2. In-water elevations are in feet MLLW, based on NOAA Benchmark 840212 (Bellingham, WA).
3. To convert Elevations from NAVD to MLLW, add +0.48 feet to NAVD Elevations.
4. Mean Higher High Water is equal to 8.5 feet based on NAVD Datum (8.02 feet based on NAVD88 Datum).
5. Datums Indicated on Drawings are Full Size (22”x34”).
6. BELLINGHAM SHIPPING TERMINAL
   CDF CONTROLLED DENSITY FILL
   E EATING
   EL ELEVATION
   FRP FIBERGLASS REINFORCED PIPE
   GP GEORGIA PACIFIC = FORMER SITE NOW OWNED BY PORT OF BELLINGHAM
   H HORIZON
   N NORTHING
   NAVD NORTH AMERICAN VERTICAL DATUM
   NAVD88 NAVD 1988
   NOAA NATIONAL OCEAN SERVICE
   WC WHATCOM WATERWAY PHASE 1 CLEANUP
   WSDOT WASHINGTON DEPARTMENT OF TRANSPORTATION

ACKNOWLEDGMENTS

ACRONYMS:

ALS AERIAL SURVEY

BELLINGHAM SHIPPING TERMINAL
CDF CONTROLLED DENSITY FILL
E EATING
EL ELEVATION
FRP FIBERGLASS REINFORCED PIPE
GP GEORGIA PACIFIC = FORMER SITE NOW OWNED BY PORT OF BELLINGHAM
H HORIZON
N NORTHING
NAVD NORTH AMERICAN VERTICAL DATUM
NAVD88 NAVD 1988
NOAA NATIONAL OCEAN SERVICE
WC WHATCOM WATERWAY PHASE 1 CLEANUP
WSDOT WASHINGTON DEPARTMENT OF TRANSPORTATION

GENERAL NOTES:

1. Detailed requirements for activities are described in the specifications. For convenience, certain extracts are reproduced below and on following sheets.
2. Scales indicated on drawings are full size (22”x34”).
4. Topographic survey completed by Davis Evans and Associates in 2000 for upland areas to the east of the inner waterway.
5. Photogrammetric survey (spot elevations) and upland survey completed by Walker and Associates in September 2004 for upland areas to the west of the inner waterway. At Log Pond and Bst.
6. Additional upland survey information was completed by Wilson Survey Engineering in March 2013 for Log Pond, South Shoreline, and central waterfront areas and plotted in MLLW.
7. Aerial image obtained from NAIP 2011 Image Database, as provided by the U.S.G.
8. Eelgrass bed locations obtained from survey completed by Wilson Survey Engineering in September and October 2009.
9. Contractor shall not damage eelgrass outside the limits of work shown during completion of the work.
10. Contractor shall not rely on aerial image for exact location of structures. All locations of upland and in-water structures shall be verified by the contractor in the field.
11. Information displayed, including property boundaries, is based on available records. The contractor is to verify all site and utility information prior to demolicion on construction. Any discrepancies shall be reported to the engineer prior to commencing work.
12. Contractor shall note all utility companies prior to commencing work in accordance with state and local requirements.
13. The contractor shall perform all work in accordance with Federal, State, and Local Regulations and in accordance with project permits.
14. The contractor shall coordinate all activities with the engineer. Location of the contractor’s site office and material storage shall be approved by Engineer.
15. Prior to any clearing, demolition and shore-line debris-recovery activities, contractor shall provide and install temporary erosion and sediment control measures in accordance with these drawings, specifications and permit requirements.
16. PRIOR TO SITE DEMOLITION, THE CONTRACTOR SHALL MARK ITEMS TO BE PROTECTED WITH TAPE OR RANKING PAINT. SITE DEMOLITION SHALL NOT PROCEED UNTIL MARKING IS REVIEWED AND APPROVED BY THE ENGINEER.
17. UNLESS NOTED OTHERWISE, ALL DEMOLISHED STRUCTURES MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DEPOSITED AT AN APPROVED DISPOSAL FACILITY OR RECYCLING FACILITY IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND REGULATIONS GOVERNING DISPOSAL.
18. IN-WATER WORK IS SUBJECT TO FISHERIES CLOSURE WINDOW - ALLOWABLE IN-WATER WORK DATES ARE PROVIDED IN THE SPECIFICATIONS.
19. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A DETAILED CONSTRUCTION WORK PLAN PRIOR TO COMMENCING WORK. ADDITIONAL SUBMITTALS REQUIREMENTS ARE PRODUCED IN THE SPECIFICATIONS.
20. FIELDS SHALL BE REMOVED COMPLETELY UNLESS NOTED ON THE PLANS. FIELDS THAT BREAK AND CANNOT BE REMOVED COMPLETELY SHALL BE CUT AT OR NEAR (WITHIN 2 FEET) THE POST-DREDGE MUDLINE.
21. CONTRACTOR SHALL PROJECT IN PLACE ALL STRUCTURES, UTILITIES, AND OBJECTS NOT CALLED OUT AS BEING DEMOLISHED ON THE PLANS. ANY DAMAGE TO ITEMS NOT REMOVED COMPLETELY SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
22. CONTRACTOR SHALL PROJECT ALL EXISTING MONITORING WELLS EXCEPT THOSE IDENTIFIED FOR REMOVAL.
23. EXISTING FLOATS AND GANTRY RAMPS AT COLONY WHARF AND MERIDIAN PILE TO BE REPAIRED BY OTHERS PRIOR TO START OF WORK AND REPLACED BY OTHERS AFTER COMPLETION OF WORK.

