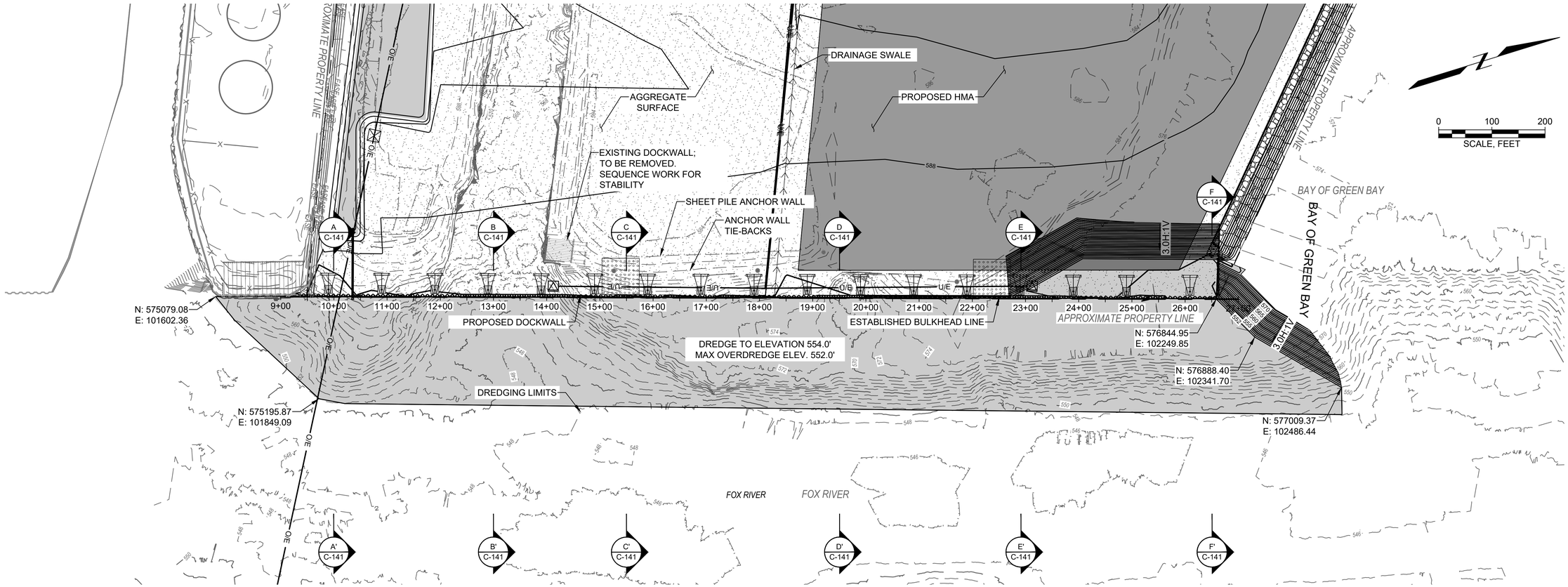
GRADING PLAN

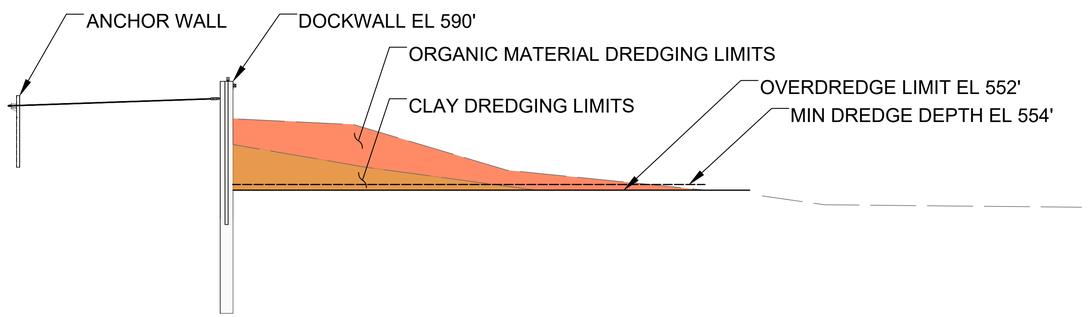
SHEET NO.

C-130

FOR BID

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Grading Plan.dwg - 11/10/2025





TYPICAL SECTION

NO SCALE

DREDGING QUANTITIES

214,910 CYDS	TOTAL EXCAVATION/CUT
113,380 CYDS	ORGANIC MATERIAL
101,530 CYDS	CLAY

NOTES

1. CONTRACTOR SHALL SEQUENCE DOCK WALL CONSTRUCTION WITH DREDGING TO ENSURE NO DREDGING OUTSIDE LIMITS AUTHORIZED IN REGULATORY APPROVALS AND FULL COMPLIANCE WITH DOCK WALL DREDGING/FILLING SEQUENCING CONSTRAINTS AS SHOWN IN THE CONTRACT DOCUMENTS.
2. NO DOCK WALL CONSTRUCTION AND/OR DREDGING SHALL TAKE PLACE UNTIL A PROJECT SEQUENCING PLAN HAS BEEN SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE OWNER.
3. CONTRACTOR SHALL INSTALL AND MAINTAIN TURBIDITY CONTROLS THROUGHOUT CONSTRUCTION.
4. CONTRACTOR SHALL SEQUENCE ALL WORK INCLUDING DEMOLITION TO MAINTAIN STABILITY OF EXISTING STRUCTURES AND SHORELINE. ALL DEMOLITION MATERIAL AND DEBRIS SHALL BE SEGREGATED AND KEPT SEPARATE FROM DREDGE MATERIAL.
5. ON SITE PROJECT BENCHMARK SHALL BE AGREED PRIOR TO ANY SURVEYS AND DREDGING. ALL SURVEYS AND DREDGING SHALL USE AGREED SITE BENCHMARK. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE AGREED PROJECT BENCHMARK.
6. ALL DREDGED ORGANIC MATERIAL (EXCEPT DEBRIS) SHOWN ON THIS SHEET SHALL BE DISPOSED AT THE BAYPORT DISPOSAL SITE.
7. ORGANIC MATERIAL SHALL BE REMOVED WITH A TOOTHLESS BUCKET COMPLYING WITH THE REGULATORY APPROVALS AND THE APPROVED TURBIDITY CONTROL PLAN. ORGANIC MATERIAL SHALL BE REMOVED TO THE DEPTHS SHOWN ON THE CONTRACT DOCUMENTS UNLESS AGREED OTHERWISE WITH THE OWNER. CONTRACTOR SHALL NOTE THAT ENGINEER MAY ADJUST FINISHED CUT ELEVATIONS FOR ORGANIC MATERIAL AS THE WORK PROGRESSES BASED ON MATERIALS FOUND ON SITE.
8. CONTRACTOR SHALL PROVIDE VERIFICATION SURVEY SHOWING REMOVAL OF ALL ORGANIC MATERIAL TO DEPTHS SHOWN ON THE CONTRACT DRAWINGS PRIOR TO COMMENCING DEEPER DREDGING UNLESS APPROVED OR DIRECTED OTHERWISE BY THE ENGINEER.
9. CLAY MATERIAL SHALL BE PROCESSED AS REQUIRED IN THE CONTRACT DOCUMENTS AND USED ON SITE AS ENGINEERED FILL UNLESS APPROVED OTHERWISE BY THE OWNER.
10. CONTRACTOR SHALL NOTE THAT THE PAYMENT LIMIT IS EL 552' AS SHOWN ON THE CONTRACT DOCUMENTS. MINIMUM SHOALING DEPTH SHALL BE 2' ABOVE THE PAYMENT LIMITS AT EL. 554'.
11. ALL DEBRIS SHALL BE SEGREGATED FOR DISPOSAL IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
12. CONTRACTOR SHALL AVOID ANY IMPACTS ON NAVIGATION.
13. CONTRACTOR SHALL PROTECT THE EXISTING WHARF STRUCTURES AND ALL ANCILLARY STRUCTURES FROM DAMAGE DURING THE PROJECT. ANY DAMAGE SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE AUTHORITY.
14. CONTRACTOR SHALL TAKE SPECIAL CARE TO AVOID OVERDREDGE BELOW THE PAYMENT LIMITS CLOSE TO THE DOCK WALL. THE OWNER MAY REQUIRE THE CONTRACTOR TO FILL OVERDREDGE BELOW THE PAYMENT LIMITS WITHIN 40 FEET OF THE FACE OF THE DOCK WALL WITH CRUSHED STONE AT NO ADDITIONAL COST TO THE OWNER.

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

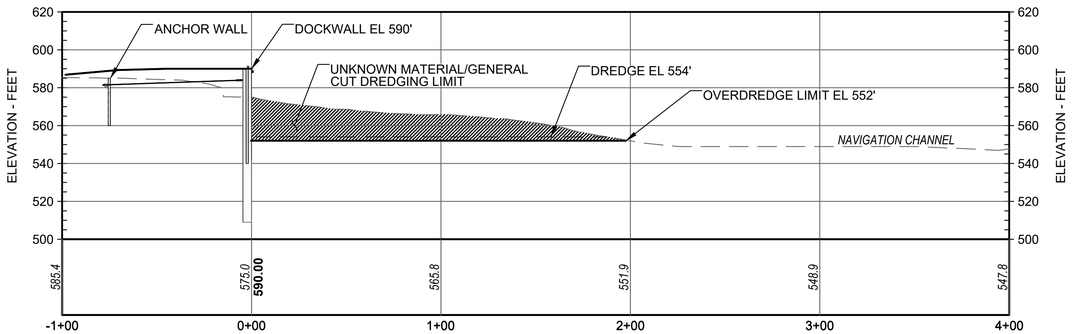
SHEET NAME

PROPOSED DREDGING PLAN

SHEET NO.

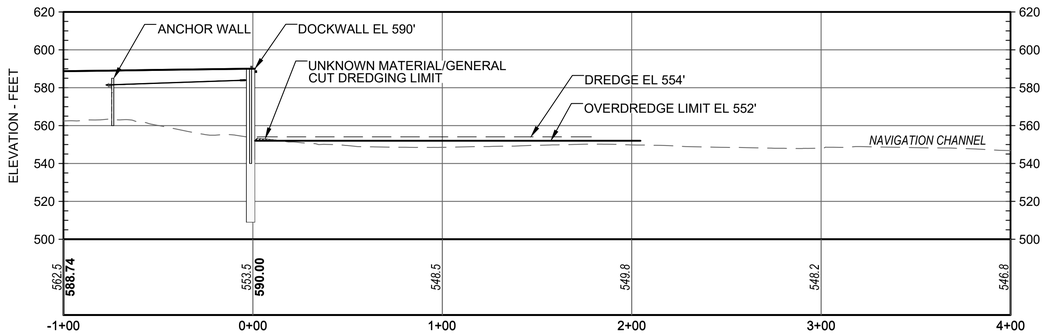
C-140

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Proposed Dredging.dwg - 11/10/2025



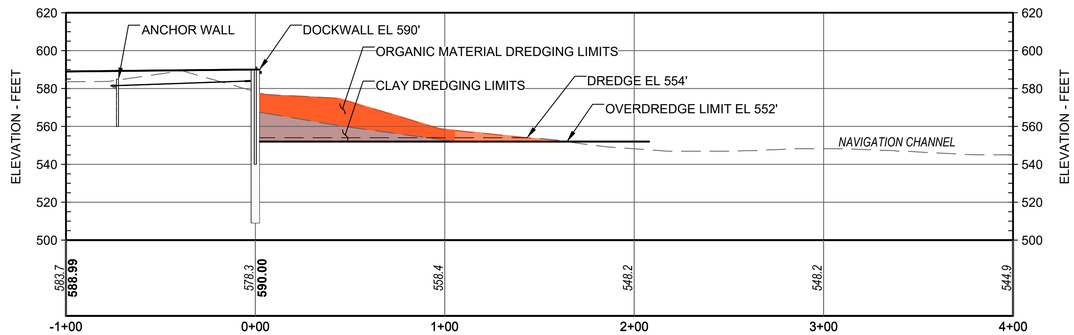
A CROSS SECTION STA. 10+00

SCALE: 1" = 40'



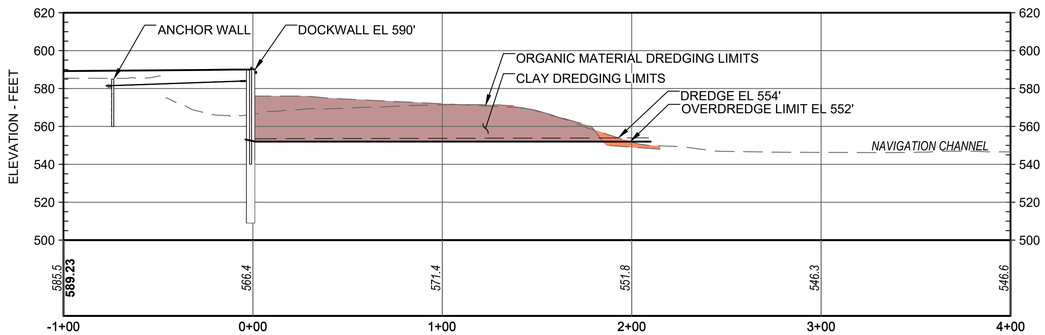
B CROSS SECTION STA. 13+00

SCALE: 1" = 40'



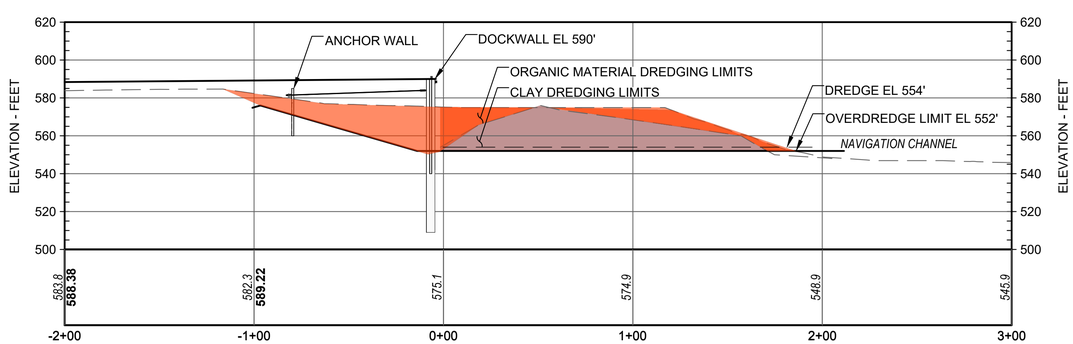
C CROSS SECTION STA. 15+50

SCALE: 1" = 40'



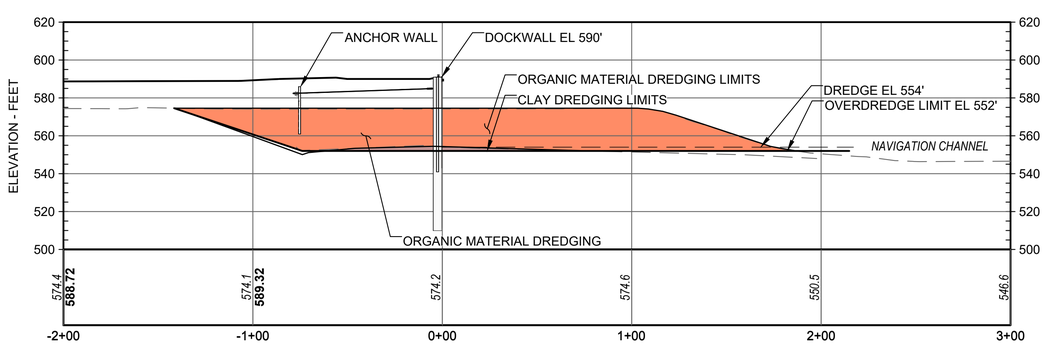
D CROSS SECTION STA. 19+50

SCALE: 1" = 40'



E CROSS SECTION STA. 23+00

SCALE: 1" = 40'



F CROSS SECTION STA. 26+20

SCALE: 1" = 40'

HORIZONTAL SCALE, FEET
0 40 80
0 40 80
VERTICAL SCALE, FEET
NO VERTICAL EXAGGERATION

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

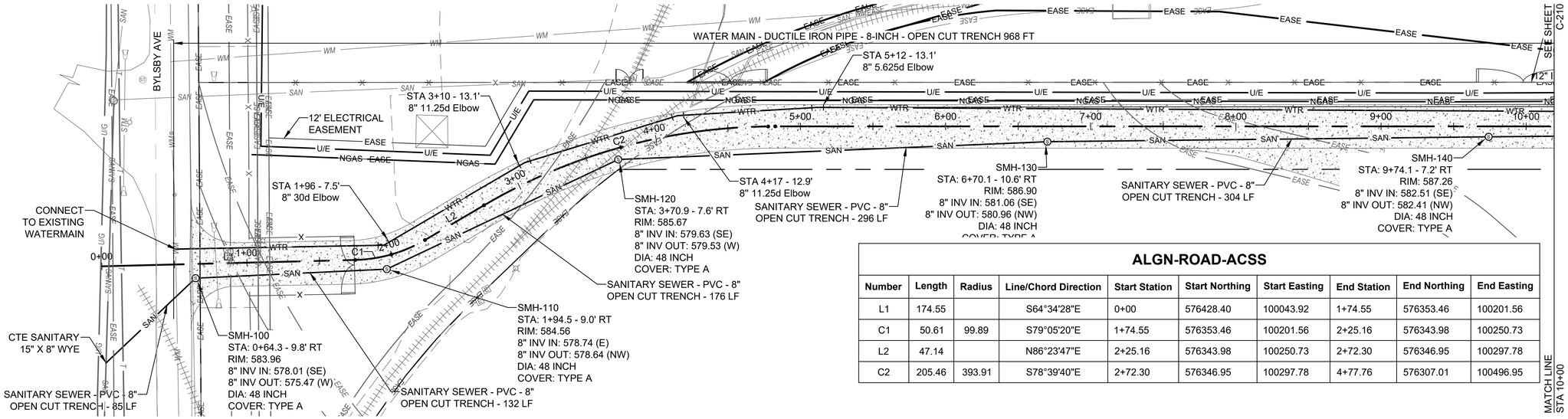
SHEET NAME

PROPOSED DREDGING SECTIONS

SHEET NO.

C-141

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Proposed Dredging.dwg - 11/10/2025

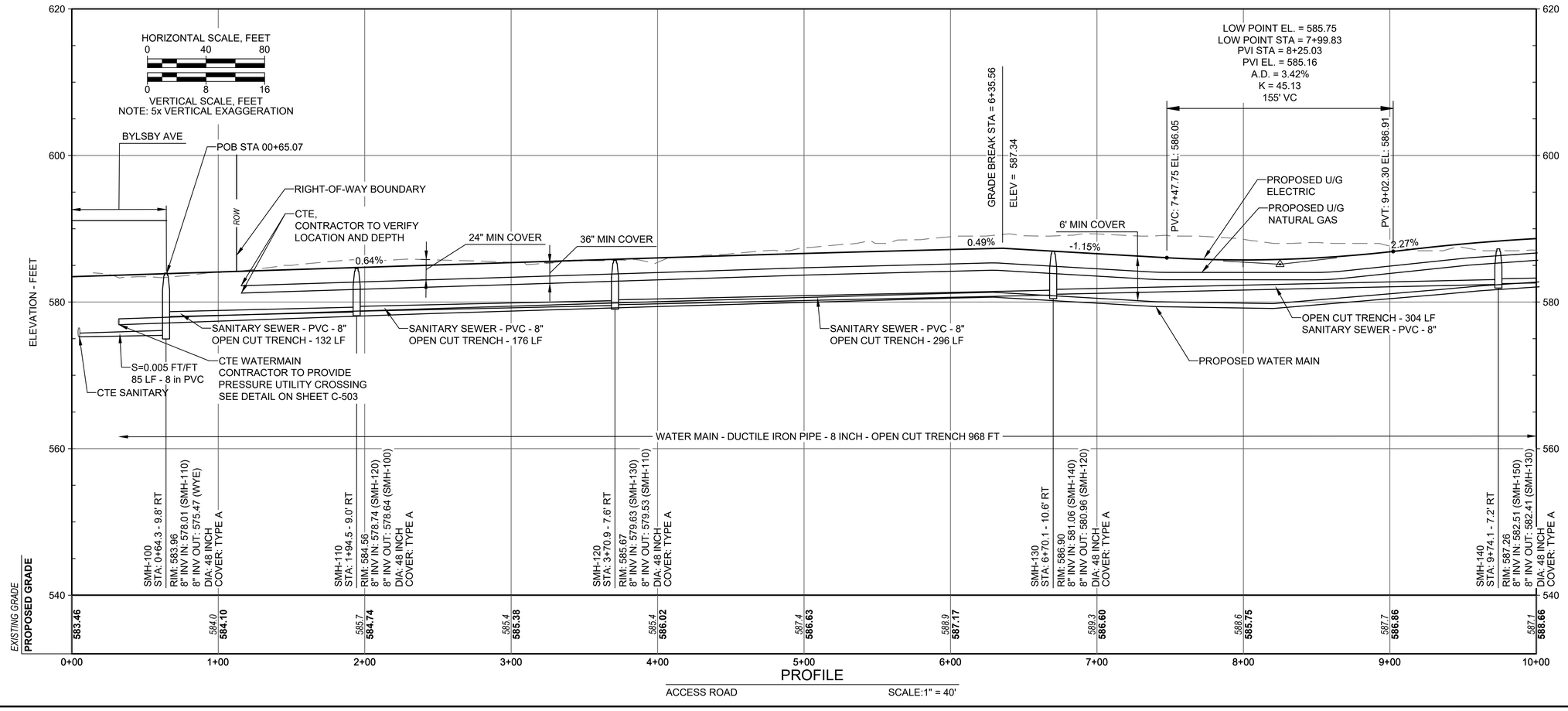


ALGN-ROAD-ACSS

Number	Length	Radius	Line/Chord Direction	Start Station	Start Northing	Start Easting	End Station	End Northing	End Easting
L1	174.55		S64°34'28"E	0+00	576428.40	100043.92	1+74.55	576353.46	100201.56
C1	50.61	99.89	S79°05'20"E	1+74.55	576353.46	100201.56	2+25.16	576343.98	100250.73
L2	47.14		N86°23'47"E	2+25.16	576343.98	100250.73	2+72.30	576346.95	100297.78
C2	205.46	393.91	S78°39'40"E	2+72.30	576346.95	100297.78	4+77.76	576307.01	100496.95

PLAN

ACCESS ROAD SCALE: 1" = 40'



PROFILE

ACCESS ROAD SCALE:1" = 40'

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

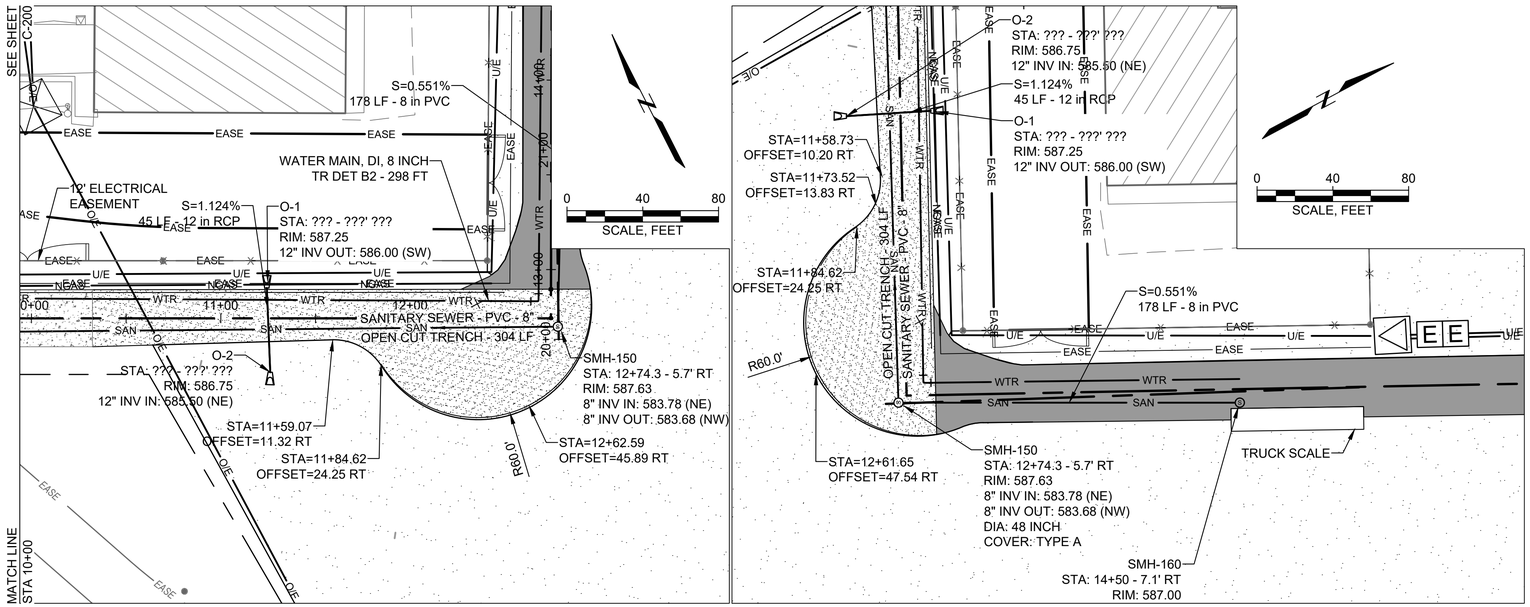
ACCESS ROAD UTILITY PLAN 0+00 TO 10+00

SHEET NO.

