

APPENDIX C
RECORD DRAWINGS

RECORD DRAWINGS WHATCOM WATERWAY PHASE 1 CLEANUP

DRAWING INDEX

PORT OF BELLINGHAM

VICINITY MAP



WHATCOM WATERWAY SITE

0 1/2 1
SCALE IN MILES



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SHEET SEQUENCE	SHEET NUMBER	SHEET TITLE
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RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

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Dec 23, 2016 10:11am tgrf@



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

COVER SHEET

G-1

SHEET NO. **1** OF **126**

GENERAL NOTES:

- DETAILED REQUIREMENTS FOR ACTIVITIES ARE DESCRIBED IN THE SPECIFICATIONS. FOR CONVENIENCE, CERTAIN EXTRACTS ARE REPRODUCED BELOW AND ON FOLLOWING SHEETS.
- SCALES INDICATED ON DRAWINGS ARE FULL SIZE (22"x34") DRAWINGS
- PRE-CONSTRUCTION BATHYMETRIC SURVEY PROVIDED BY NORTHWEST HYDRO INC. DATED OCTOBER, 2015.
- TOPOGRAPHY SURVEY COMPLETED BY DAVID EVANS AND ASSOCIATES IN 2009 FOR UPLAND AREAS TO THE EAST OF THE INNER WATERWAY.
- PHOTOGRAMMETRIC SURVEY (SPOT ELEVATIONS) AND UPLAND LINework COMPLETED BY WALKER AND ASSOCIATES IN SEPTEMBER 2004 FOR UPLAND AREAS TO THE WEST OF THE INNER WATERWAY, AT LOG POND AND BST.
- ADDITIONAL UPLAND SURVEY INFORMATION WAS COMPLETED BY WILSON SURVEY/ENGINEERING IN MARCH 2013 FOR LOG POND, SOUTH SHORELINE, AND CENTRAL WATERFRONT AREAS AND PROVIDED IN MLLW.
- AERIAL IMAGE OBTAINED FROM NAIP 2011 IMAGE DATABASE, AS PROVIDED BY THE USDA.
- EELGRASS BED LOCATIONS OBTAINED FROM SURVEY COMPLETED BY WILSON SURVEY/ENGINEERING IN SEPTEMBER AND OCTOBER 2009.
- CONTRACTOR SHALL NOT DAMAGE EELGRASS OUTSIDE THE LIMITS OF WORK SHOWN DURING COMPLETION OF THE WORK.
- 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.
- 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.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
- THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS AND IN ACCORDANCE WITH PROJECT PERMITS.
- THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH THE ENGINEER. LOCATION OF THE CONTRACTOR'S SITE OFFICE AND MATERIAL STORAGE SHALL BE APPROVED BY ENGINEER.
- PRIOR TO ANY CLEARING, DEMOLITION AND SHORELINE DEBRIS REMOVAL ACTIVITIES, CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THESE DRAWINGS, SPECIFICATIONS AND PERMIT REQUIREMENTS.
- PRIOR TO SITE DEMOLITION, THE CONTRACTOR SHALL MARK ITEMS TO BE PROTECTED WITH TAPE OR MARKING PAINT. SITE DEMOLITION SHALL NOT PROCEED UNTIL MARKING IS REVIEWED AND APPROVED BY THE ENGINEER.
- UNLESS NOTED OTHERWISE, ALL DEMOLISHED STRUCTURES MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL FACILITY OR RECYCLING FACILITY IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND REGULATIONS GOVERNING DISPOSAL.
- IN-WATER WORK IS SUBJECT TO FISHERIES CLOSURE WINDOW - ALLOWABLE IN-WATER WORK DATES ARE PROVIDED IN THE SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A DETAILED CONSTRUCTION WORK PLAN PRIOR TO COMMENCING WORK. ADDITIONAL SUBMITTAL REQUIREMENTS ARE PROVIDED IN THE SPECIFICATIONS.
- PILES SHALL BE REMOVED COMPLETELY UNLESS OTHERWISE NOTED ON THE PLANS. PILES THAT BREAK AND CANNOT BE REMOVED COMPLETELY SHALL BE CUT AT THE MUDLINE OR AT A MAXIMUM OF 12-INCHES ABOVE THE MUDLINE
- CONTRACTOR SHALL PROTECT IN-PLACE ALL STRUCTURES, UTILITIES, AND OBJECTS NOT CALLED OUT AS BEING DEMOLISHED ON THE PLANS. ANY DAMAGE TO ITEMS NOT BEING DEMOLISHED SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- CONTRACTOR SHALL PROTECT ALL EXISTING MONITORING WELLS EXCEPT THOSE IDENTIFIED FOR REMOVAL.
- CONTRACTOR TO REMOVE AND DISPOSE OF EXISTING FLOATS AT COLONY WHARF AS SHOWN ON THE DRAWINGS.
- CONTRACTOR TO REMOVE AND DELIVER TO MERIDIAN PACIFIC THE EXISTING GANGWAY AND FLOATS AS SHOWN ON THE DRAWINGS.
- POST-DREDGING BATHYMETRIC SURVEY PROVIDED BY NORTHWEST HYDRO, INC. DATED MARCH, 2016.
- POST-CONSTRUCTION BATHYMETRIC SURVEY PROVIDED BY NORTHWEST HYDRO, INC. DATED JUNE, 2016.




















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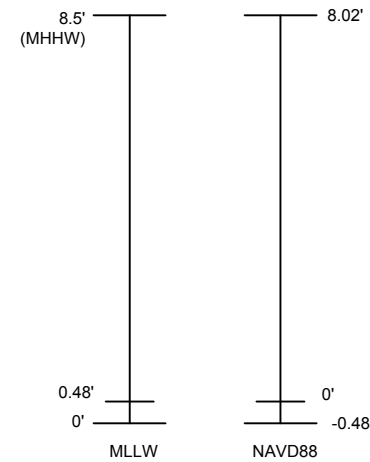
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH, NAD 83, FEET.
- IN-WATER ELEVATIONS ARE IN FEET MLLW, BASED ON NOAA/NOS BENCHMARK 9449211 (BELLINGHAM, WA)
- TO CONVERT ELEVATIONS FROM NAVD88 TO MLLW; ADD +0.48 FEET TO NAVD88 ELEVATIONS
- MEAN HIGHER HIGH WATER IS EQUAL TO 8.5 FT BASED ON MLLW DATUM (8.02 FT BASED ON NAVD88 DATUM)

ACRONYMS:

- ASB AERATED STABILIZATION BASIN
- BST BELLINGHAM SHIPPING TERMINAL
- CDF CONTROLLED DENSITY FILL
- E EASTING
- EL ELEVATION
- FRP FIBERGLASS REINFORCED PIPE
- GP GEORGIA PACIFIC = FORMER SITE NOW OWNED BY PORT OF BELLINGHAM
- IE INVERT ELEVATION
- MLLW MEAN LOWER LOW WATER
- N NORTHING
- NAIP NATIONAL AGRICULTURE IMAGERY PROGRAM
- NTS NOT TO SCALE
- SQ FT SQUARE FEET
- USDA UNITED STATES DEPARTMENT OF AGRICULTURE
- NOS NATIONAL OCEAN SERVICE
- NAD NORTH AMERICAN DATUM
- NAVD NORTH AMERICAN VERTICAL DATUM
- WSDOT WASHINGTON DEPARTMENT OF TRANSPORTATION

LEGEND:

- DETAIL REFERENCE NUMBER 
- DRAWING ON WHICH DETAIL APPEARS "1" INDICATES TYPICAL OR ON SAME DRAWING
- DETAIL REFERENCE NUMBER  **DETAIL**
SCALE: 1" = 10'
-  INDICATES DIRECTION OF CUTTING PLAN
- SECTION "A" IS SHOWN ON DRAWING "C-2"
- SECTION REFERENCE NUMBER  **SECTION**
SCALE: 1" = 10'
- PHOTO REFERENCE NUMBER 
- PHOTO POINT AND DIRECTION 
- APPROXIMATE EELGRASS BED LOCATION 
- SITE AND STRUCTURE REMOVAL 
- DEBRIS REMOVAL AND CLEAR AND GRUB 
- CATCH BASIN 
- LIGHT POLE 
- TIMBER PILE 
- EXISTING VEGETATION 
- WHATCOM WATERWAY STATIONING 
- MANHOLE COVER 
- STORMWATER DRAINAGE LINE (EXISTING) 
- MONITORING WELL 
- WELL POINT 
- EXISTING ELECTRICAL LINE 



DATUM CONVERSION
NOT TO SCALE

RECORD DRAWINGS

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Dec 21, 2016 5:32pm gtljg



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

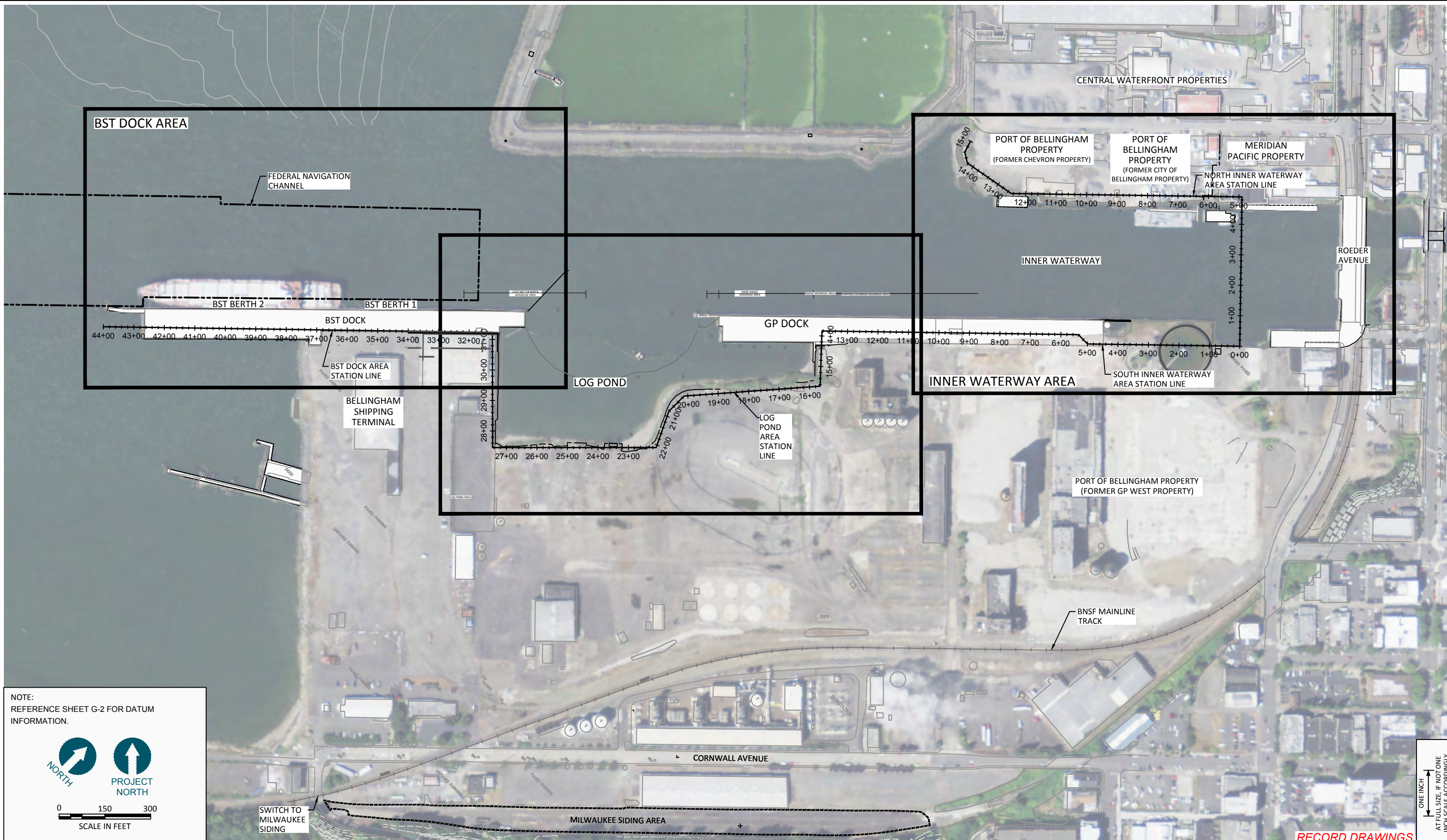
GENERAL NOTES

G-2

SHEET NO. 2 OF 126

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

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Dec 21, 2016 5:31pm gtrjg



NOTE:
REFERENCE SHEET G-2 FOR DATUM
INFORMATION.

NORTH

PROJECT
NORTH

SCALE IN FEET

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



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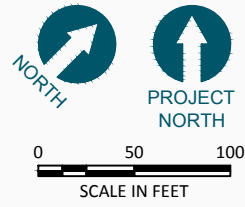
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

SITE PLAN

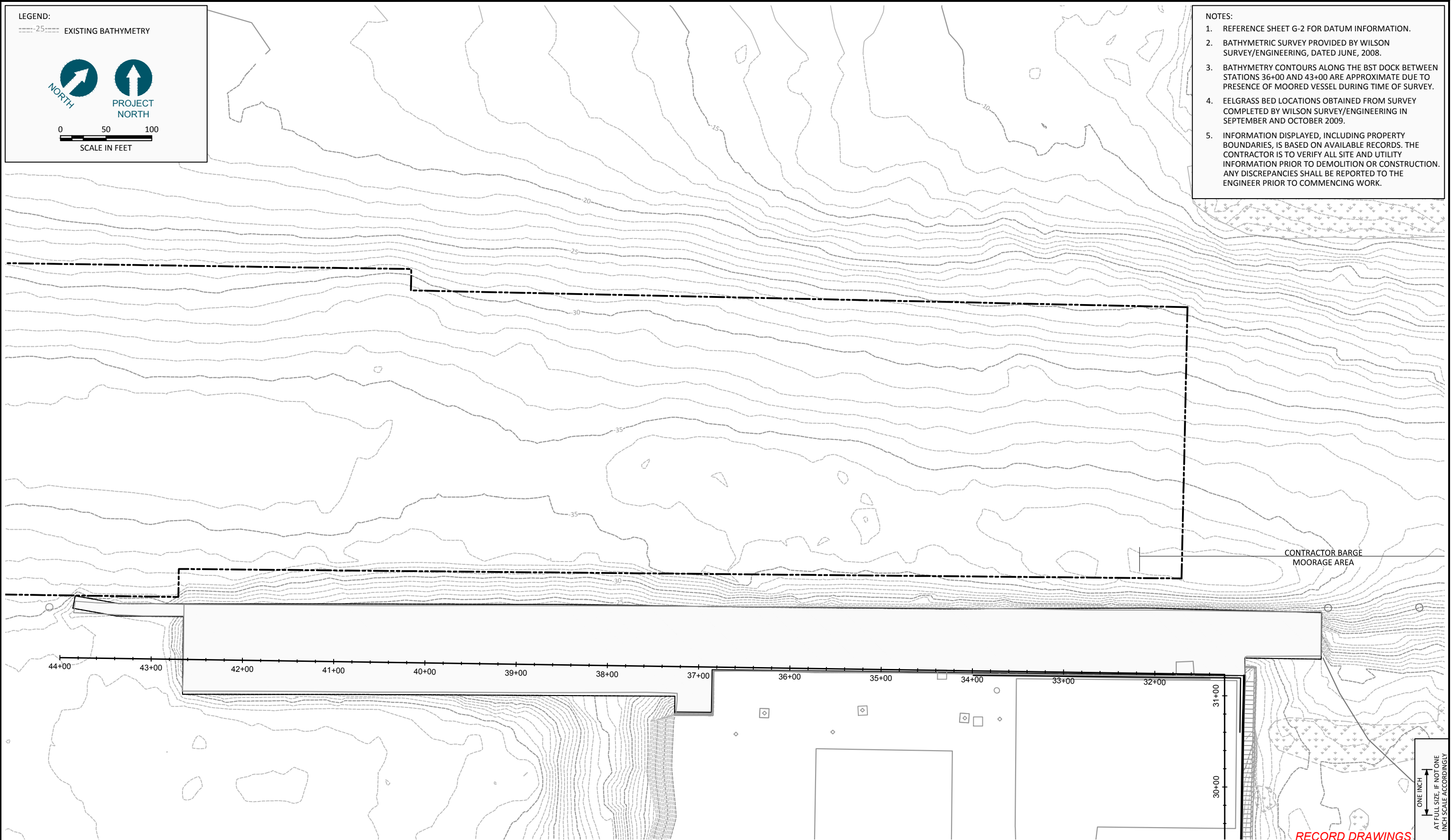
EC-1

SHEET NO. 3 OF 126

LEGEND:
 - - - - -25- - - - - EXISTING BATHYMETRY



- NOTES:
1. REFERENCE SHEET G-2 FOR DATUM INFORMATION.
 2. BATHYMETRIC SURVEY PROVIDED BY WILSON SURVEY/ENGINEERING, DATED JUNE, 2008.
 3. BATHYMETRY 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.



CONTRACTOR BARGE
MOORAGE AREA

44+00 43+00 42+00 41+00 40+00 39+00 38+00 37+00 36+00 35+00 34+00 33+00 32+00

31+00
30+00

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

K:\Projects\0007-Port of Bellingham\Whatcom Waterway Cleanup\Inner Vtr\Record Drawings\Construction Plans\0007-EC-1 TO EC-5.dwg EC-2 Dec 21, 2016 5:31 pm gtr/bp

720 OLIVE WAY, SUITE 1900 | SEATTLE, WA 98101
(206) 287-9130

1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500

REVISIONS				
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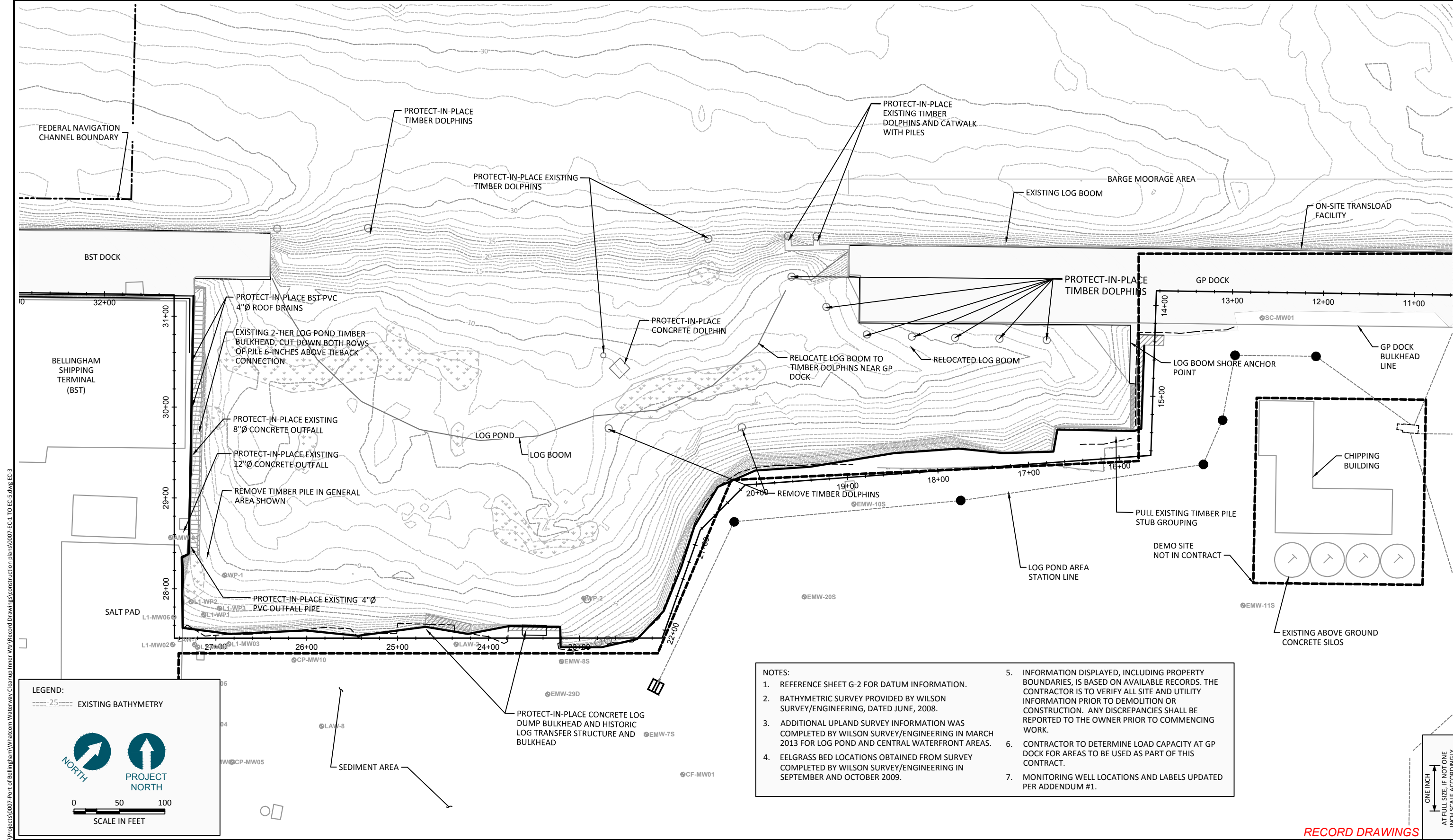
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**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

EXISTING CONDITIONS - BST DOCK AREA

EC-2

SHEET NO. 4 OF 126



- 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. 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.
 7. MONITORING WELL LOCATIONS AND LABELS UPDATED PER ADDENDUM #1.

LEGEND:

---25--- EXISTING BATHYMETRY

NORTH

PROJECT NORTH

0 50 100
SCALE IN FEET

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

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 BELLINGHAM, WASHINGTON**

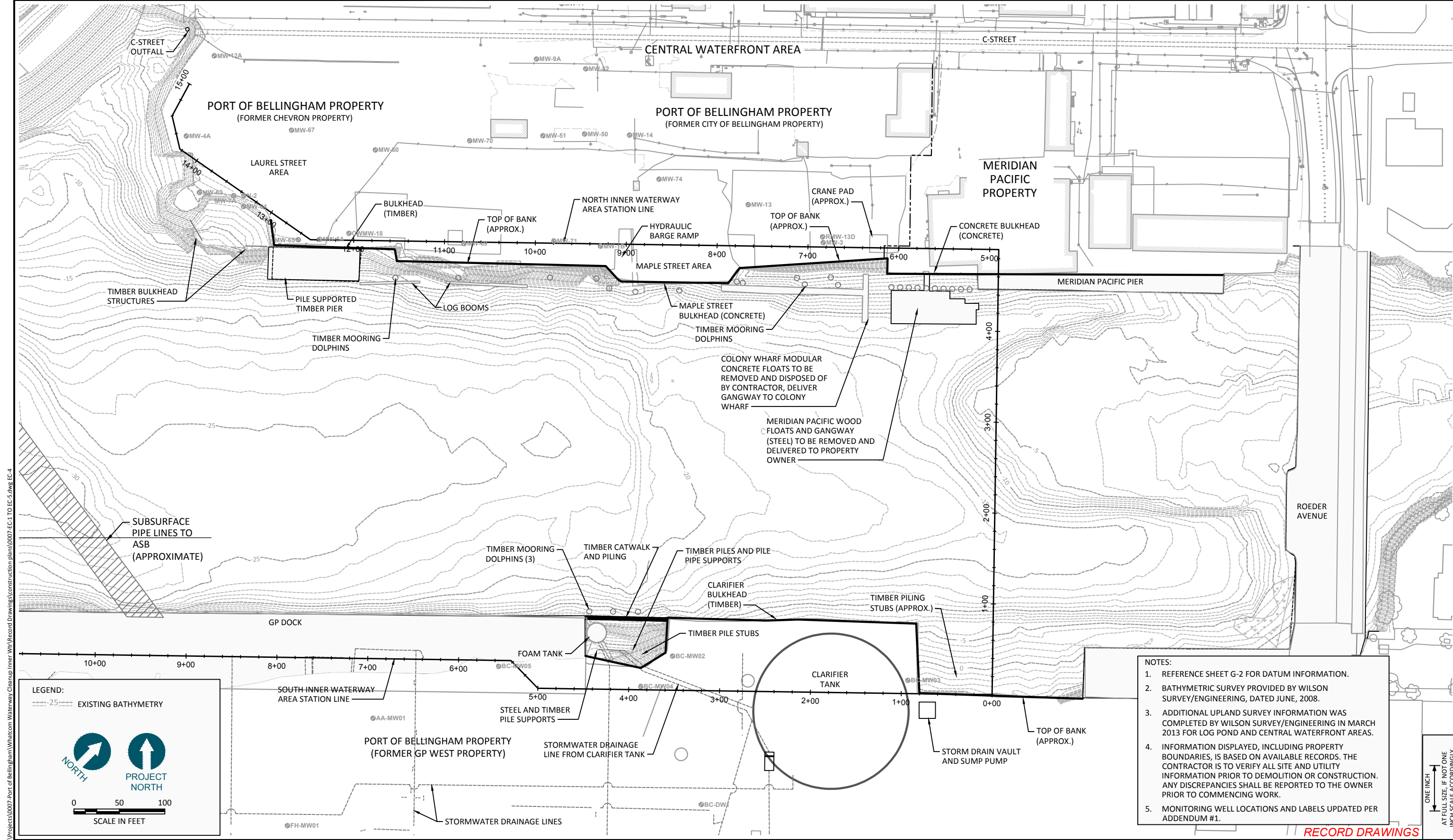
EXISTING CONDITIONS - LOG POND AREA

EC-3

SHEET NO. **5** OF **126**

K:\Projects\0007-Port of Bellingham\Whatcom Waterway Cleanup\Inner Vtr\Record Drawings\Construction\plans\0007-EC-1 TO EC-5.dwg EC-3
 Dec 21, 2016 5:31pm gtrjg

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 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY



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LEGEND:

---25--- EXISTING BATHYMETRY

NORTH

PROJECT NORTH

0 50 100
SCALE IN FEET

RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



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CHECKED BY: T. WANG

APPROVED BY: T. WANG

SCALE: AS NOTED

DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

EXISTING CONDITIONS - INNER WATERWAY AREA

EC-4

SHEET NO. 6 OF 126

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SITE, STRUCTURE AND SHORELINE

DEBRIS REMOVAL NOTES:

1. ALL WORK SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS. ALL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE PROJECT PERMITS 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 IMPACT THE WORK AND IMMEDIATELY BRING ANY CONFLICTS TO THE ENGINEER'S ATTENTION.
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 SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL REMOVAL MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
5. THE CONTRACTOR SHALL KEEP ALL STREETS AND VEHICULAR TRAFFIC AREAS CLEAN.
6. CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROLS REQUIRED DURING THE DURATION OF THIS PROJECT, SEE SPECIFICATIONS.
7. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING, TESTING AND BACKFILLING REQUIREMENTS.
8. THE CONTRACTOR SHALL INSTALL AND MAINTAIN PERIMETER FENCING AS REQUIRED TO MAINTAIN SECURITY OF SITE.
9. CONTRACTOR SHALL PROTECT-IN-PLACE ALL STRUCTURES, UTILITIES AND OBJECTS NOT CALLED OUT AS BEING REMOVED ON THE PLANS. ANY DAMAGE TO ITEMS NOT BEING REMOVED SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO STRICTLY CONTAIN THE SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL WITHIN THE LIMITS SHOWN ON THE DRAWINGS. ANY DAMAGE TO UTILITIES, OTHER FACILITIES, OR EQUIPMENT DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE PROMPTLY REPAIRED AT HIS EXPENSE. THIS INCLUDES ITEMS OUTSIDE THE WORK AREA THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES DURING EXECUTION OF THIS CONTRACT.
11. ALL LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREIN HAVE BEEN ESTABLISHED BY FIELD OBSERVATIONS OR OBTAINED FROM REVIEW OF AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. 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 WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. THE CONTRACTOR SHALL BRING ANY CONFLICTS BETWEEN EXISTING UTILITIES AND NEW WORK TO THE ENGINEERS ATTENTION.
12. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
13. DOLPHINS AND PILES CALLED OUT ON THE PLANS TO BE REMOVED SHALL BE PULLED COMPLETELY UNLESS OTHERWISE NOTED ON THE PLANS. PILES THAT BREAK AND CANNOT BE PULLED COMPLETELY OR CALLED OUT ON THE PLANS AS BEING CUT SHALL BE CUT AT THE MUDLINE OR AT A MAXIMUM OF 12-INCHES ABOVE THE MUDLINE, SEE SPECIFICATIONS.
14. EXTENT OF DEBRIS REMOVAL AND CLEAR AND GRUB VEGETATION IS APPROXIMATE AND IS TO BE VERIFIED 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 ARE TO SHOW GENERAL SCOPE OF ITEMS TO BE REMOVED. THE PHOTOS ARE FOR REFERENCE ONLY AND HIGHLIGHT ITEMS IN THE FOREGROUND TO BE REMOVED. ITEMS IN THE BACKGROUND THAT ARE TO BE REMOVED ARE NOT NECESSARILY IDENTIFIED. THE CONTRACTOR SHALL VISIT THE SITE AND SURVEY THE SCOPE OF REMOVAL PRIOR TO SUBMITTING A BID.

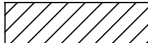


16. PRIOR TO SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL, THE CONTRACTOR SHALL MARK ITEMS TO BE PROTECTED WITH TAPE OR MARKING PAINT. SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL SHALL NOT PROCEED UNTIL MARKING IS REVIEWED AND APPROVED BY THE ENGINEER.
17. UNLESS NOTED OTHERWISE, ALL REMOVED STRUCTURES MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL FACILITY OR RECYCLING FACILITY IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND REGULATIONS GOVERNING DISPOSAL.
18. ALL DIMENSIONS OF DEMOLISHED STRUCTURES ARE APPROXIMATE AND ARE FOR REFERENCE ONLY.
19. PRIOR TO COMMENCING DEMOLITION ACTIVITIES CONTRACTOR SHALL IMPLEMENT TEMPORARY EROSION AND SEDIMENTATION CONTROLS. NO DEMOLITION MATERIALS OR DEBRIS SHALL BE ALLOWED TO ENTER THE WATERWAY, SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
20. SEE ELECTRICAL SHEETS FOR ADDITIONAL DEMOLITION ITEMS.
21. UNLESS SPECIFICALLY NOTED "REMOVE" INCLUDES COMPLETE REMOVAL AND SATISFACTORY DISPOSAL OR RECYCLING.
22. WHERE EXISTING STRUCTURES EXTEND BELOW THE WATERLINE ALONG THE NORTH SHORELINE THE STRUCTURES SHALL BE CUT AT THE EXISTING MUDLINE OR AT A MAXIMUM OF 12-INCHES ABOVE THE MUDLINE.
23. ALONG THE SOUTH SHORELINE EXISTING STRUCTURES AND THEIR ASSOCIATED PILES LOCATED WITHIN THE DREDGE SLOPE SHALL BE CUT AT THE FACE OF THE DREDGE SLOPE UNLESS OTHERWISE NOTED ON THE PLANS. THE PORTION OF STRUCTURE BELOW THE FACE OF THE DREDGE SLOPE WILL REMAIN IN PLACE.
24. UPLAND SITE ITEMS, STRUCTURES AND PILES 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 OTHERWISE NOTED ON THE PLANS.
25. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR CLEARING AND GRUBBING AND SITE, STRUCTURAL, AND SHORELINE DEBRIS REMOVAL.
26. REFER TO C-SHEETS FOR INFORMATION REGARDING PROTECTION OR DECOMMISSIONING OF MONITORING WELLS.

SOILS:

SEE THE GEOTECHNICAL REPORT BY ANCHOR QEA, DATED MAY 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 APPROXIMATE EXTENTS OF ABOVE WATERLINE REMOVAL ITEMS. ADDITIONAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL IS REQUIRED BELOW THE WATERLINE, SEE NOTE 15 AND THE SPECIFICATIONS.

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RECORD DRAWINGS

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 CHECKED BY: MDK
 APPROVED BY: DLO
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 DATE: MARCH 2015

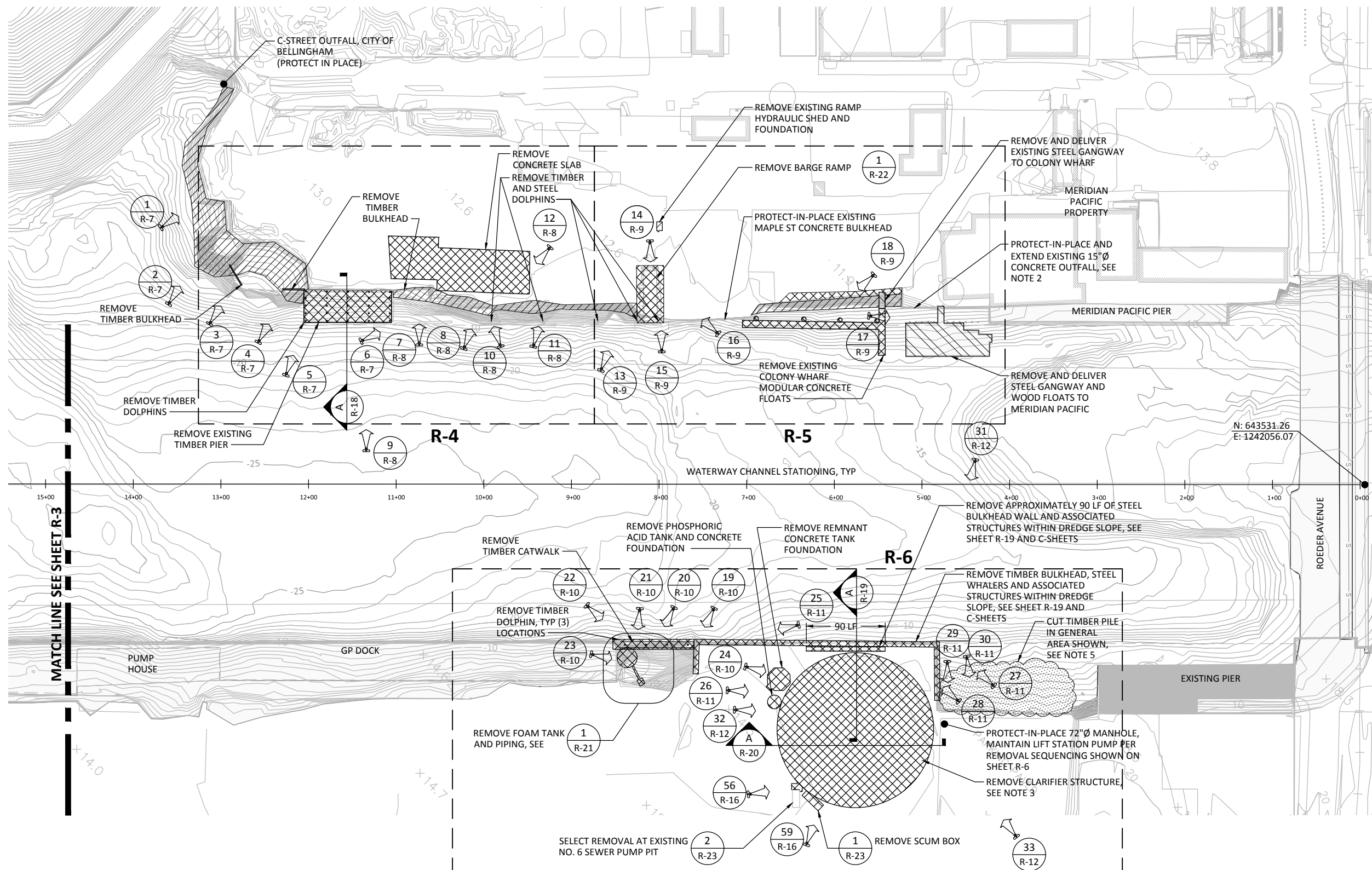
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

**SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL NOTES**

R-1

SHEET NO. **7** OF **126**

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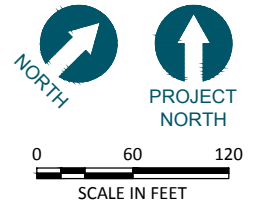


- REMOVAL NOTES:**
- SEE SHEET R-1 FOR SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL AND NOTES.
 - EXTEND EXISTING CONCRETE OUTFALL PIPE PER 1
CU-8
 - REMOVE ALL PIPING, STRUCTURAL STEEL, MISCELLANEOUS METAL, PUMPS, ELECTRICAL EQUIPMENT, ETC ATTACHED TO OR WITHIN CLARIFIER STRUCTURE. OUTSIDE LIMITS OF DREDGE, REMOVE CLARIFIER CONCRETE STRUCTURE AND PILING TO 2' BELOW EXISTING GRADE, SEE R-20 AND C-SHEETS, FOR REMOVAL WITHIN THE DREDGE SLOPE, SEE R-19.
 - SEE C-SHEETS FOR DREDGE AND SHORELINE EXCAVATION LIMITS.
 - PILES SHALL BE CUT AT THE MUDLINE OR AT A MAXIMUM OF 12-INCHES ABOVE THE MUDLINE, SEE SPECIFICATIONS.
 - REFER TO C-SHEETS FOR INFORMATION REGARDING PROTECTION OR DECOMMISSIONING OF MONITORING WELLS.

- LEGEND:**
- X
X-X PHOTOGRAPH ORIENTATION
 - SITE AND STRUCTURE REMOVAL
 - DEBRIS REMOVAL AND CLEAR AND GRUB, SEE NOTE 14 ON R-1
 - STRUCTURE REMOVAL AND DELIVERY TO OWNER, OWNER PER PLAN. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION

INNER WATERWAY AREA - SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PLAN
SCALE: 1"=60'

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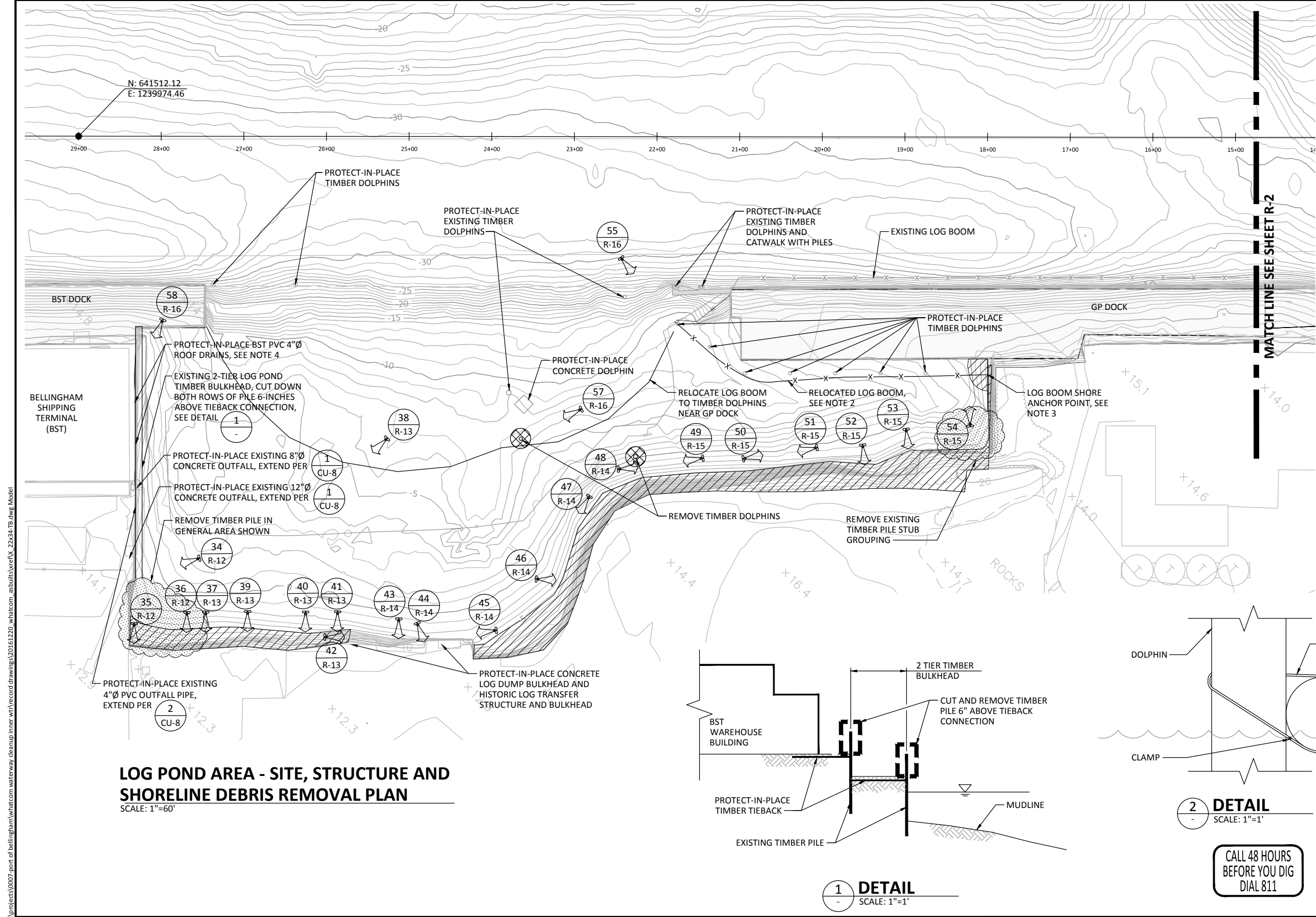
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REV	DATE	BY	APP'D	DESCRIPTION

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DRAWN BY: KMV
CHECKED BY: MDX
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**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

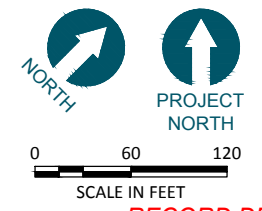
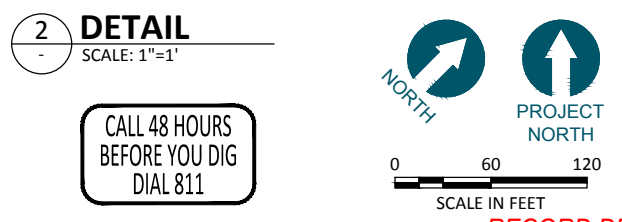
INNER WATERWAY AREA SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PLAN

R-2
SHEET NO. 8 OF 126



- NOTES:**
- SEE SHEET R-1 FOR SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES.
 - ATTACH LOG BOOM TO EVERY OTHER DOLPHIN USING 1/4" 1x19 ASTM 316 WIRE ROPE AND CLAMP PLACED LOOSELY TO ALLOW FOR MOVEMENT. SEE DETAIL 2.
 - ATTACH END OF LOG BOOM WITH 1/4" 1x19 ASTM 316 WIRE ROPE AND CLAMP TO CONCRETE ECO BLOCK ON SHORE.
 - EXTEND BST PVC 4"Ø ROOF DRAINS TO THE TOP OF THE CAPPED SLOPE. EXTEND USING LIKE MATERIALS. SEE C-SHEETS FOR CAPPED SLOPE.
 - REFER TO C-SHEETS FOR INFORMATION REGARDING PROTECTION OR DECOMMISSIONING OF MONITORING WELLS.

- LEGEND:**
- PHOTOGRAPH ORIENTATION
 - SITE AND STRUCTURE REMOVAL
 - DEBRIS REMOVAL AND CLEAR AND GRUB, SEE NOTE 14 ON R-1



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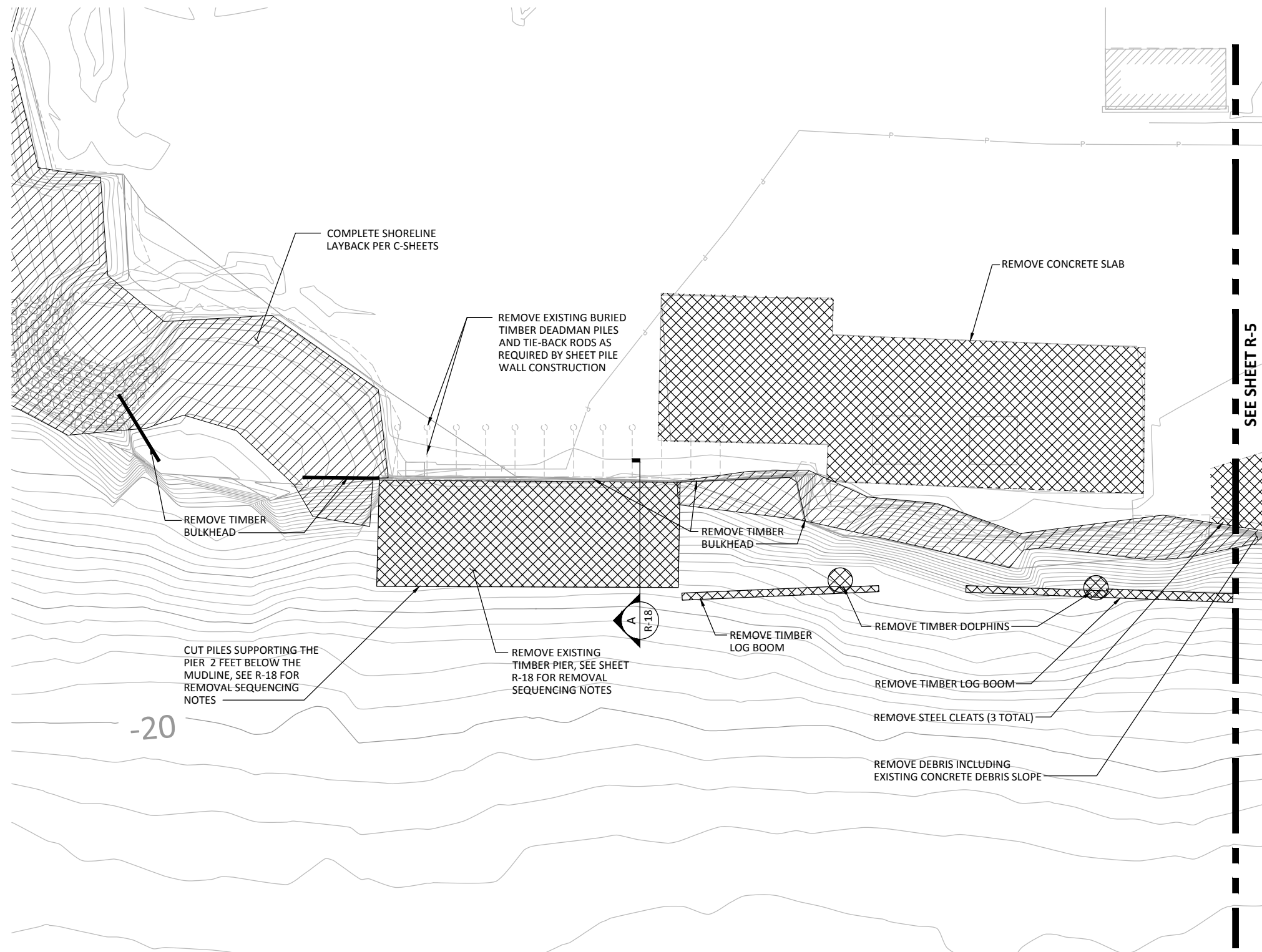
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

LOG POND AREA SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PLAN

R-3

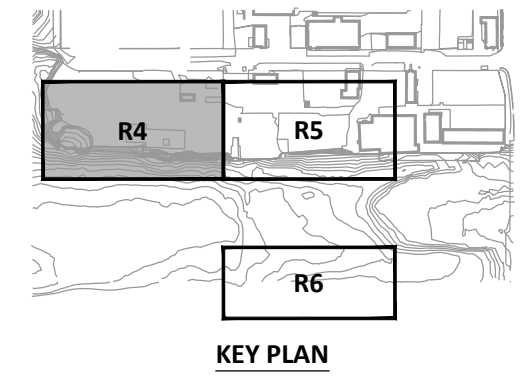
SHEET NO. 9 OF 126

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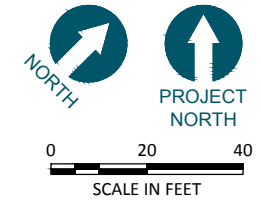
- NOTES:**
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 2. SEE SHEET R-1 FOR ADDITIONAL SITE, STRUCTURE, AND SHORELINE DEBRIS REMOVAL NOTES.
 3. REFER TO C-SHEETS FOR INFORMATION REGARDING PROTECTION OR DECOMMISSIONING OF MONITORING WELLS.

- LEGEND:**
- SITE AND STRUCTURE REMOVAL
 - DEBRIS REMOVAL AND CLEAR AND GRUB, SEE NOTE 14 ON R-1
 - EXISTING ELECTRICAL LINE



WEST CENTRAL WALL REMOVAL PLAN
SCALE: 1"=20'

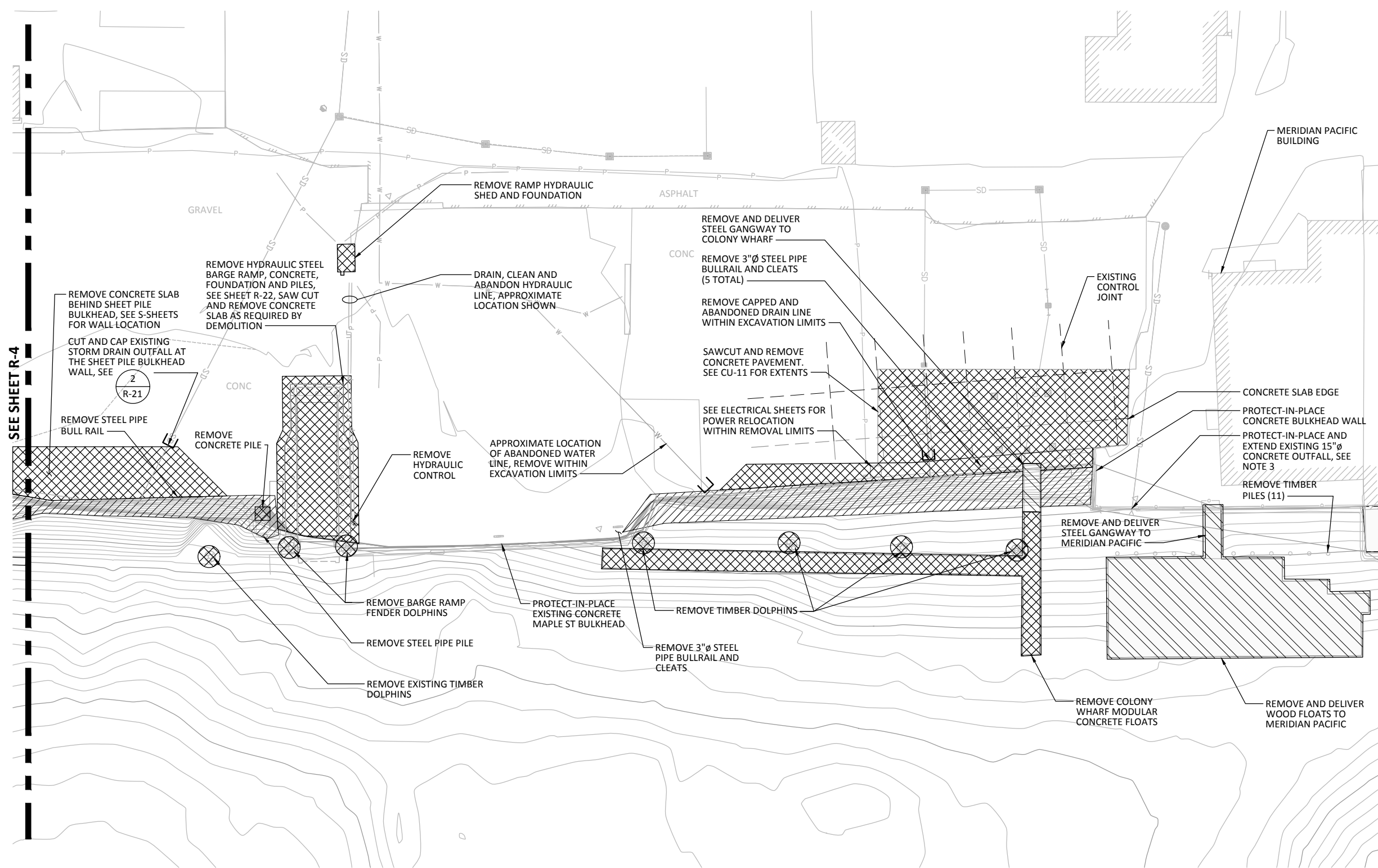
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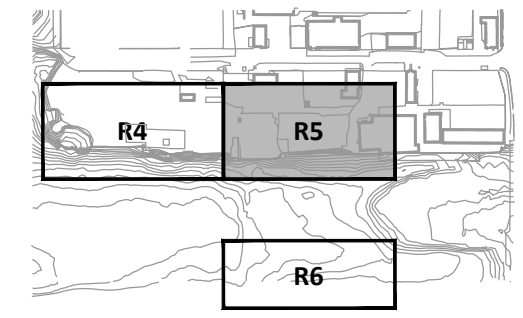
 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS					REV	DATE	BY	APP'D	DESCRIPTION																					DESIGNED BY: <u>SJS</u> DRAWN BY: <u>KMV</u> CHECKED BY: <u>MDK</u> APPROVED BY: <u>DLO</u> SCALE: <u>AS NOTED</u> DATE: <u>MARCH 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON WEST CENTRAL AREA SITE, STRUCTURE, AND SHORELINE DEBRIS REMOVAL	R-4 SHEET NO. 10 OF 126
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- NOTES:**
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 2. SEE SHEET R-1 FOR ADDITIONAL SITE, STRUCTURAL, AND SHORELINE DEBRIS REMOVAL NOTES.
 3. EXTEND EXISTING CONCRETE OUTFALL PIPE PER 1
CU-8
 4. REFER TO C-SHEETS FOR INFORMATION REGARDING PROTECTION OR DECOMMISSIONING OF MONITORING WELLS

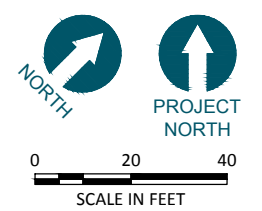
- LEGEND:**
- SITE AND STRUCTURE REMOVAL
 - DEBRIS REMOVAL AND CLEAR AND GRUB, SEE NOTE 14 ON R-1
 - STRUCTURE REMOVAL AND DELIVERY TO OWNER, OWNER PER PLAN. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION
 - SD EXISTING DRAIN LINE
 - W EXISTING WATER LINE
 - P EXISTING ELECTRICAL LINE
 - - - EXISTING PAVEMENT CONTROL JOINT



KEY PLAN

MAPLE ST. AREA SITE, STRUCTURAL AND SHORELINE DEBRIS REMOVAL PLAN
SCALE: 1"=20'

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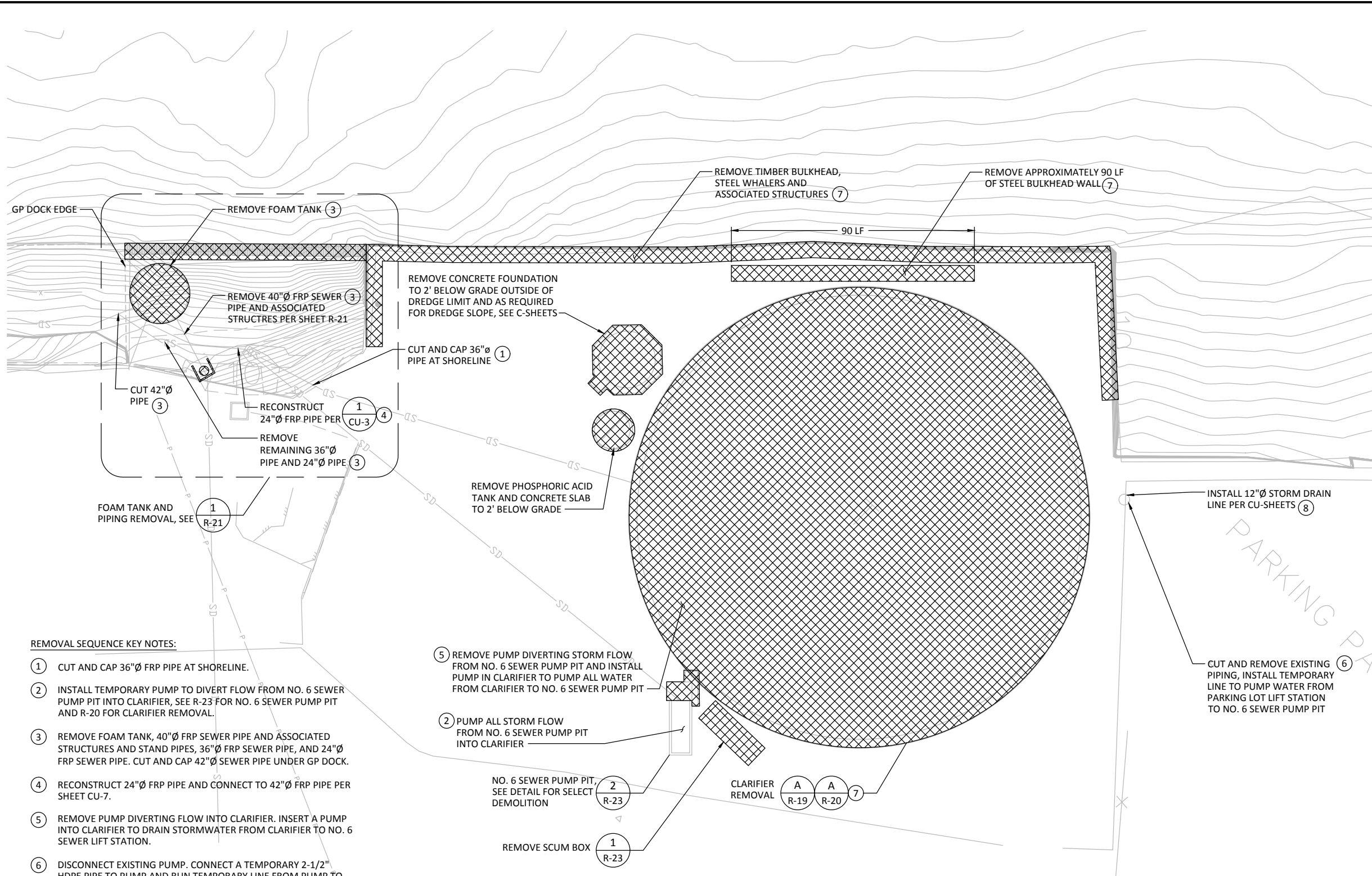
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		MAPLE ST. AREA SITE, STRUCTURAL AND SHORELINE DEBRIS REMOVAL PLAN		

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REMOVAL SEQUENCE KEY NOTES:

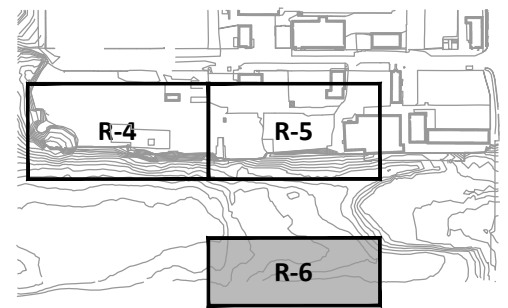
- 1 CUT AND CAP 36"Ø FRP PIPE AT SHORELINE.
- 2 INSTALL TEMPORARY PUMP TO DIVERT FLOW FROM NO. 6 SEWER PUMP PIT INTO CLARIFIER, SEE R-23 FOR NO. 6 SEWER PUMP PIT AND R-20 FOR CLARIFIER REMOVAL.
- 3 REMOVE FOAM TANK, 40"Ø FRP SEWER PIPE AND ASSOCIATED STRUCTURES AND STAND PIPES, 36"Ø FRP SEWER PIPE, AND 24"Ø FRP SEWER PIPE. CUT AND CAP 42"Ø SEWER PIPE UNDER GP DOCK.
- 4 RECONSTRUCT 24"Ø FRP PIPE AND CONNECT TO 42"Ø FRP PIPE PER SHEET CU-7.
- 5 REMOVE PUMP DIVERTING FLOW INTO CLARIFIER. INSERT A PUMP INTO CLARIFIER TO DRAIN STORMWATER FROM CLARIFIER TO NO. 6 SEWER LIFT STATION.
- 6 DISCONNECT EXISTING PUMP. CONNECT A TEMPORARY 2-1/2" HDPE PIPE TO PUMP AND RUN TEMPORARY LINE FROM PUMP TO NO. 6 SEWER PUMP PIT.
- 7 REMOVE CLARIFIER AND STEEL AND TIMBER BULKHEADS AND ASSOCIATED STRUCTURES. PER SHEETS R-19 AND R-20.
- 8 REMOVE EXISTING PUMP FROM 72"Ø MANHOLE AND DELIVER TO THE PORT, INSTALL 12"Ø STORM DRAIN LINE AS SHOWN IN CU-SHEETS.

- 5 REMOVE PUMP DIVERTING STORM FLOW FROM NO. 6 SEWER PUMP PIT AND INSTALL PUMP IN CLARIFIER TO PUMP ALL WATER FROM CLARIFIER TO NO. 6 SEWER PUMP PIT
- 2 PUMP ALL STORM FLOW FROM NO. 6 SEWER PUMP PIT INTO CLARIFIER

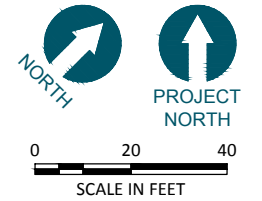
CLARIFIER AREA REMOVAL PLAN
 SCALE: 1"=20'

- NOTES:**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING ABOVE AND UNDERGROUND UTILITIES. EXISTING UTILITIES SHOWN HAVE BEEN OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL UTILITY LOCATIONS NOT SHOWN. CARE SHOULD BE TAKEN TO AVOID DAMAGE OR DISTURBANCE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY HIS ACTIVITIES.
 2. SEE SHEET R-1 FOR ADDITIONAL REMOVAL NOTES.
 3. SEE C-SHEETS FOR DREDGE AND SHORELINE EXCAVATION LIMITS.
 4. REFER TO C-SHEETS FOR INFORMATION REGARDING PROTECTION OR DECOMMISSIONING OF MONITORING WELLS.

- LEGEND:**
- SITE AND STRUCTURE REMOVAL
 - DEBRIS REMOVAL AND CLEAR AND GRUB, SEE NOTE 14 ON R-1
 - DRAIN LINE
 - WATER LINE
 - ELECTRICAL LINE



KEY PLAN



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WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

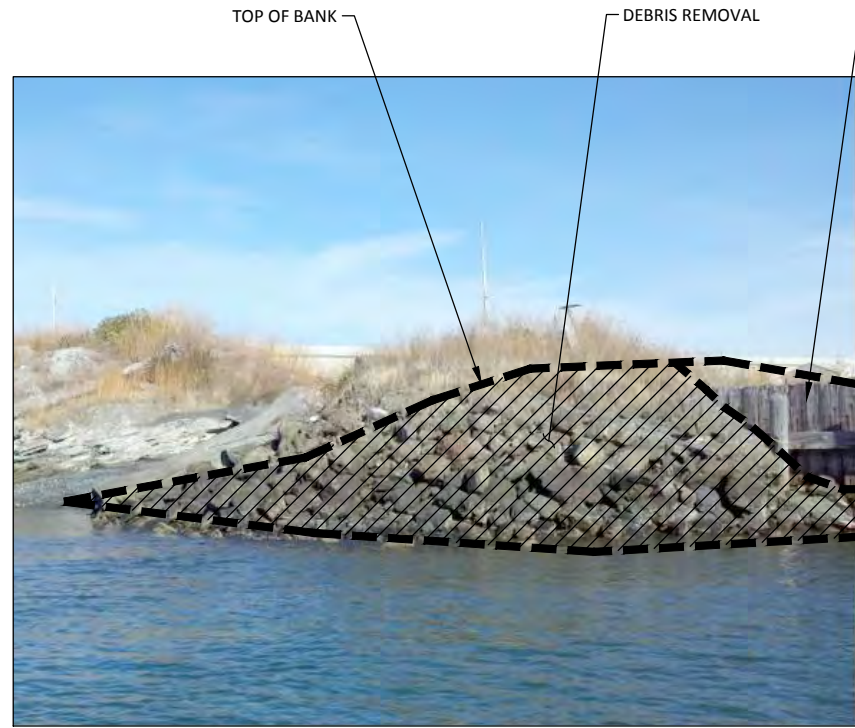
CLARIFIER AREA SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL PLAN

R-6
 SHEET NO. 12 OF 126

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY



1 PHOTO
R-2 SCALE: NTS

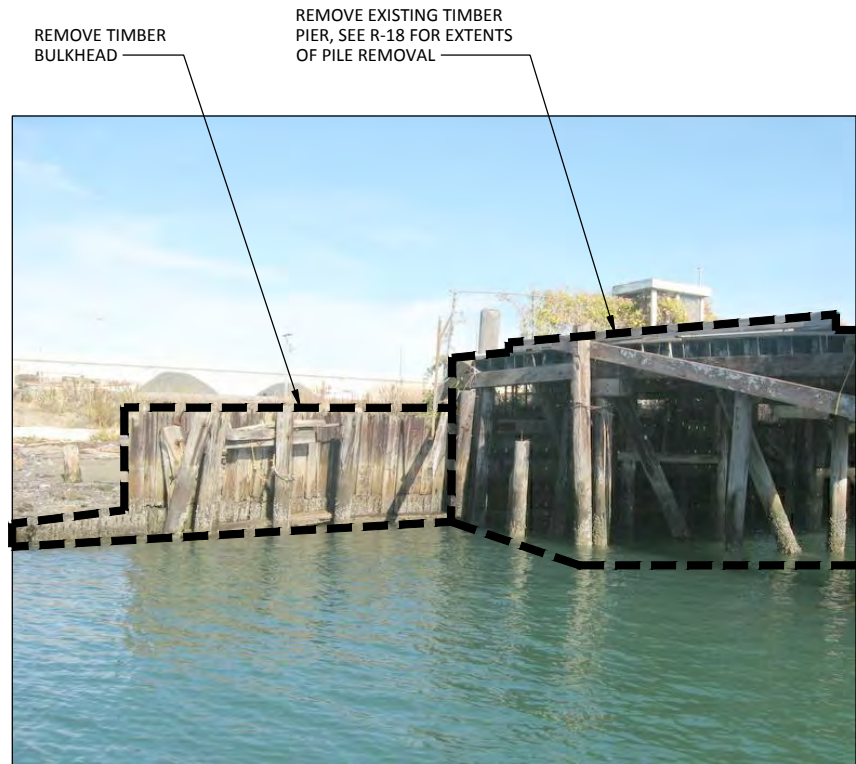


2 PHOTO
R-2 SCALE: NTS

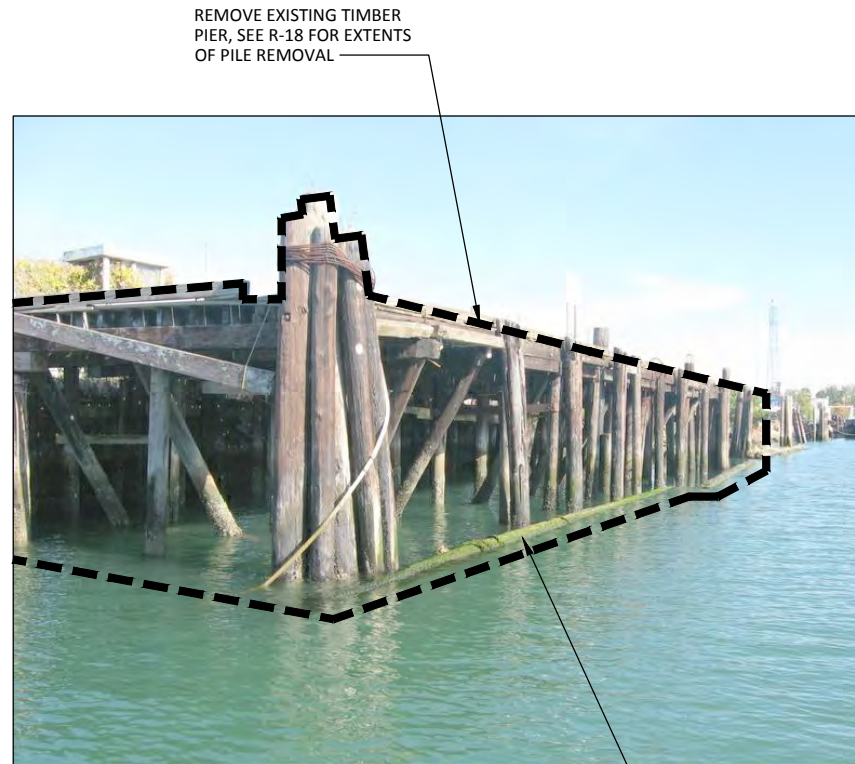


3 PHOTO
R-2 SCALE: NTS

NOTES:
1. SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.



4 PHOTO
R-2 SCALE: NTS



5 PHOTO
R-2 SCALE: NTS



6 PHOTO
R-2 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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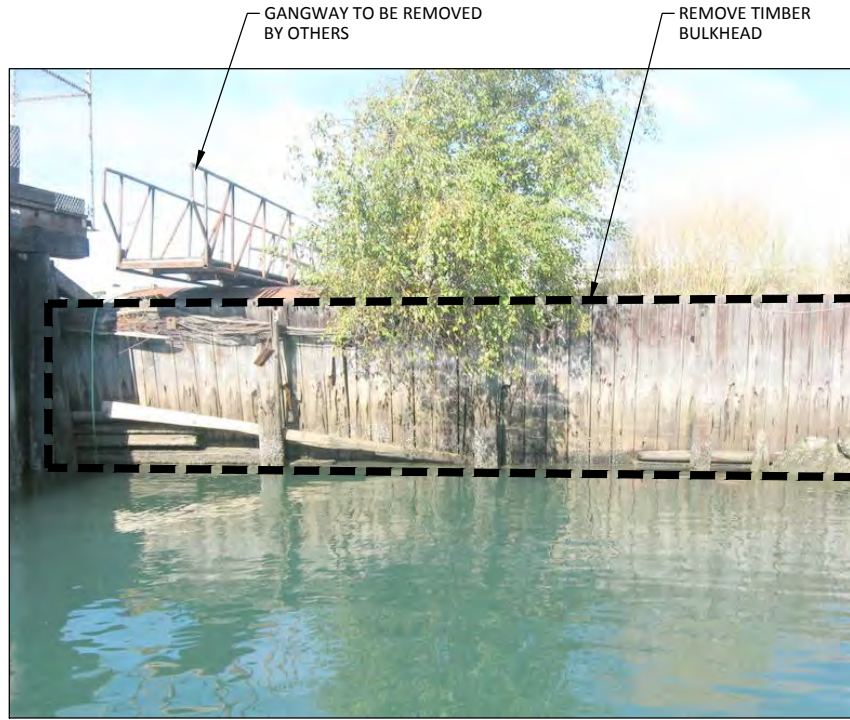
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CHECKED BY: MDK
APPROVED BY: DLO
SCALE: AS NOTED
DATE: MARCH 2015

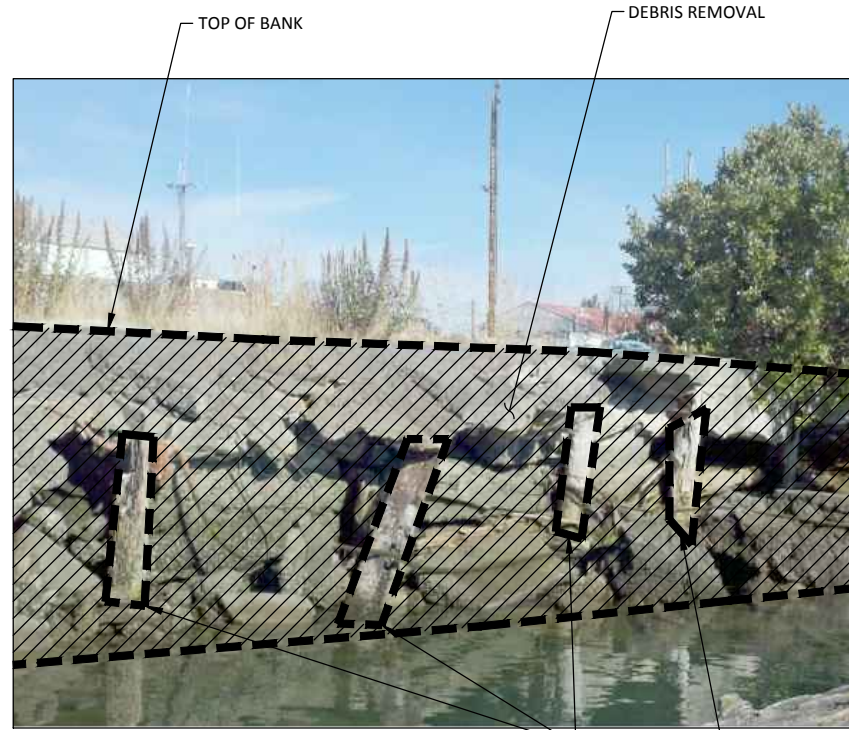
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL PHOTOGRAPHS

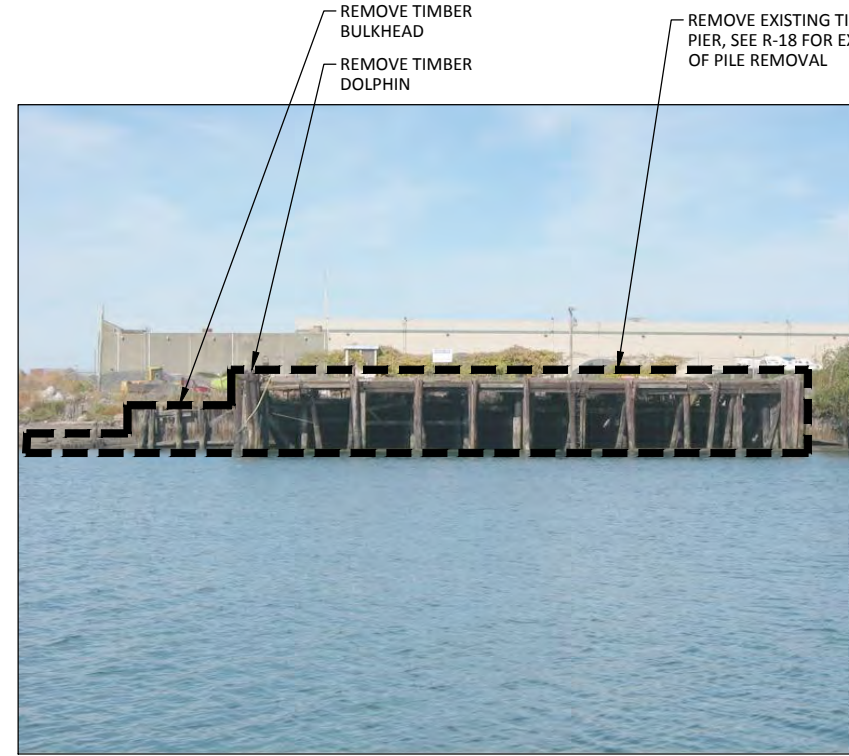
R-7
SHEET NO. 13 OF 126



7 PHOTO
R-2 SCALE: NTS



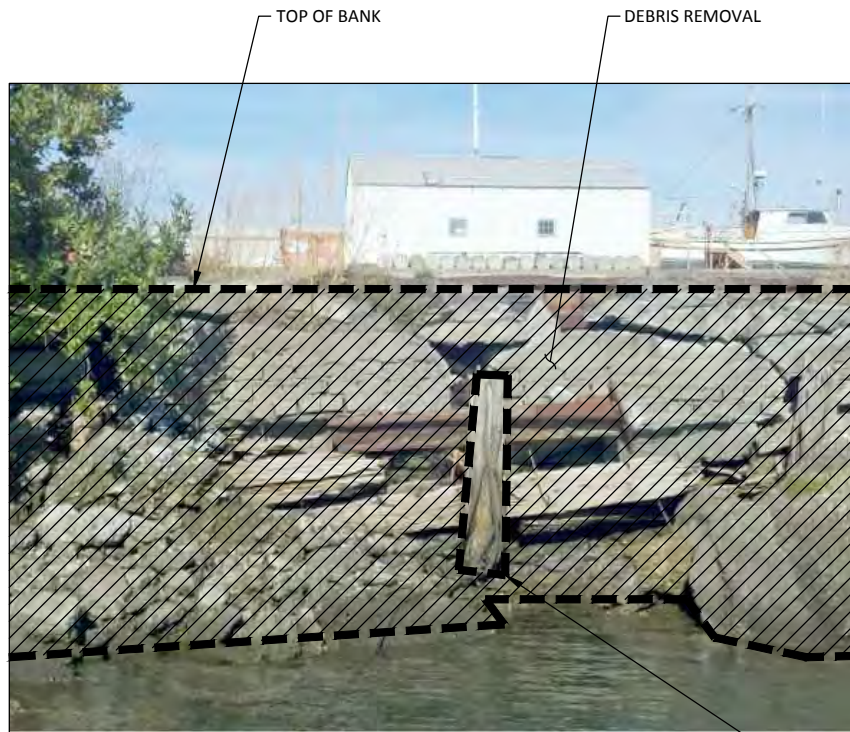
8 PHOTO
R-2 SCALE: NTS



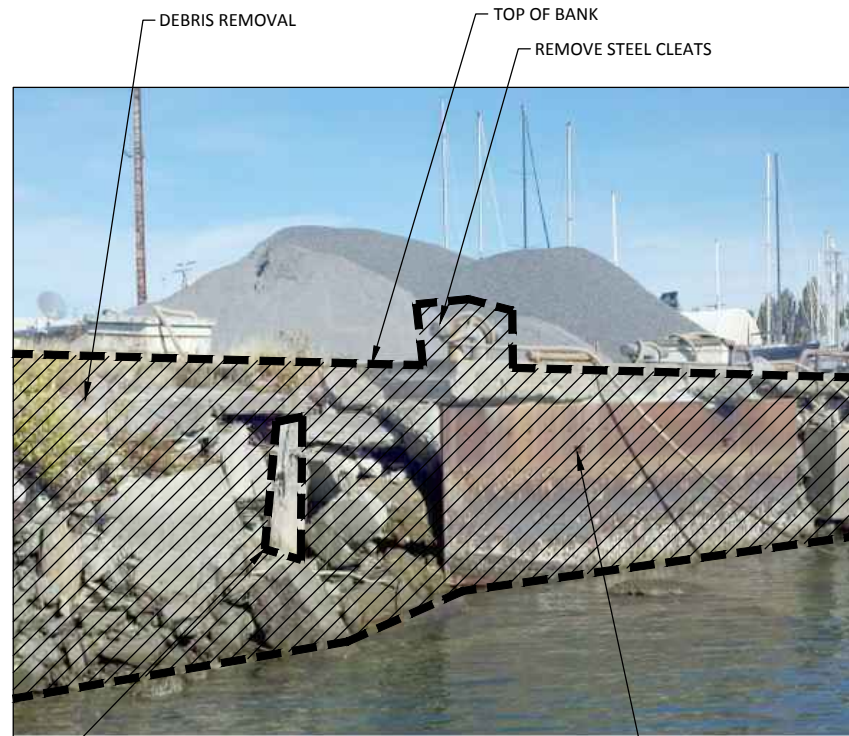
9 PHOTO
R-2 SCALE: NTS

NOTES:

- SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.



10 PHOTO
R-2 SCALE: NTS



11 PHOTO
R-2 SCALE: NTS



12 PHOTO
R-2 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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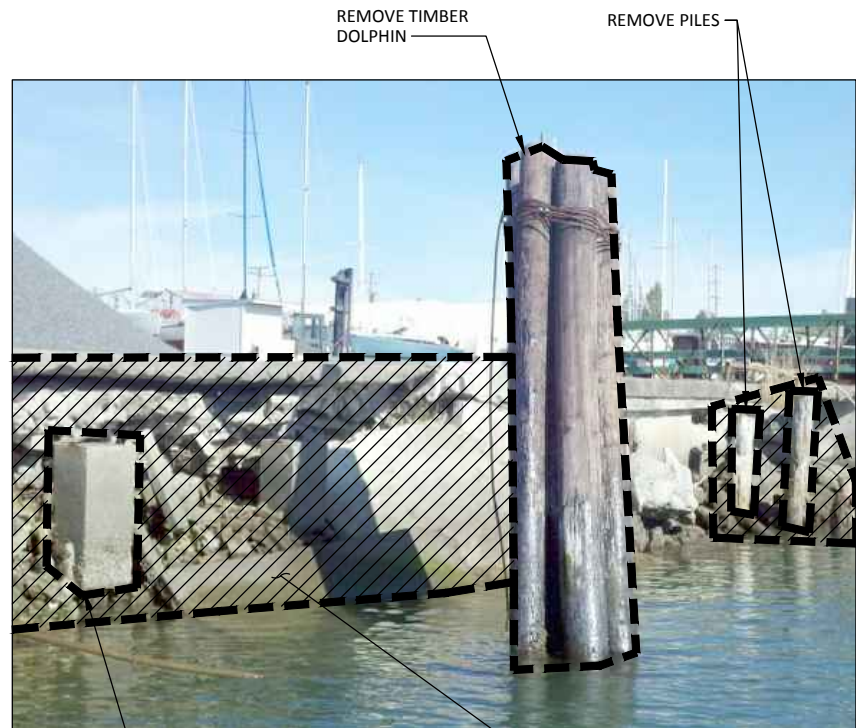
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WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

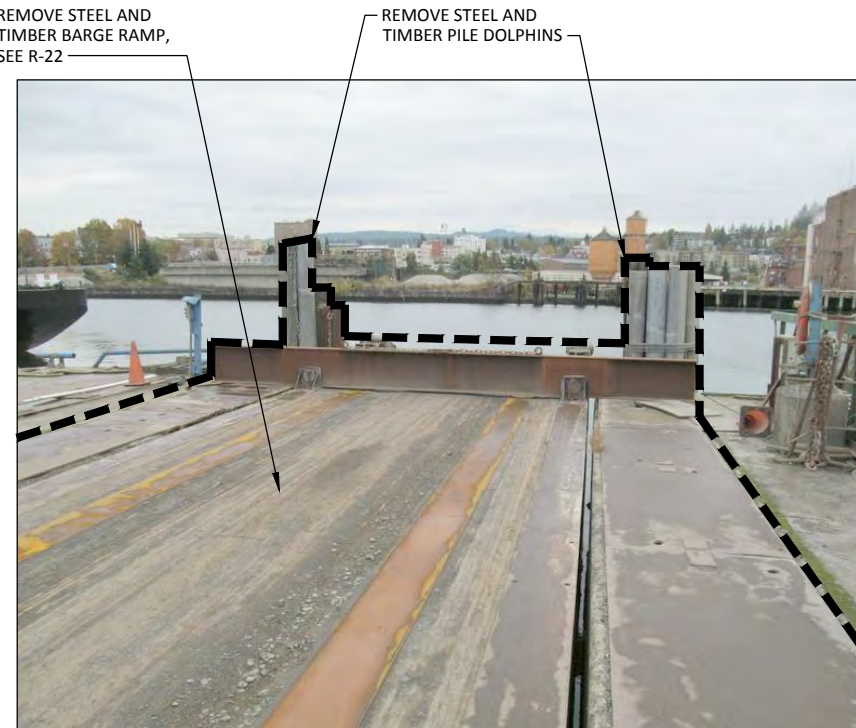
SITE, STRUCTURE AND SHORELINE DEBRIS
 REMOVAL PHOTOGRAPHS

R-8

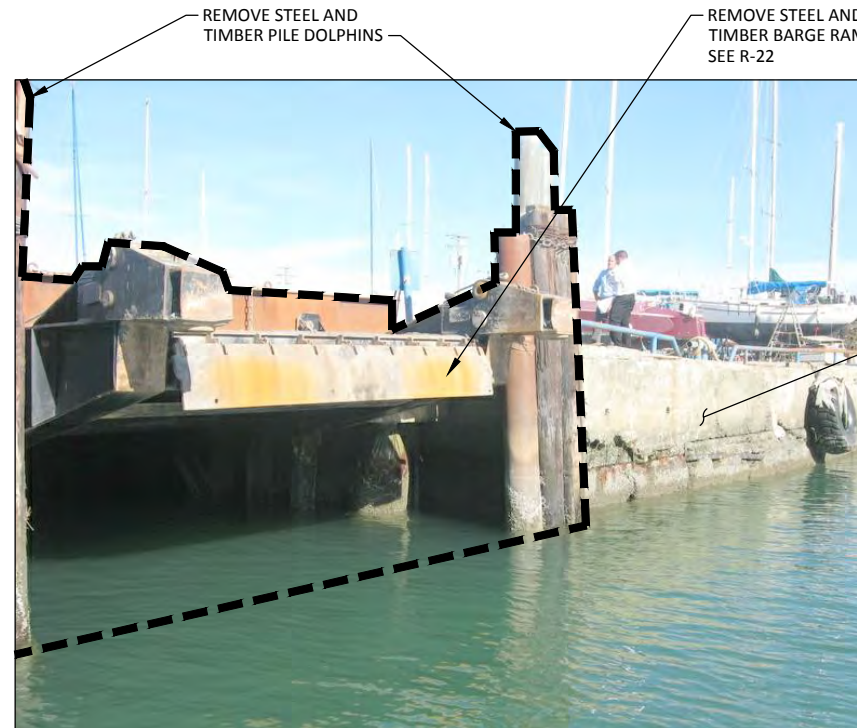
SHEET NO. 14 OF 126



13 PHOTO
R-2 SCALE: NTS
REMOVE CONCRETE DEBRIS



14 PHOTO
R-2 SCALE: NTS

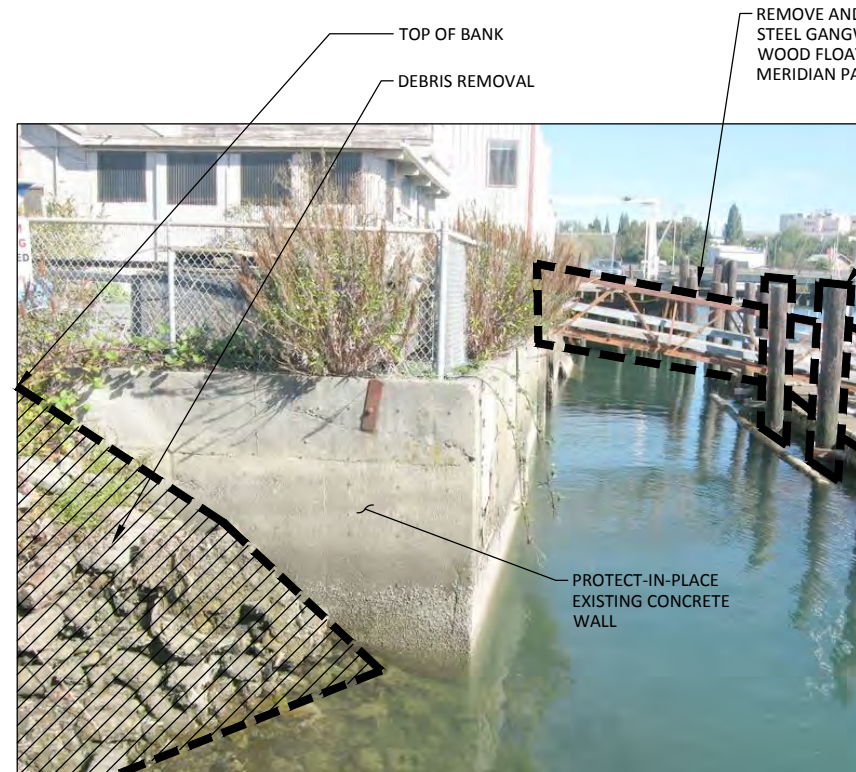


15 PHOTO
R-2 SCALE: NTS

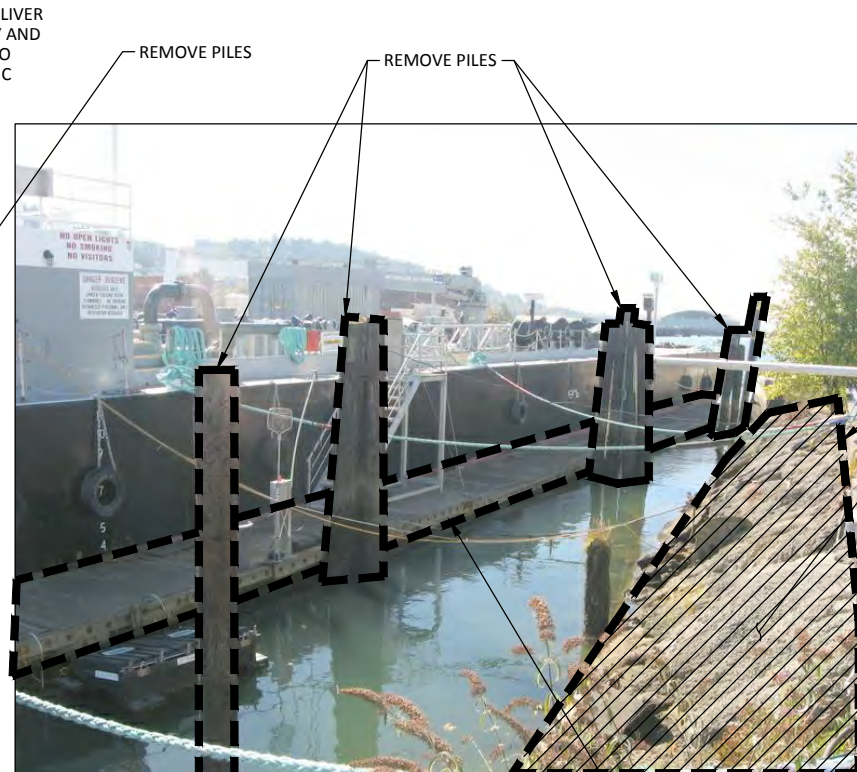
NOTES:
1. SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.



16 PHOTO
R-2 SCALE: NTS



17 PHOTO
R-2 SCALE: NTS



18 PHOTO
R-2 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

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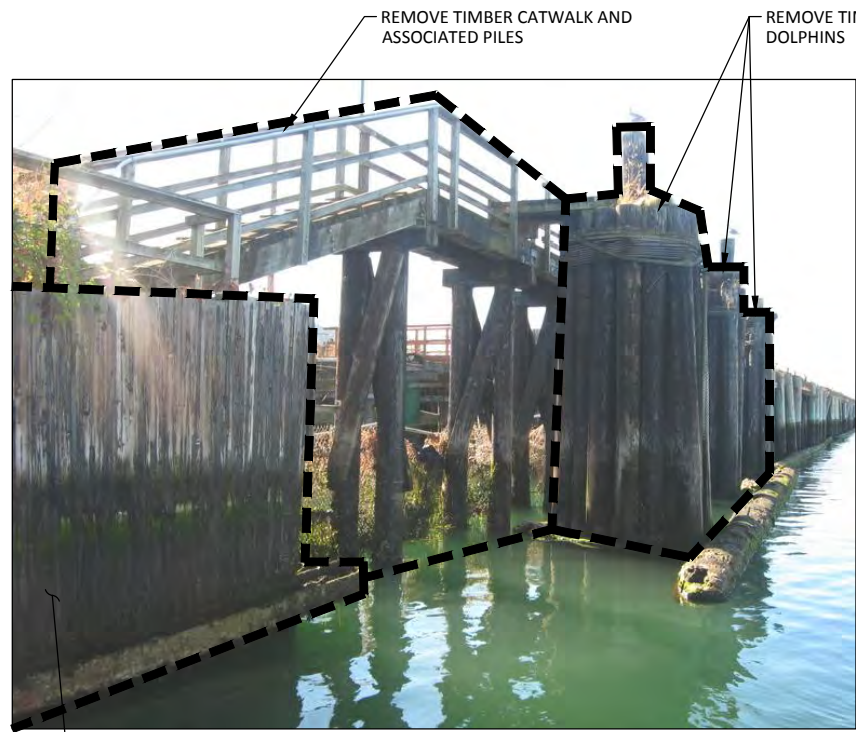
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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL PHOTOGRAPHS

R-9

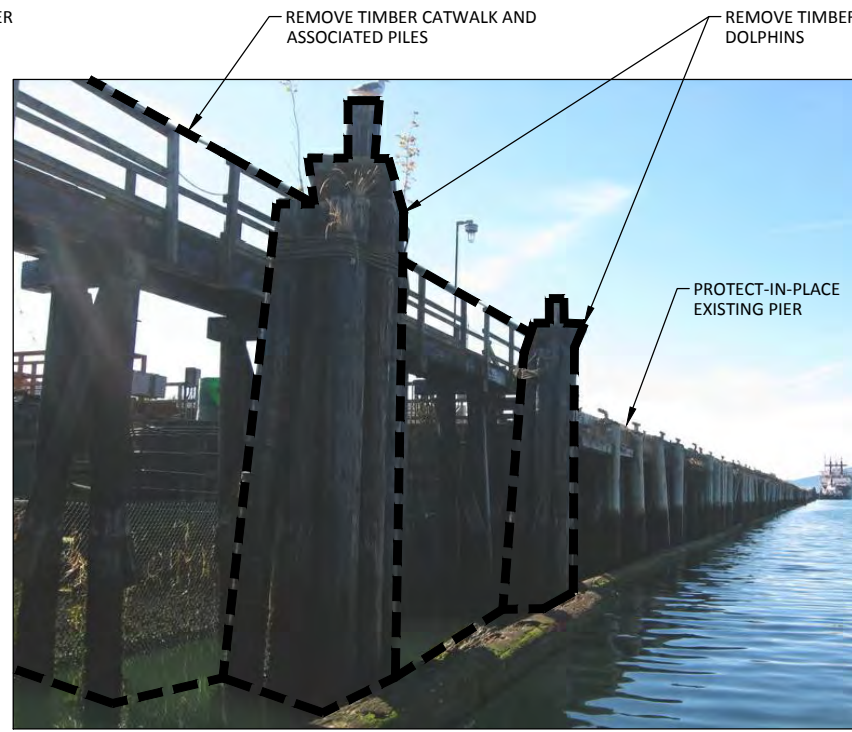
SHEET NO. 15 OF 126



REMOVE TIMBER CATWALK AND ASSOCIATED PILES

REMOVE TIMBER DOLPHINS

19 PHOTO
R-2 SCALE: NTS

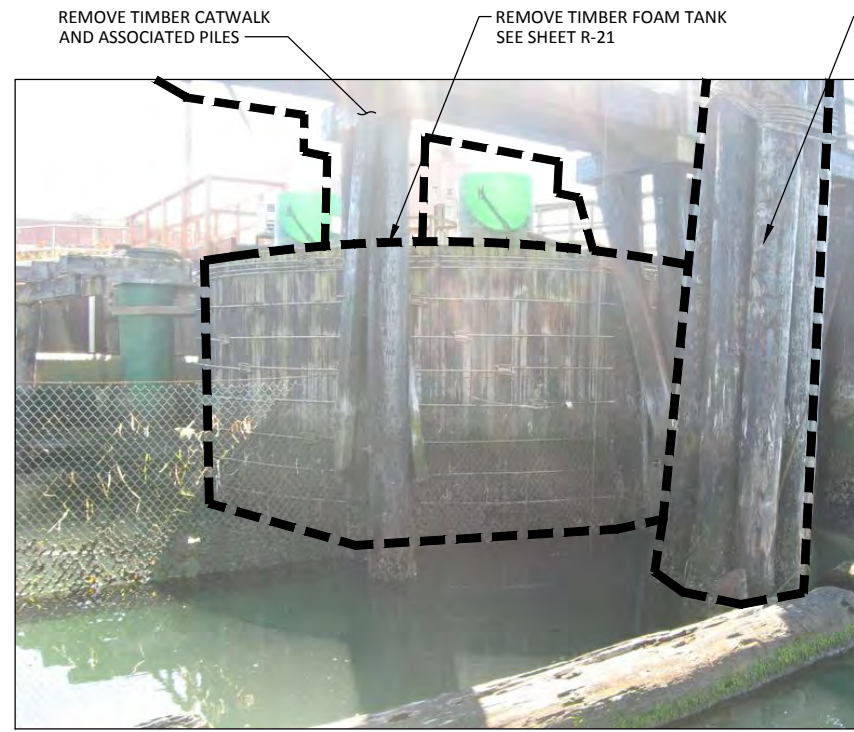


REMOVE TIMBER CATWALK AND ASSOCIATED PILES

REMOVE TIMBER DOLPHINS

PROTECT-IN-PLACE EXISTING PIER

20 PHOTO
R-2 SCALE: NTS



REMOVE TIMBER CATWALK AND ASSOCIATED PILES

REMOVE TIMBER FOAM TANK SEE SHEET R-21

REMOVE TIMBER DOLPHIN

21 PHOTO
R-2 SCALE: NTS

- NOTES:
1. SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.
 2. REMOVE CLARIFIER STRUCTURE TO 2' BELOW GRADE OUTSIDE LIMIT OF DREDGE SLOPE, SEE R-20. FOR REMOVAL WITHIN THE DREDGE SLOPE SEE R-19. SEE C-SHEETS FOR LIMITS OF DREDGE SLOPE.

REMOVE TIMBER BULKHEAD, STEEL WHALERS AND ASSOCIATED STRUCTURES WITHIN DREDGE SLOPE SEE SHEET R-19 AND C-SHEETS

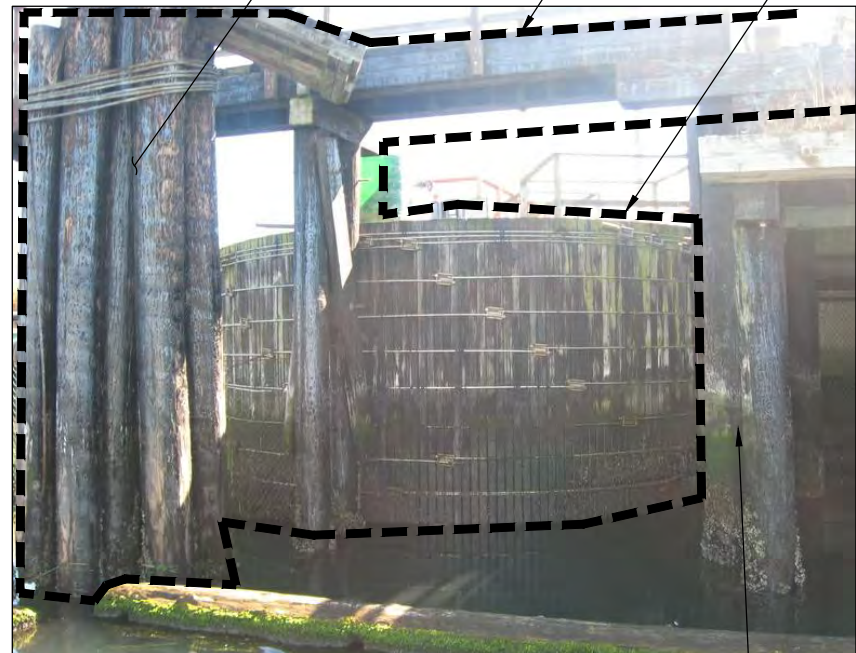
REMOVE TIMBER DOLPHIN

REMOVE TIMBER CATWALK AND ASSOCIATED PILES

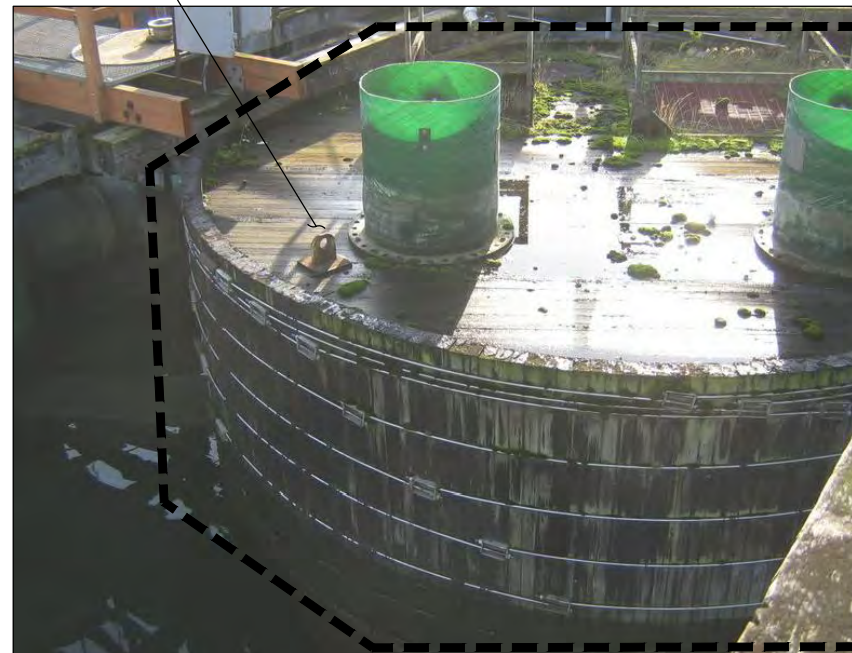
REMOVE TIMBER FOAM TANK AND PIPING, SEE SHEET R-21

REMOVE TIMBER BULKHEAD, APPROXIMATELY 90LF OF STEEL BULKHEAD AND ASSOCIATED STRUCTURES WITHIN THE DREDGE SLOPE SEE SHEET R-19 AND C-SHEETS

REMOVE CLARIFIER SEE NOTE 2

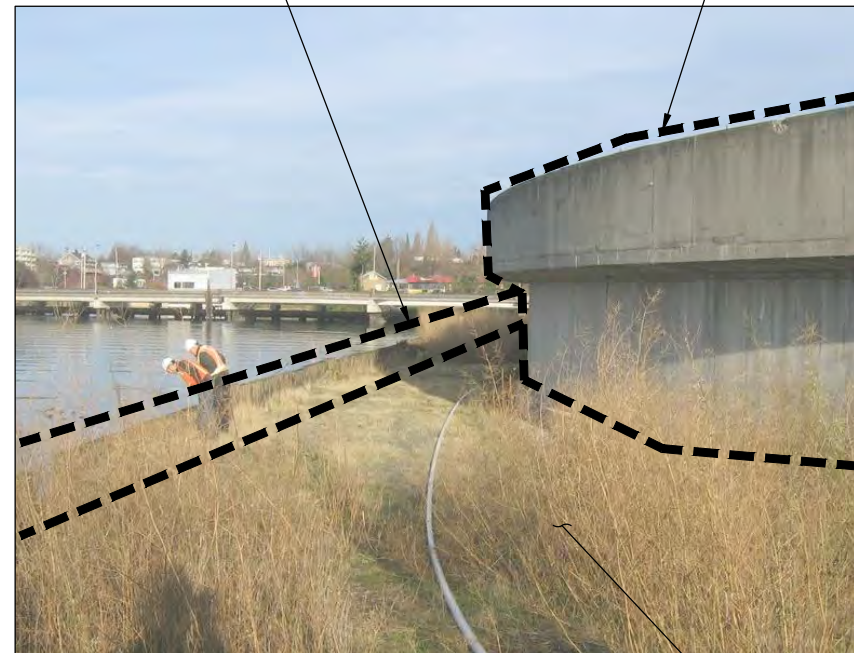


22 PHOTO
R-2 SCALE: NTS



PROTECT-IN-PLACE EXISTING PIER AND PILE

23 PHOTO
R-2 SCALE: NTS



SEE C-SHEETS FOR DREDGE SLOPE IN CLARIFIER AREA

24 PHOTO
R-2 SCALE: NTS

CALL 48 HOURS BEFORE YOU DIG DIAL 811

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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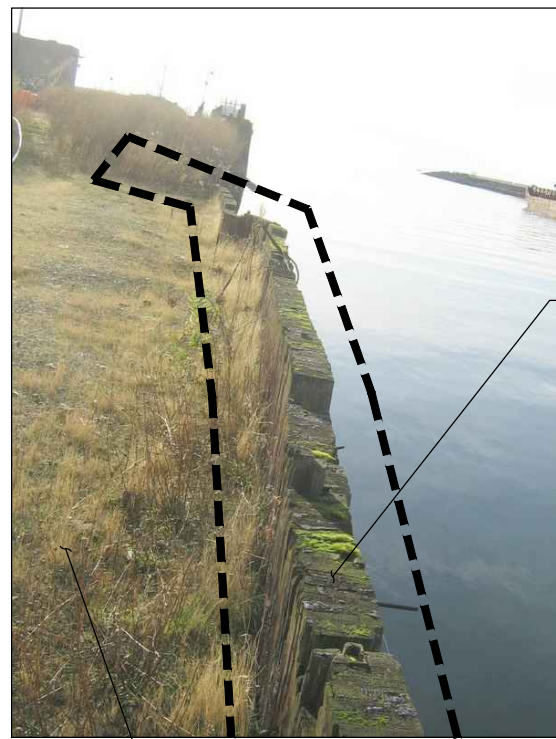
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WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS
 REMOVAL PHOTOGRAPHS

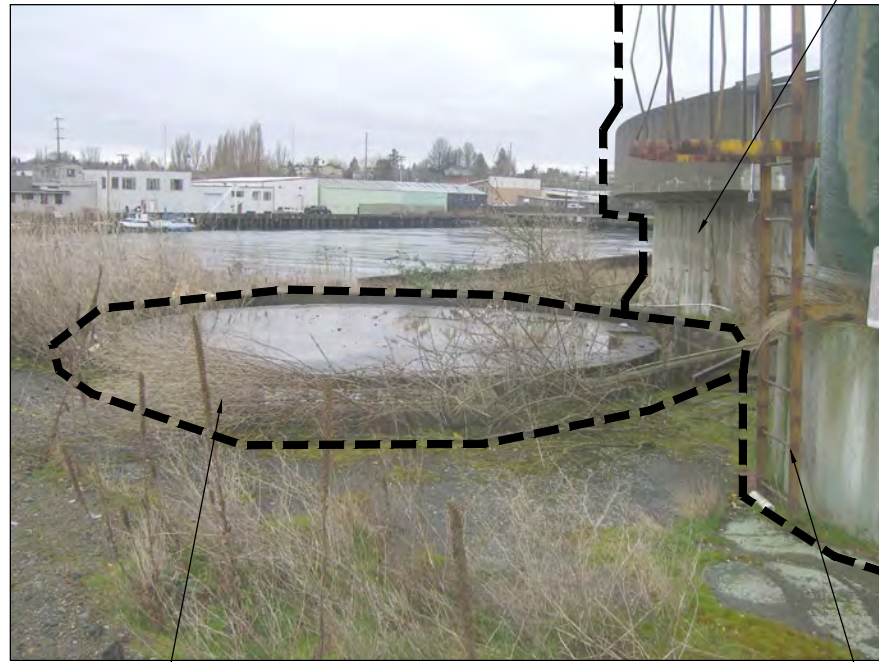
R-10

SHEET NO. 16 OF 106



REMOVE TIMBER BULKHEAD, STEEL WHALERS AND ASSOCIATED STRUCTURES WITHIN DREDGE SLOPE. SEE R-19 AND C-SHEETS

25 PHOTO
R-2 SCALE: NTS



REMOVE CLARIFIER STRUCTURE, SEE NOTE 3

REMOVE REMNANT CONCRETE TANK FOUNDATION, SEE NOTE 2

26 PHOTO
R-2 SCALE: NTS



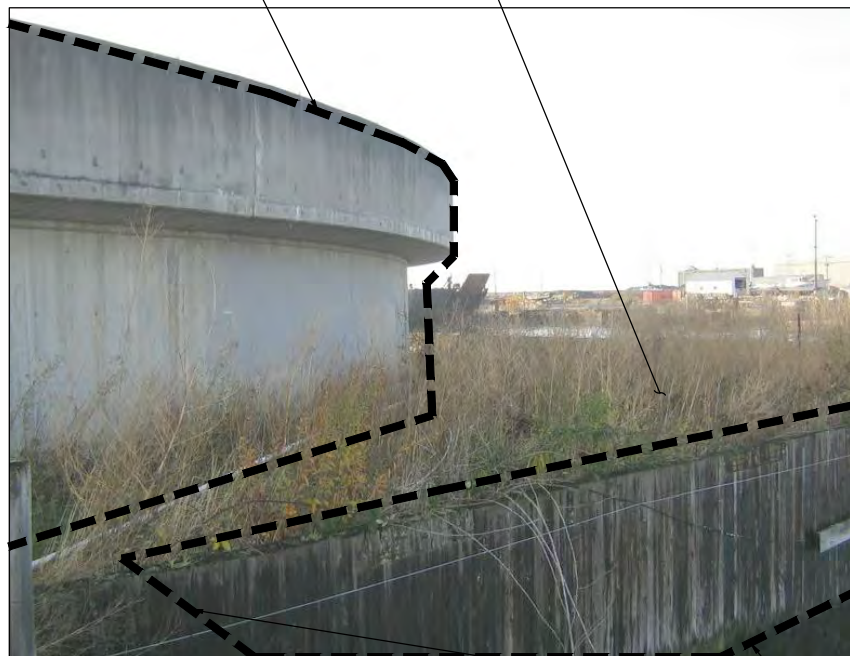
REMOVE TIMBER BULKHEAD, STEEL WHALERS AND RELATED STRUCTURES WITHIN DREDGE SLOPE, SEE R-19, AND C - SHEETS

REMOVE PHOSPHORIC ACID TANK AND CONCRETE FOUNDATION

27 PHOTO
R-2 SCALE: NTS

NOTES:

1. SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.
2. OUTSIDE OF DREDGE LIMITS REMOVE STRUCTURE AND PILE DOWN 2 FEET BELOW EXISTING GRADE, WHERE LOCATED WITHIN THE DREDGE SLOPE CUT AND REMOVE STRUCTURE AND 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 DREDGE SLOPE SEE R-19. SEE C-SHEETS FOR LIMITS OF DREDGE SLOPE.
4. PILES SHALL BE CUT AT THE MUDLINE OR AT A MAXIMUM OF 12-INCHES ABOVE THE MUDLINE, SEE SPECIFICATIONS



REMOVE CLARIFIER, SEE NOTE 3

SEE C-SHEETS FOR DREDGE SLOPE IN CLARIFIER AREA

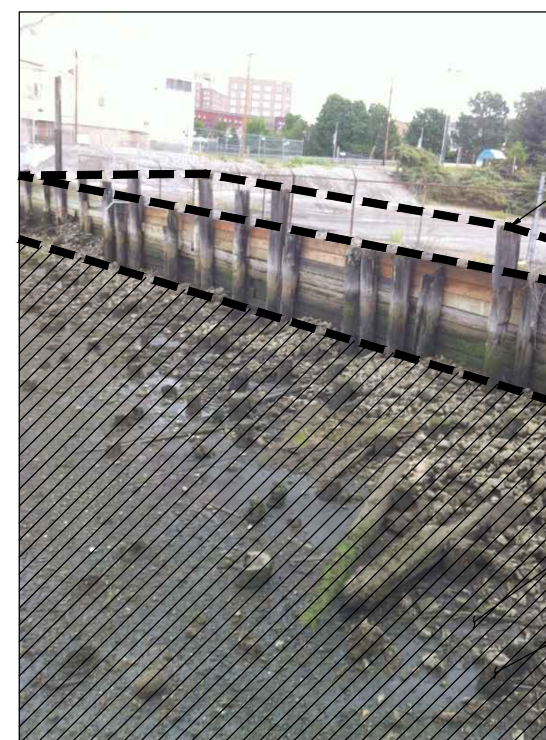
28 PHOTO
R-2 SCALE: NTS



DEBRIS REMOVAL

CUT PILES WITHIN AREA BELOW BULKHEAD, SEE NOTE 4

29 PHOTO
R-2 SCALE: NTS



CUT OFF PILES 6-INCHES ABOVE TOP OF BULKHEAD

DEBRIS REMOVAL

CUT PILES WITHIN AREA BELOW BULKHEAD, SEE NOTE 4

30 PHOTO
R-2 SCALE: NTS

REMOVE TIMBER BULKHEAD, STEEL WHALERS AND ASSOCIATED STRUCTURES WITHIN DREDGE SLOPE, SEE R-19, AND C - SHEETS

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RECORD DRAWINGS

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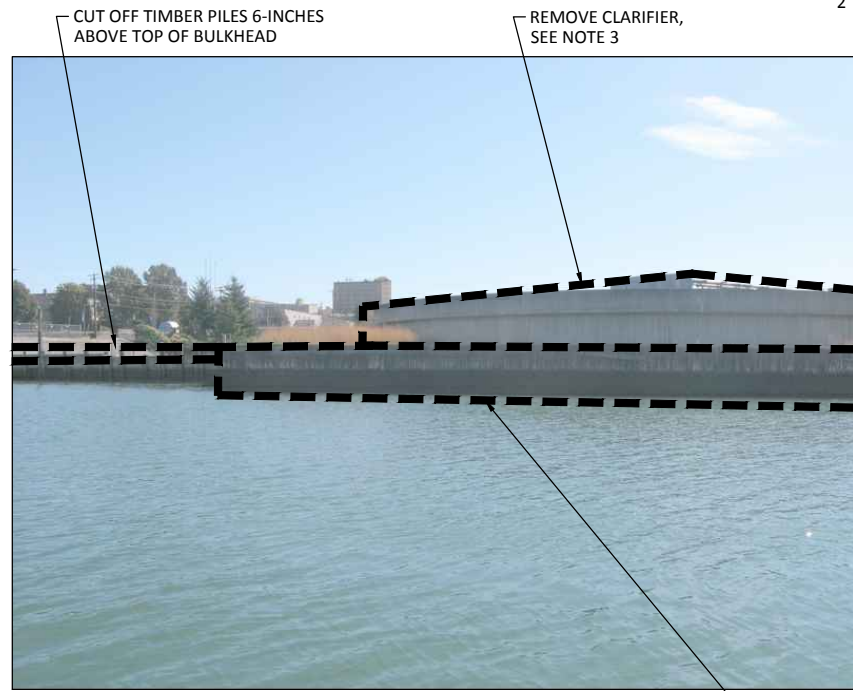
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL PHOTOGRAPHS

R-11

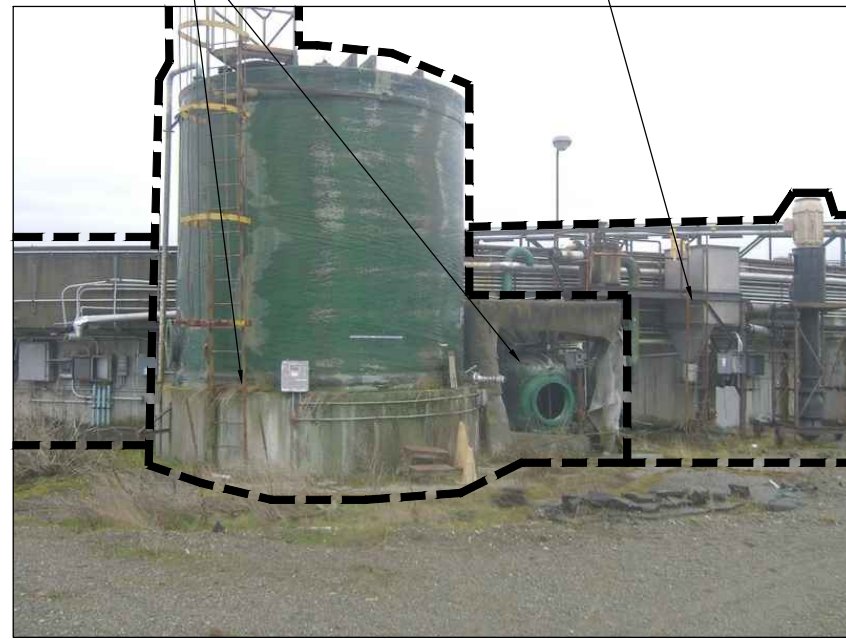
SHEET NO. 17 OF 126

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

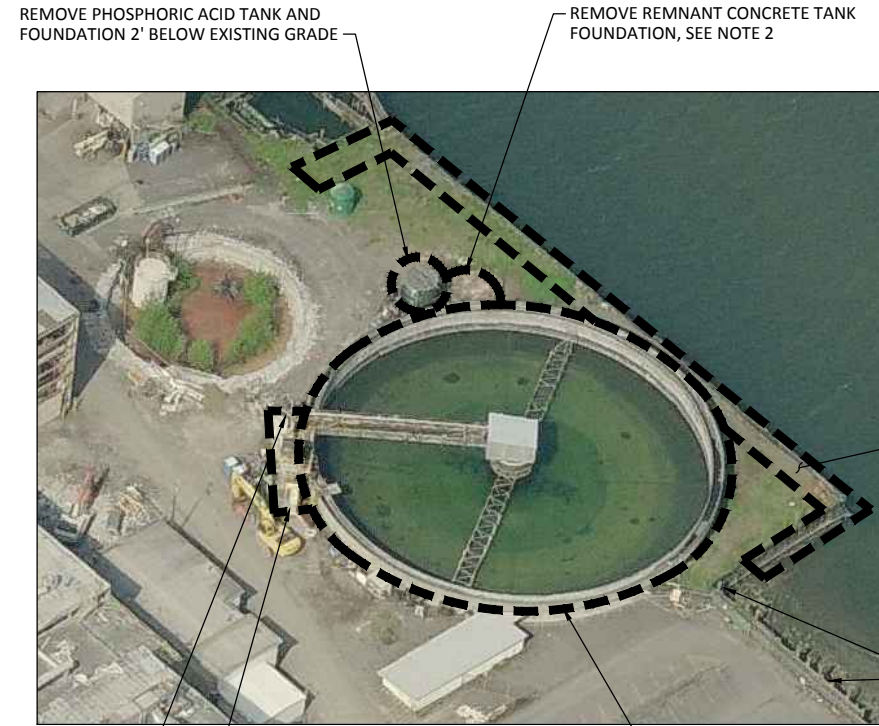


31 PHOTO
R-2 SCALE: NTS

REMOVE TIMBER BULKHEAD, APPROXIMATELY 90LF OF STEEL BULKHEAD AND ASSOCIATED STRUCTURES WITHIN DREDGE SLOPE, SEE SHEETS R-19, AND C - SHEETS



32 PHOTO
R-2 SCALE: NTS



33 PHOTO
R-2 SCALE: NTS

NO 6 SEWER PUMP PIT, SEE SHEET R-23 FOR SELECT REMOVAL
REMOVE SCUM BOX, SEE SHEET R-23

NOTES:

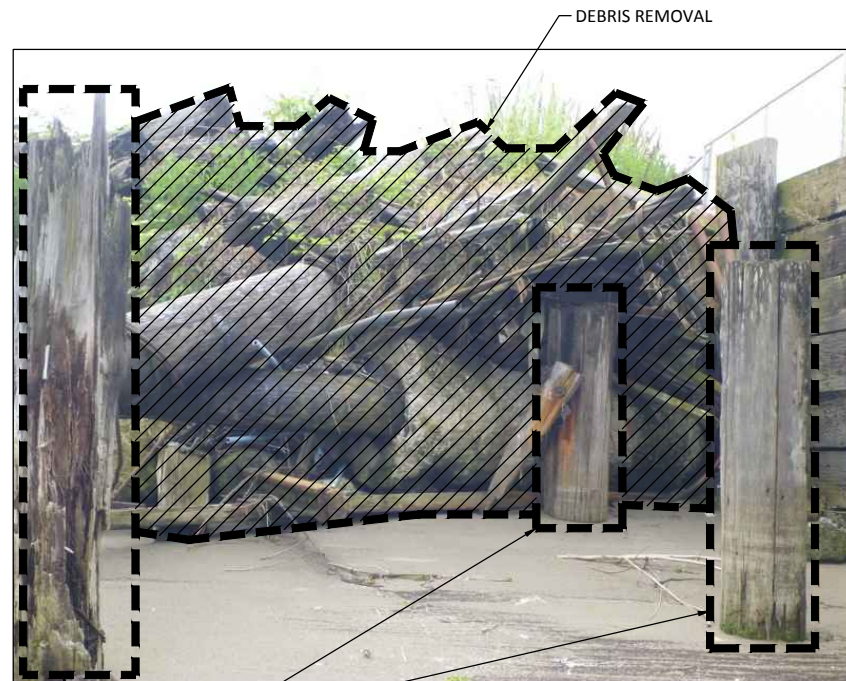
1. SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.
2. OUTSIDE OF DREDGE LIMITS REMOVE STRUCTURE AND PILE DOWN 2 FEET BELOW EXISTING GRADE, WHERE LOCATED WITHIN THE DREDGE SLOPE CUT AND REMOVE STRUCTURE AND PILES AT FACE OF DREDGE SLOPE.
3. REMOVE CLARIFIER STRUCTURE TO 2' BELOW GRADE OUTSIDE LIMIT OF DREDGE SLOPE, SEE R-20. FOR REMOVAL WITHIN THE DREDGE SLOPE SEE R-19. SEE C-SHEETS FOR LIMITS OF DREDGE SLOPE

REMOVE TIMBER AND STEEL BULKHEADS AND ASSOCIATED STRUCTURES WITHIN DREDGE SLOPE, SEE R-19 AND C - SHEETS

PROTECT-IN-PLACE EXIST TIMBER BULKHEAD



34 PHOTO
R-3 SCALE: NTS



35 PHOTO
R-3 SCALE: NTS



36 PHOTO
R-3 SCALE: NTS

DEBRIS REMOVAL AND CLEAR AND GRUB VEGETATION

CALL 48 HOURS BEFORE YOU DIG DIAL 811

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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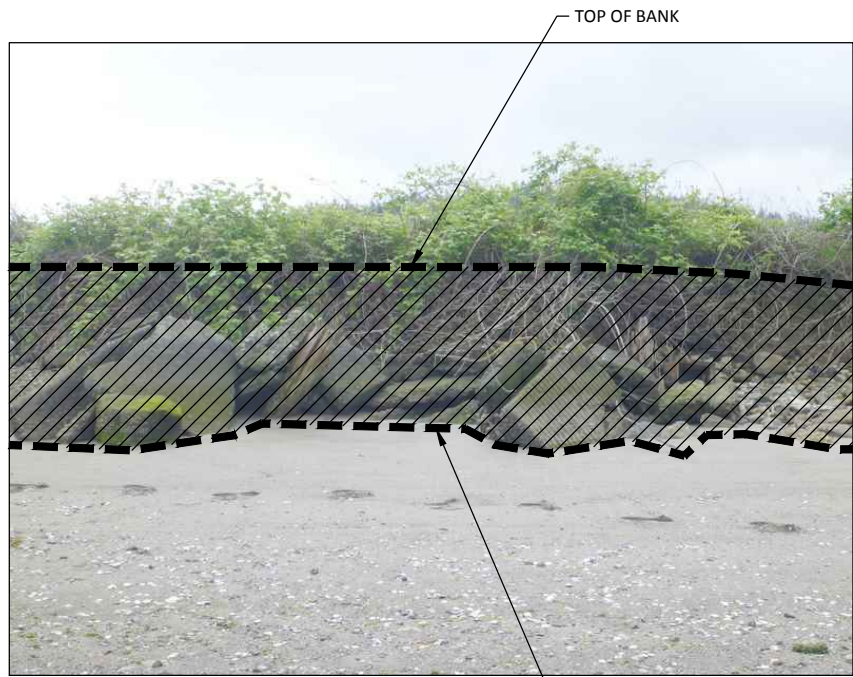
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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL PHOTOGRAPHS

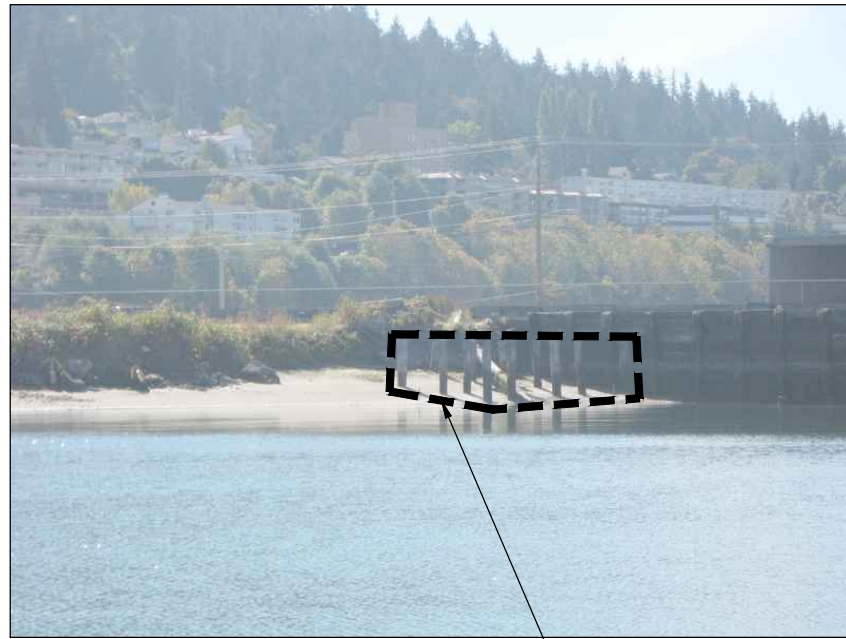
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SHEET NO. 18 OF 126



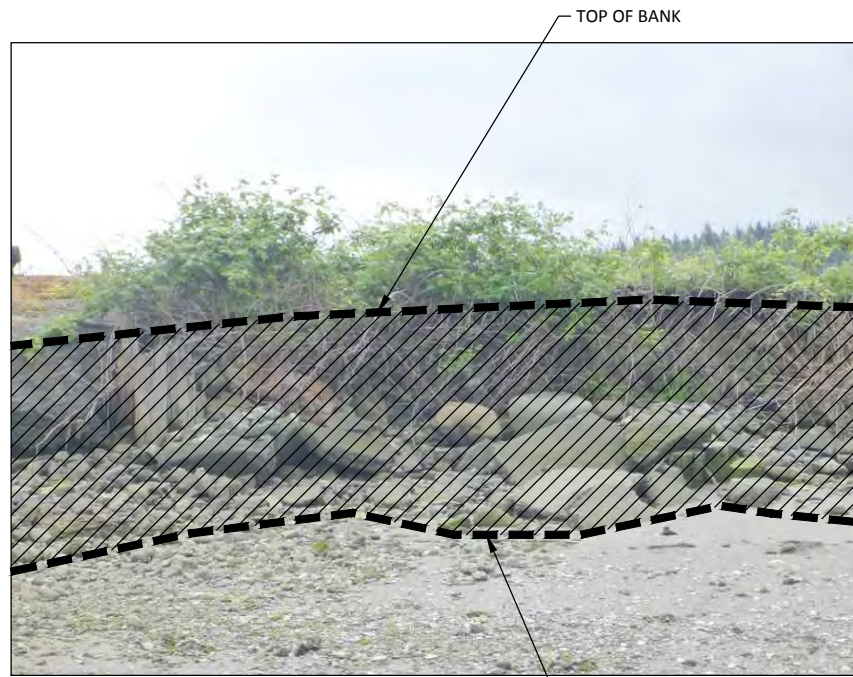
37 PHOTO
R-3 SCALE: NTS

DEBRIS REMOVAL AND CLEAR AND GRUB VEGETATION



38 PHOTO
R-3 SCALE: NTS

REMOVE TIMBER PILE



39 PHOTO
R-3 SCALE: NTS

DEBRIS REMOVAL AND CLEAR AND GRUB VEGETATION

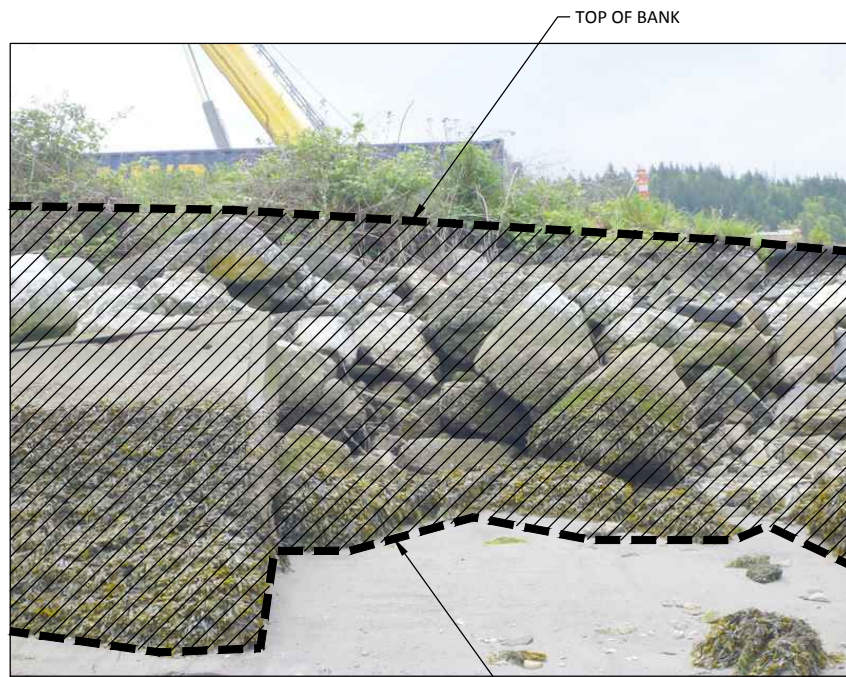
NOTES:

- SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.