LEGEND:

- Indicates typical or on same drawing

- Indicates direction of cutting plan

- Indicates detail reference number

- Indicates section reference number

- Indicates photo reference number

- Indicates photo point and direction

APPROXIMATE EELGRASS BED LOCATION
SHORELINE DEBRIS REMOVAL AREA
CATCH BASIN
LIGHT POLE
TIMBER FLE
EXISTING VEGETATION
WHATCOM WATERWAY STATIONING
MANNHOLE COVER
STORMWATER DRAINAGE LINE (EXISTING)
MONITORING WELL
WELL POINT
NOTES:
1. REFERENCE SHEET G-2 FOR DATUM INFORMATION.
2. BATHYMETRIC SURVEY PROVIDED BY WILSON SURVEY/ENGINEERING, DATED JUNE 2009.
3. BATHYMETRIC CONTOURS ALONG THE BST DOCK BETWEEN STATIONS 36+00 AND 43+00 ARE APPROXIMATE DUE TO PRESENCE OF MOORED VESSEL DURING TIME OF SURVEY.
4. EELGRASS BED LOCATIONS OBTAINED FROM SURVEY COMPLETED BY WILSON SURVEY/ENGINEERING IN SEPTEMBER AND OCTOBER 2009.
5. INFORMATION DISPLAYED, INCLUDING PROPERTY BOUNDARIES, IS BASED ON AVAILABLE RECORDS. THE CONTRACTOR IS TO VERIFY ALL SITE AND UTILITY INFORMATION PRIOR TO DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.
NOTES:

1. REFERENCE SHEET G-2 FOR DATUM INFORMATION.
3. ADDITIONAL UPLAND SURVEY INFORMATION WAS COMPLETED BY WILSON SURVEY/ENGINEERING IN MARCH 2013 FOR LOG POND AND CENTRAL WATERFRONT AREAS.
4. EELGRASS BED LOCATIONS OBTAINED FROM SURVEY COMPLETED BY WILSON SURVEY/ENGINEERING IN SEPTEMBER AND OCTOBER 2009.
5. INFORMATION DISPLAYED, INCLUDING PROPERTY BOUNDARIES, IS BASED ON AVAILABLE RECORDS. THE CONTRACTOR IS TO VERIFY ALL SITE AND UTILITY INFORMATION PRIOR TO DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER PRIOR TO COMMENCING WORK.
6. CONTRACTOR TO DETERMINE LOAD CAPACITY AT GP DOCK FOR AREAS TO BE USED AS PART OF THIS CONTRACT.

LEGEND:

- EXISTING BATHYMETRY
- SCALE IN FEET
- PROJECT NORTH
- 0 50 100

OFFERED BID DOCUMENT

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

EXISTING CONDITIONS - LOG POND AREA

WARNING: ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
NOTES:
1. REFERENCE SHEET G-2 FOR DATUM INFORMATION.
2. BATHYMETRIC SURVEY PROVIDED BY WILSON SURVEY/ENGINEERING. DATED JUNE, 2008.
3. ADDITIONAL UPLAND SURVEY INFORMATION WAS COMPLETED BY WILSON SURVEY/ENGINEERING IN MARCH 2013 FOR LOG POND AND CENTRAL WATERFRONT AREAS.
4. INFORMATION DISPLAYED, INCLUDING PROPERTY BOUNDARIES, IS BASED ON AVAILABLE RECORDS. THE CONTRACTOR IS TO VERIFY ALL SITE AND UTILITY INFORMATION PRIOR TO DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER PRIOR TO COMMENCING WORK.
SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES:

1. ALL WORK SHALL COMPLY WITH THESE PLANS AND SPECIFICATIONS. ALL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS PERTAINING TO REMOVAL AND DISPOSAL.

2. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH DETAILED REMOVAL WORK PLANS FOR BOTH THE SHORELINE DEBRIS AND SITE AND STRUCTURE REMOVAL PRIOR TO COMMENCING WORK. SEE SPECIFICATIONS.

3. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES AND OTHER FEATURES THAT MAY AFFECT THE WORK AND IMMEDIATELY NOTIFY ANY CONFLICTS TO THE ENGINEER AT ONCE.

4. THE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE SCOPE OF WORK. UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE THE METHOD OF REMOVAL. THE CONTRACTOR SHALL SURVEY AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL REMOVAL MEANS, METHODS, TECHNIQUES AND PROCEDURES.

5. THE CONTRACTOR SHALL KEEP ALL STREETS AND VESSELS TRAFFIC AREAS CLEAR.

6. CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROLS REQUIRED DURING THE DURATION OF THIS PROJECT, SEE SPECIFICATIONS.

7. DESTROY SOILS FILLING THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING, TESTING AND BACKFILLING REQUIREMENTS.

8. THE CONTRACTOR SHALL INSTALL AND MAINTAIN REMEDIATION FIXTURES AS REQUIRED TO MAINTAIN SECURITY OF SITE.

9. CONTRACTOR SHALL PROTECT IN PLACE ALL STRUCTURES, UTILITIES AND OBJECTS NOT CALLED OUT AS BEING ATTACHED ON THE PLANS. ANY DAMAGE TO ITEMS NOT BEING REMOVED SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

10. THE CONTRACTOR SHALL FILL ALL NEEDED PRECAUTIONS TO STRICTLY CONTAIN THE SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL. INTERIORS OF THE STRUCTURES SHOWN ON THE DRAWINGS, ANY DAMAGE TO UTILITIES OR OTHER ITEMS IS THE RESPONSIBILITY OF THE CONTRACTOR AS SPECIFIED IN THE SPECIFICATIONS..setItem(). Add the note: "ITEMS" SHOULD BE PROMPTLY REMOVED AT THIS EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE AREA THAT WAS DAMAGED BY CONSTRUCTION ACTIVITIES DURING EXECUTION OF THIS CONTRACT.

11. ALL LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREIN HAVE BEEN INSPECTED BY THE CONTRACTOR OR OBSERVED OR OBTAINED FROM REVIEW OF AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPREHENSIVE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID OTHER UTILITIES NOT SHOWN HEREIN WHEN THEY MAY BE ATTACHED IN THE INFLATION OF THIS PLAN. THE CONTRACTOR HEREFORE AGREES TO COMPENSATE THE ENGINEER FOR REMOVAL OF EXISTING UTILITIES AND NOT WORK TO THE ENGINEER'S SATISFACTION.

12. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.

13. DOLPHINS PLUS CABLES CALLED OUT ON THE PLANS TO BE REMOVED SHALL BE PULLED COMPLETELY UNLESS OTHERWISE NOTED ON THE PLANS. FLEXIBLE BOUNDS AND CABLES CALLED OUT ON THE PLANS TO BE REMOVED SHALL BE CUT AT END USE OR AT A MAXIMUM OF 12" INCHES ABOVE THE WALLEY. SEE SPECIFICATIONS.

14. EXISTING DEBRIS REMOVAL AND CLEAN AND GRUB ELEVATION IS APPROXIMATE AND IS TO BE CONFIRMED BY THE ENGINEER PRIOR TO COMPLETION OF WORK. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

15. THE INTENT OF THE SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PLANS AND PHOTOS IS TO SHOW IN GENERAL SCOPES OF ITEMS TO BE REMOVED. THE PHOTOS ARE FOR REFERENCE ONLY AND HIGH MARKET ITEMS IN THE BACKGROUND TO BE REMOVED. ITEMS IN THE FOREGROUND ARE TO BE LEFT IN PLACE.