C-200

FOR BID

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\ACCESS ROAD P&P.dwg - 11/10/2025

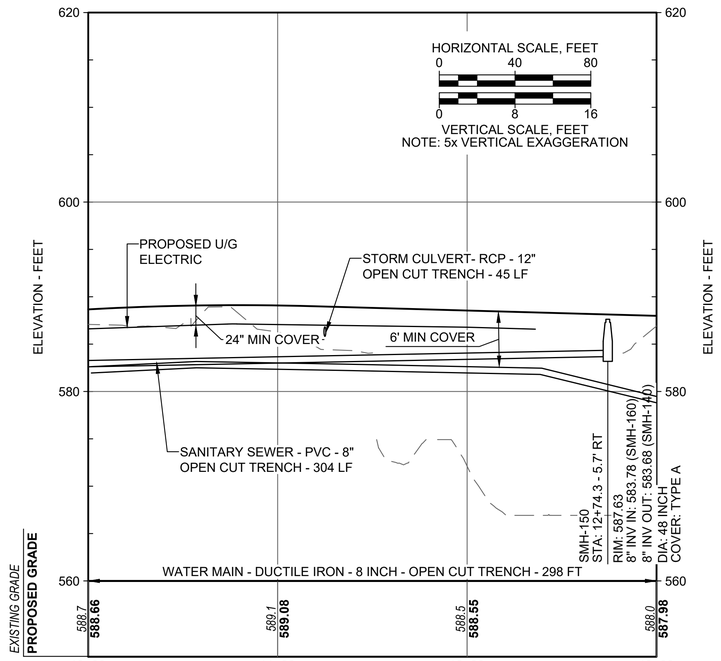


PLAN

ACCESS ROAD SCALE: 1" = 40'

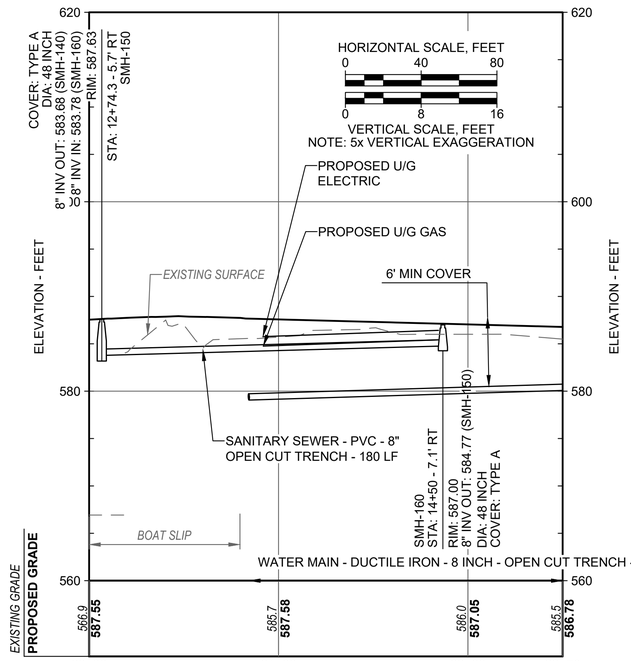
PLAN

SANITARY SERVICE LINE SCALE: 1" = 40'



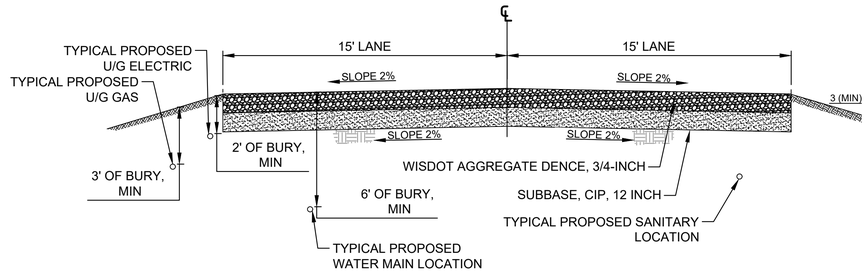
PROFILE

ACCESS ROAD



PROFILE

SANITARY SERVICE LINE



TYPICAL CROSS SECTION

ACCESS ROAD SCALE: NOT TO SCALE

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

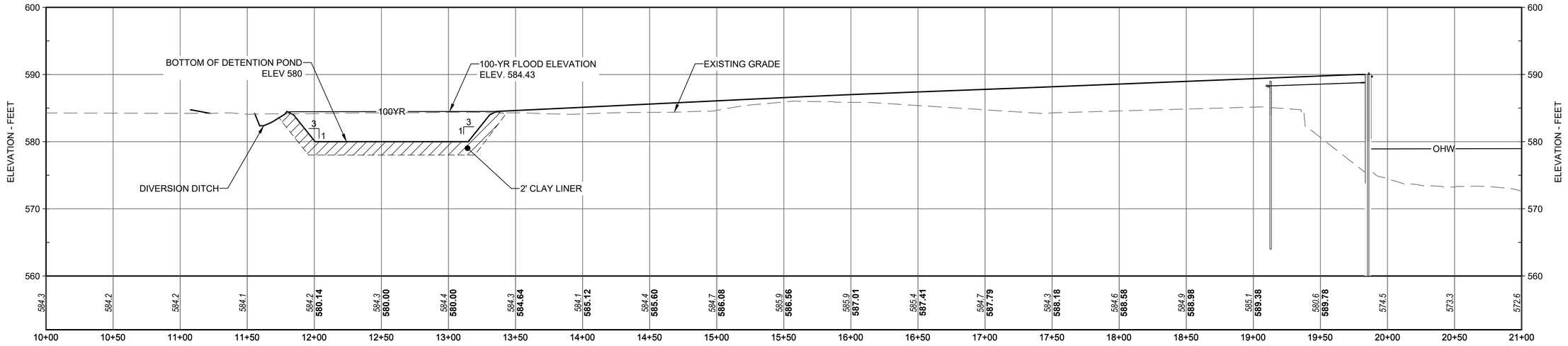
ACCESS ROAD UTILITY PLAN 10+00 TO 13+00

SHEET NO.

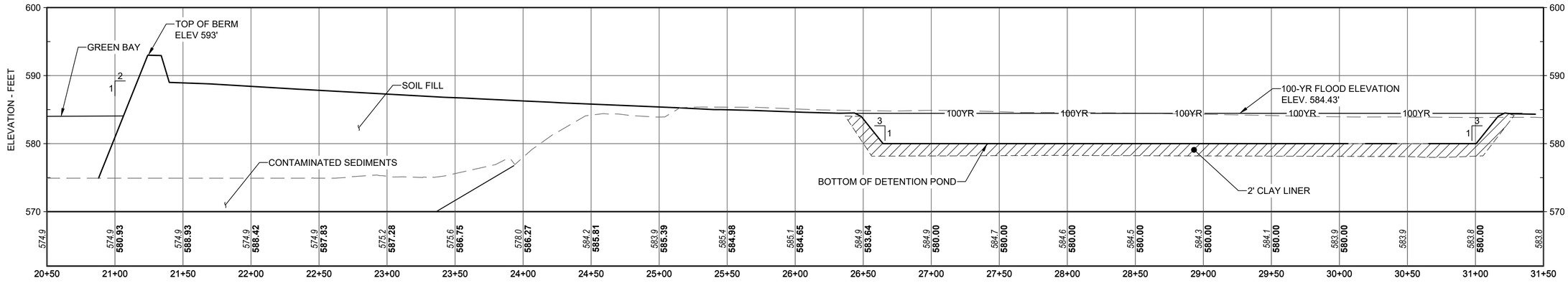
C-210

FOR BID

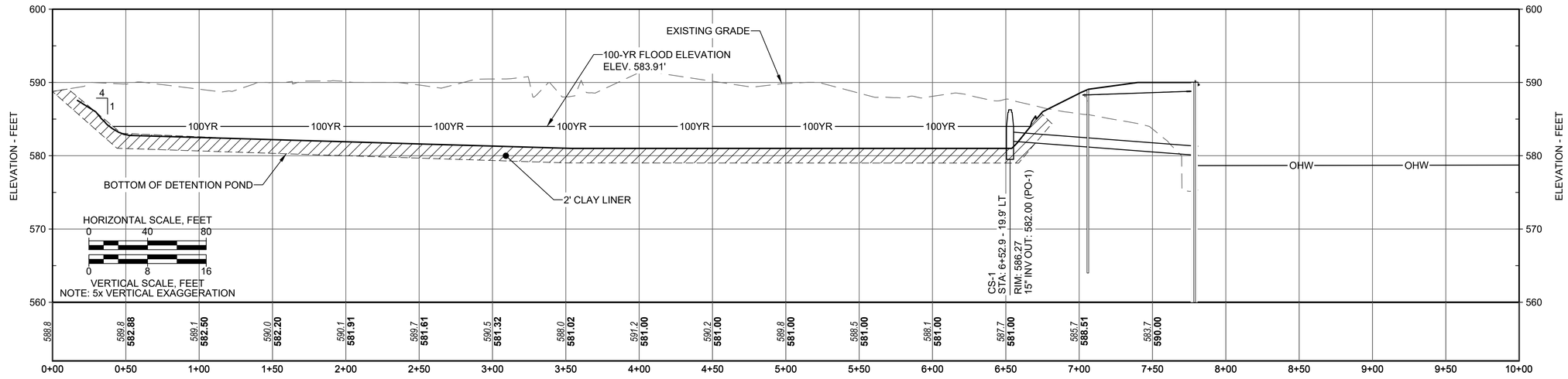
RIUTTA_LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\ACCESS ROAD P&P.dwg - 11/10/2025



SECTION A-A
DETENTION POND - BASIN 1 SCALE: 1" = 40'



SECTION B-B
DETENTION POND - BASIN 2 SCALE: 1" = 40'



SECTION C-C
DETENTION POND C-C SCALE: 1" = 40'

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

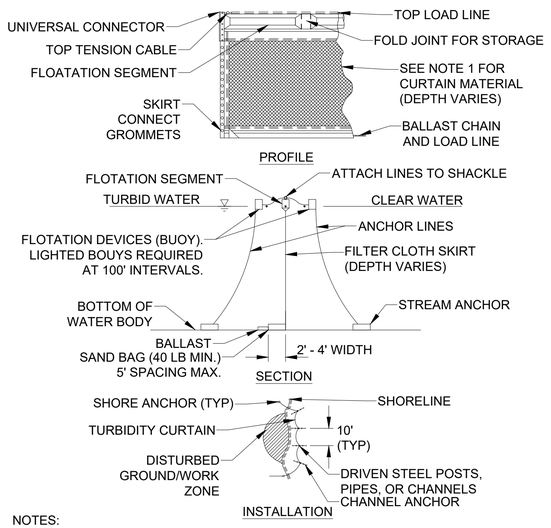
PROPOSED SECTIONS

SHEET NO.

C-303

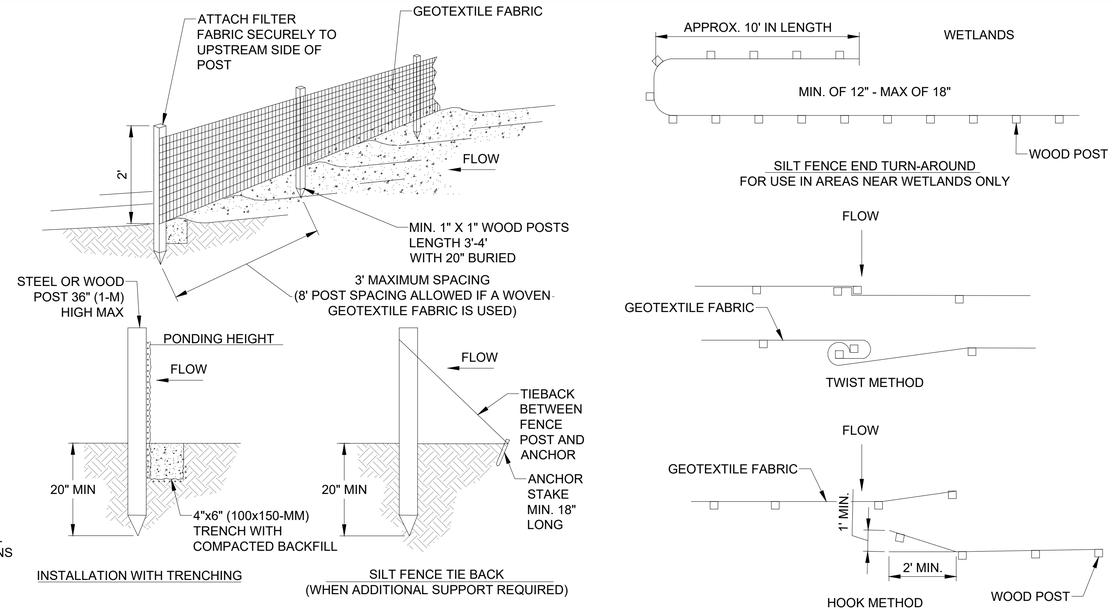
FOR BID

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Grading Plan.dwg - 11/10/2025



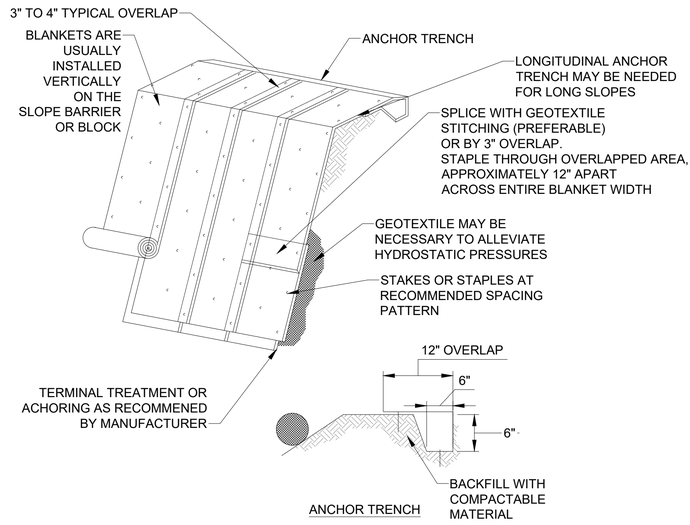
NOTES:
1. FOR UPPER (TB-P) TURBIDITY CURTAIN PLACED AROUND WATER INTAKE, MATERIAL SHALL CONTAIN A PERMEABLE FILTER FABRIC. FOR STANDARD TURBIDITY CURTAINS (TB-1) CONTAINING WORK AREAS WITH PLACEMENT OF ROCK ON THE DAM EMBANKMENT, THE MATERIAL SHALL BE IMPERMEABLE. FOR BOTTOM (TB-SM) TURBIDITY CURTAIN PLACED AROUND WATER INTAKES, FABRIC SHALL BE SAME AS STANDARD TURBIDITY CURTAIN.
2. IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISION, SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
3. REEFING LINES ARE REQUIRED TO BE INSTALLED AND USED TO SHORTEN CURTAIN DURING PERIODS OF LOW WATER LEVELS.
4. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

TURBIDITY CURTAIN
NO SCALE



NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225-MM) MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
4. WOOD POSTS SHALL BE MADE OF OAK OR HICKORY.
5. CONSTRUCTION, OPERATION, AND MAINTENANCE SHALL BE IN ACCORDANCE WITH WDNR CONSTRUCTION PRACTICE STANDARD 1056.

SILT FENCE
NO SCALE



NOTES:
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET. EXTEND BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. STAKING OR STAPLING LAYOUT SHALL CONFORM TO MANUFACTURERS RECOMMENDATIONS FOR SLOPE AND GRADE

EROSION CONTROL BLANKET
NO SCALE

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT
PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

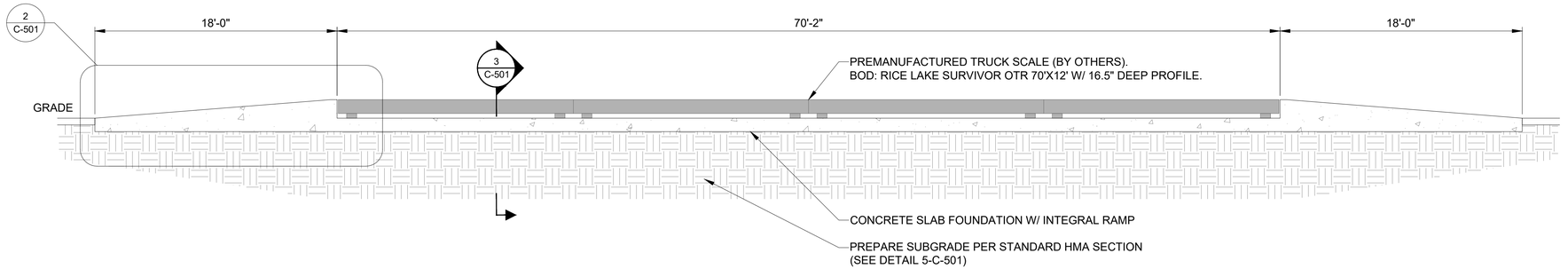
SITE DETAILS

SHEET NO.

C-500

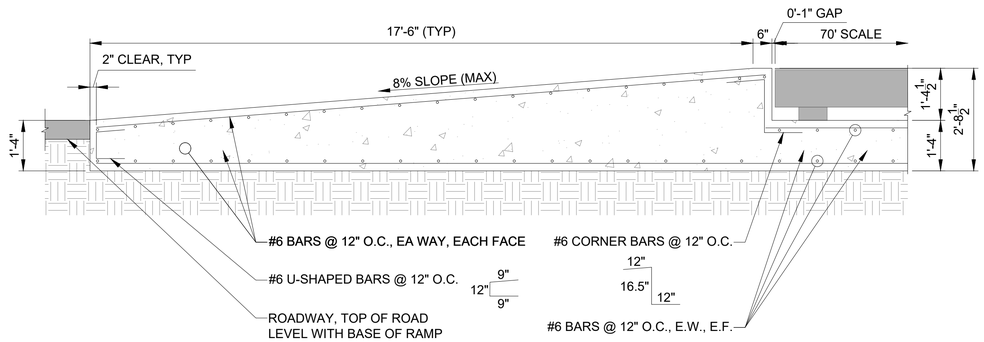
FOR BID

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SITE DETAILS.dwg - 11/10/2025



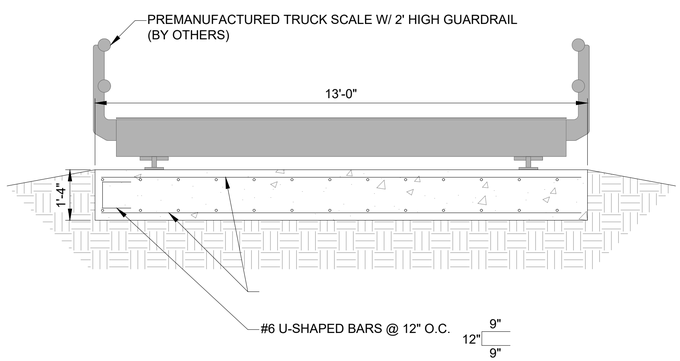
1 C-501 TRUCK SCALE SECTION

SCALE: 1" = 5'



2 C-501 RAMP REINFORCEMENT DETAILS

SCALE: 6" = 1'-0"

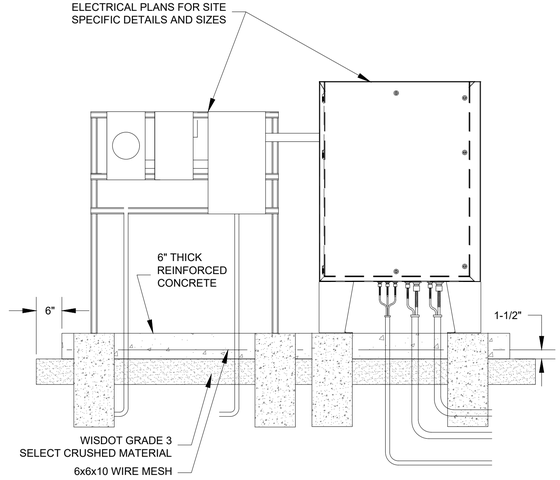


3 C-501 SCALE FOUNDATION SECTION

SCALE: 6" = 1'-0"

NOTES:

1. 6" THICK CONCRETE SLAB SHALL BE SHALL HAVE DIMENSIONS OF 1 FOOT WIDER THAN TOTAL EQUIPMENT WIDTH BY 3 FEET CLEARANCE IN FRONT OF EQUIPMENT.

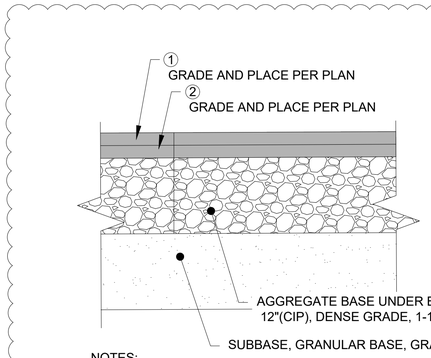


TYPICAL ELECTRICAL DROP EQUIPMENT PAD

NO SCALE

ELECTRICAL NOTES:

1. PROVIDE ELECTRICAL FEED TO A TRANSFORMER LOCATED NEAR TRUCK SCALE A.
2. SPLIT POWER TO TWO SEPARATE METER STATIONS AT TRUCK SCALE TRANSFORMER, ONE FOR METERING EACH OF THE TWO PARCELS ON SITE.
3. PROVIDE TWO SEPARATE ELECTRICAL FEEDS, ONE FROM EACH METER, TO POWER DROPS NEAR THE DOCK WALL ON EACH PARCEL. THE POWER DROP AT EACH PARCEL SHALL SUPPLY POWER TO TWO 800 KVA TRANSFORMERS.



NOTES:

1. EXISTING MATERIAL MAY BE SUBSTITUTED FOR SUBBASE PROVIDED IT MEETS SPECIFICATIONS TO CONFORM TO WISDOT GRANULAR SUBBASE MATERIAL.
2. CONTRACTOR MUST SUBMIT ASPHALT MIX DESIGN TO ENGINEER FOR APPROVAL .
3. APPLICATION RATE OF 110#/SYD PER 1-INCH THICKNESS
4. REFER TO YOUR LOCAL DOT STANDARDS AND SPECIFICATIONS

HMA APPLICATION

ITEM	MIX	RATE OF APPLICATION	ESTIMATED THICKNESS	DESCRIPTION
1	4 HT 58-28 H	190 LB/SYD	1.75 INCHES	TOP COURSE
2	4 HT 58-28 S	250 LB/SYD	2.25 INCHES	LEVELING COURSE

PLACE HMA BOND COAT SS-1H; 0.05-0.15 GALLON/SYD AS DIRECTED BY THE ENGINEER BETWEEN HMA LAYERS (FOR INFORMATION ONLY, INCLUDED WITH PAYMENT FOR HMA MIXTURES)
CONTRACTOR SHALL RUN THE QUALITY MANAGEMENT PROGRAM PER WISDOT REQUIREMENTS AND PROVIDE TEST RESULT TO

STANDARD HMA SECTION

NO SCALE

B

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention: 0 1"

If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

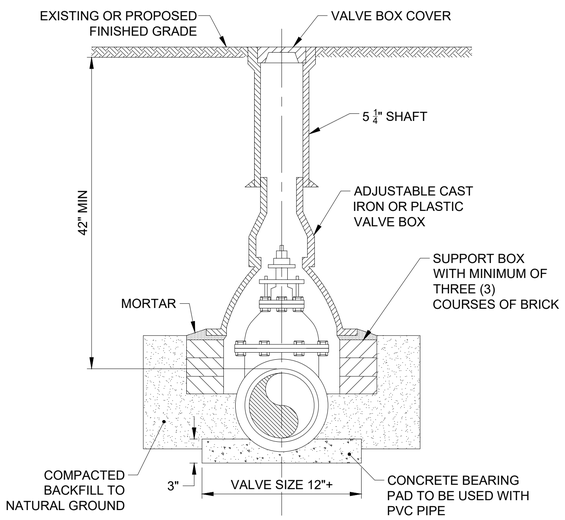
SHEET NAME

SITE DETAILS

SHEET NO.

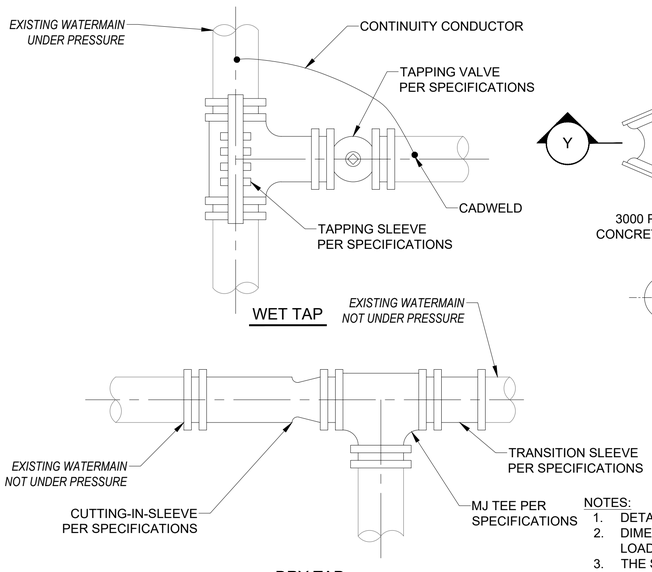
C-501

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SITE DETAILS.dwg - 11/10/2025



NOTE:
1. SIMILAR INSTALLATION FOR CURB BOX OR SERVICE LINE.

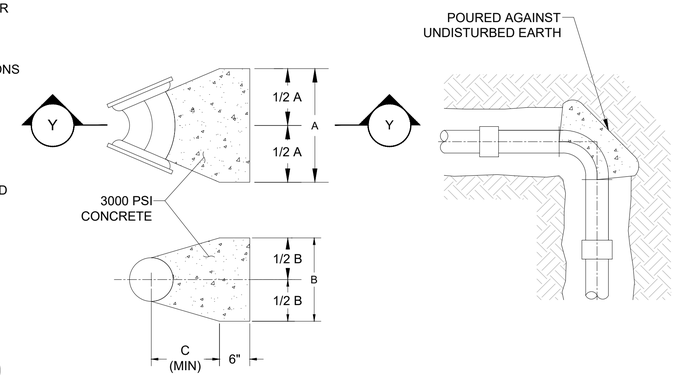
VALVE BOX DETAIL
NO SCALE



NOTES:

1. ALL JOINTS SHALL BE MADE USING MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS.

TAP EXISTING WATERMAIN
NO SCALE



NOTES:
1. DETAILS TYPICAL FOR ALL BANDS EXCEPT TOP BEND OF A VERTICAL DEFLECTION
2. DIMENSIONS ARE BASED ON A SURGE PRESSURE OF 150 PSI AND SAFE BEARING LOADS OF 2 TONS PER SQ. FT. IN CLEAN DRY SAND.
3. THE SHAPE OF THE BACK OF THE BLOCK MAY VARY AS LONG AS THE BEARING AREA PERPENDICULAR TO THE DIRECTION OF THE THRUST IS NO LESS THAN THE AREA SHOWN IN THE TABLES AND THE POUR IS AGAINST FIRM UNDISTURBED EARTH.
4. JOINTS SHALL BE KEPT FREE OF CONCRETE AND A NON-ADHESIVE BARRIER APPROVED BY THE ENGINEER SHALL BE PLACED BETWEEN THE THRUST BLOCK AND ALL MECHANICAL JOINTS.

SCHEDULE FOR 22 1/2" AND 11 1/4" BENDS

W.M. SIZE	THRUST BLOCK DIM.			BEARING AREA* SQ. FT. (MIN)
	A(MIN)	B(MIN)	C(MIN)	
6"	1'-0"	1'-0"	1'-0"	1.0
8"	1'-6"	1'-3"	1'-2"	1.9
10"	1'-9"	1'-6"	1'-4"	2.6
12"	2'-0"	1'-9"	1'-6"	3.5
16"	2'-6"	2'-0"	1'-9"	5.0

SCHEDULE FOR 45° BENDS

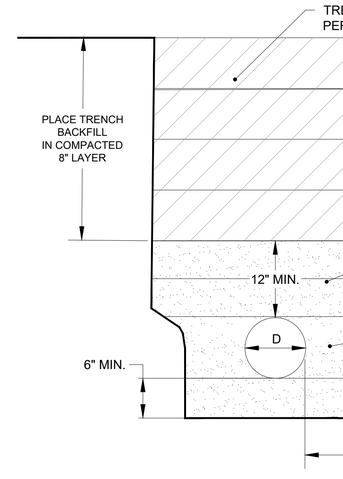
W.M. SIZE	THRUST BLOCK DIM.			BEARING AREA* SQ. FT. (MIN)
	A(MIN)	B(MIN)	C(MIN)	
6"	1'-6"	1'-0"	1'-0"	1.5
8"	1'-6"	1'-6"	1'-3"	2.25
10"	2'-6"	1'-6"	1'-6"	3.75
12"	2'-6"	2'-0"	1'-9"	5.0
16"	4'-0"	2'-6"	2'-10"	10.0

SCHEDULE FOR 90° BENDS

W.M. SIZE	THRUST BLOCK DIM.			BEARING AREA* SQ. FT. (MIN)
	A(MIN)	B(MIN)	C(MIN)	
6"	1'-6"	1'-6"	1'-0"	2.25
8"	2'-0"	2'-0"	1'-3"	4.0
10"	3'-6"	2'-0"	1'-6"	7.0
12"	3'-6"	2'-6"	1'-9"	9.0
16"	4'-0"	4'-0"	2'-10"	16.0

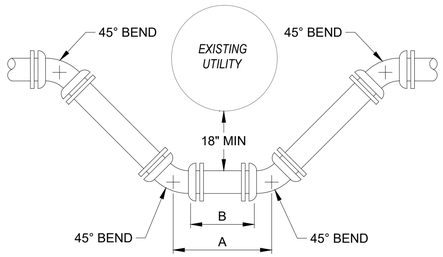
*MEASURED PERPENDICULAR TO DIRECTION OF THRUST CAUSED BY BENDS

THRUST BLOCK DETAIL
NO SCALE



NOTES:
1. EXCAVATE AND PLACE FOUNDATION BACKFILL AT LEAST 6 INCHES BELOW THE BOTTOM OF THE PIPE. IF ROCK, HARDPAN, OR FRAGMENTED MATERIAL EXISTS, THE DEPTH IS THE GREATER OR 6 INCHES BELOW THE PIPE OR TO A DEPTH EQUAL TO 1/2 INCH PER FOOD OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE.
2. THE BACKFILL MATERIALS AND METHODS SHALL CONFORM TO THE SPECIFICATIONS.