40 PHOTO
R-3 SCALE: NTS

DEBRIS REMOVAL AND CLEAR AND GRUB VEGETATION



41 PHOTO
R-3 SCALE: NTS

DEBRIS REMOVAL AND CLEAR AND GRUB VEGETATION



DEBRIS REMOVAL

42 PHOTO
R-3 SCALE: NTS

PROTECT-IN-PLACE CONCRETE LOG DUMP BULKHEAD AND HISTORICAL LOG TRANSFER STRUCTURE AND BULKHEAD

CALL 48 HOURS BEFORE YOU DIG DIAL 811

RECORD DRAWINGS

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

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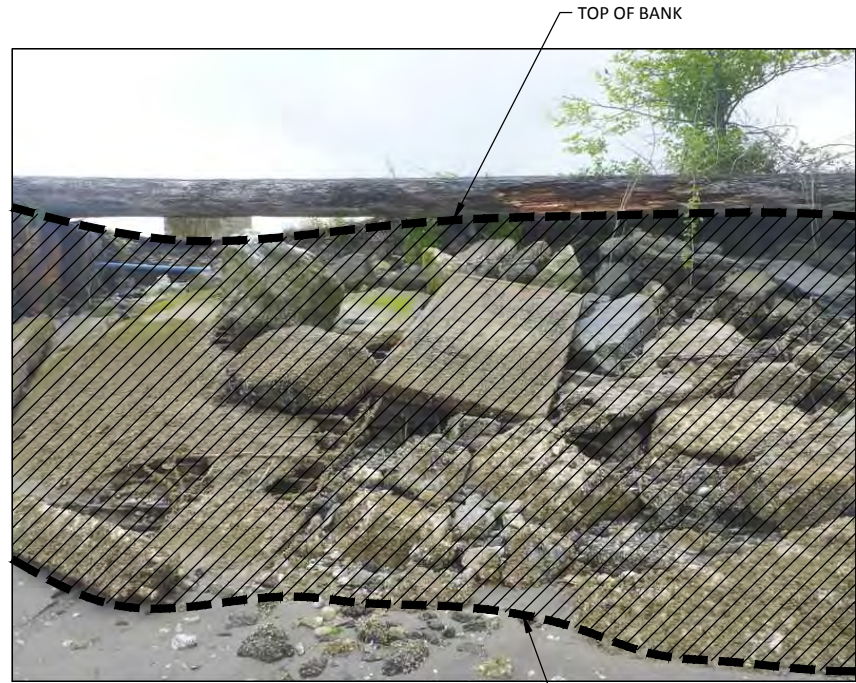
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WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS
 REMOVAL PHOTOGRAPHS

R-13

SHEET NO. 19 OF 126



43 PHOTO
R-3 SCALE: NTS

TOP OF BANK

DEBRIS REMOVAL



44 PHOTO
R-3 SCALE: NTS

PROTECT-IN-PLACE HISTORICAL LOG
TRANSFER STRUCTURE AND STEEL BULKHEAD

DEBRIS REMOVAL



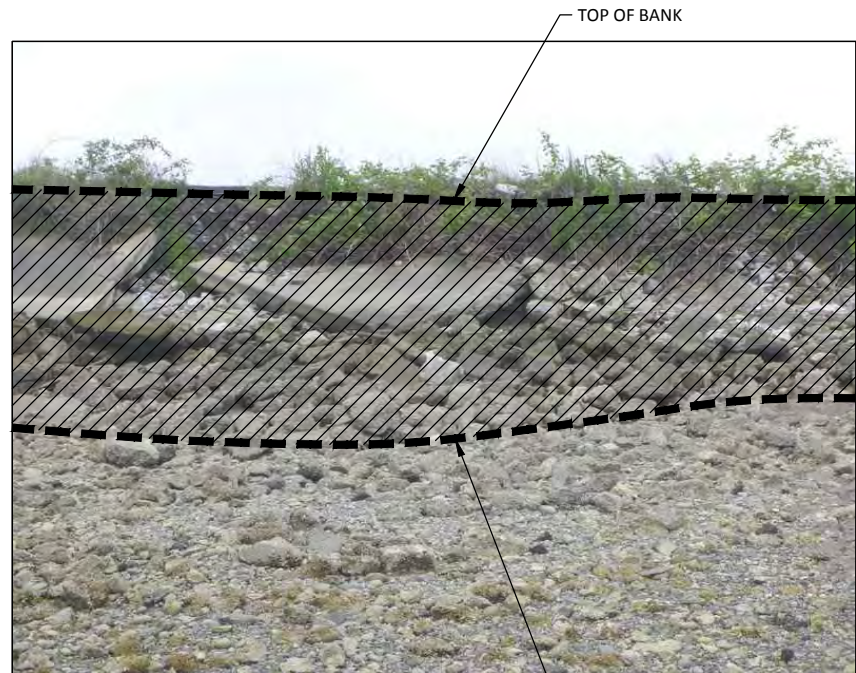
45 PHOTO
R-3 SCALE: NTS

TOP OF BANK

PROTECT-IN-PLACE HISTORICAL
LOG TRANSFER STEEL BULKHEAD

DEBRIS REMOVAL

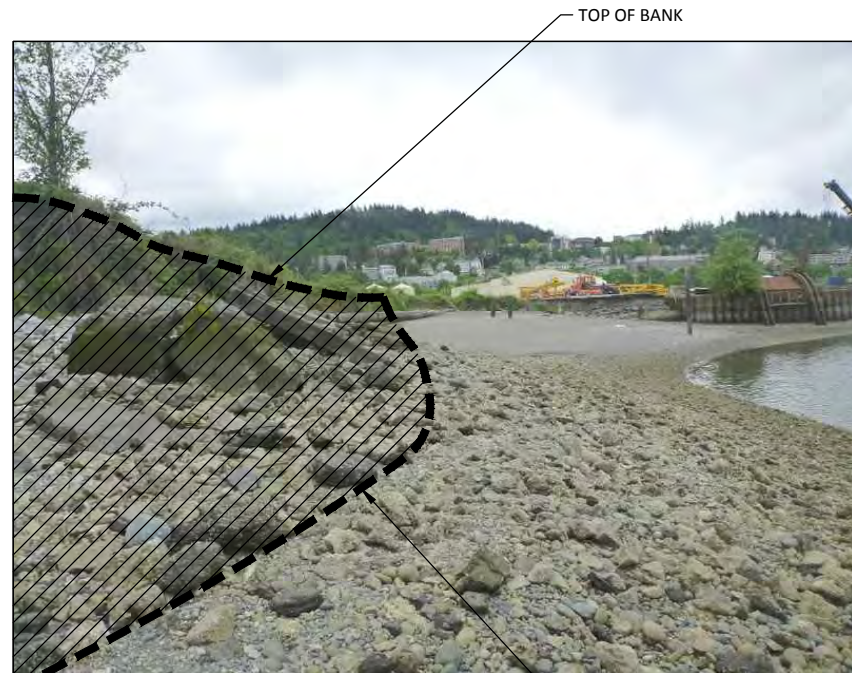
NOTES:
1. SEE SHEET R-1 FOR GENERAL SITE,
STRUCTURE AND SHORELINE DEBRIS
REMOVAL NOTES AND LEGEND.



46 PHOTO
R-3 SCALE: NTS

TOP OF BANK

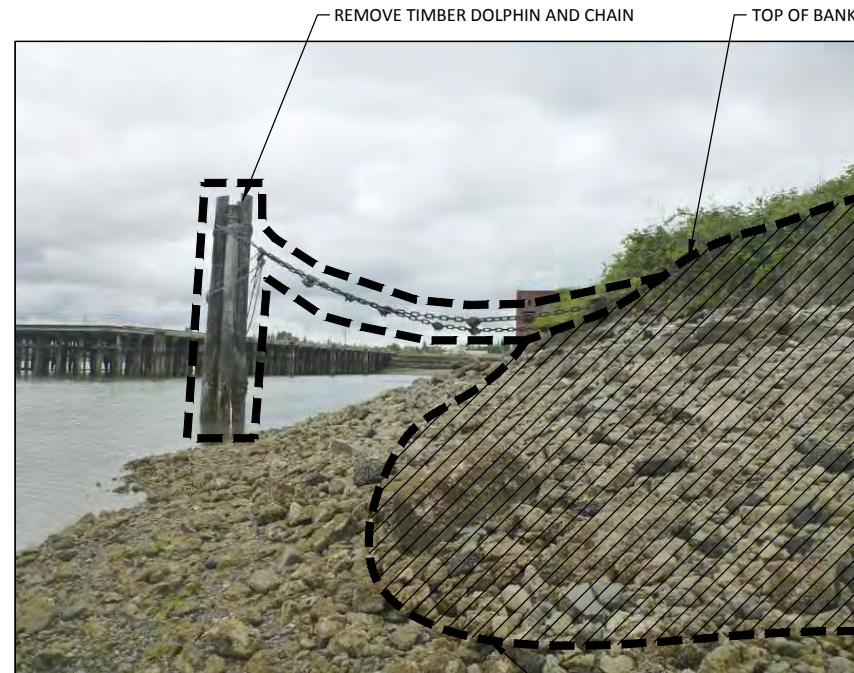
DEBRIS REMOVAL AND CLEAR AND
GRUB VEGETATION



47 PHOTO
R-3 SCALE: NTS

TOP OF BANK

DEBRIS REMOVAL AND CLEAR AND
GRUB VEGETATION



48 PHOTO
R-3 SCALE: NTS

REMOVE TIMBER DOLPHIN AND CHAIN

TOP OF BANK

DEBRIS REMOVAL AND CLEAR AND
GRUB VEGETATION

CALL 48 HOURS
BEFORE YOU DIG
DIAL 811

ONE INCH
AT FULL SIZE, IF NOT ONE
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RECORD DRAWINGS

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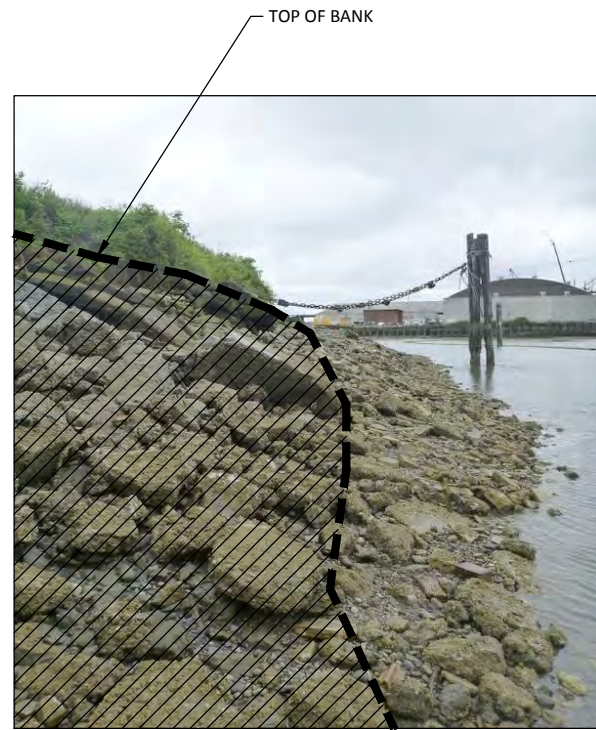
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BELLINGHAM, WASHINGTON**

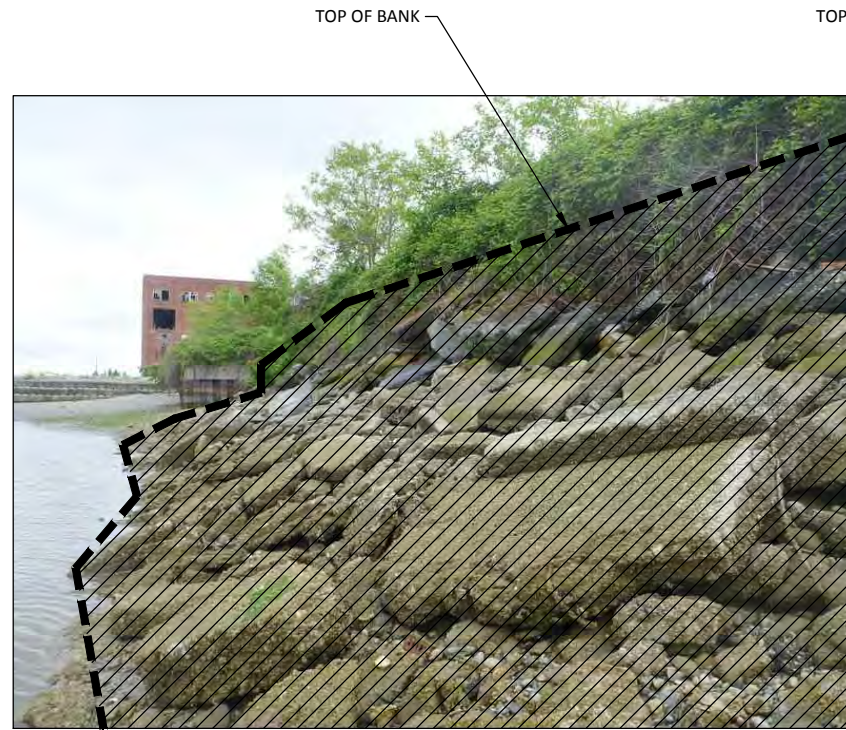
**SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL PHOTOGRAPHS**

R-14

SHEET NO. 20 OF 126



49 PHOTO
R-3 SCALE: NTS



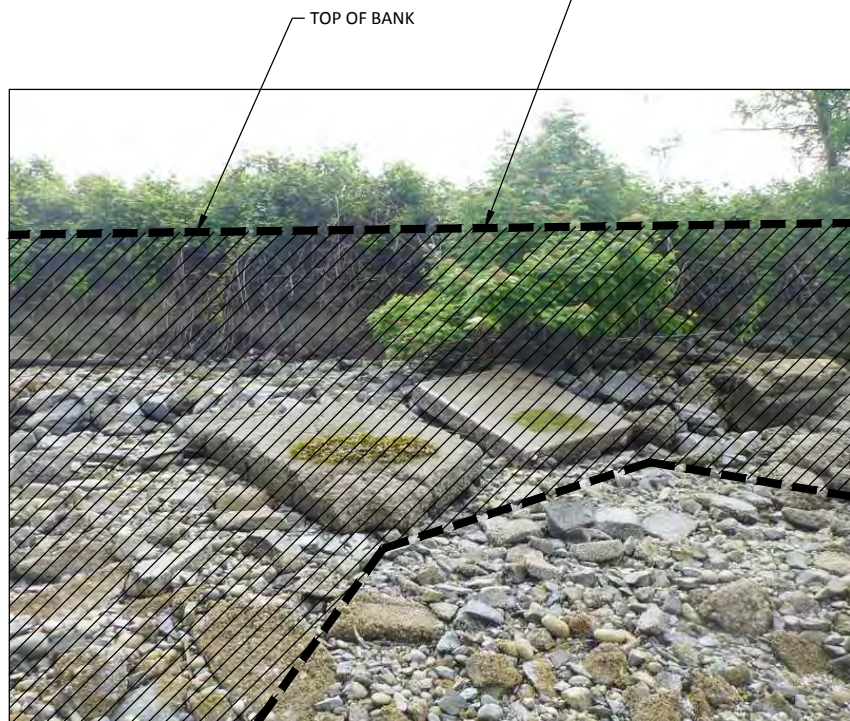
50 PHOTO
R-3 SCALE: NTS



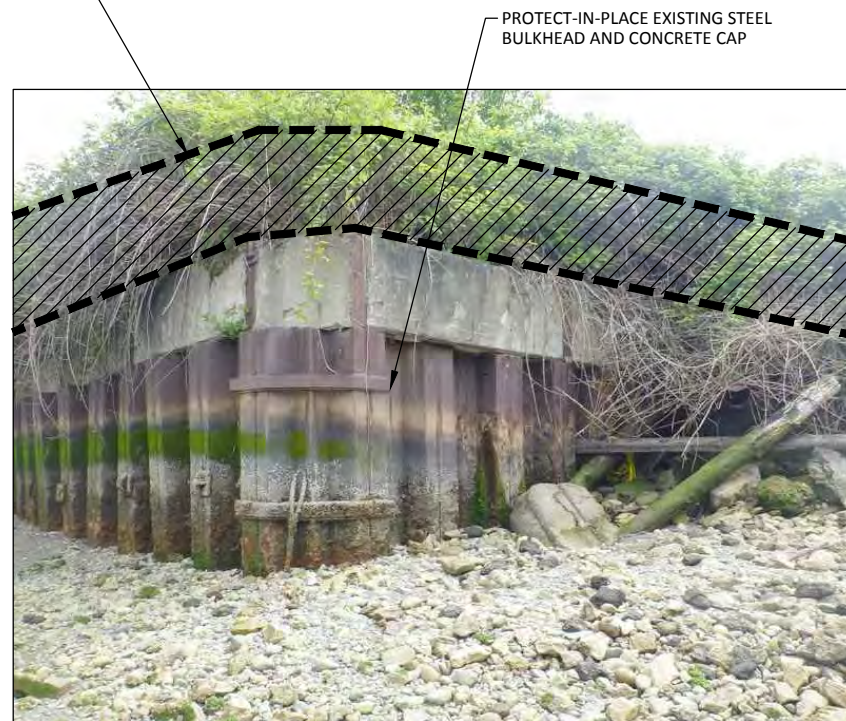
51 PHOTO
R-3 SCALE: NTS

NOTES:
1. SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.

DEBRIS REMOVAL AND CLEAR AND GRUB VEGETATION



52 PHOTO
R-3 SCALE: NTS



53 PHOTO
R-3 SCALE: NTS

PROTECT-IN-PLACE EXISTING STEEL BULKHEAD AND CONCRETE CAP



54 PHOTO
R-3 SCALE: NTS

PROTECT-IN-PLACE EXISTING PIER AND PILE

PROTECT-IN-PLACE CONCRETE BLOCK BULKHEAD

DEBRIS REMOVAL

CALL 48 HOURS BEFORE YOU DIG DIAL 811

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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL PHOTOGRAPHS

R-15

SHEET NO. 21 OF 126

PROTECT-IN-PLACE TIMBER DOLPHINS

PROTECT-IN-PLACE TIMBER DOLPHINS



55 PHOTO R-3 SCALE: NTS

REMOVE STRUCTURE ASSOCIATED WITH CLARIFIER

REMOVE SCUM BOX, SEE SHEET R-23

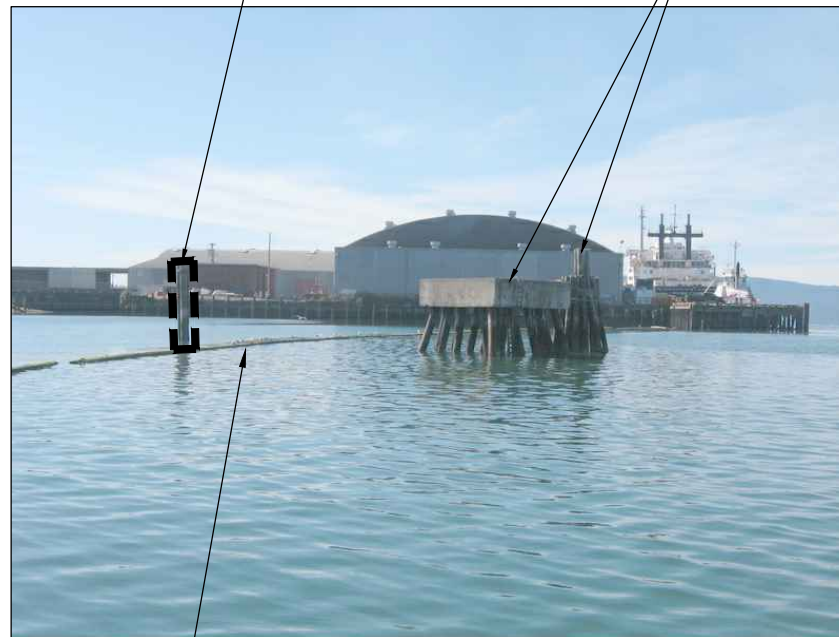


56 PHOTO R-2 SCALE: NTS

REMOVE ABOVE GRADE PORTIONS OF NO. 6 SEWER LIFT STATION, SEE SHEET R-23

REMOVE TIMBER DOLPHIN

PROTECT-IN-PLACE CONCRETE AND TIMBER DOLPHINS



57 PHOTO R-3 SCALE: NTS

RELOCATE LOG BOOM PER SHEET R-3

NOTES:
1. SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND.

2-TIER LOG POND TIMBER BULKHEAD, CUT DOWN AND REMOVE BOTH ROWS OF PILE 6-INCHES ABOVE TIEBACK CONNECTION, SEE DETAIL 1 R-3



58 PHOTO R-3 SCALE: NTS

REMOVE CLARIFIER, SEE NOTE 3



59 PHOTO R-2 SCALE: NTS

REMOVE SCUM BOX AND ALL ASSOCIATED UTILITIES TO 2' BELOW FINISHED GRADE SEE SHEET R-23

RECONNECT EXISTING HANGER AND STRAP SUPPORT USING A STEEL BOLT PER GENERAL STRUCTURAL NOTES ON S-1

DISCONNECT AND REMOVE EXISTING 42"Ø FRP PIPE EAST OF EXISTING FLANGE



60 PHOTO R-21 SCALE: NTS

CLEAN OR REPLACE EXISTING BOLT TO ENSURE EXISTING BRACE AND PIPE CAN MOVE LATERALLY DURING EXPANSION AND CONTRACTION

PROTECT-IN-PLACE EXISTING FLANGE, EXPANSION JOINT, PIPE AND PIPE SUPPORT WEST OF DISCONNECTION POINT

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RECORD DRAWINGS

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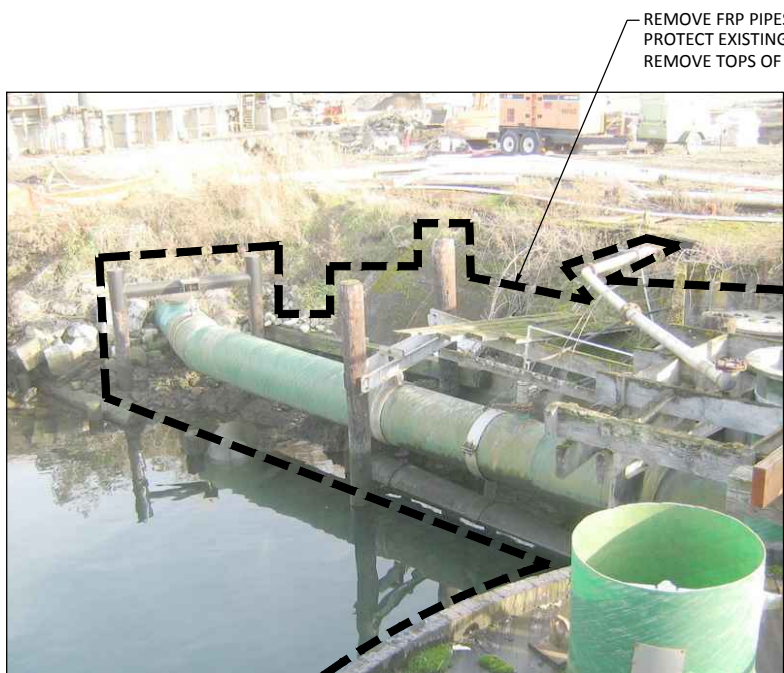


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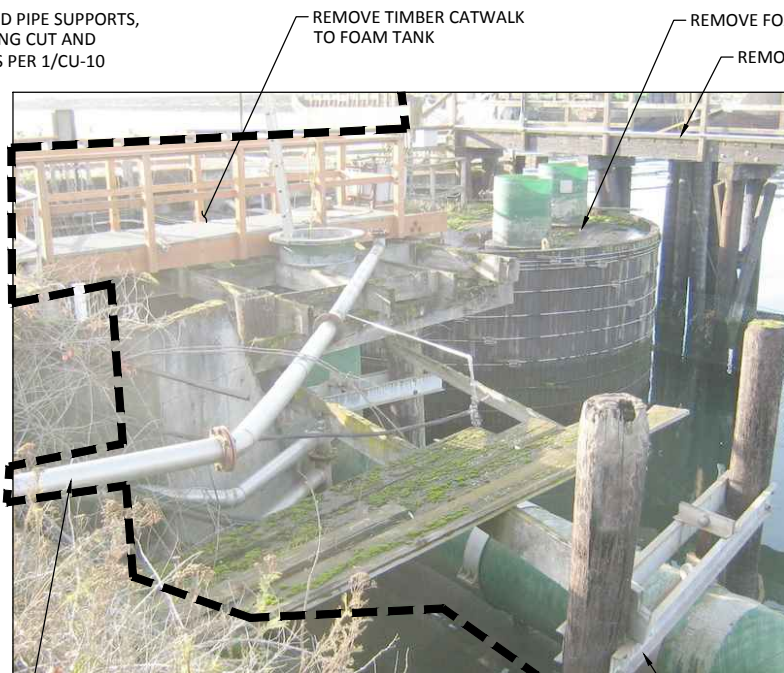
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APPROVED BY: DLO
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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON
SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL PHOTOGRAPHS

R-16
SHEET NO. 22 OF 126



REMOVE FRP PIPES, AND PIPE SUPPORTS, PROTECT EXISTING PILING CUT AND REMOVE TOPS OF PILES PER 1/CU-10



REMOVE TIMBER CATWALK TO FOAM TANK

REMOVE FOAM TANK

REMOVE TIMBER CATWALK



REMOVE 36" Ø FRP PIPE

REMOVE TIMBER CATWALK TO FOAM TANK

REMOVE TIMBER FOAM TANK

REMOVE FRP PIPING

DEBRIS REMOVAL

NOTE:

1. SEE SHEET R-1 FOR GENERAL SITE, STRUCTURE AND SHORELINE DEBRIS REMOVAL NOTES AND LEGEND
2. PHOTOS OF EXISTING FOAM TANK PIPING ARE PROVIDED TO SHOW THE GENERAL AREA OF THE FOAM TANK AND EXISTING PIPING AND ILLUSTRATE THE CONSTRAINTS AND COMPLEXING OF TANK AND PIPING DEMOLITION.

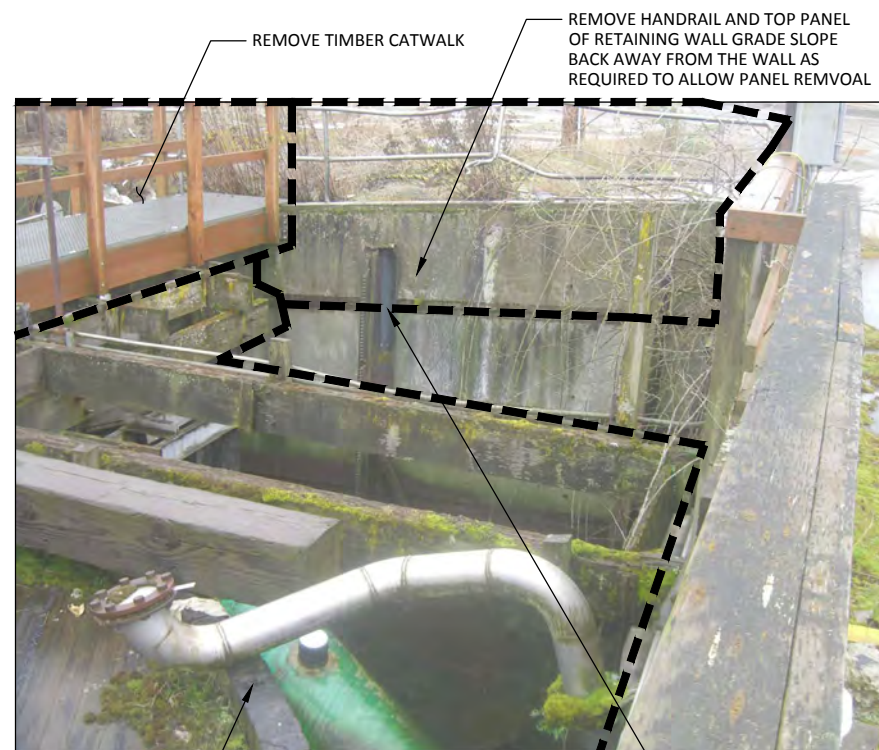
61 PHOTO
R-21 SCALE: NTS

REMOVE EXISTING UTILITY PIPE AND CUT AND CAP AT EXISTING SLOPE

62 PHOTO
R-21 SCALE: NTS

CUT AND CAP 24" Ø FRP PIPE 2 FEET WEST OF CONCRETE BLOCK

63 PHOTO
R-21 SCALE: NTS



REMOVE TIMBER CATWALK

REMOVE HANDRAIL AND TOP PANEL OF RETAINING WALL GRADE SLOPE BACK AWAY FROM THE WALL AS REQUIRED TO ALLOW PANEL REMOVAL



CUT AND CAP 36" Ø FRP PIPE

REMOVE EXISTING PIPE AND PIPE SUPPORTS, PROTECT EXISTING PILES CUT AND REMOVE TOPS OF PILES PER 1/CU-10

REMOVE FRP PIPING

CUT AND CAP 24" Ø FRP PIPE 2 FEET WEST OF CONCRETE BLOCK

DEBRIS REMOVAL

65 PHOTO
R-21 SCALE: NTS

PROTECT-IN-PLACE EXISTING CONCRETE CONCRETE BLOCK



REMOVE CONCRETE WALL AT 40" Ø FRP PIPE

REMOVE FRP STANDPIPE

66 PHOTO
R-21 SCALE: NTS

REMOVE FOAM TANK AND PIPING, SEE SHEET R-21 FOR EXTENTS AND SEQUENCING

64 PHOTO
R-21 SCALE: NTS

CUT AND REMOVE STEEL PILE AT BOTTOM OF TOP PANEL TO BE REMOVED

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RECORD DRAWINGS

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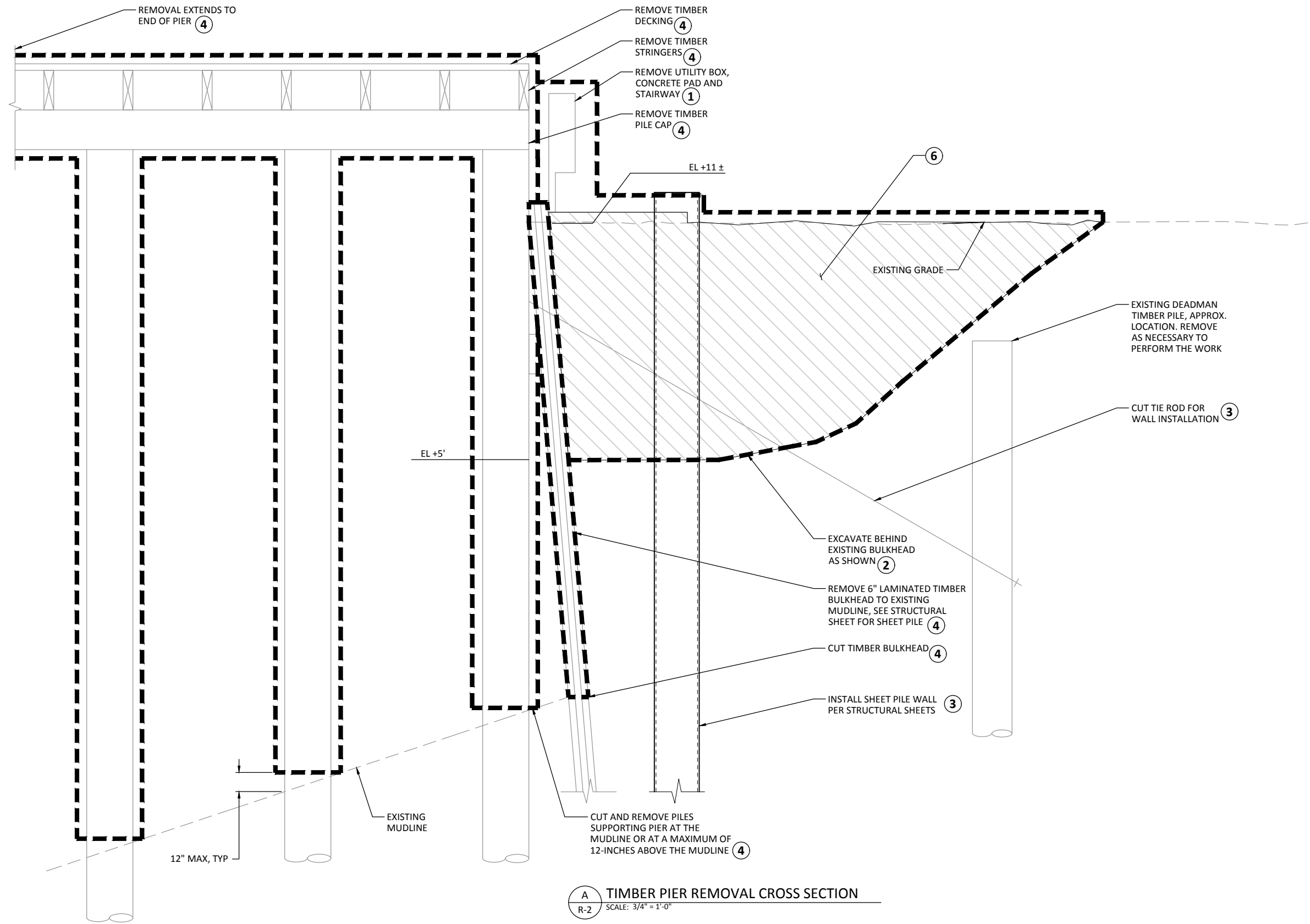
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SITE, STRUCTURE AND SHORELINE DEBRIS
REMOVAL PHOTOGRAPHS

R-17

SHEET NO. 23 OF 126

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- REMOVAL SEQUENCE KEY NOTES:**
- ① REMOVE UTILITY BOX, CONCRETE PAD, STAIRWAYS, AND OBSTRUCTIONS.
 - ② EXCAVATE DOWN TO AN APPROXIMATE EL+5 BEHIND THE EXISTING TIMBER SHEET PILE WALL AND STEEL SHEET PILE WALL ALIGNMENT.
 - ③ SHEET PILE WALL SHALL BE DRIVEN TO TIP ELEVATION PRIOR TO REMOVAL OF EXISTING TIMBER BULKHEAD, UNLESS NOTED OTHERWISE. TIE-BACKS 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 -34 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 BULKHEAD AND ADJACENT PIER MAY BE REMOVED AND TIMBER PILES CUT AT THE MUDLINE OR AT A MAXIMUM OF 12-INCHES ABOVE THE MUDLINE. ADDITIONAL TIMBER BULKHEAD WAS OBSERVED DURING INTERIM CLEANUP, CONTRACTOR TO NOTIFY THE PORT IF EXISTING CONDITIONS VARY FROM THIS SHEET.
 - ⑤ EXCAVATION DOWN TO AN APPROXIMATE EL+5 MUST BE MAINTAINED BEHIND NEW SHEET PILE WALL DURING DREDGING AND CAPPING. SEE STRUCTURAL SHEETS FOR MAXIMUM UNBALANCED SOIL HEIGHT REQUIREMENTS.
 - ⑥ ONCE CAPPING SLOPE HAS BEEN COMPLETED, BACKFILL BEHIND NEW WALL TO MATCH EXISTING GRADE. SEE CU-SHEETS FOR FINISHED GRADES.

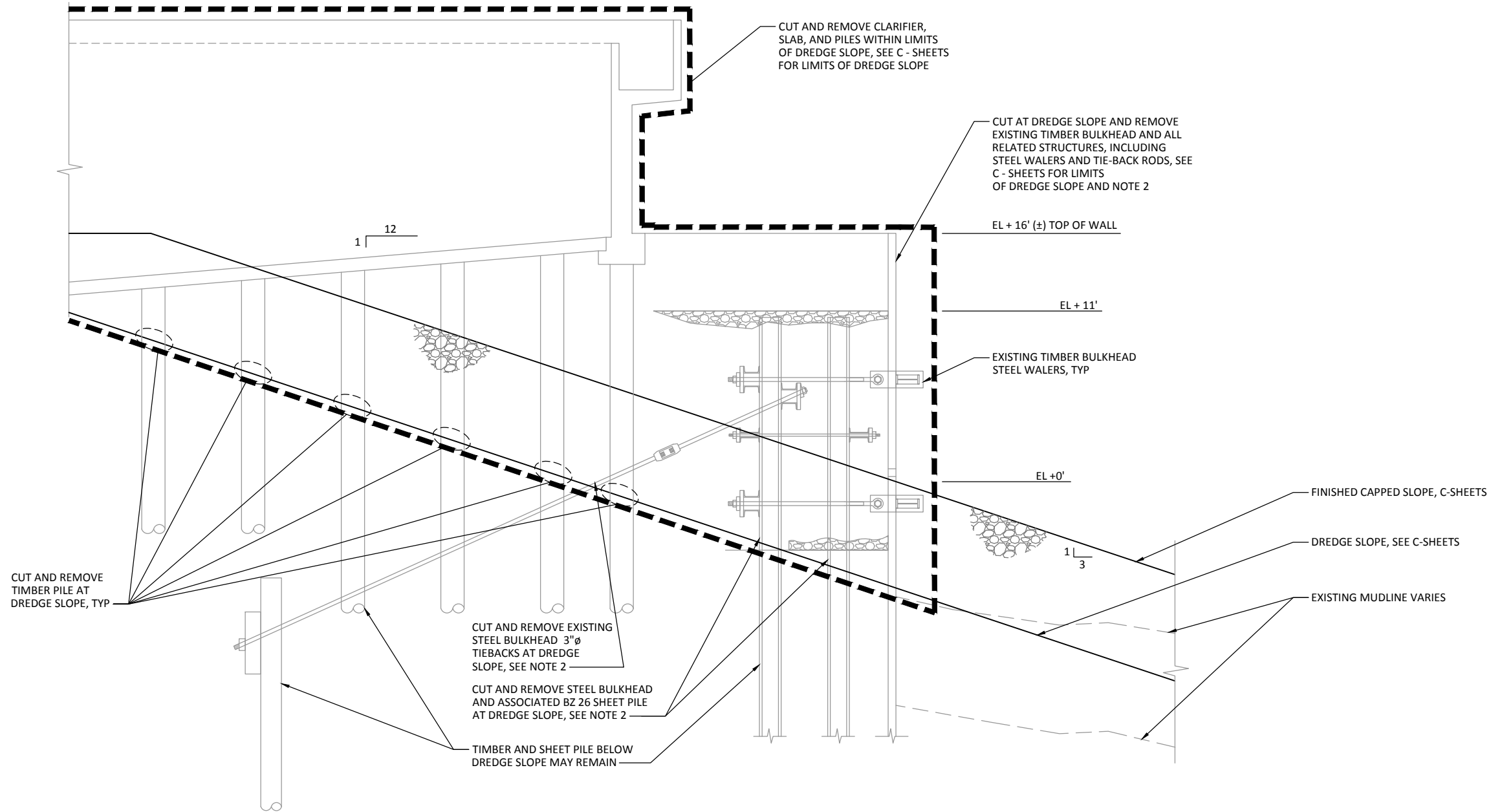
A TIMBER PIER REMOVAL CROSS SECTION
R-2 SCALE: 3/4" = 1'-0"

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RECORD DRAWINGS

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<p style="font-size: 8px;">720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130</p>	<p style="font-size: 8px;">1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500</p>	<p style="font-size: 8px;">REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="font-size: 6px;">REV</th> <th style="font-size: 6px;">DATE</th> <th style="font-size: 6px;">BY</th> <th style="font-size: 6px;">APP'D</th> <th style="font-size: 6px;">DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV	DATE	BY	APP'D	DESCRIPTION																					<p>DESIGNED BY: MDK</p> <p>DRAWN BY: GMC</p> <p>CHECKED BY: MDK</p> <p>APPROVED BY: DLO</p> <p>SCALE: AS NOTED</p> <p>DATE: MARCH 2015</p>	<p>WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON</p>	<p style="font-size: 18px; font-weight: bold;">R-18</p>
		REV	DATE	BY	APP'D	DESCRIPTION																								
				<p>TIMBER PIER REMOVAL CROSS SECTION</p>	<p style="font-size: 8px;">SHEET NO. 24 OF 126</p>																									



A CLARIFIER REMOVAL SECTION WITHIN DREDGE SLOPE
R-2 SCALE: 1/4" = 1'-0"

NOTES:

1. ALL ELEVATIONS AND PILE LOCATIONS ARE APPROXIMATE AND FOR REFERENCE ONLY.
2. STEEL BULKHEAD IS APPROXIMATELY 90LF AND ONLY OCCURS AT THE EXISTING CLARIFIER. THE TIMBER BULKHEAD, STEEL WALERS AND ASSOCIATED TIE-BACK RODS LOCATED AT 12' INTERVALS, EXTEND BEYOND THE STEEL BULKHEAD, SEE SHEET R-6 FOR LOCATION. SEE SPECIFICATIONS FOR A LIST OF REFERENCE DRAWINGS DETAILING THE EXISTING TIMBER AND STEEL BULKHEADS.

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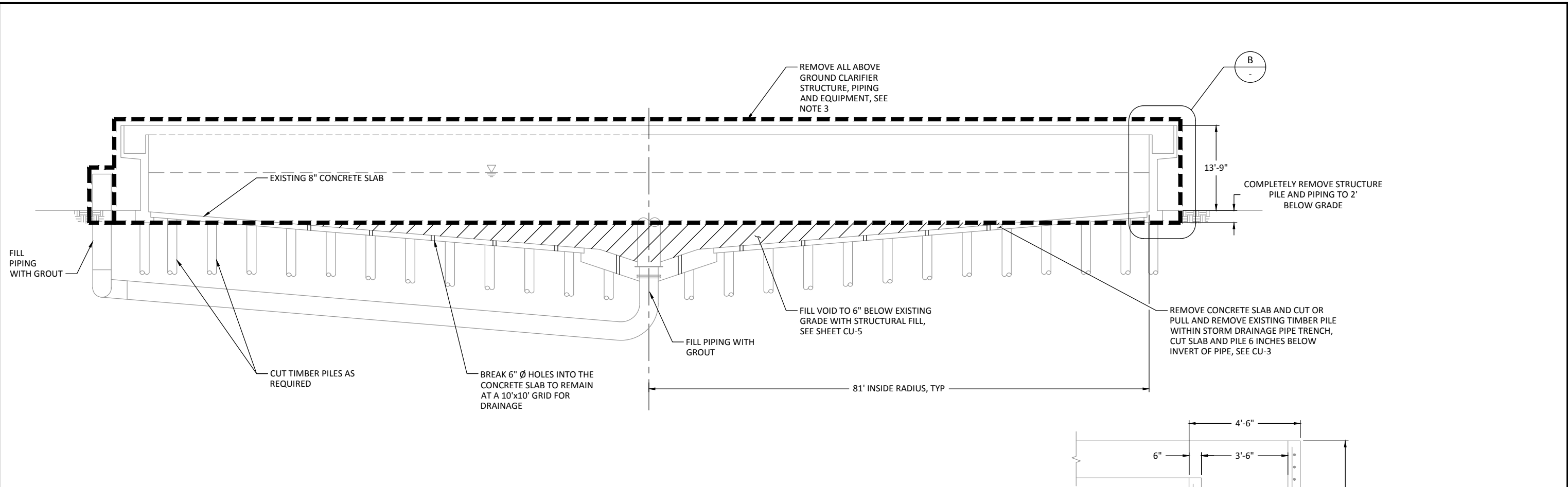
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BELLINGHAM, WASHINGTON

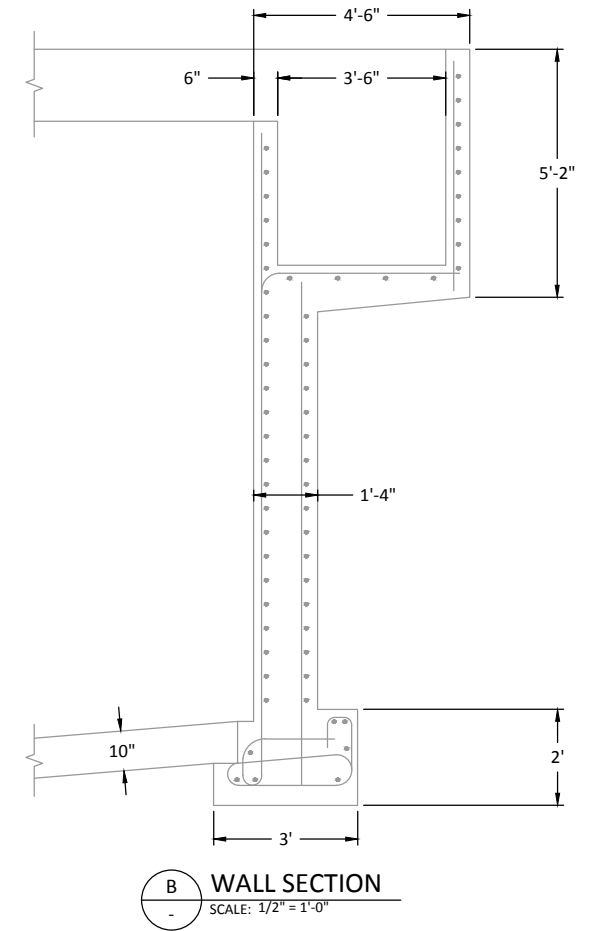
CLARIFIER REMOVAL CROSS SECTIONS 1

R-19
 SHEET NO. 25 OF 126

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A
R-2 CLARIFIER REMOVAL SECTION OUTSIDE DREDGE SLOPE
SCALE: 1/8" = 1'-0"





B
WALL SECTION
SCALE: 1/2" = 1'-0"

- NOTES:**
1. A PORTION OF THE CLARIFIER STRUCTURE BELOW GROUND SHALL BE REMOVED TO CONSTRUCT DREDGE SLOPE. SEE CIVIL SHEETS FOR DREDGE LIMITS AND SEE SHEET R-19 FOR ADDITIONAL DETAILS.
 2. ALL DIMENSIONS, PILES AND STEEL REINFORCING SHOWN ARE APPROXIMATE AND ARE FOR REFERENCE ONLY.
 3. CLARIFIER TO BE PUMPED AND LIQUIDS REMOVED AFTER THE RECONSTRUCTION OF THE NO. 6 SEWER LINE. SEE SHEET R-6 FOR DEMOLITION SEQUENCING NOTES.

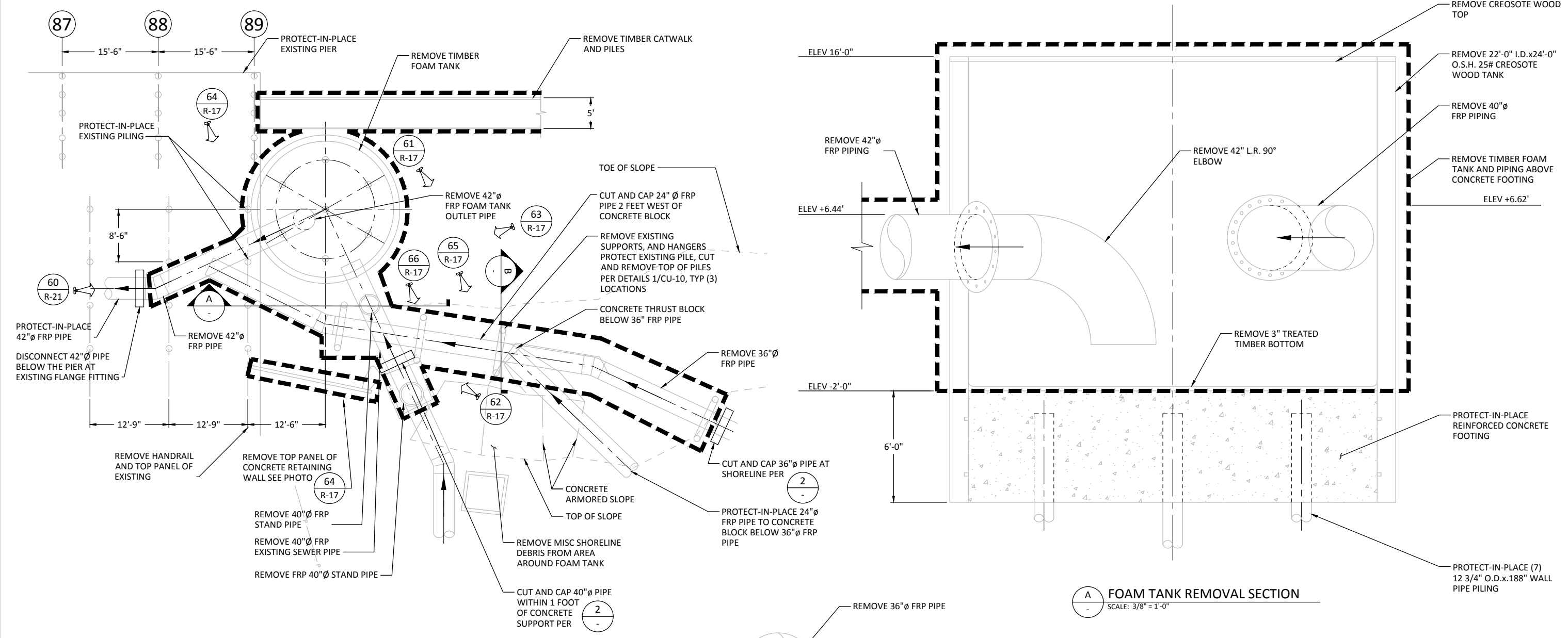
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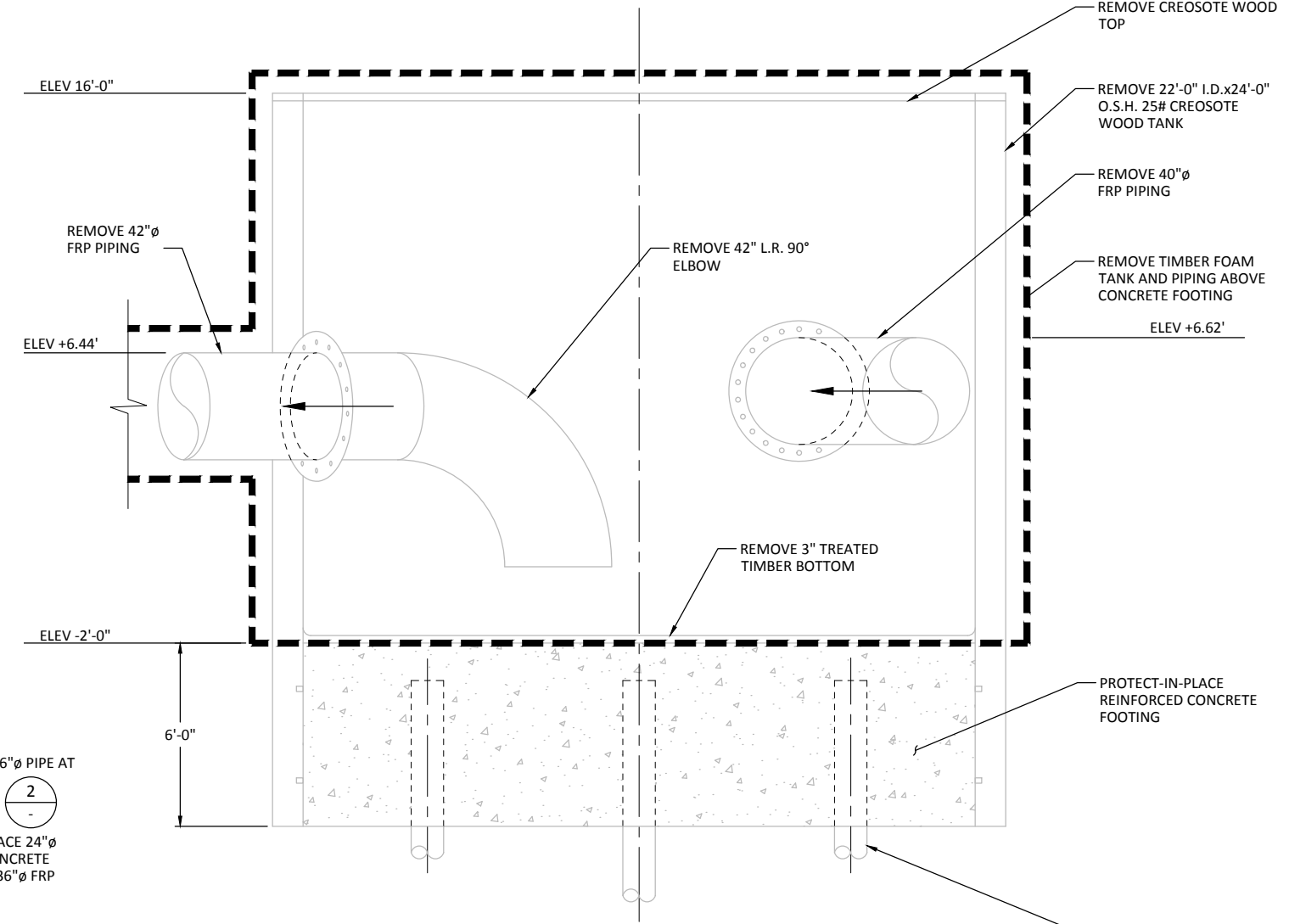
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 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV	DATE	BY	APP'D	DESCRIPTION																					DESIGNED BY: <u>SJS</u> DRAWN BY: <u>KMV</u> CHECKED BY: <u>MDK</u> APPROVED BY: <u>DLO</u> SCALE: <u>AS NOTED</u> DATE: <u>MARCH 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON CLARIFIER REMOVAL CROSS SECTIONS 2	R-20 SHEET NO. 26 OF 126
		REV	DATE	BY	APP'D	DESCRIPTION																								
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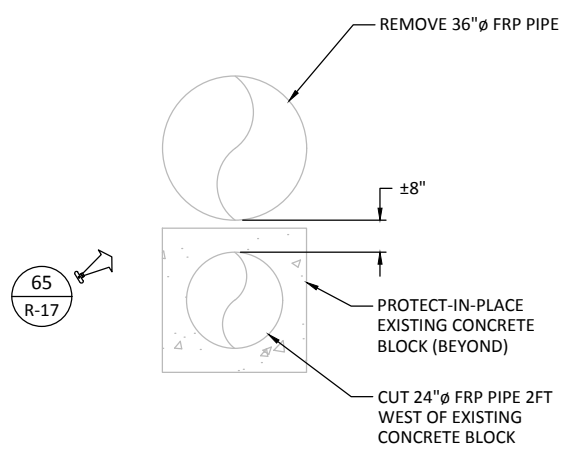
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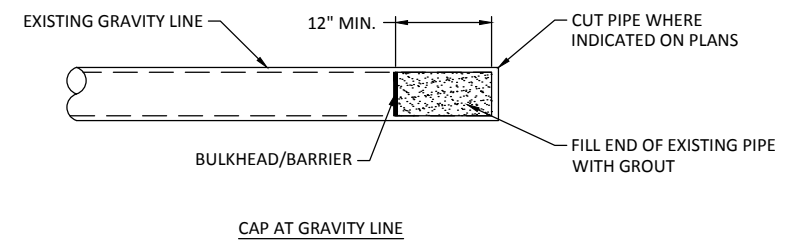
1 FOAM TANK AND PIPING REMOVAL PLAN
R-2 SCALE: 1/8" = 1'-0"



A FOAM TANK REMOVAL SECTION
SCALE: 3/8" = 1'-0"



B PIPING SECTION
SCALE: 1/2" = 1'-0"



2 DETAIL
R-5 SCALE: NTS

- NOTES:**
- ALL DIMENSIONS, PILE AND PIPING LOCATIONS ARE APPROXIMATE AND SHOWN FOR REFERENCE ONLY.
 - SEE SHEET R-6 FOR OVERALL FOAM TANK AND PIPING REMOVAL SEQUENCING NOTES.

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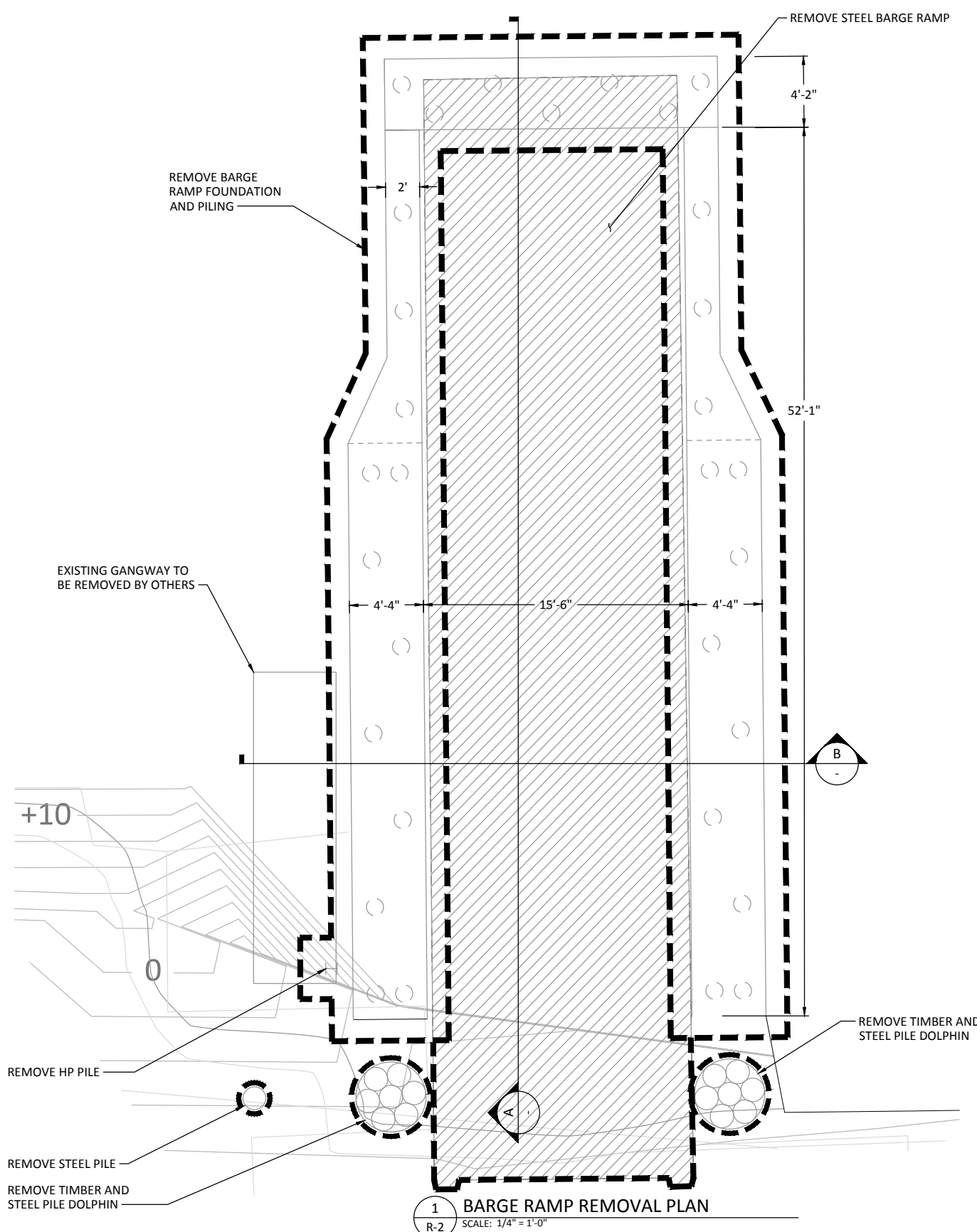
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

FOAM TANK REMOVAL PLAN AND SECTION

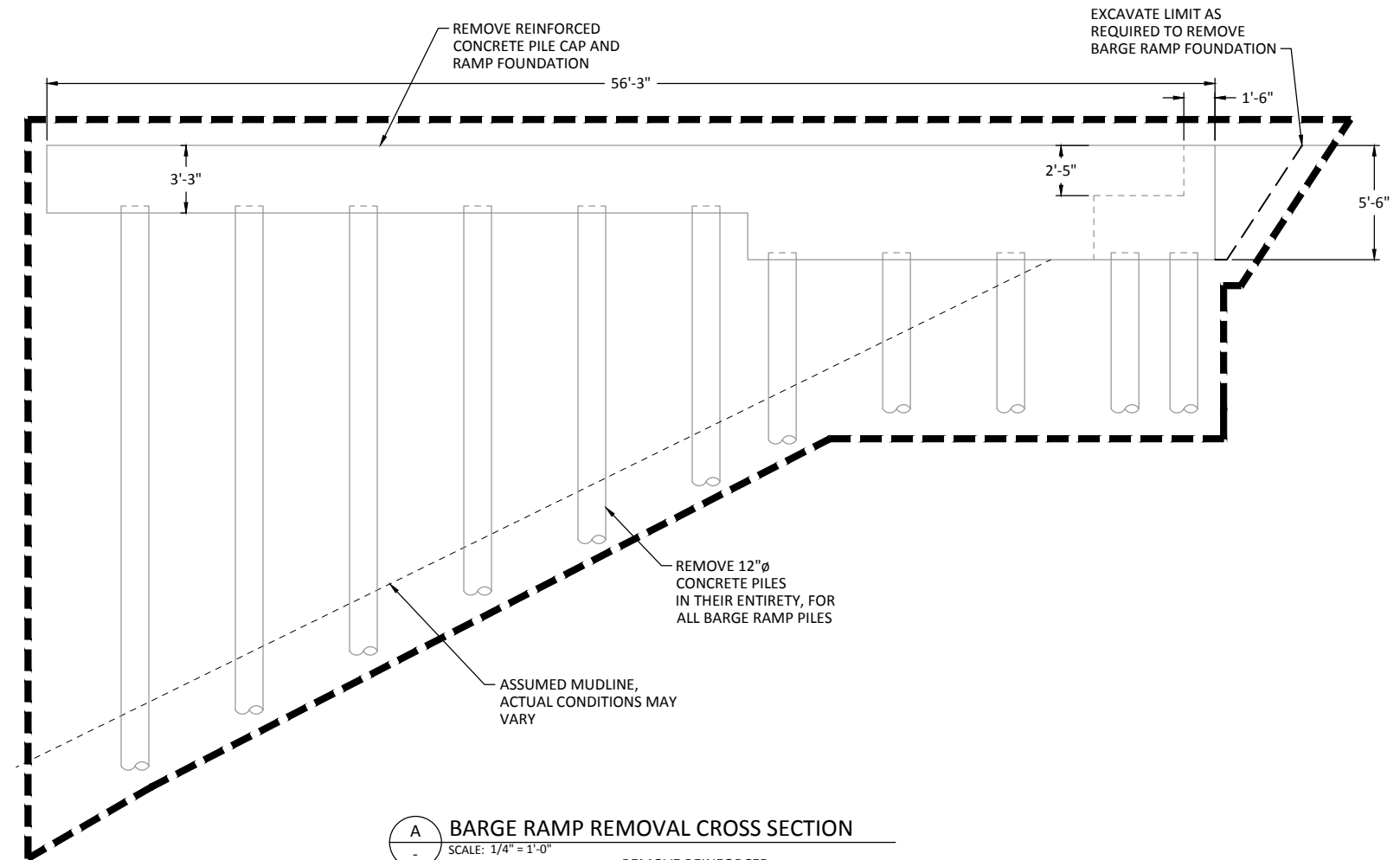
R-21

SHEET NO. 27 OF 126

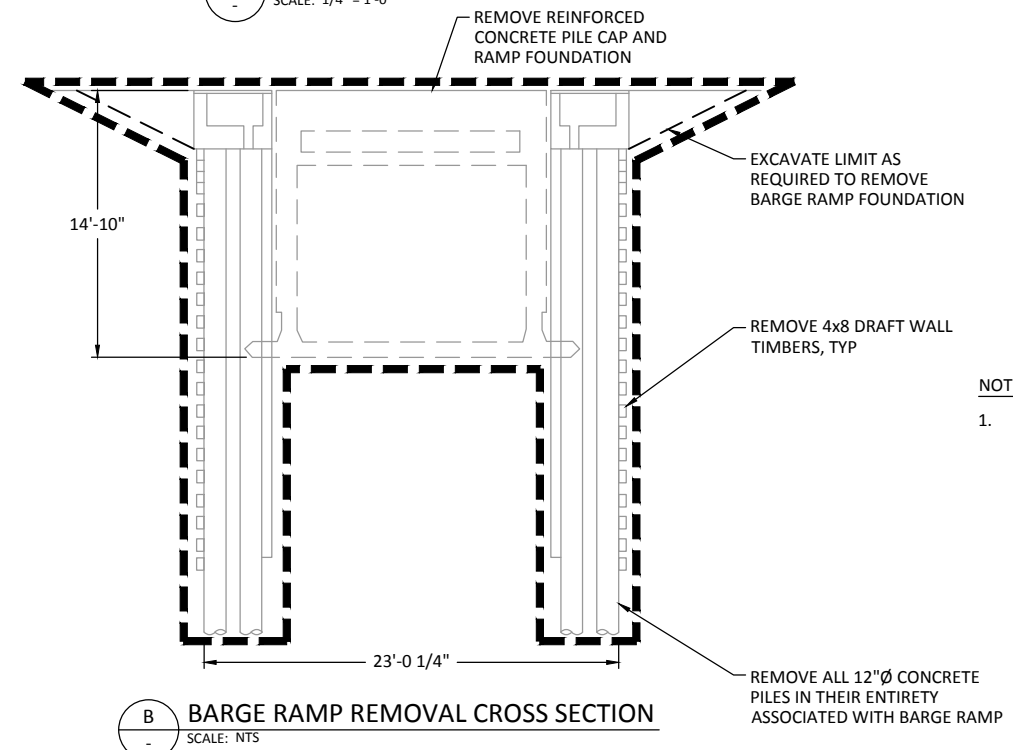
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1 BARGE RAMP REMOVAL PLAN
R-2 SCALE: 1/4" = 1'-0"



A BARGE RAMP REMOVAL CROSS SECTION
SCALE: 1/4" = 1'-0"



B BARGE RAMP REMOVAL CROSS SECTION
SCALE: NTS

- NOTES:**
1. ALL DIMENSIONS, PILES, STEEL, CONCRETE AND TIMBER SHOWN ARE APPROXIMATE AND ARE FOR REFERENCE ONLY.

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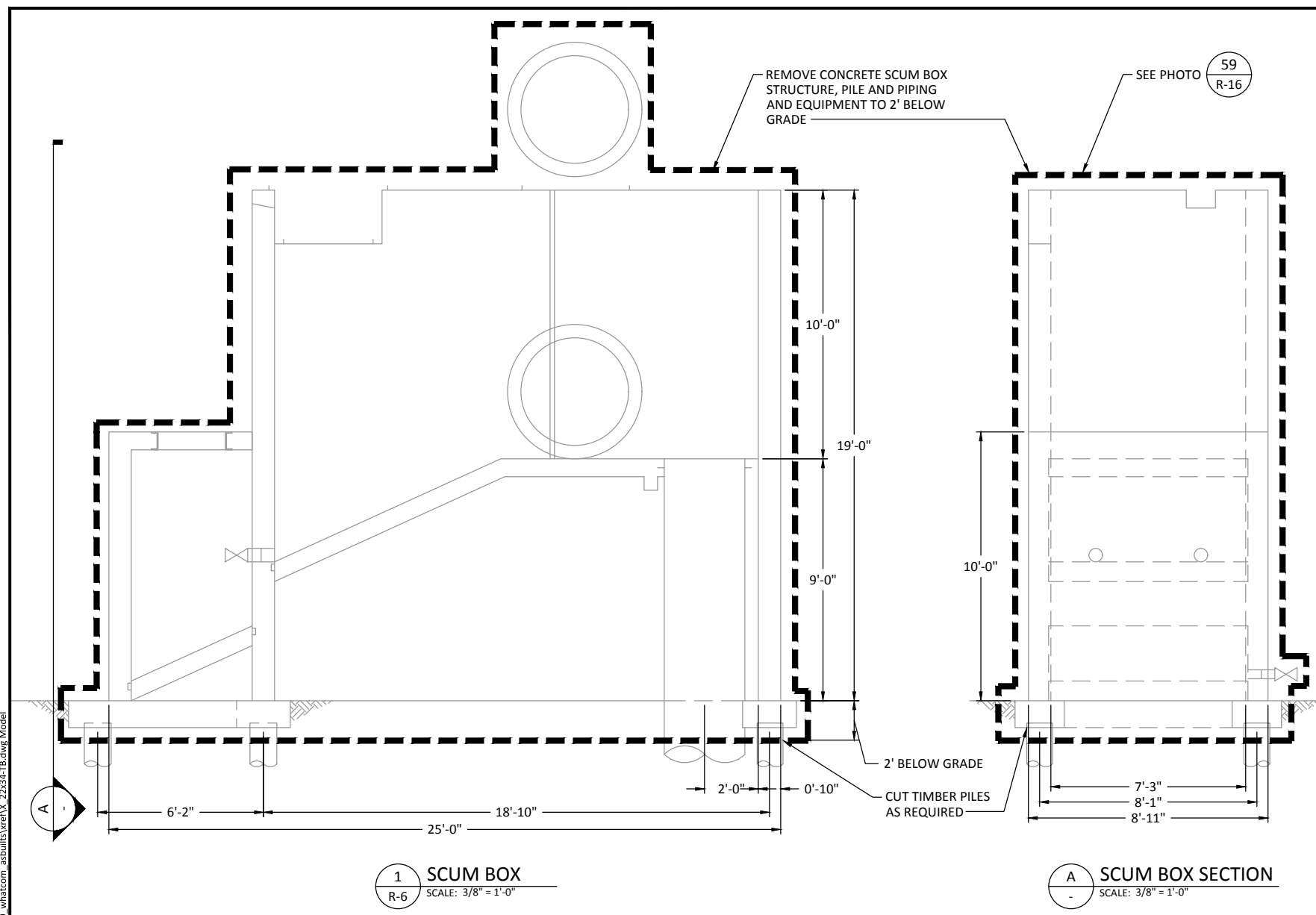
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

BARGE RAMP REMOVAL PLAN AND SECTION

R-22

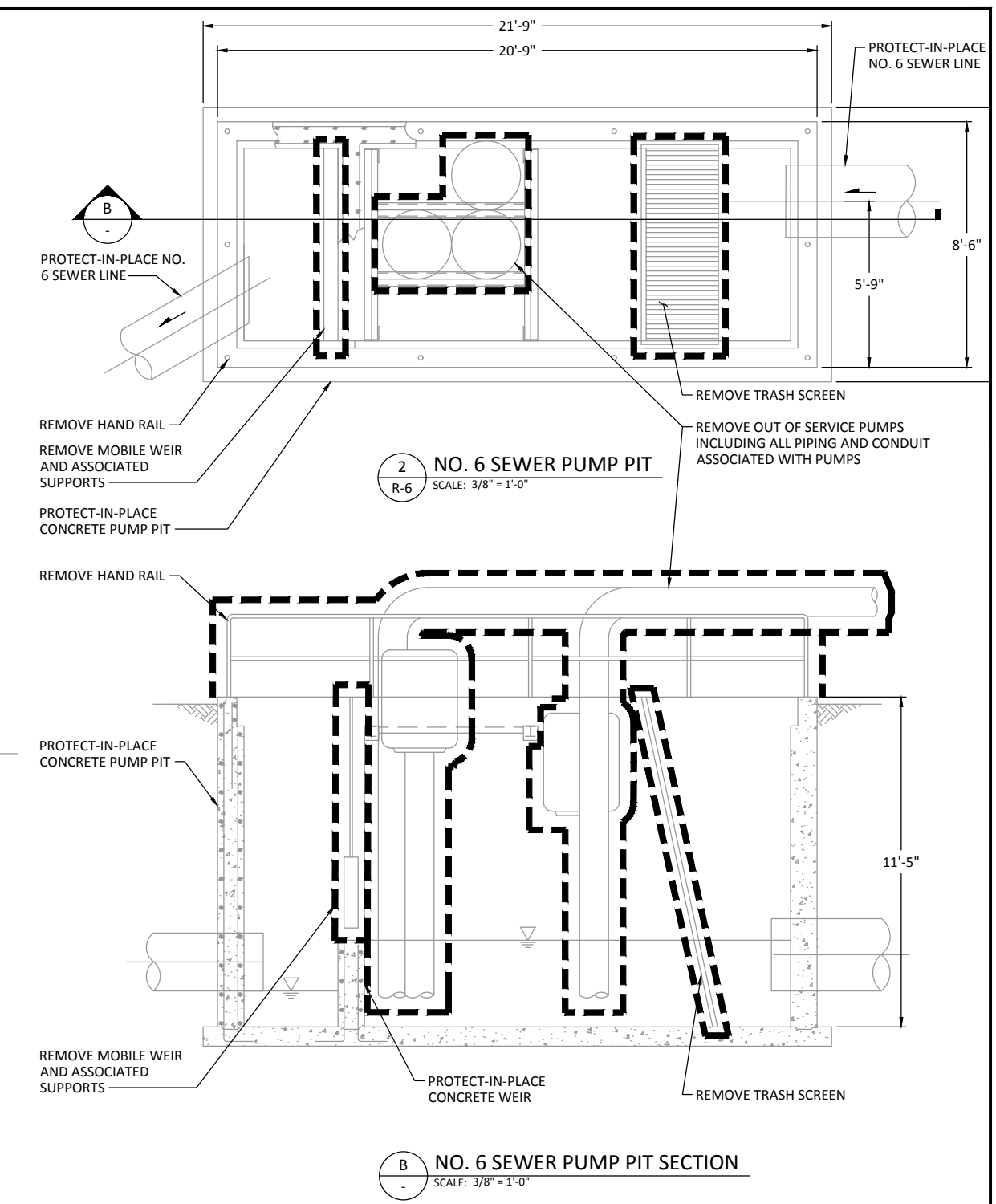
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1 SCUM BOX
SCALE: 3/8" = 1'-0"

A SCUM BOX SECTION
SCALE: 3/8" = 1'-0"



2 NO. 6 SEWER PUMP PIT
SCALE: 3/8" = 1'-0"

B NO. 6 SEWER PUMP PIT SECTION
SCALE: 3/8" = 1'-0"

NOTES:
1. ALL DIMENSIONS SHOWN ARE APPROXIMATE AND ARE FOR REFERENCE ONLY.

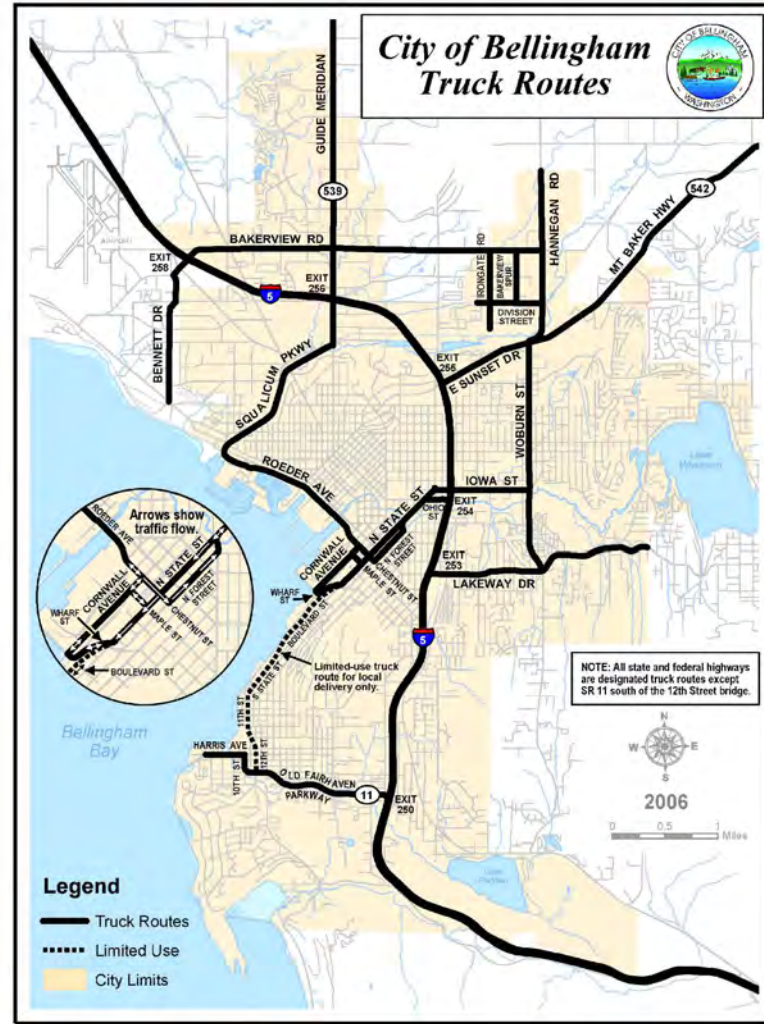
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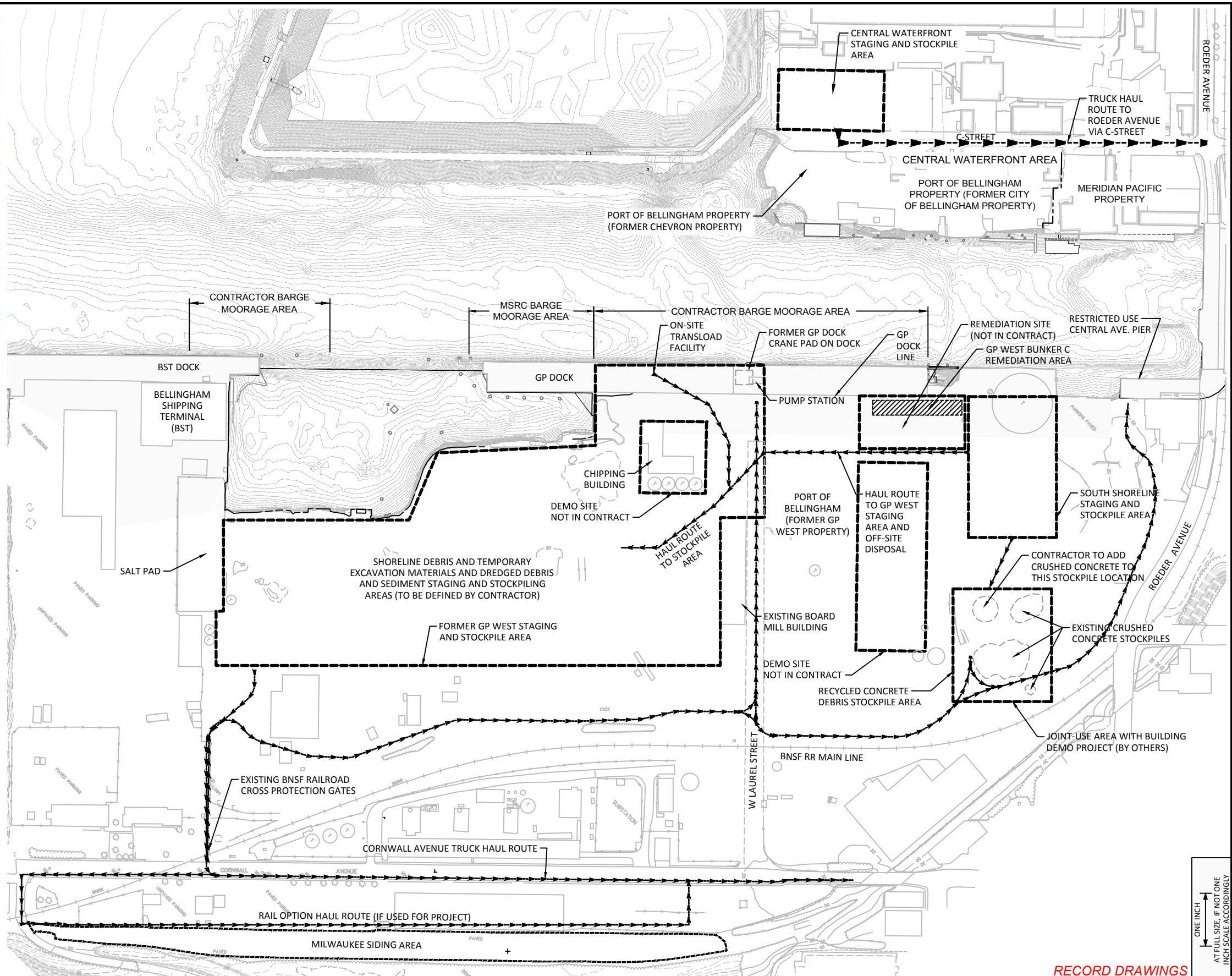
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		REMOVAL DETAILS	SHEET NO. 29 OF 126	

REVISIONS				
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- NOTES:
- REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 - 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.
 - INTERNAL CONFIGURATION OF THE SOUTH SHORELINE STAGING AND STOCKPILE AREA (INCLUDING CONSTRUCTION WATER COLLECTION AND TREATMENT EQUIPMENT) TO BE DETERMINED BY THE CONTRACTOR.
 - CONTRACTOR TO COORDINATE WITH BNSF RAILROAD FOR ACCESS AND OPERATION AT MILWAUKEE SIDING AREA AS NECESSARY.
 - CONTRACTOR MAY STOCKPILE SOIL AND DEBRIS AT DESIGNATED STOCKPILE AREAS FOR UP TO FOUR MONTHS FOLLOWING COMPLETION OF DREDGING AND/OR UPLAND SOIL EXCAVATION AND SHORELINE DEBRIS REMOVAL ACTIVITIES OR NO LATER THAN **JULY 1, 2016**.
 - 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.
 - CONTRACTOR TO COORDINATE WITH PORT IF MONITORING WELLS OBSTRUCT PROJECT ACTIVITIES.
 - MSRC BARGE TO REMAIN MOORED AT GP DOCK THROUGH DURATION OF PROJECT.
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PROJECT NORTH



RECORD DRAWINGS



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 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
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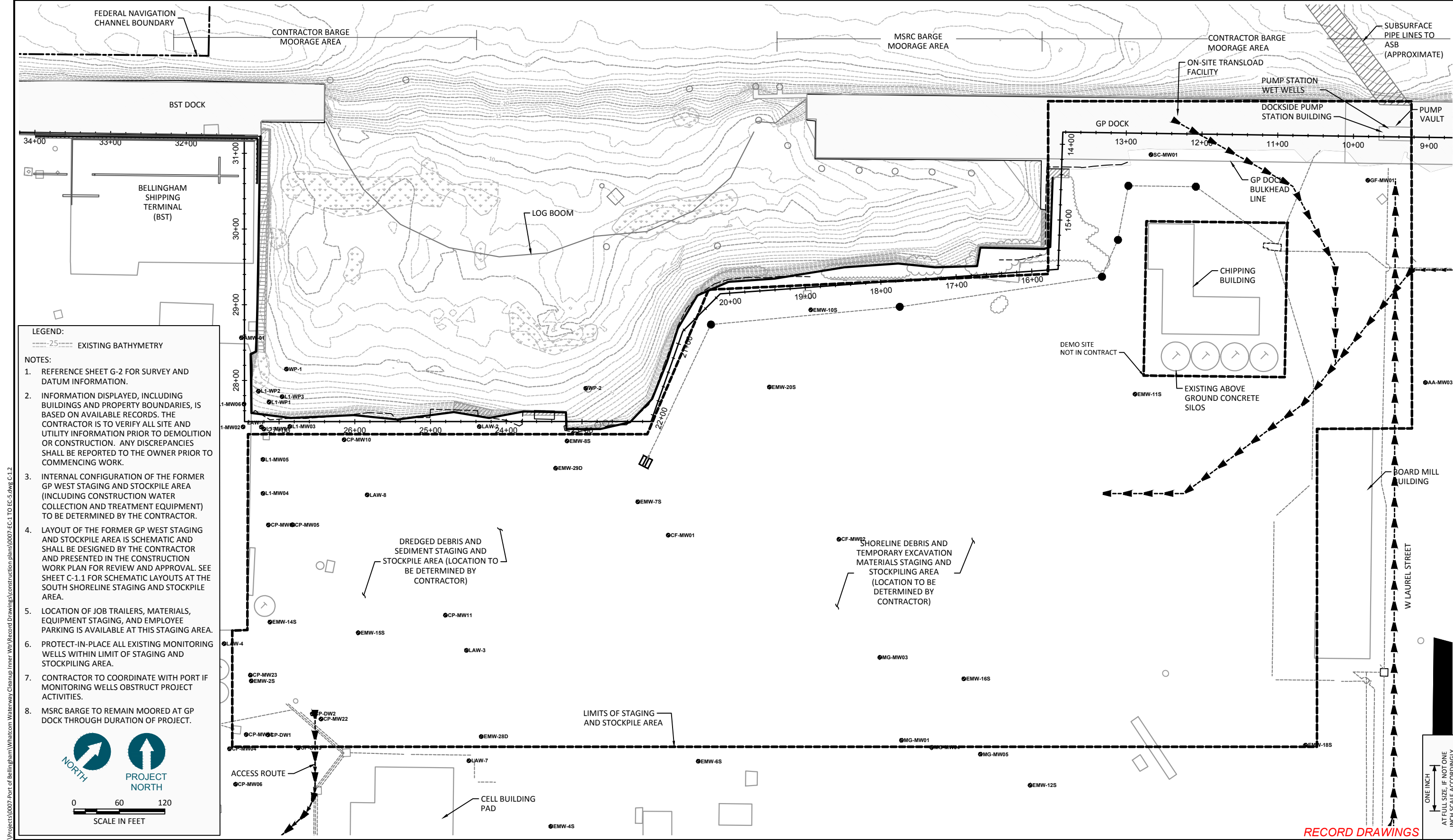
SITE ACCESS, STAGING AND STOCKPILE PLAN

C-1.1

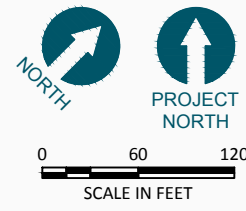
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- LEGEND:**
 ---25--- EXISTING BATHYMETRY
- NOTES:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. INFORMATION DISPLAYED, INCLUDING BUILDINGS AND PROPERTY BOUNDARIES, IS BASED ON AVAILABLE RECORDS. THE CONTRACTOR IS TO VERIFY ALL SITE 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, EQUIPMENT STAGING, AND EMPLOYEE PARKING IS AVAILABLE AT THIS STAGING AREA.
 6. PROTECT-IN-PLACE ALL EXISTING MONITORING WELLS WITHIN LIMIT OF STAGING AND STOCKPILING AREA.
 7. CONTRACTOR TO COORDINATE WITH PORT IF MONITORING WELLS OBSTRUCT PROJECT ACTIVITIES.
 8. MSRC BARGE TO REMAIN MOORED AT GP DOCK THROUGH DURATION OF PROJECT.



RECORD DRAWINGS



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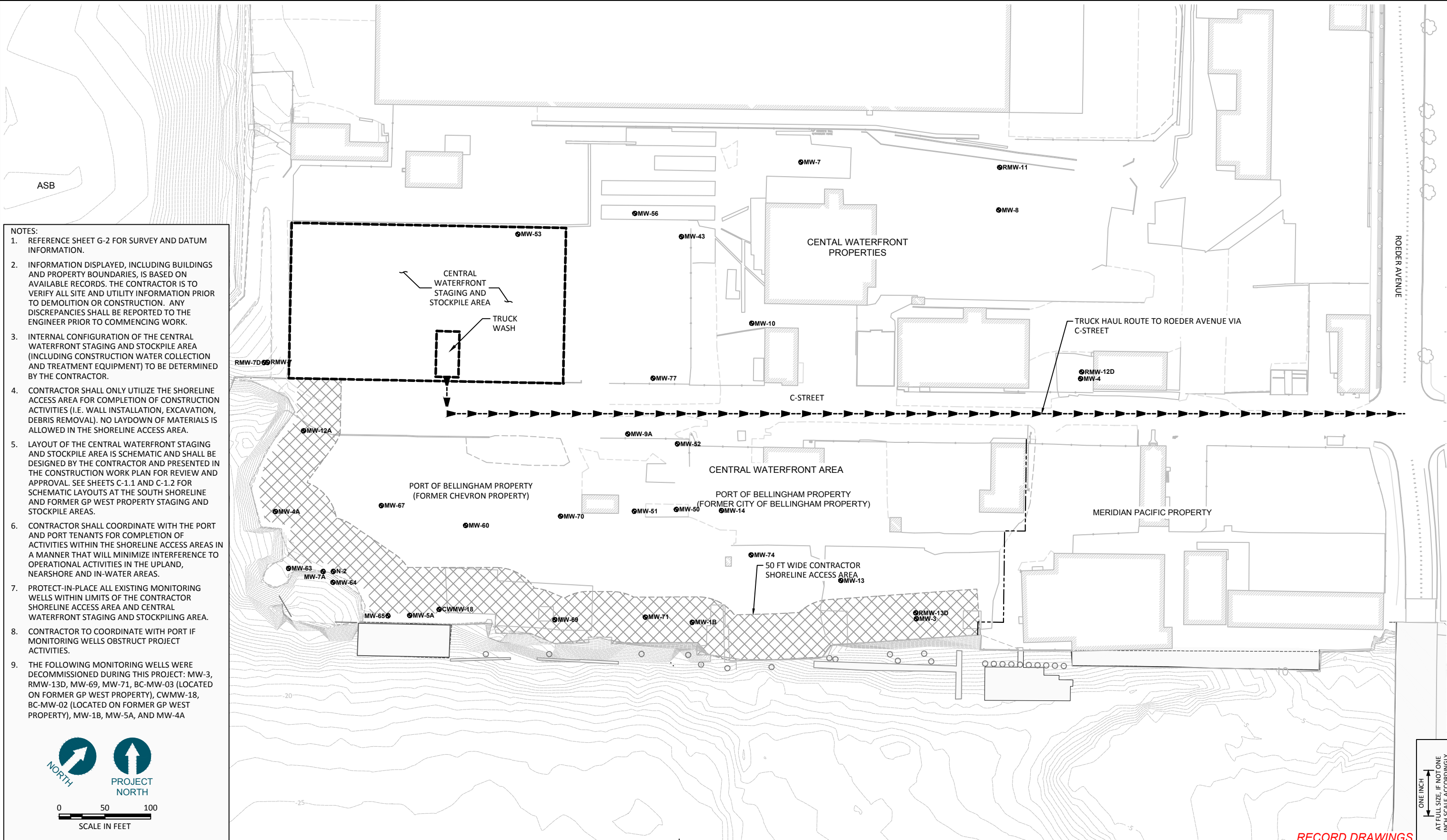
**EXISTING CONDITIONS FORMER GP WEST PROPERTY
 - SITE ACCESS, STAGING AND STOCKPILE AREA**

C-1.2

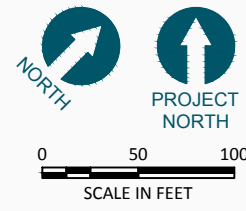
SHEET NO. 31 OF 126

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 Dec 21, 2016 5:59pm gtrf

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Dec 21, 2016 6:00pm gtrf



- 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 CENTRAL WATERFRONT STAGING AND STOCKPILE AREA (INCLUDING CONSTRUCTION WATER COLLECTION AND TREATMENT EQUIPMENT) TO BE DETERMINED BY THE CONTRACTOR.
 4. CONTRACTOR SHALL ONLY UTILIZE THE SHORELINE ACCESS AREA FOR COMPLETION OF CONSTRUCTION ACTIVITIES (I.E. WALL INSTALLATION, EXCAVATION, DEBRIS REMOVAL). NO LAYDOWN OF MATERIALS IS ALLOWED IN THE SHORELINE ACCESS AREA.
 5. LAYOUT OF THE CENTRAL WATERFRONT 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 SHEETS C-1.1 AND C-1.2 FOR SCHEMATIC LAYOUTS AT THE SOUTH SHORELINE AND FORMER GP WEST PROPERTY STAGING AND STOCKPILE AREAS.
 6. CONTRACTOR SHALL COORDINATE WITH THE PORT AND PORT TENANTS FOR COMPLETION OF ACTIVITIES WITHIN THE SHORELINE ACCESS AREAS IN A MANNER THAT WILL MINIMIZE INTERFERENCE TO OPERATIONAL ACTIVITIES IN THE UPLAND, NEARSHORE AND IN-WATER AREAS.
 7. PROTECT-IN-PLACE ALL EXISTING MONITORING WELLS WITHIN LIMITS OF THE CONTRACTOR SHORELINE ACCESS AREA AND CENTRAL WATERFRONT STAGING AND STOCKPILING AREA.
 8. CONTRACTOR TO COORDINATE WITH PORT IF MONITORING WELLS OBSTRUCT PROJECT ACTIVITIES.
 9. THE FOLLOWING MONITORING WELLS WERE DECOMMISSIONED DURING THIS PROJECT: MW-3, RMW-13D, MW-69, MW-71, BC-MW-03 (LOCATED ON FORMER GP WEST PROPERTY), CWMW-18, BC-MW-02 (LOCATED ON FORMER GP WEST PROPERTY), MW-1B, MW-5A, AND MW-4A



ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

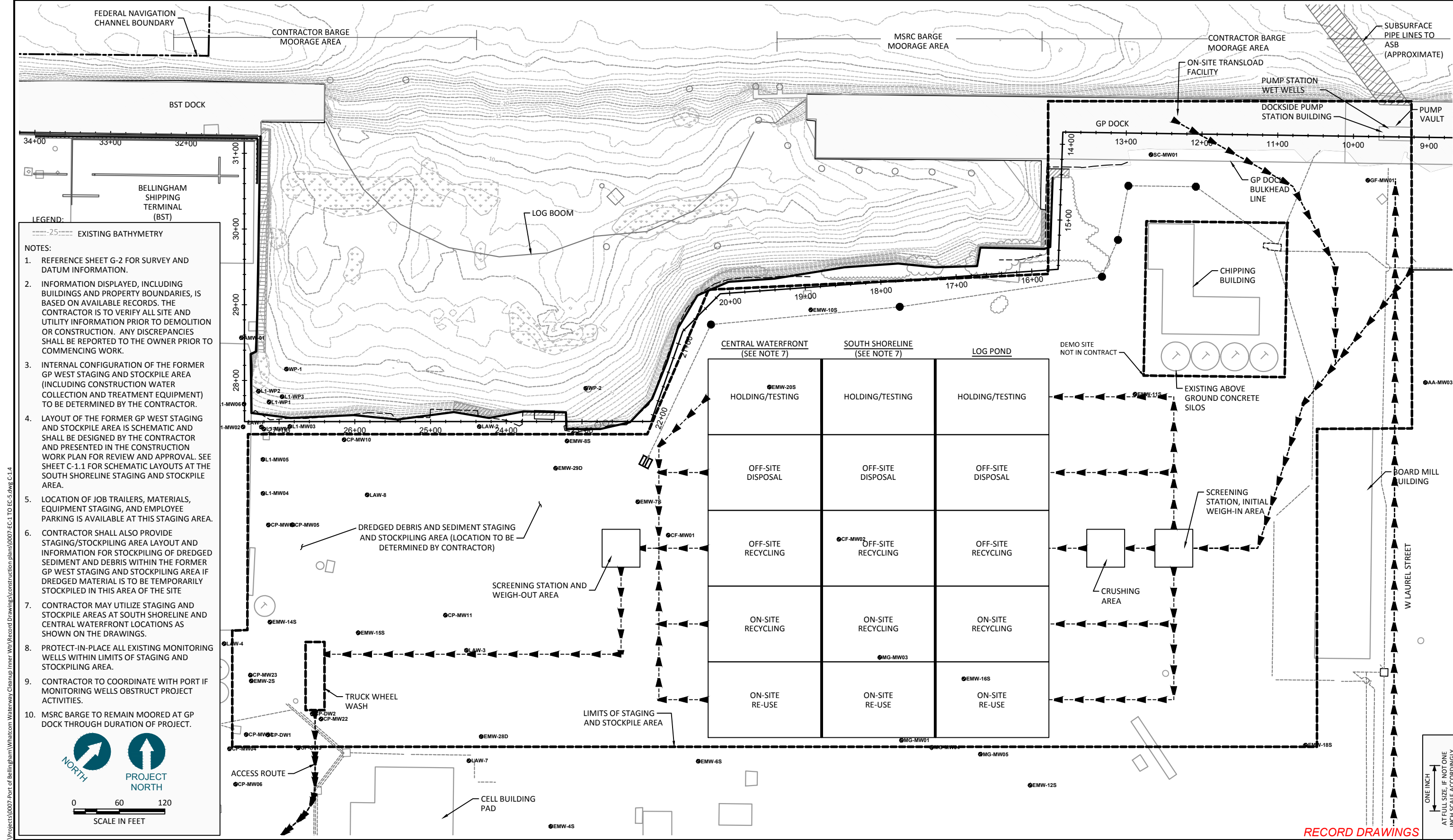
DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

**EXISTING CONDITIONS CENTRAL WATERFRONT
 - SITE ACCESS AND STAGING AREA**

C-1.3

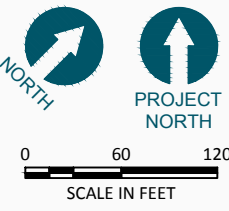
SHEET NO. 32 OF 126



LEGEND:
 ---25--- EXISTING BATHYMETRY

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, EQUIPMENT STAGING, AND EMPLOYEE PARKING IS AVAILABLE AT THIS STAGING AREA.
6. CONTRACTOR SHALL ALSO PROVIDE STAGING/STOCKPILING AREA LAYOUT AND INFORMATION FOR STOCKPILING OF DREDGED SEDIMENT AND DEBRIS WITHIN THE FORMER GP WEST STAGING AND STOCKPILE AREA IF DREDGED MATERIAL IS TO BE TEMPORARILY STOCKPILED IN THIS AREA OF THE SITE
7. CONTRACTOR MAY UTILIZE STAGING AND STOCKPILE AREAS AT SOUTH SHORELINE AND CENTRAL WATERFRONT LOCATIONS AS SHOWN ON THE DRAWINGS.
8. PROTECT-IN-PLACE ALL EXISTING MONITORING WELLS WITHIN LIMITS OF STAGING AND STOCKPILING AREA.
9. CONTRACTOR TO COORDINATE WITH PORT IF MONITORING WELLS OBSTRUCT PROJECT ACTIVITIES.
10. MSRC BARGE TO REMAIN MOORED AT GP DOCK THROUGH DURATION OF PROJECT.



RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

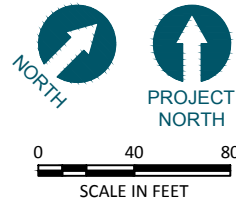
WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

STAGING AND STOCKPILE AREA CONCEPTUAL LAYOUT

C-1.4
 SHEET NO. 33 OF 126

- LEGEND:**
- 5— POST-DREDGE CONTOUR (1-FT INTERVAL)
 - ▨ REQUIRED DREDGE AREA
 - 20— PRE-CONSTRUCTION BATHYMETRY
 - D-1 CONTROL POINT LOCATION AND DESIGNATION

- NOTE:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. EXISTING BATHYMETRY CONTOURS ALONG THE BST DOCK BETWEEN STATIONS 36+00 AND 43+00 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 IS +0.5 FT UNLESS OTHERWISE NOTED ON DRAWINGS. PAYABLE OVERDREDGE ALLOWANCE OF +0.5 FT APPLIES TO THE DREDGE 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.



