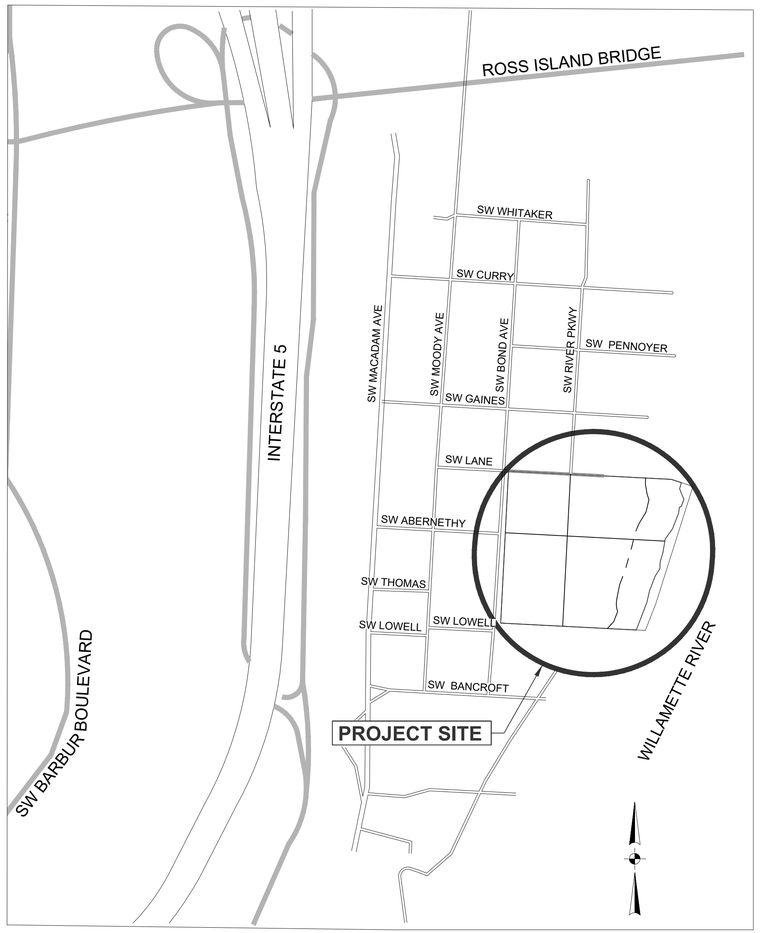
# ALAMO MANHATTAN BANK STABILIZATION

## PRELIMINARY DESIGN

## PORTLAND, OREGON




VICINITY MAP

SCALE: NTS


PROJECT MAP

SCALE: NTS

## SITE INFORMATION:

MULTNOMAH COUNTY, OREGON
1S1E10DB TL 300 (7.68 ACRES)
1S1E10DB TL 400 (2.15 ACRES)
CITY OF PORTLAND ZONING: CX-CENTRAL
PROPOSED USE: HIGH-RISE COMMERCIAL MIXED-USE

## BENCHMARK:

ALL ELEVATIONS SHOWN ON THE PLANS ARE CITY OF PORTLAND DATUM USING BENCHMARK NO.1514, ELEVATION=36.182, LOCATED AT THE INTERSECTION OF SW MOODY AVE AND SW GIBBS ST AT THE SW CORNER AND BENCHMARK NO. 1519, ELEVATION =33.576, LOCATED AT SW BOND AVE AND SW CURRY ST AT THE EAST CURB. THIS DATUM HAS ITS ZERO ELEVATION EQUIVALENT TO 1.375 FEET BELOW MEAN SEA LEVEL AS SET BY THE US COAST AND GEODETIC SURVEY, 1947 ADJUSTMENT.

## SHEET INDEX



## APPLICANT/DEVELOPER


| | |
|---|---|
| Name: | Alamo Manhattan |
| Contact: | Wade Johns |
| Phone: | (469) 941-4515 |
| Email: | Wade.Johns@alamomanhattan.com |


## CIVIL ENGINEER/SURVEYOR


| | |
|---|---|
| Name: | Otak, Inc. |
| Engineer: | Joshua Owens, PE |
| Surveyor: | Mike Spelts |
| Phone: | (503) 287-6825 |
| Email: | joshua.owens@otak.com |


## ENVIRONMENTAL CONSULTANT


| | |
|---|---|
| Name: | Pacific Habitat Services, Inc. |
| Contact: | John van Staveren |
| Phone: | (503) 570-0820 |
| Email: | jvs@pacifichabitat.com |


## GEOTECHNICAL CONSULTANT


| | |
|---|---|
| Name: | GeoDesign, Inc. |
| Contact: | Nick Paveglio |
| Phone: | (360) 693-8416 |
| Email: | npaveglio@geodesign.com |


NOT FOR CONSTRUCTION

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REVISIONS

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FINAL MAP DATA

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| CAD BY | SECTION ENGR |
| CHECKED BY | BES REVIEWER |
| | PBOT REVIEWER |

CITY OF PORTLAND OREGON 1851


Otak, Inc.
808 SW Third Avenue, Ste. 300
Portland, OR 97204
503. 287. 6825
www.otak.com


OTAK PROJECT NUMBER
19050.2

ALAMO MANHATTAN
BANK STABILIZATION
PORTLAND, OR
COVER SHEET

SHEET NO.
C0.0
OF

GENERAL

1. ERRORS AND OMISSIONS ARE THE RESPONSIBILITY OF THE "ENGINEER OF RECORD". IF ERRORS OR OMISSIONS ARE FOUND AFTER THE PERMIT HAS BEEN ISSUED, THE PERMITTEE OR ITS CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD (JOSHUA OWENS, PE OF OTAK, INC. AT 503-287-6825) TO HAVE THE CORRECTIONS MADE. ALL CHANGES WILL REQUIRE THE APPROVAL OF THE CITY ENGINEER PRIOR TO THE WORK BEGINNING.

2. THE CONTRACTOR SHALL HAVE AT ALL TIMES ON-SITE, THE APPROVED CONSTRUCTION DRAWINGS & SPECIAL SPECIFICATIONS, CITY OF PORTLAND STANDARD SPECIFICATIONS & STANDARD DRAWINGS, AND ALL OTHER APPLICABLE SPECIFICATIONS BOOKS AND MANUALS. ELECTRONIC EQUIVALENT ARE ACCEPTABLE.

3. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL PERMIT CONDITIONS, LAWS, ORDINANCES, CODES AND/OR REGULATIONS APPLICABLE FOR PROJECT IMPLEMENTATION, WHICH INCLUDES BUT NOT LIMITED TO: OREGON DSL REMOVAL/FILL PERMIT, U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT, DEQ 1200-C PERMIT, ODFW FISH PASSAGE WAIVER APPROVAL, NATIONAL MARINE FISHERIES SERVICE BIOLOGICAL OPINION AMENDMENT, AND MULTNOMAH COUNTY FLOODPLAIN PERMIT.

4. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THESE DRAWINGS AND THE APPLICABLE REQUIREMENTS OF THE 2010 EDITION OF THE CITY OF PORTLAND STANDARD CONSTRUCTION SPECIFICATIONS AND ALL REVISIONS AND SPECIAL SPECIFICATIONS.

5. ELEVATIONS ARE BASED ON CITY OF PORTLAND DATUM FROM BENCH MARK NO. 1514, ELEVATION = 36.182, LOCATED AT THE INTERSECTION OF SW MOODY AVE AND SW GIBBS ST AT THE ST CORNER AND BENCHMARK NO. 1519, ELEVATION = 33.576, LOCATED AT SW BOND AVE AND SW CURRY ST AT THE EAST CURB.

6. ATTENTION EXCAVATORS: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING [503.232.1987]. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CALL CENTER. YOU MUST NOTIFY THE CENTER AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL [811 OR 1-800-332-2344].

7. UTILITIES SHOWN ON THESE PLANS ARE FOR INFORMATION AND COORDINATION PURPOSES ONLY AND ARE NOT AUTHORIZED FOR INSTALLATION UNDER THE PUBLIC STREET IMPROVEMENT PERMIT. PRIVATE AND PUBLIC UTILITY COMPANIES ARE REQUIRED TO SECURE SEPARATE UTILITY PERMITS FROM THE PBOT FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

8. FOR PLUGGING OF ABANDONED SEWER PIPES AND FILLING ABANDONED PIPES, SEE SECTIONS 00490.43 AND 00490.44 RESPECTIVELY OF THE STANDARD SPECIFICATION.

UNANTICIPATED CONTAMINATED MATERIAL

9. FOR UNANTICIPATED CONTAMINATED MEDIA ENCOUNTERED, THE PERMITTEE/APPLICANT OR ITS AGENT SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE MANAGEMENT, AND DISPOSAL OF CONTAMINATED MEDIA ENCOUNTERED. THE PERMITTEE IS ALSO RESPONSIBLE FOR ALL RESULTANT DELAYS.

10. THE PERMITTEE OR ITS AGENT SHALL PROVIDE THE CITY (ENGINEERING AND INSPECTION) WITH COPIES OF ALL DISPOSAL PERMITS FROM THE PERMITTED DISPOSAL FACILITY, ANALYTICAL RESULTS USED TO GAIN ACCEPTANCE OF THE CONTAMINATED MEDIA, AND DISPOSAL RECEIPTS/DAILY WEIGH SLIPS. DAILY WEIGH SLIP AMOUNTS SHALL BE CHECKED AGAINST INSPECTOR'S DAILY REPORTS. THE PERMITTEE MUST USE AN OREGON FACILITY FOR DISPOSAL OF THE CONTAMINATED MEDIA.

TREES

11. ALL TREE REMOVAL SHALL COMPLY WITH THE FEDERAL MIGRATORY BIRD TREATY ACT. SEE THE SPECIAL PROVISIONS FOR REQUIREMENTS PRIOR TO CUTTING OF ANY TREE.

12. ALL GROUND DISTURBANCES NEAR TREES REQUIRES ROOT INSPECTION!! CONTACT URBAN FORESTRY (URBAN FORESTRY AT 503-823-8733; FOR ROOT INSPECTIONS PRESS 3) PRIOR TO ALL EXCAVATIONS ADJACENT TO TREES. CONSULTATION WITH THE URBAN FORESTER IS REQUIRED BEFORE CUTTING OF ROOTS.

13. FOR ALTERNATE TREE SPECIES OR ALTERNATE TREE PLANTING LOCATION APPROVAL (PRIOR TO PLANTING), CONTACT URBAN FORESTRY AT 503-823-8733; TO LEAVE A MESSAGE FOR THE TREE INSPECTOR PRESS 5.

EROSION CONTROL

14. EROSION/SEDIMENT CONTROL (ESC) IS REQUIRED ON THIS PROJECT. IMPLEMENTATION OF THE ESC AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE FACILITIES IS, PER THE EROSION CONTROL MANUAL (MARCH 2008),THE RESPONSIBILITY OF THE CONTRACTOR PERMITTEE OR ITS AGENT.

15. CONTRACTOR SHALL AVOID DISTURBING AREAS OUTSIDE OF THE EXTENTS SHOWN IN THE PLANS.

16. ESTABLISH STAGING AND STOCKPILE AREAS FOR STORAGE OF CONSTRUCTION EQUIPMENT, VEHICLE PARKING, EARTHWORK MATERIAL, LOGS, ROCK, PLANTING MATERIALS, FUELING, SERVICING, AND HAZARDOUS MATERIALS. MINIMIZE CLEARING AND GRUBBING ACTIVITIES WHEN PREPARING STAGING AND STOCKPILE AREAS.

FOR GRADING PERMITS AND STRUCTURAL FILLS

17. THE PERMITTEE OR IT'S AGENT SHALL RETAIN THE SERVICES OF A GEOTECHNICAL ENGINEER TO MAKE ALL INSPECTIONS, TO PROVIDE MATERIAL TESTING SERVICES, AND TO CERTIFY THAT THE PLACED STRUCTURAL FILLS MEET THE EMBANKMENT SPECIFICATION RECOMMENDED IN THE GEOTECHNICAL REPORT, AND SECTION 00330 - "EARTHWORK" OF THE STANDARD CONSTRUCTION SPECIFICATION.

18. THE PERMITTEE OR IT'S AGENT SHALL ADHERE TO THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT PREPARED BY GEODESIGN DATED DECEMBER XX, 2019.

19. THE GEOTECHNICAL ENGINEER SHALL SEND TEST AND INSPECTION RESULTS TO:

    TODD LILES, BUREAU OF TRANSPORTATION

    1120 SW 5TH AVENUE, SUITE 800

    PORTLAND, OR 97204-1971

    OR VIA EMAIL TO: TODD.LILES@PORTLANDOREGON.GOV

EQUIPMENT

20. THE SIZE AND CAPABILITY OF HEAVY EQUIPMENT WILL BE COMMENSURATE WITH THE PROJECT.

21. EXCAVATOR(S), AND ANY OTHER EQUIPMENT PERFORMING WORK BELOW ORDINARY HIGH WATER (EL=18.22), SHALL USE BIODEGRADABLE HYDRAULIC FLUIDS BASED UPON RAPESEED (CANOLA) VEGETABLE OIL. ALL EQUIPMENT WILL BE IN GOOD WORKING ORDER AND FREE OF FUEL, OIL, LUBRICATION, OR OTHER FLUID LEAKS. WASH AND REMOVE EXTERNAL OIL AND GREASE, ALONG WITH DIRT AND MUD PRIOR TO MOBILIZING EQUIPMENT ONTO THE CONSTRUCTION SITE. ALL CONSTRUCTION EQUIPMENT WORKING WITHIN 50 FEET OF JURISDICTIONAL WETLANDS OR WATERS SHALL BE DIAPERED WITH PETROLEUM ABSORBENT MATERIAL IN ACCORDANCE WITH ODOT STANDARD SPECIFICATION SECTION 00290 AND ALL APPLICABLE JPA OR DEQ CONDITIONS.