PIPE BEDDING DETAIL
NO SCALE



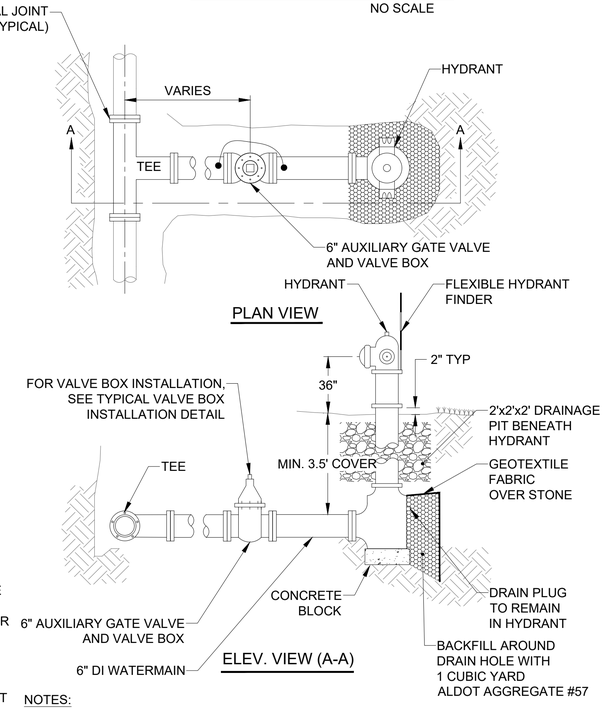
ID EXISTING UTILITY

W.M.			<12	12	24	36
6"	MIN DIMENSION	A	23"	28 1/2"	34"	40"
		B	13"	16 1/2"	22"	27 1/2"
8"		A	24"	29 1/2"	35"	40 1/2"
		B	13 1/2"	13 1/2"	19"	24 1/2"
10"		A	25"	30 1/2"	36"	41 1/2"
		B	14"	14"	16"	21 1/2"
12'		A	25"	31 1/2"	37"	42 1/2"
		B	14 1/2"	14 1/2"	14 1/2"	18 1/2"

*=LENGTH GOVERNED BY BELL ON FITTINGS

NOTES:
1. WHEN CROSSING UNDER STORM OR SANITARY SEWERS. THE DIMENSION "B" SHALL BE A FULL LENGTH OF PIPE WITH JOINTS AT EQUAL DISTANCE FROM THE SEWER.
2. ALL JOINTS SHALL BE MADE USING MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS. THE ENGINEER MAY ALLOW OTHER TYPES OF JOINT RESTRAINTS IF CIRCUMSTANCES WARRANT. ANY MODIFICATIONS MUST BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
3. CONTRACTOR MUST SUPPORT EXISTING UTILITY DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR REPAIR OF DAMAGE TO EXISTING UTILITIES AT THEIR EXPENSE.
4. PROVIDE AND COMPACT FILL BETWEEN PIPES PER PROJECT DOCUMENTS.

PRESSURE UTILITY CROSSING
NO SCALE



NOTES:
1. ALL HYDRANT LEAD FITTINGS, INCLUDING ALL THREE SIDES OF THE TEE, SHALL BE MECHANICAL JOINT WITH RETAINER GLANDS.

TYPICAL HYDRANT CONNECTION
NO SCALE

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT
PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

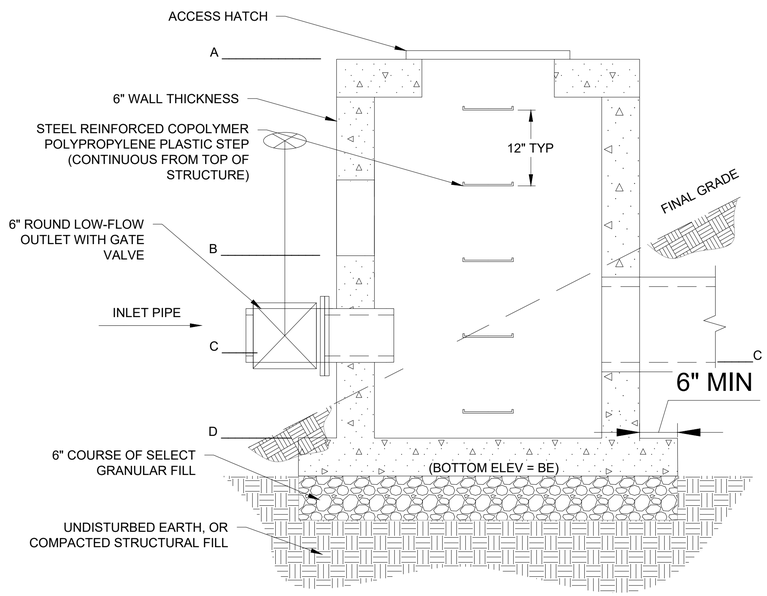
WATER DETAILS

SHEET NO.

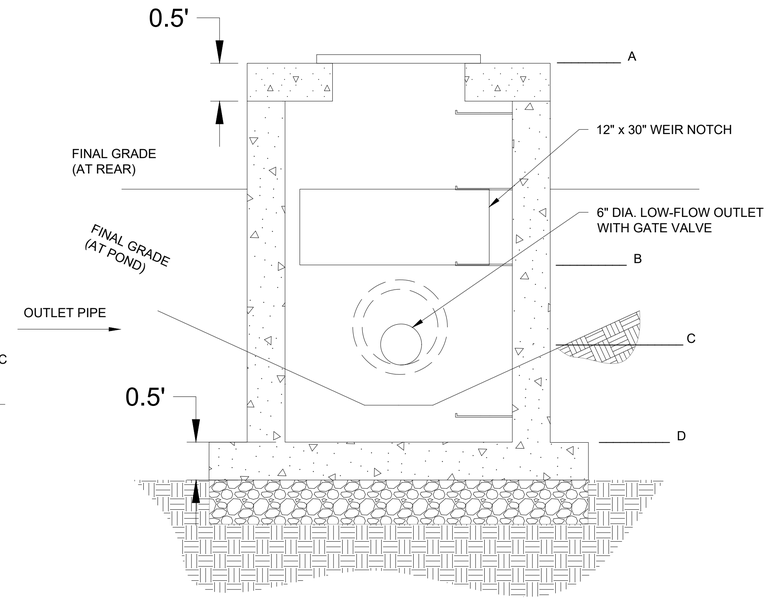
C-503

FOR BID

RIUTTA_LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SITE DETAILS.dwg - 11/10/2025



SIDE VIEW

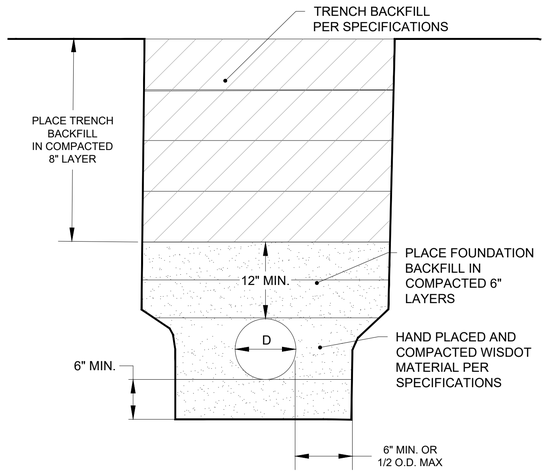


FRONT VIEW

BASIN	A	B	C	D	EMERGENCY SPILLWAY
1	583.00	581.50	581.50	579.50	584.00
2	584.00	582.00	582.00	580.00	583.50

POND STRUCTURE OUTLET

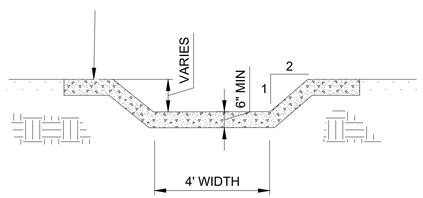
NO SCALE



NOTES:
1. EXCAVATE AND PLACE FOUNDATION BACKFILL AT LEAST 6 INCHES BELOW THE BOTTOM OF THE PIPE. IF ROCK, HARDPAN, OR FRAGMENTED MATERIAL EXISTS, THE DEPTH IS THE GREATER OR 6 INCHES BELOW THE PIPE OR TO A DEPTH EQUAL TO 1/2 INCH PER FOOD OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE.
2. THE BACKFILL MATERIALS AND METHODS SHALL CONFORM TO THE SPECIFICATIONS.

PIPE BEDDING DETAIL

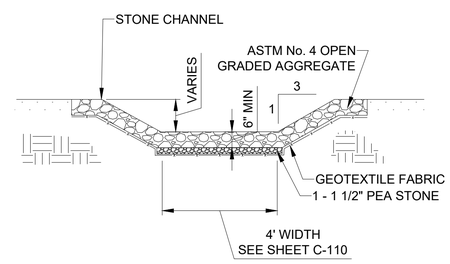
NO SCALE



NOTES:
1. COMPACT SUBGRADE MATERIAL TO A MIN. OF 95% MAXIMUM DRY DENSITY AS DETERMINED BY ASTM-D1557.
2. GRANULAR BASE MATERIAL SHALL BE COMPACTED TO A MIN OF 95% MAXIMUM DRY DENSITY AS DETERMINED BY ASTM-D1557.
3. CONCRETE REQUIREMENTS:
   - 3.1. COMPRESSIVE STRENGTH: 4,500 PSI @ 28 DAYS
   - 3.2. AIR ENTRAINMENT: 7.0% +/- 1.5%
   - 3.3. SLUMP:
     - 3.3.1. 0-3" WITHOUT ADMIXTURES OR WITH TYPE A OR D ADMIXTURE.
     - 3.3.2. 0-6" AFTER THE ADDITION OF TYPE MR, F OR G ADMIXTURE.
4. SAW CUT 1/4 DEPTH CONTRACTION JOINTS AT 25' INTERVALS FIBER EXPANSION JOINTS TO BE INSTALLED AT 100' INTERVALS AND AT EACH CHANGE IN DIRECTION.

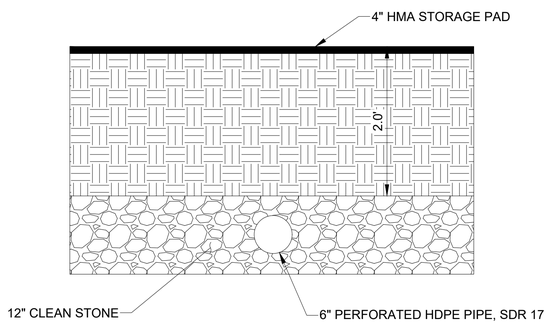
CONCRETE DRAINAGE SWALE

NO SCALE



DRAINAGE SWALE - WITH STONE

NO SCALE



DRAIN TILE SECTION

NO SCALE

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

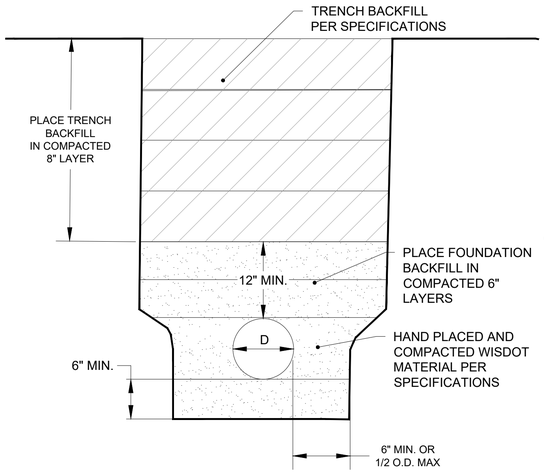
STORM DETAILS

SHEET NO.

C-504

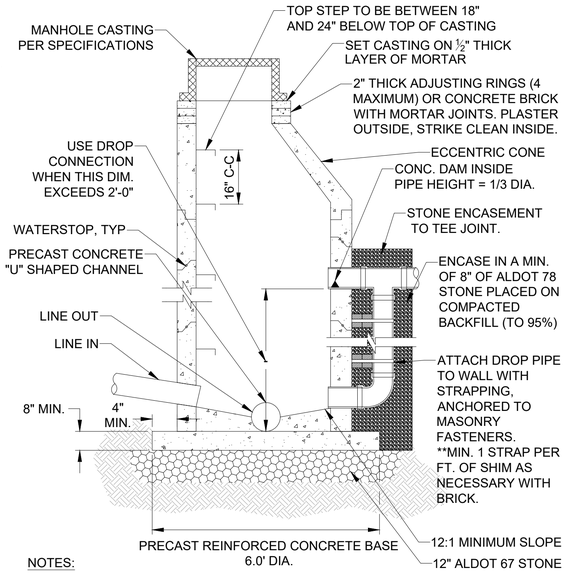
FOR BID

RIUTTA_LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SITE DETAILS.dwg - 11/10/2025



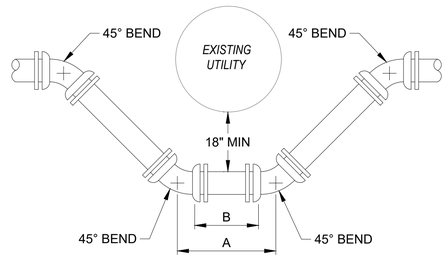
NOTES:
1. EXCAVATE AND PLACE FOUNDATION BACKFILL AT LEAST 6 INCHES BELOW THE BOTTOM OF THE PIPE. IF ROCK, HARDPAN, OR FRAGMENTED MATERIAL EXISTS, THE DEPTH IS THE GREATER OR 6 INCHES BELOW THE PIPE OR TO A DEPTH EQUAL TO 1/2 INCH PER FOOD OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE.
2. THE BACKFILL MATERIALS AND METHODS SHALL CONFORM TO THE SPECIFICATIONS.

PIPE BEDDING DETAIL
NO SCALE



NOTES:
1. SANITARY SEWER MANHOLES SHALL BE PROVIDED WITH PRECAST CONCRETE FLOW CHANNELS.
2. PRECAST CONCRETE FLOW CHANNELS SHALL PROVIDE A SMOOTH FLOW-LINE TRANSITION BETWEEN MANHOLE INLET(S) AND MANHOLE OUTLET.

STANDARD CONCRETE MANHOLE W/ OUTSIDE DROP CONNECTION
NO SCALE

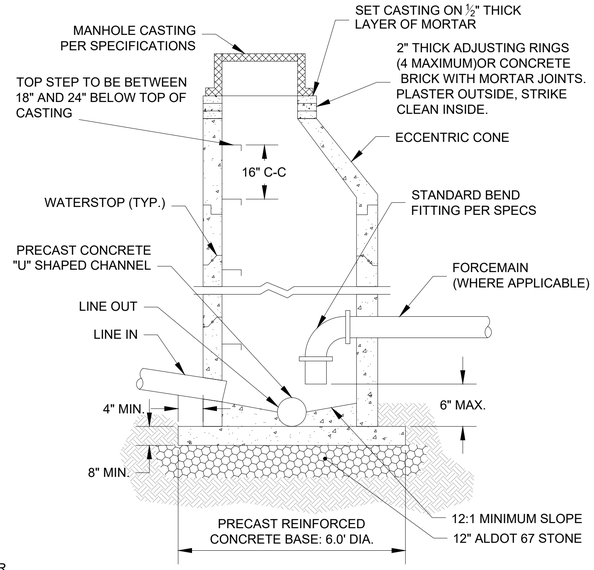


ID EXISTING UTILITY						
W.M.			<12	12	24	36
6"	MIN DIMENSION	A	23"	28 1/2"	34"	40"
		B	13"	16 1/2"	22"	27 1/2"
8"		A	24"	29 1/2"	35"	40 1/2"
		B	13 1/2"	13 1/2"	19"	24 1/2"
10"		A	25"	30 1/2"	36"	41 1/2"
		B	14"	14"	16"	21 1/2"
12'		A	25"	31 1/2"	37"	42 1/2"
		B	14 1/2"	14 1/2"	14 1/2"	18 1/2"

*=LENGTH GOVERNED BY BELL ON FITTINGS

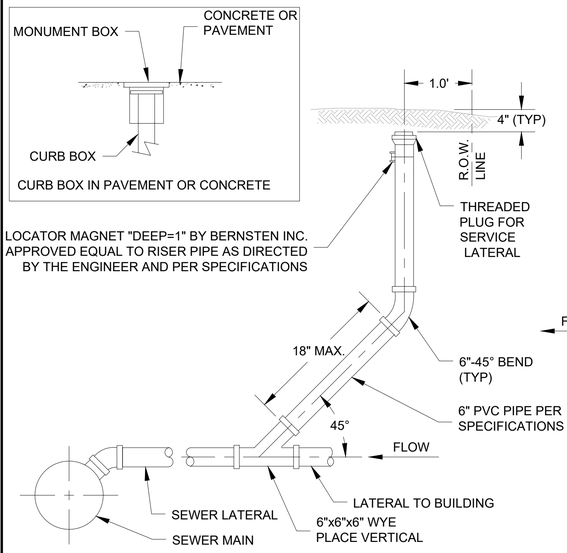
NOTES:
1. WHEN CROSSING UNDER STORM OR SANITARY SEWERS. THE DIMENSION "B" SHALL BE A FULL LENGTH OF PIPE WITH JOINTS AT EQUAL DISTANCE FROM THE SEWER.
2. ALL JOINTS SHALL BE MADE USING MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS. THE ENGINEER MAY ALLOW OTHER TYPES OF JOINT RESTRAINTS IF CIRCUMSTANCES WARRANT. ANY MODIFICATIONS MUST BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
3. CONTRACTOR MUST SUPPORT EXISTING UTILITY DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR REPAIR OF DAMAGE TO EXISTING UTILITIES AT THEIR EXPENSE.
4. PROVIDE AND COMPACT FILL BETWEEN PIPES PER PROJECT DOCUMENTS.

PRESSURE UTILITY CROSSING
NO SCALE

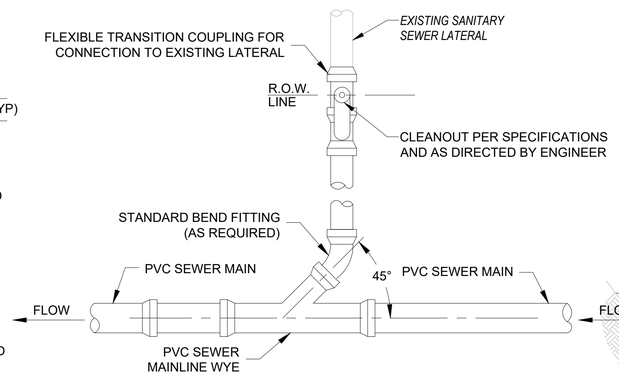


NOTES:
1. SANITARY SEWER MANHOLES SHALL BE PROVIDED WITH PRECAST CONCRETE FLOW CHANNELS.
2. PRECAST CONCRETE FLOW CHANNELS SHALL PROVIDE A SMOOTH FLOW-LINE TRANSITION BETWEEN MANHOLE INLET(S) AND MANHOLE OUTLET.
3. FLOW CHANNEL SHALL BE FORMED TO PROVIDE SMOOTH FLOW FROM FORCEMAIN DISCHARGE PIPE.
4. F.M. DISHCARGE BEND FITTING SHALL BE ANGLED TO PROVIDE SMOOTH FLOW INTO FLOW CHANNEL.

SANITARY SEWER MANHOLE
NO SCALE

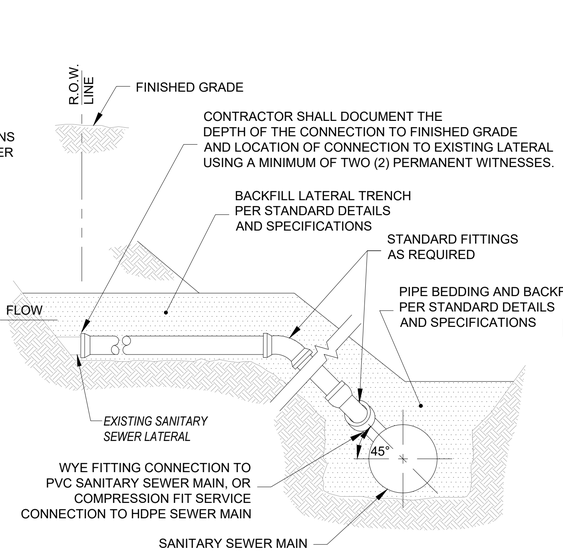


SANITARY SEWER CLEAN-OUT
NO SCALE

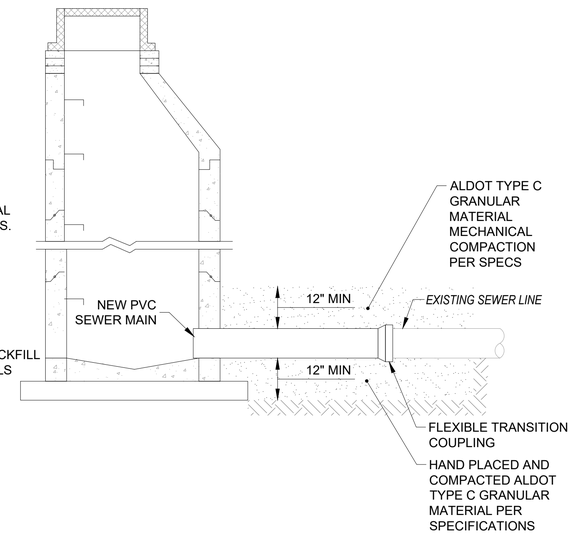


NOTES:
1. CONTRACTOR SHALL LOCATE PROPOSED CONNECTIONS TO EXISTING LATERALS PRIOR TO EXTENDING NEW LATERALS IN ORDER TO MINIMIZE UNNECESSARY BENDS.

SANITARY SEWER LATERAL (PLAN VIEW)
NO SCALE



SANITARY SEWER LATERAL RISER
NO SCALE



NOTES:
1. THE BACKFILL MATERIALS AND METHODS SHALL CONFORM TO THE SPECIFICATIONS

SANITARY SEWER MAIN CONNECTION NEW TO EXISTING AT NEW MANHOLE
NO SCALE

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

SANITARY DETAILS

SHEET NO.

C-505

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SITE DETAILS.dwg - 11/10/2025

DOCKWALL DESIGN CRITERIA:

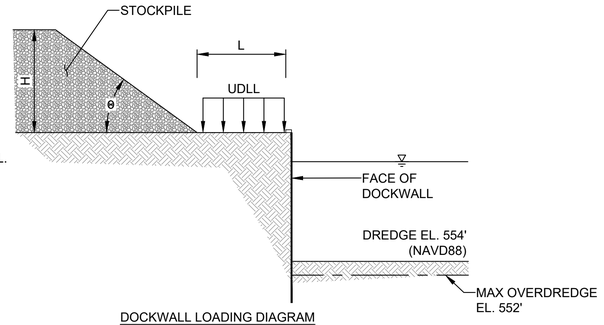
LIVE LOADS:

- UNIFORMLY DISTRIBUTED LIVE LOAD (UDLL): 500 PSF

BULK STOCKPILING:

BULK STOCKPILING BASED ON MATERIAL PROPERTIES IDENTIFIED BELOW. MINIMUM DISTANCE FROM DOCKWALL SHALL BE MEASURED AS THE DISTANCE FROM THE TOE OF THE STOCKPILE TO THE OUTBOARD FACE OF THE DOCKWALL. LOADING IN AREAS NOT USED FOR BULK STOCKPILING SHALL BE LIMITED TO THE UNIFORMLY DISTRIBUTED LIVE LOAD. SEE LOADING DIAGRAMS AND PLAN THIS SHEET.

- COAL:
  - MAXIMUM UNIT WEIGHT: 60 PCF
  - MAXIMUM ANGLE OF REPOSE (θ): 36 DEGREES
  - MAXIMUM STOCKPILE HEIGHT (H): 60 FEET (EQUIVALENT SURCHARGE 3,600 PSF)
  - MINIMUM DISTANCE FROM DOCKWALL (L): 15 FEET
- LIMESTONE (ROAD SALT SIMILAR):
  - MAXIMUM UNIT WEIGHT: 100 PCF
  - MAXIMUM ANGLE OF REPOSE (θ): 45 DEGREES
  - MAXIMUM STOCKPILE HEIGHT (H): 40 FEET (EQUIVALENT SURCHARGE 4,000 PSF)
  - MINIMUM DISTANCE FROM DOCKWALL (L): 50 FEET



DOCKWALL LOADING DIAGRAM
NOT TO SCALE

DESIGN VESSEL:	DESIGN	MAXIMUM
- LENGTH OVERALL	740 FEET	1000 FEET
- LENGTH BETWEEN PERPENDICULARS	730 FEET	
- BEAM	78 FEET	105 FEET
- DESIGN DRAFT	22 FEET	
- DISPLACEMENT	30,000 TONS	45,000 TONS
- OFFLOADER REACH	MAX 300 FEET	MIN 230 FEET

BERTH DEPTH:
- DESIGN BERTH DEPTH: 24 FT (ELEV. 554.0)
- OVERDREDGE TOLERANCE: 2 FT (ELEV. 552.0)

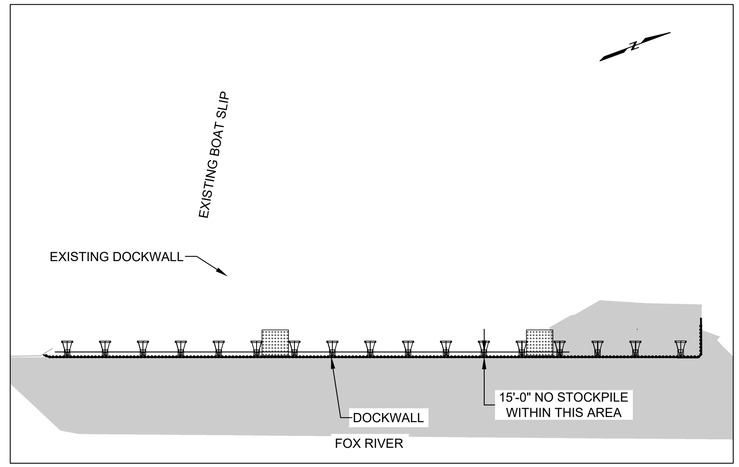
SEISMIC DESIGN:
- RISK CATEGORY II
- SITE CLASS E
- PGA 0.024
- S_s 0.052
- S_1 0.033
- F_{PGA} 1.6
- F_a 1.6
- F_v 2.4
- PGA_m 0.061
- S_{ms} 0.084
- S_{m1} 0.08
- PGA_D 0.041
- S_{DS} 0.056
- S_{D1} 0.053

STRUCTURAL STEEL AND MISCELLANEOUS METALS:

1. STRUCTURAL STEEL SHALL BE DESIGNED IN ACCORDANCE WITH AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS
2. STEEL SHALL CONFORM TO THE FOLLOWING ASTM GRADES:
   - STEEL SHEETPILES SEE BELOW
   - HOLLOW TUBE A-500, GRADE C
   - HIGH STRENGTH BOLTS F3125, GRADE A325
   - ALL-THREADED BAR ASTM A615 GRADE 75/80
   - ALL OTHER STRUCTURAL STEEL A592 GRADE 50 (Fy - 50 KSI) UNO
3. WELDING SHALL CONFORM TO AWS
   - WELDING ELECTRODES AWS E70XX
4. ALL NEW STEEL HARDWARE AND FABRICATIONS SHALL BE HOT DIPPED GALVANIZED AND CONFORM TO ASTM A-123 AND/OR A-153 UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL COORDINATE ALL DIMENSIONS SHOWN ON THE PLANS WITH THE VARIOUS TRADES, SIZE OF UNITS AND EXISTING CONDITIONS BEFORE DETAILING AND FABRICATING STEEL.
6. STAINLESS STEEL SHALL BE SERIES 300, TYPE 316 UNLESS OTHERWISE NOTED.

STEEL SHEET PILE DOCKWALL:

1. ALL STEEL FOR STEEL SHEET PILE DOCKWALL SHALL CONFORM TO ASTM A572 GR.60, MINIMUM YIELD STRESS OF 60 KSI.
   - TIP EL. SEE DRAWINGS
   - ALL STEEL PILES SHALL HAVE A MINIMUM STEEL THICKNESS OF ⅜" ON BOTH WEB AND FLANGE UNLESS A GREATER THICKNESS IS SPECIFIED ELSEWHERE.
2. TYPE 1 DOCKWALL (COMBI-WALL) SYSTEM SHALL CONSIST OF PIPE 54"Ø X 11/16" WALL KING PILES SPACED AT MAXIMUM 9.4' ON CENTER WITH STEEL SHEET PILES MEETING THE CRITERIA BELOW:MINIMUM SECTION MODULUS SHALL BE EQUIVALENT TO 170.6 CUBIC INCHES PER LINEAR FOOT OF INSTALLED COMBINATION WALL.
   - MINIMUM SECTION MODULUS SHALL BE EQUIVALENT TO 170 CUBIC INCHES PER LINEAR FOOT OF INSTALLED COMBINATION WALL.
   - MINIMUM MOMENT OF INERTIA SHALL BE 4,500 IN4 PER LINEAR FOOT OF INSTALLED COMBINATION WALL.
   - KING PILE SHALL HAVE A MINIMUM MOMENT OF INERTIA OF 40,900 IN4
3. STEEL WALE INCLUDING ALL WASHER PLATES, SPLICE PLATES, FASTENERS, ETC. SHALL BE HOT DIP GALVANIZED UNLESS NOTED OTHERWISE.
4. TIE RODS SHALL HAVE A MINIMUM ULTIMATE STRENGTH OF 960 KIPS (EQUIVALENT TO 103 KIPS/FT) AND A MINIMUM YIELD STRENGTH OF 720 KIPS (EQUIVALENT TO 76.5 KIPS/FT)
5. ARTICULATED BAR COUPLERS SHALL BE DESIGNED BY THE MANUFACTURER TO DEVELOP A MINIMUM OF 1.25 TIMES THE ULTIMATE TIE ROD BAR STRENGTH.
6. ANCHOR WALL
   SHALL CONSIST OF NZ19 STEEL SHEET PILES OR EQUIVALENT MEETING THE CRITERIA BELOW:
   - MINIMUM SECTION MODULUS SHALL BE EQUIVALENT TO 35.08 CUBIC INCHES PER LINEAR FOOT OF INSTALLED ANCHOR WALL.
   - MINIMUM MOMENT OF INERTIA SHALL BE 283.1 IN^4 PER LINEAR FOOT OF INSTALLED ANCHOR WALL.