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Dec 21, 2016 6:01pm gtrjg



REVISIONS				
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DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

BST DREDGING PLAN

C-2

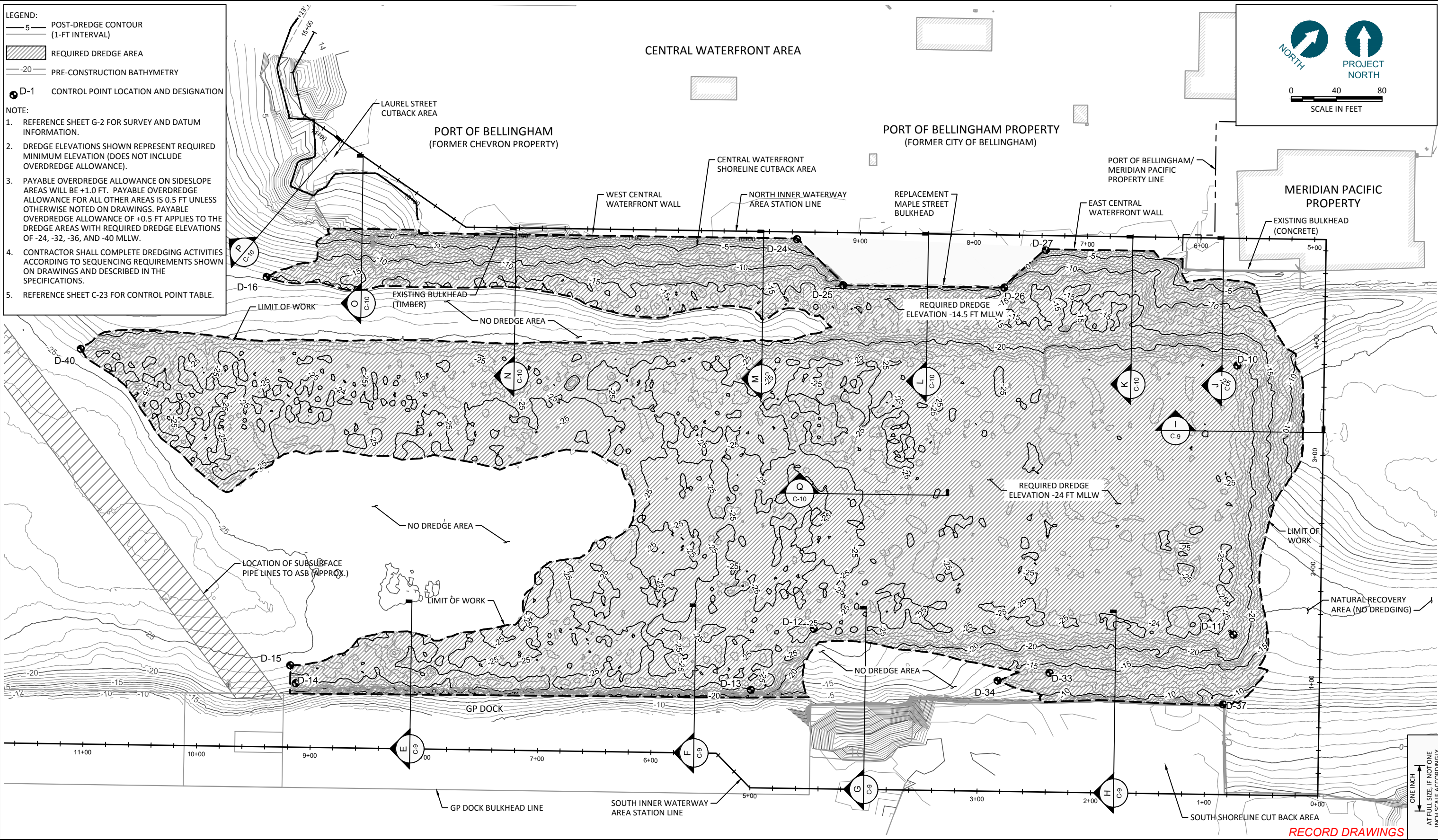
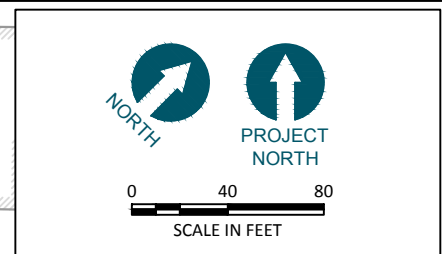
SHEET NO. **34** OF **126**

RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

- LEGEND:**
- 5 POST-DREDGE CONTOUR (1-FT INTERVAL)
 - REQUIRED DREDGE AREA
 - 20 PRE-CONSTRUCTION BATHYMETRY
 - D-1 CONTROL POINT LOCATION AND DESIGNATION

- NOTE:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. DREDGE ELEVATIONS SHOWN REPRESENT REQUIRED MINIMUM ELEVATION (DOES NOT INCLUDE OVERDREDGE ALLOWANCE).
 3. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WILL BE +1.0 FT. PAYABLE OVERDREDGE ALLOWANCE FOR ALL OTHER AREAS IS 0.5 FT UNLESS OTHERWISE NOTED ON DRAWINGS. PAYABLE OVERDREDGE ALLOWANCE OF +0.5 FT APPLIES TO THE DREDGE AREAS WITH REQUIRED DREDGE ELEVATIONS OF -24, -32, -36, AND -40 MLLW.
 4. CONTRACTOR SHALL COMPLETE DREDGING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
 5. REFERENCE SHEET C-23 FOR CONTROL POINT TABLE.



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Dec 21, 2016 6:01 pm igfjg

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

INNER WATERWAY DREDGING PLAN

C-3

SHEET NO. 35 OF 126

LEGEND:

- POST-CONSTRUCTION TOP OF CAP AREA CONTOURS
- POST-CONSTRUCTION BATHYMETRY
- RESIDUALS MANAGEMENT COVER AREA
- CONTROL POINT LOCATION AND DESIGNATION

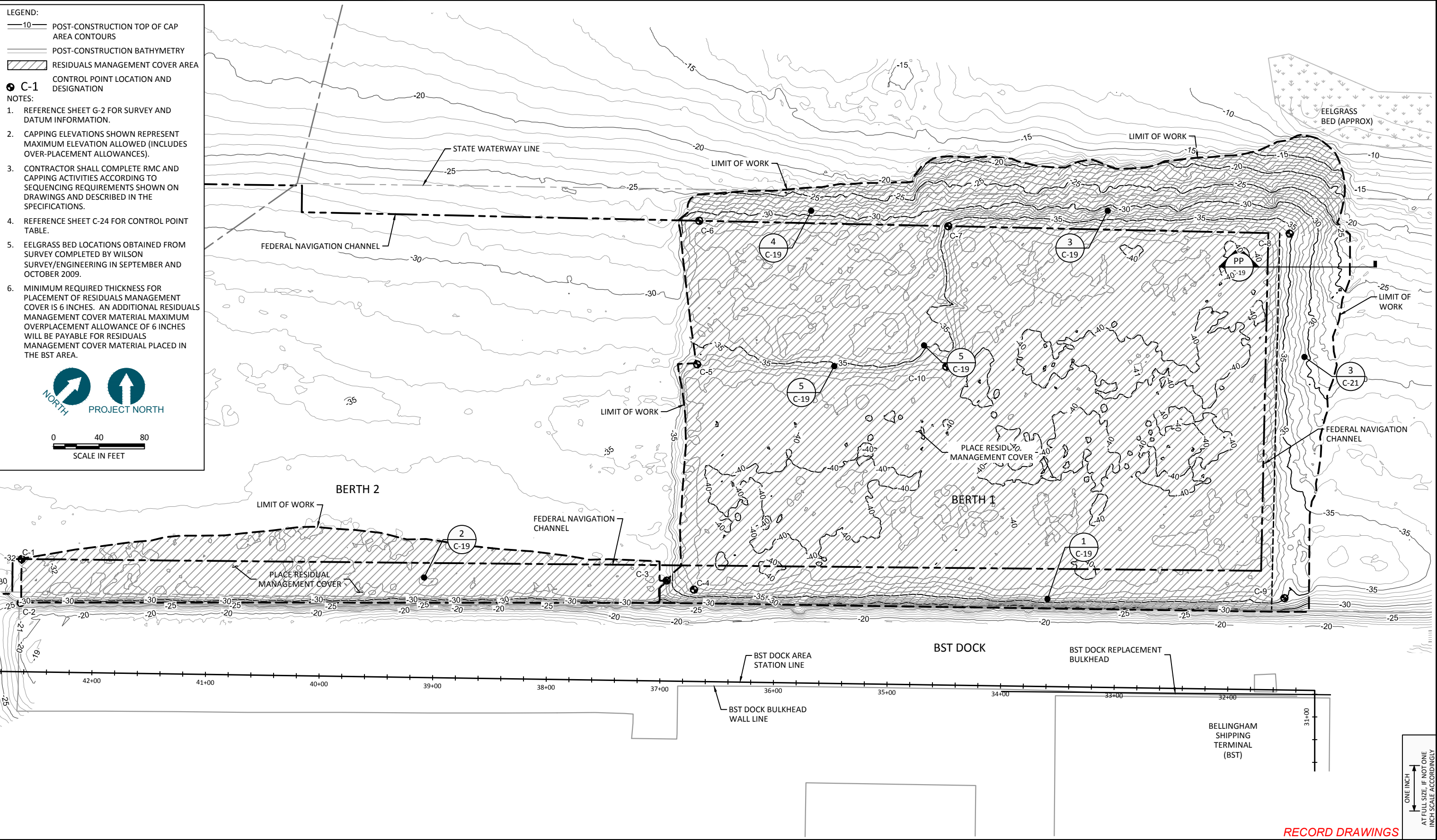
NOTES:

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 RMC AND CAPPING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
4. REFERENCE SHEET C-24 FOR CONTROL POINT TABLE.
5. EELGRASS BED LOCATIONS OBTAINED FROM SURVEY COMPLETED BY WILSON SURVEY/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.

NORTH

PROJECT NORTH

0 40 80
SCALE IN FEET



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Dec 21, 2016 6:02pm igfip

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

**BST CAPPING AND RESIDUALS MANAGEMENT COVER
 PLAN**

C-4

SHEET NO. **36** OF **126**

LEGEND:

- 10— POST-CONSTRUCTION TOP OF CAP AREA CONTOURS
- POST-CONSTRUCTION BATHYMETRY
- ▨ TYPE 3 CAP AREA
- ⊙ C-1 CONTROL POINT LOCATION AND DESIGNATION

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. REFERENCE SHEET C-24 FOR CONTROL POINT TABLE.



NORTH
PROJECT NORTH

0 40 80
SCALE IN FEET

BST BULKHEAD WALL LINE

BST DOCK AREA STATION LINE

BST DOCK

BST DOCK REPLACEMENT BULKHEAD

BELLINGHAM SHIPPING TERMINAL (BST)

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

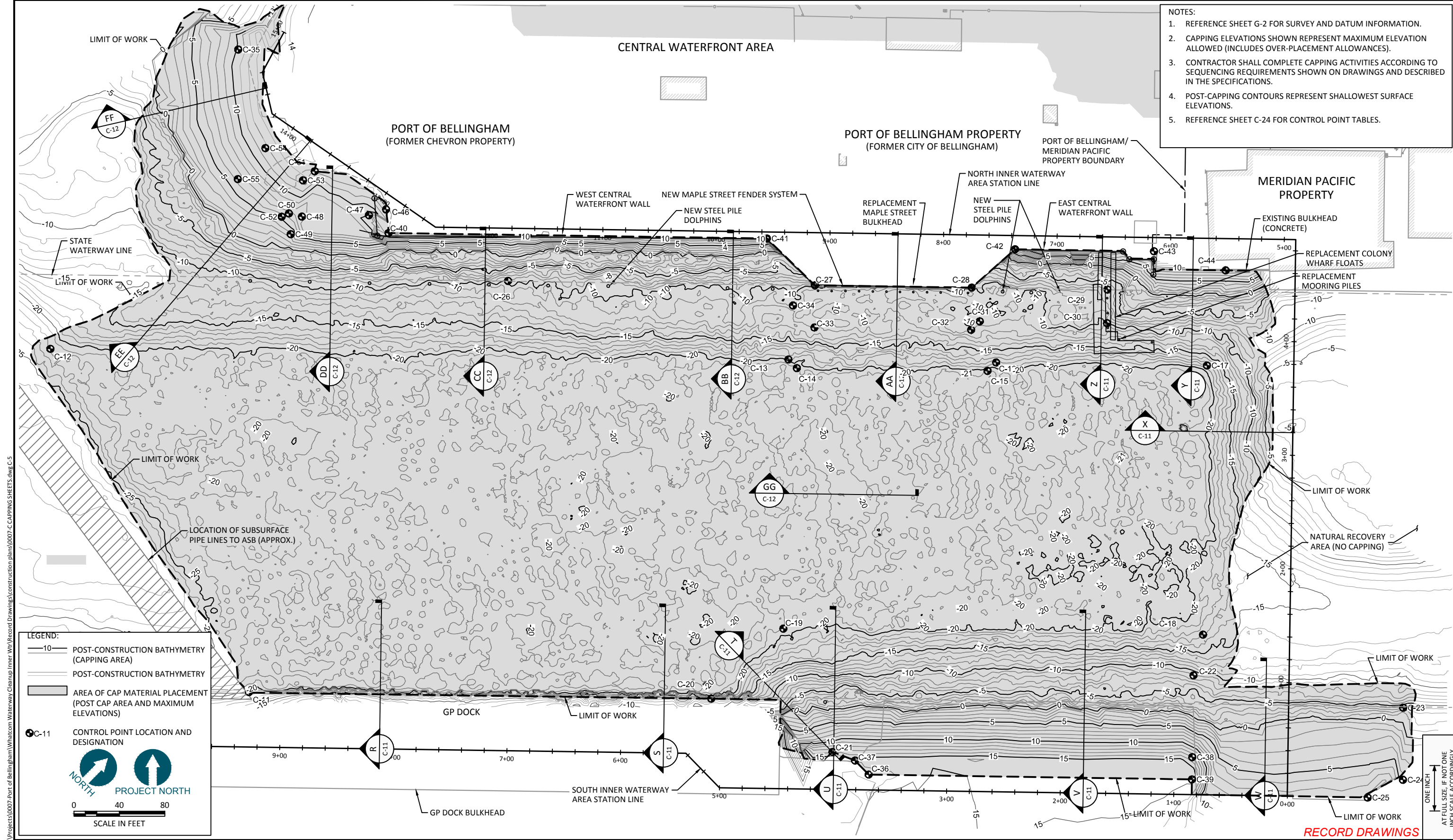
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

BST CAP TYPE PLAN

C-4.1

SHEET NO. 37 OF 126

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Dec 21, 2016 6:03pm gtr/bp



- 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:

- 10— POST-CONSTRUCTION BATHYMETRY (CAPPING AREA)
- POST-CONSTRUCTION BATHYMETRY
- AREA OF CAP MATERIAL PLACEMENT (POST CAP AREA AND MAXIMUM ELEVATIONS)
- C-11 CONTROL POINT LOCATION AND DESIGNATION

SCALE IN FEET

0 40 80

NORTH **PROJECT NORTH**

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

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 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

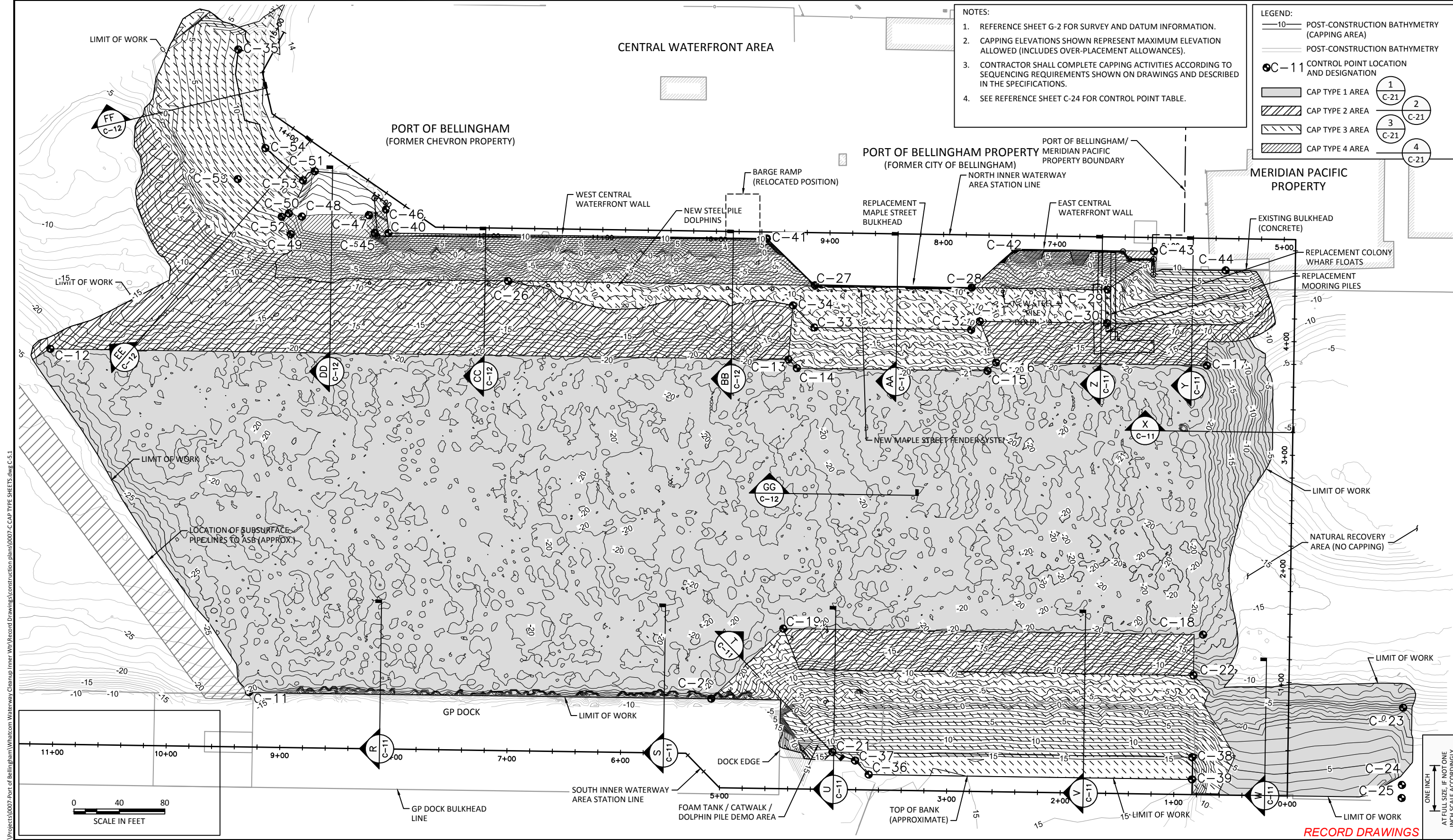
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

INNER WATERWAY CAPPING PLAN

C-5

SHEET NO. 38 OF 126

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Dec 21, 2016 6:05pm gtrjg



REVISIONS				
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DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

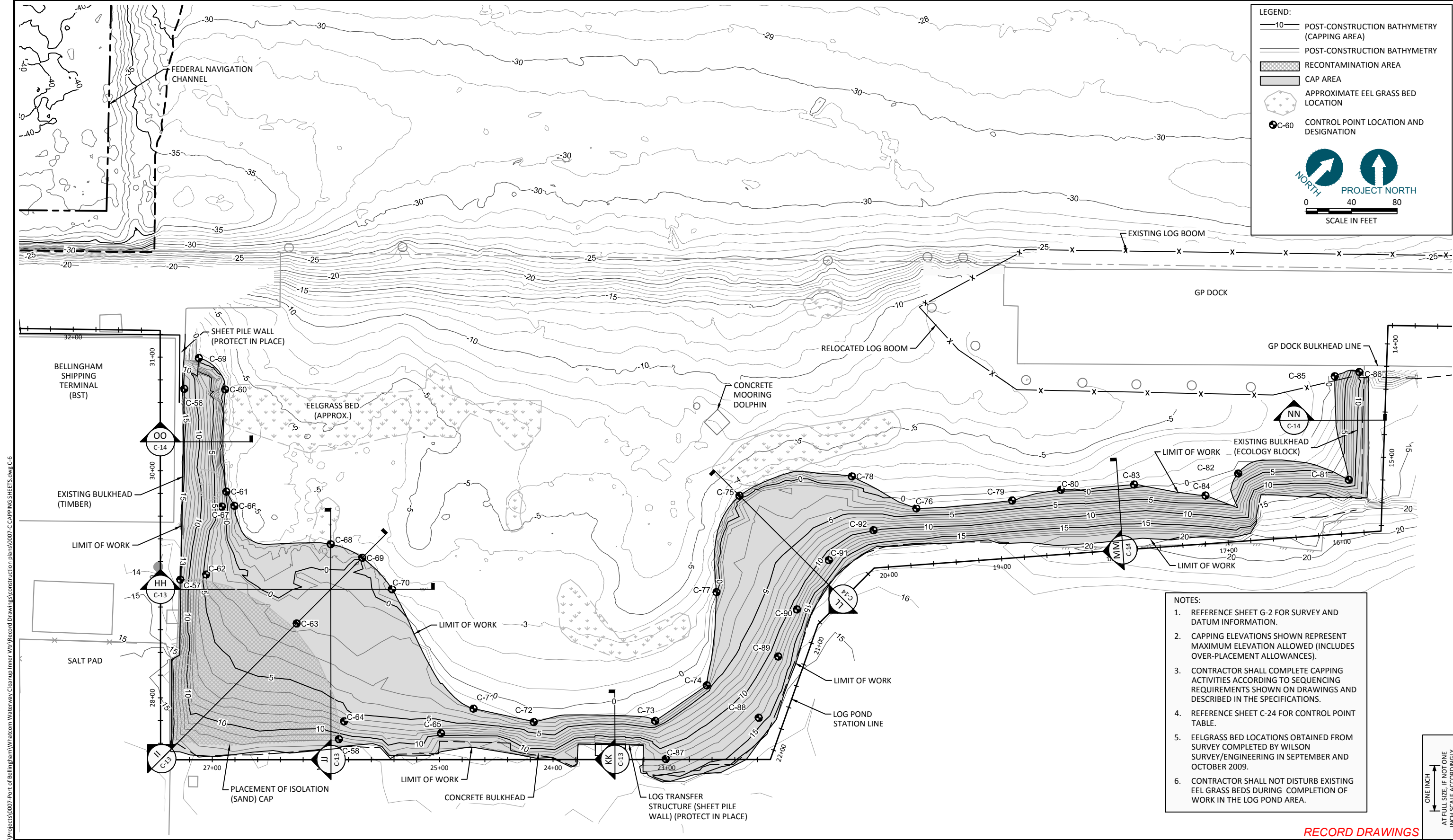
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

INNER WATERWAY CAP TYPE PLAN

C-5.1

SHEET NO. 39 OF 126

RECORD DRAWINGS



LEGEND:

- 10— POST-CONSTRUCTION BATHYMETRY (CAPPING AREA)
- POST-CONSTRUCTION BATHYMETRY
- RECONTAMINATION AREA
- CAP AREA
- APPROXIMATE EEL GRASS BED LOCATION
- C-60 CONTROL POINT LOCATION AND DESIGNATION

NORTH
 PROJECT NORTH

0 40 80
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. REFERENCE SHEET C-24 FOR CONTROL POINT TABLE.
 5. EELGRASS BED LOCATIONS OBTAINED FROM SURVEY COMPLETED BY WILSON SURVEY/ENGINEERING IN SEPTEMBER AND OCTOBER 2009.
 6. CONTRACTOR SHALL NOT DISTURB EXISTING EEL GRASS BEDS DURING COMPLETION OF WORK IN THE LOG POND AREA.

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

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 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

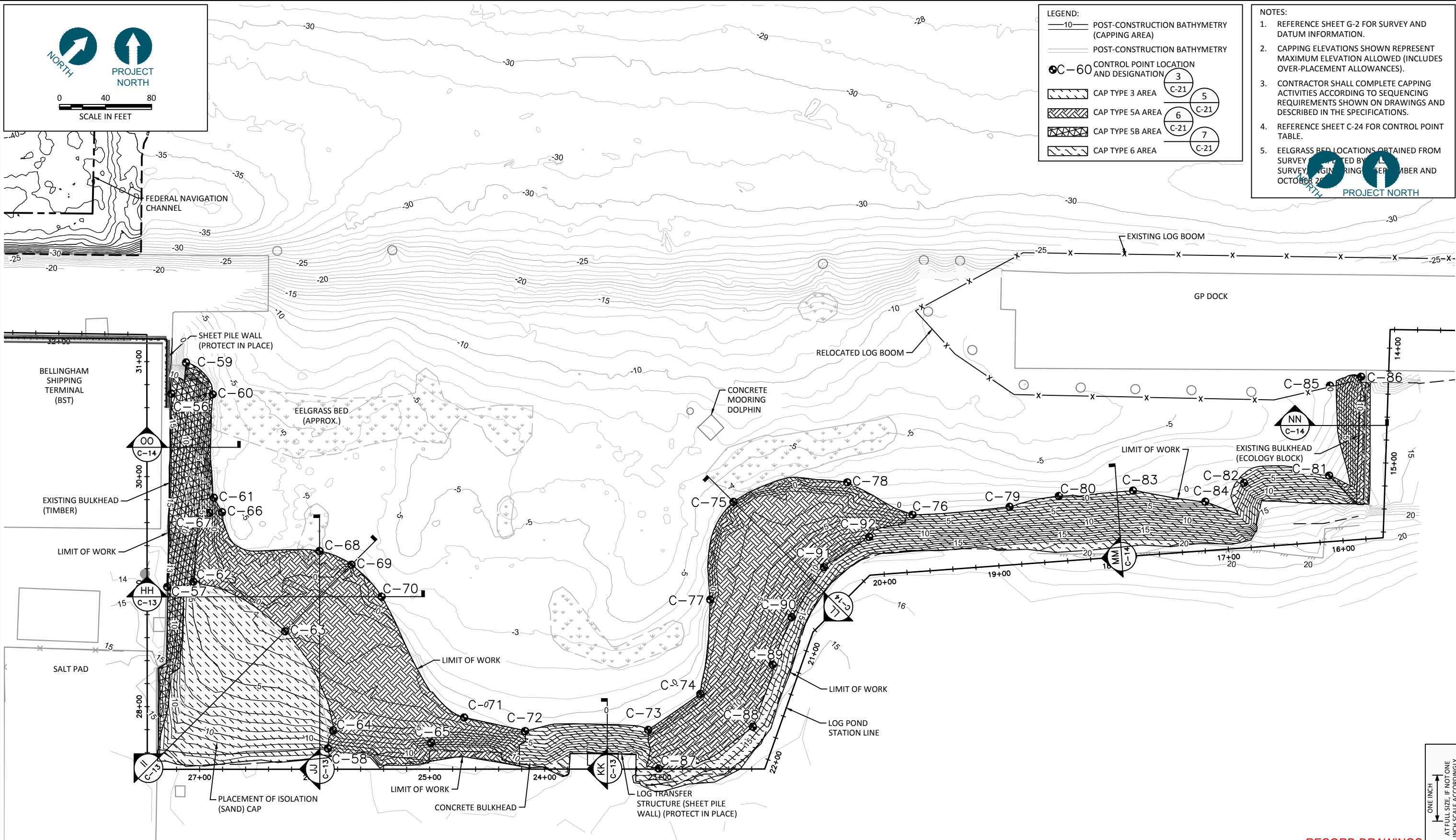
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

LOG POND CAPPING PLAN

C-6

SHEET NO. 40 OF 126

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 Dec 21, 2016 6:05pm igfip



LEGEND:

- 10— POST-CONSTRUCTION BATHYMETRY (CAPPING AREA)
- POST-CONSTRUCTION BATHYMETRY
- C-60 CONTROL POINT LOCATION AND DESIGNATION
- ▨ CAP TYPE 3 AREA
- ▩ CAP TYPE 5A AREA
- ▧ CAP TYPE 5B AREA
- ▦ CAP TYPE 6 AREA

- 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. REFERENCE SHEET C-24 FOR CONTROL POINT TABLE.
 5. EELGRASS BED LOCATIONS OBTAINED FROM SURVEY CONDUCTED BY [redacted] SURVEY ENGINEERING, SEPTEMBER AND OCTOBER 2011.

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Dec 21, 2016 6:07pm [redacted]

RECORD DRAWINGS

720 OLIVE WAY, SUITE 1900 | SEATTLE, WA 98101
(206) 287-9130

1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500

REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

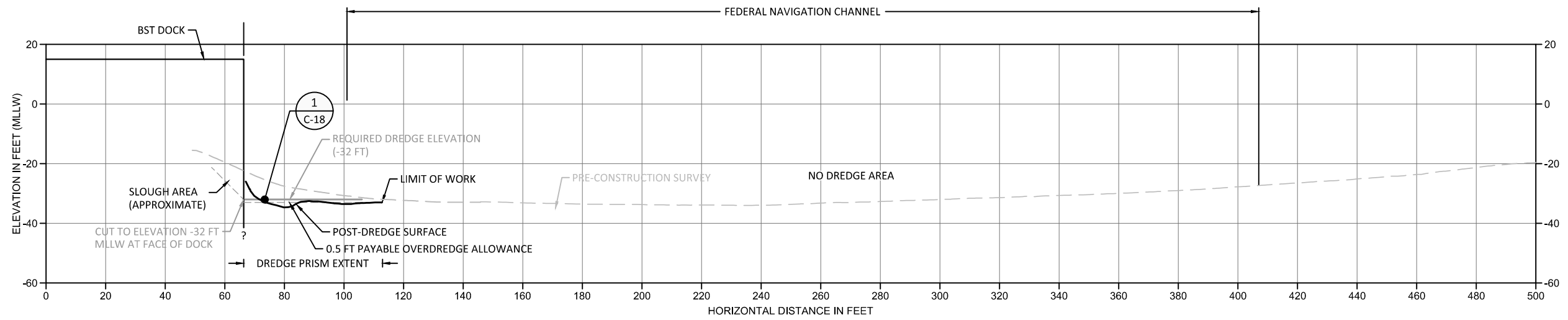
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

LOG POND CAP TYPE PLAN

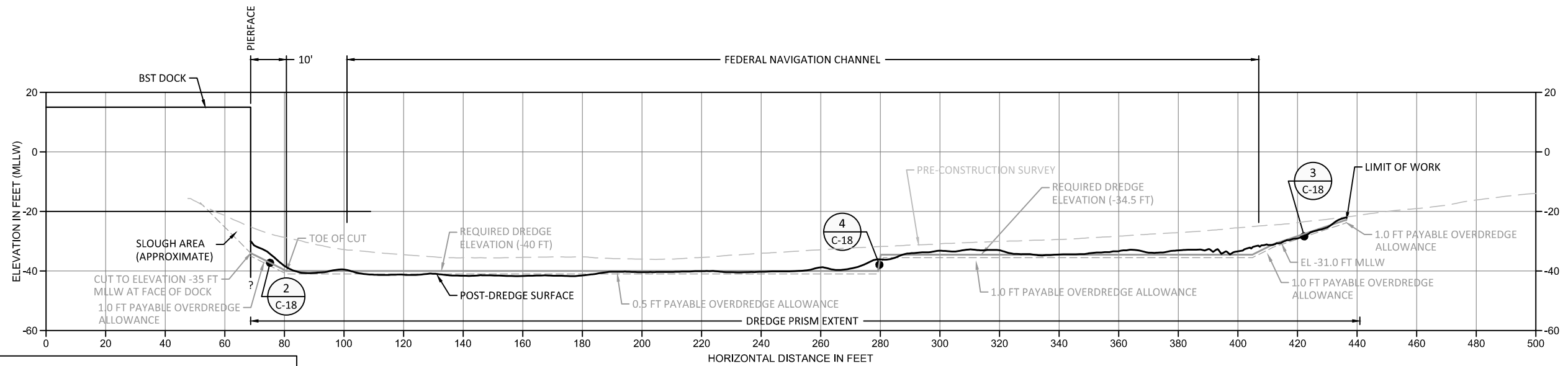
C-6.1

SHEET NO. 41 OF 126

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



A SECTION: BERTH 2 DREDGING
SCALE: 1" = 20'



B SECTION: BERTH 1 DREDGING
SCALE: 1" = 20'

- NOTES:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WILL BE +1.0 FT. PAYABLE OVERDREDGE ALLOWANCE FOR ALL OTHER AREAS IS +0.5 FT UNLESS OTHERWISE NOTED ON DRAWINGS.
 3. DO NOT PERFORM EXCESSIVE DREDGING AT TOE OF CUT OR IN SLOPE AREAS.
 4. CONTRACTOR SHALL COMPLETE DREDGING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
 5. CONTRACTOR SHALL REMOVE SLOUGH MATERIAL (AS APPLICABLE) AT FACE OF DOCK AS PART OF REQUIRED DREDGING WORK. ANTICIPATED SLOUGH VOLUME IS INCLUDED IN THE BID ITEM FOR REQUIRED DREDGING.
 6. NO UNDER-PIER DREDGING WILL BE PERFORMED.

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
DRAWN BY: D. HOLMER
CHECKED BY: T. WANG
APPROVED BY: T. WANG
SCALE: AS NOTED
DATE: MARCH 2015

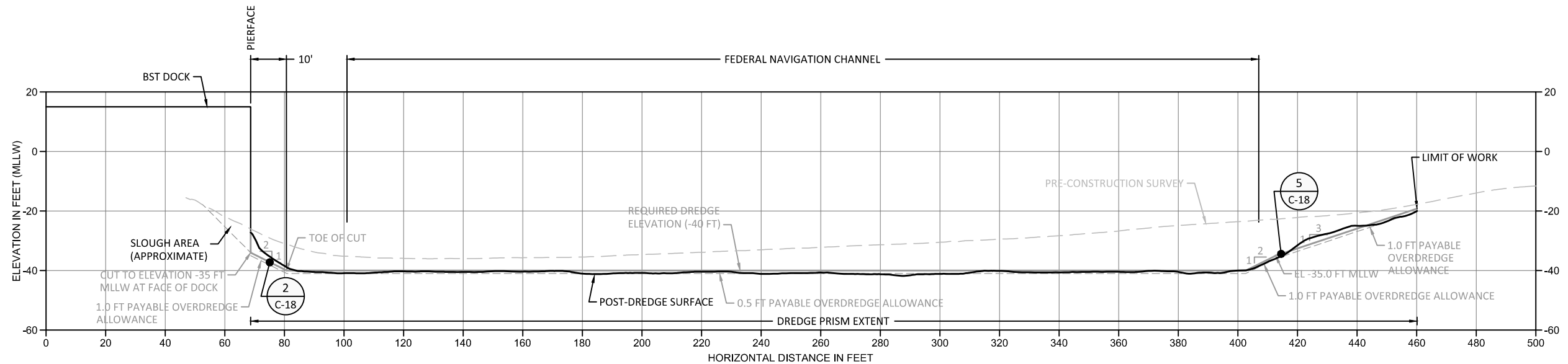
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

BST DREDGING CROSS-SECTIONS

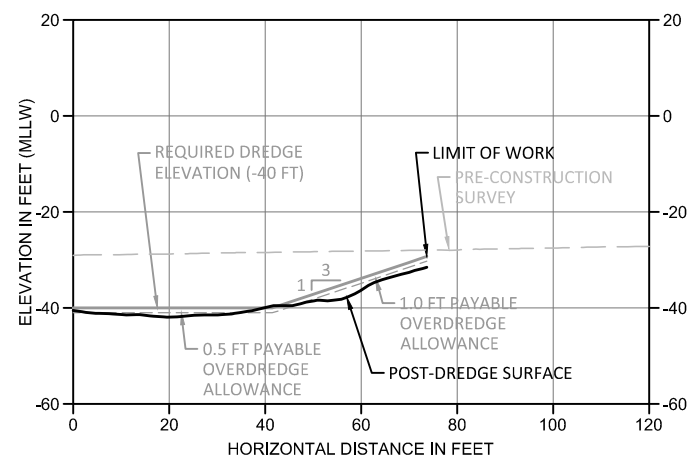
C-7

SHEET NO. 42 OF 126

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Dec 21, 2016 6:07 pm gtl/ep



C SECTION: BERTH 1 DREDGING
SCALE: 1" = 20'



D SECTION: BERTH 1 DREDGING
SCALE: 1" = 20'

- NOTES:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WILL BE +1.0 FT. PAYABLE OVERDREDGE ALLOWANCE FOR ALL OTHER AREAS IS +0.5 FT UNLESS OTHERWISE NOTED ON DRAWINGS.
 3. DO NOT PERFORM EXCESSIVE DREDGING AT TOE OF CUT OR IN SLOPE AREAS.
 4. CONTRACTOR SHALL COMPLETE DREDGING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
 5. CONTRACTOR SHALL REMOVE SLOUGH MATERIAL (AS APPLICABLE) AT FACE OF DOCK AS PART OF REQUIRED DREDGING WORK. ANTICIPATED SLOUGH VOLUME IS INCLUDED IN THE BID ITEM FOR REQUIRED DREDGING.
 6. NO UNDER-PIER DREDGING WILL BE PERFORMED.

RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
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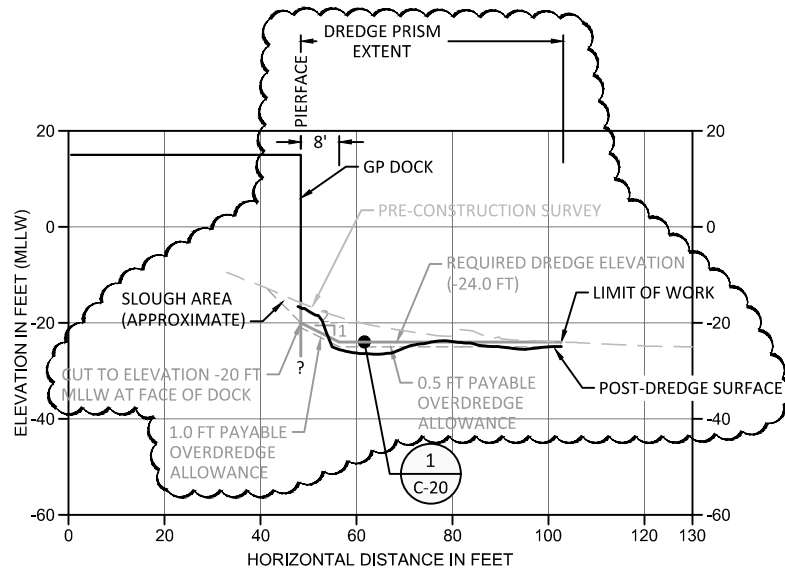
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

BST DREDGING CROSS-SECTIONS

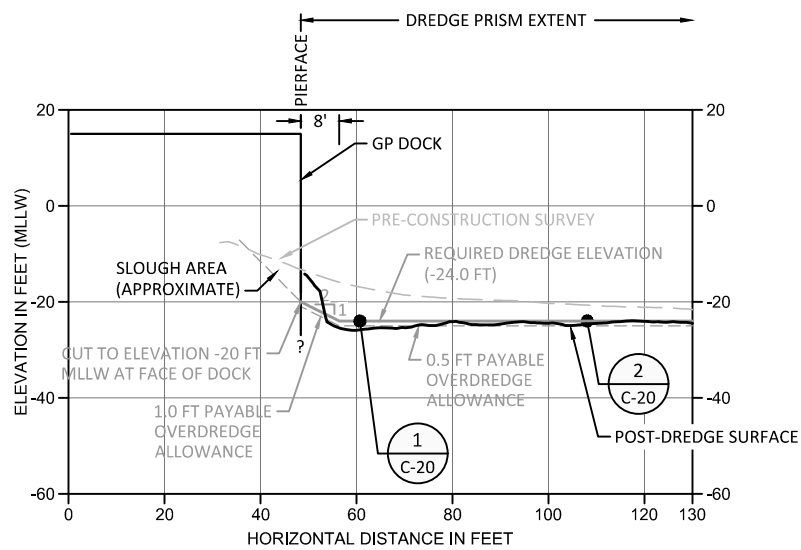
C-8

SHEET NO. 43 OF 126

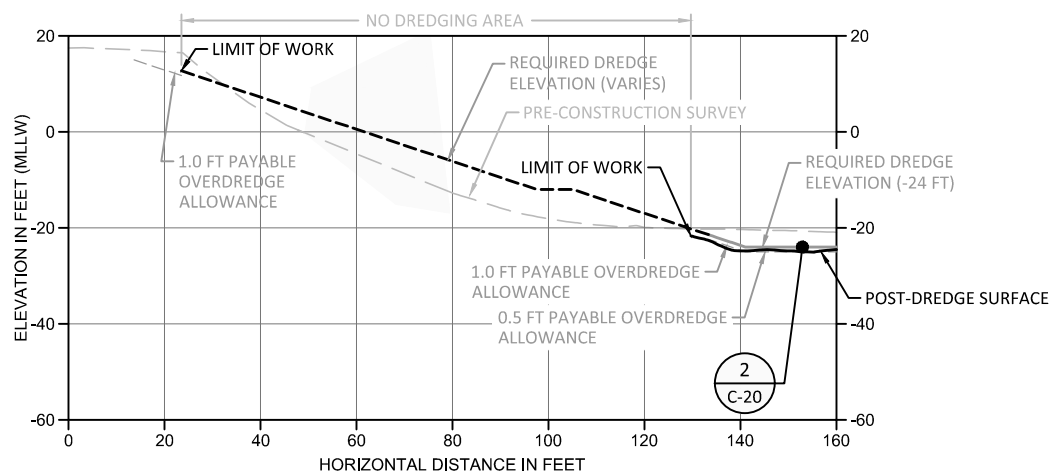
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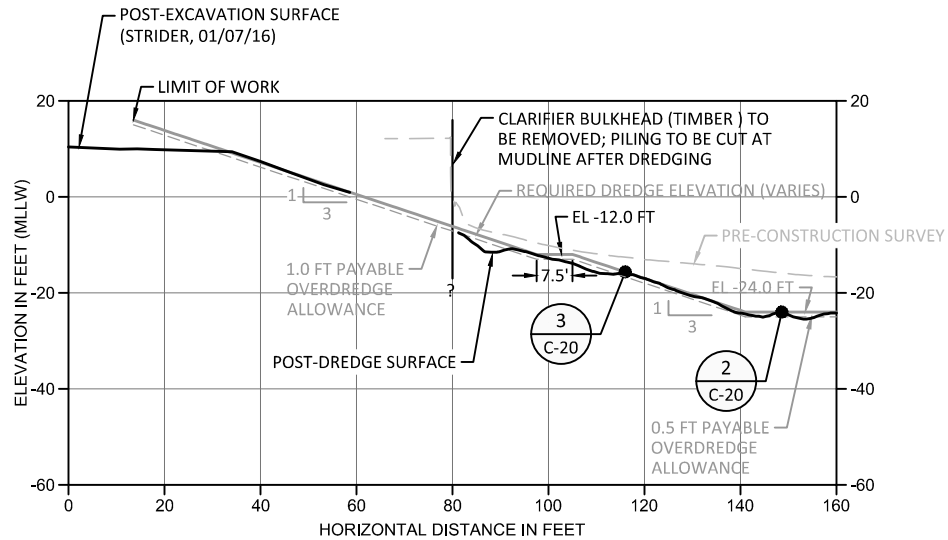
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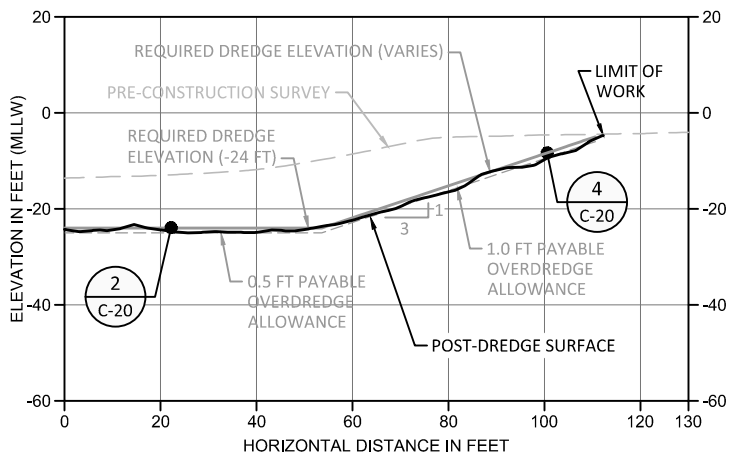
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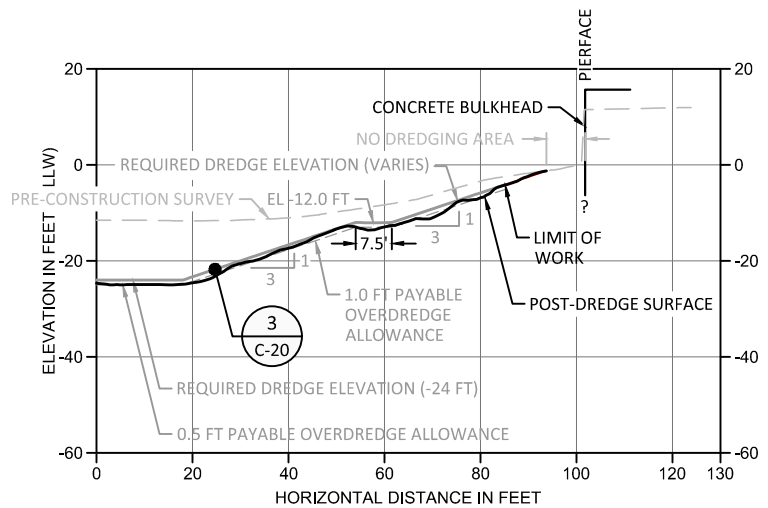
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H SECTION
C-3 SCALE: 1" = 20'



I SECTION
C-3 SCALE: 1" = 20'



J SECTION
C-3 SCALE: 1" = 20'

- NOTES:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WILL BE +1.0 FT. PAYABLE OVERDREDGE ALLOWANCE FOR ALL OTHER AREAS IS +0.5 FT UNLESS OTHERWISE NOTED ON DRAWINGS.
 3. DO NOT PERFORM EXCESSIVE DREDGING AT TOE OF CUT OR IN SLOPE AREAS.
 4. CONTRACTOR SHALL COMPLETE DREDGING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
 5. CONTRACTOR SHALL REMOVE SLOUGH MATERIAL (AS APPLICABLE) AT FACE OF DOCK AS PART OF REQUIRED DREDGING WORK. ANTICIPATED SLOUGH VOLUME IS INCLUDED IN THE BID ITEM FOR REQUIRED DREDGING.
 6. NO UNDER-PIER DREDGING WILL BE PERFORMED.

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

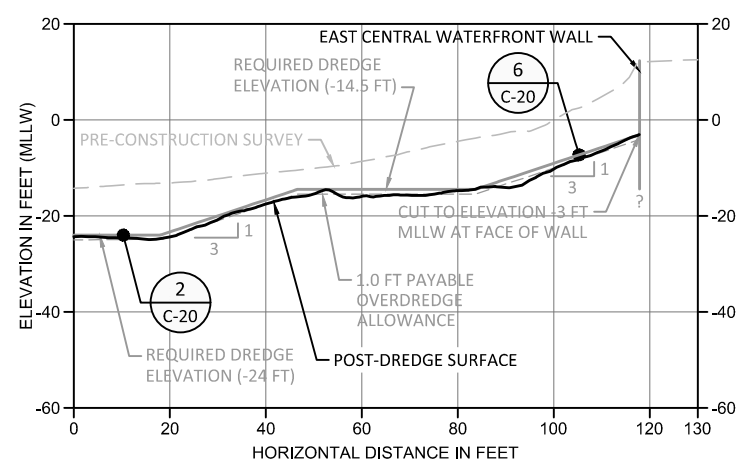
INNER WATERWAY DREDGING CROSS-SECTIONS

C-9

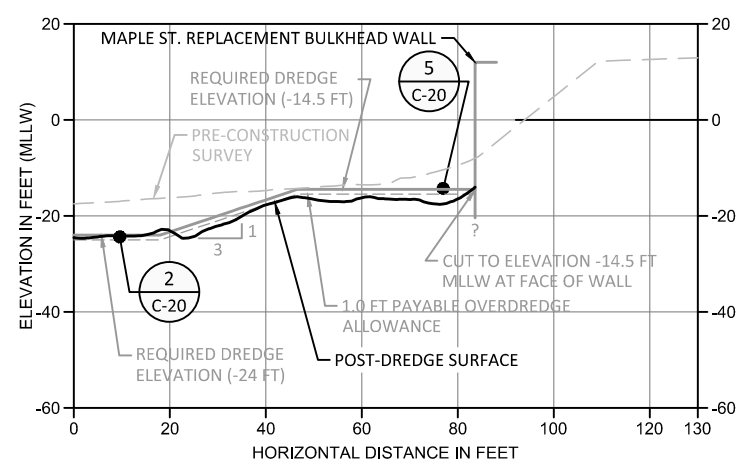
SHEET NO. 44 OF 126

ONE INCH
AT FULL SIZE, IF NOT ONE
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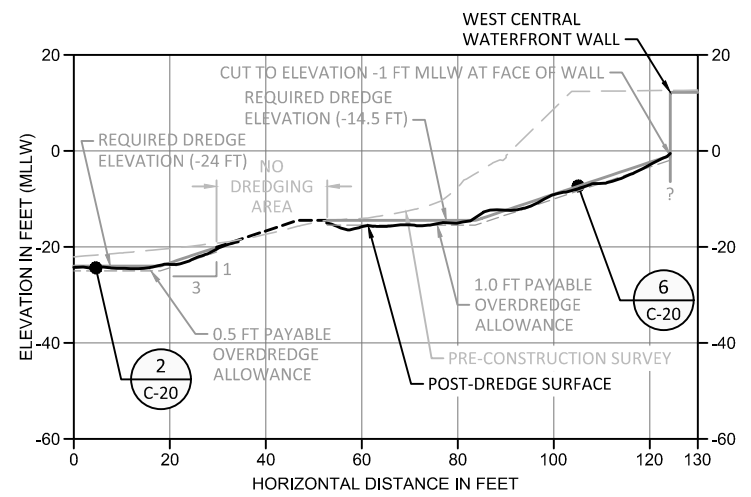
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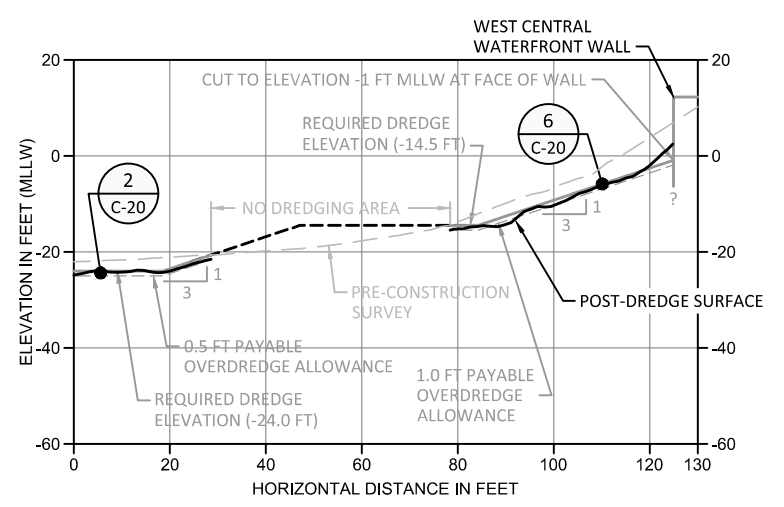
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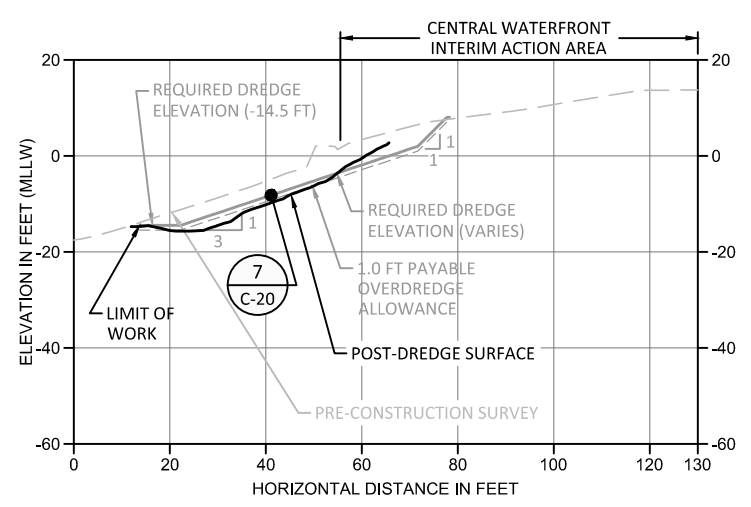
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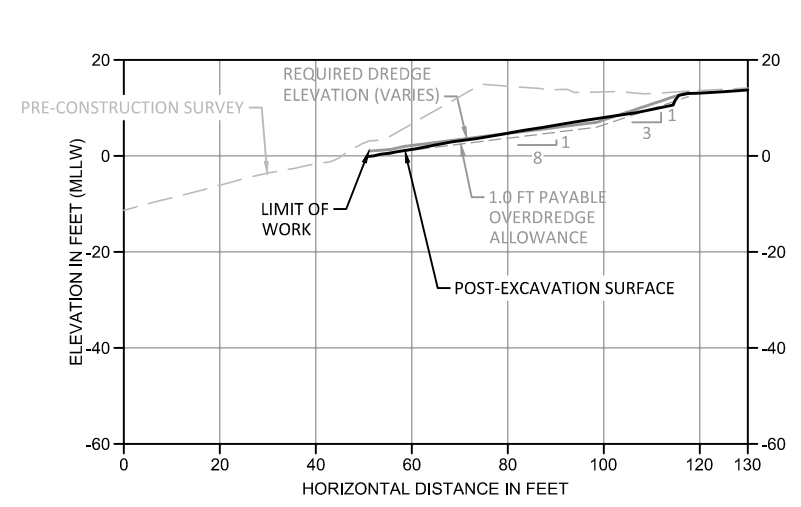
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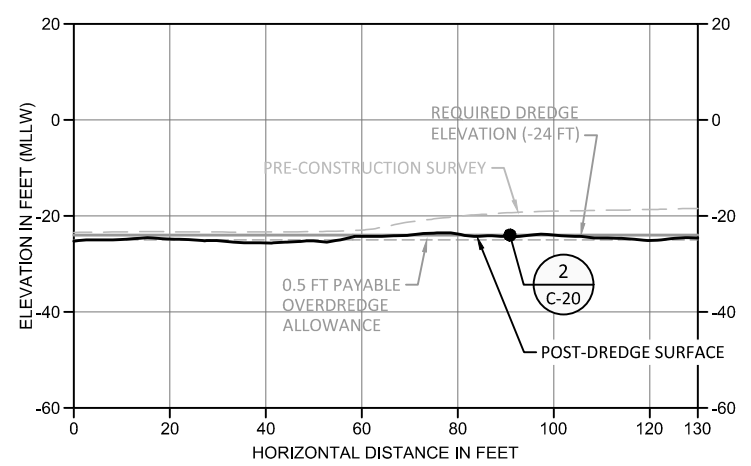
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O SECTION
C-3 SCALE: 1" = 20'



P SECTION
C-3 SCALE: 1" = 20'



Q SECTION
C-3 SCALE: 1" = 20'

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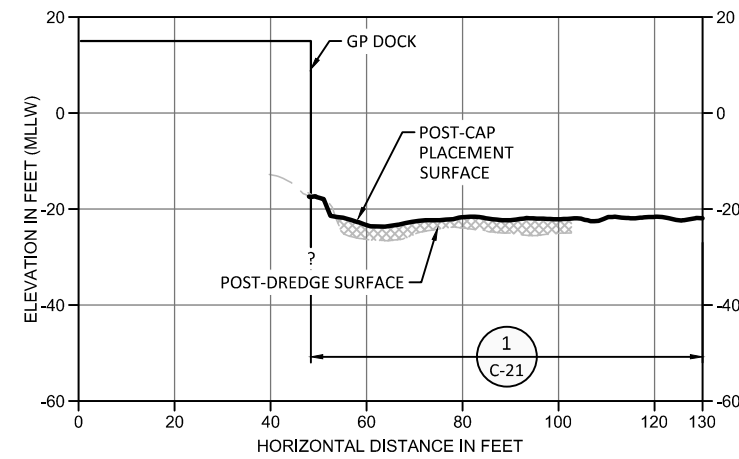
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

INNER WATERWAY DREDGING CROSS-SECTIONS

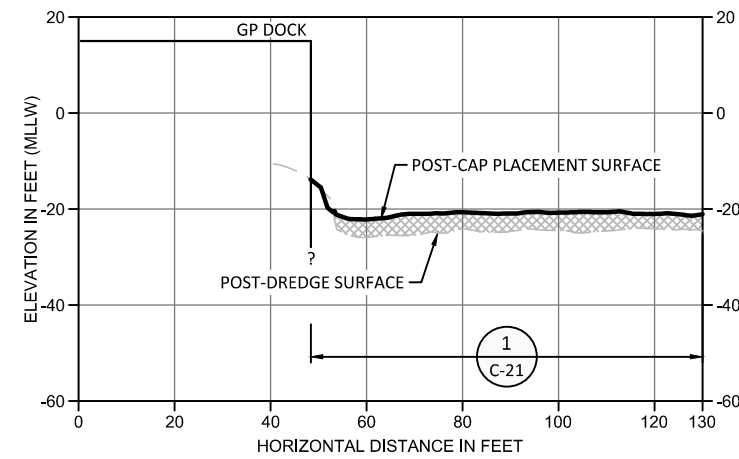
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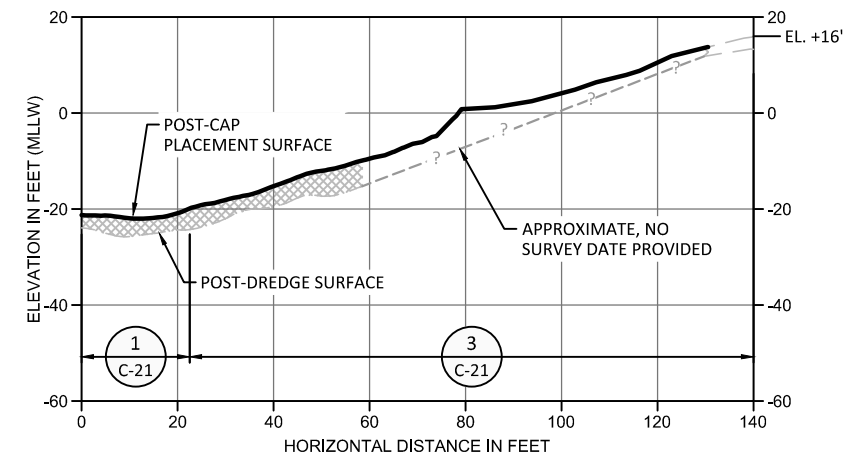
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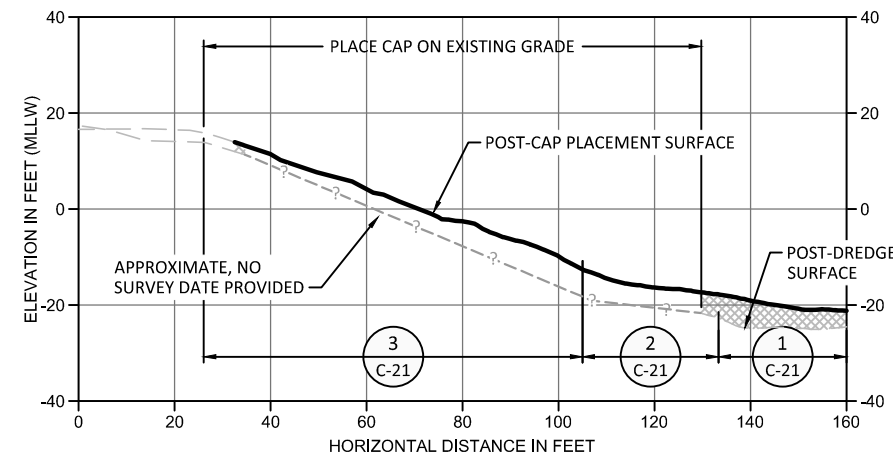
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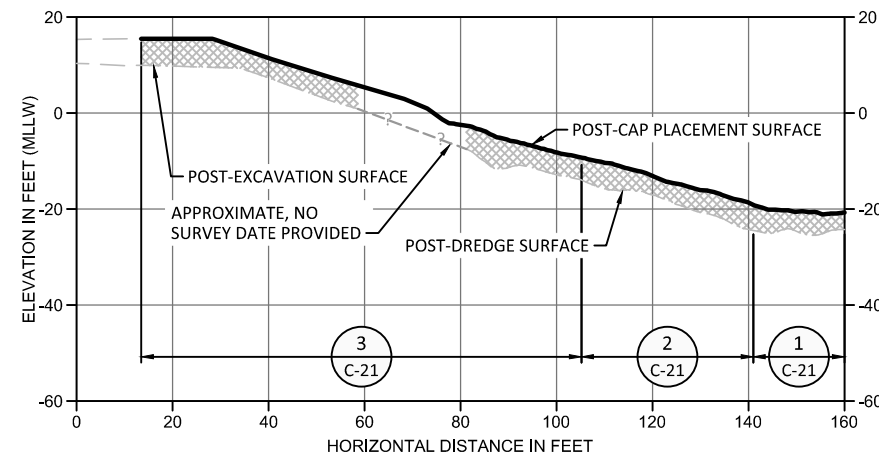
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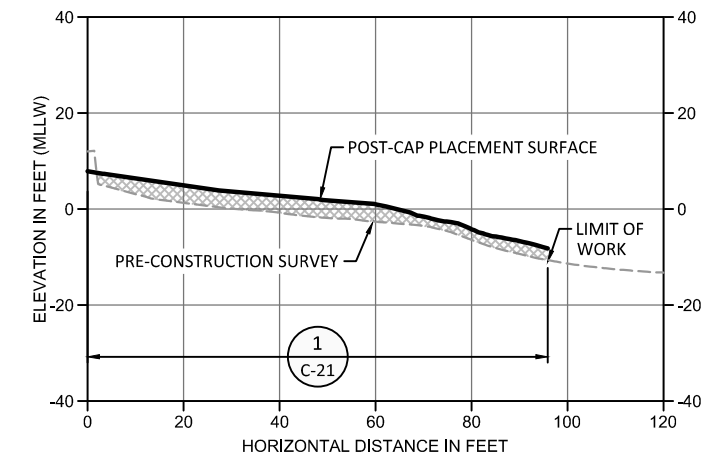
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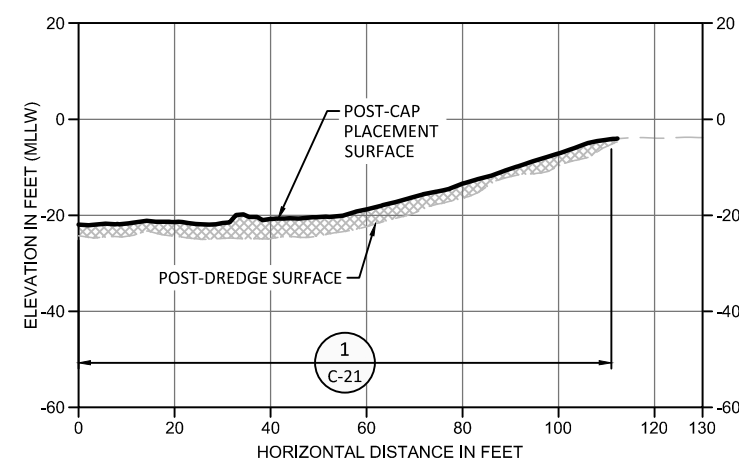
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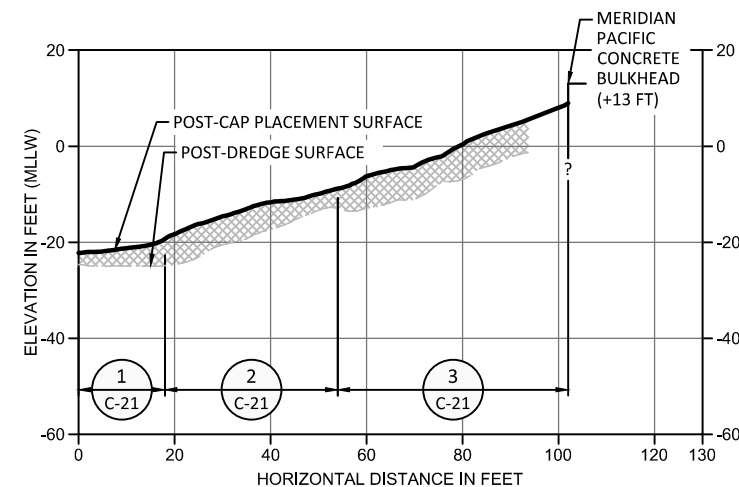
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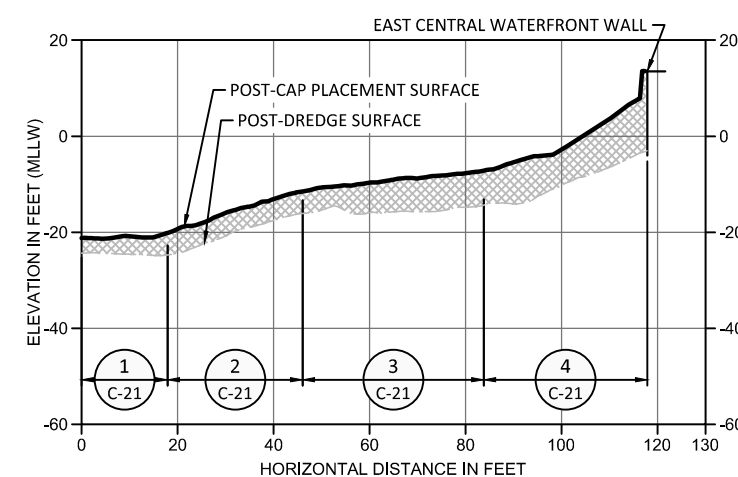
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X SECTION
C-5,5.1 SCALE: 1" = 20'



Y SECTION
C-5,5.1 SCALE: 1" = 20'



Z SECTION
C-5,5.1 SCALE: 1" = 20'

- LEGEND:**
 CAP LAYER
- NOTES:**
- REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 - REFERENCE SHEET C-5.1 FOR PLAN VIEW OF LOCATIONS FOR EACH CAP TYPE
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 - CONTRACTOR SHALL COMPLETE CAPPING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
 - TOP OF CAP IN SECTIONS REPRESENT THE MAXIMUM ELEVATION FOR CAP PLACEMENT PER THE CONTRACT REQUIREMENTS. MINIMUM CAP THICKNESS REQUIREMENTS AND OVERPLACEMENT ALLOWANCES ARE PRESENTED IN THE SPECIFICATIONS.
 - NO UNDER-PIER PLACEMENT OF CAP MATERIAL WILL BE PERFORMED AS PAR TOF THIS CONTRACT.

RECORD DRAWINGS



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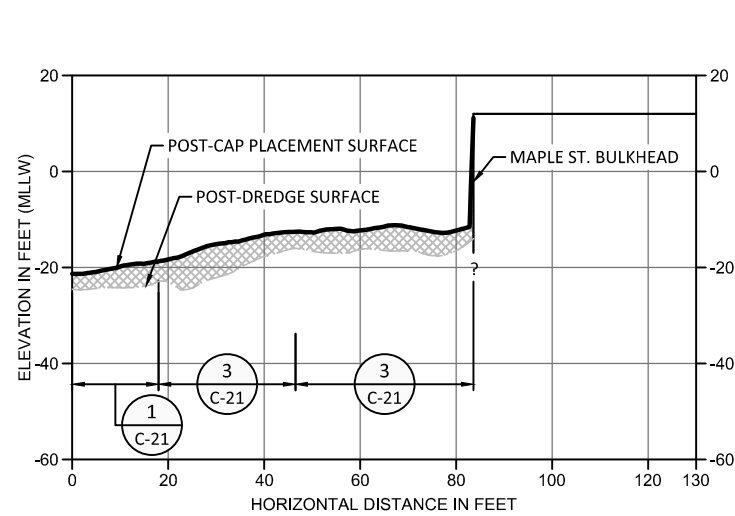
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

INNER WATERWAY CAPPING CROSS-SECTIONS

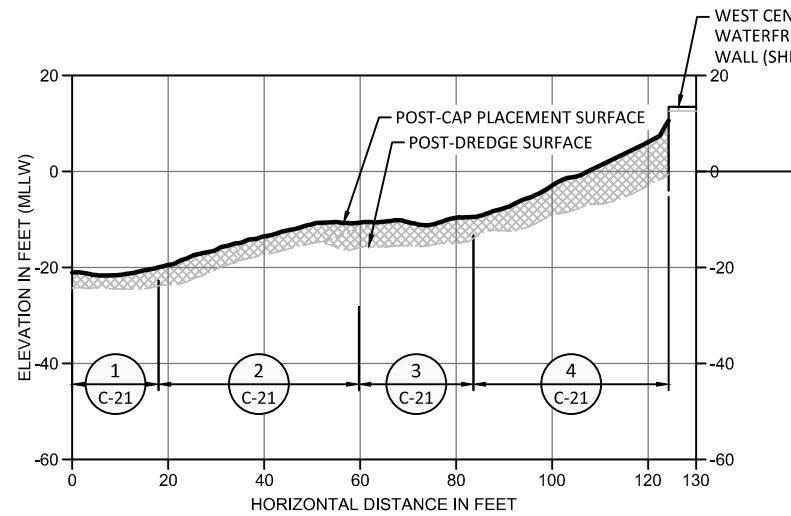
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SHEET NO. 46 OF 126

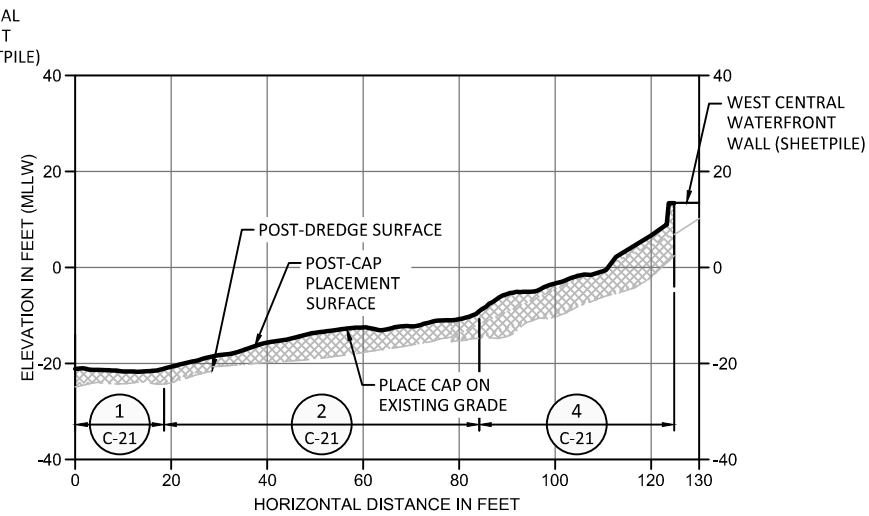
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



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BB SECTION
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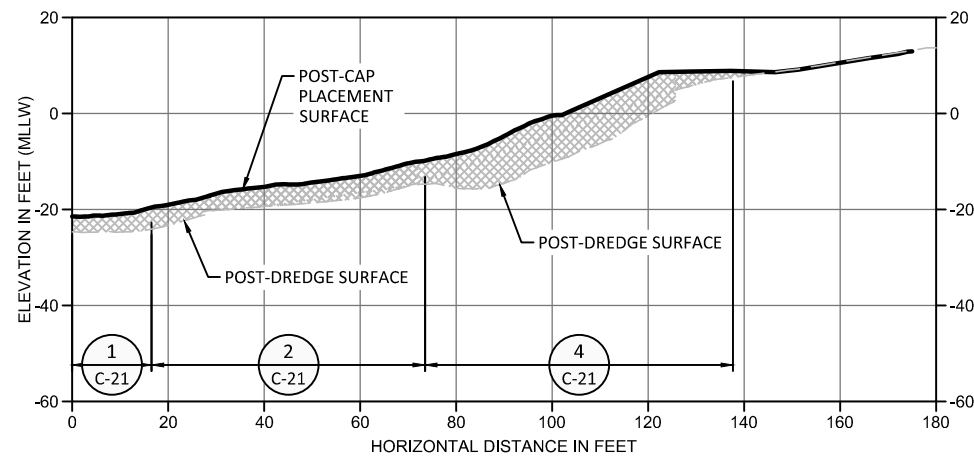
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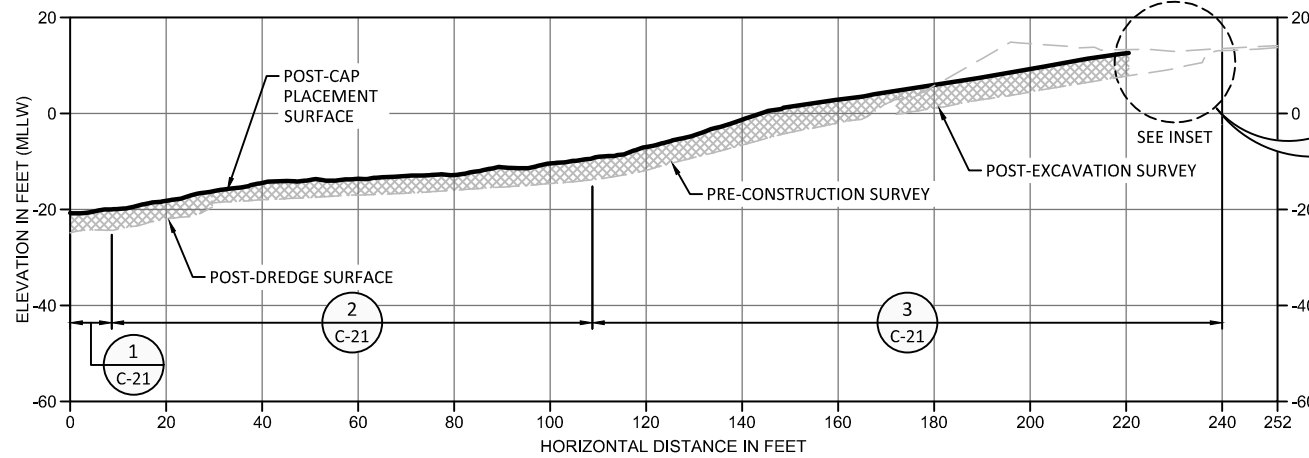
█ CAP LAYER

NOTES:

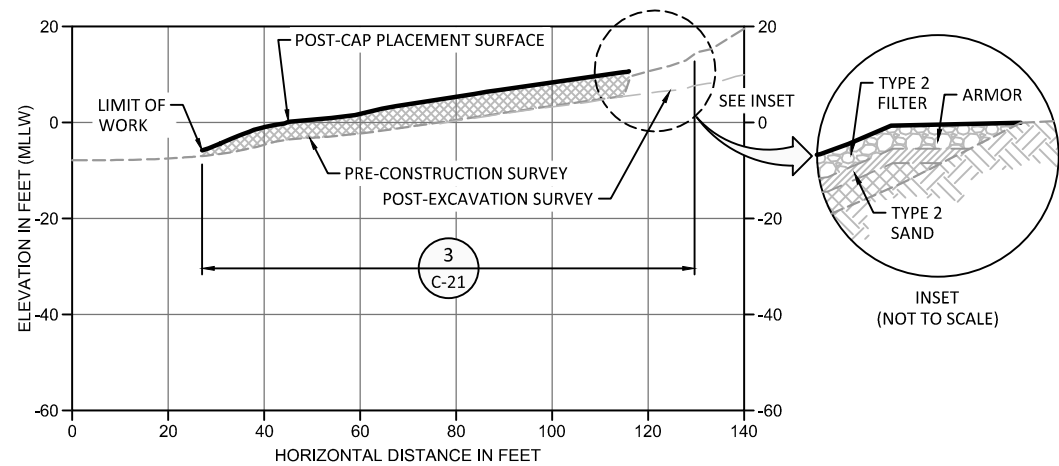
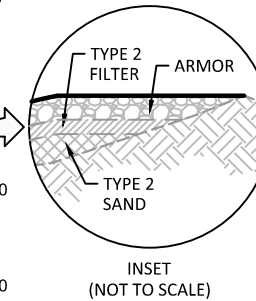
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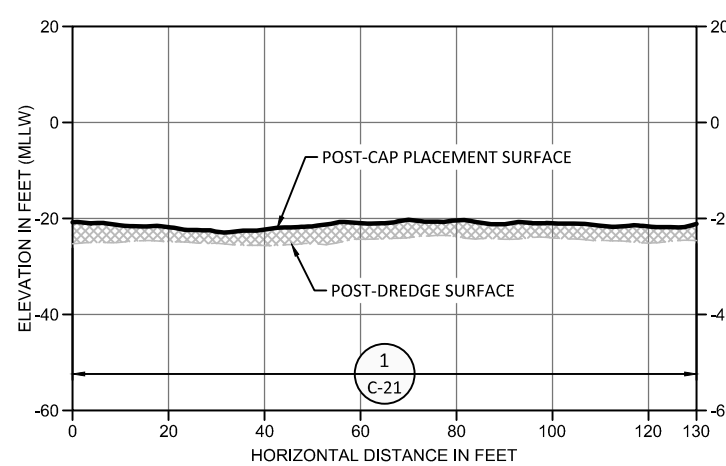
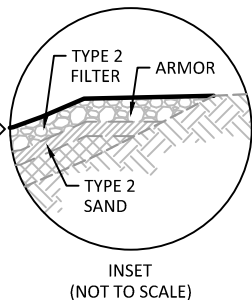
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EE SECTION
C-5.5.1 SCALE: 1" = 20'



FF SECTION
C-5.5.1 SCALE: 1" = 20'



GG SECTION
C-5.5.1 SCALE: 1" = 20'

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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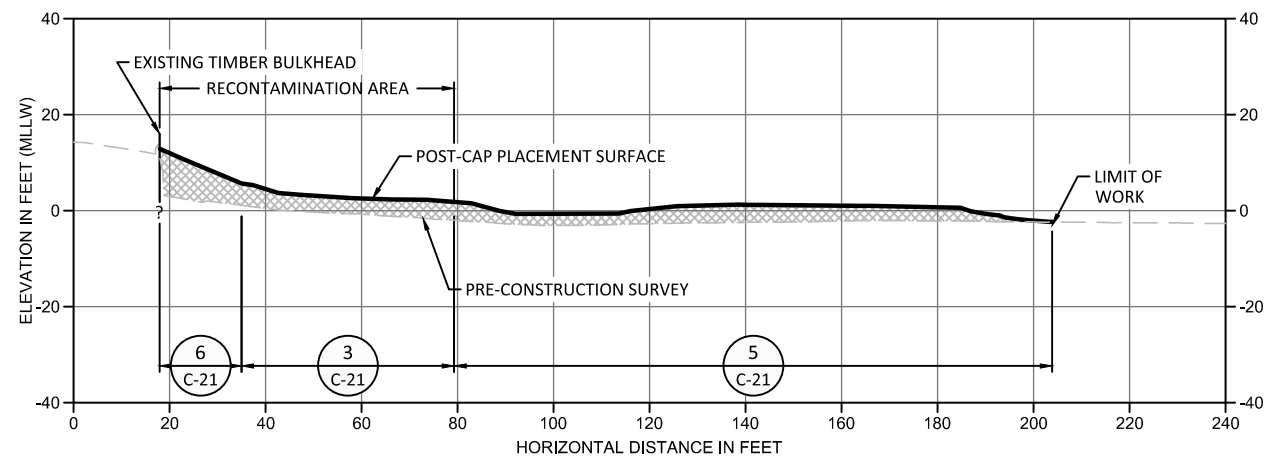
REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
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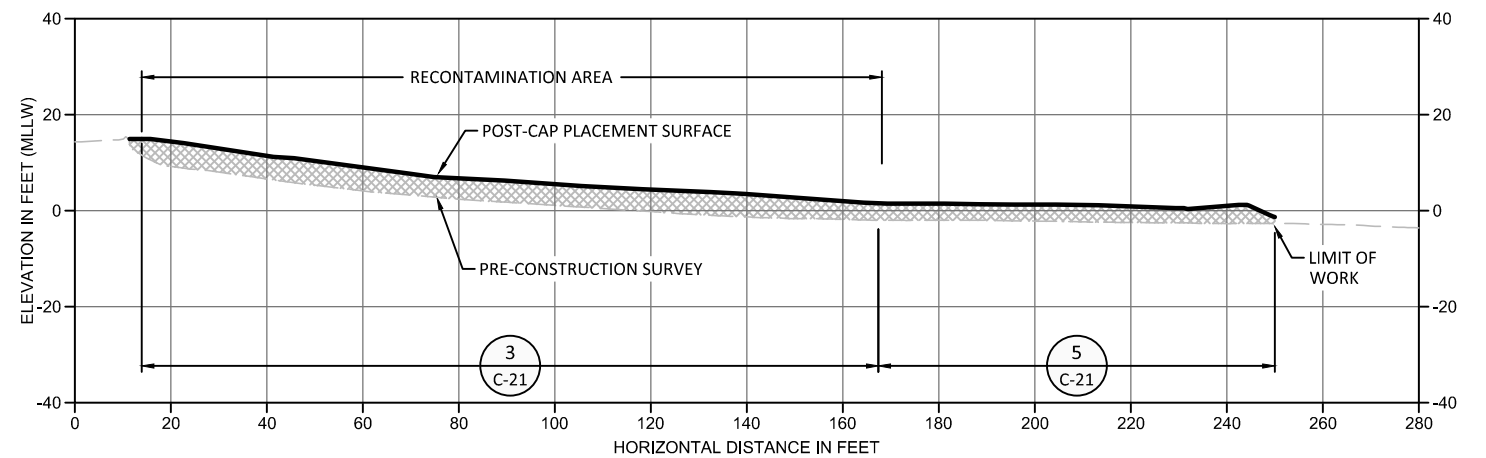
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON
INNER WATERWAY CAPPING CROSS-SECTIONS

C-12
 SHEET NO. 47 OF 126

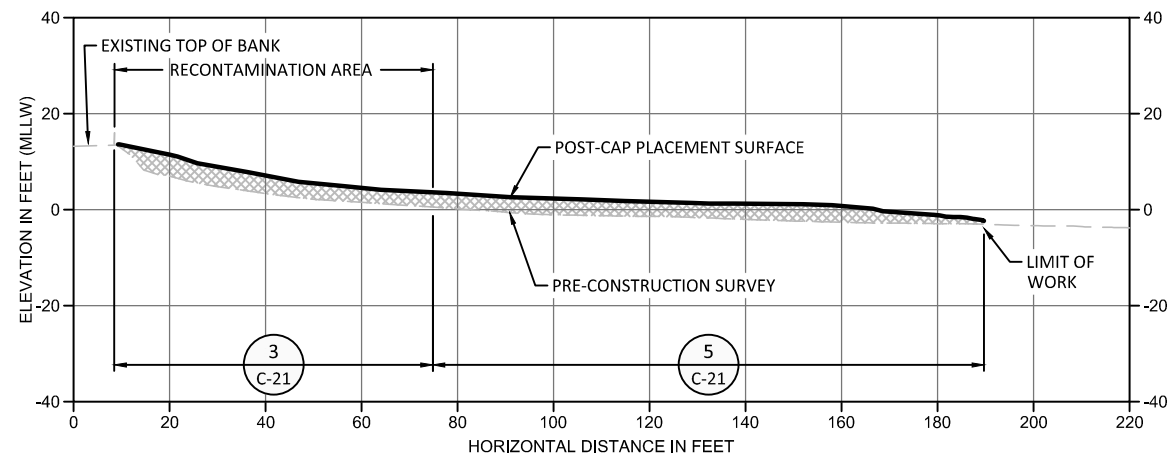
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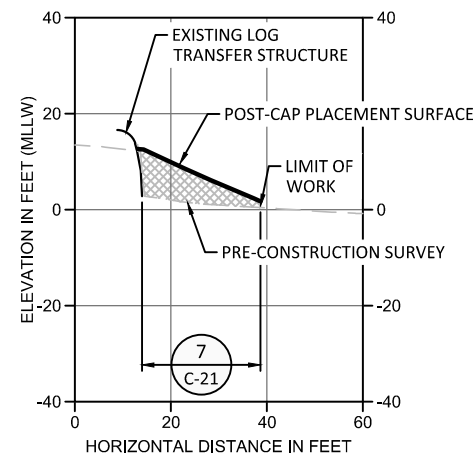
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II SECTION
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JJ SECTION
C-6,6.1 SCALE: 1" = 20'



KK SECTION
C-6,6.1 SCALE: 1" = 20'

LEGEND:
 CAP LAYER

NOTES:

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RECORD DRAWINGS



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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

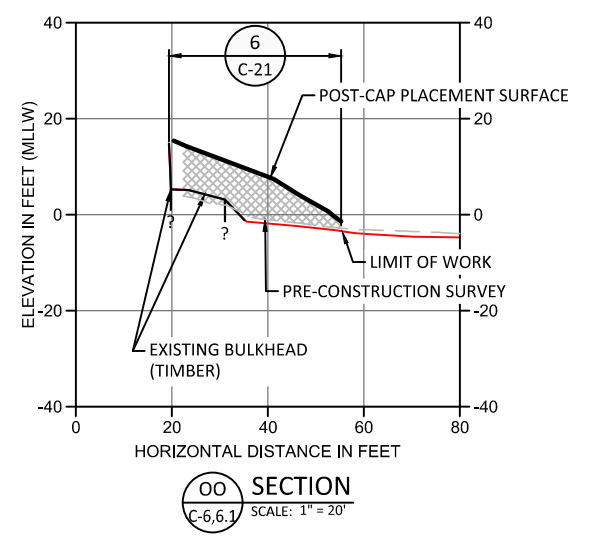
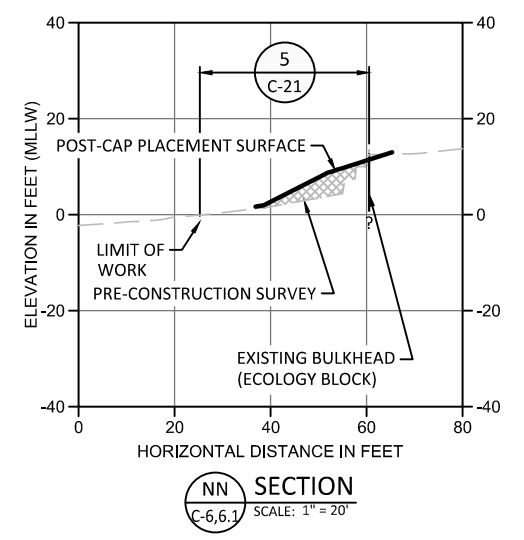
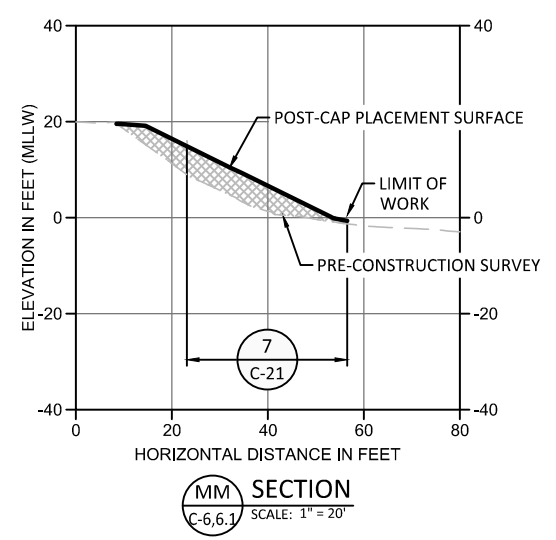
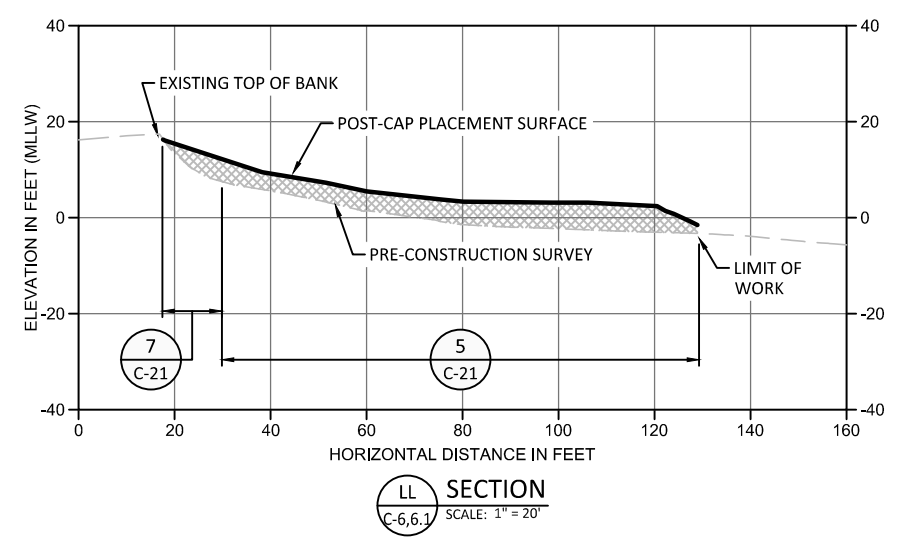
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C-13

SHEET NO. 48 OF 126

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- LEGEND:**
 CAP LAYER
- NOTES:**
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RECORD DRAWINGS



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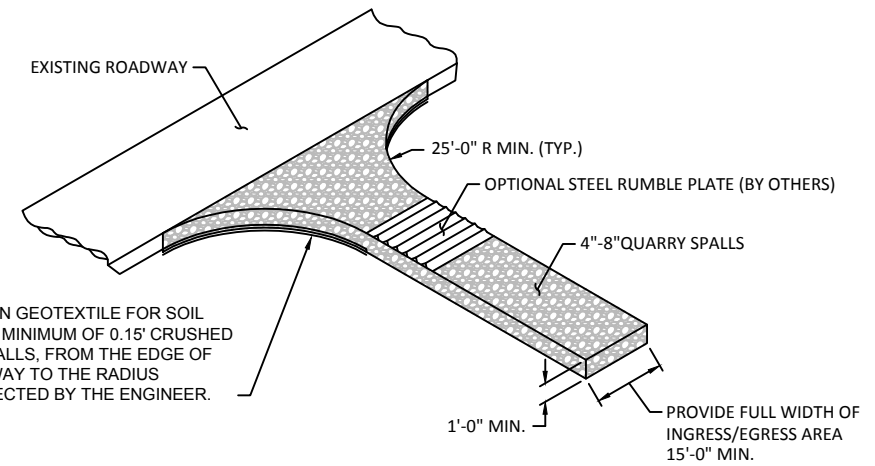
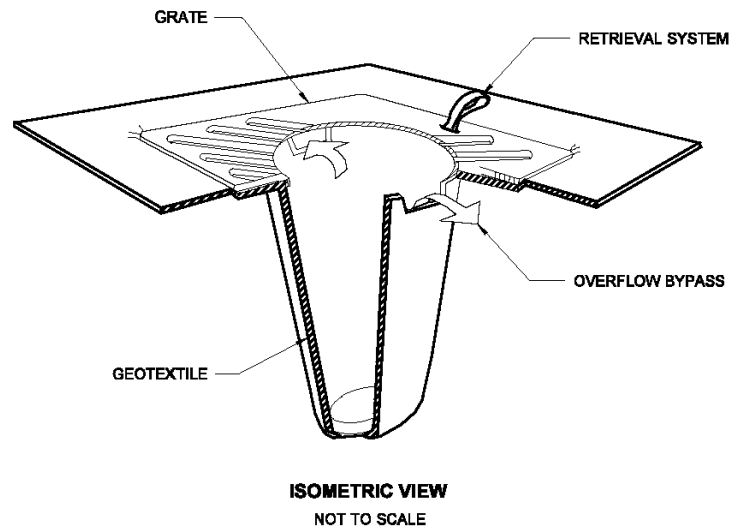
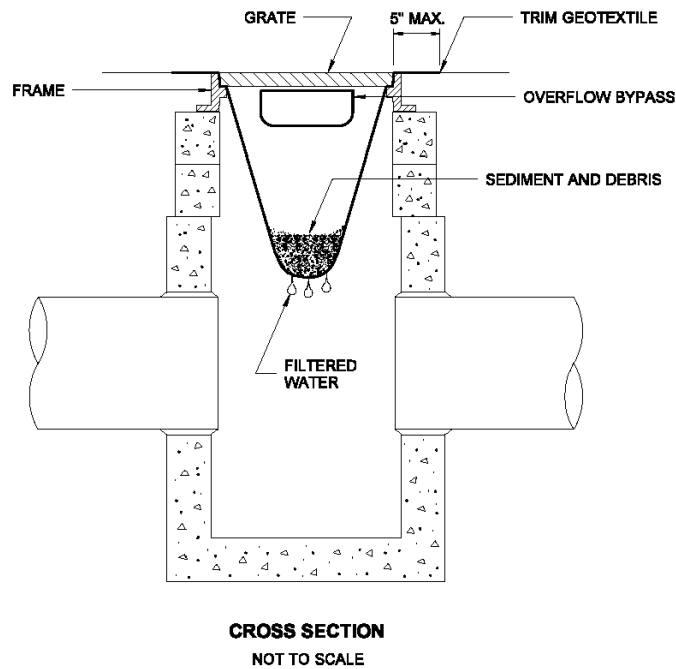
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**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

LOG POND CAPPING CROSS-SECTIONS

C-14

SHEET NO. 49 OF 126



NOTES ON CATCH BASIN INSERT:

1. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATION 8-01.3(15)
2. SIZE THE BELOW GRATE INLET DEVICE (BGID) FOR THE STORM WATER STRUCTURE IT WILL SERVICE
3. THE BGID SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS)
4. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BGID SYSTEM WITHOUT SPILLING THE COLLECTED MATERIAL.

1 DETAIL: CATCH BASIN PROTECTION
SCALE: NTS

GENERAL NOTES:

1. EXAMPLES SHOWN ARE FOR CONTRACTOR INFORMATION ONLY AND INTENDED TO SHOW EXAMPLE BEST MANAGEMENT PRACTICES. DESIGN AND OPERATIONS OF STOCKPILE MANAGEMENT AND OFFLOADING OPERATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR. COMPLY WITH ALL CONTRACT DOCUMENTS, ENVIRONMENTAL MANAGEMENT PLAN, AND THE FEDERAL, STATE AND LOCAL PERMIT REQUIREMENTS FOR OFFLOAD FACILITY, AND STOCKPILING.
2. DRAWINGS SHOW POTENTIAL STAGING AND STOCKPILE AREA LOCATIONS ADJACENT TO THE WHATCOM WATERWAY. THE CONTRACTOR MUST COORDINATE DIRECTLY WITH THE PORT IF THEY DESIRE TO USE A DIFFERENT FACILITY.
3. STAGING AND STOCKPILE AREAS MUST, AT A MINIMUM, MEET THE REQUIREMENTS OF THE SPECIFICATIONS.
4. THE STAGING AND STOCKPILE AREA OPERATOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL PERMITS FOR FACILITY OPERATIONS, INCLUDING, BUT NOT LIMITED TO ALL STAGING AND STOCKPILE AREA STORMWATER AND DEWATERING DISCHARGES.
5. SEDIMENT SHALL NOT BE PLACED MORE THAN 4- FEET HIGH IMMEDIATELY AGAINST ECOLOGY BLOCK WALL.
6. DO NOT STACK SEDIMENT AT A SLOPE GREATER THAN 5H:1V ADJACENT TO ECOLOGY BLOCK WALL.
7. SPILLS THAT OCCUR DURING OFFLOADING AND TRANSFER SHALL DRAIN ONTO BARGE OR WITHIN A CONTAINED UPLAND AREA. SPILL PROTECTION SHALL BE CONSTRUCTED FROM IMPERMEABLE MATERIAL.
8. CLEAN TRANSLOAD FACILITY DAILY.
9. DETAILS SHOW SEDIMENT STACKED GREATER THAN 4 FEET HIGH FOR ILLUSTRATIVE PURPOSES ONLY. DEPICTION OF STACKED SEDIMENT DOES NOT INDICATE POTENTIAL WORKABILITY AND FLOW BEHAVIOR OF DREDGED MATERIAL, AND SHALL NOT BE USED BY THE CONTRACTOR AS BASIS FOR ANTICIPATING DREDGE MATERIAL CONDITIONS DURING THE WORK.
10. DETAILS SHOWN ARE FOR CONTRACTOR REFERENCE. DESIGN AND CONSTRUCTION OF CONTAINMENT SILT CURTAINS (IF NEEDED) AND OFFLOADING OPERATIONS TO BE PERFORMED BY CONTRACTOR.

11. TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) FEATURES SHALL BE INSTALLED TO PREVENT RUNOFF FROM THE DEWATERED SEDIMENT FROM ENTERING ADJACENT SURFACE WATER BODY. THE NEED FOR THESE FEATURES, AND THEIR LOCATION, SHALL BE DETERMINED DURING CONSTRUCTION, BASED ON THE ACTUAL LOCATION OF THE OFFLOADING AND TEMPORARY STOCKPILE AREAS.
12. TESC FEATURES SHALL BE USED BETWEEN ALL POTENTIAL SOURCES OF RUNOFF AND ADJACENT SURFACE WATER BODIES WHERE THE SURFACE WATER IS DOWNSLOPE OF THE OFFLOADING AND STAGING AND STOCKPILE AREAS.
13. TESC FEATURES SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER AND COMPLY WITH WSDOT HIGHWAY RUNOFF MANUAL, MARCH 2004 (OR EQUIVALENT), AVAILABLE AT: [HTTP://WWW.WSDOT.WA.GOV/FASC/ENGINEERINGPUBLICATIONS/MANUALS/HIGHWAYRUNOFF2004.PDF](http://www.wsdot.wa.gov/fasc/engineeringpublications/manuals/highwayrunoff2004.pdf)

14. A STABILIZED ENTRANCE, SUCH AS THE DETAIL SHOWN, SHALL BE CONSTRUCTED, IF NECESSARY, TO PREVENT TRACKING OF SEDIMENT ONTO PUBLIC ROADWAYS AND TO PREVENT EROSION AND RUNOFF FROM ACCESS ROUTES.
15. CATCH BASIN INSERTS SHALL BE INSTALLED IN ALL CATCH BASINS IN VICINITY OF STAGING AND STOCKPILE AREA IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATION

2 DETAIL: STABILIZED ENTRANCE - TYP.
SCALE: NTS

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BELLINGHAM, WASHINGTON**

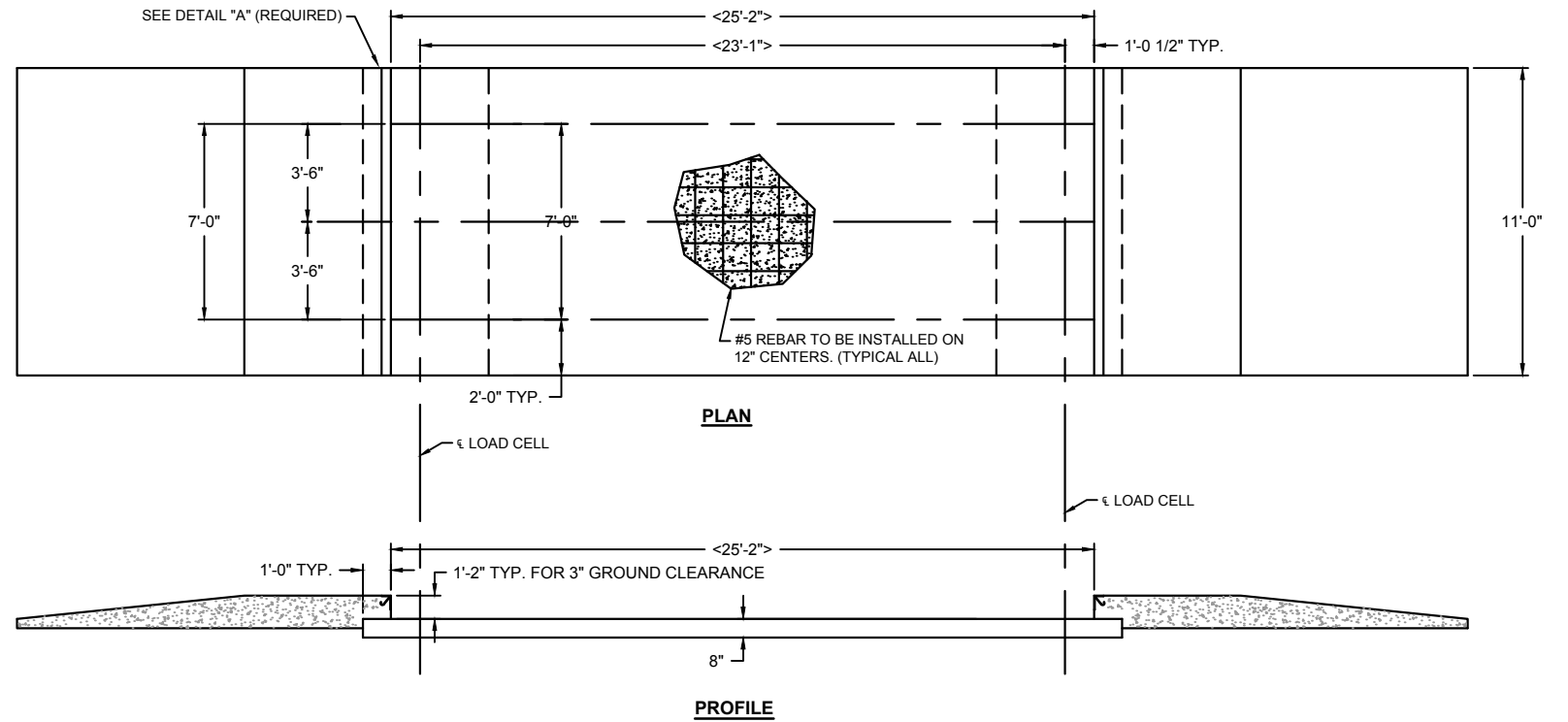
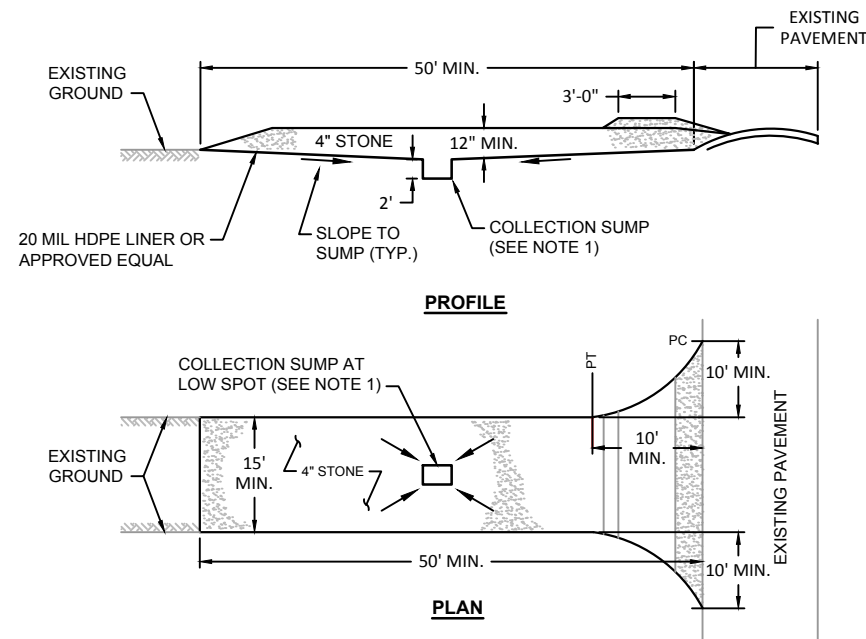
TESC DETAILS 1 OF 2

C-15

SHEET NO. 50 OF 126

RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



TRUCK WASH STATION NOTES:

- VEHICLES SHALL BE BRUSH CLEANED TO REMOVE SOIL/DEBRIS PRIOR TO EXITING. IF, AS DETERMINED BY THE ENGINEER, BRUSH CLEANING IS NOT EFFECTIVE IN DECONTAMINATING VEHICLES, THEN THE CONTRACTOR SHALL FLUID WASH THE VEHICLES. WASH STATION SHALL BE CONSTRUCTED WITH A 20 MIL HDPE LINER SYSTEM TO DRAIN TO 2' DEEP HDPE LINED COLLECTION SUMP. DECONTAMINATION WATER IN THE COLLECTION SUMP SHALL BE DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS.
- THE TRUCK WASH STATION SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SOIL/DEBRIS ONTO ADJACENT PAVED AREAS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF THE COLLECTION SUMP. ALL SOIL/DEBRIS SPILLED, DROPPED, WASHED OR TRACKED ONTO ADJACENT PAVEMENT MUST BE REMOVED IMMEDIATELY.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
- STONE AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF AT AN APPROPRIATE DISPOSAL FACILITY AT THE CONCLUSION OF THE PROJECT.

NOTES:

- WEIGH SCALE FOUNDATION IS SHOWN AS TYPICAL AND SHALL BE DETERMINED BY THE CONTRACTOR FOR ACCEPTANCE BY THE ENGINEER.
- CHECK STATE REGULATIONS FOR APPROACH RAMP LENGTH (TYPICALLY 10' LEVEL & 25' SLOPING)
- THE FOUNDATION DESIGN (CONCRETE AND REBAR SPECIFICATIONS) SHOWN IS FOR A NATIONWIDE RANGE OF CONDITIONS AND MAY NEED MODIFICATION FOR LOCAL CONDITIONS.

1
-
DETAIL: TRUCK WASH STATION - TYP.
SCALE: NTS

2
-
DETAIL: WEIGH SCALE FOUNDATION- TYP.
SCALE: NTS

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ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

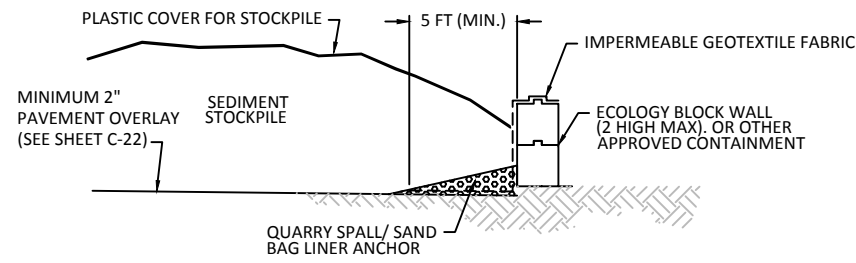
DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

TESC DETAILS 2 OF 2

C-16

SHEET NO. 51 OF 126



STOCKPILE CONTAINMENT

1
-
DETAIL
SCALE: NOT TO SCALE

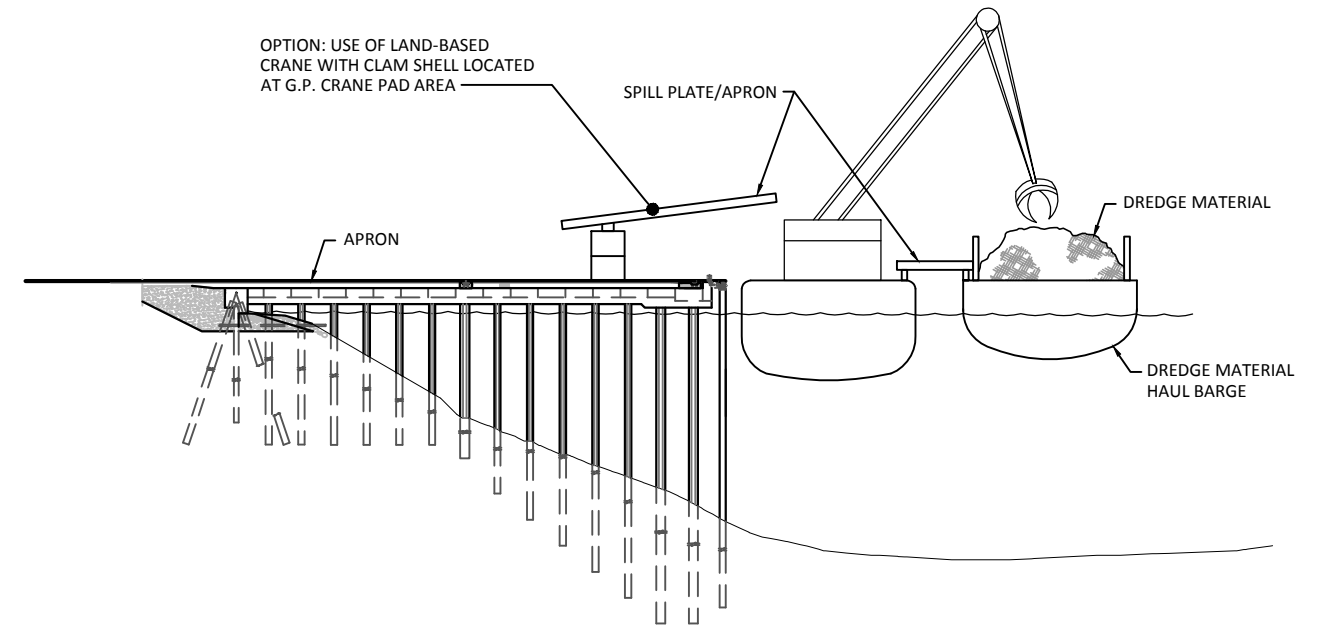
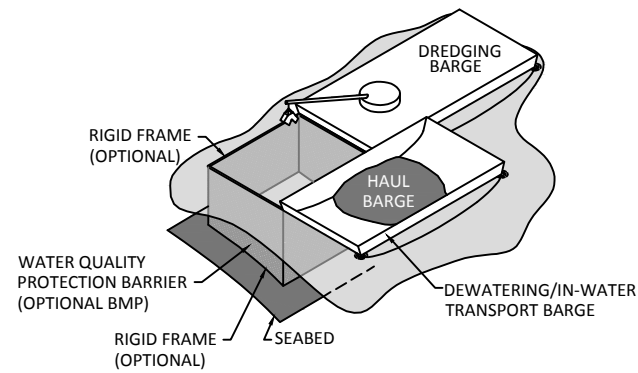


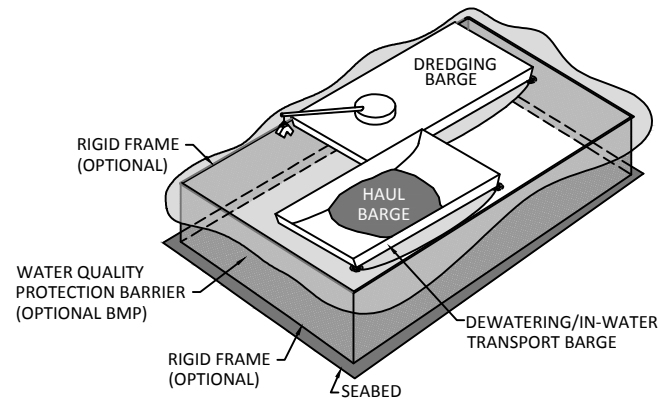
PHOTO 1: EXAMPLE OF OFFLOADING OPERATIONAL CONTROLS

PHOTO 2: EXAMPLE OF OFFLOADING OPERATIONAL CONTROLS



ISOMETRIC VIEW - CONCEPTUAL WATER QUALITY PROTECTION BARRIER ARRANGEMENTS

3
-
DETAIL
SCALE: NOT TO SCALE



ISOMETRIC VIEW - CONCEPTUAL WATER QUALITY PROTECTION BARRIER ARRANGEMENTS

4
-
DETAIL
SCALE: NOT TO SCALE

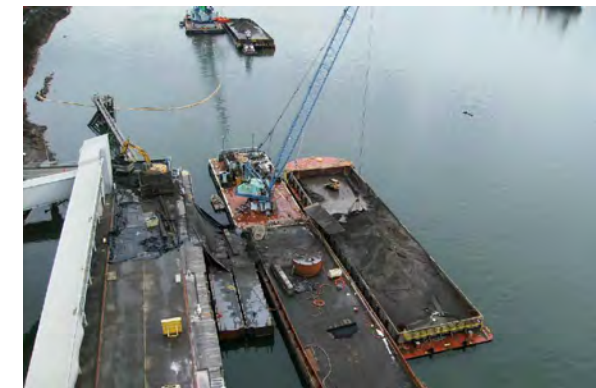


PHOTO 3: EXAMPLE OF OFFLOADING TO TRUCKS OPERATIONAL CONTROLS

OFFLOAD FROM HAUL BARGE

2
-
DETAIL
SCALE: NOT TO SCALE

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



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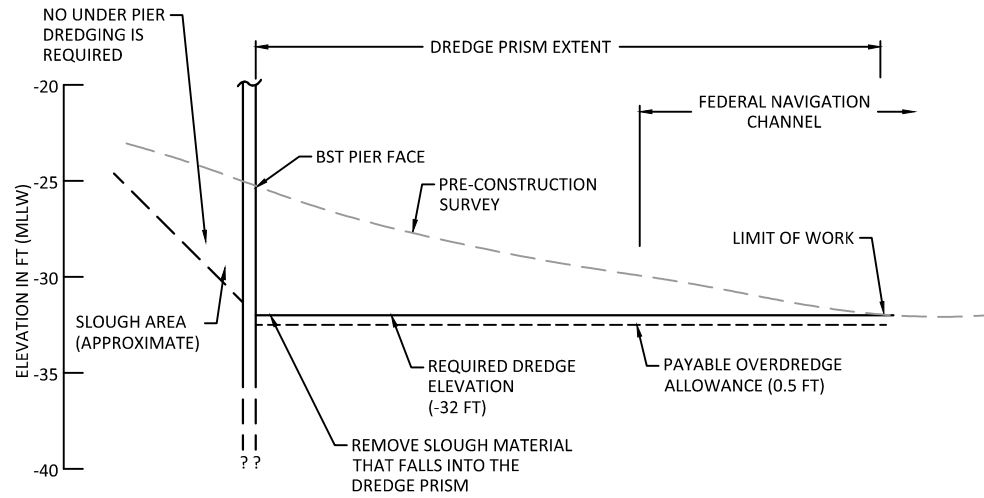
WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

OFFLOADING AND ENVIRONMENTAL SEDIMENT
 MANAGEMENT DETAILS

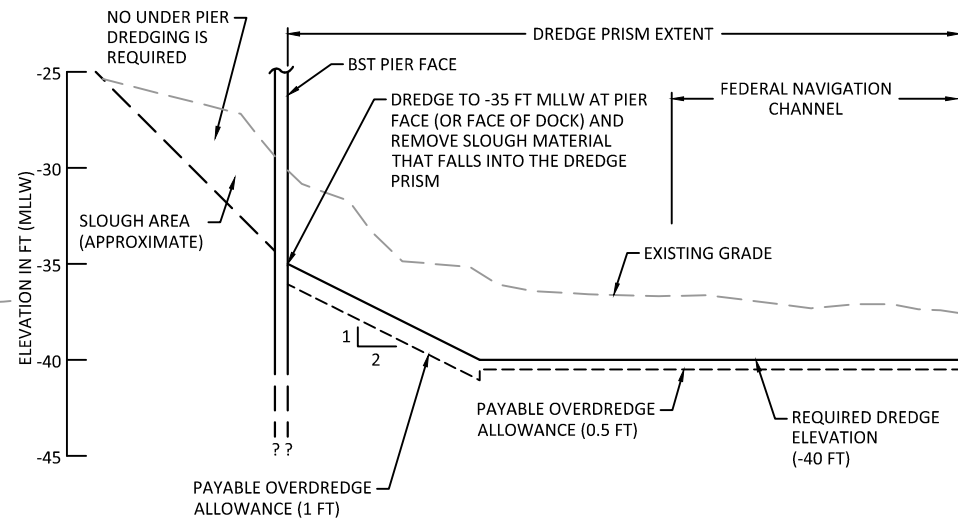
C-17

SHEET NO. 52 OF 126

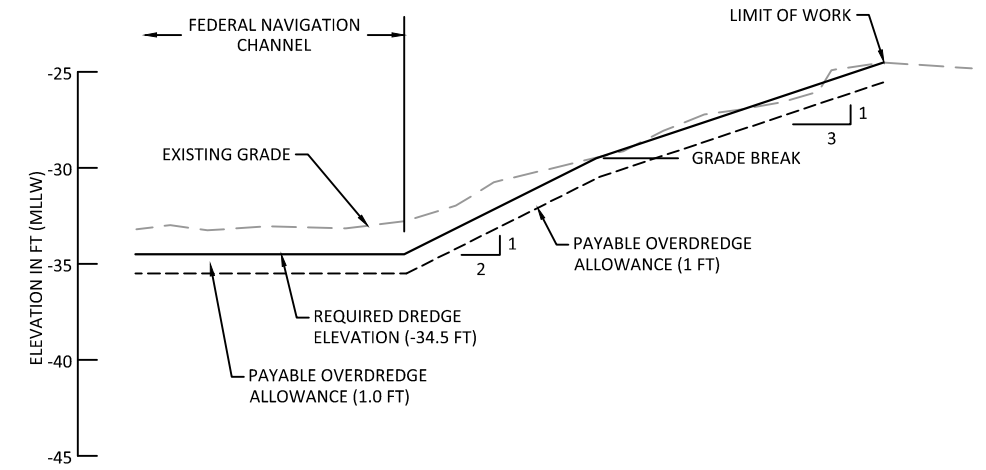
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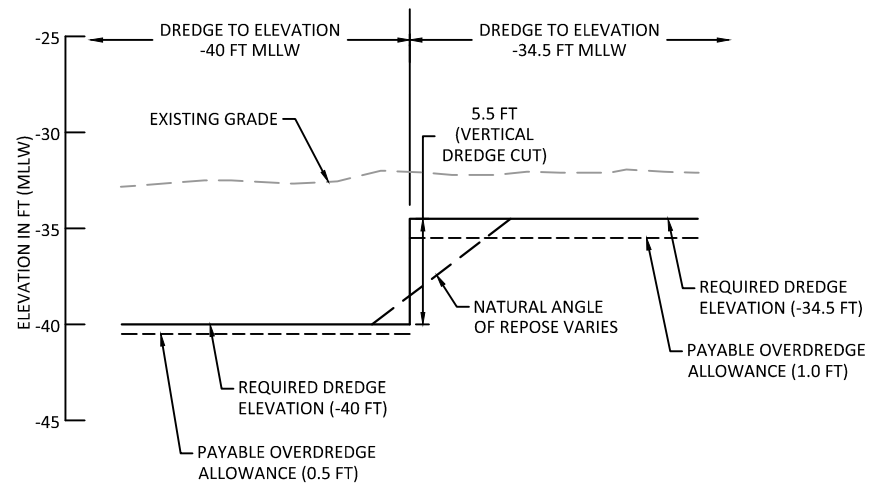
1 **DETAIL: BST BERTH 2 DREDGING**
C-7 SCALE: NTS



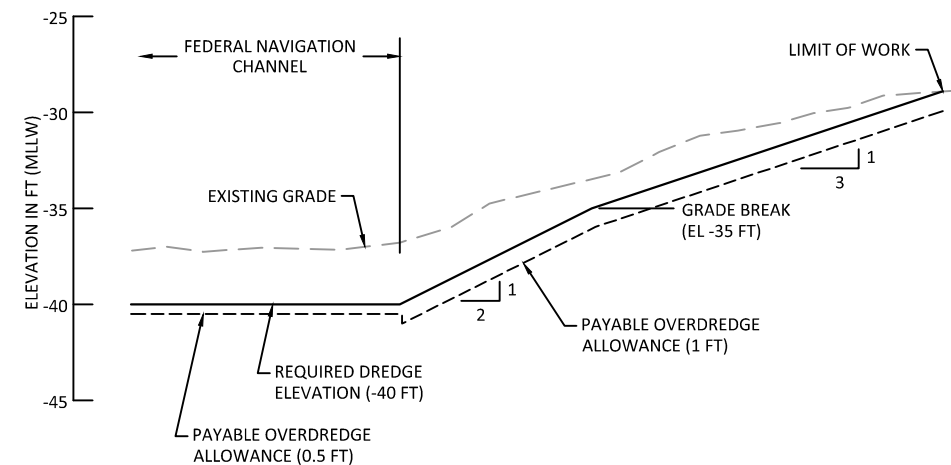
2 **DETAIL: BST BERTH 1 DREDGING**
C-7, C-8 SCALE: NTS



3 **DETAIL: BST DREDGE SIDE SLOPE (NW SLOPE)**
C-7 SCALE: NTS



4 **DETAIL: BST DREDGE ELEVATION CHANGE**
C-7 SCALE: NTS



5 **DETAIL: BST DREDGE SIDE SLOPE (NW SLOPE)**
C-8 SCALE: NTS

- NOTES:
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WILL BE +1.0 FT. PAYABLE OVERDREDGE ALLOWANCE FOR ALL OTHER AREAS IS 0.5 FT UNLESS OTHERWISE NOTED ON DRAWINGS.
 3. DO NOT PERFORM EXCESSIVE DREDGING AT TOE OF CUT OR IN SLOPE AREAS.
 4. CONTRACTOR SHALL COMPLETE DREDGING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
 5. CONTRACTOR SHALL REMOVE SLOUGH MATERIAL (AS APPLICABLE) AT FACE OF DOCK AS PART OF REQUIRED DREDGING WORK. ANTICIPATED SLOUGH VOLUME IS INCLUDED IN THE BID ITEM FOR REQUIRED DREDGING.
 6. NO UNDER-PIER DREDGING WILL BE PERFORMED.