22. INSPECT EQUIPMENT DAILY FOR LEAKS OR ACCUMULATIONS OF GREASE, AND FIX ANY IDENTIFIED PROBLEMS BEFORE ENTERING RIVER OR AREAS THAT DRAIN DIRECTLY TO THE RIVER. ALL EQUIPMENT SERVICING AND MAINTENANCE, INCLUDING FUELING, OIL CHANGE AND LUBRICATION, WILL OCCUR OUTSIDE OF THE RIPARIAN ZONE AND WITHIN THE LIMITS OF THE DESIGNATED STAGING AREA. ALL WASTE MATERIALS ASSOCIATED WITH THESE OPERATIONS INCLUDING OIL, LUBRICANTS, HYDRAULIC FLUIDS AND TRASH, WILL BE DISPOSED OF OFF-SITE IN AN ENVIRONMENTALLY SOUND MANNER. WHEN NOT IN USE, VEHICLES SHALL BE STORED IN THE STAGING AREA AS IDENTIFIED IN THE PLANS.

23. EXISTING ROADWAYS OR TRAVEL PATHS WILL BE USED WHENEVER REASONABLE. MINIMIZE THE NUMBER OF NEW ACCESS PATHS TO MINIMIZE IMPACTS TO RIPARIAN VEGETATION AND FUNCTIONS. BELOW ORDINARY HIGH WATER, HEAVY EQUIPMENT SHALL NOT BE OPERATED OUTSIDE OF TURBIDLY CURTAIN.

IN-WATER WORK ISOLATION

24. THE ODFW APPROVED IN-WATER WORK WINDOW IS JULY 1 - OCTOBER 31.

25. ESC MEASURMENTS SHALL BE IMPLEMENTED TO PREVENT SEDIMENT AND DEBRIS FROM LEAVING THE WORK AREA, INCLUDING IN WATER WORK AREAS FOR ALL WATER LEVELS

EARTHWORK

26. EARTHWORK GENERAL NOTES:
    - THE CONTRACTOR SHALL LIMIT GROUND DISTURBANCE TO THE EXTENT NECESSARY TO COMPLETE THE WORK.
    - THE ENGINEER MAY ADJUST GRADING IN THE FIELD TO MEET SPECIFIC FIELD CONDITIONS.
    - EXCESS CUT MATERIAL SHALL BE EXPORTED TO AN APPROVED EARTHWORK HAUL SITE TO BE IDENTIFIED BY THE CONTRACTOR.
    - UNSUITABLE SUBGRADE MATERIAL SHALL BE OVEREXCAVATED AND REPLACED BY SUITABLE FILL.

30. GRADING TOLERANCES SHALL BE AS FOLLOWS: WITHIN 0.1 FEET OF DESIGN ELEVATIONS FOR EARTHWORK, ROCK, AND LARGE WOOD STRUCTURES.

ROCK

31. STONE FOR RIPRAP, FILTER BLANKET, AND RIVER ROCK SHALL BE HARD, DURABLE, RESISTANT TO WEATHERING, FREE FROM OVERBURDEN, SPOIL, SHALE, STRUCTURAL DEFECTS, AND ORGANIC MATERIAL, AND SHALL MEET THE SIZE CLASS SPECIFIED. NEITHER BREADTH NOR THICKNESS OF A SINGLE STONE SHALL BE LESS THAN ONE-THIRD ITS LENGTH. RIVER ROCK SHALL BE ROUNDED TO SUBROUNDED, WITH DIAMETERS AS SPECIFIED IN THE PLANS. RIPRAP AND FILTER BLANKET ROCK MATERIALS AND SHALL BE ANGULAR.

32. THE RIPRAP, FILTER BLANKET, AND RIVER ROCK SHALL BE CONSTRUCTED TO THE LIMITS SHOWN ON THE PLANS.

LARGE WOOD STRUCTURES

33. LARGE WOOD MATERIALS: SPECIES OF WOOD FOR USE IN LARGE WOOD STRUCTURES SHALL BE DOUGLAS-FIR, WESTERN RED CEDAR, OR SITKA SPRUCE. SIZE OF LARGE WOOD MATERIAL SHALL BE PER DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IF A SPECIFIED LOG SIZE IS NOT AVAILABLE. WOOD MATERIAL SHALL BE FREE OF CRACKS, DECAY, OR OTHER STRUCTURAL DEFICIENCIES, AND SHALL BE FREE OF DISEASE AND PARASITIC INSECTS. LARGE WOOD MATERIAL FOR STRUCTURES SHALL BE SECURED FROM THE FOLLOWING SOURCES:
    - IMPORTED LARGE WOOD FROM AN OFF-SITE SOURCE (PROCURED AND HAULED TO SITE BY CONTRACTOR)

34. THE CONTRACTOR SHALL PROVIDE A LIST OF THE LOGS THAT ARE AVAILABLE TO BE USED FOR THE PROJECT. FOR EACH LOG, THE LIST SHALL DESCRIBE THE TREE SPECIES, DIAMETER (DBH), LENGTH, AND ROOTWAD DIAMETER. THE LARGE WOOD STRUCTURE CONFIGURATIONS AND MATERIAL SCHEDULES SHOWN IN THE PLANS ARE CONSIDERED PRELIMINARY, AND ARE SUBJECT TO REVISION BY THE ENGINEER UPON RECEIPT OF THE LIST OF LOG MATERIAL.

35. SPECIFIED DIAMETER OF LOGS SHALL BE MEASURED AT BREAST HEIGHT (DBH). LENGTHS OF LOGS SHALL INCLUDE THE ROOTWAD PORTIONS OF THE LOG, IF ROOTWAD IS PRESENT. LOG SIZE SHALL BE WITHIN THE SPECIFIED RANGE OF DIAMETERS SHOWN ON THE PLANS. ROOTWAD DIAMETER SHALL TYPICALLY BE A MINIMUM OF 3 TIMES THE DBH OF THE LOG, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

36. GENERAL LARGE WOOD STRUCTURE INSTALLATION NOTES:
    - THE ENGINEER WILL PROVIDE FIELD GUIDANCE DURING THE FIRST INSTALLATION OF EACH TYPE OF STRUCTURE, PROVIDE MINIMUM OF 3 WORKING DAY NOTICE
    - THE LOCATION AND CONFIGURATION OF LARGE WOOD STRUCTURES MAY VARY IN FIELD DUE TO SITE CONDITIONS, AND THE FINAL LOCATION OF THESE STRUCTURES WILL BE FLAGGED BY THE ENGINEER DURING CONSTRUCTION.
    - THE CONTRACTOR SHALL TAKE CARE TO PROTECT THE ROOTWADS FROM DAMAGE DURING HANDLING OF LARGE WOOD MATERIAL.
    - BURIAL DEPTH AND PERCENT BURIAL SHALL MATCH OR EXCEED SPECIFIED DIMENSIONS. BOTH DIMENSIONS ARE MEASURED FROM THE TOP OF THE LOG. THE TILT ANGLE OF THE LOG IS PROVIDED ONLY AS A RECOMMENDATION. FINAL TILT ANGLES MAY VARY FROM PLANS PROVIDED THE LOGS HAVE THE REQUIRED BURIAL DEPTHS AND BURIAL LENGTHS.
    - LIMIT TRENCH WIDTHS ASSOCIATED WITH LOG INSTALLATION TO THE LOG DIAMETER PLUS 2 FEET AND MINIMIZE BANK DISTURBANCE. FOLLOWING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE DISTURBED BANKS BY METHODS NOTED ON THESE PLANS.
    - BACKFILL LOG TRENCHES WITH NATIVE ALLUVIUM AND SOILS, MACHINE PACKING BY TRACKING OVER THE LOGS AND PATTING THE SOILS WITH THE BUCKET OF THE EXCAVATOR PER SOIL COMPACTION SPECIFICATIONS.
    - IF MULTIPLE ROOTWADS OR STRUCTURES ARE INSTALLED TO PROTECT A BANK FROM EROSION, POSITION THE LOGS SO THE ROOTWADS OVERLAP SLIGHTLY TO AVOID WATER JETTING BETWEEN LOGS.
    - SALVAGE SMALLER WOOD MATERIAL (<4 INCH DBH) THAT IS REMOVED DURING SITE CLEARING TO RE-USE AS SLASH DEBRIS IN VOID SPACE BETWEEN LOGS.

POST-CONSTRUCTION SITE STABILIZATION

39. SEED AND PLANT ACCORDING TO LANDSCAPE PLANS BY LINDA TYCHER & ASSOCIATES

## LEGEND

- STORM DRAIN MANHOLE
- STORM DRAIN DRY WELL
- STORM DRAIN CLEAN OUT
- STORM DRAIN CATCH BASIN
- STORM DRAIN DROP INLET
- STORM DRAIN AREA DRAIN
- STORM DRAIN MAIN — SD —
- STORM DRAIN LATERAL — SD — SD —
- LIDA PLANTERS
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEAN OUT
- SANITARY SEWER MAIN — SS —
- SANITARY SEWER LATERAL — SS — SS —
- WATER VALVE
- WATER BLOW-OFF
- WATER METER (VAULT)
- WATER MAIN — W —
- WATER MAIN (BY PWB)
- FIRE HYDRANT
- FIRE DEPT. CONNECTION
- POST INDICATOR VALVE
- DOUBLE CHECK VALVE — DCVA —
- FIRE WATER MAIN — FW — FW —
- ELECTRIC JUNCTION BOX
- UTILITY POLE & GUY
- UTILITY POLE WITH LIGHT
- ELECTRIC LINE — P —
- UNDERGROUND UTILITY TRENCH
- GAS VALVE
- GAS BLOW OFF
- GAS METER
- GAS LINE — G —
- TELEPHONE MANHOLE
- TELEPHONE RISER
- TELEPHONE POLE
- UNDERGROUND TELEPHONE — T —
- OVERHEAD LINES — OHL —
- CABLE RISER
- UNDERGROUND CABLE TV — TV —
- UNDERGROUND COMM — COM —
- STREET LIGHT POLE
- STREET LIGHT JUNCTION BOX
- STREET LIGHT CONTROLLER
- UNDERGROUND CONDUIT

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| A.C. | ASPHALTIC CONCRETE | PT | POINT OF TANGENCY |
| BZ | BUILDING ZONE | PVI | POINT OF VERTICAL INTERSECTION |
| DWY | DRIVEWAY | PZ | PEDESTRIAN ZONE |
| ELEV | ELEVATION | R.O.W. | RIGHT OF WAY |
| EZ | ENTRY ZONE | STA | STATION |
| FB | FACE OF BUILDING | SW | SIDEWALK |
| FL | FLOW LINE | TC | TOP OF CURB |
| FZ | FURNISHING ZONE | TCD | TOP OF CHECK DAM |
| IE | INVERT ELEVATION | TP | TOP OF PLANTER |
| LF | LINEAL FEET | TPB | TOP OF PLANTER BOX CURB |
| MWMAC | MINOR WARM MIX ASPHALTIC CONCRETE | TS | TOP OF SIDEWALK |
| | | TYP | TYPICAL |
| N/A | NOT APPLICABLE | | |
| PC | POINT OF CURVATURE | | |
| PL | PROPERTY LINE | | |
| PRC | POINT OF REVERSE CURVATURE | | |

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ALAMO MANHATTAN
BANK STABILIZATION
PORTLAND, OR
GENERAL NOTES AND LEGEND

SHEET NO.
C0.1
OF

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## DEMOLITION GENERAL NOTES:

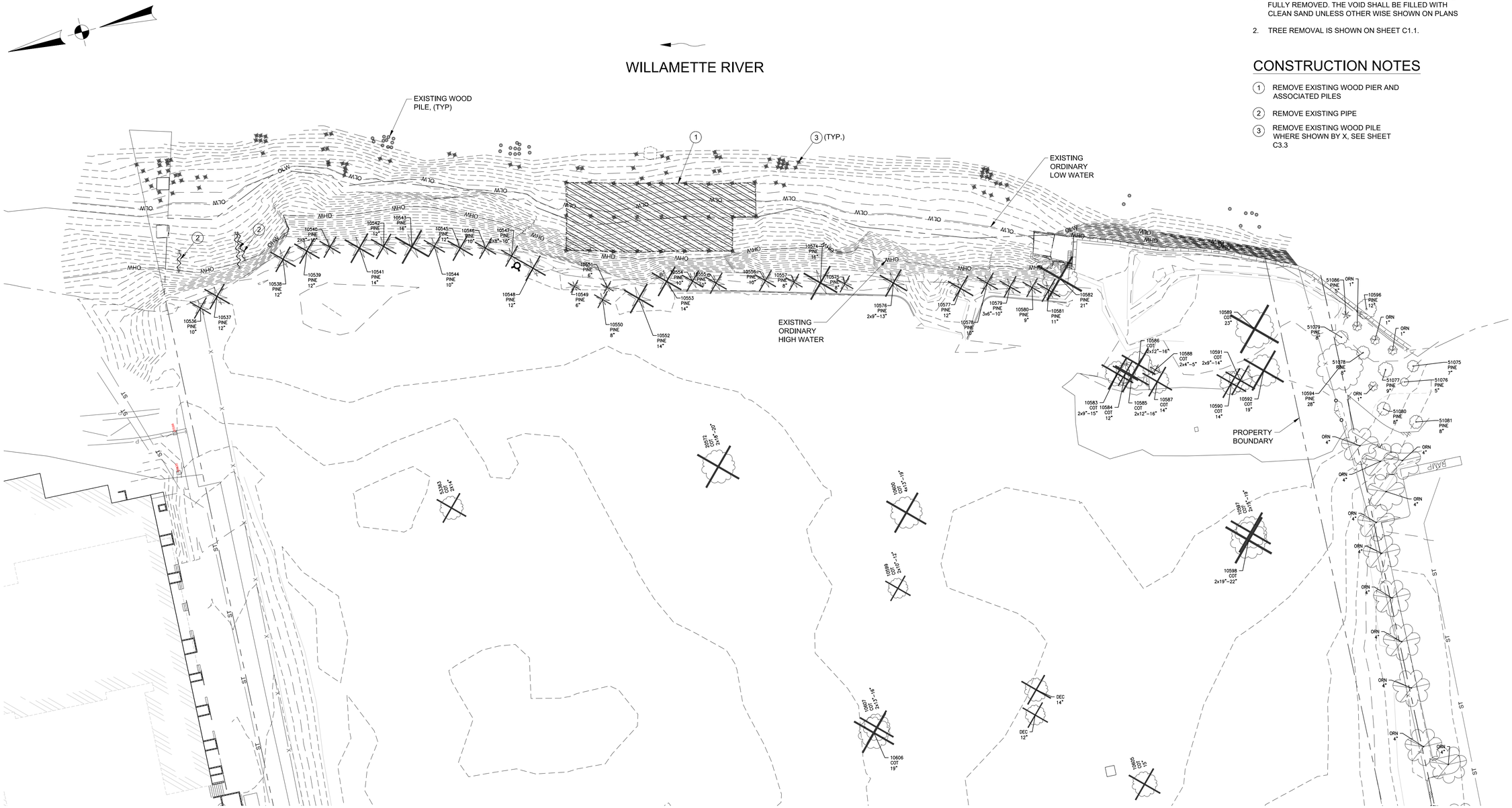
1. THE WOOD PILES SHOWN TO BE REMOVED SHALL BE FULLY REMOVED. THE VOID SHALL BE FILLED WITH CLEAN SAND UNLESS OTHER WISE SHOWN ON PLANS
2. TREE REMOVAL IS SHOWN ON SHEET C1.1.

## CONSTRUCTION NOTES

(1) REMOVE EXISTING WOOD PIER AND ASSOCIATED PILES

(2) REMOVE EXISTING PIPE

(3) REMOVE EXISTING WOOD PILE WHERE SHOWN BY X, SEE SHEET C3.3

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# ALAMO MANHATTAN BANK STABILIZATION
PORTLAND, OR
## EXISTING CONDITIONS AND DEMOLITION

SHEET NO.
C1.0
OF

FILE: C19050.C1.0.DWG ### 2/5/2020 4:52:36 PM - LEAHB

## CONSTRUCTION NOTES

(1) REMOVE TREES AS SHOWN IN "TREE INVENTORY TABLE."

## TREE INVENTORY TABLE

| ID # | COMMON NAME | BOTANICAL NAME | OBH (IN) | REMOVAL Y/N |
|---|---|---|---|---|
| 10536 | PINE | PINUS | 10" | Y |
| 10537 | PINE | PINUS | 12" | Y |
| 10538 | PINE | PINUS | 12" | Y |
| 10539 | PINE | PINUS | 12" | Y |
| 10540 | PINE | PINUS | 10" | Y |
| 10541 | PINE | PINUS | 14" | Y |
| 10542 | PINE | PINUS | 12" | Y |
| 10543 | PINE | PINUS | 16" | Y |
| 10544 | PINE | PINUS | 10" | Y |
| 10545 | PINE | PINUS | 12" | Y |
| 10546 | PINE | PINUS | 10" | Y |
| 10547 | PINE | PINUS | 10" | Y |
| 10548 | PINE | PINUS | 12" | Y |
| 10549 | PINE | PINUS | 6" | Y |
| 10550 | PINE | PINUS | 8" | Y |
| 10551 | PINE | PINUS | 6" | Y |
| 10552 | PINE | PINUS | 14" | Y |
| 10553 | PINE | PINUS | 14" | Y |
| 10554 | PINE | PINUS | 10" | Y |
| 10555 | PINE | PINUS | 10" | Y |
| 10556 | PINE | PINUS | 10" | Y |
| 10557 | PINE | PINUS | 8" | Y |
| 10574 | PINE | PINUS | 16" | Y |
| 10575 | PINE | PINUS | 8" | Y |
| 10576 | PINE | PINUS | 13" | Y |
| 10577 | PINE | PINUS | 12" | Y |
| 10578 | PINE | PINUS | 10" | Y |
| 10579 | PINE | PINUS | 10" | Y |
| 10580 | PINE | PINUS | 9" | Y |
| 10581 | PINE | PINUS | 11" | Y |
| 10582 | COTTONWOOD | POPULUS DELTOIDES | 21" | Y |
| 10583 | COTTONWOOD | POPULUS DELTOIDES | 15" | Y |
| 10584 | COTTONWOOD | POPULUS DELTOIDES | 12" | Y |
| 10585 | COTTONWOOD | POPULUS DELTOIDES | 16" | Y |
| 10586 | COTTONWOOD | POPULUS DELTOIDES | 16" | Y |
| 10587 | COTTONWOOD | POPULUS DELTOIDES | 14" | Y |
| 10588 | COTTONWOOD | POPULUS DELTOIDES | 5" | Y |
| 10589 | COTTONWOOD | POPULUS DELTOIDES | 23" | Y |
| 10590 | COTTONWOOD | POPULUS DELTOIDES | 14" | Y |
| 10591 | COTTONWOOD | POPULUS DELTOIDES | 14" | Y |
| 10592 | COTTONWOOD | POPULUS DELTOIDES | 19" | Y |
| 10597 | COTTONWOOD | POPULUS DELTOIDES | 19" | Y |
| 10598 | COTTONWOOD | POPULUS DELTOIDES | 22" | Y |
| 10599 | COTTONWOOD | POPULUS DELTOIDES | 12" | Y |
| 10600 | COTTONWOOD | POPULUS DELTOIDES | 19" | Y |
| 20572 | COTTONWOOD | POPULUS DELTOIDES | 20" | Y |
| 53363 | COTTONWOOD | POPULUS DELTOIDES | 14" | Y |

WILLAMETTE RIVER

EXISTING ORDINARY LOW WATER

EXISTING ORDINARY HIGH WATER

PROPERTY BOUNDARY

CONCRETE

0 30 60
SCALE IN FEET

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PORTLAND, OR
TREE INVENTORY AND
PROTECTION

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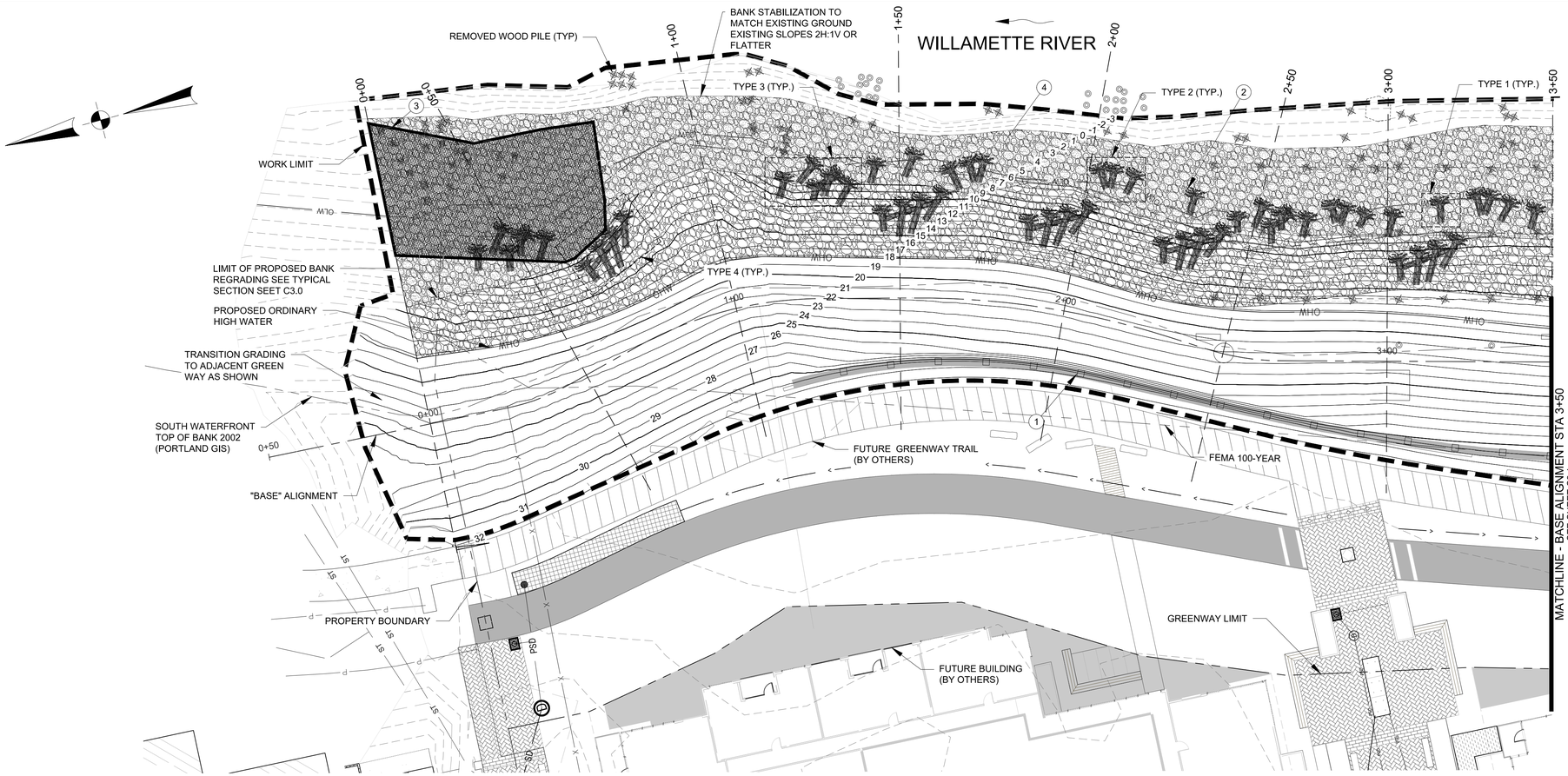
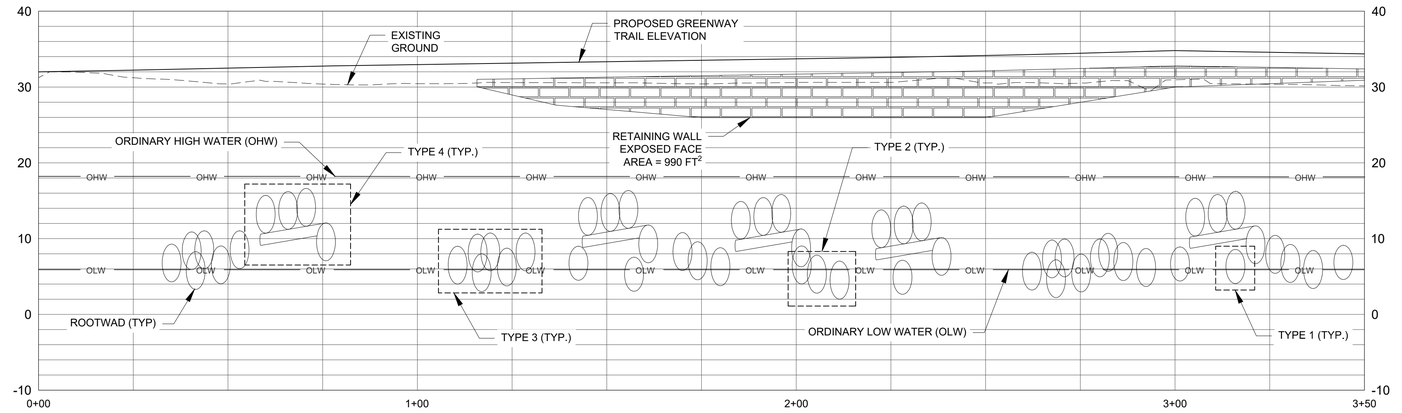
OF

FILE: C19050-C1.1.DWG ### 2/5/2020 4:53:07 PM - LEAHB




BASE ALIGNMENT PROFILE: STA 0+00 TO STA 3+50
Horiz. Scale: 1"=20'
Vert. Scale: 1"=10'