PLAN
ALLOWABLE STOCKPILE AREA SCALE: 1" = 200'

ABBREVIATIONS

ABN/ABAN	ABANDONED
B	BOTTOM
BIT	BITUMINOUS
BM	BENCHMARK
CB	CATCH BASIN
CIP	CAST IN PLACE
CLF	CHAIN LINK FENCE
CONC	CONCRETE
CW	CROSSWALK
DBYL	DOUBLE YELLOW LINE
EP	EDGE OF PAVEMENT
EF	EACH FACE
EL	ELEVATION
EW	EACH WAY
EXTG	EXISTING
FP	FIRE PROTECTION
GRAN	GRANITE
INV	INVERT
LBS	POUNDS
LOC	LIMIT OF CONSTRUCTION
N/F	NOW OR FORMERLY
PED	PEDESTRIAN
PW	POTABLE WATER
℄	PROPERTY LINE
SS	SANITARY SEWER
SGE	SLOPED GRANITE EDGING
SL	STOP LINE
STR	STAIRS
SW	SIDEWALK
SWL	SOLID WHITE LINE
SYL	SOLID YELLOW LINE
T	TOP
TOW	TOP OF WALL
UHMW	ULTRA HIGH MOLECULAR WEIGHT
UNO	UNLESS NOTED OTHERWISE
VGC	VERTICAL GRANITE CURB
VLF	VINYL FENCE

GEOTEXTILE

1. SEPARATION GEOTEXTILE: WOVEN GEOTEXTILE FABRIC, MANUFACTURED FOR SEPARATION APPLICATIONS, MADE FROM POLYOLEFINS OR POLYESTERS; WITH ELONGATION LESS THAN 50 PERCENT; COMPLYING WITH AASHTO M 228 AND THE FOLLOWING, MEASURED PER TEST METHODS REFERENCED;
   - SURVIVABILITY: CLASS 2; AASHTO M 288
   - GRAB TENSILE STRENGTH; 247 LBF; ASTM D 4632
   - SEWN SEAM STRENGTH: 222 LBF; ASTM D 4632
   - TEAR STRENGTH: 90 LBF; ASTM D 4533
   - PUNCTURE STRENGTH: 90 LBF; ASTM D 4833
   - PUNCTURE STRENGTH: 90 LBF; ASTM D 4833
   - APPARENT OPENING SIZE: NO. 60 SIEVE, MAXIMUM; ASTM D 4751
   - PERMITTIVITY: 0.02 OER SECOND, MINIMUM; ASTM D 4491
   - UV STABILITY: 50 PERCENT AFTER 500 HOURS EXPOSURE; ASTM D 4355

LAKE DATUM
(MENOMINEE, MI STATION ID 9087088)

MAXIMUM HIGH WATER (MAX HW) JUNE 2020	+583.70
CHART DATUM/LOW WATER (IGLD85 +577.50)	+577.94
MINIMUM LOW WATER (MIN LW) JAN 2013	+575.30
IGLD85	+0.44
NAVD88 (THIS PLAN SET)	0.00

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

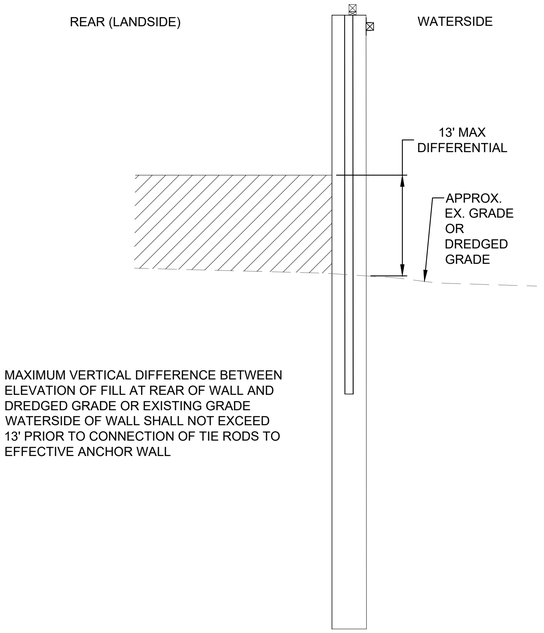
SHEET NAME

DOCKWALL GENERAL NOTES

SHEET NO.

SM001

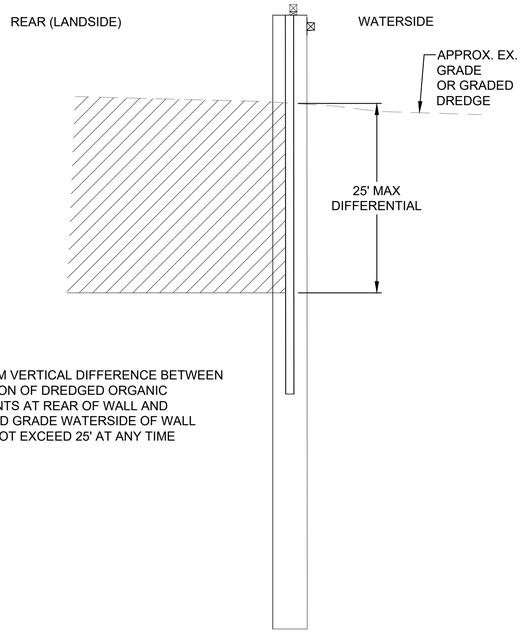
RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\GENERAL NOTES_LEGEND.dwg - 11/10/2025



MAXIMUM VERTICAL DIFFERENCE BETWEEN ELEVATION OF FILL AT REAR OF WALL AND DREDGED GRADE OR EXISTING GRADE WATERSIDE OF WALL SHALL NOT EXCEED 13' PRIOR TO CONNECTION OF TIE RODS TO EFFECTIVE ANCHOR WALL

A SECTION
FILLING / DREDGING UNSUPPORTED WALL

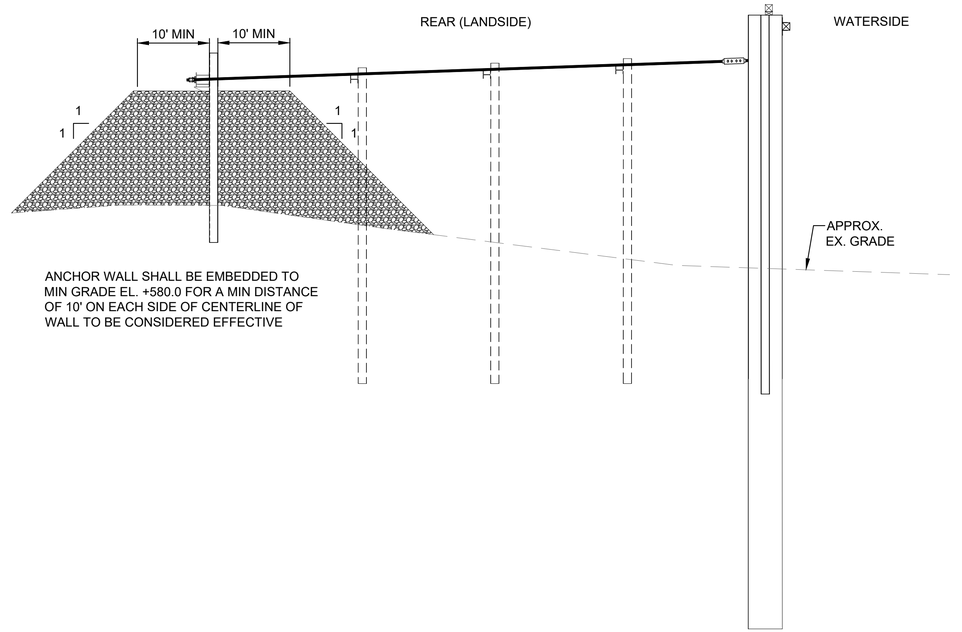
NO SCALE



MAXIMUM VERTICAL DIFFERENCE BETWEEN ELEVATION OF DREDGED ORGANIC SEDIMENTS AT REAR OF WALL AND DREDGED GRADE WATERSIDE OF WALL SHALL NOT EXCEED 25' AT ANY TIME

B SECTION
DREDGING REAR OF UNSUPPORTED WALL

NO SCALE



ANCHOR WALL SHALL BE EMBEDDED TO MIN GRADE EL. +580.0 FOR A MIN DISTANCE OF 10' ON EACH SIDE OF CENTERLINE OF WALL TO BE CONSIDERED EFFECTIVE

C SECTION
EFFECTIVE ANCHOR WALL

NO SCALE

NOTES:
1. THE CONTRACTOR SHALL PREPARE A SEQUENCING PLAN FOR EACH STAGE OF WALL INSTALLATION, FILLING AND DREDGING WHICH SHALL COMPLY WITH THE SEQUENCING REQUIREMENTS ON THIS DRAWING. NO WORK SHALL COMMENCE UNTIL THE SEQUENCING PLAN HAS BEEN APPROVED.
2. THE CONTRACTOR'S SEQUENCING PLAN SHALL INCLUDE CONTINUOUS MONITORING OF THE DOCK WALL AND ANCHOR WALL DURING ALL FILLING AND DREDGING OPERATIONS.

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

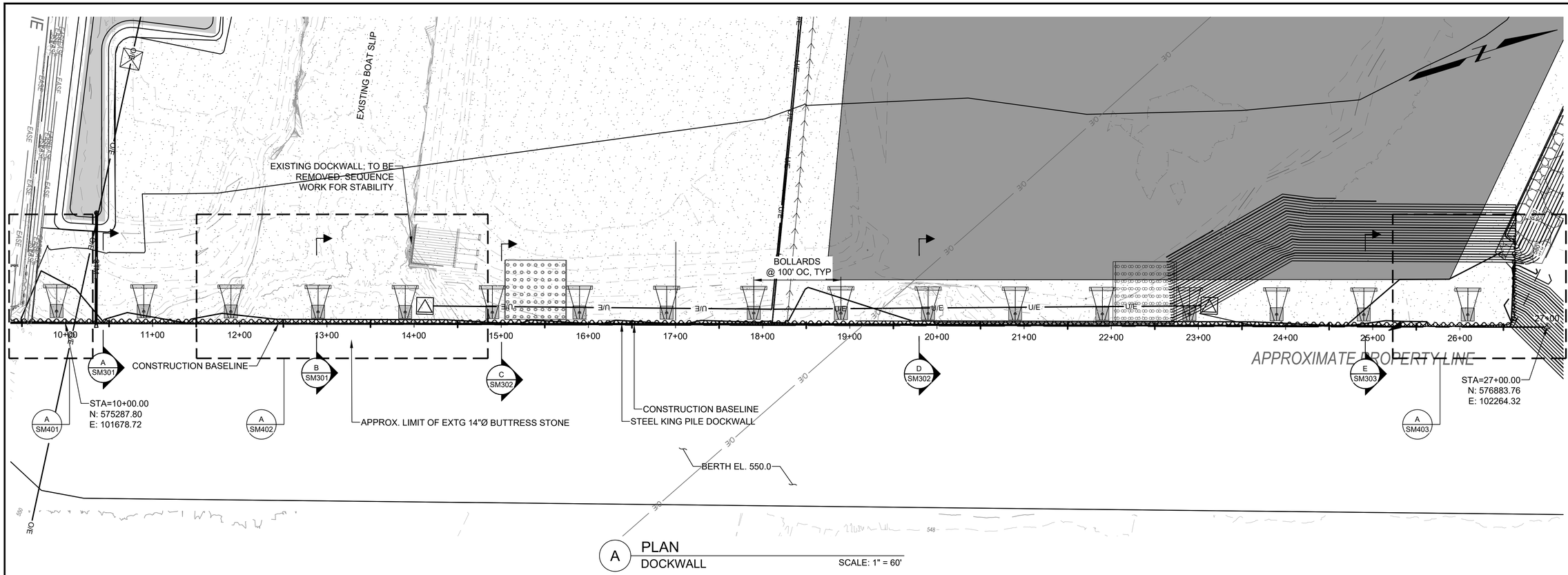
SHEET NAME

DOCKWALL SEQUENCING CONSTRAINTS

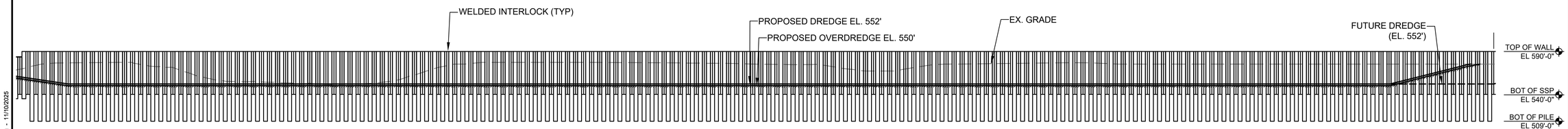
SHEET NO.

SM002

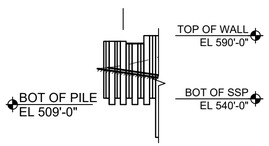
RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SEQUENCING CONSTRAINTS.dwg - 11/10/2025



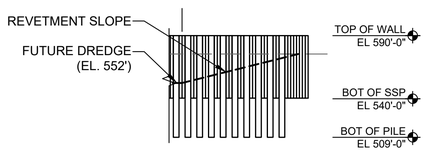
A PLAN
DOCKWALL
SCALE: 1" = 60'



B ELEVATION
DOCKWALL
SCALE: 1" = 60'



C ELEVATION
DOCKWALL AT SOUTH END
SCALE: 1" = 60'



D ELEVATION
DOCKWALL AT NORTH END
SCALE: 1" = 60'

0 60 120
SCALE, FEET

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT
PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

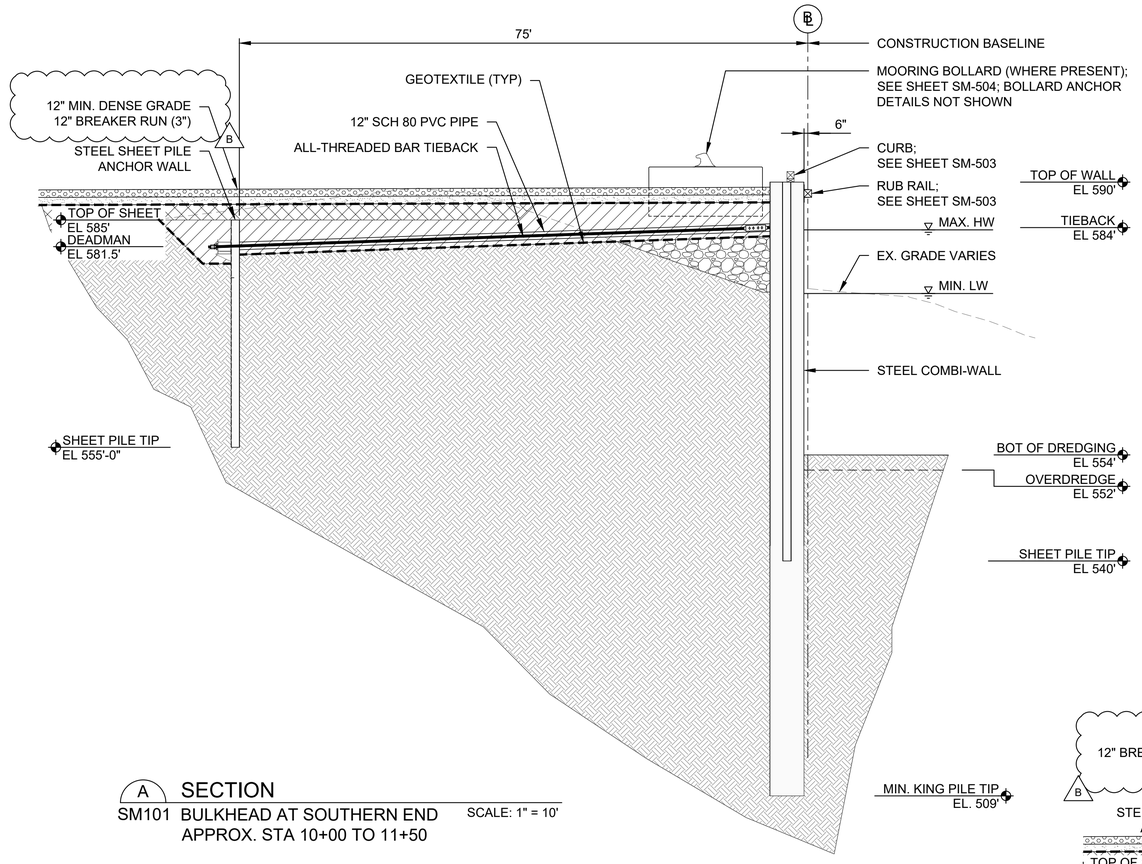
SHEET NAME

DOCKWALL PLAN & ELEVATION

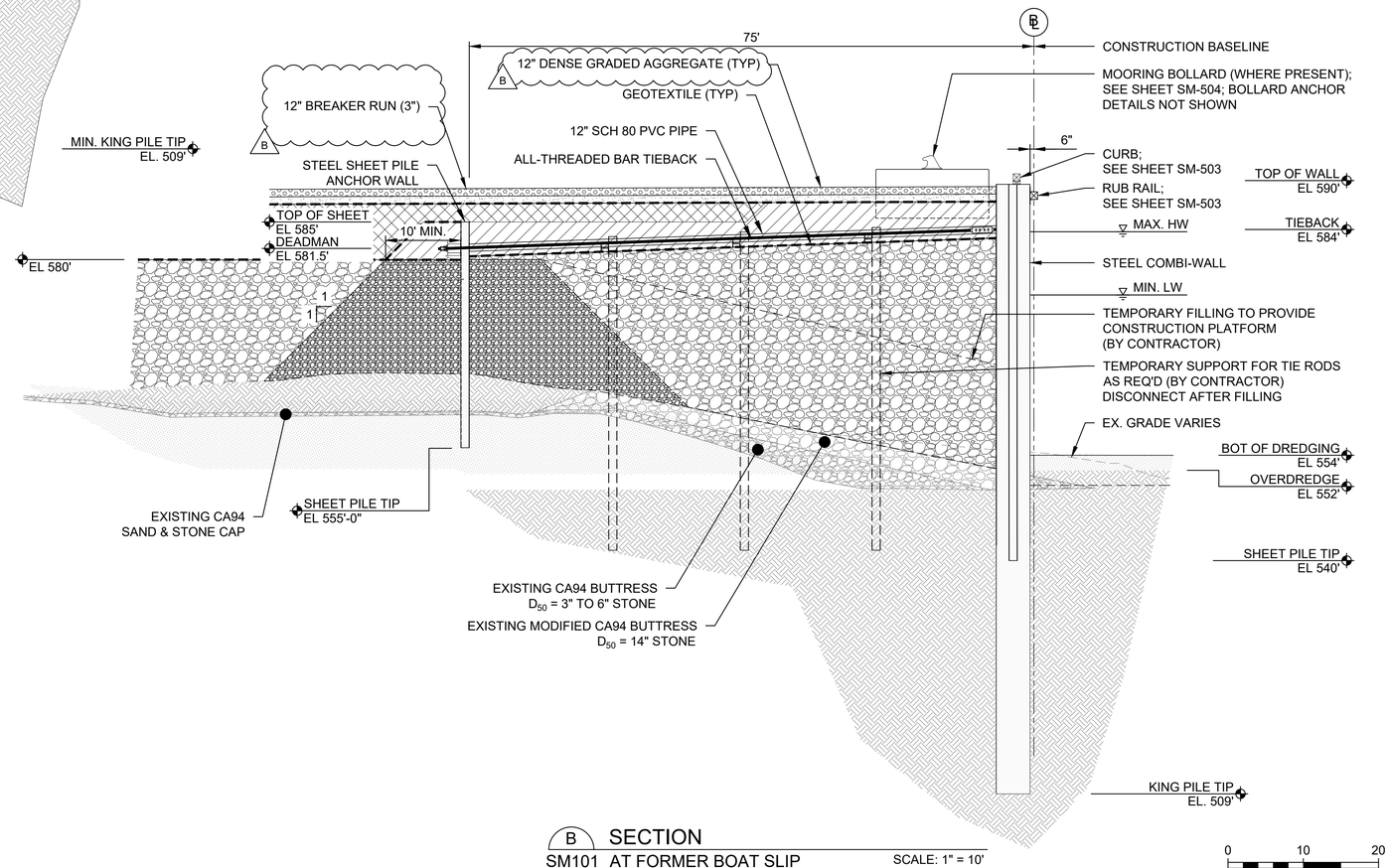
SHEET NO.

SM101

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Bulkhead Plan.dwg - 11/10/2025



A SECTION
SM101 BULKHEAD AT SOUTHERN END APPROX. STA 10+00 TO 11+50
SCALE: 1" = 10'



B SECTION
SM101 AT FORMER BOAT SLIP APPROX. STA 11+50 TO 14+50
SCALE: 1" = 10'

0 10 20
SCALE, FEET

MATERIALS LEGEND

- MARINE STONE FILL (6" - 12" STONE)
- CRUSHED STONE (1-1/4" STONE)
- MARINE STRUCTURAL FILL
- DENSE-GRADE CRUSHED STONE
- BREAKER RUN (B)
- ENGINEERED FILL (PROCESSED CLAY)
- CONCRETE
- EXISTING CONCRETE
- CONTAMINATED EXISTING SOIL
- EXISTING SOILS
- HMA PAVEMENT

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

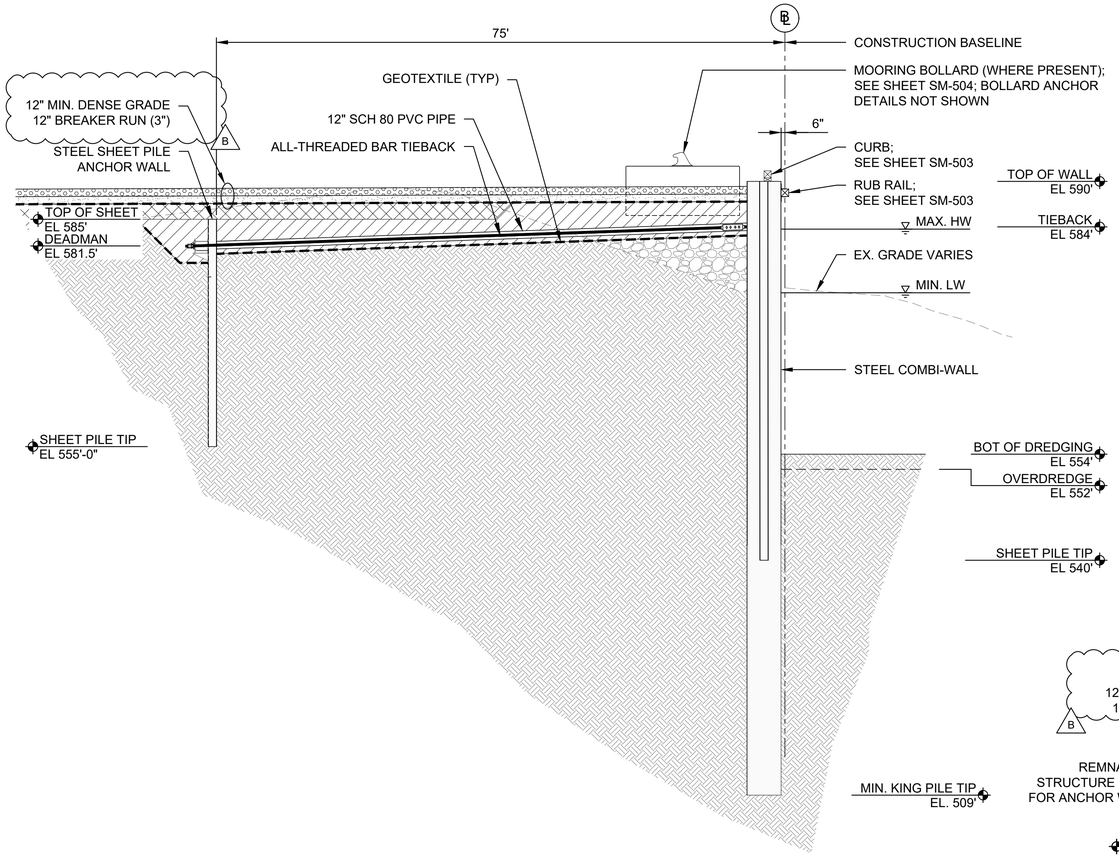
SHEET NAME

DOCKWALL SECTIONS - SHEET 1 OF 3

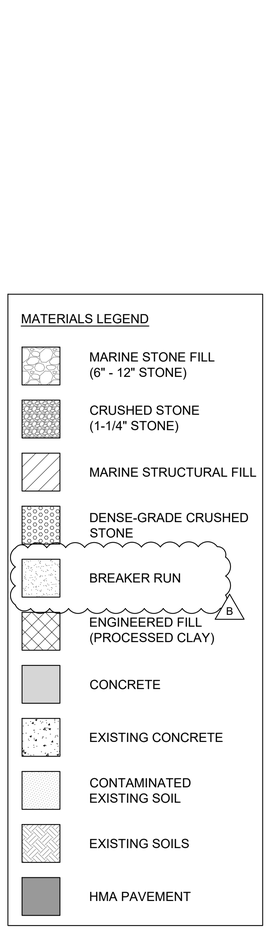
SHEET NO.