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

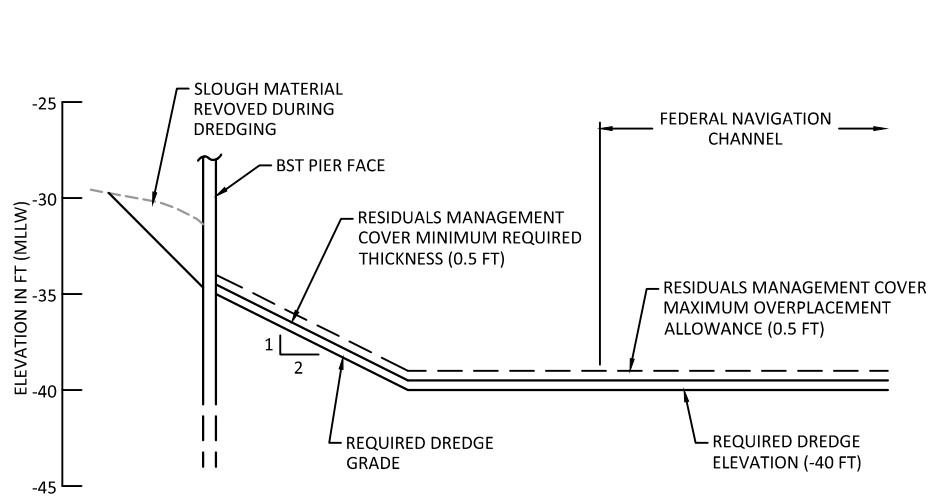
BST DREDGING DETAILS

C-18

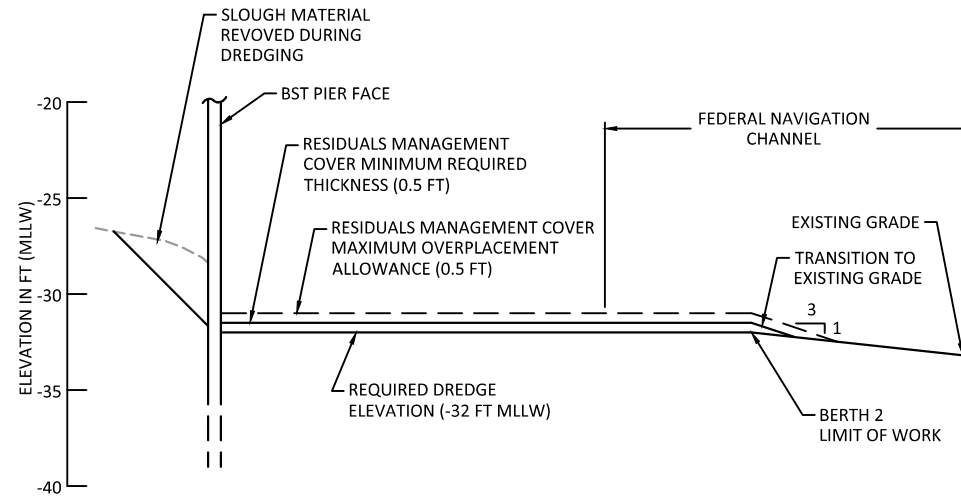
SHEET NO. 53 OF 126

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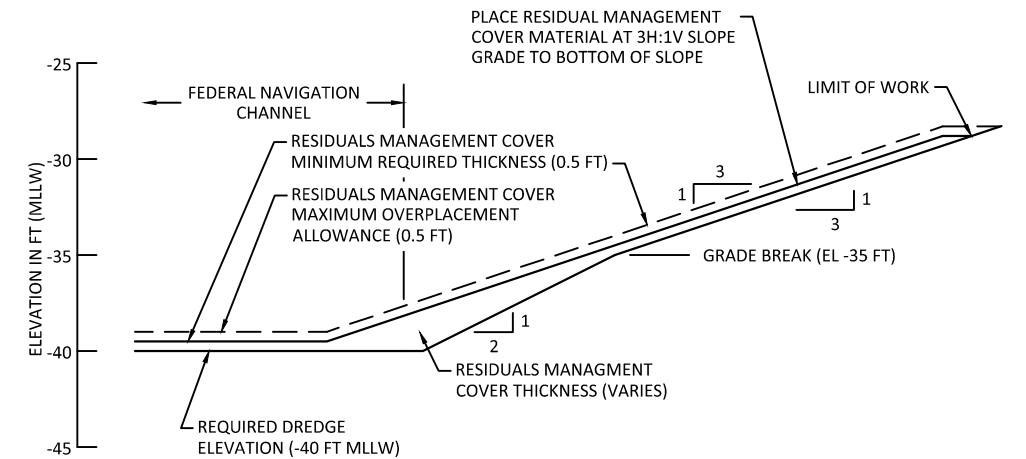
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



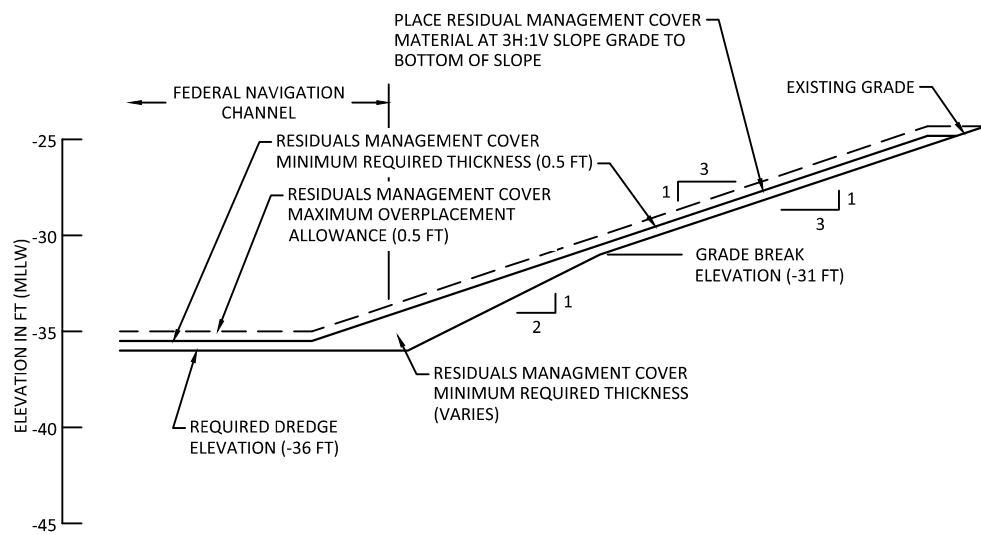
1 DETAIL: BST BERTH 1
C-4.4.1 SCALE: NTS



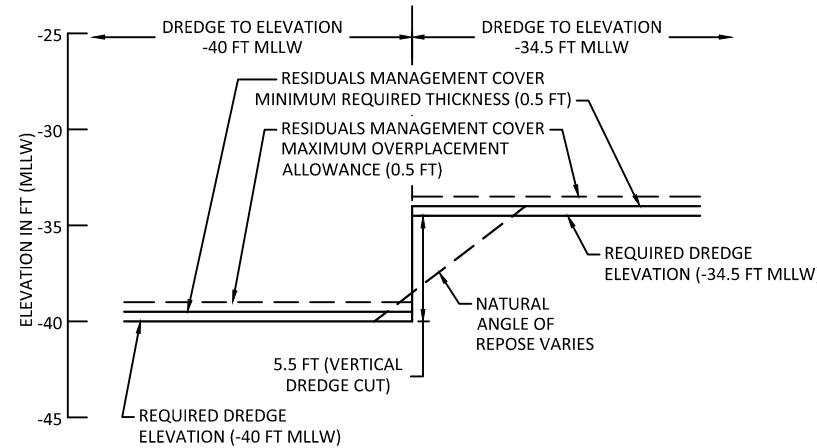
2 DETAIL: BST BERTH 2
C-4.4.1 SCALE: NTS



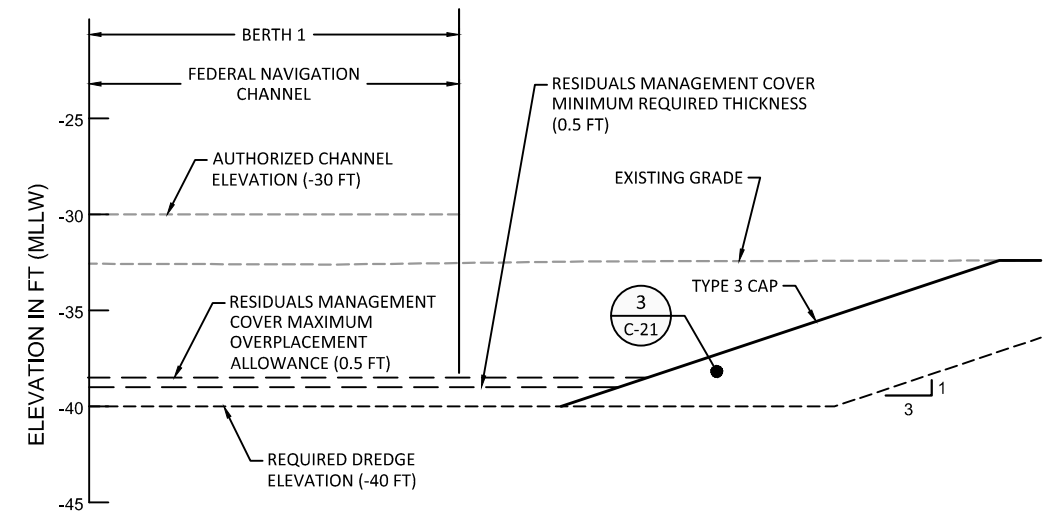
3 DETAIL: BST CLEAN COVER SLOPE DETAIL (NW SLOPE FOR -40 DREDGE PRISM)
C-4.4.1 SCALE: NTS



4 DETAIL: BST CLEAN COVER SLOPE DETAIL (NW SLOPE FOR -36 DREDGE PRISM)
C-4.4.1 SCALE: NTS



5 DETAIL: BST ELEVATION CHANGE WITHIN DREDGE PRISM
C-4.4.1 SCALE: NTS



PP SECTION: BST TRANSITION SLOPE CAP (TYPE I)
C-4.4.1 SCALE: NTS

NOTES:

1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
2. REFERENCE SHEET C-4 FOR PLAN VIEW OF RMC LOCATIONS.
3. RMC MATERIAL SHALL NOT BE PLACED ABOVE THE IN-WATER TOP OF SLOPE RESTRICTED ELEVATIONS.
4. CONTRACTOR SHALL COMPLETE RMC ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
5. REFERENCE SHEET C-4 FOR PLAN VIEW OF LOCATIONS FOR PLACEMENT OF RESIDUA MANAGEMENT COVER MATERIAL.
6. TOP OF RMC IN SECTIONS REPRESENT THE MAXIMUM ELEVATION FOR RMC PLACEMENT PER THE CONTRACT REQUIREMENTS. MINIMUM RMC THICKNESS REQUIREMENTS AND OVERPLACEMENT ALLOWANCES ARE PRESENTED IN THE SPECIFICATIONS.
7. NO UNDER-PIER PLACEMENT OF RMC MATERIAL WILL BE PERFORMED AS PART OF THIS CONTRACT.

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON
 BST RESIDUALS MANAGEMENT COVER PLACEMENT
 SECTIONS AND DETAILS

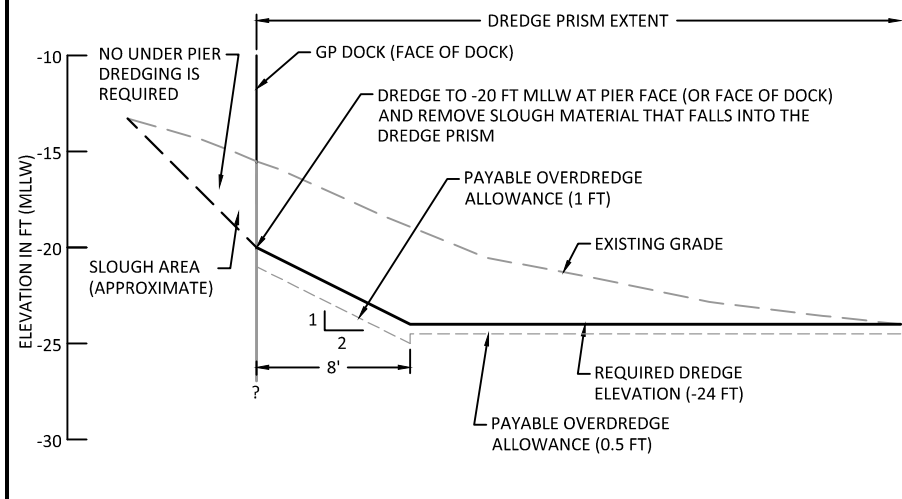
C-19

SHEET NO. 54 OF 126

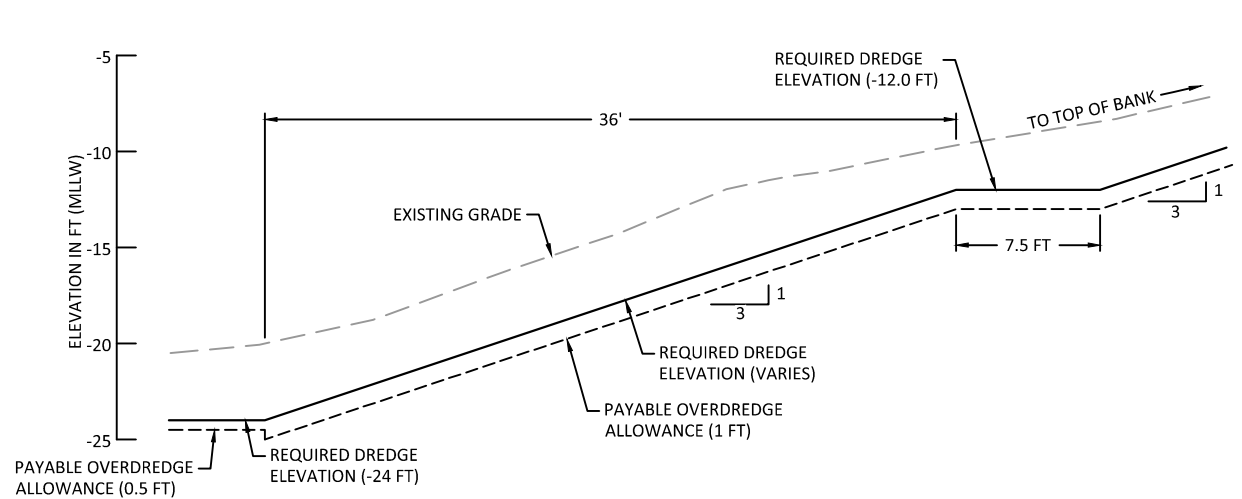
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ONE INCH
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 INCH SCALE ACCORDINGLY

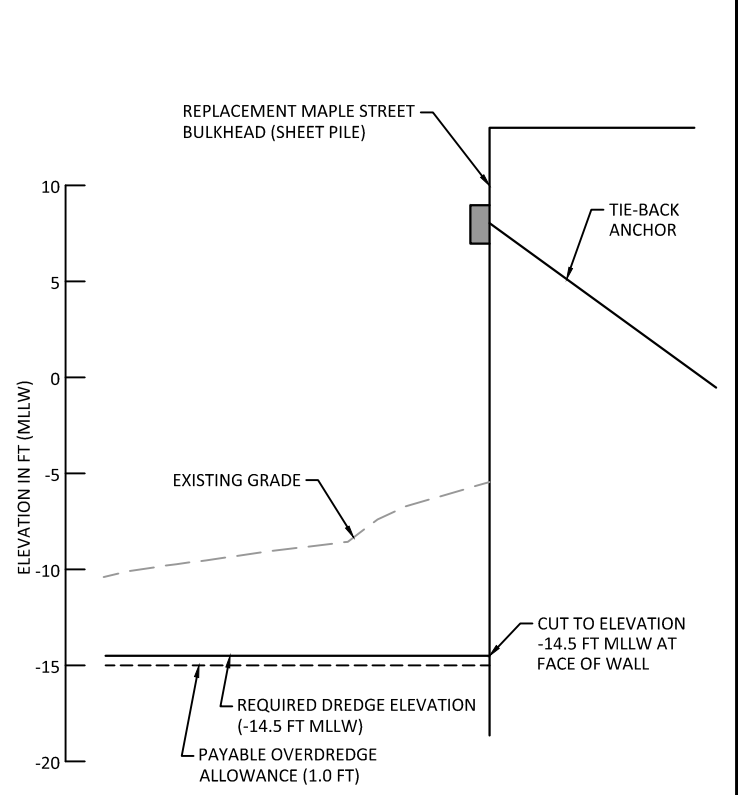
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Dec 21, 2016 6:09pm gtl/ep



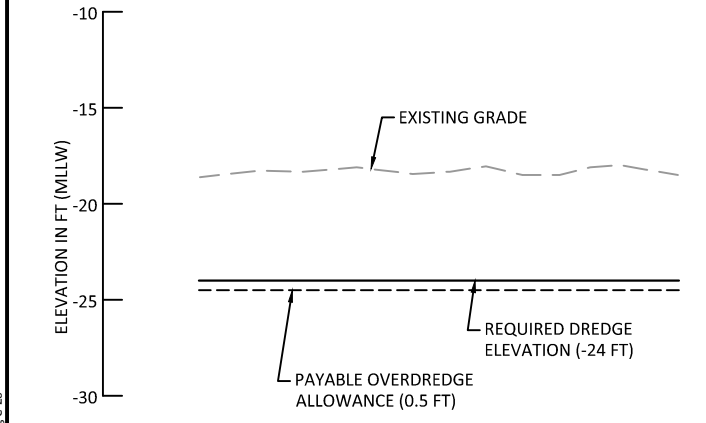
1 DETAIL: INNER WATERWAY GP DOCK AREA
C-9 SCALE: NTS



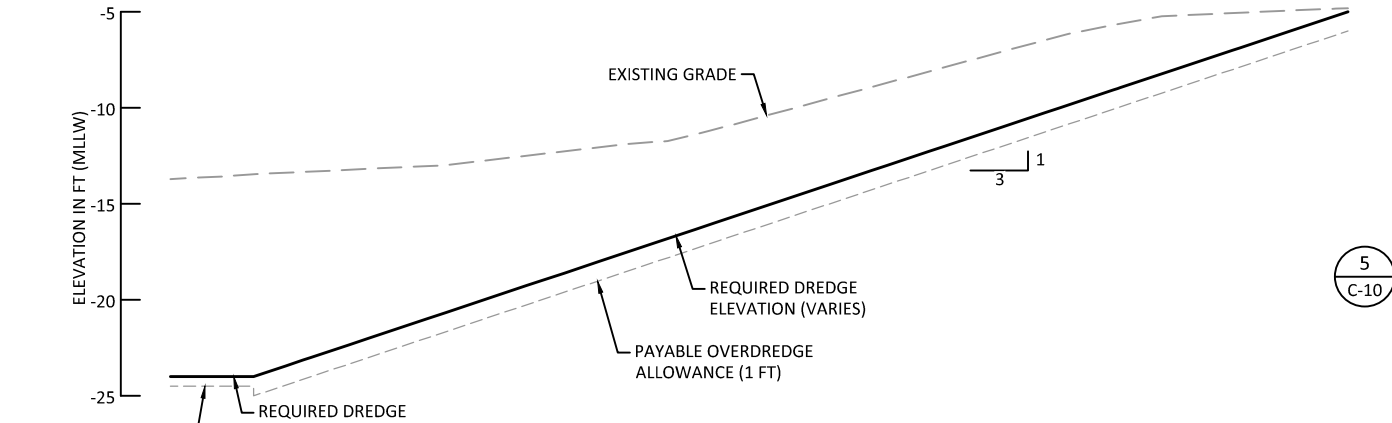
3 DETAIL: INNER WATERWAY SHORELINE SLOPE AREAS
C-9 SCALE: NTS



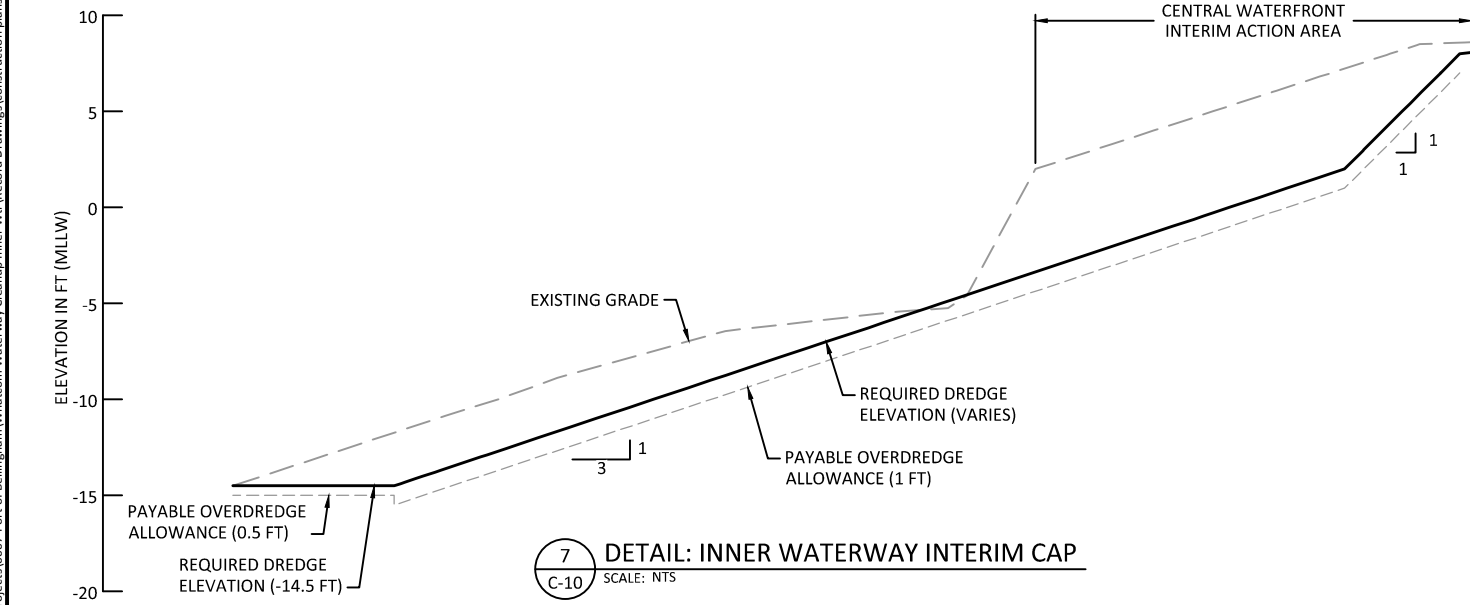
5 DETAIL: INNER WATERWAY MAPLE STREET REPLACEMENT WALL
C-10 SCALE: NTS



2 DETAIL: INNER WATERWAY OPEN WATER AREA
C-9, C-10 SCALE: NTS

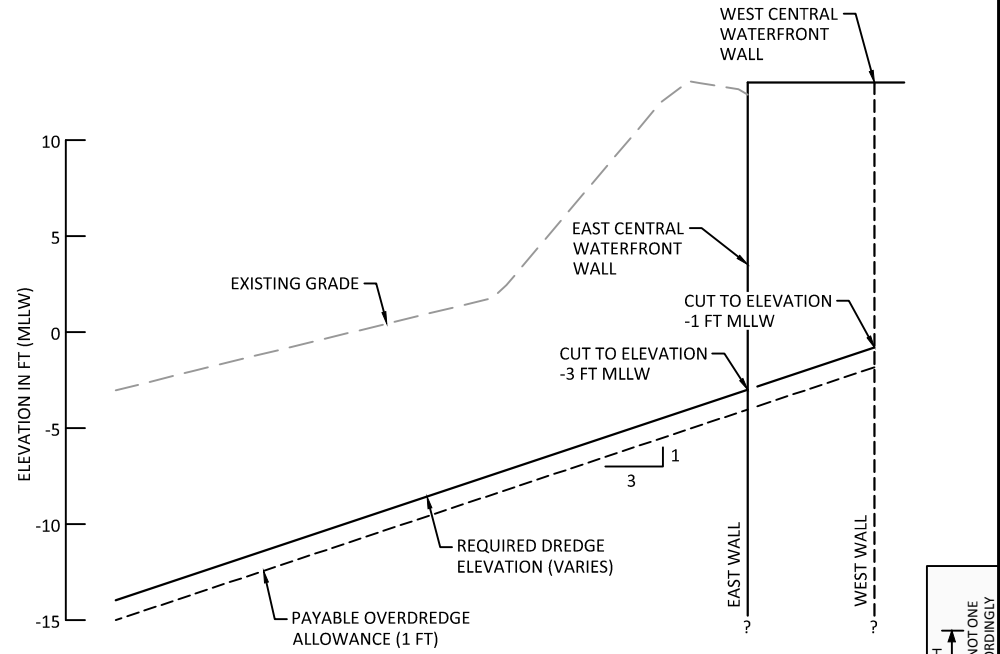


4 DETAIL: INNER WATERWAY
C-9 SCALE: NTS



7 DETAIL: INNER WATERWAY INTERIM CAP
C-10 SCALE: NTS

- NOTES:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WILL BE +1.0 FT. PAYABLE OVERDREDGE ALLOWANCE FOR ALL OTHER AREAS IS +0.5 FT UNLESS OTHERWISE NOTED ON DRAWINGS.
 3. DO NOT PERFORM EXCESSIVE DREDGING AT TOE OF CUT OR IN SLOPE AREAS.
 4. CONTRACTOR SHALL COMPLETE DREDGING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
 5. CONTRACTOR SHALL REMOVE SLOUGH MATERIAL (AS APPLICABLE) AT FACE OF DOCK AS PART OF REQUIRED DREDGING WORK. ANTICIPATED SLOUGH VOLUME IS INCLUDED IN THE BID ITEM FOR REQUIRED DREDGING.
 6. NO UNDER-PIER DREDGING WILL BE PERFORMED.



6 DETAIL: INNER WATERWAY EAST AND WEST CENTRAL WATERFRONT WALL
C-10 SCALE: NTS

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

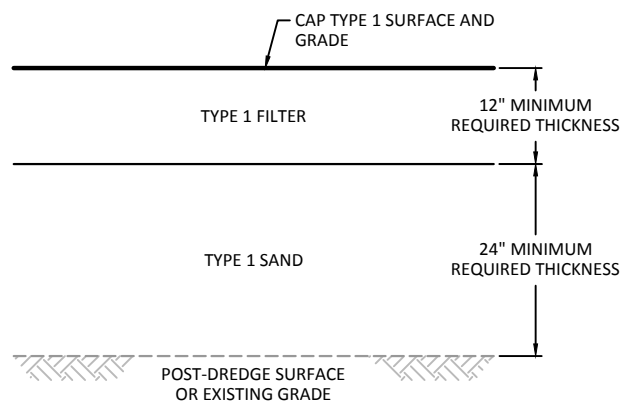
DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON
INNER WATERWAY DREDGING DETAILS

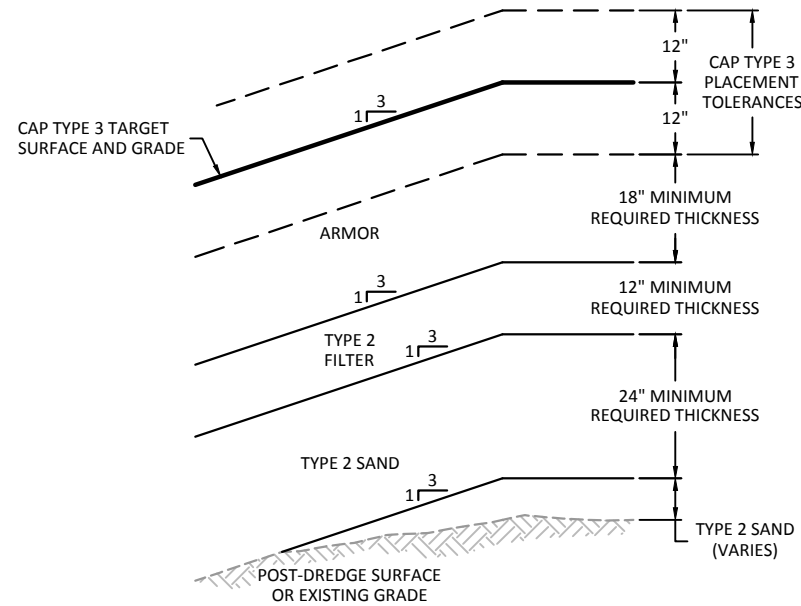
C-20
 SHEET NO. **55** OF **126**

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY

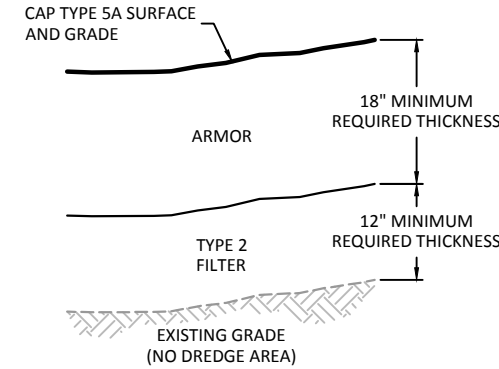
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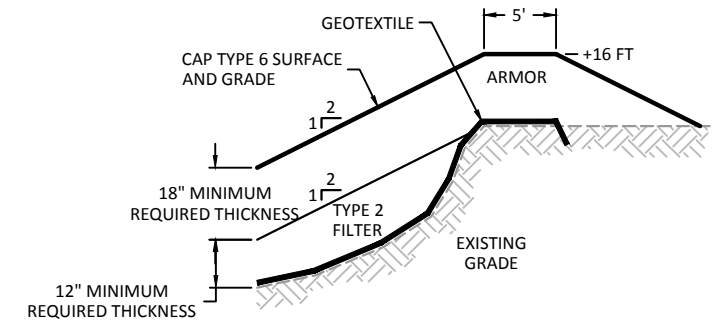
1 DETAIL: CAP TYPE 1
SCALE: NTS



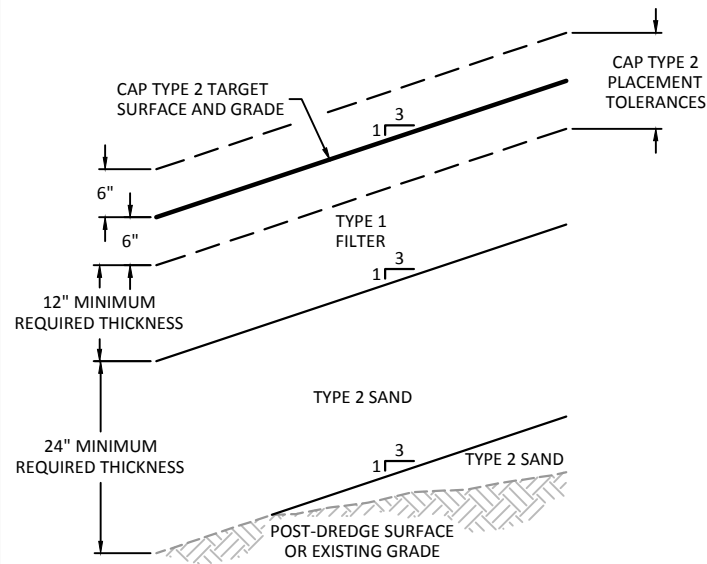
3 DETAIL: CAP TYPE 3
SCALE: NTS



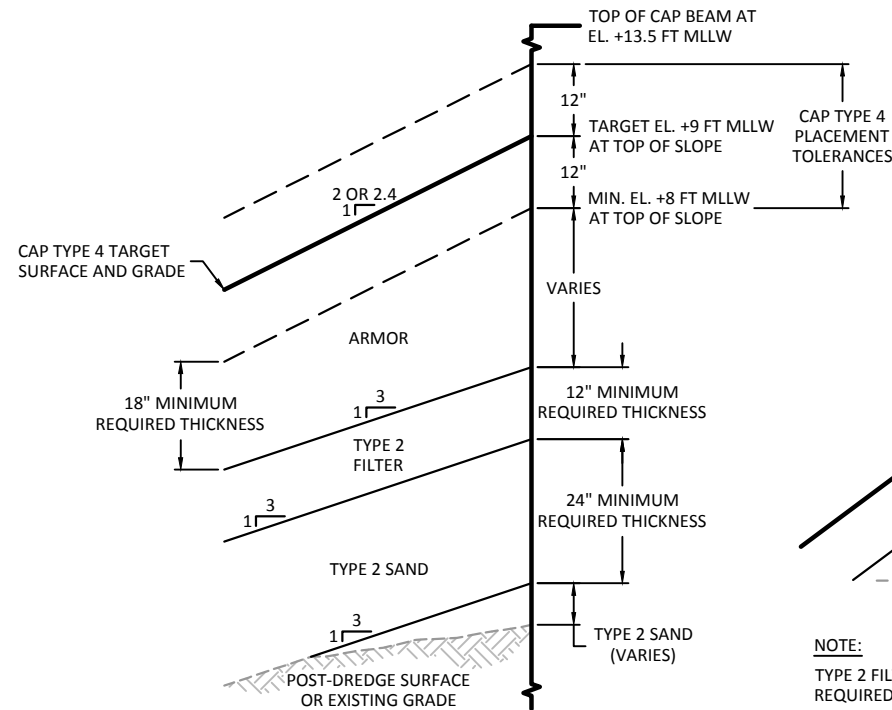
5 DETAIL: CAP TYPE 5A
SCALE: NTS



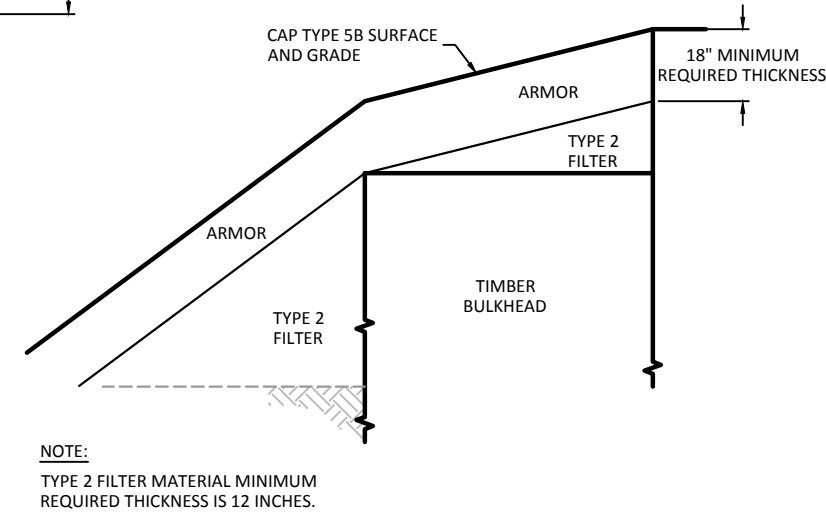
7 DETAIL: CAP TYPE 6
SCALE: NTS



2 DETAIL: CAP TYPE 2
SCALE: NTS



4 DETAIL: CAP TYPE 4
SCALE: NTS



6 DETAIL: CAP TYPE 5B
SCALE: NTS

- NOTES:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. REFERENCE SHEET C-4.1, C-5.1, AND C-6.1 FOR PLAN VIEW OF LOCATIONS FOR EACH CAP TYPE.
 3. CAP MATERIAL SHALL NOT BE PLACED ABOVE THE RESTRICTED ELEVATIONS.
 4. CONTRACTOR SHALL COMPLETE CAPPING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATION.
 5. NO UNDER-PIER PLACEMENT OF CAP MATERIAL WILL BE PERFORMED AS PART OF THIS CONTRACT.
 6. CONTRACTOR SHALL COMPLETE FIELD MEASUREMENTS TO VERIFY TIMBER BULKHEAD ELEVATIONS WILL NOT PROTRUDE INTO ARMOR LAYER. CONTRACTOR TO NOTIFY ENGINEER FOR CLARIFICATION.

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
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**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

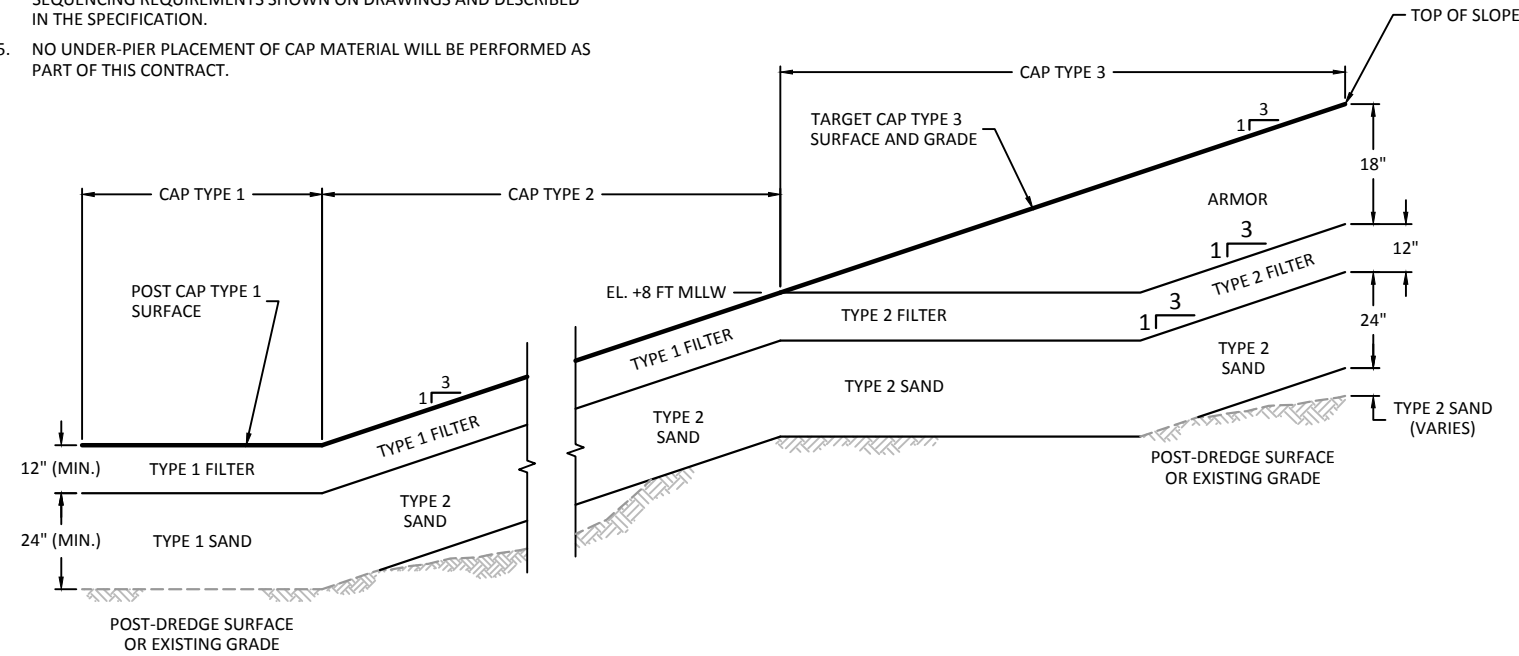
CAPPING DETAILS

C-21

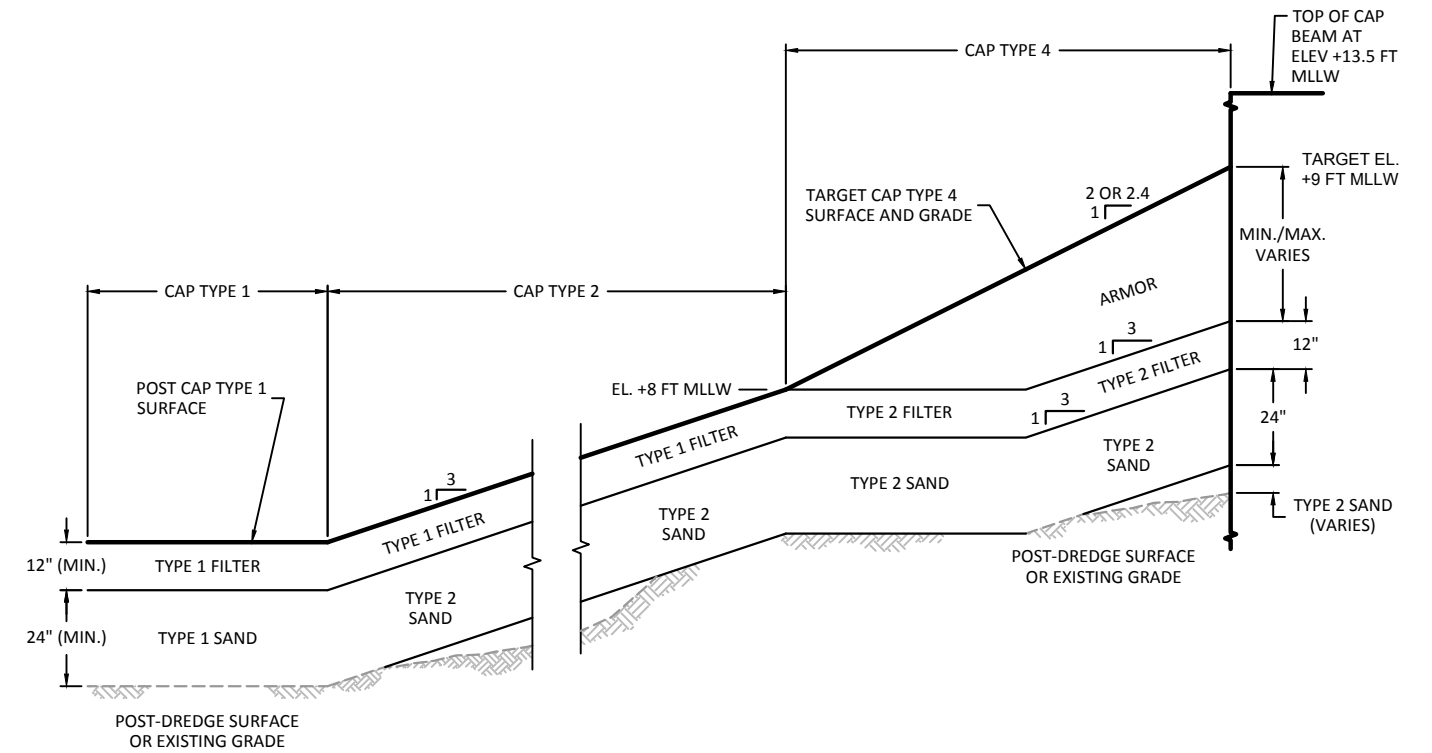
SHEET NO. **56** OF **126**

NOTES:

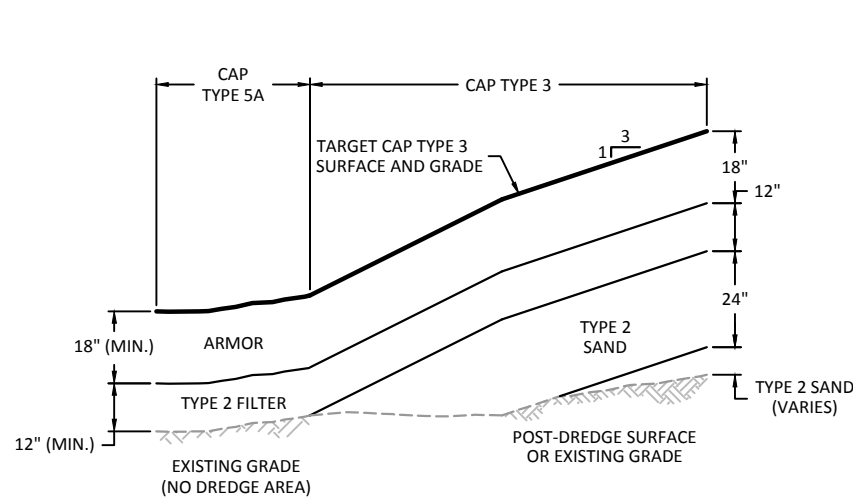
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
2. REFERENCE SHEET C-4.1, C-5.1, AND C-6.1 FOR PLAN VIEW OF LOCATIONS FOR EACH CAP TYPE.
3. CAP MATERIAL SHALL NOT BE PLACED ABOVE THE RESTRICTED ELEVATIONS.
4. CONTRACTOR SHALL COMPLETE CAPPING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATION.
5. NO UNDER-PIER PLACEMENT OF CAP MATERIAL WILL BE PERFORMED AS PART OF THIS CONTRACT.



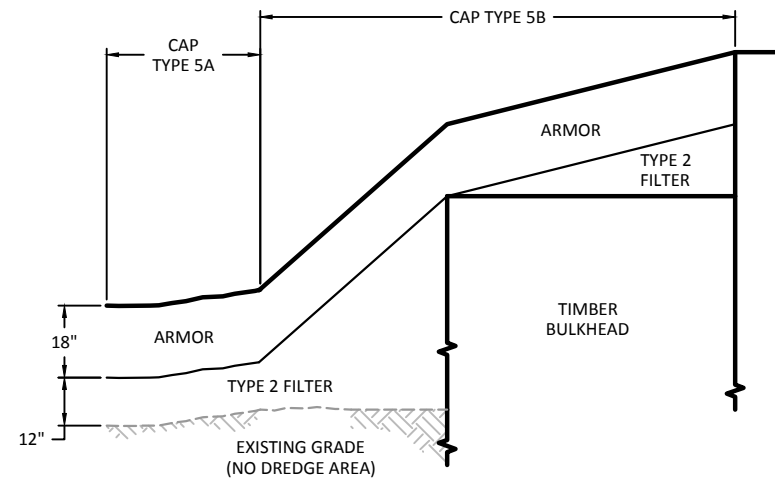
1 DETAIL: CAP TYPE 1 TO TYPE 2 TO TYPE 3
SCALE: NTS



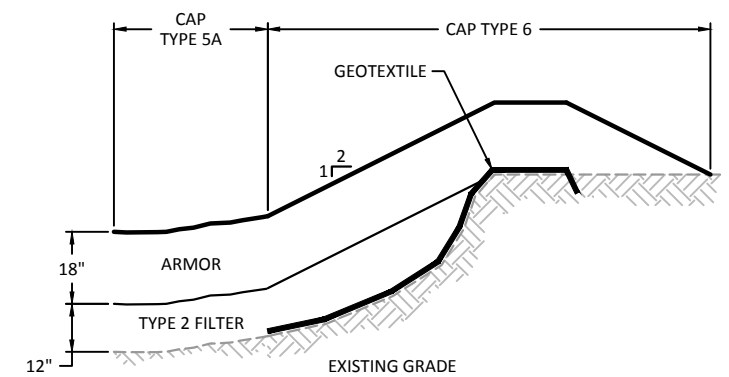
2 DETAIL: CAP TYPE 1 TO TYPE 2 TO TYPE 4
SCALE: NTS



3 DETAIL: CAP TYPE 5A TO TYPE 3
SCALE: NTS



4 DETAIL: CAP TYPE 5A TO TYPE 5B
SCALE: NTS



5 DETAIL: CAP TYPE 5A TO TYPE 6
SCALE: NTS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
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DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

CAPPING TRANSITION DETAILS

C-22

SHEET NO. 57 OF 126

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SEE DRAWING C-2

CONTROL POINTS		
POINT #	NORTHING	EASTING
D-1	641275.68	1239507.23
D-2	641427.15	1239665.80
D-3	641635.04	1239883.09
D-4	641404.54	1240106.68
D-5	641042.49	1239733.43
D-6	641184.97	1239595.22
D-7	641338.37	1239751.91
D-8	640643.53	1239295.62
D-9	640615.47	1239322.20

SEE DRAWING C-3

CONTROL POINTS		
POINT #	NORTHING	EASTING
D-10	643284.25	1241631.94
D-11	643114.13	1241796.95
D-12	642856.84	1241531.70
D-13	642779.63	1241530.52
D-14	642500.66	1241242.92
D-15	642508.46	1241228.45
D-16	642735.66	1240972.13
D-17	642792.88	1240964.35
D-18	642786.17	1240919.88
D-19	642833.13	1240904.40
D-20	642857.95	1240914.24
D-21	642797.63	1240964.93
D-22	642863.51	1241032.85
D-23	642857.99	1241039.89
D-24	643089.00	1241279.03
D-25	643089.13	1241336.55
D-26	643187.81	1241438.28
D-27	643237.05	1241440.78
D-28	643318.17	1241523.44
D-29	643269.69	1241522.70

SEE DRAWING C-3

CONTROL POINTS		
POINT #	NORTHING	EASTING
D-30	643243.05	1241548.54
D-31	643259.04	1241543.48
D-32	643253.66	1241548.70
D-33	642975.87	1241706.12
D-34	642938.79	1241678.66
D-35	642818.97	1241675.63
D-36	643017.73	1241880.79
D-37	643064.23	1241833.93
D-38	642819.24	1241658.41
D-39	642873.27	1241636.82
D-40	642575.27	1240901.03

SEE DRAWING CS-1

CONTROL POINTS		
POINT #	NORTHING	EASTING
CS-1	643133.28	1241816.69
CS-2	642995.71	1241674.87
CS-3	643081.13	1241592.02
CS-4	642972.94	1241480.48
CS-5	642980.58	1241384.19
CS-6	643023.13	1241342.92
CS-7	643046.70	1241320.05

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ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

DREDGING CONTROL POINT TABLES

C-23

SHEET NO. 58 OF 126

K:\Projects\0007-Port of Bellingham\Whatcom Waterway Cleanup\Inner Vtr Record Drawings\Construction Plans\0007-CAPPING SHEETS.dwg C-24
Dec 21, 2016 6:11pm gtljg

SEE DRAWING C-4, C-4.1

CONTROL POINTS		
POINT #	NORTHING	EASTING
C-1	640643.53	1239295.62
C-2	640615.47	1239322.20
C-3	641031.33	1239710.81
C-4	641042.63	1239733.43
C-5	641184.97	1239595.22
C-6	641275.68	1239507.23
C-7	641427.15	1239665.80
C-8	641634.90	1239883.09
C-9	641404.54	1240106.54
C-10	641338.37	1239751.91

SEE DRAWING C-5, C-5.1

CONTROL POINTS		
POINT #	NORTHING	EASTING
C-11	642485.00	1241238.27
C-12	642575.27	1240901.03
C-13	643027.69	1241367.44
C-14	643027.53	1241378.05
C-15	643144.42	1241498.56
C-16	643155.03	1241498.72
C-17	643284.25	1241631.94
C-18	643114.13	1241796.95
C-19	642856.84	1241531.70
C-20	642768.31	1241530.35
C-21	642810.46	1241639.00
C-22	643082.77	1241816.32
C-23	643193.06	1241967.05
C-24	643148.01	1242011.78
C-25	643115.02	1242000.81
C-26	642902.25	1241143.89
C-27	643090.39	1241337.85
C-28	643186.52	1241436.95
C-29	643269.69	1241522.70

SEE DRAWING C-5, C-5.1

CONTROL POINTS		
POINT #	NORTHING	EASTING
C-30	643248.44	1241543.31
C-31	643170.48	1241462.95
C-32	643159.88	1241462.79
C-33	643063.75	1241363.69
C-34	643064.17	1241336.69
C-35	642878.59	1240831.85
C-36	642818.97	1241675.63
C-37	642819.24	1241658.41
C-38	643031.09	1241866.46
C-39	643017.04	1241880.07
C-40	642857.76	1241039.66
C-41	643089.74	1241278.81
C-42	643237.30	1241440.06
C-43	643322.50	1241527.90
C-44	643355.17	1241584.42
C-46	642870.90	1241023.42
C-47	642856.65	1241016.32
C-48	642814.13	1240975.45
C-49	642796.19	1240979.43
C-50	642807.98	1240965.37

SEE DRAWING C-5, C-5.1

CONTROL POINTS		
POINT #	NORTHING	EASTING
C-51	642850.36	1240955.27
C-52	642801.49	1240962.92
C-53	642837.38	1240953.57
C-54	642834.06	1240910.09
C-55	642797.61	1240912.17

SEE DRAWING C-6, C-6.1

CONTROL POINTS		
POINT #	NORTHING	EASTING
C-56	641344.54	1240234.01
C-57	641223.13	1240350.25
C-58	641222.40	1240548.28
C-59	641372.74	1240223.94
C-60	641369.49	1240259.85
C-61	641306.59	1240324.18
C-62	641242.41	1240363.11
C-63	641268.21	1240450.00
C-64	641236.81	1240540.45
C-65	641289.50	1240608.25
C-66	641302.76	1240338.04
C-67	641294.51	1240330.68
C-68	641338.72	1240421.87
C-69	641349.96	1240450.00
C-70	641348.81	1240488.10
C-71	641325.08	1240613.14
C-72	641354.20	1240658.97
C-73	641430.55	1240734.03
C-74	641484.75	1240743.97

SEE DRAWING C-6, C-6.1

CONTROL POINTS		
POINT #	NORTHING	EASTING
C-75	641623.26	1240646.35
C-76	641725.32	1240764.44
C-77	641548.81	1240692.11
C-78	641705.15	1240704.40
C-79	641789.79	1240819.28
C-80	641826.74	1240842.96
C-81	642005.32	1240996.78
C-82	641948.61	1240948.80
C-83	641875.57	1240885.33
C-84	641913.14	1240936.55
C-85	642061.12	1240941.97
C-86	642085.84	1240955.67
C-87	641413.30	1240764.24
C-88	641496.86	1240796.49
C-89	641547.12	1240770.55
C-90	641588.11	1240752.94
C-91	641638.64	1240742.13
C-92	641685.07	1240751.43

SEE DRAWING CS-2

CONTROL POINTS		
POINT #	NORTHING	EASTING
CS-1	643133.28	1241816.69
CS-2	642995.71	1241674.87
CS-3	643081.13	1241592.02
CS-4	642972.94	1241480.48
CS-5	642980.58	1241384.19
CS-6	643023.13	1241342.92
CS-7	643046.70	1241320.05
CS-8	643165.83	1241509.86
CS-9	643199.55	1241714.09

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

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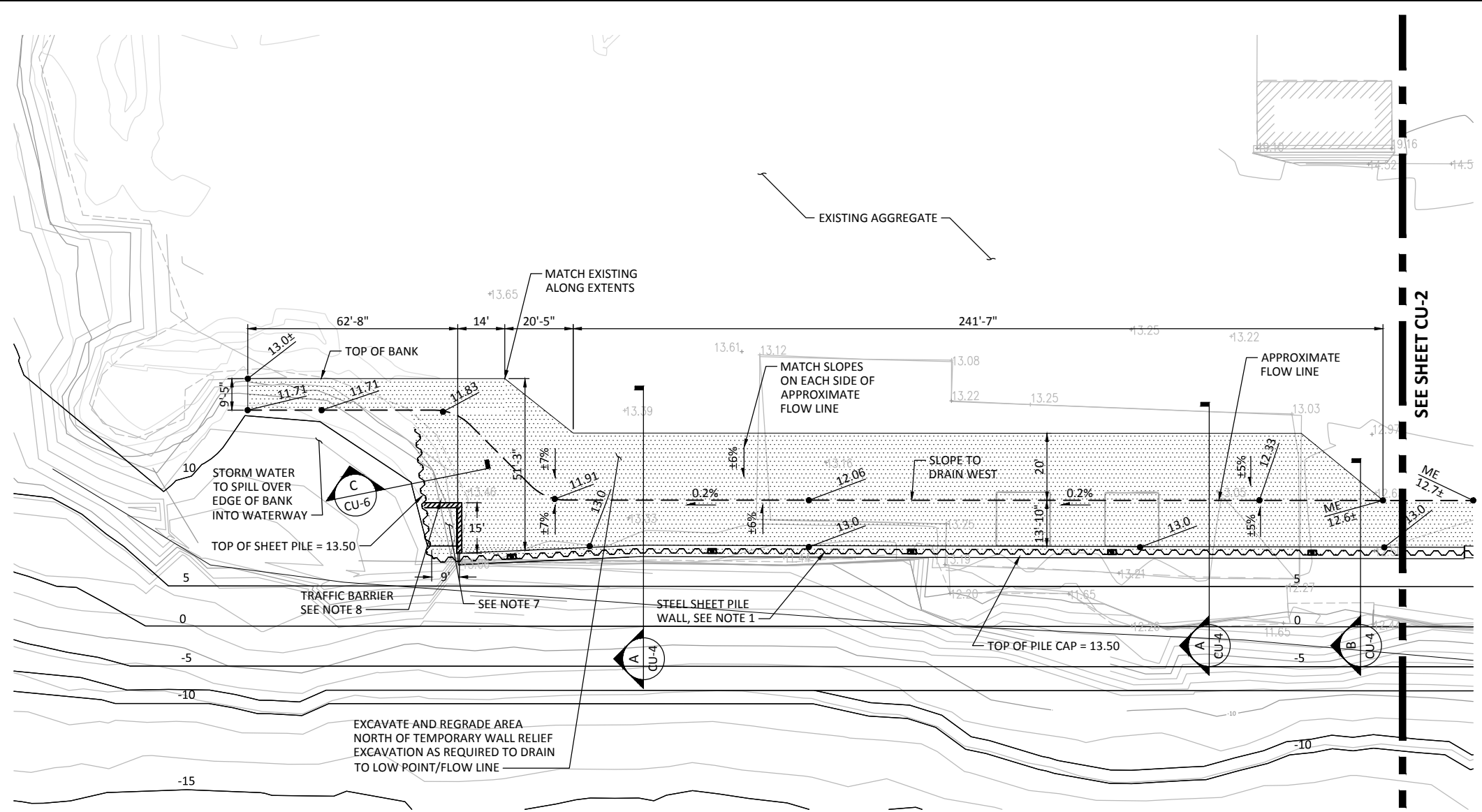
**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

CAPPING CONTROL POINT TABLES

C-24

SHEET NO. 59 OF 126

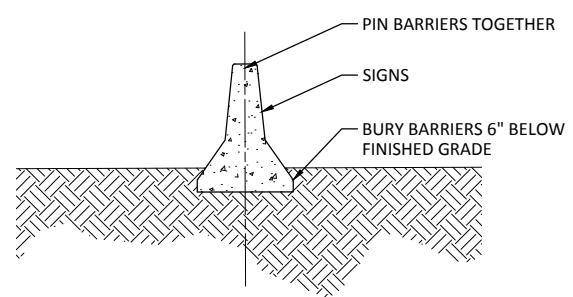
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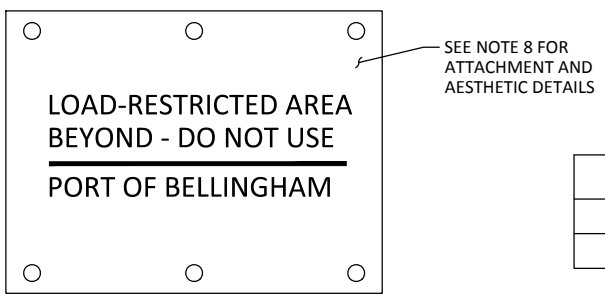
- LEGEND:**
- RE-GRADE AREA, OMIT AGGREGATE BALLAST
 - FINISHED CAPPED SLOPE, SEE C-SHEETS
 - EXISTING CONTOUR
 - FINISHED GRADE SPOT ELEVATION (MLLW)
 - FINISH SURFACE SLOPE DIRECTION
 - EXISTING SURFACE SPOT ELEVATION (MLLW)
 - FLOW LINE / APPROXIMATE TEMPORARY WALL RELIEF EXCAVATION LIMITS, SEE NOTE 4
 - SHEET PILE WALL, SEE NOTES 1 AND 2

- NOTES:**
1. SEE STRUCTURAL SHEETS FOR ADDITIONAL SHEET PILE WALL DETAILS AND TOP OF PILE CAP ELEVATION.
 2. SEE STRUCTURAL SHEETS FOR BULKHEAD CONTROL POINTS.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING ABOVE GRADE AND UNDERGROUND UTILITIES. CARE SHOULD BE TAKEN TO AVOID DAMAGE OR DISTURBANCE TO UTILITIES.
 4. TEMPORARY WALL RELIEF EXCAVATION SHALL BE PERFORMED PRIOR TO DREDGING ADJACENT TO WALL, SEE STRUCTURAL SHEETS FOR MAXIMUM UNBALANCED HEIGHT REQUIREMENTS. AFTER WALL CONSTRUCTION AND CAPPING IS COMPLETE CONTRACTOR SHALL PLACE STRUCTURAL FILL AND BALLAST.
 5. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 6. SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.
 7. THE AREA ADJACENT TO THE SOUTHWEST CORNER OF THE EXISTING SHEETPILE WALL (WITHIN 9' TO THE EAST AND 15' TO THE NORTH) IS DESIGNED TO HOLD A STANDARD MAINTENANCE ACCESS LOADING ONLY.
 8. PROVIDE 2 SIGNS, 18" x 24", 316 SS WITH BLACK LETTERING ON WHITE REFLECTIVE SHEETING. ATTACH SIGN TO BARRIER WITH 6 EA 1/2" CONCRETE SCREWS WITH SS WASHERS.
 9. STORMWATER RELIEF SHOWN IS AN INTERIM CONDITION ONLY. ADJACENT SITE IS CURRENTLY UNUSED AND UNDEVELOPED. FUTURE TENANT/DEVELOPMENT WILL NEED ITS OWN STORMWATER PLAN FOR CONVEYANCE AND TREATMENT.
 10. DUE TO SHEETPILE WALL REALIGNMENT, REGRADED AREAS VARIED FROM ORIGINAL PLANS. SEE SUBMITTAL 056A FOR FINAL ASBUILT OF SHEETPILE WALL ALIGNMENT IN THE WCW AREA. SEE RFI 028 AND RFI 050 FOR FURTHER INFORMATION ON CAUSE OF REALIGNMENT AND CONCRETE CAP WIDENING IN THE WCW AREA.
 11. DRAINAGE FLOW PATH AND ADJACENT SLOPES IN THIS AREA ARE FIELD FIT. DIMENSIONS SHOWN IN PLAN ARE APPROXIMATE AND REPRESENTS THE APPROXIMATE FLOW PATTERNS INCLUDING SLOPES AND FLOW DIRECTIONS.

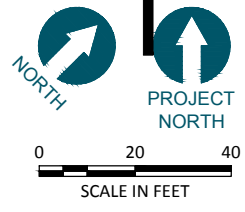
WEST CENTRAL WALL PAVING AND GRADING PLAN
SCALE: 1"=20'



1 TRAFFIC BARRIER
SCALE: NOT TO SCALE



2 LOAD RESTRICTED AREA SIGN
SCALE: NOT TO SCALE



SIGN DIMENSIONS (INCHES)

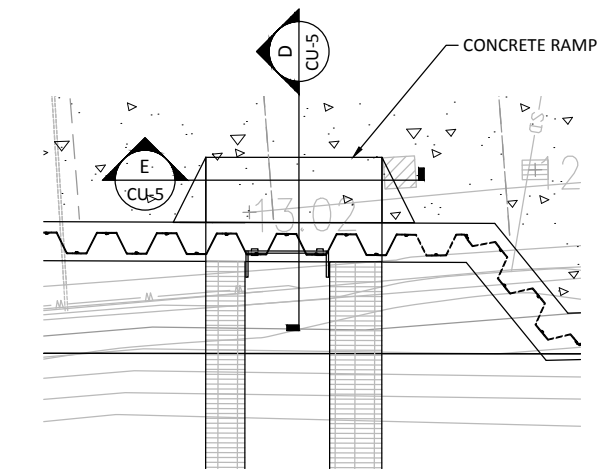
A	B	C	D	E	F	G	H
24	18	1 1/4	3/4	1 3/4	3/8	3/4	9/16

RECORD DRAWINGS

 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	DESIGNED BY: <u>SJS</u> DRAWN BY: <u>GMC</u> CHECKED BY: <u>MDK</u> APPROVED BY: <u>DLO</u> SCALE: <u>AS NOTED</u> DATE: <u>MARCH 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON	CU-1
		MAPLE ST. BULKHEAD PAVING AND GRADING PLAN	SHEET NO. 60 OF 126	

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

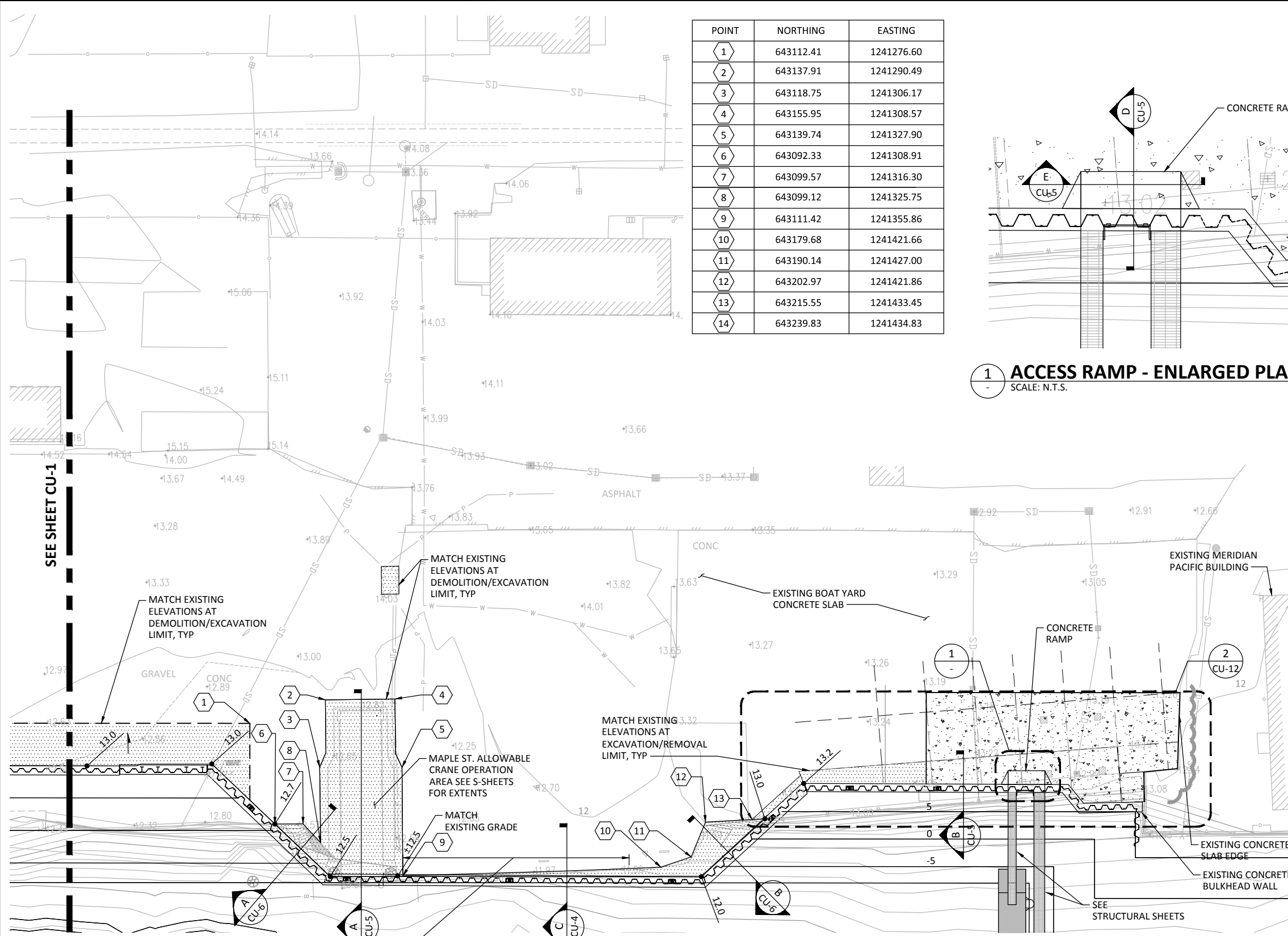
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5	643139.74	1241327.90
6	643092.33	1241308.91
7	643099.57	1241316.30
8	643099.12	1241325.75
9	643111.42	1241355.86
10	643179.68	1241421.66
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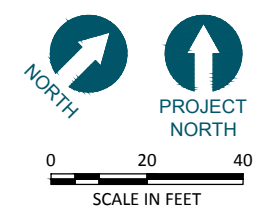
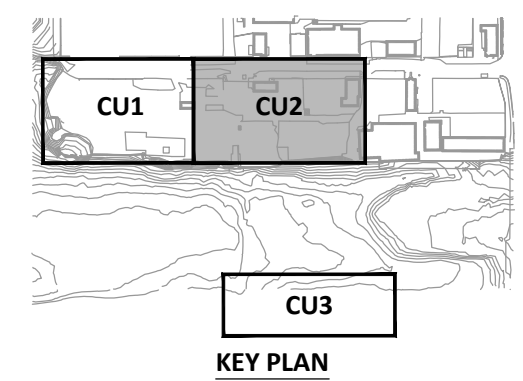
1 ACCESS RAMP - ENLARGED PLAN
SCALE: N.T.S.

- LEGEND:**
- 6" AGGREGATE BALLAST
 - 10 FINISHED CAPPED SLOPE, SEE C-SHEETS
 - EXISTING CONTOUR
 - FINISHED GRADE SPOT ELEVATION (MLLW)
 - FINISH SURFACE SLOPE DIRECTION
 - EXISTING SURFACE SPOT ELEVATION (MLLW)
 - FLOW LINE / APPROXIMATE TEMPORARY WALL RELIEF EXCAVATION LIMITS, SEE NOTE 4
 - SHEET PILE WALL, SEE NOTES 1 AND 2

- NOTES:**
- SEE STRUCTURAL SHEETS FOR ADDITIONAL SHEET PILE WALL DETAILS AND TOP OF PILE CAP ELEVATION.
 - SEE STRUCTURAL SHEETS FOR BULKHEAD CONTROL POINTS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING ABOVE GRADE AND UNDERGROUND UTILITIES. CARE SHOULD BE TAKEN TO AVOID DAMAGE OR DISTURBANCE TO UTILITIES.
 - TEMPORARY WALL RELIEF EXCAVATION SHALL BE PERFORMED PRIOR TO DREDGING ADJACENT TO WALL, SEE STRUCTURAL SHEETS FOR MAXIMUM UNBALANCED HEIGHT REQUIREMENTS. AFTER WALL CONSTRUCTION AND CAPPING IS COMPLETE CONTRACTOR SHALL PLACE STRUCTURAL FILL AND BALLAST.
 - EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 - SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.



MAPLE ST. BULKHEAD PAVING AND GRADING PLAN
SCALE: 1"=20'



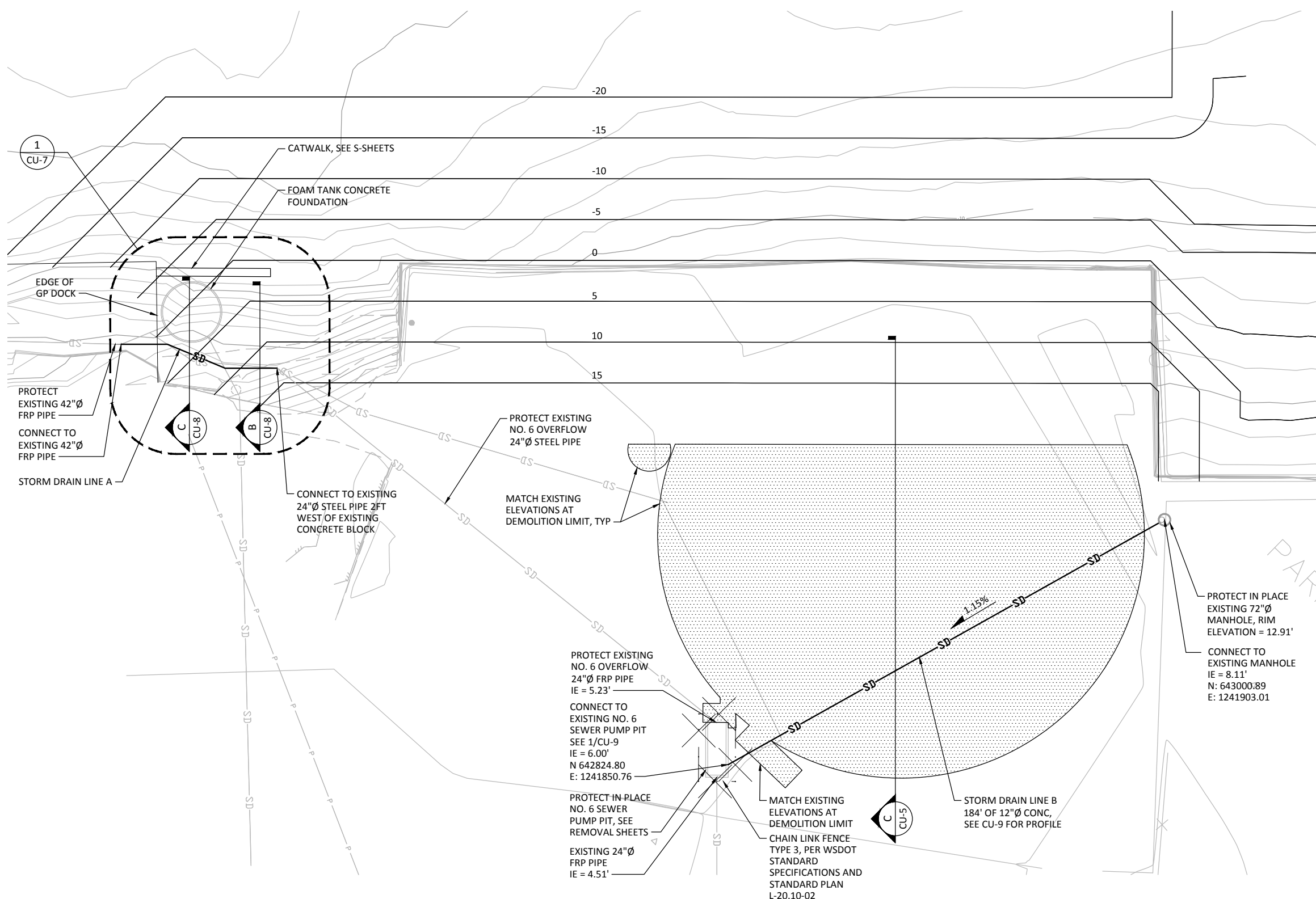
CALL 48 HOURS BEFORE YOU DIG DIAL 811

WHERE GAP BETWEEN SHEET PILE WALL AND EXISTING BULKHEAD IS LESS THAN 3', FILL SPACE TO WITHIN 6" OF FINISH GRADE WITH CDF, APPROXIMATELY 85 LF, SEE STRUCTURAL SHEETS FOR FILL SEQUENCING REQUIREMENTS

K:\projects\0007-port-of-bellingham\whatcom-waterway-cleanup\inner-wr\record-drawings\20161220_whatcom_asbuilt\sheetX_22x34-TB.dwg, Model Dec-21, 2016 3:14pm gtrjg

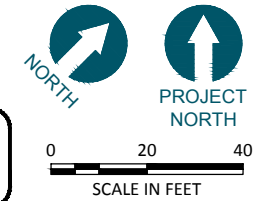
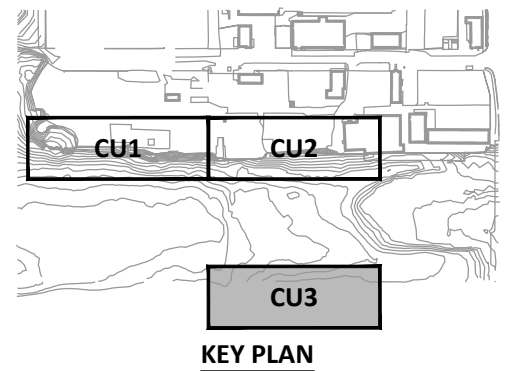
 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV	DATE	BY	APP'D	DESCRIPTION																DESIGNED BY: <u>SJS</u> DRAWN BY: <u>GMC</u> CHECKED BY: <u>MDK</u> APPROVED BY: <u>DLO</u> SCALE: <u>AS NOTED</u> DATE: <u>MARCH 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON MAPLE ST. BULKHEAD PAVING AND GRADING PLAN	CU-2 SHEET NO. 61 OF 126
		REV	DATE	BY	APP'D	DESCRIPTION																			

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- LEGEND:**
- EXISTING STORM DRAIN PIPE
 - STORM DRAIN PIPE
 - FINISHED CAPPED SLOPE, SEE C-SHEETS
 - EXISTING CONTOUR
 - 6" AGGREGATE BALLAST
 - EXISTING DRAINAGE STRUCTURES
 - FINISHED GRADE SPOT ELEVATION (MLLW)
 - STORM DRAIN PIPE SLOPE

- NOTES:**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING ABOVE GRADE AND UNDERGROUND UTILITIES. EXISTING UTILITIES SHOWN HAVE BEEN OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ADDITIONAL UTILITIES NOT SHOWN. CARE SHOULD BE TAKEN TO AVOID DAMAGE OR DISTURBANCE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY HIS ACTIVITIES.
 - EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 - SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.



CALL 48 HOURS BEFORE YOU DIG DIAL 811

ONE INCH = 40 FEET
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

CLARIFIER AREA DRAINAGE PLAN
 SCALE: 1"=20'

ANCHOR QEA
 720 OLIVE WAY, SUITE 1900 | SEATTLE, WA 98101
 (206) 287-9130

kpff
 1601 5th Avenue, Suite 1300
 Seattle, Washington 98101
 (206) 382-0600 Fax (206) 382-0500

REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: SJS
 DRAWN BY: KMV
 CHECKED BY: MDK
 APPROVED BY: DLO
 SCALE: AS NOTED
 DATE: MARCH 2015

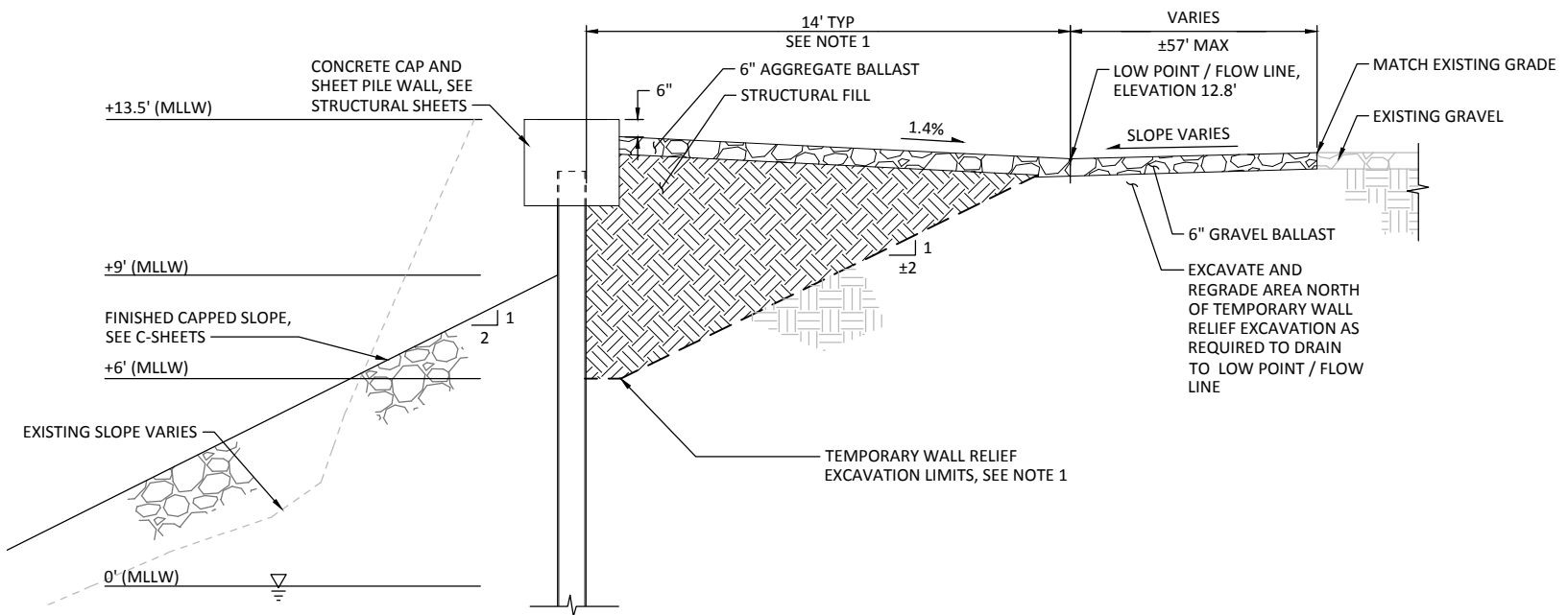
WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

CLARIFIER AREA PAVING, GRADING AND DRAINAGE PLAN

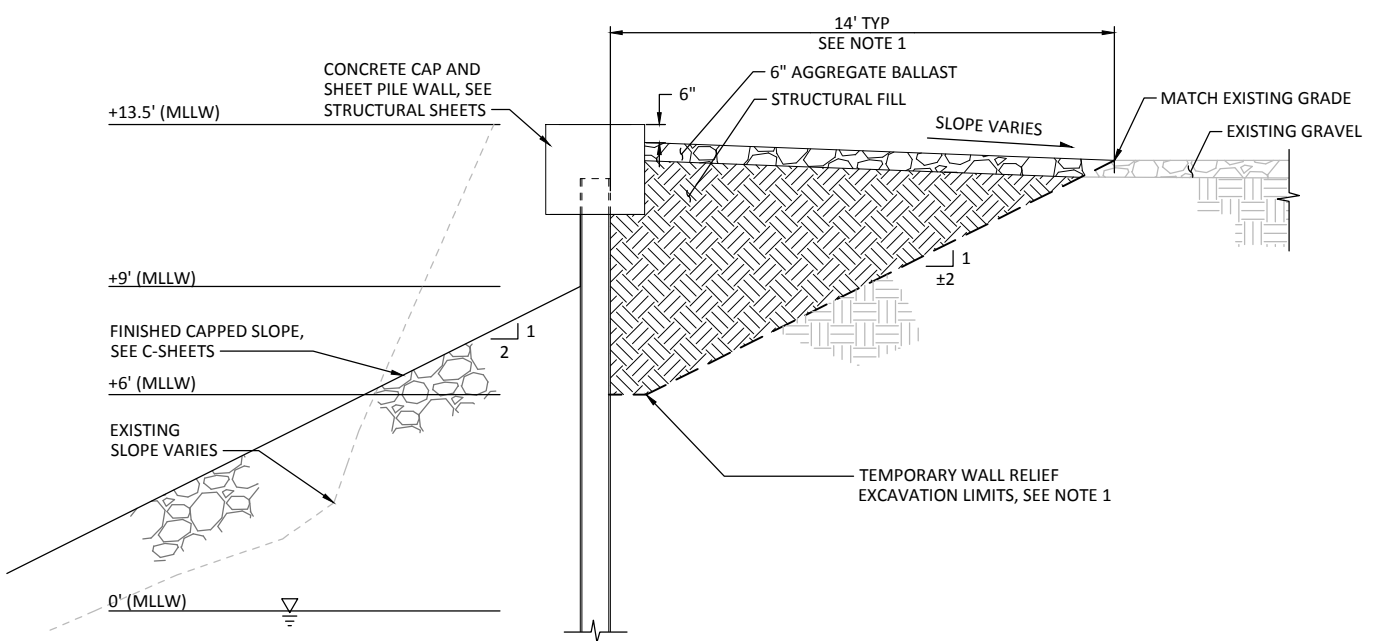
CU-3
 SHEET NO. 62 OF 126

RECORD DRAWINGS

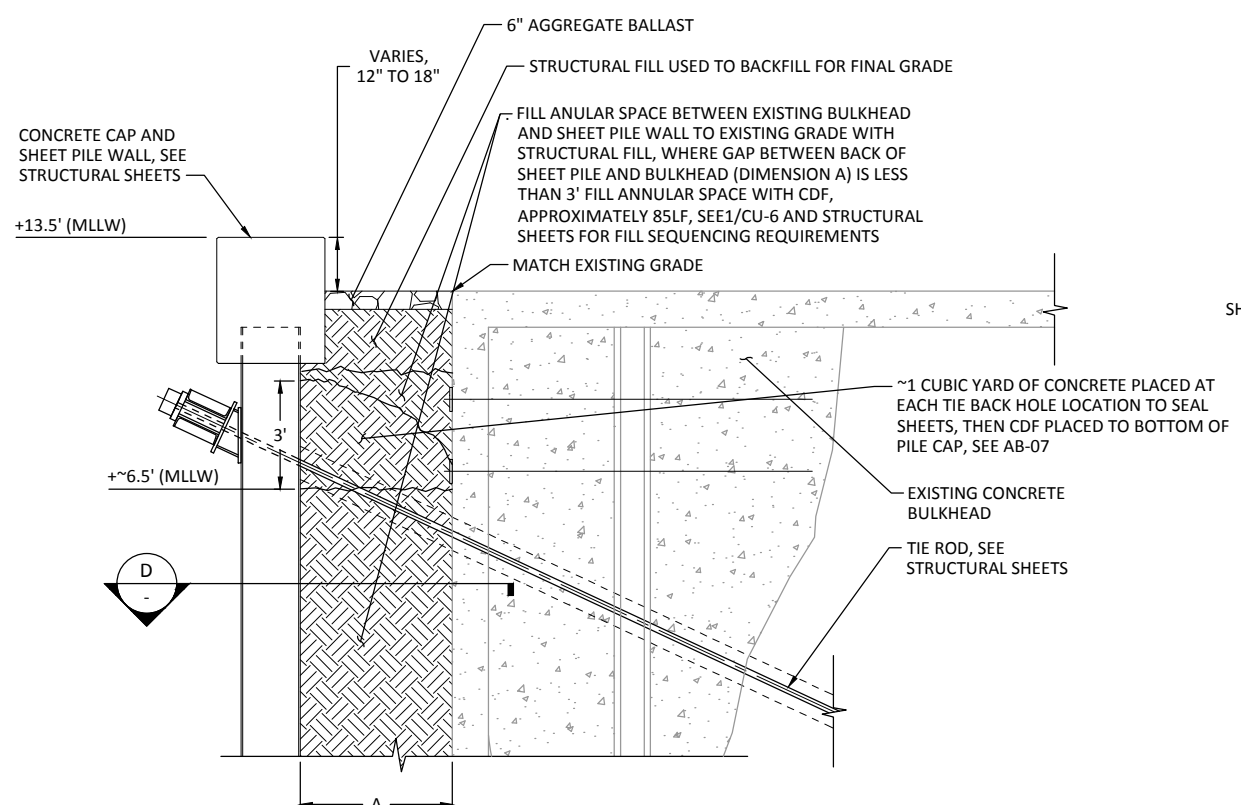
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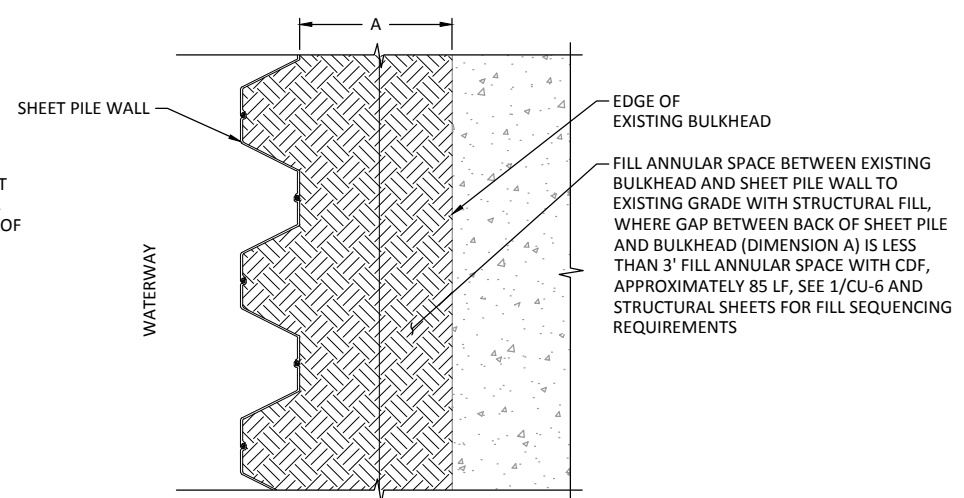
A SECTION
CU-1 SCALE: 3/8" = 1'-0"



B SECTION
CU-1 SCALE: 3/8" = 1'-0"



C SECTION
CU-2 SCALE: 3/8" = 1'-0"





D SECTION
CU-4 SCALE: 3/8" = 1'-0"

- NOTES:**
1. TEMPORARY WALL RELIEF EXCAVATION SHALL BE PERFORMED PRIOR DREDGING ADJACENT TO WALL, SEE STRUCTURAL SHEETS FOR MAXIMUM UNBALANCED HEIGHT REQUIREMENTS. AFTER WALL CONSTRUCTION AND CAPPING IS COMPLETE, CONTRACTOR SHALL PLACE STRUCTURAL FILL AND BALLAST.
 2. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 3. SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.

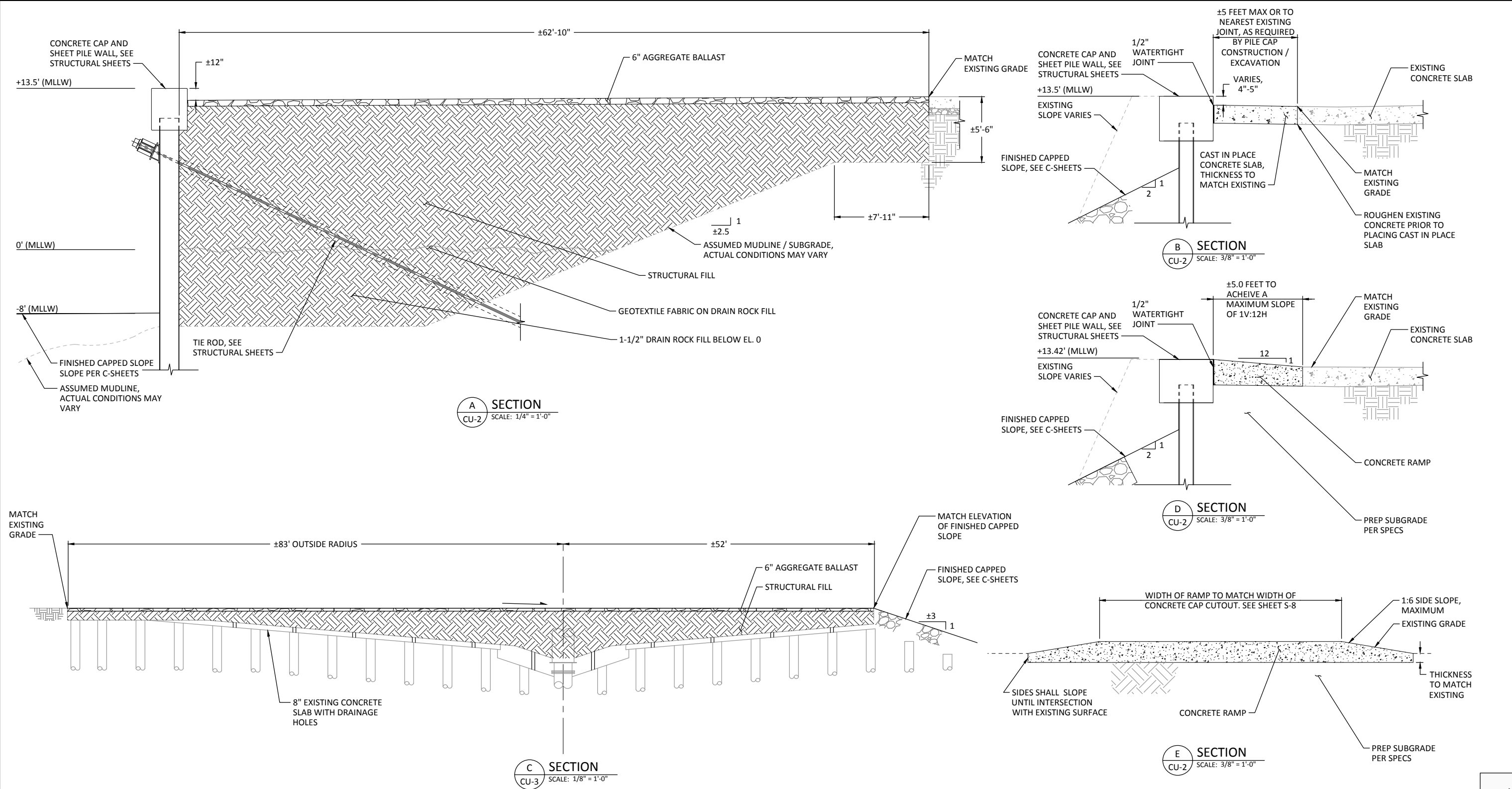
CALL 48 HOURS BEFORE YOU DIG DIAL 811

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

RECORD DRAWINGS

 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV	DATE	BY	APP'D	DESCRIPTION																					DESIGNED BY: <u>SJS</u> DRAWN BY: <u>GMC</u> CHECKED BY: <u>MDK</u> APPROVED BY: <u>DLO</u> SCALE: <u>AS NOTED</u> DATE: <u>MARCH 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON PAVING AND GRADING SECTIONS	CU-4 SHEET NO. 63 OF 126
		REV	DATE	BY	APP'D	DESCRIPTION																								

K:\projects\0007-post of bellingham\whatcom waterway cleanup inner wrf\record drawings\20161220_whatcom_asbuilts\wrf\X_23-34-TB.dwg, Model
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- NOTES:**
- EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 - SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.

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RECORD DRAWINGS

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

ANCHOR QEA
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 (206) 287-9130

kpff
 1601 5th Avenue, Suite 1300
 Seattle, Washington 98101
 (206) 382-0600 Fax (206) 382-0500

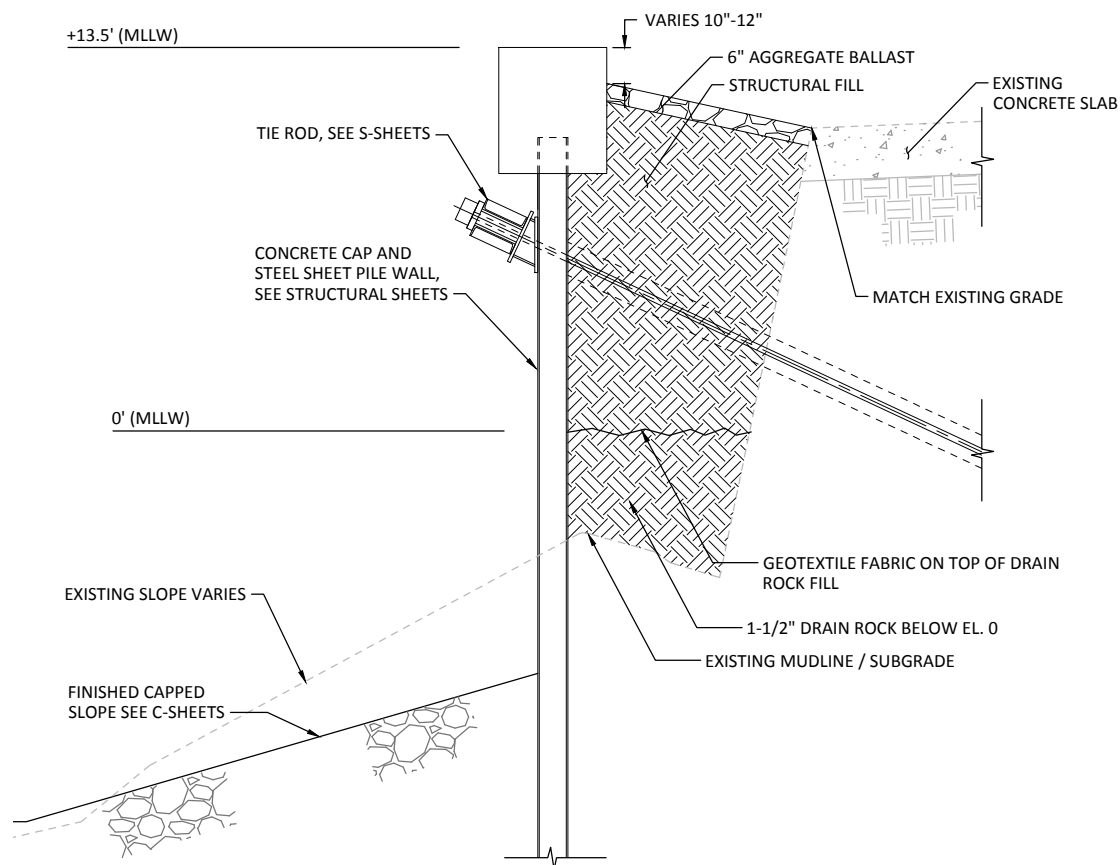
REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: SJS
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 CHECKED BY: MDK
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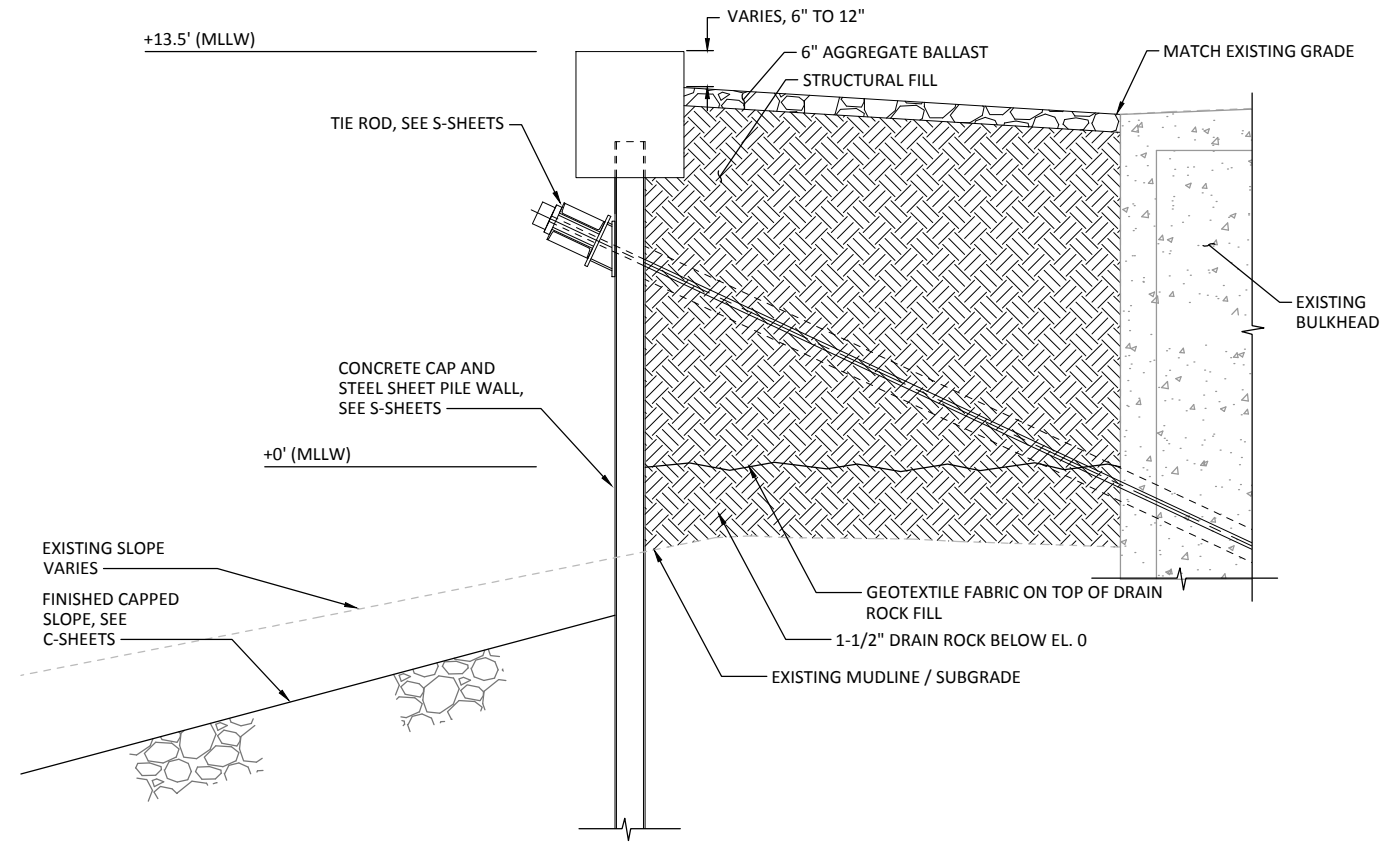
**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

PAVING AND GRADING SECTIONS

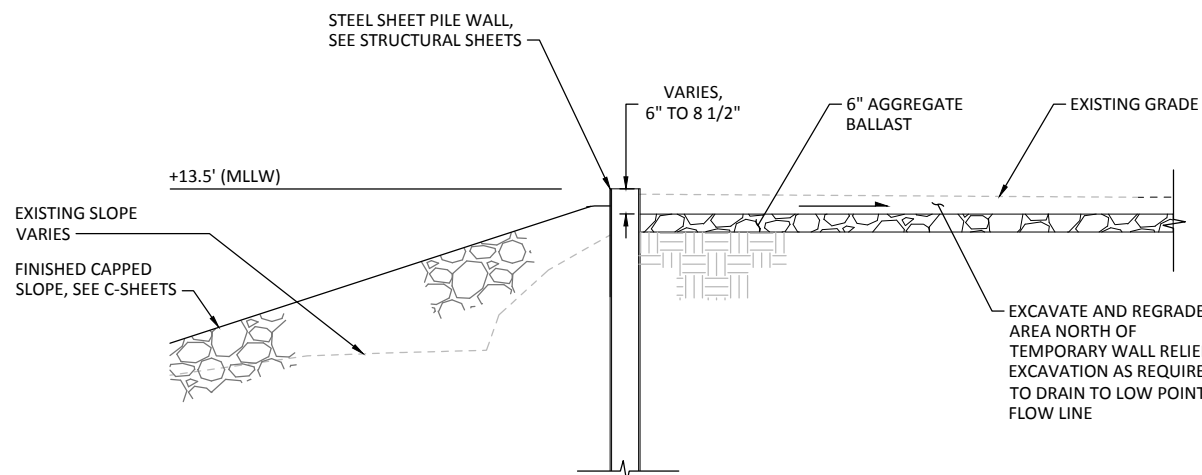
CU-5
 SHEET NO. 64 OF 126



A SECTION
CU-2 SCALE: 3/8" = 1'-0"

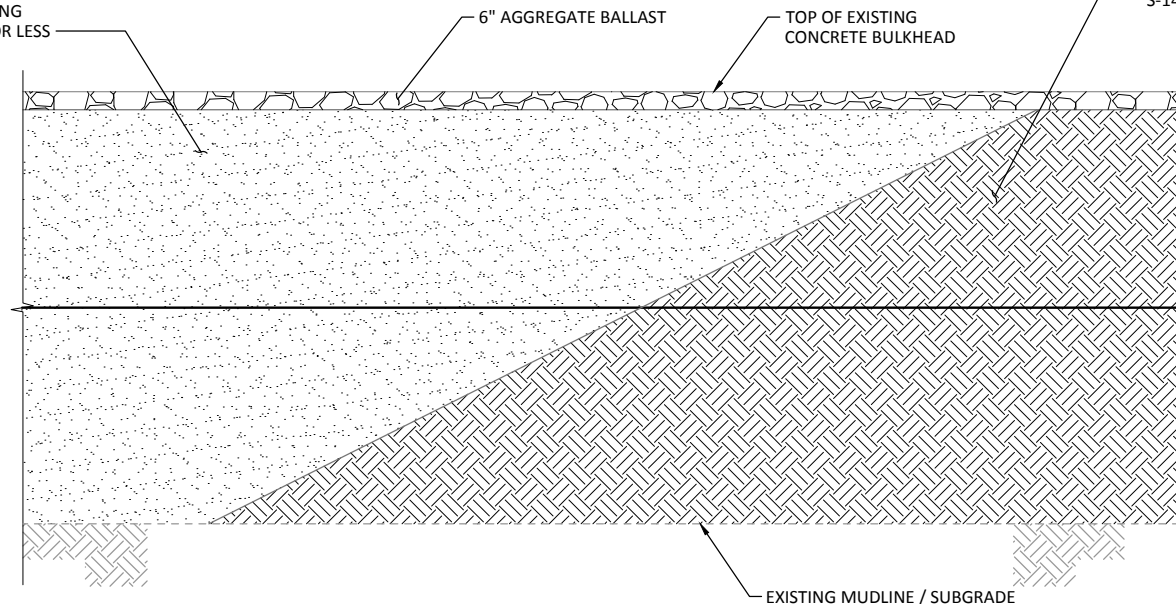


B SECTION
CU-2 SCALE: 3/8" = 1'-0"



C SECTION
CU-1 SCALE: 3/8" = 1'-0"

CDF WHERE SPACE BETWEEN SHEET PILE WALL AND EXISTING BULKHEAD IS 3 FEET OR LESS



1 CDF AND STRUCTURAL FILL PLACEMENT DETAIL
CU-4 SCALE: 3/8" = 1'-0"

NOTES:

1. TO LIMIT THE SPREAD OF CDF MATERIAL BEYOND THE REQUIRED LOCATION THE CONTRACTOR SHALL PLACE AN ADJACENT LIFT (HEIGHT TO BE DETERMINED BY THE CONTRACTOR) OF STRUCTURAL FILL PRIOR TO PLACING CDF MATERIAL BETWEEN THE SHEET PILE WALL AND EXISTING BULKHEAD, SEE STRUCTURAL SHEETS FOR ADDITIONAL FILL SEQUENCING REQUIREMENTS.
2. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
3. SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.

SEE NOTE 1

SEE NOTE 1

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RECORD DRAWINGS

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REVISIONS				
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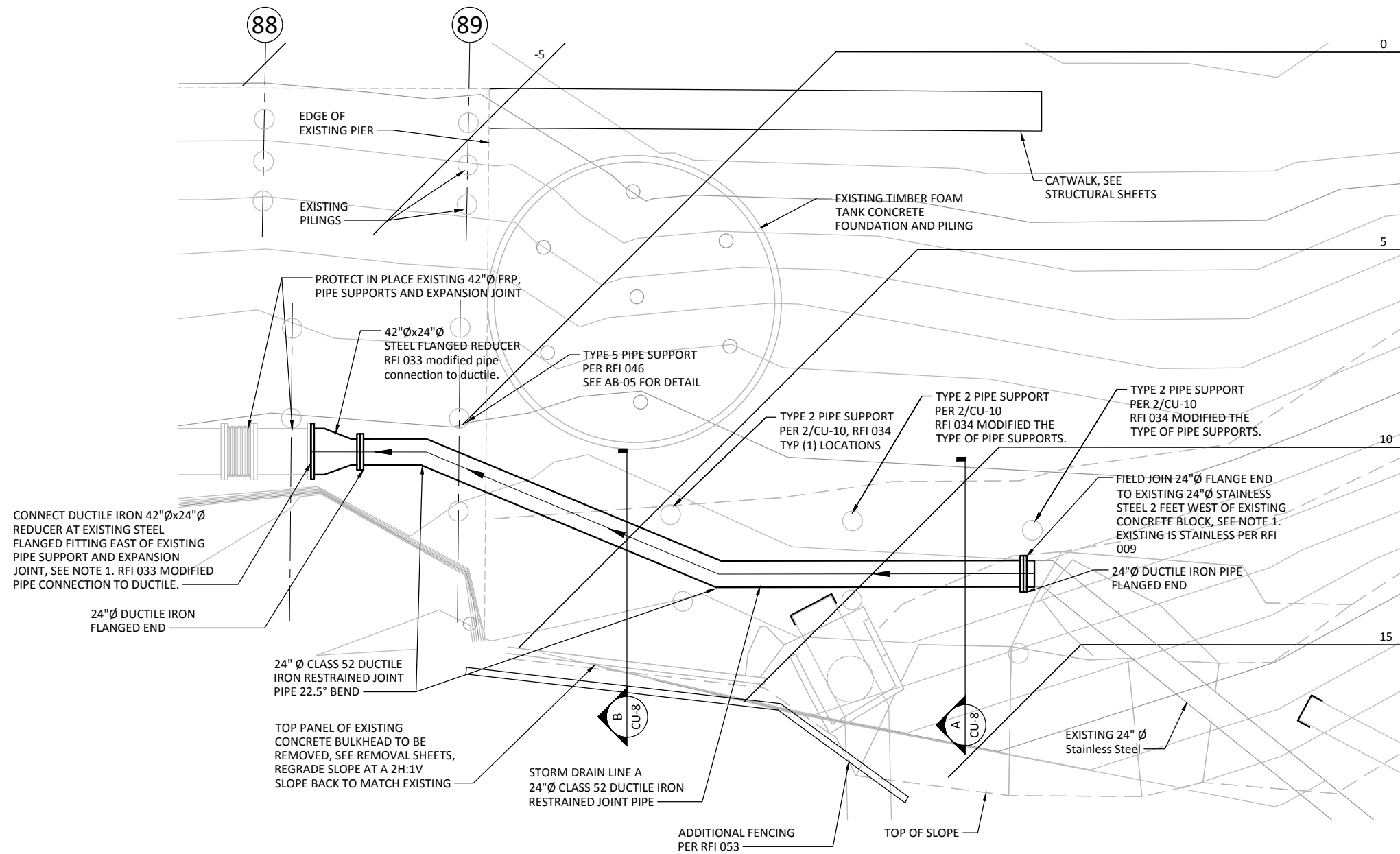
DESIGNED BY: SJS
 DRAWN BY: GMC
 CHECKED BY: MDK
 APPROVED BY: DLO
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

PAVING AND GRADING SECTIONS

CU-6

SHEET NO. 65 OF 126



- LEGEND:**
- 10 FINISHED CAPPED SLOPE CONTOURS, SEE C-SHEETS
 - EXISTING CONTOUR

- NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY EXISTING PILE LOCATIONS, EXISTING PIPE INVERTS, EXISTING AND DUCTILE IRON PIPE ROUTING AND BENDS, AND POINTS OF CONNECTION TO EXISTING FRP PIPES SHOWN ON THE PLAN. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS THAT MAY IMPACT THE WORK.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING ABOVE GRADE AND UNDERGROUND UTILITIES. EXISTING UTILITIES SHOWN HAVE BEEN OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ADDITIONAL UTILITIES NOT SHOWN. CARE SHOULD BE TAKEN TO AVOID DAMAGE OR DISTURBANCE TO UTILITIES TO REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY HIS ACTIVITIES.
 3. SEE SHEET CU-8 FOR STORM DRAIN LINE A PROFILE.
 4. SEE SHEET D-20 FOR EXISTING PIPING DEMOLITION.
 5. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 6. SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.
 7. (2) ADDITIONAL PIPE RANGER SUPPORTS WERE FOUND TO BE DAMAGED. SUPPORTS WERE REPLACED PER RFI 048 SEC AB-09 FOR DETAIL.