16. PRIOR TO SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL THE CONTRACTOR SHALL MAKE ITEMS TO BE PROTECTED WITH TARP OR MULLING PADS. SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL SHALL NOT PROCEED UNTIL MARKING IS REMOVED AND APPROVED BY THE ENGINEER.

17. UNLESS NOTED OTHERWISE, ALL REMOVED STRUCTURES MATERIAL AND DEBRIS SHALL BE STORED THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL FACILITY OR RECYCLING FACILITY IN ACCORDANCE WITH FEDERAL AND STATE LAWS AND REGULATIONS GOVERNING DISPOSAL.

18. ALL DIMENSIONS OF DEBRIS LOCATED ARE APPROXIMATE AND ARE FOR REFERENCE ONLY.

19. PRIOR TO COMMENCING DREDGING ACTIVITIES CONTRACTOR SHALL IMPLEMENT TEMPORARY EXCAVATION AND SUBMERGENCE Controls. NO DREDGING ACTIVITIES OR DEBRIS SHALL BE ALLOWED TO ENTER THE WATERWAY, SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

20. SEE ELECTRICAL SHIFTS FOR ADDITIONAL DEBRIS ITEMS.

21. UNLESS SPECIFICALLY NOTED "REMOVED" INCLUDES COMPLETE REMOVAL AND SATISFACTORY RECYCLING OR DISPOSAL.

22. WHERE EXISTING STRUCTURES EXISTING BELOW THE WATERLINE ALONG THE NORTH SHORELINE THE STRUCTURES SHALL BE CUT AT THE EXISTING MULLION OR AT A MAXIMUM OF 12" INCHES ABOVE THE MULLION.

23. ALONG THE SOUTH SHORELINE EXISTING STRUCTURES AND THEIR ASSOCIATED FIXED LOCATED WITHIN THE DESIGN SLOPE SHALL BE CUT AT THE DESIGN SLOPE. THE FLXIBLE BOUNDS OF THE DESIGN SLOPE SHALL BE IMPLEMENTED IN THE PLANS. THIS FLEXIBLE GEOMETRY SHOULDN'T BE REFLECTED IN THE DREDGE SIPE. MORE WILL REMAIN IN PLACE.

24. UP AND DOWNTHE ITEMS STRUCTURES AND PLANS SHALL BE EITHER REMOVED IN THEIR ENTIRETY OR, WHERE THEY EXTEND 2 FEET BELOW EXISTING GRADE, SHALL BE CUT 2 FEET BELOW EXISTING GRADE AND REMOVED UNLESS OTHERWIZE NOTED ON THE PLANS.

25. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR CLEANING AND GRUBBING AND SITE, STRUCTURAL AND SHORELINE DEBRIS REMOVAL.

SOILS:

SEE THE GEOLOGICAL REPORT BY ANCHOR QEA, DATED NOVEMBER, 2013 FOR COMPLETE INFORMATION.

SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL LEGEND:

DEBRIS REMOVAL, AND CLEAR AND GRUB. SEE NOTE 14

SITE AND STRUCTURE REMOVAL

APPROXIMATE REMOVAL BOUNDARY

NOTE: REMOVAL BOUNDARY ILLUSTRATES APPROPRIATE TREATMENT EXTENDS BEYOND THE WATERLINE. REMOVAL ITEMS ARE TO BE LEFT IN PLACE. ADDITIONAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL IS REQUIRED BEYOND THE WATERLINE. SEE NOTE 15 AND THE SPECIFICATIONS.

WHATCOM WATERWAY PHASE 1 CLEANUP

BELLMINGHAM, WASHINGTON

FINAL BID DOCUMENT
LOG POND AREA - SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PLAN

SCALE: 1"=40'

NOTES:

1. SEE SHEET R-3 FOR SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PLAN.
2. ATTACH LOG BOOM TO EVERY OTHER DOLPHIN USING 1/4" x 1/2" AMT SJ55 WIRE ROPE AND CLAMP PLACED LOOSELY TO ALLOW FOR MOVEMENT. SEE DETAIL 2.
3. ATTACH END OF LOG BOOM WITH 1/4" x 1/2" AMT SJ55 WIRE ROPE AND CLAMP TO CONCRETE EPS BLOCK ON SHORE.
4. EXTEND OUTLINES 50' A EAST TO B Nd50S BEYOND THE FACE OF CAPPED SLOPE. EXTEND USING THE MATERIALS. SEE C SHEETS FOR CAPPED SLOPE.