## GENERAL NOTES:

1. BANK SECTIONS ARE SHOWN ON SHEETS C2.2 - C2.5.

## CONSTRUCTION NOTES

1. CONSTRUCT RETAINING WALL AND FENCE, SEE SHEET C3.X FOR DETAILS
2. CONSTRUCT LARGE WOOD STRUCTURES, SEE SHEET C3.1-C3.2
3. EXISTING SHALLOW WATER ALCOVE TO REMAIN, SLOPES 4:1 OR FLATTER, SEE TYPICAL SECTIONS ON SHEET C3.0
4. CONSTRUCT BANK STABILIZATION , SEE TYPICAL SECTIONS ON SHEET C3.0

## LEGEND

- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR (1)
- PROPOSED 5' CONTOUR (5)
- ORDINARY HIGH WATER (OHW ELEV 18.22') (OHW)
- ORDINARY LOW WATER (OHW ELEV 5.90') (OLW)
- SOUTH WATER FRONT TOP OF BANK (2002, PORTLAND GIS)
- BASE ALIGNMENT (FOR HORIZONTAL REFERENCE)
- PROPOSED FENCE
- PROPOSED RETAINING WALL

0 20 40
SCALE IN FEET

NOT FOR CONSTRUCTION

| NO. | DATE | DESCRIPTION | APPD. |
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REVISIONS

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CITY OF PORTLAND, OREGON 1851

Otak, Inc.
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Portland, OR 97204
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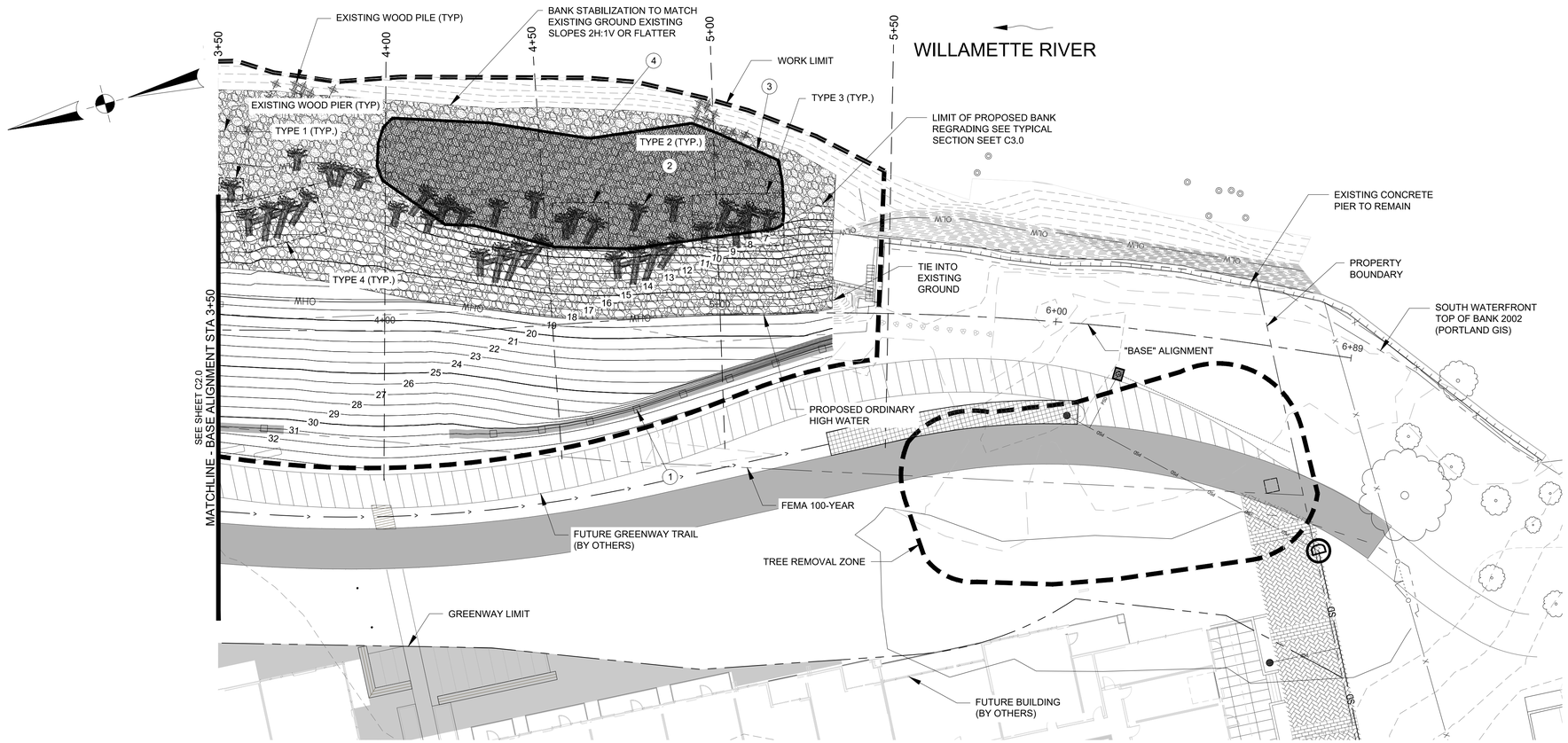
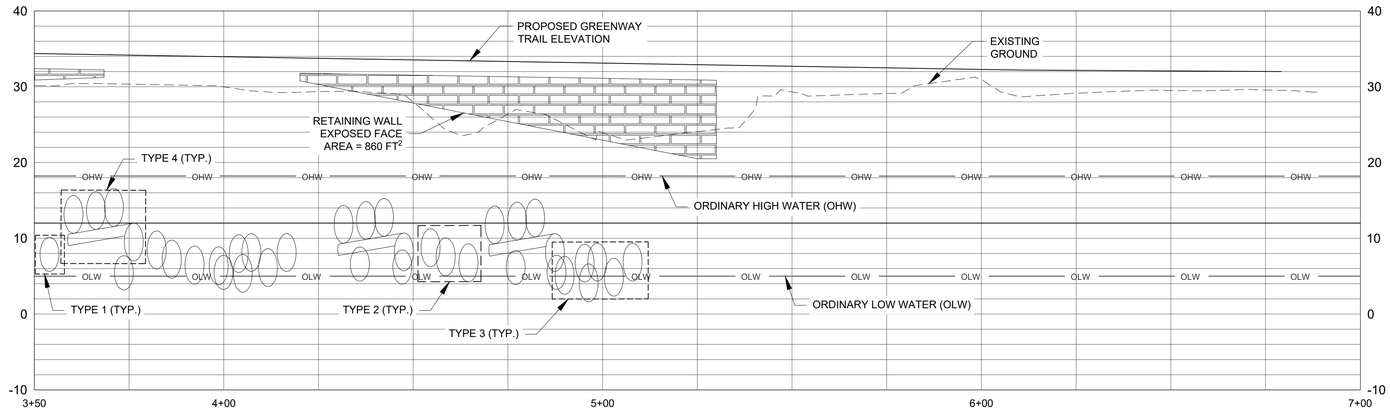
OTAK PROJECT NUMBER
19050.2

# ALAMO MANHATTAN BANK STABILIZATION
PORTLAND, OR
## GRADING PLAN AND PROFILE

SHEET NO.
C2.0
OF

FILE: C19050-C2.0.DWG ### 2/5/2020 4:54:15 PM - LEAHB




BASE ALIGNMENT PROFILE: STA 3+50 TO STA 7+00
Horiz. Scale: 1"=20'
Vert. Scale: 1"=10'

## GENERAL NOTES:

1. BANK SECTIONS ARE SHOWN ON SHEETS C2.2 - C2.5.

## CONSTRUCTION NOTES

1. CONSTRUCT RETAINING WALL AND FENCE, SEE SHEET C3.X FOR DETAILS
2. CONSTRUCT LARGE WOOD STRUCTURES, SEE SHEET C3.1-C3.2
3. EXISTING SHALLOW WATER ALCOVE TO REMAIN, SLOPES 4:1 OR FLATTER, SEE TYPICAL SECTIONS ON SHEET C3.0
4. CONSTRUCT BANK STABILIZATION , SEE TYPICAL SECTIONS ON SHEET C3.0

## LEGEND

- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- PROPOSED 1' CONTOUR (1)
- PROPOSED 5' CONTOUR (5)
- ORDINARY HIGH WATER (OHW ELEV 18.22') (OHW)
- ORDINARY LOW WATER (OHW ELEV 5.90') (OLW)
- SOUTH WATER FRONT TOP OF BANK (2002, PORTLAND GIS)
- BASE ALIGNMENT (FOR HORIZONTAL REFERENCE)
- PROPOSED FENCE
- PROPOSED RETAINING WALL

NOT FOR CONSTRUCTION

0 20 40
SCALE IN FEET

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19050.2

# ALAMO MANHATTAN BANK STABILIZATION
PORTLAND, OR

## GRADING PLAN AND PROFILE

SHEET NO.
C2.1
OF

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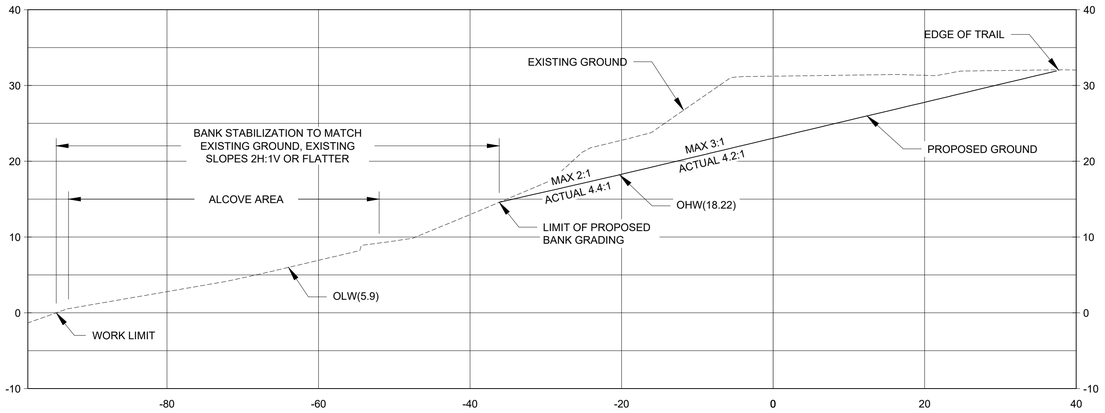


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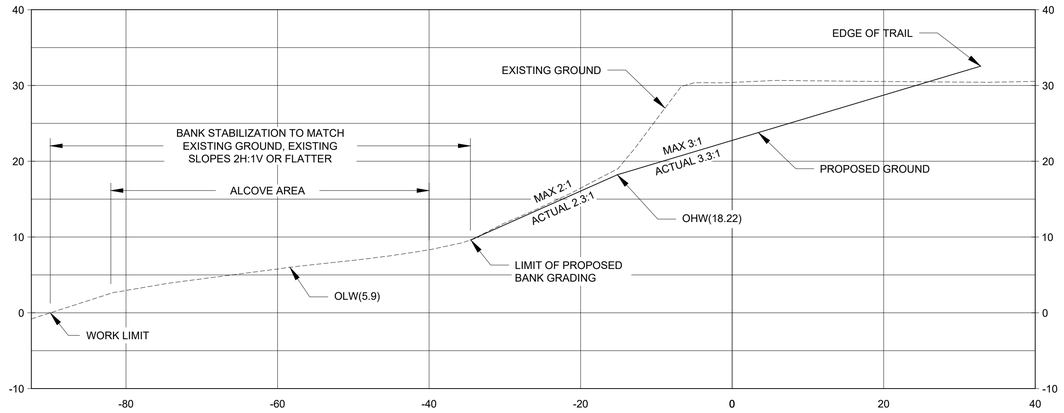
Vert. Scale: 1" =10'

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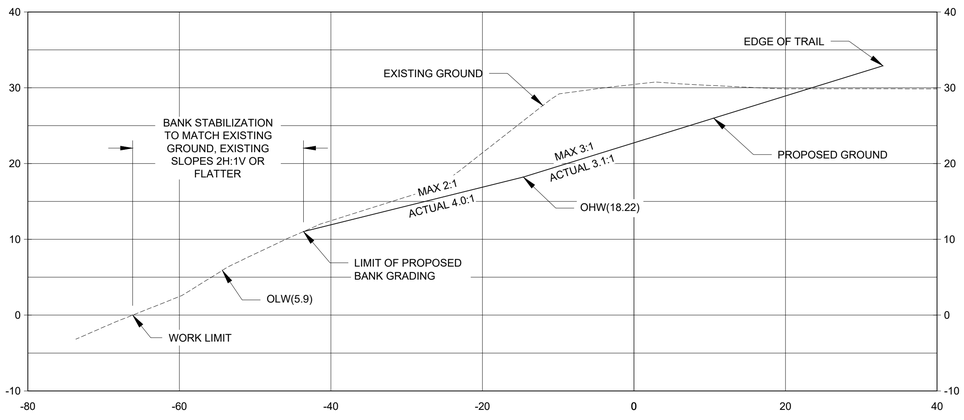
Vert. Scale: 1" =10'