1 FOAM TANK STORM DRAINAGE PLAN
 SCALE: 1" = 5'-0"

NORTH
 PROJECT NORTH
 CALL 48 HOURS BEFORE YOU DIG DIAL 811
 SCALE IN FEET

RECORD DRAWINGS

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 (206) 287-9130

kpff
 1601 5th Avenue, Suite 1300
 Seattle, Washington 98101
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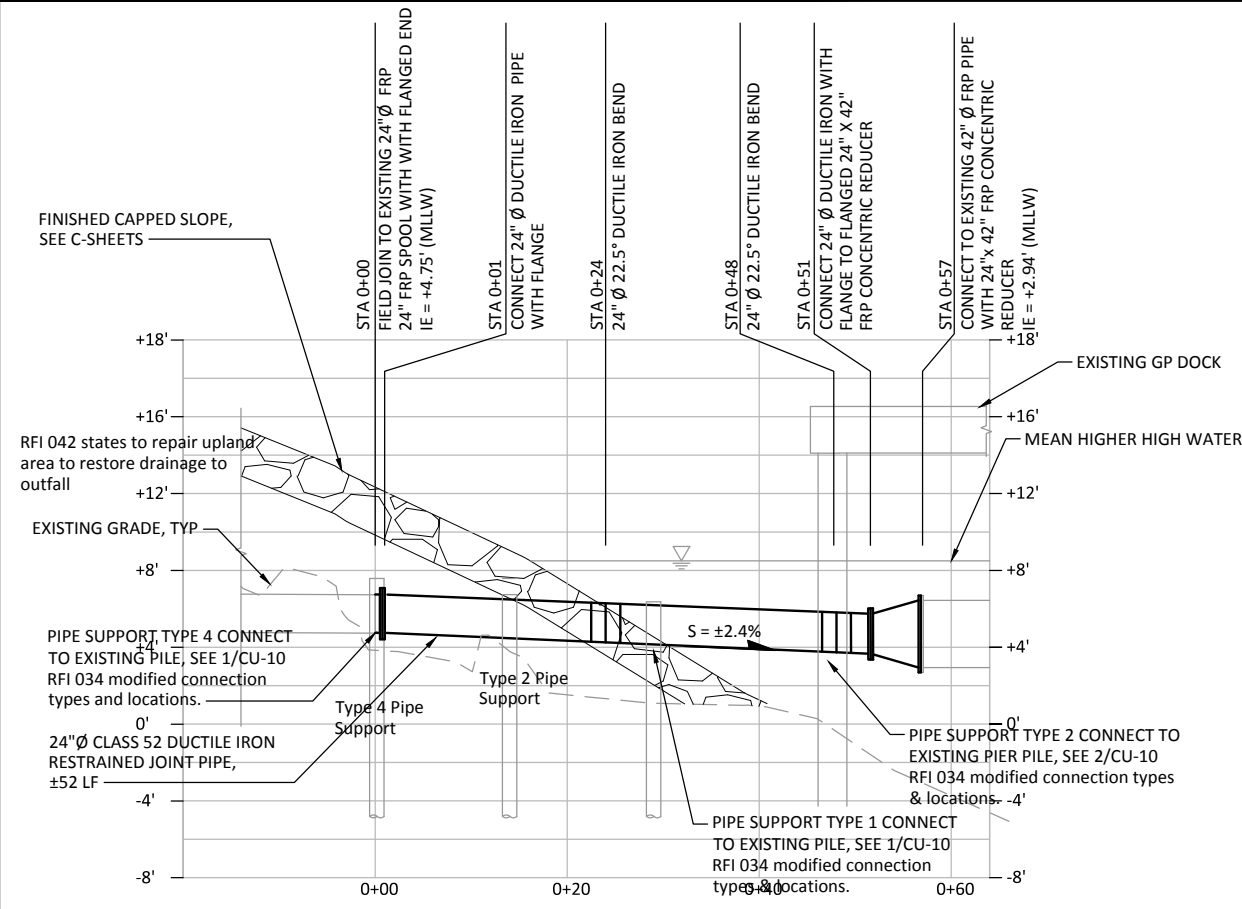
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WHATCOM WATERWAY PHASE 1 CLEANUP
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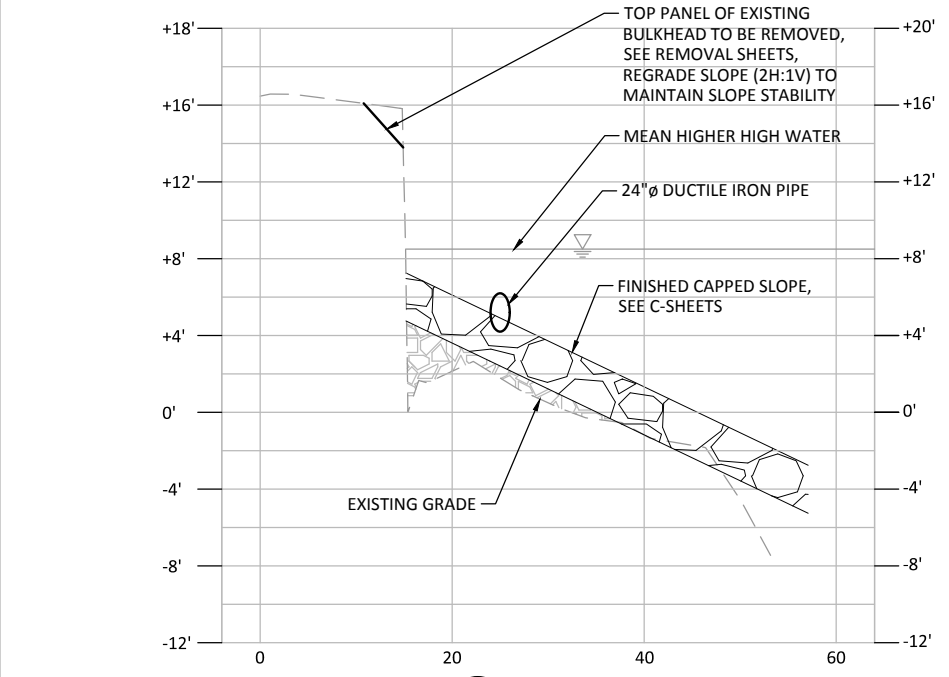
CIVIL UPLAND DETAILS

CU-7
 SHEET NO. 66 OF 126

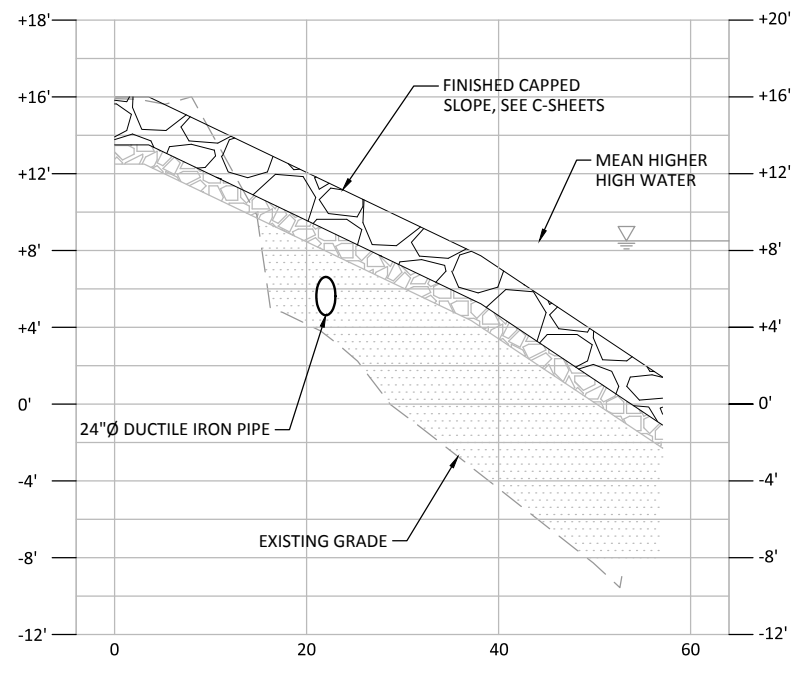
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STORM DRAINAGE PROFILE LINE A
SCALE: V 1"=5'
H 1"=10'

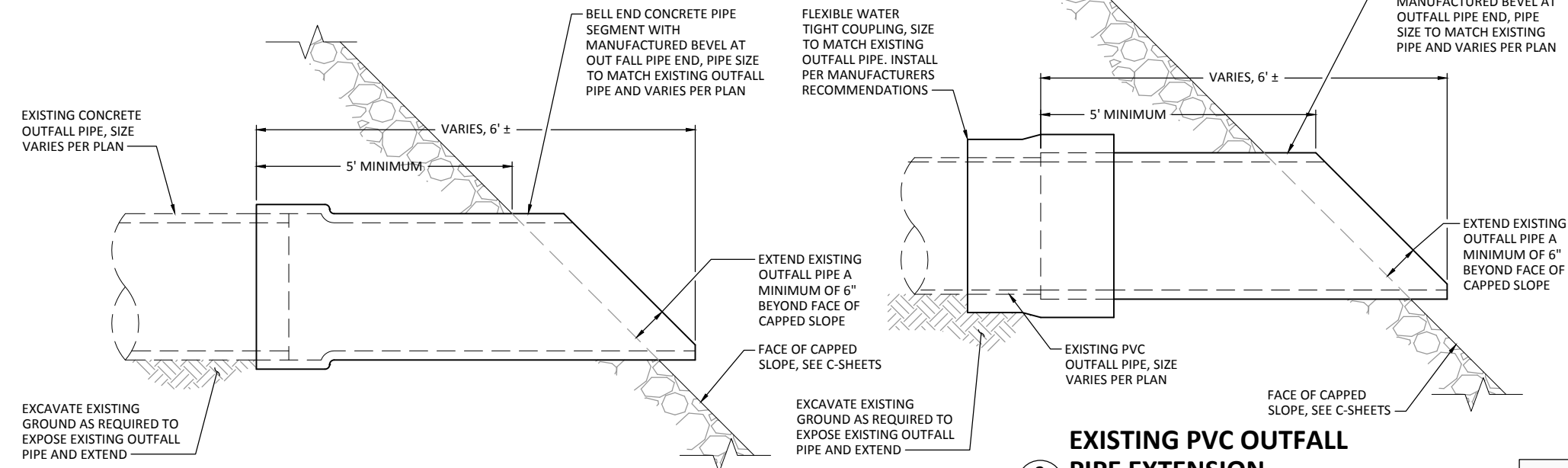


SECTION B
CU-7 SCALE: V 1"=5'
H 1"=10'



SECTION A
CU-7 SCALE: V 1"=5'
H 1"=10'

- NOTES:**
- EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 - SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.



1 EXISTING CONCRETE OUTFALL PIPE EXTENSION
R-2, R-5 SCALE: NTS

2 EXISTING PVC OUTFALL PIPE EXTENSION
R-3 SCALE: NTS

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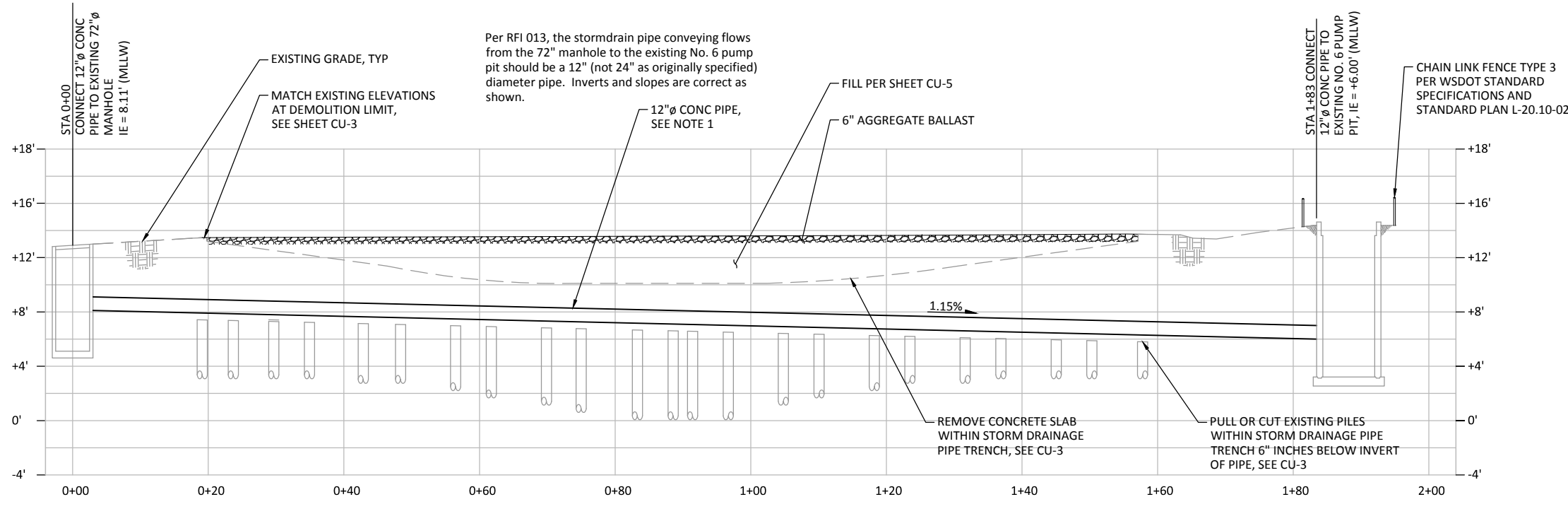
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WHATCOM WATERWAY PHASE 1 CLEANUP
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DRAINAGE PROFILES, SECTIONS AND DETAILS

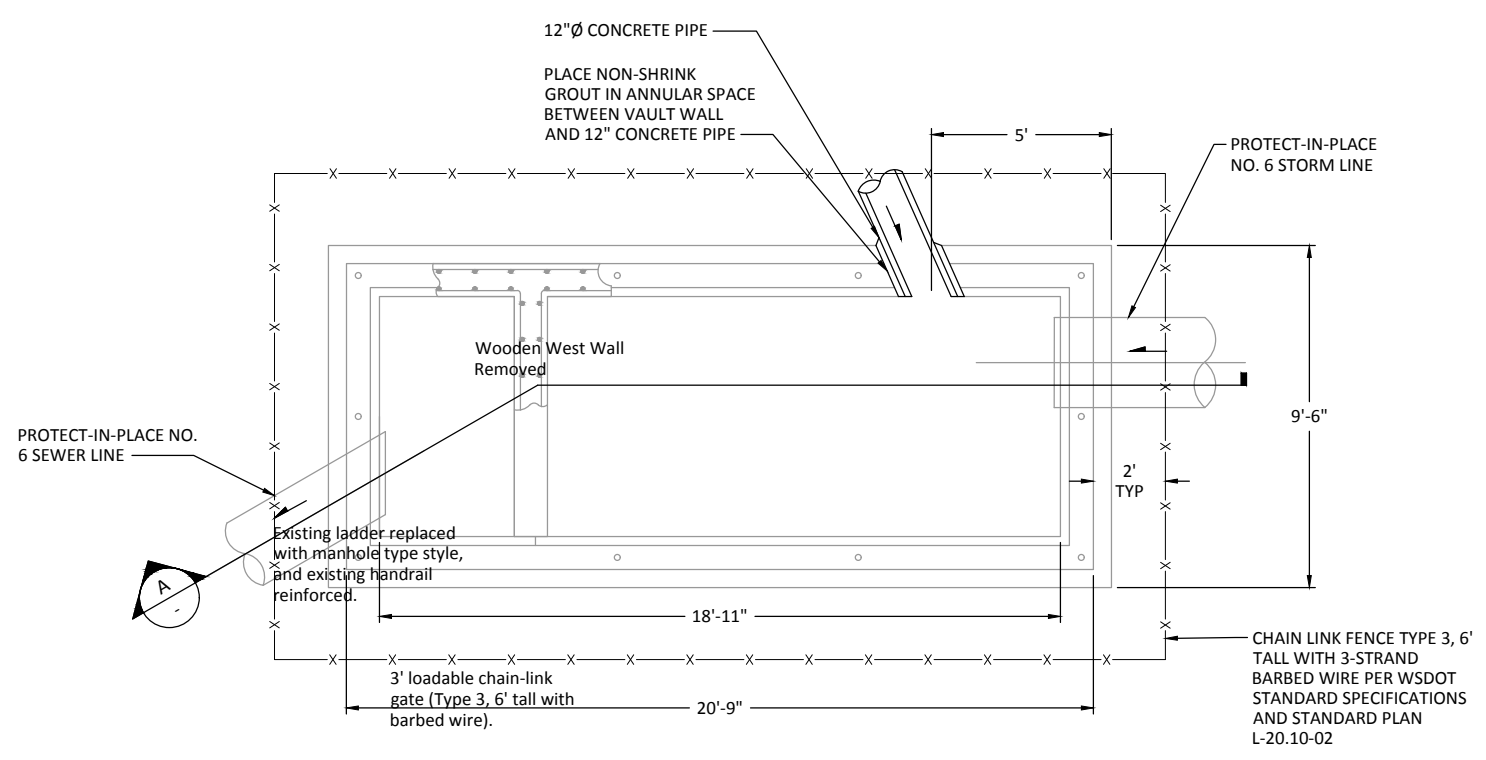
CU-8
SHEET NO. 67 OF 126



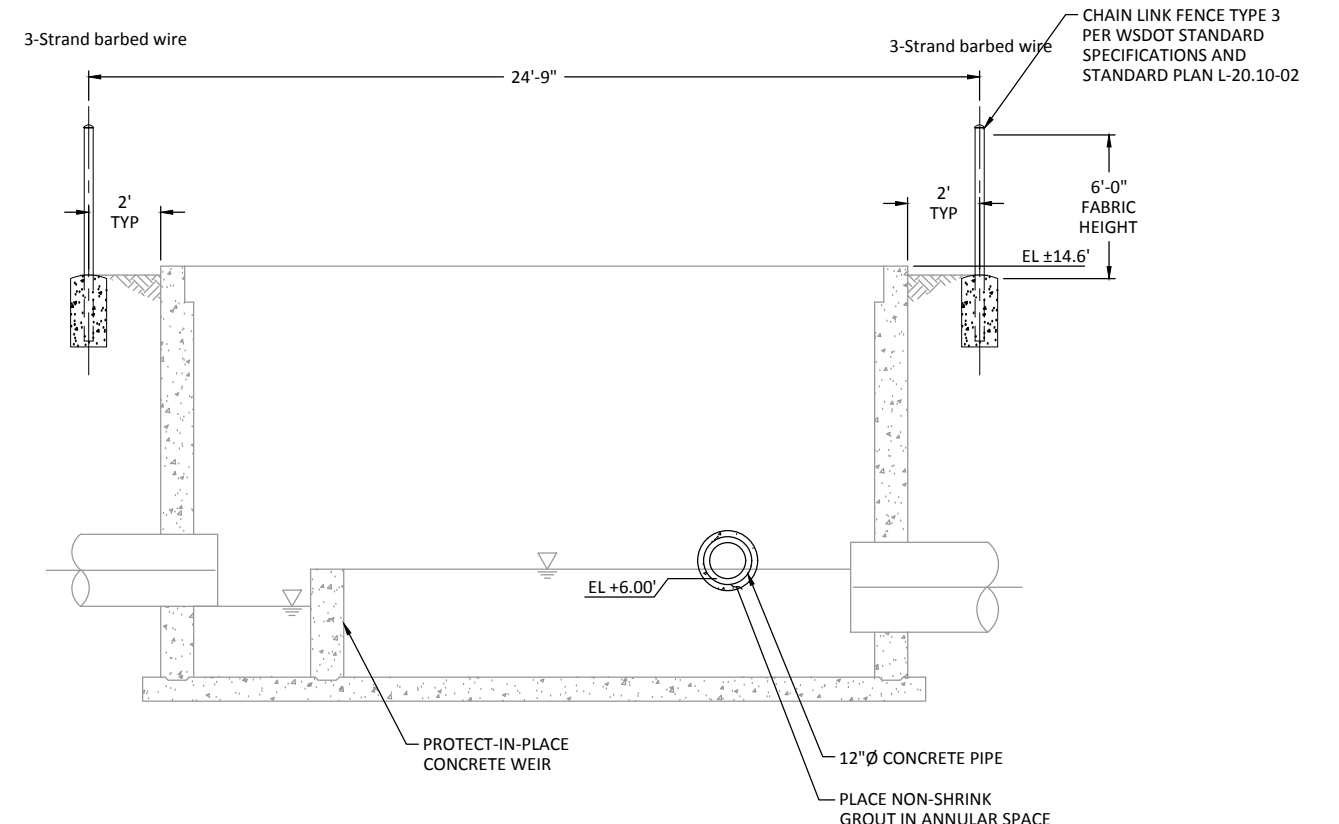
- NOTES:**
1. STORM DRAIN PIPE TRENCH, BEDDING AND BACKFILL SHALL BE PER WSDOT STANDARD SPECIFICATIONS AND STANDARD PLAN B-55.20-00.
 2. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 3. SEE SPECIFICATIONS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.

STORM DRAINAGE PROFILE LINE B

SCALE: H: 1"=10'
V: 1"=5'



1 NO. 6 PUMP PIT STORM DRAIN PIPE CONNECTION
CU-3 SCALE: 3/8" = 1'-0"



A SECTION
SCALE: 3/8" = 1'-0"

- NOTES:**
1. DIMENSIONS OF EXISTING NO. 6 SEWER PIT SHOWN ARE APPROXIMATE AND ARE FOR REFERENCE ONLY.

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RECORD DRAWINGS

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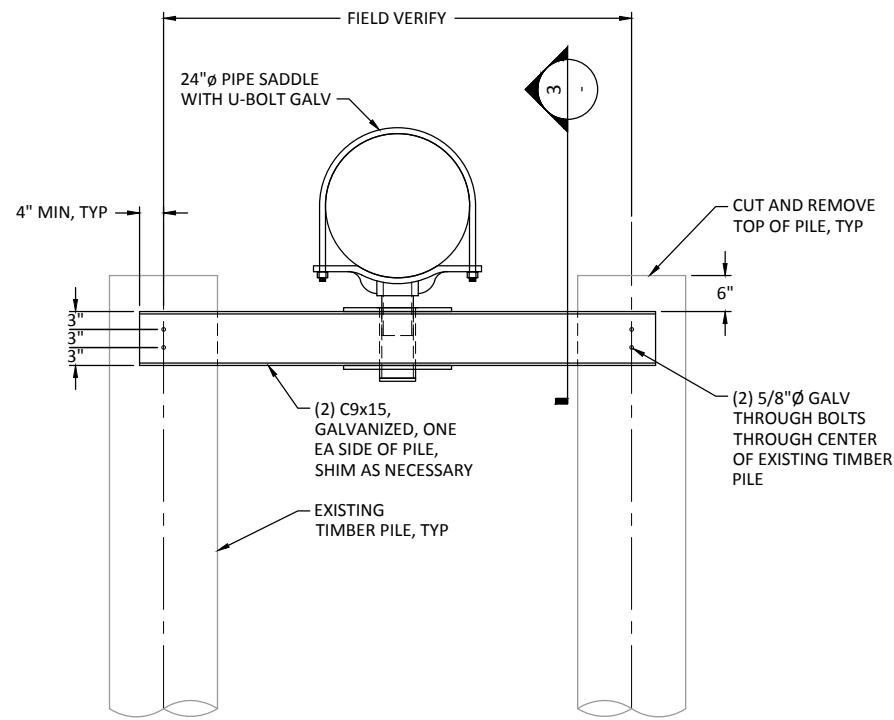
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CHECKED BY: MDK
APPROVED BY: DLO
SCALE: AS NOTED
DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

CIVIL UPLAND DETAILS

CU-9

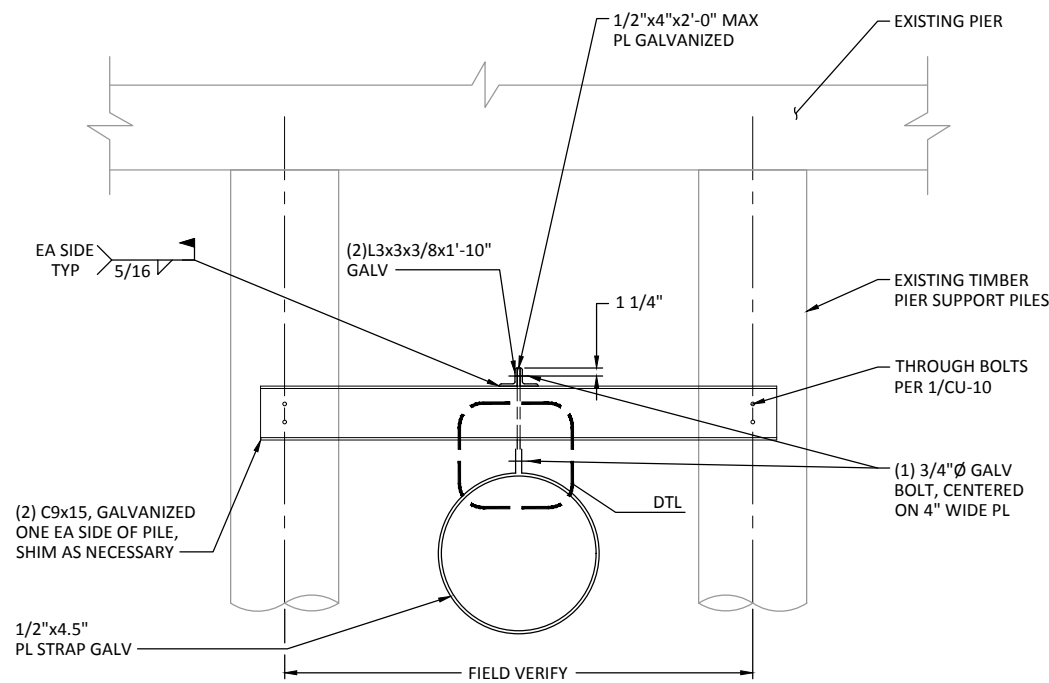
SHEET NO. 68 OF 126



NOTES:

- ELEVATION OF PIPE SUPPORTS TO BE DETERMINED USING STORM DRAIN LINE A PROFILE, SHEET CU-8 AND SHALL BE FIELD VERIFIED.

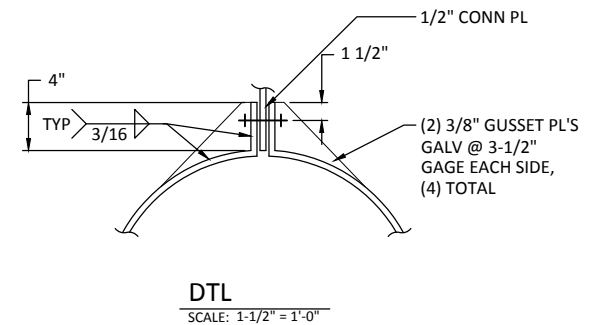
1 DETAIL - PIPE SUPPORT TYPE 1
 CU-7 SCALE: 3/8" = 1'-0"
 CU-8



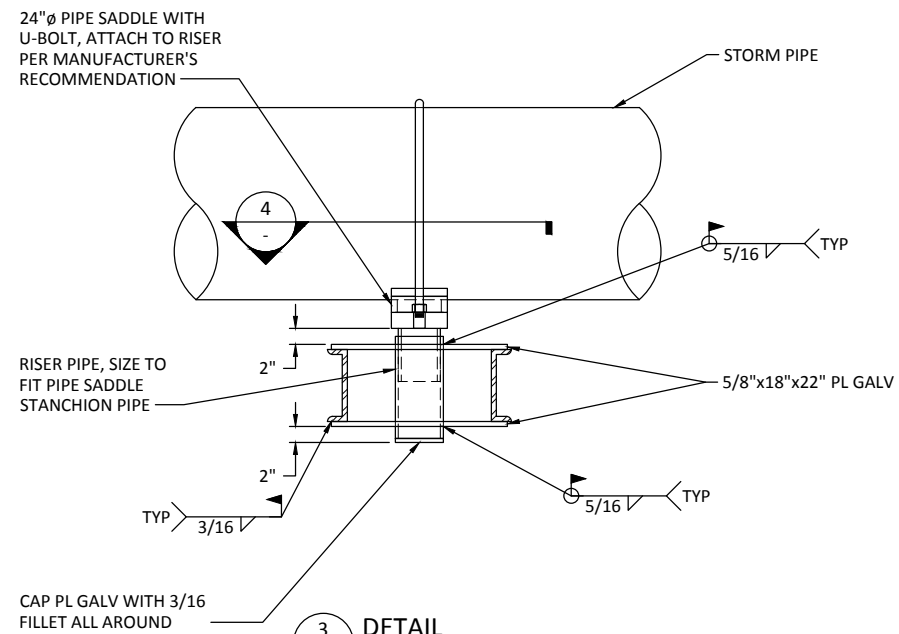
NOTES:

- ELEVATION OF PIPE SUPPORTS TO BE DETERMINED USING STORM DRAIN LINE A PROFILE, SHEET CU-8 AND SHALL BE FIELD VERIFIED.

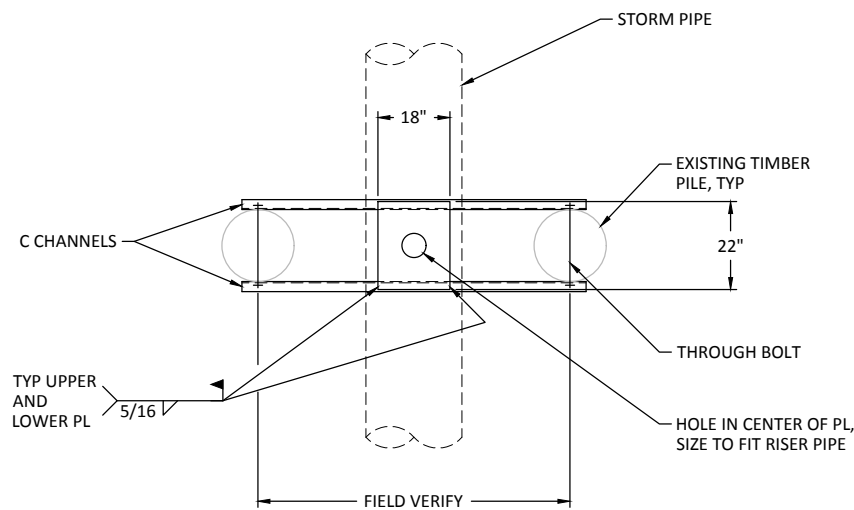
2 DETAIL - PIPE SUPPORT TYPE 2
 CU-7 SCALE: 3/8" = 1'-0"
 CU-8



See RFI 045, 046, 047, and 048 for info on revised pipe bracket drawings. See supplemental AB sheets for sketches of revised pipe bracket types.



3 DETAIL
 SCALE: 1" = 1'-0"



4 DETAIL
 SCALE: 1/2" = 1'-0"

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RECORD DRAWINGS

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WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

CIVIL UPLAND DETAILS

CU-10

SHEET NO. 69 OF 126

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

NOTES (APPLICABLE TO ALL ELECTRICAL DRAWINGS):

- ALL EQUIPMENT, CONDUITS, HANDHOLES, CABLES, ETC. SHOWN &/OR INDICATED ON THE ELECTRICAL DRAWINGS ARE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL ELECTRICAL MATERIALS SHALL BE "UL" (UNDERWRITERS LABORATORIES, INC.) LISTED, LABELED AND APPROVED FOR THE SERVICE INTENDED WHERE UL STANDARDS HAVE BEEN ESTABLISHED. ALL ELECTRICAL MATERIAL SHALL BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
- PROVIDE ALL SUPERVISION, LABOR, SERVICES, TOOLS, MATERIALS & EQUIPMENT FOR A COMPLETE, SAFE & RELIABLE INSTALLATION, ADJUSTED, TESTED & READY FOR OPERATION.
- PROVIDE ALL COORDINATION WITH UTILITIES AND PUGET SOUND ENERGY.
- THE COMPLETED INSTALLATION SHALL BE DONE IN A NEAT & WORKMANLIKE MANNER, SHALL BE SUITABLE FOR THE LOCATION, AND SHALL BE IN ACCORDANCE WITH ALL LAWS, RULES & REGULATIONS IN EFFECT AT THE SITE (INCLUDING THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, THE WASHINGTON STATE RULES & REGULATIONS FOR INSTALLING ELECTRIC WIRES & EQUIPMENT, AND THE WASHINGTON STATE ENERGY CODE).
- ALL OPERATIONS SHALL BE CONDUCTED IN A MANNER TO AVOID THE RISK OF HARM TO PERSONS OR DAMAGE TO PROPERTY. DAMAGE SHALL IMMEDIATELY BE REPAIRED. CONSTRUCTION EQUIPMENT & TOOLS SHALL BE IN GOOD OPERATING CONDITION, AND BE DESIGNED FOR THE WORK REQUIRED.
- THE ELECTRICAL DRAWINGS ARE GENERAL IN FORM AND DO NOT SHOW EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES, PROTECT EXISTING UTILITIES AS REQUIRED, AND REPAIR ANY DAMAGE TO EXISTING UTILITIES (KNOWN OR UNKNOWN, LOCATED OR NOT LOCATED) RESULTING FROM CONTRACTOR'S OPERATIONS WITHOUT INCREASE IN CONTRACT SUM. DAMAGED ELECTRICAL AND TELECOMMUNICATIONS (TELEPHONE, COMPUTER/DATA, TELEVISION, FIBER, COPPER, ETC.) CABLES SHALL BE REPLACED IN THEIR ENTIRETY. SPLICING WILL NOT BE ALLOWED.
- VERIFY ALL TRENCH, EQUIPMENT, HANDHOLES, LIGHTPOLES, DEVICES, ETC. LOCATIONS WITH OWNER & ENGINEER PRIOR TO BEGINNING EXCAVATION, TRENCHING & ROUGH-IN.
- CHANGES IN LOCATION UP TO 10' (E.G. EQUIPMENT AND DEVICES, TRENCH AND CONDUIT ROUTING, ETC.) MADE BEFORE INSTALLATION AND DEVIATIONS TO AVOID INTERFERENCES SHALL BE MADE WITHOUT INCREASE IN CONTRACT SUM.
- POWER INTERRUPTIONS (WHETHER TO THE ENTIRE SYSTEM OR TO INDIVIDUAL BUILDINGS, PANELS, EQUIPMENT, DEVICES, ETC.) SHALL BE KEPT TO AN ABSOLUTE MINIMUM, AND SHALL NOT BE DONE WITHOUT PRIOR APPROVAL, 2 WEEKS ADVANCED SCHEDULING & COORDINATION MEETING WITH THE OWNER. SECONDARY VERIFICATION THAT POWER INTERRUPTION WILL OCCUR IS ALSO REQUIRED 48 HOURS PRIOR TO THE DATE OF OCCURRENCE.
- BELOW GRADE CONDUIT SHALL BE SCHEDULE 40 PVC, DIRECT BURIED A MINIMUM OF 24 INCHES BELOW GRADE. WARNING TAPE SHALL BE BURIED ABOVE ALL CONDUITS.
- BELOW GRADE CONDUITS CONTAINING BENDS SHALL BE DONE WITH GALVANIZED RIGID STEEL (GRS) OR FIBERGLASS. THE MINIMUM CHANGE OF DIRECTION IN ANY PLANE BETWEEN SECTIONS OF STRAIGHT PVC CONDUIT WITHOUT THE USE OF GRS OR FIBERGLASS BENDS SHALL BE LIMITED TO 5 DEGREES.
- UNDERGROUND FEEDER, BRANCH CIRCUIT & EQUIPMENT GROUND CABLES SHALL BE 1/C STRANDED COPPER, #12 AWG UNLESS NOTED OTHERWISE, WITH 600V TYPE XHHW INSULATION.
- IN ADDITION TO THE CIRCUIT CONDUCTORS INDICATED, CONTRACTOR SHALL PROVIDE AN EQUIPMENT GROUND CABLE (SIZED THE SAME AS THE LARGEST CIRCUIT CONDUCTOR UNLESS SPECIFICALLY NOTED OTHERWISE) WITHIN EACH RACEWAY WITH THE FEEDER OR CIRCUIT CONDUCTORS.

REMOVAL NOTES (APPLICABLE TO ALL ELECTRICAL DRAWINGS):

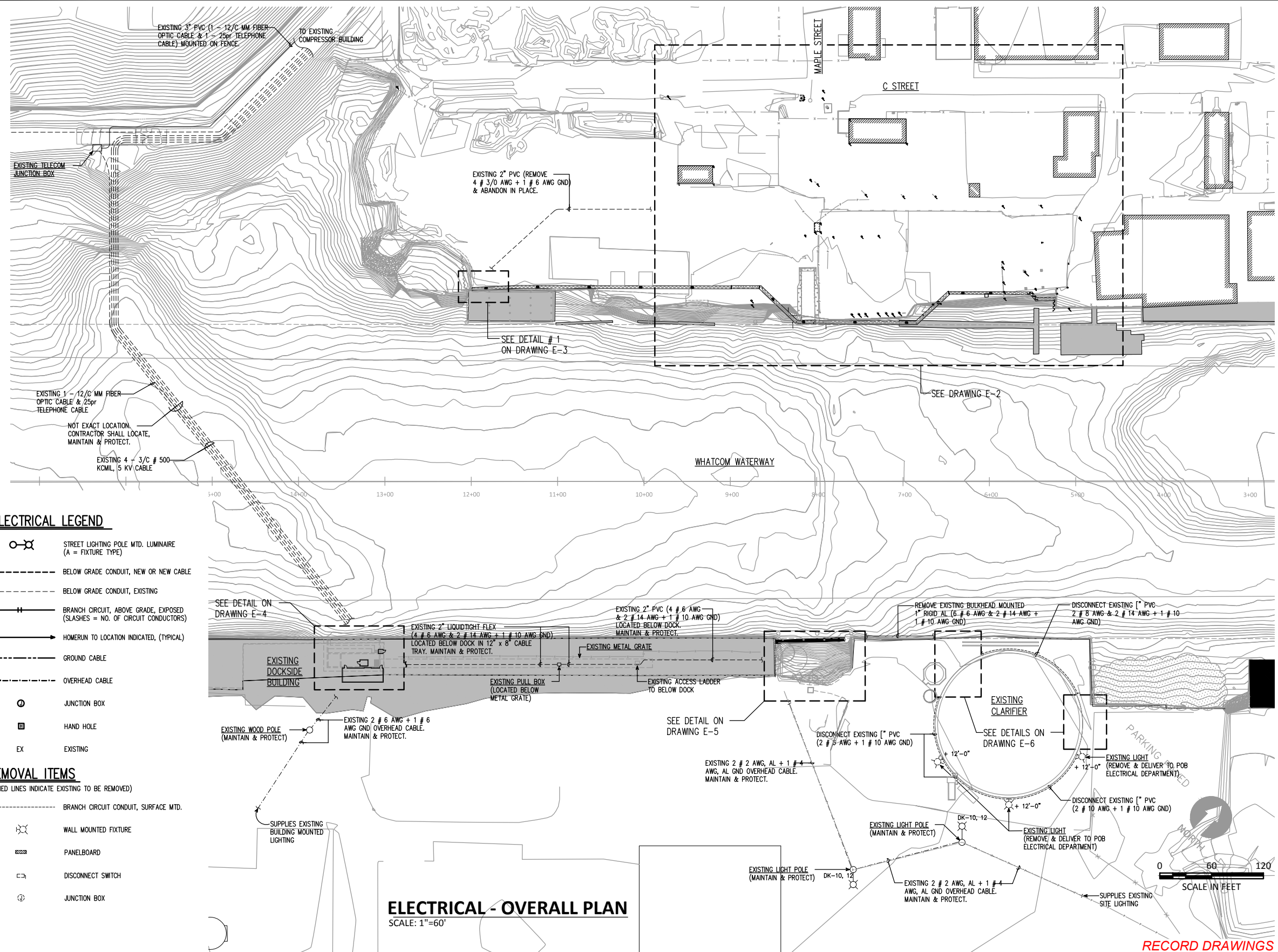
- CONTRACTOR SHALL REMOVE ALL EXISTING POWER, LIGHTING, EQUIPMENT, RACEWAYS, CABLES, DEVICES, ETC. AS INDICATED. REMOVE RACEWAY AND CABLES BACK TO THEIR ORIGIN WHERE DEVICES ARE INDICATED TO BE REMOVED.
- PROVIDE BLANK COVERS ON ALL UNUSED REMAINING BOXES AND METAL CAPS ON A UNUSED REMAINING CONDUITS.
- UNLESS NOTED OTHERWISE, BELOW GRADE RACEWAYS ARE ALLOWED TO REMAIN, EXCEPT, WIRING SHALL BE REMOVED. EXISTING BELOW GRADE RACEWAYS ARE ALLOWED TO BE RE-USED IF IN GOOD CONDITION & SUITABLE FOR THE NEW INSTALLATION.
- EXISTING CIRCUITS, CONDUITS, CABLES, ETC. INTERRUPTED DUE TO THE CONSTRUCTION SHALL BE RE-CONNECTED AS REQUIRED TO MAINTAIN THE CIRCUIT.
- ALL SURPLUS MATERIAL REMOVED SHALL BE INSPECTED BY THE OWNER AND TENANT AND THOSE ITEMS SELECTED SHALL REMAIN THE PROPERTY OF THE OWNER AND TENANT. ALL REMAINING SURPLUS MATERIALS SHALL BE REMOVED FROM THE SITE DISPOSED OF BY THE CONTRACTOR.
- CONTACT THE OWNER AND ALL UTILITIES TO DETERMINE EXACT LOCATION OF EXISTING BELOW GRADE UTILITIES, SERVICES, PIPES, CONDUITS, CABLES, ETC. BEFORE DOING ANY EXCAVATING OR TRENCHING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR REPLACING (AS REQUIRED) ALL THAT HE DAMAGES, KNOWN OR UNKNOWN.

ELECTRICAL LEGEND

- STREET LIGHTING POLE MTD. LUMINAIRE (A = FIXTURE TYPE)
- BELOW GRADE CONDUIT, NEW OR NEW CABLE
- BELOW GRADE CONDUIT, EXISTING
- BRANCH CIRCUIT, ABOVE GRADE, EXPOSED (SLASHES = NO. OF CIRCUIT CONDUCTORS)
- HOMERUN TO LOCATION INDICATED, (TYPICAL)
- GROUND CABLE
- OVERHEAD CABLE
- JUNCTION BOX
- HAND HOLE
- EXISTING

REMOVAL ITEMS

- BRANCH CIRCUIT CONDUIT, SURFACE MTD. (DASHED LINES INDICATE EXISTING TO BE REMOVED)
- WALL MOUNTED FIXTURE
- PANELBOARD
- DISCONNECT SWITCH
- JUNCTION BOX



ELECTRICAL - OVERALL PLAN
SCALE: 1"=60'

RECORD DRAWINGS



K ENGINEERS INC.
208 Third Street
Lynden, WA. 98264
Bus. (360) 354-4757
FAX (360) 354-6794

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DRAWN BY: K. LANCE
CHECKED BY: S. TEVELDE
APPROVED BY: S. TEVELDE
SCALE: AS NOTED
DATE: MARCH 2015

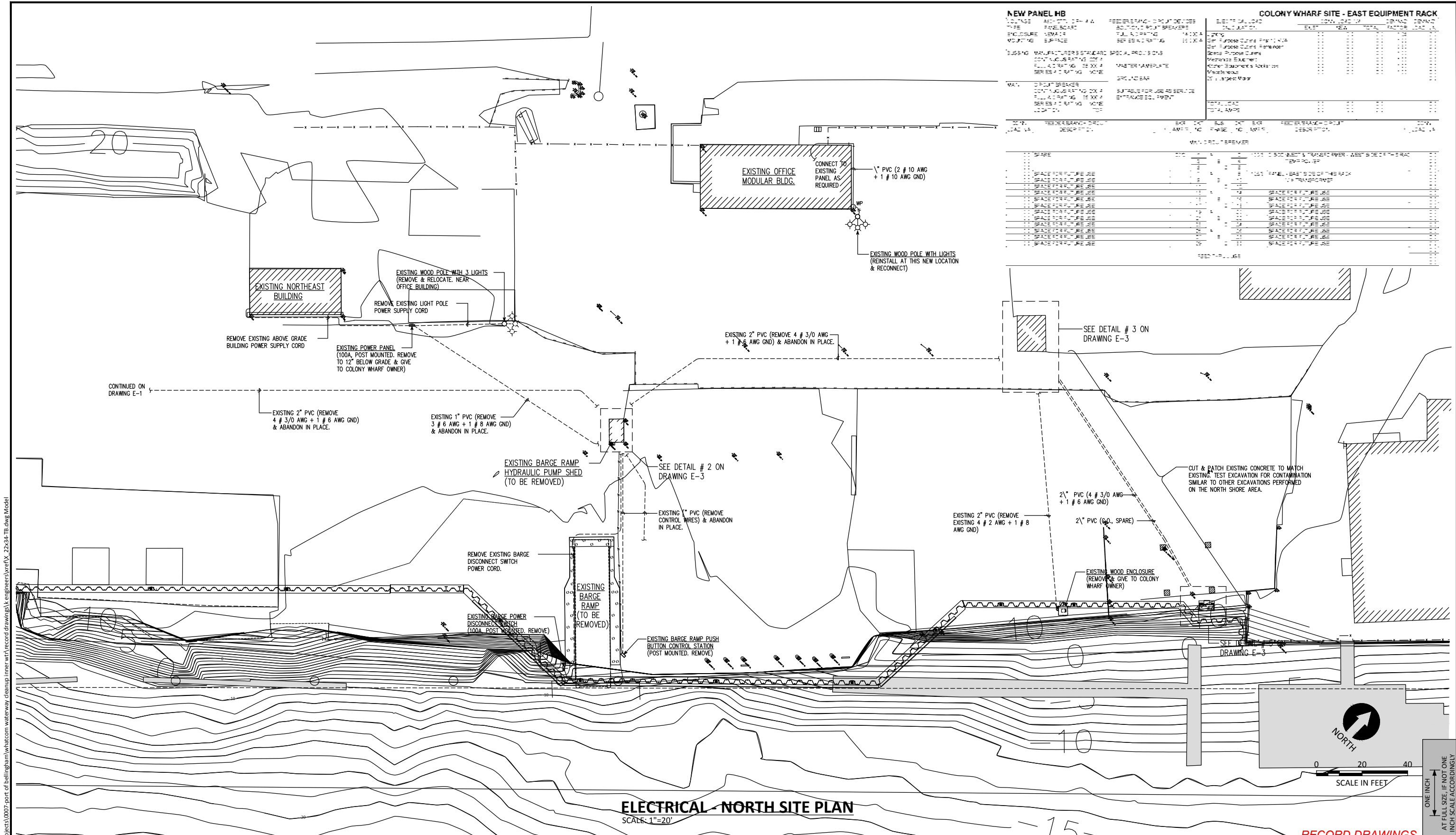
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BELLINGHAM, WASHINGTON

ELECTRICAL - OVERALL PLAN, LEGEND & NOTES

E-1

SHEET NO. 70 OF 126

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NEW PANEL HB

DESCRIPTION	QUANTITY	UNIT	REMARKS
1200A PANEL BOARD	1	PCB	ADDITIONAL RIBBON BREAKERS
ENCLOSURE	1	ENC	FULL RATING
MOUNTING SURFACE	1	MSF	10,000 LB
BUSBAR MANUFACTURER'S STANDARD	1	MSB	SPECIAL PROVISIONS
CONDUCTOR RATING 100A	1	COR	MASTER NAMEPLATE
FULL RATING 100A	1	FR	SUITABLE FOR USE AS SERVICED
SERIES RATING NONE	1	SR	ENTRANCE EQUIPMENT
CONDUIT BREAKER	1	CB	
CONDUCTOR RATING 100A	1	COR	
FULL RATING 100A	1	FR	
SERIES RATING NONE	1	SR	
CONDUIT	1	CON	

COLONY WHARF SITE - EAST EQUIPMENT RACK

DESCRIPTION	QUANTITY	UNIT	REMARKS
1200A PANEL BOARD	1	PCB	ADDITIONAL RIBBON BREAKERS
ENCLOSURE	1	ENC	FULL RATING
MOUNTING SURFACE	1	MSF	10,000 LB
BUSBAR MANUFACTURER'S STANDARD	1	MSB	SPECIAL PROVISIONS
CONDUCTOR RATING 100A	1	COR	MASTER NAMEPLATE
FULL RATING 100A	1	FR	SUITABLE FOR USE AS SERVICED
SERIES RATING NONE	1	SR	ENTRANCE EQUIPMENT
CONDUIT BREAKER	1	CB	
CONDUCTOR RATING 100A	1	COR	
FULL RATING 100A	1	FR	
SERIES RATING NONE	1	SR	
CONDUIT	1	CON	

ELECTRICAL NORTH SITE PLAN
SCALE: 1"=20'

RECORD DRAWINGS

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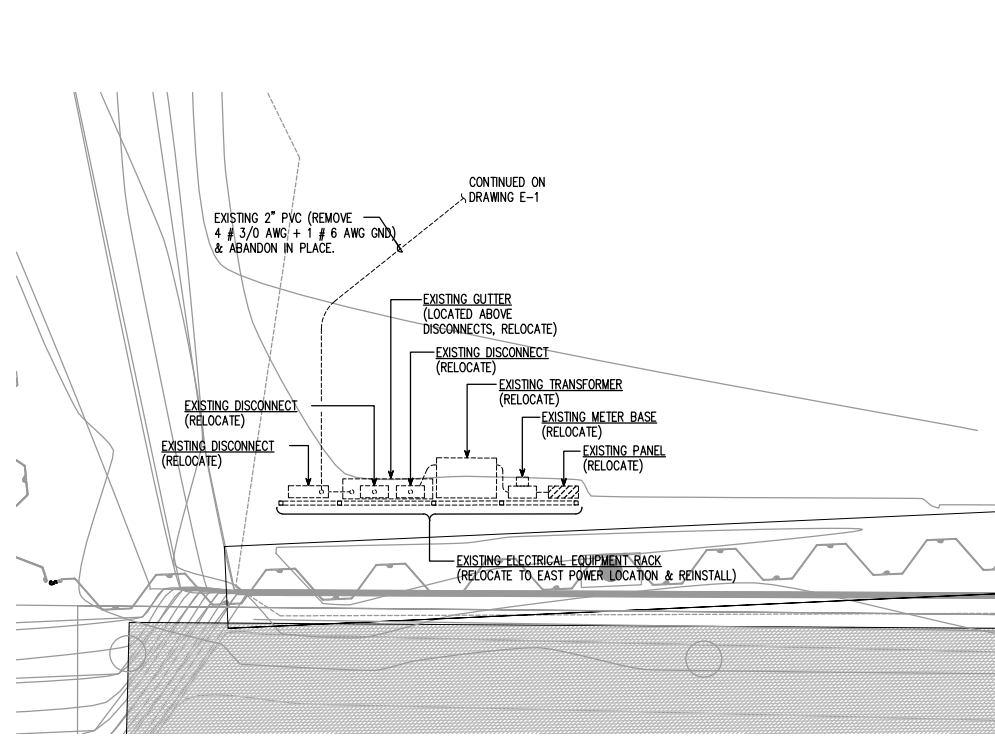
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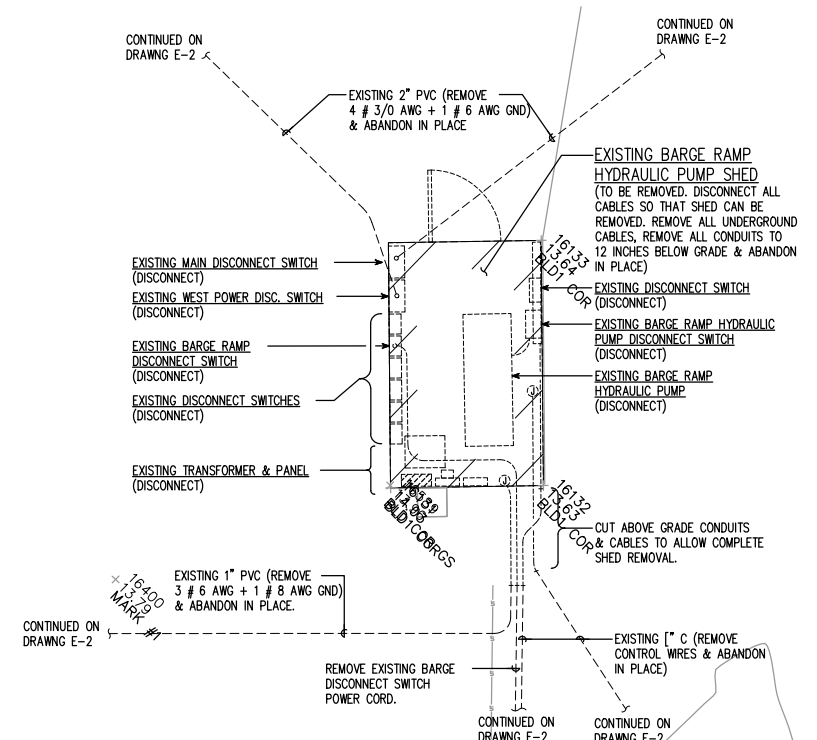
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 BELLINGHAM, WASHINGTON
ELECTRICAL - NORTH SITE PLAN

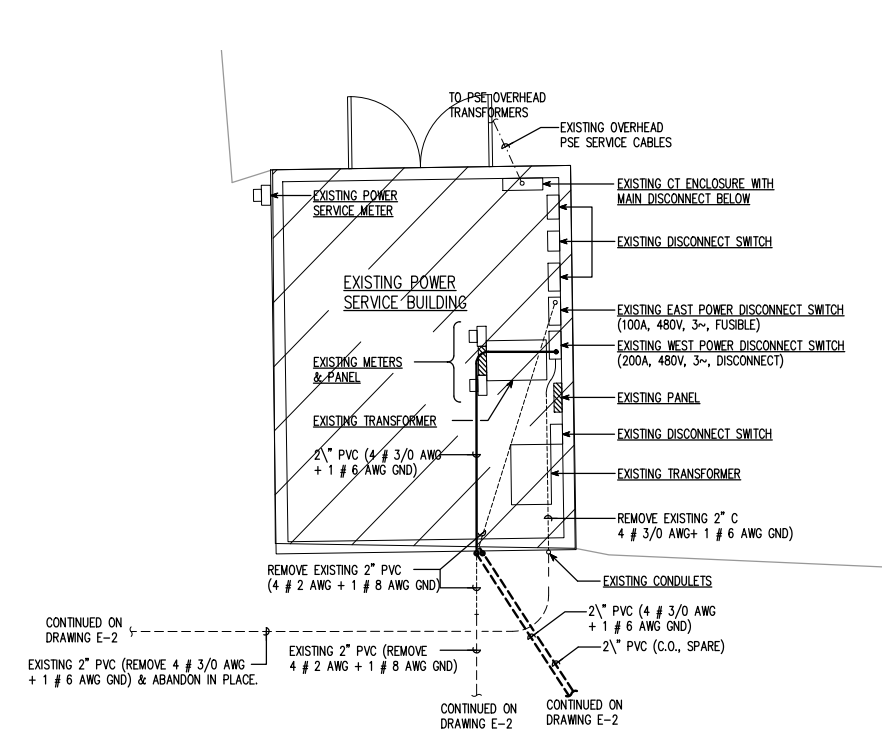
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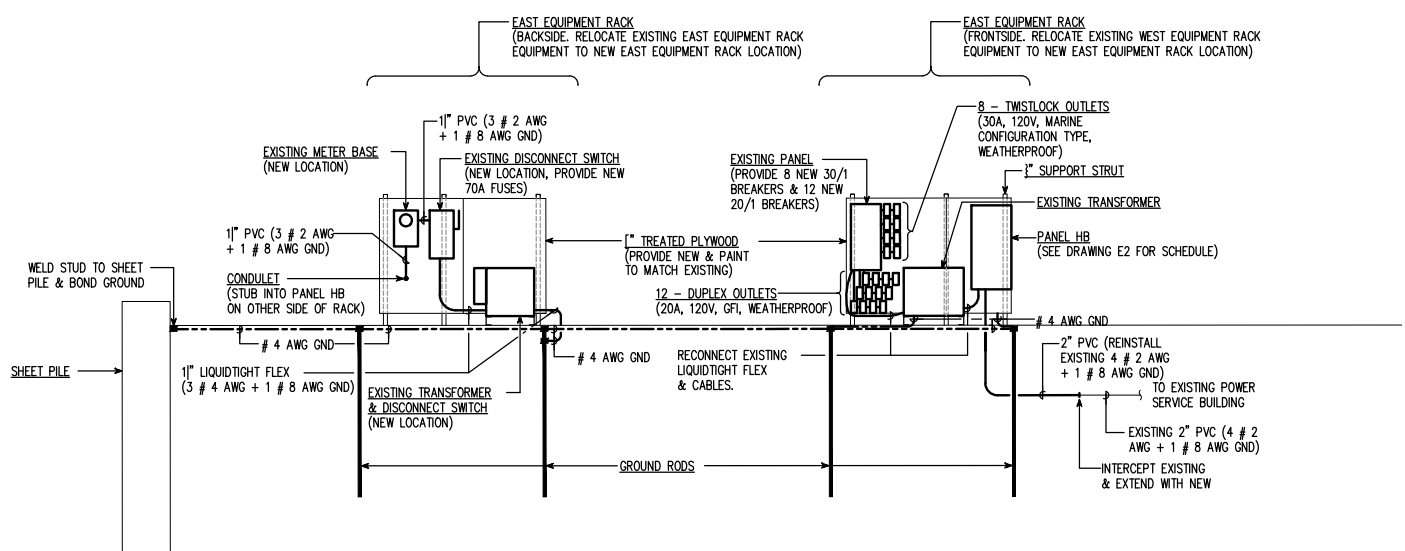
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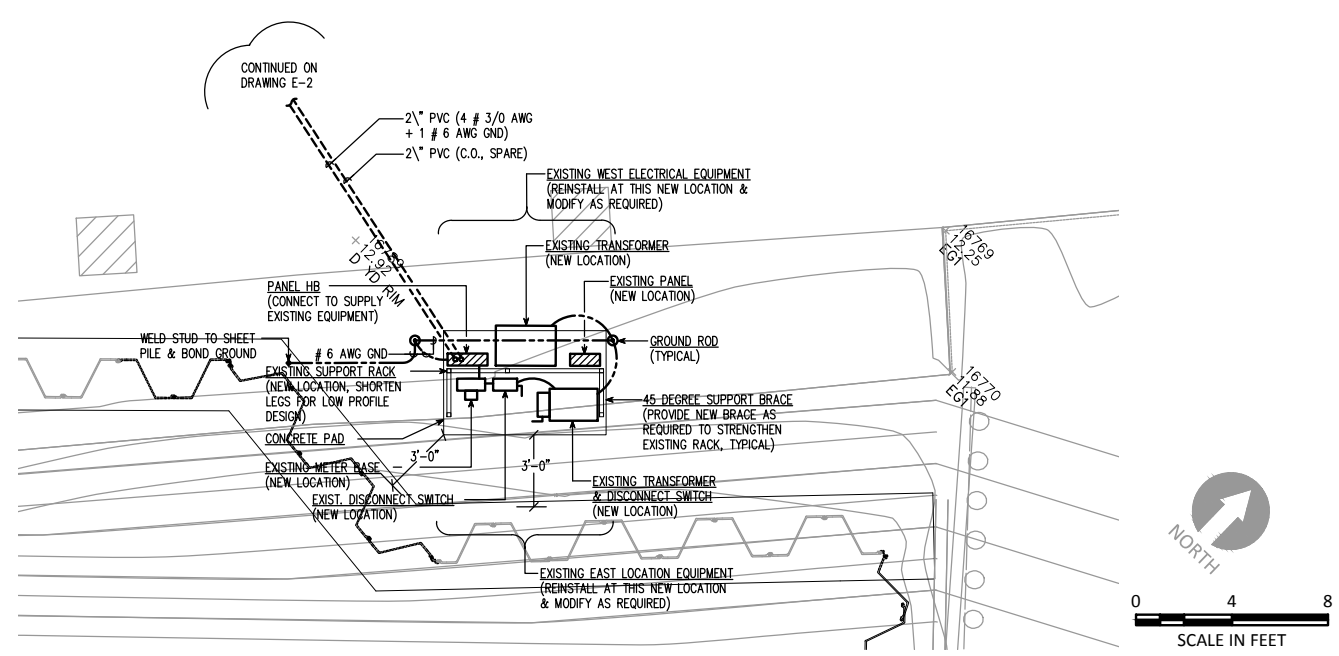
ELECTRICAL DETAIL # 2 - BARGE RAMP PUMP SHED
SCALE: 1/4"=1'-0"



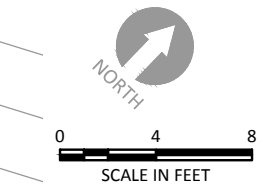
ELECTRICAL DETAIL # 3 - POWER SERVICE BUILDING
SCALE: 1/4"=1'-0"



ELECTRICAL DETAIL # 4 - EAST EQUIPMENT RACK
SCALE: 1/4"=1'-0"

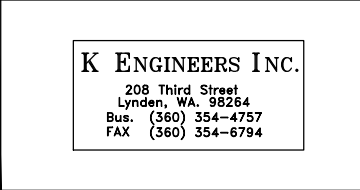


ELECTRICAL DETAIL # 5 - EAST EQUIPMENT RACK
SCALE: 1/4"=1'-0"



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BELLINGHAM, WASHINGTON

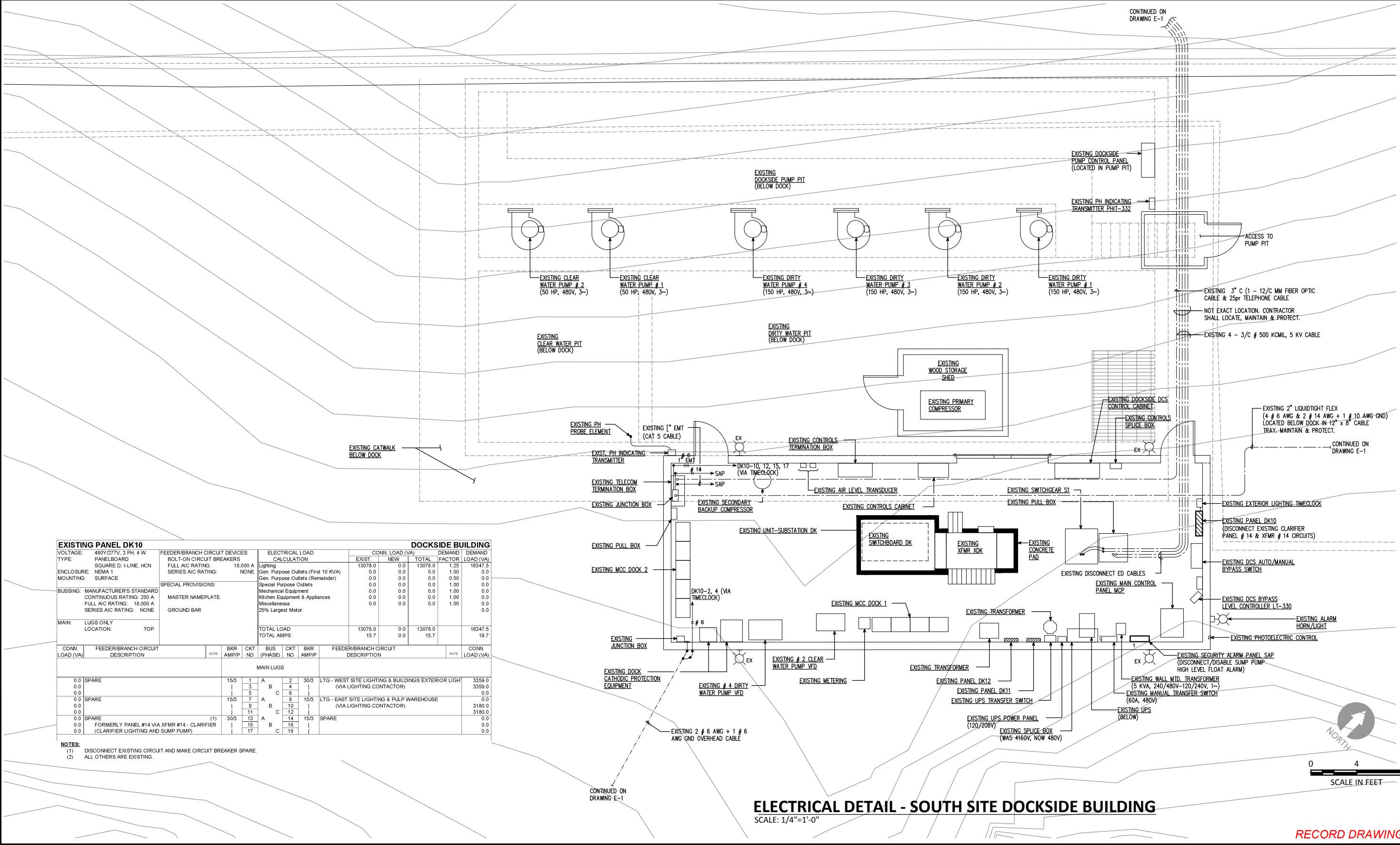
ELECTRICAL - DETAILS

E-3

SHEET NO. 72 OF 126

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INCH SCALE ACCORDINGLY

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 Dec 22, 2016 2:53pm tgriga



EXISTING PANEL DK10		DOCKSIDE BUILDING									
VOLTAGE: 480Y/277V, 3 PH, 4 W		FEEDER/BRANCH CIRCUIT DEVICES:		ELECTRICAL LOAD CALCULATION		CONN. LOAD (VA)		DEMAND FACTOR		DEMAND LOAD (VA)	
TYPE: PANELBOARD		BOLT-ON CIRCUIT BREAKERS		Lighting		EXIST	NEW	TOTAL			
ENCLOSURE: SQUARE D, I-LINE, HCN		FULL AIC RATING: 18,000 A		Gen. Purpose Outlets (First 10 kVA)		13078.0	0.0	13078.0	1.25	16347.5	
MOUNTING: SURFACE		SERIES AIC RATING: NONE		Gen. Purpose Outlets (Remainder)		0.0	0.0	0.0	0.50	0.0	
BUSING: MANUFACTURER'S STANDARD		SPECIAL PROVISIONS:		Special Purpose Outlets		0.0	0.0	0.0	1.00	0.0	
CONTINUOUS RATING: 250 A		MASTER NAMEPLATE		Mechanical Equipment		0.0	0.0	0.0	1.00	0.0	
FULL AIC RATING: 18,000 A		GROUND BAR		Kitchen Equipment & Appliances		0.0	0.0	0.0	1.00	0.0	
SERIES AIC RATING: NONE				Miscellaneous		0.0	0.0	0.0	1.00	0.0	
MAIN: LUGS ONLY				TOTAL LOAD		13078.0	0.0	13078.0		16347.5	
LOCATION: TOP				TOTAL AMPS		15.7	0.0	15.7		19.7	
CONN. LOAD (VA)	FEEDER/BRANCH CIRCUIT DESCRIPTION	NOTE	BKR AMP/P	CKT NO	BUS (PHASE)	CKT NO	BKR AMP/P	FEEDER/BRANCH CIRCUIT DESCRIPTION	NOTE	CONN. LOAD (VA)	
MAIN LUGS											
0.0	SPARE		15/3	1	A	2	30/3	LTG - WEST SITE LIGHTING & BUILDINGS EXTERIOR LIGHT (VIA LIGHTING CONTACTOR)		3359.0	
0.0				3	B	4				3359.0	
0.0				5	C	6				0.0	
0.0	SPARE		15/3	7	A	8	15/3	LTG - EAST SITE LIGHTING & PULP WAREHOUSE (VIA LIGHTING CONTACTOR)		0.0	
0.0				9	B	10				3180.0	
0.0				11	C	12				3180.0	
0.0	SPARE		(1)	30/3	13	A	14	15/3	SPARE	0.0	
0.0	FORMERLY PANEL #14 VIA XFMR #14 - CLARIFIER (CLARIFIER LIGHTING AND SUMP PUMP)			15	B	16				0.0	
0.0				17	C	18				0.0	

NOTES:
 (1) DISCONNECT EXISTING CIRCUIT AND MAKE CIRCUIT BREAKER SPARE.
 (2) ALL OTHERS ARE EXISTING.



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: S. TEVELDE
 DRAWN BY: K. LANCE
 CHECKED BY: S. TEVELDE
 APPROVED BY: S. TEVELDE
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

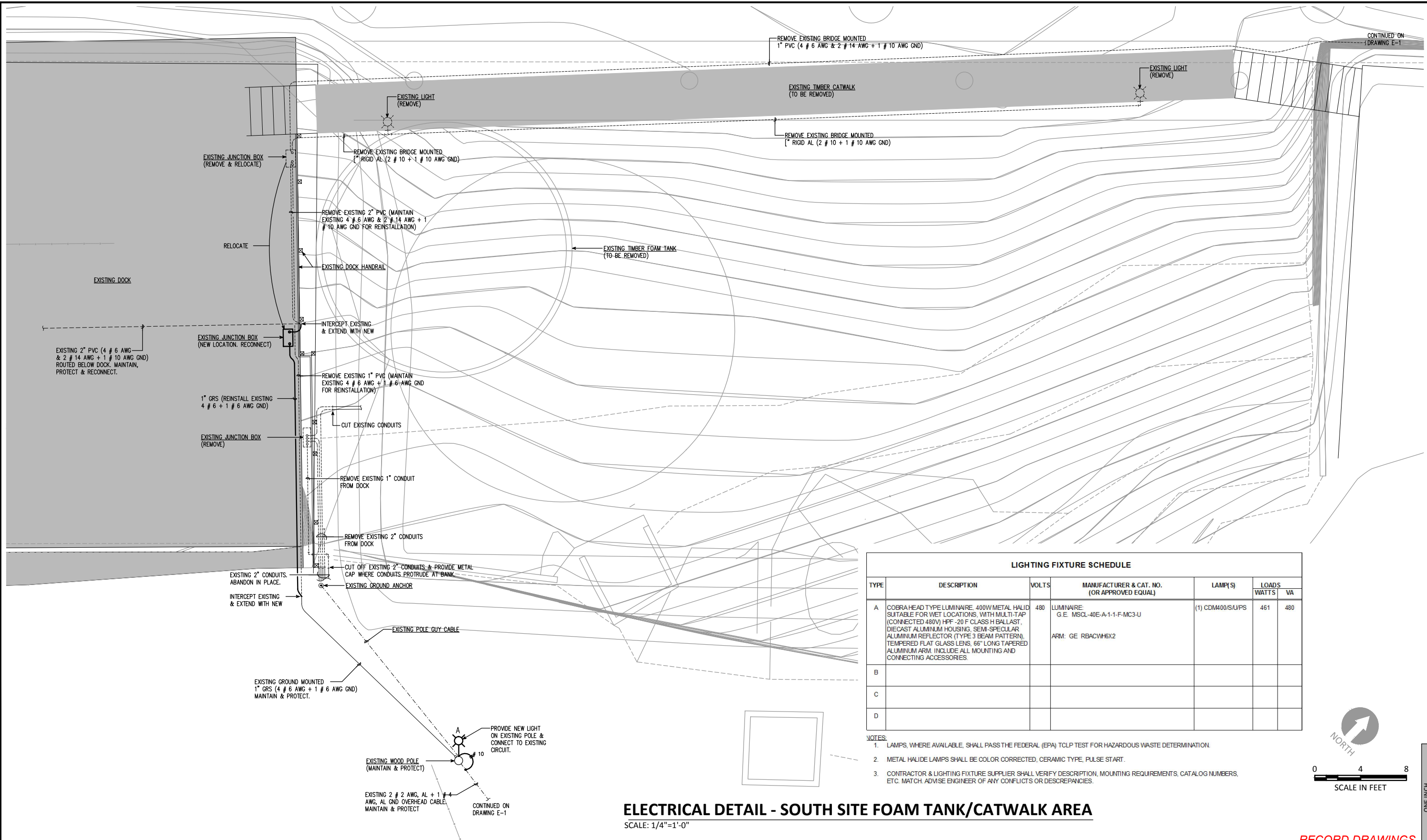
ELECTRICAL DETAIL - SOUTH SITE DOCKSIDE BUILDING

E-4

SHEET NO. 73 OF 126

RECORD DRAWINGS

K:\projects\007-port of bellingham\whatcom waterway cleanup inner with record drawings\engineers\rev\2224-TB.dwg Model

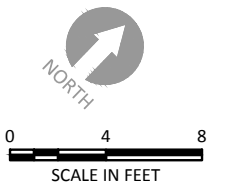


CONTINUED ON DRAWING E-1

CONTINUED ON DRAWING E-1

LIGHTING FIXTURE SCHEDULE					
TYPE	DESCRIPTION	VOLTS	MANUFACTURER & CAT. NO. (OR APPROVED EQUAL)	LAMP(S)	LOADS WATTS VA
A	COBRA HEAD TYPE LUMINAIRE, 400W METAL HALID SUITABLE FOR WET LOCATIONS, WITH MULTI-TAP (CONNECTED 480V) HFF -20 F CLASS H BALLAST, DIECAST ALUMINUM HOUSING, SEMI-SPECULAR ALUMINUM REFLECTOR (TYPE 3 BEAM PATTERN), TEMPERED FLAT GLASS LENS, 66" LONG TAPERED ALUMINUM ARM. INCLUDE ALL MOUNTING AND CONNECTING ACCESSORIES.	480	LUMINAIRE: G.E. IMSC-40E-A-1-F-MC3-U ARM: GE RBACW-HX2	(1) CDM400/S/U/PS	461 480
B					
C					
D					

- NOTES:
- LAMPS, WHERE AVAILABLE, SHALL PASS THE FEDERAL (EPA) TCLP TEST FOR HAZARDOUS WASTE DETERMINATION.
 - METAL HALIDE LAMPS SHALL BE COLOR CORRECTED, CERAMIC TYPE, PULSE START.
 - CONTRACTOR & LIGHTING FIXTURE SUPPLIER SHALL VERIFY DESCRIPTION, MOUNTING REQUIREMENTS, CATALOG NUMBERS, ETC. MATCH. ADVISE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES.



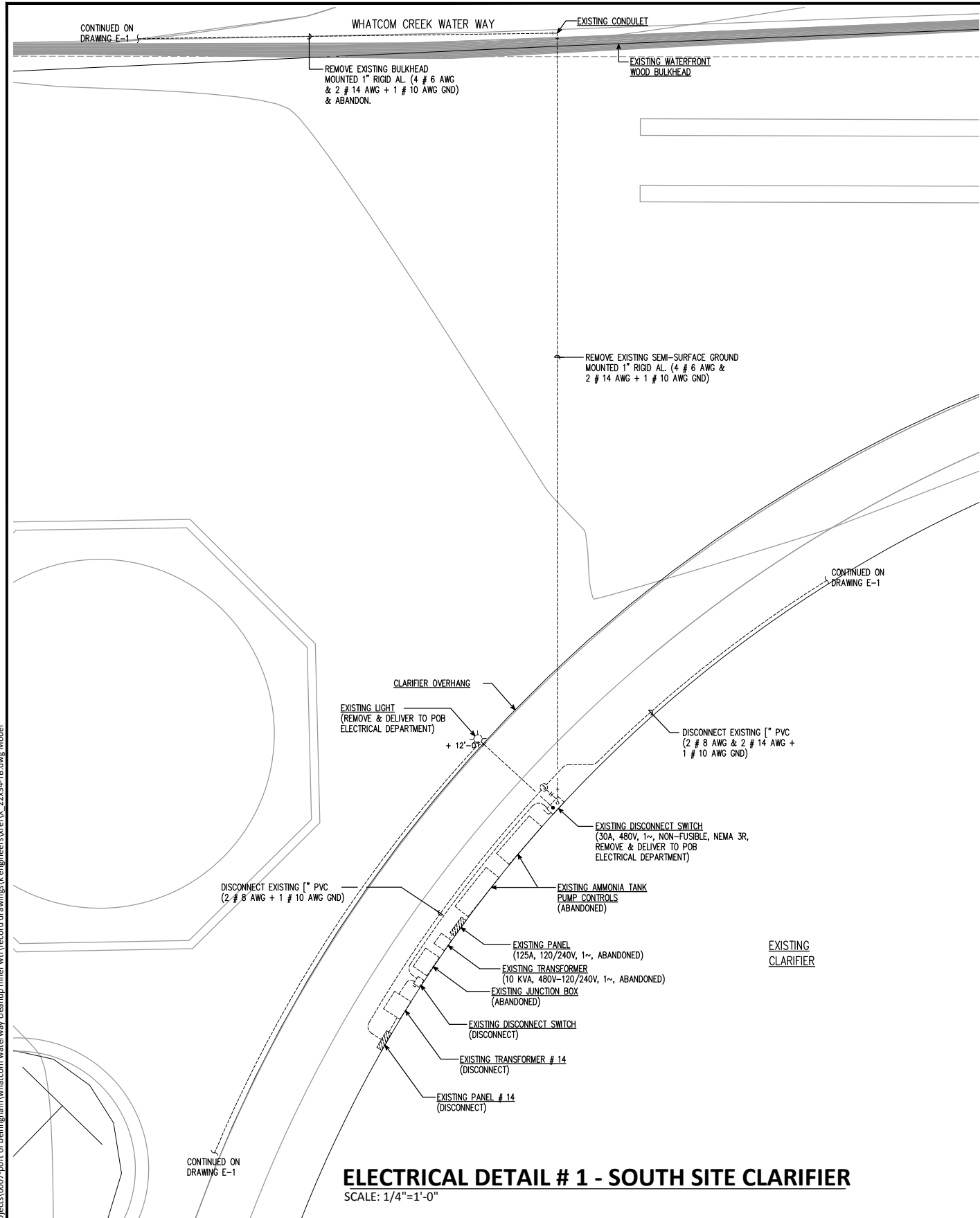
ELECTRICAL DETAIL - SOUTH SITE FOAM TANK/CATWALK AREA
SCALE: 1/4"=1'-0"

RECORD DRAWINGS

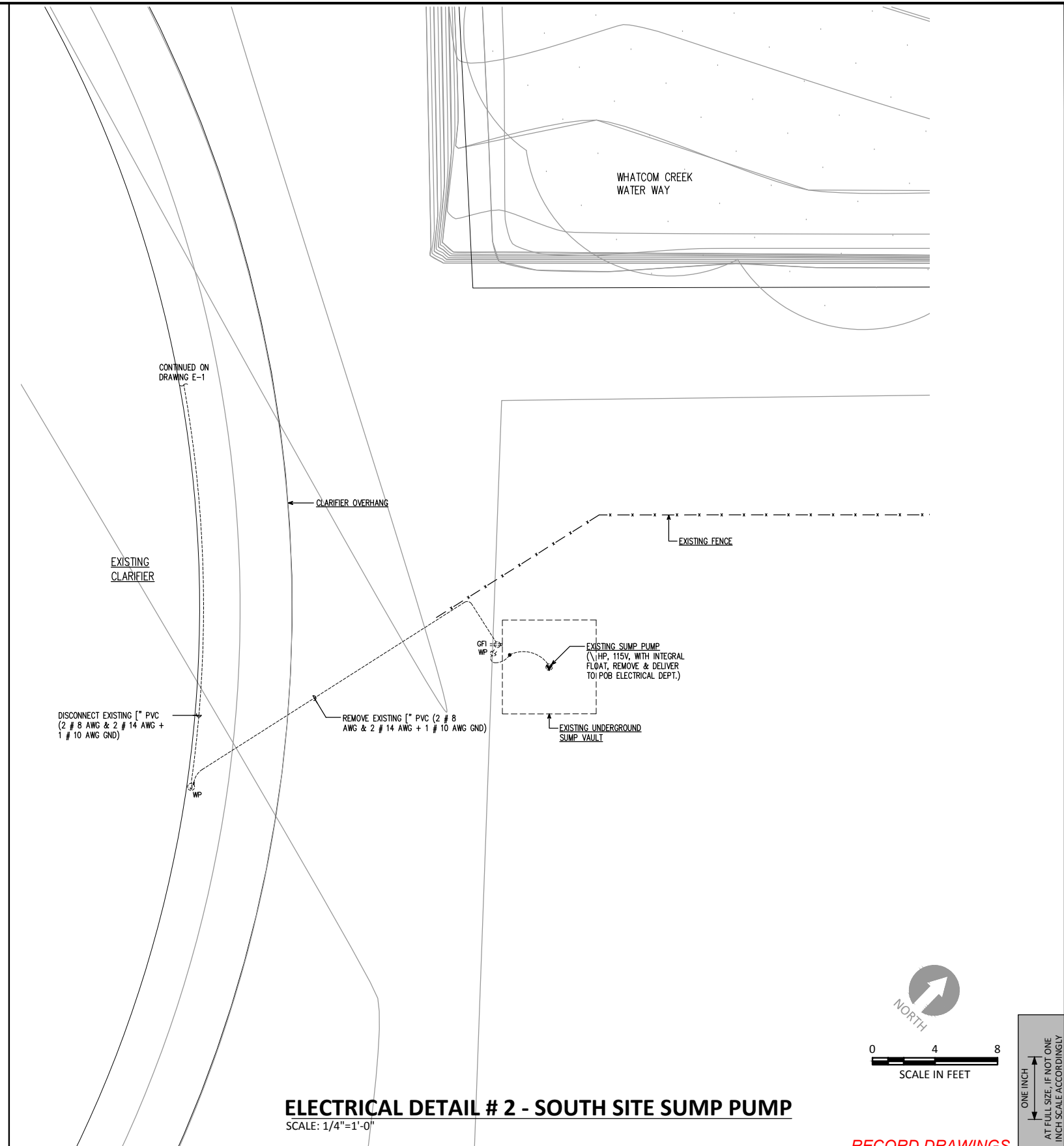
<p>PORT OF BELLINGHAM Washington State</p>	<p>ANCHOR QEA 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130</p>	<p>K ENGINEERS INC. 208 Third Street Lynden, WA. 98264 Bus. (360) 354-4757 FAX (360) 354-6794</p>	REVISIONS <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		REV	DATE	BY	APP'D	DESCRIPTION																					DESIGNED BY: S. TEVELDE DRAWN BY: K. LANCE CHECKED BY: S. TEVELDE APPROVED BY: S. TEVELDE SCALE: AS NOTED DATE: MARCH 2015	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON ELECTRICAL DETAIL - SOUTH SITE FOAM TANK/CATWALK AREA	E-5 SHEET NO. 74 OF 126								
			REV	DATE	BY	APP'D	DESCRIPTION																																	
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REV	DATE	BY	APP'D	DESCRIPTION																																				

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

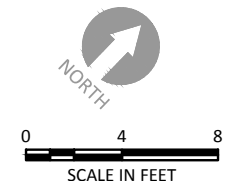
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Dec 22, 2016 2:53pm tgriga



ELECTRICAL DETAIL # 1 - SOUTH SITE CLARIFIER
SCALE: 1/4"=1'-0"



ELECTRICAL DETAIL # 2 - SOUTH SITE SUMP PUMP
SCALE: 1/4"=1'-0"



RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: S. TEVELDE
 DRAWN BY: K. LANCE
 CHECKED BY: S. TEVELDE
 APPROVED BY: S. TEVELDE
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

ELECTRICAL DETAILS - SOUTH SITE

E-6

SHEET NO. 75 OF 126

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

GENERAL:

THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. CONTRACTOR SHALL VERIFY INFORMATION GIVEN HERE WITH SPECIFICATIONS AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE PORT BEFORE BEGINNING AFFECTED WORK. THE ENGINEER WILL RESOLVE ANY SUCH CONFLICT.

CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS THE CONTRACTOR SHALL OBTAIN WRITTEN DIRECTION FROM THE ENGINEER BEFORE PROCEEDING. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS - DO NOT SCALE DRAWINGS.

DESIGN DRAWINGS AND CALCULATIONS OR SHOP DRAWINGS, FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED CALCULATIONS ARE FOR INFORMATION ONLY AND WILL NOT BE STAMPED OR RETURNED.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

NO EXISTING CONDITION ASSESSMENT HAS BEEN PERFORMED TO VERIFY THAT ANY OF THE EXISTING STRUCTURAL ELEMENTS ARE IN GOOD CONDITION OR HAVE THE CAPACITY TO SUPPORT ANY LOADS. THE CONTRACTOR SHALL USE EXISTING STRUCTURES AT THEIR OWN RISK.

CODES AND STANDARDS:

- INTERNATIONAL BUILDING CODE, 2009 (IBC) AS AMENDED BY THE CITY OF BELLINGHAM
- ASCE 7-10, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" AMERICAN SOCIETY OF CIVIL ENGINEERS
- ACI 318-08, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AMERICAN CONCRETE INSTITUTE (ACI).
- STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" 2005.
- SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 360-05
- REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
- AMERICAN WELDING SOCIETY (AWS): D1.1 STRUCTURAL WELDING CODE - STEEL D1.4 STRUCTURAL WELDING CODE - REINFORCING STEEL

SOILS:

SEE THE GEOTECHNICAL REPORT BY ANCHOR QEA, DATED MAY, 2013 FOR COMPLETE INFORMATION

CONSTRUCTION VERTICAL DATUM:

ALL REFERENCE DATUM IS IN MLLW

JOINT SEALING:

HYDROPHILIC JOINT FILLER FOR SEALING SHEET PILE JOINTS SHALL BE OCM INC. ADEKA ULTRA-SEAL A30 OR EQUAL AND SHALL BE APPLIED PER THE MANUFACTURER'S REQUIREMENTS.

SEAL ALL SHEETS AT EVERY KNUCKLE THAT SPECIFY JOINT SEALANT FROM TOP OF WALL TO EL -7 MLLW, UNO. NOTE THAT JOINT SEALANT IS NOT REQUIRED AT EAST CENTRAL WATERFRONT WALL, SEE S-7.

GROUT:

GROUT SHALL BE NON SHRINK, NON METALLIC WITH A MIN COMPRESSIVE STRENGTH OF 5000 PSI.

REINFORCED CONCRETE:

A. CONCRETE MATERIALS:

CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING:

MIX	MIN. f'c (PSI)	TEST AGE (DAYS)	MAX. W/C RATIO
CAST-IN-PLACE CONCRETE	4,000	28	0.40

B. REINFORCING STEEL:

REINFORCING SHALL BE SUPPORTED AS SPECIFIED BY THE PROJECT SPECIFICATIONS AND THE CRSI MANUAL OF STANDARD PRACTICE, MSP-1. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH "ACI MANUAL OF CONCRETE PRACTICE FOR DETAILS AND DETAILING OF CONCRETE REINFORCEMENT," ACI 315.

USE OF MECHANICAL SPLICES SHALL BE SUBJECT TO ENGINEER'S APPROVAL. WHERE DETAILED ON PLANS, MECHANICAL SPLICES SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE SPLICED BARS IN BOTH TENSION AND COMPRESSION.

UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE CLASS B, CASE 1, PER THE TABLE BELOW. NO MORE THAN 50% OF THE BARS SHALL BE SPLICED AT ANY LOCATION.

TENSION LAP SPlice LENGTHS OF GRADE 60 UNCOATED BARS - CLASS B, CASE 1		
BAR SIZE	f'c = 4,000 psi	
	TOP BARS	OTHERS
#3	2'-0"	1'-7"
#4	2'-8"	2'-1"
#5	3'-4"	2'-7"
#6	4'-0"	3'-1"
#7	5'-10"	4'-6"
#8	6'-8"	5'-2"
#9	7'-7"	5'-10"
#10	8'-6"	6'-7"
#11	9'-5"	7'-3"
#14	LAP SPLICES NOT ALLOWED	
#18	LAP SPLICES NOT ALLOWED	

TOP BARS ARE DEFINED AS BARS THAT ARE SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW HORIZONTALLY POSITIONED REINFORCEMENT.

STRUCTURAL STEEL FABRICATIONS:

A. STEEL MATERIALS:

CHANNELS, ANGLES, PLATES, BARS, AND MISC. STEEL	- ASTM A 36, UNO
STEEL SHAPES	- ASTM A 992, GR50
7-WIRE STRAND	- ASTM A 416, GR 270
THREADED TIE ROD	- ASTM A 722, GR 150
SHEET PILING	- ASTM A 572 GR50
SHEET PILE CONNECTORS	- PER MANUFACTURER
STEEL PIPE PILE	- ASTM A 252, GR3, 45KSI
HEADED STUDS	- A108
HSS TUBES	- A500 GR B
BOLTS	- ASTM A325, UNO
ANCHOR BOLTS	- ASTM F1554, GR 105
GALVANIZED METAL CORRUGATED DUCT	-ASTM A653

B. METAL FABRICATION:

ALL METAL FABRICATIONS EXCEPT FOR SHEET PILES OR UNLESS OTHERWISE NOTED SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A 123 GR 100. ALL GALVANIZING AT FIELD WELDS AND WHERE THE ORIGINAL COATING IS DAMAGED SHALL BE REPAIRED ACCORDING TO ASTM A 780, METHOD A1 USING ZINC WELD STICK.

C. STEEL SHEET PILES:

ALL STEEL PILING SHALL BE PROVIDED BY THE CONTRACTOR. STEEL SHEET PILING SHALL BE DRIVEN TO THE MINIMUM TIP ELEVATION SHOWN ON THE PLANS. SEE SPECIFICATION 31 41 16.13 FOR ADDITIONAL INFORMATION.

CONTROL DENSITY FILL (CDF):

VOID GROUTING SHALL BE CDF IN ACCORDANCE WITH SPECIFICATION 03 30 00. CDF SHALL HAVE A 28-DAY UNCONFINED COMPRESSIVE STRENGTH OF 300 PSI, MIN.

WELDING:

ALL WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED FOR THE WELDING AND POSITION SHOWN IN ACCORDANCE WITH AWS AND HAVING CURRENT CERTIFICATION FROM WABO.

ALL WELDS SHALL BE PERFORMED WITH PROCEDURES PREQUALIFIED OR QUALIFIED IN ACCORDANCE WITH AWS D1.1 AND D1.4.

THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD SYMBOLS ARE SHOWN WHERE FIELD WELDS ARE REQUIRED BY THE STRUCTURAL DESIGN.

WELDING ELECTRODES SHALL BE 70 KSI STRENGTH AND SHALL BE "LOW-HYDROGEN" ELECTRODES.

TIEBACK TESTING:

A. PERFORMANCE TESTING: PRIOR TO INSTALLING PRODUCTION TIEBACKS, A MINIMUM OF FOUR SUCCESSFUL PERFORMANCE TESTS SHALL BE CONDUCTED ON TIEBACKS PER SPECIFICATION 31 68.13. THE TEST TIEBACKS SHALL BE INSTALLED BY THE SAME METHODS, PERSONNEL, MATERIALS, AND EQUIPMENT AS THE PRODUCTION ANCHORS. CHANGES IN METHODS, PERSONNEL, MATERIALS, OR EQUIPMENT MAY REQUIRE ADDITIONAL PERFORMANCE TESTING AS DETERMINED BY THE RESIDENT ENGINEER.

B. PROOF TESTING: PROOF TESTS SHALL BE COMPLETED ON EACH PRODUCTION TIEBACK PER SPECIFICATION 31 68 13.

CORROSION:

THE CORROSION RATE IN THE TIDAL ZONE WAS ASSUMED TO BE 2.5 MILS OF LOSS ON EXPOSED STEEL EACH YEAR.

COMPOSITE LUMBER:

COMPOSITE LUMBER SHALL BE AXION ECOTRAX COMPOSITE RAILROAD CROSS TIES OR EQUAL. MIN 75% OF THE PHYSICAL PROPERTIES RETAINED AFTER 15 YEARS. SEE SPEC 35 59 13.19

UHMW AND HDPE:

SHALL BE MANUFACTURED FROM VIRGIN RESIN BLACK IN COLOR. SEE SPECS FOR ADDITIONAL REQUIREMENTS

UHMW	-ASTM D4020
HDPE	-ASTM D3350-05

DESIGN LOADS & CRITERIA:

A. STEEL PILE DOLPHINS:

THE STEEL MONOPILE DOLPHINS ARE DESIGNED TO BERTH A 5000 LONG TON BARGE AT MODERATE BERTHING SPEED OF 0.45 KNOTS NORMAL TO THE SHORELINE. WITH A RECOMMENDED MAXIMUM BERTHING ANGLE OF 20° THE MAXIMUM ALLOWED VESSEL VELOCITY IS 1.3 KNOTS.

B. MAPLE ST. FENDERING SYSTEM:

THE FENDER SYSTEM IS DESIGNED TO BERTH A 5000 LONG TON BARGE AT MODERATE BERTHING SPEED OF 0.45 KNOTS NORMAL TO THE BULKHEAD. WITH A RECOMMENDED MAXIMUM BERTHING ANGLE OF 10° THE MAXIMUM ALLOWED VESSEL VELOCITY IS 2.5 KNOTS. THE ROPE GUARD IS DESIGNED FOR A 2 KIP VERTICAL FORCE AT MIDSPAN BETWEEN THE FENDER PILES.

C. BULLRAIL:

THE BULLRAIL IS DESIGNED FOR A VERTICAL OR HORIZONTAL FORCE OF 1 KIP BETWEEN SUPPORTS

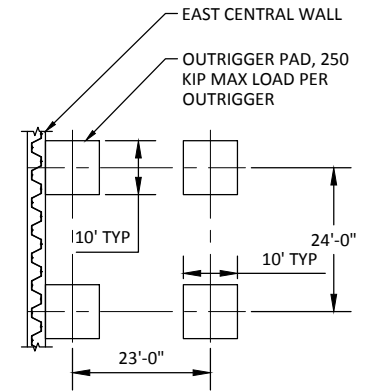
D. MOORING CLEATS

CLEATS ARE DESIGNED FOR A 25 TON LINE LOAD BETWEEN 0-180 DEGREES HORIZONTAL PARALLEL WITH THE WALL AND 0-45 DEGREES VERTICAL.

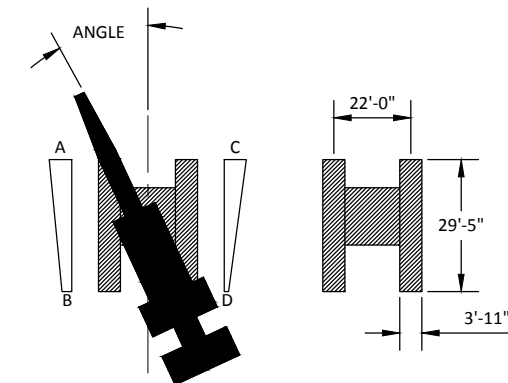
E. SHEET PILE WALLS:

ALL SHEET PILE WALL ELEMENTS HAVE BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:

- WEST CENTRAL WATERFRONT WALL HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
 - TEMPORARY CONSTRUCTION CONDITIONS LISTED IN THESE DESIGN DOCUMENTS WITH A MAXIMUM CONSTRUCTION SURCHARGE OF 250 PSF.
 - A VERTICAL LIVE LOAD SURCHARGE OF 500 PSF IN THE FINAL CONDITION.
 - SEISMIC LOADING PER IBC CODE REQUIREMENTS IN THE FINAL CONDITION.
 - A MINIMUM OF A 50 YEAR DESIGN LIFE AT THE ASSUMED SEAWATER STEEL CORROSION RATE WHICH RESULTS IN A 30% LOSS IN SECTION.
 - A VERTICAL LIVE LOAD OF 1000 PSF OFFSET 15 FEET FROM THE WALL.
- EAST CENTRAL WATERFRONT WALL HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
 - TEMPORARY CONSTRUCTION CONDITIONS LISTED IN THESE DESIGN DOCUMENTS WITH A MAXIMUM CONSTRUCTION SURCHARGE OF 250 PSF.
 - A VERTICAL LIVE LOAD SURCHARGE OF 1000 PSF IN THE FINAL CONDITION.
 - SEISMIC LOADING PER IBC CODE REQUIREMENTS IN THE FINAL CONDITION.
 - A MINIMUM OF A 50 YEAR DESIGN LIFE AT THE ASSUMED SEAWATER STEEL CORROSION RATE WHICH RESULTS IN A 20% LOSS IN SECTION.
 - EAST CENTRAL DESIGN CRANE ON 10x10 FEET OUTRIGGER PADS ADJACENT TO THE WALL. EACH PAD HAS BEEN DESIGNED TO MAXIMUM OUTRIGGER LOAD OF 250 KIP. SEE SKETCH THIS SHEET
- MAPLE STREET BULKHEAD HAS BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
 - TEMPORARY CONSTRUCTION CONDITIONS LISTED IN THESE DESIGN DOCUMENTS WITH A MAXIMUM CONSTRUCTION SURCHARGE OF 250 PSF.
 - DRILL RIG LOAD DURING CONSTRUCTION - 32,000 LB DISTRIBUTED OVER 10.8x10.8 FT SQUARE AREA.
 - A VERTICAL LIVE LOAD SURCHARGE OF 250 PSF IN THE FINAL CONDITION.
 - A VERTICAL LIVE LOAD OF 1000 PSF OFFSET 10 FEET FROM THE WALL
 - SEISMIC LOADING PER IBC CODE REQUIREMENTS IN THE FINAL CONDITION.
 - A MINIMUM OF A 30 YEAR DESIGN LIFE AT THE ASSUMED SEAWATER STEEL CORROSION RATE WHICH RESULTS IN A 20% LOSS IN SECTION.
 - 1000 KIP MOBILE CRANE PARALLEL TO WALL AT 10' OFFSET.



EAST CENTRAL CRANE PAD DESIGN LOADS



CRANE LOADING TABLE				
ANGLE	A	B	C	D
0°	65.0 psi	1.1 psi	65.0 psi	1.1 psi
23°	67.7 psi	8.8 psi	57.3 psi	0.0 psi
90°	46.3 psi	46.3 psi	19.8 psi	19.8 psi
TOTAL LOAD TO TRACKS - 1000 kips				

MAPLE ST. MOBILE CRANE DESIGN LOADS

RECORD DRAWINGS

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REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: EDE
 DRAWN BY: GMC
 CHECKED BY: TAH
 APPROVED BY: RHR
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

GENERAL STRUCTURAL NOTES

ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

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SPECIAL INSPECTION SCHEDULE ESTABLISHED PER 2009 IBC SECTION 109 & CHAPTER 17			
ITEM	CONTINUOUS INSPECTION	PERIODIC INSPECTION	COMMENTS
SOILS			
GRADING, EXCAVATION & FILL		X	BY GEOTECHNICAL ENGINEER
FINAL FOUNDATION PREPARATION		X	BY GEOTECHNICAL ENGINEER
PILING - DRIVING	X		BY GEOTECHNICAL ENGINEER
CONCRETE			
REINFORCING PLACEMENT		X	
REINFORCING WELDING		X	
REINFORCING COUPLING		X	
PREPARATION OF TEST SPECIMENS	X		
CONCRETE PLACEMENT	X		
EMBEDDED PLATES		X	
CURING		X	
STRUCTURAL STEEL			
FABRICATION & ERECTION		X	REF. NOTE 5
SINGLE PASS FILLET WELDS ≤ 5/16"		X	REF. NOTE 6
FILLET WELDS > 5/16"	X		REF. NOTE 6
PARTIAL/COMPLETE PENETRATION WELD	X		REF. NOTE 7
OTHER WELDING			
WELDING OF ANCHORS AND STUDS		X	

INSPECTION SCHEDULE NOTES:



- THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO PROJECT SPECIFICATIONS, THE STRUCTURAL NOTES AND THE NOTES BELOW. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
- SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR PER IBC SECTION 1704.2.2.
- CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION (IBC 1702). PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE.
- INSPECTION REQUIREMENTS FOR SYSTEMS DESIGNED BY OTHERS SHALL BE DEFINED BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN.
- INSPECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH IBC SECTION 1704.3. THE STEEL FRAME SHALL BE INSPECTED FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS INCLUDING BRACING, STIFFENING, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
- ALL WELDS SHALL BE VISUALLY INSPECTED.
- ALL COMPLETE PENETRATION WELDS SHALL BE TESTED ULTRASONICALLY OR BY USING ANOTHER APPROVED METHOD.

ABBREVIATIONS:

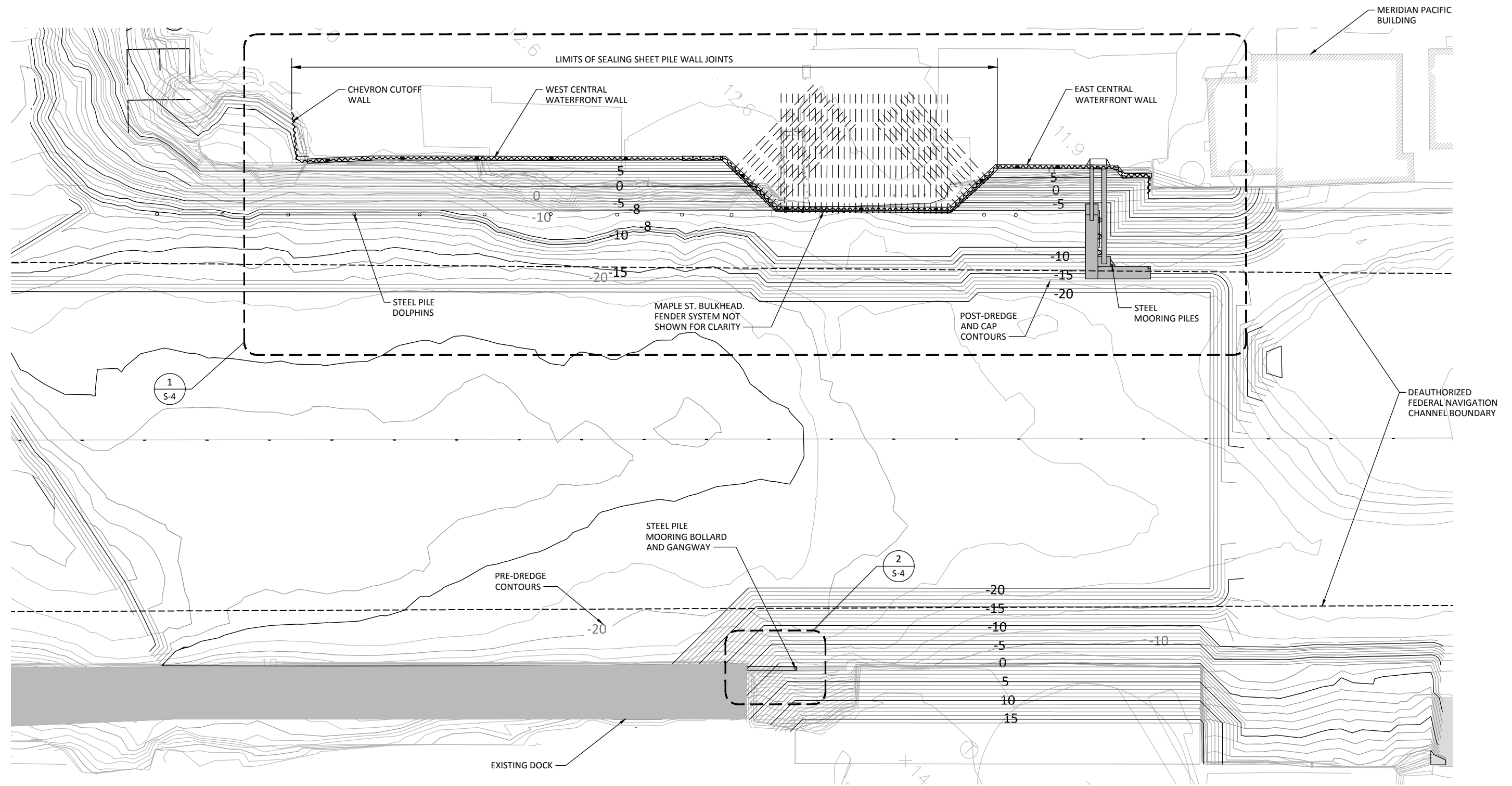
AB	ANCHOR BOLT	IF	INSIDE FACE
ACP	ASPHALT CONCRETE PAVEMENT	IN	INCH
ADD'L	ADDITIONAL	INT	INTERIOR
ADJ	ADJUSTABLE	JT	JOINT
AGG	AGGREGATE	K	KIP (1,000 LBS.)
ANCH	ANCHOR	KSF	KIPS PER SQ. FT.
B/	BOTTOM OF	KSI	KIPS PER SQ. INCH
BLDG	BUILDING	LF	LINEAL FOOT
BM	BEAM	LLH	LONG LEG HORIZONTAL
BOT	BOTTOM	LLV	LONG LEG VERTICAL
BRG	BEARING	LOC	LOCATION ('S)
BTWN	BETWEEN	LP	LOW POINT
CC	CENTER TO CENTER	MATL	MATERIAL
CIP	CAST IN PLACE	MAX	MAXIMUM
CJ	CONSTRUCTION OR CONTROL JOINT	MECH	MECHANICAL
CL	CENTERLINE	MHW	MEAN HIGH WATER
CLG	CEILING	MLW	MEAN LOW WATER
CLR	CLEAR	MIN	MINIMUM
COL	COLUMN	MISC	MISCELLANEOUS
CONC	CONCRETE	MOM	MOMENT
CONN	CONNECTION	NIC	NOT IN CONTRACT
CONST	CONSTRUCTION	NOM	NOMINAL
CONT	CONTINUOUS	NO	NUMBER
CONTR	CONTRACTOR	NS	NEAR SIDE, NONSHRINK
COORD	COORDINATE	NTS	NOT TO SCALE
CP	COMPLETE PENETRATION	OC	ON CENTER
CTR	CENTER	OD	OUTSIDE DIAMETER
CY	CUBIC YARD	OF	OUTSIDE FACE
DBA	DEFORMED BAR ANCHOR	OPNG	OPENING
DBL	DOUBLE	OPP	OPPOSITE
DEMO	DEMOLISH	PC	PIECE
DEMO'D	DEMOLISHED	PEN	PENETRATION
DET	DETAIL	PL	PLATE, PROPERTY LINE
DIA	DIAMETER	PP	PARTIAL PENETRATION
DIAG	DIAGONAL	PSI	POUNDS PER SQ. IN.
DIM	DIMENSION	PSF	POUNDS PER SQ. FT.
DO	DITTO	RD	ROOF DRAIN
DN	DOWN	REF	REFERENCE DIMENSION
DWF	DEFORMED WIRE FABRIC	REINF	REINFORCING
DWG	DRAWING	REM	REMAIN (DER)
DWL	DOWEL	REQ'D	REQUIRED
EA	EACH	RTN	RETURN
EF	EACH FACE	RND	ROUND
EHW	EXTREME HIGH WATER	RS	ROUGH SAWN LUMBER
ELW	EXTREME LOW WATER	SC	SLIP CRITICAL
EL	ELEVATION	SCHED	SCHEDULE
ELECT	ELECTRICAL	SECT	SECTION
ELEV	ELEVATOR	SHT	SHEET
EMBED	EMBEDMENT	SIM	SIMILAR
EQ	EQUAL	SOG	SLAB-ON-GRADE
ES	EACH SIDE	SP	SPACE
EW	EACH WAY	SPEC	SPECIFICATION
EX, EXIST	EXISTING	SQ	SQUARE
EXP	EXPANSION	SS	STAINLESS STEEL
EXT	EXTERIOR	STD	STANDARD
FD	FLOOR DRAIN	STIFF	STIFFENER
FDN	FOUNDATION	STIRR	STIRRUP
FIN	FINISH	STL	STEEL
FLG	FLANGE	STRUCT	STRUCTURAL
FLR	FLOOR	SUPP	SUPPORT
FRP	FIBRE-REINFORCED PLASTIC	SYM	SYMMETRICAL
FS	FAR SIDE	T/	TOP OF
FT	FEET	T&B	TOP AND BOTTOM
FTG	FOOTING	TEMP	TEMPORARY
GA	GAGE	THK	THICK (NESS)
GALV	GALVANIZED	THRU	THROUGH
GEN	GENERAL	TRANS	TRANSVERSE
HGR	HANGER	TYP	TYPICAL
HK	HOOK	UNO	UNLESS NOTED OTHERWISE
HORIZ	HORIZONTAL	VERT	VERTICAL
HP	HIGH POINT	VIF	VERIFY IN FIELD
HSS	HOLLOW STRUCTURAL SECTION	W/	WITH
IBC	INTERNATIONAL BUILDING CODE	WF	WIDE FLANGE
ID	INSIDE DIAMETER	WHS	WELDED HEADED STUD
		W/O	WITHOUT
		WP	WORK POINT
		WT	STRUCTURAL TEE
		WWF	WELDED WIRE FABRIC

RECORD DRAWINGS

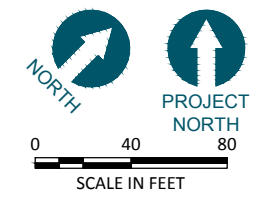
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 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-1330	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS					REV	DATE	BY	APP'D	DESCRIPTION																					DESIGNED BY: <u>EDE</u> DRAWN BY: <u>KDV</u> CHECKED BY: <u>TAH</u> APPROVED BY: <u>RHR</u> SCALE: <u>AS NOTED</u> DATE: <u>MARCH 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON GENERAL STRUCTURAL NOTES, ABBREVIATIONS & SYMBOLS	S-2 SHEET NO. 77 OF 126
REVISIONS																																			
REV	DATE	BY	APP'D	DESCRIPTION																															

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OVERALL PLAN
SCALE: 1"=40'



RECORD DRAWINGS

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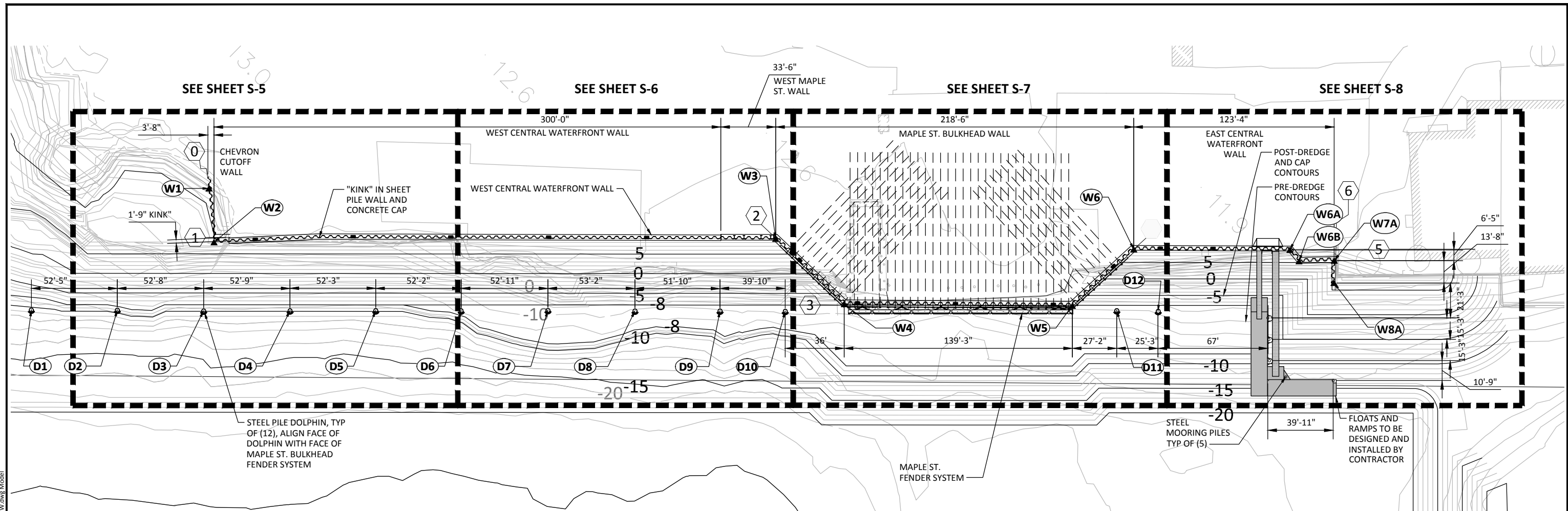
DESIGNED BY: EDE
DRAWN BY: GMC
CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

OVERALL PLAN

S-3

SHEET NO. 78 OF 126



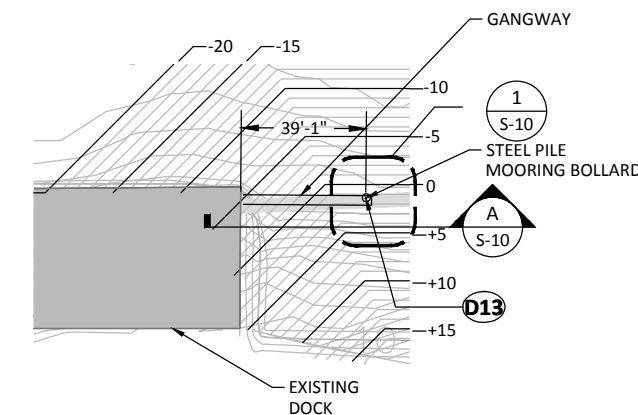
AS-BUILT DOLPHIN CENTER OF PILE LOCATION

CP #	NORTHING	EASTING
D1	642,741.86	1,240,983.20
D2	642,778.32	1,241,020.89
D3	642,814.66	1,241,059.02
D4	642,851.50	1,241,096.78
D5	642,887.94	1,241,134.28
D6	642,924.19	1,241,171.75
D7	642,961.26	1,241,209.53
D8	642,998.07	1,241,247.87
D9	643,034.19	1,241,285.08
D10	643,061.76	1,241,313.76
D11	643,203.02	1,241,458.68
D12	643,220.29	1,241,477.05
D13	642,837.00	1,241,603.40

NOTE:

- SEE B / S-29.