LEGEND:

PHOTOGRAPH ORIENTATION

SITE AND STRUCTURE REMOVAL

DEBRIS REMOVAL AND CLEAR AND GRADE, SEE NOTE 14 ON R-1

R-3

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

LOG POND AREA SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PLAN

SHEET NO. 9 OF 104
NOTES:
1. SEE SHEET R-5 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND FOOTPRINT.
REMOVE TIMBER REALIGNMENT AND APPROXIMATELY 10 FT OF STEEL BLUEHEAD AND ASSOCIATED STRUCTURES WITHIN DREDGE SLOPE, SEE N. 26 AND C-SHEETS.

REMOVE CLARIFIER STRUCTURE, SEE NOTE 3.

NOTES:
1. See Sheet R-1 for general site, structure and shoreline debris removal notes and legends.
2. Outside of debris limits remove structures and pile down 2 feet below existing grade. Inhere located within the debris slope. Cut and remove structure and piles at face of debris slope.
3. Remove clarifier structure to 10 ft. below grade outside limit of debris slope, see R-25 for removal of debris within slopes see C-Sheets for limits of debris slope.

REMOVE REINFORCED CONCRETE TANK FOUNDATION, SEE NOTE 2.

CUT OFF PILES 6-8 INCHES ABOVE TOP OF BLUEHEAD.

See C-Sheets for debris slope in clarifier area.

REMOVE BLUEHEAD AND APPROXIMATELY 10 FT OF STEEL BLUEHEAD AND ASSOCIATED STRUCTURES WITHIN DREDGE SLOPE, SEE N. 26 AND C-SHEETS.

REMOVE PHOSPHATE ADDITIVE TANK AND CONCRETE FOUNDATION.

DEBRIS REMOVAL.

CUT OFF PILES 6-8 INCHES ABOVE TOP OF BLUEHEAD.

DEBRIS REMOVAL.

REMOVE PILES WITHIN AREA BELOW BLUEHEAD.

REMOVE PILES WITHIN AREA BELOW BLUEHEAD.
1. SEE SHEETS 1 & 2 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGENDS.

2. OUTSIDE OF DREDGE LIMITS REMOVE STRUCTURE AND PILE DOWN 2 FEET BELOW EXISTING GRADE, WHERE LOCATED WITHIN THE DREDGED SLOPE LIMITS. REMOVE DEBRIS AND WOODEN PILES AT FACE OF DREDGE SLOPE.

3. REMOVE CLARIFIER STRUCTURE TO 2' BELOW GRADE, OUTSIDE LIMIT OF DREDGE SLOPE, SEE R-20, FOR REMOVAL WITHIN THE DREDGED SLOPE. SEE R-20, SEE C-SHEETS FOR LIMITS OF DREDGE SLOPE.

PROTECT IN PLACE EXISTING TIMBER BULKHEAD

REMOVING PHOSPHORIC ACID TANK AND FOUNDATION 2' BELOW EXISTING GRADE

REMOVE TIMBER BULKHEAD AND APPROXIMATELY 50% OF STEEL BULKHEAD AND ASSOCIATED STRUCTURES WITHIN DREDGED SLOPE, SEE SHEETS R-25, AND C-SHEETS