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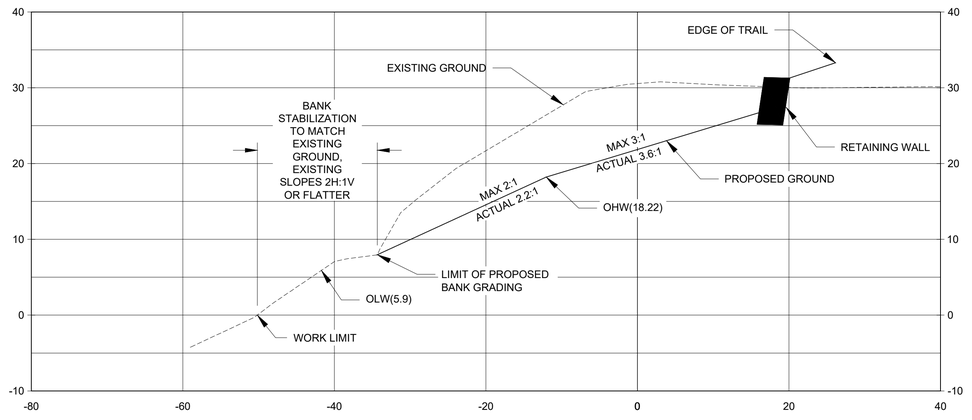


BASE ALIGNMENT SECTION: STA 1+50.00
Horiz. Scale: 1" = 10'
Vert. Scale: 1" =10'

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OTAK PROJECT NUMBER
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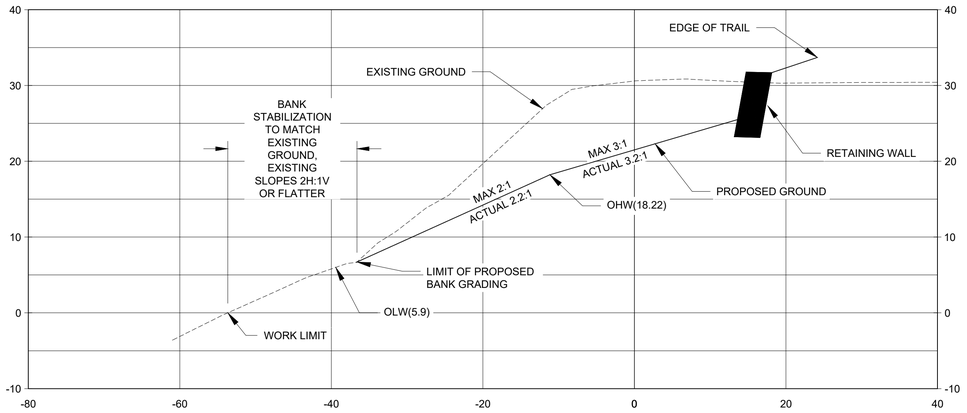
ALAMO MANHATTAN
BANK STABILIZATION
PORTLAND, OR

BANK SECTIONS

SHEET NO.
C2.2
OF

FILE: C:\19050.C2.2.DWG ### 2/5/2020 4:54:57 PM - LEAHB

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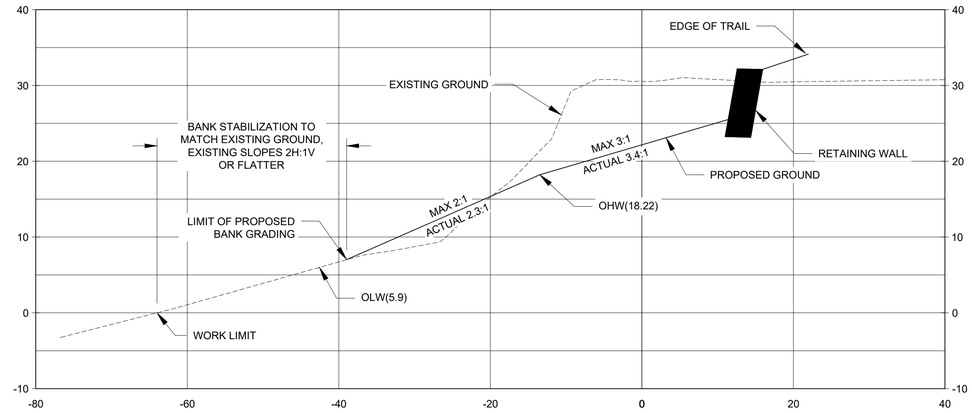
Horiz. Scale: 1" = 10'
Vert. Scale: 1" =10'

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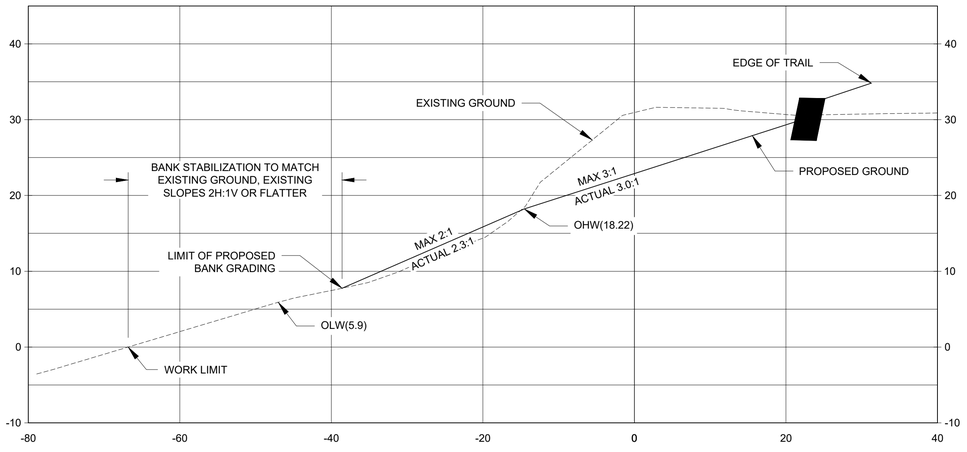


BASE ALIGNMENT SECTION: STA 3+00.00
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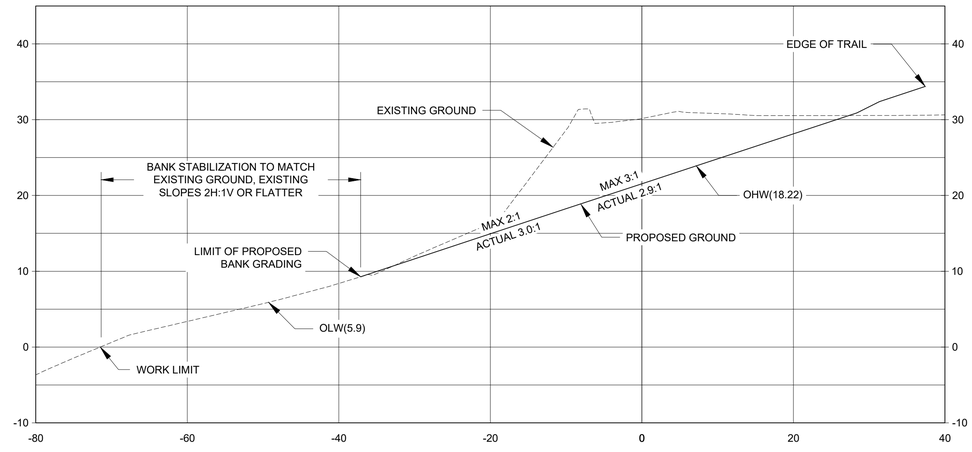


BASE ALIGNMENT SECTION: STA 3+50.00
Horiz. Scale: 1" = 10'
Vert. Scale: 1" =10'

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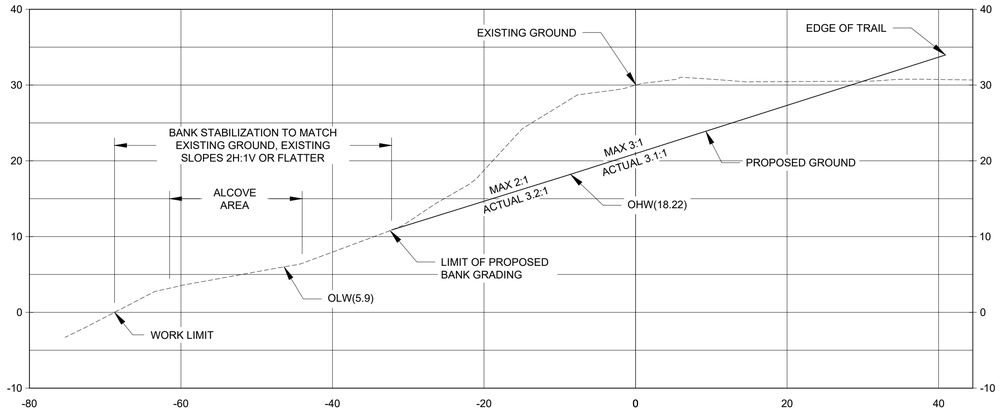
ALAMO MANHATTAN
BANK STABILIZATION
PORTLAND, OR

BANK SECTIONS

SHEET NO.
C2.3
OF

FILE: C:\19050.C2.2.DWG ### 2/5/2020 4:55:02 PM - LEAHB




BASE ALIGNMENT SECTION: STA 4+00.00
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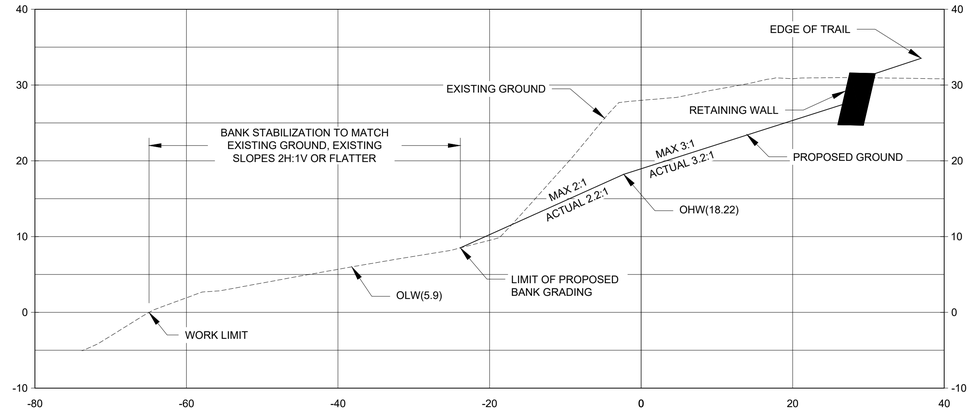


BASE ALIGNMENT SECTION: STA 4+50.00
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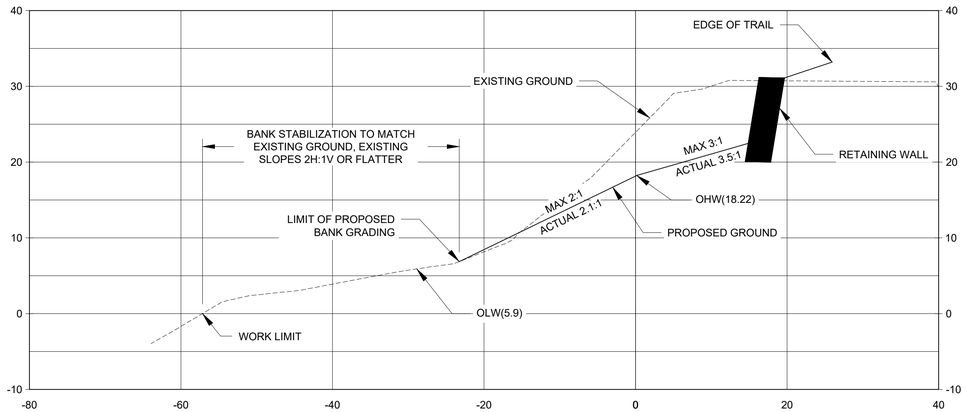


BASE ALIGNMENT SECTION: STA 5+00.00
Horiz. Scale: 1" = 10'
Vert. Scale: 1" =10'