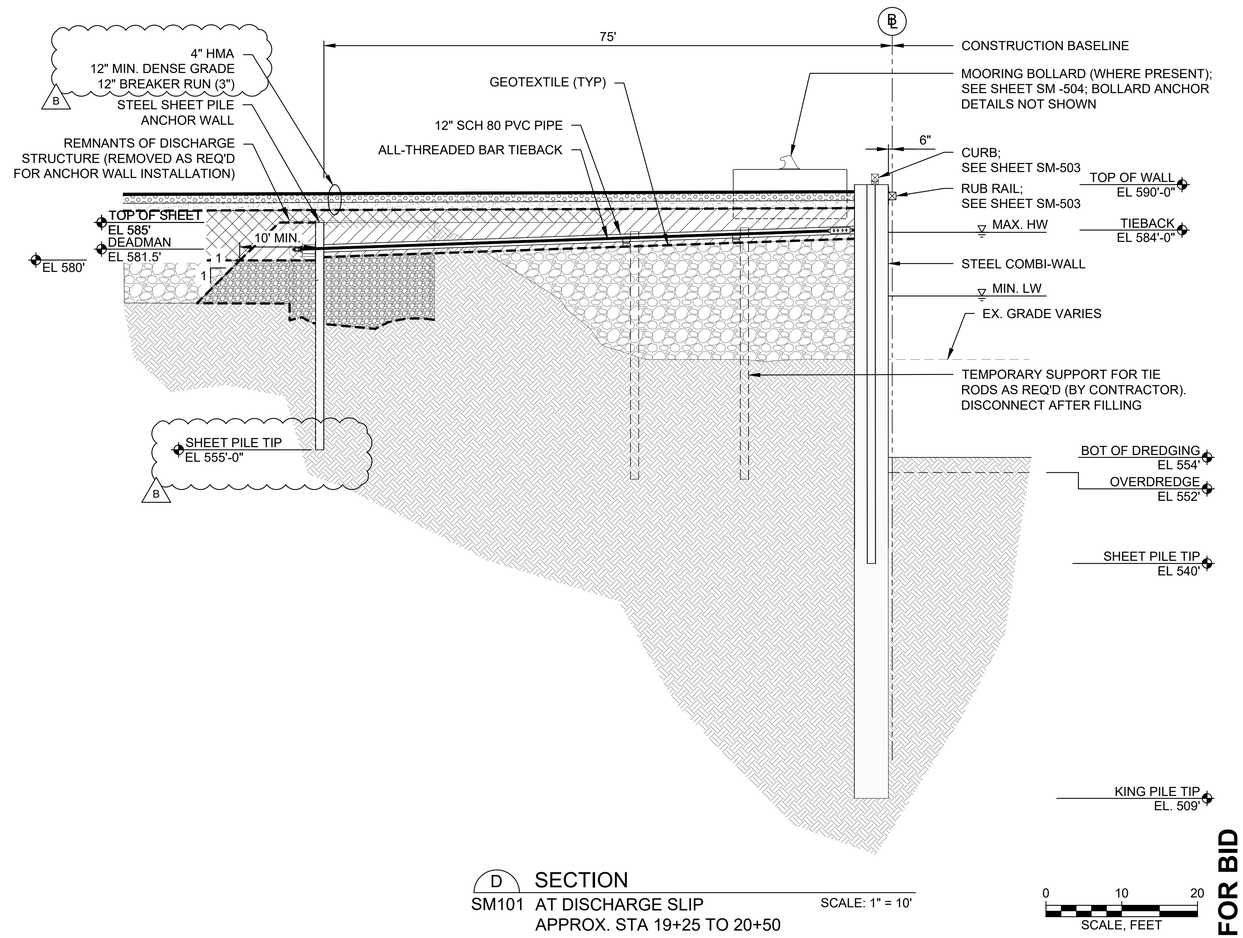
SM301

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Proposed Sections.dwg - 11/10/2025



C SECTION
SM101 TYPICAL DOCKWALL SCALE: 1" = 10'
APPROX. STA 14+50 TO 19+00
STA 20+50 TO 22+00 SIMILAR (WITH HMA PAVING)





D SECTION
SM101 AT DISCHARGE SLIP SCALE: 1" = 10'
APPROX. STA 19+25 TO 20+50

0 10 20
SCALE, FEET

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

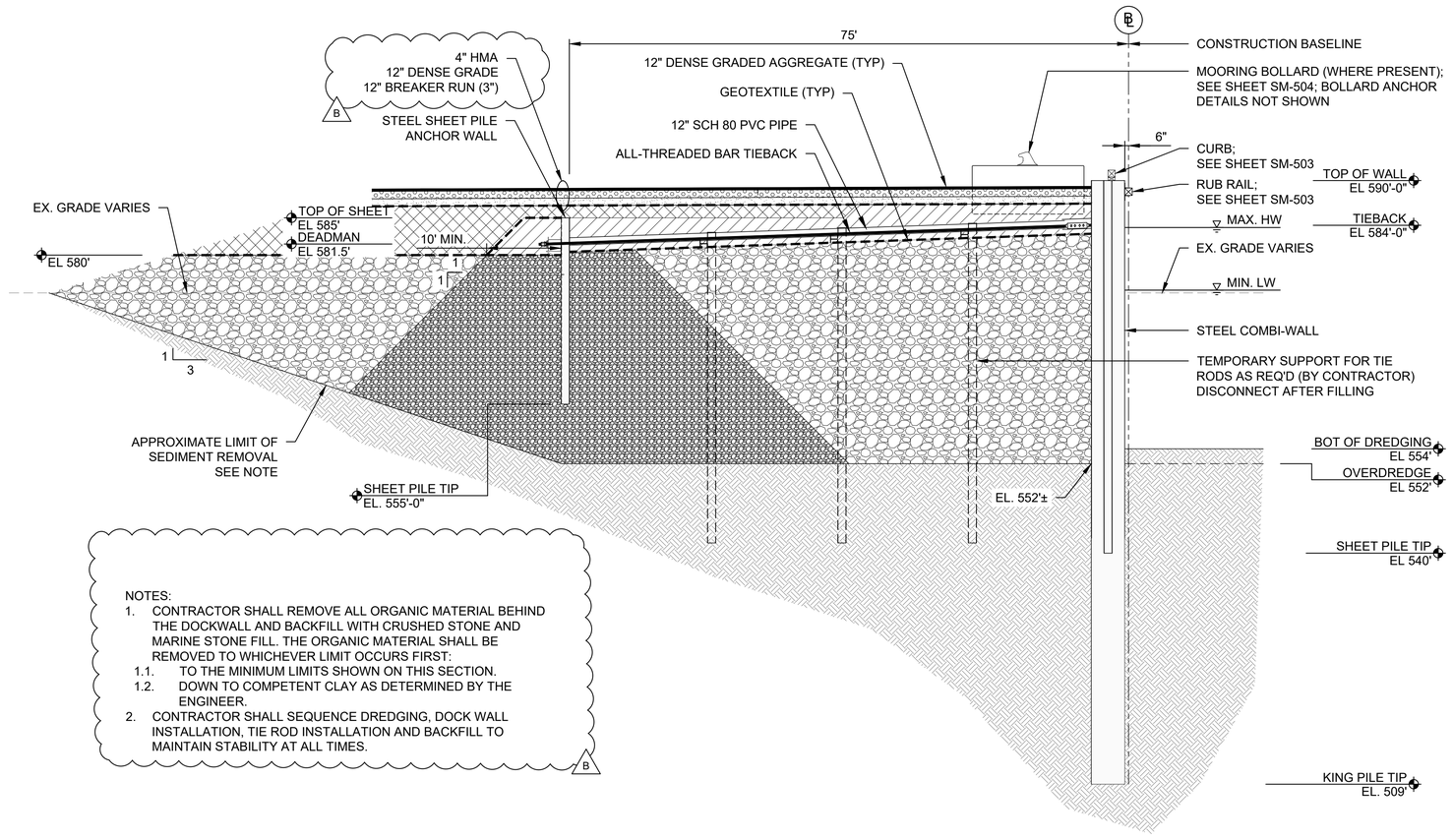
SHEET NAME

DOCKWALL SECTIONS - SHEET 2 OF 3

SHEET NO.

SM302

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Proposed Sections.dwg - 11/10/2025



NOTES:
1. CONTRACTOR SHALL REMOVE ALL ORGANIC MATERIAL BEHIND THE DOCKWALL AND BACKFILL WITH CRUSHED STONE AND MARINE STONE FILL. THE ORGANIC MATERIAL SHALL BE REMOVED TO WHICHEVER LIMIT OCCURS FIRST:
   1.1. TO THE MINIMUM LIMITS SHOWN ON THIS SECTION.
   1.2. DOWN TO COMPETENT CLAY AS DETERMINED BY THE ENGINEER.
2. CONTRACTOR SHALL SEQUENCE DREDGING, DOCK WALL INSTALLATION, TIE ROD INSTALLATION AND BACKFILL TO MAINTAIN STABILITY AT ALL TIMES.

B

E SECTION
SM101 DOCKWALL IN OPEN WATER
APPROX. STA 22+00 TO 26+00

SCALE: 1" = 10'

MATERIALS LEGEND

- MARINE STONE FILL (6" - 12" STONE)
- CRUSHED STONE (1-1/4" STONE)
- MARINE STRUCTURAL FILL
- DENSE-GRADE CRUSHED STONE
- BREAKER RUN (B)
- ENGINEERED FILL (PROCESSED CLAY)
- CONCRETE
- EXISTING CONCRETE
- CONTAMINATED EXISTING SOIL
- EXISTING SOILS
- HMA PAVEMENT

0 10 20
SCALE, FEET

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

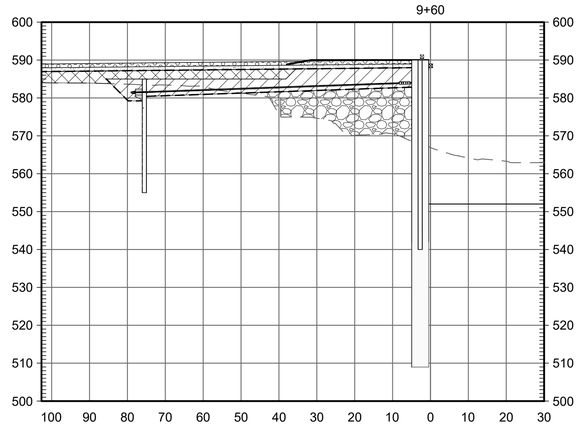
SHEET NAME

DOCKWALL SECTIONS - SHEET 3 OF 3

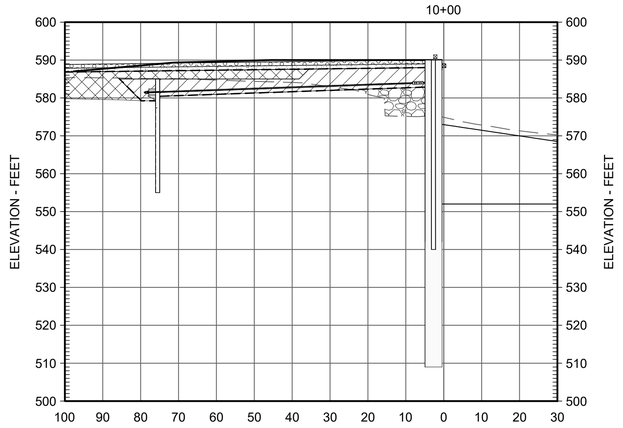
SHEET NO.

SM303

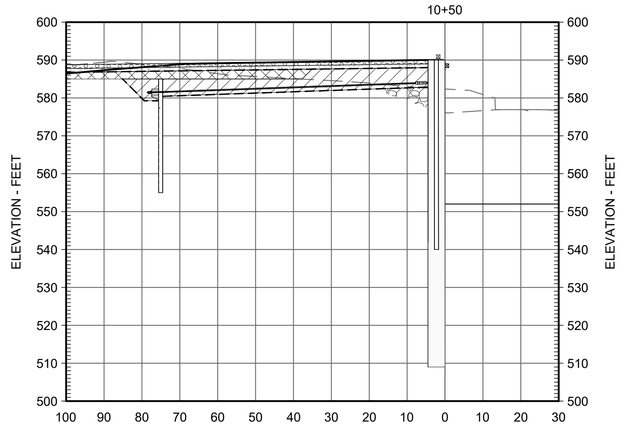
RIUTTA_LEAH B:\Working\BROWN COUNTY \W\2201593 Port Property Development\00_CAD\Design\Sheets\Proposed Sections.dwg - 11/10/2025



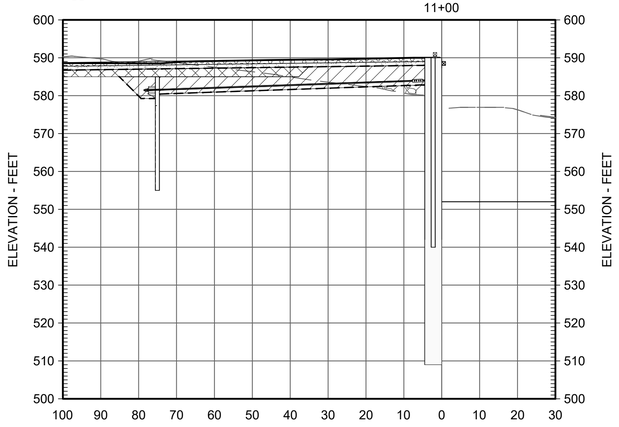
A SECTION
STA 9+60
SCALE: 1" = 20'



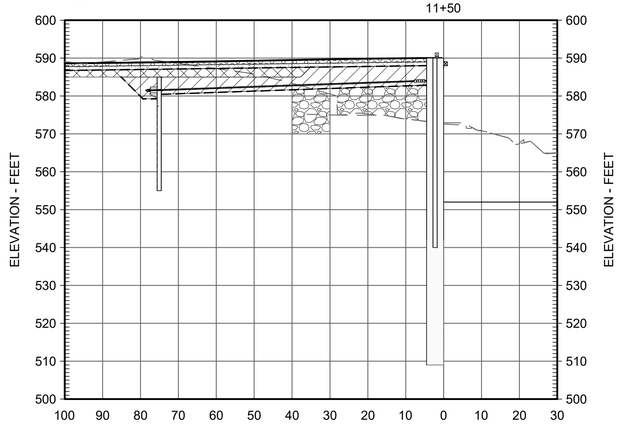
B SECTION
STA 10+00
SCALE: 1" = 20'



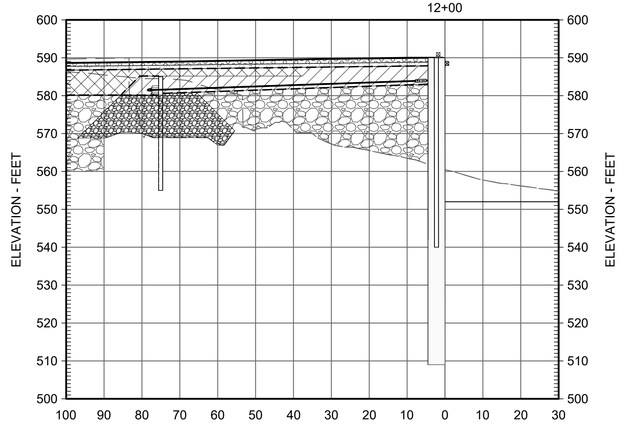
C SECTION
STA 10+50
SCALE: 1" = 20'



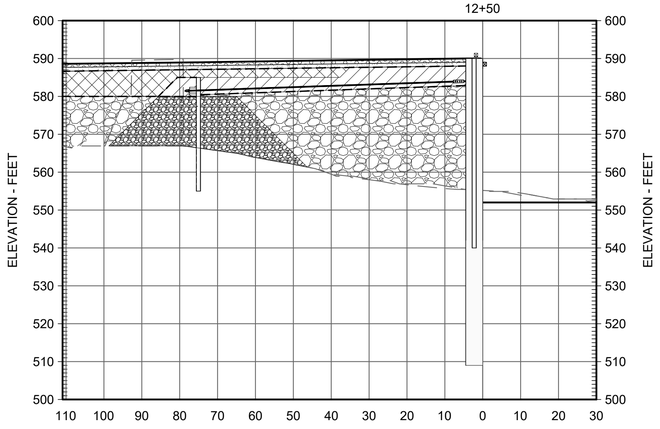
D SECTION
STA 11+00
SCALE:1" = 20'



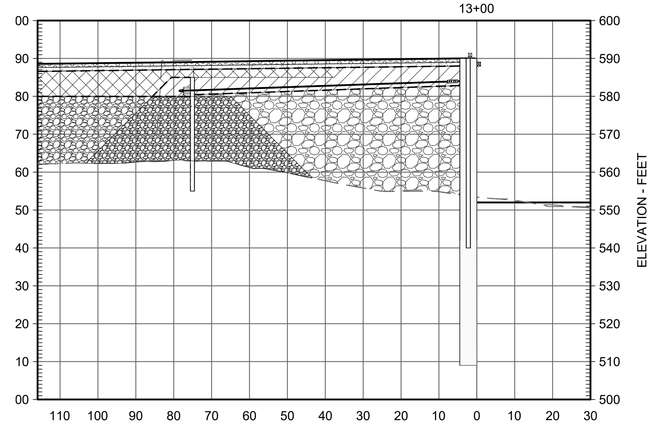
E SECTION
STA 11+50
SCALE: 1" = 20'



F SECTION
STA 12+00
SCALE: 1" = 20'



G SECTION
STA 12+50
SCALE: 1" = 20'



H SECTION
STA 13+00
SCALE: 1" = 20'

NOTE:
SEE SHEETS SM301 THRU SM303 FOR MATERIAL HATCH LEGEND.

0 20 40
SCALE, FEET

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

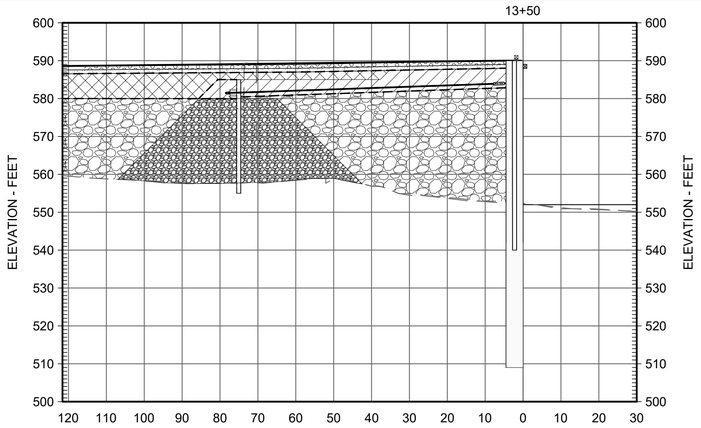
SHEET NAME

SECTIONS - SHEET 1 OF 4

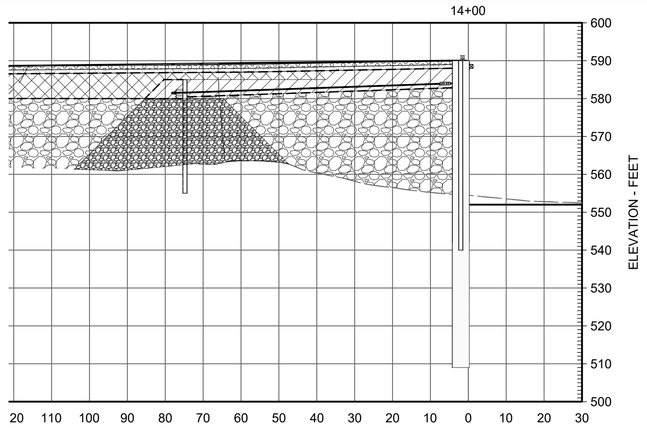
SHEET NO.

SM311

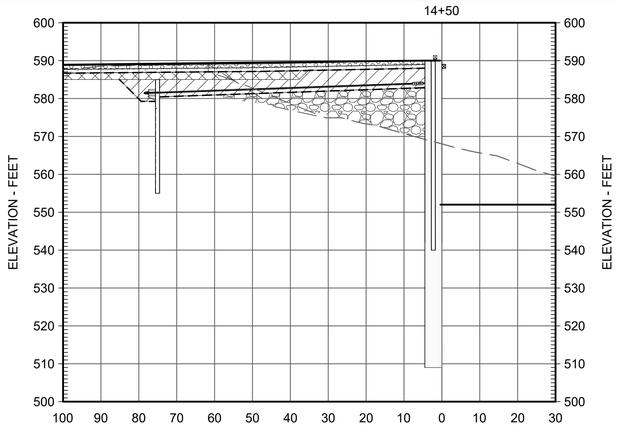
RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SECTIONS.dwg - 11/10/2025



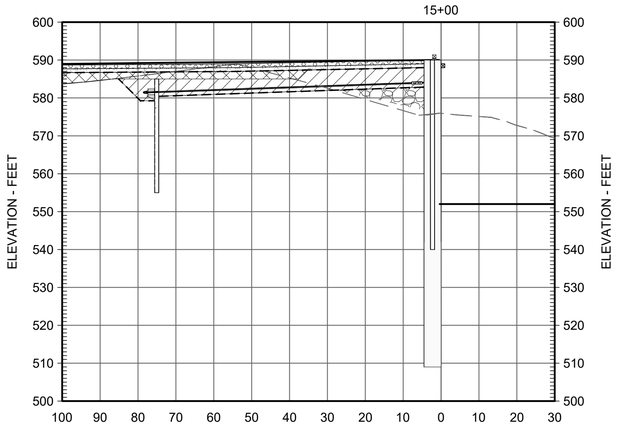
A SECTION
STA 13+50
SCALE: 1" = 20'



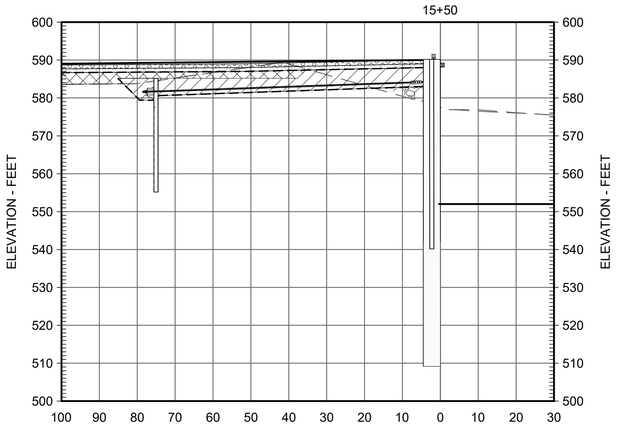
B SECTION
STA 14+00
SCALE: 1" = 20'



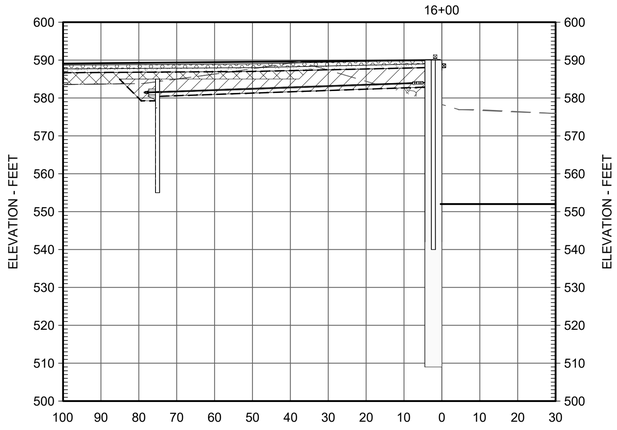
C SECTION
STA 14+50
SCALE: 1" = 20'



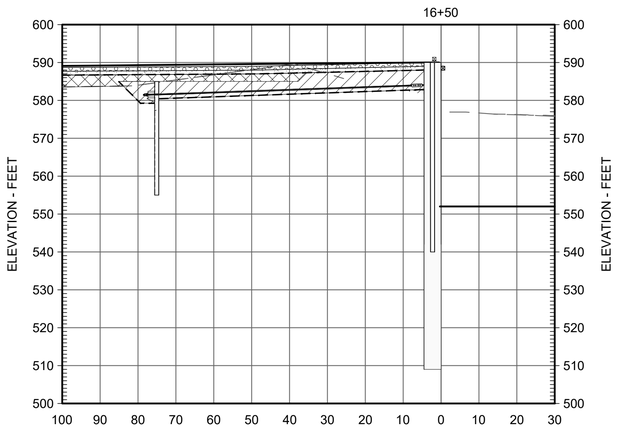
D SECTION
STA 15+00
SCALE: 1" = 20'



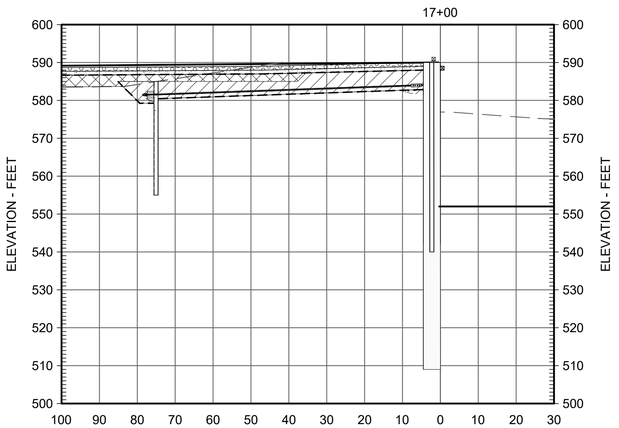
E SECTION
STA 15+50
SCALE: 1" = 20'



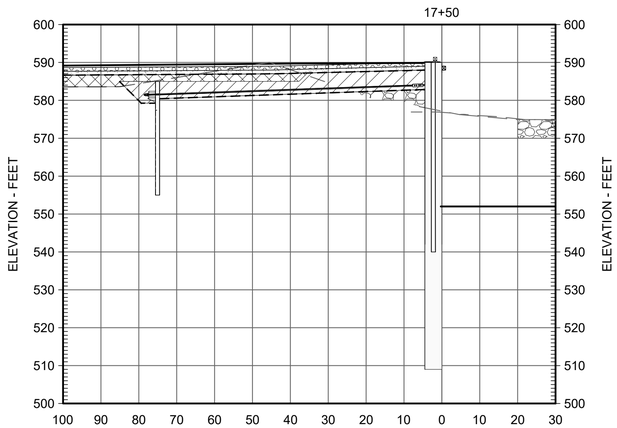
F SECTION
STA 16+00
SCALE: 1" = 20'



G SECTION
STA 16+50
SCALE: 1" = 20'



H SECTION
STA 17+00
SCALE: 1" = 20'



I SECTION
STA 17+50
SCALE: 1" = 20'

0 20 40
SCALE, FEET

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SECTIONS.dwg - 11/10/2025

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

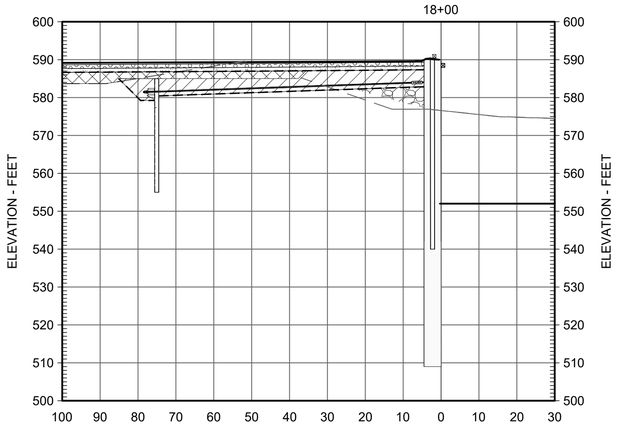
SHEET NAME

SECTIONS - SHEET 2 OF 4

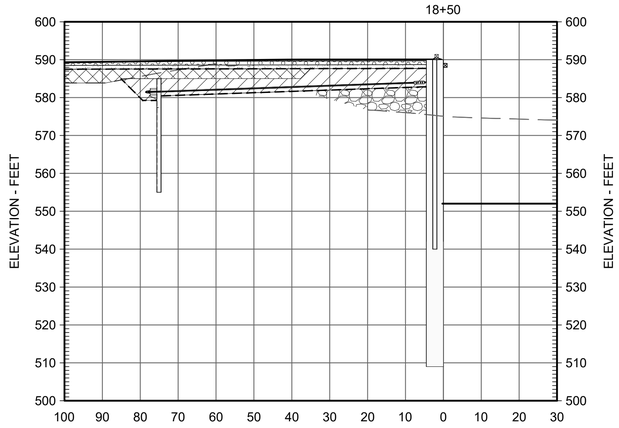
SHEET NO.