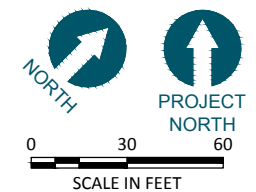
1 NORTH SHORELINE STRUCTURAL PLAN
SCALE: 1" = 30'



2 SOUTH SHORELINE BOLLARD PLAN
SCALE: 1" = 30'

AS-BUILT SHEET PILE WALL CONTROL POINT LOCATIONS

CP #	NORTHING	EASTING
W1	642,870.52	1,241,009.33
W2	642,849.07	1,241,034.43
W3	643,089.40	1,241,278.86
W4	643,089.92	1,241,336.68
W5	643,186.14	1,241,437.22
W6	643,236.99	1,241,440.12
W6A	643,303.07	1,241,508.72
W6B	643,302.04	1,241,517.57
W7A	643,317.34	1,241,532.66
W8A	643,307.44	1,241,542.06



ONE INCH
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INCH SCALE ACCORDINGLY

RECORD DRAWINGS



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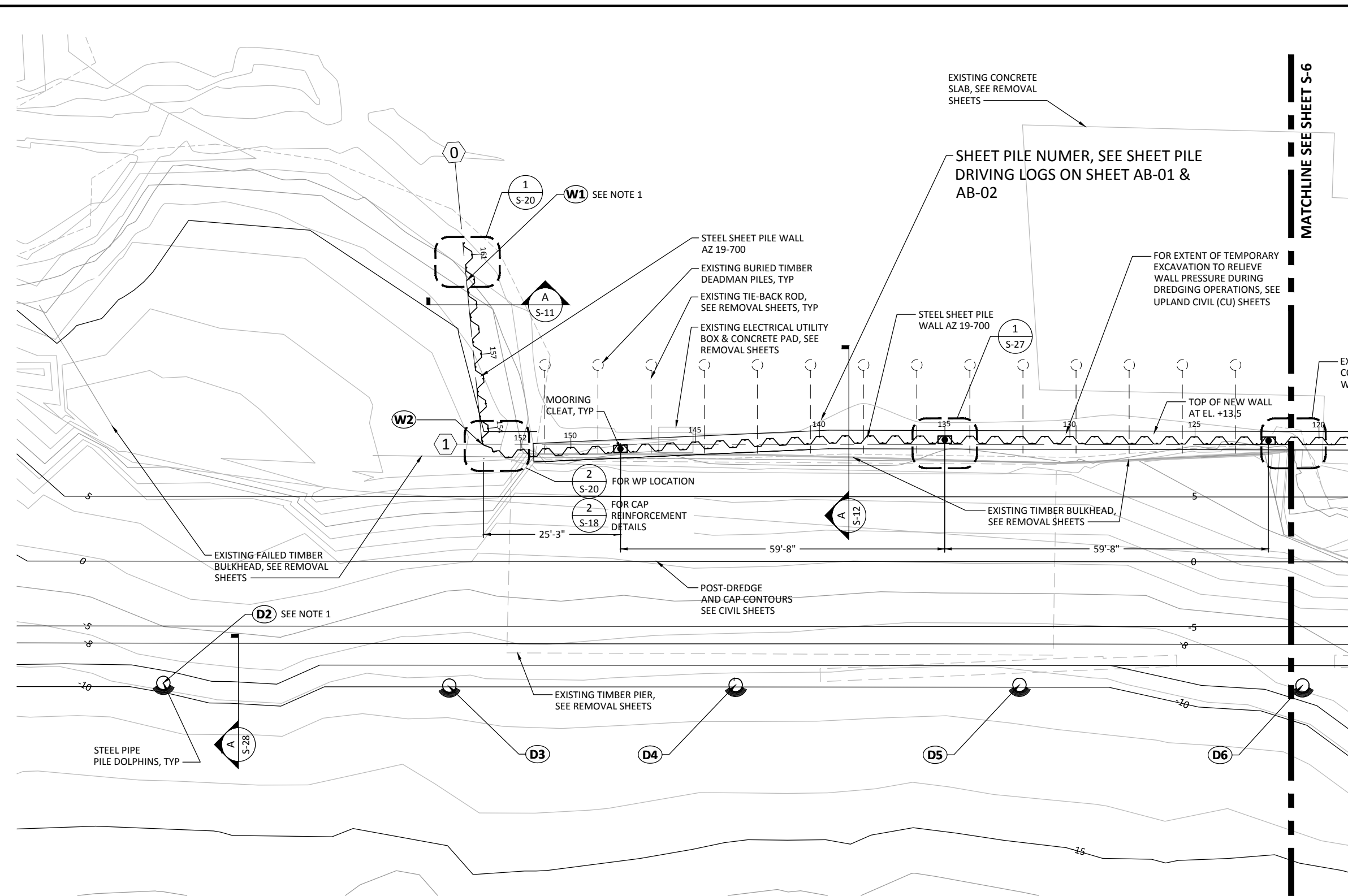
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON



EAST WATERWAY SHORELINE STRUCTURAL PLAN

S-4
SHEET NO. 79 OF 126

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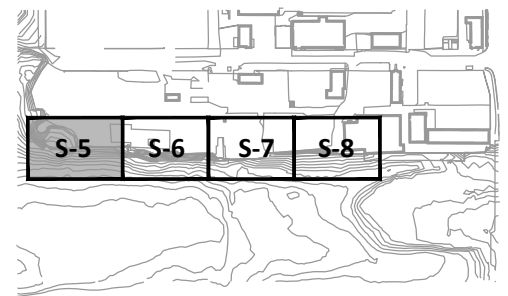
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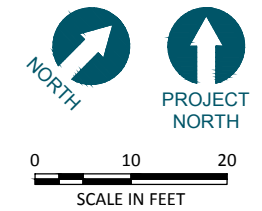
- LEGEND:**
-  30" MONOPILE DOLPHIN, SEE SHEET S-28
 -  MOORING CLEAT, SEE 2/S-27

- NOTES:**
1. REFER TO SHEET S-4 FOR HORIZONTAL CONTROL POINT LOCATIONS.
 2. REFER TO S-13 AND REMOVAL DRAWINGS FOR CONSTRUCTION SEQUENCING INFORMATION.

WEST CENTRAL WATERFRONT WALL PLAN - 1
SCALE: 1"=10'



KEY PLAN



RECORD DRAWINGS

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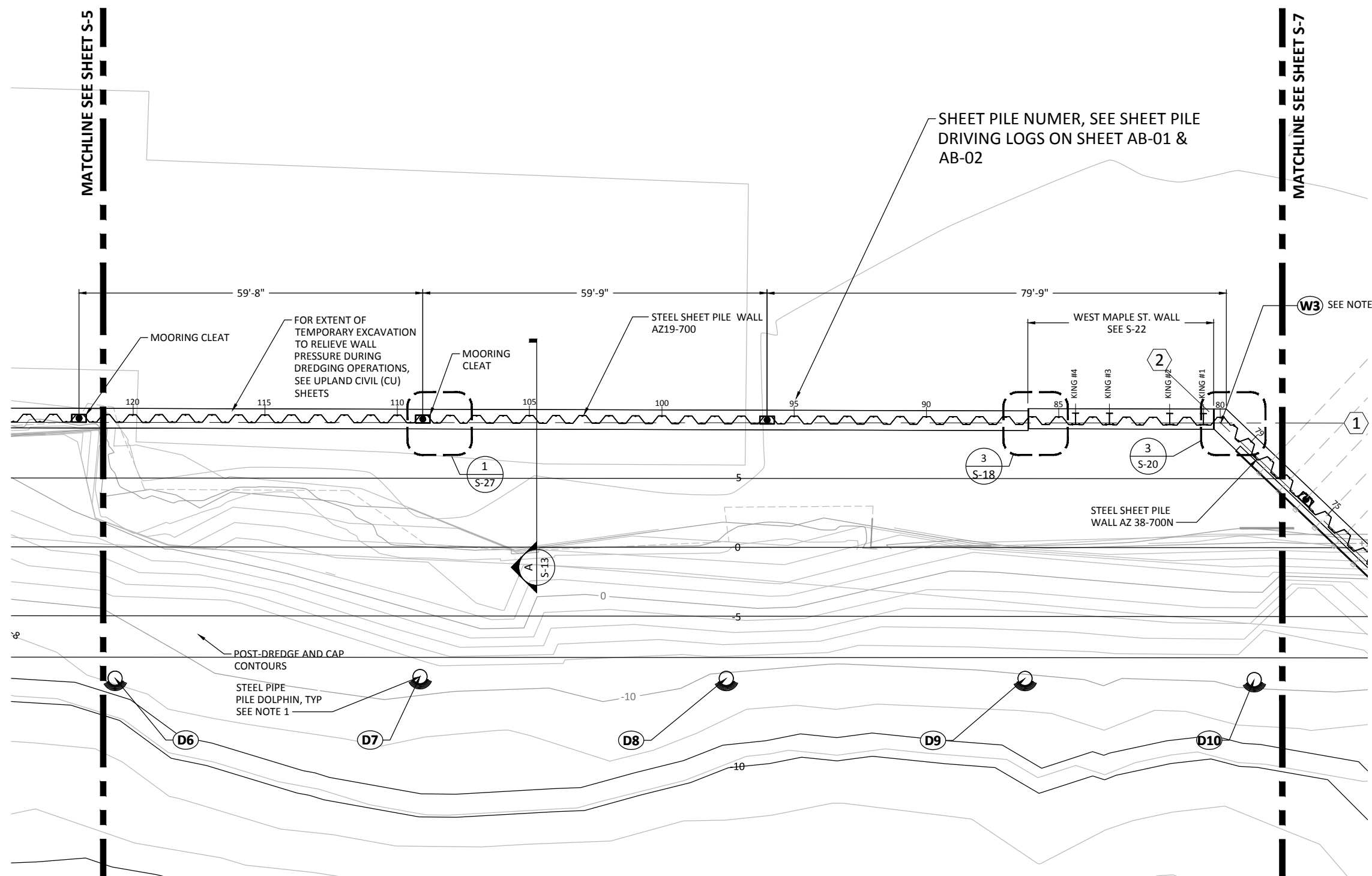
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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

WEST CENTRAL WATERFRONT WALL PLAN - 1

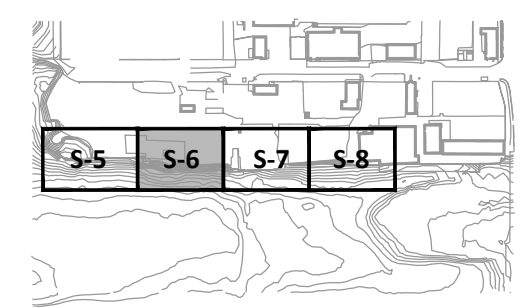
S-5
SHEET NO. 80 OF 126

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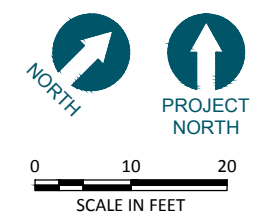


- LEGEND:**
-  30" MONOPILE DOLPHIN, SEE SHEET S-28
 -  MOORING CLEAT, SEE 1/S-27

- NOTES:**
1. SEE S-4 FOR HORIZONTAL CONTROL POINT LOCATIONS
 2. REFER TO S-13 & REMOVAL DRAWINGS FOR CONSTRUCTION SEQUENCING INFORMATION



KEY PLAN



WEST CENTRAL WATERFRONT WALL PLAN - 2
SCALE: 1"=10'

RECORD DRAWINGS

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INCH SCALE ACCORDINGLY

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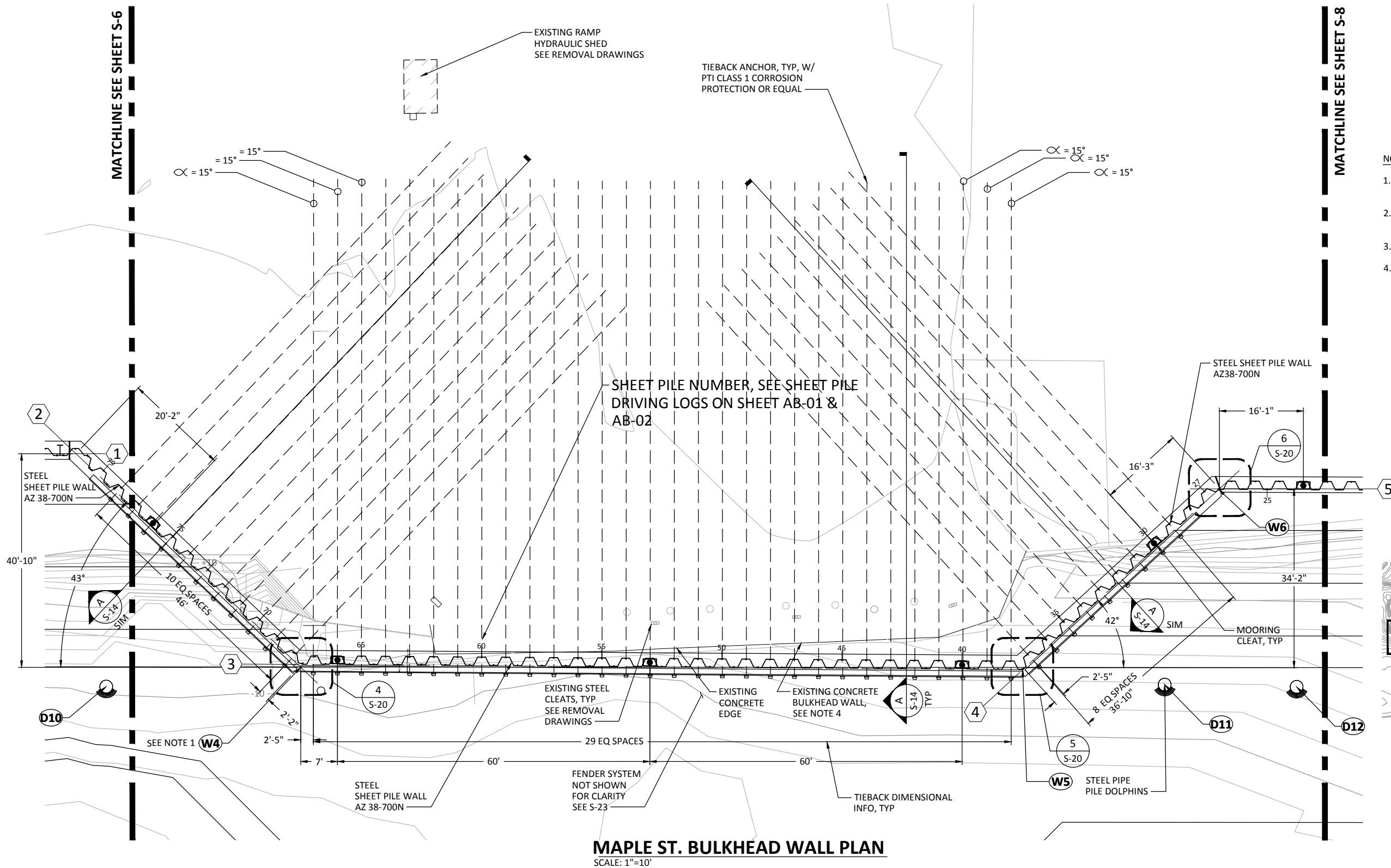
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

WEST CENTRAL WATERFRONT WALL PLAN - 2

S-6

SHEET NO. 81 OF 126

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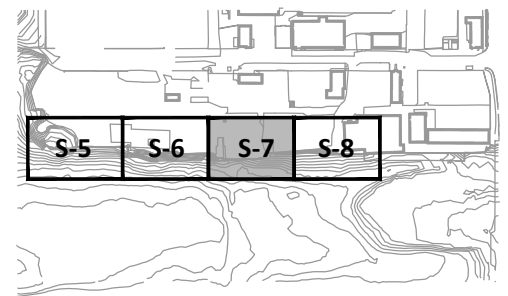


- LEGEND:**
- 30" MONOPILE DOLPHIN, SEE SHEET S-28
 - MOORING CLEAT, SEE 1/S-27
 - APPROXIMATE LOCATION OF EXISTING H-PILES

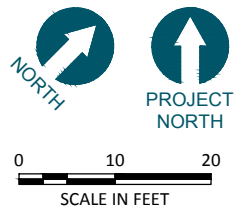
- NOTES:**
- SEE S-4 FOR HORIZONTAL CONTROL POINT LOCATIONS.
 - SEE DRAWING S-9 FOR ADDITIONAL INFORMATION.
 - JOINT SEALANT NOT REQUIRED EAST OF **(W6)**
 - CAPACITY OF EXISTING CONCRETE WALL UNKNOWN. SEE S-1 FOR DETAILS.

SHEET PILE AS-BUILT LOG

PILE NO.	AB TIP EL.
30	-49.0000
40	-49.0000
50WEST	-48.3200
60WEST	-46.9000



KEY PLAN

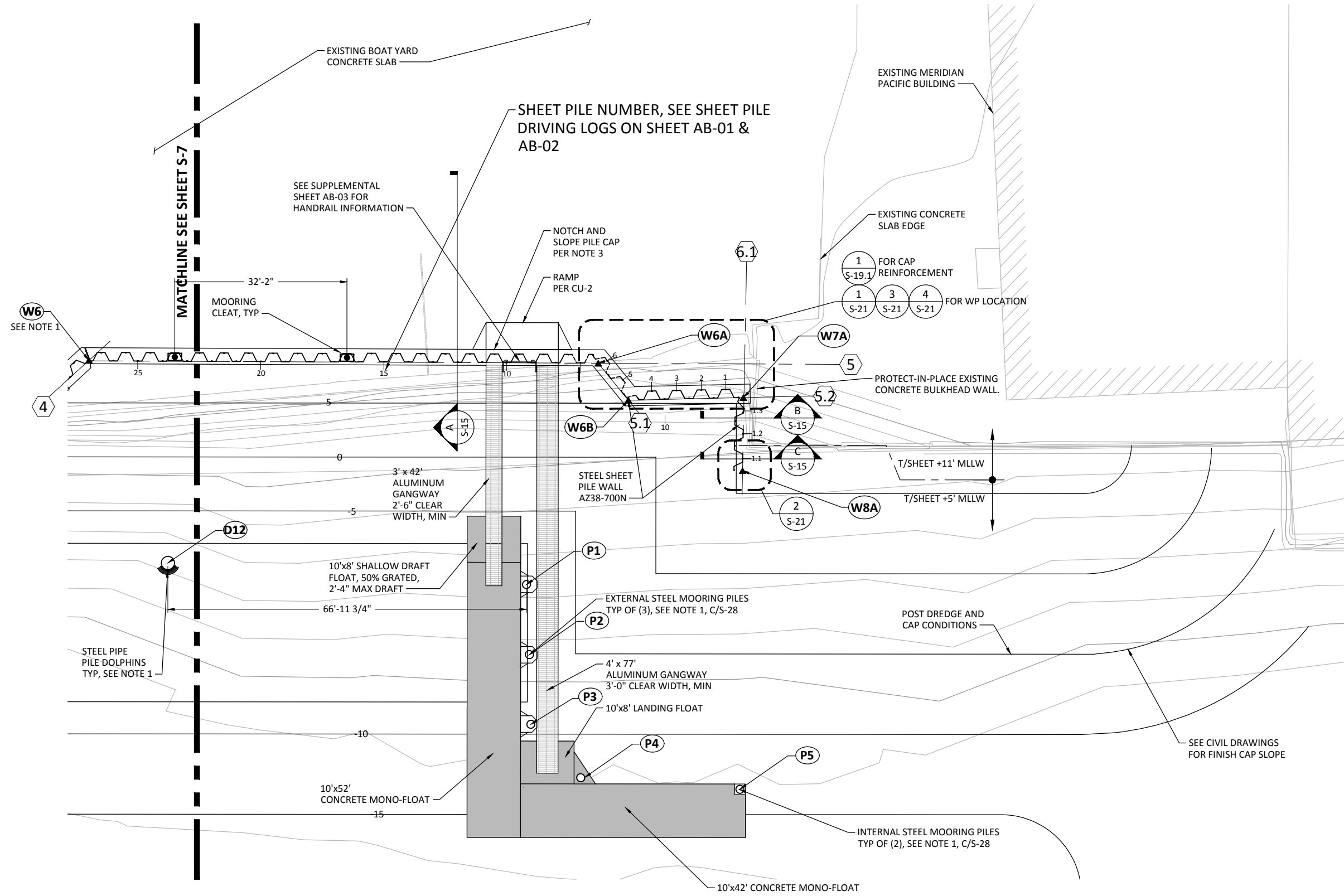


MAPLE ST. BULKHEAD WALL PLAN
SCALE: 1"=10'

RECORD DRAWINGS

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		REV	DATE	BY	APP'D	DESCRIPTION																								
				ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY																										

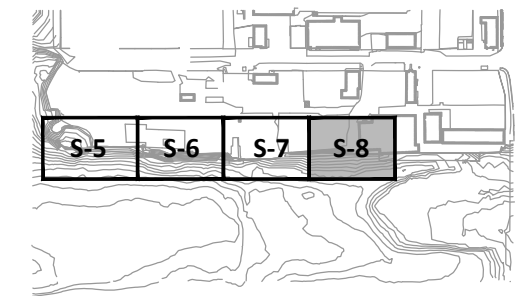
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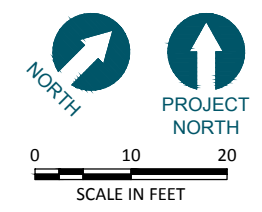
- LEGEND:**
- ◻ 30" MONOPILE DOLPHIN, SEE SHEET S-28
 - ◻ MOORING CLEAT, SEE 1/S-27
 - 18" STEEL MOORING PILES, SEE C/S-28

FLOAT PILE CENTER OF PILE AS-BUILT		
	NORTHING	EASTING
P1	643264.07	1241527.912
P2	643245.9053	1241546.694
P3	643245.7818	1241560.83
P4	643264.3995	1241583.174
P5	643255.0494	1241537.434

- NOTES:**
- SEE S-4 FOR HORIZONTAL CONTROL POINT LOCATIONS.
 - SEE FL-1 FOR FLOAT AND RAMP INFORMATION.
 - NOTCH PER CU-2 AND SLOPE TOP OF PILE CAP DOWN AT 2% FOR WIDTH OF GANGWAYS.



KEY PLAN



EAST CENTRAL WATERFRONT WALL PLAN
SCALE: 1"=10'

RECORD DRAWINGS



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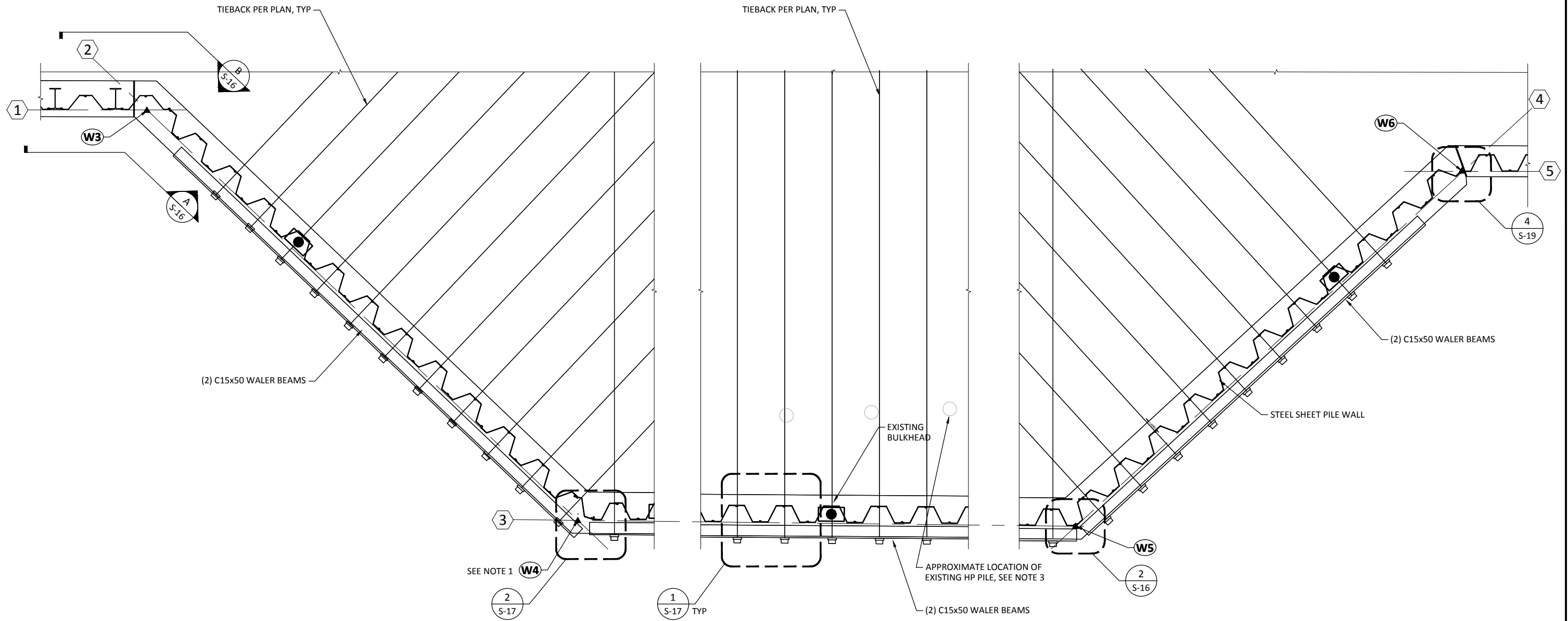
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

EAST CENTRAL WATERFRONT WALL PLAN

S-8

SHEET NO. 83 OF 126

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MAPLE ST. BULKHEAD WALL PLAN
SCALE: 1/4"=1'-0"

NOTES:

1. SEE S-4 FOR HORIZONTAL CONTROL POINT LOCATIONS.
2. WALER BEAMS AND ANCHOR CONNECTIONS ARE SHOWN IN TOP VIEW FOR CLARITY.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE EXISTING HP PILES AND AVOID DURING TIEBACK INSTALLATION.
4. 8" HORIZONTAL TOLERANCE AT THE FACE OF THE WALL IS ALLOWED DURING TIEBACK INSTALLATION TO AVOID EXISTING HP PILES.
5. FENDER SYSTEM NOT SHOWN.

ONE INCH
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INCH SCALE ACCORDINGLY

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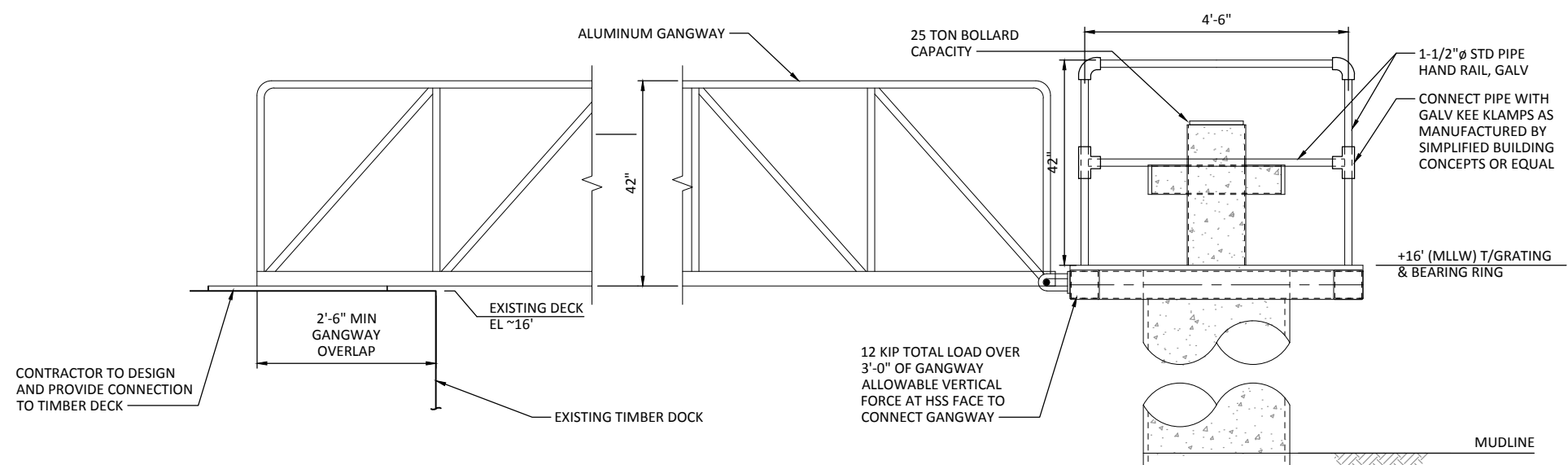
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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

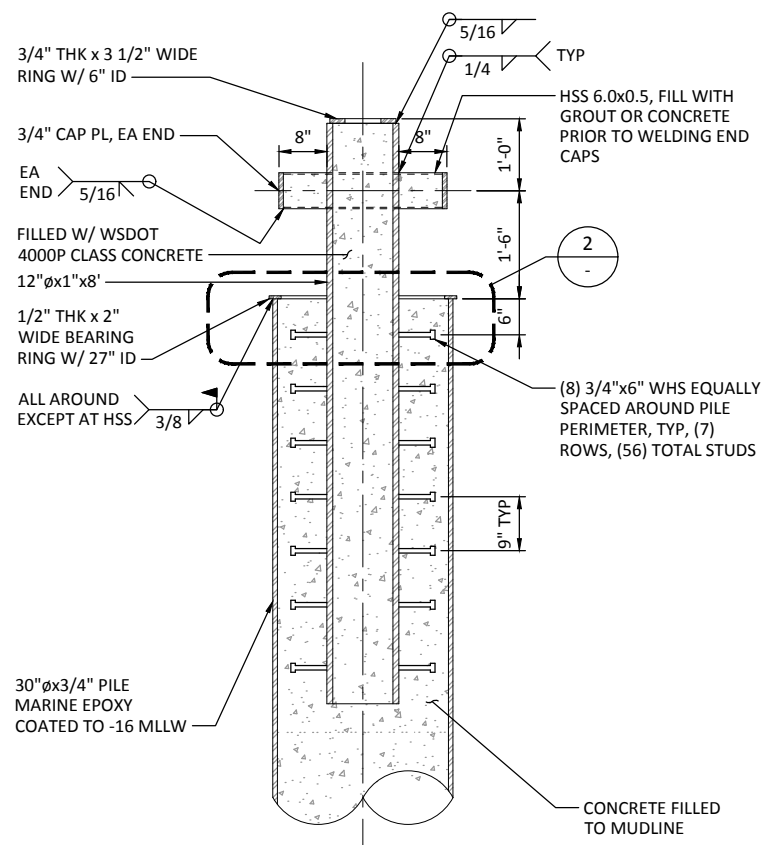
MAPLE ST. BULKHEAD WALL PLAN

S-9
SHEET NO. 84 OF 126

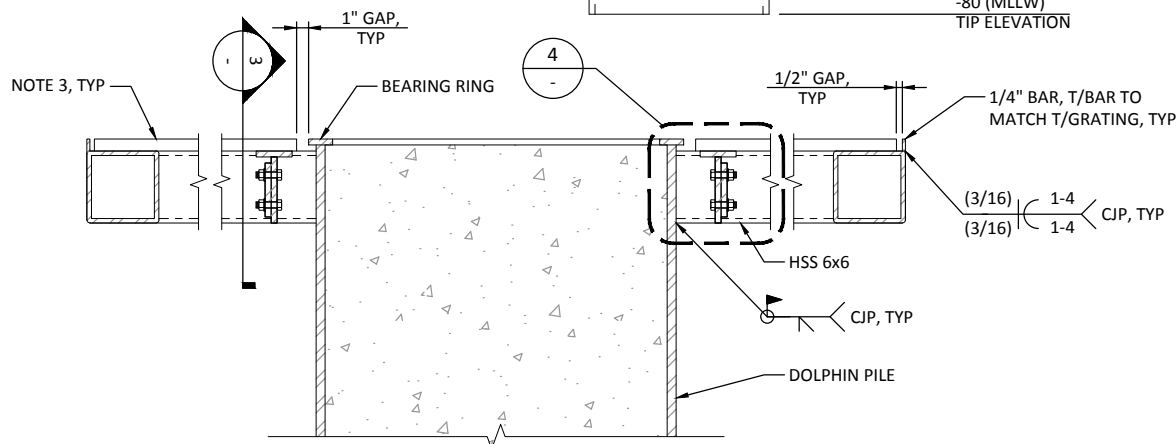
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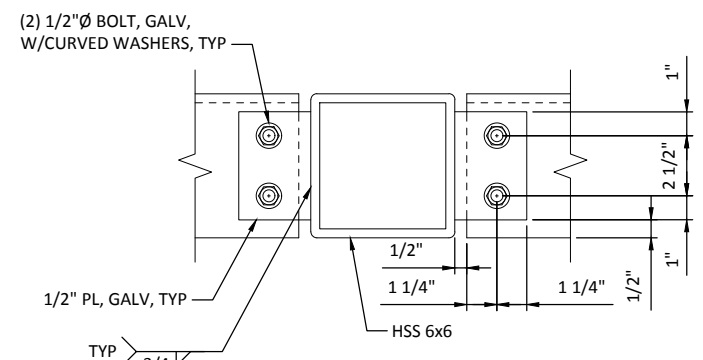
A GANGWAY ELEVATION
 SCALE: 3/4" = 1'-0"



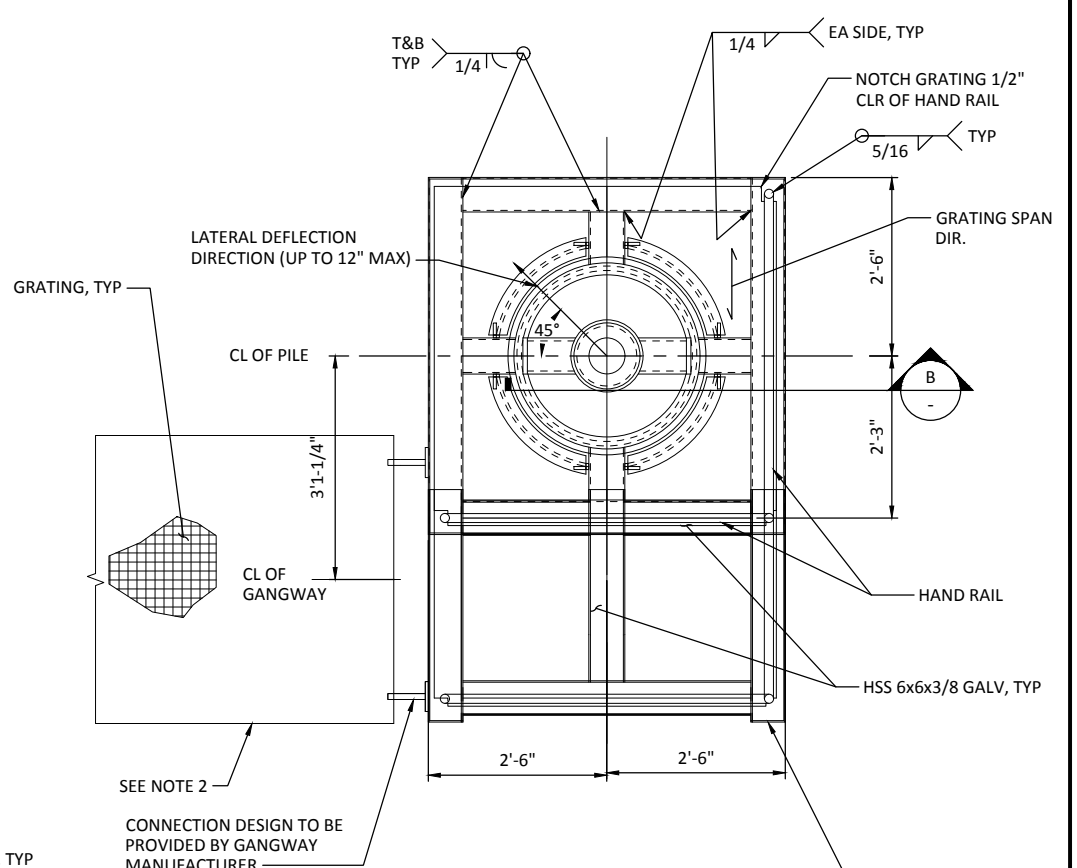
B SECTION
 SCALE: 3/4" = 1'-0"



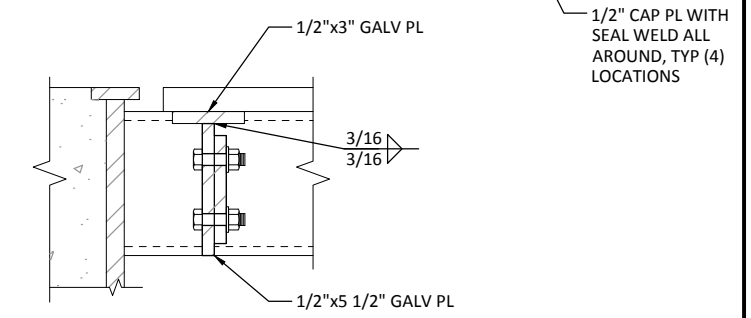
2 DETAIL
 SCALE: 1-1/2" = 1'-0"



3 SHEAR TAB DETAIL
 SCALE: 3" = 1'-0"



1 MOORING BOLLARD PLATFORM PLAN
 SCALE: 3/4" = 1'-0"



4 GRATING SUPPORT RING
 SCALE: 3" = 1'-0"

NOTES:

- ALL BARE STEEL SHALL BE MARINE EPOXY COATED.
- BIDDER DESIGNED AND INSTALLED 3'-0" WIDE CLEAR x 40'-0" LONG MINIMUM ALUMINUM GANGWAY, 50 PSF UNIFORM DESIGN LIVE LOAD CAPACITY, AND HARDWARE CONNECTIONS TO ALLOW FOR THE MOORING PILE AND PLATFORM TO DEFLECT 12" IN THE DIRECTION INDICATED ON PLAN. ALL STRUCTURAL ALUMINUM SHALL BE ALLOY 6061-T6 PER ASTM B308 & WELDED PER AWS D1.2
- 1" MCMASTER-CARR SERRATED STEEL BAR GRATING, GALV, 6867T21 OR EQUIV WITH CLIP ANCHORS PER MFR REQ.

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY

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 SCALE: AS NOTED
 DATE: MARCH 2015

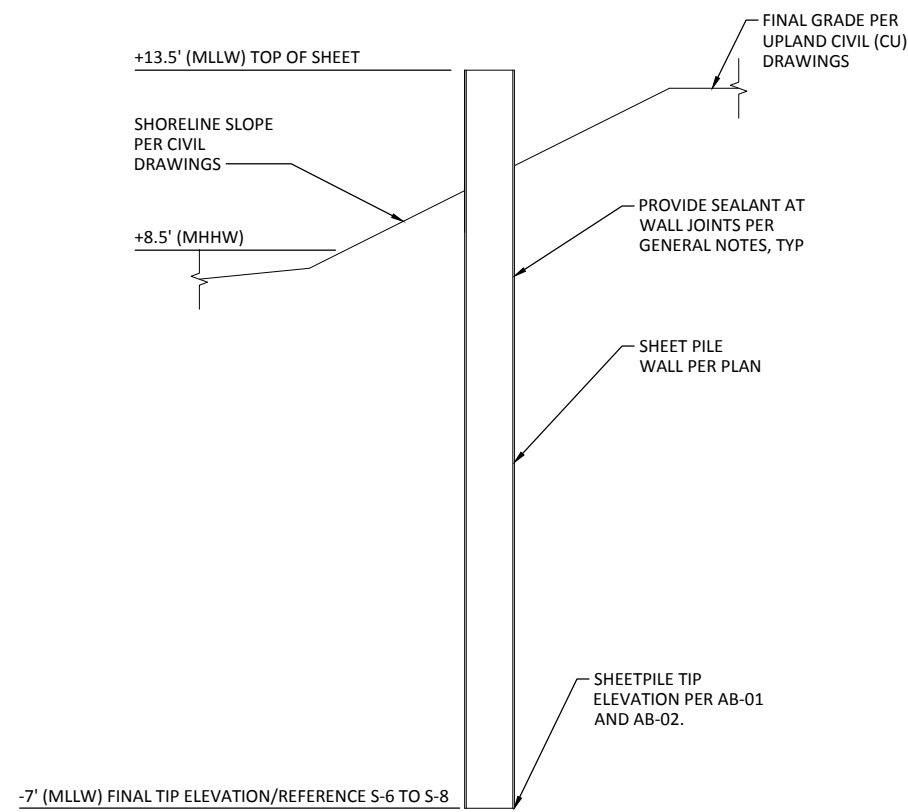
**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

SOUTH SHORELINE MOORING BOLLARD

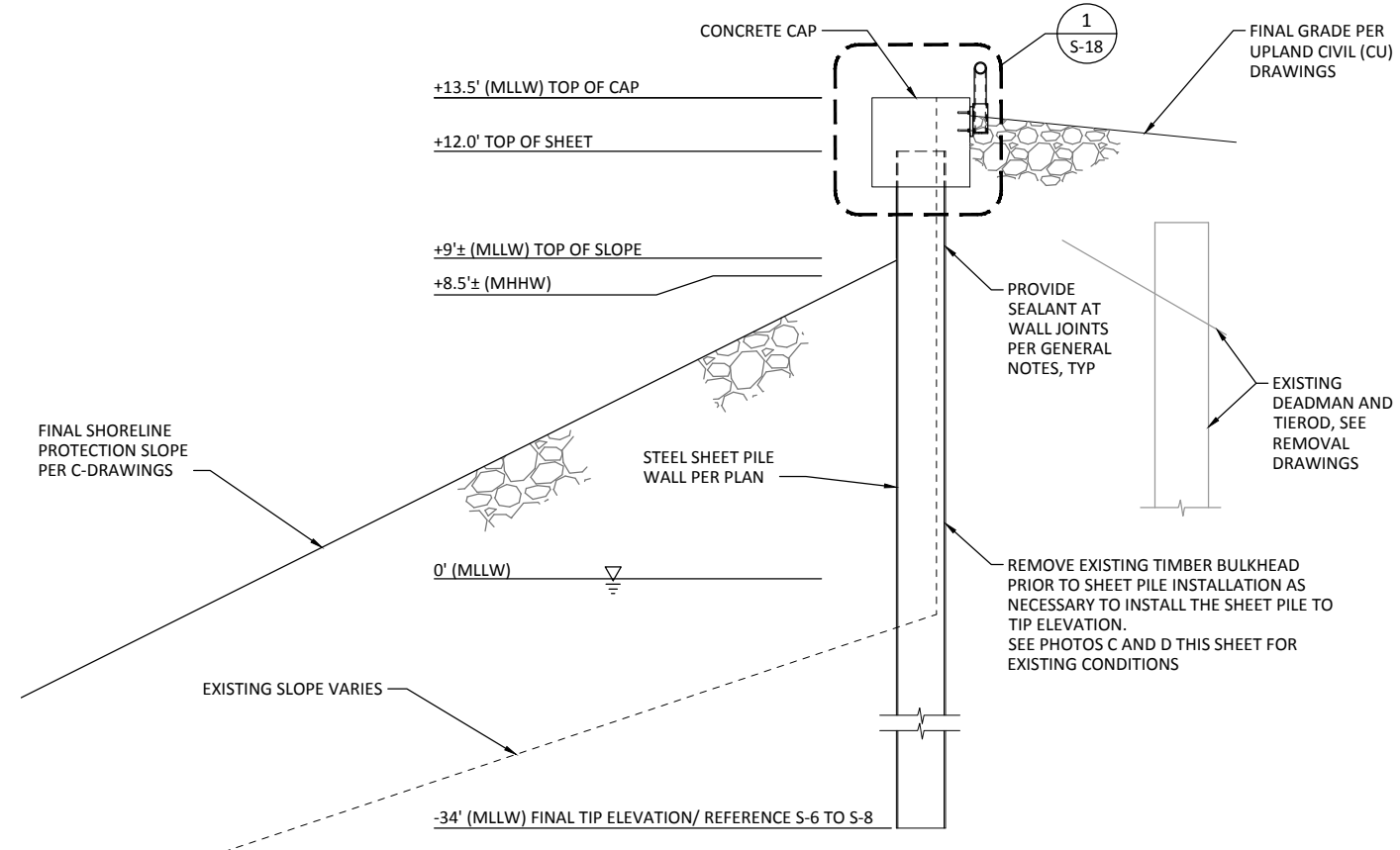
S-10

SHEET NO. 85 OF 126

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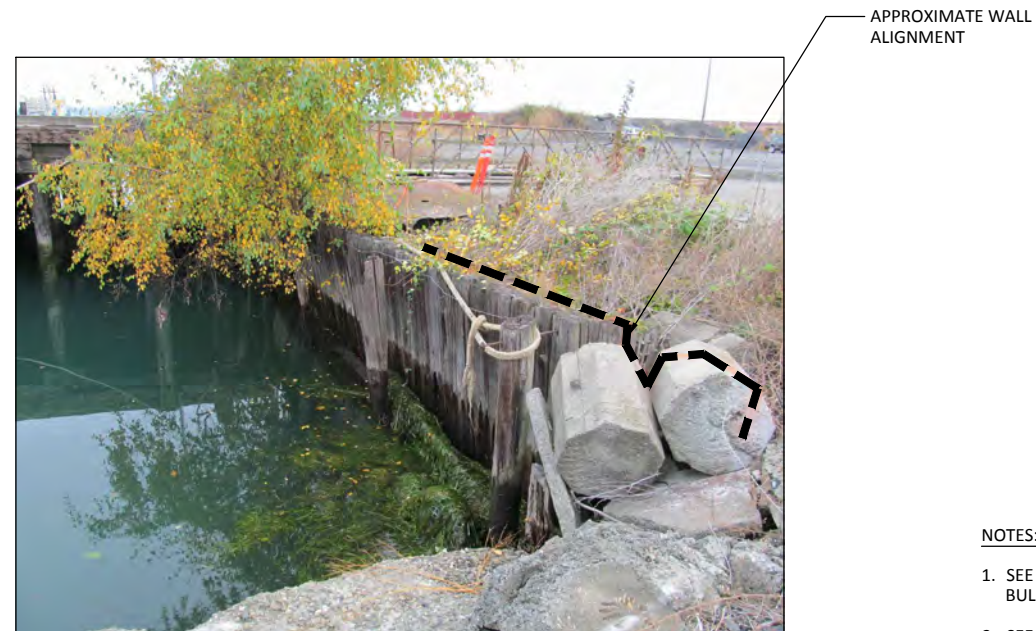
A CHEVRON CUT OFF WALL SECTION
S-5 SCALE: 3/8" = 1'-0"



B SHEET PILE WALL SECTION AT CONFLICT WITH EXISTING BULKHEAD
S-5 SCALE: 3/8" = 1'-0"



C PHOTO
SCALE: NTS



D PHOTO
SCALE: NTS

- NOTES:**
- SEE REMOVAL SHEETS FOR EXISTING TIMBER BULKHEAD INFORMATION.
 - SEE REMOVAL SHEETS AND SHEET S-13 FOR CONSTRUCTION SEQUENCING.

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: MDK
DRAWN BY: GMC
CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

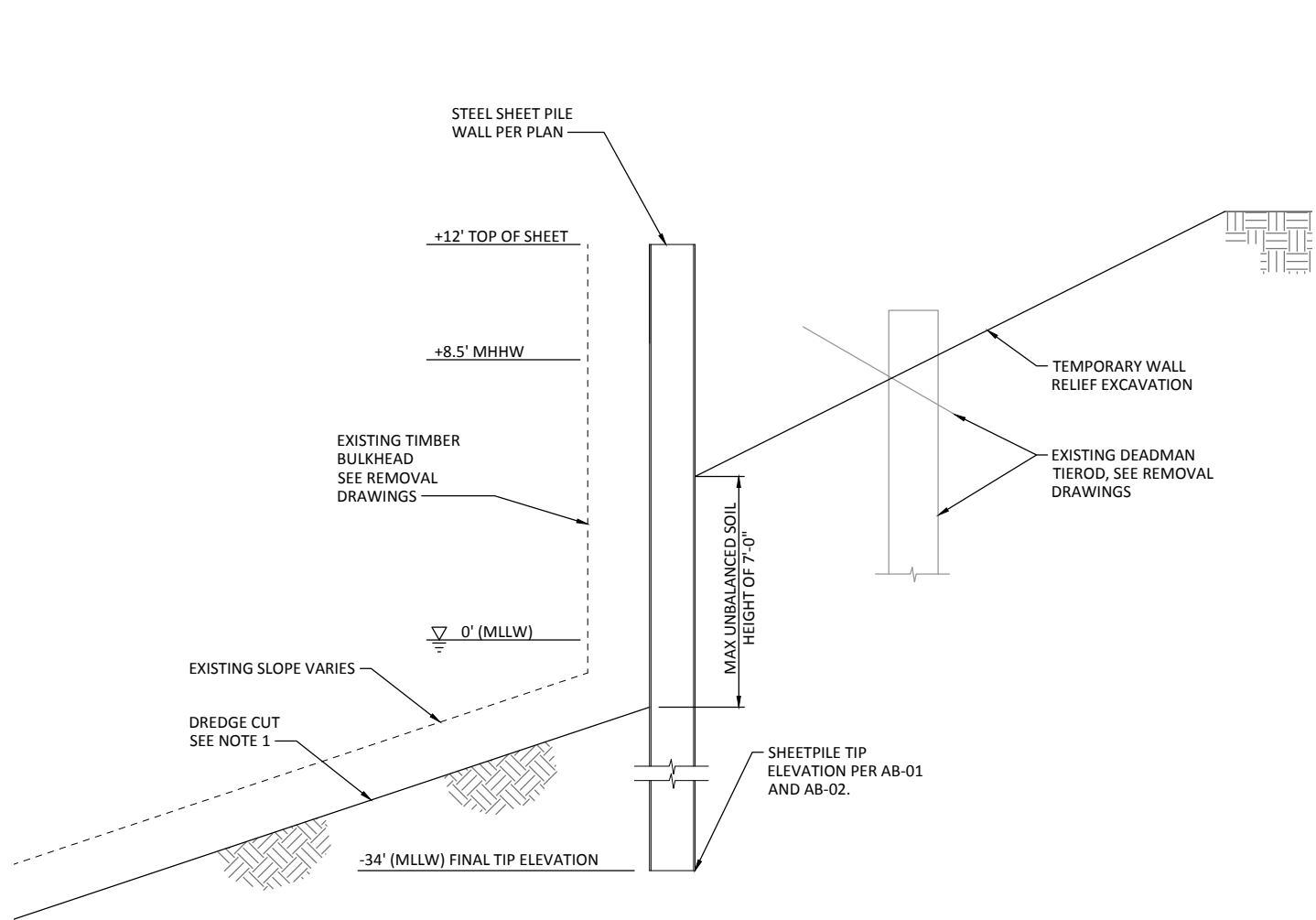
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

WEST CENTRAL WATERFRONT WALL SECTIONS - 1

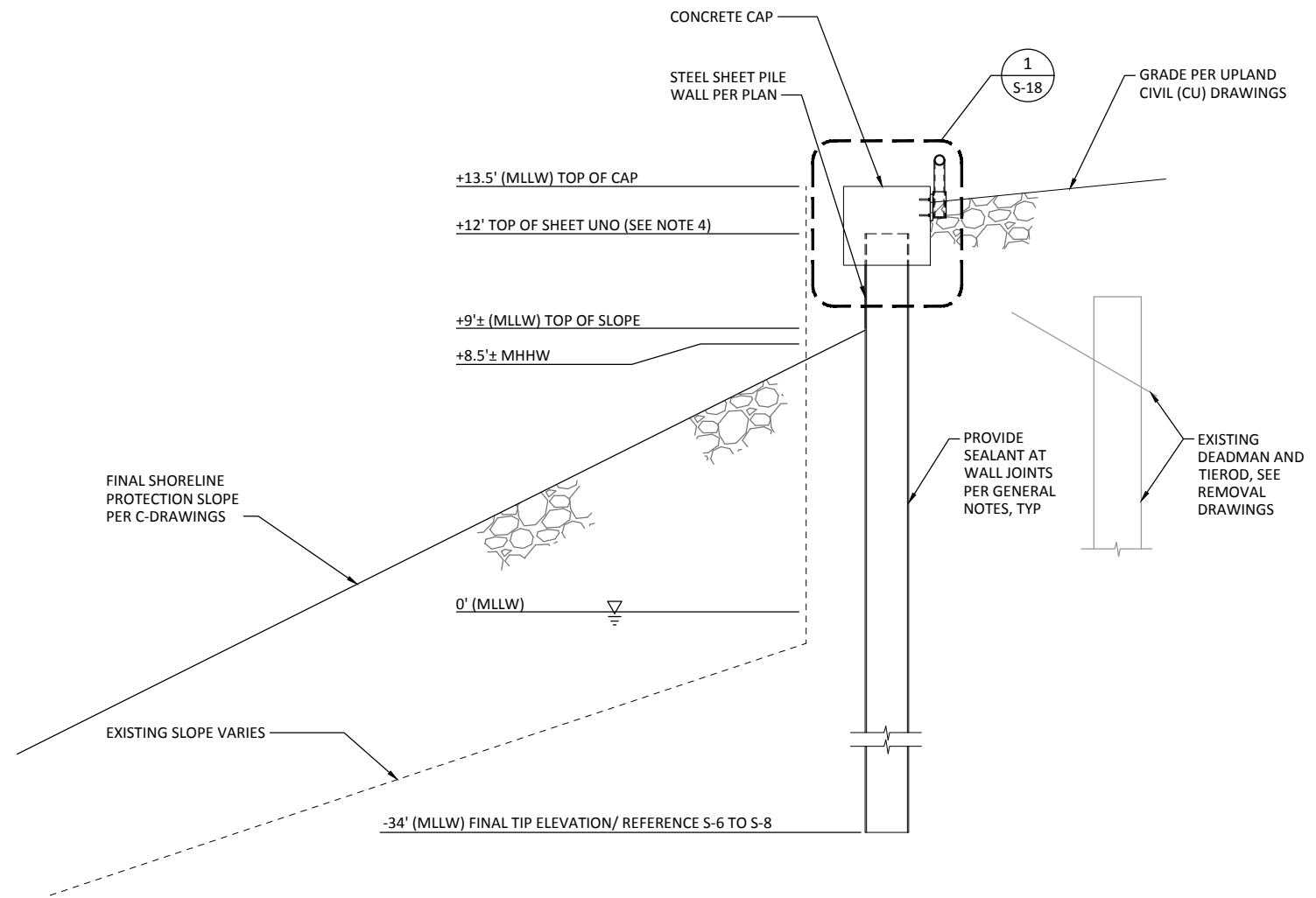
S-11

SHEET NO. 86 OF 126

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TEMPORARY CONDITION DURING DREDGING OPERATIONS



FINAL CONDITION

NOTES:

1. TEMPORARY WALL RELIEF EXCAVATION SHALL BE PERFORMED PRIOR TO DREDGING ADJACENT TO WALL. SEE SPECS FOR MORE INFORMATION.
2. SEE REMOVAL SHEETS FOR INFORMATION AT EXISTING TIMBER BULKHEAD.
3. SEE SHEET S-13 FOR CONSTRUCTION SEQUENCING.
4. TOP OF SHEET AT +12' MLLW EXCEPT AT WEST MAPLE ST. WALL PER S-22.
5. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCK PILING, TESTING AND BACK FILLING REQUIREMENTS.

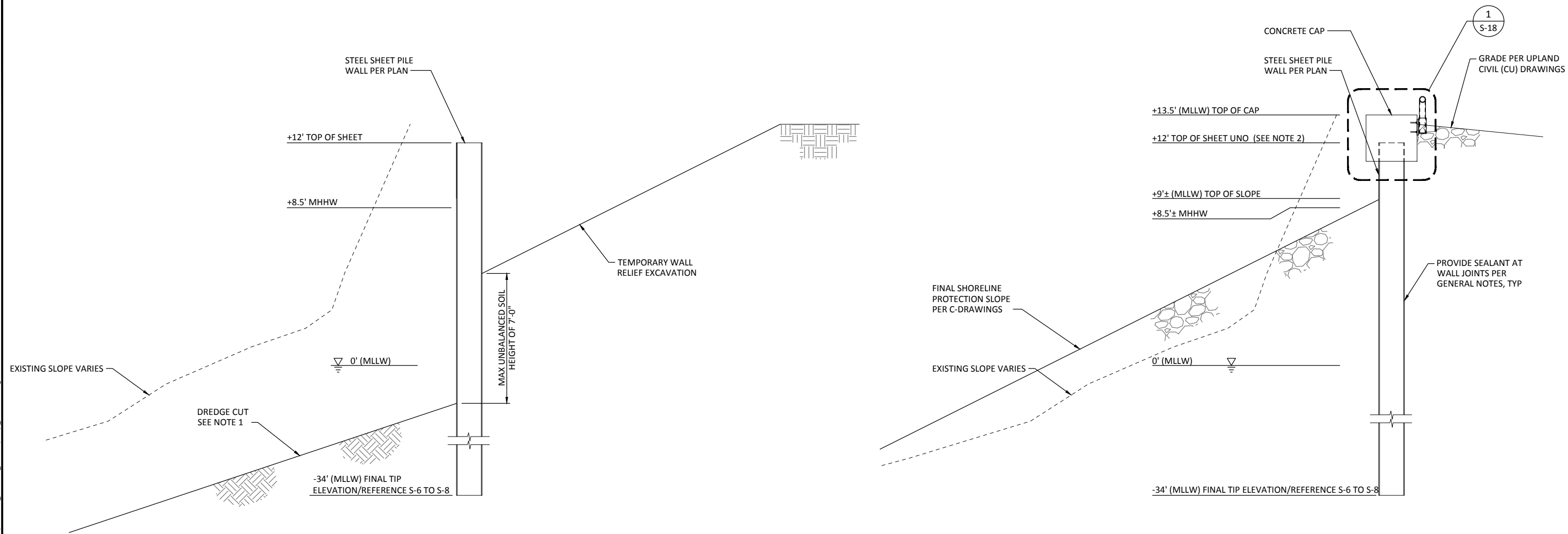
A
S-5 WEST CENTRAL WATERFRONT WALL SECTION W/ EXISTING BULKHEAD CONDITION
SCALE: 3/8" = 1'-0"

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV	DATE	BY	APP'D	DESCRIPTION																					DESIGNED BY: <u>EDE</u> DRAWN BY: <u>GMC</u> CHECKED BY: <u>TAH</u> APPROVED BY: <u>RHR</u> SCALE: <u>AS NOTED</u> DATE: <u>MARCH 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON	S-12
		REV	DATE	BY	APP'D	DESCRIPTION																								
				WEST CENTRAL WATERFRONT WALL SECTIONS 2	SHEET NO. 87 OF 126																									

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TEMPORARY CONDITION DURING DREDGING OPERATIONS

FINAL CONDITION

CONSTRUCTION SEQUENCING REQUIREMENTS:

1. REMOVE UPLAND DEBRIS TO INSTALL SHEETS.
2. DRIVE SHEETS TO TIP ELEVATION.
3. PERFORM TEMPORARY WALL RELIEF EXCAVATION.
4. PERFORM DREDGING AND CAPPING
5. FILL IN TEMPORARY EXCAVATION AND GRADE PER UPLAND CIVIL (CU) SHEETS.



NOTES:

1. TEMPORARY WALL RELIEF EXCAVATION SHALL BE PERFORMED PRIOR TO DREDGING ADJACENT TO WALL. SEE SPECS FOR MORE INFORMATION.
2. TOP OF SHEET AT +12' MLLW EXCEPT AT WEST MAPLE ST. WALL PER S-22.
5. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECIFICATIONS FOR EXCAVATION, STOCK PILING, TESTING AND BACK FILLING REQUIREMENTS.

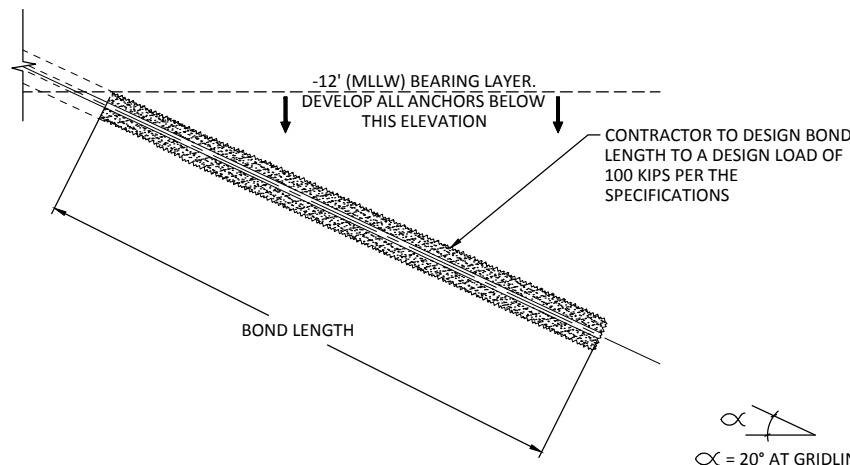
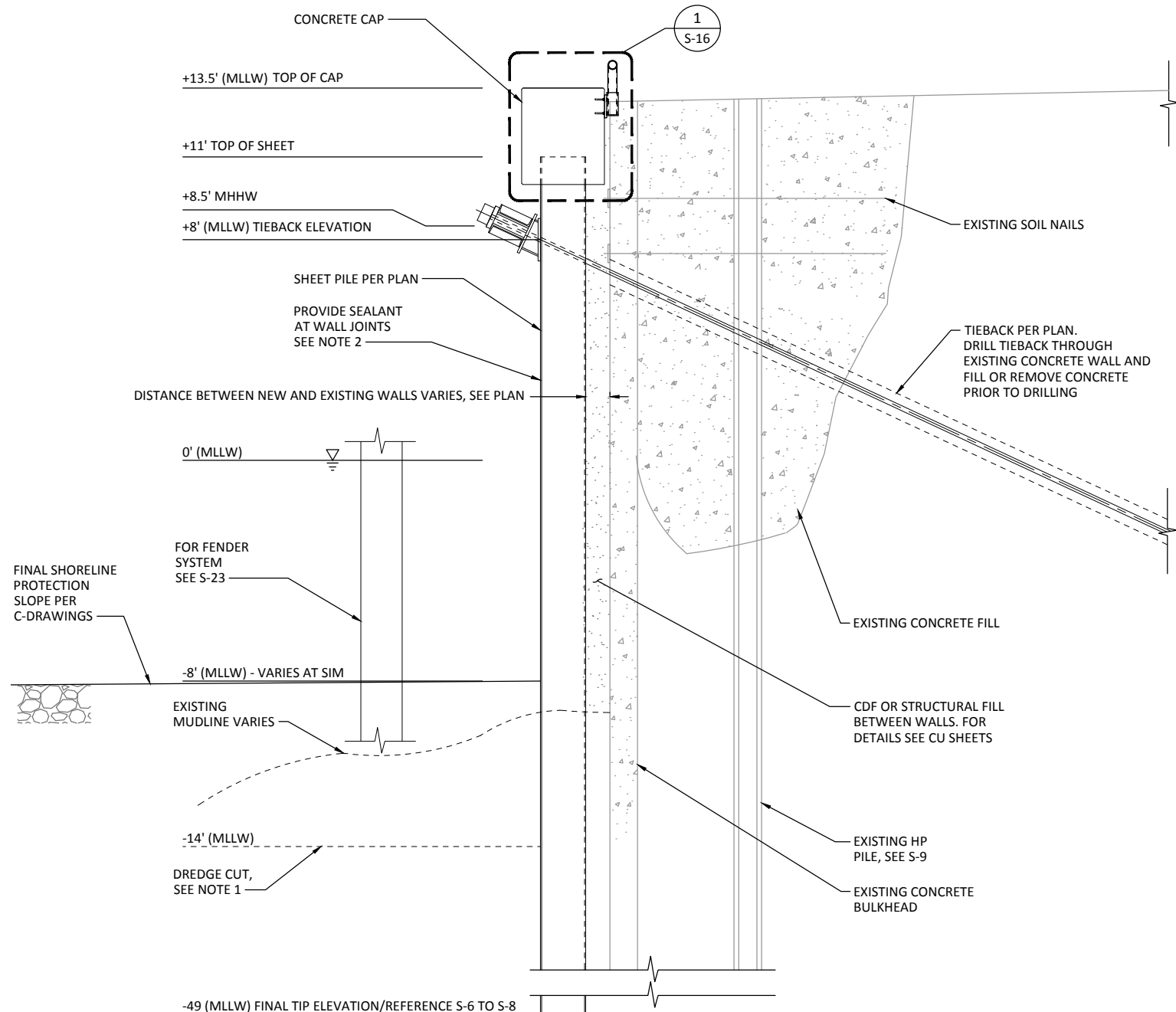
A
S-6 WEST CENTRAL WATERFRONT WALL SECTION
SCALE: 3/8" = 1'-0"

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV	DATE	BY	APP'D	DESCRIPTION																					DESIGNED BY: EDE DRAWN BY: GMC CHECKED BY: TAH APPROVED BY: RHR SCALE: AS NOTED DATE: MARCH 2015	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON WEST CENTRAL WATERFRONT WALL SECTIONS - 3	S-13 SHEET NO. 88 OF 126
		REV	DATE	BY	APP'D	DESCRIPTION																								
				RECORD DRAWINGS																										

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$\alpha = 20^\circ$ AT GRIDLINE **(3)**, UNO PER S-7
 $\alpha = 25^\circ$ AT GRIDLINES **(2)** & **(4)**

- NOTE:**
- SHEET PILE, TIEBACKS, AND WALER MUST BE INSTALLED AND TIEBACKS TESTED & APPROVED BEFORE PERFORMING DREDGE CUT. SEE SPECS FOR MORE INFORMATION.
 - SEAL MAPLE STREET BULKHEAD AT EVERY KNUCKLE JOINT FROM TOP OF WALL TO EL -14 MLLW.

CONSTRUCTION SEQUENCE

- STEP 1: DRIVE NEW SHEET PILE
- STEP 2: INFILL GAP BETWEEN EXISTING BULKHEAD WALL AND NEW SHEET PILE WALL WITH STRUCTURAL BACKFILL TO MAX ELEVATION OF +4' OR CDF IN LIFTS TO TOP OF WALL, SEE CU PLANS AND SPECIFICATIONS
- STEP 3: DRILL, INSTALL, GROUT AND POST GROUT TIEBACKS
- STEP 4: INSTALL WALER AND MAKE FIELD WELDS
- STEP 5: BACKFILL BETWEEN WALLS TO FULL HEIGHT AND TIGHTEN TIEBACKS SIMULTANEOUSLY TO MAINTAIN VERTICAL WALL ALIGNMENT
- STEP 6: PERFORM PERFORMANCE AND PROOF TESTING PER SPECIFICATIONS.
- STEP 7: CONSTRUCT CONCRETE CAP AND COMPLETE UPLAND SURFACING PER UPLAND CIVIL (CU) DRAWINGS.

- CONSTRUCTION NOTES:**
- CAPACITY OF EXISTING BULKHEAD WALL IS UNKNOWN. CONTRACTOR TO USE AT THEIR OWN RISK.
 - THE ALLOWABLE TEMPORARY VERTICAL LOAD ON THE NEW SHEET PILE WALL IS 4.7 KIPS PER LINEAR FOOT.

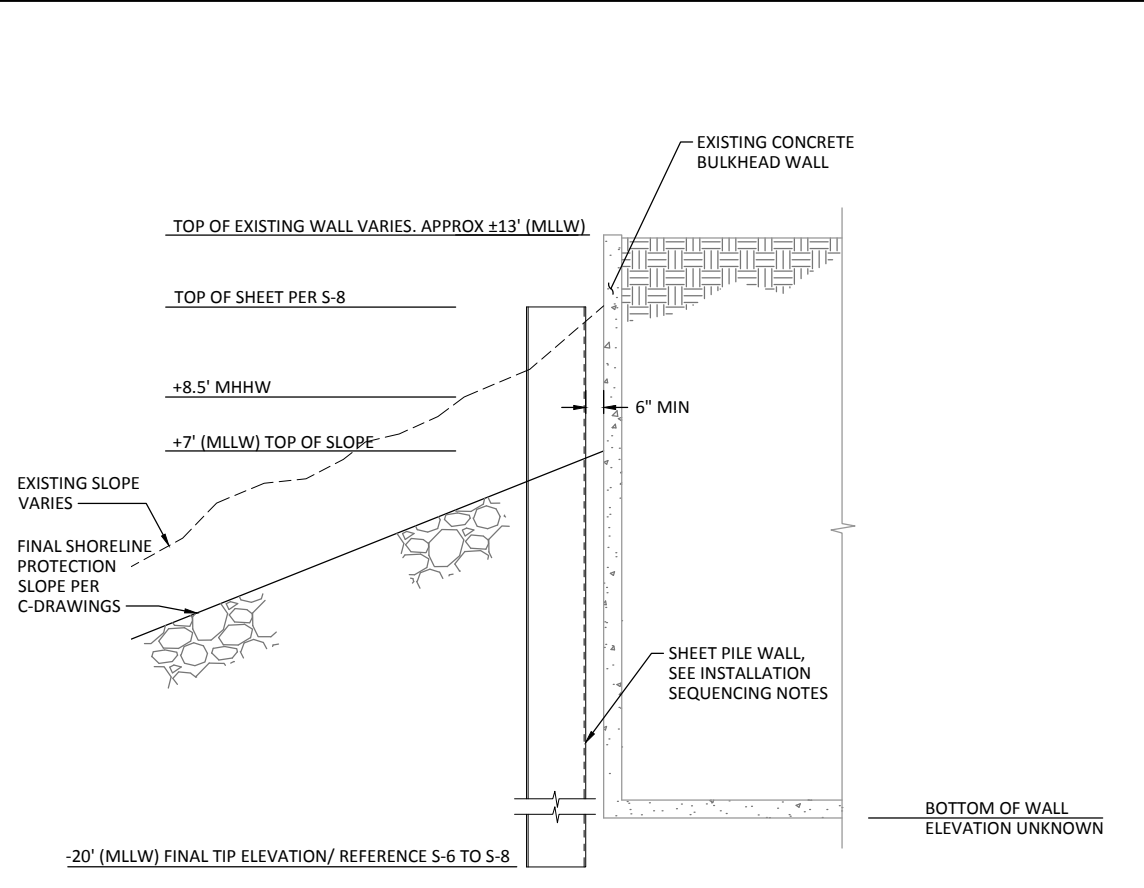
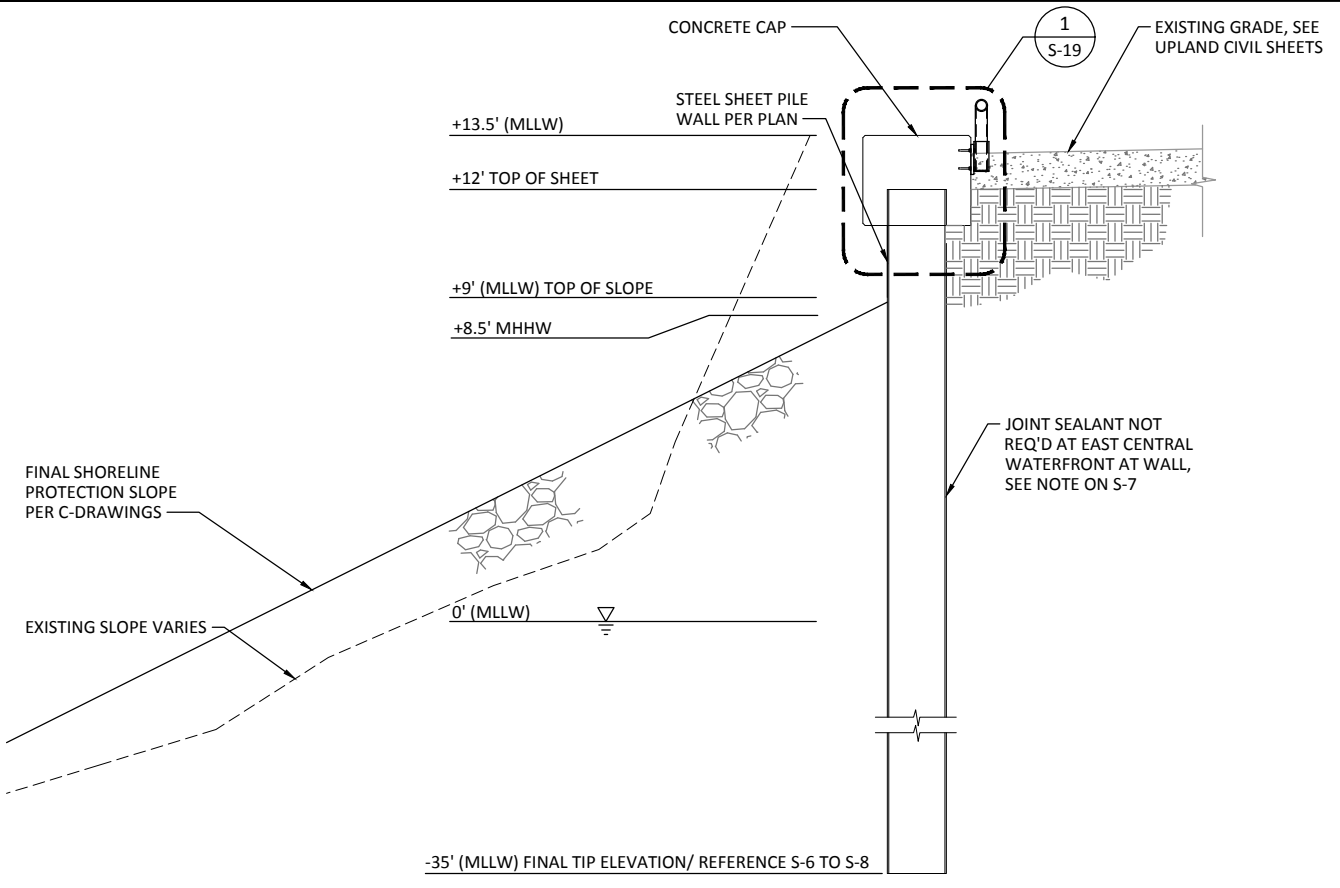
A
S-7
MAPLE ST. BULKHEAD SECTION
SCALE: 3/8" = 1'-0"

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

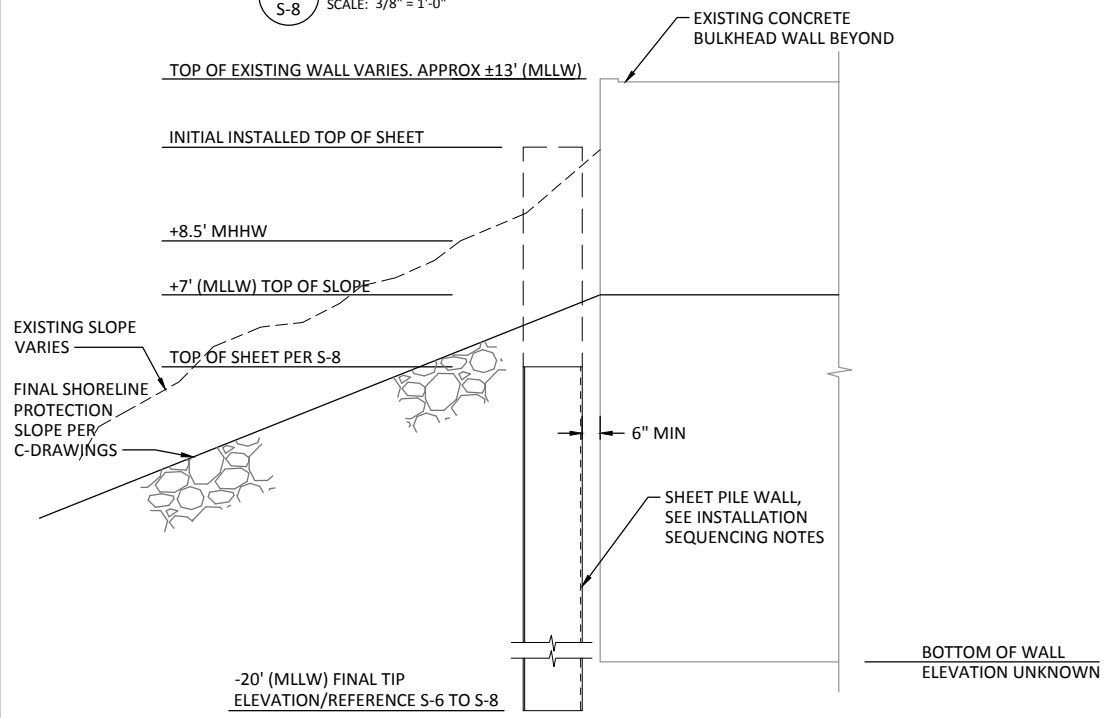
 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	DESIGNED BY: EDE DRAWN BY: GMC CHECKED BY: TAH APPROVED BY: RHR SCALE: AS NOTED DATE: MARCH 2015	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON	S-14
		MAPLE ST. BULKHEAD SECTION	SHEET NO. 89 OF 126	

REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION



A EAST CENTRAL WATERFRONT WALL SECTION
SCALE: 3/8" = 1'-0"

B SECTION
SCALE: 3/8" = 1'-0"



C SECTION
SCALE: 3/8" = 1'-0"

- SHEET PILE INSTALLATION SEQUENCE:**
1. INSTALL SHEET PILE WALL W/ TOP OF WALL AT OR ABOVE EXISTING SHORELINE ELEVATION
 2. BACKFILL ANY GAPS BETWEEN NEW SHEET PILE WALL & EXISTING CONCRETE WALL WITH CDF.
 3. DREDGE OUT SLOPE IN FRONT OF NEW WALL PER CIVIL DRAWINGS.
 4. CUT SHEET PILE WALL DOWN TO FINAL TOP OF SHEET ELEV
 5. CAP SLOPE PER CIVIL DRAWINGS

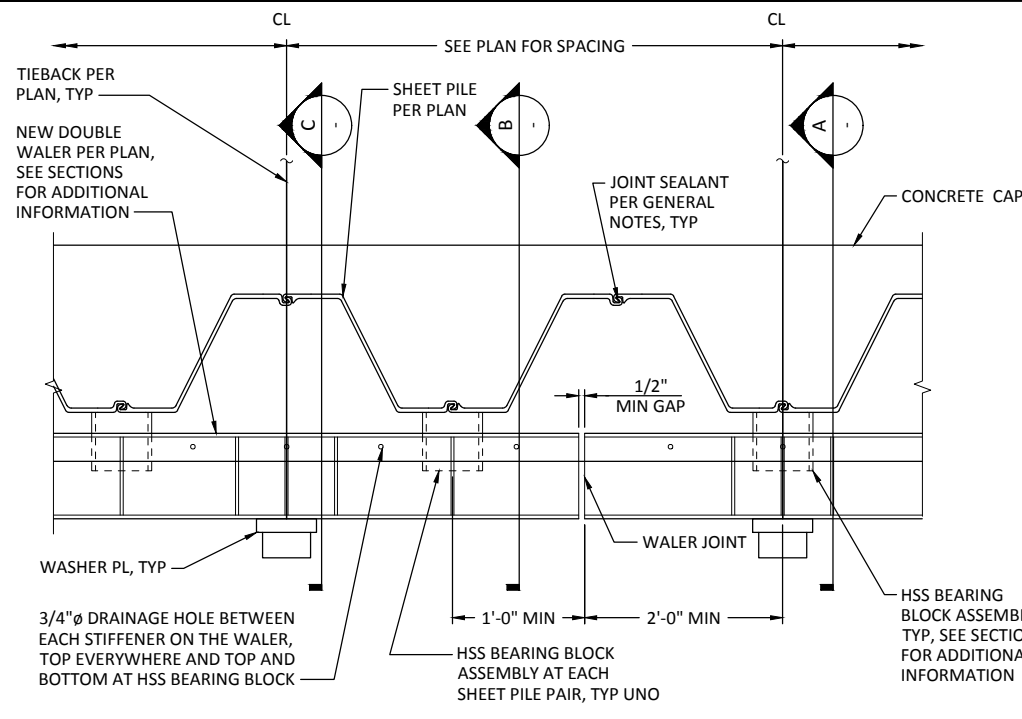
ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

RECORD DRAWINGS

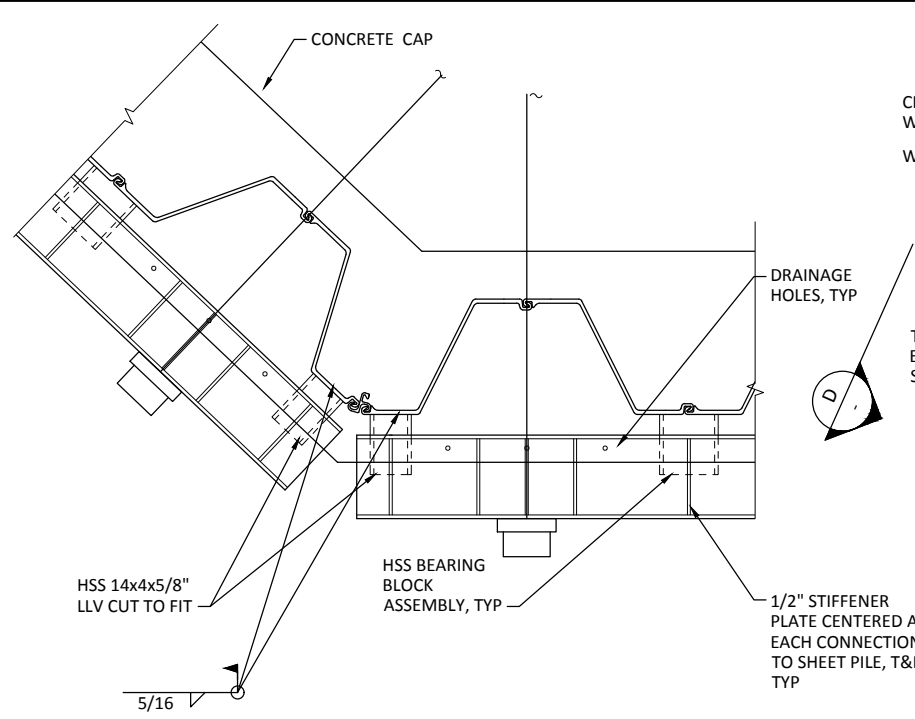
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 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	DESIGNED BY: <u>MDX</u> DRAWN BY: <u>GMC</u> CHECKED BY: <u>TAH</u> APPROVED BY: <u>RHR</u> SCALE: <u>AS NOTED</u> DATE: <u>MARCH 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON	S-15
		EAST CENTRAL WATERFRONT WALL SECTION		SHEET NO. 90 OF 126

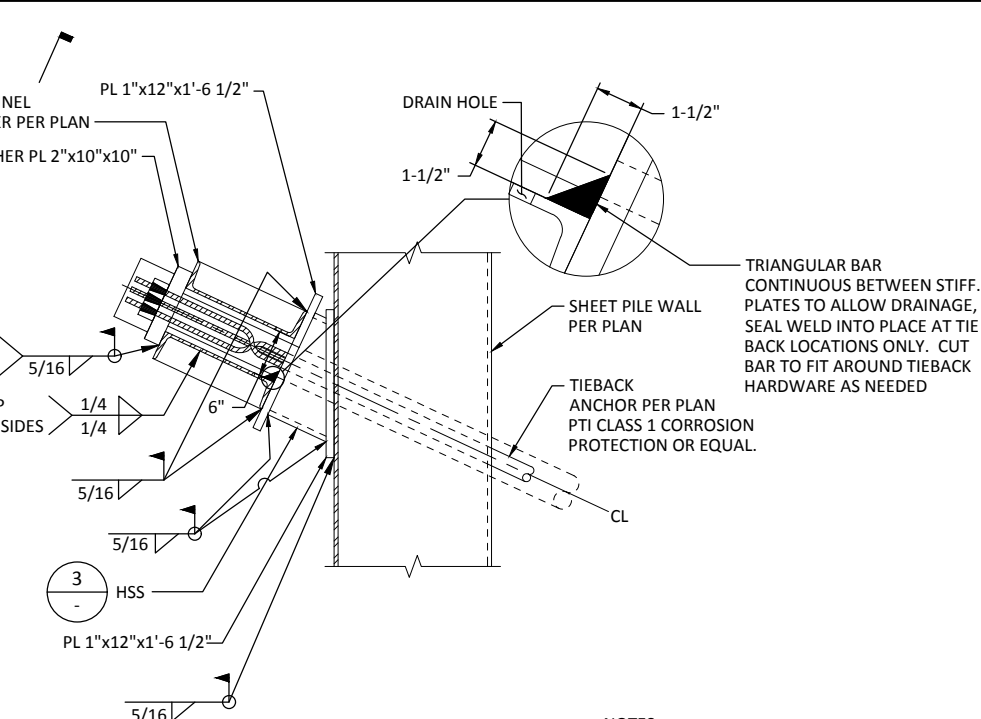
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REV	DATE	BY	APP'D	DESCRIPTION



1 GENERAL BULKHEAD PLAN
SCALE: 3/4" = 1'-0"

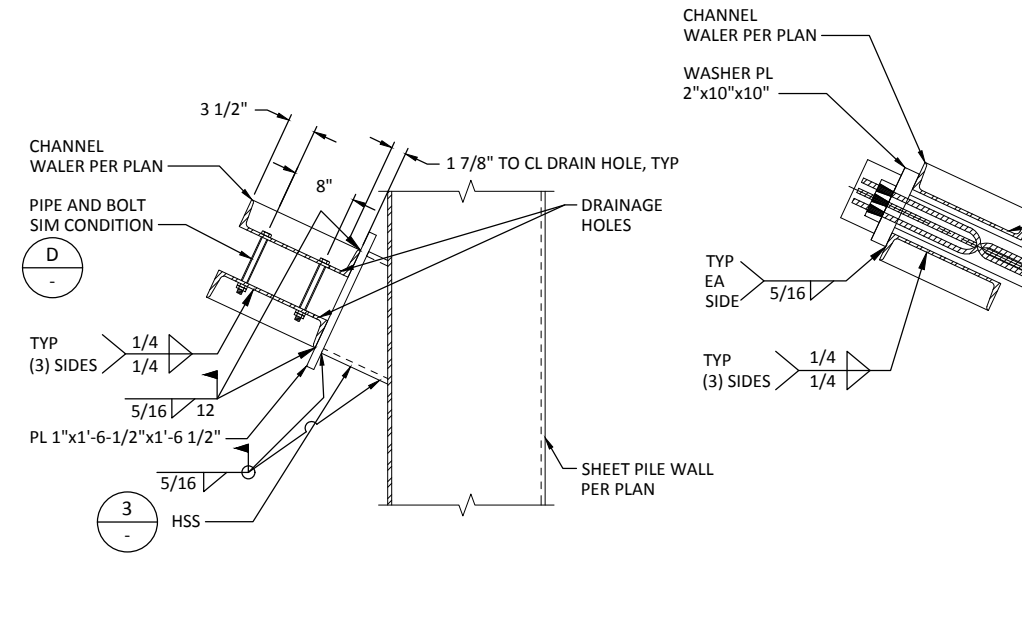


2 BULKHEAD CORNER PLAN
SCALE: 3/4" = 1'-0"

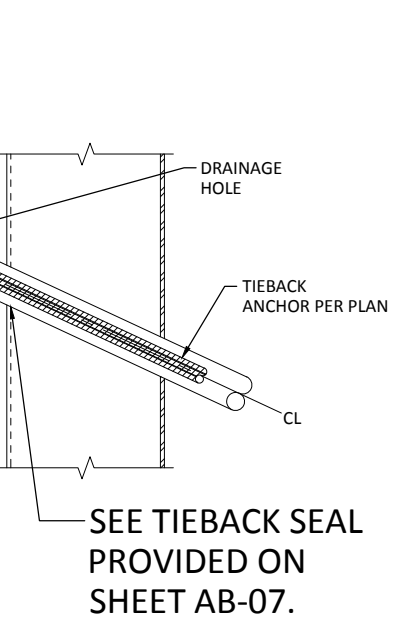


A SECTION
SCALE: 1" = 1'-0"

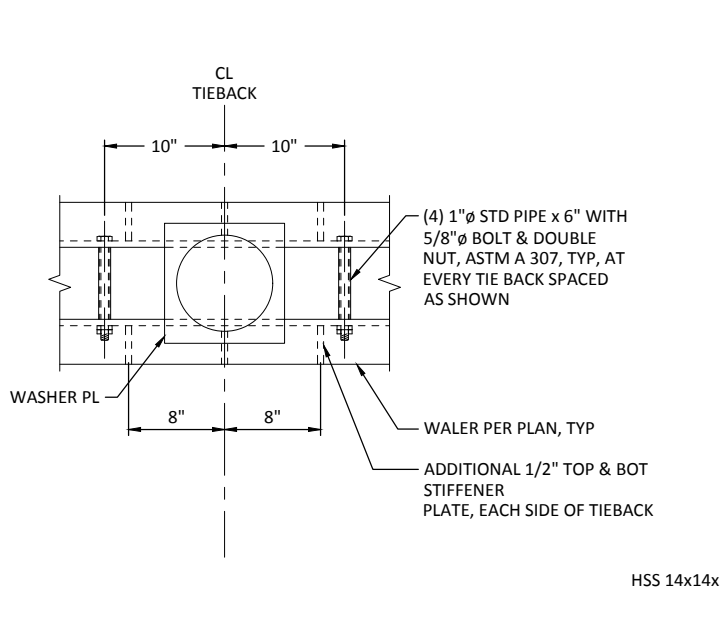
- NOTES:**
1. WALER AND ANCHOR CONNECTIONS ARE SHOWN IN TOP VIEW FOR CLARITY
 2. WALERS SHALL SPAN AT LEAST 3 TIEBACKS BETWEEN JOINTS
 3. WALER AND HSS BEARING BLOCKS IN PLAN VIEW ARE DRAWN CONCEPTUALLY
 4. WALER BEAM AND ASSEMBLIES SHALL NOT BE GALVANIZED.
 5. TIE BACK AND ASSOCIATED ASSEMBLIES CORROSION PROTECTION PER S-7



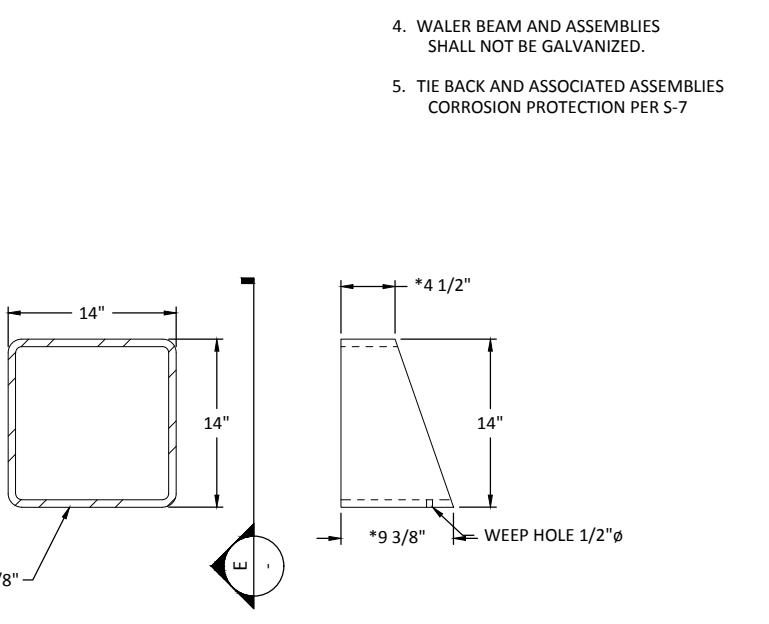
B SECTION
SCALE: 1" = 1'-0"



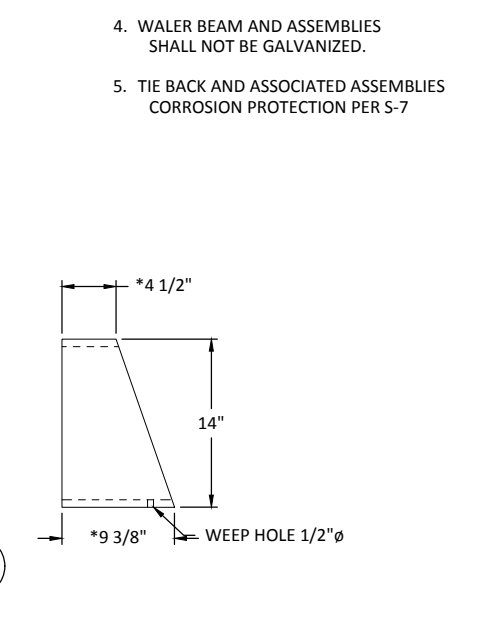
C SECTION
SCALE: 1" = 1'-0"



D ANCHOR ELEVATION
SCALE: 1-1/2" = 1'-0"



3 HSS BEARING BLOCK DETAIL
SCALE: 1-1/2" = 1'-0"



E HSS BEARING BLOCK ELEVATION
SCALE: 1-1/2" = 1'-0"

- NOTES:**
1. WALER AND ASSOCIATED ASSEMBLIES SHALL BE MARINE COATED PER SPECIFICATIONS..

* DIMENSIONS SHOWN ARE MINIMUM. MAY INCREASE DUE TO VARIANCE IN AS-DRIVEN SHEET PILE WALL FACE. CUT IN FIELD TO FIT.

RECORD DRAWINGS

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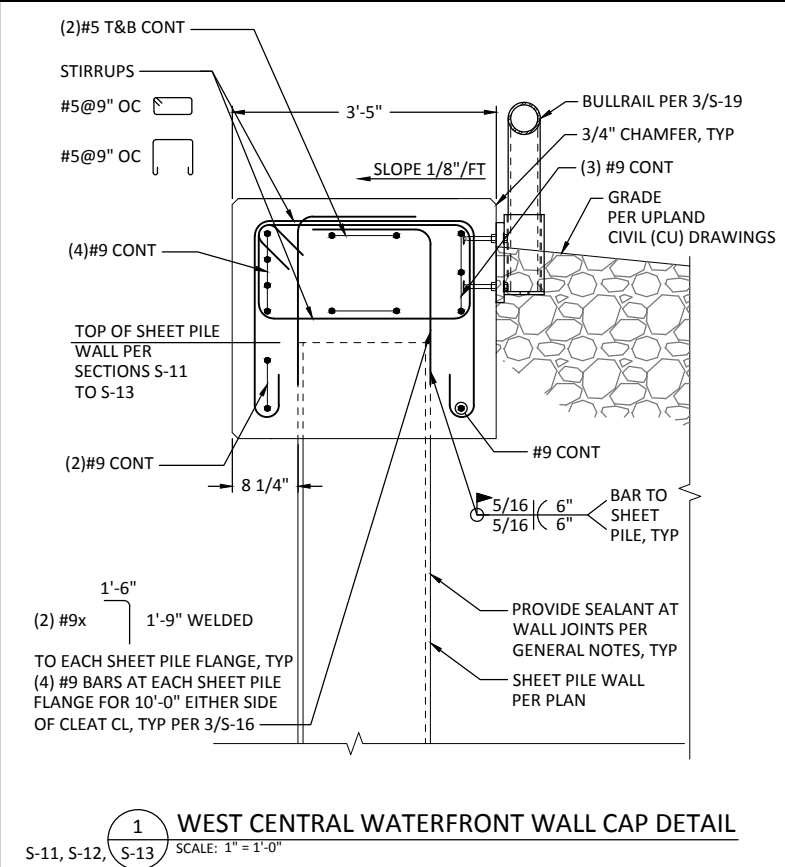
**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

MAPLE ST. BULKHEAD DETAILS - 2

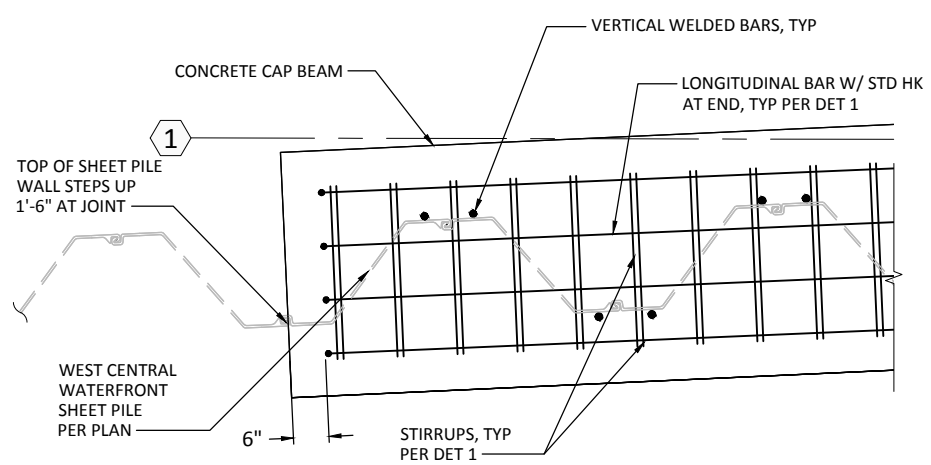
S-17

SHEET NO. 92 OF 126

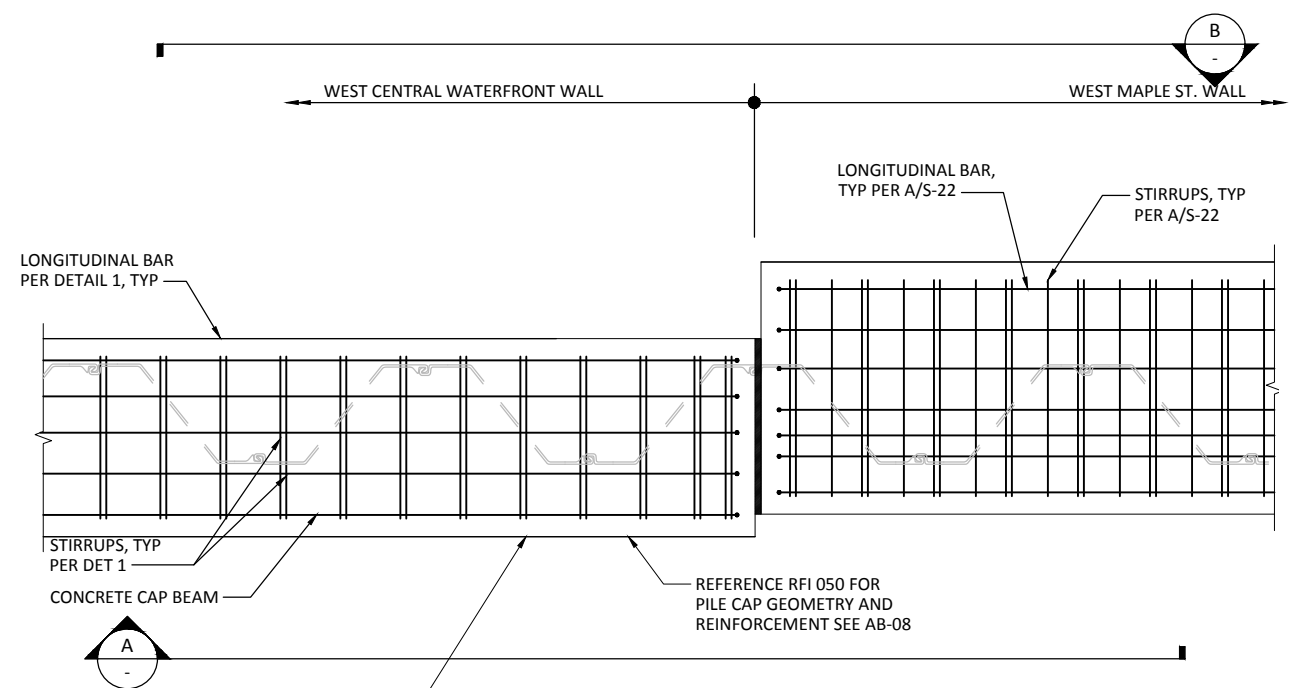
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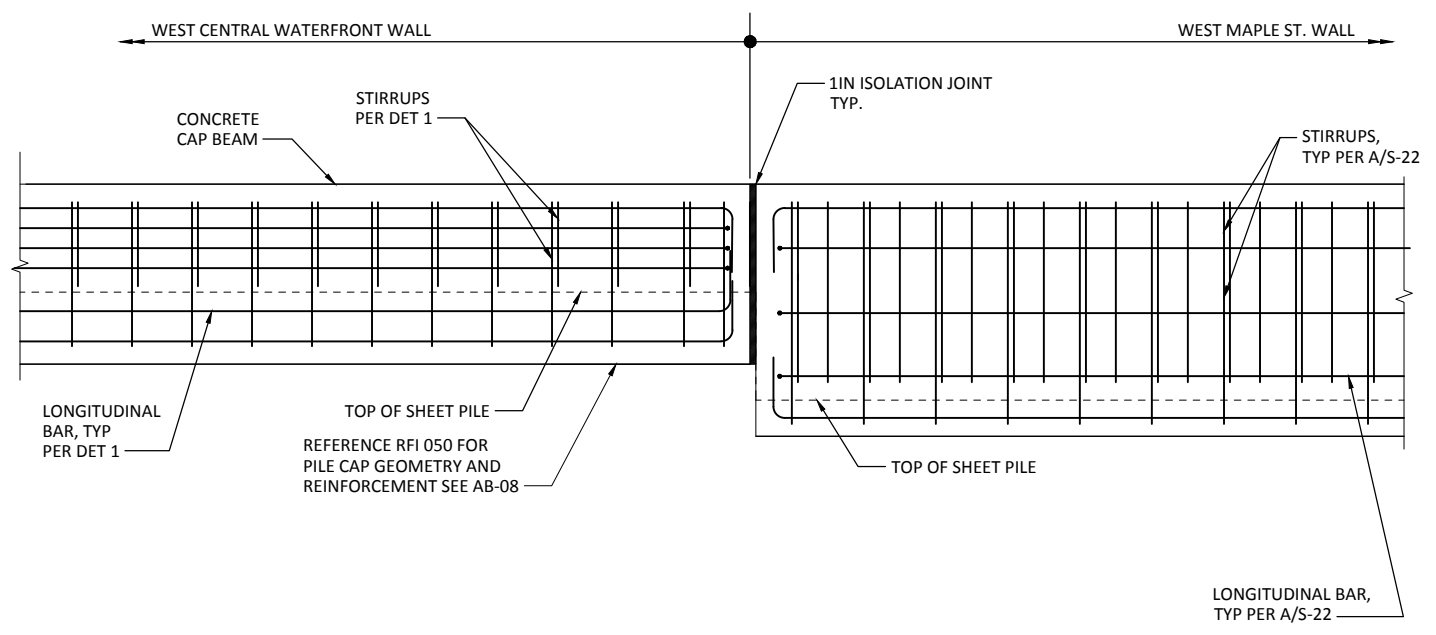
1 WEST CENTRAL WATERFRONT WALL CAP DETAIL
S-11, S-12, S-13 SCALE: 1" = 1'-0"



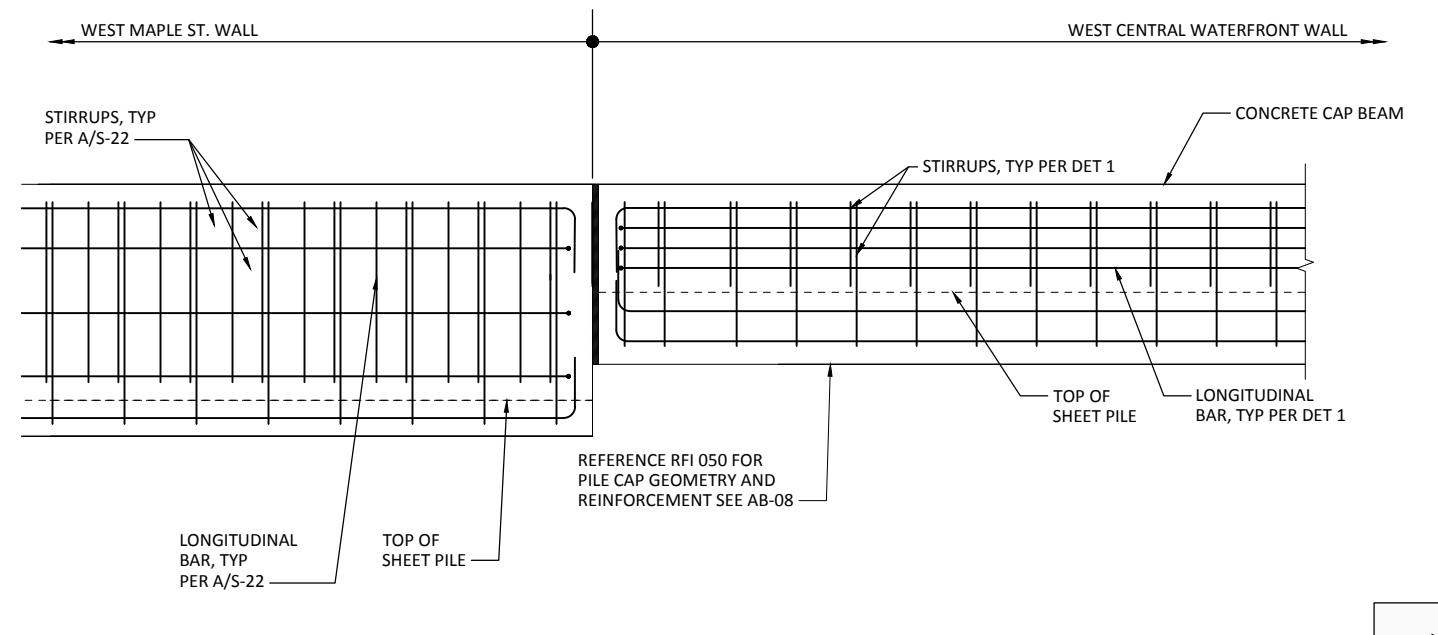
2 CAP REINFORCEMENT DETAIL
S-5 SCALE: 3/4" = 1'-0"



3 TOP REINFORCEMENT PLAN
S-6 SCALE: 3/4" = 1'-0"



A ELEVATION
SCALE: 3/4" = 1'-0"



B ELEVATION
SCALE: 3/4" = 1'-0"

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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ANCHOR QEA
720 OLIVE WAY, SUITE 1900 | SEATTLE, WA 98101
(206) 287-9130

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500

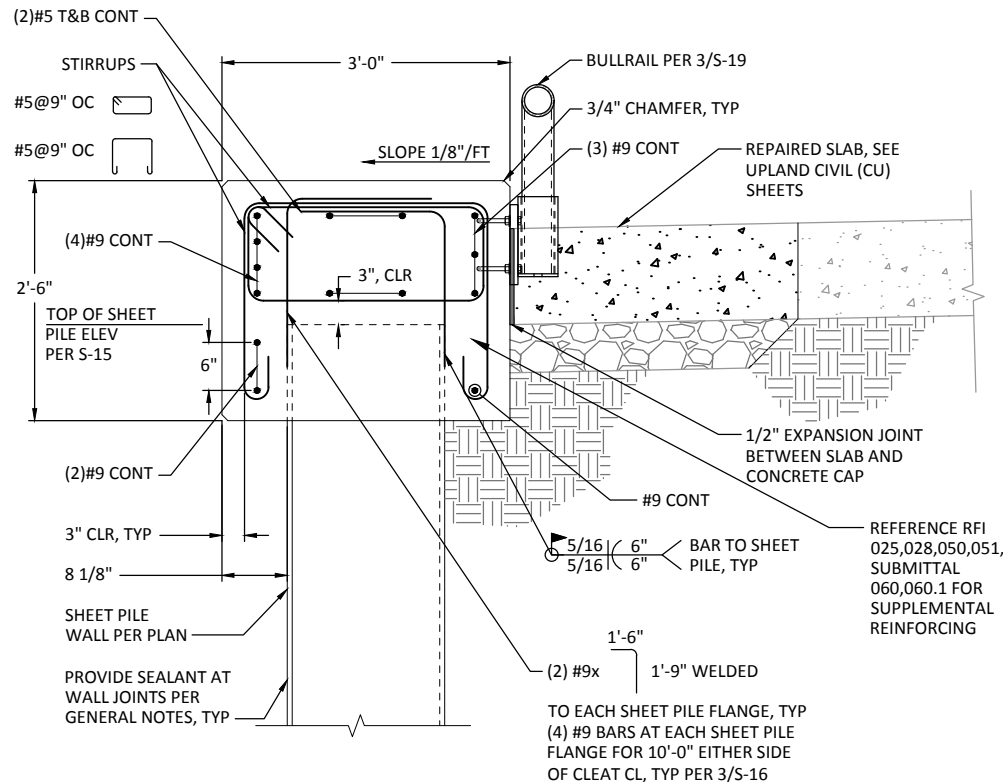
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DESIGNED BY: EDE
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CHECKED BY: TAH
APPROVED BY: RHR
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DATE: MARCH 2015

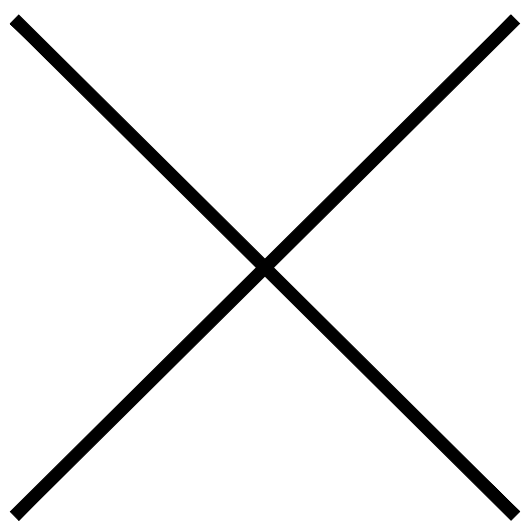
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

WEST CENTRAL WATERFRONT WALL DETAILS

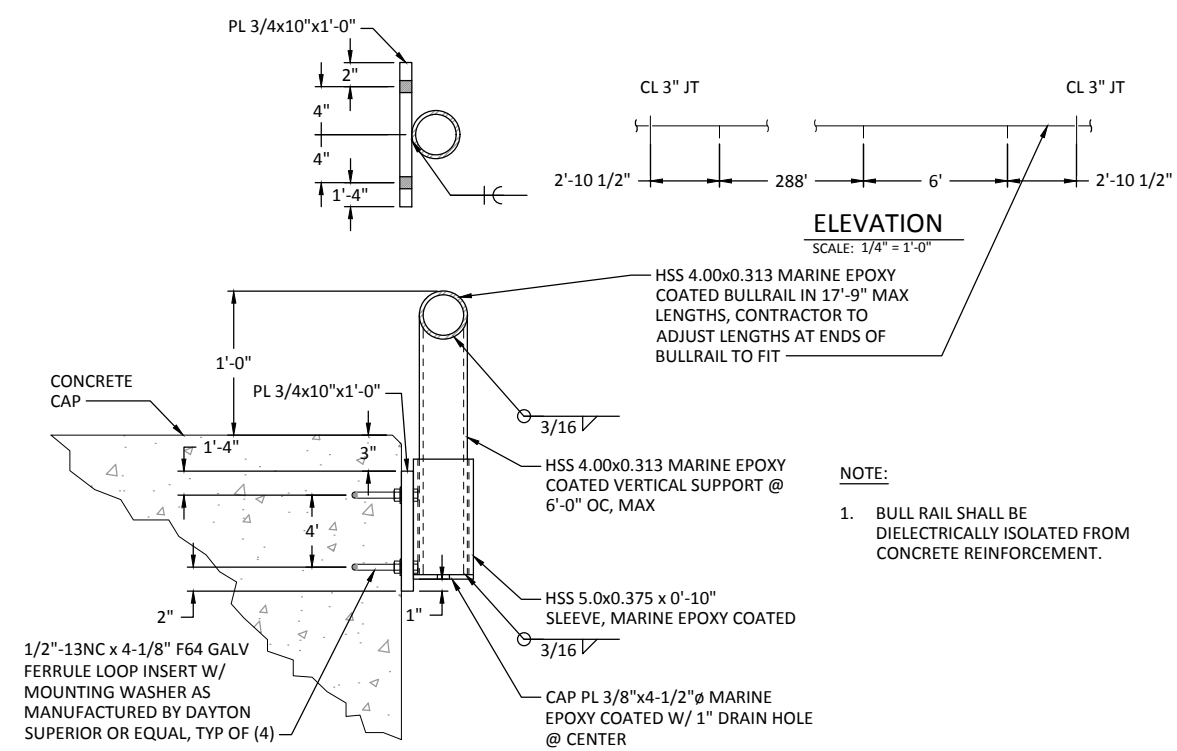
S-18
SHEET NO. 93 OF 126



1 EAST CENTRAL WATERFRONT WALL DETAIL
S-15 SCALE: 1" = 1'-0"

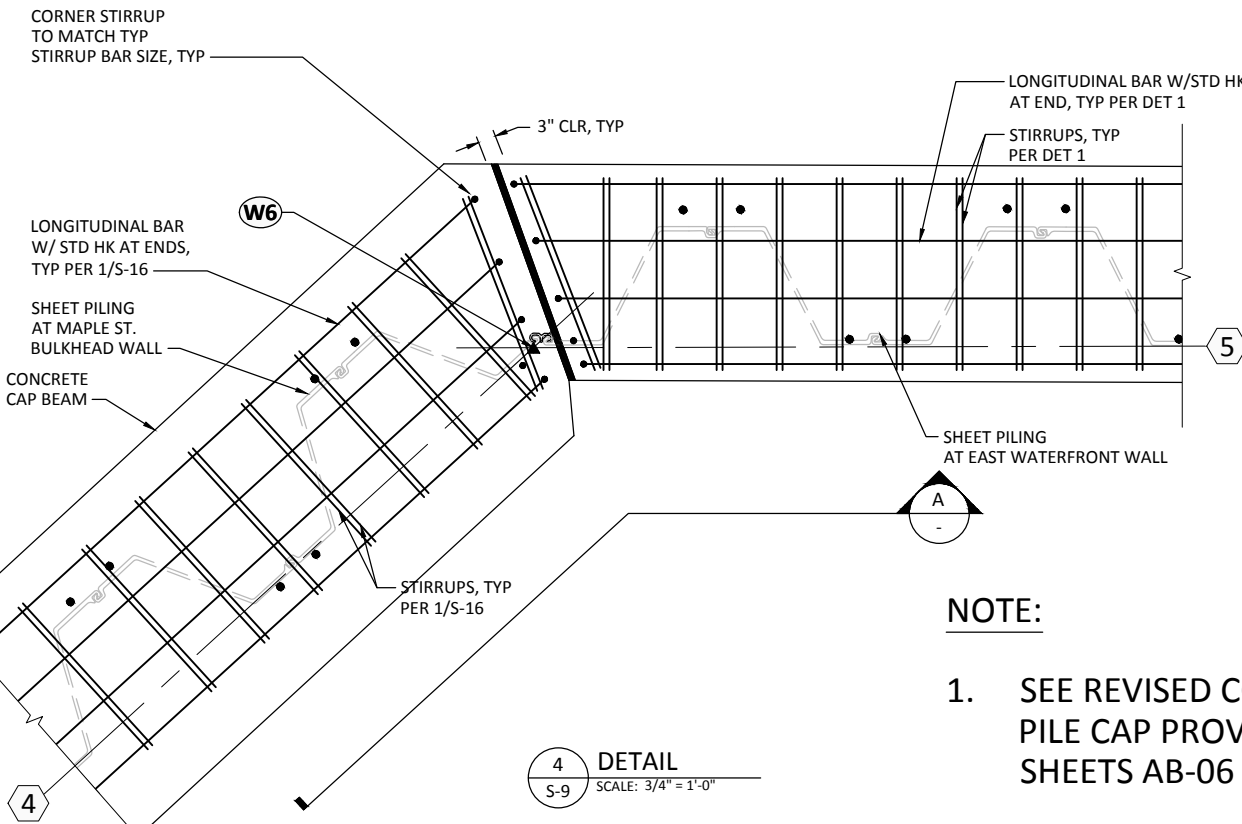


2 CAP REINFORCEMENT DETAIL
S-8 SCALE: 3/4" = 1'-0"



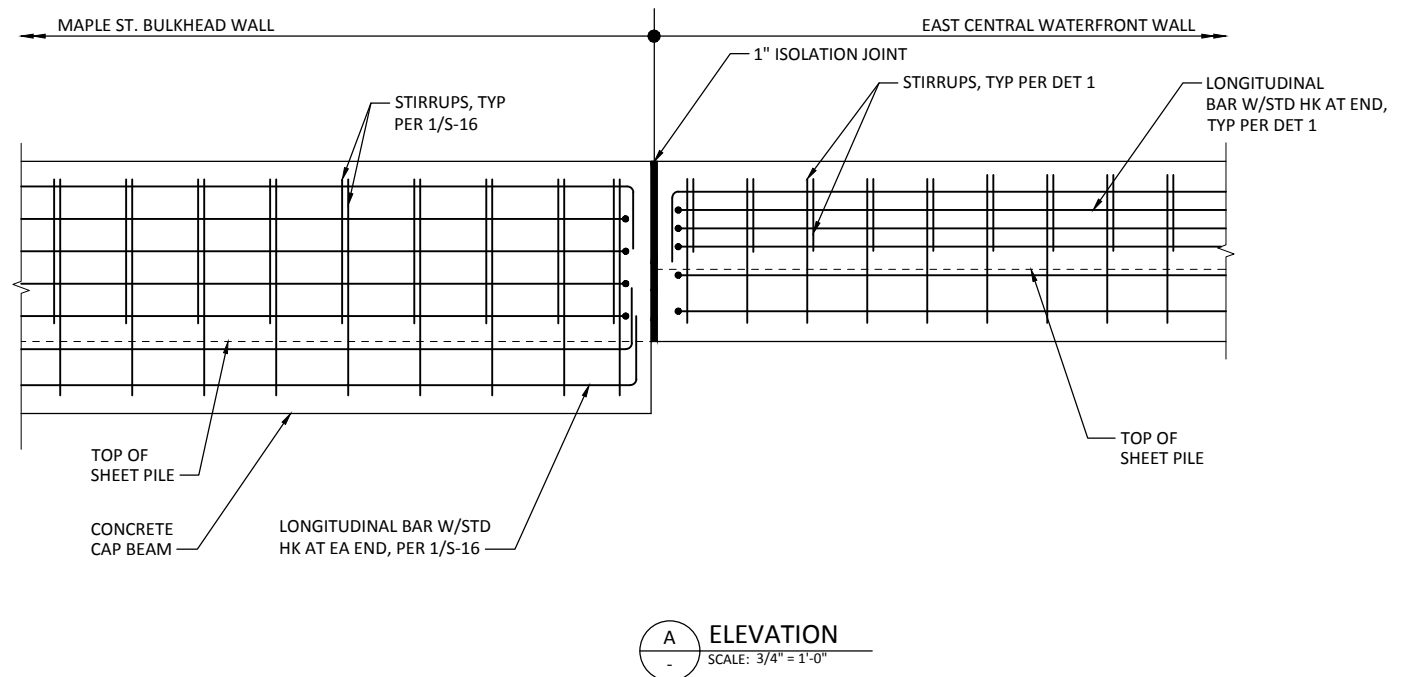
3 TYP BULLRAIL SUPPORT DETAIL
SCALE: 1-1/2" = 1'-0"

NOTE:
1. BULL RAIL SHALL BE DIELECTRICALLY ISOLATED FROM CONCRETE REINFORCEMENT.