DRS DRAINER PUMP PLT, SEE SHEET R-23 FOR SELECT REMOVAL

REMOVING SCUM BOX, SEE SHEET R-23

DEBRIS REMOVAL IN FRONT OF BULKHEAD AND REMOVE PILE

K P F F Consulting Engineers

WHATCOM WATERWAY PHASE I CLEANUP
BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PHOTOGRAPHS

FINAL BID DOCUMENT

R-12

sheet no. 18 of 104
**Removal Sequence Key Notes:**

1. **Removal Utility Roof, Concrete Pad, Stairways, and Obstructions.**
2. **Excavate to an Appropriate Cut 5' Behind the Existing Timber Sheet Pile Wall and Structural Sheet Pile Wall Adjacent.**
3. **Sheet Pile Wall Shall Be Brought to TIP Elevation Prior to Removal of Existing Timber Bluehead, Unless Noted Otherwise. Ties Also Shall Be Removed Individually and Sequentially So That Existing Wall Structural Integrity Is Not Compromised. Sheet Piles Must Be Driven to at least TIP Elevation 24' Before Adjacent Existing Tie-Backs May Be Cut. Remove Deadman Pile As Necessary to Perform Work.**
4. **Once Sheet Pile Wall Is Fully Driven, Existing Timber Bluehead and Adjacent Piers May Be Removed and Timber Bluehead Cut at TIP, Bluehead OR at a Maximum of 12' Inches Above the Bluehead. Additional Timber Bluehead Was Observed During Interim Cleaning. Contractor to Notify the Port if Existing Conditions Vary From This Sheet.**
5. **Excavation Down to an Appropriate EL-5 Must Be Maintained Behind New Sheet Pile Wall During Excavating and Capping. See Structural Sheet Pile Installation Manual.**
6. **Once Capping S土 is Complete, Anchor Pile Behind New Wall to Match Existing Gravel. See EL-5 Sheets for Finished Grades.**

**Removal of Pier Before Timber Removal Cross Section:**

- **Removal of Timber Pier:**
  - Cutting and removing piles supporting pipe at the bluehead or at a maximum of 12-inches above the bluehead.
  - Cutting bluehead for structural sheet pile.
  - Installing sheet pile wall for structural sheet.
  - Cutting and removing piles supporting pipe at the bluehead or at a maximum of 12-inches above the bluehead.

**Final Bid Document:**

*WHATCOM WATERWAY PHASE I CLEANUP*

*BELLMONT, WASHINGTON*

*TIMBER PIER REMOVAL CROSS SECTION*

*Owner: Port of Bellingham*

*Engineer: Anchor QA*

*Architect: KPF*

*Sheet N°: R-18*
NOTES:
1. ALL ELEVATIONS AND PILE LOCATIONS ARE APPROXIMATE AND FOR REFERENCE ONLY.
2. STEEL Bulkhead IS APPROXIMATELY 10F AND ONLY OCCURS AT THE ERODING CLARIFIER.

CLRIFER REMOVAL SECTION WITHIN DREDGE SLOPE

CUT AND REMOVE LAMINATION TEXTS AT DREDGE SLOPE, SEE NOTE 2

CUT AND REMOVE SLAB, AND PILES WITHIN LIMITS OF DREDGE SLOPE, SEE C-SHEETS FOR LIMITS OF DREDGE SLOPE

CUT AT DREDGE SLOPE AND REMOVE TIMBER RUBBAGE AND ALL RELATED STRUCTURES, SEE C-SHEETS FOR LIMITS OF DREDGE SLOPE.

FINISHED CAPPED SLOPE, C-SHEETS

DREDGE SLOPE, SEE C-SHEETS

EXISTING MUDFLOW WAVES

TUBE AND SHEET PILE BELOW DREDGE SLOPE. MAY REMAIN

12'
10'

EL. -10'

EL. 38'

EL. 26'
NOTES:
1. A PORTION OF THE CLARIFIER STRUCTURE BELOW GROUND SHALL BE REMOVED TO CONSTRUCT DREDGE SLOPE. SEE SHEETS FOR DREDGE LIMITS AND SHEET R-18 FOR ADDITIONAL DETAILS.
2. ALL DIMENSIONS, PLACEMENTS, AND STEEL REINFORCING SHOWN ARE APPROPRIATE AND ARE FOR REFERENCE ONLY.
3. CLARIFIER TO BE DISASSEMBLED AND LIQUIDS REMOVED AFTER THE RECONSTRUCTION OF THE NO. 8 DREDGE LINE. SEE SHEET R-8 FOR DEMOLITION SEQUENCING NOTES.
NOTES:
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
2. INFORMATION DISPLAYED, INCLUDING BUILDINGS AND PROPERTY BOUNDARIES, IS BASED ON AVAILABLE RECORDS. THE CONTRACTOR IS TO VERIFY ALL SITE AND UTILITY INFORMATION PRIOR TO DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.
3. INTERNAL CONFIGURATION OF THE SOUTH SHORELINE STAGING AND STOCKPILE AREA (INCLUDING CONSTRUCTION WATER COLLECTION AND TREATMENT EQUIPMENT) TO BE DETERMINED BY THE CONTRACTOR.
4. CONTRACTOR TO COORDINATE WITH BNSF RAILROAD FOR ACCESS AND OPERATION AT MILWAUKEE SIDING AREA AS NECESSARY.
5. CONTRACTOR MAY STOCKPILE SOIL AND DEBRIS AT DESIGNATED STOCKPILE AREAS FOR UP TO FOUR MONTHS FOLLOWING COMPLETION OF DREDGING AND/OR UPLAND SOIL ERECTION AND DEBRIS REMOVAL ACTIVITIES OR NO LATER THAN AUGUST 1, 2014.
6. LAYOUT OF THE SOUTH SHORELINE STAGING AND STOCKPILE AREA IS SCHEMATIC AND SHALL BE DESIGNED BY THE CONTRACTOR AND PRESENTED IN THE CONSTRUCTION WORK PLAN FOR REVIEW AND APPROVAL. SEE SHEET C-1.2 FOR SCHEMATIC LAYOUTS AT THE FORMER GP WEST STAGING AND STOCKPILE AREA.