SM312

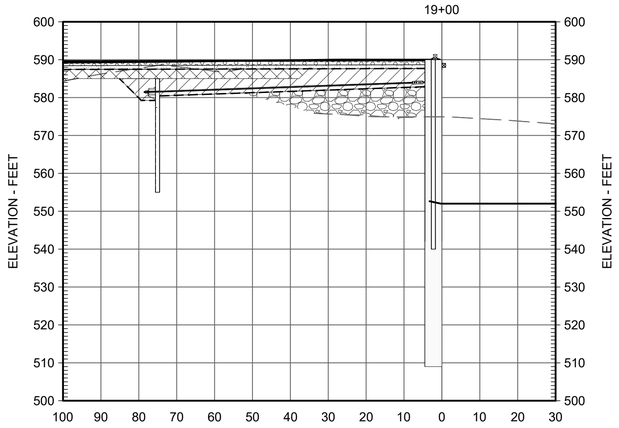
FOR BID



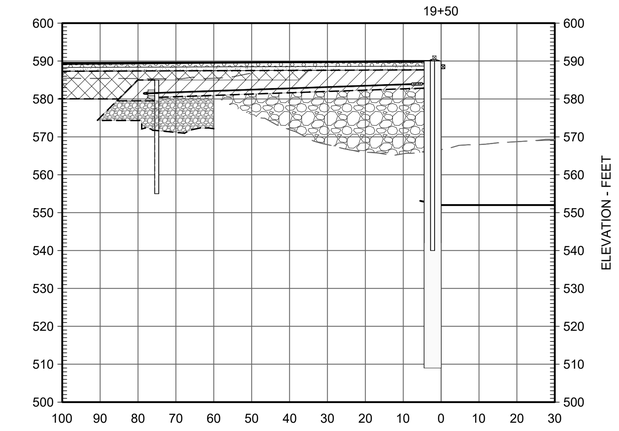
A SECTION
STA 18+00
SCALE: 1" = 20'



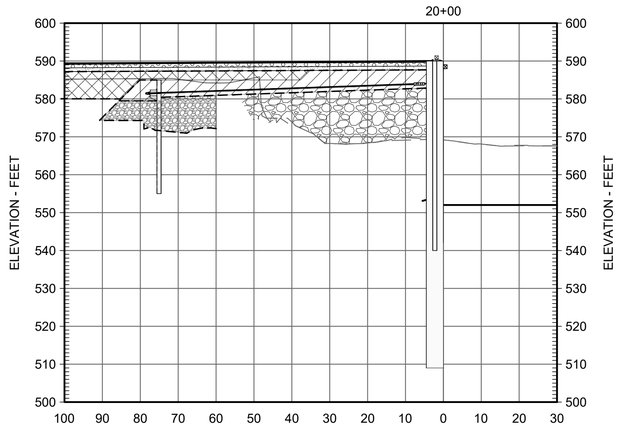
B SECTION
STA 18+50
SCALE: 1" = 20'



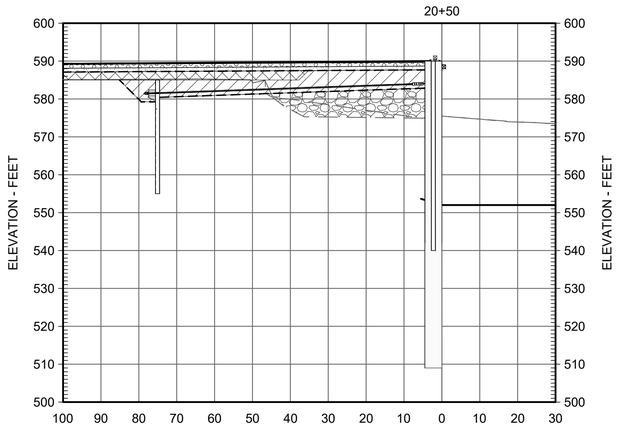
C SECTION
STA 19+00
SCALE: 1" = 20'



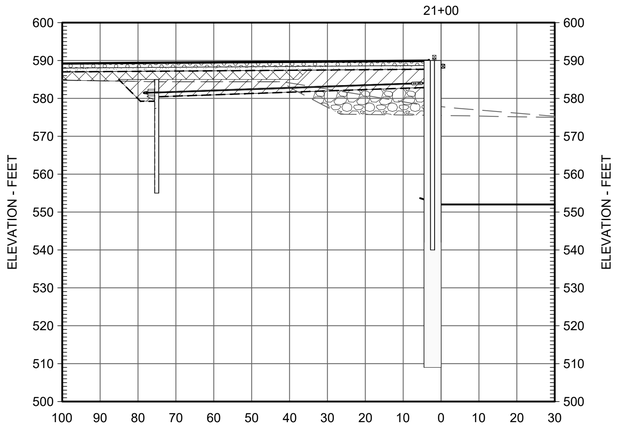
D SECTION
STA 19+50
SCALE: 1" = 20'



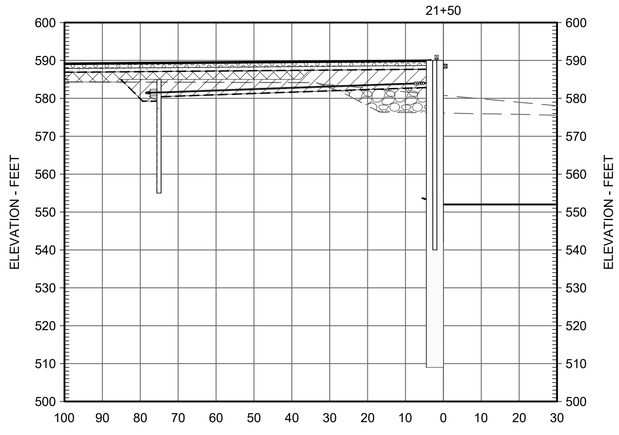
E SECTION
STA 20+00
SCALE: 1" = 20'



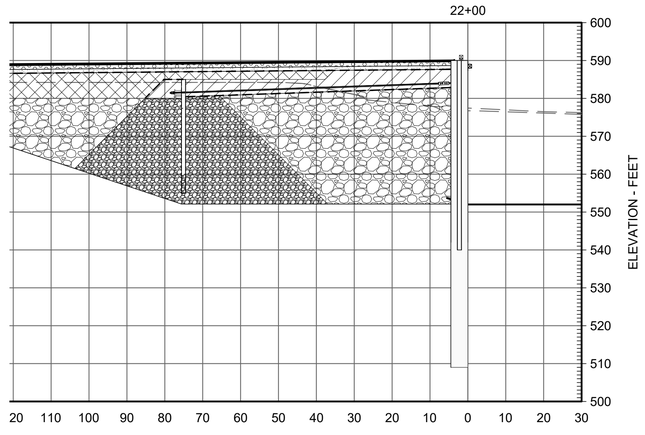
F SECTION
STA 20+50
SCALE: 1" = 20'



G SECTION
STA 21+00
SCALE: 1" = 20'



H SECTION
STA 21+50
SCALE: 1" = 20'



I SECTION
STA 22+00
SCALE: 1" = 20'

0 20 40
SCALE, FEET

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SECTIONS.dwg - 11/10/2025

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

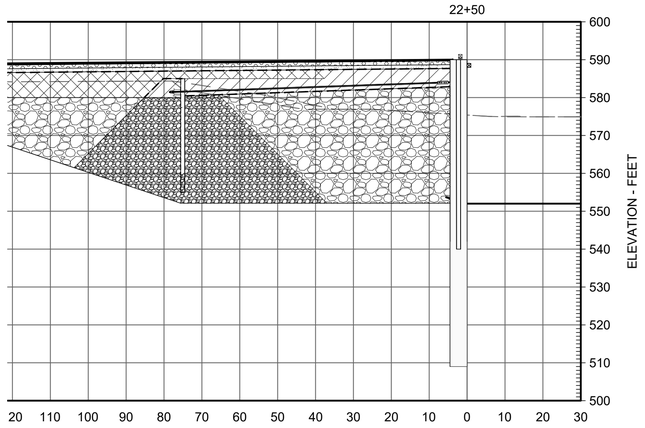
SHEET NAME

SECTIONS - SHEET 3 OF 4

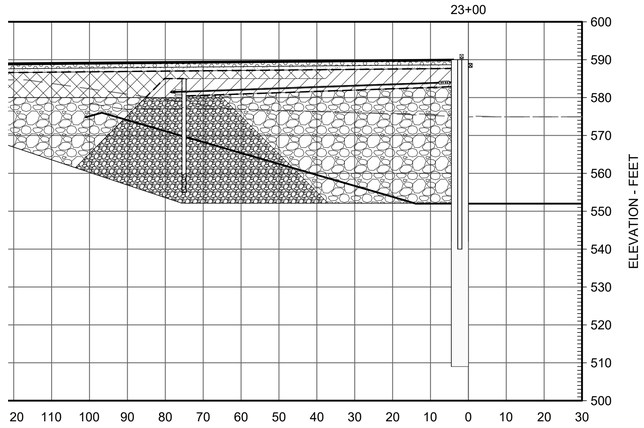
SHEET NO.

SM313

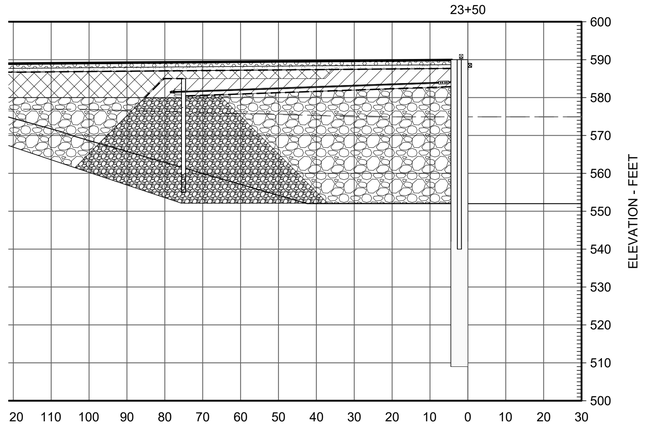
FOR BID



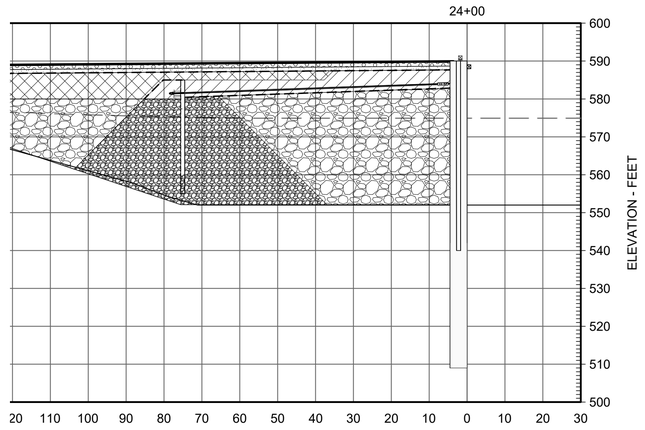
A SECTION
STA 22+50
SCALE: 1" = 20'



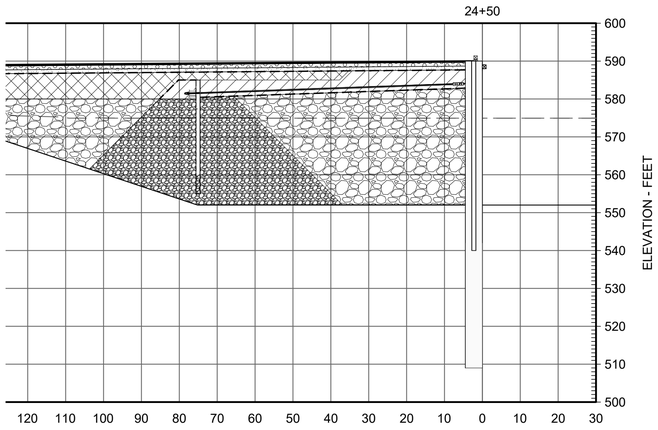
B SECTION
STA 23+00
SCALE: 1" = 20'



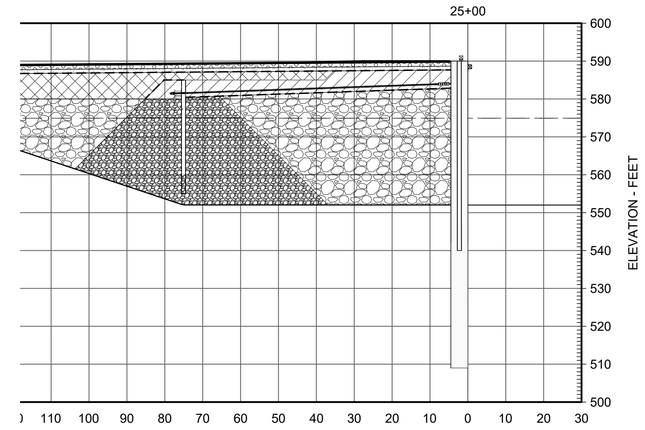
C SECTION
STA 23+50
SCALE: 1" = 20'



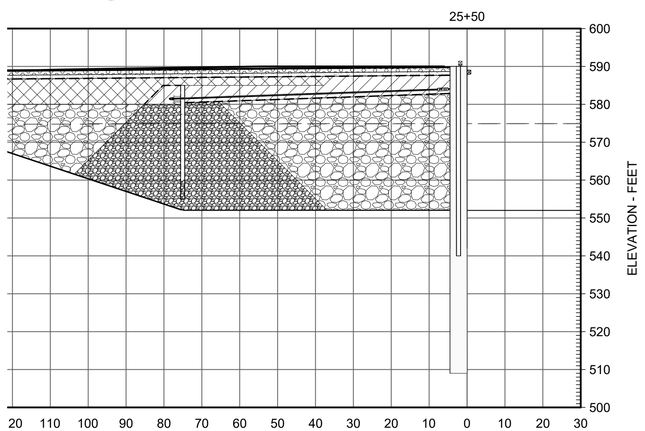
D SECTION
STA 24+00
SCALE: 1" = 20'



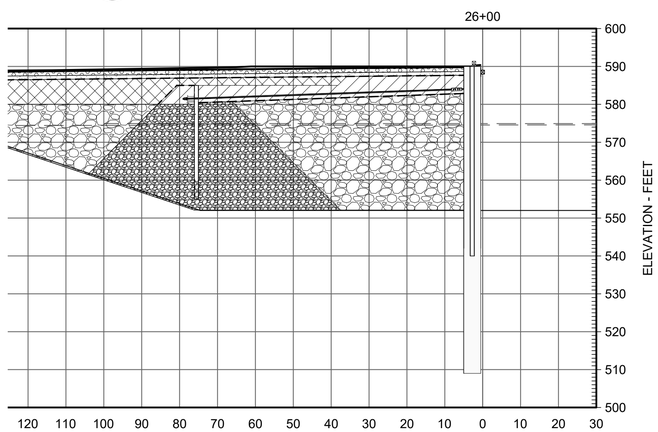
E SECTION
STA 24+50
SCALE: 1" = 20'



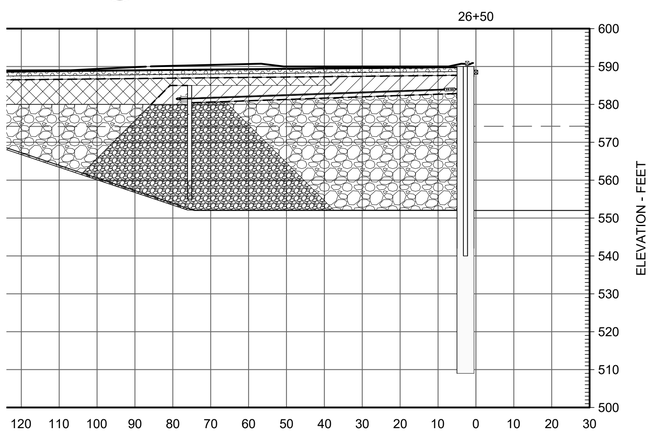
F SECTION
STA 25+00
SCALE: 1" = 20'



G SECTION
STA 25+50
SCALE: 1" = 20'



H SECTION
STA 26+00
SCALE: 1" = 20'



I SECTION
STA 26+00
SCALE: 1" = 20'

0 20 40
SCALE, FEET

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

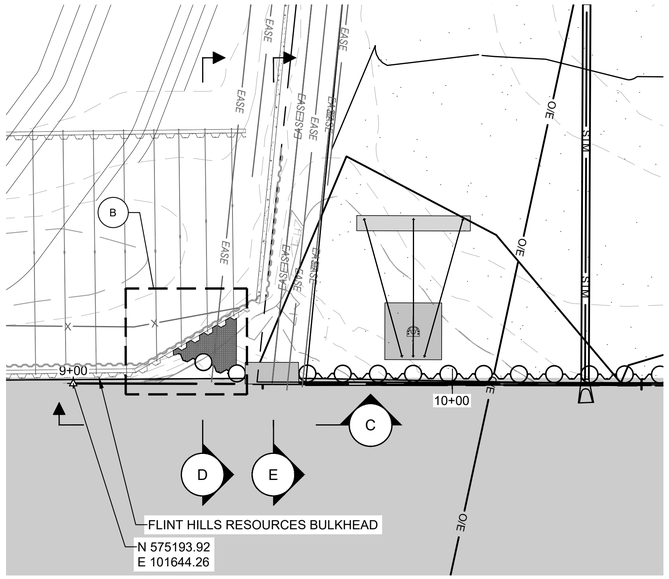
SECTIONS - SHEET 4 OF 4

SHEET NO.

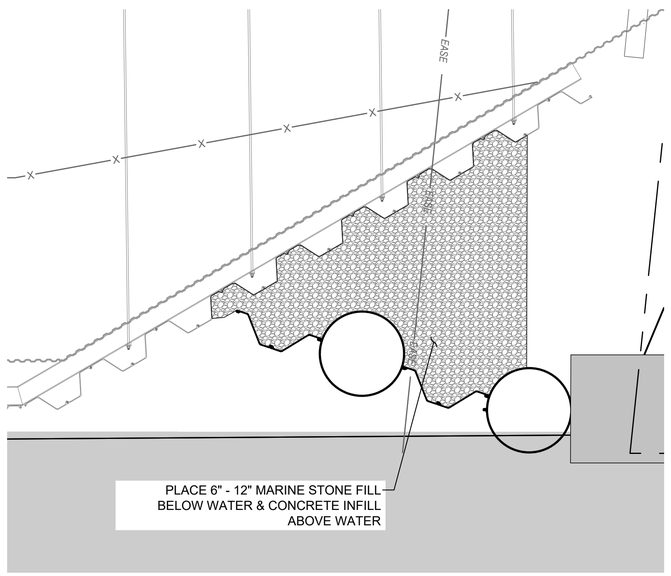
SM314

FOR BID

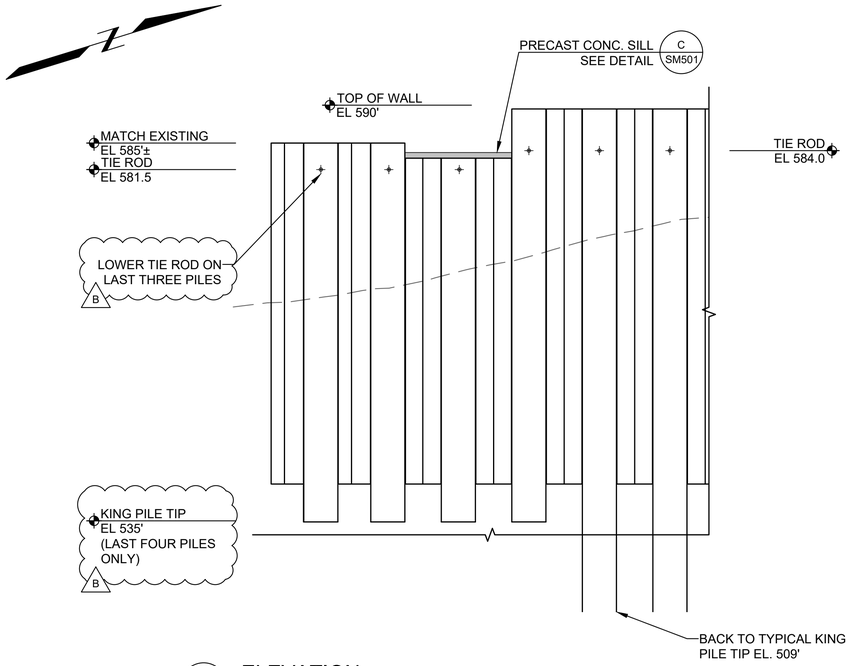
RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SECTIONS.dwg - 11/10/2025



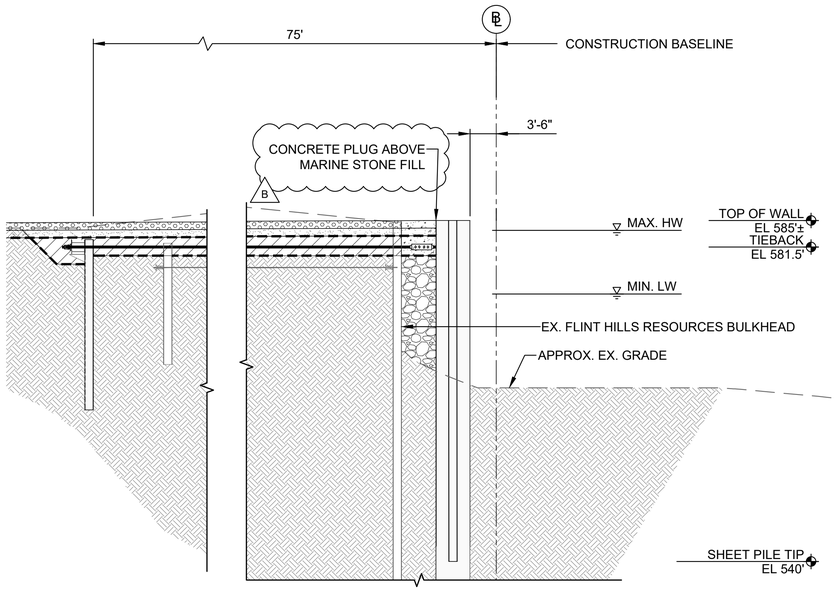
A ENLARGED PLAN
SM101 SOUTH END
SCALE: 1" = 20'



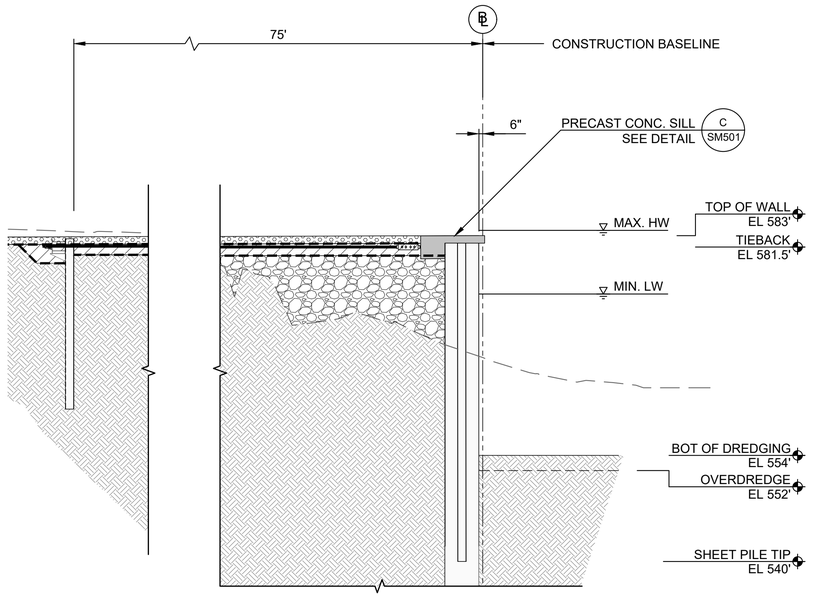
B DETAIL
BULKHEAD END
SCALE: 1" = 4'



C ELEVATION
BULKHEAD END
SCALE: 1" = 10'



D SECTION
BULKHEAD
SCALE: 1" = 10'



E SECTION
BULKHEAD
SCALE: 1" = 10'

0 4 8
SCALE, FEET

0 10 20
SCALE, FEET

0 20 40
SCALE, FEET

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

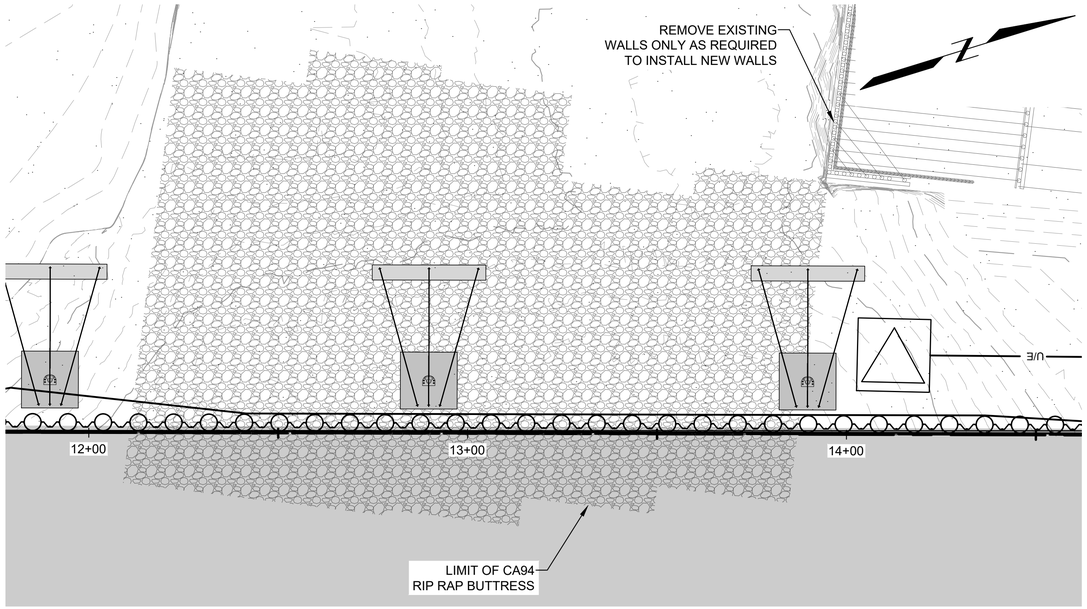
SHEET NAME

PLAN - SOUTH END

SHEET NO.

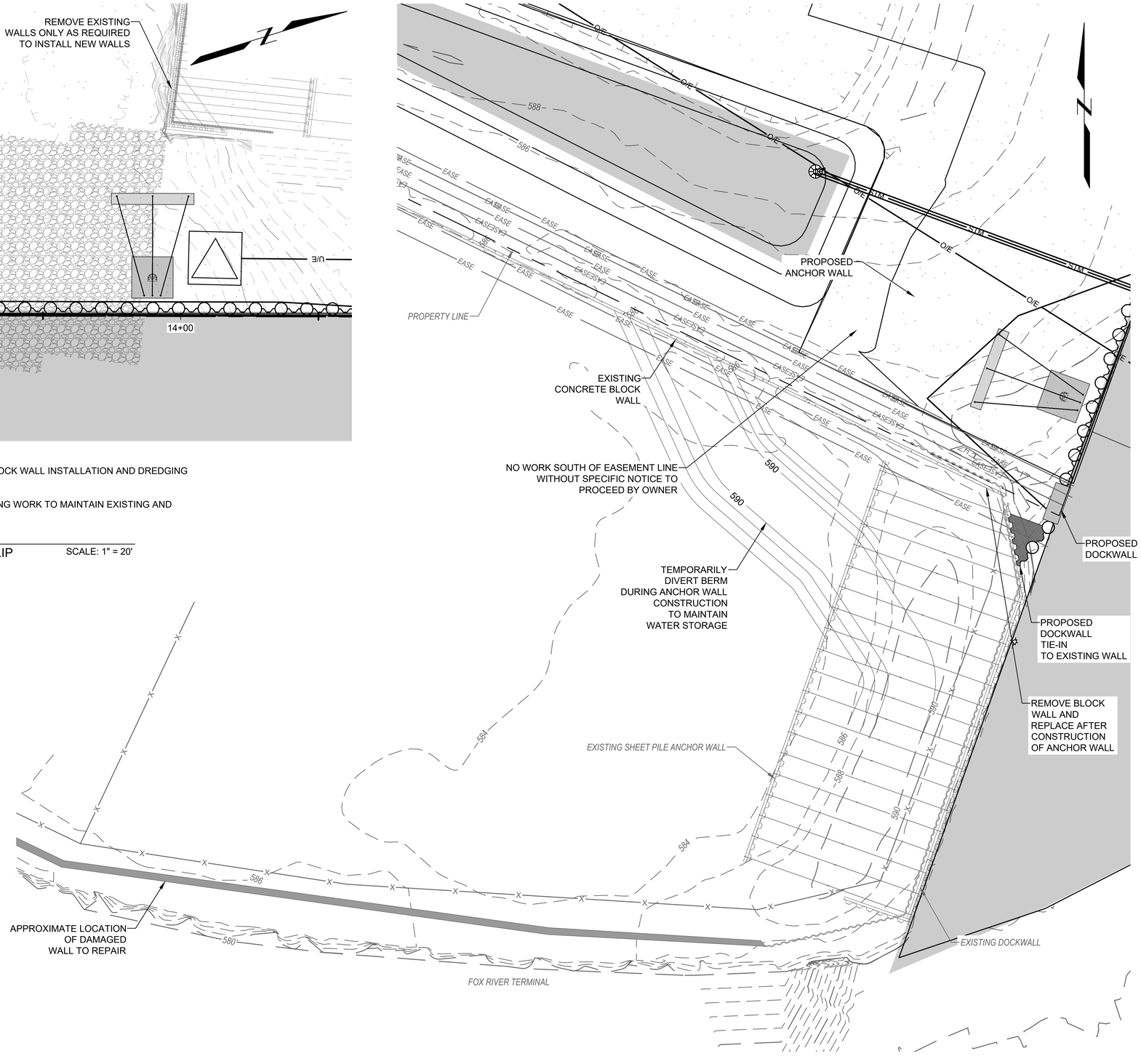
SM401

RIUTTA, LEAH B:\Working\BROWN COUNTY W\2201593 Port Property Development\00_CAD\Design\Sheets\Bulkhead Enlarged Plans.dwg - 11/10/2025



NOTES:
1. CONTRACTOR SHALL COMPLY WITH APPROVED PLAN FOR DOCK WALL INSTALLATION AND DREDGING NEAR CAPS PROTECTING CONTAMINATED SEDIMENTS.
2. PROPOSED FILL MATERIALS ARE NOT SHOWN FOR CLARITY
3. CONTRACTOR SHALL REMAIN RESPONSIBLE FOR SEQUENCING WORK TO MAINTAIN EXISTING AND PROPOSED WALL STABILITY AT ALL TIMES.