4 DETAIL
S-9 SCALE: 3/4" = 1'-0"

NOTE:
1. SEE REVISED CONCRETE PILE CAP PROVIDED ON SHEETS AB-06



A ELEVATION
SCALE: 3/4" = 1'-0"

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ONE INCH AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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(206) 287-9130

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500

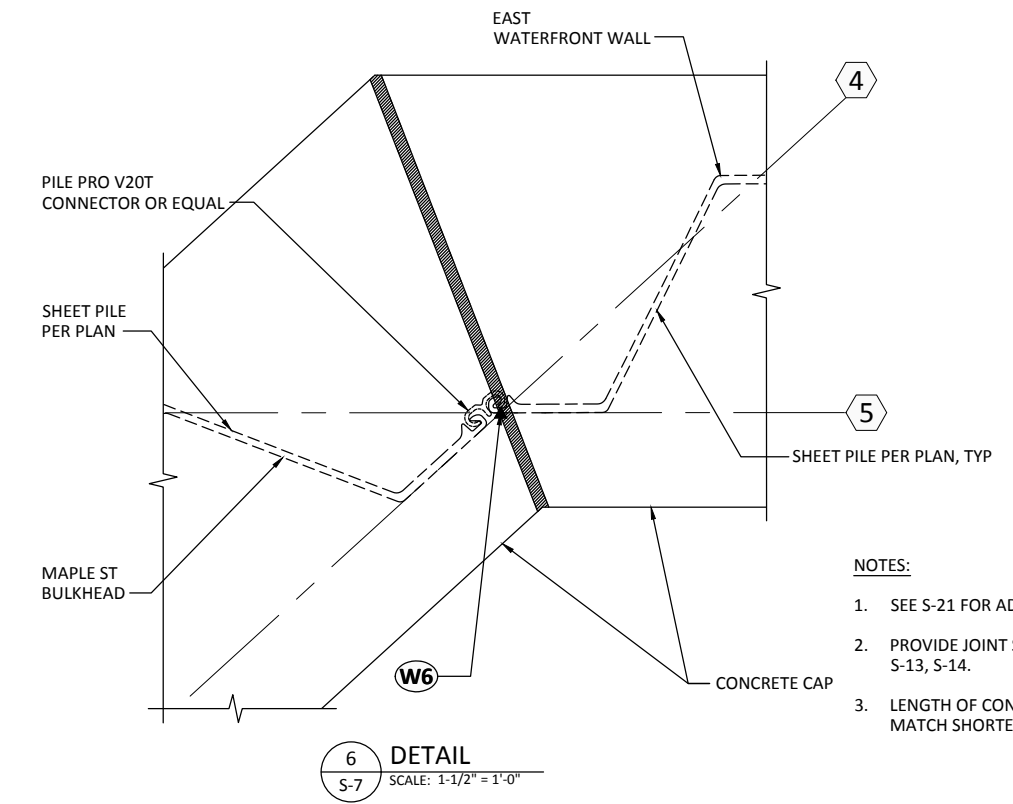
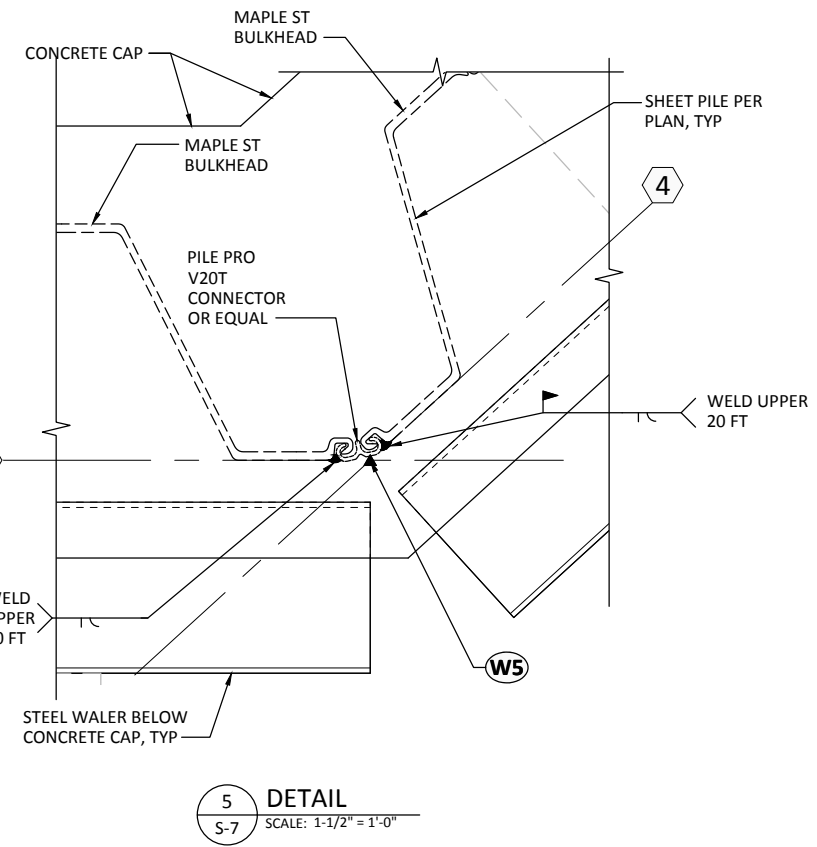
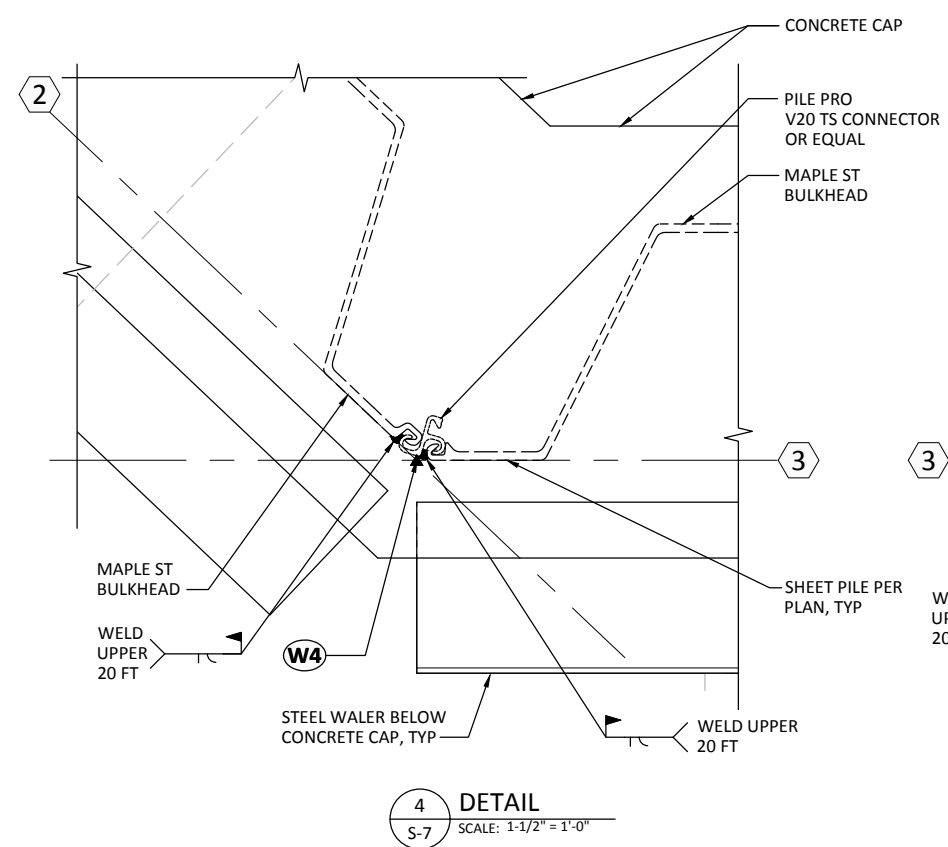
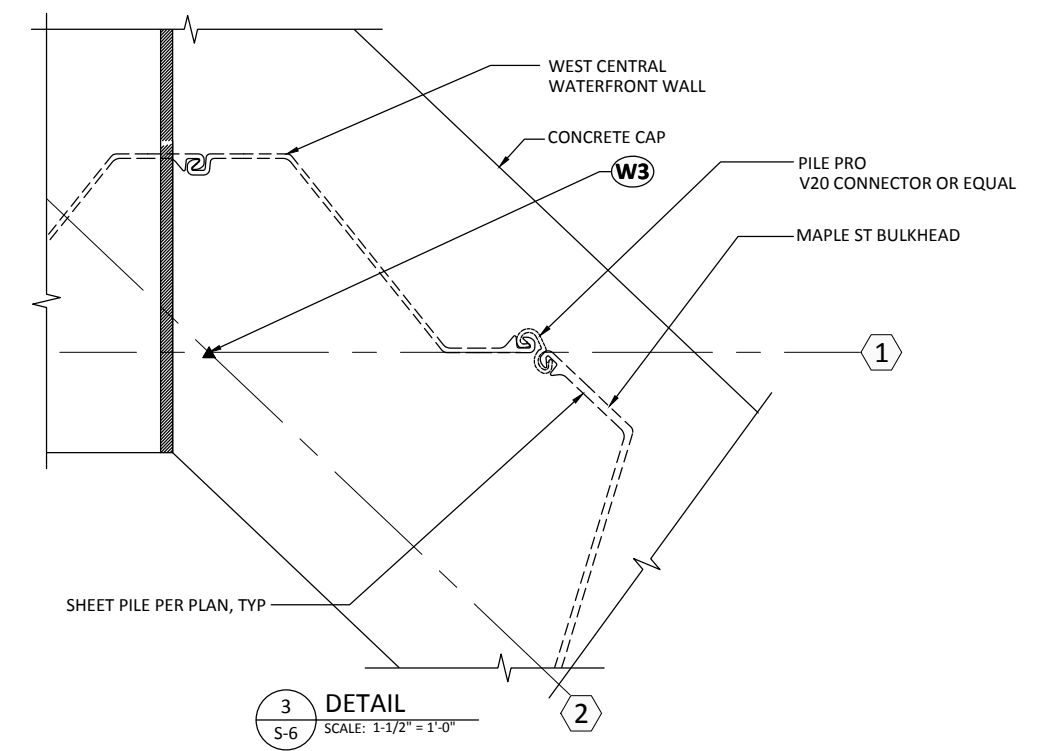
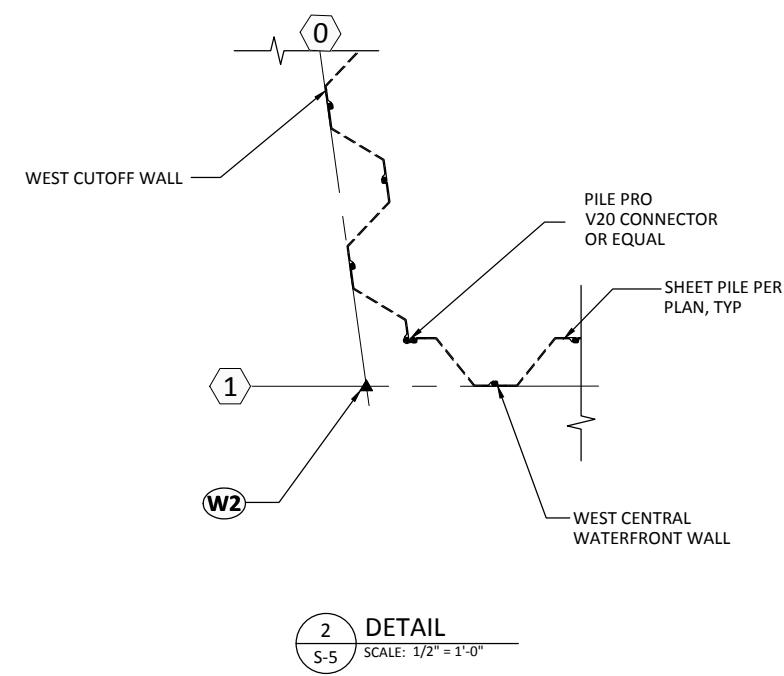
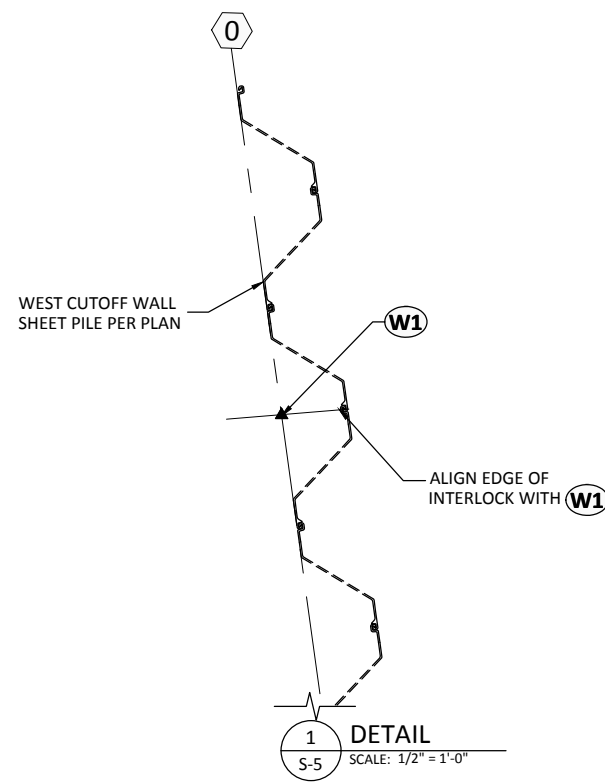
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REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: EDE
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CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON
EAST CENTRAL WATERFRONT WALL

S-19
SHEET NO. 94 OF 126

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- NOTES:
- SEE S-21 FOR ADD'L INFORMATION
 - PROVIDE JOINT SEAL PER S-1, S-12, S-13, S-14.
 - LENGTH OF CONNECTOR SHALL MATCH SHORTER SHEET LENGTH.

ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
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DESIGNED BY: EDE
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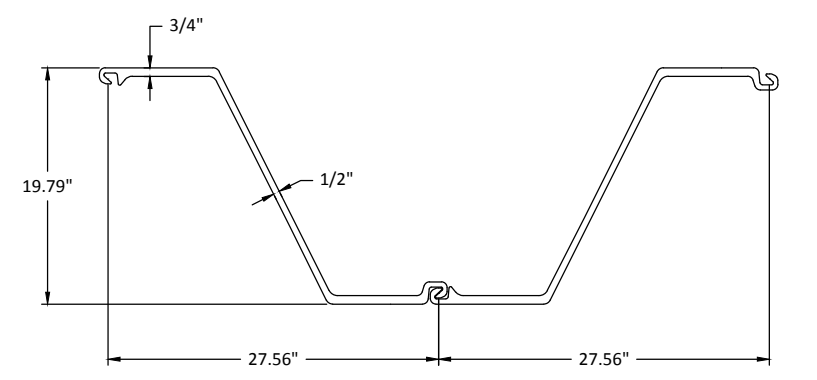
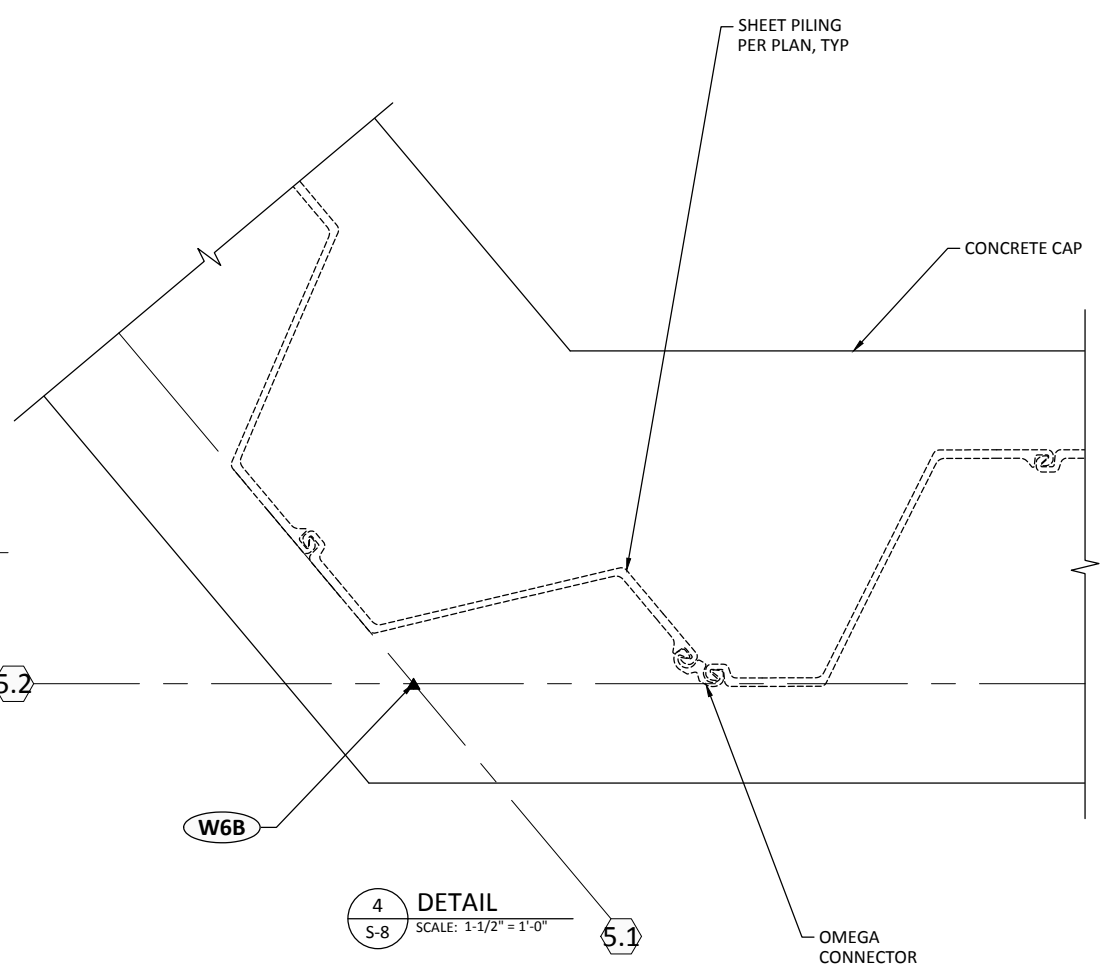
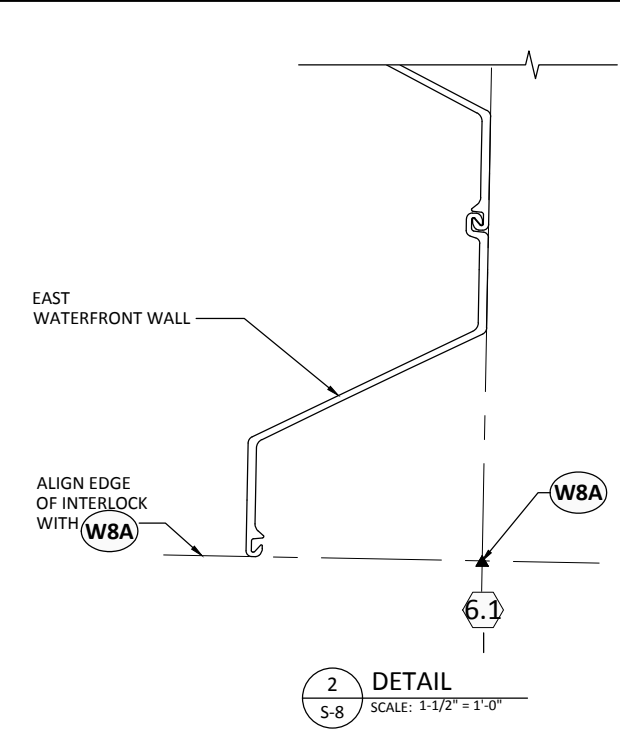
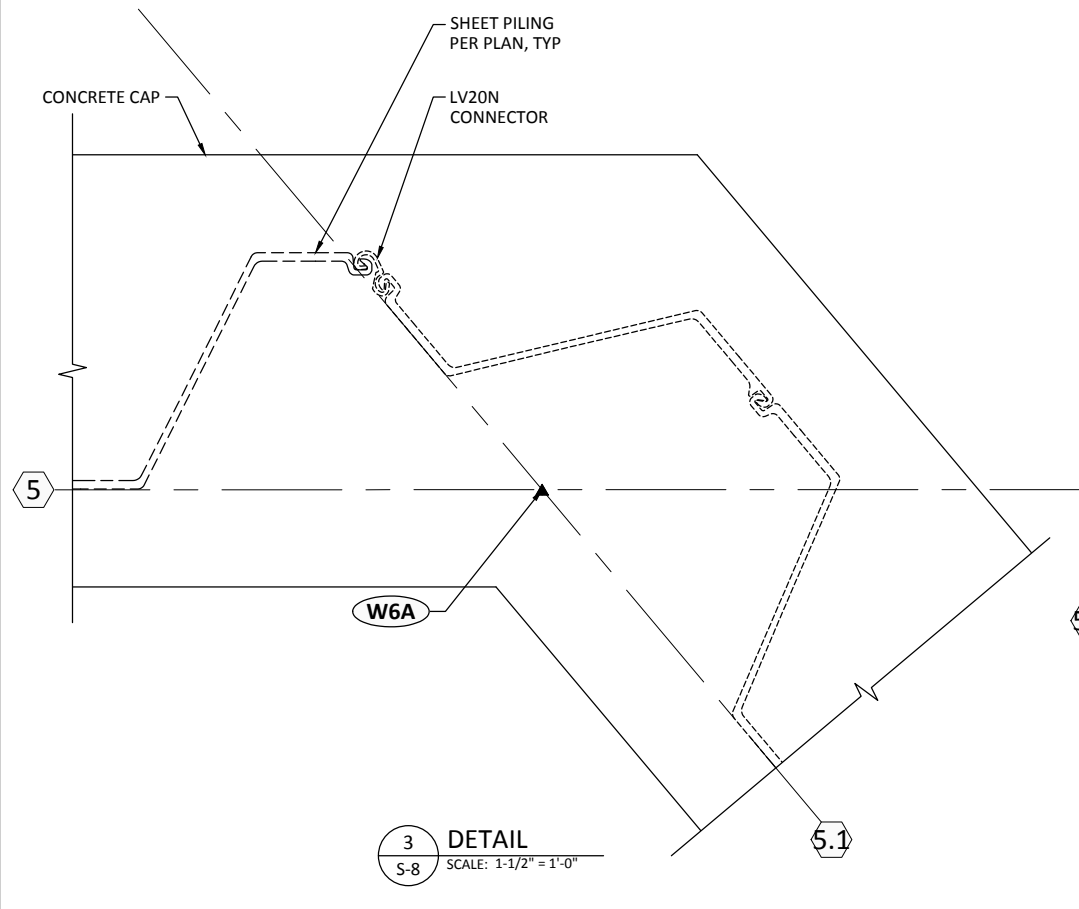
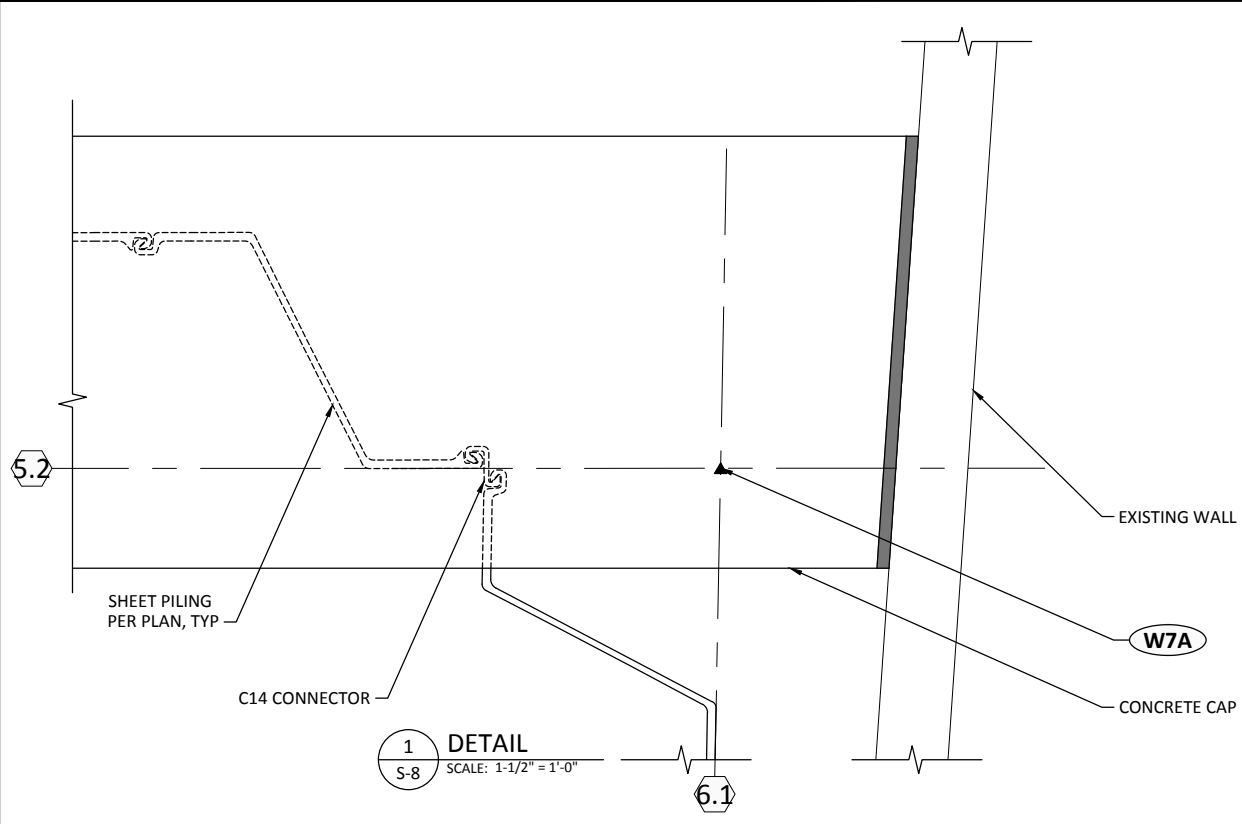
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

DETAIL SECTIONS - 1

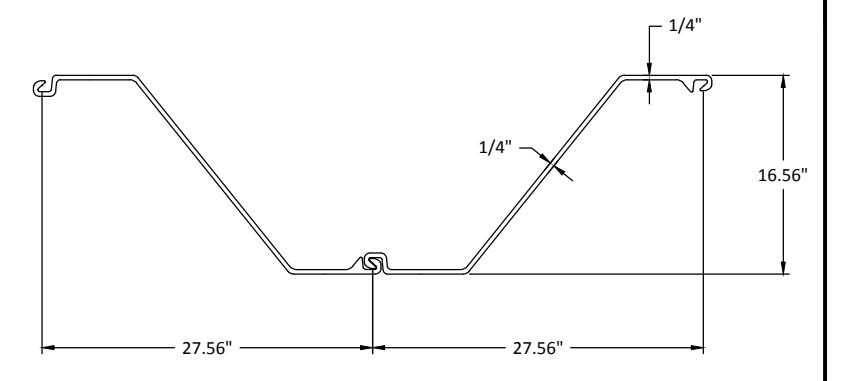
S-20

SHEET NO. 95 OF 126

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Dec 21, 2016 3:14pm griff



AZ 38-700
SCALE: 1-1/2" = 1'-0"



AZ 19-700
SCALE: 1-1/2" = 1'-0"

- NOTES:**
1. LENGTH OF CONNECTOR SHALL MATCH SHORTER SHEET LENGTH.
 2. SEE REVISED SHEET PILE CONNECTIONS PROVIDED ON SHEET AB-05

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

ANCHOR
QEA

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REVISIONS				
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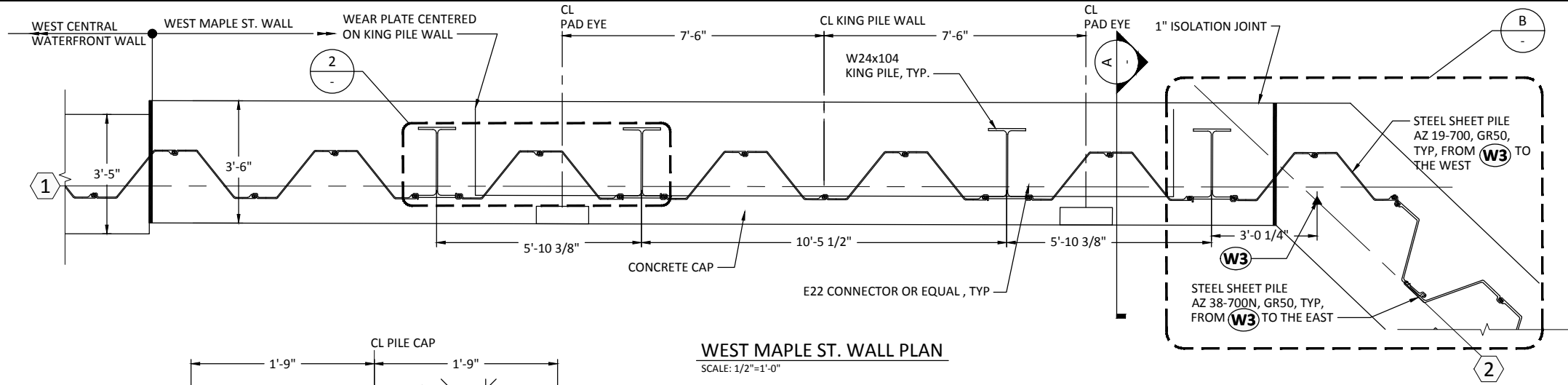
DESIGNED BY: EDE
DRAWN BY: GMC
CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

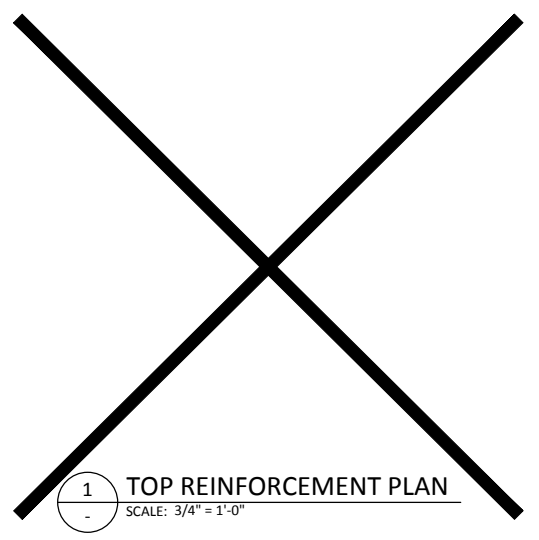
DETAIL SECTIONS - 2

S-21
SHEET NO. 96 OF 126

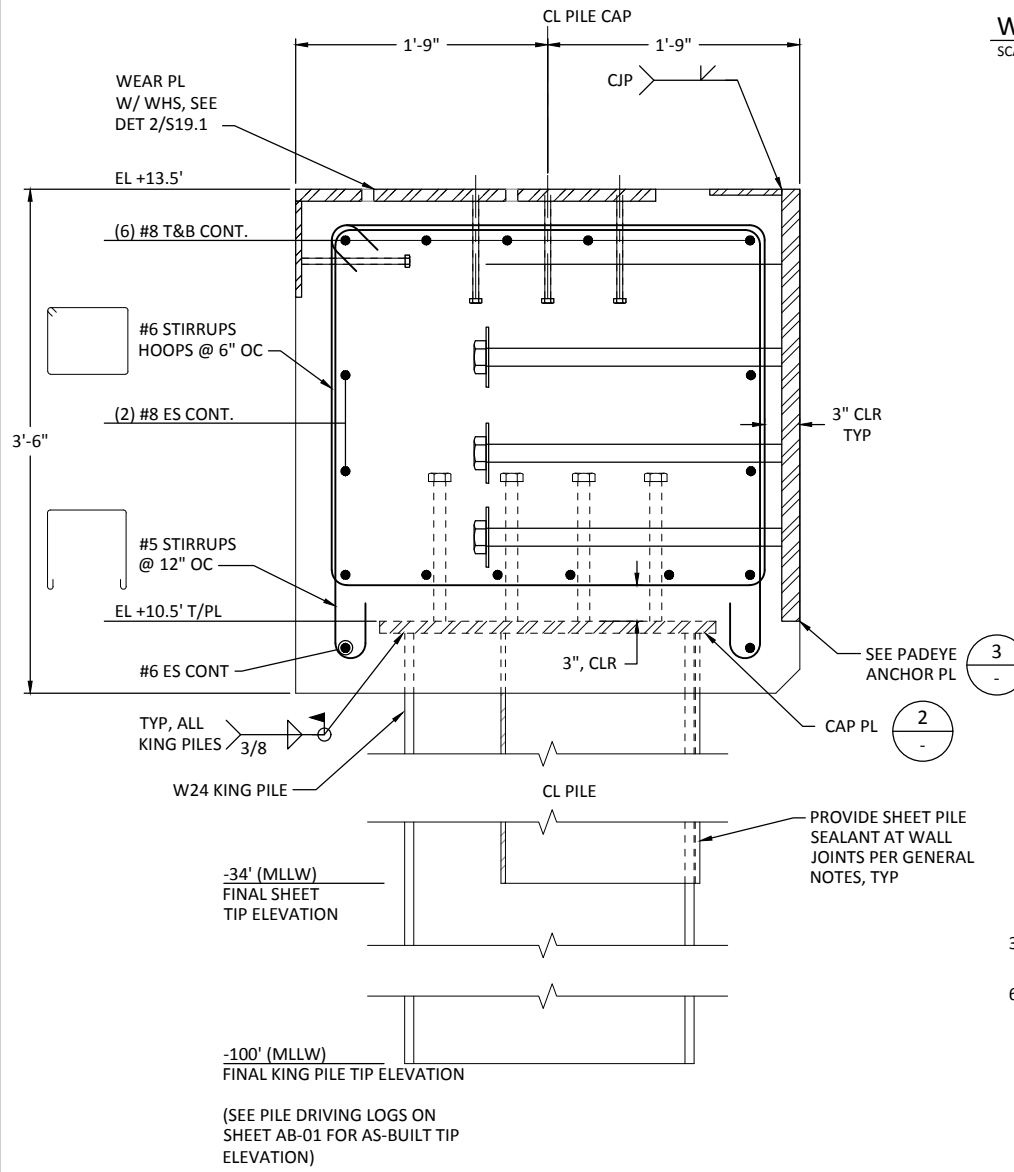
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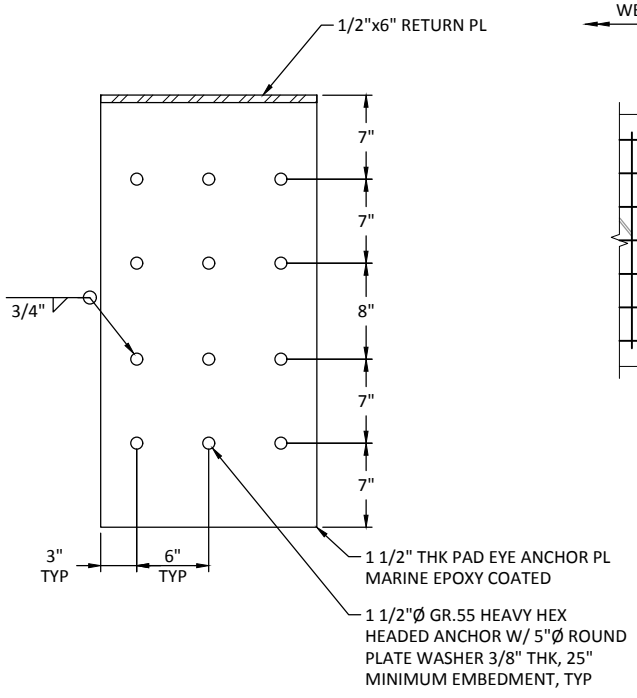
WEST MAPLE ST. WALL PLAN
SCALE: 1/2"=1'-0"



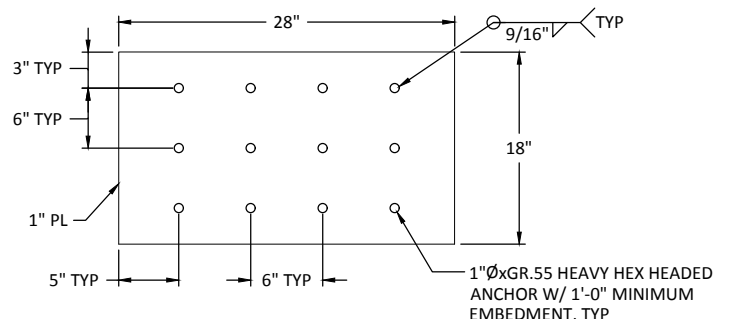
TOP REINFORCEMENT PLAN
SCALE: 3/4"=1'-0"



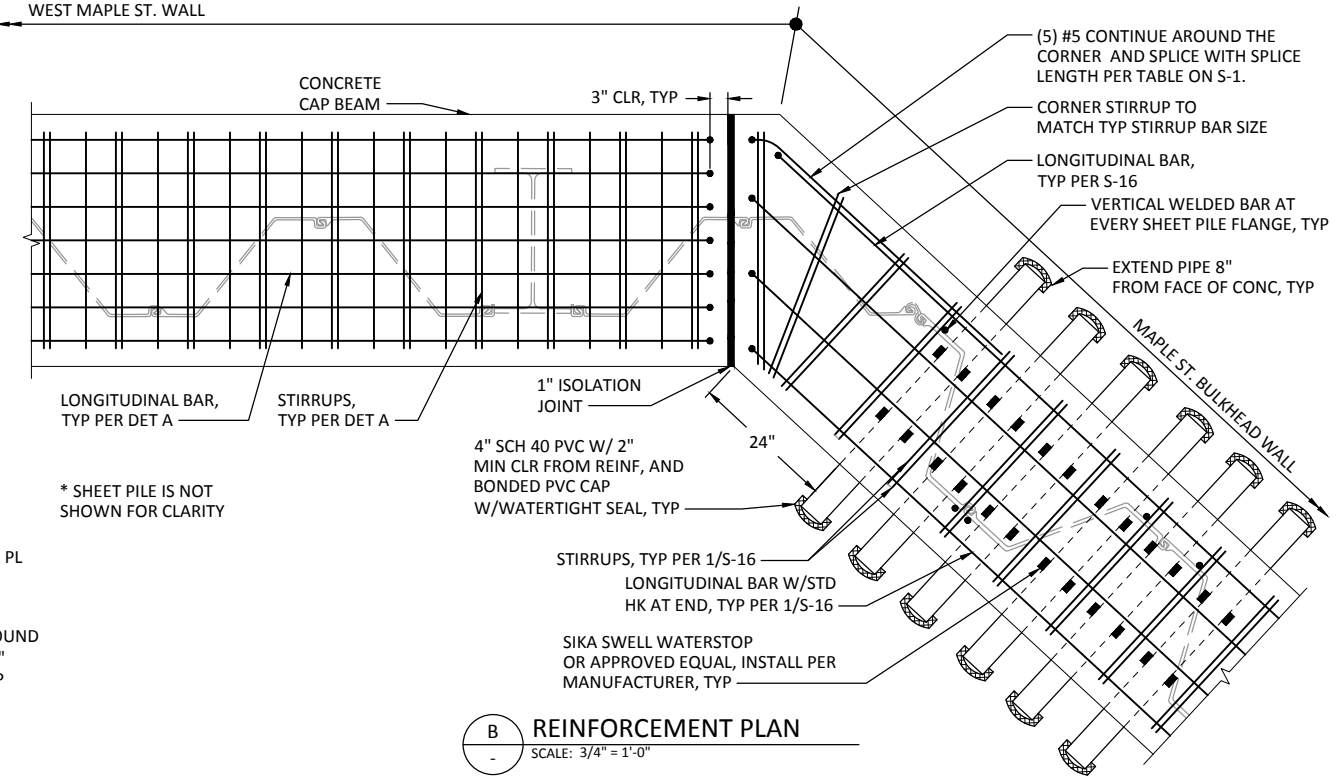
WEST MAPLE ST. WALL SECTION
SCALE: 1-1/2"=1'-0"



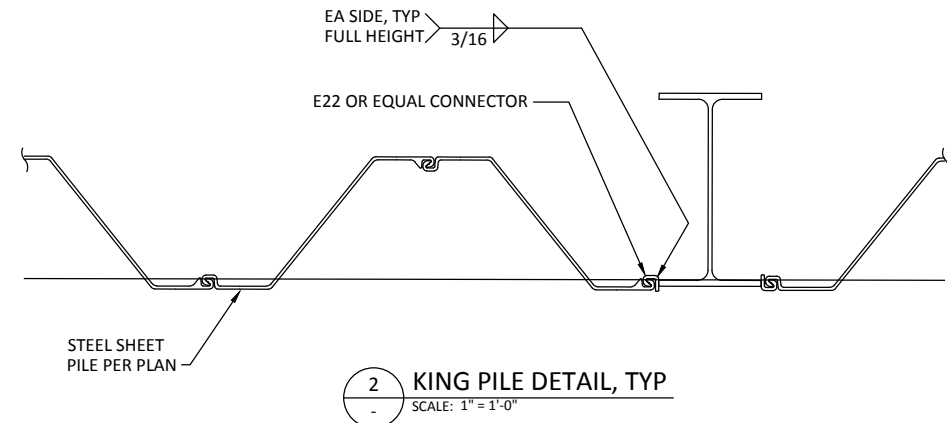
PAD EYE ANCHOR PLATE DETAIL
SCALE: 1 1/2"=1'-0"



CAP DETAIL AT EA KING PILE, (4) LOCATIONS
SCALE: 1 1/2"=1'-0"



REINFORCEMENT PLAN
SCALE: 3/4"=1'-0"



KING PILE DETAIL, TYP
SCALE: 1"=1'-0"

RECORD DRAWINGS

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY

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DESIGNED BY: EDE
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 APPROVED BY: RHR

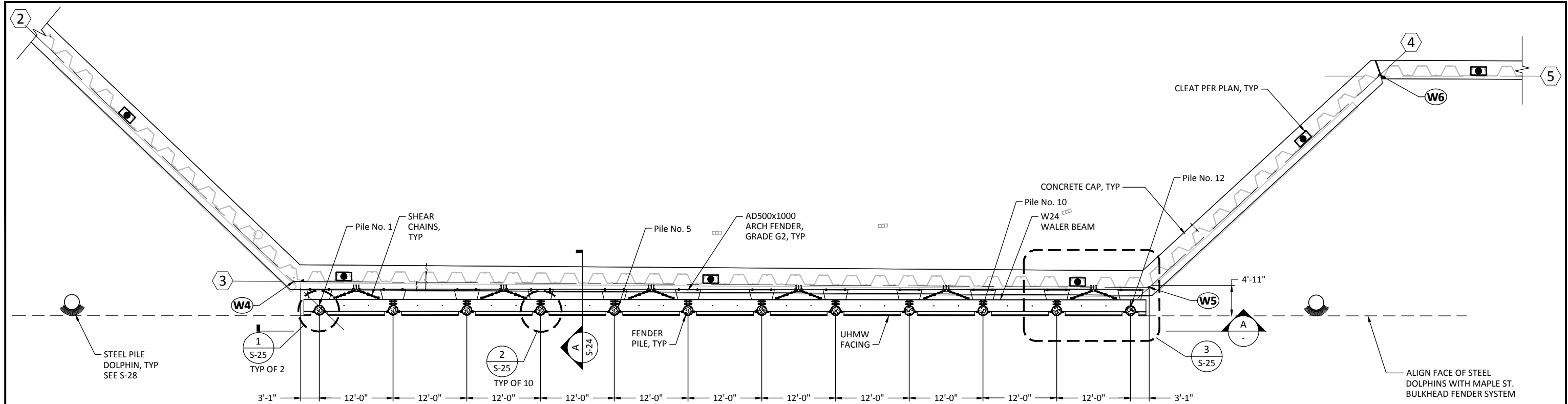
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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

WEST MAPLE ST. WALL PLAN AND SECTIONS

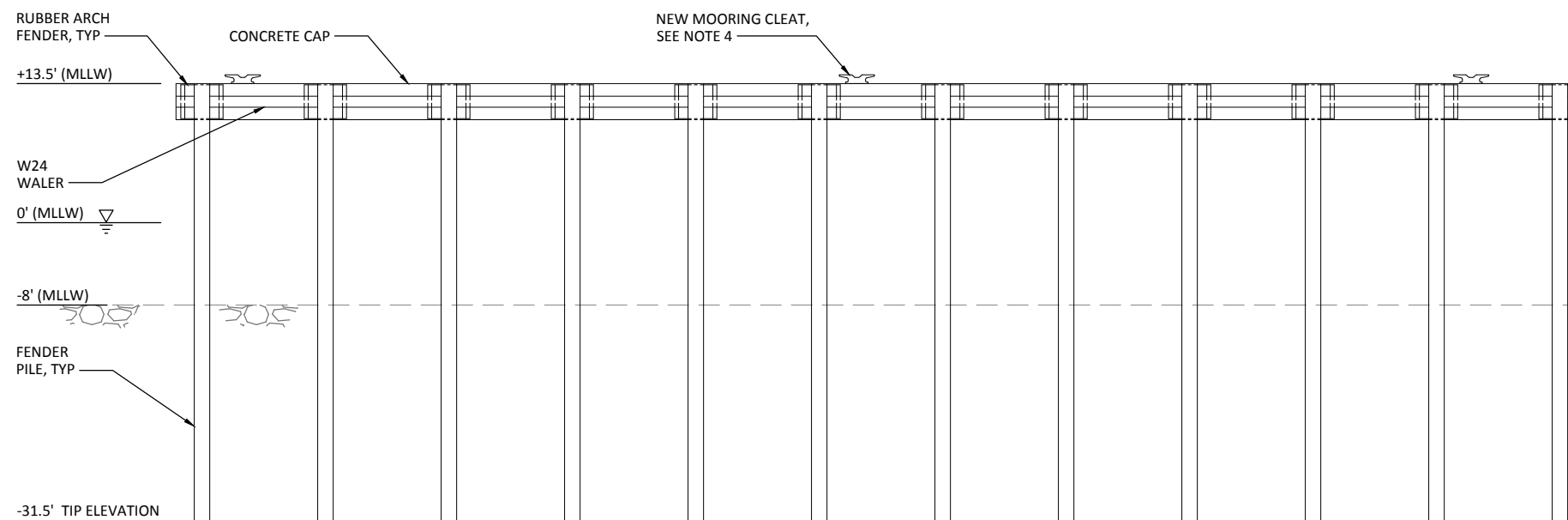
S-22

SHEET NO. 97 OF 126



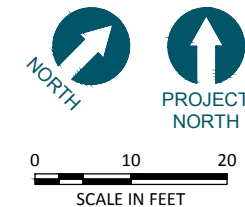
MAPLE ST. FENDER SYSTEM PLAN
SCALE: 1-1/2"=10'

FENDER PILE AS-BUILT LOG	
PILE NO.	AB TIP EL.
1	-31.5000
2	-31.5000
3	-31.5000
4	-31.5000
5	-31.5000
6	-31.5000
7	-31.5000
8	-31.5000
9	-31.5000
10	-31.5000
11	-31.5000
12	-31.5000



A ELEVATION
SCALE: 1-1/2"=10'

- NOTES:**
1. INSTALL FENDER PILES AFTER DREDGING AND CAPPING HAVE OCCURRED.
 2. ROPE GUARD NOT SHOWN FOR CLARITY. FOR DETAILS SEE S-24.
 3. TIEBACKS NOT SHOWN FOR CLARITY.
 4. FOR MOORING CLEAT LOCATIONS, SEE S-7.



RECORD DRAWINGS

K:\projects\0007-port of bellingham\whatcom waterway cleanup\inner wrf\record drawings\20161220_whatcom_asbuilt\wrf\X_22x34-TB.dwg, Model Dec-21, 2016 3:14pm igl@p



REVISIONS				
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DESIGNED BY: EDE
 DRAWN BY: GMC
 CHECKED BY: TAH
 APPROVED BY: RHR
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

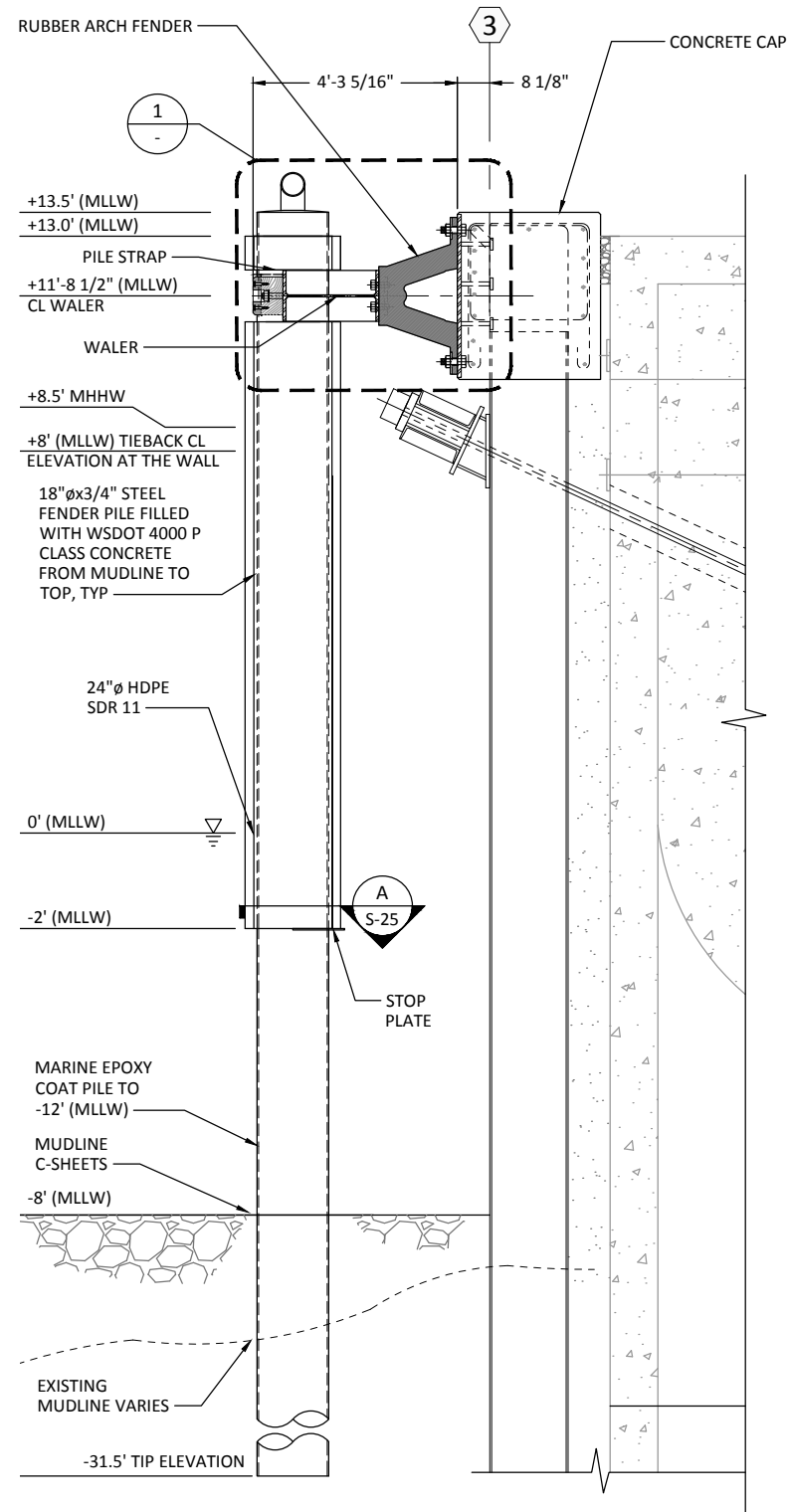
MAPLE ST. FENDER SYSTEM PLAN AND ELEVATION

S-23

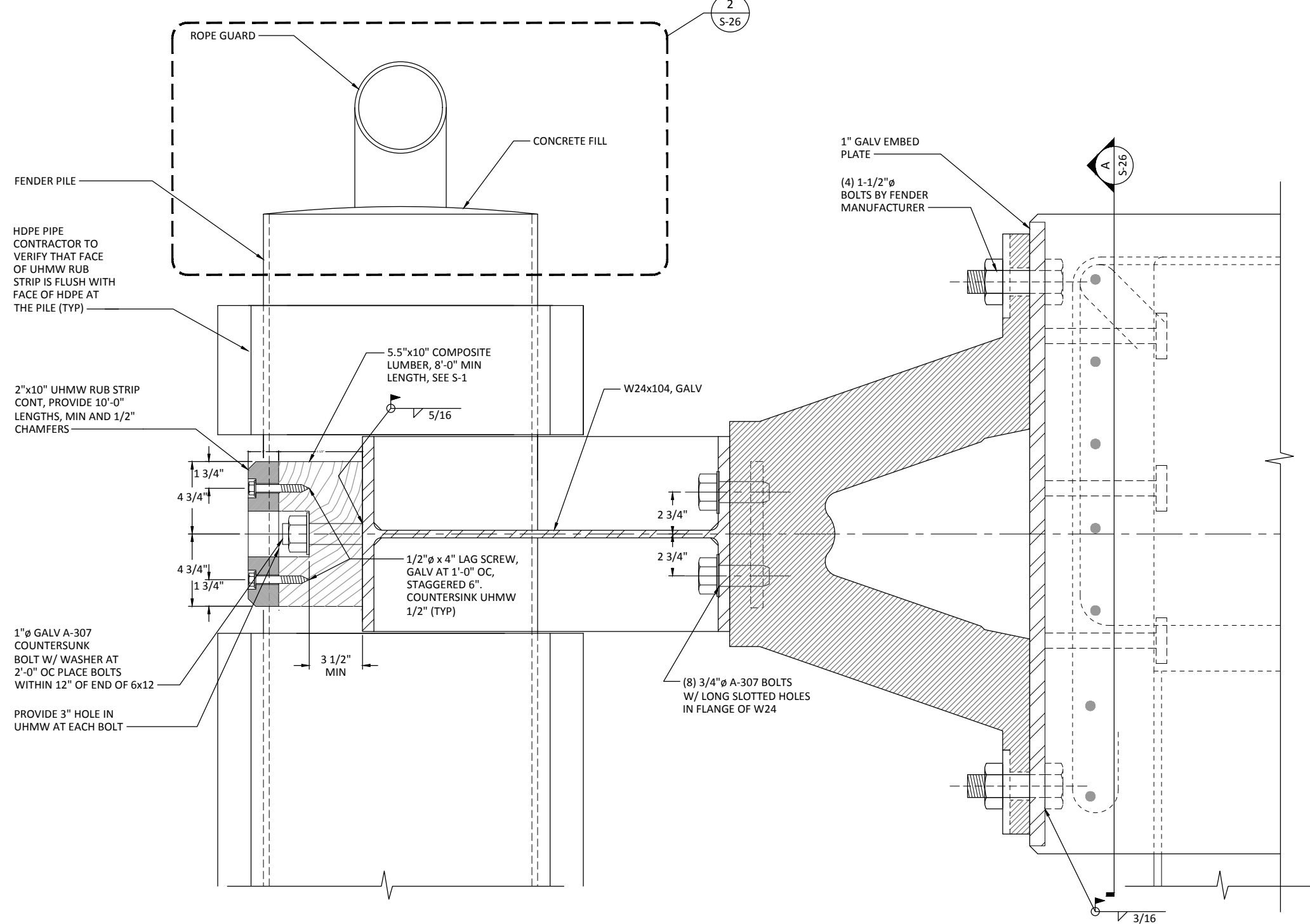
SHEET NO. 98 OF 126

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

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Dec 21, 2016 3:10pm, griff



A
S-23 FENDER PILE TRANSVERSE SECTION
SCALE: 1/4" = 1'-0"



1
WALER DETAIL
SCALE: 3" = 1'-0"

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: EDE
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 CHECKED BY: TAH
 APPROVED BY: RHR
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
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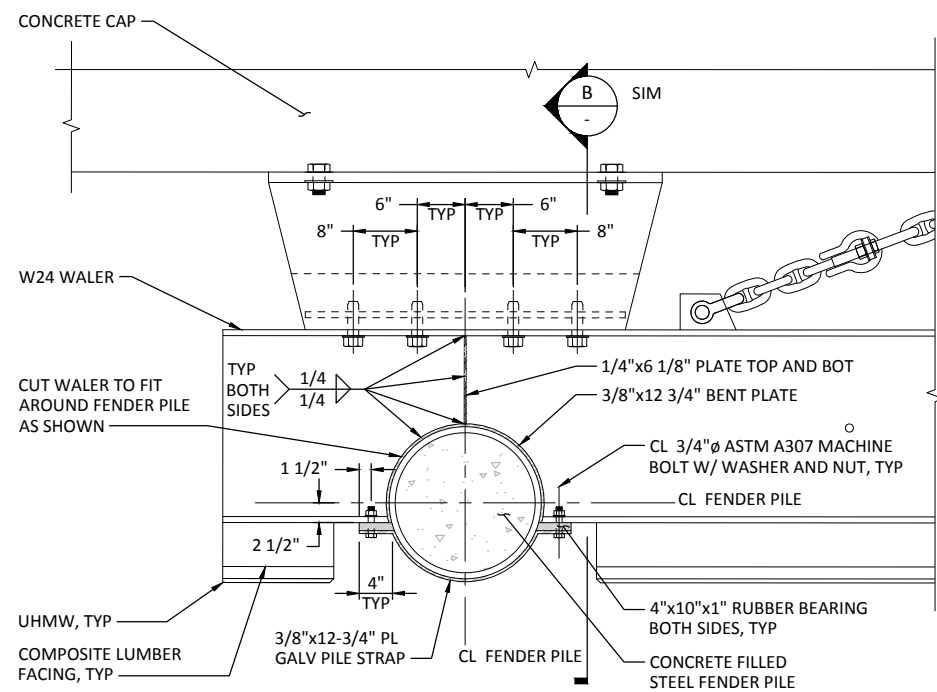
MAPLE ST. FENDER SYSTEM SECTION

S-24

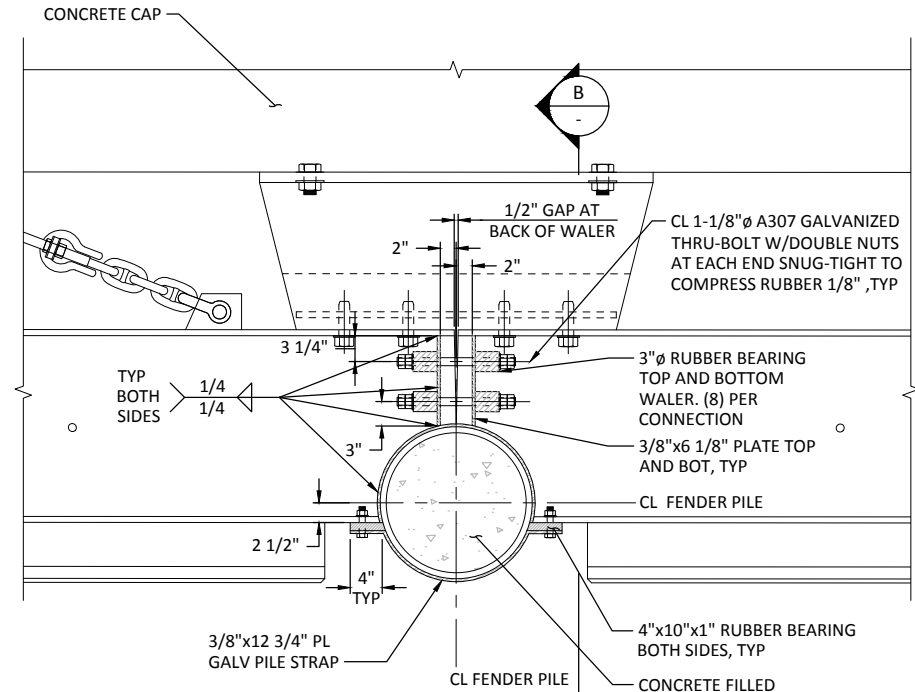
SHEET NO. 99 OF 126

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY

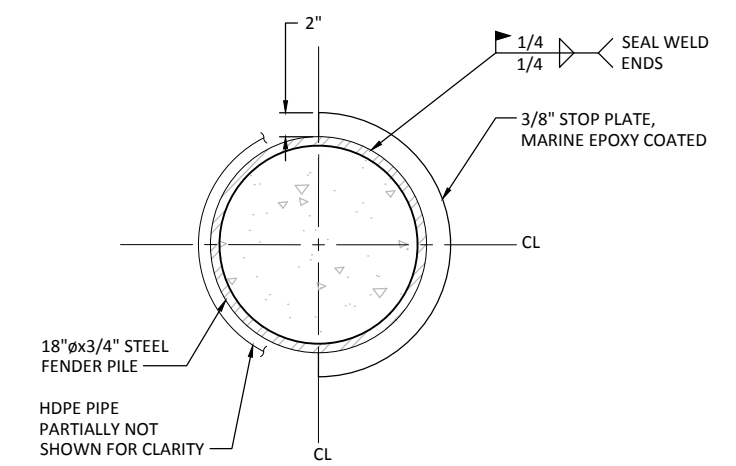
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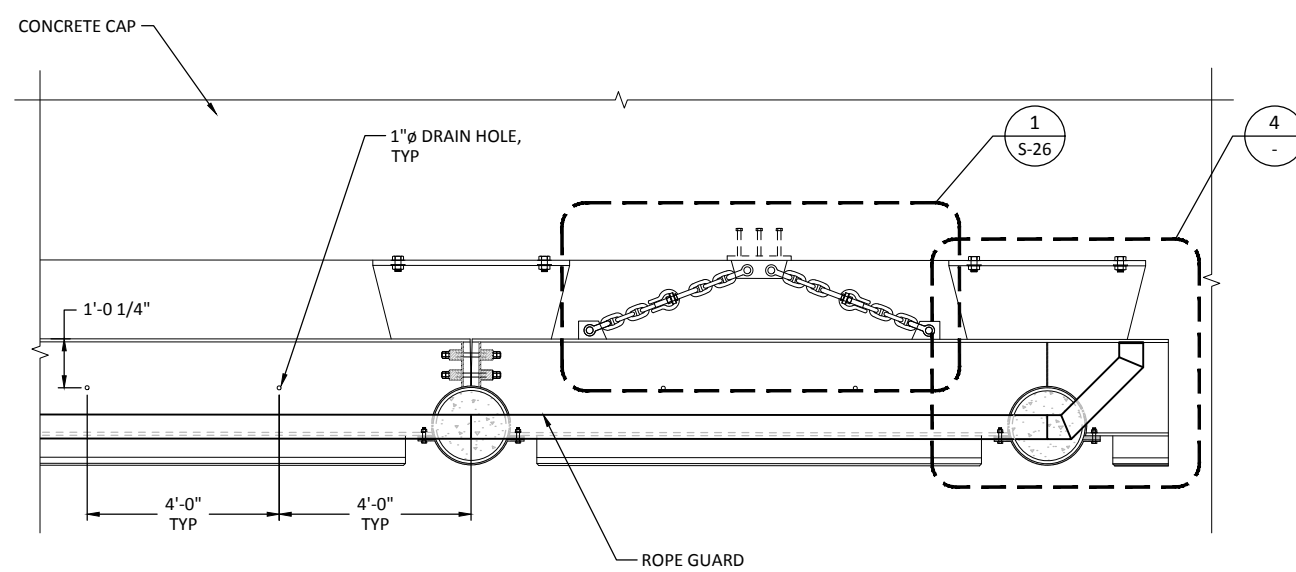
1 FENDER PILE DETAIL
S-23 SCALE: 1" = 1'-0"
TYP OF 2



2 FENDER PILE DETAIL
S-23 SCALE: 1" = 1'-0"
TYP OF 10

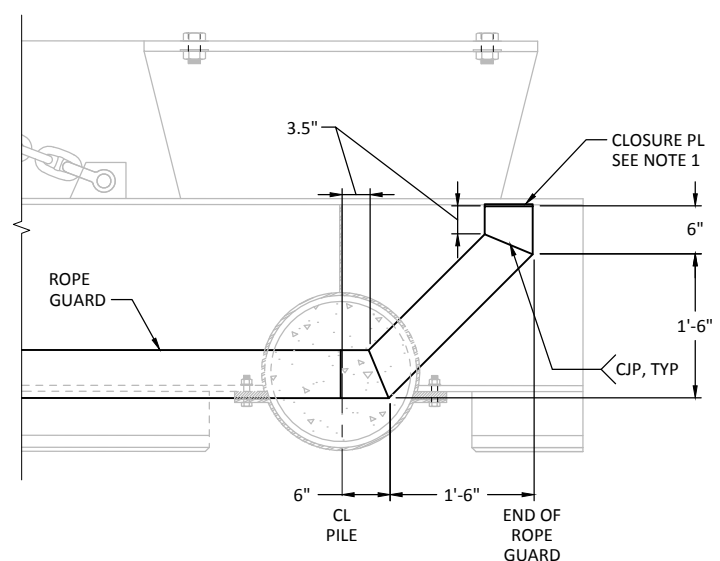


A STOP PLATE SECTION
S-24 SCALE: 1-1/2" = 1'-0"

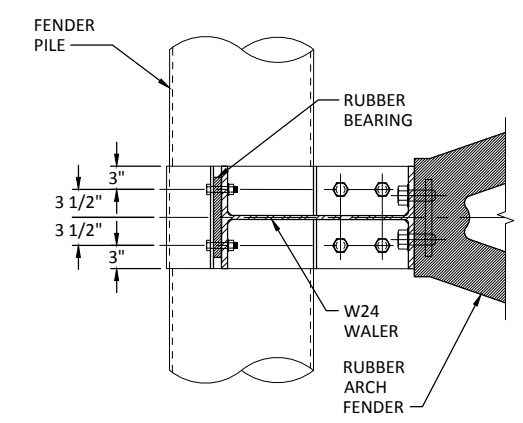


3 DETAIL
S-23 SCALE: 1/2" = 1'-0"

NOTE:
1. WELD 1/4" THICK CLOSURE PLATE AT THE END OF ROPE GUARDS.



4 DETAIL
SCALE: 1" = 1'-0"



NOTE:
1. UHMW AND COMPOSITE LUMBER FACING NOT SHOWN FOR CLARITY.

B SECTION
SCALE: 1" = 1'-0"

RECORD DRAWINGS



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: EDE
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CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

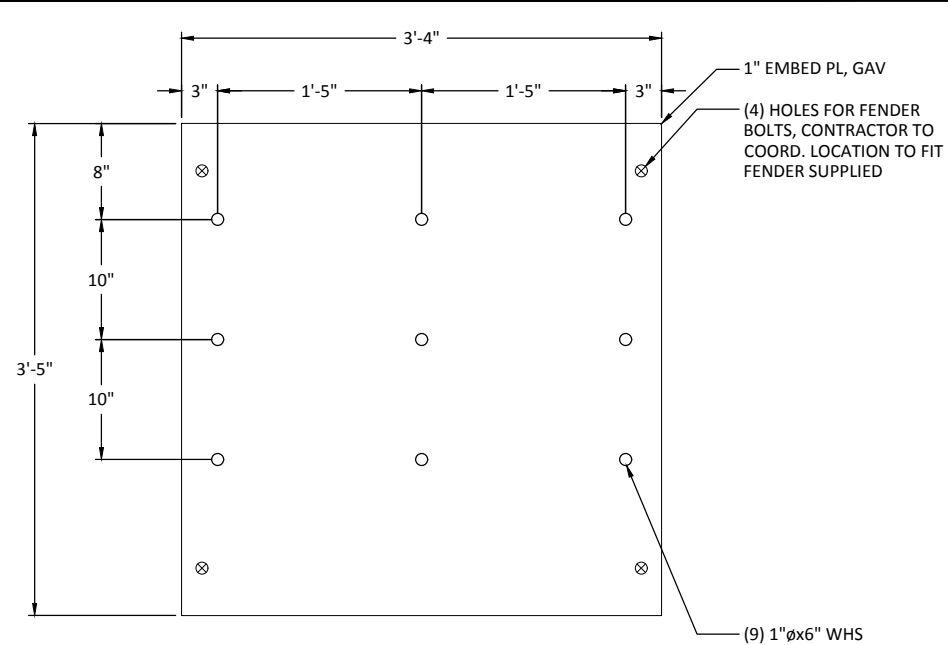
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

MAPLE ST. FENDER SYSTEM - DETAILS 1

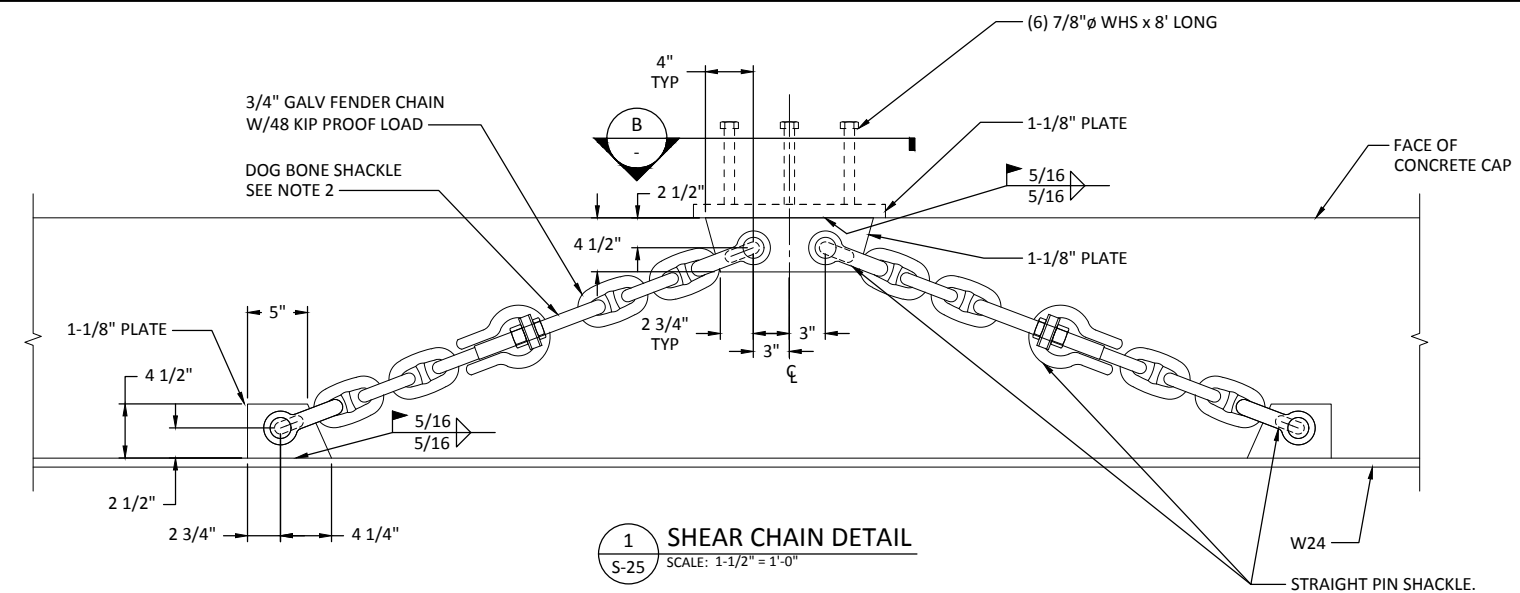
S-25

SHEET NO. 100 OF 126

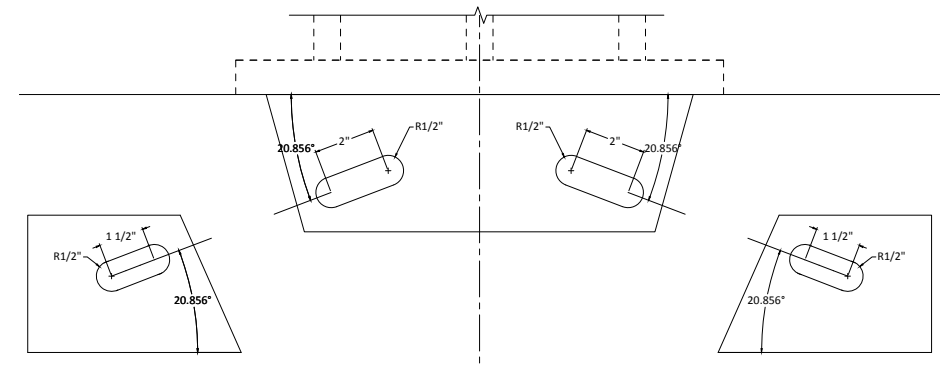
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



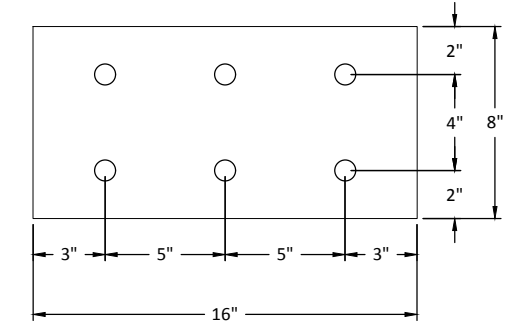
A SECTION
S-24 SCALE: 1-1/2" = 1'-0"



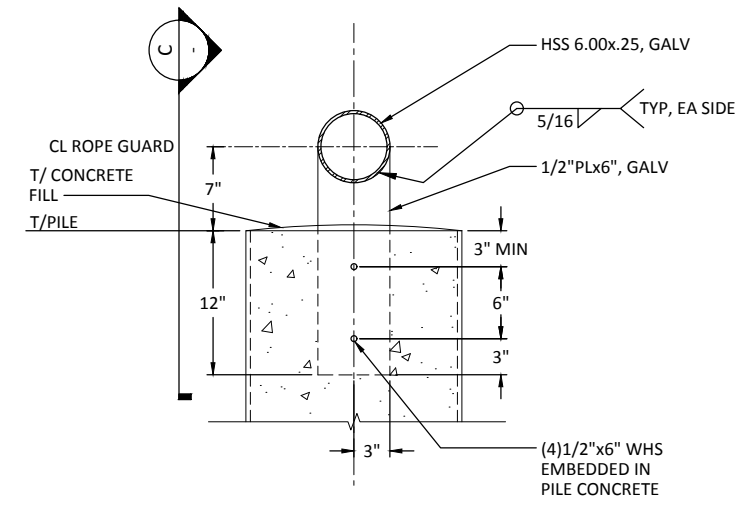
1 SHEAR CHAIN DETAIL
S-25 SCALE: 1-1/2" = 1'-0"



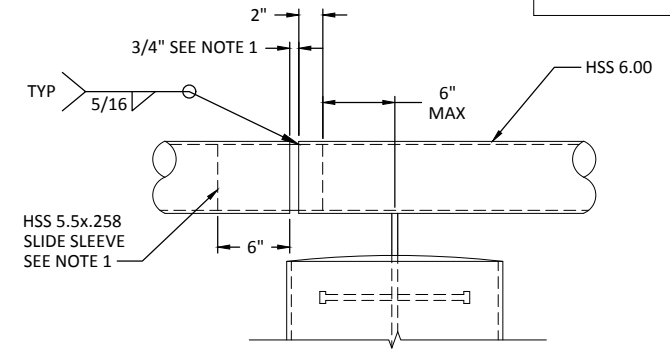
3 SHEAR CHAIN PADEYE DETAIL
S-25 SCALE: 1-1/2" = 1'-0"



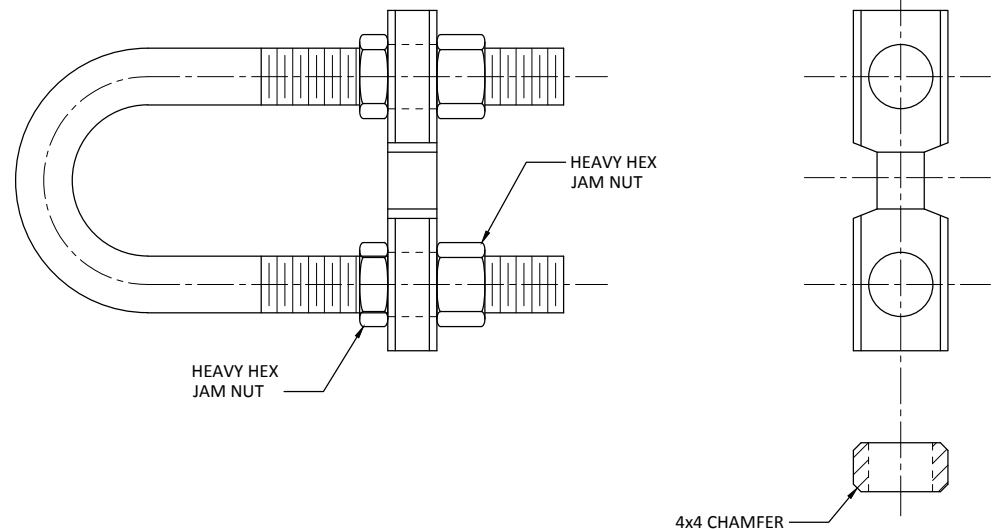
B SECTION
SCALE: 3" = 1'-0"



2 DETAIL
S-24 SCALE: 1-1/2" = 1'-0"



C ROPE GUARD SPLICE CONNECTION
SCALE: 1-1/2" = 1'-0"



DOG BONE SHACKLE DETAIL
SCALE: 6" = 1'-0"

- NOTES:**
- GRIND THE ENDS OF SLIDE SLEEVE AND ROPE GUARD END ROUND ($r=3/16"$). ENSURE CORRECT FIT WHEN FABRICATING AND AGAIN, WHEN INSTALLING. GREASE SLIDE SLEEVE ONLY ON LONG END BEFORE FINAL INSTALL.
 - MARITIME INTERNATIONAL DOG BONE SHACKLE SHOWN SCHEMATICALLY. CONTRACTOR TO PROVIDE THIS PRODUCT OR EQUIVALENT. BREAK STRENGTH TO EQUAL OR EXCEED THE BREAK STRENGTH OF THE CHAIN.

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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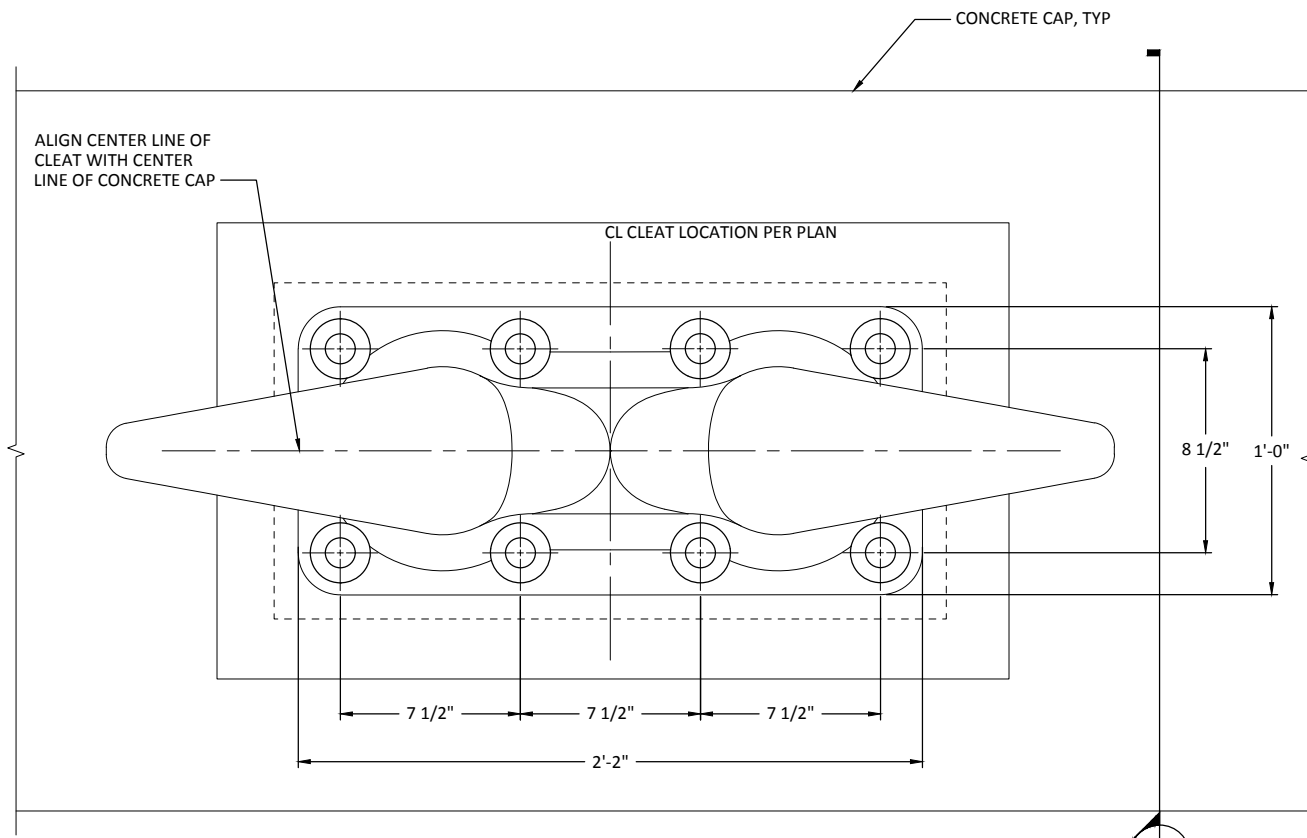
DESIGNED BY: EDE
DRAWN BY: GMC
CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MAY 2013

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

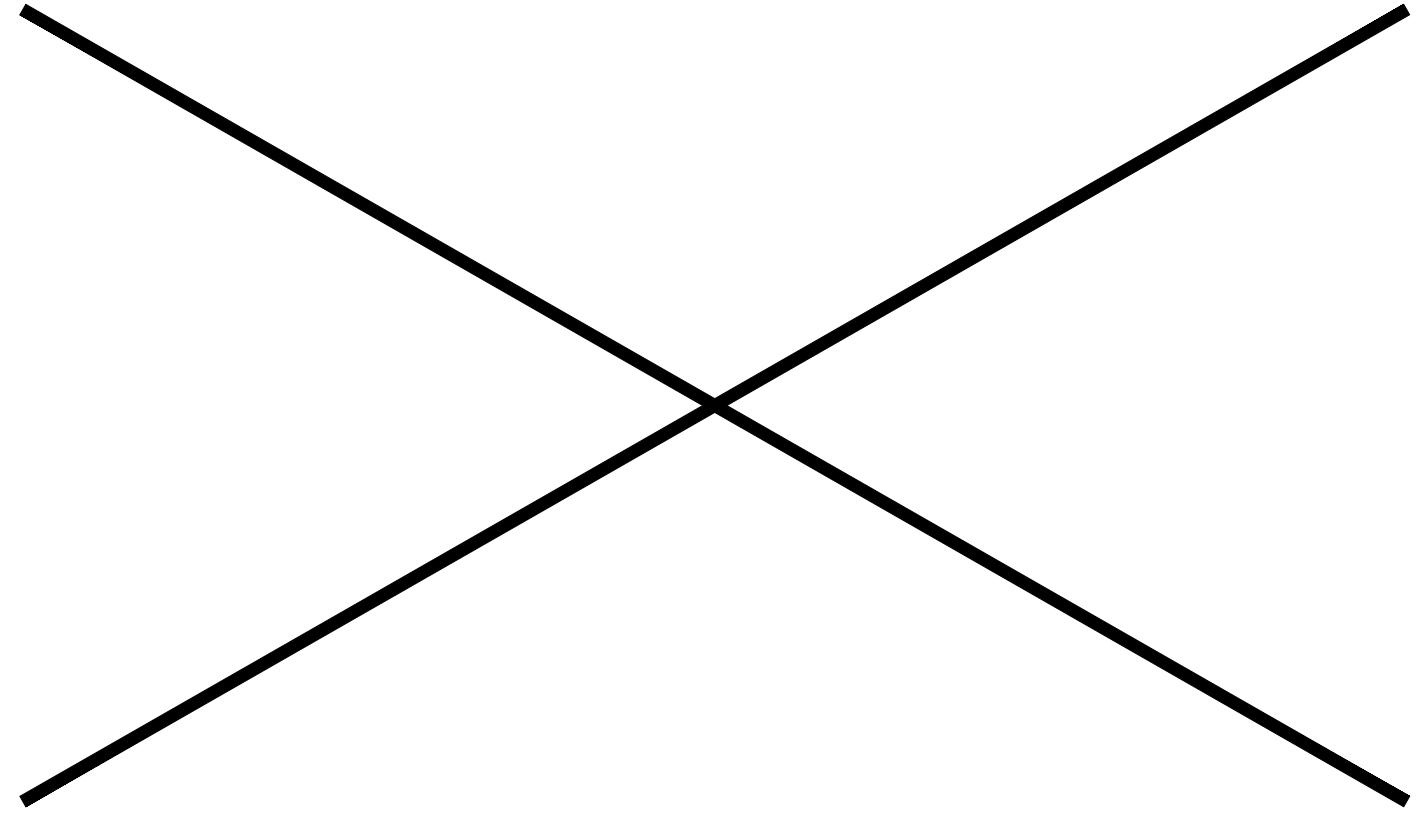
MAPLE ST. FENDER SYSTEM - DETAILS 2

S-26
SHEET NO. 101 OF 126

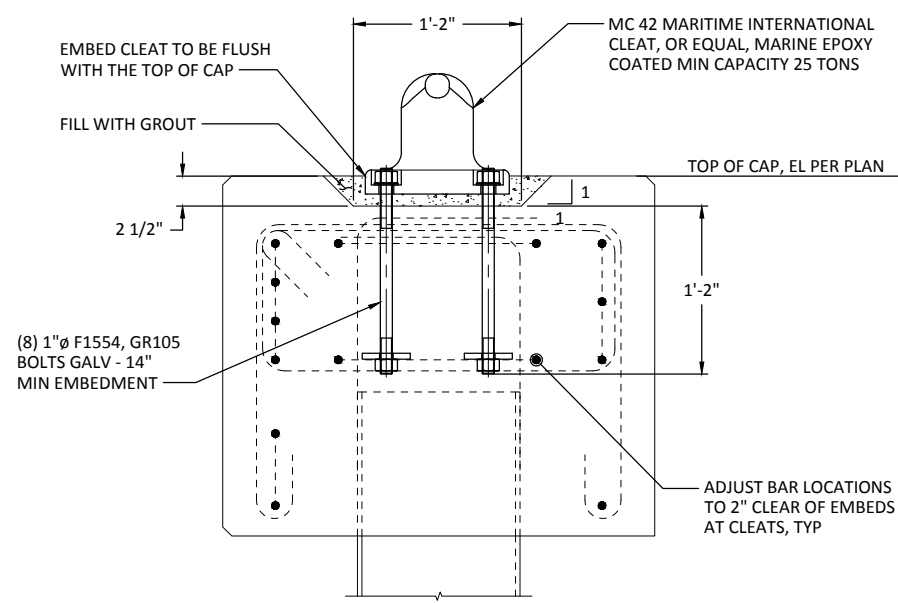
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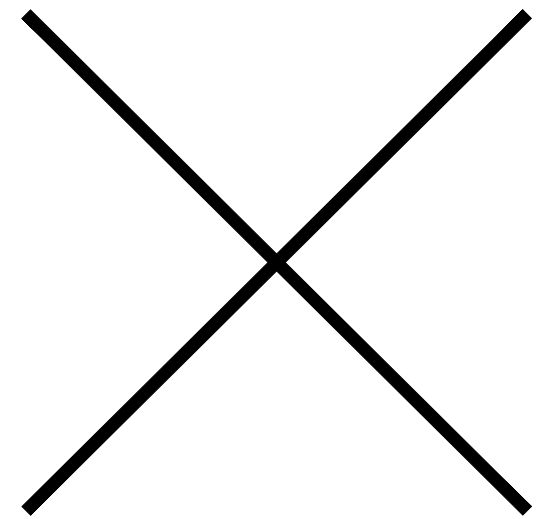
1 CLEAT - PLAN
S-5 SCALE: 3" = 1'-0"



2 FUTURE CLEAT PLAN
S-5 SCALE: 3" = 1'-0"



A NEW CLEAT SECTION
SCALE: 1-1/2" = 1'-0"



B FUTURE CLEAT SECTION
SCALE: 1-1/2" = 1'-0"

NOTES:
1. FOR CLEAT LOCATIONS SEE DRAWINGS S-6, S-7 AND S-8.

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

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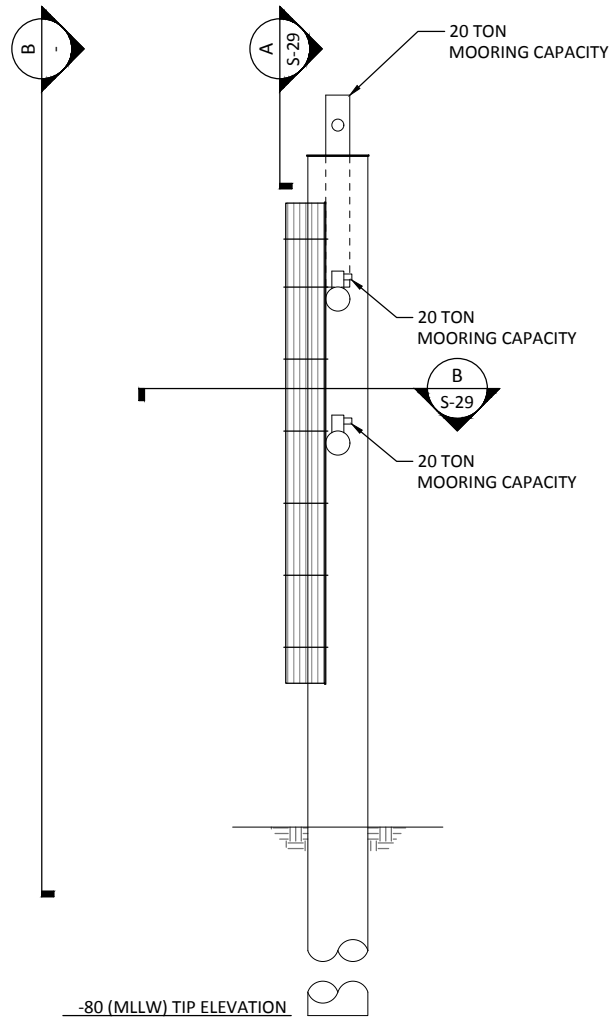
DESIGNED BY: EDE
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APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

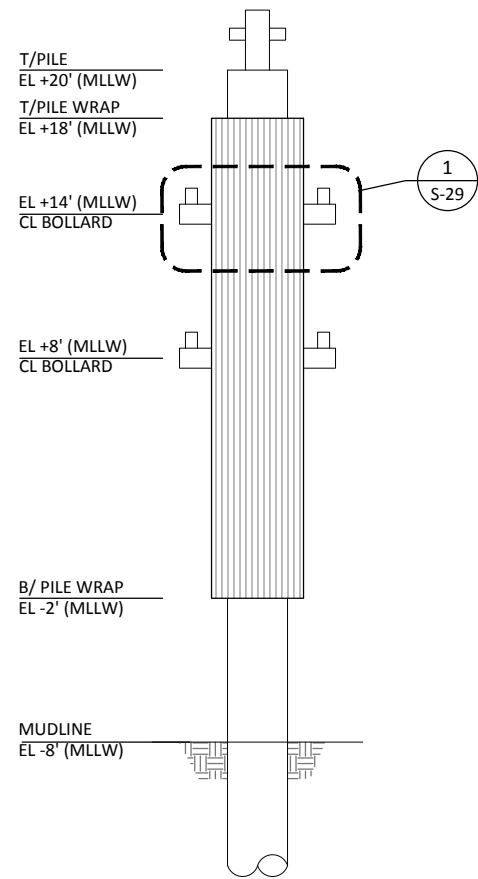
MOORING CLEAT DETAILS

S-27
SHEET NO. 102 of 126

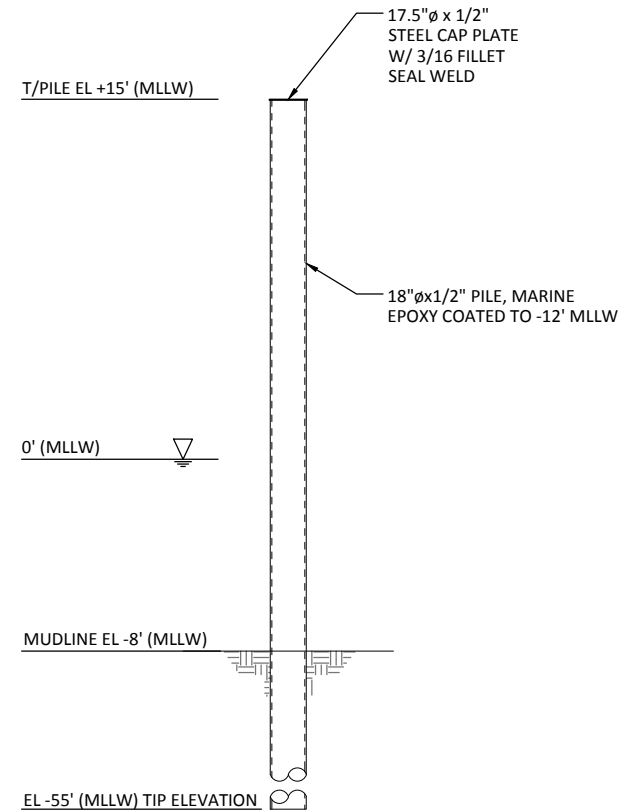
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Dec 21, 2016 3:14pm gfrige



A
S-5
MONOPILE DOLPHIN - ELEVATION 1
SCALE: 1/4" = 1'-0"



B
-
MONOPILE DOLPHIN - ELEVATION 2
SCALE: 1/4" = 1'-0"



C
S-8
STEEL MOORING PILES - ELEVATION
SCALE: 1/4" = 1'-0"

DOLPHIN PILE AS-BUILT EL.		
PILE NO.	TIP EL.	TOP EL.
1	-79.4800	20.5200
2	-79.4800	20.5200
3	-79.5600	20.4400
4	-79.5000	20.5000
5	-79.4200	20.5800
6	-79.5800	20.4200
7	-79.5100	20.4900
8	-79.4600	20.5400
9	-79.4000	20.6000
10	-79.4200	20.5800
11	-80	20
12	-80.0700	19.9300
13	-80.3000	16

RECORD DRAWINGS



REVISIONS				
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DESIGNED BY: EDE
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CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

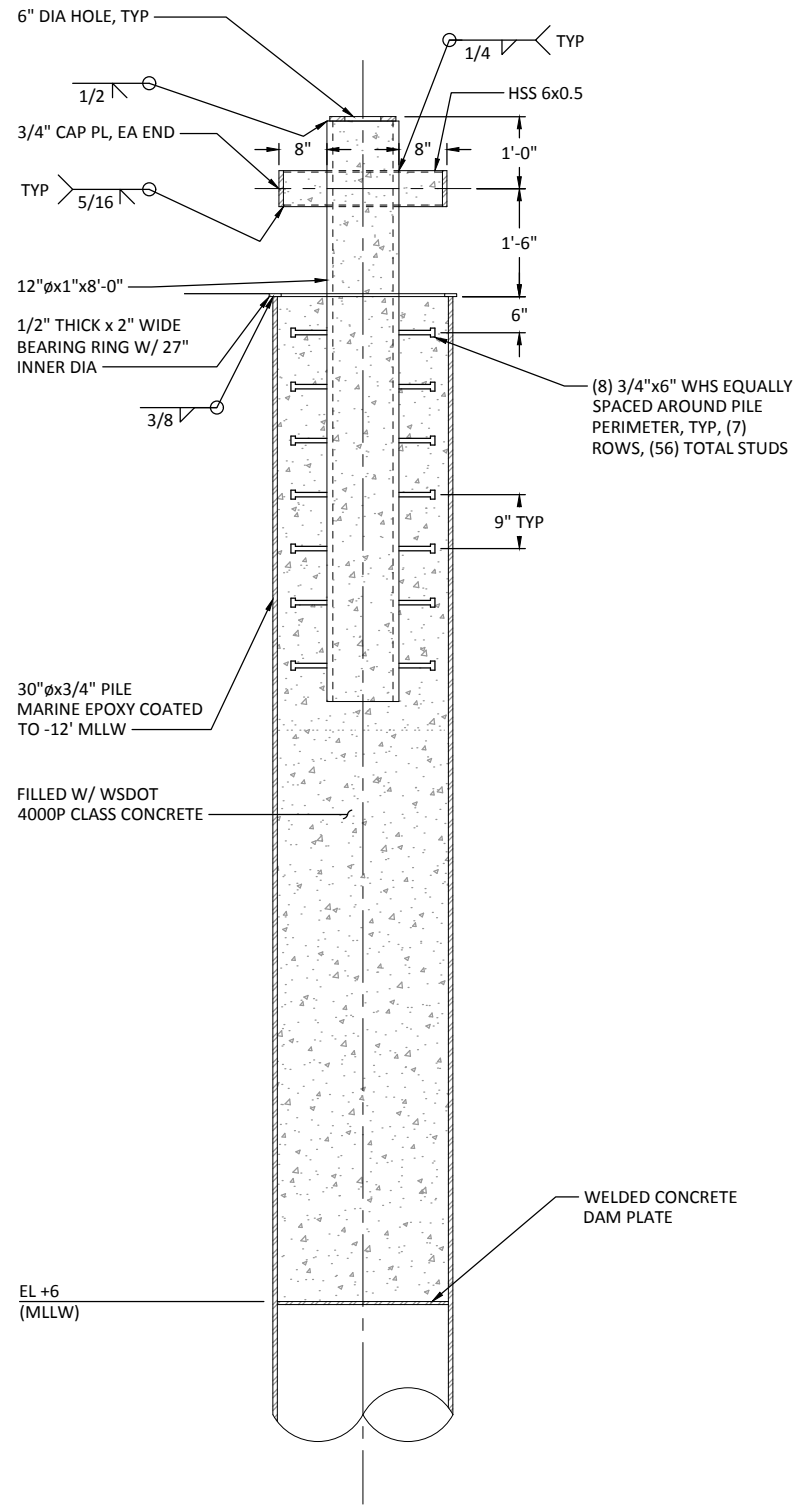
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

MONOPILE DOLPHIN - ELEVATION

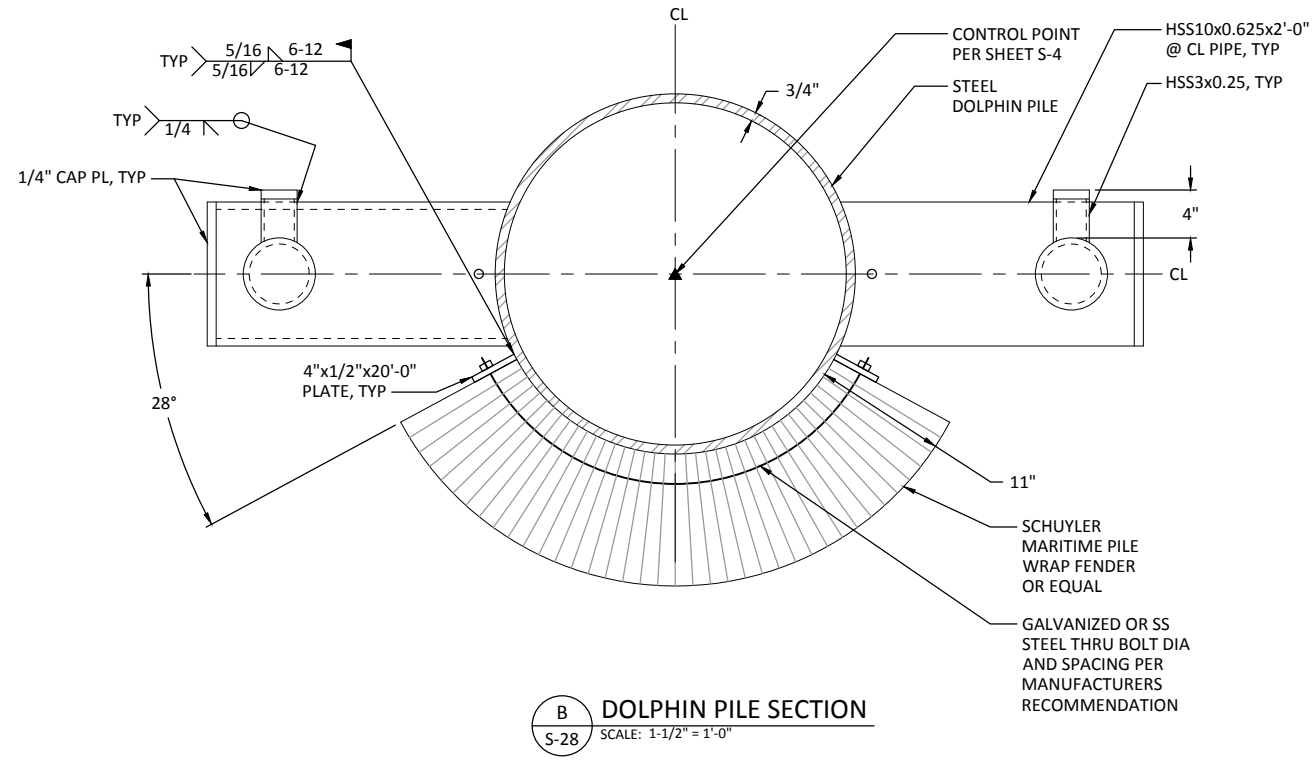
S-28

SHEET NO. 103 OF 126

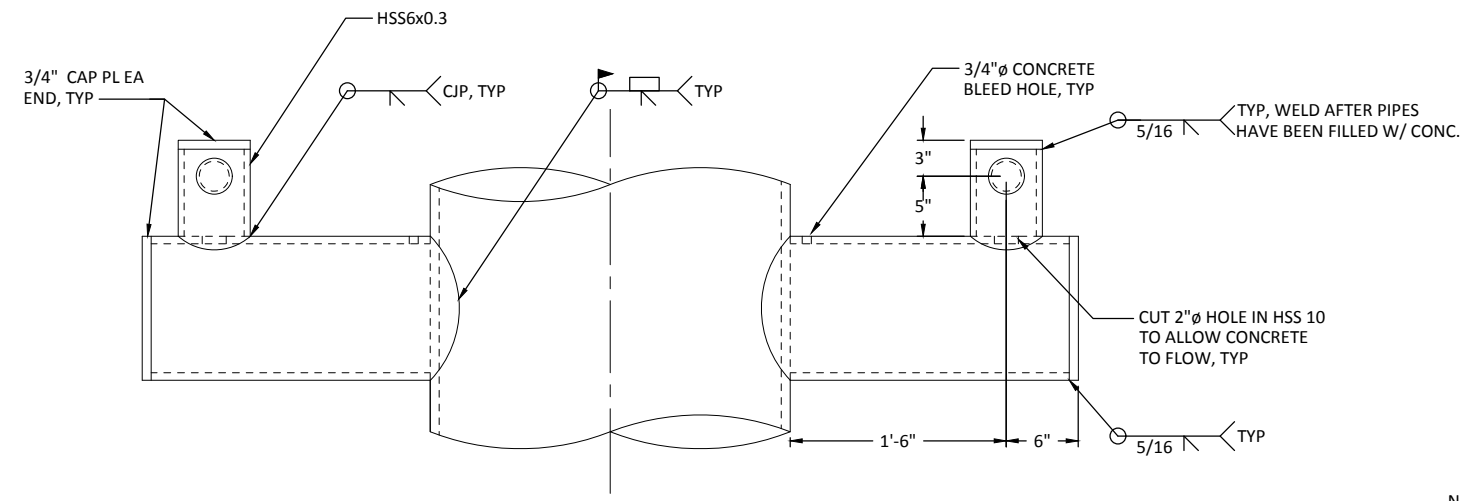
ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



A STEEL DOLPHIN DETAIL
S-28 SCALE: 3/4" = 1'-0"



B DOLPHIN PILE SECTION
S-28 SCALE: 1-1/2" = 1'-0"



1 BOLLARD DETAIL
S-28 SCALE: 1-1/2" = 1'-0"

NOTE:
1. PILE, ALL BOLLARDS AND WELDS ARE TO BE MARINE EPOXY COATED.

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ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

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REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: EDE
DRAWN BY: GMC
CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

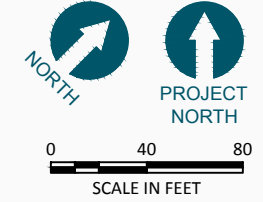
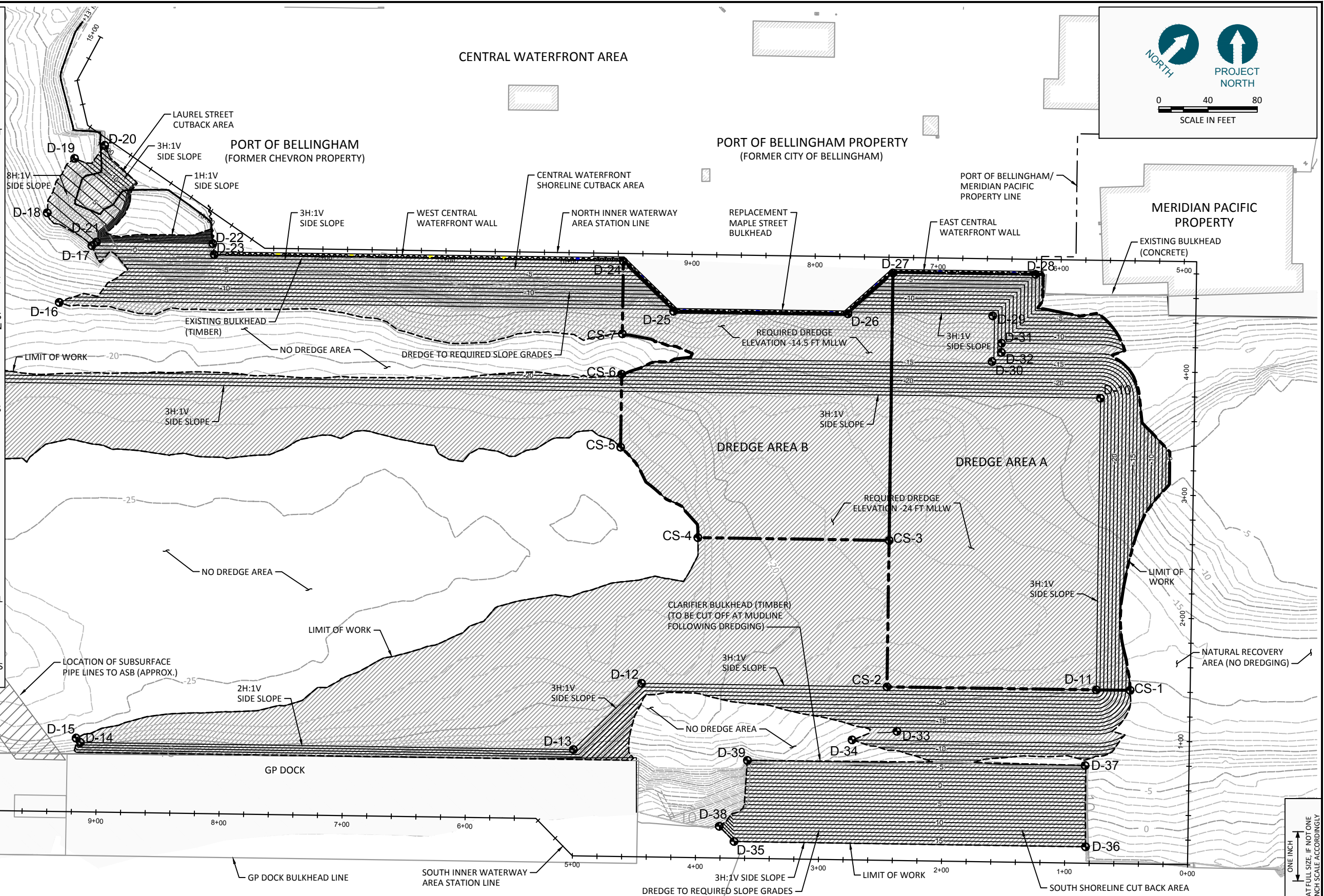
MONOPILE DOLPHIN - DETAILS

S-29
SHEET NO. 104 OF 126

- LEGEND:**
- DREDGE AREA WITH MAJOR CONTOUR INTERVALS FOR DREDGED SURFACE
 - REQUIRED DREDGE AREA
 - CONSTRUCTION SEQUENCING AREA
 - EXISTING BATHYMETRY
 - D-40 DREDGING CONTROL POINT LOCATION AND DESIGNATION
 - CS-1 CONSTRUCTION SEQUENCING CONTROL POINT LOCATION AND DESIGNATION

- NOTE:**
1. REFERENCE SHEET G-2 FOR SURVEY AND DATUM INFORMATION.
 2. DREDGE ELEVATIONS SHOWN REPRESENT REQUIRED MINIMUM ELEVATION (DOES NOT INCLUDE OVERDREDGE ALLOWANCE).
 3. PAYABLE OVERDREDGE ALLOWANCE ON SIDESLOPE AREAS WILL BE +1.0 FT. PAYABLE OVERDREDGE ALLOWANCE FOR ALL OTHER AREAS IS 0.5 FT UNLESS OTHERWISE NOTED ON DRAWINGS. PAYABLE OVERDREDGE ALLOWANCE OF +0.5 FT APPLIES TO THE DREDGE AREAS WITH REQUIRED DREDGE ELEVATIONS OF -24, -32, -36, AND -40 MLLW.
 4. CONTRACTOR SHALL COMPLETE DREDGING ACTIVITIES ACCORDING TO SEQUENCING REQUIREMENTS SHOWN ON DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS.
 5. REFERENCE SHEET C-23 FOR CONTROL POINT TABLE.
 6. DESIGN LIMITS, ELEVATIONS, AND OTHER FEATURES THAT ARE UNRELATED TO CONSTRUCTION SEQUENCING HAVE NOT BEEN UPDATED TO REFLECT POST-CONSTRUCTION CONDITIONS ON THE CS-SHEETS

- INNER WATERWAY DREDGING CONSTRUCTION SEQUENCING NOTES**
1. COMPLETE REQUIRED DREDGING ACTIVITIES WITHIN DREDGE AREA A PRIOR TO DREDGING OTHER PORTIONS OF THE INNER WATERWAY, AND FOLLOWING CONSTRUCTION OF THE EAST CENTRAL WATERFRONT WALL.
 2. COMPLETE REQUIRED DREDGING ACTIVITIES WITHIN DREDGE AREA B FOLLOWING COMPLETION OF REQUIRED DREDGING IN DREDGE AREA A, AND FOLLOWING CONSTRUCTION OF THE REPLACEMENT MAPLE STREET BULKHEAD.
 3. COMPLETION OF DREDGING ACTIVITIES WITHIN DREDGE AREA A AND DREDGE AREA B SHALL BE PERFORMED WITHIN THE AREAS DEFINED BY THE CONTROL POINTS PROVIDED ON THE DRAWINGS. CONTRACTOR SHALL REQUEST AND OBTAIN APPROVAL FROM THE ENGINEER IF AN ALTERNATE APPROACH FOR COMPLETION OF THESE DREDGE SEQUENCING REQUIREMENTS IS PROPOSED.
 4. DREDGING ACTIVITIES WITHIN THE REMAINING AREAS OF THE INNER WATERWAY SHALL BE COMPLETED IN ACCORDANCE WITH THE SEQUENCING REQUIREMENTS PROVIDED IN THE SPECIFICATIONS.