PROJECT NORTH

SCALE IN FEET

0  250  500

101 Stewart Street, Suite 430
Seattle, Washington 98101
(206) 306-3560  Fax (206) 306-3562

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SITE ACCESS, STAGING AND STOCKPILE PLAN

C-1.1

FINAL BID DOCUMENT

M. WOLTMAN
D. HOLMER
T. WANG
T. WANG

MAY 2013

NOTES:
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
2. INFORMATION DISPLAYED, INCLUDING BUILDINGS AND PROPERTY BOUNDARIES, IS BASED ON AVAILABLE RECORDS. THE CONTRACTOR IS TO VERIFY ALL SITE AND UTILITY INFORMATION PRIOR TO DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.
3. INTERNAL CONFIGURATION OF THE SOUTH SHORELINE STAGING AND STOCKPILE AREA (INCLUDING CONSTRUCTION WATER COLLECTION AND TREATMENT EQUIPMENT) TO BE DETERMINED BY THE CONTRACTOR.
4. CONTRACTOR TO COORDINATE WITH BNSF RAILROAD FOR ACCESS AND OPERATION AT MILWAUKEE SIDING AREA AS NECESSARY.
5. CONTRACTOR MAY STOCKPILE SOIL AND DEBRIS AT DESIGNATED STOCKPILE AREAS FOR UP TO FOUR MONTHS FOLLOWING COMPLETION OF DREDGING AND/OR UPLAND SOIL ERECTION AND DEBRIS REMOVAL ACTIVITIES OR NO LATER THAN AUGUST 1, 2014.
6. LAYOUT OF THE SOUTH SHORELINE STAGING AND STOCKPILE AREA IS SCHEMATIC AND SHALL BE DESIGNED BY THE CONTRACTOR AND PRESENTED IN THE CONSTRUCTION WORK PLAN FOR REVIEW AND APPROVAL. SEE SHEET C-1.2 FOR SCHEMATIC LAYOUTS AT THE FORMER GP WEST STAGING AND STOCKPILE AREA.
NOTES:
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
2. INFORMATION DISPLAYED, INCLUDING BUILDINGS AND PROPERTY BOUNDARIES, IS BASED ON AVAILABLE RECORDS. THE CONTRACTOR IS TO VERIFY ALL SITE AND UTILITY INFORMATION PRIOR TO DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER PRIOR TO COMMENCING WORK.
3. INTERNAL CONFIGURATION OF THE FORMER GP WEST STAGING AND STOCKPILE AREA (INCLUDING CONSTRUCTION WATER COLLECTION AND TREATMENT EQUIPMENT) TO BE DETERMINED BY THE CONTRACTOR.
4. LAYOUT OF THE FORMER GP WEST STAGING AND STOCKPILE AREA IS SCHEMATIC AND SHALL BE DESIGNED BY THE CONTRACTOR AND PRESENTED IN THE CONSTRUCTION WORK PLAN FOR REVIEW AND APPROVAL. SEE SHEET C-1.1 FOR SCHEMATIC LAYOUTS AT THE SOUTH SHORELINE STAGING AND STOCKPILE AREA.
5. LOCATION OF JOB TRAILERS, MATERIALS, EQUPMENT STAGING, AND EMPLOYEE PARKING IS AVAILABLE AT THIS STAGING AREA.
REQUIRED DREDGE ELEVATION -32 FT MLLW