A ENLARGED PLAN
SM101 ENTRANCE TO BOAT SLIP SCALE: 1" = 20'



ENLARGED PLAN
FLINT HILLS RESOURCES BULKHEAD TIE-IN SCALE: 1" = 20'

0 20 40
SCALE, FEET

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

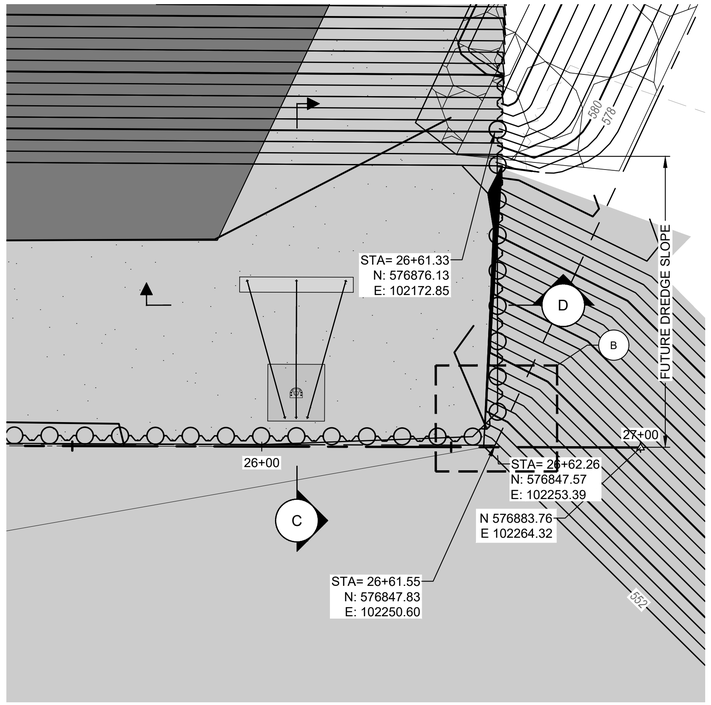
SHEET NAME

PLAN - DOCKWALL DETAILS

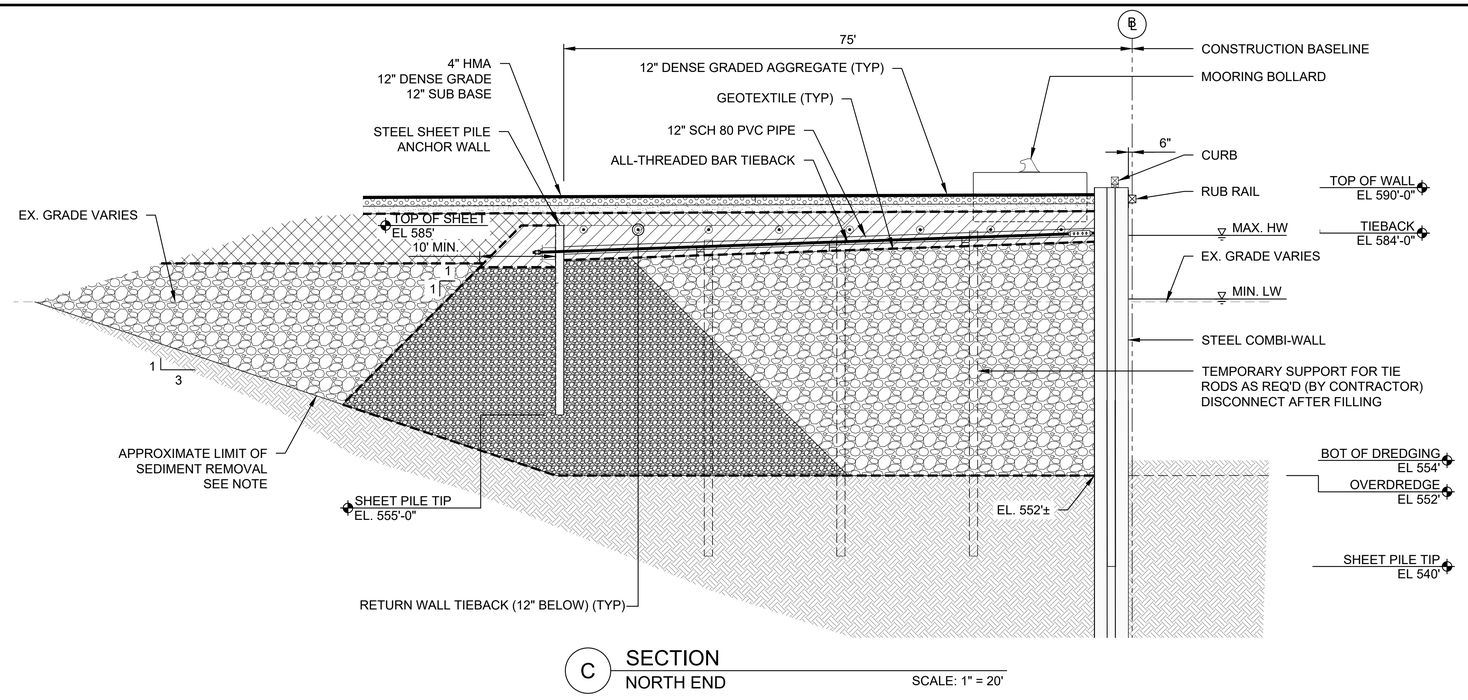
SHEET NO.

SM402

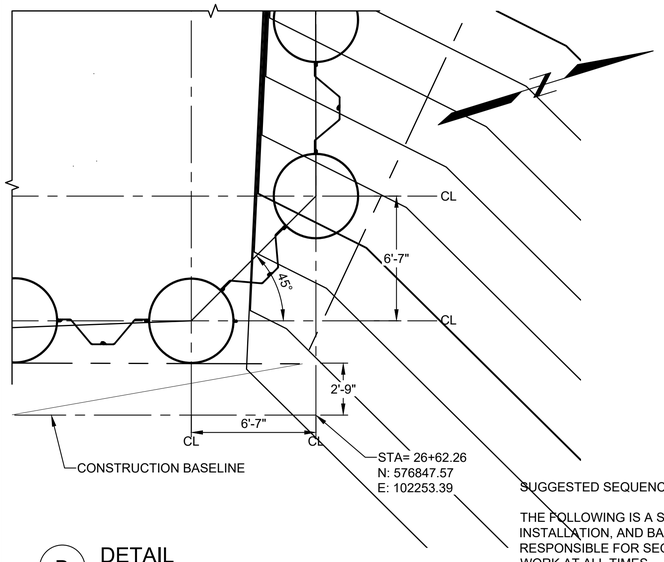
RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Bulkhead Enlarged Plans.dwg - 11/10/2025



A ENLARGED PLAN
SM101 NORTH END
SCALE: 1" = 20'



C SECTION
NORTH END
SCALE: 1" = 20'

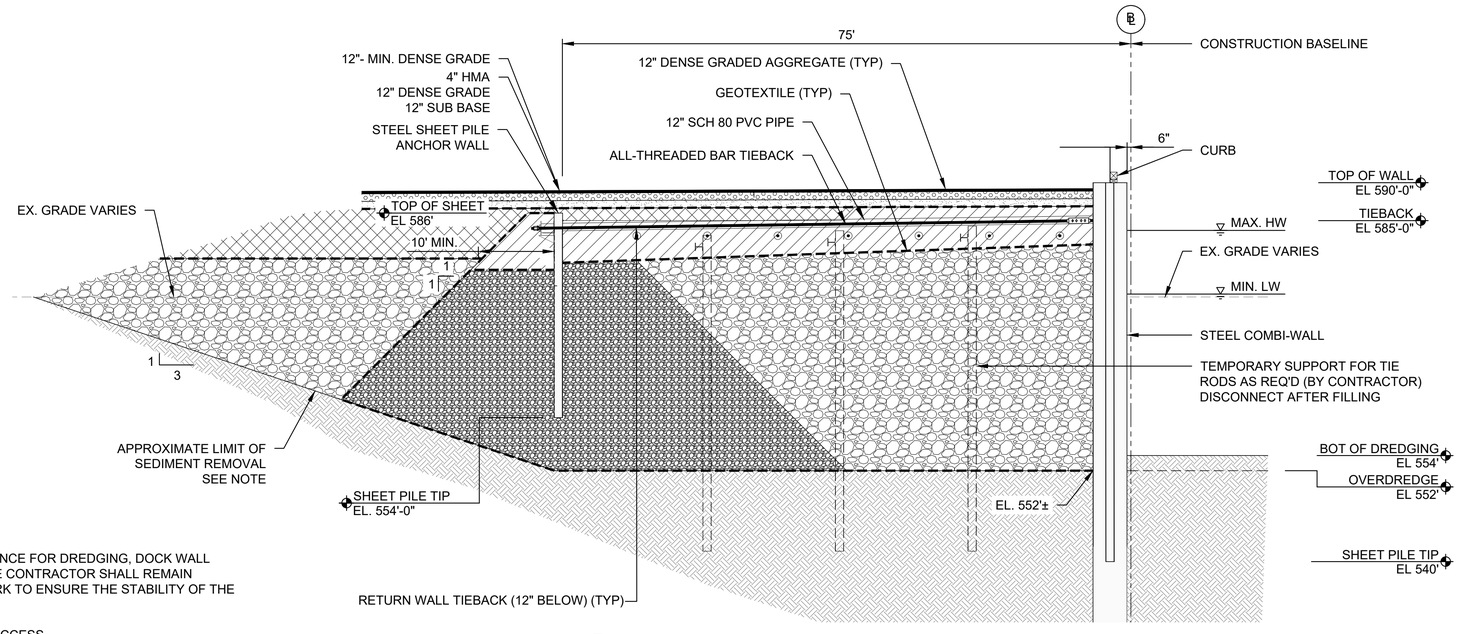


B DETAIL
BULKHEAD END
SCALE: 1" = 4'

SUGGESTED SEQUENCE:

THE FOLLOWING IS A SUGGESTED SEQUENCE FOR DREDGING, DOCK WALL INSTALLATION, AND BACKFILLING BUT THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR SEQUENCING HIS WORK TO ENSURE THE STABILITY OF THE WORK AT ALL TIMES.

1. DREDGE FROM CHANNEL IN TO GET ACCESS.
2. DREDGE OUT ORGANIC MATERIAL LANDSIDE OF DOCK WALL.
3. CONSTRUCT TEMPORARY ACCESS (ALSO PERMANENT STONE FOR ANCHOR WALL FROM EXISTING SHORELINE).
4. INSTALL DOCK WALL.
5. INSTALL ANCHOR WALL.
6. PLACE FILL BETWEEN WALLS TO MAX ALLOWED WITHOUT TIE RODS. MONITOR WALL DURING ALL FILLING.
7. DRIVE TEMP TIE ROD SUPPORTS.
8. INSTALL TIE RODS.
9. COMPLETE FILLING.
10. USE COMPLETED TEMP ACCESS AND FILLING TO ACCESS NORTH SHORELINE FOR REVETMENT.



D SECTION
NORTH END
SCALE: 1" = 20'

0 4 8
SCALE, FEET

0 10 20
SCALE, FEET

0 20 40
SCALE, FEET

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

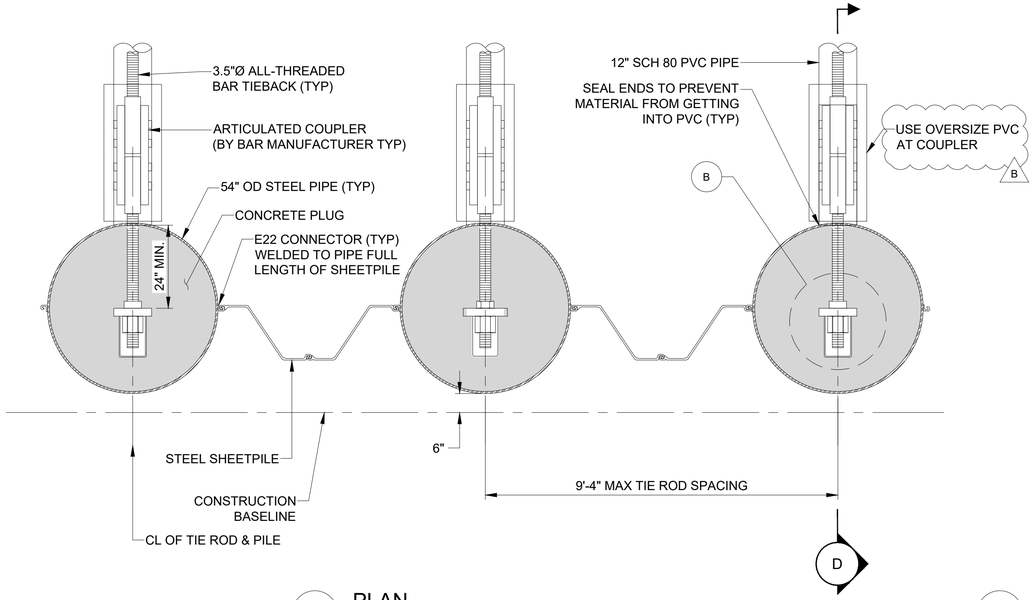
SHEET NAME

PLAN - NORTH END

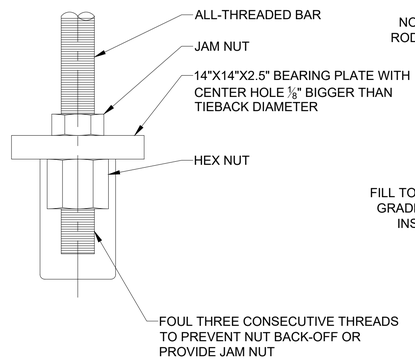
SHEET NO.

SM403

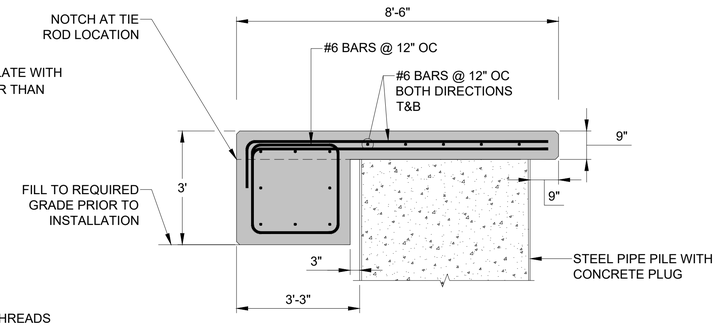
RIUTTA_LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Bulkhead Enlarged Plans.dwg - 11/10/2025



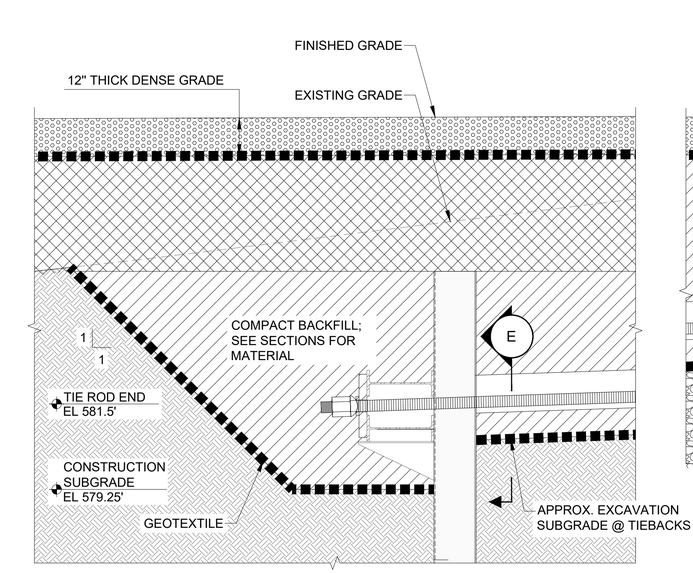
A PLAN
TYPICAL DOCKWALL
SCALE: 1/2"=1'-0"



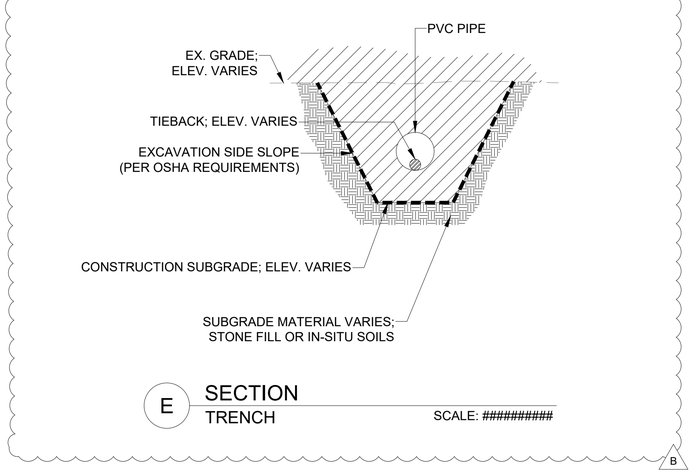
B DETAIL
TIEROD HEAD
SCALE: 1-1/2"=1'-0"



C DETAIL
SM401 PRECAST SILL
SCALE: 1-1/2"=1'-0"



D SECTION
TIEROD AT DOCKWALL
SCALE: 1/2"=1'-0"



E SECTION
TRENCH
SCALE: ##########

0 1 2
SCALE, FEET

0 1 2
SCALE, FEET

0 2 4
SCALE, FEET

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

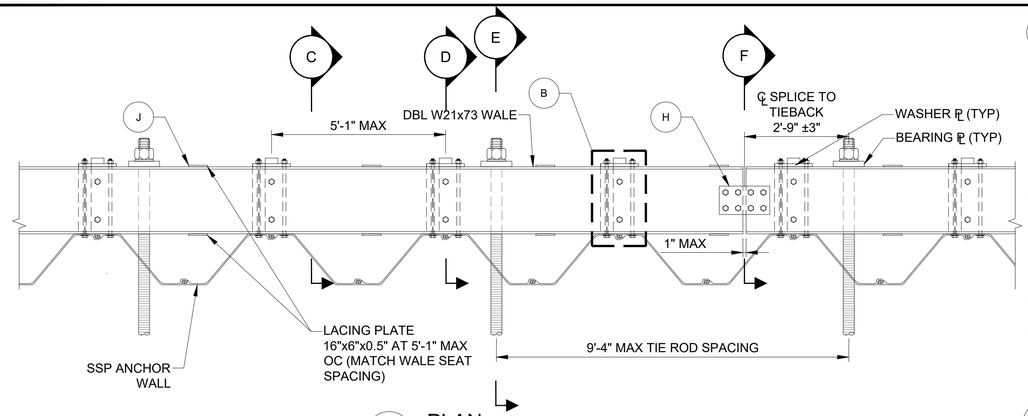
DOCKWALL DETAILS - SHEET 1 OF 3

SHEET NO.

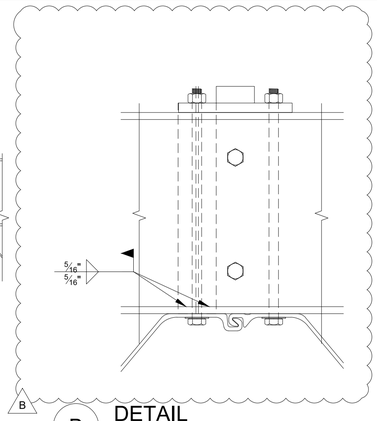
SM501

FOR BID

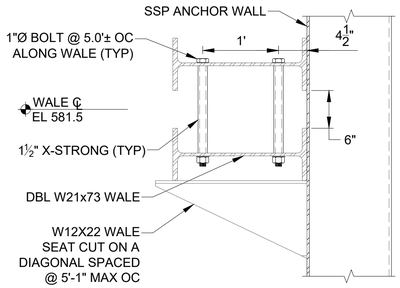
RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Dockwall Details.dwg - 11/10/2025



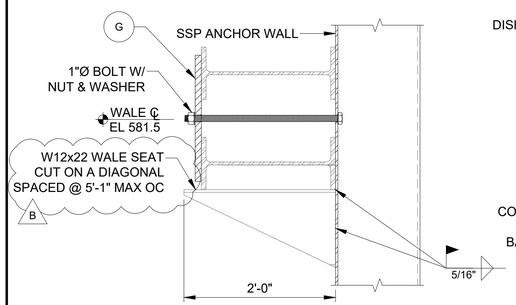
A PLAN
TYPICAL ANCHOR WALL — SCALE: 1/2"=1'-0"



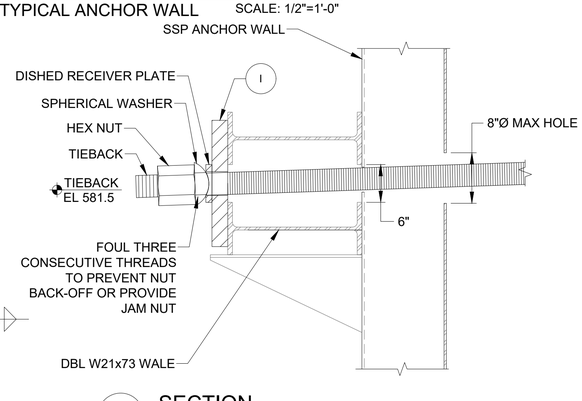
B DETAIL
BEAM SEAT — SCALE: 1-1/2"=1'-0"



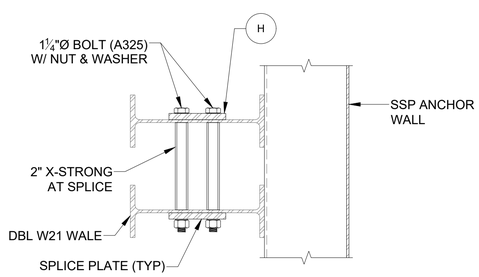
C SECTION
WALE — SCALE: 1"=1'-0"



D SECTION
WALE / WALE CONNECTION — SCALE: 1"=1'-0"

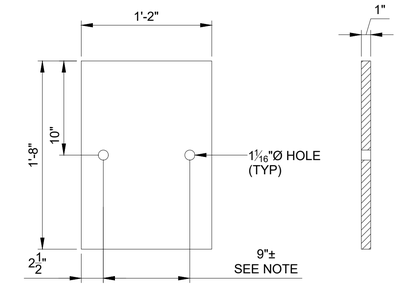


E SECTION
TIEBACK / ANCHOR PILE CONNECTION — SCALE: 1"=1'-0"



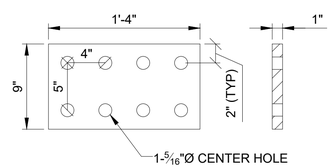
NOTE:
SPLICES SHALL BE LOCATED NO CLOSER THAN 30' APART OR (3) TIEBACKS.

F SECTION
WALE SPLICE — SCALE: 1"=1'-0"

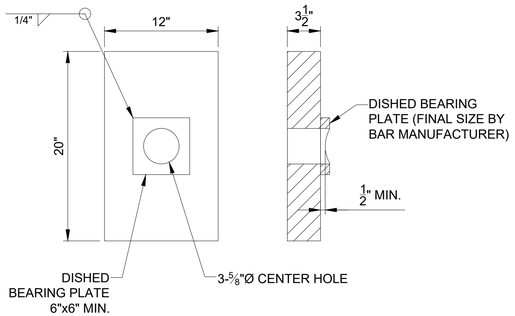


NOTE:
BOLT SPACING TO BE MODIFIED AS REQ'D FOR SELECTED SSP SIZE. BOLTS TO BE CENTERED ON SSP FLANGE.

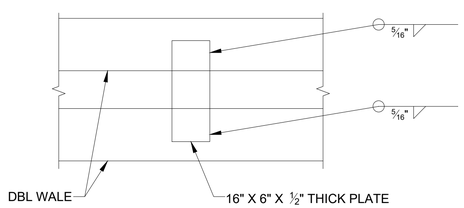
G DETAIL
WASHER PLATE — SCALE: 1-1/2"=1'-0"



H DETAIL
SPLICE PLATE — SCALE: 1-1/2"=1'-0"



I DETAIL
BEARING PLATE — SCALE: 1-1/2"=1'-0"



J DETAIL
LACING PLATE — SCALE: 1"=1'-0"

NOTE: COORDINATE SPACING TO AVOID CONFLICTS WITH SHEET PILES, WALE SEAT, AND OTHER CONNECTIONS

0 1 2
SCALE, FEET

0 2 4
SCALE, FEET

0 1 2
SCALE, FEET

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT
PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

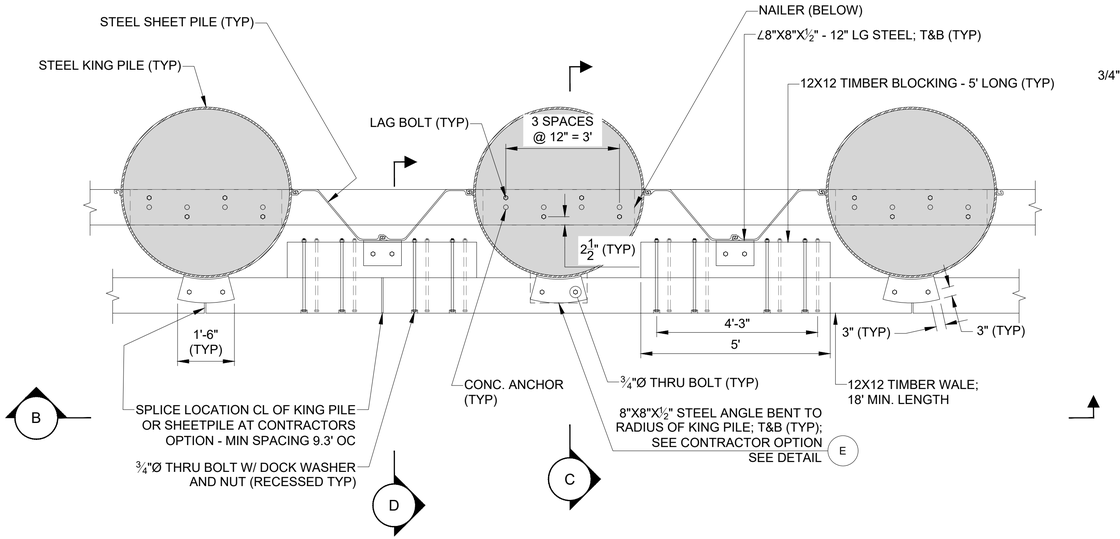
DOCKWALL DETAILS - SHEET 2 OF 3

SHEET NO.