NOT FOR CONSTRUCTION

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ALAMO MANHATTAN
BANK STABILIZATION
PORTLAND, OR

BANK SECTIONS

SHEET NO.
C2.4
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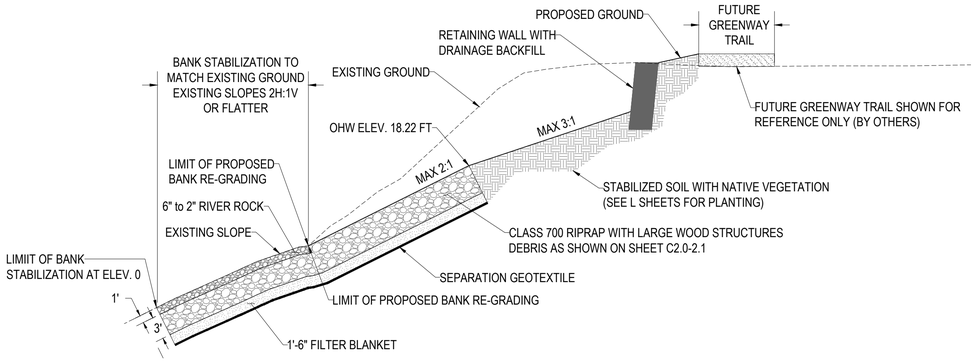
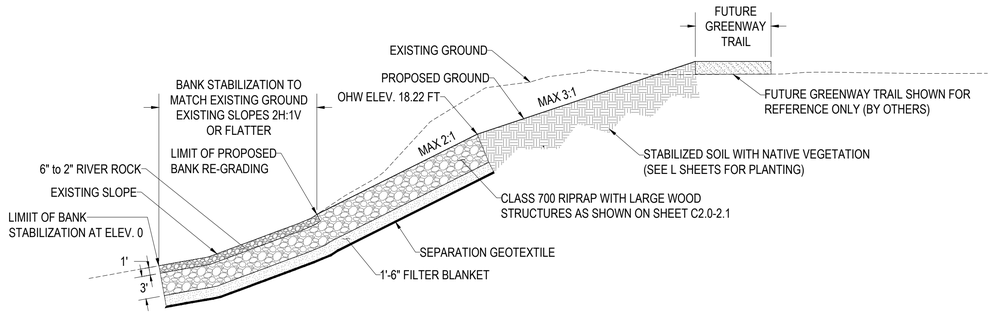
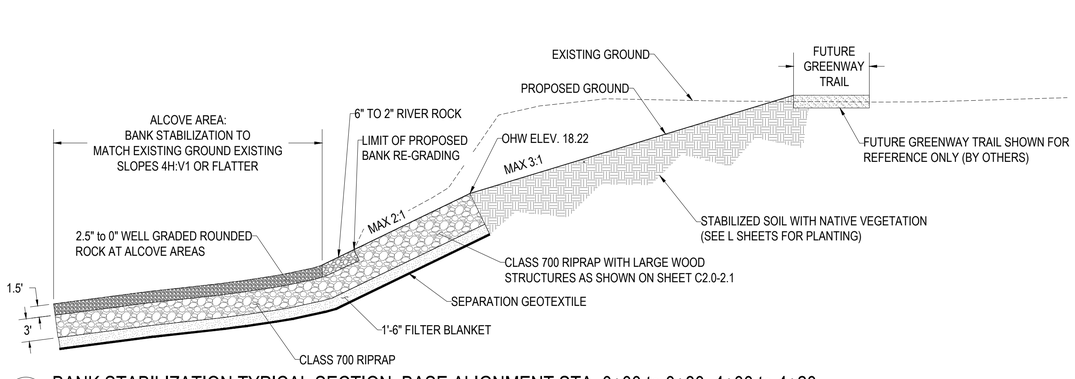


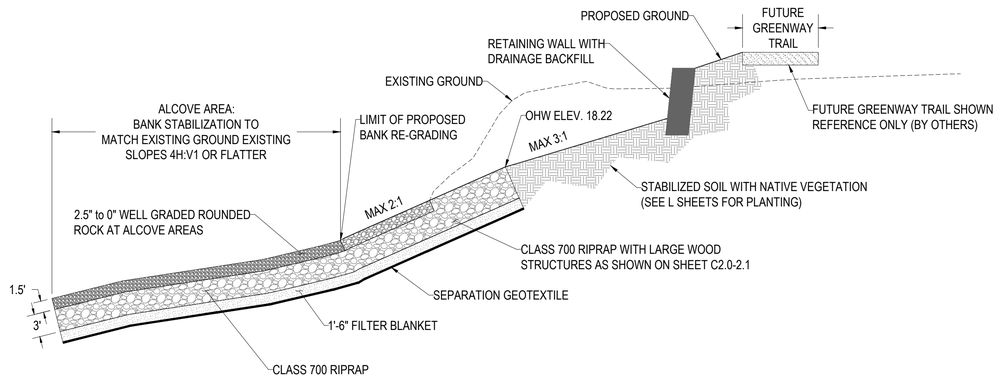

1 BANK STABILIZATION TYPICAL SECTION: BASE ALIGNMENT STA. 1+15 to 3+70
NOT TO SCALE




2 BANK STABILIZATION TYPICAL SECTION: BASE ALIGNMENT STA. 0+80 to 1+15, 3+70 to 4+00
NOT TO SCALE




3 BANK STABILIZATION TYPICAL SECTION: BASE ALIGNMENT STA. 0+00 to 0+80, 4+00 to 4+20
NOT TO SCALE




BANK STABILIZATION TYPICAL SECTION: BASE ALIGNMENT STA. 4+20 to 5+30
NOT TO SCALE

NOT FOR CONSTRUCTION

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OTAK PROJECT NUMBER
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ALAMO MANHATTAN
BANK STABILIZATION
PORTLAND, OR
CONSTRUCTION DETAILS

SHEET NO.
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OF

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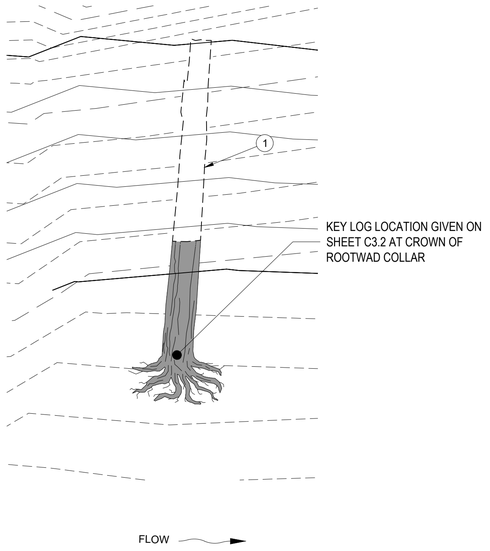
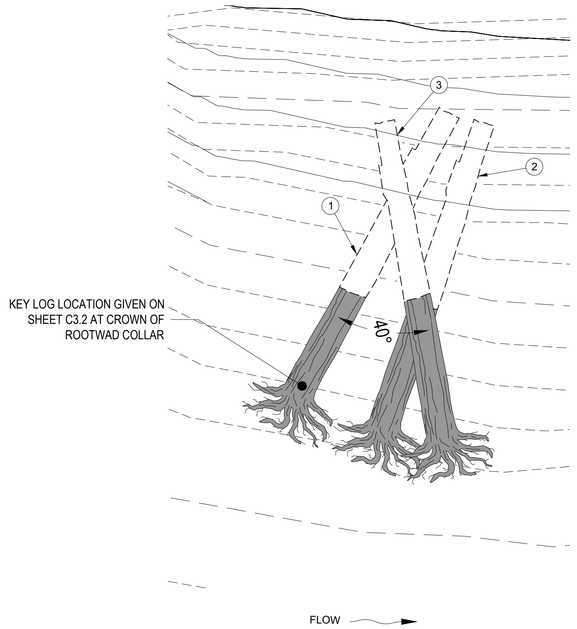
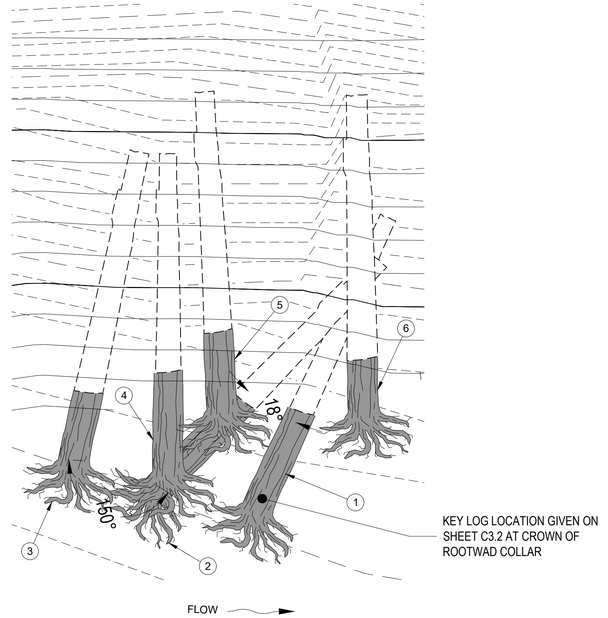



1 TYPE 1 LARGE WOOD STRUCTURE
NOT TO SCALE




2 TYPE 2 LARGE WOOD STRUCTURE
NOT TO SCALE




3 TYPE 3 LARGE WOOD STRUCTURE
NOT TO SCALE

## TYPE 1 LARGE WOOD STRUCTURE MATERIAL SCHEDULE

| CONST. NOTE | QUANTITY (EA) | DBH (IN) | LENGTH (FT) | ROOTWAD ATTACHED? | MIN. PERCENT OF LOG (TOTAL LENGTH) BURIED | STEM TILT ANGLE β (DEG.) |
|---|---|---|---|---|---|---|
| 1 | 1 | 18-24 | 24 | YES | 55% | 0-2 DOWN |

## TYPE 2 LARGE WOOD STRUCTURE MATERIAL SCHEDULE

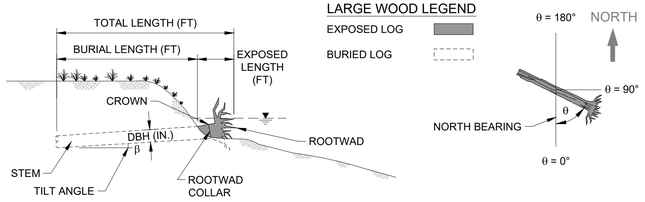
| CONST. NOTE | QUANTITY (EA) | DBH (IN) | LENGTH (FT) | ROOTWAD ATTACHED? | MIN. PERCENT OF LOG (TOTAL LENGTH) BURIED | STEM TILT ANGLE β (DEG.) |
|---|---|---|---|---|---|---|
| 1 | 1 | 18-24 | 24 | YES | 60% | 2.0 DOWN |
| 2 | 1 | 18-24 | 24 | YES | 55% | 2.0 DOWN |
| 3 | 1 | 18-24 | 24 | YES | 50% | 0-2.0 DOWN |

## TYPE 3 LARGE WOOD STRUCTURE MATERIAL SCHEDULE

| CONST. NOTE | QUANTITY (EA) | DBH (IN) | LENGTH (FT) | ROOTWAD ATTACHED? | MIN. PERCENT OF LOG (TOTAL LENGTH) BURIED | STEM TILT ANGLE β (DEG.) |
|---|---|---|---|---|---|---|
| 1 | 1 | 18-24 | 24 | YES | 66% | 3.0 DOWN |
| 2 | 1 | 18-24 | 24 | YES | 60% | 3.5 UP |
| 3 | 1 | 18-24 | 24 | YES | 80% | 1.0 DOWN |
| 4 | 1 | 18-24 | 24 | YES | 73% | 5.5 DOWN |
| 5 | 1 | 18-24 | 24 | YES | 78% | 3.0 DOWN |
| 6 | 1 | 18-24 | 24 | YES | 85% | 3.0 DOWN |

## TYPE 1 CONSTRUCTION SEQUENCING:

1. PLACE LOG AT ANGLE AND ELEVATION SPECIFIED ON SHEET C3.2. LOGS SHALL BE INSTALLED FLAT OR AT A TILT ANGLE UP TO 2 DEGREES. LOGS PLACED AT TOE OF BANK-LEVEL MAY BE INSTALLED SUCH THAT UP TO 6 FT OF STEM IS EXPOSED. LOGS ABOVE THE TOE OF BANK BUT BELOW 10 FT MAY HAVE EXPOSED STEM UP TO 2 FT. LOGS INSTALLED ABOVE THE 10 FT ELEVATION SHOULD HAVE EXPOSED STEM 0.5-1FT MAXIMUM, DECREASING AS ELEVATION INCREASES.




TYPICAL LOG REFERENCE KEY AND LEGEND

## TYPE 2 CONSTRUCTION SEQUENCING:

1. PLACE KEY LOG AT ANGLE AND ELEVATION SPECIFIED ON SHEET C3.2, WITH TILT ANGLE AND BURIAL AS SPECIFIED.
2. PLACE SECOND LOG SPACED SUCH THAT ITS ROOTWAD BARELY OVERLAPS WITH KEY LOG ROOTWAD (APPROXIMATELY 6 FT DOWNSTREAM ON CENTER). PLACE AT AN ELEVATION SUCH THAT CROWN OF ROOT COLLAR IS AT OR SLIGHTLY ABOVE ELEVATION OF KEY LOG ROOT COLLAR CROWN.
3. PLACE THIRD LOG AT A 40 DEGREE ANGLE WITH THE KEY LOG, POINTING UPSTREAM. TILT ANGLE OF THE THIRD LOG SHOULD BE FLAT OR SLIGHTLY DOWN-ANGLE.

## TYPE 3 CONSTRUCTION SEQUENCING:

1. PLACE KEY LOG AT ANGLE AND ELEVATION SPECIFIED ON SHEET C3.2, WITH TILT ANGLE AND BURIAL AS SPECIFIED.
2. PLACE SECOND LOG AT AN 18 DEGREE ANGLE WITH THE KEY LOG SUCH THAT THE TWO ROOTWADS BARELY OVERLAP (6 FEET ON CENTER). TILT ANGLE AND BURIAL SHALL BE AS SPECIFIED.
3. PLACE THIRD LOG SUCH THAT ROOTWADS 2 & 3 OVERLAP BY 1' AND FORM A 150 DEGREE ANGLE AT THEIR FACES. TILT ANGLE AND BURIAL SHALL BE AS SPECIFIED.
4. PLACE FOURTH LOG SUCH THAT THE ROOTWAD FACE OVERLAPS WITH THE ROOTWAD OF LOG 2 AND THE STEM RESTS ON LOG 2. LOG 4 SHALL BE PERPENDICULAR TO THE SLOPE AND INSTALLED AT THE TILT ANGLE AND BURIAL AS SPECIFIED.
5. PLACE FIFTH LOG SPACED 4 FT DOWNSTREAM OF LOG 4, SIMILARLY ORIENTED WITH THE BANK. LOG 5 RESTS ON LOG 2 AND IS APPROXIMATELY 6.5 FT FROM ROOTWAD COLLAR OF LOG 2. TILT ANGLE AND BURIAL SHALL BE AS SPECIFIED.
6. PLACE SIXTH LOG SPACED 9.5 FT DOWNSTREAM OF LOG 5, ALSO ROUGHLY PERPENDICULAR TO THE BANK. THE STEM OF LOG 6 (8.5 FT FROM ROOTWAD COLLAR) SHALL REST ON LOG 2, APPROXIMATELY 18.5 FT FROM THE ROOTWAD COLLAR OF LOG 2. TILT ANGLE AND BURIAL SHALL BE AS SPECIFIED.