RECORD DRAWINGS

ONE INCH
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INCH SCALE ACCORDINGLY

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Dec 21, 2016 5:53pm gtrjg



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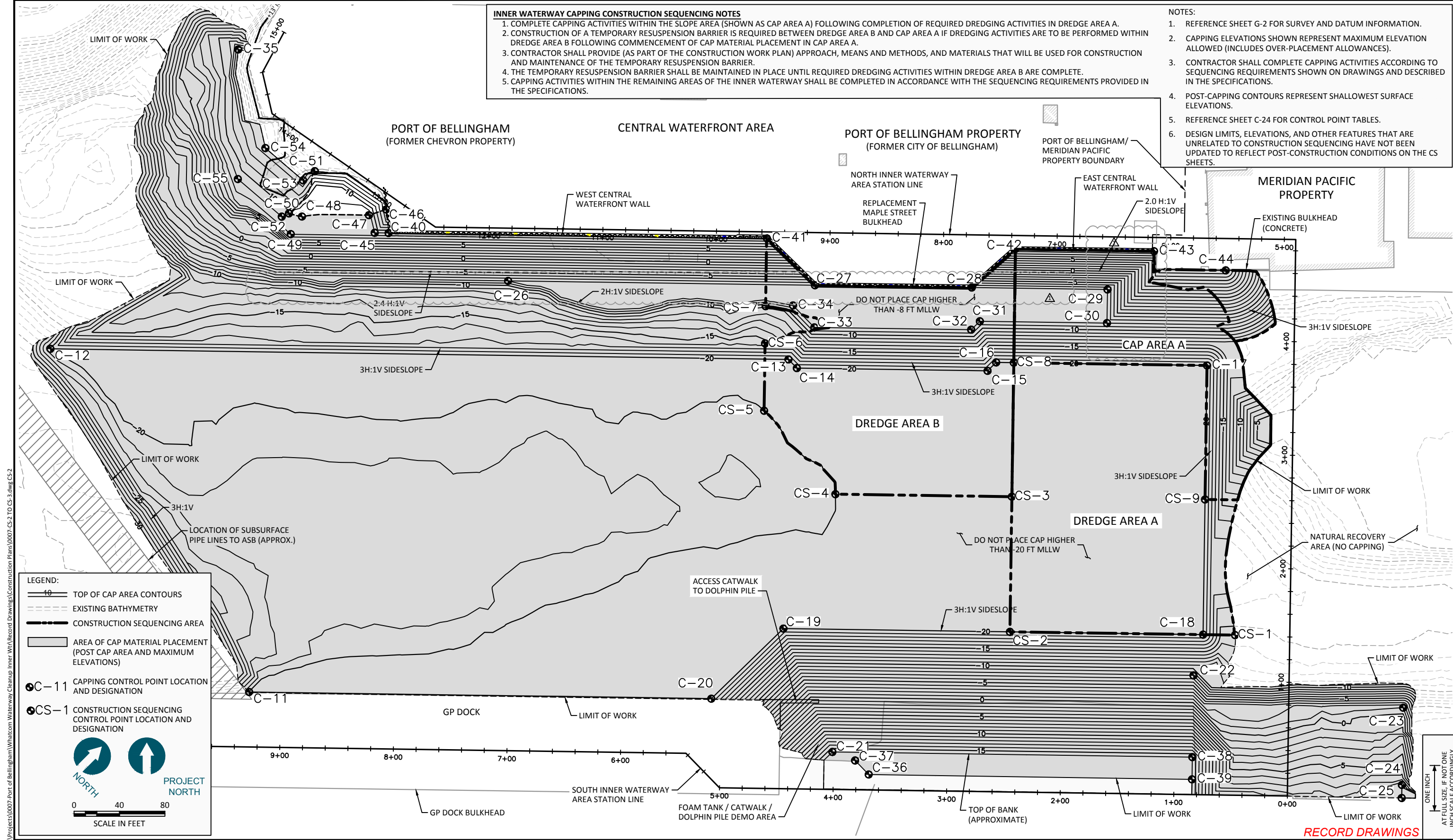
DESIGNED BY: M. WOLTMAN
 DRAWN BY: D. HOLMER
 CHECKED BY: T. WANG
 APPROVED BY: T. WANG
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

**INNER WATERWAY DREDGING CONSTRUCTION
 SEQUENCING**

CS-1

SHEET NO **105** OF **126**



INNER WATERWAY CAPPING CONSTRUCTION SEQUENCING NOTES

1. COMPLETE CAPPING ACTIVITIES WITHIN THE SLOPE AREA (SHOWN AS CAP AREA A) FOLLOWING COMPLETION OF REQUIRED DREDGING ACTIVITIES IN DREDGE AREA A.
2. CONSTRUCTION OF A TEMPORARY RESUSPENSION BARRIER IS REQUIRED BETWEEN DREDGE AREA B AND CAP AREA A IF DREDGING ACTIVITIES ARE TO BE PERFORMED WITHIN DREDGE AREA B FOLLOWING COMMENCEMENT OF CAP MATERIAL PLACEMENT IN CAP AREA A.
3. CONTRACTOR SHALL PROVIDE (AS PART OF THE CONSTRUCTION WORK PLAN) APPROACH, MEANS AND METHODS, AND MATERIALS THAT WILL BE USED FOR CONSTRUCTION AND MAINTENANCE OF THE TEMPORARY RESUSPENSION BARRIER.
4. THE TEMPORARY RESUSPENSION BARRIER SHALL BE MAINTAINED IN PLACE UNTIL REQUIRED DREDGING ACTIVITIES WITHIN DREDGE AREA B ARE COMPLETE.
5. CAPPING ACTIVITIES WITHIN THE REMAINING AREAS OF THE INNER WATERWAY SHALL BE COMPLETED IN ACCORDANCE WITH THE SEQUENCING REQUIREMENTS PROVIDED IN THE SPECIFICATIONS.

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.
6. DESIGN LIMITS, ELEVATIONS, AND OTHER FEATURES THAT ARE UNRELATED TO CONSTRUCTION SEQUENCING HAVE NOT BEEN UPDATED TO REFLECT POST-CONSTRUCTION CONDITIONS ON THE CS SHEETS.

LEGEND:

- 10 — TOP OF CAP AREA CONTOURS
- - - - - EXISTING BATHYMETRY
- - - - - CONSTRUCTION SEQUENCING AREA
- ▭ AREA OF CAP MATERIAL PLACEMENT (POST CAP AREA AND MAXIMUM ELEVATIONS)
- C-11 CAPPING CONTROL POINT LOCATION AND DESIGNATION
- CS-1 CONSTRUCTION SEQUENCING CONTROL POINT LOCATION AND DESIGNATION

PROJECT NORTH

NORTH

0 40 80
SCALE IN FEET

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**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

**INNER WATERWAY CAPPING CONSTRUCTION
SEQUENCING**

CS-2

SHEET NO 106 OF 126

RECORD DRAWINGS

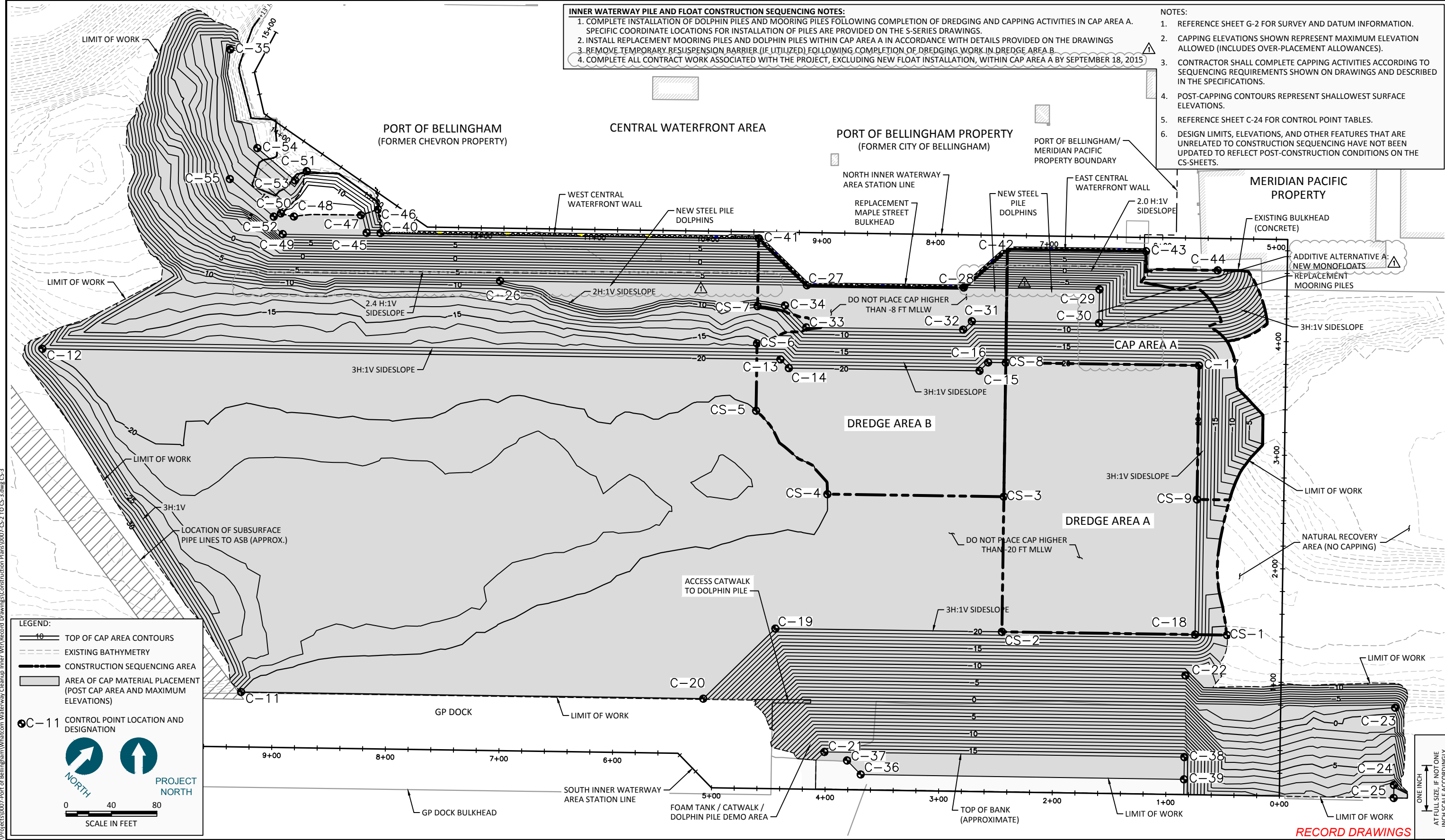
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INCH SCALE ACCORDINGLY

INNER WATERWAY PILE AND FLOAT CONSTRUCTION SEQUENCING NOTES:

1. COMPLETE INSTALLATION OF DOLPHIN PILES AND MOORING PILES FOLLOWING COMPLETION OF DREDGING AND CAPPING ACTIVITIES IN CAP AREA A. SPECIFIC COORDINATE LOCATIONS FOR INSTALLATION OF PILES ARE PROVIDED ON THE S-SERIES DRAWINGS.
2. INSTALL REPLACEMENT MOORING PILES AND DOLPHIN PILES WITHIN CAP AREA A IN ACCORDANCE WITH DETAILS PROVIDED ON THE DRAWINGS
3. REMOVE TEMPORARY RESUSPENSION BARRIER (IF UTILIZED) FOLLOWING COMPLETION OF DREDGING WORK IN DREDGE AREA B
4. COMPLETE ALL CONTRACT WORK ASSOCIATED WITH THE PROJECT, EXCLUDING NEW FLOAT INSTALLATION, WITHIN CAP AREA A BY SEPTEMBER 18, 2015

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.
6. DESIGN LIMITS, ELEVATIONS, AND OTHER FEATURES THAT ARE UNRELATED TO CONSTRUCTION SEQUENCING HAVE NOT BEEN UPDATED TO REFLECT POST-CONSTRUCTION CONDITIONS ON THE CS-SHEETS.



LEGEND:

- 10 — TOP OF CAP AREA CONTOURS
- - - - - EXISTING BATHYMETRY
- - - - - CONSTRUCTION SEQUENCING AREA
- AREA OF CAP MATERIAL PLACEMENT (POST CAP AREA AND MAXIMUM ELEVATIONS)
- C-11 CONTROL POINT LOCATION AND DESIGNATION

PROJECT NORTH

SCALE IN FEET

0 40 80

REVISIONS				
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 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

INNER WATERWAY PILE AND FLOAT CONSTRUCTION SEQUENCING

CS-3

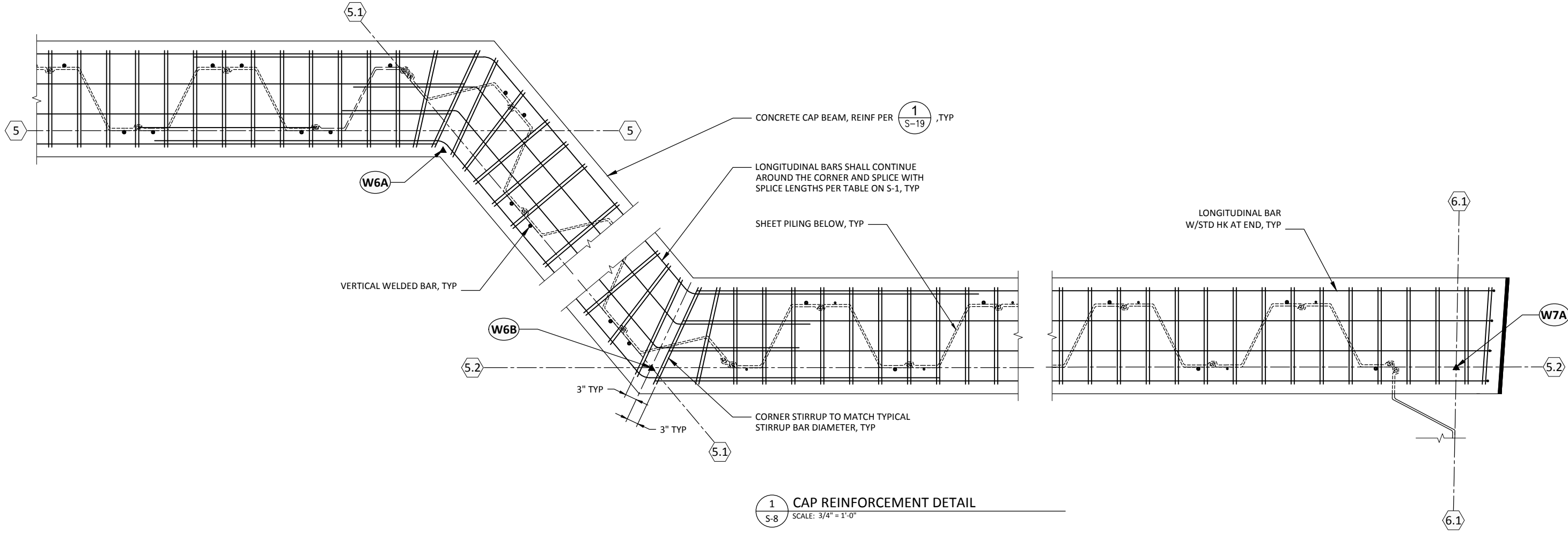
SHEET NO 107 OF 126



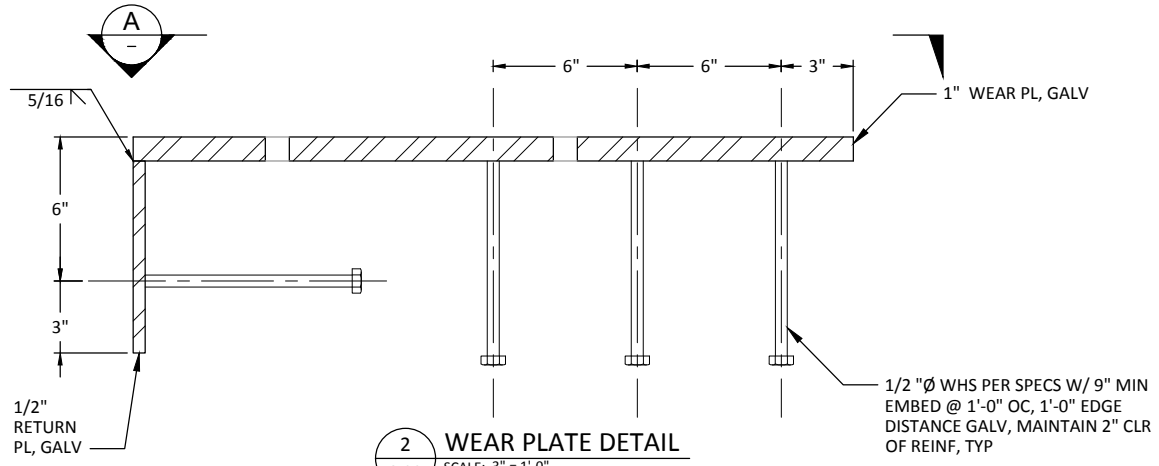
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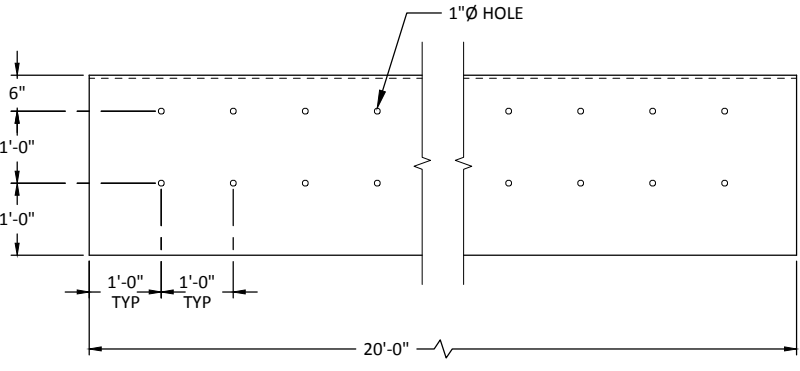
RECORD DRAWINGS



1 CAP REINFORCEMENT DETAIL
 S-8 SCALE: 3/4" = 1'-0"



2 WEAR PLATE DETAIL
 S-22 SCALE: 3" = 1'-0"



A WEAR PLATE PLAN VIEW
 SCALE: 3/4" = 1'-0"

RECORD DRAWINGS

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 720 OLIVE WAY, SUITE 1900 | SEATTLE, WA 98101
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kpff
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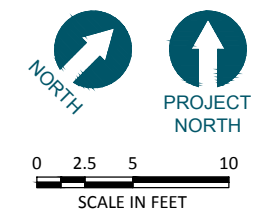
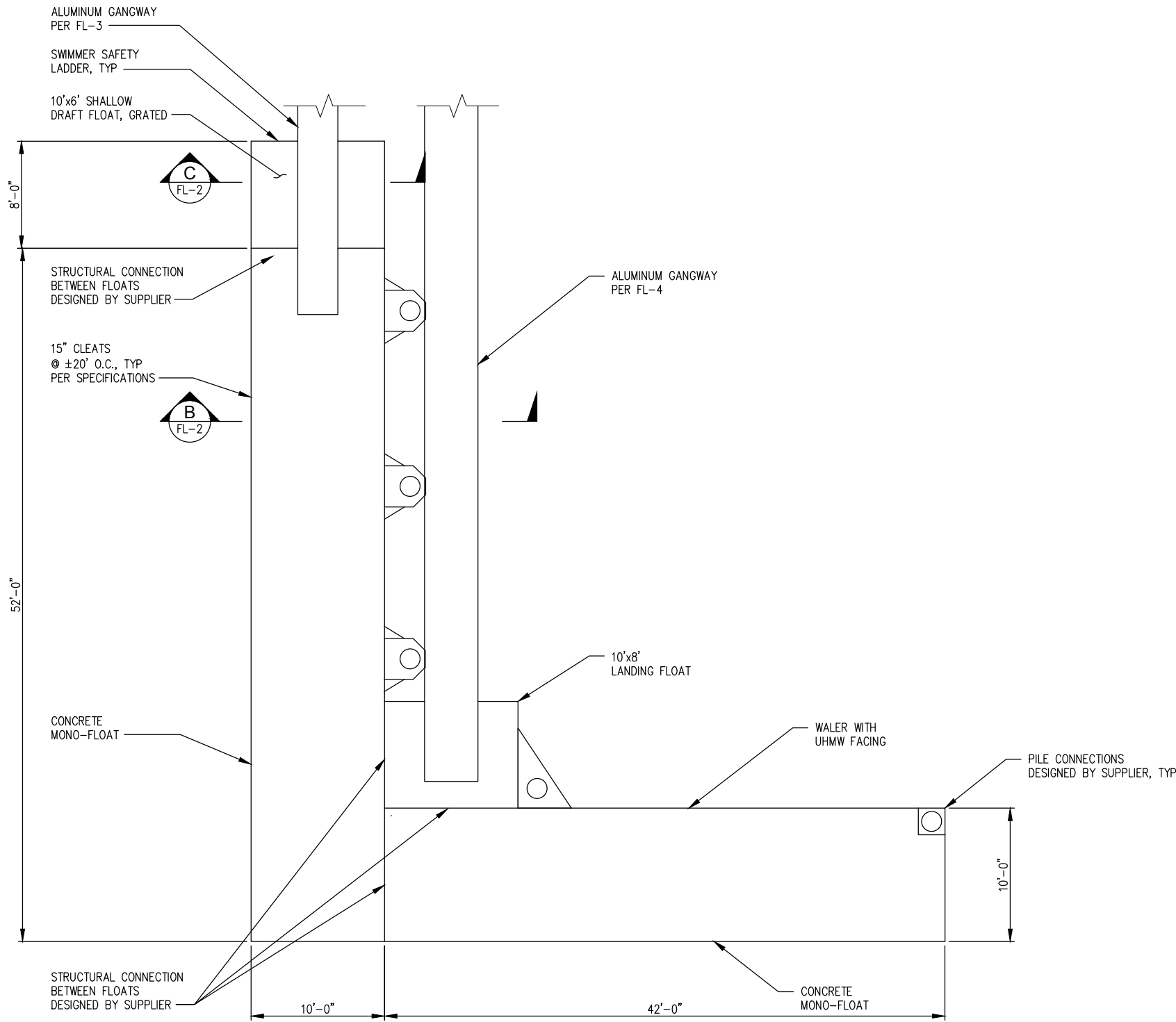
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 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON
EAST CENTRAL WATERFRONT WALL AND STEEL DETAILS

S-19.1
 SHEET No 108 OF 126

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY

- NOTES:**
1. ALL FLOAT DIMENSIONS SHOWN ARE TO OUTSIDE EDGE OF CONCRETE WALKING SURFACE.
 2. REFER TO FLOAT SHOP DRAWING DATED 09-15-2015 FOR SUPPLEMENTAL FLOAT INFORMATION.



1
S-8 **FLOAT PLAN**
SCALE: 1" = 5'

**FOR FLOAT PROCUREMENT ONLY
THIS DRAWING NOT FOR USE FOR
FLOAT CONSTRUCTION OR
INSTALLATION**

RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

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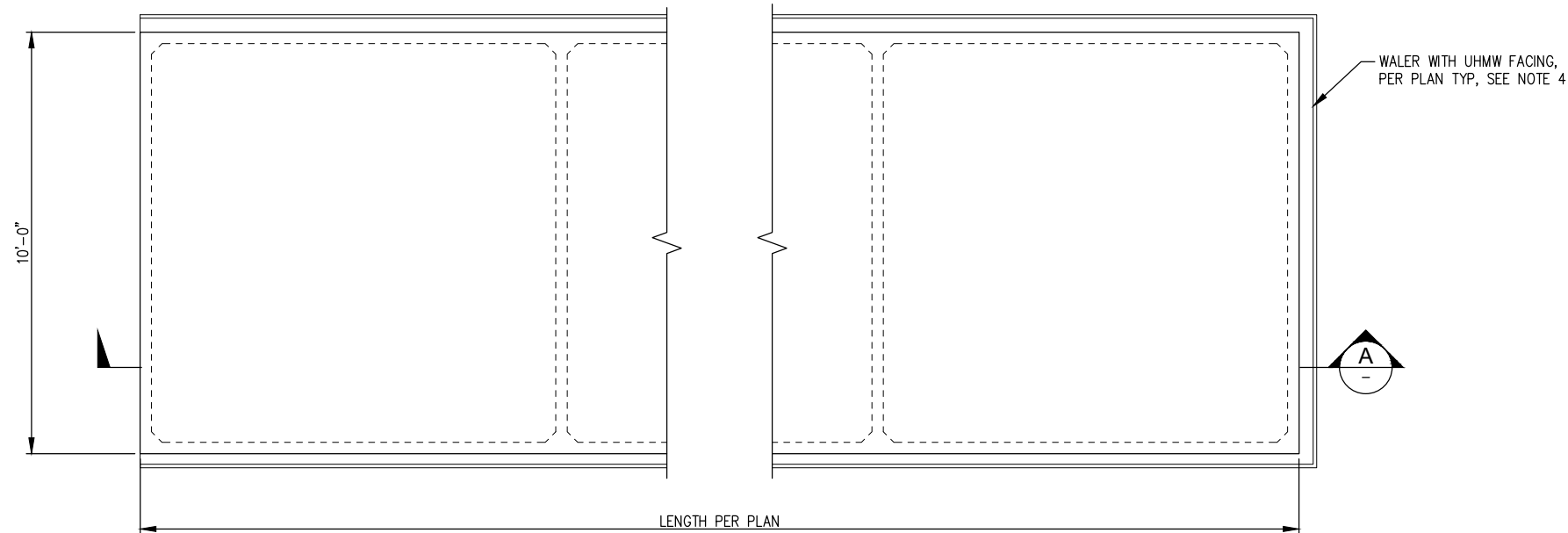
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**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

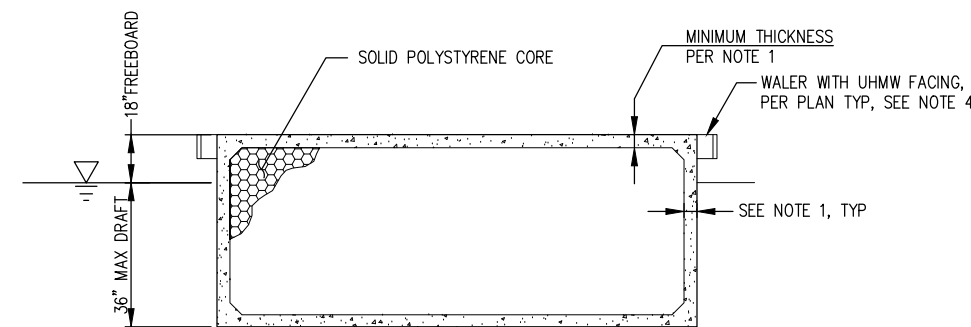
CONCRETE FLOAT DECK PLAN

FL-1

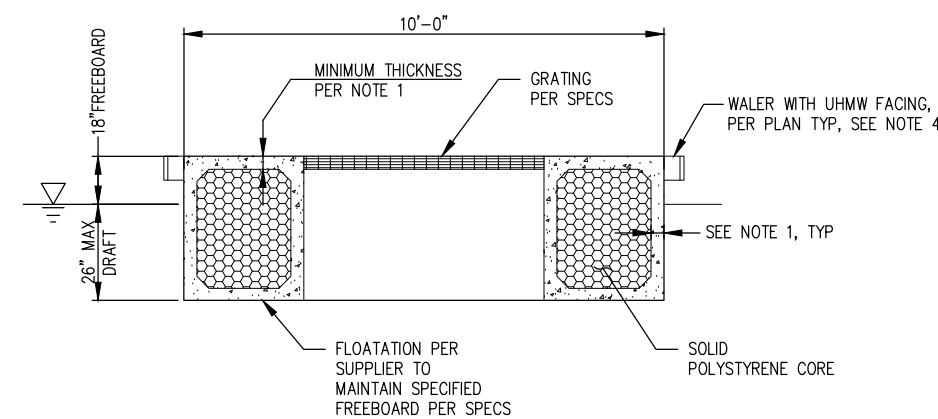
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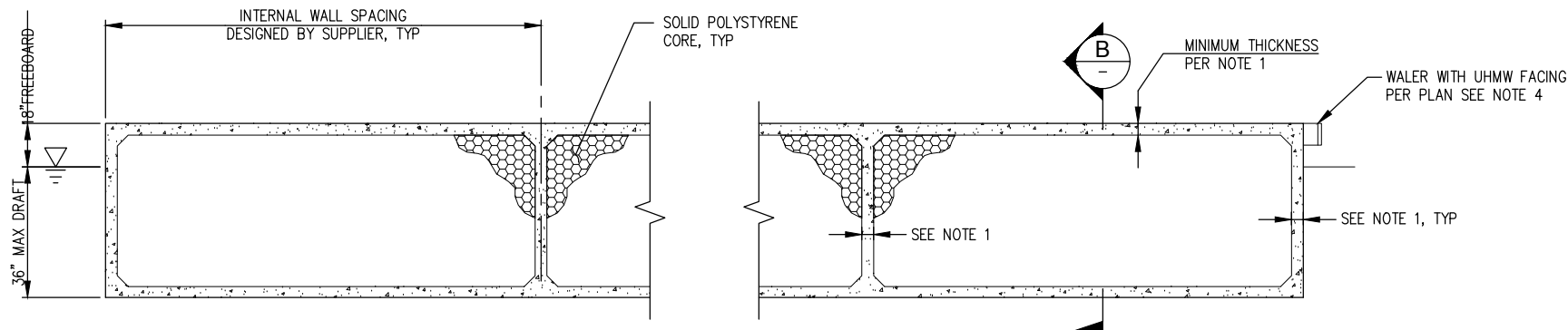
1 **TYPICAL CONCRETE FLOAT PLAN**
SCALE: 1/2" = 1'-0"



B **TYPICAL CONCRETE FLOAT SECTION**
FL-1 SCALE: 1/2" = 1'-0"



A **TYPICAL CONCRETE FLOAT SECTION**
SCALE: 1/2" = 1'-0"



NOTES:

- 3" MINIMUM THICKNESS OF FLOAT TOP, BOTTOM, SIDES AND INTERNAL WALLS. FOR MINIMUM COVERAGE OF REINFORCING STEEL SEE SPECIFICATIONS.
- CONCRETE FLOAT DIMENSIONS SHOWN ARE TO OUTSIDE EDGE OF CONCRETE WALKING SURFACE.
- DECK FEATURES NOT SHOWN FOR CLARITY.
- UHMW SHALL BE 1" THICK MIN.
- REFER TO FLOAT SHOP DRAWING DATED 09-15-2015 FOR SUPPLEMENTAL FLOAT INFORMATION

**FOR FLOAT PROCUREMENT ONLY
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RECORD DRAWINGS

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INCH SCALE ACCORDINGLY

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DATE: AUGUST 2015

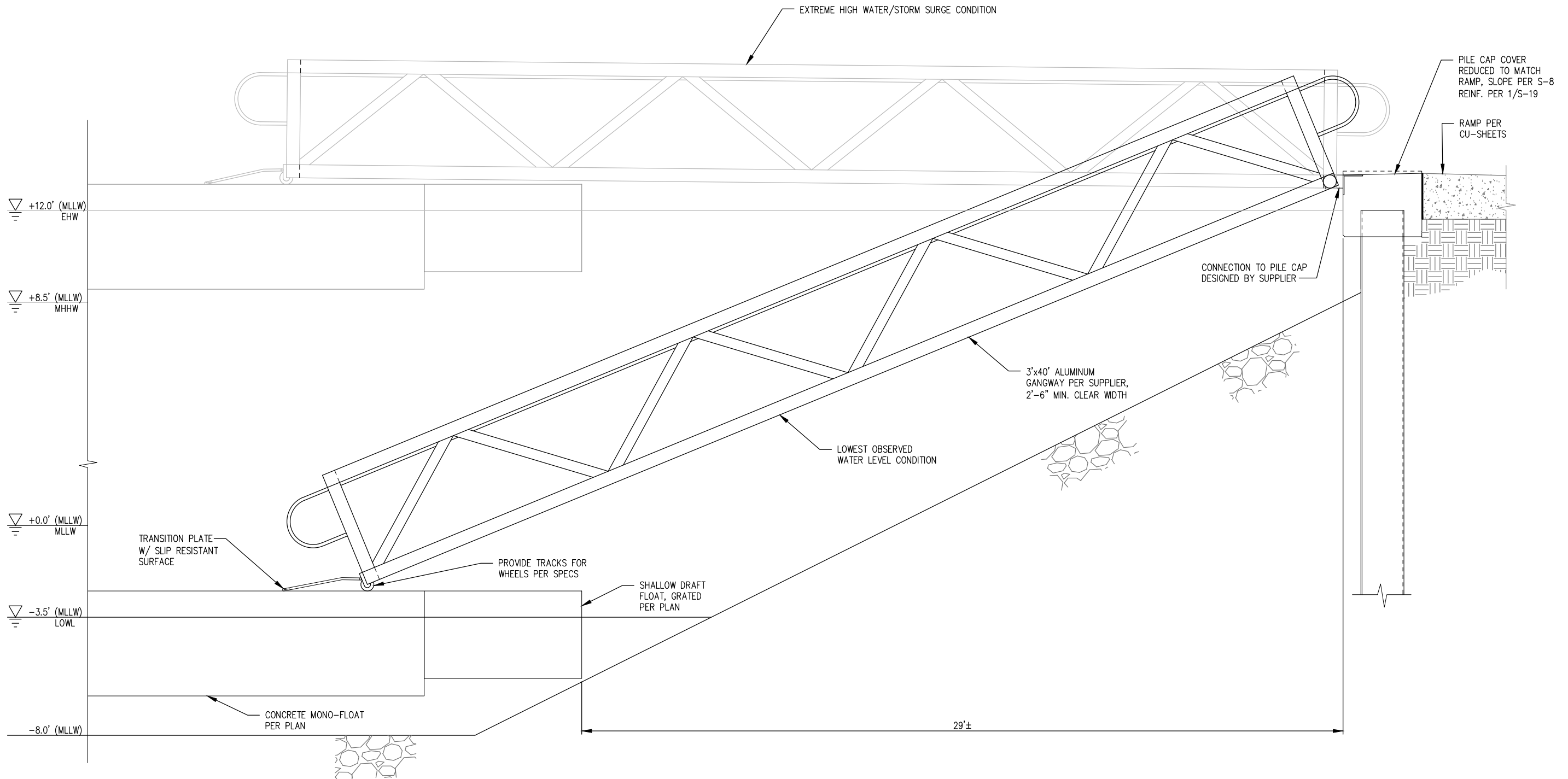
**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

FLOAT PLANS, SECTIONS AND DETAIL

FL-2

SHEET NO. 110 OF 126

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Dec 21, 2016 5:40pm kgiga



A 40' GANGWAY PROFILE
FL-1 SCALE: 1/2" = 1'-0"

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RECORD DRAWINGS

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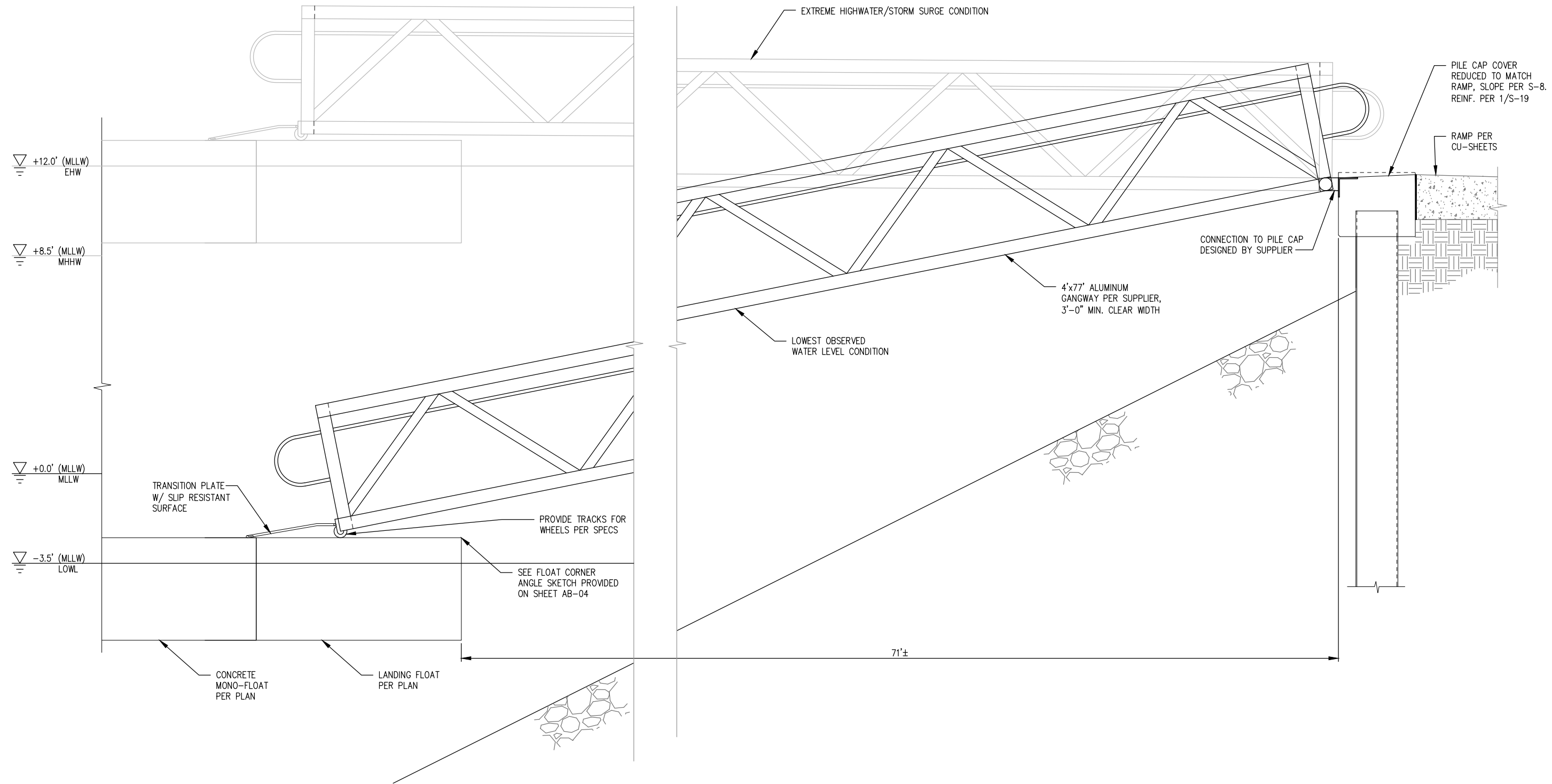
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

40' GANGWAY PROFILE

FL-3

SHEET NO. 111 OF 126

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Dec 21, 2016 5:40pm kgjga



A **77' GANGWAY PROFILE**
FL-1 SCALE: 1/2" = 1'-0"

**FOR FLOAT PROCUREMENT ONLY
THIS DRAWING NOT FOR USE FOR
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RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



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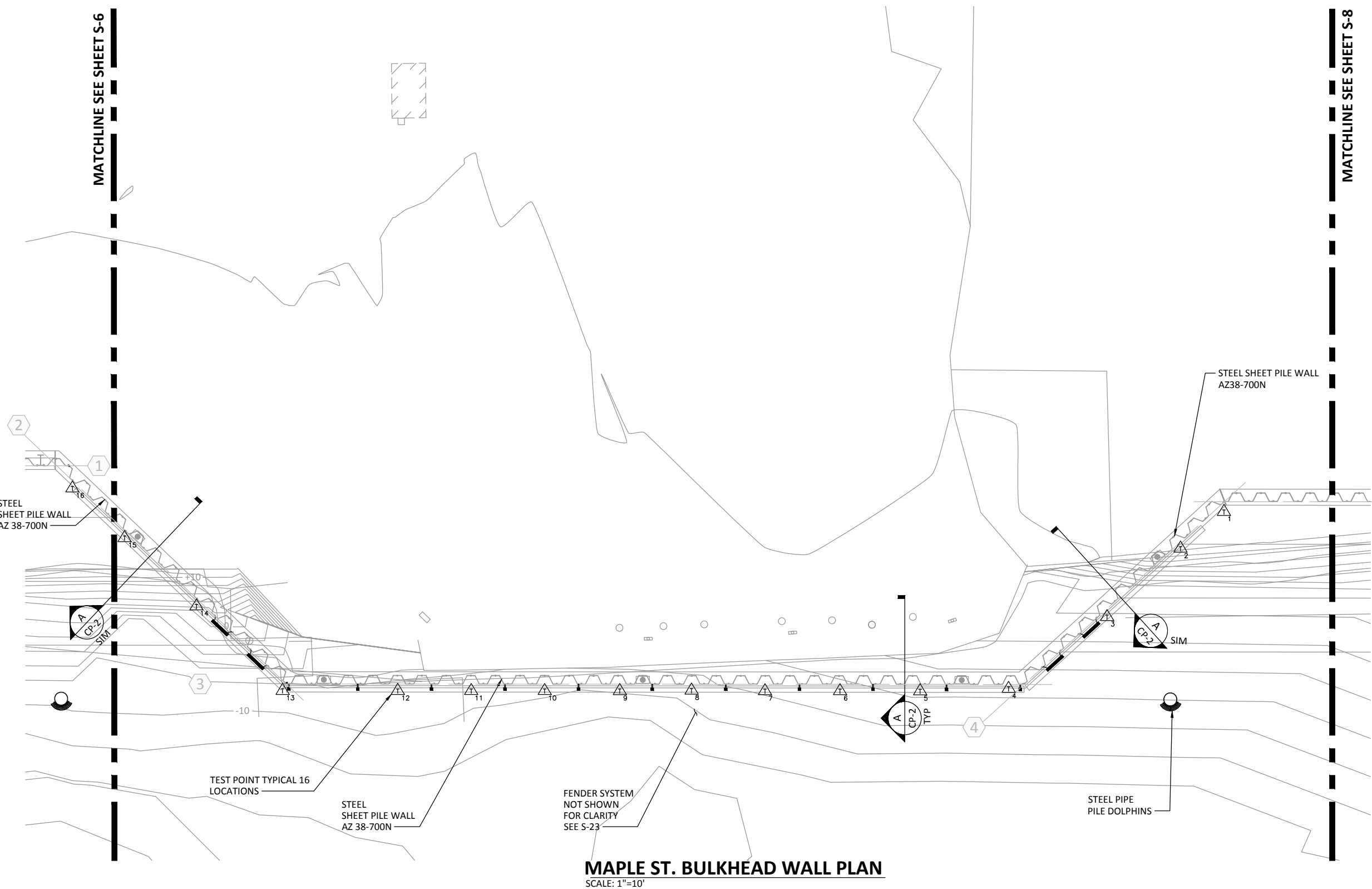
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**WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON**

77' GANGWAY PROFILE

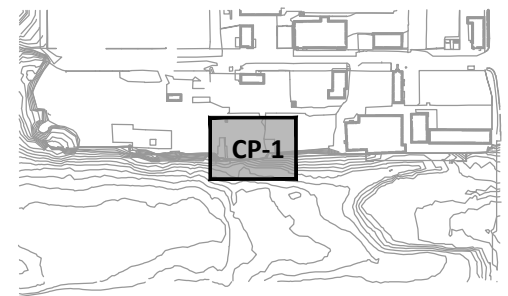
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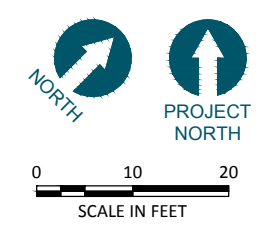


- LEGEND:**
- 30" MONOPILE DOLPHIN, SEE SHEET S-28
 - MOORING CLEAT, SEE 1/S-27
 - APPROXIMATE LOCATION OF EXISTING H-PILES
 - CATHODIC PROTECTION ANODE HORIZONTAL ORIENTATION, 12" MAXIMUM ABOVE FINAL MUDLINE
 - CATHODIC PROTECTION ANODE VERTICAL ORIENTATION, BOTTOM @ -8(MLLW)

- NOTES:**
1. ANODE LOCATIONS MAY BE ADJUSTED TO AVOID FENDER PILES.



KEY PLAN



MAPLE ST. BULKHEAD WALL PLAN
SCALE: 1"=10'

RECORD DRAWINGS



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APPROVED BY: _____
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DATE: AUGUST 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

MAPLE ST. BULKHEAD CATHODIC PROTECTION PLAN

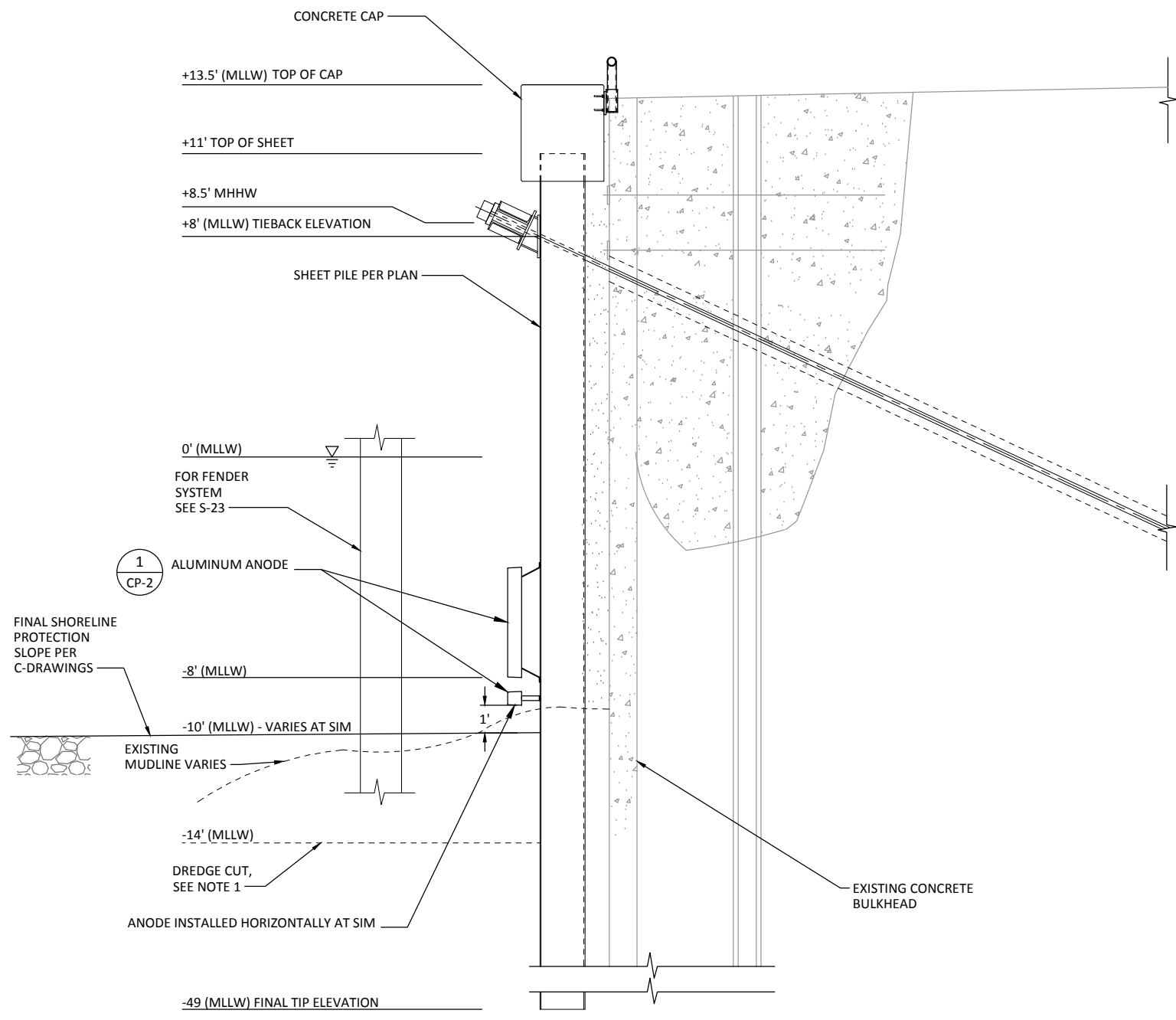
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SHEET NO 113 OF 126

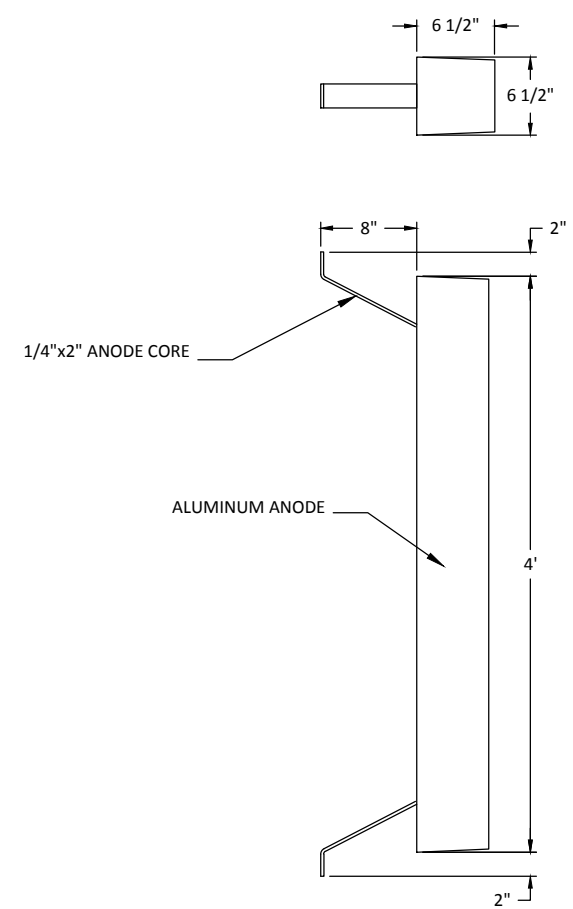
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INCH SCALE ACCORDINGLY

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A MAPLE ST. BULKHEAD SECTION
 CP-1 SCALE: 3/8" = 1'-0"



NOMINAL WEIGHT: 200 LBS.

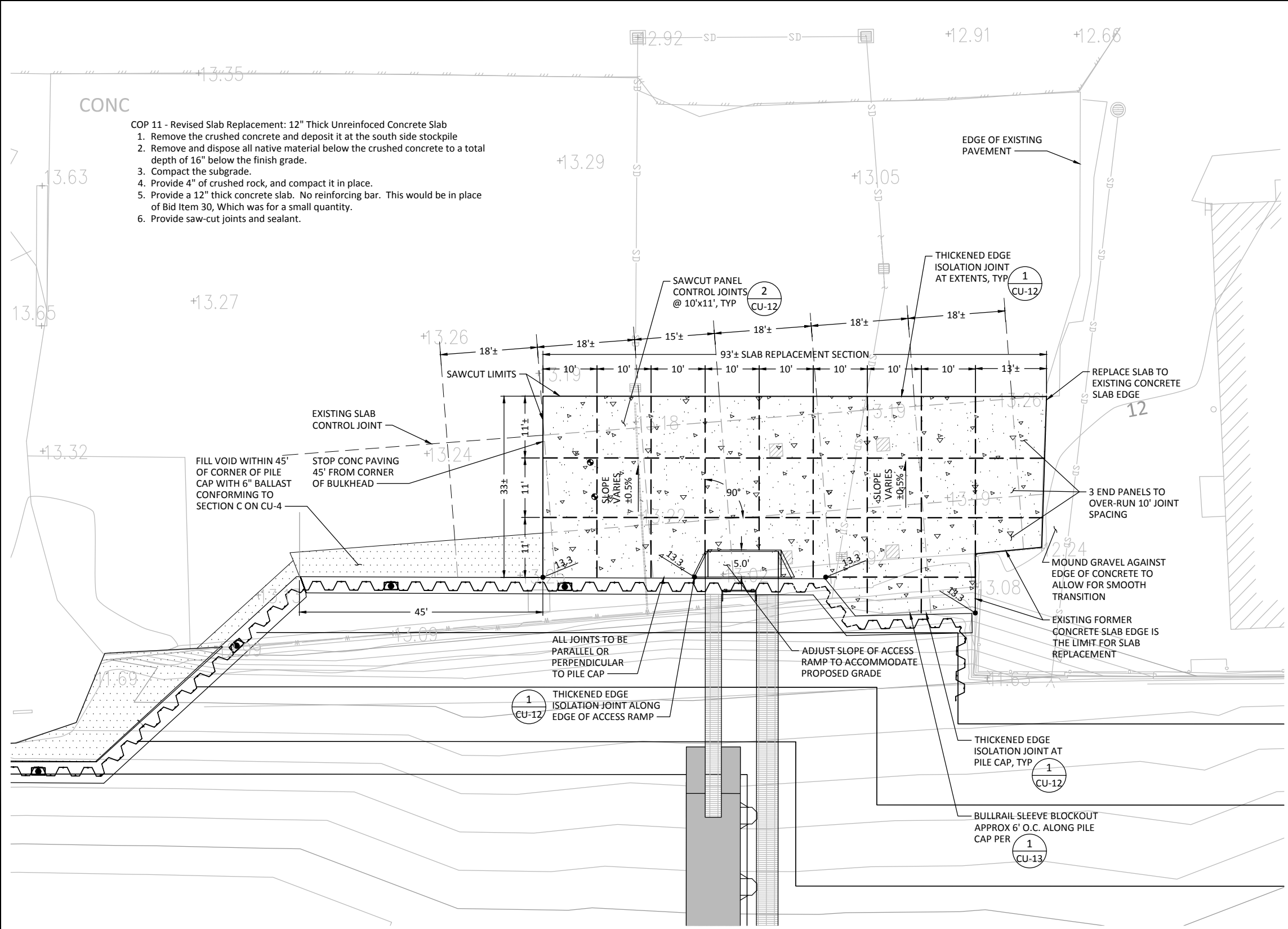
1 ANODE - DETAIL
 CP-2 SCALE: NONE

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY

RECORD DRAWINGS

 PORT OF BELLINGHAM <i>Washington State</i>	 ANCHOR QEA 720 OLIVE WAY, SUITE 1900 SEATTLE, WA 98101 (206) 287-9130	 Norton Corrosion Limited Woodinville, WA. (800) 426-3111 www.nortoncorrosion.com	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP'D</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS					REV	DATE	BY	APP'D	DESCRIPTION																										DESIGNED BY: <u>J.E.</u> DRAWN BY: <u>R.H.</u> CHECKED BY: <u>E.S.</u> APPROVED BY: _____ SCALE: <u>AS NOTED</u> DATE: <u>AUGUST 2015</u>	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WASHINGTON MAPLE ST. CATHODIC PROTECTION DETAILS	CP-2 SHEET No 114 OF 126
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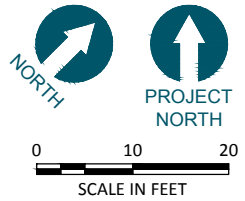


- LEGEND:**
- AGGREGATE BALLAST
 - 12" CONCRETE PAVING 3
CU-12
 - EXISTING CONTOUR
 - FINISHED GRADE SPOT ELEVATION (MLLW)
 - FINISH SURFACE SLOPE DIRECTION
 - EXISTING SURFACE SPOT ELEVATION (MLLW)
 - EXISTING MONITORING WELL, SEE NOTE 10
 - SHEET PILE WALL, SEE NOTE 1
 - EXISTING CONTROL JOINT
 - PROPOSED CONTROL JOINT SEE NOTE 7

- NOTES:**
1. SEE STRUCTURAL SHEETS FOR ADDITIONAL SHEET PILE WALL DETAILS, TOP OF PILE CAP ELEVATION, AND BULKHEAD CONTROL POINTS.
 2. CONTROL JOINTS TO BE SAWCUT PER WSDOT SPEC 5-05.3(8)A.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING ABOVE GRADE AND UNDERGROUND UTILITIES. CARE SHOULD BE TAKEN TO AVOID DAMAGE OR DISTURBANCE TO UTILITIES.
 4. EXISTING SOILS WITHIN THE PROJECT AREA MAY CONTAIN CONTAMINANTS, SEE SPECS FOR EXCAVATION, STOCKPILING AND TESTING REQUIREMENTS.
 5. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING CONTROL JOINTS AND MODIFY CONTROL JOINTS AS REQUIRED.
 6. SUBGRADE TO BE COMPACTED TO 95% COMPACTION, ENGINEER TO VERIFY COMPACTION. SEE SPECS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS. SEE 3/CU-12 FOR PAVING SECTION. SEE SPECS FOR ADDITIONAL COMPACTION AND BACKFILLING REQUIREMENTS.
 7. JOINTING PLAN IS SCHEMATIC, CONTRACTOR TO VERIFY PANEL DIMENSIONS AND LOCATE JOINTS PRIOR TO CONSTRUCTION. CONTRACTOR TO INSTALL ADDITIONAL CONTROL JOINTS AT SHARP CORNERS IN AREAS THAT DO NOT CORRESPOND WITH GRID TO AID IN CONTROLLING CRACKING. PANEL SIZE SHALL NOT EXCEED 13.5± FEET. SEE 2/CU-12 FOR CONTROL JOINT DETAIL.
 8. PAVING HAS BEEN DESIGNED TO WITHSTAND LOADS SHOWN ON SHEET S-1 FOR THE EAST CENTRAL CRANE PAD DESIGN LOADS.
 9. SEE 4/CU-12 FOR TYPICAL COLD CONSTRUCTION JOINT.
 10. MONITORING WELLS WITHIN PAVING LIMITS ARE TO BE PROTECTED, AND SET TO FINISH GRADE BY A LICENSED WELL DRILLER. CONTRACTOR SHALL PROVIDE ISOLATION JOINT AROUND MONITORING WELL CONFORMING TO WSDOT STANDARD PLAN A-40.15.00 CONDITIONS H, I OR J.

2 MAPLE ST. BULKHEAD PAVING AND JOINTING PLAN
 SCALE: 1"=10'

CALL 48 HOURS BEFORE YOU DIG DIAL 811



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RECORD DRAWINGS

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 (206) 287-9130

kpff
 1601 5th Avenue, Suite 1300
 Seattle, Washington 98101
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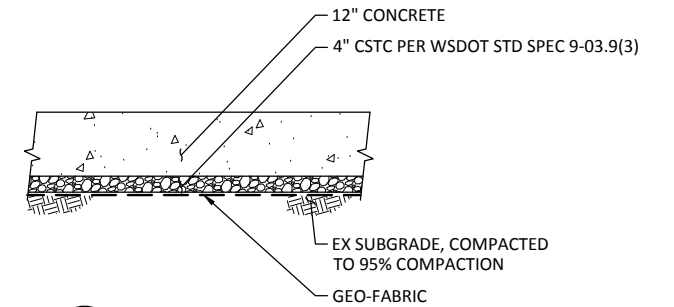
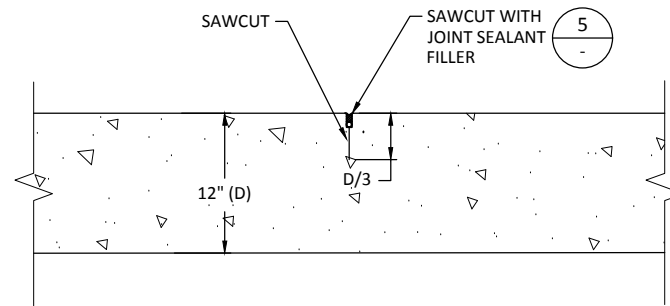
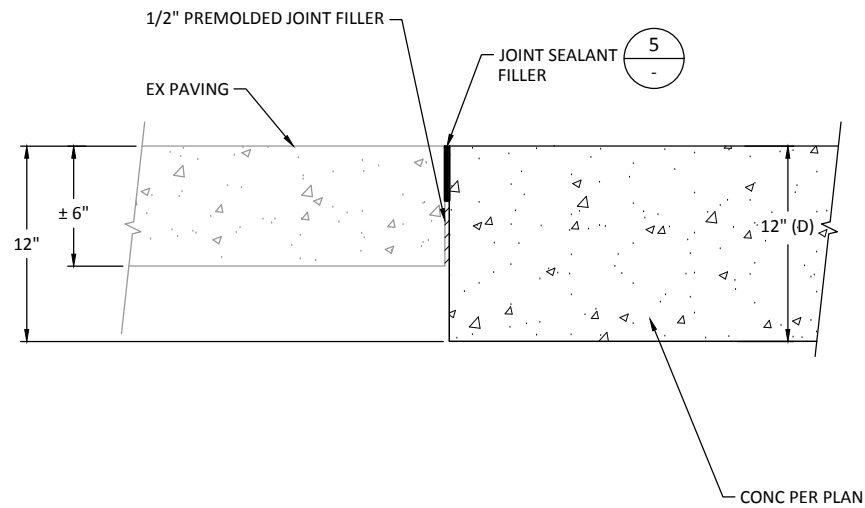
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 DRAWN BY: SJS
 CHECKED BY: JB
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 DATE: FEB 2016

WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

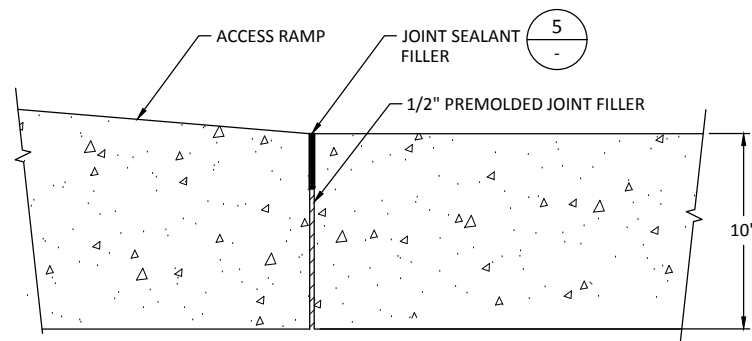
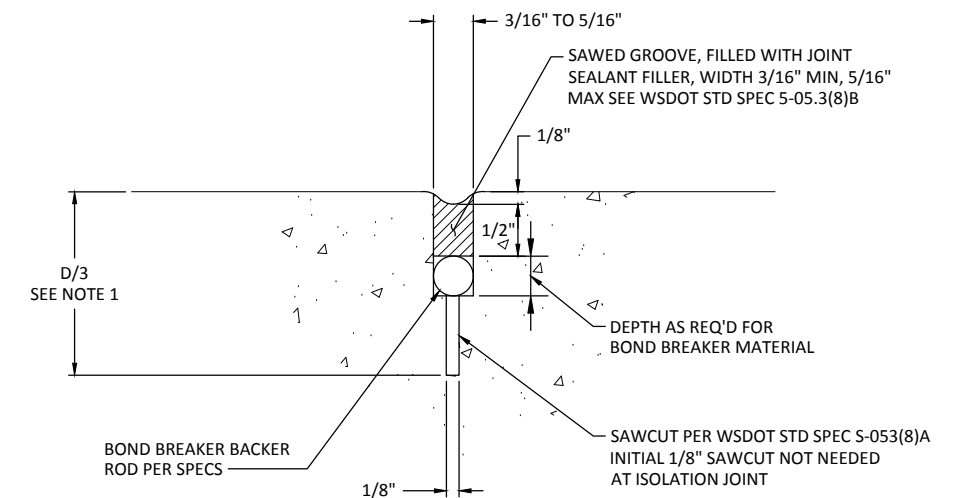
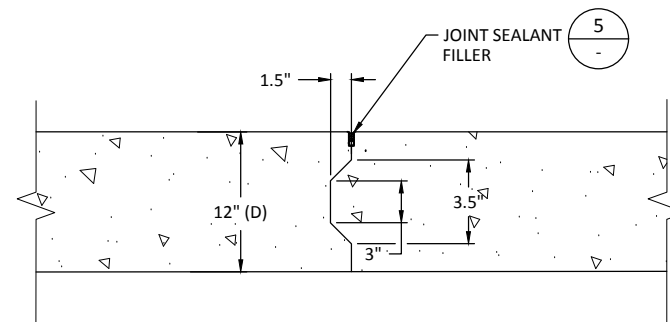
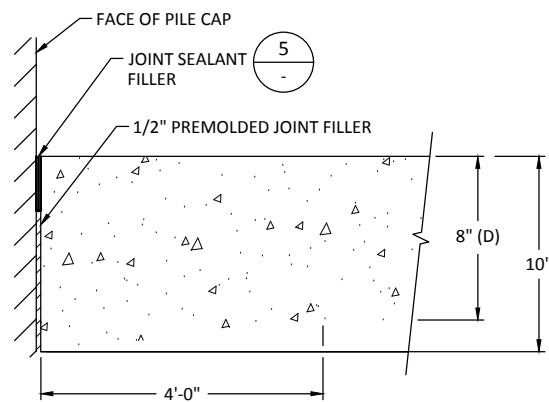
MAPLE ST. BULKHEAD PAVING AND JOINTING DETAIL

CU-11
 SHEET NO. 115 OF 126



2 TYPICAL WEAKENED PLANE CONTROL JOINT
CU-11 SCALE: NTS

3 PAVEMENT SECTION
CU-11 SCALE: NTS



4 TYPICAL COLD CONSTRUCTION JOINT
CU-11 SCALE: NTS

5 TYPICAL JOINT SEALANT
CU-11 SCALE: NTS

1 ISOLATION JOINT DETAILS
CU-11 SCALE: 3/4"=1'-0"

NOTES:
1. "D" EQUALS TOTAL DEPTH OF PAVEMENT.

RECORD DRAWINGS

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

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REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

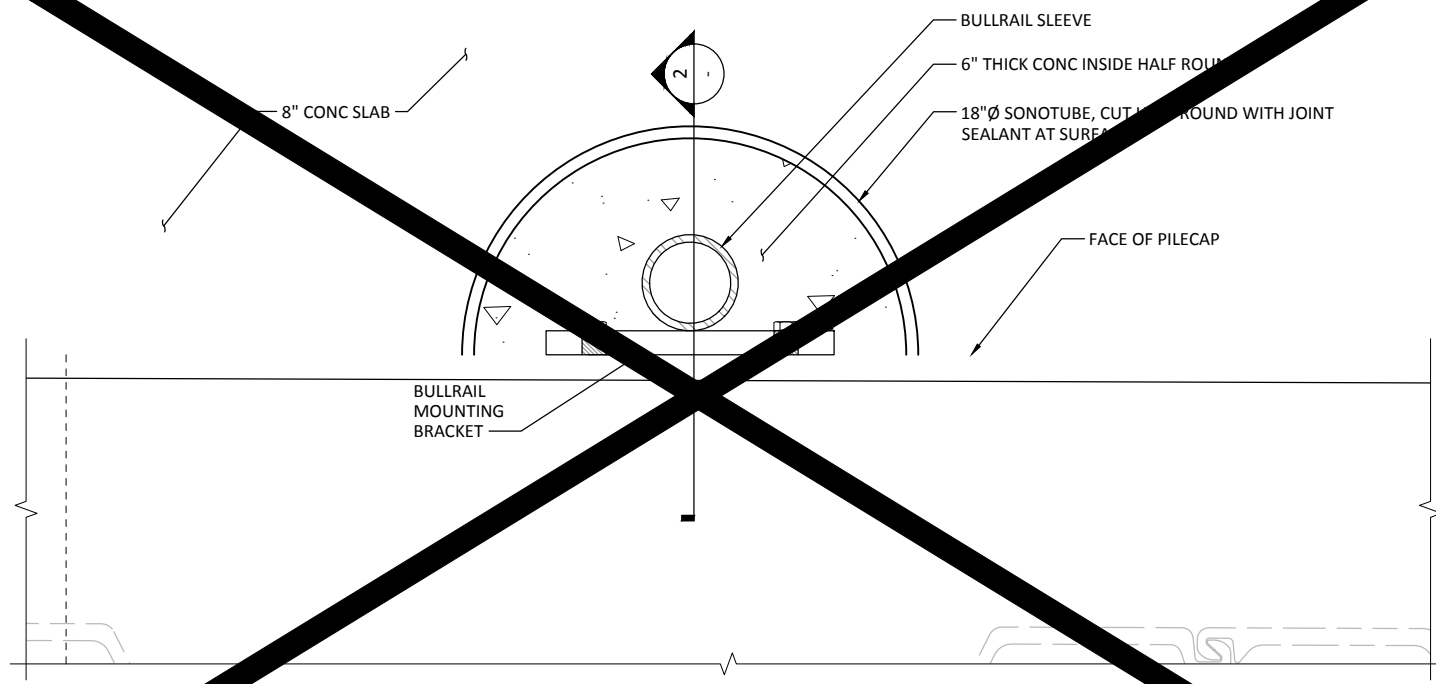
DESIGNED BY: SJS
DRAWN BY: SJS
CHECKED BY: JB
APPROVED BY: DLO
SCALE: AS NOTED
DATE: FEB 2016

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

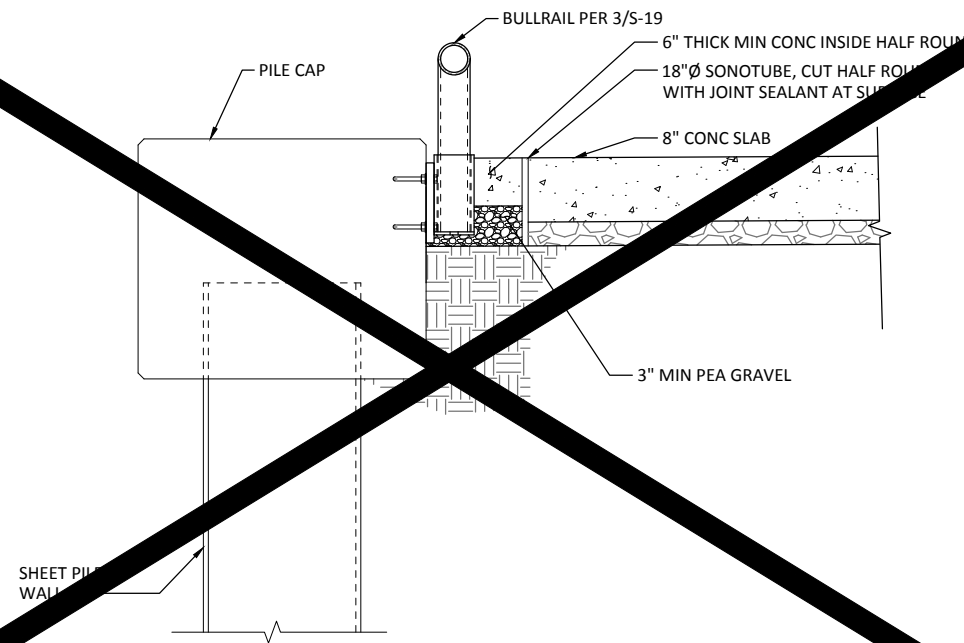
MAPLE ST. BULKHEAD PAVING AND JOINTING DETAIL

CU-12

SHEET NO. 116 OF 126



1 TYP BULLRAIL SLEEVE BLOCKOUT
 CU-11 SCALE: 1" = 1'-0"



2 BULLRAIL SLEEVE BLOCKOUT SECTION
 SCALE: 1" = 1'-0"

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RECORD DRAWINGS

720 OLIVE WAY, SUITE 1900 | SEATTLE, WA 98101
 (206) 287-9130

1601 5th Avenue, Suite 1300
 Seattle, Washington 98101
 (206) 382-0600 Fax (206) 382-0500

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 APPROVED BY: DLO
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 DATE: MARCH 2016

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

BULLRAIL SLEEVE BLOCKOUT

CU-13
 SHEET No 117 OF 126

Sheet #	Sheet length	Top	AB Tip	Design Tip	Alignment Issues	Sheet #	Sheet length	Top	AB Tip	Design Tip	Alignment Issues	Sheet #	Sheet length	Top	AB Tip	Design Tip	Alignment Issues
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1.3	35	14.06	-20.94	-20		42	60	11	-49	-49		72 West	60	11.16	-48.84	-49	
1	50	12	-38	-37		43	60	11	-49	-49		72 East	60	12	-48	-49	
2	50	13.5	-36.5	-37		44	60	11	-49	-49		73	60	11	-49	-49	
3	50	14.25	-35.75	-37		45	60	11	-49	-49		74	60	11	-49	-49	
4	50	12	-38	-37		46 West	60	11	-49	-49		75	60	11	-49	-49	
4.5	50	12	-38	-37		46 East	60	13	-47	-49		76 West	60	11.16	-48.84	-49	
5	50	12	-38	-37		47 West	60	11	-49	-49		76 East	60	11	-49	-49	
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11	50	12	-38	-35		51	60	11	-49	-49	4 1/2" North	79.5	60	11	-49	-49	
12	50	12	-38	-35		52 West	60	12.32	-47.68	-49		80	45	20.05	-24.95	-22.5	
13	50	12	-38	-35		52 East	60	11.68	-48.32	-49	4" North	King#1	115	16.16	-98.84	-100	
14	50	12	-38	-35		53 West	60	11	-49	-49		81	45	22.74	-22.26	-22.5	
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37	60	11	-49	-49		67 East	60	13.5	-46.5	-49	7 1/2" North	101	50	13.4	-36.6	-34	
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RECORD DRAWINGS

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REVISIONS				
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DESIGNED BY: EDE
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 CHECKED BY: TAH
 APPROVED BY: RHR
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

SUPPLEMENTAL INFO - PILE DRIVING LOGS

AB-01

SHEET NO. 118 OF 126

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108	50	15.83	-34.17	-34		136 West	50	13.55	-36.45	-34							
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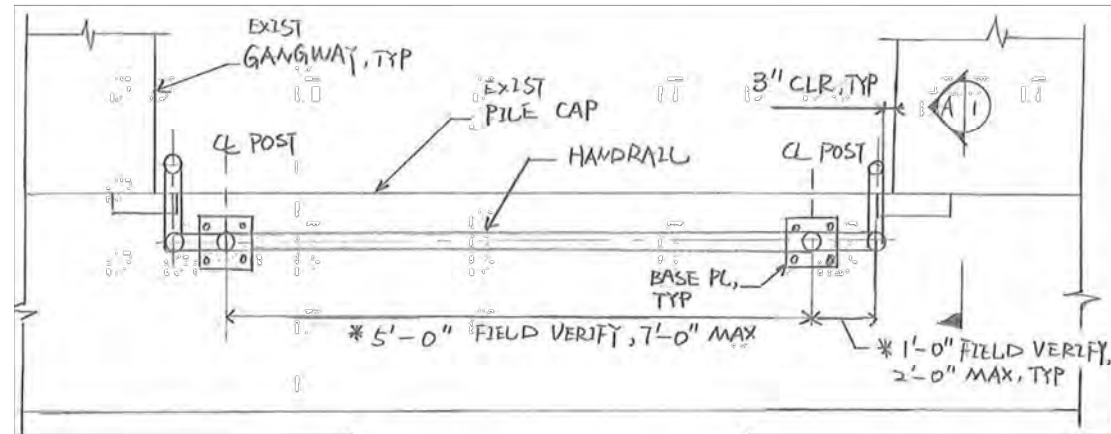
DESIGNED BY: EDE
 DRAWN BY: GMC
 CHECKED BY: TAH
 APPROVED BY: RHR
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

SUPPLEMENTAL INFO - PILE DRIVING LOGS

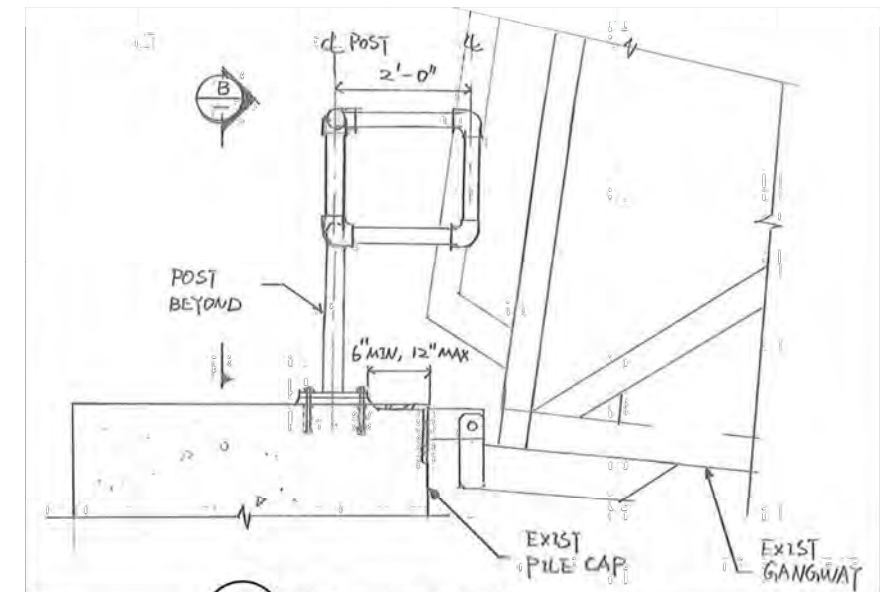
AB-02

SHEET NO. 119 OF 126

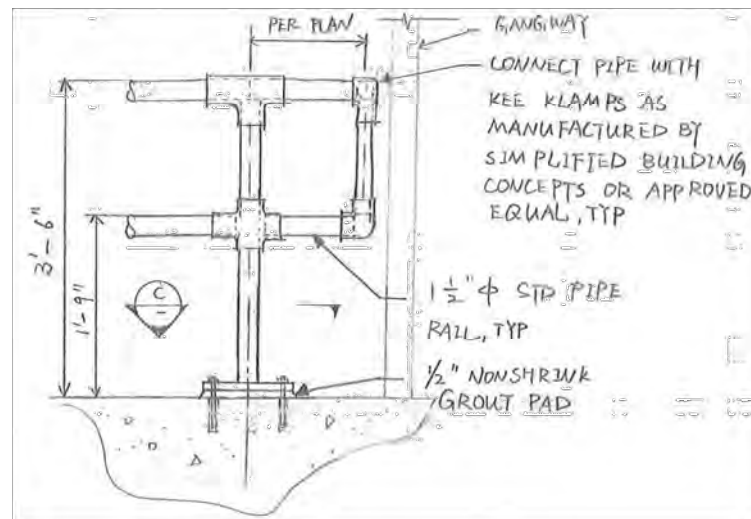


1 HANDRAIL PLAN
SCALE: NTS

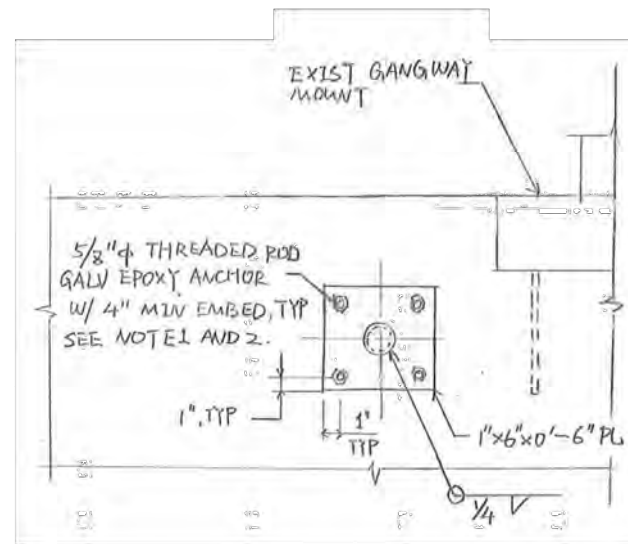
* CONTRACTOR TO FIELD LOCATE ANCHORS PRIOR TO FABRICATION, AND COORDINATE HANDRAIL DIMENSION, SEE NOTE 1.



A HANDRAIL ELEVATION
SCALE: NTS



B HANDRAIL ELEVATION
SCALE: NTS



C BASE PL DETAIL
SCALE: NTS

NOTES:

1. CONTRACTOR SHALL PROVIDE REBAR LOCATING SERVICES BEFORE DRILLING, CORE DRILL MAY NOT BE USED. REINF SHALL NOT BE CUT OR DAMAGED.
2. THREADED ROD, NUTS, AND WASHERS SHALL BE GALVANIZED PER SPECS.
3. ALL METAL FABRICATIONS SHALL BE EPOXY COATED PER SPECS. EPOXY COAT COLOR SHALL BE LIGHT GRAY.
4. PROTECT IN PLACE EXIST STURCTURES, DAMAGE SHALL BE REPAIRED BY CONTRACTOR AT NO COST TO THE OWNER.
5. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

MATERIALS:

1. PLATE SHALL BE ASTM A36 FY = 36KSI.
2. PIPE SHALL BE ASTM A53 GR B.
3. THREADED ROD SHALL BE F1554 GR 55.
4. EPOXY SHALL BE HILTI RE500 V3 OR APPROVED EQUAL, INSTALL PER MANUFACTURER'S REQUIREMENTS.

kpff

1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500

WHATCOM WATERWAY CLEAN UP PHASE 1
BELLINGHAM, WA
SK-S32: GANGWAY HANDRAIL

DATE: 05/31/2016

SCALE: NTS

DRAWN BY: GJC

SHT: 1 OF 1

RECORD DRAWINGS

ANCHOR QEA
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(206) 287-9130

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Seattle, Washington 98101
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REVISIONS				
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DESIGNED BY: EDE
DRAWN BY: GMC
CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

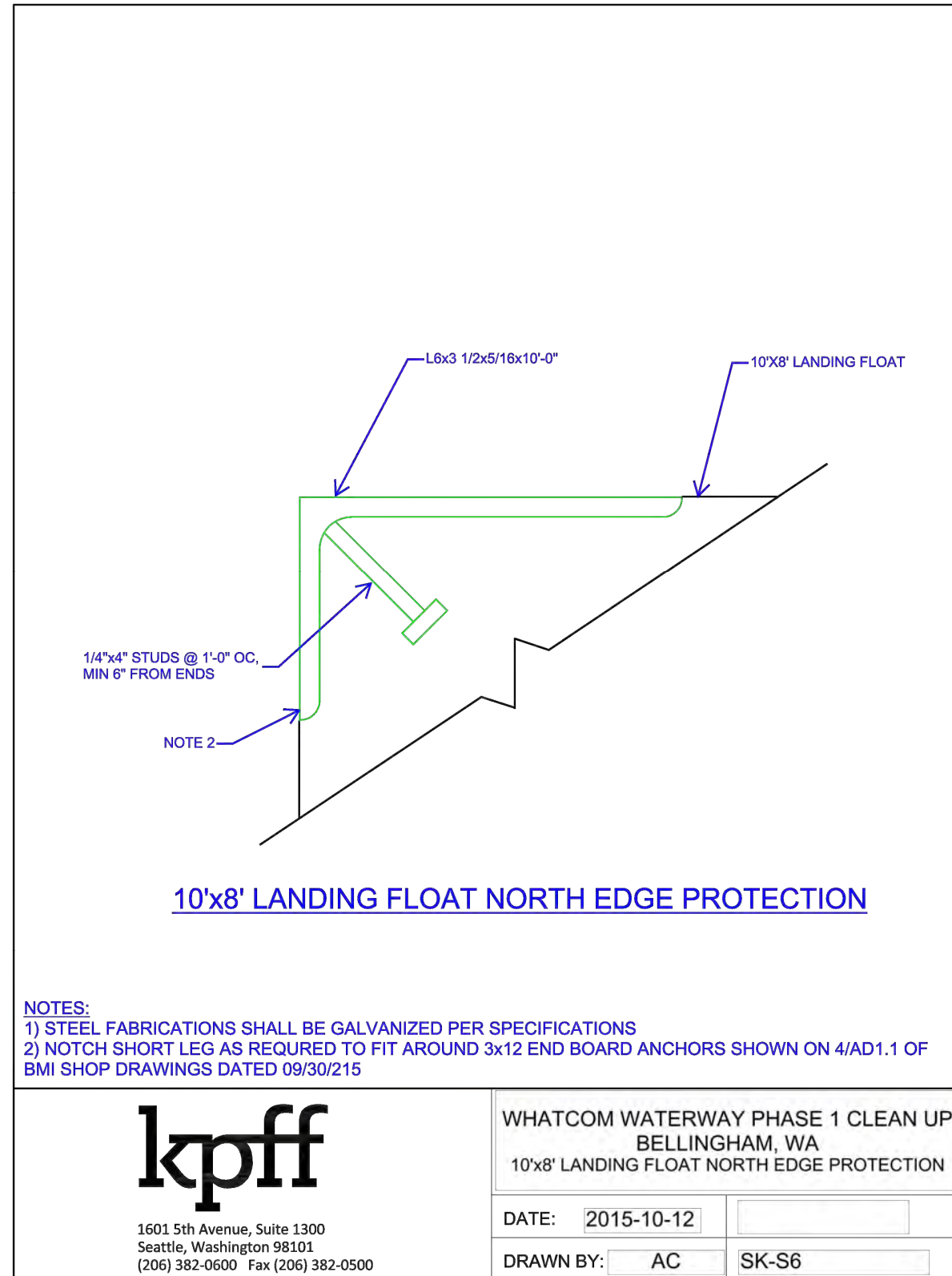
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SUPPLEMENTAL INFO - SK-S32 GANGWAY HANDRAIL

AB-03

SHEET NO. 120 OF 126

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WHATCOM WATERWAY PHASE 1 CLEAN UP
 BELLINGHAM, WA
 10'x8' LANDING FLOAT NORTH EDGE PROTECTION

DATE: 2015-10-12

DRAWN BY: AC SK-S6

ONE INCH
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RECORD DRAWINGS

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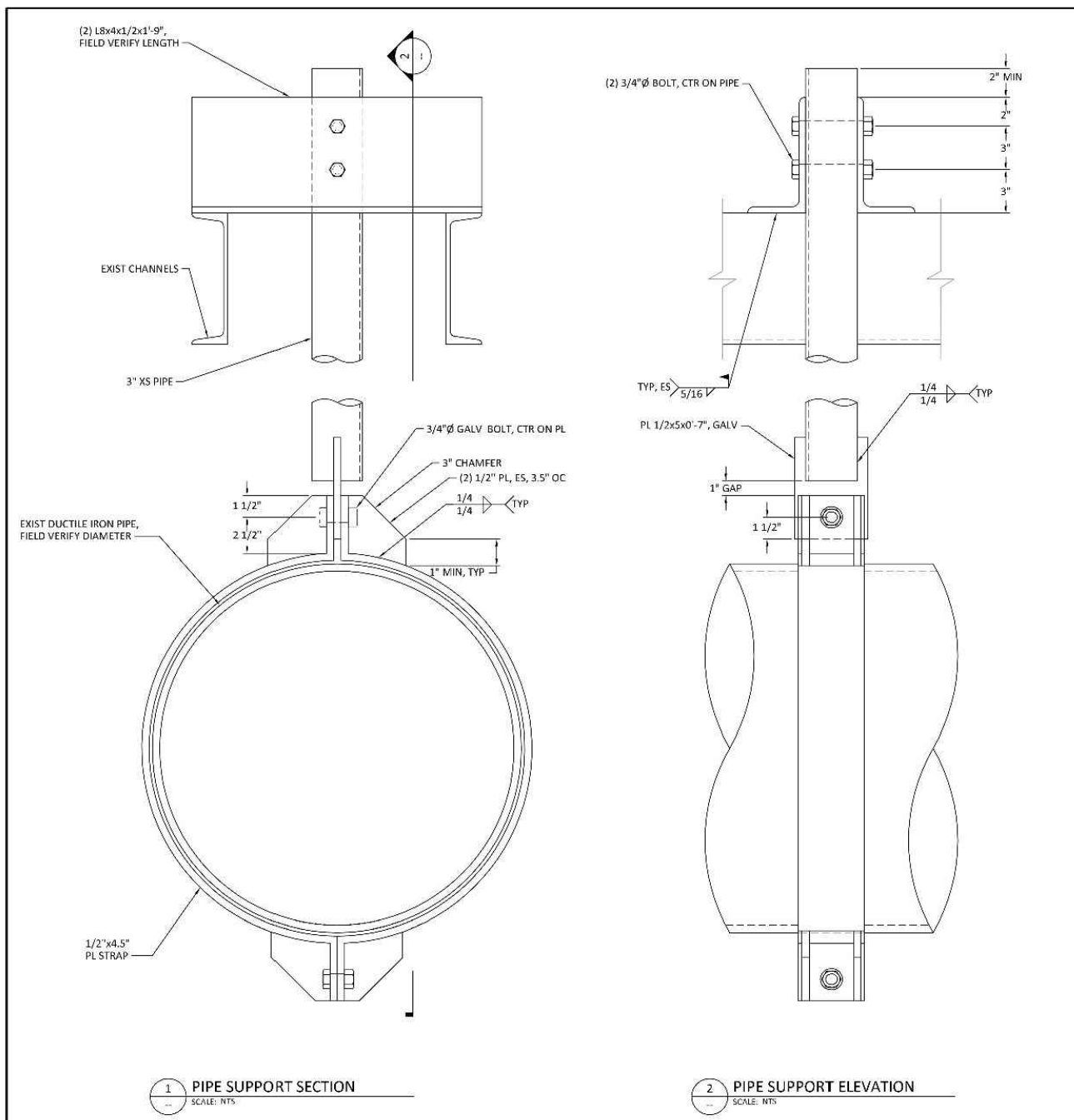
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REV	DATE	BY	APP'D	DESCRIPTION

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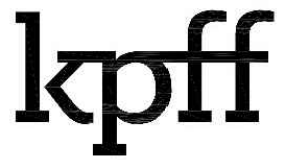
WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

SUPPLEMENTAL INFO - SK-S6 NORTH EDGE PROTECTION

AB-04
 SHEET NO. 121 OF 126



- NOTES:
 1) ALL FABRICATIONS AND BOLTS SHALL BE GALVANIZED PER SPECIFICATIONS
 2) GALVANIZATION DAMAGED BY WELDING SHALL BE REPAIRED PER SPECIFICATIONS

 1601 5th Avenue, Suite 1300 Seattle, Washington 98101 (206) 382-0600 Fax (206) 382-0500	WHATCOM WATERWAY PHASE 1 CLEANUP BELLINGHAM, WA SK-S19: RFI 046 - FOAM TANK HANGER 5 DESIGN	
	DATE: 2016-03-03	SHT 1 OF 1
DRAWN BY: ADC		SHT 1 OF 1

REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: EDE
 DRAWN BY: GMC
 CHECKED BY: TAH
 APPROVED BY: RHR
 SCALE: AS NOTED
 DATE: MARCH 2015

**WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON**

SUPPLEMENTAL INFO - SK-S19 FOAM TANK HANGER 5 DESIGN

AB-05

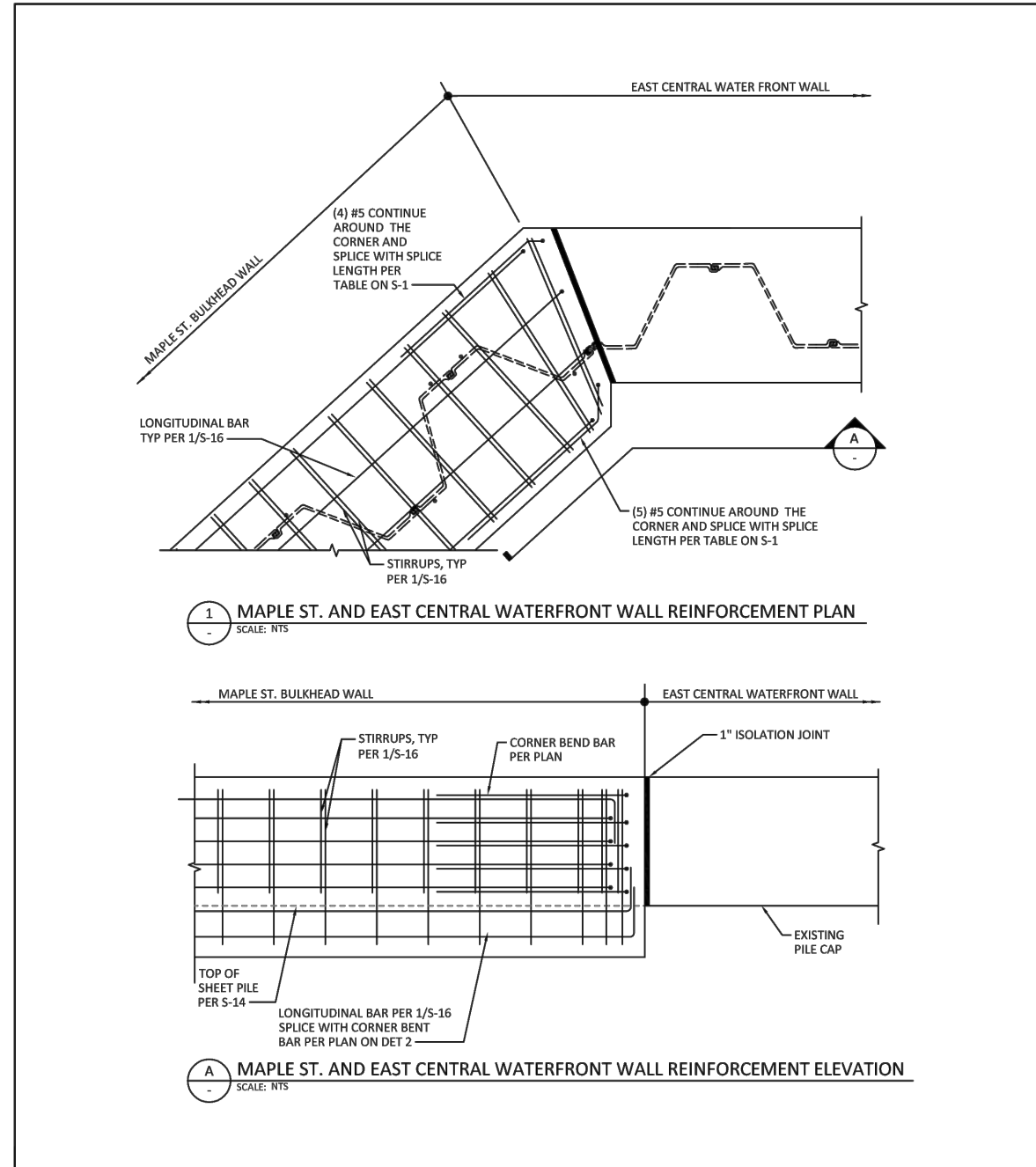
SHEET NO. 122 OF 126

RECORD DRAWINGS

ONE INCH
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 INCH SCALE ACCORDINGLY

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Dec 21, 2016 3:14pm gtl/ep



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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WA
SK-S23: MAPLE ST AND EAST CENTRAL
WATERFRONT WALL PILE CAP INTERFACE

DATE: 2016-03-30	SCALE: NTS
DRAWN BY: ADC	SHT 1 OF 1

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS



REVISIONS				
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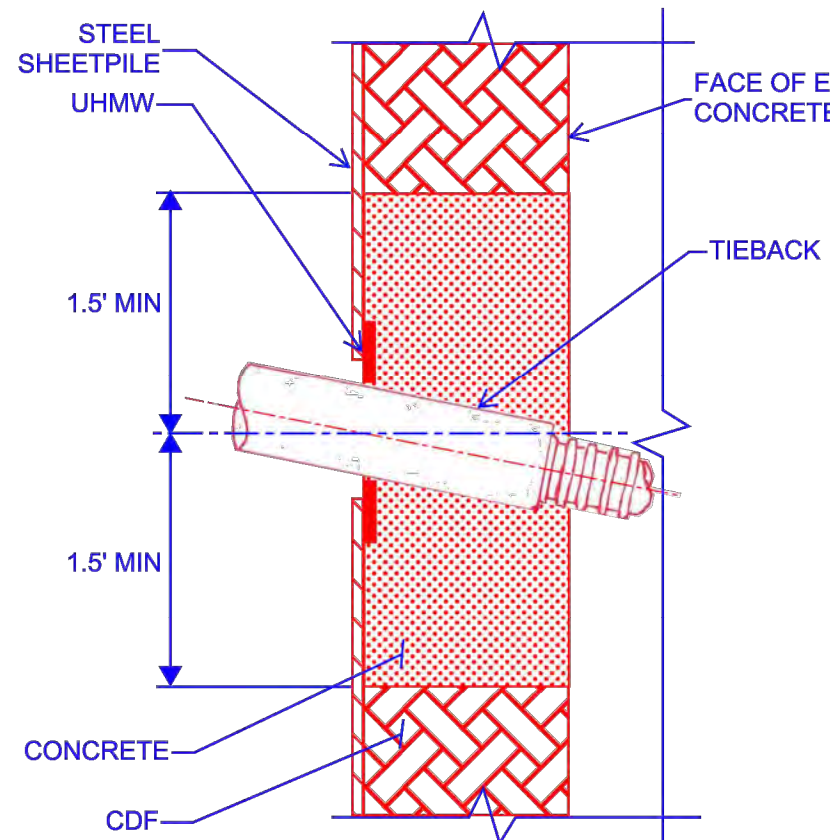
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CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

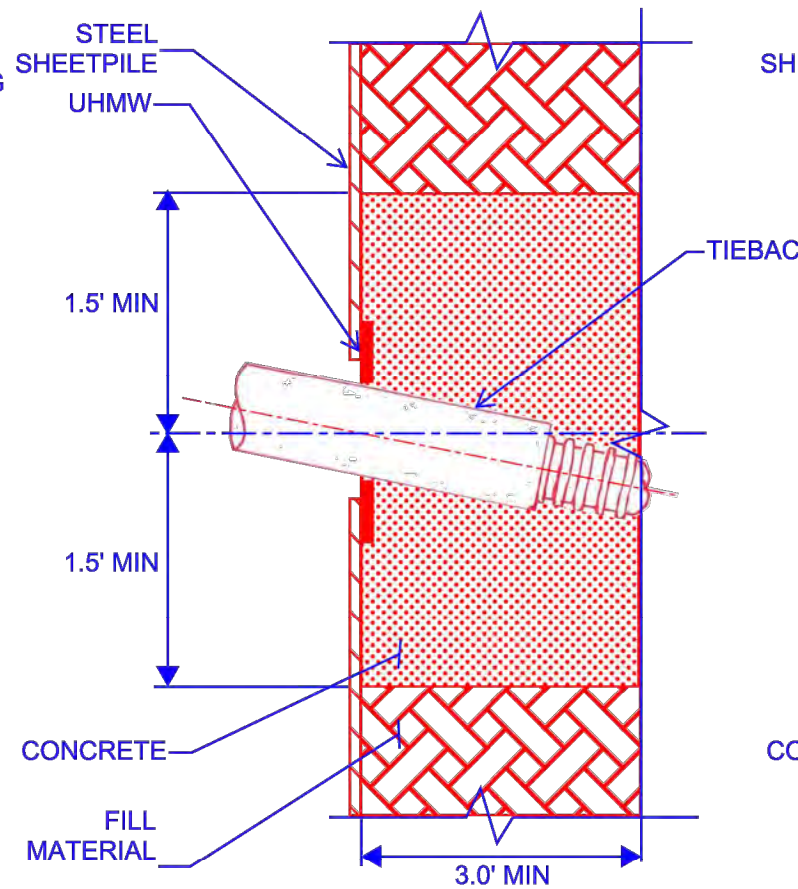
SUPPLEMENTAL INFO - SK-S23 REVISED PILE CONCRETE CAP

AB-06

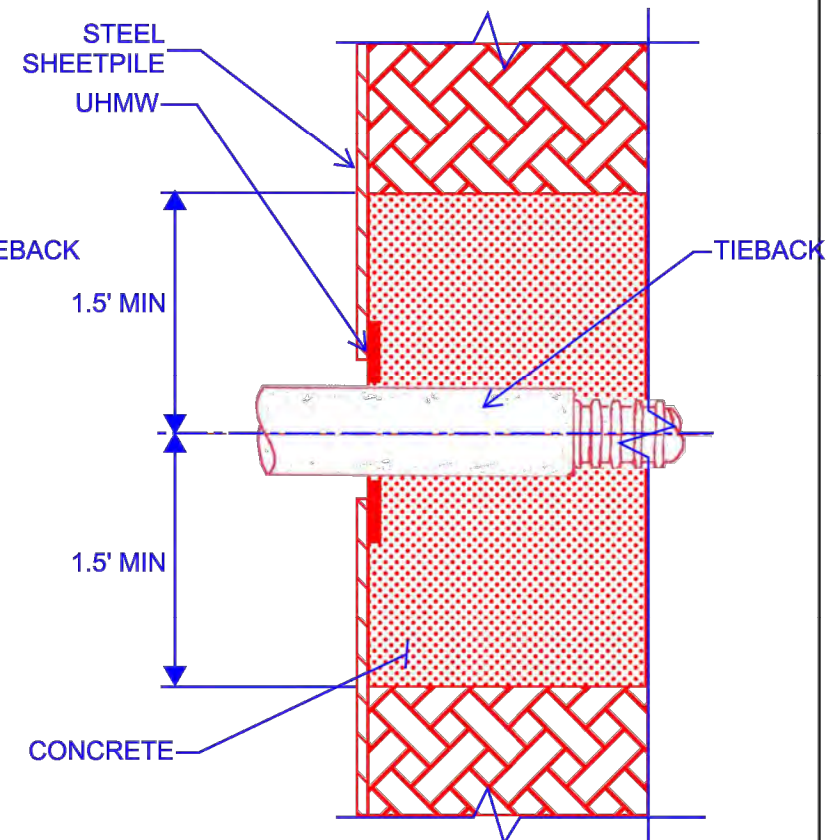
SHEET NO. 123 OF 126



1 TIEBACK HOLE SEAL DETAIL FOR AREAS LESS THAN 3' WIDE
SCALE: NTS



2 TIEBACK HOLE SEAL DETAIL FOR AREAS MORE THAN 3' WIDE
SCALE: NTS



A TYPICAL TIEBACK HOLE SEAL PLAN
SCALE: NTS

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WA
SK-S18: TIEBACK HOLE SEAL

DATE: 2016-03-03 SCALE: NTS
DRAWN BY: ADC SHT: 1 OF 1

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY

RECORD DRAWINGS

ANCHOR QEA
720 OLIVE WAY, SUITE 1900 | SEATTLE, WA 98101
(206) 287-9130

kpff
1601 5th Avenue, Suite 1300
Seattle, Washington 98101
(206) 382-0600 Fax (206) 382-0500

REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

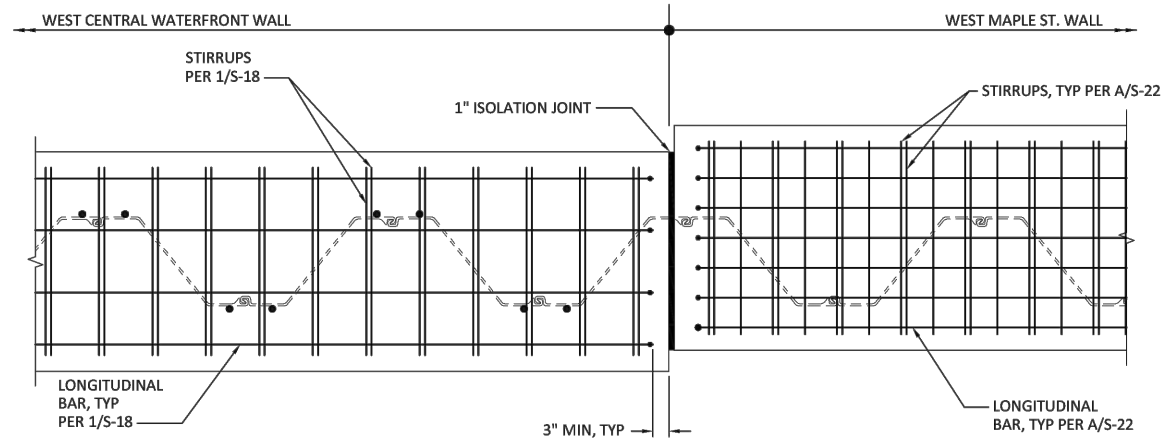
DESIGNED BY: EDE
DRAWN BY: GMC
CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

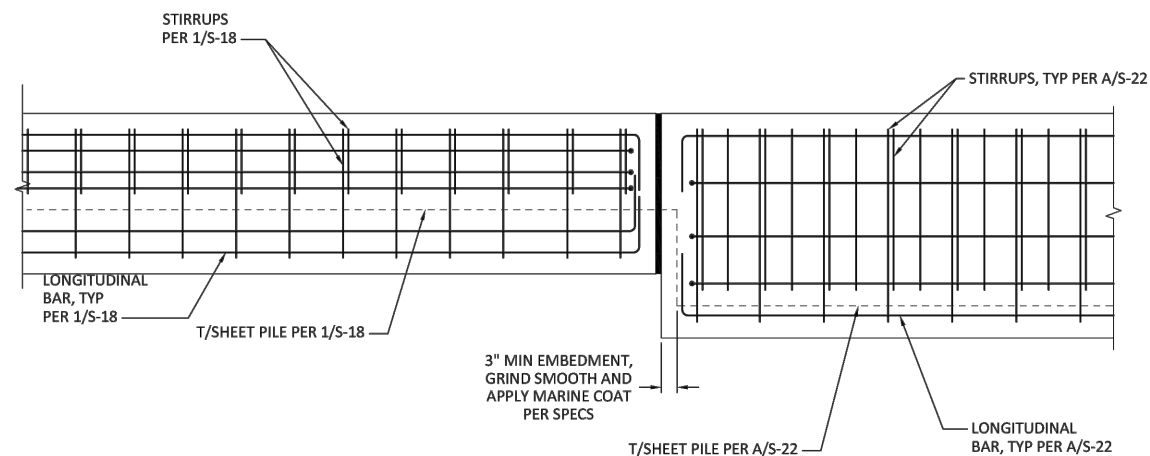
SUPPLEMENTAL INFO - SK-S18 TIEBACK SEAL

AB-07
SHEET NO. 124 OF 126

K:\projects\0007-port-of-bellingham\whatcom waterway cleanup\inner wrf\record drawings\2016\220_whatcom_asbuilt\sheet\X_22-34-TB.dwg Model Dec 21, 2016 3:14pm gtlg



1
WEST CENTRAL WATERFRONT AND WEST MAPLE ST. WALL REINFORCEMENT PLAN
SCALE: NTS



A
WEST CENTRAL WATERFRONT AND WEST MAPLE ST. WALL REINFORCEMENT ELEVATION
SCALE: NTS



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WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WA

SK-S22: WEST CENTRAL WATERFRONT AND WEST
MAPLE ST. WALL PILE CAP INTERFACE

DATE: 2016-03-24

SCALE: NTS

DRAWN BY: ADC

SHT 1 OF 1

RECORD DRAWINGS

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Dec 21, 2016 3:14pm gtlg



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: EDE
DRAWN BY: GMC
CHECKED BY: TAH
APPROVED BY: RHR
SCALE: AS NOTED
DATE: MARCH 2015

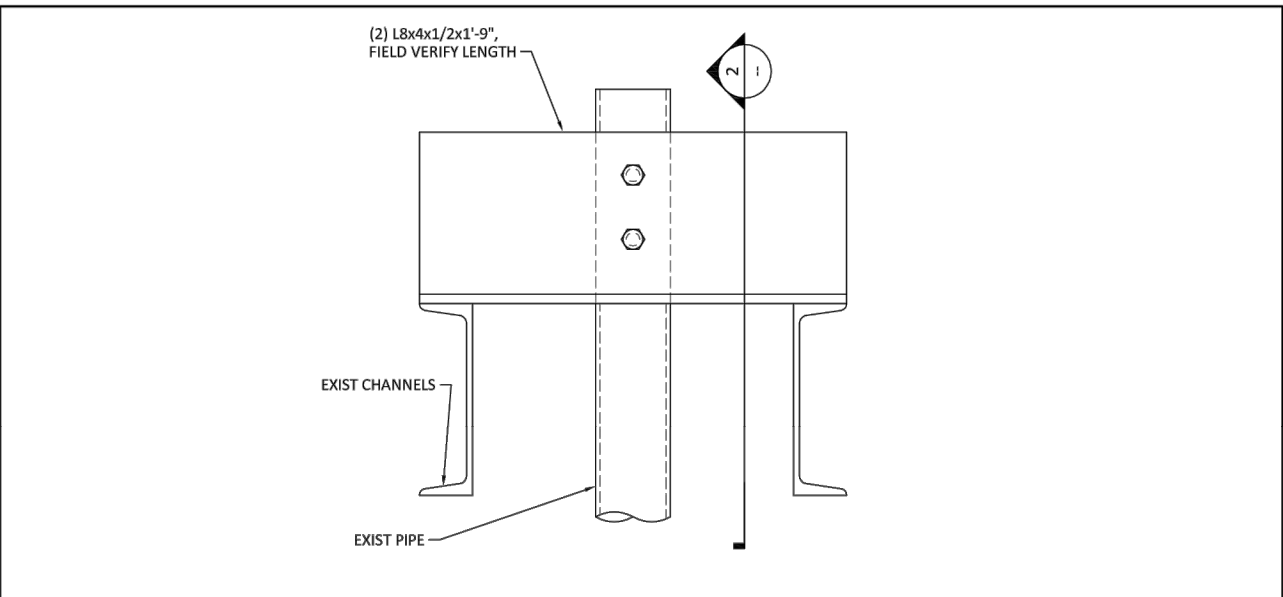
WHATCOM WATERWAY PHASE 1 CLEANUP
BELLINGHAM, WASHINGTON

SUPPLEMENTAL INFO - SK-S22 MAPLE ST. PILE CAP

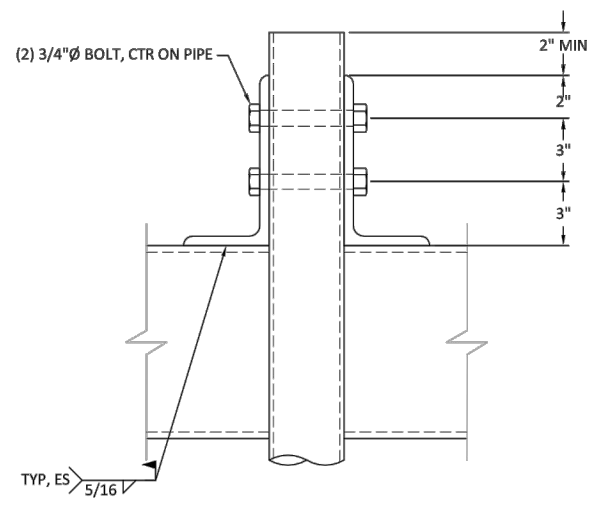
AB-08

SHEET NO. 125 OF 126

ONE INCH
AT FULL SIZE, IF NOT ONE
INCH SCALE ACCORDINGLY



1 PIPE SUPPORT SECTION
SCALE: NTS



2 PIPE SUPPORT ELEVATION
SCALE: NTS

NOTES:
 1) ALL FABRICATIONS AND BOLTS SHALL BE GALVANIZED PER SPECIFICATIONS
 2) GALVANIZATION DAMAGED BY WELDING SHALL BE REPAIRED PER SPECIFICATIONS



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WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WA
 SK-S20: RFI 048 - FOAM TANK HANGER
 REPLACEMENT

DATE: 2016-03-03

DRAWN BY: ADC

SHT 1 OF 1

RECORD DRAWINGS

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY

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 (206) 287-9130

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 Seattle, Washington 98101
 (206) 382-0600 Fax (206) 382-0500

REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: EDE
 DRAWN BY: GMC
 CHECKED BY: TAH
 APPROVED BY: RHR
 SCALE: AS NOTED
 DATE: MARCH 2015

WHATCOM WATERWAY PHASE 1 CLEANUP
 BELLINGHAM, WASHINGTON

SUPPLEMENTAL INFO - TYPE 4 PIPE SUPPORT

AB-09
 SHEET NO. 126 OF 126