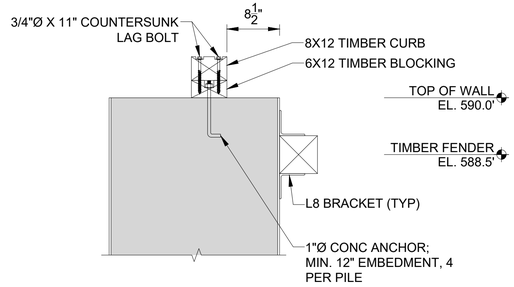
SM502

FOR BID

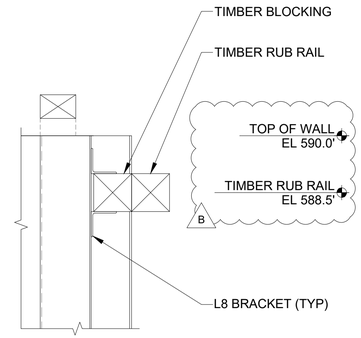
RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Dockwall Details.dwg - 11/10/2025



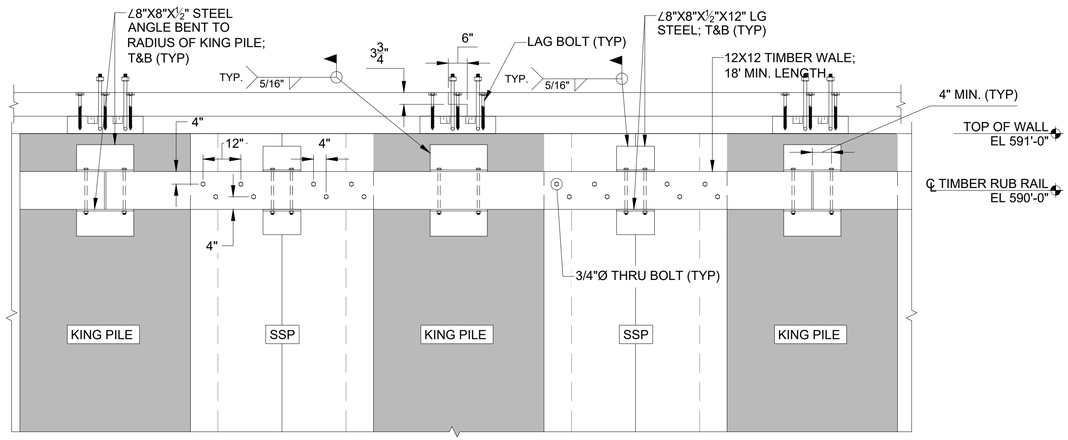
A PLAN
TIMBER RUB RAIL
SCALE: 1/2"=1'-0"



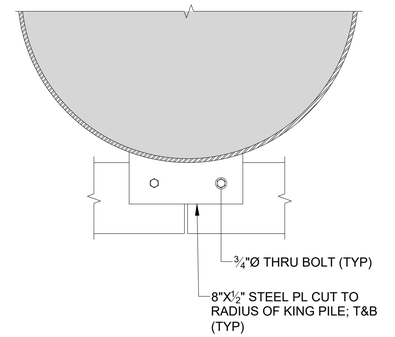
C DETAIL
TIMBER CURB
SCALE: 1/2"=1'-0"



D SECTION
AT SHEET PILE
SCALE: 1/4"=1'-0"



B PLAN
TIMBER RUB RAIL
SCALE: 1/2"=1'-0"



E DETAIL - CONTRACTOR OPTION
RUB RAIL BRACKET
SCALE: 1"=1'-0"

0 1 2
SCALE, FEET

0 1 2
SCALE, FEET

0 2 4
SCALE, FEET

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT
PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

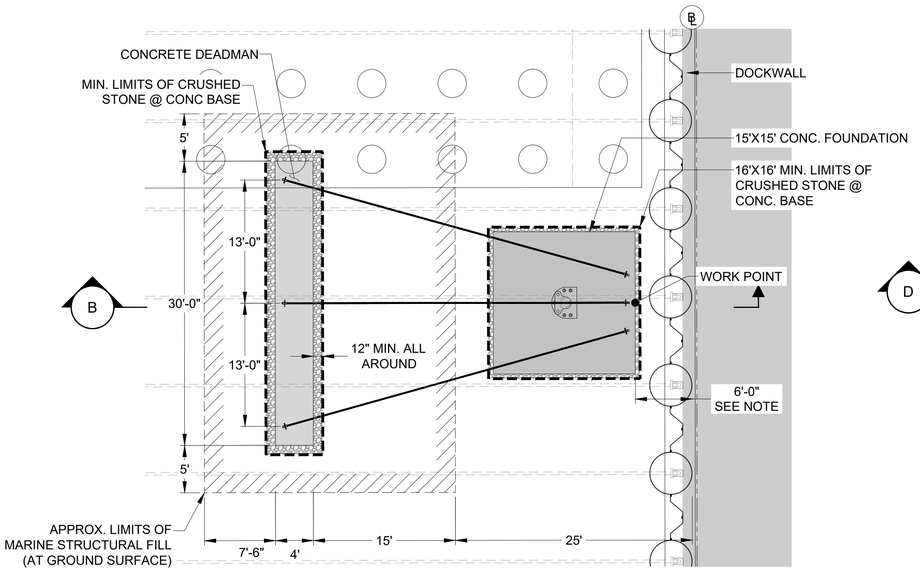
DOCKWALL DETAILS - SHEET 3 OF 3

SHEET NO.

SM503

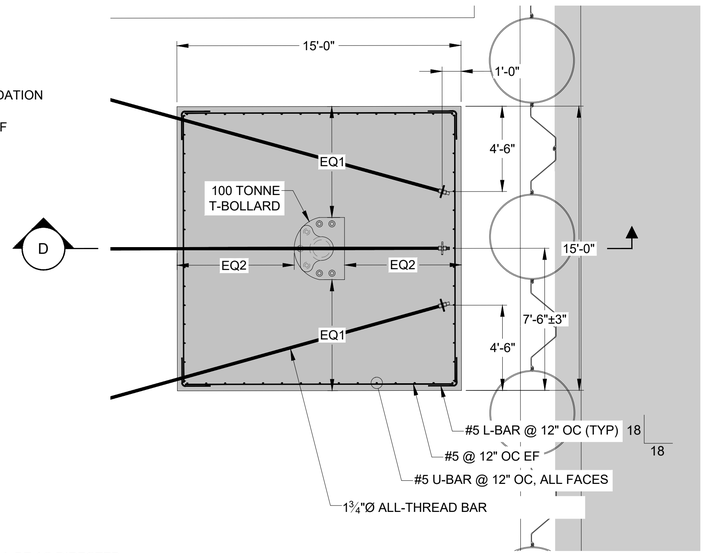
FOR BID

RUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Dockwall Details.dwg - 11/10/2025

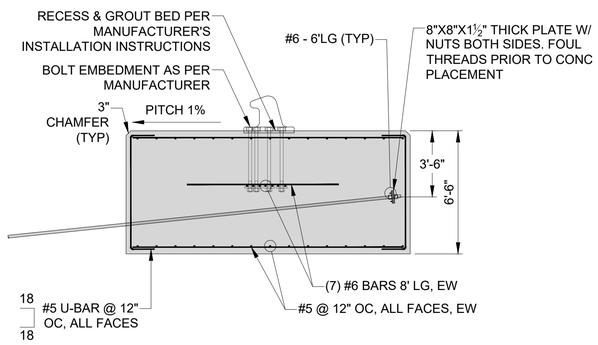


A PLAN
100 TONNE T-BOLLARD
SCALE: 1/8"=1'-0"

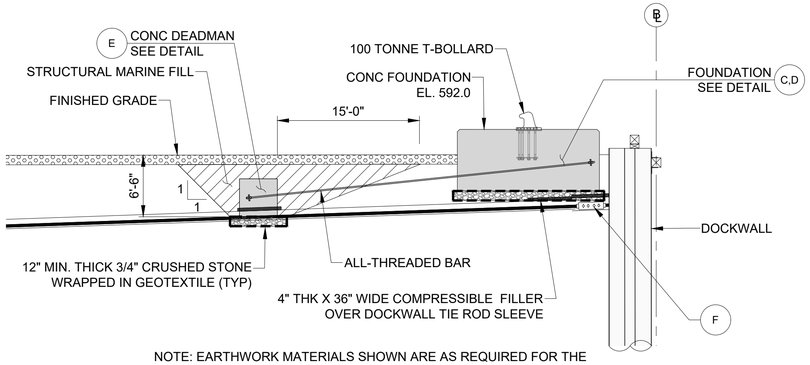
NOTE:
1. FINAL LOCATIONS OF ALL BOLLARDS SHALL BE AS DIRECTED BY THE OWNER
2. CENTER BOLLARD ON DOCK WALL TIE ROD TO MINIMIZE CONFLICTS



C PLAN
CONCRETE FOUNDATION LAYOUT AND REINFORCEMENT
SCALE: 1/4"=1'-0"

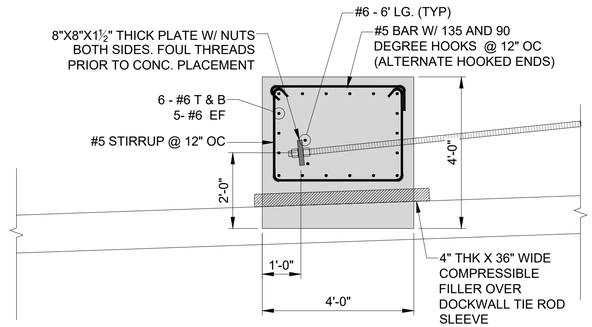


D SECTION
CONCRETE FOUNDATION LAYOUT AND REINFORCEMENT
SCALE: 1/4"=1'-0"

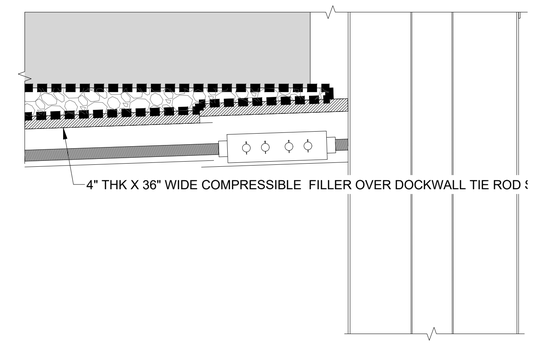


NOTE: EARTHWORK MATERIALS SHOWN ARE AS REQUIRED FOR THE BOLLARD FOUNDATION AND DEADMAN SYSTEM. REFER TO THE SM300 SERIES FOR EARTHWORK REQUIREMENTS IN THE VICINITY OF THE DOCKWALL AND ASSOCIATED ANCHOR WALL.

B SECTION
100 TONNE T-BOLLARD
SCALE: 1/8"=1'-0"



E SECTION
CONCRETE DEADMAN
SCALE: 1/2"=1'-0"



F DETAIL
TIE ROD
SCALE: 1/2"=1'-0"

0 2 4
SCALE, FEET

0 4 8
SCALE, FEET

0 8 16
SCALE, FEET

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT
PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	ADP
Drawn:	JSF
Designed:	EB
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION V	MJV
A	10/22/2025	FOR BID	MJV

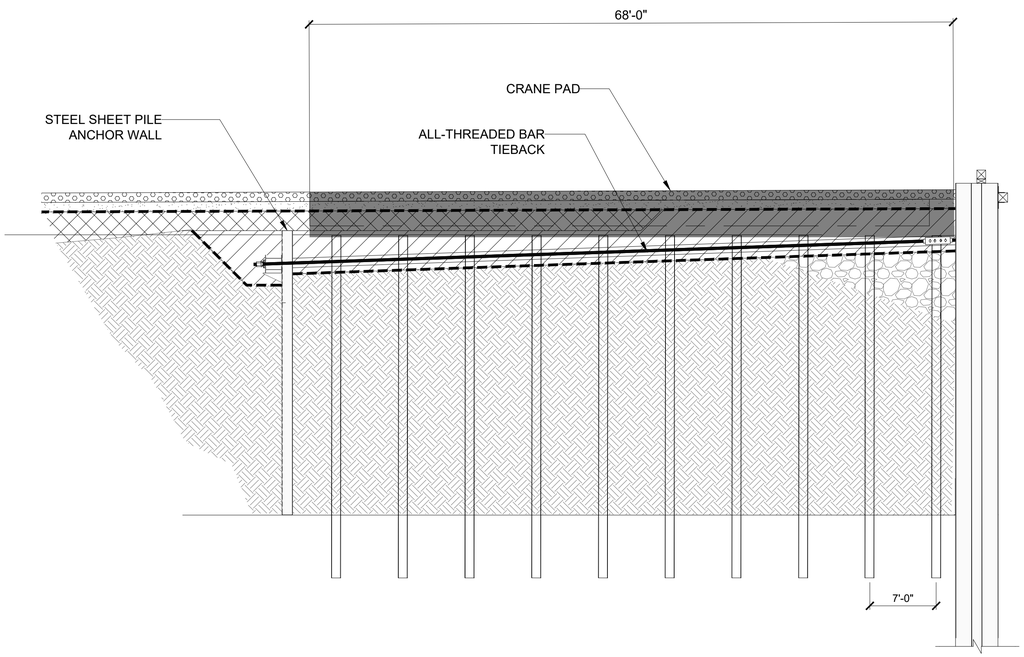
SHEET NAME

MARINE BOLLARD DETAILS

SHEET NO.

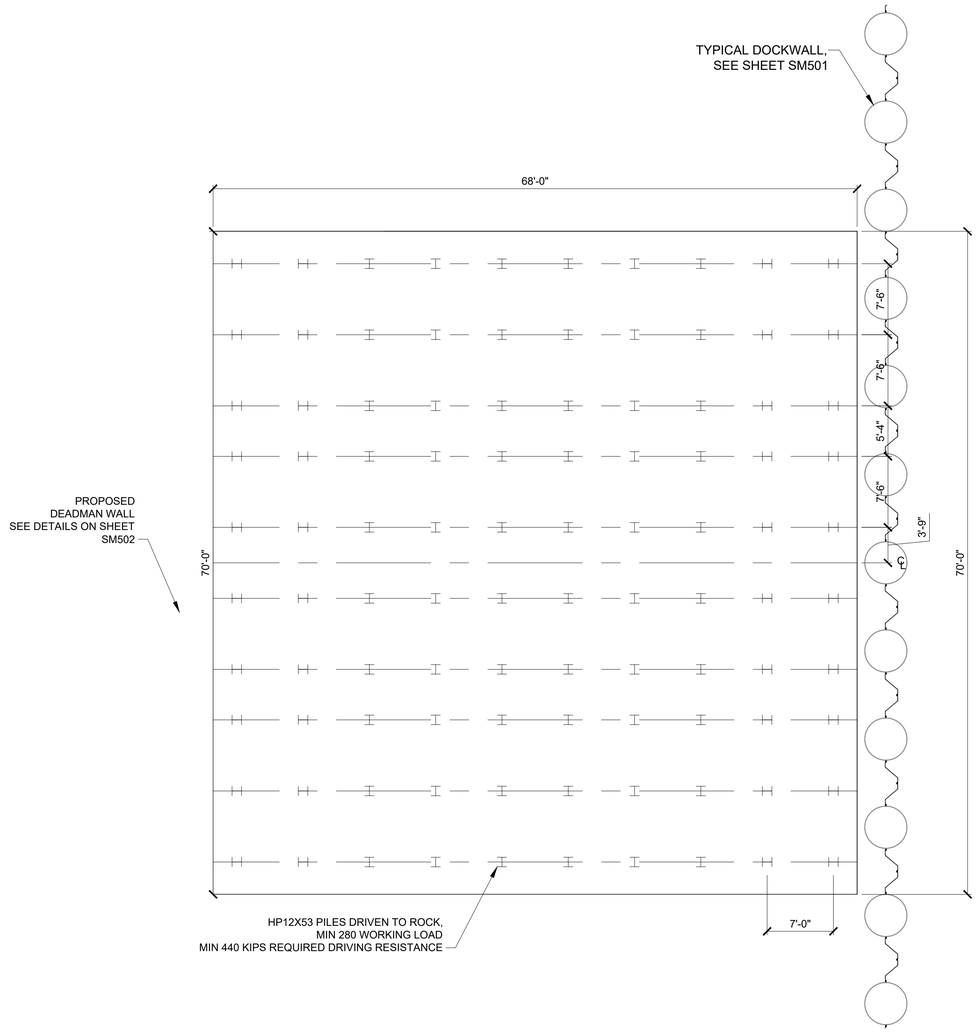
SM504

RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\PROPOSED BOLLARD.dwg - 11/10/2025



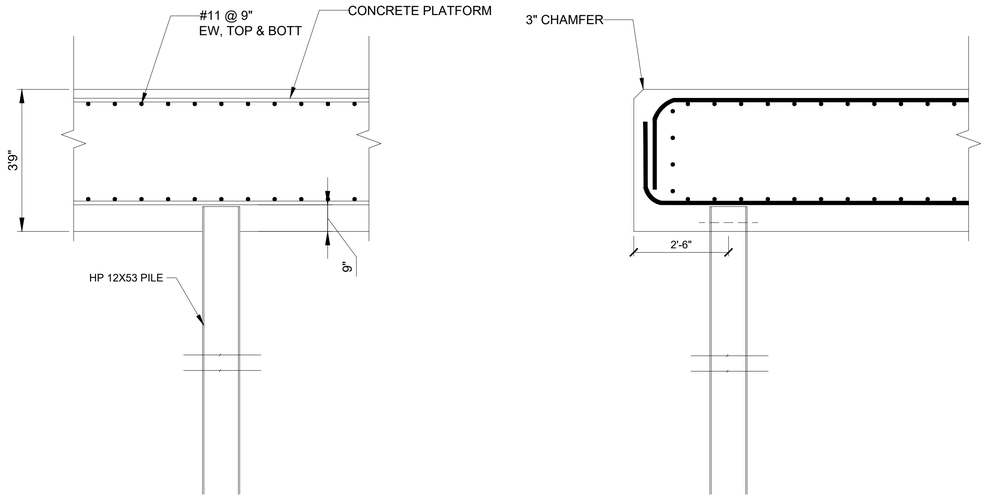
DOCK WALL CRANE PLATFORM ELEVATION VIEW

1/8"=1'-0"



DOCK WALL CRANE PLATFORM PLAN VIEW

1/8"=1'-0"



CRANE PLATFORM SECTION VIEW

1/2"=1'-0"_1

DESIGN LIVE LOADS
MAX CRANE AND LIFT WEIGHT COMBINED 2400 KIPS

MAX UNIFORM LOAD 2 KIPS/SF

PRELIMINARY - FOR BIDDING ONLY
NOT FOR CONSTRUCTION

FOR BID

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE
RECOVERY
GREEN BAY, WI

PORT PROPERTY
DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention: 0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

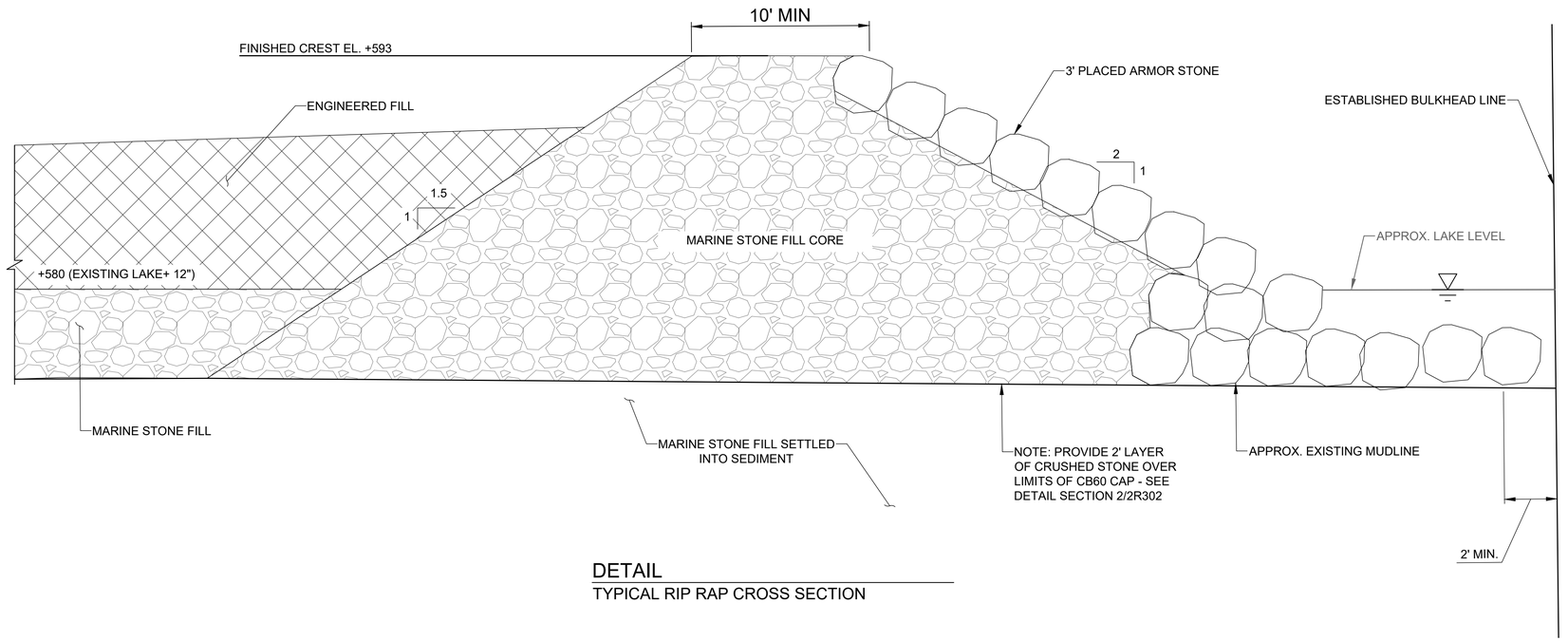
SHEET NAME

CRANE PAD DETAIL

SHEET NO.

SM505

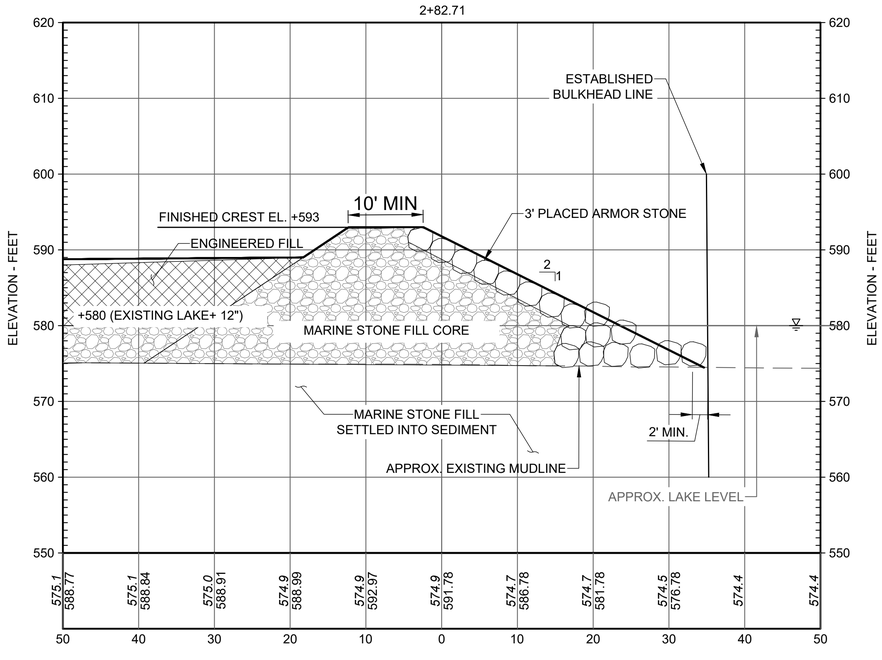
RIUTTA, LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\SITE DETAILS.dwg - 11/10/2025



DETAIL
TYPICAL RIP RAP CROSS SECTION

SEQUENCE AND MONITORING

1. PLACE MARINE STOLE FILL FROM EXISTING SHORELINE OUTWARDS INTO THE LAKE.
2. PLACE TOE ARMOR - LAYER TWO ROCKS THICK (APPROX. 6' THICK)
3. CONSTRUCT MARINE STONE FILL CORE TO DIMENSIONS SHOWN.
4. MARINE STONE FILL CORE IS SAME MATERIAL AS MARINE STONE FILL.
5. MONITOR TOP OF MARINE STONE FILL CORE BY PLACING STEEL PLATES OR SIMILAR AND RECORDING ELEVATION AT APPROX. 7 DAY INTERVALS.
6. WHEN SETTLEMENT RATE IS LESS THAN 1" IN 14 DAYS PLACE OUTER ARMOR ON SLOPE.



1 DETAIL
C-130 RIP RAP CROSS SECTION
SCALE: 1" = 10'

B

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT
PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

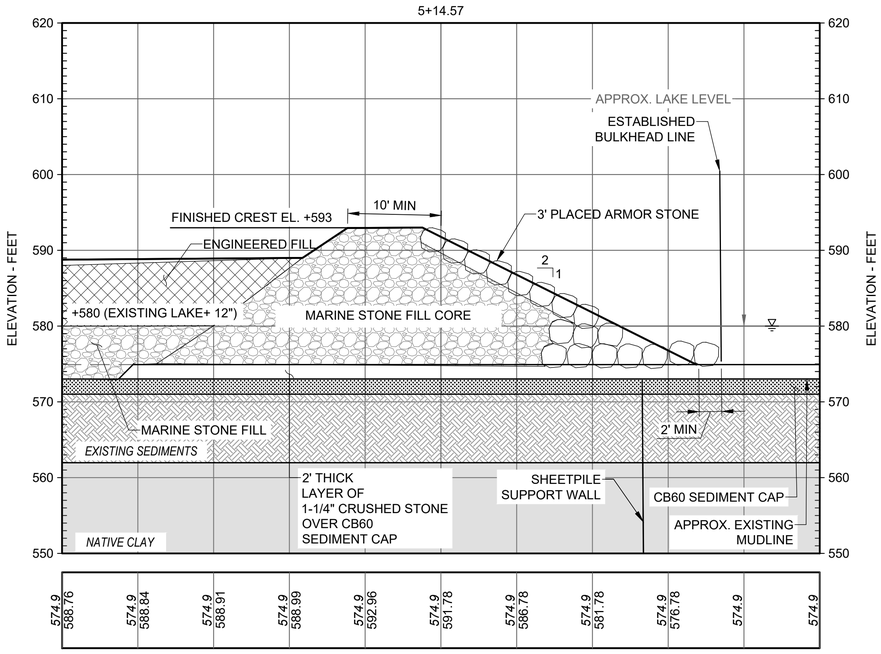
REVETMENT SECTIONS 1

SHEET NO.

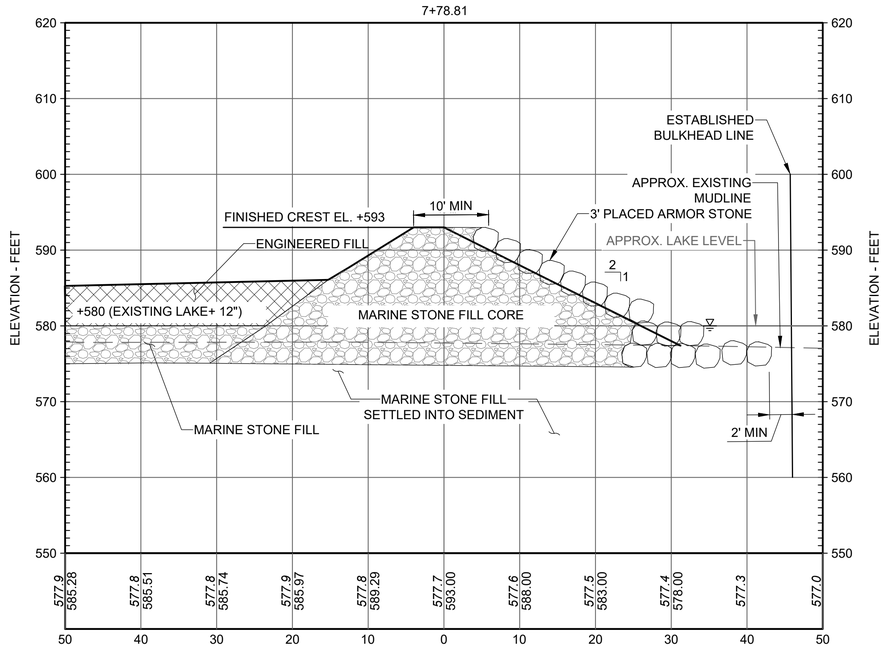
SR301

FOR BID

RIUTTA_LEAH B:\Working\BROWN COUNTY WI\2201593 Port Property Development\00_CAD\Design\Sheets\Rip Rap Plan and Profiles.dwg - 11/10/2025



2 DETAIL
C-130 RIP RAP CROSS SECTION SCALE: 1" = 10'



3 DETAIL
C-130 RIP RAP CROSS SECTION SCALE: 1" = 10'

B

GEI Consultants
GEI CONSULTANTS, INC.
3159 VOYAGER DRIVE
GREEN BAY, WI 54311
(920)455-8200

BROWN COUNTY
PORT & RESOURCE RECOVERY
GREEN BAY, WI

PORT PROPERTY DEVELOPMENT

PORT & RESOURCE RECOVERY
2561 BROADWAY ST
GREEN BAY, WI

P.E. No.:	
Approved:	MJV
Checked:	GMM
Drawn:	INR
Designed:	INR
GEI Project	2201593

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

NO.	DATE	ISSUE/REVISION	APP
B	11/10/2025	REVISION B	MJV
A	10/22/2025	FOR BID	MJV

SHEET NAME

REVETMENT SECTIONS 2

SHEET NO.

SR302

FOR BID

RIUTTA_LEAH B:\Working\BROWN COUNTY \W\2201593 Port Property Development\00_CAD\Design\Sheets\Rip Rap Plan and Profiles.dwg - 11/10/2025