NOT FOR CONSTRUCTION

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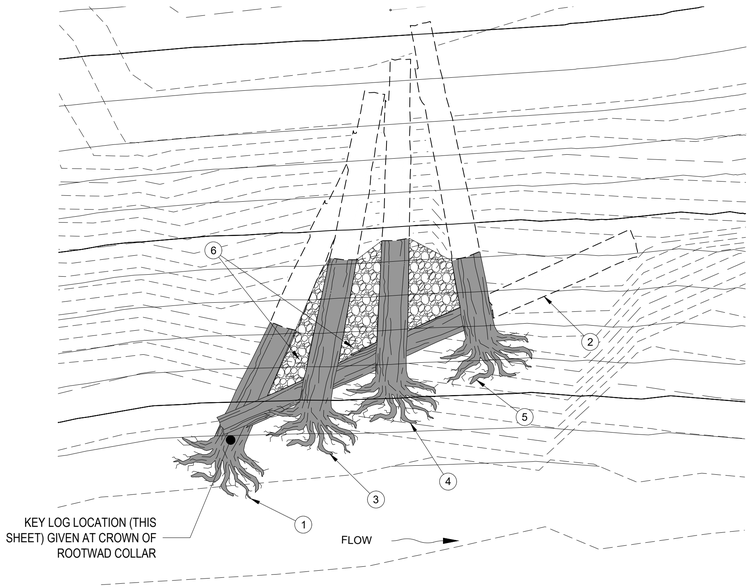
ALAMO MANHATTAN
BANK STABILIZATION
PORTLAND, OR
CONSTRUCTION DETAILS

SHEET NO.
C3.1
OF

FILE: C:\1950-C3.1.DWG ### 2/5/2020 4:56:10 PM - LEAHB




1 TYPE 4 LARGE WOOD STRUCTURE
NOT TO SCALE

## TYPE 4 LARGE WOOD STRUCTURE MATERIAL SCHEDULE

| CONST. NOTE | QUANTITY (EA) | DBH (IN) | LENGTH (FT) | ROOTWAD ATTACHED? | MIN. PERCENT OF LOG BURIED | STEM TILT ANGLE β (DEG.) |
|---|---|---|---|---|---|---|
| 1 | 1 | 18-24 | 24 | YES | 55% | 2.0 DOWN |
| 2 | 1 | 18-24 | 30 | NO | 20% | 5.0 DOWN |
| 3 | 1 | 18-24 | 24 | YES | 50% | 7.0 DOWN |
| 4 | 1 | 18-24 | 24 | YES | 50% | 5.0 DOWN |
| 5 | 1 | 18-24 | 24 | YES | 65% | 2.0 DOWN |

## TYPE 4 CONSTRUCTION SEQUENCING:

1. PLACE KEY LOG AT ANGLE AND ELEVATION SPECIFIED ON THIS SHEET, WITH TILT ANGLE AND BURIAL AS SPECIFIED.
2. PLACE SECOND LOG AT A 20 DEGREE ANGLE WITH THE BANK FACE (40 DEGREES WITH RESPECT TO LOG 1 ROOTWAD), WITH THE UPSTREAM END RESTING ON THE ROOT COLLAR OF LOG 1. TILT ANGLE AND BURIAL SHALL BE AS SPECIFIED.
3. PLACE THIRD LOG SUCH THAT THE ROOT COLLAR OF THE LOG RESTS ON LOG 2, 7 FT FROM THE UPSTREAM END. TILT ANGLE AND BURIAL SHALL BE AS SPECIFIED.
4. PLACE FOURTH LOG SUCH THAT THE ROOT COLLAR OF THE LOG RESTS ON LOG 2, 12 FT FROM THE UPSTREAM END. TILT ANGLE AND BURIAL SHALL BE AS SPECIFIED.
5. PLACE FIFTH LOG SUCH THAT THE ROOT COLLAR OF THE LOG RESTS ON LOG 2, JUST UPSTREAM OF THE BURIAL POINT (18 FEET FROM UPSTREAM END). TILT ANGLE AND BURIAL SHALL BE AS SPECIFIED.
6. FILL GAP BETWEEN BOTTOM OF LOG 2 AND SLOPE WITH CLASS 700 RIP RAP AND ROUNDED RIVER ROCK (APPROX. 2 CY, 1.5 FT DEEP). FILL VOIDS UP TO LOG CROWNS WITH SOIL AND PLANT PER LANDSCAPING PLAN.

## KEY LOG LOCATION AND ORIENTATION

| STRUCTURE TYPE | STATION | OFFSET | NORTHING | EASTING | ELEVATION (ROOT COLLAR CROWN) | ANGLE θ |
|---|---|---|---|---|---|---|
| Type 3 | 0+48.1 | -50.3 | 674286.6772 | 7646887.3718 | 9.0 | 52° |
| Type 4 | 0+75.9 | -33.7 | 674253.3920 | 7646878.2339 | 12.1 | 79° |
| Type 3 | 1+23.6 | -39.7 | 674190.6547 | 7646882.1640 | 8.8 | 36° |
| Type 1 | 1+42.5 | -39.4 | 674171.8453 | 7646877.0370 | 9.0 | 60° |
| Type 1 | 1+57.2 | -42.4 | 674156.3354 | 7646876.0238 | 7.5 | 51° |
| Type 4 | 1+60.9 | -30.4 | 674155.4869 | 7646863.2775 | 11.8 | 44° |
| Type 2 | 1+80.0 | -36.3 | 674133.1140 | 7646862.0956 | 8.8 | 102° |
| Type 4 | 2+01.3 | -30.8 | 674113.0766 | 7646847.5693 | 11.3 | 39° |
| Type 2 | 2+11.5 | -42.9 | 674097.1882 | 7646853.1956 | 7.0 | 49° |
| Type 1 | 2+28.1 | -41.9 | 674080.8611 | 7646842.6733 | 7.1 | 60° |
| Type 4 | 2+38.4 | -34.0 | 674075.7718 | 7646830.0319 | 10.2 | 41° |
| Type 3 | 2+75.2 | -42.1 | 674049.5154 | 7646827.3618 | 8.0 | 60° |
| Type 2 | 2+92.3 | -43.0 | 674032.7663 | 7646823.6652 | 8.7 | 46° |
| Type 1 | 3+01.3 | -42.9 | 674024.1463 | 7646821.2398 | 8.9 | 61° |
| Type 1 | 3+15.9 | -46.2 | 674009.1585 | 7646820.5933 | 8.6 | 78° |
| Type 4 | 3+21.2 | -35.2 | 674006.9567 | 7646808.5562 | 11.7 | 46° |
| Type 2 | 3+36.5 | -46.9 | 673989.1774 | 7646815.8583 | 8.4 | 46° |
| Type 1 | 3+44.4 | -44.3 | 673982.1905 | 7646811.1765 | 9.1 | 61° |
| Type 1 | 3+54.0 | -41.1 | 673973.7954 | 7646805.5622 | 10.1 | 72° |
| Type 1 | 3+73.6 | -50.6 | 673952.3495 | 7646809.5772 | 7.7 | 72° |
| Type 4 | 3+76.2 | -38.4 | 673953.0343 | 7646797.1628 | 12.0 | 44° |
| Type 2 | 3+92.3 | -44.4 | 673935.9762 | 7646798.6537 | 9.0 | 48° |
| Type 1 | 3+99.9 | -47.8 | 673927.7117 | 7646799.9755 | 7.8 | 61° |
| Type 3 | 4+11.7 | -39.4 | 673918.6075 | 7646788.7879 | 8.6 | 37° |
| Type 1 | 4+35.9 | -35.1 | 673898.7158 | 7646779.7444 | 8.9 | 61° |
| Type 1 | 4+47.1 | -36.1 | 673887.5347 | 7646778.6067 | 8.5 | 120° |
| Type 4 | 4+47.5 | -23.4 | 673889.5415 | 7646766.0495 | 10.7 | 70° |
| Type 2 | 4+64.6 | -28.2 | 673871.8651 | 7646767.5020 | 9.3 | 118° |
| Type 1 | 4+77.0 | -31.0 | 673858.8455 | 7646767.8434 | 8.4 | 102° |
| Type 4 | 4+87.4 | -21.3 | 673850.3712 | 7646756.1743 | 10.6 | 43° |
| Type 1 | 4+87.8 | -32.2 | 673847.6644 | 7646766.7058 | 7.8 | 70° |
| Type 3 | 5+03.0 | -31.0 | 673832.6288 | 7646762.1494 | 7.4 | 128° |

## LARGE WOOD MATERIAL SCHEDULE

| STRUCTURE TYPE | QUANTITY OF STRUCTURE TYPE | QUANTITY OF LOGS | |
|---|---|---|---|
| | | STEM & ROOTWAD | SUBTOTAL BY STRUCTURE TYPE |
| TYPE 1 | 12 | 1 | 12 |
| TYPE 2 | 6 | 3 | 18 |
| TYPE 3 | 5 | 6 | 30 |
| TYPE 4 | 8 | 5 | 40 |
| TOTAL | | | 100 |

NOT FOR CONSTRUCTION

| NO. | DATE | DESCRIPTION | APPD. |
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OTAK PROJECT NUMBER
19050.2

ALAMO MANHATTAN
BANK STABILIZATION
PORTLAND, OR
CONSTRUCTION DETAILS

SHEET NO.
C3.2
OF

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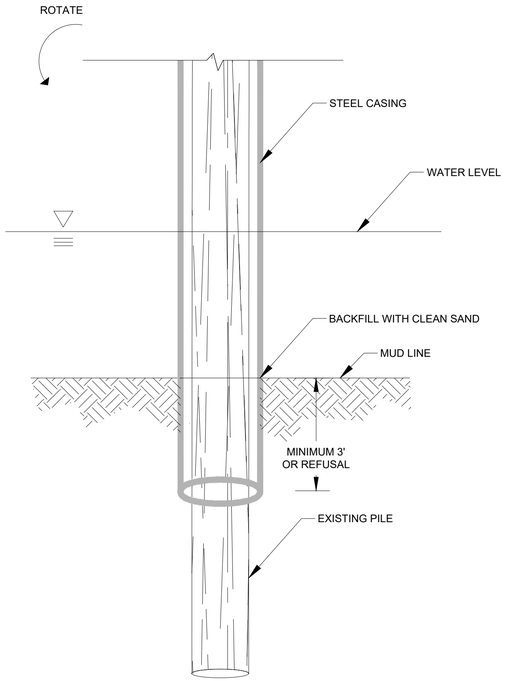


1 PILE REMOVAL DETAIL
NOT TO SCALE

**USE THE FOLLOWING STEPS TO MINIMIZE CREOSOTE RELEASE, SEDIMENT DISTURBANCE, AND TOTAL SUSPENDED SOLIDS:**

1. INSTALL A FLOATING SURFACE BOOM TO CAPTURE FLOATING SURFACE DEBRIS.
2. KEEP ALL EQUIPMENT (E.G., BUCKET, STEEL CABLE, VIBRATORY HAMMER) OUT OF THE WATER, GRIP PILES ABOVE THE WATERLINE, AND COMPLETE ALL WORK DURING LOW WATER AND LOW CURRENT CONDITIONS.
3. DISLODGE THE PILING WITH A VIBRATORY HAMMER, WHENEVER FEASIBLE--NEVER INTENTIONALLY BREAK A PILE BY TWISTING OR BENDING.
4. SLOWLY LIFT THE PILE FROM THE SEDIMENT AND THROUGH THE WATER COLUMN.
5. PLACE THE PILE IN A CONTAINMENT BASIN ON A BARGE DECK, PIER, OR SHORELINE WITHOUT ATTEMPTING TO CLEAN OR REMOVE ANY ADHERING SEDIMENT (A CONTAINMENT BASIN FOR THE REMOVED PILES AND ANY ADHERING SEDIMENT MAY BE CONSTRUCTED OF DURABLE PLASTIC SHEETING WITH SIDEWALLS SUPPORTED BY HAY BALES OR ANOTHER SUPPORT STRUCTURE TO CONTAIN ALL SEDIMENT, AND RETURN FLOW MAY BE DIRECTED BACK TO THE WATERWAY).
6. FILL THE HOLES LEFT BY EACH PILING WITH CLEAN, NATIVE SEDIMENTS.
7. DISPOSE OF ALL REMOVED PILES, FLOATING SURFACE DEBRIS, ANY SEDIMENT SPILLED ON WORK SURFACES, AND ALL CONTAINMENT SUPPLIES AT A PERMITTED UPLAND DISPOSAL SITE.