NOTE:
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
2. EXISTING BATHYMETRY CONTINUES ALONG THE BST DOCK BETWEEN STATIONS 36+00 AND 43+00 AND ARE APPROXIMATE DUE TO PRESENCE OF MOORED VESSEL DURING TIME OF SURVEY.
3. DREDGE ELEVATIONS SHOWN REPRESENT REQUIRED MINIMUM ELEVATION (DOES NOT INCLUDE OVERDREDGE ALLOWANCE).
4. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WILL BE +1.0 FT. PAYABLE OVERDREDGE ALLOWANCE FOR ALL OTHER AREAS (-45 FT) UNLESS OTHERWISE NOTED ON DRAWINGS. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WITH REQUIRED DREDGE ELEVATIONS OF -24, -32, -36, AND -40 MLLW.
5. CONTRACTOR SHALL COMPLETE DREDGING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
6. REFERENCE SHEET C-23 FOR CONTROL POINT TABLE.
7. EELGRASS BED LOCATIONS OBTAINED FROM SURVEY COMPLETED BY WILSON SURVEY/ENGINEERING IN SEPTEMBER AND OCTOBER 2009.

NOTICE: ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY.
NOTES:
1. REFER TO SHEET C-2 FOR SURVEY AND DATUM INFORMATION.
2. CAPPING ELEVATIONS SHOWN REPRESENT MAXIMUM ELEVATION ALLOWED (INCLUDES OVER-PLACEMENT ALLOWANCES).
3. CONTRACTOR SHALL COMPLETE BACP AND CAPPING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
4. REFER TO SHEET G-2 FOR CONTROL POINT TABLE.
5. EELGRASS BED LOCATIONS OBTAINED FROM SURVEY COMPLETED BY WILSON SURVEYING ENGINEERING IN SEPTEMBER AND OCTOBER 2009.
6. MINIMUM REQUIRED THICKNESS FOR PLACEMENT OF RESIDUALS MANAGEMENT COVER IS 6 INCHES. AN ADDITIONAL RESIDUALS MANAGEMENT COVER MATERIAL MAXIMUM OVERPLACEMENT ALLOWANCE OF 6 INCHES WILL BE PAYABLE FOR RESIDUALS MANAGEMENT COVER MATERIAL PLACED IN THE BST AREA.

LEGEND:
- Top of cap area contours
- Existing bathymetry
- Residuals management cover area

DESCRIPTION:
- Top of cap area contours
- Existing bathymetry
- Residuals management cover area

APPLICATION:
- Top of cap area contours
- Existing bathymetry
- Residuals management cover area

LIMIT OF WORK:
- Top of cap area contours
- Existing bathymetry
- Residuals management cover area

CONTROL POINT LOCATION AND DESIGNATION:
- Top of cap area contours
- Existing bathymetry
- Residuals management cover area

NOTES:
1. REFERENCE SHEET C-2 FOR SURVEY AND DATUM INFORMATION.
2. CAPPING ELEVATIONS SHOWN REPRESENT MAXIMUM ELEVATION ALLOWED (INCLUDES OVER-PLACEMENT ALLOWANCES).
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NOTES:
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
2. CAPPING ELEVATIONS SHOWN REPRESENT MAXIMUM ELEVATION ALLOWED (INCLUDES OVER-PLACEMENT ALLOWANCES).
3. CONTRACTOR SHALL COMPLETE CAPPING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
4. POST-CAPPING CONTOURS REPRESENT SHALLOWEST SURFACE ELEVATIONS.
5. REFERENCE SHEET C-24 FOR CONTROL POINT TABLES.

LEGEND:
- TOP OF CAP AREA CONTOURS
- EXISTING BATHYMETRY
- AREA OF CAP MATERIAL PLACEMENT (POST CAP AREA AND MAXIMUM ELEVATIONS)
- CONTROL POINT LOCATION AND DESIGNATION
- SCALE IN FEET

- NOTES:
  1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
  2. CAPPING ELEVATIONS SHOWN REPRESENT MAXIMUM ELEVATION ALLOWED (INCLUDES OVER-PLACEMENT ALLOWANCES).
  3. CONTRACTOR SHALL COMPLETE CAPPING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
  4. POST-CAPPING CONTOURS REPRESENT SHALLOWEST SURFACE ELEVATIONS.
  5. REFERENCE SHEET C-24 FOR CONTROL POINT TABLES.

- WHATCOM WATERWAY PHASE 1 CLEANUP
  BELLINGHAM, WASHINGTON

- FINAL BID DOCUMENT