**IF PILE CAN NOT BE REMOVED BY PULLING FOLLOW DETAIL**

1. INSTALL STEEL CASING BELOW MUDLINE, MIN 3FT or REFUSAL
2. ROTATE CASING TO SNAP PILE OFF BELOW MUDLINE
3. TRANSPORT PILE IN CASING TO DISPOSAL AREA
4. DISPOSE PILE IN ACCORDANCE TO ALL STATE AND FEDERAL REGULATIONS
5. BACKFILL HOLE WITH CLEAN SAND OR MATERIALS AS SHOWN ON PLANS
6. IF PILE IS NOT FULLY REMOVED MARK REMNANT ON SHEETS C2.0 AND C2.1 AND PROVIDE TO ENGINEER OF RECORD

NOT FOR CONSTRUCTION

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ALAMO MANHATTAN
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PORTLAND, OR
CONSTRUCTION DETAILS

SHEET NO.
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OF

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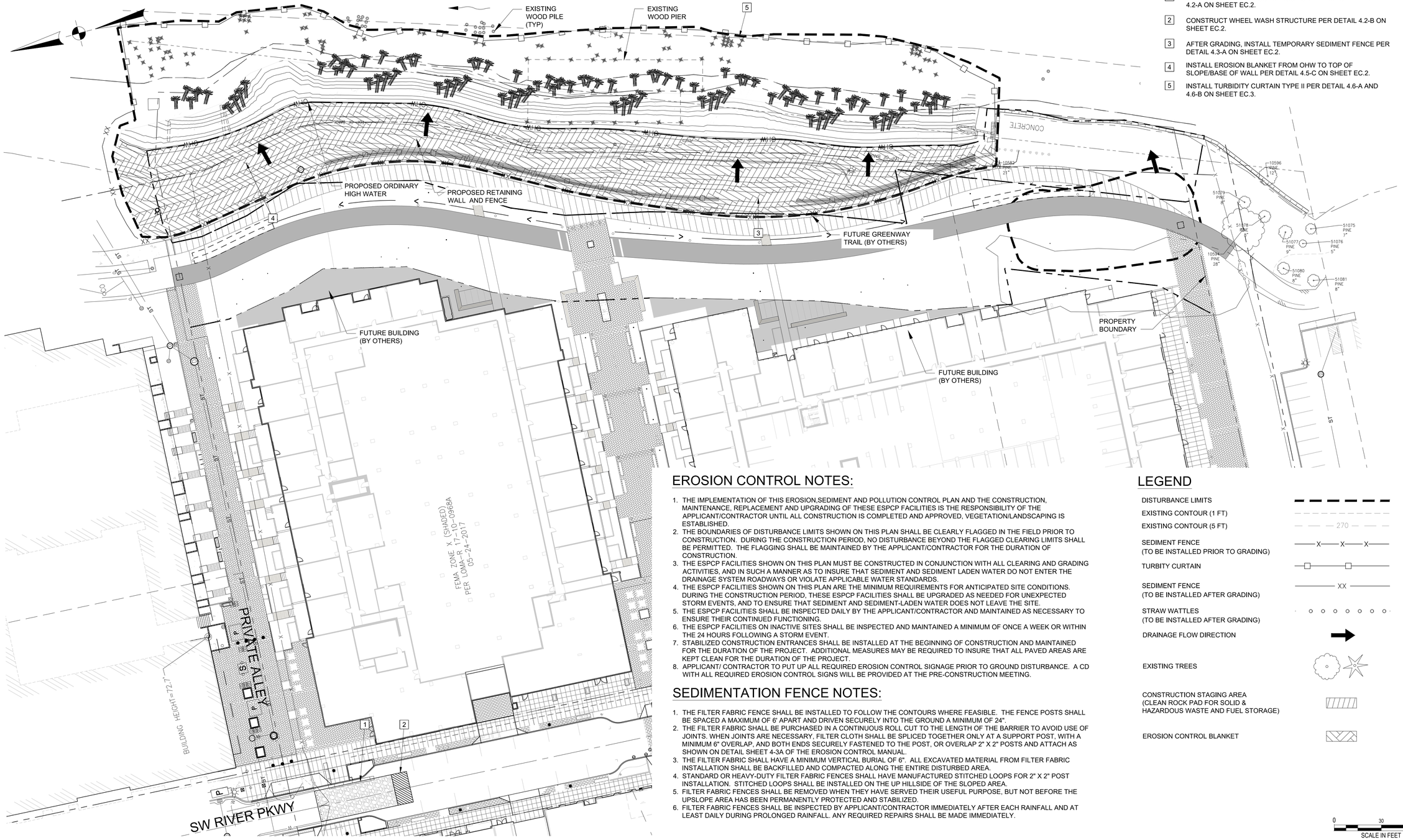


## CONSTRUCTION KEY NOTES

1. CONSTRUCT GRAVEL CONSTRUCTION ENTRANCE PER DETAIL 4.2-A ON SHEET EC.2.
2. CONSTRUCT WHEEL WASH STRUCTURE PER DETAIL 4.2-B ON SHEET EC.2.
3. AFTER GRADING, INSTALL TEMPORARY SEDIMENT FENCE PER DETAIL 4.3-A ON SHEET EC.2.
4. INSTALL EROSION BLANKET FROM OHW TO TOP OF SLOPE/BASE OF WALL PER DETAIL 4.5-C ON SHEET EC.2.
5. INSTALL TURBIDITY CURTAIN TYPE II PER DETAIL 4.6-A AND 4.6-B ON SHEET EC.3.

## EROSION CONTROL NOTES:

1. THE IMPLEMENTATION OF THIS EROSION,SEDIMENT AND POLLUTION CONTROL PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESPCP FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED, VEGETATION/LANDSCAPING IS ESTABLISHED.
2. THE BOUNDARIES OF DISTURBANCE LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
3. THE ESPCP FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM ROADWAYS OR VIOLATE APPLICABLE WATER STANDARDS.
4. THE ESPCP FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESPCP FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS, AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE SITE.
5. THE ESPCP FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
6. THE ESPCP FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A WEEK OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
7. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
8. APPLICANT/ CONTRACTOR TO PUT UP ALL REQUIRED EROSION CONTROL SIGNAGE PRIOR TO GROUND DISTURBANCE. A CD WITH ALL REQUIRED EROSION CONTROL SIGNS WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING.

## SEDIMENTATION FENCE NOTES:

1. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS WHERE FEASIBLE. THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF 6' APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24".
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6" OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST, OR OVERLAP 2" X 2" POSTS AND ATTACH AS SHOWN ON DETAIL SHEET 4-3A OF THE EROSION CONTROL MANUAL.
3. THE FILTER FABRIC SHALL HAVE A MINIMUM VERTICAL BURIAL OF 6". ALL EXCAVATED MATERIAL FROM FILTER FABRIC INSTALLATION SHALL BE BACKFILLED AND COMPACTED ALONG THE ENTIRE DISTURBED AREA.
4. STANDARD OR HEAVY-DUTY FILTER FABRIC FENCES SHALL HAVE MANUFACTURED STITCHED LOOPS FOR 2" X 2" POST INSTALLATION. STITCHED LOOPS SHALL BE INSTALLED ON THE UP HILLSIDE OF THE SLOPED AREA.
5. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY PROTECTED AND STABILIZED.
6. FILTER FABRIC FENCES SHALL BE INSPECTED BY APPLICANT/CONTRACTOR IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

## LEGEND

- DISTURBANCE LIMITS
- EXISTING CONTOUR (1 FT)
- EXISTING CONTOUR (5 FT) — 270
- SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING) — X X X
- TURBITY CURTAIN
- SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING) — XX
- STRAW WATTLES (TO BE INSTALLED AFTER GRADING)
- DRAINAGE FLOW DIRECTION
- EXISTING TREES
- CONSTRUCTION STAGING AREA (CLEAN ROCK PAD FOR SOLID & HAZARDOUS WASTE AND FUEL STORAGE)
- EROSION CONTROL BLANKET

0 30 60
SCALE IN FEET

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OTAK PROJECT NUMBER
19050.2

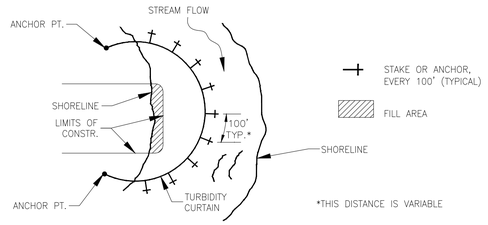
# ALAMO MANHATTAN BANK STABILIZATION
PORTLAND, OR
## EROSION CONTROL PLAN

SHEET NO.
EC.1
OF

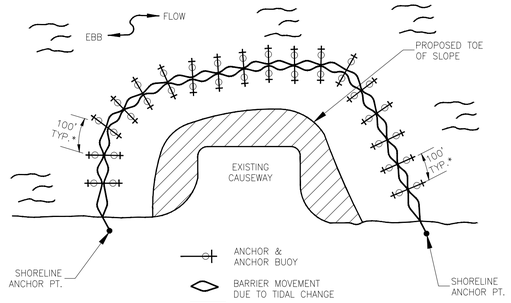
FILE: C:\1950-EC.1.DWG ### 2/5/2020 4:57:33 PM - LEAHB

# TURBIDITY CURTAIN

## TYPICAL LAYOUTS: STREAMS,PONDS & LAKES (PROTECTED & NON–TIDAL)




## TIDAL WATERS AND/OR HEAVY WIND & WAVE ACTION




DRAWING NOT TO SCALE

| EROSION CONTROL MANUAL | TURBIDITY CURTAIN PLAN VIEW Detail Drawing 4.6–A |
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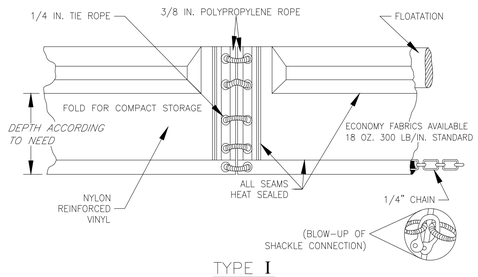
FILE DRAFT:INSPECTORS GRAPHICS DRAWING PLOT 1:1

# TURBIDITY CURTAIN

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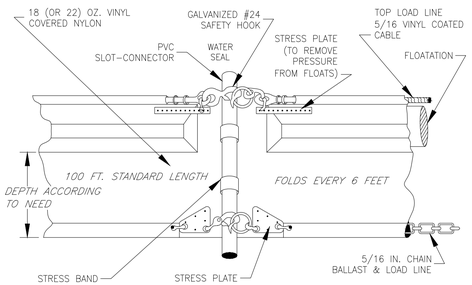


TYPE II

DRAWING NOT TO SCALE

| EROSION CONTROL MANUAL | TURBIDITY CURTAIN CONNECTIONS Detail Drawing 4.6–B |
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OF

# TURBIDITY CURTAIN

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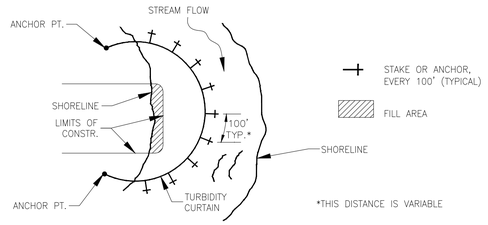


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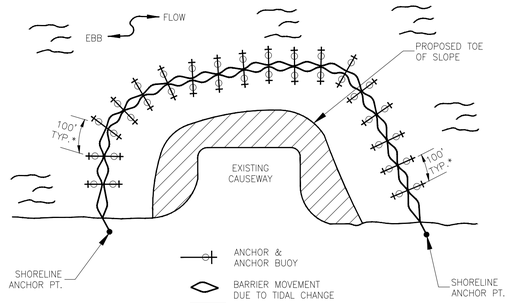


DRAWING NOT TO SCALE

| EROSION CONTROL MANUAL | TURBIDITY CURTAIN PLAN VIEW Detail Drawing 4.6–A |
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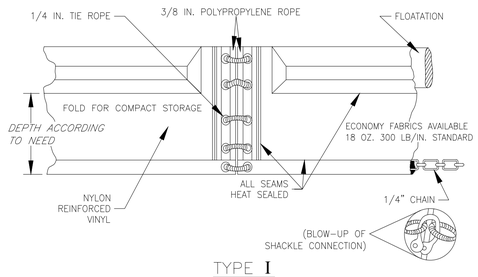
FILE DRAFT:INSPECTORS GRAPHICS DRAWING PLOT 1:1

# TURBIDITY CURTAIN

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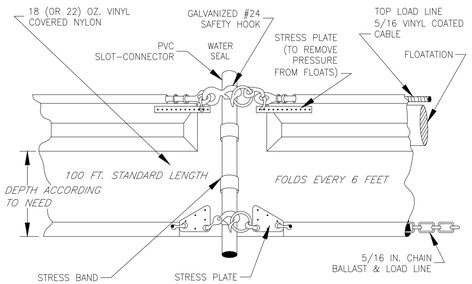


TYPE II

DRAWING NOT TO SCALE

| EROSION CONTROL MANUAL | TURBIDITY CURTAIN CONNECTIONS Detail Drawing 4.6–B |
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